

# Ultralight Manual Expandable FlyAway Terminal

AvL's 60cm Backpack / Manpack Manual FlyAway Antenna is lightweight, compact, portable, robust with carbon fiber reflectors and bases, and easy and quick to assemble. AvL's Az/EI positioners feature easy pointing as well as fine-tuning. As with all AvL antenna systems, these antennas interface with any modem, RF electronics, or satellite service, and achieve pointing accuracy and pointing stability even in the most extreme conditions.

## FEATURES

- ◆ 8-piece AvL carbon fiber reflector with an aluminum hub
- ◆ Manual Az/EI operation standard – coarse & fine
- ◆ Manual Pol rotation
- ◆ 5-minute set-up
- ◆ Airline carry-on compliant single case pack-up ((less than 35 lbs. and 45" girth)
- ◆ 2-Port Ku-band Precision (LP) (standard Cross-Pol comp.)
- ◆ Optional feeds: 2-port Ku-band Mode-Match (LP) (enhanced Cross-Pol comp.), 2-port Ka-band Commercial (CP or LP), 2-port Ka-band MIL (CP or LP) (WGS), 2-ort X-band MIL (CP) (WGS) – Opt. Rx/Tx Reject Filter Kit
- ◆ Computer assisted manual pointing
- ◆ BUC/LNB integration



Specifications	Mechanical
Az/EI drive	Manually-driven fine and coarse adjustment (visual scales standard)
Polarization drive system	Manual rotation of feed (visual scales standard)
Reflector construction	Segmented carbon fiber
Axis travel	
Azimuth	360 degrees continuous
Elevation (reflector boresight)	0-90 degrees
Polarization	+/- 95 degrees
Standard integration interfaces	
Tx input @ feed	Waveguide flange (cover)
Rx input (AvL-supplied coax)	Waveguide flange (cover)
BUC (& other CFE) mounting	Contact AvL Sales
Controller Interface	Optional - one 30-ft. cable with connector from base connector
Manual/emergency drive	Three-lobe knob for manual adjustment standard
Weight	<35 lbs. packed in airline carry-on compliant backpack

Specifications	Environmental
Wind – Survival	Deployed: 60 mph (97 kph) (ballasted); Stowed: 90 mph (145 kph)
Wind – Operational	30 mph (48 kph) gusting to 45 mph (72 kph)
Pointing loss in wind:	
Ka-band receive	1 dB typical, 2 dB max
Temperature:	
Operational	-40°F to 140°F (-40°C to 60°C)
Survival	-50°F to 180°F (-46°C to 82°C)

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RF Parameters	Standard 2-Port Ku-Band Precision		Opt. 2-Port X-Band (MIL/WGS)		Opt. 2-Port Ka-Band MIL		Opt. 2-Port Ka-Band Comm.	
	Receive	Transmit	Receive	Transmit	Receive	Transmit	Receive	Transmit
Frequency Range (GHz)	10.95 - 12.75	13.75- 14.50	7.25 - 7.75	7.90 – 8.40	20.2 - 21.2	30.0 - 31.0	17.7 - 20.2**	27.5 - 30.0**
Polarization Configuration	Linear orthogonal standard, optional co-pol		RHCP or LHCP configurable		Circular (opt. linear feed available)		Circular (opt. linear feed available)**	
Gain (mid-band)	35.6 dBi	37.1 dBi	31.6 dBi	32.3 dBi	40.2 dBi	43.4 dBi	39.3 dBi	42.9 dBi
-3dB Beam width (mid-band)	3.0°	2.5°	4.7°	4.3°	1.7°	1.1°	1.9°	1.2°
Radiation Pattern Compliance	FCC 25.209*, ITU-R S.580-6		MIL-STD-188-164A		FCC 25.209*, MIL-STD-188-164A		FCC 25.209*, ITU-R S.580-6	
EIRP X Band 22.4W			45.2 dBw					
EIRP KU Band 25W	50.7 dBw							
EIRP Ka Band 12.6W					53.4 dBw		52.9 dBw	
G/T with LNB, midband, clear horizon	15.0 dB/°K (50° LNB)		10.7 dB/°K (55° LNB)		16.3 dB/°K (120° LNB)		15.4 dB/°K (120° LNB)	
Antenna Noise Temp. (mid-band, 20° El)	59° K		55° K		123° K		123° K	
Maximum Feed Transmit (Tx) Power	500 watts		1000 watts		250 watts		250 watts	
VSWR	1.30:1	1.30:1	1.30:1	1.30:1	1.30:1	1.30:1	1.30:1	1.30:1
Axial Ratio (Ka and X only, within pointing cone)			1.2 dB	2 dB	1.5 dB	1.0 dB	1.5 dB	1.0 dB
Cross-Polarization Isolation (Ku only)								
On Axis (minimum)	35 dB	35 dB						
Within Pointing Cone, std. Precision feed	26 dB	27 dB						
Within Pointing Cone, opt. MM feed	25 dB	35 dB						
Feed Port Isolation (Tx to Rx)	35 dB	80 dB (incl. filter)	100 (incl. opt. filter)	100 (incl. opt. filter)	85 dB	85 dB (incl. filter)	85 dB	85 dB (incl. filter)

## Options Upgrades & Services

- ◆ Upgrade from 2-port Precision Ku feed to: a) 2-port enhanced cross-pol (mode-matched) Ku; b) 2-port X MIL; c) 2-port Ka MIL; d) 2-port Ka Comm
- ◆ Add co-polarization Kit (for 2-port Ku feeds only) – configures Rx and Tx to same polarization sense (may require second case)
- ◆ Add BUC/HPA mounting (NOTE: minimum elevation may be restricted by these options) (may require second case)
- ◆ Upgrade to custom RF/IF I/O cabling configurations available
- ◆ Custom colorization (contact factory for available colors)
- ◆ Add custom logo on reflector face (1- or – 2 colors, per AvL logo policy)
- ◆ Spare parts kit

Request A Quote