

## Installing receive frequencies in Trimble internal radio modems

This Technical Tip provides instructions for installing receive frequencies in Trimble internal radio modems in Trimble GPS/GNSS receivers beginning with the Trimble 5700, which was introduced in February 2001. The same general procedure is used with all Trimble GPS/GNSS receivers introduced after the Trimble 5700.

These instructions do not apply to the Trimble 4700 or the Trimble 4800.

Because receiving a broadcast does not burden the frequency spectrum or cause interference for other users, there is no restriction to the frequencies you can listen to within the limitations of the radio modem's frequency range.

You will want to have your rover receivers configured so they can receive all the frequencies your base radio modem or base GPS/GNSS receiver can broadcast. You will also want to enter other RTK GPS broadcast frequencies that may be available in your area, provided they are within the rover radio modem's frequency range.

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 install receive frequencies in your Trimble internal radio modems. 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.

The procedure to install receive frequencies in a Trimble internal radio modem is as follows:

1. First, a version of WinFlash that delivers firmware 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.

You can determine if your WinFlash "toolbox" has the necessary capabilities by starting WinFlash and seeing if the device type "[receiver name]" is available. If it is, you can skip to Step 3 below. If not, you need to 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 "[receiver name]" device, you can either install the WinFlash from the CD that comes with the [receiver name] or download from the Trimble Web site the WinFlash that installs pretty much any 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.

Click on the link that reads **Downloads**

Download any of the firmware versions available on the Downloads page. May as well get the most recent one, but that is not critical for the purpose of installing receive frequencies.

The file you are downloading 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 provide the first 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.

Now when you start WinFlash you should see [receiver name] in the list of available device types.

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. 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 WinFlash - Device Configuration screen. Select the serial port you will use to connect to the [receiver name], then highlight “[receiver name]” (or something reasonably similar) as the Device type, then click the Next button.
5. The WinFlash – Operation Selection screen will now be visible. In the Operations window, highlight “Configure radio settings” or “Configure radio/GSM settings” depending on which model you have, then press the Next button and finally the Finish button. WinFlash will establish communication with your [receiver name] and present a screen that displays the current settings.
6. If your [receiver name] has the UHF-transmit option enabled, make certain the Mode is set to Rover.  
  
The lower portion of the screen will display the frequencies the radio modem can receive. If you want to start from scratch, you can click the “Remove All” button. To add frequencies, enter the desired frequency value in the box to the left of the “Add” button, then click the “Add” button. You can also change the order the frequencies appear in the list by highlighting the frequency to be moved and then using the “Move Up” and “Move Down” buttons.
7. After you have entered all the desired frequencies in the lower part of the screen, you can use the “Current Channel” list toward the top of the screen to select the frequency you will use. This is not critical because you can also use Survey Controller in your data collector to select the desired frequency.
8. Click the OK button and WinFlash will add the frequencies to the internal radio modem and reboot the [receiver model]. After the reboot process is finished you should see a Status message that says “The radio was configured successfully”. Click the Exit button to shut down WinFlash. Turn off the [receiver model], disconnect the cable(s), and the [receiver model] should now be ready to go to work.