



TECHNICAL BULLETIN NUMBER 8004A

Vertical Receiving Antennas

TMC Models VRA-5

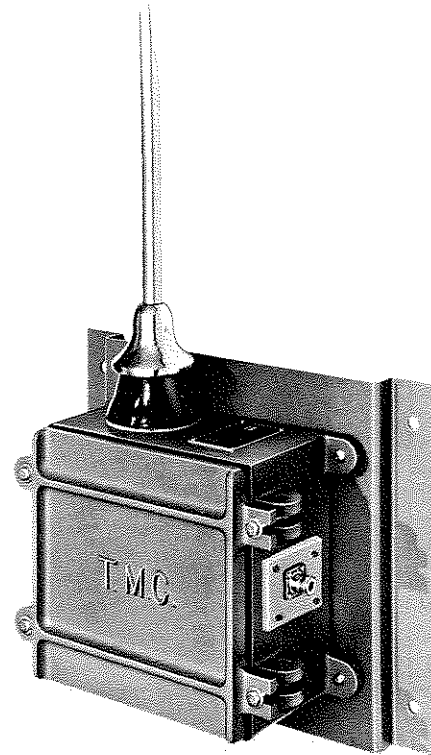
VRA-6

VRA-7

VRA-8

VRA-9

VRA-10



- 200 to 800 kc
2 to 32 mc
3 to 15 mc
- Aluminum and fiberglass whip antennas
- Universal mount

The Technical Materiel Corporation's VRA Antenna Series are available for all practical operating systems both afloat in a shipboard environment, as well as ashore. In connection with the latter utilization, models are available for both fixed installations or for transportable application.

When considering fixed installations, separate models of the VRA are available either with stainless steel or aluminum whips, depending on the operating environmental conditions.

With respect to transportable applications, the fiberglass configuration offers immediate installation application through the efforts of a single, untrained individual. The immediate adaptability of this high capacity radio frequency antenna system to transportable environments in both commercial and government applications is apparent.

Similarly, the tuner associated with the antenna mast is housed in a cast aluminum container which affords optimum protection from environments which may be found either at sea or at shore locations.

The coupling transformer used in Models VRA provide frequency response which is flat within ± 1.5 db over their operating ranges. However, it should be noted that impedance match over wide frequency ranges must, of necessity, be a compromise. In the case of Models VRA, optimum match is provided near the center of the band and efficiency at the lower and higher end is somewhat less.

Our VRA Models 11 and 12 offer a frequency coverage down to 15 kcs. Further information on these antennas is contained in Technical Bulletin 8020.

Vertical Receiving Antennas

TECHNICAL SPECIFICATIONS

FREQUENCY COVERAGE:

See Chart I.

CHART I — VRA MODELS

ANTENNA MODELS	FREQ. RANGE	XFMR FREQ. RESPONSE	WHIP MAT'L	HEIGHT	OUT-PUT IMP.	INSTALLED WEIGHT
VRA-5	200-800 kc	± 1.5db, optimum matching at 400 kc	Aluminum	18'	70 Ω Nom.	27 lb.
VRA-6	2-32 mc	± 1.5db from 2-32 mc	Aluminum	18'	70 Ω Nom.	27 lb.
VRA-7	3-15 mc	± 1.5db from 3-15 mc	Aluminum	35'	70 Ω Nom.	27 lb.
VRA-8	200-800 kc	± 1.5db, optimum matching at 400 kc	Fiberglass	16'	70 Ω Nom.	27 lb.
VRA-9	2-32 mc	± 1.5db from 2-32 mc	Fiberglass	16'	70 Ω Nom.	27 lb.
VRA-10	3-15 mc	± 1.5db from 3-15 mc	Fiberglass	32'	70 Ω Nom.	27 lb.

EQUIPMENT CASE:

Waterproof all weather cast aluminum alloy.

STANDARD WEATHERPROOF CONNECTOR PROVIDED:

UG-58A/U Receptacle mounted on case with mating cable connector TMC Part No. AX-259-2 (Alternate connector assemblies can be provided on customer order. See OPTIONS/ACCESSORIES.)

SAFETY:

Receiver and personnel protected from lighting by means of an adjustable internal spark gap.

MOUNTING KIT:

Installation hardware provided for pole or bulkhead mounting.

CONSTRUCTION:

Antenna base is screw fitted into a metal bell mounted on a porcelain insulator which is further supported on rubber bushings to withstand shock.

INSTALLED SIZE: (Less Antenna)

18½" × 16⅛" × 7".

INSTALLED WEIGHT:

27 lbs.

SHIPPING WEIGHT & CUBE:

50 lbs., 2.3 cu. ft.

COMPONENTS AND CONSTRUCTION:

Equipment is manufactured in accordance with JAN/MIL specifications wherever practicable.

OPTIONS/ACCESSORIES:

(Priced Separately.)

CONNECTOR ASSEMBLIES:

Alternate mounting plate connector assemblies as shown in Chart II.

CHART II

MOUNTING PLATE CONNECTOR ASSEMBLIES

MODEL NUMBER	DESCRIPTION
AX-256-1	Mounting Plate Connector Assembly type UHF(L)
AX-259-1	Mounting Plate Connector Assembly type N
AX-281-1	Mounting Plate Connector Assembly type UHF
AX-285-1	Mounting Plate Connector Assembly type HN
AX-286-1	Mounting Plate Connector Assembly type C
AX-287-5	Mounting Plate Connector Assembly type LC, 70 ohm with mating plug
AX-310	Mounting Plate Assembly, 1/2" stuffing tube
ES-ST7875	End Seal, Styroflex 7/8" 70 ohm

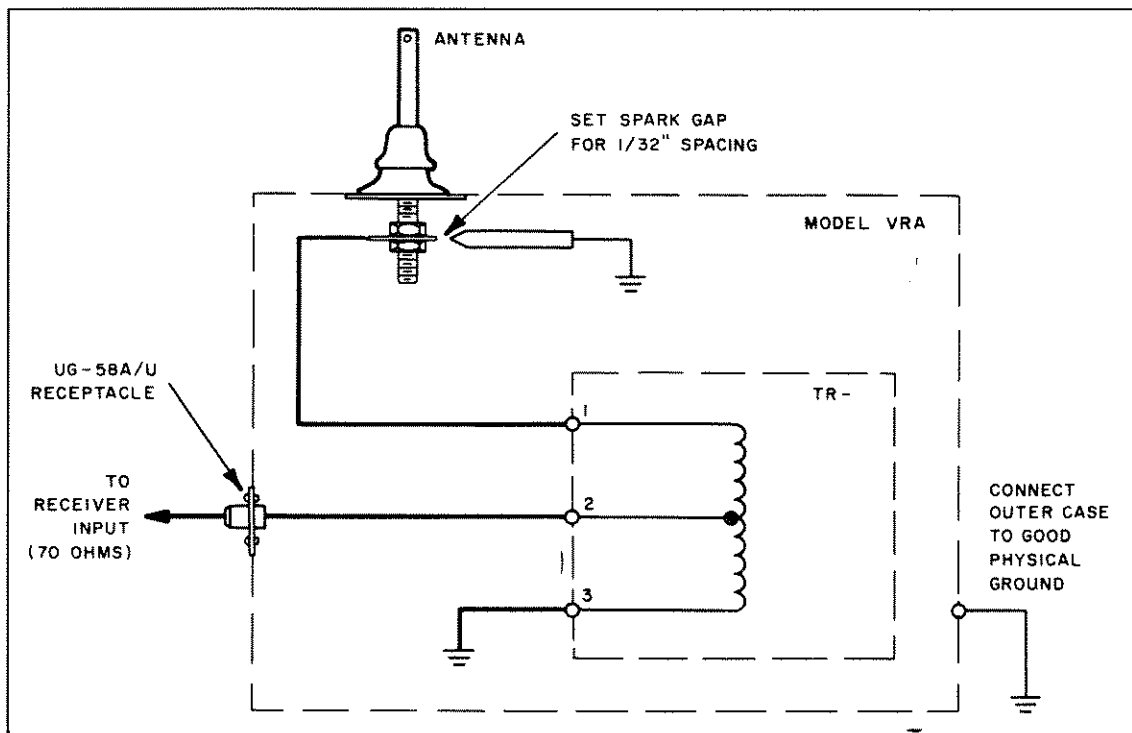


FIGURE 1. SIMPLIFIED SCHEMATIC AND CONNECTION DIAGRAM, MODELS VRA

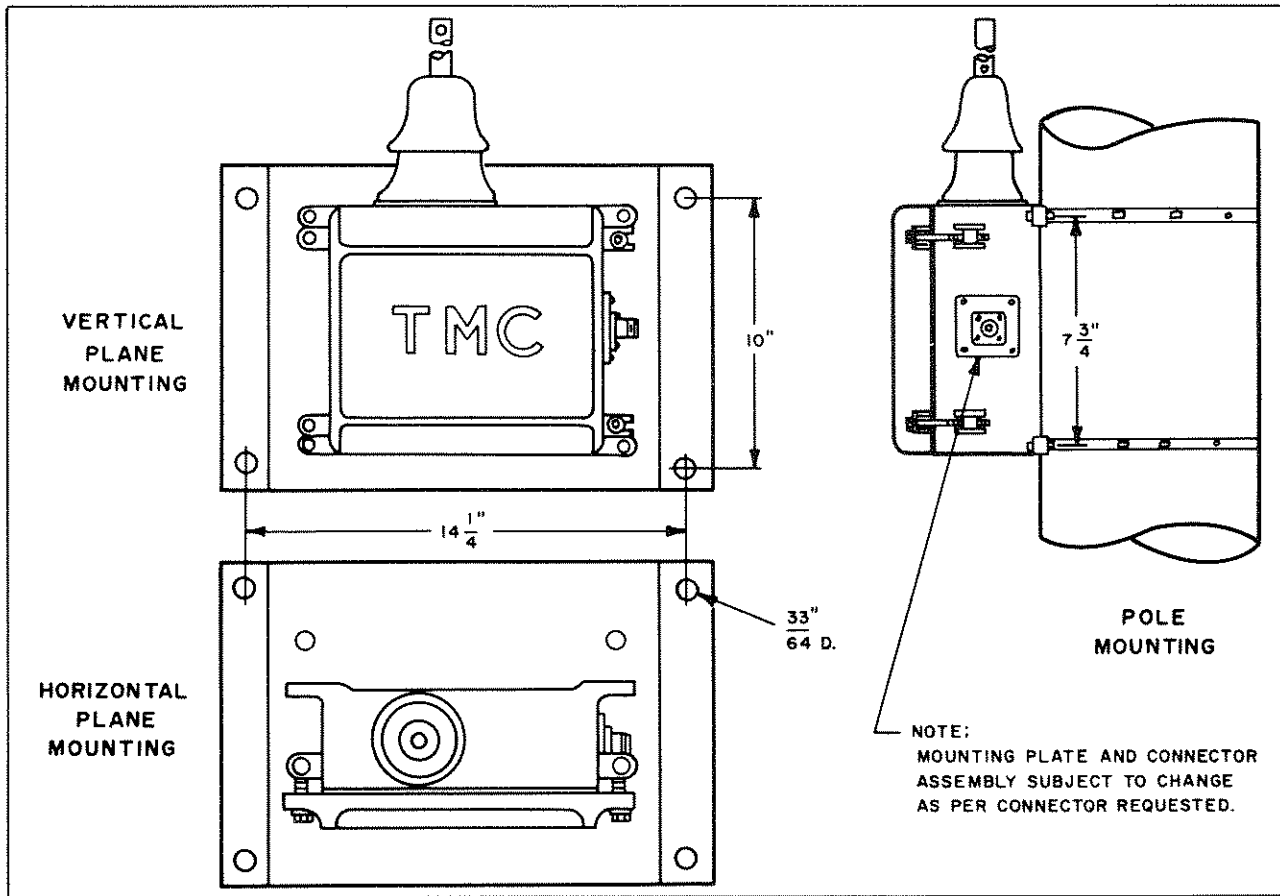


FIGURE 2. MODEL VRA, INSTALLATION DIAGRAM

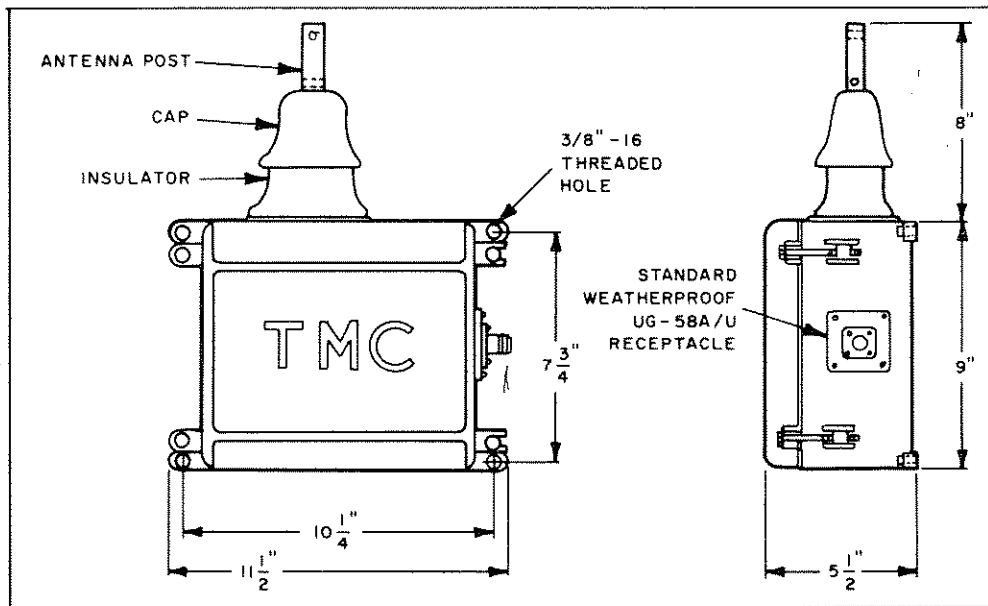


FIGURE 3. OUTLINE DIMENSIONAL DRAWING

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