

837J NETWORK INSTALLATION AND PRESCRIPTION SETTINGS

1. GENERAL

1.01 This section gives installation and prescription settings for the 837J network. This network is for use as an impedance compensator on 25-gauge H88 loaded metropolitan area trunk (MAT) cable at locations with terminal balance requirements. A description of the 837J network is contained in Section 332-206-158.

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

2. INSTALLATION

2.01 The 837J network is stud mounted on a shelf near the point where the cable pairs are brought out to the panel wiring boards. Terminals 1 and 2 connect to the cable pair and terminals 3 and 4 connect to the trunk equipment.

3. PRESCRIPTION SETTINGS

3.01 Table A gives the prescription settings for the 837J network when used on an end section consisting entirely of 25-gauge H88 loaded MAT cable. The build-out resistance (BOR), build-out capacitance (BOC), and LATTICE settings in the table describe the positions of the 16 screws on the face of the network.

3.02 The following procedure should be used in determining the 837J network settings when the end section contains mixed gauges (MAT cable plus another type of facility).

(a) Calculate or otherwise obtain the resistance of the 25-gauge MAT cable and the resistance of the other gauge cable. The sum of these is the total cable end section equivalent resistance and is used in Table A to establish BOR and LATTICE settings. (An alternate method is to subtract the sum of the resistance of the two facility types from 393 ohms, which is the resistance of 6000 feet of 25-gauge MAT cable. The resulting value is the amount of LATTICE and BOR resistance needed.) The LATTICE resistance is 196 ohms and the BOR has a maximum resistance of 196 ohms in 28-ohm increments.

(b) Calculate or otherwise obtain the capacitance of the 25-gauge MAT cable and the capacitance of the other gauge cable and add the two together. Subtract this value from $0.071 \mu\text{F}$ (the capacitance of 6000 feet MAT cable). This is the value of capacitance which must be added by the LATTICE and BOC. The LATTICE capacitance is $0.036 \mu\text{F}$ and the BOC is a maximum of $0.052 \mu\text{F}$ adjustable in $.001 \mu\text{F}$ steps.

(c) It is possible in some cases that the need for resistance as calculated in (a) will conflict with the need for capacitance as calculated in (b), eg, one of the calculations will indicate that the LATTICE be IN while the other indicates that the LATTICE be OUT. When this condition occurs, the requirement for capacitance as calculated in (b) dictates the setting for the LATTICE screws. The resistance value is set as close as possible by the BOR.

NOTICE

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