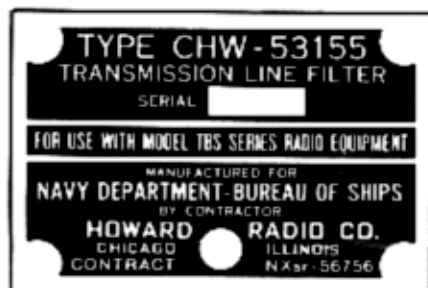


INSTRUCTIONS
for
INSTALLATION
AND OPERATION
of
TRANSMISSION LINE
FILTER



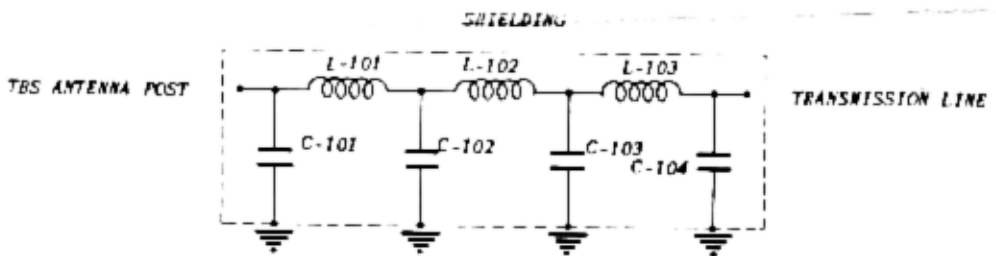
Navy Type 53155

(For Use With Model TBS Series)
Radio Transmitting Equipment



1. **INTRODUCTION:** The Model TBS Transmission Line Filter, Navy type-53155, is designed to reduce to a minimum the harmonics radiated from the antenna system of the Model TBS series transmitter. It should be borne in mind that the filter is effective only in eliminating harmonic radiation from the antenna system; radiation from power wiring, interconnecting leads, and the equipment proper must be minimized by careful shielding and grounding.

2. **DESIGN:** The filter is a low pass, three section, constant "K" type, of 70 ohms characteristic impedance, designed to provide a maximum of attenuation (about 45db) for frequencies above 110 mcs. The schematic diagram and parts list for the filter unit are shown in figure 1 below.



FILTER CHARACTERISTICS: CUT-OFF FREQUENCY = 110 Mc.; CHARACTERISTIC IMPEDANCE = 70Ω AT 70 Mc.

LEGEND

SYMBOL DESIG.	FUNCTION	DESCRIPTION	NAVY TYPE NO.	NAVY DRG. OR SPEC.
CAPACITORS				
C-101	SHUNT CAP.	CAPACITOR, WICA, 25 MMFD ± 10% 500 V. MAX. WORKING, LOW LOSS CASE	482106	RE-48A-349
C-102	SHUNT CAP.	CAPACITOR, WICA, 50 MMFD ± 10% 500 V. MAX. WORKING, LOW LOSS CASE	482107	RE-48A-349
C-103	SHUNT CAP.	SAME AS C-102	482107	RE-48A-349
C-104	SHUNT CAP.	SAME AS C-101	482106	RE-48A-349
INDUCTANCES				
L-101	SERIES IND.	INDUCTANCE, 0.15mh., 4 TURNS OF #12 TINNED COPPER WIRE ON 0.437" DIA. FORM, UNI- FORM SPACING TO LENGTH OF 0.5"		
L-102	SERIES IND.	SAME AS L-101		
L-103	SERIES IND.	SAME AS L-101		

**TBS TRANSMISSION LINE FILTER, NAVY TYPE-53155
SCHEMATIC DIAGRAM**

FIGURE 1

3. INSTALLATION: The filter may be mounted in either of two positions as shown in figures 2 and 3, as follows:

- (a) Disconnect and remove the end of the flexible transmission line entering the *upper* junction box on the TBS transmitter front panel.
- (b) Remove the junction box from the panel of the transmitter.
- (c) Store the junction box, cover plate, two thumb screws, and lockwashers for possible future use.
- (d) Remove paint and any corrosion products from the area on the panel where the filter box back will contact the panel, in order to provide a good electrical contact.
- (e) Remove the filter cover and secure the filter to the panel with the two No. 6-32 machine screws and lockwashers provided.
- (f) Secure the filter input strap connector to the transmitter binding post by means of the No. 8-32 nut and lock washer previously removed.
- (g) Attach the flexible transmission line sheath to the filter case by means of the threaded fitting, and connect the inner conductor to the output end of the filter, using the nut and lockwasher provided.
- (h) Bolt the filter cover in place by using the No. 6-32 machine screws and lockwashers provided.

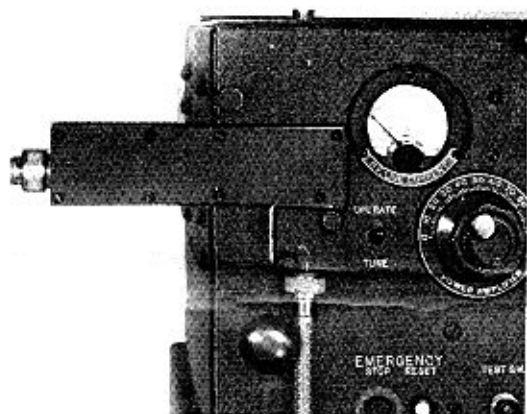


FIGURE 2

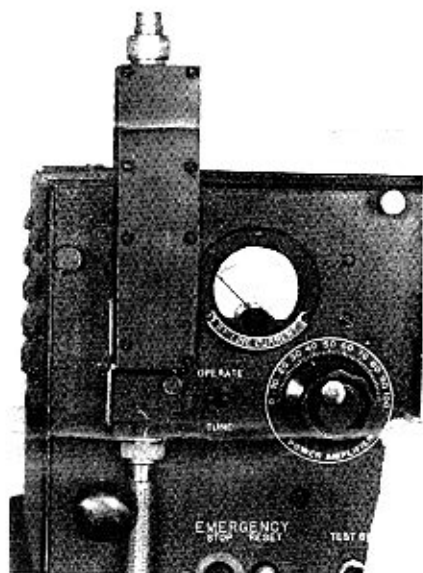


FIGURE 3