Turning Off Automatic SBAS Tracking on R/VS Series Receivers

Part Number 874-0013-001 Released January 28, 2011

This workflow illustrates how to track SBAS PRN 133 and 138, which, for example, prevents tracking SBAS PRN 135. Use this workflow as a blueprint for defining SBAS tracking specific to your current needs.

I'M AN EXPERT:

- Power on

- SBAS -7 SATELLITES -7 MODE -7 MANUAL

- Set ALL PRN's to satellite numbers you want to track.

- Set extra channels to PRN's not visible in your region
  (currently PRN 130 and 131 are not transmitting in any region – Jan. 2011)

- To return to automatic SBAS tracking:
  SBAS -7 SATELLITES -7 MODE -7 AUTO

I'M A NOVICE:

A. Apply power to the receiver.

B. Check the receiver's application to ensure the `WAASRTKB` or `SBASRTKB` application is running:
SYSTEM SETUP -7 DISPLAY APPS -7 IN USE: WAAS
SWAPAPPLICATIONS if needed.

C. Decide which SBAS satellites you wish to track (example, 133 and 138).

D. -7 TOP MENU

E. SBAS -7 SATELLITES -7 MODE -7 MANUAL

F. Set all PRN's to satellites you want to manually search for.

G. If you have more channels than PRN numbers that you want to track, set the extra PRN's to numbers not visible in your region. For example, currently PRN 130 and 131 are not transmitting in any region (as of January, 2011).
Try this link to find unused PRN's (values are between 120 through 138, inclusive):
http://www.gpsworld.com/gnss-system/almanac/the-almanac-4265#sbas

H. The settings you make here will be saved. These SBAS satellites will be tracked again the next time you power on the receiver.

I. If you want to set the receiver back to track SBAS satellites automatically:
-7 TOP MENU . . . SBAS -7 SATELLITES -7 MODE -7 AUTO

NOTES ON SBAS TRACKING AND WAAS PRN135:

In April 2010, WAAS satellite PRN 135 lost control of its navigation computer – the system that keeps the satellite stationary over the equator. Normally PRN 135 is at longitude 133º West. With no navigation computer, the satellite drifted slowly to the East. In December 2010, it had drifted to 93ºW, when finally the navigation computer was back online. In January 2011, work began to bring the satellite back online and move it back to 133ºW.

While on the move back to 133ºW, PRN 135 will be in test mode. Receivers on the ground may be selecting PRN 135 as the primary WAAS satellite to use, based on where it is in the sky. If only test messages are available on the receiver's primary WAAS satellite, the receivers wait to see if full messages will be coming. Unfortunately this prevents the receiver from using the valid signals that are currently transmitting from PRN 133 and 138. To ensure uninterrupted WAAS performance, users should manually tune their receivers to use PRN's 133 and 138 until PRN 135 arrives back at its home at 133ºW, later in 2011.

To monitor the status of the WAAS satellites, users can monitor these sites:

http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/gnss/waas/news/

http://www.nstb.tc.faa.gov/RT_WaasSatelliteStatus.htm

While SBAS operators worldwide strive to prevent situations like this from happening, the potential exists that something similar could occur somewhere else in the future. The information in this workflow may help configure systems in such cases.

FURTHER INFORMATION:

Consult www.HemisphereGNSS.com for the latest information, or contact your dealer.

For support via email, please contact TechSupport@HemisphereGNSS.com

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