

AvL TECHNOLOGIES

MODEL 0613 Manual FlyAway

60 cm Tri-Band Portable Antenna



Reflector	60 cm, 3 piece Carbon Fiber
Optics	Offset, Prime Focus, 0.6 f/D
Interchangeable Feeds	X-CP, Ku-LP, Ka-CP
Positioner Type	Ultra Lightweight Manual with Tripod Unique boom center mounted positioner creates balanced loading for ease of pointing with minimal overhung load. Includes fine adjust in AZ & EL
Drive System	Elevation over Azimuth
Mount Geometry	Rotation of Ku Feed
Polarization	

Mechanical

Travel

Azimuth

Coarse 360° Continuous

Fine +/- 10°

Elevation

Coarse 0 – 90° +

Fine 0 – 90°

Polarization (Ku) ± 95°

(Reflector/Positioner/Tripod/One Ku Feed/)
Total Ku Antenna weight: 17 lbs.
28”L x 11” W x 8”HT (stowed configuration)

Note: BUC and LNB are CFE

Set-up Time Less than 5 minutes

RF Interface

BUC Mounting

Coax

Feed Boom, Rear of Reflector, Or Remote

Two connectors at Amplifiers

Electrical Interface

Connectors at Amplifiers

Environmental

Wind

Operational

Without anchoring 20 mph

With anchoring 30 mph gusting to 45 mph

Survival (anchored) 80 mph in zenith (90° elevation) position

Pointing Loss in Wind

X-band Receive, Operational winds 0.1 dB typical, 0.3 dB max

Ku-band Receive, Operational winds 0.3 dB typical, 0.7 dB max

Ka-band Receive, Operational winds 0.8 dB typical, 2.0 dB max

Temperature

Operational -22° to 125° F (-30° to 52° C)

Survival -40° to 140° F (-40° to 60° C)

<u>X-Band</u>	<u>Receive</u>	<u>Transmit</u>
Polarization	RHCP or LHCP configurable	LHCP or RHCP configurable
Frequency Range (GHz)	7.25 - 7.75	7.90 - 8.40
Gain (Midband) (dBi)	31.6	32.3
VSWR	1.30:1	1.30:1
Beamwidth (-3 dB)	4.5°	4.2°
Radiation Pattern Compliance (beyond mainbeam)	MIL-STD-188-164A	MIL-STD-188-164A
Ant Noise Temperature @ 20° EI, midband	57° K	
G/T with 55° LNB, midband, clear horizon	10.8 dB/° K	
Axial Ratio (CP only, within pointing cone)	1.21 dB	2 dB
Feed Port Isolation – TX to RX (dB)	110 (includes optional filter)	100 (includes optional filter)
Power Handling Capability		1000 watts
<u>Ku-Band</u>	<u>Receive</u>	<u>Transmit</u>
Polarization	Linear orthogonal standard, optional co-pol	Linear orthogonal standard, optional co-pol
Frequency Range (GHz)	10.95 - 12.75	13.75-14.50
Gain (Midband) (dBi)	35.6	37.1
VSWR	1.30:1	1.30:1
Beamwidth (-3 dB)	3.0°	2.5°
Radiation Pattern Compliance (Outside mainbeam)	FCC 25.209, ITU-R S.580-6	FCC 25.209, ITU-R S.580-6
Ant Noise Temperature @ 20° EI, midband	56° K	
G/T with 50° LNB, midband, clear horizon	15.4dB/° K	
Cross Pol Isolation, on-axis	35 dB	35 dB
Cross Pol Isolation, within pointing cone	26 dB Standard, 25dB Optional MM feed	27 dB Standard, 35 dB Optional MM feed
Feed Port Isolation – TX to RX (dB)	35	80 (includes filter)
Power Handling Capability		500 watts
<u>Ka-Band</u>	<u>Receive</u>	<u>Transmit</u>
Polarization	Circular (Optional Linear feed available)	Circular (Optional Linear feed Available)
Frequency Range (GHz)	20.2 - 21.2 (military) or 17.7 - 20.2 (commercial option)	30.0 - 31.0 (military) or 27.5 - 30.0 (commercial option)
Gain (Midband military) (dBi)	40.4	43.4
VSWR	1.30:1	1.30:1
Beamwidth (-3 dB)	1.7°	1.1°
Radiation Pattern Compliance	FCC 25.209, MIL-STD-188-164A	FCC 25.209, MIL-STD-188-164A
Ant Noise Temperature @ 20° EI, midband	111° K	
G/T with 100° LNB, midband, clear horizon	17.0 dB/° K	
Axial Ratio (CP only, within pointing cone)	1.5 dB	1.0 dB
Feed Port Isolation – TX to RX (dB)	30	80 (includes filter)
Power Handling Capability		250 watts
<u>Controller</u>	Various CAP Options Available such as the RC300 Flyaway Companion Satellite Acquisition Tool	
<u>Options</u>	Beacon receiver Wind Anchoring options – ground stakes, sand bags Computer Assisted Pointing (CAP)	
BUC/LNB mounting		
Waveguide interconnect options		



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