

830A NETWORK DESCRIPTION

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1. GENERAL

1.01 This section describes the 830A network (Fig. 1). This network is used to build out the input impedance of high-capacitance, H88, loaded, 19-, 22-, and 24-gauge cable to the impedance of the E6 gain unit.

1.02 The 830A network can be used in either a terminal or intermediate repeater.

2. EQUIPMENT DESCRIPTION

2.01 The 830A network is contained in a plastic case and measures 3.2 inches wide, 1.3 inches high, and 4.9 inches deep. It is mounted on the line side of the E6 repeater chassis and is secured by four screws on the chassis connector block. These screws also make the required electrical connections to insert the network between the line and gain unit. The face of the network contains the screw switches for the building-out resistance (BOR), building-out capacitance (BOC), and low-frequency (LF) corrector network.

3. CIRCUIT DESCRIPTION

3.01 The circuit arrangement of the 830A network is shown in Fig. 2. The network contains passive circuit elements and is similar in function

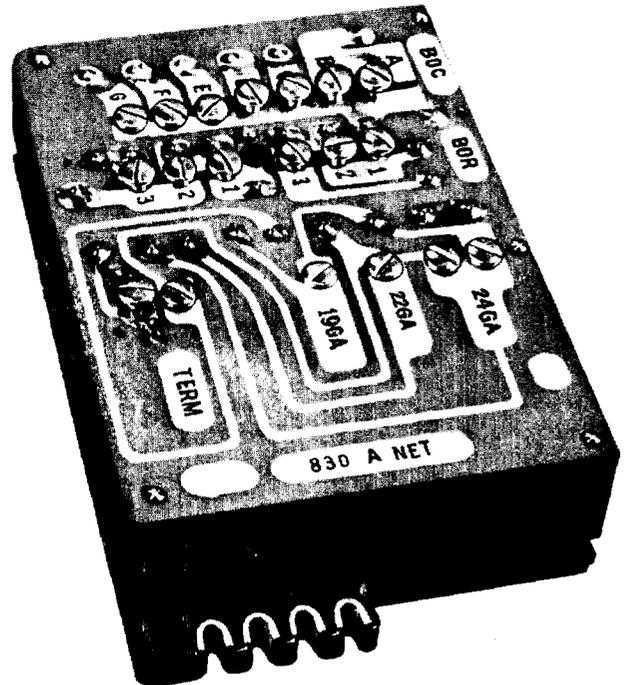


Fig. 1—830A Line Build-out Network

to an impedance compensator. The line build-out section has the following adjustments:

- (a) Building-out resistance (BOR): 0 to 196 ohms in 28-ohm steps
- (b) Building-out capacitors (BOC): 0 to 0.101 μ F in 0.001- μ F steps.

3.02 The LF corrector section has switch settings suitable for terminal or intermediate repeaters on 19-, 22-, or 24-gauge cable pairs. The TERM. screws should be down for a terminal repeater and up for an intermediate repeater.

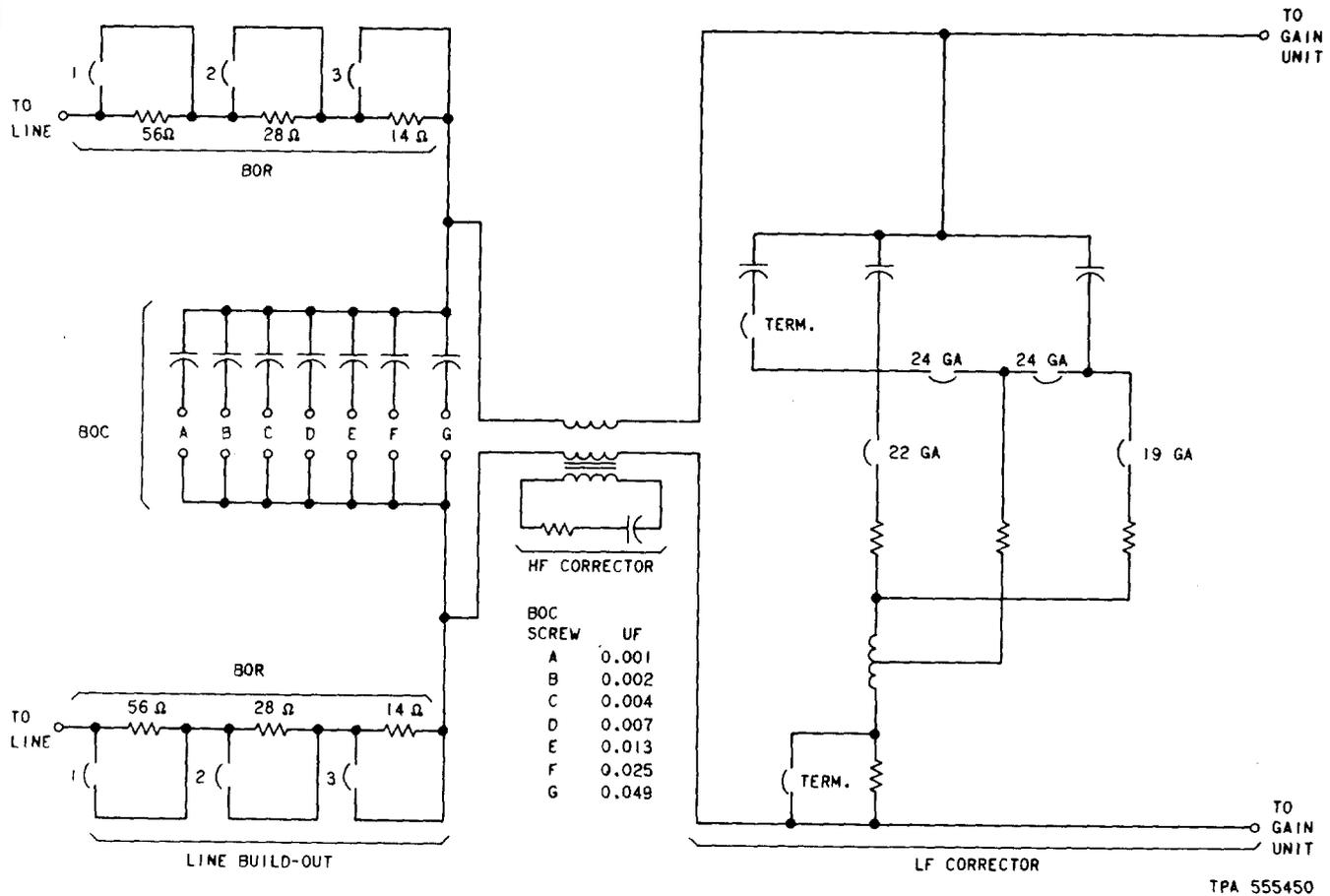


Fig. 2—830A Network—Schematic Diagram

3.03 The high-frequency (HF) corrector is a complementary section, and the value of the components are preset for high-capacitance, H88, loaded cable. The HF corrector provides a resistive termination above the cable cutoff frequency where the full-section cable impedance becomes very low and corrects the reactance of the cable impedance at and just below the cutoff frequency.

3.04 Prescription settings and lineup procedures are described in Section 332-206-100 (Exchange-Area Trunks) and Section 851-300-101 (Switched Special Services).