



SLC[®]-2000 MSDT

SPQ[®] 808 (RT) MSDT Server 12 or 24 DS0 — SAIUMBF

This data sheet describes the *SPQ[®]808* Multi-Services Distant Terminal (MSDT) Server (COMCODE 107063992) and is intended for the end-user of the unit. The *SPQ808* MSDT is designed to support the *SLC[®]-2000* MSDT used in *SLC-2000* Access Carrier Systems featuring Fiber in the Loop (FITL). The *SPQ808* MSDT Server is always located in a remote terminal (RT) that interconnects to a TR-08* switch interface in a integrated configuration, or to a central office terminal (COT) in a universal arrangement. The *SPQ808* MSDT Server provides 12 or 24 channels of service at the 1.544 Mb/s rate to a single MSDT over a fiber optic loop. On the loop side, the *SPQ808* MSDT Server interfaces an optical unit (OU) using a balanced EIA-422 interface.

In addition to providing the EIA-422 interface to support fiber optics transport to the MSDT, the *SPQ808* MSDT Server has an option switch for a DSX-1 interface. The DSX-1 option is intended for applications where the *SLC-2000* MSDT is supported by means of a T1 carrier facility, or a higher rate multiplexer. In T1 carrier applications, the DSX-1 interface is wired to an external (Telco provided) T1 office repeater unit that provides the interface to the T1 facility.

Figure 1 is a functional block diagram of the unit, and Figure 2 shows the faceplate.

* Bellcore Technical Reference TR-TSY-000008 Issue 2, August 1987, *Digital Interface Between the SLC 96 Digital Loop Carrier System and a Local Digital Switch.*

The *SPQ808* MSDT Server is a double-width unit comprised of two circuit boards joined together with one common faceplate. It occupies two adjacent channel unit slots in the RT shelf. In the transmit direction (toward the MSDT), the *SPQ808* MSDT Server accepts either twelve or twenty-four 16-bit time slots from the backplane bus for either the universal or integrated configuration, and feeds them to the transceiver. The transceiver multiplexes this signal with framing bits into a 1.544 Mb/s bit stream and feeds it to the backplane interface logic (BPIL) circuit. The BPIL circuit scrambles the 1.544 Mb/s bit stream and feeds it to the OU using a balanced line driver.

The signal received from the OU is converted from a balanced to an unbalanced logic level signal and passed to the BPIL circuit where clock is recovered. The 1.544 Mb/s bit stream is descrambled by the BPIL circuit, demultiplexed by the transceiver, checked for faults, and passed to the BPIL circuit for buffering and rearrangement in the time slot interchange (TSI) and output to the backplane bus.

Per-channel trunk processing is performed in the upstream (toward switch or central office terminal) direction.

Unit Indicators

FAIL (Red LED): When lighted, indicates that a failure has been sectionalized to the *SPQ808*.

CLF (Yellow LED): When lighted, indicates that a carrier line failure has been sectionalized to the link connecting the RT and MSDT.

DT (Yellow LED): When lighted, indicates an event at the MSDT.

CONFIG (Yellow LED): When lighted, indicates a problem with an MSDT CU and/or *SPQ808* MSDT Server configuration.

Unit Options

MJ (Option Strap): This strap changes the alarm severity for a subset of failures. When the strap is in the MJ=12 position, with 12 slots assigned to the *SPQ808* CU, or in the MJ=ANY position, a failure causes a major alarm to be transmitted. When the strap is in the MJ=12 position, with less than 12 slots assigned to the *SPQ808* MSDT Server, a failure causes a minor alarm to be transmitted.

OU/DSX (Board-mounted switch): This switch is placed in the OU position for fiber optic based applications requiring a balanced EIA-422 interface to the external OU. The switch is placed in the DSX position for T1 carrier applications.

B8ZS/ZCS (Board-mounted switch): This switch (B/Z) selects between per-channel zero-code suppression (position Z) and the bipolar with 8 zero substitution (position B) line code. This switch should be set per applicable office

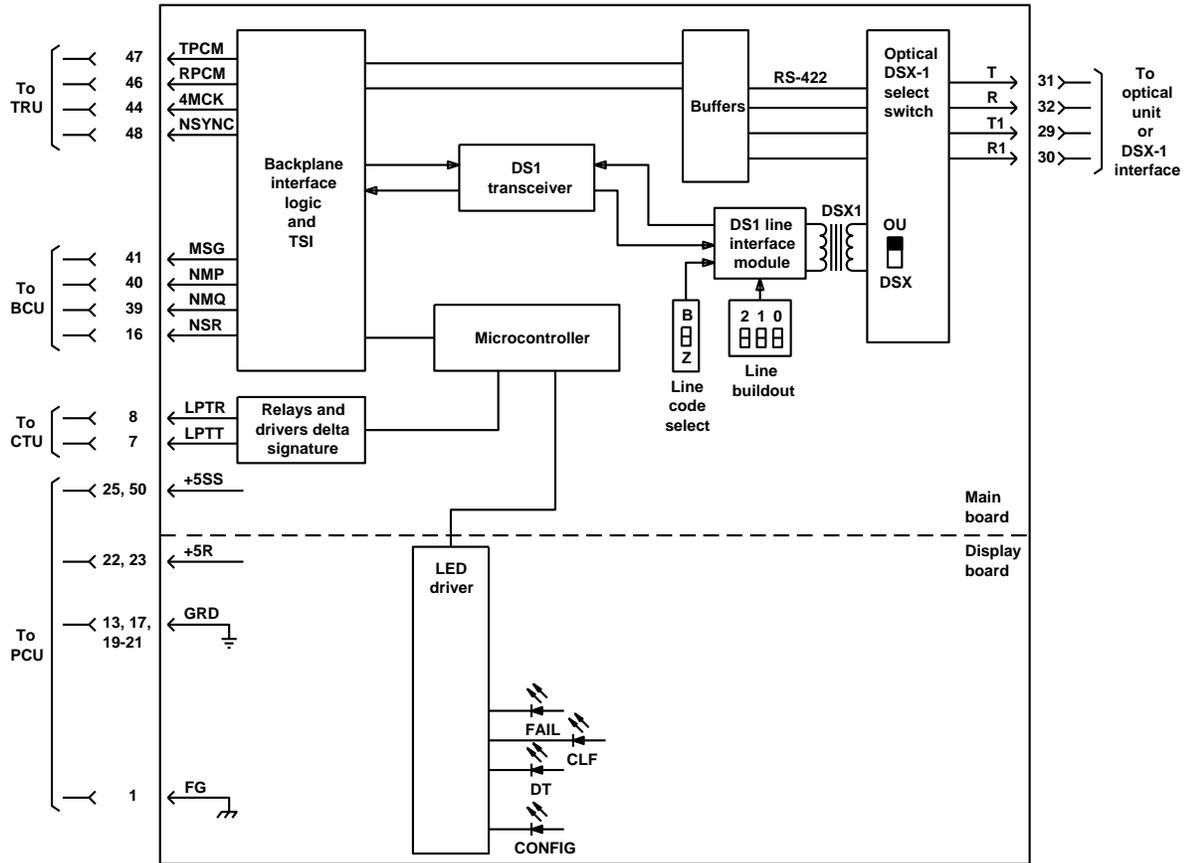
records. This switch is functional only when the OU/DSX switch is in the DSX position.

Equalization (Board-mounted switch): These three switches (TRANS- 0, 1, 2) select the amount of pre-equalization based on the distance between the bank and the DSX-1 cross-connect (see Table 1). These switches are functional only when the OU/DSX switch is in the DSX position.

Table 1. Equalization Option Settings

Trans- 2	1	0	Distance to DSX-1 (Note) (Feet)
OFF	OFF	ON	0 to 132
OFF	ON	OFF	133 to 265
OFF	ON	ON	266 to 398
ON	OFF	OFF	399 to 532
ON	OFF	ON	533 to 655

Note: These distances are for ABAM cable used in the central office. Refer to AT&T 915-710-115 for calculations for other types of cable used for collocated RT and T1 extension applications.



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Figure 1. SPQ 808 MSDT Server Block Diagram

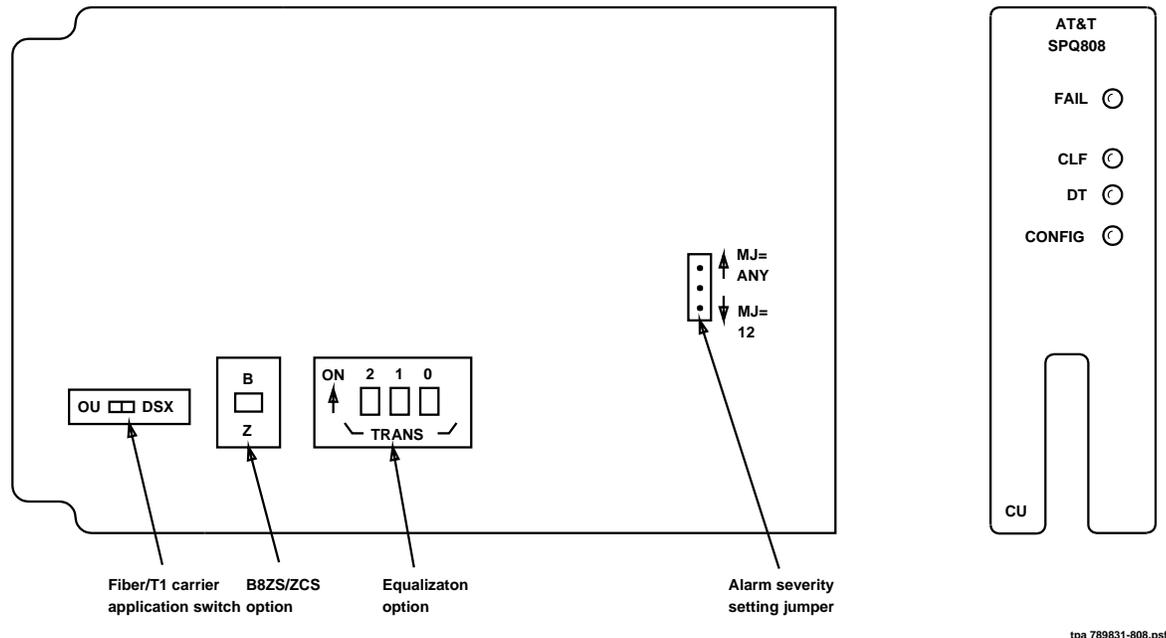


Figure 2. SPQ808 MSDT Server

Follow local procedures for obtaining technical assistance. AT&T also provides in-hours or emergency out-of-hours help for the SLC-2000 Access System. Call the AT&T Regional Technical Assistance Center at **1-800-225-RTAC**.

Additional copies of this document (AT&T 363-005-288) are available from the Customer Information Center — call 1-800-432-6600.

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