Model OE-309/TRC-97A (MRT-2) 4.6m Antenna

Transportable Antennas

VertexRSI™
ISO 9001 Registered

The Strength to Perform

Description

The VertexRSI Medium Range Transportable Antenna Group (MRT-2) is used for command and control communications in a widely dispersed, rapidly moving tactical force.

The MRT-2 Group consists of a pair of rugged, all-aluminum, tripod-mounted 4.6-meter diameter parabolic antennas. Each antenna reflector is comprised of eight identical and interchangeable sets of panels, trusses and braces. The reflector is supported on a positioner that provides azimuth and elevation adjustment and includes the connections for the tripod legs. The system is raised from ground level to its operating height by one person without the use of cranes or jacks. A trained team of six people can unpack and deploy both antennas in four hours.

The MRT-2 has undergone an extensive three-year evaluation by the U.S. Air Force to optimize its performance and deployment.

The size, ease of transport and rapid deployment of these antennas combine to extend radio link range and reduce equipment, personnel and logistics support needs. This potential was demonstrated by the U.S. Air Force in a major exercise in which four groups of MRT-2 antennas replaced four groups of 8-foot shorter-range antennas. The exercise was accomplished with greater efficiency and dramatically reduced cost.

Features

- Compact palletized design for easy transportation
- Transported with M-35 truck, helicopter or cargo aircraft
- Linear polarized feed and waveguide are sealed in case for safe transportation
- Easily deployed without lift equipment in four hours by six people
- First-used/first-off palletized design
- Deployment tools included
- Self-contained tools and equipment for deployment

Options

- Satcom feed system

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Technical Specifications

Electrical*	
Frequency Range	4.4 - 5.0 GHz
Antenna Gain, dBi	44.0 minimum
VSWR	1.35:1
Power	5 kW CW
Sidelobe Performance (below peak)	
to 14°	-20 dB
14° to 22°	-28 dB
22° to 180°	-30 dB

Mechanical	
Reflector Material	Aluminum
Antenna Optics	Prime focus, dual linear polarized
Adjustment Range	
Elevation	-5° to +10°
Azimuth	±10°
Shipping Weight	4,800 lbs. (2,177 kg)
Height to Center of Reflector (deployed)	14 ft (4.3 m)
Reflector RMS	0.035 in (0.9 mm)
Shipping Dimensions	
Height	84 in (213 cm)
Width	88 in (224 cm)
Length	103 in (262 cm)
Volume	441 ft^3 (12.5 m^3)
Shipping Weight	
Stored on Pallet (both antennas)	4,800 lbs. (2,177 kg)
Deployed (each antenna)	1,500 lbs. (680 kg)
Deployment time (with 6 personnel)	
Single Antenna	2.5 hr
Dual Antennas	4 hr

Environmental	
Wind Loading (no ice)	
Operational	69 mph (111 km/h) with ground anchors
Survival	115 mph (185 km/h) with foot pad stakes
Temperature	-40° to +140° F (-40° to +60° C)
Atmospheric Conditions	Salt, pollutants and contaminants as encountered in coastal and industrial areas (meets MIL-STD-810)
Solar Radiation	360 BTU/h/ft^2 (1,000 Kcal/h/m^2)

* Patterns available upon request.

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