830D NETWORK
DESCRIPTION

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1. GENERAL

1.01 This section describes the 830D network for use in the E6 repeater as part of the Traffic Service Position System (TSPS) No. 1. The 830D network and the associated E6 repeater provide means for connecting the assistance operator trunk circuit to the trunk link of the TSPS switching network. The network provides the proper terminating impedance towards the E6 repeater on one side and a high-impedance bridging point for the link circuit on the other.

1.02 This section is reissued to clarify mounting information in 2.01. Information previously found in 1.02 can now be found in 3.01.

2. EQUIPMENT DESCRIPTION

2.01 The 830D network (Fig. 1) consists of components mounted on a printed wiring board and housed in a plastic case. The network measures 3.2 inches wide, 1.3 inches high, and 4.9 inches deep. ▶It is mounted face up in the side of the E6 repeater that connects to the trunk link. It should be secured by means of the four screws on the chassis connector block.◀ These screws also make the required electrical connections between the network and the repeater.

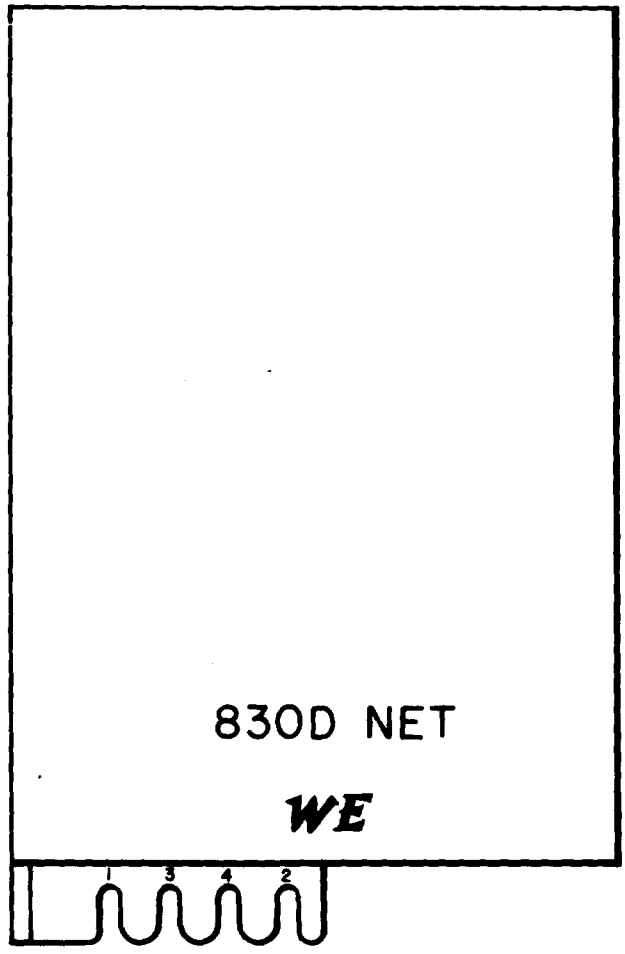

Fig. 1—830D Network

3. CIRCUIT DESCRIPTION

3.01 ▶The 830D network consists of a transformer with a 1:4 impedance ratio, a resistor capacitor network, and a blocking capacitor.◀

3.02 The circuit schematic of the 830D network is shown in Fig. 2. Terminals 3 and 4 connect to the E6 repeater. Resistor R1 and

capacitor C1 plus the load impedance reflected through the transformer provide a 900-ohm termination on one side of the repeater. Looking back from the link, the TSPS trunk circuit looks like 450 ohms. Terminals 1 and 2 of the 830D network bridge 6800 ohms across this impedance. An idle circuit termination is required when the link is open to terminate the repeater.

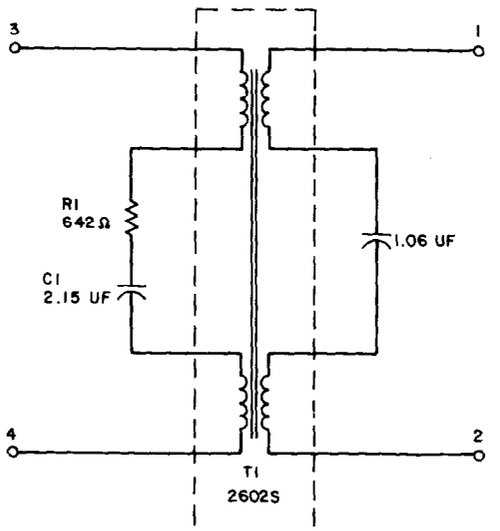

Fig. 2—830D—Schematic

3.03 Transformer T1 has an impedance step-up ratio of 1:4 from the repeater side to the TSPS switching link side. The transformed impedance at terminals 1 and 2 is 6800 ohms. This is the bridging impedance seen by the TSPS link.