ReefNet Depth Logger Setup Notes/ Sending Data

Go to: http://reefnet.ca/downloads/ and download "Sensus Manager" and "USB Driver," following the instructions in the Setup Guide below.

To connect the logger to the reader, set the logger onto the 3 metal contacts of the reader. The screw heads of the logger will fit on top of the contacts in a way that the reader won't easily budge if you push it down and wiggle it. (See tips in troubleshooting guide below).

Before using your logger, make sure it's configured to collect data every second. While your logger is connected to your computer: In Sensus Manager, click on "Configure device" button, **change the interval to 1 second** and click "apply." Also set the default to 'meters' and 'Celsius'.

Attach the logger to the ring of the bongo net and reinforce it with a zip tie. Use this for all oblique (bongo) tows, even if you're having trouble downloading data. It will still record.

To look at data: Connect your reader and click "download device." Double click on your serial # when it pops up, and you will see the list of individual tows. Check your tow data to make sure you have a nice v-shaped tow, showing that the net is not stalling in between deployment and retrieval of the net. Also check your max depths and adjust line out/weights/boat speed as needed to achieve 30m (or 10m from bottom) depth. (For instructions on finding your COM port, see setup guide below).

The best way to make a file of all your data to send Amanda (awinans@uw.edu) is to go to "Export CSV" on Sensus Manager and export "All dives for this recorder." When this box pops up, it will tell you the headings for each column in your file. Here is the equation to find depth in meters: (pressure in mbar-1013)*0.00975. (You can just send the csv file to Amanda in the format it downloads as, without the headings).

CHECK your battery occasionally: With logger connected to computer, go to "Configure device," then "Read device information." A reading of less than 3.2 V indicates that the logger is near the end of its life, and it should be replaced (It starts out at 3.6 V). **ReefNet suggests that you freeze the battery overnight and return to room temperature before reading it to get the true voltage**.

USB-Serial Cable Setup Guide

ReefNet's Sensus download unit has a **9-pin serial port** plug rather than a more familiar USB plug. In order to connect it to modern PCs, a **USB-Serial cable** is bundled with the download unit.

If you are having trouble downloading data from your recorder and you receive persistent communication errors, this guide is for you.

Carefully follow the step-by-step instructions for your operating system to properly install and configure the USB-Serial cable for use with Sensus Manager.

Instructions for Windows

Begin by unplugging the USB-Serial cable and restarting your PC. Then:

1. [Download](http://reefnet.ca/downloads/) the USB-Serial cable driver from ReefNet: http://reefnet.ca/downloads/
2. Unzip the downloaded file and begin setup as follows:
    a. **Windows XP:** Open the "Windows XP" subfolder and double-click the "setup" item.
    b. **Windows Vista & 7:** Open the "Windows Vista & 7" subfolder and **right-click** the "setup" item. Then choose "Run as administrator".
3. When the driver setup finishes, restart your PC again.
4. Once fully restarted, plug the USB-Serial cable (with download unit attached) into a free USB port. **DO NOT plug into a USB hub/splitter**. Plug **directly** into your PC.

FINDING COM PORT:

At this point the USB-Serial Cable should be recognized by Windows and a "COM port" number will be assigned to the 9-pin connector on the cable. You will need to determine what number has been assigned by following these steps:

1. Open the Windows Device Manager as follows:
    a. **Windows XP:** From the **Start** menu, click **Run**. Then type *devmgmt.msc* and press Enter.
    b. **Windows Vista & 7:** From the **Start** menu type *Device Manager* and press Enter.
2. In the Device Manager list, look for the section named **Ports** and expand it to see its contents.
3. You should see an item like "Prolific USB-Serial.... (COM XX)". **Note the COM number** within the brackets.

Now that you know the COM port number assigned to the USB-Serial cable, you can set the Sensus Manager software appropriately as follows:

1. Start Sensus Manager.
2. On the **Settings** tab, first confirm your device type (Sensus, Sensus Pro, or Sensus Ultra).
3. Set the serial port number to match the COM number you identified earlier.
4. Return to the **Data Library** tab and click **Download** to try communicating with your data recorder.

If successful, you should see the message "Download complete", and your recorder's serial number should appear in the Data Library list. Expanding the serial number should reveal your dive data, if any.

HELPFUL TIP: As long as you plug the USB-Serial cable into the same USB port, you should never need to adjust any of the program settings. However if you plug into an alternate USB port **the COM number may change**. If you encounter communication problems you can always check the correct COM port number by revisiting the Device Manager as above.

Instructions for Mac OS

Begin by unplugging the USB-Serial cable and restarting your Mac. Then:

1. [Download](http://reefnet.ca/downloads/) the USB-Serial cable driver from ReefNet: http://reefnet.ca/downloads/
2. Unzip the downloaded file and open the subsequent DMG image file. This may occur automatically with your web browser.
3. Run the driver setup/installer.
4. When the driver setup finishes, restart your Mac again.
5. Once fully restarted, plug the USB-Serial cable (with download unit attached) into a free USB port. **DO NOT plug into a USB hub/splitter**. Plug **directly** into your Mac.

HELPFUL TIP: Always plug the USB-Serial Cable in *before* starting Sensus Manager for Mac OS. Otherwise the serial port settings will not be available and you will not be able to communicate with your recorder.

Now you can set the Sensus Manager software settings appropriately as follows:

1. Start Sensus Manager.
2. On the **Settings** tab, set the serial port to *usbserial*. On your system it may be named *usbserial0* or something similar, however it should be easily identifiable as the USB-Serial option.
3. Return to the Data Library tab and click Download to try communicating with your data recorder.

If successful, you should see the message "Download complete", and your recorder's serial number should appear in the Data Library list. Expanding the serial number should reveal your dive data, if any.

USB-Serial Cable Troubleshooting

Logger connection problems:
If you're experiencing intermittent connection problems on one PC (i.e. occasional download errors), you may have luck by using a rubber band to hold the recorder onto the download unit. Cleaning the contacts with a pencil eraser may also improve the connection if salt or mineral deposits have built up.

PART 1 - BASIC SETUP TROUBLESHOOTING

1. Make sure BOTH the latest Sensus Manager software AND the latest USB driver software are installed from our download page.
2. Plug in the USB cable.
3. Open the Windows "Device Manager". If you need help finding the Device Manager, click here: http://www.computerhope.com/issues/ch000833.htm
4. In the Device Manager, look in the section called "Ports" for an item called "USB-Serial" or similar. This is the USB cable you have plugged in. NOTE THE "COM" NUMBER IN BRACKETS.
5. Start the Sensus Manager software and enter the matching COM number in the "Settings" tab.
6. Now try to download from your Sensus Ultra device.

PART 2 - KNOWN ISSUE WITH WINDOWS 7 / 8

The driver automatically installed by Win 7 and 8 is usually version 3.4.x.x, which is NOT the one you want. The driver on our web site is older (3.3.2.102), and so even after you install it Windows does what it thinks is the right thing and uses the newer one.

In order to revert to the correct version, try following these instructions:

1. Plug in the USB cable
2. Open the Device Manager as you did earlier.
3. Under "Ports", DOUBLE CLICK the "Prolific USB-Serial" item.
4. Choose the "Driver" tab

5. Click "Update Driver"
6. Then choose "Browse My Computer"
7. Then choose "Let me pick from a list..."
8. In the next screen, you will see at least a couple of driver options.

IMPORTANT: Look for a driver with version 3.3.2.102. Do NOT select any other version.

9. Once you've selected the "3.3.2.102" driver, click "Next" to complete the driver update.
10. Unplug the USB cable, wait 10 seconds, then plug it back in.

Now look at the "Prolific" Port item in the Device Manager. The COM number displayed should work in Sensus Manager.