SUPPORT BULLETIN
Positioning Services

Configuring Trimble R7 For New Frequency and Baud Rate

The following instructions will instruct you how to change the frequency and baud on your Trimble R7. To determine what new frequency and baud rate should be used in your region, please refer to www.trimble.com/sat.

Changing the Frequency and Baud Rate for OmniSTAR on the Trimble R7

The following set of instructions will instruct you how to change the frequency on your Trimble R7.

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

Connecting to the web user interface (WebUI) of the receiver using Windows 7

Section 1 - Creating a Bluetooth connection between the computer and the receiver

1. In the system tray (in the lower right corner of the Windows taskbar), click the Up arrow and then click the Bluetooth icon. From the shortcut menu that appears, select Add a Device:
2. Windows 7 searches for the Bluetooth device. Ensure that it is switched on. Match the model and serial number to the one shown on the screen. The Device name will match the model and serial number of your receiver. Select the correct device and then click Next:

3. Select the **Enter the device’s pairing code** option:
4. By default, the pairing code is 0000. Enter it in the dialog and then click Next:

![Pairing Code Dialog](image1)

5. After the device has been successfully added you need to inspect its properties. Click on the Devices and Printers link in the success window:

![Success Window](image2)

Alternatively, select Show Bluetooth Devices from the Bluetooth context menu:
6. In the *Bluetooth Device* window, right-click the device and then select *Properties* from the shortcut menu:

7. In the *Services* tab, clear the check boxes for COM1 and COM2 services. Take note of the local COM port for COM3 (this is COM11 in the example below). You will need to know this COM port for **Section 2, step 7**:
Section 2 - Setting up and configuring the modem

1. Return to the Control Panel and use the search field in the top right corner to search for "phone".

![Image of search field in Control Panel]

2. Select Phone and Modem:

![Image of Phone and Modem option in Control Panel]

3. Select the Modems tab:

![Image of Modems tab in Phone and Modem dialog]

4. Click Add. The following wizard appears:

![Image of Modem wizard]
5. Select the *Don't detect my modem; I will select it from a list* check box and then click **Next**. Wait a minute while the Windows 7 operating system populates the list:

6. From the *Models* list, select the *Communications cable between two computers* option and then click **Next**.

   **Note** – Even though you are using a Bluetooth connection you are effectively using it as a "cable" between the devices.

   The following dialog appears:
7. The COM port you noted earlier (Section 1, step 7) should be displayed below Selected ports. Click the port to select it and then click **Next**.

8. Wait while Windows 7 installs the modem.

The Bluetooth pairing and hardware setup are now complete.
Section 3 - Creating an Internet connection

1. In the Control Panel, click the View network status and tasks link:

The following screen appears:
2. Click the *Set up a new connection or network* link. The following screen appears:

3. Select *Set up a dial-up connection* and then click **Next**:
4. The **Communications cable between two computers** modem you created in Section 2 should be visible. Click on it to continue. The following screen appears:

![Image of a dial-up connection setup screen]

5. In the **Dial-up phone number** field, enter 1. This is a placeholder number that you will delete later. After you enter it you will be able to click **Connect**. After you click **Connect**, the following screen appears:

![Image of a dial-up connection testing screen]
6. Windows 7 attempts to connect to the Internet using the connection. As it is not yet configured this will not work. Click **Skip** to continue. The following screen appears:

![Control Panel and Network and Sharing Center]

7. Return to the **Network and Sharing Center** in the **Control Panel**. Click the **Connect to a network** link. The following screen appears:
8. Right-click the *Dial-up Connection* link and then from the shortcut menu that appears select *Properties*. The following dialog appears:

![Dial-up Connection Properties dialog](image)

9. In the *Phone number* field, remove the placeholder "1" and then click **OK**. The following screen appears:

![Connect Dial-up Connection dialog](image)
10. Click the Connect to a network link again (see Step 7), right-click the Dial-up connection and from the shortcut menu that appears, select Connect:

11. Click Dial.

12. Next to your dial-up connection, click on the blue Dial-up Connection link. The following screen appears:

13. In the Details tab, note the Server IPv4 address. This is the IP address to connect to the receiver web interface.

14. Enter the IP address in your browser. The connection can be a little slow so please be patient. The following screen appears:
15. Enter the user name and password. The default settings for a Trimble GNSS receiver are:
   o User name: admin
   o Password: password

16. Click OK. You are now connected to your receiver through the web interface.

Connecting to the web user interface (WebUI) of the receiver using Windows XP
The following instructions are specifically for a Trimble SPS receiver; however, the same instructions can be applied to a Trimble R7.

Connecting to the receiver using a web browser and Bluetooth wireless technology
This section describes how to access the web interface on a SPS Modular receiver that has firmware version 3.32 or later installed, using Bluetooth wireless technology on an office computer that has Service Pack 2 of the Windows XP operating system (Professional Edition) installed.
1. On the office computer, open the Control Panel. Open Bluetooth Configuration and go to the Client Applications tab. The following dialog appears:

2. Add at least one Bluetooth Serial port. To do this, click Add COM port and then follow the steps at the wizard. Name the COM port appropriately and clear the Secure Connection check box.

3. Start the Bluetooth Setup wizard (click Start / All Programs / My Bluetooth Places):
4. The **Bluetooth Setup** wizard starts. Use the settings shown below and then click **Next**: 

![Bluetooth Setup Wizard](image)

**Welcome to the Bluetooth Setup Wizard**

This Wizard will help you set up your Bluetooth environment.

What would you like to do?

- I know the service I want to use and I want to find a Bluetooth device that provides that service.
- I want to find a specific Bluetooth device and configure how this computer will use its services.
- I want to configure the Bluetooth services that this computer will provide to remote devices.
- I want to change the name and/or device type that this computer displays to other Bluetooth devices.

The following dialog appears:

![Bluetooth Service Selection](image)

**Services provided by remote devices**

The services listed below may be provided by nearby Bluetooth devices. Select a service from the list to see a description of that service. Click Next to search for devices that offer the selected service.

- Printer
- Human Interface Device
- Imaging
- Bluetooth Camera
- Bluetooth Serial Port 1
- Bluetooth Serial Port 5
- Bluetooth Serial Port 6

5. Select the Bluetooth serial port you created and then click **Next**. The following dialog appears:
6. In the Search criteria list, change the search to Show all devices and then select the SPS Modular receiver that you want to connect to. Click Next:

![Bluetooth Device Selection](image)

6. In the Search criteria list, change the search to Show all devices and then select the SPS Modular receiver that you want to connect to. Click Next:

![Bluetooth Setup Wizard Completion Page](image)

7. Click **Configure** to select the COM port on your office computer. Think of Bluetooth as a cable replacement and the COM port as the serial port on your office computer into which the Bluetooth 'cable' will be connected. The following dialog appears:

![Completing Bluetooth Setup Wizard](image)
8. Clear the Secure Connection check box and then tap **OK**.

9. Tap **Finish**. The new Bluetooth connection appears in *My Bluetooth places*:

10. Double-click the icon to connect.
Creating a new connection

1. From your Windows Control Panel, open Network Connections and then click **Create a new connection**:

2. The **New Connection** wizard starts. Use the following settings to:
   - Set up an advanced connection
   - Connect directly to another computer
   - Connect as a Guest

3. Give the connection a name that relates to the COM port used on the office computer. This is like a cable connection between two computers, but the cable is replaced by a Bluetooth wireless connection. Tap **Next**. The following dialog appears:
4. Select the correct COM port from the list and then tap **Next**:

The defaults for the SPS Modular receiver are:

- User name: admin
- Password: password
5. The new Direct connection appears in the Network Connections folder. If that status shows as Connected, you can continue to the web interface.

![Network Connections](image1)

6. Right-click on the connection and then select Status:

![COM5 Status](image2)

7. The Details tab shows the Server IP address. Use this IP to connect to the receiver using the web interface.
Changing the frequency and baud rate through the webUI

1. Connect to the WebUI
2. Navigate to the OmniSTAR→Configuration page
3. Confirm the following settings
   a. Preferred Source of Data: External
   b. External OmniSTAR Data: Auto
   c. Internal OmniSTAR Demodulator: Auto
   d. SV name: Custom
   e. Max Data Outage: 90 Sec
4. 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
5. Click OK
Verifying Correct Operation for OmniSTAR

Once you have reconfigured 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.

Verification through the webUI

1. Make sure the receiver is outside with a clear and open view of the sky
2. Connect to the WebUI
3. Navigate to the **OmniSTAR → Summary** page
4. The **Mode** field should display **Tracking**
Verification through the Trimble Access field software

1. Make sure the antenna connected to the receiver is outside with a clear and open view of the sky
2. Connect to the receiver
   a. Navigate to Settings→Bluetooth and select the appropriate receiver under Connect to GNSS rover
   b. Click Accept
3. Start a OmniSTAR survey
   a. From the General Survey main menu, click Measure
   b. Select an OmniSTAR Survey Style
c. Click Measure points

4. Click on Esc, and click Continue to start an OmniSTAR survey
5. Click **Continue**

**Waiting for radio link**

Cancel Survey, or continue and start OmniSTAR without waiting for RTK

6. Select the Satellite icon
7. The **System** will display **OmniSTAR**

![SBAS status](image)

- **System:** OmniSTAR
- **Correction age:** 5.6s
- **Correction satellite name:** ?

**RTK**: Omni VBS H:0.774m V:1.084m

<table>
<thead>
<tr>
<th>Esc</th>
<th>Init</th>
<th>Options</th>
<th>DataLnk</th>
<th>Back</th>
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For Additional Assistance
If you need additional assistance, please contact your regional Customer Care team.

North, Central & South America and the Caribbean
- Phone: +1- 832-538-0210
- US Toll Free Phone: +1- 877-407-4743
- Brazil Phone: +55 (19) 3113 7099
- Email: am_corrections@trimble.com

Australia, South East Asia and India
- Australia Toll Free Phone: 1800 062 221
- Phone: +61 8 9322 5295
- Email: au_corrections@trimble.com (Australia)
- Email: asia_corrections@trimble.com (South East Asia)
- Email: in_corrections@trimble.com (India)

China
- Phone: +86 10 8857 7575
- Email: asia_corrections@trimble.com

New Zealand
- NZ Toll Free Phone: 0800 888 864
- Phone: +64 3 354 9195
- Email: nz_corrections@trimble.com

Europe/CIS & Middle East
- Phone: +31 70 317 0912 (Service & Support)
- Phone: +46 8622 1063 (Sweden)
- Phone: +49 6142 177 2035 (Germany)
- Phone: +44 1256 746 220 (UK)
- Email: eu_corrections@trimble.com (Europe, Russia & CIS)
- Email: me_corrections@trimble.com (Middle East)

Africa
- Phone: +27 21 404 1870
- Email: africa_corrections@trimble.com