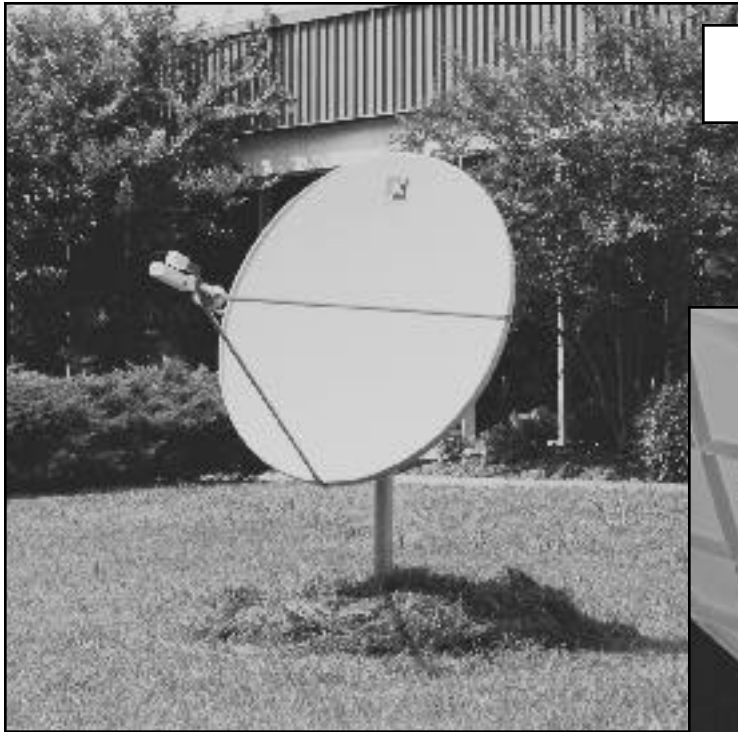


# 1.2m Receive-Transmit Offset Antenna System



*Sturdy Az/EI mount with elevation scale*

## FEATURES

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- One-piece precision offset thermoset-molded reflector.
- Fine azimuth and elevation adjustments.
- Galvanized .75 in. O.D. feed support legs.
- Factory pre-assembled mount.
- Cadmium-plated hardware for maximum corrosion resistance.
- Designed for lightweight outdoor units (ODUs). (5 lb. or 2.3 kg max. weight)

## DESCRIPTION

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The Channel Master® Type 123 1.2m Offset Rx-Tx Antenna is a rugged commercial grade product suitable for the most demanding applications. The reflector is thermoset-molded for strength and surface accuracy. Molded into the rear of the reflector is a network of support ribs which not only strengthens the antenna, but also helps to sustain the critical parabolic shape necessary for transmit performance. The reflector optics feature a long focal length for excellent cross-pol performance, required by many satellite operators.

The Az/EI mount is constructed from heavy-gauge steel to provide a rigid support to the reflector. The Az/EI mount secures the antenna to any 2.88 in.-3.00 in. O.D. mast and prevents slippage in high winds. A specially formulated powder paint process offers excellent protection from weather-related corrosion.

# SPECIFICATIONS

# TYPE 123

## 1.2m Receive-Transmit Offset Antenna System

### RF PERFORMANCE

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Effective Aperture		1.2m (48 in.)
Operating Frequency	Tx	13.75 - 14.50 GHz
	Rx	10.70 - 12.75 GHz
Polarization		Linear, Orthogonal
Gain ( $\pm 2$ dBi)	Tx	43.3 dBi @ 14.25 GHz
	Rx	41.8 dBi @ 11.95 GHz
3 dB Beamwidth	Tx	1.2° @ 14.3 GHz
	Rx	1.5° @ 12.0 GHz
Sidelobe Envelope (Tx, Co-Pol dBi)		29-25 Log $\theta$
	1.5° < $\theta$ < 20°	-3.5
	20° < $\theta$ < 26.3°	32-25 Log $\theta$
	26.3° < $\theta$ < 48°	-10 (Typical)
48° < $\theta$ < 180°	30 dB in 1 dB Contour	
Antenna Cross-Polarization		30 dB in 1 dB Contour
Antenna Noise Temperature	10° EI	45°K
	20° EI	31°K
	30° EI	24°K
VSWR		1.3:1 Max.
Isolation	Tx	70 dB min
	Rx	35 dB min
Feed Interface	Tx	WR-75
	Rx	WR-75

### MECHANICAL PERFORMANCE

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Reflector Material		Glass Fiber Reinforced Polyester
Antenna Optics		One-Piece Offset Feed Prime Focus - Long Focal Length
Mount Type		Elevation over Azimuth
Elevation Adjust.Range		7°-84° Continuous Fine Adjustment
Azimuth Adjust.Range		360° Continuous; $\pm 20^\circ$ Fine Adjustment
Mast Pipe Interface		2.88 in.-3.00 in.(73-76 mm) Diameter
Wind Loading	Operational	45 mi/h (72 km/h)
	Survival	125 mi/h (200 km/h)
Temperature		-50°C to 80°C
Humidity		0 to 100% (Condensing)
Atmosphere		Salt, Pollutants and Contaminants as Encountered in Coastal and Industrial Areas
Solar Radiation		360 BTU/h/ft <sup>2</sup>
Shock and Vibration		As Encountered During Shipping and Handling



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