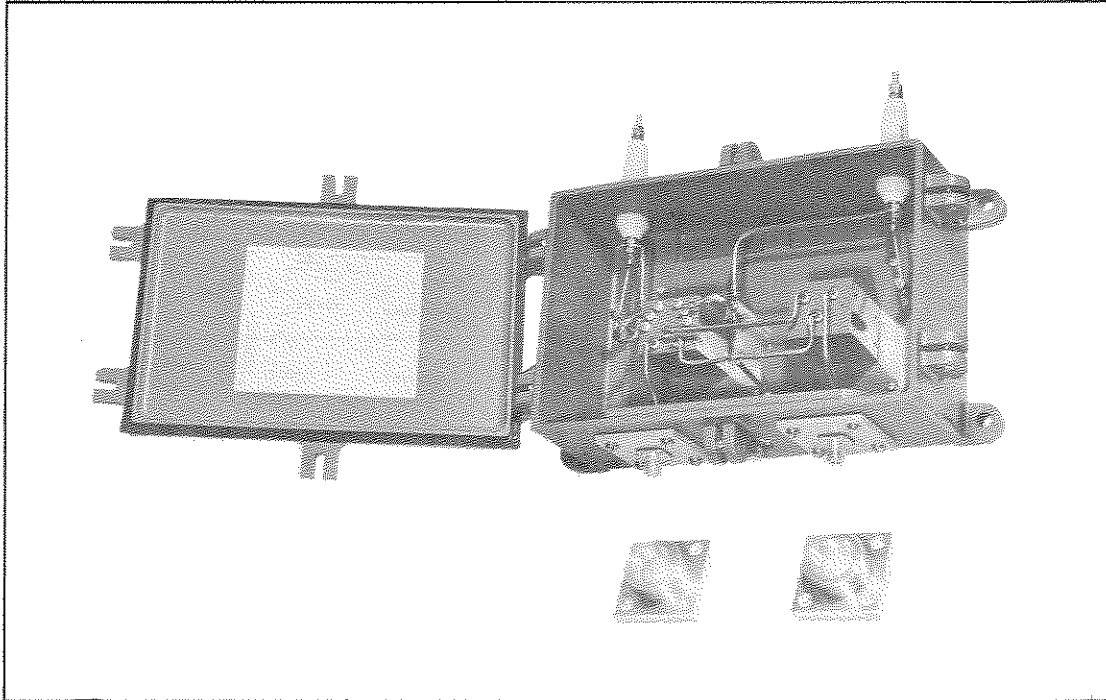


SALES SERVICE BULLETIN NUMBER 177

HF/LF Antenna Coupler, Model HLC



The TMC HF/LF Antenna Coupler, Model HLC, was designed to provide simultaneous high frequency and low frequency reception from a single antenna.

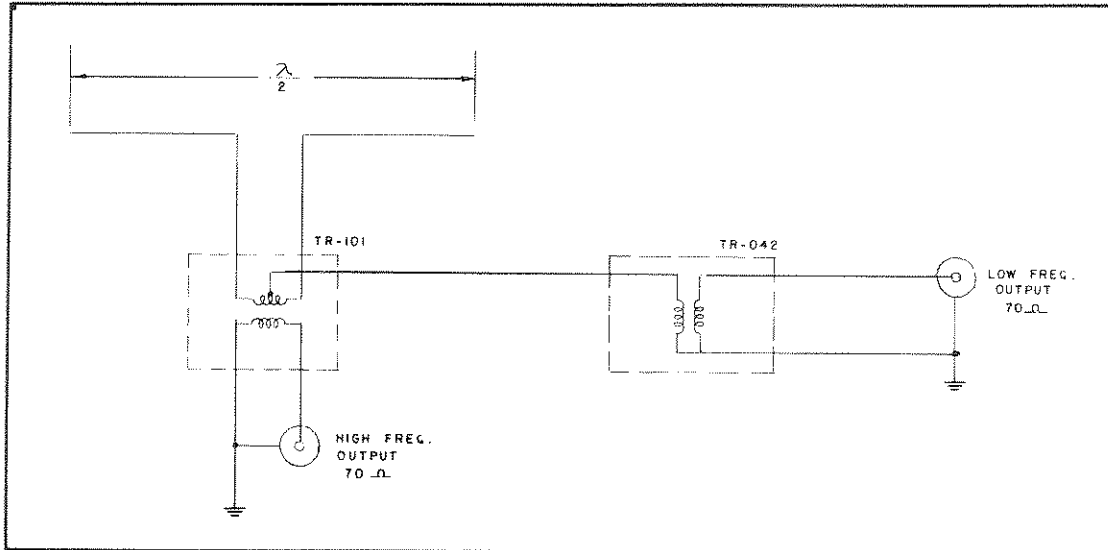
The Coupler consists of two broadband transformers mounted in a JAN alloy cast aluminum case. The HF transformer is a multi-tap device providing a match for 700,300 or 70 ohms balanced to 70 ohms unbalanced, over the frequency range of 2 - 30 Mcs. This transformer is similar to the one used so successfully in the TMC Rhombic Antenna Coupler, Model RAC. The LF transformer provides a 70 ohm output and is usable over the frequency range 15 - 1500 Kcs.

This Coupler may be used with any normal HF Antenna System which utilizes open wire transmission lines. HF reception is accomplished in a normal manner and is not affected by the addition of the LF transformer to the System. For LF reception the transmission lines become a part of the Antenna and the System now appears as a top loaded vertical receiving antenna. (See block diagram). Obviously an impedance match in this case over the frequency range 15 - 1500 Kcs must be a compromise, and 250 Kcs was used as a design center.

The HLC Coupler should be mounted on a suitable post at the base of the Antenna. The aluminum case is weather resistant and is provided with a built-in lightning arrester.

A center ground connection for RG-12/U is standard. Output connections on the Coupler are optional, as indicated in the illustration. The equipment has been designated as follows:

Model HLC-1 Fittings for RG-85/U (in foreground)
Model HLC-2 Fittings for RG-12/U (mounted).



TECHNICAL SPECIFICATIONS

HF Transformer

Frequency Range:	2 to 30 Mcs.
Frequency Response:	Flat within 3 db throughout range.
Input Impedance:	700, 300 and 70 ohm balanced.
Output Impedance:	70 ohm unbalanced.

LF Transformer

Frequency Range:	15 - 1500 Kcs.
Frequency Response:	Dependent on the antenna system used.
Output Impedance:	70 ohm unbalanced.
Equipment Case:	Weather resistant, cast of an aluminum alloy.
Input Terminals:	Two ceramic insulators, properly spaced.
Output Terminals:	See Description above.
Components and Construction:	Equipment is manufactured in accordance with JAN/MIL specifications wherever practicable.

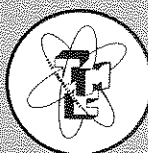
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