

Resetting Trimble GPS/GNSS survey receivers

This Technical Tip provides instructions for resetting the Trimble GPS/GNSS survey receivers manufactured during the past decade or so. The various models are covered in the order in which they were introduced.

Trimble has provided instructions for resetting the receivers, but those instructions only tell the operator to hold the power button for a certain time period. The experience of this writer indicates the Trimble-specified time periods are not correct and the receivers' light-emitting diodes (LEDs) provide a better guide to the reset process.

The instructions below record the firmware versions installed in the receivers used to prepare these instructions. At the time these instructions were prepared it was not known if the firmware version affects the LED behavior of a particular receiver model during the reset procedure.

Trimble 4700 - Version 1.30 firmware

1. Start with the receiver turned off – all LEDs dark and with power connected to the receiver. Prepare to press and hold the green power button for a minute or longer.
2. Press and hold the green power button – the elapsed-time (ET) points below are from the time at which the operator starts to hold the green power button.
3. Within the first five seconds all five LEDs will come on and then go off. The green power LED corresponding with the port being used to power the receiver will flash a few times and then remain on solid.
4. At around 18 seconds ET the red satellite LED will light. If you release the green power button at this point the receiver will be reset to its defaults. The survey data stored in the receiver will not be deleted if you release the green power button at this time.
5. At around 60 to 70 seconds ET the red satellite LED will go off. Release the green power button.
6. Press and release the green power button. All LEDs will now light for around 30 to 60 seconds while the receiver reformats its internal memory. When this operation is completed the green power LED will flash a few times and then remain on solid. Now the receiver has been reset and all survey data has been deleted from the internal memory.

Trimble 5700 (P/N 40406-XX) - Version 2.32 firmware

1. Start with the receiver turned off – all LEDs dark and with power connected to the receiver. We recommend you remove from the receiver the CompactFlash memory card unless you want to delete all survey data stored on that card. Prepare to press and hold the green power button for the better part of a minute.
2. Press and hold the green power button – the elapsed-time (ET) points below are from the time at which the operator starts to hold the green power button.
3. Within the first five seconds all five LEDs will come on and then go off.
4. At around 20 seconds ET the red satellite LED will light solid. If you release the green power button at this point the receiver will be reset to its defaults and the ephemeris file will be deleted. The survey data and application files stored in the receiver will not be deleted if you release the green power button at this time.
5. At around 35 to 40 seconds ET the red satellite LED will go off. Release the green power button. All five LEDs will now light for around 10 seconds while the receiver reformats its built-in memory and “quick formats” the CompactFlash memory card in the card slot (if any). When this operation is completed the green power LED will light solid. Now the receiver is reset to factory defaults and the ephemeris file as well as all application files have been deleted from internal memory. If the CompactFlash was in the card slot during this procedure, all survey data has been deleted from that device.

Trimble 5800 (P/Ns 45145-XX and 53618-XX) - Version 2.32 firmware

1. Start with the receiver turned off – all LEDs dark and with power connected to the receiver. Prepare to press and hold the green power button for the better part of a minute.
2. Press and hold the green power button – the elapsed-time (ET) points below are from the time at which the operator starts to hold the green power button.
3. Within the first five seconds all three LEDs will come on and then go off. Then the green power LED will light for about half a second, then go dark.
4. At around 20 seconds ET the green power LED will light solid. If you release the green power button at this point the receiver will be reset to its defaults and the ephemeris file will be deleted. The survey data and application files stored in the receiver will not be deleted if you release the green power button at this time.
5. At around 35 to 40 seconds ET the green power LED will go off. Release the green power button. All three LEDs will now light for around 45 to 50 seconds while the receiver reformats its internal memory. When this operation is completed the green power LED will light solid. Now the receiver is reset to factory defaults and the ephemeris file as well as all survey data and application files have been deleted from the internal memory.

Trimble R8 (P/Ns 50158-XX)

(These are the earlier Trimble R8s that cannot receive the GLONASS signals)

It is believed the instructions for the Trimble 5800 will apply.

Trimble R8 Model 2 (P/Ns 60158-XX and 60250-XX) - Version 3.64 firmware

(Sometimes called “R8 GNSS” - these were the first Trimble R8 receivers that could receive the GLONASS signals)

1. Start with the receiver turned off – all LEDs dark and with power connected to the receiver. Prepare to press and hold the green power button for the better part of a minute.
2. Press and hold the green power button – the elapsed-time (ET) points below are from the time at which the operator starts to hold the green power button.
3. Within the first six seconds or so the green power LED may or may not flash on for a small fraction of a second then go off, then all three LEDs will come on for around three seconds and then go off. (Release the green power button and start over if you do not see all three LEDs light and then go off.)
4. At around 20 to 25 seconds ET the amber satellite LED will light solid. If you release the green power button at this point the receiver will be reset to its defaults and the ephemeris file will be deleted. The survey data and application files stored in the receiver will not be deleted if you release the green power button at this time.
5. At around 35 to 40 seconds ET the amber satellite LED will go off. Release the green power button. All three LEDs will now light for around 120 seconds while the receiver reformats its internal memory. When this operation is completed all three LEDs will flash off, on, and off, then light for about three seconds and go off. In about four or five seconds the green power LED will come on solid. Now the receiver is reset to factory defaults and the ephemeris file as well as all survey data and application files have been deleted from the internal memory.

Trimble R6 (P/Ns 60275-XX and 60775-XX)

It is believed the instructions for the Trimble R8 Model 2 will apply.

Trimble 5800 II (P/N 64700-XX)

It is believed the instructions for the Trimble R8 Model 2 will apply.

Trimble R8 Model 3 (P/N 67250-XX) Version 4.04 firmware

The instructions for the Trimble R8 Model 2 apply. At Step 5, it was noted that reformatting the internal memory took only about 20 seconds. Your results may vary.