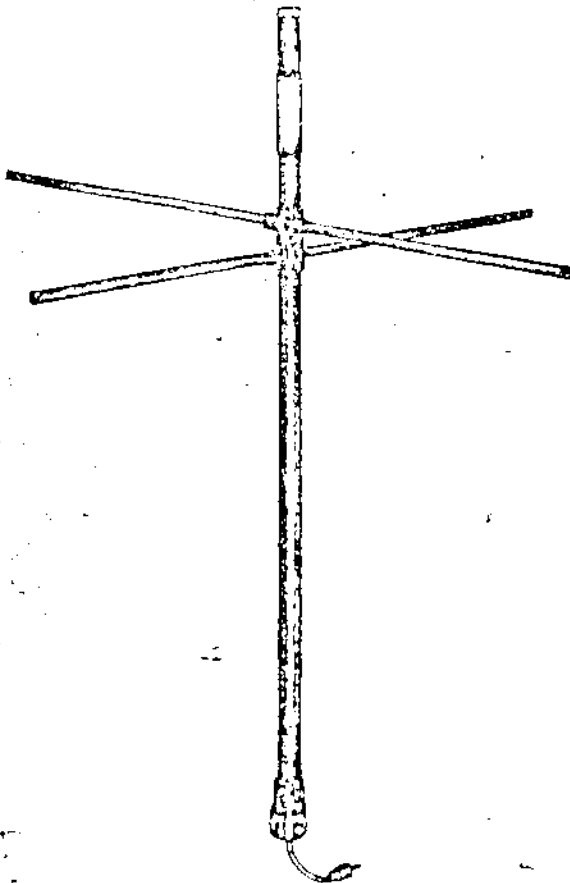


# GROUND PLANE ANTENNA KIT

## Model MTAD9501A



Model MTAD9501A GROUND PLANE ANTENNA KIT consists of an omnidirectional, vertically polarized antenna complete with coaxial cable, UHF connector and antenna mounting clamp. This antenna is designed for operation in the 148 to 174 mc band and features anodized aluminum construction throughout. The antenna feed cable and connector are normally enclosed in the mast for weather protection, the driven element being grounded for lightning protection by means of an internal short-circuited stub. Mechanically, the antenna is comprised of a 1.5 inch outside diameter radiator assembly and two 0.75 inch diameter ground plane rods fastened to the radiator by two clamps. The adaptor clamp supplied in the kit mounts the antenna to a 1.9 inch outside diameter tubular mast.

### NOMINAL SPECIFICATIONS

Frequency Range	148-174 MC
Impedance	50 Ohms
Gain	0 db over half-wave dipole
Standing Wave Ratio	Less than 2 to 1 from 150-174 MC
Maximum RF power	250 Watts
Horizontal Wind Thrust-total (with 1/2 inch of radiator)	85 mph winds: 30 lbs 110 mph winds: 50 lbs
Dimensions	51" high x 45" wide
Weight	5 lbs

### INSTALLATION INSTRUCTIONS

The following factors should be considered when installing the antenna:

- A length of 1 1/2 inch IPS tubular pipe (1.9 inches outside diameter) is required to support the radiator. If the adaptor clamp supplied in the kit is used, the transmission line must be terminated with a connector to mate with the antenna cable connector directly or by means of an adaptor. This cable should protrude from the supporting pipe to facilitate connection to the antenna cable.
- The ground plane rods are centered within the clamps and spaced radially at 90° intervals on the antenna. In normal 150 to 174 mc applications, the rods are centered between the two strips of tape serving as markers. This arrangement provides an SWR of better than 2 to 1 over the frequency band. For a particular operating frequency within the 148 to 174 mc band the optimum setting of the rod clamps for minimum SWR (better than 1.5 to 1) may be determined from the "Ground Rod Setting Chart" in the accompanying diagram. Having determined the rod positions, the marker tapes are removed and the rod clamps are secured to the antenna with the two screws and nuts provided, taking care not to over-tighten the screws.
- The clamp supplied with the antenna is fitted to the antenna base and secured with the set screw provided. Connect the antenna cable to the transmission line using an adaptor if necessary. The antenna is mounted to the mast by means of the clamp; at least two feet clearance being allowed between the ground plane rods and the upper guy wires supporting the mast. The antenna is secured with the two set screws in the clamp.
- The free end of the transmission cable is attached to the equipment. Refer to the transmitter section of the equipment manual for instructions on tuning the transmitter to the antenna.

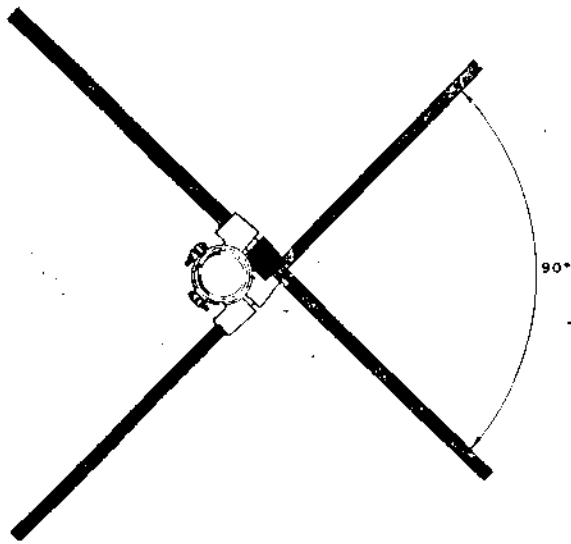


**CANADIAN MOTOROLA ELECTRONICS COMPANY**

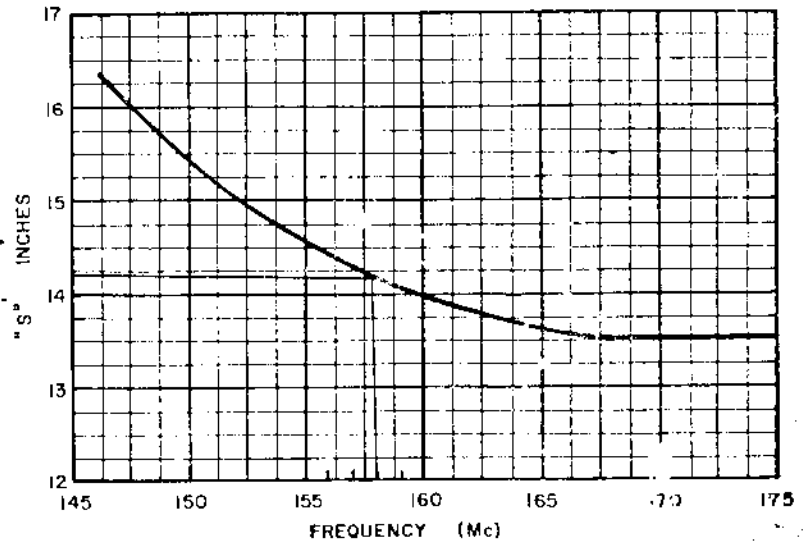
105 Bartley Drive, Toronto 10, Ontario

a division of Canadian Industries Limited

Part No.  
68P00001M-0



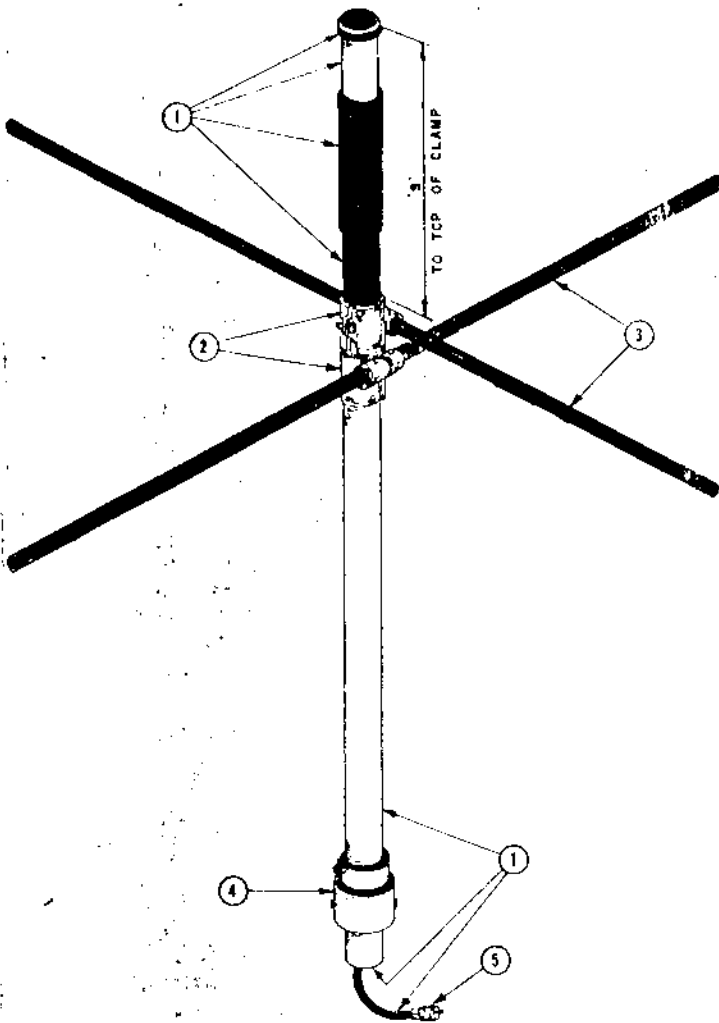
GROUND ROD SETTING CHART



MTAD9501A GROUND PLANE ANTENNA

PARTS LIST

REFERENCE SYMBOL	PART NO.	DESCRIPTION
1	85D00001M	ANTENNA ASSEMBLY, consists of:
	85D00001M01	TOP CAP
	85D00001M02	RADIATOR
	85D00001M03	RADOME
	85D00001M04	BASE AND MOUNTING PIPE
	30882345	CABLE RG-8U X 54"
	85D00001M11	RUBBER BASE PLUG
2	85D00001M05	CLAMP ASSEMBLY NO. 13
3	85D00001M06	ROD, GROUND
4	85D00001M07	CLAMP, PIPE NO. 9
5	28A42310	CONNECTOR, AMPHENOL, NO. 83-15P



MTAD9501A GROUND PLANE ANTENNA  
DIAGRAM  
69C00013M-A