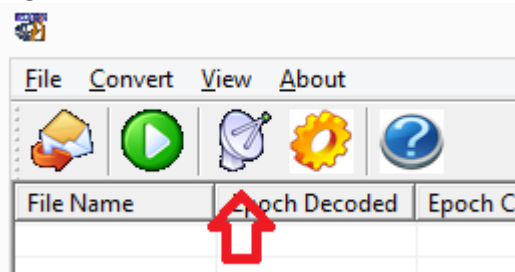


Exporting RINEX with Correct Headers from X90-OPUS

Question:

Concerning the CHC RINEX conversion tool:

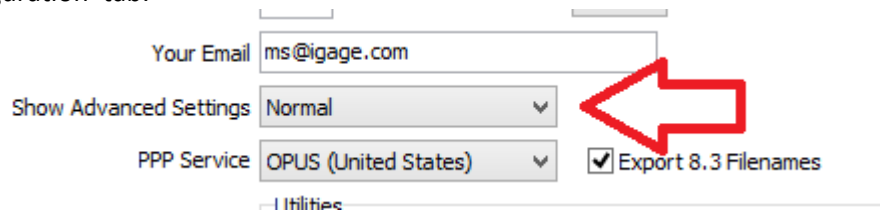


1

I'm having difficulty understanding what the satellite icon in the software is used for. I can change my antenna type by selecting the icon and then by using the pull down select my antenna type. However, when I export a RINEX file, it doesn't seem to hold add or populate the antenna type field within the RINEX file. It is blank? I'd appreciate any guidance or help you can provide on this subject.

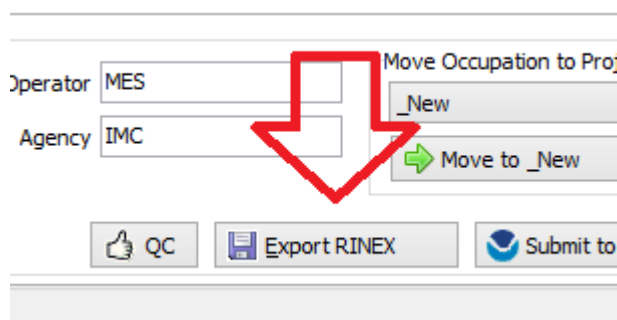
Answer:

In the X9 Download tool, on the Configuration tab there is an item to 'Show Advanced Settings' on the 'Configuration' tab:



Change it to 'Normal' (or advanced).

Then on the main 'X90 Occupations' tab you will get a new Export button:



If you use this 'Export RINEX' button, then the resulting RINEX file will have all of the fields (including the HI) stuffed properly:

```

10040972.130 - Notepad
File Edit Format View Help
| 2.11 OBSERVATION DATA M (MIXED) RINEX VERSION / TYPE
teqc 2013Mar15 X90-B9200 20150129 15:51:01UTC PGM / RUN BY / DATE
Linux2.4.20-8|i386|gcc|Win32-MinGW32|= COMMENT
2.10 OBSERVATION DATA M (MIXED) COMMENT
CHC RINEX 2.0 CHC 20141231 232450 UTC COMMENT
Format: BD950/970 COMMENT
POINT 1004 ← MARKER NAME
1004 ← MARKER NUMBER
MES IMC OBSERVER / AGENCY
018197 CHC X90D-OPUS ← 60.0 REC # / TYPE / VERS
CHCX90D-OPUS NONE ← ANT # / TYPE
-1810075.8859 -4409369.7839 4226127.1252 APPROX POSITION XYZ
4.1000 0.0000 0.0000 ANTENNA: DELTA H/E/N
1 1 WAVELENGTH FACT L1/2
8 C1 L1 D1 S1 P2 L2 D2 S2 # / TYPES OF OBSERV
5.0000 INTERVAL
Original filename 018197_13_097_A2 COMMENT
2013 4 6 17 16 25.0000000 GPS TIME OF FIRST OBS
16 LEAP SECONDS
END OF HEADER

13 4 6 17 16 25.0000000 0 9G01G25G14G32G22G31G12G18G11
22309087.485 -54303.566 2798.633 46.000 22309093.009
Ln 1, Col 1

```

2

And, when you export using this button the file is not decimated so there will be 5 second (by default) intervals.

However, if you insist on using HCRinex:

If you push the GEAR button and enter the information on the Options screen:

It will generate the correct headers:

```
016624_13_257_A0.13O - Notepad
File Edit Format View Help
  2.10      OBSERVATION DATA  M (MIXED)      RINEX VERSION / TYPE
CHC RINEX 2.0  CHC          20150129 155703 UTC  PGM / RUN BY / DATE
Format: BD950/970
016624_13_2
016624_13_2
016624
ANTNUM123  ANT_TYPE_YESNO NONE
-1799605.9601 -4493929.1800 4141173.2380
  1      1
  8 C1 L1 D1 S1 P2 L2 D2 S2
  5.000
2013  9  13  3  14  5.0000000  GPS
2013  9  14  3  16  20.0000000  GPS
13  9 13  3 14  5.0000000  0 10G24G21G27G22G15G 6G 3G19G18G14
END OF HEADER
```

However, the settings made on the 'Options' dialog are not persistent (so when you close the tool and reopen it you will have to set everything up again) and on a Win8 64 machine you have to run the tool as an administrator.

There is another advantage of using the 'Export' button. The result is automatically run through TEQC (which is the front end for OPUS and most other processing tools.) If you use the Export button, I don't think that it is possible to make an illegally formed RINEX file. Which makes the easier to use and easier to configure method, well worth the 'less effort' 😊.