



**21-150-18**  
**High Power/Digitally Tuned**  
**VHF/UHF Antenna**  
**30 - 512 MHz**

**FEATURES**

- **Frequency Hopping - fast tune Capability and increased radiation efficiency**
- **43 Watts Power Handling**
- **Tuning Controlled by Separate Logic Control Units (LCU's) available for most modern digital radios**
- **Compatible with SINCGARS, HAVEQUICK and other secure waveforms**
- **Continuous VHF and UHF guard frequency response**
- **Designed to MIL-STD-810 Environmental conditions**
- **Suitable for helicopters and subsonic aircraft**
- **Footprint replacement for 437S-IH**
- **Direct and Indirect (LITS) Lightning Protection**



This antenna provides exceptional gain via a digitally tuned element in the 30-174 MHz band combined with a passive UHF element, co-located within a single, high strength fiberglass radome. Unique radiating element design ensures excellent patterns over the complete frequency range and provides continuous and simultaneous reception of 121.5, 156.8, 243 and 406 MHz guard channels irrespective of antenna tuning between 118-512 MHz.

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 and EMI design considerations combined with latest composites structural technology makes the 21-150-18 suitable for helicopters and subsonic aircraft. This antenna includes a lightning protection scheme whereby internal metal elements are high voltage insulated such that diverters on the outer radome surface attached to the isolated aluminum top plate cause local ionisation and lead the strike to airframe.

The separate logic converter unit combines FPGA embedded flash memory technology with MIL spec'd power supply in a MIL-STD-461 compliant package. LCU's can be provided for most current generation digital transceivers which should be specified when ordering.

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# SPECIFICATIONS

## Cooper Antennas Model 21-150-18

### High Power Digitally Tuned VHF/UHF Antenna

#### ELECTRICAL

Frequency	30-88 MHz 108-174 MHz 225-512 MHz	
Gain (typical)	≥ - 11 dBi (30 MHz) ≥ - 3 dBi (88 MHz) 0 dBi average (118 to 174 MHz) +1 dBi average (225-512 MHz)	
Guard Channel Gain	≥ -2 dBi (121.5 and 156.8 MHz) ≥ 0 dBi (243 and 406 MHz)	} Irrespective of tuned frequency from 118 to 512 MHz
VSWR	≤ 2.5:1	
Impedance (nominal)	50 Ohms	
Power	43 Watts over full band	
Tuning Time	Less than 60μ seconds	
Polarization (nominal)	Vertical (when vertically mounted)	
Antenna RF Connector	TNC Type Female	
DC connector	PTO2 12-10P	

#### MECHANICAL

Height	10 inches
Mounting Holes	Suitable for 8 x 10:32 UNF or similar
Weight	Antenna 4.5 lbs

#### ENVIRONMENTAL

Temperature	-54°C to +80°C
Operating Speed	Up to Mach 0.85

#### FINISH

Antenna	Urethane Lusterless Black
Base Plate	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.