RELEASE NOTES

Trimble® Infrastructure GNSS Receivers

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Version 4.00
Revision A
March 2009

Trimble

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Release notice

This is the March 2009 release (Revision A) of the *Trimble Infrastructure GNSS Receivers Release Notes*. It applies to version 4.00 of the receiver firmware.

Product Limited Warranty Information

For applicable product Limited Warranty information, please refer to the Limited Warranty Card included with this Trimble product, or consult your local Trimble authorized dealer.

Product Extended Limited Warranty Information

For applicable product Extended Limited Warranty information, please refer to the Limited Warranty Card included with this Trimble product, or consult your Trimble dealer.

Registration

To receive information regarding updates and new products, please contact your local dealer or visit the Trimble website at lwww.trimble.com/register. Upon registration you may select the newsletter, upgrade or new product information you desire.

Notices

Class B Statement – Notice to Users. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes and modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commission rules.

Canada

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

Australia and New Zealand

This product conforms with the regulatory requirements of the Australian Communications Authority (ACA) EMC framework, thus satisfying the requirements for C-Tick Marking and sale within Australia and New Zealand.

Taiwan – Battery recycling requirements

The product contains a removable Lithium-ion battery. Taiwanese regulations require that waste batteries are recycled.

廢電池請回收

Notice to our European Union customers

For product recycling instructions and more information, please go to www.trimble.com/ev.shtml.

Recycling in Europe: To recycle Trimble WEEE (Waste Electrical and Electronic Equipment, products that run on electrical power.), Call +31 497 53 24 30, and ask for the "WEEE Associate". Or, mail a request for recycling instructions to:
Trimble Europe BV
c/o Menlo Worldwide Logistics
Meerheide 45
5521 DZ Eersel, NL

Declaration of Conformity

We, Trimble Navigation Limited,

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declare under sole responsibility that the products:
Trimble NetR3, NetR5, and NetR8 GNSS receivers
comply with Part 15 of FCC Rules.

Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Introduction

These release notes describe new or changed features in firmware version 4.00 of the Trimble® Infrastructure NetR3, NetR5™, and NetR8™ GNSS receivers.

The CD supplied with your receiver contains utilities that you can use to program or configure the receiver. Before you upgrade the firmware, Trimble recommends that you download and backup any files that are stored on the receiver.

If your Trimble receiver is supplied with additional Trimble firmware or software products, make sure that those items are upgraded to the latest version before you install firmware version 4.00.

CAUTION – If you use firmware version 4.00 to delete files from the receiver, the deletion is permanent—you cannot undelete the files.

Trimble Infrastructure Receivers: Version 4.00

Note – *Before you update to version 4.00 on a Trimble Infrastructure GNSS receiver, you must have firmware version 3.60 or later installed. You cannot update to version 4.00 directly from version 3.50 or earlier—you must first download and install version 3.64 from www.trimble.com and then install version 4.00.*

General

Trimble RTK rovers will initialize faster if both the reference station and the rover use the latest firmware version available.

Click the **Check for new firmware now** button in the web browser (see web browser / *Interface Menu* / *Firmware* / *Firmware Upgrade Check*). This button enables you to check immediately for new firmware. If the receiver is connected to the Internet, the receiver still scans daily for updates, if set to do so.

Updating the firmware

Firmware updates are available free of charge under your warranty agreement. To download a firmware update, fill out and submit the form on the product support information page on trimble.com, or go to http://www.trimble.com/infrastructure/firmwareupdate.aspx. The firmware is then available to download.

New features

Version 4.00 includes the following new features.

New Trimble correction message format: CMRx

The CMRx message format is a Trimble proprietary development that enables use of all the signals generated from the Trimble base station, reference station, or Trimble VRS™ network. This is a considerable advantage with the increasing number of GPS and GLONASS satellites available.

The CMRx format will also support signals from some future satellite constellations.

The benefits are that the CMRx format:

- Handles an increasing number of satellites and signals.
- Allows for a greater number of repeaters because the messages are more compact.
- Increases battery life at the base station radio and repeaters; smaller messages result in shorter transmission time.
- Sends smaller volumes of data over the Internet, which results in lower costs.

Improvements to the RTK engine

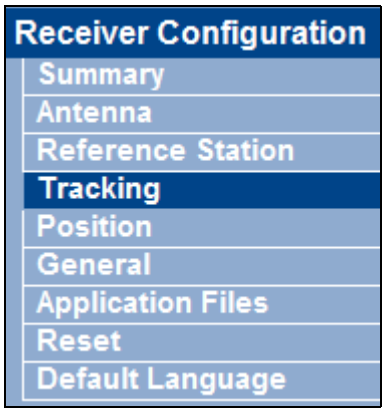
With firmware 4.00, positions appear to initialize faster and more readily at greater ranges than with older firmware versions. Trials on a rover receiver running firmware version 4.00 from a single base station or a reference station on the Internet successfully tested RTK positioning at ranges well over 20 km.

Under a tree canopy, GPS signals may be heavily attenuated. In this environment, firmware 4.00 appears to perform better than older firmware versions.

Note – *These performance results may not be the same in all locations worldwide because atmospheric and ionospheric conditions vary.*

Web user interface

- Support for new browsers: Microsoft® Internet Explorer® 7.0, Mozilla Firefox 3.0, Apple Safari.
- The *Receiver Configuration* menu now contain *Tracking*, *Position*, and *General* pages:



- Power saving

  To reduce power drain on the receiver, there is now an Enable option in the *Power Save* menu. Select one of the following from the *General* / *VFD Power Save* menu:

Setting	The VFD...
Auto	Slumbers after 60 seconds of inactivity only if the input voltage is less than 14.5 V, that is, battery powered. Otherwise, it is assumed that the receiver is AC powered (greater than or equal to 14.5 V) and the VFD stays on always.
Enable	Slumbers after 60 seconds if there are no key presses or warnings, regardless of the source of input power. Even with a DC power input greater than 15 V, the VFD slumbers after 60 seconds of inactivity.
Disable	Never slumbers

TIMG files

The Trimble NetR3 and NetR5 GNSS receivers now require the TIMG file for loading. If you encounter difficulties, make sure that you have at firmware 3.60 or later loaded, and have the latest version of the WinFlash utility that enables loading TIMG files.

Registering the receiver

Trimble recommends that you register your Trimble 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 email when there are updates to the receiver firmware, or when new functionality becomes available.

To register the receiver:

1. Run the receiver 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.