

# How to Manually Adjust TerraStar Satellite Frequency Information in the GPS 6500

GPS 6500 receivers on v6.73 and older firmware could potentially be affected by incorrect TerraStar Satellite frequency information stored in its memory due to satellite frequency changes that took place in 2018. Firmware version 6.73 should have the correct frequencies in it, but a few cases have been recorded in which receivers on v6.73 would not accept a new TerraStar subscription or converge if the subscription was already active.

Frequency changes were finished the week of Oct 15th, 2018 and we Technical Support started receiving calls.

## How to resolve

1. Verify receiver is on up to date firmware.
2. Verify receiver has a valid/active subscription.
3. Verify the user has autotuning on and attempted to rebroadcast the TerraStar signal at least once when in an open area.
4. Attempt to use the custom frequency function on the display
  1. Use the Custom Frequency option in TerraStar setup and enter in the appropriate frequency for the satellite for the region in Mhz. Be sure InCommand is v4.2 or newer and Integra is v7.5. (frequency table and link to regions below)
  2. After setting the manual frequency wait 10min to see if TerraStar information is received.
5. If using the custom frequency setting doesn't work use the display command line functionality to manually set the TerraStar satellite. Take note of the format when entering the frequency. The command line can be entered in Hz or Khz format.
  1. Example: ASSIGNLBANDBEAM MANUAL 98W 1545865000 1200
  2. After setting the manual beam wait 10min and see if TerraStar information is received and/or try rebroadcasting the subscription. (if not valid subscription)
6. If the prior two steps do not work, then the receiver's frequency information can be manually updated. Reference the "update GPS 6500 TerraStar frequency information" below
7. Once the frequencies have been updated, verify autotuning is selected, restart the GPS 6500.
  1. If the receiver didn't have a valid subscription on the receiver, wait 5min and rebroadcast the subscription.
  2. If the receiver shows a valid subscription, wait for TerraStar to converge normally.

## TerraStar Custom Frequency Table

Satellite	Hertz	Kilohertz Frequency	Megahertz frequency
98W	1545865000	1545865.000	1545.8650
143.5E	1545835000	1545835.000	1545.8350
25E	1545825000	1545825.000	1545.8250
AORW	1545845000	1545845.000	1545.8450
IOR	1545865000	1545865.000	1545.8650
POR	1545905000	1545905.000	1545.9050

[TerraStar Coverage Map](#)

## Update GPS 6500 TerraStar Frequency Information

Send the following commands to update the TerraStar frequency table. This is what autotuning looks at when selected.

VERIPOSUPDATEBEAMINFO 98W 1545865000  
VERIPOSUPDATEBEAMINFO 143.5E 1545835000  
VERIPOSUPDATEBEAMINFO POR 1545905000  
VERIPOSUPDATEBEAMINFO AORW 1545845000  
VERIPOSUPDATEBEAMINFO 25E 1545825000  
VERIPOSUPDATEBEAMINFO IOR 1545865000  
ASSIGNLBANDBEAM AUTO  
SAVECONFIG

\*power cycle\*

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<https://support.agleader.com/kbp/index.php?View=entry&EntryID=2138>