

## Model iMet-3200A

### 403 MHz GPS Upper-Air Sounding System

### World Class Synoptic Sounding Performance



- **New Design for Synoptic Soundings**
- **All-Weather Operations**
- **All Digital Architecture**
- **Compatible with iMet-1 and iMet-2 Radiosondes**
- **iMetOS-II Operating Software**

#### System Overview

Operating Principle	Automatic GPS
Frequency	400 – 406 MHz
Operating Mode	Fixed Site
Operating Environment	All-Weather
System Architecture	Digital
Users Required	1 person
MTBF	> 2400 Hours
Useful Life	10 Years
Operating System	iMetOS-II

#### 403 MHz Antenna/LNA

Antenna Type	Quadra Helix
Construction	Aluminum/Fiberglass Composite
Polarization	Vertical, Circular Overhead

#### 403 MHz Receiver

Type	Superheterodyne
Frequency Control	Synthesized with AFC
Bandwidth	15 kHz
Modulation	FM FSK
Sensitivity	12 dB S/N
	-118 dBm

#### Operating Parameters

Power	100-240 VAC, 50/60 Hz
Outside Equip Temp	- 40 to + 55 Deg C
Antenna/LNA Wt	4.0 kg
UHF Antenna Length	1.3 m

#### System Computer

Processor	Celeron or higher
Data Output	Any Windows Compatible
Type	Mini Tower w Flat Screen Monitor
Operating System	Windows 2000 or higher
Ruggedized MIL-STD	Available

#### Upper-Air Sounding Performance

Max Slant Range	> 250 Km (subject to conditions)
Max Altitude	> 35 Km (subject to conditions)
Reports	All Std. WMO, STANAG

#### Installation Options

Antenna	Roof or Tower Mount
Installation Time	Less than ½ day

*Specifications Subject to Change without Notice*

## iMet-1ABxn Radiosonde 403 MHz GPS with Pressure Sensor



### Features

#### Advanced Sensor Technology:

- Thin Polymer Humidity
- Bead Thermistor Temperature
- Solid State Pressure
- 12 Channel C/A Code GPS

#### Simple to Use:

- Dry cell batteries
- Switchable power on / off
- No pre-flight temp & humidity recalibration required
- Switch controlled frequency
- Compact and light weight

#### Compatible with:

- iMet-3150 Portable
- iMet-3050A Portable
- iMet-3200A Synoptic
- iMet-3100M Military

### System Overview

Operating Principle	GPS Wind Finding
Nominal Frequencies	403 MHz
Range	> 250 km *
Altitude	> 30 km *
Battery	Alkaline Dry Cell
Operating Time	> 2 Hours
Weight	260 Grams
Sampling Rate	1 Hz
Case	Expanded Polystyrene

### Transmitter

Tuning Range	400.15 – 406 MHz
Output Power	300 mW
Transmission	1200 baud, FM
Bandwidth	6 kHz (narrow band)
Stability	Crystal Controlled
Encoding Scheme	Bell-202 Standard

### GPS Receiver

Type	C/A code, 12 Channel
Tracking	Continuous
Update Rate	1 Hz
Acquisition Time	50 sec (cold start)
Position Accuracy	10 m
Wind Velocity Accuracy	1.0 m/s
Altitude Accuracy	15m

### Meteorological Sensors

<i>Pressure</i>	
Type	Piezoresistive
Range	2 to 1070 hPa
Accuracy	0.5 hPa
Resolution	< 0.01 hPa
Response Time	< 1.0 Sec

#### *Temperature*

Type	Bead Thermistor
Range	- 95 to + 50 Deg
Accuracy	0.2 Deg C
Resolution	< 0.01 Deg
Response Time	2.0 Sec
	@ 1000 hPa

#### *Humidity*

Type	Capacitive
Range	0 to 100% RH
Accuracy	5% RH
Resolution	< 0.1% RH
Response Time	2 Sec @ 25 Deg C
	60 Sec @ - 35 Deg

*Specifications subject to change without notice*

*\* Subject to ground station type, balloon size and atmospheric conditions*