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Tech Note 130312-1: Communication with WET Labs Transmissometers Using a Terminal Window Program and Changing the Clean Water Value

Terminal Program

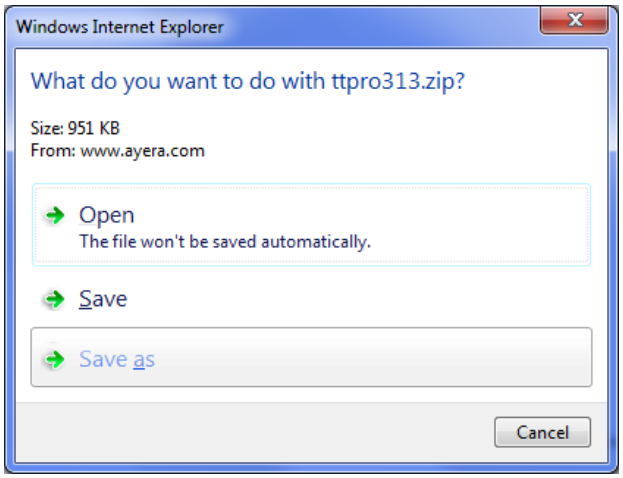
Use a terminal window program to interface between WET Labs products and a PC when not using ECOView or other host program provided by WET Labs. The terminal window allows access to all functions of the sensor and the ability to view live data output. The instructions below are for downloading and setting up TeraTerm Pro, but the communication setup and protocols will be the same for other terminal window programs.

Download the program (free): http://www.ayera.com/teraterm/download.cfm

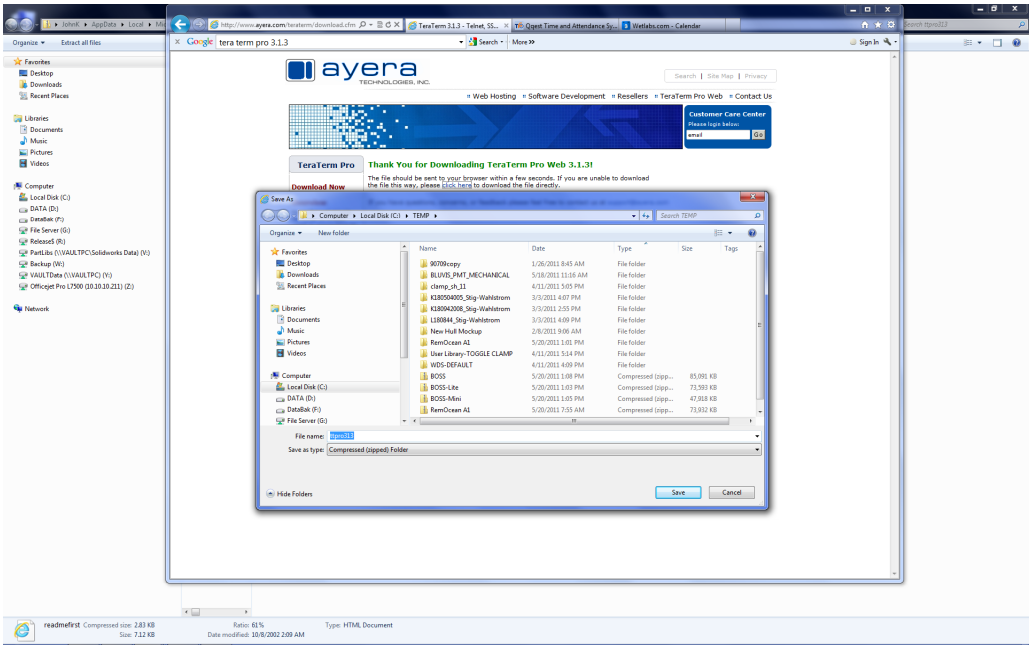
Follow the instructions on the website:

Complete the information required to allow the download.

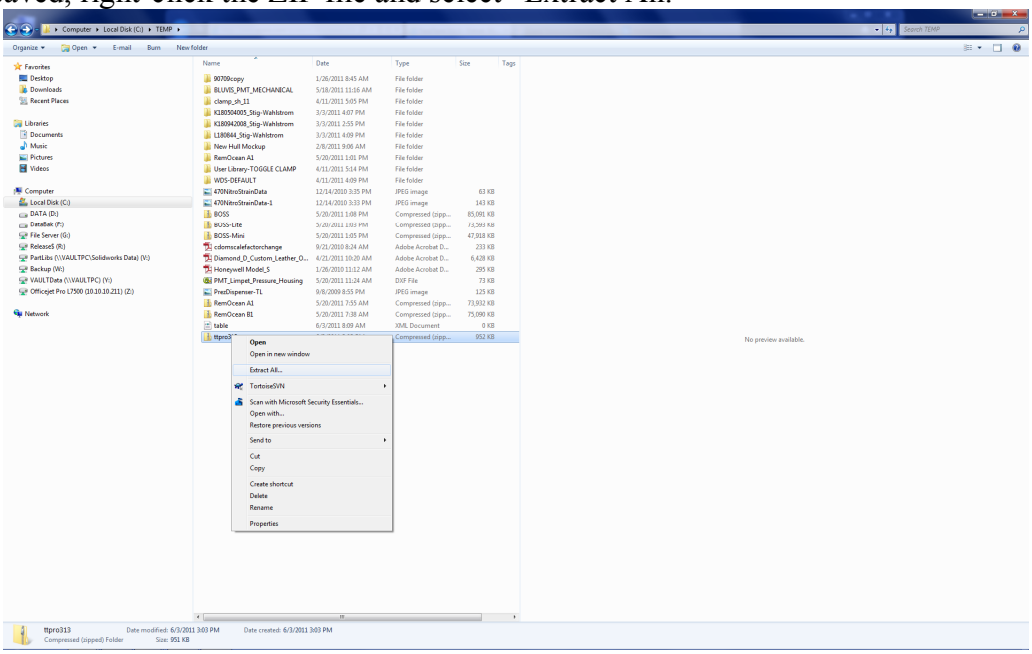
Select “Save As.”



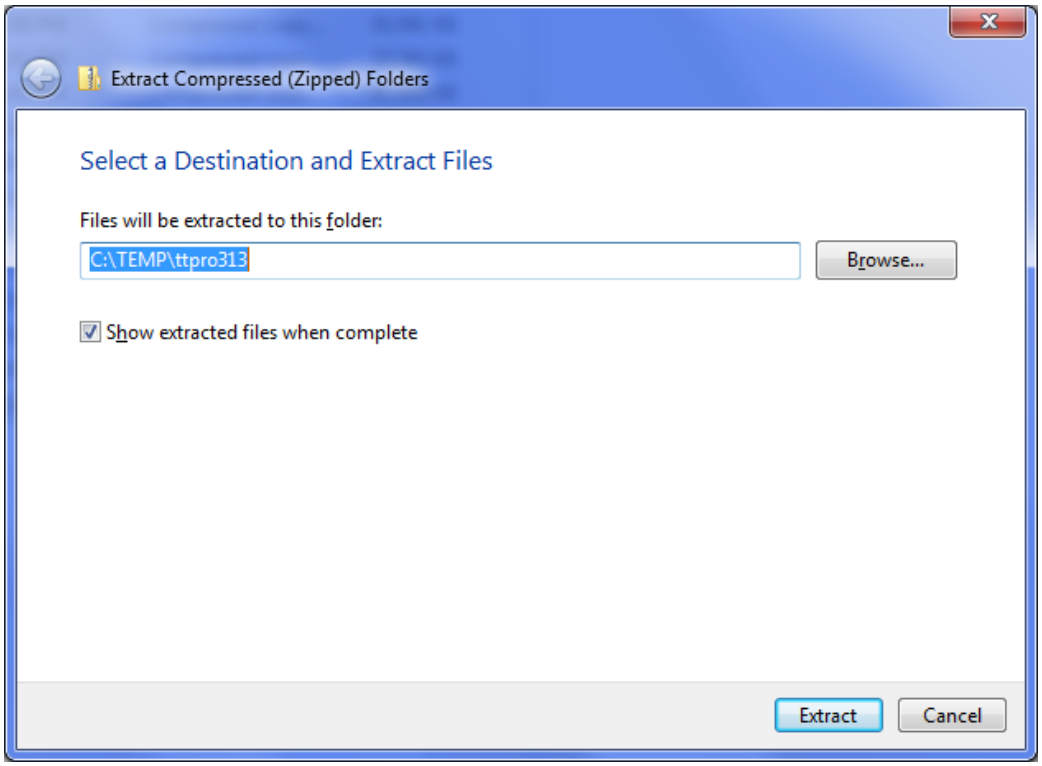
Select a folder to save the ZIP file in.

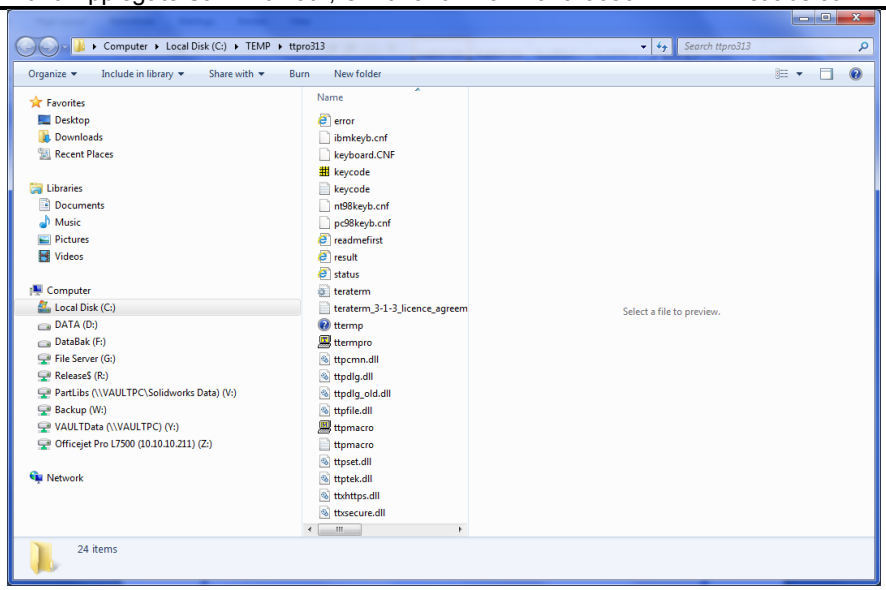


Once saved, right-click the ZIP file and select “Extract All.”



Select the location to store the extracted the files.

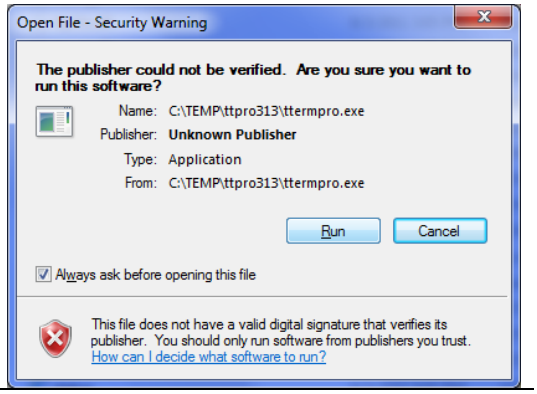




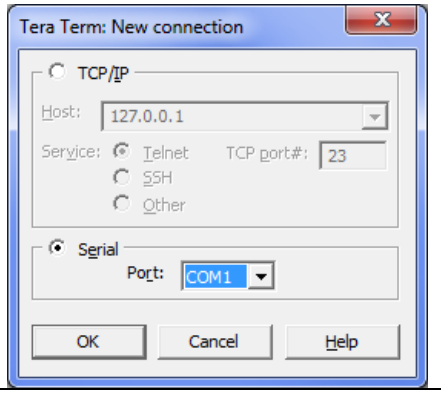
Set up the Terminal Program

1. Select “ttermpro” to start the application.

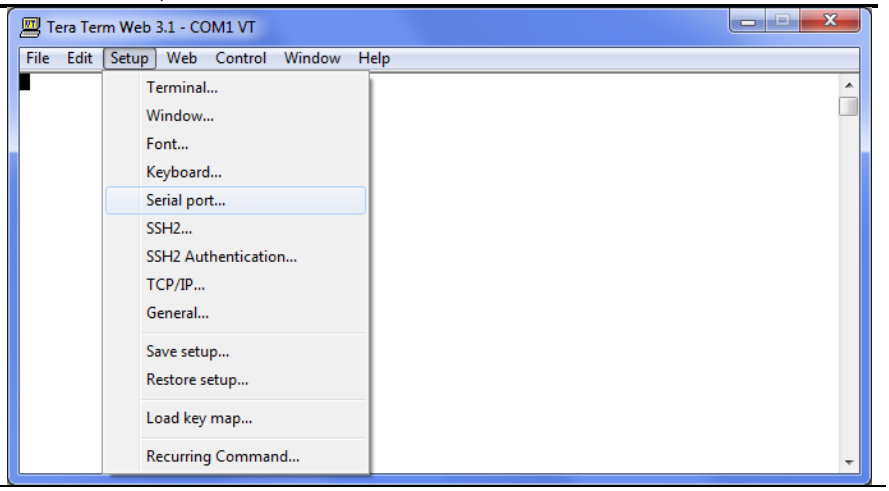
2. If using Windows Vista or a newer operating system, a warning message may appear. Select “Run.”



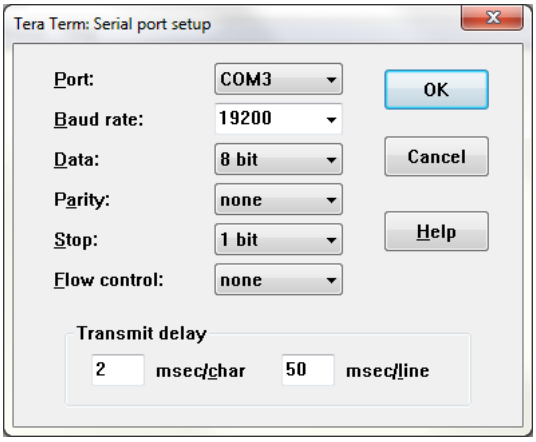
3. Select the “Serial” button and then select the COM port the sensor is plugged into. Select “OK.”



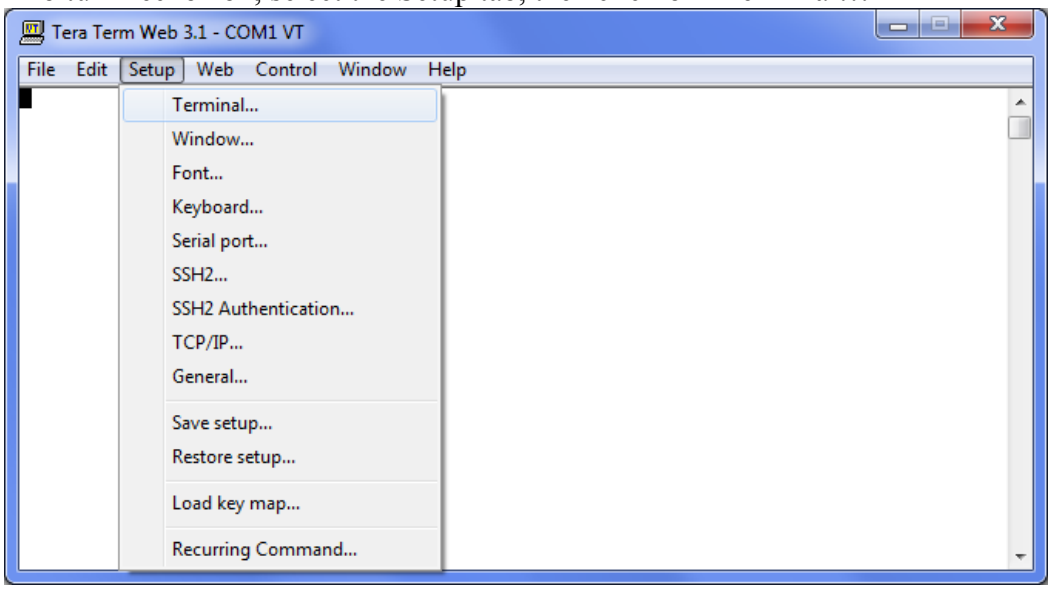
4. Select the "Setup" tab and drag the mouse to select "Serial port…"



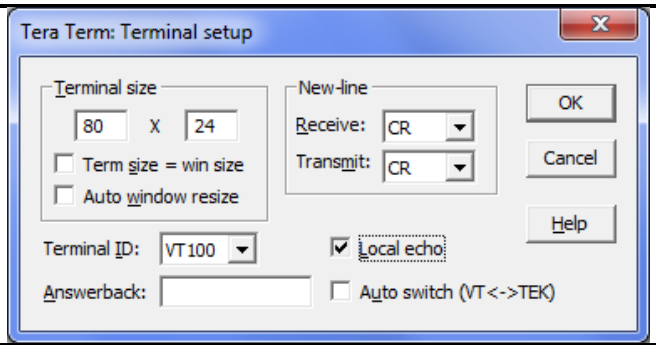
5. Change the baud rate to 19200.
6. Set the other parameters as given in the User's Guide—
   Data: 8 bit
   Parity: none
   Stop: 1 bit
   Flow Control: none
7. Set the "msec/char" and "msec/line" text boxes to 2 and 50 respectively. These settings allow the sensor time to react to commands before another command is sent to it. Without these delays, errors in command settings are possible if many are set at once. Click "OK."



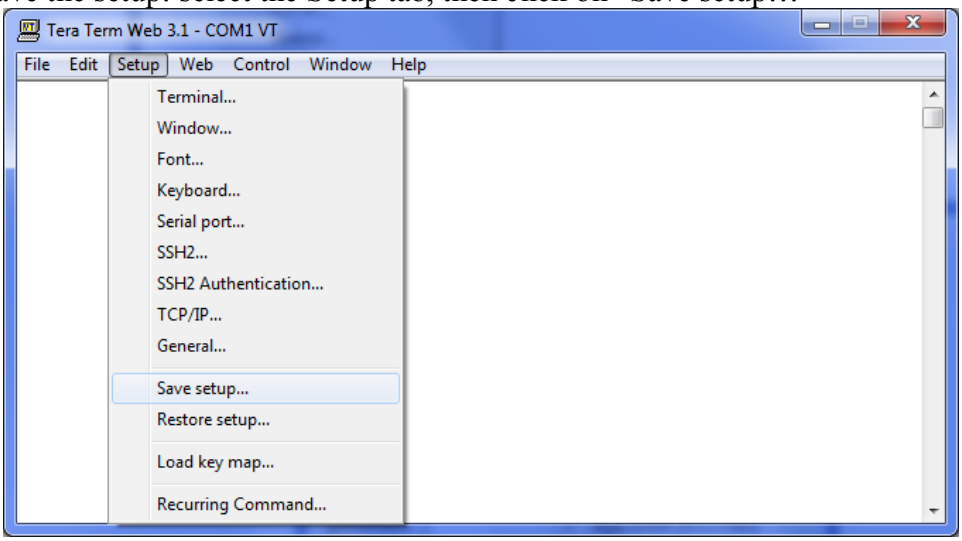
8. To turn "echo" on, select the Setup tab, then click on "Terminal…"



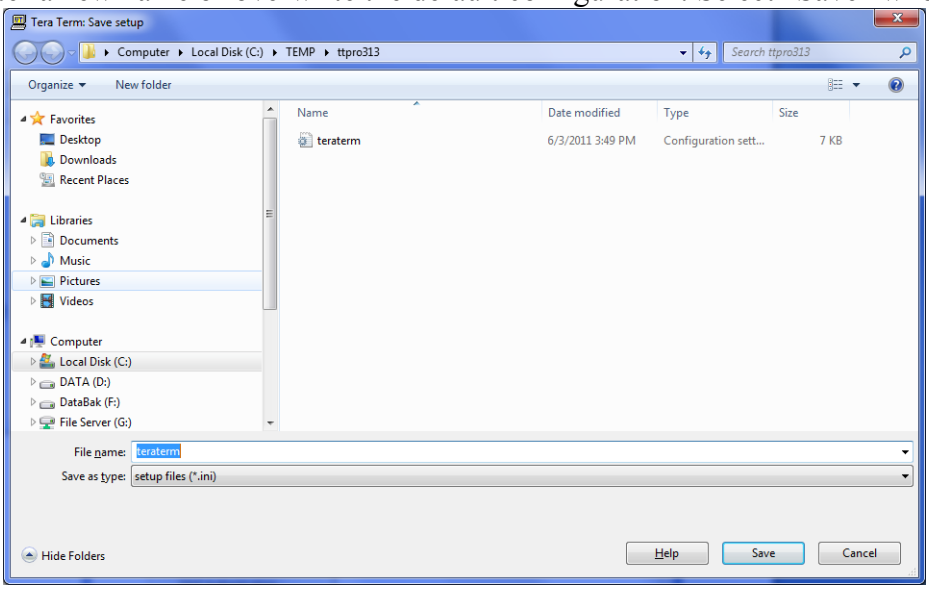
9. Select the "Local echo" check box. Click "OK."



10. Save the setup: select the Setup tab, then click on "Save setup…"

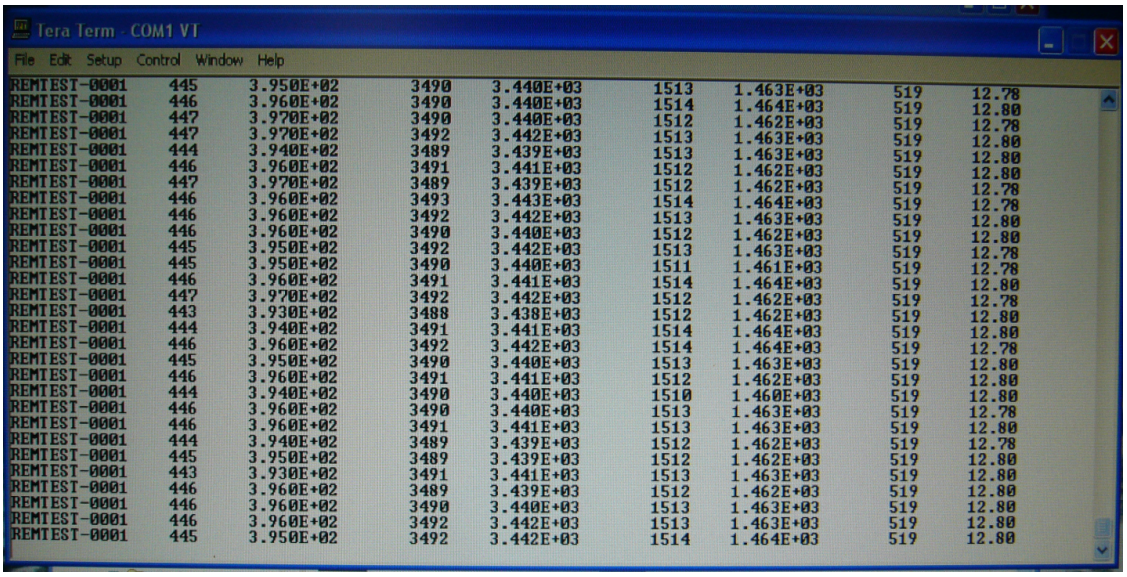


11. Enter a new name or overwrite the default configuration. Select "Save" when completed.



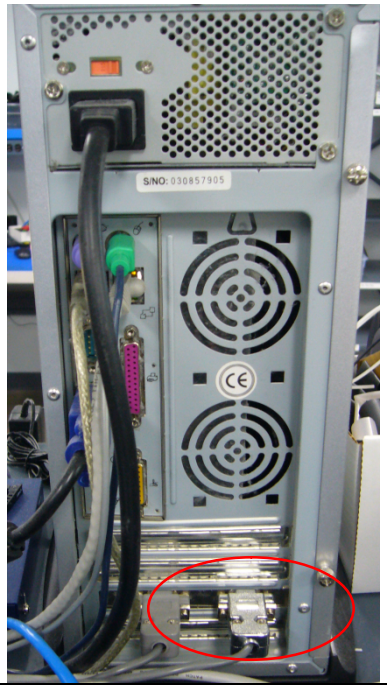
Setting Up the Sensor

1. Have a terminal window program running.



2. Plug the DB-9 connector on the test cable into the host PC's serial port.

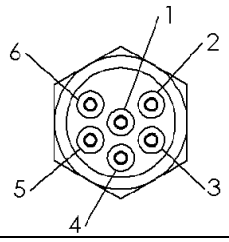
   Note that serial input locations will vary between computer manufacturers.

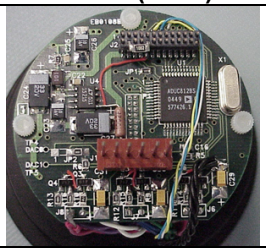


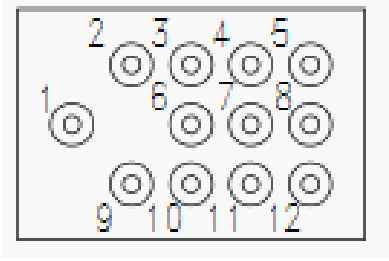
1. Turn on the power supply and make sure it is set to 12V–15V before the test cable is connected.

2. Turn off the power supply.
3. Connect the power supply to the test cable.
4. Connect the sensor to the test cable.

Connector Pin-outs

Pin	Function	MCBH-6-MP
1	Ground	
2	RS-232 (RX)	
3	Reserved	
4	V in	
5	RS-232 (TX)	
6	Analog out	

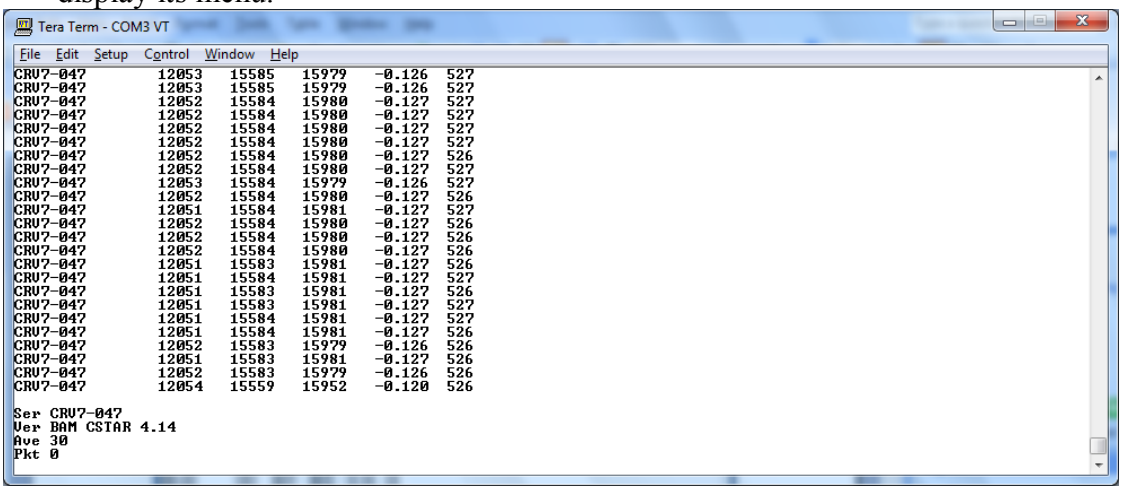
Pin	Function	Molex (OEM)
1	NC	
2	V+	
3	TX	
4	RX	
5	Reserved	
6	Ground	

Pin	Function	Diagram
1	TX ECO FLbbCD	
2	NC	
3	TX OCR-504	
4	NC	
5	TX C-Rover	
6	NC	
7	NC	
8	NC	
9	V+ ECO FLbbCD	
10	V+ OCR-504	
11	V+ C-Rover	
12	GND	

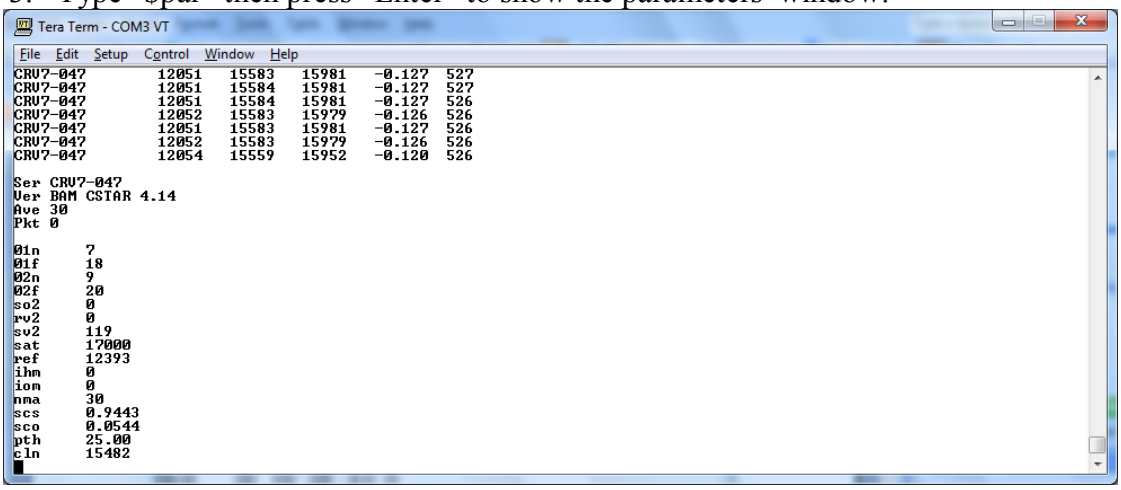
LPBH-12-MP (REM-B only)

Change the Clean Water Value

1. Turn on the power supply
2. Type !!!!! to stop the sensor from taking measurements, or to wake the sensor. It will display its menu.



3. Type “$par” then press “Enter” to show the parameters window.



4. Type “$cln=” “your value” then press “Enter” to change the stored value and observe its change.
5. Type “$sto” then press “Enter” to save the change into the sensor’s internal memory.
6. Turn the power supply off, then on.
7. When the command prompt is showing, type !!!!! to stop the sensor from taking measurements or to wake it. It will display its menu.
8. Type “$par” then press “Enter” to observe that the change has been correctly saved for the new clean water (cln) value.