

Differential GPS Setup and Operation

Setup

Choose a permanent location for the receiver antenna with an unobstructed view of as much of the sky as possible. If the antenna is moved even slightly it must be noted because the post-processing will have to be re-initialized at that point. Connect the antenna and serial (GPS COM1) cables and power cables. The red LED on the receiver will be lit.

Data Logger Startup

Turn on the laptop - it will automatically log in. Double-click the "**GPS Data Logger**" application. After it starts up click the "**Open**" icon and open the "**predict.in**" project file. (Located at "C:\Documents and Settings\gps\My Documents \PREDICT). At the "Build a project" dialog box click **OK**. (Return key is Cancel!)

The green light on the GPS COM1 port will flash once per second indicating data transmission. Confirm that the receiver gets a location fix and the number of epochs increments each second.

Hints

When started for the first time it may take a few minutes to get a position fix

The antenna must be fixed in place and the program running at least 15 minutes before a flight. Quit the logging program before moving the antenna.

Data will be stored in a folder labeled by the day-of-the-year (e.g. data from February 6 is stored in the 037 folder) in the "**PREDICT**" folder. Each time the logging program is started a new file will be created. New folders will be created each day at 00 UTC.

Data Backup

After each flight please copy the subdirectories in the PRDICT folder to a flash drive. It will hold about 20 days of continuous data recording. When the flash drive fills up copy its data to a CD-R. Leave the original data on the computer's hard drive.

Troubleshooting

Make sure the connections are secure and it's getting power. Try turning everything off and starting over. If the receiver has power but isn't sending data (flashing green LED) check the project settings below.

GPS Project file settings:

- GPS receiver tab: Novatel OEM4, Data interval = 1 second, GPS comport A.
- COM/Socket tab: COM1 serial port, 115200 Baud, no parity, 8 bits.
- Display tab: Position should be checked, request position at 1 second interval.
- Log Format tab: Save GPB Files, Save Hourly files, 24 hour interval. If Save Hourly Files is unchecked, the data files will be overwritten **WITHOUT WARNING!**

