
AvL TECHNOLOGIES

.96M & .98M AvSAT **MODEL 960 & 980**



Mechanical

Reflector/Feed System

Model 960

Chanel Master Model 96cm

Model 980

Prodelin Model 1981 98 cm

Mount Geometry

Elevation over Azimuth

Polarization Axis

Rotation of Reflector/Feed System about boresight

Travel

Azimuth

400E or $\pm 200E$ from stow position

Elevation - Operational

0-65 or 0-90E of reflector boresight

Total

0-150E

Polarization

$\pm 55E$ or $\pm 95E$

Speed

Slewing/Deploying
Peaking

10E/second in azimuth, 5E/sec. in elevation, 5E/in polarization
0.2E/second

Motors

24V DC Variable Speed with optical

Electrical Interface

RF

Tx and Rx Type F connectors at base of antenna

Controller

15 ft. Cable with connectors for controller to remote box

Weight

100 lbs. with standard RF electronics

Environmental

Wind

Survival

Deployed

80 mph

Stowed

140 mph

Operational - Tracking

60 mph at 60E F

Boresight Backlash

Az degrees

.01 dB

EI degrees

.05 dB

Pol degrees

.05 dB

Beam Deflection - Transmit

20 mph

.2 dB

30 gusting to 45 mph

.5 dB

Temperature

Operational

-20EF to 125EF

Survival

-30EF to 125EF

Electrical RF

| | <u>Receive</u> | <u>Transmit</u> |
|------------------------------------|-----------------------|------------------------|
| Frequency | 10.95-12.75 GHz | 13.75 -14.5 GHz |
| Gain (Midband) | 39.7 dBi | 41.7 dBi |
| VSWR | 1.30:1 | 1.30:1 |
| Beamwidth in Orbital Arc (degrees) | | |
| -3 dB | 1.3 | 1.1 |
| -10 dB | 2.2 | 1.9 |
| First Sidelobe Level (\pm 2 dB) | -23 dB | -23 dB |
| Radiation Pattern | 29-25 Log T | 29-25 Log T dBi |
| Antenna Noise Temperature | | |
| 30E Elevation Angle | 47EK | |
| Polarization | Linear | Linear |
| Allowable Transmit Power | | 8 Watts |
| Cross-Pol Isolation | | |
| On-Axis | 30 dB | 30 dB |
| Off-Axis (within 1 dB BW) | 28 dB | 28 dB |
| Maximum Off-Axis | 21 dB | 25 dB |
| Feed Port Isolation | | |
| TX/RX | | 80 dB |

Controller

| | |
|----------------------|---|
| Type | Automatic satellite acquisition with GPS, compass, level sensors, pre-loaded library of satellite positions |
| Manual Mode Input | Menu-driven by front panel buttons |
| Automatic Mode Input | Automatically locates, peaks-up, and minimizes cross-pol |
| Display | Two lines 3/8" high, 16 characters per line |
| Size | Two rack units high or two units 6" x 6" x 3.5" |
| Input Power | 110V AC, 1ph, 60Hz, 7 amps peak |