



21-50-101  
Wide-band VHF/UHF Airborne  
Blade Antenna  
30 to 512 MHz

## FEATURES

- **Only 13 inch height**
- **High Strength Broadband Top Disc-loaded Blade Antenna**
- **Requires no external tuning**
- **Fully Foamed for High Environmental Integrity**
- **Suitable for AN/ARC-182, AN/ARC-210, ARC 232 and Similar Multi-Mode Radios**
- **Complies with MIL-STD-810**
- **DC Grounded**
- **Gain optimized in 30-88 MHz (SINGARS) band**



The 21-50-101 is a vertically polarized, omni-directional antenna, compatible with all popular airborne radios operating within the 30 to 512 MHz frequency range. This antenna can handle up to 100 Watts of power and requires no external tuning.

This wideband, multi-function antenna developed by Cooper Antennas Ltd is particularly suited to tactical military communications. Rugged design ensures reliability in world wide conditions of service on helicopters and subsonic aircraft.

Use of a top loading disc optimizes efficiency in VHF and the antenna provides omni-directional radiation throughout the operating frequency range. The element is DC grounded for voltage transient protection. Unique element shaping preserves elevation pattern throughout frequency band.

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# SPECIFICATIONS

## Cooper Antennas Model 21-50-101 Broadband Airborne Blade Antenna

### ELECTRICAL

Frequency	30 - 88 MHz, 108 - 174 MHz, 225 - 512 MHz
Gain (typical)	30 MHz        -17.5 dBi 88 MHz        -7.0 dBi 108-137 MHz   -1.5 dBi average 138-174 MHz   +1.0 dBi average 225-300 MHz   +2.0 dBi average 301-512 MHz   +1.0 dBi average
VSWR	≤ 2.5:1
Impedance (nominal)	50 Ohms
Power	100 Watts CW
Polarization	Vertical
Radiation	Azimuth : Omni-directional Elevation : Similar to stub
Antenna RF Connector	TNC Female

### MECHANICAL

Antenna Shell Type	High density foam filled epoxy/fiber glass shell with aluminum alloy top-tube set in aluminum alloy base.
Height (max)	13 inches (330 mm)
Weight	4.5 lbs (2 kg)
Base Plate Shape	Tear drop
Fixing Holes	6 x Ø 0.234 inches (5.95mm) holes, counter bored Ø 0.39 inches (9.9mm)

### FINISH

Antenna	Urethane Lusterless Black
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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.