

J98726SE-2, L2; L2,A; L2,T; L2,A,T 4DX CHANNEL UNIT D4CE411, 451

DATA SHEET

D4 CHANNEL BANK

The 4-wire Duplex (4DX) channel unit (J98726SE) provides the interface between a D4 channel bank or SLC\* -96 carrier system terminal and 4-wire circuits

using duplex signaling. The primary use for the 4DX is for PBX tie trunk circuits, but it can be used for other applications if the VF extension is terminated with a compatible DX converter. For signaling and supervision, it converts duplex signals from the metallic extension into pulses for the digital network.

\* Trademark of Western Electric

\* -9 TO 0 dB FOR 1200/600 OHM CABLE AND -15 TO 0 dB FOR 150 OHM CABLE

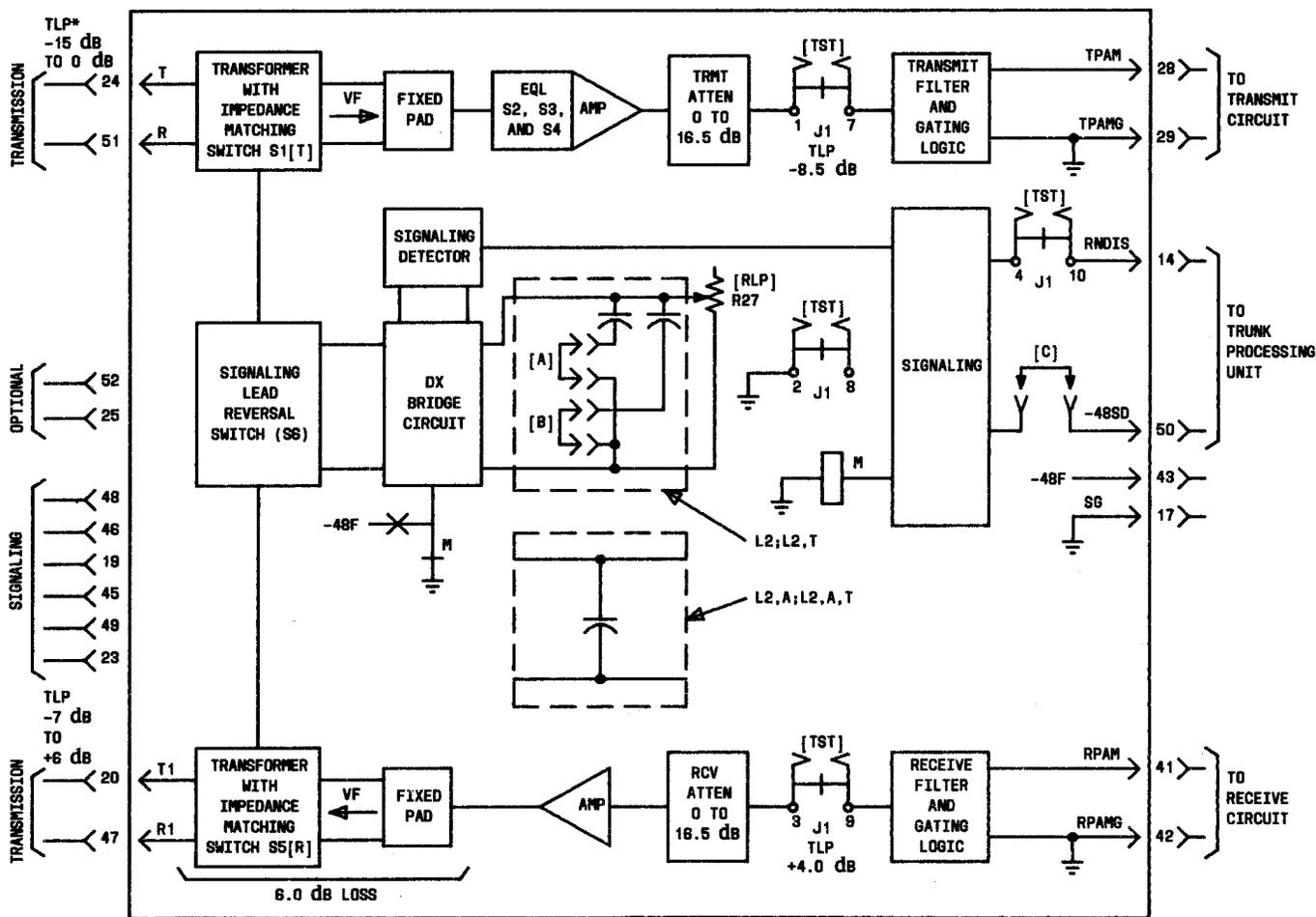


Fig. 1 — J98726SE Block Diagram

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**SECTION 365-005-019**

Similar pulses from the digital network are converted into duplex signaling states and placed on the metallic extension toward the trunk.

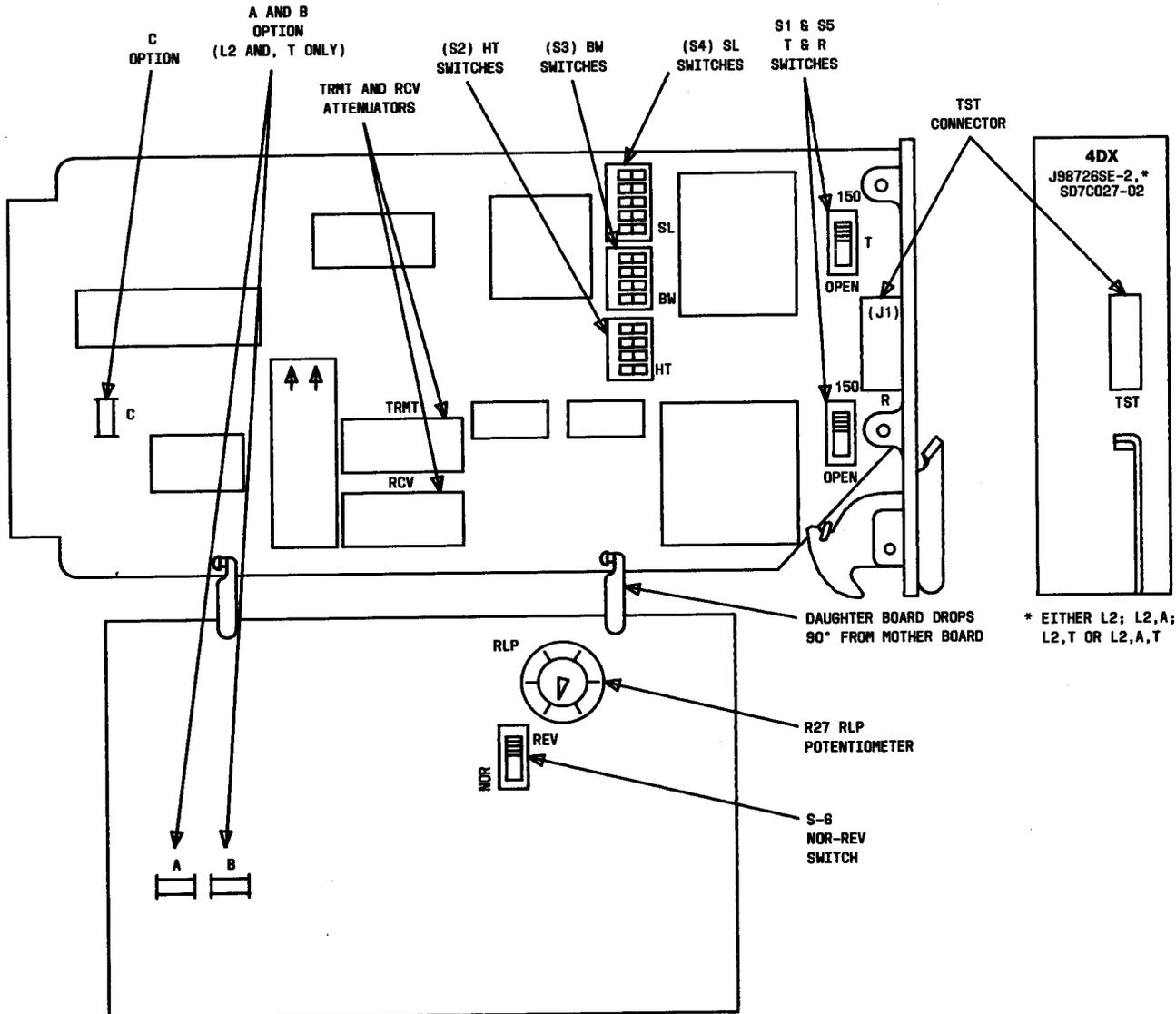
gain, active equalization in the transmit path, 0 to 16.5 dB attenuators, and line buildout circuitry.

This section is reissued to include the L2,A; L2,T; and L2,A,T versions of the channel unit.

For detail, see CD- and SD-7C027-02 and Section 365-170-117. Section 855-351-105 gives prescription (option) settings and application information.

The transmission circuitry of this unit contains selectable impedance matching transformers, 6 dB of

Figure 1 is a functional block diagram of the unit, and Fig. 2 gives major component location and option information.



**Fig. 2 — J98726SE Component Layout**

**TST CONNECTOR:** Insertion of a test card into this connector provides splitting access to the TRMT TLP, the RCV TLP, and the RNDIS lead for test and maintenance purposes.

**C OPTION:** Option C is selected when it is desired to operate the M relay 2.5 seconds after a carrier failure, making the circuit appear busy during carrier failures. Option C is selected by inserting the jumper plug into the black side (white showing) of the C option jack.

**A OPTION AND B OPTION:** Options A and B, when selected, connect the DX bridge balancing capacitors to balance the line capacitance of the metallic facility for all loop lengths. The options are selected by inserting the jumper plug into the black side (white showing) of the A and C option jacks. The options are available only on the L2 and L2,T versions. They are replaced by a single capacitor on the L2,A and L2,A,T versions.

**(S2) HT SWITCHES:** These four binary weighted slide switches are used for adjusting the amplitude response of the equalizer (height of 3250-Hz bump) from 0 to 11 dB in 15 steps. The switches should be set so that the sum of the exposed numbers equals the HT setting required.

**(S3) BW SWITCHES:** These four binary weighted slide switches are used for adjusting the bandwidth response of the equalizer (bandwidth of 3250-Hz bump) from 0 to 11 dB in 15 steps. The switches should be set so that the sum of the exposed numbers equals the BW setting required.

**(S4) SL SWITCHES:** SL contains five slide switches for adjusting the slope of the equalizer frequency response. The L/N switch is used to make an

overall slope adjustment to the equalizer frequency response (L or N is exposed for loaded or nonloaded cable, respectively). The other four switches are binary weighted switches used to adjust the slope of the equalizer frequency response in 15 steps. The switches should be set so that the sum of the exposed numbers equals the SL setting required.

**(S1 AND S5) T AND R SWITCHES:** T and R are 4-position slide switches for selecting the terminating impedance for the transmit (T-R) and receive (T1-R1) cable pair, respectively. The four positions of each switch (going from "150" toward "open") select the 150-ohm, 600-ohm, 1200-ohm, and open-circuit terminations.

**TRMT AND RCV ATTENUATORS:** Rocker switches on these attenuators provide from 0 to 16.5 dB of attenuation in the transmit and/or receive transmission paths in steps of 0.1 dB. Attenuation is inserted into the transmission path when rocker switches are pushed into the "IN" position. The sum of the numbers associated with the "IN" rocker switches is the amount of attenuation inserted.

**(R27) RLP POTENTIOMETER:** This is a calibrated potentiometer (0-5K ohms) which allows prescription setting of the DX balancing resistor. The potentiometer setting should be set equal to the metallic loop resistance  $\pm 250$  ohms.

**(S6) NOR-REV SWITCH:** This is a 2-position slide switch for selecting either a normal (NOR) or reversed (REV) connection of the signaling leads to simplex pairs (T-R and T1-R1).