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RBR XR-420 CTD Cheat Sheet



Instrument: Logger: RBR XR-420 CTD 4.6 009658

Firmware: 4.60

Software: latest Ver 6.13

Memory: 2 MB (?)

Batteries:

- The CTD runs on four 2/3A 3V lithium (camera-type) batteries. They operate in 2 parallel sets providing 6 V.

Energizer	Kodak	IEC	Procell	Duracell	Rayovac	Panasonic	Varta
EL123A	K123LA	CR17345	PL123A	DL123A	RL123A	CR123A	CR123A

Before changing the batteries, ensure that the logger is not sampling and leave it idle for at least one minute after disconnecting it from the computer. This will ensure that it has entered its standby state and its operation will not be disturbed by removing the old batteries.

- unscrew the endcap opposite to the sensors. Unscrew the centre bolt and withdraw the battery carousel. The batteries go in alternating +/- . Replace the carousel and endcap. The endcap should be screwed in finger tight – do not over-tighten.

There is enough memory and batteries for 200,000 sets of readings (~2.3 days at 1/sec; ~138 days at 1/minute)

Operating Software

Load the operating software onto the PC/Laptop. Connect to the CTD using the serial cable. The serial cable connects to the plug inside the instrument, beside the battery

carrousel. Start the operating program setup_rbr6w13.exe, RBR Data Logger for Windows ver 6.13.

To check real-time readings:

- click on Logger Functions, Fetch Live Readings. The channels are 1:Cond, 2:Temp, & 3:Pr

To start:

- Click Setup, and set start/stop time, averaging period, etc,
- If the CTD has turbidity and it is set to auto-range, then the fastest sampling is about every 3 sec. When set to a manual range it can sample at 1 second.
- Then click on Enable Logging to program the instrument. All data in the memory will be erased.
- Disconnect, close end cap, and perform profiles

To stop:

- Connect back up to computer & click on Retrieve Data.

Files can be viewed by clicking on File, Read a Recent File, or Read a Dat/Hex File and opening the appropriate data file.

Calibration Coefficients

- Calibration coefficients are stored inside the instrument. To view, use the operating software: Calibration Functions, Calibration History. The calibration coefficients are not to be changed without permission from ASL.

CTD Hygiene

- The CTD sensors are sensitive and delicate; the Conductivity sensor can be spoiled by dirt, oil, etc. Rinse in freshwater after each use. Read the manual.
- If the CTD cast is to go down “almost to the bottom” it is a good idea to put a weight on a length of rope about a meter below the sensors (attach the weight to the main line, not the CTD). This way you can stop lowering when the weight hits bottom instead of when the sensors hit bottom.

Manufacturer:

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