

RELEASE NOTES

Trimble® Infrastructure GNSS Series Receivers

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Version 4.46
Revision A
March 2012



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Release Notice

This is the March 2012 release (Revision A) of the *Trimble Infrastructure GNSS Receivers Release Notes*. It applies to version 4.46 of the receiver firmware.

Product Warranty Information

For applicable product warranty information, please refer to the Warranty Card included with this Trimble product, or consult your Trimble reseller.

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

Electric 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



Introduction

These release notes describe the improvements made to the Trimble® NetR9™ Infrastructure series receiver. With this release, the receiver can use version 4.46 firmware.

To use firmware version 4.46:

- You must have a valid firmware warranty. If necessary, contact your Trimble reseller to purchase a warranty.
- The receiver must have firmware dated April 2011 or later.

Before you upgrade the firmware, download and back up any files or configuration settings.

New features and changes

General

Improved CPU management through reducing allocation to options not in use.

Data formats

- BINEX record 0x7f-05 updated to include Doppler values for all satellites and signals.
- BINEX record 0x7f-05 updated to include explicit ObsFlag bytes.
- BINEX record 0x7f-05 updated to include Compass and GLONASS observation codes.
- BINEX record 0x01-02 update to show GLONASS position/velocity values in kilometers instead of meters. Also updates for GLONASS slot IDs.
- BINEX record 0x00-1f now shows antenna height to ARP.
- BINEX record 0x01-01 updated GPS ephemeris week data.
- BINEX streams include comment fields every 60 seconds to indicate the version BINEX implemented on the receiver. Logged BINEX will include on version comment per file. No comment fields indicate a firmware earlier than version 4.45. Version 4.45 and later include the BNX1 version number.

Note – *This version number is not an official BINEX version; it is a Trimble identifier included in the stream.*

- RT27 update to resolve missing position in RT27 record at week rollover.
- Trimcomm™ 0xb5 updates to handle serial port configuration changes.

Data logging

- Full support for RINEX version 3.xx navigation files.
- New support for on board conversions to RINEX version 2.12 and version 3.02 proposed formats. Please note these are only proposed formats at the time of the version 4.46 firmware release. As such, these are subject to change and are not fully supported by all software packages.
- New power saving functionality for data logging sessions that enables the operator to define one or more logging sessions and have the receiver power down while not logging, to conserve power. It also enables the operator to set a predetermined wakeup period whereby the receiver will power on at a predetermined interval for a user-defined amount of time. This ensures the receiver will be accessible at a known time regardless of the data logging session schedule.

Power saving mode theory of operation:

- The receiver must have the current time: Otherwise it will remain powered on until the time is set.
- The receiver must have been powered on for at least 60 seconds prior to the power saving mode taking effect.
- Power saving mode will power on the receiver 60 seconds prior to the scheduled data logging session to allow for power up, SV acquisition/tracking, and setting of time.
- Power saving mode will not power off the receiver if there is less than two minutes left before the next scheduled power on time.

Power

- Resolves an issue of power-on values being reset to default when power control routines are enhanced during a firmware upgrade.
- Resolves a rare issue whereby the system may not save power routine settings if the receiver unexpectedly shuts down because the internal battery charger is disabled and completely drained.
- The power-on and power-off default values have been updated:
 - Default Power-on voltage: 11.8 V
 - Default Power-off voltage: 10.5 V

Tracking

- Improved cycle slip detection.
- Improved QZSS health and ephemeris reporting.
- Improved QZSS L1C and L1SAIF tracking.
- Update GLONASS ephemeris decoding of group delays.
- Updates for Compass constellation.

OmniSTAR

Resolved an issue whereby the selected OmniSTAR satellite may be lost when the receiver is rebooted.

Networking

- The NetR9 receiver now supports the FTP “REST” command.
- Improved TCP performance on 10BaseT Half Duplex networks.
- DNS now supported via PPP connections.

Web interface and front panel

- Improved Web UI performance over slow connections.
- Minor translation and branding updates to accommodate new features/changes.
- Updated configuration change email alert to prevent multiple rapid email notifications.
- Resolves several minor issues of specific web pages not rendering correctly in various browsers.
- Addition of Compass controls in the Satellite Tracking Graph.
- Resolves an issue of the Satellite Tracking Graph not appearing when tracking QZSS LEX signals.
- Resolves an issue where the APC offset would be introduced to the antenna height field upon a receiver reset.
- Updates to the antenna.ini file for the Web UI and front panel antenna selection menu. Adds support for the AG25 and resolves an issue where the Unknown External antenna option was not available.

Upgrading the firmware

Make sure that the receiver firmware warranty date is April 2011 or later.

Use one of the following methods.

- WinFlash utility: Use the latest version that is available with the version 4.46 Web package.
- Receiver Web User Interface: Make sure that the receiver is already running firmware version 4.xx or later. Download and install the version 4.46 *.TIMG file.