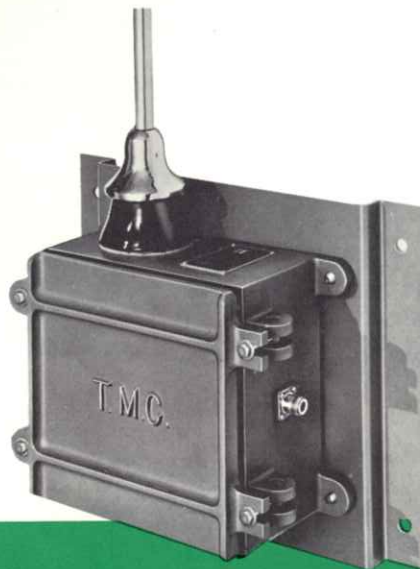


## VERTICAL RECEIVING ANTENNA

Series

VRA



TMC Model VRA-5

The VRA Vertical Receiving Antenna is used in all practical operating systems both on shipboard and on shore for fixed or transportable applications. Separate models of the VRA are available with either aluminum or fiberglass whips depending on the environment operating conditions.

The matching unit associated with the antenna mast is housed in a cast aluminum container installed on a mounting plate with the associated antenna base. This arrangement affords optimum protection from the environment while maintaining the entire system as a compact assembly.

The frequency response of the matching unit is flat within  $\pm 1.5$  db over the operating range and, as test results show, the compensating networks significantly improve the overall electrical characteristics of the antenna. It should be noted that impedance match over wide frequency ranges must of necessity be a compromise. In the VRA series, the optimum match is provided near the center of the band with less efficiency noted at the high and low ends. Typical response curves and test circuits are available on request.

The VRA-11 and VRA-12 antennas are two heavy duty 35-foot fiberglass models constructed in two sections and designed to withstand 100 mph winds. The masts are free-standing (no guy wires) and contain equally spaced copper wires to simulate a vertical cylinder. Extra epoxy is coated on the antenna surface for better protection against corrosion and for added strength.

The Model VTA series of antenna, described in Bulletin 2060 are suitable for both receiving and transmitting installation. Each is capable of handling 1000 watts peak and average power output.

Revised 15 August 1971  
Supersedes 8004A, 8020



THE TECHNICAL MATERIEL CORPORATION

AND SUBSIDIARIES

Printed in U.S.A.

## TECHNICAL SPECIFICATIONS

### Frequency Range

Refer to CHART "A" below.

### Equipment Case

All weather cast aluminum alloy

### Connector Assemblies

UG-58A/U receptacle with mating RF connector. P/N AX-259-2  
Additional assemblies as indicated on CHART "B"

### Mounting

Kit provided for pole or bulkhead mounting.

Antenna base is screw fitted into a metal base mounted on a porcelain insulator. The entire assembly can be further mounted on a rigid steel plate on special order (See photo).

### Safety

Receiver and personnel are protected from lightning by an adjustable internal spark gap.

### CHART "A"

### MODELS AVAILABLE

Model	Frequency	Height	Antenna Material	Response
VRA-5	200-800 KHz	18'	Aluminum	+/- 1.5 db
VRA-6	2-32 MHz	18'	Aluminum	+/- 1.5 db
VRA-7	3-15 MHz	35'	Aluminum	+/- 1.5 db
VRA-8	200-800 KHz	16'	Fiberglass	+/- 1.5 db
VRA-9	2-32 MHz	16'	Fiberglass	+/- 1.5 db
VRA-10	3-15 MHz	32'	Fiberglass	+/- 1.5 db
VRA-11	100KHz-30MHz	35'	Fiberglass	+/- 1.5 db
VRA-12	15-300 KHz	35'	Fiberglass	+/- 1.5 db

All Units Match into 70 ohms Nominal Impedance.

### CHART "B"

### OUTPUT TERMINALS

/C	AX-286-1	Type C Connector
/HN	AX-285-1	Type HN Connector
/LC	AX-287-5	Type LC Connector (70 ohms)
/N	AX-259-1	Type N Connector
/UHF	AX-281-1	Type UHF Connector
/UHFL	AX-256-1	Type UHF(L) Connector
/ES	ES-ST7875	7/8" Sytroflex End Seal, 70 ohms.



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