



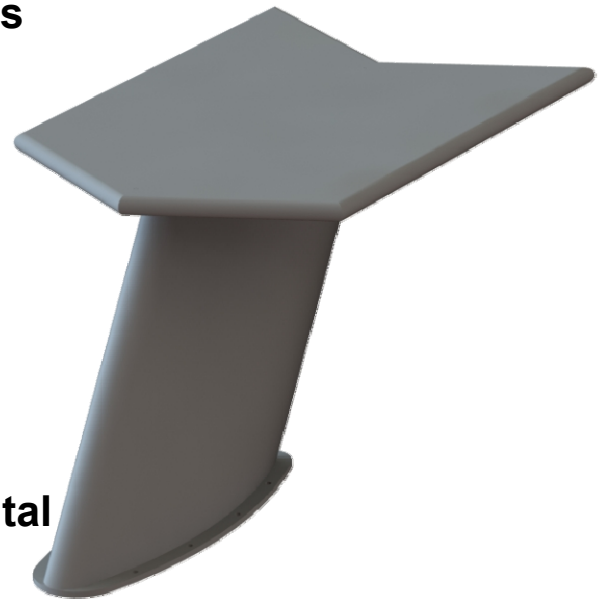
21-50-77

**Multi-function UHF/VHF, LINK16,
and Satcom Antenna**

**240 to 400 MHz, 30 to 512 MHz,
900 to 2000 MHz**

FEATURES

- **Hi and Lo angle UHF Satcom coverage**
- **Full 30 - 512 MHz LOS communications**
- **Wide Band Link16/JTIDS/MIDS**
- **PRC-117G, AN/ARC-210 &
AN/ARC-231 compatible**
- **Low wingspan minimizes loading on
aircraft structure**
- **Fixing holes compatible with 437S1-H**
- **Designed to MIL-STD-810 Environmental
Requirements**



The 21-50-77 is a rugged multifunction VHF/UHF, LOS, C/D Band Data Link and UHF Satcom antenna designed for airborne applications. A high strength aerodynamic vertical shell houses a 30 - 512 MHz linear element that can be used for V/UHF line of sight “LOS” communications or UHF Satcom at low angles of elevation. This vertical shell also supports a “Bat-Wing” shape horizontal element containing a pair of cross dipoles, connected to provide high angle, right hand circularly polarized UHF Satcom coverage.

A small wideband disccone on the upper batwing surface provides 900-2000 MHz coverage for LINK16, MIDS, JTIDS and other C/D band systems.

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SPECIFICATIONS

Cooper Antennas Model 21-50-77

Multi-function UHF/VHF, LINK16 and Satcom Antenna

ELECTRICAL

Frequency	UHF Hi Angle :	240 - 400 MHz
	V/UHF Lo Angle :	30 - 512 MHz
	C/D Band:	900 - 2000 MHz
Gain	Hi Angle :	+6.5 dBiC
	Lo Angle :	-20 dBi @ 30 MHz
		-8.0 dBi @ 88 MHz
		-5.0 dBi average @ 118 -174 MHz
		+2.0 dBi average @ 225 - 512 MHz
		+1.0 dBi average @ 900 - 2000 MHz
VSWR	Hi Angle :	≤ 1.5:1
	Lo Angle :	≤ 2.5:1
	Link 16 &C/D Band :	≤ 2.0:1
Impedance (nominal)		50 Ohms for all ports
Power	Hi Angle :	200 Watts CW
	Lo Angle :	50 Watts (30-88 MHz), 50 Watts (118-175 MHz), 200 Watts (225-512 MHz)
	C/D Band:	2 KW Peak
Polarization	UHF Hi Angle :	Right Hand Circular
	V/UHF Lo Angle :	Vertical
	C/D Band:	Vertical
Antenna RF Connector	UHF Hi Angle :	N Female
	V/UHF Lo Angle :	TNC Female
	Link 16 &C/D Band:	TNC Male

MECHANICAL

Height	12 inches (305mm) max
Wingspan	13 inches (330mm) max
Mounting Hole Configuration	8 holes each 0.208 - 0.234 dia. Inches (5.28 - 5.94mm)
Weight	9.5 lbs (4.32Kg)

ENVIRONMENTAL

Designed to Environmental	MIL-E-5400 Class 2 / MIL-STD-810
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FINISH

Antenna: Urethane Lusterless Grey Baseplate: Unpainted, Alocrom

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.