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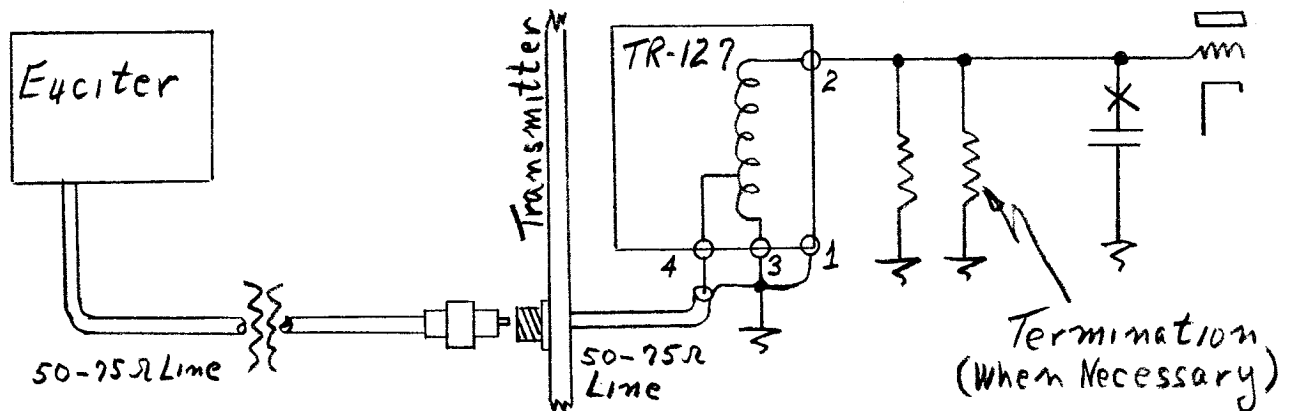
TMC SPECIFICATION NO. S - 273

TITLE: Application Specification TR-127

JOB

APPROVED A. J. J.

1. Purpose: The TR-127 has been created to convert the output power generated in such transmitter exciters as the Model VOX and Model PMO into a higher level of impedance and voltage.
2. Explanation: When it becomes necessary to transfer excitation for a transmitter from a remote frequency determining source, the transfer must take place at low impedance. This convention is adhered to for a number of very logical technical reasons known to the field in general and, therefore, not discussed here.
Since the end termination for such a transfer line is generally in the region of 50 to 75 ohms, and since the input impedance to the grid of the first low level stage is generally in the region of 1000 to 10,000 ohms, more than 90% of the power generated by the remote exciter is wasted in the termination.
The TR-127, on the other hand, converts impedances in a manner which satisfies the termination needs of the line while producing a far more useable voltage level in the first grid of the transmitter.
3. Application: It is suggested that the TR-127 be used as shown below:



The transformer should be placed as close to the input grid as is physically possible. When the input stage is a converted Pierce oscillator, as is usually the case, the grid circuit will contain a shunting capacitor of about 32 μf . When it can be done, this capacitor should be removed so that the secondary termination will be predominantly resistive and virtually independent of frequency. However, satisfactory operation will be obtained in many cases even if the capacitor is present.

In addition, if the input grid impedance is very high and the drive required is in the order of a few tenths of a watt, several shunting resistors should be placed across the transformer secondary so that the composite resistance approaches 1200 ohms. These resistors should be 2 watt composition units capable of dissipating the power not consumed by the input grid.