



21-290-01

**Combined Passive/Digitally Tuned
VHF/UHF & L-Band Antenna
30 - 512 MHz & 960 - 1220 MHz**

FEATURES

- **Frequency Hopping - fast tune Capability and increased radiation efficiency**
- **Tuning Controlled by Separate Logic Control Unit (LCU) compatible with latest generation multi-mode radios**
- **Designed to MIL-STD-810 Environmental conditions**
- **Suitable for helicopter and subsonic fixed wing aircraft**



This antenna provides exceptional gain via a digitally tuned element in the 30-88 MHz band combined with wide band passive VHF/UHF & L-band elements. The elements are co-located within a single, high strength fiber glass radome. Unique radiating element design provides simultaneous operation of VHF/UHF & L- band through separate coaxial connectors. Many years of experience in designing solid-state tuned antennas has enabled CAL's team to provide the ultimate in performance and reliability in this frequency agile airborne blade. Close attention to environmental and EMI design considerations, and the latest composites structural technology makes the 21-290-01 suitable for helicopters and subsonic aircraft and is compliant with MIL-STD-810. The separate logic converter unit combines flash memory technology with a MIL spec power supply in a MIL-STD-461 compliant package. LCU's can be provided for most current generation digital transceivers. Transceiver should be specified when ordering.

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

SPECIFICATIONS

Cooper Antennas Model 21-290-01

Combined Passive/Digitally Tuned VHF/UHF & L-Band Antenna

ELECTRICAL

Frequency	30-88 MHz 108-174 MHz 225-512 MHz 960 - 1220 MHz
Gain (typical)	≥ - 10 dBi (30 MHz) ≥ - 2 dBi (88 MHz) ≥ 0 dBi (118 MHz) ≥ 0 dBi (174 MHz) ≥ +2 dBi average (225-512 MHz) ≥ +1 dBi average (960-1220 MHz)
VSWR	≤ 2.5:1 (V/UHF) ≤ 2.0:1 (L-Band)
Impedance (nominal)	50 Ohms
Power	50 Watts VHF (30 - 174 MHz) 100 Watts UHF (225-512 MHz) 3 kW peak 0.004 duty cycle L-Band
Tuning Time	Less than 60 μ seconds
Polarization (nominal)	Vertical (when vertically mounted)
Antenna RF Connector	TNC Female VHF/UHF N Type Female L-Band
DC connector	Multi pin D38999

MECHANICAL

Height	12.3 inches max
Mounting Holes	10 x 10:32 UNF or similar
Weight	Antenna 5.5 lbs

ENVIRONMENTAL

Temperature	-54°C to +80°C
Operating Speed	Up to Mach 0.95

FINISH

Antenna	Urethane Gloss White
Base Plate	Unpainted

Other finish options are available. Please specify required finish when ordering.

Note: Cooper Antennas Ltd have a policy of continuous product improvement. The data herein is therefore subject to change. Please check with Cooper Antennas Ltd to verify that this data sheet is the latest issue before initiating contract activity.