

GPS Monitor 1.2

What is it?

GPS Monitor is a small freeware application designed for checking GPS satellite navigation receivers for compatibility with *GPS Map*® and *GPS Map Lite*®, the powerful moving map based navigation applications running on *Apple Newton*™ compatible PDAs. You can use the application for monitoring your GPS receiver's output and for copying displayed data to the clipboard and to other applications.

More information and demo versions of *GPS Map* and *GPS Map Lite* are available at www.soaring.de/gps/GPS_Map.html.

What else do I need?

- an *Apple Newton*™ compatible PDA with an operating system version of at least 1.3 or 2.x.
- a GPS receiver, either hand-held, OEM module or active antenna with a serial interface (e.g. *Garmin* receivers or *Trimble ScoutMaster*, not *Personal Locator*).
- a data cable for connecting the GPS receiver to the Newton.

There are no special requirements to the GPS receiver because it will be used only as a position sensor.

The receiver must have a serial interface with the following specification:

- TTL, RS232 or RS422 level, 4800 baud, 8 bits, 1 stop bit
- NMEA 183 software protocol

The NMEA protocol has many different implementations, but *GPS Monitor* will adapt to them automatically.

GPS Monitor supports the following NMEA message combinations:

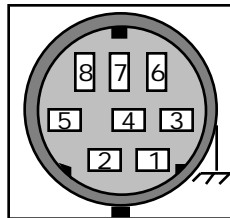
1. \$GPGGA and \$GPVTG
2. \$GPGGA and \$GPRMC
3. \$GPGLL and \$GPVTG
4. \$GPRMC only

If the messages to send are selectable at your GPS receiver you should prefer the combinations 1 and 2, because of 3 and 4 don't contain information about altitude and data quality.

If the receiver sends additional messages they will be ignored.

How do I connect a GPS receiver?

The *Newton*TM compatible PDA has a mini DIN 8 female connector with RS422 levels. Most receivers have RS232 or TTL only interfaces. Simply connect the ground lines of the PDA and the GPS receiver, and the RXD- line of the PDA to the TX line of the GPS receiver.

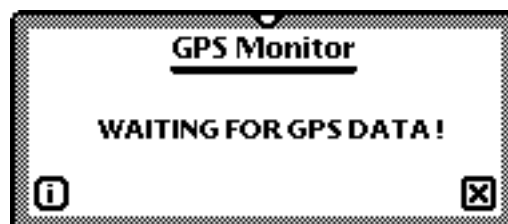


Pin Assignment (by looking to the PDA's connector from outside)

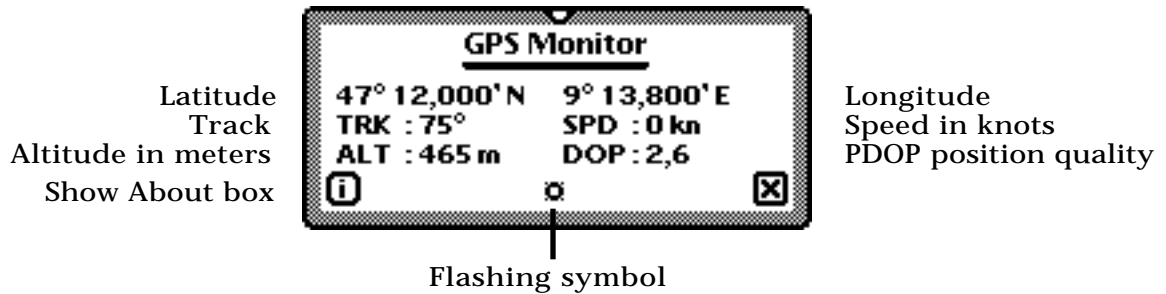
Pin 1	HSK _o	/DTR
Pin 2	HSK _i	/CTS
Pin 3	TxD-	/TD
Pin 4	GND	ground, must be connected to the GPS receiver's ground
Pin 5	RxD-	/RD, must be connected to the GPS receiver's data output
Pin 6	TxD+	
Pin 7	GPi	
Pin 8	RxD+	

How does it work?

After starting up *GPS Monitor* will try to adapt its driver to the NMEA protocol derivate used by your specific receiver. This will need up to ten seconds and *GPS Monitor* will display a please wait message.



After the driver has adapted to the specific protocol you will see the names of the recognized NMEA sentences below the wait message, e.g. (GGA + VTG). Shortly after that the screen will change and display the GPS data.



You may select the displayed text with the pen and then drag it to the clipboard or into another application running in background.

The small flashing symbol below the text field will change each time a GPS update occurs. That should happen at least all five seconds to be compatible with *GPS Map* or *GPS Map Lite*.

Disclaimer

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Informations presented in this manual may be changed for progression without pre-announcement.

Revision history

Version 1.0:

Initial release

Version 1.1:

Added support for some receivers with special protocol variants, i.e. Garmin 85. Those systems will be also supported by GPS Map 1.8.3 and GPS Map Lite 1.2.3.

Version 1.2:

Fixed a bug with displaying PDOP.