Lucent Technologies
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SLC®-2000 Access System Software Releases 3.1, 3.2, 3.3, 4.0, 4.2, 4.4, 4.5, and 4.6

Commands and Messages

363-208-003
Issue 8
April 1998

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Title: SLC®-2000 Access System, Software Releases 3.1, 3.2, 3.3, 4.0, 4.2, 4.4, 4.5, and 4.6, Commands and Messages

Identification No.: 363-208-003 Issue No.: 8 Date: April 1998

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Completeness					//////////////////
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Organization					//////////////////
Appearance					//////////////////
Examples					
Illustrations					
Overall Satisifaction					//////////////////

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❒ Improve the overview/introduction
❒ Improve the table of contents
❒ Improve the organization
❒ Include more figures
❒ Add more examples
❒ Add more detail
❒ Make it more concise/brief
❒ Add more step-by-step procedures/tutorials
❒ Add more troubleshooting information
❒ Make it less technical
❒ Add more/better quick reference aids
❒ Improve the index

Please provide details for the suggested improvement. _____

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Organization					//////////////////
Appearance					//////////////////
Examples					
Illustrations					
Overall Satisifaction					//////////////////

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❒ Add more troubleshooting information
❒ Make it less technical
❒ Add more/better quick reference aids
❒ Improve the index

Please provide details for the suggested improvement. _____

_____

3. What did you like most about this CIP?

_____

_____

4. Feel free to write any comments below or on an attached sheet.

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About This Document

Purpose

Overview

Introduction

The commands and messages document describes the system commands and output messages used by installation, operation, and maintenance personnel on the *SLC*®-2000 Access System.

Scope

SLC-2000 Access System

Specific information	This document contains specific information pertaining to the commands and messages for the *SLC*-2000 Access System.
User interfaces	Basic introduction to the user interface panel (UIP) and craft interface terminal (CIT) system user interfaces.
Conventions and syntax	Explanation of the conventions and syntax used in commands.
Manual pages	Manual pages of all UIP system, CIT digital loop carrier (DLC) subsystem, and CIT synchronous optical network (SONET) subsystem commands.
Messages and alarm reports	Description of all system output messages and reports.

Intended Audience

Who Uses This Document?

Customers

The commands and messages document is intended for the following customers who participate in the engineering, installation, and maintenance of the system.

- Equipment engineers and outside plant engineers
- Installation, operation, and maintenance personnel
- Central office operations personnel
- Operations center personnel that use centralized operations systems for surveillance or provisioning
- System administrators
- Training personnel.

What must I know to use this document?

This document is based on an understanding of basic digital transmission principles and familiarity with digital loop carrier systems. You may find background information on digital loop carrier systems in 363-205-010, *SLC Series 5 Carrier System, Applications and Planning Guide*.

Reason(s) for Reissue

Software Release 4.3

Introduction

Information for Software Release 4.3 (R4.3) has been removed from this document.

Software Release 4.6

Introduction

NOTE:
Use Software Release 4.06.00 (R4.6) only in a *SLC*-2000 Access System RT. For universal applications, you must use R3.2 or R3.3 in the COT when using R4.6 at the *SLC*-2000 Access System RT. To ensure all features are available (for example, full complement of new channel units), you must use R3.3 in the COT when using R4.6 at the RT.

Software Release 4.06.00 (R4.6) of the *SLC*-2000 Access System supports all of the existing features of R4.5 and offers new capabilities. Please note that this issue also contains information for the following DLC subsystem software releases.

- Software Release 3.01.01 (R3.1) COT/RT
- Software Release 3.02.01 (R3.2) COT/RT
- Software Release 3.03.00 (R3.3) COT only
- Software Release 4.00.02 (R4.0) RT only
- Software Release 4.02.00 (R4.2) RT only
- Software Release 4.04.00 (R4.4) RT only
- Software Release 4.05.00 (R4.5) RT only.

*SPQ*811 DT Server

R4.6 introduces the *SPQ*811 DT Server. The *SPQ*811 DT Server is also supported in R4.5.

VFDE feature

R4.6 adds the support of voice frequency data enhancement (VFDE) for both metallic and FITL systems. The VFDE feature is achieved by suspending robbed-bit signaling during a call. The benefit to the end user is improved modem performance or throughput.

Software Release 4.6 (Continued)

Compatibility

Use the following table to determine the compatibility of R4.6 with different hardware, software, and switch generics (for integrated applications).

SLC®-2000 Access System Software Release	SONET Software Releases					TR-303 Integrated Applications - Switch Generics*				DDM-2000 FiberReach Software Release
	OC-3		OC-12†							
	Linear	Rings	Linear	Rings	ITH	*5ESS*® Switch	*DMS-100*‡ Switch	*EWSD*§ Switch	*GTD-5*¶ Switch	
R4.6 RT	R8.0 R6.2	R13.0 R11.1 R11.0 R9.1 R7.2 R7.1	R2.2	R3.1	AT2.0	5E13(1)** 5E12(1)†† 5E11(1)‡‡ 5E10 5E9.2§§ 5E9.1¶¶	ESMA interface w/ NA007	R13	R1.7.2.2 EB1	R3.0 R2.1

* Switch generics that are integrated TR-08 compatible are *5ESS* Switch (5E1.2 and later), *DMS-100* Switch, and *EWSD* Switch (R9.0). The *GTD-5* Switch is *not* TR-08 compatible. The TR-303 software compatibility testing with the Siemens *EWSD* Switch was performed and documented by Siemens Aktiengesellschaft. Thus, Lucent Technologies assumes no responsibility for the software compatibility when the *SLC*-2000 Access System is used with the *EWSD* Switch.

† *SLC*-2000 Access System will interface with OC-12 Software Releases.

‡ Trademark of Northern Telecom, Ltd.

§ Registered trademark of Siemens Aktiengesellschaft.

¶ Registered trademark of GTE Corporation.

** Beginning Managed Introduction (BMI) of 5E13(1) required for the VFDE feature.

†† 5E12(1) with SU package 98-0007 (or higher) required for the VFDE feature.

‡‡ 5E11(1) with SU package 98-0008 (or higher) required for the VFDE feature.

§§ 5E9.2 with BWM95-0005 (or higher).

¶¶ 5E9.1 with BWM95-0004 (or higher). IDCU only for TR-303.

How to Use This Document

Organization

Introduction	This document contains specific information and is organized in the given order.
"**About This Document**"	This section defines the purpose, scope, and intended audience for this document; provides introductory and support information on this document; includes the bibliography (*references*); lists training courses; and lists information on how to obtain technical support on the system.
Chapter 1, "User Interfaces"	This chapter describes physical access to the system.
Chapter 2, "Procedures"	This chapter describes the user interface panel (UIP) input and output and describes craft interface terminal (CIT) procedures for login to the system and remote system access.
Chapter 3, "Addressing System Elements"	This chapter contains tables listing the address conventions for the SONET subsystem and the access identifiers (AIDs) for the DLC subsystem.
Chapter 4, "Command, Message, and Report Syntax"	This chapter describes the syntax for entering commands from the UIP or CIT. It also shows the syntax for output messages and error messages.
Chapter 5, "UIP Commands"	This chapter contains the pages describing the UIP menus and reports.

(Continued on next page)

Organization (Continued)

Chapter 6, "SONET Subsystem Commands"	This chapter lists the CIT commands and the associated security levels for the SONET subsystem.
Chapter 7, "DLC Subsystem Commands"	This chapter contains the pages describing the CIT commands and reports for the DLC subsystem.
Chapter 8, "System Output Messages and Reports"	This chapter describes the UIP and CIT output messages and reports.
Chapter 9, "Dictionaries"	This chapter lists the abbreviation (name) and the description for each error code, status name, and system state.
"Glossary"	This section lists and spells out the abbreviations and acronyms.

Conventions Used

Special fonts

Introduction	Special fonts are used in this document for text that requires emphasis. The following conventions are used to highlight specific text.
UPPERCASE	UPPERCASE letters (or literal spelling) denote a panel stamping located on the equipment.
***Italic* type face**	*Italic* typeface denotes the titles of documents referenced in the text. However, italic typeface may also be used to highlight an important word or phrase.
Double quotes	Double quotes (") surround text to represent chapter titles referenced in the text.
Icons	Special symbols (icons) denote safety labels and notes.
`Monospace font`	**`Constant Width`** (monospace) font is used in the display of the input and output screens.

Trademarks

Introduction

The trademarks used in this document are identified on the back of the title page. Trademarks are presented in a specific way — they stand out from the rest of the text by using a different font or capital letters, and they modify a noun. For example, the system name contains a trademark — *SLC*®-2000 Access System. The trademark is never used by itself — the trademark always modifies a noun (for example, *SPOTS*® channel units).

Trademarks of Lucent Technologies

Lucent Technologies trademarks are identified on first use in *each chapter* (in the table of contents, text, and headings) with the registered mark (®) or trademark (™) symbol. Also, they are identified on first use in *each* table and figure.

Trademarks of other companies

Trademarks of other companies are identified using a footnote on the first use in the document.

Terms

Introduction

This section explains terms used in this document that may have a different meaning than general or common use of the term.

Distant terminal (DT)

The term *DT* (R4.4 and later software releases) refers to both the multi-services distant terminal (MSDT) and narrowband shelf (NBS).

Access

In the *SLC*-2000 Access System, the term *access* means that the system provides the primary service interface for the customer to enter the network.

Manual pages

The term *manual page* refers to the format of the command pages.

Aborted

The term *aborted* is used in the text *Can be aborted* and is located in the manual pages for each command. The term *aborted* means that you (the user) can terminate execution of the command prior to completion of the command. Press the CANCEL or DELETE key to *abort* or terminate execution of the command.

You

The term *you* refers to the person using the interface to the *SLC*-2000 Access System.

Keyboard designations

The designation for keys when referring to the keyboards for terminals and personal computers is the spelling placed in a key shaped box (for example, CANCEL). The following generic designations indicate specific functions.

- CANCEL — denotes a CANCEL, Cancel, or CANcel key
- DELETE — denotes a DELETE, Delete, or DELete key
- RETURN — denotes a RETURN, Return, Enter, or Carriage Return key
- CONTROL — denotes a CONTROL, Control, Ctrl, or CONtrol key.

Product Safety

Safety Labels

Introduction

This document may contain safety labels as DANGERS, WARNINGS, and CAUTIONS. These safety labels have the following definitions.

Safety alert symbol

The safety alert symbol ⚠ is used on product labels and in this document to alert the user to important operating and maintenance instructions.

Danger

⚠ **DANGER:**
Danger indicates the presence of a hazard that will cause death or severe personal injury if the hazard is not avoided.

Warning

⚠ **WARNING:**
Warning indicates the presence of a hazard that can cause death or severe personal injury if the hazard is not avoided.

Caution

⚠ **CAUTION:**
Caution indicates the presence of a hazard that will or can cause minor personal injury or property damage if the hazard is not avoided. The caution is also used for property-damage-only accidents. This includes equipment damage, loss of software, or service interruption.

Lightwave Safety

Considerations when exposed to laser light

WARNING:
Never view any unterminated optical connector with optical instruments other than indirect image-converting devices such as the FIND-R-SCOPE infrared optical viewer, since viewing optics tends to collimate the energy from an optical connector and, hence, increases the potential risk for injury.*

A Lucent Technologies lightwave digital transmission system and associated optical test sets use semiconductor laser transmitters. The lasers emit lightwaves, at or near infrared wavelengths, into lightguide fibers. This light is at the red end of the visible spectrum.

Although, at present, the transmitter power levels are below those known to cause injury to the eye (for example, from a direct inadvertent exposure to the end of an energized fiber), direct exposure at close distances should be avoided.

* Registered trademark of Continental Bank N.A.

Electrostatic Discharge (ESD)

Considerations to avoid ESD damage

CAUTION:
Industry experience has shown that all integrated circuit packs can be damaged by static electricity that builds up on work surfaces and personnel. The static charges are produced by various charging effects of movement and contact with other objects. Dry air allows greater static charges to accumulate. Higher potentials are measured in areas with low relative humidity, but potentials high enough to cause damage can occur anywhere.

Observe the following list of precautions when handling circuit packs to prevent damage by electrostatic discharge.

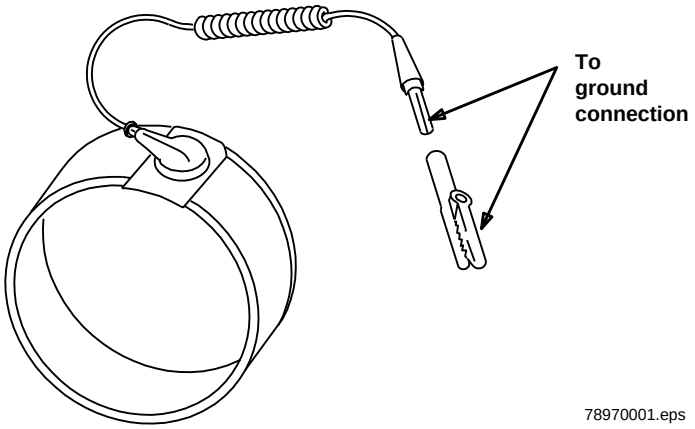
- Assume all circuit packs contain solid state electronic components that can be damaged by ESD.
- When handling circuit packs (storing, inserting, removing, etc.) or when working on the backplane, always wear a grounded wrist strap or wear a heel strap and stand on a grounded, static-dissipating floor mat. If a static-dissipating floor mat is used, be sure that it is clean to ensure a good discharge path.
- Handle all circuit packs by the faceplate or latch and by the top and bottom outermost edges. Never touch the components, conductors, or connector pins.
- Observe warning labels on bags and cartons. Whenever possible, do not remove circuit packs from antistatic packaging until ready to insert them into slots.
- Open, if possible, all circuit packs at a static-safe work position, using properly grounded wrist straps and static-dissipating table mats. If a static-dissipating table mat is used, be sure that it is clean to ensure a good discharge path.
- Always store and transport circuit packs in static-safe packaging. Shielding is not required unless specified.
- Keep all static-generating materials such as food wrappers, plastics, and foam packaging away from all circuit packs. On removal from the bay, immediately put circuit packs into static-safe packages.
- Whenever possible, maintain relative humidity above 20 percent.

(Continued on next page)

Electrostatic Discharge (ESD) (Continued)

Grounding jacks

To reduce the possibility of ESD damage, shelves are equipped with grounding jacks to enable personnel to ground themselves using wrist straps with a minimum resistance of 250 k Ω while handling circuit packs or working on a shelf/shelves. Connect the wrist straps to the jacks located at the upper left-hand corner of the user interface panel (UIP) and the fan unit. When grounding jacks are not available, use an alligator clip adapter to connect to the bay frame ground.



System Software Releases

Compatibility

Supported releases

In this document, it is assumed that certain feature releases of hardware and software are being used. Otherwise, parts of this document may be inaccurate for your application. The *SLC*-2000 Access System Software Releases work with specific SONET Software Releases, integrated application switch generics, and DDM-2000 FiberReach Software Releases.

COT/RT matrix

Use the following table to determine the compatibility of different hardware, COT/RT Software Releases, and switch generics (for integrated applications).

SLC®-2000 Access System Software Release	SONET Software Releases					TR-303 Integrated Applications - Switch Generics*				DDM-2000 FiberReach Software Release
	OC-3		OC-12†							
	Linear	Rings	Linear	Rings	ITH	*5ESS*® Switch	*DMS-100*‡ Switch	*EWSD*§ Switch	*GTD-5*¶ Switch	
R3.1 COT/RT**	R6.2	R7.0	R2.2	NA	AT2.0	NA	NA	NA	NA	NA
R3.2 COT/RT**	R6.2	R11.0 R7.1	R2.2	R3.1	AT2.0	NA	NA	NA	NA	NA
R3.22 COT/RT**	R6.2	R11.0 R7.1	R2.2	R3.1	AT2.0	NA	NA	NA	NA	NA

* Switch generics that are integrated TR-08 compatible are *5ESS* Switch (5E1.2 and later), *DMS-100* Switch, and *EWSD* Switch (R9.0). The *GTD-5* Switch is *not* TR-08 compatible.

† *SLC*-2000 Access System will interface with OC-12 Software Releases.

‡ Trademark of Northern Telecom, Ltd.

§ Registered trademark of Siemens Aktiengesellschaft.

¶ Registered trademark of GTE Corporation.

** The COT is only used in universal applications and can be used with any switching system.

Compatibility (Continued)

COT matrix

Use the following table to determine the compatibility of different hardware, COT Software Releases, and switch generics (for integrated applications).

SLC®-2000 Access System Software Release	SONET Software Releases					TR-303 Integrated Applications - Switch Generics*				DDM-2000 FiberReach Software Release
	OC-3		OC-12†							
	Linear	Rings	Linear	Rings	ITH	*5ESS*® Switch	*DMS-100*‡ Switch	*EWSD*§ Switch	*GTD-5*¶ Switch	
R3.3 COT**	R6.2	R11.0 R9.0 R7.2 R7.1	R2.2	R3.1	AT2.0	NA	NA	NA	NA	NA

* Switch generics that are integrated TR-08 compatible are *5ESS* Switch (5E1.2 and later), *DMS-100* Switch, and *EWSD* Switch (R9.0). The *GTD-5* Switch is *not* TR-08 compatible.

† *SLC*-2000 Access System will interface with OC-12 Software Releases.

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¶ Registered trademark of GTE Corporation.

** The COT is only used in universal applications and can be used with any switching system.

RT matrix

Use the following table to determine the compatibility of different hardware, RT Software Releases, and switch generics (for integrated applications).

SLC®-2000 Access System Software Release	SONET Software Releases					TR-303 Integrated Applications - Switch Generics*				DDM-2000 FiberReach Software Release
	OC-3		OC-12†							
	Linear	Rings	Linear	Rings	ITH	*5ESS*® Switch	*DMS-100*‡ Switch	*EWSD*§ Switch	*GTD-5*¶ Switch	
R4.0 RT	R6.2	R7.1	R2.2	R3.1	AT2.0	5E9.2** 5E9.1††	NA	NA	NA	NA
R4.2 RT	R6.2	R9.0 R7.2 R7.1 R7.0	R2.2	R3.1	AT2.0	5E10 5E9.2** 5E9.1††	ESMA interface w/ NA004	R13	R1.7.2.2 EB1	NA

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Compatibility (Continued)

RT matrix (continued)

SLC-2000 Access System Software Release	SONET Software Releases					TR-303 Integrated Applications - Switch Generics*				DDM-2000 FiberReach Software Release
	OC-3		OC-12†							
	Linear	Rings	Linear	Rings	ITH	*5ESS* Switch	*DMS-100*‡ Switch	*EWSD*§ Switch	*GTD-5*¶ Switch	
R4.4 RT	R6.2	R13.0 R11.1 R11.0 R9.1 R9.0 R7.2 R7.1 R7.0	R2.2	R3.1	AT2.0	5E10 5E9.2** 5E9.1††	ESMA interface w/ NA007	R13	R1.7.2.2 EB1	R3.0 R2.1
R4.5 RT	R8.0 R6.2	R13.0 R11.1 R11.0 R9.1 R7.2 R7.1	R2.2	R3.1	AT2.0	5E10 5E9.2** 5E9.1††	ESMA interface w/ NA007	R13	R1.7.2.2 EB1	R3.0 R2.1
R4.6 RT	R8.0 R6.2	R13.0 R11.1 R11.0 R9.1 R7.2 R7.1	R2.2	R3.1	AT2.0	5E13(1)‡‡ 5E12(1)§§ 5E11(1)¶¶ 5E10 5E9.2** 5E9.1††	ESMA interface w/ NA007	R13	R1.7.2.2 EB1	R3.0 R2.1

* Switch generics that are integrated TR-08 compatible are *5ESS* Switch (5E1.2 and later), *DMS-100* Switch, and *EWSD* Switch (R9.0). The *GTD-5* Switch is *not* TR-08 compatible. The TR-303 software compatibility testing with the Siemens *EWSD* Switch was performed and documented by Siemens Aktiengesellschaft. Thus, Lucent Technologies assumes no responsibility for the software compatibility when the *SLC*-2000 Access System is used with the *EWSD* Switch.

† *SLC*-2000 Access System will interface with OC-12 Software Releases.

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¶ Registered trademark of GTE Corporation.

** 5E9.2 with BWM95-0005 (or higher).

†† 5E9.1 with BWM95-0004 (or higher). IDCU only for TR-303.

‡‡ Beginning Managed Introduction (BMI) of 5E13(1) required for the VFDE feature.

§§ 5E12(1) with SU package 98-0007 (or higher) required for the VFDE feature.

¶¶ 5E11(1) with SU package 98-0008 (or higher) required for the VFDE feature.

Customer Assistance and Technical Support

Regional Technical Assistance Center (RTAC)

Introduction

Lucent Technologies provides customer assistance for the *SLC*-2000 Access System including, but not limited to, troubleshooting assistance, technical consultation, operational problem consultation, procedural advice, and emergency recovery assistance from a qualified system support professional from the Regional Technical Assistance Center (RTAC).

1-800-225-RTAC

Service is provided from the RTAC at **1-800-225-RTAC** (1-800-225-7822). This telephone number is monitored 24 hours a day, 7 days a week. During regular business hours, your call will be answered by your local regional RTAC. Outside normal business hours, all calls will be answered at a centralized technical assistance center where service-affecting problems will be dispatched immediately to your local RTAC. All other problems will be referred to your local RTAC on the next regular business day.

Information Products (IPs)

Documentation

Introduction

This part contains the *SLC*-2000 Access System documentation plan and bibliography (list of references).

How to order

To order copies of documents and/or to request placement on the standing order list, send or call in an order.

Customer	Mail Order	Telephone Order *(Monday Through Friday)*
Commercial customers*	Lucent Technologies Customer Information Center Attention: Order Entry Center 2855 N. Franklin Road P.O. Box 19901 Indianapolis, IN 46219	Within USA: **1-888-LUCENT8** or **1-888-582-3688** 7:30 a.m to 6:30 p.m. EST FAX: **1-317-322-6484** From Canada: **1-800-255-1242** Worldwide: **1-317-322-6416** FAX: **1-317-322-6699**
RBOC/BOC	Process through your Company documentation coordinator	

* For commercial customers, a check, money order, purchase order number, or charge card number is required with all orders. Make checks payable to Lucent Technologies. Lucent Technologies entities should use Form IND 1-80.80 FA, available through the Customer Information Center.

Documentation (Continued)

Documentation plan

The following documents provide additional information about the *SLC*-2000 Access System.

363-205-004, *SLC-2000 Multi-Services Distant Terminal (MSDT) Feature, User/Service and Ordering Manual*

Audience — Engineers, network planners, product evaluators, standardization groups, installers, administrators, operation and maintenance personnel, and technical support.

Content — Applications, physical and functional description, administration, powering, technical specifications, construction and installation, operation and maintenance [in task-oriented practices (TOP) format], and ordering information.

363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide*

Audience — Network planners, engineers, product evaluators, standardization groups, and ordering personnel.

Content — Benefits and features, applications, services, product description, parts list, ordering information, system specifications and requirements, and environmental data. Refer to the customer assembly manual for ordering configurations for central office and remote terminal frame arrangements.

363-208-001, *SLC-2000 Access System, User/Service Manual*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — System overview, description, introduction to each system interface, administration and provisioning, operations and maintenance procedures (TOP format), and maintenance support information (alarm tables, etc.).

363-208-010, *SLC-2000 Access System, Customer Assembly Manual for RT Frames*

Audience — Customers that plan to install the equipment.

Content — Configuration drawings and detailed instructions for ordering, installing, assembling, and connecting the equipment in an RT frame arrangement. This document includes installation procedures, cabling and wiring diagrams, the application schematic diagrams (SDs), a parts list, and supporting information. Shelf assembly, cable routing, and frame installation are provided.

(Continued on next page)

Documentation (Continued)

Documentation plan (continued)

363-208-011, *SLC-2000 Access System, Customer Assembly Manual for COT Frames*

Audience — Customers that plan to install the equipment.

Content — Configuration drawings and detailed instructions for ordering, installing, assembling, and connecting the equipment in a COT frame arrangement. This document includes installation procedures, cabling and wiring diagrams, the application schematic diagrams (SDs), a parts list, and supporting information. Shelf assembly, cable routing, and frame installation are provided.

363-208-020, Issue 2, *SLC-2000 Access System, Software Release Description — Release 3.01.01*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides information about the software release and procedures for implementation. Describes the features and capabilities provided in the release. Lists operating issues from the previous release that have been resolved, the operating issues in this release, and any work-around.

363-208-022, Issue 4, *SLC-2000 Access System, Software Release Description — Release 3.02.00*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides information about the software release and procedures for implementation. Describes the features and capabilities provided in the release. Lists operating issues from the previous release that have been resolved, the operating issues in this release, and any work-around.

363-208-022, Issue 5, *SLC-2000 Access System, Software Release Description — Release 3.03.00*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides information about the software release and procedures for implementation. Describes the features and capabilities provided in the release. Lists operating issues from the previous release that have been resolved, the operating issues in this release, and any work-around.

(Continued on next page)

Documentation (Continued)

Documentation plan (continued)

363-208-023, Issue 2, *SLC-2000 Access System, Software Release Description — Release 4.00.02*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides information about the software release and procedures for implementation. Describes the features and capabilities provided in the release. Lists operating issues from the previous release that have been resolved, the operating issues in this release, and any work-around.

363-208-024, Issue 1, *SLC-2000 Access System, Software Release Description — Release 4.01.00*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides information about the software release and procedures for implementation. Describes the features and capabilities provided in the release. Lists operating issues from the previous release that have been resolved, the operating issues in this release, and any work-around.

363-208-024, Issue 3, *SLC-2000 Access System, Software Release Description — Release 4.02.00*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides information about the software release and procedures for implementation. Describes the features and capabilities provided in the release. Lists operating issues from the previous release that have been resolved, the operating issues in this release, and any work-around.

363-208-026, Issue 2, *SLC-2000 Access System, Software Release Description — Release 4.04.01*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides information about the software release and procedures for implementation. Describes the features and capabilities provided in the release. Lists operating issues from the previous release that have been resolved, the operating issues in this release, and any work-around.

(Continued on next page)

Documentation (Continued)

Documentation plan (continued)

363-208-026, Issue 3, *SLC-2000 Access System, Software Release Description — Release 4.04.02*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides information about the software release and procedures for implementation. Describes the features and capabilities provided in the release. Lists operating issues from the previous release that have been resolved, the operating issues in this release, and any work-around.

363-208-027, Issue 2, *SLC-2000 Access System, Software Release Description — Release 4.05.00*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides information about the software release and procedures for implementation. Describes the features and capabilities provided in the release. Lists operating issues from the previous release that have been resolved, the operating issues in this release, and any work-around.

363-208-028, Issue 2, *SLC-2000 Access System, Software Release Description — Release 4.06.00*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides information about the software release and procedures for implementation. Describes the features and capabilities provided in the release. Lists operating issues from the previous release that have been resolved, the operating issues in this release, and any work-around.

363-206-200, *DDM-2000 OC-3 and OC-12 Multiplexer, Applications, Planning, and Ordering Guide*

Audience — Network planners, engineers, product evaluators, standardization groups, and ordering personnel.

Content — Provides specific information about the features, applications, operation, engineering, and ordering of the DDM-2000 OC-3 and OC-12 Multiplexers.

(Continued on next page)

Documentation (Continued)

Documentation plan (continued)

363-206-202, *DDM-2000 OC-3 Multiplexer, User/Service Manual — Releases 2, 3, 4, 5, 6, and 7*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — System overview, system description, introduction to each system interface, administration and provisioning, operations and maintenance procedures (in TOP format), and maintenance support information (alarm tables, etc.).

363-206-218, *DDM-2000 OC-3 Multiplexer, Software Release Description, Release 7.0.2*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides information about the software release and procedures for implementation. Describes the features and capabilities provided in the release. Lists operating issues from the previous release that have been resolved, the operating issues in this release, and any work-arounds.

363-206-242, *DDM-2000 OC-3 Multiplexer, Software Release Description, Release 6.2.2*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides information about the software release and procedures for implementation. Describes the features and capabilities provided in the release. Lists operating issues from the previous release that have been resolved, the operating issues in this release, and any work-arounds.

363-206-243, *DDM-2000 OC-3 Multiplexer, Software Release Description, Release 7.1.2*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides information about the software release and procedures for implementation. Describes the features and capabilities provided in the release. Lists operating issues from the previous release that have been resolved, the operating issues in this release, and any work-arounds.

(Continued on next page)

Documentation (Continued)

Documentation plan (continued)

363-206-245, *DDM-2000 OC-3 Multiplexer, Software Release Description, Release 9.0*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides information about the software release and procedures for implementation. Describes the features and capabilities provided in the release. Lists operating issues from the previous release that have been resolved, the operating issues in this release, and any work-arounds.

363-206-246, *DDM-2000 OC-12 Multiplexer, Software Release Description, Release 2.2.1*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides information about the software release and procedures for implementation. Describes the features and capabilities provided in the release. Lists operating issues from the previous release that have been resolved, the operating issues in this release, and any work-arounds.

363-206-247, *DDM-2000 OC-12 Multiplexer, Software Release Description, Release 3.1.1*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides information about the software release and procedures for implementation. Describes the features and capabilities provided in the release. Lists operating issues from the previous release that have been resolved, the operating issues in this release, and any work-arounds.

363-206-253, *DDM-2000 OC-3 Multiplexer, Software Release Description, Release 7.2*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides information about the software release and procedures for implementation. Describes the features and capabilities provided in the release. Lists operating issues from the previous release that have been resolved, the operating issues in this release, and any work-arounds.

(Continued on next page)

Documentation (Continued)

Documentation plan (continued)

363-206-280, *DDM-2000 OC-3 Multiplexer — Releases 8 and 9 — User/Service Manual*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — System overview, system description, introduction to each system interface, administration and provisioning, operations and maintenance procedures (in TOP format), and maintenance support information (alarm tables, etc.).

363-206-300, *DDM-2000 FiberReach Multiplexer, Applications, Planning, and Ordering Guide*

Audience — Network planners, engineers, product evaluators, standardization groups, and ordering personnel.

Content — Provides specific information about the features, applications, operation, engineering, and ordering of the DDM-2000 OC-3 and OC-12 Multiplexers.

363-206-301, *DDM-2000 FiberReach Multiplexer, User/Service Manual*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — System overview, system description, introduction to each system interface, administration and provisioning, operations and maintenance procedures (in TOP format), and maintenance support information (alarm tables, etc.).

824-102-148, *2000 Family of Products, Operations Systems Engineering Guide*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides detailed information about the operations system (OS) interface to the systems in the 2000 Product Family for engineering an OS.

824-102-149, *SLC-2000 Access System, Operations Systems Engineering Guide*

Audience — Installers, technicians, engineers, and troubleshooters.

Content — Provides detailed information about the OS interface to the *SLC*-2000 Access System (how the systems communicate with each other) for engineering an OS.

Documentation (Continued)

Supported tasks

The documents listed in the documentation plan support the following tasks.

Planning

- 363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide*
- 363-205-004, *SLC-2000 Multi-Services Distant Terminal (MSDT) Feature, User/Service and Ordering Manual*
- 824-102-148, *2000 Family of Products, Operations Systems Engineering Guide (OSEG)*.

System engineering

- 363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide*
- 363-208-010, *SLC-2000 Access System, Customer Assembly Manual for RT Frames* (equipment required for RT frame arrangements)
- 363-208-011, *SLC-2000 Access System, Customer Assembly Manual for COT Frames* (equipment required for COT frame arrangements)
- 363-205-004, *SLC-2000 Multi-Services Distant Terminal (MSDT) Feature, User/Service and Ordering Manual*.

Ordering

- 363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide* (parts list)
- 363-205-004, *SLC-2000 Multi-Services Distant Terminal (MSDT) Feature, User/Service and Ordering Manual*.

Circuit order and channel unit applications

- 363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide*
- 915-710-116, *SLC Series 5 Carrier System, Channel Unit Application and Prescription Setting*.

(Continued on next page)

Documentation (Continued)

Supported tasks (continued)

System installation

- 363-208-010, *SLC-2000 Access System, Customer Assembly Manual for RTs*
- 363-208-011, *SLC-2000 Access System, Customer Assembly Manual for COT Frames*.

Acceptance, turn-up, maintenance, and system provisioning

- 363-208-001, *SLC-2000 Access System, User/Service Manual* (TOP procedures and Data Sheets)
- 363-208-003, *SLC-2000 Access System, Commands and Messages* (command pages)
- 363-205-004, *SLC-2000 Multi-Services Distant Terminal (MSDT) Feature, User/Service Manual*.

Cabling/wiring maintenance

- 363-208-010, *SLC-2000 Access System, Customer Assembly Manual for RT Frames*
- 363-208-011, *SLC-2000 Access System, Customer Assembly Manual for COT Frames*.

Channel unit installation

- 363-208-001, *SLC-2000 Access System, User/Service Manual* (TOP procedures)
- 915-710-116, *SLC Series 5 Carrier System, Channel Unit Application and Prescription Setting*.

Administration

- 363-208-001, *SLC-2000 Access System, User/Service Manual*.

Remote Operations

- 824-102-148, *2000 Family of Products Operations System Engineering Guide (OSEG)*
- 363-208-003, *SLC-2000 Access System, Commands and Messages*.

Training

Introduction

The National Product Training Center in Altemonte Springs, Florida, provides management courses for planning, engineering, and ordering as well as training for telecommunications technicians in installation, operations, and maintenance. Suitcasing of these courses may be available. Consult your local Lucent Technologies Account Executive for more information or reservations.

Enroll using 1-888-LUCENT8

Call the training coordinator for your company to get information on these and other training courses available, on schedules, fees, and registration. If your company does not have an assigned training coordinator, call this toll-free number [1-888-LUCENT8 (1-888-582-3688)] Monday through Friday, 7:30 a.m. to 5:30 p.m. EST. Use this number to order a product training catalog, get more information about a course, find out about new courses, or to register for a class. However, in Canada, please call 1-800-221-1647**.**

When you call 1-888-LUCENT8, select Option 2 (press ABC 2 one time on a touch-tone phone) for Lucent Technologies product training.

Enroll using COMCATS

You may also use a computer and modem to log into the on-line catalog, computerized catalog system (COMCATS).

Set your terminal options to the following values.

- 300/1200/2400 baud rate
- Full duplex
- Space parity
- 7 data bits
- 1 stop bit.

dial:	1-800-662-0662 or 614-764-5566
login:	comcats
password:	at&tcat

If you have trouble accessing COMCATS, call 1-888-LUCENT8 and ask to speak with the COMCATS Administrator.

Training (Continued)

LE2000, *SLC*-2000 Access System Planning and Engineering Overview

Audience

This course is designed for telecommunication managers responsible for the planning, implementation, and maintenance of the *SLC*-2000 Access System.

Length

2 days

Content

Applications, planning considerations, features and benefits, functional description, testing, basic maintenance, and ordering procedures.

Media

Instructor-led format with visual media and class discussion. End-of-unit review exercises are used to reinforce the lecture. Each student will be provided with 363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide*.

Prerequisite

Students *must* be familiar with transmission principles (TR-0510, *Transmission Principles*).

(Continued on next page)

Training (Continued)

LE2010, *SLC*-2000 Access System Overview

Audience

This course is designed for anyone who would like an overview of the *SLC*-2000 Access System.

Length

4 hours

Content

An overview that will help you to understand the purpose of the *SLC*-2000 Access System and how it fits into the telephony network.

Media

A self-paced, interactive multimedia course delivered using CD-ROM. Students must have a computer compatible with MPC-II. All software needed to view the training is included on the CD-ROM.

Prerequisite

Previous knowledge of transmission principles (TR0510, *Transmission Principles*).

(Continued on next page)

Training (Continued)

TR4610, *SLC*-2000 Access System Operation and Maintenance

Audience

This course is designed for telecommunication central office, outside plant, and maintenance personnel responsible for installing and maintaining the system.

Length

4 days

Content

A comprehensive study of the *SLC*-2000 Access System and the MSDT that includes a physical description, functional description, testing, basic maintenance, and system turnup.

Media

A combination of instructor lectures and class discussion. The information will be reinforced with a quiz and hands-on exercises on operational systems that are typical of those in the field.

Prerequisite

Students *must* be familiar with transmission principles (TR-0510, *Transmission Principles*) and the DDM-2000 OC-3 multiplexer (LW2603, *DDM-2000 OC-3 Multiplexer Linear Operation, Maintenance, and Administration*, or LW2608, *DDM-2000 OC-3 Multiplexer Ring Networks Operation, Maintenance, and Administration*).

Electronic and Alternative Media

Overview

Information products (IPs) for the *SLC*-2000 Access System are available in electronic form on compact disk, read-only memory (CD-ROM) and floppy disk. Also, IPs are maintained on the Internet (behind the Lucent Technologies firewall).

CD-ROM

CD-ROM has many advantages over traditional paper documentation, including cost savings, search and retrieve capability, and the assurance of the most current IPs. CD-ROM is available by annual subscription (on standing order).

Technical information for the CD-ROM

For CD-ROM technical information, call Lucent Technologies IP Support (1-888-LTINFO6).

Pricing information

For pricing information, contact your Lucent Technologies Network Systems Account Executive or the Lucent Technologies Customer Information Center (1-888-LUCENT8).

How to order

To order, call your Technical Information Resource Manager, your Lucent Technologies Account Executive, or the Lucent Technologies Customer Information Center (1-888-LUCENT8).

The Lucent Technologies Intranet

For *Intranet* technical information, call the Electronic Media Networked Service (EMNS) group at Lucent Technologies (1-800-228-6763). The URL for transmission IPs is **http://www-emns.nw.lucent.com/infoware/trans/index.html/**. This URL can only be accessed by Lucent Technologies personnel.

The Internet

For *Internet* technical information, call the EMNS group at Lucent Technologies (1-800-228-6763). The URL for transmission IPs is **http://www.lucent-info.com/**.

How to Order

Additional copies

To order additional copies of this document (**363-208-003**) and/or to request placement on the standing order list, send or call in an order.

Customer	Mail Order	Telephone Order *(Monday Through Friday)*
Commercial customers*	Lucent Technologies Customer Information Center Attention: Order Entry Center 2855 N. Franklin Road P.O. Box 19901 Indianapolis, IN 46219	Within USA: **1-888-LUCENT8** or **1-888-582-3688** 7:30 a.m to 6:30 p.m. EST FAX: **1-317-322-6484** From Canada: **1-800-255-1242** Worldwide: **1-317-322-6416** FAX: **1-317-322-6699**
RBOC/BOC	Process through your Company documentation coordinator	

* For commercial customers, a check, money order, purchase order number, or charge card number is required with all orders. Make checks payable to Lucent Technologies. Lucent Technologies entities should use Form IND 1-80.80 FA, available through the Customer Information Center.

One-time orders

One-time orders include a binder (if applicable) and the IP contents for the current issue in effect at the time of order. Also, you may request placement on the standing order list for all later reissues of any IP. The standing order list for each IP provides automatic distribution for all reissues of the IP. The Regional Bell Operating Company (RBOC)/Bell Operating Company (BOC) customers should process IP orders or standing order requests through their Company Documentation Coordinator.

How to Comment

Feedback forms

Two feedback forms are located immediately after the legal page of this document.

Missing feedback forms

If the feedback forms are missing, please send your comments and suggestions to the following location.

Lucent Technologies
Network Systems, Customer Training and Information Products
Documentation Services
2400 Reynolda Road
Winston-Salem, NC 27106-4606

Toll-free number

You may report errors or request changes to this document by calling the toll-free number (**1-888-LTINFO**) and giving the 9-digit number for the IP, **363-208-003**.

User Interfaces

1

Contents

About the User Interfaces 1-2

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About the User Interfaces

Overview

Introduction

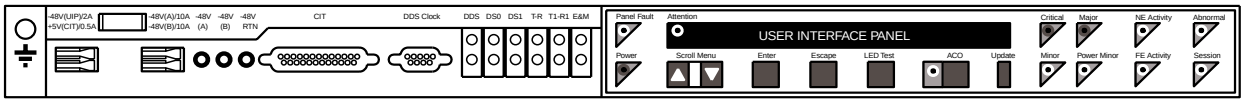
This chapter describes the user interfaces to the *SLC*®-2000 Access System. The user interface to the system is provided by the user interface panel (UIP) and the craft interface terminal (CIT).

User Interface Panel (UIP)

Overview

Description

The UIP is a maintenance and control panel built into the system and located above the access resource manager (ARM) shelf. The *SLC*-2000 Access System provides craft personnel access to the system. No special equipment is required to use the control functions of the UIP. Access to these functions is provided by push-button switches on the panel.



81386201.eps

Two UIP sections

The UIP is divided into the maintenance and display sections. The maintenance section permanently mounts to the ARM shelf. However, the display section can be removed to allow field replacement.

Types of CIT access

The UIP supports the following types of access using a CIT.

Local

The CIT connects directly to the CIT connector on the UIP.

Remote with modems

NOTE:
The remote login without modems requires a *null*-modem.

The CIT at a remote site communicates with the *SLC*-2000 Access System through modems. One modem connects to the CIT connector on the UIP, and another connects to the CIT at the remote site.

Remote through the data communications channel (DCC)

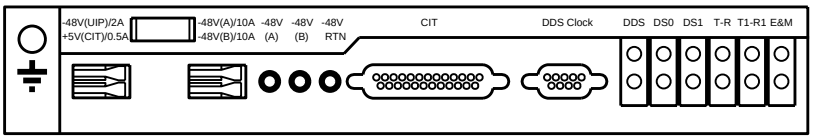
A CIT connected to another network element in the subnetwork communicates with the *SLC*-2000 Access System through the DCC.

Maintenance Section

Description

The maintenance section contains fuses, jacks, and connectors.

NOTE:
The *channel side* looks toward the channel unit (CU), while the *drop side* looks toward the drop.



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Banana jack

ESD

The electrostatic discharge (ESD) ground banana jack is a convenient grounding point for an ESD wrist strap. Always wear an ESD wrist strap when handling circuit packs to prevent possible damage to the packs.

Fuses

–48V(A)/10A and –48V(B)/10A

The –48V(A)/10A and –48V(B)/10A are WP-90247, L115 fuses that provide fusing for the two –48 V feeders supplying the ARM shelf.

–48V/2A-UIP

The –48V/2A-UIP is a WP-90247, L109 fuse that provides fusing for the UIP display section power.

+5V/0.5A-CIT

The +5V/0.5A-CIT is a WP-90247, L103 fuse that provides fusing for the +5 V power available at the CIT connector.

(Continued on next page)

Maintenance Section (Continued)

Pin jacks

–48(A), –48(B), and –48 RTN

The –48(A), –48(B) and –48 RTN are pin jacks used as test points for monitoring the –48 V feeders supplying the ARM shelf. These jacks are not protected by fuses.

Connectors

CIT

The CIT 25-pin EIA-232-D female connector is a connection point for the CIT or modem.

DDS Clock

The DDS Clock 9-pin female D-type connector is a connection point for a data test set for digital data service (DDS) testing.

Bantam jacks

DDS

The DDS bantam jacks provide transmit and receive side access to the DDS signal for DDS testing. The labels for the TRMT/RCV jacks (top/bottom jacks, respectively) are located on the inside of the UIP cover.

DS0

NOTE:
For DS0 jacks, digital access is provided to the digital side of the channel units, while access to the feeder direction of the system is *not* provided.

The DS0 bantam jacks provide transmit and receive side access to voice frequency equivalent, the digital bit stream is converted to analog, of a single DS0 time slot signal for channel testing. The labels for the TRMT/RCV jacks (top/bottom jacks, respectively) are located on the inside of the UIP cover.

DS1

The DS1 bantam jacks provide transmit and receive side access to a selected DS1 feeder. The labels for the IN/OUT jacks (top/bottom jacks, respectively) are located on the inside of the UIP cover.

(Continued on next page)

Maintenance Section (Continued)

Bantam jacks (continued)

T/R

The T/R bantam jacks provide channel and drop side access to tip and ring. The CHAN/DROP labels for the T/R jacks (top/bottom jacks, respectively) are located on the inside of the UIP cover.

T1/R1

The T1/R1 bantam jacks provide channel and drop side access to tip 1 and ring 1 for testing 4-wire circuits. The CHAN/DROP labels for the T1/R1 jacks (top/bottom jacks, respectively) are located on the inside of the UIP cover.

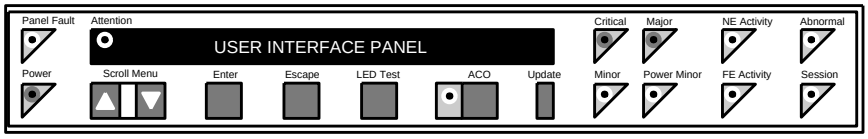
E/M

The E/M bantam jack provides channel side access to E&M. The CHAN label for the E&M jack is located on the inside of the UIP cover.

Display Section

Description

The display section of the UIP contains alarm indicators, an alphanumeric display, switches, and a connector.



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Light-emitting diode (LED) alarm indicators

Panel Fault

Panel Fault is a red LED alarm indicator that lights when a fault is present in the UIP internal circuitry.

Power

Power is a green LED alarm indicator that lights when –48 V is present at the UIP.

Attention

Attention is a yellow LED alarm indicator that lights when the alphanumeric message display (AMD) contains information to view.

ACO

ACO is a green LED alarm indicator reserved for *future* central office terminal (COT) applications. Lights when an alarm cut off (ACO) function is active.

Critical

Critical is a red LED alarm indicator that lights when a critical alarm is present.

Major

Major is a red LED alarm indicator that lights when a major alarm is present.

Minor

Minor is a yellow LED alarm indicator that lights when a minor alarm is present.

(Continued on next page)

Display Section (Continued)

LED alarm indicators (continued)

Power Minor

Power Minor is a yellow LED alarm indicator that lights when a power minor alarm is present.

NE Activity

NE Activity is a yellow LED alarm indicator that lights when the displayed alarm is at the near end of the system.

FE Activity

FE Activity is a yellow LED alarm indicator that lights when the displayed alarm is at the far end of the system.

Abnormal

Abnormal is a yellow LED alarm indicator that lights when an abnormal craft-induced state is present (for example, a loopback or force to protection).

Session

Session is a yellow LED alarm indicator that lights when a remote terminal session is in progress.

Display

Alphanumeric message display

The alphanumeric message display (AMD) is a 24-character, 0.5-inch by 7-inch dot matrix alphanumeric display. Use this display with the command entry switches to do many operations without a CIT.

Switches and push buttons

The UIP has push buttons and a single-line 24-character display that provides access to menus for system operations, status, and reports. Chapter 2, "Procedures," contains procedures for how to access the UIP menu commands. Each menu command is detailed in Chapter 5, "UIP Commands."

(Continued on next page)

Display Section (Continued)

Switches and push buttons (continued)

Scroll Menu (Up/Down)

Use the Scroll Menu Up ▲ and Down ▼ command entry push buttons to scroll up and down through possible selections in a menu.

Enter

Enter is a command entry push-button switch used to select or execute the item or command currently displayed.

Escape

Escape is a command entry push-button switch that returns the display to the *main* menu.

LED Test

LED Test is a push-button switch that *while* pushed lights all common unit LED alarm indicators and all the pixels in the alphanumeric message display (AMD). The UIP lights its own LED alarm indicators, while the remaining LED alarm indicators are lighted by the provisioning and display controller (PDC).

ACO

ACO is a push-button switch used at the central office terminal (COT). Pushing this switch in the presence of alarms terminates the alarm contact closures at the central office except for the system identification (ID) contacts. The LED alarm indicator associated with the switch is lighted to signal to the craft personnel that ACO function is active.

Update

NOTE:
Although pressing the UPDATE push-button switch clears all feeder alarms, alarm conditions may still be present. This may cause the RT to be out of sync with the local digital switch (LDS).

Update is a push-button switch that updates the configuration in memory to the current configuration.

Craft Interface Terminal (CIT)

Overview

Description

The CIT refers to an ASCII terminal, which may be used to access the *SLC*-2000 software for system turnup, administration, and provisioning and maintenance. The CIT is connected to the system through a connector on the UIP either directly or remotely using a local modem.

Compatible terminals and modems

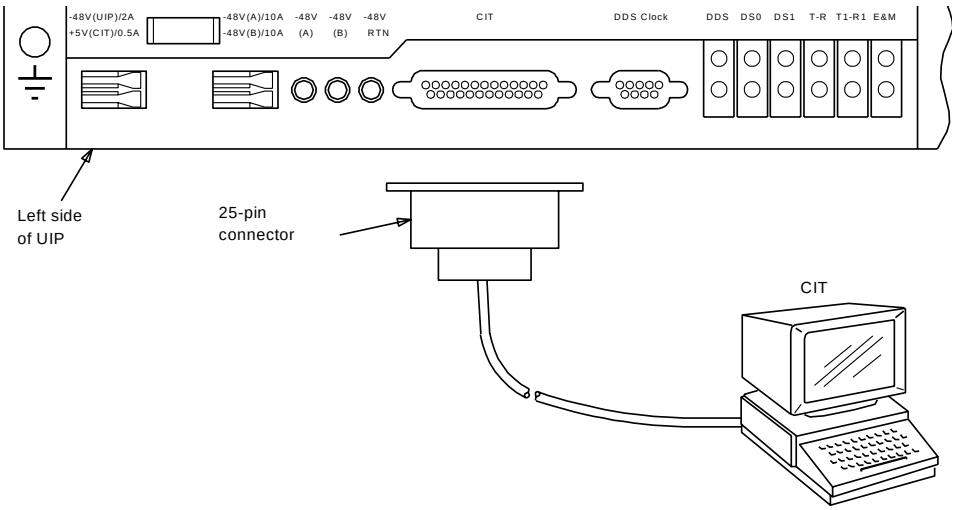
A CIT can be either an ASCII terminal or a PC running software that emulates an ASCII terminal (for details, see the section for miscellaneous equipment and tools located in Chapter 11 “Ordering,” of 363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide*).

(Continued on next page)

Local Access

Description

The CIT plugs into the 25-pin (EIA-232 type) connector of the UIP as shown in the following figure. The CIT feature is available for the Synchronous Optical Network (SONET) and DLC subsystems in *SLC*-2000 Access System. Procedures for local access are given in Chapter 2, "Procedures."



82031401.eps

Remote Login Access

Description

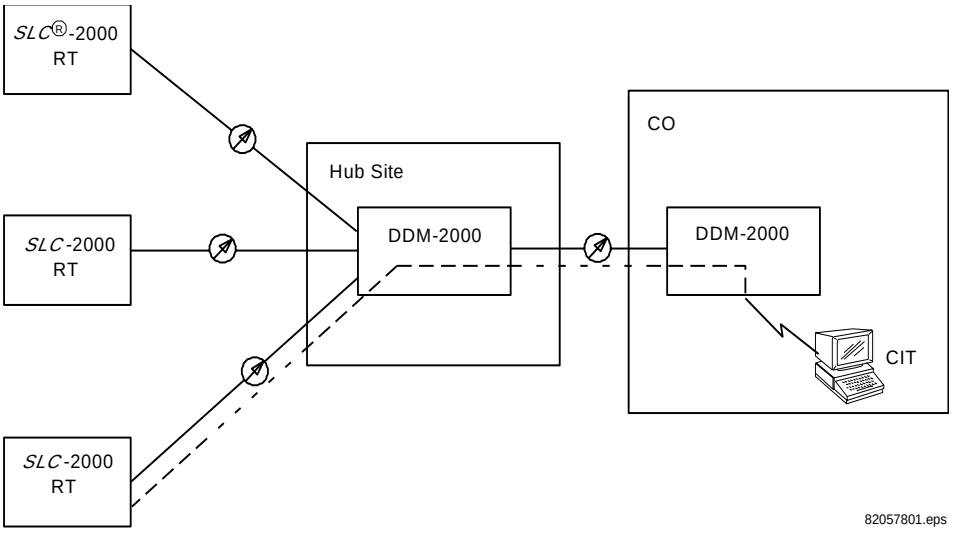
Remote login allows access from the local *network element* to other network elements in the subnetwork. Relative to the CIT, the *local* network element is the physical system to which it is connected [DDM-2000 multiplexer at the central office or a *SLC*-2000 Access System at a central office terminal (COT) or remote terminal (RT)]. Each network element will support one incoming remote login and one outgoing remote login at the same time (over the data communications channel). You can remotely log in on only one network element at a time.

Local log in

To access remote network elements, you must first log in successfully to the local network element.

Remote log in

After establishing a local session, use the SONET subsystem command, rlgn, to start a remote session. Chapter 2, "Procedures," describes the procedure for remote login access. When you have established a remote session, the local network element will send all user input to the remote session and return the remote session output for display on the CIT. The following figure is an *example* showing a remote CIT login from one network element to another in a SONET subnetwork.



(Continued on next page)

Remote Login Access (Continued)

Toggle between sessions

The local network element allows a user that has local and remote sessions in progress to *toggle* between each session with a CONTROL T (press and hold CONTROL *and* press T). See the SONET subsystem command, toggle.

Log out of a remote login session

Use the *logout* command to end a remote login session. See the SONET subsystem command, logout.

Procedures

2

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About the Menu/Prompt Format of the UIP

Overview

Introduction

This chapter describes and shows the menu and prompt format for the user interface panel (UIP). This chapter also provides specific procedural activities for accessing the *SLC*®-2000 Access System using the craft interface terminal (CIT).

- Logging in/out
- Menu format
- Prompt format
- Command mode (direct entry).

First in/first out command execution

The *SLC*-2000 Access System queues the commands issued by the CIT and UIP together and executes respective to the order received. Thus, before executing, the command may be delayed. For example, press the LED Test push button located on the UIP. Immediately follow with a digital loop carrier (DLC) subsystem command (for example, ENT-T0). The DLC subsystem command will not execute until the system completes the light-emitting diode (LED) test.

Display of new alarms and faults

The UIP does not display new alarms or faults while commands issued by the CIT are in progress. Thus, alarm reporting at the UIP is delayed. When the in-progress CIT command completes, the delayed alarms or faults are displayed at the UIP.

User Interface Panel (UIP)

Description

Introduction

CAUTION:
Commands that require confirmation may affect service when that command is executed.

The alphanumeric message display (AMD) displays the commands and parameters/options for the display section of the user interface panel. The main menu commands are shown in **bold** face type on the left-hand side. Options for a command are displayed in a submenu (shown as boxes containing a list of items). Some commands display a confirmation prompt after the option(s) have been selected. These commands have the word *confirm* on the right-hand side.

(Continued on next page)

Description (Continued)

UIP menu stack

Command - Name

MAIN MENU — List the system commands. Use the Scoll Menu up and down buttons until the desired item is displayed, then press Enter to choose or confirm your choice. Press Escape to start over.

RETRIEVE-FAULTS — List active faults (local to *SLC*®-2000 RT) with high test priority fault listed first. Use Scroll Menu pushbuttons to browse through fault messages.

RETRIEVE-ALARMS — List active system alarms (local to *SLC*-2000 RT with most critical alarm listed first) sent or received by the *SLC*-2000 RT. Use Scroll Menu buttons to browse through alarm messages.

Command	Command - Selection	Command - Option	
INITIALIZE-CRS — Establishes the default DS1 feeder to VRT (T1) and DS0 time slot in DS1s (T0).	INIT-CRS:T1 INIT-CRS:T0	INIT-CRS:T#:vrt1 INIT-CRS:T#:vrt2 INIT-CRS:T#:vrt3 INIT-CRS:T#:vrt4 INIT-CRS:T#:vrt5 INIT-CRS:T#:vrt6 INIT-CRS:T#:vrt7 INIT-CRS:T#:vrt8	CONFIRM *
INITIALIZE-SYSTEM — Initialize provisioning memory of DLC subsystem (use only during initial turnup).			CONFIRM *
RETRIEVE-PROG-VRSN — List the System and SMU software version information for all subsystem software packages [digital loop carrier (DLC), SONET (SNT), and test head controller (THC)]. Use Scroll Menu buttons to view list.			
RETRIEVE-STATE — Return the states of VRTs 1 through 8 per VTU (12 34 45 78) (I = In service, - = Out-of-service). For example, output could be VRT STATES: II II - - - - - .			
SET-BAUD — Set baud rate for local craft Interface terminal access	300 4800 1200 [9600] 2400 19200		
SET-DISTRIBUTION — Set the distribution configuration of a VRT to metallic copper drops (METL) or Fiber-in-the-Loop (FITL).	SHELF 1 SHELF 5 SHELF 2 SHELF 6 SHELF 3 SHELF 7 SHELF 4 SHELF 8	[MET] FITL	CONFIRM *
SET-FEEDER — Select the feeder faclity configuration.	[VTU] LIU		CONFIRM *
SET-MODE-TR8 — Select the TR-08 mode of operation for VRT pairs in an MDS Assembly.	SET-MODE:vrt1&2 SET-MODE:vrt3&4 SET-MODE:vrt5&6 SET-MODE:vrt7&8	SET-MODE:vrt#s:1 SET-MODE:vrt#s:2	CONFIRM *
SET-NE — Configure the DLC subsystem for either RT or COT operation	SET-NE:[RT] SET-NE:COT		CONFIRM *
SET-STATE-SMU — Enable or disable the software installation feature in the SMU	ENABLED DISABLED		CONFIRM *
SWITCH-CORE — Force switch, inhibit switching, or reset protection switch priority in bandwidth management section (CORE)	RESET INHIBIT FORCE ->1 FORCE ->2		CONFIRM *
SWITCH-LIU — Force switch, lockout switching, manually switch, or reset protection switch priority in LIU feeder circuit packs.	SWITCH-LIU:1 SWITCH-LIU:2 SWITCH-LIU:3 SWITCH-LIU:4 SWITCH-LIU:5 SWITCH-LIU:6 SWITCH-LIU:7 SWITCH-LIU:8	SWITCH-LIU:#:Reset SWITCH-LIU:#:Lockout SWITCH-LIU:#:Force SWITCH-LIU:#:Manual	CONFIRM *
TEST-SHELF — Perform LED test on MDS to check intershelf connectivity.	1 & 2 3 & 4 5 & 6 7 & 8		
TEST-VRT-ALARM — Send an alarm from a VRT to far end equipment to test remote alarm links.	VRT1 VRT2 VRT3 VRT4 VRT5 VRT6 VRT7 VRT8	MJ MN DGRP A DGRP B DGRP C DGRP D	CONFIRM*

**** CAUTION: You must confirm these commands because they may affect service.***

uip4.eps

Description (Continued)

Scroll menu buttons

Use the Scroll Menu buttons (Up ▲ and Down ▼ arrows) to view the commands in the main menu. Press the Enter button to select the displayed command. Use the Escape button to normally return the display to the main menu and to interrupt (abort) certain commands. (See Chapter 5, "UIP Commands," for interrupting a specific command).

UIP AMD

The AMD normally is *not* lighted when the UIP is not processing a command. The display times out (is not lighted) after 1.5 hours when a command is not in progress. To light the display, press any button on the UIP. In the main menu, the RETRIEVE-FAULTS command is displayed first because of its importance — it lists the items to be fixed.

Attention LED alarm indicator

When the Attention LED alarm indicator is lighted, a *fault* or *alarm* message is waiting to be displayed. Display the oldest and highest priority fault or alarm message using the UIP commands, RETRIEVE-FAULTS or RETRIEVE-ALARMS (see Chapter 8, "Output Messages and Reports"). When more than one fault or alarm message exists, you can *scroll* down to display each message in the list. The Attention LED alarm indicator remains lighted while messages are being displayed until the last message has been displayed.

Some messages are automatically displayed by the system in response to provisioning and display controller (PDC) or UIP faults, button pushes, or when the system controller (SYSCTL) is inserted. However, automatic messages from SYSCTL insertion or SYSCTL button pushes are suppressed when a UIP command is in progress. See Chapter 8, "Output Messages and Reports" for a description of the automatic messages.

Default values

Default values for the UIP commands are shown in square brackets ([ ]) on the AMD. These values execute automatically if you do not select a different value *and* you press the Enter button on the UIP.

Craft Interface Terminal (CIT)

Local Access

Verify SONET subsystem software release

Before proceeding, verify the current synchronous optical network (SONET) subsystem (SNT) software release (see UIP command, RETRIEVE-PROG-VERS).

EIA-232D CIT connector on the UIP

CAUTION:
Unexpected problems can result when loading software from a MS-DOS window running under the Windows 95 platform. When loading software in the SLC-2000 Access System, run the CTRM program directly from DOS. Failure to follow this precaution can corrupt the memory in the SMU and a service outage may occur (if a spare SMU is not available).

Step	Procedure
1	**CAUTION:** *To prevent damage by electrostatic discharge, always wear a grounded wrist strap while working with the SLC-2000 Access System. Connect the wrist strap to the grounding jack provided on the left side of the UIP.* Connect the CIT to the EIA-232D CIT connector on the UIP.

Continued on next page

Local Access (Continued)

EIA-232D CIT connector on the UIP (continued)

Step	Procedure
2	**NOTE:** The *SLC*-2000 Access System supports data rates up to 19,200 baud, but it does not provide flow control. Some terminals and personal computers (PCs) that can be set for higher data rates will not work properly at these rates with equipment like the *SLC*-2000 Access System. With the rate set to 19,200 baud, the system may appear to stop working when reports or long prompts are displayed. If this happens, try setting both the *SLC*-2000 Access System and the terminal for a lower data rate. Power the CIT and set terminal parameters to the following values (consult the PC or terminal manual for setup procedures). At this point, the system ignores characters from the CIT except the [?], [RETURN], [;], [$], or [1] – [8]. ■ Full duplex ■ 8 data bits with no parity ■ 1 start bit ■ 1 stop bit ■ No flow control ■ Baud rate set same as on UIP using the SET-BAUD command. The following set-baud options are available. — 300 — 1,200 — 2,400 — 4,800 — 9,600 (default) — 19,200.

3	Press [RETURN].
	
	The CIT prompts with the following message. If the display responds with `choose a subsystem: . . .`, the PDC has failed.
	
	`/* Enter "1" to proceed */`
	`subsystem =`

Continued on next page

Local Access (Continued)

EIA-232D CIT connector on the UIP (continued)

Step	Procedure

4	Press RETURN.
	
	The CIT prompts with the following message. If the display responds with `choose a subsystem: . . .`, the PDC has failed.
	
	`/* Enter "1" to proceed */`
	`subsystem =`

5	Enter the correct number (1 or 2) and press RETURN.
	
	The CIT will prompt with `login<` and will display an identification message and the system prompt. The following example is typical of the display for the DLC subsystem.
	
	`/*****************************************`
	`*  *`
	`*  Lucent Technologies  *`
	`*  SLC-2000 Access System  *`
	`*  *`
	`*  DLC Subsystem Release 4.06.00  *`
	`*  SONET Subsystem Release 13.00.01  *`
	`*  *`
	`*****************************************/`

6	Security is available in the SONET software to protect against unauthorized access to the system. When security is enabled, you *must* enter a login and password to access the system. Thus, enter your login and then your password (when prompted). Otherwise, if security has not been enabled, press RETURN.

(Continued on next page)

Local Access (Continued)

Typical example

The following is a typical example of an alarm and status report printed on the CIT screen.

```
   /*************************************
   *                                   *
   *        Lucent Technologies        *
   *       SLC-2000 Access System      *
   *                                   *
   *   DLC Subsystem Release 4.06.00   *
   *  SONET Subsystem Release 13.00.01 *
   *                                   *
   *************************************/

   Site2NE1 98-02-16 03:09:00 SLC-2000 DLC, R4.06.00
M  rtrv-alm:all COMPLD
   /* Active Alarms and Status Report
===============================================================================
   There are no active alarms or status conditions.
   */
;
```

A changed prompt

If there is an alarm condition, the system prompt may be something other than < (for example, if there is a major alarm condition on the SONET subsystem, the prompt will be MJ<). After the prompt (<), the system will respond to commands entered. You can press RETURN to redisplay the date, time, and prompt.

Change the size of the display

You can set the vertical size of the displayed page on the CIT [use the SONET subsystem command, set-link:pg=( )] . Page length (pg) may be set from 3 to 150 lines with the default length set to 24 lines. The page length is set to the default each time a new CIT session is started.

Command formats

See Chapter 4, "Command, Message, and Report Syntax," for a description of the individual command formats.

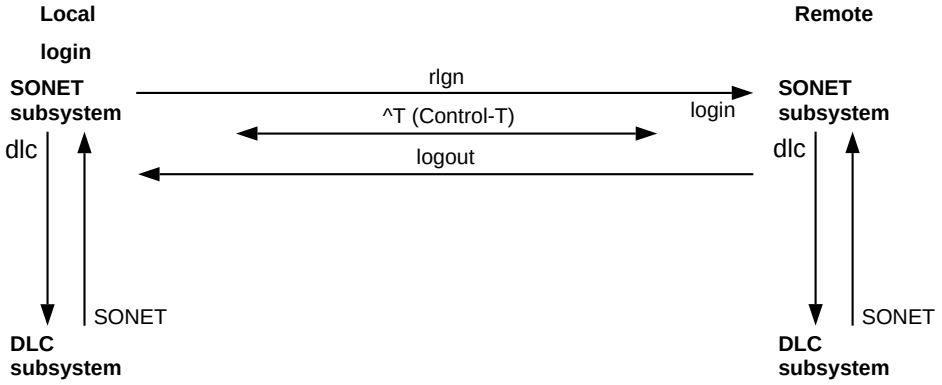
Subsystem Toggle

Switch between SONET and DLC subsystems

Once logged into the CIT, you (the user) can switch between the SONET subsystem and the DLC subsystem. If you are in the SONET subsystem, you can switch to the DLC subsystem using the SONET subsystem command, dlc. Use the DLC subsystem command, SONET, to switch back to the SONET subsystem.

Toggle between different SONET subsystems

The *SLC*-2000 Access System provides remote login capabilities utilizing the SONET section data communication channel (DCC) as a communication channel. Use the SONET subsystem command, rlgn-tid, to initiate a remote login session to another SONET subsystem. You can have one local session and one remote session, simultaneously. Use ^T (CONTROL T) to toggle between two SONET subsystems. The SONET subsystem command, toggle, only works in the SONET subsystem. If you are in the DLC subsystem, switch to the SONET subsystem and then use the SONET subsystem command, toggle. The following figure illustrates different scenarios.



citoggle.eps

Session time-outs

All CIT sessions are monitored for the input from the user and are terminated if there is no input activity for the provisioned amount of time (see SONET subsystem command, set-security). Before the time-out, any incomplete dialogue in progress (not command in progress) is aborted, and any test access established during the session is disconnected.

Remote Login

Log in to the remote system

When security has been enabled on the DCC port being accessed, a login and password are required for the remote login. Also, far end communications (fecom) must be enabled *at both ends* (see the SONET subsystem command, set-fecom, in Chapter 6, "SONET Subsystem Commands").

Step	Procedure
1	Connect CIT and establish session with the local *SLC*-2000 Access System or DDM-2000 Multiplexer system.
2	Enter the SONET subsystem command rlgn:tid [where *tid* equals the target identifier (shelf, site, or system name) of the RT]. The CIT prompts with login<.
3	**NOTE:** You can remotely log into only one network element at a time. A remote login also will be denied if a session is already in progress at the remote site (either someone else is already logged in or you already have an active remote session that has been suspended with a CONTROL T). If security has been enabled, enter your login and password at the prompt. Otherwise, press RETURN. The following example is a typical system response. After the prompt, the remote system will respond in the same manner as for local access.

```
   /*************************************
   *                                   *
   *        Lucent Technologies        *
   *       SLC-2000 Access System      *
   *                                   *
   *   DLC Subsystem Release 4.06.00   *
   *  SONET Subsystem Release 13.00.01 *
   *                                   *
   *************************************/

   Site2NE1 98-02-16 03:09:00 SLC-2000 DLC, R4.06.00
M  rtrv-alm:all COMPLD
   /* Active Alarms and Status Report
   ======================================================================
   There are no active alarms or status conditions.
    */
;
```

Remote Login (Continued)

CIT SONET subsystem commands

See Chapter 6, "SONET Subsystem Commands," for a format description of each command.

CIT SONET subsystem command, toggle

Use the SONET subsystem command, toggle [or a ^T (CONTROL T)], to move back and forth between the remote terminal and near-end terminal. The toggle command is rejected when no remote session is in progress. The remote session is suspended while in progress when toggle or CONTROL T is entered to toggle control to the near end.

Logging Off

Terminate the remote login session

NOTE:
A remote login session may be terminated in some cases due to events in the remote system and may not be noticeable until you try to enter a command in the remote session. Events such as disabling far-end communications (fecom) at either end, failure of the data communications channel, init-sys or reset, removing OLIUs, etc., may abruptly terminate a remote log-in session. Once communications are reestablished, access to the network element can be established.

Enter the logout command in a remote terminal session to end the session and return control to the near end. Enter a logout command in the near-end session to terminate the local *and* remote sessions.

Addressing System Elements

3

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About the System Element Addresses

Overview

Addresses

This chapter describes the conventions for addressing the multiplexer and digital loop carrier (DLC) components of the network. These addresses are used in the craft interface terminal (CIT) commands that affect network elements.

Objects and Entities

Circuit Pack Links

Overview

Circuit pack (CP) links are used for reporting alarms on unisolated failures. The CP link AID identifies the pair of circuit packs on the link. However, in the MDC to CU bus link AID, the MDC circuit pack AID and relative CU bus AID are included in the AID.

MDC to T8U

An MDC to T8U link only exists between an MDC and the subtending T8U. Therefore, the shelf and slot numbers are equal in the MDC/T8U AIDs (for example, only mdc-{1–8}-{1,2}/t8u-{1–8}-{1,2} are valid).

MDC to PTU

An MDC to PTU link only exists between an MDC and the subtending PTU. Therefore, the shelf and slot numbers are equal in the MDC/PTU AIDs (for example, only mdc-{1–8}-{1,2}/ptu-{1–8}-{1,2} are valid).

MDC to CU bus

Each MDC also interfaces to three CU buses (cubus). There are four CUs per CU bus.

Embedded Data Links

Overview

The embedded data links are data links carried on the DS1 links between the *SLC*-2000 Access System RT and the integrated digital terminal (IDT) or the COT (for TR-08). The embedded data links are used to exchange information relating to a particular VRT between the RT and the IDT or COT.

TR-08

The TR-08 embedded data link AIDs use the specific structure, *entity-vrt-digroup*.

Element	Description
Entity	Defines the type (TR-08) of data link.
VRT	Identifies the virtual remote terminal.
Digroup	Identifies the digroup.

TR-303

The TR-303 embedded data link AIDs use the specific structure, *Entity-VRT-Instance*.

Element	Description
Entity	Defines the type (TR-303) of data link.
VRT	Identifies the virtual remote terminal.
Instance	Identifies whether the data link is primary (1) or protection (2).

Line Groups

Overview

The line group AIDs are used to identify the groups of common equipment needed for each channel unit shelf.

Line group

The line group AIDs use the specific structure, *lgrp-shelf*.

Logical Entities

Overview

A *logical entity* identifies system components such as the logical (without a physical appearance) drops, feeders, and lines associated with the *SLC*-2000 Access System.

TR-08 and TR-303 VRTs

The AIDs associated with the TR-08 and TR-303 virtual remote terminals (VRTs) use the specific structure, *entity-vrt*.

Logical INA DS1

Each logical INA DS1 is correlated to a virtual RT and is equivalent to a logical feeder DS1 of the VRT. The logical INA DS1 AIDs use the specific structure, *ina*-{*port*}.

Logical drop

Logical drops are distribution line terminations on VRTs or INA DS1s. Logical drops are also referred to as logical lines in the case of VRTs.

In VRTs, the logical drop AIDs use the specific structure, *entity-vrt-port*, where *entity* can be a TR-08 VRT drop or TR-303 drop.

In INA DS0s, the logical drops AIDs use the specific structure, *inads0-ina-ds0*. The INA DS0s are logical drops *and* DS0 channels.

Logical feeder

Logical feeders are VRT feeder signals.

In TR-08 VRTs, the logical feeders are called logical feeder DS1s. The TR-08 logical feeder AIDs use the specific structure, *vrtfdr*-{*vrt*}-{*port*}.

However, TR-303 logical feeder AIDs use the specific structure, *v3fdr*-{*vrt*}-{*port*}.

TR-08 digroup

The TR-08 digroup logical entity AIDs represent the availability of 24 logical lines on a TR-08 VRT. The TR-08 digroup AIDs use the specific structure, *dgr*-{*vrt*}-{*digroup*}.

Operation Interfaces

Overview

The operation interfaces are identified for inventory purposes.

UIP

The UIP is the user interface panel located above the ARM shelf.

CIT

The CIT operation interface AIDs use the specific structure, *entity-cit*. There are two CIT ports. CIT port number 1 is the front access port located on the maintenance section of the UIP. Port number two is a rear port located on the ARM backplane.

Element	Description
Entity	Defines the type of operation interface.
CIT	Identifies the number of the CIT port.

TAP

The TAP operation interface AIDs use the specific structure, *entity-tap-shelf*. There are eight test access paths on TAP-A. One test access path is assigned for each distribution shelf. Identifiers for TAP-B are provided, but there are no plans to manage TAP-B through the CIT.

Element	Description
Entity	Defines the type of operation interface.
TAP	Identifies either TAP-A or TAP-B.
Shelf	Identifies the distribution shelf.

X.25 link

The X.25 port which is the OS interface.

External major

The external major input is used by the system to detect dual ringing generator failures.

Peripherals

Overview

The peripherals are identified for inventory purposes.

DT

The DT AIDs use the specific structure, *entity-shelf-dtserver*.

Element	Description
Entity	Defines the type of peripheral (DT).
Shelf	Determines the shelf location of the DT Server.
DTServer	Identifies the DT Server slot in the MDS.

Physical Feeder

Overview

The physical feeder AIDs are used to identify the low-speed port.

VTU/LIU DS1 port

The VTU/LIU DS1 port AIDs are VTU or LIU ports equivalent to the DDM-2000 low-speed ports. The VTU/LIU DS1 port AIDs use the specific structure, *group-slot-port*.

Physical Lines

Overview

The physical line AIDs are used to identify whether the line is metallic or FITL.

Metallic

The metallic physical line AIDs use the specific structure, *drop*-{*shelf#*}-{*cuslot#*}-{*port#*}.

FITL

The Fiber-in-the-Loop (FITL) physical line AIDs use the specific structure, *dtdp*-{*shelf#*}-{*dtserver*}-{*cuslot#*}-{*port#*}.

Shelf and Backplane

Overview

The ARM shelf and MDS assembly are identified for inventory purposes.

ARM shelf

The ARM shelf AID uses the specific structure, *arm*.

MDS assembly

The MDS assembly AIDs use the specific structure, *entity-shelf*. Use the AID for the channel unit shelf to provision specific shelves located within an MDS assembly.

Slots

Overview

Slot AIDs identify the physical circuit pack holder for alarm reports and circuit pack inventory. The slot AIDs normally reflect what is stenciled (panel stamped) on the *SLC*-2000 Access System equipment. However, in some cases the slot name cannot be used [for example, with the virtual tributary unit/line interface unit (VTU/LIU) slots the AID *ls* (low speed) is used to be consistent with DDM-2000 multiplexer equipment AIDs].

ARM shelf and channel unit slot

The ARM shelf and channel unit slot AIDs use the specific structure, *entity-group-slot*. The order of this structure is adhered to for all slots in the ARM and channel unit shelf slots.

Element	Description
Entity	Defines the name of the plug-in and usually is stenciled on the bank in the *SLC*-2000 Access System.
Group	The *group* field has different meanings. However, not every slot AID uses each field (for example, CORE slots do not belong to any particular type of group, so the *group* field is empty). In the DDM-2000 plug-ins and the VTUs, the group field is the multiplexer group (A or C) associated with the slot. In reference to CUs, the group field represents the channel unit shelf. A shelf is made up of two MDCs, two PTUs, two T8Us, and 24 CUs. The system can have a maximum of eight channel unit shelves.
Slot	Determines the unique circuit pack holder.

CORE slot

The CORE slot AIDs are controller slots which hold the TSI (or STU) and BMP circuit packs of the *SLC*-2000 Access System. The CORE address is used as a general reference to these slots (for example, the AID core-1 refers to all slots in side 1 of the CORE).

(Continued on next page)

Slots (Continued)

DT slot

The DT slot AIDs use the specific structure, *entity-group-dtserver-slot*. This includes FITL distant terminal (DT) common units and DT channel units. A DT Server is installed in a CU slot. Thus, DT Servers, DTs, and DT slots are numbered according to the CU slot which the DT Server occupies.

Element	Description
Entity	Defines the type of DT slot.
Group	Determines the shelf location of the DT Server.
DTServer	Identifies the DT Server slot in the MDS.
Slot	Determines the unique circuit pack holder in the DT.

VTU/LIU slot

The VTU/LIU slot AID is a VTU or LIU card slot equivalent to the DDM-2000 low-speed slot. The set of eiqht VTU/LIU slots belongs to the A multiplexer group.

SONET Subsystem

Overview

Introduction

Valid addresses are available on the CIT for slots, lines, ports, channels, and operations interfaces. Where lists of items appear in braces { }, use any one (and only one) of these items in the address.

The *all* address

The address *all* (when in a command) includes all addresses valid for that command. For example, in rtrv-eqpt (retrieve equipment), using the address *all* (by itself) reports any alarms on each of the slot addresses valid for this command (main-all, fn-all, ls-all, tg-all, sysctl, and auxctl).

- main-all — all main slot addresses
- fn-all — all function unit slot addresses
- tg-all — all timing slot addresses.

AIDs

Software Release 3.1 (R3.1)

The following table lists the AIDs for the synchronous optical network (SONET) subsystem in *SLC*-2000 Access System R3.1.

Object	Entity	Address	Example
Channel* and paths	STS-1 channel within OC-3	{m,c,all†}-{1-3,all}, {a}-{1,2,all} m{1,2}-{1-3,all}‡	m-3, m2-3
	STS-1 channel for MXRVO, DS3, or STS1E	a, c, all	a
	VT1.5 channel within OC-3	{m,c,all†}-{1–3,all†}-{1–7,all†}-{1–4,all} {a,all†}-{1,2,all†}-{1–7,all†}-{1–4,all} m{1,2}-{1–3,all†}-{1–7,all†}-{1–4,all}‡	m-1-2-1, a-2-7-4, m1-3-2-3
	VT1.5 channel for DS1 or STS1E	{a,c,all†}-{1–7,all†}-{1–4,all}	a-1-2, c-7-4
Lines	OC-3 line pair	all†, main,fn-{a,c}	main
	OC-3 line	all†, {main,fn-a,fn-c}-{1,2,all}	fn-c-2
	EC-1 line	a, c, all	c
Operations interface	UIP	userpanel	userpanel
	CIT	cit-{1,2,all}	cit-1
	Section data comms. channel	dcc-{m,a,c,all}, dcc-{m1,m2,c,all}‡, dcc-{m,c,all}§	dcc-m, dcc-m2, dcc-c
	TBOS	tbos-1	tbos-1
	Parallel telemetry	partlm	partlm
	X.25 link	x25	x25
	Environmental alarm input	env-{1–15,all}	env-1
	Environmental control input	cont-{1–4,all}	cont-1

Continued on next page

AIDs (Continued)

R3.1 (continued)

Object	Entity	Address	Example
Ports	DS3 or EC-1 port	all, a, c	all
	DS1 port	c-{1–7,all†}-{1–4,all}	c-all, c-7-4
	DS1 sync. reference port	ref-{1,2}	ref-1
Slots	Entire SONET subsystem	all	all
	Main slot	main-{1,2,all}	main-all
	Function unit slot	fn-all, fn-{a,c}-{1,2,all}	fn-all, fn-a-all, fn-c-1
	Function unit pair	fn-{a,c}	fn-a
	DS1 low-speed slot	ls-all ls-{a,c}-{1–8,all}	ls-all ls-c-2
	Timing slot	tg-{1,2,all}	tg-all
	System control slot	sysctl	sysctl
	Auxiliary control slot	auxctl	auxctl
STS-1 cross-connection	Main port	m-{1–3}	m-3
	Function unit (OLIU)	{a}-{1,2}, {c}-{1–3}	a-2, c-3
	Function unit (MXRVO, STS1E, or DS3)	{a,c}	c

Continued on next page

AIDs (Continued)

R3.1 (continued)

Object	Entity	Address	Example
VT1.5 cross-connection	Main port	m-{1–3,all†}-{1–7,all†}-{1–4,all}	m-4-4-4
	DS1 low-speed port	{a,c}-{1,7,all†}-{1–4,all}	a-2-7
	Function unit (OLIU)	{a}-{1,2}-{1–7,all†}-{1–4,all}, {c}-{1,3}-{1–7,all†}-{1–4,all}	a-1-1-4, c-3-7-1

* If all is chosen as any part of an address, no subsequent address fields can be defined. For example, on an STS-1 channel, the address all-3 is invalid.

† Circuit pack (CP) link addresses are used in reporting alarms: this table shows how the addresses are displayed on the UIP. On the CIT, the link addresses are displayed in separate columns: the first CP is in the *Source Address* column of the report, the second CP is listed in the *Description* column. For operations system (OS) reports, the link addresses are displayed with a hyphen ("-") instead of the slash ("/").

‡ Rings applications only.

§ Rings security applications only.

AIDs (Continued)

R3.2 The following table lists the AIDs for SONET subsystem in *SLC*-2000 Access System R3.2.

Object	Entity	Address	Example
Channel* and paths	STS-1 channel within OC-3	{m,c,all†}-{1-3,all}, {a}-{1,2,all} m{1,2}-{1-3,all}‡	m-3, m2-3
	STS-1 channel for MXRVO, DS3, or STS1E	a, c, all	a
	VT1.5 channel within OC-3	{m,c,all†}-{1–3,all†}-{1–7,all†}-{1–4,all} {a,all†}-{1,2,all†}-{1–7,all†}-{1–4,all} m{1,2}-{1–3,all†}-{1–7,all†}-{1–4,all}‡	m-1-2-1, a-2-7-4, m1-3-2-3
	VT1.5 channel for DS1 or STS1E	{a,c,all†}-{1–7,all†}-{1–4,all}	a-1-2, c-7-4
Lines	OC-3 line pair	all†, main,fn-{a,c}	main
	OC-3 line	all†, {main,fn-a,fn-c}-{1,2,all}	fn-c-2
	EC-1 line	a, c, all	c
Operations interface	UIP	userpanel	userpanel
	CIT	cit-{1,2,all}	cit-1
	Section data comms. channel	dcc-{m,a,c,all}, dcc-{m1,m2,c,all}‡, dcc-{m,c,all}§	dcc-m, dcc-m2, dcc-c
	TBOS	tbos-1	tbos-1
	Parallel telemetry	partlm	partlm
	X.25 link	x25	x25
	Environmental alarm input	env-{1–15,all}	env-1
	Environmental control input	cont-{1–4,all}	cont-1

Continued on next page

AIDs (Continued)

R3.2 (continued)

Object	Entity	Address	Example
Ports	DS3 or EC-1 port	all, a, c	all
	DS1 port	c-{1–7,all†}-{1–4,all}	c-all, c-7-4
	DS1 sync. reference port	ref-{1,2}	ref-1
Slots	Entire SONET subsystem	all	all
	Main slot	main-{1,2,all}	main-all
	Function unit slot	fn-all, fn-{a,c}-{1,2,all}	fn-all, fn-a-all, fn-c-1
	Function unit pair	fn-{a,c}	fn-a
	DS1 low-speed slot	ls-all ls-{a,c}-{1–8,all}	ls-all ls-c-2
	Timing slot	tg-{1,2,all}	tg-all
	System control slot	sysctl	sysctl
	Auxiliary control slot	auxctl	auxctl
STS-1 cross-connection	Main port	m-{1–3}	m-3
	Function unit (OLIU)	{a}-{1,2}, {c}-{1–3}	a-2, c-3
	Function unit (MXRVO, STS1E, or DS3)	{a,c}	c

Continued on next page

AIDs (Continued)

R3.2 (continued)

Object	Entity	Address	Example
VT1.5 cross-connection	Main port	m-{1–3,all†}-{1–7,all†}-{1–4,all}	m-4-4-4
	DS1 low-speed port	{a,c}-{1,7,all†}-{1–4,all}	a-2-7
	Function unit (OLIU)	{a}-{1,2}-{1–7,all†}-{1–4,all}, {c}-{1,3}-{1–7,all†}-{1–4,all}	a-1-1-4, c-3-7-1

* If all is chosen as any part of an address, no subsequent address fields can be defined. For example, on an STS-1 channel, the address all-3 is invalid.

† Circuit pack (CP) link addresses are used in reporting alarms: this table shows how the addresses are displayed on the UIP. On the CIT, the link addresses are displayed in separate columns: the first CP is in the *Source Address* column of the report, the second CP is listed in the *Description* column. For operations system (OS) reports, the link addresses are displayed with a hyphen ("-") instead of the slash ("/").

‡ Rings applications only.

§ Rings security applications only.

AIDs (Continued)

R3.3

The following table lists the AIDs for SONET subsystem in *SLC*-2000 Access System R3.3.

Object	Entity	Address	Example
Channel* and paths	STS-1 channel within OC-3	{m,c,all†}-{1-3,all}, {a}-{1,2,all} m{1,2}-{1-3,all}‡	m-3, m2-3
	STS-1 channel for MXRVO, DS3, or STS1E	a, c, all	a
	VT1.5 channel within OC-3	{m,c,all†}-{1–3,all†}-{1–7,all†}-{1–4,all} {a,all†}-{1,2,all†}-{1–7,all†}-{1–4,all} m{1,2}-{1–3,all†}-{1–7,all†}-{1–4,all}‡	m-1-2-1, a-2-7-4, m1-3-2-3
	VT1.5 channel for DS1 or STS1E	{a,c,all†}-{1–7,all†}-{1–4,all}	a-1-2, c-7-4
Lines	OC-3 line pair OC-3 line EC-1 line	all†, main,fn-{a,c} all†, {main,fn-a,fn-c}-{1,2,all} a, c, all	main fn-c-2 c
Operations interface	UIP	userpanel	userpanel
	CIT	cit-{1,2,all}	cit-1
	Section data comms. channel	dcc-{m,a,c,all}, dcc-{m1,m2,c,all}‡, dcc-{m,c,all}§	dcc-m, dcc-m2, dcc-c
	TBOS	tbos-1	tbos-1
	Parallel telemetry	partlm	partlm
	X.25 link	x25	x25
	Environmental alarm input	env-{1–15,all}	env-1
	Environmental control input	cont-{1–4,all}	cont-1

Continued on next page

AIDs (Continued)

R3.3 (continued)

Object	Entity	Address	Example
Ports	DS3 or EC-1 port	all, a, c	all
	DS1 port	c-{1–7,all†}-{1–4,all}	c-all, c-7-4
	DS1 sync. reference port	ref-{1,2}	ref-1
Slots	Entire SONET subsystem	all	all
	Main slot	main-{1,2,all}	main-all
	Function unit slot	fn-all, fn-{a,c}-{1,2,all}	fn-all, fn-a-all, fn-c-1
	Function unit pair	fn-{a,c}	fn-a
	DS1 low-speed slot	ls-all ls-{a,c}-{1–8,all}	ls-all ls-c-2
	Timing slot	tg-{1,2,all}	tg-all
	System control slot	sysctl	sysctl
	Auxiliary control slot	auxctl	auxctl
STS-1 cross-connection	Main port	m-{1–3}	m-3
	Function unit (OLIU)	{a}-{1,2}, {c}-{1–3}	a-2, c-3
	Function unit (MXRVO, STS1E, or DS3)	{a,c}	c

Continued on next page

AIDs (Continued)

R3.3 (continued)

Object	Entity	Address	Example
VT1.5 cross-connection	Main port	m-{1–3,all†}-{1–7,all†}-{1–4,all}	m-4-4-4
	DS1 low-speed port	{a,c}-{1,7,all†}-{1–4,all}	a-2-7
	Function unit (OLIU)	{a}-{1,2}-{1–7,all†}-{1–4,all}, {c}-{1,3}-{1–7,all†}-{1–4,all}	a-1-1-4, c-3-7-1

* If all is chosen as any part of an address, no subsequent address fields can be defined. For example, on an STS-1 channel, the address all-3 is invalid.

† Circuit pack (CP) link addresses are used in reporting alarms: this table shows how the addresses are displayed on the UIP. On the CIT, the link addresses are displayed in separate columns: the first CP is in the *Source Address* column of the report, the second CP is listed in the *Description* column. For operations system (OS) reports, the link addresses are displayed with a hyphen ("-") instead of the slash ("/").

‡ Rings applications only.

§ Rings security applications only.

AIDs (Continued)

R4.0

The following table lists the AIDs for SONET subsystem in *SLC*-2000 Access System R4.0.

Object	Entity	Address	Example
Channel* and paths	STS-1 channel within OC-3	{m,c,all†}-{1-3,all}, {a}-{1,2,all} m{1,2}-{1-3,all}‡	m-3, m2-3
	STS-1 channel for MXRVO, DS3, or STS1E	a, c, all	a
	VT1.5 channel within OC-3	{m,c,all†}-{1–3,all†}-{1–7,all†}-{1–4,all} {a,all†}-{1,2,all†}-{1–7,all†}-{1–4,all} m{1,2}-{1–3,all†}-{1–7,all†}-{1–4,all}‡	m-1-2-1, a-2-7-4, m1-3-2-3
	VT1.5 channel for DS1 or STS1E	{a,c,all†}-{1–7,all†}-{1–4,all}	a-1-2, c-7-4
Lines	OC-3 line pair	all†, main,fn-{a,c}	main
	OC-3 line	all†, {main,fn-a,fn-c}-{1,2,all}	fn-c-2
	EC-1 line	a, c, all	c
Operations interface	UIP	userpanel	userpanel
	CIT	cit-{1,2,all}	cit-1
	Section data comms. channel	dcc-{m,a,c,all}, dcc-{m1,m2,c,all}‡, dcc-{m,c,all}§	dcc-m, dcc-m2, dcc-c
	TBOS	tbos-1	tbos-1
	Parallel telemetry	partlm	partlm
	X.25 link	x25	x25
	Environmental alarm input	env-{1–15,all}	env-1
	Environmental control input	cont-{1–4,all}	cont-1

Continued on next page

AIDs (Continued)

R4.0 (continued)

Object	Entity	Address	Example
Ports	DS3 or EC-1 port	all, a, c	all
	DS1 port	c-{1–7,all†}-{1–4,all}	c-all, c-7-4
	DS1 sync. reference port	ref-{1,2}	ref-1
Slots	Entire SONET subsystem	all	all
	Main slot	main-{1,2,all}	main-all
	Function unit slot	fn-all, fn-{a,c}-{1,2,all}	fn-all, fn-a-all, fn-c-1
	Function unit pair	fn-{a,c}	fn-a
	DS1 low-speed slot	ls-all ls-{a,c}-{1–8,all}	ls-all ls-c-2
	Timing slot	tg-{1,2,all}	tg-all
	System control slot	sysctl	sysctl
	Auxiliary control slot	auxctl	auxctl
STS-1 cross-connection	Main port	m-{1–3}	m-3
	Function unit (OLIU)	{a}-{1,2}, {c}-{1–3}	a-2, c-3
	Function unit (MXRVO, STS1E, or DS3)	{a,c}	c

Continued on next page

AIDs (Continued)

R4.0 (continued)

Object	Entity	Address	Example
VT1.5 cross-connection	Main port	m-{1–3,all†}-{1–7,all†}-{1–4,all}	m-4-4-4
	DS1 low-speed port	{a,c}-{1,7,all†}-{1–4,all}	a-2-7
	Function unit (OLIU)	{a}-{1,2}-{1–7,all†}-{1–4,all}, {c}-{1,3}-{1–7,all†}-{1–4,all}	a-1-1-4, c-3-7-1

* If all is chosen as any part of an address, no subsequent address fields can be defined. For example, on an STS-1 channel, the address all-3 is invalid.

† Circuit pack (CP) link addresses are used in reporting alarms: this table shows how the addresses are displayed on the UIP. On the CIT, the link addresses are displayed in separate columns: the first CP is in the *Source Address* column of the report, the second CP is listed in the *Description* column. For operations system (OS) reports, the link addresses are displayed with a hyphen ("-") instead of the slash ("/").

‡ Rings applications only.

§ Rings security applications only.

AIDs (Continued)

R4.2

The following table lists the AIDs for SONET subsystem in *SLC*-2000 Access System R4.2.

Object	Entity	Address	Example
Channel* and paths	STS-1 channel within OC-3	{m,c,all†}-{1-3,all}, {a}-{1,2,all} m{1,2}-{1-3,all}‡	m-3, m2-3
	STS-1 channel for MXRVO, DS3, or STS1E	a, c, all	a
	VT1.5 channel within OC-3	{m,c,all†}-{1–3,all†}-{1–7,all†}-{1–4,all} {a,all†}-{1,2,all†}-{1–7,all†}-{1–4,all} m{1,2}-{1–3,all†}-{1–7,all†}-{1–4,all}‡	m-1-2-1, a-2-7-4, m1-3-2-3
	VT1.5 channel for DS1 or STS1E	{a,c,all†}-{1–7,all†}-{1–4,all}	a-1-2, c-7-4
Lines	OC-3 line pair OC-3 line EC-1 line	all†, main,fn-{a,c} all†, {main,fn-a,fn-c}-{1,2,all} a, c, all	main fn-c-2 c
Operations interface	UIP	userpanel	userpanel
	CIT	cit-{1,2,all}	cit-1
	Section data comms. channel	dcc-{m,a,c,all}, dcc-{m1,m2,c,all}‡, dcc-{m,c,all}§	dcc-m, dcc-m2, dcc-c
	TBOS	tbos-1	tbos-1
	Parallel telemetry	partlm	partlm
	X.25 link	x25	x25
	Environmental alarm input	env-{1–15,all}	env-1
	Environmental control input	cont-{1–4,all}	cont-1

Continued on next page

AIDs (Continued)

R4.2 (continued)

Object	Entity	Address	Example
Ports	DS3 or EC-1 port	all, a, c	all
	DS1 port	c-{1–7,all†}-{1–4,all}	c-all, c-7-4
	DS1 sync. reference port	ref-{1,2}	ref-1
Slots	Entire SONET subsystem	all	all
	Main slot	main-{1,2,all}	main-all
	Function unit slot	fn-all, fn-{a,c}-{1,2,all}	fn-all, fn-a-all, fn-c-1
	Function unit pair	fn-{a,c}	fn-a
	DS1 low-speed slot	ls-all ls-{a,c}-{1–8,all}	ls-all ls-c-2
	Timing slot	tg-{1,2,all}	tg-all
	System control slot	sysctl	sysctl
	Auxiliary control slot	auxctl	auxctl
STS-1 cross-connection	Main port	m-{1–3}	m-3
	Function unit (OLIU)	{a}-{1,2}, {c}-{1–3}	a-2, c-3
	Function unit (MXRVO, STS1E, or DS3)	{a,c}	c

Continued on next page

AIDs (Continued)

R4.2 (continued)

Object	Entity	Address	Example
VT1.5 cross-connection	Main port	m-{1–3,all†}-{1–7,all†}-{1–4,all}	m-4-4-4
	DS1 low-speed port	{a,c}-{1,7,all†}-{1–4,all}	a-2-7
	Function unit (OLIU)	{a}-{1,2}-{1–7,all†}-{1–4,all}, {c}-{1,3}-{1–7,all†}-{1–4,all}	a-1-1-4, c-3-7-1

* If all is chosen as any part of an address, no subsequent address fields can be defined. For example, on an STS-1 channel, the address all-3 is invalid.

† Circuit pack (CP) link addresses are used in reporting alarms: this table shows how the addresses are displayed on the UIP. On the CIT, the link addresses are displayed in separate columns: the first CP is in the *Source Address* column of the report, the second CP is listed in the *Description* column. For operations system (OS) reports, the link addresses are displayed with a hyphen ("-") instead of the slash ("/").

‡ Rings applications only.

§ Rings security applications only.

AIDs (Continued)

R4.4

The following table lists the AIDs for SONET subsystem in *SLC*-2000 Access System R4.4.

Object	Entity	Address	Example
Channel* and paths	STS-1 channel within OC-3	{m,c,all†}-{1-3,all}, {a}-{1,2,all} m{1,2}-{1-3,all}‡	m-3, m2-3
	STS-1 channel for MXRVO, DS3, or STS1E	a, c, all	a
	VT1.5 channel within OC-3	{m,c,all†}-{1–3,all†}-{1–7,all†}-{1–4,all} {a,all†}-{1,2,all†}-{1–7,all†}-{1–4,all} m{1,2}-{1–3,all†}-{1–7,all†}-{1–4,all}‡	m-1-2-1, a-2-7-4, m1-3-2-3
	VT1.5 channel for DS1 or STS1E	{a,c,all†}-{1–7,all†}-{1–4,all}	a-1-2, c-7-4
Lines	OC-3 line pair	all†, main,fn-{a,c}	main
	OC-3 line	all†, {main,fn-a,fn-c}-{1,2,all}	fn-c-2
	EC-1 line	a, c, all	c
Operations interface	UIP	userpanel	userpanel
	CIT	cit-{1,2,all}	cit-1
	Section data comms. channel	dcc-{m,a,c,all}, dcc-{m1,m2,c,all}‡, dcc-{m,c,all}§	dcc-m, dcc-m2, dcc-c
	TBOS		tbos-1
	Parallel telemetry	tbos-1 partlm	partlm
	X.25 link		x25
	Environmental alarm input	x25 env-{1–15,all}	env-1
	Environmental control input	cont-{1–4,all}	cont-1

Continued on next page

AIDs (Continued)

R4.4 (continued)

Object	Entity	Address	Example
Ports	DS3 or EC-1 port	all, a, c	all
	DS1 port	c-{1–7,all†}-{1–4,all}	c-all, c-7-4
	DS1 sync. reference port	ref-{1,2}	ref-1
Slots	Entire SONET subsystem	all	all
	Main slot	main-{1,2,all}	main-all
	Function unit slot	fn-all, fn-{a,c}-{1,2,all}	fn-all, fn-a-all, fn-c-1
	Function unit pair	fn-{a,c}	fn-a
	DS1 low-speed slot	ls-all ls-{a,c}-{1–8,all}	ls-all ls-c-2
	Timing slot	tg-{1,2,all}	tg-all
	System control slot	sysctl	sysctl
	Auxiliary control slot	auxctl	auxctl
STS-1 cross-connection	Main port	m-{1–3}	m-3
	Function unit (OLIU)	{a}-{1,2}, {c}-{1–3}	a-2, c-3
	Function unit (MXRVO, STS1E, or DS3)	{a,c}	c

Continued on next page

AIDs (Continued)

R4.4 (continued)

Object	Entity	Address	Example
VT1.5 cross-connection	Main port	m-{1–3,all†}-{1–7,all†}-{1–4,all}	m-4-4-4
	DS1 low-speed port	{a,c}-{1,7,all†}-{1–4,all}	a-2-7
	Function unit (OLIU)	{a}-{1,2}-{1–7,all†}-{1–4,all}, {c}-{1,3}-{1–7,all†}-{1–4,all}	a-1-1-4, c-3-7-1

* If all is chosen as any part of an address, no subsequent address fields can be defined. For example, on an STS-1 channel, the address all-3 is invalid.

† Circuit pack (CP) link addresses are used in reporting alarms: this table shows how the addresses are displayed on the UIP. On the CIT, the link addresses are displayed in separate columns: the first CP is in the *Source Address* column of the report, the second CP is listed in the *Description* column. For operations system (OS) reports, the link addresses are displayed with a hyphen ("-") instead of the slash ("/").

‡ Rings applications only.

§ Rings security applications only.

AIDs (Continued)

R4.5 and R4.6

The following table lists the AIDs for SONET subsystem in *SLC*-2000 Access System R4.5 and R4.6.

Object	Entity	Address	Example
Channel* and paths	STS-1 channel within OC-3	{m,c,all†}-{1-3,all}, {a}-{1,2,all} m{1,2}-{1-3,all}‡	m-3, m2-3
	STS-1 channel for MXRVO, DS3, or STS1E	a, c, all	a
	VT1.5 channel within OC-3	{m,c,all†}-{1–3,all†}-{1–7,all†}-{1–4,all} {a,all†}-{1,2,all†}-{1–7,all†}-{1–4,all} m{1,2}-{1–3,all†}-{1–7,all†}-{1–4,all}‡	m-1-2-1, a-2-7-4, m1-3-2-3
	VT1.5 channel for DS1 or STS1E	{a,c,all†}-{1–7,all†}-{1–4,all}	a-1-2, c-7-4
Lines	OC-3 line pair	all†, main,fn-{a,c}	main
	OC-3 line	all†, {main,fn-a,fn-c}-{1,2,all}	fn-c-2
	EC-1 line	a, c, all	c
Operations interface	UIP	userpanel	userpanel
	CIT	cit-{1,2,all}	cit-1
	Section data comms. channel	dcc-{m,a,c,all}, dcc-{m1,m2,c,all}‡, dcc-{m,c,all}§	dcc-m, dcc-m2, dcc-c
	TBOS		tbos-1
	Parallel telemetry	tbos-1 partlm	partlm
	X.25 link		x25
	Environmental alarm input	x25 env-{1–15,all}	env-1
	Environmental control input	cont-{1–4,all}	cont-1

Continued on next page

AIDs (Continued)

R4.5 and R4.6 (continued)

Object	Entity	Address	Example
Ports	DS3 or EC-1 port	all, a, c	all
	DS1 port	c-{1–7,all†}-{1–4,all}	c-all, c-7-4
	DS1 sync. reference port	ref-{1,2}	ref-1
Slots	Entire SONET subsystem	all	all
	Main slot	main-{1,2,all}	main-all
	Function unit slot	fn-all, fn-{a,c}-{1,2,all}	fn-all, fn-a-all, fn-c-1
	Function unit pair	fn-{a,c}	fn-a
	DS1 low-speed slot	ls-all ls-{a,c}-{1–8,all}	ls-all ls-c-2
	Timing slot	tg-{1,2,all}	tg-all
	System control slot	sysctl	sysctl
	Auxiliary control slot	auxctl	auxctl
STS-1 cross-connection	Main port	m-{1–3}	m-3
	Function unit (OLIU)	{a}-{1,2}, {c}-{1–3}	a-2, c-3
	Function unit (MXRVO, STS1E, or DS3)	{a,c}	c

Continued on next page

AIDs (Continued)

R4.5 and R4.6 (continued)

Object	Entity	Address	Example
VT1.5 cross-connection	Main port	m-{1–3,all†}-{1–7,all†}-{1–4,all}	m-4-4-4
	DS1 low-speed port	{a,c}-{1,7,all†}-{1–4,all}	a-2-7
	Function unit (OLIU)	{a}-{1,2}-{1–7,all†}-{1–4,all}, {c}-{1,3}-{1–7,all†}-{1–4,all}	a-1-1-4, c-3-7-1

* If all is chosen as any part of an address, no subsequent address fields can be defined. For example, on an STS-1 channel, the address all-3 is invalid.

† Circuit pack (CP) link addresses are used in reporting alarms: this table shows how the addresses are displayed on the UIP. On the CIT, the link addresses are displayed in separate columns: the first CP is in the *Source Address* column of the report, the second CP is listed in the *Description* column. For operations system (OS) reports, the link addresses are displayed with a hyphen ("-") instead of the slash ("/").

‡ Rings applications only.

§ Rings security applications only.

DLC Subsystem

Overview

Introduction

Valid addresses are displayed on the UIP for slots, lines, ports, channels, and operations interfaces. Select these addresses from a menu on the UIP. However, the CIT displays valid addresses for the DLC subsystem for subscriber line interfaces.

AIDs

R3.1

The following table lists valid AIDs for the DLC subsystem (*SLC*-2000 Access System R3.1) for subscriber line interfaces. Use any one (and only one) of the addresses listed when the items appear in braces { }.

Object	Entity	Address	Example
ARM slots	CORE slots	core-{1,2}	core-1
	LAN slot	lan	lan
	MIU slot	miu	miu
	PDC slot	pdc	pdc
	SMU slot	smu	smu
	STU/TSI slot	tsi-{1,2}	tsi-2
	THC slot	thc	thc
	VTU/LIU slot	ls-a-{1–8}	ls-a-1
Common*	Common	—	—
CP links†	EOC to EOC	bmp-{1,2}/bmp-{1,2}	
	EOC to TSI	tsi-{1,2}/bmp-1-{1,2}	
	MDC to CU bus	mdc-{1–8}-{1,2}/cubus-{1–3}	
	MDC to MDC	mdc-{1–8}-2/mdc-{1–8}-1	
	MDC to PTU	mdc-{1–8}-{1,2}/ptu-{1–8}-{1,2}	
	MDC to T8U	mdc-{1–8}-{1,2}/t8u-{1–8}-{1,2}	
	MDC to TSI	mdc-{1–8}-{1,2}/tsi-{1,2}	
	PDC to SYSCTL	pdc/sysctl	
	PDC to TSI	pdc/tsi-{1,2}	
	PDC to UIP	pdc/uip	
	SMU to PDC	smu/pdc	
	THC to TSI	thc/tsi-{1,2}	
	TMC to TMC	bmp-{1,2}/bmp-{1,2}	
	TSI to BMP	tsi-{1,2}/bmp-1-{1,2}	
	TSI to TSI	tsi-1/tsi-2	
	VTU/LIU to TSI	ls-a-{1–8}/tsi-{1,2}	
	VTU/LIU #8 to VTU/LIU	ls-a-8/ls-a-{1–7}	
Digroups	TR-08 digroups	dgr-{1–8}-{a–d}	dgr-1-b

Continued on next page

AIDs (Continued)

R3.1 (continued)

Object	Entity	Address	Example
DT slot	BIU	biu-{1–8}-{1,3,5,7,13,15,17,19}	biu-8-19
	CDTU	cdtu-{1–8}-{1,3,5,7,13,15,17,19}	cdtu-5-7
	DT CU	dtcu-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}	dtcu-6-15-1
	PCU	pcu-{1–8}-{1,3,5,7,13,15,17,19}	pcu-1-7
	PIU	piu-{1–8}-{1,3,5,7,13,15,17,19}	piu-7-7
	RGU	rgu-{1–8}-{1,3,5,7,13,15,17,19}	rgu-2-3
Embedded data links	TR-08	tr8dl-{1–8}-{a–d}	tr8dl-4-c
Entire DLC subsystem		all	all
Line group	Line group	lgrp-{1–8}	lgrp-1
Logical drop	INA DS0	inads0-{1–28}-{1–24}	inads0-28-1
	TR-08 VRT drop	vrtdp-{1–8}-{1–96}	vrtdp-5-94
Logical feeder	TR-08 VRT	vrtfdr-{1–8}-{a–d}	vrtfdr-1-c
MDS slot	Channel unit	cu-{1–8}-{1–24}	cu-1-23
	MDC	mdc-{1–8}-{1,2}	mdc-7-2
	DT Server	cu-{1–8}-{1,3,5,7,13,15,17,19}	cu-2-17
		dt-{1–8}-{1,3,5,7,13,15,17,19}	dt-2-17
	PTU	ptu-{1–8}-{1,2}	ptu-1-1
	TR-08 unit	t8u-{1–8}-{1,2}	t8u-8-1
Operations interface	ATU	atu	atu
	CIT	cit-{1,2}	cit-1
	External major input	extmj	extmj
	ITH	ith	ith
	ITH links	ithlink-{1,2}	ithlink-2
	TAP	tap-{a,b}-{1–8}	tap-a-1
	UIP	uip	uip
	X.25 link	x25	x25

Continued on next page

AIDs (Continued)

R3.1 (continued)

Object	Entity	Address	Example
Peripherals	DT	dt-{1–8}-{1,3,5,7,13,15,17,19}	dt-1-1
Physical drops	Physical line (drop) Physical line in a DT	drop-{1–8}-{1–24}-{1–4} dtdp-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}-{1–4}	drop-8-24-3 dtdp-2-5-3-2
Physical feeder	VTU/LIU DS1 port	a-{1–7}-{1–4}	a-5-3
Reference signals	Synchronization ref (COT)	compclk-{1,2}	compclk-1
Shelf/ backplane	ARM shelf MDS assembly	arm mds-{1–4} shelf-{1–8}	arm mds-1 shelf-7
Virtual RT	INA DS1s TR-08 VRT	ina-{1–28} vrt-{1–8}	ina-2 vrt-1

* Use the *common* AID when reporting the *system free-running* alarm. The string representation is a dash (—). The system free-running alarm occurs when the system bandwidth management core is free-running.

† Circuit pack (CP) link addresses are used in reporting alarms: this table shows how the addresses are displayed on the UIP. On the CIT, the link addresses are displayed in separate columns: the first CP is in the *Source Address* column of the report, the second CP is listed in the *Description* column. For operations system (OS) reports, the link addresses are displayed with a hyphen ("-") instead of the slash ("/").

AIDs (Continued)

R3.2

The following table lists valid AIDs for the DLC subsystem (*SLC*-2000 Access System R3.2) for subscriber line interfaces. Use any one (and only one) of the addresses listed when the items appear in braces { }.

Object	Entity	Address	Example
ARM slots	CORE slots	core-{1,2}	core-1
	LAN slot	lan	lan
	MIU slot	miu	miu
	PDC slot	pdc	pdc
	SMU slot	smu	smu
	STU/TSI slot	tsi-{1,2}	tsi-2
	THC slot	thc	thc
	VTU/LIU slot	ls-a-{1–8}	ls-a-1
Common*	Common	—	—
CP links†	EOC to EOC	bmp-{1,2}/bmp-{1,2}	
	EOC to TSI	tsi-{1,2}/bmp-1-{1,2}	
	MDC to CU bus	mdc-{1–8}-{1,2}/cubus-{1–3}	
	MDC to MDC	mdc-{1–8}-2/mdc-{1–8}-1	
	MDC to PTU	mdc-{1–8}-{1,2}/ptu-{1–8}-{1,2}	
	MDC to T8U	mdc-{1–8}-{1,2}/t8u-{1–8}-{1,2}	
	MDC to TSI	mdc-{1–8}-{1,2}/tsi-{1,2}	
	PDC to SYSCTL	pdc/sysctl	
	PDC to TSI	pdc/tsi-{1,2}	
	PDC to UIP	pdc/uip	
	SMU to PDC	smu/pdc	
	THC to TSI	thc/tsi-{1,2}	
	TMC to TMC	bmp-{1,2}/bmp-{1,2}	
	TSI to BMP	tsi-{1,2}/bmp-1-{1,2}	
	TSI to TSI	tsi-1/tsi-2	
	VTU/LIU to TSI	ls-a-{1–8}/tsi-{1,2}	
	VTU/LIU #8 to VTU/LIU	ls-a-8/ls-a-{1–7}	
Digroups	TR-08 digroups	dgr-{1–8}-{a–d}	dgr-1-b

Continued on next page

AIDs (Continued)

R3.2 (continued)

Object	Entity	Address	Example
DT slot	BIU	biu-{1–8}-{1,3,5,7,13,15,17,19}	biu-8-19
	CDTU	cdtu-{1–8}-{1,3,5,7,13,15,17,19}	cdtu-5-7
	DT CU	dtcu-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}	dtcu-6-15-1
	PCU	pcu-{1–8}-{1,3,5,7,13,15,17,19}	pcu-1-7
	PIU	piu-{1–8}-{1,3,5,7,13,15,17,19}	piu-7-7
	RGU	rgu-{1–8}-{1,3,5,7,13,15,17,19}	rgu-2-3
Embedded data links	TR-08	tr8dl-{1–8}-{a–d}	tr8dl-4-c
Entire DLC subsystem		all	all
Line group	Line group	lgrp-{1–8}	lgrp-1
Logical drop	INA DS0	inads0-{1–28}-{1–24}	inads0-28-1
	TR-08 VRT drop	vrtdp-{1–8}-{1–96}	vrtdp-5-94
Logical feeder	TR-08 VRT	vrtfdr-{1–8}-{a–d}	vrtfdr-1-c
MDS slot	Channel unit	cu-{1–8}-{1–24}	cu-1-23
	MDC	mdc-{1–8}-{1,2}	mdc-7-2
	DT Server	cu-{1–8}-{1,3,5,7,13,15,17,19}	cu-2-17
		dt-{1–8}-{1,3,5,7,13,15,17,19}	dt-2-17
	PTU	ptu-{1–8}-{1,2}	ptu-1-1
	TR-08 unit	t8u-{1–8}-{1,2}	t8u-8-1
Operations interface	ATU	atu	atu
	CIT	cit-{1,2}	cit-1
	External major input	extmj	extmj
	ITH	ith	ith
	ITH links	ithlink-{1,2}	ithlink-2
	TAP	tap-{a,b}-{1–8}	tap-a-1
	UIP	uip	uip
	X.25 link	x25	x25

Continued on next page

AIDs (Continued)

R3.2 (continued)

Object	Entity	Address	Example
Peripherals	DT	dt-{1–8}-{1,3,5,7,13,15,17,19}	dt-1-1
Physical drops	Physical line (drop) Physical line in a DT	drop-{1–8}-{1–24}-{1–4} dtdp-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}-{1–4}	drop-8-24-3 dtdp-2-5-3-2
Physical feeder	VTU/LIU DS1 port	a-{1–7}-{1–4}	a-5-3
Reference signals	Synchronization ref (COT)	compclk-{1,2}	compclk-1
Shelf/ backplane	ARM shelf MDS assembly	arm mds-{1–4} shelf-{1–8}	arm mds-1 shelf-7
Virtual RT	INA DS1s TR-08 VRT	ina-{1–28} vrt-{1–8}	ina-2 vrt-1

* Use the *common* AID when reporting the *system free-running* alarm. The string representation is a dash (—). The system free-running alarm occurs when the system bandwidth management core is free-running.

† Circuit pack (CP) link addresses are used in reporting alarms: this table shows how the addresses are displayed on the UIP. On the CIT, the link addresses are displayed in separate columns: the first CP is in the *Source Address* column of the report, the second CP is listed in the *Description* column. For operations system (OS) reports, the link addresses are displayed with a hyphen ("-") instead of the slash ("/").

AIDs (Continued)

R3.3

NOTE:
Use R3.3 only in a *SLC*-2000 Access System COT. For universal applications, use R3.2, R4.0, R4.1, R4.2, R4.4, R4.5, or R4.6 at the *SLC*-2000 Access System RT when using R3.3 in the COT. Use R4.2 or later software in the RT to ensure all features are available (for example, full complement of new channel units) when using R3.3 or later software release.

The following table lists valid AIDs for the DLC subsystem (*SLC*-2000 Access System R3.3) for subscriber line interfaces. Use any one (and only one) of the addresses listed when the items appear in braces { }.

Object	Entity	Address	Example
ARM slots	BMP slot	bmp-{1,2}	bmp-1
	CORE slots	core-{1,2}	core-1
	LAN slot	lan	lan
	MIU slot	miu	miu
	PDC slot	pdc	pdc
	SMU slot	smu	smu
	STU/TSI slot	tsi-{1,2}	tsi-2
	THC slot	thc	thc
	VTU/LIU slot	ls-a-{1–8}	ls-a-1
Common*	Common	—	—
CP links†	MDC to CU bus	mdc-{1–8}-{1,2}/cubus-{1–3}	
	MDC to MDC	mdc-{1–8}-2/mdc-{1–8}-1	
	MDC to PTU	mdc-{1–8}-{1,2}/ptu-{1–8}-{1,2}	
	MDC to T8U	mdc-{1–8}-{1,2}/t8u-{1–8}-{1,2}	
	MDC to TSI	mdc-{1–8}-{1,2}/tsi-{1,2}	
	PDC to SYSCTL	pdc/sysctl	
	PDC to TSI	pdc/tsi-{1,2}	
	PDC to UIP	pdc/uip	
	SMU to PDC	smu/pdc	
	THC to TSI	thc/tsi-{1,2}	
	TMC to TMC	bmp-{1,2}/bmp-{1,2}	
	TSI to BMP	tsi-{1,2}/bmp-1-{1,2}	
	TSI to TSI	tsi-1/tsi-2	
	VTU/LIU to TSI	ls-a-{1–8}/tsi-{1,2}	
	VTU/LIU #8 to VTU/LIU	ls-a-8/ls-a-{1–7}	
Digroups	TR-08 digroups	dgr-{1–8}-{a–d}	dgr-1-b

Continued on next page

AIDs (Continued)

R3.3 (continued)

Object	Entity	Address	Example
Embedded data links	TR-08	tr8dl-{1–8}-{a–d}	tr8dl-4-c
Entire DLC subsystem		all	all
Line group	Line group	lgrp-{1–8}	lgrp-1
Logical drop	INA DS0 TR-08 VRT drop	inads0-{1–28}-{1–24} vrtdp-{1–8}-{1–96}	inads0-28-1 vrtdp-5-94
Logical feeder	TR-08 VRT	vrtfdr-{1–8}-{a–d}	vrtfdr-1-c
MDS slot	Channel unit MDC PTU TR-08 unit	cu-{1–8}-{1–24} mdc-{1–8}-{1,2} ptu-{1–8}-{1,2} t8u-{1–8}-{1,2}	cu-1-23 mdc-7-2 ptu-1-1 t8u-8-1
Operations interface	ATU CIT External major input ITH ITH links TAP UIP X.25 link	atu cit-{1,2} extmj ith ithlink-{1,2} tap-{a,b}-{1–8} uip x25	atu cit-1 extmj ith ithlink-2 tap-a-1 uip x25
Peripherals	DT	dt-{1–8}-{1,3,5,7,13,15,17,19}	dt-1-1
Physical drops	Physical line (drop)	drop-{1–8}-{1–24}-{1–4}	drop-8-24-3
Physical feeder	VTU/LIU DS1 port	a-{1–7}-{1–4}	a-5-3
Reference signals	Synchronization ref (COT)	compclk-{1,2}	compclk-1

Continued on next page

AIDs (Continued)

R3.3 (continued)

Object	Entity	Address	Example
Shelf/ backplane	ARM shelf MDS assembly	arm mds-{1–4} shelf-{1–8}	arm mds-1 shelf-7
Virtual RT	INA DS1s TR-08 VRT	ina-{1–28} vrt-{1–8}	ina-2 vrt-1

* Use the *common* AID when reporting the *system free-running* alarm. The string representation is a dash (—). The system free-running alarm occurs when the system bandwidth management core is free-running.

† Circuit pack (CP) link addresses are used in reporting alarms: this table shows how the addresses are displayed on the UIP. On the CIT, the link addresses are displayed in separate columns: the first CP is in the *Source Address* column of the report, the second CP is listed in the *Description* column. For operations system (OS) reports, the link addresses are displayed with a hyphen ("-") instead of the slash ("/").

AIDs (Continued)

R4.0

The following table lists valid AIDs for the DLC subsystem (*SLC*-2000 Access System R4.0) for subscriber line interfaces. Use any one (and only one) of the addresses listed when the items appear in braces { }.

Object	Entity	Address	Example
ARM slots	BMP slot	bmp-{1,2}	bmp-1
	CORE slots	core-{1,2}	core-1
	LAN slot	lan	lan
	MIU slot	miu	miu
	PDC slot	pdc	pdc
	SMU slot	smu	smu
	STU/TSI slot	tsi-{1,2}	tsi-2
	THC slot	thc	thc
	VTU/LIU slot	ls-a-{1–8}	ls-a-1
Common*	Common	—	—
CP links†	EOC to EOC	bmp-{1,2}/bmp-{1,2}	
	EOC to TSI	tsi-{1,2}/bmp-1-{1,2}	
	MDC to CU bus	mdc-{1–8}-{1,2}/cubus-{1–3}	
	MDC to MDC	mdc-{1–8}-2/mdc-{1–8}-1	
	MDC to PTU	mdc-{1–8}-{1,2}/ptu-{1–8}-{1,2}	
	MDC to T8U	mdc-{1–8}-{1,2}/t8u-{1–8}-{1,2}	
	MDC to TSI	mdc-{1–8}-{1,2}/tsi-{1,2}	
	PDC to SYSCTL	pdc/sysctl	
	PDC to TSI	pdc/tsi-{1,2}	
	PDC to UIP	pdc/uip	
	SMU to PDC	smu/pdc	
	THC to TSI	thc/tsi-{1,2}	
	TMC to TMC	bmp-{1,2}/bmp-{1,2}	
	TSI to BMP	tsi-{1,2}/bmp-1-{1,2}	
	TSI to TSI	tsi-1/tsi-2	
	VTU/LIU to TSI	ls-a-{1–8}/tsi-{1,2}	
	VTU/LIU #8 to VTU/LIU	ls-a-8/ls-a-{1–7}	
Digroups	TR-08 digroups	dgr-{1–8}-{a–d}	dgr-1-b

Continued on next page

AIDs (Continued)

R4.0 (continued)

Object	Entity	Address	Example
DT slot	BIU	biu-{1–8}-{1,3,5,7,13,15,17,19}	biu-8-19
	CDTU	cdtu-{1–8}-{1,3,5,7,13,15,17,19}	cdtu-5-7
	DT CU	dtcu-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}	dtcu-6-15-1
	PCU	pcu-{1–8}-{1,3,5,7,13,15,17,19}	pcu-1-7
	PIU	piu-{1–8}-{1,3,5,7,13,15,17,19}	piu-7-7
	RGU	rgu-{1–8}-{1,3,5,7,13,15,17,19}	rgu-2-3
Embedded data links	TR-08	tr8dl-{1–8}-{a–d}	tr8dl-4-c
	TR-303 EOC	v3eoc-{1}-{1,2}	v3eoc-1-1
	TR-303 TMC	v3tmc-{1}-{1,2}	v3tmc-1-2
Entire DLC subsystem		all	all
Line group	Line group	lgrp-{1–8}	lgrp-1
Logical drop	INA DS0	inads0-{1–28}-{1–24}	inads0-28-1
	TR-08 VRT drop	vrtdp-{1–8}-{1–96}	vrtdp-5-94
	TR-303 VRT drop	v3dp-{1}-{1–1536}	v3dp-1-999
Logical feeder	TR-08 VRT	vrtfdr-{1–8}-{a–d}	vrtfdr-1-c
	TR-303 DS1	v3fdr-{1}-{1–28}	v3fdr-1-27
MDS slot	Channel unit	cu-{1–8}-{1–24}	cu-1-23
	MDC	mdc-{1–8}-{1,2}	mdc-7-2
	DT Server	cu-{1–8}-{1,3,5,7,13,15,17,19}	cu-2-17
		dt-{1–8}-{1,3,5,7,13,15,17,19}	dt-2-17
	PTU	ptu-{1–8}-{1,2}	ptu-1-1
	TR-08 unit	t8u-{1–8}-{1,2}	t8u-8-1
Operations interface	ATU	atu	atu
	CIT	cit-{1,2}	cit-1
	External major input	extmj	extmj
	ITH	ith	ith
	ITH links	ithlink-{1,2}	ithlink-2
	TAP	tap-{a,b}-{1–8}	tap-a-1
	UIP	uip	uip
	X.25 link	x25	x25

Continued on next page

AIDs (Continued)

R4.0 (continued)

Object	Entity	Address	Example
Peripherals	DT	dt-{1–8}-{1,3,5,7,13,15,17,19}	dt-1-1
Physical drops	Physical line (drop) Physical line in a DT	drop-{1–8}-{1–24}-{1–4} dtdp-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}-{1–4}	drop-8-24-3 dtdp-2-5-3-2
Physical feeder	VTU/LIU DS1 port	a-{1–7}-{1–4}	a-5-3
Reference signals	Synchronization ref (COT)	compclk-{1,2}	compclk-1
Shelf/ backplane	ARM shelf MDS assembly	arm mds-{1–4} shelf-{1-8}	arm mds-1, shelf-7
Virtual RT	INA DS1s TR-08 VRT TR-303 VRT	ina-{1–28} vrt-{1–8} v303-1	ina-2 vrt-1 v303-1

* Use the *common* AID when reporting the *system free-running* alarm. The string representation is a dash (—). The system free-running alarm occurs when the system bandwidth management core is free-running.

† Circuit pack (CP) link addresses are used in reporting alarms: this table shows how the addresses are displayed on the UIP. On the CIT, the link addresses are displayed in separate columns: the first CP is in the *Source Address* column of the report, the second CP is listed in the *Description* column. For operations system (OS) reports, the link addresses are displayed with a hyphen ("-") instead of the slash ("/").

AIDs (Continued)

R4.2

NOTE:
Use R4.2 only in a *SLC*-2000 Access System RT. For universal applications, use R3.2 or R3.3 at the *SLC*-2000 Access System COT when using R4.2 in the RT. Use R3.3 or later software in the COT to ensure all features are available (for example, full complement of new channel units) when using R4.2 or later software release.

The following table lists valid AIDs for the DLC subsystem (*SLC*-2000 Access System R4.2) for subscriber line interfaces. Use any one (and only one) of the addresses listed when the items appear in braces { }.

Object	Entity	Address	Example
ARM slots	BMP slot	bmp-{1,2}	bmp-1
	CORE slots	core-{1,2}	core-1
	LAN slot	lan	lan
	MIU slot	miu	miu
	PDC slot	pdc	pdc
	SMU slot	smu	smu
	STU/TSI slot	tsi-{1,2}	tsi-2
	THC slot	thc	thc
	VTU/LIU slot	ls-a-{1–8}	ls-a-1
Common*	Common	—	—
CP links†	EOC to EOC	bmp-{1,2}/bmp-{1,2}	
	EOC to TSI	tsi-{1,2}/bmp-1-{1,2}	
	MDC to CU bus	mdc-{1–8}-{1,2}/cubus-{1–3}	
	MDC to MDC	mdc-{1–8}-2/mdc-{1–8}-1	
	MDC to PTU	mdc-{1–8}-{1,2}/ptu-{1–8}-{1,2}	
	MDC to T8U	mdc-{1–8}-{1,2}/t8u-{1–8}-{1,2}	
	MDC to TSI	mdc-{1–8}-{1,2}/tsi-{1,2}	
	PDC to SYSCTL	pdc/sysctl	
	PDC to TSI	pdc/tsi-{1,2}	
	PDC to UIP	pdc/uip	
	SMU to PDC	smu/pdc	
	THC to TSI	thc/tsi-{1,2}	
	TMC to TMC	bmp-{1,2}/bmp-{1,2}	
	TSI to BMP	tsi-{1,2}/bmp-1-{1,2}	
	TSI to TSI	tsi-1/tsi-2	
	VTU/LIU to TSI	ls-a-{1–8}/tsi-{1,2}	
	VTU/LIU #8 to VTU/LIU	ls-a-8/ls-a-{1–7}	
Digroups	TR-08 digroups	dgr-{1–8}-{a–d}	dgr-1-b

Continued on next page

AIDs (Continued)

R4.2 (continued)

Object	Entity	Address	Example
DT slot	BIU	biu-{1–8}-{1,3,5,7,13,15,17,19}	biu-8-19
	CDTU	cdtu-{1–8}-{1,3,5,7,13,15,17,19}	cdtu-5-7
	DT CU	dtcu-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}	dtcu-6-15-1
	PCU	pcu-{1–8}-{1,3,5,7,13,15,17,19}	pcu-1-7
	PIU	piu-{1–8}-{1,3,5,7,13,15,17,19}	piu-7-7
	RGU	rgu-{1–8}-{1,3,5,7,13,15,17,19}	rgu-2-3
Embedded data links	TR-08	tr8dl-{1–8}-{a–d}	tr8dl-4-c
	TR-303 EOC	v3eoc-{1,2}-{1,2}	v3eoc-1-1
	TR-303 TMC	v3tmc-{1,2}-{1,2}	v3tmc-2-2
Entire DLC subsystem		all	all
Line group	Line group	lgrp-{1–8}	lgrp-1
Logical drop	INA DS0	inads0-{1–28}-{1–24}	inads0-28-1
	TR-08 VRT drop	vrtdp-{1–8}-{1–96}	vrtdp-5-94
	TR-303 VRT drop	v3dp-{1,2}-{1–1536}	v3dp-2-199
Logical feeder	TR-08 VRT	vrtfdr-{1–8}-{a–d}	vrtfdr-1-c
	TR-303 DS1	v3fdr-{1,2}-{1–28}	v3fdr-1-27
MDS slot	Channel unit	cu-{1–8}-{1–24}	cu-1-23
	MDC	mdc-{1–8}-{1,2}	mdc-7-2
	DT Server	cu-{1–8}-{1,3,5,7,13,15,17,19}	cu-2-17
		dt-{1–8}-{1,3,5,7,13,15,17,19}	dt-2-17
	PTU	ptu-{1–8}-{1,2}	ptu-1-1
	TR-08 unit	t8u-{1–8}-{1,2}	t8u-8-1

Continued on next page

AIDs (Continued)

R4.2 (continued)

Object	Entity	Address	Example
Operations interface	ATU	atu	atu
	CIT	cit-{1,2}	cit-1
	External major input	extmj	extmj
	ITH	ith	ith
	ITH links	ithlink-{1,2}	ithlink-2
	TAP	tap-{a,b}-{1–8}	tap-a-1
	UIP	uip	uip
	X.25 link	x25	x25
Peripherals	DT	dt-{1–8}-{1,3,5,7,13,15,17,19}	dt-1-1
Physical drops	Physical line (drop)	drop-{1–8}-{1–24}-{1–4}	drop-8-24-3
	Physical line in a DT	dtdp-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}-{1–4}	dtdp-2-5-3-2
Physical feeder	VTU/LIU DS1 port	a-{1–7}-{1–4}	a-5-3
Reference signals	Synchronization ref (COT)	compclk-{1,2}	compclk-1
Shelf/ backplane	ARM shelf	arm	arm
	MDS assembly	mds-{1–4}	mds-1
		shelf-{1–8}	shelf-7
Virtual RT	INA DS1s	ina-{1–28}	ina-2
	TR-08 VRT	vrt-{1–8}	vrt-1
	TR-303 VRT	v303-{1,2}	v303-2

* Use the *common* AID when reporting the *system free-running* alarm. The string representation is a dash (—). The system free-running alarm occurs when the system bandwidth management core is free-running.

† Circuit pack (CP) link addresses are used in reporting alarms: this table shows how the addresses are displayed on the UIP. On the CIT, the link addresses are displayed in separate columns: the first CP is in the *Source Address* column of the report, the second CP is listed in the *Description* column. For operations system (OS) reports, the link addresses are displayed with a hyphen ("-") instead of the slash ("/").

AIDs (Continued)

R4.4

The following table lists valid AIDs for the DLC subsystem (*SLC*-2000 Access System R4.4) for subscriber line interfaces. Use any one (and only one) of the addresses listed when the items appear in braces { }.

Object	Entity	Address	Example
ARM slots	BMP slot	bmp-{1,2}	bmp-1
	CORE slots	core-{1,2}	core-1
	LAN slot	lan	lan
	MIU slot	miu	miu
	PDC slot	pdc	pdc
	SMU slot	smu	smu
	STU/TSI slot	tsi-{1,2}	tsi-2
	THC slot	thc	thc
	VTU/LIU slot	ls-a-{1–8}	ls-a-1
Common*	Common	–	–
CP links†	EOC to EOC	bmp-{1,2}/bmp-{1,2}	
	EOC to TSI	tsi-{1,2}/bmp-1-{1,2}	
	MDC to CU bus	mdc-{1–8}-{1,2}/cubus-{1–3}	
	MDC to MDC	mdc-{1–8}-2/mdc-{1–8}-1	
	MDC to PTU	mdc-{1–8}-{1,2}/ptu-{1–8}-{1,2}	
	MDC to T8U	mdc-{1–8}-{1,2}/t8u-{1–8}-{1,2}	
	MDC to TSI	mdc-{1–8}-{1,2}/tsi-{1,2}	
	PDC to SYSCTL	pdc/sysctl	
	PDC to TSI	pdc/tsi-{1,2}	
	PDC to UIP	pdc/uip	
	SMU to PDC	smu/pdc	
	THC to TSI	thc/tsi-{1,2}	
	TMC to TMC	bmp-{1,2}/bmp-{1,2}	
	TSI to BMP	tsi-{1,2}/bmp-1-{1,2}	
	TSI to TSI	tsi-1/tsi-2	
	VTU/LIU to TSI	tsi-{1,2}/ls-a-{1–8}	
	VTU/LIU #8 to VTU/LIU	ls-a-8/ls-a-{1–7}	
Digroups	TR-08 digroups	dgr-{1–8}-{a–d}	dgr-1-b

Continued on next page

AIDs (Continued)

R4.4 (continued)

Object	Entity	Address	Example
DT slot	BIU	biu-{1–8}-{1,3,5,7,13,15,17,19}	biu-8-19
	CDTU	cdtu-{1–8}-{1,3,5,7,13,15,17,19}	cdtu-5-7
	DT CU	dtcu-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}	dtcu-6-15-1
	PCU	pcu-{1–8}-{1,3,5,7,13,15,17,19}	pcu-1-7
	PIU	piu-{1–8}-{1,3,5,7,13,15,17,19}	piu-7-7
	RGU	rgu-{1–8}-{1,3,5,7,13,15,17,19}	rgu-2-3
Embedded data links	TR-08	tr8dl-{1–8}-{a–d}	tr8dl-4-c
	TR-303 EOC	v3eoc-{1,2}-{1,2}	v3eoc-1-1
	TR-303 TMC	v3tmc-{1,2}-{1,2}	v3tmc-2-2
Entire DLC subsystem		all	all
Line group	Line group	lgrp-{1–8}	lgrp-1
Logical drop	INA DS0	inads0-{1–28}-{1–24}	inads0-28-1
	TR-08 VRT drop	vrtdp-{1–8}-{1–96}	vrtdp-5-94
	TR-303 VRT drop	v3dp-{1,2}-{1–1536}	v3dp-2-199
Logical feeder	TR-08 VRT	vrtfdr-{1–8}-{a–d}	vrtfdr-1-c
	TR-303 DS1	v3fdr-{1,2}-{1–28}	v3fdr-1-27
MDS slot	Channel unit	cu-{1–8}-{1–24}	cu-1-23
	MDC	mdc-{1–8}-{1,2}	mdc-7-2
	DT Server	cu-{1–8}-{1,3,5,7,13,15,17,19}	cu-2-17
		dt-{1–8}-{1,3,5,7,13,15,17,19}	dt-2-17
	PTU	ptu-{1–8}-{1,2}	ptu-1-1
	TR-08 unit	t8u-{1–8}-{1,2}	t8u-8-1
Operations interface	ATU	atu	atu
	CIT	cit-{1,2}	cit-1
	External major input	extmj	extmj
	ITH	ith	ith
	ITH links	ithlink-{1,2}	ithlink-2
	TAP	tap-{a,b}-{1-8}	tap-a-1
	UIP	uip	uip
	X.25 link	x25	x25
Peripherals	DT	dt-{1–8}-{1,3,5,7,13,15,17,19}	dt-1-1

Continued on next page

AIDs (Continued)

R4.4 (continued)

Object	Entity	Address	Example
Physical drops	Physical line (drop)	drop-{1–8}-{1–24}-{1–4}	drop-8-24-3
	Physical line in a DT	dtdp-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}-{1–4}	dtdp-2-5-3-2
Physical feeder	VTU/LIU DS1 port	a-{1–7}-{1–4}	a-5-3
Reference signals	Synchronization ref (COT)	compclk-{1,2}	compclk-1
Shelf/ backplane	ARM shelf MDS assembly	arm mds-{1–4} shelf-{1–8}	arm mds-1 shelf-7
Virtual RT	INA DS1s TR-08 VRT TR-303 VRT	ina-{1–28} vrt-{1–8} v303-{1,2}	ina-2 vrt-1 v303-2

* Use the *common* AID when reporting the *system free-running* alarm. The string representation is a dash (—). The system free-running alarm occurs when the system bandwidth management core is free-running.

† Circuit pack (CP) link addresses are used in reporting alarms: this table shows how the addresses are displayed on the UIP. On the CIT, the link addresses are displayed in separate columns: the first CP is in the *Source Address* column of the report, the second CP is listed in the *Description* column. For operations system (OS) reports, the link addresses are displayed with a hyphen ("-") instead of the slash ("/").

AIDs (Continued)

R4.5 and R4.6

The following table lists valid AIDs for the DLC subsystem (*SLC*-2000 Access System R4.5 and R4.6) for subscriber line interfaces. Use any one (and only one) of the addresses listed when the items appear in braces { }.

Object	Entity	Address (Note)	Example
ARM slots	BMP slot	bmp-{1,2}	bmp-1
	CORE slots	core-{1,2}	core-1
	LAN slot	lan	lan
	MIU slot	miu	miu
	PDC slot	pdc	pdc
	SMU slot	smu	smu
	STU/TSI slot	tsi-{1,2}	tsi-2
	THC slot	thc	thc
	VTU/LIU slot	ls-a-{1–8}	ls-a-1
Common*	Common	–	–
CP links†	EOC to EOC	bmp-{1,2}/bmp-{1,2}	
	EOC to TSI	tsi-{1,2}/bmp-1-{1,2}	
	MDC to CU bus	mdc-{1–8}-{1,2}/cubus-{1–3}	
	MDC to MDC	mdc-{1–8}-2/mdc-{1–8}-1	
	MDC to PTU	mdc-{1–8}-{1,2}/ptu-{1–8}-{1,2}	
	MDC to T8U	mdc-{1–8}-{1,2}/t8u-{1–8}-{1,2}	
	MDC to TSI	mdc-{1–8}-{1,2}/tsi-{1,2}	
	PDC to SYSCTL	pdc/sysctl	
	PDC to TSI	pdc/tsi-{1,2}	
	PDC to UIP	pdc/uip	
	SMU to PDC	smu/pdc	
	THC to TSI	thc/tsi-{1,2}	
	TMC to TMC	bmp-{1,2}/bmp-{1,2}	
	TSI to BMP	tsi-{1,2}/bmp-1-{1,2}	
	TSI to TSI	tsi-1/tsi-2	
	VTU/LIU to TSI	ls-a-{1–8}/tsi-{1,2}	
	VTU/LIU #8 to VTU/LIU	ls-a-8/ls-a-{1–7}	
Digroups	TR-08 digroups	dgr-{1–8}-{a–d}	dgr-1-b

Continued on next page

AIDs (Continued)

R4.5 and R4.6 (continued)

Object	Entity	Address (Note)	Example
DT slot	BIU	biu-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}	biu-8-19
	CDTU	cdtu-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}	cdtu-5-7
	DT CU	dtcu-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}-{1–6}	dtcu-6-15-1
	PCU	pcu-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}	pcu-1-7
	PIU	piu-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}	piu-7-7
	RGU	rgu-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}	rgu-2-3
Embedded data links	TR-08	tr8dl-{1–8}-{a–d}	tr8dl-4-c
	TR-303 EOC	v3eoc-{1,2}-{1,2}	v3eoc-1-1
	TR-303 TMC	v3tmc-{1,2}-{1,2}	v3tmc-2-2
Entire DLC subsystem		all	all
Line group	Line group	lgrp-{1–8}	lgrp-1
Logical drop	INA DS0	inads0-{1–28}-{1–24}	inads0-28-1
	TR-08 VRT drop	vrtdp-{1–8}-{1–96}	vrtdp-5-94
	TR-303 VRT drop	v3dp-{1,2}-{1–1536}	v3dp-2-199
Logical feeder	TR-08 VRT	vrtfdr-{1–8}-{a–d}	vrtfdr-1-c
	TR-303 DS1	v3fdr-{1,2}-{1–28}	v3fdr-1-27
MDS slot	Channel unit	cu-{1–8}-{1–24}	cu-1-23
	MDC	mdc-{1–8}-{1,2}	mdc-7-2
	DT Server	cu-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}	cu-2-17
		dt-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}	dt-2-17
	PTU	ptu-{1–8}-{1,2}	ptu-1-1
	TR-08 unit	t8u-{1–8}-{1,2}	t8u-8-1

Continued on next page

AIDs (Continued)

R4.5 and R4.6 (continued)

Object	Entity	Address (Note)	Example
Operations interface	ATU	atu	atu
	CIT	cit-{1,2}	cit-1
	External major input	extmj	extmj
	ITH	ith	ith
	ITH links	ithlink-{1,2}	ithlink-2
	TAP	tap-{a,b}-{1-8}	tap-a-1
	UIP	uip	uip
	X.25 link	x25	x25
Peripherals	DT	dt-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}	dt-1-1
Physical drops	Physical line (drop)	drop-{1–8}-{1–24}-{1–4}	drop-8-24-3
	Physical line in a DT	dtdp-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}-{1–6}-{1–4}	dtdp-2-5-3-2
Physical feeder	VTU/LIU DS1 port	a-{1–7}-{1–4}	a-5-3
Reference signals	Synchronization ref (COT)	compclk-{1,2}	compclk-1
Shelf/ backplane	ARM shelf	arm	arm
	MDS assembly	mds-{1–4}	mds-1
		shelf-{1–8}	shelf-7
Virtual RT	INA DS1s	ina-{1–28}	ina-2
	TR-08 VRT	vrt-{1–8}	vrt-1
	TR-303 VRT	v303-{1,2}	v303-2

NOTE:
Only DT Server *SPQ*®811 will function in DT Server slot positions 11 and 23.

* Use the *common* AID when reporting the *system free-running* alarm. The string representation is a dash (—). The system free-running alarm occurs when the system bandwidth management core is free-running.

† Circuit pack (CP) link addresses are used in reporting alarms: this table shows how the addresses are displayed on the UIP. On the CIT, the link addresses are displayed in separate columns: the first CP is in the *Source Address* column of the report, the second CP is listed in the *Description* column. For operations system (OS) reports, the link addresses are displayed with a hyphen ("-") instead of the slash ("/").

Command, Message, and Report Syntax

4

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About the Command, Message, and Report Syntax

Overview

Introduction

This chapter describes the conventions to help you to understand how to enter commands. Also, this chapter helps to understand how to read and interpret the automatic, alarm, and condition and fault messages and reports.

UIP

Command Conventions

Introduction

CAUTION:
Some commands are service affecting and require the user to confirm the choice.

The alphanumeric message display (AMD) of the user interface panel (UIP) displays the commands and parameters/options for the display section of the user interface panel. The main menu commands are shown in **bold** face type on the left-hand side. Options for a command are displayed in a submenu (shown as boxes containing a list of items). Some commands display a confirmation prompt after the option(s) have been selected. These commands have the word *confirm* on the right-hand side.

Basic structure of the UIP menu stack

NOTE:
The command and parameter names may be abbreviated so that all the necessary information can fit on the display.

The UIP commands are menu driven. The first menu is called the main menu. The main menu contains all of the UIP commands. The system may prompt for more information (after a command is selected) if more input is required using one or more submenus. Use the Scroll Menu buttons (Up ▲ and Down ▼ arrows) to view the commands in the main menu. Press the Enter button to select the displayed command.

Select the command

Each choice contains the string *<ent>* indicating that the command may be selected (executed) — press the Enter button on the UIP. The default values execute automatically when a different value is not selected and the Enter button on the UIP is pressed. The default values for the UIP commands are shown in brackets ([ ]).

Return to the top of the menu stack

Press the Escape button at any time to normally return the display to the main menu and to interrupt (abort) certain commands. See Chapter 5, "UIP Commands," to determine if you can interrupt a specific command.

(Continued on next page)

Command Conventions (Continued)

UIP menu stack

Command - Name

MAIN MENU — List the system commands. Use the Scoll Menu up and down buttons until the desired item is displayed, then press Enter to choose or confirm your choice. Press Escape to start over.

RETRIEVE-FAULTS — List active faults (local to *SLC*®-2000 RT) with high test priority fault listed first. Use Scroll Menu pushbuttons to browse through fault messages.

RETRIEVE-ALARMS — List active system alarms (local to *SLC*-2000 RT with most critical alarm listed first) sent or received by the *SLC*-2000 RT. Use Scroll Menu buttons to browse through alarm messages.

Command	Command - Selection	Command - Option	
INITIALIZE-CRS Establishes the default DS1 feeder to VRT (T1) and DS0 time slot in DS1s (T0).	INIT-CRS:T1 INIT-CRS:T0	INIT-CRS:T#:vrt1 INIT-CRS:T#:vrt2 INIT-CRS:T#:vrt3 INIT-CRS:T#:vrt4 INIT-CRS:T#:vrt5 INIT-CRS:T#:vrt6 INIT-CRS:T#:vrt7 INIT-CRS:T#:vrt8	CONFIRM *
INITIALIZE-SYSTEM Initialize provisioning memory of DLC subsystem (use only during initial turnup).			CONFIRM *
RETRIEVE-PROG-VRSN	List the System and SMU software version information for all subsystem software packages [digital loop carrier (DLC), SONET (SNT), and test head controller (THC)]. Use Scroll Menu buttons to view list.		
RETRIEVE-STATE	Return the states of VRTs 1 through 8 per VTU (12 34 45 78) (I = In service, - = Out-of-service). For example, output could be VRT STATES: II II - - - - - .		
SET-BAUD Set baud rate for local craft Interface terminal access	300 4800 1200 [9600] 2400 19200		
SET-DISTRIBUTION Set the distribution configuration of a VRT to metallic copper drops (METL) or Fiber-in-the-Loop (FITL).	SHELF 1 SHELF 5 SHELF 2 SHELF 6 SHELF 3 SHELF 7 SHELF 4 SHELF 8	[MET] FITL	CONFIRM *
SET-FEEDER Select the feeder faclity configuration.	[VTU] LIU		CONFIRM *
SET-MODE-TR8 Select the TR-08 mode of operation for VRT pairs in an MDS Assembly.	SET-MODE:vrt1&2 SET-MODE:vrt3&4 SET-MODE:vrt5&6 SET-MODE:vrt7&8	SET-MODE:vrt#s:1 SET-MODE:vrt#s:2	CONFIRM *
SET-NE Configure the DLC subsystem for either RT or COT operation	SET-NE:[RT] SET-NE:COT		CONFIRM *
SET-STATE-SMU Enable or disable the software installation feature in the SMU	ENABLED DISABLED		CONFIRM *
SWITCH-CORE Force switch, inhibit switching, or reset protection switch priority in bandwidth management section (CORE)	RESET INHIBIT FORCE ->1 FORCE ->2		CONFIRM *
SWITCH-LIU Force switch, lockout switching, manually switch, or reset protection switch priority in LIU feeder circuit packs.	SWITCH-LIU:1 SWITCH-LIU:2 SWITCH-LIU:3 SWITCH-LIU:4 SWITCH-LIU:5 SWITCH-LIU:6 SWITCH-LIU:7 SWITCH-LIU:8	SWITCH-LIU:#:Reset SWITCH-LIU:#:Lockout SWITCH-LIU:#:Force SWITCH-LIU:#:Manual	CONFIRM *
TEST-SHELF Perform LED test on MDS to check intershelf connectivity.	1 & 2 3 & 4 5 & 6 7 & 8		
TEST-VRT-ALARM Send an alarm from a VRT to far end equipment to test remote alarm links.	VRT1 VRT2 VRT3 VRT4 VRT5 VRT6 VRT7 VRT8	MJ MN DGRP A DGRP B DGRP C DGRP D	CONFIRM*

**** CAUTION: You must confirm these commands because they may affect service.***

uip4.eps

Command Conventions (Continued)

How to use the RETRIEVE-*type* commands

For RETRIEVE-*type* commands (without command parameters), press the Enter button to execute the command displayed on the UIP. When a RETRIEVE-*type* command is executed, the UIP collects a message list, then displays the first report message in the list. Use the Scroll Menu buttons (Up ▲ and Down ▼ arrows) to view these messages (the same way that menu items are viewed). Press the Escape button at any time to return to the top of the main menu.

How to use other commands

For commands other than RETRIEVE-*type* commands, press the Enter button to execute the displayed command using default parameters or display the first option in the parameter menu for the command. Use the Scroll Menu buttons to view the parameter menu(s). When the desired option is displayed, press Enter to execute the command with that option (unless there is another parameter menu for the command).

Display the in-progress message for other commands

An *in-progress* message is displayed when the command (other than a RETRIEVE-*type* command has been entered) takes more than 2 seconds to complete.

Display the completion and status message

A *completion* message is displayed when a command is successfully completed. The status of the completed command is displayed as *done*, *PASS*, or *FAIL*. If the command did not complete successfully, an *error* message (DENY *reason*) is displayed.

After a *completion/error* message has been displayed on the UIP for at least 2 seconds, press any button (preferably Enter or Escape) to return to the top of the Main menu.

Cancel a command

Press the Escape button to abort (stop) the TEST-VRT-ALARM and TEST-SHELF commands while in progress. (Also, press the Escape button after the LED TEST push button has been pressed to cancel the LED indicator test.)

Response Conventions

Introduction

When a command is selected (with all required parameters), a *report*, *report update*, *in-progress*, *abort*, *completion*, or *error* message is displayed to let the user know the status of the command. An abort message signals the termination of a UIP command by the user.

Report (from RETRIEVE-*type* commands)

Report messages are displayed upon successful completion of a RETRIEVE-*type* command. The following commands are RETRIEVE-*type* commands.

- RETRIEVE-faults
- RETRIEVE-alarms
- RETRIEVE-program-version
- RETRIEVE-state

The RETRIEVE-*type* commands are listed in the Main Menu. When the command is selected with the Enter button, the UIP immediately presents the retrieved data as a scrollable data list. The user may repeatedly scroll the data list (*report* messages) without message loss.

Return to main menu

The *report* messages list includes a *Return to Main Menu* selection. However, if the Escape button is pressed while a *report* message is displayed on the AMD, the UIP returns to the top of the Main Menu.

Get report updates

NOTE:
The following condition applies only to the UIP commands, RETRIEVE-ALARMS and RETRIEVE-FAULTS. For all other commands, the user must execute the command again to see the effects of system status changes.

If a change in the status of the system occurs while the user is viewing a *report* message from the RETRIEVE-ALARMS or RETRIEVE-FAULTS command, the change will be reflected in the *report* message being displayed. This should help when attempting to clear a series of alarms and defaults.

(Continued on next page)

Response Conventions (Continued)

Display the in-progress messages

An *in-progress* message is displayed if the command requires more than 2 seconds to complete. This message confirms that the UIP is indeed executing the requested command. The following is an example of an *in-progress* message.

```
SWITCH-CORE: In-Progress
```

Cancel a command message

Only the TEST-VRT-ALARM and TEST-SHELF commands can be aborted. An *abort* message signals that the user terminated a UIP AMD command using the Escape button. The message is displayed for 5 seconds, after which the UIP AMD returns to the Main menu. The LED test can be aborted. However, no message is displayed. The following is an example of an abort message.

```
** Command Canceled **
```

Display a completion message

The *completion* message for all commands (except the RETRIEVE-*type*) is *command:option done*. (For example, the display prior to executing the UIP command SET-STATE-SMU should be SET-STATE-SMU:Enable <ent>.)

Pressing Enter will issue the command, and successful execution would be indicated by the following display.

```
SET-STATE-SMU: Enable done
```

Display an error message

An *error* message display means the command has been refused by the system (that is, execution is denied). The reasons for denial are included in the command pages. The following is an example of command execution with an *error* message result.

```
DENY: Updating program
```

CIT

Overview

Introduction

The user is prompted [when using the craft interface terminal (CIT)] for parameters in the order given in the sections "Format" of Chapter 6, "SONET Subsystem Commands" and Chapter 7, "DLC Subsystem Commands,".

The parameter prompt

A parameter prompt is given in the form **`parameter=`** or **`parameter[default]=`**. Parameters are classified using three categories and are dependent on the nature of the default value.

Parameters with static default values

A parameter with a *static* default value assumes the same default value in every use of the command. An example is the *repeat* parameter in the *test-led* command — the default value is 1 (meaning test the LEDs only once) in every use of the command.

Parameters with current default values

A parameter with a *current* default value assumes the current value of the parameter in the system data base. An example is the *alarmlevel* parameter in the SONET subsystem command, set-t1. The original default for this parameter is *no* (the default value displayed for the command when first used for a specific DS1 port). If this parameter value is changed to *MJ* for a specific DS1 port, then the default value should be *MJ* for the next use of the SONET subsystem command, set-t1 for that DS1 port. Current values apply only to a single object/entity.

Parameters with no default values

A parameter with *no* default value is not allowed to have a default value. For example, a value must be entered for the *aid* parameter (if the access identifier is required for the command).

Default and original values

In the sections "Parameters" of Chapter 6, "SONET Subsystem Commands" and Chapter 7, "DLC Subsystem Commands," the static default value is specified for parameters with a static default value, and the original value is specified for parameters with a current default value.

(Continued on next page)

Overview (Continued)

Access the Help mode

You can enter the help mode at any time without disrupting current entry activities. Press the [?] key at any place in a dialog to access help.

Exit the Help mode

Exit the Help command by answering the question normally prompted at the end of a help message. Abort Help at any time using the [CANCEL] and [DELETE] keys, thus returning you to the top menu prompt.

Main menu help

When you request help at the main menu, the command categories are displayed and placed in a prompted mode. When you request additional help at this point, the menu provides a short introduction to guide the user.

Single line entry

Any command can be entered on a single line. Optional or empty parameters may be omitted when at the end of a command line.

Commands are not case sensitive

The DLC subsystem commands are *shown* in uppercase, while the SONET subsystem commands are *shown* in lowercase for clarity. However, the commands for the *SLC*-2000 Access System are not case sensitive. Commands may be entered in uppercase and lowercase letters. Entries other than commands (for example, passwords, logins, and tids) are case sensitive. Type these entries exactly as they were originally constructed.

Terminators

Terminators are keys that tell the network element (NE) that the user has finished inputting information and is expecting a response. The following terminators are valid and have a specific task(s).

- [;] terminates the command line.
- [RETURN] enters and executes the command line.
- [!] is used the same as <cr>.
- [?] requests context-sensitive *help* information. The [?] suspends the present input operation and displays *help* requiring user response. After exiting the *help* mode, the user is returned to the suspended operation and the suspended command is redisplayed.

Overview (Continued)

Constructors

Specific *other* keys are used in the construction of commands and include their specific effect(s).

- Alphabetic characters are valid in uppercase and lowercase and are case insensitive to processing. However, logins and passwords must be entered the same as they were constructed.
- [.] represents the decimal point in floating point numbers.
- [CONTROL] [T] switches between established sessions (see the SONET subsystem command, toggle).
- [,] is used to separate parameters.
- [BACK SPACE] and [_] erases the previous character input and continues each time it is pressed.
- [@] kills the current line input allowing the command to be restarted.
- [CANCEL] and [DELETE] terminates current activity and returns to the top level prompt.
- [-] separates identifiers in the command code.
- [:] separates parameter blocks in a command.

Dialog or Menu Driven Interface

Introduction

The dialog/menu driven interface is one of two methods (identical to the DDM-2000 interface) of entering CIT commands. This method prompts for input of the DLC subsystem command using system interaction.

System prompt dialog

The system prompts (the user) for information needed to complete the command. To start the dialog, enter the question mark (enter **?**) for help. To cancel a dialog session, press CANCEL or DELETE.

How to use the menu-driven interface

NOTE:
User input is shown in ***bold-italics***.

The following example illustrates how to use the menu-driven interface. This example enters one cross-connection from a TR-303 virtual remote terminal (VRT) line (v3dp-1-1) to a drop on MDS shelf 2 (drop-2-1-1).

```
<  ?

/* Select from
   1. conn   (connect)
   2. cpy    (copy)
   3. disc   (disconnect)
   4. dlt    (delete)
   5. ed     (edit)
   6. ent    (enter)
   7. init   (initialize)
   8. rd     (read)
   9. rtrv   (retrieve)
   10. set
   11. sw    (switch)
   12. upd   (update)
   13. logout
   14. reset
   15. sonet */
   < 6

/* Select from
   1. crs
   2. t0  */

command = 1

/* Select from
   1. t0
   2. t1  */

command = 1
```

(Continued on next page)

Dialog or Menu Driven Interface (Continued)

How to use the menu-driven interface (continued)

```
/* Enter a T0 address1:
   vrtdp-all or
   vrtdp-{1-8,a&&a´}-{1-96,b&&b´,all} or
   v3dp-1-{1-1536,a&&a´,all} or
   inads0-all or
   inads0-{1-28,a&&a´}-{1-24,b&&b´,all} */

Address1 = v3dp-1-1


/* Enter a T0 address2:
   drop-all or
   drop-{1-8,a&&a´}-all or
   drop-{1-8,a&&a´}-{1-24,b&&b´}-{1-4,c&&c´,all} or
   dtdp-all or
   dtdp-{1-8,a&&a´}-all or
   dtdp-{1-8,a&&a´}-{1,3,5,7,9,11,13,15,17,19,21,23,b&&b´}-all or
   dtdp-{1-8,a&&a´}-{1,3,5,7,9,11,13,15,17,19,21,23,b&&b´}-{1-6,c&&c´}-{1-4,d&&d´,all} or
   ithlink-{1-2,a&&a´,all} */

Address2 = drop-2-1-1


/* Caution! Network Cross-connections are affected by this command. */

/* You have selected the ent-crs-t0 command with these parameters: */
/* Review of Parameter Responses ...  */
         Address1 = v3dp-1-1
         Address2 = drop-2-1-1

Execute? (y/n or CANcel/DELete to quit) = y

   In progress...

   ST-PROTO-4 97-05-30 06:20:00 SLC-2000 DLC, R4.05.00
M  ent-crs-t0::v3dp-1-1:drop-2-1-1 COMPLD
;
```

Expert Command Mode

Introduction

The expert command mode is one of two methods (identical to the DDM-2000 interface) of entering CIT commands. The expert command mode allows direct input of the complete DLC subsystem command without the system prompt interaction.

How to use the expert command mode

NOTE:
User input is shown in ***bold-italics***.

The following example illustrates how to use the expert command mode (refer to the manual pages in this chapter for command syntax). This procedure also enters one cross-connection from a TR-303 VRT line (v3dp-1-1) to a drop on MDS shelf 2 (drop-2-1-1).

```
< ent-crs-t0::v3dp-1-1,drop-2-1-1;

 /* Caution! Network Cross-connections are affected by this command. */

 /* You have selected the ent-crs-t0 command with these parameters: */
 /* Review of Parameter Responses ...  */
          Address1 = v3dp-1-1
          Address2 = drop-2-1-1

 Execute? (y/n or CANcel/DELete to quit) = y

    In progress...

    ST-PROTO-4 97-05-30 06:20:00 SLC-2000 DLC, R4.05.00
 M  ent-crs-t0::v3dp-1-1:drop-2-1-1 COMPLD
 ;
```

Incomplete or incorrect command

When you enter a partially complete or incorrect command, the system interprets the command up to the point where the input error occurs and prompts the craft personnel for valid values.

Abbreviate the CIT commands

The CIT commands can be abbreviated as long as the abbreviations represent single unique elements of the full command. (For example, you can abbreviate the ENT-CRS-T0 command to EN-C-T0.)

SONET Subsystem

Introduction

NOTE:
The SONET subsystem uses a different syntax than the DLC subsystem. In the SONET subsystem, consecutive colons are used to input the static or current default value for a parameter block, and the number of parameter blocks varies with the command. The square brackets ([ ]) enclosing the parameters are not part of the command input — they represent command line options. The parameter(s) within the square brackets are optional and can be omitted if they are not needed. The system will substitute the default values of these parameters when the command is executed.

The user command input message for the SONET subsystem consists of a command followed by the access identifier (AID) and name-defined block (NDB) parameter blocks in a fixed order and ended with a termination character. All user command input for the SONET subsystem has the following common format.

```
command_code[:AID][:2NDB];
```

The address

The variable AID identifies a slot, channel, or operations interface within the shelf. When required, the address must appear immediately after the command name. The NDB parameter must be entered in the name=value format.

DLC Subsystem

Introduction

NOTE:
The DLC subsystem uses a different syntax (TL1) than the SONET subsystem. In the DLC subsystem, consecutive colons are used for empty parameter blocks, and the parameter blocks are a fixed number for each command. The square brackets ([ ]) enclosing the parameters are not part of the command input; they represent options. The parameter(s) within the square brackets are optional and may be omitted if they are not needed. The system will substitute the default value of these parameters when the command is executed.

The DLC CIT and TL1 commands consist of a command followed by the target identifer (TID), access identifier (AID), correlation tag (CTAG), general block (GB), position-defined block (PDB) or common block (CB), name-defined block (NDB) or specific data block (SDB), and state block (SB) parameter blocks in that order, and ended with a termination character. All user command input for the DLC subsystem has the same requirements for the TID, CTAG, and GB.

```
COMMAND_CODE:[TID]:AID:[CTAG]:[GB]:PDB:NDB:SB;
```

Unique command parameters

NOTE:
The TID, CTAG, and GB parameters are always left blank when input through the CIT (they are only used by the TL1 operations system (OS) interface). The colons (:) are required to delimit the input parameters even though there is no data between them. In TL1 applications, the variable TID identifies the NE to which the command is addressed, and the CTAG parameter block correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment.

The AID, PDB, NDB, and SB parameters are unique for each command and are defined in the command pages. The AID parameter identifies the object(s) and/or entity(ies) within the network element (NE) on which the command operates. The PDB parameter block [or common data block (CDB)] is used for data parameters that are input every time the command is entered. They are defined by their position in the command. The NDB parameter block [or specific data block (SDB)] is used when only a few parameters are needed from a choice of a large number of parameters. These parameters are entered in a name-defined manner (name=value). The SB data parameter describes the state or condition of the object-entity. The SB parameter is used in the DLC subsystem commands, ED-T1 and ED-STATE-SMU.

Response Conventions

Overview

Reports are paged and displayed on the monitor of the CIT.

Page multipage output

The system prompts to continue paging when the report is multipage output. When the prompt is displayed, enter one of the following inputs to proceed to the next screen page.

- [;]
- [RETURN]
- *yes* [;] or
- *yes* [RETURN].

Terminate the output

Enter one of the following inputs to terminate the output and return the screen to the top level prompt.

- [N]
- no [;]
- [N] [RETURN]
- no [RETURN]
- [CANCEL] or
- [DELETE].

Set the page length

Use the SONET subsystem command, set-link, to set the length of the page.

Confirm execution of the command

After all parameters have been entered, a caution message followed by the command name, the selected values of parameters, and a prompt to execute is displayed on the CIT. Press [Y] followed by [RETURN] to execute the command. However, to change the value of any of the parameters, press the [N] followed by [RETURN] and you are prompted to reenter all parameters. Press the [CANCEL] and [DELETE] key to abort the command.

(Continued on next page)

Response Conventions (Continued)

Display error response

Error messages describe what is known about the error condition and, if possible, how to correct the error.

Input

System response to an input error will indicate what the error is and how to correct the error. The system will indicate where the error or ambiguity is and will reprompt at that point for new input.

Execution

Errors occurring during the execution of a command will indicate what the error is and how to correct the error.

UIP Commands

5

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About the UIP Commands

Overview

Introduction

This chapter contains all of the user interface panel (UIP) commands for the *SLC*®-2000 Access System.

Select the UIP command

Press Enter to select the UIP command displayed on the alphanumeric display (AMD) menu.

TL1 command convention

Some commands have been changed slightly to make them consistent with the Transaction Language 1 (TL1) commands.

Listed alphabetically

The commands for the UIP are listed alphabetically on the following pages.

Overview

UIP menu stack

Command - Name

MAIN MENU — List the system commands. Use the Scoll Menu up and down buttons until the desired item is displayed, then press Enter to choose or confirm your choice. Press Escape to start over.

RETRIEVE-FAULTS — List active faults (local to *SLC*®-2000 RT) with high test priority fault listed first. Use Scroll Menu pushbuttons to browse through fault messages.

RETRIEVE-ALARMS — List active system alarms (local to *SLC*-2000 RT with most critical alarm listed first) sent or received by the *SLC*-2000 RT. Use Scroll Menu buttons to browse through alarm messages.

Command	Command - Selection	Command - Option	
INITIALIZE-CRS Establishes the default DS1 feeder to VRT (T1) and DS0 time slot in DS1s (T0).	INIT-CRS:T1 INIT-CRS:T0	INIT-CRS:T#:vrt1 INIT-CRS:T#:vrt2 INIT-CRS:T#:vrt3 INIT-CRS:T#:vrt4 INIT-CRS:T#:vrt5 INIT-CRS:T#:vrt6 INIT-CRS:T#:vrt7 INIT-CRS:T#:vrt8	CONFIRM *
INITIALIZE-SYSTEM Initialize provisioning memory of DLC subsystem (use only during initial turnup).			CONFIRM *
RETRIEVE-PROG-VRSN — List the System and SMU software version information for all subsystem software packages [digital loop carrier (DLC), SONET (SNT), and test head controller (THC)]. Use Scroll Menu buttons to view list.			
RETRIEVE-STATE — Return the states of VRTs 1 through 8 per VTU (12 34 45 78) (I = In service, - = Out-of-service). For example, output could be VRT STATES: II II - - - - - .			
SET-BAUD Set baud rate for local craft Interface terminal access	300 4800 1200 [9600] 2400 19200		
SET-DISTRIBUTION Set the distribution configuration of a VRT to metallic copper drops (METL) or Fiber-in-the-Loop (FITL).	SHELF 1 SHELF 5 SHELF 2 SHELF 6 SHELF 3 SHELF 7 SHELF 4 SHELF 8	[MET] FITL	CONFIRM *
SET-FEEDER Select the feeder faclity configuration.	[VTU] LIU		CONFIRM *
SET-MODE-TR8 Select the TR-08 mode of operation for VRT pairs in an MDS Assembly.	SET-MODE:vrt1&2 SET-MODE:vrt3&4 SET-MODE:vrt5&6 SET-MODE:vrt7&8	SET-MODE:vrt#s:1 SET-MODE:vrt#s:2	CONFIRM *
SET-NE Configure the DLC subsystem for either RT or COT operation	SET-NE:[RT] SET-NE:COT		CONFIRM *
SET-STATE-SMU Enable or disable the software installation feature in the SMU	ENABLED DISABLED		CONFIRM *
SWITCH-CORE Force switch, inhibit switching, or reset protection switch priority in bandwidth management section (CORE)	RESET INHIBIT FORCE ->1 FORCE ->2		CONFIRM *
SWITCH-LIU Force switch, lockout switching, manually switch, or reset protection switch priority in LIU feeder circuit packs.	SWITCH-LIU:1 SWITCH-LIU:2 SWITCH-LIU:3 SWITCH-LIU:4 SWITCH-LIU:5 SWITCH-LIU:6 SWITCH-LIU:7 SWITCH-LIU:8	SWITCH-LIU:#:Reset SWITCH-LIU:#:Lockout SWITCH-LIU:#:Force SWITCH-LIU:#:Manual	CONFIRM *
TEST-SHELF Perform LED test on MDS to check intershelf connectivity.	1 & 2 3 & 4 5 & 6 7 & 8		
TEST-VRT-ALARM Send an alarm from a VRT to far end equipment to test remote alarm links.	VRT1 VRT2 VRT3 VRT4 VRT5 VRT6 VRT7 VRT8	MJ MN DGRP A DGRP B DGRP C DGRP D	CONFIRM*

**** CAUTION: You must confirm these commands because they may affect service.***

uip4.eps

Command Manual Pages

INITIALIZE-CRS

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the INITIALIZE-CRS command.

INITIALIZE-CRS:signal_level:vrt

Command name

Initialize cross-connections.

Can command be aborted?

No.

Purpose

NOTE:
No DS1 cross-connects can exist for the virtual remote terminal (VRT) in order for the INITIALIZE-CRS command to work for T1. Also, no DS0 cross-connects can exist for the VRT in order for the INITIALIZE-CRS command to work for T0.

Enter the INITIALIZE-CRS command to create standard DS0 (line) or DS1 (feeder) cross-connections. (Refer to 363-208-001, *SLC-2000 Access System, User/Service and Ordering Manual*, for information about standard cross-connections.)

INITIALIZE-CRS (Continued)

Parameters

Use the following parameters with the INITIALIZE-CRS command.

signal_level

Signal level. Identifies the signal level being cross-connected and is selected from the following menu. Valid values are {T0, T1}.

- INIT-CRS:T0 — DS0 line cross-connect
- INIT-CRS:T1 — DS1 feeder cross-connect

Default — none, value must be selected.

vrt

Virtual remote terminal. The TR-08 VRT number corresponding to the line/feeder being cross-connected and is selected from the following menu.

Valid values are vrt{1–8}.

- INIT-CRS:signal_level:vrt1
- INIT-CRS:signal_level:vrt2
- INIT-CRS:signal_level:vrt3
- INIT-CRS:signal_level:vrt4
- INIT-CRS:signal_level:vrt5
- INIT-CRS:signal_level:vrt6
- INIT-CRS:signal_level:vrt7
- INIT-CRS:signal_level:vrt8

Default — none, value must be selected.

Response

Confirmation

The following confirmation message is displayed after selecting the *signal_level* and *vrt*.

```
CONFIRM?  Y<ent> N<esc>
```

(Continued on next page)

INITIALIZE-CRS (Continued)

Response (continued)

Completion

The following completion message is displayed after the cross-connection has been completed.

```
INIT-CRS   done
```

Error

The INITALIZE-CRS command is denied and the following error message is displayed when the VRT is already cross-connected to a DS1.

```
DENY:  Feeder cross-connection exists
```

The INITALIZE-CRS command is denied and the following error message is displayed when the VRT is already cross-connected to a line.

```
DENY:  Drop cross-connection exists
```

The INITALIZE-CRS command is denied and the following error message is displayed when the data memory on the time slot interchangers (TSIs) has failed.

```
DENY:  Data memory failed
```

The INITALIZE-CRS command is denied and the following response is displayed when a software installation is in progress.

```
DENY:  Updating program
```

INITIALIZE-SYSTEM

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

CAUTION:
The INITIALIZE-SYSTEM command will cause loss of service on all circuits in the system. DS0 and DS1 cross-connections will be deleted. Shelves will return to metallic distribution mode, and the remote terminal (RT)/central office terminal (COT) option will return to RT.

NOTE:
The UIP command, INITIALIZE-SYSTEM is separate and distinct from the SONET subsystem command, init-sys. The INITIALIZE-SYSTEM command only affects the DLC subsystem.

Use the following format to input the INITIALIZE-SYSTEM command.

INITIALIZE-SYSTEM

Command name

Initialize system.

Can command be aborted?

No.

Purpose

Enter the INITIALIZE-SYSTEM command to reset the following non-volatile provisioning data for all customer lines (channel units) to default values.

- clei=other
- function code=> (default)
- redline=no

During normal conditions, use this command only during turnup. Do not use this command again unless the provisioning memory becomes corrupted. To prevent casual operation, the INITIALIZE-SYSTEM command has a circuit pack interlock feature. All virtual tributary units (VTUs) and metallic distribution controllers (MDCs) must be removed from the system before the command is entered or the command will be denied.

INITIALIZE-SYSTEM (Continued)

Response

Confirmation

The following confirmation message is displayed after entering the INITIALIZE-SYSTEM command.

```
CONFIRM?  N<esc> Y<ent>
```

Completion

The following completion message is displayed after the DLC subsystem has been initialized.

```
INITIALIZE-SYSTEM   done
```

Error

The INITALIZE-SYSTEM command is denied and the following error message is displayed when the circuit pack interlock has not been removed.

```
DENY:  Feeder in-service
```

RETRIEVE-ALARMS

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RETRIEVE-ALARMS command.

RETRIEVE-ALARMS

Command name

Retrieve active alarm and status conditions.

Can command be aborted?

No.

Purpose

Enter the RETRIEVE-ALARMS command to generate a report of active alarm and status conditions. Note that faults show root cause, while alarms are results of faults.

Press the Scroll Menu (Up ▲ or Down ▼ buttons) to scroll through report messages. Press the Escape button on the UIP to return to the Main Menu while viewing a report message.

Each report message is displayed on a single line.

```
AlarmLevel  Condition/Description
```

If there is one or more active alarm condition, alarms are listed in order of severity with items of the same severity in chronological order with the least recent alarm first.

NOTE:
If a change in the status of the system occurs while the user is viewing a report message from the RETRIEVE-ALARM and RETRIEVE-FAULT commands, the displayed message will change. This action should help when attempting to clear a series of alarms and defaults. For all other commands, the user must execute the command again to see the effects of system state changes.

RETRIEVE-ALARMS (Continued)

Parameters

Use the following output parameters with the RETRIEVE-ALARMS command.

AlarmLevel

Indicates the severity level of the alarm or status condition as displayed on the UIP by light-emitting diode (LED) indicators. The *AlarmLevel* can have one of the following values.

- CR (critical)
- MJ (major)
- MN (minor)
- PMN (power/minor)
- ABN (abnormal)
- NE (near end)
- FE (far end)

Condition/Description

A one line description of the alarm or status condition.

Response

The following display is an example of a alarm/status report.

```
MJ:dgr-1-a rcvd alarm
```

The following one line messages are displayed consecutively when there are no active alarms or status conditions.

```
No Active Alarms
```

and

```
RETURN TO MAIN MENU <esc>
```

RETRIEVE-FAULTS

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RETRIEVE-FAULTS command.

RETRIEVE-FAULTS

Command name

Retrieve system equipment faults.

Can command be aborted?

No.

Purpose

Enter the RETRIEVE-FAULTS command to retrieve system hardware and hardware interface equipment faults. This report provides information to assist craft in determining the highest priority failure when there are multiple failures.

To scroll through report messages, press the Scroll Menu (Up ▲ or Down ▼) buttons. To return to the top of the Main Menu while viewing a report message, press the Escape button located on the UIP.

NOTE:
If a change in the status of the system occurs while the user is viewing a report message from the RETRIEVE-ALARM and RETRIEVE-FAULT commands, the displayed message will change. This action should help when attempting to clear a series of alarms and defaults. For all other commands, the user must execute the command again to see the effects of system state changes.

Each report message is displayed on a single line.

```
AlarmLevel  Fault/Description
```

If there is one or more active fault conditions, faults are listed in order of severity with items of the same severity listed in chronological order with the least recent listed first.

RETRIEVE-FAULTS (Continued)

Parameters

Use the following output parameters with the RETRIEVE-FAULTS command.

FaultLevel

Indicates the severity of the alarm that the occurrence of the fault triggers. It also provides a priority for the circuit pack replacement. The *FaultLevel* will have one of the following values.

- CR (critical)
- MJ (major)
- MN (minor)
- NE (near end)

Fault/Description

A one line description of the fault.

Response

The following display is an example of a fault/status report.

```
pdc  failed
```

The following one line messages are consecutively displayed when there are no active faults.

```
No Active Faults
```

and

```
RETURN TO MAIN MENU <esc>
```

RETRIEVE-PROG-VRSN

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RETRIEVE-PROG-VRSN command.

RETRIEVE-PROG-VRSN

Command name

Retrieve system memory unit (SMU) software version.

Can command be aborted?

No.

Purpose

NOTE:
Execute this command again to display the new software version for the SMU when the version of the SMU software changes while this report is being displayed.

Enter the RETRIEVE-PROG-VRSN command to generate a report that identifies the three software packages in the *SLC*®-2000 Access System, or the two software packages located on the system memory unit (SMU).

Press the Escape button to return to the Main Menu while viewing a report message.

The report contains one line for each package.

```
PackageType   PackageName Version Version Number
```

RETRIEVE-PROG-VRSN (Continued)

Parameters

Use the following output parameters with the RETRIEVE-PROG-VRSN command.

PackageType

Package types. The following package types are for the RETRIEVE-PROG-VRSN command.

- System — system package
- SMU — SMU package.

PackageName

Package names. The following package names are for the three software packages.

NOTE:
The integrated test head (ITH) package version is not included in the system packages for Release 1.

- DLC — digital loop carrier subsystem package
- TST — integral test head package
- SNT — SONET subsystem package.

VersionNumber

Version number. The version number of the package. For system packages, this is the latest version installed from the SMU.

- System packages — The version number for each System package is the latest version installed from the SMU. If the version cannot be retrieved due to missing software, the word *none* will appear in this field. If the version cannot be retrieved due to a failure, the word *FAIL* will appear in this field.
- SMU packages — The version number for each SMU package is the version which is on the current SMU. If the package does not exist on the SMU currently in the system, the word *none* will appear in this field. If the version cannot be retrieved from the SMU due to a failure, the word *FAIL* will appear in this field.

RETRIEVE-PROG-VRSN (Continued)

Response

The following display is an example of a version report.

```
Sys: R4.06.00
```

If software is being downloaded to the SMU, the word *downloading* is displayed only for SMU data. When the data is corrupt, the message *bad data* is displayed.

RETRIEVE-STATE

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RETRIEVE-STATE command.

RETRIEVE-STATE

Command name

Retrieve state of the VRTs and feeder DS1s.

Can command be aborted?

No.

Purpose

Enter the RETRIEVE-STATE command to generate a report that displays the states of the TR-08 VRTs.

Parameters

The following output parameters are used with the RETRIEVE-STATE command.

To scroll through report messages, press the Scroll Menu (Up ▲ or Down ▼) buttons. To return to the top Main Menu while viewing a report message, press the Escape button located on the UIP.

Each report message is displayed on a single line using the following format.

```
VRT STATES: ab cd ef gh
```

Where *ab cd ef gh* are the states of VRTs 1 through 8, respectively. The abbreviations used for the states are i (in-service) and - [hyphen (out-of-service)].

Response

The following is an example of a RETRIEVE-STATE report message.

```
VRT STATES: ii -- i- -i
```

SET-BAUD

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

NOTE:
Set the switches located on the system controller (SYSCTL) to the same baud rate as on the UIP for a local download of software.

Use the following format to input the SET-BAUD command.

SET-BAUD:baud

Command name

Set the baud rate.

Can command be aborted?

No.

Purpose

Enter the SET-BAUD command to set the baud for the front access CIT port.

Parameters

The following parameters are used with the SET-BAUD command.

baud

Baud rate. Choose the baud from the following valid values.

NOTE:
Some values are not available on some software releases of the DLC subsystem.

- 300 b/s
- 1,200 b/s
- 2,400 b/s
- 4,800 b/s
- 9,600 b/s
- 19,200 b/s

Original default is 9,600 b/s. Default (presented to the user) is the current value.

SET-BAUD (Continued)

Response

Completion

The following completion message is displayed when this command has been successfully completed.

```
SET-BAUD: baudn     done
```

Error

The SET-BAUD command is denied and the following error message is displayed when this command cannot execute due to a system fault. Use the UIP command, RETRIEVE-FAULTS to determine the cause.

```
DENY:  System fault
```

SET-DISTRIBUTION

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the SET-DISTRIBUTION command.

SET-DISTRIBUTION:shelf:distribution-mode

Command name

Set the distribution mode.

Can command be aborted?

No.

Purpose

CAUTION:
Execution of this command may affect service. Changing distribution configuration requires extensive hardware installation and preparation. Make sure that equipment installed in the shelf is compatible with the distribution mode being set.

NOTE:
The SET-DISTRIBUTION command requires that the PDC must be installed and working and that the shelf to be configured must have *no* MDCs installed. Both MDCs associated with the shelf will be configured by the provisioning and display controller (PDC) when they are installed.

Enter the SET-DISTRIBUTION command to set the distribution mode to metallic (for channel units) or Fiber-in-the-Loop (FITL) [for distant terminal (DT) Servers] on a metallic distribution shelf (TR-08 VRT).

SET-DISTRIBUTION (Continued)

Parameters

Use the following parameters with the SET-DISTRIBUTION command.

shelf

Metallic distribution shelf. Identifies the metallic distribution shelf that the command will configure.

- SHELF1 — 1st (lowest) metallic distribution shelf (vrt1)
- SHELF2 — 2nd metallic distribution shelf (vrt2)
- SHELF3 — 3rd metallic distribution shelf (vrt3)
- SHELF4 — 4th metallic distribution shelf (vrt4)
- SHELF5 — 5th metallic distribution shelf (vrt5)
- SHELF6 — 6th metallic distribution shelf (vrt6)
- SHELF7 — 7th metallic distribution shelf (vrt7)
- SHELF8 — 8th (uppermost) metallic distribution shelf (vrt8).

distribution-mode

Distribution mode. Identifies whether channel units (metallic distribution) or MSDT Servers (fiber distribution) will be installed in the metallic distribution shelf (MDS) assembly. Choose the mode from a menu of the following values.

- METL — metallic
- FITL — Fiber-in-the-Loop

Original default is *metallic*. Default (presented to the user) is the current value.

Response

Completion

One of the following completion messages is displayed after successful execution of this command.

```
SET-DISTN:vrtn:metl done
```

or

```
SET-DISTN:vrtn:fitl done
```

(Continued on next page)

SET-DISTRIBUTION (Continued)

Response (continued)

Error

The SET-DISTRIBUTION command is denied and the following error message is displayed when a system failure prevents execution of this command.

```
DENY: System fault
```

The SET-DISTRIBUTION command is denied and the following error message is displayed when both MDCs have not been removed from the shelf.

```
DENY: MDC in shelf
```

The SET-DISTRIBUTION command is denied and the following error message is displayed when the data memory on the TSIs has failed.

```
DENY: Data memory failed
```

The SET-DISTRIBUTION command is denied and the following error message is displayed when a software installation is in-progress.

```
DENY: Updating program
```

SET-FEEDER

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the SET-FEEDER command.

SET-FEEDER:type

Command name

Set the feeder and SONET subsystem configuration.

Can command be aborted?

No.

Purpose

Enter the SET-FEEDER command to provision the feeder and SONET subsystem configuration. The configuration tells the SONET subsystem what type of unit should be plugged into the feeder complex [virtual tributary unit (VTU)/line interface unit (LIU) slots].

The circuit packs equipped in the feeder complex determine whether the feeder is SONET or metallic DS1.

Parameters

Use the following parameters with the SET-FEEDER command.

type

Feeder type. Sets the *type* of feeder being provisioned.

- VTU — Configure the system for SONET feeder. VTUs are expected in the VTU/LIU slots, and the SYSCTL and overhead controller (OHCTL) are required. Any LIU equipped in VTU/LIU slots will be alarmed but will not be taken out of service. Select this configuration for the Release 2 DS1 applications [that used the stand-alone access resource manager (ARM) shelf without the MDS assembly].
- LIU — Configure the system for metallic DS1 feeder within the SONET subsystem. LIUs are expected in the VTU/LIU slots, and the SYSCTL and OHCTL are required. Any VTUs equipped in VTU/LIU slots will be alarmed but will not be taken out of service. This configuration allows local software download (Release 3 and later).

Original value is VTU. Default value (presented to the user) is the current value.

SET-FEEDER (Continued)

Response

Confirmation

The following confirmation message is displayed when the *type* has been selected.

```
CONFIRM?  Y<ent> N<esc>
```

Completion

The following completion message is displayed when the configuration is finished.

```
SET-FEEDER   done
```

Error

The SET-FEEDER command is denied and the following error message is displayed when the data memory on the TSIs has failed.

```
DENY: Data memory failed
```

The SET-FEEDER command is denied and the following error message is displayed when a software installation is in-progress.

```
DENY: Updating program
```

SET-MODE-TR8

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the SET-MODE-TR8 command.

SET-MODE-TR8:vrtpair:mode

Command name

Provision the selected pair of VRTs for Mode 1 or 2.

Can command be aborted?

No.

Purpose

NOTE:
The craft interface terminal (CIT) *cannot* be used to provision only one VRT.

Enter the SET-MODE-TR8 command to provision the selected pair of VRTs for Modes 1 or 2. If all of the VRTs are set for Mode 1, the system will have only seven VRTs assigned.

The SET-MODE-TR8 command works only if there are no feeder DS1 cross-connections to the VRT feeders of the specified VRT pair.

Setting the mode affects only the lines that are assigned to that VRT. In other words, if a CIT command was used to delete a line from a VRT, the line must be reassigned with a CIT command.

SET-MODE-TR8 (Continued)

Parameters

Use the following parameters with the SET-MODE-TR8 command.

vrtpair

VRT pair. Identifies the VRT pair that is served through a particular MDS assembly. Valid values are vrt{1&2, 3&4, 5&6, 7&8}.

- SET-MODE-TR8:vrt1&2
- SET-MODE-TR8:vrt3&4
- SET-MODE-TR8:vrt5&6
- SET-MODE-TR8:vrt7&8

Default — none, value must be selected.

mode

TR-08 mode. The TR-08 mode corresponding to the selected VRT pair. Valid values of {1,2}.

- SET-MODE-TR8:vrtpair:1
- SET-MODE-TR8:vrtpair:2

Original value is *1*. Default (presented to the user) is the current value.

Response

Confirmation

The following confirmation message is displayed when the *vrtpair* and *mode* have been selected.

```
CONFIRM?  Y<ent> N<esc>
```

Completion

The following completion message is displayed when the configuration is finished.

```
SET-MODE-TR8    done
```

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SET-MODE-TR8 (Continued)

Response (continued)

Error

The SET-MODE-TR8 command is denied and the following response is displayed when a software installation is in-progress.

```
DENY: Updating program
```

The SET-MODE-TR8 command is denied and the following response is displayed when the data memory on the TSIs has failed.

```
DENY: Data memory failed
```

The SET-MODE-TR8 command is denied and the following response is displayed when the command is entered to change the selected VRTs from Mode 1 to Mode 2 and any non-standard cross-connects exist for the logical lines on the specified VRTs. Use the CIT to change the mode (DLC subsystem command, ED-MODE-TR8) when this happens.

```
DENY: Illegal Mode 2 crs
```

The SET-MODE-TR8 command is denied and the following response is displayed when this command is entered and any of the logical feeder DS1s for the selected pair of VRTs are already cross-connected.

```
DENY: fdr crs conn exist
```

SET-NE

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the SET-NE command.

SET-NE:TermType

Command name

Set the network element.

Can command be aborted?

No.

Purpose

Enter the SET-NE command to set the network element. Configure the DLC subsystem for either remote terminal (RT) or central office terminal (COT) operation.

Parameters

Use the following parameters with the SET-NE command.

TermType

Terminal type. Selects the type of terminal (COT or RT) for the *SLC*-2000 Access System to represent. Valid values are {COT and RT}.

Default is *RT*. However, the default changes to the last value entered.

SET-NE (Continued)

Response

Error

The SET-NE command is denied and the following response is displayed when a software installation is in-progress.

```
DENY: Updating program
```

The SET-NE command is denied and the following response is displayed when the data memory on the TSIs has failed.

```
DENY: Data memory failed
```

Related command

The following command is related to the SET-NE command.

- ED-NE

SET-STATE-SMU

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the SET-STATE-SMU command.

SET-STATE-SMU:state

Command name

Set the state of the system memory unit (SMU).

Can command be aborted?

No.

Purpose

CAUTION:
Execution of the SET-STATE-SMU command may affect service. Execute this command only after you have verified that the package version(s) is (are) correct by using the RETRIEVE-PROG-VRSN command.

CAUTION:
To avoid interrupting service, make sure no manual conditions (manual/force/lockout) exist before enabling the SMU using the SET-STATE-SMU command.

Enter the SET-STATE-SMU command to set the state (enable/disable) of the SMU.

Parameters

Use the following parameters with the SET-STATE-SMU command.

state

State of SMU. This is the state of operation for the SMU.

- Enable — enable software installation from the SMU to the system.
- Disable — disable software installation from the SMU to the system.

Default (presented to the user) is the current state of the SMU.

SET-STATE-SMU (Continued)

Response

Confirmation

The following confirmation message is displayed after entering the command.

```
CONFIRM?  Y<ent> N<esc>
```

Completion

The following completion message is displayed when the state of the SMU has been changed.

```
SET-STATE-SMU:state done
```

Error

The SET-STATE-SMU command is denied and the following response is displayed when attempting to *enable* a failed SMU. Replace the SMU.

```
DENY: SMU failed
```

The SET-STATE-SMU command is denied and the following response is displayed when attempting to *enable* the SMU and the SMU memory has failed. Replace the SMU.

```
DENY: SMU memory failed
```

The SET-STATE-SMU command is denied and the following response is displayed when attempting to *enable* the SMU and the SMU is not present.

```
DENY: SMU not present
```

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SET-STATE-SMU (Continued)

Response (continued)

The SET-STATE-SMU command is denied and the following response is displayed when attempting to *enable* the SMU and the program stored in the SMU is incompatible with the system hardware (see 363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide*).

```
DENY: ProgVrsn/Sys Incomp
```

The SET-STATE-SMU command is denied and the following response is displayed when attempting to *enable* the SMU and the system is in the process of installing software stored on the SMU into the controller pack. Try again when completed.

```
DENY: SW is downloading
```

The SET-STATE-SMU command is denied and the following response is displayed when attempting to *disable* the SMU and the system is in the process of installing software stored on the SMU into the controller pack. Try again when completed.

```
DENY: Updating program
```

The SET-STATE-SMU command is denied and the following response is displayed when attempting to *enable* the SMU and the system is in the process of auditing software stored in the SMU. Try again later.

NOTE:
The audit should take less than one minute.

```
DENY: Audit in-progress
```

SWITCH-CORE

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the SWITCH-CORE command.

SWITCH-CORE:priority

Command name

Change the protection switching state of the TS1 core.

Can command be aborted?

No.

Purpose

CAUTION:
Execution of this command may affect service. Forcing service to a failed pack may cause service interruption until the force is cleared by executing the SWITCH-CORE:RESET command.

Enter the SWITCH-CORE command to change the protection switching state of the TS1 core.

SWITCH-CORE (Continued)

Parameters

Use the following parameters with the SWITCH-CORE command.

priority

Priority of request. Specifies the request.

- Reset — Clears active external requests (*Inhibit* and a *Forced Switch*) but does not result in switching. The highest priority request. The only way to clear the ABN light and alarms raised by *Inhibit* and a *Forced Switch*.
- Inhibit — Prevents further switches until cleared by *Reset*. A higher order priority request than *Force 1 to 2* and *Force 2 to 1*. Thus, this priority can be used to replace a *Forced Switch*.
- Force →1 — Switches traffic from side 2 of the TS1 core to side 1 regardless of whether side 1 of the TS1 core is good or bad. This request is remains active and prevents any automatic protection switching or forced switches until cleared by *Reset* or *Inhibit*.
- Force →2 — Switches traffic from side 1 of the TS1 core to side 2 regardless of whether side 2 of the TS1 core is good or bad. This request remains active and prevents any automatic protection switching or forced switches until cleared by *Reset* or replaced by *Inhibit*.

Default is the current protection switching state of the TS1 core.

Response

In-Progress

The following in-progress message is displayed during the execution of this command.

```
SW-CORE: In-Progress
```

Confirmation

The following confirmation message is displayed when the command has been entered.

```
CONFIRM?  Y<ent> N<esc>
```

(Continued on next page)

SWITCH-CORE (Continued)

Response (continued)

Completion

The following completion message is displayed when the command has successfully finished.

```
SW-CORE: priorityn  done
```

Error

The SWITCH-CORE command is denied and the following response is displayed when a force is in effect and another force is attempted.

```
DENY:  Force in effect
```

The SWITCH-CORE command is denied and the following response is displayed when an inhibit is in effect and a force is attempted.

```
DENY: Inhibit in effect
```

The SWITCH-CORE command is denied and the following response is displayed when the SWITCH-CORE command cannot execute because of a system fault. Use the RETRIEVE-FAULTS command to determine the cause.

```
DENY:  System fault
```

Related commands

The following DLC subsystem commands are related to the UIP command, SWITCH-CORE.

- SW-TOPROTN-EQPT
- SW-TOWKG-EQPT

SWITCH-LIU

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the SWITCH-LIU command.

SWITCH-LIU:liu*n*:priority

Command name

Control LIU slot protection switching.

Can command be aborted?

No.

Purpose

Enter the SWITCH-LIU command to manually control LIU slot protection switching.

Parameters

Use the following parameters with the SWITCH-LIU command.

liu*n*

LIU address. Identifies the LIU to be switched. Valid values are LIU slot numbers {1-8}.

- SWITCH-LIU:1
- SWITCH-LIU:2
- SWITCH-LIU:3
- SWITCH-LIU:4
- SWITCH-LIU:5
- SWITCH-LIU:6
- SWITCH-LIU:7
- SWITCH-LIU:8

Default — none, value must be selected.

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SWITCH-LIU (Continued)

Parameters (continued)

priority

Priority of request. Specifies the request and is selected from a menu of the following values.

NOTE:
Lockout and *Force Switch* always cause an abnormal condition (the Abnormal indicator lighted on the UIP and MN alarms on the affected VRTs). The only way to clear the abnormal indication and alarms caused by *Lockout*, *Force* switch, or *Manual* switch is by requesting a *Reset* (except that *Lockout* also can be cleared by entering the UIP command, INITIALIZE-SYSTEM).

- SW-LIU:liun:Reset — clear active external switch requests (*Lockout*, *Force*, or *Manual*). The *Reset* request clears any active external switch requests and returns any traffic on the protection slot to its service slot. This request has the highest priority, overriding any current *Lockout*, *Force*, or *Manual* protection switching state. A *Reset* request is always accepted.
- SW-LIU:liun:Lockout — locks out protection switching requests (except *Reset*). The *Lockout* request denies any protection switching request except for *Reset*. If *Lockout* is requested for the protection slot, any traffic that is currently on the protection slot is unconditionally switched back to the service slot, and no traffic from any service slot can be switched to the protection slot.

  If *Lockout* is requested for a service slot, any traffic on that service slot that has been switched to protection is unconditionally switched back to the service slot, and no further traffic can be switched from that liu*n* service slot to the protection slot.

  The *Lockout* protection switching state stays in effect until *Reset* is requested (UIP) or a DLC subsystem command, SW-TOWKG-EQPT *reset* is entered. *Lockout* can be cleared only by requesting *Reset* or entering the INITIALIZE-SYSTEM command.
- SW-LIU:liun:Force — force a switch to the protection LIU. The *Force* request switches liu*n* (service slots only) to the protection LIU regardless of whether the protection LIU is good or bad. However, it cannot override a current *Lockout* or *Force* protection switching state.

  The *Force* request stays in effect until an LIU protection switch reset or lockout request is entered (from the UIP or CIT). A *Force* request overrides any automatic switches. If a slot (other than liu*n*) has been automatically switched to protection, it is switched off protection and slot liu*n* switches to protection.

(Continued on next page)

SWITCH-LIU (Continued)

Parameters (continued)

- SW-LIU:liun:Manual — manually switch to the protection low-speed slot. A *Manual* request switches liu*n* (service slots only) to the protection low-speed slot only if the protection slot is good and is not in use. This request has the lowest priority — it is cancelled if an LIU fails or is removed, or if a *Reset*, *Lockout*, or *Force* is requested.

Default (presented to the user) is the current state of protection switching for the LIU.

Response

Confirmation

The following confirmation message is displayed when liu*n* and priority have been selected.

```
CONFIRM?  Y<ent> N<esc>
```

Completion

The following completion message is displayed when the command has finished.

```
SW-LIU:liun:priority   done
```

Error

Further attempts to force a protection switch are denied and the following error message is displayed when a *force* is in effect.

```
DENY: Force in effect
```

Attempts to switch protection (*Force* or *Manual*) are denied and the following error message is displayed when a switch is requested for the protection slot (LIU slot 8).

```
DENY: Invalid for slot 8
```

(Continued on next page)

SWITCH-LIU (Continued)

Response (continued)

Attempts to switch protection (*Force* or *Manual*) are denied and the following error message is displayed when a *Lockout* is in effect.

```
DENY: Lockout in effect
```

Related commands

The following DLC subsystem commands are related to the UIP command, SWITCH-LIU.

- SW-TOPROTN-EQPT
- SW-TOWKG-EQPT

TEST-SHELF

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the TEST-SHELF command.

TEST-SHELF:num

Command name

Test distribution shelf.

Can command be aborted?

No.

Purpose

Enter the TEST-SHELF command to cause distribution shelf light-emitting diode (LED) indicators to light so that technicians can confirm the shelf number.

Parameters

Use the following parameters with the TEST-SHELF command.

num

Shelf number. The number assigned to the distribution shelf.
Valid values are {1, 2, 3, 4}.

Default (presented to the user) is the last shelf that was lighted.

Response

Confirmation

The following confirmation message is displayed during the execution of this command.

```
LED Test on Shelf n
```

(Continued on next page)

TEST-SHELF (Continued)

Response (continued)

Abort

The following message is displayed when a test on a shelf is terminated using the ESCAPE button.

```
** Command Canceled **
```

Completion

The TEST-SHELF command will time out if there is no input for 30 seconds. The following completion message is displayed after the time out.

```
TEST-SHELF done
```

Error

The following error message is displayed when the TEST-SHELF command cannot execute due to a system fault. Use the UIP command, RETRIEVE-FAULTS to determine the cause.

```
DENY: System fault
```

TEST-VRT-ALARM

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the TEST-VRT-ALARM command.

TEST-VRT-ALARM:vrt*n*:alm

Command name

Generate test alarms on a VRT.

Can command be aborted?

No.

Purpose

CAUTION:
Execution of this command may affect service. Transmitting digroup alarms to the far-end will cause the far-end system to trunk process the entire digroup. These tests should only be run during system turnup before any services have been turned up.

Enter the TEST-VRT-ALARM command to generate alarms on a VRT to test interfaces with remote maintenance systems.

TEST-VRT-ALARM (Continued)

Parameters

Use the following parameters with the TEST-VRT-ALARM command.

vrt*n*

VRT number. The number of the VRT being tested. Valid values are vrt{1-8}.

- VRT1
- VRT2
- VRT3
- VRT4
- VRT5
- VRT6
- VRT7
- VRT8

alm

Type of alarm. This is the alarm type.

- MJ — VRT major alarm
- MN — VRT minor alarm
- DGRP A — VRT digroup A major alarm
- DGRP B — VRT digroup B major alarm
- DGRP C — VRT digroup C major alarm
- DGRP D — VRT digroup D major alarm
- MISC — VRT miscellaneous alarm.

Default (presented to the user) for both parameters is the last value entered.

Response

Confirmation

The following message is displayed when the command is entered.

```
CONFIRM?  Y<ent> N<esc>
```

(Continued on next page)

TEST-VRT-ALARM (Continued)

Response (continued)

In-Progress

One of the following messages is displayed during the execution of the TEST-VRT-ALARM command.

```
TEST:vrt:   xxxx Alarm
```

or

```
TEST:vrt:   yyyy Alm
```

Where *xxxx* is one of the following values.

- MJ — major alarm
- MN — minor alarm
- Misc — miscellaneous.

Where *yyyy* is one of the following values.

- DGRP A — digroup A alarm
- DGRP B — digroup B alarm
- DGRP C — digroup C alarm
- DGRP D — digroup D alarm.

Abort

Return to the top of the Main Menu. The following message is displayed when a test on an alarm is terminated (by pressing the ESCAPE button).

```
** Command Canceled **
```

(Continued on next page)

TEST-VRT-ALARM (Continued)

Response (continued)

Completion

The TEST-VRT-ALARM will time out if there is no input for 30 seconds. The following completion message is displayed when the command is finished.

```
TEST:ALARM:vrtn     done
```

Error

NOTE:
If the VRT is in a failed state (for example, an MDC has failed) the command will execute, but the selected alarm may not really be transmitted.

A VRT must be in-service (the MDCs serving the VRT must be plugged in) in order for this command to execute successfully. The following error message is displayed when the VRT is not in service and an attempt is made to execute this command.

```
DENY: VRT out of service
```

The following error message is displayed when the TEST-VRT-ALARM command cannot execute due to a system fault. Use the UIP command, RETRIEVE-FAULTS to determine the cause.

```
DENY: System fault
```

The TEST-VRT-ALARM command times out and the following error message is displayed when the command cannot execute within a time limit (determined by the system). Execute the command again. If this error occurs again, use the RETRIEVE-FAULTS command to determine the cause.

```
DENY: System Timeout
```

SONET Subsystem Commands

6

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About the SONET Subsystem Commands

Overview

Introduction

This chapter lists all of the commands for the Synchronous Optical Network (SONET) subsystem of the *SLC*®-2000 Access System.

SONET subsytem software release

This chapter lists the command syntax available with Software Release 13 (R13) of the DDM-2000 Multiplexer.

Reference only

Use this chapter only as a reference for the SONET subsystem commands.

SONET feeder only

The SONET subsystem commands are valid for systems configured using VTUs.

NOTE:
The SONET subsystem commands are not valid when the system is configured with LIUs for DS1 metallic feeder. The SYSCTL is a required element of the *SLC*-2000 Access System. The commands will not give the expected result as when using VTUs for SONET feeder.

Detailed information

The following information products (IPs) contain detailed information about the SONET subsystem commands.

- 363-206-202, *DDM-2000 OC-3 Multiplexer, User/Service Manual — Releases 2, 3, 4, 5, 6, and 7.*
- 363-206-280, *DDM-2000 OC-3 Multiplexer — Releases 8, 9, and 11 — User/Service Manual.*
- 363-206-301, *DDM-2000 FiberReach Multiplexer, User/Service Manual*

What are the Security Levels for Users?

Overview

Security

System security is an option provided for the SONET subsystem. When system security is enabled, all users are then required to enter a valid login and password pair to access the system.

Privileged users

The system supports up to three privileged user logins. Privileged users may set system security on all data communication channels (DCC) and each CIT interface using the SONET subsystem command, set-secu. The privileged user may assign login and password pairs to general users using the SONET subsystem command, set-lgn.

Nonprivileged users

The system supports up to 100 nonprivileged user logins. General, maintenance, and reports-only users are categories available for nonprivileged users.

General

General users may execute commands that are not restricted to privileged users and obtain reports.

Maintenance

Maintenance users may only execute commands that access the system, extract reports, and execute maintenance functions.

Reports-only

Reports-only users may only obtain reports and execute several basic commands.

Security Level

Privileged and nonprivileged

The following table lists SONET subsystem commands and the associated security level(s).

	Security Level				
	Privileged		Nonprivileged		
SONET Subsystem Command	Security Not Enabled	Security Enabled	General	Maintenance	Reports-only
apply	❑	❑			
cnvt-crs	❑	❑	❑		
cpy-prog	❑	❑	❑*		
dlt-crs-sts1	❑	❑	❑		
dlt-crs-vt1	❑	❑	❑		
dlt-osacmap	❑	❑	❑*		
dlt-tadrmap	❑	❑	❑*		
ent-crs-sts1	❑	❑	❑		
ent-crs-vt1	❑	❑	❑		
ent-osacmap	❑	❑	❑*		
ent-tl1msgmap	❑	❑	❑*		
ent-ulsdcc	❑	❑	❑*		
help	❑	❑	❑	❑	❑
init-pm	❑	❑	❑*		
ins-prog	❑	❑	❑*		
init-sys	❑	❑			
logout	❑	❑	❑	❑	❑
opr-aco	❑	❑	❑	❑	
opr-lpbk-ec1	❑	❑	❑	❑	
opr-lpbk-t1	❑	❑	❑	❑	
opr-lpbk-t3	❑	❑	❑	❑	

Continued on next page

Security Level (Continued)

Privileged and nonprivileged (continued)

	Security Level				
	Privileged		Nonprivileged		
SONET Subsystem Command	Security Not Enabled	Security Enabled	General	Maintenance	Reports-only
reset	❑	❑	❑*		
rlgn	❑	❑	❑	❑	❑
rls-lpbk-ec1	❑	❑	❑	❑	
rls-lpbk-t1	❑	❑	❑	❑	
rls-lpbk-t3	❑	❑	❑	❑	
rstr-passwd	❑	❑			
rtrv-alm	❑	❑	❑	❑	❑
rtrv-attr-alm	❑	❑	❑	❑	❑
rtrv-attr-cont	❑	❑	❑	❑	❑
rtrv-attr-env	❑	❑	❑	❑	❑
rtrv-crs-sts1	❑	❑	❑	❑	❑
rtrv-crs-vt1	❑	❑	❑	❑	❑
rtrv-ec1	❑	❑	❑	❑	❑
rtrv-eqpt	❑	❑	❑	❑	❑
rtrv-feat	❑	❑	❑	❑	❑
rtrv-fecom	❑	❑	❑	❑	❑
rtrv-hsty	❑	❑	❑	❑	❑
rtrv-link	❑	❑	❑	❑	❑
rtrv-lgn	❑	❑			
rtrv-map-neighbor	❑	❑	❑	❑	❑
rtrv-map-network	❑	❑	❑	❑	❑
rtrv-ne	❑	❑	❑	❑	❑

Continued on next page

Security Level (Continued)

Privileged and nonprivileged (continued)

	Security Level				
	Privileged		Nonprivileged		
SONET Subsystem Command	Security Not Enabled	Security Enabled	General	Maintenance	Reports-only
rtrv-oc1	❑	❑	❑	❑	❑
rtrv-oc3	❑	❑	❑	❑	❑
rtrv-oc12	❑	❑	❑	❑	❑
rtrv-osacmap	❑	❑	❑	❑	❑
rtrv-ow	❑	❑	❑	❑	❑
rtrv-passwd	❑	❑			
rtrv-pm-line	❑	❑	❑	❑	❑
rtrv-pm-sect	❑	❑	❑	❑	❑
rtrv-pm-sts1	❑	❑	❑	❑	❑
rtrv-pm-t1	❑	❑	❑	❑	❑
rtrv-pm-t3	❑	❑	❑	❑	❑
rtrv-pm-tca	❑	❑	❑	❑	❑
rtrv-pm-vt1	❑	❑	❑	❑	❑
rtrv-pmthres-line	❑	❑	❑	❑	❑
rtrv-pmthres-sect	❑	❑	❑	❑	❑
rtrv-pmthres-sts1	❑	❑	❑	❑	❑
rtrv-pmthres-t1	❑	❑	❑	❑	❑
rtrv-pmthres-t3	❑	❑	❑	❑	❑
rtrv-pmthres-vt1	❑	❑	❑	❑	❑
rtrv-secu	❑	❑			
rtrv-state-eqpt	❑	❑	❑	❑	❑
rtrv-state-path	❑	❑	❑	❑	❑

Continued on next page

Security Level (Continued)

Privileged and nonprivileged (continued)

	Security Level				
	Privileged		Nonprivileged		
SONET Subsystem Command	Security Not Enabled	Security Enabled	General	Maintenance	Reports-only
rtrv-state-oc1	❑	❑	❑	❑	❑
rtrv-state-sts1	❑	❑	❑	❑	❑
rtrv-state-vt1	❑	❑	❑	❑	❑
rtrv-sts1	❑	❑	❑	❑	❑
rtrv-sync	❑	❑	❑	❑	❑
rtrv-t1	❑	❑	❑	❑	❑
rtrv-t3	❑	❑	❑	❑	❑
rtrv-tl1msgmap	❑	❑	❑	❑	❑
rtrv-ulsdcc	❑	❑	❑	❑	❑
rtrv-vt1	❑	❑	❑	❑	❑
rtrv-x25	❑	❑	❑	❑	❑
set-attr-alm	❑	❑	❑		
set-attr-cont	❑	❑	❑		
set-attr-env	❑	❑	❑		
set-date	❑	❑	❑*		
set-ec1	❑	❑	❑		
set-feat	❑	❑			
set-fecom	❑	❑			
set-lgn	❑	❑			
set-link	❑	❑	❑	❑	❑
set-ne	❑	❑	❑*		
set-oc1	❑	❑	❑		
set-oc3	❑	❑	❑		
set-oc12	❑	❑	❑		

Continued on next page

Security Level (Continued)

Privileged and nonprivileged (continued)

	Security Level				
	Privileged		Nonprivileged		
SONET Subsystem Command	Security Not Enabled	Security Enabled	General	Maintenance	Reports-only
set-ow	❑	❑	❑	❑	
set-passwd	❑	❑	❑	❑	❑
set-pmthres-line	❑	❑	❑	❑	❑
set-pmthres-sect	❑	❑	❑	❑	❑
set-pmthres-sts1	❑	❑	❑	❑	❑
set-pmthres-t1	❑	❑	❑	❑	❑
set-pmthres-t3	❑	❑	❑	❑	❑
set-pmthres-vt1	❑	❑	❑	❑	❑
set-secu	❑	❑			
set-state-ec1	❑	❑	❑		
set-state-oc1	❑	❑	❑		
set-state-oc3	❑	❑	❑		
set-state-sts1	❑	❑	❑		
set-state-t1	❑	❑	❑		
set-state-t3	❑	❑	❑		
set-state-vt1	❑	❑	❑		
set-sts1	❑	❑	❑		
set-sync	❑	❑	❑		
set-t1	❑	❑	❑		
set-t3	❑	❑	❑		
set-trace-sts1	❑	❑	❑		
set-vt1	❑	❑	❑		
set-x25	❑	❑	❑*		

Continued on next page

Security Level (Continued)

Privileged and nonprivileged (continued)

	Security Level				
	Privileged		Nonprivileged		
SONET Subsystem Command	Security Not Enabled	Security Enabled	General	Maintenance	Reports-only
switch-fn	❑	❑	❑	❑	
switch-line	❑	❑	❑	❑	
switch-ls	❑	❑	❑	❑	
switch-path-sts1	❑	❑	❑	❑	
switch-path-vt1	❑	❑	❑	❑	
switch-sync	❑	❑	❑	❑	
test-alm	❑	❑	❑	❑	
test-auto	❑	❑	❑	❑	
test-led	❑	❑	❑	❑	
test-sysctl	❑	❑	❑	❑	
test-tlm-par	❑	❑	❑	❑	
test-tlm-ser	❑	❑	❑	❑	
test-trmsn-t1	❑	❑	❑	❑	
test-trmsn-t3	❑	❑	❑	❑	
toggle	❑	❑	❑	❑	❑
upd	❑	❑	❑		

* Applies when security is *not* enabled.

What are the Categories?

Overview

When is confirmation required?

CAUTION:
Service may be affected when you execute particular commands. These commands are denoted with the <CONFIRM> *symbol.*

How to use the *tid* parameter

NOTE:
Although the tid parameter is listed in the following SONET subsystem commands, always leave the tid parameter blank when using the CIT.

Commands are listed by intended function

This section lists the SONET subsystem commands. The commands are grouped in the following categories by the intended function of the command.

- Configure
- Fault
- Miscellaneous
- Performance
- Security.

Special Characters

Abort

CANcel, DELete, or Control–x

Abort a command.

End

; (Semicolon)

End a command.

Return, Enter, or ! (carriage return)

End line of input.

Erase

@ (at-sign)

Erase an input line.

BackSpace, ^H, Control–h, or _ (under bar)

Erase a character.

Help

? (question mark)

Help.

Configure

Convert

cnvt-crs:address1,address2; <CONFIRM>

Convert STS-1 cross-connections to VT1.5 cross-connections.
address1 is the access identifier (AID) for the first STS-1 channel to be converted.
address2 is the AID for the second STS-1 channel to be converted.

Copy

cpy-prog:TID;

Copy local system controller program to remote system controller.
tid identifies the NE program to which the command is addressed.

Delete

dlt-crs-sts1:address1,address2[:cct=CrsType]; <CONFIRM>

Delete STS-1 cross-connections.
address1 is the AID for the source (*from*) STS-1 channel.
address2 is the AID for the destination (*to*) STS-1 channel.
cct identifies the two-way or drop and continue cross connection.

dlt-crs-vt1:address1,address2[:cct=CrsType]; <CONFIRM>

Delete VT1.5 (DS1) cross-connections.
address[1,2] are the AIDs for the VT1.5 channels, or the VT1.5 channel and DS1 port.
cct identifies the two-way, drop and continue, or locked cross connection.

dlt-osacmap:vc=VCType,snpa=SNPA;

Delete DTE calling addresses of OSs that are assigned to the specified SVC or PVC in the X.25 subnetwork application context map.
vc identifies the virtual circuit type X.25 attachment for OS as PVC or SVC.
snpa identifies the X.25 subnetwork point of attachment for OS.

dlt-tadrmap:tid=tid;

Delete NE entry from the directory services network element (DSNE).
tid identifies the network element (NE) to which the command is addressed.

Configure (Continued)

Enter

ent-crs-sts1:address1,address2 [:cct =CrsType][,ring =RingID];

Make STS-1 cross-connections.
address1 is the AID for the source (*from*) STS-1 channel.
address2 is the AID for the destination (*to*) STS-1 channel, or DS3, EC-1, or OC-1 port.
cct identifies the two-way, drop and continue, or ring cross connections.
ring identifies the ring identification for drop and continue cross connections.

ent-crs-vt1:address1,address2[:cct =CrsType][,ring =RingID]; <CONFIRM>

Make VT1.5 (DS1) cross-connections.
address[1,2] are the AIDs for the VT1.5 channels or DS1 ports.
cct identifies the two-way, drop and continue, or locked cross connections.
ring identifies the ring identification for drop and continue and locked cross connections.

ent-osacmap:vc=VCType,snpa=SNPA,acid=ACID;

Create entries in X.25 subnetwork application context map.
vc identifies the virtual circuit type X.25 attachment for OS as PVC or SVC.
snpa identifies the X.25 subnetwork point of attachment for OS.
acid determines the snpa ID (maximum of 23 alphanumeric characters).

ent-tl1msgmap:acid=ACID,msgtype=MessageType,action=Action;

Map the TL1 message types to OS for NE.
acid determines the OS function (maximum of 23 alphanumeric characters).
msgtype identifies the supported class of TL1 messages.
action determines enabled or disabled.

ent-ulsdcc:[L3org =OrganizationID],L3res =][,L3rou =RoutingData];

Enter upper layer section (3–7) of OSI.
L3org is the company code.
L3res is not used.
L3rou designates routing domain and area fields.

Initialize

init-sys:address; <CONFIRM>

Initialize data to factory values.
address is the AID to designate all slots or the SYSCTL.

Configure (Continued)

Install

apply;

Initiate installation of dormant copy of software generic stored in flash memory of the NE.

ins-prog:tid;

Install new program into the SYSCTL.
tid identifies the shelf name.

Operate

opr-lpbk-ec1:address[:lpbktype=LoopbackType]; <CONFIRM>

Loop back STS-1E toward fiber or DSX.
address is the AID for the EC1 port.
lpbktype identifies terminal or facility loopback.

opr-lpbk-t1:address[:lpbktype=LoopbackType]; <CONFIRM>

NOTE:
When performing the SONET subsystem command, opr-lpbk-t1 the test equipment being used must be optioned for *received loop timed*.

Loop DS1 port toward fiber or DSX.
address is the AID for the DS1 port(s).
lpbktype identifies terminal or facility loopback.

opr-lpbk-t3:address[:lpbktype=LoopbackType]; <CONFIRM>

Loop DS3 port toward fiber or DSX.
address is the AID for the DS3 port(s).
lpbktype identifies terminal or facility loopback.

Configure (Continued)

Release

rls-lpbk-ec1:address[:lpbktype=LoopbackType];

Release looped back STS-1E port.
address is the AID for the EC1 port.
lpbktype identifies terminal or facility loopback.

rls-lpbk-t1:address;

Release loop on DS1 port.
address is the AID for the DS1 port(s).

rls-lpbk-t3:address;

Release loop on DS3 port.
address is the AID for the DS3 port(s).

Retrieve

rtrv-alm:[alm =AlarmLevel];

Display report of alarms and status of NE.
alm identifies the alarm level being reported.

rtrv-attr-alm;

Display current alarm attributes.

rtrv-attr-cont:[address];

Display current miscellaneous discrete environmental control points.
address is the AID for the environmental control point.

rtrv-attr-env:[address];

Display current miscellaneous discrete environmental alarm/status points.
address is the AID for the environmental input point.

rtrv-crs-sts1:[address];

Display STS-1 cross-connections.
address is the AID for one or more STS-1 channels.

rtrv-crs-vt1:[address];

Display VT1.5 (DS1) cross-connections.
address is the AID for VT1.5 channels or DS1 ports.

(Continued on next page)

Configure (Continued)

Retrieve (continued)

rtrv-ec1:[address];

Display information for EC1 port(s).
address is the AID for one or more EC1 ports (a,b,c,all).

rtrv-eqpt:[address];

Display circuit pack type and version information.
address is the AID for one or more slot(s).

rtrv-feat;

Display enabled feature options.

rtrv-fecom:[address];

Display state of DCC channel(s).
address is the AID of the DCC.

rtrv-hsty;

Display most recent events.

rtrv-link;

Display CIT link, page length, and baud rate.

rtrv-map-neighbor;

Display immediate neighbor systems.

rtrv-map-network;

Display all systems, their product type, and if they are DSNE.

rtrv-ne;

Display network element provisioning information.

rtrv-oc1:[address];

Display OC-1 line configuration.
address is the AID for the OC-1 line(s).

rtrv-oc3:[address];

Display OC-3 line configuration.
address is the AID for the OC-3 line(s).

(Continued on next page)

Configure (Continued)

Retrieve (continued)

rtrv-oc12:[address];

Display OC-12 line configuration.
address is the AID for the OC-12 line(s).

rtrv-osacmap;

Display OS application context map.

rtrv-ow;

Display order wire routing and mode for NE.

rtrv-state-eqpt[:address];

Display slot, port, and protection switching state information for the NE.
address is the AID(s) for one or more slot(s).

rtrv-state-path:[address];

Display signal path state information for paths dropped at the NE.
address is the AID for any VT1.5 or STS-1 path.

rtrv-state-oc1:[address];

Display OC-1 channel states.
address is the AID for any OC-1 channel.

rtrv-state-sts1:[address];

Display STS-1 channel states.
address is the AID for any STS-1 channel.

rtrv-state-vt1:[address];

Display VT1.5 channel states.
address is the AID for any VT1.5 channel.

rtrv-sts1:[address];

Display provisioned thresholds of terminated linear or dropped ring STS-1 channels.
address is the AID for any STS-1 channel.

rtrv-sync;

Display synchronization report, provisioning, and operational information.

(Continued on next page)

Configure (Continued)

Retrieve (continued)

rtrv-t1:[address];

Display the DS1 port provisioning report.
address is the AID(s) for DS1 port(s).

rtrv-t3:[address];

Display the DS3 port provisioning report.
address is the AID(s) DS3 port(s).

rtrv-tl1msgmap;

Display the OS ACID to TL1 autonomous message types.

rtrv-trace-sts1:[address];

Display provisioned transmit and receive path traces for the STS cross-connected STS-1 channels.
address is the AID for any STS-1 channel for which the path trace is assigned.

rtrv-ulsdcc;

Display upper layer section DCC report for NSAP address.

rtrv-vt1:[address];

Display provisioned values for terminated or dropped VT1.5 channels.
address is the AID of the VT1.5 channel(s).

rtrv-x25;

Display X.25 link packet size information.

Set

set-attr-alm:[almdel=AlarmDelay][,cldel=ClearDelay] [,pmn=PowerMinor];

Set alarm holdoff and clear delays.
almdel designates the alarm delay in seconds.
cldel designates the alarm clear delay in seconds.
pmn designates the power minor alarm level.

set-attr-cont:address:desc=Description;

Provision name of environmental control points.
address is the AID for the control point.
desc designates a name of up to 26 alphanumeric characters.

(Continued on next page)

Configure (Continued)

Set (continued)

set-attr-env:address:[alm=Alarm][,almtype=AlarmType] [,desc=Description];

Provision alarm level of environmental input points.
address is the AID of the environmental point.
alm designates the level of alarm.
almtype designates a name of up to 10 alphanumeric characters.
desc designates a name of up to 26 alphanumeric characters.

set-date:[date=Date][,time=Time];

Set date and time.
date sets the year, month, and day.
time sets the hour, minute(s), and second(s).

set-ec1:address:[alm=AlarmLevel][,dgr=SignalDegradeThreshold];

Set alarm and signal degrade threshold levels of EC-1 port.
address is the AID for one or more EC-1 port.
alm designates the alarm level of incoming EC-1 signal failure.
dgr designates the signal degrade threshold level (BER –9 to –5).

set-feat:feat=Feature,act=Action;

Configure the NE for feature options that are licensed for use.
feat identifies the feature options licensed for use.
act determines enabled or disabled feature.

set-fecom:address:[com=Communication][,nsus=NS/US];

Enable or disable DCC channel.
address is the AID of the DCC channel.
com determines enabled or disabled.
nsus identifies the network side/user side DCC identity.

set-link:pg=PageLength;

Set vertical page size.
pg designates the page size in lines.

(Continued on next page)

Configure (Continued)

Set (continued)

set-ne:tid=TID:[dsne=DSNE][,almgrp=AlarmGroup][,agne=AGNE] [,site=Site][,ne=NE][,shelf=Shelf][,crs=CrsMode][,cort=CO/RT] [,tbaddr=TBOSAddress][,tblink=TBOSLink][,tbrem=TBOSRemote] [,idle=IdleChannelSignal];

Set target identifier (name) of system.
tid identifies the shelf name using a maximum of 20 alphanumeric characters.
dsne determines use of the DSNE.
almgrp designates the alarm group.
agne determines use of the alarm gateway network element (AGNE).
site identifies the numeric identification of NEs at the same site.
ne identifies the numeric identification of the system at a site.
shelf identifies the numeric identification of a system in a bay at a site.
crs determines the cross-connect mode, default or manual.
cort identifies central office or remote terminal.
tbaddr identifies the TBOS display address of the NE.
tblink determines the TBOS link function.
tbrem determines the TBOS remote reporting status.
idle identifies whether AIS or unequipped signal is inserted in VT1.5 or STS-1 channels that are not cross connected.

set-oc1:address:[dgr=SignalDegradeThreshold][,aisalm=Alarm];

Set several parameters of specified OC-1 line.
address is the AID(s) for OC-1 line(s).
dgr determines the signal degrade threshold (BER –9 to –5).
aisalm determines the provisioned alarm level of OC-1 line.

set-oc3:address:[dgr=SignalDegradeThreshold][,kbyte=Kbyte] [,syncmsg=SynchronizationMessaging][,aisalm=Alarm] [,radio=Radio][,concat=ConcatenationMode];

Set several parameters of specified OC-3 line pair.
address is the AID(s) for OC-3 line pair(s).
dgr determines the signal degrade threshold (BER –9 to –5).
kbyte determines the use of the K-byte overhead for sync messages.
syncmsg allows timing to be reconfigured in a network upon a node or fiber failure.
aisalm determines the provisioned alarm level of OC-3 line.
radio indicates whether a radio frequency unit is connected to the SONET subsystem.
concat determines the use of concatenation mode of OC-3 line.

(Continued on next page)

Configure (Continued)

Set (continued)

set-oc12:address:[dgr=SignalDegrade][,kbyte=Kbyte] [,syncmsg=SynchronizationMessaging][,aisalm=Alarm];

Set several parameters of specified OC-12 line pair.
address is the AID(s) for OC-12 line pair(s).
dgr determines the signal degrade threshold (BER –9 to –5).
kbyte determines the use of the K-byte overhead for sync messages.
syncmsg allows timing to be reconfigured in a network upon a node or fiber failure.
aisalm determines the provisioned alarm level of OC-12 line.

set-ow:[owrt=OrderWireRouting];

Set order wire routing for NE.
owrt determines the order wire routing parameter for NE.

set-state-ec1:address:ps=PrimaryState;

Set state of EC-1 port(s).
address is the AID(s) of the EC-1 port(s).
ps determines the port state.

set-state-oc1:address:ps=PrimaryState;

Set state of OC-1 line(s).
address is the AID(s) of the OC-1 line(s).
ps determines the port state.

set-state-oc3:address:ps=PrimaryState;

Set state of OC-3 line(s).
address is the AID(s) of the OC-3 line(s).
ps determines the port state.

set-state-sts1:address:ps=PrimaryState;

Set state of STS-1 channel(s).
address is the AID(s) of the STS-1 channel(s).
ps determines the channel state.

set-state-t1:address:ps=PrimaryState;

Set state of DS1 port(s).
address is the AID(s) of the DS1 port(s).
ps determines the port state.

(Continued on next page)

Configure (Continued)

Set (continued)

set-state-t3:address:ps=PrimaryState;

Set state of DS3 port(s).
address is the AID(s) of the DS3 port(s).
ps determines the port state.

set-state-vt1:address:ps=PrimaryState;

Set state of VT1.5 channel(s).
address is the AID(s) of the VT1.5 channel(s).
ps determines the channel state.

set-sts1:dgr=SignalDegrade:sfall=SignalFailure[,nsa=Alarm] [,sa=Alarm];

Set signal degrade alarm threshold of dropped STS-1 channels.
dgr designates the degrade threshold (BER −9 to −5).
sfall determines the BER (−3 or −6)of the STS-1 channel.
nsa determines the provisioned alarm level of non-service affecting STS-1 path AIS.
sa determines the provisioned alarm level of service affecting STS-1 path AIS.

set-sync:[mdsw=ModeSwitching][,src=SynchronizationSource] [,omd=OutputMode][,aisthres=AISThreshold] [,auto=SyncAutoreconfiguration]; <CONFIRM>

Provision the synchronization mode switching, synchronization source, and output mode ot timing signals.
mdsw determines the mode of switch.
src is the AID of the synchronization source.
omd designates the output mode.
aisthres determines the incoming synchronization message quality level.
auto determines use of synchronization automatic reconfiguration.

(Continued on next page)

Configure (Continued)

Set (continued)

set-t1:address:[lc=LineCode][,alm=AlarmLevel][,fth=FailureThreshold] [,dlc=DLCBVPtoLOS][,ais=AlarmIndicationSignal][,pmmd=PMMode] [,fmt=Format]; <CONFIRM>

Provision parameters of DS1 ports.
address is the AID(s) of the DS1 port(s).
lc designates the line code.
alm designates the level of alarm.
fth designates the fail threshold (BER –6 or –3).
dlc(bpv) determines if the incoming signal fail is translated to LOS.
ais determines use of alarm indication signal.
pmmd determines use of performance monitoring mode of ports.
fmt designates format to be monitored.

set-t3:address:[md=Mode][,ais=AlarmIndicationSignal] [,alm=AlarmLevel][,fth=FailureThreshold][,pmmd=PMMode] [,frame=Frame][,fmt=Format]; <CONFIRM>

Provision parameters of DS3 ports.
address is the AID(s) of the DS3 port(s).
md designates the violation monitor removal mode.
ais determines use of the alarm indication signal.
alm designates the level of alarm.
fth designates the fail threshold (BER –6 or –3).
pmmd determines use of performance monitoring mode of ports.
frame designates the framing type.
fmt designates the format to be monitored.

set-trace-sts1:address:EXPTRC=Expectedincomingpathtrace [,TRC=OutgoingPathTrace];

Assign user selectable alphanumeric character strings to the transmit and receive path trace fields of a STS-1 cross-connected signal.
address is the AID(s) of the STS-1 channel(s).
EXPTRC determines the incoming path trace message (maximum of 62 alphanumeric characters).
TRC determines the outgoing path trace message (maximum of 62 alphanumeric characters).

(Continued on next page)

Configure (Continued)

Set (continued)

set-vt1:address:dgr=SignalDegrade[,nsa=Alarm] [,sa=Alarm];

Set signal degrade alarm threshold of dropped VT1.5 channels.
address is the AID(s) of the VT1.5 channel(s).
dgr designates the degrade threshold (BER –8 to –5).
nsa determines the provisioned alarm level of non-service affecting VT path AIS.
sa determines the provisioned alarm level of service affecting VT path AIS.

set-x25:PKT=pkt;

Set the packet size of X.25 link.
pkt determines the packet size.

Switch

switch-fn:address:pri =Priority; <CONFIRM>

Control function unit circuit pack protection switching.
address is the AID of the function unit slot.
pri determines priority of protection switching request.

switch-line:address:pri =Priority; <CONFIRM>

Control OC-3 line protection switching.
address is the AID of the OC-3 line pair.
pri determines priority of protection switch request.

switch-ls:address:pri =Priority; <CONFIRM>

Control low speed circuit pack protection switching.
address is the AID(s) of the low-speed slot(s).
pri determines priority of protection switch request.

switch-path-sts1:address:pri =Priority;

Control STS-1 path switching.
address is the AID of the STS-1 path carrying traffic.
pri determines priority of protection switch request (manual only).

switch-path-vt1:address:pri =Priority;

Control VT1.5 path switching.
address is the AID of the VT1.5 path carrying traffic.
pri determines priority of protection switch request (manual only).

(Continued on next page)

Configure (Continued)

Switch (continued)

switch-sync:s=SyncFunction:pri=Priority; <CONFIRM>

Control synchronization protection switching.
s designates the synchronization function.
pri determines priority of protection switch request.

Test

test-alm:[md=Mode][,r=Repeat];

Test office alarms.
md determines the office alarm to test.
r designates the number of times (1–10) to repeat test.

test-auto:md=Mode; <CONFIRM>

Do auto turnup tests.
md determines the type of turnup test.

test-led:[address]:[r=Repeat];

Test the shelf LEDs.
address is the AID of the slot or user panel.
r designates the number of times (1–10) to repeat test.

test-sysctl;

Self test of SYSCTL.

test-tlm-par:[md=Mode][,r=Repeat];

Test parallel telemetry output(s).
md determines parallel telemetry output(s) mode.
r designates the number of times (1–10) to repeat test.

test-tlm-ser:[d=Display][,p=Point][,r=Repeat];

Test serial telemetry outputs.
d designates the TBOS display being used.
p designates TBOS display point(s) to be tested.
r determines the number of times (1–10) to repeat test.

(Continued on next page)

Configure (Continued)

Test (continued)

test-trmsn-t1:address:[dirn=Direction][,dur=Duration]; <CONFIRM>

Test DS1 transmission.
address is the AID of the DS1 port.
dirn determines the direction of test.
dur determines the length of test in minutes.

test-trmsn-t3:address:[dirn=Direction][,dur=duration]; <CONFIRM>

Test DS3 transmission.
address is the AID of the DS3 port.
dirn determines the direction of test.
dur determines the length of test in minutes.

Update

upd; <CONFIRM>

Update system database.

Miscellaneous

Help

help;

Provide help within a craft dialog on the CIT.

Logout

logout;

End CIT session.

Remote login

rlgn:tid;

Set up remote login session using SONET DCC.
tid identifies the desired remote shelf.

Toggle

toggle; or Control **–t (Control–t)**

Toggle between local and remote sessions.

Fault

Operate

opr-aco;

Silence audible alarms.

Reset

reset;

Restart shelf software program.

Retrieve

rtrv-alm:[alm =AlarmLevel];

Display report of alarms and status of NE.
alm identifies the alarm level being reported.

rtrv-eqpt:[address];

Display circuit pack type and version information.
address is the AID for one or more slot(s).

rtrv-hsty;

Display most recent events.

rtrv-state-eqpt[:address];

Display slot, port, and protection switching state information for the NE.
address is the AID(s) for one or more slot(s).

rtrv-state-path:[address];

Display signal path state information for paths dropped at the NE.
address is the AID for any VT1.5 or STS-1 path.

Performance

Iniatilize

init-pm:reg =Register;

Initialize current day and quarter hour (qh) pm register.
reg identifies the register being initialized.

Retrieve

rtrv-pm-line:[address];

Display PM OC-1, OC-3, or EC-1 lines terminated on system.
address is the AID for the OC-1, OC-3, or EC-1 line(s).

rtrv-pm-sect:[address];

Display PM OC-3 optics, STS-1 (within OC-1 line), and STS-3 section report.
address is the AID for the OC-1 or OC-3 line(s).

rtrv-pm-sts1:[address];

Display PM STS-1 status report.
address is the AID for the STS-1 channels.

rtrv-pm-t1:[address];

Display PM DS1 status report.
address is the AID for the DS1 channel.

rtrv-pm-t3:[address];

Display PM DS3 status report.
address is the AID for the DS3 port(s).

rtrv-pm-tca;

Display PM threshold crossing alert (TCA) report.

rtrv-pm-vt1:[address];

Display PM status for one or more VT1.5 channels.
address is the AID for one or more VT1.5 channels.

rtrv-pmthres-line;

Display current OC-1 or OC-3 line PM threshold report.

rtrv-pmthres-sect;

Display section PM threshold report.

(Continued on next page)

Performance (Continued)

Retrieve (continued)

rtrv-pmthres-sts1;

Display STS-1 path PM threshold report.

rtrv-pmthres-t1;

Display DS1 path and line PM threshold report.

rtrv-pmthres-t3;

Display DS-3 PM threshold report.

rtrv-pmthres-vt1;

Display VT1.5 PM threshold report.

Set

set-pmthres-line:[qhb2cvoc3=nnnnn][,dayb2cvoc3=nnnnnnn] [qhb2cvoc1=nnnnn][,dayb2cvoc1=nnnnnnn][,qhb2cvec1=nnnn] [,dayb2cvec1=nnnnn][,qhb2es=nnn][,dayb2es=nnnnn][,qhb2esa=nnn] [,dayb2esa=nnnnn][,qhb2esb=nnn][,dayb2esb=nnnnn][,qhb2ses=nn] [,dayb2ses=nnnn][,qhb2uas=nn][,dayb2uas=nnnn][,qhpscl=nn] [,daypscl=nn];

Set OC-1 or OC-3 line performance parameter thresholds.
qhb2cvoc3 determines the OC-3 coding violations count (qh).
dayb2cvoc3 determines the OC-3 coding violation count (daily).
qhb2cvoc1 determines the OC-1 coding violations count (qh).
dayb2cvoc1 determines the OC-1 coding violation count (daily).
qhb2cvec1 determines the EC-1 coding violations count (qh).
dayb2cvec1 determines the EC-1 coding violation count (daily).
qhb2es determines the errored second (ES) count (qh).
dayb2es determines the ES count (daily).
qhb2esa determines the ES type A count (qh).
dayb2esa determines the ES type A count (daily).
qhb2esb determines the ES type B count (qh).
dayb2esb determines the ES type B count (daily).
qhb2ses determines the severely errored second (SES) count (qh).
dayb2ses determines the SES count (daily).
qhb2uas determines the unavailable second (UAS) count (qh).
dayb2uas determines the UAS count (daily).
qhpscl determines the line protection switch counts (qh).
daypscl determines the line protection switch counts (daily).

(Continued on next page)

Performance (Continued)

Set (continued)

set-pmthres-sect:[txpwr1db=n][,txpwr2db=n][,laserbias=n][,qhsefs=nn][,daysefs=nnnn];

Set OC-1 or OC-3 section performance parameter thresholds.
txpwr1db determines use of transmit power equal to 1 dB.
txpwr2db determines use of transmit power equal to 2 dB.
laserbias determines use of laser bias.
qhsefs designates the severely errored frame seconds (SEFS) (qh).
daysefs designates the SEFS (daily).

set-pmthres-sts1:[qhb3cv=nnnn][,dayb3cv=nnnnnn][,qhb3es=nnn][,dayb3es=nnnnn][,qhb3esa=nnn][,dayb3esa=nnnnn][,qhb3esb=nnn][,dayb3esb=nnnnn][,qhb3ses=nn][,dayb3ses=nnnn][,qhb3uas=nn][,dayb3uas=nnnn];

Set performance parameter thresholds of STS-1 path.
qhb3cv determines the coding violations count (qh).
dayb3cv determines the coding violation count (daily).
qhb3es determines the errored seconds (ES) count (qh).
dayb3es determines the ES count (daily).
qhb3esa determines the ES type A count (qh).
dayb3esa determines the ES type A count (daily).
qhb3esb determines the ES type B count (qh).
dayb3esb determines the ES type B count (daily).
qhb3ses determines the severely errored frame seconds (SEFS) count (qh).
dayb3ses determines the SEFS count (daily).
qhb3uas determines the unavailable seconds count (qh).
dayb3uas determines the unavailable seconds count (daily).

set-pmthres-t1:[dayesl=nnnnn][daycvpsf=nnnnn][daycvpesf=nnnnn][dayesp=nnnnn][,daysesp=nnnnnnn][,dayuasp=nnn][,daycvpfe=nnn][,dayespfe=nnnnn][,daysespfe=nnn][,dayuaspfe=nnnnn];

Set performance monitoring thresholds of DS1 signal.
dayesl determines the errored second line (ESL) count (daily).
dayesp determines the errored second path (ESP) count (daily).
daycvpsf determines the code violations path SF (CVPSF) count (daily).
daycvpesf determines the code violations path ESF (CVPESF) count (daily).
daysesp determines the severely errored second path (SESP) count (daily).
dayuasp determines the unavailable second path (UASP) count (daily).
daycvpfe determines the code violations path far end (CVPFE) count (daily).
dayespfe determines the errored second path far end (ESPFE) count (daily).
daysespfe determines the severely errored second far end path (SESPFE) count (daily).
dayuaspfe determines the unavailable second path far end (UASPFE) count (daily).

(Continued on next page)

Performance (Continued)

Set (continued)

set-pmthres-t3:[qhcvl=nnnnn][,daycvl=nnnnnnn][,qhesl=nnnn] [,dayesl=nnnnn][,qhsesl=nn][,daysesl=nnnn][,qhsefs=nn] [,daysefs=nnnn][,qhpcv=nnnnn][,daypcv=nnnnnnn][,qhfmcv=nnnnn] [,dayfmcv=nnnnnnn][,qhcp=nnnnn][,daycp=nnnnn][,qhesp=nnn] [,dayesp=nnnnn][,qhsesp=nn][,daysesp=nnnn][,qhuasp=nn] [,dayuasp=nnnn][,qhsefsfe=nn][,daysefsfe=nnnn][,qhcpfe=nnnnn] [,daycpfe=nnnnnnn][,qhespfe=nnn][,dayespfe=nnnnn][,qhsespfe=nn] [,daysespfe=nnnn][qhuaspfe=nn][,dayuaspfe];

Set performance parameter thresholds of DS3 signal.
qhcvl determines the coding violations count for DS3 line (qh).
daycvl determines the coding violations count for DS3 line (daily).
qhesl determines the errored second (ES) count for DS3 line (qh).
dayesl determines the ES count for DS3 line (daily).
qhsesl determines the severely errored second (SES) count for DS3 line (qh).
daysesl determines the SES count for DS3 line (daily).
qhsefs determines the severely errored frame seconds count (qh).
daysefs determines the severely errored frame seconds count (daily).
qhpcv determines the coding violations count for P-bit format (qh).
daypcv determines the coding violations count for P-bit format (daily).
qhfmcv determines the coding violations count for F&M bit format (qh).
dayfmcv determines the coding violations count for F&M bit format (daily).
qhcp determines the coding violations count for near-end CP-bit format (qh).
daycp determines the coding violations count for near-end CP-bit format (daily).
qhesp determines the ES count for P-bit, FM-bit, and CP-bit format (qh).
dayesp determines the ES count for P-bit, FM-bit, and CP-bit format (daily).
qhsesp determines the severely errored second (SES) count for PM format (qh).
daysesp determines the SES count for PM format (daily).
qhuasp determines the unavailable second (UAS) count for P-bit, FM-bit, and CP-bit format (qh).
dayuasp determines the UAS count for P-bit, FM-bit, and CP-bit format (daily).
qhsefsfe determines the severely errored frame seconds for far-end CP-bit format (qh).
daysefsfe determines the severely errored frame seconds for far-end CP-bit format (daily).
qhcpfe determines the coding violations count for far-end CP-bit format (qh).
daycpfe determines the coding violations count for far-end CP-bit format (daily).
qhespfe determines the errored seconds count for far-end CP-bit format (qh).
dayespfe determines the errored seconds count for far-end CP-bit format (daily).
qhsespfe determines the SES count for far-end CP-bit format (qh).
daysespfe determines the SES count for far-end CP-bit format (daily).
qhuaspfe determines the UAS count for far-end CP-bit format (qh).
dayuaspfe determines the UAS count for far-end CP-bit format (daily).

(Continued on next page)

Performance (Continued)

Set (continued)

set-pmthres-vt1:[qhv5es=nnnnn][,dayv5es=nnnnnnn] [,qhv5ses=nnn][,dayv5ses=nnnnn][,qhv5uas=nnn] [,dayv5uas=nnnnn];

Set performance parameter thresholds of VT1.5 signal.
qhv5es determines the errored second (ES) count (qh).
dayv5es determines the ES count (daily).
qhv5ses determines the severely errored second (SES) count (qh).
dayv5ses determines the SES count (daily).
qhv5uas determines the unavailable second (UAS) count (qh).
dayv5uas determines the UAS count (daily).

Security

Restore

rstr-passwd:login,passwd,user_type,clr;

Restore the login, password (in encrypted and encoded form), and user type information.
login identifies the log in name.
passwd identifies the current encrypted and encoded password.
user_type determines level of user privilege.
clr indicates whether existing login data should be deleted.

Retrieve

rtrv-lgn;

Display login authorization information.

rtrv-passwd;

Display the logins, passwords (in encrypted form), and user type for all logins in the system.

rtrv-secu;

Display CIT and DCC port security and time-out information.

Set

set-lgn:act=Action;

Enter, edit, and delete logins and passwords.
act determines whether to enter, edit, or delete a login and password.

set-passwd;

Change a user password.

set-secu:address:sec=Security:to=Timeout;

Enable or disable CIT security on CIT and DCC interfaces.
address is the AID(s) for the DCC and CIT interfaces.
sec designates security on specified CIT or DCC port(s).
to determines the timeout of inactive session on CIT (minutes).

DLC Subsystem Commands

7

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About the DLC Subsystem Commands

Overview

Introduction

This chapter contains all of the commands for the digital loop carrier (DLC) subsystem of the *SLC*®-2000 Access System.

Entering Commands During a CIT Session

Overview

Introduction

The CIT provides the user with two methods of entering commands — a dialog/menu driven interface and an expert command mode interface. These methods operate identically to the DDM-2000 interface.

Dialog or Menu Driven Interface

Introduction

The dialog or menu driven interface prompts for input of the DLC subsystem command using system interaction.

System prompt dialog

The system prompts (the user) for information needed to complete the command. To start the dialog, enter the question mark (enter **?**) for help. To cancel a dialog session, press CANCEL or DELETE.

How to use the menu-driven interface

NOTE:
User input is shown in ***bold-italics***.

The following example illustrates how to use the dialog or menu driven interface. This example enters one cross-connection from a TR-303 virtual remote terminal (VRT) line (v3dp-1-1) to a drop on MDS shelf 2 (drop-2-1-1).

```
<  ?

/* Select from
   1. conn   (connect)
   2. cpy    (copy)
   3. disc   (disconnect)
   4. dlt    (delete)
   5. ed     (edit)
   6. ent    (enter)
   7. init   (initialize)
   8. rd     (read)
   9. rtrv   (retrieve)
   10. set
   11. sw    (switch)
   12. upd   (update)
   13. logout
   14. reset
   15. sonet
   16. access */
   < 6

/* Select from
   1. crs
   2. t0  */

command = 1

/* Select from
   1. t0
   2. t1  */

command = 1
```

(Continued on next page)

Dialog or Menu Driven Interface (Continued)

How to use the menu-driven interface (continued)

```
/* Enter a T0 address1:
   vrtdp-all or
   vrtdp-{1-8,a&&a´}-{1-96,b&&b´,all} or
   v3dp-1-{1-1536,a&&a´,all} or
   inads0-all or
   inads0-{1-28,a&&a´}-{1-24,b&&b´,all} */

Address1 = v3dp-1-1


/* Enter a T0 address2:
   drop-all or
   drop-{1-8,a&&a´}-all or
   drop-{1-8,a&&a´}-{1-24,b&&b´}-{1-4,c&&c´,all} or
   dtdp-all or
   dtdp-{1-8,a&&a´}-all or
   dtdp-{1-8,a&&a´}-{1,3,5,7,9,11,13,15,17,19,21,23,b&&b´}-all or
   dtdp-{1-8,a&&a´}-{1,3,5,7,9,11,13,15,17,19,21,23,b&&b´}-{1-6,c&&c´}-{1-4,d&&d´,all} or
   ithlink-{1-2,a&&a´,all} */

Address2 = drop-2-1-1


/* Caution! Network Cross-connections are affected by this command. */

/* You have selected the ent-crs-t0 command with these parameters: */
/* Review of Parameter Responses ...  */
         Address1 = v3dp-1-1
         Address2 = drop-2-1-1

Execute? (y/n or CANcel/DELete to quit) = y

   In progress...

   ST-PROTO-4 97-05-30 06:20:00 SLC-2000 DLC, R4.05.00
M  ent-crs-t0::v3dp-1-1:drop-2-1-1 COMPLD
;
```

Expert Command Mode

Introduction

The expert command mode allows direct input of the complete DLC subsystem command without the system prompt interaction.

How to use the expert command mode

NOTE:
User input is shown in ***bold-italics***.

The following example illustrates how to use the expert command mode (refer to the manual pages in this chapter for command syntax). This procedure also enters one cross-connection from a TR-303 VRT line (v3dp-1-1) to a drop on MDS shelf 2 (drop-2-1-1).

```
< ent-crs-t0::v3dp-1-1,drop-2-1-1;

  /* Caution! Network Cross-connections are affected by this command. */

  /* You have selected the ent-crs-t0 command with these parameters: */
  /* Review of Parameter Responses ...  */
          Address1 = v3dp-1-1
          Address2 = drop-2-1-1

  Execute? (y/n or CANcel/DELete to quit) = y

     In progress...

     ST-PROTO-4 97-05-30 06:20:00 SLC-2000 DLC, R4.05.00
  M  ent-crs-t0::v3dp-1-1:drop-2-1-1 COMPLD
  ;
```

Incomplete or incorrect command

When you enter a partially complete or incorrect command, the system interprets the command up to the point where the input error occurs and prompts the craft personnel for valid values.

Abbreviate the CIT commands

The CIT commands can be abbreviated as long as the abbreviations represent single unique elements of the full command. (For example, you can abbreviate the ENT-CRS-T0 command to EN-C-T0.)

Command Manual Pages

ACCESS-DT

Software release compatibility

Use this command in R4.7 *SLC*-2000 Access Systems.

Format

Use the following format to input the ACCESS-DT command.

ACCESS-DT:[tid]:[aid][:ctag];

Command name

Connect the CIT (through a *communications channel*) to a *SLC ConnectReach* Access System distant terminal (CRDT).

Can command be aborted?

Yes, when you enter dlc (or DLC) to exit the *communications channel* and return to the DLC subsystem.

Purpose

Enter the DLC subsystem command, ACCESS-DT to connect the CIT to a CRDT. At any given time, the *SLC*-2000 Access System allows one DLC subsystem command, ACCESS-DT. When completed, this command establishes a *communications channel* to a CRDT. Although all *SLC ConnectReach* commands will appear on the CIT display, some are not supported for use with the DLC subsystem command, ACCESS-DT. The following table lists *SLC ConnectReach* commands which may be entered on the CIT (all responses are provided by the CRDT and displayed on the CIT).

***SLC ConnectReach* Access System Commands**	
Supported	***Not* Supported**
? (on-line help)	network-upgrade
config	xmodem-download
statistics	archive
version	slave-warm-start
show-hardware-config	slave-cold-start
log	
diagnose	
ping	
warm-start	
cold-start	
Help	
exit	

ACCESS-DT (Continued)

Input parameters for R4.7

Use the following parameters with the ACCESS-DT command in R4.7 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

DT Server AID. Address is the access identifier (AID) of the DT Server hosting the *SLC ConnectReach* distant terminal (DT). The DT Server AID is derived from the channel unit slot of the DT Server. The following format is valid for the DT Server AID.

- dt-{1–8}-{N}

NOTE:
Note that {1–8} identifies the MDS assembly shelf number and *N* is the CU slot number (shown on the designation strip of the metallic distribution shelf) for the channel unit slot used by the DT Server (slot identifier).

Placement of DT Servers in the metallic distribution shelf is restricted. The following values are valid slot identifiers.

- 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, and 23 for 12-line DTs
- 1, 5, 9, 13, 17, and 21 for 24-line DTs.

The default DT Server AID is the one used in the most recent DLC subsystem command (ED-DT, RTRV-DT, or CPY-DT) during the current user session. If no default AID is available, you *must* enter a value. If you (the user) enter a range of AIDs, the default AID is cleared.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

ACCESS-DT (Continued)

Example

The following ACCESS-DT command connects the CIT to the specified CRDT.

```
< ?
  /* Select from
      1. conn (connect)
      2. cpy  (copy)
      3. disc (disconnect)
      4. dlt  (delete)
      5. ed   (edit)
      6. ent  (enter)
      7. init (initialize)
      8. rd   (read)
      9. rtrv (retrieve)
     10. set
     11. sw  (switch)
     12. upd (update)
     13. logout
     14. reset
     15. sonet
     16. access */

< access

  /* Select from
     1. dt */

     command=1

  /* Enter a dt address:
     dt= {1-8} - {1,3,5,7,9,11,13,15,17,19,21,23} */
     Address = dt-8-1

     In progress . . .

  /* Hit return to connect to DT.
     To exit type dlc */

>            dialog now takes place with CRDT directly,
             user enters command, DLC to exit from CRDT.


>dlc

  M access-dt::dt-8-1 COMPLD

<            SLC-2000 DLC subsystem prompt is returned.
```

ACCESS-DT (Continued)

Response

The following message is displayed before the ACCESS-DT command sends any messages to the CRDT. A prompt from the CRDT is displayed when a successful communications channel is established. If the attempt fails to communicate with the CRDT, an appropriate error message is returned.

```
ACCESS-DT::dt-1-1;

/* Hit return to connect to DT.
   To exit type dlc */
```

The following message is displayed when the command, dlc (*or* DLC) is entered to exit the *communications channel*.

```
ACCESS-DT::dt-1-1 COMPLD
```

Error

The ACCESS-DT command is denied and the following message is displayed when the AID is associated with an MSDT, not a CRDT.

```
SROF
/* Status, Requested Operation Failed
   DT type is MSDT. */
```

The ACCESS-DT command is denied and the following message is displayed when the AID is associated with an NBS, not a CRDT.

```
SROF
/* Status, Requested Operation Failed
   DT type is NBS. */
```

(Continued on next page)

ACCESS-DT (Continued)

Response (continued)

The ACCESS-DT command is denied and the following message is displayed when a DT Server is not present for the CRDT specified by the AID.

```
SROF
/* Status, Requested Operation Failed
   DT Server is missing. */
```

The ACCESS-DT command is denied and the following message is displayed when another CIT port is already communicating with a CRDT. The identification of the CIT port (front, rear, or remote) is listed in the error message.

```
SROF
/* Status, Requested Operation Failed
   Command already in use by front CIT. */
```

The ACCESS-DT command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded
   Software installation in-progress.

   Try again after installation is complete. */
```

ACCESS-DT (Continued)

Related commands

The following *SLC ConnectReach* Access System commands may be used when a communications channel has been established using the DLC subsystem command, ACCESS-DT.

NOTE:
Refer to 363-208-050, *SLC ConnectReach Access System, User/Service Manual* for details on the CRDT commands.

- ? (on-line help)
- config
- statistics
- version
- show-hardware-config
- log
- diagnose
- ping
- warm-start
- cold-start
- help
- exit

CONN-RTU

Software release compatibility

Use this command in R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the CONN-RTU command.

CONN-RTU:[tid]:[aid]:[ctag];

Command name

Connect CIT to the remote test unit (RTU).

Can command be aborted?

No.

Purpose

NOTE:
Refer to the user's documentation for the RTU for details about the RTU commands.

Enter the CONN-RTU command to connect the CIT to the RTU. When this command has completed execution, the user is provided with a *pipe* to the RTU. All subsequent commands entered on the CIT are sent directly to the RTU.

To disconnect the session with the RTU and return to the DLC subsystem, enter the SONET subsystem command, disc-rtu.

Parameters

Use the following parameters with the CONN-RTU command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Access identifier. Valid value is null. Default value is *null*.

(Continued on next page)

CONN-RTU (Continued)

Parameters (continued)

ctag

Correlation tag. Correlates the input from the operations system (OS) with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

Example

The following CONN-RTU command connects the CIT to the RTU.

```
CONN-RTU;
```

Response

Completion

The following free form text is displayed when the CONN-RTU command successfully completes.

```
/* The pipe to the RTU is a machine - machine interface.
   No prompting or help menus are available, you must
   use the RTU command set.

   To exit from the RTU: type < disc-rtu; > */
;
```

Error

The CONN-RTU command is denied and the following message is displayed when the LAN card is not plugged in.

```
ENEQ
/* Equipage, Not EQuipped
    LAN not equipped - no test access established.  */
;
```

(Continued on next page)

CONN-RTU (Continued)

Response (continued)

The CONN-RTU command is denied and the following message is displayed when the RTU is currently busy due to another CIT session in progress (and connected to RTU).

```
RTUB
/* Resource, Test Unit is Busy
   RTU Test currently in progress. */
;
```

The CONN-RTU command is denied and the following message is displayed when the RTU is not connected to the system (for example, it is not connected to the LAN circuit pack).

```
SNVS
/* Status, Not in Valid State
   RTU not connected - no test access established. */
;
```

CONN-TACC

Software release compatibility

Use this command in R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the CONN-TACC command.

CONN-TACC:[tid]:[Address]:[ctag]:::[MET=MetallicAccess], [DIGL=DigitalAccess];

Command name

Connect test access.

Can command be aborted?

No.

Purpose

CAUTION:
Execution of the CONN-TACC command for metallic access or split digital access may affect service.

Enter the CONN-TACC command to establish metallic and/or digital test access through the UIP to a subscriber line interface (channel) on the metallic distribution shelf. Digital only test access is allowed on channels served by Fiber-in-the-Loop (FITL) distant terminals (DTs). Test access is denied for Integrated Services Digital Network (ISDN) channels.

Only one line can be tested at a time. This command will drop any active test access previously established with the DLC subsystem commands, CONN-TACC or CONN-TAP. If an existing test is dropped, the completion message will notify the user and identify the test (for example, see "Response, Completion").

The CIT will allow test access only on an equipped channel. However, after test access has been established on a line, the channel unit may be removed and test access will remain active on the line. When a new channel unit is inserted, it will *reconnect* test access.

(Continued on next page)

CONN-TACC (Continued)

Purpose (continued)

When test access has been established on a line, it does not time out but remains active as long as the CIT connection over which it was made is active. When the CIT connection becomes inactive (logged off or physically disconnected) or the provisioning and display controller (PDC) is removed, test access will be disconnected within 2 minutes.

The user does not need to drop test access (DLC subsystem command, DISC-TACC) on the line before testing the next line. Entering the CONN-TACC command with an access identifier (AID) will drop the previous test access and connect it to the line specified by the AID. Also, if the user has executed the DLC subsystem command, SET-SIG, the same signaling bits will be transmitted on the line specified by the CONN-TACC command.

CAUTION:
If an AID is not specified for test access, the command will use the current (default) AID, or the user will be prompted for an AID. Make sure the confirmation message shows the correct address before executing test access at the confirmation message prompt.

The default AID feature allows related DLC commands (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, and RTRV-T0) to share the current AID during the same login session. (For example, a user may execute CONN-TACC on a line, then execute ED-T0 on another line.) If the user again executes CONN-TACC *without specifying an AID*, test access will be connected to the line that was specified in the ED-T0 command.

To send the signaling bits on a channel with the DLC subsystem command, SET-SIG command, the user must specify *DIGL=split* when requesting test access. To reset the signaling bits to their original values, either disconnect test access, or connect test access with *DIGL=none*.

When split digital test access is selected for a circuit that uses AB or ABCD signaling, the signaling bits received from the drop direction are displayed by the integral test head (ITH) on the test head controller (THC) circuit pack.

This command uses only the *A* test access path (A-TAP) — the B-TAP is used for remote demand tests.

CONN-TACC (Continued)

Parameters for R3.2, R3.3, R4.0, R4.2, and R4.4

Use the following parameters with the CONN-TACC command in R3.2, R3.3, R4.0, R4.2, and R4.4 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier. The address is the access identifier (AID) of the channel to be tested. The channel may be served by a channel unit in the MDS assembly or in a FITL DT. This parameter must identify a single channel. The following values are valid subscriber line interface AIDs.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}-{1–4}

Default is the single channel AID used in the most recent DLC subsystem command (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, or RTRV-T0) during the current session. However, the default changes to the last value entered. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

MET=

Type of metallic access. Defines the type of metallic test access and specifies the desired mode.

- *none* — no metallic access
- *split* — split access.

Original value is *split*. Default (presented to the user) is the current value.

(Continued on next page)

CONN-TACC (Continued)

Parameters for R3.2, R3.3, R4.0, R4.2, and R4.4 (continued)

DIGL=

Type of digital test access. Defines the type of digital test access and specifies the desired mode.

- *none* — no digital access
- *split* — split access.

Original value is *none*. Default (presented to the user) is the current value.

NOTE:
You cannot specify *MET=none,DIGL=none*.

CONN-TACC (Continued)

Parameters for R4.5 and R4.6

Use the following parameters with the CONN-TACC command in R4.5 and R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier. The address is the access identifier (AID) of the channel to be tested. The channel may be served by a channel unit in the MDS assembly or in a FITL DT. This parameter must identify a single channel. The following values are valid subscriber line interface AIDs.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}-{1–6}-{1–4}

Default is the single channel AID used in the most recent DLC subsystem command (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, or RTRV-T0) during the current session. However, the default changes to the last value entered. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

MET=

Type of metallic access. Defines the type of metallic test access and specifies the desired mode.

- *none* — no metallic access
- *split* — split access.

Original value is *split*. Default (presented to the user) is the current value.

(Continued on next page)

CONN-TACC (Continued)

Parameters for R4.5 (continued)

DIGL=

Type of digital test access. Defines the type of digital test access and specifies the desired mode.

- *none* — no digital access
- *split* — split access.

Original value is *none*. Default (presented to the user) is the current value.

NOTE:
You cannot specify *MET=none,DIGL=none*.

Example

The following CONN-TACC command establishes local test access (metallic) to a remote terminal (RT) channel unit.

```
CONN-TACC::drop-1-1-1::::met=s,digl=n;
```

The following CONN-TACC command establishes local test access (digital) to a DT channel unit.

```
CONN-TACC::dtdp-5-1-1-1::::met=n,digl=s;
```

Response

Confirmation

The CONN-TACC command requires confirmation. The following confirmation message is displayed when you enter the CONN-TACC command with *MET=split* or *DIGL=split*.

```
/* Caution!  Execution of this command may affect service. */

/* You have selected the conn-tacc command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = [Access Identifier]
         MetallicAccess = [Type of metallic access]
         DigitalAccess = [Type of digital access]

   Execute? (y/n or CANcel/DELete to quit) =
```

(Continued on next page)

CONN-TACC (Continued)

Response (continued)

Completion

The following completion message is displayed when the CONN-TACC command tears down an existing test established with CONN-TACC or CONN-TAP. The completion message identifies the test that was disconnected.

```
/* This command caused the following test to be torn down:
   conn-tacc
   Address = drop-1-4-3
   MetallicAccess = none
   DigitalAccess = split */
;
```

The following completion message is displayed when the CONN-TACC command is entered and the system is not fully equipped for test access (may be missing some common units).

```
/* Check system equipage before testing the channel. */
```

The following completion message is displayed when the CONN-TACC command is entered requesting metallic test access to a DT Server.

```
/* Metallic test access for fiber distribution is limited to
   the Remote Terminal channel unit only */
;
```

Error

The CONN-TACC command is denied and the following error code and message are displayed when you enter the CONN-TACC command and it conflicts with a remote demand test.

```
RTUB
/* Resource, Test Unit Busy
   Remote Demand Test currently in progress. */
;
```

(Continued on next page)

CONN-TACC (Continued)

Response (continued)

The CONN-TACC command is denied and the following error code and message are displayed when you enter the CONN-TACC command and the requested channel (AID) has been assigned to the ITH.

```
EANS
/* Equipage, Access Not Supported
   Addressed line is a Test System link - no test access established. */
;
```

The CONN-TACC command is denied and the following error code and message are displayed when you enter the CONN-TACC command and the ITH is not equipped for craft access.

```
ENEQ
/* Equipage, Not Equipped
   ITH not equipped for CIT access - no test access established. */
;
```

The CONN-TACC command is denied and the following error code and message are displayed when you enter the CONN-TACC command and the requested metallic channel (AID) is not equipped.

```
ENEQ
/* Equipage, Not Equipped
   Channel unit not equipped - no test access established. */
;
```

The CONN-TACC command is denied and the following error code and message are displayed when you enter the CONN-TACC command and the requested channel (AID) is equipped with a channel unit that does not support CIT test access.

```
EANS
/* Equipage, Access Not Supported
   Equipped channel unit does not support test access
   to the addressed line - no test access established. */
;
```

(Continued on next page)

CONN-TACC (Continued)

Response (continued)

The CONN-TACC command is denied and the following error code and message are displayed when you enter the CONN-TACC command and the specified MDS shelf is either unequipped or non-existent, or the channel unit installed in the channel unit slot serving the addressed physical line does not support test access on the line.

```
EANS
/* Equipage, Access Not Supported
   MDS shelf not equipped or equipped channel unit
   does not support test access to the addressed line.
   No test access established. */
;
```

The CONN-TACC command is denied and the following error code and message are displayed when you enter the CONN-TACC command and the requested channel (AID) is not equipped in the DT.

```
ENEQ
/* Equipage, Not EQuipped
   Distant Terminal server not equipped - no test access established. */
;
```

Related commands

The following DLC subsystem commands are related to the CONN-TACC command.

- CONN-TAP
- CPY-T0
- DISC-TACC
- DLT-T0
- ED-T0
- ENT-T0
- RTRV-T0

CONN-TAP

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the CONN-TAP command.

CONN-TAP:[tid]:[Address]:[ctag]:::[TERM=TermType];

Command name

Connect test access path.

Can command be aborted?

No.

Purpose

Enter the CONN-TAP command to set access from the CHAN and DROP (metallic access) jacks of the user interface panel (UIP) to the internal test access path *A* (A-TAP) of the system to verify operation of the TAP. The A-TAP is used for local test access and special service channel alignment. Branches of the A-TAP are provided for each metallic distribution shelf. Each of these branches can be tested individually.

The CONN-TAP command permits the A-TAP connections to be looped (tip-to-tip and ring-to-ring) so that continuity tests can be made. This command also allows the A-TAP connections to be open-circuited to test for foreign electromotive force (EMF) and stuck channel unit test relays.

Only one A-TAP branch can be tested at a time. The CONN-TAP command will drop any active test access previously established with CONN-TACC or CONN-TAP. If an existing test is dropped, the completion message will notify the user and identify the test (for example, see "Response, Completion").

When test access has been established on a line, it does not time out, but remains active as long as the CIT connection over which it was made is active. When the CIT connection becomes inactive (logged off or physically disconnected) or the PDC is removed, test access will be disconnected within 2 minutes.

(Continued on next page)

CONN-TAP (Continued)

Purpose (continued)

The user does not need to drop test access (DLC subsystem command, DISC-TACC) on the line before testing the next line. Entering the CONN-TAP command with an access identifier (AID) drops the previous test access and connects it to the line specified by the AID. Also, if the user has executed the SET-SIG command, the same signaling bits will be transmitted on the line specified by the CONN-TAP command.

CAUTION:
If an AID is not specified for test access, the CONN-TAP command will use the current (default) AID, or the user will be prompted for an AID. Make sure the confirmation message shows the correct address before executing test access at the confirmation message prompt.

The default AID feature allows related DLC subsystem commands (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, and RTRV-T0) to share the current AID during the same login session. (For example, a user may execute CONN-TAP on a line, then execute ED-T0 on another line.) If the user again executes CONN-TAP *without* specifying an AID, test access will be connected to the line that was specified in the ED-T0 command.

CONN-TAP (Continued)

Parameters for R3.1, R3.2, R3.3, R4.0, R4.2, and R4.4

Use the following parameters with the CONN-TAP command in R3.1, R3.2, R3.3, R4.0, R4.2, and R4.4 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier. The address is the access identifier (AID) of a channel (any channel - the A-TAP is connected to all channels). The channel may be served by a channel unit in the MDS assembly or in a FITL distant terminal (DT). This parameter must identify a single channel. The CONN-TAP command will test the branch of A-TAP that serves this channel. The following values are valid subscriber line interface AIDs.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}-{1–4}

Default is the single channel AID used in the most recent DLC subsystem command (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, or RTRV-T0) during the current session. However, the default changes to the last value entered. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

TERM=

Type of test path access. Specifies the type of test path access.

- *open* — Open circuit access connects the A-TAP branch for the metallic distribution shelf of the channel from the UIP jacks to the channel unit without operating the channel unit relay. No termination is provided.
- *loop* — Loops the tip/ring pairs of the A-TAP branch for the metallic distribution shelf of the channel (except for the E&M pairs, which are not looped because only one direction is supported for these leads).

CONN-TAP (Continued)

Parameters for R4.5 and R4.6

Use the following parameters with the CONN-TAP command in R4.5 and R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier. The address is the access identifier (AID) of a channel (any channel - the A-TAP is connected to all channels). The channel may be served by a channel unit in the MDS assembly or in a FITL distant terminal (DT). This parameter must identify a single channel. The CONN-TAP command will test the branch of A-TAP that serves this channel. The following values are valid subscriber line interface AIDs.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}-{1–6}-{1–4}

Default is the single channel AID used in the most recent DLC subsystem command (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, or RTRV-T0) during the current session. However, the default changes to the last value entered. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

TERM=

Type of test path access. Specifies the type of test path access.

- *open* — Open circuit access connects the A-TAP branch for the metallic distribution shelf of the channel from the UIP jacks to the channel unit without operating the channel unit relay. No termination is provided.
- *loop* — Loops the tip/ring pairs of the A-TAP branch for the metallic distribution shelf of the channel (except for the E&M pairs, which are not looped because only one direction is supported for these leads).

CONN-TAP (Continued)

Example

The following CONN-TAP command establishes test access from the CHAN and DROP jacks located on the UIP.

```
CONN-TAP::drop-8-1-1::::term=open;
```

The following CONN-TAP command establishes test access from the CHAN and DROP jacks located on the UIP.

```
CONN-TAP::dtdp-5-1-1-1::::term=loop;
```

Response

Confirmation

The CONN-TAP command requires confirmation. The following confirmation message is displayed when you enter the CONN-TAP command.

```
/* Caution!  Execution of this command may affect service. */

/* You have selected the conn-tap command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = [Access Identifier]
         TermType = [Type of test access path]

Execute? (y/n or CANcel/DELete to quit) =
;
```

Completion

The following completion message identifies the test that was disconnected when the CONN-TAP command is entered and an active test connection will be affected.

```
/* This command caused the following test to be torn down:
   conn-tap
   Address = drop-1-4-3
   Testtype = loop */
;
```

(Continued on next page)

CONN-TAP (Continued)

Response (continued)

The following completion message is displayed when this command is entered and the system is not fully equipped for test access (may be missing some common units).

```
/* Check system equipage before testing the test access path. */
```

Error

The CONN-TAP command is denied and the following message is displayed when this command is entered and it conflicts with a remote demand test.

```
RTUB
/* Resource, Test Unit Busy
   Remote Demand Test currently in progress. */
;
```

The CONN-TAP command is denied and the following message is displayed when this command is entered and the ITH is not equipped for craft access.

```
ENEQ
/* Equipage, Not EQuipped
   ITH not equipped for CIT access - no test access established. */
;
```

The CONN-TAP command is denied and the following error code and message are displayed when you enter the CONN-TAP command and the specified MDS shelf is either unequipped or non-existent, or the the channel unit installed in the channel unit slot serving the addressed physical line does not support test access on the line.

```
EANS
/* Equipage, Access Not Supported
   MDS shelf not equipped or equipped channel unit
   does not support test access to the addressed line.
   No test access established. */
;
```

CONN-TAP (Continued)

Related commands

The following DLC subsystem commands are related to the CONN-TAP command.

- CONN-TACC
- CPY-T0
- DISC-TACC
- DLT-T0
- ED-T0
- ENT-T0
- RTRV-T0

CPY-DT

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

NOTE:
The term DT (R4.4 and later software releases) refers to both the multi-services distant terminal (MSDT) and narrowband shelf (NBS). In R4.4 and later software releases, the CPY-DT command is only valid when the DT type is msdt. The CPY-DT is not valid when the DT type is nbs.

Format

Use the following format to input the CPY-DT command.

CPY-DT:[tid]:[FromAddress],ToAddress[:ctag];

Command name

Copy distant terminal.

Can command be aborted?

No.

Purpose

NOTE:
A maximum of 24 lines can be allocated among DT Server pairs.
For R4.4 and earlier software releases, the DT Server pairs are 1–3, 5–7, 13–15, and 17–19. For R4.5 and later software releases, the DT Server pairs are 1–3, 5–7, 9–11, 13–15, 17–19, and 21–23. Based on the current provisioning and the DT timeslot provisioning restrictions, a maximum of *x* lines may be provisioned for dt-*m*-*n*.

Enter the CPY-DT command to copy the provisionable software attribute(s) for bandwidth assignment to a distant terminal (DT). (See the DLC subsystem command, ED-DT, for the parameter provisioning.)

(Continued on next page)

CPY-DT (Continued)

Parameters for R3.1, R3.2, R3.3, R4.0, R4.2, and R4.4

Use the following parameters with the CPY-DT command in R3.1, R3.2, R3.3, R4.0, R4.2, and R4.4 of the *SLC*-2000 Access System.

NOTE:
The CPY-DT command will be denied if an invalid value is entered for either of the access identifier (AID) parameters, or if the resulting assignment would be in conflict with an existing assignment to another DT. Refer to "Channel Unit Installation: Introduction-000", 363-208-001, *SLC-2000 Access System, User/Service Manual*, for DT Server installation rules.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

FromAddress

DT Server AID. The access identifier (AID) of the channel unit slot for the DT Server that is the source of the provisioning data to be copied. The DT Server AID is derived from the channel unit slot of the DT Server. The following format is valid for the DT Server AID.

- dt-{1–8}-{N}

NOTE:
Note that {1–8} identifies the MDS channel shelf number and *N* is the CU slot number (shown on the designation strip of the metallic distribution shelf) for the channel unit slot used by the DT Server (slot identifier).

Placement of DT Servers in the metallic distribution shelf is restricted. The following values are valid slot identifiers.

- 1, 3, 5, 7, 13, 15, 17, and 19 for 12-line DTs
- 1, 5, 13, and 17 for 24-line DTs.

Default is the DT Server AID used in the most recent DLC subsystem command (ED-DT, RTRV-DT, or CPY-DT) during the current user session. If no default AID is available, you *must* enter a value.

(Continued on next page)

CPY-DT (Continued)

Parameters for R3.1, R3.2, R3.3, R4.0, R4.2, and R4.4 (continued)

ToAddress

DT Server AID. The AID of the channel unit slot for the DT Server is the destination of the provisioning data to be copied. The DT Server AID is derived from the channel unit slot of the DT Server. The following format is valid for the DT Server AID.

- dt-{1–8}-{N}

NOTE:
Note that {1–8} identifies the MDS channel shelf number and *N* is the CU slot number (shown on the designation strip of the metallic distribution shelf) for the channel unit slot used by the DT Server (slot identifier).

Placement of DT Servers in the metallic distribution shelf is restricted. The following values are valid slot identifiers.

- 1, 3, 5, 7, 13, 15, 17, and 19 for 12-line DTs
- 1, 5, 13, and 17 for 24-line DTs.

The *ToAddress* parameter does not have a default. Thus, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

CPY-DT (Continued)

Parameters for R4.5 and R4.6

Use the following parameters with the CPY-DT command in R4.5 and R4.6 of the *SLC*-2000 Access System.

NOTE:
The CPY-DT command will be denied if an invalid value is entered for either of the access identifier (AID) parameters, or if the resulting assignment would be in conflict with an existing assignment to another DT. Refer to "Channel Unit Installation: Introduction-000", 363-208-001, *SLC-2000 Access System, User/Service Manual*, for DT Server installation rules.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

FromAddress

DT Server AID. The access identifier (AID) of the channel unit slot for the DT Server that is the source of the provisioning data to be copied. The DT Server AID is derived from the channel unit slot of the DT Server. The following format is valid for the DT Server AID.

- dt-{1–8}-{N}

NOTE:
Note that {1–8} identifies the MDS channel shelf number and *N* is the CU slot number (shown on the designation strip of the metallic distribution shelf) for the channel unit slot used by the DT Server (slot identifier).

Placement of DT Servers in the metallic distribution shelf is restricted. The following values are valid slot identifiers.

NOTE:
Only DT Server *SPQ*811 will function in slot positions 11 and 23.

- 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, and 23 for 12-line DTs
- 1, 5, 9, 13, 17, and 21 for 24-line DTs.

Default is the DT Server AID used in the most recent DLC subsystem command (ED-DT, RTRV-DT, or CPY-DT) during the current user session. If no default AID is available, you *must* enter a value.

(Continued on next page)

CPY-DT (Continued)

Parameters for R4.5 and R4.6 (continued)

ToAddress

DT Server AID. The AID of the channel unit slot for the DT Server is the destination of the provisioning data to be copied. The DT Server AID is derived from the channel unit slot of the DT Server. The following format is valid for the DT Server AID.

- dt-{1–8}-{N}

NOTE:
Note that {1–8} identifies the MDS channel shelf number and *N* is the CU slot number (shown on the designation strip of the metallic distribution shelf) for the channel unit slot used by the DT Server (slot identifier).

Placement of DT Servers in the metallic distribution shelf is restricted. The following values are valid slot identifiers.

NOTE:
Only DT Server *SPQ*811 will function in slot positions 11 and 23.

- 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, and 23 for 12-line DTs
- 1, 5, 9, 13, 17, and 21 for 24-line DTs.

The *ToAddress* parameter does not have a default. Thus, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

Example

The following CPY-DT command copies the line size provisioning of the first specified DT Server to the second DT Server.

```
CPY-DT::dt-2-3,dt-2-5;
```

CPY-DT (Continued)

Response

Confirmation

The CPY-DT command requires confirmation. The following confirmation message is displayed when you enter the CPY-DT command attempting to alter the provisioning of bandwidth served using a DT Server and applicable error conditions are not present.

```
/* Caution!  Execution of this command may affect service. */

/* You have selected the cpy-dt command with these parameters: */
/* Review of Parameter Responses ...   */
         FromAddress = Access Identifier
         ToAddress = Access Identifier

Execute? (y/n or CANcel/DELete to quit) =
;
```

Error

The following denial message is displayed when the CPY-DT entry was made with an illegal AID.

```
/* Invalid Address */
/* AID is not a valid slot for a DT Server.
   Enter a dt address: dt-{1-8}-{1,3,5,7,9,11,13,15,17,19,21,23) */
```

The system prompts the user for a new AID — press the ESC key to abort the dialog.

The CPY-DT command is denied and the following error message is displayed when bandwidth assignment parameters conflict with existing assignments to another DT Server.

```
IDNV
/* Input, Data Not Valid,
   Timeslot assignment conflict for DT served via ToAddress
   (Maximum available for ToAddress is xx timeslots) */
;
```

(Continued on next page)

CPY-DT (Continued)

Response (continued)

The following message is displayed when you attempt to copy the provisioning of one DT to another and the available bandwidth on the *FromAddress* DT exceeds the available bandwidth on the *ToAddress* DT.

NOTE:
Note that dt-*m*-*k* is the *FromAddress*, dt-*m*-*n* is the *ToAddress*, dt-*m*-*p* is the mate DT Server of dt-*m*-*n*, and *x* (0, 12, or 24) is the maximum number of lines that can be provisioned for the DT.

```
IDNV
/* Input, Data Not Valid,
   Bandwidth for dt-m-k exceeds available bandwidth on dt-m-n.
   A maximum of 24 lines may be allocated among dt-m-n and dt-m-p
   Based on the current provisioning and the DT timeslot provisioning
   restrictions, a maximum of x lines may be provisioned for dt-m-n. */
;
```

The following error message is displayed when an attempt is made to copy the provisioning of one DT to another, and one of the DTs identified in the FromAddress or ToAddress is set to nbs.

```
IDNV
/* Input, Data Not Valid,
   The provisioned DT type is nbs for one of the entered DTs. */
;
```

The following message is displayed when you attempt to reduce the number of *LINES* assigned for a DT and cross-connections exist for one or more of the specified lines.

```
SNVS
/* Status, Not in Valid State,
   Cross-connections exist for the lines which are being unassigned. */
;
```

Related commands

The following DLC subsystem commands are related to the CPY-DT command.

- ED-DT
- RTRV-DT.

CPY-MEM

Software release compatibility

Use this command in R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the CPY-MEM command.

cpy-mem:[tid]::[ctag]::,from memory device,,to memory device;

Command name

Force a software installation to circuit packs.

Can command be aborted?

No.

Purpose

Enter the CPY-MEM command to force a software installation from the system memory unit (SMU) to specific circuit packs. When executed, the software load from the SMU is installed into the target circuit pack(s).

Parameters

Use the following parameters with the CPY-MEM command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

from memory device

Source CP. Defines the source circuit pack which holds the software to be installed. Valid value is smu.

Default — none, you *must* enter a value.

(Continued on next page)

CPY-MEM (Continued)

Parameters (continued)

to memory device

Target CP. Defines the target circuit pack which is to receive the software to be installed. The following values are valid for this parameter.

- all
- bmp-{1–2,all}
- ls-a-{1–8,all}
- mdc-{1–8,all}-{1–2,all}
- pdc
- tsi-{1–2,all}

Default — none, you *must* enter a value.

Example

The following CPY-MEM command forces a software installation to mdc-4-2.

```
CPY-MEM:::::smu,mdc-4-2;
```

The following CPY-MEM command forces a software installation to ls-a-6.

```
CPY-MEM:::::smu,ls-a-6;
```

The following CPY-MEM command forces a software installation to both BMPs.

```
CPY-MEM:::::smu,bmp-all;
```

(Continued on next page)

CPY-MEM (Continued)

Response

Confirmation

The CPY-MEM command requires confirmation. The following confirmation message is displayed when you enter the CPY-MEM command.

```
/* Caution!  Execution of this command may affect service. */

/* You have selected the cpy-mem command with these parameters: */
/* Review of Parameter Responses ...  */
         From Memory Device = smu
         To Memory Device   = [Access Identifier]

Execute? (y/n or CANcel/DELete to quit) =
;
```

Error

When an invalid *from memory device* is entered, the system displays a help message that lists the valid *from memory device* value and reprompts the user.

The CPY-MEM command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

The CPY-MEM command is denied and the following message is displayed when a specific circuit pack is requested and the software load cannot be installed (for example, if the circuit pack is not equipped).

```
SROF
/* Status, Requested Operation Failed,
   Software load could not be installed. */
;
```

(Continued on next page)

CPY-MEM (Continued)

Response (continued)

The CPY-MEM command is denied and the following message is displayed when *all* circuit packs or a family of circuit packs (for example, ls-a-all) are requested and the software load cannot be installed on one or more circuit packs (for example, if the circuit pack is not equipped).

```
/* The following circuit packs not installed:
   to memory device-1
   to memory device-2
         .     .
         .     .
         .     . */
;
```

CPY-T0

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the CPY-T0 command.

CPY-T0:[tid]:[FromAddress],ToAddress:[ctag];

Command name

Copy channel.

Can command be aborted?

No.

Purpose

NOTE:
The CPY-T0 command can copy up to five objects. However, there is one T0 entity for each ISDN CU physical port. In R4.5 and later software releases, you must use the CPY-T0 command two times for the AUA94 and AUA94B, and four times for the *SPQ*494 CUs.

Enter the CPY-T0 command to copy the software provisionable attributes of a (source) physical line on a metallic channel shelf or a physical line within a distant terminal (DT) (served by the *SLC*-2000 Access System) to a destination.

The CPY-T0 command is independent of cross-connections created using DLC subsystem command, ENT-CRS-T0.

CPY-T0 (Continued)

Parameters for R3.1, R3.2, R3.3, R4.0, R4.2, and R4.4

Use the following parameters with the CPY-T0 command in R3.1, R3.2, R3.3, R4.0, R4.2, and R4.4 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

FromAddress

Access identifier. The access identifier (AID) of the source physical line that identifies a single object-entity. The following values are valid for this parameter:

- drop-{1-8}-{1-24}-{1-4}
- dtdp-{1-8}-{1,3,5,7,13,15,17,19}-{1-6}-{1-4}

Default is the single channel AID used in the most recent DLC subsystem command (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, or RTRV-T0) during the current login session. The default changes to the last entered value. However, the default value is lost when the last command was RTRV-T0 and the AID value was set to *all*. If no default AID is available, you *must* enter a value.

ToAddress

Destination AID. The AID of the destination physical line. This parameter identifies the physical line that will be provisioned with the attributes of the line addressed by the *FromAddress* parameter.

When the *ToAddress* parameter specifies a channel that is cross-connected to a TR-303 VRT, the system will create the appropriate TR-303 managed objects. The following values are valid for this parameter.

- drop-{1-8}-{1-24}-{1-4}
- dtdp-{1-8}-{1,3,5,7,13,15,17,19}-{1-6}-{1-4}

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

CPY-T0 (Continued)

Parameters for R4.5 and R4.6

Use the following parameters with the CPY-T0 command in R4.5 and R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

FromAddress

Access identifier. The access identifier (AID) of the source physical line that identifies a single object-entity. The following values are valid for this parameter.

NOTE:
Only DT Server *SPQ*811 will function in slot positions 11 and 23.

- drop-{1-8}-{1-24}-{1-4}
- dtdp-{1-8}-{1,3,5,7,9,11,13,15,17,19,21,23}-{1-6}-{1-4}

Default is the single channel AID used in the most recent DLC subsystem command (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, or RTRV-T0) during the current login session. The default changes to the last entered value. However, the default value is lost when the last command was RTRV-T0 and the AID value was set to *all*. If no default AID is available, you *must* enter a value.

(Continued on next page)

CPY-T0 (Continued)

Parameters for R4.5 and R4.6 (continued)

ToAddress

Destination AID. The AID of the destination physical line. This parameter identifies the physical line that will be provisioned with the attributes of the line addressed by the *FromAddress* parameter.

When the *ToAddress* parameter specifies a channel that is cross-connected to a TR-303 VRT, the system will create the appropriate TR-303 managed objects. The following values are valid for this parameter.

NOTE:
Only DT Server *SPQ*811 will function in slot positions 11 and 23.

- drop-{1-8}-{1-24}-{1-4}
- dtdp-{1-8}-{1,3,5,7,9,11,13,15,17,19,21,23}-{1-6}-{1-4}

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

CPY-T0 (Continued)

Example

The following CPY-T0 command copies the provisioned attributes of a physical line at drop-1-1-1 to the physical line at dtdp-2-1-1-1.

```
CPY-T0::drop-1-1-1,dtdp-2-1-1-1;
```

The following CPY-T0 command copies the provisioned attributes of a physical line at a default AID to physical lines at drop-1-2-1, drop-1-2-2, and drop-1-3-1. The default is the AID used in the most recent DLC subsystem command (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, or RTRV-T0) during the current login session.

```
CPY-T0::drop-1-1-1,drop-1-2-1;
CPY-T0::,drop-1-2-2;
CPY-T0::,drop-1-3-1;
```

Response

Confirmation

The CPY-T0 command requires confirmation. The following confirmation message is displayed when you enter the CPY-T0 command.

```
/* Caution!  Execution of this command may affect service. */

/* You have selected the cpy-t0 command with these parameters: */
/* Review of Parameter Responses ...  */
         From Address = [Access Identifier]
         To Address = [Access Identifier]

Execute? (y/n or CANcel/DELete to quit) =
;
```

(Continued on next page)

CPY-T0 (Continued)

Response (continued)

The following confirmation message is displayed when you enter the CPY-T0 command attempting to alter the provisioning of a line under test [for example, using mechanized loop testing (MLT) or Switched Access Remote Testing System (SARTS)].

```
/* Caution!  Execution of this command may affect a test in progress. */

/* Caution!  Execution of this command may affect service. */

/* You have selected the cpy-t0 command with these parameters: */
/* Review of Parameter Responses ...  */
        From Address = [Access Identifier]
        To Address = [Access Identifier]

Execute? (y/n or CANcel/DELete to quit) =
;
```

Error

The following message is displayed and the user is prompted to reenter the AID when either address references a fiber drop AID (dtdp) within a distribution shelf which is not provisioned for FITL distribution.

```
/* Invalid Address */
/* The distribution shelf for AID is not provisioned for
   fiber distribution. */

/* Enter a drop address:
    drop-{1-8}-{1-24}-{1-4} or
    dtdp-{1-8}-{1,3,5,7,9,11,13,15,17,19,21,23}-{1-6}-{1-4} */

   To Address =
```

The following message is displayed and the user is prompted to reenter the AID when either address references a metallic drop AID within a distribution shelf which is provisioned for FITL distribution.

```
/* Invalid Address */
/* The distribution shelf for AID is not provisioned for
   metallic distribution. */

/* Enter a drop address:
    drop-{1-8}-{1-24}-{1-4} or
    dtdp-{1-8}-{1,3,5,7,9,11,13,15,17,19,21,23}-{1-6}-{1-4} */

   To Address =
```

(Continued on next page)

CPY-T0 (Continued)

Response (continued)

The following message is displayed and the user is re-prompted for the AID when either address references a DT drop AID (dtdp) with a channel number greater than the number of DS0s for which the supporting DT Server is provisioned (for example, attempt to CPY-T0::dtdp-1-3-4-1 when dt-1-3 is provisioned to serve 12 lines).

```
/* Invalid Address */
/* The DT server for AID is currently provisioned for a maximum
   of n lines. */

/* Enter a drop address:
    drop-{1-8}-{1-24}-{1-4} or
    dtdp-{1-8}-{1,3,5,7,9,11,13,15,17,19,21,23}-{1-6}-{1-4} */

   To Address =
```

The following error message is displayed when a valid set of addresses is entered, but the *ToAddress* cannot support the *CLEI** code from the *FromAddress*.

```
IDNV
/* Input, Data Not Valid,
/* Cannot support CLEI code CLEI code for line AID */
;
```

The following error message is displayed when the command cannot be completed due to an error in nonvolatile data storage (NVDS).

```
SSTP
/* Status, SToPped,
   Data memory failed. */
;
```

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* COMMON LANGUAGE is a registered trademark and CLEI, CLLI, CLCI, and CLFI are trademarks of Bell Communications Research, Inc.

CPY-T0 (Continued)

Response (continued)

The CPY-T0 command is denied and the following error message is displayed for various reasons. The message can be displayed when you are copying a channel that has been provisioned for ISDN (R4.4 and earlier software releases). Also, the message can be displayed when you are copying a DT channel provisioned for DDS to DT channels 1 or 2 of a DT slot, and channels 3 or 4 of the slot are cross-connected.

```
SROF
/* Status, Requested Operation Failed */
;
```

The CPY-T0 command is denied and the following error message is displayed when you try to copy an ISDN line to another line that does not have a T0 cross connect.

```
SNVS
/* Status, Not in Valid State,
   Cannot copy an ISDN line when T0 crossconnect does not exist for TR-303 VRT. */
;
```

The CPY-T0 command is denied and the following error message is displayed when you try to copy an ISDN line to another line that does not have a T1 cross connect.

```
SNVS
/* Status, Not in Valid State,
   Cannot copy an ISDN line when T1 crossconnect does not exist for TR-303 VRT. */
;
```

The CPY-T0 command is denied and the following error message is displayed when you try to copy a non-ISDN line to an ISDN line with D channel cross connections.

```
SNVS
/* Status, Not in Valid State,
   Cannot copy a NON-ISDN line to an ISDN line with D channel XCONS. */
;
```

CPY-T0 (Continued)

Related commands

The following DLC subsystem commands are related to the CPY-T0 command.

- DLT-T0
- ENT-T0
- ED-T0
- RTRV-T0.

DISC-TACC

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the DISC-TACC command.

DISC-TACC:[tid]::[ctag];

Command name

Disconnect test access.

Can command be aborted?

No.

Purpose

Enter the DISC-TACC command to terminate any control of signaling bits established by the DLC subsystem command, SET-SIG, and disconnect test access established with the DLC subsystem commands, CONN-TACC or CONN-TAP. Also, if a digital test access is active, the integral test head (ITH) stops displaying the received signaling bits on the test head controller (THC) faceplate.

Parameters

Use the following parameters with the DISC-TACC command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

DISC-TACC (Continued)

Example

The following DISC-TACC command disconnects the previously entered CONN-TACC or CONN-TAP command.

```
DISC-TACC;
```

Response

If a remote demand test is in progress or in conditional disconnect, this command will not tear it down — the command completes without any warnings or error messages.

Completion

The following completion message identifies the test that was disconnected when execution of this command tears down an existing test established with the CONN-TACC or CONN-TAP commands.

```
/* This command caused the following test to be torn down:
   conn-tacc
   Address = drop-1-15
   MetallicAccess = none
   DigitalAccess = split */
;
```

DLT-CRS-T0

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the DLT-CRS-T0 command.

DLT-CRS-T0:[tid]:Address1,Address2:[ctag];

Command name

Delete cross-connection between a logical VRT line or logical integrated network access (INA) digital signal level 0 (DS0), and a physical line or ITH link.

Can command be aborted?

No.

Purpose

Enter the DLT-CRS-T0 command to delete a cross-connection between a logical virtual remote terminal (VRT) line or logical integrated network access (INA) DS0, and a physical line or integral test head (ITH) link.

All cross-connections are two-way cross-connections.

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DLT-CRS-T0 (Continued)

Parameters for R3.1, R3.2, and R3.3

Use the following parameters with the DLT-CRS-T0 command in R3.1, R3.2, and R3.3 of the *SLC*-2000 Access System.

NOTE:
When *all* address is used as part of an address to cross-connect entire groups of signals, the multiple addresses are mapped into individual addresses directly one to one. Therefore, only addresses where the total number of connections is the same for *Address1* and *Address2* are valid.

Use the following parameters with the DLT-CRS-T0 command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address1

Logical VRT or INA DS0 address. The address of the logical VRT line or the logical INA DS0 entity in the cross-connection. No input is allowed after the parameter *all* is entered in the *Address1* AID string. The following values are valid for this parameter.

- vrtdp-{1–8, all}-{1–96, all}
- inads0-{1–28, all}-{1–24, all}

Default — none, you *must* enter a value.

Address2

Physical line address. The address of the physical line entity in the cross-connection. No input is allowed after the parameter *all* is entered in the *Address2* AID string. The following values are valid for this parameter.

- drop-{1–8,all}-{1–24,all}-{1–4,all}
- dtdp-{1–8,all}-{1,3,5,7,13,15,17,19,all}-{1–6,all}-{1–4,all}
- ithlink-{1–3}

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

DLT-CRS-T0 (Continued)

Parameters for R4.0

Use the following parameters with the DLT-CRS-T0 command in R4.0 of the *SLC*-2000 Access System.

NOTE:
When *all* or range addresses are used as part of an address to cross-connect entire groups of signals, the multiple addresses are mapped into individual addresses directly one to one. Therefore, only addresses where the total number of connections is the same for *Address1* and *Address2* are valid.

Use the following parameters with the DLT-CRS-T0 command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address1

Logical VRT or INA DS0 address. The address of the logical VRT line or the logical INA DS0 entity in the cross-connection. No input is allowed after the parameter *all* is entered in the *Address1* AID string. The following values (*&&* is a range operator) are valid for this parameter.

- vrtdp-{1–8, A&&A´, all}-{1–96, B&&B´, all}
- v3dp-1-{1–1536, C&&C´, all}
- inads0-{1–28, D&&D´, all}-{1–24, E&&E´, all}

Mnemonic	Address	Range Value	Requirement
A	TR-08 VRT	1–8	A≤A´
B	TR-08 channel	1–96	B≤B´
C	TR-303 channel	1–1536	C≤C´
D	INA DS1	1–28	D≤D´
E	DS0 within an INA DS1	1–24	E≤E´

Default — none, you *must* enter a value.

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DLT-CRS-T0 (Continued)

Parameters for R4.0 (continued)

Address2

Physical line address. The address of the physical line entity in the cross-connection. No input is allowed after the parameter *all* is entered in the *Address2* AID string. The following values (*&&* is a range operator) are valid for this parameter.

- drop-{1–8,F&&F´,all}-{1–24,G&&G´,all}-{1–4,H&&H´,all}
- dtdp-{1–8,F&&F´,all}-{1,3,5,7,13,15,17,19,I&&I´,all}-{1–6,J&&J´,all}-{1–4,H&&H´,all}
- ithlink-{1,2,K&&K´}

Mnemonic	Address	Range Value	Requirement
F	MDS shelf	1–8	F≤F´
G	RT slot	1–24	G≤G´
H	Circuit on a channel unit	1–4	H≤H´
I	DT Server slot	1, 3, 5, 7, 13, 15, 17, and 19	I≤I´
J	DT slot	1–6	J≤J´
K	ITH link	1–2	K≤K´

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

DLT-CRS-T0 (Continued)

Parameters for R4.2 and R4.4

Use the following parameters with the DLT-CRS-T0 command in R4.2 and R4.4 of the *SLC*-2000 Access System.

NOTE:
When *all* or range addresses are used as part of an address to cross-connect entire groups of signals, the multiple addresses are mapped into individual addresses directly one to one. Therefore, only addresses where the total number of connections is the same for *Address1* and *Address2* are valid.

Use the following parameters with the DLT-CRS-T0 command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address1

Logical VRT or INA DS0 address. The address of the logical VRT line or the logical INA DS0 entity in the cross-connection. No input is allowed after the parameter *all* is entered in the *Address1* AID string. The following values (*&&* is a range operator) are valid for this parameter (refer to “Example’ for examples of how to use the range operators).

- vrtdp-{1–8, A&&A´, all}-{1–96, B&&B´, all}
- v3dp-{1–2,F&&F´}-{1–1536, C&&C´, all}
- inads0-{1–28, D&&D´, all}-{1–24, E&&E´, all}

Mnemonic	Address	Range Value	Requirement
A	TR-08 VRT	1–8	A≤A´
B	TR-08 channel	1–96	B≤B´
C	TR-303 channel	1–1536	C≤C´
D	INA DS1	1–28	D≤D´
E	DS0 within an INA DS1	1–24	E≤E´
F	TR-303 VRT	1–2	F≤F´

Default — none, you *must* enter a value.

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DLT-CRS-T0 (Continued)

Parameters for R4.2 and R4.4 (continued)

Address2

Physical line address. The address of the physical line entity in the cross-connection. No input is allowed after the parameter *all* is entered in the *Address2* AID string. The following values (*&&* is a range operator) are valid for this parameter.

- drop-{1–8,F&&F´,all}-{1–24,G&&G´,all}-{1–4,H&&H´,all}
- dtdp-{1–8,F&&F´,all}-{1,3,5,7,13,15,17,19,I&&I´,all}-{1–6,J&&J´,all}-{1–4,H&&H´,all}
- ithlink-{1–2,K&&K´}

Mnemonic	Address	Range Value	Requirement
F	MDS shelf	1–8	F≤F´
G	RT slot	1–24	G≤G´
H	Circuit on a channel unit	1–4	H≤H´
I	DT Server slot	1, 3, 5, 7, 13, 15, 17, and 19	I≤I´
J	DT slot	1–6	J≤J´
K	ITH link	1–2	K≤K´

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

DLT-CRS-T0 (Continued)

Parameters for R4.5 and R4.6

Use the following parameters with the DLT-CRS-T0 command in R4.5 and R4.6 of the *SLC*-2000 Access System.

NOTE:
When *all* or range addresses are used as part of an address to cross-connect entire groups of signals, the multiple addresses are mapped into individual addresses directly one to one. Therefore, only addresses where the total number of connections is the same for *Address1* and *Address2* are valid.

Use the following parameters with the DLT-CRS-T0 command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address1

Logical VRT or INA DS0 address. The address of the logical VRT line or the logical INA DS0 entity in the cross-connection. No input is allowed after the parameter *all* is entered in the *Address1* AID string. The following values (*&&* is a range operator) are valid for this parameter (refer to “Example’ for examples of how to use the range operators).

- vrtdp-{1–8, A&&A´, all}-{1–96, B&&B´, all}
- v3dp-{1–2,F&&F´}-{1–1536, C&&C´, all}
- inads0-{1–28, D&&D´, all}-{1–24, E&&E´, all}.

Mnemonic	Address	Range Value	Requirement
A	TR-08 VRT	1–8	A≤A´
B	TR-08 channel	1–96	B≤B´
C	TR-303 channel	1–1536	C≤C´
D	INA DS1	1–28	D≤D´
E	DS0 within an INA DS1	1–24	E≤E´
F	TR-303 VRT	1–2	F≤F´

Default — none, you *must* enter a value.

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DLT-CRS-T0 (Continued)

Parameters for R4.5 and R4.6 (continued)

Address2

Physical line address. The address of the physical line entity in the cross-connection. No input is allowed after the parameter *all* is entered in the *Address2* AID string. The following values (*&&* is a range operator) are valid for this parameter.

- drop-{1–8,F&&F´,all}-{1–24,G&&G´,all}-{1–4,H&&H´,all}
- dtdp-{1–8,F&&F´,all}-{1,3,5,7,9,11,13,15,17,19,21,23,I&&I´,all}-{1–6,J&&J´,all}-{1–4,H&&H´,all}
- ithlink-{1–2,K&&K´}.

NOTE:
The architecture of the *SLC*-2000 Access System allows TR-08, TR-303, and INA CO interfaces. Carefully consider cross-connection or checkerboarding restrictions when using the DT Servers in the expanded slots. The enhanced FiberReach/DT feature generally benefits systems equipped to support only TR-303 and INA VRTs. Use TR-08 VRTs with the following restrictions (for more detail, refer to Chapter 3, “System Configurations and Applications, T0 Cross-Connect/Checkerboarding Restrictions”, of 363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide*).

Shelf TR-08 Mode	The customer line terminates on a DT hosted by a DT Server located in MDS slot . . .	Physical line cross-connections are restricted to logical lines in . . .
M1	**1**, **3**, **5**, **7**, **13**, **15**, **17**, or **19**	TR-303 VRTs, TR-08 M1 VRTs, and INA DS1s
M1	**9**, **11**, **21**, or **23**	TR-303 VRTs and INA DS1s
M2	**1**, **3**, **5**, **7**, **13**, **15**, **17**, or **19**	TR-08 M2 assigned to the shelf
M2	**9**, **11**, **21**, or **23**	Not supported

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DLT-CRS-T0 (Continued)

Parameters for R4.5 and R4.6 (continued)

Mnemonic	Address	Range Value	Requirement
F	MDS shelf	1–8	F≤F´
G	RT slot	1–24	G≤G´
H	Circuit on a channel unit	1–4	H≤H´
I	DT Server slot	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, and 23	I≤I´
J	DT slot	1–6	J≤J´
K	ITH link	1–2	K≤K´

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

DLT-CRS-T0 (Continued)

Example

The following DLT-CRS-T0 command deletes eight T0 cross-connections between the TR-303 VRT and physical shelf 1.

```
DLT-CRS-T0::v3dp-1-13&&20,drop-1-4&&5-all;
```

The following DLT-CRS-T0 command deletes all standard T0 cross-connections between TR-08 VRT 6 and physical shelf 6.

```
DLT-CRS-T0::vrtdp-6-all,drop-6-all;
```

The following DLT-CRS-T0 command deletes the first four T0 cross-connections between INA 13 and shelf 7.

```
DLT-CRS-T0::inads0-13-1&&4,drop-7-19-all;
```

The following DLT-CRS-T0 command deletes the T0 cross-connection between the TR-303 VRT and the specified DT physical drop.

```
DLT-CRS-T0::v3dp-1-193,dtdp-3-1-1-1;
```

Response

Confirmation

The DLT-CRS-T0 command requires confirmation. The following confirmation message is displayed when you enter the DLT-CRS-T0 command.

```
/* Caution! Network Cross-connections are affected by this command. */

/* You have selected the dlt-crs-t0 command with these parameters: */
/* Review of Parameter Responses ...  */
         Address 1 = [Access Identifier]
         Address 2 = [Access Identifier]

Execute? (y/n or CANcel/DELete to quit) =
;
```

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DLT-CRS-T0 (Continued)

Response (continued)

The following confirmation message is displayed when you enter the DLT-CRS-T0 command using the parameter *all* as part of the address.

```
/* Caution! Execution of this command may affect service.
   Multiple cross-connections may be affected. */

/* You have selected the dlt-crs-t0 command with these parameters: */
/* Review of Parameter Responses ...  */
         Address 1 = [Access Identifier]
         Address 2 = [Access Identifier]

Execute? (y/n or CANcel/DELete to quit) =
```

Completion

A normal COMPLD response is returned to the user when the cross-connection is deleted.

Error

The DLT-CRS-T0 command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

The DLT-CRS-T0 command is denied and the following message is displayed when the data memory of the DLC subsystem has failed.

```
SSTP
/* Status, SToPped,
   Data memory failed. */
;
```

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DLT-CRS-T0 (Continued)

Response (continued)

The DLT-CRS-T0 command is denied and the following message is displayed when you specify a range and the AIDs in those ranges do not have a one-to-one correspondence.

```
IDNC
/* Input, Data Not Consistent,
   An equal number of cross-connections must be specified in Address1
   and Address 2. For fiber shelves, check provisioned DT bandwidth. */
;
```

The DLT-CRS-T0 command is denied and the following message is displayed when either *Address1* or *Address2* are part of an existing cross-connection but not the *same* cross-connection.

```
SNVS
/* Status, Not in Valid State,
   The specified cross-connection does not exist. */
;
```

The DLT-CRS-T0 finishes and the following message is displayed when this command is entered with several addresses and one or more of these cross-connections do not exist.

```
/* The following cross-connections not processed.
   Cross-connect does not exist, or exists with different address:
   Address1  Address2
   Address1  Address2
      .  .
      .  .
      .  .     */
```

Related commands

The following DLC subsystem commands are related to the DLT-CRS-T0 command.

- ENT-CRS-T0
- INIT-CRS-T0
- RTRV-CRS-T0

DLT-CRS-T1

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the DLT-CRS-T1 command.

DLT-CRS-T1:[tid]:Address1,Address2:[ctag];

Command name

Delete a cross-connection between a physical feeder DS1 and logical VRT feeder or INA DS1.

Can command be aborted?

No.

Purpose

Enter the DLT-CRS-T1 command to delete a cross-connection between a physical feeder DS1 and a VRT logical feeder DS1 or logical INA DS1.

All cross-connections are two-way cross-connections.

DLT-CRS-T1 (Continued)

Parameters for R3.1, R3.2, and R3.3

Use the following parameters with the DLT-CRS-T1 command in R3.1, R3.2, and R3.3 of the *SLC*-2000 Access System.

NOTE:
When *all* address is used as part of an address to cross-connect entire groups of signals, the multiple addresses are mapped into individual addresses directly one to one. Therefore, only addresses where the total number of connections is the same for *Address1* and *Address2* are valid.

Use the following parameters with the DLT-CRS-T1 command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address1

Physical feeder DS1 address. The address of the physical feeder DS1 in the cross-connection. No input is allowed after the parameter *all* is entered in the *Address1* AID string. The following values are valid for this parameter.

- a-{1–7,all}-{1–4,all}

Default — none, you *must* enter a value.

Address2

VRT feeder or logical INA address. The address of the VRT feeder or logical INA in the cross-connection. The following values are valid for this parameter.

- vrtfdr-{1–8}-{a–d}
- ina-{1–28,all}

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

DLT-CRS-T1 (Continued)

Parameters for R4.0

Use the following parameters with the DLT-CRS-T1 command in R4.0 of the *SLC*-2000 Access System.

NOTE:
When *all* or range addresses are used as part of an address to cross-connect entire groups of signals, the multiple addresses are mapped into individual addresses directly one to one. Therefore, only addresses where the total number of connections is the same for *Address1* and *Address2* are valid.

Use the following parameters with the DLT-CRS-T1 command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address1

Physical feeder DS1 address. The address of the physical feeder DS1 in the cross-connection. No input is allowed after the parameter *all* is entered in the *Address1* AID string. The following values (*&&* is a range operator) are valid for this parameter.

- a-{1–7,A&&A´,all}-{1–4,B&&B´,all}

Mnemonic	Address	Range Value	Requirement
A	VTU or LIU plug-in	1–7	A≤A´
B	DS1 on a VTU or LIU plug-in	1–4	B≤B´

Default — none, you *must* enter a value.

(Continued on next page)

DLT-CRS-T1 (Continued)

Parameters for R4.0 (continued)

Address2

VRT feeder or logical INA address. The address of the VRT feeder or logical INA in the cross-connection. The following values (*&&* is a range operator) are valid for this parameter.

- vrtfdr-{1–8,A&&A´}-{a–d,B&&B´}
- v3fdr-1-{1–28,C&&C´,all}
- ina-{1–28,D&&D´,all}

Mnemonic	Address	Range Value	Requirement
A	TR-08 VRT	1–8	A≤A´
B	TR-08 feeder DS1	a–d	B≤B´
C	TR-303 feeder DS1	1–28	C≤C´
D	INA DS1	1–28	D≤D´

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

DLT-CRS-T1 (Continued)

Parameters for R4.2, R4.4, R4.5, and R4.6

Use the following parameters with the DLT-CRS-T1 command in R4.2, R4.4, R4.5, and R4.6 of the *SLC*-2000 Access System.

NOTE:
When *all* or range addresses are used as part of an address to cross-connect entire groups of signals, the multiple addresses are mapped into individual addresses directly one to one. Therefore, only addresses where the total number of connections is the same for *Address1* and *Address2* are valid.

Use the following parameters with the DLT-CRS-T1 command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address1

Physical feeder DS1 address. The address of the physical feeder DS1 in the cross-connection. No input is allowed after the parameter *all* is entered in the *Address1* AID string. The following values (*&&* is a range operator) are valid for this parameter.

- a-{1–7,A&&A´,all}-{1–4,B&&B´,all}

Mnemonic	Address	Range Value	Requirement
A	VTU or LIU plug-in	1–7	A≤A´
B	DS1 on a VTU or LIU plug-in	1–4	B≤B´

Default — none, you *must* enter a value.

(Continued on next page)

DLT-CRS-T1 (Continued)

Parameters for R4.2, R4.4, R4.5, and R4.6 (continued)

Address2

VRT feeder or logical INA address. The address of the VRT feeder or logical INA in the cross-connection. The following values (*&&* is a range operator) are valid for this parameter.

- vrtfdr-{1–8,A&&A´}-{a–d,B&&B´}
- v3fdr-{1–2,E&&E´}-{1–28,C&&C´,all}
- ina-{1–28,D&&D´,all}

Mnemonic	Address	Range Value	Requirement
A	TR-08 VRT	1–8	A≤A´
B	TR-08 feeder DS1	a–d	B≤B´
C	TR-303 feeder DS1	1–28	C≤C´
D	INA DS1	1–28	D≤D´
E	TR-303 VRT	1–2	E≤E´

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

DLT-CRS-T1 (Continued)

Example

The following DLT-CRS-T1 command deletes the eight T1 cross-connections between physical feeders 1 and 2, and the TR-303 VRT.

```
DLT-CRS-T1::a-1&&2-all,v3fdr-1-1&&8;
```

The following DLT-CRS-T1 command deletes the four T1 cross-connections between physical feeder 3 and TR-08 VRT 3.

```
DLT-CRS-T1::a-3-all;vrtfdr-3-a;
```

The following DLT-CRS-T1 command deletes the T1 cross-connections between physical feeder 7 and INAs 27 and 28.

```
DLT-CRS-T1::a-7-3&&4,ina-27&&28;
```

Response

Confirmation

The DLT-CRS-T1 command requires confirmation. The following confirmation message is displayed when you enter the DLT-CRS-T1 command.

```
/* Caution! Network Cross-connections are affected by this command. */

/* You have selected the dlt-crs-t1 command with these parameters: */
/* Review of Parameter Responses ...  */
         Address 1 = [Access Identifier]
         Address 2 = [Access Identifier]

Execute? (y/n or CANcel/DELete to quit) =
;
```

(Continued on next page)

DLT-CRS-T1 (Continued)

Response (continued)

The following confirmation message is displayed when you enter the DLT-CRS-T1 command using a range of AIDs or if *all* is part of the address.

```
/* Caution! Network Cross-connections are affected by this command.
   Multiple cross-connections may be affected.*/

/* You have selected the dlt-crs-t1 command with these parameters: */
/* Review of Parameter Responses ...  */
         Address 1 = [Access Identifier]
         Address 2 = [Access Identifier]

Execute? (y/n or CANcel/DELete to quit) =
```

Completion

The following completion message is displayed when you enter the DLT-CRS-T1 command with several addresses and one or more of the specified cross-connections does not exist.

```
/* The following cross-connections not processed.
   Cross-connect does not exist, or exists with different address:
   Address1  Address2
   Address1  Address2
      .  .
      .  .
      .  .     */
```

Error

The DLT-CRS-T1 command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

(Continued on next page)

DLT-CRS-T1 (Continued)

Response (continued)

The DLT-CRS-T1 command is denied and the following message is displayed when the NVDS has failed.

```
SSTP
/* Status, SToPped,
   Data memory failed. */
;
```

The following error message is displayed when you enter the DLT-CRS-T1 command with two AID ranges and the AIDs in those ranges do not have a one-to-one correspondence.

```
IDNC
/* Input, Data Not Consistent,
   An equal number of cross-connections must be specified in Address1
   and Address 2. */
;
```

The DLT-CRS-T1 command is denied and the following message is displayed when you enter the command and the system has not completely initialized.

```
SNVS
/* Status, Not in Valid State,
   System initialization in-progress, try again later. */
;
```

The DLT-CRS-T1 command is denied and the following message is displayed when either *Address1* or *Address2* are part of an existing cross-connection, but not the *same* cross-connection.

```
SNVS
/* Status, Not in Valid State,
   The specified cross-connection does not exist. */
;
```

DLT-CRS-T1 (Continued)

Related commands

The following DLC subsystem commands are related to the DLT-CRS-T1 command.

- ENT-CRS-T1
- INIT-CRS-T1
- RTRV-CRS-T1

DLT-T0

Software release compatibility

Use this command in R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the DLT-T0 command.

DLT-T0:[tid]:[aid]:[ctag];

Command name

Delete T0.

Can command be aborted?

No.

Purpose

NOTE:
The DLT-T0 command can delete up to five objects. However, there is one T0 entity for each ISDN CU physical port. In R4.5 and later software releases, you must use the DLT-T0 command two times for the AUA94 and AUA94B, and four times for the *SPQ*494 CUs.

Enter the DLT-T0 command to return the provisioning information for a physical line to the default settings. When a valid DLT-T0 command with a valid aid value is received, the system sets the primary service state to OOS-MA-UAS, and all other parameters are not available to you (the user).

DLT-T0 (Continued)

Parameters for R3.1, R3.2, R3.3, R4.0, R4.2, and R4.4

Use the following parameters with the DLT-T0 command in R3.1, R3.2, R3.3, R4.0, R4.2, and R4.4 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Access identifier (AID). The address of the physical line for which the provisioned values are to be cleared. The following values are valid for this parameter.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}-{1–4}

Default (on the user interface) is the single physical line AID used in the most recent execution of a DLC subsystem command (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, RTRV-T0, ENT-T0, and ED-T0) during the current login session of the user. When no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

DLT-T0 (Continued)

Parameters for R4.5 and R4.6

Use the following parameters with the DLT-T0 command in R4.5 and R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Access identifier (AID). The address of the physical line for which the provisioned values are to be cleared. The following values are valid for this parameter.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}-{1–6}-{1–4}

Default (on the user interface) is the single physical line AID used in the most recent execution of a DLC subsystem command (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, RTRV-T0, ENT-T0, and ED-T0) during the current login session of the user. When no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

Example

The following DLT-T0 command deletes the physical line at drop-2-3-1.

```
DLT-T0::drop-2-3-1;
```

The following DLT-T0 command deletes the physical line at the default AID set by the most recent execution of a DLC subsystem command (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, RTRV-T0, ENT-T0, and ED-T0) during the current login session of the user.

```
DLT-T0;
```

DLT-T0 (Continued)

Response

Confirmation

The DLT-T0 command requires confirmation. The following confirmation message is displayed when you enter the DLT-T0 command and attempt to alter the provisioning of a line.

```
/* Caution!  Execution of this command may affect service. */

/* You have selected the dlt-t0 command with these parameters: */
/* Review of Parameter Responses ...  */
        Address = [Access Identifier]

Execute? (y/n or CANcel/DELete to quit) =
;
```

Completion

The completion of the DLT-T0 command is recorded in the history log.

Error

The DLT-T0 command is denied and the following message is displayed when the data memory of the DLC subsystem has failed.

```
SSTP
/* Status, SToPped,
   Data memory failed. */
;
```

The DLT-T0 command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

The DLT-T0 command is denied and the following message is displayed when trying to delete an ISDN line that has existing D-channel XCONS (R4.5 and later software releases).

```
SNVS
/* Status, Not in Valid State,
   Cannot delete an ISDN line that has existing D channel XCONS. */
;
```

(Continued on next page)

DLT-T0 (Continued)

Response (continued)

The following error message is displayed when you attempt to delete a fiber drop AID (dtdp) within a distribution shelf that is not provisioned for FITL distribution.

```
/* Invalid Address */
/* The distribution shelf for AID is not provisioned for
   fiber distribution. */

/* Enter a drop address:
    drop-{1-8}-{1-24}-{1-4},
    dtdp-{1-8}-{1,3,5,7,9,11,13,15,17,19,21,23}-{1-6}-{1-4} */

   Address =
```

The following error message is displayed when you attempt to delete a metallic drop AID within a distribution shelf that is provisioned for FITL distribution.

```
/* Invalid Address */
/* The distribution shelf for AID is not provisioned for
   metallic distribution. */

/* Enter a drop address:
    drop-{1-8}-{1-24}-{1-4},
    dtdp-{1-8}-{1,3,5,7,9,11,13,15,17,19,21,23}-{1-6}-{1-4} */

   Address =
```

The following error message is displayed when you attempt to delete a fiber drop AID (dtdp) with a channel number greater than the number of DS0s for which the supporting DT Server is provisioned. (For example, attempt to DLT-T0::dtdp-1-3-4-1 when dt-1-3 is provisioned to serve 12 lines.)

```
/* Invalid Address */
/* The DT server for AID is currently provisioned for
   a maximum of n lines. */

/* Enter a drop address:
    drop-{1-8}-{1-24}-{1-4},
    dtdp-{1-8}-{1,3,5,7,9,11,13,15,17,19,21,23}-{1-6}-{1-4} */

   Address =
```

Related commands

The following DLC subsystem commands are related to the DLT-T0 command.

- CPY-T0
- ENT-T0
- ED-T0
- RTRV-T0.

ED-DAT

Software release compatibility

Use this command in R3.2 *SLC*-2000 Access Systems.

NOTE:
Use the SONET subsystem command, set-date to edit the date and time in R3.3, R4.0, R4.2, R4.4, R4.5, or R4.6.

Format

Use the following format to input the ED-DAT command.

ED-DAT:[tid]::[ctag]::date[,time];

Command name

Edit date and time.

Can command be aborted?

No.

Purpose

Enter the ED-DAT command to initiate a request for the network element to change its system date and time to a given value.

Parameters

tid

Target identifier. The name of the network element to which the command is addressed.

Default value for this parameter is null on the user interface.

ctag

Correlation tag. Default value for this parameter is null on the user interface.

(Continued on next page)

ED-DAT (Continued)

Parameters (continued)

date

Requested date. The requested *date* using the format YY-MM-DD, where YY is the last two digits of the year ranging from 00 to 99; MM is the month of the year ranging from 01 to 12; and DD is the day of the month ranging from 01 to 31.

Original value for date (at installation) is 70-01-01 (YY-MM-DD).

time

Requested time. The requested *time* using the format HH-MM-SS, where HH is the hour in a 24-hour format ranging from 00 to 23; MM is the minute ranging from 00 to 59; and SS is the second ranging from 00 to 59.

Original value for time (at installation) is 00:00:00 (HH:MM:SS). Default value is the current time.

Response

Confirmation

The following confirmation message is displayed for the ED-DAT command.

```
/* Caution!  Execution of this command will corrupt the
   current quarterhour and current day performance monitoring data.
   You have selected the ed-dat command with these parameters:

   Date = YY-MM-DD
   Time = HH-MM-SS

Execute? (y/n or CANcel/DELete to quit) =
;
```

Completion

The system calendar and clock are set to these values immediately when this command is executed, and these values are displayed in the completion message (COMPLD).

If this message is successful, the *date* in the response header should equal the input *date*, and the *time* should equal the input time plus the time (seconds) required to send the response message.

Related commands

The following SONET subsystem command is related to the ED-DAT command.

- set-date (SONET subsystem).

ED-DISTN

Software release compatibility

Use this command in R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the ED-DISTN command.

ED-DISTN:[tid]:aid:[ctag]:::[dmode=DistributionMode];

Command name

Edit distribution type for a shelf.

Can command be aborted?

No.

Purpose

NOTE:
The ED-DISTN command is similar to the UIP command, SET-DISTN. However, this command differs from the UIP command, SET-DISTN — the ED-DISTN command will complete even if MDCs are present in the shelf.

Enter the ED-DISTN command to provision the distribution mode for a metallic distribution shelf as metallic or Fiber-in-the-Loop (FITL).

Parameters

Use the following parameters with the ED-DISTN command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Access identifier (AID). The address of the metallic distribution shelf for which the ED-DISTN command is intended. The *aid* is a required parameter. Valid values for the *aid* parameter are shelf-{1–8}.

(Continued on next page)

ED-DISTN (Continued)

Parameters (continued)

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

DistributionMode

Distribution mode. Valid values are {MET,FITL}.

- MET — METallic. The shelf only supports metallic loop terminations (channel units).
- FITL — Fiber-in-the-Loop. The shelf only supports DT Servers.

Original value is *MET*. Default value presented to the user is the current value.

Example

The following ED-DISTN command changes the distribution mode of the shelf to FITL.

```
ED-DISTN::shelf-2::::dmode=fitl;
```

Response

Confirmation

The ED-DISTN command requires confirmation. The following confirmation message is displayed when you enter the ED-DISTN and request the mode to be changed.

```
/* Caution! Execution of this command may affect service.
   Provisioning data for the lines served through the specified
   shelf will be erased. */

/* You have selected the ed-distn command with these parameters: */
/* Review of Parameter Responses ...  */
        Address = [Access Identifier]
        DistributionMode = [Distribution mode]

Execute? (y/n or CANcel/DELete to quit) =
;
```

(Continued on next page)

ED-DISTN (Continued)

Response (continued)

Error

The ED-DISTN command is denied and the following message is displayed when the DLC subsystem has failed.

```
SSTP
/* Status, SToPped,
   Data memory failed. */
;
```

The ED-DISTN command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

The ED-DISTN command is denied and the following message is displayed when any of the physical lines in the specified shelf are cross-connected.

```
SNVS
/* Status, Not in Valid State,
   A cross-connection exists for one or more physical lines served
   through the specified shelf. */
;
```

ED-DT

Software release compatibility

Use this command in R3.1, R3.2, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

NOTE:
The term DT (R4.4 and later software releases) refers to both the multi-services distant terminal (MSDT) and narrowband shelf (NBS).

Format

Use the following format to input the ED-DT command in R3.1, R3.2, R4.0, and R4.2.

ED-DT:[tid]:[Address]:[ctag]:::[LINES=Lines];

Use the following format to input the ED-DT command in R4.4, R4.5, and R4.6.

ED-DT:[tid]:[Address]:[ctag]::[dttype]:[LINES=Lines],[dtm=dtmode];

Command name

Edit distant terminal.

Can command be aborted?

No.

ED-DT (Continued)

Purpose

CAUTION:
Changing the DT line size or DT mode can be service affecting.

NOTE:
A maximum of 24 lines can be allocated among DT Server pairs.
For R4.4 and earlier software releases, the DT Server pairs are 1–3, 5–7, 13–15, and 17–19. For R4.5 and later software releases, the DT Server pairs are 1–3, 5–7, 9–11, 13–15, 17–19, and 21–23. Based on the current provisioning and the DT timeslot provisioning restrictions, a maximum of *x* lines may be provisioned for dt-*m*-*n*.

Enter the ED-DT command to provision the maximum number of subscriber lines that a *SLC*-2000 DT can serve.

The *SLC*-2000 DT interfaces to the *SLC*-2000 Access System using a DT Server [for example, *SPQ*808, *SPQ*809, *SPQ*810, or *SPQ*811 DT Servers]. In Software Release 4.4 and later software releases, the DLC subsystem command, ED-DT changes the maximum number of subscriber lines for a *SLC*-2000 DT Server serving a DT, the type of DT, and the mode of the NBS. The following table lists the DT Servers and appropriate software release applications.

SLC®-2000 Software Release	DT Server			
	SPQ®808	*SPQ* 809	*SPQ*810	*SPQ*811
R3.1	msdt	msdt	NA	NA
R3.2	msdt	msdt	NA	NA
R4.0	NA	msdt	NA	NA
R4.2	NA	msdt	NA	NA
R4.4	NA	msdt	nbs	nbs
R4.5	NA	msdt	msdt, nbs	msdt, nbs
R4.6	NA	msdt	msdt, nbs	msdt, nbs

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ED-DT (Continued)

Purpose (continued)

The DT Servers are installed in channel unit slots in an MDS assembly configured for Fiber-in-the-Loop (FITL). [For example, to configure an MDS channel shelf for FITL, see the UIP command, SET-DISTN (set distribution).] When the UIP command SET-DISTN is executed, the system configures the channel shelf for four DTs served by DT Servers installed in channel unit (CU) slots (1, 3, 5, 7, 13, 15, 17, or 19).

Placement of DT Servers in the metallic distribution shelf is restricted. The following requirements are valid CU slot identifiers for R4.4 and earlier software releases.

- 1, 3, 5, 7, 13, 15, 17, and 19 for 12-line DTs.
- 1, 5, 13, and 17 for 24-line DTs.

The following requirements are valid CU slot identifiers for R4.5 and R4.6.

- 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, and 23 for 12-line DTs.
- 1, 5, 9, 13, 17, and 21 for 24-line DTs.

In R4.4 and later software releases, the system configures the channel shelf for four DTs served by DT Servers installed in CU slots (1, 5, 13, and 17) with the type of DT set to msdt, the number lines set to 24 (LINES=24), and the mode of the DT set to quad (dtm=quad). The default system configuration is a MSDT in quad mode with 24 lines (msdt, LINES=24, and dtm=quad).

The *default* system configuration is for 24-line DTs. Use the ED-DT command to *change* the default configuration, when the 12-line DTs are being installed.

NOTE:
Use the DLC subsystem command, RTRV-DT, to retrieve the current DT line size settings. However, for R4.4 and later software releases use the DLC subsystem command RTRV-NBS to retrieve the DT mode (dtm) and provisioning information for the NBS.

NOTE:
The ED-DT command will be denied if an invalid value is entered for either of the access identifier (AID) parameters, or if the resulting assignment would be in conflict with an existing assignment to another DT. Refer to "Channel Unit Installation: Introduction-000", 363-208-001, *SLC-2000 Access System, User/Service Manual*, for DT Server installation rules.

ED-DT (Continued)

Parameters for R3.1, R3.2, and R4.0

Use the following parameters with the ED-DT command in R3.1, R3.2, and R4.0 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

DT Server AID. The DT Server AID is derived from the channel unit slot of the DT Server. The following format is valid for the DT Server AID.

- dt-{1–8}-{N}

NOTE:
Note that {1–8} identifies the MDS channel shelf number and *N* is the CU slot number (shown on the designation strip of the metallic distribution shelf) for the channel unit slot used by the DT Server (slot identifier).

Placement of DT Servers in the metallic distribution shelf is restricted. The following values are valid slot identifiers.

- 1, 3, 5, 7, 13, 15, 17, and 19 for 12-line DTs.
- 1, 5, 13, and 17 for 24-line DTs.

Default is the DT Server AID used in the most recent DLC subsystem command (CPY-DT, ED-DT, or RTRV-DT) during the current user session. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

LINES

Number of lines. Designates the number of subscriber lines that can be turned up on the DT served by the DT Server identified by the AID.

Valid values are {0, 12, 24}. The value *0* effectively disconnects all lines at the DT. The value *12* enables the first 12 channels in a DT — they are terminated in the first three quad-CU slots of the DT. (The remainder of the CU slots in the DT will not have service.) The value *24* enables all 24 channels in the DT. All six quad-CU slots in the DT can have service.

Original value is 12. Default — (presented to the user) is the last value entered.

ED-DT (Continued)

Parameters for R4.2

Use the following parameters with the ED-DT command in R4.2 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

DT Server AID. The DT Server AID is derived from the channel unit slot of the DT Server. The following format is valid for the DT Server AID.

- dt-{1–8}-{N}

NOTE:
Note that {1–8} identifies the MDS channel shelf number and *N* is the CU slot number (shown on the designation strip of the metallic distribution shelf) for the channel unit slot used by the DT Server (slot identifier).

Placement of DT Servers in the metallic distribution shelf is restricted. The following values are valid slot identifiers.

- 1, 3, 5, 7, 13, 15, 17, and 19 for 12-line DTs.
- 1, 5, 13, and 17 for 24-line DTs.

Default is the DT Server AID used in the most recent DLC subsystem command (CPY-DT, ED-DT, or RTRV-DT) during the current user session. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

LINES

Number of lines. Designates the number of subscriber lines that can be turned up on the DT served by the DT Server identified by the AID.

Valid values are {0, 12, 24}. The value *0* effectively disconnects all lines at the DT. The value *12* enables the first 12 channels in a DT — they are terminated in the first three quad-CU slots of the DT. (The remainder of the CU slots in the DT will not have service.) The value *24* enables all 24 channels in the DT. All six quad-CU slots in the DT can have service.

Original value is 12. Default — (presented to the user) is the last value entered.

ED-DT (Continued)

Parameters for R4.4

Use the following parameters with the ED-DT command in R4.4 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

DT Server AID. The DT Server AID is derived from the channel unit slot of the DT Server. The following format is valid for the DT Server AID.

- dt-{1–8}-{N}

NOTE:
Note that {1–8} identifies the MDS channel shelf number and *N* is the CU slot number (shown on the designation strip of the metallic distribution shelf) for the channel unit slot used by the DT Server (slot identifier).

Placement of DT Servers in the metallic distribution shelf is restricted. DT Server pairs (1–3, 5–7, 13–15, and 17–19) share 24 channels (digroup). The following values are valid slot identifiers.

- 1, 3, 5, 7, 13, 15, 17, and 19 for 12-line DTs.
- 1, 5, 13, and 17 for 24-line DTs.

Default is the DT Server AID used in the most recent DLC subsystem command (CPY-DT, ED-DT, RTRV-DT, or RTRV-NBS) during the current user session. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

dttype

Type of DT. When the DT type is set to msdt and the DT Server is the *SPQ*810, *or* the DT type is set to nbs and the DT Server is the *SPQ*809, the system responds with an incompatible alarm (CU INCOMP). Use the DLC subsystem command, ED-DT to match the type of DT with the DT Server. Use the DLC subsystem commands, RTRV-DT or RTRV-NBS to retrieve the NBS DT mode and lines provisioning.

Valid values are {msdt,nbs}.

(Continued on next page)

ED-DT (Continued)

Parameters for R4.4 (continued)

LINES

NOTE:
The LINES value of 12 is not allowed when the DT type is nbs *and* the DT mode is octet.

Number of lines. Designates the number of subscriber lines that can be turned up on the DT served by the DT Server identified by the AID.

Valid values are {0, 12, 24}.

- The value *0* effectively disconnects all lines at the DT.
- The value *12* enables the first 12 channels in a DT — they are terminated in the first three quad-CU slots of the DT. The remainder of the CU slots in the DT will not have service.
- The value *24* enables all 24 channels in the DT — all six quad-CU slots in the DT can have service.

The menu for LINES is dynamic. The system presents only valid values. The set of valid values is based on the current provisioning of a DT. DT Server pairs (1–3, 5–7, 13–15, and 17–19) share 24 channels (digroup).

Default value is the current value.

dtm

NOTE:
When the DT type parameter is set to msdt, the only valid DT mode is quad. When the LINE parameter is set to 12, the only valid DT mode is quad.

Mode for the DT. The dtm parameter designates the mode at the DT.

Valid values when DT type equals nbs are {quad, octet}.

Valid value when DT type equals msdt is {quad}.

The menu for dtm is dynamic. The system presents only *valid* values based on the LINES parameter. Quad and octet modes are presented for 0 or 24 lines. However, only the quad mode is presented for 12 lines.

ED-DT (Continued)

Parameters for R4.5 and R4.6

Use the following parameters with the ED-DT command in R4.5 and R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

DT Server AID. The DT Server AID is derived from the channel unit slot of the DT Server. The following format is valid for the DT Server AID.

NOTE:
Note that {1–8} identifies the MDS channel shelf number and *N* is the CU slot number (shown on the designation strip of the metallic distribution shelf) for the channel unit slot used by the DT Server (slot identifier).

- dt-{1–8}-{N}

Placement of DT Servers in the metallic distribution shelf is restricted. DT Server pairs (1–3, 5–7, 9–11, 13–15, 17–19, and 21–23) share 24 channels (digroup). The following values are valid slot identifiers.

NOTE:
Only DT Server *SPQ*811 will function in slot positions 11 and 23.

- 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, and 23 for 12-line DTs.
- 1, 5, 9, 13, 17, and 21 for 24-line DTs.

Default is the DT Server AID used in the most recent DLC subsystem command (CPY-DT, ED-DT, RTRV-DT, or RTRV-NBS) during the current user session. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

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ED-DT (Continued)

Parameters for R4.5 and R4.6 (continued)

dttype

Type of DT. When the the DT type is set to nbs and the DT Server is the *SPQ*809, the system responds with an incompatible alarm (CU INCOMP). Use the DLC subsystem command, ED-DT to match the type of DT with the DT Server. Use the DLC subsystem commands, RTRV-DT or RTRV-NBS to retrieve the NBS DT mode and lines provisioning.

Valid values are {msdt,nbs}.

LINES

NOTE:
The LINES value of 12 is not allowed when the DT type is nbs *and* the DT mode is octet.

Number of lines. Designates the number of subscriber lines that can be turned up on the DT served by the DT Server identified by the AID.

Valid values are {0, 12, 24}.

- The value *0* effectively disconnects all lines at the DT.
- The value *12* enables the first 12 channels in a DT — they are terminated in the first three quad-CU slots of the DT. The remainder of the CU slots in the DT will not have service.
- The value *24* enables all 24 channels in the DT — all six quad-CU slots in the DT can have service.

The menu for LINES is dynamic. The system presents only valid values. The set of valid values is based on the current provisioning of a DT. DT Server pairs (1–3, 5–7, 9–11, 13–15, 17–19, and 21–23) share 24 channels (digroup).

Default value is the current value.

(Continued on next page)

ED-DT (Continued)

Parameters for R4.5 and R4.6 (continued)

dtm

NOTE:
When the DT type parameter is set to msdt, the only valid DT mode is quad. When the LINE parameter is set to 12, the only valid DT mode is quad.

Mode for the DT. The dtm parameter designates the mode at the DT.

Valid values when DT type equals nbs are {quad, octet}.

Valid value when DT type equals msdt is {quad}.

The menu for dtm is dynamic. The system presents only *valid* values based on the LINES parameter. Quad and octet modes are presented for 0 or 24 lines. However, only the quad mode is presented for 12 lines.

Example

The following ED-DT command changes the specified DT line size to 12 lines.

```
ED-DT::dt-2-1::::lines=12;
```

The following ED-DT (R4.4 and later software releases) command changes the specified DT line size to 12 lines.

```
ED-DT::dt-2-1:::nbs:lines=12,dtm=quad;
```

The following ED-DT (R4.4 and later software releases) commands provision a preferred arrangement for the NBS. This arrangement specifies NBSQ-A in quad mode with 12 lines and NBSQ-B in quad mode with 24 lines.

```
ED-DT::dt-1-3:::nbs:lines=12,dtm=quad;
ED-DT::dt-1-5:::nbs:lines=24,dtm=quad;
```

The following ED-DT (R4.4 and later software releases) commands provision another preferred arrangement for the NBS. This arrangement specifies NBSQ-A in quad mode with 24 lines, NBSQ-B in octet mode with 24 lines, and NBSQ-D in octet mode with 24 lines.

```
ED-DT::dt-1-1:::nbs:lines=24,dtm=quad;
ED-DT::dt-1-5:::nbs:lines=24,dtm=octet;
ED-DT::dt-2-13:::nbs:lines=24,dtm=octet;
```

ED-DT (Continued)

Example (continued)

The following ED-DT (R4.4 and later software releases) commands provision another preferred arrangement for the NBS. This arrangement specifies NBSQ-A in octet mode with 24 lines, NBSQ-C in octet mode with 24 lines, and NBSQ-B in quad mode with 24 lines.

```
ED-DT::dt-1-5:::nbs:lines=24,dtm=octet;
ED-DT::dt-2-13:::nbs:lines=24,dtm=octet;
ED-DT::dt-1-1:::nbs:lines=24,dtm=quad;
```

The following ED-DT (R4.4 and later software releases) commands provision another preferred arrangement for the NBS. This arrangement specifies NBSQ-A in octet mode with 24 lines, NBSQ-C in octet mode with 24 lines, NBSQ-B in quad mode with 24 lines, and NBSQ-D in octet mode with 24 lines.

```
ED-DT::dt-1-5:::nbs:lines=24,dtm=octet;
ED-DT::dt-2-13:::nbs:lines=24,dtm=octet;
ED-DT::dt-3-7:::nbs:lines=24,dtm=octet;
ED-DT::dt-2-1:::nbs:lines=24,dtm=octet;
```

Response

Confirmation

The ED-DT command requires confirmation. The following confirmation message is displayed when you enter the ED-DT command.

```
/* Caution! Execution of this command may affect service. */

/* You have selected the ed-dt command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = Access Identifier
         Lines = Number of lines

Execute? (y/n or CANcel/DELete to quit) =
;
```

The ED-DT command requires confirmation. The following confirmation message is displayed in R4.4 and later software releases when you enter the ED-DT command.

```
/* Caution! Execution of this command may affect service. */

/* You have selected the ed-dt command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = Access Identifier
         dttype = Type of DT
         Lines = Number of lines
         dtm = Mode of DT  */

Execute? (y/n or CANcel/DELete to quit) =
;
```

(Continued on next page)

ED-DT (Continued)

Response (continued)

Error

The following error message is displayed when you enter the ED-DT command with the AID of a CU slot that is not part of a valid configuration.

```
/* Invalid Address */
/* Address is not a valid slot for a DT server.
   Enter a dt address: dt-{1-8}-{1,3,5,7,9,11,13,15,17,19,21,23) */
;
```

The system prompts the user for a new AID — press the ESC key to abort the dialog.

The ED-DT command is denied and the following error message is displayed when bandwidth assignment parameters conflict with existing assignments to another DT Server.

```
IDNV
/* Input, Data Not Valid,
   Timeslot assignment conflict for DT served via Address
   (Maximum available for Address is xx timeslots) */
;
```

The following error message is displayed when you attempt to reduce the number of lines assigned for a DT and cross-connections exist for one or more of those lines.

```
SNVS
/* Status, Not in Valid State,
   Cross-connections exist for the lines which are being assigned. */
;
```

Related commands

The following DLC subsystem commands are related to the ED-DT command.

- CPY-DT
- RTRV-DT
- RTRV-NBS.

ED-FDR

Software release compatibility

Use this command in R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the ED-FDR command.

ED-FDR:[tid]:[aid]:[ctag]::[type];

Command name

Edit the feeder configuration.

Can command be aborted?

No.

Purpose

Enter the ED-FDR command to set the feeder configuration for either SONET [virtual tributary unit (VTU)] or DS1 [line interface unit (LIU)].

Synchronization mode for different configurations

The following table shows how the synchronization mode for the different feeder configurations correspond. When the feeder configuration is changed from VTU to LIU, or LIU to VTU, the system reprovisions the synchronization mode to the corresponding mode. See the DLC subsystem command, SET-SYNCN for further information.

SYNCNMODE

VTU Configuration	LIU Configuration
COMPCLK*	COMPCLK FRNG
SONET	LPD

* When converting a system from an LIU configuration to a VTU configuration, if the timing mode is set for FRNG, the timing mode is reprovisioned for SONET timing. When converting a system from a VTU configuration to an LIU configuration, the timing mode is not reprovisioned for FRNG.

ED-FDR (Continued)

Parameters

Use the following parameters with the ED-FDR command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Access identifier. The only valid value is null. Default value — null on the user interface.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

type

Type of unit. Indicates the type of unit to be plugged into the feeder complex (VTU/LIU slots). The *type* implies the configuration of the system for SONET or metallic DS1.

Valid values are {VTU, LIU}.

- VTU. The system is configured for SONET feeder. VTUs are expected in the VTU/LIU slots. The presence of LIUs in VTU/LIU slots will initiate an alarm.
- LIU. The system is configured for metallic DS1 feeder, with an integral SONET subsystem. LIUs are expected in the VTU/LIU slots. The system controller (SYSCTL) and overhead controller (OHCTL) are required. Presence of VTUs in VTU/LIU slots will initiate an alarm.

Default — the current value. Original value is VTU.

NOTE:
Do not confuse the LIU configuration with the *Metallic DS1 feeder using SONET subsystem* in which the feeder DS1 signals are looped through the SONET subsystem – select *VTU* for this configuration.

ED-FDR (Continued)

Example

The following ED-FDR command sets the DLC feeder configuration to VTU.

```
ED-FDR::::vtu;
```

Response

Confirmation

The following confirmation message is displayed after the ED-FDR command is entered.

```
/* Caution! The Network Element feeder interface and synchronization
   is affected by this command. */

/* You have selected the ed-fdr command with this parameter: */
        Type=value

Execute? (y/n or CANcel/DELete to quit) =
;
```

Error

The ED-FDR command is denied and the following message is displayed when the data memory has failed.

```
SSTP
/* Status, SToPped,
   Data memory failed. */
;
```

The ED-FDR command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

Related command

The following DLC subsystem command is related to the ED-FDR command.

- RTRV-FDR

ED-INA

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the ED-INA command.

ED-INA:[tid]:aid:[ctag]:::[FMT=FramingFormat];

Command name

Enter attributes for INA DS1s.

Can command be aborted?

No.

Purpose

Enter the ED-INA command to provision the INA DS1 framing format. The framing format is only provisionable for INA DS1s in a *SLC*-2000 Access System.

The ED-INA command can be used to change the framing format of an INA DS1 even if the INA DS1 is not cross-connected to a physical DS1. However, this command only affects the framing format of a physical DS1 if the INA DS1 is cross-connected to it.

Parameters

Use the following parameters with the ED-INA command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

INA DS1 AID. The address of the INA DS1 for which the ED-INA command is intended. The aid is a required parameter and must reference the valid INA DS1s of the system in order to be accepted. Valid values are ina-{1–28}.

(Continued on next page)

ED-INA (Continued)

Parameters (continued)

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

FMT

Framing format. Specifies the framing format of the INA DS1.

Valid values are {SF, ESF}.

- SF — SuperFrame, also known as the D4 framing format
- ESF — Extended SuperFrame.

Original value is SF. Default value is the last value entered.

Example

The following ED-INA command sets the DS1 framing format of INA-8 to SF.

```
ED-INA::ina-8::::fmt=sf;
```

Response

Confirmation

The ED-INA command requires confirmation. The following confirmation message is displayed when you enter the ED-INA command.

```
/* Caution! Execution of this command will affect service. */

/* You have selected the ed-ina command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = [Access Identifier]
         FramingFormat = [Framing format]

Execute? (y/n or CANcel/DELete to quit) =
;
```

(Continued on next page)

ED-INA (Continued)

Response (continued)

Error

The ED-INA command is denied and the following message is displayed when the data memory of the DLC subsystem has failed.

```
SSTP
/* Status, SToPped,
   Data memory failed. */
;
```

The ED-INA command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

Related command

The following DLC subsystem command is related to the ED-INA command.

- RTRV-INA.

ED-MODE-T8U

Software release compatibility

Use this command in R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the ED-MODE-T8U command.

ED-MODE-T8U:[tid]:aid:[ctag]:::[MODE=T8UMode];

Command name

Provision the T8U mode for a single or range of shelves.

Can command be aborted?

No.

Purpose

CAUTION:
Execution of the ED-MODE-T8U command will cause the MDC associated with the T8U circuit pack to go through a pack initialization. This will cause an interruption of transmission to the lines serviced by the MDC.

Enter the ED-MODE-T8U command to provision the T8U mode of one or a range of shelves. When enabled, all pulse-code modulation (PCM) transmission is forwarded to the T8U plug-in. When disabled, PCM is routed directly to the TSI.

The T8U circuit packs are required in each MDS shelf assembly that is configured as a TR-08 Mode 1 or Mode 2. The T8U circuit packs, however, are optional in the MDS shelf assemblies that are DS0 cross-connected to the TR-303 VRT, with no TR-08 lines cross-connected into that VRT. An alarm condition will be raised if the *t8umode* parameter is set to enabled (Y) and the T8Us are absent.

Parameters

Use the following parameters with the ED-MODE-T8U command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

(Continued on next page)

ED-MODE-T8U (Continued)

Parameters (continued)

aid

Access identifier. The address of the intended shelf or shelves. The following values are valid for the AID parameter.

- shelf-{1–8,A&&A´,all}.

&& is the range operator and *A* is a shelf, in the range 1–8 (A≤A´). *shelf* is a physical channel unit shelf which may house two T8U plug-ins.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

MODE

T8U Mode. Determines if routing of the PCM to the T8U plug-in is enabled.

Valid values are {Y, N}.

- Y — T8U is enabled. PCM for the requested shelf/shelves is routed to the T8U.
- N — T8U is disabled. PCM for the requested shelf/shelves is routed directly to the time slot interchanger (TSI).

Default — none, you *must* enter a value.

Example

The following ED-MODE-T8U command provisions shelf-4 to disable the T8U mode.

```
ED-MODE-T8U::shelf-4::::t8umode=n;
```

ED-MODE-T8U (Continued)

Response

Confirmation

The ED-MODE-T8U command requires confirmation. The following confirmation message is displayed when you enter the ED-MODE-T8U command.

```
/* Caution! Execution of this command may affect service.
   This command affects the routing of PCM with the system.  Transmission
   will be affected and lines serviced by the requested shelf/shelves
   will experience temporary interruption of service. */

/* You have selected the ed-mode-t8u command with these parameters: */
/* Review of Parameter Responses ...  */
        Address = [Access Identifier]
        Enable T8U Mode = [YES/NO]

Execute? (y/n or CANcel/DELete to quit) =
;
```

Error

An error and help message (which includes a list of valid AIDs) is displayed when you enter an invalid AID.

The ED-MODE-T8U command is denied and the following message is displayed when the data memory has failed.

```
SSTP
/* Status, SToPped,
   Data memory failed. */
;
```

The ED-MODE-T8U command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

(Continued on next page)

ED-MODE-T8U (Continued)

Response (continued)

The following error message is displayed when MODE=N is requested and *any* drop (either metallic or fiber) or feeder DS1 associated with the requested shelf is cross-connected to a TR-08 VRT.

```
SNVS
/* Status, Not in Valid State,
   One or more drops and/or feeders are cross-connected to a TR08 VRT. */
;
```

The following error message is displayed when the ED-MODE-T8U command is entered with several addresses (for example, a range or *all* is specified) with MODE=N requested and one or more of the shelves contains a drop or a feeder DS1 associated with the requested shelf which is cross-connected to a TR-08 VRT.

```
/* T8Us on the following shelves not disabled.
   One or more drops/feeders are cross-connected to a TR08/TR303/INA VRT:
   Address1
   Address1
      .  .
      .  .     */
;
```

The ED-MODE-T8U command will complete if the request includes setting the T8U mode to the same value as it is already set (for example, MODE=Y when the T8U is enabled, or MODE=N when the T8U is disabled).

Related command

The following DLC subsystem command is related to the ED-MODE-T8U command.

- RTRV-NE

ED-MODE-TR8

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the ED-MODE-TR8 command.

ED-MODE-tr8:[tid]:aid:[ctag]:::[MODE=TR8Mode];

Command name

Provision the TR-08 mode for a pair of VRTs.

Can command be aborted?

No.

Purpose

CAUTION:
Execution of the ED-MODE-TR8 command will cause the metallic distribution controllers (MDCs) associated with the VRT to go through a pack initialization. This will cause an interruption of transmission to the lines serviced by the VRT.

NOTE:
This command would normally be called EDIT-VRT. However, it operates on *pairs* of VRTs, as opposed to *single* VRTs.

Enter the ED-MODE-TR8 command to provision the virtual remote terminal (VRT) TR-08 mode for a pair of VRTs served using a metallic distribution shelf (MDS) assembly. This command is similar in operation to the UIP command, SET-MODE-TR8.

Parameters

Use the following parameters with the ED-MODE-TR8 command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

(Continued on next page)

ED-MODE-TR8 (Continued)

Parameters (continued)

aid

VRT access identifer (AID). The address of the lower numbered VRT in the VRT pair for which the ED-MODE-TR8 command is intended. The *aid* is a required parameter.

Valid values are vrt-{1,3,5,7}. (For example, vrt-1 refers to VRTs 1 and 2, vrt-3 refers to VRTs 3 and 4, etc.)

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

MODE

TR-08 Mode. The TR-08 mode.

Valid values are {1–2}.

- 1 — Mode 1. No concentration with up to four feeder DS1 signals supported per VRT.
- 2 — Mode 2. 2:1 (actually 48:24) concentration with up to two feeder DS1 signals supported per VRT.

Default — the current system value.

Example

The following ED-MODE-TR8 command provisions VRTs 7 and 8 (MDS assembly 4) for TR-08 Mode 2 operation.

```
ED-MODE-TR8::vrt-7::::mode=2;
```

ED-MODE-TR8 (Continued)

Response

Confirmation

The ED-MODE-TR8 command requires confirmation. The following confirmation message is displayed when you enter the ED-MODE-TR8 command.

```
/* Caution! Execution of this command may affect service.
   This command affects the TR8 mode for VRTs vrt-n and vrt-n+1. */

/* You have selected the ed-mode-tr8 command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = [Access Identifier]
         Mode = [TR8 mode]

Execute? (y/n or CANcel/DELete to quit) =
;
```

Error

The ED-MODE-TR8 command is denied and the following message is displayed when the data memory of the DLC subsystem has failed.

```
SSTP
/* Status, SToPped,
   Data memory failed. */
;
```

The ED-MODE-TR8 command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

(Continued on next page)

ED-MODE-TR8 (Continued)

Response

The following error message is displayed when you request a conversion from Mode 1 to Mode 2, or from Mode 2 to Mode 1, and one or more of the logical feeder signals of the VRT is cross-connected to a physical DS1.

NOTE:
If the current value for the *TR8Mode* is entered, the command has a normal completion.

```
SNVS
/* Status, Not in Valid State,
   One or more feeder DS1 cross-connects exist for the requested VRT(s). */
;
```

The following error message is displayed when you request a conversion from Mode 1 to Mode 2, and one or more of the logical distribution lines of the VRT is cross-connected to a physical line other than the standard physical line.

NOTE:
Even though cross-connections to the ITH links (ithlink-{1-3}) are not considered to be standard cross-connections, the command will not be denied if these are the only *nonstandard* cross-connections for the VRT pair.

```
SNVS
/* Status, Not in Valid State,
   One or more non-standard DS0 cross-connects exist for the requested VRT(s).
   Only standard DS0 cross-connects are permitted for TR8 Mode 2 VRTs. */
;
```

The following error message is displayed when you request a conversion from Mode 2 to Mode 1, and cross-connections exist on the specified *AID* (for example, shelf-8).

```
SNVS
/* Status, Not in Valid State,
   One or more TR08 cross connects exist on AID. */
;
```

Related command

The following DLC subsystem command is related to the ED-MODE-TR8 command.

- RTRV-VRT

ED-NE

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the ED-NE command.

ED-NE:[tid]::[ctag]::[TERM=TermType];

Command name

Edit network element.

Can command be aborted?

No.

Purpose

CAUTION:
Execution of the ED-NE command will cause the MDCs associated with the VRT to go through a pack initialization. This will cause an interruption of transmission to the lines serviced by the VRT.

Enter the ED-NE command to set the configuration of the *SLC*-2000 Access System terminal for RT or COT operation.

Parameters

Use the following parameters with the ED-NE command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

(Continued on next page)

ED-NE (Continued)

Parameters (continued)

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

TERM

Terminal type. Indicates whether the *SLC*-2000 Access System terminal should operate as a COT or remote terminal (RT).

NOTE:
Software Release 4.0, R4.2, R4.4, R4.5, and R4.6 only support RT operations. Software Release 3.3 only supports COTs.

Valid value is {COT, RT}.

- COT — central office terminal (default for R3.3)
- RT — remote terminal (default for R3.1, R3.2, R4.0, R4.2, R4.4, R4.5, and R4.6).

Original value is RT. Default value is the last value entered.

Example

The following ED-NE command sets the network element to operate as a remote terminal (RT).

```
ED-NE::::rt;
```

ED-NE (Continued)

Response

Confirmation

The ED-NE command requires confirmation — changes to the *TERM* value will affect service and operations. The following confirmation message is displayed when you enter the ED-NE command and attempt to change the *TERM* value.

```
/* Caution! Execution of this command will affect service and operations,
   including office alarm interfaces. */

/* You have selected the ed-ne command with these parameters: */
/* Review of Parameter Responses ...  */
         TerminalType = [Terminal type]

Execute? (y/n or CANcel/DELete to quit) =
;
```

Error

The following message is displayed when the ED-NE command fails due to a fault in the nonvolatile data store (NVDS).

```
SSTP
/* Status, SToPped,
   Data memory failed. */
;
```

The following message is displayed when the ED-NE command fails due to a request to set the *TerminalType* to COT (for R4.0, R4.2, R4.4, R4.5, and R4.6).

```
EFON
/* Equipage, Feature Option Not provided. */
;
```

ED-STATE-SMU

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the ED-STATE-SMU command.

ED-STATE-SMU:[tid]:[Address]:[ctag]::[SMUState];

Command name

Enable/disable the SMU.

Can command be aborted?

No.

Purpose

NOTE:
To avoid interrupting service, make sure no manual conditions (manual/force/lockout) exist before enabling the SMU using the ED-STATE-SMU command.

Enter the ED-STATE-SMU command to enable or disable the automatic DLC subsystem software installation of *SLC*-2000 Access System downloadable circuit packs. When the SMU is set to enable, the PDC will periodically check the current software in the DLC circuit packs against the software stored in the SMU. If there is a difference, automatic installation of the SMU software into the DLC circuit packs will commence. Once enabled, the SMU cannot be disabled until the software on all DLC circuit packs in the *SLC*-2000 Access System matches the software stored in the SMU. Disabling the SMU will have the effect of prohibiting any software installation into the DLC circuit packs regardless of whether or not the current DLC software matches the software stored in the SMU.

Parameters

Use the following parameters with the ED-STATE-SMU command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

(Continued on next page)

ED-STATE-SMU (Continued)

Parameters (continued)

Address

SMU slot address. The address of the SMU slot. Valid value is smu.

Default value is *smu*.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

SMUState

State of the SMU. The *desired* state of the SMU. The *SMUState* parameter is position defined. Valid values are {enabled, disabled}. Default — the current value.

Example

The following ED-STATE-SMU command disables the state of the system memory unit (SMU).

```
ED-STATE-SMU:::::disabled;
```

Response

Confirmation

The ED-STATE-SMU command requires confirmation. The following confirmation is displayed when you enter a request to enable the SMU.

```
/* Caution! DLC subsystem software may be affected by this command.
   Disabling the SMU inhibits the DLC subsystem automatic software
   installation feature.

   Consult the appropriate SLC-2000 Access System Software Release
   Description for software installation procedures. */

/* You have selected the ed-state-smu command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = smu
         SMUState = [SMU state]

Execute? (y/n or CANcel/DELete to quit) =
;
```

(Continued on next page)

ED-STATE-SMU (Continued)

Response (continued)

Error

The following error message is displayed when you attempt to change the SMU state to disabled while a software audit or installation is in progress.

```
SABT
/* Status, ABorTed,
   A software audit or installation is in progress, try again later. */
;
```

The following error message is displayed when you attempt to change the SMU state to enabled and the SMU is not equipped.

```
SNVS
/* Status, Not in Valid State,
   The SMU is not equipped. */
;
```

The following error message is displayed when you attempt to change the SMU state to enabled and the SMU is failed.

```
SNVS
/* Status, Not in Valid State,
   The SMU is failed. */
;
```

The following error message is displayed when you attempt to change the SMU state to enabled and an SMU audit is in progress.

```
SABT
/* Status, ABorTed,
   An SMU audit is in progress, try again later. */
;
```

(Continued on next page)

ED-STATE-SMU (Continued)

Response (continued)

The following error message is displayed when an SMU audit fails (in response to a failed attempt to change the SMU state to enabled). Replace the SMU.

```
SSTP
/* Status, SToPped,
   SMU memory audit failed. */
;
```

The following error message is displayed when you attempt to change the SMU state to enabled and there is an incompatibility between the SMU software and the system hardware. (Refer to 363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide*.)

```
SSTP
/* Status, SToPped,
   Incompatibility between SMU software version and system hardware. */
;
```

The following error message is displayed when you attempt to change the SMU state to enabled and a software download to the SMU is in progress.

```
SABT
/* Status, ABorTed,
   A software download to the SMU is in progress, try again later. */
;
```

Related commands

The following DLC subsystem and SONET subsystem commands are related to the ED-STATE-SMU command.

- copy-program (SONET subsystem)
- install-program (SONET subsystem)
- RTRV-STATE-EQPT

ED-T0

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the ED-T0 command.

ED-T0:[tid]:[aid]:[ctag]::[CLEI][,FunctionCode]:[ProvisioningParameters];

Command name

Edit T0.

Can command be aborted?

No.

Purpose

NOTE:
The primary state must not be OOS-MA-UAS or the ED-T0 command will not successfully execute.

NOTE:
The ED-T0 command can edit up to five objects. However, there is one T0 entity for each ISDN CU physical port. In R4.5 and later software releases, you must use the ED-T0 command two times for the AUA94 and AUA94B, and four times for the *SPQ*494 CUs.

Enter the ED-T0 command to adjust the parameters of a physical line on a metallic channel shelf or in a distant terminal (DT) served by the *SLC* -2000 Access System. The ED-T0 command is similar to the DLC subsystem command, ENT-T0.

ED-T0 (Continued)

Parameters for R3.1 and R3.2

Use the following parameters with the ED-T0 command in R3.1 and R3.2 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Physical line AID. The address which identifies the physical line to be provisioned on the metallic channel shelf or in the DT. The following values are valid for this parameter.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}-{1–4}

Default value is the single physical line access identifier (AID) used in the most recent execution of DLC subsystem commands (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, and RTRV-T0) during the current login session. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

(Continued on next page)

ED-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

CLEI

CLEI[*] *Code*. The functional *CLEI* code is the first six or seven digits of the *CLEI* code of the channel unit used to provide service on this channel. The values listed in the following table are valid for the *CLEI* code parameter.

Functional *CLEI* Code	Apparatus Codes
5SCU38	AUA34 (COT)
5SC133	AUA34B (COT)
5SCU7D	AUA41
5SCUCD	AUA41B
5SCU69	AUA42
5SCU6E	AUA42B
5SCU6A	AUA43
5SCU6F	AUA43B
5SCU7C	AUA44
5SCU48	AUA52
5SC143	AUA52B
5SCU7B	AUA54
5SC1JE	AUA293 and AUA92 (COT)
5SC1HE	AUA293 and AUA93 (RT)
SAC1AH	*SPQ*®442
SAC1AE	*SPQ*443
SAC1BF	*SPQ*444
SAC1BG	*SPQ*454
Other	A channel unit not in this list (for example, an *SPQ*400) equipped in the slot for this channel.

Original value for the *CLEI* code is *Other*. Default — the last value entered. You are (user) prompted for an entry when you do not enter a *CLEI* code.

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ED-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

FunctionCode

Function code. You are given the default value and prompted for an entry when you do not enter a function code. However, if the *CLEI* code for this channel is changed, the default value given will be the bold function code for the entered functional *CLEI* code listed in the following table.

Functional *CLEI* Codes	Function Codes
5SC1JE and 5SC1HE	**BRI**
Other	**DFLT**
5SCU38 and 5SC133	**DS0A** and DS0B
5SCU7B and SAC1BG	**EM4**[**C**,H] and PLR[1,2]
5SCU69, 5SCU6E, and SAC1AH	**FXO**, DPT, and TO
5SCU6A, 5SCU6F, and SAC1AE	**FXS**, DPO, and TO
5SCU7D and 5SCUCD	**FX**[**S**,T][**1**,2,3,5], DX4[N,R], ETO4, and TO4
5SCU7C and SAC1BF	**FX**[**O**,P][**1**,2,3,5] and TD[O,S][A,B,C,D]
5SCU48 and 5SC143	**OCU**

The function code depends on the *CLEI* code.

CAUTION:
Undesirable ringing on the subscriber line can occur when you use the default (LS) function code rather than the appropriate function codes (AC, LO, and LR, respectively) for the AUA45, AUA45B, and AUA75 equipped channel units. The AUA45, AUA45B, and AUA75 channel units cannot be distinguished from other POTS/SPOTS-like channel units (for example, AUA25, AUA25B, AUA27, AUA51, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, and AUA179) for which the default function code (LS) is appropriate. Please refer to function code entries AC, LR, and LS in this section.

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ED-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

Function Code	Description
BRI	Basic rate interface transmission extension (BRITE) for integrated services digital network (ISDN). Basic rate interface (BRI) is provided through the AUA293, AUA92, and AUA93 CUs.
DFLT	Defaults to equipped function (circuit function determined by installed channel unit). This includes POTS, multiparty (MP), coin channel units, and channels to be equipped with direct inward dial (DID), manual ringdown, private line automatic ring (PLAR), and *SPOTS* channel units.
DPO	2-wire dial-pulse originating
DPT	2-wire dial-pulse terminating
DS0A	Single customer DS0 signal (subrate)
DS0B	Single or multiple customer DS0 signal (56 or 64 kb/s)
DX4N	4-wire duplex with duplex signaling and signaling leads normal
DX4R	4-wire duplex with duplex signaling and signaling leads reversed
EM4C	E&M signaling, type I
EM4H	E&M signaling, type II
ETO4	4-wire equalized transmission only, no DC signaling
FXO	2-wire foreign exchange, office end
FXO1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal and no toll diversion
FXO2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and no toll diversion
FXO3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and no toll diversion
FXO5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and no toll diversion
FXP1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal, and toll diversion
FXP2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and toll diversion
FXP3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and toll diversion

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ED-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

Function Code	Description
FXP5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and toll diversion
FXS	2-wire foreign exchange, station end
FXS1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and no toll diversion
FXS2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and no toll diversion
FXS3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and no toll diversion
FXS5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and no toll diversion
FXT1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and toll diversion
FXT2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and toll diversion
FXT3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and toll diversion
FXT5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and toll diversion
OCU	Office channel unit dataport.
PLR1	PLR signaling, type I
PLR2	PLR signaling, type II
RVT	2-wire loop reverse battery
TDOA	4-state tandem signaling, type II, signaling leads looped through carrier toward office
TDOB	4-state tandem signaling, type I, signaling leads not looped through carrier toward office

Continued on next page

ED-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

Function Code	Description
TDOC	2-state tandem signaling, type II, signaling leads looped
TDOD	2-state tandem signaling, type I, signaling leads not looped
TDSA	4-state tandem signaling, type II, signaling leads looped through carrier toward subscriber
TDSB	4-state tandem signaling, type I, signaling leads not looped through carrier toward subscriber
TDSC	2-state tandem signaling, type II, signaling leads looped
TDSD	2-state tandem signaling, type I, signaling leads not looped
TO	2-wire transmission only
TO4	4-wire transmission only, no DC signaling

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ED-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

ProvisionParameters

Provisioning parameters. The option settings for each function code. The provisioning parameter names are based on the work order record detail (WORD) document abbreviations.

Parameter Name	WORD Abbreviation	User Prompt	User Expert String
–7 dB (J3)	–7DB(J3)	–7 dB(J3)	dBJ3
–7 dB receive	–7DB RCV	–7 dB Receive	dBr
–7 dB transmit	–7DB TRMT	–7 dB Transmit	dBt
All-zero-code allowed	ZC	AllZeroCodeAllowed	zc
Balance	BAL	Balance	bal
Clear channel	CC	ClearChannel	cc
Equalizer bandwidth	BW	Bandwidth	bw
Equalizer height	HT	Height	ht
Equalizer nonloaded/ loaded	L-N	Nonloaded/Loaded	ln
Equalizer slope	SL	Slope	sl
Error correction	EC	ErrorCorrection	ec
Impedance	IMP	Impedance	imp
On-hook transmission	OHT	OnHookTransmission	oht
Receive attenuator	RCV	RCV Attenuator	rcv
Receive gain	RCV(GN)	ReceiveGain	rcvgn
Red-lined status	RLS	Redlined	rls
Sealing current	SC	SealingCurrent	sc
Service	SVC	ISDN Channel Service	svc
Signaling type	LS-GS	SignalingType	lsgs
Secondary channel used	SCC	SecondaryChannelUsed	scc
Subscriber data rate	RATE	SubscriberDataRate	rate
Toll diversion	TD	TollDiversion	td
Transmit and receive impedance	TRMT&RCV(IMP)	TRMT & RCV Impedance	imp
Transmit attenuator	TRMT	TRMT Attenuator	trmt
Transmit gain	XMT(GN)	TransmitGain	xmtgn

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ED-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following tables (shown in alphabetic order) list the valid parameters for *FunctionCode*. When prompting for a parameter value, the default is the current value unless the *CLEI* code or Function code is being changed. Then the default will be the original (default) listed in the following tables.

NOTE:
The *redline* parameter is used by the telephone company to mark redlined circuits, to which a special priority is assigned. The system does not treat redlined channels any differently from non-redlined channels.

The following table lists the BRI function code provisioning parameters for apparatus codes AUA293 (*CLEI*=5SC1JE for COT, *CLEI*=5SC1HE for RT), AUA92 (*CLEI*=5SC1JE), and AUA93 (*CLEI*=5SC1HE).

NOTE:
You cannot provision the DT BRI channel unit (CU) using the CIT. You must provision the DT BRI CU at the channel unit.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
svc=ISDN channel service	SVC	2B+D, B1+D, B2+D, or D	2B+D
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for the POTS, multiparty, coin, FSR, DID, manual ringdown, PLAR, and DC bypass pair or alarm channel units (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the DPO function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the DPT function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the DS0A function code provisioning parameters for apparatus code AUA34 (*CLEI*=5SCU38).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 or 64 kb/s.

† Set ZC to YES if the data rate is 64 kb/s.

The following table lists the DS0A function code provisioning parameters for apparatus code AUA34B (*CLEI*=5SC133).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
ec=Error correction	EC	NONE or SCEC	NONE
zc=All-zero-code allowed*	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Set ZC to YES if the data rate is 64 kb/s.

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ED-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the DS0B function code provisioning parameters for apparatus code AUA34 (*CLEI*=5SCU38).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 or 64 kb/s.

† Set ZC to YES if the data rate is 64 kb/s.

The following table lists the DS0B function code provisioning parameters for apparatus code AUA34B (*CLEI*=5SC133).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
ec=Error correction	EC	NONE or SCEC	NONE
zc=All-zero-code allowed*	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Set ZC to YES if the data rate is 64 kb/s.

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ED-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the DX4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

The following table lists the EM4C/H function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the ETO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBJ3=–7 dB (J3)	–7DB(J3)	BK or WH	BK
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the FXO function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	900
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
td=TollDiversion	TD	NO or YES	NO
lsgs=SignalingType	LS-GS	GS or LS	GS
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXO/P function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV(IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the FXS function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXS/T function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV(IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the OCU function code provisioning parameters for apparatus code AUA52 (*CLEI*=5SCU48).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, or 56 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed	ZC	NO or YES	NO
scc=Secondary channel used	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 kb/s.

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ED-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the OCU function code provisioning parameters for apparatus code AUA52B (*CLEI*=5SC143).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an input invalid syntax or punctuation (IISP) error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 56- or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† When the 64 kb/s rate is selected, the user is not prompted for ZC and SCC. For rate=64 kb/s, ZC and SCC are automatically set to YES.

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ED-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the PLR1/2 function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDO function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDS function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the TO function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), *SPQ*442 (*CLEI*=SAC1AH), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the TO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBt=–7 dB TRMT	–7DB TRMT	BK or WH	BK
dBr=–7 dB RCV	–7DB RCV	BK or WH	BK
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

ED-T0 (Continued)

Parameters for R3.3

Use the following parameters with the ED-T0 command in R3.3 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Physical line AID. The address which identifies the physical line to be provisioned on the metallic channel shelf or in the DT. The following values are valid for this parameter.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}-{1–4}

Default value is the single physical line access identifier (AID) used in the most recent execution of DLC subsystem commands (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, and RTRV-T0) during the current login session. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

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ED-T0 (Continued)

Parameters for R3.3 (continued)

CLEI

CLEI[*] *Code*. The functional *CLEI* code is the first six or seven digits of the *CLEI* code of the channel unit used to provide service on this channel. The values listed in the following table are valid for the *CLEI* code parameter.

Functional *CLEI* Code	Apparatus Codes
5SC143	AUA252, AUA252B, and AUA52B
5SCU38	AUA34
5SC133	AUA34B
5SCU7D	AUA41
5SCUCD	AUA41B
5SCU69	AUA42
5SCU6E	AUA42B
5SCU6A	AUA43
5SCU6F	AUA43B
5SCU48	AUA52
5SC1JE	AUA293 and AUA92
5SC324	*SPQ*®334
SAC1AH	*SPQ* 442
SAC1AE	*SPQ*443
SAC1BF	*SPQ*444
5SCTFF	*SPQ*452
SAC1BG	*SPQ*454
Other	AUA150C, AUA33B, AUA36B, PGM*-2000†, *SPQ*318, *SPQ*328, *SPQ*333, and *SPQ*336.

* Trademark of Tollgrade Communications, Inc.

† The *PGM*-2000 can not be provisioned electronically in R3.3.

Original value for the *CLEI* code is *Other*. Default — the last value entered. You are (user) prompted for an entry when you do not enter a *CLEI* code.

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* COMMON LANGUAGE is a registered trademark and CLEI, CLLI, CLCI, and CLFI are trademarks of Bell Communications Research, Inc.

ED-T0 (Continued)

Parameters for R3.3 (continued)

FunctionCode

Function code. You are given the default value and prompted for an entry when you do not enter a function code. However, if the *CLEI* code for this channel is changed, the default value given will be the bold function code for the entered functional *CLEI* code listed in the following table.

Functional *CLEI* Codes	Function Codes
5SC1JE	**BRI**
Other	**DFLT** and EBS
5SCU38 and 5SC133	**DS0A** and DS0B
5SC324	**DS0A**, DS0B, and SW56
SAC1BG	**EM4**[**C**,H] and PLR[1,2]
5SCU69, 5SCU6E, and SAC1AH	**FXO**, DPT, and TO
5SCU6A, 5SCU6F, and SAC1AE	**FXS**, DPO, and TO
5SCU7D and 5SCUCD	**FX**[**S**,T][**1**,2,3,5], DX4[N,R], ETO4, and TO4
SAC1BF	**FX**[**O**,P][**1**,2,3,5] and TD[O,S][A,B,C,D]
5SCU48, 5SC143, and 5SCTFF*	**OCU**

* OCU is the only valid function code for the *SPQ*® 452 CU for R3.3.

The function code depends on the *CLEI* code.

CAUTION:
Undesirable ringing on the subscriber line can occur when you use the default (LS) function code rather than the appropriate function codes (AC, LO, and LR, respectively) for the AUA45, AUA45B, and AUA75 equipped channel units. The AUA45, AUA45B, and AUA75 channel units cannot be distinguished from other POTS/SPOTS-like channel units (for example, AUA25, AUA25B, AUA27, AUA51, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, and AUA179) for which the default function code (LS) is appropriate. Please refer to function code entries AC, LR, and LS in this section.

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ED-T0 (Continued)

Parameters for R3.3 (continued)

Function Code	Description
BRI	Basic rate interface transmission extension (BRITE) for integrated services digital network (ISDN). Basic rate interface (BRI) is provided through the AUA293 and AUA92 CUs.
DFLT	Defaults (for TR-08 VRTs) to equipped function (circuit function determined by installed channel unit). The function code for certain CUs can be derived from the equipment in addition to being explicitly specified. This includes POTS, multiparty (MP), coin, frequency selective ringing (FSR), direct inward dial (DID), manual ringdown, private line automatic ring (PLAR), and DC bypass pair or alarm channel units.
DPO	2-wire dial-pulse originating
DPT	2-wire dial-pulse terminating
DS0A	Single customer DS0 signal (subrate)
DS0B	Single or multiple customer DS0 signal (56 or 64 kb/s)
DX4N	4-wire duplex with duplex signaling and signaling leads normal
DX4R	4-wire duplex with duplex signaling and signaling leads reversed
EBS	Enhanced business service (P-Phone)
EM4C	E&M signaling, type I
EM4H	E&M signaling, type II
ETO4	4-wire equalized transmission only, no DC signaling
FXO	2-wire foreign exchange, office end
FXO1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal and no toll diversion
FXO2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and no toll diversion
FXO3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and no toll diversion
FXO5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and no toll diversion

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ED-T0 (Continued)

Parameters for R3.3 (continued)

Function Code	Description
FXP1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal, and toll diversion
FXP2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and toll diversion
FXP3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and toll diversion
FXP5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and toll diversion
FXS	2-wire foreign exchange, station end
FXS1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and no toll diversion
FXS2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and no toll diversion
FXS3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and no toll diversion
FXS5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and no toll diversion
FXT1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and toll diversion
FXT2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and toll diversion
FXT3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and toll diversion
FXT5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and toll diversion
OCU	Office channel unit dataport
PLR1	PLR signaling, type I
PLR2	PLR signaling, type II
SW56	Switched 56 service*

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ED-T0 (Continued)

Parameters for R3.3 (continued)

Function Code	Description
TDOA	4-state tandem signaling, type II, signaling leads looped through carrier toward office
TDOB	4-state tandem signaling, type I, signaling leads not looped through carrier toward office
TDOC	2-state tandem signaling, type II, signaling leads looped
TDOD	2-state tandem signaling, type I, signaling leads not looped
TDSA	4-state tandem signaling, type II, signaling leads looped through carrier toward subscriber
TDSB	4-state tandem signaling, type I, signaling leads not looped through carrier toward subscriber
TDSC	2-state tandem signaling, type II, signaling leads looped
TDSD	2-state tandem signaling, type I, signaling leads not looped
TO	2-wire transmission only
TO4	4-wire transmission only, no DC signaling

* SW56 is not a valid function code for the *SPQ*®452 CU for R3.3.

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ED-T0 (Continued)

Parameters for R3.3 (continued)

ProvisionParameters

Provisioning parameters. The option settings for each function code. The provisioning parameter names are based on the work order record detail (WORD) document abbreviations listed in the following table.

Parameter Name	WORD Abbreviation	User Prompt	User Expert String
–7 dB (J3)	–7DB(J3)	–7 dB(J3)	dBJ3
–7 dB receive	–7DB RCV	–7 dB Receive	dBr
–7 dB transmit	–7DB TRMT	–7 dB Transmit	dBt
All-zero-code allowed	ZC	AllZeroCodeAllowed	zc
Balance	BAL	Balance	bal
Clear channel	CC	ClearChannel	cc
Equalizer bandwidth	BW	Bandwidth	bw
Equalizer height	HT	Height	ht
Equalizer nonloaded/ loaded	L-N	Nonloaded/Loaded	ln
Equalizer slope	SL	Slope	sl
Error correction	EC	ErrorCorrection	ec
Impedance	IMP	Impedance	imp
On-hook transmission	OHT	OnHookTransmission	oht
Quality monitoring	QM	QualityMonitoring	qm
Receive attenuator	RCV	RCV Attenuator	rcv
Receive gain	RCV(GN)	ReceiveGain	rcvgn
Red-lined status	RLS	Redlined	rls
Sealing current	SC	SealingCurrent	sc
Service	SVC	ISDN Channel Service	svc
Signaling type	LS-GS	SignalingType	lsgs
Secondary channel used	SCC	SecondaryChannelUsed	scc
Subscriber data rate	RATE	SubscriberDataRate	rate
Toll diversion	TD	TollDiversion	td
Transmit and receive impedance	TRMT&RCV(IMP)	TRMT&RCVImpedance	imp
Transmit attenuator	TRMT	TRMT Attenuator	trmt
Transmit gain	XMT(GN)	TransmitGain	xmtgn

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ED-T0 (Continued)

Parameters for R3.3 (continued)

The following tables (shown in alphabetic order) list the valid parameters for *FunctionCode*. When prompting for a parameter value, the default is the current value unless the *CLEI* code or Function code is being changed. Then the default will be the original (default) listed in the following tables.

NOTE:
The *redline* parameter is used by the telephone company to mark redlined circuits, to which a special priority is assigned. The system does not treat redlined channels any differently from non-redlined channels.

The following table lists the BRI function code provisioning parameters for apparatus codes AUA293 and AUA92 (*CLEI*=5SC1JE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
svc=ISDN channel service	SVC	2B+D, B1+D, B2+D, or D	2B+D
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for the POTS, multiparty, coin, FSR, DID, manual ringdown, PLAR, and DC bypass pair or alarm channel units (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the DPO function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the DPT function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the DS0A function code provisioning parameters for apparatus code AUA34 (*CLEI*=5SCU38).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 or 64 kb/s.

† Set ZC to YES if the data rate is 64 kb/s.

The following table lists the DS0A function code provisioning parameters for apparatus code AUA34B (*CLEI*=5SC133).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
ec=Error correction	EC	NONE or SCEC	NONE
zc=All-zero-code allowed*	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Set ZC to YES if the data rate is 64 kb/s.

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ED-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the DS0A function code provisioning parameters for apparatus code *SPQ*334 (*CLEI*=5SC324).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 38.4, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 38.4-, 56-, or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† You are not prompted for ZC when you select the 64-kb/s data rate. When rate=64 kb/s, ZC is automatically set to YES.

The following table lists the DS0B function code provisioning parameters for apparatus code AUA34 (*CLEI*=5SCU38).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 or 64 kb/s.

† Set ZC to YES if the data rate is 64 kb/s.

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ED-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the DS0B function code provisioning parameters for apparatus code AUA34B (*CLEI*=5SC133).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
ec=Error correction	EC	NONE or SCEC	NONE
zc=All-zero-code allowed*	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Set ZC to YES if the data rate is 64 kb/s.

The following table lists the DS0B function code provisioning parameters for apparatus code *SPQ*334 (*CLEI*=5SC324).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
rate=Subscriber data rate*	RATE	2.4, 4.8, 9.6, 19.2, 38.4, 56, or 64 kb/s	56
ec=Error correction	EC	NONE or SCEC	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Valid data rates for DS0B are 56- or 64-kb/s even though all data rates are available for provisioning.

† You are not prompted for ZC when you select the 64-kb/s data rate. When rate=64 kb/s, ZC is automatically set to YES.

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ED-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the DX4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

The following table lists the EBS function code provisioning parameters for apparatus code *SPQ*328 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the EM4C/H function code provisioning parameters for apparatus code *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the ETO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBJ3=–7 dB (J3)	–7DB(J3)	BK or WH	BK
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the FXO function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	900
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
td=TollDiversion	TD	NO or YES	NO
lsgs=SignalingType	LS-GS	GS or LS	GS
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXO/P function code provisioning parameters for apparatus code *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV(IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the FXS function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXS/T function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV(IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the OCU function code provisioning parameters for apparatus code AUA52 (*CLEI*=5SCU48).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, or 56 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed	ZC	NO or YES	NO
scc=Secondary channel used	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 kb/s.

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ED-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the OCU function code provisioning parameters for apparatus code AUA252, AUA252B, and AUA52B (*CLEI*=5SC143).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 56- or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† When the 64 kb/s rate is selected, the user is not prompted for ZC and SCC. For rate=64 kb/s, ZC and SCC are automatically set to YES.

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ED-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the OCU function code provisioning parameters for apparatus codes *SPQ*452 (*CLEI*=5SCTFF).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 38.4, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
qm=quality monitoring	QM	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 38.4-, 56-, or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† You are not prompted for ZC or SCC when you select the 64-kb/s data rate. When rate=64 kb/s, ZC and SCC are automatically set to YES.

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ED-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the PLR1/2 function code provisioning parameters for apparatus code *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the SW56 function code provisioning parameters for apparatus code *SPQ*334 (*CLEI*=5SC324).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
ab=A/B signaling	AB	NO or YES	NO
rls=redlined	RLS	NO or YES	NO

The following table lists the TDO function code provisioning parameters for apparatus code *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the TDS function code provisioning parameters for apparatus code *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

The following table lists the TO function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), *SPQ*442 (*CLEI*=SAC1AH), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the TO4 function code provisioning parameters for apparatus codes AUA41 (*CLEI*=5SCU7D) and AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBt=–7 dB TRMT	–7DB TRMT	BK or WH	BK
dBr=–7 dB RCV	–7DB RCV	BK or WH	BK
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

ED-T0 (Continued)

Parameters for R4.0

Use the following parameters with the ED-T0 command in R4.0 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Physical line AID. The address which identifies the physical line to be provisioned on the metallic channel shelf or in the DT. The following values are valid for this parameter.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}-{1–4}

Default value is the single physical line access identifier (AID) used in the most recent execution of DLC subsystem commands (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, and RTRV-T0) during the current login session. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

CLEI

CLEI Code*. The functional *CLEI* code is the first six or seven digits of the *CLEI* code of the channel unit used to provide service on this channel. The values listed in the following table are valid for the *CLEI* code parameter.

NOTE:
The CLEI codes 5SCU38 and 5SC133 are intended for COT applications.

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ED-T0 (Continued)

Parameters for R4.0 (continued)

Functional *CLEI* Code	Apparatus Codes
5SCU7D	AUA141 and AUA41
5SCUCDxxxx	AUA41B
5SCU69	AUA142 and AUA42
5SCU6E	AUA42B
5SCU6A	AUA43
5SCU6F	AUA43B
5SCU7C	AUA44
5SCU48	AUA152 and AUA52
5SC143	AUA52B
5SCU7B	AUA54
5SC1HE	AUA293 and AUA93
5SC18E	AUA94
SAC1AH	*SPQ*®442
SAC1AE	*SPQ*443
SAC1BF	*SPQ*444
SAC1BG	*SPQ*454
Other	AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, AUA179, AUA232, AUA25, AUA25B, AUA27, AUA45, AUA45B, AUA51, AUA53, AUA55, AUA56, AUA56B, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA75, MCU5205, MCU5405, *SPQ*400, *SPQ*440, *SPQ*440B, *SPQ*450, *SPQ*478, *SPQ*800, *SPQ*809, and *SPQ*909

Original value for the *CLEI* code is *Other*. Default — the last value entered. You are (user) prompted for an entry when you do not enter a *CLEI* code.

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ED-T0 (Continued)

Parameters for R4.0 (continued)

FunctionCode

Function code. You are given the default value and prompted for an entry when you do not enter a function code. However, if the *CLEI* code for this channel is changed, the default value given will be the bold function code for the entered functional *CLEI* code listed in the following table.

Functional *CLEI* Codes	Function Codes
Other	AC, DATA, **DFLT**, GO, GS, LO, LR, LS, NO, and RVT
5SC1HE	**BRI**
5SCU7B and SAC1BG	**EM4**[**C**,H] and PLR[1,2]
5SCU69, 5SCU6E, and SAC1AH	**FXO**, DPT, and TO
5SCU6A, 5SCU6F, and SAC1AE	**FXS**, DPO, and TO
5SCU7D and 5SCUCD	**FX**[**S**,T][**1**,2,3,5], DX4[N,R], ETO4, and TO4
5SCU7C and SAC1BF	**FX**[**O**,P][**1**,2,3,5] and TD[O,S][A,B,C,D]
5SCU48 and 5SC143	**OCU**

The following table lists the function codes. The function code depends on the functional *CLEI* code.

CAUTION:
Undesirable ringing on the subscriber line can occur when you use the default (LS) function code rather than the appropriate function codes (AC, LO, and LR, respectively) for the AUA45, AUA45B, and AUA75 equipped channel units. The AUA45, AUA45B, and AUA75 channel units cannot be distinguished from other POTS/SPOTS-like channel units (for example, AUA25, AUA25B, AUA27, AUA51, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, and AUA179) for which the default function code (LS) is appropriate. Please refer to function code entries AC, LR, and LS in this section.

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ED-T0 (Continued)

Parameters for R4.0 (continued)

Function Code	Description
AC	Manual ring down
BRI	Basic rate interface transmission extension (BRITE) for integrated services digital network (ISDN). Basic rate interface (BRI) is provided through the AUA293 and AUA93 CUs.
DATA	Digital data
DFLT	Defaults (for TR-08 VRTs) to equipped function (circuit function determined by installed channel unit). The function code for certain CUs can be derived from the equipment in addition to being explicitly specified. This includes POTS, multiparty (MP), coin, frequency selective ringing (FSR), direct inward dial (DID), manual ringdown, private line automatic ring (PLAR), and DC bypass pair or alarm channel units Default for TR-303 VRTs is 2-wire loop start (LS). You must explicitly provision other functions using the appropriate function code.
DPO	2-wire dial-pulse originating
DPT	2-wire dial-pulse terminating
DX4N	4-wire duplex with duplex signaling and signaling leads normal
DX4R	4-wire duplex with duplex signaling and signaling leads reversed
EM4C	E&M signaling, type I
EM4H	E&M signaling, type II
ETO4	4-wire equalized transmission only, no DC signaling
FXO	2-wire foreign exchange, office end
FXO1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal and no toll diversion
FXO2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and no toll diversion
FXO3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and no toll diversion

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ED-T0 (Continued)

Parameters for R4.0 (continued)

Function Code	Description
FXO5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and no toll diversion
FXP1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal, and toll diversion
FXP2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and toll diversion
FXP3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and toll diversion
FXP5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and toll diversion
FXS	2-wire foreign exchange, station end
FXS1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and no toll diversion
FXS2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and no toll diversion
FXS3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and no toll diversion
FXS5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and no toll diversion
FXT1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and toll diversion
FXT2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and toll diversion
FXT3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and toll diversion
FXT5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and toll diversion
GO	2-wire ground start (current sink)
GS	2-wire ground start (current feed)

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ED-T0 (Continued)

Parameters for R4.0 (continued)

Function Code	Description
ISDN	Supported by the system (R4.0) and appears in reports from the DLC subsystem command, RTRV-T0. Cannot be provisioned using the DLC subsystem commands, ENT-T0 or ED-T0 (can only provision ISDN lines with the LDS through the TR-303 EOC). The ISDN function code pertains to the ANSI U-DSL interface supported by the AUA94 CU on TR-303 VRTs.
LO	2-wire loop start (current sink)
LR	Private line automatic ringdown (PLAR)
LS	2-wire loop start (current feed)
NO	2-wire transmission only
OCU	Office channel unit dataport
PLR1	PLR signaling, type I
PLR2	PLR signaling, type II
RVT	2-wire loop reverse battery
TDOA	4-state tandem signaling, type II, signaling leads looped through carrier toward office
TDOB	4-state tandem signaling, type I, signaling leads not looped through carrier toward office
TDOC	2-state tandem signaling, type II, signaling leads looped
TDOD	2-state tandem signaling, type I, signaling leads not looped
TDSA	4-state tandem signaling, type II, signaling leads looped through carrier toward subscriber
TDSB	4-state tandem signaling, type I, signaling leads not looped through carrier toward subscriber
TDSC	2-state tandem signaling, type II, signaling leads looped
TDSD	2-state tandem signaling, type I, signaling leads not looped
TO	2-wire transmission only
TO4	4-wire transmission only, no DC signaling

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ED-T0 (Continued)

Parameters for R4.0 (continued)

ProvisionParameters

Provisioning parameters. The option settings for each function code. The provisioning parameter names are based on the work order record detail (WORD) document abbreviations.

Parameter Name	WORD Abbreviation	User Prompt	User Expert String
–7 dB (J3)	–7DB(J3)	–7 dB(J3)	dBJ3
–7 dB receive	–7DB RCV	–7 dB Receive	dBr
–7 dB transmit	–7DB TRMT	–7 dB Transmit	dBt
All-zero-code allowed	ZC	AllZeroCodeAllowed	zc
Balance	BAL	Balance	bal
Clear channel	CC	ClearChannel	cc
Equalizer bandwidth	BW	Bandwidth	bw
Equalizer height	HT	Height	ht
Equalizer nonloaded/ loaded	L-N	Nonloaded/Loaded	ln
Equalizer slope	SL	Slope	sl
Error correction	EC	ErrorCorrection	ec
Impedance	IMP	Impedance	imp
On-hook transmission	OHT	OnHookTransmission	oht
Receive attenuator	RCV	RCV Attenuator	rcv
Receive gain	RCV(GN)	ReceiveGain	rcvgn
Red-lined status	RLS	Redlined	rls
Sealing current	SC	SealingCurrent	sc
Service	SVC	ISDN Channel Service	svc
Signaling type	LS-GS	SignalingType	lsgs
Secondary channel used	SCC	SecondaryChannelUsed	scc
Subscriber data rate	RATE	SubscriberDataRate	rate
Toll diversion	TD	TollDiversion	td
Transmit and receive impedance	TRMT&RCV(IMP)	TRMT&RCVImpedance	imp
Transmit attenuator	TRMT	TRMT Attenuator	trmt
Transmit gain	XMT(GN)	TransmitGain	xmtgn

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ED-T0 (Continued)

Parameters for R4.0 (continued)

The following tables (shown in alphabetic order) list the valid parameters for *FunctionCode*. When prompting for a parameter value, the default is the current value unless the *CLEI* code or Function code is being changed. Then the default will be the original (default) listed in the following tables.

The *redline* parameter is used by the telephone company to mark redlined circuits, to which a special priority is assigned. The system does not treat redlined channels any differently from non-redlined channels.

The following table lists the AC function code provisioning parameters for apparatus codes AUA45 and AUA45B (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the BRI function code provisioning parameters for apparatus codes AUA293 and AUA93 (*CLEI*=5SC1HE).

NOTE:
DT applications (R4.0 and earlier software releases) require you to provision the AUA293 and AUA93 CUs using the on-board switches.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
svc=ISDN channel service	SVC	2B+D, B1+D, B2+D, or D	2B+D
rls=Redlined	RLS	NO or YES	NO

The following table lists the DATA function code provisioning parameters for apparatus codes AUA200 and AUA232 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the DFLT function code provisioning parameters for the POTS, multiparty, coin, FSR, DID, manual ringdown, PLAR, and DC bypass pair or alarm channel units (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the DPO function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the DPT function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the DX4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

The following table lists the EM4C/H function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the ETO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBJ3=–7 dB (J3)	–7DB(J3)	BK or WH	BK
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the FXO function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	900 or 600	900
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
td=TollDiversion	TD	NO or YES	NO
lsgs=SignalingType	LS-GS	GS or LS	GS
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXO/P function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the FXS function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXS/T function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the GO function code provisioning parameters for apparatus codes AUA32, AUA39, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the GS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA51, AUA53, AUA59, AUA150, AUA151, AUA159, AUA159B, AUA179, *SPQ*440, *SPQ*440B, and *SPQ*450 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LO function code provisioning parameters for apparatus codes AUA32, AUA39, *SPQ*300, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LR function code provisioning parameters for apparatus code AUA75 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the LS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA27, AUA51, AUA53, AUA55, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, AUA179, *SPQ*400, *SPQ*440, *SPQ*440B, *SPQ*450, *SPQ*478, and *SPQ*909 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the NO function code provisioning parameters for apparatus codes MCU5205 and MCU5405 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the OCU function code provisioning parameters for apparatus codes AUA52 and AUA152 (*CLEI*=5SCU48).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, or 56 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed	ZC	NO or YES	NO
scc=Secondary channel used	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 kb/s.

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the OCU function code provisioning parameters for apparatus code AUA52B (*CLEI*=5SC143).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 56- or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† When the 64 kb/s rate is selected, the user is not prompted for ZC and SCC. For rate=64 kb/s, ZC and SCC are automatically set to YES.

The following table lists the PLR1/2 function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the RVT function code provisioning parameters for apparatus codes AUA56 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDO function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDS function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the TO function code provisioning parameters for apparatus codes AUA42 and AUA142 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), *SPQ*442 (*CLEI*=SAC1AH), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the TO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBt=–7 dB TRMT	–7DB TRMT	BK or WH	BK
dBr=–7 dB RCV	–7DB RCV	BK or WH	BK
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

ED-T0 (Continued)

Parameters for R4.2

Use the following parameters with the ED-T0 command in R4.2 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Physical line AID. The address which identifies the physical line to be provisioned on the metallic channel shelf or in the DT. The following values are valid for this parameter.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}-{1–4}

Default value is the single physical line access identifier (AID) used in the most recent execution of DLC subsystem commands (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, and RTRV-T0) during the current login session. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

CLEI

CLEI Code. The functional *CLEI* code is the first six or seven digits of the *CLEI* code of the channel unit used to provide service on this channel. The values listed in the following table are valid for the *CLEI* code parameter.

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.2 (continued)

Functional *CLEI* Code	Apparatus Codes
5SCU7D	AUA141 and AUA41
5SC3HJ	AUA41B
5SCU69	AUA142 and AUA42
5SCU6E	AUA42B
5SCU6A	AUA43
5SCU6F	AUA43B
5SCU7C	AUA44 and AUA44B
5SCU48	AUA152 and AUA52
5SC143	AUA252, AUA252B, and AUA52B
5SCU7B	AUA54 and AUA54B
5SC1HE	AUA293 and AUA93
5SC18E	AUA94
SAC1CS	*PGM* *-2000
SAC1AH	*SPQ* ®442
SAC1AE	*SPQ*443
SAC1BF	*SPQ*444
5SCTFF	*SPQ*452
SAC1BG	*SPQ*454
SACPDC	*SPQ*456
5SC212	*SPQ*494†
Other	AUA150, AUA150C, AUA151, AUA158, AUA158B, AUA158C, AUA159, AUA159B, AUA159C, AUA178, AUA179, AUA232, AUA25, AUA25B, AUA27, AUA45, AUA45B, AUA51, AUA53, AUA53B, AUA55, AUA55B, AUA56, AUA56B, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA59B, AUA75, MCU5205, MCU5405, *SPQ*400, *SPQ*419, *SPQ*429, *SPQ*440, *SPQ*440B, *SPQ*440C, *SPQ*450, *SPQ*453, *SPQ*478, *SPQ*800, *SPQ*809, and *SPQ*909

* Trademark of Tollgrade Communications, Inc.

† The integrated services digital network (ISDN) function code is supported by the system and can appear in reports resulting from the DLC subsystem command, RTRV-T0. However, you cannot provision the ISDN function code using the CIT (DLC subsystem commands, ED-T0 and ENT-T0). You must provision ISDN lines through the local digital switch (LDS) using the TR-303 embedded operations channel (EOC).

Original value for the *CLEI* code is *Other*. Default — the last value entered. You are (user) prompted for an entry when you do not enter a *CLEI* code.

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ED-T0 (Continued)

Parameters for R4.2 (continued)

FunctionCode

Function code. You are given the default value and prompted for an entry when you do not enter a function code. However, if the *CLEI* code for this channel is changed, the default value given will be the bold function code for the entered functional *CLEI* code listed in the following table.

Functional *CLEI* Codes	Function Codes
Other	AC, DATA, **DFLT**, EBS, GO, GS, LO, LR, LS, NO, and RVT
5SC1JE, 5SC1HE	**BRI**
SACPDC	**DFLT** and RVT
5SCU69, 5SCU6E, SAC1AH	DPT, **FXO**, and TO
5SCU6A, 5SCU6F, SAC1AE	DPO, **FXS**, and TO
5SCU7D, 5SC3HJ	DX4[N,R], ETO4, **FX**[**S**,T][**1**,2,3,5], and TO4
5SCU7B, SAC1BG	**EM4**[**C**,H] and PLR[1,2]
5SCU7C, SAC1BF	**FX**[**O**,P][**1**,2,3,5] and TD[O,S][A,B,C,D]
5SCU48, 5SC143	**OCU**
5SCTFF	**OCU** and SW56
SAC1CS	**PG5**, PG8, PG15, and PG20

The following table lists the function codes. The function code depends on the functional *CLEI* code.

CAUTION:
Undesirable ringing on the subscriber line can occur when you use the default (LS) function code rather than the appropriate function codes (AC, LO, and LR, respectively) for the AUA45, AUA45B, and AUA75 equipped channel units. The AUA45, AUA45B, and AUA75 channel units cannot be distinguished from other POTS/SPOTS-like channel units (for example, AUA25, AUA25B, AUA27, AUA51, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, and AUA179) for which the default function code (LS) is appropriate. Please refer to function code entries AC, LR, and LS in this section.

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.2 (continued)

Function Code	Description
AC	Manual ring down
BRI	Basic rate interface transmission extension (BRITE) for integrated services digital network (ISDN). Basic rate interface (BRI) is provided through the AUA293 and AUA93 CUs.
DATA	Digital data
DFLT	Defaults (for TR-08 VRTs) to equipped function (circuit function determined by installed channel unit). The function code for certain CUs can be derived from the equipment in addition to being explicitly specified. This includes POTS, multiparty (MP), coin, frequency selective ringing (FSR), direct inward dial (DID), manual ringdown, private line automatic ring (PLAR), and DC bypass pair or alarm channel units. Default for TR-303 VRTs is 2-wire loop start (LS). You must explicitly provision other functions using the appropriate function code.
DPO	2-wire dial-pulse originating
DPT	2-wire dial-pulse terminating
DX4N	4-wire duplex with duplex signaling and signaling leads normal
DX4R	4-wire duplex with duplex signaling and signaling leads reversed
EBS	Enhanced Business Service (EBS) (P-Phone)
EM4C	E&M signaling, type I
EM4H	E&M signaling, type II
ETO4	4-wire equalized transmission only, no DC signaling
FXO	2-wire foreign exchange, office end
FXO1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal and no toll diversion
FXO2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and no toll diversion
FXO3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and no toll diversion
FXO5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and no toll diversion

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ED-T0 (Continued)

Parameters for R4.2 (continued)

Function Code	Description
FXP1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal, and toll diversion
FXP2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and toll diversion
FXP3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and toll diversion
FXP5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and toll diversion
FXS	2-wire foreign exchange, station end
FXS1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and no toll diversion
FXS2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and no toll diversion
FXS3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and no toll diversion
FXS5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and no toll diversion
FXT1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and toll diversion
FXT2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and toll diversion
FXT3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and toll diversion
FXT5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and toll diversion
GO	2-wire ground start (current sink)
GS	2-wire ground start (current feed)
ISDN	Supported by the system (R4.0 and later software releases) and appears in reports from the DLC subsystem command, RTRV-T0. Cannot be provisioned using the DLC subsystem commands, ENT-T0 or ED-T0 (can only provision ISDN lines with the LDS through the TR-303 EOC). The ISDN function code pertains to the ANSI U-DSL interface supported by the AUA94 and *SPQ*494 CU on TR-303 VRTs.

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ED-T0 (Continued)

Parameters for R4.2 (continued)

Function Code	Description
LO	2-wire loop start (current sink)
LR	Private line automatic ringdown (PLAR)
LS	2-wire loop start (current feed)
NO	2-wire transmission only
OCU	Office channel unit dataport
PG5	Program CU bandwidth settings of 5 kHz or 2 time slots
PG8	Program CU bandwidth settings of 8 kHz or 3 time slots
PG15	Program CU bandwidth settings of 15 kHz or 6 time slots
PG20	Program CU bandwidth settings of 20 kHz or 8 time slots
PLR1	PLR signaling, type I
PLR2	PLR signaling, type II
RVT	2-wire loop reverse battery
SW56	Switched 56 service supported by the dual OCU dataport
TDOA	4-state tandem signaling, type II, signaling leads looped through carrier toward office
TDOB	4-state tandem signaling, type I, signaling leads not looped through carrier toward office
TDOC	2-state tandem signaling, type II, signaling leads looped
TDOD	2-state tandem signaling, type I, signaling leads not looped
TDSA	4-state tandem signaling, type II, signaling leads looped through carrier toward subscriber
TDSB	4-state tandem signaling, type I, signaling leads not looped through carrier toward subscriber
TDSC	2-state tandem signaling, type II, signaling leads looped
TDSD	2-state tandem signaling, type I, signaling leads not looped
TO	2-wire transmission only
TO4	4-wire transmission only, no DC signaling

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ED-T0 (Continued)

Parameters for R4.2 (continued)

ProvisionParameters

Provisioning parameters. The option settings for each function code. The provisioning parameter names are based on the work order record detail (WORD) document abbreviations.

Parameter Name	WORD Abbreviation	User Prompt	User Expert String
–7 dB (J3)	–7DB(J3)	–7 dB(J3)	dBJ3
–7 dB receive	–7DB RCV	–7 dB Receive	dBr
–7 dB transmit	–7DB TRMT	–7 dB Transmit	dBt
A/B signaling	AB	A/BSignaling	ab
All-zero-code allowed	ZC	AllZeroCodeAllowed	zc
Balance	BAL	Balance	bal
Clear channel	CC	ClearChannel	cc
Enhanced switched 56	EH56	Enhanced SW56	eh56
Equalizer bandwidth	BW	Bandwidth	bw
Equalizer height	HT	Height	ht
Equalizer nonloaded/ loaded	L-N	Nonloaded/Loaded	ln
Equalizer slope	SL	Slope	sl
Error correction	EC	ErrorCorrection	ec
Impedance	IMP	Impedance	imp
On-hook transmission	OHT	OnHookTransmission	oht
Quality monitoring	QM	QualityMonitoring	qm
Receive attenuator	RCV	RCV Attenuator	rcv
Receive gain	RCV(GN)	ReceiveGain	rcvgn
Red-lined status	RLS	Redlined	rls
Sealing current	SC	SealingCurrent	sc
Service	SVC	ISDN Channel Service	svc
Signaling type	LS-GS	SignalingType	lsgs
Secondary channel used	SCC	SecondaryChannelUsed	scc
Subscriber data rate	RATE	SubscriberDataRate	rate
Toll diversion	TD	TollDiversion	td
Transmission loss	LS	TransmissionLoss	ls
Transmit and receive impedance	TRMT&RCV(IMP)	TRMT&RCVImpedance	imp
Transmit attenuator	TRMT	TRMT Attenuator	trmt
Transmit gain	XMT(GN)	TransmitGain	xmtgn

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ED-T0 (Continued)

Parameters for R4.2 (continued)

The following tables (shown in alphabetic order) list the valid parameters for *FunctionCode*. When prompting for a parameter value, the default is the current value unless the *CLEI* code or Function code is being changed. Then the default will be the original (default) listed in the following tables.

NOTE:
The *redline* parameter is used by the telephone company to mark redlined circuits, to which a special priority is assigned. The system does not treat redlined channels any differently from non-redlined channels.

The following table lists the AC function code provisioning parameters for apparatus codes AUA45 and AUA45B (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the BRI function code provisioning parameters for apparatus codes AUA293 and AUA93 (*CLEI*=5SC1HE).

NOTE:
DT applications (R4.2 and later software releases) require you to provision the AUA293 and AUA93 CUs using the CIT (set the on-board switches to match the parameter settings provisioned using the CIT). R4.0 and earlier software releases, require you to provision the AUA293 and AUA93 CUs using the on-board switches.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
svc=ISDN channel service	SVC	2B+D, B1+D, B2+D, or D	2B+D
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the DATA function code provisioning parameters for apparatus codes AUA200 and AUA232 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for the POTS, multiparty, coin, FSR, DID, manual ringdown, PLAR, and DC bypass pair or alarm channel units (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for apparatus code *SPQ*456 (*CLEI*=SACPDC).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
ls =Transmission loss	LS	0 or 2.5 dB	0 dB
rls=Redlined	RLS	NO or YES	NO

The following table lists the DPO function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the DPT function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the DX4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the EBS function code provisioning parameters for apparatus code *SPQ*®429 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the EM4C/H function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the ETO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBJ3=–7 dB (J3)	–7DB(J3)	BK or WH	BK
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the FXO function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	900 or 600	900
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
td=TollDiversion	TD	NO or YES	NO
lsgs=SignalingType	LS-GS	GS or LS	GS
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXO/P function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the FXS function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXS/T function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the GO function code provisioning parameters for apparatus codes AUA32, AUA39, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the GS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA51, AUA53, AUA59, AUA150, AUA151, AUA159, AUA159B, AUA179, *SPQ*440, *SPQ*440B, and *SPQ*450 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LO function code provisioning parameters for apparatus codes AUA32, AUA39, *SPQ*300, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LR function code provisioning parameters for apparatus code AUA75 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the LS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA27, AUA51, AUA53, AUA55, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, AUA179, *SPQ*400, *SPQ*440, *SPQ*440B, *SPQ*450, *SPQ*478, and *SPQ*909 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the NO function code provisioning parameters for apparatus codes MCU5205 and MCU5405 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the OCU function code provisioning parameters for apparatus codes AUA52 and AUA152 (*CLEI*=5SCU48).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, or 56 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed	ZC	NO or YES	NO
scc=Secondary channel used	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 kb/s.

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the OCU function code provisioning parameters for apparatus code AUA52B (*CLEI*=5SC143).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 56- or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† When the 64 kb/s rate is selected, the user is not prompted for ZC and SCC. For rate=64 kb/s, ZC and SCC are automatically set to YES.

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the OCU function code provisioning parameters for apparatus codes *SPQ*452 (*CLEI*=5SCTFF).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 38.4, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
qm=quality monitoring	QM	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 38.4-, 56-, or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† You are not prompted for ZC or SCC when you select the 64-kb/s data rate. When rate=64 kb/s, ZC and SCC are automatically set to YES.

The following table lists the PG5, PG8, PG15, and PG20 function code provisioning parameters for apparatus code *PGM*-2000 (*CLEI*=SAC1CS).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the PLR1/2 function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B), AUA54B (*CLEI*=5SCU7B), and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the RVT function code provisioning parameters for apparatus codes AUA56 and AUA56B (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the RVT function code provisioning parameters for apparatus codes *SPQ*456 (*CLEI*=SACPDC).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
ls=Transmission loss	LS	0 or 2.5 dB	0 dB
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the SW56 function code provisioning parameters for apparatus code *SPQ*452 (*CLEI*=5SCTFF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
eh56=Enhanced switched 56	EH56	NO or YES	NO
ab=A/B signaling	AB	NO or YES	NO
qm=Quality monitoring	QM	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDO function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C), AUA44B (*CLEI*=5SCU7C), and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDS function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C), AUA44B (*CLEI*=5SCU7C), and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the TO function code provisioning parameters for apparatus codes AUA42 and AUA142 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), *SPQ*442 (*CLEI*=SAC1AH), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the TO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBt=–7 dB TRMT	–7DB TRMT	BK or WH	BK
dBr=–7 dB RCV	–7DB RCV	BK or WH	BK
sc=SealingCurrent	SC	YES or NO	YES
rls=Redlined	RLS	NO or YES	NO

ED-T0 (Continued)

Parameters for R4.4

Use the following parameters with the ED-T0 command in R4.4 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Physical line AID. The address which identifies the physical line to be provisioned on the metallic channel shelf or in the DT. The following values are valid for this parameter.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}-{1–4}

Default value is the single physical line access identifier (AID) used in the most recent execution of DLC subsystem commands (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, and RTRV-T0) during the current login session. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

CLEI

CLEI Code. The functional *CLEI* code is the first six or seven digits of the *CLEI* code of the channel unit used to provide service on this channel. The values listed in the following table are valid for the *CLEI* code parameter.

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.4 (continued)

Functional *CLEI* Code	Apparatus Codes
5SCU7D	AUA141 and AUA41
5SC3HJ	AUA41B
5SCU69	AUA142 and AUA42
5SCU6E	AUA42B
5SCU6A	AUA43
5SCU6F	AUA43B
5SCU7C	AUA44 and AUA44B
5SCU48	AUA152 and AUA52
5SC143	AUA252, AUA252B, and AUA52B
5SCU7B	AUA54 and AUA54B
5SC1HE	AUA293 and AUA93
5SC18E*	AUA94†
SAC1CS	*PGM*‡-2000
SAC1AH	*SPQ*®442
SAC1AE	*SPQ*443
SAC1BF	*SPQ*444
5SCTFF	*SPQ*452
SAC1BG	*SPQ*454
SACPDC	*SPQ*456
5SC212	*SPQ*494†
Other	AUA150, AUA150C, AUA151, AUA158, AUA158B, AUA158C, AUA159, AUA159B, AUA159C, AUA178, AUA179, AUA200, AUA232, AUA25, AUA25B, AUA27, AUA45, AUA45B, AUA51, AUA53, AUA53B, AUA55, AUA55B, AUA56, AUA56B, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA59B, AUA75, AUA90, MCU5205, MCU5405, *SPQ*400, *SPQ*419, *SPQ*429, *SPQ*440, *SPQ*440B,*SPQ*440C, *SPQ*450, *SPQ*453, *SPQ*478, *SPQ*800, *SPQ*809, *SPQ*810, and *SPQ*909

* The LDS only knows the *SPQ*494. 5SC212 is displayed as the provisioned functional CLEI code.

† The integrated services digital network (ISDN) function code appears in reports when using the DLC subsystem command, RTRV-T0. However, you cannot provision the ISDN function code using the CIT (DLC subsystem commands, ED-T0 and ENT-T0). You must provision ISDN lines through the local digital switch (LDS) using the TR-303 embedded operations channel (EOC).

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Original value for the *CLEI* code is *Other*. Default — the last value entered. You are (user) prompted for an entry when you do not enter a *CLEI* code.

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ED-T0 (Continued)

Parameters for R4.4 (continued)

FunctionCode

Function code. You are given the default value and prompted for an entry when you do not enter a function code. However, if the *CLEI* code for this channel is changed, the default value given will be the bold function code for the entered functional *CLEI* code listed in the following table.

Functional *CLEI* Codes	Function Codes
Other	AC, DATA, **DFLT**, EBS, GO, GS, LO, LR, LS, NO, and RVT
5SC1HE	**BRI**
SACPDC	**DFLT** and RVT
5SCU69, 5SCU6E, SAC1AH	DPT, **FXO**, and TO
5SCU6A, 5SCU6F, SAC1AE	DPO, **FXS**, and TO
5SCU7D, 5SC3HJ	DX4[N,R], ETO4, **FX**[**S**,T][**1**,2,3,5], and TO4
5SCU7B, SAC1BG	**EM4**[**C**,H] and PLR[1,2]
5SCU7C, SAC1BF	**FX**[**O**,P][**1**,2,3,5] and TD[O,S][A,B,C,D]
5SCU48, 5SC143	**OCU**
5SCTFF	**OCU** and SW56
SAC1CS	**PG5**, PG8, PG15, and PG20

The following table lists the function codes. The function code depends on the functional *CLEI* code.

CAUTION:
Undesirable ringing on the subscriber line can occur when you use the default (LS) function code rather than the appropriate function codes (AC, LO, and LR, respectively) for the AUA45, AUA45B, and AUA75 equipped channel units. The AUA45, AUA45B, and AUA75 channel units cannot be distinguished from other POTS/SPOTS-like channel units (for example, AUA25, AUA25B, AUA27, AUA51, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, and AUA179) for which the default function code (LS) is appropriate. Please refer to function code entries AC, LR, and LS in this section.

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.4 (continued)

Function Code	Description
AC	Manual ring down
BRI	Basic rate interface transmission extension (BRITE) for integrated services digital network (ISDN). Basic rate interface (BRI) is provided through the AUA293 and AUA93 CUs.
DATA	Digital data
DFLT	Defaults (for TR-08 VRTs) to equipped function (circuit function determined by installed channel unit). The function code for certain CUs can be derived from the equipment in addition to being explicitly specified. This includes POTS, multiparty (MP), coin, frequency selective ringing (FSR), direct inward dial (DID), manual ringdown, private line automatic ring (PLAR), and DC bypass pair or alarm channel units Default for TR-303 VRTs is 2-wire loop start (LS). You must explicitly provision other functions using the appropriate function code.
DPO	2-wire dial-pulse originating
DPT	2-wire dial-pulse terminating
DX4N	4-wire duplex with duplex signaling and signaling leads normal
DX4R	4-wire duplex with duplex signaling and signaling leads reversed
EBS	Enhanced Business Service (EBS) (P-Phone)
EM4C	E&M signaling, type I
EM4H	E&M signaling, type II
ETO4	4-wire equalized transmission only, no DC signaling
FXO	2-wire foreign exchange, office end
FXO1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal and no toll diversion
FXO2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and no toll diversion
FXO3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and no toll diversion
FXO5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and no toll diversion

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ED-T0 (Continued)

Parameters for R4.4 (continued)

Function Code	Description
FXP1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal, and toll diversion
FXP2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and toll diversion
FXP3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and toll diversion
FXP5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and toll diversion
FXS	2-wire foreign exchange, station end
FXS1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and no toll diversion
FXS2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and no toll diversion
FXS3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and no toll diversion
FXS5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and no toll diversion
FXT1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and toll diversion
FXT2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and toll diversion
FXT3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and toll diversion
FXT5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and toll diversion
GO	2-wire ground start (current sink)
GS	2-wire ground start (current feed)

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ED-T0 (Continued)

Parameters for R4.4 (continued)

Function Code	Description
ISDN	Supported by the system (R4.0 and later software releases) and appears in reports from the DLC subsystem command, RTRV-T0. Cannot be provisioned using the DLC subsystem commands, ENT-T0 or ED-T0 (can only provision ISDN lines with the LDS through the TR-303 EOC). The ISDN function code pertains to the ANSI U-DSL interface supported by the AUA94 and *SPQ*494 CU on TR-303 VRTs.
LO	2-wire loop start (current sink)
LR	Private line automatic ringdown (PLAR)
LS	2-wire loop start (current feed)
NO	2-wire transmission only
OCU	Office channel unit dataport
PG5	Program CU bandwidth settings of 5 kHz or 2 time slots
PG8	Program CU bandwidth settings of 8 kHz or 3 time slots
PG15	Program CU bandwidth settings of 15 kHz or 6 time slots
PG20	Program CU bandwidth settings of 20 kHz or 8 time slots
PLR1	PLR signaling, type I
PLR2	PLR signaling, type II
RVT	2-wire loop reverse battery
SW56	Switched 56 service supported by the dual OCU dataport

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ED-T0 (Continued)

Parameters for R4.4 (continued)

Function Code	Description
TDOA	4-state tandem signaling, type II, signaling leads looped through carrier toward office
TDOB	4-state tandem signaling, type I, signaling leads not looped through carrier toward office
TDOC	2-state tandem signaling, type II, signaling leads looped
TDOD	2-state tandem signaling, type I, signaling leads not looped
TDSA	4-state tandem signaling, type II, signaling leads looped through carrier toward subscriber
TDSB	4-state tandem signaling, type I, signaling leads not looped through carrier toward subscriber
TDSC	2-state tandem signaling, type II, signaling leads looped
TDSD	2-state tandem signaling, type I, signaling leads not looped
TO	2-wire transmission only
TO4	4-wire transmission only, no DC signaling

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ED-T0 (Continued)

Parameters for R4.4 (continued)

ProvisionParameters

Provisioning parameters. The option settings for each function code. The provisioning parameter names are based on the work order record detail (WORD) document abbreviations.

Parameter Name	WORD Abbreviation	User Prompt	User Expert String
–7 dB (J3)	–7DB(J3)	–7 dB(J3)	dBJ3
–7 dB receive	–7DB RCV	–7 dB Receive	dBr
–7 dB transmit	–7DB TRMT	–7 dB Transmit	dBt
A/B signaling	AB	A/BSignaling	ab
All-zero-code allowed	ZC	AllZeroCodeAllowed	zc
Balance	BAL	Balance	bal
Clear channel	CC	ClearChannel	cc
Enhanced switched 56	EH56	Enhanced SW56	eh56
Equalizer bandwidth	BW	Bandwidth	bw
Equalizer height	HT	Height	ht
Equalizer nonloaded/ loaded	L-N	Nonloaded/Loaded	ln
Equalizer slope	SL	Slope	sl
Error correction	EC	ErrorCorrection	ec
Impedance	IMP	Impedance	imp
On-hook transmission	OHT	OnHookTransmission	oht
Quality monitoring	QM	QualityMonitoring	qm
Receive attenuator	RCV	RCV Attenuator	rcv
Receive gain	RCV(GN)	ReceiveGain	rcvgn
Red-lined status	RLS	Redlined	rls
Sealing current	SC	SealingCurrent	sc
Service	SVC	ISDN Channel Service	svc
Signaling type	LS-GS	SignalingType	lsgs
Secondary channel used	SCC	SecondaryChannelUsed	scc
Subscriber data rate	RATE	SubscriberDataRate	rate
Toll diversion	TD	TollDiversion	td
Transmission loss	LS	TransmissionLoss	ls
Transmit and receive impedance	TRMT&RCV(IMP)	TRMT&RCVImpedance	imp
Transmit attenuator	TRMT	TRMT Attenuator	trmt
Transmit gain	XMT(GN)	TransmitGain	xmtgn

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ED-T0 (Continued)

Parameters for R4.4 (continued)

The following tables (shown in alphabetic order) list the valid parameters for *FunctionCode*. When prompting for a parameter value, the default is the current value unless the *CLEI* code or Function code is being changed. Then the default will be the original (default) listed in the following tables.

NOTE:
The *redline* parameter is used by the telephone company to mark redlined circuits, to which a special priority is assigned. The system does not treat redlined channels any differently from non-redlined channels.

The following table lists the AC function code provisioning parameters for apparatus codes AUA45 and AUA45B (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the BRI function code provisioning parameters for apparatus codes AUA293 and AUA93 (*CLEI*=5SC1HE).

NOTE:
DT applications (R4.2 and later software releases) require you to provision the AUA293 and AUA93 CUs using the CIT (set the on-board switches to match the parameter settings provisioned using the CIT). R4.0 and earlier software releases, require you to provision the AUA293 and AUA93 CUs using the on-board switches.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
svc=ISDN channel service	SVC	2B+D, B1+D, B2+D, or D	2B+D
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the DATA function code provisioning parameters for apparatus codes AUA200 and AUA232 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for the POTS, multiparty, coin, FSR, DID, manual ringdown, PLAR, and DC bypass pair or alarm channel units (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for apparatus code *SPQ*456 (*CLEI*=SACPDC).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
ls =Transmission loss	LS	0 or 2.5 dB	0 dB
rls=Redlined	RLS	NO or YES	NO

The following table lists the DPO function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	−1.0 to 6.75 in steps of 0.25	−1.0
rcvgn=ReceiveGain	RCV(GN)	−8.0 to 1.5 in steps of 0.25	−8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the DPT function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the DX4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the EBS function code provisioning parameters for apparatus code *SPQ* 429 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the EM4C/H function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the ETO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBJ3=–7 dB (J3)	–7DB(J3)	BK or WH	BK
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the FXO function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	900 or 600	900
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
td=TollDiversion	TD	NO or YES	NO
lsgs=SignalingType	LS-GS	GS or LS	GS
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXO/P function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the FXS function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXS/T function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the GO function code provisioning parameters for apparatus codes AUA32, AUA39, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the GS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA51, AUA53, AUA59, AUA150, AUA151, AUA159, AUA159B, AUA179, *SPQ*440, *SPQ*440B, and *SPQ*450 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LO function code provisioning parameters for apparatus codes AUA32, AUA39, *SPQ*300, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LR function code provisioning parameters for apparatus code AUA75 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the LS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA27, AUA51, AUA53, AUA55, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, AUA179, *SPQ*400, *SPQ*440, *SPQ*440B, *SPQ*450, *SPQ*478, and *SPQ*909 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the NO function code provisioning parameters for apparatus codes MCU5205 and MCU5405 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the OCU function code provisioning parameters for apparatus codes AUA52 and AUA152 (*CLEI*=5SCU48).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, or 56 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed	ZC	NO or YES	NO
scc=Secondary channel used	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 kb/s.

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ED-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the OCU function code provisioning parameters for apparatus code AUA52B (*CLEI*=5SC143).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 56- or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† When the 64 kb/s rate is selected, the user is not prompted for ZC and SCC. For rate=64 kb/s, ZC and SCC are automatically set to YES.

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ED-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the OCU function code provisioning parameters for apparatus codes *SPQ*452 (*CLEI*=5SCTFF).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 38.4, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
qm=quality monitoring	QM	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 38.4-, 56-, or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† You are not prompted for ZC or SCC when you select the 64-kb/s data rate. When rate=64 kb/s, ZC and SCC are automatically set to YES.

The following table lists the PG5, PG8, PG15, and PG20 function code provisioning parameters for apparatus code *PGM*-2000 (*CLEI*=SAC1CS).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the PLR1/2 function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the RVT function code provisioning parameters for apparatus codes AUA56 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the RVT function code provisioning parameters for apparatus codes *SPQ*456 (*CLEI*=SACPDC).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
ls=Transmission loss	LS	0 or 2.5 dB	0 dB
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the SW56 function code provisioning parameters for apparatus code *SPQ*452 (*CLEI*=5SCTFF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
eh56=Enhanced switched 56	EH56	NO or YES	NO
ab=A/B signaling	AB	NO or YES	NO
qm=Quality monitoring	QM	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDO function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDS function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the TO function code provisioning parameters for apparatus codes AUA42 and AUA142 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), *SPQ*442 (*CLEI*=SAC1AH), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the TO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBt=–7 dB TRMT	–7DB TRMT	BK or WH	BK
dBr=–7 dB RCV	–7DB RCV	BK or WH	BK
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

ED-T0 (Continued)

Parameters for R4.5

Use the following parameters with the ED-T0 command in R4.5 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Physical line AID. The address which identifies the physical line to be provisioned on the metallic channel shelf or in the DT. The following values are valid for this parameter.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}-{1–6}-{1–4}

Default value is the single physical line access identifier (AID) used in the most recent execution of DLC subsystem commands (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, and RTRV-T0) during the current login session. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

CLEI

CLEI Code. The functional *CLEI* code is the first six or seven digits of the *CLEI* code of the channel unit used to provide service on this channel. The values listed in the following table are valid for the *CLEI* code parameter.

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.5 (continued)

Functional *CLEI* Code	Apparatus Codes
5SCU7D	AUA141 and AUA41
5SC3HJ	AUA41B
5SCU69	AUA142 and AUA42
5SCU6E	AUA42B
5SCU6A	AUA43
5SCU6F	AUA43B
5SCU7C	AUA44 and AUA44B
5SCU48	AUA152 and AUA52
5SC143	AUA252, AUA252B, and AUA52B
5SCU7B	AUA54 and AUA54B
5SC1HE	AUA293 and AUA93
5SC18E *	AUA94 † and AUA94B †
SAC1CS	*PGM* ‡-2000
SAC1AH	*SPQ* ®442
SAC1AE	*SPQ*443
SAC1BF	*SPQ*444
5SCTFF	*SPQ*452
SAC1BG	*SPQ*454
SACPDC	*SPQ*456
5SC212	*SPQ*494 †
Other	AUA150, AUA150C, AUA151, AUA158, AUA158B, AUA158C, AUA159, AUA159B, AUA159C, AUA178, AUA179, AUA200, AUA232, AUA25, AUA25B, AUA27, AUA45, AUA45B, AUA51, AUA53, AUA53B, AUA55, AUA55B, AUA56, AUA56B, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA59B, AUA75, AUA90, MCU5205, MCU5405, *SPQ*400, *SPQ*419, *SPQ*429, *SPQ*440, *SPQ*440B,*SPQ*440C, *SPQ*450, *SPQ*453, *SPQ*478, *SPQ*800, *SPQ*809, *SPQ*810, *SPQ*811, and *SPQ*909

* The LDS only knows the *SPQ*494. 5SC212 is displayed as the provisioned functional CLEI code.

† You can provision the ISDN function code using the CIT (DLC subsystem commands, ED-T0 and ENT-T0) or through the local digital switch (LDS) using the TR-303 embedded operations channel (EOC). The integrated services digital network (ISDN) function code appears in reports when using the DLC subsystem command, RTRV-T0.

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Original value for the *CLEI* code is *Other*. Default — the last value entered. You are (user) prompted for an entry when you do not enter a *CLEI* code.

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ED-T0 (Continued)

Parameters for R4.5 (continued)

FunctionCode

Function code. You are given the default value and prompted for an entry when you do not enter a function code. However, if the *CLEI* code for this channel is changed, the default value given will be the bold function code for the entered functional *CLEI* code listed in the following table.

Functional *CLEI* Codes	Function Codes
Other	AC, DATA, **DFLT**, EBS, GO, GS, LO, LR, LS, NO, and RVT
5SC1JE, 5SC1HE	**BRI**
SACPDC	**DFLT** and RVT
5SCU69, 5SCU6E, SAC1AH	DPT, **FXO**, and TO
5SCU6A, 5SCU6F, SAC1AE	DPO, **FXS**, and TO
5SCU7D, 5SC3HJ	DX4[N,R], ETO4, **FX**[**S**,T][**1**,2,3,5], and TO4
5SCU7B, SAC1BG	**EM4**[**C**,H] and PLR[1,2]
5SCU7C, SAC1BF	**FX**[**O**,P][**1**,2,3,5] and TD[O,S][A,B,C,D]
5SC18E, 5SC212	**ISDN**
5SCU48, 5SC143	**OCU**
5SCTFF	**OCU** and SW56
SAC1CS	**PG5**, PG8, PG15, and PG20

The following table lists the function codes. The function code depends on the functional *CLEI* code.

CAUTION:
Undesirable ringing on the subscriber line can occur when you use the default (LS) function code rather than the appropriate function codes (AC, LO, and LR, respectively) for the AUA45, AUA45B, and AUA75 equipped channel units. The AUA45, AUA45B, and AUA75 channel units cannot be distinguished from other POTS/SPOTS-like channel units (for example, AUA25, AUA25B, AUA27, AUA51, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, and AUA179) for which the default function code (LS) is appropriate. Please refer to function code entries AC, LR, and LS in this section.

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ED-T0 (Continued)

Parameters for R4.5 (continued)

Function Code	Description
AC	Manual ring down
BRI	Basic rate interface transmission extension (BRITE) for integrated services digital network (ISDN). Basic rate interface (BRI) is provided through the AUA293 and AUA93 CUs.
DATA	Digital data
DFLT	Defaults (for TR-08 VRTs) to equipped function (circuit function determined by installed channel unit). The function code for certain CUs can be derived from the equipment in addition to being explicitly specified. This includes POTS, multiparty (MP), coin, frequency selective ringing (FSR), direct inward dial (DID), manual ringdown, private line automatic ring (PLAR), and DC bypass pair or alarm channel units Default for TR-303 VRTs is 2-wire loop start (LS). You must explicitly provision other functions using the appropriate function code.
DPO	2-wire dial-pulse originating
DPT	2-wire dial-pulse terminating
DX4N	4-wire duplex with duplex signaling and signaling leads normal
DX4R	4-wire duplex with duplex signaling and signaling leads reversed
EBS	Enhanced Business Service (EBS) (P-Phone)
EM4C	E&M signaling, type I
EM4H	E&M signaling, type II
ETO4	4-wire equalized transmission only, no DC signaling
FXO	2-wire foreign exchange, office end
FXO1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal and no toll diversion
FXO2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and no toll diversion
FXO3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and no toll diversion
FXO5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and no toll diversion

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ED-T0 (Continued)

Parameters for R4.5 (continued)

Function Code	Description
FXP1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal, and toll diversion
FXP2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and toll diversion
FXP3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and toll diversion
FXP5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and toll diversion
FXS	2-wire foreign exchange, station end
FXS1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and no toll diversion
FXS2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and no toll diversion
FXS3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and no toll diversion
FXS5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and no toll diversion
FXT1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and toll diversion
FXT2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and toll diversion
FXT3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and toll diversion
FXT5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and toll diversion
GO	2-wire ground start (current sink)
GS	2-wire ground start (current feed)

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ED-T0 (Continued)

Parameters for R4.5 (continued)

Function Code	Description
ISDN	Integrated Services Digital Network. Can be provisioned using the DLC subsystem commands, ENT-T0 and ED-T0, or through the LDS using the TR-303 EOC. The ISDN function code pertains to the ANSI U-DSL interface supported by the AUA94, AUA94B, and *SPQ*494 CUs on TR-303 VRTs. Appears in reports as a result of the DLC subsystem command, RTRV-T0.
LO	2-wire loop start (current sink)
LR	Private line automatic ringdown (PLAR)
LS	2-wire loop start (current feed)
NO	2-wire transmission only
OCU	Office channel unit dataport
PG5	Program CU bandwidth settings of 5 kHz or 2 time slots
PG8	Program CU bandwidth settings of 8 kHz or 3 time slots
PG15	Program CU bandwidth settings of 15 kHz or 6 time slots
PG20	Program CU bandwidth settings of 20 kHz or 8 time slots
PLR1	PLR signaling, type I
PLR2	PLR signaling, type II
RVT	2-wire loop reverse battery
SW56	Switched 56 service supported by the dual OCU dataport

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ED-T0 (Continued)

Parameters for R4.5 (continued)

Function Code	Description
TDOA	4-state tandem signaling, type II, signaling leads looped through carrier toward office
TDOB	4-state tandem signaling, type I, signaling leads not looped through carrier toward office
TDOC	2-state tandem signaling, type II, signaling leads looped
TDOD	2-state tandem signaling, type I, signaling leads not looped
TDSA	4-state tandem signaling, type II, signaling leads looped through carrier toward subscriber
TDSB	4-state tandem signaling, type I, signaling leads not looped through carrier toward subscriber
TDSC	2-state tandem signaling, type II, signaling leads looped
TDSD	2-state tandem signaling, type I, signaling leads not looped
TO	2-wire transmission only
TO4	4-wire transmission only, no DC signaling

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ED-T0 (Continued)

Parameters for R4.5 (continued)

ProvisionParameters

Provisioning parameters. The option settings for each function code. The provisioning parameter names are based on the work order record detail (WORD) document abbreviations.

Parameter Name	WORD Abbreviation	User Prompt	User Expert String
–7 dB (J3)	–7DB(J3)	–7 dB(J3)	dBJ3
–7 dB receive	–7DB RCV	–7 dB Receive	dBr
–7 dB transmit	–7DB TRMT	–7 dB Transmit	dBt
A/B signaling	AB	A/BSignaling	ab
All-zero-code allowed	ZC	AllZeroCodeAllowed	zc
Balance	BAL	Balance	bal
Clear channel	CC	ClearChannel	cc
Enhanced switched 56	EH56	Enhanced SW56	eh56
Equalizer bandwidth	BW	Bandwidth	bw
Equalizer height	HT	Height	ht
Equalizer nonloaded/ loaded	L-N	Nonloaded/Loaded	ln
Equalizer slope	SL	Slope	sl
Error correction	EC	ErrorCorrection	ec
Impedance	IMP	Impedance	imp
On-hook transmission	OHT	OnHookTransmission	oht
Quality monitoring	QM	QualityMonitoring	qm
Receive attenuator	RCV	RCV Attenuator	rcv
Receive gain	RCV(GN)	ReceiveGain	rcvgn
Red-lined status	RLS	Redlined	rls
Sealing current	SC	SealingCurrent	sc
Service	SVC	ISDN Channel Service	svc
Signaling type	LS-GS	SignalingType	lsgs
Secondary channel used	SCC	SecondaryChannelUsed	scc
Subscriber data rate	RATE	SubscriberDataRate	rate
Toll diversion	TD	TollDiversion	td
Transmission loss	LS	TransmissionLoss	ls
Transmit and receive impedance	TRMT&RCV(IMP)	TRMT&RCVImpedance	imp
Transmit attenuator	TRMT	TRMT Attenuator	trmt
Transmit gain	XMT(GN)	TransmitGain	xmtgn

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ED-T0 (Continued)

Parameters for R4.5 (continued)

The following tables (shown in alphabetic order) list the valid parameters for *FunctionCode*. When prompting for a parameter value, the default is the current value unless the *CLEI* code or Function code is being changed. Then the default will be the original (default) listed in the following tables.

NOTE:
The *redline* parameter is used by the telephone company to mark redlined circuits, to which a special priority is assigned. The system does not treat redlined channels any differently from non-redlined channels.

The following table lists the AC function code provisioning parameters for apparatus codes AUA45 and AUA45B (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the BRI function code provisioning parameters for apparatus codes AUA293 and AUA93 (*CLEI*=5SC1HE).

NOTE:
DT applications (R4.2 and later software releases) require you to provision the AUA293 and AUA93 CUs using the CIT (set the on-board switches to match the parameter settings provisioned using the CIT). R4.0 and earlier software releases, require you to provision the AUA293 and AUA93 CUs using the on-board switches.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
svc=ISDN channel service	SVC	2B+D, B1+D, B2+D, or D	2B+D
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the DATA function code provisioning parameters for apparatus codes AUA200 and AUA232 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for the POTS, multiparty, coin, FSR, DID, manual ringdown, PLAR, and DC bypass pair or alarm channel units (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for apparatus code *SPQ*456 (*CLEI*=SACPDC).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
ls =Transmission loss	LS	0 or 2.5 dB	0 dB
rls=Redlined	RLS	NO or YES	NO

The following table lists the DPO function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the DPT function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the DX4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the EBS function code provisioning parameters for apparatus code *SPQ* 429 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the EM4C/H function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the ETO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBJ3=–7 dB (J3)	–7DB(J3)	BK or WH	BK
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the FXO function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	900 or 600	900
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
td=TollDiversion	TD	NO or YES	NO
lsgs=SignalingType	LS-GS	GS or LS	GS
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXO/P function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the FXS function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXS/T function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the GO function code provisioning parameters for apparatus codes AUA32, AUA39, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the GS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA51, AUA53, AUA59, AUA150, AUA151, AUA159, AUA159B, AUA179, *SPQ*440, *SPQ*440B, and *SPQ*450 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the ISDN function code provisioning parameters for apparatus codes AUA94 (*CLEI*=5SC18E), AUA94B (*CLEI*=5SC18E), and *SPQ*494 (*CLEI*=5SC212). Note that during an audit the LDS may change the provisioning value for the functional CLEI code from 5SC18E to 5SC212.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LO function code provisioning parameters for apparatus codes AUA32, AUA39, *SPQ*300, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LR function code provisioning parameters for apparatus code AUA75 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the LS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA27, AUA51, AUA53, AUA55, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, AUA179, *SPQ*400, *SPQ*440, *SPQ*440B, *SPQ*440C, *SPQ*450, *SPQ*478, and *SPQ*909 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the NO function code provisioning parameters for apparatus codes MCU5205 and MCU5405 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the OCU function code provisioning parameters for apparatus codes AUA52 and AUA152 (*CLEI*=5SCU48).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, or 56 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed	ZC	NO or YES	NO
scc=Secondary channel used	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 kb/s.

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ED-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the OCU function code provisioning parameters for apparatus code AUA52B (*CLEI*=5SC143).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 56- or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† When the 64 kb/s rate is selected, the user is not prompted for ZC and SCC. For rate=64 kb/s, ZC and SCC are automatically set to YES.

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ED-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the OCU function code provisioning parameters for apparatus codes *SPQ*452 (*CLEI*=5SCTFF).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 38.4, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
qm=quality monitoring	QM	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 38.4-, 56-, or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† You are not prompted for ZC or SCC when you select the 64-kb/s data rate. When rate=64 kb/s, ZC and SCC are automatically set to YES.

The following table lists the PG5, PG8, PG15, and PG20 function code provisioning parameters for apparatus code *PGM*-2000 (*CLEI*=SAC1CS).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the PLR1/2 function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the RVT function code provisioning parameters for apparatus codes AUA56 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the RVT function code provisioning parameters for apparatus codes *SPQ*456 (*CLEI*=SACPDC).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
ls=Transmission loss	LS	0 or 2.5 dB	0 dB
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the SW56 function code provisioning parameters for apparatus code *SPQ*452 (*CLEI*=5SCTFF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
eh56=Enhanced switched 56	EH56	NO or YES	NO
ab=A/B signaling	AB	NO or YES	NO
qm=Quality monitoring	QM	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDO function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDS function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the TO function code provisioning parameters for apparatus codes AUA42 and AUA142 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), *SPQ*442 (*CLEI*=SAC1AH), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the TO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBt=–7 dB TRMT	–7DB TRMT	BK or WH	BK
dBr=–7 dB RCV	–7DB RCV	BK or WH	BK
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

ED-T0 (Continued)

Parameters for R4.6

Use the following parameters with the ED-T0 command in R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Physical line AID. The address which identifies the physical line to be provisioned on the metallic channel shelf or in the DT. The following values are valid for this parameter.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}-{1–6}-{1–4}

Default value is the single physical line access identifier (AID) used in the most recent execution of DLC subsystem commands (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, and RTRV-T0) during the current login session. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

CLEI

CLEI Code. The functional *CLEI* code is the first six or seven digits of the *CLEI* code of the channel unit used to provide service on this channel. The values listed in the following table are valid for the *CLEI* code parameter.

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.6 (continued)

Functional *CLEI* Code	Apparatus Codes
5SCU7D	AUA141 and AUA41
5SC3HJ	AUA41B
5SCU69	AUA142 and AUA42
5SCU6E	AUA42B
5SCU6A	AUA43
5SCU6F	AUA43B
5SCU7C	AUA44 and AUA44B
5SCU48	AUA152 and AUA52
5SC143	AUA252, AUA252B, and AUA52B
5SCU7B	AUA54 and AUA54B
5SC1HE	AUA293 and AUA93
5SC18E *	AUA94 † and AUA94B †
SAC1CS	*PGM* ‡-2000
SAC1AH	*SPQ* ® 442
SAC1AE	*SPQ*443
SAC1BF	*SPQ*444
5SCTFF	*SPQ*452
SAC1BG	*SPQ*454
SACPDC	*SPQ*456
5SC212	*SPQ*494 †
Other	AUA150, AUA150C, AUA151, AUA158, AUA158B, AUA158C, AUA159, AUA159B, AUA159C, AUA178, AUA179, AUA200, AUA232, AUA25, AUA25B, AUA27, AUA45, AUA45B, AUA51, AUA53, AUA53B, AUA55, AUA55B, AUA56, AUA56B, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA59B, AUA75, AUA90, MCU5205, MCU5405, *SPQ*400, *SPQ*401B, *SPQ*419, *SPQ*429, *SPQ*440C, *SPQ*440D, *SPQ*450, *SPQ*453, *SPQ*478, *SPQ*800, *SPQ*809, *SPQ*810, *SPQ*811, and *SPQ*909

* The LDS only knows the *SPQ*494. 5SC212 is displayed as the provisioned functional CLEI code.

† You can provision the ISDN function code using the CIT (DLC subsystem commands, ED-T0 and ENT-T0) or through the local digital switch (LDS) using the TR-303 embedded operations channel (EOC). The integrated services digital network (ISDN) function code appears in reports when using the DLC subsystem command, RTRV-T0.

‡ Trademark of Tollgrade Communications, Inc.

Original value for the *CLEI* code is *Other*. Default — the last value entered. You are (user) prompted for an entry when you do not enter a *CLEI* code.

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ED-T0 (Continued)

Parameters for R4.6 (continued)

FunctionCode

Function code. You are given the default value and prompted for an entry when you do not enter a function code. However, if the *CLEI* code for this channel is changed, the default value given will be the bold function code for the entered functional *CLEI* code listed in the following table.

Functional *CLEI* Codes	Function Codes
Other	AC, DATA, **DFLT**, EBS, GO, GS, LO, LR, LS, NO, and RVT
5SC1JE, 5SC1HE	**BRI**
SACPDC	**DFLT** and RVT
5SCU69, 5SCU6E, SAC1AH	DPT, **FXO**, and TO
5SCU6A, 5SCU6F, SAC1AE	DPO, **FXS**, and TO
5SCU7D, 5SC3HJ	DX4[N,R], ETO4, **FX**[**S**,T][**1**,2,3,5], and TO4
5SCU7B, SAC1BG	**EM4**[**C**,H] and PLR[1,2]
5SCU7C, SAC1BF	**FX**[**O**,P][**1**,2,3,5] and TD[O,S][A,B,C,D]
5SC18E, 5SC212	**ISDN**
5SCU48, 5SC143	**OCU**
5SCTFF	**OCU** and SW56
SAC1CS	**PG5**, PG8, PG15, and PG20

The following table lists the function codes. The function code depends on the functional *CLEI* code.

CAUTION:
Undesirable ringing on the subscriber line can occur when you use the default (LS) function code rather than the appropriate function codes (AC, LO, and LR, respectively) for the AUA45, AUA45B, and AUA75 equipped channel units. The AUA45, AUA45B, and AUA75 channel units cannot be distinguished from other POTS/SPOTS-like channel units (for example, AUA25, AUA25B, AUA27, AUA51, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, and AUA179) for which the default function code (LS) is appropriate. Please refer to function code entries AC, LR, and LS in this section.

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ED-T0 (Continued)

Parameters for R4.6 (continued)

Function Code	Description
AC	Manual ring down
BRI	Basic rate interface transmission extension (BRITE) for integrated services digital network (ISDN). Basic rate interface (BRI) is provided through the AUA293 and AUA93 CUs.
DATA	Digital data
DFLT	Defaults (for TR-08 VRTs) to equipped function (circuit function determined by installed channel unit). The function code for certain CUs can be derived from the equipment in addition to being explicitly specified. This includes POTS, multiparty (MP), coin, frequency selective ringing (FSR), direct inward dial (DID), manual ringdown, private line automatic ring (PLAR), and DC bypass pair or alarm channel units Default for TR-303 VRTs is 2-wire loop start (LS). You must explicitly provision other functions using the appropriate function code.
DPO	2-wire dial-pulse originating
DPT	2-wire dial-pulse terminating
DX4N	4-wire duplex with duplex signaling and signaling leads normal
DX4R	4-wire duplex with duplex signaling and signaling leads reversed
EBS	Enhanced Business Service (EBS) (P-Phone)
EM4C	E&M signaling, type I
EM4H	E&M signaling, type II
ETO4	4-wire equalized transmission only, no DC signaling
FXO	2-wire foreign exchange, office end
FXO1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal and no toll diversion
FXO2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and no toll diversion
FXO3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and no toll diversion
FXO5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and no toll diversion

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ED-T0 (Continued)

Parameters for R4.6 (continued)

Function Code	Description
FXP1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal, and toll diversion
FXP2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and toll diversion
FXP3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and toll diversion
FXP5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and toll diversion
FXS	2-wire foreign exchange, station end
FXS1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and no toll diversion
FXS2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and no toll diversion
FXS3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and no toll diversion
FXS5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and no toll diversion
FXT1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and toll diversion
FXT2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and toll diversion
FXT3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and toll diversion
FXT5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and toll diversion
GO	2-wire ground start (current sink)
GS	2-wire ground start (current feed)

Continued on next page

ED-T0 (Continued)

Parameters for R4.6 (continued)

Function Code	Description
ISDN	Integrated Services Digital Network. Can be provisioned using the DLC subsystem commands, ENT-T0 and ED-T0, or through the LDS using the TR-303 EOC. The ISDN function code pertains to the ANSI U-DSL interface supported by the AUA94, AUA94B, and *SPQ*494 CUs on TR-303 VRTs. Appears in reports as a result of the DLC subsystem command, RTRV-T0.
LO	2-wire loop start (current sink)
LR	Private line automatic ringdown (PLAR)
LS	2-wire loop start (current feed)
NO	2-wire transmission only
OCU	Office channel unit dataport
PG5	Program CU bandwidth settings of 5 kHz or 2 time slots
PG8	Program CU bandwidth settings of 8 kHz or 3 time slots
PG15	Program CU bandwidth settings of 15 kHz or 6 time slots
PG20	Program CU bandwidth settings of 20 kHz or 8 time slots
PLR1	PLR signaling, type I
PLR2	PLR signaling, type II
RVT	2-wire loop reverse battery
SW56	Switched 56 service supported by the dual OCU dataport

Continued on next page

ED-T0 (Continued)

Parameters for R4.6 (continued)

Function Code	Description
TDOA	4-state tandem signaling, type II, signaling leads looped through carrier toward office
TDOB	4-state tandem signaling, type I, signaling leads not looped through carrier toward office
TDOC	2-state tandem signaling, type II, signaling leads looped
TDOD	2-state tandem signaling, type I, signaling leads not looped
TDSA	4-state tandem signaling, type II, signaling leads looped through carrier toward subscriber
TDSB	4-state tandem signaling, type I, signaling leads not looped through carrier toward subscriber
TDSC	2-state tandem signaling, type II, signaling leads looped
TDSD	2-state tandem signaling, type I, signaling leads not looped
TO	2-wire transmission only
TO4	4-wire transmission only, no DC signaling

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.6 (continued)

ProvisionParameters

Provisioning parameters. The option settings for each function code. The provisioning parameter names are based on the work order record detail (WORD) document abbreviations.

Parameter Name	WORD Abbreviation	User Prompt	User Expert String
–7 dB (J3)	–7DB(J3)	–7 dB(J3)	dBJ3
–7 dB receive	–7DB RCV	–7 dB Receive	dBr
–7 dB transmit	–7DB TRMT	–7 dB Transmit	dBt
A/B signaling	AB	A/BSignaling	ab
All-zero-code allowed	ZC	AllZeroCodeAllowed	zc
Balance	BAL	Balance	bal
Clear channel	CC	ClearChannel	cc
Enhanced switched 56	EH56	Enhanced SW56	eh56
Equalizer bandwidth	BW	Bandwidth	bw
Equalizer height	HT	Height	ht
Equalizer nonloaded/ loaded	L-N	Nonloaded/Loaded	ln
Equalizer slope	SL	Slope	sl
Error correction	EC	ErrorCorrection	ec
Impedance	IMP	Impedance	imp
On-hook transmission	OHT	OnHookTransmission	oht
Quality monitoring	QM	QualityMonitoring	qm
Receive attenuator	RCV	RCV Attenuator	rcv
Receive gain	RCV(GN)	ReceiveGain	rcvgn
Red-lined status	RLS	Redlined	rls
Sealing current	SC	SealingCurrent	sc
Service	SVC	ISDN Channel Service	svc
Signaling type	LS-GS	SignalingType	lsgs
Secondary channel used	SCC	SecondaryChannelUsed	scc
Subscriber data rate	RATE	SubscriberDataRate	rate
Toll diversion	TD	TollDiversion	td
Transmission loss	LS	TransmissionLoss	ls
Transmit and receive impedance	TRMT&RCV(IMP)	TRMT&RCVImpedance	imp
Transmit attenuator	TRMT	TRMT Attenuator	trmt
Transmit gain	XMT(GN)	TransmitGain	xmtgn

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.6 (continued)

The following tables (shown in alphabetic order) list the valid parameters for *FunctionCode*. When prompting for a parameter value, the default is the current value unless the *CLEI* code or Function code is being changed. Then the default will be the original (default) listed in the following tables.

NOTE:
The *redline* parameter is used by the telephone company to mark redlined circuits, to which a special priority is assigned. The system does not treat redlined channels any differently from non-redlined channels.

The following table lists the AC function code provisioning parameters for apparatus codes AUA45 and AUA45B (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the BRI function code provisioning parameters for apparatus codes AUA293 and AUA93 (*CLEI*=5SC1HE).

NOTE:
DT applications (R4.2 and later software releases) require you to provision the AUA293 and AUA93 CUs using the CIT (set the on-board switches to match the parameter settings provisioned using the CIT). R4.0 and earlier software releases, require you to provision the AUA293 and AUA93 CUs using the on-board switches.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
svc=ISDN channel service	SVC	2B+D, B1+D, B2+D, or D	2B+D
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the DATA function code provisioning parameters for apparatus codes AUA200 and AUA232 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for the POTS, multiparty, coin, FSR, DID, manual ringdown, PLAR, and DC bypass pair or alarm channel units (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for apparatus code *SPQ*456 (*CLEI*=SACPDC).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
ls =Transmission loss	LS	0 or 2.5 dB	0 dB
rls=Redlined	RLS	NO or YES	NO

The following table lists the DPO function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the DPT function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the DX4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the EBS function code provisioning parameters for apparatus code *SPQ* 429 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the EM4C/H function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the ETO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBJ3=–7 dB (J3)	–7DB(J3)	BK or WH	BK
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the FXO function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	900 or 600	900
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
td=TollDiversion	TD	NO or YES	NO
lsgs=SignalingType	LS-GS	GS or LS	GS
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXO/P function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the FXS function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXS/T function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the GO function code provisioning parameters for apparatus codes AUA32, AUA39, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the GS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA51, AUA53, AUA59, AUA150, AUA151, AUA159, AUA159B, AUA179, *SPQ*440C, *SPQ*440D, and *SPQ*450 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the ISDN function code provisioning parameters for apparatus codes AUA94 (*CLEI*=5SC18E), AUA94B (*CLEI*=5SC18E), and *SPQ*494 (*CLEI*=5SC212). Note that during an audit the LDS may change the provisioning value for the functional CLEI code from 5SC18E to 5SC212.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LO function code provisioning parameters for apparatus codes AUA32, AUA39, *SPQ*300, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LR function code provisioning parameters for apparatus code AUA75 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

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ED-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the LS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA27, AUA51, AUA53, AUA55, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, AUA179, *SPQ*400, *SPQ*401B, *SPQ*440C, *SPQ*440D, *SPQ*450, *SPQ*478, and *SPQ*909 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the NO function code provisioning parameters for apparatus codes MCU5205 and MCU5405 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the OCU function code provisioning parameters for apparatus codes AUA52 and AUA152 (*CLEI*=5SCU48).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, or 56 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed	ZC	NO or YES	NO
scc=Secondary channel used	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 kb/s.

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the OCU function code provisioning parameters for apparatus code AUA52B (*CLEI*=5SC143).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 56- or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† When the 64 kb/s rate is selected, the user is not prompted for ZC and SCC. For rate=64 kb/s, ZC and SCC are automatically set to YES.

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ED-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the OCU function code provisioning parameters for apparatus codes *SPQ*452 (*CLEI*=5SCTFF).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 38.4, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
qm=quality monitoring	QM	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 38.4-, 56-, or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† You are not prompted for ZC or SCC when you select the 64-kb/s data rate. When rate=64 kb/s, ZC and SCC are automatically set to YES.

The following table lists the PG5, PG8, PG15, and PG20 function code provisioning parameters for apparatus code *PGM*-2000 (*CLEI*=SAC1CS).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the PLR1/2 function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the RVT function code provisioning parameters for apparatus codes AUA56 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the RVT function code provisioning parameters for apparatus codes *SPQ*456 (*CLEI*=SACPDC).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
ls=Transmission loss	LS	0 or 2.5 dB	0 dB
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the SW56 function code provisioning parameters for apparatus code *SPQ*452 (*CLEI*=5SCTFF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
eh56=Enhanced switched 56	EH56	NO or YES	NO
ab=A/B signaling	AB	NO or YES	NO
qm=Quality monitoring	QM	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDO function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDS function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ED-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the TO function code provisioning parameters for apparatus codes AUA42 and AUA142 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), *SPQ*442 (*CLEI*=SAC1AH), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the TO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBt=–7 dB TRMT	–7DB TRMT	BK or WH	BK
dBr=–7 dB RCV	–7DB RCV	BK or WH	BK
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

ED-T0 (Continued)

Example

The following ED-T0 command provisions the attributes of a physical line at drop-2-1-1 to the values of 2W FXS service through an *SPQ*443 channel unit.

```
ED-T0::drop-2-1-1:::sac1ae,fxs;
```

The following ED-T0 command adjusts the transmit gain of the physical line at the default AID (set in the previous example).

```
ED-T0:::::,:xmtgn=0;
```

The following ED-T0 command sets the transmit and receive gains of the physical line at the default AID (set in the previous example).

```
ED-T0:::::,:xmtgn=0;
```

The following ED-T0 command edits the attributes of the physical line at drop-1-12-1 for ISDN service through the *SPQ*494 CU (R4.5 and later software releases).

```
ED-T0::drop-1-12-1:::5sc212,ISDN;
```

ED-T0 (Continued)

Response

Confirmation

NOTE:
The confirmation message displayed may differ according to the *CLEI* and *FunctionCode* parameters that you choose.

The ED-T0 command requires confirmation. The following message is an example of what is displayed when you enter the ED-T0 command.

```
/* Caution! Execution of this command may affect service. */

/* You have selected the ed-t0 command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = [Access Identifier]
         CLEI = [CLEI code]
         FunctionCode = [Function code]
         TRMT Attenuator = [value]
         RCV Attenuator = [value]
         Nonloaded/Loaded = [N/L]
         Slope = [value]
         Bandwidth = [value]
         Height = [value]
         TRMT & RCV Impedance = [value]
         Redlined = [YES/NO]

Execute? (y/n or CANcel/DELete to quit) =
;
```

Completion

The completion of the ED-T0 command is recorded in the history log.

(Continued on next page)

ED-T0 (Continued)

Response (continued)

Error

The ED-T0 command is denied and the following message is displayed when the NVDS has failed.

```
SSTP
/* Status, SToPped,
   Data memory failed. */
;
```

The ED-T0 command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

The ED-T0 command is denied and the following message is displayed when you attempt to provision DT channels 1 and 2 for DDS and channels 3 and 4 of the DT Server slot are cross-connected.

```
SROF
/* Status, Requested Operation Failed */
;
```

The ED-T0 command is denied and the following message is displayed when the NVDS is not ready for database changes. Retry the ED-T0 command in a few minutes.

```
SSTP
/* Status, SToPped,
   Data memory initializing or not available. */
;
```

(Continued on next page)

ED-T0 (Continued)

Response (continued)

The following error message is displayed when the ED-T0 command is received for a line which is in the OOS-MA-UAS state.

```
SNVS
/* Status, Not in Valid State,
   PST=OOS-MA-UAS */
;
```

The following error message is displayed when the ED-T0 command is used to change an ISDN line to a non-ISDN line.

```
SNVS
/* Status, Not in Valid State,
   Cannot change an ISDN line with D channel XCONS to a NON-ISDN line. */
;
```

The following error message is displayed when the ED-T0 command is used to change a line (non-ISDN) to be an ISDN line and no T0 cross connect exists.

```
SNVS
/* Status, Not in Valid State,
   Cannot edit an ISDN line when T0 crossconnect does not exist for TR-303 VRT. */
;
```

The following error message is displayed when the physical line to be provisioned is cross-connected to a logical VRT that is set for TR-08 Mode 2 or TR-303.

```
CNYI
/* Command Not Yet Implemented */
;
```

Related commands

The following DLC subsystem commands are related to the ED-T0 command.

- CPY-T0
- DLT-T0
- ENT-T0
- RTRV-T0

ED-T1

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the ED-T1 command.

ED-T1:[tid]:aid:[ctag]:::[EQLZ=Equalization][,LINECDE=LineCode]:[pst];

Command name

Enter attributes for feeder DS1 ports.

Can command be aborted?

No.

Purpose

Enter the ED-T1 command to provision the feeder DS1 port parameters. The ED-T1 command is similar to the SONET subsystem command, set-t1.

Parameters

Use the following parameters with the ED-T1 command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Access identifier. The address of the port for which the ED-T1 command is intended. The *aid* is a required parameter and must reference the valid feeder DS1 ports of the system in order to be accepted. Valid values are a-{1–7}-{1–4}.

If the specified DS1 corresponds to any DS1 of a TR-303 VRT, then you *cannot* specify AMI (ZCS) for the LINECDE parameter. Specify B8ZS for the LINECDE parameter for all DS1 feeders associated with the TR-303 VRT.

(Continued on next page)

ED-T1 (Continued)

Parameters (continued)

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

EQLZ

DS1 equalization. In a DS1 metallic feeder configuration, equalization is used to specify the maximum distance of the cable between the system and the DSX-1. The cable is assumed to be 22- or 26-G PIC or equivalent (refer to the following table for DS1 feeder cable lengths and loss).

Approximate Cable Length (Feet)		
22-G	**26-G**	**Other Cable (db loss @ 772 kHz)**
0 to 133	0 to 90	0 to 0.6
>133 to 267	>90 to 180	0.6 to 1.2
>267 to 400	>180 to 270	1.2 to 1.8
>400 to 533	>270 to 360	1.8 to 2.4
>533 to 665	>360 to 450	2.4 to 2.8

In a SONET feeder configuration, this parameter is accepted but has no effect other than to change internally stored data.

Valid values are {0–665}.

Default — the current value.

(Continued on next page)

ED-T1 (Continued)

Parameters (continued)

LINECDE

Line coding. The DS1 line coding. Valid values are {AMI and B8ZS}.

- AMI — Alternate mark inversion. When set for AMI, zero code suppression (ZCS) is employed by the system to maintain the required one's density on the DS1 signal. This is used in networks that do not support B8ZS [for example, interfaces to digital carrier line unit (DCLU)].
- B8ZS — bipolar with 8 zero substitution coding.

If the specified DS1 corresponds to a TR-303 VRT, the pulse density assurance technique (PDAT) is derived from the LINECDE parameter.

- LINECDE=AMI, then PDAT=ZCS
- LINECDE=B8ZS, then PDAT=B8ZS

pst

Primary state. This position-defined parameter is used to set the primary state of the feeder DS1 port(s) addressed by the *aid* field. Valid values are {NoChange and OOS-MT-AUTO}.

Default is NoChange.

Example

The following ED-T1 command sets the DS1 equalization and line coding of physical feeder a-7-4 to 655 and B8ZS.

```
ED-T1::a-7-4::::eqlz=655,linecde-b8zs;
```

ED-T1 (Continued)

Response

Confirmation

The ED-T1 command requires confirmation. The following confirmation message is displayed when you enter the ED-T1 command.

```
/* Caution! Execution of this command may affect service. */

/* You have selected the ed-t1 command with these parameters: */
/* Review of Parameter Responses ...  */
        Address = [Access Identifier]
        Equalization = [value]
        LineCode = [Line code]
        PrimaryState = [Primary state]

Execute? (y/n or CANcel/DELete to quit) =
;
```

Error

The ED-T1 command is denied and the following message is displayed when the NVDS has failed.

```
SSTP
/* Status, SToPped,
   Data memory failed. */
;
```

The ED-T1 command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

The ED-T1 command is denied and the following message is displayed when the specified *aid* is cross-connected to DS1 #1 or #2 of a TR-303 VRT, and LINECDE is specified as AMI.

```
IDNC
/* Input, Data Not Consistent,
   LINECDE cannot specify AMI when AID is cross-connected to
   v3fdr-1-1 or v3fdr-1-2. */
;
```

ENT-CRS-T0

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the ENT-CRS-T0 command.

ENT-CRS-T0:[tid]:Address1,Address2:[ctag];

Command name

Create a DS0 cross-connection.

Can command be aborted?

No.

Purpose

Enter the ENT-CRS-T0 command to create a cross-connection between a logical VRT line or logical INA DS0 and a physical line or integral test head (ITH) link. Refer to 363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide*.

All cross-connections are two-way cross-connections.

ENT-CRS-T0 (Continued)

Parameters for R3.1, R3.2, and R3.3

Use the following parameters with the ENT-CRS-T0 command in R3.1, R3.2, and R3.3 of the *SLC*-2000 Access System.

NOTE:
When *all* address is used as part of an address to cross-connect entire groups of signals, the multiple addresses are mapped into individual addresses directly one to one. Therefore, only addresses where the total number of connections is the same for *Address1* and *Address2* are valid.

Use the following parameters with the ENT-CRS-T0 command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address1

Access identifier. The address of the logical VRT line or the logical INA DS0 to be cross-connected to a physical line or ITH link. No input is allowed after the parameter *all* is entered in the *Address1* AID string. The following values are valid for this parameter.

- vrtdp-{1–8,all}-{1–96,all}
- inads0-{1–28,all}-{1–24,all}

Default — none, you *must* enter a value.

Address2

Access identifier. The address of the physical line or ITH link to be cross-connected to a logical line. No input is allowed after the parameter *all* is entered in the *Address1* AID string. The following values are valid for this parameter.

- drop-{1–8,all}-{1–24,all}-{1–4,all}
- dtdp-{1–8,all}-{1,3,5,7,13,15,17,19,all}-{1–6,all}-{1–4,all}
- ithlink-{1–3}

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

ENT-CRS-T0 (Continued)

Parameters for R4.0

Use the following parameters with the ENT-CRS-T0 command in R4.0 of the *SLC*-2000 Access System.

NOTE:
When *all* or range addresses are used as part of an address to cross-connect entire groups of signals, the multiple addresses are mapped into individual addresses directly one to one. Therefore, only addresses where the total number of connections is the same for *Address1* and *Address2* are valid.

Use the following parameters with the ENT-CRS-T0 command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address1

Access identifier. The address of the logical VRT line or the logical INA DS0 to be cross-connected to a physical line or ITH link. No input is allowed after the parameter *all* is entered in the *Address1* AID string. The following values (*&&* is a range operator) are valid for this parameter:

- vrtdp-{1–8,A&&A´,all}-{1–96,B&&B´,all}
- v3dp-1-{1–1536,C&&C´,all}
- inads0-{1–28,D&&D´,all}-{1–24,E&&E´,all}

Mnemonic	Address	Range Value	Requirement
A	TR-08 VRT	1–8	A≤A´
B	TR-08 channel	1–96	B≤B´
C	TR-303 channel	1–1536	C≤C´
D	INA DS1	1–28	D≤D´
E	DS0 within an INA DS1	1–24	E≤E´

Default — none, you *must* enter a value.

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ENT-CRS-T0 (Continued)

Parameters for R4.0 (continued)

Address2

Access identifier. The address of the physical line or ITH link to be cross-connected to a logical line. No input is allowed after the parameter *all* is entered in the *Address1* AID string. The following values (*&&* is a range operator) are valid for this parameter:

- drop-{1–8,F&&F´,all}-{1–24,G&&G´,all}-{1–4,H&&H´,all}
- dtdp-{1–8,F&&F´,all}-{1,3,5,7,13,15,17,19,I&&I´,all}-{1–6,J&&J´,all}-{1–4,H&&H´,all}
- ithlink-{1–2,K&&K´}

Mnemonic	Address	Range Value	Requirement
F	MDS shelf	1–8	F≤F´
G	RT slot	1–24	G≤G´
H	Circuit on a channel unit	1–4	H≤H´
I	DT Server slot	1, 3, 5, 7, 13, 15, 17, and 19	I≤I´
J	DT slot	1–6	J≤J´
K	ITH link	1–2	K≤K´

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

ENT-CRS-T0 (Continued)

Parameters for R4.2 and R4.4

Use the following parameters with the ENT-CRS-T0 command in R4.2 and R4.4 of the *SLC*-2000 Access System.

NOTE:
When *all* or range addresses are used as part of an address to cross-connect entire groups of signals, the multiple addresses are mapped into individual addresses directly one to one. Therefore, only addresses where the total number of connections is the same for *Address1* and *Address2* are valid.

Use the following parameters with the ENT-CRS-T0 command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address1

Access identifier. The address of the logical VRT line or the logical INA DS0 to be cross-connected to a physical line or ITH link. No input is allowed after the parameter *all* is entered in the *Address1* AID string. The following values (*&&* is a range operator) are valid for this parameter:

- vrtdp-{1–8,A&&A´,all}-{1–96,B&&B´,all}
- v3dp-{1–2,F&&F´}-{1–1536,C&&C´,all}
- inads0-{1–28,D&&D´,all}-{1–24,E&&E´,all}

Mnemonic	Address	Range Value	Requirement
A	TR-08 VRT	1–8	A≤A´
B	TR-08 channel	1–96	B≤B´
C	TR-303 channel	1–1536	C≤C´
D	INA DS1	1–28	D≤D´
E	DS0 within an INA DS1	1–24	E≤E´
F	TR-303 VRT	1–2	F≤F´

Default — none, you *must* enter a value.

(Continued on next page)

ENT-CRS-T0 (Continued)

Parameters for R4.2 and R4.4 (continued)

Address2

Access identifier. The address of the physical line or ITH link to be cross-connected to a logical line. No input is allowed after the parameter *all* is entered in the *Address1* AID string. The following values (*&&* is a range operator) are valid for this parameter:

- drop-{1–8,F&&F´,all}-{1–24,G&&G´,all}-{1–4,H&&H´,all}
- dtdp-{1–8,F&&F´,all}-{1,3,5,7,13,15,17,19,I&&I´,all}-{1–6,J&&J´,all}-{1–4,H&&H´,all}
- ithlink-{1–2,K&&K´}

Mnemonic	Address	Range Value	Requirement
F	MDS shelf	1–8	F≤F´
G	RT slot	1–24	G≤G´
H	Circuit on a channel unit	1–4	H≤H´
I	DT Server slot	1, 3, 5, 7, 13, 15, 17, and 19	I≤I´
J	DT slot	1–6	J≤J´
K	ITH link	1–2	K≤K´

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

ENT-CRS-T0 (Continued)

Parameters for R4.5 and R4.6

Use the following parameters with the ENT-CRS-T0 command in R4.5 and R4.6 of the *SLC*-2000 Access System.

NOTE:
When *all* or range addresses are used as part of an address to cross-connect entire groups of signals, the multiple addresses are mapped into individual addresses directly one to one. Therefore, only addresses where the total number of connections is the same for *Address1* and *Address2* are valid.

Use the following parameters with the ENT-CRS-T0 command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address1

Access identifier. The address of the logical VRT line or the logical INA DS0 to be cross-connected to a physical line or ITH link. No input is allowed after the parameter *all* is entered in the *Address1* AID string. The following values (*&&* is a range operator) are valid for this parameter:

- vrtdp-{1–8,A&&A´,all}-{1–96,B&&B´,all}
- v3dp-{1–2,F&&F´}-{1–1536,C&&C´,all}
- inads0-{1–28,D&&D´,all}-{1–24,E&&E´,all}

Mnemonic	Address	Range Value	Requirement
A	TR-08 VRT	1–8	A≤A´
B	TR-08 channel	1–96	B≤B´
C	TR-303 channel	1–1536	C≤C´
D	INA DS1	1–28	D≤D´
E	DS0 within an INA DS1	1–24	E≤E´
F	TR-303 VRT	1–2	F≤F´

Default — none, you *must* enter a value.

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ENT-CRS-T0 (Continued)

Parameters for R4.5 and R4.6 (continued)

Address2

Access identifier. The address of the physical line or ITH link to be cross-connected to a logical line. No input is allowed after the parameter *all* is entered in the *Address1* AID string. The following values (*&&* is a range operator) are valid for this parameter:

- drop-{1–8,F&&F´,all}-{1–24,G&&G´,all}-{1–4,H&&H´,all}
- dtdp-{1–8,F&&F´,all}-{1,3,5,7,9,11,13,15,17,19,21,23,I&&I´,all}-{1–6,J&&J´,all}-{1–4,H&&H´,all}
- ithlink-{1–2,K&&K´}.

NOTE:
The architecture of the *SLC*-2000 Access System allows TR-08, TR-303, and INA CO interfaces. Carefully consider cross-connection or checkerboarding restrictions when using the DT Servers in the expanded slots. The enhanced FiberReach/DT feature generally benefits systems equipped to support only TR-303 and INA VRTs. Use TR-08 VRTs with the following restrictions (for more detail, refer to Chapter 3, “System Configurations and Applications, T0 Cross-Connect/Checkerboarding Restrictions”, of 363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide*).

Shelf TR-08 Mode	The customer line terminates on a DT hosted by a DT Server located in MDS slot . . .	Physical line cross-connections are restricted to logical lines in . . .
M1	**1**, **3**, **5**, **7**, **13**, **15**, **17**, or **19**	TR-303 VRTs, TR-08 M1 VRTs, and INA DS1s
M1	**9**, **11**, **21**, or **23**	TR-303 VRTs and INA DS1s
M2	**1**, **3**, **5**, **7**, **13**, **15**, **17**, or **19**	TR-08 M2 assigned to the shelf
M2	**9**, **11**, **21**, or **23**	Not supported

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ENT-CRS-T0 (Continued)

Parameters for R4.5 and R4.6 (continued)

Mnemonic	Address	Range Value	Requirement
F	MDS shelf	1–8	F≤F´
G	RT slot	1–24	G≤G´
H	Circuit on a channel unit	1–4	H≤H´
I	DT Server slot	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, and 23	I≤I´
J	DT slot	1–6	J≤J´
K	ITH link	1–2	K≤K´

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

ENT-CRS-T0 (Continued)

Examples

Standard T0 cross-connections

The following ENT-CRS-T0 command establishes 24 T0 cross-connections between the TR-303 VRT and physical shelf 2.

```
ENT-CRS-T0::v3dp-1-25&&48,drop-2-13&&24-1&&2;
```

The following ENT-CRS-T0 command establishes 48 T0 cross-connections between TR-08 VRT 4 and physical shelf 3.

```
ENT-CRS-T0::vrtdp-4-1&&48,drop-3-13&&24-all;
```

The following ENT-CRS-T0 command establishes 24 T0 cross-connections between INA 6 and physical shelf 8.

```
ENT-CRS-T0::inads0-6-all,drop-8-7&&12-all;
```

The following ENT-CRS-T0 command establishes 4 T0 cross-connections between the TR-303 VRT and the specified DT physical drops.

```
ENT-CRS-T0::v3dp-1-97&&100,dtdp-2-1-1-all;
```

(Continued on next page)

ENT-CRS-T0 (Continued)

Examples (continued)

FiberReach NBS/ISDN T0 cross-connections

The following examples enter the cross-connections for the AUA94 and/or *SPQ*494 ISDN channel units when in a FiberReach NBS.

The AUA94 dual ISDN channel unit can be installed in a FiberReach narrowband shelf (NBS) beginning with Software Release 4.4 (R4.4).

In R4.4 and later, you can provision each DSX-1 signal terminating on the NBS for either the quad *or* octet mode. When provisioned for the quad mode, each DSX-1 signal provides service to one of two six-slot DT shelves (capable of handling up to 24 POTS lines, or 8 ISDN and 6 POTS lines) in the NBS.

When provisioned for the octet mode, each DSX-1 signal provides service to one of four sets of three channel unit slots in the NBS. Each set of three channel unit slots is referred to as an NBS quadrant (NBSQ). A mix of quad and octet modes is allowed in one NBS. However, the *SPQ*494 quad ISDN channel unit can *only* be installed in an NBSQ provisioned for the octet mode.

NOTE:
The AUA94 channel unit can be installed in an NBSQ provisioned for either the quad or octet mode, whereas the *SPQ*494 channel unit can only be installed in an NBSQ provisioned for the octet mode.

Use the CIT DLC subsystem command, ED-DT to provision the DSX-1 signals providing service to the NBSQs for either the quad or octet mode.

When one of the NBSQs in an NBS is provisioned for the octet mode, the first two slots can contain *SPQ*494 channel units. The third slot can contain any of the other channel units available for the NBS. If the third slot contains an AUA94 channel unit, this will allow the NBSQ to support a total of ten ISDN lines, with each line offering 2B+D service. A total of 40 ISDN lines can be supported with four NBSQs in octet mode .

(Continued on next page)

ENT-CRS-T0 (Continued)

Examples (continued)

The time slots associated with these ten ISDN lines must be correctly cross-connected to the physical channel unit slots in the NBS using the CIT DLC subsystem command, ENT-CRS-T0. The system uses a *virtual* channel unit slot concept (in octet mode) for the ISDN time slots to be correctly cross-connected to the physical slots in the NBS. Using the *virtual* concept, software in the *SLC*-2000 Access System hosting the NBS (when provisioning ISDN circuits) *thinks it sees* a 6-slot NBSQ instead of a 3-slot NBSQ. Slots 4, 5, and 6 of the NBSQ are not physically present. However, they are present in the software and are called *virtual* slots.

NOTE:
All CUs other than the *SPQ*494 ISDN CU do not use the *virtual* slot concept.

When installing and cross-connecting ISDN circuits in an NBS with DS1 feeders provisioned for the octet mode, you must understand the relationship between the NBS, octet mode, and actual or *virtual* slots. For a detailed description of the *virtual* channel unit slot concept, refer to 363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide*.

Examples 1 and 2 are provided as aids in understanding the correct entries required for the CIT DLC command, ENT-CRS-T0.

NOTE:
Refer to 363-208-001, *SLC-2000 Access System, User/Service Manual*, "Channel Unit Installation:Introduction-000" for slot restrictions that must be observed when installing the AUA94 and *SPQ*494 channel units in a FiberReach NBS.

NOTE:
In R4.5 and later software releases, ISDN lines for the AUA94, AUA94B, and *SPQ*494 ISDN channel units are provisioned using the CIT or through the LDS using the TR-303 EOC. In R4.4 and earlier software releases, the AUA94 and *SPQ*494 ISDN channel units are not provisioned using the CIT (DLC subsystem commands, ED-T0 and ENT-T0). You must provision ISDN lines through the local digital switch (LDS) using the TR-303 embedded operations channel (EOC).

NOTE:
Use the CIT DLC subsystem command, ENT-CRS-T0 for each DSL to create T0 cross-connections between the virtual drops and the physical drops.

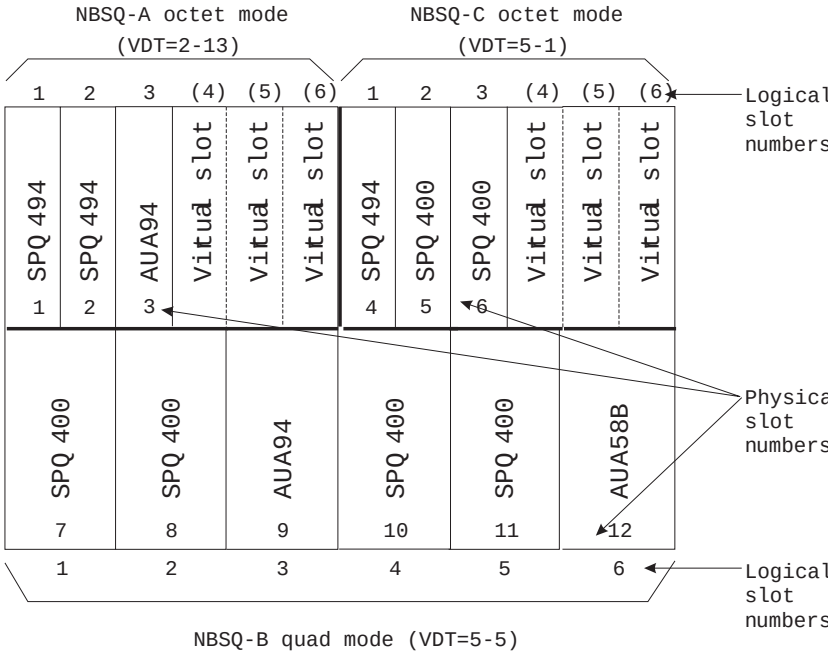
(Continued on next page)

ENT-CRS-T0 (Continued)

Examples (continued)

Example 1 – Equip NBSQ-B and NBSQ-C in octet mode and NBSQ-B in quad mode

The first example enters the cross-connections to equip NBSQ-A and NBSQ-C in octet mode and NBSQ-B in quad mode as shown in the following figure.



This example assumes the following conditions.

- MDS shelves 2 and 5 are configured as FITL
- The DT Server in slot 13 on MDS shelf 2 is connected to NBSQ-A
- The DT Server in slot 1 on MDS shelf 5 is connected to NBSQ-C
- The DT Server in slot 5 on MDS shelf 5 is connected to NBSQ-B
- All ISDN lines are configured appropriately in the LDS
- All channel unit circuit packs are located in NBS slots as shown.

(Continued on next page)

ENT-CRS-T0 (Continued)

Examples (continued)

NOTE:
This example uses the CIT DLC subsystem command, ENT-CRS-T0 in the listed sequence to configure an NBS that has not been previously configured for either the quad and or octet mode(s) in order to support the AUA94 and/or *SPQ*494 channel unit(s).

NOTE:
The slot numbers that appear in parenthesis in the following example are the logical slot numbers shown in the figure for the first example.

for NBSQ-A

`ent-crs-t0::v3dp-1-140&&141,dtdp-2-13-1-1&&2;⇨`	channels 1/2 *SPQ*494 (slot 1)
`ent-crs-t0::v3dp-1-142&&143,dtdp-2-13-4-1&&2;⇨`	channels 3/4 *SPQ*494 (slot 1) virtual slot 4 in NBSQ-A
`ent-crs-t0::v3dp-1-144&&145,dtdp-2-13-2-1&&2;⇨`	channels 1/2 *SPQ*494 (slot 1)
`ent-crs-t0::v3dp-1-146&&147,dtdp-2-13-5-1&&2;⇨`	channels 3/4 *SPQ*494 (slot 1) virtual slot 5 in NBSQ-A
`ent-crs-t0::v3dp-1-148&&149,dtdp-2-13-3-1&&2;⇨`	channels 1/2 AUA94 (slot 3)

for NBSQ-C

`ent-crs-t0::v3dp-1-150&&151,dtdp-5-1-1-1&&2;⇨`	channels 1/2 *SPQ*494 (slot 1)
`ent-crs-t0::v3dp-1-152&&153,dtdp-5-1-4-1&&2;⇨`	channels 3/4 *SPQ*494 (slot 1) virtual slot 4 in NBSQ-C
`ent-crs-t0::v3dp-1-154&&161,dtdp-5-1-2&&3-1&&4;⇨`	channels 1–4 *SPQ*400 (slots 2/3)

for NBSQ-B

`ent-crs-t0::v3dp-1-162&&169,dtdp-5-5-1&&2-1&&4;⇨`	channels 1–4 *SPQ*400 (slots 1/2)
`ent-crs-t0::v3dp-1-170&&171,dtdp-5-5-3-1&&2;⇨`	channels 1/2 AUA94 (slot 3) ISDN line
`ent-crs-t0::v3dp-1-174&&181,dtdp-5-5-4&&5-1&&4;⇨`	channels 1–4 *SPQ*400 (slots 4/5)
`ent-crs-t0::v3dp-1-182&&183,dtdp-5-5-6-1&&2;⇨`	channels 1/2 AUA58B (slot 6)

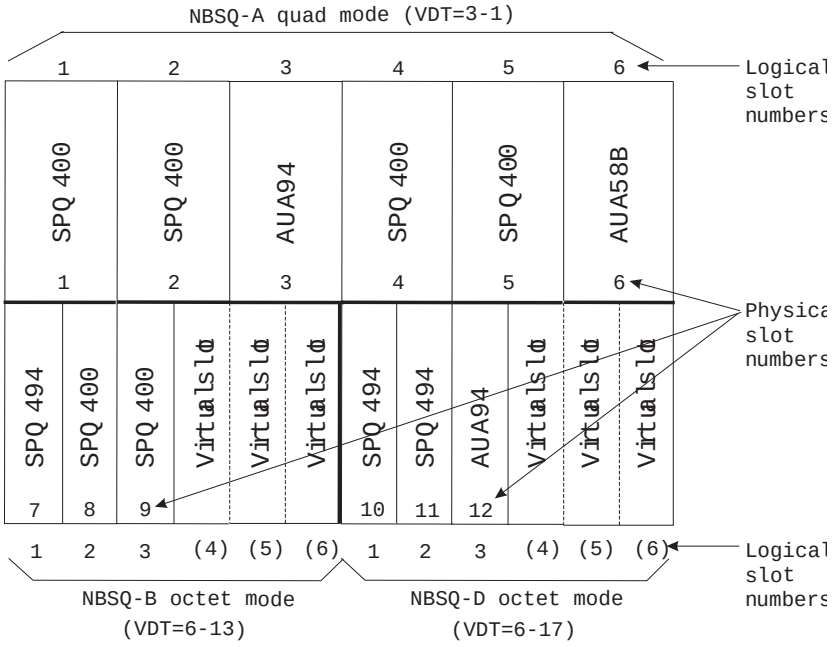
(Continued on next page)

ENT-CRS-T0 (Continued)

Examples (continued)

Example 2 – Equip NBSQ-A in quad mode and NBSQ-B and NBSQ-D in octet mode

The second example enters the cross-connections to equip NBSQ-A in quad mode and NBSQ-B and NBSQ-D in octet mode as shown in the following figure.



This example assumes the following conditions.

- MDS shelves 3 and 6 are configured as FITL
- The DT Server in slot 1 on MDS shelf 3 is connected to NBSQ-A
- The DT Server in slot 13 on MDS shelf 6 is connected to NBSQ-B
- The DT Server in slot 17 on MDS shelf 6 is connected to NBSQ-D
- All ISDN lines are configured appropriately in the LDS
- All channel unit circuit packs are located in NBS slots as shown.

(Continued on next page)

ENT-CRS-T0 (Continued)

Examples (continued)

NOTE:
This example uses the CIT DLC subsystem command, ENT-CRS-T0 in the listed sequence to configure an NBS that has not been previously configured for either the quad and or octet mode(s) in order to support the AUA94 and/or *SPQ*494 channel unit(s).

NOTE:
The slot numbers that appear in parenthesis in the following example are the logical slot numbers shown in the figure for the second example.

for NBSQ-A

```
ent-crs-t0::v3dp-1-140&&147,dtdp-3-1-1&&2-1&&4;⇨ channels 1–4 SPQ400 (slots 1/2)
ent-crs-t0::v3dp-1-148&&149,dtdp-3-1-3-1&&2;⇨    channels 1/2 AUA94 (slot 3)
                                                 ISDN line
ent-crs-t0::v3dp-1-150&&157,dtdp-3-1-4&&5-1&&4;⇨ channels 1–4 SPQ400 (slots 4/5)
ent-crs-t0::v3dp-1-158&&158,dtdp-3-1-6-1&&2;⇨    channels 1/2 AUA58B (slot 6)
```

for NBSQ-B

```
ent-crs-t0::v3dp-1-170&&171,dtdp-6-13-1-1&&2;⇨   channels 1/2 SPQ494 (slot 1)
ent-crs-t0::v3dp-1-172&&173,dtdp-6-13-4-1&&2;⇨   channels 3/4 SPQ494 (slot 1)
                                                 virtual slot 4 in NBSQ-B
ent-crs-t0::v3dp-1-174&&181,dtdp-6-13-2&&3-1&&4;⇨channels 1–4 SPQ400 (slots 2/3)
```

for NBSQ-D

```
ent-crs-t0::v3dp-1-160&&161,dtdp-6-17-1-1&&2;⇨   channels 1/2 SPQ494 (slot 1)
ent-crs-t0::v3dp-1-162&&163,dtdp-6-17-4-1&&2;⇨   channels 3/4 SPQ494 (slot 1)
                                                 virtual slot 4 in NBSQ-D
ent-crs-t0::v3dp-1-164&&165,dtdp-6-17-2-1&&2;⇨   channels 1/2 SPQ494 (slot 2)
ent-crs-t0::v3dp-1-166&&167,dtdp-6-17-5-1&&2;⇨   channels 3/4 SPQ494 (slot 2)
                                                 virtual slot 5 in NBSQ-B
ent-crs-t0::v3dp-1-168&&169,dtdp-6-17-3-1&&2;⇨   channels 1/2 AUA94 (slot 3)
```

ENT-CRS-T0 (Continued)

Response

Confirmation

The ENT-CRS-T0 command requires confirmation. The following confirmation message is displayed when you enter the ENT-CRS-T0 command.

```
/* Caution! Network Cross-connections are affected by this command. */

/* You have selected the ent-crs-t0 command with these parameters: */
/* Review of Parameter Responses ...  */
        Address 1 = [Access Identifier]
        Address 2 = [Access Identifier]

Execute? (y/n or CANcel/DELete to quit) =
;
```

The following confirmation message is displayed when you enter the ENT-CRS-T0 command with the parameter *all* as part of the address.

```
/* Caution! Network Cross-connections are affected by this command.
   Multiple cross-connections may be affected.*/

/* You have selected the ent-crs-t0 command with these parameters: */
/* Review of Parameter Responses ...  */
        Address 1 = [Access Identifier]
        Address 2 = [Access Identifier]

Execute? (y/n or CANcel/DELete to quit) =
;
```

(Continued on next page)

ENT-CRS-T0 (Continued)

Response (continued)

Completion

The command completes without any warning or error messages when both addresses are in the same cross-connection.

The ENT-CRS-T0 command completes and the following message is displayed when you enter the ENT-CRS-T0 command with several addresses and one or more of the specified cross-connections cannot be completed (because of existing cross-connections or the system configuration).

```
/* The following cross-connections not processed.
   Cross-connect exists with different address,
   or cross-connects are inconsistent with provisioned system configuration:
   Address1  Address2
   Address1  Address2
      .  .
      .  .     */
```

Some system configurations may not allow cross-connections. Denial may result from the restriction placed on channels 3 and 4 of a DT Server slot when channels 1 and 2 of the slot have been provisioned for ISDN or DDS. Also, you cannot cross-connect channels 1 and 2 of a DT Server slot that are provisioned for ISDN or DDS when channels 3 or 4 of the slot are cross-connected.

Error

The ENT-CRS-T0 command is denied and the following message is displayed when a software installation is in progress or the system is going through an initialization.

```
SNVS
/* Status, Not in Valid State,
   System initialization in-progress, try again later. */
;
```

(Continued on next page)

ENT-CRS-T0 (Continued)

Response (continued)

The ENT-CRS-T0 command is denied and the following message is displayed when the NVDS has failed.

```
SSTP
/* Status, execution SToPped,
   Data memory failed. */
;
```

The following error message is displayed when you enter the ENT-CRS-T0 command and request a *checkerboard* (in other words, non-standard) cross-connection to a logical line on a TR-08 Mode 2 VRT. (Refer to 363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide*.)

```
SNVS
/* Status, Not in Valid State,
   Invalid cross-connection request for a TR-08 Mode 2 VRT. */
;
```

The ENT-CRS-T0 command is denied and the following message is displayed when you attempt to cross-connect a fiber drop AID (dtdp) within a distribution shelf that is not provisioned for FITL distribution.

```
IIAC
/* Input, Invalid Access Identifier,
   One or more shelves in Address2 are not provisioned for
   fiber distribution. */
;
```

(Continued on next page)

ENT-CRS-T0 (Continued)

Response (continued)

The ENT-CRS-T0 command is denied and the following message is displayed when you attempt to cross-connect a metallic drop *AID* within a distribution shelf that is provisioned for FITL distribution.

```
IIAC
/* Input, Invalid Access Identifier,
   One or more shelves in Address2 are not provisioned for
   metallic distribution. */
;
```

The ENT-CRS-T0 command is denied and the following message is displayed when you specify a range and the AIDs in those ranges do not have a one-to-one correspondence (for example, an AID specifying a different number of lines between the Address1 and Address2 parameters).

```
IDNC
/* Input, Data Not Consistent,
   An equal number of cross-connections must be specified in Address1
   and Address 2. For fiber shelves, check provisioned DT bandwidth. */
;
```

The ENT-CRS-T0 command is denied and the following message is displayed when you attempt to cross-connect a fiber drop AID (dtdp) with a channel number greater than the number of DS0s for which the supporting DT Server is provisioned.

```
IIAC
/* Input, Invalid Access Identifier,
   The DT server for AID is currently provisioned for a maximum
   of n lines. */
;
```

(Continued on next page)

ENT-CRS-T0 (Continued)

Response (continued)

The ENT-CRS-T0 command is denied and the following message is displayed when you use addresses that already have active cross-connections (unless both addresses are in the same cross-connection).

```
SACC
/* Status, Already Cross-Connected,
   Establishing new cross-connections requires that existing
   cross-connections associated with these addresses must
   be deleted first. */
;
```

The ENT-CRS-T0 command is denied and the following message is displayed when an unspecified error has occurred. Contact your technical assistance center for further clarification.

```
SROF
/* Status, Requested Operation Failed */
;
```

The ENT-CRS-T0 command is denied and the following message is displayed when you request a VRT that is not usable (for example, VRTs 1-7 are Mode 1, then VRT 8 is rendered not usable).

```
SNVS
/* Status, Not in Valid State,
   Invalid cross-connection request, TR-08 VRT 1 is unusable. */
;
```

The ENT-CRS-T0 command is denied and the following message is displayed when Address1 specifies an LLN of a TR-08 VRT (vrtdp) and the T8U state of the specified shelf in the PLN (drop or dtdp) is disabled.

```
SNVS
/* Status, Not in Valid State,
   The T8U state of one or more shelves is disabled. */
;
```

(Continued on next page)

ENT-CRS-T0 (Continued)

Response (continued)

The ENT-CRS-T0 command is denied and the following message is displayed when either *Address1* or *Address2* cannot be cross-connected due to a provisioning restriction in the system. Denial may result from the restriction placed on channels 3 and 4 of a DT Server slot when channels 1 and 2 of the slot have been provisioned for ISDN or DDS. Also, you cannot cross-connect channels 1 and 2 of an MDST Server slot that are provisioned for ISDN or DDS when channels 3 or 4 of the slot are cross-connected.

```
SNVS
/* Status, Not in Valid State,
   Unusable due to system provisioning. */
;
```

Related commands

The following DLC subsystem commands are related to the ENT-CRS-T0 command.

- DLT-CRS-T0
- INIT-CRS-T0
- RTRV-CRS-T0

ENT-CRS-T1

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the ENT-CRS-T1 command.

ENT-CRS-T1:[tid]:Address1,Address2:[ctag];

Command name

Create cross-connection between a physical DS1 feeder and a logical VRT feeder or logical INA.

Can command be aborted?

No.

Purpose

Enter the ENT-CRS-T1 command to create a cross-connection (see 363-208-001, *SLC-2000 Access System, User/Service Manual*) between a physical DS1 feeder and a logical virtual remote terminal (VRT) feeder or logical integrated network access (INA).

All cross-connections are two-way cross-connections.

ENT-CRS-T1 (Continued)

Parameters for R3.1, R3.2, and R3.3

Use the following parameters with the ENT-CRS-T1 command in R3.1, R3.2, and R3.3 of the *SLC*-2000 Access System.

NOTE:
When *all* address is used as part of an address to cross-connect entire groups of signals, the multiple addresses are mapped into individual addresses directly one to one. Therefore, only addresses where the total number of connections is the same for *Address1* and *Address2* are valid.

Use the following parameters with the ENT-CRS-T1 command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address1

Physical feeder AID. The address of the physical feeder DS1 to be cross-connected to a VRT feeder or logical INA. No input is allowed after the parameter *all* is entered in the *Address1* AID string. The following values are valid for this parameter.

- a-{1–7,all}-{1–4,all}

Default — none, you *must* enter a value.

Address2

VRT feeder of logical INA AID. The address of the VRT feeder or logical INA to be cross-connected to a physical feeder DS1. The following values (*&&* is a range operator) are valid for this parameter.

- vrtfdr-{1–8,all}-{a-d,all}
- ina-{1–28,all}

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

ENT-CRS-T1 (Continued)

Parameters for R4.0

Use the following parameters with the ENT-CRS-T1 command in R4.0 of the *SLC*-2000 Access System.

NOTE:
When *all* or range addresses are used as part of an address to cross-connect entire groups of signals, the multiple addresses are mapped into individual addresses directly one to one. Therefore, only addresses where the total number of connections is the same for *Address1* and *Address2* are valid.

Use the following parameters with the ENT-CRS-T1 command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address1

Physical feeder AID. The address of the physical feeder DS1 to be cross-connected to a VRT feeder or logical INA. No input is allowed after the parameter *all* is entered in the *Address1* AID string. The following values (*&&* is a range operator) are valid for this parameter.

- a-{1–7,A&&A´,all}-{1–4,B&&B´,all}

Mnemonic	Address	Range Value	Requirement
A	VTU or LIU plug-in	1–7	A≤A´
B	DS1 on a VTU or LIU plug-in	1–4	B≤B´

Default — none, you *must* enter a value.

(Continued on next page)

ENT-CRS-T1 (Continued)

Parameters for R4.0 (continued)

Address2

VRT feeder of logical INA AID. The address of the VRT feeder or logical INA to be cross-connected to a physical feeder DS1. The following values (*&&* is a range operator) are valid for this parameter.

- vrtfdr-{1–8,C&&C´,all}-{a-d,D&&D´,all}
- v3fdr-1-{1–28,E&&E´,all}
- ina-{1–28,F&&F´,all}

Mnemonic	Address	Range Value	Requirement
C	TR-08 VRT	1–8	C≤C´
D	TR-08 feeder DS1	a–d	D≤D´
E	TR-303 feeder DS1	1–28	E≤E´
F	INA DS1	1–28	F≤F´

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

ENT-CRS-T1 (Continued)

Parameters for R4.2, R4.4, R4.5, and R4.6

Use the following parameters with the ENT-CRS-T1 command in R4.2, R4.4, R4.5, and R4.6 of the *SLC*-2000 Access System.

NOTE:
When *all* or range addresses are used as part of an address to cross-connect entire groups of signals, the multiple addresses are mapped into individual addresses directly one to one. Therefore, only addresses where the total number of connections is the same for *Address1* and *Address2* are valid.

Use the following parameters with the ENT-CRS-T1 command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address1

Physical feeder AID. The address of the physical feeder DS1 to be cross-connected to a VRT feeder or logical INA. No input is allowed after the parameter *all* is entered in the *Address1* AID string. The following values (*&&* is a range operator) are valid for this parameter.

- a-{1–7,A&&A´,all}-{1–4,B&&B´,all}

Mnemonic	Address	Range Value	Requirement
A	VTU or LIU plug-in	1–7	A≤A´
B	DS1 on a VTU or LIU plug-in	1–4	B≤B´

Default — none, you *must* enter a value.

(Continued on next page)

ENT-CRS-T1 (Continued)

Parameters for R4.2, R4.4, R4.5, and R4.6 (continued)

Address2

VRT feeder of logical INA AID. The address of the VRT feeder or logical INA to be cross-connected to a physical feeder DS1. The following values (*&&* is a range operator) are valid for this parameter.

- vrtfdr-{1–8,C&&C´}-{a-d,D&&D´}
- v3fdr-{1–2,G&&G´}-{1–28,E&&E´,all}
- ina-{1–28,F&&F´,all}

Mnemonic	Address	Range Value	Requirement
C	TR-08 VRT	1–8	C≤C´
D	TR-08 feeder DS1	a–d	D≤D´
E	TR-303 feeder DS1	1–28	E≤E´
F	INA DS1	1–28	F≤F´
G	TR-303 VRT	1–2	G≤G´

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

ENT-CRS-T1 (Continued)

Example

The following ENT-CRS-T1 command establishes 8 T1 cross-connections between DS1 physical feeders and TR-303 VRT feeders.

```
ENT-CRS-T1::a-1&&2-all,v3fdr-1-1&&8;
```

The following ENT-CRS-T1 command establishes 12 T1 cross-connections between DS1 physical feeders and logical INA feeders.

```
ENT-CRS-T1::a-5&&7-all,ina-17&&28;
```

The following ENT-CRS-T1 command establishes a T1 cross-connection between a physical feeder and a TR-08 VRT feeder.

```
ENT-CRS-T1::a-3-1,vrtddr-3-a;
```

Response

Confirmation

The ENT-CRS-T1 command requires confirmation. The following confirmation message is displayed when you enter the ENT-CRS-T1 command.

```
/* Caution! Network Cross-connections are affected by this command. */

/* You have selected the ent-crs-t1 command with these parameters: */
/* Review of Parameter Responses ...  */
         Address 1 = [Access Identifier]
         Address 2 = [Access Identifier]

Execute? (y/n or CANcel/DELete to quit) =
;
```

(Continued on next page)

ENT-CRS-T1 (Continued)

Response (continued)

The following confirmation message is displayed when you enter the ENT-CRS-T1 command with the parameter *all* as part of the address.

```
/* Caution! Network Cross-connections are affected by this command.
   Multiple cross-connections may be affected.*/

/* You have selected the ent-crs-t1 command with these parameters: */
/* Review of Parameter Responses ...  */
         Address 1 = [Access Identifier]
         Address 2 = [Access Identifier]

Execute? (y/n or CANcel/DELete to quit) =
;
```

Error

The following error message is displayed when the *SLC*-2000 Access System receives an ENT-CRS-T1 command with two AID ranges, and the AIDs in those ranges do not have a one-to-one correspondence.

```
IDNC
/* Input, Data Not Consistent,
   An equal number of cross-connections must be specified in Address1
   and Address 2. */
;
```

The ENT-CRS-T1 command is denied and the following message is displayed when the NVDS has failed.

```
SSTP
/* Status, SToPped,
   Data memory failed. */
;
```

(Continued on next page)

ENT-CRS-T1 (Continued)

Response (continued)

The ENT-CRS-T1 command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

The ENT-CRS-T1 command is denied and the following message is displayed when the cross-connection request is for a cross-connection that is not consistent with the fixed physical-to-logical feeder mapping. Refer to 363-208-001, *SLC-2000 Access System, User/Service Manual*, for valid physical-to-logical feeder mappings.

```
IDNC
/* Input, Data Not Consistent,
   Not a valid cross-connection between physical and logical feeders. */
;
```

The ENT-CRS-T1 command is denied and the following message is displayed when *Address2* is a logical *B* or *D* digroup (for example, vrtfdr-1-b) for a TR-08 VRT which is set to Mode 2.

```
SNVS
/* Status, Not in Valid State,
   Invalid Digroup for a TR-08 Mode 2 VRT. */
;
```

(Continued on next page)

ENT-CRS-T1 (Continued)

Response (continued)

The ENT-CRS-T1 command is denied and the following message is displayed when this command is invoked using addresses where active cross-connections already exist and the specified cross-connection does not exactly match an existing cross-connection.

```
SACC
/* Status, Already Cross-Connected,
   Establishing new cross-connections requires that existing
   cross-connections associated with these addresses must
   be deleted first. */
;
```

The ENT-CRS-T1 command will complete but the following message is displayed when this command is entered with several addresses and one or more of the specified cross-connects cannot be completed due to existing cross-connections or the system configuration.

```
/* The following cross-connections not processed.
   Cross-connect exists with different address,
   or cross-connects are inconsistent with provisioned system configuration:
   Address1  Address2
   Address1  Address2
      .  .
      .  .     */
```

Related commands

The following DLC subsystem commands are related to the ENT-CRS-T1 command.

- DLT-CRS-T1
- INIT-CRS-T1
- RTRV-CRS-T1

ENT-T0

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the ENT-T0 command.

ENT-T0:tid:[aid]:ctag::[CLEI][,FunctionCode]:[ProvisionParameters];

Command name

Enter T0 (provision DS0 channel).

Can command be aborted?

No.

Purpose

NOTE:
The ENT-T0 command can create up to five objects. However, there is one T0 entity for each ISDN CU physical port. In R4.5 and later software releases, you must use the ENT-T0 command two times for the AUA94 and AUA94B, and four times for the *SPQ*494 CUs.

Enter the ENT-T0 command to provision a physical line on a metallic channel shelf or in a distant terminal (DT) served by the *SLC*-2000 Access System. The service state must be OOS-MA-UAS for the ENT-T0 command to successfully execute.

ENT-T0 (Continued)

Parameters for R3.1 and R3.2

Use the following parameters with the ENT-T0 command in R3.1 and R3.2 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Physical line AID. The address which identifies the physical line to be provisioned on the metallic channel shelf or in the DT. The following values are valid for this parameter.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}-{1–4}

Default value is the single physical line access identifier (AID) used in the most recent execution of DLC subsystem commands (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, and RTRV-T0) during the current login session. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

(Continued on next page)

ENT-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

CLEI

CLEI[*] *Code*. The functional *CLEI* code is the first six or seven digits of the *CLEI* code of the channel unit used to provide service on this channel. The values listed in the following table are valid for the *CLEI* code parameter.

Functional *CLEI* Code	Apparatus Codes
5SCU38	AUA34 (COT)
5SC133	AUA34B (COT)
5SCU7D	AUA41
5SCUCD	AUA41B
5SCU69	AUA42
5SCU6E	AUA42B
5SCU6A	AUA43
5SCU6F	AUA43B
5SCU7C	AUA44
5SCU48	AUA52
5SC143	AUA52B
5SCU7B	AUA54
5SC1JE	AUA293 and AUA92 (COT)
5SC1HE	AUA293 and AUA93 (RT)
SAC1AH	*SPQ*®442
SAC1AE	*SPQ*443
SAC1BF	*SPQ*444
SAC1BG	*SPQ*454
Other	A channel unit not in this list (for example, an *SPQ*400) equipped in the slot for this channel.

Original value for the *CLEI* code is *Other*. Default — the last value entered. You are (user) prompted for an entry when you do not enter a *CLEI* code.

(Continued on next page)

* COMMON LANGUAGE is a registered trademark and CLEI, CLLI, CLCI, and CLFI are trademarks of Bell Communications Research, Inc.

ENT-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

FunctionCode

Function code. You are given the default value and prompted for an entry when you do not enter a function code. However, if the *CLEI* code for this channel is changed, the default value given will be the bold function code for the entered functional *CLEI* code listed in the following table.

Functional *CLEI* Codes	Function Codes
5SC1JE and 5SC1HE	**BRI**
Other	**DFLT**
5SCU38 and 5SC133	**DS0A** and DS0B
5SCU7B and SAC1BG	**EM4**[**C**,H] and PLR[1,2]
5SCU69, 5SCU6E, and SAC1AH	**FXO**, DPT, and TO
5SCU6A, 5SCU6F, and SAC1AE	**FXS**, DPO, and TO
5SCU7D and 5SCUCD	**FX**[**S**,T][**1**,2,3,5], DX4[N,R], ETO4, and TO4
5SCU7C and SAC1BF	**FX**[**O**,P][**1**,2,3,5] and TD[O,S][A,B,C,D]
5SCU48 and 5SC143	**OCU**

The function code depends on the *CLEI* code.

CAUTION:
Undesirable ringing on the subscriber line can occur when you use the default (LS) function code rather than the appropriate function codes (AC, LO, and LR, respectively) for the AUA45, AUA45B, and AUA75 equipped channel units. The AUA45, AUA45B, and AUA75 channel units cannot be distinguished from other POTS/SPOTS-like channel units (for example, AUA25, AUA25B, AUA27, AUA51, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, and AUA179) for which the default function code (LS) is appropriate. Please refer to function code entries AC, LR, and LS in this section.

(Continued on next page)

ENT-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

Function Code	Description
BRI	Basic rate interface transmission extension (BRITE) for integrated services digital network (ISDN). Basic rate interface (BRI) is provided through the AUA92, AUA93, and AUA293 CUs.
DFLT	Defaults to equipped function (circuit function determined by installed channel unit). This includes POTS, multiparty (MP), coin channel units, and channels to be equipped with direct inward dial (DID), manual ringdown, private line automatic ring (PLAR), and *SPOTS* channel units.
DPO	2-wire dial-pulse originating
DPT	2-wire dial-pulse terminating
DS0A	Single customer DS0 signal (subrate)
DS0B	Single or multiple customer DS0 signal (56 or 64 kb/s)
DX4N	4-wire duplex with duplex signaling and signaling leads normal
DX4R	4-wire duplex with duplex signaling and signaling leads reversed
EM4C	E&M signaling, type I
EM4H	E&M signaling, type II
ETO4	4-wire equalized transmission only, no DC signaling
FXO	2-wire foreign exchange, office end
FXO1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal and no toll diversion
FXO2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and no toll diversion
FXO3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and no toll diversion
FXO5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and no toll diversion
FXP1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal, and toll diversion
FXP2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and toll diversion
FXP3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and toll diversion

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ENT-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

Function Code	Description
FXP5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and toll diversion
FXS	2-wire foreign exchange, station end
FXS1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and no toll diversion
FXS2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and no toll diversion
FXS3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and no toll diversion
FXS5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and no toll diversion
FXT1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and toll diversion
FXT2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and toll diversion
FXT3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and toll diversion
FXT5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and toll diversion
OCU	Office channel unit dataport.
PLR1	PLR signaling, type I
PLR2	PLR signaling, type II
RVT	2-wire loop reverse battery
TDOA	4-state tandem signaling, type II, signaling leads looped through carrier toward office
TDOB	4-state tandem signaling, type I, signaling leads not looped through carrier toward office

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ENT-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

Function Code	Description
TDOC	2-state tandem signaling, type II, signaling leads looped
TDOD	2-state tandem signaling, type I, signaling leads not looped
TDSA	4-state tandem signaling, type II, signaling leads looped through carrier toward subscriber
TDSB	4-state tandem signaling, type I, signaling leads not looped through carrier toward subscriber
TDSC	2-state tandem signaling, type II, signaling leads looped
TDSD	2-state tandem signaling, type I, signaling leads not looped
TO	2-wire transmission only
TO4	4-wire transmission only, no DC signaling

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ENT-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

ProvisionParameters

Provisioning parameters. The option settings for each function code. The provisioning parameter names are based on the work order record detail (WORD) document abbreviations.

Parameter Name	WORD Abbreviation	User Prompt	User Expert String
–7 dB (J3)	–7DB(J3)	–7 dB(J3)	dBJ3
–7 dB receive	–7DB RCV	–7 dB Receive	dBr
–7 dB transmit	–7DB TRMT	–7 dB Transmit	dBt
All-zero-code allowed	ZC	AllZeroCodeAllowed	zc
Balance	BAL	Balance	bal
Clear channel	CC	ClearChannel	cc
Equalizer bandwidth	BW	Bandwidth	bw
Equalizer height	HT	Height	ht
Equalizer nonloaded/ loaded	L-N	Nonloaded/Loaded	ln
Equalizer slope	SL	Slope	sl
Error correction	EC	ErrorCorrection	ec
Impedance	IMP	Impedance	imp
On-hook transmission	OHT	OnHookTransmission	oht
Receive attenuator	RCV	RCV Attenuator	rcv
Receive gain	RCV(GN)	ReceiveGain	rcvgn
Red-lined status	RLS	Redlined	rls
Sealing current	SC	SealingCurrent	sc
Service	SVC	ISDN Channel Service	svc
Signaling type	LS-GS	SignalingType	lsgs
Secondary channel used	SCC	SecondaryChannelUsed	scc
Subscriber data rate	RATE	SubscriberDataRate	rate
Toll diversion	TD	TollDiversion	td
Transmit and receive impedance	TRMT&RCV(IMP)	TRMT & RCV Impedance	imp
Transmit attenuator	TRMT	TRMT Attenuator	trmt
Transmit gain	XMT(GN)	TransmitGain	xmtgn

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ENT-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following tables (shown in alphabetic order) list the valid parameters for *FunctionCode*. When prompting for a parameter value, the default is the current value unless the *CLEI* code or Function code is being changed. Then the default will be the original (default) listed in the following tables.

NOTE:
The *redline* parameter is used by the telephone company to mark redlined circuits, to which a special priority is assigned. The system does not treat redlined channels any differently from non-redlined channels.

The following table lists the BRI function code provisioning parameters for apparatus codes AUA92 (*CLEI*=5SC1JE), AUA93 (*CLEI*=5SC1HE), and AUA293 (*CLEI*=5SC1JE for COT, *CLEI*=5SC1HE for RT).

NOTE:
You cannot provision the DT BRI channel unit (CU) using the CIT. You must provision the DT BRI CU at the channel unit.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
svc=ISDN channel service	SVC	2B+D, B1+D, B2+D, or D	2B+D
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for the POTS, multiparty, coin, FSR, DID, manual ringdown, PLAR, and DC bypass pair or alarm channel units (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the DPO function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the DPT function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the DS0A function code provisioning parameters for apparatus code AUA34 (*CLEI*=5SCU38).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 or 64 kb/s.

† Set ZC to YES if the data rate is 64 kb/s.

The following table lists the DS0A function code provisioning parameters for apparatus code AUA34B (*CLEI*=5SC133).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
ec=Error correction	EC	NONE or SCEC	NONE
zc=All-zero-code allowed*	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Set ZC to YES if the data rate is 64 kb/s.

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ENT-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the DS0B function code provisioning parameters for apparatus code AUA34 (*CLEI*=5SCU38).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed*	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 or 64 kb/s.

† Set ZC to YES if the data rate is 64 kb/s.

The following table lists the DS0B function code provisioning parameters for apparatus code AUA34B (*CLEI*=5SC133).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
ec=Error correction	EC	NONE or SCEC	NONE
zc=All-zero-code allowed*	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Set ZC to YES if the data rate is 64 kb/s.

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ENT-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the DX4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

The following table lists the EM4C/H function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the ETO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBJ3=–7 dB (J3)	–7DB(J3)	BK or WH	BK
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the FXO function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	900
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
td=TollDiversion	TD	NO or YES	NO
lsgs=SignalingType	LS-GS	GS or LS	GS
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXO/P function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV(IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the FXS function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXS/T function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the OCU function code provisioning parameters for apparatus code AUA52 (*CLEI*=5SCU48).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, or 56 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed	ZC	NO or YES	NO
scc=Secondary channel used	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 kb/s.

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ENT-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the OCU function code provisioning parameters for apparatus code AUA52B (*CLEI*=5SC143).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 56- or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† When the 64 kb/s rate is selected, the user is not prompted for ZC and SCC. For rate=64 kb/s, ZC and SCC are automatically set to YES.

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ENT-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the PLR1/2 function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDO function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDS function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R3.1 and R3.2 (continued)

The following table lists the TO function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), *SPQ*442 (*CLEI*=SAC1AH), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the TO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBt=–7 dB TRMT	–7DB TRMT	BK or WH	BK
dBr=–7 dB RCV	–7DB RCV	BK or WH	BK
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

ENT-T0 (Continued)

Parameters for R3.3

Use the following parameters with the ENT-T0 command in R3.3 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Physical line AID. The address which identifies the physical line to be provisioned on the metallic channel shelf or in the DT. The following values are valid for this parameter.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}-{1–4}

Default value is the single physical line access identifier (AID) used in the most recent execution of DLC subsystem commands (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, and RTRV-T0) during the current login session. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

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ENT-T0 (Continued)

Parameters for R3.3 (continued)

CLEI

CLEI[*] *Code*. The functional *CLEI* code is the first six or seven digits of the *CLEI* code of the channel unit used to provide service on this channel. The values listed in the following table are valid for the *CLEI* code parameter.

Functional *CLEI* Code	Apparatus Codes
5SC143	AUA252, AUA252B, and AUA52B
5SCU38	AUA34
5SC133	AUA34B
5SCU7D	AUA41
5SCUCD	AUA41B
5SCU69	AUA42
5SCU6E	AUA42B
5SCU6A	AUA43
5SCU6F	AUA43B
5SCU48	AUA52
5SC1JE	AUA293 and AUA92
5SC324	*SPQ*®334
SAC1AH	*SPQ* 442
SAC1AE	*SPQ*443
SAC1BF	*SPQ*444
5SCTFF	*SPQ*452
SAC1BG	*SPQ*454
Other	AUA150C, AUA33B, AUA36B, PGM*-2000[†], *SPQ*318, *SPQ*328, *SPQ*333, and *SPQ*336.

* Trademark of Tollgrade Communications, Inc.

† The *PGM*-2000 can not be provisioned electronically in R3.3.

Original value for the *CLEI* code is *Other*. Default — the last value entered. You are (user) prompted for an entry when you do not enter a *CLEI* code.

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ENT-T0 (Continued)

Parameters for R3.3 (continued)

FunctionCode

Function code. You are given the default value and prompted for an entry when you do not enter a function code. However, if the *CLEI* code for this channel is changed, the default value given will be the bold function code for the entered functional *CLEI* code listed in the following table.

Functional *CLEI* Codes	Function Codes
5SC1JE	**BRI**
Other	**DFLT** and EBS
5SCU38 and 5SC133	**DS0A** and DS0B
5SC324	**DS0A**, DS0B, and SW56
SAC1BG	**EM4**[**C**,H] and PLR[1,2]
5SCU69, 5SCU6E, and SAC1AH	**FXO**, DPT, and TO
5SCU6A, 5SCU6F, and SAC1AE	**FXS**, DPO, and TO
5SCU7D and 5SCUCD	**FX**[**S**,T][**1**,2,3,5], DX4[N,R], ETO4, and TO4
SAC1BF	**FX**[**O**,P][**1**,2,3,5] and TD[O,S][A,B,C,D]
5SCU48, 5SC143, and 5SCTFF*	**OCU**

* OCU is the only valid function code for the *SPQ*® 452 CU for R3.3.

The function code depends on the *CLEI* code.

CAUTION:
Undesirable ringing on the subscriber line can occur when you use the default (LS) function code rather than the appropriate function codes (AC, LO, and LR, respectively) for the AUA45, AUA45B, and AUA75 equipped channel units. The AUA45, AUA45B, and AUA75 channel units cannot be distinguished from other POTS/SPOTS-like channel units (for example, AUA25, AUA25B, AUA27, AUA51, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, and AUA179) for which the default function code (LS) is appropriate. Please refer to function code entries AC, LR, and LS in this section.

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ENT-T0 (Continued)

Parameters for R3.3 (continued)

Function Code	Description
BRI	Basic rate interface transmission extension (BRITE) for integrated services digital network (ISDN). Basic rate interface (BRI) is provided through the AUA92 and AUA293 CUs.
DFLT	Defaults (for TR-08 VRTs) to equipped function (circuit function determined by installed channel unit). The function code for certain CUs can be derived from the equipment in addition to being explicitly specified. This includes POTS, multiparty (MP), coin, frequency selective ringing (FSR), direct inward dial (DID), manual ringdown, private line automatic ring (PLAR), and DC bypass pair or alarm channel units.
DPO	2-wire dial-pulse originating
DPT	2-wire dial-pulse terminating
DS0A	Single customer DS0 signal (subrate)
DS0B	Single or multiple customer DS0 signal (56 or 64 kb/s)
DX4N	4-wire duplex with duplex signaling and signaling leads normal
DX4R	4-wire duplex with duplex signaling and signaling leads reversed
EBS	Enhanced business service (P-Phone)
EM4C	E&M signaling, type I
EM4H	E&M signaling, type II
ETO4	4-wire equalized transmission only, no DC signaling
FXO	2-wire foreign exchange, office end
FXO1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal and no toll diversion
FXO2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and no toll diversion
FXO3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and no toll diversion
FXO5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and no toll diversion

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ENT-T0 (Continued)

Parameters for R3.3 (continued)

Function Code	Description
FXP1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal, and toll diversion
FXP2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and toll diversion
FXP3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and toll diversion
FXP5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and toll diversion
FXS	2-wire foreign exchange, station end
FXS1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and no toll diversion
FXS2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and no toll diversion
FXS3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and no toll diversion
FXS5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and no toll diversion
FXT1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and toll diversion
FXT2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and toll diversion
FXT3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and toll diversion
FXT5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and toll diversion
OCU	Office channel unit dataport
PLR1	PLR signaling, type I
PLR2	PLR signaling, type II
SW56	Switched 56 service*

Continued on next page

ENT-T0 (Continued)

Parameters for R3.3 (continued)

Function Code	Description
TDOA	4-state tandem signaling, type II, signaling leads looped through carrier toward office
TDOB	4-state tandem signaling, type I, signaling leads not looped through carrier toward office
TDOC	2-state tandem signaling, type II, signaling leads looped
TDOD	2-state tandem signaling, type I, signaling leads not looped
TDSA	4-state tandem signaling, type II, signaling leads looped through carrier toward subscriber
TDSB	4-state tandem signaling, type I, signaling leads not looped through carrier toward subscriber
TDSC	2-state tandem signaling, type II, signaling leads looped
TDSD	2-state tandem signaling, type I, signaling leads not looped
TO	2-wire transmission only
TO4	4-wire transmission only, no DC signaling

* SW56 is not a valid function code for the *SPQ*®452 CU for R3.3.

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ENT-T0 (Continued)

Parameters for R3.3 (continued)

ProvisionParameters

Provisioning parameters. The option settings for each function code. The provisioning parameter names are based on the work order record detail (WORD) document abbreviations listed in the following table.

Parameter Name	WORD Abbreviation	User Prompt	User Expert String
–7 dB (J3)	–7DB(J3)	–7 dB(J3)	dBJ3
–7 dB receive	–7DB RCV	–7 dB Receive	dBr
–7 dB transmit	–7DB TRMT	–7 dB Transmit	dBt
All-zero-code allowed	ZC	AllZeroCodeAllowed	zc
Balance	BAL	Balance	bal
Clear channel	CC	ClearChannel	cc
Equalizer bandwidth	BW	Bandwidth	bw
Equalizer height	HT	Height	ht
Equalizer nonloaded/ loaded	L-N	Nonloaded/Loaded	ln
Equalizer slope	SL	Slope	sl
Error correction	EC	ErrorCorrection	ec
Impedance	IMP	Impedance	imp
On-hook transmission	OHT	OnHookTransmission	oht
Quality monitoring	QM	QualityMonitoring	qm
Receive attenuator	RCV	RCV Attenuator	rcv
Receive gain	RCV(GN)	ReceiveGain	rcvgn
Red-lined status	RLS	Redlined	rls
Sealing current	SC	SealingCurrent	sc
Service	SVC	ISDN Channel Service	svc
Signaling type	LS-GS	SignalingType	lsgs
Secondary channel used	SCC	SecondaryChannelUsed	scc
Subscriber data rate	RATE	SubscriberDataRate	rate
Toll diversion	TD	TollDiversion	td
Transmit and receive impedance	TRMT&RCV(IMP)	TRMT&RCVImpedance	imp
Transmit attenuator	TRMT	TRMT Attenuator	trmt
Transmit gain	XMT(GN)	TransmitGain	xmtgn

(Continued on next page)

ENT-T0 (Continued)

Parameters for R3.3 (continued)

The following tables (shown in alphabetic order) list the valid parameters for *FunctionCode*. When prompting for a parameter value, the default is the current value unless the *CLEI* code or Function code is being changed. Then the default will be the original (default) listed in the following tables.

NOTE:
The *redline* parameter is used by the telephone company to mark redlined circuits, to which a special priority is assigned. The system does not treat redlined channels any differently from non-redlined channels.

The following table lists the BRI function code provisioning parameters for apparatus codes AUA92 and AUA293 (*CLEI*=5SC1JE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
svc=ISDN channel service	SVC	2B+D, B1+D, B2+D, or D	2B+D
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for the POTS, multiparty, coin, FSR, DID, manual ringdown, PLAR, and DC bypass pair or alarm channel units (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the DPO function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the DPT function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the DS0A function code provisioning parameters for apparatus code AUA34 (*CLEI*=5SCU38).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 or 64 kb/s.

† Set ZC to YES if the data rate is 64 kb/s.

The following table lists the DS0A function code provisioning parameters for apparatus code AUA34B (*CLEI*=5SC133).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
ec=Error correction	EC	NONE or SCEC	NONE
zc=All-zero-code allowed*	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Set ZC to YES if the data rate is 64 kb/s.

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ENT-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the DS0A function code provisioning parameters for apparatus code *SPQ*334 (*CLEI*=5SC324).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 38.4, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 38.4-, 56-, or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† You are not prompted for ZC when you select the 64-kb/s data rate. When rate=64 kb/s, ZC is automatically set to YES.

The following table lists the DS0B function code provisioning parameters for apparatus code AUA34 (*CLEI*=5SCU38).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 or 64 kb/s.

† Set ZC to YES if the data rate is 64 kb/s.

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ENT-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the DS0B function code provisioning parameters for apparatus code AUA34B (*CLEI*=5SC133).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
ec=Error correction	EC	NONE or SCEC	NONE
zc=All-zero-code allowed*	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Set ZC to YES if the data rate is 64 kb/s.

The following table lists the DS0B function code provisioning parameters for apparatus code *SPQ*334 (*CLEI*=5SC324).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
rate=Subscriber data rate*	RATE	2.4, 4.8, 9.6, 19.2, 38.4, 56, or 64 kb/s	56
ec=Error correction	EC	NONE or SCEC	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Valid data rates for DS0B are 56- or 64-kb/s even though all data rates are available for provisioning.

† You are not prompted for ZC when you select the 64-kb/s data rate. When rate=64 kb/s, ZC is automatically set to YES.

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ENT-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the DX4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

The following table lists the EBS function code provisioning parameters for apparatus code *SPQ*328 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the EM4C/H function code provisioning parameters for apparatus code *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the ETO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBJ3=–7 dB (J3)	–7DB(J3)	BK or WH	BK
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the FXO function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	900
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
td=TollDiversion	TD	NO or YES	NO
lsgs=SignalingType	LS-GS	GS or LS	GS
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXO/P function code provisioning parameters for apparatus code *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV(IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the FXS function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXS/T function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV(IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the OCU function code provisioning parameters for apparatus code AUA52 (*CLEI*=5SCU48).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, or 56 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed	ZC	NO or YES	NO
scc=Secondary channel used	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 kb/s.

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ENT-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the OCU function code provisioning parameters for apparatus code AUA52B (*CLEI*=5SC143).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 56- or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† When the 64 kb/s rate is selected, the user is not prompted for ZC and SCC. For rate=64 kb/s, ZC and SCC are automatically set to YES.

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ENT-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the OCU function code provisioning parameters for apparatus codes *SPQ*452 (*CLEI*=5SCTFF).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 38.4, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
qm=quality monitoring	QM	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 38.4-, 56-, or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† You are not prompted for ZC or SCC when you select the 64-kb/s data rate. When rate=64 kb/s, ZC and SCC are automatically set to YES.

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ENT-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the PLR1/2 function code provisioning parameters for apparatus code *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the SW56 function code provisioning parameters for apparatus code *SPQ*334 (*CLEI*=5SC324).

Provisioning Parameter	WORD Abbreviation	Value	Default Value
ab=A/B signaling	AB	NO or YES	NO
rls=redlined	RLS	NO or YES	NO

The following table lists the TDO function code provisioning parameters for apparatus code *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R3.3 (continued)

The following table lists the TDS function code provisioning parameters for apparatus code *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

The following table lists the TO function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), *SPQ*442 (*CLEI*=SAC1AH), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the TO4 function code provisioning parameters for apparatus codes AUA41 (*CLEI*=5SCU7D) and AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBt=–7 dB TRMT	–7DB TRMT	BK or WH	BK
dBr=–7 dB RCV	–7DB RCV	BK or WH	BK
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

ENT-T0 (Continued)

Parameters for R4.0

Use the following parameters with the ENT-T0 command in R4.0 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Physical line AID. The address which identifies the physical line to be provisioned on the metallic channel shelf or in the DT. The following values are valid for this parameter.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}-{1–4}

Default value is the single physical line access identifier (AID) used in the most recent execution of DLC subsystem commands (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, and RTRV-T0) during the current login session. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

CLEI

CLEI Code*. The functional *CLEI* code is the first six or seven digits of the *CLEI* code of the channel unit used to provide service on this channel. The values listed in the following table are valid for the *CLEI* code parameter.

NOTE:
The CLEI codes 5SCU38 and 5SC133 are intended for COT applications.

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ENT-T0 (Continued)

Parameters for R4.0 (continued)

Functional *CLEI* Code	Apparatus Codes
5SCU7D	AUA141 and AUA41
5SCUCDxxxx	AUA41B
5SCU69	AUA142 and AUA42
5SCU6E	AUA42B
5SCU6A	AUA43
5SCU6F	AUA43B
5SCU7C	AUA44
5SCU48	AUA152 and AUA52
5SC143	AUA52B
5SCU7B	AUA54
5SC1HE	AUA293 and AUA93
5SC18E	AUA94
SAC1AH	*SPQ*®442
SAC1AE	*SPQ*443
SAC1BF	*SPQ*444
SAC1BG	*SPQ*454
Other	AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, AUA179, AUA232, AUA25, AUA25B, AUA27, AUA45, AUA45B, AUA51, AUA53, AUA55, AUA56, AUA56B, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA75, MCU5205, MCU5405, *SPQ*400, *SPQ*440, *SPQ*440B, *SPQ*450, *SPQ*478, *SPQ*800, *SPQ*809, and *SPQ*909

Original value for the *CLEI* code is *Other*. Default — the last value entered. You are (user) prompted for an entry when you do not enter a *CLEI* code.

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ENT-T0 (Continued)

Parameters for R4.0 (continued)

FunctionCode

Function code. You are given the default value and prompted for an entry when you do not enter a function code. However, if the *CLEI* code for this channel is changed, the default value given will be the bold function code for the entered functional *CLEI* code listed in the following table.

Functional *CLEI* Codes	Function Codes
Other	AC, DATA, **DFLT**, GO, GS, LO, LR, LS, NO, and RVT
5SC1JE and 5SC1HE	**BRI**
5SCU7B and SAC1BG	**EM4**[**C**,H] and PLR[1,2]
5SCU69, 5SCU6E, and SAC1AH	**FXO**, DPT, and TO
5SCU6A, 5SCU6F, and SAC1AE	**FXS**, DPO, and TO
5SCU7D and 5SCUCD	**FX**[**S**,T][**1**,2,3,5], DX4[N,R], ETO4, and TO4
5SCU7C and SAC1BF	**FX**[**O**,P][**1**,2,3,5] and TD[O,S][A,B,C,D]
5SCU48 and 5SC143	**OCU**

The following table lists the function codes. The function code depends on the functional *CLEI* code.

CAUTION:
Undesirable ringing on the subscriber line can occur when you use the default (LS) function code rather than the appropriate function codes (AC, LO, and LR, respectively) for the AUA45, AUA45B, and AUA75 equipped channel units. The AUA45, AUA45B, and AUA75 channel units cannot be distinguished from other POTS/SPOTS-like channel units (for example, AUA25, AUA25B, AUA27, AUA51, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, and AUA179) for which the default function code (LS) is appropriate. Please refer to function code entries AC, LR, and LS in this section.

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ENT-T0 (Continued)

Parameters for R4.0 (continued)

Function Code	Description
AC	Manual ring down
BRI	Basic rate interface transmission extension (BRITE) for integrated services digital network (ISDN). Basic rate interface (BRI) is provided through the AUA93 and AUA293 CUs.
DATA	Digital data
DFLT	Defaults (for TR-08 VRTs) to equipped function (circuit function determined by installed channel unit). The function code for certain CUs can be derived from the equipment in addition to being explicitly specified. This includes POTS, multiparty (MP), coin, frequency selective ringing (FSR), direct inward dial (DID), manual ringdown, private line automatic ring (PLAR), and DC bypass pair or alarm channel units Default for TR-303 VRTs is 2-wire loop start (LS). You must explicitly provision other functions using the appropriate function code.
DPO	2-wire dial-pulse originating
DPT	2-wire dial-pulse terminating
DX4N	4-wire duplex with duplex signaling and signaling leads normal
DX4R	4-wire duplex with duplex signaling and signaling leads reversed
EM4C	E&M signaling, type I
EM4H	E&M signaling, type II
ETO4	4-wire equalized transmission only, no DC signaling
FXO	2-wire foreign exchange, office end
FXO1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal and no toll diversion
FXO2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and no toll diversion
FXO3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and no toll diversion

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ENT-T0 (Continued)

Parameters for R4.0 (continued)

Function Code	Description
FXO5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and no toll diversion
FXP1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal, and toll diversion
FXP2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and toll diversion
FXP3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and toll diversion
FXP5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and toll diversion
FXS	2-wire foreign exchange, station end
FXS1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and no toll diversion
FXS2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and no toll diversion
FXS3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and no toll diversion
FXS5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and no toll diversion
FXT1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and toll diversion
FXT2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and toll diversion
FXT3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and toll diversion
FXT5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and toll diversion
GO	2-wire ground start (current sink)
GS	2-wire ground start (current feed)

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ENT-T0 (Continued)

Parameters for R4.0 (continued)

Function Code	Description
ISDN	Supported by the system (R4.0) and appears in reports from the DLC subsystem command, RTRV-T0. Cannot be provisioned using the DLC subsystem commands, ENT-T0 or ED-T0 (can only provision ISDN lines with the LDS through the TR-303 EOC). The ISDN function code pertains to the ANSI U-DSL interface supported by the AUA94 CU on TR-303 VRTs.
LO	2-wire loop start (current sink)
LR	Private line automatic ringdown (PLAR)
LS	2-wire loop start (current feed)
NO	2-wire transmission only
OCU	Office channel unit dataport
PLR1	PLR signaling, type I
PLR2	PLR signaling, type II
RVT	2-wire loop reverse battery
TDOA	4-state tandem signaling, type II, signaling leads looped through carrier toward office
TDOB	4-state tandem signaling, type I, signaling leads not looped through carrier toward office
TDOC	2-state tandem signaling, type II, signaling leads looped
TDOD	2-state tandem signaling, type I, signaling leads not looped
TDSA	4-state tandem signaling, type II, signaling leads looped through carrier toward subscriber
TDSB	4-state tandem signaling, type I, signaling leads not looped through carrier toward subscriber
TDSC	2-state tandem signaling, type II, signaling leads looped
TDSD	2-state tandem signaling, type I, signaling leads not looped
TO	2-wire transmission only
TO4	4-wire transmission only, no DC signaling

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.0 (continued)

ProvisionParameters

Provisioning parameters. The option settings for each function code. The provisioning parameter names are based on the work order record detail (WORD) document abbreviations.

Parameter Name	WORD Abbreviation	User Prompt	User Expert String
–7 dB (J3)	–7DB(J3)	–7 dB(J3)	dBJ3
–7 dB receive	–7DB RCV	–7 dB Receive	dBr
–7 dB transmit	–7DB TRMT	–7 dB Transmit	dBt
All-zero-code allowed	ZC	AllZeroCodeAllowed	zc
Balance	BAL	Balance	bal
Clear channel	CC	ClearChannel	cc
Equalizer bandwidth	BW	Bandwidth	bw
Equalizer height	HT	Height	ht
Equalizer nonloaded/ loaded	L-N	Nonloaded/Loaded	ln
Equalizer slope	SL	Slope	sl
Error correction	EC	ErrorCorrection	ec
Impedance	IMP	Impedance	imp
On-hook transmission	OHT	OnHookTransmission	oht
Receive attenuator	RCV	RCV Attenuator	rcv
Receive gain	RCV(GN)	ReceiveGain	rcvgn
Red-lined status	RLS	Redlined	rls
Sealing current	SC	SealingCurrent	sc
Service	SVC	ISDN Channel Service	svc
Signaling type	LS-GS	SignalingType	lsgs
Secondary channel used	SCC	SecondaryChannelUsed	scc
Subscriber data rate	RATE	SubscriberDataRate	rate
Toll diversion	TD	TollDiversion	td
Transmit and receive impedance	TRMT&RCV(IMP)	TRMT&RCVImpedance	imp
Transmit attenuator	TRMT	TRMT Attenuator	trmt
Transmit gain	XMT(GN)	TransmitGain	xmtgn

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.0 (continued)

The following tables (shown in alphabetic order) list the valid parameters for *FunctionCode*. When prompting for a parameter value, the default is the current value unless the *CLEI* code or Function code is being changed. Then the default will be the original (default) listed in the following tables.

The *redline* parameter is used by the telephone company to mark redlined circuits, to which a special priority is assigned. The system does not treat redlined channels any differently from non-redlined channels.

The following table lists the AC function code provisioning parameters for apparatus codes AUA45 and AUA45B (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the BRI function code provisioning parameters for apparatus codes AUA93 and AUA293 (*CLEI*=5SC1HE).

NOTE:
DT applications (R4.0 and earlier software releases) require you to provision the AUA293 and AUA93 CUs using the on-board switches.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
svc=ISDN channel service	SVC	2B+D, B1+D, B2+D, or D	2B+D
rls=Redlined	RLS	NO or YES	NO

The following table lists the DATA function code provisioning parameters for apparatus codes AUA200 and AUA232 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the DFLT function code provisioning parameters for the POTS, multiparty, coin, FSR, DID, manual ringdown, PLAR, and DC bypass pair or alarm channel units (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the DPO function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the DPT function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the DX4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

The following table lists the EM4C/H function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the ETO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBJ3=–7 dB (J3)	–7DB(J3)	BK or WH	BK
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the FXO function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	900 or 600	900
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
td=TollDiversion	TD	NO or YES	NO
lsgs=SignalingType	LS-GS	GS or LS	GS
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXO/P function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the FXS function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXS/T function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the GO function code provisioning parameters for apparatus codes AUA32, AUA39, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the GS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA51, AUA53, AUA59, AUA150, AUA151, AUA159, AUA159B, AUA179, *SPQ*440, *SPQ*440B, and *SPQ*450 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LO function code provisioning parameters for apparatus codes AUA32, AUA39, *SPQ*300, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LR function code provisioning parameters for apparatus code AUA75 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the LS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA27, AUA51, AUA53, AUA55, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, AUA179, *SPQ*400, *SPQ*440, *SPQ*440B, *SPQ*450, *SPQ*478, and *SPQ*909 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the NO function code provisioning parameters for apparatus codes MCU5205 and MCU5405 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the OCU function code provisioning parameters for apparatus codes AUA52 and AUA152 (*CLEI*=5SCU48).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, or 56 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed	ZC	NO or YES	NO
scc=Secondary channel used	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 kb/s.

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ENT-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the OCU function code provisioning parameters for apparatus code AUA52B (*CLEI*=5SC143).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 56- or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† When the 64 kb/s rate is selected, the user is not prompted for ZC and SCC. For rate=64 kb/s, ZC and SCC are automatically set to YES.

The following table lists the PLR1/2 function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the RVT function code provisioning parameters for apparatus codes AUA56 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDO function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDS function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.0 (continued)

The following table lists the TO function code provisioning parameters for apparatus codes AUA42 and AUA142 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), *SPQ*442 (*CLEI*=SAC1AH), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the TO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBt=–7 dB TRMT	–7DB TRMT	BK or WH	BK
dBr=–7 dB RCV	–7DB RCV	BK or WH	BK
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

ENT-T0 (Continued)

Parameters for R4.2

Use the following parameters with the ENT-T0 command in R4.2 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Physical line AID. The address which identifies the physical line to be provisioned on the metallic channel shelf or in the DT. The following values are valid for this parameter.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}-{1–4}

Default value is the single physical line access identifier (AID) used in the most recent execution of DLC subsystem commands (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, and RTRV-T0) during the current login session. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

CLEI

CLEI Code. The functional *CLEI* code is the first six or seven digits of the *CLEI* code of the channel unit used to provide service on this channel. The values listed in the following table are valid for the *CLEI* code parameter.

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.2 (continued)

Functional *CLEI* Code	Apparatus Codes
5SCU7D	AUA141 and AUA41
5SC3HJ	AUA41B
5SCU69	AUA142 and AUA42
5SCU6E	AUA42B
5SCU6A	AUA43
5SCU6F	AUA43B
5SCU7C	AUA44 and AUA44B
5SCU48	AUA152 and AUA52
5SC143	AUA252, AUA252B, and AUA52B
5SCU7B	AUA54 and AUA54B
5SC1HE	AUA93 and AUA293
5SC18E	AUA94
SAC1CS	*PGM* *-2000
SAC1AH	*SPQ*®442
SAC1AE	*SPQ*443
SAC1BF	*SPQ*444
5SCTFF	*SPQ*452
SAC1BG	*SPQ*454
SACPDC	*SPQ*456
5SC212	*SPQ*494†
Other	AUA150, AUA150C, AUA151, AUA158, AUA158B, AUA158C, AUA159, AUA159B, AUA159C, AUA178, AUA179, AUA232, AUA25, AUA25B, AUA27, AUA45, AUA45B, AUA51, AUA53, AUA53B, AUA55, AUA55B, AUA56, AUA56B, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA59B, AUA75, MCU5205, MCU5405, *SPQ*400, *SPQ*419, *SPQ*429, *SPQ*440, *SPQ*440B, *SPQ*440C, *SPQ*450, *SPQ*453, *SPQ*478, *SPQ*800, *SPQ*809, and *SPQ*909

* Trademark of Tollgrade Communications, Inc.

† The integrated services digital network (ISDN) function code is supported by the system and can appear in reports resulting from the DLC subsystem command, RTRV-T0. However, you cannot provision the ISDN function code using the CIT (DLC subsystem commands, ED-T0 and ENT-T0). You must provision ISDN lines through the local digital switch (LDS) using the TR-303 embedded operations channel (EOC).

Original value for the *CLEI* code is *Other*. Default — the last value entered. You are (user) prompted for an entry when you do not enter a *CLEI* code.

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ENT-T0 (Continued)

Parameters for R4.2 (continued)

FunctionCode

Function code. You are given the default value and prompted for an entry when you do not enter a function code. However, if the *CLEI* code for this channel is changed, the default value given will be the bold function code for the entered functional *CLEI* code listed in the following table.

Functional *CLEI* Codes	Function Codes
Other	AC, DATA, **DFLT**, EBS, GO, GS, LO, LR, LS, NO, and RVT
5SC1JE, 5SC1HE	**BRI**
SACPDC	**DFLT** and RVT
5SCU69, 5SCU6E, SAC1AH	DPT, **FXO**, and TO
5SCU6A, 5SCU6F, SAC1AE	DPO, **FXS**, and TO
5SCU7D, 5SC3HJ	DX4[N,R], ETO4, **FX**[**S**,T][**1**,2,3,5], and TO4
5SCU7B, SAC1BG	**EM4**[**C**,H] and PLR[1,2]
5SCU7C, SAC1BF	**FX**[**O**,P][**1**,2,3,5] and TD[O,S][A,B,C,D]
5SCU48, 5SC143	**OCU**
5SCTFF	**OCU** and SW56
SAC1CS	**PG5**, PG8, PG15, and PG20

The following table lists the function codes. The function code depends on the functional *CLEI* code.

CAUTION:
Undesirable ringing on the subscriber line can occur when you use the default (LS) function code rather than the appropriate function codes (AC, LO, and LR, respectively) for the AUA45, AUA45B, and AUA75 equipped channel units. The AUA45, AUA45B, and AUA75 channel units cannot be distinguished from other POTS/SPOTS-like channel units (for example, AUA25, AUA25B, AUA27, AUA51, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, and AUA179) for which the default function code (LS) is appropriate. Please refer to function code entries AC, LR, and LS in this section.

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ENT-T0 (Continued)

Parameters for R4.2 (continued)

Function Code	Description
AC	Manual ring down
BRI	Basic rate interface transmission extension (BRITE) for integrated services digital network (ISDN). Basic rate interface (BRI) is provided through the AUA93 and AUA293 CUs.
DATA	Digital data
DFLT	Defaults (for TR-08 VRTs) to equipped function (circuit function determined by installed channel unit). The function code for certain CUs can be derived from the equipment in addition to being explicitly specified. This includes POTS, multiparty (MP), coin, frequency selective ringing (FSR), direct inward dial (DID), manual ringdown, private line automatic ring (PLAR), and DC bypass pair or alarm channel units Default for TR-303 VRTs is 2-wire loop start (LS). You must explicitly provision other functions using the appropriate function code.
DPO	2-wire dial-pulse originating
DPT	2-wire dial-pulse terminating
DX4N	4-wire duplex with duplex signaling and signaling leads normal
DX4R	4-wire duplex with duplex signaling and signaling leads reversed
EBS	Enhanced Business Service (EBS) (P-Phone)
EM4C	E&M signaling, type I
EM4H	E&M signaling, type II
ETO4	4-wire equalized transmission only, no DC signaling
FXO	2-wire foreign exchange, office end
FXO1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal and no toll diversion
FXO2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and no toll diversion
FXO3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and no toll diversion
FXO5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and no toll diversion

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ENT-T0 (Continued)

Parameters for R4.2 (continued)

Function Code	Description
FXP1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal, and toll diversion
FXP2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and toll diversion
FXP3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and toll diversion
FXP5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and toll diversion
FXS	2-wire foreign exchange, station end
FXS1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and no toll diversion
FXS2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and no toll diversion
FXS3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and no toll diversion
FXS5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and no toll diversion
FXT1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and toll diversion
FXT2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and toll diversion
FXT3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and toll diversion
FXT5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and toll diversion
GO	2-wire ground start (current sink)
GS	2-wire ground start (current feed)
ISDN	Supported by the system (R4.0 and later software releases) and appears in reports from the DLC subsystem command, RTRV-T0. Can not be provisioned using the DLC subsystem commands, ENT-T0 or ED-T0 (can only provision ISDN lines with the LDS through the TR-303 EOC). The ISDN function code pertains to the ANSI U-DSL interface supported by the AUA94 and *SPQ*494 CU on TR-303 VRTs.

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ENT-T0 (Continued)

Parameters for R4.2 (continued)

Function Code	Description
LO	2-wire loop start (current sink)
LR	Private line automatic ringdown (PLAR)
LS	2-wire loop start (current feed)
NO	2-wire transmission only
OCU	Office channel unit dataport
PG5	Program CU bandwidth settings of 5 kHz or 2 time slots
PG8	Program CU bandwidth settings of 8 kHz or 3 time slots
PG15	Program CU bandwidth settings of 15 kHz or 6 time slots
PG20	Program CU bandwidth settings of 20 kHz or 8 time slots
PLR1	PLR signaling, type I
PLR2	PLR signaling, type II
RVT	2-wire loop reverse battery
SW56	Switched 56 service supported by the dual OCU dataport
TDOA	4-state tandem signaling, type II, signaling leads looped through carrier toward office
TDOB	4-state tandem signaling, type I, signaling leads not looped through carrier toward office
TDOC	2-state tandem signaling, type II, signaling leads looped
TDOD	2-state tandem signaling, type I, signaling leads not looped
TDSA	4-state tandem signaling, type II, signaling leads looped through carrier toward subscriber
TDSB	4-state tandem signaling, type I, signaling leads not looped through carrier toward subscriber
TDSC	2-state tandem signaling, type II, signaling leads looped
TDSD	2-state tandem signaling, type I, signaling leads not looped
TO	2-wire transmission only
TO4	4-wire transmission only, no DC signaling

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.2 (continued)

ProvisionParameters

Provisioning parameters. The option settings for each function code. The provisioning parameter names are based on the work order record detail (WORD) document abbreviations.

Parameter Name	WORD Abbreviation	User Prompt	User Expert String
–7 dB (J3)	–7DB(J3)	–7 dB(J3)	dBJ3
–7 dB receive	–7DB RCV	–7 dB Receive	dBr
–7 dB transmit	–7DB TRMT	–7 dB Transmit	dBt
A/B signaling	AB	A/BSignaling	ab
All-zero-code allowed	ZC	AllZeroCodeAllowed	zc
Balance	BAL	Balance	bal
Clear channel	CC	ClearChannel	cc
Enhanced switched 56	EH56	Enhanced SW56	eh56
Equalizer bandwidth	BW	Bandwidth	bw
Equalizer height	HT	Height	ht
Equalizer nonloaded/ loaded	L-N	Nonloaded/Loaded	ln
Equalizer slope	SL	Slope	sl
Error correction	EC	ErrorCorrection	ec
Impedance	IMP	Impedance	imp
On-hook transmission	OHT	OnHookTransmission	oht
Quality monitoring	QM	QualityMonitoring	qm
Receive attenuator	RCV	RCV Attenuator	rcv
Receive gain	RCV(GN)	ReceiveGain	rcvgn
Red-lined status	RLS	Redlined	rls
Sealing current	SC	SealingCurrent	sc
Service	SVC	ISDN Channel Service	svc
Signaling type	LS-GS	SignalingType	lsgs
Secondary channel used	SCC	SecondaryChannelUsed	scc
Subscriber data rate	RATE	SubscriberDataRate	rate
Toll diversion	TD	TollDiversion	td
Transmission loss	LS	TransmissionLoss	ls
Transmit and receive impedance	TRMT&RCV(IMP)	TRMT&RCVImpedance	imp
Transmit attenuator	TRMT	TRMT Attenuator	trmt
Transmit gain	XMT(GN)	TransmitGain	xmtgn

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ENT-T0 (Continued)

Parameters for R4.2 (continued)

The following tables (shown in alphabetic order) list the valid parameters for *FunctionCode*. When prompting for a parameter value, the default is the current value unless the *CLEI* code or Function code is being changed. Then the default will be the original (default) listed in the following tables.

NOTE:
The *redline* parameter is used by the telephone company to mark redlined circuits, to which a special priority is assigned. The system does not treat redlined channels any differently from non-redlined channels.

The following table lists the AC function code provisioning parameters for apparatus codes AUA45 and AUA45B (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the BRI function code provisioning parameters for apparatus codes AUA93 and AUA293 (*CLEI*=5SC1HE).

NOTE:
DT applications (R4.2 and later software releases) require you to provision the AUA293 and AUA93 CUs using the CIT (set the on-board switches to match the parameter settings provisioned using the CIT). R4.0 and earlier software releases, require you to provision the AUA293 and AUA93 CUs using the on-board switches.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
svc=ISDN channel service	SVC	2B+D, B1+D, B2+D, or D	2B+D
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the DATA function code provisioning parameters for apparatus codes AUA200 and AUA232 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for the POTS, multiparty, coin, FSR, DID, manual ringdown, PLAR, and DC bypass pair or alarm channel units (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for apparatus code *SPQ*456 (*CLEI*=SACPDC).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
ls =Transmission loss	LS	0 or 2.5 dB	0 dB
rls=Redlined	RLS	NO or YES	NO

The following table lists the DPO function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the DPT function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the DX4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the EBS function code provisioning parameters for apparatus code *SPQ*®429 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the EM4C/H function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the ETO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBJ3=–7 dB (J3)	–7DB(J3)	BK or WH	BK
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the FXO function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	900 or 600	900
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
td=TollDiversion	TD	NO or YES	NO
lsgs=SignalingType	LS-GS	GS or LS	GS
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXO/P function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the FXS function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXS/T function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the GO function code provisioning parameters for apparatus codes AUA32, AUA39, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the GS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA51, AUA53, AUA59, AUA150, AUA151, AUA159, AUA159B, AUA179, *SPQ*440, *SPQ*440B, and *SPQ*450 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LO function code provisioning parameters for apparatus codes AUA32, AUA39, *SPQ*300, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LR function code provisioning parameters for apparatus code AUA75 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the LS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA27, AUA51, AUA53, AUA55, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, AUA179, *SPQ*400, *SPQ*440, *SPQ*440B, *SPQ*450, *SPQ*478, and *SPQ*909 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the NO function code provisioning parameters for apparatus codes MCU5205 and MCU5405 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the OCU function code provisioning parameters for apparatus codes AUA52 and AUA152 (*CLEI*=5SCU48).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, or 56 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed	ZC	NO or YES	NO
scc=Secondary channel used	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 kb/s.

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ENT-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the OCU function code provisioning parameters for apparatus code AUA52B (*CLEI*=5SC143).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 56- or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† When the 64 kb/s rate is selected, the user is not prompted for ZC and SCC. For rate=64 kb/s, ZC and SCC are automatically set to YES.

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ENT-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the OCU function code provisioning parameters for apparatus codes *SPQ*452 (*CLEI*=5SCTFF).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 38.4, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
qm=quality monitoring	QM	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 38.4-, 56-, or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† You are not prompted for ZC or SCC when you select the 64-kb/s data rate. When rate=64 kb/s, ZC and SCC are automatically set to YES.

The following table lists the PG5, PG8, PG15, and PG20 function code provisioning parameters for apparatus code *PGM*-2000 (*CLEI*=SAC1CS).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the PLR1/2 function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B), AUA54B (*CLEI*=5SCU7B), and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the RVT function code provisioning parameters for apparatus codes AUA56 and AUA56B (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the RVT function code provisioning parameters for apparatus codes *SPQ*456 (*CLEI*=SACPDC).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
ls=Transmission loss	LS	0 or 2.5 dB	0 dB
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the SW56 function code provisioning parameters for apparatus code *SPQ*452 (*CLEI*=5SCTFF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
eh56=Enhanced switched 56	EH56	NO or YES	NO
ab=A/B signaling	AB	NO or YES	NO
qm=Quality monitoring	QM	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDO function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C), AUA44B (*CLEI*=5SCU7C), and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDS function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C), AUA44B (*CLEI*=5SCU7C), and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.2 (continued)

The following table lists the TO function code provisioning parameters for apparatus codes AUA42 and AUA142 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), *SPQ*442 (*CLEI*=SAC1AH), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the TO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBt=–7 dB TRMT	–7DB TRMT	BK or WH	BK
dBr=–7 dB RCV	–7DB RCV	BK or WH	BK
sc=SealingCurrent	SC	YES or NO	YES
rls=Redlined	RLS	NO or YES	NO

ENT-T0 (Continued)

Parameters for R4.4

Use the following parameters with the ENT-T0 command in R4.4 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Physical line AID. The address which identifies the physical line to be provisioned on the metallic channel shelf or in the DT. The following values are valid for this parameter.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,13,15,17,19}-{1–6}-{1–4}

Default value is the single physical line access identifier (AID) used in the most recent execution of DLC subsystem commands (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, and RTRV-T0) during the current login session. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

CLEI

CLEI Code. The functional *CLEI* code is the first six or seven digits of the *CLEI* code of the channel unit used to provide service on this channel. The values listed in the following table are valid for the *CLEI* code parameter.

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.4 (continued)

Functional *CLEI* Code	Apparatus Codes
5SCU7D	AUA141 and AUA41
5SC3HJ	AUA41B
5SCU69	AUA142 and AUA42
5SCU6E	AUA42B
5SCU6A	AUA43
5SCU6F	AUA43B
5SCU7C	AUA44 and AUA44B
5SCU48	AUA152 and AUA52
5SC143	AUA252, AUA252B, and AUA52B
5SCU7B	AUA54 and AUA54B
5SC1HE	AUA293 and AUA93
5SC18E*	AUA94†
SAC1CS	*PGM*‡-2000
SAC1AH	*SPQ*®442
SAC1AE	*SPQ*443
SAC1BF	*SPQ*444
5SCTFF	*SPQ*452
SAC1BG	*SPQ*454
SACPDC	*SPQ*456
5SC212	*SPQ*494†
Other	AUA150, AUA150C, AUA151, AUA158, AUA158B, AUA158C, AUA159, AUA159B, AUA159C, AUA178, AUA179, AUA200, AUA232, AUA25, AUA25B, AUA27, AUA45, AUA45B, AUA51, AUA53, AUA53B, AUA55, AUA55B, AUA56, AUA56B, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA59B, AUA75, AUA90, MCU5205, MCU5405, *SPQ*400, *SPQ*419, *SPQ*429, *SPQ*440, *SPQ*440B,*SPQ*440C, *SPQ*450, *SPQ*453, *SPQ*478, *SPQ*800, *SPQ*809, *SPQ*810, and *SPQ*909

* The LDS only knows the *SPQ*494. 5SC212 is displayed as the provisioned functional CLEI code.

† The integrated services digital network (ISDN) function code appears in reports when using the DLC subsystem command, RTRV-T0. However, you cannot provision the ISDN function code using the CIT (DLC subsystem commands, ED-T0 and ENT-T0). You must provision ISDN lines through the local digital switch (LDS) using the TR-303 embedded operations channel (EOC).

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Original value for the *CLEI* code is *Other*. Default — the last value entered. You are (user) prompted for an entry when you do not enter a *CLEI* code.

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.4 (continued)

FunctionCode

Function code. You are given the default value and prompted for an entry when you do not enter a function code. However, if the *CLEI* code for this channel is changed, the default value given will be the bold function code for the entered functional *CLEI* code listed in the following table.

Functional *CLEI* Codes	Function Codes
Other	AC, DATA, **DFLT**, EBS, GO, GS, LO, LR, LS, NO, and RVT
5SC1JE, 5SC1HE	**BRI**
SACPDC	**DFLT** and RVT
5SCU69, 5SCU6E, SAC1AH	DPT, **FXO**, and TO
5SCU6A, 5SCU6F, SAC1AE	DPO, **FXS**, and TO
5SCU7D, 5SC3HJ	DX4[N,R], ETO4, **FX**[**S**,T][**1**,2,3,5], and TO4
5SCU7B, SAC1BG	**EM4**[**C**,H] and PLR[1,2]
5SCU7C, SAC1BF	**FX**[**O**,P][**1**,2,3,5] and TD[O,S][A,B,C,D]
5SCU48, 5SC143	**OCU**
5SCTFF	**OCU** and SW56
SAC1CS	**PG5**, PG8, PG15, and PG20

The following table lists the function codes. The function code depends on the functional *CLEI* code.

CAUTION:
Undesirable ringing on the subscriber line can occur when you use the default (LS) function code rather than the appropriate function codes (AC, LO, and LR, respectively) for the AUA45, AUA45B, and AUA75 equipped channel units. The AUA45, AUA45B, and AUA75 channel units cannot be distinguished from other POTS/SPOTS-like channel units (for example, AUA25, AUA25B, AUA27, AUA51, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, and AUA179) for which the default function code (LS) is appropriate. Please refer to function code entries AC, LR, and LS in this section.

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.4 (continued)

Function Code	Description
AC	Manual ring down
BRI	Basic rate interface transmission extension (BRITE) for integrated services digital network (ISDN). Basic rate interface (BRI) is provided through the AUA93 and AUA293 CUs.
DATA	Digital data
DFLT	Defaults (for TR-08 VRTs) to equipped function (circuit function determined by installed channel unit). The function code for certain CUs can be derived from the equipment in addition to being explicitly specified. This includes POTS, multiparty (MP), coin, frequency selective ringing (FSR), direct inward dial (DID), manual ringdown, private line automatic ring (PLAR), and DC bypass pair or alarm channel units Default for TR-303 VRTs is 2-wire loop start (LS). You must explicitly provision other functions using the appropriate function code.
DPO	2-wire dial-pulse originating
DPT	2-wire dial-pulse terminating
DX4N	4-wire duplex with duplex signaling and signaling leads normal
DX4R	4-wire duplex with duplex signaling and signaling leads reversed
EBS	Enhanced Business Service (EBS) (P-Phone)
EM4C	E&M signaling, type I
EM4H	E&M signaling, type II
ETO4	4-wire equalized transmission only, no DC signaling
FXO	2-wire foreign exchange, office end
FXO1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal and no toll diversion
FXO2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and no toll diversion
FXO3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and no toll diversion
FXO5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and no toll diversion

Continued on next page

ENT-T0 (Continued)

Parameters for R4.4 (continued)

Function Code	Description
FXP1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal, and toll diversion
FXP2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and toll diversion
FXP3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and toll diversion
FXP5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and toll diversion
FXS	2-wire foreign exchange, station end
FXS1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and no toll diversion
FXS2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and no toll diversion
FXS3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and no toll diversion
FXS5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and no toll diversion
FXT1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and toll diversion
FXT2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and toll diversion
FXT3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and toll diversion
FXT5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and toll diversion
GO	2-wire ground start (current sink)
GS	2-wire ground start (current feed)

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ENT-T0 (Continued)

Parameters for R4.4 (continued)

Function Code	Description
ISDN	Supported by the system (R4.0 and later software releases) and appears in reports from the DLC subsystem command, RTRV-T0. Cannot be provisioned using the DLC subsystem commands, ENT-T0 or ED-T0 (can only provision ISDN lines with the LDS through the TR-303 EOC). The ISDN function code pertains to the ANSI U-DSL interface supported by the AUA94 and *SPQ*494 CU on TR-303 VRTs.
LO	2-wire loop start (current sink)
LR	Private line automatic ringdown (PLAR)
LS	2-wire loop start (current feed)
NO	2-wire transmission only
OCU	Office channel unit dataport
PG5	Program CU bandwidth settings of 5 kHz or 2 time slots
PG8	Program CU bandwidth settings of 8 kHz or 3 time slots
PG15	Program CU bandwidth settings of 15 kHz or 6 time slots
PG20	Program CU bandwidth settings of 20 kHz or 8 time slots
PLR1	PLR signaling, type I
PLR2	PLR signaling, type II
RVT	2-wire loop reverse battery
SW56	Switched 56 service supported by the dual OCU dataport

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ENT-T0 (Continued)

Parameters for R4.4 (continued)

Function Code	Description
TDOA	4-state tandem signaling, type II, signaling leads looped through carrier toward office
TDOB	4-state tandem signaling, type I, signaling leads not looped through carrier toward office
TDOC	2-state tandem signaling, type II, signaling leads looped
TDOD	2-state tandem signaling, type I, signaling leads not looped
TDSA	4-state tandem signaling, type II, signaling leads looped through carrier toward subscriber
TDSB	4-state tandem signaling, type I, signaling leads not looped through carrier toward subscriber
TDSC	2-state tandem signaling, type II, signaling leads looped
TDSD	2-state tandem signaling, type I, signaling leads not looped
TO	2-wire transmission only
TO4	4-wire transmission only, no DC signaling

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ENT-T0 (Continued)

Parameters for R4.4 (continued)

ProvisionParameters

Provisioning parameters. The option settings for each function code. The provisioning parameter names are based on the work order record detail (WORD) document abbreviations.

Parameter Name	WORD Abbreviation	User Prompt	User Expert String
–7 dB (J3)	–7DB(J3)	–7 dB(J3)	dBJ3
–7 dB receive	–7DB RCV	–7 dB Receive	dBr
–7 dB transmit	–7DB TRMT	–7 dB Transmit	dBt
A/B signaling	AB	A/BSignaling	ab
All-zero-code allowed	ZC	AllZeroCodeAllowed	zc
Balance	BAL	Balance	bal
Clear channel	CC	ClearChannel	cc
Enhanced switched 56	EH56	Enhanced SW56	eh56
Equalizer bandwidth	BW	Bandwidth	bw
Equalizer height	HT	Height	ht
Equalizer nonloaded/ loaded	L-N	Nonloaded/Loaded	ln
Equalizer slope	SL	Slope	sl
Error correction	EC	ErrorCorrection	ec
Impedance	IMP	Impedance	imp
On-hook transmission	OHT	OnHookTransmission	oht
Quality monitoring	QM	QualityMonitoring	qm
Receive attenuator	RCV	RCV Attenuator	rcv
Receive gain	RCV(GN)	ReceiveGain	rcvgn
Red-lined status	RLS	Redlined	rls
Sealing current	SC	SealingCurrent	sc
Service	SVC	ISDN Channel Service	svc
Signaling type	LS-GS	SignalingType	lsgs
Secondary channel used	SCC	SecondaryChannelUsed	scc
Subscriber data rate	RATE	SubscriberDataRate	rate
Toll diversion	TD	TollDiversion	td
Transmission loss	LS	TransmissionLoss	ls
Transmit and receive impedance	TRMT&RCV(IMP)	TRMT&RCVImpedance	imp
Transmit attenuator	TRMT	TRMT Attenuator	trmt
Transmit gain	XMT(GN)	TransmitGain	xmtgn

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.4 (continued)

The following tables (shown in alphabetic order) list the valid parameters for *FunctionCode*. When prompting for a parameter value, the default is the current value unless the *CLEI* code or Function code is being changed. Then the default will be the original (default) listed in the following tables.

NOTE:
The *redline* parameter is used by the telephone company to mark redlined circuits, to which a special priority is assigned. The system does not treat redlined channels any differently from non-redlined channels.

The following table lists the AC function code provisioning parameters for apparatus codes AUA45 and AUA45B (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the BRI function code provisioning parameters for apparatus codes AUA93 and AUA293 (*CLEI*=5SC1HE).

NOTE:
DT applications (R4.2 and later software releases) require you to provision the AUA293 and AUA93 CUs using the CIT (set the on-board switches to match the parameter settings provisioned using the CIT). R4.0 and earlier software releases, require you to provision the AUA293 and AUA93 CUs using the on-board switches.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
svc=ISDN channel service	SVC	2B+D, B1+D, B2+D, or D	2B+D
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the DATA function code provisioning parameters for apparatus codes AUA200 and AUA232 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for the POTS, multiparty, coin, FSR, DID, manual ringdown, PLAR, and DC bypass pair or alarm channel units (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for apparatus code *SPQ*456 (*CLEI*=SACPDC).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
ls =Transmission loss	LS	0 or 2.5 dB	0 dB
rls=Redlined	RLS	NO or YES	NO

The following table lists the DPO function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the DPT function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the DX4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the EBS function code provisioning parameters for apparatus code *SPQ*429 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the EM4C/H function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the ETO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBJ3=–7 dB (J3)	–7DB(J3)	BK or WH	BK
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the FXO function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	900 or 600	900
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
td=TollDiversion	TD	NO or YES	NO
lsgs=SignalingType	LS-GS	GS or LS	GS
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXO/P function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the FXS function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXS/T function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the GO function code provisioning parameters for apparatus codes AUA32, AUA39, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the GS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA51, AUA53, AUA59, AUA150, AUA151, AUA159, AUA159B, AUA179, *SPQ*440, *SPQ*440B, and *SPQ*450 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LO function code provisioning parameters for apparatus codes AUA32, AUA39, *SPQ*300, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LR function code provisioning parameters for apparatus code AUA75 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the LS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA27, AUA51, AUA53, AUA55, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, AUA179, *SPQ*400, *SPQ*440, *SPQ*440B, *SPQ*450, *SPQ*478, and *SPQ*909 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the NO function code provisioning parameters for apparatus codes MCU5205 and MCU5405 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the OCU function code provisioning parameters for apparatus codes AUA52 and AUA152 (*CLEI*=5SCU48).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, or 56 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed	ZC	NO or YES	NO
scc=Secondary channel used	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 kb/s.

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ENT-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the OCU function code provisioning parameters for apparatus code AUA52B (*CLEI*=5SC143).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 56- or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† When the 64 kb/s rate is selected, the user is not prompted for ZC and SCC. For rate=64 kb/s, ZC and SCC are automatically set to YES.

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ENT-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the OCU function code provisioning parameters for apparatus codes *SPQ*452 (*CLEI*=5SCTFF).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 38.4, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
qm=quality monitoring	QM	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 38.4-, 56-, or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† You are not prompted for ZC or SCC when you select the 64-kb/s data rate. When rate=64 kb/s, ZC and SCC are automatically set to YES.

The following table lists the PG5, PG8, PG15, and PG20 function code provisioning parameters for apparatus code *PGM*-2000 (*CLEI*=SAC1CS).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the PLR1/2 function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the RVT function code provisioning parameters for apparatus codes AUA56 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the RVT function code provisioning parameters for apparatus codes *SPQ*456 (*CLEI*=SACPDC).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
ls=Transmission loss	LS	0 or 2.5 dB	0 dB
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the SW56 function code provisioning parameters for apparatus code *SPQ*452 (*CLEI*=5SCTFF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
eh56=Enhanced switched 56	EH56	NO or YES	NO
ab=A/B signaling	AB	NO or YES	NO
qm=Quality monitoring	QM	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDO function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDS function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.4 (continued)

The following table lists the TO function code provisioning parameters for apparatus codes AUA42 and AUA142 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), *SPQ*442 (*CLEI*=SAC1AH), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the TO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBt=–7 dB TRMT	–7DB TRMT	BK or WH	BK
dBr=–7 dB RCV	–7DB RCV	BK or WH	BK
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

ENT-T0 (Continued)

Parameters for R4.5

Use the following parameters with the ENT-T0 command in R4.5 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Physical line AID. The address which identifies the physical line to be provisioned on the metallic channel shelf or in the DT. The following values are valid for this parameter.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}-{1–6}-{1–4}

Default value is the single physical line access identifier (AID) used in the most recent execution of DLC subsystem commands (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, and RTRV-T0) during the current login session. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

CLEI

CLEI Code. The functional *CLEI* code is the first six or seven digits of the *CLEI* code of the channel unit used to provide service on this channel. The values listed in the following table are valid for the *CLEI* code parameter.

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.5 (continued)

Functional *CLEI* Code	Apparatus Codes
5SCU7D	AUA141 and AUA41
5SC3HJ	AUA41B
5SCU69	AUA142 and AUA42
5SCU6E	AUA42B
5SCU6A	AUA43
5SCU6F	AUA43B
5SCU7C	AUA44 and AUA44B
5SCU48	AUA152 and AUA52
5SC143	AUA252, AUA252B, and AUA52B
5SCU7B	AUA54 and AUA54B
5SC1HE	AUA293 and AUA93
5SC18E *	AUA94 † and AUA94B †
SAC1CS	*PGM* ‡-2000
SAC1AH	*SPQ* ®442
SAC1AE	*SPQ*443
SAC1BF	*SPQ*444
5SCTFF	*SPQ*452
SAC1BG	*SPQ*454
SACPDC	*SPQ*456
5SC212	*SPQ*494 †
Other	AUA150, AUA150C, AUA151, AUA158, AUA158B, AUA158C, AUA159, AUA159B, AUA159C, AUA178, AUA179, AUA200, AUA232, AUA25, AUA25B, AUA27, AUA45, AUA45B, AUA51, AUA53, AUA53B, AUA55, AUA55B, AUA56, AUA56B, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA59B, AUA75, AUA90, MCU5205, MCU5405, *SPQ*400, *SPQ*419, *SPQ*429, *SPQ*440, *SPQ*440B, *SPQ*440C, *SPQ*450, *SPQ*453, *SPQ*478, *SPQ*800, *SPQ*809, *SPQ*810, and *SPQ*909

* The LDS only knows the *SPQ*494. 5SC212 is displayed as the provisioned functional CLEI code.

† You can provision the ISDN function code using the CIT (DLC subsystem commands, ED-T0 and ENT-T0) or through the local digital switch (LDS) using the TR-303 embedded operations channel (EOC). The integrated services digital network (ISDN) function code appears in reports when using the DLC subsystem command, RTRV-T0.

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Original value for the *CLEI* code is *Other*. Default — the last value entered. You are (user) prompted for an entry when you do not enter a *CLEI* code.

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.5 (continued)

FunctionCode

Function code. You are given the default value and prompted for an entry when you do not enter a function code. However, if the *CLEI* code for this channel is changed, the default value given will be the bold function code for the entered functional *CLEI* code listed in the following table.

Functional *CLEI* Codes	Function Codes
Other	AC, DATA, **DFLT**, EBS, GO, GS, LO, LR, LS, NO, and RVT
5SC1JE, 5SC1HE	**BRI**
SACPDC	**DFLT** and RVT
5SCU69, 5SCU6E, SAC1AH	DPT, **FXO**, and TO
5SCU6A, 5SCU6F, SAC1AE	DPO, **FXS**, and TO
5SCU7D, 5SC3HJ	DX4[N,R], ETO4, **FX**[**S**,T][**1**,2,3,5], and TO4
5SCU7B, SAC1BG	**EM4**[**C**,H] and PLR[1,2]
5SCU7C, SAC1BF	**FX**[**O**,P][**1**,2,3,5] and TD[O,S][A,B,C,D]
5SC18E, 5SC212	**ISDN**
5SCU48, 5SC143	**OCU**
5SCTFF	**OCU** and SW56
SAC1CS	**PG5**, PG8, PG15, and PG20

The following table lists the function codes. The function code depends on the functional *CLEI* code.

CAUTION:
Undesirable ringing on the subscriber line can occur when you use the default (LS) function code rather than the appropriate function codes (AC, LO, and LR, respectively) for the AUA45, AUA45B, and AUA75 equipped channel units. The AUA45, AUA45B, and AUA75 channel units cannot be distinguished from other POTS/SPOTS-like channel units (for example, AUA25, AUA25B, AUA27, AUA51, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, and AUA179) for which the default function code (LS) is appropriate. Please refer to function code entries AC, LR, and LS in this section.

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.5 (continued)

Function Code	Description
AC	Manual ring down
BRI	Basic rate interface transmission extension (BRITE) for integrated services digital network (ISDN). Basic rate interface (BRI) is provided through the AUA93 and AUA293 CUs.
DATA	Digital data
DFLT	Defaults (for TR-08 VRTs) to equipped function (circuit function determined by installed channel unit). The function code for certain CUs can be derived from the equipment in addition to being explicitly specified. This includes POTS, multiparty (MP), coin, frequency selective ringing (FSR), direct inward dial (DID), manual ringdown, private line automatic ring (PLAR), and DC bypass pair or alarm channel units Default for TR-303 VRTs is 2-wire loop start (LS). You must explicitly provision other functions using the appropriate function code.
DPO	2-wire dial-pulse originating
DPT	2-wire dial-pulse terminating
DX4N	4-wire duplex with duplex signaling and signaling leads normal
DX4R	4-wire duplex with duplex signaling and signaling leads reversed
EBS	Enhanced Business Service (EBS) (P-Phone)
EM4C	E&M signaling, type I
EM4H	E&M signaling, type II
ETO4	4-wire equalized transmission only, no DC signaling
FXO	2-wire foreign exchange, office end
FXO1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal and no toll diversion
FXO2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and no toll diversion
FXO3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and no toll diversion
FXO5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and no toll diversion

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ENT-T0 (Continued)

Parameters for R4.5 (continued)

Function Code	Description
FXP1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal, and toll diversion
FXP2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and toll diversion
FXP3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and toll diversion
FXP5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and toll diversion
FXS	2-wire foreign exchange, station end
FXS1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and no toll diversion
FXS2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and no toll diversion
FXS3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and no toll diversion
FXS5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and no toll diversion
FXT1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and toll diversion
FXT2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and toll diversion
FXT3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and toll diversion
FXT5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and toll diversion
GO	2-wire ground start (current sink)
GS	2-wire ground start (current feed)

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ENT-T0 (Continued)

Parameters for R4.5 (continued)

Function Code	Description
ISDN	Integrated Services Digital Network. Can be provisioned using the DLC subsystem commands, ENT-T0 and ED-T0, or through the LDS using the TR-303 EOC. The ISDN function code pertains to the ANSI U-DSL interface supported by the AUA94, AUA94B, and *SPQ*494 CUs on TR-303 VRTs. Appears in reports as a result of the DLC subsystem command, RTRV-T0.
LO	2-wire loop start (current sink)
LR	Private line automatic ringdown (PLAR)
LS	2-wire loop start (current feed)
NO	2-wire transmission only
OCU	Office channel unit dataport
PG5	Program CU bandwidth settings of 5 kHz or 2 time slots
PG8	Program CU bandwidth settings of 8 kHz or 3 time slots
PG15	Program CU bandwidth settings of 15 kHz or 6 time slots
PG20	Program CU bandwidth settings of 20 kHz or 8 time slots
PLR1	PLR signaling, type I
PLR2	PLR signaling, type II
RVT	2-wire loop reverse battery
SW56	Switched 56 service supported by the dual OCU dataport

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ENT-T0 (Continued)

Parameters for R4.5 (continued)

Function Code	Description
TDOA	4-state tandem signaling, type II, signaling leads looped through carrier toward office
TDOB	4-state tandem signaling, type I, signaling leads not looped through carrier toward office
TDOC	2-state tandem signaling, type II, signaling leads looped
TDOD	2-state tandem signaling, type I, signaling leads not looped
TDSA	4-state tandem signaling, type II, signaling leads looped through carrier toward subscriber
TDSB	4-state tandem signaling, type I, signaling leads not looped through carrier toward subscriber
TDSC	2-state tandem signaling, type II, signaling leads looped
TDSD	2-state tandem signaling, type I, signaling leads not looped
TO	2-wire transmission only
TO4	4-wire transmission only, no DC signaling

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ENT-T0 (Continued)

Parameters for R4.5 (continued)

ProvisionParameters

Provisioning parameters. The option settings for each function code. The provisioning parameter names are based on the work order record detail (WORD) document abbreviations.

Parameter Name	WORD Abbreviation	User Prompt	User Expert String
–7 dB (J3)	–7DB(J3)	–7 dB(J3)	dBJ3
–7 dB receive	–7DB RCV	–7 dB Receive	dBr
–7 dB transmit	–7DB TRMT	–7 dB Transmit	dBt
A/B signaling	AB	A/BSignaling	ab
All-zero-code allowed	ZC	AllZeroCodeAllowed	zc
Balance	BAL	Balance	bal
Clear channel	CC	ClearChannel	cc
Enhanced switched 56	EH56	Enhanced SW56	eh56
Equalizer bandwidth	BW	Bandwidth	bw
Equalizer height	HT	Height	ht
Equalizer nonloaded/ loaded	L-N	Nonloaded/Loaded	ln
Equalizer slope	SL	Slope	sl
Error correction	EC	ErrorCorrection	ec
Impedance	IMP	Impedance	imp
On-hook transmission	OHT	OnHookTransmission	oht
Quality monitoring	QM	QualityMonitoring	qm
Receive attenuator	RCV	RCV Attenuator	rcv
Receive gain	RCV(GN)	ReceiveGain	rcvgn
Red-lined status	RLS	Redlined	rls
Sealing current	SC	SealingCurrent	sc
Service	SVC	ISDN Channel Service	svc
Signaling type	LS-GS	SignalingType	lsgs
Secondary channel used	SCC	SecondaryChannelUsed	scc
Subscriber data rate	RATE	SubscriberDataRate	rate
Toll diversion	TD	TollDiversion	td
Transmission loss	LS	TransmissionLoss	ls
Transmit and receive impedance	TRMT&RCV(IMP)	TRMT&RCVImpedance	imp
Transmit attenuator	TRMT	TRMT Attenuator	trmt
Transmit gain	XMT(GN)	TransmitGain	xmtgn

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ENT-T0 (Continued)

Parameters for R4.5 (continued)

The following tables (shown in alphabetic order) list the valid parameters for *FunctionCode*. When prompting for a parameter value, the default is the current value unless the *CLEI* code or Function code is being changed. Then the default will be the original (default) listed in the following tables.

NOTE:
The *redline* parameter is used by the telephone company to mark redlined circuits, to which a special priority is assigned. The system does not treat redlined channels any differently from non-redlined channels.

The following table lists the AC function code provisioning parameters for apparatus codes AUA45 and AUA45B (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the BRI function code provisioning parameters for apparatus codes AUA93 and AUA293 (*CLEI*=5SC1HE).

NOTE:
DT applications (R4.2 and later software releases) require you to provision the AUA293 and AUA93 CUs using the CIT (set the on-board switches to match the parameter settings provisioned using the CIT). R4.0 and earlier software releases, require you to provision the AUA293 and AUA93 CUs using the on-board switches.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
svc=ISDN channel service	SVC	2B+D, B1+D, B2+D, or D	2B+D
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the DATA function code provisioning parameters for apparatus codes AUA200 and AUA232 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for the POTS, multiparty, coin, FSR, DID, manual ringdown, PLAR, and DC bypass pair or alarm channel units (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for apparatus code *SPQ*456 (*CLEI*=SACPDC).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
ls =Transmission loss	LS	0 or 2.5 dB	0 dB
rls=Redlined	RLS	NO or YES	NO

The following table lists the DPO function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the DPT function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the DX4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the EBS function code provisioning parameters for apparatus code *SPQ*429 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the EM4C/H function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the ETO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBJ3=–7 dB (J3)	–7DB(J3)	BK or WH	BK
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the FXO function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	900 or 600	900
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
td=TollDiversion	TD	NO or YES	NO
lsgs=SignalingType	LS-GS	GS or LS	GS
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXO/P function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the FXS function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXS/T function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the GO function code provisioning parameters for apparatus codes AUA32, AUA39, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the GS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA51, AUA53, AUA59, AUA150, AUA151, AUA159, AUA159B, AUA179, *SPQ*440, *SPQ*440B, *SPQ*440C, and *SPQ*450 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the ISDN function code provisioning parameters for apparatus codes AUA94 (*CLEI*=5SC18E), AUA94B (*CLEI*=5SC18E), and *SPQ*494 (*CLEI*=5SC212). Note that during an audit the LDS may change the provisioning value for the functional CLEI code from 5SC18E to 5SC212.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LO function code provisioning parameters for apparatus codes AUA32, AUA39, *SPQ*300, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LR function code provisioning parameters for apparatus code AUA75 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the LS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA27, AUA51, AUA53, AUA55, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, AUA179, *SPQ*400, *SPQ*440, *SPQ*440B, *SPQ*440C, *SPQ*450, *SPQ*478, and *SPQ*909 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the NO function code provisioning parameters for apparatus codes MCU5205 and MCU5405 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the OCU function code provisioning parameters for apparatus codes AUA52 and AUA152 (*CLEI*=5SCU48).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, or 56 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed	ZC	NO or YES	NO
scc=Secondary channel used	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 kb/s.

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ENT-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the OCU function code provisioning parameters for apparatus code AUA52B (*CLEI*=5SC143).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 56- or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† When the 64 kb/s rate is selected, the user is not prompted for ZC and SCC. For rate=64 kb/s, ZC and SCC are automatically set to YES.

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the OCU function code provisioning parameters for apparatus codes *SPQ*452 (*CLEI*=5SCTFF).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 38.4, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
qm=quality monitoring	QM	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 38.4-, 56-, or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† You are not prompted for ZC or SCC when you select the 64-kb/s data rate. When rate=64 kb/s, ZC and SCC are automatically set to YES.

The following table lists the PG5, PG8, PG15, and PG20 function code provisioning parameters for apparatus code *PGM*-2000 (*CLEI*=SAC1CS).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the PLR1/2 function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the RVT function code provisioning parameters for apparatus codes AUA56 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the RVT function code provisioning parameters for apparatus codes *SPQ*456 (*CLEI*=SACPDC).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
ls=Transmission loss	LS	0 or 2.5 dB	0 dB
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the SW56 function code provisioning parameters for apparatus code *SPQ*452 (*CLEI*=5SCTFF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
eh56=Enhanced switched 56	EH56	NO or YES	NO
ab=A/B signaling	AB	NO or YES	NO
qm=Quality monitoring	QM	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDO function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDS function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.5 (continued)

The following table lists the TO function code provisioning parameters for apparatus codes AUA42 and AUA142 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), *SPQ*442 (*CLEI*=SAC1AH), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the TO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBt=–7 dB TRMT	–7DB TRMT	BK or WH	BK
dBr=–7 dB RCV	–7DB RCV	BK or WH	BK
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

ENT-T0 (Continued)

Parameters for R4.6

Use the following parameters with the ENT-T0 command in R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Physical line AID. The address which identifies the physical line to be provisioned on the metallic channel shelf or in the DT. The following values are valid for this parameter.

- drop-{1–8}-{1–24}-{1–4}
- dtdp-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}-{1–6}-{1–4}

Default value is the single physical line access identifier (AID) used in the most recent execution of DLC subsystem commands (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, and RTRV-T0) during the current login session. If no default AID is available, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

CLEI

CLEI Code. The functional *CLEI* code is the first six or seven digits of the *CLEI* code of the channel unit used to provide service on this channel. The values listed in the following table are valid for the *CLEI* code parameter.

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.6 (continued)

Functional *CLEI* Code	Apparatus Codes
5SCU7D	AUA141 and AUA41
5SC3HJ	AUA41B
5SCU69	AUA142 and AUA42
5SCU6E	AUA42B
5SCU6A	AUA43
5SCU6F	AUA43B
5SCU7C	AUA44 and AUA44B
5SCU48	AUA152 and AUA52
5SC143	AUA252, AUA252B, and AUA52B
5SCU7B	AUA54 and AUA54B
5SC1HE	AUA293 and AUA93
5SC18E *	AUA94 † and AUA94B †
SAC1CS	*PGM* ‡-2000
SAC1AH	*SPQ* ®442
SAC1AE	*SPQ*443
SAC1BF	*SPQ*444
5SCTFF	*SPQ*452
SAC1BG	*SPQ*454
SACPDC	*SPQ*456
5SC212	*SPQ*494 †
Other	AUA150, AUA150C, AUA151, AUA158, AUA158B, AUA158C, AUA159, AUA159B, AUA159C, AUA178, AUA179, AUA200, AUA232, AUA25, AUA25B, AUA27, AUA45, AUA45B, AUA51, AUA53, AUA53B, AUA55, AUA55B, AUA56, AUA56B, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA59B, AUA75, AUA90, MCU5205, MCU5405, *SPQ*400, *SPQ*401B, *SPQ*419, *SPQ*429, *SPQ*440C, *SPQ*440D, *SPQ*450, *SPQ*453, *SPQ*478, *SPQ*800, *SPQ*809, *SPQ*810, *SPQ*811, and *SPQ*909

* The LDS only knows the *SPQ*494. 5SC212 is displayed as the provisioned functional CLEI code.

† You can provision the ISDN function code using the CIT (DLC subsystem commands, ED-T0 and ENT-T0) or through the local digital switch (LDS) using the TR-303 embedded operations channel (EOC). The integrated services digital network (ISDN) function code appears in reports when using the DLC subsystem command, RTRV-T0.

‡ Trademark of Tollgrade Communications, Inc.

Original value for the *CLEI* code is *Other*. Default — the last value entered. You are (user) prompted for an entry when you do not enter a *CLEI* code.

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.6 (continued)

FunctionCode

Function code. You are given the default value and prompted for an entry when you do not enter a function code. However, if the *CLEI* code for this channel is changed, the default value given will be the bold function code for the entered functional *CLEI* code listed in the following table.

Functional *CLEI* Codes	Function Codes
Other	AC, DATA, **DFLT**, EBS, GO, GS, LO, LR, LS, NO, and RVT
5SC1JE, 5SC1HE	**BRI**
SACPDC	**DFLT** and RVT
5SCU69, 5SCU6E, SAC1AH	DPT, **FXO**, and TO
5SCU6A, 5SCU6F, SAC1AE	DPO, **FXS**, and TO
5SCU7D, 5SC3HJ	DX4[N,R], ETO4, **FX**[**S**,T][**1**,2,3,5], and TO4
5SCU7B, SAC1BG	**EM4**[**C**,H] and PLR[1,2]
5SCU7C, SAC1BF	**FX**[**O**,P][**1**,2,3,5] and TD[O,S][A,B,C,D]
5SC18E, 5SC212	**ISDN**
5SCU48, 5SC143	**OCU**
5SCTFF	**OCU** and SW56
SAC1CS	**PG5**, PG8, PG15, and PG20

The following table lists the function codes. The function code depends on the functional *CLEI* code.

CAUTION:
Undesirable ringing on the subscriber line can occur when you use the default (LS) function code rather than the appropriate function codes (AC, LO, and LR, respectively) for the AUA45, AUA45B, and AUA75 equipped channel units. The AUA45, AUA45B, and AUA75 channel units cannot be distinguished from other POTS/SPOTS-like channel units (for example, AUA25, AUA25B, AUA27, AUA51, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, and AUA179) for which the default function code (LS) is appropriate. Please refer to function code entries AC, LR, and LS in this section.

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.6 (continued)

Function Code	Description
AC	Manual ring down
BRI	Basic rate interface transmission extension (BRITE) for integrated services digital network (ISDN). Basic rate interface (BRI) is provided through the AUA93 and AUA293 CUs.
DATA	Digital data
DFLT	Defaults (for TR-08 VRTs) to equipped function (circuit function determined by installed channel unit). The function code for certain CUs can be derived from the equipment in addition to being explicitly specified. This includes POTS, multiparty (MP), coin, frequency selective ringing (FSR), direct inward dial (DID), manual ringdown, private line automatic ring (PLAR), and DC bypass pair or alarm channel units Default for TR-303 VRTs is 2-wire loop start (LS). You must explicitly provision other functions using the appropriate function code.
DPO	2-wire dial-pulse originating
DPT	2-wire dial-pulse terminating
DX4N	4-wire duplex with duplex signaling and signaling leads normal
DX4R	4-wire duplex with duplex signaling and signaling leads reversed
EBS	Enhanced Business Service (EBS) (P-Phone)
EM4C	E&M signaling, type I
EM4H	E&M signaling, type II
ETO4	4-wire equalized transmission only, no DC signaling
FXO	2-wire foreign exchange, office end
FXO1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal and no toll diversion
FXO2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and no toll diversion
FXO3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and no toll diversion
FXO5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and no toll diversion

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ENT-T0 (Continued)

Parameters for R4.6 (continued)

Function Code	Description
FXP1	4-wire foreign exchange, office end with loop-start signaling, signaling leads normal, and toll diversion
FXP2	4-wire foreign exchange, office end with loop-start signaling, signaling leads reversed, and toll diversion
FXP3	4-wire foreign exchange, office end with ground-start signaling, signaling leads normal, and toll diversion
FXP5	4-wire foreign exchange, office end with ground-start signaling, signaling leads reversed, and toll diversion
FXS	2-wire foreign exchange, station end
FXS1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and no toll diversion
FXS2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and no toll diversion
FXS3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and no toll diversion
FXS5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and no toll diversion
FXT1	4-wire foreign exchange, station end with loop-start signaling, signaling leads normal, and toll diversion
FXT2	4-wire foreign exchange, station end with loop-start signaling, signaling leads reversed, and toll diversion
FXT3	4-wire foreign exchange, station end with ground-start signaling, signaling leads normal, and toll diversion
FXT5	4-wire foreign exchange, station end with ground-start signaling, signaling leads reversed, and toll diversion
GO	2-wire ground start (current sink)
GS	2-wire ground start (current feed)

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ENT-T0 (Continued)

Parameters for R4.6 (continued)

Function Code	Description
ISDN	Integrated Services Digital Network. Can be provisioned using the DLC subsystem commands, ENT-T0 and ED-T0, or through the LDS using the TR-303 EOC. The ISDN function code pertains to the ANSI U-DSL interface supported by the AUA94, AUA94B, and *SPQ*494 CUs on TR-303 VRTs. Appears in reports as a result of the DLC subsystem command, RTRV-T0.
LO	2-wire loop start (current sink)
LR	Private line automatic ringdown (PLAR)
LS	2-wire loop start (current feed)
NO	2-wire transmission only
OCU	Office channel unit dataport
PG5	Program CU bandwidth settings of 5 kHz or 2 time slots
PG8	Program CU bandwidth settings of 8 kHz or 3 time slots
PG15	Program CU bandwidth settings of 15 kHz or 6 time slots
PG20	Program CU bandwidth settings of 20 kHz or 8 time slots
PLR1	PLR signaling, type I
PLR2	PLR signaling, type II
RVT	2-wire loop reverse battery
SW56	Switched 56 service supported by the dual OCU dataport

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ENT-T0 (Continued)

Parameters for R4.6 (continued)

Function Code	Description
TDOA	4-state tandem signaling, type II, signaling leads looped through carrier toward office
TDOB	4-state tandem signaling, type I, signaling leads not looped through carrier toward office
TDOC	2-state tandem signaling, type II, signaling leads looped
TDOD	2-state tandem signaling, type I, signaling leads not looped
TDSA	4-state tandem signaling, type II, signaling leads looped through carrier toward subscriber
TDSB	4-state tandem signaling, type I, signaling leads not looped through carrier toward subscriber
TDSC	2-state tandem signaling, type II, signaling leads looped
TDSD	2-state tandem signaling, type I, signaling leads not looped
TO	2-wire transmission only
TO4	4-wire transmission only, no DC signaling

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ENT-T0 (Continued)

Parameters for R4.6 (continued)

ProvisionParameters

Provisioning parameters. The option settings for each function code. The provisioning parameter names are based on the work order record detail (WORD) document abbreviations.

Parameter Name	WORD Abbreviation	User Prompt	User Expert String
–7 dB (J3)	–7DB(J3)	–7 dB(J3)	dBJ3
–7 dB receive	–7DB RCV	–7 dB Receive	dBr
–7 dB transmit	–7DB TRMT	–7 dB Transmit	dBt
A/B signaling	AB	A/BSignaling	ab
All-zero-code allowed	ZC	AllZeroCodeAllowed	zc
Balance	BAL	Balance	bal
Clear channel	CC	ClearChannel	cc
Enhanced switched 56	EH56	Enhanced SW56	eh56
Equalizer bandwidth	BW	Bandwidth	bw
Equalizer height	HT	Height	ht
Equalizer nonloaded/ loaded	L-N	Nonloaded/Loaded	ln
Equalizer slope	SL	Slope	sl
Error correction	EC	ErrorCorrection	ec
Impedance	IMP	Impedance	imp
On-hook transmission	OHT	OnHookTransmission	oht
Quality monitoring	QM	QualityMonitoring	qm
Receive attenuator	RCV	RCV Attenuator	rcv
Receive gain	RCV(GN)	ReceiveGain	rcvgn
Red-lined status	RLS	Redlined	rls
Sealing current	SC	SealingCurrent	sc
Service	SVC	ISDN Channel Service	svc
Signaling type	LS-GS	SignalingType	lsgs
Secondary channel used	SCC	SecondaryChannelUsed	scc
Subscriber data rate	RATE	SubscriberDataRate	rate
Toll diversion	TD	TollDiversion	td
Transmission loss	LS	TransmissionLoss	ls
Transmit and receive impedance	TRMT&RCV(IMP)	TRMT&RCVImpedance	imp
Transmit attenuator	TRMT	TRMT Attenuator	trmt
Transmit gain	XMT(GN)	TransmitGain	xmtgn

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ENT-T0 (Continued)

Parameters for R4.6 (continued)

The following tables (shown in alphabetic order) list the valid parameters for *FunctionCode*. When prompting for a parameter value, the default is the current value unless the *CLEI* code or Function code is being changed. Then the default will be the original (default) listed in the following tables.

NOTE:
The *redline* parameter is used by the telephone company to mark redlined circuits, to which a special priority is assigned. The system does not treat redlined channels any differently from non-redlined channels.

The following table lists the AC function code provisioning parameters for apparatus codes AUA45 and AUA45B (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the BRI function code provisioning parameters for apparatus codes AUA93 and AUA293 (*CLEI*=5SC1HE).

NOTE:
DT applications (R4.2 and later software releases) require you to provision the AUA293 and AUA93 CUs using the CIT (set the on-board switches to match the parameter settings provisioned using the CIT). R4.0 and earlier software releases, require you to provision the AUA293 and AUA93 CUs using the on-board switches.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
svc=ISDN channel service	SVC	2B+D, B1+D, B2+D, or D	2B+D
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the DATA function code provisioning parameters for apparatus codes AUA200 and AUA232 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for the POTS, multiparty, coin, FSR, DID, manual ringdown, PLAR, and DC bypass pair or alarm channel units (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the DFLT function code provisioning parameters for apparatus code *SPQ*456 (*CLEI*=SACPDC).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
ls =Transmission loss	LS	0 or 2.5 dB	0 dB
rls=Redlined	RLS	NO or YES	NO

The following table lists the DPO function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the DPT function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the DX4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the EBS function code provisioning parameters for apparatus code *SPQ*429 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the EM4C/H function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the ETO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBJ3=–7 dB (J3)	–7DB(J3)	BK or WH	BK
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the FXO function code provisioning parameters for apparatus codes AUA42 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA142 (*CLEI*=5SCU69), and *SPQ*442 (*CLEI*=SAC1AH).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	900 or 600	900
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
td=TollDiversion	TD	NO or YES	NO
lsgs=SignalingType	LS-GS	GS or LS	GS
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXO/P function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	L or N	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

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ENT-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the FXS function code provisioning parameters for apparatus codes AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
oht=OnHookTransmission	OHT	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the FXS/T function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
ln=Nonloaded/loaded	L-N	N or L	N
sl=Slope	SL	0 to 15 in steps of 1	0
bw=Bandwidth	BW	0 to 15 in steps of 1	0
ht=Height	HT	0 to 15 in steps of 1	0
imp=Transmit and receive impedance	TRMT&RCV (IMP)	150, 600, or 1200	600
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the GO function code provisioning parameters for apparatus codes AUA32, AUA39, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the GS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA51, AUA53, AUA59, AUA150, AUA151, AUA159, AUA159B, AUA179, *SPQ*440C, *SPQ*440D, and *SPQ*450 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the ISDN function code provisioning parameters for apparatus codes AUA94 (*CLEI*=5SC18E), AUA94B (*CLEI*=5SC18E), and *SPQ*494 (*CLEI*=5SC212). Note that during an audit the LDS may change the provisioning value for the functional CLEI code from 5SC18E to 5SC212.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LO function code provisioning parameters for apparatus codes AUA32, AUA39, *SPQ*300, and *SPQ*340 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the LR function code provisioning parameters for apparatus code AUA75 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the LS function code provisioning parameters for apparatus codes AUA25, AUA25B, AUA27, AUA51, AUA53, AUA55, AUA57, AUA58, AUA58B, AUA58C, AUA59, AUA150, AUA151, AUA158, AUA158B, AUA159, AUA159B, AUA178, AUA179, *SPQ*400, *SPQ*401B, *SPQ*440C, *SPQ*440D, *SPQ*450, *SPQ*478, and *SPQ*909 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the NO function code provisioning parameters for apparatus codes MCU5205 and MCU5405 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the OCU function code provisioning parameters for apparatus codes AUA52 and AUA152 (*CLEI*=5SCU48).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, or 56 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed	ZC	NO or YES	NO
scc=Secondary channel used	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* Do not use MVEC if the data rate is 56 kb/s.

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the OCU function code provisioning parameters for apparatus code AUA52B (*CLEI*=5SC143).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 56- or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† When the 64 kb/s rate is selected, the user is not prompted for ZC and SCC. For rate=64 kb/s, ZC and SCC are automatically set to YES.

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the OCU function code provisioning parameters for apparatus codes *SPQ*452 (*CLEI*=5SCTFF).

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Do not enter the parameters cc, scc, and zc when the rate=64 kb/s. Otherwise, an IISP error response will be generated. The REPT DBCHG response will include the cc, scc, and zc parameter settings.

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rate=Subscriber data rate	RATE	2.4, 4.8, 9.6, 19.2, 38.4, 56, or 64 kb/s	56
ec=Error correction	EC	NONE, SCEC, MVEC*	NONE
zc=All-zero-code allowed†	ZC	NO or YES	NO
scc=Secondary channel used†	SCC	NO or YES	NO
qm=quality monitoring	QM	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

* MVEC does not operate with the 38.4-, 56-, or 64-kb/s data rate. If you select MVEC with the 19.2-kb/s data rate, single time slot 19.2 error correction (19.2EC) is performed.

† You are not prompted for ZC or SCC when you select the 64-kb/s data rate. When rate=64 kb/s, ZC and SCC are automatically set to YES.

The following table lists the PG5, PG8, PG15, and PG20 function code provisioning parameters for apparatus code *PGM*-2000 (*CLEI*=SAC1CS).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the PLR1/2 function code provisioning parameters for apparatus codes AUA54 (*CLEI*=5SCU7B) and *SPQ*454 (*CLEI*=SAC1BG).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 25.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 25.5 in steps of 0.1	16.5
rls=Redlined	RLS	NO or YES	NO

The following table lists the RVT function code provisioning parameters for apparatus codes AUA56 (*CLEI*=Other).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
rls=Redlined	RLS	NO or YES	NO

The following table lists the RVT function code provisioning parameters for apparatus codes *SPQ*456 (*CLEI*=SACPDC).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
ls=Transmission loss	LS	0 or 2.5 dB	0 dB
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the SW56 function code provisioning parameters for apparatus code *SPQ*452 (*CLEI*=5SCTFF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
eh56=Enhanced switched 56	EH56	NO or YES	NO
ab=A/B signaling	AB	NO or YES	NO
qm=Quality monitoring	QM	NO or YES	NO
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDO function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

The following table lists the TDS function code provisioning parameters for apparatus codes AUA44 (*CLEI*=5SCU7C) and *SPQ*444 (*CLEI*=SAC1BF).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 11.6 in steps of 0.1	11.6
rls=Redlined	RLS	NO or YES	NO

(Continued on next page)

ENT-T0 (Continued)

Parameters for R4.6 (continued)

The following table lists the TO function code provisioning parameters for apparatus codes AUA42 and AUA142 (*CLEI*=5SCU69), AUA42B (*CLEI*=5SCU6E), AUA43 (*CLEI*=5SCU6A), AUA43B (*CLEI*=5SCU6F), *SPQ*442 (*CLEI*=SAC1AH), and *SPQ*443 (*CLEI*=SAC1AE).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
imp=Impedance	IMP	600 or 900	600
bal=Balance	BAL	0 to 15 in steps of 1	3
xmtgn=TransmitGain	XMT(GN)	–1.0 to 6.75 in steps of 0.25	–1.0
rcvgn=ReceiveGain	RCV(GN)	–8.0 to 1.5 in steps of 0.25	–8.0
sl=Slope	SL	0 to 7 in steps of 1	0
rls=Redlined	RLS	NO or YES	NO

The following table lists the TO4 function code provisioning parameters for apparatus code AUA41B (*CLEI*=5SCUCD).

Provisioning Parameter	WORD Abbreviation	Values	Default Value
trmt=TRMT attenuator	TRMT	0 to 16.5 in steps of 0.1	16.5
rcv=RCV attenuator	RCV	0 to 16.5 in steps of 0.1	16.5
dBt=–7 dB TRMT	–7DB TRMT	BK or WH	BK
dBr=–7 dB RCV	–7DB RCV	BK or WH	BK
sc=SealingCurrent	SC	NO or YES	YES
rls=Redlined	RLS	NO or YES	NO

ENT-T0 (Continued)

Example

The following ENT-T0 command provisions the attributes of the physical line at drop-1-1-1 for PLAR service through the AUA75 channel unit (CU).

```
ENT-T0::drop-1-1-1:::other,lr;
```

The following ENT-T0 command provisions the attributes of the physical line at drop-1-24-1 for 2W FXO service with default parameters through the *SPQ*442 CU.

```
ENT-T0::drop-1-24-1:::saclah,fxo;
```

The following ENT-T0 command provisions the attributes of the physical line at drop-1-24-1 for 2W FXO service with 0 transmit gain, 0 receive gain, and other parameters with default values through the *SPQ*442 CU.

```
ENT-T0::drop-1-24-1:::saclah,fxo:xmtgn=0,rcvgn=0;
```

The following ENT-T0 command provisions the attributes of the physical line at drop-1-12-1 for ISDN service with default parameters through the AUA94 CU (R4.5 and later software releases).

```
ENT-T0::drop-1-12-1:::5sc18e2,ISDN;
```

The following ENT-T0 command provisions the attributes of the physical line at drop-1-12-1 for ISDN service with default parameters through the *SPQ*494 CU (R4.5 and later software releases).

```
ENT-T0::drop-1-12-1:::5sc212,ISDN;
```

ENT-T0 (Continued)

Response

Confirmation

NOTE:
The confirmation displayed differs according to the *CLEI* and *FunctionCode* parameters that you choose.

The ENT-T0 command requires confirmation. The following message is an example of what is displayed when you enter the ENT-T0 command.

```
/* Caution! Execution of this command may affect service. */

/* You have selected the ent-t0 command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = [Access Identifier]
         CLEI = [CLEI code]
         FunctionCode = [Function code]
         TRMT Attenuator = [value]
         RCV Attenuator = [value]
         Nonloaded/Loaded = [N/L]
         Slope = [value]
         Bandwidth = [value]
         Height = [value]
         TRMT & RCV Impedance = [value]
         Redlined = [YES/NO]

Execute? (y/n or CANcel/DELete to quit) =
;
```

The error correction method for a 19.2 kb/s OCU is called single time slot 19.2 kb/s error correction. The following confirmation message is displayed when you enter the ENT-T0 command for an OCU channel (FunctionCode=OCU) with SCEC error correction selected (ec=SCEC).

```
/* Caution! SCEC is not supported on TR8 Mode 2 VRTs. */

/* Caution! Execution of this command may affect service. */

/* You have selected the ent-t0 command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = [Access Identifier]
         CLEI = [CLEI code]
         FunctionCode = [Function code]
         TRMT Attenuator = [value]
         RCV Attenuator = [value]
         Nonloaded/Loaded = [N/L]
         Slope = [value]
         Bandwidth = [value]
         Height = [value]
         TRMT & RCV Impedance = [value]
         Redlined = [YES/NO]

Execute? (y/n or CANcel/DELete to quit) =
;
```

(Continued on next page)

ENT-T0 (Continued)

Response (continued)

The following confirmation message is displayed when you enter the ENT-T0 command and select toll diversion (td=YES). (For example, ENT-T0::aid:::5SCU69,FXO:td=YES;.)

```
/* Caution! Toll Diversion service is not supported by TR8 VRTs. */

/* Caution! Execution of this command may affect service. */

/* You have selected the ent-t0 command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = [Access Identifier]
         CLEI = [CLEI code]
         FunctionCode = [Function code]
         TRMT Attenuator = [value]
         RCV Attenuator = [value]
         Nonloaded/Loaded = [N/L]
         Slope = [value]
         Bandwidth = [value]
         Height = [value]
         TRMT & RCV Impedance = [value]
         Redlined = [YES/NO]

Execute? (y/n or CANcel/DELete to quit) =
;
```

The following confirmation message is displayed when you enter the ENT-T0 command while the line is being tested by an external test system [for example, the Mechanized Loop Test (MLT) system or Switched Access Remote Test System (SARTS)].

```
/* Caution! Execution of this command may affect a test in progress. */

/* Caution! Execution of this command may affect service. */

/* You have selected the ent-t0 command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = [Access Identifier]
         CLEI = [CLEI code]
         FunctionCode = [Function code]
         TRMT Attenuator = [value]
         RCV Attenuator = [value]
         Nonloaded/Loaded = [N/L]
         Slope = [value]
         Bandwidth = [value]
         Height = [value]
         TRMT & RCV Impedance = [value]
         Redlined = [YES/NO]

Execute? (y/n or CANcel/DELete to quit) =
;
```

(Continued on next page)

ENT-T0 (Continued)

Response (continued)

The following confirmation message is displayed when you enter the ENT-T0 command while the line is being tested using CONN-TACC.

```
/* Caution! Execution of this command may affect a test in progress. */

/* Caution! Execution of this command may affect a test in progress. */

/* Caution! Execution of this command may affect service. */

/* You have selected the ent-t0 command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = [Access Identifier]
         CLEI = [CLEI code]
         FunctionCode = [Function code]
         TRMT Attenuator = [value]
         RCV Attenuator = [value]
         Nonloaded/Loaded = [N/L]
         Slope = [value]
         Bandwidth = [value]
         Height = [value]
         TRMT & RCV Impedance = [value]
         Redlined = [YES/NO]

Execute? (y/n or CANcel/DELete to quit) =
```

Error

The ENT-T0 command is denied and the following message is displayed when the NVDS has failed.

```
SSTP
/* Status, SToPped,
   Data memory failed. */
;
```

The ENT-T0 command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

(Continued on next page)

ENT-T0 (Continued)

Response (continued)

The ENT-T0 command is denied and the following message is displayed when you attempt to provision DT channels 1 and 2 for DDS and channels 3 and 4 of the DT Server slot are cross-connected.

```
SROF
/* Status, Requested Operation Failed. */
;
```

The ENT-T0 command is denied and the following message is displayed when the NVDS is not ready for database changes. Retry the ENT-T0 command in a few minutes.

```
SSTP
/* Status, SToPped,
   Data memory initializing or not available. */
;
```

The ENT-T0 command is denied and the following message is displayed when the channel being provisioned has a state other than OOS-MA-UAS (RTRV-T0 command).

```
SNVS
/* Status, Not in Valid State,
   PST=pst. */
;
```

The ENT-T0 command is denied and the following message is displayed when entering an ISDN line and the T1 crossconnect does not exist for TR-303 VRT.

```
SNVS
/* Status, Not in Valid State,
   Cannot edit an ISDN line when T1 crossconnect does not exist for TR-303 VRT. */
;
```

(Continued on next page)

ENT-T0 (Continued)

Response (continued)

The ENT-T0 command is denied and the following message is displayed when entering an ISDN line and the T0 crossconnect does not exist for TR-303 VRT.

```
SNVS
/* Status, Not in Valid State,
   Cannot edit an ISDN line when T0 crossconnect does not exist for TR-303 VRT. */
;
```

The following error message is displayed when the physical line to be provisioned is cross-connected to a logical VRT that is set for TR-08 Mode 2 or TR-303.

```
CNYI
/* Command Not Yet Implemented */
;
```

Related commands

The following DLC subsystem commands are related to the ENT-T0 command.

- CPY-T0
- DLT-T0
- ED-T0
- RTRV-T0

HELP

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the HELP command.

?

Command name

Provide in-context help.

Can command be aborted?

No.

Purpose

Enter the HELP command **?** for assistance with the dialog (craft personnel) on the CIT. The help message describes the format of the required entry or lists a menu of choices.

Help is invoked with an invalid input. However, type **?** at any time to request help. The **?** displays a help message and another prompt.

HELP (Continued)

Response

The help message is displayed when you enter **?** in response to the top-level prompt (for example, see the following display).

```
/* Select from
   1. conn   (connect)
   2. cpy    (copy)
   3. disc   (disconnect)
   4. dlt    (delete)
   5. ed     (edit)
   6. ent    (enter)
   7. init   (initialize)
   8. rd     (read)
   9. rtrv   (retrieve)
   10. set
   11. sw    (switch)
   12. upd   (update)
   13. logout
   14. reset
   15. sonet */

/* No default value */
/* Enter return or "!" to end a line of input.
   Enter ";" to end a command.
   Enter "@" to erase all input on the current line.
   Enter backspace or "_" to erase the last character input.
   Enter "?" at any prompt to get help.
   Enter the "CANcel, DELete or $" key to abort a command.
   To execute a command, select one of the following command verbs.
   For more information see the SLC-2000 System Command and
   Message Manual
*/
```

INIT-CRS-T0

Software release compatibility

Use this command in R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the INIT-CRS-T0 command in Software Releases 3.2 and 3.3.

INIT-CRS-T0:[tid]:Address:[ctag];

However, use the following format to input the INIT-CRS-T0 command in Software Release 4.0 and later.

INIT-CRS-T0:[tid]:Address:[ctag]::[starting shelf][,number of shelves];

Command name

Initialize T0 cross-connections.

Can command be aborted?

No.

Purpose

Enter the INIT-CRS-T0 command to initialize T0 cross-connections between physical lines and logical lines of TR-08 or TR-303 VRTs. All cross-connections are two-way cross-connections.

When a TR-08 VRT is specified, 96 lines will be cross-connected.

When a TR-303 VRT (R4.0 and later software releases) is specified, 96*n* lines will be cross-connected. *n* (increments of 96) defines the number of lines on the TR-303 VRT. However, for R4.5 this will leave the physical lines associated with servers in slots 9 and 21 of a FITL shelf disconnected from logical lines on the TR-303 VRT. When desired, use the DLC subsystem command, ENT-CRS-T0 to cross connect the physical lines for these 12- or 24-line DT Servers to logical lines of the TR-303 VRT.

INIT-CRS-T0 (Continued)

Parameters for R3.2 and R3.3

Use the following parameters with the INIT-CRS-T0 command in R3.2 and R3.3 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier (AID). The address of the VRT to be T0-cross-connected. Each logical line number in the VRT will be assigned sequentially to a physical drop. For fiber shelves, the sequence of cross-connections depends upon the DT bandwidth provisioning (see DLC subsystem command, ED-DT).

Valid values for this parameter are vrt-{1–8}.

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

INIT-CRS-T0 (Continued)

Parameters for R4.0

Use the following parameters with the INIT-CRS-T0 command in R4.0 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier (AID). The address of the VRT to be T0-cross-connected. Each logical line number in the VRT will be assigned sequentially to a physical drop. For fiber shelves, the sequence of cross-connections depends upon the DT bandwidth provisioning (see DLC subsystem command, ED-DT).

The following values are valid for this parameter.

- vrt-{1–8}
- v303-1

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

starting shelf

Starting shelf. Designates the initial physical shelf to start assignments for standard cross-connections in a TR-303 VRT. The *starting shelf* parameter is applicable only when *Address* specifies a TR-303 VRT. You cannot include the *starting shelf* parameter when *Address* specifies a TR-08 VRT. Valid values are {1–8}.

Default value for this parameter is one (1).

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INIT-CRS-T0 (Continued)

Parameters for R4.0 (continued)

number of shelves

Number of shelves. Designates the number of physical shelves to be cross-connected to the TR-303 VRT. The *number of shelves* parameter is applicable only when *Address* specifies a TR-303 VRT. You cannot include the *number of shelves* parameter when *Address* specifies a TR-08 VRT.

Valid values are {1–8}. The value is constrained by the starting shelf parameter. The following relationship must be true for the *number to shelves* parameter to be valid.

$$[(\text{starting shelf} - 1) + (\text{number of shelves}) \leq 8]$$

Default — value is one (1).

INIT-CRS-T0 (Continued)

Parameters for R4.2, R4.4, R4.5, and R4.6

Use the following parameters with the INIT-CRS-T0 command in R4.2, R4.4, R4.5, and R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier (AID). The address of the VRT to be T0-cross-connected. Each logical line number in the VRT will be assigned sequentially to a physical drop. For fiber shelves, the sequence of cross-connections depends upon the DT bandwidth provisioning (see DLC subsystem command, ED-DT).

NOTE:
The architecture of the *SLC*-2000 Access System allows TR-08, TR-303, and INA CO interfaces. Carefully consider cross-connection or checkerboarding restrictions when using the DT Servers in the expanded slots. The R4.5 enhanced FiberReach/DT feature generally benefits systems equipped to support only TR-303 and INA VRTs. Use TR-08 VRTs with the following restrictions (for more detail, refer to Chapter 3, “System Configurations and Applications, T0 Cross-Connect/Checkerboarding Restrictions”, of 363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide*).

Shelf TR-08 Mode	The customer line terminates on a DT hosted by a DT Server located in MDS slot . . .	Physical line cross-connections are restricted to logical lines in . . .
M1	**1**, **3**, **5**, **7**, **13**, **15**, **17**, or **19**	TR-303 VRTs, TR-08 M1 VRTs, and INA DS1s
M1	**9**, **11**, **21**, or **23**	TR-303 VRTs and INA DS1s
M2	**1**, **3**, **5**, **7**, **13**, **15**, **17**, or **19**	TR-08 M2 assigned to the shelf
M2	**9**, **11**, **21**, or **23**	Not supported

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INIT-CRS-T0 (Continued)

Parameters for R4.2, R4.4, R4.5, and R4.6 (continued)

The following values are valid for this parameter.

- vrt-{1–8}
- v303-{1,2}

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

starting shelf

Starting shelf. Designates the initial physical shelf to start assignments for standard cross-connections in a TR-303 VRT. The *starting shelf* parameter is applicable only when *Address* specifies a TR-303 VRT. You cannot include the *starting shelf* parameter when *Address* specifies a TR-08 VRT. Valid values are {1–8}.

Default value for this parameter is one (1).

number of shelves

Number of shelves. Designates the number of physical shelves to be cross-connected to the TR-303 VRT. The *number of shelves* parameter is applicable only when *Address* specifies a TR-303 VRT. You cannot include the *number of shelves* parameter when *Address* specifies a TR-08 VRT.

Valid values are {1–8}. The value is constrained by the starting shelf parameter. The following relationship must be true for the *number to shelves* parameter to be valid.

$$\mathbf{[(starting\ shelf - 1) + (number\ of\ shelves) \leq 8]}$$

Default — value is one (1).

INIT-CRS-T0 (Continued)

Example

The following INIT-CRS-T0 command establishes 96 T0 cross-connections between TR-08 VRT 3 and physical shelf 3.

```
INIT-CRS-T0::vrt-3;
```

The following INIT-CRS-T0 command establishes 192 T0 cross-connections between the TR-303 VRT and shelves 7 and 8.

```
INIT-CRS-T0::v303-1:::7,2;
```

Response

Confirmation

The following confirmation message is displayed after entering the INIT-CRS-T0 command.

```
/* Caution! Network Cross-connections are affected by this command. */

/* You have selected the init-crs-t0 command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = [Access Identifier]

Execute? (y/n or CANcel/DELete to quit) =
;
```

(Continued on next page)

INIT-CRS-T0 (Continued)

Response (continued)

Error

The INIT-CRS-T0 command is denied and the following message is displayed when you enter an *Address* specifying a TR-08 VRT, and either the *number of shelves* or *starting shelf* parameters are specified.

```
IDNC
/* Input, Data Not Consistent,
   Starting shelf and number of
   shelves are only valid when Address specifies a TR-303 VRT. */
;
```

The INIT-CRS-T0 command is denied and the following message is displayed when the NVDS has failed.

```
SSTP
/* Status, execution SToPped,
   Data memory failed. */
;
```

The INIT-CRS-T0 command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

(Continued on next page)

INIT-CRS-T0 (Continued)

Response (continued)

The INIT-CRS-T0 command is denied and the following message is displayed when you enter an *Address* specifying a TR-08 VRT and the state of the T8U (use the DLC subsystem command, RTRV-NE, to display the current state of the T8U) of any shelf corresponding to that VRT is disabled.

```
SNVS
/* Status, Not in Valid State,
   The T8U state of one or more shelves is disabled. */
;
```

The INIT-CRS-T0 command is denied and the following message is displayed when one or more cross-connections cannot be completed due to existing cross-connections, the system configuration, or if the VRT (v303-1) is in service.

```
SNVS
/* Status, Not in Valid State,
   Initializing cross-connections requires that existing cross-connections
   associated with the VRT must be deleted first */
;
```

Related commands

The following DLC subsystem commands are related to the INIT-CRS-T0 command.

- DLT-CRS-T0
- ENT-CRS-T0
- RTRV-CRS-T0
- RTRV-NE

INIT-CRS-T1

Software release compatibility

Use this command in R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the INIT-CRS-T1 command.

INIT-CRS-T1:[tid]:Address:[ctag];

Command name

Initialize T1 cross-connections.

Can command be aborted?

No.

Purpose

Enter the INIT-CRS-T1 command to establish standard T1 cross-connections between physical and logical feeder DS1s of TR-08 VRTs. Do not use the INIT-CRS-T1 command for the TR-303 VRT. (Refer to 363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide*, for more details on standard cross-connections.) All cross-connections are two-way cross-connections.

INIT-CRS-T1 (Continued)

Parameters

Use the following parameters with the INIT-CRS-T1 command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier (AID). The address of the VRT to be T1 cross-connected. Valid values are vrt-{1–8}.

NOTE:
The choice of feeders will depend on the mode (1 or 2) of the TR-08 VRT. Depending on system configuration, vrt-8 may not be available. (For example, when vrt-7 is configured as mode 1, then *all* ports on VTU/LIU a-7 will be in use. Thus, no ports remain for vrt-8.)

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

Example

The following INIT-CRS-T1 command establishes the standard T1 cross-connections between physical feeder 5 and TR-08 VRT 5.

```
INIT-CRS-T1::vrt-5;
```

(Continued on next page)

INIT-CRS-T1 (Continued)

Response

Confirmation

The following confirmation message is displayed after entering the INIT-CRS-T1 command.

```
/* Caution! Network Cross-connections are affected by this command. */

/* You have selected the init-crs-t1 command with these parameters:

         Address = [Access Identifier] */

Execute? (y/n or CANcel/DELete to quit) =
;
```

Error

The INIT-CRS-T1 command is denied and the following message is displayed when the NVDS has failed.

```
SSTP
/* Status, execution SToPped,
   Data memory failed. */
;
```

The INIT-CRS-T1 command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

The INIT-CRS-T1 command is denied and the following message is displayed when there are insufficient feeders available for cross-connection.

```
SNVS
/* Status, Not in Valid State,
   Insufficient feeders available for cross-connection. */
;
```

(Continued on next page)

INIT-CRS-T1 (Continued)

Response (continued)

The INIT-CRS-T1 command is denied and the following message is displayed when *Address* specifies a TR-08 VRT and the state of the T8U (use the DLC subsystem command, RTRV-NE, to display the current state of the T8U) of any shelf corresponding to that VRT is disabled.

```
SNVS
/* Status, Not in Valid State,
   The T8U state of one or more shelves is disabled. */
;
```

The INIT-CRS-T1 command is denied and the following message is displayed when *Address* specifies a TR-08 VRT which has active cross-connections.

```
SNVS
/* Status, Not in Valid State,
   Initializing cross-connections requires that existing cross-connections
   associated with the VRT must be deleted first. */
;
```

Related commands

The following DLC subsystem commands are related to the INIT-CRS-T1 command.

- DLT-CRS-T1
- ENT-CRS-T1
- RTRV-CRS-T1
- RTRV-NE
- RTRV-VRT

INIT-REG-T1

Software release compatibility

Use this command in R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the INIT-REG-T1 command in Software Releases 3.2 and 3.3.

INIT-REG-T1:[tid]:Address:[ctag];

However, use the following format to input the INIT-REG-T1 command in Software Release 4.0 and later.

INIT-REG-T1:[tid]:Address:[ctag]::[montype],[monval],,,tmper[,,];

Command name

Initialize DS1 performance counts.

Can command be aborted?

No.

Purpose

Enter the INIT-REG-T1 command to initialize performance monitoring counters for DS1s. Counters are initialized to a value of zero (0) for partial accumulate.

INIT-REG-T1 (Continued)

Parameters for R3.2 and R3.3

Use the following parameters with the INIT-REG-T1 command in R3.2 and R3.3 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier. The address of the (physical) feeder DS1 whose counters are to be initialized. The following value is valid for this parameter.

- all

Default — *all*.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

INIT-REG-T1 (Continued)

Parameters for R4.0, R4.2, and R4.4

Use the following parameters with the INIT-REG-T1 command in R4.0, R4.2, and R4.4 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier. The address of the (physical) feeder DS1 whose counters are to be initialized. The following values are valid for this parameter.

- all
- a-{1–7}-{1–4}
- biu-{1–8}-{1,3,5,7,13,15,17,19}
- cu-{1–8}-{1,3,5,7,13,15,17,19}
- dt-{1–8}-{1,3,5,7,13,15,17,19}

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

tmper

Time period. Designates that the minute or daily counters are to be initialized. The following values are valid for this parameter.

- 15-MIN — minute counts
- 60-MIN — minute counts
- 1-DAY — daily counts.

INIT-REG-T1 (Continued)

Parameters for R4.5 and R4.6

Use the following parameters with the INIT-REG-T1 command in R4.5 and R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier. The address of the (physical) feeder DS1 whose counters are to be initialized. The following values are valid for this parameter.

- all
- a-{1–7}-{1–4}
- biu-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}
- cu-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}
- dt-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

tmper

Time period. Designates that the minute or daily counters are to be initialized. The following values are valid for this parameter.

- 15-MIN — minute counts
- 60-MIN — minute counts
- 1-DAY — daily counts.

INIT-REG-T1 (Continued)

Example

The following INIT-REG-T1 command (R4.0 and later software releases) initializes the 15-minute DS1 performance monitoring counters for physical feeder a-3-2.

```
INIT-REG-T1::a-3-2:::,,,,15-min;
```

Response

Confirmation

The INIT-REG-T1 command requires confirmation. The following confirmation message is displayed when you enter the INIT-REG-T1 command.

```
/* Caution! Execution of this command may affect collection
   of DS1 performance monitoring data.*/

/* You have selected the init-reg-t1 command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = [Access Identifier]
         Time Period = [Time period]

Execute? (y/n or CANcel/DELete to quit) =
;
```

(Continued on next page)

INIT-REG-T1 (Continued)

Response (continued)

The following confirmation message is displayed when you enter the INIT-REG-T1 command using the *all* value for the Address parameter. Note that the system displays a list of DS1s that are not initialized.

```
/* Caution! Execution of this command may affect collection
   of DS1 performance monitoring data.*/

/* You have selected the init-reg-t1 command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = [Access Identifier]
         Time Period = [Time period]

/* The PM counters on the following DS1's were not initialized.
         a-2-1
         a-2-2
         a-2-3
         a-2-4
         a-3-1
         a-3-2
         .
         .
         .
*/

Execute? (y/n or CANcel/DELete to quit) =
;
```

Error

The INIT-REG-T1 command is denied and the following message is displayed when the data memory has failed.

```
SSTP
/* Status, execution SToPped,
   Data memory failed. */
;
```

(Continued on next page)

INIT-REG-T1 (Continued)

Response (continued)

The following error message is displayed when you enter an *address* that does not support performance monitoring [for example, if *address* specifies cu-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23} and the slot does not house a DT Server or the installed DT Server (*SPQ*808 DT Server) does not support performance monitoring.]

```
SNVS
/* Status, Not in Valid State,
   The specified slot does not contain a DT
   server which supports performance monitoring. */
;
```

The following error message is displayed when you enter an *address* for an unequipped slot.

```
ENEQ
/* Equippage, Not EQuipped,
   The specified slot is not equipped. */
;
```

The INIT-REG-T1 command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

INIT-SYS

Software release compatibility

CAUTION:
Never execute this command on an in-service system! Execution of this command will set all provisioned parameters in the DLC subsystem to their original default values. This will interrupt service on all special service circuits and fiber distribution (FITL) circuits.

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the INIT-SYS command in R3.1, R3.2, and R3.3.

INIT-SYS:[tid]:[Address]:[ctag];

However, use the following format to input the INIT-SYS command in R4.0, R4.2, R4.4, R4.5, and R4.6.

INIT-SYS:[tid]:[Address]:[ctag]::phase;

Command name

Initialize system.

Can command be aborted?

Yes.

Purpose

Enter the INIT-SYS command to initialize provisionable parameters in the DLC subsystem to their original values. When CIT security is provided, this command can only be executed by privileged users. The INIT-SYS command has the following functions when applied to the DLC subsystem.

- Sets all DLC subsystem provisionable parameters to their defaults.
- Resets any manual protection switches (inhibit, force) that exist.
- Releases any existing electronic loopbacks (controlled by the DLC subsystem).
- Resets the alarm conditions displayed and transmitted by the DLC subsystem.

(Continued on next page)

INIT-SYS (Continued)

Purpose (continued)

- Recomputes the alarm state after the command completes, rediscovers, and restores any alarm conditions which remain.
- Clears nonvolatile data storage (NVDS) three-way mismatches.
- Returns the distribution mode for all shelves to metallic and deletes all T1 and T0 cross-connections. This command does not change the CIT baud setting on the UIP. This command does not change the CIT page length. This command is equivalent to the UIP command, INITIALIZE-SYSTEM except that no circuit pack equipage restrictions are enforced.

Parameters for R3.1, R3.2, and R3.3

Use the following parameters with the INIT-SYS command in R3.1, R3.2, and R3.3 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Address of command. Determines the scope of the command. Valid value is {all}, the entire DLC subsystem nonvolatile provisioning data memory is initialized.

Default — value is *all*.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

INIT-SYS (Continued)

Parameters for R4.0, R4.2, R4.4, R4.5, and R4.6

Use the following parameters with the INIT-SYS command in R4.0, R4.2, R4.4, R4.5, and R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Address of command. Determines the scope of the command. Valid value is {all}, the entire DLC subsystem nonvolatile provisioning data memory is initialized.

Default — value is *all*.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

phase

NVDS initialization. Defines the degree of thoroughness of the NVDS initialization. When phase=8, the INIT-SYS command is equivalent to the UIP command, INITIALIZE-SYSTEM. However, no circuit pack equipage restrictions are enforced.

Valid value is {8}. Clears all existing provisioning data, and initializes static data.

Default — value is 8.

INIT-SYS (Continued)

Example

The following INIT-SYS command initializes the DLC subsystem.

```
INIT-SYS::all;
```

Response

The following message is displayed when the system starts the sequence of processor restarts.

```
/*Processor restart in progress
  Processor restarts are complete when pack initialization alarms clear
  Use rtrv-alm/rtrv-hsty to query for current alarms/alarm history */

/*User interface will return control to the SONET side
  and then reset the system in a few seconds. */
```

The following message is displayed when each processor [except provisioning display controller (PDC)] is reset.

```
xxx processor successfully re-started
```

(Continued on next page)

INIT-SYS (Continued)

Response (continued)

Confirmation

The INIT-SYS command requires confirmation. The following confirmation message is displayed when you enter the DLC subsystem command, INIT-SYS::all;.

```
/*CAUTION!

  THIS COMMAND SHOULD NEVER BE EXECUTED ON AN IN-SERVICE SYSTEM!

  Execution of this command will set ALL provisioned parameters
  in the DLC subsystem to their original default values.
  This will interrupt service on all special service circuits
  and Fiber Distribution (FITL) circuits.

  Proceed with EXTREME CAUTION! */

/*You have selected the init-sys command with this parameter: */
/*Review of Parameter Responses ...  */
   Address = all
   Phase = [8]

Execute? (y/n or CANcel/DELete to quit) =
```

Completion

Upon completion of NVDS initialization, processors on certain plug-ins [bandwidth management processor (BMP), metallic distribution controller (MDC), PDC, TSI, and VTU] are restarted. All processors restart as if they have just been installed in the system.

After you answer yes to the confirmation message, the CIT displays the following message and automatically switches control to the SONET subsystem. During the switch to the SONET subsystem, the NVDS initialization and processor restart commences. Process restarts are complete when pack initialization alarms clear. Switch the CIT back to the DLC subsystem and use the DLC subsystem command RTRV-ALM or RTRV-HSTY to query for current alarms or the alarm history, respectively.

```
/*User interface will return control to the SONET side
  and then reset the system in a few seconds. */
;
```

(Continued on next page)

INIT-SYS (Continued)

Response (continued)

Error

The INIT-SYS command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/*Status, System Resources Exceeded,
  Software installation in-progress.
  Try again after installation is complete. */
;
```

The following error message is displayed when you enter the INIT-SYS command and NVDS has failed. This may be caused by faulty TSI hardware.

```
SROF
/*Status, Requested Operation Failed,
  Data memory failed possibly due to faulty TSI hardware. */
/*User interface will return control to the SONET side
  and then reset the system in a few seconds. */
;
```

The following error message is displayed when an internal system timeout has occurred. As a result, a partial NVDS initialization has occurred. Thus, you should reenter the INIT-SYS to complete the initialization.

```
SABT
/*Status, ABorTed,
  Data memory failed due to timeout - try again. */
/*User interface will return control to the SONET side
  and then reset the system in a few seconds. */
;
```

LOGOUT

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the LOGOUT command.

LOGOUT:[tid]::[ctag];

Command name

Terminate a CIT session.

Can command be aborted?

No.

Purpose

Enter the LOGOUT command from the CIT to terminate a CIT session.

If you enter this command during a local session, the command terminates all sessions (local and remote) established by you (the user). If you enter this command during a remote session, the command terminates the remote session and returns you (the user) to the local session.

Parameters

Use the following parameters with the LOGOUT command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RD-MEM-ADRS

Software release compatibility

NOTE:
The DLC subsystem command RD-MEM-ADRS is intended for software development use by Lucent Technologies personnel.

RD-MEM-FILE

Software release compatibility

NOTE:
The DLC subsystem command RD-MEM-FILE is intended for software development use by Lucent Technologies personnel.

RESET

Software release compatibility

Use this command in R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RESET command.

RESET:[tid]:Address:[ctag]::[ResetValue=level];

Command name

Reset/restart processor(s) on a circuit pack.

Can command be aborted?

No.

Purpose

CAUTION:
System execution is affected by this command. Use this command only under direction from RTAC.

Enter the RESET command to restart all processors on a specific (or all) circuit pack. It is functionally equivalent to a software reset (warm start) and is intended for use primarily during development.

RESET (Continued)

Parameters

Use the following parameters with the RESET command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier (AID). The address of the circuit pack whose processors are to be restarted. The following values are valid for this parameter.

- all
- bmp-{1–2}
- ls-a-{1–8}
- mdc-{1–8}-{1–2}
- pdc
- tsi-{1–2}

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

level

Type of restart. Defines the type of processor reset. The following values are valid for this paramater.

- 1 — (cold start) restarts the processor as if it has just been installed in the system
- 2 — (warm start) reinitializes the memory of the processor.

Default — value is 2.

RESET (Continued)

Example

The following RESET command causes all processors to reset.

```
RESET::all;
```

The following RESET command causes the PDC to reset.

```
RESET::pdc;
```

Response

The following message is displayed when the system starts the sequence of processor restarts. This message is displayed only when you use the values pdc or all for the *Address* parameter.

```
/* Processor restart in progress
   Processor restarts are complete when pack initialization alarms clear
   Use rtrv-alm/rtrv-hsty to query for current alarms/alarm history */

/* User interface will return control to the SONET side
   and then reset the system in a few seconds. */
```

The following message is displayed when the system starts the sequence of processor restarts.

```
/* Processor restart in progress
   Processor restarts are complete when pack initialization alarms clear
   Use rtrv-alm/rtrv-hsty to query for current alarms/alarm history */
```

(Continued on next page)

RESET (Continued)

Response (continued)

Confirmation

The RESET command requires confirmation.

```
/* Caution!  System execution is affected by this command.
   You have selected the reset command with these parameters:

         Address = address */

Execute? (y/n or CANcel/DELete to quit) =
```

Error

The RESET command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

The RESET command is denied and the following message is displayed when the RESET command requests a specific circuit pack and the processor cannot be reset (for example, if the circuit pack is not equipped).

```
SROF
/* Status, Requested Operation Failed,
   Processor could not be reset. */
;
```

(Continued on next page)

RESET (Continued)

Response (continued)

Completion

The RESET command is completed and the following message is displayed when the RESET command requests *all* circuit packs and the processor cannot be reset on one or more circuit packs (for example, if the circuit pack is not equipped).

```
/* The following processors not reset:
   Address-1
   Address-2
   .     .
   .     .
   .     .     */
;
```

RTRV-ALM

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RTRV-ALM command.

RTRV-ALM-*z*:[tid]:[aid]:[ctag]::[com_block];

Command name

Retrieve active alarm and status conditions from the DLC subsystem.

Can command be aborted?

Yes, when the AID is *all*.

Purpose

Enter the RTRV-ALM command to retrieve all active alarm and status conditions.

The report is automatically printed after successful login to the DLC subsystem (as if the user had entered rtrv-alm-all::all;).

Input parameters

Use the following input parameters with the RTRV-ALM command.

z

Command code modifier. The *SLC*-2000 Access System accepts and limits the response for the RTRV-ALM command. The following values are valid for this parameter.

- eqpt
- t1
- com
- all.

(Continued on next page)

RTRV-ALM (Continued)

Input parameters (continued)

The following values limit the response for the RTRV-ALM. (For example, if you enter a RTRV-ALM-T1 command, the *SLC*-2000 Access System only includes conditions with the modifier=T1 in the response message.)

- eqpt — the equipment
- t1 — T1 facility type alarms
- com — the *common* equipment
- all — all alarms.

Default — none, you *must* enter a value.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Access identifier. The following values are valid for this parameter in the DLC subsystem.

- all

Default — value is *all*.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

(Continued on next page)

RTRV-ALM (Continued)

Input parameters (continued)

com_block

Common block. A position-defined block. The ntfcncde parameter is contained in this block.

- ntfcncde — (notification code). The following values are valid for this parameter.
  - all
  - CR
  - MJ
  - PMN
  - MN
  - other.

Default — value is *all*.

When ntfcncde is valid, the *SLC*-2000 Access System response, as determined by the preceding input parameters, is further limited to only the specified *ntfcncde*.

The message modifier (*z*) and the *ntfcncde* parameters are used as filters to restrict the total set of alarm conditions retrieved. If *ntfcncde* is *other*, the system will return all conditions with the alarm levels abnormal, ne-acty, fe-acty, and status.

RTRV-ALM (Continued)

Output parameters

Alarm level

NOTE:
The PWR MINOR LED indicator is only required for the SONET subsystem power minor alarm summary message.

Alarm condition. The alarm or status condition being reported. An alarm condition is the name of the topmost LED indicator on the user panel that is lighted.

- CRITICAL
- MAJOR
- MINOR
- PWR MINOR
- Abnormal [status light-emitting diode (LED) indicator]
- Ne-acty (status LED indicator)
- Fe-acty (status LED indicator)
- Status (the abnormal, ne-acty, or fe-acty LED indicators are not lighted)

Source address

Address of event. Source address is the address of the event. An event source may be a slot, channel, port, or an operations interface. This column is blank if the conditions are not related to any particular address (for example, –48V ARM fuse failure).

Date detected

Date condition detected. Month (MM) and day (DD) the condition was detected.

Time detected

Time of day detected. Time of day (hours, minute, and seconds) the condition was detected.

Srv
Service affecting. Srv indicates if the condition is service affecting.

- SA — The condition is service affecting.
- NSA — The condition is *not* service affecting, but it could become service affecting.
- SC — Standing condition. Applies to unalarmed abnormal and status conditions.

(Continued on next page)

RTRV-ALM (Continued)

Output parameters (continued)

Description

Description of condition. The English text description of the condition. For FE conditions, the description indicates that the alarm originated at the far end.

Example

The following RTRV-ALM command retrieves all active equipment alarm and status conditions from the DLC subsystem.

```
RTRV-ALM-eqpt:::::all;
```

Response

The entries in the output report will be listed from greatest to lowest alarm level. Within an alarm level, newer alarms are listed first (last in, first out). The alarm level uses the following order for priority.

a. CRITICAL

b. MAJOR

c. PWR MINOR

d. MINOR

e. Abnormal — Assigned to conditions that do not have a severity of MINOR or greater but cause the ABN LED indicator to light.

f. Ne-acty — Assigned to near end conditions that have no severity but cause the NE Activity LED indicator to light.

g. Fe-acty — Assigned to far end conditions that have no severity but cause the FE Activity LED indicator to light.

h. Status — Assigned to conditions that do not cause the CRITICAL, MAJOR, PWR MINOR, MINOR, NE-Activity, or FE-Activity alarm LED indicators to light.

All alarm and status conditions specific to the DLC subsystem are included in the alarm report. Conditions that are reported in the SONET subsystem report will not be included in the DLC subsystem report. However, a summary message which indicates the highest severity SONET subsystem alarm condition that is in the SONET alarm report is included in the report.

(Continued on next page)

RTRV-ALM (Continued)

Response (continued)

The following display is an example of the alarm report.

```
/* Active Alarms and Status Report
   ================================================================================
   Alarm       Source      Date  Time        Srv   Description
   Level       Address     Detected
   ================================================================================
   Condition   address     MM-DD HH:MM:SS    srv   description
                               .
                               .
                               .
   Condition   address     MM-DD HH:MM:SS    srv   description
*/
;
```

The following RTRV-ALM report is displayed when there are no active alarm or status conditions.

```
/* Active Alarms and Status Report
   ================================================================================
   There are no active alarms or status conditions.
*/
;
```

(Continued on next page)

RTRV-ALM (Continued)

Response (continued)

Alarm and status conditions are grouped by type (*alarm level*), and the types of conditions are separated from each other by rows of dashes (-). The report contains one entry for each alarm or status condition in the system, unless the scope of the report is restricted by the input parameters.

```
/* Active Alarms and Status Report
   ================================================================================
   Alarm       Source      Date  Time        Srv   Description
   Level       Address     Detected
   ================================================================================
   CRITICAL    tsi-1       03-21 14:47:53    SA    circuit pack failed
   --------------------------------------------------------------------------------
   MAJOR       mdc-1-2     03-21 14:47:50    SA    circuit pack missing
   MAJOR       vrt-1-2     03-21 14:47:50    SA    TR8 MJ alarm received
   MAJOR                   03-21 14:47:50    NSA   Ringing generator failed
   --------------------------------------------------------------------------------
   MINOR       tsi-1       03-20 05:05:13    NSA   circuit pack failed
   MINOR       core-2      03-21 13:47:53    NSA   ABN - CORE switch inhibit
   --------------------------------------------------------------------------------
   abnormal    smu         01-01 00:00:00    SC    SW auto. install disabled
*/
;
```

RTRV-CRS-T0

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RTRV-CRS-T0 command.

RTRV-CRS-T0:[tid]:[Address]:[ctag];

Command name

Retrieve cross-connections between VRT logical lines or logical INA DS0s and physical lines.

Can command be aborted?

Yes, when the AID is *all* or a range (R4.0 and later software releases) of values. No for a single AID.

Purpose

Enter the RTRV-CRS-T0 command to retrieve a list of cross-connections between logical lines and physical lines (or ITH links).

RTRV-CRS-T0 (Continued)

Parameters for R3.1, R3.2, and R3.3

Use the following parameters with the RTRV-CRS-T0 command in R3.1, R3.2, and R3.3 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Address identifier. The address of the logical VRT line, the logical INA DS0, the physical line entity, or the ITH link in the cross-connection. The following values are valid for this parameter.

- all
- vrtdp-{1–8,all}-{1–96,all}
- inads0-{1–28,all}-{1–24,all}
- drop-{1–8,all}-{1–24,all}-{1–4,all}
- dtdp-{1–8,all}-{1,3,5,7,13,15,17,19,all}-{1–6,all}-{1–4,all}
- ithlink-{1–3,all}.

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-CRS-T0 (Continued)

Parameters for R4.0

Use the following parameters with the RTRV-CRS-T0 command in R4.0 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Address identifier. The address of the logical VRT line, the logical INA DS0, the physical line entity, or the ITH link in the cross-connection. The following values (*&&* is a range operator) are valid for this parameter.

- all
- vrtdp-{1–8,A&&A´,all}-{1–96,B&&B´,all}
- v3dp-1-{1–1536,C&&C´,all}
- inads0-{1–28,D&&D´,all}-{1–24,E&&E´,all}
- drop-{1–8,F&&F´,all}-{1–24,G&&G´,all}-{1–4,H&&H´,all}
- dtdp-{1–8,A&&A´,all}-{1,3,5,7,13,15,17,19,I&&I´,all}-{1–6,J&&J´,all}-{1–4,H&&H´,all}
- ithlink-{1–2,K&&K´,all}.

Mnemonic	Address	Range Value	Requirement
A	TR-08 VRT	1–8	A≤A´
B	TR-08 channel	1–96	B≤B´
C	TR-303 channel	1–1536	C≤C´
D	INA DS1	1–28	D≤D´
E	DS0 within an INA DS1	1–24	E≤E´
F	MDS shelf	1–8	F≤F´
G	RT slot	1–24	G≤G´
H	Circuit on a channel unit	1–4	H≤H´
I	DT Server slot	1, 3, 5, 7, 13, 15, 17, and 19	I≤I´
J	DT slot	1–6	J≤J´
K	ITH link	1–2	K≤K´

Default — none, you *must* enter a value.

(Continued on next page)

RTRV-CRS-T0 (Continued)

Parameters for R4.0 (continued)

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-CRS-T0 (Continued)

Parameters for R4.2 and R4.4

Use the following parameters with the RTRV-CRS-T0 command in R4.2 and R4.4 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Address identifier. The address of the logical VRT line, the logical INA DS0, the physical line entity, or the ITH link in the cross-connection. The following values (*&&* is a range operator) are valid for this parameter.

- all
- vrtdp-{1–8,A&&A´,all}-{1–96,B&&B´,all}
- v3dp-{1–2,L&&L´}-{1–1536,C&&C´,all}
- inads0-{1–28,D&&D´,all}-{1–24,E&&E´,all}
- drop-{1–8,F&&F´,all}-{1–24,G&&G´,all}-{1–4,H&&H´,all}
- dtdp-{1–8,A&&A´,all}-{1,3,5,7,13,15,17,19,I&&I´,all}-{1–6,J&&J´,all}-{1–4,H&&H´,all}
- ithlink-{1–2,K&&K´,all}.

Mnemonic	Address	Range Value	Requirement
A	TR-08 VRT	1–8	A≤A´
B	TR-08 channel	1–96	B≤B´
C	TR-303 channel	1–1536	C≤C´
D	INA DS1	1–28	D≤D´
E	DS0 within an INA DS1	1–24	E≤E´
F	MDS shelf	1–8	F≤F´
G	RT slot	1–24	G≤G´
H	Circuit on a channel unit	1–4	H≤H´
I	DT Server slot	1, 3, 5, 7, 13, 15, 17, and 19	I≤I´
J	DT slot	1–6	J≤J´
K	ITH link	1–2	K≤K´
L	TR-303 VRT	1–2	L≤L´

Default — none, you *must* enter a value.

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RTRV-CRS-T0 (Continued)

Parameters for R4.2 and R4.4 (continued)

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-CRS-T0 (Continued)

Parameters for R4.5 and R4.6

Use the following parameters with the RTRV-CRS-T0 command in R4.5 and R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Address identifier. The address of the logical VRT line, the logical INA DS0, the physical line entity, or the ITH link in the cross-connection. The following values (*&&* is a range operator) are valid for this parameter.

- all
- vrtdp-{1–8,A&&A´,all}-{1–96,B&&B´,all}
- v3dp-{1–2,L&&L´}-{1–1536,C&&C´,all}
- inads0-{1–28,D&&D´,all}-{1–24,E&&E´,all}
- drop-{1–8,F&&F´,all}-{1–24,G&&G´,all}-{1–4,H&&H´,all}
- dtdp-{1–8,A&&A´,all}-{1,3,5,7,9,11,13,15,17,19,21,23,I&&I´,all}-{1–6,J&&J´,all}-{1–4,H&&H´,all}
- ithlink-{1–2,K&&K´,all}.

Mnemonic	Address	Range Value	Requirement
A	TR-08 VRT	1–8	A≤A´
B	TR-08 channel	1–96	B≤B´
C	TR-303 channel	1–1536	C≤C´
D	INA DS1	1–28	D≤D´
E	DS0 within an INA DS1	1–24	E≤E´
F	MDS shelf	1–8	F≤F´
G	RT slot	1–24	G≤G´
H	Circuit on a channel unit	1–4	H≤H´
I	DT server slot	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, and 23	I≤I´
J	DT slot	1–6	J≤J´
K	ITH link	1–2	K≤K´
L	TR-303 VRT	1–2	L≤L´

Default — none, you *must* enter a value.

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RTRV-CRS-T0 (Continued)

Parameters for R4.5 and R4.6 (continued)

NOTE:
The architecture of the *SLC*-2000 Access System allows TR-08, TR-303, and INA CO interfaces. Carefully consider cross-connection or checkerboarding restrictions when using the DT Servers in the expanded slots. The enhanced FiberReach/DT feature generally benefits systems equipped to support only TR-303 and INA VRTs. Use TR-08 VRTs with the following restrictions (for more detail, refer to Chapter 3, "System Configurations and Applications, T0 Cross-Connect/Checkerboarding Restrictions", of 363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide*).

Shelf TR-08 Mode	The customer line terminates on a DT hosted by a DT Server located in MDS slot . . .	Physical line cross-connections are restricted to logical lines in . . .
M1	**1**, **3**, **5**, **7**, **13**, **15**, **17**, or **19**	TR-303 VRTs, TR-08 M1 VRTs, and INA DS1s
M1	**9**, **11**, **21**, or **23**	TR-303 VRTs and INA DS1s
M2	**1**, **3**, **5**, **7**, **13**, **15**, **17**, or **19**	TR-08 M2 assigned to the shelf
M2	**9**, **11**, **21**, or **23**	Not supported

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-CRS-T0 (Continued)

Example

The following RTRV-CRS-T0 command retrieves the first 96 T0 cross-connections associated with the TR-303 VRT.

```
RTRV-CRS-T0::v3dp-1-1&&96;
```

The following RTRV-CRS-T0 command retrieves all T0 cross-connections associated with TR-08 VRT 2.

```
RTRV-CRS-T0::vrtdp-2-all;
```

The following RTRV-CRS-T0 command retrieves all T0 cross-connections associated with INA 7.

```
RTRV-CRS-T0::inads0-7-all;
```

The following RTRV-CRS-T0 command retrieves all T0 cross-connections associated with physical shelf 5.

```
RTRV-CRS-T0::drop-5-all;
```

The following RTRV-CRS-T0 command retrieves all T0 cross-connections associated with the specified DT.

```
RTRV-CRS-T0::dtdp-4-5-all;
```

RTRV-CRS-T0 (Continued)

Response

Completion

The following report is returned when the system fully complies with the request.

```
/* TO Cross Connect Report
   ==============================================================================
   Address           Address
      1                 2
   ================================================================
   Address1          Address2
      .                 .
      .                 .
      .                 .
   Address1          Address2
*/
;
```

Error

The command is denied and the following message is displayed when a single AID is entered, and the AID is not part of an existing cross-connection.

```
SNVS
/* Status, Not in Valid State,
   The specified cross-connection does not exist. */
;
```

Related commands

The following DLC subsystem commands are related to the RTRV-CRS-T0 command.

- DLT-CRS-T0
- ENT-CRS-T0
- INIT-CRS-T0

RTRV-CRS-T1

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RTRV-CRS-T1 command.

RTRV-CRS-T1:[tid]:Address:[ctag];

Command name

Retrieve cross-connection T1.

Can command be aborted?

Yes, when the AID is *all* or a range of values. No for a single AID.

Purpose

Enter the RTRV-CRS-T1 command to retrieve cross-connection(s) between the logical VRT feeder DS1 or logical INA DS1, and a physical feeder DS1. VRT feeders can be part of TR-08 and TR-303 VRTs.

RTRV-CRS-T1 (Continued)

Parameters for R3.1, R3.2, and R3.3

Use the following parameters with the RTRV-CRS-T1 command in R3.1, R3.2, and R3.3 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier. The address of the physical feeder DS1 or of a logical VRT feeder or INA. The following values are valid for this parameter.

- all
- a-{1–7,all}-{1–4,all}
- vrtfdr-{1–8}-{a–d}
- ina-{1–28,all}

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-CRS-T1 (Continued)

Parameters for R4.0

Use the following parameters with the RTRV-CRS-T1 command in R4.0 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier. The address of the physical feeder DS1 or of a logical VRT feeder or INA. The following values (*&&* is a range operator) are valid for this parameter.

- all
- a-{1–7,A&&A´,all}-{1–4,B&&B´,all}
- vrtfdr-{1–8,C&&C´}-{a–d,D&&D´}
- v3fdr-1-{1–28,E&&E´,all}
- ina-{1–28,F&&F´,all}

Mnemonic	Address	Range Value	Requirement
A	VTU/LIU plug-in	1–7	A≤A´
B	DS1 on a VTU/LIU plug-in	1–4	B≤B´
C	TR-08 VRT	1–8	C≤C´
D	TR-08 feeder DS1	a–d	D≤D´
E	TR-303 feeder DS1	1–28	E≤E´
F	INA DS1	1–28	F≤F´

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-CRS-T1 (Continued)

Parameters for R4.2, R4.4, R4.5, and R4.6

Use the following parameters with the RTRV-CRS-T1 command in R4.2, R4.4, R4.5, and R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier. The address of the physical feeder DS1 or of a logical VRT feeder or INA. The following values (*&&* is a range operator) are valid for this parameter.

- all
- a-{1–7,A&&A´,all}-{1–4,B&&B´,all}
- vrtfdr-{1–8,C&&C´}-{a–d,D&&D´}
- v3fdr-{1–2,G&&G´}-{1–28,E&&E´,all}
- ina-{1–28,F&&F´,all}

Mnemonic	Address	Range Value	Requirement
A	VTU/LIU plug-in	1–7	A≤A´
B	DS1 on a VTU/LIU plug-in	1–4	B≤B´
C	TR-08 VRT	1–8	C≤C´
D	TR-08 feeder DS1	a–d	D≤D´
E	TR-303 feeder DS1	1–28	E≤E´
F	INA DS1	1–28	F≤F´
G	TR-303 VRT	1–2	G≤G´

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-CRS-T1 (Continued)

Example

The following RTRV-CRS-T1 command retrieves the T1 cross-connections associated with the TR-303 VRT.

```
RTRV-CRS-T1::v3fdr-1-all;
```

The following RTRV-CRS-T1 command retrieves the T1 cross-connections associated with TR-08 VRTs 6 and 7.

```
RTRV-CRS-T1::vrtfdr-6&&7-a&&d;
```

The following RTRV-CRS-T1 command retrieves the T1 cross-connections associated with INAs 1 through 12.

```
RTRV-CRS-T1::ina-1&&12;
```

The following RTRV-CRS-T1 command retrieves the T1 cross-connections associated with physical feeders 2 through 6.

```
RTRV-CRS-T1::a-2&&6-all;
```

RTRV-CRS-T1 (Continued)

Response

NOTE:
The output parameter Address1 (physical feeder AID) lists the AID of the physical feeder. The output parameter Address2 (logical VRT feeder or INA AID) lists the AID of the logical VRT feeder or INA.

Completion

If an AID is entered with an embedded *all* or a range is entered, cross-connections are output starting with the lowest numbered physical feeder that is cross-connected (for example, a-1-1) and ending with the highest numbered cross-connected physical feeder (for example, a-7-4).

The following report is displayed when the system fully complies with the request.

```
/* T1 Cross Connect Report
   ==============================================================================
   Address          Address
      1                2
   ================================================================
   Address1         Address2
      .                .
      .                .
      .                .
   Address1         Address2
*/
;
```

If the Address=all, an entry for each existing T1 cross-connection is included in the report.

Error

The following denial message is displayed when a single AID is entered and the AID is not part of an existing cross-connection.

```
SNVS
/* Status, Not in Valid State,
   The specified cross-connection does not exist. */
;
```

Related commands

The following DLC subsystem commands are related to the RTRV-CRS-T1 command.

- DLT-CRS-T1
- ENT-CRS-T1
- INIT-CRS-T1

RTRV-DISTN

Software release compatibility

Use this command in R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RTRV-DISTN command.

RTRV-DISTN:[tid]:[aid]:[ctag];

Command name

Retrieve distribution shelf mode settings.

Can command be aborted?

Yes, when the AID is *all* or multiple values. No for a single AID.

Purpose

Enter the RTRV-DISTN command to retrieve the settings for the distribution mode of the metallic distribution shelves. Provisioning for a shelf is displayed regardless of whether the shelf is connected.

Input parameters

Use the following input parameters with the RTRV-DISTN command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Access identifier. The address of a metallic distribution shelf. The following values are valid for the *aid* parameter:

- all
- shelf-{1–8, all}

Default — value is *all*.

(Continued on next page)

RTRV-DISTN (Continued)

Input parameters (continued)

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

Output parameters

ShelfAddress

Shelf address. The AID of the metallic distribution shelf.

Distribution Mode

Distribution mode. The mode of the shelf. Valid values are MET and FITL.

- MET — *METallic*. The shelf is provisioned to only support metallic loop terminations (channel units).
- FITL — *Fiber-in-the-Loop*. The shelf is provisioned to only support DT Servers.

Example

The following RTRV-DISTN command retrieves the mode settings for the distribution shelf.

```
RTRV-DISTN;
```

Response

The output report appears in the following format.

```
/* MDS Provisioning Report
   ==============================================================================
   Shelf       Distribution
   Address     Mode
   ================================================================
   Shelf-1     DistributionMode
   Shelf-2     DistributionMode
      .               .
      .               .
      .               .
   Shelf-8     DistributionMode
*/
;
```

(Continued on next page)

RTRV-DISTN (Continued)

Response (continued)

The following example of an output report is displayed in response to RTRV-DISTN::SHELF-ALL;.

```
/* MDS Provisioning Report
   ==============================================================================
   Shelf       Distribution
   Address     Mode
   ================================================================
   shelf-1     MET
   shelf-2     MET
   shelf-3     MET
   shelf-4     MET
   shelf-5     FITL
   shelf-6     MET
   shelf-7     FITL
   shelf-8     FITL
*/
;
```

Related commands

The following DLC subsystem command is related to the RTRV-DISTN command.

- ED-DISTN.

RTRV-DT

Software release compatibility

Use this command in R3.1, R3.2, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

NOTE:
The term DT (R4.4 and later software releases) refers to both the multi-services distant terminal (MSDT) and narrowband shelf (NBS).

Format

Use the following format to input the RTRV-DT command.

RTRV-DT:[tid]:[Address][:ctag];

Command name

Retrieve distant terminal (DT) provisioning.

Can command be aborted?

Yes, when the AID is *all* or multiple values. No for a single AID.

Purpose

Enter the RTRV-DT command to retrieve the provisionable parameter(s) for channel (for example, line) assignments for a DT. Refer to the DLC subsystem command, ED-DT, for the *line* parameter provisioning.

RTRV-DT (Continued)

Input parameters for R3.1, R3.2, R4.0, R4.2, and R4.4

Use the following parameters with the RTRV-DT command in R3.1, R3.2, R3.3, R4.0, R4.2, and R4.4 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

DT Server AID. Address is the access identifier (AID) of the distant terminal (DT). The DT Server AID is derived from the channel unit slot of the DT Server. The following format is valid for the DT Server AID.

- dt-{1–8}-{N}

NOTE:
Note that {1–8} identifies the MDS channel shelf number and *N* is the CU slot number (shown on the designation strip of the metallic distribution shelf) for the channel unit slot used by the DT Server (slot identifier).

Placement of DT Servers in the metallic distribution shelf is restricted. The following values are valid slot identifiers.

- 1, 3, 5, 7, 13, 15, 17, and 19 for 12-line DTs
- 1, 5, 13, and 17 for 24-line DTs.

The default DT Server AID is the one used in the most recent DLC subsystem command (ED-DT, RTRV-DT, or CPY-DT) during the current user session. If no default AID is available, you *must* enter a value. If you (the user) enter a range of AIDs, the default AID is cleared.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-DT (Continued)

Input parameters for R4.5 and R4.6

Use the following parameters with the RTRV-DT command in R4.5 and R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

DT Server AID. Address is the access identifier (AID) of the distant terminal (DT). The DT Server AID is derived from the channel unit slot of the DT Server. The following format is valid for the DT Server AID.

- dt-{1–8}-{N}

NOTE:
Note that {1–8} identifies the MDS channel shelf number and *N* is the CU slot number (shown on the designation strip of the metallic distribution shelf) for the channel unit slot used by the DT Server (slot identifier).

Placement of DT Servers in the metallic distribution shelf is restricted. The following values are valid slot identifiers.

NOTE:
Only DT Server *SPQ*811 will function in slot positions 11 and 23.

- 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, and 23 for 12-line DTs
- 1, 5, 9, 13, 17, and 21 for 24-line DTs.

The default DT Server AID is the one used in the most recent DLC subsystem command (ED-DT, RTRV-DT, or CPY-DT) during the current user session. If no default AID is available, you *must* enter a value. If you (the user) enter a range of AIDs, the default AID is cleared.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-DT (Continued)

Output parameters for R3.1, R3.2, R4.0, and R4.2

DT Server Address

DT Server AID. The AID of the equipped DT Server.

Parameter Name

Lines. The name of the line parameter.

Provisioned Value

Number of assigned DS0s. The number of DS0s assigned to the DT Server.

Equipped CLEI Code

DT Server CLEI Code. The *CLEI* code of the DT Server placed in the slot identified with the given AID. If the CLEI code is unreadable, the word *unreadable* appears in this field.

Output parameters for R4.4, R4.5, and R4.6

DT Server Address

DT Server AID. The address of the DT Server.

Provisioned dttype

Type of DT. The provisioned value for the DT type. Valid values are {msdt,nbs}.

Provisioned dtmode

Mode of DT. The provisioned value for the DT mode. Valid values are {quad,octet}.

Provisioned Lines

Number of assigned DS0s. The number of DS0s assigned to the DT Server. Valid values are {0, 12, 24}.

Available Bandwidth

Available bandwidth. The available bandwidth for the equipped DT Server.

Equipped CLEI Code

DT Server CLEI Code. The *CLEI* code of the DT Server placed in the slot identified with the given AID. If the CLEI code is unreadable, the word *unreadable* appears in this field.

RTRV-DT (Continued)

Example

The following RTRV-DT command retrieves the provisioned line size for the specified DT.

```
RTRV-DT::dt-2-1;
```

Response

The following report is displayed when the RTRV-DT command is entered.

```
RTRV-DT::dt-1-3;

/* DT Server Provisioning Report
   ==============================================================================
   DT Server   Parameter      Provisioned       Equipped
   Address     Name           Value             CLEI Code
   ==============================================================================
   dt-1-3      lines          12                abcdefg
*/
;
```

The following report is displayed in R4.4 and later software releases when the RTRV-DT command is entered.

```
RTRV-DT::dt-1-1;

/* DT Server Provisioning Report
   ==============================================================================
   DT Server   Provisioned    Provisioned    Provisioned    Available     Equipped
   Address     dttype         dtmode         Lines          Bandwidth     CLEICode
   ==============================================================================
   dt-1-1      nbs            octet          0              24            abcdefg
*/
;
```

(Continued on next page)

RTRV-DT (Continued)

Response (continued)

Error

The following denial message is displayed when you enter the RTRV-DT command with an illegal AID.

```
/* Invalid Address */
/* AID is not a valid slot for a DT server.
   Enter a dt address: dt-{1-8}-{1,3,5,7,9,11,13,15,17,19,21,23). */
;
```

The system will prompt for a new AID. Press ESC to abort the dialog.

Related commands

The following DLC subsystem commands are related to the RTRV-DT command.

- CPY-DT
- ED-DT

RTRV-EQPT

Software release compatibility

Use this command in R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RTRV-EQPT command.

RTRV-EQPT:[tid]:[Address]:[ctag];

Command name

Retrieve equipment.

Can command be aborted?

Yes.

Purpose

Use the RTRV-EQPT command to display the circuit pack type and version information for one or more shelves and slots in the DLC subsystem.

Inventory information for the UIP display module, ARM shelf assembly, and MDS assembly is also available using this command.

RTRV-EQPT (Continued)

Input parameters for R3.2, R3.3, R4.0, R4.2, and R4.4

Use the following input parameters with the RTRV-EQPT command in R3.2, R3.3, R4.0, R4.2, and R4.4 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

NOTE:
Inventory information for the low-speed slots (ls-a-{1–8}) is only available for LIUs. You must use the SONET subsystem command, rtrv-eqpt to retrieve inventory data for VTUs.

NOTE:
Inventory information for common packs in the DT [except optical units (OUs)] is only available when you use the *SPQ*809 DT Server and MC97793A1 bank interface unit (BIU). DT inventory does not include the inventory of the DT shelf/backplane.

Slot/shelf address. The *Address* determines the slot or shelf address whose equipage is to be reported. The following addresses are valid values for the *Address* parameter.

- all
- arm
- biu-{1–8}-{1,3,5,7,13,15,17,19}
- bmp-{1–2,all}
- cdtu-{1–8}-{1,3,5,7,13,15,17,19}
- cu-{1–8,all}-{1–24,all}
- dtcu-{1–8,all}-{1,3,5,7,13,15,17,19,all}-{1–6,all}
- lan
- ls-{a,all}-{1–8,all}
- mdc-{1–8,all}-{1–2,all}
- mds-{1–4,all}
- pcu-{1–8}-{1,3,5,7,13,15,17,19}
- pdc
- piu-{1–8}-{1,3,5,7,13,15,17,19}
- ptu-{1–8,all}-{1–2,all}
- rgu-{1–8}-{1,3,5,7,13,15,17,19}
- smu
- t8u-{1–8,all}-{1–2,all}
- tsi-{1-2,all}
- uip.

Default — value is *all* equipped shelves and slots.

RTRV-EQPT (Continued)

Input parameters for R3.2, R3.3, R4.0, R4.2, and R4.4 (continued)

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-EQPT (Continued)

Input parameters for R4.5 and R4.6

Use the following input parameters with the RTRV-EQPT command in R4.5 and R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

NOTE:
Inventory information for the low-speed slots (ls-a-{1–8}) is only available for LIUs. You must use the SONET subsystem command, rtrv-eqpt to retrieve inventory data for VTUs.

NOTE:
Inventory information for common packs in the DT [except optical units (OUs)] is only available when you use the *SPQ*809, *SPQ*810, or *SPQ*811 DT Server and MC97793A1 bank interface unit (BIU). DT inventory does not include the inventory of the DT shelf/backplane.

Slot/shelf address. The *Address* determines the slot or shelf address whose equipage is to be reported. The following addresses are valid values for the *Address* parameter.

- all
- arm
- biu-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}
- bmp-{1–2,all}
- cdtu-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}
- cu-{1–8,all}-{1–24,all}
- dtcu-{1–8,all}-{1,3,5,7,9,11,13,15,17,19,21,23,all}-{1–6,all}
- lan
- ls-{a,all}-{1–8,all}
- mdc-{1–8,all}-{1–2,all}
- mds-{1–4,all}
- pcu-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}
- pdc
- piu-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}
- ptu-{1–8,all}-{1–2,all}
- rgu-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}
- smu
- t8u-{1–8,all}-{1–2,all}
- tsi-{1-2,all}
- uip.

Default — value is *all* equipped shelves and slots.

RTRV-EQPT (Continued)

Input parameters for R4.5 and R4.6 (continued)

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-EQPT (Continued)

Output parameters

Address

Slot/shelf address. The address of the slot and/or shelf for which equipage is being reported.

Circuit pack

Type of circuit pack. Circuit pack is the circuit pack type and is normally the mnemonic name that identifies the general type function provided by a circuit pack. (For example, the provisioning display controller is PDC.) Channel units (CUs) are assigned types which identify the type of CU. (For example, the *SPQ* 400 channel unit type is POTS-AL.)

Apparatus code

Function of circuit pack. Apparatus code uniquely identifies the specific function provided by a circuit pack. Circuit packs with different apparatus codes are not interchangeable, even if they have the same name. For shelves, the *Apparatus Code* field contains the equipment code (J-Code).

Series number

Manufacturing version. The series number is used to indicate interchangeability among the circuit packs with the same circuit pack type and apparatus code, but different manufacturing versions. In general, a circuit pack can be replaced by another pack that has the same apparatus code and the same or later series number.

For shelves, *Series Number* field contains the equipment code list number.

CLEI code

CP CLEI Code. The 10-character code identifying each circuit pack.

ECI code

Equipment catalog item. The equipment catalog item (ECI) is a 6-character code identifying each circuit pack. The ECI code corresponds to the bar-code label on the faceplate of the circuit pack and is uniquely equivalent to the *CLEI* code.

(Continued on next page)

RTRV-EQPT (Continued)

Output parameters (continued)

Serial number

Serial number. A 12-character code uniquely identifying each circuit pack and indicating the date and place of manufacture.

DLC program vrsn

Version of DLC program. Only applies to the system memory unit (SMU) and is the version of the DLC subsystem software currently stored in the SMU.

Program version

Version of program. The version of the software currently stored in the circuit pack. This parameter only applies to the PDC and BIU circuit pack.

The BIU program version takes the form xxxx.y. *xxxx* is a program version number with a value of 0 through 8191. *y* is the copy of the code currently running on the BIU and can be one of the following values.

- 0 – factory copy is running
- 1 – copy one is running
- 2 – copy two is running.

SNT program vrsn

Version of SONET software. Only applies to the SMU and is the version of the SONET software [for the system controller (SYSCTL) and overhead controller (OHCTL)] currently stored in the SMU. Currently no SONET software is stored on the SMU, so this will always be equal to *none*.

TST program vrsn —

Version of test software. Only applies to the SMU and is the version of the test software (for the ITH) currently stored in the SMU. Currently no test software is stored on the SMU, so this will always be equal to *none*.

DLC equipment code

Equipment code for DLC. Only applies to the SMU and is the *J-code* of the DLC software currently stored in the SMU.

Equipment code

Equipment code. The *J-code* number of the software on the circuit pack. This parameter only applies to the PDC circuit pack.

(Continued on next page)

RTRV-EQPT (Continued)

Output parameters (continued)

SNT equipment code

SONET software J-code. Only applies to the SMU and is the *J-code* of the SONET software (for the SYSCTL and OHCTL) currently stored in the SMU. Currently, no SONET software is stored on the SMU, so this will always be equal to *none*. Only applies to the SMU and is the version of the SONET software (for the SYSCTL and OHCTL) currently stored in the SMU. Currently, no SNT software is stored on the SMU, so this will always be equal to *none*.

TST equipment code

Test software J-code. Only applies to the SMU and is the *J-code* of the test software currently stored in the SMU. Currently, no test software is stored on the SMU, so this will always be equal to *none*.

Example

The following RTRV-EQPT command displays the type of circuit pack and version information for all occupied slots in the DLC subsystem.

```
RTRV-EQPT::all;
```

The following RTRV-EQPT command displays the CU information for shelf 3.

```
RTRV-EQPT::cu-3-all;
```

The following RTRV-EQPT command displays the version information for the SMU.

```
RTRV-EQPT::smu;
```

RTRV-EQPT (Continued)

Response

The following report is an example of the message displayed when you enter the command, RTRV-EQPT::arm:;.

```
/* Equipage and Version Report
   ==============================================================================
   Address     Circuit   Apparatus    Series   CLEI        ECI      Serial
               Pack      Code         Number   Code        Code     Number
   ==============================================================================
   arm         ARMSHLF   APP          SSN      -           -        -
   mds-1       MD-SHLF   APP          SSN      -           -        -
      .           .        .           .        .           .        .
      .           .        .           .        .           .        .
   ------------------------------------------------------------------------------
   uip         UIP       APP          SSN      CLEI        Eco      SLN
   ------------------------------------------------------------------------------
   smu         SMU       APP          SSN      CLEI        Eco      SLN
      DLC program version xx.yy.zz       DLC equipment code   J12345xx-n
      TST program version xx.yy.zz       TST equipment code   J12345xx-n
      SNT program version xx.yy.zz
   pdc         Type     APP         SSN      CLEI     Eco      SLN
      Program version xx.yy.zz           Equipment code       J12345xx-n
   ------------------------------------------------------------------------------
   Address     Type     APP         SSN      CLEI     ECI      SLN
      .           .       .          .        .        .          .
*/
;
```

The network element only includes equipment information for properly equipped slots. The network element will successfully complete the RTRV-EQPT command and return a COMPLD even if the slot(s) identified in the *aid* are not equipped.

For older channel units, incomplete *CLEI* code information is available. A 10-character code is returned which is a partial *CLEI* code with an *x* in each undetermined character space (for example, 5SCU7Dxxxx). The *TYPE* for these units is always equal to *CU*.

If a circuit pack is not readable, the *CLEI* is equal to *Unreadable*, the *TYPE* is equal to the type of circuit pack (CP) that was previously in the slot (if available in RAM, otherwise it is equal to a question mark), and all other fields contain question marks (?). Hyphens (-) indicate information in that field does not apply.

Software version information is included for the PDC circuit pack. Also, the DLC software version stored on the SMU is reported. Version information on other downloadable units (for example, TSI, MDC, VTU) in the system is not reported since it is the same version as that on the PDC when the SMU is enabled (normal operating condition). This makes the report easier to read.

(Continued on next page)

RTRV-EQPT (Continued)

Response (continued)

The following report is an example of the message displayed when you enter the command, RTRV-EQPT::all:;.

```
/* Equipage and Version Report
   ==============================================================================
   Address     Circuit    Apparatus    Series   CLEI        ECI      Serial
               Pack       Code         Number   Code        Code     Number
   ==============================================================================
   arm         ARMSHLF    J12345ab-1   L12      -           -        -
   mds-1       MD-SHLF    J54321ba-2   L32      -           -        -
   mds-2       MD-SHLF    J54321ba-2   L32      -           -        -
   ------------------------------------------------------------------------------
   uip         UIP        UIPAPP       S1:1     UIPCLEICDE  UIPECI   93OC01010101
   ------------------------------------------------------------------------------
   smu         SMU        BBF260       S1:1     SAPQABNBDE  111111   92OC10123421
      DLC program vrsn 3.0.1             DLC equipment code   J12345xz-n
      TST program vrsn none              TST equipment code   none
      SNT program vrsn none              SNT equipment code   none
   pdc         PDC        BBF240       S1:1     SAPQAAPBDE  111111   92OC07643421
      Program version  3.0.0             Equipment code       J12345xx-n
   ------------------------------------------------------------------------------
   ls-a-1      LIU        BBG261       S1:1     CLEIabcdef  123456   94OC11789012
   ------------------------------------------------------------------------------
   tsi-1       TSI        BDK250       S1:1     SAIUK50BAA  111111   93OC07003421
   tsi-2       TSI        BDK250       S1:1     SAIUK50BAA  111111   93OC04643000
   ------------------------------------------------------------------------------
   ptu-1-1     PTU        BDJ200       S1:1     SAPQAAVBAA  111111   92OC03333421
   mdc-1-1     MDC        BDJ240       S1:1     SARTB00AAA  111111   92OC03000421
   t8u-1-1     T8U        BDJ205       S1:1     SAIUJ00BAA  111111   92OC04563421
   t8u-1-2     T8U        BDJ205       S1:1     SAIUJ00BAA  111111   92OC04563423
   mdc-1-2     MDC        BDJ240       S1:1     SARTB00AAA  111111   92OC03000422
   ptu-1-2     PTU        BDJ200       S1:1     SAPQAAVBAA  111111   92OC03333424
   ------------------------------------------------------------------------------
   cu-1-1      DTSERV     SPQ809       S1:1     SAIUMB0AAA  111111   92OC07622221
   cu-1-5      DTSERV     SPQ809       S1:1     SAIUMB0AAA  111111   92OC07622221
   ------------------------------------------------------------------------------
   biu-1-1     BIU        AUXXXX       S1:1     SAIUMB0AAA  111111   92OC07622221
      Program version  3.1               Equipment code       J12345xx-n
   cdtu-1-1    CDTU       AUXXXX       S1:1     SAIUMB0AAA  111111   92OC07622221
   piu-1-1     PIU        AUXXXX       S1:1     SAIUMB0AAA  111111   92OC07622221
   pcu-1-1     PCU        AUXXXX       S1:1     SAIUMB0AAA  11111    92OC07622221
   rgu-1-1     RGU        AUXXXX       S1:1     SAIUMB0AAA  111111   92OC07622221
   dtcu-1-1-1  CU         AUXXXX       S1:1     SAIUMB0AAA  111111   92OC07622221
   dtcu-1-1-2  CU         AUXXXX       S1:1     SAIUMB0AAA  111111   92OC07622221
   dtcu-1-1-5  CU         AUXXXX       S1:1     SAIUMB0AAA  111111   92OC07622221
   ------------------------------------------------------------------------------
   ptu-2-1     PTU        BDJ200       S1:1     SAPQAAVBAA  111111   92OC03333421
   mdc-2-1     MDC        BDJ240       S1:1     SARTB00AAA  111111   92OC03000421
   t8u-2-1     T8U        BDJ205       S1:1     SAIUJ00BAA  111111   92OC04563421
   t8u-2-2     T8U        BDJ205       S1:1     SAIUJ00BAA  111111   92OC04563423
   mdc-2-2     MDC        BDJ240       S1:1     SARTB00AAA  111111   92OC03000422
   ptu-2-2     PTU        BDJ200       S1:1     SAPQAAVBAA  111111   92OC03333424
   ------------------------------------------------------------------------------
   cu-2-1      POTS-AL    SPQ400       S1:1     SAIUMB0AAA  111111   92OC07622221
   cu-2-9      POTS-AL    SPQ400       S1:1     SAIUMB0AAA  111111   92OC07622221
*/
;
```

RTRV-EQPT (Continued)

Related commands

The following DLC subsystem commands are related to the RTRV-EQPT command.

- RTRV-ALM
- RTRV-HSTY
- RTRV-STATE-EQPT

RTRV-FDR

Software release compatibility

Use this command in R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RTRV-FDR command.

RTRV-FDR:[tid]::[ctag];

Command name

Retrieve provisioned DLC feeder configuration.

Can command be aborted?

No.

Purpose

Enter the RTRV-FDR command to display the current provisioned configuration for the DLC feeder.

Input parameters

Use the following input parameters with the RTRV-FDR command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-FDR (Continued)

Output parameters

Use the following output parameters with the RTRV-FDR command.

type

Type of unit. Indicates the type of unit to be plugged into the feeder complex (VTU/LIU slots). The *type* implies the configuration of the system for SONET or metallic DS1.

The following values are valid for this parameter.

- VTU. The system is configured for SONET feeder. VTUs are expected in the VTU/LIU slots. Presence of LIUs in VTU/LIU slots will initiate an alarm.
- LIU. The system is configured for metallic DS1 feeder. LIUs are expected in the VTU/LIU slots. Presence of VTUs in VTU/LIU slots will initiate an alarm.

NOTE:
Do not confuse this configuration with the *Metallic DS1 feeder using SONET subsystem* in which the feeder DS1 signals are looped through the SONET subsystem. The user should select *VTU* for this configuration.

Original value is VTU. Default value presented to the user is the current value.

Example

The following RTRV-FDR command retrieves the DLC feeder configuration.

```
RTRV-FDR;
```

Response

Confirmation

The RTRV-FDR command requires confirmation. The following is an example of the output report.

```
/* DLC Feeder Configuration Report
   ==============================================================================
   Type=type
*/
;
```

RTRV-FDR (Continued)

Related commands

The following DLC subsystem commands are related to the RTRV-FDR command.

- ED-FDR
- RTRV-ALM

RTRV-HSTY

Software release compatibility

Use this command in R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RTRV-HSTY command.

RTRV-HSTY:[tid]:[Address]:[ctag];

Command name

Retrieve the DLC subsystem event-history report.

Can command be aborted?

Yes.

Purpose

CAUTION:
The history log is lost during any PDC reset, including the automatic reset that occurs at the end of software installation to the PDC. The INIT-SYS command clears the history report.

Enter the RTRV-HSTY command to display the DLC subsystem event-history report. The report contains a list of the most recent (up to 500) system events. Refer to Chapter 8, “System Output Messages and Reports,” for alarm message and history report information.

Events are displayed last-in, first-out according to the order in which they occurred. (For example, the most recent event appears at the top of the page, and the oldest event appears at the bottom of the list.) Normally, this results in event date/time stamps shown in a monotonically decreasing order with the newest time stamp shown first and the oldest time stamp shown last. However, any time or date provisioning changes will cause the log output to deviate from the norm.

Date or time provisioning changes will have no effect on previously logged events in the history report.

(Continued on next page)

RTRV-HSTY (Continued)

Purpose (continued)

Certain events will cause multiple log entries. For example, messages record the following events during the removal and reinsertion of a circuit pack (CP).

- Removal event
- Alarm of the removal event if the slot is alarmed
- Insertion event
- Clearing of an alarm if the slot was alarmed.

Parameters

Use the following parameters with the RTRV-HSTY command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier. Default — null on the user interface.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

Example

The following RTRV-HSTY command displays the event history report for the DLC subsystem.

```
RTRV-HSTY;
```

RTRV-HSTY (Continued)

Response

Completion

The following report is an example of the message displayed when you enter the RTRV-HSTY command.

```
/* Maintenance History Report
   ==============================================================================
   Date  Time          Sys.Alm.    Alm.     Source      Event
                       Level       Lvl.     Address     Description
   ==============================================================================
   10-12 12:48:32      MINOR       CL       dt-3-1      DT datalink alm clrd
   10-12 12:48:15      MINOR       MN       dt-3-1      DT datalink fail
   10-12 12:48:10      MINOR       CL       dt-3-1      rcvd FITL yellow clrd
   10-12 12:47:55      MAJOR       MJ       dt-3-1      rcvd FITL yellow
   10-12 12:47:49      MINOR       CL       dt-3-1      DT server missing clrd
   10-12 12:47:46      MAJOR       CL       cu-3-1      circuit pack inserted
   10-12 12:41:31      MAJOR       MJ       dt-3-1      DT server missing
   10-12 12:41:29      MINOR       CL       dt-3-1      circuit pack removed*/
;
```

RTRV-INA

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RTRV-INA command.

RTRV-INA:[tid]:[aid]:[ctag];

Command name

Retrieve attributes for INA DS1s.

Can command be aborted?

Yes, when the AID is *all* or multiple values. No for a single AID.

Purpose

Enter the RTRV-INA command to retrieve the framing format and primary service state of INA DS1s.

Input parameters

Use the following input parameters with the RTRV-INA command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Access identifier. The *aid* is a required parameter and must reference valid INA DS1s of the system in order to be accepted. The following values are valid for this parameter.

- all
- ina-{1–28,all}

Default — value is *all*.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-INA (Continued)

Output parameters

Address

INA DS1 AID. The *aid* of the INA DS1.

Framing format

Framing format. Specifies the framing format of the INA DS1.

- SF — SuperFrame, also known as the D4 framing format.
- ESF — Extended SuperFrame.

Orignal value is SF. Default value is the current value.

Primary state

Primary service state. The primary service state of the INA DS1.

- is — The INA DS1 is cross-connected to a feeder DS1 port that is not in the OOS-MT-AUTO state.
- oos — The INA DS1 is not cross-connected to a feeder DS1 port, or the INA DS1 is cross-connected to a feeder DS1 port that is in the OOS-MT-AUTO state.

The INA DS1s in the report will be listed in ascending order.

Example

The following RTRV-INA command retrieves the DS1 framing format and primary service state of INA 8.

```
RTRV-INA::ina-8;
```

RTRV-INA (Continued)

Response

The following report example is displayed for all requested INA DS1s when the system fully complies with the request.

```
/* INA DS1 Report
   ==============================================================================
   INA         Framing        Primary
   Address     Format         State
   ==============================================================================
   ina-3       sf             is
*/
;
```

When you enter an invalid AID, the system provides a help message which includes the list of valid AIDs, and will reprompt.

The RTRV-INA command is denied and the following message is displayed when the NVDS has failed.

```
SSTP
/* Status, SToPped,
   Data memory failed. */
;
```

Related commands

The following DLC subsystem command is related to the RTRV-INA command.

- ED-INA

RTRV-LINK

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RTRV-LINK command.

RTRV-LINK:[tid]::[ctag];

Command name

Retrieve the provisioned link settings.

Can command be aborted?

No.

Purpose

Enter the RTRV-LINK command to display the currently-provisioned parameters for the craft interface link of the user, as set by the SONET subsystem command, set-link. This includes the link which the user is logged into, the baud rate, the page length of reports, and the dialog mode.

Input parameters

Use the following input parameters with the RTRV-LINK command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-LINK (Continued)

Output parameters

The following output parameters are used with the RTRV-LINK command.

Link

CIT link. Link identifies the CIT link from which the command was executed. Valid values are cit-{1–2} and dcc.

- cit-1 — the front-access port
- cit-2 — the rear-access port
- dcc — SONET DCC port used for remote access.

PageLength

Number of lines displayed. The number of lines displayed in one page of a report. Reports with a number of lines greater than one report page will be paged.

Baud

Data rate. Baud identifies the data rate for this link. When this command is executed using the SONET data communications channel (DCC), the baud rate is fixed at 19,200 kb and cannot be changed. Therefore, the baud rate is not reported for the DCC and a hyphen (-) will appear in the report.

Baud is set in the *SLC*-2000 Access System using the UIP — it is consistent to also include it in this report. In a *SLC*-2000 Access System integrated SONET configuration, the UIP baud settings will override any SYSCTL hardware settings. This parameter does not appear in the SET-LINK command for the *SLC*-2000 Access System.

Baud is a hyphen (-) when in a remote session (using the DCC).

Example

The following RTRV-LINK command displays the current values of the CIT provisionable parameters.

```
RTRV-LINK;
```

RTRV-LINK (Continued)

Response

The following report is an example of the message displayed when you enter the RTRV-LINK command.

```
/* Interface Link Configuration Report
   ==============================================================================
   Link=cit-1, PageLength (pg)= 24, Baud=19200, Mode=HumanMachine
*/
;
```

Related commands

The following DLC subsystem command is related to the RTRV-LINK command.

- SET-LINK

RTRV-NBS

Software release compatibility

Use this command in R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RTRV-NBS command.

RTRV-NBS:[tid]:[Address][:ctag];

Command name

Retrieve the modes of the four narrowband shelf (NBS) quadrants (NBSQs) at the NBS.

Can command be aborted?

Yes, when the AID is *all* or multiple values. No for a single AID.

Purpose

NOTE:
Wait for 3 minutes to enter the DLC subsystem command RTRV-NBS after using the DLC subsystem command ED-DT to change the mode of the DT.

Enter the RTRV-NBS command to retrieve the mode of the NBSQs at the NBS. Refer to the DLC subsystem command, ED-DT for the *dtm* parameter provisioning.

RTRV-NBS (Continued)

Input parameters for R4.4

Use the following parameters with the RTRV-NBS command in R4.4 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

DT Server AID. Address is the access identifier (AID) of one of four DT Servers that can be connected to an NBS. The DT Server AID is derived from the channel unit slot of the DT Server. The following format is valid for the DT Server AID.

- dt-{1–8}-{N}

NOTE:
Note that {1–8} identifies the MDS channel shelf number and *N* is the CU slot number (shown on the designation strip of the metallic distribution shelf) for the channel unit slot used by the DT Server (slot identifier).

Placement of DT Servers in the metallic distribution shelf is restricted. DT Server pairs (1–3, 5–7, 13–15, and 17–19) share 24 channels (digroup). The following values are valid slot identifiers.

- 1, 3, 5, 7, 13, 15, 17, and 19 for 12-line DTs
- 1, 5, 13, and 17 for 24-line DTs.

The default DT Server AID is the one used in the most recent DLC subsystem command (ED-DT and RTRV-NBS) during the current user session. If no default AID is available, you *must* enter a value. If you (the user) enter a range of AIDs, the default AID is cleared.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-NBS (Continued)

Input parameters for R4.5 and R4.6

Use the following parameters with the RTRV-NBS command in R4.5 and R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

DT Server AID. Address is the access identifier (AID) of one of four DT Servers that can be connected to an NBS. The DT Server AID is derived from the channel unit slot of the DT Server. The following format is valid for the DT Server AID.

- dt-{1–8}-{N}

NOTE:
Note that {1–8} identifies the MDS channel shelf number and *N* is the CU slot number (shown on the designation strip of the metallic distribution shelf) for the channel unit slot used by the DT Server (slot identifier).

Placement of DT Servers in the metallic distribution shelf is restricted. DT Server pairs (1–3, 5–7, 9–11, 13–15, 17–19, and 21–23) share 24 channels (digroup). The following values are valid slot identifiers.

NOTE:
Only DT Server *SPQ*811 will function in slot positions 11 and 23.

- 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, and 23 for 12-line DTs
- 1, 5, 9, 13, 17, and 21 for 24-line DTs.

The default DT Server AID is the one used in the most recent DLC subsystem command (ED-DT and RTRV-NBS) during the current user session. If no default AID is available, you *must* enter a value. If you (the user) enter a range of AIDs, the default AID is cleared.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-NBS (Continued)

Output parameters

NBS Quadrant

NBSQ. The NBSQ identifies the NBS quadrant.

DT Server AID

DT Server AID. The address of the DT Server serving the NBSQ.

Provisioned Mode

Mode of DT. The provisioned value for the DT Server mode.

Valid values are {quad,octet}.

Actual Mode at NBS

Actual mode of NBS. The actual mode value assigned by the digital signal cross-connect backplane interface unit (DSXBIU) at the NBS.

Valid values are {quad,octet}.

Provisioned Lines

Number of assigned DS0s. The number of DS0s assigned to the DT Server using the DLC subsystem command, ED-DT.

Valid values are {0, 12, 24}.

Actual Lines at NBS

Actual number of lines at NBS. The actual number of lines value assigned by the DSXBIU at the NBS.

Valid values are {0, 12, 24}.

Example

The following RTRV-NBS command retrieves the provisioned data for the specified NBS.

```
RTRV-NBS::dt-3-1;
```

RTRV-NBS (Continued)

Response

The following example report is displayed when the RTRV-NBS command is entered.

```
RTRV-NBS::dt-1-1;

/* NBS Provisioning and Status Report
   ==============================================================================
   NBS         DT Server   Provisioned   Actual Mode    Provisioned    Actual Lines
   Quadrant    AID         Mode           at NBS         Lines          at NBS
   ==============================================================================
   NBSQ-A      dt-1-1      quad           quad           12             12
   NBSQ-C      Not applicable
   NBSQ-B      dt-2-1      octet          octet          24             24
   NBSQ-D      Unknown
*/
;
```

Error

The following denial message is displayed (R4.4) when you enter the RTRV-NBS command with an illegal AID.

```
/* Invalid Address */
/* AID is not a valid slot for a DT server.
   Enter a dt address: dt-{1-8}-{1,3,5,7,13,15,17,19). */
;
```

The following denial message is displayed (R4.5 and later software releases) when you enter the RTRV-NBS command with an illegal AID.

```
/* Invalid Address */
/* AID is not a valid slot for a DT server.
   Enter a dt address: dt-{1-8}-{1,3,5,7,9,11,13,15,17,19,21,23). */
;
```

The system will prompt for a new AID. Press ESC to abort the dialog.

(Continued on next page)

RTRV-NBS (Continued)

Response (continued)

The following denial message is displayed when you enter the RTRV-NBS command with a DT AID and an isolated hardware or software failure prevents the command from executing.

```
SROF
/* Status, Required Operation Failed,
   Execution failed due to a hardware or software problem. */
;
```

The following denial message is displayed when you enter the RTRV-NBS command with a DT AID and the link between the DT Server to the NBS is down.

```
SROF
/* Status, Required Operation Failed,
   DT link is down. */
;
```

The following denial message is displayed when you enter the RTRV-NBS command with a DT AID and the corresponding NBS is not available.

```
SROF
/* Status, Required Operation Failed,
   No NBS response - try later. */
;
```

The following denial message is displayed when you enter the RTRV-NBS command and the MDC is not present.

```
SROF
/* Status, Required Operation Failed,
   MDS is unavailable - try later. */
;
```

(Continued on next page)

RTRV-NBS (Continued)

Response (continued)

The following denial message is displayed when you enter the RTRV-NBS command and the MDC is initializing (for example, because of mode change).

```
SROF
/* Status, Required Operation Failed,
   MDS is initializing - try later. */
;
```

The following denial message is displayed when you enter the RTRV-NBS command with a DT AID and the DT Server is missing.

```
SROF
/* Status, Required Operation Failed,
   DT Server is missing. */
;
```

The following denial message is displayed when you enter the RTRV-NBS command with a DT AID and the DT Server is serving a MSDT.

```
SROF
/* Status, Required Operation Failed,
   DT type is MSDT. */
;
```

Related commands

The following DLC subsystem commands are related to the RTRV-NBS command.

- ED-DT

RTRV-NE

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RTRV-NE command.

RTRV-NE:[tid]::[ctag];

Command name

Retrieve network element.

Can command be aborted?

Yes.

Purpose

NOTE:
The *SLC*-2000 Access System, R4.0, R4.2, R4.4, R4.5, and R4.6 only supports RT configurations. R3.3 only supports COT configurations.

Enter the RTRV-NE command to retrieve the active configuration of the *SLC*-2000 Access System terminal. The configurations are remote terminal (RT) or central office terminal (COT) operation.

Parameters

Use the following parameters with the RTRV-NE command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-NE (Continued)

Example

The following RTRV-NE command displays the active configuration of the network element (NE).

```
RTRV-NE;
```

Response

The following report is an example of the message displayed when you enter the RTRV-NE command (where *TermType* is *rt*) (see DLC subsystem command, ED-MODE-T8U).

```
/* SLC-2000 Access System Provisioning Report
   ==========================================================================
   Term = rt
   T8U Mode:

   shelf-1 Y
   shelf-2 Y
   shelf-3 Y
   shelf-4 Y
   shelf-5 N
   shelf-6 N
   shelf-7 N
   shelf-8 N
*/
;
```

Error

The following message is displayed when the RTRV-NE command fails due to an NVDS fault.

```
SSTP
/* Status, execution SToPped,
   Data memory failed. */
;
```

Related commands

The following DLC subsystem commands are related to the RTRV-NE command.

- ED-MODE-T8U
- set-ne (SONET subsystem)

RTRV-PM-T1

Software release compatibility

Use this command in R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RTRV-PM-T1 command.

RTRV-PM-T1:[tid]:Address:[ctag];

Command name

Retrieve performance monitoring data.

Can command be aborted?

Yes, when the AID is *all* or a range of values. No for a single AID.

Purpose

Enter the RTRV-PM-T1 command to retrieve and display the (near-end) performance monitoring counts of DS1s. Performance monitoring is available for *any* DS1 (TR-303 feeder, TR-08 feeder, INA DS1, or MSDT DS1 link) (refer to 363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide*). Performance monitoring is also available for the near end (NE) and far end (FE) of the MSDT DS1 link.

RTRV-PM-T1 (Continued)

Input parameters for R3.2 and R3.3

Use the following input parameters with the RTRV-PM-T1 command in R3.2 and R3.3 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier. The address of the (physical) feeder DS1 whose counters are to be displayed. The valid value for this parameter is all.

Default — value is all.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

Input parameters for R4.0, R4.2, and R4.4

Use the following parameters with the RTRV-PM-T1 command in R4.0, R4.2, and R4.4 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier. The address of the (physical) feeder DS1 whose counters are to be displayed. The following values are valid for this parameter.

- a-{1–7}-{1–4,all}
- cu-{1–8}-{1,3,5,7,13,15,17,19}
- biu-{1–8}-{1,3,5,7,13,15,17,19}

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-PM-T1 (Continued)

Input parameters for R4.5 and R4.6

Use the following parameters with the RTRV-PM-T1 command in R4.5 and R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier. The address of the (physical) feeder DS1 whose counters are to be displayed. The following values are valid for this parameter.

- a-{1–7}-{1–4,all}
- cu-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}
- biu-{1–8}-{1,3,5,7,9,11,13,15,17,19,21,23}

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

Output parameters for R3.2 and R3.3

Address

Access identifier. The AID of the feeder DS1.

CSS

Controlled slip second counts. However, CSS is not reported for DT Server and BIU DS1s.

RTRV-PM-T1 (Continued)

Output parameters for R4.0, R4.2, R4.4, R4.5, and R4.6

Address

Access identifier. The AID of the feeder DS1.

CSS

NOTE:
CSS is not reported for the DT Server and BIU DS1s.

Controlled slip second counts.

CVP

Coding violation counts (path).

DMP

Degraded minute second counts (path).

ESP

Errored second counts (path).

Period

Time period over which the data was accumulated.

SEFS

Severely errored framing second counts.

SESP

Severely errored second counts (path).

UASP

Unavailable second counts (path).

Example

The following RTRV-PM-T1 command retrieves and displays the performance monitoring counts for physical DS1 port a-6-2.

```
RTRV-PM-T1::a-6-2;
```

RTRV-PM-T1 (Continued)

Response

The *period* for history counts will be in 15-minute intervals. Any counts which are not applicable are displayed as dashes (---). Counts which are marked *partial accumulate* are followed by a plus mark (+), and counts which are marked *corrupt* are followed by a single asterisk (*).

The first entry for history counts is the same as the *previous* counts.

The following report is an example of the message displayed when you enter the RTRV-PM-T1 command (R4.0 and later software releases).

```
/* SLC-2000 DS1 Performance Monitoring Report
   ==============================================================================
   Address Period            CVP     ESP    SESP    SEFS    UASP     DMP     CSS
   ==============================================================================

   a-7-4   curr min          329      17      13       9       7       1       3
           prev min           29+      7+      3+      2+      2+      0+     42+

           curr day        21967+   9876+   5432+    123+    121+      2+     76+
           prev day     28800000   86400   86400   86400   86400    1440   86400

           history:
           00:00-00:15      ----       7+      3+      2+      2+      0+     42+
           00:15-00:30      ----       0       0       0       0       0       0
           00:30-00:45      ----       0       0       0       0       0       0
           00:45-01:00      ----       0       0       0       0       0       0
           01:00-01:15      ----       0       0       0       0       0       0
           01:15-01:30      ----       0       0       0       0       0       0
           01:30-01:45      ----       0       0       0       0       0       0
           01:45-02:00      ----       0       0       0       0       0       0
           02:00-02:15      ----       0       0       0       0       0       0
           02:15-02:30      ----       0       0       0       0       0       0
           02:30-02:45      ----       0       0       0       0       0       0
           02:45-03:00      ----       0       0       0       0       0       0
           03:00-03:15      ----       0       0       0       0       0       0
           03:15-03:30      ----       0       0       0       0       0       0
           03:30-03:45      ----       0       0       0       0       0       0
           03:45-04:00      ----       0       0       0       0       0       0
           04:00-04:15      ----       0       0       0       0       0       0
           04:15-04:30      ----       0       0       0       0       0       0
           04:30-04:45      ----       0       0       0       0       0       0
           04:45-05:00      ----       0       0       0       0       0       0
           05:00-05:15      ----       0       0       0       0       0       0
           05:15-05:30      ----       0       0       0       0       0       0
           05:30-05:45      ----       0       0       0       0       0       0
           05:45-06:00      ----       0       0       0       0       0       0
           06:00-06:15      ----       0       0       0       0       0       0
           06:15-06:30      ----       0       0       0       0       0       0
           06:30-06:45      ----       0       0       0       0       0       0
           06:45-07:00      ----       0       0       0       0       0       0
           07:00-07:15      ----       0       0       0       0       0       0
           07:15-07:30      ----       0       0       0       0       0       0
           07:30-07:45      ----       0       0       0       0       0       0
           07:45-08:00      ----    3253*   3112*     76*     64*      1*  32767*
*/
;
```

RTRV-STATE-EQPT

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RTRV-STATE-EQPT command.

RTRV-STATE-EQPT:[tid]:[Address]:[ctag];

Command name

Retrieve state of equipment.

Can command be aborted?

Yes, when the AID is *all* or multiple values. No for a single AID.

Purpose

Enter the RTRV-STATE-EQPT command to retrieve the state of the SMU, switch states, and priorities for LIUs/VTUs, the CORE (duplicated BMP/TSI circuit packs), and TR-303 EOC data links (referenced as v3eoc-{1–2}-{1–2}), and timeslot management channel (TMC) data links (referenced as v3tmc-{1–2}-{1–2}).

RTRV-STATE-EQPT (Continued)

Input parameters for R3.1, R3.2, and R3.3

Use the following parameters with the RTRV-STATE-EQPT command in R3.1, R3.2, and R3.3 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Slot or CORE AID. The address of the slot or CORE side to be retrieved. The following values are valid for this parameter.

- all
- core-{1–2,all}
- smu .

Default — value is *all*.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-STATE-EQPT (Continued)

Input parameters for R4.0

Use the following parameters with the RTRV-STATE-EQPT command in R4.0 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Slot or CORE AID. The address of the slot, CORE side, or data link to be retrieved. The following values are valid for this parameter.

- all
- core-{1–2,all}
- ls-a-{1–8,all}
- smu
- v3eoc-{1,all}-{1–2}
- v3tmc-{1,all}-{1–2}.

Default — value is *all*.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-STATE-EQPT (Continued)

Input parameters for R4.2, R4.4, R4.5, and R4.6

Use the following parameters with the RTRV-STATE-EQPT command in R4.2, R4.4, R4.5, and R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Slot or CORE AID. The address of the slot, CORE side, or data link to be retrieved. The following values are valid for this parameter.

- all
- core-{1–2,all}
- ls-a-{1–8,all}
- smu
- v3eoc-{1–2,all}-{1–2}
- v3tmc-{1–2,all}-{1–2}.

Default — value is *all*.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-STATE-EQPT (Continued)

Output parameters for R3.1, R3.2, and R3.3

Address

Slot or CORE AID. The AID of the circuit pack slot or CORE side to be retrieved. The following values are valid for this parameter.

- all
- core-{1–2,all}
- smu .

SMU state

State of SMU. Only applicable to the SMU, and is blank for all other circuit pack types. The following values are valid for this parameter:

- enabled
- disabled
- downloading.

Switch state

State of switch. Only applicable to CORE and LIU/VTU slots — blank for SMU. The following values are valid for this parameter.

- Active — For the CORE, the service has been switched to this side. Otherwise, for LIU/VTU slots, the service has been switched to this slot and the slot is equipped with an LIU/VTU.
- Standby — For the CORE, the side is not carrying service. Otherwise, for LIU/VTU slots, the slot is not carrying service and is not in the OOS-MT-AUTO state (from the perspective of the DLC subsystem).
- - (Hyphen) — For LIU/VTU slots, the slot is in the OOS-MT-AUTO state (from the perspective of the DLC subsystem).

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RTRV-STATE-EQPT (Continued)

Output parameters for R3.1, R3.2, and R3.3 (continued)

Switch priority

Protection switch request. Switch Priority is the currently active protection switch request. Only a higher priority protection switch request can cause a protection switch to be done. This field is blank for the SMU slot and TR-303 data links. If no manual or automatic switch requests are active, this field is blank. Switch priority may be one of the following for the CORE and QLS (LIU/VTU) slots.

- Inhibit — Applicable to the CORE only. No protection switches will be done until the switch is reset.
- Lockout of protection — Applicable to the protection LIU/VTU slot {8} only. This prevents access to the protection pack for the group. No protection switches will be done until the switch is reset.
- Lockout of service — Applicable to the service LIU/VTU slots only {1–7}. This prevents access to the protection pack for the specified service slot. No protection switches will be done on the specified service slot until the switch is reset.
- Forced — Applicable to the CORE only. No automatic or manual switches will be done until the forced switch is reset. This always appears next to the standby unit.
- APS-pack failure — Automatic protection switching has occurred due to a circuit pack failure. This always appears next to the standby unit.
- APS-automatic lock — Applicable only for service LIU/VTU slots {1–7}. Traffic is forced and held onto the protection pack, unable to revert to the service pack until 24 hours after lock-in has occurred. This occurs following four automatic switches from service to protection during a 10-minute interval.
- Manual — Applicable only for LIU/VTU slots. The specified service slot has been manually switched to protection. This condition is the same as the NORM mode in the DLC subsystem command, SW-TOPROTN-EQPT.

RTRV-STATE-EQPT (Continued)

Output parameters for R4.0

Address

Slot or CORE AID. The AID of the circuit pack slot, CORE side, or TR-303 data link to be retrieved. The following values are valid for this parameter.

- all
- core-{1–2,all}
- ls-a-{1–8,all}
- smu
- v3eoc-{1,all}-{1–2}
- v3tmc-{1,all}-{1–2}.

Circuit pack

Type of circuit pack. Blank for the CORE and TR-303 data links. Value is *SMU* for the SMU slot. However, the value is either *LIU*, *VTU*, or – (dash) for the LIU/VTU slots.

SMU state

State of SMU. Only applicable to the SMU, and is blank for all other circuit pack types. The following values are valid for this parameter:

- Enabled
- Disabled
- Downloading.

Switch state

State of switch. Only applicable to CORE and LIU/VTU slots, and TR-303 data links — blank for SMU. The following values are valid for this parameter.

- Active — For the CORE and TR-303 data links, the service has been switched to this side. Otherwise, for LIU/VTU slots, the service has been switched to this slot and the slot is equipped with an LIU.
- Standby — For the CORE and TR-303 data links, the side is not carrying service. Otherwise, for LIU/VTU slots, the slot is not carrying service and is not in the OOS-MT-AUTO state (from the perspective of the DLC subsystem).
- - (Hyphen) — For LIU/VTU slots, the slot is in the *OOS-MT-AUTO* state (from the perspective of the DLC subsystem).

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RTRV-STATE-EQPT (Continued)

Output parameters for R4.0 (continued)

Switch priority

Protection switch request. Switch Priority is the currently active protection switch request. Only a higher priority protection switch request can cause a protection switch to be done. This field is blank for the SMU slot and TR-303 data links. If no manual or automatic switch requests are active, this field is blank. Switch priority may be one of the following for the CORE and QLS (LIU/VTU) slots.

- Inhibit — Applicable to the CORE only. No protection switches will be done until the switch is reset.
- Lockout of protection — Applicable to the protection LIU/VTU slot {8} only. This prevents access to the protection pack for the group. No protection switches will be done until the switch is reset.
- Lockout of service — Applicable to the service LIU/VTU slots only {1–7}. This prevents access to the protection pack for the specified service slot. No protection switches will be done on the specified service slot until the switch is reset.
- Forced — Applicable to the CORE only. No automatic or manual switches will be done until the forced switch is reset. This always appears next to the standby unit.
- APS-pack failure — Automatic protection switching has occurred due to a circuit pack failure. This always appears next to the standby unit.
- APS-automatic lock — Applicable only for service LIU/VTU slots {1–7}. Traffic is forced and held onto the protection pack, unable to revert to the service pack until 24 hours after lock-in has occurred. This occurs following four automatic switches from service to protection during a 10-minute interval.
- Manual — Applicable only for LIU/VTU slots. The specified service slot has been manually switched to protection. This condition is the same as the NORM mode in the DLC subsystem command, SW-TOPROTN-EQPT.

Serv state

Entity service state. Applicable only for the TR-303 data links. Otherwise, the field is blank for all other entities. Indicates the state of service (in-service or out-of-service) for a particular entity. The following values are valid for this output parameter:

- IS — the data link is *in-service*.
- OOS — the data link is *out-of-service*.

RTRV-STATE-EQPT (Continued)

Output parameters for R4.2, R4.4, R4.5, and R4.6

Address

Slot or CORE AID. The AID of the circuit pack slot, CORE side, or TR-303 data link to be retrieved. The following values are valid for this parameter.

- all
- core-{1–2,all}
- ls-a-{1–8,all}
- smu
- v3eoc-{1–2,all}-{1–2}
- v3tmc-{1–2,all}-{1–2}.

Circuit pack

Type of circuit pack. Blank for the CORE and TR-303 data links. Value is *SMU* for the SMU slot. However, the value is either *LIU*, *VTU*, or – (dash) for the LIU/VTU slots.

SMU state

State of SMU. Only applicable to the SMU, and is blank for all other circuit pack types. The following values are valid for this parameter:

- Enabled
- Disabled
- Downloading.

Switch state

State of switch. Only applicable to CORE and LIU/VTU slots, and TR-303 data links — blank for SMU. The following values are valid for this parameter.

- Active — For the CORE and TR-303 data links, the service has been switched to this side. Otherwise, for LIU/VTU slots, the service has been switched to this slot and the slot is equipped with an LIU.
- Standby — For the CORE and TR-303 data links, the side is not carrying service. Otherwise, for LIU/VTU slots, the slot is not carrying service and is not in the OOS-MT-AUTO state (from the perspective of the DLC subsystem).
- - (Hyphen) — For LIU/VTU slots, the slot is in the *OOS-MT-AUTO* state (from the perspective of the DLC subsystem).

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RTRV-STATE-EQPT (Continued)

Output parameters for R4.2, R4.4, R4.5, and R4.6 (continued)

Switch priority

Protection switch request. Switch Priority is the currently active protection switch request. Only a higher priority protection switch request can cause a protection switch to be done. This field is blank for the SMU slot and TR-303 data links. If no manual or automatic switch requests are active, this field is blank. Switch priority may be one of the following for the CORE and QLS (LIU/VTU) slots.

- Inhibit — Applicable to the CORE only. No protection switches will be done until the switch is reset.
- Lockout of protection — Applicable to the protection LIU/VTU slot {8} only. This prevents access to the protection pack for the group. No protection switches will be done until the switch is reset.
- Lockout of service — Applicable to the service LIU/VTU slots only {1–7}. This prevents access to the protection pack for the specified service slot. No protection switches will be done on the specified service slot until the switch is reset.
- Forced — Applicable to the CORE only. No automatic or manual switches will be done until the forced switch is reset. This always appears next to the standby unit.
- APS-pack failure — Automatic protection switching has occurred due to a circuit pack failure. This always appears next to the standby unit.
- APS-automatic lock — Applicable only for service LIU/VTU slots {1–7}. Traffic is forced and held onto the protection pack, unable to revert to the service pack until 24 hours after lock-in has occurred. This occurs following four automatic switches from service to protection during a 10-minute interval.
- Manual — Applicable only for LIU/VTU slots. The specified service slot has been manually switched to protection. This condition is the same as the NORM mode in the DLC subsystem command, SW-TOPROTN-EQPT.

Serv state

Entity service state. Applicable only for the TR-303 data links. Otherwise, the field is blank for all other entities. Indicates the state of service (in-service or out-of-service) for a particular entity. The following values are valid for this output parameter:

- IS — the data link is *in-service*.
- OOS — the data link is *out-of-service*.

RTRV-STATE-EQPT (Continued)

Example

The following RTRV-STATE-EQPT command displays the state of the SMU.

```
RTRV-STATE-EQPT::smu;
```

The following RTRV-STATE-EQPT command displays the state of the active and standby EOC.

```
RTRV-STATE-EQPT::eoc-all;
```

Response

The SMU slot is reported first and is followed by the CORE (sides 1 and 2, respectively). The LIUs/VTUs (in ascending order) follow the CORE. The TR-303 data links are reported in ascending order (if the RT contains a TR-303 VRT) after the LIUs/VTUs.

The following example report is displayed when the RTRV-STATE-EQPT command (R4.0 and later software releases) has been entered.

```
/* Equipment State Report
   ==============================================================================
   Address     Circuit     SMU           Switch      Switch           Serv
               Pack        State         State       Priority         State
   ==============================================================================
   address     SMU         SMUstate
   ------------------------------------------------------------------------------
   core-1                                s           priority
   core-2                                s           priority
   ------------------------------------------------------------------------------
   ls-a-1      VTU                       s           priority
      .        .           .             .           .
      .        .           .             .           .
      .        .           .             .           .
   ls-a-8      VTU                       s           priority
   ------------------------------------------------------------------------------
   v3eoc-1-1                             s                            svc
   v3eoc-1-2                             s                            svc
   v3tmc-1-1                             s                            svc
   v3tmc-1-2                             s                            svc
*/
;
```

(Continued on next page)

RTRV-STATE-EQPT (Continued)

Response (continued)

In the output report, slot types are separated by a row of dashes. Within each slot type, slots are listed in order of their addresses, with protection slots listed last. The different slot types are SMU, CORE, and LIU/VTU. If the *Address=all*, an entry for the SMU, each CORE side, and each QLS slot is included in the report. Otherwise, only information on the requested slot(s) or core side(s) is returned.

If you enter an invalid *Address*, the system displays a help message which includes the list of valid AIDs, and reprompts.

Related commands

The following DLC subsystem commands are related to the RTRV-STATE-EQPT command.

- ED-STATE-SMU
- RTRV-ALM-EQPT
- SET-STATE-SMU
- SW-DX-T0
- SW-TOPROTN-EQPT
- SW-TOWKG-EQPT

RTRV-STATE-VEQPT

Software release compatibility

Use this command in R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RTRV-STATE-VEQPT command.

RTRV-STATE-VEQPT:[tid]:[aid]:[ctag];;

Command name

Retrieve state of virtual (logical) equipment entities.

Can command be aborted?

Yes, when the AID is *all* or multiple values. No for a single AID.

Purpose

NOTE:
Use the DLC subsystem command, RTRV-VRT to retrieve the service states of TR-303 VRTs.

Enter the RTRV-STATE-VEQPT command to retrieve service states of virtual equipment entities — logical INA DS1s, TR-08 digroups, and line groups. (Refer to the section for service states in 363-208-000, *SLC-2000 Access System, Applications, Planning, and Ordering Guide*, for more information on these entities.)

This command was originally designed for the OS/NE interface. It is also supported on the CIT so that craft personnel can obtain the same information as the OSs.

For Mode 2 TR-08 VRTs, the service state of the C digroup always equals that of the A digroup, while the D digroup always equals that of the B digroup.

RTRV-STATE-VEQPT (Continued)

Input parameters

Use the following input parameters with the RTRV-STATE-VEQPT command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

NOTE:
If the AID=*all*, TR-08 digroups are listed, followed by line groups, followed by INA DS1s.

Access identifier. The address of the virtual equipment entity. The following AIDs are valid values for the *aid* parameter.

- all
- dgr-{1–8,all}-{a–d,all}
- ina-{1–28,all}
- lgrp-{1–8,all}.

Default value for the *aid* parameter is *all*.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

Output parameters

Entity address

Entity address. The AID of the virtual equipment entity.

(Continued on next page)

RTRV-STATE-VEQPT (Continued)

Output parameters (continued)

Service state

NOTE:
The service states shown apply only to TR-08 and INA virtual equipment. Use the DLC subsystem command, RTRV-VRT, to determine service states of TR-303 VRTs.

Service state. The service state of the entity. Valid values are {is,oos}.

The service states have the following meanings for TR-08 digroups and logical INA DS1s:

- is — A DS1 cross-connection to an in-service feeder DS1 exists.
- oos — Either there is no feeder DS1 cross-connection, or the cross-connected feeder DS1 is in the OOS-MT-AUTO state.

The service states have the following meanings for line groups.

- is — Both MDCs and both PTUs on the channel unit shelf corresponding to that line group are installed. Each line group corresponds to a shelf (for example, line group 1 corresponds to shelf 1).
- oos — A Line Group is out-of-service if both MDCs and both power and test units (PTUs) on the channel unit shelf corresponding to that line group are removed.

Example

The following RTRV-STATE-VEQPT command displays the service state of all virtual equipment.

```
RTRV-STATE-VEQPT::all;
```

The following RTRV-STATE-VEQPT command displays the service state of the 28 INA virtual DS1 facilities.

```
RTRV-STATE-VEQPT::ina-all;
```

The following RTRV-STATE-VEQPT command displays the service state of TR-08 VRT 3, digroup C.

```
RTRV-STATE-VEQPT::dgrp-3-c;
```

RTRV-STATE-VEQPT (Continued)

Response

The output report is displayed using the following format.

```
/* Logical Equipment Provisioning Report
   ==============================================================================
   Entity      Service
   Address     State
   ==============================================================================
   dgr-1-a     is
   dgr-1-b     is
      .        .
      .        .
   dgr-8-d     oos
  ---------------------------------------------------------------------
   lgrp-1      is
   lgrp-2      oos
      .        .
      .        .
   lgrp-8      is
  ---------------------------------------------------------------------
   ina-1       oos
   ina-2       oos
      .        .
      .        .
   ina-28      is
*/
;
```

Related commands

The following DLC subsystem commands are related to the RTRV-STATE-VEQPT command.

- RTRV-INA
- RTRV-VRT

RTRV-SYNCN

Software release compatibility

Use this command in R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RTRV-SYNCN command.

RTRV-SYNCN:[tid]:[aid]:[ctag];

Command name

Retrieve synchronization.

Can command be aborted?

No.

Purpose

Enter the RTRV-SYNCN command to retrieve the current synchronization settings for the system.

Input parameters

Use the following input parameters with the RTRV-SYNCN command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

NOTE:
The *aid* parameter is only supported in DLC subsystem releases which support the DLC subsystem command, SET-SYNCN.

Access identifier. Valid value for this parameter is core. Default — value is core.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-SYNCN (Continued)

Output parameters

Sync source

The source from which the DLC subsystem is deriving its timing. The following values are valid for this output parameter.

- a-*m*-*n* (access identifier). The AID of the source feeder DS1 signal from which the DLC subsystem is deriving its timing. *m* is the LIU number and *n* is the LIU port number. Only appears when the CORE is loop timing.
- internal. The DLC subsystem CORE is free running.
- sonet. The DLC subsystem is deriving its timing from a synchronous timing generator (TGS) circuit pack (for example, in a SONET feeder configuration). To obtain more details on timing for the system, use the SONET subsystem command, rtrv-sync.
- compclk-*n*. When the CORE is deriving its timing from a composite clock input, the AID of the composite clock input from which the DLC subsystem CORE is deriving its timing will appear. Valid values for *n* are 1 and 2.

Provisioned mode

Shows the provisioned synchronization mode. This parameter is valid only when the DLC subsystem command SET-SYNCN is supported.

Primary reference

The AID of the feeder DS1 signal which the system uses as its primary (default) reference source in a DS1 feeder configuration.

This parameter is displayed only when the *Provisioned Mode* is *LPD*.

Secondary reference

The AID of the feeder DS1 signal which the system uses as its primary backup reference source in a DS1 feeder configuration.

This parameter is displayed only when the *Provisioned Mode* is *LPD*.

COMPCLK protection

Indicates whether or not the protection composite clock input is to be used.

This parameter is displayed only when the *Provisioned Mode* is *COMPCLK*.

RTRV-SYNCN (Continued)

Example

The following RTRV-SYNCN command retrieves the current synchronization settings for the system.

```
RTRV-SYNCN;
```

Response

The RTRV-SYNCN command displays the following form of report.

```
RTRV-SYNCN;

/* CORE Synchronization Report
   ==============================================================================
   Parameter                 Values

   ==============================================================================
   Sync Source               source

   Provisioned Mode          syncnmode

   Loop Timing (DS1 feeder)
      Primary Reference      address
      Secondary Reference    address

   External Timing
      COMPCLK Protection     y_or_n
*/
;
```

Related commands

The following DLC subsystem command is related to the RTRV-SYNCN command.

- SET-SYNCN

RTRV-T0

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RTRV-T0 command.

RTRV-T0:[tid]:[aid]:[ctag];

Command name

Retrieve T0.

Can command be aborted?

Yes, when the AID is *all* or multiple values. No for a single AID.

Purpose

Enter the RTRV-T0 command to retrieve provisioning and state information for physical lines on the metallic channel shelf or in a distant terminal (DT) served by the *SLC*-2000 Access System.

RTRV-T0 (Continued)

Input parameters for R3.1, R3.2, R3.3, R4.0, R4.2, and R4.4

Use the following input parameters with the RTRV-T0 command in R3.1, R3.2, R3.3, R4.0, R4.2, and R4.4 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Access identifier. The address of the physical line to be retrieved. On the user interface, the default is the single physical line AID used in the most recent execution of a DLC subsystem command (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, and RTRV-T0) during the current login session. If no default AID is available, the user must enter a value. The following AIDs are valid values for the *aid* parameter.

- all
- drop-{1–8,all}-{1–24,all}-{1–4,all}
- dtdp-{1–8,all}-{1,3,5,7,13,15,17,19,all}-{1–6,all}-{1–4,all}

The AID default is erased when an AID range is entered that includes *all*.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-T0 (Continued)

Input parameters for R4.5 and R4.6

Use the following input parameters with the RTRV-T0 command in R4.5 and R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Access identifier. The address of the physical line to be retrieved. On the user interface, the default is the single physical line AID used in the most recent execution of a DLC subsystem command (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, and RTRV-T0) during the current login session. If no default AID is available, the user must enter a value. The following AIDs are valid values for the *aid* parameter.

- all
- drop-{1–8,all}-{1–24,all}-{1–4,all}
- dtdp-{1–8,all}-{1,3,5,7,9,11,13,15,17,19,21,23,all}-{1–6,all}-{1–4,all}

The AID default is erased when an AID range is entered that includes *all*.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-T0 (Continued)

Output parameters

Physical line

Physical line AID. The AID of the physical line.

Parameter name

Name of settable parameters. Identifies the settable parameters (from ENT-T0) for the particular line. The three state fields are also included in this column under the settable parameters.

- pst — Primary state
- sst — Secondary state
- ast — Associated state.

Provisioned value

Value of settable parameters. Identifies the values for the settable parameters. The parameters are listed in the same order that they are set in the DLC subsystem command, ENT-T0. Trailing x's are *not* used in the *CLEI* code field if the full *CLEI* code is shown. Also, values for the three state fields are included in this column under the settable parameters. If there are multiple secondary states, the ampersand (&) character is used to group them.

NOTE:
For rate=64 kb/s, clear channel (CC) is automatically set to ENABLE. Otherwise, CC is automatically set to DISABLE. Also, the parameters scc and zc are automatically set to YES when the rate=64 kb/s. The cc, scc, and zc parameter settings are reported by the DLC subsystem command, RTRV-T0.

Line service states appear in the RTRV-T0 report, but they cannot be provisioned directly using the TL1 commands.

Red line

Red line. Indicates if the line is redlined. The *redline* parameter is used by the telephone company to mark redlined circuits, to which a special priority is assigned. The system does not treat redlined channels any differently from non-redlined channels.

Valid values are {yes,-}.

- yes — the line is redlined
- hyphen (-) — the line is not redlined. A hyphen is used so that the *yes* entries are highlighted.

(Continued on next page)

RTRV-T0 (Continued)

Output parameters (continued)

Equipped *CLEI* code

NOTE:
The *CLEI* codes displayed by this command are derived *CLEI* codes and are not the *CLEI* codes stored in the CU.

NOTE:
The ISDN function code is supported by the system and can appear in reports resulting from the DLC subsystem command, RTRV-T0. The ISDN function code pertains to the *ANSI* U-DSL interface that is supported with the AUA94, AUA94B, and *SPQ* 494 CU on TR-303 VRTs. However, you can provision the ISDN function code using the CIT (DLC subsystem commands, ED-T0 or ENT-T0) or through the local digital switch (LDS) using the TR-303 embedded operations channel (EOC).

CU CLEI Code. The channel unit *CLEI* code with which the line is equipped. If the system cannot retrieve the full *CLEI* code, trailing x's are used. For compatibility with future system releases, trailing x's are appended to pad the displayed code out to 10-character positions. A hyphen (-) is shown in this field when the slot is not equipped.

POTS-like describes a CU not uniquely identifiable. The word *unreadable* appears when the type of channel unit is not known. The *SLC*-2000 Access System supports preprovisioning. Thus, you can retrieve data for unequipped slots.

The following table lists the inventory information for channel units (CUs).

(Continued on next page)

RTRV-T0 (Continued)

Output parameters (continued)

Channel Unit	*CLEI* Code
AUA141 4W CF	5SCU7Dxxxx
AUA142 E*SPOTS*® CS	5SCU69xxxx
AUA150 POTS/*SPOTS* CF+ALC	5SC3PVxxxx
AUA152 OCU DP	5SCU48xxxx
AUA200 2W DPX w/SW56	5SCTB0xxxx
AUA232 RS-232 CU (DDS, TR-08/ INA VRTs)	5SCTCBxxxx
AUA252 OCU DP w/SW56	5SCTFFxxxx
AUA293 BRITE 3	5SC4PTxxxx
AUA33 COIN CS	5SCU23xxxx
AUA33B COIN CS	5SC3RExxxx
AUA34 DS0 DP	5SCU38xxxx
AUA35 MP CS	5SCU54xxxx
AUA36 DID DPO	5SCU9Fxxxx
AUA36B DID DPO	5SCU90xxxx
AUA37 FSR CS	5SCUS0xxxx
AUA408 FITL	SAIUMBxxxx
AUA41 4W CF	5SCU7Dxxxx
AUA41B 4W CF	5SC3HJxxxx
AUA42 E*SPOTS* CS	5SCU69xxxx
AUA42B E*SPOTS* CS	5SCU6Exxxx
AUA43 E*SPOTS* CF	5SCU6Axxxx
AUA43B E*SPOTS* CF	5SCU6Fxxxx
AUA44 4W CS	5SCU7Cxxxx
AUA44B 4W CS	5SCU7Cxxxx
AUA52 OCU DP	5SCU48xxxx
AUA52B OCU DP B	5SC143xxxx
AUA53 COIN CF	5SCU26xxxx
AUA53B COIN CF	5SCU26xxxx
AUA54 4W EM	5SCU7Bxxxx
AUA54B 4W EM	5SC3RSxxxx
AUA55 MP CF	5SCU57xxxx

Continued on next page

RTRV-T0 (Continued)

Output parameters (continued)

Channel Unit	*CLEI* Code
AUA56 DID DPT	5SCU9Exxxx
AUA56B DID DPT	5SCU9Yxxxx
AUA57 FSR CF	5SCUT0xxxx
AUA90 TBRITE	5SC1EExxxx
AUA92 BRITE 2 LE	5SC1JExxxx
AUA93 BRITE 2 NT	5SC1HExxxx
AUA94 *ANSI* U	5SC18Exxxx
AUA94B *ANSI* U	5SC18Exxxx
*PGM**-2000	SAC1CSxxxx
*POTS*like CF	POTS-like
*POTS*like CS	POTS-like
*SPOTS*like CS	POTS-like
SPQ®318 quad COIN CS	SAC1ARxxxx
*SPQ*328 quad EBS (P-Phone)	SAC1AJxxxx
*SPQ*333 dual COIN CS	5SC3EExxxx
*SPQ*334 dual DS0 DP	5SC3EExxxx
*SPQ*336 quad DID 2W DPO	SACPCCxxxx
*SPQ*400 quad POTS	POTS-like
*SPQ*401B D-POTS	SAC1EWUxxx
*SPQ*419 quad COIN CF	SAC1ARxxxx
*SPQ*429 quad EBS (P-Phone)	SAC1AKxxxx
*SPQ*440 quad POTS/*SPOTS* CF	POTS-like
*SPQ*440C quad POTS/*SPOTS* CF+ALC	SAC1ACxxxx
*SPQ*440D quad POTS/*SPOTS* CF+ALC+VFDE	SAC1ACXxxx
*SPQ*442 quad E*SPOTS* CF	SAC1AHxxxx
*SPQ*443 quad E*SPOTS* CS	SAC1AExxxx
*SPQ*444 4W CS	SAC1BFxxxx
*SPQ*452 dual OCU DP w/SW56	5SCTFFxxxx
*SPQ*453 dual COIN CF	5SC3EExxxx
*SPQ*454 4W E&M	SAC1BGxxxx
*SPQ*456 DID DPT	SACPDCxxxx

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RTRV-T0 (Continued)

Output parameters (continued)

Channel Unit	*CLEI* Code
*SPQ*478 Quad ALC C-POTS CF	SAC1AAxxxx
*SPQ*494 *ANSI* U	5SC212xxxx
*SPQ*808 DT Server (optical or metallic facility)	SAIUMBxxxx
*SPQ*809 DT Server (w/remote inventory)	5SCF90xxxx
*SPQ*810 DT Server (w/remote inventory)	LFIU80xxxx
*SPQ*811 DT Server (w/remote inventory) VFDE	LFI2V40xxx

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RTRV-T0 (Continued)

Example

The following RTRV-T0 command retrieves the attributes of the physical line at drop-2-3-1.

```
RTRV-T0::drop-2-3-1;
```

The following RTRV-T0 command retrieves the attributes of the physical line at the default AID. The default is the AID used in the most recent DLC subsystem command (CONN-TACC, CONN-TAP, CPY-T0, DLT-T0, ED-T0, ENT-T0, or RTRV-T0) during the current login session.

```
RTRV-T0;
```

Response

The following output report (sorted by alphanumeric order of the *aid* value) is displayed when you enter a valid RTRV-T0 command. The following reports are examples of messages displayed for the RTRV-T0 command.

```
/* Physical Line Provisioning Report
   ==============================================================================
   Physical          Parameter         Provisioned       Red          Equipped
   Line              Name              Value             Line         CLEI Code
   ==============================================================================
   Address           CLEI              CLEI              RLS          EquippedCLEI
                     FunctionCode      FunctionCode
                          .                 .
                          .                 .
                          .                 .
*/
;
```

(Continued on next page)

RTRV-T0 (Continued)

Response (continued)

NOTE:
The sample parameter values for each physical line may not represent a realistic provisioning combination.

```
/* Physical Line Provisioning Report
   ================================================================================
   Physical          Parameter         Provisioned       Red          Equipped
   Line              Name              Value             Line         CLEI Code
   ================================================================================
   drop-1-1-1        CLEI              Other             -            POTS-like
                     FunctionCode      DLFT
                     PrimaryState      is
                     Sec. State
                     Assoc. State

*/
;
```

```
/* Physical Line Provisioning Report
   ================================================================================
   Physical          Parameter         Provisioned       Red          Equipped
   Line              Name              Value             Line         CLEI Code
   ================================================================================
   drop-1-1-1        CLEI              Other             -            POTS-like
                     FunctionCode      DLFT
                     PrimaryState      is
                     Sec. State
                     Assoc. State

*/
;
```

```
/* Physical Line Provisioning Report
   ================================================================================
   Physical          Parameter         Provisioned       Red          Equipped
   Line              Name              Value             Line         CLEI Code
   ================================================================================
   dtdp-1-5-6-1      CLEI              5SCU69            -            5SCU69xxxx
                     FunctionCode      FXO
                     IMP               600
                     BAL               15
                     XMT(GN)           3.25
                     RCV(GN)           2.50
                     SL                2
                     TD                YES
                     LS-GS             LS
                     OHT               YES
                     PrimaryState      is
                     Sec. State
                     Assoc. State
*/
;
```

(Continued on next page)

RTRV-T0 (Continued)

Response (continued)

```
/* Physical Line Provisioning Report
   ==============================================================================
   Physical          Parameter         Provisioned       Red         Equipped
   Line              Name              Value             Line        CLEI Code
   ==============================================================================
   drop-1-12-1       CLEI              5SC212            YES         5SC18Exxxx
                     FunctionCode      ISDN
                     SVC               2B+D
                     PrimaryState      is
                     Sec. State
                     Assoc. State

*/
```

Error

An error message replaces the report data for an inappropriate AID when you enter the RTRV-T0 command with a *range* or the AID *all* and one or more of the range AIDs are inappropriate due to system provisioning parameters. The following report is an example of the message displayed when you enter the RTRV-T0 command with inappropriate AID information.

```
/* Physical Line Provisioning Report
   ==============================================================================
   Physical          Parameter         Provisioned       Red         Equipped
   Line              Name              Value             Line        CLEI Code
   ==============================================================================
      The shelf for drop-1-1-1 is not provisioned for metallic distribution.
      The shelf for drop-1-1-2 is not provisioned for metallic distribution.
   drop-2-1-1        CLEI              Other             -           unreadable
                     Function Code     DFLT
                     Primary state     oss-mt
                     Sec. State        fef
                     Assoc. State
   drop-2-1-1        CLEI              Other             -           unreadable
                     Function Code     DFLT
                     Primary state     oss-mt
                     Sec. State        fef
                     Assoc. State
   drop-2-1-1        CLEI              Other             -           unreadable
                     Function Code     DFLT
                     Primary state     oss-mt
                     Sec. State        fef
                     Assoc. State
      .
      .
      .
*/
;
```

(Continued on next page)

RTRV-T0 (Continued)

Response (continued)

The following reports are examples of the message displayed when the CU is failed.

```
/* Physical Line Provisioning Report
   ==============================================================================
   Physical          Parameter         Provisioned       Red         Equipped
   Line              Name              Value             Line        CLEI Code
   ==============================================================================
   drop-1-14-1       CLEI              5SCU7Dxxxx        yes         5SCU7Dxxxx
                     FunctionCode      ETO4
                     TRMT              3.1
                     RCV               5.5
                     -7DB(J3)          WH
                     L-N               N
                     SL                10
                     BW                10
                     HT                10
                     TRMT&RCV(IMP)     150
                     PrimaryState      is
                     Sec. State
                     Assoc. State
*/
;
```

```
/* Physical Line Provisioning Report
   ==============================================================================
   Physical          Parameter         Provisioned       Red         Equipped
   Line              Name              Value             Line        CLEI Code
   ==============================================================================
   drop-1-16-1       CLEI              5SCU48xxxx        yes         5SCU48xxxx
                     FunctionCode      OCU
                     RATE              9.6
                     EC                MVEC
                     ZC                NO
                     SCC               NO
                     PrimaryState      is
                     Sec. State
                     Assoc. State
*/
;
```

```
/* Physical Line Provisioning Report
   ==============================================================================
   Physical          Parameter         Provisioned       Red         Equipped
   Line              Name              Value             Line        CLEI Code
   ==============================================================================
   drop-1-18-1       CLEI              Other             -           5SCU48xxxx
                     FunctionCode      DFLT
                     PrimaryState      oos-ma-as
                     Sec. State        mea
                     Assoc. State
*/
;
```

(Continued on next page)

RTRV-T0 (Continued)

Response (continued)

```
/* Physical Line Provisioning Report
   ==============================================================================
   Physical          Parameter         Provisioned       Red         Equipped
   Line              Name              Value             Line        CLEI Code
   ==============================================================================
   drop-1-17-1       CLEI              5SCU6Axxxx        -           -
                     FunctionCode      FXS
                     IMP               600
                     BAL               15
                     XMT(GN)           3.25
                     RCV(GN)           2.50
                     SL                2
                     TD                YES
                     LS-GS             LS
                     OHT               YES
                     PrimaryState      oos-mt
                     Sec. State        ueq
                     Assoc. State
*/
;
```

The following error message is displayed when the RTRV-T0 command fails due to an NVDS fault.

```
SSTP
/* Status, execution SToPped,
   Data memory failed. */
;
```

The following error message is displayed when the RTRV-T0 command is received for a line which is in the OOS-MA-UAS state.

```
SNVS
/* Status, Not in Valid State,
   PST=OOS-MA-UAS. */
;
```

Related commands

The following DLC subsystem commands are related to the RTRV-T0 command.

- CPY-T0
- DLT-T0
- ED-T0
- ENT-T0

RTRV-T1

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RTRV-T1 command.

RTRV-T1:[tid]:[aid]:[ctag];

Command name

Retrieve attributes for feeder DS1 pipes.

Can command be aborted?

Yes, when the AID is *all* or multiple values. No for a single AID.

Purpose

Use the RTRV-T1 command to retrieve all feeder DS1 port parameter settings that can be provisioned using the ED-T1 command.

Input parameters

Use the following input parameters with the RTRV-T1 command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Access identifier (AID). The address of the feeder DS1 ports for which the current provisioned values are requested. The following values are valid for this parameter.

- all
- a-{1–7,all}-{1–4,all}.

Default — value is *all*.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-T1 (Continued)

Output parameters

Port address

Feeder DS1 port AID. The address of the feeder DS1 port.

Line coding

DS1 line coding. The DS1 line coding. The following values are valid for this parameter.

- ami — Alternate mark inversion
- b8zs — Bipolar 8-zero substitution.

FMT

Framing format. Specifies the framing format of the INA DS1. The following values are valid for this parameter.

- SF — SuperFrame, also known as the D4 framing format.
- ESF — Extended SuperFrame
- FSP — DS1 TR-08 datalink format.

Equalization

Maximum cable length. Indicates the maximum cable length (in feet) from the system to the DSX-1 for the feeder DS1 port [only applicable for metallic DS1 (LIU) feeder configurations]. Valid values for this parameter are {0–655}.

State

Primary service state. Indicates the primary service state of the feeder DS1 port. The following values are valid for this parameter.

- is — In service. A valid T1 signal from the feeder direction [for example, the DSX-1 if in a metallic DS1 (LIU) feeder configuration] is being monitored.
- oos-mt — Out-of-service, maintenance. The system is receiving bad T1 signaling.
- oos-mt-auto — Out-of-service, maintenance, automatic. The system is waiting for a valid T1 signal from the feeder direction.

RTRV-T1 (Continued)

Example

The following RTRV-T1 command retrieves all provisionable DS1 feeder parameters for physical DS1 ports a-2-1 through a-2-4.

```
RTRV-T1::a-2-all;
```

Response

The following report is an example of the message displayed when you enter the RTRV-T1 command.

```
/* T1 Port Provisioning Report
   ==============================================================================
   Port          Line        Framing         Equalization       Primary
   Address       Coding      Format          (feet)             State
   ==============================================================================
   a-1-1         ami         fsp             133                IS
   a-1-2         ami         fsp             133                IS
   a-1-3         ami         fsp             133                OOSmtAuto
   a-1-4         ami         fsp             133                OOSmtAuto
   a-2-1         ami         esf             133                OOSmtAuto
   a-2-2         ami         esf             133                OOSmtAuto
   a-2-3         ami         esf             133                OOSmtAuto
   a-2-4         ami         esf             133                OOSmtAuto
   a-3-1         ami         esf             133                OOSmtAuto
   a-3-2         b8zs        esf             133                OOSmtAuto
   a-3-3         b8zs        esf             133                OOSmtAuto
   a-3-4         b8zs        esf             133                OOSmtAuto
   a-4-1         ami         esf             133                OOSmtAuto
   a-4-2         ami         esf             133                OOSmtAuto
   a-4-3         ami         esf             133                OOSmtAuto
   a-4-4         ami         esf             133                OOSmtAuto
   a-5-1         ami         sf              133                OOSmtAuto
   a-5-2         ami         sf              133                OOSmtAuto
   a-5-3         ami         sf              133                OOSmtAuto
   a-5-4         ami         sf              133                OOSmtAuto
   a-6-1         ami         esf             133                OOSmtAuto
   a-6-2         ami         esf             133                OOSmtAuto
   a-6-3         ami         esf             133                OOSmtAuto
   a-6-4         ami         esf             133                OOSmtAuto
   a-7-1         ami         esf             133                OOSmtAuto
   a-7-2         ami         esf             133                OOSmtAuto
   a-7-3         ami         esf             133                OOSmtAuto
   a-7-4         ami         esf             133                OOSmtAuto
*/
;
```

RTRV-T1 (Continued)

Response (continued)

Error

The RTRV-T1 command is denied and the following message is displayed when the NVDS has failed.

```
SSTP
/* Status, execution SToPped,
   Data memory failed. */
;
```

Related commands

The following DLC subsystem commands are related to the RTRV-T1 command.

- ED-INA
- ED-T1

RTRV-TRACE

Software release compatibility

NOTE:
The DLC subsystem command RTRV-TRACE is intended for software development use by Lucent Technologies personnel.

RTRV-VRT

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the RTRV-VRT command.

RTRV-VRT:[tid]:[aid]:[ctag];

Command name

Retrieve attributes for VRTs.

Can command be aborted?

Yes, when the AID is *all* or multiple values. No for a single AID.

Purpose

Enter the RTRV-VRT command to retrieve the mode settings and status for TR-08 and TR-303 VRTs.

RTRV-VRT (Continued)

Input parameters for R3.1, R3.2, and R3.3

Use the following parameters with the RTRV-VRT command in R3.1, R3.2, and R3.3 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Access identifier. The *aid* of a VRT. The following values are valid for this parameter:

- all
- vrt-{1–8,all}.

Default value is *all*.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

Input parameters for Software Release 4.0 (R4.0)

Use the following parameters with the RTRV-VRT command in Software Release 4.0 (R4.0) of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Access identifier. The *aid* of a VRT. The following values are valid for this parameter:

- all
- vrt-{1–8,all}
- v303-1.

Default value is *all*.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-VRT (Continued)

Input parameters for R4.2, R4.4, R4.5, and R4.6

Use the following parameters with the RTRV-VRT command in R4.2, R4.4, R4.5, and R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Access identifier. The *aid* of a VRT. The following values are valid for this parameter:

- all
- vrt-{1–8,all}
- v303-{1–2}.

Default value is *all*.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

RTRV-VRT (Continued)

Output parameters for R3.1, R3.2, and R3.3

VRT address

Address of VRT. The address of the VRT.

TR8 mode

Mode of VRT. The TR-08 Mode of the VRT. Valid values are {1–2}.

NOTE:
If VRT vrt-7 is provisioned for Mode 1, then a dash (-) should appear under the TR-08 Mode column for VRT vrt-8 since vrt-8 is unavailable in this situation.

Primarystate

Service state. The primary service state of the VRT. The following values are valid for this parameter.

- is — In-service
- oos — Out-of-service.

VRT pairs are separated by rows of dashes.

Output parameters for Software Release 4.0 (R4.0)

VRT address

Address of VRT. The address of the VRT.

TR8 mode

Mode of VRT. The TR-08 Mode of the VRT. Valid values are {1–2}.

NOTE:
If VRT vrt-7 is provisioned for Mode 1, then a dash (-) should appear under the TR-08 Mode column for VRT vrt-8 since vrt-8 is unavailable in this situation.

Primarystate

Service state. The primary service state of the VRT. The following values are valid for this parameter.

- is — In-service
- oos — Out-of-service.

VRT pairs are separated by rows of dashes.

RTRV-VRT (Continued)

Output parameters for R4.2, R4.4, R4.5, and R4.6

VRT address

Address of VRT. The address of the VRT.

TR8 mode

Mode of VRT. The TR-08 Mode of the VRT. Valid values are {1–2}.

NOTE:
If VRT vrt-7 is provisioned for Mode 1, then a dash (-) should appear under the TR-08 Mode column for VRT vrt-8 since vrt-8 is unavailable in this situation.

Primarystate

Service state. The primary service state of the VRT. The following values are valid for this parameter.

- is — In-service
- oos — Out-of-service.

VRT pairs are separated by rows of dashes.

Example

The following RTRV-VRT command retrieves the mode setting and status of all TR-08 and TR-303 VRTs.

```
RTRV-VRT::all;
```

The following RTRV-VRT command retrieves the status of the TR-303 VRT.

```
RTRV-VRT::v303-1;
```

The following RTRV-VRT command retrieves the mode setting and status of the TR-08 VRT 3.

```
RTRV-VRT::vrt-3;
```

RTRV-VRT (Continued)

Response

The resulting report of RTRV-VRT lists the VRTs in ascending order.

The following report format is displayed for all requested VRTs when the system fully complies with the request.

```
/* VRT Report
   ==============================================================================
   VRT            TR8            Primary
   Address        Mode           State
   ==============================================================================
   Address        Mode           pst
*/
;
```

NOTE:
The VTU/LIU pack is installed and the system is correctly configured.

The transition of a VRT (TR-08 or TR-303) from an out-of-service (OOS) to the in-service (IS) state requires particular actions.

- Create the T1 cross-connections using the DLC subsystem commands, ENT-CRS-T1 and INIT-CRS-T1.
- Apply a valid DS1 signal to the physical T1 cross-connected port.

When you have completed these steps, the report displayed by the DLC subsystem command RTRV-VRT indicates VRT transitions from an OOS to IS state. There is no specific order of execution for the transition, but you must complete both steps.

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RTRV-VRT (Continued)

Response (continued)

The following message example is displayed for all requested VRTs when the system fully complies with the request.

```
/* VRT Report
   ==============================================================================
   VRT            TR8            Primary
   Address        Mode           State
   ==============================================================================
   vrt-1          1              is
   vrt-2          1              is
   ------------------------------------------------------------------------------
   vrt-3          2              is
   vrt-4          2              oos
   ------------------------------------------------------------------------------
   vrt-5          1              is
   vrt-6          1              is
   ------------------------------------------------------------------------------
   vrt-7          2              oos
   vrt-8          2              is
   ------------------------------------------------------------------------------
   v303-1         -              is
*/
;
```

Error

The system displays a help message including the list of valid AIDs, and reprompts when you enter an invalid AID.

The RTRV-VRT command is denied and the following message is displayed when the NVDS has failed.

```
SSTP
/* Status, execution SToPped,
   Data memory failed. */
;
```

Related commands

The following DLC subsystem commands are related to the RTRV-VRT command.

- INIT-CRS-T1
- ENT-CRS-T1
- RTRV-CRS-T1
- RTRV-T1

SET-LINK

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the SET-LINK command.

SET-LINK:[tid]::[ctag]:::[PG=PageLength];

Command name

Change the page length and other attributes of the CIT link.

Can command be aborted?

No.

Purpose

NOTE:
The DLC subsystem command, SET-LINK is similar to the SONET subsystem command, set-link.

The SET-LINK command only affects the link from which it is executed — it can never be directed at the link of another user. When the page length is set to *0* (zero), the pager is not active and output is sent to the screen directly. Setting the page length in the DLC subsystem causes the page length for the SONET subsystem to be changed to the same value when the *sonet* command is entered. Likewise, when the page length is changed in the SONET subsystem, the DLC page length is set to the same value when the *dlc* command is executed.

Parameters

Use the following parameters with the SET-LINK command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

(Continued on next page)

SET-LINK (Continued)

Parameters (continued)

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

Name defined block

Parameter values. If a parameter (PG) value does not appear in the name defined block in expert command mode, the value remains unchanged as a result of the SET-LINK command. For menu-driven mode, the default value presented to the user for each of the parameters is the current system value.

- PG — Page length. The vertical size of the displayed page in lines. Valid values are an integer {3–150}.

  Original value is *24*. The page length is set to the original value each time a new CIT session is started on the link.

  A value of 0 (zero) may also be supported depending on whether DDM-2000 supports such a value. Paging is disabled when *PG* is set to zero.

Example

The following SET-LINK command sets the page length for the CIT to 35.

```
SET-LINK::::::pg=35;
```

SET-SIG

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the SET-SIG command.

SET-SIG:[tid]::[ctag]::[SIGBIT=SignalingBits];

Command name

Set signaling.

Can command be aborted?

No.

Purpose

Enter the SET-SIG command to set the value of the ABCD signaling bits used when testing a physical line. If test access has been established by the DLC subsystem command, CONN-TACC with *DIGL=SPLIT*, this command operates on the physical line identified in the DLC subsystem command, CONN-TACC. When this command has established transmission of the signaling bits on a line being tested with CONN-TACC and *DIGL=SPLIT*, the same bits will be transmitted on each successive line tested using the DLC subsystem command, CONN-TACC and *DIGL=SPLIT,* until *one* of the following conditions is met.

- The DLC subsystem command, CONN-TACC is executed and does not specify digital split access (for example, DIGL=NONE).
- The DLC subsystem command, DISC-TACC is executed.

The effect of either of these commands is to restore the signaling state of channels under test to the default value of ABCD=1111 until this command is executed again. When signaling is displayed for circuits which employ two bit signaling, the A and B bits represent signaling in odd signaling frames, and the C and D bits represent signaling in even signaling frames. This is to accommodate toggling signaling bits.

SET-SIG (Continued)

Parameters

Use the following parameters with the SET-SIG command.

NOTE:
No AID is supported for the SET-SIG command. Ignore entries in the AID parameter field.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

SIGBIT

Signaling bits. A 4-character string of 0/1's representing the ABCD bits. There is no initial default, and then the default becomes the last value entered.

Example

The following SET-SIG command sets the signaling bits after the previously entered DLC subsystem command, CONN-TACC (DIGL=S).

```
SET-SIG::::::sigbit=1111;
```

SET-SIG (Continued)

Response

Confirmation

The following confirmation message is displayed when you enter the SET-SIG command.

```
/* Caution!  Execution of this command may affect service. */

/* You have selected the set-sig command with these parameters: */
/* Review of Parameter Responses ...  */
        SignalingBits = [bit value]

   Execute? (y/n or CANcel/DELete to quit) =
;
```

Error

NOTE:
Ringing the line of a customer is considered service affecting.

The SET-SIG command is denied with the Bellcore error code SCNS, and the following message is displayed on the CIT when digital split test access has not been established with the DLC subsystem command, CONN-TACC with *DIGL=SPLIT*.

```
SCNS
/* Status, Circuit Not in Split condition,
   Digital split (digl=split) test access must be connected. */
;
```

Related commands

The following DLC subsystem commands are related to the SET-SIG command.

- CONN-TACC
- DISC-TACC

SET-SYNCN

Software release compatibility

Use this command in R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the SET-SYNCN command.

SET-SYNCN:[tid]:[aid]:[ctag]::[syncnmode]:[spec_block];

Command name

Set the synchronization parameters for the CORE.

Can command be aborted?

No.

Purpose

CAUTION:
Changing the value of the primary or secondary reference may cause a reference switch depending upon the current synchronization mode, current timing source, and state of the received feeder DS1 signals.

NOTE:
DS1 loop timing references should not be assigned to the same LIU since a *clean* switch between the primary and secondary sources cannot be made and calls may be dropped.

Enter the SET-SYNCN command to change the synchronization parameters for the DLC subsystem CORE.

Depending upon the feeder configuration (VTU versus LIU), the CORE can derive timing from various sources. The following table lists the choices for the CORE based on the feeder configuration.

Feeder Configuration	SYNCNMODE Choices
VTU (SONET)	Composite clock (COMPCLK) SONET (SONET)
LIU (DS1)	Composite clock (COMPCLK) Free running (FRNG) Loop timed (LPD)

SET-SYNCN (Continued)

Parameters

Use the following input parameters with the SET-SYNCN command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

aid

Access identifier. Valid value for this parameter is *core*.

Default — value is *core*.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

syncnmode

Synchronization mode (SynchronizationMode). This parameter indicates the primary timing source for the system.

The default presented to the user is the current provisioned value. The choices are dependent upon the provisioned feeder configuration. The following values are valid for the syncmode parameter (only valid choices for a particular feeder configuration are listed).

- COMPCLK (composite clock). The system will use the composite clock input(s) as the input reference source(s) for the DLC subsystem. *This mode is valid for all feeder configurations.*
- FRNG (free running). The system will use its internal oscillator (±32 ppm) on the TSI as the reference source for the DLC subsystem. *This mode is valid only for DS1 feeder (LIU) configurations.*
- LPD (loop timed). The system will use the feeder DS1 input(s) as the input reference source(s) for the DLC subsystem. *This mode is valid only for DS1 feeder (LIU) configurations.*
- SONET (SONET subsystem). The system will use the internal timing outputs from the TGS circuit packs [using the VT to STS-1 multiplexers (MXRVOs) and the VTUs in mux group A] as the input reference source(s) for the DLC subsystem. *This mode is valid only for SONET feeder (VTU) configurations.*

(Continued on next page)

SET-SYNCN (Continued)

Parameters (continued)

The following table shows the SYNCNMODE mapping for the CORE based on feeder configuration. When the feeder configuration is changed from VTU to LIU, or LIU to VTU, the system provisions the synchronization mode to the corresponding mode.

SYNCNMODE	
VTU Configuration	**LIU Configuration**
COMPCLK*	COMPCLK FRNG
SONET	LPD

* When converting a system from an LIU configuration to a VTU configuration, if the timing mode is set for FRNG, the timing mode is reprovisioned for SONET timing. When converting a system from a VTU configuration to an LIU configuration, the timing mode is not reprovisioned for FRNG.

The synchronization mode is also automatically set to a default when the DLC subsystem *term-type* (RT/COT) setting is changed. The following table shows the SYNCNMODE auto-provisioning for the CORE when DLC subsystem term type is changed.

	SYNCNMODE (Term Type Changed)	
Configuration	**From RT to COT**	**From COT to RT**
VTU	COMPCLK	SONET
LIU	COMPCLK	LPD

(Continued on next page)

SET-SYNCN (Continued)

Parameters (continued)

spec_block

Specific parameter block. The system level attributes to be modified are specified inside the *spec_block*. Parameters within spec_block are specified using a name=value,name=value, . . . type construct with no constraints on the order of the arrangement of parameters. Constructs such as name1=value1, name2=, name3=, name4=, name5=value5,... are acceptable and in this example only the parameters *name1* and *name5* will be attempted to be changed at the network element. If the current value of the parameter *name1* is already *value1* in the previous example, *name1* will not be changed. The following values are valid for the spec_block parameter.

- CCPROT (composite clock protection). Allows the user to specify whether or not the second composite clock reference will be used. This parameter is only offered if the user is setting the *syncnmode* to *COMPCLK*. Otherwise, the parameter is not valid. The following values are valid for this parameter.

NOTE:
Setting the CCPROT parameter to *N* does not prevent the system from using compclk-2 if a good clock is detected on this signal.

  Y — The protection composite clock input (compclk-2) will be used as a backup reference source. Absence of this input will be alarmed.

  N — Absence of compclk-2 will not be alarmed.

- LPPRI (loop timing reference, primary). Valid values are any feeder DS1 AID, with the restriction that the DS1 may not be served on the same LIU as the *secondary* timing reference unless the *primary* timing reference AID is the same as the *secondary* timing reference.

  Valid values are a-{1–7}-{1–4}.

  This parameter is available only when the user is setting the *syncnmode* to *LPD*. Otherwise, this parameter is not valid.

- LPSEC (loop timing reference, secondary). Valid values are any feeder DS1 AID, with the restriction that the DS1 may not be served on the same LIU as the *primary* timing reference unless the *secondary* timing reference AID is the same as the *primary* timing reference.

  Valid values are a-{1–7}-{1–4}.

  This parameter is available only when the user is setting the *syncnmode* to *LPD*. Otherwise, this parameter is not valid.

The *secondary* reference is *disabled* by setting the *primary* reference and the *secondary* reference equal to the same feeder DS1 AID.

SET-SYNCN (Continued)

Example

The following SET-SYNCN command sets the synchronization parameters for the DLC subsystem CORE for the VTU feeder configuration.

```
SET-SYNCN::core:::sonet;
```

The following SET-SYNCN command sets the synchronization parameters for the DLC subsystem CORE for the LIU feeder configuration. The synchronization is set for looped timing with a-1-1 and a-3-1 as the primary and secondary looped timing references.

```
SET-SYNCN::core:::lpd:lppri=a-1-1,lpsec=a-3-1;
```

Response

Confirmation

The following confirmation message is displayed after entering the SET-SYNCN command.

```
/* Caution! The NE synchronization is affected by this command. */

/* You have selected the set-syncn command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = core
         SynchronizationMode = [mode]
         Composite Clock Protection = [YES/NO]

   Execute? (y/n or CANcel/DELete to quit) =
;
```

(Continued on next page)

SET-SYNCN (Continued)

Response (continued)

Do not assign DS1 loop timing references to the same LIU since a *clean* switch between the primary and secondary sources cannot be made, and calls may be dropped. Therefore, the following warning message is displayed prior to the confirmation message when *either* of the listed conditions is valid.

- You (the user) attempt to set the *Primary Reference* to an AID of a DS1 signal that is served by the same LIU as the DS1 signal assigned as the *Secondary Reference* but is not the same DS1.
- You (the user) attempt to set the *Secondary Reference* to an AID of a DS1 signal that is served by the same LIU as the DS1 signal assigned as the *Primary Reference* but is not the same DS1.

```
/* Caution! The Primary and Secondary Loop Timing References
   should be served through different LIUs, unless the same
   feeder DS1 is assigned as the Primary and Secondary reference.
   If the Primary and Secondary references are on the same LIU,
   service may be interrupted during a loop timing input
   reference switch in a DS1 feeder configuration.  */
;
```

Error

If the requested SET-SYNCN command can be successfully completed but does not alter the existing condition, the network element (NE) will not *deny* the command. Instead the NE will respond with a COMPLD message (the command is idempotent).

The SET-SYNCN command is denied, and the following message is displayed when the data memory has failed.

```
SSTP
/* Status, execution SToPped,
   Data memory failed. */
;
```

(Continued on next page)

SET-SYNCN (Continued)

Response (continued)

The SET-SYNCN command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

Related commands

The following DLC subsystem command is related to the SET-SYNCN command.

- RTRV-SYNC

SET-TRACE

Software release compatibility

NOTE:
The DLC subsystem command SET-TRACE is intended for software development use by Lucent Technologies personnel.

SONET

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the SONET command.

SONET:[tid]::[ctag];

Command name

Toggle to the SONET subsystem.

Can command be aborted?

No.

Purpose

Enter the SONET command to toggle to the SONET subsystem.

Parameters

Use the following parameters with the SONET command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

Response

Completion

A completion message is not issued. However, when the SONET subsystem has regained control of the link, the subsystem header and the command prompt are displayed.

SW-DX-T0

Software release compatibility

Use this command in R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the SW-DX-T0 command.

SW-DX-T0:[tid]:Address:[ctag]::[mode];

Command name

Switch to duplicated (data link) facility for TR-303 VRTs.

Can command be aborted?

No.

Purpose

Enter the SW-DX-T0 command to initiate a protection switch from the active EOC or TMC datalink to the standby (protecting) counterpart. Execution of this command will initiate the dialog with the LDS to effect this path switch.

SW-DX-T0 (Continued)

Parameters for R4.0

Use the following parameters with the SW-DX-T0 command in R4.0 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier (AID). The address of the *protected* data link to be switched (for example, the *from* equipment, the *to* data link is implied as its protecting counterpart). The value {1} is the only allowable value for the VRT in the v3eoc and v3tmc addresses (only one TR-303 VRT is supported). The following values are valid for this parameter.

- v3eoc-1-{1–2}
- v3tmc-1-{1–2}

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

mode

Protection switch mode. Defines the mode of the protection switch. Valid value is NORM — allow the protection switch *only* if the protecting data link is in service.

Default — value is *NORM*.

SW-DX-T0 (Continued)

Parameters for R4.2, R4.4, R4.5, and R4.6

Use the following parameters with the SW-DX-T0 command in R4.2, R4.4, R4.5, and R4.6 of the *SLC*-2000 Access System.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier (AID). The address of the *protected* data link to be switched (for example, the *from* equipment, the *to* data link is implied as its protecting counterpart). The values {1–2} are the only allowable values for the VRT in the v3eoc and v3tmc addresses (two TR-303 VRTs are supported). The following values are valid for this parameter.

- v3eoc-{1–2}-{1–2}
- v3tmc-{1–2}-{1–2}

Default — none, you *must* enter a value.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

mode

Protection switch mode. Defines the mode of the protection switch. Valid value is NORM — allow the protection switch *only* if the protecting data link is in service.

Default — value is *NORM*.

SW-DX-T0 (Continued)

Example

The following SW-DX-T0 command causes a protection switch of the EOC data link.

```
SW-DX-T0::v3eoc-1-2;
```

The following SW-DX-T0 command causes a protection switch of the TMC data link.

```
SW-DX-T0::v3tmc-1-1;
```

Response

Confirmation

The SW-DX-T0 command requires confirmation. The following confirmation message is displayed when you enter the SW-DX-T0 command.

```
/* Caution! Execution of this command may affect service. */

/* You have selected the sw-dx-t0 command with these parameters: */
/* Review of Parameter Responses ...  */
        Address = [Access Identifier]
        Protection Switch Mode = NORM

   Execute? (y/n or CANcel/DELete to quit) =
;
```

(Continued on next page)

SW-DX-T0 (Continued)

Response (continued)

Error

When you enter an invalid mode, the system provides a help message that includes the list of valid modes and will reprompt for the entry.

The SW-DX-T0 command is denied, and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

The SW-DX-T0 command is denied, and the following message is displayed when path switching is inhibited.

```
SPLD
/* Status, Protection Unit Locked,
   Data link path switching is inhibited. */
;
```

The SW-DX-T0 command is denied, and the following message is displayed when the protecting data link is out-of-service.

```
SNIS
/* Status, Not In Service,
   Protecting data link is out-of-service. */
;
```

The SW-DX-T0 command is denied, and the following message is displayed when a path switch is currently in progress.

```
SNVS
/* Status, Not in Valid State,
   Data link path switch is currently in progress. */
;
```

Related commands

The following DLC subsystem command is related to the SW-DX-T0 command.

- RTRV-STATE-EQPT

SW-TOPROTN-EQPT

Software release compatibility

Use this command in R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the SW-TOPROTN-EQPT command.

SW-TOPROTN-EQPT:[tid]:Address:[ctag]::mode[,,dirn];

Command name

Switch to protection.

Can command be aborted?

No.

Purpose

NOTE:
Use the SONET subsystem command, sw-ls for VTU protection switch control.

Enter the SW-TOPROTN-EQPT command to perform the following tasks.

- Instruct the network element (NE) to perform an equipment (circuit pack) protection switch on quad line interface units (LIUs) and TSI/BMP CORE equipment.
- Mark (standby) equipment as *inhibited* (CORE) or *locked out* (LIUs) from protection switching. When marked inhibited or locked out, automatic protection switching is disabled. Equipment marked inhibited or locked out remains in this state until subsequently released using the SW-TOWKG-EQPT command.
- Operate an LIU circuit pack switch with the lockout, forced switch, or normal (manual) switch *mode* (in priority order, respectively) when an address indicates an LIU *service* circuit pack slot.
- Perform a lockout on a specified slot when an address indicates the LIU *protection* circuit pack slot.
- Operate a side switch with inhibit or forced switch mode (in priority order, respectively) when an address indicates the CORE.
- Force a CORE switch that switches both the BMP and TSI as a pair. However, it is not possible to switch the standby TSI while remaining on the active BMP and vice versa.

SW-TOPROTN-EQPT (Continued)

Parameters

Use the following parameters with the SW-TOPROTN-EQPT command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

Address

Access identifier (AID). The slot address within the NE for which the SW-TOPROTN-EQPT command is intended.

For LIU protection switching, the *aid* value must identify either a single LIU slot (for example, ls-a-1) or all low-speed slots in a single group (for example, ls-a-all).

- Valid values for the LIU slot address for modes FRCD and NORM are ls-a-{1–7}. Only *service* slots are allowed and *all* is not allowed.
- Valid values for the LIU *service* slot address for mode LOCKOUT are ls-a-{1–7,all}, where *all* designates {1,2,3,4,5,6,7}.
- Valid value for low-speed *protection* slot addresses for mode LOCKOUT is ls-a-8 — the protection slot only.

For TSI/BMP CORE switching, the valid value for the AID is *core*.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

(Continued on next page)

SW-TOPROTN-EQPT (Continued)

Parameters (continued)

mode

Protection switch mode (priority). The protection switch request priority of the command. Valid values for the *mode* parameter are {LOCKOUT, INHIBIT, FRCD, NORM}.

- LOCKOUT — *Lockout*. Requests a *lockout* of protection switching and is applicable only when the *aid* value indicates an LIU circuit pack slot(s). The effect of this type of protection switching request is to lock out protection switching requests for the addressed entity. If the lockout addresses a *protection* slot, any traffic that is currently on the protection circuit pack is unconditionally switched back to the service circuit pack, and not traffic from any service circuit pack will be switched to the protection circuit pack. If the lockout addresses a *service* slot, any traffic on that service circuit pack that was previously switched to protection is unconditionally switched back to the service circuit pack, and no further traffic can be switched from that service circuit pack to the protection circuit pack. The protection switching lockout remains in effect until a protection switching *reset* is entered (for example, SW-TOWKG-EQPT with *mode=RESET*).
- INHIBIT — *Inhibit*. Requests an *inhibit* of protection switching and is applicable only when the *aid* value indicates the TSI CORE. The effect of this type of protection switching request is to inhibit (freeze) protection switching for the addressed entity. The protection switching inhibit remains in effect until a protection switching *reset* is entered (for example, SW-TOWKG-EQPT with *mode=RESET*).
- FRCD — *Forced*. Requests an equipment protection switch with a priority of *forced* and is accepted unless another manual protection switch request of equal or higher priority is in effect. This *mode* value is applicable when the *aid* value indicates an LIU slot or TSI CORE. The forced protection switch remains in effect until a protection switching *lockout* (when applicable) or *reset* is entered. Addressing the lockout switch request to an LIU circuit pack *protection* slot (in a protection group of service and protection circuit pack slots) has the same effect as addressing the lockout switch request to *all* of the *service* circuit pack slots in the protection group. However, in this case, the state of the service circuit pack slots does not change.
- NORM — *Normal*. Requests an equipment protection switch with a priority of *manual* and is accepted if no other automatic or manual protection switch requests of equal or higher priority are in effect. This *mode* value is applicable only when the *aid* value indicates an LIU slot. The manual protection switch remains in effect until a protection switching *lockout* (when applicable), *forced* (when applicable), or *reset* is entered, or an automatic protection switch occurs.

Default — none, you *must* enter a value.

(Continued on next page)

SW-TOPROTN-EQPT (Continued)

Parameters (continued)

dirn

Direction. Specifies the direction of transmission affected by the protection switch.

Default value is *BTH* (both) for all SW-TOPROTN-EQPT commands to the NE. The default value can also be null.

Example

The following SW-TOPROTN-EQPT command forces a BMP/TSI core switch.

```
SW-TOPROTN-EQPT::core:::frcd;
```

The following SW-TOPROTN-EQPT command inhibits core protection switching.

```
SW-TOPROTN-EQPT::core:::inhibit;
```

The following SW-TOPROTN-EQPT command causes LIU 4 to switch to protection.

```
SW-TOPROTN-EQPT::ls-a-4:::norm;
```

Response

If the NE receives a valid SW-TOPROTN-EQPT command, but protection switching request does not alter the existing protection switching state and/or priority, the NE provides a normal completion response. A generalized example of this is when the LIU protection circuit pack slot is already locked out and a request is made for lockout of protection.

(Continued on next page)

SW-TOPROTN-EQPT (Continued)

Response (continued)

Confirmation

The SW-TOPROTN-EQPT command requires confirmation. The following confirmation message is displayed when you enter the SW-TOPROTN-EQPT command.

```
/* Caution! Execution of this command may affect service. */

/* You have selected the sw-toprotn-eqpt command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = core
         Mode = [inhibit/frcd or lockout]
         Direction = bth

   Execute? (y/n or CANcel/DELete to quit) =
;
```

Completion

The following message is included in the completion response if a lockout is requested for all of the LIU slots (*ls-a-all*), and not all of the requests succeed due to slots being in the OOS-MT-UEQ-AUTO state.

```
/* The following slots were not LOCKED:

   Address: Equipage, Not Equipped
                .
                .
                .
   Address: Equipage, Not Equipped
*/
;
```

(Continued on next page)

SW-TOPROTN-EQPT (Continued)

Response (continued)

Error

The following error message is displayed when the NE receives a SW-TOPROTN-EQPT command that would otherwise change the protection switching state and/or priority and is lower or equal to the priority of the pre-existing protection switching state.

```
SSRD
/* Status, Switch Request Denied,
   Equal or higher priority switch  request exists. */
;
```

The following error message is displayed when a valid SW-TOPROTN-EQPT command is entered with a *core* AID and an unisolated hardware or software failure prevents the command from executing.

```
SROF
/* Status, Requested Operation Failed,
   Execution failed due to a hardware or software problem. */
;
```

The following error message is displayed when the NE receives a SW-TOPROTN-EQPT command with a *mode* of FRCD or NORM, but the protection circuit pack slot in the protection group is not equipped with a circuit pack of the same type as in the service circuit pack slot. (For example, a VTU is in the LIU protection slot, or an STU is in the TSI slot, or the standby TSI slot is empty.)

```
ENPS
/* Equipage, Not equipped with Protection Switching. */
;
```

The following error message is displayed when the NE receives a SW-TOPROTN-EQPT command directed to a single unequipped LIU service circuit pack slot.

```
ENEQ
/* Equipage, Not EQuipped. */
;
```

(Continued on next page)

SW-TOPROTN-EQPT (Continued)

Response (continued)

The following error message is displayed when the NE receives a SW-TOPROTN-EQPT command with an LIU AID and a *mode* of NORM, but the command cannot be completed because a hardware problem exists when the command is executed.

```
SPFA
/* Status, Protection unit FAiled,
   Hardware problem with protection switching mechanism. */
;
```

The following error message is displayed when the NE receives a SW-TOPROTN-EQPT command, but the command cannot be completed because a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

The CIT SONET subsystem command, switch-ls is used to switch VTUs. The following error message is displayed when a protection switch is requested on a QLS slot, but the system is configured for VTU.

```
IIAC
/* Input, Invalid ACcess identifier,
   System provisioned for VTUs only. */
;
```

Related commands

The following DLC subsystem commands are related to the SW-TOPROTN-EQPT command.

- RTRV-STATE-EQPT
- SW-TOWKG-EQPT

SW-TOWKG-EQPT

Software release compatibility

Use this command in R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the SW-TOWKG-EQPT command.

SW-TOWKG-EQPT:[tid]:aid:[ctag]::mode[,,dirn];

Command name

Switch to working equipment.

Can command be aborted?

No.

Purpose

NOTE:
Use the SONET subsystem command, sw-ls for VTU protection switch control.

Enter the SW-TOWKG-EQPT command to instruct the network element (NE) to reset equipment (circuit pack) protection switching on LIU slots and the TSI/BMP CORE. Resets of both revertive and nonrevertive protection switching are included.

Parameters

NOTE:
Other than the use of the *all* construct within the *aid* field, grouping and/or ranging of *aid* values for this command is not allowed.

Use the following parameters with the SW-TOWKG-EQPT command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

(Continued on next page)

SW-TOWKG-EQPT (Continued)

Parameters (continued)

aid

Access identifier. The slot address within the NE for which the SW-TOWKG-EQPT command is intended.

For LIU protection switching the *aid* value must identify either a single LIU slot (for example, ls-a-1) or all low-speed slots in a single group (for example, ls-a-all).

- Valid values for the LIU *service* slot address for mode RESET are ls-a-{1–7,all}, where *all* designates {1, 2, 3, 4, 5, 6, and 7).
- Valid value for low-speed *protection* slot addresses for mode RESET is ls-a-8 — the protection slot only.

For TSI/BMP CORE switching, the valid value for the AID is core.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

mode

Protection switch mode (priority). Provides the protection switch request priority of the command.

Valid value for the *mode* parameter is {RESET}.

Reset requests a *reset* of protection switching. The effect of this type of protection switching request is to reset any previous manual protection switching requests for the addressed entity.

Default value — none, a value *must* be entered.

dirn

Direction. Specifies the direction of transmission affected by the protection switch reset.

Default — value is *BTH* (both) for all SW-TOWKG-EQPT commands to the NE. The default value can also be *null*.

SW-TOWKG-EQPT (Continued)

Example

The following SW-TOWKG-EQPT command resets the TSI/BMP core protection switching.

```
SW-TOWKG-EQPT::core:::reset;
```

The following SW-TOWKG-EQPT command resets the protection switching on LIU 3.

```
SW-TOWKG-EQPT::liu-3:::reset;
```

Response

Confirmation

The SW-TOWKG-EQPT command requires confirmation. The following confirmation message is displayed when you enter the SW-TOWKG-EQPT command.

```
/* Caution! Execution of this command may affect service. */

/* You have selected the sw-towkg-eqpt command with these parameters: */
/* Review of Parameter Responses ...  */
         Address = [Access Identifier]
         Mode = reset
         Direction = bth

   Execute? (y/n or CANcel/DELete to quit) =
;
```

Error

The following error message is displayed when a valid SW-TOWKG-EQPT command is entered with a *core* AID and an unisolated hardware or software failure prevents the command from executing.

```
SROF
/* Status, Requested Operation Failed,
   Execution failed due to a hardware or software problem. */
;
```

(Continued on next page)

SW-TOWKG-EQPT (Continued)

Response (continued)

The following error message is displayed when the NE receives a SW-TOWKG-EQPT command but the command cannot be completed because a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

NOTE:
Use the CIT SONET subsystem command, switch-ls to switch VTUs.

The following error message is displayed when a protection switch is requested on a VTU/LIU slot, but the system is configured for VTU.

```
IIAC
/* Input, Invalid Access Identifier,
   System provisioned for VTUs only. */
;
```

Related commands

The following DLC subsystem commands are related to the SW-TOWKG-EQPT command.

- RTRV-STATE-EQPT
- SW-TOPROTN-EQPT

UPD

Software release compatibility

Use this command in R3.1, R3.2, R3.3, R4.0, R4.2, R4.4, R4.5, and R4.6 *SLC*-2000 Access Systems.

Format

Use the following format to input the UPD command.

UPD:[tid]::[ctag];

Command name

Update the DLC subsystem configuration.

Can command be aborted?

No.

Purpose

NOTE:
The DLC subsystem command, UPD, is different from the update function for the UIP — it only affects the DLC subsystem. The update function for the UIP updates the entire system.

Enter the UPD command to update the equipment list in the DLC subsystem database to reflect the existing hardware configuration and incoming signals.

Use the DLC subsystem command, UPD to transition feeder DS1s from the OOS-MT state to the OOS-MT-AUTO state. Also, use this command to transition LIUs from the OOS-MT-UEQ state to the OOS-MT-AUTO state.

Parameters

Use the following parameters with the UPD command.

tid

Target identifier. Identifies the network element (NE) to which the command is addressed. However, always leave the *tid* parameter blank when using the CIT.

ctag

Correlation tag. Correlates the input from the OS with the resulting output from the NE as appropriate in the OS/NE environment. However, always leave the *ctag* parameter blank when using the CIT.

UPD (Continued)

Response

Confirmation

The UPD command requires confirmation. The following confirmation message is displayed when you enter the UPD command.

```
/* Caution! Execution of the update command may interrupt
   service because of an active protection switch request on
   an empty slot of this SONET subsystem.  It also
   updates the equipment list and initializes ALL parameters
   associated with empty slots of this SONET subsystem.  */

   Execute? (y/n or CANcel/DELete to quit) =
;
```

The UPD command is denied and the following message is displayed when the NVDS has failed.

```
SSTP
/* Status, execution SToPped,
   Data memory failed. */
;
```

The UPD command is denied and the following message is displayed when a software installation is in progress.

```
SSRE
/* Status, System Resources Exceeded,
   Software installation in-progress.
   Try again after installation is complete. */
;
```

System Output Messages and Reports

8

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What are the System Output Messages and Reports?

Overview

Introduction

This chapter contains the manual pages for the system output messages and reports.

Output messages

The user interface panel (UIP) displays output in the form of automatic, fault or condition, and alarm messages.

Reports

The craft interface terminal (CIT) [digital loop carrier (DLC) and synchronous optical network (SONET) subsystems] displays output in the form of alarm and history reports.

UIP Messages

Automatic

Introduction

Automatic messages are triggered by specific button pushes, UIP faults, provisioning display controller (PDC) unavailability, and system controller/ overhead controller (SYSCTL/OHCTL) installation.

Syntax of the automatic message

Automatic messages are output in the form *severity*:*ext*.

- *severity* — the severity of the alarm
- *text* — Describes the alarm. Usually the address of the entity is included in the text. The text of the SONET subsystem alarms may include an NE (near end) or FE (far end) location.

Example of the automatic message

The following is an example of an automatic message.

```
MN:NE:pdc unavail
```

(Continued on next page)

Automatic (Continued)

What is the meaning of the automatic message?

NOTE:
The automatic messages are listed alphabetically by the UIP string text.

The following table shows the automatic message strings output on the alphanumeric message display (AMD) of the UIP.

UIP String Text	Meaning
MN:NE:pdc unavail	This message is displayed when the UIP is unavailable to communicate with the PDC. This implies that either a software installation on the PDC is in progress or that the PDC has failed
PANEL FAULT	The UIP has failed and is unable to communicate with the PDC.
SONET SUBSYS UPDATE done	Displayed after the UPDATE function has been completed in the SONET subsystem in response to use of the UPD/INIT button on the SYSCTL. You can now proceed to the next task.
STATUS -LOCAL SONET	Displayed in response to the user pressing the FE SEL (far-end select) button on the SYSCTL. This shows that the UIP LED indicators reflect the alarm status of the local system only. The letter "L" is displayed in the SYSCTL 7-segment display.
STATUS -LOCAL SONET SITE	Displayed in response to the user pressing the FE SEL (far-end select) button on the SYSCTL. This shows that the UIP LEDs reflect the combined alarm status of all the SONET network elements at the local site. For example, all network elements with the same SITE ID as the local system, including the local system, in the SONET subnetwork. The SITE ID and a dot (for example, 1. if the SITE ID is 1) are displayed on the SYSCTL.

Continued on next page

Automatic (Continued)

What is the meaning of the automatic message? (continued)

UIP String Text	Meaning
STATUS -REMOTE SITE 1	The number "1" is displayed on the 7-segment display of the SYSCTL when the user presses the FE SEL (far-end select) button (on the SYSCTL). The UIP LEDs reflect the alarm status of remote site number 1 in the SONET subnetwork.
STATUS -REMOTE SITE 2	The number "2" is displayed on the 7-segment display of the SYSCTL when the user presses the FE SEL (far-end select) button (on the SYSCTL). The UIP LEDs reflect the alarm status of remote site number 2 in the SONET subnetwork.
STATUS -REMOTE SITE 3	The number "3" is displayed on the 7-segment display of the SYSCTL when the user presses the FE SEL (far-end select) button (on the SYSCTL). The UIP LEDs reflect the alarm status of remote site number 3 in the SONET subnetwork.
STATUS -REMOTE SITE 4	The number "4" is displayed on the 7-segment display of the SYSCTL when the user presses the FE SEL (far-end select) button (on the SYSCTL). The UIP LEDs reflect the alarm status of remote site number 4 in the SONET subnetwork.
STATUS -REMOTE SITE 5	The number "5" is displayed on the 7-segment display of the SYSCTL when the user presses the FE SEL (far-end select) button (on the SYSCTL). The UIP LEDs reflect the alarm status of remote site number 5 in the SONET subnetwork.

Continued on next page

Automatic (Continued)

What is the meaning of the automatic message? (continued)

UIP String Text	Meaning
STATUS -REMOTE SITE 6	The number "6" is displayed on the 7-segment display of the SYSCTL when the user presses the FE SEL (far-end select) button (on the SYSCTL). The UIP LEDs reflect the alarm status of remote site number 6 in the SONET subnetwork.
STATUS -REMOTE SITE 7	The number "7" is displayed on the 7-segment display of the SYSCTL when the user presses the FE SEL (far-end select) button (on the SYSCTL). The UIP LEDs reflect the alarm status of remote site number 7 in the SONET subnetwork.
STATUS -REMOTE SITE 8	The number "8" is displayed on the 7-segment display of the SYSCTL when the user presses the FE SEL (far-end select) button (on the SYSCTL). The UIP LEDs reflect the alarm status of remote site number 8 in the SONET subnetwork.
SYSCTL EXTENDED INITZN	This message appears after the SYSCTL INITIALIZATION message is retired either after a 10-second time-out or in response to use of the UPD/INIT button. The SYSCTL has entered an extended initialization period that lasts about 30 seconds.
SYSCTL EXTND INITZN done	This message appears after the SYSCTL extended initialization has been completed. You can now proceed to the next task.

Continued on next page

Automatic (Continued)

What is the meaning of the automatic message? (continued)

UIP String Text	Meaning
SYSCTL INITIALIZATION	This message appears right after a SYSCTL with working software has been inserted. If the UPD/INIT button on the SYSCTL is pushed while this message is displayed, the SYSCTL will reset all SONET subsystem level parameters to their factory defaults. This message should appear only about 10 seconds after insertion of the SYSCTL.
UPDATE: In-Progress	This message appears right after the Update button has been pressed and shows that the UPDATE function is in progress.
UPDATE: done	This message appears after the UPDATE function has been completed in response to use of the Update button on the UIP. You can now proceed to the next task.

Fault or Condition

Introduction

If there are no active faults or conditions, the system AMD will display the following two 1-line messages when the RETRIEVE-FAULTS command is selected on the UIP.

```
No Active Alarms
```

```
RETURN TO MAIN MENU <ent>
```

Syntax of the fault message

Fault messages are normally in the form *severity*:*ext*.

- *ss* — the severity of the fault.
- *text* — Describes the fault. Usually the address of the failed entity is included in the text.

Example of fault message

The following is an example of a fault message.

```
MN:stu-1  failed
```

(Continued on next page)

Fault or Condition (Continued)

What is the meaning of the fault or condition message?

NOTE:
The fault or condition messages are listed alphabetically by the message.

Fault messages and their meaning for the UIP command, RETRIEVE-FAULTS, are shown the following table. The letters *m* and *n* in the addresses are variables that designate shelves or virtual remote terminals (VRTs) and slots or ports, respectively.

Address	Message	Meaning
pdc, smu, tsi-n, bmp-n, ls-a-n	**12v failure**	A fault has been detected in the internal 12 V DC power supply. Likely causes — a fault on the PDC, SMU, TSI, BMP, VTU or LIU circuit packs, or failure of the UIP circuit module.
ls-c-n	**2nd CP**	The BBF3 (DS1PM) circuit pack requires both function unit slots in the group to be equipped. Insert a second circuit pack of the same type in the empty function unit slot.
—	**48v input A failure**	The `A´ 48-volt power feed to the ARM shelf has failed. Likely cause — 48-volt fuse on UIP has blown.
—	**48v input B failure**	The `B´ 48-volt power feed to the ARM shelf has failed. Likely cause — 48-volt fuse on UIP has blown.
mdc-m-n, tsi-n, ls-a-n, bmp-n	**aborted SW**	Aborted software installation on the identified pack. Likely cause — the circuit pack has failed. The system will attempt to reinstall the software. If the installation continues to fail, the system will diagnose the problem and raise the appropriate alarm.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
—	**AC power fail**	The AC power supply to a remote terminal cabinet has failed.
ls-a-n, ls-c-n	**APS autolock**	The service associated with a DS1 CP has been automatically switched and locked onto the protection DS1 CP. The APS lock will remain active until midnight. Likely cause — four automatic switches of a single DS1 CP in 10 minutes, usually due to intermittent failure of the DS1 CP.
main-n, fn-c-n	**APS chan fail**	The SONET automatic protection switching (APS) channel on the protection OC-3 line has failed. Likely causes — failure of the OLIU on the protection line at the FE, or failure of the OLIU on the protection line at the NE.
mdc-m-n, pdc, ls-a-n, tsi-n, bmp-n	**awaiting SW**	The identified circuit pack is waiting for a software (SW) installation from the SMU. The Fault LED of most circuit packs should be blinking.
smu	**bad data**	The DLC subsystem software on the SMU is corrupted. A software download of the DLC subsystem software to the SMU must be performed, or the SMU must be replaced to correct this situation.
tsi-n	**bad data memory**	The copy of the system database stored on the indicated TSI contains uncorrectable errors. If only one TSI indicates this fault, it is probably failed. If both TSIs show this fault, then reinstall the original TSIs from the system to permit the errors to be corrected, or use the INITIALIZE-SYSTEM command to clear both database copies.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
dt-m-n	**`batt chrg fail`**	PIU failure in DT supported alarm by the DT Server in slot #n of metallic distribution shelf (MDS) #m.
dt-m-n	**`biu failed`**	BIU failure in DT supported by the DT Server in slot #n of MDS #m. Replace the BIU.
dt-m-n	**`cdtu failed`**	CDTU failure in DT supported by DT Server in slot #n of MDS #m.
dcc-n	**`channel fail`**	The system cannot communicate with the far-end system through the SONET section data communications channel (DCC). Likely causes — SYSCTL CP failure, reset, or initialization at the far end; failed program installation at far end; program installation in progress at the far end; or SYSCTL or OHCTL CP failure at the near end.
uip	**`CIT port failed`**	The CIT port on the UIP has failed.
dcc-n	**`communication fail`**	The system is not communicating with another shelf in the subnetwork. The rtrv-nmap command will report the name of the system(s) with which this system is not communicating. Likely causes — an unprotected OC-*n* line failure in the subnetwork; a controller failure, reset, or initialization on another shelf; section DCC channel failure on this or another shelf; or failure of the OHCTL CP.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
dt-m-n	**`config`**	Configuration error of conflicting or zero timeslots assigned to DT Server in slot #n of MDS #m (DT Server in wrong channel slot in the shelf).
main-n, fn-{a,c}-n, ls-{a,c}-n, tg-n	**`CP unknown`**	Function unit (FN) slot – MXRV0 or OLIU is inserted in a slot provisioned for a DS3 CP. AUXCTL slot – a CP other than the TLMCTL is inserted in that slot when the SYSCTL slot is equipped with the BBG1 SYSCTL. TG slot – the timing mode switch settings on the TGS are either invalid, different from those on the companion TGS, or different from what they were before the TGS was replaced; *or* the DS1 format or line coding switches on the TGS are not the same as they were before the TGS was replaced. MAIN slot – a CP other than an OLIU is inserted in the specified slot, or the optical power switch on the OLIU CP is different from what it was before the OLIU CP was replaced. FN slot – a DS3 or OLIU is inserted in a slot provisioned for a MXRV0. LS slot – the line coding switches on the DS1 CP do not match the previous DS1 CP. In R3.1 or higher, this message can mean that a 22F OLIU is present in a slot in which a 21G OLIU is expected or vice versa.
sysctl	**`ctrl link fail`**	The control link between the SYSCTL and OHCTL has failed.
dt-m-n	**`cu failed`**	Channel unit failure in the DT supported by the DT Server in slot #n of MDS #m.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
dt-m-n, v3tmc-m-n, v3eoc-m-n	**datalink fail**	Lost extended superframe (ESF) datalink from DT supported by the DT Server in slot #n of MDS #m. Failure of the TR-303 datalink in TR-303 VRT #m channel #n.
tsi-n	**data mem. updating**	The copy of the system database stored on the indicated TSI is being updated.
smu	**disabled**	The SMU has been disabled. The SET-STATE-SMU command can be used to enable the SMU (make sure the program version is correct first by using the UIP command, RETRIEVE-PROG-VRSN).
smu	**dnld aborted**	The software download of DLC subsystem software to the SMU was aborted. The DLC subsystem software on the SMU may be corrupt.
dt-m-n	**door open**	Open door at DT supported by the DT Server in slot #n of MDS #m.
smu	**downloading**	Software download of DLC subsystem software to the SMU is in progress.
c	**DS1 Freq Err *use CIT***	An incoming timing signal has an unacceptable frequency offset. Likely cause — a DS1 external timing reference to the local shelf or a remote shelf has a frequency offset > 20 Hz. Use the CIT to obtain details.
c-n-m	**DS1 sgnl fail**	The bit error rate (BER) in the DS1 signal incoming from the DSX-1 exceeds the provisioned failure threshold, 10^{-3} or 10^{-6}. Likely causes — failure of upstream equipment or facility (towards the DSX-1), crosstalk in office wiring, or failure of the DS1 CP.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
ref-n	**DS1 sync fail**	The DS1 synchronization reference signal #n has failed. Likely causes — failure of upstream equipment or facility (toward the DSX-1), failure of the incoming DS1 synchronization reference signal, upstream failure in the clock providing the reference signal, high BER on the received signal caused by failure of the office timing supply that provides the DS1 timing reference, the system is provisioned for SF format on the specified DS1 synchronization reference signal and the received DS1 signal is in ESF format, failure of the connection to the timing supply, the frequency of the clock providing the DS1 reference signal is out of specification, or failure of the office timing supply that provides the DS1 timing reference.
c	**DS3 Freq Err *use CIT***	Indicates that an incoming timing signal has an unacceptable frequency offset. Likely cause — a DS3 external timing reference to the local shelf or a remote shelf has a frequency offset > 20 Hz. Use the CIT to obtain details.
c	**DS3 sgnl fail**	The BER in the incoming DS3 signal exceeds the provisioned failure threshold of 10^{-3} or 10^{-6}. Likely causes — failure of the upstream equipment or facility (toward the DSX-3), cross talk in office wiring, or unprotected failure of DS3 CP.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
dt-m-n	**DT CLF**	Loss of DS1 signal from DT supported by the DT Server in slot #n of MDS #m. Also, can be caused by a failure at the DT (for example, power loss), or a power or OU failure in the HDOS.
dt-m-n	**DT CU failed**	A CU has failed in the DT supported by the DT Server in slot #n of MDS #m.
–	**dual ringer failure**	The external major alarm input on the UIP is active. Typically, the ringing supply to the system has failed.
–	**dup. CNE **use CIT***	A shelf has been provisioned as a gateway network element (GNE) in a network that already has a GNE. Only one NE in the network may be provisioned as the GNE. See the SONET subsystem commands, set-ne and rtv-ne for GNE provisioning information. Use the CIT to obtain details.
sysctl	**dup. display**	Two or more shelves in the network have the same TBOS display number (determined by switches on the SYSCTL CP).
syctl	**dup. site/ne**	Two or more shelves in the network have the same site address (determined by switches on the SYSCTL CP) and the same network element address (determined by switches on the OHCTL CP).
sysctl	**dup. TID**	Two or more shelves in the network have the same system name or TID set by the set-ne command.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
c	**`EC1 sgnl fail`**	The BER in the received EC-1 signal exceeds the provisioned threshold . Likely causes — failure of the STS-1E CP at the near end, failure of the incoming cable, cross talk in office wiring, or failure of the incoming signal from the STSX-1.
—	**`excessive holdover`**	The system has been in holdover mode for more than 4 hours. May cause degraded performance (high error rates) on the transmitted and/or received signals. Whenever this condition exists, the condition *holdover mode active* also exists. Likely cause — refer to *holdover mode active*.
—	**`external Minor`**	The UIP external minor input is active. Typically, this input is connected to an external power shelf and means that a single rectifier, a single ringing generator, or the fan shelf has failed. Normally, miscellaneous discrete input number 15 on the SYSCTL is used for this purpose.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
main-n, fn-{a,c}, ls-{a,c}-n	`force psw`	For an OC-3 line, the identified line is not selected as the active receiving line, and an automatic or manual protection switch to make this the active receiving line will not be done. The forced switch will remain in effect until the protection switch is reset, or a lockout or inhibit switch request is received. Note that switching is unidirectional. Because of this, the specified line might still be active (if the far end is selecting the specified line to receive traffic), and the far end might still be free to switch the line it is selecting to receive traffic. See the SONET subsystem command, switch-line. For a function unit slot or a low-speed service slot, the identified equipment is not active, and an automatic or manual switch to make it active will not be done. The forced switch will remain in effect until the protection switch is reset, or a lockout or inhibit switch request is received. See the SONET subsystem commands, switch-fn and switch-ls.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
—	**`holdover mode`**	The system is in holdover synchronization mode. Likely causes — the system was manually switched to holdover mode [with the SONET subsystem command, switch-sync, or in a central office (CO) system, with a TBOS control point] and the switch has not been reset; or the system automatically switched to holdover mode because of failure of the timing references, and either the reference failures have not cleared, or the system is provisioned for non-revertive synchronization mode switching, or the system is provisioned for *external* timing and no external timing references are available. The condition can be cleared by repairing at least one timing reference (if both are failed) and resetting synchronization mode protection switching with the command switch-sync:s=mode,pri=reset. In a CO system, the synchronization mode can also be reset with a TBOS control point.
a-m-n	**`inc. DS1 HBER`**	The BER on the identified feeder DS1 signal exceeds 10^{-3}.
a-m-n	**`inc. DS1 LOF`**	A loss-of-frame (LOF) condition exists on the identified feeder DS1 signal. Likely cause — failure of far end (FE) signal or hardware.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
a-m-n, c-m-n	**`inc. DS1 LOS`**	At least 128 consecutive zeros are received in the DS1 signal incoming from the DSX-1, or the energy at the DS1 input is below a preset threshold. Likely causes — hard failure of upstream equipment or facility (towards the DSX-1), the DS1 input is disconnected at the backplane or the DSX-1, or equipment is failed or removed at DSX-1.
c	**`inc. DS3 LOS`**	At least 128 consecutive zeros were detected in the DS3 signal received from the DSX-3. Likely causes — equipment failed or removed at DSX-3, or DS3 input disconnected at the DSX-3 or at the DDM-2000 backplane.
c	**`inc. DS3 OOF`**	The system has detected a DS3 out-of-frame (OOF) condition in the demultiplexer (DEMUX) direction (coming from the fiber) for the specified DS3 signal. Reported only if the DS3 interface is provisioned in VM or VMR mode. See the SONET subsystem commands, set-t3 and rtrv-t3. Likely causes — an out-of-frame DS3 signal incoming to the DSX-3 at the far end, failure of the DS3 CP at the far end or near end, or the DS3 signal is looped at both ends.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
c	**`inc. EC1 LOF`**	The system has detected a loss-of-frame (LOF) condition in an incoming EC-1 signal. LOF is defined as an out-of-frame (OOF) condition (five consecutive errored STS-1 framing patterns) that lasts for at least 3 milliseconds. Likely causes — failure of the STS-1E or equivalent CP at the far end, failure of the STS-1E or equivalent CP at the near end, failure of the incoming cable, or a cable disconnected at the STSX-1 or shelf connector.
c	**`inc. EC1 LOS`**	The system has detected a loss-of-signal (LOS) condition on the EC-1 line. Likely causes — failure of the incoming signal or cable from the STSX-1, failure of the STS-1E CP at the near end, or a cable disconnected at the STSX-1 or shelf connector.
c	**`inc. EC1 SD`**	The BER in the received EC-1 signal exceeds the provisioned threshold of 10^{-5} to 10^{-9}. Likely causes — failure of the STS-1E CP at the near end, failure of the incoming cable, cross talk in office wiring, or failure of the incoming signal from the STSX-1.
tr8dl-m-n	**`inc. failure`**	The received TR-08 datalink has failed. Likely cause — failure of far-end DLC or digital switch.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
main-n, fn-c	**`inc. OC12 LOF`**	The system has detected a loss-of-frame (LOF) condition in an incoming OC-12 signal. LOF is defined as an out-of-frame (OOF) condition (five consecutive errored STS-1 framing patterns) that lasts for at least 3 milliseconds. Likely causes — failure of the OLIU CP at the near end, failure of the OLIU CP at the far end, or failure of the receive fiber.
main-n, fn-c	**`inc. OC12 LOS`**	The system has detected a loss-of-signal (LOS) condition on the OC-12 line. Likely causes — failure of the OLIU CP at the near end, failure of the OLIU CP at the far end, or failure of the receive fiber.
main-n, fn-c	**`inc. OC3 LOF`**	The system has detected a loss-of-frame (LOF) condition in an incoming OC-3 signal. LOF is defined as an out-of-frame (OOF) condition (five consecutive errored STS-1 framing patterns) that lasts for at least 3 milliseconds. Likely causes — failure of the OLIU CP at the near end, failure of the OLIU CP at the far end, or failure of the receive fiber.
main-n, fn-c	**`inc. OC3 LOS`**	The system has detected a loss-of-signal (LOS) condition on the OC-3 line. Likely causes — failure of the OLIU CP at the near end, failure of the OLIU CP at the far end, or failure of the receive fiber.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
cu-m-n	**`incompat`**	The circuit pack in channel unit slot #n on MDS #m is incompatible with the system configuration. Possible errors are DT Server in wrong channel slot in the shelf, a metallic channel unit is installed in a shelf which has been provisioned for FITL operation, or a nonsupported channel unit has been installed.
dtcu-m-n-x	**`incompat`**	The CU #x in the DT supported by the DT Server in slot #n of the MDS #m is incompatible with the DT.
t8u-m-n	**`incompat`**	The version of the installed T8U is not compatible with FITL, or the shelf m is configured not to have a T8U and one is installed in side n.
sysctl, auxctl, main-n, fn-c-n, tg-n	**`incomp sw.`**	For the SYSCTL slot, some of the unused switches are not in the prescribed position. For the AUXCTL slot, an invalid switch setting has been selected on the OHCTL CP.
dt-m-n	**`in dual mode`**	DT supported by the DT Server in slot #n of MDS #m in dual mode — illegal configuration in the *SLC®*-2000 Access System. (See 363-208-001, *SLC-2000 Access System, User/ Service Manual*.)
dt-m-n	**`in mode err`**	For DT type *msdt*, the DT supported by the DT Server in slot #n of MDS #m in dual mode. For DT type *nbs*, the DT supported by the DT Server in slot #n of MDS #m in mode conflict. (See 363-208-001, *SLC-2000 Access System, User/ Service Manual*, for more information.)

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
tsi-n, bmp-n	**inh dly psw**	CORE nightly routine protection switching has been inhibited. This will occur if a CORE circuit pack has reset too many times or if the CORE as a whole has failed to stay active for 24 hours, several days in a row. This may indicate an intermittent fault or a fault on the indicated pack that only shows up when that pack is active. Replace the indicated pack.
main-n, fn-{a,c}, ls-{a,c}-n	**inhibit psw**	OC-3 line — the identified line is not selected as the active receiving line, and a protection switch to make this the active receiving line will not be done. No further protection switching of specified line will be done until the protection switch is reset. Note that line switching is unidirectional. Because of this, the specified line might still be active (if the far end is selecting the specified line to receive traffic), and the far end might still be free to switch the line it is selecting to receive traffic. See the SONET subsystem command, switch-line. Function unit slot, timing slot, or timing reference — the identified equipment or reference is not active, and protection switches to the identified equipment or reference will not be done until the protection switch is reset. See the SONET subsystem commands, switch-fn and switch-sync.
—	**inhibit TL1**	TL1 autonomous alarm reporting is inhibited by the TL1 SONET subsystem command, inh-msg. Clear by enabling autonomous message reporting with the TL1 SONET subsystem command, alw-msg. The alw-msg command is only supported on the TL1/X.25 OS/NE interface.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
core-n	**`inhib psw`**	CORE automatic protection switching has been inhibited. Clear using the UIP command, SWITCH-CORE.
env-n	**`input active`**	The specified environmental alarm point (miscellaneous discrete input) is active. The corresponding alarm message in the CIT alarm report is provisionable, so you must use the CIT to find the meaning of this alarm.
dtcu-m-n-*p*	**`ISDN cnflt`**	ISDN channel unit placement violation in slot #p of the distant terminal supported by the DT Server in slot #n of metallic distribution shelf #m. (See 363-208-001, *SLC-2000 Access System, User/Service Manual*, for ISDN CU placement restrictions.)
dt-m-n	**`ISDN slot err`**	ISDN channel unit placement violation in DT supported by the DT Server in slot #n of MDS #m. (See 363-208-001, *SLC-2000 Access System, User/Service Manual*, for more information.)
dt-m-n	**`is missing`**	A DT Server previously installed in slot #n of MDS #m and provisioned with 12 or 24 lines has been removed. Reinsert or replace the DT Server, *or* provision the DT Server for 0 lines.
	`link`	A link† has failed — the addresses identify the elements. Likely causes — MDC failure(s), MDS quadrant has lost power, the SYSCTL has failed (check the fault LEDs and try an LED Test), or the unit may have failed.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
x25	**`link fail`**	Failure in the X.25 communication channel. Likely causes — failure of the X.25 communication equipment, failure at the OS, or system is provisioned as a TL1/X.25 gateway, but this interface is not being used. See the SONET subsystem command, set-ne for provisioning.
tbos-n	**`link failure`**	A TBOS link has failed.
main-n, ls-c-n	**`lockout prot.`**	OC-3 line — the identified protection line is not selected as the active receiving line, and a protection switch to make this the active receiving line will not be allowed. Note that line switching is unidirectional. Because of this, the specified line might still be active (if the FE is selecting the specified line to receive traffic), and the far end might still be free to switch the line it is selecting to receive traffic. The lockout remains in effect until the protection switch is reset or until a protection switch *inhibit* request is entered. See the SONET subsystem command, switch-line. Low-speed protection slot — no service slot in the whole low-speed group is allowed to switch to protection. The lockout remains in effect until the protection switch is reset. See the SONET subsystem command, switch-ls. Low-speed service slot — the specified low-speed service slot is active and will not be switched to protection. The lockout remains in effect until the protection switch is reset. See the SONET subsystem command, switch-ls.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
ls-a-8	**lock prot**	No service slot in the whole low-speed group will be allowed to switch to protection. The lockout will remain in effect until the protection switch is reset. See the SONET subsystem command, switch-ls. DS1 feeder configurations — consult the UIP command, SWITCH-LIU.
ls-a-n	**lock service**	Low-speed service slot — the specified low-speed service slot is active and will not be switched to protection. The lockout will remain in effect until the protection switch is reset. See the SONET subsystem command, switch-ls. DS1 feeder configurations — consult the UIP command, SWITCH-LIU.
a-m-n	**loopback**	Line loopback has been established on the identified DS1.
{a,c}-m-n,{a,c}	**loopback**	SONET feeder configuration — the loopback is towards the optical fiber. DS1 feeder configuration — for DS1s in the "A" low-speed group (a-m-n) the loopback is toward the DSX-1. See the SONET subsystem commands, opr-lpbk-t1, rls-lpbk-t1, opr-lpbk-t3, and rls-lpbk-t3.
ls-a-n	**lost 51MHz clock**	The VTU input clock has failed. Normally caused by an MXRV0 failure in the FUNCTION A slot, or a TGS failure.
ls-a-n	**ls prot unavailable**	VTU/LIU protection is unavailable. An event (such as VTU/LIU failure) has resulted in VTU/LIU protection being unavailable. Minor alarms are being transmitted on each in-service TR-08 VRT.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
—	**man sync mode psw**	The synchronization mode has been manually switched to holdover or free-running and will remain in that mode until the switch request is reset. See the SONET subsystem command, switch-sync.
main-n, fn-{a,c}, ls-{a,c}-n	**manual psw**	The specified DS1 CP is manually switched to protection. The manual switch will remain in effect until the protection switch is reset or until a failure occurs and an automatic switch preempts the manual switch. See the SONET subsystem command, switch-ls. DS1 feeder configurations — consult the UIP command, SWITCH-LIU.
ptu-m-n	**neg rng fail**	No negative ringing signal is present on the input to PTU #n in MDS #m. Therefore, no ringing is available for the circuits served by the PTU. Likely cause — a misconnection between the MDS and the ringing generator, or a ringing fuse failure on the MDS.
—	**OC12 connector failed**	The OC-12 faceplate connector (ribbon cable) which carries STS-1/ STS-3c ring pass through traffic on the OC-12 ring interface on the OC-3 shelf has been removed or failed. Reconnect or replace (if failed) the faceplate connector.
main-n, fn-c	**OC3 sgnl fail**	The BER in the received OC-3 signal exceeds 10^{-3}. Likely causes — failure of the OLIU CP at the near end, failure of the receive fiber, or failure of the OLIU CP at the far end.
main-n, fn-c	**OC3 LOP **use CIT****	There are one or more OC-3 STS-1 loss-of-pointer (LOP) conditions active in the SONET subsystem. Use the CIT to obtain details.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
main-n, fn-c	**OC3 SD **use CIT****	There are one or more OC-3 STS-1 signal degraded conditions active in the SONET subsystem. Use the CIT to obtain details of the alarm.
dt-m-n	**on loc battery**	The distant terminal supported by the DT Server in slot #n of MDS #m is operating on local battery.
ls-a-n	**on protection**	Service for the indicated VTU/LIU is being provided by the protection VTU/LIU. Another fault message should be in the queue that identifies the reason why this pack is on protection.
dt-m-n	**on rmt battery**	The distant terminal supported by the DT Server in slot #n of MDS #m is operating on remote battery.
pdc, ls-a-n, tsi-n, mdc-m-n, bmp-n, core-n	**pack init**	Software on the indicated circuit pack is being initialized and a self-test is being performed. A transient condition and should not last for more than 5 minutes. For a core pack init, the packs on that core side are initializing. The core side indicated cannot provide service until this clears.
a-m-n	**PCM path failed**	There is an internal transmission problem for the feeder DS1 signal #n on VTU #m. Likely cause — TSI, VTU, LIU, MDC, or T8U circuit packs.
—	**PDC/SYSCTL incompat.**	The PDC has detected an incompatibility with the communication protocol between the PDC and the SYSCTL. Incompatible SYSCTL software may cause this to be reported.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
dt-m-n	**pcu failed**	PCU failed in DT supported by the DT Server in slot #n of MDS #m.
dt-m-n	**piu fuse fail**	PIU fuse failed in DT supported by the DT Server in slot #n of MDS #m.
dt-m-n	**piu removed**	PIU removed or failed in DT supported by the DT Server in slot #n of MDS #m.
ptu-m-n	**pos rng fail**	No positive ringing signal is present on the input to PTU #n in MDS #m. Therefore, no positive ringing is available for the circuits served by the PTU. Likely cause — ringing generator failure. Alarmed only if a multiparty channel unit is plugged into the quadrant served by the PTU.
dt-m-n	**power src fail**	AC power failure in DT supported by the DT Server in slot #n of MDS #m.
core-n	**psw forced**	CORE #n has been forced active. Prevents automatic protection switching. Use the UIP command, SWITCH-CORE to clear.
ls-a-n	**rcvd bad clk**	VTU #n has received a bad clock input. Likely cause — VTU or MXRV0 failure. Use the UIP command, SWITCH-LS or SWITCH-FN to switch a VTU or MXRV0 before pulling it.
a-m-n	**rcvd DS1 AIS**	DS1 AIS is being received on the feeder DS1 signal #n on VTU/LIU #m. Likely causes — upstream network equipment or facility (upstream = towards the OC-3 feeder).

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
a-m-n	**rcvd DS1 YEL**	The far end is detecting a DS1 signal failure or DS1 AIS. Likely causes — far end signal failure or a near-end failure which is causing the system to transmit AIS. Only detected on INA DS1s and TR-303 DS1s.
main-n, fn-{a,c}-n, ls-{a,c}-n, tg-n	**removed**	A circuit pack that was previously installed in this system is removed. Replace the CP, or *update* to remove it from the system equipment list.
mdc-m-n, smu, sysctl, tsi-n, bmp-n, t8u-m-n	**removed**	A circuit pack that was previously installed in this system is removed. Replace the CP.
smu	**removed**	The SMU has been removed.
dt-m-n	**rgu failed**	RGU failed or missing at DT supported by the DT Server in slot #n of MDS #m.
smu	**SMU powering-up**	The SMU circuit pack is powering up. A test of the stored software is being performed. The system will clear this condition when the SMU is powered.
a-m-n, c-m-n	**signal degrade**	The BER in the received DS1 signal exceeds 10^{-6}. Likely causes — failure of the DS1 terminating CP at the far end, far-end cable failure, cross talk in office wiring at the far end, or failure of the far-end signal.
—	**SONET**	Provides a summary of the active alarms and status conditions in the SONET subsystem. Use the CIT to get detailed information.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
{m,a,c}-m-n	**STS1 BER**	Ring applications — the BER of the specified STS-1 signal exceeds the signal fail threshold (10^{-6}). VT1.5 path-switched rings — the system responds by inserting VT Path AIS in each pass-through VT contained in the STS-1. Locally, the system will select the VTs from the STS-1 on the other ring, as appropriate. Likely causes — failure of the NE OLIU CP reporting the STS-1 failure, failure of the FE OLIU, or failure of the receive fiber if the OC-3 is also reporting a failure.
—	**STS1 SD **use CIT****	There are one or more STS-1 signal degrade conditions active in the SONET subsystem. Use the CIT to obtain details.
ptu-m-n	**stuck relay**	A relay is stuck on PTU #n in MDS #m. Try pushing the reset button on the PTU. If this does not clear the problem, the PTU has probably failed.
cu-m-n	**stuck relay**	The test relay on channel unit (CU) #n on MDS #m is stuck. Try reseating the CU. If that does not clear the condition, replace the CU.
cu-m-n	**stuck test**	The channel units that are inserted at the RT and COT ends are incompatible with each other. As a result, the test relay on the identified channel unit is stuck and no testing can be performed on lines on the shelf that serves that channel unit. Normally happens when an FX0 CU is at one end and a POTS CU is at the other.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
—	**suppt** use CIT****	A SONET alarm exists. Use the CIT to obtain details.
ls-a-*n*, mdc-*m*-*n*, tsi-*n*, bmp-*n*	**SW installing**	Software is being installed onto this pack from the SMU by the automatic installation feature. The system will clear this condition when the install is complete.
—	**sync quality unknown**	The system is in the loop timed synchronization mode in a DS1 feeder configuration and both the primary and secondary timing inputs have failed. See the DLC subsystem command, RTRV-SYNCN, to determine which feeder DS1 signals are used for this purpose.
—	**sys data memory fault**	The system database is not valid. No provisioning activities will be accepted until the fault is corrected. Likely causes — faults which affect both TSIs, or two TSIs which contain error-free but mismatched copies of the database. Use the UIP command, INITIALIZE-SYSTEM to clear the mismatch.
—	**sys free-running**	The system is no longer locked to a stable timing source. Likely cause — TGS packs failed/ removed in a SONET system. In a metallic system, this can happen if there are no good incoming DS1 signals to the LIUs.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
—	**system on battery**	The power minor alarm input is active, which indicates that the system is operating on battery reserve — input is internally multipled with the PMN input on the SYSCTL.
cit-n, dcc-n	**test in prog**	An automatic turnup test is in progress in the SONET subsystem.
c-m-n, c	**test in progress**	A transmission test using the internal test signal generator and monitor is in progress on the specified T1 or T3 port.
—	**TID map full *use CIT***	The size of the directory services network element (DSNE) database at the GNE has been exceeded. Likely cause — NEs have been removed from the network but not from the DSNE database located at the GNE. See the SONET subsystem command, dlt-tadrmap. Use the CIT to obtain details.
mdc-m-n	**to CU link**	A link between MDC #n on MDS #m and its supported channel units has failed. Likely cause — a channel unit or MDC failed.
—	**Uneq. STS **use CIT****	One or more STS-1s are unequipped in the SONET subsystem. Use the CIT to obtain details.
—	**Uneq. VT **use CIT****	One or more VTUs are unequipped in the SONET subsystem. Use the CIT to obtain details.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

Address	Message	Meaning
m-1-2-1	**unequipped VT**	The system has detected the unequipped code (SONET path overhead signal code label byte=0) for an in-service VT1.5 channel. Likely cause — an upstream VT1.5 cross-connection has been deleted.
m-3	**unequipped VT**	The system has detected the unequipped code (SONET path overhead signal code label byte=0) for an in-service STS-1 channel. Likely cause — an upstream STS-1 cross-connection has been deleted.
tsi-n, bmp-n	**unlatched**	The faceplate latch for the TSI or BMP circuit pack is not latched. The latch must be closed in order for the circuit pack to operate.
tsi-n	**update aborted**	An attempt to correct the system database copy on the indicated TSI has failed. Likely causes — removal of the other TSI before the database copy completed, or failure of the indicated TSI.
uip	**VRT test in progress**	A VRT test (initiated using the UIP command, TEST-VRT-ALM) is in progress.
—	**VT LOP **use CIT****	There are one or more VT LOP conditions active in the SONET subsystem. Use the CIT to obtain details.
—	**VT SD **use CIT****	There are one or more VT signal degrade conditions active in the SONET subsystem. Use the CIT to obtain details.
—	**VT yel **use CIT****	There are one or more VT yellow alarm conditions active in the SONET subsystem. Use the CIT to obtain details.

Continued on next page

Fault or Condition (Continued)

What is the meaning of the fault or condition message? (continued)

* For PTUs, the system will report this condition if the PTU is failed or removed.

† Link faults are unisolated faults that occur between circuit packs in the system. These faults typically occur when a circuit pack has failed or is removed. Link alarms may also occur if there are cabling faults between the ARM shelf assembly and MDS assembly, or if there is a backplane fault. The system clears the link faults if and when it has isolated the failure to an individual circuit pack. It will then raise an alarm against the implicated pack. Ignore link alarms that do not persist for more than 3 minutes.

Link AIDs use the form Circuit_Pack_1_AID-Circuit_Pack_2_AID. Circuit_Pack_1_AID is the AID of the circuit pack on one end of the link, and Circuit_Pack_2_AID is the AID of the circuit pack on the other end of the link.

In the DLC subsystem alarm report, the first AID is listed in the address column and the second AID is included in the description column.

If there are several link alarm messages and the same circuit pack AID is in more than one link AID, the fault most likely lies in that circuit pack.

The following list identifies the CP link AIDs.

EOC to EOC	bmp-{1,2}/bmp-{1,2}
EOC to TSI	tsi-{1,2}/bmp-1-{1,2}
MDC to CU bus	mdc-{1–8}-{1,2}/cubus-{1–3}
MDC to MDC	mdc-{1–8}-2/mdc-{1–8}-1
MDC to PTU	mdc-{1–8}-{1,2}/ptu-{1–8}-{1,2}
MDC to T8U	mdc-{1–8}-{1,2}/t8u-{1–8}-{1,2}
MDC to TSI	mdc-{1–8}-{1,2}/tsi-{1,2}
PDC to SYSCTL	pdc/sysctl
PDC to TSI	pdc/tsi-{1,2}
PDC to UIP	pdc/uip
SMU to PDC	smu/pdc
THC to TSI	thc/tsi-{1,2}
TMC to TMC	bmp-{1,2}/bmp-{1,2}
TSI to BMP	tsi-{1,2}/bmp-1-{1,2}
TSI to TSI	tsi-1/tsi-2
VTU/LIU to TSI	ls-a-{1–8}/tsi-{1,2}
VTU/LIU #8 to VTU/LIU	ls-a-8/ls-a-{1–7}

Alarm

Introduction

If there are no active alarms or status conditions, the system AMD displays the following message (one line at a time) when the UIP command, RETRIEVE-ALARMS, is selected.

```
No Active Alarms
```

```
RETURN TO MAIN MENU <ent>
```

Syntax of the alarm message

Alarm messages are in the form *severity*:*ext*.

- *severity* — the severity of the alarm
- *text* — Describes the alarm. Usually the address of the entity is included in the text. The text of the SONET subsystem alarms may include an NE (near end) or FE (far end) location.

Example of an alarm message

The following is an example of an alarm message.

```
MJ:FE:dgr-1-a trmt alarm
```

Alarm (Continued)

What is the meaning of the alarm message?

The following table lists the alarm messages and associated meaning(s) for the UIP command, RETRIEVE-ALARMS. The letters *m* and *n* in the addresses are variables that designate slots or VRTs and digroups or ports, respectfully.

Address	Message	Meaning
site #	**acty**	There is at least one active alarm at the identified site. Use the CIT to obtain details.
c	**inc. DS3 AIS**	The system has detected DS3 AIS in the DEMUX direction (that is, coming from the fiber) for the specified DS3 signal. Likely causes — failure of the office timing supply that provides the DS1 timing reference.
c	**inc. EC1 AIS**	The system has detected an EC-1 line alarm indication signal (AIS) on an incoming EC-1 line. Likely cause — failure of an STS-1E CP at the far end.
c	**inc. EC1 FERF**	The system has detected the EC-1 far-end receive failure (FERF) signal in the incoming EC-1 signal. Likely cause — the far end has detected an incoming signal failure on the specified EC-1 line. This may be caused by failure of the STS-1E CP at the near end, the STS-1E CP at the far end, or the transmit cable on the specified line.
main-n, fn-c	**inc. OC3 AIS**	The system has detected OC-3 line AIS on an incoming OC-3 line. Likely cause — failure of an OLIU CP at the far end.

Continued on next page

Alarm (Continued)

What is the meaning of the alarm message? (continued)

Address	Message	Meaning
main-n, fn-c	**`inc. OC3 FERF`**	The system has detected the OC-3 FERF signal in the incoming OC-3 signal. Likely causes — the far end detecting an incoming signal failure on the specified OC-3 line. This may be caused by failure of the OLIU CP at the near end, the OLIU CP at the far end, or the transmit fiber on the specified line.
cont-n	**`input active`**	The specified environmental control point (miscellaneous discrete output) is active. Note that the actual message that appears in the alarm and status report for this condition can be provisioned. This is the default message. See the SONET subsystem commands, rtrv-attr-cont and set-attr-cont. Likely cause — the system was instructed to close the environmental control point by either a TBOS control point or by the closing of the corresponding environmental control input at the far end.
dt-m-n	**`on battery`**	The distant terminal supported by the DT Server in slot #n of MDS #m is operating on battery power.
dt-m-n	**`power alarm`**	The distant terminal supported by the DT Server in slot #n of MDS #m has reported a power fault (PCU, PIU failure).
a-m-n	**`rcvd DS1 AIS*`**	DS1 AIS is being received on the feeder DS1 signal #n on VTU #m. Likely causes — upstream network equipment or facility (upstream = towards the OC-3 feeder).

Continued on next page

Alarm (Continued)

What is the meaning of the alarm message? (continued)

Address	Message	Meaning
a-m-n	**`rcvd DS1 YEL`**	The far end is detecting a DS1 signal failure or DS1 AIS*. Likely causes — far-end signal failure or a near-end failure that is causing the system to transmit AIS. This is only detected on INA DS1s and TR-303 DS1s.
dt-m-n	**`rcvd FITL Yellow`**	A yellow alarm signal is being received by the DT Server in slot #n of MDS #m. Likely causes — DT fault, or a local fault which has caused the far end to detect a failure.
dt-m-n	**`rcvd MISC`**	A miscellaneous alarm is being reported by the DT Server in slot #n of MDS #m (DT fan, etc.).
vrt-m	**`rcvd MISC alarm`**	A power/miscellaneous alarm has been received on the TR-08 datalink of VRT #m.
vrt-m	**`rcvd FELP`**	A far-end loopback (FELP) message has been received for VRT #m on the TR-08 datalink. If a DS1 has been looped back towards the facility, a corresponding fault message is in the Faults queue.
dgr-m-n	**`rcvd alarm`**	With major alarm — A Major alarm has been received for digroup letter n on VRT #m. Likely causes — local failure in the DLC subsystem that caused the far end to detect a facility failure, or the far-end DLC terminal or digital switch has failed. With minor alarm — A digroup alarm has been received on digroup letter n on VRT #m.

Continued on next page

Alarm (Continued)

What is the meaning of the alarm message? (continued)

Address	Message	Meaning
vrt-m	**rcvd alarm**	With major alarm — A major alarm has been received on VRT #m (without a digroup alarm indication). With minor alarm — A Minor alarm has been received on VRT #m (without a digroup alarm indication).
—	**SONET alarm**	A SONET subsystem alarm is active. The condition will be listed in the SONET subsystem report (it may also appear in the UIP fault list).
—	**SONET condition**	An abnormal condition exists in the SONET subsystem. The condition will be listed in the SONET subsystem report (it may also appear in the UIP fault list).
—	**STS1 AIS **use CIT****	There are one or more STS-1 AIS conditions active in the SONET subsystem. Use the CIT to obtain details.
{m,a,c}-c	**STS1 yel **use CIT****	There are one or more STS-1 yellow alarm conditions active in the SONET subsystem. Use the CIT to obtain details.
cont-n	**TBOS CONTROL**	The specified environmental control point (miscellaneous discrete output) is active. The *real* message that appears in the alarm and status report for this condition can be provisioned. This is the default message. See the SONET subsystem commands, rtrv-attr-cont and set-attr-cont. The cause is that the system was instructed to close the environmental control point by either a TBOS control point or by the closing of the corresponding environmental control input at the far end.

Continued on next page

Alarm (Continued)

What is the meaning of the alarm message? (continued)

Address	Message	Meaning
a-m-n	**trmt DS1 AIS**	DS1 AIS is being transmitted on the feeder DS1 signal #n on VTU/LIU #m. Likely causes — local failure in the DLC subsystem or non-cross-connected DS1.
a-m-n	**trmt Yellow**	Yellow alarm is being transmitted on the identified feeder DS1 signal. The system has detected either an incoming DS1 signal failure or incoming DS1 AIS.
vrt-m	**trmt alarm**	With major alarm — A major alarm is being transmitted on the TR-08 datalink of VRT #n. Likely cause — ringing generator failure. With minor alarm — A minor alarm is being transmitted on the TR-08 datalink of VRT #m. Likely cause — local protected failure.
vrt-m	**trmt MISC alarm**	A miscellaneous alarm is being transmitted on the TR-08 datalink of VRT #m. In the current system release, a TR-08 miscellaneous alarm may be requested by the UIP command, TEST-VRT-ALARMS.
dgr-m-n	**trmt alarm**	A major alarm is being transmitted on the TR-08 datalink of VRT #m for digroup #n. Likely cause — local failure or an incoming facility failure has been detected.
—	**VT AIS **use CIT****	There are one or more VT1.5 AIS conditions active in the SONET subsystem. Use the CIT to obtain details.

Continued on next page

Alarm (Continued)

What is the meaning of the alarm message? (continued)

* DS1 AIS is detected on the incoming signals for the feeder DS1s (a-{1-7}-{1-4}). Normally, the AIS is caused by an upstream failure in the network (for example, at another multiplex). However, sometimes this condition is also raised in a SLC-2000 Access System when there is a critical alarm in the main or fn-c slots in the SONET subsystem. In this case, the failure affects the DS1 that are carried on the SONET payload in OC-3 signals terminated on these slots. The system does not use the SONET TSI map to determine which DS1 are affected by these failures.

  When VT1.5 or STS-1 AIS is received, AIS is sent on the DS1 signals carried in the payload. The system does not correlate these alarms.

  The observed behavior is similar to that which would occur if the SONET and DLC subsystems were separate multiplexer and DLC systems.

  AIS indicates that a failure has been detected elsewhere in the network (or in the system in this case) and should not be used to trigger craft personnel dispatch. The system raises a Major alarm when it detects DS1 AIS on the feeder DS1s since these signals are unprotected and receipt of AIS causes the system to initiate trunk processing on the affected lines.

DLC Subsystem Reports

Alarm and Status

Introduction

The DLC subsystem command RTRV-ALM retrieves and displays all active alarm and status conditions. The alarm and status report differs from the history report in that only active conditions are reported using the DLC subsystem command, RTRV-ALM.

RTRV-ALM report printed at log in

The alarm and status report is automatically printed after successful login to the DLC subsystem. The system prints a report as in response to the DLC subsystem command, RTRV-ALM-all::all;.

What is the meaning of the alarm and status report?

The following table lists the meanings and likely causes of the conditions reported in the alarm and status report for the DLC subsystem. The letters *m* and *n* in the addresses are variables that designate shelves or VRTs and slots or ports, respectively. For conditions with more than one possible cause, the most likely cause is listed first.

Address	Report	Meaning
pdc, smu, tsi-n, bmp-n, ls-a-n	**`12v power cnvtr failed`**	A fault has been detected in the internal 12 V DC power supply. Likely causes — a fault on the PDC, SMU, LIU, VTU, BMP, or TSI circuit packs, or failure of the UIP circuit module.
—	**`-48v power/fuse A failed`**	The 'A' 48-volt power feed to the ARM shelf has failed. Likely cause — 48-volt fuse on UIP has blown.
—	**`-48v power/fuse B failed`**	The 'B' 48-volt power feed to the ARM shelf has failed. Likely cause — 48-volt fuse on UIP has blown.
core-n	**`ABN - forced switch`**	TSI #n has been forced active. Prevents automatic protection switching. Clear using the UIP command, SWITCH-CORE.

Continued on next page

Alarm and Status (Continued)

What is the meaning of the alarm and status report? (continued)

Address	Report	Meaning
t8u-m-n	**ABN- incompat. T8U for FITL**	The version of the installed T8U is not compatible with FITL.
t8u-m-n	**ABN- incompat**	A T8U is installed when the shelf has been set for no T8U required.
tsi-n, bmp-n	**ABN - inhibit daily switch**	CORE nightly routine protection switching has been inhibited. This will occur if a CORE circuit pack has reset too many times or if the CORE as a whole has failed to stay active for 24 hours, several times in a row. This may indicate an intermittent fault or a fault on the indicated pack that only shows up when that pack is active. The RTRV-HSTY command may provide more information. Replace the indicated pack.
core-n	**ABN - inhibit switch**	TSI (CORE) automatic protection switching has been inhibited. Clear using the UIP command, SWITCH-CORE.
ls-a-n	**ABN - lockout of protection**	This message means that no service slot in the whole low-speed group is allowed to switch to protection. The lockout remains in effect until the protection switch is reset. See the SONET subsystem command, switch-ls.
ls-a-n	**ABN - lockout of service**	For a low-speed service slot, the specified low-speed service slot is active and will not be switched to protection. The lockout will remain in effect until the protection switch is reset. See the SONET subsystem command, switch-ls.

Continued on next page

Alarm and Status (Continued)

What is the meaning of the alarm and status report? (continued)

Address	Report	Meaning
ls-a-n	**ABN - manual switch**	The specified DS1 CP is manually switched to protection. The manual switch will remain in effect until the protection switch is reset or until a failure occurs and an automatic switch preempts the manual switch. See the SONET subsystem command, switch-ls.
smu	**ABN - SMU missing**	The SMU has been removed.
—	**AC power failed**	The AC power supply to a remote terminal cabinet has failed.
ls-a-n	**APS - automatic lock**	The service associated with a DS1 circuit pack (CP) has been automatically switched and locked onto the protection DS1 CP. The automatic protection lock will remain active until midnight. Likely cause — four automatic switches of a single DS1 CP in 10 minutes, usually because of an intermittent failure on the DS1 CP.
smu	**backup program mem. corrupt**	The DLC subsystem software on the SMU is corrupted. A software download of the DLC subsystem software must be performed, or the SMU must be replaced to correct this situation.
smu	**bkup prog. mem. disabled**	The SMU has been disabled. Use the UIP command, RETRIEVE-PROG-VRSN, to verify the version of the program. Use the UIP command, SET-STATE-SMU, to enable the SMU.

Continued on next page

Alarm and Status (Continued)

What is the meaning of the alarm and status report? (continued)

Address	Report	Meaning
tsi-n	**bad system data memory**	The copy of the system database stored on the indicated TSI contains uncorrectable errors. If only one TSI indicates this fault, it is probably failed. If both TSIs show this fault, then install the original TSIs from the system to permit the errors to be corrected, or use the INITIALIZE-SYSTEM command to clear both database copies.
cu-m-n, ls-a-n, mdc-m-n, pdc, ptu-m-n, smu, tsi-n, bmp-n, t8u-m-n, thc, uip	**circuit pack failed**	The identified circuit pack has failed.
ls-a-n, mdc-m-n, ls-a-n, smu, tsi-n, bmp-n, t8u-m-n	**circuit pack missing**	A circuit pack that was previously installed in this system is removed. The CP should be replaced, or an *update* should be done to remove it from the system equipment list. The circuit pack that was previously installed has been removed.
ls-a-n	**circuit pack on protection**	Service for the indicated VTU/LIU is being provided by the protection VTU/LIU.
tsi-n, bmp-n	**circuit pack unlatched**	The faceplate latch for the TSI/BMP circuit pack is not latched. The latch must be closed in order for the circuit pack to operate.
uip	**CIT port failed**	The CIT port on the UIP has failed.
compclk-n	**composite clock failure**	The composite clock input to the TSI has failed.

Continued on next page

Alarm and Status (Continued)

What is the meaning of the alarm and status report? (continued)

Address	Report	Meaning
tsi-n	**data memory update aborted**	An attempt to correct the system database copy on the indicated TSI has failed. Likely causes — removal of the other TSI before the database copy completed, or failure of the indicated TSI.
tsi-n	**data memory updating**	The copy of the system database stored on the indicated TSI is being updated.
a-m-n	**DS1 line loopback**	Line loopback has been established on the identified DS1.
dt-m-n	**DT BIU failed**	BIU failure in DT supported by the DT Server in slot #n of MDS #m.
dt-m-n	**DT battery charger alarm**	PIU failure in DT supported by the DT Server in slot #n of MDS #m.
dt-m-n	**DT CDTU failed**	CDTU failure in the DT.
dt-m-n	**DT CLF**	Loss of DS1 signal from DT supported by the DT Server in slot #n of MDS #m.
dt-m-n	**DT CU failed**	A CU has failed in the DT supported by the DT Server in slot #n of MDS #m.
dtcu-m-n-x	**DT CU incompatible**	The CU #x in the DT supported by the DT Server in slot #n of the MDS #m is incompatible with the DT.
dt-m-n	**DT datalink fail**	Lost extended superframe (ESF) datalink from DT supported by the DT Server in slot #n of MDS #m.

Continued on next page

Alarm and Status (Continued)

What is the meaning of the alarm and status report? (continued)

Address	Report	Meaning
dt-m-n	**`DT door open`**	Open door at DT supported by the DT Server in slot #n of MDS #m.
dt-m-n	**`DT in dual mode`**	DT supported by the DT Server in slot #n of MDS #m in dual mode — illegal configuration in the *SLC®*-2000 Access System (See 363-208-001, *SLC-2000 Access System, User/ Service Manual*).
dt-m-n	**`DT in mode err`**	For DT type *msdt*, the DT supported by the DT Server in slot #n of MDS #m in dual mode. For DT type *nbs*, the DT supported by the DT Server in slot #n of MDS #m in mode conflict. (See 363-208-001, *SLC-2000 Access System, User/ Service Manual*, for more information.)
dt-m-n	**`DT misc alarm received`**	A miscellaneous alarm is being reported by the DT Server in slot #n of MDS #m (DT fan, etc.).
dt-m-n	**`DT on backup battery`**	The distant terminal supported by the DT Server in slot #n of MDS #m is operating on battery power.
dt-m-n	**`DT on remote battery`**	The distant terminal supported by the DT Server in slot #n of MDS #m is operating on remote battery.
dt-m-n	**`DT on local battery`**	The distant terminal supported by the DT Server in slot #n of MDS #m is operating on local battery.
dt-m-n	**`DT PCU failed`**	PCU failed in DT supported by the DT Server in slot #n of MDS #m.
dt-m-n	**`DT PIU CP missing`**	PIU removed in DT supported by the DT Server in slot #n of MDS #m.
dt-m-n	**`DT PIU fuse failed`**	PIU fuse failed in DT supported by the DT Server in slot #n of MDS #m.

Continued on next page

Alarm and Status (Continued)

What is the meaning of the alarm and status report? (continued)

Address	Report	Meaning
dt-m-n	**DT power source failed**	AC power failure in DT supported by the DT Server in slot #n of MDS #m.
dt-m-n	**DT pwr alarm received**	The distant terminal supported by the DT Server in slot #n of MDS #m has reported a power fault (PCU, PIU failure).
dt-m-n	**DT RGU failed**	RGU failed or missing at DT supported by the DT Server in slot #n of MDS #m.
—	**dual ringing gen. failure**	The external major alarm input on the UIP is active. Typically, the ringing supply to the system has failed. However, in some applications, this input may be externally multipled with 1 of the 14 environmental alarm points (miscellaneous discrete inputs).
dt-m-n	**DT server missing**	A DT Server previously installed in slot #n of MDS #m and provisioned with 12 or 24 lines has been removed. Reinsert or replace the DT Server, *or* provision the DT Server for 0 lines.
v3eoc-m-n	**EOC data link failed**	Lost EOC datalink from RT.
—	**externalMinor**	The UIP external minor input is active. Typically, this input is connected to an external power shelf and means that a single rectifier, a single ringing generator, or the fan shelf has failed. Normally, miscellaneous discrete input number 15 on the SYSCTL is used for this purpose.
site No.	**FE alm (use SONET rtrv-alm)**	There is at least one active alarm at the identified site. The SONET subsystem CIT alarm report should be used to obtain more details.

Continued on next page

Alarm and Status (Continued)

What is the meaning of the alarm and status report? (continued)

Address	Report	Meaning
cu-m-n, t8u-m-n	**`hardware incompat.`**	The circuit pack in channel unit slot #n on MDS #m is incompatible with the system configuration. Possible errors are DT Server in wrong channel slot in the shelf, a metallic channel unit is installed in a shelf which has been provisioned for FITL operation, or a nonsupported channel unit has been installed. The T8U is installed in shelf m side n and that shelf has been set to T8U not required. Remove the T8U.
a-m-n	**`inc. DS1 AIS*`**	DS1 AIS is being received on the feeder DS1 signal #n on VTU/LIU #m. Likely causes — upstream (toward the OC-3 feeder) network equipment or facility.
a-m-n	**`inc. DS1 LOF`**	A loss-of-frame (LOF) condition exists on the identified feeder DS1 signal. Likely cause — failure of far-end signal or hardware.
a-m-n	**`inc. DS1 LOS`**	At least 128 consecutive zeros are received in the DS1 signal incoming from the DSX-1, or the energy at the DS1 input is below a preset threshold. Likely causes — hard failure of upstream equipment or facility (towards the DSX-1), the DS1 input is disconnected at the backplane or the DSX-1, or equipment is failed or removed at DSX-1.

Continued on next page

Alarm and Status (Continued)

What is the meaning of the alarm and status report? (continued)

Address	Report	Meaning
a-m-n	**`inc. DS1 sig. degrade`**	The bit error rate (BER) in the received DS1 signal exceeds 10^{-6}. Likely causes — failure of the DS1 terminating CP at the far end, far-end cable failure, cross talk in office wiring at the far end, or failure of the far-end signal.
a-m-n	**`inc. DS1 sig. fail (HBER)`**	The bit error rate (BER) on the identified feeder DS1 signal exceeds 10^{-3}.
a-m-n	**`inc. DS1 yellow`**	The far end is detecting a DS1 signal failure or DS1 AIS*. Likely causes — far-end signal failure or a near-end failure which is causing the system to transmit AIS. This is only detected on INA DS1s and TR303 DS1s.
a-m-n	**`internal PCM path failure`**	There is an internal transmission problem for the feeder DS1 signal #n on VTU/LIU #m. Likely cause — TSI, VTU, LIU, MDC, or T8U circuit packs.
dtcu-m-n-p	**`ISDN cu conflict`**	ISDN channel unit placement violation in slot #p of the distant terminal supported by the DT Server in slot #n of metallic distribution shelf #m. See ISDN CU placement restrictions for the DT in 363-208-000, *SLC-2000 Access System, Applications Planning and Ordering Guide*.

Continued on next page

Alarm and Status (Continued)

What is the meaning of the alarm and status report? (continued)

Address	Report	Meaning
dt-m-n	**ISDN CU in wrong slot**	ISDN channel unit placement violation in DT supported by the DT Server in slot #n of MDS #m.
—	**link failed**†	A link has failed — the addresses identify the elements. Likely causes — MDC failure(s), MDS quadrant has lost power, the SYSCTL has failed (check the fault LEDs and try an LED Test), or the unit may have failed.
ls-a-n	**miscellaneous input active**	The external alarm input on the specified VTU/LIU is active. The real message that appears in the alarm and status report for this condition can be provisioned. This is the default message. See the SONET subsystem commands, rtrv-attr-env and set-attr-env.
ptu-m-n	**neg. ringing input failed**	No negative ringing signal is present on the input to PTU #n in MDS #m. Therefore, no ringing is available for the circuits served by the PTU. Likely cause — ringing generator failure.
dt-m-n	**no timeslots for DT server**	Configuration error of conflicting or zero timeslots assigned to DT Server in slot #n of MDS #m (DT Server in wrong channel slot in the shelf).
pdc, ls-a-n, tsi-n, bmp-n, mdc-m-n	**pack initialization**	Software on the indicated circuit pack is being initialized and a self-test is being performed. The BMP initialization is dependent upon the TSI first completing initialization.

Continued on next page

Alarm and Status (Continued)

What is the meaning of the alarm and status report? (continued)

Address	Report	Meaning
core-n	**pack initialization**	Software on the indicated core circuit packs is being initialized. This includes multipack initialization dependencies.
—	**PDC/SYSCTL link incompat.**	The PDC has detected an incompatibility with the communication protocol between the PDC and the SYSCTL. Incompatible SYSCTL software may cause this to be reported.
ptu-m-n	**pos. ringing input failed**	No positive ringing signal is present on the input to PTU #n in MDS #m. Therefore, no positive ringing is available for the circuits served by the PTU. Likely cause — ringing generator failure. Alarmed only if a multiparty channel unit is plugged into the quadrant served by the PTU.
—	**power eqpt failed**	The RT has detected an external MN alarm closure. This is usually connected to the DC power shelf and indicates a DC power shelf failure.
ptu-m-n	**PTU CP power failure**	Power to the PTU has failed.
ls-a-n	**QLS input clock fail**	The VTU input clock has failed. Normally caused by an MXRVO failure in the FUNCTION A slot, or a TGS failure.
ls-a-n	**QLS protection unavailable**	VTU/LIU protection is unavailable. An event (such as VTU/LIU failure) has resulted in VTU/LIU protection being unavailable.

Continued on next page

Alarm and Status (Continued)

What is the meaning of the alarm and status report? (continued)

Address	Report	Meaning
ls-a-n	**QLS received clock failed**	VTU #n has received a bad clock input. Likely cause — VTU or MXRVO failure (use SWITCH-LS or SWITCH-FN to switch a VTU or MXRVO before pulling it).
dt-m-n	**rcvd FITL yellow**	A yellow alarm signal is being received by the DT Server in slot #n of MDS #m. Likely causes — DT fault, or a local fault which has caused the far end to detect a failure.
smu	**SMU powering-up**	The SMU circuit pack is powering up. A test of the stored software is being performed.
—	**SONET alarm active**	Provides a summary of the active alarms and status conditions in the SONET subsystem. Use the CIT to get detailed information.
cu-m-n, ptu-m-n	**stuck test relay**	A relay is stuck on PTU #n in MDS #m. Try pushing the reset button on the PTU. If this does not clear the problem, the PTU has probably failed.
smu	**SW download in-progress**	Software download of DLC subsystem software to the SMU has started.
mdc-m-n, tsi-n, ls-a-n, bmp-n	**SW installation aborted**	Aborted software installation on the identified pack. Likely cause — the circuit pack has failed.
ls-a-n, mdc-m-n, tsi-n, bmp-n	**SW installation in-progress**	A software installation is in progress to identified pack.

Continued on next page

Alarm and Status (Continued)

What is the meaning of the alarm and status report? (continued)

Address	Report	Meaning
smu	**SW download aborted**	The software download of DLC subsystem software to the SMU was aborted. The DLC subsystem software on the SMU may be corrupt.
mdc-m-n, pdc, ls-a-n, tsi-n, bmp-n	**SW installation pending**	The identified circuit pack is waiting for a software (SW) installation from the SMU. The Fault LED of the circuit pack should be blinking.
—	**sync quality unknown**	Loss of primary and protection provisioned clock source. The system is running with an alternate clock source with unknown quality.
—	**sys data memory fault**	The system database is not valid. No provisioning activities will be accepted until the fault is corrected. Likely causes — faults which affect both TSIs, or two TSIs which contain error-free but mismatched copies of the database.
tsi-n	**system is free running**	The system is no longer locked to a stable timing source. Likely cause — TGS packs failed/ removed in a SONET system or there are no good DS1 signals in a metallic system.
v3tmc-m-n	**TMC data link failed**	Lost TMC datalink from RT.
vrt-m	**TR8 alarm received**	With Major Alarm — A major alarm has been received on VRT #m (without a digroup alarm indication). With Minor Alarm — A minor alarm has been received on VRT #m (without a digroup alarm indication).
tr8dl-m-n	**TR8 data link failed**	The received TR-08 datalink has failed. Likely cause — failure of far-end DLC or digital switch.

Continued on next page

Alarm and Status (Continued)

What is the meaning of the alarm and status report? (continued)

Address	Report	Meaning
vrt-n	**`TR8 FELP rcvd`**	A far-end loopback (FELP) message has been received for VRT #m on the TR-08 datalink. If a DS1 has been looped back towards the facility, a corresponding fault message is in the Faults queue.
dgr-m-n	**`TR8 MJ digroup alarm rcvd`**	With Major Alarm — A major alarm has been received for digroup letter n on VRT #m. Likely causes — local failure in the DLC subsystem that caused the far end to detect a facility failure, or the far-end DLC terminal or digital switch has failed.
vrt-m	**`TR8 misc alarm rcvd`**	A power/miscellaneous alarm has been received on the TR-08 datalink of VRT #m.
uip	**`VRT test in-progress`**	A VRT test (initiated using the UIP command, TEST-VRT-ALM) is in progress.

* DS1 AIS is detected on the incoming signals for the feeder DS1s (a-{1-7}-{1-4}). Normally, the AIS is caused by an upstream failure in the network (for example, at another multiplex). However, sometimes this condition is also raised in a *SLC*-2000 Access System when there is a critical alarm in the *main* or *fn-c* slots in the SONET subsystem. In this case, the failure affects the DS1s that are carried on the SONET payload in OC-3 signals terminated on these slots. The system does not use the SONET TSI map to determine which DS1s are affected by these failures.

When VT1.5 or STS-1 AIS is received, AIS is sent on the DS1 signals carried in the payload. The system does not correlate these alarms.

The observed behavior is similar to that which would occur if the SONET and DLC subsystems were separate multiplexer and DLC systems.

AIS indicates that a failure has been detected elsewhere in the network (or in the system in this case) and should not be used to trigger craft personnel dispatch. The system raises a major alarm when it detects DS1 AIS on the feeder DS1s since these signals are unprotected and receipt of AIS causes the system to initiate trunk processing on the affected lines.

Continued on next page

Alarm and Status (Continued)

What is the meaning of the alarm and status report? (continued)

† Link faults are unisolated faults that occur between circuit packs in the system. These faults typically occur when a circuit pack has failed or is removed. Link alarms may also occur if there are cabling faults between the ARM shelf assembly and MDS assembly, or if there is a backplane fault. The system clears the link faults if and when it has isolated the failure to an individual circuit pack. It will then raise an alarm against the implicated pack. Ignore link alarms that do not persist for more than 3 minutes.

Link AIDs use the form Circuit_Pack_1_AID-Circuit_Pack_2_AID. Circuit_Pack_1_AID is the AID of the circuit pack on one end of the link, and Circuit_Pack_2_AID is the AID of the circuit pack on the other end of the link.

In the DLC subsystem alarm report, the first AID is listed in the address column and the second AID is included in the description column.

If there are several link alarm messages and the same circuit pack AID is in more than one link AID, the fault most likely lies in that circuit pack.

The following list identifies the CP link AIDs.

EOC to EOC	bmp-{1,2}/bmp-{1,2}
EOC to TSI	tsi-{1,2}/bmp-1-{1,2}
MDC to CU bus	mdc-{1–8}-{1,2}/cubus-{1–3}
MDC to MDC	mdc-{1–8}-2/mdc-{1–8}-1
MDC to PTU	mdc-{1–8}-{1,2}/ptu-{1–8}-{1,2}
MDC to T8U	mdc-{1–8}-{1,2}/t8u-{1–8}-{1,2}
MDC to TSI	mdc-{1–8}-{1,2}/tsi-{1,2}
PDC to SYSCTL	pdc/sysctl
PDC to TSI	pdc/tsi-{1,2}
PDC to UIP	pdc/uip
SMU to PDC	smu/pdc
THC to TSI	thc/tsi-{1,2}
TMC to TMC	bmp-{1,2}/bmp-{1,2}
TSI to BMP	tsi-{1,2}/bmp-1-{1,2}
TSI to TSI	tsi-1/tsi-2
VTU/LIU to TSI	ls-a-{1–8}/tsi-{1,2}
VTU/LIU #8 to VTU/LIU	ls-a-8/ls-a-{1–7}

History

Introduction

NOTE:
This section only applies to the DLC subsystem.

The maintenance history report displays event-history of the most recent (up to 500) system events.

Last in, first out

Events are displayed in a last-in, first-out order according to the order in which they occurred. Normally, this results in event date/time stamps shown in a monotonically decreasing order with the newest time stamp shown first and the oldest time stamp shown last. However, time or date provisioning changes will cause the log output to deviate from the norm.

RTRV-ALM alarm report included in history report

In addition to the messages listed, any messages that appear in the alarm and status report (DLC subsystem command, RTRV-ALM) may also appear in the history report to record the onset of alarm and status conditions.

DLC subsystem commands that affect the service state

Also, all DLC subsystem commands that affect the state of the system (provisioning commands; protection switching commands; loopbacks; transmission, alarm, and telemetry tests) will appear in the report.

(Continued on next page)

History (Continued)

What is the meaning of the history report?

The following table lists the history reports and associated meaning(s) for the DLC subsystem. The letters *m* and *n* in the addresses are variables that designate slots or VRTs and digroups or ports, respectfully.

CIT String Text	Meaning
12v power cnvtr alm clrd	A fault in the internal 12 V DC power supply has cleared.
-48V power/fuse A alm clrd	The `A´ 48-volt power feed to the ARM shelf has been restored.
-48V power/fuse B alm clrd	The `B´ 48-volt power feed to the ARM shelf has been restored.
AC power good	The AC power supply to a remote terminal cabinet has been restored.
APS - automatic lock reset	The automatic protection switch lock for a circuit pack has been released.
auto switch	An automatic CORE side switch has occurred. The automatic side switch message occurs when the core routinely switches once in a 24-hour period.
backup prog. mem. alm clrd	The condition that caused the system to report the corruption of the DLC subsystem software on the SMU has cleared.
bkup prog. mem. cond. clrd	The condition that caused the system to report the disabling of the backup program memory (SMU) has cleared.
circuit pack fail clrd	The condition that caused the system to report a failure of the identified circuit pack has cleared.
circuit pack inserted	A circuit pack has been inserted. If an alarm is cleared as a result of this insertion, the alarm clear message is logged separately.
circuit pack missing clrd	The condition that caused the system to report a missing circuit pack that was previously installed in the system has cleared.
circuit pack not unlatched	The faceplate latch for the TSI or BMP circuit pack in now latched.
circuit pack removed	A circuit pack has been removed. If an alarm is raised as a result of this insertion, the alarm clear message is logged separately.

Continued on next page

History (Continued)

What is the meaning of the history report? (continued)

CIT String Text	Meaning
CIT port alm clrd	The alarm associated with the CIT port located on the UIP has cleared.
composite clock fail clrd	The condition that caused the system to report a failure of the composite clock input to the TSI has cleared.
command_name:address	The specified command was entered on the UIP, CIT, or OS/NE (X.25) interface. The address of the affected system element is included if applicable. Only commands which affect the state of the system are logged (for example, provisioning type commands).
CU link fail clrd	The condition that caused the system to report a link failure has cleared.
data mem. cond. clrd	The condition that caused the system to report the updating of the copy of the system database stored on the indicated TSI has cleared.
data memory abort alm clrd	The condition that caused the system to report a failure of an attempt to correct the system data base copy on the indicated TSI has cleared.
Digroup in-service	A TR-08 digroup has transitioned from OOS to IS. (See the section “Service States” of 363-208-000, *SLC-2000 Access System, Applications Planning and Ordering Guide*, for a description of TR-08 digroups and TR-08 digroup service states.)
Digroup out-of-service	A TR-08 digroup has transitioned from IS to OOS. (See the section “Service States” of 363-208-000, *SLC-2000 Access System, Applications Planning and Ordering Guide*, for a description of TR-08 digroups and TR-08 digroup service states.)
DS1 line loopback rlsd	Line loopback on the identified DS1 has been released.

Continued on next page

History (Continued)

What is the meaning of the history report? (continued)

CIT String Text	Meaning
DS1 port in service	A feeder DS1 (VTU/LIU port) has transitioned to IS. (See the section “Service States” of 363-208-000, *SLC-2000 Access System, Applications Planning and Ordering Guide*, for a description of TR-08 digroups and TR-08 digroup service states.)
DT battery alarm clrd	The condition that caused the system to report that the DT supported by the DT Server in slot #n of MDS #m is operating on battery has cleared.
DT batt chrg alm clrd	The condition that caused the system to report that the DT battery charger is in alarm has cleared.
DT BIU fail clrd	BIU failure in DT supported by the DT Server in slot #n of MDS #m has cleared.
DT CDTU fail clrd	CDTU failure in DT has cleared.
DT CLF clrd	The condition that caused the system to report the loss of DS1 signal from DT supported by the DT Server in slot #n of MDS #m has cleared.
DT CU fail clrd	The CU failure in the DT supported by the DT Server in slot #n of MDS #m has cleared.
DT CU incomp. clrd	The condition making the CU #x in the DT supported by the DT Server in slot #n of the MDS #m incompatible with the DT has now cleared.
DT datalink alm clrd	The condition that caused the system to report a lost extended superframe (ESF) datalink from DT supported by the DT Server in slot #n of MDS #m has cleared.
DT door alarm clrd	The condition that caused the system to report an open door at DT supported by the DT Server in slot #n of MDS #M has cleared.

Continued on next page

History (Continued)

What is the meaning of the history report? (continued)

CIT String Text	Meaning
DT door alarm clrd	The condition that caused the system to report an open door at DT supported by the DT Server in slot #n of MDS #m has cleared.
DT dual CU mode clrd	The condition that caused the system to report an illegal dual mode configuration at the DT supported by the DT Server in slot #n of MDS #m has cleared.
DT local batt alm clrd	The condition that caused the system to report that the DT supported by the DT Server in slot #n of MDS #m is operating on local battery has cleared.
DT misc alarm clrd	The condition that caused the system to report a miscellaneous alarm via the DT Server in slot #n of the MDS #m (DT fan, etc.) has cleared.
DT mode error clrd	The condition that caused the system to report an illegal mode configuration at the DT supported by the DT Server in slot #n of MDS #m has cleared.
DT PCU fail clrd	The PCU failure in DT supported by the DT Server in slot #n of MDS #m has cleared.
DT PIU CP missing clrd	The condition that caused the system to report a PIU removal in DT supported by the DT Server in slot #n of MDS #m has cleared.
DT PIU fuse alm clrd	The condition that caused the system to report a PIU fuse failure in the DT supported by the DT Server in slot #n of MDS #m has cleared.
DT power source alm clrd	The condition that caused the system to report an AC power failure at the DT supported by the DT Server in slot #n of MDS #m has cleared.
DT pwr alarm clrd	The condition that caused the system to report a power fault (PCU, PIU failure) at the DT supported by the DT Server in slot #n of MDS #m has cleared.
DT remote batt alm clrd	The condition that caused the system to report that the DT supported by the DT Server in slot #n of MDS #m is operating on remote battery has cleared.

Continued on next page

History (Continued)

What is the meaning of the history report? (continued)

CIT String Text	Meaning
DT RGU fail clrd	The condition that caused the system to report an RGU failed or missing at DT supported by the DT Server in slot #n of MDS #m has cleared.
DT server alarm clrd	The condition that caused the system to report a configuration error of conflicting or zero timeslots assigned to DT Server in slot #n of MDS #m has cleared.
DT server missing clrd	The condition that caused the system to report a missing DT Server in slot #n of MDS #m has been cleared.
dual ringing gen. alm clrd	The condition that caused the system to report a failure of the dual ringing supply to the system has cleared.
EOC data link alm clrd	The condition that caused the system to report the EOC data link failure has cleared.
hardware incompat. clrd	The condition that caused the system to report the incompatibility of the circuit pack in channel unit slot #n on MDS #m with the system configuration has cleared.
inc. DS1 AIS clrd	The condition that caused the system to report receiving a DS1 AIS on the feeder DS1 signal #n on VTU or LIU #m has cleared.
inc. DS1 LOF clrd	The condition that caused the system to report a loss-of-frame (LOF) condition on the identified feeder DS1 signal has cleared.
inc. DS1 LOS clrd	The condition that caused the system to report a loss-of-signal (LOS) condition has been cleared.
inc. DS1 sig. degrade clrd	The condition that caused the system to report that the bit error rate (BER) in the received DS1 signal has exceeded 10_{u-3d} has cleared.
inc. DS1 sig. fail (HBER) clrd	The condition that caused the system to report receiving a DS1 AIS on the feeder DS1 signal #n on VTU or LIU #m has cleared.
inc. DS1 yellow clrd	The condition that caused the system to report the detection of a DS1 signal failure or DS1 AIS by the far end has cleared.

Continued on next page

History (Continued)

What is the meaning of the history report? (continued)

CIT String Text	Meaning
`INA DS1 in-service`	An INA DS1 has transitioned from OOS to IS. (See the section “Service States” of 363-208-000, *SLC-2000 Access System, Applications Planning and Ordering Guide*, for a description of INA DS1s and INA DS1 service states.)
`INA DS1 out-of-service`	An INA DS1 has transitioned from IS to OOS. (See the section “Service States” of 363-208-000, *SLC-2000 Access System, Applications Planning and Ordering Guide*, for a description of INA DS1s and INA DS1 service states.)
`internal PCM path alm clrd`	The condition that caused the system to report an internal transmission problem for the feeder DS1 signal #n on VTU or LIU #m has cleared.
`ISDN CU alarm clrd`	The condition that caused the system to report an ISDN channel unit placement violation in DT supported by the DT Server in slot #n of MDS #m has cleared.
`ISDN CU conflict clrd`	The condition that caused the system to report an ISDN channel unit placement violation in slot #p of the distant terminal supported by the DT Server in slot #n of MDS #m has cleared.
`Line Group in-service`	A Line Group has transitioned from OOS to IS. (See the section “Service States” of 363-208-000, *SLC-2000 Access System, Applications Planning and Ordering Guide*, for a description line groups and line group service states.)
`Line Group out-of-service`	A Line Group has transitioned from IS to OOS. (See the section “Service States” of 363-208-000, *SLC-2000 Access System, Applications Planning and Ordering Guide*, for a description line groups and line group service states.)
`link alm clrd`	The condition that caused the system to report a link failure has cleared.

Continued on next page

History (Continued)

What is the meaning of the history report? (continued)

CIT String Text	Meaning
miscellaneous input clrd	The condition that caused the system to report the external alarm has cleared.
neg. ringing input alm clrd	The condition that caused the system to report no negative ringing signal present on the input to PTU #n in MDS #m has cleared.
pack initialization clrd	The condition that caused the system to report the initialization and self-testing of the software on the indicated circuit pack has cleared.
PDC reset	After a PDC reset, this is the first message that the system enters into the history log. (PDC reset clears the DLC subsystem history log.)
PDC/SYSCTL link incompat. clrd	The condition that caused the system to report that the PDC/SYSCTL link was incompatible has cleared.
power eqpt good	The condition that caused the system to report that the power equipment failed has cleared.
pos. ringing input alm clrd	The condition that caused the system to report a failure of the positive ringing signal on the input to PTU #n in MDS #m has cleared.
protection QLS alarm clrd	The condition that caused the system to report the unavailability of VTU/LIU protection has cleared.
protection alm clrd	The condition that caused the system to report that service for the indicated VTU/LIU is being provided by the protection VTU/LIU has cleared.
PTU CP fail clrd	The condition that caused the system to report a failure of power to the PTU has cleared.
QLS clock alm clrd	The condition that caused the system to report that the VTU/LIU was receiving a bad clock input has cleared.
QLS input clock alm clrd	The condition that caused the system to report a failure of the VTU/LIU input clock has cleared.

Continued on next page

History (Continued)

What is the meaning of the history report? (continued)

CIT String Text	Meaning
rcvd FITL yellow clrd	The condition that caused the system to report a yellow alarm signal received by the DT Server in slot #n of MDS #m has cleared.
reference input switch	This message appears when the system is in a DS1 feeder (LIU) configuration and the system switches from one loop timing reference input to another.
reference input switch	This message appears when the CORE derives its timing from a composite clock input and switches from one composite clock reference to another.
reset forced switch	The circuit pack that has been forced active preventing automatic protection switches has been reset.
reset inhibit daily switch	The indicated pack had been preventing the CORE daily switch from occurring. This condition has now been reset.
reset inhibit switch	The TSI (CORE) automatic protection switching that was inhibited has been reset.
reset lockout	The protection switch was reset so that service slots in the low-speed group are allowed to switch to protection.
reset manual switch	The DS1 CP manual switch to protection has been reset. Either the manual switch has been reset or another failure or automatic switch has preempted the manual switch.
SMU missing clrd	The condition that caused the system to report the SMU missing has cleared.
SMU power-up clrd	The condition that caused the system to report the powering of the SMU circuit pack has cleared.
SW download abort clrd	The condition that caused the system to report an aborted attempt of the software download of the DLC subsystem software to the SMU has cleared.

Continued on next page

History (Continued)

What is the meaning of the history report? (continued)

CIT String Text	Meaning
SW download cond clrd	The condition that caused the system to report the starting of the software download of the DLC subsystem software to the SMU has cleared.
SW installation abort clrd	The software installation from the SMU is now in progress for the identified circuit pack.
SW installation cond clrd	The condition that caused the system to report a software installation in progress to the identified pack has cleared.
SW installation not pending	The software installation from the SMU is now in progress for the identified circuit pack.
sync quality recovered	The condition that caused the system to lose primary clock source has cleared. The clock source is now of known quality.
sys data memory fault clrd	The condition that caused the system to report that its data base is not valid has cleared.
system clock alm clrd	The condition that caused the system to report that the system is no longer locked to a stable timing source has cleared.
system data memory alm clrd	The condition that caused the system to report uncorrectable errors on the copy of the system data base stored on the indicated TSI has cleared.
T8U incompat. clrd	The condition that caused the system to report the incompatibility between the installed T8U and FITL has cleared.
test relay alm clrd	The condition that caused the system to report a stuck test relay on channel unit #n on MDS #m has cleared.
TMC data link alarm clrd	The condition that caused the system to report the TMC data link alarm has been cleared.

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History (Continued)

What is the meaning of the history report? (continued)

CIT String Text	Meaning
TR8 FELP cond. clrd	A far-end loopback (FELP) message has been cleared for VRT #m on the TR-08 datalink.
TR8 MJ digroup alarm clrd	The condition that caused the system to report a major alarm on digroup #n on VRT #m has cleared.
TR8 alarm clrd	The condition that caused the system to report an alarm on VRT #m has cleared.
TR8 data link alm clrd	The condition that caused the system to report the failure of the received TR-08 datalink has cleared.
TR8 misc alarm clrd	The condition that caused the system to report a power/miscellaneous alarm on the TR-08 datalink of VRT #m has cleared.
TSI incomp. clrd	The condition that caused the system to report that the TSI circuit pack was incompatible has been cleared.

SONET Subsystem Reports

Fault and Alarm

Introduction

The SONET subsystem command, rtrv-alm retrieves and displays all active fault and alarm conditions within the SONET subsystem. The alarm and status report differs from the history report in that only active conditions are reported using the SONET subsystem command, rtrv-alm.

What is the meaning of the fault and alarm report?

The following table lists the meanings and likely causes of the conditions reported in the alarm and status report for the SONET subsystem. The report includes the source address of the alarm as well as the date and time of the alarm, whether or not the condition is service-affecting, and a short description of the condition. The report also includes a summary message for the DLC subsystem.

CIT String Text	Meaning
AC power failed - FE	The AC power supply to a remote terminal cabinet has failed.
ACO active	The parallel telemetry outputs and audible office alarms normally active because of the alarm conditions in the system are being suppressed. See the SONET subsystem command, opr-aco.
APS - automatic lock	The service associated with a DS1 CP has been automatically switched and locked onto the protection DS1 CP. The automatic protection switching (APS) lock will remain active until midnight. Cause is four automatic switches of a single DS1 CP in 10 minutes, probably because of an intermittent failure of the DS1 CP.
APS channel failed	The SONET automatic protection switching (APS) channel on the protection OC-3 line has failed. Likely causes — failure of the OLIU CP on the protection line at the far end, or failure of the OLIU CP on the protection line at the near end.

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Fault and Alarm (Continued)

What is the meaning of the fault and alarm report? (continued)

CIT String Text	Meaning
`auto turnup test IP`	An automatic turnup test is in progress.
`communication failure`	The system is not communicating with another shelf in the network. System is normally communicating with that shelf through the SONET section DCC specified in the address column. The SONET subsystem command, rtrv-nmap, will report the name of the system(s) with which this system is not communicating. Likely causes include a controller failure, reset, or initialization on another shelf; section DCC channel failure on this or another shelf; failure of the OHCTL CP.
`control`*`n`*	The specified environmental control point (miscellaneous discrete output) is active. The *real* message that appears in the alarm and status report for this condition can be provisioned; this is the default message. See the SONET subsystem commands, rtrv-attr-cont and set-attr-cont. Cause is the system was instructed to close the environmental control point by either a TBOS control point or by the closing of the corresponding environmental control input at the far end.
`CP removed`	A CP previously installed in this system is removed. Replace the CP, or *update* to remove it from the system equipment list.
`DS1 CP failed`	Internal equipment failure of the specified DS1 CP.
`DS1 loopback`	A loopback (toward the optical fiber) is active on the specified T1 port. See the SONET subsystem commands, opr-lpbk-t1 and rls-lpbk-t1.

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Fault and Alarm (Continued)

What is the meaning of the fault and alarm report? (continued)

CIT String Text	Meaning
DS1 trmsn test IP	A transmission test using the internal test signal generator and monitor is in progress on the specified T1 port. See the SONET subsystem command, test-trmsn-t1.
DS3 CP failed	Internal equipment failure of the specified DS3 CP.
DS3 loopback	A loopback (toward the optical fiber) is active on the specified T3 port. See the SONET subsystem commands, opr-lpbk-t3 and rls-lpbk-t3.
DS3 trmsn test IP	A transmission test using the internal test signal generator and monitor is in progress on the specified T3 port. See the SONET subsystem command, test-trmsn-t3.
duplicate site/ne address	Two or more shelves in the network have the same site address (determined by switches on the SYSCTL CP) and the same network element address (determined by switches on the OHCTL CP).
duplicate TBOS display	Two or more shelves in the network have the same TBOS display number (determined by switches on the SYSCTL CP).
duplicate TID	Two or more shelves in the network have the same system name or TID set by the SONET command, set-ne.
environment*n*	The specified environmental alarm point (miscellaneous discrete input) is active. The *real* message that appears in the alarm and status report for this condition can be provisioned; this is the default message. See the SONET subsystem commands, rtrv-attr-env and set-attr-env.

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Fault and Alarm (Continued)

What is the meaning of the fault and alarm report? (continued)

CIT String Text	Meaning
`excessive holdover`	The system has been in holdover mode for more than 4 hours. May cause degraded performance (high error rates) on the transmitted and/or received signals. Whenever this condition exists, the condition "holdover mode active" also exists. Likely cause — refer to "holdover mode active".
`externalMinor`	The external minor alarm input (environmental alarm input 15) is active. Typically, this input is connected to an external power shelf and means that the DC power or the cooling fan in a remote terminal cabinet has failed. The *real* message that appears in the alarm and status report for this condition can be provisioned; this is the default message. See the SONET subsystem commands, rtrv-attr-env and set-attr-env.
`forced switch`	For an OC-3 line, the identified line is not selected as the active receiving line, and an automatic or manual protection switch to make this the active receiving line will not be done. The forced switch will remain in effect until the protection switch is reset or a lockout or inhibit switch request is received. Note that switching is unidirectional. Because of this, the specified line might still be active (if the far end is selecting the specified line to receive traffic), and the far end might still be free to switch the line it is selecting to receive traffic. See the SONET subsystem command, switch-line. For a function unit slot or a low-speed service slot, the identified equipment is not active, and an automatic or manual switch to make it active will not be done. The forced switch will remain in effect until the protection switch is reset or a lockout or inhibit switch request is received. See the SONET subsystem commands, switch-fn and switch-ls.

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Fault and Alarm (Continued)

What is the meaning of the fault and alarm report? (continued)

CIT String Text	Meaning
`holdover mode active`	The system is in holdover synchronization mode. Likely causes — the system was manually switched to holdover mode [with the SONET subsystem command, switch-sync, or in a central office (CO) system, with a TBOS control point] and the switch has not been reset; or the system automatically switched to holdover mode because of failure of the timing references, and either the reference failures have not cleared or the system is provisioned for nonrevertive synchronization mode switching or the system is provisioned for *external* timing and no external timing references are available. The condition can be cleared by repairing at least one timing reference (if both are failed) and resetting synchronization mode protection switching with the command switch-sync:s=mode,pri=reset. In a CO system, the synchronization mode can also be reset with a TBOS control point.
`inc. DS1 LOS`	At least 128 consecutive zeros are received in the DS1 signal incoming from the DSX-1, or the energy at the DS1 input is below a preset threshold. Likely causes — hard failure of upstream equipment or facility (towards the DSX-1). The DS1 input is disconnected at the backplane or the DSX-1; equipment is failed or removed at DSX-1.
`inc. DS1 sig failed (BER)`	Bit error ratio (BER) in the DS1 signal incoming from the DSX-1 exceeds the provisioned failure threshold, 10^{-3} or 10^{-6}. Likely causes — failure of upstream equipment or facility (towards the DSX-1). Crosstalk in office wiring. Failure of the DS1 CP.
`inc. DS1 sync. ref. AIS`	DS1 alarm indication signal (AIS) is being received from the DS1 synchronization reference signal. Likely causes — failure of upstream equipment or facility (towards the DSX-1).

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Fault and Alarm (Continued)

What is the meaning of the fault and alarm report? (continued)

CIT String Text	Meaning
`inc. DS1 sync. ref. BER`	Bit error ratio (BER) in the DS1 synchronization reference signal exceeds 10^{-3}. Likely causes — failure of upstream equipment or facility (towards the DSX-1).
`inc. DS1 sync. ref. EOOF`	Excessive out-of-frame (OOF) events were detected in the DS1 synchronization reference signal. Excessive OOF is defined as more than 512 out-of-frame events in one day. Likely cause — failure of the incoming DS1 synchronization reference signal.
`inc. DS1 sync. ref. LOF`	The system is unable to frame on the DS1 synchronization reference signal. Likely causes — upstream failure in the clock providing the reference signal; high bit error ratio on the received signal caused by failure of the office timing supply that provides the DS1 timing reference; the system is provisioned for SF format on the specified DS1 synchronization reference signal and the received DS1 signal is in ESF format.
`inc. DS1 sync. ref. LOS`	At least 128 consecutive zeros were received in the DS1 synchronization reference signal, or the energy at the DS1 input is below a preset threshold. Likely causes — failure of the office timing supply that provides the DS1 timing reference or failure of the connection to the timing supply.
`inc. DS1 sync. ref. OOL`	The incoming DS1 synchronization reference signal is out of lock (OOL). The clock frequency of the DS1 reference signal is out of specification. Likely causes — failure of the office timing supply that provides the DS1 timing reference.
`inc. DS3 AIS`	The system has detected DS3 alarm indication signal (AIS) in the DEMUX direction (that is, coming from the fiber) for the specified DS3 signal. Likely causes — the incoming DS3 signal at the far end is failed, or DS3 AIS is received from the DSX-3 at the far end.

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Fault and Alarm (Continued)

What is the meaning of the fault and alarm report? (continued)

CIT String Text	Meaning
`inc. DS3 LOS`	At least 128 consecutive zeros were detected in the DS3 signal received from the DSX-3. Likely causes — equipment failed or removed at DSX-3; DS3 input disconnected at the DSX-3 or at the DDM-2000 backplane.
`inc. DS3 OOF`	The system has detected a DS3 out-of-frame (OOF) condition in the DEMUX direction (that is, coming from the fiber) for the specified DS3 signal. Reported only if the DS3 interface is provisioned in VM or VMR mode. See the SONET subsystem commands, set-t3 and rtrv-t3. Likely causes — an out-of-frame DS3 signal incoming to the DSX-3 at the far end; failure of the DS3 CP at the far end or near end; the DS3 signal is looped at both ends.
`inc. DS3 sig. failed (BER)`	Bit error ratio (BER) in the incoming DS3 signal exceeds the provisioned failure threshold, 10^{-3} or 10^{-6}. Likely causes — failure of the upstream equipment or facility (towards the DSX-3); cross talk in office wiring; unprotected failure of DS3 CP.
`inc. OC12 LOF`	The system has detected a loss-of-frame (LOF) condition in an incoming OC-12 signal. LOF is defined as an out-of-frame (OOF) condition (four consecutive errored STS-1 framing patterns) that lasts for at least 3 milliseconds. Likely causes — failure of the OLIU CP at the near end, failure of the OLIU CP at the far end, or failure of the receive fiber.
`inc. OC12 LOS`	The system has detected a loss-of-signal (LOS) condition on the OC-12 line. Likely causes — failure of the OLIU CP at the near end, failure of the OLIU CP at the far end, or failure of the receive fiber.

Continued on next page

Fault and Alarm (Continued)

What is the meaning of the fault and alarm report? (continued)

CIT String Text	Meaning
`inc. OC3 BER`	Bit error ratio (BER) in the received OC-3 signal exceeds 10^{-3}. Likely causes — failure of the OLIU CP at the near end, failure of the receive fiber, or failure of the OLIU CP at the far end.
`inc. OC3 FERF`	The system has detected the OC-3 far-end receive failure (FERF) signal in the incoming OC-3 signal. Likely causes — the far end has detected an incoming signal failure on the specified OC-3 line. May be caused by failure of the OLIU CP at the near end, the OLIU CP at the far end, or the transmit fiber on the specified line.
`inc. OC3 line AIS`	The system has detected OC-3 line alarm indication signal (AIS) on an incoming OC-3 line. Likely cause — failure of an OLIU CP at the far end.
`inc. OC3 LOF`	The system has detected a loss-of-frame (LOF) condition in an incoming OC-3 signal. LOF is defined as an out-of-frame (OOF) condition (four consecutive errored STS-1 framing patterns) that lasts for at least 3 milliseconds. Likely causes — failure of the OLIU CP at the near end, failure of the OLIU CP at the far end, or failure of the receive fiber.
`inc. OC3 LOP STS1 #x`	The system has detected a loss-of-pointer (LOP) condition. A valid STS-1 pointer could not be found for eight consecutive frames in the identified STS-1 signal. If this condition occurs on the STS-1 on both OC-3 lines, the likely cause — an unprotected failure of an MXRV0 or a DS3 CP at the far end. If this condition occurs on only one OC-3 line, the likely cause — failure of the OLIU CP at the near end or far end.

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Fault and Alarm (Continued)

What is the meaning of the fault and alarm report? (continued)

CIT String Text	Meaning
`inc. OC3 LOS`	The system has detected a loss-of-signal (LOS) condition on the OC-3 line. Likely causes — failure of the OLIU CP at the near end, failure of the OLIU CP at the far end, or failure of the receive fiber.
`inc. OC3 sig. degrade (BER)`	Bit error ratio (BER) in the specified OC-3 line exceeds the provisioned soft error threshold (10^{-9} to 10^{-5}) but is below the hard error threshold of 10^{-3}. Likely causes — failure of the OLIU CP at the near end, failure of the OLIU CP at the far end, failure of the receive fiber, or incorrect setting of the optical power switch on the OLIU CP.
`inc. OC3 sig. failed (BER)`	Bit error ratio (BER) in the received OC-3 signal exceeds 10^{-3}. Likely causes — failure of the OLIU CP at the near end, failure of the receive fiber, or failure of the OLIU CP at the far end.
`inc. STS1 AIS`	The system has detected an incoming STS-1 alarm indication signal (AIS) in the active OC-3 line. The system responds by transmitting DS1 or DS3 AIS toward the DSX and transmitting STS-1 yellow back toward the fiber from which the AIS is being received. Likely causes — unprotected removal or failure of a DS3, MXRV0, or OLIU CP at the far end.
`inc. STS1 yellow`	The system has detected an incoming STS-1 yellow signal, which means that the far end is receiving STS-1 AIS on the active OC-3 line. Likely causes — unprotected failure of a DS3 or MXRV0 CP at the far end, unprotected failure of a DS3 or MXRV0 CP at the near end, or unprotected failure of the OLIU CP at the near or far end.

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Fault and Alarm (Continued)

What is the meaning of the fault and alarm report? (continued)

CIT String Text	Meaning
`inc. VT AIS`	The system has detected VT path alarm indication signal (AIS) incoming from the active OC-3 line. The system responds by transmitting DS1 AIS toward the DSX-1 and VT yellow back toward the fiber from which the AIS is being received. Likely causes — unprotected removal or failure of a DS1 CP at the far end.
`inc. VT LOP`	The system has detected a VT loss-of-pointer (LOP) condition. Likely causes — unprotected failure of a DS1 CP at the near end; unprotected failure of a DS1 CP at the far end; unprotected failure of an MXRV0 CP at the near end; unprotected failure of an MXRV0 CP at the far end.
`inc. VT yellow`	The far end is detecting VT AIS or VT LOP. Likely causes — unprotected failure of a DS1 CP at the near end, a DS1 at the far end, an MXRV0 CP at the near end, or an MXRV0 CP at the far end.
`inhibit switch`	For an OC-3 line, the identified line is not selected as the active receiving line, and a protection switch to make this the active receiving line will not be done. No further protection switching of specified line will be done until the protection switch is reset. Note that line switching is unidirectional. Because of this, the specified line might still be active (if the far end is selecting the specified line to receive traffic), and the far end might still be free to switch the line it is selecting to receive traffic. See the SONET subsystem command, switch-line. For a function unit slot, timing slot, or timing reference, the identified equipment or reference is not active, and protection switches to the identified equipment or reference will not be done until the protection switch is reset. See the SONET subsystem commands, switch-fn and switch-sync.

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Fault and Alarm (Continued)

What is the meaning of the fault and alarm report? (continued)

CIT String Text	Meaning
lockout of protection	For an OC-3 line, this message means that the identified protection line is not selected as the active receiving line, and a protection switch to make this the active receiving line will not be allowed. Note that line switching is unidirectional. Because of this, the specified line might still be active (if the far end is selecting the specified line to receive traffic), and the far end might still be free to switch the line it is selecting to receive traffic. The lockout will remain in effect until the protection switch is reset or until a protection switch *inhibit* request is entered. See the SONET subsystem command, switch-line. For a low-speed protection slot, this message means that no service slot in the whole low-speed group will be allowed to switch to protection. The lockout will remain in effect until the protection switch is reset. See the SONET subsystem command, switch-ls.
lockout of service	For a low-speed service slot, this message means that the specified low-speed service slot is active and will not be switched to protection. The lockout will remain in effect until the protection switch is reset. See the SONET subsystem command, switch-ls.
manual switch	The specified DS1 CP is manually switched to protection. The manual switch will remain in effect until the protection switch is reset or until a failure occurs and an automatic switch preempts the manual switch. See the SONET subsystem command, switch-ls.
manual sync. mode switch	The synchronization mode has been manually switched to holdover or free-running and will remain in that mode until the switch request is reset. See the SONET subsystem command, switch-sync.
MXRV0 CP failed	Internal equipment failure of the specified MXRV0 CP.

Continued on next page

Fault and Alarm (Continued)

What is the meaning of the fault and alarm report? (continued)

CIT String Text	Meaning
OC12 connector failed	The OC-12 faceplate connector (ribbon cable) which carries STS-1/STS-3c ring pass through traffic on the OC-12 ring interface on the OC-3 shelf has been removed or failed. Reconnect or replace (if failed) the faceplate connector.
OHCTL CP failed	Internal equipment failure of the OHCTL CP.
OLIU CP failed	Internal equipment failure of the specified OLIU CP.
program installation IP	System is being used to install software into another system. If this procedure is interrupted before completion, the remote systems' control circuit packs will likely become inoperable until another install program attempt is successful.
section DCC channel failed	The system cannot communicate with the far-end system through the SONET section data communications channel (DCC). Likely causes — SYSCTL CP failure, reset, or initialization at the far end; failed program installation at far end; program installation in progress at the far end; SYSCTL or OHCTL CP failure at the near end.
SYSCTL CP failed	Internal equipment failure of the SYSCTL CP. The system has determined that some part of the SYSCTL CP has failed. Some types of failures cannot be reported since the SYSCTL CP cannot function properly.
TGS CP failed	Internal equipment failure of the specified TGS CP, or the systems at both ends of the span are loop-timed from each other.
TSI CP failed	Internal equipment failure of the TSI CP.

Continued on next page

Fault and Alarm (Continued)

What is the meaning of the fault and alarm report? (continued)

CIT String Text	Meaning
unexpected CP present	A DS1 CP is installed in a low-speed slot associated with a function unit currently provisioned for DS3 service. Remove the DS1 CP from the shelf, or replace the DS3 CP with an MXRV0 CP.
unexpected CP switches	For the SYSCTL slot, the site switch settings on the SYSCTL CP are invalid (Release 1 only), or some of the unused switches are not in the prescribed position. For the AUXCTL slot, an invalid switch setting has been selected on the OHCTL CP.
unexpected CP type	For a function unit (FN) slot, an MXRV0 or OLIU CP is inserted in a slot provisioned for a DS3 CP. For the AUXCTL slot, a CP other than the TLMCTL is inserted in that slot when the SYSCTL slot is equipped with the BBG1 SYSCTL.
unexpected CP type/ switches	For a TG slot, the timing mode switch settings on the TGS CP are either invalid, different from those on the companion TGS CP, or different from what they were before the TGS CP was replaced, or the DS1 format or line coding switches on the TGS CP are not the same as they were before the TGS CP was replaced. For a MAIN slot, a CP other than an OLIU is inserted in the specified slot, or the optical power switch on the OLIU CP is different from what it was before the OLIU CP was replaced. For a function unit (FN) slot, a DS3 or OLIU CP is inserted in a slot provisioned for an MXRV0 CP. For a low-speed (LS) slot, the line coding switches on the DS1 CP are different from what they were before the DS1 CP was replaced. In Release 3 or higher, this message may mean that a 22F OLIU is present in a slot in which a 21G OLIU is expected or vice versa.

Continued on next page

Fault and Alarm (Continued)

What is the meaning of the fault and alarm report? (continued)

CIT String Text	Meaning
`X.25 communication failure`	Failure in the X.25 communication channel. Likely causes — failure of the X.25 communication equipment; failure at the OS; system is provisioned as a TL1/X.25 gateway but this interface is not being used. (For provisioning, see the SONET subsystem command, set-ne.)

History

Introduction

NOTE:
This section only applies to the SONET subsystem.

The maintenance history report displays event-history of the most recent (up to 500) system events. Use the SONET subsystem command, rtrv-hsty to display the history report.

Last in, first out

Events are displayed in a last-in, first-out order according to the order in which they occurred. Normally, this results in event date/time stamps shown in a monotonically decreasing order with the newest time stamp shown first and the oldest time stamp shown last. However, time or date provisioning changes will cause the log output to deviate from the norm.

SONET subsystem command, rtrv-alm, fault and alarm report included in history report

In addition to the messages listed, any messages that appear in the fault and alarm report (SONET subsystem command, rtrv-alm) may also appear in the history report to record the onset of fault and alarm conditions.

SONET subsystem commands that affect the service state

Also, all SONET subsystem commands that affect the state of the system (provisioning commands; protection switching commands; loopbacks; transmission, alarm, and telemetry tests) will appear in the report.

(Continued on next page)

History (Continued)

What is the meaning of the history report?

The following table lists the history reports and associated meaning(s) for the SONET subsystem.

CIT String Text	Meaning
AC power failed - FE clrd	The AC power supply to an RT cabinet has been restored.
APS - APS channel failed	An automatic protection switch was done because the system detected a failure of the SONET automatic protection switching channel.
APS - CP failed	An automatic protection switch was done because the system detected a circuit pack failure.
APS - K1/K2 byte failure	An automatic protection switch was done because the system detected a failure of the K1 and/or K2 bytes in the SONET automatic protection switching channel.
APS - automatic lock reset	The automatic protection switch lock for a DS1 circuit pack has been released.
APS - sig. degraded	An automatic protection switch was done because the system detected a degraded signal on the OC-3 line.
APS - sig. failed	An automatic protection switch was done because the system detected a failure of the OC-3 line (incoming OC-3 line AIS, loss of signal, or bit error rate higher than 10^{-3}).
APS channel good	A failure of the SONET automatic protection switching channel has cleared.
auto switch	An automatic protection switch of a DS1 circuit pack is active. When the failure that caused the switch to be done clears, the switch will be reset automatically. Likely causes — protected failure or removal of a DS1 CP.

Continued on next page

History (Continued)

What is the meaning of the history report? (continued)

CIT String Text	Meaning
`auto sync. mode switch`	An automatic protection switch of the synchronization mode is active. When the failure that caused the switch to be done clears, the switch will be reset automatically if automatic mode switching is enabled. See the SONET subsystem commands, set-sync and rtrv-sync.
`CIT timeout`	A craft interface terminal (CIT) session was automatically terminated because there was no activity on the CIT for the provisioned time. See the SONET subsystem command, set-secu.
`communication good`	A communication failure has cleared. The system can now communicate, using the SONET section DCC, with another system with which it had previously lost communication.
`control`*`n`*` rlsd`	The system has released the specified miscellaneous discrete environmental control because it has been requested to do so through the serial telemetry or discrete telemetry interface. Appears only in an RT.
`disconnect`	The craft interface terminal has been disconnected.
`DS1 CP good`	The failure of the specified circuit pack has cleared.
`DS1 CP inserted`	A circuit pack was inserted into the shelf.
`DS1 port in service`	A DS1 port was put in the *in service* state. Happens automatically when an incoming signal is detected (coming from the DSX) unless the port has been provisioned to the *not monitored* state.
`ds1 sync. ref. port in service`	A DS1 *external* timing reference was automatically put in the *in service* state because an incoming DS1 signal was detected.
`DS3 CP good`	The failure of the specified circuit pack has cleared.

Continued on next page

History (Continued)

What is the meaning of the history report? (continued)

CIT String Text	Meaning
DS3 CP inserted	A circuit pack was inserted into the shelf.
ds3 port in service	A DS3 port was put in the *in service* state. Happens automatically when an incoming signal is detected (coming from the DSX) unless the port has been provisioned to the *not monitored* state.
environment*n* rlsd	The specified miscellaneous discrete environment alarm input point has been released, indicating that an environmental alarm or status condition has cleared. Appears only in an RT.
externalMinor clrd	The external minor alarm condition has cleared.
holdover mode clrd	The system is no longer in holdover timing mode. It has switched from holdover mode to the provisioned timing mode (either *looptimed* or *phaselocked* to an *external* DS1 timing reference).
inc. DS1 good	A failure of the DS1 signal coming from the DSX is cleared.
inc. DS1 sync. ref. good	A failure of the *external* DS1 timing reference is cleared.
inc. DS3 AIS clrd	The system is no longer detecting DS3 AIS (alarm indication signal) in the DEMUX direction (that is, coming from the fiber).
inc. DS3 good	A failure of the DS3 signal coming from the DSX is cleared.
inc. DS3 OOF clrd	A DS3 out-of-frame (OOF) condition in the DEMUX direction (coming from the fiber) is cleared.
inc. OC3 FERF clrd	The system is no longer detecting the OC-3 far-end receive failure (FERF) signal.
inc. OC3 LOP STS1 #*x* clrd	The system is no longer detecting a loss-of-pointer (LOP) condition on the specified STS-1 signal.

Continued on next page

History (Continued)

What is the meaning of the history report? (continued)

CIT String Text	Meaning
inc. OC3 sig. degrade clrd	A failure of the specified OC-3 signal has cleared. OC-3 line AIS and/or OC-3 line FERF conditions may still be present on the specified OC-3 line. The OC-3 LOP condition may still be present for one or more of the STS-1 signals in the OC-3 line.
inc. OC3 line AIS clrd	The system is no longer detecting the OC-3 alarm indication signal (AIS) on the specified OC-3 line.
inc. STS1 AIS clrd	The STS-1 alarm indication signal (AIS) is no longer being received. A downstream failure (in the MUX direction) has cleared.
inc. STS1 yellow clrd	The STS-1 yellow signal is no longer being received.
inc. VT AIS clrd	The VT alarm indication signal (AIS) is no longer being received. A downstream failure (in the MUX direction) has cleared.
inc. VT LOP clrd	The system is no longer in a VT loss-of-pointer (LOP) condition.
inc. VT yellow clrd	The VT yellow signal is no longer being received from the fiber (in the DEMUX direction).
login:*login_id*	A login session with a user's login identification has been started on the specified CIT port.
login:*login_id* DENY	A login session was attempted but denied because of an invalid login and password pair.
logout:*login_id*	A login session with a user's login identification has ended on the specified CIT port.
MXRVO CP good	The failure of the specified circuit pack has cleared.
MXRVO CP inserted	A circuit pack was inserted into the shelf.
OLIU CP good	The failure of the specified circuit pack has cleared.
OLIU CP inserted	A circuit pack was inserted into the shelf.

Continued on next page

History (Continued)

What is the meaning of the history report? (continued)

CIT String Text	Meaning
`remote session terminated`	A remote CIT session (set up by the SONET subsystem command, rlgn) has been terminated. May have been caused by a failure of the controller at the far end or by terminating a CIT session while a remote session was suspended.
`reset`	DDM-2000 has reset the system software program.
`section DCC channel good`	The failure of the SONET section data communications channel has cleared.
`switch reset`	An automatic protection switch of a DS1 circuit pack has been automatically reset. The system has switched from holdover synchronization mode to the provisioned synchronization mode (*looptimed* or *phaselocked* to an *external* DS1 timing reference). or A manually initiated protection switch has been reset (by the SONET subsystem command, switch-line, switch-sync, switch-fn, or switch-ls).
`TGS CP good`	The failure of the specified circuit pack has cleared.
`TGS CP inserted`	A circuit pack was inserted into the shelf.
`TSI CP good`	The failure of the specified circuit pack has cleared.
`TSI CP inserted`	A circuit pack was inserted into the shelf.
`unexpected CP removed`	A circuit pack has been removed from the specified slot.
`X.25 communication restored`	Communication over the X.25 communication channel has been restored.

Dictionaries

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About the Dictionaries

Overview

Introduction

This chapter contains dictionaries for UIP and SONET subsystem error codes and the service states for the SLC-2000 Access System.

Dictionary Codes

Errors

UIP error messages The following table contains the UIP error codes and associated UIP commands.

Displayed Message	UIP Commands
DENY: Aborted, try again	TEST-AUTO-TURNUP
DENY: APS in effect	SWITCH-LIU
DENY: Audit in-progress	SET-STATE-SMU
DENY: Data Mem Not Avail	*provisioning* commands
DENY: Data memory failed	*provisioning* commands
DENY: Force in effect	SWITCH-CORE, SWITCH-LIU
DENY: Illegal Mode 2 crs	SET-MODE-TR8
DENY: Inhibit in effect	SWITCH-CORE
DENY: Invalid for slot 8	SWITCH-LIU
DENY: Lockout in effect	SWITCH-LIU
DENY: MDC in shelf	SET-DISTN
DENY: ProgVrsn/Sys Incmp	SET-STATE-SMU
DENY: SMU failed	SET-STATE-SMU
DENY: SMU memory failed	SET-STATE-SMU
DENY: SMU not present	SET-STATE-SMU
DENY: SW is downloading	SET-STATE-SMU
DENY: SYSCTL busy	UPDATE
DENY: SYSCTL downloading	UPDATE
DENY: SYSCTL init.	UPDATE
DENY: SYSCTL link failed	TEST-AUTO-TURNUP, UPD
DENY: SYSCTL not present	TEST-AUTO-TURNUP, UPD
DENY: SYSCTL present	SET-FEEDER

Continued on next page

Errors (Continued)

UIP error messages (continued)

Displayed Message	UIP Commands
DENY: System Time-out	*all* commands
DENY: System fault	SET-BAUD, SWITCH-CORE
DENY: Updating program	*provisioning* commands
DENY: VRT out of service	TEST-VRT-ALARM
DENY: VRT set for Mode 2	SET-NE
DENY: auto lock in effect	SWITCH-LIU
DENY: drop crs conn exist	SET-DISTN, INIT-CRS
DENY: fdr crs conn exist	SET-MODE-TR8, INIT-CRS
DENY: in VTU config.	SWITCH-LIU
DENY: ls-a-8 failed	SWITCH-LIU
DENY: ls-a-8 unequipped	SWITCH-LIU
DENY: manual sw in effect	SWITCH-LIU
DENY: slot unequipped	SWITCH-LIU
DENY: sys in SARM config	*provisioning* commands

Errors (Continued)

SONET subsystem error messages

The following table contains the SONET subsystem error codes, the associated CIT message, and associated SONET subsystem commands.

Error Code	CIT Message	SONET Subsystem Commands
ENEQ	**Equipage, Not EQuipped**	set-oc3, set-sts1, set-vt1, switch-ls
ENRI	**Equipage, Not equipped for Retrieving specified Information**	rtrv-attr-cont, rtrv-attr-env
ENSI	**Equipage, Not equipped for Setting specified Information**	set-attr-cont, set-attr-env
EQWT	**EQuipage, Wrong Type**	set-state-ec1, set-sync
IDEI	**Input, Data Entry Invalid**	set-lgn, set-passwd
IDNC	**Input, Data Not Consistent**	set-passwd, switch-ls, switch-sync
IITA	**Input, Invalid TArget identifier (TID)**	cnvt-crs, ins-prog
IIUS	**Input, Invalid USer identifier (uid)**	set-lgn
PIPW	**Privilege, Illegal PassWord**	set-passwd
RNBY	**Resource, Ne is BusY**	rlgn
SACC	**Status, Already Cross-Connected**	ent-crs-sts1, ent-crs-vt1
SCSN	**Status, invalid Command SequeNce**	cnvt-crs, ins-prog
SDNC	**Status, Data Not Consistent**	set-lgn
SLBM	**Status, List, Below Minimum**	set-lgn
SLEM	**Status, List, Exceeds Maximum**	set-lgn

Continued on next page

Errors (Continued)

SONET subsystem error messages (continued)

Error Code	CIT Message	SONET Subsystem Commands
SNVS	**Status, Not in Valid State**	dlt-crs-sts1, dlt-crs-vt1, ent-crs-sts1, ent-crs-vt1, rlgn, set-fecom, set-ne, set-sync, toggle, ins-prog, set-state-ec1, switch-line, switch-path-sts1, switch-path-vt1, switch-sync
SPFA	**Status, Protection unit FAiled**	switch-ls
SPSP	**Status, Protection Switch Priority**	switch-ls, switch-path-sts1, switch-path-vt1, switch-sync
SROF	**Status, Requested Operation Failed**	dlc, rlgn, toggle, set-ne
SSRB	**Status, System Resource Busy**	test-alm, test-auto, test-led, test-sysctl, test-tlm-par, test-tlm-ser, test-trmsn-t1, test-trmsn-t3
SSRD	**Status, Switch Request Denied**	switch-ls
SSTP	**Status, execution SToPped**	cnvt-crs, ins-prog, rtrv-pm-t1, rtrv-pm-vt1, rtrv-pmthres-t1, rtrv-pmthres-vt1, set-pmthres-t1, set-pmthres-vt1

System States

Primary states

The following table contains the primary system states of the *SLC*-2000 Access System.

Service State	Meaning
In-service (*is*)	VT feeder section. ■ A slot is considered in-service if a VTU or an LIU circuit pack is installed in the slot, regardless of the type of feeder (SONET or DS1) that the system is provisioned to provide. ■ A port may be considered in-service when it detects the presence of a good incoming DS1 signal (one that is compatible with the provisioned DS1 framing). DLC subsystem. ■ A TR-08 VRT or INA DS1 is in-service if it is DS1-cross-connected to a VT feeder port that is *not* in the *oos-mt-auto* state. ■ A TR-08 digroup {a-d} *object* is in-service if it is DS1 cross-connected to a logical feeder DS1 and a VT feeder port that is in either the in-service or *oos-mt* state. ■ A logical INA DS1 *object* is in-service if the logical INA DS1 is cross-connected to the corresponding (same number) VT feeder port that is in either the in-service or *oos-mt* state.
Out-of-service memory administration, unassigned (*oos-ma-uas*)	The object is *oos* because of provisioning-driven memory administration requirements. However, resource/service parameters have *not* been assigned for the object.
Out-of-service memory administration, assigned (*oos-ma-as*)	The object is *oos* because of provisioning-driven memory administration requirements. However, resource/service parameters *have* been assigned for the object.
Out-of-service maintenance (*oos-mt*)	The object is *oos* for maintenance reasons (such as a fault, performance monitoring, or testing).

System States (Continued)

Secondary states

The following table contains the secondary system states of the *SLC*-2000 Access System.

Service State	Meaning
Automatic (–)	Equivalent to the DDM-2000 AUTO state. ■ Out-of-service, maintenance, unequipped, auto (*oos-mt-ueq-auto*) — corresponds to the AUTO *slot* state (not alarmed) in DDM-2000. ■ Out-of-service, maintenance, auto (*oos-mt-auto*) — a *port* state similar to *oos-mt* except that it is not alarmed. ■ Out-of-service, auto (*oos-auto*) — a DS1 port that is (permanently) DS1 cross-connected to a VRT that is in the *oos-auto* state.
Fault (*flt*)	The addressed object is *oos* because it failed.
Manual (*man*)	The addressed object has been manually taken *oos* for maintenance reasons.
Mismatch of equipment and attributes (*mea*)	The addressed object is improperly equipped.
Test (*ts*)	The addressed object currently is being tested.
Unequipped (*ueq*)	The addressed object has not been equipped.

System States (Continued)

Associated states

The following table contains the associated system states of the *SLC*-2000 Access System.

Service State	Meaning
Family of equipment failure (*fef*)	The associated controlling supporting equipment is *oos*.

Glossary

A

A/S/C
Alarm/status/control

AA
Anti-aliasing. A filter for removing out of band frequencies before digital signal processing.

ABN
Abnormal (LED indicator)

ACO
Alarm cut-off

ADM
Add/drop multiplexer

AID
Access identifier

AIS
Alarm indication signal. A code sent downstream in digital network as an indication that an upstream failure has been detected and alarmed.

AIU
Access Interface Unit. A Service Net 2000 local access unit based on the *SLC*©-2000 remote terminal design.

ALC
Automatic loss compensation

ALIC5
Analog line to integrated *SLC* carrier at *5ESS*© switch cut

ALM
Alarm

AMD
Alphanumeric message display

AMI
Alternate mark inversion

AMU
Analog measurement unit

ANSI*
American National Standards Institute

APG
Applications and Planning Guide

APOG
Applications, Planning, and Ordering Guide

APS
Automatic protection switch

ARM
Access resource manager

ASCII
American Standard Code for Information Interchange

ASIC
Application specific integrated circuit

ASN.1
Abstract syntax notation.1

ATTR
Attribute

ATU
Alarm and test unit

B

B3ZS
Bipolar with three zero substitution

B8ZS
Bipolar with eight zero substitution

Base10
Base 10 corporation. A telecommunications equipment vendor which provides equipment to support a derived-channel alarm service.

BCL
Bank control link. A 125 kb/s control link used in the metallic channel shelf.

BER
Bit error rate

* ANSI is a registered trademark of American National Standards Institute, Inc.

BIP
Bit interleaved parity

BIP-N
Bit interleaved parity-N. A method of error monitoring.

BITS
Building integrated timing supply

BIU
Backplane interface unit. This pack provides functionality at the DT equivalent to a bank controller, transmit-receive unit (TRU), and line interface unit (LIU).

BMP
Bandwidth management processor. The duplicated controller for TR-303 remote terminals.

BOC
Bell Operating Company

BORSHT
Battery, overvoltage, ringing, supervision, hybrid, and test.

BPD
Bulk power distribution. Centralized AC to 48-volt power conversion for all equipment in a given physical application.

BRI
ISDN basic rate interface.

BRITE
Basic rate interface transmission extension. A set of CUs which extend an ISDN BRI across a universal configuration DLC.

BRT
Business remote terminal. A physical arrangement of *SLC*-2000 systems in a 90-type customer premises cabinet for business applications.

C

CAN
Cancel

CATV
Cable television

CAU
Craft access unit

CB
Common block

CC
Clear channel

CCITT
Consultative Committee on International Telegraphy and Telephony

CD-ROM
Compact disk, read-only memory

CDB
Common data block

CDTU
Channel and drop test unit. A circuit pack in the DT that does channel and drop testing.

CEV
Controlled environmental vault. An environmentally controlled remote terminal structure that is buried underground and contains multiple 7-foot bays of *SLC*-2000 (and other) systems.

CF
Current feed

CIT
Craft interface terminal

CIU
Craft interface unit

CLASS

CLSS

CNVT
Convert

CO
Central office

codec
Coder/decoder

COFA
Change of frame alignment

COMCATS
Computerized catalog system

Command
The complete specification of a function that the NE is required to perform.

COT
Central office terminal

CP
Circuit pack

CPE
Customer premises equipment

CR
Critical alarm

CRC
Cyclic redundancy check

CRS
Cross-connection

CS
Current sink

CSA
Carrier serving area

CSC
Common signaling channel. A TR-303 data link that carries path control and call control signaling messages for locally switched services.

CTAG
Correlation TAG

CTRL
Control

CU
Channel unit

Cursor
An indication in the display of the position of the next character that will appear.

CUT
Channel under test. The channel unit that is currently being tested.

CV
Code violations

D

DACS
Digital Access and Cross-Connect System

DCC
Data communications channel. The embedded overhead communications channel in the SONET line that is used for end-to-end communications and maintenance.

DCE
Data circuit-terminating equipment

DCGS
Dialogue code generation system

DCLU
Digital carrier line unit

DCS
Digital cross-connect system

DCU
Digital connectivity unit

DDS
Digital data service

Default value
The value given to a parameter by the system processor in the absence of a specific value provided by the user. A default value may be the current value as it exists in the system database, or it may be static.

DEL
Delete

DEMUX
Demultiplexer

DEMUX direction
The direction, referenced to an NE, from the high-speed input to the low-speed output.

DFLT
Default

DID
Direct inward dial

Digit
A character (0 through 9).

DLC
Digital loop carrier system

DLP
Detailed level procedure

DM
Degraded minute

DMA
Direct memory access. A direct access to memory that does not require a processor instruction.

DMU
DDS/monitor unit. A maintenance circuit pack in the *SLC*-2000 ARM shelf.

DP
Data port

DPLL
Digital phase-locked loop

DPO
Dial pulse originate

DPR
Dual port RAM

DPT
Dial pulse terminate

DS0
Digital signal level zero (64 kb/s rate)

DS1
Digital signal level 1 (1.544 Mb/s rate)

DS1V
Circuit pack which maps the signal between a DS1 and SONET VT-G.

DS3
Digital signal level 3 (44.736 Mb/s rate)

DS3CC
Digitally switched three clear channel. A circuit pack which provides for bidirectional transport of one DS3 signal through DDM-2000 in either clear channel mode, violation monitor removal (VMR) or violation monitor (VM) mode by mapping the DS3 into an STS-1 signal.

DSDM
DLC subsystem data memory

DSL
ISDN digital subscriber line

DSNE
Directory services network element

DSP
Digital signal processor. A microprocessor specially designed for processing digitized signals.

DSX
Digital signal cross-connect

DSXBIU
Digital signal cross-connect bank interface unit (for NBS).

DT
Distant terminal

DTE
Digital terminating equipment

DTMF
Dual tone multi-frequency

DX
Duplex signaling

E

E&M
E&M signaling. A DC signaling system using a separate pair of wires.

EBS
Enhanced Business Service

ECI
Equipment catalog item

ED8C500
Equipment code of the standard bay framework used for mounting *SLC*-2000 equipment shelves.

EMC
Electromagnetic compatibility

EMC
Electromagnetic compliance

EMF
Electromotive force

ENT
Enter

ENV
Envelope

EOC
Embedded operations channel

EQ
Equipped (memory administrative state)

EQPT
Equipment

ES
Errored seconds

ESA
Errored seconds type A

ESB
Errored seconds type B

ESD
Electrostatic discharge

ESF
Extended superframe

ESF/ndl
Extended superframe/new data link

F

FDC
Fiber distribution controller. Analagous to the metallic distribution controller (MDC), the FDC resides in the fiber distribution shelf (FDS) and controls fiber termination units (FTUs).

FDM
Frequency division multiplexing

FDS
Fiber distribution shelf. This shelf holds FDCs and FTUs and makes up the backbone of the fiber distribution scheme for *SLC*-2000.

FE
Far end

FE ACTY
Far-end activity (LED indicator)

FE SEL
Far-end select (SYSCTL pushbutton)

FEBE
Far-end block error

FECOM
Far-end communications

FERF
Far-end receive error

FG
Failure group

FITL
Fiber in the loop

FLS
Frame loss second

FMAC
Facility maintenance and control system

FN
Failure number

FP303
SLC Series 5 feature package 303. A Series 5 feature package that supports TR-303 operation.

Free running
An operating condition of a clock in which the local oscillator is not locked to an internal synchronization reference and is using no storage techniques to sustain accuracy.

FS
Forced switch

Fs'
A superframe synchronization pattern used in *SLC* 96 to indicate the superframe boundary. Part of the Fs´ sequence can be used for a data link.

FSK
Frequency shift keying. This is the current mechanism for mixing voice and cable television (CATV) on one fiber.

FSR
Frequency selective ringing

FTTH
Fiber-to-the-Home. A pair gain system over optical fiber that extends beyond the RT.

FTU
Fiber termination unit. This pack comprises of optics and circuitry equivalent to an AUA406 CU. One version of this pack is a dual DT terminator, the other a single DT terminator. This pack is also called an OU, OCU, DOT, and SOT.

G

GB
General block

GNE
Gateway network element

H

HDIC
High density interconnect. This is an area in a cabinet (or CEV) where the distribution fibers terminate.

HDLC
High-level data link control. A data link protocol characterized by flags, bit stuffing, and CRC checks.

HDOS
High density optics shelf

HDT
Host digital terminal. The remote terminal node (HDT) serving FITL optical network units (ONUs).

HMI
Human-Machine Interface

Holdover
An operating condition of a clock in which the local oscillator is not locked to an external reference but is using storage techniques to maintain accuracy with respect to the last known frequency comparison with a synchronization reference.

HS
High speed

HSTY
History

I

IC
Internal clock

ICS
Interprocessor communication system

ID
Identifier. A character string that begins with a letter and contains only letters or digits.

IDLC
Integrated digital loop carrier

IDT
Integrated digital terminal. The part of a local digital switch that serves the same function as a COT in the universal configuration.

IF
Interface

IIC
Inter-intergrated circuit. IIC is a 2-wire, serial bus protocol, designed to provide the facilities of a small area network between circuit packs of one system to circuit packs between different systems.

INA
Integrated network access

IOK
I´m OK. A signal emitted by a healthy circuit pack.

IS
In-service (memory administrative state)

IS-3
Optical interconnect signal level 3

ISDN
Integrated services digital network

ISO
Organization for International Standards

ITH
Integral test head

L

LAN
Link to alarms and networks

LAN
Local area network

LAPD
Link access procedures for D-channel

LBO
Line build-out

LDS
Local digital switch

LED
Light-emitting diode

LEIM
Loop electronics inventory module

Letter
A character (A through Z, a through z)

LGN
Login

LIFO
Last in first out

Line
An optical transmission line. A transmission medium, together with the associated high-speed equipment, required to provide the means of transporting information between two consecutive NEs, one which originates and the other terminates the line signal.

LIU
Line interface unit

LOF
Loss of frame

Loop timing
Timing mode in which an NE derives the transmit timing in the East direction from the received line signal in the West direction, and the transmit timing in the West direction from the received line signal in the East direction.

LOP
Loss of pointer

LOS
Loss of signal

LPBK
Loopback

LS
Low speed

LS
Locally-switched

LTA
Line terminating assembly

LTE
Line terminating equipment. Equipment in which the section (line) overhead is terminated (SONET terminology).

M

MCU
Main control unit

MDC
Metallic distribution controller

MDF
Main distributing frame. The MDF is a central office crossconnect frame for interconnecting VF loops to central office equipment.

MDS
Metallic distribution shelf

MIU
Miscellaneous interface unit. The MIU is a maintenance circuit pack in the *SLC*-2000 ARM shelf.

MJ
Major (alarm)

MLT
Mechanized loop testing

MML
Man-Machine Language

MN
Minor (alarm)

MOI
Message oriented interface. The MOI is a protocol for transferring messages over bank control links.

MP
Multiparty

MS
Manual switch

MS-DOS
Microsoft Disk Operating System

MSDT
Multi-services distant terminal

MUX
Multiplexer

Mux direction
The direction, referenced to an NE, from the low-speed input to the high-speed output.

MXRV0
VT to STS-1 multiplexer

MXRVE
Multiplexer receiver virtual tributary electrical. MXRVE is a coaxial mutiplexer plug-in which will support an STS-1 electrical interface.

N

NA
Not alarmed (only reported)

NBS
Narrowband shelf

NBSQ
NBS quadrant

NDB
Name defined block

NE
Near end

NE ACTY
Near-end activity (LED indicator)

NE
Network element

NEBS
Network equipment building systems. NEBS are Bellcore defined central office physical standards that *SLC*-2000 equipment must meet (subject of TR-63).

NLS
Non-locally switched

NMA
Network monitoring analysis

NMAP
Network map

NMON
Not monitored (memory administrative state)

NRZ
Non-return to zero

NS
Non-switched

NSA
Non-service affecting

NSAP
Network service access point

NT1
Network termination 1. The network terminating equipment which completes the U-interface segment of an ISDN basic rate access line.

NTP
Non-trouble-clearing procedure

NVDS
Nonvolatile data storage

NVM
Nonvolatile memory

O

OAM&P
Operation, administration, maintenance, and provisioning

Object entity
A logical service or physical resource associated with an NE. A logical grouping of NE attributes from the perspective of the user. (For example, slots, ports, lines, and the user panel.)

OC
Optical carrier

OC-N
Optical carrier level N. Optical signal with an STS-N format. Used for interoffice interfaces.

OCU
Office channel unit

OCU-DP
Office channel unit-data port

OE
Optical extension

OH
Overhead

OHCTL
Overhead controller

OHT
On-hook transmission

OI
Operations interface

OIP
Operations interface processor

OLIU
Optical line interface unit

ONU
Optical network unit

OOF
Out-of-frame

OPS/INE
Operations process system/intelligent network element

OS
Operations system

OS
Operations support

OSEG
Operations Systems Engineering Guide

OSI
Open System Interface

OTGR
Operations technology generic requirements. A set of Bellcore TR´s that specify the operations requirements for network equipment.

OU
Optical unit

P

PAR
Parallel (telemetry)

Path
At a given rate, is a logical connection between the point at which a standard frame format for the signal at the given rate is assembled, and the point at which the standard frame format for the signal is disassembled.

Path alarm indication signal
A path level code which is sent downstream in a digital network as an indication that an upstream failure has been detected and alarmed.

PAU
Power amplifier unit

PC
Personal computer

PC
Physical control

PCN
Peripheral communications network. The PCN is the mechanism by which *SLC*-2000 peripherals communicate with each other.

PCU
Power converter unit

PCV
P coding violations

PDB
Position defined block

PDC
Provisioning and display controller (master of the SMU)

PGTC
Pair gain test controller

Phase locked
An operating condition of a clock in which it is locked to an external reference and is using time constants that are altered to quickly bring the frequency of the local oscillator into approximate agreement with the synchronization reference frequency.

PID
Program identification

PIN
Positive-intrinsic-negative

PJC
Pointer justification count

PLAR
Private line auto ring

PM
Performance monitoring

PMN
Power minor (alarm)

POH
Path overhead. Overhead assigned to and transported with the payload until the payload is demultiplexed. Used for functions that are necessary to transport the payload.

PRI
ISDN primary rate interface

PRS
Primary reference source

PSCL
Line protection switch counts

PT
Physical terminal

PTE
Path terminating equipment. Network elements in which POH is terminated (SONET terminology).

PTU
Power and test unit

Q

QHPSCL
Quarter hour line protection switch counts

QLS
Quad low-speed (ARM circuit pack)

R

R&R
Remove and reinsert

RBOC
Regional Bell Operating Company

RHC
Regional holding company

RLGN
Remote login

RLS
Release

RMS
Remote measurement system

RMU
Remote measurement unit

RT
Remote terminal

RTAC
Regional Technical Assistance Center

RTU
Remote test unit

RZ
Return to zero

S

SA
Service affecting

SARTS
Switched Access Remote Test System

SB
State block

SD
Signal degrade

SDB
Specific data block

SDE
Synchronization distribution expander

SEFS
Severely errored frame seconds

Semantics
The rules and conventions governing the interpretation and assignment of meaning to tokens (character strings).

SES
Severely errored seconds

SF
Signal fail

SIU
Site interface unit

SMAS
Switched maintenance access system. A relay switching network that allows SARTS to access the metallic pairs to be tested.

SMU
System memory unit

SN-2000
Service Net 2000

SONET
Synchronous optical network

SRD
Software release description

SRD
Systems requirements document

SRQ
System requirement

Stability
The systematic variation of the frequency with respect to time (synonymous with aging, drift, trends, etc.).

STM
Synchronous transport module

STS
Synchronous transport signal

STS-1
Synchronous transport signal level 1

STS-N
Synchronous transport signal level N

STU
System timing unit. A duplicate circuit pack that provides basic timing functionality for the DLC fraction of the *SLC*-2000 RT.

SX
Simplex signaling

Synchronous
The essential characteristic of time-scales or signals such that their corresponding significant instants occur at precisely the same average rate. For a network, refers to nodes which are timed from the references traceable to a single Stratum-1 source.

Synchronous network
The synchronization of synchronous transmission systems with synchronous payloads to a master (network) clock which can be traced to a single reference clock.

Syntax
The rules for the formation of tokens (character strings) without regard to meaning.

SYSCTL
System controller

T

T8U
TR-08 datalink unit

TA
Technical advisory

TAP
Test access point

TAP
Trouble analysis procedure

TBD
To be determined

TBOS
Telemetry byte-oriented serial (protocol)

TBRITE
Basic rate transmission extension for ISDN T interfaces

TCA
Threshold crossing alert

TCVCXO
Temperature-compensated, voltage-controlled crystal oscillator

TDM
Time division multiplex

TGS
Synchronous timing generator

THC
Test head controller

Through timing
Timing mode in which an NE derives the transmit timing in the East direction from the received line signal in the East direction, and the transmit timing in the West direction from the received line signal in the West direction.

TID
Target identifier

TL1
Transaction Language 1

TLB
Timing looped back

TLM
Telemetry

TMC
Timeslot management channel

TMS
Test management system

Tokens
Character strings

TOP
Task-oriented practice

TR
Technical reference

TRMSN
Transmission

TRU
Transmit-receive unit

TSA
Time slot assignment: static cross-connect at a DS0, DS1, VT1.5 level, etc., that is provisioned when service is requested and remains as long as service is assigned or until the network is rearranged.

TSI
Time slot interchanger. The dynamic assignment of a time slot to a channel only for the duration of a call

TSU
Transmission signaling unit

TSV
Test and status verify. A SARTS call back line to allow craft to verify that a line is idle before interrupting for testing.

U

UART
Universal asynchronous receiver/transmitter

UAS
Unavailable seconds

UDC
Universal digital channel. UDC is a Bellcore concept for providing a small cross-section digital loop carrier system based on ISDN UDSL technology.

UDSL
ISDN U-interface digital subscriber line

UIP
User interface panel

UIR
User interface requirements

UNIFACE
Unified interface

UNITOOL
Unitface software tool

UPD
Update

UPD/INIT
Update/initialization

User channel
Allocated to the user for input of information (for example, data communication for use in maintenance activities and remoting of alarms external to the span equipment in a proprietary fashion).

UVG
Universal voice grade

V

V-MSDT
Virtual MSDT

VDC
Video controller for FTTH

VF
Voice frequency

VFDE
Voice frequency data enhancement

VM
Violation monitor

VMR
Violation monitor and removal

VOM
Volt-ohm-multimeter

VRT
Virtual remote terminal

VSB
Vestigal sideband

VT
Virtual tributary

VT-G
Virtual tributary group

VTU
Virtual tributary unit

VTx
Virtual tributary of size x

W

WORD
Work order record detail

WS
Workstation

Z

ZCS
Zero code suppression

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