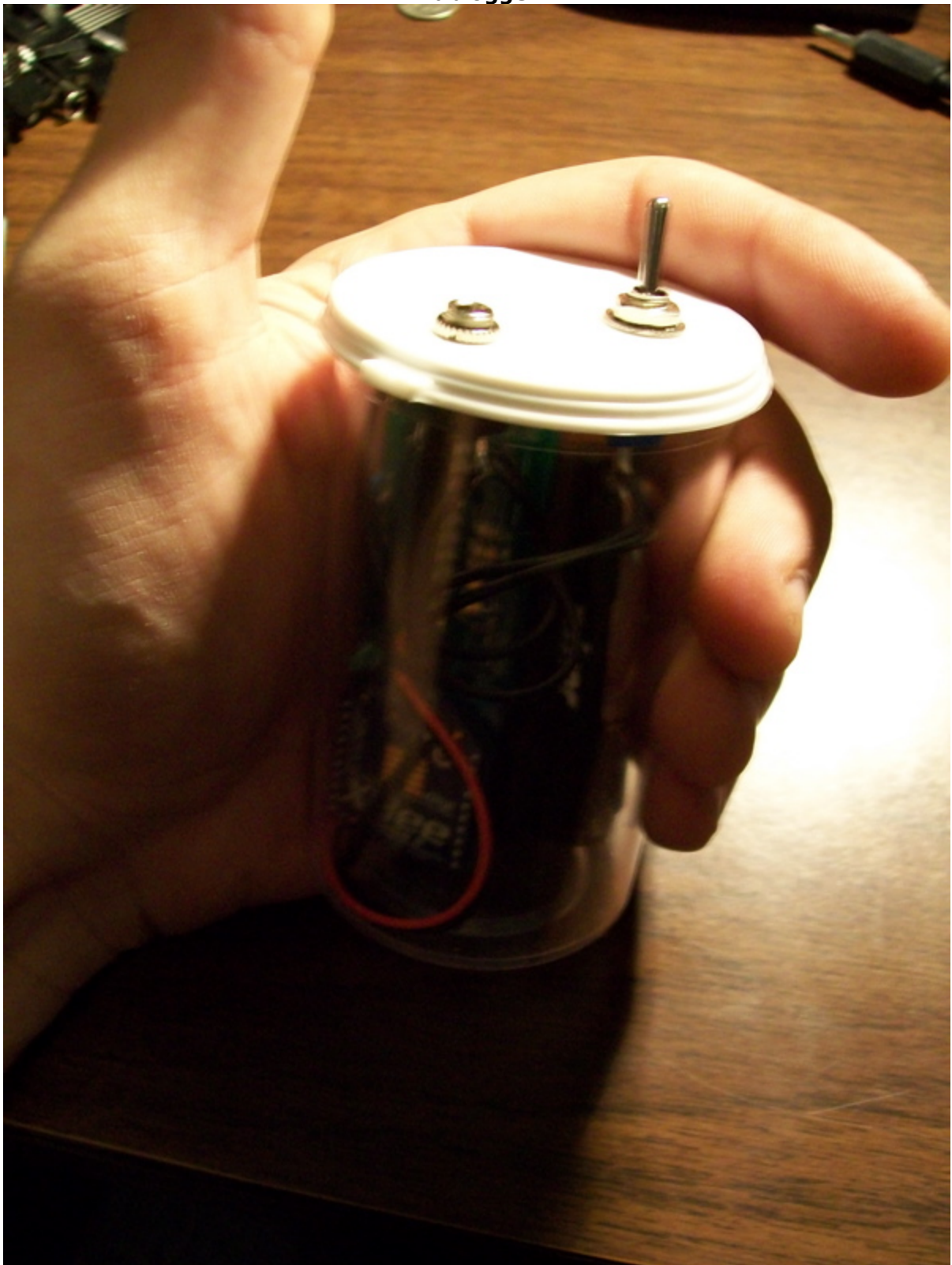


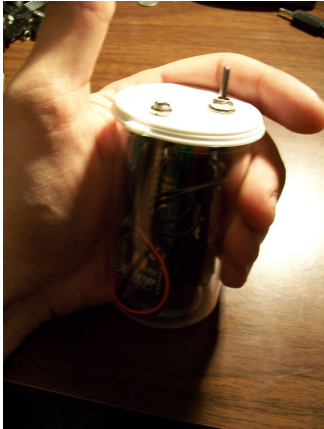
Nublogger



So, you got a nublogger. That's awesome! This is a quick instruction manual that will take you through unboxing it, installing the software you need, and using the nublogger

Unboxing

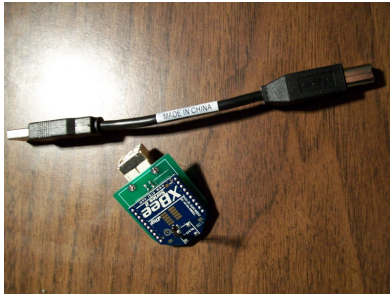
Here's what you should find in the box:



Temperature Sensor



Temperature Sensing Tip



USB Radio and Cable



Software CD

Installing the Software

There's two pieces of software you have to install. The first is a driver that lets your computer recognize the USB radio, and the second is a piece of software that detects sensors in your area, collects the data from them and logs the data to a file on your computer.

Installing the driver:

In your installation CD, there's a folder named 'Drivers'. Open that folder. There's folders inside with names of operating systems. Choose your operating system and open that folder. Inside, there'll be a program that installs the drivers you need. Run the program, and follow the instructions. If you have any trouble installing the drivers, email nublogger@nublabs.com for help or check the driver website here: <http://www.ftdichip.com/Drivers/VCP.htm> for more instructions.

Installing the nublogger software:

Installing the software is a snap. On the installation CD, there's another folder named 'Software.' Open that folder. Inside, you'll see three folders: Nublogger for Windows, Nublogger for Mac OSX and Nublogger for Linux. Pick the folder that matches your operating system and drag it to your computer. You're done!

Using the nublogger

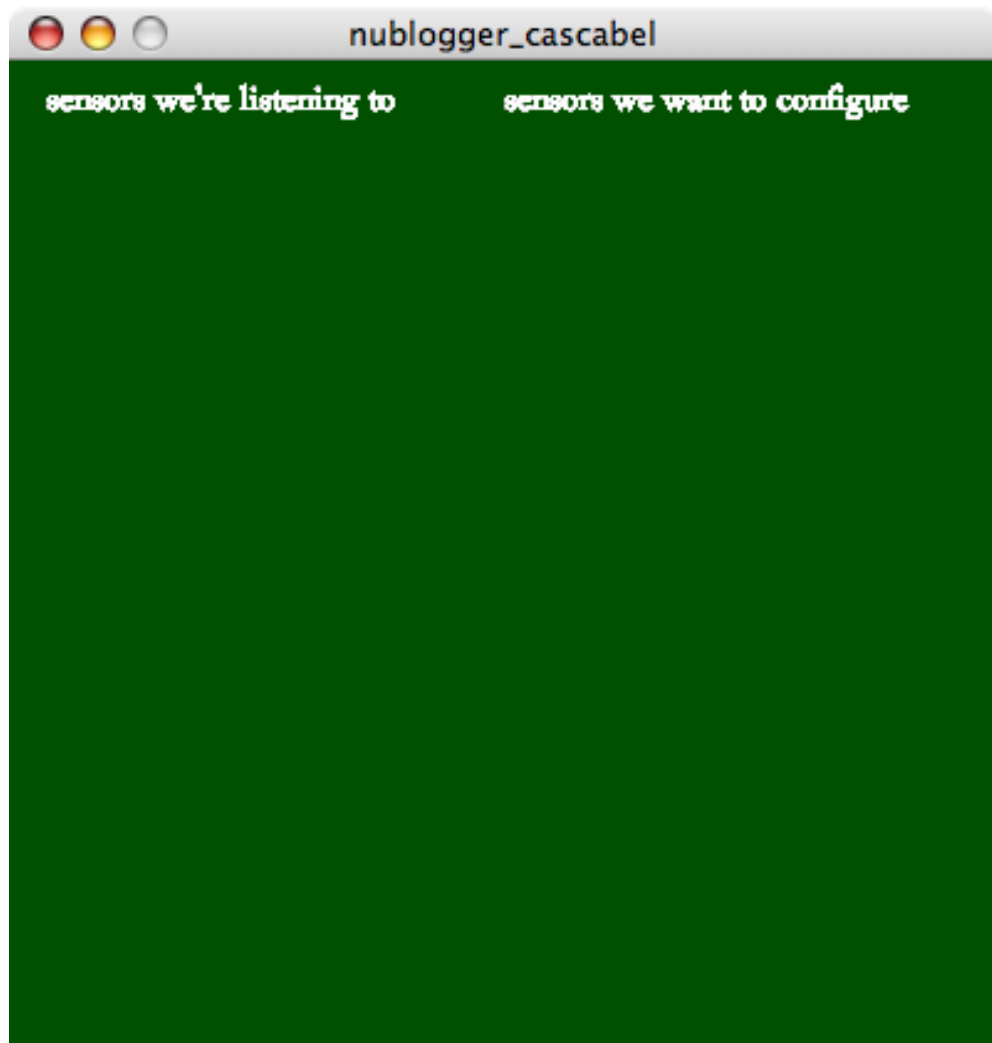
OK, so now you're done with the installation. Let's get on to actually collecting data. Before you run the nublogger program, you need to have the USB radio plugged in to one of your computer's USB ports.

If you have windows, the first time you plug in the USB radio, windows may pop up a 'Found New Hardware' wizard prompting you to install the new hardware, which it may list as the FT232RL USB Adapter. Follow the instructions, click 'install the drivers automatically,' and click through the installer.

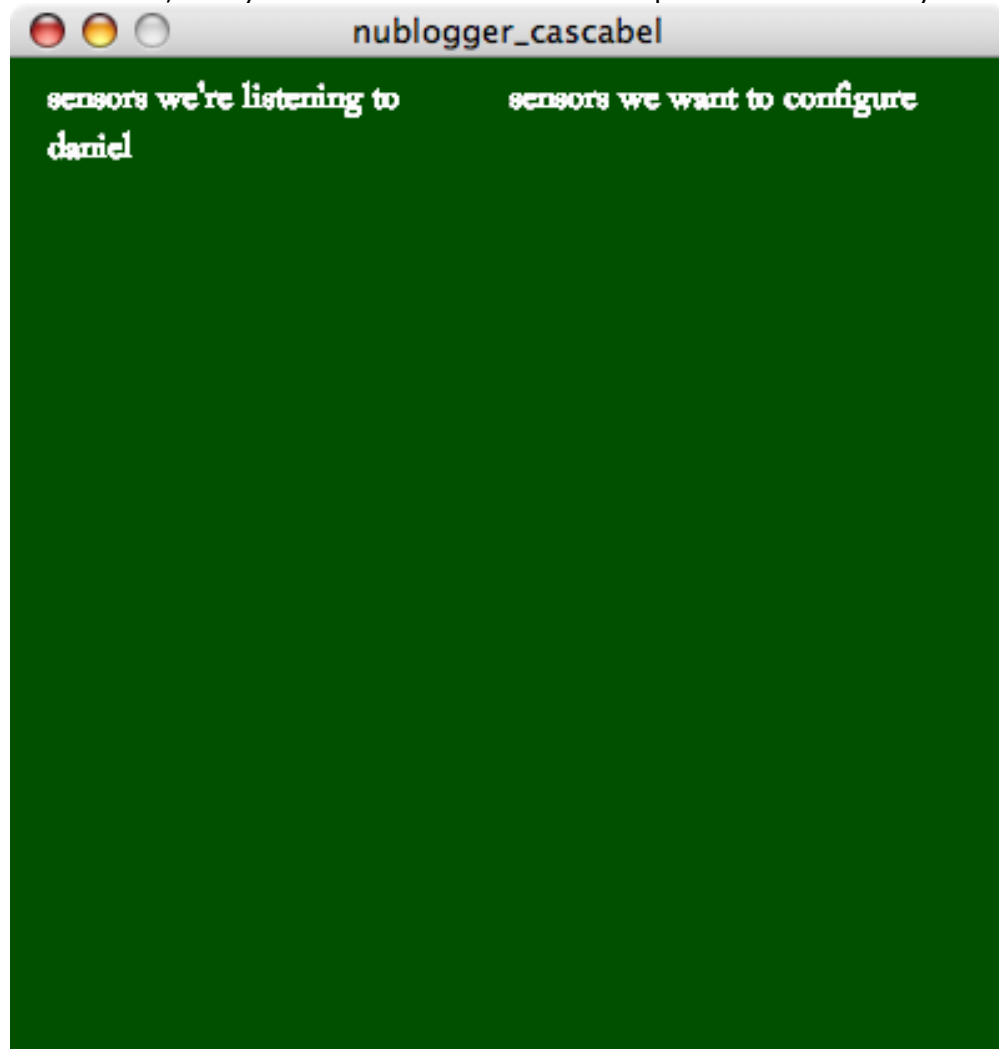
Now, in the folder you dragged to your desktop, double-click the executable file inside the program. It'll take a moment or two to start up as it detects the USB radio on your computer.

A window will pop up asking you to choose a configuration file. For now, just click 'Cancel.' We'll go into detail on that file later

Another window will come up asking you to select a file to save your logged data to. This will be a comma-separated, .csv file that stores the time each measurement was taken, the name of the sensor that took the measurement, and the temperature in degrees celsius. You can open the file afterwards with any spreadsheet program that can read .csv files, such as Excel, Google Docs or Open Office. Enter a filename and click 'ok'



You'll see a screen that looks like this. Now, insert the Temperature Sensing Tip into the plug at the top of the Temperature Sensor, and switch the Temperature Sensor's power switch to the 'ON' position. The LED inside the temperature sensor will begin flashing as it takes measurements, and you'll see the name of the temperature sensor on your screen.



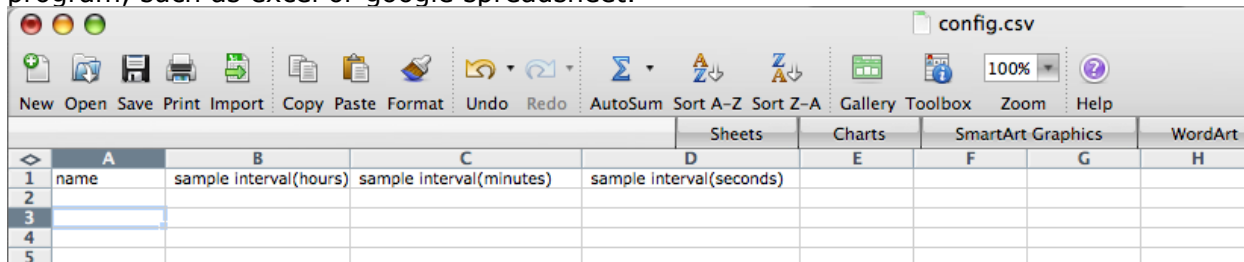
If you turn on more sensors, their names will appear in a column on the left-hand side of the screen. The system will automatically discover and begin logging data from the new sensors.

To stop the program, click the 'X' at the top of the window or hit the 'q' key. Your saved data will not be affected by stopping the program.

Configuring the nublogger

By default, the sensors take a measurement every second. However, you can set the interval between measurements to whatever you want. To do that, you're going to create a file with the interval you want.

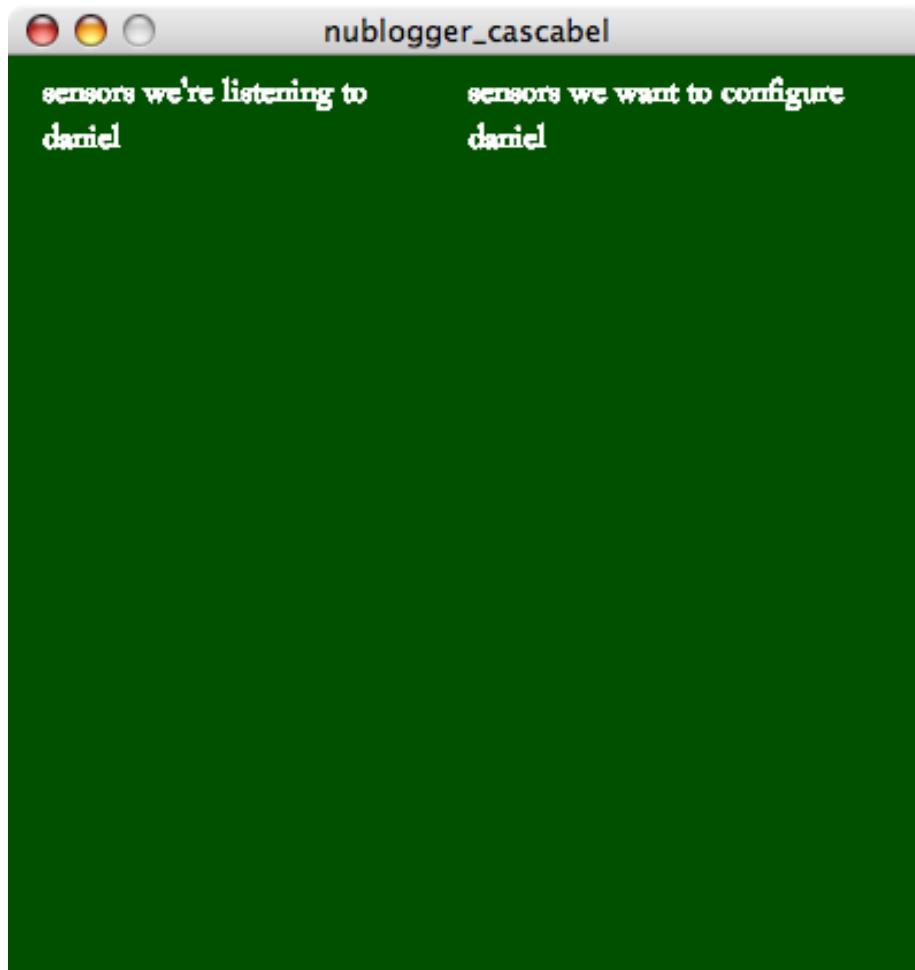
In the nublogger folder, there's a file called config.csv. Open it with any spreadsheet program, such as excel or google spreadsheet.



You'll see columns for the dataloggers' names and the interval between samples in hours, minutes and seconds.

To configure the datalogger to take a measurement every four seconds instead of every one second, put the name of the datalogger--it's written on a label on the datalogger--in the 'name' column, and then put a '4' in the seconds column. Save the file (be sure to save it as a .csv file, not a .xls or other spreadsheet format)

Now, restart the nublogger program. When it asks for a config file, select the file you just edited. Pick a file for it to save the data to, and the program will start.



Here, you'll see the names of the sensors to be configured on the right side of the window. Sometimes it takes a few seconds for the new configuration to take effect. You can check the sample times in the data file to make sure the sensor is sampling correctly.

Great! That should get you up and running with the nublogger. If you have any questions, email nublogger@nublabs.com and we'll get back to you quickly.

Troubleshooting

The most common cause of problems with the nublogger is low batteries. If the nublogger isn't responding, or behaving erratically, changing the batteries will often solve the problem.

If the nublogger program hangs when you open it, it's a sign that it's not recognizing the USB radio. Make sure the USB radio is plugged in and no other programs are using it.

Open Source/modifying the nublogger

The schematics, firmware and software for the nublogger are all open sourced. The source code is included on the CD in the nub.nublogger directory, and the latest version can be checked out from github <http://github.com/nublabs/nub.datalogger/>

The firmware is developed in Arduino C, and the latest version of the arduino IDE, as of the time of this writing, is included on the CD under Development Tools or available from arduino.cc The computer-side software is written in Processing, an extension of Java, and the the Processing IDE is also under Development tools and available from processing.org