



**20-50-16**  
**Low Profile 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**
- **CECOM mounted construction for base station or mobile applications.**
- **No tuning required**
- **Just 41 inches overall height**
- **Meets MIL-STD-810 environment**
- **100 Watts power handling**
- **Excellent gain maintained by passive impedance matching throughout frequency band**
- **Detachable top element for stowage**

The 20-50-16 is a high performance wide band multi-element antenna intended for use with a Joint Tactical Radio System (JTRS) operating within the frequency band 30-512 MHz.

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

Construction comprises high integrity aluminum alloy mast with detachable top VHF element and integral matching circuits. The whole assembly is foam filled to provide maximum strength and prevent the ingress of moisture.



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# SPECIFICATIONS

## Cooper Antennas Model 20-50-16

### Low Profile JTRS Antenna

#### Electrical Specification

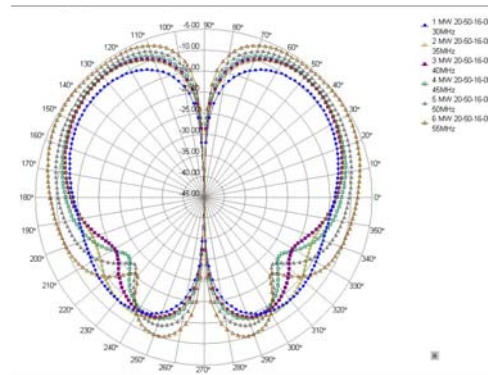
|                           |   |
|---------------------------|---|
| Frequency :               | 30-512 MHz                                |
| <b>GAIN :</b>             |   |
| 30-88 MHz                 | -13 dBi to -6 dBi                         |
| 118-174 MHz               | -4 dBi average                            |
| 225-512 MHz               | 0 dBi average                             |
| <b>VSWR :</b>             |   |
| 30-88 MHz                 | ≤ 2.5:1                                   |
| 118-174 MHz               | ≤ 3.0:1                                   |
| 225-490 MHz               | ≤ 2.5:1                                   |
| 491-512 MHz               | ≤ 3.0:1                                   |
| Impedance :               | 50 Ohms (nominal)                         |
| Power :                   | 100 Watts CW                              |
| Polarization :            | Linear (vertical when vertically mounted) |
| Antenna RF Connector :    | BNC Female                                |
| Operational Temperature : | -40°C to +71°C                            |

#### Mechanical Specification:

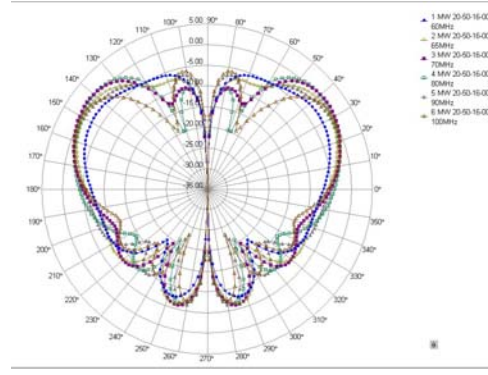
|                  |   |
|------------------|---|
| Fixings :        | CECOM pattern base with four 7/16 inch (11.1mm) dia. Holes on a 4.5 inch (114mm) circle |
| Overall height : | 41 inches (1041 mm)   |
| Weight :         | 5lbs (2.27kg)   |

#### Finish Specification:

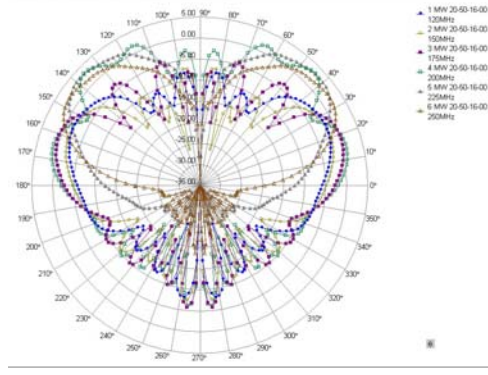
**Desert Tan**  
**Other finish options are available.**  
**Please specify finish required when ordering.**



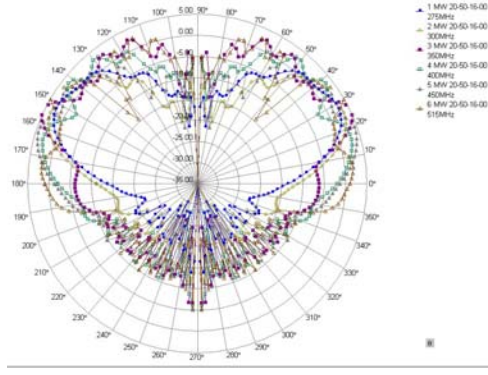
30-55 MHz



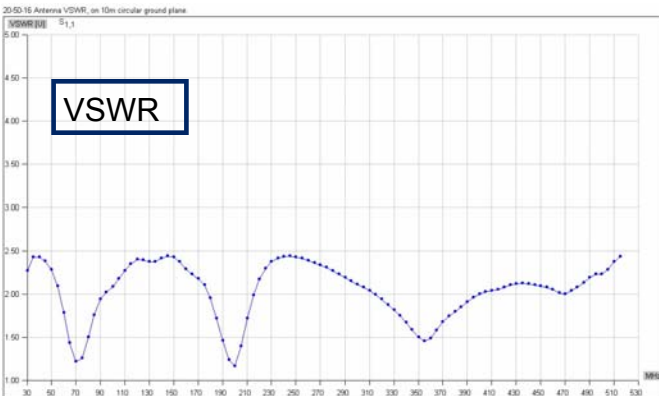
60-100 MHz



120-250 MHz



275-515 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.**