

## Mobile Broadband Satellite Communications Very Small Aperture Terminal (VSAT) 750mm Solid Reflector

## Type MVS750

The MVS Series allows non-skilled personnel to operate mobile Very Small Aperture Terminal (VSAT) satellite communications equipment enabling the user to access any broadband application over satellite.

The MVS Series antennas are typically used by organisations for:

- Military applications requiring rapid deployment and SATCOM on the pause
- Remote or mobile office and monitoring applications
- Education, civil protection, law enforcement and emergency response
- Satellite news gathering (SNG) applications

With the MVS Series antennas, users enjoy the same reliable, secure, high-speed IP based data communications they are accustomed to in the office, while mobile. Users can get connected Anywhere/ Anytime for applications such as:

- Secure, high-speed digital communications
- High-speed Internet access
- Voice and Fax communications
- Teleconferencing
- Wide area private network extension
- Video broadcasting



*Convert Any Vehicle to a Mobile  
Wireless Broadband Hot-Spot*



The MVS Series of auto-acquisition antennas feature:

- Automatic satellite acquisition with a single button push eliminating the need for -
  - Special test equipment for alignment
  - Computers or peripheral equipment to operate the antenna
  - Phone calls to network operators or service providers
- Rapid deployment and operation on every Ku-band satellite, worldwide
- Works with every satellite modem

Every antenna comes equipped with the following standard equipment:

- High precision and stiffness, low backlash drive system
- Built-in GPS and compass
- Built-in satellite receiver
- Built-in level sensor
- Automatic polarization alignment
- Safe and easy installation, no calibrations required

### RACAL ANTENNAS LTD

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Racal reserve the right to vary in detail from the description and specification in this publication.

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### Mobile Satellite Link

The MVS750 will convert from stowed to automatically locked-on in a few minutes. The simple push of a button will put the unit in either mode. There are no external computers or other devices needed to operate the antenna. Serial communications are available including a GPS string for satellite modems.



### Ease of Deployment

Easily configurable into any mobile environment, the MVS750 is ready to deploy anywhere. The base is designed to accommodate flat roof or rack mount vehicles. The antenna automatically compensates for sloped surfaces up to 10 degrees.



### Portability MVS750P

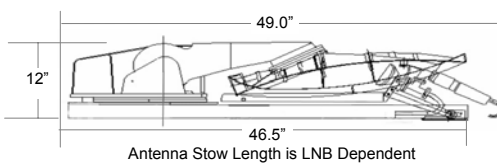
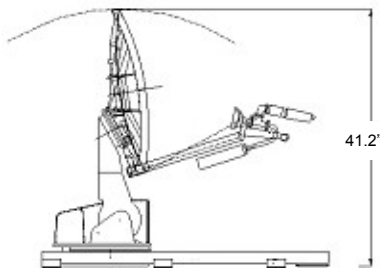
The MVS 750P solution provides a rugged, portable container for a shippable and highly flexible rapid deployment requirement. Quick removal of the cover allows full access to a ready-to-deploy antenna.



### Control Panel

The One Touch Go and Stow technology maximizes ease of deployment. The menu driven control panel comes in a portable hand-held unit or a 1U rack mount panel. The controller is used for standard operation, or for configuring the antenna for worldwide operation.

General Use Position



### Reflector

Size ..... 75cm Ku-band elliptical (89 cm wide x 62 cm high)  
Mount..... 3-Axis: Polarization over Elevation over Azimuth  
Polarization..... Linear, Co or Cross-Polarized

### Travel

Azimuth..... 400° or ± 200° from Stow Position  
Elevation - Operational..... 0-65° (+) stow position  
Polarization..... ±65°

### Travel Velocity

Slewing/Deploying..... Azimuth ..... 10°/second  
Elevation..... 5°/second  
Manual Jog..... 1.0° or 0.2°/second

### Electrical Interface

RF..... 75Ω Tx / Rx Type F Connector (50Ω option)  
Interfacility Link..... 30 ft: 2ea. RG6 Coax, 1 Data Cable  
Motors..... 24VDC Variable Speed  
Controller (1U) / Power Supply..... 50/60Hz, 110/220VAC, Single Phase  
Power Consumption – Motors Active..... 250 Watts  
Power Consumption – Idle..... 20 Watts

### Antenna Characteristics

	Receive	Transmit
Frequency.....	11.7-12.75 GHz	13.75-14.5 GHz
Gain (±.2dBi).....	37.8 dBi @11.95Ghz	39.3 dBi @ 14.25Ghz
VSWR.....	1.30:1	
Beam width in Orbital Arc (degrees)		
-3dB.....	2.0 degrees @ 12.0Ghz	1.6 degrees @ 14.3Ghz
Polarization.....	Linear, Cross-pol ..... Standard, Co-pol optional	
Antenna Noise Temperature @ 30° EI.....	50°K	
Sidelobe Envelope (Tx,Co-Pol, Major Axis)		
	1.8° < Θ < 20°	29-25 Log Θ dBi
	20° < Θ < 26.3°	-3.5 dBi
	26.3° < Θ < 48°	32-25 Log Θ dBi
	48° < Θ < 180°	-10 (Typical) dBi

### Physical Data

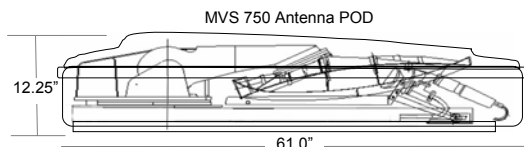
Approximate Weight (w/o BUC/ LNB)..... 92 lbs  
Max. Length with IFL Cables Connected ..... 53 inches  
Height  
Stowed ..... 10.5 in Cross-pol; 12.5 in Co-pol  
Deployed ..... 42 inches  
Case Dimensions..... 55"W x 43.5"D x 20"H  
Approximate Case Weight w/o antenna (hard case)..... 115 lbs

### Antenna Controller

One button operation automatic satellite acquisition with integrated GPS/Compass/Level Sensors and user configurable satellite selection  
Portable Power Supply/Display Unit  
Weight: Power Supply / Display Only ..... 4.5 lbs / .5 lbs.  
Dimensions ..... Power Supply - 9"Wx 10.25"Dx2.5"H  
Display - 5½"W x 3¼"D x 1-3/8"H  
Rack Mount (1U)  
Weight..... 4.5 lbs  
Dimensions (inches)..... 19"W x 8.0"D x 1.75"H

### Environmental

MVS750 - Wind  
Survival - Stowed ..... 125 mph  
Operational ..... 60 mph at 60° F  
MVS750P - Wind  
Operational ..... 30mph gusting to 45mph  
Temperature  
Operational ..... -20°F to 125°F  
Storage ..... -30°F to 150°F



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