North Carolina
Department of Environment & Natural Resources
Division of Air Quality
Toxics Protection Branch

Standard Operating Procedure for
Meteorological Data Collection From
CR-10 and CR-10X Dataloggers

1.0 General Information	
Name:	LoggerNet v3.2 or higher
Manufacturer:	Campbell Scientific Inc.,815 West 1800 North, Logan, Utah, 84321
Users:	Monitoring site operators

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Pernell Judd, Electronics Technician   Date

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John Holland, Quality Assurance Manager   Date

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Jim Bowyer, LAB Supervisor   Date

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Donald D. Redmond, Jr., Ambient Monitoring Section Chief   Date

2.0 Purpose

- The purpose of this document is to provide standard operating procedures for the proper collection of meteorological data from the CR-10 and CR-10X datalogger using computer program LoggerNet.

3.0 References

- Campbell Scientific Inc.,815 West 1800 North, Logan, Utah, 84321 (435) 750-9540
- CR10/CR10X Operator's Manual at the site location.

4.0 Equipment Description

- The CR10/CR10X is a data logger for data storage, processing and the control unit for the Climatronics CS800 cross-arm sensors. WS/WD, temp and barometric sensors are all integrated into the CR10/CR10X programming and wiring for the Climatronics weather stations. The non-flash memory and lithium backed SRAM stores up to 62,000 data points. The data logger is stored in a weatherproof fiber glass enclosure.

5.0 Procedures

5.1 Calibration and Certification

The data logger must be returned to Campbell Scientific to be calibrated every 2 years if mounted inside a building, calibrated every year if mounted outside.

5.2 Collection of Meteorological Data.

- Open the door on the enclosure and connect the blue ribbon cable to the (9 pin) serial **I/O** port on the datalogger.

- Connect the middle connector of the blue ribbon cable to the datalogger end of the **SC32A** module. (See Figure 1.)

Figure 1. SC32A Module

- Connect the printer end of **DB9** null cable to the printer end of the **SC32A** module.

- Connect the **DB9** end (9 pins) of the null cable to the laptop computer **IOIOI** port.

- Turn on power to the laptop computer.

- On your laptop find the computer program icon **LoggerNet** and click on it, this will bring up the Datalogger Support Software LoggerNet 3.2 or higher tool bar menu. Looking left to right on the LoggerNet tool bar menu click the connect button.
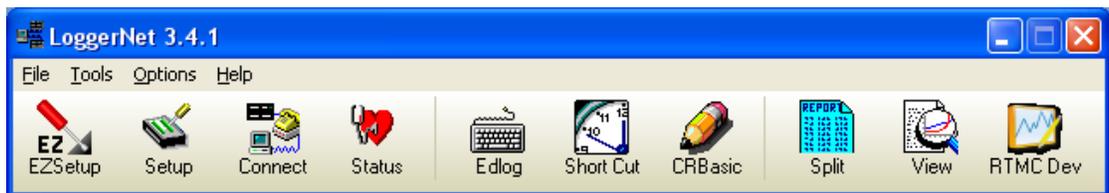

Figure 2. Tool Bar Menu

- The CR10X data logger connection screen window will open up and request you to select a station. (See Figure 3.)

- Highlight the CR10X that is already present in the **Stations** window, all buttons in the connect screen will become active.
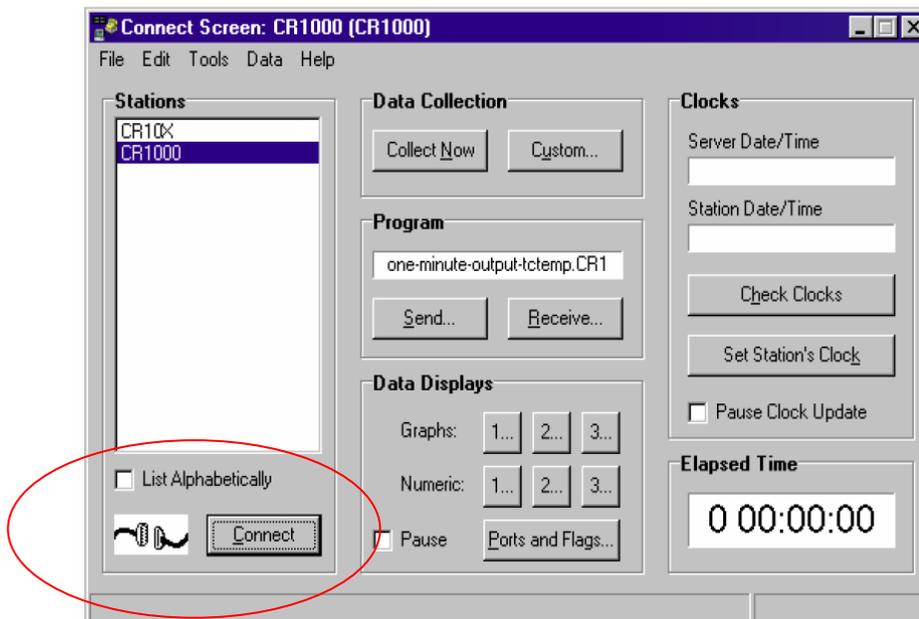

Figure 3. Data logger Connection Screen

- At the bottom of the connect window is a **Connect** button next to a connect symbol. Click the **Connect** button, the symbol will show the two cables connected and the computer and

the datalogger are now able to communicate.

- In the Datalogger Connection screen is a window for **Data Collection** click the **Custom** button and a new "custom collect" window will open.
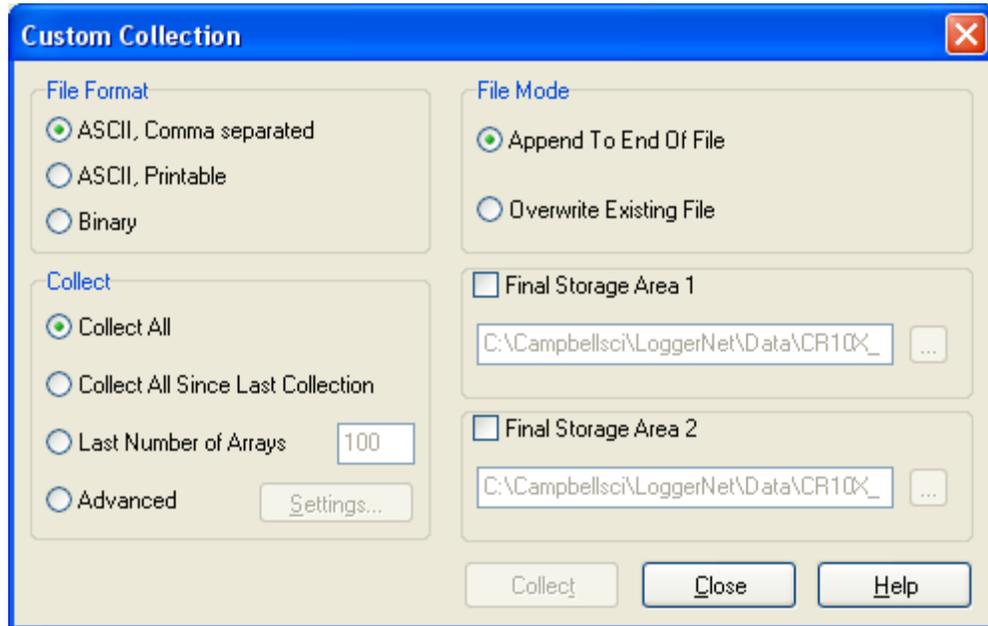

Figure 4. Custom Collection Window

- Verify that the File format (**ASCII** is selected), File Mode (**Overwrite Existing File** is selected), and the **Collect** (**Collect all Since Last Collection** is selected), and **Final Storage for Area1 is checked.**

- **The file name** for Final Storage Area 1 should already be assigned by the software; remember the location; this is where it will be located in the computer.

- Click **Collect** at the bottom of the window and the data will start downloading.

- When all the data is collected close the custom collect window and open Microsoft Office Excel.

- Click open, in the address drop down list select **C: drive**.

- Go to (**Files of type :**) select (**All Files *.***) from the drop down menu list, then click **Campbellsci** folder.

- In the **Campbellsci** folder open **LoggerNet** folder. once LoggerNet folder is open, find the **Data** folder and open it. The data file will be in the list as the

site name (example **Asheville up to day 153 CR10X_FSArea1_dat.xls**).
- Open the file and save it in an Excel format on your computer or a memory stick.

- With Excel window open, go to the bottom of the **Datalogger Connection** screen and press the disconnect button next to the (**symbol**).

- All the cables can now be disconnected from the laptop, close and latch the housing door on the datalogger.

- Close all the windows on your laptop and turn it off.

- Data will be saved in the LoggerNet .dat file and will be in an Excel format.

- E-mail the data file at least to the Toxics Protection Branch Data Manager or designee monthly.

- If any problems are encountered contact the TPB Electronics Technician or TPB Lab.