



20-50-12
NSN 5985-99-181-0700
JTRS 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 mobile applications**
- **No tuning required**
- **Meets MIL-STD-810 environment**
- **100 Watts power handling**
- **Excellent gain maintained by passive impedance matching throughout frequency band**
- **Detachable top element**
- **Tri-pod legs fold back for stowage and transportation**



The 20-50-12 is a high performance wide band multi-element antenna intended for use with the Joint Tactical Radio System (JTRS) and similar radio systems operating within the frequency band 30 - 512 MHz.

The antenna comprises a tripod mounted wide band monopole with proprietary matching circuits that cover VHF and UHF frequency band. Decoupling techniques are employed to optimize radiation patterns throughout the entire frequency band.

Construction comprises a base element with detachable top VHF element having all matching circuits foamed-in-place to provide maximum strength and reliability.

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Cooper Antennas Ltd is Accredited to: ISO9001D, AS9100, ISO14001 and MAA Approved

SPECIFICATIONS

Cooper Antennas Model 20-50-12

JTRS Antenna NSN 5985-99-181-0700

Electrical Specification

Frequency: 30 to 512 MHz

Gain (typical at beam maximum):

| | |
|---------------|---------------|
| 30 MHz | -3 dBi |
| 88 MHz | -1 dBi |
| 108 – 174 MHz | 0 dBi average |
| 225 – 512 MHz | 0 dBi average |

VSWR (to 50 ohms):

| | |
|---------------|------------|
| 30 - 88 MHz | 3.0:1 max. |
| 118 - 174 MHz | 2.5:1 max. |
| 225 - 450 MHz | 2.5:1 max. |
| 451 – 512 MHz | 3.0:1 max. |

Impedance (nominal) : 50 Ohms

Power : 100 Watts CW

Polarization : Vertical

Antenna RF Connector : N Female

Operational Temperature : -40°C to +71°C

Mechanical Specification:

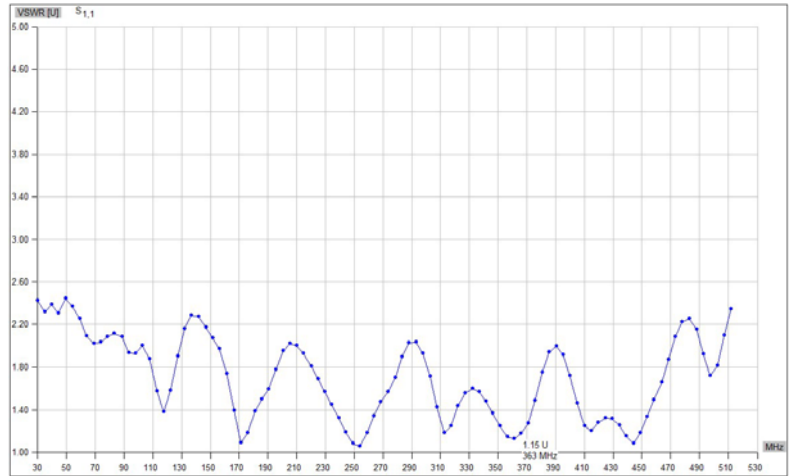
| | |
|------------------|---|
| Fixings : | Tripod mounted |
| Overall height : | 115 inches (2921mm) |
| Stowed Size : | 36 inches x 8 inches (915mm x 203mm) |
| Weight : | 10lbs (4.55kg) |

Finish Specification:

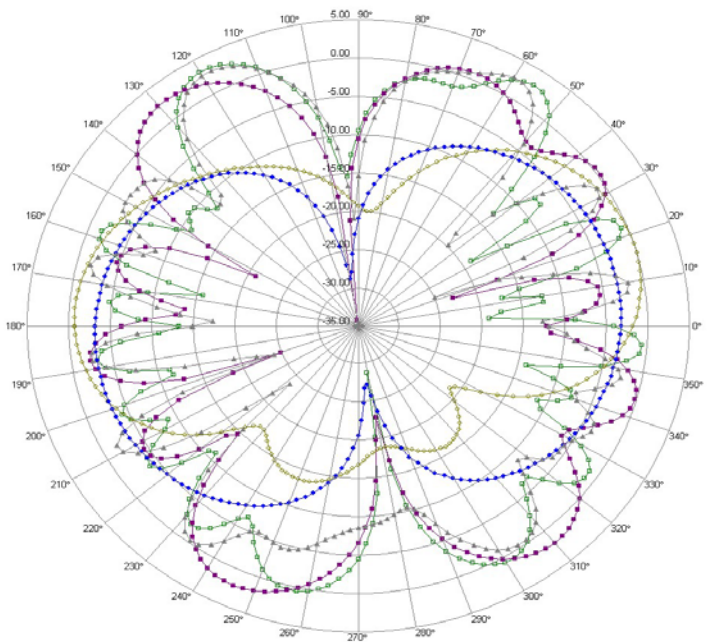
Urethane Lusterless Black

Other finish options are available.

Please specify finish required when ordering.



VSWR



Elevation radiation patterns (30, 90, 225, 400, 512 MHz)

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.