



Support Bulletin

Trimble Advanced Positioning

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Frequency and Baud Rate Configuration (For Trimble Receivers)

The following instructions will instruct you how to change the frequency and baud rate used for satellite-based (MSS / L-band) corrections. These instructions are applicable for Trimble branded receivers with a web user interface (webUI).

The document is split up into 3 sections:

1. Connecting to the WebUI,
2. Changing the frequency and baud rate, and
3. Verifying correction operation after the frequency and baud rate change

Please refer to the [Trimble RTX](#) or [OmniSTAR](#) coverage maps for the most current frequency and baud rate information.

News regarding satellite beam coverage, frequencies, and baud rates can be found at trimble.com/sat.

<https://positioningservices.trimble.com/>

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WebUI Access

You can change the frequency and baud rate for tracking both the Trimble RTX satellite and the OmniSTAR satellite by using the web user interface (WebUI)

Connecting to the web user interface (WebUI) of the receiver - via WiFi

1. Make sure the receiver is on and in close proximity to your PC.
2. Connect to the receiver via WiFi – it should be listed as Trimble GNSS XXXX, where XXXX is the last 4 digits of the receiver’s serial number.
 - a. If you are prompted for a password, the default password is ‘abcdeabcde’
3. Once connected to the GNSS receiver, open any modern web browser, such as Google Chrome, and type in <http://192.168.142.1>
 - a. If you are prompted for login credentials, the default username is ‘admin’ and the default password is ‘password’

Connecting to the web user interface (WebUI) of the receiver - via Ethernet

Receivers without WiFi access will need to be connected to via Ethernet.

1. Connect the receiver to a PC using an Ethernet cable.
2. Once the receiver is connected to the computer via Ethernet, an IP address will appear on the front panel of the receiver. If the front panel is displaying other information, press either the up or down arrows on the front panel to scroll through different options until an IP address is displayed.
3. On the computer, open up any web browser and type in the IP address from step (2).
 - a. If you are prompted for login credentials, the default username is ‘admin’ and the default password is ‘password’

Note: If there are any issues with step (3), make sure all other network connections on the PC are turned off or disconnected; this includes disconnecting or turning off WiFi.

Trimble RTX and xFill - Changing The Frequency and Baud Rate

1. Connect to the WebUI
2. Navigate to the **MSS Corrections** → **Configuration** page
3. Select **RTX/xFill**
4. Change **SV name** to **Custom**
5. Enter the new satellites settings for your region
 - a. Enter the new frequency in the **Frequency [Mhz]** field
 - b. Enter the new baud rate in the **Bit Rate [Hz]** field
6. Click OK

The screenshot shows the 'MSS Configuration' web interface. On the left is a navigation menu with the following items: Receiver Status, Satellites, Data Logging, Receiver Configuration, I/O Configuration, Bluetooth, MSS Corrections (highlighted), Status, Configuration (highlighted), Subscription, Network Configuration, Wi-Fi, Security, Firmware, Programmatic Interface, and Help. The main content area is titled 'MSS Configuration?' and contains the following elements: 'MSS Service: Off OmniSTAR RTX/xFill' (with 'RTX/xFill' selected); 'SV name: Custom' (in a dropdown menu); 'Frequency [MHz]: 1551.4890'; 'Bit Rate [Hz]: 1200'; and 'OK' and 'Cancel' buttons. Red arrows and numbered callouts (1-6) indicate the steps: 1 points to 'MSS Corrections' in the menu; 2 points to 'Configuration' in the sub-menu; 3 points to the 'RTX/xFill' radio button; 4 points to the 'SV name' dropdown; 5a points to the 'Frequency [MHz]' input field; 5b points to the 'Bit Rate [Hz]' input field; and 6 points to the 'OK' button.

OmniSTAR - Changing The Frequency and Baud Rate

1. Connect to the WebUI
2. Navigate to the **MSS Corrections** → **Configuration** page
3. Select **OmniSTAR**
4. Confirm the following settings
 - a. **Preferred Source of Data:** External
 - b. **External OmniSTAR Data:** Auto
 - c. **Internal OmniSTAR Demodulator:** Auto
 - d. **Max Data Outage:** 90 Sec
5. Change **SV name** to **Custom**
6. Enter the new satellites settings for your region
 - a. Enter the new frequency in the **Frequency [Mhz]** field
 - b. Enter the new baud rate in the **Bit Rate [Hz]** field
7. Click OK

MSS Configuration ?

MSS Service: Off OmniSTAR RTX/xFill

Preferred Source of Data: External Internal

External OmniSTAR Data: Auto

Internal OmniSTAR Demodulator: Auto

SV name: Custom

Frequency [MHz]: 1551.4890

Bit Rate [Hz]: 1200

Seed with RTK:

NAD83->ITRF Transformation:

Max Data Outage: 90 [Sec.]

OK Cancel

The screenshot shows a sidebar menu on the left with 'MSS Corrections' selected. The main content area is titled 'MSS Configuration ?' and contains various settings. Red arrows with numbers 1 through 7 point to specific elements: 1 points to the 'MSS Corrections' menu item; 2 points to the 'Configuration' sub-item; 3 points to the 'OmniSTAR' radio button; 4 points to the 'External' radio button; 5 points to the 'SV name' dropdown menu; 6a points to the 'Frequency [MHz]' input field; 6b points to the 'Bit Rate [Hz]' input field; and 7 points to the 'OK' button.

Trimble RTX and xFill - Verifying Correct Operation After Frequency Change

Once you have configured your receiver to the correct new satellite settings for your region, you can confirm that you are receiving the signal by following the steps below.

1. Make sure the antenna connected to the receiver (or just the receiver for smart antennas) is outside with a clear and open view of the sky
2. Connect to the WebUI
3. Navigate to the **MSS Corrections** → **Status** page
4. The **Mode** field should display **Tracking**

MSS Status ?

RTX/xFill Configuration:
SV name: Custom
Frequency [MHz]: 1555.8080
Bit Rate [Hz]: 2400

L-Band Beam Status:
Mode: Tracking
SNR [dBHz]: 49.41
Link %: 100.0
Age of Correction[sec]: 7.2

OmniSTAR - Verifying Correct Operation After Frequency Change

Once you have configured your receiver to the correct new satellite settings for your region, you can confirm that you are receiving the signal by following the steps below.

1. Make sure the antenna connected to the receiver (or just the receiver for smart antennas) is outside with a clear and open view of the sky
2. Connect to the WebUI
3. Navigate to the **MSS Corrections** → **Status** page
4. The **Tracking Mode** field should display **Full Tracking**

MSS Status ?

OmniSTAR Configuration:	HP/XP Library Status:	Last Known Position:
External Data Mode: Auto	Internal Library: Active	Latitude: 0° 0' 0.00000" N
Internal Data Mode: Auto	Engine: ---	Longitude: 0° 0' 0.00000" E
Internal HP/XP Link ID: 100	Solution Status: ---	Height [m]: 0.000
Internal HP/XP Link Name: Custom	Subscription Starts At: 1980-01-06 [Bubble]	Sigma-E [m]: 0.000
Internal VBS Link ID: 100	Subscription Expires At: 2017-05-25 [Bubble]	Sigma-N [m]: 0.000
Internal VBS Link Name: Custom	Subscribed Engine: HP	Sigma-U [m]: 0.000
Custom Frequency [MHz]: 1557.8350	Horizontal Precision [m]: 0.30	Datum Offset:
Custom Bit Rate [Hz]: 1200	Vertical Precision [m]: 0.30	Latitude: 0° 0' 0.00000" N
	Receiver Motion: Static	Longitude: 0° 0' 0.00000" E
L-Band Beam Status:	OmniSTAR Motion: Unknown	Height [m]: 0.000
Signal Source: Demodulator	Seed with Last Known Pos: No	Sigma-E [m]: 0.000
Tracking Mode: Full Tracking	Seed with Fixed RTK Pos: No	Sigma-N [m]: 0.000
Satellite Link ID: ---	Seed Quality: Unknown	Sigma-U [m]: 0.000
Satellite Link Name: Custom	Error: No errors	NMEA Encryption:
Frequency [MHz]: 1557.8350	VBS Library Status:	Mode: Disabled
Bit Rate [Hz]: 1200	Internal Library: Not Active	
Eb/No [dB]: 1.7	Solution Status: ---	
SNR [dBHz]: 35.5	Subscription Starts At: 1980-01-06	
Age of Correction[sec]:	Subscription Expires At: 2012-07-13 [Expired]	
	Error: Not Active	

<https://positioningservices.trimble.com/>

More Information

If you need any assistance or have questions, our Customer Care team is standing by to help, 24 hours a day, 7 days a week. The most current contact information is available at <https://positioningservices.trimble.com/contact/>

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