

TSR 160

Crossed-Dipole Antenna



DESCRIPTION:

- ★ The TSR 160 has the following main features:
 - ★ Hemispherical coverage - no satellite tracking necessary.
 - ★ **R**ight **H**and **C**ircular **P**olarisation (RHCP) in vertical direction corresponding to the satellites.
 - ★ Linear, horizontal polarisation in the horizontal plane for best suppression of man-made electrical interference.
 - ★ Reflector, to create a directional characteristic for the suppression of fading caused by multipath propagation due to ground reflections.
 - ★ Optimized reflector-distance of 0.45λ for widest possible beamwidth to increase signal strength when the satellite is at or near the horizon.
- ★ The crossed-dipole turnstile antenna with reflector is ideal for the purpose, as it receives right hand circular polarisation when the satellite is directly overhead, and has an omnidirectional, horizontally polarized pattern for signals arriving parallel to the ground.
- ★ The reflector shields the crossed-dipole element from ground reflections which otherwise may cause the signal to disappear into the noise due to cancelling effects. Enhancing the dipole-to-reflector spacing from ideally 0.4λ to 0.45λ increases the strength of signals received at low angles.
- ★ Consequently, a constant signal throughout the pass with virtually no fading is ensured.

SPECIFICATIONS:

ELECTRICAL	
MODEL	TSR 160
ANTENNA TYPE	Crossed-dipole turnstile antenna with reflector
FREQUENCY	140 - 200 MHz
IMPEDANCE	Nom. 50 Ω
POLARISATION	Horizontally polarised in horizontal plane. Right Hand Circular Polarised in vertical direction
BAND WIDTH	60 MHz @ SWR 2
SWR	≤ 1.3 @ f. res.
MAX. POWER	100 watts (if used as a transmitting antenna)
MECHANICAL	
CONNECTOR	UHF-female
WIND SURFACE	0.036 m ²
WIND LOAD	46 N @ 160 km/h
TOTAL HEIGHT	Approx. 0.9 m
TIP TO TIP LENGTH	Approx. 0.9 m
WEIGHT	Approx. 0.8 kg
MOUNTING	On 30 - 44 mm dia. mast tube (not included)

