J98726JA TUI AND J98726JB OIU-5 CIRCUIT PACKS

INDEPENDENT DIGROUP TIMING DATA SHEET

D4 CHANNEL BANK

DESCRIPTION

♦Two circuit packs, the TUI and OIU-5, together provide independent digroup timing in a D4 channel bank or DCT (digital carrier trunk). This capability accommodates diverse synchronization requirements in public networks or in a specialized private network. The TUI circuit pack is required in the TU slot of digroup A. A J98726AA transmit unit is required in the TU slot of digroup B. The OIU-5 circuit pack is required in the OIU slot (top shelf). Independent digroup timing is applicable to all D4 modes of operation except Mode 1. Figure 1 shows the TUI and OIU-5 faceplates.

Note: It is recommended that an OIU-2 or OIU-4A be used in standard synchronous networks.♦

This practice is reissued to include information about the clock outputs and information supporting digital data transmission with independent digroup timing. Revision arrows are used to indicate significant changes.

The timing options are set by option plugs located on the faceplate of the OIU-5 circuit pack. The timing option possibilities are as follows. The B digroup can be optioned independent of the A digroup for either external, loop, or local timing. The A digroup can be optioned independent of the B digroup for loop timing, or it can be optioned to lock to B digroup timing. Lock to B digroup timing times the A digroup to the B digroup, and thus times the entire D4 channel bank to whatever timing option is selected for the B digroup.

♦Digital data transmission is restricted to the B digroup when the A digroup is loop timed (A-LT option selected on the OIU-5). However, both digroups can support digital data transmission if the A-LCK B option is selected on the OIU-5. The A-LCK B option causes the A digroup timing to be synchronized to the B digroup timing.♦

APPLICATIONS

♦*Caution: Removing the OIU-5 from the D4 channel bank will interrupt service in the A digroup.*♦

Some independent digroup timing applications are as follows:

*   When one D4 channel bank must be timed to two separate timing sources, that is, two digital switches which are not synchronized to each other.

*   When one D4 channel bank digroup (B) must be timed to an external composite clock for digital data and the other digroup (A) must be timed to a loop timing source such as digital switch.

*   When one D4 channel bank digroup (B) is locally timed (functions as a master network timing source) and the other digroup (A) is timed to a second timing source (digital switch or cross-connect).

FEATURES

Features of independent digroup timing are as follows:

*   Two regenerated external composite clock outputs are provided referenced to the B digroup. ♦These clock outputs can be taken from pin pairs 51-52 and 53-54. Each clock output can provide timing for up to 6 D4 channel banks (in tandem). The maximum cable distance for the clock leads is 1500 feet terminated into 133 ohms. Refer to SD-3C316-01 (48-channel PCM Bank — DCT [Digital Carrier Trunk] Application Schematic) or SD-3C304-02 (D4 Channel Bank Applications Schematic).♦

*   In the B digroup, loss of external composite clock, a red alarm, or a loop failure condition

causes an automatic switch to free run timing when the B digroup is optioned for external timing.

- When the A digroup is loop timed and has a red alarm or is looped, it automatically switches to timing from the B digroup.

- The OIU-5 provides jack access to external composite clock timing to allow testing with the dataport transmitter and receiver test sets. The jack is on the faceplate and is labeled TST.

- No backplane wiring changes are required.

OPTIONS

There are no options on the TUI circuit pack. All timing options are on the OIU-5 circuit pack. The options are as follows:

B-EXT: Times the B digroup to an external composite clock source.

B-LT: Loop times the B digroup to the incoming pulse stream from the far-end equipment.

B-LOC T: Times the B digroup to a free-running clock source internal to the D4 channel bank.

A-LT: Loop times the A digroup to the incoming pulse stream from the far-end equipment. This is independent of the timing option selected for the B digroup.

A-LCK B: Times the A digroup from the B digroup.

The timing option for the A digroup is then determined by the option selected for the B digroup (local, loop, or external).

REGIONAL TECHNICAL ASSISTANCE

Technical assistance for the D4 channel bank can be obtained by calling the Regional Technical Assistance Center at *1-800-225-RTAC.* This telephone number is staffed 24 hours per day.

ISSUING ORGANIZATION
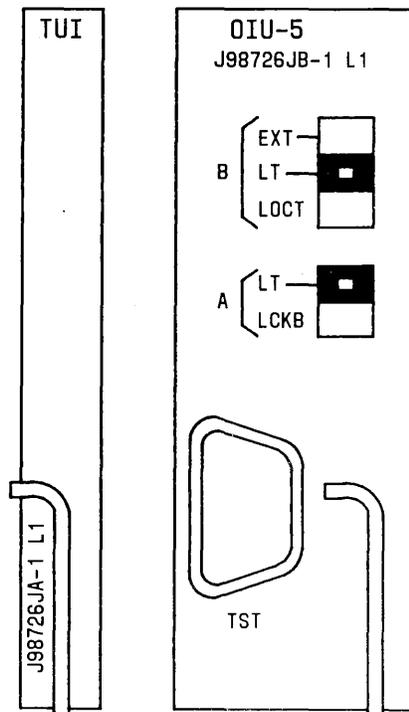
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Figure 1—TUI and OUI-5 Circuit Pack Faceplates