

837F NETWORK DESCRIPTION

1. GENERAL

1.01 This section describes the 837F network.

This network is used as an impedance compensator in loaded E6-repeated CO-PBX links. It is restricted to use on 19-, 22-, or 24-gauge H88 cable facilities where the PBX impedance is 600 ohms.

1.02 The network is installed at a PBX location where terminal balance is required and drop build-out capacitance (DBOC) is needed. Lineup of the network is accomplished by adjustment of a set of screw switches.

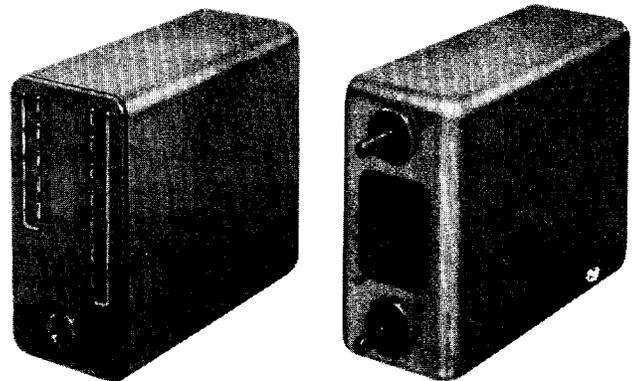


Fig. 1—837F Network

2. EQUIPMENT DESCRIPTION

2.01 The 837F network fits into an aluminum can approximately 1.7 inches wide, 3.3 inches high, and 4.3 inches deep. The network is stud-mounted on a shelf near where the cable pairs are brought out to the panel wiring boards. Connections to the cable and line circuits are made at four terminals which extend from the rear of the networks. The front of the network incorporates seven screw switches for LBOC (line build-out capacitance) settings and a 239C jack for test purposes and, in addition, has five screw switches for DBOC settings and a pair of pin jacks. The pin jacks are provided so that external DBOC may be used during lineup. A photograph of the network is shown in Fig. 1.

3. CIRCUIT DESCRIPTION

3.01 The circuit arrangement of the 837F network is shown in Fig. 2. Terminals 1 and 2 connect to the cable and terminals 3 and 4 connect to the trunk circuit.

3.02 The 837F network is a passive network and consists of a low-frequency corrector, a high-frequency corrector, LBOC, and DBOC. The LBOC is provided to build out any fractional end-section of cable to nearly a full section. The DBOC is provided to adjust for the capacitance of office cable.

3.03 Transformer T1, resistor R1, and capacitor C8 provide high-frequency correction and aid in improving input impedance. Transformer T2, resistor R2, and capacitor C9 provide low-frequency correction and impedance matching toward the PBX equipment. Both correctors are low-loss sub-networks which shape the impedance of the built-out cable such that the resulting impedance is a good match to the 600-ohm PBX impedance.

3.04 Jacks J1 and J2 permit the use of an external capacitor during lineup. Jack J3 is used for testing and lineup. A plug inserted in the jack (J3) will disconnect the PBX.

3.05 The in-service loss of the 837F network at 1 kHz is approximately 0.5 dB.

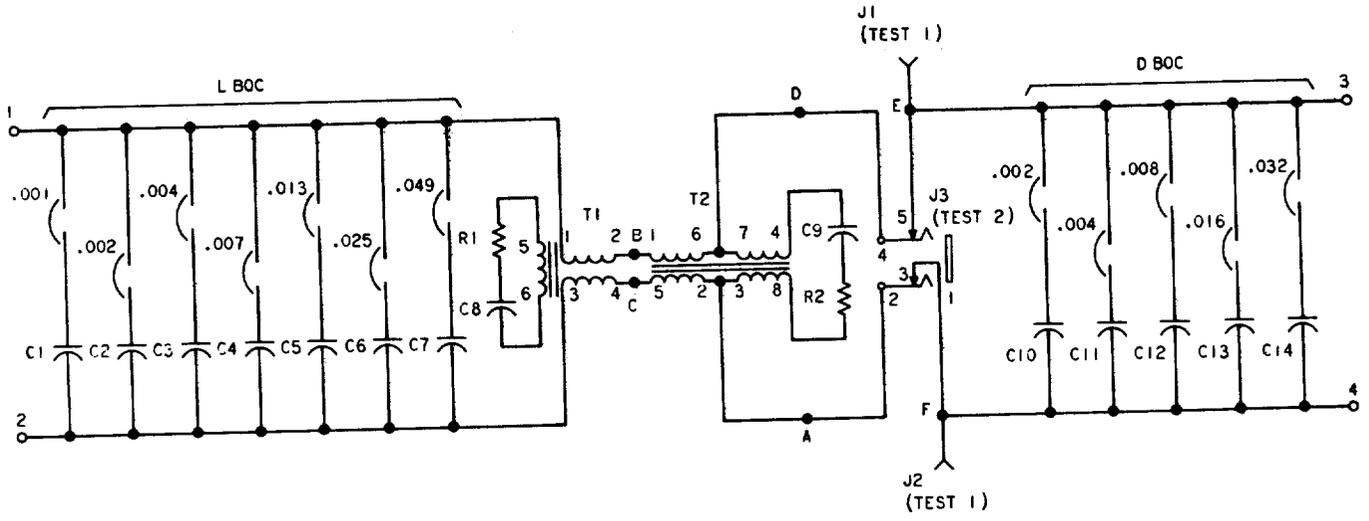


Fig. 2—Schematic—837F Network