



# Trimble GNSS OEM

## RECEIVERS

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

- ▶ Introduction
- ▶ Upgrade Procedure
- ▶ New Features and Changes
- ▶ Legal Notices

## Introduction

These Release Notes describe improvements made since version 5.43 to the following Trimble GNSS OEM receivers:

- BD930
- BD935-INS
- BX935-INS
- BD940
- BD940-INS
- BX940
- BD970
- BD982
- BX982
- BD992
- BD992-INS
- BX992

To use the new firmware, 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 November 2018 or later. Alternatively, obtain the warranty date from the WinFlash software. Select **Verify receiver options** and ensure the **Firmware Option** is 1 November 2018.

For further support information, go to [https://www.trimble.com/support/support\\_az.aspx#B](https://www.trimble.com/support/support_az.aspx#B). Select your BD/BX receiver and click **Support**.

Version 5.44

Revision A

December 2019

# Upgrade Procedure

There are two ways to load the new firmware:

- Use the WinFlash utility (BD9xx WinFlash v54X.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 Trimble GNSS OEM receivers.

- Enhanced security (for further information, see below)
- BD/BX94X and BD/BX99X receivers now support position averaging for the establishment of base station coordinates.
- Improvements to binary output messages to support BeiDou III satellites
- Improvements to local coordinates and geoid support
- Corrected an issue with the display of the temperature on the BD940-INS/BX940 receivers

### Enhanced security

Senate Bill 327 (SB 327) is a California (USA) law that is effective on 1 January 2020. The law requires manufacturers of devices that connect “directly or indirectly” to the Internet to equip the devices with “reasonable” security features.

The law requires that depending on the nature and purpose of the device, if a device can be accessed outside a local area network, then the password for the device must be either for each device OR force the user of the device to set their own password.

Although the law is currently specific to California, Trimble has chosen to implement the changes to all affected devices shipped from Trimble. This ensures the highest security in all applications worldwide.

### Affected Trimble GNSS devices

The below models are affected when they are received with version 5.44 firmware installed.

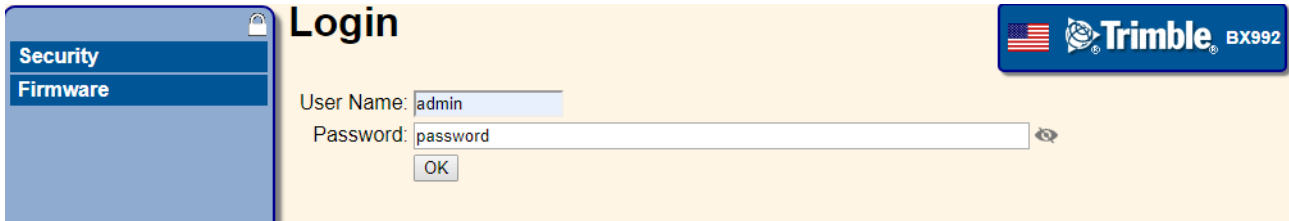
Trimble GNSS model	Firmware version	Downgrade limit
BD940	5.44	5.30
BD940 INS	5.44	5.33
BX940	5.44	5.30
BD970	5.44	5.34
BD982	5.44	5.35
BX982	5.44	5.35
BD990	5.44	5.37
BD992	5.44	5.37
BD992INS	5.44	5.37
BX992	5.44	5.37

**NOTE –** These new security measures do not affect receivers that were shipped with a lower version of the firmware (less than 5.44) and then chosen to upgrade to version 5.44 or later.

## What's changed on units shipped with version 5.44?

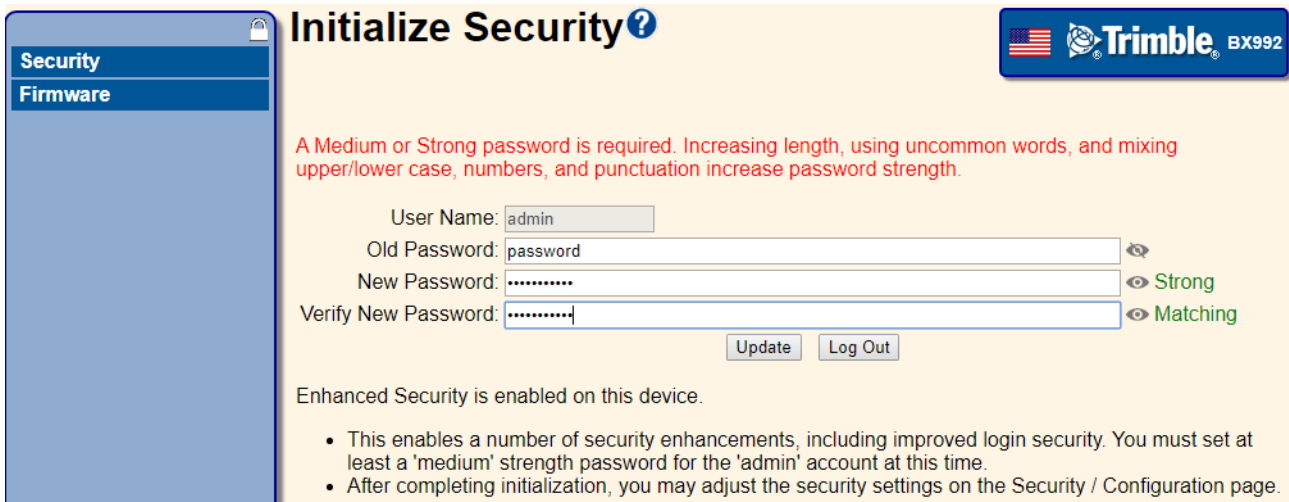
The first time you access the receiver web interface you will need to perform additional steps to set up a new password for the 'admin' login.

1. Connect to the receiver on the Ethernet and open a web browser with the appropriate IP address to launch the web interface. You will initially see that the list of menu options is limited to Security and Firmware.
2. When prompted, enter the default login username and password. By default, the username is **admin** and the password is **password**.



The screenshot shows the 'Login' page of the receiver web interface. On the left is a navigation menu with 'Security' and 'Firmware' options. The main content area has a title 'Login' and the Trimble BX992 logo. Below the title are two input fields: 'User Name' with 'admin' and 'Password' with 'password'. An 'OK' button is positioned below the password field.

3. You are prompted to enter a new password. Use a combination of upper and lowercase letters, numbers, and punctuation to obtain a "medium" or "strong" password; a "weak" password will be rejected. After verifying your new password, click **Update**.



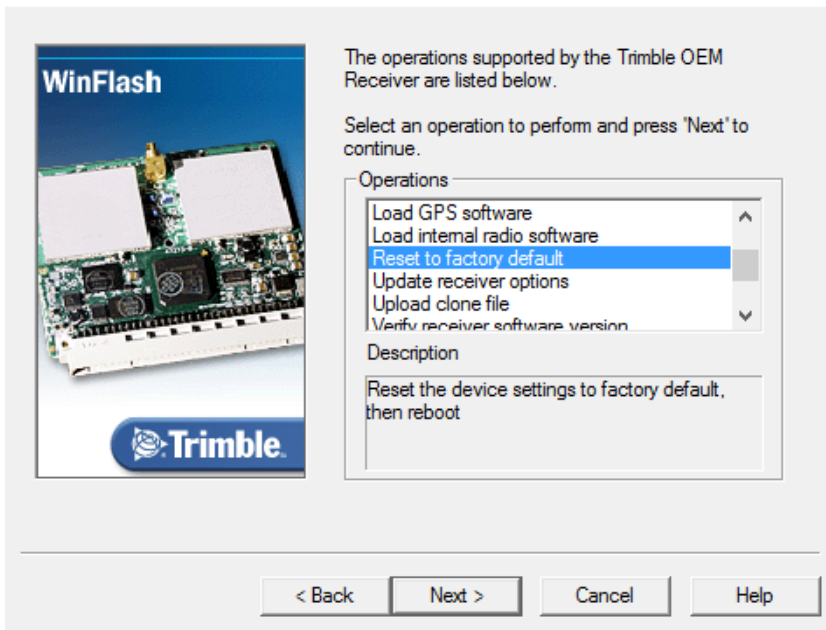
The screenshot shows the 'Initialize Security' page. It features a navigation menu on the left and the Trimble BX992 logo on the right. A red warning message states: 'A Medium or Strong password is required. Increasing length, using uncommon words, and mixing upper/lower case, numbers, and punctuation increase password strength.' Below this are four input fields: 'User Name' (admin), 'Old Password' (password), 'New Password' (masked with dots), and 'Verify New Password' (masked with dots). To the right of the 'New Password' and 'Verify New Password' fields are status indicators: 'Strong' and 'Matching'. At the bottom are 'Update' and 'Log Out' buttons. A message below the buttons states: 'Enhanced Security is enabled on this device.' Below this message are two bullet points: 'This enables a number of security enhancements, including improved login security. You must set at least a 'medium' strength password for the 'admin' account at this time.' and 'After completing initialization, you may adjust the security settings on the Security / Configuration page.'

4. Ensure that you remember the new password. Please be aware that it is no longer possible to clear this password without direct physical access to the receiver.

## What do I do if I forget the password?

You can no longer clear your password without direct physical access to the receiver.

1. Connect to the receiver using the WinFlash utility:



2. Select the **Reset to factory default** option.
3. Reset the password starting with the username as **admin** and the password as **password**.

**NOTE** – The receiver must be reconfigured after it is reset. The reset does not affect any options that have been installed.

## What if I am not connected to the Internet?

### Security Configuration – LAN/WAN IP only

The **Security Configuration** page now includes a new option to allow weaker (or no) passwords to be used for non-admin accounts, but with the restriction that accounts will only authenticate from LAN/WAN IP addresses and not the Internet.

**NOTE** – First-time initialization of the “admin” account password is still required even if you are on a local network. The medium/strong requirement is maintained at all times for this account. The admin account can always authenticate from any IP address.

1. From the **Login IP Address Range** field, select the LAN/WAN IP Only option and click **OK**.

- The Any IP setting is the default option and there is no change to it. When the LAN/WAN IP Only option is selected, you can use any strength password for accounts other than the 'admin' account, but those accounts will only authenticate from a LAN/WAN IP addresses and not Internet format addresses. Even a blank/empty password is allowed. This means a local user account could be set up without any password being required to allow anyone to access the receiver web interface from a LAN/WAN IP address.

Security:  ▼

Login IP Address Range (non-admin):  ▼

OK

Delete?	User Name	Receiver Config	File Download	File Delete	Edit User	NTripCaster
	admin	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**Add User**

A Medium or Strong password is required. Increasing length, using uncommon words, and mixing upper

User Name:

Password:

Verify Password:

Receiver Config	File Download	File Delete	Edit User	NTripCaster
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Add User

## Documentation updates

The latest documentation can be found online at [https://www.trimble.com/support/support\\_az.aspx#B](https://www.trimble.com/support/support_az.aspx#B). Select your BD/BX receiver and click **Support**.

## Legal Notices

Trimble Inc.  
 Engineering and Construction  
 5475 Kellenburger Road  
 Dayton, Ohio 45424-1099  
 USA

800-538-7800 (toll free in USA)  
 +1-937-245-5600 Phone  
 +1-937-233-9004 Fax  
[www.trimble.com](http://www.trimble.com)

### Copyright and Trademarks

© 2019, Trimble Inc. All rights reserved.

Trimble, the Globe & Triangle logo, and OmniSTAR are trademarks of Trimble Inc., registered in the United States and in other countries. All other trademarks are the property of their respective owners.

### Release Notice

This is the December 2019 release (Revision A) of the GNSS OEM Receivers' Release Notes. It applies to version 5.44 of the Trimble GNSS OEM receivers.