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4.5 Meter Mobile Troposcatter Antenna System

The ASC Signal 4.5 m (15 ft) transportable antenna consists of a three-piece hinged reflector, manual positioner, and dual polarized feed system mounted on a trailer.

The formed aluminum panels are cut from a single-piece precision spinning. The antenna elevation structure and positioner are made from hot dip galvanized structural steel. All fasteners are either stainless steel or hot galvanized structural bolts. The unique Trifold® antenna design provides excellent thermal expansion characteristics and ensures the extreme accurate surface contour. A large range of adjustment provides non critical positioner and trailer orientation for horizon-to-horizon applications. The center fed "J" hook prime focus feed assembly can be

pressurized to prevent ingress of moisture and electronically tuned to meet the specified requirements. The feed window is formed polycarbonate. The feed is supported by three Mylar® guy wires.

- Exceptional electrical performance
- Quick deployment
- Outstanding wind survival
- Durability and reliability

SPECIFICATIONS

4.5 Meter Mobile Troposcatter Antenna System

Electrical Performance

| | |
|--------------------|--|
| Frequency band | 4.4 GHz to 5.0 GHz |
| Antenna Gain | 43.9 dBi @ 4.4 GHz 44.4 dBi @ 4.7 GHz 45.0 dBi @ 5.0 GHz |
| Side Lobes | 1st Sidelobe -24 dB 14° - 22° -27 dB Greater than 22° < -30 dB |
| VSWR | 1.25:1 Maximum |
| Beam Width 3 dB | 0.94° - 1.05° |
| Cross Polarization | < -30 dB |
| Polarization | Dual Linear |
| Power CW | 5 Kw |

Mechanical Performance

| | |
|------------------------|---|
| Antenna Size | 15 ft (4.5 m) |
| Feed Type | Prime Focus |
| Mount Type | Elevation Over Azimuth |
| Reflector Material | Aluminum |
| Drive | Manual |
| Transport | Road/Air/Rail |
| Weight | 8,700 lb |
| Dimensions | Length 226 in Width 97 in |
| Antenna Pointing Range | Elevation ±3.6° Azimuth ±5.0° |
| Material | Reflector Pressurized Formed Aluminum Back Structure Galvanized Steel Hardware Stainless/Galvanized Steel |
| Wind Load Survival | Any Position 65 mph to 85 mph (108 km/hr to 133 km/hr) |
| Temperature | -40°C to 60°C |
| Pointing Accuracy | 0.10° with Wind Gusts 30 mph to 45 mph (50 km/h to 75 km/h) |
| Rain | Operational, 4 in/h (10 cm/h) |
| Relative Humidity | 0% to 100% with Condensation |
| Solar Radiation | 360 BTU/h/ft ² (1135 watts/m ²) |



ASC Signal Corporation

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