INSTALLATION AND CONFIGURATION OF THE COMBINED GPS/GLONASS RECEIVER FOR MONITORING THE SCINTILLATION IMPACT ON IONOSPHERE

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OVERVIEW

• The highly accurate GPS 19x HVS position receiver/antenna provides up to 10 Hz update rates for position, velocity and time data.
• It offers high-sensitivity reception and enhanced position acquisition.
This 32-channel receiver is capable of tracking multiple global navigation satellite systems, including GPS, GLONASS, Galileo and QZSS.

With more visible satellites it provides enhanced position, heading and speed accuracy delivered up to 10 times more often than other types of receivers/antennas.

Wide Area Augmentation System (WAAS)-capable, it can determine precise location to within 3 m (9.84 ft).
OBSERVABLE ADVANTAGES

• Waterproof (IPX7) sensor of GPS 19x HVS receiver can be pole mounted or flush mounted.
• It can be attached to the underside of various case designs for added ease of installation.
• It can also be configured to have 1 Hz or 5 Hz update rates to help support specific installation requirements.
GPS PERFORMANCE

• Acquisition times
  - reacquisition: less than 2 seconds
  - hot: approx. 1 second
  - warm: approx. 38 seconds
  - cold: approx. 45 seconds

• Update rate
  - 1, 5 or 10 records per second

• Accuracy
  - GPS Standard Positioning Service (SPS)
    Position: < 15 meters, 95% typical
  - WAAS/EGNOS/MSAS
    Position: < 3 meters, 95% typical
WIRING ANTENNA ON RS232 PORT
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[Diagram of DB-9 serial connector with pin assignments and connections to power source, fuse, and antenna connections.]

- Pin 1: Connect Antenna
- Pin 2: Data In
- Pin 3: Data Out
- Pin 5: Ground

Connections:
- Red: Vin
- Black: GND
- RXB
- RXA
- TXB (unconnected)
- Accessory ON
TESTING CONNECTION WITH MTTTY
SENSOR CONFIGURATION WITH SNSRXCFG

- SNSRXCFG configures the GPS sensor based on user selected parameters.
- Selecting a type of sensor
SENSOR CONFIGURATION WITH SNSRXCFG

- Main Interface Screen for the sensor connection
• The Comm (Communication) Menu allows setting the port number and baud rate.
• This configuration used COM1 serial port and was set up manually to 38 400 bps.
SENSOR CONFIGURATION WITH SNSRXCFG

- Properly connected sensor allows configuration changes.
SOFTWARE FOR MONITORING
THANK YOU FOR YOUR ATTENTION!