

# SUPPORT BULLETIN

## Positioning Services

### Configuring Trimble SPS 855 and SPS 852 For New Frequency and Baud Rate

The following instructions will instruct you how to change the frequency and baud on your Trimble SPS 855 and SPS 852. To determine what new frequency and baud rate should be used in your region, please refer to [www.trimble.com/sat](http://www.trimble.com/sat).

#### Changing the Frequency and Baud Rate for RTX on the SPS 855 and SPS 852

The following set of instructions will instruct you how to change the frequency on your Trimble SPS 855 and SPS 852.

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

#### Connecting to the web user interface (WebUI) of the receiver

1. Connect the SPS 855 or SPS 852 to a PC using an Ethernet cable.
  - a. There is an adapter that goes into the 26pin port on the back of the receiver. This adapter has an Ethernet port on the other end and an Ethernet cable should be connected from that to a PC.
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 any modern web browser, such as Google Chrome, 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'
4. If the Web UI asks for 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 are turned off or disconnected; this includes disconnecting or turning off WiFi.

This document is for informational purposes only and is not a legally binding agreement or offer. Trimble makes no warranties and assumes no obligations or liabilities hereunder.

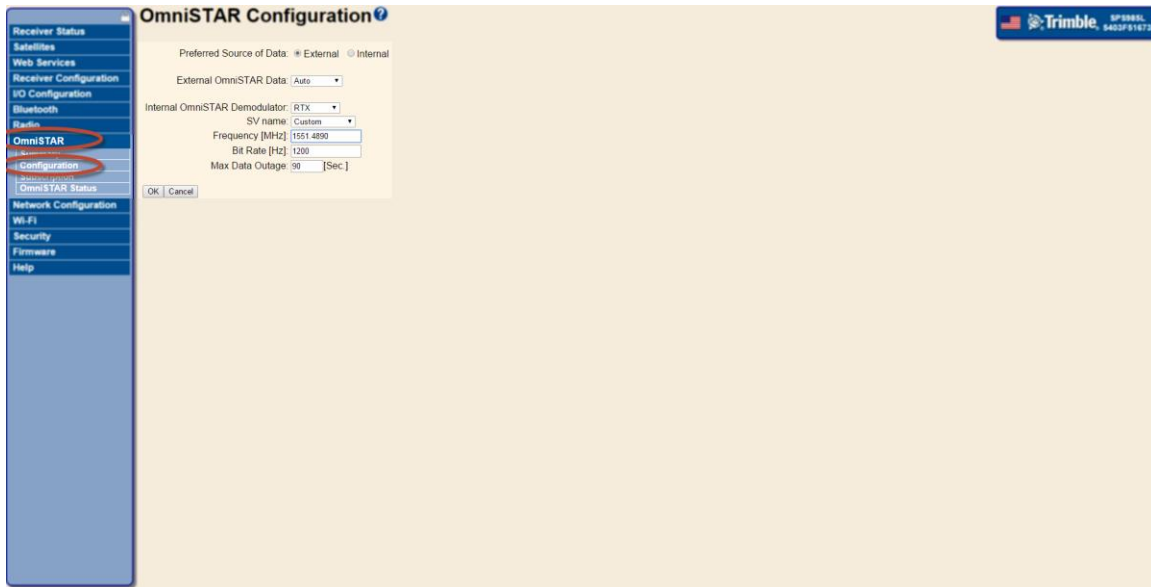
Trimble Navigation Limited, Positioning Services Division, 10368 Westmoor Drive, Westminster, CO 80021, USA

© 2015, Trimble Navigation Limited. All rights reserved. Trimble, the Globe & Triangle logo, OmniSTAR, and CenterPoint are trademarks of Trimble Navigation Limited, registered in the United States and in other countries. RangePoint is a/are trademark/trademarks of Trimble Navigation Limited. All other trademarks are the property of their respective owners.



### Changing the frequency and baud rate

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:** RTX
  - 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



## Changing the Frequency and Baud Rate for OmniSTAR on the SPS 855 and SPS 852

The following set of instructions will instruct you how to change the frequency on your Trimble SPS 855 and SPS 852.

You can change the frequency and baud rate for tracking the OmniSTAR satellite by using either the web user interface (WebUI) or the front panel of the receiver.

### Connecting to the web user interface (WebUI) of the receiver

1. Connect the SPS 855 or SPS 852 to a PC using an Ethernet cable.
  - a. There is an adapter that goes into the 26pin port on the back of the receiver. This adapter has an Ethernet port on the other end and an Ethernet cable should be connected from that to a PC.
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 any modern web browser, such as Google Chrome, 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'
4. If the Web UI asks for credentials, the default username is "admin" and the default password is "password".

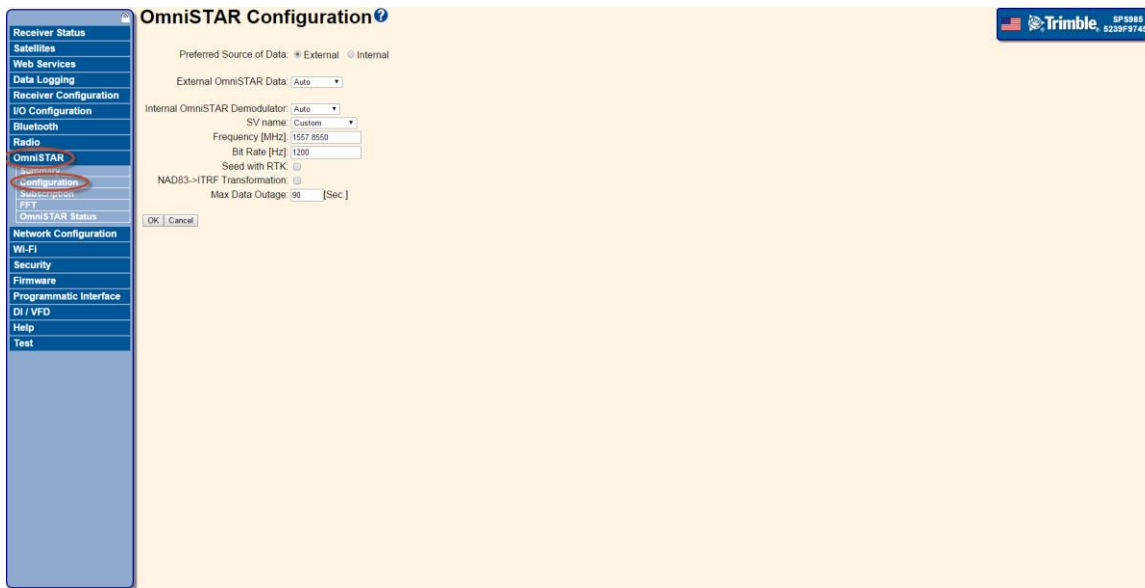
**Note:** If there are any issues with step (3), make sure all other network connections are turned off or disconnected; this includes disconnecting or turning off WiFi.



### 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



### Changing the frequency and baud rate through the front panel of the receiver

1. From the main screen press the Enter key once to access the **Operation Mode** screen
2. Press the Down Arrow key until **OmniSTAR Config** is selected
3. Press the Enter key until the **Satellite** screen is shown
4. Press the Down Arrow key until **Manual/XXXX** is shown, where **XXXX** can be any satellite name
5. Press the Enter key to enter the **Manual Sv** screen
6. Press the Down Arrow key until **Custom** is shown
7. Press the Enter key until the **Freq** screen is shown
8. Use the Right Arrow and Left Arrow keys to move the cursor and select a digit. Use the Up Arrow and Down Arrow keys to change the digits to the correct Frequency for your area
9. Press Enter key once to set the Frequency, and once more to get to the **Bit Rate** screen

10. Use the Right Arrow and Left Arrow keys to move the cursor and select a digit. Use the Up Arrow and Down Arrow keys to change the digits to the correct baud rate (bit rate) for your area
11. Press Enter until you return to the main screen

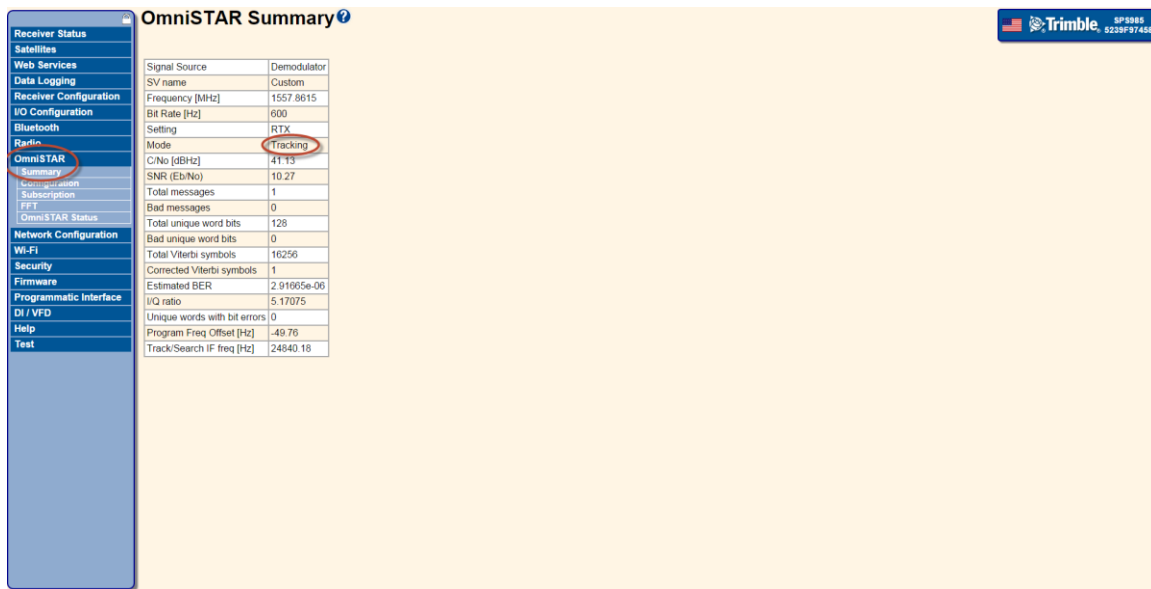
**Changing the Frequency and Baud Rate for xFill on the SPS 855 and SPS 852**  
 Trimble xFill utilizes the same satellite beams as Trimble RTX; you can follow the same directions presented in [Changing the Frequency and Baud Rate for RTX](#) and xFill will automatically use the new satellite beam settings.

### Verifying Correct Operation for Trimble RTX

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 antenna connected to 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**



Receiver Status	Signal Source	Demodulator
Satellites	SV name	Custom
Web Services	Frequency [MHz]	1557.8615
Data Logging	Bit Rate [Hz]	600
Receiver Configuration	Setting	RTX
I/O Configuration	Mode	Tracking
Bluetooth	C/No [dBHz]	41.13
Radio	SNR (Eb/No)	10.27
OmniSTAR	Total messages	1
Summary	Bad messages	0
Subscription	Total unique word bits	128
RTT	Bad unique word bits	0
OmniSTAR Status	Total Viterbi symbols	16256
Network Configuration	Corrected Viterbi symbols	1
Wi-Fi	Estimated BER	2.91665e-06
Security	I/Q ratio	5.17075
Firmware	Unique words with bit errors	0
Programmatic Interface	Program Freq Offset [Hz]	-49.76
DI / VFD	Track/Search IF freq [Hz]	24840.18
Help		
Test		

#### Verification through the SCS900 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 from the SCS900 field software and select **CenterPoint RTX** as your **Correction method**

**Receiver Setup**

Mode: **Rover**

Connection type: **Bluetooth**

Bluetooth device: **SPS985L, 5403F5167**

Correction method: **CenterPoint RTX**

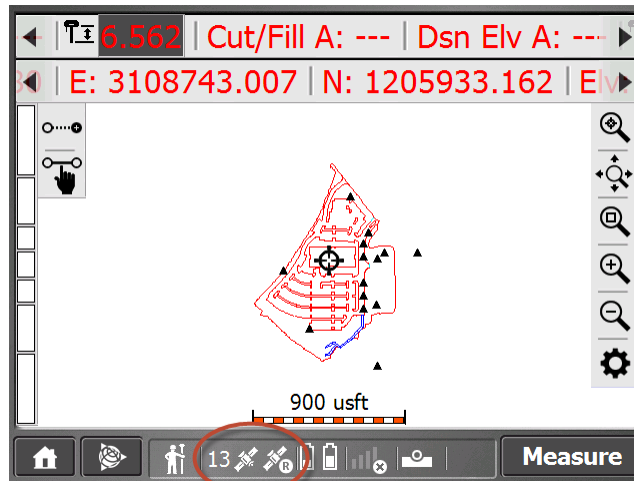
GPS precision tolerance: **H 0.082 usft V 0.082**

Using Quick Release: **Yes**

Antenna height: **6.562 usft**

**Cancel** **Accept**

3. Navigate to **GPS Status** by clicking on the satellite icon from the main view



4. The **Position** field will display **RTX**

**GPS Status**

Sats Used: 13

**Position: RTX**

Precision:

Hz: 0.506 usft

Vt: 0.493 usft

Wi-Fi On

**Tolerances**

GPS Only

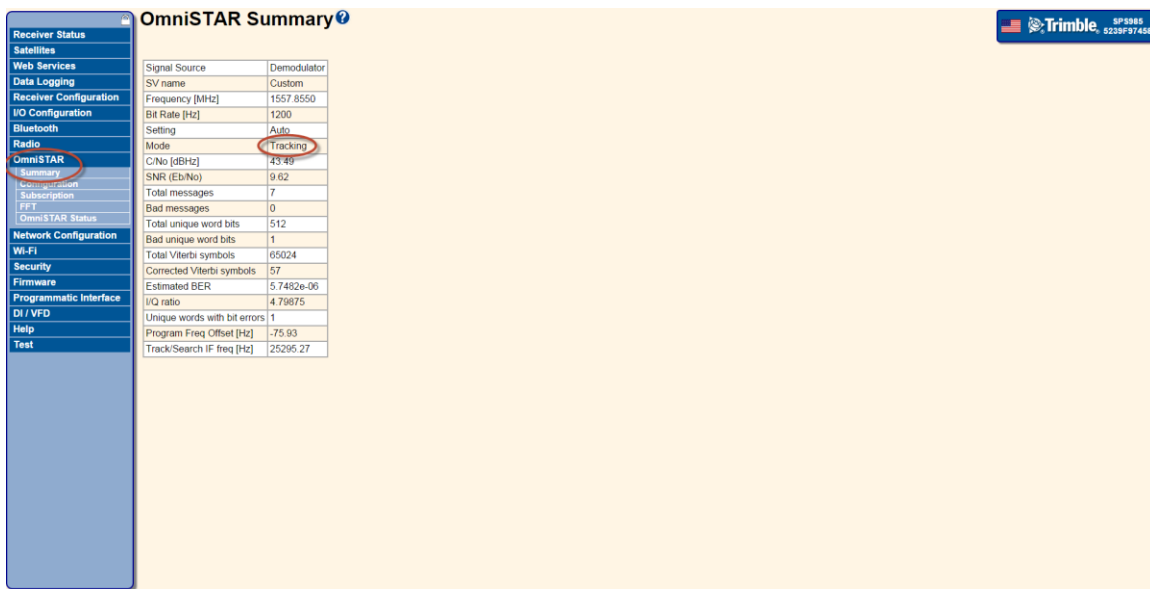
**Close**

## 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 antenna connected to 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**



The screenshot shows the 'OmniSTAR Summary' page. On the left is a navigation menu with categories like Receiver Status, Satellites, Web Services, Data Logging, Receiver Configuration, I/O Configuration, Bluetooth, Radio, OmniSTAR, and Network Configuration. The 'OmniSTAR' category is selected and expanded. The 'Summary' sub-item is highlighted. The main content area displays a table of receiver status metrics. The 'Mode' field in the 'Radio' section is circled in red and shows the value 'Tracking'.

Category	Parameter	Value
Signal Source	Signal Source	Demodulator
	SV name	Custom
Frequency [MHz]	Frequency [MHz]	1557.8550
	Bit Rate [Hz]	1200
Setting	Setting	Auto
	Mode	Tracking
C/No [dBHz]	C/No [dBHz]	43.49
	SNR (Eb/No)	9.62
Total messages	Total messages	7
	Bad messages	0
Total unique word bits	Total unique word bits	512
	Bad unique word bits	1
Total Viterbi symbols	Total Viterbi symbols	65024
	Corrected Viterbi symbols	57
Estimated BER	Estimated BER	5.7482e-06
	I/Q ratio	4.79875
Unique words with bit errors	Unique words with bit errors	1
	Program Freq Offset [Hz]	-.75.93
Track/Search IF freq [Hz]	Track/Search IF freq [Hz]	25295.27

### Verification through the SCS900 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 from the SCS900 field software and select **OmniSTAR** as your **Correction method**

### Receiver Setup

Mode: **Rover**

Connection type: **Bluetooth**

Bluetooth device: **SPS985, 5239F97458: Trimble**

Correction method: **OmniSTAR**

OmniSTAR initialization: **Initialize while moving (dynamic)**

GPS precision tolerance: **H 0.082 usft V 0.082 usft**

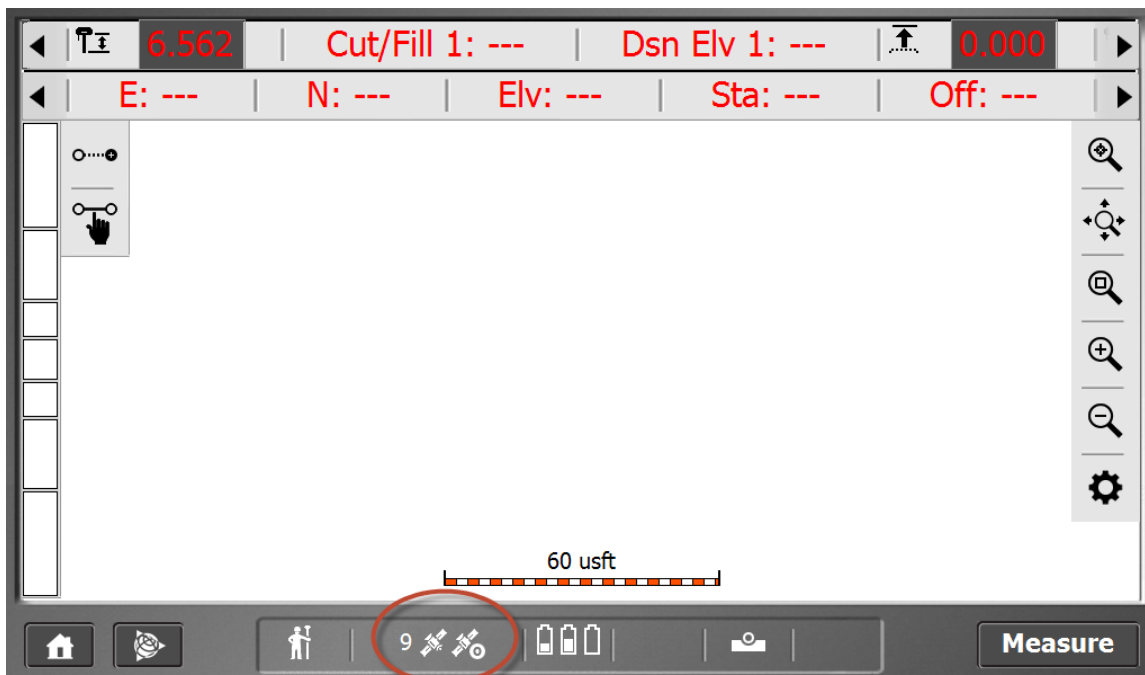
Using Quick Release: **Yes**

Antenna height: **6.562 usft**

Hold the antenna still and press "Accept".

**Cancel** **Accept**

3. Navigate to **GPS Status** by clicking on the satellite icon from the main view



4. The Position field will display **Omnistar**

The screenshot shows a 'GPS Status' window with a circular diagram of satellite positions and a list of system parameters. The diagram includes a north arrow and various satellite identifiers like R5, R14, R15, R4, R3, and R32. The system information on the right includes 'Sats Used: 9', 'Position: Omnistar VBS', 'Precision', 'Hz: 0.425 usft', and 'Vt: 0.393 usft'. A 'Tolerances' section has a 'GPS Only' checkbox which is currently unchecked. A 'Close' button is located at the bottom left of the window.

Field	Value
Sats Used	9
Position	Omnistar VBS
Precision	
Hz	0.425 usft
Vt	0.393 usft

## 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](mailto: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](mailto:au_corrections@trimble.com) (Australia)

Email: [asia\\_corrections@trimble.com](mailto:asia_corrections@trimble.com) (South East Asia)

Email: [in\\_corrections@trimble.com](mailto:in_corrections@trimble.com) (India)

### China

Phone: +86 10 8857 7575

Email: [asia\\_corrections@trimble.com](mailto:asia_corrections@trimble.com)

### New Zealand

NZ Toll Free Phone: 0800 888 864

Phone: +64 3 354 9195

Email: [nz\\_corrections@trimble.com](mailto: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](mailto:eu_corrections@trimble.com) (Europe, Russia & CIS)

Email: [me\\_corrections@trimble.com](mailto:me_corrections@trimble.com) (Middle East)

### Africa

Phone: +27 21 404 1870

Email: [africa\\_corrections@trimble.com](mailto:africa_corrections@trimble.com)