

849J NETWORK DESCRIPTION

1. INTRODUCTION

1.01 This section describes the 849J network which supersedes the 849H network. The design of the 849H network allowed the multifrequency (MF) tones to be shunted, resulting in low MF levels at the toll office. The design of the 849J network improves the level at the toll office by about 9 dB.

1.02 When this section is reissued, the reason for reissue will be given in this paragraph.

1.03 The 849J network (Fig. 1) is installed in the NET 1 and/or NET 2 positions of the 424V4 and J99338F Traffic Service Position System (TSPS) 4-wire bridging repeater. The purpose of the 849J network is to derive SX and SX1 signaling leads from the 4-wire transmission pairs.

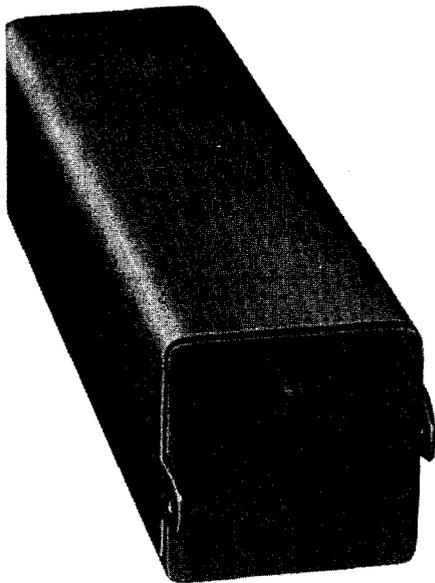


Fig. 1—849J Network

1.04 The 424V4 repeater is covered by SD-97047-01 and the J99338F repeater is covered by SD-7C022-01.

2. EQUIPMENT DESCRIPTION

2.01 The 849J network is a plug-in unit equipped with a 15-pin connector which may be inserted directly into the network positions of the 424V4 repeater or the J99338F 4-wire bridging repeater.

2.02 The 849J network consists of two centertapped inductors (L1 and L3) and a simplex inductor (L2) housed in an aluminum can approximately 1-3/4 inches wide by 1-3/4 inches high by 7 inches long.

2.03 Metal tabs on the front of the unit permit removal of the network from its mounting by the use of the 602C or 602D tool.

3. CIRCUIT DESCRIPTION

3.01 Figure 2 is a schematic of the 849J network. The dimensions of the illustration are such that it may be cut out and used in the 424V4 SWIFTEC board (E-4899) until the 849J insert is available.

3.02 When inserted in the network sockets of the 424V4 or J99338F repeater mountings, as shown in Fig. 3 and 4, the L1 and L3 inductors are bridged across the 4-wire transmission leads. The large inductance of the L1 and L3 inductors yield a very high impedance in shunt with the 600-ohm amplifiers of the repeater. As a result, the loss contributed by the 849J network to the transmission paths is negligible at 1000 Hz.

3.03 The nominal resistance contributed by the 849J network to the signaling path is 255 ohms.

NOTICE

Not for use or disclosure outside the
Bell System except under written agreement

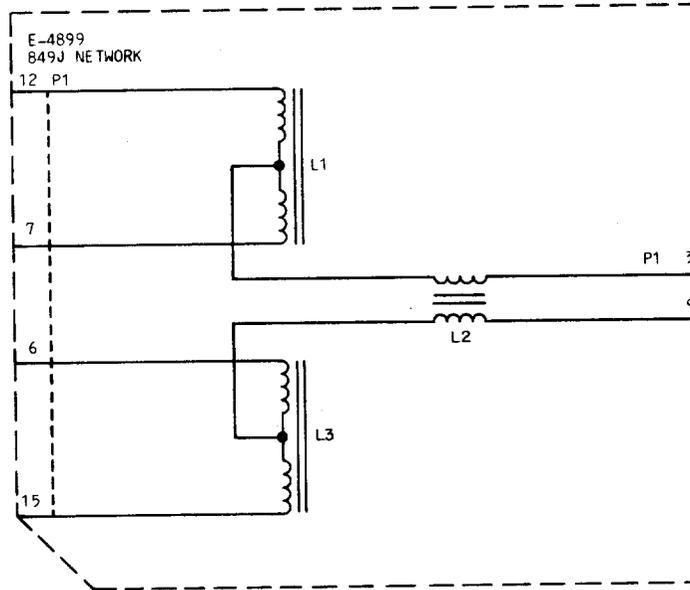
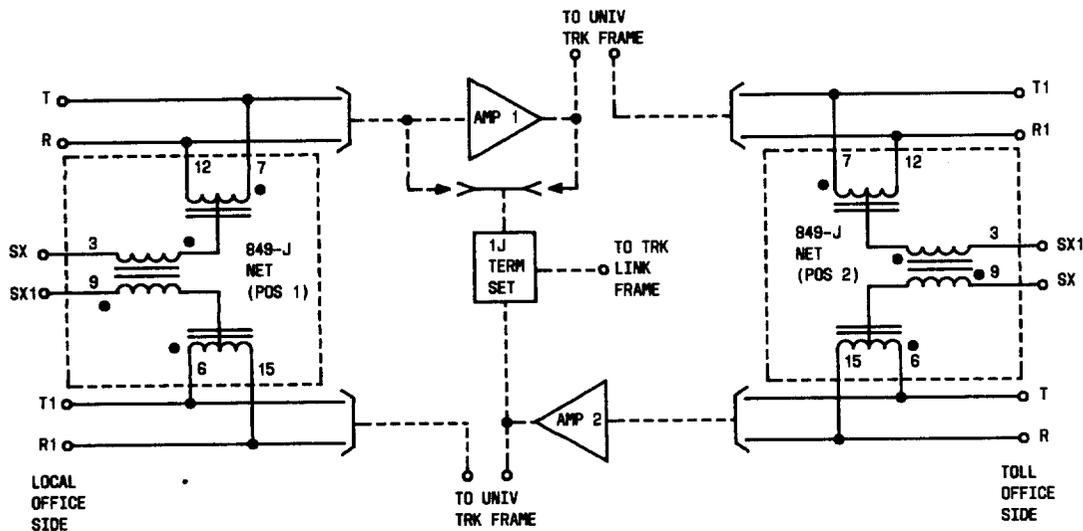


Fig. 2—849J Network—Schematic



NOTE:
 THE 849J NETWORK MAY BE USED IN NET 1 POSITION ONLY
 WHEN THE ZG OPTION HAS BEEN WIRED PER SD 97047-01,
 ISSUE 23 OR LATER.

Fig. 3—Simplified Schematic of 424V4 Repeater With 849J Networks

3.04 Inductor L2 windings are in series with the SX and SX1 leads. This inductor isolates the ac path for MF signaling tones from the dc supervision path. With this isolation, the shunting

effect of the dc signaling circuit on MF outputser output is significantly reduced. The effect is higher level MF tones to the toll office and more reliable operation than was possible with the 849H network.

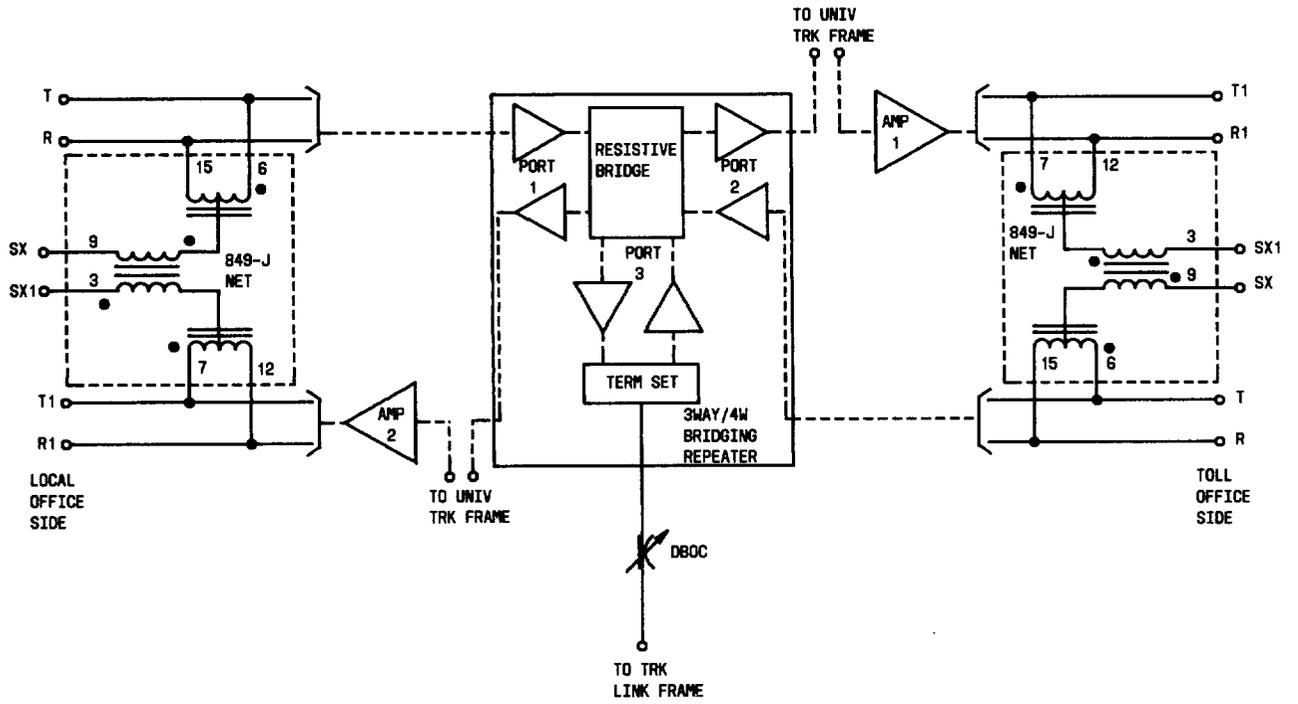


Fig. 4—Simplified Schematic of J99338F 4-Wire Bridging Repeater With 849J Networks