



21-50-20
Broadband Airborne Blade
Antenna
30 to 400 MHz

FEATURES

- **High Strength Broadband Blade Antenna**
- **Frequency Selective Matching Network**
- **Fully Foamed to Provide High Environmental Integrity**
- **Aluminum Alloy Retaining Collar Accepts High Side Loading**
- **Equivalent to AS-3191/A & AS-3793/A**
- **Suitable for AN/ARC-182, AN/ARC-186 and Similar Multi-Mode Radios**
- **Complies with MIL-STD-810**
- **Meets Requirements of NSN 5985-01-134-2291**
- **Meets MIL-DTL-8567B lightning protection requirements**



The 21-50-20 is a vertically polarized, omni-directional antenna, compatible with all popular airborne radios operating within the 30 to 400 MHz frequency range. The 21-50-20 antenna can handle 50 Watts of power and requires no external tuning.

The 21-50-20 is a wideband, multi-function antenna developed by Cooper Antennas Ltd and is particularly suited to tactical military communications. Rugged design ensures reliability in world wide conditions of service on aircraft operating at speeds up to Mach 1.0.

Use of a surface deposited radiating element optimizes efficiency. The element is DC grounded for lightning protection.

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SPECIFICATIONS

Cooper Antennas Model 21-50-20

Broadband Airborne Blade Antenna

ELECTRICAL

Frequency	30 - 88 MHz 108 - 174 MHz 225 - 400 MHz
Gain	30 MHz ≥ - 23.0 dBi 88 MHz ≥ - 11.0 dBi 108-174 MHz -3.0 dBi average 225-400 MHz +3.0 dBi average
VSWR	≤ 2.5:1 30 - 88 MHz ≤ 2.5:1 108 - 118 MHz ≤ 2.0:1 118 - 174 MHz ≤ 2.0:1 225 - 400 MHz
Impedance (nominal)	50 Ohms
Power	50 Watts CW
Polarization	Vertical
Radiation	Azimuth : Omni-directional Elevation : As stub
Antenna RF Connector	BNC Female

MECHANICAL

Antenna Shell Type	High density foam filled epoxy/fiber glass shell set in aluminum alloy base collar
Height	14.6 inches (371mm)
Weight	3.5 lbs (1.59kg)
Side Loading	≥8 psi ultimate
Base Plate Shape	Tear drop
Fixing Holes	6 x Ø 0.234 inches (6mm) holes, counter sunk at 100° Ø 0.39 inches (9.9mm)

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.