



**21-50-48**  
**UHF/MUOS SATCOM**  
**and VHF/UHF LOS Antenna**  
**240 to 385 and 30 to 512 MHz**

## FEATURES

- **Finish F81 is NSN 5985-01-623-7126**
- **Suitable for helicopter, vehicular, fixed and mobile applications**
- **Covers UHF Satcom and MUOS as well as VHF/UHF Line of Sight (LOS)**
- **All Weather operation**
- **Wide Angle pattern coverage without Hi-Lo switching**
- **200 Watts CW Power handling for Satcom**
- **Designed to MIL-STD-810**



Combining highly efficient “droopy dipoles” with a wide band, line-of-sight linear element, the 21-50-48 provides Hi-Lo angle UHF Satcom from a single connector plus a separate VHF/UHF/EPLRS element in a single airborne antenna.

Element shaping and matching of the circularly polarized dipoles provides UHF Satcom coverage right through the UHF and MUOS band with useable radiation and gain typically from zenith down to 20 degrees or less above the horizon.

The robust design is suitable for helicopter and fixed wing aircraft operating up to 450 knots.

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# SPECIFICATIONS

## Cooper Antennas Model 21-50-48

### UHF/MUOS SATCOM and VHF/UHF LOS Antenna

#### ELECTRICAL

<b>Frequency</b>	Line of Sight (LOS) :	30 - 512 MHz
	Satcom :	240- 385 MHz
<b>Gain (typical)</b>	LOS:	≥ -23 dBi @ 30 MHz ≥ -10 dBi @ 88 MHz ≥ -3 dBi (average) 118 - 174 MHz ≥ 0 dBi to +3 dBi 225 - 512 MHz
	Satcom:	+6.5 dBiC @ Zenith ≥ 0 dBiC @ all elevation angles above +25°.
<b>VSWR</b>	LOS:	30-449 MHz ≤ 2.5:1; 450-512 MHz ≤ 3:1
	Satcom:	≤ 1.75:1
<b>Impedance (nominal)</b>		50 Ohms
<b>Power</b>	LOS :	50 Watts VHF, 200 Watts UHF
	Satcom :	200 Watts
<b>Polarization</b>	LOS:	Linear
	Satcom:	Right Hand Circular (maximum at zenith)
<b>Antenna RF Connector</b>	LOS:	TNC Female
	Satcom:	N Female
<b>Operational Temperature</b>		-54°C to +71°C

#### MECHANICAL

<b>Overall Height</b>	12 inches (305mm)
<b>Weight</b>	4.5 lbs (2kg)

FINISH PART NUMBER	COLOR DESCRIPTION
21-50-48	Urethane Lusterless Gray FED-STD 595 36173
21-50-48F81	Medium Gunship Gray FED-STD 595 36118 (NSN 5985-01-623-7126)
21-50-48F04	Lusterless black urethane FED-STD 595 37038

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.