

ionUser Manual

TeleType GPS

Advanced GPS Utility

TeleType Part # 8040

Revision 1.4

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Introduction

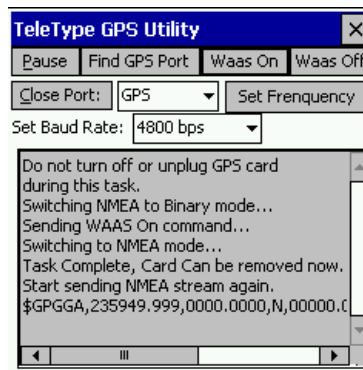
This documentation is for the Advanced GPS Utility. This utility is intended for use with TeleType CompactFlash (1351 series) and CompactFlash Rugged (1370 series) GPS Receivers. With this utility WAAS can be turned on and off, the NMEA string frequency can be changed, and the baud rate at which the GPS receiver communicates with the PDA can be changed. This utility is compatible with Windows ME/2000/XP laptops and Pocket PC based PDAs with the StrongArm processor such as the iPaq.

WAAS stands for Wide Area Augmentation System. This system augments the normal GPS signal with a correction signal from a satellite orbiting over the equator. This corrected signal, coupled with the normal GPS system allows for typical accuracy of less than 3 meters, 95 percent of the time. There are areas where GPS accuracy can degrade if WAAS is used, however, and in those areas you can disable WAAS using the utility.

Software Installation

1. To install the software onto your PC and/or PDA follow the instructions below.
 - a) Extract the Waas.zip file to a temporary directory.
 - b) Double-click on the Install.exe file in the temporary directory.
 - c) Select Desktop/Laptop to install on a PC or PocketPC to install on a PocketPC PDA.
 - d) Click Setup.
2. The software will now be installed in C:\Program Files\GPS\Waas32 on the PC, and \Program Files\WaasCE on the PDA.
3. a) PC - Select WAAS32 from the TeleType GPS program group in the Start menu.
b) PocketPC – Select Programs from the start menu, and select TeleType WAAS from the Program window.

WAAS Program Window



The Advanced GPS Utility allows you to turn the WAAS capabilities of the GPS receiver on and off, and change the frequency with which GGA, GLL, GSA, GSV, RMC, and VTG, NMEA strings are received. This is the main window for the software.

Pause – Select Pause if you wish to pause the on-screen view of the NMEA data strings. This will also momentarily stop recording data to a file.

Find GPS Port - Use this feature to automatically locate and select the GPS port.

Open/Close Port - Toggles the serial port to be available for communication with the GPS receiver. The port is automatically opened when the GPS program is activated. The serial port can be manually closed to disable communication with the GPS receiver. This feature has been designed for future use in external communications applications such as two way messaging.

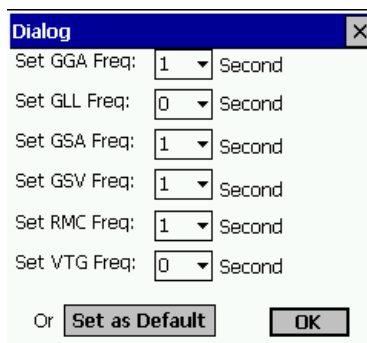
Waas On – Once the port has been opened and an NMEA stream is coming through, clicking on this button will turn on WAAS for the GPS receiver.

Waas Off – Once the port has been opened and an NMEA stream is coming through, clicking on this button will turn off WAAS for the GPS receiver.

Set Frequency – Opens the Set Frequency window where the frequency of certain NMEA strings can be changed.

Set Baud Rate – Sets the baud rate at which the software will communicate with the GPS receiver. This should be set to 4800 for all TeleType GPS receivers.

Set Frequency Window



This window will allow you to change how often certain NMEA strings are sent from the GPS receiver. The choices for each option are from 0 to 10. Selecting 0 means that the specified string will not be sent out at all. The WAAS capability of the receiver should be turned off before you set any of the strings, and then turned on after this is complete.

Set as Default –Resets all of the frequencies to their default values.

OK – Implements all of the changes to the frequencies.

Troubleshooting

No NMEA data is being printed on-screen. What should I do?

Close the TeleType GPS Navigation software. If this is open when the Advanced GPS Utility is run, the Utility will not be able to communicate with the GPS receiver. If the TeleType GPS software is not open, then follow the steps below to open communication with the GPS receiver.

The NMEA data stream means that the GPS receiver is communicating correctly with the software. Select GPS port and 4800 baud from the main screen. Select Find GPS port, select Open port (if the button displays Closed, then the port is open). If data is still not flowing, perform a soft-reset on the PDA.

Also be sure that you do not have Palm Pilot hot synch enabled or Microsoft CE ActiveSync activated - as this often conflicts with the COM port for the GPS receiver.

How do I know if WAAS Activation/Deactivation worked?

The Advanced GPS Utility will print out text on the screen as it is enabling or disabling WAAS on the GPS receiver. The text displayed should be similar to what you see below if the procedure completed successfully. If anything else is displayed then the procedure most likely did not work for some reason.

Correct Text:

Do not turn off or unplug GPS card during this task.

Switching NMEA to Binary mode...

Sending WAAS On command...

Switching to NMEA mode...

Task complete, Card Can be removed now.

Start sending NMEA stream again...

The WAAS Activation/Deactivation procedure failed.

To be able to enable or disable WAAS, the software must be able to communicate with the GPS receiver. Proper communication is occurring when a NMEA data stream can be seen in the main window. If no data is being printed, see the question above to start communicating with the GPS receiver. This can also happen if the card is removed before the procedure is complete.

How do I know if WAAS is turned on?

Currently the Advanced GPS Utility does not report whether or not WAAS has been activated.

Does WAAS ever get disabled?

If WAAS is activated and the GPS receiver is not used for 14 days, it will automatically be turned off. WAAS can be turned back on using the Advanced GPS Utility.