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SLC[®] Series 5 Carrier System

Information and Pricing Guide for GTE

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About This Guide

⇒ **NOTE:**

Issue 2 replaces all previous issues of the *Information and Pricing Guide for GTE*. The *models*, *options*, and *parts* in this issue must be used in placing all orders beginning January 1993.

The *Information and Pricing Guide for GTE* was developed to assist GTE personnel in preparing budgetary estimates and purchase orders for SLC® Series 5 Carrier System equipment including fiber applications that utilize AT&T's Network Multiplexer. The guide contains GTE standard equipment configurations (*models* and *options*) that can be combined to form complete purchase orders for the products.

⇒ **NOTE:**

Any Purchase Order placed by GTE for the products and/or services contained in AT&T 363-205-000G, *Information and Pricing Guide for GTE*, are deemed to be pursuant to the terms and conditions of the Applicable General Agreement, made by and between GTE and AT&T, in effect on the date of order receipt. All terms on the reverse side of GTE's Purchase Order and on the reverse side of AT&T's Sales Agreement or Acknowledgment form are hereby deleted.

Chapter 1, *General Description and Specifications*, provides a summary of the more detailed AT&T 363-205-100, *SLC Series 5 Carrier System, General Description*. The information in this chapter should provide enough detail to guide the customer to the system configuration that best matches company requirements. If more ordering information is desired, see Chapter 9, *System Documentation*, for directions on how to order AT&T 363-205-000G.

Models and Options

Chapters 2 and 3, *Central Office Terminal (COT)* and the *Remote Terminal (RT)*, respectively, contain the models and options required to configure a complete SLC Series 5 Carrier System.

Chapter 4, *Fiber Multiplexer*, contains models and options for AT&T's Network Multiplexer. All network multiplexer models and options are designed to work with different combinations of the COT and RT models and options for fiber applications.

Chapter 5, *Test Equipment* contains models and options for ordering AT&T's extended test controller (XTC) as well as other test equipment. Chapter 6, *Spare*s contains models that will allow GTE to order all necessary spare channel units and circuit packs.

What is Provided with Each Model?

The models and options contained in this guide are *preengineered* generic equipment configurations which were developed exclusively for GTE. In general, the configurations will include all equipment required to install a complete SLC Series 5 Carrier System.

The COT models do not include mounting hardware for securing the central office network frames in the central office (CO), as installation requirements may vary between sites. The customer is responsible for providing the required mounting hardware in addition to ordering the generic COT models. In some cases the generic equipment supplied with a certain model or option may not include everything needed for the particular installation site. If this is the case, the customer must work with the local AT&T Account Executive to order additional equipment. Refer to the various chapters in this guide for details about what is included with each model and option.

Engineer (Equipment Specification) and Furnish

All models and options in this book are ordered as *engineer* and *furnish*. In this case *engineer* means that AT&T will generate a complete equipment specification for each model and option ordered by the customer. Many additional *engineering* services such as site surveys and office records are available through AT&T for an additional engineering charge, which is bid for each installation site separately over and above the standard equipment specification service. All GTE orders comprised of GTE models and options will include standard equipment specification charges. However, any orders that deviate from these preengineered configurations will require additional *full engineering* charges. See Chapter 7, *Engineering and Installation Services*, for a description of additional engineering services that are available.

Installation, Training, and Documentation

Installation services are available as described in Chapter 7, *Engineering and Installation Services*, for all GTE orders. Installation pricing is provided in Chapter 11, *Pricing Information* for orders consisting of models and options from this guide. For any other orders, installation is bid on a per-job basis. Refer to Chapters 8 and 9, *System Product Training* and *System Documentation*, respectively, for details and ordering information about AT&T's available training and documentation.

General Description and Specifications

1

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General Description and Specifications

1

System Description

The *SLC*® Series 5 Carrier System is a digital loop carrier system that provides 96 channels and optional protection line switching. A standard T1 digital facility is used for transmission. Also, the system may be multiplexed to a higher digital rate using the DDM-1000 (or equivalent) multiplexer and then transmitted over lightguide facilities. Two independent 96-channel systems are combined in a dual channel bank arrangement. The dual channel bank shelf comes in the central office terminal (COT) and remote terminal (RT) configurations. The two systems combined in one dual channel bank are designated the white system (upper) and the blue system (lower). The 96 channels provided in each bank are grouped into four digroups — each digroup consists of 24 channels (Figures 1-1 and 1-2):

- Digroup A — lines 1-24
- Digroup B — lines 25-48
- Digroup C — lines 49-72
- Digroup D — lines 73-96

Plug-in circuit packs are divided into two groups called *common* circuit packs and *channel unit* (CU) circuit packs. The common circuit pack units serve a common digroup or system while the channel unit circuit packs are required for specific channel services. The channel unit circuit packs provide either one or two channels of service depending on the specific type channel unit. There are 12 channel slots per digroup for a total of 48 channel slots in each system — 96 slots per dual bank. A specific mix of common and channel unit circuit packs are needed to provide the desired *SLC* Series 5 Carrier System.

The COT installation is normally powered by a central office bulk type power plant. The RT installation is powered by a power plant and battery string located in each bay or cabinet housing the RT dual channel bank equipment. Remote terminal mounted systems can also be powered by a bulk power plant.

The COT equipment is normally installed in a central office using standard bay framework. The RT equipment may be located in a telephone office or customer premises using standard bay framework or in one of the remote structure arrangements that is available.

Circuit maintenance equipment for the *SLC* Series 5 Carrier System includes the *SLC* 96 Carrier System pair gain test controller (PGTC) and extended test controller (XTC).

The *SLC* Series 5 Carrier System is available in three basic feature package service offerings — Feature Package C (FPC), Feature Package C with AutoCut (FPC/AC), and Feature Package I (FPI). Each feature package supports a different set of services and determines other available features of the system — maintenance level and transmission interface.

Feature Package C

⇒ NOTE:

FPC is the COT companion to FPC/AC.

FPC supports the following services in the universal configuration (Figure 1-5).

- Single-party message telephone service (POTS)
- Multiparty message telephone service
- Coin service
- Direct Inward Dial (DID) 2-wire locally switched special service
- 2- and 4-wire special service channel units
- Digital data services (Dataport channel units)
- Enhanced testing capabilities
- Digital connectivity DS1 service when equipped with digital connectivity units (DCUs).

The DCUs may be installed in the COT and/or RT and consist of a DCU-L (left) and DCU-R (right). The DCU channel unit pair is installed in a digroup of the *SLC* Series 5 Carrier System and replaces the channel units normally installed in the digroup. Snap-in faceplate assemblies are used to cover the

unequipped channel unit slots to prevent installation of channel unit plug-ins. The 24 channels of the digroup are multiplexed into a DS1 signal with Fs (D4) format. The digroup requires a DS1 interface to a digital facility using DSX-1 cross connect (or equivalent) at the COT or to a D4-type channel bank (or equivalent) at the RT. The PGTC or XTC can be used for channel and drop testing except for DID service. The XTC allows remote testing of the special service channel units when the proper common circuit packs are installed. The craft interface unit (CIU) is required for provisioning certain common and channel unit circuit packs.

Feature Package C with AutoCut (RT Only)

⇒ NOTE:

FPC/AC is only for RT applications. FPC is the COT companion to FPC/AC.

An FPC/AC system supports operation in Mode I (universal), or in Mode I or Mode II (integrated). If operated in universal configuration Mode I, when the COT is removed the RT can be integrated automatically without any changes to the RT.

FPC/AC supports the following services:

- Single party message telephone service (POTS)
- 2-wire locally switched special service (*SPOTS*[®] and M *SPOTS* channel units)
- POTS and *VerSuS** alarm service
- Multiparty message telephone service
- Coin service
- Frequency selective ringing (FSR)

* Registered trademark of Versus Technology, Inc.

- Direct inward dialing (DID)
- Fiber-in-the-Loop (FITL)
- Private-line ringdown
- 2-wire nonlocally switched special services (E *SPOTS* CUs)
- 4-wire voice frequency (VF) special services
- Digital data services (DDS).

Mechanized loop testing (MLT)/local test desk (LTD) channel and drop testing of all locally switched POTS and POTS-like services are supported. The CIU provides provisioning and local test access. PGTC/XTC capabilities and Switched Access Remote Testing System (SARTS) access are available. Refer to AT&T 363-205-402, *SLC Series 5 Channel Unit Installation* and AT&T 363-205-100G, *SLC Series 5 Carrier System, Feature Packages G and I, General Description*, for detailed circuit testing capabilities for special service channel units.

Feature Package I

⇒ NOTE:

FPI is only for RT applications.

FPI systems cannot be installed in a dual channel bank (DCB) in combination with any other feature package. FPI supports the following features and services in the integrated configuration (Figure 1-4).

- Integrated interface to the *GTD-5** EAX, using the RDLC data link protocol.
- Integrated *GTD-5* EAX OAM&P functionality
- Multiple configurations for GTE's diverse markets
- Optional Operations Interface (OI) capability
- Enhanced channel unit testing
- Provisioning of special service channel units
- Power on reset (when card inserted) testing on channel units and common circuit packs
- Single-party message telephone service
- Coin service
- Superimposed divided ringing multiparty service
- Frequency selective bridged ringing multiparty service
- Locally switched circuits (POTS) and locally switched special service circuits (*SPOTS* channel unit)
- Nonlocally switched and point-to-point special service circuits — this service can be provided by *GTD-5* EAX grooming services or nailed connections.

* Registered trademark used under license from the GTE Corporation.

Integrated Network Access (INA)

The *SLC* Series 5 Carrier System channel banks can be optioned with special bank control unit (BCU) and alarm display unit (ADU) circuit packs to allow the channel bank to operate into a D4 channel bank at the other end.

See AT&T 915-710-115G for restrictions and applications.

Feature Package Conversion

An existing *SLC* Series 5 Carrier System may be upgraded from one feature package to another feature package when enhanced services and testing features are required. The existing dual channel bank assemblies (COT and RT) must be capable of supporting the new feature package. The conversion will involve replacing, removing, and/or adding certain common circuit packs. The existing service provided by the system may require interruption during the conversion depending on the type of conversion taking place and the circuit packs involved. Both ends of the same system must be the same feature package. See AT&T 363-205-500G, AT&T 363-205-600G, and the *GTD-5 EAX User's Guide* for additional information.

T1 Line Requirements

⇒ **NOTE:**
Refer to integrated *SLC* Series 5 Carrier System layout (Figure 1-3), integrated *SLC* Series 5 Carrier System layout for FPI (Figure 1-4), and universal *SLC* Series 5 Carrier System layout (Figure 1-5) for additional details.

⇒ **NOTE:**
For FPI, T1 span protection is provided using external automatic protection switching (APS).

The following T1 lines are required per 96 POTS lines:

- FPC — (4) service + (1) optional protect line
- FPC/AC, Mode 1 — (4) service + (1) optional protect line
- FPC/AC, Mode 2 — (2) service + (1) optional protect line
- FPI, Mode 1 — (4) service
- FPI, Mode 2 — (2) service
- FPI, Mode 4 — (1) service
- INA, Mode I — (4) service
- INA, Mode III — (2) service

Advantages of *SLC* Series 5 Carrier System

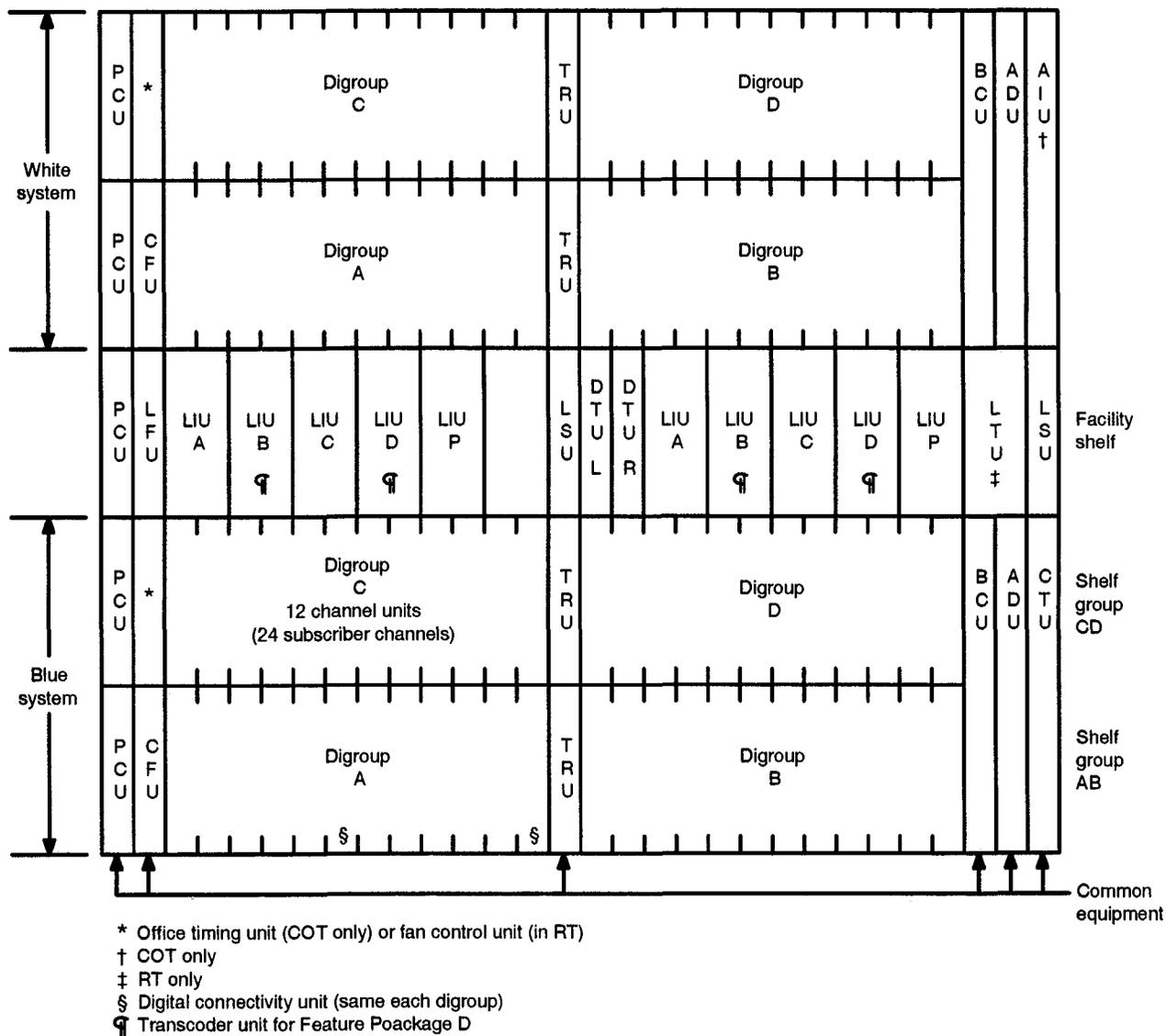
This system provides feeder relief so that additional feeder cable is not needed. Also, as follows, it allows special services to be added on the route without additional line conditioning or redesign:

- To implement a central office (CO)-centrex arrangement.
- To consolidate, defer, or avoid small community dial offices.
- At least twice the number of channels in the same equipment space as the *SLC* 96 Carrier System.
- Fewer channel units of different types to provide same service as *SLC* 96 Carrier System.
- Flexible channel unit slots — any channel unit can go into any slot position with few administration restrictions.
- Simplified special services design using Series 5 special service channel unit in the carrier serving area (CSA).

Provisioning and testing the channel units with the J99404TA CIU from the COT eliminates the need to dispatch to the RT for circuit alignment.

For FPC, the extended super frame (ESF) format (formerly Fe) and message data link offer the following improved special service operations and better line monitoring:

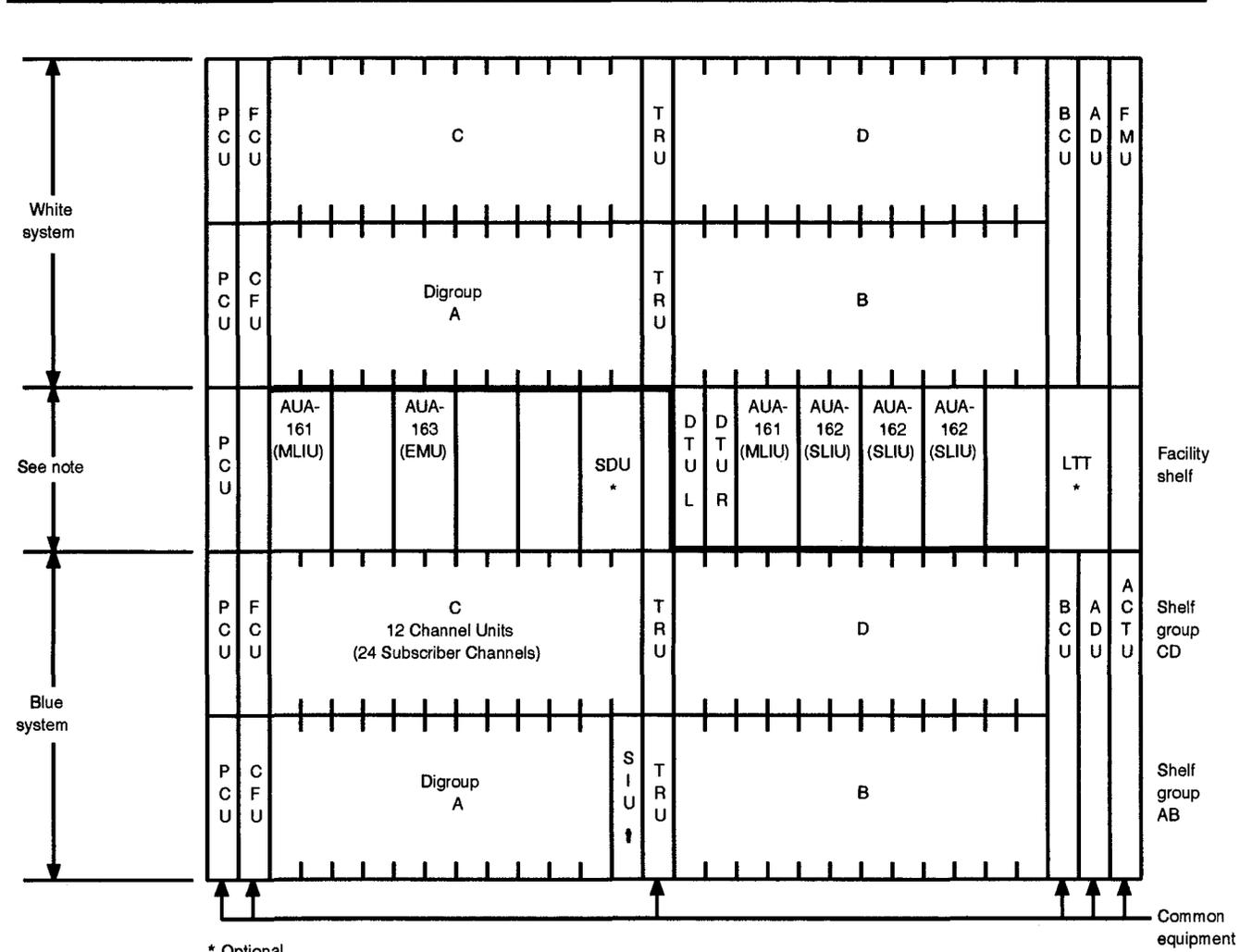
- Improved alarms
- More RT miscellaneous alarms
- Better facility performance monitoring
- Automatic common system trouble isolation
- An option for automatic protection line switching
- Compatible with lightwave multiplexers and lightwave carrier facilities
- Optional bipolar with eight zero substitution (B8ZS) coding on the digital line with future application of service requiring 64 kb/s clear channel capacity (64CCC).



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Figure 1-1. SLC Series 5 Carrier System Dual Channel Bank Arrangement

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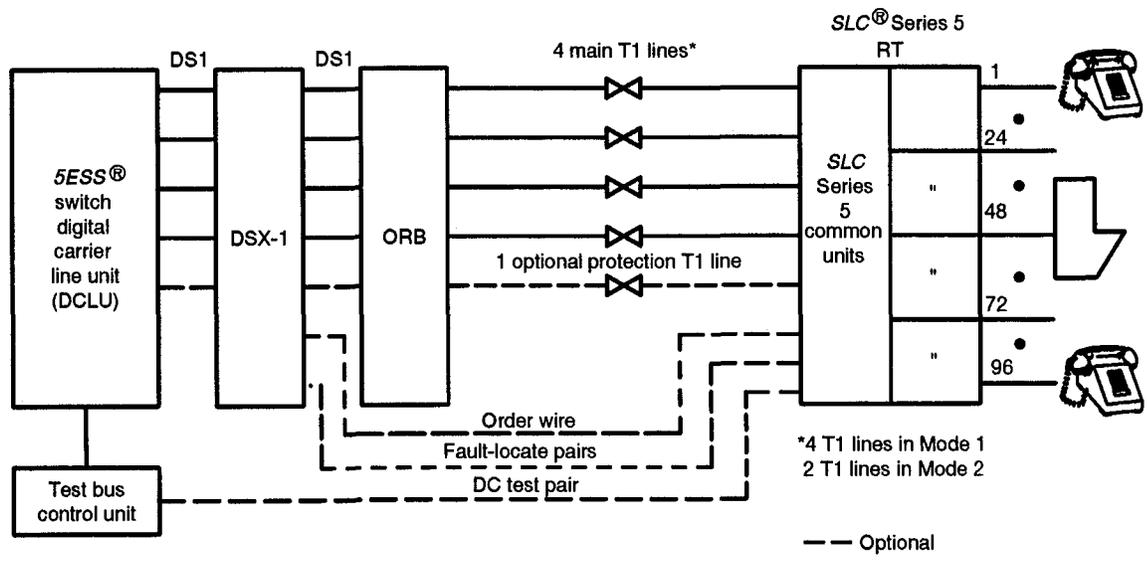


* Optional
 † At least one SIU (AUA77) must be equipped per site to provide the OI capability

Note: Right side of facility shelf is part of the white system and shows Mode 1 configuration (1:1 conce0051)
 Left side of facility shelf is part of the blue system and shows Mode 4 configuration (4:1 concentration)

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Figure 1-2. SLC Series 5 Carrier System Dual Channel Bank Arrangement for FPI



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Figure 1-3. Integrated SLC Series 5 Carrier System Layout

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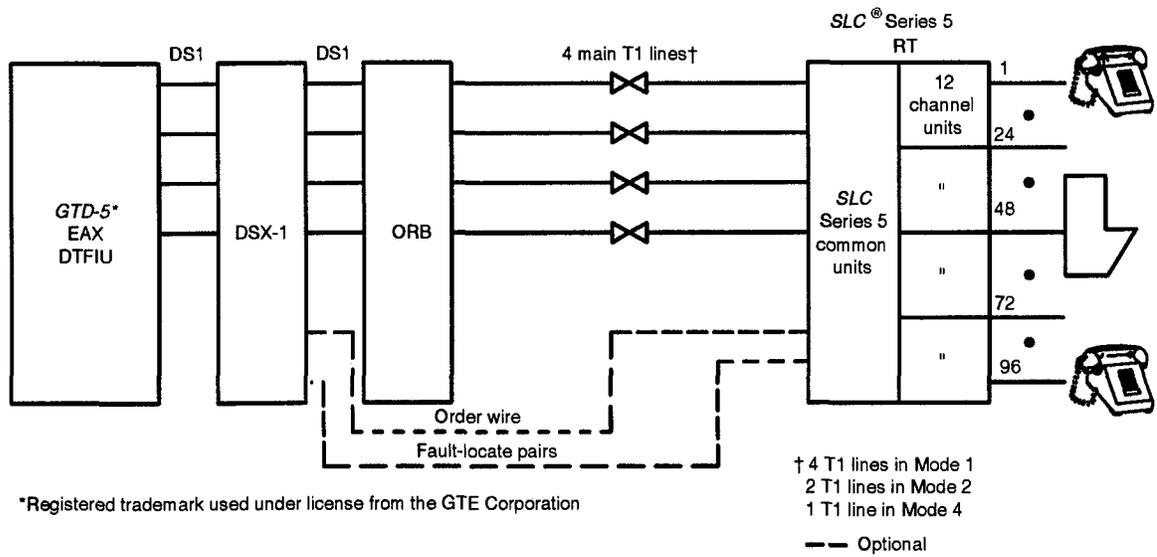
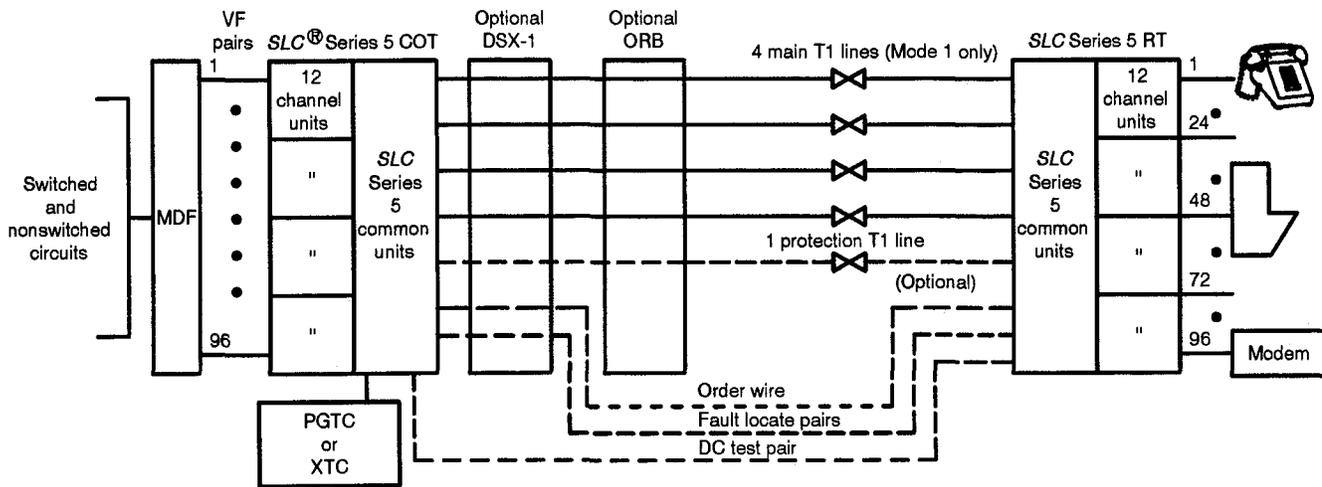


Figure 1-4. Integrated SLC Series 5 Carrier System Layout for FPI



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Figure 1-5. Universal SLC Series 5 Carrier System Layout

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Table 1-1. Transmission Specifications — VF Channel Units with Fixed Settings

<u>Parameter (Note)</u>	<u>Condition</u>	<u>Value</u>
Loop resistance (beyond the RT, excluding the set)	AUA25B / AUA27* / AUA58 / AUA38 AUA59 / AUA150	0-900 ohms 0-1500 ohms
Loop current	AUA25B / AUA27 / AUA58 (0-900 ohms) AUA59 / AUA150 / AUA39 (CSA) (0-1500 ohms)	20 mA to 35 mA 25 mA to 35 mA 23 mA to 35 mA
1000 Hz loss† (±0.5 dB typical, ±1.0 dB max)	AUA59 / AUA150 / AUA39 AUA27 / AUA58 AUA25B	0 dB 1 dB 2 dB
Frequency response (loss relative to 1004 Hz)	400 Hz to 3000 Hz 3200 Hz 300 Hz and 3400 Hz	-0.5 dB to +1 dB -0.5 dB to +1.5 dB 0 dB to +3 dB
60 Hz rejection	> 20 dB	
Gain tracking‡	-37 dBm0 to +3 dBm0 -50 dBm0 to -37 dBm0	±0.5 dB maximum (± 0.25 dB average) ±1.0 dB maximum (± 0.5 dB average)
Return loss at the COT§	AUA27 / AUA58 / AUA59 / AUA150 (terminated by 900 ohms +2 µF)	ERL ≥ 18 dB SRL ≥ 12 dB
Return loss at the RT¶	900 ohms +2 µF reference Z, testing into AUA27 / AUA58 / AUA59 / AUA150	ERL ≥ 18 dB SRL ≥ 12 dB
Idle channel noise (at the COT and RT)	20 dBmC maximum	
Single frequency distortion	0 - 12 kHz, 0 dBm0 1004 - 1020 kHz, 0 dBm0	< -28 dBm0 < -40 dBm0
Intermodulation distortion (4-tone method, -13 dBm0 input)	A-B (R2) product 2A-B (R3) product	> 43 dB > 44 dB
Overload at COT and RT	≥ +3 dBm0	
Data pulse distortion (PAR)	> 90	
Impulse noise**	≤ 15 counts in 15 minutes	
Minimum longitudinal balance at the COT and RT††	200 Hz, 500 Hz, 1000 Hz 3000 Hz	≥ 58 dB ≥ 53 dB
Cross talk (0 dBm0 input, 200 Hz to 3400 Hz)	≤ -65 dBm0	
On-hook loss, 1004 Hz	< 5 dB over 1004 Hz off-hook loss	

Continued on next page

Table 1-1. Continued

Note: Measured at 25°C.

* With derived alarm channel.

† Measured as the ICL with the RT terminated in 600 ohms for AUA25B, 900 ohms otherwise, and with the COT terminated in 900 ohms.

‡ At 1004 Hz, relative to 0 dBm0.

§ Measured with respect to 900 ohms and 2.16 μ F with the RT end terminated as listed.

¶ Measured with respect to the listed impedance with the 4-wire path broken or with the COT end terminated in 900 ohms and 2.16 μ F.

** Measured at a threshold of 47 dBmC0.

†† Measured by IEEE Method 455-1976.

Table 1-2. Transmission Specifications for Coin Channel Units

Parameter (Note)	Value
Loop resistance (beyond the RT, excluding the set)	0-1500 ohms
Loop current	> 23 mA
1000-Hz loss (±0.5 dB typical, ±1.0 dB max)	0 dB*
Bandwidth (relative to the 1000-Hz loss)	0 to -1.5 dB at 400 Hz and 2800 Hz 0 to -3.0 dB at 300 Hz and 3000 Hz
Return loss at the COT †	ERL ≥ 18 dB SRL ≥ 12 dB
Return loss at the RT ‡	ERL ≥ 18 dB SRL ≥ 15 dB
Idle channel noise (at the RT)	20 dBmC maximum
Signal-to-distortion ratio (at -10 dBm)	>33 dB
Data pulse distortion (PAR)	> 90
Gain tracking (1004 Hz) -37 dBm0 to +3 dBm0 -50 dBm0 to -37 dBm0	±0.5 dB maximum (± 0.25 dB average) ±1.0 dB maximum (± 0.5 dB average)
Intermodulation distortion (-13 dBm0 input)	A-B (R2) Product: > 43 dB 2A-B (R3) Product: > 44 dB
Single frequency distortion (0-12 kHz 0 dBm0)	< -28 dBm0
Impulse noise§	≤ 15 counts in 15 minutes
Overload at COT and RT	≥ +3 dBm0
Minimum longitudinal Balance at the RT ¶	200 Hz, 500 Hz, 1000 Hz (≥ 58 dB), 3000 Hz (≥ 53 dB)

Note: Measured at 25°C.

* Measured as the ICL with the RT terminal in 600 ohms and with COT terminated in 900 ohms.

† Measured with respect to 900 ohms and 2.16 μF with the 4-wire path broken or with the other end terminated in 1100 ohms in parallel with 0.03 μF.

‡ Measured with respect to 600 ohms and 2.16 μF with the 4-wire path broken or with the other end terminated in 900 ohms and 2.16 μF.

§ Measured with a holding tone of -13 dBm0 at a threshold of 59 dBmC0.

¶ Measured by IEEE Method 455-1976.

Table 1-3. AUA158 - Electrical and Transmission Specifications

Parameter	Value
Loop resistance (excluding telset)	0 to 900 Ω
Loop current	20 mA to 30 mA
VF loss, off-hook, between CO and network interface (NIF) at customer location	4 to 8 dB
1000 Hz loss:	
0 Ω tip-to-ring	6.0 dB
900 Ω loop resistance	1.4 dB
VF loss, on-hook, between CO and RT CUs:	
AUA158B*	6 dB to 11 dB*
AUA158	5 dB
Return loss at COT (reference Z of 900 Ω + 2.16 μ F, RT terminated with 900 Ω + 2.16 μ F)	ERL > 18 dB SRL > 10 dB
Return loss at RT (reference Z of 900 Ω + 2.16 μ F, CO terminated with 900 Ω + 2.16 μ F)	ERL > 18 dB SRL > 10 dB
Frequency response (loss relative to 1004 Hz, end-to-end)	400 Hz to 3000 Hz: -0.5 dB to +1 dB 3200 Hz: -0.5 dB to +1.5 dB 300 Hz and 3400 Hz: 0 dB to +3 dB
Overload at COT and RT	at +3 dBm0, \leq 0.5 dB extra loss
Single frequency distortion with input of:	
0 Hz to 12 kHz, 0 dBm0	< -28 dBm0 at 0 Hz to 12 kHz
1004 Hz to 1020 kHz, 0 dBm0	< -40 dBm0 at 0 Hz to 4000 Hz
Signal-to-distortion with input of:	
0 to -30 dBm0	> 33 dB
-30 to -40 dBm0	> 27 dB
-40 to -45 dBm0	> 22 dB
System generated tones 0 Hz < f < 16 kHz	< -50 dBm0
Structural impedance	900 Ω + 2.16 μ F
Minimum longitudinal balance (measured by IEEE Method 455-1976)	200 Hz to 1000 Hz: \geq 58 dB 3000 Hz: \geq 53 dB
Idle channel noise, end-to-end	\leq 20 dBmC
60 Hz rejection	> 20 dB
Cross talk (0 dBm0 input, 200 Hz to 3400 Hz)	\leq -65 dBm0
Impulse noise at a threshold of 47 dBmC0 for 15 minutes	\leq 15 counts
Data pulse distortion (PAR), end-to-end	> 90
Gain tracking at 1004 Hz, relative to 0 dBm0	
-37 dBm0 to +3 dBm0	\pm 0.5 dB maximum (\pm 0.25 dB average)
-50 dBm0 to -37 dBm0	\pm 1.5 dB maximum (\pm 0.5 dB average)

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Table 1-3. Continued

Note: End-to-end performance specified with AUA38 or AUA39 at COT, terminated with $900\ \Omega + 2.16\ \mu\text{F}$.

* When the AUA158B is first installed with the telset on-hook, COT to RT loss is 8 dB.

Table 1-4. AUA159 Electrical and Transmission Specifications

<u>Parameter</u>	<u>POTS</u>	<u>Special Services</u>
<u>Loop resistance (excluding telset)</u>	<u>0 to 900 Ω</u>	<u>CSA</u>
<u>Loop current</u>	<u>20 mA to 30 mA</u>	<u>25 mA to 30 mA</u>
<u>VF loss, off-hook, between CO and network interface (NIF) at customer location</u>	<u>4 to 8 dB</u>	<u>2 to 5 dB</u>
<u>1000 Hz loss, off-hook:</u>		
<u>0 Ω tip-to-ring</u>	<u>6.0 dB</u>	<u>3.4 dB</u>
<u>Maximum loop resistance</u>	<u>1.4 dB</u>	<u>0 dB</u>
<u>VF loss, on-hook, between CO and RT CUs:</u>		
<u>AUA159B</u>	<u>6 dB to 11 dB *</u>	<u>7.5 dB to 11 dB</u>
<u>AUA159</u>	<u>4 dB</u>	<u>4 dB</u>
<u>Return loss at COT (reference Z of 900 Ω + 2.16 μF, terminated with 900 Ω + 2.16 μF for POTS or TR-57 CSA test loops for special services)</u>	<u>ERL > 18 dB</u> <u>SRL > 10 dB</u>	<u>ERL > 10 dB</u> <u>SRL > 5 dB</u>
<u>Return loss at RT (reference Z of 900 Ω + 2.16 μF for POTS or 600 Ω + 2.16 μF for special services, CO terminated with 900 Ω + 2.16 μF)</u>	<u>ERL > 18 dB</u> <u>SRL > 10 dB</u>	<u>ERL > 19 dB</u> <u>SRL > 11 dB</u>
<u>Frequency response (loss relative to 1004 Hz, end-to-end)</u>	<u>400 Hz to 3000 Hz: -0.5 dB to +1 dB</u> <u>3200 Hz: -0.5 dB to +1.5 dB</u> <u>300 Hz and 3400 Hz: 0 dB to +3 dB</u>	
<u>Overload at COT and RT</u>	<u>at +3 dBm0, \leq 0.5 dB extra loss</u>	
<u>Single frequency distortion with input of:</u>		
<u>0 Hz to 12 kHz, 0 dBm0</u>	<u>< -28 dBm0 at 0 Hz to 12 kHz</u>	
<u>1004 Hz to 1020 kHz, 0 dBm0</u>	<u>< -40 dBm0 at 0 Hz to 4000 Hz</u>	
<u>Signal-to-distortion with input of:</u>		
<u>0 to -30 dBm0</u>	<u>> 33 dB</u>	
<u>-30 to -40 dBm0</u>	<u>> 27 dB</u>	
<u>-40 to -45 dBm0</u>	<u>> 22 dB</u>	
<u>System generated tones 0 Hz < f < 16 kHz</u>	<u>< -50 dBm0</u>	
<u>Structural impedance</u>	<u>600 Ω + 2.16 μF</u>	
<u>Minimum longitudinal balance (measured by IEEE Method 455-1976)</u>	<u>200 Hz to 1000 Hz: \geq 58 dB</u> <u>3000 Hz: \geq 53 dB</u>	
<u>Idle channel noise, end-to-end</u>	<u>\leq 20 dBmC</u>	
<u>60 Hz rejection</u>	<u>> 20 dB</u>	
<u>Cross talk (0 dBm0 input, 200 Hz to 3400 Hz)</u>	<u>\leq -65 dBm0</u>	

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Table 1-4. Continued

<u>Parameter</u>	<u>POTS</u>
Impulse noise at a threshold of 47 dBmC0 for 15 minutes	≤ 15 counts
Data pulse distortion (PAR), end-to-end	> 90
Gain tracking at 1004 Hz, relative to 0 dBm0: -37 dBm0 to +3 dBm0	±0.5 dB maximum (±0.25 dB average)
-50 dBm0 to -37 dBm0	±1.5 dB maximum (±0.5 dB average)

Note: End-to-end performance specified with AUA38 or AUA39 at COT, terminated with 900 Ω + 2.16 μF.

* When the AUA159B is first installed with the telset on-hook, COT to RT loss is 8 dB.

Table 1-5. Transmission Specifications for AUA75 Dual Private Line Auto Ring Channel Unit

Parameter (Note)	Value
Loop design	The unit is not limited to CSA design rules. Maximum cable loss should not exceed 9 dB, split in any proportion between the two end cable links. Total combined loop resistance (not including the terminating equipment) should not exceed 1500 ohms. Neither loop should exceed 1300 ohms.
Structural impedance	900 ohms + 2.16 μ F
Balance impedance	900 ohms + 2.16 μ F
1000 Hz loss * (\pm 0.5 dB typical, \pm 1.0 dB max)	0 dB or 3 dB (switch selectable)
Bandwidth (relative to the 1000 Hz loss)	+1 to -0.5 dB at 400 Hz and 2800 Hz
Return loss † end-to-end	ERL \geq 23 dB, SRL \geq 17 dB
Idle channel noise ‡	\leq 20 dBmC maximum
Signal-to-distortion ratio (at -10 dBm0)	> 33 dB
Data pulse distortion (PAR) at -13 dBm	> 90
Gain tracking (1004 Hz)	\pm 0.5 dB maximum (-37 dBm0 to +3 dBm0) \pm 1.0 dB maximum (-50 dBm0 to -37 dBm0)
Intermodulation distortion (-13 dBm0 input)	> 43 dB [A-B (R2) product] > 44 dB [2A-B (R3) product]
Single frequency distortion (0-12 kHz, 0 dbm0)	< -28 dBm0
Impulse noise at 47 dBmC0	\leq 15 counts in 15 minutes
Overload at COT and RT	\leq 0.5 dB compression at +3 dBm0
Longitudinal balance §	\geq 58 dB (200 Hz, 500 Hz, 1000 Hz) \geq 53 dB (3000 Hz)
Equal-level cross talk	better than -65 dB (200 Hz to 3400 Hz)
Ringing delay	\leq 200 ms
Ring trip delay	\leq 200 ms for Rdc \leq 1800 ohms
Ring trip immunity	8 μ F in parallel with 10k ohms at T/R
Ringing range at COT ¶	40 Vrms across 3 REN
Ringing range at RT ¶	40 Vrms across 4 REN
Ringing cycle	2 seconds on (100 msec), 4 seconds off (100 msec)
Audible ringing	440 Hz plus 480 Hz (1.6%)
Audible ringing level	-47 to -16 dBm0 (with no more than 5 dB between components)

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Table 1-5. Continued

Note: Measured at 25°C.

* Measured as insertion loss between 900 ohms terminations.

† Measured with respect to 900 ohms + 2.16 μ F with the opposite end terminated in 900 ohms + 2.16 μ F.

‡ Measured with 900 ohms terminations on both ends.

§ Measured by IEEE Method 455-1976.

¶ COT Ringing 86 Vrms and 1300 ohms of cable.
RT Ringing 100 Vrms and 1300 ohms of cable.

Table 1-6. Transmission Specifications — VF Channel Units with Adjustable Settings

Parameter	2-Wire E SPOTS® Channel Units (AUA142, AUA43)	4-Wire Channel Units (Note) (AUA141, AUA44, AUA54)
Loop resistance (beyond RT, excluding teletest)	CSA loops	0-2800Ω (loop-start, ground-start, or transmission only) * 0-5000Ω (duplex)
<i>Gain range (granularity)</i>		
Metallic interface to digital line	-1.0 dB to 6.75 dB Granularity = 0.25 dB	Range depends on function code Granularity = 0.1 dB
Digital line to metallic interface	-8.0 dB to 1.5 dB Granularity = 0.25 dB	
<i>Gain tracking</i>		
Input -37 to +3 dBm	±0.25 dB	±0.25 dB
Input -50 to -37 dBm	±0.50 dB	±0.50 dB
Equalization	(Slope type) equalized CSA cable rolloff at 0.4 kHz varies from 0.0 dB to 1.1 dB; at 2.8 kHz rolloff varies from 0.3 dB to 1.75 dB	Post-equalization of cable less than 15 dB (H88) or 18 kft (NL) is comparable to D4 4FXS CU (J98726SB). Pre- and post-equalization available by emulating 150Ω mismatch
<i>Structural impedance</i>		
ERL/SRL (2-wire return loss with 4-wire path broken)	600Ω +2.16μF or 875Ω +2.15μF 28/20 dB	600Ω or 1200Ω
RL (any frequency)		23 dB
RL (1 kHz)		28 dB
Balance capability	ERL better than 12 dB at digital line interface of channel unit facing loop	
CSA loops		
<i>Longitudinal Balance (IEEE Method)</i>	<i>AUA142</i> <i>AUA43</i>	
200 Hz	63 dB	58 dB 67 dB
500 Hz	63 dB	58 dB 67 dB
1000 Hz	63 dB	58 dB 67 dB
3000 Hz	58 dB	58 dB 62 dB
Equal-level cross talk, C-message weighted	-65 dB	-65 dB (channel unit and inter-unit cross talk)
Idle channel noise	23 dBmC0 for AUA142/AUA43 pair	20 dBmC0 per CU, each direction

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Table 1-6. Continued

Parameter	2-Wire E SPOTS® Channel Units (AUA142, AUA43)	4-Wire Channel Units (AUA141, AUA44, AUA54)
Impulse noise at 59 dBmC0	≤ 15 counts in 15 minutes	≤ 15 counts in 15 minutes
Single distortion (at -10 dBm)	> 33 dB	> 33 dB
Single-frequency distortion (0 dBm0 input tone at any frequency from 0 to 12 kHz)	-28 dBm0 for AUA142/AUA43 pair	-28 dBm0 per channel unit
Intermodulation distortion, -13 dBm0 input (IM products)	A-B (R2) < -43 dB 2A-B (R3) < -44 dB	R2 < -49 dB R3 < -51 dB
Pulse distortion (P/AR)	≥ 90	≥ 94

Note: For AUA54, and for AUA44 in tandem applications, order ED-7C700-20, G1 (one per dual digroup) to provide 24" E&M signaling leads for one digroup. E&M signaling is required for these channel units. Also order VF cable concurrently with this item.

* Range based on commercial power. Range may be reduced when on battery power.

Table 1-7. 1-kHz Gain Range — 4-Wire VF Channel Units

<u>Apparatus Code</u>	<u>Function Code</u>	<u>Transmit Gain dB (Note)</u>	<u>Receive Gain dB (Note)</u>
AUA141	DX	-1.5 to 15.0 *	-10.5 to 6.0
	FSX__,FXT__	-1.5 to 15.0 *	-10.5 to 6.0
	ET04	-8.5 to 15.0 *	-9.5 to 7.0
	T04	-7.5 to 16.0 *	-16.5 to 7.0
AUA44	FXO,FXP	-1.5 to 15.0 *	-10.5 to 6.0
	TD____	2.1 to 3.6 †	-2.1
AUA54	EM4__	-8.0 to 17.5	-17.0 to 8.5
	PLR____	-8.0 to 17.5	-17.0 to 8.5

Note: Transmit — From metallic interface to digital line,
 Receive — From digital line to metallic interface.

* These gain limits are for zero equalization. Where the circuit design calls for equalization, the limits are increased by the amount of 1 kHz Equalizer Gain (dB) specified in AT&T 915-710-116 for that circuit design. The cross talk limit for outside plan cable, where the signal comes off the cable, allows a TLP no lower than -9 dB. This restricts the useful gain of these function codes to 9.0 dB in transmit direction (to maintain the digital line TLP at 0.0 dB).

† For tandem function codes, the AUA44 can actually be provisioned for transmit gains ranging from -8.0 to 3.6 dB. The range shown represents the intended application.

Table 1-8. Transmission Specifications (Note) — Multiparty and FSR Channel Units

Parameter	Value	
	Multiparty (AUA35, AUA55)	FSR (AUA37, AUA57)
Loop resistance (beyond the RT, excluding the set)	0-1500Ω	0-900Ω
1004 Hz on-hook loss	≤ 5 dB over 1004 Hz off-hook loss	On-hook transmission not supported
Loop current	≥ 25mA	≥ 22mA *
1000-Hz Loss (±0.5 dB typical, ±1.0 dB maximum)	1 dB	
Bandwidth (relative to the 1004-Hz loss) †	-0.5 to +1.0 dB at 400 Hz and 2800 Hz	
60 Hz rejection	>25 dB	>20 dB
Return loss at COT ‡	ERL ≥ 18 dB SRL ≥ 10 dB	
Return loss at RT §	ERL ≥ 18 dB SRL ≥ 10 dB	
Idle channel noise (at the RT)	20 dBmC maximum	
Signal-to-distortion ratio (0 to -30 dBm0)	≥ 33 dB	
(-30 to -40 dBm0)	≥ 27 dB	
(-40 to -45 dBm0)	≥ 22 dB	
Data pulse distortion (PAR)	> 90	
Gain tracking (1004 Hz relative to 0 dBm0)	±0.5 dB maximum (±0.25 dB average)	
(-37 to +3 dBm0)	±1.0 dB maximum (±0.5 dB average)	
(-50 to -37 dBm0)		
Intermodulation distortion (-13 dBm0 input)	A-B (R2) Product: > 43 dB 2A-B (R3) Product: > 44 dB	
Impulse noise ¶	≤ 15 counts in 15 minutes	
Overload at COT and RT	≥ +3 dBm0	
Minimum longitudinal balance at the RT **	≥ 58 dB (200, 500, 1000 Hz) ≥ 53 dB (3000 Hz)	

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Table 1-8. Continued

Note: Measured at 25°C.

- * Delivered over 900 Ω loop to off-hook telset with up to eight on-hook telsets bridged across the channel unit.
 - † Measured with a signal level of 0 dBm0 — plus (+) means more loss, while minus (-) means less loss.
 - ‡ Measured with respect to 900 ohms in series with 2.16 μ F and with 900 ohms in series with 2.16 μ F in parallel with a hold coil at the RT.
 - § Measured with respect to 900 ohms in series with 2.16 μ F with a hold coil at the RT and with -48 V battery feed terminated with 900 ohms in series with 2.16 μ F at the COT.
 - ¶ Measured with a holding tone of -13 dBm0 at a threshold of 59 dBmC0.
 - ** Measured by IEEE Method 455-1976.
-

Table 1-9. AUA26 (COT) and AUA27 (RT) VerSuS * Alarm Services Channel Specifications

Parameter	Specification (Notes 1 and 2)	
	Condition	Value
Lo-tone output level at COT	Off-hook On-hook	≥ -40 dBm † \geq (Off-hook Level + 15) dBm
Lo-tone detection level at RT		≥ -31 dBm
Loop signaling	Excluding station set	$\leq 900 \Omega$
Loop current	0 to 900 Ω loop	≥ 20 mA
Nominal impedance	200-3400 Hz	900 Ω +2.16 μ F
Return loss	COT RT	ERL > 18 dB, SRL > 12 dB ERL > 18 dB, SRL > 15 dB
Longitudinal balance IEEE method 455-1976	200 Hz, 500 Hz, 1000 Hz 3000 Hz	> 58 dB (minimum) > 53 dB (minimum)
DLC channel loss	Off-hook at 0 dBm0, 1004 Hz On-hook at 0 dBm0, 1004 Hz	1.0 = 1.0 dB 8.0 = 2.0 dB ‡
Frequency response	Gain at 400-2800 Hz	+0.5 to -1.0 dB relative to 1004 Hz ≥ 20 dB relative to loss at 1004 Hz
60 Hz loss Gain tracking	COT or RT Encoder 1004 Hz at input level -37 to +3 dBm0 -50 to -37 dBm0	Loss relative to loss at 0 dBm0 = 0.5 dB (maximum) = 1.0 dB (maximum)
Idle channel noise	COT or RT output	≤ 20 dBmC
Signal-to-distortion (S/D)	0 to -30 dBm0 input level	> 33 dB
Peak-to-average ratio (P/AR)	-13 dBm0 input level	≥ 90
Impulse noise	COT or RT, measured with a 47 dBmC0 threshold	≤ 15 counts in 15 minutes
Channel cross talk	0 dBm0 input into any line 200-3400 Hz	Output of any other line < 25 dBmC0
System generated tones	COT and RT terminated	Any single frequency, COT or RT < -50 dBm0, 0-16 kHz
Overload at COT and RT	Input at COT or RT	$\geq +3$ dBm0

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Table 1-9. Continued

Parameter	Specification (Notes 1 and 2)	
	Condition	Value
Single frequency distortion	0 dBm0 input at frequency of: 0 to 12 kHz 1004 to 1020 Hz	Output at any other frequency: < -28 dBm0 at 0-12 kHz < -40 dBm0 at 0-4 kHz
Intermodulation distortion (IEEE method 743-1984)	(-13 dBm0 input) R2 R3	Power below received signal > 43 dB > 44 dB
Frequency offset	COT and RT	0 ±0.4 Hz

Notes :

1. All measurements taken at 25° C.
2. Environmental specifications may be found in SLC® Series 5 Carrier System documentation.

* Registered trademark of Versus Technology, Inc.

† Referenced to 900 Ω throughout this specification unless stated otherwise.

‡ On-hook voltage loss will be less than 5 dB if operating into equipment at the COT or RT with greater than 8kΩ input impedance.

Table 1-10. Ringing Specifications — AUA45 Dual Ringing Repeater Channel Unit

Parameter	Value
Ringing delay	≤ 200 ms end-to-end
Ringing distortion	≤ ±50 ms
Ring trip delay	≤ 200 ms for $R_{DC} \leq 1930\Omega$
Ring trip immunity	8μF in parallel with 10kΩ at T/R interface
Ringing range at COT *	40 V_{RMS} across 3 REN
Ringing range at RT *	40 V_{RMS} across 4 REN

* COT ringing 86 V_{RMS} and 1500Ω of cable.
RT ringing 100 V_{RMS} and 1500Ω of cable.

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Central Office Terminal (COT)

2

A central office terminal (COT) is composed of the following three basic groups:

- Support hardware
- Common circuit packs
- Channel unit circuit packs.

A complete COT system can be configured per the following guidelines:

1. Select one of the COT models
2. Select common circuit packs and other desired options from the options group
3. Add channel unit circuit packs from the listing in Table 2-37.

Each model and option listed in this section has a brief description of its contents. If there is a question as to what is included in a specific model or option, consult your local AT&T Account Executive.

⇒ **NOTE:**

Central office network frame mounting hardware is not provided with the COT models as hardware requirements vary between sites. Local power cables are provided for connection of the COT to local central office (CO) fuse bays. The customer is responsible for providing -48 V central office power to the COT bay from the CO main power source.

COT Models

The COT models provide different frame sizes and dual channel bank (DCB) quantities which ultimately determine the number of wired lines (channels). Models do not include hardware for mounting COT frames in the CO. The COT options must be selected to complete the COT configuration. The following list contains general *notes* that apply to COT models.

- The COT models do not include common circuit packs. Therefore, the channel banks must be populated by using the available COT options.
- COT models do not include channel units.



NOTE:

Order channel unit circuit packs as required (Table 2-37).

- The AUA3 office timing unit (OTU) circuit pack is only required when dataport services are used. Therefore, it is not included in the Feature Package C (FPC) options. When deploying dataport channel units in a 96-line system, the customer must order one AUA3 OTU (COMCODE 103840468) per 96-line system.
- To accommodate GTE's standard use of office repeater bays for testing, FPC "M" options that provide common circuit packs for T1 metallic interface do not include line powering line interface units (LIUs). Therefore, a CO repeater is required. These options include protection circuitry to protect the T1 line and its repeaters.

- If the GTE engineer does not wish to use an office repeater bay to power the T1 line in certain metallic applications, powering LIUs may be ordered by selecting the "P" options.



NOTE:

"P" options were developed for use only in CONTEL property applications.

- The FPC options that provide common circuit packs for fiber interface are designed to connect to DSX-1 cross-connect panels. Nonpowering LIUs are provided with these options. T1 protection circuitry is optional and must therefore be ordered separately, specifying the line switch unit (LSU) and protection LIUs on the purchase order.
- Table 2-1 lists the COT part numbers with corresponding GTE material codes.

Table 2-1. COT Part Number/GTE Material Code Summary

Part Number	Description	GTE Material Code
COT Models		
COT-8G-1DCB	COT 8' (1) DCB	300552
COT-8G-3DCB	COT 8' (3) DCBs	300549
COT-9G-1DCB	COT 9' (1) DCB	300553
COT-9G-4DCB	COT 9' (4) DCB	300550
COT-11G-1DCB	COT 11' (1) DCB	300554
COT-11G-5DCB	COT 11' (5) DCBs	300551
COT Options		
FL-OW-EQUIP	Fault locate and order wire equipment	300567
ADD-1-DCB	Kit with 1 DCB and cable for field installation	300566
8FR-END-GR	End guard for 8' frame	300555
9FR-END-GR	End guard for 9' frame	300556
11FR-END-GR	End guard for 11' frame	300557
1DCB-100-CASET	100' cable set for (1) DCB	300564
3DCB-100-CASET	100' cable set for (3) DCBs	300558
4DCB-100-CASET	100' cable set for (4) DCBs	300560
5DCB-100-CASET	100' cable set for (5) DCBs	300562
1DCB-225-CASET	225' cable set for (1) DCB	300565
3DCB-225-CASET	225' cable set for (3) DCBs	300559
4DCB-225-CASET	225' cable set for (4) DCBs	300561
5DCB-225-CASET	225' cable set for (5) DCBs	300563
COT-FPC-96M	Common packs, metallic, blue system	300568
COT-FPC-96M-WH	Common packs, metallic, white system	364498
COT-FPC-192M	Common packs, metallic, both systems	300569
COT-FPC-96F	Common packs, fiber, blue system	300570
COT-FPC-96F-WH	Common packs, fiber, white system	364500
COT-FPC-192F	Common packs, fiber, both systems	300571
COT-FPC-96P*	Common packs, metallic and T1 powering, blue system	364499
COT-FPC-96P*-WH	Common packs, metallic and T1 powering, white system	364501
COT-FPC-192P*	Common packs, metallic and T1 powering, both systems	358893

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Table 2-1. *Continued*

<u>Part Number</u>	<u>Description</u>	<u>GTE Material Code</u>
COT Common Circuit Packs		
103840245	AUA1 TRU	851889
105728042	AUA11C PCU	851886
105710271	AUA73B LSU	000073
103840336	AUA18 DTU-L	851890
103840344	AUA19 DTU-R	851891
106430127	AUB3B AIU	322614
103841292	AUB5 CTU	851894
103841284	AUB4 ASU	000077
103841300	AUB6 ADU	851896
106018088	AUA114 CFU	319856
106018096	AUA115 LFU	319851
105517510	MC97755A1 BCU	851897
105703946	AUA61D DS1 LIU ORB DSX-1	311894
106314305	AUA62D LIU, powering	318130
103840468	AUA3 OTU	318136

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Table 2-1. *Continued*

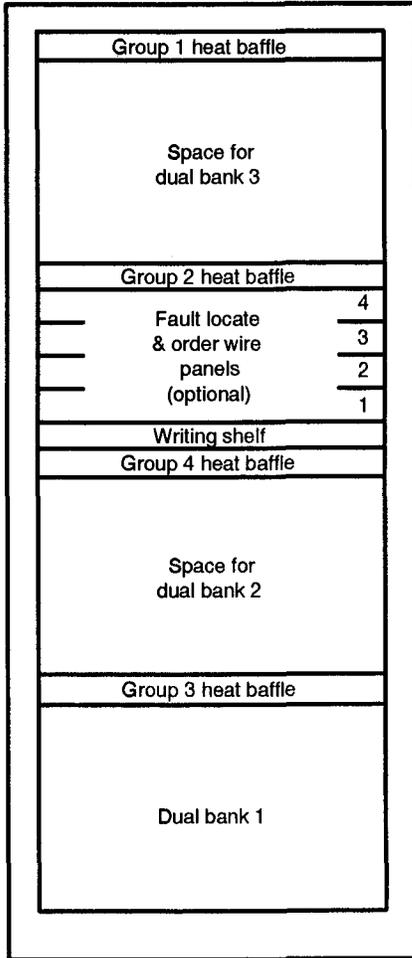
<u>Part Number</u>	<u>Description</u>	<u>GTE Material Code</u>
Miscellaneous COT Equipment		
ED-8C501-50, G2	9' frame	776536
ED-8C501-51, G2	8' frame	300610
ED-8C501-51, G3	11' frame	885026
ED-7C700-20, G1	E&M signaling leads	313317
103840468	AUA3 OTU	851892
103759528	89FIB terminal block for subscriber pairs	559154
104164827	89EIE terminal block for D4 channel banks	950228
COT Channel Units		
106018401	AUA141 4-wire special services CU	304045
106018419	AUA142 E <i>SPOTS</i> ® 2-wire channel unit	304043
103840427	AUA26 POTS and <i>VerSuS</i> † alarm service	316836
103840500	AUA33 coin channel unit	851908
106244171	AUA34B DS0 dataport channel unit	335959
103840526	AUA35 multiparty channel unit	316837
103840534	AUA36 DID DP0 2-wire channel unit	318131
103840542	AUA37 FSR channel unit	300613
103840559	AUA38 POTS channel unit	883518
103840567	AUA39 <i>SPOTS</i> channel unit	300614
105478713	AUA43 E <i>SPOTS</i> 2-wire channel unit	851903
105678171	AUA44 4-wire special services CU	317182
106244163	AUA52B OCU dataport	335960
103840963	AUA75 PLAR	329027

* "P" options were developed for use only in CONTEL property applications.

† Registered trademark of Versus Technology, Inc.

COT-8G-1DCB

Figure 2-1 illustrates the layout of the COT-8G-1DCB configuration. Tables 2-2 and 2-3 list the options and parts, respectively.



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Figure 2-1. Model COT-8G-1DCB [COT, (1) DCB in 8-Foot Frame (Wired for 192 POTS Lines)]

Table 2-2. Model COT-8G-1DCB Options

Option No.	Description
8FR-END-GR	End guard for 8' frame
1DCB-100-CASET	100' cable set for (1) DCB
1DCB-225-CASET	225' cable set for (1) DCB
FL-OW-EQUIP	Fault locate and order wire equipment
COT-FPC-96M	FPC, blue system
COT-FPC-96M-WH	FPC, white system
COT-FPC-192M	FPC, both systems
COT-FPC-96F	FPC, blue system
COT-FPC-96F-WH	FPC, white system
COT-FPC-192F	FPC, both systems
COT-FPC-96P	FPC, blue system, powering
COT-FPC-96P-WH	FPC, white system, powering
COT-FPC-192P	FPC, both systems, powering
ADD-1-DCB	Kit with (1) channel bank and cable for field installation

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Configuration

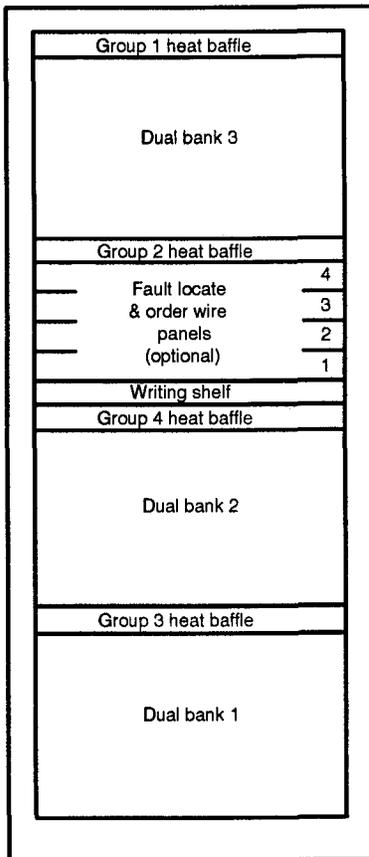
The prewired 8-foot frame (J1C182G-1, L4) is equipped with (1) *SLC*® Series 5 DCB, heat baffles, and frame cables for an additional (2) channel banks.

Table 2-3. Model COT-8G-1DCB Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
ED-8C501-51, G2	Frame, 8'	1
J1C182AG-1, L2	COT DCB	1
ED-7C603-31, G1	Heat baffle	1
ED-7C603-31, G2	Heat baffle	1
ED-7C603-31, G3	Heat baffle	1
ED-7C603-31, G4	Heat baffle	1
ED-3C369-70, G1	Writing shelf	1

COT-8G-3DCB

Figure 2-2 illustrates the layout of the COT-8G-3DCB configuration. Tables 2-4 and 2-5 list the options and parts, respectively.



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Figure 2-2. Model COT-8G-3DCB [COT, (3) DCB in 8-Foot Frame (Wired for 576 POTS Lines)]

Table 2-4. Model COT-8G-3DCB Options

<u>Option No.</u>	<u>Description</u>
8FR-END-GR	End guard for 8' frame
3DCB-100-CASET	100' cable set for (3) DCBs
3DCB-225-CASET	225' cable set for (3) DCBs
FL-OW-EQUIP	Fault locate and order wire equipment
COT-FPC-96M	FPC, blue system
COT-FPC-96M-WH	FPC, white system
COT-FPC-192M	FPC, both systems
COT-FPC-96F	FPC, blue system
COT-FPC-96F-WH	FPC, white system
COT-FPC-192F	FPC, both systems
COT-FPC-96P	FPC, blue system, powering
COT-FPC-96P-WH	FPC, white system, powering
COT-FPC-192P	FPC, both systems, powering

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Configuration

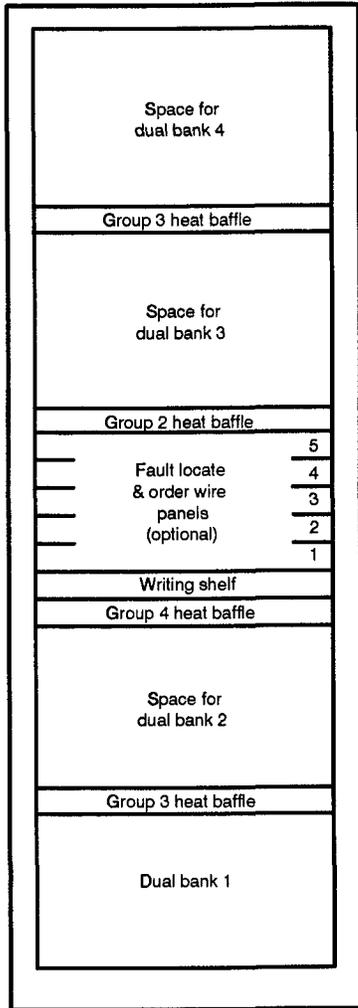
The prewired 8-foot frame (J1C182G-1, L4) is equipped with (3) *SLC* Series 5 DCBs, heat baffles, and writing shelf.

Table 2-5. Model COT-8G-3DCB Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
ED-8C501-51, G2	Frame, 8'	1
J1C182AG-1, L2	COT DCB	3
ED-7C603-31, G1	Heat baffle	1
ED-7C603-31, G2	Heat baffle	1
ED-7C603-31, G3	Heat baffle	1
ED-7C603-31, G4	Heat baffle	1
ED-3C369-70, G1	Writing shelf	1

COT-9G-1DCB

Figure 2-3 illustrates the layout of the COT-9G-1DCB configuration. Tables 2-6 and 2-7 list the options and parts, respectively.



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Figure 2-3. Model COT-9G-1DCB [COT, (1) DCB in 9-Foot Frame (Wired for 192 POTS Lines)]

Table 2-6. Model COT-9G-1DCB Options

Option No.	Description
9FR-END-GR	End guard for 9' frame
1DCB-100-CASET	100' cable set for (1) DCB
1DCB-225-CASET	225' cable set for (1) DCB
FL-OW-EQUIP	Fault locate and order wire equipment
COT-FPC-96M	FPC, blue system
COT-FPC-96M-WH	FPC, white system
COT-FPC-192M	FPC, both systems
COT-FPC-96F	FPC, blue system
COT-FPC-96F-WH	FPC, white system
COT-FPC-192F	FPC, both systems
COT-FPC-96P	FPC, blue system, powering
COT-FPC-96P-WH	FPC, white system, powering
COT-FPC-192P	FPC, both systems, powering
ADD-1-DCB	Kit with (1) channel bank and cable for field installation

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Configuration

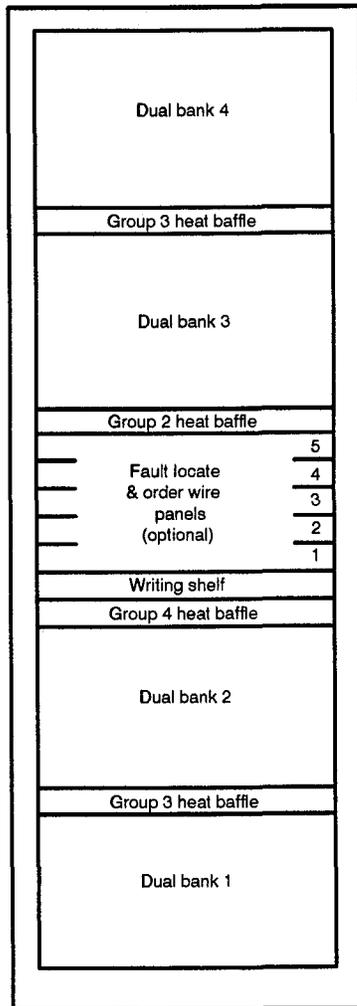
The prewired 9-foot frame (J1C182H-3, L1) is equipped with (1) *SLC* Series 5 DCB, heat baffles, and frame cables for an additional (3) channel banks.

Table 2-7. Model COT-9G-1DCB Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
ED-8C501-50, G2	Frame, 9'	1
J1C182AG-1, L2	COT DCB	1
ED-7C603-31, G2	Heat baffle	1
ED-7C603-31, G3	Heat baffle	2
ED-7C603-31, G4	Heat baffle	1
ED-3C369-70, G1	Writing shelf	1

COT-9G-4DCB

Figure 2-4 illustrates the layout of the COT-9G-4DCB configuration. Tables 2-8 and 2-9 list the options and parts, respectively.



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Figure 2-4. Model COT-9G-4DCB [COT, (4) DCB in 9-Foot Frame (Wired for 768 POTS Lines)]

Table 2-8. Model COT-9G-4DCB Options

<u>Option No.</u>	<u>Description</u>
9FR-END-GR	End guard for 9' frame
4DCB-100-CASET	100' cable set for (4) DCBs
4DCB-225-CASET	225' cable set for (4) DCBs
FL-OW-EQUIP	Fault locate and order wire equipment
COT-FPC-96M	FPC, blue system
COT-FPC-96M-WH	FPC, white system
COT-FPC-192M	FPC, both systems
COT-FPC-96F	FPC, blue system
COT-FPC-96F-WH	FPC, white system
COT-FPC-192F	FPC, both systems
COT-FPC-96P	FPC, blue system, powering
COT-FPC-96P-WH	FPC, white system, powering
COT-FPC-192P	FPC, both systems, powering

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Configuration

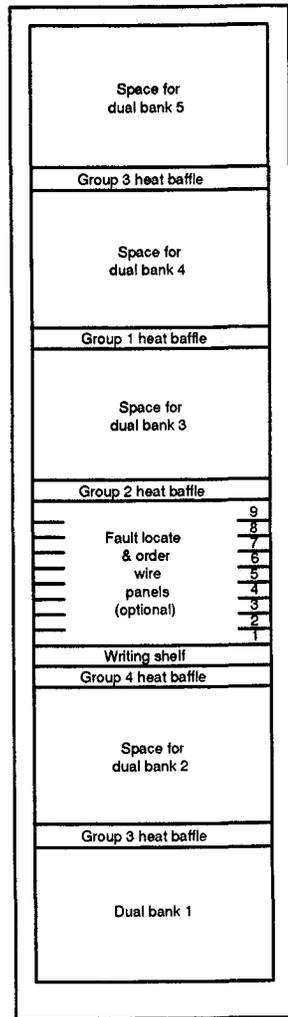
The prewired 9-foot frame (J1C182H-1, L4) is equipped with (4) *SLC* Series 5 DCBs, heat baffles, and writing shelf.

Table 2-9. Model COT-9G-4DCB Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
ED-8C501-50, G2	Frame, 9'	1
J1C182AG-1, L2	COT DCB	4
ED-7C603-31, G2	Heat baffle	1
ED-7C603-31, G3	Heat baffle	2
ED-7C603-31, G4	Heat baffle	1
ED-3C369-70, G1	Writing shelf	1

COT-11G-1DCB

Figure 2-5 illustrates the layout of the COT-11G-1DCB configuration. Tables 2-10 and 2-11 list the options and parts, respectively.



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Figure 2-5. Model COT-11G-1DCB [COT, (1) DCB in 11-Foot 8-Inch Frame (Wired for 192 POTS Lines)]

Table 2-10. Model COT-11G-1DCB Options

<u>Option No.</u>	<u>Description</u>
11FR-END-GR	End guard for 11' 8" frame
1DCB-100-CASET	100' cable set for (1) DCB
1DCB-225-CASET	225' cable set for (1) DCB
FL-OW-EQUIP	Fault locate and order wire equipment
COT-FPC-96M	FPC, blue system
COT-FPC-96M-WH	FPC, white system
COT-FPC-192M	FPC, both systems
COT-FPC-96F	FPC, blue system
COT-FPC-96F-WH	FPC, white system
COT-FPC-192F	FPC, both systems
COT-FPC-96P	FPC, blue system, powering
COT-FPC-96P-WH	FPC, white system, powering
COT-FPC-192P	FPC, both systems, powering
ADD-1-DCB	Kit with (1) channel bank and cable for field installation

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Configuration

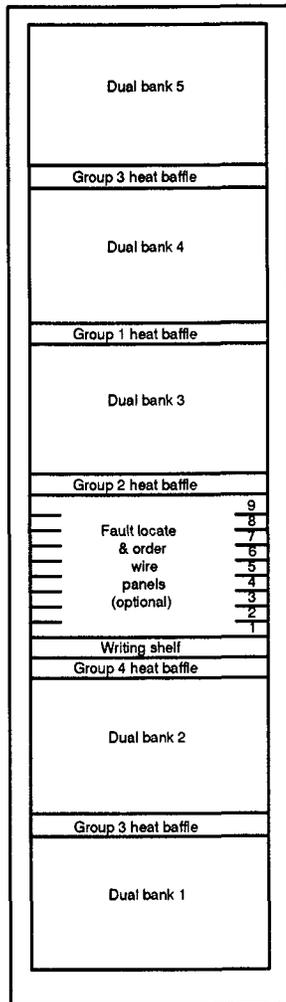
The prewired 11-foot 8-inch frame (J1C182J-1, L3) is equipped with (1) *SLC* Series 5 DCB, heat baffles, and frame cables for an additional (4) channel banks.

Table 2-11. Model COT-11G-1DCB Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
ED-8C501-51, G3	Frame, 11' 8"	1
J1C182AG-1, L2	COT DCB	1
ED-7C603-31, G1	Heat baffle	1
ED-7C603-31, G2	Heat baffle	1
ED-7C603-31, G3	Heat baffle	2
ED-7C603-31, G4	Heat baffle	1
ED-3C369-70, G1	Writing shelf	1

COT-11G-5DCB

Figure 2-6 illustrates the layout of the COT-11G-5DCB configuration. Tables 2-12 and 2-13 list the options and parts, respectively.



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Figure 2-6. Model COT-11G-5DCB [COT, (5) DCB in 11-Foot 8-Inch Frame (Wired for 960 POTS Lines)]

Table 2-12. Model COT-11G-5DCB Options

Option No.	Description
11FR-END-GR	End guard for 11' 8'' frame
5DCB-100-CASET	100' cable set for (5) DCBs
5DCB-225-CASET	225' cable set for (5) DCBs
FL-OW-EQUIP	Fault locate and order wire equipment
COT-FPC-96M	FPC, blue system
COT-FPC-96M-WH	FPC, white system
COT-FPC-192M	FPC, both systems
COT-FPC-96F	FPC, blue system
COT-FPC-96F-WH	FPC, white system
COT-FPC-192F	FPC, both systems
COT-FPC-96P	FPC, blue system, powering
COT-FPC-96P-WH	FPC, white system, powering
COT-FPC-192P	FPC, both systems, powering

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Configuration

The prewired 11-foot 8-inch frame (J1C182J-1, L4) is equipped with (5) *SLC* Series 5 DCBs, heat baffles, and writing shelf.

Table 2-13. Model COT-11G-5DCB Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
ED-8C501-51, G3	Frame, 11' 8''	1
J1C182AG-1, L2	COT DCB	5
ED-7C603-31, G1	Heat baffle	1
ED-7C603-31, G2	Heat baffle	1
ED-7C603-31, G3	Heat baffle	2
ED-7C603-31, G4	Heat baffle	1
ED-3C369-70, G1	Writing shelf	1

COT Options

The available COT options provide for different cable lengths, end guards, fault locate and order wire panel, and common circuit packs for 96 or 192 lines, with metallic or fiber interface. The cable set options provide cables for interconnecting voice frequency (VF) pairs, T1 lines, alarms, office clock, ringing signal, test pairs, and local power.

FL-OW-EQUIP

The FL-OW-EQUIP option (Table 2-14) is a fault locate and order wire panel. This option is not required for fiber applications.

Table 2-14. FL-OW-EQUIP (Fault Locate and Order Wire Panel)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
J1C141AC-1, L3, L4	FL/OW panel	1
ED-3C556-30, G3	Telephone set and order wire unit	1
ED-2C374-31, G2	FL/OW control unit	1

ADD-1-DCB

The ADD-1-DCB option (Table 2-15) is a kit used to add one DCB in field installations.

NOTE:
Provides one COT DCB for installation into a prewired COT frame. Includes cables required for CO installation.

Table 2-15. ADD-1-DCB [Kit to Add (1) DCB for Field Installation]

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
J1C182AG-1, L2	COT channel bank	1
ED-3C861-20, G10	225' cable set for derived pairs	2
106556491	Bulk T1 cable 606C (6 pair 22G)	900
405659327	3M-4005-DPM/FR connectors	4

8FR-END-GR

The 8FR-END-GR option (Table 2-16) provides one end guard for the 8-foot frame.

Table 2-16. 8FR-END-GR (End Guard for 8-Foot Frame)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty (Note)</u>
ED-8C502-51, G1	8' end guard	1
ED-8C502-50, G5 and G8	Associated hardware	1

Note: All parts shipped in one box.

9FR-END-GR

The 9FR-END-GR option (Table 2-17) provides one end guard for the 9-foot frame.

Table 2-17. 9FR-END-GR (End Guard for 9-Foot Frame)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty (Note)</u>
ED-8C502-50, G2, G4, G5, and G7	End guard and associated hardware	1

Note: All parts shipped in one box.

11FR-END-GR

The 11FR-END-GR option (Table 2-18) provides one end guard for the 11-foot 8-inch frame.

Table 2-18. 11FR-END-GR (End Guard for 11-Foot 8-Inch Frame)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty (Note)</u>
ED-8C502-50, G3, G4, G5, and G7	End guard and associated hardware	1

Note: All parts shipped in one box.

1DCB-100-CASET

The 1DCB-100-CASET option (Table 2-19) provides a set of 100-foot cables for one DCB (all cable lengths are the same within the option).

- Derived pair cables terminated with standard CO Amphenol connectors.
- Bulk T1 cable (6 pairs) with separate 3M-4005-DPM/FR connectors.
- Cables for interconnecting -48 V power, test pairs, extended test controller (XTC), alarms, CO clock, and ringing signal.

Table 2-19. 1DCB-100-CASET [100-Foot Cable Set for (1) DCB]

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
ED-3C861-20, G7	Derived pairs cable assembly	2
105412696	252A cable *	100
100015312	254A cable *	100
100017367	100' B25A connector cable, double end	1
102451481	100' A25R connector cable, single end	4
ED-3C861-20, G24	SLC [®] Series 5 cable assembly	1
106556491	606C cable * (6 pair 22G)	400
843745373	P24 wire BK, R-BK *	200
100831825	22BF shielded wire *	400
996795449	KS15711, L4 inner sleeve	4
996794970	KS15712, L3 outer sleeve	4
405659327	3M-4005-DPM/FR connectors	4

* This part is sold by sectional foot.

3DCB-100-CASET

The 3DCB-100-CASET option (Table 2-20) provides a set of 100-foot cables for three DCBs (all cable lengths are the same within the option).

- Derived pair cables terminated with standard CO Amphenol connectors.
- Bulk T1 cable (6 pairs) with separate 3M-4005-DPM/FR connectors.
- Cables for interconnecting –48 V power, test pairs, XTC, alarms, CO clock, and ringing signal.

Table 2-20. 3DCB-100-CASET [100-Foot Cable Set for (3) DCBs]

Comcode (Part No.)	Description	Qty
ED-3C861-20, G7	Derived pairs cable assembly	6
105412696	252A cable *	100
100015312	254A cable *	100
100017367	100' B25A connector cable, double end	1
102451481	100' A25R connector cable, single end	3
ED-3C861-20, G24	SLC® Series 5 cable assembly	1
106556491	606C cable * (6 pair 22G)	1200
843745373	P24 wire BK, R-BK *	200
100831825	22BF shielded wire *	400
996795449	KS15711 L4 inner sleeve	4
996794970	KS15712 L3 outer sleeve	4
405659327	3M-4005-DPM/FR connectors	12

* This part is sold by sectional foot.

4DCB-100-CASET

The 4DCB-100-CASET option (Table 2-21) provides a set of 100-foot cables for four DCBs (all cable lengths are the same within the option).

- Derived pair cables terminated with standard CO Amphenol connectors.
- Bulk T1 cable (6 pairs) with separate 3M-4005-DPM/FR connectors.
- Cables for interconnecting –48 V power, test pairs, XTC, alarms, CO clock, and ringing signal.

Table 2-21. 4DCB-100-CASET [100-Foot Cable Set for (4) DCBs]

Comcode (Part No.)	Description	Qty
ED-3C861-20, G7	Derived pairs cable assembly	8
105412696	252A cable *	100
100015312	254A cable *	100
100017367	100' B25A connector cable, double end	1
102451481	100' A25R connector cable, single end	5
ED-3C861-20, G24	SLC® Series 5 cable assembly	1
106556491	606C cable * (6 pair 22G)	1600
843745373	P24 wire BK, R-BK *	200
100831825	22BF shielded wire *	400
996795449	KS15711 L4 inner sleeve	4
996794970	KS15712 L3 outer sleeve	4
405659327	3M-4005-DPM/FR connectors	16

* This part is sold by sectional foot.

5DCB-100-CASET

The 5DCB-100-CASET option (Table 2-22) provides a set of 100-foot cables for five DCBs (all cable lengths are the same within the option).

- Derived pair cables terminated with standard CO Amphenol connectors.
- Bulk T1 cable (6 pairs) with separate 3M-4005-DPM/FR connectors.
- Cables for interconnecting –48 V power, test pairs, XTC, alarms, CO clock, and ringing signal.

Table 2-22. 5DCB-100-CASET [100-Foot Cable Set for (5) DCBs]

Comcode (Part No.)	Description	Qty
ED-3C861-20, G7	Derived pairs cable assembly	10
105412696	252A cable *	100
100015312	254A cable *	100
100017367	100' B25A connector cable, double end	1
102451481	100' A25R connector cable, single end	5
ED-3C861-20, G24	SLC® Series 5 cable assembly	1
106556491	606C cable * (6 pair 22G)	2000
843745373	P24 wire BK, R-BK *	200
100831825	22BF shielded wire *	500
996795449	KS15711 L4 inner sleeve	5
996794970	KS15712 L3 outer sleeve	5
405659327	3M-4005-DPM/FR connectors	20

* This part is sold by sectional foot.

1DCB-225-CASET

The 1DCB-225-CASET option (Table 2-23) provides a set of 225-foot cables for one DCB (all cable lengths are the same within the option).

- Derived pair cables terminated with standard CO Amphenol connectors.
- Bulk T1 cable (6 pairs) with separate 3M-4005-DPM/FR connectors.
- Cables for interconnecting –48 V power, test pairs, XTC, alarms, CO clock, and ringing signal.

Table 2-23. 1DCB-225-CASET [225-Foot Cable Set for (1) DCB]

Comcode (Part No.)	Description	Qty
ED-3C861-20, G10	Derived pairs cable assembly	2
105412696	252A cable *	225
100015312	254A cable *	225
100961812	225' B25A connector cable, double end	1
102451531	225' A25R connector cable, single end	4
ED-3C861-20, G24	SLC® Series 5 cable assembly	1
106556491	606C cable * (6 pair 22G)	900
843745373	P24 wire BK, R-BK *	450
100831825	22BF shielded wire *	900
996795449	KS15711 L4 inner sleeve	4
996794970	KS15712 L3 outer sleeve	4
405659327	3M-4005-DPM/FR connectors	4

* This part is sold by sectional foot.

3DCB-225-CASET

The 3DCB-225-CASET option (Table 2-24) provides a set of 225-foot cables for three DCBs (all cable lengths are the same within the option).

- Derived pair cables terminated with standard CO Amphenol connectors.
- Bulk T1 cable (6 pairs) with separate 3M-4005-DPM/FR connectors.
- Cables for interconnecting –48 V power, test pairs, XTC, alarms, CO clock, and ringing signal.

Table 2-24. 3DCB-225-CASET [225-Foot Cable Set for (3) DCBs]

Comcode (Part No.)	Description	Qty
ED-3C861-20, G10	Derived pairs cable assembly	6
105412696	252A cable *	225
100015312	254A cable *	225
100961812	225' B25A connector cable, double end	1
102451531	225' A25R connector cable, single end	3
ED-3C861-20, G24	SLC® Series 5 cable assembly	1
106556491	606C cable * (6 pair 22G)	2700
843745373	P24 wire BK, R-BK *	450
100831825	22BF shielded wire *	900
996795449	KS15711 L4 inner sleeve	4
996794970	KS15712 L3 outer sleeve	4
405659327	3M-4005-DPM/FR connectors	12

* This part is sold by sectional foot.

4DCB-225-CASET

The 4DCB-225-CASET option (Table 2-25) provides a set of 225-foot cables for four DCBs (all cable lengths are the same within the option).

- Derived pair cables terminated with standard CO Amphenol connectors.
- Bulk T1 cable (6 pairs) with separate 3M-4005-DPM/FR connectors.
- Cables for interconnecting –48 V power, test pairs, XTC, alarms, CO clock, and ringing signal.

Table 2-25. 4DCB-225-CASET [225-Foot Cable Set for (4) DCBs]

Comcode (Part No.)	Description	Qty
ED-3C861-20, G10	Derived pairs cable assembly	8
105412696	252A cable *	225
100015312	254A cable *	225
100961812	225' B25A connector cable, double end	1
102451531	225' A25R connector cable, single end	5
ED-3C861-20, G24	SLC® Series 5 cable assembly	1
106556491	606C cable * (6 pair 22G)	3600
843745373	P24 wire BK, R-BK *	450
100831825	22BF shielded wire *	900
996795449	KS15711 L4 inner sleeve	4
996794970	KS15712 L3 outer sleeve	4
405659327	3M-4005-DPM/FR connectors	16

* This part is sold by sectional foot.

5DCB-225-CASET

The 5DCB-225-CASET option (Table 2-26) provides a set of 225-foot cables for five DCBs (all cable lengths are the same within the option).

- Derived pair cables terminated with standard CO Amphenol connectors.
- Bulk T1 cable (6 pairs) with separate 3M-4005-DPM/FR connectors.
- Cables for interconnecting -48 V power, test pairs, XTC, alarms, CO clock, and ringing signal.

Table 2-26. 5DCB-225-CASET [225-Foot Cable Set for (5) DCBs]

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
ED-3C861-20, G10	Derived pairs cable assembly	10
105412696	252A cable *	225
100015312	254A cable *	225
100961812	225' B25A connector cable, double end	1
102451531	225' A25R connector cable, single end	5
ED-3C861-20, G24	SLC® Series 5 cable assembly	1
106556491	606C cable * (6 pair 22G)	4500
843745373	P24 wire BK, R-BK *	450
100831825	22BF shielded wire *	1125
996795449	KS15711 L4 inner sleeve	5
996794970	KS15712 L3 outer sleeve	5
405659327	3M-4005-DPM/FR connectors	20

* This part is sold by sectional foot.

COT-FPC-96M

The COT-FPC-96M option (Table 2-27) provides FPC blue system (first 96 lines) common packs, supports all services, and includes electronics for T1 protection.

Table 2-27. COT-FPC-96M (Common Packs, 96 Lines, Metallic)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
103840245	AUA1 TRU	2
105728042	AUA11C PCU	4
105710271	AUA73B LSU	1
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106430127	AUB3B AIU	1
103841292	AUB5 CTU	1
103841284	AUB4 ASU	1
103841300	AUB6 ADU	1
106018088	AUA114 CFU	2
105517510	MC97755A1 BCU	1
105703946	AUA61D DS1 LIU ORB DSX-1	5

COT-FPC-96M-WH

The COT-FPC-96M-WH option (Table 2-28) provides FPC white system (second 96 lines) common packs, supports all services, and includes electronics for T1 protection.

Table 2-28. COT-FPC-96M-WH (Common Packs, White System, Metallic)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
103840245	AUA1 TRU	2
105728042	AUA11C PCU	1
105710271	AUA73B LSU	1
103841300	AUB6 ADU	1
105517510	MC97755A1 BCU	1
105703946	AUA61D DS1 LIU ORB DSX-1	5

COT-FPC-192M

The COT-FPC-192M option (Table 2-29) provides FPC common packs for 192 lines, supports all services, and includes electronics for T1 protection.

Table 2-29. COT-FPC-192M (Common Packs, 192 Lines, Metallic)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
103840245	AUA1 TRU	4
105728042	AUA11C PCU	5
105710271	AUA73B LSU	2
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106430127	AUB3B AIU	1
103841292	AUB5 CTU	1
103841300	AUB6 ADU	2
106018088	AUA114 CFU	2
105517510	MC97755A1 BCU	2
105703946	AUA61D DS1 LIU ORB DSX-1	10

COT-FPC-96F

The COT-FPC-96F option (Table 2-30) provides FPC blue system (first 96 lines) common packs and supports all services. Fiber multiplexer equipment must be ordered separately (Chapter 4, *Fiber Multiplexer*). T1 protection is not required.

Table 2-30. COT-FPC-96F (Common Packs, 96 Lines, Fiber)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
103840245	AUA1 TRU	2
105728042	AUA11C PCU	4
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106430127	AUB3B AIU	1
103841292	AUB5 CTU	1
103841284	AUB4 ASU	1
103841300	AUB6 ADU	1
106018088	AUA114 CFU	2
105517510	MC97755A1 BCU	1
105703946	AUA61D DS1 LIU ORB DSX-1	4

COT-FPC-96F-WH

The COT-FPC-96F-WH option (Table 2-31) provides FPC white system (second 96 lines) common packs and supports all services. Fiber multiplexer equipment must be ordered separately (Chapter 4, *Fiber Multiplexer*). T1 protection is not required.

Table 2-31. COT-FPC-96F-WH (Common Packs, White System, Fiber)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
103840245	AUA1 TRU	2
105728042	AUA11C PCU	1
103841300	AUB6 ADU	1
105517510	MC97755A1 BCU	1
105703946	AUA61D DS1 LIU ORB DSX-1	4

COT-FPC-192F

The COT-FPC-192F option (Table 2-32) provides common packs for 192 fiber lines and supports all services. Fiber multiplexer equipment must be ordered separately (Chapter 4, *Fiber Multiplexer*). T1 protection is not required.

Table 2-32. COT-FPC-192F (Common Packs, 192 Lines, Fiber)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
103840245	AUA1 TRU	4
105728042	AUA11C PCU	5
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106430127	AUB3B AIU	1
103841292	AUB5 CTU	1
103841300	AUB6 ADU	2
106018088	AUA114 CFU	2
105517510	MC97755A1 BCU	2
105703946	AUA61D DS1 LIU ORB DSX-1	8

COT-FPC-96P

The COT-FPC-96P option (Table 2-33) provides FPC blue system (first 96 lines) common packs, supports all services, and includes electronics for T1 protection and powering.

NOTE:

"P" options were developed for use only in CONTEL property applications.

Table 2-33. COT-FPC-96P (Common Packs, Blue System, Metallic and T1 Powering)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
103840245	AUA1 TRU	2
105728042	AUA11C PCU	4
105710271	AUA73B LSU	1
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106430127	AUB3B AIU	1
103841292	AUB5 CTU	1
103841284	AUB4 ASU	1
103841300	AUB6 ADU	1
106018088	AUA114 CFU	2
106018096	AUA115 LFU	1
105517510	MC97755A1 BCU	1
106314305	AUA62D LIU, powering	5

COT-FPC-96P-WH

The COT-FPC-96P-WH option (Table 2-34) provides FPC white system (second 96 lines) common packs, supports all services, and includes electronics for T1 protection and powering.

⇒ **NOTE:**
"P" options were developed for use only in CONTEL property applications.

Table 2-34. COT-FPC-96P-WH (Common Packs, White System, Metallic)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
103840245	AUA1 TRU	2
105728042	AUA11C PCU	1
105710271	AUA73B LSU	1
103841300	AUB6 ADU	1
105517510	MC97755A1 BCU	1
106314305	AUA62D LIU, powering	5

COT-FPC-192P

The COT-FPC-192P option (Table 2-35) provides FPC common packs for 192 lines, supports all services, and includes electronics for T1 protection and powering.

⇒ **NOTE:**
"P" options were developed for use only in CONTEL property applications.

Table 2-35. COT-FPC-192P (Common Packs, 192 Lines, Metallic and T1 Powering)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
103840245	AUA1 TRU	4
105728042	AUA11C PCU	5
105710271	AUA73B LSU	2
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106430127	AUB3B AIU	1
103841292	AUB5 CTU	1
103841300	AUB6 ADU	2
106018088	AUA114 CFU	2
106018096	AUA115 LFU	1
105517510	MC97755A1 BCU	2
106314305	AUA62D LIU, powering	10

Miscellaneous COT Equipment

Table 2-36 lists miscellaneous COT equipment.

Table 2-36. Miscellaneous COT Equipment

<u>Comcode (Part No.)</u>	<u>Description</u>
ED-8C501-51, G2	8' frame
ED-8C501-50, G2	9' frame
ED-8C501-51, G3	11' frame
ED-7C700-20, G1	E&M signaling leads *
103840468	AUA3 OTU
103759528	89FIB terminal block for subscriber pairs
104164827	89EIE terminal block for D4 channel banks

* Order ED-7C700-20, G1 (one per dual digroup) to provide 24" E&M signaling leads for one digroup. Also order VF cable concurrently with this item.

COT Channel Unit Circuit Packs

The selection of the channel units determines the services that the COT will provide — for example, single party, multiparty, coin, 2-wire specials, 4-wire specials, and dataport. Table 2-37 provides ordering information for channel unit circuit packs available for use in *SLC Series 5* COT DCBs.

The *SLC Series 5* DCB contains two *SLC Series 5* Carrier Systems (96 lines each). Each *SLC Series 5* Carrier System contains 48 channel unit circuit pack slots. Channel units provide 1 or 2 channels of service based on the function of the circuit packs. The COT channel units must be selected to mate with a corresponding channel unit at the RT to provide the service desired.

The channel units ordered must be compatible with the feature package arrangement provided by the associated common circuit packs. A DCB can accept a maximum of 96-channel unit circuit packs (48 per system).

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Table 2-37. Ordering Information for COT Channel Units (FPC)

<u>Order Wording</u>	<u>Comcode</u>	<u>Loop Start/ Ground Start</u>	<u>Current Feed/ Current Sink</u>	<u>Description</u>	<u>Note(s)</u>
AUA26	103840427	LS		POTS and <i>VerSuS</i> * alarm service	1, 2
AUA33	103840500		CS	Coin channel unit	3, 4
AUA34B	106244171			DS0 dataport channel unit	3, 5, 6
AUA35	103840526	LS	CS	Multiparty channel unit	1, 7
AUA36	103840534		CF	DID DPO 2-wire channel unit	1
AUA37	103840542		CS	FSR channel unit	3
AUA38	103840559	LS	CS	POTS channel unit	1
AUA39	103840567	LS/GS		<i>SPOTS</i> ® channel unit	1
AUA141	106018401	LS/GS		4-wire special services CU	3, 8, 9
AUA142	106018419	LS/GS	CS	E <i>SPOTS</i> 2-wire channel unit	1
AUA43	105478713	LS/GS	CF	E <i>SPOTS</i> 2-wire channel unit	1
AUA44	105678171	LS/GS		4-wire special services CU	3, 10
AUA45B	105717987			Dual ringing repeater CU	1
AUA52B	106244163			OCU dataport	3, 5, 6

Notes:

1. One CU circuit pack provides two channels of service (maximum of 48 channel units per 96-line system).
2. This CU is for use in *VerSuS* alarm services network.
3. One CU circuit pack provides one channel of service (maximum of 48 channel units per 96-line system).
4. Coin first is ground start, while tone first is loop start.
5. Dataports require the addition of an AUA3 OTU (Comcode 103840468) at the COT for operation — the OTU must be ordered separately.
6. The digital rate may be 2.4, 4.8, 9.6, or 19.2 kb/s (called subrates), or 56 or 64 kb/s (called fullrates).
7. Multiparty requires an AUG1 PRU at the RT terminal.
8. The AUA141 can function as FX-station end (4FSX), duplex (4DX), transmission only (4TO), and equalized transmission only (4ETO).
9. Order ED-7C700-20, G1 (one per dual digroup) to provide 24'' E&M signaling leads for one digroup. E&M signaling is required for this channel unit. Also order VF cable concurrently with this item.
10. The AUA44 can function as FX-office end (4FXO), tandem (4TDM).

* Registered trademark of Versus Technology, Inc.

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A remote terminal (RT) is composed of the following three basic groups:

- Support hardware
- Common packs
- Channel unit circuit packs.

A complete RT system can be configured using the following steps.

1. Select one of the RT models
2. Select common circuit packs and other desired options from the options group
3. Add channel unit circuit packs from the listing in Table 3-108.

Each model and option listed in this section has a brief description of its contents. If there is a question as to what is included in a specific model or option, consult your local AT&T Account Executive.

RT Models

The following list contains general *notes* that apply to RT Models.

- The RT Models do not include common circuit packs. Therefore, the channel banks must be populated by using available options.
- Equip the blue system (first 96 lines) first, and follow with the white system (second 96 lines) as required (Figures 1-1 and 1-2).
- RT models do not include channel units.



NOTE:

Order channel unit circuit packs as required (Table 3-108).

- Fiber multiplexers and repeater shelves in 80D cabinets do not contain circuit packs and should be filled by using available options listed in the Chapter 4, *Fiber Multiplexer*. Also refer to Chapter 4 for lightguide terminals and pigtails.
- The 51A and 80-type cabinets have been modified to include installation of Teradyne *RMU** telephone line test measurement apparatus wiring harness and 3M connectors.
- The 20-Hz ringing generators are provided on all RT models. Also, all RT models except RT-7-3DCB48 and RT-8-3DCB48 contain -48 V DC power and batteries.
- Digital test units are included at the RT because they are required for proper function of the line test unit and for special service testing.

- All RT models contain battery reserve for 8 hours of standard operation. However, when T1 lines are extended from the cabinet, the number of line repeaters powered may lower the reserve below 8 hours.
- Protectors are not included in RT models for T1 or subscriber lines. Table 3-107 lists the protectors required for each particular RT model.
- RT cabinets are *not* provided with an emergency transfer switch.
- Table 3-1 lists the RT part numbers with corresponding GTE material codes.
- The following VF channels in every model have been reserved for specific functions.

	Channel	Function
1.	Blue/White System	FPI Mode 1 Datalink
2.	Every Blue System	FPI FMU remote access
3,4	First Blue system in each model	RMU remote access
23,24	First Blue system in each model	Operations Interface access

* Registered trademark of Teradyne, Inc.

Table 3-1. RT Part Number/GTE Material Code Summary

Part Number	Description	GTE Material Code
RT Models		
RT-51A-1DCB	RT, (1) DCB, 51A cabinet, metallic T1 interface	311837
RT-51A-1DCBF	RT, (1) DCB, 51A cabinet, fiber interface	364510
80A-2DCBM	RT, (2) DCBs, 80A cabinet, metallic T1 interface	364502
80A-2DCBM-APS	RT, (2) DCBs, 80A cabinet, metallic T1 interface	364503
80A-1DCB-2000	RT, (1) DCB, 80A cabinet, metallic T1 interface	352348
80A-2DCB-2000	RT, (2) DCBs, 80A cabinet, metallic T1 interface	364504
RT-80D-3DCBM*	RT, (3) DCBs, 80D cabinet, metallic T1 interface	300573
RT-80D-4DCBM*	RT, (4) DCBs, 80D cabinet, metallic T1 interface	300574
80D-3DCBM-APS*	RT, (3) DCBs, 80D cabinet, metallic T1 interface	364505
80D-3DCBF-2000*	RT, (3) DCBs, 80D cabinet, fiber interface	314686
80D-4DCBM-BP	RT, (4) DCBs, 80D cabinet, metallic T1 interface	†
80D-3DCBM-BP-APS	RT, (3) DCBs, 80D cabinet, metallic T1 interface	†
80D-3DCBF-BP-2000	RT, (3) DCBs, 80D cabinet, fiber interface	†
80E-5DCBF-BP-2000	RT, (5) DCBs, 80E cabinet, fiber interface	356999
80E-7DCBF-BP-2000	RT, (7) DCBs, 80E cabinet, fiber interface	363405
90A-1DCBF	RT, (1) DCB, 90A cabinet with DDM-2000	325425
90A-HICAP-IDCB	RT, (1) DCB, 90A cabinet, HICAP	364511
90A-2DCBM	RT, (2) DCBs, 90A cabinet	325426
RT-7-3DCB115	RT, (2) DCBs, (1) 7-foot frame for 115 V AC powering	300577
RT-7-3DCB48	RT, (2) DCBs, (1) 7-foot frame for -48 V DC powering	300578
RT-8-2DCB115	RT, (2) DCBs, (1) 8-foot frame for 115 V AC powering	364506
RT-8-2DCB48	RT, (2) DCBs, (1) 8-foot frame for -48 V DC powering	364507
RT-8-3DCB48-CO	RT, (2) DCBs, (1) 8-foot frame for -48 V DC powering	364508

Continued on next page

Table 3-1. Continued

Part Number	Description	GTE Material Code
RT Options		
7FR-END-GR	End guard for 7' frame	300588
8GFR-END-GR	End guard for 8' frame	364512
7-2-50-CASET	50' cable set for (2) DCBs	300589
7-3-50-CASET	50' cable set for (3) DCBs	300591
7-2-100-CASET	100' cable set for (2) DCBs	300590
7-3-100-CASET	100' cable set for (3) DCBs	300592
90A-50M-CASET	50' cable set for 90A metallic cabinet	364513
90A-50F-CASET	50' cable set for 90A fiber cabinet	364514
90A-100M-CASET	100' cable set for 90A metallic cabinet	364515
90A-100F-CASET	100' cable set for 90A fiber cabinet	364516
RT-AUTO-96M1	Common packs, FPC/AC Mode 1, metallic, blue system	311888
RT-AUTO-96M1-WH	Common packs, FPC/AC Mode 1, metallic, white system	364517
RT-AUTO-192M1	Common packs, FPC/AC Mode 1, metallic, both systems	311889
RT-AUTO-96M2	Common packs, FPC/AC Mode 2, metallic, blue system	311890
RT-AUTO-96M2-WH	Common packs, FPC/AC Mode 2, metallic, white system	364518
RT-AUTO-192M2	Common packs, FPC/AC Mode 2, metallic, both systems	311891
RT-AUTO-96F1	Common packs, FPC/AC Mode 1, fiber, blue system	311886
RT-AUTO-96F1-WH	Common packs, FPC/AC Mode 1, fiber, white system	364519
RT-AUTO-192F1	Common packs, FPC/AC Mode 1, fiber, both systems	311887
RT-AUTO-96F2	Common packs, FPC/AC Mode 2, fiber, blue system	311884
RT-AUTO-96F2-WH	Common packs, FPC/AC Mode 2, fiber, white system	364520
RT-AUTO-192F2	Common packs, FPC/AC Mode 2, fiber, both systems	311885
RT-FPI-96M/F1	Common packs, FPI Mode 1, blue system	341985
RT-FPI-96M/F1-WH	Common packs, FPI Mode 1, white system	364479
RT-FPI-192M/F1	Common packs, FPI Mode 1, both systems	341986
RT-FPI-96M/F2	Common packs, FPI Mode 2, blue system	341987
RT-FPI-96M/F2-WH	Common packs, FPI Mode 2, white system	364480
RT-FPI-192M/F2	Common packs, FPI Mode 2, both systems	341988

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Table 3-1. Continued

Part Number	Description	GTE Material Code
RT Options		
RT-FPI-96M/F4	Common packs, FPI Mode 4, blue system	341989
RT-FPI-96M/F4-WH	Common packs, FPI Mode 4, white system	364481
RT-FPI-192M/F4	Common packs, FPI Mode 4, both systems	341990
RT-INA-96M1	Common packs, INA Mode I, metallic, blue system	364521
RT-INA-96M1-WH	Common packs, INA Mode I, metallic, white system	364522
RT-INA-192M1	Common packs, INA Mode I, metallic, both systems	364523
RT-INA-96M3	Common packs, INA Mode III, metallic, blue system	364524
RT-INA-96M3-WH	Common packs, INA Mode III, metallic, white system	364525
RT-INA-192M3	Common packs, INA Mode III, metallic, both systems	364526
RT-INA-96F1	Common packs, INA Mode I, fiber, blue system	364527
RT-INA-96F1-WH	Common packs, INA Mode I, fiber, white system	364528
RT-INA-192F1	Common packs, INA Mode I, fiber, both systems	364529
RT-INA-96F3	Common packs, INA Mode III, fiber, blue system	364530
RT-INA-96F3-WH	Common packs, INA Mode III, fiber, white system	364531
RT-INA-192F3	Common packs, INA Mode III, fiber, both systems	364532
RT FPC to FPI Conversion Packages		
RT-FPI-CONV1-BL		364482
RT-FPI-CONV1-WH		364483
RT-FPI-CONV1-192		364484
RT-FPI-CONV2-BL		364485
RT-FPI-CONV2-WH		364486
RT-FPI-CONV2-192		364487
RT-FPI-CONV4-BL		364488
RT-FPI-CONV4-WH		364489
RT-FPI-CONV4-192		364490

Continued on next page

Table 3-1. Continued

<u>Part Number</u>	<u>Description</u>	<u>GTE Material Code</u>
Miscellaneous RT Equipment		
AT-8812B	Pedestal base for 51A cabinet	311841
AT-8783B	Metal crossarms for 51A cabinet	311840
106530132	AEK90 T1 repeater	352349
J1C182AF-1, L3	RT DCB with E&M signaling leads	
J1C182AH-1, L1	RT DCB (710-type)	323717
J1C182AH-1, L2	RT DCB (3M-type)	364533
ED-7C700-20, G1	24'' E&M signaling leads for one digroup	313317
ED-7C601-30, G2	Beige 51A cabinet	311839
105727838	3B1 30Hz ringing generator	319860
104032727	AUG1 PRU	000080
105167563	1B-5 (5') SM biconic pigtail	
104300249	2016A SM biconic connector	
406387985	25F OLIU, 75 kft range	358044
846244168	Hex Key	579483
102450574	216C Tool	579873

Continued on next page

Table 3-1. *Continued*

<u>Part Number</u>	<u>Description</u>	<u>GTE Material Code</u>
RT Common Circuit Packs		
106879364	AUA111 TRU	341996
103841243	AUB28 ADU	341994
106878838	AUB30 ACTU	341995
106878846	MC97775A1 BCU (FPI)	341997
106434608	AUA161 MLIU	341980
106434624	AUA162 SLIU	341991
106434574	AUA101 FMU	341993
106458789	AUA163 EMU	341992
105728042	AUA11C PCU	851886
105710271	AUA73B LSU	000073
104194550	AUA105 TRU	311892
103840401	AUA24 FCU	883512
103841235	AUB27 ADU	311893
103841219	AUB25 CTU	851893
106018088	AUA114 CFU	319856
106018096	AUA115 LFU	319851
106443427	MC97776A1 BCU (AUTO)	357002
106313802	AUA64D, S3 LIU power looping	319859
103840336	AUA18 DTU-L	850890
103840344	AUA19 DTU-R	850891
105703946	AUA61D LIU DSX-1	311894
105585368	MC97769A1 BCU (INA)	326727
106654742	AUA176 LTT	338076

Continued on next page

Table 3-1. *Continued*

<u>Part Number</u>	<u>Description</u>	<u>GTE Material</u>
RT Channel Units		
106018401	AUA141 4-wire special services channel unit	304045
106018419	AUA142 E <i>SPOTS</i> [®] 2-wire channel unit	304043
106018500	AUA150 POTS/ <i>SPOTS</i> channel unit, 1500 Ω/CSA	314712
103840435	AUA27 POTS and <i>VerSuS</i> [†] alarm service	318156
105478713	AUA43 E <i>SPOTS</i> 2-wire channel unit	851903
105678171	AUA44 4-wire special services channel unit	317182
106244163	AUA52B OCU dataport channel unit	335960
103840724	AUA53 coin channel unit, 1500 Ω	851906
103840732	AUA54 4-wire special services channel unit	304047
103840740	AUA55 multiparty channel unit	316838
103840757	AUA56 DID DPT 2-wire channel unit	883517
103840765	AUA57 FSR channel unit, 900 Ω	304015
105710297	AUA58B POTS channel unit, 900 Ω	314713
105710289	AUA25B M <i>SPOTS</i> channel unit	
103840963	AUA75 2WPLAR	329027
106018583	AUA158 POTS channel unit, 900 Ω, ALC	364538
106018591	AUA159 UVG <i>SPOTS</i> channel unit, 600 Ω, ALC	364539
RT Miscellaneous Equipment		
106833080	AUA77 SIU	341978
103841011	AUA8 SDU	341977

* 80D distributed power cabinets (models) will be destandardized by GTE when 80 D bulk power models are orderable (8/93).

† 80D Bulk Power (BP) material codes will be assigned at a later date.

‡ Registered trademark of Versus Technology, Inc.

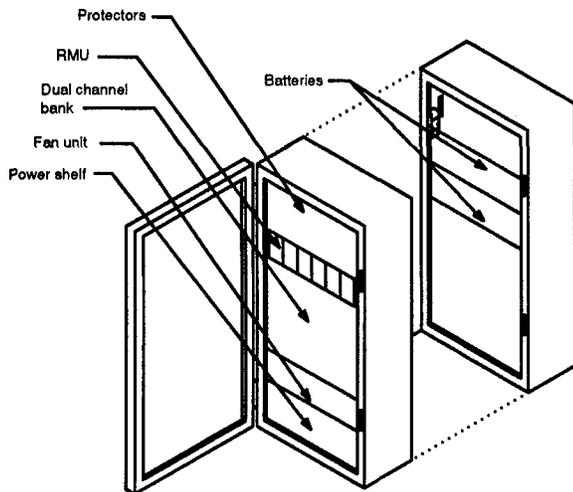
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RT-51A-1DCB

Figure 3-1 illustrates the layout of the RT-51A-1DCB configuration. Tables 3-2 and 3-3 list the options and parts, respectively.



lpa 769446/01

Figure 3-1. Model RT-51A-1DCB [RT, (1) DCB in 51A Cabinet with Metallic T1 Interface] (Wired for 192 POTS Lines)

⇒ NOTE:

Model RT-51A-1DCB must be ordered with either the pedestal or pole mounting hardware (Table 3-101). This model provides the standard 51A green cabinet.

Table 3-2. Model RT-51A-1DCB Options (Note)

Option No.	Description
RT-AUTO-96M1	FPC/AC M1, blue system
RT-AUTO-96M1-WH	FPC/AC M1, white system
RT-AUTO-192M1	FPC/AC M1, both systems
RT-AUTO-96M2	FPC/AC M2, blue system
RT-AUTO-96M2-WH	FPC/AC M2, white system
RT-AUTO-192M2	FPC/AC M2, both systems
RT-INA-96M1	INA Mode I, blue system
RT-INA-96M1-WH	INA Mode I, white system
RT-INA-192M1	INA Mode I, both systems
RT-INA-96M3	INA Mode III, blue system
RT-INA-96M3-WH	INA Mode III, white system
RT-INA-192M3	INA Mode III, both systems

Note: Order pedestal base or pole mounting hardware separately (Table 3-101).

Configuration

Model RT-51A-1DCB is a prewired 51A cabinet wired for 192 POTS lines with direct pole mounting hardware and the following equipment.

- One J1C182AH-1, L1 DCB
- One 2C fan unit
- -48 V DC power shelf with circuit packs and 20-Hz ringing generators
- Battery backup for 8 hours of operation
- Wiring for Teradyne *RMU* and LTT telephone line test measurement apparatus

Table 3-3. Model RT-51A-1DCB Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
ED7C601-30, G5	51A cabinet	1
J1C182AH-1, L1	RT DCB w/o protectors	1
106382336	2C fan unit	1
406456707	IR30C batteries	8
J1C182BA-1, L3	RT power shelf	1
105701726	336A1 power unit	2
105701734	337A1 battery charger	2
601251259	ED-7C613-30, G3 LDU	1
106193485	AUG11 BFU	1
105727846	3C1 ringing generator	2
106758170	<i>RMU</i> and LTT cable assembly	1
106885213	OI LAN cable	1
ED7C711-30, G177	FMU Cable	1

RT-51A-1DCBF

Figure 3-2 illustrates the layout of the RT-51A-1DCBF configuration. Tables 3-4 and 3-5 list the options and parts, respectively.

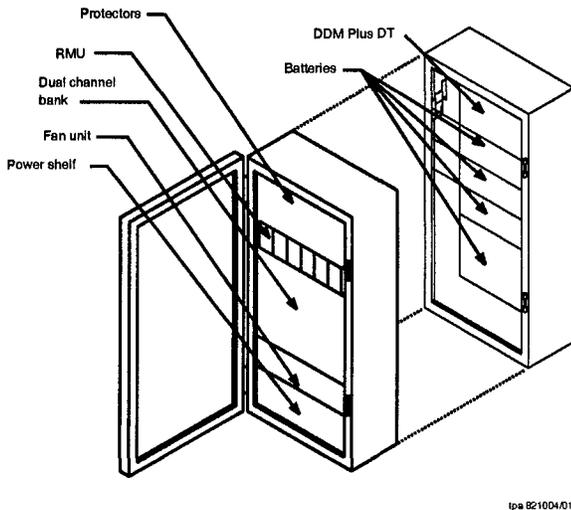


Figure 3-2. Model RT-51A-1DCBF [RT, (1) DCB in 51A Cabinet with Metallic T1 Interface] (Wired for 192 POTS Lines)



NOTE:

Model RT-51A-1DCBF must be ordered with either the pedestal or pole mounting hardware (Table 3-101). This model provides the standard 51A beige and brown cabinet.

Table 3-4. Model RT-51A-1DCBF Options (Note)

<u>Option No.</u>	<u>Description</u>
RT-AUTO-96F1	FPC/AC F1, blue system
RT-AUTO-96F1-WH	FPC/AC F1, white system
RT-AUTO-192F1	FPC/AC F1, both systems
RT-AUTO-96F2	FPC/AC F2, blue system
RT-AUTO-96F2-WH	FPC/AC F2, white system
RT-AUTO-192F2	FPC/AC F2, both systems
RT-FPI-96M/F1	FPI Mode 1, blue system
RT-FPI-96M/F1-WH	FPI Mode 1, white system
RT-FPI-192M/F1	FPI Mode 1, both system
RT-FPI-96M/F2	FPI Mode 2, blue system
RT-FPI-96M/F2-WH	FPI Mode 2, white system
RT-FPI-192M/F2	FPI Mode 2, both system
RT-FPI-96M/F4	FPI Mode 4, blue system
RT-FPI-96M/F4-WH	FPI Mode 4, white system
RT-FPI-192F/F4	FPI Mode 4, both system
RT-INA-96F1	INA Mode I, blue system
RT-INA-96F1-WH	INA Mode I, white system
RT-INA-192F1	INA Mode I, both systems
RT-INA-96F3	INA Mode III, blue system
RT-INA-96F3-WH	INA Mode III, white system
RT-INA-192F3	INA Mode III, both systems

Note: Order pedestal base or pole mounting hardware separately (Table 3-101). Order (1) 25F OLIU for each (4) DS1s desired plus protect OLIU.

Configuration

Model RT-51A-1DCBF is a prewired 51A cabinet wired for 192 POTS lines with direct pole mounting hardware and the following equipment.

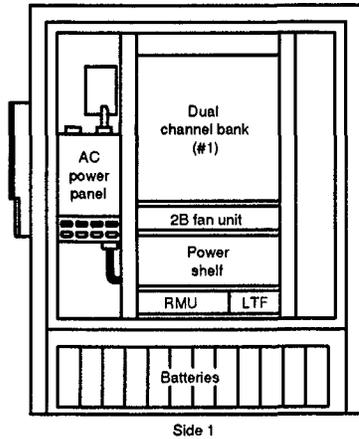
- One J1C182AH-1, L1 DCB
- One 2C fan unit
- -48 V DC power shelf with circuit packs and 20-Hz ringing generators
- Battery backup for 8 hours of operation
- Wiring for Teradyne *RMU* and LTT telephone line test measurement apparatus
- One DDM-Plus DT Cabinet with 12 *ST* fiber connection capacity.

Table 3-5. Model RT-51A-1DCBF Replacement Parts Information

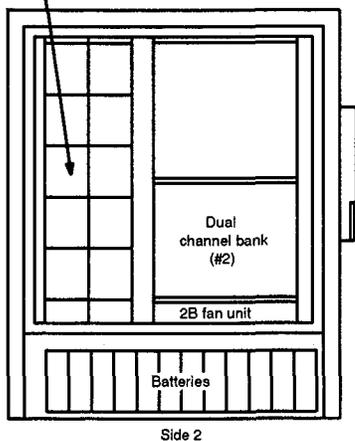
<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
ED7C601-30, G5	51A cabinet	1
J1C182AH-1, L1	RT DCB w/o protectors	1
106382336	2C fan unit	1
406456707	IR30C batteries	8
J1C182BA-1, L3	RT power shelf	1
105701726	336A1 power unit	2
105701734	337A1 battery charger	2
601251259	ED-7C613-30, G3 LDU	1
106193485	AUG11 BFU	2
105727846	3C1 ringing generator	2
106758170	<i>RMU</i> and LTT cable assembly	1
106885213	OI LAN cable	1
ED7C711-30, G177	FMU Cable	1
KS23787,L7	DDM Plus DT Cabinet	1

80A-2DCBM

Figure 3-3 illustrates the layout of the 80A-2DCBM configuration. Tables 3-6 and 3-7 list the options and parts, respectively.



Misc pair panel



lpa 820310/01

Figure 3-3. Model 80A-2DCBM [RT, (2) DCBs in 80A Cabinet with Metallic T1 Interface] (Wired for 384 POTS Lines with DCBs for 384 POTS Lines)

Table 3-6. Model 80A-2DCBM Options

Option No.	Description
RT-AUTO-96M1	FPC/AC M1, blue system
RT-AUTO-96M1-WH	FPC/AC M1, white system
RT-AUTO-192M1	FPC/AC M1, both systems
RT-AUTO-96M2	FPC/AC M2, blue system
RT-AUTO-96M2-WH	FPC/AC M2, white system
RT-AUTO-192M2	FPC/AC M2, both systems
RT-INA-96M1	INA Mode I, blue system
RT-INA-96M1-WH	INA Mode I, white system
RT-INA-192M1	INA Mode I, both systems
RT-INA-96M3	INA Mode III, blue system
RT-INA-96M3-WH	INA Mode III, white system
RT-INA-192M3	INA Mode III, both systems

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Configuration



NOTE:

Not for integration into *GTD-5* EAX switch.

Model 80A-2DCBM is a prewired 80A cabinet with hardware for pad mounting, cabling for four channel banks, and the following equipment.

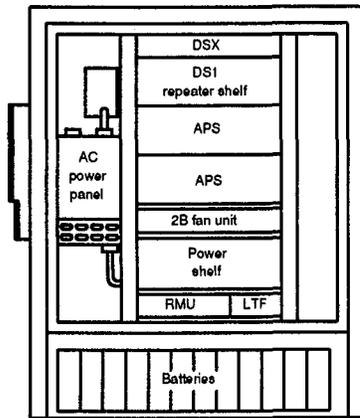
- Two J1C182AH-1, L1 DCBs
- Two 2B fan units
- -48 V DC bulk power shelf with circuit packs and 20-Hz ringing generators
- Battery backup for 8 hours of operation

Table 3-7. Model 80A-2DCBM Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
F920H0637	80A cabinet for (2) DCBs	1
106430135	128F bracket	1
J1C182AH-1, L1	RT DCB w/o protectors	2
ED-7C711-30, G34	AC power system	1
105550420	2B fan unit	2
ED-83242-31, G3	KS-23619, L3 battery	1
ED-7C711-30, G63	Battery cable	1
J1C182BD-1, L1	-48 V bulk power shelf	1
ED-7C711-30, G179	RMU and LTF cables	1
F920H0586	OI LAN cable	1
104032750	AUG3 RCU	1
104032768	AUG4 BIU	1
106397888	3H1 ringing generator	2
105701726	336A1 power unit	3
601355225	ED-7C719-30,G1 LTF	1

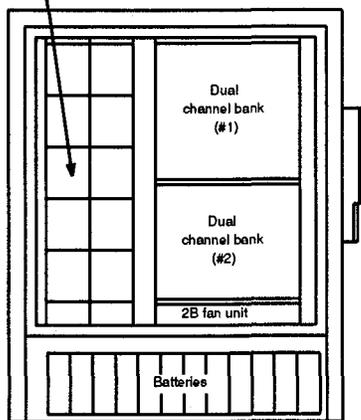
80A-2DCBM-APS (Orderable 06/93)

Figure 3-4 illustrates the layout of the 80A-2DCBM-APS configuration. Tables 3-8 and 3-9 list the options and parts, respectively.



Side 1

Misc pair panel



Side 2

1pa 820727/01

Table 3-8. Model 80A-2DCBM-APS Options (Note)

Option No.	Description
RT-FPI-96M/F1	FPI Mode 1, blue system
RT-FPI-96M/F1-WH	FPI Mode 1, white system
RT-FPI-192M/F1	FPI Mode 1, both systems
RT-FPI-96M/F2	FPI Mode 2, blue system
RT-FPI-96M/F2-WH	FPI Mode 2, blue system
RT-FPI-192M/F2	FPI Mode 2, both systems
RT-FPI-96M/F4	FPI Mode 4, blue system
RT-FPI-96M/F4-WH	FPI Mode 4, white system
RT-FPI-192M/F4	FPI Mode 4, both systems

Note : Order AEK90 repeaters as required (Table 3-101).

Figure 3-4. Model 80A-2DCBM-APS [RT, (2) DCBs in 80A Cabinet with Metallic T1 Interface] (Wired for 384 POTS Lines with DCBs for 384 POTS Lines)

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Configuration



NOTE:

Only for FPI metallic feed and integration into GTD-5 EAX switch.

Model 80A-2DCBM-APS is a prewired 80A cabinet with hardware for pad mounting, cabling for four channel banks, and the following equipment.

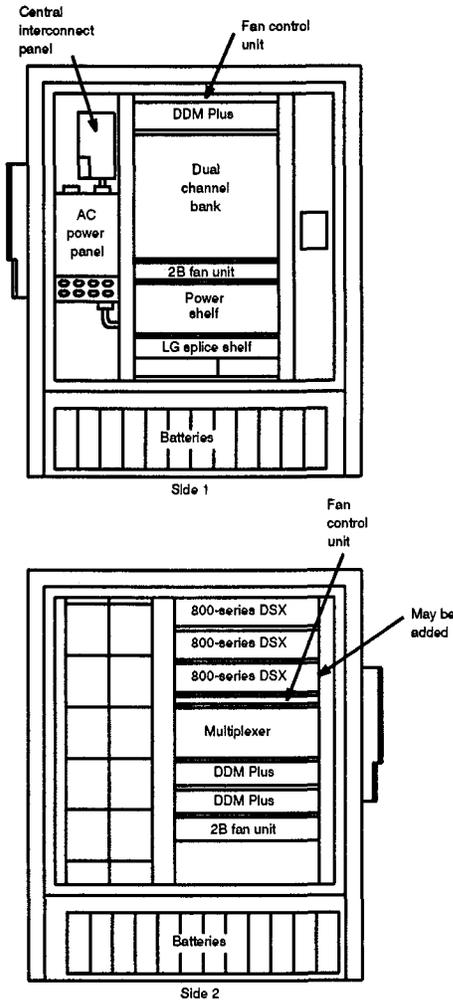
- Two J1C182AH-1, L1 DCBs
- Two 2B fan units
- -48 V DC bulk power shelf with circuit packs and 20-Hz ringing generators
- Battery backup for 8 hours of operation
- DSX-1 800-type panel
- DS1 repeater shelf

Table 3-9. Model 80A-2DCBM-APS Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
F920H0690	80A cabinet for (2) DCBs	1
106430135	128F bracket	1
J1C182AH-1, L1	RT DCB w/o protectors	2
ED-7C711-30, G34	AC power system	1
105550420	2B fan unit	2
ED-7C711-30, G59	800-series DSX	1
ED-83242-31, G3	KS-23619, L3 battery	2
ED-7C711-30, G63	Battery cable	2
J1C182BD-1, L1	-48 V bulk power shelf	1
ED-7C711-30, G179	RMU and LTF cable assembly	1
J98725DA-1	DS1 repeater shelf	1
F920H0586	OI LAN cable	1
ED-7C711-30, G177	FMU cable	2
104032750	AUG3 RCU	1
104032768	AUG4 BIU	1
106397888	3H1 ringing generator	2
105701726	336A1 power unit	5
402067078	Lynch APS shelf	1
	Model 302MA010PTA1	
601355225	ED-7C719-30,G1 LTF	1

80A-1DCB-2000

Figure 3-5 illustrates the layout of the 80A-1DCB-2000 configuration. Tables 3-10 and 3-11 list the options and parts, respectively.



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Figure 3-5. Model 80A-1DCB-2000 [RT, (1) DCB in 80A Cabinet with Metallic T1 Interface] (Wired for 192 POTS Lines with DCBs for 192 POTS Lines)

Table 3-10. Model 80A-1DCB-2000 Options (Note)

Option No.	Description
RT-AUTO-96F1	FPC/AC M1, blue system
RT-AUTO-96F1-WH	FPC/AC M1, white system
RT-AUTO-192F1	FPC/AC M1, both systems
RT-AUTO-96F2	FPC/AC M2, blue system
RT-AUTO-96F2-WH	FPC/AC M2, white system
RT-AUTO-192F2	FPC/AC M2, both systems
RT-FPI-96M/F1	FPI Mode 1, blue system
RT-FPI-96M/F1-WH	FPI Mode 1, white system
RT-FPI-192M/F1	FPI Mode 1, both systems
RT-FPI-96M/F2	FPI Mode 2, blue system
RT-FPI-96M/F2-WH	FPI Mode 2, white system
RT-FPI-192M/F2	FPI Mode 2, both systems
RT-FPI-96M/F4	FPI Mode 4, blue system
RT-FPI-96M/F4-WH	FPI Mode 4, white system
RT-FPI-192M/F4	FPI Mode 4, both systems
RT-INA-96F1	INA Mode I, blue system
RT-INA-96F1-WH	INA Mode I, white system
RT-INA-192F1	INA Mode I, both systems
RT-INA-96F3	INA Mode III, blue system
RT-INA-96F3-WH	INA Mode III, white system
RT-INA-192F3	INA Mode III, both systems

Note: Order AEK90 repeaters 25A and 25F OLIUs as required (Table 3-101).

Configuration

Model 80A-1DCB-2000 is a prewired 80A cabinet with hardware for pad mounting, cabling for four channel banks, and the following equipment.

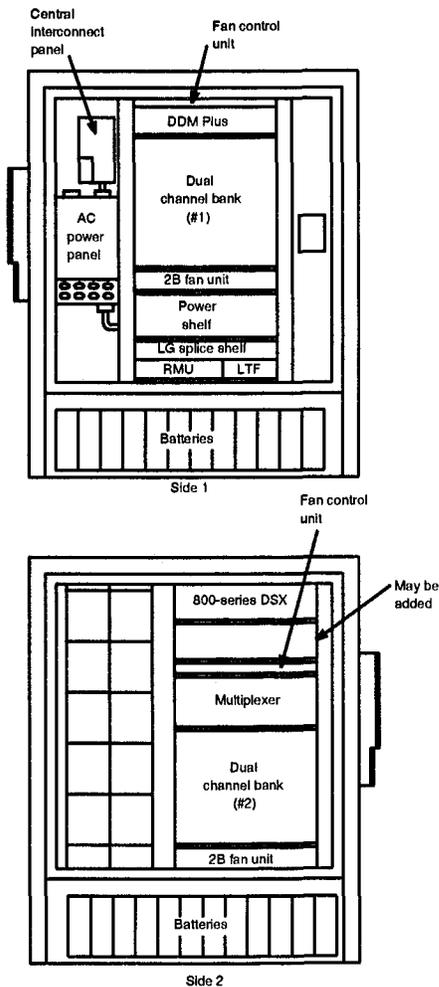
- One J1C182AH-1, L1 DCB
- Two 2B fan units
- -48 V DC bulk power shelf with circuit packs and 20-Hz ringing generators
- Battery backup for 8 hours of operation
- Two DSX-1 800-type panels
- One DDM-2000 OC-3 Multiplexer shelf assembly
- Three DDM-Plus shelves - provides hubbing capabilities.
- Lightguide terminal for 96 fibers and (8) jumpers with *ST* to *ST* connectors

Table 3-11. Model 80A-1DCB-2000 Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
F920H0600	80A cabinet for (1) DCB	1
106430135	128F bracket	1
J1C182AH-1, L1	RT DCB w/o protectors	1
ED-7C711-30, G34	AC power system	1
105550420	2B fan unit	2
F920H0695	800-series DSX	1
ED-7C711-30, G63	Battery cable	2
ED-7C711-30, G57	800-series DSX	1
ED-8C724-30, G3B	DDM-2000 Multiplexer shelf	1
J1C182BD-1, L1	-48 V bulk power shelf	1
F920H0121	RMU and LTT cable assembly	1
ED-7C711-30, G194	(4) lightguide jumpers	1
ED-7C711-30, G196	Lightguide interface	2
J98725DB-1, L1	DDM-Plus shelf	3
F920H0586	OI LAN cable	1
ED7C711-30, G177	FMU cable	1
ED-83242-31, G3	KS-23619, L3 battery	2
104032750	AUG3 RCU	1
104032768	AUG4 BIU	1
106397888	3H1 ringing generator	2
105701726	336A1 power unit	5

80A-2DCB-2000

Figure 3-6 illustrates the layout of the 80A-2DCB-2000 configuration. Tables 3-12 and 3-13 list the options and parts, respectively.



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Figure 3-6. Model 80A-2DCB-2000 [RT, (2) DCBs in 80A Cabinet with Metallic T1 Interface] (Wired for 384 POTS Lines with DCBs for 384 POTS Lines)

Table 3-12. Model 80A-2DCB-2000 Options (Note)

Option No.	Description
RT-AUTO-96F1	FPC/AC M1, blue system
RT-AUTO-96F1-WH	FPC/AC M1, white system
RT-AUTO-192F1	FPC/AC M1, both systems
RT-AUTO-96F2	FPC/AC M2, blue system
RT-AUTO-96F2-WH	FPC/AC M2, white system
RT-AUTO-192F2	FPC/AC M2, both systems
RT-FPI-96M/F1	FPI Mode 1, blue system
RT-FPI-96M/F1-WH	FPI Mode 1, white system
RT-FPI-192M/F1	FPI Mode 1, both systems
RT-FPI-96M/F2	FPI Mode 2, blue system
RT-FPI-96M/F2-WH	FPI Mode 2, white system
RT-FPI-192M/F2	FPI Mode 2, both systems
RT-FPI-96M/F4	FPI Mode 4, blue system
RT-FPI-96M/F4-WH	FPI Mode 4, white system
RT-FPI-192M/F4	FPI Mode 4, both systems
RT-INA-96F1	INA Mode I, blue system
RT-INA-96F1-WH	INA Mode I, white system
RT-INA-192F1	INA Mode I, both systems
RT-INA-96F3	INA Mode III, blue system
RT-INA-96F3-WH	INA Mode III, white system
RT-INA-192F3	INA Mode III, both systems

Note : Order AEK90 repeaters, 25A and 25F OLIUs as required (Table 3-101).

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Configuration

Model 80A-2DCB-2000 is a prewired 80A cabinet with hardware for pad mounting, cabling for four channel banks, and the following equipment.

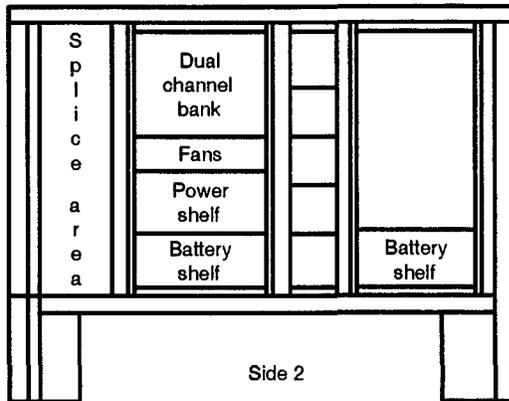
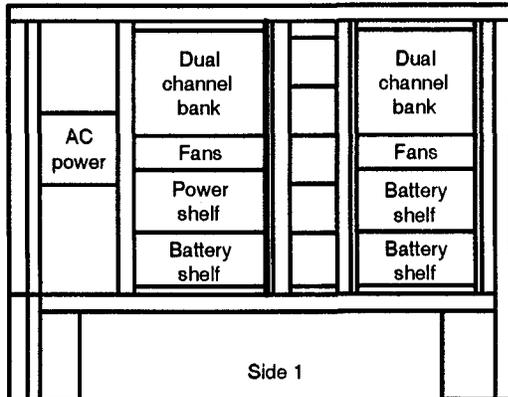
- Two J1C182AH-1, L1 DCBs
- Two 2B fan units
- -48 V DC bulk power shelf with circuit packs and 20-Hz ringing generators
- Battery backup for 8 hours of operation
- DSX-1 800-type panel
- One DDM-2000 OC-3 Multiplexer shelf assembly
- One DDM-Plus shelf
- Lightguide terminal for 48 fibers and (4) jumpers with *ST* to *ST* connectors

Table 3-13. Model 80A-2DCB-2000 Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
F920H0533	80A cabinet for (2) DCBs	1
106430135	128F bracket	1
J1C182AH-1, L1	RT DCB w/o protectors	2
ED-7C711-30, G34	AC power system	1
105550420	2B fan unit	2
ED-7C711-30, G63	Battery cable	2
ED-7C711-30, G59	800-series DSX	1
ED-8C724-30, G3B	DDM-2000 Multiplexer shelf	1
J1C182BD-1, L1	-48 V bulk power shelf	1
ED-7C711-30, G179	RMU and LTF cable assembly	1
ED-7C711-30, G196	Lightguide interface	1
J98725DB-1, L1	DDM-Plus	1
F910H0586	OI LAN cable	1
ED7C711-30,G177	FMU cable	2
ED-83242-30, G3	KS-23619, L3 battery	2
104032750	AUG3 RCU	1
104032768	AUG4 BIU	1
106397888	3H1 ringing generator	2
105701726	336A1 power unit	5
601355225	ED7C719-30,G1 LTF	1

RT-80D-3DCBM

Figure 3-7 illustrates the layout of the RT-80D-3DCBM configuration. Tables 3-14 and 3-15 list the options and parts, respectively.



tpa 789447/01

Figure 3-7. Model RT-80D-3DCBM [RT, (3) DCBs in 80D Cabinet with Metallic T1 Interface] (Wired for 768 POTS Lines with DCBs for 576 POTS Lines)

Table 3-14. Model RT-80D-3DCBM Options

Option No.	Description
RT-AUTO-96M1	FPC/AC M1, blue system
RT-AUTO-96M1-WH	FPC/AC M1, white system
RT-AUTO-192M1	FPC/AC M1, both systems
RT-AUTO-96M2	FPC/AC M2, blue system
RT-AUTO-96M2-WH	FPC/AC M2, white system
RT-AUTO-192M2	FPC/AC M2, both systems
RT-INA-96M1	INA Mode I, blue system
RT-INA-96M1-WH	INA Mode I, white system
RT-INA-192M1	INA Mode I, both systems
RT-INA-96M3	INA Mode III, blue system
RT-INA-96M3-WH	INA Mode III, white system
RT-INA-192M3	INA Mode III, both systems

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See notice on first page

Configuration



NOTE:

Not for integration into *GTD-5* EAX switch.

Model RT-80D-3DCBM is a prewired 80D cabinet with hardware for pad mounting, cabling for four channel banks, and the following equipment.

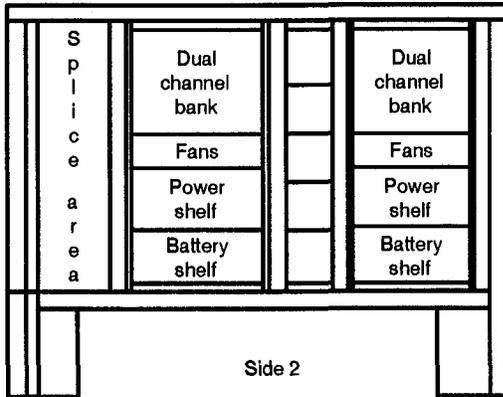
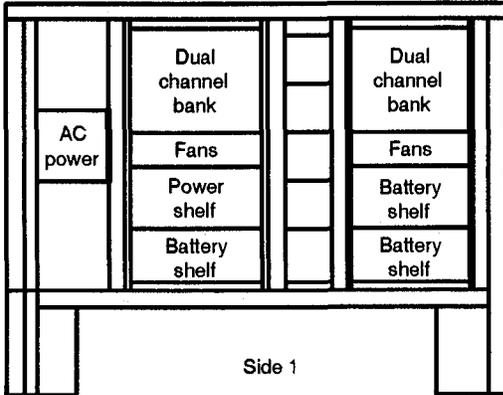
- Three J1C182AH-1, L1 DCBs
- Three 2C fan units
- Two -48 V DC power shelf with circuit packs and 20-Hz ringing generators
- Battery backup for 8 hours of operation

Table 3-15. Model RT-80D-3DCBM Replacement Parts Information

Part Number	Description	Qty
F91OH0755	80D cabinet for (4) DCBs	1
104164850	128DC bracket	2
J1C182AH1,L1	RT DCB, w/o protectors	3
105550420	2B fan unit	3
104028733	181A apparatus mounting	5
406456707	IR30C batteries	20
J1C182BA-1, L3	RT power shelf	2
105701726	336A1 power unit	8
105701734	337A1 battery charger	5
601251259	ED-7C613-30, G3 LDU	2
106193485	AUG11 BFU	3
105727846	3C1 ringing generator	4
600423198	ED-7C613-30, G2 LDU daughter board	1
ED-7C621-30, G179	RMU and LTF cable assembly	1
ED-7C621-30, G34	AC power system	1
F920H0459	OI LAN cable	1
601355225	ED-7C719-30,G1 LTF	1

RT-80D-4DCBM

Figure 3-8 illustrates the layout of the RT-80D-4DCBM configuration. Tables 3-16 and 3-17 list the options and parts, respectively.



tpa 789448/01

Figure 3-8. Model RT-80D-4DCBM [RT, (4) DCBs in 80D Cabinet with Metallic T1 Interface] (Wired for 768 POTS Lines)

Table 3-16. Model RT-80D-4DCBM Options

<u>Option No.</u>	<u>Description</u>
RT-AUTO-96M1	FPC/AC M1, blue system
RT-AUTO-96M1-WH	FPC/AC M1, white system
RT-AUTO-192M1	FPC/AC M1, both systems
RT-AUTO-96M2	FPC/AC M2, blue system
RT-AUTO-96M2-WH	FPC/AC M2, white system
RT-AUTO-192M2	FPC/AC M2, both systems
RT-INA-96M1	INA Mode I, blue system
RT-INA-96M1-WH	INA Mode I, white system
RT-INA-192M1	INA Mode I, both systems
RT-INA-96M3	INA Mode III, blue system
RT-INA-96M3-WH	INA Mode III, white system
RT-INA-192M3	INA Mode III, both systems

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See notice on first page

Configuration



NOTE:

Not for integration into *GTD-5* EAX switch.

Model RT-80D-4DCBM is a prewired 80D cabinet with hardware for pad mounting, cabling for four channel banks, and the following equipment.

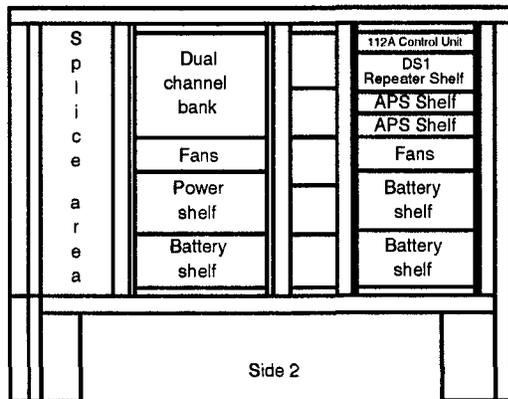
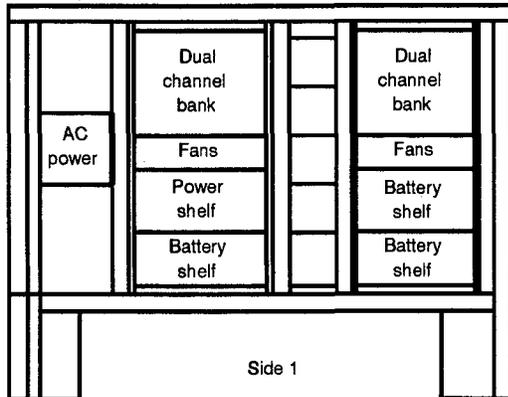
- Four J1C182AH-1, L1 DCBs
- Four 2C fan units
- Two -48 V DC power shelf with circuit packs and 20-Hz ringing generators
- Battery backup for 8 hours of operation

Table 3-17. Model RT-80D-4DCBM Replacement Parts Information

Part Number	Description	Qty
F91OH0755	80D cabinet for (4) DCBs	1
104164850	128C bracket	1
J1C182AH1,L1	RT DCB, w/o protectors	4
105550420	2B fan unit	4
104028733	181A apparatus mounting	6
406456707	IR30C batteries	24
J1C182BA-1, L3	RT power shelf	2
105701726	336A1 power unit	8
105701734	337A1 battery charger	6
601251259	ED-7C613-30, G3 LDU	2
106193485	AUG11 BFU	4
105727846	3C1 ringing generator	4
600423198	ED-7C613-30, G2 LDU daughter board	1
ED-7C621-30, G179	RMU and LTF cable assembly	1
ED-7C621-30, G34	AC power system	1
F920H0459	OI LAN cable	1
601355225	ED-7C719-30,G1 LTF	1

80D-3DCBM-APS

Figure 3-9 illustrates the layout of the 80D-3DCBM-APS configuration. Tables 3-18 and 3-19 list the options and parts, respectively.



tpa 821005/01

Figure 3-9. Model 80D-3DCBM-APS [RT, (3) DCBs in 80D Cabinet with Metallic T1 Interface] (Wired for 576 POTS Lines with DCBs for 576 POTS Lines)

Table 3-18. Model 80D-3DCBM-APS Options (Note)

Option No.	Description
RT-FPI-96M/F1	FPI Mode 1, blue system
RT-FPI-96M/F1-WH	FPI Mode 1, white system
RT-FPI-192M/F1	FPI Mode 1, blue system
RT-FPI-96M/F2	FPI Mode 2, blue system
RT-FPI-96M/F2-WH	FPI Mode 2, white system
RT-FPI-192M/F2	FPI Mode 2, both systems
RT-FPI-96M/F4	FPI Mode 4, blue system
RT-FPI-96M/F4-WH	FPI Mode 4, white system
RT-FPI-192M/F4	FPI Mode 4, both systems

Note : Order AEK90 repeaters as required (Table 3-101).

Configuration



NOTE:

Only for integration into *GTD-5* EAX switch.

Model 80D-3DCBM-APS is a prewired 80D cabinet with hardware for pad mounting, cabling for four channel banks, and the following equipment.

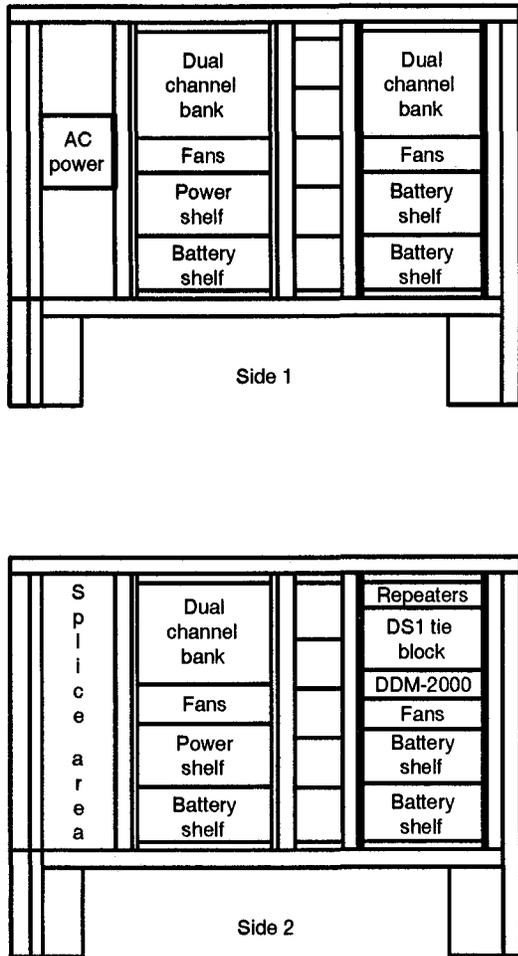
- Three J1C182AH-1, L1 DCBs
- Four 2C fan units
- Two -48 V DC power shelf with circuit packs and 20-Hz ringing generators
- Battery backup for 8 hours of operation
- DS1 repeater shelf

**Table 3-19. Model 80D-3DCBM-APS
Replacement Parts Information**

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
F91OH0755	80D cabinet for (4) DCBs	1
104164850	128C bracket	1
J1C182AH1,L1	RT DCB, w/o protectors	3
105550420	2B fan unit	4
104028733	181A apparatus mounting	6
406456707	IR30C batteries	24
105701726	336A1 power unit	8
105701734	337A1 battery charger	6
601251259	ED-7C613-30, G3 LDU	2
106193485	AUG11 BFU	4
105727846	3C1 ringing generator	4
600423198	ED-7C613-30, G2 LDU daughter board	1
F920H0459	OI LAN cable	1
F920H0689	FMU cable	3
ED-7C621-30, G179	RMU and LTF cable assembly	1
J1C182BA, L3	RT power shelf	2
ED-7C621-30, G34	AC power system	1
J98725DA-1, L1	DS1 repeater shelf	1
F92OH0585	APS wiring	1
402067078	Lynch APS shelf Model 302MA010PT A1	2
601355225	ED-7C719-30,G1 LTF	1

80D-3DCBF-2000

Figure 3-10 illustrates the layout of the 80D-3DCBF-2000 configuration. Tables 3-20 and 3-21 list the options and parts, respectively.



tpa 789503/01

Figure 3-10. Model 80D-3DCBF-2000 [RT, (3) DCBs in 80D Cabinet with Fiber Interface] (Wired for 576 POTS Lines)

Table 3-20. Model 80D-3DCBF-2000 Options (Note)

Option No.	Description
RT-AUTO-96F1	FPC/AC M1, blue system
RT-AUTO-192F1	FPC/AC M1, both systems
RT-AUTO-96F2	FPC/AC M2, blue system
RT-AUTO-192F2	FPC/AC M2, both systems
RT-AUTO-96F1-WH	FPC/AC M1, white system
RT-AUTO-96F2-WH	FPC/AC M2, white system
RT-FPI-96M/F1	FPI Mode 1, blue system
RT-FPI-96M/F1-WH	FPI Mode 1, white system
RT-FPI-192M/F1	FPI Mode 1, both systems
RT-FPI-96M/F2	FPI Mode 2, blue system
RT-FPI-96M/F2-WH	FPI Mode 2, white system
RT-FPI-192M/F2	FPI Mode 2, both systems
RT-FPI-96M/F4	FPI Mode 4, blue system
RT-FPI-96M/F4-WH	FPI Mode 4, white system
RT-FPI-192M/F4	FPI Mode 4, both systems
RT-INA-96F1	INA Mode I, blue system
RT-INA-96F1-WH	INA Mode I, white system
RT-INA-192F1	INA Mode I, both systems
RT-INA-96F3	INA Mode III, blue system
RT-INA-96F3-WH	INA Mode III, white system
RT-INA-192F3	INA Mode III, both systems
RT-CAB-28VT15-COM *	DDM-2000 common circuit packs for 28 VT1.5 lines
ADD-28VT15 *	Adds 28 VT1.5 lines to DDM-2000
F92OH0575 and ED-7C621-30, G66	Option for collocated cabinet (must be ordered with cabinet)

Note: Order AEK90 repeaters as required (Table 3-101).

* See Chapter 4, Fiber Multiplexer (FMUX).

Configuration



NOTE:

Not for integration into *GTD-5* EAX switch.

Model 80D-3DCBF-2000 is a prewired Group 47 80D cabinet (standard beige) wired for (576) POTS lines and has the following equipment.

- Three *SLC* Series 5 J1C182AH-1, L1 DCBs
- One J98725DA-1, L1 DS1 extension shelf
- One DSX-1 tie block
- 3M-4005-DPM/FR connectors
- Wiring for the Teradyne *RMU* telephone line test measurement apparatus
- One DDM-2000 OC-3 Multiplexer shelf assembly
- Batteries for 8-hour emergency power
- 20-Hz ringing generators
- One 128C bracket for use as a template to form the cement pedestal mounting base.

Each DCB can be equipped to provide a maximum of (192) POTS lines. The repeater shelf can be equipped to provide a maximum of (28) DS1 extensions. The DDM-2000 shelf can be equipped to provide a maximum of (84) DS1 circuits.

Table 3-21. Model 80D-3DCBF-2000 Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
F91OH0759	80D cabinet for (3) DCBs	1
104164850	128C bracket	1
J1C182AH1, L1	RT DCB w/o protectors	3
J98725DA-1, L1	DS1 extension shelf (28 capacity)	1
105550420	2B fan unit	4
104028733	181A apparatus mounting	6
406456707	IR30C batteries	24
J1C182BA-1, L3	RT power shelf	2
105701726	336A1 power unit	8
105701734	337A1 battery charger	6
601251259	ED-7C613-30, G3 LDU	2
F920H0459	AUG11 BFU	4
105727846	3C1 ringing generator	4
ED-8C724-30, G3B	DDM-2000 Multiplexer shelf	1
F920H0459	OI LAN cable	1
ED-7C621-30, G179	<i>RMU</i> and LTF cable assembly	1
ED-7C621-30, G66	DSX-1 tie block panel	1
F920H0689	FMU cable	3
ED-7C621-30, G34	AC power system	1
601355225	ED-7C719-30, G1 LTF	1

80D-4DCBM-BP (Orderable 08/93)

Figure 3-11 illustrates the layout of the 80D-4DCBM-BP configuration. Tables 3-22 and 3-23 list the options and parts, respectively.

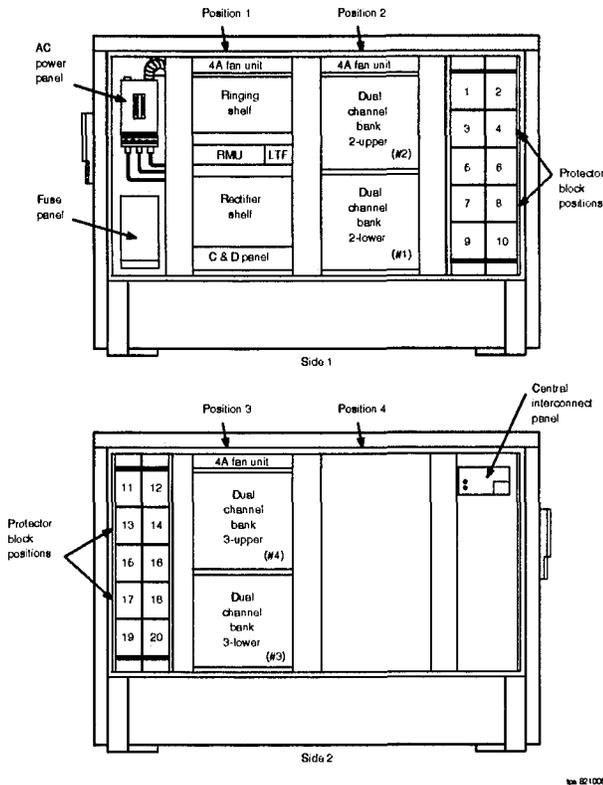


Table 3-22. Model 80D-4DCBM-BP Options

Option No.	Description
RT-AUTO-96M1	FPC/AC M1, blue system
RT-AUTO-96M1-WH	FPC/AC M1, white system
RT-AUTO-192M1	FPC/AC M1, both systems
RT-AUTO-96M2	FPC/AC M2, blue system
RT-AUTO-96M2-WH	FPC/AC M2, white system
RT-AUTO-192M2	FPC/AC M2, both systems
RT-INA-96M1	INA Mode I, blue system
RT-INA-96M1-WH	INA Mode I, white system
RT-INA-192M1	INA Mode I, both systems
RT-INA-96M3	INA Mode III, blue system
RT-INA-96M3-WH	INA Mode III, white system
RT-INA-192M3	INA Mode III, both systems

Figure 3-11. Model 80D-4DCBM-BP [RT, (4) DCBs in 80D Cabinet with Metallic T1 Interface] (Wired for 1152 POTS Lines)

Configuration



NOTE:

Not for integration into *GTD-5* EAX switch.

Model 80D-4DCBM-BP is a prewired 80D cabinet with hardware for pad mounting, cabling for six channel banks, and the following equipment.

- Four J1C182AH-1, L1 DCBs
- Three 4A fan units
- -48 V DC bulk power shelf with circuit packs and 20-Hz ringing generators
- Battery backup for 8 hours of operation

Table 3-23. Model 80D-4DCBM-BP Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
F920H0789	80D cabinet for (6) DCBs	1
106505506	128G bracket	1
J1C182AH, L1	RT DCB w/o protectors	4
106526742	4A fan unit	3
105571590	CS787B540 PU	2
104032750	AUG3 RCU	1
F920H0692	OI LAN cable	1
105727846	3C1 ringing generator	2
F910H0691	RMU and LTF cable assembly	1
ED-7C716-30, G34	AC power system	1
ED-7C704-30, G1	-48 V rectifier power shelf	1
J1C184AC1	Bulk ringing system	1
ED-83242-31, G3	KS-23619, L3 battery	2
ED-7C716-30, G63	Battery cable	2
601355225	ED-7C719-30, G1 LTF	1

80D-3DCBM-BP-APS (Orderable 08/93)

Figure 3-12 illustrates the layout of the 80D-3DCBM-BP-APS configuration. Tables 3-24 and 3-25 list the options and parts, respectively.

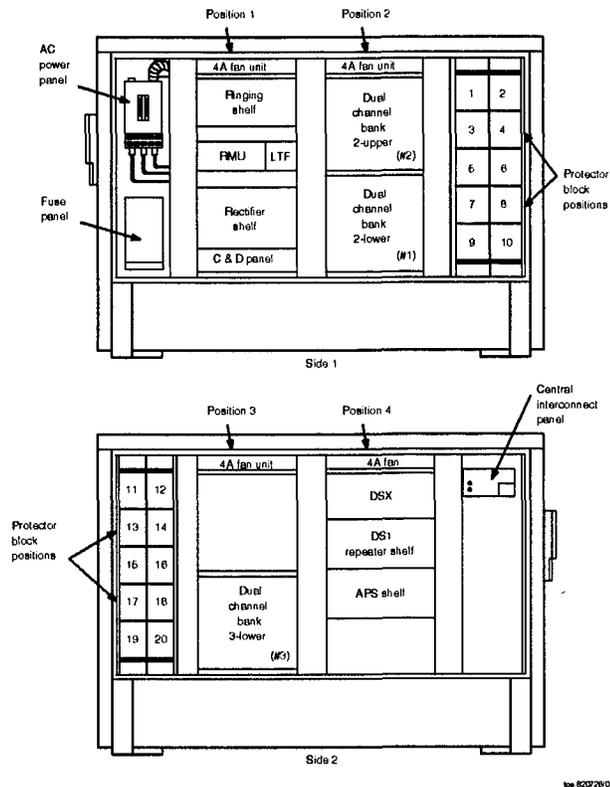


Figure 3-12. Model 80D-3DCBM-BP-APS [RT, (3) DCBs in 80D Cabinet with Metallic T1 Interface] (Wired for 960 POTS Lines)

Table 3-24. Model 80D-3DCBM-BP-APS Options (Note)

Option No.	Description
RT-FPI-96M/F1	FPI Mode 1, blue system
RT-FPI-96M/F1-WH	FPI Mode 1, white system
RT-FPI-192M/F1	FPI Mode 1, both systems
RT-FPI-96M/F2	FPI Mode 2, blue system
RT-FPI-96M/F2-WH	FPI Mode 2, white system
RT-FPI-192M/F2	FPI Mode 2, both systems
RT-FPI-96M/F4	FPI Mode 4, blue system
RT-FPI-96M/F4-WH	FPI Mode 4, white system
RT-FPI-192M/F4	FPI Mode 4, both systems

Note: Order AEK90 repeaters as required (Table 3-101).

Configuration



NOTE:

Only for integration into *GTD-5* EAX switch.

Model 80D-3DCBM-BP-APS is a prewired 80D cabinet with hardware for pad mounting, cabling for four channel banks, and the following equipment.

- Four J1C182AH-1, L1 DCBs
- Three 4A fan units
- -48 V DC bulk power shelf with circuit packs and 20-Hz ringing generators
- Battery backup for 8 hours of operation
- DSX-1 800-type panel
- DS1 repeater shelf

**Table 3-25. Model 80D-3DCBM-BP-APS
Replacement Parts Information**

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
F920H0XX	80D cabinet for (3) DCBs	1
106505506	128G bracket	1
J1C182AH1, L1	RT DCB w/o protectors	3
106526742	4A fan unit	4
J98725DA-1, L1	DS1 repeater shelf	1
ED-7C717-30, G66	800-series DSX-1	1
104032750	AUG3 RCU	1
F920H0692	OI LAN cable	1
ED7C716-30, G177	FMU cable	3
105727846	3C1 ringing generator	2
F920H0691	RMU and LTF cable assembly	1
ED-7C716-30, G34	AC power system	1
ED-7C704-30, G1	-48 V rectifier power shelf	1
J1C184AC1	Bulk ringing system	1
ED-83242-30, G3	KS-23619, L3 battery	3
ED-7C716-30, G63	Battery cable	2
ED-7C716-30, G163	Battery cable	1
105571590	CS787B540 PU	2
402067078	Lynch APS shelf	1
	Model 302MA010PTA1	
601355225	ED-7C719-30, G1 LTF	1

80D-3DCBF-BP-2000 (Orderable 08/93)

Figure 3-13 illustrates the layout of the 80D-3DCBF-BP-2000 configuration. Tables 3-26 and 3-27 list the options and parts, respectively.

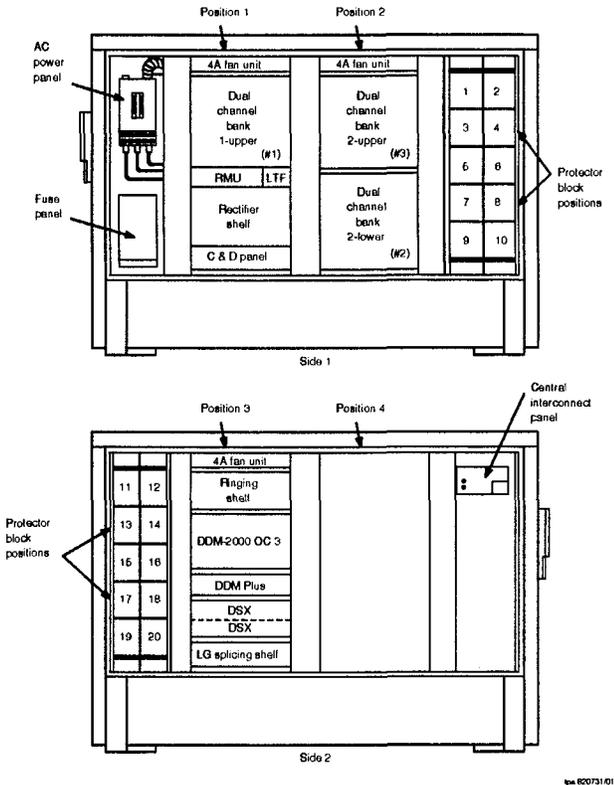


Figure 3-13. Model 80D-3DCBF-BP-2000 [RT, (3) DCBs in 80D Cabinet with Fiber Interface] (Wired for 960 POTS Lines)

Table 3-26. Model 80D-3DCBF-BP-2000 Options (Note)

Option No.	Description
RT-AUTO-96F1	FPC/AC M1, blue system
RT-AUTO-192F1	FPC/AC M1, both systems
RT-AUTO-96F2	FPC/AC M2, blue system
RT-AUTO-192F2	FPC/AC M2, both systems
RT-AUTO-96F1-WH	FPC/AC M1, white system
RT-AUTO-96F2-WH	FPC/AC M2, white system
RT-FPI-96M/F1	FPI Mode 1, blue system
RT-FPI-96M/F1-WH	FPI Mode 1, white system
RT-FPI-192M/F1	FPI Mode 1, both systems
RT-FPI-96M/F2	FPI Mode 2, blue system
RT-FPI-96M/F2-WH	FPI Mode 2, white system
RT-FPI-192M/F2	FPI Mode 2, both systems
RT-FPI-96M/F4	FPI Mode 4, blue system
RT-FPI-96M/F4-WH	FPI Mode 4, white system
RT-FPI-192M/F4	FPI Mode 4, both systems
RT-INA-96F1	INA Mode I, blue system
RT-INA-96F1-WH	INA Mode I, white system
RT-INA-192F1	INA Mode I, both systems
RT-INA-96F3	INA Mode III, blue system
RT-INA-96F3-WH	INA Mode III, white system
RT-INA-192F3	INA Mode III, both systems
RTCAB-28VT15-COM *	DDM-2000 common circuit packs for 28 VT1.5 lines
ADD-28VT15 *	Adds 28 VT1.5 lines to DDM-2000

Note : Order AEK90 repeaters as required (Table 3-101).

* See Chapter 4, *Fiber Multiplexer (FMUX)*.

Configuration

Model 80D-3DCBF-BP-2000 is a prewired Group 90 80D cabinet (standard beige) wired for (960) POTS lines and has the following equipment.

- Three SLC Series 5 J1C182AH-1, L1 DCBs
- One J98725DB-1, L1 DDM-Plus shelf
- One DSX-1 tie block
- 3M-4005-DPM/FR connectors
- Wiring for the Teradyne *RMU* telephone line test measurement apparatus
- One DDM-2000 OC-3 Multiplexer shelf assembly
- Batteries for 8-hour emergency power
- 20-Hz ringing generators
- One 128G bracket for use as a template to form the cement pedestal mounting base.
- Lightguide terminal for 48 fibers and (4) jumpers with *ST* to *ST* connectors

Each DCB can be equipped to provide a maximum of (192) POTS lines. The repeater shelf can be equipped to provide a maximum of (28) DS1 extensions. The DDM-2000 shelf can be equipped to provide a maximum of (84) DS1 circuits.

**Table 3-27. Model 80D-3DCBF-BP-2000
Replacement Parts Information**

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
F920H0788	80D cabinet for (5) DCBs	1
106505506	128G bracket	1
J1C182AH1, L1	RT DCB, w/o protectors	3
106526742	4A fan unit	3
105727846	3C1 ringing generator	2
ED-8C724-30, G3B	DDM-2000 Multiplexer shelf	1
J98725DB-1, L1	DDM-Plus shelf	1
ED-83242-30, G3	KS-23619, L3 battery	2
105571590	CS787B540 PU	2
104032750	AUG3 RCU	1
F90H0692	OI LAN cable	1
ED7C716-30, G177	FMU cable	3
F920H0691	<i>RMU</i> and LTF cable assembly	1
ED-7C716-30, G34	AC power system	1
ED-7C716-30, G59	DSX-1 w/jumpers	1
ED-7C704-30, G1	-48 V rectifier power system	1
J1C184AC1	Bulk ringing system	1
ED-7C716-30, G63	Battery cable	2
ED-7C716-30, G196	48-fiber terminal	1
601355225	ED-7C719-30, G1 LTF	1

80E-5DCBF-BP-2000

Figure 3-14 illustrates the layout of the 80E-5DCBF-BP-2000 configuration. Tables 3-28 and 3-29 list the options and parts, respectively.

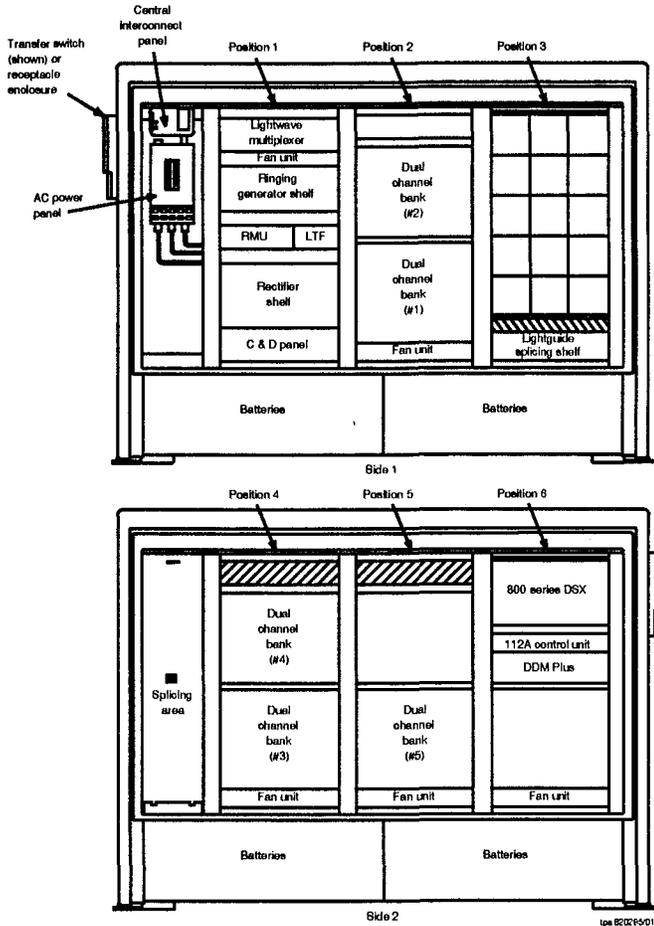


Figure 3-14. Model 80E-5DCBF-BP-2000 [RT, (5) DCBs in 80E Cabinet with Fiber Interface] (Wired for 960 POTS Lines)

Table 3-28. Model 80E-5DCBF-BP-2000 Options (Note)

Option No.	Description
RT-AUTO-96F1	FPC/AC M1, blue system
RT-AUTO-192F1	FPC/AC M1, both systems
RT-AUTO-96F2	FPC/AC M2, blue system
RT-AUTO-192F2	FPC/AC M2, both systems
RT-AUTO-96F1-WH	FPC/AC M1, white system
RT-AUTO-96F2-WH	FPC/AC M2, white system
RT-FPI-96M/F1	FPI Mode 1, blue system
RT-FPI-96M/F1-WH	FPI Mode 1, white system
RT-FPI-192M/F1	FPI Mode 1, both systems
RT-FPI-96M/F2	FPI Mode 2, blue system
RT-FPI-96M/F2-WH	FPI Mode 2, white system
RT-FPI-192M/F2	FPI Mode 2, both systems
RT-FPI-96M/F4	FPI Mode 4, blue system
RT-FPI-96M/F4-WH	FPI Mode 4, white system
RT-FPI-192M/F4	FPI Mode 4, both systems
RT-INA-96F1	INA Mode I, blue system
RT-INA-96F1-WH	INA Mode I, white system
RT-INA-192F1	INA Mode I, both systems
RT-INA-96F3	INA Mode III, blue system
RT-INA-96F3-WH	INA Mode III, white system
RT-INA-192F3	INA Mode III, both systems
RT-CAB-28VT15-COM *	DDM-2000 common circuit packs for 28 VT1.5 lines
ADD-28VT15 *	Adds 28 VT1.5 lines to DDM-2000

Note: Order AEK90 repeaters and 25F OLIUs as required (Table 3-101).

* See Chapter 4, Fiber Multiplexer (FMUX).

Configuration

Model 80E-5DCBF-BP-2000 is a prewired Group 90 80E cabinet (standard beige) wired for (1344) POTS lines and has the following equipment.

- Five *SLC* Series 5 J1C182AH-1, L1 DCBs
- One DDM-Plus extension shelf
- One 800-series DSX with jumpers
- 3M-4005-DPM/FR connectors
- Wiring for the Teradyne *RMU* telephone line test measurement apparatus
- One DDM-2000 OC-3 Multiplexer shelf assembly
- Batteries for 8-hour emergency power
- 20-Hz ringing generators
- One 128E bracket for use as a template to form the cement pedestal mounting base.
- Lightguide terminal for 48 fibers and (4) jumpers with *ST* to *ST* connectors

Each DCB can be equipped to provide a maximum of (192) POTS lines. The DDM-Plus shelf can be equipped to provide a maximum of (28) DS1 extensions. The DDM-2000 shelf can be equipped to provide a maximum of (84) DS1 circuits.

Table 3-29. Model 80E-5DCBF-BP-2000 Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
F92OH0634	80E cabinet for (7) DCBs	1
104439831	128E bracket	1
J1C182AH1, L1	RT DCB, w/o protectors	5
105550420	2B fan unit	5
105727846	3C1 ringing generator	2
104032750	AUG3 RCU	1
105571590	CS787B540 PU	3
ED-83242-31, G3	KS-23619, L3 battery	4
ED-7C728-30, G1	FMU cable for FPI	7
ED-7C703-30, G34	AC power system	1
ED-7C704-30, G1	-48 V rectifier power shelf	1
J1C182BC-1, L1	Bulk ringing system	1
ED-7C703-30, G63	Battery cable	4
ED-7C703-30, G67	800-series DSX with jumpers	1
ED-8C724-30, G3B	DDM-2000 Multiplexer shelf	1
J98725DB-1, L1	DDM-Plus shelf	1
F92OH0692	OI LAN cable	1
ED7C703-30, G179	<i>RMU</i> and LTF cable assembly	1
ED-7C703-30, G196	48-fiber terminal	1
601355225	ED-7C719-30, G1 LTF	1

80E-7DCBF-BP-2000

Figure 3-15 illustrates the layout of the 80E-7DCBF-BP-2000 configuration. Tables 3-30 and 3-31 list the options and parts, respectively.

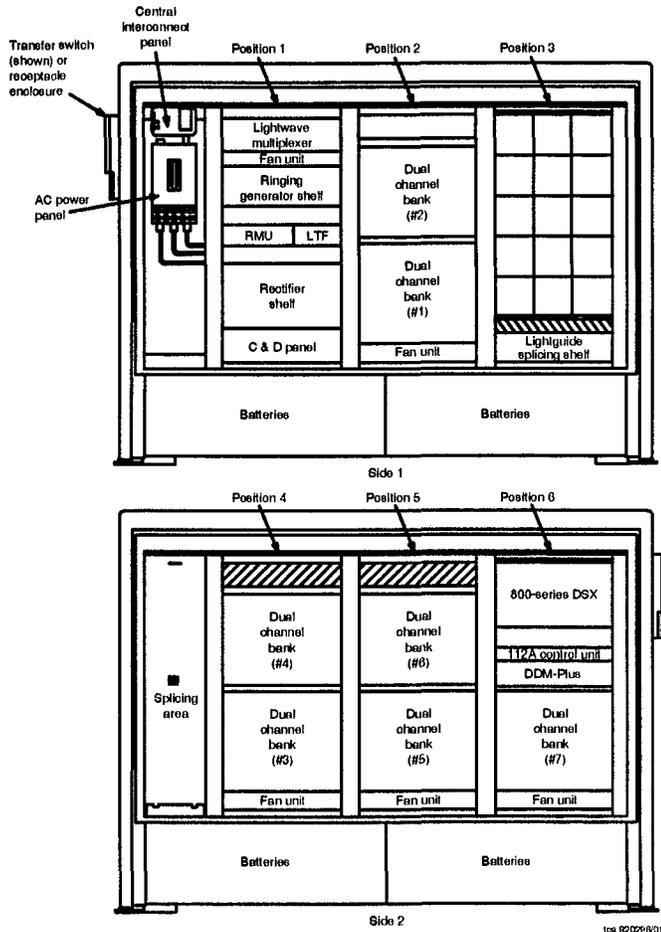


Figure 3-15. Model 80E-7DCBF-BP-2000 [RT, (7) DCBs in 80E Cabinet with Fiber Interface] (Wired for 1344 POTS Lines)

Table 3-30. Model 80E-7DCBF-BP-2000 Options (Note)

Option No.	Description
RT-AUTO-96F1	FPC/AC M1, blue system
RT-AUTO-192F1	FPC/AC M1, both systems
RT-AUTO-96F2	FPC/AC M2, blue system
RT-AUTO-192F2	FPC/AC M2, both systems
RT-AUTO-96F1-WH	FPC/AC M1, white system
RT-AUTO-96F2-WH	FPC/AC M2, white system
RT-FPI-96M/F1	FPI Mode 1, blue system
RT-FPI-96M/F1-WH	FPI Mode 1, white system
RT-FPI-192M/F1	FPI Mode 1, both systems
RT-FPI-96M/F2	FPI Mode 2, blue system
RT-FPI-96M/F2-WH	FPI Mode 2, white system
RT-FPI-192M/F2	FPI Mode 2, both systems
RT-FPI-96M/F4	FPI Mode 4, blue system
RT-FPI-96M/F4-WH	FPI Mode 4, white system
RT-FPI-192M/F4	FPI Mode 4, both systems
RT-INA-96F1	INA Mode I, blue system
RT-INA-96F1-WH	INA Mode I, white system
RT-INA-192F1	INA Mode I, both systems
RT-INA-96F3	INA Mode III, blue system
RT-INA-96F3-WH	INA Mode III, white system
RT-INA-192F3	INA Mode III, both systems
RT-CAB-28VT15-COM *	DDM-2000 common circuit packs for 28 VT1.5 lines
ADD-28VT15 *	Adds 28 VT1.5 lines to DDM-2000

Note: Order AEK90 repeaters and 25F OLIUs as required (Table 3-101).

* See Chapter 4, Fiber Multiplexer (FMUX).

Configuration

Model 80E-7DCBF-BP-2000 is a prewired Group 90 80E cabinet (standard beige) wired for (1344) POTS lines and has the following equipment.

- Seven SLC Series 5 J1C182AH-1, L1 DCB
- One DDM-Plus extension shelf
- One 800-series DSX with jumpers
- 3M-4005-DPM/FR connectors
- Wiring for the Teradyne *RMU* telephone line test measurement apparatus
- One DDM-2000 OC-3 Multiplexer shelf assembly
- Batteries for 8-hour emergency power
- 20-Hz ringing generators
- One 128E bracket for use as a template to form the cement pedestal mounting base.
- Lightguide terminal for 48 fibers and (4) jumpers with *ST* to *ST* connectors

Each DCB can be equipped to provide a maximum of (192) POTS lines. The DDM-Plus shelf can be equipped to provide a maximum of (28) DS1 extensions. The DDM-2000 shelf can be equipped to provide a maximum of (84) DS1 circuits.

Table 3-31. Model 80E-7DCBF-BP-2000 Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
F92OH0634	80E cabinet for (7) DCBs	1
104439831	128E bracket	1
J1C182AH1, L1	RT DCB, w/o protectors	7
105550420	2B fan unit	5
105727846	3C1 ringing generator	2
104032750	AUG3 RCU	1
105571590	CS787B540 PU	3
ED-83242-31, G3	KS-23619, L3 battery	4
ED-7C728-30, G1	FMU cable for FPI	7
ED-7C703-30, G34	AC power system	1
ED-7C704-30, G1	-48 V rectifier power system	1
J1C182BC-1, L1	Bulk ringing system	1
ED-7C703-30, G63	Battery cable	4
ED-7C703-30, G67	800-series DSX with jumpers	1
ED-8C724-30, G3B	DDM-2000 Multiplexer shelf	1
J98725DB-1, L1	DDM-Plus shelf	1
F92OH0692	OI LAN cable	1
ED7C703-30, G179	<i>RMU</i> and LTF cable assembly	1
ED-7C703-30, G196	48-fiber terminal	1
601355225	ED-7C719-30, G1 LTF	1

90A-1DCBF

Figure 3-16 illustrates the layout of the 90A-1DCBF configuration. Tables 3-32 and 3-33 list the options and parts, respectively.

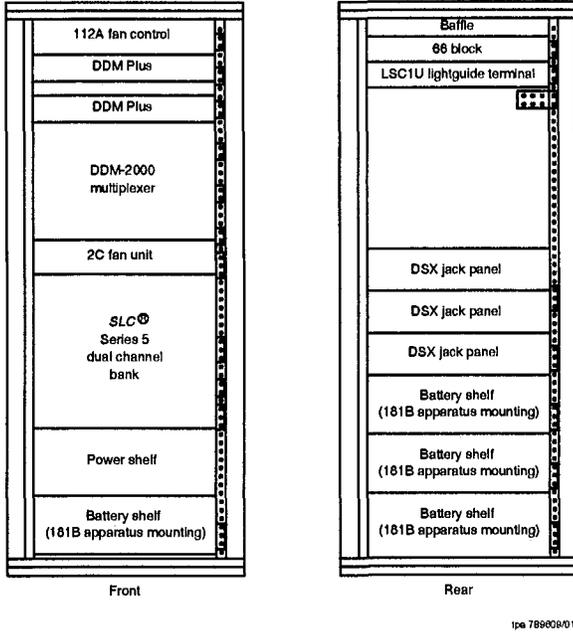


Figure 3-16. Model 90A-1DCBF [RT, (1) DCB in a 90A Cabinet with DDM-2000] (Wired for 192 POTS Lines)

Table 3-32. Model 90A-1DCBF Options (Note)

Option No.	Description
90A-50F-CASET	50' cable set for 90A cabinet
90A-100F-CASET	100' cable set for 90A cabinet
RT-AUTO-96F1	FPC/AC M1, blue system
RT-AUTO-192F1	FPC/AC M1, both systems
RT-AUTO-96F2	FPC/AC M2, blue system
RT-AUTO-192F2	FPC/AC M2, both systems
RT-AUTO-96F1-WH	FPC/AC M1, white system
RT-AUTO-96F2-WH	FPC/AC M2, white system
RT-INA-96F1	INA Mode I, blue system
RT-INA-96F1-WH	INA Mode I, white system
RT-INA-192F1	INA Mode I, both systems
RT-INA-96F3	INA Mode III, blue system
RT-INA-96F3-WH	INA Mode III, white system
RT-INA-192F3	INA Mode III, both systems
RT-FPI-96M/F1	FPI Mode 1, blue system
RT-FPI-96M/F1-WH	FPI Mode 1, white system
RT-FPI-192M/F1	FPI Mode 1, both systems
RT-FPI-96M/F2	FPI Mode 2, blue system
RT-FPI-96M/F2-WH	FPI Mode 2, white system
RT-FPI-192M/F2	FPI Mode 2, both systems
RT-FPI-96M/F4	FPI Mode 4, blue system
RT-FPI-96M/F4-WH	FPI Mode 4, white system
RT-FPI-192M/F4	FPI Mode 4, both systems
RTCAB-28VT15-COM *	DDM-2000 common circuit packs for 28 VT1.5 lines
ADD-28VT15 *	Adds 28 VT1.5 lines to DDM-2000

Note : Order AEK90 repeaters and 25F OLIUs as required (Table 3-101).

* See Chapter 4, *Fiber Multiplexer (FMUX)*.

Configuration

Model 90A-1DCBF is a 90A cabinet that is powered by 115 V AC, provides NEBS zone 4 compliance, and has the following equipment.

- One J1C182AH-1, L1 DCB
- One DDM-2000 OC-3 Multiplexer shelf assembly
- One 2C fan unit
- -48 V DC power shelf with circuit packs and 20-Hz ringing generators
- Battery backup for 8 hours of operation
- Two J98725DB-1, L1 DDM-Plus shelves
- 3M-4005-DPM/FR connectors
- Lightguide terminal for 72 fibers.

Table 3-33. Model 90A-1DCBF Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
ED-7C699-30, G3	90A cabinet	1
F91OH0390	Cables for (1) DCB and DDM-2000 Multiplexer shelf	1
F91OH0391	Cables for (2) DDM-Plus shelves	1
J1C182AH1, L1	RT DCB	1
J1C182BA-1, L3	RT power shelf	1
ED-8C724-30, G3B	DDM-2000 Multiplexer shelf	1
F92OH0121	RMU and LTT cable assembly	1
106382336	2C fan unit	1
104028733	181A apparatus mounting	4
406456707	IR30C batteries	16
105701726	336A1 power unit	4
105701734	337A1 battery charger	4
601251259	ED-7C613-30, G3 LDU	1
106193485	AUG11 BFU	2
105727846	3C1 ringing generator	2
J98725DB-1, L1	DDM-Plus shelf	2
ED-7C699-30, G143	Lightguide terminal, 72F	1
ED-7C711-30, G177	FMU cable	1
F910H0586	OI LAN cable	1

90A-HICAP-1DCB

Figure 3-17 illustrates the layout of the 90A-HICAP-1DCB configuration. Tables 3-34 and 3-35 list the options and parts, respectively.

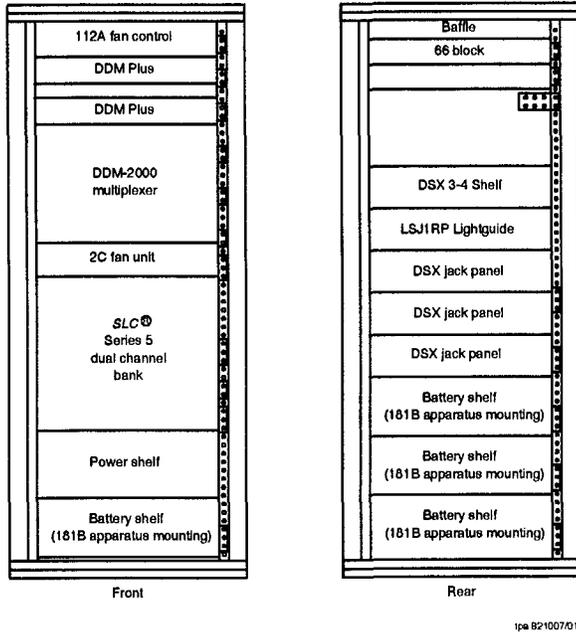


Figure 3-17. Model 90A-HICAP-1DCB [RT, (1) DCB in a 90A Cabinet with DDM-2000] (Wired for 192 POTS Lines)

Table 3-34. Model 90A-HICAP-1DCB Options (Note)

Option No.	Description
90A-50F-CASET	50' cable set for 90A cabinet
90A-100F-CASET	100' cable set for 90A cabinet
RT-AUTO-96F1	FPC/AC M1, blue system
RT-AUTO-192F1	FPC/AC M1, both systems
RT-AUTO-96F2	FPC/AC M2, blue system
RT-AUTO-192F2	FPC/AC M2, both systems
RT-AUTO-96F1-WH	FPC/AC M1, white system
RT-AUTO-96F2-WH	FPC/AC M2, white system
RT-INA-96F1	INA Mode I, blue system
RT-INA-96F1-WH	INA Mode I, white system
RT-INA-192F1	INA Mode I, both systems
RT-INA-96F3	INA Mode III, blue system
RT-INA-96F3-WH	INA Mode III, white system
RT-INA-192F3	INA Mode III, both systems
RT-FPI-96M/F1	FPI Mode 1, blue system
RT-FPI-96M/F1-WH	FPI Mode 1, white system
RT-FPI-192M/F1	FPI Mode 1, both systems
RT-FPI-96M/F2	FPI Mode 2, blue system
RT-FPI-96M/F2-WH	FPI Mode 2, white system
RT-FPI-192M/F2	FPI Mode 2, both systems
RT-FPI-96M/F4	FPI Mode 4, blue system
RT-FPI-96M/F4-WH	FPI Mode 4, white system
RT-FPI-192M/F4	FPI Mode 4, both systems
RT-CAB-28VT15-COM *	DDM-2000 common circuit packs for 28 VT1.5 lines
ADD-28VT15 *	Adds 28 VT1.5 lines to DDM-2000

Note: Order AEK90 repeaters and 25F OLIUs as required (Table 3-101).

* See Chapter 4, *Fiber Multiplexer (FMUX)*.

Configuration

Model 90A-HICAP-1DCB is a 90A cabinet that is powered by 115 V AC, provides NEBS zone 4 compliance, and has the following equipment.

- One J1C182AH-1, L1 DCB
- One DDM-2000 OC-3 Multiplexer shelf assembly
- One 2C fan unit
- -48 V DC power shelf with circuit packs and 20-Hz ringing generators
- Battery backup for 8 hours of operation
- Two J98725DB-1, L1 DDM-Plus shelves
- 3M-4005-DPM/FR connectors
- All DS3s and DS1s are available for external cabinet use.
- 3M connectors have 20 pair each
- Lightguide terminal for 96 fibers.

**Table 3-35. Model 90A-HICAP-1DCB
Replacement Parts Information**

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
ED-7C699-30, G3	90A cabinet	1
F92OH0493	Cables for DDM-Plus and DDM-2000 Multiplexer shelf	1
J1C182AH-1, L1	RT DCB	1
J1C182BA-1, L3	RT power shelf	1
ED-8C724-30, G3B	DDM-2000 Multiplexer shelf	1
F92OH0121	RMU and LTT cable assembly	1
106382336	2C fan unit	1
104028733	181A apparatus mounting	4
406456707	IR30C batteries	16
105701726	336A1 power unit	4
105701734	337A1 battery charger	4
601251259	ED-7C613-30, G3 LDU	1
106193485	AUG11 BFU	2
105727846	3C1 ringing generator	2
J98725DB-1, L1	DDM-Plus shelf	2
ED-7C711-30, G177	FMU cable	1
F92OH0586	OI LAN cable	1
105743785	DSX 3-4 Shelf	1
106587694	LSJ1RP-30/7 lightguide shelf	1

90A-2DCBM

NOTE:

Model 90A-2DCBM may be used with model 90A-1DCBF and 90A-HICAP-10CB for multi-cabinet BRT applications with FPC or FPI.

Figure 3-18 illustrates the layout of the 90A-2DCBM configuration. Tables 3-36 and 3-37 list the options and parts, respectively.

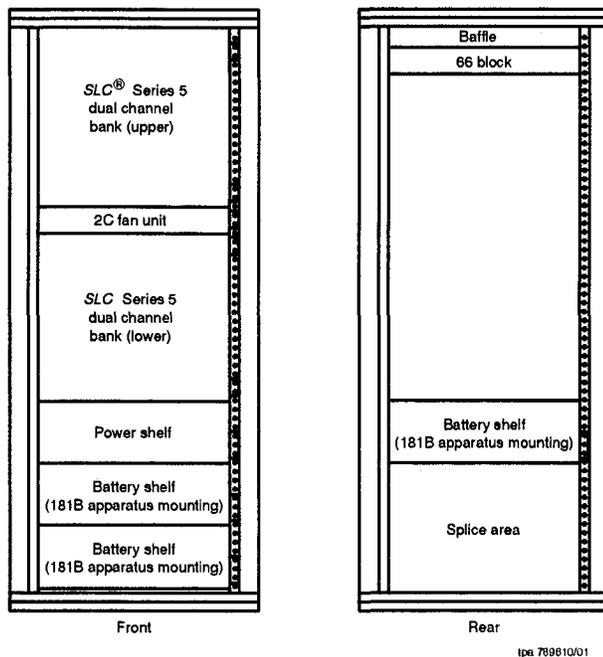


Figure 3-18. Model 90A-2DCBM [RT, (2) DCBs in a 90A Cabinet] (Wired for 384 POTS Lines)

Table 3-36. Model 90A-2DCBM Options

Option No.	Description
90A-50M-CASET	50' cable set for 90A cabinet
90A-100M-CASET	100' cable set for 90A cabinet
RT-AUTO-96F1	FPC/AC M1, blue system
RT-AUTO-96F1-WH	FPC/AC M1, white system
RT-AUTO-192F1	FPC/AC M1, both systems
RT-AUTO-96F2	FPC/AC M2, blue system
RT-AUTO-96F2-WH	FPC/AC M2, white system
RT-AUTO-192F2	FPC/AC M2, both systems
RT-AUTO-96M1	FPC/AC M1, blue system
RT-AUTO-96M1-WH	FPC/AC M1, white system
RT-AUTO-192M1	FPC/AC M1, both systems
RT-AUTO-96M2	FPC/AC M2, blue system
RT-AUTO-96M2-WH	FPC/AC M2, white system
RT-AUTO-192M2	FPC/AC M2, both systems
RT-INA-96M1	INA Mode I, blue system
RT-INA-96M1-WH	INA Mode I, white system
RT-INA-192M1	INA Mode I, both systems
RT-INA-96M3	INA Mode III, blue system
RT-INA-96M3-WH	INA Mode III, white system
RT-INA-192M3	INA Mode III, both systems
RT-INA-96F1	INA Mode I, blue system
RT-INA-96F1-WH	INA Mode I, white system
RT-INA-192F1	INA Mode I, both systems
RT-INA-96F3	INA Mode III, blue system
RT-INA-96F3-WH	INA Mode III, white system
RT-INA-192F3	INA Mode III, both systems

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Configuration

Model 90A-2DCBM is a 90A cabinet that is powered by 115 V AC, provides NEBS zone 4 compliance, and has the following equipment.

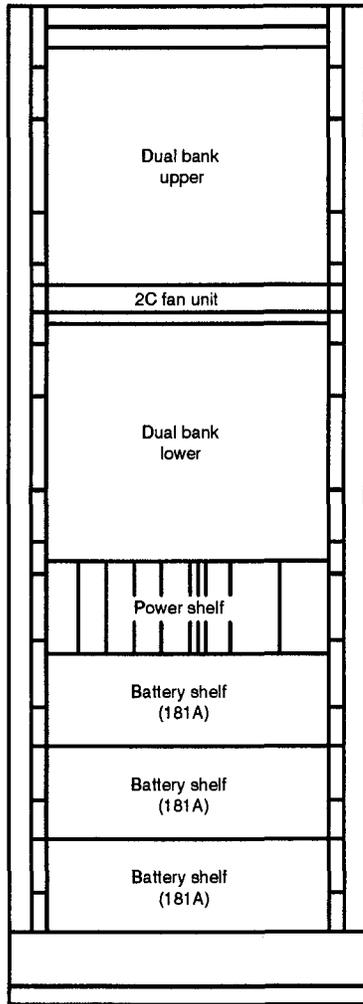
- Two J1C182AH-1, L1 DCBs
- One 2C fan unit
- -48 V DC power shelf with circuit packs and 20-Hz ringing generators
- Battery backup for 8 hours of operation

Table 3-37. Model 90A-2DCBM Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
ED-7C699-30, G3	90A cabinet	1
F91OH0389	Cables for (2) DCBs	1
ED7C711-30, G179	FMU and LTF cable assembly	1
J1C182AH, L1	RT DCB	2
J1C182BA-1, L3	RT power shelf	1
106382336	2C fan unit	1
104028733	181A apparatus mounting	3
406456707	IR30C batteries	12
105701726	336A1 power unit	4
105701734	337A1 battery charger	3
601251259	ED-7C613-30, G3 LDU	1
106193485	AUG11 BFU	2
105727846	3C1 ringing generator	2
ED-7C711-30, G177	FMU cable	2
F920H0586	OI LAN cable	1
601355225	ED-7C719-30, G1 LTF	1

RT-7-2DCB115

Figure 3-19 illustrates the layout of the RT-7-2DCB115 configuration. Tables 3-38 and 3-39 list the options and parts, respectively.



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Figure 3-19. Model RT-7-2DCB115 [RT, (1) 7-Foot Frame for 115 V AC Powering] (Wired for 384 POTS Lines)

Table 3-38. Model RT-7-2DCB115 Options

Option No.	Description
7FR-END-GR	End guard for 7' frame
7-2-50-CASET	50' cable set for (2) DCBs
7-2-100-CASET	100' cable set for (2) DCBs
RT-AUTO-96M1	FPC/AC M1, blue system
RT-AUTO-96M1-WH	FPC/AC M1, white system
RT-AUTO-192M1	FPC/AC M1, both systems
RT-AUTO-96M2	FPC/AC M2, blue system
RT-AUTO-96M2-WH	FPC/AC M2, white system
RT-AUTO-192M2	FPC/AC M2, both systems
RT-AUTO-96F1	FPC/AC M1, blue system
RT-AUTO-96F1-WH	FPC/AC M1, white system
RT-AUTO-192F1	FPC/AC M1, both systems
RT-AUTO-96F2	FPC/AC M2, blue system
RT-AUTO-96F2-WH	FPC/AC M2, white system
RT-AUTO-192F2	FPC/AC M2, both systems
RT-FPI-96M/F1	FPI Mode 1, blue system
RT-FPI-96M/F1-WH	FPI Mode 1, white system
RT-FPI-192M/F1	FPI Mode 1, both systems
RT-FPI-96M/F2	FPI Mode 2, blue system
RT-FPI-96M/F2-WH	FPI Mode 2, white system
RT-FPI-192M/F2	FPI Mode 2, both systems
RT-FPI-96M/F4	FPI Mode 4, blue system
RT-FPI-96M/F4-WH	FPI Mode 4, white system
RT-FPI-192M/F4	FPI Mode 4, both systems
RT-INA-96M1	INA Mode I, blue system
RT-INA-96M1-WH	INA Mode I, white system
RT-INA-192M1	INA Mode I, both systems
RT-INA-96M3	INA Mode III, blue system
RT-INA-96M3-WH	INA Mode III, white system
RT-INA-192M3	INA Mode III, both systems
RT-INA-96F1	INA Mode I, blue system
RT-INA-96F1-WH	INA Mode I, white system
RT-INA-192F1	INA Mode I, both systems
RT-INA-96F3	INA Mode III, blue system
RT-INA-96F3-WH	INA Mode III, white system
RT-INA-192F3	INA Mode III, both systems

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Configuration

Model RT-7-2DCB115 is a 7-foot frame for 115 V AC operation with the following equipment.

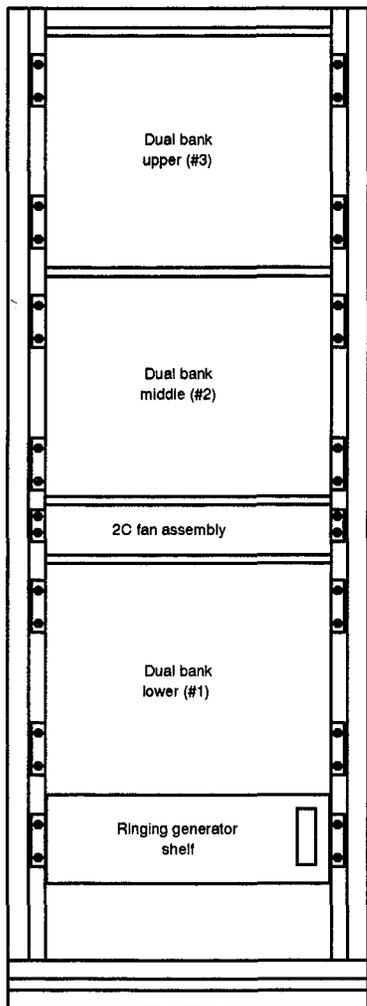
- Two J1C182AH-1, L2 DCBs
- -48 V DC power shelf with circuit packs and 20-Hz ringing generators
- One 2C fan unit
- Battery backup for 8 hours of operation.

Table 3-39. Model RT-7-2DCB115 Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
ED-8C500-50, G5	7' network bay frame	1
J1C182AH-1, L2	RT DCB	2
106382336	2C fan unit	1
104028733	181A apparatus mounting	3
406456707	IR30C batteries	12
J1C182BA-1, L3	RT power shelf	1
105701726	336A1 power unit	4
105701734	337A1 battery charger	3
601251259	ED-7C613-30, G3 LDU	1
106193485	AUG11 BFU	2
105727846	3C1 ringing generator	2
600423198	ED-7C613-30, G2 LDU daughter board	1
ED-7C728-30, G2	FMU cable	2
106749500	OI LAN cable	1
F92OH0691	RMU and LTF cable assembly	1
601355225	ED-7C719-30, G1 LTF	1

RT-7-3DCB48

Figure 3-20 illustrates the layout of the RT-7-3DCB48 configuration. Tables 3-40 and 3-41 list the options and parts, respectively.



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Figure 3-20. Model RT-7-3DCB48 [RT, (1) 7-Foot Frame for -48 V DC Powering] (Wired for 576 POTS Lines)

Table 3-40. Model RT-7-3DCB48 Options

<u>Option No.</u>	<u>Description</u>
7FR-END-GR	End guard for 7' frame
7-3-50-CASET	50' cable set for (3) DCBs
7-3-100-CASET	100' cable set for (3) DCBs
RT-AUTO-96F1	FPC/AC M1, blue system
RT-AUTO-96F1-WH	FPC/AC M1, white system
RT-AUTO-192F1	FPC/AC M1, both systems
RT-AUTO-96F2	FPC/AC M2, blue system
RT-AUTO-96F2-WH	FPC/AC M2, white system
RT-AUTO-192F2	FPC/AC M2, both systems
RT-AUTO-96M1	FPC/AC M1, blue system
RT-AUTO-96M1-WH	FPC/AC M1, white system
RT-AUTO-192M1	FPC/AC M1, both systems
RT-AUTO-96M2	FPC/AC M2, blue system
RT-AUTO-96M2-WH	FPC/AC M2, white system
RT-AUTO-192M2	FPC/AC M2, both systems
RT-FPI-96M/F1	FPI Mode 1, blue system
RT-FPI-96M/F1-WH	FPI Mode 1, white system
RT-FPI-192M/F1	FPI Mode 1, both systems
RT-FPI-96M/F2	FPI Mode 2, blue system
RT-FPI-96M/F2-WH	FPI Mode 2, white system
RT-FPI-192M/F2	FPI Mode 2, both systems
RT-FPI-96M/F4	FPI Mode 4, blue system
RT-FPI-96M/F4-WH	FPI Mode 4, white system
RT-FPI-192M/F4	FPI Mode 4, both systems
RT-INA-96M1	INA Mode I, blue system
RT-INA-96M1-WH	INA Mode I, white system
RT-INA-192M1	INA Mode I, both systems
RT-INA-96M3	INA Mode III, blue system
RT-INA-96M3-WH	INA Mode III, white system
RT-INA-192M3	INA Mode III, both systems
RT-INA-96F1	INA Mode I, blue system
RT-INA-96F1-WH	INA Mode I, white system
RT-INA-192F1	INA Mode I, both systems
RT-INA-96F3	INA Mode III, blue system
RT-INA-96F3-WH	INA Mode III, white system
RT-INA-192F3	INA Mode III, both systems

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Configuration

Model RT-7-3DCB48 is a 7-foot frame for -48 V DC operation with the following equipment.

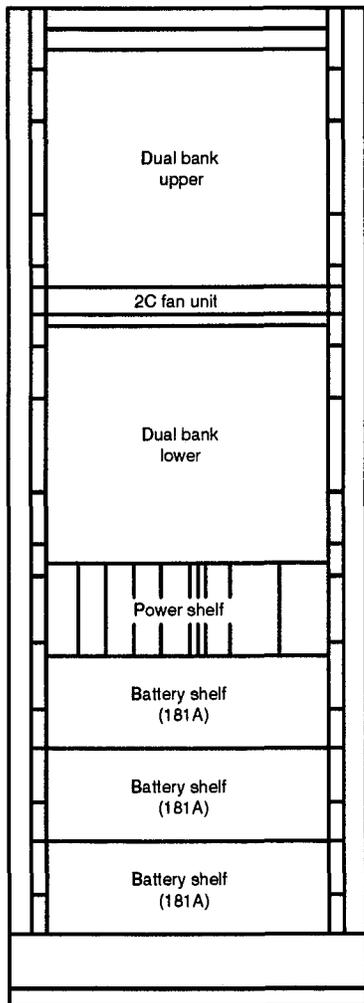
- Three J1C182AH-1, L2 DCBs
- One bulk power shelf with circuit packs and 20-Hz ringing generator
- One 2C fan unit

Table 3-41. Model RT-7-3DCB48 Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
ED-8C500-50, G5	7' network bay frame	1
J1C182AH-1, L2	RT DCB	3
106382336	2C fan unit	1
J1C182BB-1, L1	RT bulk power shelf	1
106193485	AUG11 BFU	3
105727846	3C1 ringing generator	2
104032743	AUG2 RSU	1
ED-7C728-30, G2	FMU cable	3
106749500	OI LAN cable	1
F92OH0691	RMU and LTF cable assembly	1
601355225	ED-7C719-30, G1 LTF	1

RT-8-2DCB115

Figure 3-21 illustrates the layout of the RT-8-2DCB115 configuration. Tables 3-42 and 3-43 list the options and parts, respectively.



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Figure 3-21. Model RT-8-2DCB115 [RT, (1) 8-Foot Frame for 115 V AC Powering] (Wired for 384 POTS Lines)

Table 3-42. Model RT-8-2DCB115 Options

Option No.	Description
8FR-END-GR	End guard for 8' frame
7-2-50-CASET	50' cable set for (2) DCBs
7-2-100-CASET	100' cable set for (2) DCBs
RT-AUTO-96F1	FPC/AC M1, blue system
RT-AUTO-96F1-WH	FPC/AC M1, white system
RT-AUTO-192F1	FPC/AC M1, both systems
RT-AUTO-96F2	FPC/AC M2, blue system
RT-AUTO-96F2-WH	FPC/AC M2, white system
RT-AUTO-192F2	FPC/AC M2, both systems
RT-AUTO-96M1	FPC/AC M1, blue system
RT-AUTO-96M1-WH	FPC/AC M1, white system
RT-AUTO-192M1	FPC/AC M1, both systems
RT-AUTO-96M2	FPC/AC M2, blue system
RT-AUTO-96M2-WH	FPC/AC M2, white system
RT-AUTO-192M2	FPC/AC M2, both systems
RT-FPI-96M/F1	FPI Mode 1, blue system
RT-FPI-96M/F1-WH	FPI Mode 1, white system
RT-FPI-192M/F1	FPI Mode 1, both systems
RT-FPI-96M/F2	FPI Mode 2, blue system
RT-FPI-96M/F2-WH	FPI Mode 2, white system
RT-FPI-192M/F2	FPI Mode 2, both systems
RT-FPI-96M/F4	FPI Mode 4, blue system
RT-FPI-96M/F4-WH	FPI Mode 4, white system
RT-FPI-192M/F4	FPI Mode 4, both systems
RT-INA-96M1	INA Mode I, blue system
RT-INA-96M1-WH	INA Mode I, white system
RT-INA-192M1	INA Mode I, both systems
RT-INA-96M3	INA Mode III, blue system
RT-INA-96M3-WH	INA Mode III, white system
RT-INA-192M3	INA Mode III, both systems
RT-INA-96F1	INA Mode I, blue system
RT-INA-96F1-WH	INA Mode I, white system
RT-INA-192F1	INA Mode I, both systems
RT-INA-96F3	INA Mode III, blue system
RT-INA-96F3-WH	INA Mode III, white system
RT-INA-192F3	INA Mode III, both systems

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Configuration

Model RT-8-2DCB115 is an 8-foot frame for 115 V AC operation with the following equipment.

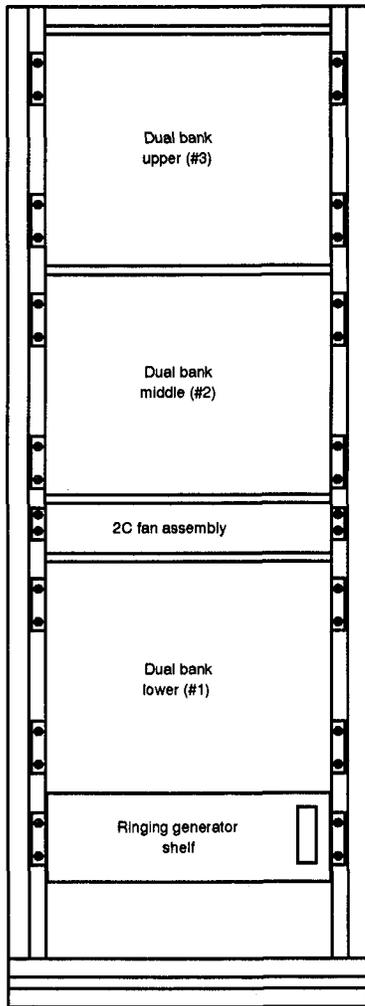
- Two J1C182AH-1, L2 DCBs
- -48 V DC power shelf with circuit packs and 20-Hz ringing generators
- One 2C fan unit
- Battery backup for 8 hours of operation.

Table 3-43. Model RT-8-2DCB115 Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
ED-8C500-51, G4	8' network bay frame	1
J1C182AH-1, L2	RT DCB	2
106382336	2C fan unit	1
104028733	181A apparatus mounting	3
406456707	IR30C batteries	12
J1C182BA-1, L3	RT power shelf	1
105701726	336A1 power unit	4
105701734	337A1 battery charger	3
601251259	ED-7C613-30, G3 LDU	1
106193485	AUG11 BFU	2
105727846	3C1 ringing generator	2
600423198	ED-7C613-30, G2 LDU daughter board	1
ED-7C728-30, G2	FMU cable	2
106749500	OI LAN cable	1
F92OH0691	RMU and LTF cable assembly	1
601355225	ED-7C719-30, G1 LTF	1

RT-8-3DCB48

Figure 3-22 illustrates the layout of the RT-8-3DCB48 configuration. Tables 3-44 and 3-45 list the options and parts, respectively.



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Figure 3-22. Model RT-8-3DCB48 [RT, (1) 8-Foot Frame for -48 V DC Powering] (Wired for 576 POTS Lines)

Table 3-44. Model RT-8-3DCB48 Options

Option No.	Description
8FR-END-GR	End guard for 8' frame
7-3-50-CASET	50' cable set for (3) DCBs
7-3-100-CASET	100' cable set for (3) DCBs
RT-AUTO-96F1	FPC/AC M1, blue system
RT-AUTO-96F1-WH	FPC/AC M1, white system
RT-AUTO-192F1	FPC/AC M1, both systems
RT-AUTO-96F2	FPC/AC M2, blue system
RT-AUTO-96F2-WH	FPC/AC M2, white system
RT-AUTO-192F2	FPC/AC M2, both systems
RT-AUTO-96M1	FPC/AC M1, blue system
RT-AUTO-96M1-WH	FPC/AC M1, white system
RT-AUTO-192M1	FPC/AC M1, both systems
RT-AUTO-96M2	FPC/AC M2, blue system
RT-AUTO-96M2-WH	FPC/AC M2, white system
RT-AUTO-192M2	FPC/AC M2, both systems
RT-FPI-96M/F1	FPI Mode 1, blue system
RT-FPI-96M/F1-WH	FPI Mode 1, white system
RT-FPI-192M/F1	FPI Mode 1, both systems
RT-FPI-96M/F2	FPI Mode 2, blue system
RT-FPI-96M/F2-WH	FPI Mode 2, white system
RT-FPI-192M/F2	FPI Mode 2, both systems
RT-FPI-96M/F4	FPI Mode 4, blue system
RT-FPI-96M/F4-WH	FPI Mode 4, white system
RT-FPI-192M/F4	FPI Mode 4, both systems
RT-INA-96M1	INA Mode I, blue system
RT-INA-96M1-WH	INA Mode I, white system
RT-INA-192M1	INA Mode I, both systems
RT-INA-96M3	INA Mode III, blue system
RT-INA-96M3-WH	INA Mode III, white system
RT-INA-192M3	INA Mode III, both systems
RT-INA-96F1	INA Mode I, blue system
RT-INA-96F1-WH	INA Mode I, white system
RT-INA-192F1	INA Mode I, both systems
RT-INA-96F3	INA Mode III, blue system
RT-INA-96F3-WH	INA Mode III, white system
RT-INA-192F3	INA Mode III, both systems

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Configuration

Model RT-8-3DCB48 is an 8-foot frame for -48 V DC operation with the following equipment.

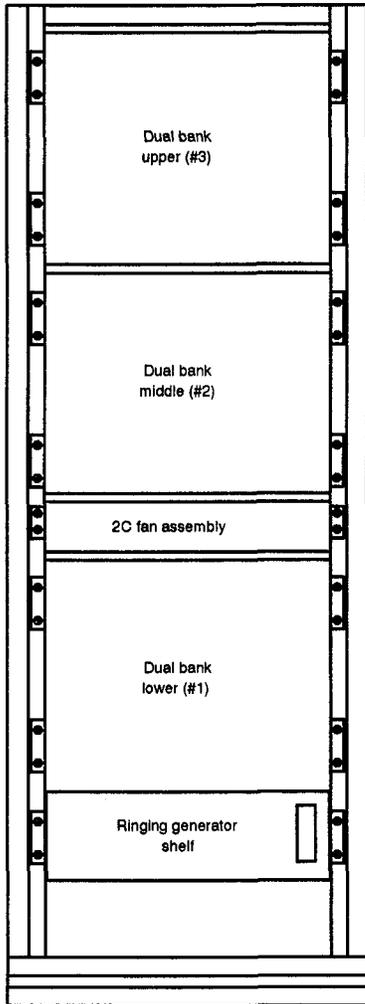
- Three J1C182AH-1, L2 DCBs
- One bulk power shelf with circuit packs and 20-Hz ringing generator
- One 2C fan unit

Table 3-45. Model RT-8-3DCB48 Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
ED-8C500-51, G4	8' network bay frame	1
J1C182AH-1, L2	RT DCB	3
106382336	2C fan unit	1
J1C182BB-1, L1	RT bulk power shelf	1
106193485	AUG11 BFU	3
105727846	3C1 ringing generator	2
104032743	AUG2 RSU	1
ED-7C728-30, G2	FMU cable	3
106749500	OI LAN cable	1
F92OH0691	RMU and LTF cable assembly	1
601355225	ED-7C719-30, G1 LTF	1

RT-8-3DCB48-CO

Figure 3-23 illustrates the layout of the RT-8-3DCB48-CO configuration. Tables 3-46 and 3-47 list the options and parts, respectively.



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Figure 3-23. Model RT-8-3DCB48-CO [RT, (1) 8-Foot Frame for -48 V DC Powering] (Wired for 576 POTS Lines)

Table 3-46. Model RT-8-3DCB48-CO Options

<u>Option No.</u>	<u>Description</u>
8FR-END-GR	End guard for 8' frame
7-3-50-CASET	50' cable set for (3) DCBs
7-3-100-CASET	100' cable set for (3) DCBs
RT-AUTO-96F1	FPC/AC M1, blue system
RT-AUTO-96F1-WH	FPC/AC M1, white system
RT-AUTO-192F1	FPC/AC M1, both systems
RT-AUTO-96F2	FPC/AC M2, blue system
RT-AUTO-96F2-WH	FPC/AC M2, white system
RT-AUTO-192F2	FPC/AC M2, both systems
RT-AUTO-96M1	FPC/AC M1, blue system
RT-AUTO-96M1-WH	FPC/AC M1, white system
RT-AUTO-192M1	FPC/AC M1, both systems
RT-AUTO-96M2	FPC/AC M2, blue system
RT-AUTO-96M2-WH	FPC/AC M2, white system
RT-AUTO-192M2	FPC/AC M2, both systems
RT-FPI-96M/F1	FPI Mode 1, blue system
RT-FPI-96M/F1-WH	FPI Mode 1, white system
RT-FPI-192M/F1	FPI Mode 1, both systems
RT-FPI-96M/F2	FPI Mode 2, blue system
RT-FPI-96M/F2-WH	FPI Mode 2, white system
RT-FPI-192M/F2	FPI Mode 2, both systems
RT-FPI-96M/F4	FPI Mode 4, blue system
RT-FPI-96M/F4-WH	FPI Mode 4, white system
RT-FPI-192M/F4	FPI Mode 4, both systems
RT-INA-96M1	INA Mode I, blue system
RT-INA-96M1-WH	INA Mode I, white system
RT-INA-192M1	INA Mode I, both systems
RT-INA-96M3	INA Mode III, blue system
RT-INA-96M3-WH	INA Mode III, white system
RT-INA-192M3	INA Mode III, both systems
RT-INA-96F1	INA Mode I, blue system
RT-INA-96F1-WH	INA Mode I, white system
RT-INA-192F1	INA Mode I, both systems
RT-INA-96F3	INA Mode III, blue system
RT-INA-96F3-WH	INA Mode III, white system
RT-INA-192F3	INA Mode III, both systems

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Configuration

Model RT-8-3DCB48-CO is an 8-foot frame for -48 V DC operation with the following equipment.

- Three J1C182AH-1, L2 DCBs
- One ringing shelf with 20-Hz ringing generator
- One 2C fan unit

**Table 3-47. Model RT-8-3DCB48-CO
Replacement Parts Information**

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
ED-8C500-51, G4	8' network bay frame	1
J1C182AH-1, L2	RT DCB	3
106382336	2C fan unit	1
ED-7C728-30, G2	FMU cable	3
106749500	OI LAN cable	1
F92OH0691	RMU and LTF cable assembly	1
J1C182 BC-1, L1	Bulk ringing shelf	1

RT Options

The available RT options provide for 30-Hz ringing generators, multiplexer circuit packs, repeaters, frame end guards, different cable lengths, and common circuit packs for 96 or 192 lines, with metallic or fiber interface.

⇒ NOTE:

The cable set options provide cables for interconnecting VF pairs, T1 lines, alarms, office clock, ringing signal, test pairs, and power.

7FR-END-GR

Option 7FR-END-GR (Table 3-48) provides one end guard for the 7-foot frame.

Table 3-48. 7FR-END-GR (End Guard for 7-Foot Frame)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Quantity (Note)</u>
ED-8C502-50, G1, G7, G5, G7, and G17	End guard and associated hardware	1

Note : All parts shipped in one box.

8FR-END-GR

Option 8FR-END-GR (Table 3-49) provides one end guard for the 8-foot frame.

Table 3-49. 8FR-END-GR (End Guard for 8-Foot Frame)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Quantity (Note)</u>
ED-8C502-51, G1	End guard	1
ED-8C502-50, G5 and G8	Associated hardware	1

Note : All parts shipped in one box.

7-2-50-CASET

Option 7-2-50-CASET (Table 3-50) provides a set of 50-foot cables for two DCBs. Bulk T1 cables are provided as required with separate 3M-4005-DPM/FR connectors.

Table 3-50. 7-2-50-CASET (50-Foot Cables for Two DCBs)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
106556491	606C cable *	(4 runs)
105355911	607C cable *	(4 runs)
105203772	Cable *	(4 runs)
405659327	3M-4005-DPM/FR connectors	25

* This part is sold by sectional foot.

7-2-100-CASET

Option 7-2-100-CASET (Table 3-52) provides a set of 100-foot cables for two DCBs. Bulk T1 cables are provided as required with separate 3M-4005-DPM/FR connectors.

Table 3-52. 7-2-100-CASET (100-Foot Cables for Two DCBs)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
106556491	606C cable *	(4 runs)
105355911	607C cable *	(4 runs)
105203772	Cable *	(4 runs)
405659327	3M-4005-DPM/FR connectors	25

* This part is sold by sectional foot.

7-3-50-CASET

Option 7-3-50-CASET (Table 3-51) provides a set of 50-foot cables for three DCBs. Bulk T1 cables are provided as required with separate 3M-4005-DPM/FR connectors.

Table 3-51. 7-3-50-CASET (50-Foot Cables for Three DCBs)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
106556491	606C cable *	(6 runs)
105355911	607C cable *	(6 runs)
105203772	Cable *	(6 runs)
405659327	3M-4005-DPM/FR connectors	37

* This part is sold by sectional foot.

7-3-100-CASET

Option 7-3-100-CASET (Table 3-53) provides a set of 100-foot cables for three DCBs. Bulk T1 cables are provided as required with separate 3M-4005-DPM/FR connectors.

Table 3-53. 7-3-100-CASET (100-Foot Cables for Three DCBs)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
106556491	606C cable *	(6 runs)
105355911	607C cable *	(6 runs)
105203772	Cable *	(6 runs)
405659327	3M-4005-DPM/FR connectors	37

* This part is sold by sectional foot.

90A-50M-CASET

Option 90A-50M-CASET (Table 3-54) provides a set of 50-foot cables for the 90A metallic models. Bulk T1 cables are provided as required with separate 3M-4005-DPM/FR connectors.

Table 3-54. 90A-50M-CASET [50-Foot Cables (Metallic) for 90A Cabinet]

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105203772	Cable for derived pairs (100 pair)	200'
106556491	606C cable for T1 lines (6 pair)	400'
105369433	294A cable for FL/OW (8 pair)	50'
844510255	DP3 wire for door alarm (1 pair)	50'
405659327	3M-4005-DPM/FR connectors	34

90A-100M-CASET

Option 90A-100M-CASET (Table 3-55) provides a set of 100-foot cables for the 90A metallic models. Bulk T1 cables are provided as required with separate 3M-4005-DPM/FR connectors.

Table 3-55. 90A-100M-CASET [100-Foot Cables (Metallic) for 90A Cabinet]

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105203772	Cable for derived pairs (100 pair)	400'
106556491	606C cable for T1 lines (6 pair)	800'
105369433	294A cable for FL/OW (8 pair)	100'
844510255	DP3 wire for door alarm (1 pair)	100'
405659327	3M-4005-DPM/FR connectors	34

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90A-50F-CASET

Option 90A-50F-CASET (Table 3-56) provides a set of 50-foot cables for the 90A fiber models. Bulk T1 cables are provided as required with separate 3M-4005-DPM/FR connectors.

Table 3-56. 90A-50F-CASET [50-Foot Cables (Fiber) for 90A Cabinet]

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105203772	Cable for derived pairs (100 pair)	100'
105044473	613C cable for repeaters (30 pair)	200'
105369433	294A cable for FL/OW (8 pair)	50'
844510255	DP3 wire for door alarm (1 pair)	50'
405659327	3M-4005-DPM/FR connectors	17

90A-100F-CASET

Option 90A-100F-CASET (Table 3-57) provides a set of 100-foot cables for the 90A fiber models. Bulk T1 cables are provided as required with separate 3M-4005-DPM/FR connectors.

Table 3-57. 90A-100F-CASET [100-Foot Cables (Fiber) for 90A Cabinet]

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105203772	Cable for derived pairs (100 pair)	200'
105044473	613C cable for repeaters (30 pair)	400'
105369433	294A cable for FL/OW (8 pair)	100'
844510255	DP3 wire for door alarm (1 pair)	100'
405659327	3M-4005-DPM/FR connectors	17

RT-AUTO-96M1

Option RT-AUTO-96M1 (Table 3-58) provides FPC/AC Mode 1 blue system common circuit packs for 96 POTS lines, supports all services, allows universal or integrated Mode 1 (nonconcentrating) operation, and includes electronics for T1 protection.

⇒ NOTE:

FPC/AC allows a pre-equipped universal FPC RT to be converted automatically to an enhanced FPB integrated system providing direct access to a digital switch using a TR-08 interface.

Table 3-58. RT-AUTO-96M1 (Common Packs, Blue System, FPC/AC Mode 1, 96 Lines, Metallic)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	3
105710271	AUA73B LSU	1
104194550	AUA105 TRU	2
103840401	AUA24 FCU	1
103841235	AUB27 ADU	1
103841219	AUB25 CTU	1
106018088	AUA114 CFU	2
106443427	MC97776A1 BCU	1
106313802	AUA64D, S3 LIU power looping	5
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106654742	AUA176 LTT	1

RT-AUTO-96M1-WH

Option RT-AUTO-96M1-WH (Table 3-59) provides FPC/AC Mode 1 white system (second 96 lines) common circuit packs for 96 POTS lines, supports all services, allows universal or integrated Mode 1 (nonconcentrating) operation, and includes electronics for T1 protection.

⇒ NOTE:

FPC/AC allows a pre-equipped universal FPC RT to be converted automatically to an enhanced FPB integrated system providing direct access to a digital switch using a TR-08 interface.

Table 3-59. RT-AUTO-96M1-WH (Common Packs, White System, FPC/AC Mode 1, 96 Lines, Metallic)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	2
105710271	AUA73B LSU	1
104194550	AUA105 TRU	2
103840401	AUA24 FCU	1
103841235	AUB27 ADU	1
106443427	MC97776A1 BCU	1
106313802	AUA64D, S3 LIU power looping	5

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RT-AUTO-192M1

Option RT-AUTO-192M1 (Table 3-60) provides FPC/AC Mode 1 common circuit packs for 192 POTS lines, supports all services, allows universal or integrated Mode 1 (nonconcentrating) operation, and includes electronics for T1 protection.

⇒ **NOTE:**
FPC/AC allows a pre-equipped universal FPC RT to be converted automatically to an enhanced FPB integrated system providing direct access to a digital switch using a TR-08 interface.

Table 3-60. RT-AUTO-192M1 (Common Packs, FPC/AC Mode 1, 192 Lines, Metallic)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	5
105710271	AUA73B LSU	2
104194550	AUA105 TRU	4
103840401	AUA24 FCU	2
103841235	AUB27 ADU	2
103841219	AUB25 CTU	1
106018088	AUA114 CFU	2
106443427	MC97776A1 BCU	2
106313802	AUA64D, S3 LIU power looping	10
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106654742	AUA176 LTT	1

RT-AUTO-96M2

Option RT-AUTO-96M2 (Table 3-61) provides FPC/AC Mode 2 common circuit packs for 96 POTS lines, supports all services, allows integrated Mode 2 (2:1 concentration) operation, and includes electronics for T1 protection.

Table 3-61. RT-AUTO-96M2 (Common Packs, FPC/AC Mode 2, 96 Lines, Metallic)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	3
105710271	AUA73B LSU	1
104194550	AUA105 TRU	2
103840401	AUA24 FCU	1
103841235	AUB27 ADU	1
103841219	AUB25 CTU	1
106018088	AUA114 CFU	2
106443427	MC97776A1 BCU	1
106313802	AUA64D, S3 LIU power looping	3
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106654742	AUA176 LTT	1

RT-AUTO-96M2-WH

Option RT-AUTO-96M2-WH (Table 3-62) provides FPC/AC Mode 2 white system (second 96 lines) common circuit packs for 96 POTS lines, supports all services, allows integrated Mode 2 (2:1 concentration) operation, and includes electronics for T1 protection.

Table 3-62. RT-AUTO-96M2-WH (Common Packs, White System, FPC/AC Mode 2, 96 Lines, Metallic)

Comcode (Part No.)	Description	Qty
105728042	AUA11C PCU	2
105710271	AUA73B LSU	1
104194550	AUA105 TRU	2
103840401	AUA24 FCU	1
103841235	AUB27 ADU	1
106443427	MC97776A1 BCU	1
106313802	AUA64D, S3 LIU power looping	3

RT-AUTO-192M2

Option RT-AUTO-192M2 (Table 3-63) provides FPC/AC Mode 2 common circuit packs for 192 POTS lines, supports all services, allows integrated Mode 2 (2:1 concentration) operation, and includes electronics for T1 protection.

Table 3-63. RT-AUTO-192M2 (Common Packs, FPC/AC Mode 2, 192 Lines, Metallic)

Comcode (Part No.)	Description	Qty
105728042	AUA11C PCU	5
105710271	AUA73B LSU	2
104194550	AUA105 TRU	4
103840401	AUA24 FCU	2
103841235	AUB27 ADU	2
103841219	AUB25 CTU	1
106018088	AUA114 CFU	2
106443427	MC97776A1 BCU	2
106313802	AUA64D, S3 LIU power looping	6
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106654742	AUA176 LTT	1

RT-AUTO-96F1

Option RT-AUTO-96F1 (Table 3-64) provides FPC/AC Mode 1 common circuit packs for 96 POTS lines, supports all services and allows universal or integrated Mode 1 (nonconcentrating) operation. T1 protection is not required.

⇒ NOTE:
FPC/AC allows a pre-equipped universal FPC RT to be converted automatically to an enhanced FPB integrated system providing direct access to a digital switch using a TR-08 interface.

Table 3-64. RT-AUTO-96F1 (Common Packs, FPC/AC Mode 1, 96 Lines, Fiber)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	3
104194550	AUA105 TRU	2
103840401	AUA24 FCU	1
103841235	AUB27 ADU	1
103841219	AUB25 CTU	1
106018088	AUA114 CFU	2
106443427	MC97776A1 BCU	1
105703946	AUA61D LIU DSX-1	4
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106654742	AUA176 LTT	1

RT-AUTO-96F1-WH

Option RT-AUTO-96F1-WH (Table 3-65) provides FPC/AC Mode 1 white system (second 96 lines) common circuit packs for 96 fiber lines, supports all services, and allows universal or integrated Mode 1 (nonconcentrating) operation. T1 protection is not required.

⇒ NOTE:
FPC/AC allows a pre-equipped universal FPC RT to be converted automatically to an enhanced FPB integrated system providing direct access to a digital switch using a TR-08 interface.

Table 3-65. RT-AUTO-96F1-WH (Common Packs, White System, FPC/AC Mode 1, 96 Lines, Fiber)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	2
104194550	AUA105 TRU	2
103840401	AUA24 FCU	1
103841235	AUB27 ADU	1
106443427	MC97776A1 BCU	1
105703946	AUA61D LIU DSX-1	4

RT-AUTO-192F1

Option RT-AUTO-192F1 (Table 3-66) provides FPC/AC Mode 1 common circuit packs for 192 POTS lines, supports all services, and allows universal or integrated Mode 1 (nonconcentrating) operation. T1 protection is not required.



NOTE:

FPC/AC allows a pre-equipped universal FPC RT to be converted automatically to an enhanced FPB integrated system providing direct access to a digital switch using a TR-08 interface.

Table 3-66. RT-AUTO-192F1 (Common Packs, FPC/AC Mode 1, 192 Lines, Fiber)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	5
104194550	AUA105 TRU	4
103840401	AUA24 FCU	2
103841235	AUB27 ADU	2
103841219	AUB25 CTU	1
106018088	AUA114 CFU	2
106443427	MC97776A1 BCU	2
105703946	AUA61D LIU DSX-1	8
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106654742	AUA176 LTT	1

RT-AUTO-96F2

Option RT-AUTO-96F2 (Table 3-67) provides FPC/AC Mode 2 common circuit packs for 96 POTS lines, supports all services, and allows integrated Mode 2 (2:1 concentration) operation. T1 protection is not required.

Table 3-67. RT-AUTO-96F2 (Common Packs, FPC/AC Mode 2, 96 Lines, Fiber)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	3
104194550	AUA105 TRU	2
103840401	AUA24 FCU	1
103841235	AUB27 ADU	1
103841219	AUB25 CTU	1
106018088	AUA114 CFU	2
106443427	MC97776A1 BCU	1
105703946	AUA61D LIU DSX-1	2
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106654742	AUA176 LTT	1

RT-AUTO-96F2-WH

Option RT-AUTO-96F2-WH (Table 3-68) provides FPC/AC Mode 2 white system (second 96 lines) common circuit packs for 96 fiber lines, supports all services, and allows integrated Mode 2 (2:1 concentration) operation. T1 protection is not required.

Table 3-68. RT-AUTO-96F2-WH (Common Packs, White System, FPC/AC Mode 2, 96 Lines, Fiber)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	2
104194550	AUA105 TRU	2
103840401	AUA24 FCU	1
103841235	AUB27 ADU	1
106443427	MC97776A1 BCU	1
105703946	AUA61D LIU DSX-1	2

RT-AUTO-192F2

Option RT-AUTO-192F2 (Table 3-69) provides FPC/AC Mode 2 common circuit packs for 192 POTS lines, supports all services, and allows integrated Mode 2 (2:1 concentration) operation. T1 protection is not required.

Table 3-69. RT-AUTO-192F2 (Common Packs, FPC/AC Mode 2, 192 Lines, Fiber)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	5
104194550	AUA105 TRU	4
103840401	AUA24 FCU	2
103841235	AUB27 ADU	2
103841219	AUB25 CTU	1
106018088	AUA114 CFU	2
106443427	MC97776A1 BCU	2
105703946	AUA61D LIU DSX-1	4
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106654742	AUA176 LTT	1

RT-FPI-96M/F1

Option RT-FPI-96M/F1 (Table 3-70) provides FPI blue system (first 96 lines) common packs for metallic or fiber feeder lines configured for Mode 1 operation (1:1 concentration) and supports the service noted in Table 3-108.

Table 3-70. RT-FPI-96M/F1 [Common Packs, Blue System, Metallic or Fiber, Mode 1 (1:1 Concentration)]

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	3
106879364	AUA111 TRU	2
103840401	AUA24 FCU	1
103841243	AUB28 ADU	1
106875838	AUB30 ACTU	1
106018088	AUA114 CFU	2
106878846	MC97775A1 BCU	1
106434608	AUA161 MLIU	1
106434624	AUA162 SLIU	3
106434574	AUA101 FMU	1
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106654742	AUA176 LTT	1

RT-FPI-96M/F1-WH

Option RT-FPI-96M/F1-WH (Table 3-71) provides FPI white system (second 96 lines) common packs for metallic or fiber feeder lines configured for Mode 1 operation (1:1 concentration) and supports the service noted in Table 3-108.

Table 3-71. RT-FPI-96M/F1-WH [Common Packs, White System, Metallic or Fiber, Mode 1 (1:1 Concentration)]

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	2
106879364	AUA111 TRU	2
103840401	AUA24 FCU	1
103841243	AUB28 ADU	1
106878846	MC97775A1 BCU	1
106434608	AUA161 MLIU	1
106434624	AUA162 SLIU	3

RT-FPI-192M/F1

Option RT-FPI-192M/F1 (Table 3-72) provides FPI common packs for 192 metallic or fiber feeder lines configured for Mode 1 operation (1:1 concentration, both systems) and supports the service as noted in Table 3-108.

Table 3-72. RT-FPI-192M/F1 [Common Packs, 192 Lines, Metallic or Fiber, Mode 1 (1:1 Concentration)]

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	5
106016538	AUA111 TRU	4
103840401	AUA24 FCU	2
103841243	AUB28 ADU	2
106823958	AUB30 ACTU	1
106018088	AUA114 CFU	2
106878846	MC97775A1 BCU	2
106434608	AUA161 MLIU	2
106434624	AUA162 SLIU	6
106434574	AUA101 FMU	1
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106654742	AUA176 LTT	1

RT-FPI-96M/F2

Option RT-FPI-96M/F2 (Table 3-73) provides FPI blue system (first 96 lines) common packs for metallic or fiber feeder lines configured for Mode 2 operation (2:1 concentration) and supports the service as noted in Table 3-108.

Table 3-73. RT-FPI-96M/F2 [Common Packs, Blue Systems, Metallic or Fiber, Mode 2 (2:1 Concentration)]

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	3
106879364	AUA111 TRU	2
103840401	AUA24 FCU	1
103841243	AUB28 ADU	1
106878838	AUB30 ACTU	1
106018088	AUA114 CFU	2
106878846	MC97775A1 BCU	1
106434608	AUA161 MLIU	1
106434624	AUA162 SLIU	1
106434574	AUA101 FMU	1
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106654742	AUA176 LTT	1

RT-FPI-96M/F2-WH

Option RT-FPI-96M/F2-WH (Table 3-74) provides FPI white system (second 96 lines) common packs for metallic or fiber feeder lines configured for Mode 2 operation (2:1 concentration) and supports the service as noted in Table 3-108.

Table 3-74. RT-FPI-96M/F2-WH [Common Packs, White System, Metallic or Fiber, Mode 2 (2:1 Concentration)]

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	2
106016538	AUA111 TRU	2
103840401	AUA24 FCU	1
103841243	AUB28 ADU	1
106878846	MC97775A1 BCU	1
106434608	AUA161 MLIU	1
106434624	AUA162 SLIU	1

RT-FPI-192M/F2

Option RT-FPI-192M/F2 (Table 3-75) provides FPI common packs for 192 metallic or fiber feeder lines configured for Mode 2 operation (2:1 concentration, both systems) and supports the service as noted in Table 3-108.

Table 3-75. RT-FPI-192M/F2 [Common Packs, 192 Lines, Metallic or Fiber, Mode 2 (2:1 Concentration)]

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	5
106879364	AUA111 TRU	4
103840401	AUA24 FCU	2
103841243	AUB28 ADU	2
106878838	AUB30 ACTU	1
106018088	AUA114 CFU	2
106878846	MC97775A1 BCU	2
106434608	AUA161 MLIU	2
106434624	AUA162 SLIU	2
106434574	AUA101 FMU	1
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106654742	AUA176 LTT	1

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RT-FPI-96M/F4

Option RT-FPI-96M/F4 (Table 3-76) provides FPI blue system (first 96 lines) common packs for metallic or fiber feeder lines configured for Mode 4 operation (4:1 concentration) and supports the service as noted in Table 3-108.

Table 3-76. RT-FPI-96M/F4 [Common Packs, Blue System, Metallic or Fiber, Mode 4 (4:1 Concentration)]

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	3
106879364	AUA111 TRU	2
103840401	AUA24 FCU	1
103841243	AUB28 ADU	1
106878838	AUB30 ACTU	1
106018088	AUA114 CFU	2
106878846	MC97775A1 BCU	1
106434608	AUA161 MLIU	1
106458789	AUA163 EMU	1
106434574	AUA101 FMU	1
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106654742	AUA176 LTT	1

RT-FPI-96M/F4-WH

Option RT-FPI-96M/F4-WH (Table 3-77) provides FPI white system (second 96 lines) common packs for metallic or fiber feeder lines configured for Mode 4 operation (4:1 concentration) and supports the service as noted in Table 3-108.

Table 3-77. RT-FPI-96M/F4-WH [Common Packs, White System, Metallic or Fiber, Mode 4 (4:1 Concentration)]

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	2
106879364	AUA111 TRU	2
103840401	AUA24 FCU	1
103841243	AUB28 ADU	1
106878846	MC97775A1 BCU	1
106434608	AUA161 MLIU	1
106458789	AUA163 EMU	1

RT-FPI-192M/F4

Option RT-FPI-192M/F4 (Table 3-78) provides FPI common packs for 192 metallic or fiber feeder lines configured for Mode 4 operation (4:1 concentration, both systems) and supports the service as noted in Table 3-108.

Table 3-78. RT-FPI-192M/F4 [Common Packs, 192 Lines, Metallic or Fiber, Mode 4 (4:1 Concentration)]

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	5
106879364	AUA111 TRU	4
103840401	AUA24 FCU	2
103841243	AUB28 ADU	2
106878838	AUB30 ACTU	1
106018088	AUA114 CFU	2
106878846	MC97775A1 BCU	2
106434608	AUA161 MLIU	2
106458789	AUA163 EMU	2
106434574	AUA101 FMU	1
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106654742	AUA176 LTT	1

RT-INA-96M1

Option RT-INA-96M1 (Table 3-79) provides integrated network access (INA) common packs for the blue system (first 96 lines) configured for Mode I operation.

Table 3-79. RT-INA-96M1 (Common Packs, INA Mode I, 96 Lines, Metallic)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	3
104194550	AUA21B TRU	2
103840401	AUA24 FCU	1
103841235	AUB27 ADU	1
103841219	AUB22 CTU	1
106018088	AUA114 CFU	2
105585368	MC97769A1 BCU	1
106313802	AUA64D, S3 LIU power looping	4
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1

RT-INA-96M1-WH

Option RT-INA-96M1-WH (Table 3-80) provides INA common packs for the white system (second 96 lines) configured for Mode I operation.

Table 3-80. RT-INA-96M1-WH (Common Packs, INA Mode I, 96 Lines, Metallic)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	2
104194550	AUA21B TRU	2
103840401	AUA24 FCU	1
103841235	AUB27 ADU	1
105585368	MC97769A1 BCU	1
106313802	AUA64D, S3 LIU power looping	4

RT-INA-192M1

Option RT-INA-192M1 (Table 3-81) provides INA common packs for 192 POTS lines configured for Mode I operation.

Table 3-81. RT-INA-192M1 (Common Packs, INA Mode I, 192 Lines, Metallic)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	5
104194550	AUA21B TRU	4
103840401	AUA24 FCU	2
103841235	AUB27 ADU	2
103841219	AUB22 CTU	1
106018088	AUA114 CFU	2
105585368	MC97769A1 BCU	2
106313802	AUA64D, S3 LIU power looping	8
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1

RT-INA-96M3

Option RT-INA-96M3 (Table 3-82) provides INA common packs for the blue system (first 96 lines) configured for Mode III operation.

Table 3-82. RT-INA-96M3 (Common Packs, INA Mode III, 96 Lines, Metallic)

Comcode (Part No.)	Description	Qty
105728042	AUA11C PCU	3
104194550	AUA21B TRU	2
103840401	AUA24 FCU	1
103841235	AUB27 ADU	1
103841219	AUB22 CTU	1
106018088	AUA114 CFU	2
105585368	MC97769A1 BCU	1
106313802	AUA64D, S3 LIU power looping	2
103840922	AUA71 TCU	2
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1

RT-INA-96M3-WH

Option RT-INA-96M3-WH (Table 3-83) provides INA common packs for the white system (second 96 lines) configured for Mode III operation.

Table 3-83. RT-INA-96M3-WH (Common Packs, INA Mode III, 96 Lines, Metallic)

Comcode (Part No.)	Description	Qty
105728042	AUA11C PCU	2
104194550	AUA21B TRU	2
103840401	AUA24 FCU	1
103841235	AUB27 ADU	1
105585368	MC97769A1 BCU	1
106313802	AUA64D, S3 LIU power looping	2
103840922	AUA71 TCU	2

RT-INA-192M3

Option RT-INA-192M3 (Table 3-84) provides INA common packs for 192 POTS lines configured for Mode III operation.

Table 3-84. RT-INA-192M3 (Common Packs, INA Mode III, 192 Lines, Metallic)

Comcode (Part No.)	Description	Qty
105728042	AUA11C PCU	5
104194550	AUA21B TRU	4
103840401	AUA24 FCU	2
103841235	AUB27 ADU	2
103841219	AUB22 CTU	1
106018088	AUA114 CFU	2
105585376	MC97769A1 BCU	2
106313802	AUA64D, S3 LIU power looping	4
103840922	AUA71 TCU	4
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1

RT-INA-96F1

Option RT-INA-96F1 (Table 3-85) provides INA common packs for the blue system (first 96 lines) configured for Mode I operation.

Table 3-85. RT-INA-96F1 (Common Packs, INA Mode I, 96 Lines, Fiber)

Comcode (Part No.)	Description	Qty
105728042	AUA11C PCU	3
104194550	AUA21B TRU	2
103840401	AUA24 FCU	1
103841235	AUB27 ADU	1
103841219	AUB22 CTU	1
106018088	AUA114 CFU	2
105585368	MC97769A1 BCU	1
105703946	AUA61D DSX-1 LIU ORB	4
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1

RT-INA-96F1-WH

Option RT-INA-96F1-WH (Table 3-86) provides INA common packs for the white system (second 96 lines) configured for Mode I operation.

Table 3-86. RT-INA-96F1-WH (Common Packs, INA Mode I, 96 Lines, Fiber)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	2
104194550	AUA21B TRU	2
103840401	AUA24 FCU	1
103841235	AUB27 ADU	1
105585368	MC97769A1 BCU	1
105703946	AUA61D DSX-1 LIU ORB	4

RT-INA-192F1

Option RT-INA-192F1 (Table 3-87) provides INA common packs for 192 fiber lines configured for Mode I operation.

Table 3-87. RT-INA-192F1 (Common Packs, INA Mode I, 192 Lines, Fiber)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	5
104194550	AUA21B TRU	4
103840401	AUA24 FCU	2
103841235	AUB27 ADU	2
103841219	AUB22 CTU	1
106018088	AUA114 CFU	2
105585368	MC97769A1 BCU	2
105703946	AUA61D DSX-1 LIU ORB	8
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1

RT-INA-96F3

Option RT-INA-96F3 (Table 3-88) provides INA common packs for the blue system (first 96 lines) configured for Mode III operation.

Table 3-88. RT-INA-96F3 (Common Packs, INA Mode III, 96 Lines, Fiber)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	3
104194550	AUA21B TRU	2
103840401	AUA24 FCU	1
103841235	AUB27 ADU	1
103841219	AUB22 CTU	1
106018088	AUA114 CFU	2
105585368	MC97769A1 BCU	1
105703946	AUA61D DSX-1 LIU ORB	2
103840922	AUA71 TCU	2
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1

RT-INA-96F3-WH

Option RT-INA-96F3-WH (Table 3-89) provides INA common packs for the white system (second 96 lines) configured for Mode III operation.

Table 3-89. RT-INA-96F3-WH (Common Packs, INA Mode III, 96 Lines, Fiber)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	2
104194550	AUA21B TRU	2
103840401	AUA24 FCU	1
103841235	AUB27 ADU	1
105585368	MC97769A1 BCU	1
105703946	AUA61D DSX-1 LIU ORB	2
103840922	AUA71 TCU	2

RT-INA-192F3

Option RT-INA-192F3 (Table 3-90) provides INA common packs for 192 fiber lines configured for Mode III operation.

Table 3-90. RT-INA-192F3 (Common Packs, INA Mode III, 192 Lines, Fiber)

Comcode (Part No.)	Description	Qty
105728042	AUA11C PCU	5
104194550	AUA21B TRU	4
103840401	AUA24 FCU	2
103841235	AUB27 ADU	2
103841219	AUB22 CTU	1
106018088	AUA114 CFU	2
105585368	MC97769A1 BCU	2
105703946	AUA61D DSX-1 LIU ORB	4
103840922	AUA71 TCU	4
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1

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RT FPC to FPI Conversion Packages

Order cables required for FPI operation from Table (3-91).

⇒ NOTE:

FPI cannot be combined with other feature packages in a DCB. All systems equipped in a DCB must be converted at the same time.

⇒ NOTE:

Flash memory unit (FMU) interface and Operations Interface (OI) LAN cables require cabinet installation activity.

Tables 3-92 through 3-100 list the packages available to convert an existing -AH DCB from FPC to FPI. It is assumed that all appropriate existing packs will be used in the FPI system. If existing packs are not to be reused, order FPI common pack options for Tables (3-70) through (3-78). Separate blue and white system options have been developed to allow easy engineering of all system mode combinations. Also, 192-line conversion options are provided when both systems are the same concentration.

Tables 3-102 through 3-106 list the packages for the site interface unit (SIU), system display unit (SDU), automatic protection switching (APS), and line test equipment [line test translator (LTT) and line test fanout (LTF)] options, respectively. This equipment may be used with FPI.

Table 3-91. RT Conversion Cables

Comcode (Part No.)	Description	Note(s)
601375967 *	ED-7C728-30, G1 FMU 710-type interface cable	1,2
601375975 *	ED-7C728-30, G2 FMU 3M-type interface cable	1,2
106749435	OI LAN Cable (80D cabinet applications)	3,4
106749500	OI LAN Cable Crack mounted applications)	3,4

Notes:

1. One cable required for each blue system converted.
2. Only one cable type (710 or 3M) required.
3. Cable requirement dependent on application.
4. One cable required per site (maximum 8 DCBs suggested to be consistent with LTF DCB maximum.)

RT-FPI-CONV1-BL

Package RT-FPI-CONV1-BL (Table 3-92) provides FPI Mode 1 operation (1:1 concentration) common packs for conversion of a FPC blue system (first 96 lines) to FPI.

Table 3-92. RT-FPI-CONV1-BL (Common Packs, Mode 1, Blue System Conversion) (Note)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
106879364	AUA111 TRU	2
103841243	AUB28 ADU	1
106878838	AUB30 ACTU	1
106878846	MC97775A1 BCU	1
106434608	AUA161 MLIU	1
106434624	AUA162 SLIU	3
106434574	AUA101 FMU	1

Note : Order cables as required (Table 3-91).

RT-FPI-CONV1-WH

Package RT-FPI-CONV1-WH (Table 3-93) provides FPI Mode 1 operation (1:1 concentration) common packs for conversion of a FPC white system (second 96 lines) to FPI.

Table 3-93. RT-FPI-CONV1-WH (Common Packs, Mode 1, White System Conversion) (Note)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
106879364	AUA111 TRU	2
103841243	AUB28 ADU	1
106878846	MC97775A1 BCU	1
106434608	AUA161 MLIU	1
106434624	AUA162 SLIU	3

Note : Order cables as required (Table 3-91).

RT-FPI-CONV1-192

Package RT-FPI-CONV1-192 (Table 3-94) provides FPI Mode 1 operation (1:1 concentration) common packs for conversion of both FPC systems in a DCB to FPI.

Table 3-94. RT-FPI-CONV1-192 (Common Packs, Mode 1, Both Systems Conversion) (Note)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
106879364	AUA111 TRU	4
103841243	AUB28 ADU	2
106878838	AUB30 ACTU	1
106878846	MC97775A1 BCU	2
106434608	AUA161 MLIU	2
106434624	AUA162 SLIU	6
106434574	AUA101 FMU	1

Note : Order cables as required (Table 3-91).

RT-FPI-CONV2-BL

Package RT-FPI-CONV2-BL (Table 3-95) provides FPI Mode 2 operation (2:1 concentration) common packs for conversion of a FPC blue system (first 96 lines) to FPI.

Table 3-95. RT-FPI-CONV2-BL (Common Packs, Mode 2, Blue System Conversion) (Note)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
106874364	AUA111 TRU	2
103841243	AUB28 ADU	1
106878838	AUB30 ACTU	1
106878846	MC97775A1 BCU	1
106434608	AUA161 MLIU	1
106434624	AUA162 SLIU	1
106434574	AUA101 FMU	1

Note : Order cables as required (Table 3-91).

RT-FPI-CONV2-WH

Package RT-FPI-CONV2-WH (Table 3-96) provides FPI Mode 2 operation (2:1 concentration) common packs for conversion of a FPC white system (second 96 lines) to FPI.

Table 3-96. RT-FPI-CONV2-WH (Common Packs, Mode 2, White System Conversion) (Note)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
106879364	AUA111 TRU	2
103841243	AUB28 ADU	1
106878846	MC97775A1 BCU	1
106434608	AUA161 MLIU	1
106434624	AUA162 SLIU	1

Note : Order cables as required (Table 3-91).

RT-FPI-CONV2-192

Package RT-FPI-CONV2-192 (Table 3-97) provides FPI Mode 2 operation (2:1 concentration) common packs for conversion of both FPC systems in a DCB to FPI.

Table 3-97. RT-FPI-CONV2-192 (Common Packs, Mode 2, Both Systems Conversion) (Note)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
106879364	AUA111 TRU	4
103841243	AUB28 ADU	2
106878838	AUB30 ACTU	1
106878846	MC97775A1 BCU	2
106434608	AUA161 MLIU	2
106434624	AUA162 SLIU	2
106434574	AUA101 FMU	1

Note : Order cables as required (Table 3-91).

RT-FPI-CONV4-BL

Package RT-FPI-CONV4-BL (Table 3-98) provides FPI Mode 4 operation (4:1 concentration) common packs for conversion of a FPC blue system (first 96 lines) to FPI.

Table 3-98. RT-FPI-CONV4-BL (Common Packs, Mode 4, Blue System Conversion) (Note)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
106879364	AUA111 TRU	2
103841243	AUB28 ADU	1
106878838	AUB30 ACTU	1
106878846	MC97775A1 BCU	1
106434608	AUA161 MLIU	1
106458789	AUA163 EMU	1
106434574	AUA101 FMU	1

Note: Order cables as required (Table 3-91).

RT-FPI-CONV4-WH

Package RT-FPI-CONV4-WH (Table 3-99) provides FPI Mode 4 operation (4:1 concentration) common packs for conversion of a FPC white system (second 96 lines) to FPI.

Table 3-99. RT-FPI-CONV4-WH (Common Packs, Mode 4, White System Conversion) (Note)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
106879364	AUA111 TRU	2
103841243	AUB28 ADU	1
106878846	MC97775A1 BCU	1
106434608	AUA161 MLIU	1
106458789	AUA163 EMU	1

Note: Order cables as required (Table 3-91).

RT-FPI-CONV4-192

Package RT-FPI-CONV4-192 (Table 3-100) provides FPI Mode 4 operation (4:1 concentration) common packs for conversion of both FPC systems in a DCB to FPI.

Table 3-100. RT-FPI-CONV4-192 (Common Packs, Mode 4, Both Systems Conversion) (Note)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
106879364	AUA111 TRU	4
103841243	AUB28 ADU	2
106878838	AUB30 ACTU	1
106878846	MC97775A1 BCU	2
106434608	AUA161 MLIU	2
106458789	AUA163 EMU	2
106434574	AUA101 FMU	1

Note: Order cables as required (Table 3-91).

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Miscellaneous RT Equipment

Table 3-101 lists miscellaneous remote terminal equipment.

Table 3-101. Miscellaneous RT Equipment

Comcode (Part No.)	Description	Note(s)
AT-8812B	Pedestal base for 51A	1
AT-8783B	Metal crossarms for 51A	2
106530132	AEK90 T1 repeater	3
J1C182AF-1, L3	RT DCB with E&M signaling leads	4
J1C182AH-1, L1	RT DCB (710-type)	5
J1C182AH-1, L2	RT DCB (3M-type)	6
ED-7C601-30, G2	Beige 51A cabinet	7
105727838	3B1 30Hz ringing generator	8
104032727	AUG1 PRU	9
105167563	1B-5 (5') single mode biconic pigtail	10, 11
104300249	2016A single mode biconic connector	10, 11
406387985	25F OLIU, 75 kft range	
846244168	Hex Key	
102450574	216C Tool	
105357776	FSIE-E-15, SM, ST to ST fiber jumper	
105420954	FSIE-A-15, SM, ST to Biconic fiber jumper	
105380703	1STA-5, SM, ST pigtail	

Notes:

1. Required to pad mount the 51A cabinet.
2. Required to aerial mount the 51A cabinet.
3. Required to populate the J98725DA-1, L1 DS1 extension shelf found in certain cabinet models. Order the AEK90 T1 repeaters in groups of four to accommodate future enhancements.
4. This DCB provides E&M signaling required for certain special service circuits. This DCB is *not* compatible with FPI.

Continued

Table 3-101. Continued

5. Provides termination on 710-type connectors.
 6. Provides termination on 3M-type connectors.
 7. The ED-7C601-30, G1 (green) cabinet is the standard 51A cabinet for GTE. The ED-7C601-30, G2 (beige) cabinet can be used as a substitute. See your local Account Executive for instructions.
 8. Specify on purchase order to substitute this ringing generator when required.
 9. Multiparty service requires the installation of the AUG1 PRU in the RT power shelf.
 10. Quantity of four required.
 11. The following documents contain fiber terminating procedures.
 - AT&T 640-250-277, *80A (Bulk Power) Cabinet, Groups 90 and 91, Splicing and Equipment Installation* (Chapter 10).
 - AT&T 640-250-264, *80D Cabinet, Groups 29, 47, and 48, Description, Installation and Splicing* (Chapter 10).
 - AT&T 640-250-279, *80D-BP Cabinet, Group 90, Splicing and Equipment Installation* (Chapter 10).
 - AT&T 640-250-256, *80E Cabinet, Fiber, Groups 70, 71, 77, 78, 90, and 91, Description, Installation, and Splicing* (Chapter 8).
 - AT&T 640-250-257, *80E-BP Cabinet, Group 90, Splicing and Equipment Installation* (Chapter 10).
 - AT&T 640-250-263, *80E-BP Cabinet, Group 89, Splicing and Equipment Installation* (Chapter 10).
 - AT&T 640-250-270, *90A Cabinet, Business Remote Terminal, Description, Installation, and Splicing* (Chapter 8).
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Tables 3-102 through 3-106 list the options for the site interface unit (SIU), system display unit (SDU), automatic protection switching (APS) and line test equipment (LTT/LTF), respectively.

Site Interface Unit (SIU)

The OI equipment (Table 3-102) provides the Operations Interface system access to the OI LAN connecting the DCBs in one location. Up to 9 DCBs (eighteen 96-line systems) may be connected to the OI LAN.

Table 3-102. Site Interface Unit

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
106833080	AUA77 SIU	1

System Display Unit (SDU)

The SDU (Table 3-103) provides an 8-character alphanumeric display. Faceplate-mounted push buttons are used to display information from the bank controller (BC) data base.

Table 3-103. System Display Unit

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
103841011	AUA8 SDU	1

Automatic Protection Switching (APS)

The APS equipment (Tables 3-104 and 3-105) provide the capability to equip 80D distributed power cabinets with automatic line protection switching.

Table 3-104. Automatic Protection Switching Equipment for 3DCB Models (Note)

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
F920H0585	Automatic protection switching (APS) cable kit	1
J98725DA-1	DS1 Extension shelf	1
402067078	Lynch APS shelf	2
846281319	112A Fan Control Unit	1
104028733	181A Apparatus Mounting	1
406456707	IR30C Batteries	4
105550420	2B Fan	1

Note : Order AEK90 repeaters as required (Table 3-101).

Table 3-105. Automatic Protection Switching Equipment for 2DCB Models (Note)

Comcode (Part No.)	Description	Qty
F920H0585	Automatic protection	1
F920H0585	Automatic protection switching (APS) cable kit	1
J98725DA-1	DS1 Extension Shelf	1
402067078	Lynch APS Shelf	2
846281319	112A Fan Control Unit	1
105550420	2B Fan	2
104028733	181A Apparatus Mounting	2
406456707	IR30C Batteries	8
J1C182BA-1,L3	RT Power Shelf	1
105701726	33GA1 Power UNit	4
105701734	337A1 Battery Charger	2
601251259	ED7C613-30,G3 Load Distribution Unit (LDU)	1
106193485	AUG 11 BFU	1

Note : Order AEK90 repeaters as required (Table 3-101).

Line Test - RT

The line test equipment (Table 3-106) provides the ability to test the subscriber loop. The equipment provides the necessary interfaces required for use with the Teradyne *RMU* telephone line test measurement apparatus.

NOTE:
 One LTF is required per 8 DCBs.
 One LTT is required per DCB.

Table 3-106. Line Test Equipment

Comcode (Part No.)	Description	Qty
106654742	AUA176 LTT	1
601355225	ED7C719-30, G1 LTF	1
106743230	LTF retrofit kit for cabinets (F920H0048) with 2 or more DCBs (no connectors)	1
106892136	LTF retrofit kit for cabinets (F920A0599) with 2 or more DCBs (connectorized)	1
106929532	LTF retrofit kit for cabinets with 1 DCB (F920H0795)	1

Required Protectors for RT Models

The protectors required for RT models (Table 3-107) are determined by the selection of the RT Model.

Table 3-107. Required Protectors for RT Models

Model	Lines				T1 Extension (Maximum)
	POTS	T1 Mode 1	T1 Mode 2	T1 Mode 4	
RT-51A-1DCB	192	20	12	0	0
RT-51A-1DCBF	192	0	0	0	0
80A-2DCBM	384	40	24	0	0
80A-2DCBM-APS	384	34	18	10	0
80A-1DCB-2000	192	0	0	0	168 *
80A-2DCB-2000	384	0	0	0	56 *
RT-80D-3DCBM	576	60	36		0
RT-80D-4DCBM	768	80	48		0
80D-3DCBM-APS	576	52	28	16	0
80D-3DCBF-2000	576	0	0	0	56 *
80D-4DCBM-BP	768	80	48	80	0
80D-3DCBM-BP-APS	576	32	26	14	0
80D-3DCBF-BP-2000	576	0	0	0	56 *
80E-5DCBF-BP-2000	960	0	0	0	56 *
80E-7DCBF-BP-2000	1344	0	0	0	56 *
90A-1DCBF	192 †	0	0	0	112 *
90A-HICAP-1DCB	192 †	0	0	0	112 *
90A-2DCBM	384 †	40	24	0	0
RT-7-2DCB115	384 †	40	24	10	0
RT-7-3DCB48	576 †	60	36	14	0
RT-8-2DCB115	384 †	40	24	10	0
RT-8-3DCB48	576 †	60	36	14	0
RT-8-3DCB48-CO	576	60	36	14	0

* Protectors not required if DS1s are extended on fiber.

† Protectors not required if subscriber lines do not exit building.

RT Channel Unit Circuit Packs

The selection of the channel units (Table 3-108) determines the services the RT will provide — for example, single party, multiparty, coin, 2-wire specials 4-wire specials, and dataport.

One *SLC* Series 5 Carrier System contains 48 channel unit slots. Thus, a maximum of 48 channel units can each provide 1 or 2 channels of service per 96-line system. The number of channels of service is based on the function of the circuit pack. The RT channel units must be selected to mate with a corresponding channel unit at the COT to provide the service desired for universal configurations.

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Table 3-108. Ordering Information for RT Channel Units (FPC/AC and FPI)

<u>Order Wording</u>	<u>Comcode</u>	<u>Loop Start/ Ground Start</u>	<u>Current Feed/ Current Sink</u>	<u>Description</u>	<u>Note(s)</u>
AUA25B	105710289	LS/GS		M SPOTS® 2-wire CU 300Ω used in the customer premises	1, 2
AUA27	103840435	LS		POTS and VerSuS* alarm service	1
AUA141	106018401	LS/GS		4-wire special services CU	3
AUA142	106018419	LS/GS	CS	E SPOTS® 2-Wire CU	1
AUA43	105478713	LS/GS	CF	E SPOTS 2-Wire CU	1
AUA44	105678171	LS/GS		4-wire special services CU	3
AUA52B	106244163			OCU dataport CU	3, 4
AUA53	103840724	LS/GS	CF	Coin channel unit, 1500 Ω	3, 5
AUA54	103840732			4-wire special services CU	3, 6, 7
AUA55	103840740	LS		Multiparty CU	1, 3, 8
AUA56	103840757		CS	DID DPT 2-wire CU	1, 8
AUA57	103840765		CF	FSR CU, 900 Ω	3
AUA58B	105710297	LS		POTS CU, 900 Ω	
AUA75	103840963			2WPLAR	
AUA150	106018500	LS/GS		POTS/SPOTS CU, 1500 Ω/CSA	1
AUA158	106018583	LS		POTS/SPOTS CU, 900 Ω/CSA	1
AUA159	106018591	LS/GS		POTS/SPOTS CU, 900 Ω/CSA	1

Notes:

1. One CU circuit pack provides two channels of service (maximum of 48 channel units per 96-line system).
2. AUA25B used with short loops only. See AT&T Data Sheet 363-005-124 for limitations.
3. One CU circuit pack provides one channel of service (maximum of 48 channel units per 96-line system).
4. The digital rate may be 2.4, 4.8, 9.6, or 19.2 kb/s (called subrates), or 56 or 64 kb/s (called fullrates).
5. Coin first is ground start, while tone first is loop start.
6. The AUA54 is only for use in the J1C182AC-1 or AF-1, E&M RT DCB assembly.
7. Order ED-7C700-20, G1 (one per dual digroup) to provide 24'' E&M signaling leads for one digroup. E&M signaling is required for this channel unit. Also order VF cable concurrently with this item.
8. Multiparty service requires the installation of the AUG1 PRU in the RT power shelf.

* Registered trademark of Versus Technology, Inc.

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This chapter contains models and options for ordering DDM-2000 multiplexers remote terminal (RT) cabinets.

Use the DDM-2000 multiplexer *Practices* developed by GTE Headquarters to specify the equipment for the central office (CO) and nonloop applications.

One DDM-2000 shelf can be equipped for a maximum of 84 DS1 circuits. The DDM-2000 shelf will support all new features that may be provided by future circuit pack offerings.

The DSX-1 cross-connect panels have capacity to terminate 80 DS1s. The fiber interconnect panel option has a capacity of 24 fibers and uses biconic connectors. If there is a question as to what is included in a specific equipment listing consult your local AT&T Account Executive.

Fiber Multiplexer Models

Each model in this section has a brief description of its contents. If there is a question as to what is included in a specific model, consult your local AT&T Account Executive.

Table 4-1. FMUX Part Number/GTE Material Code Summary

<u>Part Number</u>	<u>Description</u>	<u>GTE Material Code</u>
FMUX Models		
80A-HICAP-2000	(1) DDM-2000 OC-3 Shelf in 80A Cabinet with (3) DDM-Plus Shelves	
90A-HICAP-2000 with DDM-2000	90A Cabinet	
FMUX Options		
RTCAB-28VT15-COM	DDM-2000 Common circuit packs for 28 VT1.5 lines	
ADD-28VT15	Adds 28 VT1.5 lines to DDM-2000	
ED-8C724-30, G3B	DDM-2000 shelf	
21G	21G OLIU	
BBG2	BBG2 MXRVO (DS3 multiplexer)	
BBF2	BBF2 TGS1	
BBF1B	BBF1B DS1 card (VT1.5)	
BBG5	BBG5 system R2 controller	
BBF7	BBG7 overhead controller OC-3 R2	
ED-8C724-34, G1,M3.1R,P3.1R	SW generator program storage SW application with description SW operating system	

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80A-HICAP-2000

Figure 4-1 illustrates the layout of the 80A-HICAP-2000 configuration. Tables 4-2 and 4-3 list the options and parts, respectively.

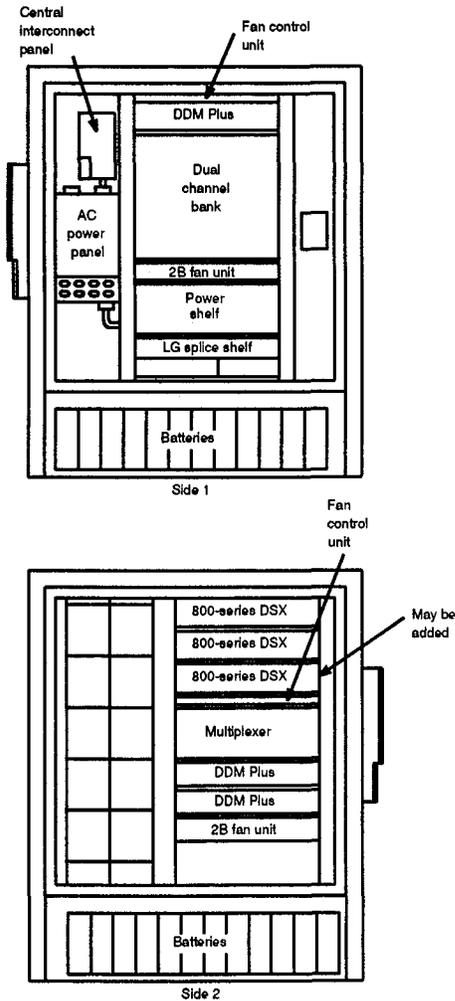


Figure 4-1. Model 80A-HICAP-2000 [(1) DDM-2000 OC-3 Shelf in 80A Cabinet with (3) DDM-Plus Shelves]

Table 4-2. Model 80A-HICAP-2000 Options

Option No.	Description
RTCAB-28VT15-COM	DDM-2000 common circuit packs for 28 VT1.5 lines
ADD-28VT15	Adds 28 VT1.5 lines to DDM-2000

Note: Order AEK90 repeaters and 25F OLIUs as required (Table 3-101).

Configuration

Model 80A-HICAP-2000 is a prewired 80A cabinet with hardware for pad mounting and the following equipment.

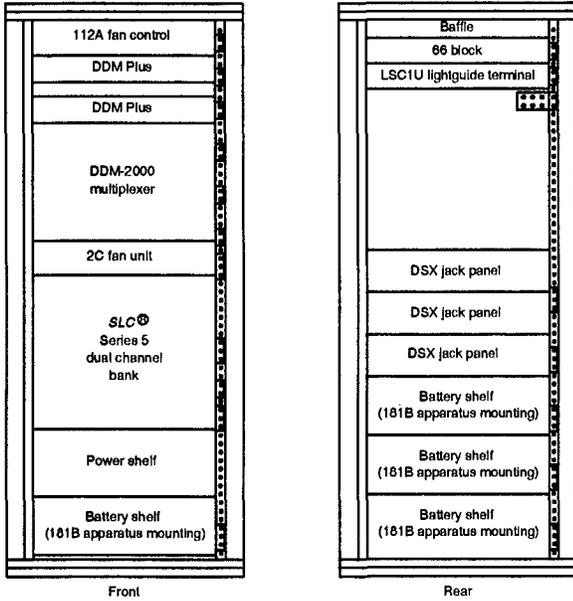
- Two 2B fan units
- -48 V DC bulk power shelf with circuit packs
- Battery backup for 8 hours of operation
- Two DSX-1 800-type panels
- One DDM-2000 OC-3 Multiplexer shelf assembly
- Three DDM-Plus shelves — provides hubbing capabilities
- Lightguide terminal for 96 fibers and (8) jumpers with *ST* to *ST* connectors.

Table 4-3. Model 80A-HICAP-2000 Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
F920H0444	80A cabinet for DDM multiplexer	1
106430135	128F bracket	1
ED-7C711-30, G34	AC power system	1
105550420	2B fan unit	2
F920H0802	800-series DSX	1
ED-7C711-30, G63	Battery cable	2
F920H0695	800-series DSX	1
ED-8C724-30, G3B	DDM-2000 Multiplexer shelf	1
J1C182BD-1, L1	-48 V bulk power shelf	1
ED-7C711-30, G194	(4) lightguide jumpers	1
ED-7C711-30, G196	Lightguide interface	2
J98725DB-1, L1	DDM-Plus shelf	3
ED-83242-31, G3	KS-23619, L3 battery	2
104032768	AUG4 BIU	1
105701726	336A1 power unit	5

90A-HICAP-2000

Figure 4-2 illustrates the layout of the 90A-HICAP-2000 configuration. Tables 4-4 and 4-5 list the options and parts, respectively.



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Figure 4-2. Model 90A-HICAP-2000 90A Cabinet with DDM-2000

Table 4-4. Model 90A-HICAP-2000 Options (Note)

Option No.	Description
RT CAB-28VT15-COM	DDM-2000 common circuit packs for 28 VT1.5 lines
ADD-28VT15	Adds 28 VT1.5 lines to DDM-2000

Note: Order AEK90 repeater and 25F OLIUs as required (Table 3-101).

Configuration

Model 90A-HICAP-2000 is a 90A cabinet that is powered by 115 V AC, provides NEBS zone 4 compliance and has the following equipment.

- One DDM-2000 OC-3 Multiplexer shelf assembly
- One 2C fan unit
- -48 V DC power shelf with circuit packs and 20-Hz ringing generators
- Battery backup for 8 hours of operation
- Two J98725DB-1, L1 DDM-Plus shelves
- 3M-4005-DPM/FR connectors
- All DS3s and DS1s are available for external cabinet use.
- 3M connectors have 20 pair each
- Lightguide terminal for 96 fibers.

Table 4-5. Model 90A-HICAP-2000 Replacement Parts Information

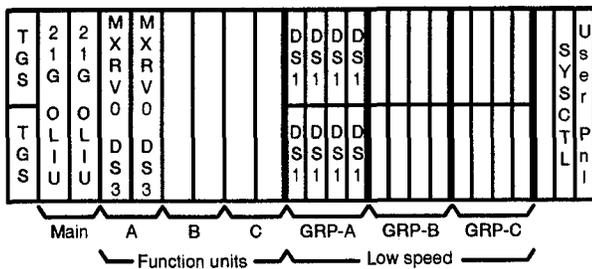
<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
ED-7C699-30, G3	90A cabinet	1
F91OH0493	Cables for DDM-Plus and DDM-2000 Multiplexer shelf	1
J1C182BA-1, L3	RT power shelf	1
ED-8C724-30, G3B	DDM-2000 Multiplexer shelf	1
106382336	2C fan unit	1
104028733	181A apparatus mounting	4
406456707	IR30C batteries	16
105701726	336A1 power unit	4
105701734	337A1 battery charger	4
601251259	ED-7C613-30, G3 LDU	1
106193485	AUG11 BFU	2
J98725DB-1, L1	DDM-Plus shelf	2
105743785	DSX 3-4 shelf	1
106587694	LSJ1RP - 30/7 Lightguide shelf	1

Fiber Multiplexer Information

The fiber multiplexer informational equipment lists include equipment for adding DDM-2000 shelf assemblies (equipped with common circuit packs) to a central office or remote network bay frame. Refer to the descriptions of each equipment list for further details.

DDM-2000 Sample Configuration (Information Only)

Figure 4-3 illustrates the layout of the DDM-2000 multiplexer sample configuration. Table 4-6 lists the primary parts breakdown.



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Figure 4-3. DDM-2000 Multiplexer Sample Configuration [Fiber Multiplexer with Common Packs for (28) DS1s (Wired for 84 VT1.5 Signals)]

Configuration

This configuration provides the DDM-2000 shelf assembly, common circuit packs to support (28) VT1.5 (DS1) signals at the OC-3 (155 Mb/s) rate, and low-speed circuit packs to provide (28) VT1.5 (DS1) signals. Since the DDM-2000 shelf is capable of handling up to (84) DS1 signals in three groups of 28, the configuration can be grown in increments of (28) DS1s by adding the circuit packs provided under the ADD-28VT15 option. The DDM-2000 shelf is fully connectorized and should be ordered with DDM-2000 multiplexer cable groups for installation into a miscellaneous central office equipment frame. This configuration includes full protection circuitry and does not include the optional telemetry circuit pack. The DDM-2000 shelf assembly provided will accommodate all new features as they become available. Refer to AT&T 363-206-201, *DDM-2000 Equipment Engineering and Ordering Guide*, for further information. The following equipment is included in the DDM-2000 multiplexer sample configuration.

- One ED-8C724-30, G1 shelf
- Common packs for (28) VT1.5 signals
- Wired for (84) VT1.5 signals

Table 4-6. DDM-2000 Multiplexer Sample Configuration Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
ED-8C724-30, G3B	DDM-2000 shelf	1
21G	21G OLIU	2
BBG2	BBG2 MXRVO (DS3 multiplexer)	2
BBF2	BBF2 TGS	2
BBF1B	BBF1B DS1 card (VT1.5)	8
BBG5	BBG5 system R2 controller	1
BBG7	BBG7 overhead controller OC-3 R2	1
ED-8C724-34, G1,M3.1R, P3.1R	SW generator program storage SW application with description SW operating system	

DDM-2000 Telemetry Controller Information

The optional telemetry controller (TLMCTL) unit is required to accommodate locations where parallel telemetry interfaces are required for access to remote maintenance centers. The cables required for telemetry are provided with the MUX2-OC3-75CA option. The TLMCTL is not required at the remote terminal locations. The TLMCTL is positioned in the AUXCTL slot that also supports expanded telemetry features in future circuit pack offerings. The BBG7-TLMCTL part number is 106633704.

DDM-2000 Central Office Cable Listing (Information Only)

Table 4-7 lists all cables required to install the DDM-2000 multiplexer shelf in the central office. This listing includes cables for the three muldem, DS1 timing reference, office alarms, power, and telemetry — includes all cables required for (84) DS1 circuits.

**Table 4-7. Cables to Install DDM-2000 Shelf in
Central Office**

Comcode (Part No.)	Description	Qty
ED-8C724-20, G301	Muldem cable A	1
ED-8C724-20, G307	Muldem cable B	1
ED-8C724-20, G313	Muldem cable C	1
ED-8C724-20, G340	300-foot DS1 timing reference cable	1
ED-8C724-20, G357	Office alarm cable	1
ED-8C724-20, G371	Power cable	1
ED-8C724-20, G348	TBOS cable	1
ED-8C724-20, G369	Miscellaneous discrete cable	1

Fiber Multiplexer Options

The fiber multiplexer options should be ordered as indicated in their descriptions. The options will provide circuit packs for increasing the DS1 circuit capacity of the multiplexer. Refer to the option descriptions for information about ordering.

The options will accommodate remote terminal DDM-2000 shelves in the RT models.

⇒ NOTE:

The remote terminal cabinets (for example, the 80D and 90A) equipped for fiber interface, are pre-equipped with multiplexer shelves and should be populated with common and DS1 line card circuit packs to provide the required service capacity.

RTCAB-28VT15-COM

The RTCAB-28VT15-COM option (Table 4-8) provides the common circuit packs and DS1 interface circuit packs required to add the first group of (28) DS1 circuits to the remote terminal cabinet models that are equipped with the DDM-2000 shelf assembly. This option includes one DS1 protection circuit pack providing one-for-seven protection. All the remote terminal models with the DDM-2000 fiber interface include a DDM-2000 shelf completely wired for (84) DS1 circuits.

⇒ NOTE:

The second and third groups of (28) DS1 circuits are provided by the ADD-28VT15 option.

Table 4-8. RTCAB-28VT15-COM [Common and DS1 Interface Circuit Packs to Add First Group of (28) DS1 Circuits]

Comcode (Part No.)	Description	Qty
21G	21G OLIU	2
BBG2	BBG2 MXRVO (DS3 multiplexer)	2
BBF2	BBF2 TGS	2
BBF1B	BBF1B DS1 card (VT1.5)	8
BBG5	BBG5 system R2 controller	1
BBG7	BBG7 overhead controller OC-3 R2	1
ED-8C724-34, G1, M3.1R, P3.1R	SW generator program storage SW application with description SW operating system	

ADD-28VT15

The ADD-28VT15 option (Table 4-9) provides the common circuit packs and DS1 interface circuit packs required to add the second or third group of (28) DS1 circuits to either the FMUX-2000-28VT15 central office multiplexer model or to any of the remote terminal models that are equipped with the DDM-2000 shelf assembly. This option includes one DS1 protection circuit pack providing one-for-seven protection.

Table 4-9. ADD-28VT15 [Common and DS1 Interface Circuit Packs to Add Second and Third Group of (28) DS1 Circuits]

Comcode (Part No.)	Description	Qty
BBG2	BBG2 MXRVO (DS3 Multiplexer)	2
BBF1B	BBF1B DS1 cards (VT1.5)	8

Miscellaneous Multiplexer Equipment

DDM-2000 Multiplexer Equipment Listing

Table 4-10 lists the miscellaneous equipment for the DDM-2000 multiplexer.

Table 4-10. DDM-2000 Multiplexer Miscellaneous Equipment

Comcode (Part No.)	Description	Qty
ED-8C724-20, G357	Office alarm cable	1
ED-8C724-20, G369	Miscellaneous discrete cable	1
ED-8C724-20, G371	Single shelf power cable	1
601359789	NE00262-30 G-3 & G-WA fuse and alarm panel	1
105774061	177A retainer	5
105389548	LSCIU-024/5 lightguide combination shelf	1
105383830	1000BC buildout block	4
105167563	1B fiber pigtail assembly	4
105420947	02003 optic jumper BIC-ST SM3MT	2
105613939	00003 optic jumper BIC-ST MM3MT	2
103912994	601S1 buildout single mode biconic	2
103912986	601M1 buildout multimode biconic	2
105339899	LT1A-F/F slice organizer (24F/fusion)	1
106230337	12A2 cable clamp kit	1
104394689	800G2-A1 DSX cross-connect panel	1

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The following categories of test equipment can be used with the *SLC*® Series 5 Carrier System:

- Extended test controller (XTC)
- Turn-up, test, and maintenance
- Centralized operations and provisioning (COP)
- Test bus control unit (TBCU).

The XTC model is for Switched Access Remote Testing System (SARTS) operating into a special service center. This model is for the XTC and its companion shelf only and does not include any interfacing hardware or operational software.

Turn-up, test, and maintenance equipment should be selected from the Section, *Test Equipment Options* based on system configuration and company requirements. Refer to AT&T 363-205-000, *SLC Series 5 Carrier System, Ordering Guide* for additional details.

Also, this chapter provides information about the centralized operations and provisioning system (COPS), which provides remote provisioning of special service circuits using an *MS-DOS** disk operating system based personal computer (PC). There is no model designated for ordering COPS. Therefore, COPS must be ordered by specifying all required parts (Table 5-2).

This chapter also provides information for ordering the TBCU. The TBCU performs XTC functions for *SLC* Series 5 Carrier Systems integrated into *5ESS*® switches. There is no model designated for ordering the TBCU. Therefore, the TBCU must be ordered by specifying all required parts (Table 5-3).

* Registered trademark of Microsoft Corporation.

Extended Test Controller (XTC) Model

The *SLC Series 5 Carrier System with Feature Package C (FPC)* provides the telephone company with significantly more testing and diagnostic features than are provided by *SLC 96 Carrier System* or *SLC Series 5 Carrier System with Feature Package A (FPA)* and *Feature Package B (FPB)*. To use this enhanced testing capability, an XTC is required instead of a pair gain test controller (PGTC). The XTC provides all of the capability of the PGTC as well as the capability to use new testing features provided in the SARTS and in the Mechanized Loop Testing System - 2 (MLT-2) specifically for the *SLC Series 5 Carrier System with FPC* or *Feature Package D (FPD)*. The XTC is not intended for use with only FPC systems. When used, the XTC becomes the office testing resource for all PGTC-compatible digital loop carrier systems, including *SLC 96 Carrier Systems*, *SLC Series 5 Carrier Systems with FPA*, and *SLC Series 5 Carrier Systems with FPB* that interface with *SLC 96 Carrier COTs*. However, for systems other than FPC none of the enhanced MLT-2 or SARTS testing capabilities are available.

Local test desks and test cabinets that have a **+STA** (+116 volts) may also be used to test digital loop carrier (DLC) systems using the XTC. The flexibility of test desks and cabinets allows them to use the full MLT testing capability of the XTC, including the enhanced MLT-2 testing features provided for FPC systems.

The XTC may be connected to a personal computer (PC) to allow administration and provisioning of certain *SLC Series 5 Carrier System* special service channel units from the PC. This feature is called centralized operations and provisioning (COP) (AT&T 363-205-103, *SLC Series 5 Carrier System, Centralized Operations and Provisioning, Installation, Test, and Maintenance*). AT&T 363-205-000, *SLC Series 5 Carrier System, Ordering Guide*, contains ordering information for COP.

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XTC-2TT-SSC

Figure 5-1 illustrates the layout of the XTC-2TT-SSC configuration. Table 5-1 lists the primary parts.

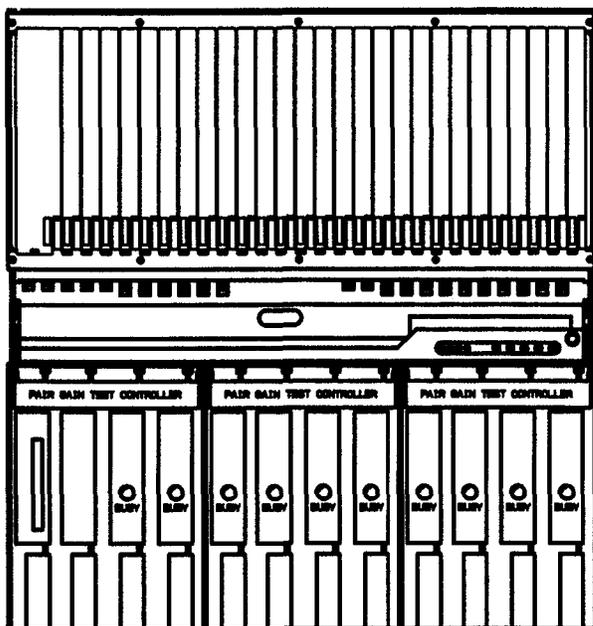


Figure 5-1. Model XTC-2TT-SSC [Extended Test Controller (SARTS)]

Configuration

NOTE:
The XTC equipment may be mounted in the miscellaneous equipment bay (Table 5-5). The XTC to PGTC extension cables have a restricted length.

Model XTC-2TT-SSC provides testing for up to (20) SLC Series 5 dual channel banks (SARTS). The configuration has the following equipment.

- One extended test controller shelf
- One PGTC expansion shelf
- Circuit packs for two test trunks
- Cables
- Special service center interface (SARTS)
- One AUA66 XFOU fanout unit

NOTE:
Model XTC-2TT-SSC includes one AUA66 XFOU fanout unit (Comcode 104044276) providing testing for the following:

- One 11' 8" COT bay
- One 9' COT bay, or
- Two 8' COT bays.

Additional bays require additional AUA66 XFOU's according to the previous listing. For example, one additional AUA66 XFOU is required when adding two 8' COT bays to the central office, assuming the original AUA66 XFOU is already fully utilized. Order additional AUA66 XFOUs as required (Table 5-6).

Table 5-1. Model XTC-2TT-SSC Replacement Parts Information

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
J1C182XA-1, L1	XTC control shelf	1
J1C142A-1, L2,L4	PGTC expansion shelf	1
103202933	SM89 PGTC power unit	1
103202941	SM90 PGTC fanout extr	1
103799037	SM94C PGTC trunk unit	1
104044235	AUB62 XADU	1
104044300	AUB69 XCCU	1
105458319	MC97761A1 XCU	1
104044276	AUB66 XFOU	1
104044219	AUB60 XPCU	1
104044284	AUB67 XTUC	2
105463442	AUB68 XTUB	2
105504765	MC97745A1, S2 XTUD	2
104436936	AUB63B XDLU	1
100015312	254A cable * (XTC to SLC® Carrier System)	225
ED-3C861-20, G24	254A cable connectors	1
100015353	256A cable * (2 x 225')	450
100961812	225' B25A connector cable, double end	1
106053846	26' A25W connector cable, single end	1
105369474	225' 811A cable	1

Continued

Table 5-1. Continued

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
402575526	KS21997 L5 plug	1
403699952	16-gauge standard wire * S, W-S	25
843745373	P24 wire *, BK, R-BK	225
843745339	Q24 wire * Y, Y-G, R, R-G	225

* This part is sold by sectional foot.

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Centralized Operations and Provisioning (COP) Information

Centralized operations and provisioning (COP) allows a customer to provision and administer special service channel units in a *SLC Series 5 Carrier System* from a PC. Access to the carrier system is provided through the XTC in the central office. The following basic arrangements are used for connecting the PC to the XTC.

- Dialed line access — Uses a 2-wire subscriber line with or without security call back and modems at both ends.
- Private line access — Uses a nonswitched data link and modems at both ends (without security).
- Direct line access — Uses local wiring or cable (up to 50 feet), without external modems.

All three methods of connection require the use of an *RS-232 to RS-422* protocol converter for interface with the XTC. In addition, the XTC control shelf must be equipped with COP compatible AUB63B (XDLU2) and MC97761A1 (XCU) circuit packs and the associated *SLC Series 5 Carrier Systems* must be FPC.

The AT&T COP software disk and user's guide are required at the PC and are ordered using an AT&T J-coded equipment specification. Data equipment required for interface to the XTC varies with the connection arrangement used and may include a modem (with or without a security feature) and associated interconnection cables. The data interface equipment is ordered by the customer as required. However, all equipment must meet the electronic and physical requirements listed in AT&T 363-205-103, *SLC Series 5 Carrier System, Centralized Operations and Provisioning, Installation, Test, and Maintenance*, which covers installation, test, and maintenance.

For the customers' convenience, a universal data mounting shelf and EIA RS-232 cable may be ordered using an AT&T J-coded equipment specification. This shelf is rack mounted in the central office near the XTC and is used for locating the modem, protocol converter, and associated interconnection cables.

Recommended PCs for COP are the AT&T 6300, AT&T PC6386 SX/EL WGS, or *IBM* PC/XT** personal computer. The PC must have 640k RAM memory and an asynchronous communications port.

Suggested COPS Configuration for GTE

This configuration (Table 5-2) provides equipment for dialed line access with security callback and modems at both ends. The configuration has the following equipment:

- One personal computer (AT&T PC6386 SX/EL WGS)
- One PC-side, switched line, external modem (Hayes *Smartmodem*[†] 1200 modem, Comcode 404074437)
- One security callback modem (*NEC*[‡] N9635E/2)
- One protocol converter (Black Box Corporation RS-232 to RS-422 converter)
- One universal mounting shelf

* Trademark of International Business Machines Corporation.

† Trademark of Hayes Microcomputer Products, Inc.

‡ Registered trademark of Nippon Denki Kabushiki Kaisha (Japan Corporation).

Table 5-2. COPS Configuration Replacement Parts Information (Note)

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
J1C182XC-1, L1	User's Guide and floppy disk for COP Comcode 601232200	1
AT&T 363-205-103	COP Installation Guide	1
J1C182XB-1, L1	Mounting shelf and interconnection cable. Comcode 601232218 (EIA-232 25-pin male-to-male D-type connector, commercially available)	1
ED-7C697-20, G1	XDC/SCLU2 to converter cable Comcode 601380603	1
ED-7C697-20, G3	PC to modem cable (standard PC serial interface cable, 25-pin male to 9-pin female)	1
ED-7C698-20, G2	Modem to modular phone jack (commercially available, standard switched network telephone line cable w/ RJ11 connectors)	1
404074437	Hayes Smartmodem * 1200 modem	1

Continued

Table 5-2. Continued

<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
3722M42	AT&T PC6386 SX/EL WGS 20M hard drive, 640k RAM contains the following: <ul style="list-style-type: none"> ■ MS DOS † w/Windows 106465560 ■ CPU 106584147 ■ Keyboard (Keytronics) 406442277 ■ AT&T 335-M 14" monitor 406545947 ■ AT&T model 320 mouse 405889155 ■ Mouse software 105725865 	1

Note : For reference and installation information, order SD-7C127-01, Issue 7 SLC® Series 5 Carrier System, Extended Test Controller, Application Schematic.

* Trademark of Hayes Microcomputer Products, Inc.

† Registered trademark of Microsoft Corporation.

Test Bus Control Unit (TBCU) Information

The test bus control unit (TBCU) provides an interface between an integrated digital loop carrier (DLC) system and a metallic test facility such as the mechanized loop testing system, version 1 (MLT-1). Specifically, the TBCU serves either *SLC* 96 Carrier RTs or *SLC* Series 5 Carrier (Feature Package C - AutoCut) RTs when integrated with a *5ESS* switch through a digital carrier line unit (DCLU), and allows customer metallic drops to be tested with the *4TEL** Computer Controlled Diagnostic System, the directly connected test unit (DCTU), or a manual test desk. The TBCU allows these facilities to test integrated *SLC* Carrier Systems in the same way universal *SLC* Carrier Systems are tested through a PGTC.

In a universal *SLC* Carrier System, the test system initiates a test by applying a voltage to the tip conductor of the central office terminal (COT) channel unit. A handshake ensues between the PGTC and the COT resulting in the creation of a metallic path between the test system and the customer drop using the RT's remote measurement unit (RMU) or a DC test pair to access the RT location. To prevent contention between *SLC* Carrier Systems sharing a DC test pair, an *inhibit* lead is wired to all COTs connected to a particular DC test pair. The *inhibit* lead is grounded by the COT containing the channel under test whenever the DC test pair is in use. Any attempts at the simultaneous testing of a different channel will result in a busy message to the test system requesting new access. Channel test results from the PGTC are relayed to the test system by voltages and/or tones on the test trunk.

When an integrated *SLC* Carrier System is being tested, the TBCU circuit imitates the actions of a COT and PGTC. Under control of the *5ESS* switch, it performs functions such as grounding or

checking the status of the *inhibit* lead, creating the metallic path to the DC test pair, and applying voltages to the test bus indicating channel test results. Tones are not used to indicate channel test results when an integrated DLC is tested.

The TBCU consists of a shelf containing a power unit and up to 15 tester units. A tester unit contains two independent TBCU circuits, each providing an interface between the metallic service unit (MSU), or modular metallic service unit (MMSU), in the *5ESS* switch and a DC test pair. One scan point, five distribution points, and one metallic test bus (MTB) are wired from the MSU to each TBCU circuit through the main distributing frame (MDF). These leads can also be wired directly if desired.

⇒ NOTE:

A TBCU is required in every *5ESS* switch or central office in which an integrated *SLC* 96 Carrier System or integrated *SLC* Series 5 Carrier System will be tested with MLT-1, MOT-2, integrated MLT-2, the DCTU, or a manual test board.

A TBCU is used when all the DC test pairs serve integrated DLC systems or when both integrated and universal RTs share the same pair.

The *SLC* 96 or *SLC* Series 5 RTs that share the same DC test pair must be collocated (for example, in the same mini-hut). If all the RTs served by a DC test pair are universal *SLC* Carrier Systems, no TBCU circuit is necessary for that pair. The maximum number of integrated *SLC* 96 or *SLC* Series 5 Carrier Systems on one DC test pair is 20 when using *4TEL* Computer Controlled Diagnostic System or a DCTU — the maximum is 10 when using a manual test desk.

* Registered trademark of Teradyne, Inc.

Figure 5-2 illustrates the layout of the TBCU configuration. Table 5-3 lists the primary parts.

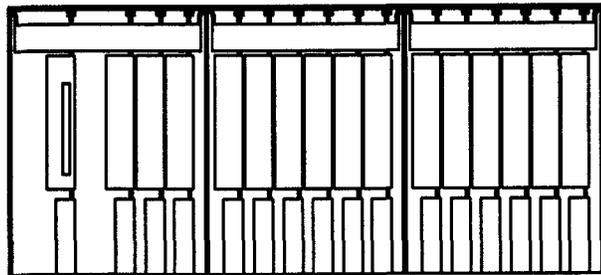


Figure 5-2. Test Bus Control Unit

Table 5-3. TBCU Configuration Replacement Parts Information

Part Number	Description	Qty
600358089	J1C189A1, L1 control shelf	1
104021506	SM499 power unit	1
104021571	SM500 tester unit	1

Suggested TBCU Configuration for GTE

This configuration provides the equipment for testing up to 10 dual channel banks with 4TEL Computer Controlled Diagnostic System or manual test desk. The configuration has the following equipment:

- One control shelf
- One tester unit for two DC test pairs



NOTE:

Additional SM500 TBCU tester units should be ordered to expand the testing capacity of the TBCU beyond ten dual channel banks. As a general rule, use ten dual channel banks per SM500 test unit. See AT&T 363-205-000 for more information.

- One power unit
- Cables

Additional Test Equipment

Extended Test Controller (XTC)

Table 5-4 lists the equipment required for installation and testing of the XTC, while Table 5-5 lists the equipment bays for the XTC or other miscellaneous mounted equipment.

Table 5-4. Equipment Required for XTC Installation and Testing

<u>Part Number</u>	<u>Description</u>	<u>Notes</u>
104435953	47B card extender	1
405359050	312A, L2 trunk test set	1
405462888	312A, L3 trunk test set adapter	1
997116181	KS-19531, L1 plug or equivalent	2

Notes:

1. Used with the PGTC to test trunk lines.
 2. Used to turn up the XTC control shelf and XTC expansion shelf.
-

Table 5-5. Equipment Bays for XTC or Other Miscellaneous Mounted Equipment

<u>Part Number</u>	<u>Description</u>
ED-8C501-51, G2	8' miscellaneous equipment bay
ED-8C501-50, G2	9' miscellaneous equipment bay
ED-8C501-51, G3	11' 8'' miscellaneous equipment bay

SLC Series 5 Carrier System Test Equipment

Table 5-6 lists the test equipment for turnup, end-to-end testing, and maintenance of SLC Series 5 Carrier System equipment.

Table 5-6. Test Equipment for Turnup, End-to-End Testing, and Maintenance of SLC® Series 5 Equipment

<u>Order Wording</u>	<u>Comcode</u>	<u>Description</u>	<u>Notes</u>
Key	846244168	Key (Allen wrench) to open 51A, 80A, 80D, or 80E cabinets	1
216C tool	102450574	Tool to open 80A, 80D, or 80E cabinets	1
KS-1450, L11	401549431	Volt-Ohm-Millimeter (e/w case) or equivalent	2, 3, 4, 5
415A2	402066518	Fault locate test set (Sierra)	4, 6
C0297601	401939335	Sierra test set insert	6
317B	401924931	Line repeater test set	6
240B3	401875869	Test set probe (Lear Siegler)	6
417A-2	401875463	Line repeater test set (Lear Siegler)	5, 6
244A-3	402441851	Test set probe (Lear Siegler)	5, 6
P3BH	102315017	3-foot slate patch cord — as required	4, 5, 6
P3BH	102314705	6-foot slate patch cord — as required	4, 5, 6
P3BH	102314739	12-foot slate patch cord — as required	4, 5, 6
AUA18 circuit pack	103840336	Digital test unit-left (DTU-L)	7
AUA19 circuit pack	103840344	Digital test unit-right (DTU-R)	7
52A test extender	104412911	Channel unit test extender	8
AUA78 circuit pack	105482269	Fault locating test adapter	4, 5, 6
262C plug	100395474	262C plug or equivalent	6
258G dummy plug	101634574	Dummy plug or equivalent	6
KS-22605, L4	405369505	Access shelf	9
J99404TA-1, L2	601202674	Craft interface unit	7, 10, 13
AUB66 circuit pack	104044276	AUB66 XTC fanout unit	11
SM500 circuit pack	104021571	SM500 TBCU tester unit	12

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Table 5-6. Continued

Notes:

1. Test equipment required for RT acceptance and turnup.
2. Test equipment required for COT end-to-end testing.
3. Test equipment required for RT end-to-end testing.
4. Test equipment required for COT T1 line testing.
5. Test equipment required for RT T1 line testing.
6. Test equipment required for maintenance.
7. The AUA18 and AUA19 DTUs may be used at the RT location in conjunction with the craft interface unit (CIU) to turn-up and test special service channel units and bank control units (BCUs) on FPC systems. This is only required if testing and/or initialization cannot be accomplished from the COT location.
8. The 52A test extender provides metallic test access to any of the SLC Series 5 Carrier System channel units for acceptance and maintenance testing.
9. Used at COT and RT locations where rear access to the dual channel bank is unavailable.
10. The CIU is used to test and turn-up special service channel units and bank controllers.
11. Order the AUB66 XFOU to expand the DCB testing capacity of XTC. A single AUA66 XFOU accommodates one 11' COT bay, one 9' COT bay, or two 8' COT bays. Refer to AT&T 363-205-000, *SLC Series 5 Carrier System, Ordering Guide* for additional details.
12. Order SM500 TU to expand the testing capacity of the TBCU. Refer to AT&T 363-205-000, *SLC Series 5 Carrier System, Ordering Guide* for additional details.
13. Installation and troubleshooting of dataport circuits with a CIU requires additional equipment available from Tele-Path Industries, Inc. (TPI).^{*} This equipment is:

TPI 108/109 RT II - data test unit
TPI 108-51 - clock interface unit
TPI 108-50A - dataport interface unit

AT&T 363-205-402, Channel Units Installation and Testing (TOP), includes procedures for testing dataport circuits using the TPI equipment.

^{*} Tele-Path Industries, Inc.
3602 Melrose Ave. NW
Roanoke, VA. 24017
(703) 982-8844

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GTE's approved maintenance plan should dictate the quantities and types of hardware to be spared at various repair and maintenance centers companywide. Without knowledge of the maintenance plan, the exact spares cannot be calculated. The spares in this chapter are considered to be only a minimum that good judgment would dictate.

The recommended sparing models are grouped to match the *SLC*[®] Series 5 Carrier System (Tables 6-2 and 6-3), DDM-2000 multiplexer (Table 6-4), and extended test controller (XTC) (Table 6-5). Channel units are usually spared on a 10-percent basis.

Table 6-8 (miscellaneous spares) lists spares for options that do not belong to a particular model.

AT&T Circuit Pack Carrying Case

At AT&T, quality is not just another buzzword — it is a total commitment to you, the customer, and to the integrity of the AT&T Transmission System products you purchase. That is why our thinking extends to protecting your equipment and your investment. We realize that sensitive circuit packs are vulnerable to damage from the following sources.

- Dust or cement powder contamination from office construction during installation.
- Metal filing contamination which can occur during the installation of overhead duct/metal work or during drilling of holes.
- Excessive mechanical shocks from mishandling, drops, or jolts.
- Electrostatic discharge (ESD) from ungrounded metals, personnel, or contact with plastics.

To minimize the possibility of damage, AT&T has introduced a new packaging and storage device to protect spare circuit cards, the circuit pack carrying case. The carrying case is a custom-made, static shielding circuit card case that has been designed to carry and store spare circuit cards for AT&T Transmission System equipment.

The carrying case has the following benefits.

- **Static shielding** — The carrying case has a unique internal grounding system that uses a standard adjustable wrist strap and separate ground cord (both with one M ohm resistors) to complete a total grounding scheme. This places the technician, the case, the cards, and the system being installed or maintained at the same electric potential. Thus, ESD events are eliminated. The carrying case protects your cards from 0 to 25,000 volts of static electricity fields and direct discharge. Ground cord, wrist strap, static shielding bag, and grounded work surface are standard with every case.
- **Inventory control** — Circuit cards are inserted with faceplate up, making it easy for you to identify needed modules in the case. A schematic of internal contents is included to keep cards organized and to minimize the need for handling. Then you can be assured your case contains non-compromised maintenance spares.
- **Mechanical protection** — The rugged design and tough exterior of the case helps prevent damage to modules in hostile environments. Custom card guides inside the case guard the modules from shock damage when mishandled. Combined, the interior cushioning, expert custom design, custom fit, and rugged materials give your cards the ultimate in physical protection.

Custom cases have already been made for the AT&T systems listed in Table 6-1.

Table 6-1. AT&T Circuit Pack Carrying Case Description and Ordering Information

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Number of Cases</u>	<u>Card Capacity (Spares)</u>
406346072	5ESS® switch	1	105
406346072	Autoplex® cellular equipment	1	20
406346080	D4 CHN BKS	1	20
406349829	DACS II	2	42
406349845	DACS III-2000	2	22
406349852	DACS IV	2	33
406462119	DACS IV-2000	4	105
406346056	DDM-1000	1	8
406529289	DDM-2000	1	7
406289264	DR4-90	4	40
405853557	DR6-135	3	40
405853557	DR11-135	3	40
406344309	FT-G LRBC	1	8
406346049	FT-G TARA	1	8
406346064	SLC® 96 Carrier System	1	20
406349795	SLC Series 5 Carrier System	2	27

Recommended Spares for SLC Series 5 Carrier System Models

Spares for COT and RT Combined Models

Table 6-2 lists the parts for spares for Feature Package C COT and RT combined models.

Table 6-2. Recommended Spares for COT/RT

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
103840245	AUA1 TRU	1
105728042	AUA11C PCU	1
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
106430127	AUB3B AIU	1
103841292	AUB5 CTU	1
103841300	AUB6 ADU	1
106018088	AUA114 CFU	1
105517510	MC97755A1 BCU	1
105517528	MC97756A1 BCU	1
105710255	AUA21B TRU	1
103840401	AUA24 FCU	1
103841227	AUB26 ADU	1
103841219	AUB25 CTU	1
600423180	ED-7C613-30, G3 LDU	1
600423198	ED-7C613-30, G2 LDU daughter board	1
106193485	AUG11 BFU	1

**Recommended Spares for RT Model
(FPC/AC)**

Table 6-3 lists the spares for Feature Package C with AutoCut.

Table 6-3. Recommended Spares for FPC/AC

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105728042	AUA11C PCU	1
104194550	AUA105 TRU	1
103840401	AUA24 FCU	1
103841219	AUB25 CTU	1
103841235	AUB27 ADU	1
106018088	AUA114 CFU	1
106443427	MC97776A1 BCU	1
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
600423180	ED-7C613-30, G3 LDU	1
600423198	ED-7C613-30, G2 LDU daughter board	1
106193485	AUG11 BFU	1

**Recommended Spares for DDM-2000
Multiplexer Models**

Table 6-4 lists spares for the DDM-2000 multiplexer.

**Table 6-4. Recommended Spares for DDM-2000
Multiplexer**

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
106064462	21G OLIU uncontrolled environment	1
106439409	BBG2 MXRVO (DS3 multiplexer)	1
106468432	BBF2 TGS	1
106543606	BBF1B DS1 card (VT1.5)	1
106633688	BBG5 system R2 controller	1
106633704	BBG7 overhead controller OC-3 R2	1

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Recommended Spares for Extended Test Controller Model

Table 6-5 lists the spares for the extended test controller.

Table 6-5. Recommended Spares for XTC

Comcode (Part No.)	Description	Qty
103202933	SM89 PGTC power unit	1
103202941	SM90 fanout	1
103799037	SM94C PGTC trunk unit	1
104044235	AUB62 XADU	1
104044300	AUB69 XCCU	1
105458319	MC97761A1 XCU	1
104044276	AUB66 XFOU	1
104044219	AUB60 XPCU	1
104044284	AUB67 XTUC	1
104044292	AUB68 XTUB	1
105070445	MC97745A1 XTUD	1
104436936	AUB63B XDLU	1

Spare Fuses for COT

Table 6-6 lists fuse spares for the COT.

Table 6-6. Fuses for the COT

Comcode (Part No.)	Description	Required Qty
406203182	(AUA114) WP90247 L103 0.5 amp fuse	2
406204230	(AUA114) WP90247 L110 3.0 amp fuse	3
406204230	(AUA115) WP90247 L110 3.0 amp fuse	5
406420273	WP902247 L201 insertion/ extraction tool (one per package)	1
402312193	Heat baffles (25A Bussman)	

Spare Fuses for RT

Table 6-7 lists fuse spares for the RT.

Table 6-7. Fuses for the RT

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Required Qty</u>
406203182	(AUA114) WP90247 L103 0.5 amp fuse	2
406204230	(AUA114) WP90247 L110 3.0 amp fuse	3
406204230	(AUA115) WP90247 L110 3.0 amp fuse	5
406203976	(AUG11) WP90247 L113 5.0 amp fuse	3
406203190	(AUG11) WP90247 L115 10.0 amp fuse	2
406420273	WP902247 L201 insertion/ extraction tool (one per package)	1

Miscellaneous Spares

Table 6-8 lists miscellaneous spares.

Table 6-8. Miscellaneous Spares

<u>Comcode (Part No.)</u>	<u>Description</u>	<u>Qty</u>
105464580	231M repeater	1
ED-3C556-30,G3	Telephone set and order-wire unit	1
ED-2C374-31,G2	FL/OW control unit	1
104379334	ART-2 alarm unit	1
406456707	IR30C batteries	4
103840468	AUA3 OTU	1
103840336	AUA18 DTU-L	1
103840344	AUA19 DTU-R	1
105727838	3B1 ringing generator	1
105727846	3C1 ringing generator	1
105701726	336A1 power unit	1
105701734	337A1 charger unit	1
106018096	AUA115 LFU	1
105710271	AUA73B LSU	1
105703946	AUA61D LIU DSX-1	1
106314305	AUA62D LIU, line powering	1
106313802	AUA64D LIU, power looping	1
104032727	AUG1 PRU	1
104032743	AUG2 RSU	1
105704571	AEK86 T1 repeater	1

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Engineering and Installation Services

7

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Types of Engineering Services

The following levels of engineering services are available:

- Equipment specification
- Detailed engineering
- Full engineering.

Equipment Specification

Equipment specification was previously called assembly engineering. For this service, AT&T provides a 224 spec that details all the parts involved in the order. The 224 spec mirrors the GTE purchase order (PO) on a line-by-line basis — the GTE PO number, the GTE PO line number, the AT&T order number, and the GTE material code for all material items. A charge is included in the model price that covers spec writing and staging for the model and all associated options and channel units (see Chapter 11, *Pricing Information*).

Detailed Engineering

AT&T engineering will engineer central office terminal (COT)/remote terminal (RT) bays, extended test controller (XTC)/pair gain test controller (PGTC) bays, and fiber terminals into a central office (CO) or remote building. This is *engineering only* and does not involve ordering of equipment or site visits by AT&T. The GTE engineer provides the following information to AT&T engineering:

- Marked floor plans
- Rack/bay assignments
- Main distributing frame assignments
- DSX-1 assignments
- Fiber distribution assignments.

AT&T will provide GTE with the following detailed engineering data originated by AT&T-NS:

- Front equipment layouts of requested bays.
- Wiring list of applicable requested circuits.

- DSX assignments of applicable requested circuits — other line termination assignments if DSX terminations are not used.
- Distributing frame termination assignments of requested applicable circuits.
- Cable running list for all external bay cables for requested circuits.

The detailed engineering does *not* include any power distribution or framework details necessary for the installation of the specified equipment in the GTE offices.

From the date of AT&T receiving the engineering information, an average interval of 3½ weeks is required to complete the detailed engineering package. (See Chapter 11, *Pricing Information* for pricing and quote numbers.)

GTE engineers must place ship to address in the CPMS MR narrative — send 224 spec to:

John Doe — Mail Code XXXX
224 23rd Street
Tampa, FL XXXXX

Pricing and Ordering for Detailed Engineering

As agreed between GTE/AT&T, AT&T will not commence any detailed engineering without an AT&T quote number referenced. The GTE engineer must place the AT&T quote number on the comment line of the CPMS DM/MAS screen when requesting detailed engineering. GTE Supply places the quote number on the purchase order to be sent to AT&T along with the engineer's name and telephone number. The GTE engineer is contacted by the AT&T engineer assigned to complete the engineering package. The GTE engineer then provides the AT&T engineer with assignments as previously stated. Prices and associated quote numbers for *model* orders are listed in Chapter 11, *Pricing Information*.

Full Engineering



NOTE:

Full engineering generally involves quotes for engineering of non-model *SLC*® Series 5 Carrier System equipment, multiplexer equipment, and occasionally site surveys.

The previous procedures do not restrict GTE from requesting any type of special engineering (for example, E&F, EF&I, etc.). When requesting *full engineering*, the GTE engineer must first obtain a quote from the Greensboro, NC technical consultants clearly outlining what is to be done and specifying that only GTE standardized equipment is to be furnished.

Upon receipt of the quote number, the GTE engineer places an order on GTE Supply showing one lot of *SLC* Series 5 Carrier equipment, the one lot material code, the quote number, and the total dollar value. If this is an E&F order, there could be charges for staging. If this is an EF&I order, there *should not* be charges for staging. When the full equipment engineering is complete and Atlanta engineering sends the equipment specs to the engineer at GTE, the engineer at GTE must update the work order to reflect the equipment details and forward this to GTE Supply to ensure billing accuracy.

Engineering Services Overview

The engineering records described herein, along with other supporting drawings, provide an overall view of the how/when/where/which/what kind of how many in a given office. They are a valuable tool to the Telco equipment engineer as well as AT&T engineering and installation personnel if maintained properly. These records are also used by the AT&T technical consultants for firm price quoting (FPQ). The accuracy of the FPQ is dependent on how well the records are maintained. They are the *common ground* for telephone conversation between the Telco and AT&T engineers, and preclude the requirement for numerous field trips.

Many of the engineering records are *searched* by the AT&T change notice (CN) department for equipment requiring immediate or optional modification.

The engineering records depict each piece of equipment in the office and can be used for property records and depreciation. The records can also be used to resurrect a partially or completely destroyed office.

The capabilities of AT&T engineering is severely limited without complete engineering records. It also limits our ability to assist the customer and instruct installation. The following areas are of prime concern.

- Record of circuits on the power plants and battery distribution fuse board (BDFB).
- Cumulative power drains.
- AC circuits in the office.
- How the office grounding system is arranged.
- Battery reserve type and size.
- Floor loading.

- Heat dissipation.
- Location of cable racks and how supported.
- Special conditions existing in the office.
- Formed and bulk cable measurements.
- Growth is orderly and follows AT&T requirements.
- Additional lighting and cable rack requirements.
- Change notices.
- Type, vintage, wiring, options, interconnection, location, etc. of existing equipment.
- Accuracy of firm price quotes.
- Implementing new feature packages or generics based on vintage of existing frames and circuit packs.

The following categories are responsibilities of maintaining the engineering records.

- Ordering equipment for a new office or an addition to an existing office as well as removals or relocations and modification of equipment.
- Installation by means of a marked print when field conditions require changes.
- The Telco engineer by use of a running order. This would be required when adding to or removing AT&T or another vendor's equipment from an office.
- The AT&T CN department, when required, changes are made to AT&T manufactured or approved equipment.

Graphic Documentation

Standard Drawings

There are four major types of standard drawings.

- Equipment specification drawings (J,ED)
- Wiring diagrams (T)
- Schematic drawings (SD)
- Framework and assembly drawings (ED).

Equipment specifications provide requirements for the assembly and wiring of apparatus and framework into units of equipment for a specific function in a communications system. The following information is found on these drawings.

- Table A, from which various options (lists of groups) can be ordered to perform specific function
- A stocklist that shows a quantity and description of the material that will be provided with each list or group
- Engineering notes to assist in the selection of lists or groups
- Manufacturing notes that assist manufacturing and installation with factory and field assembly.

Wiring diagrams (T-drawings) show the components and component interconnects in detail required for the engineering, manufacturing, installing, and maintaining of the equipment. On this drawing will be found a feature table, engineering notes, figures, and sketches of the components and their interconnections. Also on this drawing is a cross reference table that shows which SD drawing figure is associated with a given T figure.

The circuits shown on schematic diagrams (SDs) are drawn in schematic form. The drawing identifies circuit apparatus and electrical

requirements. The SDs also contain notes, cable diagrams, and block schematics. It is used to facilitate the tracing of circuit operation.

Framework and equipment drawings (EDs) are used to code small wired units such as printed wiring boards and cabling arrangements. The wiring diagram and equipment layout are usually combined on the EDs.

Floor Plans

Floor plans show the following information.

- Spot new and added frames.
- Locate wall-mounted equipment, grounding arrangements, cable racks, and lighting.
- Illustrate special requirements for supporting frames, cable racks, grounding, isolation, building openings, obstructions, ceiling heights, and other special requirements of a given office.
- Determine locations of new equipment, to measure formed and bulk cable, additional lighting, and racking requirements.

Power Drawings

Power drawings display the following information.

- A permanent record of all power feeders in the office, their size, fuse/breaker rating, originating point (BDFB), and termination.
- Cumulative record of power plant loads.
- A record of all AC circuits in place.
- A permanent record of power plant type, size, battery type, size, and reserve time.
- A source for floor loading and HVAC requirements.

Wiring List and Equipment (WE) Drawings

WE drawings list the following information.

- Record of equipment by type, vintage, and quantity in the present office. This is accomplished by listing standard drawings (J, ED, etc.) and the associated list or group structure.
- Break down of the list or group structure of the standard drawings provides the following information.
 - What subcomponents and their standard drawing have been equipped on the bay, cabinet, shelf, etc., and their list or group structure.
 - Wiring diagram that covers each component (T-drawings), from which the schematic diagram can be derived (SD-drawing).
 - Quantity of figures/drawings that are present.
 - What options were provided, if available, for each figure.
 - The internal wiring of individual components and intrabay wiring.
 - Interconnect information (interbay cabling).
 - Issue notes that verbally describe the growth of the office and show the order number and date of change starting with Issue 1.

The following situations will exist for furnish-only and installed by Telco orders.

- Since engineering records will not be available in the AT&T computerized tracking system, the customer will be responsible for identifying which equipment will require change notice application.
- The customer will be required to maintain and order from the latest issue of each standard drawing associated with the equipment.
- Any assistance by AT&T Bell Laboratories or engineering to troubleshoot, align, etc., the equipment after installation will be billable.
- Any future additions to the office requiring engineering assistance will require billable field trips to survey what exists in the office. If engineering records are to be originated, that effort will also be billable.

Installation Services Overview

⇒ NOTE:

It is assumed that the customer has installed and tested the T1 lines required for the systems being installed.

The following tasks are performed for the COT end and the RT end when the RT is placed in a building.

- Transportation of all hardware from an AT&T warehouse or customer's warehouse.
- Installation of frames.
- Installation of shelves and channel banks in the frames.
- Adjustment and installation of all circuit packs and miscellaneous equipment into shelves and channel banks.
- Installation of power, alarm, derived pairs, and T1 cables both in the frame and to the customer's interface points.
- COT to RT testing of systems for proper functioning and alarming.
- Individual testing of all installed channel units in both directions.

Services for remote terminals in prewired cabinets are generally shared in the following ways:

- Customer provided.
 - Placement of concrete pad
 - Transportation and placement of prewired cabinet
 - Commercial power to site
 - Splicing of all derived pairs and T1 line cables.
- AT&T provided.

- Adjustment and installation of all circuit packs and miscellaneous equipment into the cabinet
- Test and turnup of each equipped system for proper functioning and alarm
- Individual testing of all installed channel units in both directions.

AT&T Network Systems - Customer Operations is the only factory authorized installation vendor for *SLC Series 5 Carrier System* equipment. As such, this group has full and immediate access to training, technical resources, and material resources not available to other installation vendors. All installations receive regional technical assistance center (RTAC) technical support, with escalation to Bell Labs. AT&T Network Systems is committed to meeting GTE's expectations of timeliness, cost, and quality.

The following prices are based on the models provided in other chapters of this document. These prices are budgetary quotes only — actual costs may vary depending on site location. Prices are valid through December 31, 1993 for the states of California and Nevada. The following list contains general *notes* pertinent to pricing for installation of equipment.

- Installation pricing is intended for the internal use of GTE only. AT&T Network Systems does not authorize distribution of this information to any external party, or those GTE employees without a demonstrated need for the information.
- Pricing shown is based on a standard work week — defined as Monday to Friday between the hours of 7 a.m. and 4 p.m.
- Pricing is based on local assignment mileage only. If sites are out of installation service areas, travel and transfer charges will apply.

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- All permits and inspections will be the responsibility of GTE, both acquisition and fees.
- Escorts or observers, if required, will be provided by GTE.
- Supply of AC power is not included in the prices quoted. GTE is responsible for obtaining commercial power for the RT sites.
- Any additional equipment or work requested by GTE will be quoted and approved prior to the work starting.
- No warehousing charges have been included. If GTE requests AT&T Network Systems to provide inventory control or follow-up and tracking of materials, a quote will be provided.
- Specific work functions and exclusions are detailed by model and listed in Tables 11-2 through 11-31).
- Pricing of ironwork or support, either materials or labor, is not included.
- Prices do not include responsibility for materials and/or delivery of materials.

Installation of COT Models

Tables 11-2 through 11-7 list the prices for installation of COT models. The following installation tasks are included in the installation of COT models:

- Install and brace bay
- Connect frame AC power supply
- Connect bay DC power leads to aisle feeders
- Run and connect T1 cables (TRANS/REC)
- Run and connect alarm leads and derived pairs
- Install and stencil mainframe terminal strips

- Test COT bay alarms
- Test for continuity on all terminated leads.

The following optional installation services are available for COT models:

NOTE:

Assumptions are that DSX cross-connects are installed; fiber cross-connects are installed; multiplexer(s) is tested and turned up; the T1 span (copper/fiber) is tested and turned up; and both COT and RT are in place and ready to perform end-to-end.

- Installation of COT circuit packs
- Perform complete system end-to-end test
- Individual channel-to-channel tests

Installation of RT Models

Tables 11-8 through 11-26 list the prices for installation of RT models. System turn up and channel-to-channel tests are priced at the RT only — COT system turn up and channel-to-channel tests are priced as options. The following installation tasks are included in the installation of metallic-fed cabinet RT models.

- Certify AC/DC power supply
- Inspect assembled equipment
- Install battery packs
- Test alarms
- Perform end-to-end test and turn up
- Test individual channel-to-channel.

The following tasks are provided by the customer:

- Provide required circuit packs
- Provide concrete pad placement
- Transport and place the prewired cabinet
- Supply commercial power to the site and cabinet

- Splice derived pairs and T1 line cables
- Test and turn up T1 span.

The following installation tasks are included in the installation of Fiber-fed cabinet RT models:

- Certify AC/DC power supply
- Inspect assembled equipment
- Install battery packs
- Install DSX cross-connects
- Install fiber cross-connects
- Test alarms
- Test DDM-2000 multiplexer
- Test repeaters
- Perform end-to-end test and turn up
- Test individual channel-to-channel.

The following tasks are provided by the customer:

- Provide required circuit packs
- Provide concrete pad placement
- Transport and place the prewired cabinet
- Supply commercial power to the site and cabinet
- Splice derived pairs and fiber cables
- Test and turn up fiber span.

The following installation tasks are included in the installation of RT models in buildings.

- Install and brace bay
- Connect frame AC power (RT-7-2DCB115) to building outlet or to customer provided (dedicated) AC service panel — AC power source within 10 feet
- Connect frame 48 V power (RT-7-3DCB48) to customer provided feeder within 10 feet

- Run and connect T1 cables (TRANS/REC)
- Run and connect alarm leads and derived pairs
- Install and stencil mainframe/backboard terminal strips
- Install and test battery packs (RT-7-2DCB115)
- Test bay alarms
- Test power shelf and ringing generators
- Test continuity of all terminated leads.

The following are optional installation services available for RT models in buildings.

⇒ NOTE:

Assumptions are that DSX cross-connects are installed; fiber cross-connects are installed; multiplexer(s) is tested and turned up; the T1 span (copper/fiber) is tested and turned up; and both COT and RT are in place and ready to perform end-to-end.

- Installation of COT circuit packs
- Perform complete system end-to-end test
- Individual channel-to-channel tests.

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⇒ NOTE:

Feature Package I (FPI) information will be incorporated into existing GTE *SLC*® Series 5 Carrier System courses such as GTE's course TR4601 equivalent. GTE personnel may obtain instruction through GTE training centers. AGCS will include *SLC* Series 5 Carrier System information in their *GTD-5* EAX courses.

AT&T product training provides high-quality, comprehensive training on the maintenance, operations, administration, and management of nearly all AT&T transmission products. Training is developed based on a proven set of standards designed to provide effective, practical skills and knowledge that can be quickly implemented. AT&T instructors are *from-the-field* experts trained to teach.

AT&T product training enables all customers to gain the most benefit from their AT&T *SLC*® Series 5 Carrier System equipment and services.

Training Locations

AT&T operates state-of-the-art training facilities dedicated to training telecommunications craft, installation, supervisory, and management personnel. AT&T National Product Training Centers are located in Dublin, Ohio and Lisle, Illinois.

The training center in Dublin, Ohio is located just north of Columbus, making the center easily accessible to nearly every part of the country. The training center has 54 modern, fully equipped classrooms that surround equipment bays and minicomputer labs. Each classroom contains the latest test equipment and documentation to support product training. The training center is staffed with more than 600 professionals.

The training center in Lisle, Illinois is the Hickory Ridge Conference Center located just west of Chicago, only 35 minutes from O'Hare International Airport. The facility houses 5 training labs, a complete auditorium, 25 fully equipped classrooms, 49 caserooms, and on-site hotel and dining accommodations.

In addition, many transmission courses are designed to be *suitcased* to our customers' locations. Suitcased courses are brought to the customer's location and taught by an experienced AT&T instructor. You save time away from the job, as well as travel and living expenses for your trainees. All SLC Series 5 Carrier System training is available for suitcased delivery.

Courses at both training centers and dates for suitcased training fill quickly — call early to guarantee seat assignments that best meet your schedule.

Courses and Scheduling

AT&T Product Training Services announces a training program for the SLC Series 5 Carrier System. Course TR4601 is available for technicians, supervisors, and maintenance personnel who are involved in operating the SLC Series 5 Carrier System. Also, course TR4602 on the SLC Series 5 Carrier System Fiber-To-The-Home (FTTH) feature is now available and may be taken after completing TR4601.

These courses cover the operation and maintenance of the COT, the RT, and the FTTH feature. Students will go through a hands-on turnup of the carrier system using a functional system and associated test equipment.

Courses are available now and will be offered several times each month. To register for a class or obtain scheduling information, call your company's training coordinator. If your company does not have a designated training coordinator, call this toll-free number to order a product training catalog, get more information on a course, find out about new courses, or register for a class:

1-800-TRAINER

When you call 1-800-TRAINER, you will be given five options. Press the option that is appropriate for the training you want.

- Option 1: For information on *UNIX** System education, *press* **1** (all UNIX system courses and curriculums).
- Option 2: For information on AT&T product training for technicians, *press* **2** (technical and maintenance courses for technicians and technical support personnel).
- Option 3: For information on engineering, manufacturing, and computer system education, *press* **3** (AT&T employee training only).
- Option 4: For information on management, business, and trainer development education, *press* **4** (Management, Business, Finance, Marketing, and Training Development Education at the Corporate Education Center in Hopewell, NJ).
- Option 5: For information on AT&T product training for managers and professionals, *press* **5** (technical, maintenance, administration, and engineering courses for managers and professionals).

* Registered trademark of UNIX System Laboratories, Inc.

LE1010 — *SLC* Series 5 Carrier System Management Overview

Course LE1010 is designed to familiarize management personnel with the *SLC* Series 5 Carrier System architecture, features, operations, service capabilities, applications, and economics.

This course provides the information necessary to identify the various support systems used for maintenance. Students learn the channel unit provisioning process, and learn to identify planning and economic considerations that are part of *SLC* Series 5 Carrier System implementation.

What Are the Key Topics

This course covers the following key topics:

- System overview and physical description
- *SLC* Series 5 Carrier System digital transmission concepts
- Common units and channel units
- Remote terminal (RT) power systems
- System alarm capabilities
- Maintenance and channel unit provisioning
- Fiber-To-The-Home (FTTH) feature.

Who Should Take LE1010?

This course is designed for telecommunication managers responsible for the planning, implementation, and maintenance of the *SLC* Series 5 Carrier System. Classes are limited to 24 students.

Length of the Class

The length of course LE1010 is 2 days.

Prerequisites

Students should have a background in telephony and an understanding of basic digital transmission principles.

Media

Course LE1010 is a combination of instructor lectures and class discussion.

Location

Course LE1010 is taught at the AT&T National Product Training Center in Dublin, Ohio.

TR4601 — SLC Series 5 Carrier System Turnup and Test

Course TR4601 covers the identification and functions of SLC® Series 5 central office terminal (COT) and remote terminal (RT) equipment, modes of operation, associated turnup and test procedures, special service channel unit provisioning, channel unit testing, and system maintenance.

The course addresses the latest available service offerings and their associated equipment. Students gain hands-on experience performing turnup and test procedures, they provision special service channel units using both the craft interface unit (CIU) and centralized operations and provisioning (COP), and perform maintenance procedures using the extended test controller (XTC).

What Are the Key Topics

This course covers the following key topics:

- Digital transmission concepts
- System arrangements and features
- T1 line end-to-end testing and fault locating
- Fault-locate and order-wire panel turnup
- Remote cabinet and frame configurations
- Digital concepts [extended super frame (ESF) framing format]
- All feature package plug-ins and applications
- XTC turnup and test
- Integrated Network Access (INA) remote terminal
- Enhanced Feature Package B (FPB), and Feature Package C with AutoCut (FPCAC)
- Integrated services digital network (ISDN) channel units.

Who Should Take TR4601?

This course is designed for central office technicians, outside plant, and maintenance personnel. Also, the course may be beneficial for staffers, planners, sales people, and managers. Classes are limited to 12 students.

Prerequisites

Students need a background in telephony and an understanding of basic transmission principles.

Length of the Class

The length of course TR4601 is 5 days.

Media

Course TR4601 is a combination of instructor lectures and group discussions, reinforced with 60 percent hands-on exercises on operational systems that are representative of those in the field.

Location

Course TR4601 is taught at the AT&T National Product Training Center in Dublin, Ohio.

TR4602 — SLC Series 5 Carrier System Fiber-To-The-Home Feature

Course TR4602 covers the operation and installation of the FTTH feature of the SLC Series 5 Carrier System. Students go through a hands-on turnup of the carrier system using a functional system and associated test equipment. This Phase One version covers plain old telephone service (POTS) only. As ISDN and cable TV access (which requires a wave division multiplexer), and remote switching equipment are added, the course will be updated.

What Are the Key Topics

This course covers the following key topics:

- System arrangement and features
- Transmission concepts
- Remote terminal power and optical shelf
- Distant terminal (DT) equipment
- DT cluster arrangements and powering
- System turnup and test
- End-to-end testing and fault locating
- Maintenance and troubleshooting.

Who Should Take TR4602?

Course TR4602 is designed primarily for telephone company outside plant engineers and maintenance personnel. The course may help staffers, planners, sales people, and managers. Classes are limited to 12 students.

Length of the Class

The length of course TR4602 is 2 days.

Prerequisites

Students need a working knowledge of the SLC Series 5 Carrier System as provided by course TR4601, SLC Series 5 Carrier System Turnup and Test.

Media

Course TR4602 is a combination of instructor lectures and group discussion reinforced with practical hands-on exercises on an operational system. Students gain experience working with a SLC Series 5 Carrier System equipped with the FTTH feature.

Location

Course TR4602 is taught at the AT&T National Product Training Center in Dublin, Ohio.

TR4620 — XTC Seminar

Course TR4620 explains extended test controller (XTC) functions, XTC interfaces with mechanized loop testing (MLT) and Switched Access Remote Testing System (SARTS), architecture, and MLT/local test desk (LTD)/SARTS commands and responses. Students learn valuable installation requirements and procedures, including proper XTC bay layout, cabling requirements, XTC/pair gain test controller (PGTC) inter-shelf cabling, and XTC to *SLC* Carrier System bay cabling. Students also learn XTC turnup, test, and functional procedures, XTC fault sectionalization, and field test plan.

What Are the Key Topics

This course covers the following key topics:

- Functions of XTC circuit packs
- Interfaces to *SLC* Carrier System, MLT, and SARTS
- Architecture
- MLT/LTD/SARTS commands
- Installation requirements
- Turnup, test, and functional procedures.

Who Should Take TR4620?

Course TR4620 is designed primarily for technicians and managers who need a comprehensive knowledge of the XTC and its applications. Classes are limited to 12 students.

Length of the Class

The length of course TR4620 is 1 day.

Prerequisites

Students need a background in digital loop carrier gained through on-the-job experience or by completing course TR4601, *SLC* Series 5 Carrier System Turnup and Test.

Media

Course TR4620 is a combination of instructor lectures, group discussion, and lab exercises.

Location

Course TR4620 is taught at the AT&T National Product Training Center in Dublin, Ohio.

TR4621 — *SLC* Series 5 Carrier System Fiber-To-The-Home Feature Seminar

Course TR4621 covers the operation and installation of the FTTH feature of the *SLC* Series 5 Carrier System. This Phase One version covers POTS only. As ISDN and cable TV access (which requires a wave division multiplexer) are added, the course will be updated.

Media

Course TR4621 is a combination of instructor lectures and group discussion.

Location

Course TR4621 is taught at the AT&T National Product Training Center in Dublin, Ohio.

What Are the Key Topics

This course covers the following key topics:

- System arrangement and features
- Transmission concepts
- Remote terminal power and optical shelf
- DT equipment
- DT cluster arrangements and powering
- Engineering/layout of fiber optic cable
- Maintenance and troubleshooting techniques.

Who Should Take TR4621?

Course TR4621 is designed primarily for telephone company outside plant engineers and maintenance personnel. The course may help staffers, planners, sales people, and managers. Classes are limited to 24 students.

Length of the Class

The length of course TR4621 is 1 day.

Prerequisites

Students need a working knowledge of the *SLC* Series 5 Carrier System as provided by course LE1010, *SLC* Series 5 Carrier System Seminar.

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Documentation for AT&T Network Systems products may include some or all of the following types of documents:

- Sales/marketing brochures (presale)
- Product announcement package
- 9-digit numbered AT&T documents (postsale)
- Equipment/apparatus drawings.

The following are included in 9-digit numbered AT&T documents.

- AT&T practices
- Manuals
- Handbooks
- Quick-reference guides
- Input/output (I/O) manuals
- Application guides
- Administrative documents
- Engineering documents

- Descriptive documents
- Data sheets
- Recent change/verify (RC/V) documents
- User's guides/manuals
- Reference guides/manuals
- Document indexes
- Customer information releases (CIRs)
- Procedural documents
- Task-oriented practices (TOPs)
- Installation documents
- Maintenance documents
- Ordering guides, etc.

AT&T Practice refers to a document style that uses numbered paragraphs and marked text headings (similar to the original Bell System Practices) and is designated as a practice in the document header. Many of the current AT&T documents are practices, but the practice style is not suited to documents like manuals and applications guides. Several different styles have been used for 9-digit numbered documents that were not suitable for the

practice format. In an effort to consolidate and reconcile the different formats that currently exist and to produce consistent documentation, a new multiweight format has been developed. This format is part of the corporate standard that will specify the content and format for all AT&T documentation. Most new documents will be done with the multiweight format — documents to be reissued will be evaluated for conversion. This document has been produced using the multiweight format.

SLC® Series 5 Carrier System Documentation

The following categories of 9-digit numbered documents provide most of the *SLC Series 5 Carrier System* documentation.

- Indexes
- Applications and planning guides
- Ordering guides
- Descriptive documents
- Engineering documents
- AT&T data sheets
- Task-oriented practices (TOPs)
- User guides/manuals
- Customer information releases (CIRs).

⇒ NOTE:

Drawings available to GTE may be listed using *VIRGOS*.

See information under *Outside Plant Documentation* and under *Drawings* for additional documentation on the *SLC Series 5 Carrier System* and related equipment.

All documentation related to *SLC Series 5 Carrier System* has been consolidated into four separate categorized volumes of information — volumes I, II and III are further categorized into tabs. Each volume has a Select Code for use when ordering through the Customer Information Center. The following list contains the Select Code, description of the volume, and the approximate price.

- Volume I (Select Code 005-001) — *Description, Engineering, and Ordering Information*. (Approximate Price: \$125.)
 - Tab 1: General Description Practice
 - Tab 2: Engineering Practice
 - Tab 3: RT Cabinet Configurations
 - Tab 4: Test Equipment (XTC and PGTC).
- Volume II (Select Code 005-002) — *Turn-up and Test Procedures*. (Approximate Price: \$137.)
 - Tab 1: COT Turn-up and Test
 - Tab 2: RT Turn-up and Test
 - Tab 3: Channel Unit Installation
 - Tab 4: System Testing
 - Tab 5: Maintenance Testing
- Volume IV (Select Code 005-004) — *SLC Series 5 Carrier System Data Sheets*. (Approximate Price: \$30.)
- Volume V (Select Code 005-005) — *Feature Package I (FPI) Information*. (Approximate Price: \$125.)
 - Tab 1: General Description Practice
 - Tab 2: Acceptance, Turn Up, and Conversion
 - Tab 3: Maintenance and Trouble Clearing
 - Tab 4: Application Engineering
 - Tab 5: LTT/LTF User's Manual

Division 363 Document Index

The numerical index for each division (first 3 digits of the 9-digit number) lists the current issue of the available AT&T documents in that division. The index also lists appendixes and addenda to the current issue. Currently, active indexes are being updated about four times a year. AT&T 363-000-000, *Numerical Index — Division 363, Loop Transmission Systems* lists all 9-digit numbered documents (that start with 363) for Series 5 and other loop transmission systems. The Division 363 Index layers (second 3 digits) include AT&T Data Sheets (363-005-zzz), CIRs (363-099-zzz), SLC® 96 Carrier System documents (363-202-zzz), and SLC Series 5 Carrier System documents (363-205-zzz).

The following SLC Series 5 Carrier System documents are included in this division.

NOTE:

Documents ending with the suffix *G* are specific to GTE.

- AT&T 363-205-104, *SLC Series 5 Carrier System, Integrated Network Access — Remote Terminal (INA-RT) User's Manual*
 - AT&T 363-205-106, *SLC Series 5 Carrier System, AUA90 T-BRITE Channel Unit for ISDN, Installation and Maintenance*
 - AT&T 363-205-107, *SLC Series 5 Carrier System, AUA93 BRITE II Channel Unit for ISDN, Installation and Maintenance*
 - AT&T 363-205-109, *SLC Series 5 Carrier System, LTT/LTF User's Manual*
 - AT&T 363-205-300, *Extended Test Controller, Description, Installation, and Maintenance*
 - AT&T 363-205-400, *SLC Series 5 Carrier System, COT Acceptance and Turnup (TOP)*
 - AT&T 363-205-401, *SLC Series 5 Carrier System, RT Acceptance and Turnup (TOP)*
 - AT&T 363-205-402, *SLC Series 5 Carrier System, Channel Unit Installation (TOP)*
 - AT&T 363-205-406, *SLC Series 5 Carrier System, End-to-End System Tests (TOP)*
 - AT&T 363-205-500, *SLC Series 5 Carrier System, Maintenance and Trouble Clearing (TOP)*
 - AT&T 363-205-500G, *SLC Series 5 Carrier System, Feature Packages G and I, Maintenance (TOP)*
 - AT&T 363-205-600G, *SLC Series 5 Carrier System, Feature Packages G and I, Acceptance, Turnup, and Conversion (TOP)*
- AT&T Data Sheet 363-005-zzz, Data sheets for the *SLC Series 5 Carrier System*
 - AT&T 363-205-000, *SLC Series 5 Carrier System, Ordering Guide*
 - AT&T 363-205-002, *SLC Series 5 Carrier System, Fiber-To-The-Home Feature User's Manual*
 - AT&T 363-205-100, *SLC Series 5 Carrier System, General Description*
 - AT&T 363-205-100G, *SLC Series 5 Carrier System, Feature Packages G and I, General Description*
 - AT&T 363-205-101, *Craft Interface Unit, Description*
 - AT&T 363-205-103, *SLC Series 5 Carrier System, Centralized Operations and Provisioning, Installation, Turnup, Test, and Maintenance*

Applications and Planning Guides

These documents provide guidelines for network planners in system applications. The applications and planning guide provides a high-level description of system features, arrangements, interfaces, components/equipment, and operations,

administration, maintenance, and provisioning (OAM&P). Applications typically are presented as block diagrams showing various system arrangements, equipment interfaces, and how the system fits into the network. Some engineering information may be given, and training may be covered. Appendixes provide details on special features of the system. AT&T 363-205-010, *SLC Series 5 Carrier System Applications and Planning Guide*, contains a network overview, system applications, equipment description, channel unit information, OAM&P, references, and training.

format (used typically for trouble clearing). The data sheet is a descriptive document that may contain procedures. Some AT&T practices use the step-procedure format. AT&T 363-205-100, *SLC Series 5 Carrier System General Description*, or AT&T 363-205-100G, *SLC Series 5 Carrier System, Feature Packages G and I, General Description*, includes an overview of the system features, a functional description at the block-diagram level, a description of the physical features of the channel bank and plug-in units, maintenance information, and a summary of system specifications.

Ordering Guides

⇒ **NOTE:**
AT&T 363-205-000G, *SLC Series 5 Carrier System, Information and Pricing Guide for GTE* supersedes AT&T 363-205-000, *SLC Series 5 Carrier System, Ordering Guide*.

The ordering guide provides ordering information (equipment and apparatus codes) for the system. It includes information on how many of each unit, shelf, bank, and/or bay is required for each system arrangement. Also listed are miscellaneous units and special test equipment. AT&T 363-205-000, *SLC Series 5 Carrier System, Ordering Guide*, has tables listing the units for the system feature packages, some discontinued availability (DA) equipment, common and channel units, cabinet arrangements, miscellaneous equipment, and channel and digital line test equipment.

Descriptive Documents

Descriptive documents usually include physical and functional characteristics and features in a technical style. Depending on the unit, descriptive information may be combined with engineering, installation, and/or operation information. Descriptive documents may contain procedural information in the step-procedure format (used mainly for short, simple procedures) or flowchart

Engineering Documents

Engineering documents specify requirements for engineering a system. The requirements may include equipment constraints, customer considerations, circuit or facility design information, physical design constraints, etc. In digital and loop transmission systems, engineering is covered in two separate documents: one for facility design or system engineering, and one for circuit design (prescription setting).

The *SLC Series 5 Carrier System* has two engineering documents. AT&T 915-710-115G, *SLC Series 5 Carrier System, Application Engineering*, and AT&T 915-710-115, *SLC Series 5 Carrier System, Feature Packages G and I, Application Engineering*, cover central office considerations, remote terminal arrangements, system alarm requirements, digital facility engineering (including fault locating and order-wire requirements), test facility engineering, distribution (loop) considerations, circuit assignment for non-provisionable channel units, and miscellaneous considerations (forms/records and acceptance testing). AT&T 915-710-116, *SLC Series 5 Carrier System, Channel Unit Application and Prescription Setting* (structured like the D4 channel unit engineering document), covers special service and data applications, prescription setting for the provisionable channel units, and a summary of carrier serving area (CSA) guidelines.

AT&T Data Sheets

The AT&T Data Sheets provide detailed information for plug-in units (usually just circuit packs, not shelves). The data sheet gives a detailed description of the unit's operation, controls, and indicators, and provides figures showing a functional block diagram of the unit and a line drawing of the faceplate and circuit board. Some data sheets may contain details on unit maintenance including test procedures. For example, AT&T 363-005-132, *SLC Series 5 Carrier System, AUA75 2-Wire PLAR Channel Unit*, has procedures to set the option switches on the channel unit and test channel unit transmission and signaling end-to-end.

The *SLC Series 5 Carrier System* data sheets (AT&T 363-005-101 through 363-005-310) cover the common units, channel units, Fiber to the Home units, and miscellaneous units (adapters, test extenders, etc.). Each data sheet is assigned a unique 9-digit number within the range of numbers for the system. (*SLC Series 5 Carrier System* data sheets are within the range AT&T 363-005-101 to 363-005-399.)

Task-Oriented Practices (TOPs)

Procedures for acceptance or installation testing and maintenance are given in a highly structured format in task-oriented practices. These documents exist in two different formats. The older TOPs were done in a flowchart style turned sideways on each page (flowchart TOP). A newer, text style format (vertical page TOP) was developed later that uses numbered steps in a list format with if-then questions replacing the decision blocks used in the flowchart style. The TOP uses layered procedures with the different layers coded for identification. The TOP system is explained either in a 10-page training package (always coded TNG-893) in the back of the TOP or in a tab *How to Use TOP*.

The following list includes TOPs for the *SLC Series 5 Carrier System*.

- AT&T 363-205-400, *Central Office Terminal Acceptance and Turnup TOP* — Procedures for accepting the *SLC Series 5 Carrier System* COT, installing the common units for each feature package, converting feature packages, and turning up the system.
- AT&T 363-205-401, *Remote Terminal Acceptance and Turnup TOP* — Procedures for accepting the *SLC Series 5 Carrier System* RT, installing the common units for each feature package, converting feature packages, and turning up the system.
- AT&T 363-205-402, *Channel Unit Installation TOP* — Procedures for installing channel units for each system configuration and testing channel unit transmission and signaling from COT to RT for nonprovisionable channel units and end-to-end for provisionable channel units.
- AT&T 363-205-406, *End-To-End System Tests TOP* — Procedures for changing the system status from pre-service to in-service and verifying that the system works end-to-end.
- AT&T 363-205-500, *Maintenance and Trouble-Clearing TOP* — Procedures for clearing alarms on the system, trouble isolation on the digital facility, and clearing channel failure.
- AT&T 363-205-500G, *SLC Series 5 Carrier System, Feature Packages G and I, Maintenance (TOP)* — Procedures for clearing alarms on the system, trouble isolation on the digital facility, and clearing channel failure.
- AT&T 363-205-600G, *SLC Series 5 Carrier System, Feature Packages G and I, Acceptance, Turnup, and Conversion (TOP)* — Procedures for accepting the *SLC Series*

5 Carrier System, installing the common units for each feature package, converting feature packages, and turning up the system.

User Guides/Manuals

The definition given here for user guides/manuals differs from the definitions given in the new AT&T documentation standard. As the standards are implemented, this category should become more consistent. In the definition given here, the words *guide* and *manual* have the same meaning.

For a stand-alone product (for example, the DDM-2000 network multiplexer) or independent system feature (for example, the SLC Series 5 Carrier System Fiber to the Home feature), the user's guide/manual provides a single document containing all the information needed to use the product or feature. It explains when, why, and how to use the feature or product, briefly describes the product's hardware, software, and features, and may provide step-by-step instructions for installation, operation, and maintenance. A user guide/manual may be part of a documentation package that includes one or two other documents such as an applications and planning guide.

AT&T IPH 915, *SLC Series 5 Subscriber Loop Carrier System, Installation Procedures*, contains installation and test operations for COT, RT, and on-line test equipment.

AT&T 363-205-002, *SLC Series 5 Carrier System, Fiber to the Home Feature User's Manual*, contains applications, a physical and functional description, system engineering, operations and administration, construction and installation, maintenance, and appendixes (ordering information, data sheets, etc.).

Customer Information Releases (CIRs)

The purpose of CIRs is to provide customers with timely information. CIRs were developed after divestiture to replace the AT&T general department letters (system letters, recommendation letters, and engineering letters). CIRs may be updated at the discretion of project management, or the information from the CIR may be incorporated into the system documentation upon reissue.

Several different styles of CIRs are used: marketing information letter (ML), product sheet (PS), network planning letter (NP), information release (IR), technical description (TD), technical specification (TS), and maintenance/operations release (MG/MA/MR). Each CIR has a 9-digit number; a different suffix identifies each style. The maintenance/operations release (MOR) uses a color-coded heading to identify the importance of the information. Some styles of CIRs provide additional information in an attachment. The format for each CIR style is given in Table 9-1, which states how many sheets (one sheet is two pages) are used for the CIR and attachment (if applicable).

Table 9-1. CIR General Specifications (Number of Sheets)

CIR Type	Number of Sheets (Note)	
	CIR	Attachment
ML	5	Not applicable
PS	1	Not applicable
NP	2	Multipage
IR	1	Multipage
TD	1	Multipage
TS	1	Multipage
MOR:		
MG (routine)	1	Multipage
MA (caution)	1	Multipage
MR (emergency)	Multipage	Not applicable

Note: 1 sheet = 2 pages (front and back)

Marketing information letters provide information on how to best present Business Services products. These letters provide the following information and are aimed at telephone company marketing personnel.

- Product news about service offerings
- Portray end-user advantages.

Product sheets are quick overviews that include benefits, features, applications, and a brief technical description. The PS is designed to stimulate customer interest in the product so that the customer will request more information.

Network planning letters provide news on product developments. The NP suggests how a product will fit into the network by describing general characteristics, primary features, potential benefits, and applications. As development continues, additional product information is supplied for planning and scheduling.

Information releases are general announcements on a wide range of topics, from training programs to new generic releases or special service arrangements. The IR may be used to announce availability of more information on a product.

Technical descriptions provide technical detail to help the customer select a product. The TD provides a functional description, site preparation data, operations and maintenance considerations, ordering, and training information. The TD should be updated when standard ordering information is available.

Technical specifications provide physical, functional, environmental, interface characteristics, and performance objectives of the product. The TS may provide the following information:

- Product description
- Interface information
- The basis for product inspection
- The technical basis for the warranty.

The maintenance/operations release emphasizes information about upgrades or changes in operations and maintenance procedures associated with current products. The maintenance/operations release has three different levels of importance — routine, coded MG (green); caution, coded MA (amber); and emergency, coded MR (red).

Outside Plant Documentation

Outside plant documentation on transmission apparatus, cables, and enclosures spans several divisions. Division 622 covers conduit, manholes, and cable vaults, including the concrete hut and controlled environment vaults used for SLC Series 5 Carrier Systems. Division 626 (cables, wire, and apparatus - general) documents the different kinds of cables and provides ordering information and lettering guidelines for the 80-type outside plant cabinets. Division 631 (cable terminals) documents exchange cable identification, different types of connector blocks, and splicing information for pedestals and cabinets. Division 640 (outside plant - carrier apparatus) covers carrier apparatus cases (which house repeaters for digital lines), SLC® Carrier System splicing in various cabinets and enclosures, and lightguide cable systems. Refer to AT&T 000-000-002, *AT&T 9-Digit Numbered Documents Master Index*, for other divisions of outside plant documentation.

The following list includes outside plant documentation (a partial list) on the SLC Series 5 Carrier System.

- AT&T 622-506-052, *KS-23038 Controlled Environment Vault Description*
- AT&T 622-506-235, *Concrete Hut ED-7C285-30, Description and Installation*
- AT&T 622-506-236, *KS-23038 Controlled Environment Vault Installation*
- AT&T 622-506-237, *KS-23038 Controlled Environment Vault Operation and Maintenance*
- AT&T 626-500-105, *80-Type Cabinet, Coding Scheme, Ordering Information, and Lettering Guidelines*
- AT&T 631-600-240, *80 B, C, and D Size Cabinets, Installation*
- AT&T 631-600-241, *80 B, C, and D Size Cabinet, Splicing Information*
- AT&T 640-250-223, *80-Type Cabinet Remote Terminal, Installation and Splicing (Metallic Systems)*
- AT&T 640-250-224, *Remote Terminal Splicing, Precabled Structures Using Bulk Protection*
- AT&T 640-250-237, *51A RT Cabinet (ED-7C601-30) Placement, SLC Series 5 Carrier System*
- AT&T 640-250-247, *SLC Series 5 Carrier System Dual Channel Banks (Metallic), Field Installation of SLC Series 5 Carrier System Remote Terminal Into 80-Type Cabinets Precabled for the SLC Series 5 Carrier System*
- AT&T 640-250-248, *Precabled Structure Using Bulk Protection Metallic Remote Terminal Splicing SLC Series 5 Carrier System*
- AT&T 640-250-250, *Precabled Structures Using Bulk Power and Protection, Splicing, and Cabling Arrangements (Metallic and Fiber SLC Carrier Systems)*
- AT&T 640-250-251, *16-Foot and 24-Foot Platforms Description, SLC Series 5 Carrier System*
- AT&T 640-250-252, *80D Cabinet (Fiber) Group 80 Description, Installation, and Splicing, SLC Series 5 Carrier System*
- AT&T 640-250-254, *80E Cabinet (Fiber) - Group 88 - Description, Installation and Splicing SLC Series 5 Carrier System and SXSS Repeater Shelf*
- AT&T 640-250-255, *80D Cabinet (Fiber) Group 90, 91, 92 Description, Installation, and Splicing, SLC Series 5 Carrier System*
- AT&T 640-250-256, *80E Cabinet (Fiber) Group 90 and 91, Description, Installation, and Splicing, SLC Series 5 Carrier System and SXSS Repeater Shelf*

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See notice on first page

- AT&T 640-250-257, 80E - BP (Bulk Power) Cabinet (Fiber: Group 90) Splicing and Equipment Installation
- AT&T 640-250-263, 80E - BP (Bulk Power) Cabinet (Fiber: Group 89) Splicing and Equipment Installation
- AT&T 640-250-264, 80D Cabinet (Fiber)—Groups 29, 47, and 48 Description, Installation and Splicing SLC Series 5 Carrier System and DS1 Extension Shelf
- AT&T 640-250-270, 90A Cabinet Business Remote Terminal (BRT) Description, Installation, and Splicing SLC Series 5 Carrier System
- AT&T 640-250-277, 80A (Bulk Power) Cabinet (Groups 90 and 91) Splicing and Equipment Installation
- AT&T 640-250-279, 80D-BP (Bulk Power) Cabinet (Fiber:Group 90) Splicing and Equipment Installation AT&T 640-250-325,
- 80 D Cabinet Description, Installation, and Splicing SLC Series 5 Carrier System
- AT&T 640-250-327, 80E Cabinet Remote Terminal, Description, Installation, and Splicing
- AT&T 640-252-310, Concrete Hut (ED-7C285-30) Splicing (Metallic and Fiber Systems), Combined SLC 96 and SLC Series 5 Carrier Systems
- AT&T 640-252-311, C Equipment Platform Splicing (Metallic and Fiber Systems), Combined SLC 96 and SLC Series 5 Carrier Systems
- AT&T 640-252-312, 80-Type Cabinets, Description, Installation, and Splicing, Combined SLC 96 and SLC Series 5 Carrier Systems
- AT&T 644-203-155, 80-Type Cabinet, Repair and Replacement Parts

Drawings

Equipment drawings (J drawings), apparatus drawings (A drawings), schematic drawings (SDs), and circuit descriptions (CDs) provide detailed wiring, cabling, schematic, and physical information. Circuit descriptions (when available) use the same number as the schematic drawing. There may be limited availability on some drawings. Refer to Division 801 for J drawings and other equipment specifications.

The following drawings contain detailed information on SLC Series 5 Carrier System equipment and related systems.

- ED-7C628-10, SLC® Series 5 Carrier System Ordering Guide
- ED-30335-70, Writing Shelf
- SD-/CD-7C115-01, Central Office Terminal Channel Bank Schematic
- SD-/CD-7C116-01, Central Office Terminal Application and Bay Wiring Schematic
- SD-/CD-7C117-01, Remote Terminal Dual Channel Bank Schematic
- SD-/CD-7C118-01, Remote Terminal Application and Bay Wiring Schematic
- SD-/CD-7C119-01, Remote Terminal Power Shelf Schematic
- FPD 801-450-106-1, Floor Plan Data Sheet, SLC Series 5 Carrier System Central Office Terminal, 11-foot 6-inch Frame (Six Dual Channel Banks)
- FPD 801-450-106-2, Floor Plan Data Sheet, SLC Series 5 Carrier System Central Office Terminal, 11-foot 6-inch Frame (Five Dual Channel Banks)
- FPD 801-450-106-3, Floor Plan Data Sheet, SLC Series 5 Carrier System Central Office Terminal, 9-foot 0-inch Frame (Four Dual Channel Banks)

- FPD 801-450-106-4, *Floor Plan Data Sheet, SLC Series 5 Carrier System Central Office Terminal, 7-foot 0-inch Frame (Three Dual Channel Banks)*
- FPD 801-450-106-5, *Floor Plan Data Sheet, SLC Series 5 Carrier System Remote Terminal, 7-foot 0-inch Frame (Two Dual Channel Banks)*
- FPD 801-450-106-6, *Floor Plan Data Sheet, SLC Series 5 Carrier System Remote Terminal, 7-foot 0-inch Frame [Three Dual Channel Banks (DC Bulk Power)]*
- SD-/CD-7C127-01, *Extended Test Controller Control Shelf*
- SD-/CD-97760-01, *Pair Gain Test Controller Control Shelf*
- SD-/CD-99503-01, *Patch and Cross-Connect Panel*
- SD-/CD-1P112, *Data Link Interface*
- SD-/CD-1P113-01, *Metallic Interface Unit*

Related Documentation

The following documents contain information on systems and equipment related to the SLC Series 5 Carrier System. The numerical index for each division (for example, AT&T 363-000-000, *Numerical Index — Division 363, Loop Transmission Systems*) lists the current issue of the AT&T documents in that division. Refer to the numerical index for availability of AT&T documents in the following list:

- AT&T 100-101-401, *197A Battery Load Test Set, Description and Operation*
- AT&T 157-627-101, *Storage Battery, KS-21906 Sealed, Rechargeable, Lead-Acid, Description, Installation, and Maintenance*
- AT&T 235-019-102, *General Growth Procedures*
- AT&T 235-190-029, *Pair Gain Interface to Nonintegrated SLC Carrier System*
- AT&T 235-190-036, *Integrated SLC Carrier System*
- AT&T 332-610-100, *Customer Premises Facility Terminal for Metallic Facility Terminal Plug-In Equipment, General Description*
- AT&T 363-005-zzz, *SLC Series 5 Carrier System Data Sheets*
- AT&T 363-200-001, *T-Type Digital Line Preservice Testing*
- AT&T 363-201-216, *Active Fault-Locating System, ED-2C374 Active Fault-Locating Panel Turnup, Active Filter (1114/1115-Type) Preinstallation Tests, and Initial Fault-Locating Line and System Tests*
- AT&T 363-202-300, *Pair Gain Test Controller and Test Bus Control Unit, Description and Installation*
- AT&T 363-202-525, *SLC 96 Carrier System, Remote Power Feed Terminal (RPFT) Description, Installation, and Maintenance*

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- AT&T 363-202-602, *Bulk Protected Remote Terminals Installation of Shelves, SLC Series 5 Carrier and SLC 96 Carrier Systems*
- AT&T 363-203-100, *Subscriber Loop Interface Module (SLIM), General Description*
- AT&T 363-203-101, *Subscriber Loop Interface Module (SLIM), Installation and Maintenance*
- AT&T 363-206-100, *DDM-1000 Multiplexer User's Manual*
- AT&T 363-206-200, *DDM-2000 Network Multiplexer, Applications and Planning Guide*
- AT&T 626-100-006, *CD and DD Series of MUP (Multiunit Pulp) Cable, Description, Use, and Maintenance*
- AT&T 626-101-005, *Air Core PIC and DEPIC Cables, Nonscreened and Screened, Description, Use, and Reel Lengths*
- AT&T 626-101-010, *Waterproof Nonscreened and Screened Plastic, Insulated Cables, Description, Use, and Reel Lengths*
- AT&T 626-759-400, *Superseded Exchange Cables*
- AT&T 626-800-095, *Screened Air Core and Waterproof Plastic - Insulation Conductor Cable, Description, Use, and Reel Lengths NS/LA (Nonstandard/Limited Availability)*
- AT&T 631-400-102, *Cable and Terminal Grounding in Subscriber Building, General Description*
- AT&T 640-010-005, *Splicing T Carrier Cables, General Description*
- AT&T 640-250-206, *478-Type Apparatus Case, Description, Installation, and Maintenance*
- AT&T 640-250-221, *Remote Power Feed Terminal (RPFT), Installation and Wiring of Shelves*
- AT&T 640-525-108, *475F2, 475G2, and 475G2F Apparatus Cases, Description and Installation*
- AT&T 640-525-220, *Pair Loss Measurements Using 113A and/or 113B Test Sets, Digital Transmission Systems*
- AT&T 640-525-304, *T1 and T1/OS Carrier 46806 Apparatus Case, Description and Maintenance*
- AT&T 640-525-307, *818- /819-Type Repeater Cases, Description, Installation, Splicing, and Maintenance*
- AT&T 640-525-308, *809-Type Repeater Cases, Description, Installation, Splicing, and Maintenance*
- AT&T 640-525-309, *841B or 841C Type Repeater Cases, Description, Installation, Splicing, and Equipping*
- AT&T 640-525-315, *T1, T1C and T1/OS Apparatus Cases and Associated Plug-In Equipment*
- AT&T 640-527-220, *J98725AA Test Set Pair Loss Measurements*
- AT&T 640-527-225, *J98725AB Test Set, Bipolar Violation Detector for T1, T1C, or T1 Outstate*
- AT&T 662-400-500, *Testing Customer Lines, Operation and Test Procedures*
- AT&T 662-505-507, *Test Desk Procedures*
- AT&T 801-438-150, *J98710 Specifications, T1 Carrier Repeater Line Equipment*
- AT&T 801-440-001, *J1C142 Specifications, Pair Gain Test Controller*
- AT&T 801-523-150, *T1 Carrier, System Requirements and Repeater Bay Equipment*

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- AT&T 801-523-153, *T1C Carrier, System Requirements and Repeater Bay Equipment*
 - AT&T 855-350-104, *T1, T1 Outstate, and T1C and T1D Fault Locate System Engineering Design, Digital Transmission System Carrier Engineering Application*
 - AT&T 855-350-106, *DSX-1 and DSX-1C Retrofit*
 - AT&T 855-350-107, *T1, T1 Outstate, T1C, T1D, and T2 Order-Wire System Engineering Design*
 - AT&T 855-351-101, *Transmission and Outside Plant Design Procedures, T1 Digital Line Carrier Engineering System Application*
 - AT&T 902-200-110, *Digital Line Design and Pair Selection Rules, Subscriber Carrier Systems*
 - AT&T 902-200-115, *Digital Line Engineering Program (DILEP)*
 - AT&T 915-710-110, *SLC 96 Carrier System Application Engineering, Facility Design Systems*
 - AT&T 919-240-302, *16-Foot Controlled Environment Vault Engineering Considerations*

Bell Communications Research Documents

- BR-680-203-023, *Assignment Procedures for the SLC Series 5 Carrier System*
- BR-902-200-120, *Outside Plant Engineering, Digital Line Engineering Program II (DILEP II)*

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**Customer Service —
1-800-334-8155**

1-800-334-8155 is the toll-free customer service number. The following numbers are also for customer service.

- Manager, sales, operations, customer service
919-279-6358
- Customer service manager (noncable)
919-279-6365
- Customer service supervisor
919-279-6355
- Price and availability (furnish only)
919-279-6299
919-279-6305
919-279-6306
919-279-6309
800-334-8155
- Material expediter (furnish only CA, N.W., and HI)
919-279-6343
- Material expediter (furnish only S.W., N., S., and FL)
919-279-6340
- Scheduling specialist (EF&I team leader)
919-279-6414
- Material expediter (EF&I — CA, N.W. and HI telephone)
919-279-6394
- Material expediter (EF&I — S.W., N., S., and FL)
919-279-6391
- Customer Information Center - Documentation
800-432-6600
- AGCS Technical Assistance Center - FPI Support
602-582-7305

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The prices in Table 11-1 are for detailed engineering. Installation Prices are listed by model number and option number to correspond to the models and options configured in the specific hardware chapters.

The following list contains general pricing notes.

- For non-model configurations, firm prices will be quoted when requested.
- Site visits are not included in the detailed engineering prices.
- Installation prices are for all 50 states including Alaska and Hawaii. *However, in Alaska travel and expenses to/from USA are not included. In Hawaii, travel and expenses between the islands are not included.*

Engineering Prices

Detailed engineering charges are listed in Table 11-1 (see Chapter 7, *Engineering and Installation Services* for additional details).

Installation Prices

Tables 11-2 through 11-31 list the prices for installation of SLC[®] Series 5 Carrier System equipment.

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Detailed Engineering

Table 11-1 lists the prices for detailed engineering.

Table 11-1. Pricing — Detailed Engineering

<u>Model Description</u>	<u>Quantity</u>	<u>List Price (\$)</u>	<u>Quote Number</u>
Any COT Model in 8', 9', or 11' 8'' frame	1 to 4	2,000.00	GC-91-030785-A1
Any RT Model in 7' frame or 90A cabinet	1 to 4	2,000.00	GC-91-030786-A1
Extended test controller (XTC) model	1	800.00	GC-91-030787-A1
Any DDM-1000/DDM-2000 multiplexer in a frame at CO or RT	1	1,500.00	GC-91-030788-A1
OPTION: add 1 DCB to any COT Model	1-4	800	GC-91-090020-A1

Full Engineering

Full Engineering including travel and living expenses for site visits (if required) will be quoted to GTE when requested.

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Installation

AT&T Network Systems - Customer Operations is the only Factory Authorized installation vendor for SLC Series 5 Carrier System equipment. As such, this group has full and immediate access to training, technical resources, and material resources not available to other installation vendors. All installations receive regional technical assistance center (RTAC) technical support, with escalation to Bell Labs. AT&T Network Systems is committed to meeting GTE's expectations of timeliness, cost, and quality.

The following prices are based on the models provided in other chapters of this document. These prices are budgetary quotes only, and actual costs may vary depending on site location. Prices are valid through December 31, 1994. The following list contains general *notes* pertinent to pricing for installation of equipment.

- Installation pricing is intended for the internal use of GTE only. AT&T Network Systems does not authorize distribution of this information to any external party, or those GTE employees without a demonstrated need for the information.
- Pricing shown is based on a standard work week — defined as Monday to Friday between the hours of 7 a.m. and 4 p.m.
- Pricing is based on local assignment mileage within 100 miles of installer's base location. If sites are out of installation service areas, travel and transfer charges will apply.
- All permits and inspections will be the responsibility of GTE, both acquisition and fees.
- Escorts or observers, if required, will be provided by GTE.
- Supply of AC power is not included in the prices quoted. GTE is responsible for obtaining commercial power for the RT sites.

- Any additional equipment or work requested by GTE will be quoted and approved prior to the work starting.
- No warehousing charges have been included. If GTE requests AT&T Network Systems to provide inventory control or follow-up and tracking of materials, a quote will be provided.
- Specific work functions and exclusions are detailed by model and listed in Tables 11-2 through 11-31.
- Pricing of ironwork or support, either materials or labor, is not included.
- Prices do not include responsibility for materials and/or delivery of materials.

Installation of COT Models

Tables 11-2 through 11-7 list the prices for installation of COT models. The following installation tasks are included in the installation of COT models.

- Install and brace bay
- Connect frame AC power supply
- Connect bay DC power leads to aisle feeders
- Run and connect T1 cables (TRANS/REC)
- Run and connect alarm leads and derived pairs
- Install and stencil mainframe terminal strips
- Test COT bay alarms
- Test for continuity on all terminated leads.

The following optional installation services are available for COT models.

⇒ NOTE:

Assumptions are that DSX cross-connects are installed; fiber cross-connects are installed; multiplexer(s) is tested and turned up; the T1 span (copper/fiber) is tested and turned up; and both COT and RT are in place and ready to perform end-to-end.

- Installation of COT circuit packs
- Perform complete system end-to-end test
- Individual channel-to-channel tests

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Table 11-2. Pricing — Installation of Model COT-8G-3DCB

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Installation		
Bay E/W 3 dual channel banks, 100' of cable, includes test and turn-up	8,787.00	9,138.00
Bay E/W 3 dual channel banks, 225' of cable, includes test and turn-up	9,980.00	10,379.00
Options		
Fault locate and order-wire panel, includes end-to-end test	1,269.00	1,320.00
Fault locate and order-wire panel, excludes testing	743.00	772.00
Common packs, 96 lines, metallic	74.00	77.00
Common packs, 192 lines, metallic	131.00	136.00
Common packs, 96 lines, fiber	71.00	74.00
Common packs, 192 lines, fiber	95.00	98.00

Note : Test and turn up means local loopback test. Overall end-to-end testing is available, but is not priced in these models.

Table 11-3. Pricing — Installation of Model COT-9G-4DCB

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Installation		
Bay E/W 4 dual channel banks, 100' of cable, includes test and turn up	11,270.00	11,729.00
Bay E/W 4 dual channel banks, 225' of cable, includes test and turn up	15,702.00	16,330.00
Options		
Fault locate and order-wire panel, includes end-to-end test	1,269.00	1,320.00
Fault locate and order-wire panel, excludes testing	743.00	772.00
Common packs, 96 lines, metallic	74.00	77.00
Common packs, 192 lines, metallic	131.00	136.00
Common packs, 96 lines, fiber	71.00	74.00
Common packs, 192 lines, fiber	95.00	98.00

Note: Test and turn up means local loopback test. Overall end-to-end testing is available, but is not priced in these models.

Table 11-4. Pricing — Installation of Model COT-11G-5DCB

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Installation		
Bay E/W 5 dual channel banks, 100' of cable, includes test and turn-up	13,655.00	14,201.00
Bay E/W 5 dual channel banks, 225' of cable, includes test and turn-up	19,067.00	19,830.00
Options		
Fault locate and order-wire panel, includes end-to-end test	1,269.00	1,320.00
Fault locate and order-wire panel, excludes testing	743.00	772.00
Common packs, 96 lines, metallic	74.00	77.00
Common packs, 192 lines, metallic	131.00	136.00
Common packs, 96 lines, fiber	71.00	74.00
Common packs, 192 lines, fiber	95.00	98.00

Note: Test and turn up means local loopback test. Overall end-to-end testing is available, but is not priced in these models.

Table 11-5. Pricing — Installation of Model COT-8G-1DCB

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Installation		
Bay E/W 1 dual channel bank, 100' of cable, includes test and turn up	3,522.00	3,663.00
Bay E/W 1 dual channel bank, 225' of cable, includes test and turn up	4,909.00	5,105.00
Options		
Fault locate and order-wire panel, includes end-to-end test	1,269.00	1,320.00
Fault locate and order-wire panel, excludes testing	743.00	772.00
Kit with (1) channel bank and cables for field installation with test and turnup	2,903.00	3,019.00
Kit with (1) channel bank and cables for field installation with no testing	2,004.00	2,098.00
Common packs, 96 lines, metallic	74.00	77.00
Common packs, 192 lines, metallic	131.00	136.00
Common packs, 96 lines, fiber	71.00	74.00
Common packs, 192 lines, fiber	95.00	98.00

Note: Test and turn up means local loopback test. Overall end-to-end testing is available, but is not priced in these models.

Table 11-6. Pricing — Installation of Model COT-9G-1DCB

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Installation		
Bay E/W 1 dual channel bank, 100' of cable, includes test and turn up	3,522.00	3,663.00
Bay E/W 1 dual channel bank, 225' of cable, includes test and turn up	4,909.00	5,105.00
Options		
Fault locate and order-wire panel, includes end-to-end test	1,269.00	1,320.00
Fault locate and order-wire panel, excludes test	743.00	772.00
Kit with (1) channel bank and cables for field installation with test and turnup	2,903.00	3,019.00
Kit with (1) channel bank and cables for field installation with no testing	2,004.00	2,084.00
Common packs, 96 lines, metallic	74.00	77.00
Common packs, 192 lines, metallic	131.00	136.00
Common packs, 96 lines, fiber	71.00	74.00
Common packs, 192 lines, fiber	95.00	98.00

Note : Test and turn up means local loopback test. Overall end-to-end testing is available, but is not priced in these models.

Table 11-7. Pricing — Installation of Model COT-11G-1DCB

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Installation		
Bay E/W 1 dual channel bank, 100' of cable, includes test and turn up	3,522.00	3,663.00
Bay E/W 1 dual channel bank, 225' of cable, includes test and turn up	4,909.00	5,105.00
Options		
Fault locate and order-wire panel, includes end-to-end test	1,269.00	1,320.00
Fault locate and order-wire panel, excludes testing	743.00	772.00
Kit with (1) channel bank and cables for field installation with test and turnup	2,903.00	3,019.00
Kit with (1) channel bank and cables for field installation with no testing	2,004.00	2,084.00
Common packs, 96 lines, metallic	74.00	77.00
Common packs, 192 lines, metallic	131.00	136.00
Common packs, 96 lines, fiber	71.00	74.00
Common packs, 192 lines, fiber	95.00	98.00

Note: Test and turn up means local loopback test. Overall end-to-end testing is available, but is not priced in these models.

Installation of RT Models

Tables 11-8 through 11-27 list the prices for installation of RT models. System turn up and channel-to-channel tests are priced at the RT only. COT system turn up and channel-to-channel tests are priced as options. The following installation tasks are included in the installation of RT cabinet models placed in the outside plant environment working on T1 lines.

- Certify AC/DC power supply
- Inspect assembled equipment
- Install battery packs
- Test alarms
- Perform end-to-end test and turn up
- Test individual channel-to-channel.

The following tasks are provided by the customer:

- Provide required circuit packs
- Provide concrete pad placement
- Transport and place the prewired cabinet
- Supply commercial power to the site and cabinet
- Splice derived pairs and T1 line cables
- Test and turn up T1 span.

The following installation tasks are included in the installation of RT cabinet models placed in the outside plant environment working on a fiber multiplexer.

- Certify AC/DC power supply
- Inspect assembled equipment
- Install battery packs
- Install DSX cross-connects
- Install fiber cross-connects
- Test alarms

- Test DDM-1000 multiplexer
- Test repeaters
- Perform end-to-end test and turn up
- Test individual channel-to-channel.

The following tasks are provided by the customer:

- Provide required circuit packs
- Provide concrete pad placement
- Transport and place the prewired cabinet
- Supply commercial power to the site and cabinet
- Splice derived pairs and fiber cables
- Test and turn up fiber span.

The following installation tasks are included in the installation of RT models placed inside buildings.

- Install and brace bay
- Connect frame AC power (when required) to building outlet or to customer provided (dedicated) AC service panel — AC power source within 10 feet
- Connect frame 48 V power (when required) to customer provided feeder within 10 feet
- Run and connect T1 cables (TRANS/REC)
- Run and connect alarm leads and derived pairs
- Install and stencil mainframe/backboard terminal strips
- Install and test battery packs (when required)
- Test bay alarms
- Test power shelf and ringing generators
- Test continuity of all terminated leads.

The following optional installation services are available for RT models inside buildings.

⇒ NOTE:

Assumptions are that DSX cross-connects are installed; fiber cross-connects are installed; multiplexer(s) is tested and turned up; the T1 span (copper/fiber) is tested and turned up; and both COT and RT are in place and ready to perform end-to-end.

- Installation of COT circuit packs
- Perform complete system end-to-end test
- Individual channel-to-channel tests.

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Table 11-8. Pricing — Installation of Model RT-51A-1DCBM

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>1,932.00</u>	<u>2,010.00</u>
Options		
Common packs, 96 lines, metallic	75.00	78.00
Common packs, 192 lines, metallic	136.00	142.00

Table 11-9. Pricing — Installation of Model RT-51A-1DCBF

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>2,132.00</u>	<u>2,210.00</u>
Options		
Common packs, 96 lines, fiber	68.00	70.00
Common packs, 192 lines, fiber	127.00	132.00

Table 11-10. Pricing — Installation of Model 80A-2DCBM

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>3,593.00</u>	<u>3,737.00</u>
Options		
Common packs, 96 lines, metallic, per bank	75.00	78.00
Common packs, 192 lines, metallic, per bank	136.00	142.00

Table 11-11. Pricing — Installation of Model 80A-2DCBM-APS

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>3,779.00</u>	<u>3,931.00</u>
Options		
Common packs, 96 lines, metallic, per bank	75.00	78.00
Common packs, 192 lines, metallic, per bank	136.00	142.00

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Table 11-12. Pricing — Installation of Model 80A-1DCB-2000

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>2,382.00</u>	<u>2,477.00</u>
Options		
Common packs for fiber multiplexer	250.00	265.00
Common packs, 96 lines, fiber, per bank	68.00	70.00
Common packs, 192 lines, fiber, per bank	127.00	132.00
Addition of (28) VT1.5 signals	75.00	78.00

Table 11-13. Pricing — Installation of Model 80A-2DCB-2000

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>3,750.00</u>	<u>3,900.00</u>
Options		
Common packs for fiber multiplexer	250.00	265.00
Common packs, 96 lines, fiber, per bank	68.00	70.00
Common packs, 192 lines, fiber, per bank	127.00	132.00
Addition of (28) VT1.5 signals	75.00	78.00

Table 11-14. Pricing — Installation of Model RT-80D-3DCBM

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>5,414.00</u>	<u>5,631.00</u>
Options		
Common packs, 96 lines, metallic, per bank	75.00	78.00
Common packs, 192 lines, metallic, per bank	136.00	142.00

Table 11-15. Pricing — Installation of Model RT-80D-4DCBM

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>7,152.00</u>	<u>7,438.00</u>
Options		
Common packs, 96 lines, metallic, per bank	75.00	78.00
Common packs, 192 lines, metallic, per bank	136.00	142.00

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Table 11-16. Pricing — Installation of Model RT-80D-3DCBM-APS

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>5,328.00</u>	<u>5,541.00</u>
Options		
Common packs, 96 lines, metallic, per bank	75.00	78.00
Common packs, 192 lines, metallic, per bank	136.00	142.00

Table 11-17. Pricing — Installation of Model RT-80D-3DCBM-BP-APS

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>7,065.00</u>	<u>7,347.00</u>
Options		
Common packs, 96 lines, metallic, per bank	75.00	78.00
Common packs, 192 lines, metallic, per bank	136.00	142.00

Table 11-18. Pricing — Installation of Model 80D-3DCBF-2000

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>5,730.00</u>	<u>5,960.00</u>
Options		
Common packs for fiber multiplexer	250.00	265.00
Common packs, 96 lines, fiber, per bank	68.00	70.00
Common packs, 192 lines, fiber, per bank	127.00	132.00
Addition of (28) VT1.5 signals	75.00	78.00

Table 11-19. Pricing — Installation of Model 80D-4DCBM-BP

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>7,057.00</u>	<u>7,340.00</u>
Options		
Common packs, 96 lines, metallic, per bank	75.00	78.00
Common packs, 192 lines, metallic, per bank	136.00	142.00

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Table 11-20. Pricing — Installation of Model 80D-3DCBF-BP-2000

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>5,643.00</u>	<u>5,869.00</u>
Options		
Common packs for fiber multiplexer	250.00	265.00
Common packs, 96 lines, fiber, per bank	68.00	70.00
Common packs, 192 lines, fiber, per bank	127.00	132.00
Addition of (28) VT1.5 signals	150.00	155.00

Table 11-21. Pricing — Installation of Model 80E-5DCBF-BP-2000

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>9,159.00</u>	<u>9,526.00</u>
Options		
Common packs for fiber multiplexer	250.00	265.00
Common packs, 96 lines, fiber, per bank	68.00	70.00
Common packs, 192 lines, fiber, per bank	127.00	132.00
Addition of (28) VT1.5 signals	150.00	155.00

Table 11-22. Pricing — Installation of Model 80E-7DCBF-BP-2000

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>12,008.00</u>	<u>12,488.00</u>
Options		
Common packs for fiber multiplexer	250.00	265.00
Common packs, 96 lines, fiber, per bank	68.00	70.00
Common packs, 192 lines, fiber, per bank	127.00	132.00
Addition of (28) VT1.5 signals	150.00	155.00

Table 11-23. Pricing — Installation of Model RT-90A-1DCBF

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>6,342.00</u>	<u>6,596.00</u>
Options		
Common packs, 96 lines, fiber, per bank	68.00	70.00
Common packs, 192 lines, fiber, per bank	127.00	132.00
Common packs for fiber multiplexer	250.00	265.00

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Table 11-24. Pricing — Installation of Model RT-90A-2DCBM

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>4,232.00</u>	<u>4,401.00</u>
Options		
Common packs, 96 lines, metallic, per bank	75.00	78.00
Common packs, 192 lines, metallic, per bank	136.00	142.00

Table 11-25. Pricing — Installation of Model RT-8-2DCB115 or RT-7-2DCB115

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>4,596.00</u>	<u>4,780.00</u>
Options		
Common packs, 96 lines, metallic, per bank	75.00	78.00
Common packs, 192 lines, metallic, per bank	136.00	142.00
Common packs, 96 lines, fiber, per bank	68.00	70.00
Common packs, 192 lines, fiber, per bank	127.00	132.00

Table 11-26. Pricing — Installation of Model RT-8-3DCB48 or RT-7-3DCB48

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>6,142.00</u>	<u>6,388.00</u>
Options		
Common packs, 96 lines, metallic, per bank	75.00	78.00
Common packs, 192 lines, metallic, per bank	136.00	142.00
Common packs, 96 lines, fiber, per bank	68.00	70.00
Common packs, 192 lines, fiber, per bank	127.00	132.00

Table 11-27. Pricing — Installation of Model RT-8-3DCB48-CO

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>6,679.00</u>	<u>6,989.00</u>
Options		
Common packs, 96 lines, metallic, per bank	75.00	78.00
Common packs, 192 lines, metallic, per bank	136.00	142.00
Common packs, 96 lines, fiber, per bank	68.00	70.00
Common packs, 192 lines, fiber, per bank	127.00	132.00

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Installation of FMUX Models

Tables 11-28 through 11-31 list the prices for installation of FMUX models.

Table 11-28. Pricing — Installation of Model 80A-HICAP-2000

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>1,982.00</u>	<u>2,077.00</u>
Options		
Common packs for fiber multiplexer	250.00	265.00

Table 11-29. Pricing — Installation of Model 90A-HICAP-1DCB

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>6,342.00</u>	<u>6,596.00</u>
Options		
Common packs, 96 lines, fiber, per bank	68.00	70.00
Common packs, 192 lines, fiber, per bank	127.00	132.00
Common packs for fiber multiplexer	250.00	265.00

Table 11-30. Pricing — Installation of Model 90A-HICAP-2000

<u>Description (Note)</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Model		
<u>Installation</u>	<u>4,342.00</u>	<u>4,596.00</u>
Options		
Common packs for fiber multiplexer	250.00	265.00

Table 11-31. Pricing — Installation of Model FMUX-2000-28VT15

<u>Description</u>	<u>1993 Price (\$)</u>	<u>1994 Price (\$)</u>
Field Installation		
(1) ED-8C724-30, G1 shelf, includes 75' cable set for first MUX, and common packs for 28 VT1.5	1850.00	1995.00
<u>Local loopback test</u>	<u>665.00</u>	<u>715.00</u>
Options		
800-type DSX-1 panel, (80) DS1s	356.00	395.00
Fiber interconnection panel (terminates 24 connectors)	76.00	87.00
Additional circuit packs to add (28) VT1.5 signals	665.00	715.00

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⇒ NOTE:

Information for this chapter must be obtained directly from your AT&T Account Executive.

3DCB48-CO and RT-8-3DCB48 contain -48 V DC power and batteries.

GTE material prices for models, options and parts are available from your AT&T Account Executive upon request. They will include specification-writing engineering and staging costs.

The following list contains general pricing notes.

- For non-model configurations, firm prices will be quoted when requested.
- All COT and RT models do not include common circuit packs, therefore, the channel banks must be populated by using available options.
- Channel units for COT and RT models should be picked from the channel unit listing in Hardware chapters for service required.
- Fiber multiplexers and repeater shelves in cabinets do not contain circuit packs and should be filled by using available options.
- Ringing generators are provided on all RT models except RT-8-3DCB48-CO. Also, all RT models except ^RT-7-3DCB48 RT-8-

Glossary

A

- ACTU**
automated channel test unit
- ADU**
alarm display unit
- AIU**
alarm interface unit
- APS**
automatic protection switching
- ASU**
alarm suppressor unit
-

B

- B8ZS**
bipolar with eight zero substitution
- BC**
bank controller
- BCU**
bank control unit
- BDFB**
battery distribution fuse board
- BFU**
bank fuse unit
- BIU**
battery interface unit
- BP**
bulk power
- BRITE**
basic rate interface transmission extension
- BRT**
business remote terminal

C

- CF**
current feed
- CFU**
channel fuse unit
- CIR**
customer information release
- CIU**
craft interface unit
- CN**
change notice
- CO**
central office
- COP**
centralized operations and provisioning
- COT**
central office terminal
- CS**
current sink
- CSA**
carrier serving area
- CTU**
channel test unit
- CU**
channel unit
-

D

- DA**
discontinued availability
- DACS**
Digital Access Cross-Connect System
- DCB**
dual channel bank
- DCLU**
digital carrier line unit

DCTU
directly connected test unit

DCU
digital connectivity unit

DCU-L
digital connectivity unit-left

DCU-R
digital connectivity unit-right

DDS
digital data services

DID
direct inward dial

DLC
digital loop carrier

DRR
dual ringing repeater

DT
distant terminal

E

E&M
ear and mouth

ED
equipment drawing

EMC
electromagnetic compliance

EMU
elastic memory unit

ESD
electrostatic discharge

ESF
extended super frame

F

FCU
fan control unit

FITL
fiber-in-the-loop

FL/OW
fault locate and order wire

FMU
flash memory unit

FPA
Feature Package A

FPB
Feature Package B

FPC
Feature Package C

FPC/AC
Feature Package C with AutoCut

FPI
Feature Package I

FPQ
firm price quoting

FSR
frequency selective ringing

FTTH
fiber-to-the-home

G

GS
ground start

H

HVAC
heating, ventilation, and air conditioning

I

I/O
input/output

INA
integrated network access

IR
information release

ISDN
Integrated Services Digital Network

L

LAN
local area network

LDU
load distribution unit

LFU
line fuse unit

LIU
line interface unit

LS
loop start

LSU
line switch unit

LTD
local test desk

LTF
line test fanout

LTT
line test translator

M

MDF
main distributing frame

ML
marketing information letter

MLIU
master line interface unit

MLIU-P
master line interface unit-protection

MLT
mechanized loop testing

MMSU
modular metallic service unit

MOR
maintenance operations release

MP
Multiparty

MSU
metallic service unit

MTB
metallic test bus

N

NP
network planning letter

O

OAM&P
operations, administration, maintenance, and provisioning

OC-3
optical carrier level 3

OCU
office channel unit

OI
Operations Interface

OLIU
optical line interface unit

OTU
office timing unit

P

PC
personal computer

PCU
power converter unit

PGTC
pair gain test controller

PLAR
private line automatic ring

PO
purchase order

POTS
plain old telephone service

PRU
positive ring unit

PS
product sheet

PTS
product training services

R

RC/V
recent change/verify

RCU
ring control unit

RMU
remote measurement unit

RSU
ring switch unit

RT
remote terminal

RTAC
Regional Technical Assistance Center

S

SARTS
Switched Access Remote Testing System

SD
schematic diagram

SDU
system display unit

SLIU
slave line interface unit

T

TBCU
test bus control unit

TCU
transcoder unit

TD
technical description

Glossary

TLMCTL

telemetry controller

TOP

task-oriented practice

TRU

transmit/receive unit

TS

technical specification

V

VF

voice frequency

VT

virtual tributary

W

WE

wiring list and equipment

X

XTC

extended test controller

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