Using the NXIC-ADC with a Wetlabs FLNTUS Sensor

INTRODUCTION

The Wetlabs FLNTUS sensor is a combined Fluorometer and Turbidity sensor with an anti-fouling Bio-Wiper. The sensor has two analog outputs along with a serial interface for configuring the sensor operating parameters. When a NXIC-ADC is integrated with a Wetlabs FLNTUS care must be taken to ensure the Bio-Wiper closes before power is removed from the sensors while running in interval sampling mode. The NXIC ADC samples the analog outputs of the FLNTUS and has no direct control over the bio-wiper function. Because of this the FLNTUS sampling interval must be set slightly shorter than the NXIC sampling interval prior to the NXIC powering down the FLNTUS. Configuring the Wetlabs FLNTUS is accomplished using the Wetlabs ECOview software. The following are procedures for configuring the FLNTUS.

USING ECOVIEW

Connect the FLNTUS to a PC serial comport using either a Wetlabs test cable or a TRDI supplied, Wetlabs compatible test cable. If using a TRDI supplied test cable, us the same power supply that is used with the NXIC test cable. Once the FLNTUS is connected and powered, run the ECOview software. On the bottom-left corner, select a baud rate of 19200 and then the com port that you are connected to. When the correct com port is selected, a status message from the FLNTUS should appear as in the following figure;

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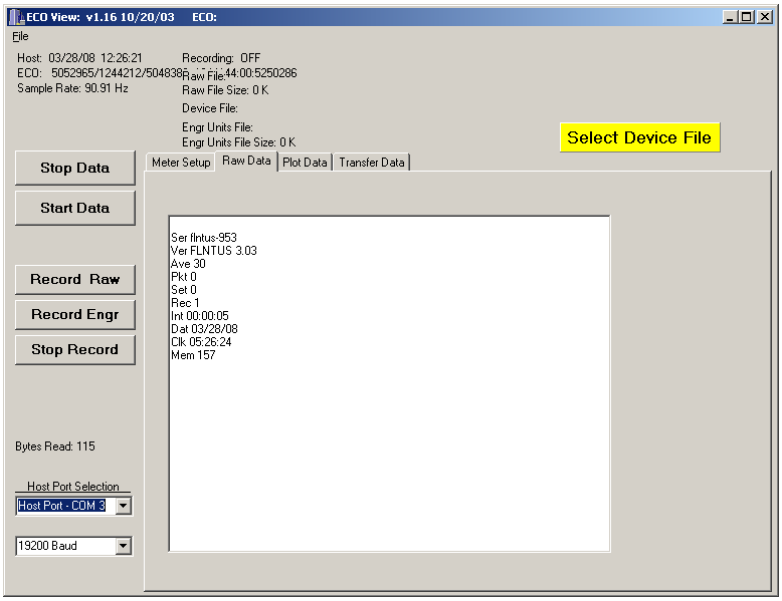
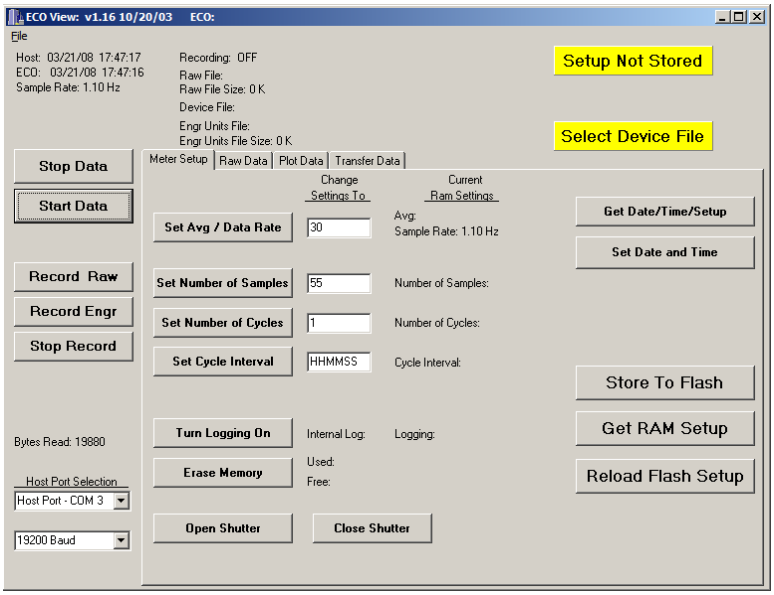
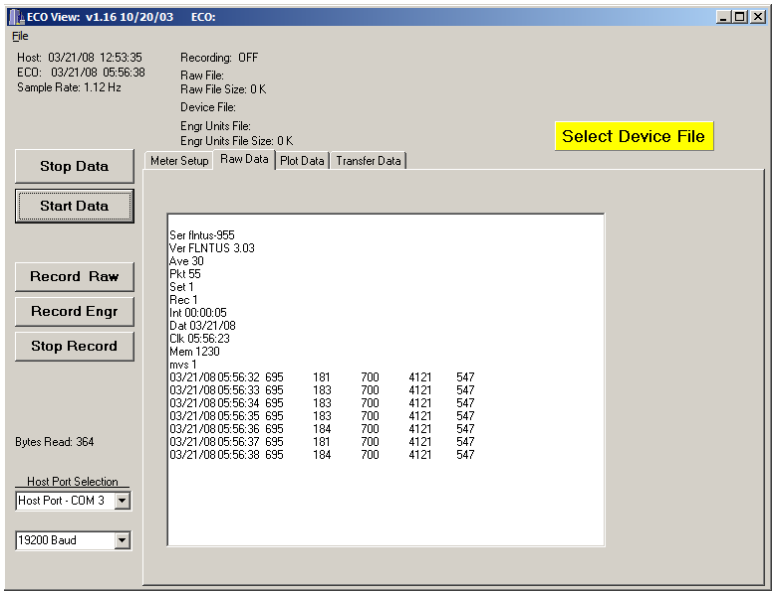


The FLNTUS sample rate is set at the factory for ~1Hz. To set the record time for activating the Bio-Wiper, set the number of samples to at least 5 seconds less than the NXIC record time. For example, if the NXIC record time is set to 1 Minute, set the FLNTUS Number of Samples to 55. After entering the number of samples, click “Set Number of Samples”. Set Number of Cycles to 1 and click “Set Number of Cycles”. Then click “Store to Flash”.



Next, select the “Raw Data” tab. Click “Start Data”. The Bio-Wiper should open and the FLNTUS will start sampling and outputting data. The FLNTUS settings will be displayed followed

by the streaming data. Measure the time from when the Bio-Wiper opens to when the Bio-Wiper closes and make sure it is ~5 seconds less than the NXIC record time.

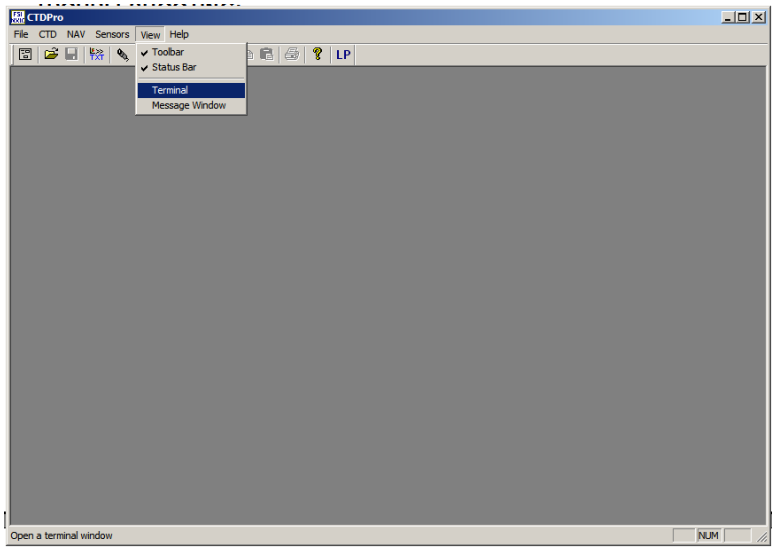


Once the FLNTUS is configured, it can be connected to the NXIC which can be configured for deployment using TRDI's CTDPro software.

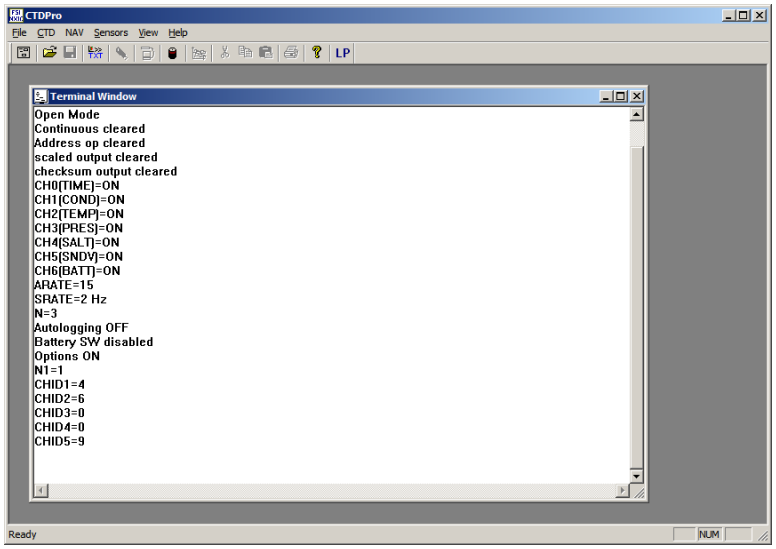
TROUBLESHOOTING:

The NXIC-CTD and WetLabs FLNTUS have been setup in the factory to work properly before shipping and should not need any changes other than configuring for your deployment scenario. In case of problems check the following:

1. The NXIC must have options enabled (i.e. CARD=ON;OPE=ON)
2. The AUX channel ids 1and 2 set to id 4 and 6 respectively. (i.e. CHID1=4; CHID2=6)
3. To check this, run CTDPro and select View -> Terminal from the menu bar



1. In the terminal window enter Open Mode by typing ***O. If data is scrolling type S to stop the data then type ***O to change to open mode. Once in open mode, type ROP and observe the following;



2. Verify that Options are on and that CHID1 = 4, and CHID2 = 6.
3. If options are turned off, turn them on by typing OPE = ON<CR>, and CARD = ON<CR>.
4. If the channel id is not correct, type CHIDx=y where x is the channel number and y is the id. To set channel 1 to 4 you would type CHID1=4<CR>.
5. Store any changes to the setup by typing ***E<CR>.

HOW TO CONTACT TELEDYNE RD INSTRUMENTS

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NOTES

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