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## SLC<sup>®</sup> Series 5 Carrier System

### AUA92 ISDN BRITE II Channel Unit — 5SC1JE0

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This data sheet describes the AUA92 circuit pack (COMCODE 104043849) and is intended for the end-user of the unit. The AUA92 circuit pack is a second generation ISDN basic rate interface transmission extension (BRITE II) channel unit. The AUA92 is intended for use in SLC<sup>®</sup> Series 5 central office terminals (COTs) equipped with an MC97774A1 bank control unit (BCU) — the COT must be connected to a remote terminal (RT) equipped with an AUA93 BRITE II channel unit (see AT&T 365-005-131). The AUA92 provides an ANSI standard NT-mode U-interface for full duplex transmission to a local digital switch or to another carrier system (for example, a D4 bank, within the same central office). The U-interface 2B1Q signal provides a 4-level line code at a data rate of 160 kb/s (80k baud).

Figure 1 illustrates placement rules for mixing AUA92 BRITE II channel units, Figure 2 is a functional block diagram of the AUA92 channel unit, and Figure 3 shows the components and faceplate.

When optioned for B1+D, B2+D, or D-only service, the AUA92 may be mixed with any other channel unit (except 2B+D) without restriction. When mixed with 2B+D service, the B1+D, B2+D, or D-only AUA92 BRITE II channel unit should *not* be placed in the slot to the immediate right of an AUA90 T-BRITE channel unit or a 2B+D AUA92 BRITE II channel unit.

For 2B+D service, the placement of AUA92 BRITE II channel units is restricted because ISDN 2B+D service requires three time slots per channel unit. Placement rules for BRITE II channel units (2B+D option) are based on a 3-slot (tri-slot) group. Each digroup of 12 *physical* slots is divided into four tri-slot groups. The tri-slot groups are physical slots 1 - 3, 4 - 6, 7 - 9, and 10 - 12.

Figure 1 illustrates the following placement rules for BRITE II channel units optioned for 2B+D service in a SLC Series 5 FPB RT:

- A 2B+D AUA92 BRITE II channel unit must not occupy the last slot in a tri-slot group. Therefore, an AUA92 BRITE II channel unit optioned for 2B+D must *not* be installed in physical slots 3, 6, 9, or 12 in any digroup.
- Only another 2B+D channel unit may occupy the slot to the immediate right of a 2B+D AUA92 BRITE II channel unit. An AUA92 optioned for B1+D, B2+D, or D-only service (or any other single- or dual-channel unit) should *not* be placed in the slot to the immediate right of an AUA92 channel unit optioned for 2B+D service.

The basic access transceiver functions include signal generation, signal reception, echo cancellation, timing, error detection, and 2B+D loopback.

The K2-interface controller converts between the 512 kb/s K2-interface serial format and the parallel format of the digital signal processor bus. It also performs error detection (CRC) calculations and B1 and B2 loopbacks.

The digital signal processor performs diagnostic tests, 2B+D processing, zero byte substitution, embedded operations channel (EOC) maintenance functions, and performance monitoring functions. It also handles interactions with the bank controller (BC) and the 950A maintenance test set (MTS) (see AT&T 363-005-238) — the BC consists of a BCU and an alarm display unit (ADU).

The backplane interface logic interconnects the BC message and address leads, the transmit-receive unit (TRU) address and PCM leads, the MTS address, data, and control leads, and the digital signal processor bus. A D4 or D1D counting sequence is selected by the BC. Channel unit timing is derived from the system clock.

The power module converts -48 V DC to +5 V DC to power the channel unit. The AUA92 also provides bank control interface, and MLT voltage detection and 333.3 Hz tone generation functions.

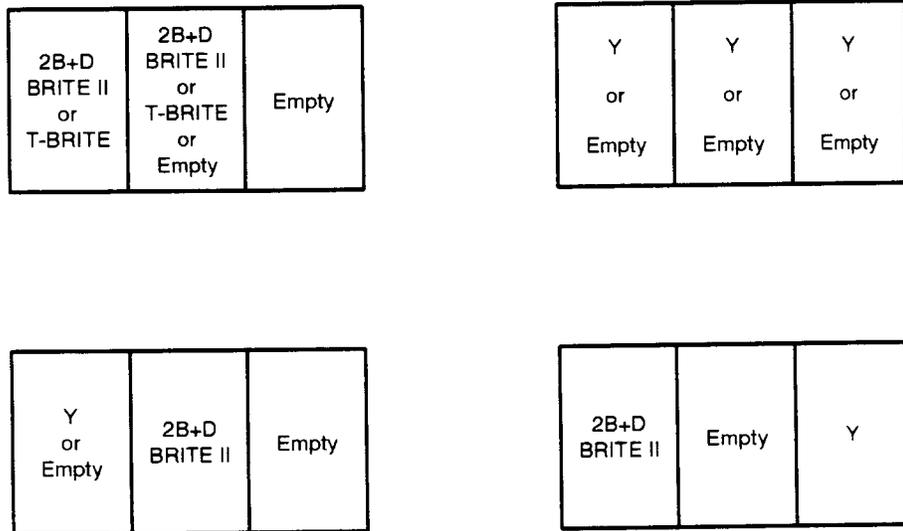
**FAIL** (Red LED): This LED lights to indicate a fault (see Table 1). The fault may occur when the AUA92 fails a self test, when the BC tries to write to the AUA92 and fails, or when an incompatibility exists in the placement of either the AUA92 or adjacent channel units in the Series 5 digroup shelf. If the FAIL LED is lighted prior to a lamp test, it will remain lighted during the test if the fault is due to either the AUA92 failing a self test or the BC failing in a write to the AUA92. If the fault is due to an incompatibility in channel unit placement, the LED is not lighted during the lamp test. If the AUA92 is properly working, the FAIL LED flashes momentarily when inserted into the bank.

**Table 1. AUA92 BRITE II Channel Unit FAIL LED Indications**

Before LED Test	LED TEST Depressed	Indication
Off	Blinking	Normal operation, B1+D, B2+D, or D service channel unit
Off	On	Normal operation, 2B+D service channel unit
On	Blinking	Placement violation of a B1+D, B2+D, or D service channel unit
On	Off	Placement violation of a 2B+D service channel unit
On	On	Failed channel unit
Off	Off	Defective LED and/or channel unit

**SERVICE Switch:** This board-mounted slide switch can be set for 2B+D, B1+D, B2+D, or D-only service using three, two, two, or one DS0 timeslot(s), respectively. All other provisioning is done by the BC.

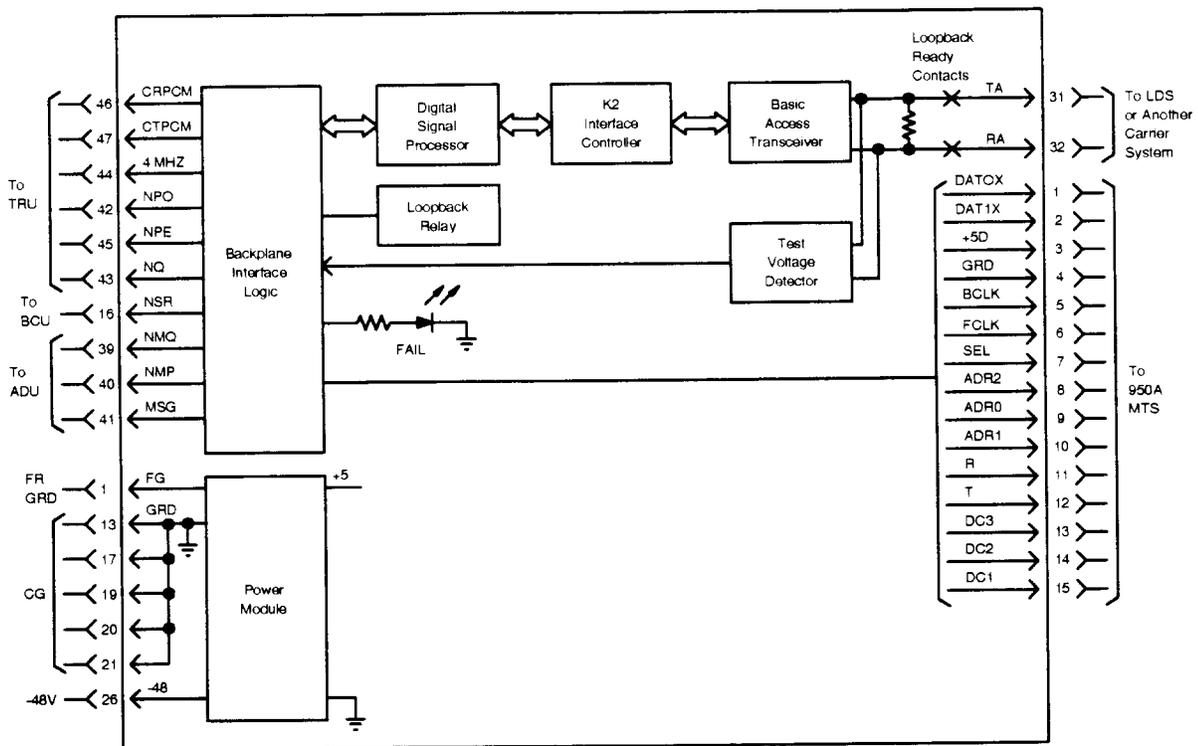
The AUA92 supports B1, B2, and 2B+D loopbacks via the embedded operations channel (EOC) and path performance monitoring compatible with TA-TSY-000784. Manual local and remote loopback testing and alarm monitoring can be performed from a 950A MTS plugged into the faceplate connector.



Y = Any valid dual- or single-channel channel unit or a B1+D, B2+D, or D-only AUA92 BRITE II channel unit.

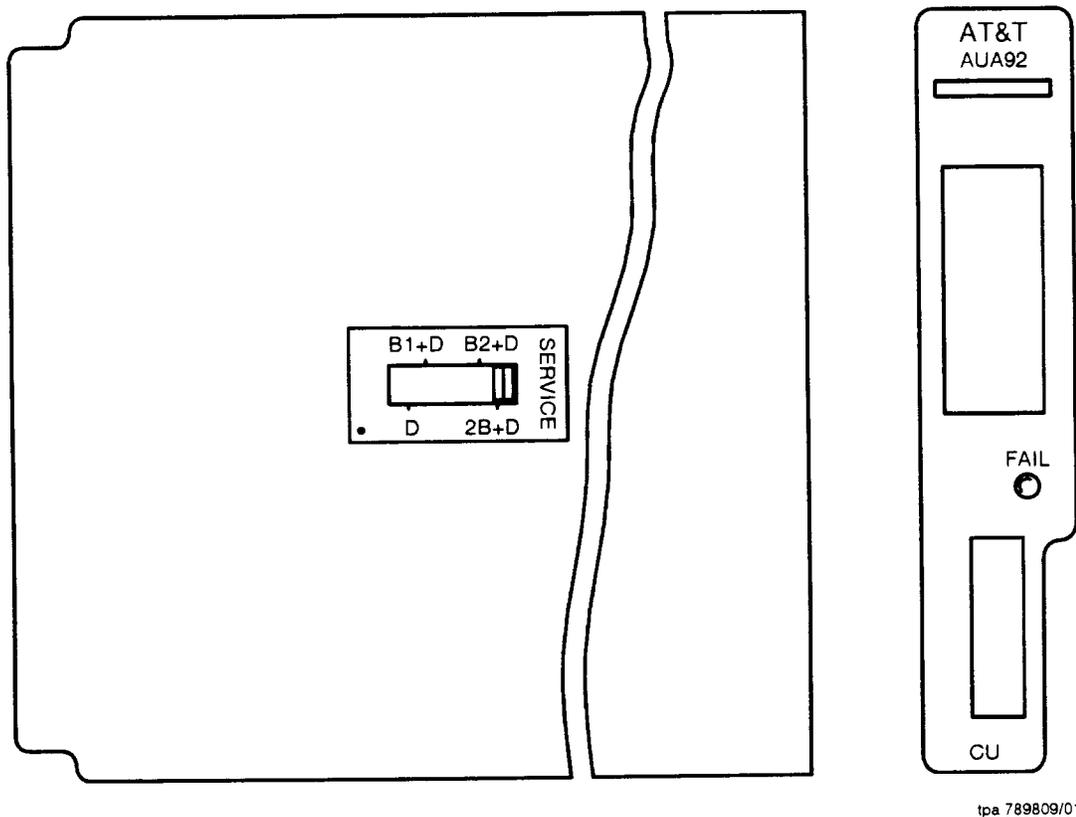
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**Figure 1. Placement Rules for AUA92 BRITE II Channel Units Model Systems**



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Figure 2. AUA92 Block Diagram



**Figure 3. AUA92 Components and Faceplate**

In-hours or emergency out-of-hours technical assistance for the SLC Series 5 Carrier System can be obtained by calling the Regional Technical Assistance Center at **1-800-225-RTAC**.

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