$PRAVE Message Format

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Overview

Over-the-air position/status messages that the RV-M7 GX transceiver may be sent out the serial port using Raveon's proprietary message format called the $PRAVE message.

Structured like a standard NMEA GPS message, the $PRAVE message contains a rich set location and status information.

Message Format

The $PRAVE message is sent out the *RV-M7 GX* when it is configured for **GPS 2** mode of operation. This mode is typically used with the RavTrack PC program, or other computer programs that can process position and status information. It is sent at 38.4K bytes/second out the serial port.

Along with ID and position information, it contains a host of other status information. The length of this message may exceed he standard NMEA limit of 79 characters. Any product or software that uses this message must take this into account.

Following is a list of the fields sent in this message

Field	Usage	Comments
1	$PRAVE	Raveon Proprietary Header
2	From ID	The ID of the transponder that transmitted its position over the air. It is a decimal number, 0 – 9999.
3	To ID	The ID that this position report was sent to. It is a decimal number, 0 – 9999.
4	Latitude	dddmm.mmmm format. It is signed. + is north, - is south. No sign means north. Note: typically there are 4 decimal places, but as few as 0 decimal places are possible. Null field if no GPS lock.
5	Longitude	dddmm.mmmm format. It is signed. + is east, - is west. No sign means east. Note: typically there are 4 decimal places, but as few as 0 decimal places are possible. Null field if no GPS lock.
6	UTC time	The UTC time at the time the transmission was made. Hhmmss format. Null field if no GPS lock.
7	GPS Status	0=not valid position. 1=GPS locked and valid position.
8	Num Satellites	The number of satellites in view
9	Altitude	The altitude in meters. Null field if no GPS lock.

10	Temperature	The internal temperature of the RV-M7 in degrees C. Typically this is 5-20 degrees above ambient.
11	Voltage	Input voltage to the device that sent this position.
12	IO status	A decimal number representing the binary inputs.
13	RSSI	The signal-strength of this message as measured by the receiver, in dBm. Note, if the message went through a repeater, it is the signal lever of the repeated message.
14	Speed	The speed of the device in km/hour, 0-255
15	Heading	The heading of the device 0-360 degrees
16	Alerts	Alert codes for alerts currently indicated in the device. NULL means no alerts. "P" means a proximity alert.
17	Spare	A spare field. May be used for UTC date in the future. Typically NULL.
18	*	The "*" NMEA end-of-message identifier.
19	Checksum	The NMEA 0183 checksum.

Example Sentence:

$PRAVE,0001,0001,3308.9051,-11713.1164,195348,1,10,168,31,13.3,3,-83,0,0,,*66

This example shows a unit at 33° 8.9051 north latitude and 117° 13.1164 east longitude. It is not moving (0 speed). Its signal strength was -83dBm. Its altitude is 168 meters.

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