



21-50-31
Wide-band VHF/UHF Airborne
Blade Antennas
30 to 512 MHz

FEATURES

- **High Strength Broadband Top-loaded Blade Antenna**
- **Frequency Selective passive Matching Network**
- **Requires no external tuning**
- **Fully Foamed for High Environmental Integrity**
- **Suitable for AN/ARC-182, AN/ARC-210 and Similar Multi-Mode Radios**
- **Complies with MIL-STD-810**
- **DC Grounded**



The 21-50-31 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 surface deposited radiating element optimizes efficiency and provides omni-directional radiation throughout the operating frequency range. The element is DC grounded for lightning protection.

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Cooper Antennas Ltd is Accredited to: ISO9001, AS9100, ISO14001 and MAA Approved

SPECIFICATIONS

Cooper Antennas Model 21-50-31

Broadband Airborne Blade Antennas

ELECTRICAL

Frequency	30 - 88 MHz 108 - 174 MHz 225 - 512 MHz
Gain	30 MHz ≥ - 24.0 dBi 88 MHz ≥ - 12.0 dBi 108 MHz ≥ - 6.0 dBi 130 MHz ≥ - 2.5 dBi 174 MHz ≥ 0 dBi 225-512 MHz ≥ 0 dBi average
VSWR	≤ 2.5:1 30 - 88 MHz ≤ 2.5:1 108 - 174 MHz ≤ 2.5:1 225 - 512 MHz
Impedance (nominal)	50 Ohms
Power	50 Watts CW 30 - 88 MHz & 118 - 174 MHz 100 Watts CW 225 - 512 MHz
Polarization	Vertical
Radiation	Azimuth : Omni-directional Elevation : As 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	10 inches (254mm)
Weight	4 lbs (1.82kg)
Base Plate Shape	Oval
Fixing Holes	10 x Ø 0.208 inch (5.3mm) holes, counter bored Ø 0.48 inches (12.2mm)

FINISH

Antenna	Lusterless Black Urethane
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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.