



21-50-12
VHF/UHF CONICAL WHIP
ANTENNA
30 to 512 MHz

FEATURES

- **Covers all operating portions of 30-512 MHz JTRS frequency band**
- **Efficient decoupling circuits maintain radiation pattern throughout frequency band**
- **Rugged construction for helicopter applications subject to high vibration levels**
- **No tuning required**
- **55 inches overall height**
- **Meets MIL-STD-810 environment**
- **50 Watts power handling**
- **Excellent gain maintained by passive impedance matching throughout frequency band**



The 21-50-12 antenna is a high performance, conical whip antenna designed for helicopters and covering the frequency band 30-512 MHz.

The 21-50-12 antenna employs a full length vertical element primarily for use at VHF together with a parasitically excited sleeve monopole designed for operation over the UHF band. Decoupling techniques are incorporated to avoid unwanted interaction and preserve performance throughout all operating bands. A frequency dependent matching network is incorporated to ensure acceptable VSWR with minimum loss of gain throughout the frequency band.

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SPECIFICATIONS

Cooper Antennas Model 21-50-12 VHF/UHF CONICAL WHIP ANTENNA

ELECTRICAL

Frequency	30 - 512 MHz
Gain	30 - 88 MHz -12 dBi to -6 dBi 108 - 174 MHz -4 dBi average 225 - 512 MHz +2 dBi average
VSWR	30 - 88MHz ≤ 2.5:1 108 - 174MHz ≤ 2.5:1 225 - 450MHz ≤ 2.25:1 451 - 512MHz ≤ 3.0:1
Impedance (nominal)	50 Ohms
Power	50 Watts CW
Polarization	Vertical
Antenna RF Connector	TNC Female
Operational Temperature	-40°C to +71°C

MECHANICAL

Fixings	6 holes Ø 0.213 inches (5.4mm), counter sunk Ø 0.42 inches (10.6mm) 100°
Overall Height	55 inches (1400mm)
Weight	3.7 lbs (1.7kg)

FINISH

Finish	Lusterless Black urethane
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Other finish options are available including Ice Shedding PTFE loaded paint.
Please specify finish required when ordering.

Note: Cooper Antennas Ltd has a policy of continuous product improvement and data herein is therefore subject to change.
Please check with Cooper Antennas Ltd that this data sheet is at latest issue before initiating contract activity.