UNCLASSIFIED

TECHNICAL MANUAL

for

Antenna Terminating Unit

Model TER 250-300

THE TECHNICAL MATERIEL CORPORATION

MAMARONECK, N.Y. OTTAWA, CANADA

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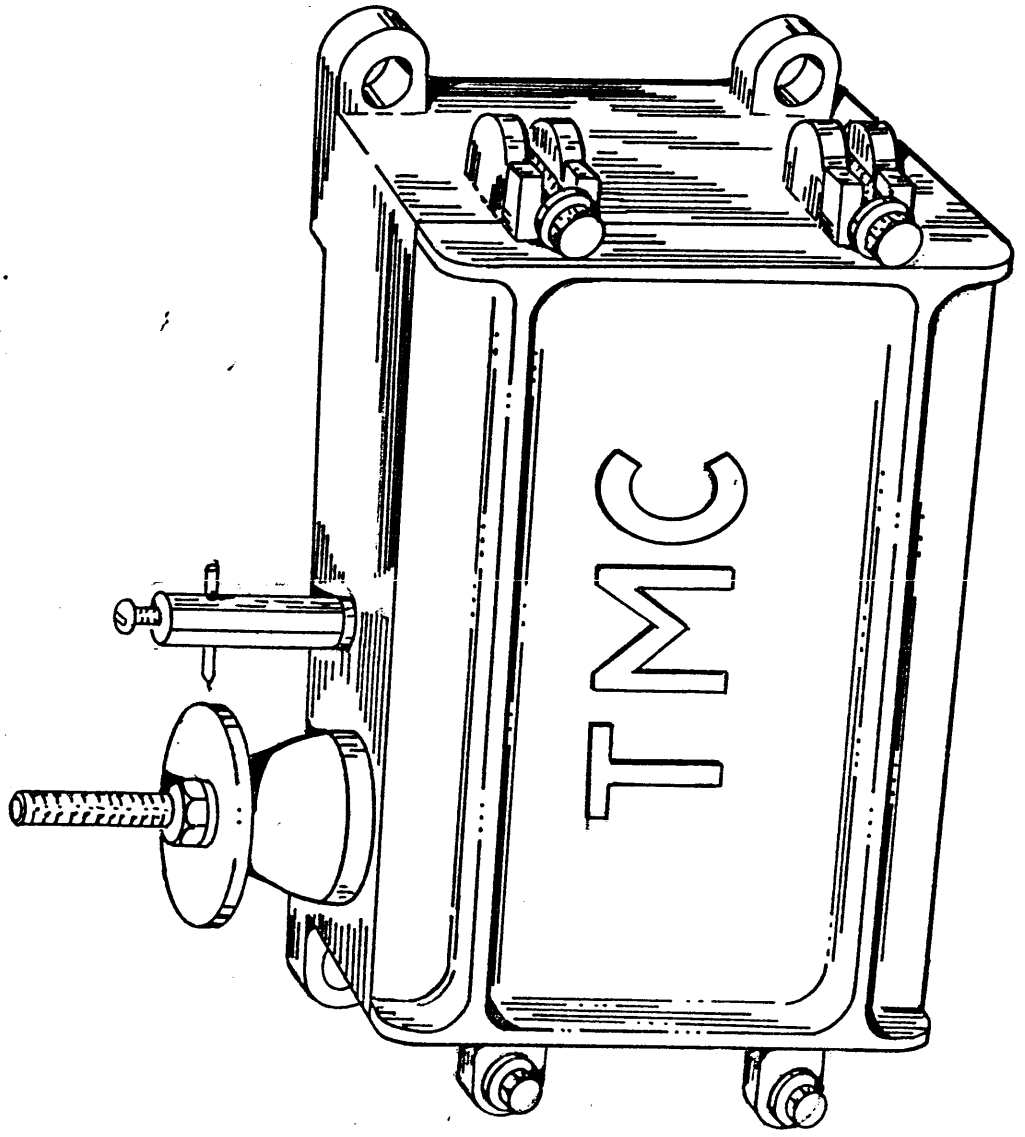

TMC

1. FUNCTIONAL DESCRIPTION

The TER is an Antenna Terminating Unit. It is used with certain types of antennas requiring a resistive termination. It has a frequency range of DC-30 mc, and is used for unbalanced operation. The unit can be easily mounted on a pole or bulkhead.

2. PHYSICAL DESCRIPTION

The TER contains a 300 ohm resistor in series with a 1.6 uh coil, connected to a mykroy bowl assembly. These components are housed in a 25 lb., weather-proof, cast aluminum case that is 14 inches wide, 9 inches high, and 5-1/2 inches deep. An external spark gap protects the internal components against lightning and static charges.

3. TECHNICAL SPECIFICATIONS

Frequency Range:	DC - 30 mc
Typical VSWR Ratio: To Unity	1.2
Average Power: (in watts)	250
Peak Envelope Power: (in watts)	500
Type of Case:	Cast Aluminum
Protective Feature:	Lightning Spark Gap
Installation Data:	14 inches wide 9 inches high 5-1/2 inches deep weight - 25 lbs.
Bowl Assemblies:	1 Small Mykroy (1/4" Rods)

4. INSTALLATION

For bulkhead mounting or pole mounting, refer to figure 1.

After unit is securely mounted, attach grounding strap to bolt (A) shown non figure 1.

5. TROUBLESHOOTING PROCEDURE

Refer to figure 2; if unit fails to operate properly, visually check the resistor for any damage and see that all mechanical connections are secure. Thoroughly inspect unit for any missing hardware.

If unit still fails to operate after mechanically inspecting all parts, remove it from its mounting and test it, using the following procedure:

Test Equipment Required

Signal Generator - General Radio 1001-A

RF Bridge - General Radio 916-A

Radio Receiver

VOM - Simpson Model 260

1. Measure DC resistance from bowl termination to ground terminal to read 300 ohm $\pm$10%.

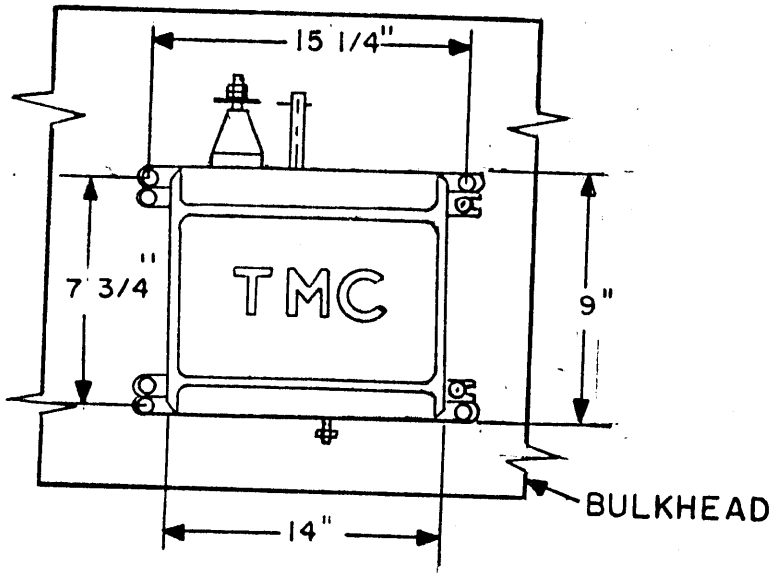
2. Set up equipment as illustrated in figure 3.

3. Take readings at the following frequencies and see that the VSWR is 1.3 or less as computed on Smith Chart.

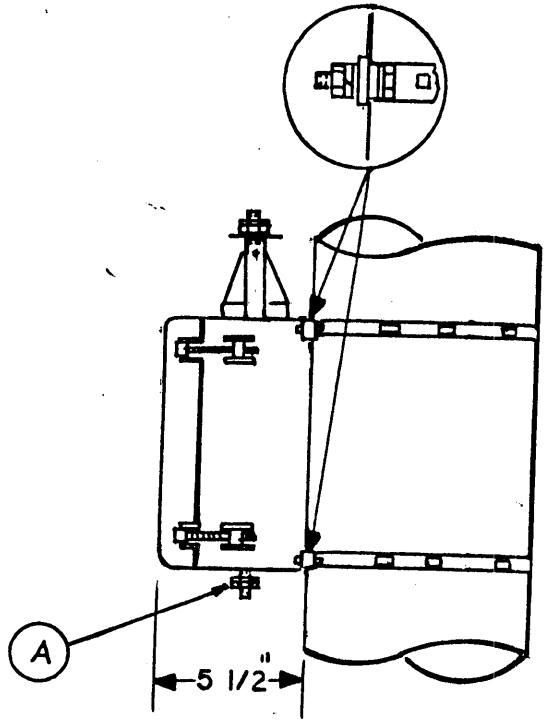
Typical Values

FMC	R	X
2	320	-20.0
4	305	-11.2
8	300	-3.7
16	285	+18.0
30	310	+50.0

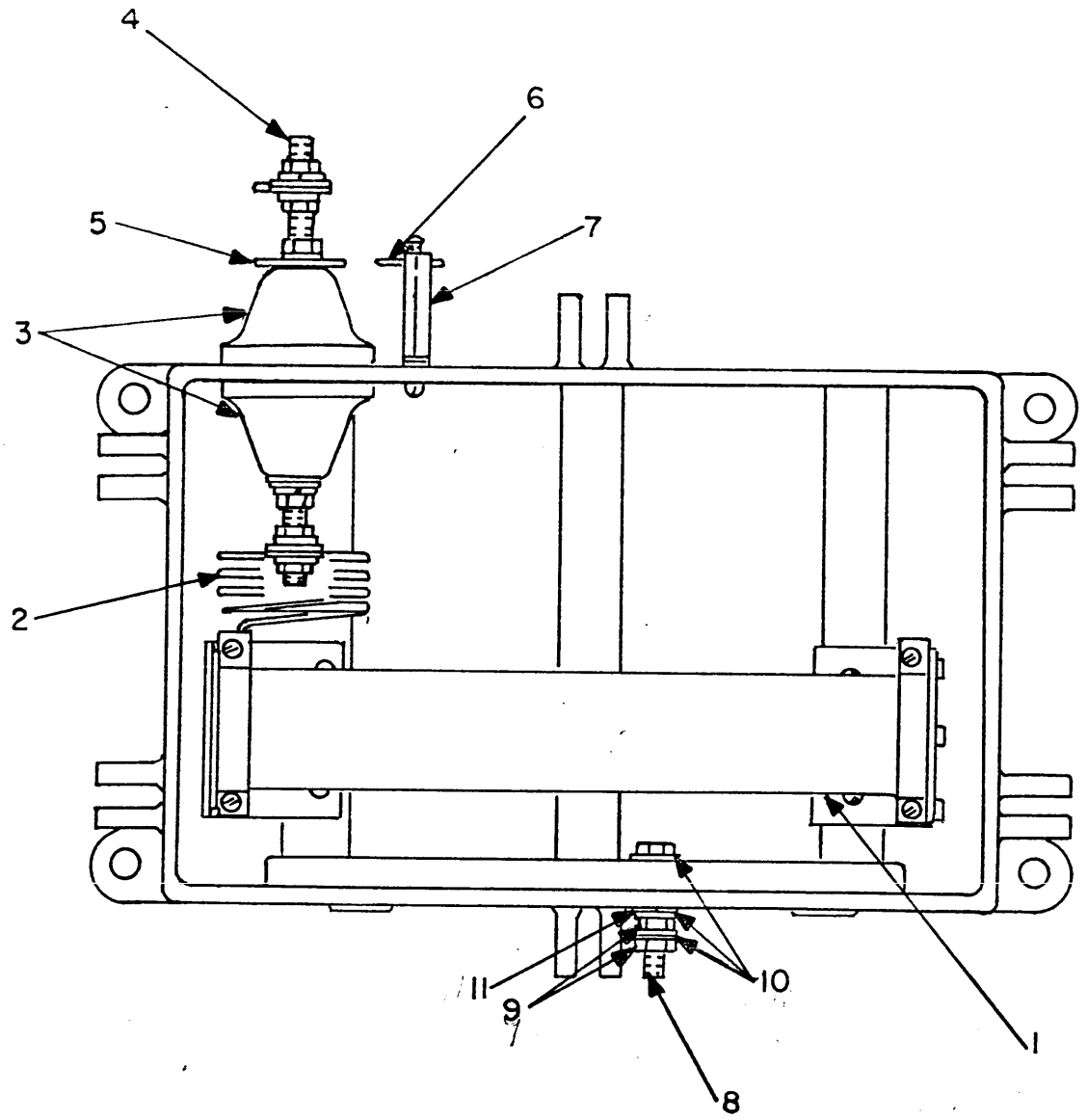
If the VSWR exceeds 1.3 for any frequency, small adjustments can be made in the coil spacing to bring it within tolerance.



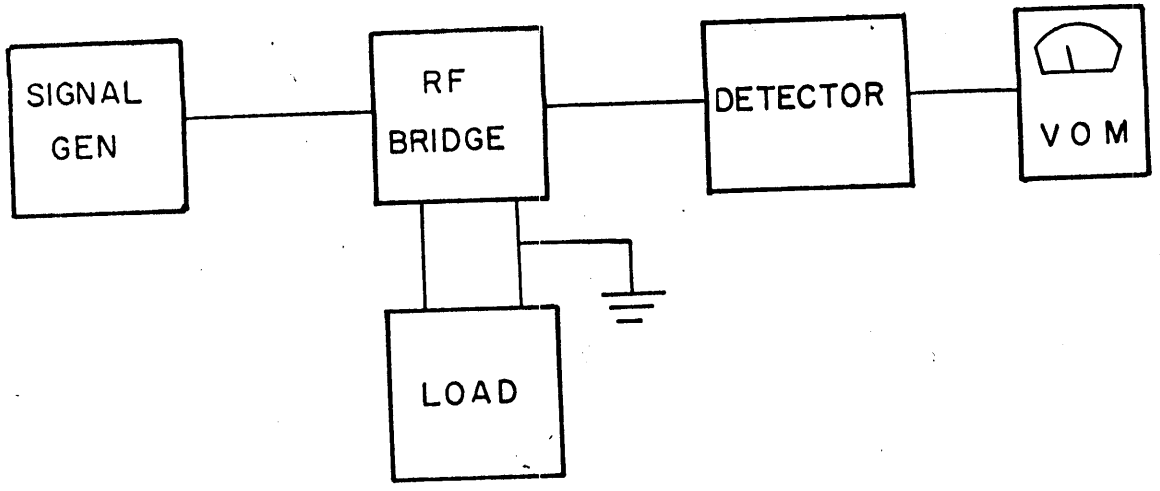
BULKHEAD MOUNTING



POLE MOUNTING



ITEM	NO. REQ	PART NO.	DESCRIPTION
1	1	A-2225	RESISTOR, ASSY
2	1	CL 280	COIL, RESISTOR EQUALING
3	2	NS 115	CAP INSULATOR
4	1	A-100	STUD ASSY
5	1	PM-723-1BN	CONTACT SPARK GAP
6	1	PM-724-1BN	ROD SPARK
7	1	PM-721-2BN.875	POST, SPARK ROD
8	1	SCHH2520BN28	SCREW, MACHINE
9	2	NTH2520BN14	NUT, HEX
10	4	FW25HBH	WASHER FLAT
11	1	LWS25MRN	WASHER LOCK


SIGNAL
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