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Hemisphere GPS Technical Services Bulletin

GPS Application Updates are now available

To: All Hemisphere GPS Partners

From: Hemisphere GPS Technical Service Dept.

Date: December 22, 2005

Subject: New Differential Application Updates For: WAAS, e-Dif, OmniSTAR

Product Affected:

All Hemisphere GPS receivers (including Satloc and CSI Wireless systems).

- e-Dif application software, currently at version 2.7, has been updated to version 2.8.
- OmniSTAR application software, currently at version 4.7, has been updated to version 4.8 (all receivers using OmniSTAR must be updated to this software version before the format changeover in early 2006).
- WAAS/EGNOS application software, currently at version 6.7, has been updated to version 6.8.

SCOPE:

The Software updates listed above have been improved to support customer and marketing requests as well as to enhance performance. All new products from Hemisphere GPS will be available with the versions of software listed in this bulletin. Please upgrade all OmniSTAR customers at your earliest convenience, as changes are significant. WAAS and e-Dif upgrades are suggested, but not mandatory.

Description of Changes:

Changes to OmniSTAR application from version 4.7 to version 4.8:

1.) This application will use the new OmniSTAR frequency settings for East, West, and Central North American satellites.

2.) Early in 2006, OmniSTAR will change the Broadcast Data Format. All receivers will have to update their firmware to be able to receive the new format.

Note: When this application is loaded, you will have to contact OmniSTAR to reinitialize your receiver subscription. (1-800-338-9178)

Changes to WAAS application from version 6.7 to version 6.8:

1.) Added selection of WAAS preferred satellite, this helps prevent jumps when switching WAAS satellites.

2.) EGNOS default satellites changed to PRN's 120 and 124.

Changes to e-Dif application from version 2.5 to version 2.6:

1.) Improved method of e-Dif auto-calibration.

Generic changes made to all differential application updates:

1.) Fixed ZDA message to meet NMEA specifications. Previous versions of differential GPS applications were using only one digit in date fields for numbers 1 to 9. The application updates now add a leading zero to give two digits.

2.) Fixed the RTCM health status monitor indicated by a "reference station not working," message.

3.) Added a command \$JASC, TYPE16 that has a reply of \$PSAT, TYPE16, xxxx,y,ccc...*cs (where xxxx is the Beacon's station ID, and y is the Beacon's health bit).

4.) Added ability to display GPGNS NMEA message.

5.) NMEA freeze time reported in many of the messages and a BIN 1 message when navigation fix lost (was freezing latitude, longitude, height, etc...).

6.) Support for more precise GGA display, up to 8 digits for both latitude and longitude message with the \$JNP command.

Updated software files names:

SLX2 Receivers:

- e-Dif application: GPSArchEdiff_26.bin
- OmniSTAR application: GPSArchOmni_48.bin
- WAAS/EGNOS application: GPSArchWAAS_68.bin

SX1/SLX3 Receivers:

- e-Dif application: GPSediff4020_26.bin
- OmniSTAR application: GPSOmni4020_48.bin
- WAAS/EGNOS application: GPSWaas4020_68.bin

SX2 Receivers:

- e-Dif application: GPSAppSX2_eDiff_26G.bin
- WAAS/EGNOS application: GPSAppSX2_WAAS_68G.bin

Note: OmniSTAR not available in SX2 receivers.

Instructions for determining receiver type:

Connect your receiver to the Hemisphere GPS SLXMon program or to a terminal program of your choice. Send the command “\$JT”. You will receive one of the following replies:

SLXg – Your receiver type is SLX2 (found in SLXg, SLX300, and SLXg3 receivers manufactured before 2005).

SX1g – Your receiver type is SX1 or SLX3 (SX1 is found in the AgIQ, SLX3 is found in SLXg3 receivers manufactured in 2005 and DGPSMax receivers).

SX2b – Your receiver type is SX2 (found in the Outback S2 and other Crescent receivers). **Note:** When updating one application on an SX2 receiver, you must update the second application at the same time or the receiver will likely lose any differential subscriptions that have been entered.

If you have any questions, please contact the Hemisphere GPS technical service department at (480) 348-9919 or email satloctech@hemispheregps.com.