matching linears to transceivers on 10-15 meters

Grounded grid linear amplifiers don't always present a perfect 50-ohm resistive input for the transceiver. And long leads from the transceiver sometimes present a reactive load on the 10- and 15-meter bands. What happens? The transceiver goes into self-oscillation when the amplifier is driven.

To solve this problem I first tried a transmatch, but it didn't work because of the difficulty of obtaining short leads. An "L" network didn't work, either.

But the "T" match (**fig. 1**), with its short leads, worked the first time. The transceiver loaded up to full power, driving the linear with no ensuing oscillations. I was delighted with the results.

The matcher was built in a small LMB Flange Lock Box (No. EL532), measuring 5¼ x 3 x 2½ inches (**fig. 2**). With the capacitor bolted to the front panel and the two input and output BNC coax fittings on the back, leads were kept short. The capacitor should tune 10 meters with a 50 pF setting and adjustment coil. For 15 meters I just increased the setting to about 70 pF. The SWR dipped 1:1 without any switching or shorting out turns for 10 meters. I could cover both bands.

Calculations would show about 50 pF for 15 meters and 45 pF for 10 meters, adjusting the coil for that value. However, I don't find this necessary.

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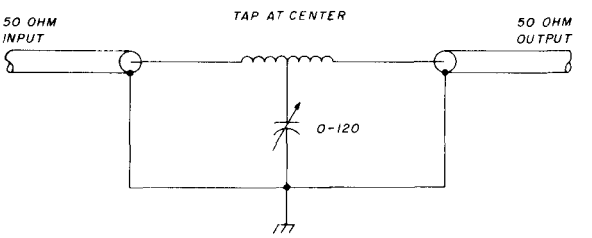

fig. 1A. "T" match circuit.

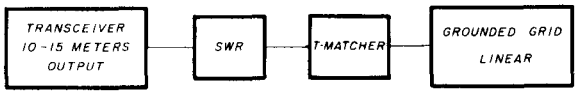

fig. 1B. "T" match block diagram.

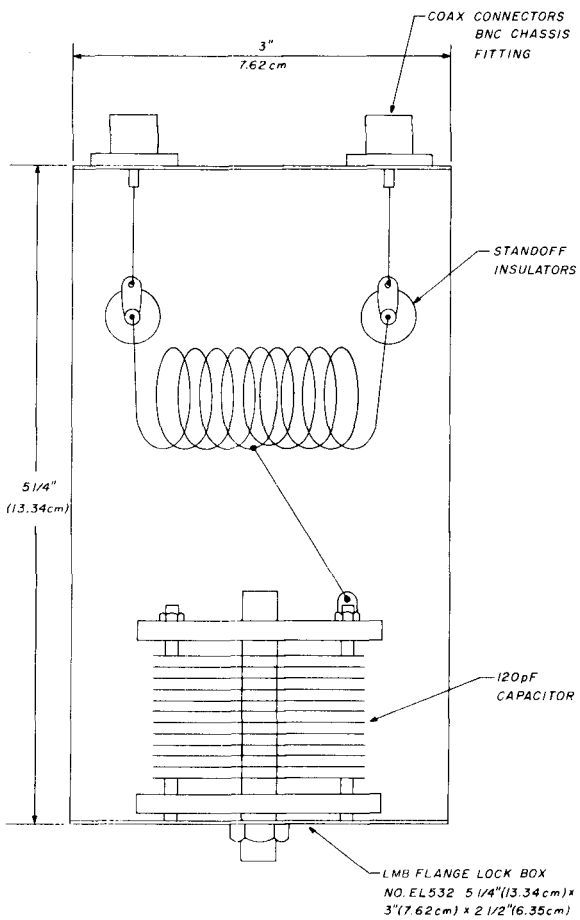

fig. 2. Details of "T" match construction.