SLC® LineReach™ Access System

MC97797A1( ) (RT) Bank Control Unit—
5SCBUM0 (MC97797A1)
5SCBUMB (MC97797A1B)

Features/Functions

- The bank control unit and alarm display unit together form the system bank controller
- Works with ADU to provide system options and system identification
- Has system program memory and random access memory to store channel unit provisioning coefficients
- Controls drop and channel unit testing by the switch or PGTC
- Conducts internal performance monitoring and fault diagnosis
- System alarm LEDs.

Description

This data sheet describes the MC97797A1( ) remote terminal (RT) bank control unit (BCU) (COMCODE 108274481, MC97797A1; and 108448721, MC97797A1B) and is intended for the end-user of the unit.

The MC97797A1 RT bank control unit is used in the *SLC*® LineReach™ Access System remote terminal for TR-08* and *SLC*® Series 5 Feature Package C (FPC) applications. The MC97797A1 BCU supports applications where the RT connects directly to a TR-08 local digital switch (LDS), such as the 5*ESS*® switch with an integrated digital carrier unit (IDCU) or digital carrier line unit (DCLU). For details, see Table 2 and the *SLC* LineReach Access System Application, Planning and Ordering Guide, 363-208-400.

The MC97797A1B BCU supports connectivity to the TR-08*, FPC and INA applications. The MC97797A1B BCU supports applications where the RT connects directly to a TR-08 local digital switch (LDS), such as the 5*ESS*® switch with an integrated digital carrier unit (IDCU) or digital carrier line unit (DCLU). In addition the MC97797A1B BCU supports D4, DACS II and SLC-2000 COT (INA Mode). Refer to Table 2, MC97797A1( ) BCU COT and Local Digital Switch Compatibility.

The MC97797A1( ) BCU together with the AUB27C alarm display unit (ADU) form the bank controller for the *SLC* LineReach Access System.

The BCU contains a microcomputer that provides central control functionality to the RT. It also has system program memory, electrically erasable programmable read-only memory (EEPROM) for semipermanent storage of channel unit provisioning coefficients, and random access memory. The RT communicates with the COT or switch over a data link embedded in the A digroup. The BCU controls this data link to exchange system alarms, and circuit test information between central office and the RT.

The BCU controls the framing format. In TR-08 applications the Fs format with D1D channel counting is used. In FPC applications the system operates with the extended super frame (ESF) (Fe) format with D4 counting. When the AUB27C ADU is optioned for automatic cutover, the BCU sets the framing format depending on the received line format. This permits automatic cutover from an FPC configuration to a TR-08 configuration and vise versa.

This data sheet is being reissued to add the MC97797A1B BCU and update this specification to add information on FP1.1.

Figure 1 shows the faceplate diagram for the MC97797A1B RT bank control unit. Table 1 shows the MC97797A1( ) BCU common unit compatibility. Table 2 lists the compatibility of the MC97797A1( ) BCU with various COTs and local digital switches. Table 3 lists the environmental specifications. Table 4 lists the power drain requirements, and Table 5 lists the edge connects for the MC97797A1( ) BCU.

* Telcordia Technologies Technical Reference TR-TSY-000008 Issue 2, August 1987, and all Revisions and Supplements*, Digital Interface Between the SLC® 96 Digital Loop Carrier System and a Local Digital Switch*.

Compatibility

The MC97797A1( ) RT bank control unit is compatible with a TR-08 local digital switch (LDS), such as the 5*ESS* switch SM or SM-2000 with an integrated digital carrier unit (IDCU) or digital carrier line unit (DCLU), *SLC* Series 5 FPC COT, *SLC*®96 TR-08 Mode 1 and Mode 2 COT, and *SLC*®-2000 COT Release 3.3. In a *SLC* LineReach RT, the MC97797A1( ) BCU is compatible with the common units shown in Table 1. Table 2 lists the compatibility of the MC97797A1( ) BCU with various COTs and local digital switches.

Table 1. MC97797A1( ) BCU Common Unit Compatibility

MC97797A1( ) BCU Common Unit Compatibility			
ADU	**TRU**	**LIU**	**CTU**
AUB27C	AUA109 AUA105B*	AUA61E, AUA64G, or AUA66	AUB22

* In order to operate in TR-08 Mode 2 the AUA105B TRU is required.

Table 2. MC97797A1( ) BCU COT and Local Digital Switch Compatibility

MC97797A1( ) BCU Local Digital Compatibility* Interfaces			
BCU	**Central Office End**	**Generic/ Release**	**Applications**
MC97797A1 MC97797A1B	5*ESS*	5E1.2.2 and later	TR-08
	SLC 96 COT	NA	TR-08
	SLC Series 5 FPC COT	NA	FPC
	SLC-2000 COT	R3.3	TR-08
MC97797A1B	D4	NA	INA
	DACS II	NA	TR-08, INA
	SLC-2000 COT	R3.3	TR-08, INA

* See 363-208-400, *SLC LineReach Access System Applications, Planning*, and *Ordering Guide*.

Specifications

This unit is intended for use in *SLC* LineReach Access Systems located in controlled environments that conform to the specifications of Telcordia Technologies GR-63*. It may also be used in applicable Lucent Technologies cabinets designed for *SLC* LineReach and intended for applications in non-controlled (outside plant) environments that conform to Telcordia Technologies GR-487†. These cabinets, when properly equipped, are designed to maintain internal environmental conditions within appropriate operational limits for *SLC* LineReach equipment such that system performance meets TR-NWT-000057‡.

The applicable outside plant environment criteria for cabinet enclosures (per GR-487) are summarized in Table 3 Environmental Specifications.

Table 3. Environmental Specifications

A. Temperature Range (Ambient) 1. Operating, per TR-NWT-000057: in Lucent Technologies cabinet-mounted RT, outside ambient temperatures of -40° F (-40° C) with no solar load to +115° F (46° C) with maximum solar load and maximum power dissipation. Lucent Technologies cabinets are designed to ensure that the components within do not exceed their rated temperatures for the above conditions. 2. Storage, per TR-NWT-000057: ambient temperatures of -40° to 140° F (-40° to 60° C).
B. Relative Humidity 1. Operating, per TR-NWT-000057. For outside ambient temperature 84° F (29° C) or less, relative humidity of 5% to 95%. For ambient temperatures above 84° F (29° C), the relative humidity is limited to that corresponding to a specific humidity of 0.024 pound of water per pound of dry air. 2. Storage, per TR-NWT-000057: ambient temperatures 84° F (29° C) or less, 10% to 95%. For ambient temperatures above 84° F (29° C), the relative humidity is limited to that corresponding to a specific humidity of 0.024 pound of water per pound of dry air.

* Telcordia Technologies Generic Reference GR-63, Issue 1, October 1994, and all Revisions and Supplements, "Network Equipment-Building System Requirements: Physical Protection (a module of LSSGR, GR-64; TSGR, FR-440, and NEBS FR, FR-2063)," Telcordia Technologies, Inc.

† Telcordia Technologies General Requirements GR-487, Issue 1, June 1996, and all Revisions and Supplements. "*General Requirements for Electronic Equipment Cabinets*," Telcordia Technologies, Inc.

‡ Telcordia Technologies Technical Reference TR-NWT-000057, Issue 2, January 1993, and all Revisions and Supplements, "*Functional Criteria For Digital Loop Carrier Systems*," Telcordia Technologies, Inc.

Table 4. Power drain for MC97797A1( ) BCU

Supply	Maximum Value
+5 Volts DC	7 W

Faceplate Features

The MC97797A1( ) RT bank control unit faceplate is shown in Figure 1. The following LED indicators are located on the faceplate:

FAIL (Red LED): When lit indicates that a failure has been sectionalized to the BCU. This LED will light momentarily during BCU installation or resets.

PMN (Red LED): When lit indicates a failure in the AC power plant or a AC input failure at the RT site.

MISC1 (Yellow LED): When lit indicates that RTMISC1 input closure at the RT has been activated.

MISC2 (Yellow LED): When lit indicates that RTMISC2 input closure at the RT has been activated (FPC only).

A (Red LED): When lit indicates that an incoming failure has occurred on the A DS1 facility.

B (Red LED): When lit indicates that an incoming failure has occurred on the B DS1 facility.

C (Red LED): Not used in *SLC* LineReach RT.

D (Red LED): Not used in *SLC* LineReach RT.

NOTE:
If you lose communications completely, such as when the A data link fails, then all LEDs A, B, C, and D could be lit. Loss of 20 Hz ringing power will also result in the A and B LEDs being lit with an associated major alarm.

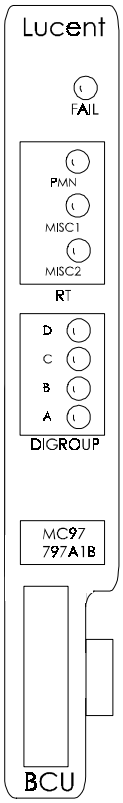

Figure 1. MC97797A1B Faceplate Diagram

Table 5. Edge Connections For MC97797A1( ) Bank Control Unit

Finger	Function
1	Frame Ground
2, 52	-48 Volts DC
18, 50, 60, 87	Circuit Ground
20, 61, 70	+5 Volts DC

References

The following documents provide additional information about the use of this unit in the *SLC* LineReach Access System:

363-208-400	*SLC LineReach Access System Applications, Planning, and Ordering Guide*
363-208-401	*SLC LineReach Access System User/Service Manual*

Technical Assistance

Follow local procedures for obtaining technical assistance. Lucent Technologies also provides in-hours or emergency out-of-hours help for the *SLC* LineReach Access System. Call the Lucent Technologies Regional Technical Assistance Center at 1-800-225-RTAC.

Ordering Information

Additional copies of this document (363-005-410) are available from the Customer Information Center — call 1-888-582-3688.

Comments

Comments about this document can be directed to:

Lucent Technologies
Customer Training and Information Products (CTIP)
Documentation Services
2400 Reynolda Road
Winston-Salem, NC 27106-4606

Copyright Information