

Trimble® Precision GNSS OEM Receivers, 4.93

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

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Introduction

These Release Notes describe improvements made since version 4.91 to the following Trimble GNSS OEM receivers:

- BD910
- BD920
- BD920-W3G
- BD930
- BD960
- BD970
- BD982
- BX960
- BX982

With this release, all the above receivers can use version 4.93 firmware. To use firmware version 4.93, you must have a valid firmware warranty. You can check the Firmware Warranty Date using the web interface. Make sure the date shown is 1 May 2014 or later. Alternatively, obtain the warranty date from the WinFlash software. Select *Verify receiver options* and ensure the *Firmware Option* is 1 May 2014 or later.

For further support information, go to www.trimble.com/OEM_ReceiverHelp.

Upgrade Procedure

There are two ways to load the new firmware:

- Use the WinFlash utility (BD9xx WinFlash v234_v493.zip) downloaded from the Trimble website.
- Use the web interface of the receiver to load the firmware image file downloaded from the Trimble website.

New Features and Changes

The following improvements have been made to the OEM GNSS receivers:

General

- Minor translation updates.
- Updated antenna database.
- Updated OmniSTAR® libraries.
- Resolves issue whereby the receiver may not be able to check if a firmware update is available.
- Customer settings are now always retained if repeated firmware system crashes occur.
- Resolves issue where the BD930 receiver could become inoperable if configuration changes were being written to memory at the time of power failure.

Data formats

- RT17/27 now includes a new satellite system flag for Beidou tracking (SV TYPE “10”), where the phase on the geostationary B1 signal is consistent with industry standards.
- RT17/27 now supports the logging and streaming of SBAS ephemeris data.
- Added additional verification of data output to ensure unhealthy satellite data is not inadvertently broadcast in RT27 and BINEX formats.
- RTCM:
 - Support for RTCM version 2.4.
 - RTCM version 2 has been updated to prevent message type 34 outputs until valid ionosphere and UTC information has been received and a position has been computed.
 - Updates to RTCM version 3 message type 1033 to ensure that the correct IGS receiver name is transmitted.
 - Updates to RTCM version 3 message type 1033 to ensure that the full receiver serial number is transmitted.
 - RTCM MSM messages are now supported for GPS, Glonass, QZSS, and Beidou.
- BINEX:
 - Identifier comment updated to **BNX2**.

- 0x7f-04 updated to correctly handle null observation records. Previously the record would be truncated when null observations were included.

Tracking

- Improved handling of GNSS satellite search, acquisition, and tracking routines.
- Updates to Beidou B1 phase ambiguity.
- Improved handling of Galileo almanac data transmissions.
- Improved GPS L2C and GLONASS L1-C/A reacquisition
- Improved L5 multipath reporting. Previously this could show invalid multipath data for high elevation L5 SVs.

Application files

- Improved handling of GZIP clone files. Previously some browsers did not provide the required information in their header information for the receiver to recognize the file type.

Web interface

- The Web UI has been updated to support full 12-character passwords.
- On the *Web UI / Receiver Configuration / Antenna* page, you can now apply antenna corrections to the RTCM V3 stream. When enabled (default), the RTCM stream sends out ADVNULLANTENNA and normalizes the corrections. When this is turned off, the RTCM stream will include the IGS antenna name in the stream.
- The *Receiver Options* webpage has been changed to reflect an *Options overview*, with detailed option bits available if you click **Option Detail**.

Documentation updates

The latest documentation can be found online at www.trimble.com/OEM_ReceiverHelp.

Legal Notices

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Release Notice

This is the January 2015 release (Revision A) of the *Release Notes*. It applies to version 4.93 of the OEM GNSS receivers software.