



iMet-1500M

Military Upper-Air Sounding System 1680 MHz RDF / GPS

- **Compatible with iMet-54 Radiosonde**
- **Advanced RDF/GPS Technology**
- **All-Weather Operation**
- **Lightweight, Rugged**
- **Rapid Deployment**
- **MIL-STD Design**
- **WMO/STANAG, METCM Reports**



Control Display Unit



Power Unit/Data Converter

System Overview

| | |
|-----------------------|--|
| Operating Principle | Automatic GPS or RDF with Dual Mode Capability |
| Frequency | 1668.4 to 1700 MHz |
| Operating Mode | Mobile or Fixed Site |
| Operating Environment | All-Weather Conditions |
| Primary Power | 24 VDC Nominal (600 W) or 110/220 VAC 50/60 Hz |
| Personnel Required | 2 Man Crew (deployment) |
| Set-Up Time | < 15 Minutes |
| MTBF | 2400 Hours |
| Useful Life | 10 Years (min) |

Operating Parameters

| | |
|-----------------------------------|---------------------------------|
| Military Transport | Hardigg/Pelican Cases |
| Operating Temperature Environment | - 40 to + 55 Deg C MIL-STD 810F |
| EMI | MIL-STD-461E |
| Antenna Weight | 110 kg |
| Power Unit Weight | 9 kg |
| Storage Cases Weight | various |
| Antenna Height | 3.0 m (Fully Extended) |
| Antenna Base Diameter | 2.0 m (Fully Extended) |

Upper-Air Sounding Performance

| | |
|-------------------|------------------------------------|
| Tracking Accuracy | < 0.2 Deg Az and El |
| Min Slant Range | 200 Km |
| Max Altitude | 35 Km |
| Reports | All Std WMO/STANAG, includes METCM |

1680 MHz Antenna

| | |
|----------------------|---|
| Scanning Principle | Solid State |
| Antenna Type | Parabolic Dish |
| Dish Construction | 2 Part Aluminum Rod Grid 1.25 m Diameter |
| Polarization | Vertical |
| Output Impedance | 50 Ohm |
| Beam Width at 3 dB | ± 9.0 deg |
| Dish Gain | 22 dB |
| Azimuth Rotation | Continuous 360 Deg |
| Elevation Rotation | - 5 to + 91.5 Deg |
| Motor Drive | DC Motors, Harmonic Drive Gears Zero Backlash, Circular Spline |
| Max Slew Speed | 25 Deg/Sec |
| Angle Readout | 0.001 Deg Resolution |
| Lubrication | Sealed |
| Control Display Unit | Controls All Antenna Functions |
| Type Receiver | Superheterodyne |
| Frequency Control | Synthesized with AFC |
| Bandwidth | Selectable 50 to 1000 kHz |
| Modulation | FM, AM, Sine or PM, Phase |
| Sensitivity | 12 dB S/N -108 dBm (FM, 100 kHz BW) |

Equipment Rack

| | |
|-----------------------|------------|
| Power Unit/Data Conv. | Ruggedized |
|-----------------------|------------|

System Computer (Not Shown)

| | |
|-------------------|-------------------------------------|
| Processor | Pentium Class |
| Storage | 1 GB RAM |
| Hard Disk Space | 10 Mb Plus 5 to 15 Mb per flight |
| Screen Resolution | 1024 x 768 with 256 colors |
| Data Output | USB |
| Operating System | Windows 10 or higher |
| Ruggedized | Laptop, Panasonic Toughbook |

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