



21-50-98
NSN 5985-99-701-7510 &
NSN 5985-01-551-5690
Broadband Airborne
Blade Antenna
30 to 512 MHz

FEATURES

- **High Strength**
- **Frequency Selective Passive Matching Network**
- **Fully Foamed for High Environmental Integrity**
- **Aluminum Alloy Retaining Collar Accepts High Side Loading**
- **Designed to MIL-DTL-85670B Specification**
- **Drop-on Replacement for AT-1108 and AS3191**
- **Complies with MIL-STD-810**
- **Meets Lightning protection requirements of AS3191**



The 21-50-98 is vertically polarized, omni-directional antenna, compatible with all popular airborne radios operating within the 30 to 512 MHz frequency range. The antenna can handle 100 Watts of power, requires no external tuning and is designed as an extended frequency coverage replacement for AS3191 to operate with latest JTRS radios.

This wideband multifunction 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 0.95.

Use of a surface deposited radiating element optimizes efficiency and the radiating element is DC grounded for static protection.

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

SPECIFICATIONS

Cooper Antennas Model 21-50-98

Broadband Airborne Blade Antenna

ELECTRICAL

Frequency	30 - 88 MHz, 108 - 174 MHz & 225 - 512 MHz
Gain	-22.5 dBi @ 30 MHz rising approximately linearly to +4 dBi @ 512 MHz Gain is equal or better than AS3191 as defined in MIL-DTL-85670B
VSWR	≤ 2.5:1
Impedance (nominal)	50 Ohms
Power	50 Watts CW VHF 100 Watts CW UHF
Polarization	Vertical
Radiation	Azimuth : Omni-directional Elevation : As stub
Antenna RF Connector	TNC Female

MECHANICAL

Antenna Shell Type	High density foam filled epoxy/fiberglass shell set in aluminum alloy base collar
Height	14.65 inches max (372mm)
Weight	3.5 lbs max (1.6kg)
Side Loading	≥8 psi ultimate
Base Plate Shape	Tear drop
Fixing Holes	6 x Ø 0.234 inches (5.9mm) holes, counter bored top side Ø 0.39 inches (9.9mm)

FINISH

Antenna	Urethane Lusterless Black
Baseplate	Unpainted

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.