TECHNICAL TIPS from INLAND GPS

Updating firmware in Trimble GPS/GNSS receivers

This Technical Tip provides general instructions for updating the firmware in Trimble GPS/GNSS receivers beginning with the Trimble 4800, which was introduced in September 1997. The same general procedure is used with all Trimble GPS/GNSS receivers introduced after the Trimble 4800, including the Trimble 4700, Trimble 5700, Trimble 5800, Trimble R7, and the Trimble R8 (including the original version, the Model 2, and the Model 3).

These instructions do not apply to the Trimble 4000, the Trimble 4400, or any of the NetRX-series receivers such as the Trimble NetRS, Trimble NetR3, Trimble NetR5, and Trimble NetR8.

This procedure requires some basic Windows skills such as using a Web browser, using Windows Explorer to navigate computer folders, using a computer mouse or pointer, etc.

IMPORTANT: The firmware-update procedure will erase all data and application files from the receiver. Download all data files from the receiver before starting the firmware-update process. These instructions will not attempt to cover application files.

In an attempt to make these instructions as universal as possible, [receiver name] will appear at various points in the process. Simply substitute the model name of your specific GPS/GNSS receiver as appropriate.

You will need a computer with a working serial (COM) port to update the firmware in your Trimble GPS/GNSS receivers. These instructions work with Windows operating systems up to and including Windows XP. It is not known if these instructions work for the Windows Vista operating system.

This process uses the Trimble WinFlash utility, which communicates with Trimble products to perform various functions including:
- Installing software, firmware, and option upgrades
- Running diagnostics (for example, retrieving configuration information)
- Configuring radio modems

The procedure to update firmware in a Trimble GPS/GNSS receiver is as follows:

1. First, a version of WinFlash that delivers the desired firmware version for your [receiver name] must be installed on your computer. If you do not have any WinFlash installed on your computer, skip to Step 2 now.

   If you do have WinFlash installed on your computer, you can determine if your WinFlash "toolbox" has the necessary capabilities by starting WinFlash and seeing if the device type "[receiver name]" is available in the selection list.

   If not, you need to install or add to WinFlash as described in Step 2.

   If the required device type is available, then you need to check to see if the firmware version you intend to install in the receiver is on your computer. Highlight the correct "Device type" from the list and click Next to advance to the "Operation Selection" screen. Under Operations, highlight the "Load GPS software" operation and click Next. You will then be at the "GPS Software Selection" screen. If the desired firmware version is in the "Available Software" list, you can skip to Step 3 below. Otherwise, install or add to WinFlash as described in Step 2.

2. If you do not have WinFlash on your computer or if your WinFlash collection does not include the desired firmware version for the "[receiver name]" device, you can download from the Trimble Web site the WinFlash that installs the desired version of [receiver name] firmware.

   To download the required WinFlash, point your Web browser to Trimble's "Support A-Z" page at
   http://www.trimble.com/support.shtml

   Click on the link that reads **[receiver name]** or something reasonably similar. If you do not see the link for a numeral-name product under "Trimble [receiver name]", check the numerical section at the bottom of the list.

Click on the link that reads **<u>Downloads</u>**

Download EXE associated with the desired firmware version on the Downloads page.

The EXE file you download is an installation file, so store the downloaded installation file someplace where you can find it. View the downloaded installation file in Windows Explorer, double-click its icon, and the installation process will start. If you do not have any WinFlash installations on your computer, this operation will create one and start your WinFlash toolbox. If you have previously installed a different version of WinFlash, this installation will add to your WinFlash tools and possibly update the WinFlash program itself.

3. Connect the [receiver name] to the serial port of your computer and make sure the [receiver name] is powered, either through batteries or a power supply, and turned on. A powered download cable or an OSM IV will work fine.

4. Start WinFlash by clicking the Start button, then Programs | WinFlash | WinFlash unless you have customized the shortcuts to other locations. WinFlash will start. Make certain the top line of the program window says WinFlash v. 1.05 (or higher). You will be in the "Device Configuration" screen. Select the serial port you will use to connect to the [receiver name], then highlight "[receiver name]" (or something reasonably similar) in the "Device type" list, then click the Next button.

5. The "Operation Selection" screen will now be visible. In the "Operations" list, highlight "Load GPS software", then press the Next button.

6. The "GPS Software Selection" screen will now be visible. In the Available Software list, highlight the desired firmware version, then press the Next button, and finally the Finish button. WinFlash will establish communication with your [receiver name] and begin the firmware-update process. You will see one or more progress bars run during the course of the process.