

Trimble® Precision GNSS OEM Receivers, 4.71

This document contains late-breaking product information, updates, and troubleshooting tips not covered in the Trimble® Precision GNSS OEM receiver documentation.

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Introduction

These release notes describe improvements made since version 4.61 to the following Trimble GNSS OEM receivers:

- BD910
- BD920
- BD960
- BD970
- BD982
- BX960
- BX982

With this release, all the above products can use version 4.71 firmware. To use firmware version 4.71, you must have a valid firmware warranty. You can check the Firmware Warranty Date using the web interface. Make sure the date shown is March 2012 or later. Alternatively, obtain the warranty date from the WinFlash software. Select *Verify receiver options* and ensure the *Firmware Option* is March 2012 or later.

Upgrade procedure

There are two ways to load the new firmware:

- Using the WinFlash utility (BD9xx WinFlash v234_v471.zip) downloaded from the Trimble website.
- Using the web interface of the receiver to load the firmware image file downloaded from the Trimble website.

New features and changes

This section documents the new features since version 4.61.

General

- The web interface has been redesigned for improved usage on smart phones and tablets.
- General operating system stability improvements.
- RTK engine processor usage reduced.
- The BD970 and BD982 temperature sensors now correctly display on the web interface.
- Minor translation updates.

I/O and Data formats

- The BD970 and BD982 receivers now include the EGM96 geoid model and output Orthometric heights based on this for messages such as the NMEA GGA and GNS

***Note** – Due to memory limitations, the BD910, BD920, and BD960 receivers continue to use a lower resolution geoid model from DMA WGS-84.*

- When sending application files with the same name these will once again overwrite the older file rather than creating separately indexed file.
- Resolved an issue that would cause outputs to stop if an application files was repeatedly started in rapid succession.
- Improved QZSS almanac handling. This resolves a rare issue where a bad almanac could cause a gap in RT27 data.
- RTCM version 3 no longer waits for UTC offset data to output valid GPS RTCM data after all almanac and ephemeris data has been cleared.
- The RTCM version 2.3 configuration now allows GLONASS output to be enabled.
- NMEA:
 - Resolves one to two missing NMEA epochs when switching OmniSTAR™ modes.
 - VRS™ operation now results in output of NMEA GGA to eight decimal places.
- BINEX:
 - Improved handling of SBAS L5 observations.
 - The web interface now requires BINEX measurements to be enabled before meta data can be selected.
 - Now outputs the receiver ID on initial connection and then every 30 minutes.

Tracking

- Enhanced signal spoofing protection.
- Improved channel allocations for GNSS tracking.
- Enhanced Galileo ephemeris handling.
- Improved cold start time when operating in low signal level/challenging environments.

Manual/Help updates

The following updates were made to the receiver manuals and help (www.trimble.com/OEM_ReceiverHelp/V4.71/en/) for this firmware release:

- Added the BD920-W3G Product Guide.
- Changed all references of “Compass” to “BeiDou”.
- Updated BeiDou in the Glossary (removed Compass).
- Removed references to GIOVE (which has been decommissioned).
- Updated tracking features to include Galileo, BeiDou, and QZSS where applicable.
- Made the references to HTML web browsers more generic (simply recommended using a current version) and added a disclaimer about performance with some browsers.
- Updated the Antenna LNA current rating on the BD910/BD920.
- Corrected the BD920 power requirements.
- Updated the BD920 antenna power output.
- Clarified LED pattern descriptions.
- Added the number of cycles that connectors are rated for.
- Added Receiver Web Applications Setting help pages for Bluetooth, GSM/GPRS, and Wi-Fi.
- Added documentation regarding Orthometric heights for receivers that include the EGM96 geoid model.
- Added a note that Met-Tilt functionality is not supported by the BD9xx receivers.
- Removed “MS Controller” references since this is no longer supported.
 - Updated the 54h and 55h messages to support BeiDou and the subtype 20 SV Enable/Disable/Ignore Health Controls.
- Updated the 56h and 57h messages to support BeiDou and rewrote this documentation to clarify it.
- Various updates to the 64h/Application File documentation to clarify and correct Application File operation.
- Updated the 64h Reference node record to include new optional fields.
- Updated the current SBAS SVs table.
- Corrected the 67h RETAFDIR message structure where a byte was not documented.
- Updated the Break response documentation for the BD920-W3G.
- Updated the 58h RESETRCVR command to include various reset states.
- Updated the AVR message to include the roll field since this can be specified in the BD982.
- Updated the VTG mode indicator.

Legal notices

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Release Notice

This is the April 2013 release (Revision A) of the *Release Notes*. It applies to version 4.71 of the Precision GNSS OEM software.