



21-50-56-5
Combined VHF/L-Band
Blade Antenna
118-156 MHz & 960-1220 MHz

FEATURES

- **Suitable for VHF ATC and DME/TACAN**
- **Passive design - requires no external tuning**
- **Isolated VHF and L-Band outputs**
- **Fully sealed internally foamed high strength blade design**
- **Drop on replacement for AT-1108 and AS3191 mounting hole pattern**
- **Environmental design to MIL-STD-810, -55°C to +71°C, 55,000 feet**
- **Lightning protected per MIL-B-5087, less than 500v imported**



The 21-50-56-5 is a combined VHF/L-Band blade antenna suitable for use with VHF ATC and DME/TACAN systems fitted to helicopters and fixed wing aircraft operating up to Mach 0.95. Construction comprises a high strength, glass epoxy radome set into an aluminum alloy base collar with internal 'foamed-in-place' radiating, matching and filtering elements. RF design insures good azimuthal omni-directivity and minimal interaction between VHF and DME/TACAN elevation patterns. This antenna has DC grounded elements for P-Static and indirect lightning strike effects protection.

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SPECIFICATIONS

Cooper Antennas Model 21-50-56-5 Combined VHF/L-Band Blade Antenna

ELECTRICAL

Frequency	118 - 156 MHz and 960 - 1220 MHz
Gain	118-156 MHz ≥ 0 dBi average 960-1220 MHz $\geq +2$ dBi average
VSWR	$\leq 2.5:1$ 118 - 156 MHz $\leq 2:1$ 960 - 1220 MHz
Impedance (nominal)	50 Ohms
Power	VHF 50 Watts CW L-band 2 kW Peak
Isolation	≥ 50 dB (L-Band to VHF) ≥ 25 dB (VHF to L-Band)
Polarization	Essentially vertical (when mounted vertically)
Radiation	Nominally omni-directional in azimuth and Co-sinusoidal in elevation
Antenna RF Connector	VHF - TNC Female L-Band - N 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 \varnothing 0.200 inches (5mm) holes, counter bore \varnothing 0.39 inches (9.9mm)

FINISH

21-50-56-5	Urethane Lusterless Black
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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.