HOBO Datalogger Instructions by Take 5, Inc.

HOBO Model number UX120-006M for datalogger:
Link

4-20 mA Cable: link

4-20 mA			
CABLE-4-20mA	4 to 20 mA Input Cable	?	$25.00

0-5 VDC Cable: link

| DC Voltage (0-2.5v, 5v, 10v)			
CABLE-2.5-STEREO	0 to 2.5 Volts DC Voltage Input Sensor	?	$10.00
CABLE-ADAP10	0 to 10 VoltsDC Voltage Input Sensor	?	$29.00
CABLE-ADAP24	0 to 24 VoltsDC Voltage Input Sensor	?	$29.00
CABLE-ADAP5	0 to 5 VoltsDC Voltage Input Sensor	?	$29.00

NOTE: The input to the device is 0-2.5 VDC and the Cable 2.5-STEREO just uses the Tip and Sleeve for the 0-2.5 VDC input. The TIP is + (usually a red wire) and the Sleeve is - (usually a Green wire). The RING, or the center conductor is not used.

You can get a cable from Digikey from this link

Product Overview	
Digi-Key Part Number	839-1037-ND
Quantity Available	584 Can ship immediately
Manufacturer	Tensility International Corp
Manufacturer Part Number	10-00342
Description	CBL ASSY 2.5MM SLIM STEREO BLK
Manufacturer Standard Lead Time	16 Weeks
Detailed Description	Cable Stereo (3 Conductor, TRS) Phone Plug, 2.5mm To Cable (Round) 6.0' (1.83m)

You will ONLY use the Tip and Sleeve… Do not use the middle ring connection. Use a conductivity tester ti discover the tip wire color and the sleeve wire color. They are defined below.
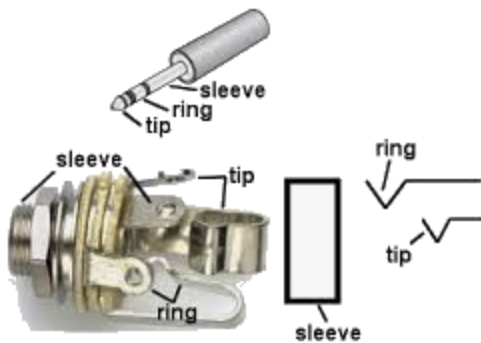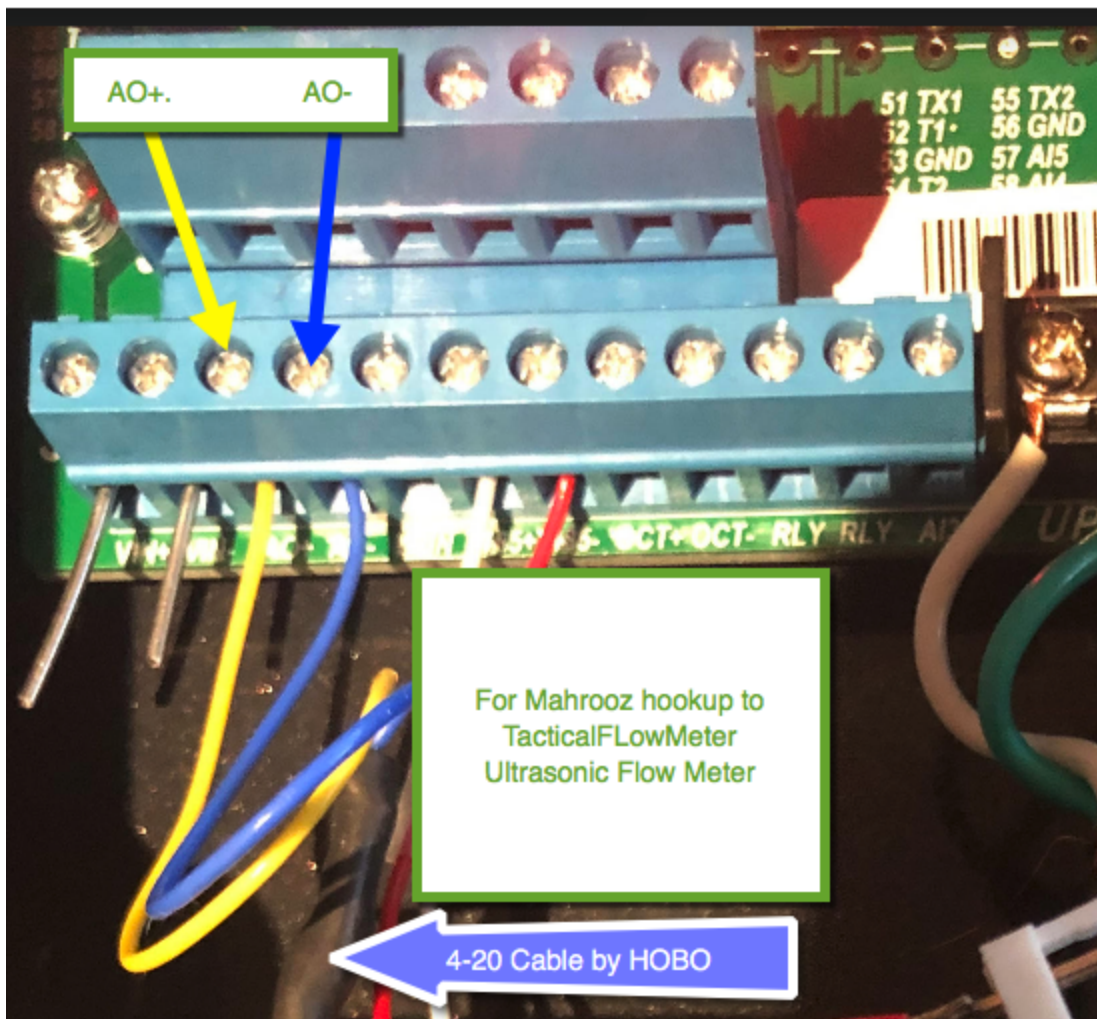

Our 4-20 Cable was mis-labelled having the wires labelled like this:

(+) YELLOW

(-) BLUE

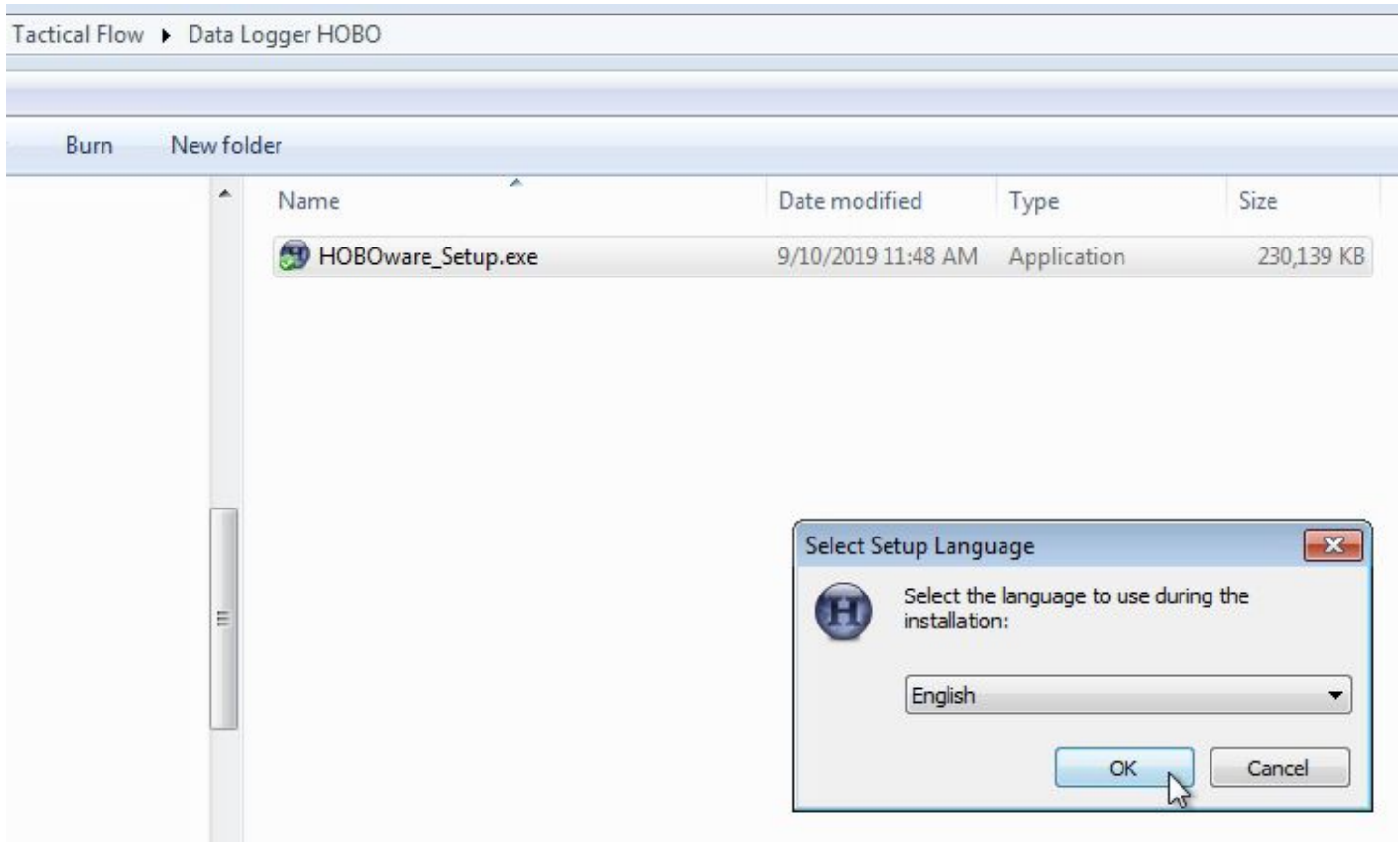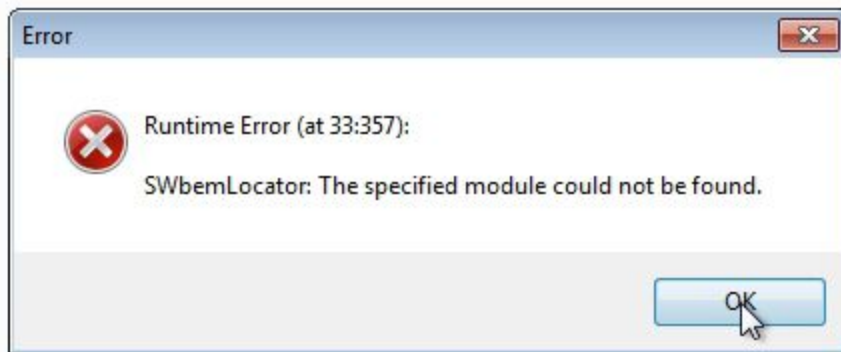We found this to be backwards and the device would indicate -2.5

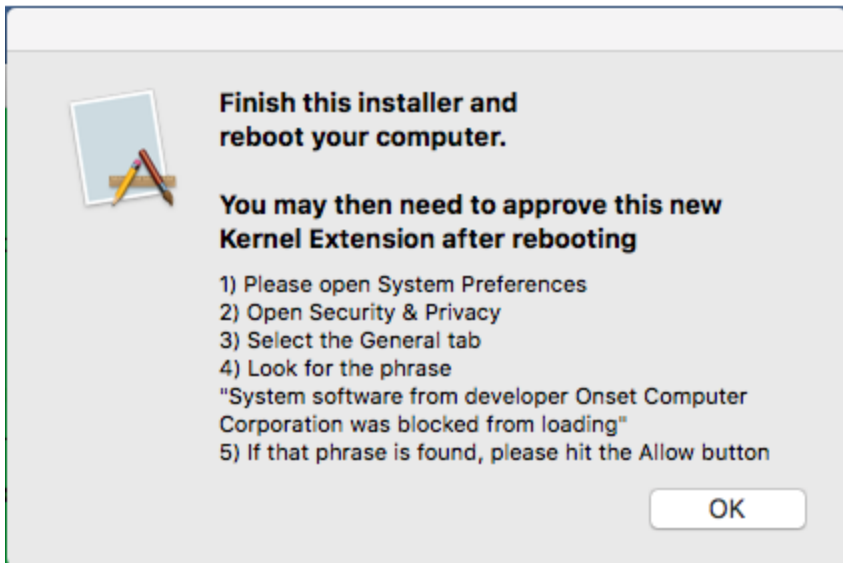How to use the HOBO:

Load the HOBO Software available here:
https://www.onsetcomp.com/support/updates

We show the Mac version because we could not get the Windows version to work, as shown below:

Burn   New folder

Name	Date modified	Type	Size
HOBOware_Setup.exe	9/10/2019 11:48 AM	Application	230,139 KB

Select Setup Language

Select the language to use during the installation:

English

OK   Cancel

Yields this error:

Error

Runtime Error (at 33:357):

SWbemLocator: The specified module could not be found.

OK

Installing on a MAC yields this, but it works:

Finish this installer and reboot your computer.

You may then need to approve this new Kernel Extension after rebooting

1) Please open System Preferences
2) Open Security & Privacy
3) Select the General tab
4) Look for the phrase
"System software from developer Onset Computer Corporation was blocked from loading"
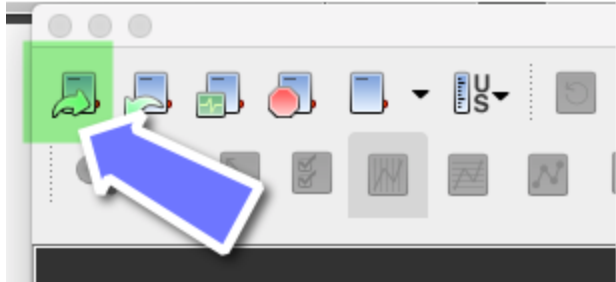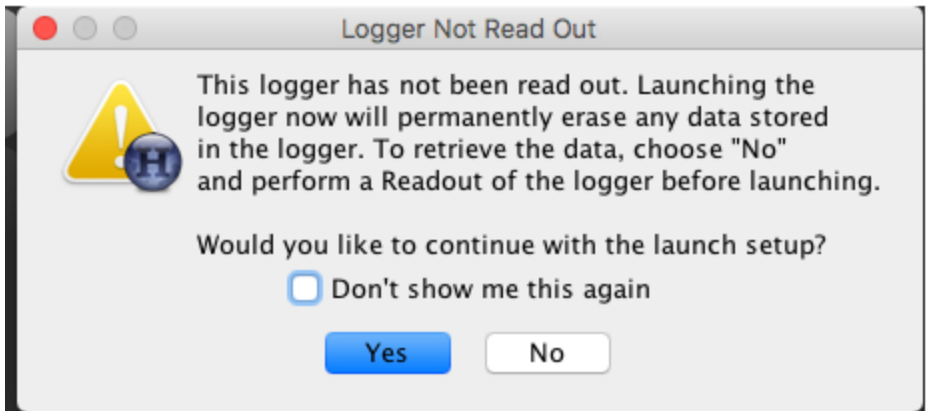5) If that phrase is found, please hit the Allow button

OK

Step by Step:

After HOBO Software is installed and you have given your "key" you will see this screen:
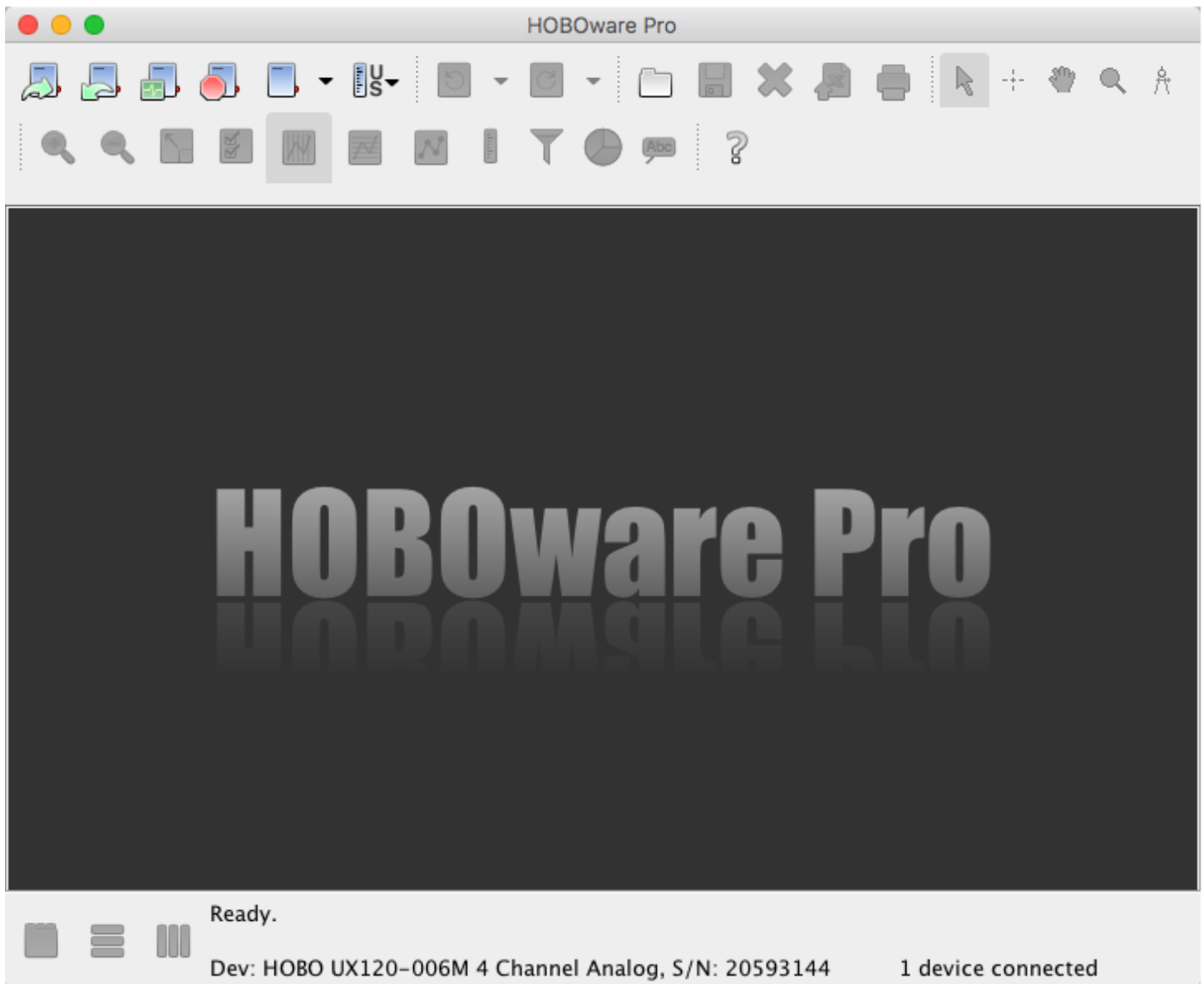
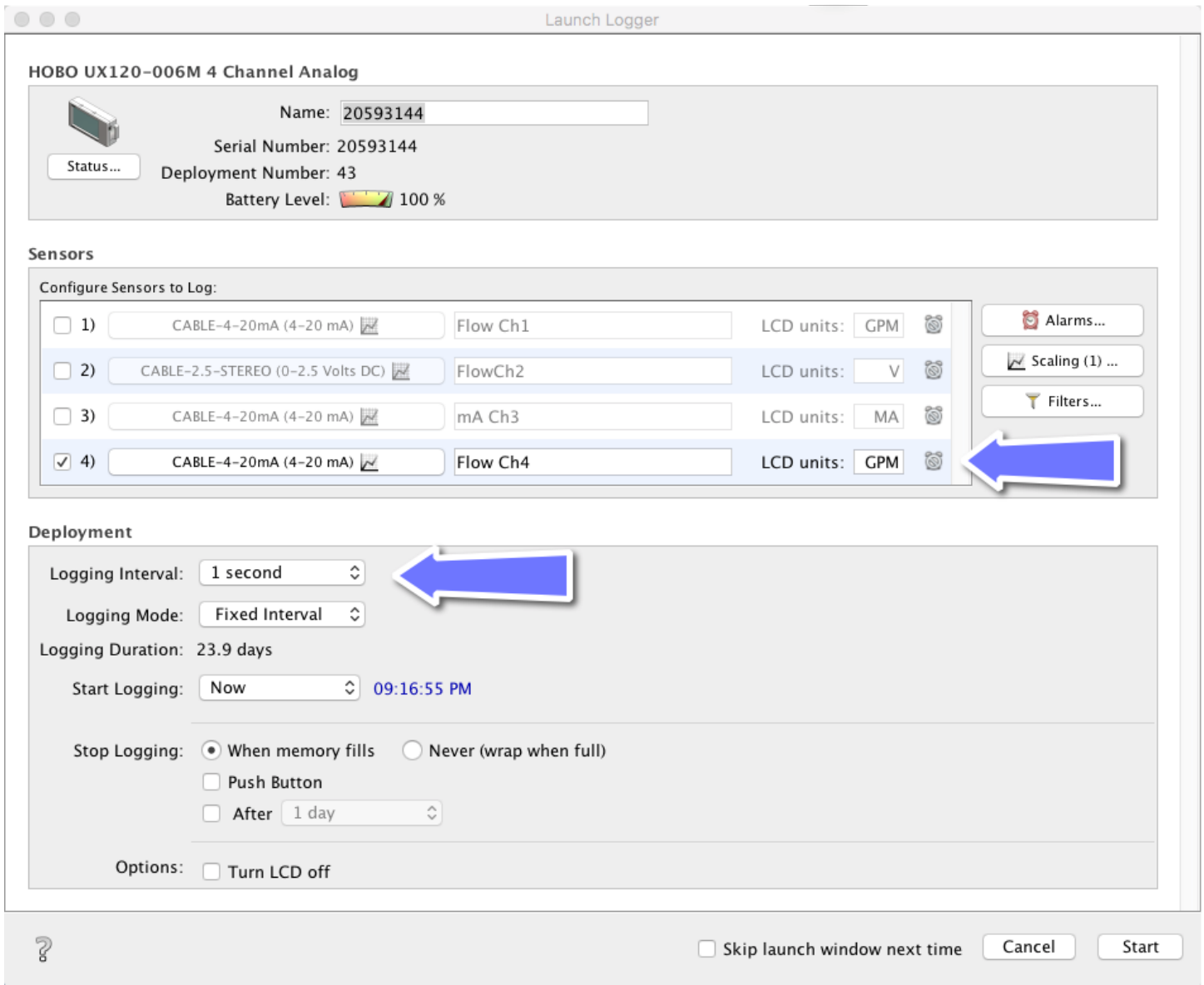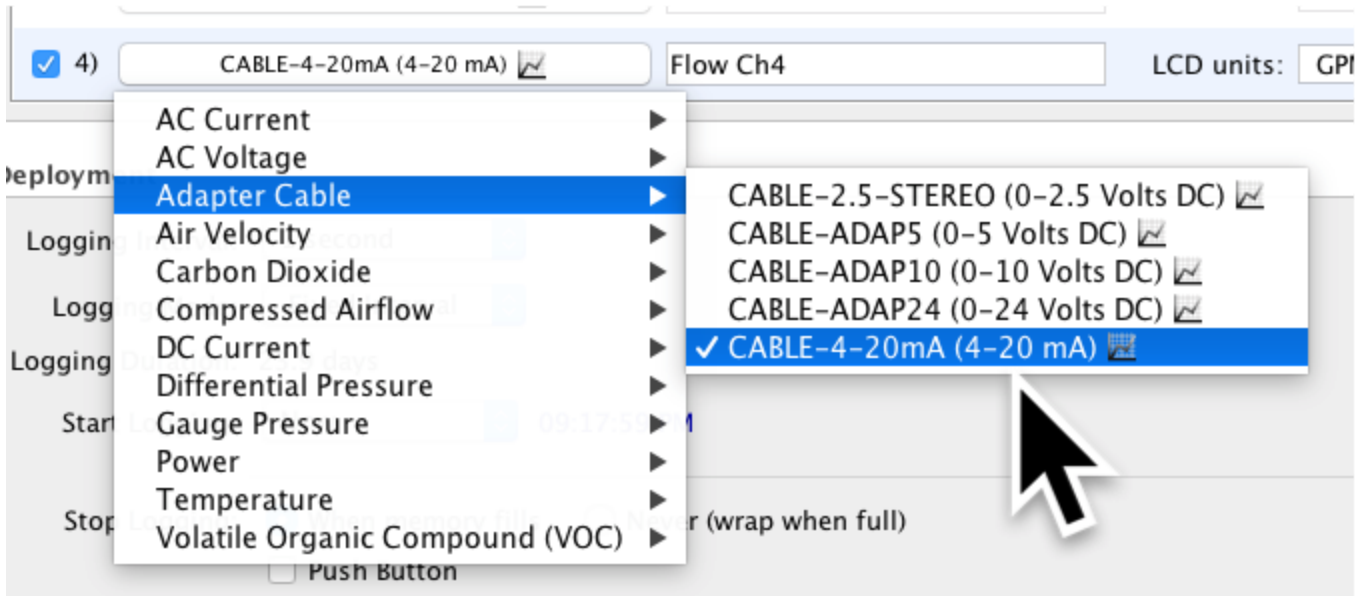With the HOBO plugged into one of your USB ports click THIS button

Acknowledge this notice:

Logger Not Read Out

This logger has not been read out. Launching the logger now will permanently erase any data stored in the logger. To retrieve the data, choose "No" and perform a Readout of the logger before launching.

Would you like to continue with the launch setup?

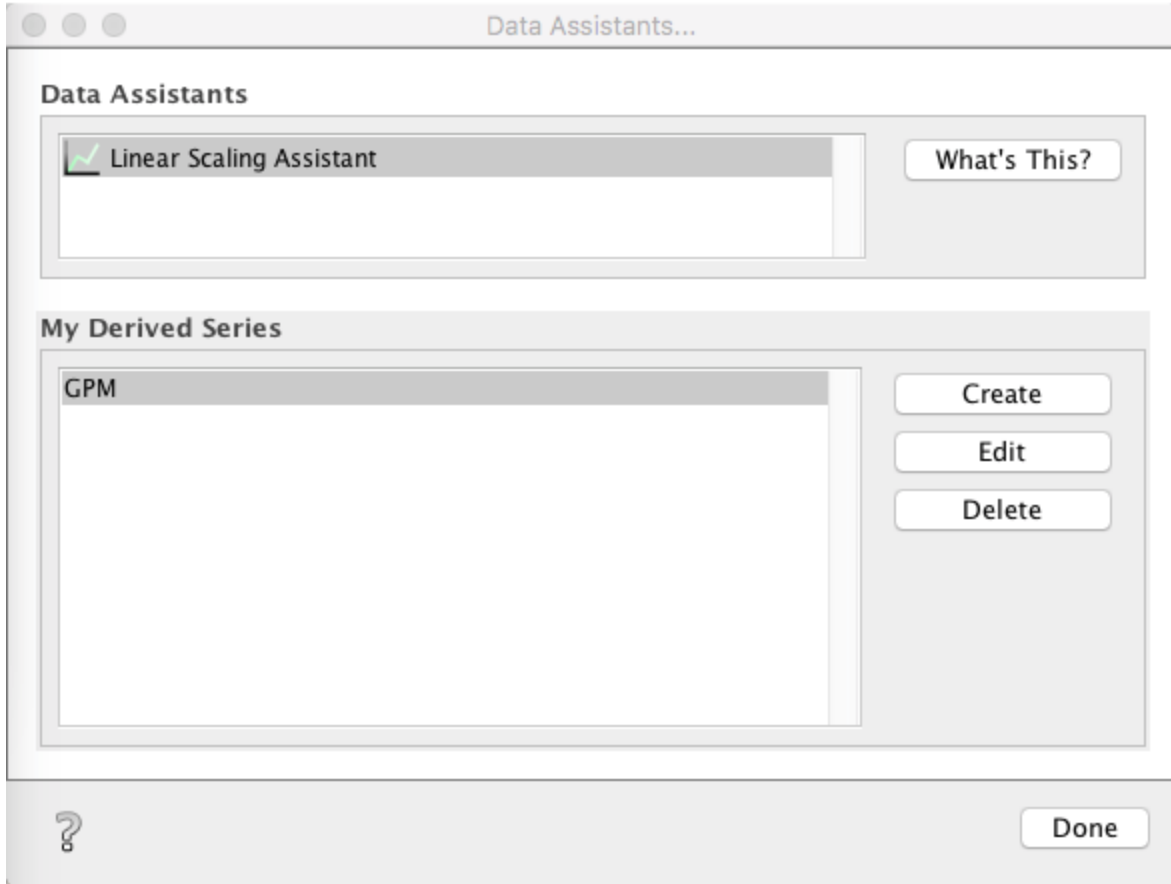☐ Don't show me this again

[Yes] [No]

We will select Channel 4 for 0-10 GPM driven with a 4 - 20 mA signal. We will only turn on ONE CHannel so we minimize the LCD segments that are turned on to conserve battery power. We will sample at 1 second intervals to start so we can VERIFY all is good.
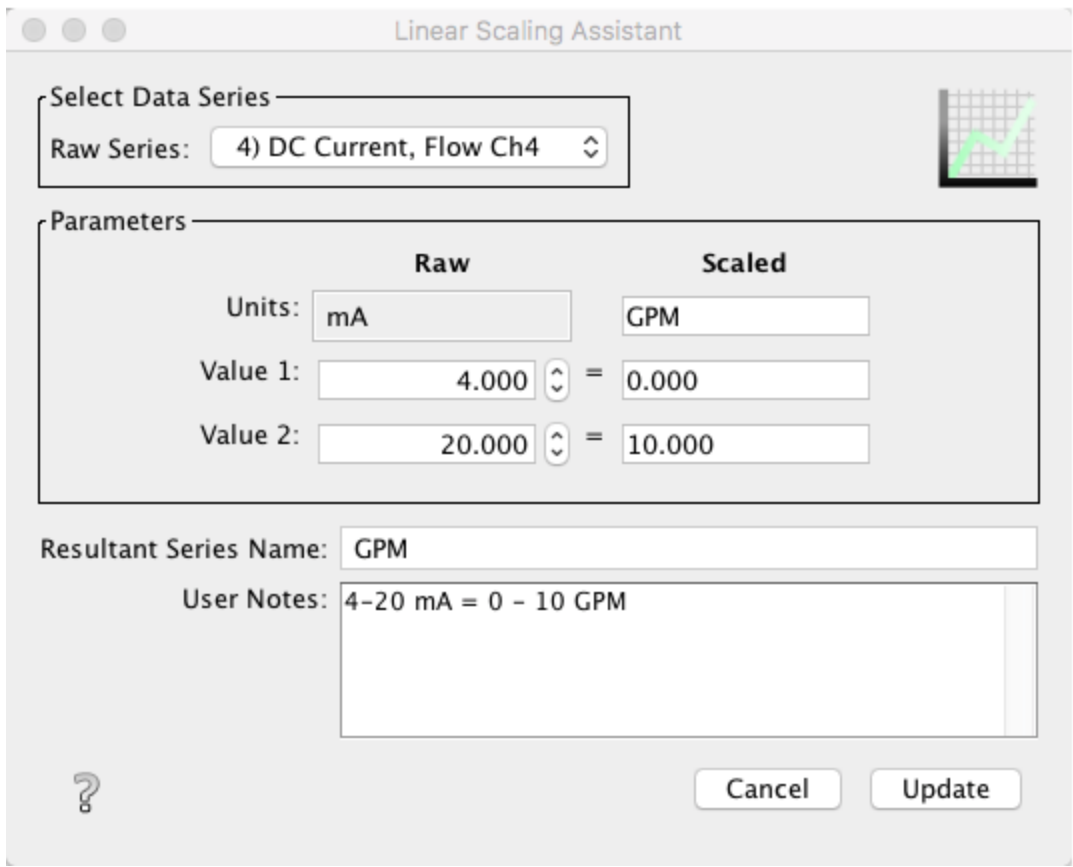

HOBO UX120-006M 4 Channel Analog

Name: 20593144
Serial Number: 20593144
Deployment Number: 43
Battery Level: 100 %

[Status...]

Sensors

Configure Sensors to Log:

☐ 1)	CABLE-4-20mA (4-20 mA)	Flow Ch1	LCD units: GPM	
☐ 2)	CABLE-2.5-STEREO (0-2.5 Volts DC)	FlowCh2	LCD units: V	
☐ 3)	CABLE-4-20mA (4-20 mA)	mA Ch3	LCD units: MA	
☑ 4)	CABLE-4-20mA (4-20 mA)	Flow Ch4	LCD units: GPM	

[⏰ Alarms...]
[📈 Scaling (1) ...]
[🔻 Filters...]

Deployment

Logging Interval: 1 second

Logging Mode: Fixed Interval

Logging Duration: 23.9 days

Start Logging: Now   09:16:55 PM

Stop Logging: ◉ When memory fills   ○ Never (wrap when full)
☐ Push Button
☐ After 1 day

Options: ☐ Turn LCD off

☐ Skip launch window next time   [Cancel]   [Start]

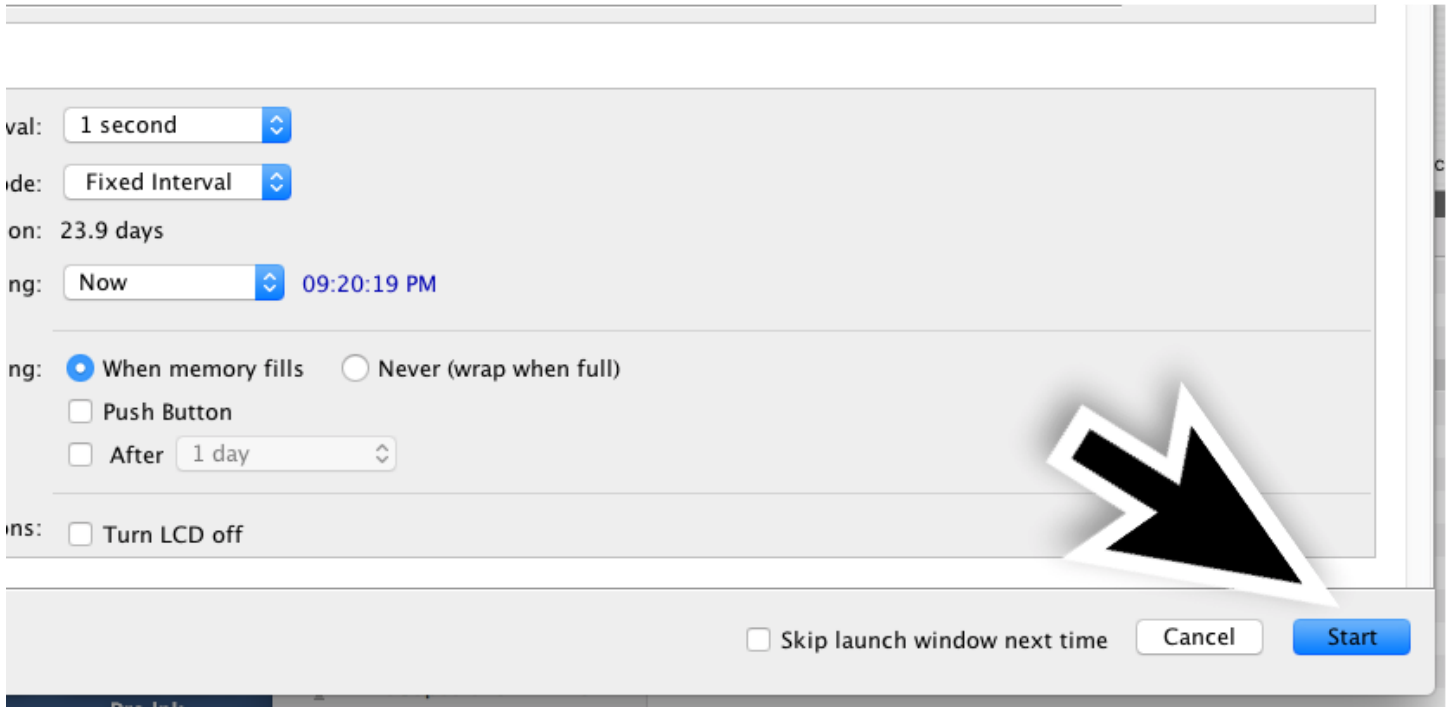We will SCALE the device by using the $25 cable that is selected as follows:

We scale by selecting the Scale. Note on the MAC this window is NOT MODAL so you will have to move the parent window out of the way to find it. They need to fix this….
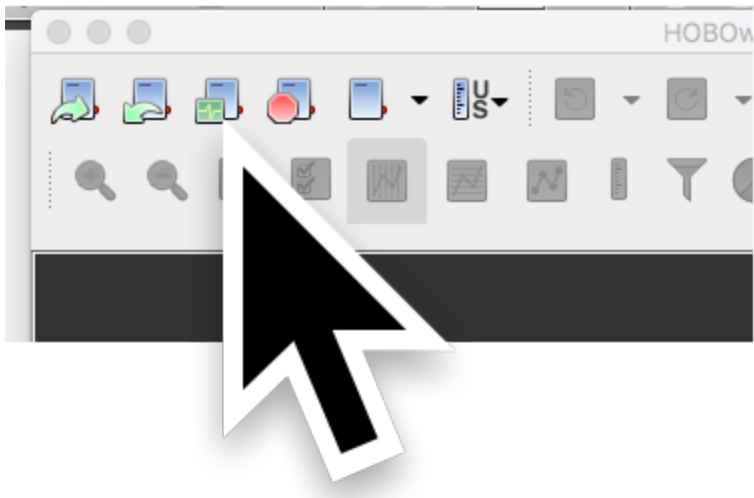

And scale like this:

Linear Scaling Assistant

Select Data Series

Raw Series: 4) DC Current, Flow Ch4

Parameters

	Raw	Scaled
Units:	mA	GPM
Value 1:	4.000 =	0.000
Value 2:	20.000 =	10.000

Resultant Series Name: GPM

User Notes: 4–20 mA = 0 – 10 GPM

Cancel   Update

Accept all the inputs and hit START:

val: 1 second

de: Fixed Interval

on: 23.9 days

ng: Now   09:20:19 PM

ng: ● When memory fills   ○ Never (wrap when full)

☐ Push Button

☐ After 1 day

ns: ☐ Turn LCD off

☐ Skip launch window next time   Cancel   Start

The computer will give notice it is loading the data into the HOBO and the HOBO will show a single channel with the units aas GPM and the value will be stored in the HOBO every second.

Monitor what is going on by hitting this button:

You will see this:

Once you have CONNFIGURED the device the way you want you can disconnect the USB cable from the computer and bring the device to the sample location.

Leave the LCD on or off?? SInce LCD's take very little power I would leave it on so you know it is running.
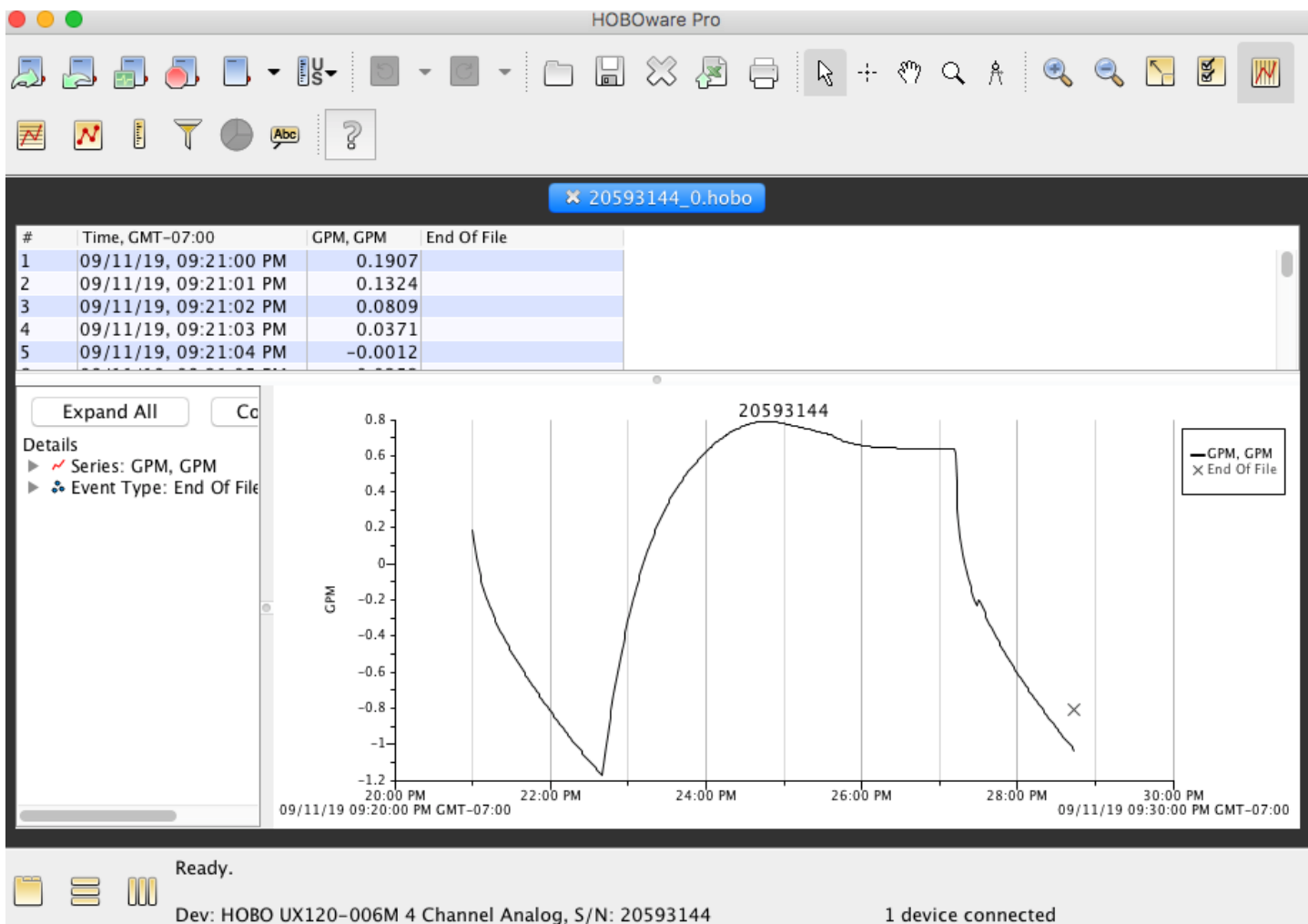
There is a way to turn it off that you can see from the main window.
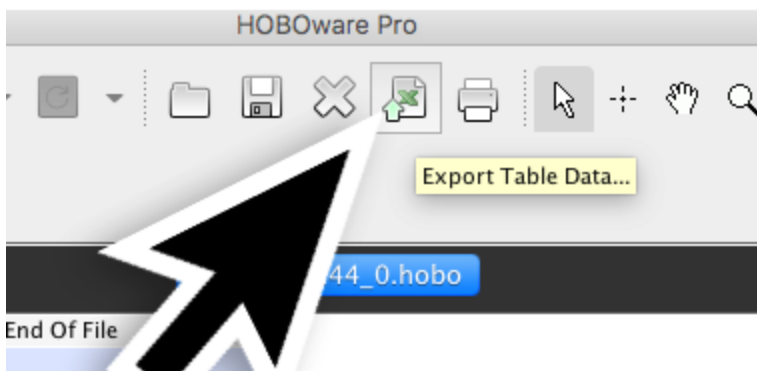
Read the data as follows:
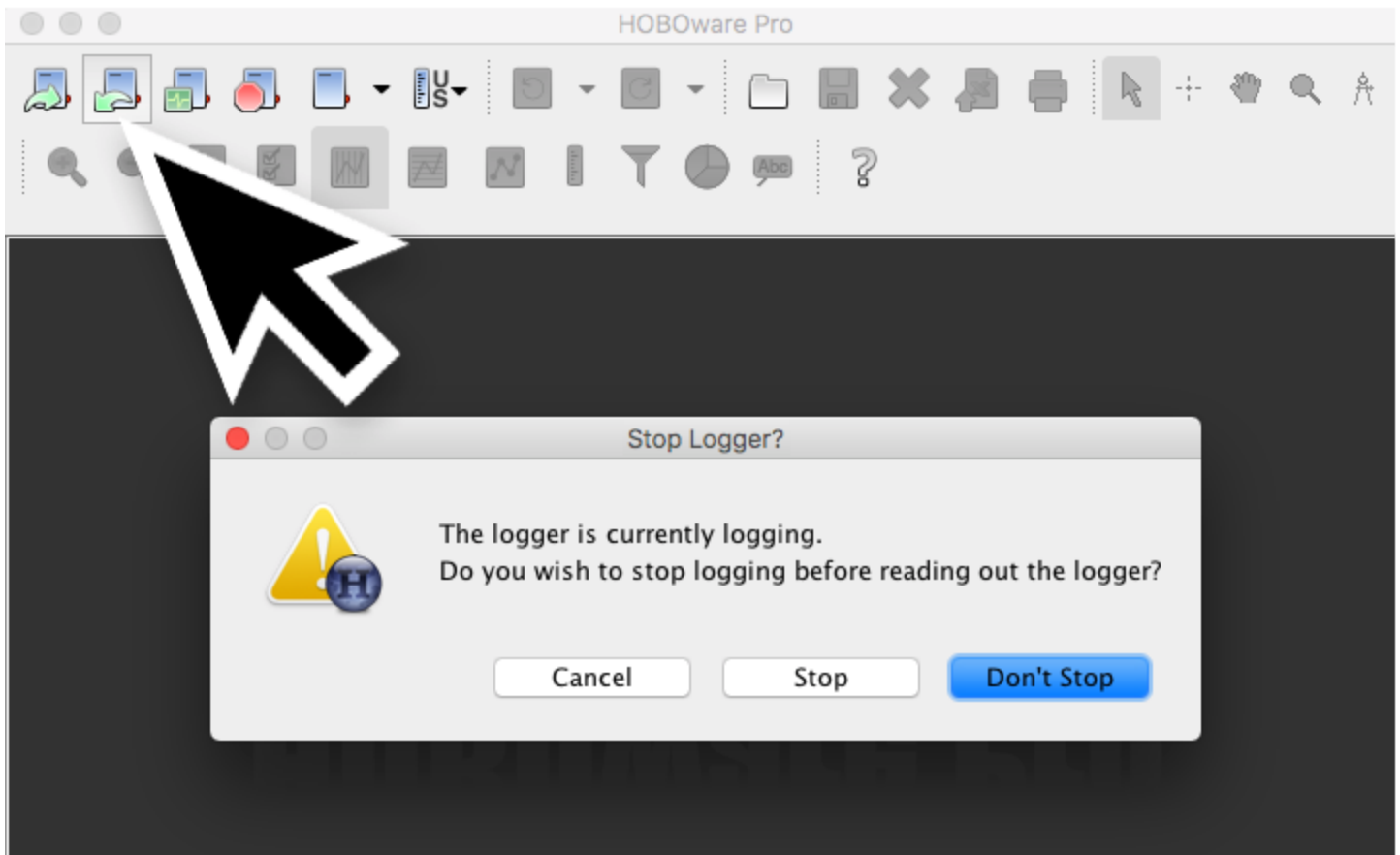
You can connect to the computer at any time.

The graph looks like this:

You can EXPORT to CSV for Excel but their interface is nice for discovery of data.

Export Table Data...

The device does have high and low alarms and date stamps for these in any particular time period.