



20-50-17
NSN 5985-99-305-3184
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**
- **Omnidirectional azimuth pattern**
- **4-hole CECOM mount for vehicular / mobile applications**
- **No tuning required**
- **Less than 40 inches overall height**
- **Meets MIL-STD-810 environmental specifications**
- **100 Watts power handling**
- **Excellent gain maintained by passive impedance matching throughout frequency band**

The 20-50-17 is a high performance wide band multi-element antenna intended for use with the Joint Tactical Radio System (JTRS) and similar systems operating within the frequency band 30-512MHz.

The antenna comprises a CECOM base mounted parasitically excited UHF sleeved monopole co-linearly stacked with a spring mount VHF monopole element. Decoupling techniques are employed to minimize unwanted interaction between elements and thus maintain optimum radiation patterns throughout the entire frequency band.

Proprietary matching techniques are employed to maintain VSWR relatively independently of ground plane.

Construction comprises a rugged aluminum base unit having integral matching circuit with a spring mounted, detachable, top VHF element. The whole assembly is foam filled to provide maximum strength and prevent the ingress of moisture. A BNC (female) connector is fitted to the underside of the base plate and is protected by a metal guard ring.



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SPECIFICATIONS

Cooper Antennas Model 20-50-17

NSN 5985-99-305-3184

JTRS Antenna

ELECTRICAL

| | | |
|-------------------------|----------------|-------------------|
| Frequency | 30 - 512 MHz | |
| Gain | 30 - 88 MHz | -13 dBi to -6 dBi |
| | 108 - 174 MHz | - 4 dBi average |
| | 225 - 512 MHz | 0 dBi average |
| VSWR | 30 - 88MHz | ≤ 2.5:1 |
| | 118 - 174MHz | ≤ 2.5:1 |
| | 225 - 512MHz | ≤ 2.5:1 |
| Impedance (nominal) | 50 Ohms | |
| Power | 100 Watts CW | |
| Polarization | Vertical | |
| Antenna RF Connector | BNC Female | |
| Operational Temperature | -51°C to +71°C | |

MECHANICAL

| | | |
|----------------|---|--|
| Fixings | CECOM pattern base having four 7/16 inch (11.1mm) dia holes on 4.5 inch (114mm) circle. | |
| Overall Height | 39.6 inches (1006mm) | |
| Weight | 6.3 lbs (2.86kg) | |

FINISH

| | |
|-------------------|----------------------|
| Finish - Standard | Desert Sand urethane |
|-------------------|----------------------|

Other finish options are available. 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.