

# Trimble® R/5000 Series GPS Receivers

## Release Notes

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This is the April 2005 release (Revision A) of the *Trimble R/5000 Series GPS Receivers Release Notes*. It applies to the Trimble R7, Trimble R8, 5700, and 5800 GPS receivers firmware version 2.23.

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## Introduction

These release notes describe features of the Trimble® R7, Trimble R8, 5700, and 5800 GPS receivers that are not included in the *5700/5800 GPS Receiver User Guide* or the *Trimble R7/Trimble R8 GPS Receiver User Guide*.

The CD that was supplied with your Trimble R7, Trimble R8, 5700, or 5800 GPS receiver contains utilities that you can use to program or configure your receiver.

**Before** you perform a firmware upgrade, Trimble recommends that you download and back up any files that are on the receiver.

If your Trimble R7, Trimble R8, 5700, or 5800 series GPS receiver is supplied with additional Trimble firmware or software products, make sure that those products have been upgraded to the latest version. For more information about upgrading, refer to the release notes for that product.

## New Features

### Trimble R7/5700 receiver version 2.21

- Firmware for Trimble R7, Trimble R8, 5700, and 5800 receivers is merged into a single version

### Trimble R7/5700 receiver version 2.23

Improvements to:

- Power indication
- Alphanumeric serial numbering
- Receiver ID
- WAAS command when using GSOF

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## Trimble R8/5800 receiver version 2.21

- Firmware for Trimble R7, Trimble R8, 5700, and 5800 receivers is merged into a single version

## Trimble R8/5800 receiver version 2.23

Improvements to:

- Power indication
- Alphanumeric serial numbering
- Receiver ID
- WAAS command when using GSOF

## Known Issues

The following issues are known at the time of release of firmware version 2.23.

### Trimble R7/5700 receiver

- If you are using the Trimble Data Transfer utility, and you have trouble communicating with the receiver, or you cannot read files from the receiver once it is connected, close any other software applications that are running on the computer and try again.
- If you do not use a SanDisk CompactFlash card in your receiver, you may encounter data logging and transfer difficulties.
- Some USB devices may stop working when they are connected to a computer for extended periods. If this occurs when you try to connect to the USB port on the receiver, disconnect the USB cable and then reconnect it.



**CAUTION** – Do not interrupt the process when transferring data through a USB port or the serial port USB. If the process is interrupted, the office computer may stop responding.

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- If you are using the Windows 2000 operating system, *before* you disconnect the USB cable stop the receiver through the *Unplug and Eject Hardware* dialog. This dialog is available from the task bar whenever the receiver is connected.

### Trimble R8/5800 receiver

- If you are using an ACU controller or a TSCe™ controller with BlueCap® module, use the Bluetooth® wireless connection between the receiver and the controller to control an RTK survey.

To log raw GPS data for in-fill or for a static/fast static survey, Trimble recommends that you use a cable to connect the receiver to the controller. Although the Bluetooth wireless connection supports logging data to a controller, the cable connection provides greater security and is less likely to result in loss of data.

- Trimble recommends that you change the receiver internal battery when the Low Battery message appears on the controller, or when a low battery is indicated by the receiver power LED. Do not wait until the battery is completely discharged and the receiver stops operating. Otherwise, you may not be able to reconnect the receiver over the Bluetooth wireless link. (If this situation does occur, reset the receiver in order to re-establish Bluetooth wireless communication.)
- Before you start a survey in which you will log data to a controller, Trimble recommends that you turn on the receiver and allow enough time for it to acquire a current time, ephemeris and almanac, and to start tracking satellites.

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- The radio mode is retained when you reset the receiver. Once you reset the receiver, confirm that it is in the correct radio mode.

## Registering the Receiver

Trimble recommends that you register your GPS receiver to protect your investment and to ensure that the system is always up to date. If you register the receiver, you will be notified by e-mail when there are updates to the receiver firmware, or when new functionality becomes available.

To register the receiver:

1. Run the *Trimble R7, Trimble R8, 5700, and 5800 GPS Receivers CD*.
2. From the main menu, select *Register your receiver*.
3. Do one of the following:
  - To register online, select *Register using the Internet*. The online registration form opens in your default web browser. Fill in the required fields, and then click **Submit** to submit the completed form.
  - To register by mail, select *Register using mail*. The registration form opens in the Microsoft WordPad editor. Fill in the required fields, print the form, and then mail it to the address shown at the bottom of the form.

## Software Compatibility

The Trimble R7, Trimble R8, 5700, and 5800 GPS receivers are compatible with the following software:

- Trimble Geomatics Office™ version 1.6 or later
- Trimble Survey Controller™ version 7.71 or later

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**Note** – Trimble Survey Controller software version 7.72 or earlier is **not** compatible with the Trimble R7 or Trimble R8 receivers.

- TRS™ (Trimble Reference Station) version 1.03 or later
- Trimble Total Control™ version 2.5 or later

## Updating the System Files

Before you can use your Trimble R7, Trimble R8, 5700, or 5800 series GPS receiver with Trimble office software, such as Trimble Geomatics Office, Trimble Total Control, or Terramodel software, you must install or update the following files:

- The Trimble R7, Trimble R8, 5700, and 5800 Series GPS Receiver Device Driver for Data Transfer

You must have this file to transfer files from the CompactFlash card or the receiver internal memory to the computer, using the USB and serial ports or a Bluetooth wireless connection.

- Configuration files

These files provide the latest list of antennas and receivers that are recognized by Trimble software. They also ensure that antenna and receiver information flows correctly from the receiver to the Trimble Survey Controller software and to the office software.

To install or update these files:

1. Run the *Trimble R7, Trimble R8, 5700, and 5800 GPS Receivers CD*.
2. From the main menu, select *Install Components for TGO / TTC / Terramodel*.
3. Follow the instructions in the installation wizard.

**Note** – You must also install the latest version of the software or firmware for any other Trimble product that you will use with the Trimble R7, Trimble R8, 5700, or 5800 series receiver (for example, the Trimble Survey Controller software.)

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## Updating the Utilities

The *Trimble R7, Trimble R8, 5700, and 5800 GPS Receivers CD* contains the following utilities. Make sure that you install the latest versions of these utilities.

### GPS Configurator software

Use the GPS Configurator software to configure the receiver when it is connected to the office computer. You can also use this software to view the current receiver settings, check GPS information, change receiver settings in real time, and to save and transfer configuration files. Use the GPS Configurator software with a Trimble 5700, 5800, Trimble R7, Trimble R8, or MS750™ receiver. You may not be able to use the software to configure some older model receivers, such as a 4600 LS™ receiver, or a 4000 series receiver.



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**CAUTION** – When you connect the office computer to the receiver using the GPS Configurator software, all outputs on the port you connect to are disabled.

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### Installing the GPS Configurator software

The GPS Configurator software is supplied on the *Trimble R7, Trimble R8, 5700, and 5800 GPS Receivers CD*. You can install the software on any number of computers.

1. Run the CD.
2. From the main menu, select *Install individual software packages*.
3. From the menu that appears, select *GPS Configurator*.
4. Follow the instructions in the installation wizard.



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**CAUTION** – You can select the internal radio as an output port for CMR™ or RTCM corrections only when the operating mode for the internal radio is set for Base.

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## WinFlash software

The WinFlash software communicates with Trimble products, and enables them to perform functions that include:

- installing and updating receiver and radio firmware
- upgrading receiver options
- retrieving receiver configuration
- configuring the internal radio and adding receive frequencies
- configuring the Bluetooth ID string to help identify the receiver when it is connected using Bluetooth wireless technology

**Note** – You **cannot** use this version of the WinFlash software to configure a GPS Total Station® 4700 or a 4800 internal radio.

### Installing the WinFlash software

If you have already run the *Install essential software* option from the *Trimble R7, Trimble R8, 5700, and 5800 GPS Receivers CD*, the WinFlash software is installed on the computer.

**Note** – You can install the WinFlash software on as many computers as required. The version of the WinFlash software on the *Trimble R7, Trimble R8, 5700, and 5800 GPS Receivers CD* is fully compatible with other copies of the software that you may have for other Trimble products. Installing the WinFlash software from this CD will not disrupt operation with other Trimble devices.

To install the WinFlash software on another office computer, or to install/reinstall it without installing other software:

1. Run the *Trimble R7, Trimble R8, 5700, and 5800 Receivers CD*.
2. From the main menu, select *Install individual software packages*. A menu appears.
3. Select *WinFlash vX.XX for Trimble R/5000 Series Receivers*.
4. Follow the instructions in the installation wizard.

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## The Trimble Data Transfer utility

Use the Trimble Data Transfer utility to transfer data between a variety of data collection devices and an office computer.

### Installing the Data Transfer utility

If you have already run the *Install essential software* option from the *Trimble R7, Trimble R8, 5700, and 5800 GPS Receivers CD*, the Data Transfer utility is installed on the computer.

**Note** – *You can install the Data Transfer utility on any number of computers.*

To install the Data Transfer utility on another office computer, or to reinstall it without installing other software:

1. Run the CD.
2. From the main menu, select *Install individual software packages*.
3. From the menu that appears, select *Data Transfer vX.XX*.
4. Follow the instructions supplied by the installation wizard.

### Using the Data Transfer utility to connect to the receiver

Connect the Data Transfer utility to a GPS Receiver (Trimble R/5000 Series) default device, or create a new GPS Receiver (Trimble R/5000 Series) device definition. You cannot use a device definition for another type of receiver. For more information about creating a new device, refer to the Data Transfer Help.

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## Trimble Reference Station software

You can use the Trimble R7 or 5700 receiver to log reference station data to the TRS (Trimble Reference Station) software version 1.04. An upgrade program for this software is supplied on the *Trimble R7, Trimble R8, 5700, and 5800 GPS Receivers CD*.

**Note** – *The upgrade program on the CD does not perform a complete installation of the TRS software. It only upgrades from an earlier version. You must have the TRS software version 1.02 or earlier already installed on the computer.*

To run the upgrade program:

1. In the TRS software, stop logging manually.
2. Disconnect from any GPS receiver.
3. Exit the TRS client software.
4. Run the *Trimble R7, Trimble R8, 5700, and 5800 GPS Receivers CD*.
5. From the main menu, select *Install individual software packages*.
6. From the menu that appears, select *TRS v1.04*.
7. Follow the instructions in the installation wizard.
8. Once the installation is completed, start the TRS software, reconnect to the receiver(s) you want to log data to and then resume logging.

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## Using a USB with the receiver

This section describes how to use a USB with a Microsoft Windows operating system.

### Windows 2000 operating system

When a Trimble R7 or 5700 receiver is connected to a USB port on a computer, the receiver is treated as a peripheral device of the computer. Before you physically disconnect or turn off a peripheral USB device such as the receiver, you must complete the following steps:

1. Right-click the Unplug or Eject Hardware icon on the computer task bar.
2. From the menu that appears, select *Unplug or eject hardware*. A dialog appears.
3. From the *Hardware devices* list, select Trimble USB GPS and then click **Stop**. A dialog appears.
4. To confirm that you want to stop the receiver, click **Stop** again. A message confirms that it is safe to remove or disconnect the receiver.
5. To close the message, click **OK** and then click **Close** to close the dialog.

You can now switch off the receiver and disconnect it from the computer.

Alternatively, to stop the receiver:

1. Click the Unplug or Eject Hardware icon. A menu appears.
2. Select *Stop Trimble USB GPS*.  
The receiver stops immediately, and the confirmation message appears.
3. To close the message, click **OK** and then click **Close** to close the dialog.

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## Windows 98 or Me operating systems

Install the Data Transfer utility before you connect the computer to the receiver. For more information, see The Trimble Data Transfer utility, page 12. Until you do this, you cannot use the USB port to connect the receiver to the office computer.

The USB driver for the Trimble R7 or 5700 receiver is installed on the office computer when you install the Data Transfer utility. If you connect the receiver to an office computer running the Windows 98 or Windows Me operating system before you install the Data Transfer utility, the system cannot find a driver for the receiver and you cannot connect to the receiver using its USB port.

If you cannot connect the office computer to the receiver using a USB, do the following:

1. If the *Add New Hardware* dialog appears, click **Cancel** to cancel the Add New Hardware wizard.
2. Install the Data Transfer utility.
3. From the *Start* menu, select *Settings / Control Panel*.
4. Double-click the System icon. A dialog appears.
5. Select the *Device Manager* tab.
6. Highlight *Other or Unknown Trimble* device and then do one of the following:
  - To delete this device, click **Remove**.
  - To update the driver for this device, click **Properties** and then click **Update Driver**. Follow the instructions. Use the file Trmbusb.inf in the folder Windows\Inf.
7. Disconnect the USB cable and then reconnect it.
8. If the device driver does not install automatically, restart the computer.

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## Using a CompactFlash Card

Always format a CompactFlash card in the receiver. This prevents data on the card from being corrupted if you remove the card while the receiver is logging data to it.

Trimble recommends that you use only a SanDisk industrial grade CompactFlash card in the Trimble R7 or 5700 receiver. Other disks can cause the following problems:

- When the receiver is logging data at 10 Hz, records could be written out of sequence to the data file.
- When you are transferring files to the office computer using a USB connection, the connection could time out. If this happens, do one of the following:
  - Connect the receiver to the computer using one of the receiver serial (COM) ports.
  - Insert a CompactFlash card directly into the computer using a CompactFlash reader.

If you use this method, and if you write files to the CompactFlash card using the reader, make sure that you correctly eject the card before you remove it from the office computer.