

# MODEL 1227 & 1247 Avion

## 1.2 Meter Manual & Motorized Flyaway Antennas

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- ***Ships in 2 Ruggedized All Weather IATA Compliant Cases***
- ***Intelsat and Eutelsat Compliant (using appropriate Feed)***
- ***Multi-Band Configurations***
- ***7 Segment Carbon Fiber Precision Reflector***
- ***Compact Pedestal featuring easy point and peak control***
- ***High Gain / Low Cross Pol Design***
- ***Extremely Rugged / Reliable***

The Sat-Lite Technologies Model 1227 Avion Manual flyaway antenna and Model 1247 Avion Motorized flyaway antenna is highly portable and designed to meet IATA weight and dimension requirements for checked baggage on airlines. The antenna features Sat-Lite's unique 7-piece segmented carbon fiber composite reflector designed for unmatched performance. Assembly time for either antenna is less than 15 minutes. The elevation-over-azimuth pedestal provides excellent stiffness characteristics and convenience for the user when pointing and peaking on a satellite.

In addition, the antenna is designed to meet international performance specifications for multiple applications. Multiple feed and packaging configurations can be supplied for a specific requirement that include low and high power amplifier configurations for each frequency band.



<b>Electrical Specifications</b>	<b>2 Port X Band Circular</b>		<b>2 Port Cross Pol Ku Band Linear / Standard Feed</b>		<b>2 Port Cross Pol Ku Band Linear / Mode Matched Feed</b>		<b>2 Port Cross Pol Ka Band Circular Polarization</b>	
	<b>Rx</b>	<b>Tx</b>	<b>Rx</b>	<b>Tx</b>	<b>Rx</b>	<b>Tx</b>	<b>Rx</b>	<b>Tx</b>
Frequency (GHz)	7.25 - 7.75	7.9 - 8.4	10.70 - 12.75	13.75 - 14.5	10.7 - 12.75	13.75 - 14.5	20.2 - 21.2	30.0 - 31.0
Gain (Midband, dBi)	37.6	38.2	42.2	43.6	42.2	43.6	46.4	49.7
Typ. Noise Temperature (K)								
10 deg El	77		65		66		160	
20 deg El	61		55		58		125	
Axial Ratio	1.5 dB	1.5 dB					1.5 dB	1.0 dB
Cross Pol (std)								
On Axis	-21.3 dB	-21.3 dB	-35 dB	-35 dB	-35 dB	-35 dB	-21.3 dB	-24.8 dB
in 1 dB BW	-21.3 dB	-21.3 dB	-27 dB	-27 dB	-25 dB	-35 dB	-21.3 dB	-24.8 dB
Sidelobe Compliances	Meets DSCS		Meets ITU 580 FCC		ITU 580 Eutelsat		Meets ITU 580	
VSWR	1.30:1	1.30:1	1.35:1	1.30:1	1.50:1	1.35:1	1.35:1	1.30:1
Isolation								
Tx/Rx	-110 dB	0 dB input	-85 dB	0 dB input	-85 dB	0 dB input	-85 dB	0 dB input
Rx/Tx	0 dB input	-110 dB	0 dB input	-35 dB	0 dB input	-30 dB	0 dB input	-30 dB

<b>Mechanical / Environmental Specifications</b>	
Reflector	127 cm (50.2 in) Carbon Fiber
Reflector Configuration	7 Piece Single Offset
Antenna Travel	
Azimuth	+/-180° continuous with fine adjust
Elevation	5 - 90° of reflector bore sight
Polarization	± 90°
Packaging	
Pedestal Case (Compression Molded)	25.6" x 19.5" x 15.6" (64 lb / 29 Kg)
Motorized Components / Small BUC (Compression Molded)	24.9" x 23.7" x 13.1" (57 lb / 26 Kg)
Reflector Case (Compression Molded)	24.9" x 23.7" x 13.1" (45 lb / 21 Kg)
Temperature	
Operational	-30 to 60°C (-22 - 140°F)
Survival	-40 to 70°C (-40 - 158°F)
Winds	
Operational	30 mph Gusting to 40 mph ( 48 kph G 64 kph)
Survival (tied down, any position)	60 mph
Integration	
Base Mounted BUCs	Packs in 3rd Pedestal Case or separate
Feed Mounted BUCs	Typical Small BUCs < 8 Watts Ku - packs with Feed
Rain	
Operational	4 in/h (10 cm/h)
Survival	6 in/h (15 cm/h)
Relative Humidity	0 - 100%
Solar Radiation	360 btu/h/ft² (1000 Kcal/h/m²)
Radial Ice (survival)	1 in (25.4 mm)
Corrosive Atmosphere	As encountered in coastal and/or industrial areas