



## Logging Instrument Data

Instrument log files are transcriptions of all that's happening on an instrument system. They are used primarily to troubleshoot and analyze sailing performance.

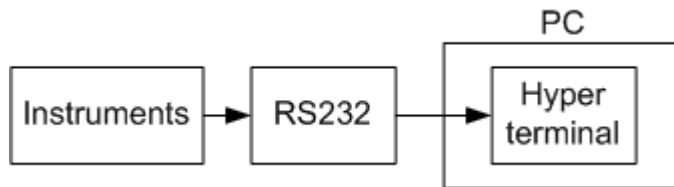
### How to record a log using basic PC utilities

#### Warning

this is pretty geeky. If you have a crew or family member that likes playing with computers, maybe you should enlist their help.

The most basic log is a recording obtained from the instrument serial port using a terminal emulator. For this, you will need

1. An RS232 interface connected to a PC. If your PC doesn't have a serial port (they are going out of fashion), you will need to get a Serial to USB adapter. We recommend the Keyspan brand. There is more detail on this at <http://www.ockam.com/docs/ConnectingSerialPorts.pdf>.
2. A terminal emulator (called HyperTerminal in Windows XP). Windows Vista and Windows 7 no longer ship with one of these, so you will have to download it. [http://download.cnet.com/HyperTerminal-Private-Edition/3000-2155\\_4-10966768.html](http://download.cnet.com/HyperTerminal-Private-Edition/3000-2155_4-10966768.html)



The terminal emulator displays whatever comes out of the RS232, and typing on the keyboard sends whatever you typed back to the instruments. For logging, we're only interested in what comes out.

After you have connected the pieces, you need to start the emulator: In Windows XP, it is located at (Start button), All programs, Accessories, Communications, HyperTerminal. There may be both a folder named HyperTerminal, and an icon named HyperTerminal. If there is a folder, open it and see if somebody has already configured a session for your instruments (something like Ockam.ht or Com1.ht). If you don't have a pre-configured terminal session, you will need to create one:

### Creating a terminal session

This procedure creates a 'session' (i.e. a set of parameters HyperTerminal uses to connect to a given serial port at a given speed and other things).

1. If you are opening HyperTerminal from the start menu, pick the HyperTerminal icon. Enter a name, e.g. Ockam. Press OK.

2. Next dialog is titled "Connect To". Click on 'Connect using' and note down all the COM port numbers. We may be returning here to try several of them. If there are no COM ports, and you have the instruments connected to something that looks like a serial port, you need professional help.
3. Pick the first COM port and press OK.
4. Next dialog is titled "COM Properties". Here is where the communication parameters are set. We might be returning here too. As a first attempt, select:
 

|                 |      |
|-----------------|------|
| Bits per second | 9600 |
| Data bits       | 7    |
| Parity          | None |
| Stop bits       | 1    |
| Flow control    | None |
5. Press OK. If there the serial port you selected actually exists, the dialog will go away, showing the emulator screen. At the bottom it will say 'Connected'.

If not, you will get an alert saying something like "Doesn't exist" or "Port in use". In this case, press File, Properties, and select the next serial port (return to step 2).

## Confirming good data

At this point, you have successfully created or opened a session, because there are no more dialogs or alerts. However, you may not be connected to the port the instruments are on.

- If nothing is happening on the screen, repeat the session creation loop for each subsequent COM port.
- If you get garbage (smiley faces, broken lines, etc), you will need to change the parameters set in step 4 above.
- If you get something that looks like this (mostly numbers and letters), you are connected

```
0 G'29.0 sMt:177 'none UW:-6.50 ^1.0 $IIHDG,177,,,, ,
1 r'0.00 e0.0 $IIMWD,,T,177,M,0.0,N,,M ,
2 G'29.0 p'+0.01 $IIMWV,360,R,31.4,N,A ,
3 SS00:00 R'979.34 z 119 W0.3 i+0.000 $IIMWV,360,T,0.0,N,A ,
4 D-0 G'29.0 V-0.3 v-0.0 d-0 LE:n/a M6.94 ,
```

## Creating a log file

Once you have good data, you need to record it.

1. With good data streaming by in the window, press menu item Transfer, then "Capture text...". A dialog comes up where you specify the directory and file name.
2. Hit the Browse button. Another dialog comes up where you navigate to the Desktop (or some other location of your choosing), and enter the File name, e.g. capture.txt. We recommend the extension **txt**. Press OK.
3. You are returned to the 'Capture text' dialog. Press Start. You will see the word Capture on the status bar.

4. Let it run at least 5 minutes. More is better.
5. To stop the recording, press Transfer, then Capture text (there's a right arrow now), and Stop. The Capture word should disappear.

### **Using the file**

- You can send log files to [DeWiggler@ockam.com](mailto:DeWiggler@ockam.com) where we will look at them and make recommendations.
- You can transfer the data to a spreadsheet using DeLogger. It is available at <http://www.ockam.com/docs/DumpLog.zip>. [Read the enclosed ReadMe.txt](#).