Engineering Firmware Release Notes   **Survey**

Date: September 3rd, 2012

Product: ProFlex 800, ProFlex 800 CORS and HDS 800

Subject: ProFlex 800 V1.3 Firmware Release

Introduction:

This document is the firmware release note of the ProFlex 800 V1.3.

This version is minor and does not require a new registration code.

Upgrade procedure

The procedure to upgrade the receiver is the following:

1- Copy the file p_800_upgrade_V1.3.S763K124.tar.bz2 to an USB memory key.

2- Make sure that there are at least 10Mb of free memory after having copied these files

3- Switch off the ProFlex 800

4- Plug the ProFlex 800 into an external power and make sure that there is also an internal battery

5- Connect the USB memory key to the ProFlex 800

6- Turn on the ProFlex 800 while keeping pressed the button 'Scroll' (during about 5 seconds)

7- Wait for the complete upgrade, which should take about 30 minutes.

Before upgrading the ProFlex 800, it is recommended to stop the recording, the sessions and the embedded NTRIP caster.

Firmware list and versions

General version number: V1.3 - S763K124

SYS:	S125g
GNSS:	K124
RFS:	763
BOOT LOADER:	1.1.5.9
KERNEL:	2.6.19
PMU:	2.31
GSM:	R7.46
Web Service:	047
NTRIP Caster:	1.0.10
PF_PMU:	17940202

The radio firmware compatible with the ProFlex 800 V1.3 are:

-Internal Pacific Crest ADL Foundation: 3.04 (2280, 2288 or 2300)
-External Pacific Crest ADL Vantage: 3.04 (2280, 2288 or 2300)
-External Pacific Crest ADL Vantage Pro: 3.04 (2280, 2288 or 2300)

-External Pacific Crest HPB: 2.58 or 2.42
-Internal U-Link: 1.02
-External U-Link: 1.04 (HW: AE)

The software compatible with ProFlex 800 V1.3 are:

- FAST Survey: 3.0.1
- GNSS Solutions: 3.71
- RINEX Converter: 4.1.1
- Conf Radio: 2.1.0 or 2.32
- Spectra Precision Survey Pro: 5.1
- Spectra Precision Survey Office: 2.7

New features (compared to ProFlex 800 V1.0)

No new features available.

Resolved Problems (compared to ProFlex 800 V1.0)

1. **RMS**: the RMS reported by the product was too pessimistic. The reported RMS is now more adequate.
2. **Local Coordinate System**: the receiver stopped outputting the position when the receiver was in the mode RTK+Heading and local coordinate system computation ($PASHS,LCS,ON) was activated. This problem is resolved.
3. **Leap Second**: Fix leap second value in ATM,RNX; ATM,ATR,&UEM; ATM,NAV,&GFT.

Known issues

1. GALILEO raw data cannot be available from ProFlex 800 because pseudo-range 1ms ambiguity is not resolved. Galileo Navigation data also cannot be available
2. When you connect the ProFlex800 to a PC with the USB Cable and you delete some files of the internal memory with the Windows Explorer of the PC, the list of files returned by the *$PASHQ,FIL/FLS* commands are not correct anymore (so also files displayed by FAST Survey). It is necessary to perform a power cycle in order to retrieve a correct list of files.
3. When the command *$PASHS,RST* is issued, the message *GNSS Board not detected* may appear sometimes. Then after few seconds, the receiver works properly.

4. With the internal memory 128Mb, it is not recommended to have an important number of files at the root or in a folder. With more than 150 files in a folder, the receiver may have issue to record new files. When you need to record a important number files, it is preferable to use the external USB memory or USB hard disk, or to move the files automatically in sub-folders if you use the sessions.

5. With the extended internal memory (8Gb) or external memory, if you record a huge number of files at the root (more than 1000), the file manager of the Web Server may have difficulties to display the list of files.

6. When using extended memory (8Gb) and the sessions with RINEX conversion, it may be possible that some epochs (about 30) are missing in the beginning of the RINEX files, while the G-File are complete.

7. When the tilt sensor is used and the embedded RINEX converter is used, the RINEX meteo file generated by the receiver contain records corresponding to the tilt sensor temperature.

Recommendations

1. User working with 3rd party bases/Networks generating GLONASS reference data is recommended to clarify with provider the name (brand) of reference receivers. If this brand is known a priori, it can be specified on rover by command $PASHS,RCP,REF,brand,1 (supported brand=TRIMBLE, NOVATEL, SEPTENTRIO, TOPCON). It this case, GPS+GLONASS rover RTK performance can be much better then in case, when reference receiver name is not known.

2. The new GSM Modem power consumption is higher in 3G mode than in 2G mode. When 2G is available, it is recommended to force the modem into 2G mode in order to increase the autonomy of the receiver.

3. The reference time to start or stop the sessions is the GPS time, and not the UTC time while the WebServer mention only UTC time. The difference between both time is 16 seconds (since July 1st, 2012).

4. It is possible to use a hard disk connected to the USB port in order to record a large amount of data. If the hard disk has not its own power supply, it must be USB certified, else there is a risk that the hard disk does not work properly due to power supply issue. With hard disk which has its own power supply, there is no problem.

5. Before using a hard drive with a ProFlex800, the hard drive must be formatted in VFAT32 and at least one folder must be created manually.

6. After a firmware upgrade, the behavior of WebServer may be strange because your Web Browser still use old pages. It is recommended to exit the Web Browser after a upgrade and to empty its cache memory