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Software Release Notice

V4.2.26 Software Ensemble for RT-3010, RT-3020, SF-2040, SF-2050, and NCT-2030M; *Serial Numbers >5000* and NCT-2100 Series Products

***** Warning *****

1. This software build will only function in products containing the NCT-2100D GPS engine. Products equipped with the older NCT-2000D GPS engine will operate on v3.2.9, which was released in June 2008.
2. **Important** - Update the receiver with a consistent ensemble of software and to use only the latest versions of the Install and StarUtil programs included in this release.
3. **Always install the new software ensemble via COM 2 and power cycle the receiver after installing the software.**
4. **Always install the new software and software options/licenses with the antenna connected and in an area where the receiver has the ability to track satellites.**
5. **Force the Install program to load all versions of software** including the GPS engine, IOP and LBM (LBM for the SF product line only), even if the load boxes are not checked by default.
6. Use of the *Install* utility is recommended for installation of the new software. However, if using StarUtil to load software individually, follow this load sequence: 1) LBM (SF- models), 2) IOP (where applicable), and 3) GPS Engine. ***Failure to load new software in this order may result in receiver communication failure.***
 - a. The IOP and LBM software must be loaded at 19200 baud. The GPS engine is connected at 19200 and can be loaded at baud rates up to 115200 baud from the Target baud rate selection.

7. To optimize performance when using the receiver with an external RTK communication device, it should be connected to COM2, and the controller to COM1.
8. **The receiver controller software may need updating** to function properly with this new release and to enable some of the new features.

New Messages and Features

This software ensemble incorporates several updates to older software. The Technical Reference Manual (TRM) revision K is updated to reflect errors in Rev J, and the StarUtil User Guide remains unchanged.

Install Makes Updating Software Easy

The new Install program automatically determines what software modules in the receiver require updating, and performs the update process. Additionally, the Install program can display and update the StarFire license and GPS receiver options.

NavCom RTK receivers utilize two processors, one in the GPS engine module and a second in the I/O processing (IOP) module. In the StarFire models, there is a third processor in the L-band module (LBM) that processes the StarFire measurements. The software upgrade package includes new software for each of the three modules. If you are receiving the software upgrade package via E-mail, then the zip file will be included as an attachment.

- Create a new separate folder for this ensemble. This will 1) ensure that all of the correct software is in one location, 2) there is no mixing of old and new software, and 3) it affords the ability to “back-track” to the previous version.*
- Reinstalling older versions of software in the receiver will cause the StarFire license to be cancelled.*

Software “ZIP” File Contents

The update “ZIP” file includes the following:

Program	Version/Date	Comments
Release Notes v4.2.26 Ensemble.PDF	Dated 10 Oct 2008	Description of improvements and bug fixes (This document)
Warning.TXT	Dated 10 Ocy 2008	Update instructions and a list of files
SLv4,2,26.bin	Version 4.2.26	GPS engine software - NCT-2100D models
IOPv3,0.hex	Version 3.0	IOP software
LBMv3,4.hex	Version 3.4	LBM software
StarUtil_v101_5_15.exe	Version 101.5.15	StarUtil program – NCT-2100D models
Install_v1_6.exe	Version 1.6	Install program
Install.ini	Dated 10 Oct 2008	Install initialization file – must reside in the same directory as the Install program
RinexUtil_v1.25.exe	Version 1.25	Binary to RINEX conversion program

Documentation

The Technical Reference Manual has been revised with changes for this release. The Product User Guide, StarUtil User Guide, Install Manual have not changed for this release. The latest versions of the Product User Guides, Install User Guide, StarUtil User Guide, and Technical Reference Manual are available on the NavCom's web site at: <http://www.navcomtech.com/Support/DownloadCenter.cfm?category=manuals>.

<i>Manual</i>	<i>Part Number</i>	<i>Revision</i>	<i>Description</i>
StarUtil User Guide.pdf	96-310008-3001	F	Revised StarUtil User's Guide
Install Manual.pdf	96-310012-3001	C	Install User's Manual
Technical Reference Manual.pdf	96-312001-3001	K	Revised Technical Reference Manual

Software Changes/Improvements

The following sections describe the changes and improvements to each of the software modules included in the ensemble.

GPS Engine Software

This GPS Engine release of software provides the following list of changes, improvements, and features incorporated since the previous formal release of v4.2.20:

V4.2.26

- Corrected COCOM limit scaling error when operating at navigation rates faster than 1Hz in RTG Dual mode
 - This error causes the receiver to stop outputting 0xB1 data before the real COCOM limit is reached (i.e. above 80kns when the nav rate is set to 25Hz). The faster the selected nav rate, the lower the COCOM limit error. The DoD imposed COCOM limit is 515ms.
- Dynamic Base 0xb1
 - When configured as a Dynamic Base receiver, output the 0xB1 message in all modes except RTK Extend
- RTCM 18/19 and 22
 - Accepts and processes RTCM message types 18/19 and 22 correctly with competitor and NavCom receivers
- RTG FOM
 - Corrected a scaling error in FOM for StarFire operating modes, which was introduced in v4.2.20
- GPS Week

- Report the GPSWeek from the stored value when unit is started up. Previously, the receiver reported week 2048 until the first satellite is tracked
- Corrected Weekend week number rollover for RTK base

I/O Processor (IOP) Software

This IOP release of software provides the following list of changes, improvements, and features incorporated since the previous formal release of v3.0:

- No changes were made to the IOP software.

L-Band Module (LBM) Software

This LBM release of software provides the following list of changes, improvements, and features incorporated since the previous formal release of v3.4:

- No changes were made to the LBM software.

StarUtil Software

This StarUtil release of software provides the following list of changes, improvements, and features incorporated since the previous formal release of v101.5.9:

- Updates were made to the StarUtil software for testing purposes.
- Correct ability to make the Control Port COM1
- Remove WCT Label from the Rover screen
- Fixed the StarUtil crash during closing
- Added scheduling capability for 0x9d message.
- Fixed the User Defined Satellite for "Out Of Range" values.
- Added scheduling capability for PNCTGST message.
- Unable to configure Proprietary Long Baseline.
- Add the scheduling capability for MDE message.

RINEXUtil Software

This RINEXUtil release of software provides the following list of changes, improvements, and features incorporated since the previous formal release of v1.25:

- No changes were made to the RINEXUtil software.

If you have any questions regarding the installation or use of the software upgrade package please contact NavCom Customer Support at customerservice@navcomtech.com or by phone at +1 310.381.2000.