

This guide will step you through scheduling and logging NCT raw data from the GPS receiver via NavCom’s StarUtil GUI program. This procedure is often used to collect raw data for NavCom to evaluate customer reported difficulties.

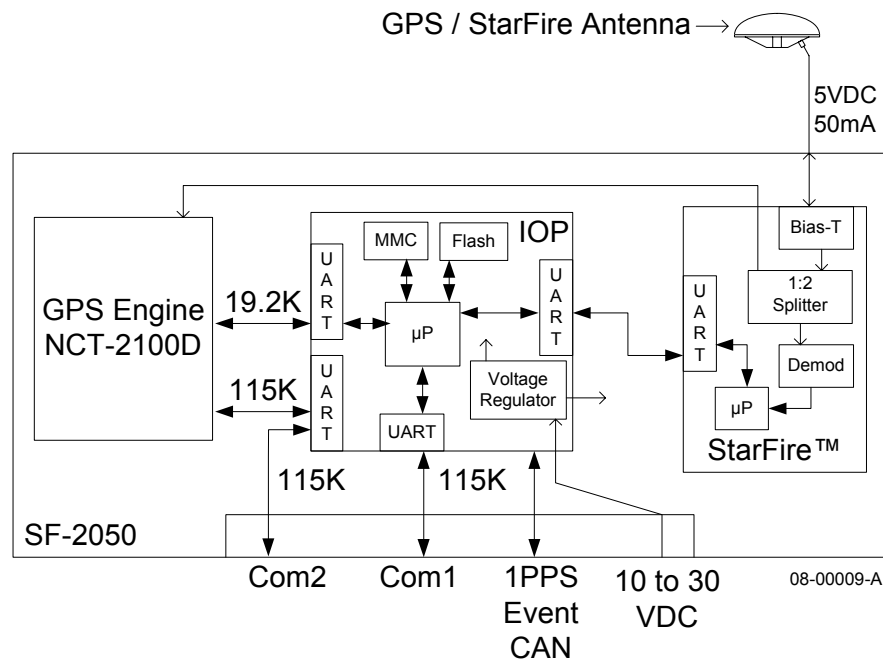
Setup – See the Troubleshooting Guide – Communication if StarUtil is not communicating with the receiver.

Scheduling:



COM 2 is the Logical Control port by default. COM 1 can be configured as the control port by using the appropriate NavCom proprietary commands or StarUtil. However, there are caveats to Logical / Physical port assignments.

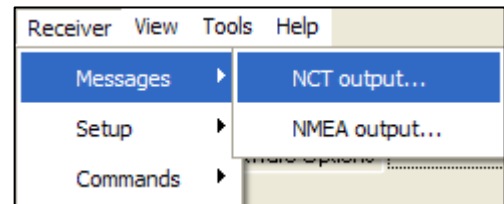
The Control Port is a logical input/output port and can not share the physical port with any other logical port. The Control Port typically handles the most data and requires baud rates in excess of 19.2K baud, particularly in multi-hertz measurement and navigation applications. Though Com 1 is physically capable of operating at 115K baud, the throughput from the NCT-2100D to the IOP is limited to 19.2K baud. Thus, the recommendation to maintain Com 2 as the Control port for multi-hertz applications.



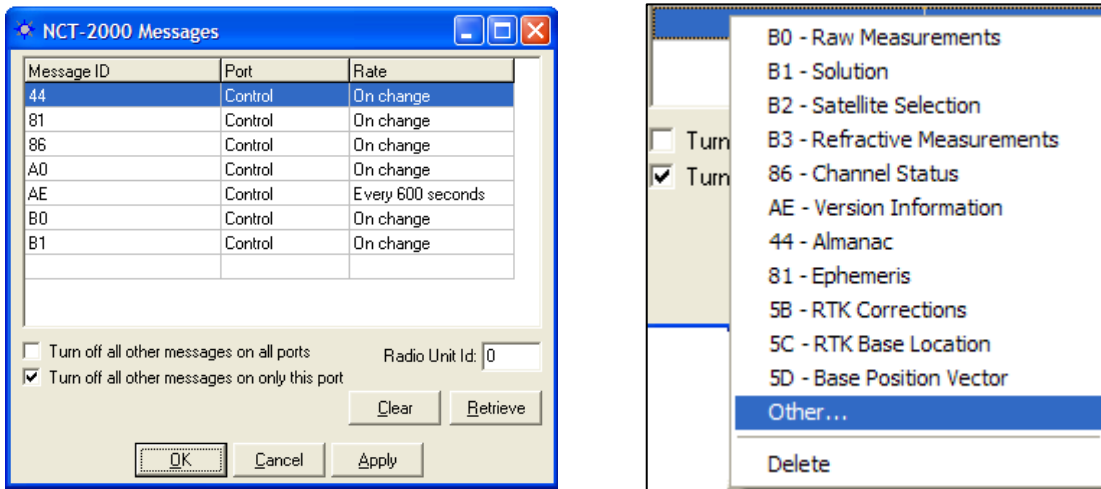
In the Rover, the NMEA Port is an output logical port and may share the data physical port (non-Control) with RTCM, CMR, or NCT RTK input corrections. In the Base Station, the NMEA port can not share the data port with any RTCM, CMR, or NCT RTK output corrections.

- ✓ Click *Receiver* →
- ✓ *Messages* →
- ✓ *NCT Output...* to bring up the NCT-2000 Messages window.
- ✓ This brings up the default message list as shown.

- 44 – Almanac
- 81 – Packed Ephemeris
- 86 – Channel Status
- A0 – Alerts
- AE – Version Information
- B0 – Raw Measurements
- B1 – PVT



- ✓ If the default list is not present, or to add a message, right click over the empty row in the *Message ID Column* and choose from the menu that appears.



- ✓ Select one of the standard messages or click **Other** to enter non-standard messages (sometimes our support engineer will ask that this be done).
- ✓ Selecting *Delete* when right clicking over an existing entry, will remove it from the list.

B1 Message

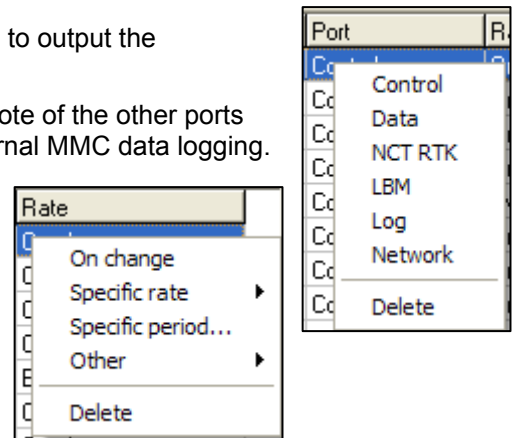
The B1 output rate is set on the *Rover / Navigation & Tracking Setup* configuration screen; NOT by the NCT-2000 Message list Rate. Always schedule the xB1 Rate as On Change then, set the desired Navigation Rate thru the Rover / Navigation & Tracking Setup screen.

The maximum navigation rate possible will, of course, be dependant on the SW options license installed within the unit. View 30 – Software Options for details.

- ✓ Enter B2 – Satellite Selection into the message list.
- ✓ Right-Click over the *Port* column to choose which Logical Port to output the message.

When adding messages Control is chosen as default. Take note of the other ports available as these will be used during the RTK setup and Internal MMC data logging.



- ✓ Right-Click over the *Rate* column for the B2 message to view choices of output rate. *On Change* is chosen as default.
- ✓ On some messages the *Rate* may be changed, for example, setting the B0 message to output at a 5Hz rate.
- ✓ When the message list is configured as desired, click *Apply* to save information in Non-Volatile Memory (NVRAM).
- ✓ Click *Retrieve* to view current contents.
- ✓ Click *OK* to close the window.

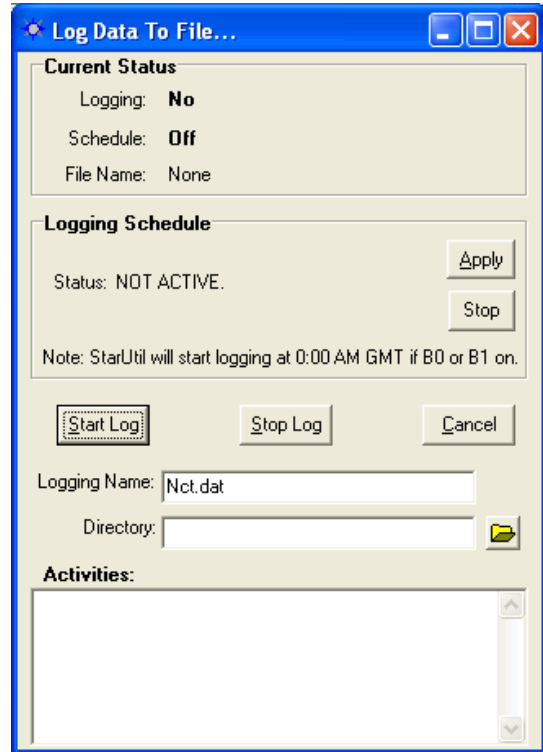
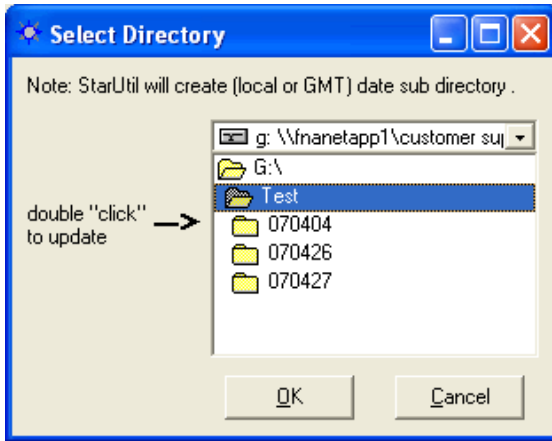



AE Message

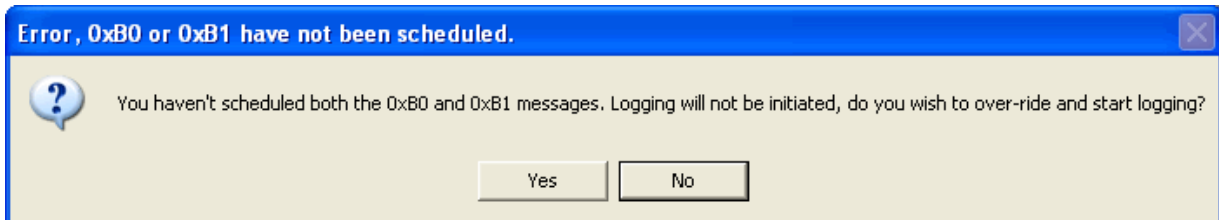
The AE message rate is always set to every 600 seconds to ensure version details are provided in any logged data.

Logging:

- ✓ Click  (*Configure Data Logging ...*)
- ✓ Enter an appropriate *Logging Name*. *Nct.dat* is the default file name.
- ✓ Click the directory browser button  to select the appropriate logging directory



- ✓ Click *OK* to close the window.
- ✓ Click  to begin data logging.
- ✓ If an error box displays, logging can be continued without sending the command to schedule B0 or B1 by clicking *No* (based on the type of logging needed).



- ✓ The log file now opens up and data is recorded to the computer's hard drive. See the *Activities* area of the *Log Data To File ...* screen.



- For tracking errors, log 30 minutes of data, minimum; or until the problem is produced.

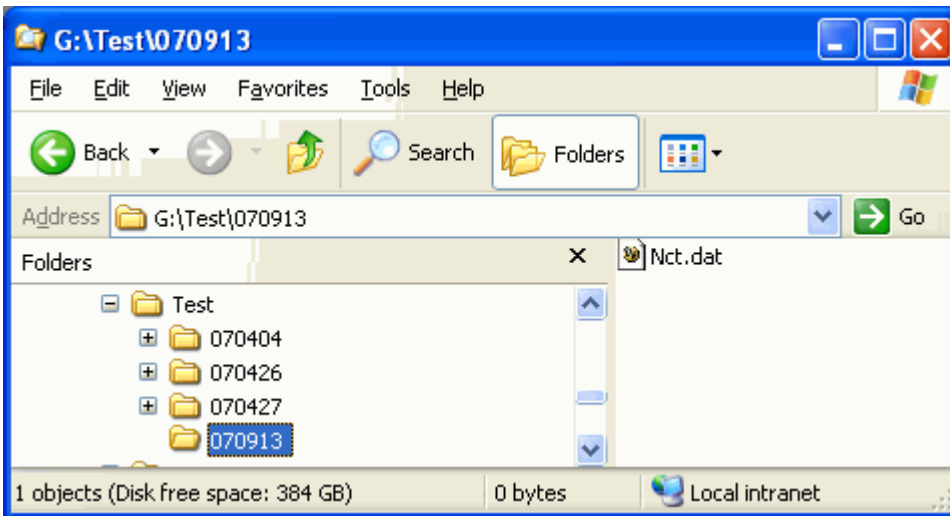
- For accuracy errors, log 60 minutes of data, minimum; or until the problem is produced.
- Additional raw data records may be requested, depending on the failure mode. A complete list of available raw data records is available on our website in the Technical Reference Manual.

<http://www.navcomtech.com/Support/DownloadCenter.cfm?category=manuals>

- ✓ Click **Stop Log** to stop data logging.
- ✓ The log file now closes and data recording to the computer's hard drive is stopped. See the *Activities* area of the *Log Data To File ...* screen.



- ✓ A new subdirectory is automatically created with today's date within the folder designated to record the data. In this example, the *Test* folder has a new folder with today's date *070913* or 2007 Sep 13.



- ✓ This file can be forwarded to NavCom Product Support for analysis, converted to RINEX format using RINEXUtil (available from NavCom), or post-processed with aftermarket third-party tools.
 - <http://www.navcomtech.com/Contact/ContactSupport.cfm>
 - productsupport@navcomtech.com