



**21-50-56**  
**NSN 5985-01-621-9678**  
**Broadband Airborne Blade**  
**Antenna**  
**30 to 512 MHz & 960 to 2500 MHz**

## FEATURES

- **Frequency Selective Matching Network**
- **Passive design-requires no external tuning**
- **Fully Foamed to Provide High Environmental Integrity**
- **Aluminum Alloy Retaining Collar Accepts High Side Loading**
- **Drop-on Replacement for AT-1108 & AS3191**
- **Suitable for AN/ARC-210, AN/ARC-231 and Similar Multi-Mode Radios**
- **Complies with MIL-STD-810/DO160D**
- **Lightning Protection in accordance with MIL-DTL-2565**



The 21-50-56 is a vertically polarized, omni-directional antenna, compatible with all popular airborne radios operating within the 30 to 512 MHz frequency range plus Link16, Tacan, IFF, JTIDS and other L-band systems.

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 aircraft operating at speeds up to Mach 1.0.

The element is DC grounded for high voltage transfer protection.

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

# SPECIFICATIONS

## Cooper Antennas Model 21-50-56

### Broadband & L-Band Blade Antenna

#### ELECTRICAL

Frequency	30 - 88 MHz, 108 - 174 MHz, 225 - 512 MHz 960 - 2500 MHz
Gain	30 MHz ≥ -23.0 dBi 60 MHz ≥ -18.0 dBi 88 MHz ≥ -10.0 dBi 118 MHz ≥ -7.0 dBi 156 MHz ≥ -2.0 dBi 174 MHz ≥ -1.0 dBi 225-512 MHz ≥ 0 dBi average 960-2500 MHz 0dBi average
VSWR	≤ 2.5:1 30 - 88 MHz ≤ 3.0:1 108 - 117 MHz ≤ 2.5:1 118 - 174 MHz & 225 - 400 MHz ≤ 2.75:1 401 - 512 MHz ≤ 2.0:1 960 - 1220 MHz ≤ 2.5:1 1221 - 2500 MHz
Impedance (nominal)	50 Ohms
Power	VHF - 50 Watts CW, L-band - 200 Watts CW UHF - 100 watts CW
Polarization	Essentially vertical (when mounted vertically)
Antenna RF Connector	V/UHF - TNC Female

#### MECHANICAL

Antenna Shell Type	High density foam filled epoxy/fiber glass shell set in aluminum alloy base collar
Height	14.75 inches (375mm)
Weight	3.75 lbs (1.7kg)
Side Loading	≥8 psi ultimate
Base Plate Shape	Tear drop
Fixing Holes	6 x Ø 0.200 inches (5mm) holes, counter bore Ø 0.39 inches (9.9mm)

FINISH PART NUMBER	COLOR DESCRIPTION
21-50-56	FED-STD 595 37038 Urethane Lusterless Black
21-50-56F81	FED-STD 595 36118 Medium Gunship Gray
21-50-56F03	FED-STD 595 17925 Gloss White

Other finish options are available. Please specify required finish 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.