



21-160-02
Lo-Profile - Fast Tune
VHF/UHF Antenna
30 - 512 MHz

FEATURES

- **Frequency Hopping - fast tune using p-i-n diodes**
- **Only 7.87" (200mm) high**
- **Tuning Controlled by separate Logic Control Unit (LCU)**
- **Designed to MIL-STD-810 Environmental conditions**
- **Suitable for helicopter and subsonic aircraft**
- **Footprint compatible with AS-3191**
- **Exceptionally low harmonic generation levels**
- **Continuous frequency coverage 108-512 MHz**



21-171 Series
Logic Converter

This tunable antenna provides exceptional gain in the 30-88 MHz SINCGARS band compared to similarly sized passive antennas whilst maintaining optimum and continuous performance from 108 MHz right up to 512MHz. Many years of experience in designing solid-state tuned antennas has enabled CAL's team to provide the ultimate in performance and reliability for a frequency agile airborne blade. Close attention to environmental, EMI and harmonic generation design considerations combined with latest composites structural technology makes the 21-160-02 suitable for helicopters and subsonic aircraft, particularly when there is low ground clearance. The separate logic converter unit combines flash memory technology with MIL spec'd power supply in a MIL-STD-461 compliant package. LCU's can be programmed for all modern digital transceivers. A unique feature of this antenna design is that the main radiating element is passive, symmetrical and fully matched for the UHF band and the p-i-n diode tuning circuitry only operates in VHF and is enclosed within the radiating element. In this way, excellent azimuthal omni-directivity is maintained throughout the entire frequency band. Excellent VHF low band gain is additionally achieved by the thin section top loading plate.

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SPECIFICATIONS

Cooper Antennas Model 21-160-02

Lo-Profile - Fast Tune VHF/UHF Antenna

ELECTRICAL

Frequency	30-88 MHz 108-512 MHz (continuous coverage)
Gain (typical)	≥ -13.5 dBi (30 MHz) ≥ -6 dBi (88 MHz) ≥ -3 dBi average (118-174 MHz) ≥ +1 dBi average (225-512 MHz)
VSWR	≤ 2.5:1
Impedance (nominal)	50 Ohms
Power	25 Watts
Tuning Time	Less than 60μ seconds
Polarization	Vertical (when vertically mounted)
Antenna RF Connector	N Type
DC Connector	Multi pin (KPT02E12-10P)
LCU part number	21-171-02

MECHANICAL

Height	7.87 inches (200mm)
Weight	Antenna 3.5 lbs (1.59kgs) Logic Unit 1.65 lbs (0.75kg)
Fixing Holes	6 x Ø 0.208 inch holes for 10:32 UNF holes or similar

FINISH

Antenna	Urethane Lusterless Black
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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.**