

# 7.5m Receive-Only Earth Station

## Ku-Band, C-Band, and X-Band Options

### Features

- C, Ku and X-Band Feed Options
- Circular Foundation Interface
- Full Line of Options to Meet Any Requirement
- High Wind and Full Motion Options Available
- No On-Site Panel Alignments Required
- Installation Teams and Supervisors Available
- Factory Assembled Mount Reduces Installation Time

### Description

Challenger's antenna reflectors incorporate precision stretch formed panels into very stiff backing structures. To ensure quality and performance, Challenger panels are inspected for R.M.S. accuracy using the latest in laser measurement techniques.

All reflector mounts are produced from high quality materials and treated for corrosion resistance by powder coat paint, epoxy paint or hot dip galvanizing as appropriate for each component. All hardware is stainless steel or hot dip galvanized depending on size and application.

**MADE IN THE USA**

RF Specifications	Ku-Band	C-Band	X-Band
Receive Frequency (GHz)	10.95 - 12.75	3.625 - 4.2	7.75 - 7.75
Midband Gain	57 dBi	47.9 dBi	53.5 dBi
Noise Temperature	50K @ 10°	45K @ 10°	48K @ 10°
Ports/Polarization	1 or 2 Port Linear	1 or 2 Port Circular/ <i>Motorized Feed System Also Available</i> 1 or 2 Port Linear	1 or 2 Port Circular
Polarization Rotation	360° Continuous	360° Continuous	360° Continuous
Polarization Isolation	30 dB LP	30 dB LP	25 dB LP
VSWR	Rx 1.4:1	Rx 1.4:1	Rx 1.4:1
Feed Flanges	Rx WR75	Rx CPR 229G	Rx CPR 112G

### Mechanical Data

Azimuth Travel	120° Standard
Elevation Travel	0° to 90° Standard
Drive System: Elevation	Mechanical Screw Jack Standard
Drive System: Azimuth	Mechanical Screw Jack Standard
Mount Type	Tube Pedestal
Structure Material and Finish	Hot Dip Galvanized Steel
Reflector Material and Finish	Aluminum with High Diffusive White Powder Coat Finish

### Environmental Data

Wind Loading	Operational:	45 mph (72 km/h); gusts to 60 mph (97 km/h)
	Survival:	125 mph (200 km/h) @ 58° F (15° C)
Ambient Temperature	Operational:	5° to 122° F (-15° to 50° C)
	Survival:	-22° to 140° F (-30° to 60° C)
Rain		Up to 4 in./hr (10 cm/hr)
Radial Ice	Survival:	1 in. (2.5 cm) all surfaces or 1/2 in. (1.3 cm) all surfaces with 80 mph (130 km/hr) gusts
Relative Humidity		0% to 100% with condensation
Solar Radiation		360 BTU/h/ft <sup>2</sup> (1000 Kcal/h/m <sup>2</sup> )
Seismic	Survival:	0.3 G's Horizontal, 1.0 G's vertical
Shock and Vibration		As occurred during shipment
Corrosive Atmosphere		As encountered in costal regions and/or heavily industrialized areas

All Challenger Communication Large Aperture Antennas are capable of surviving winds up to 125 mph as standard. High Wind designs are also available for areas that experience severe winds.



7.5 Meter Antenna

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