



Temperature Logger Download and Deploy Instructions



Background

Materials needed:

- Downloading Cords
- Fully-charged computer with LogMaster 4 software downloaded on it
- 1 trowel per person in field
- map indicating locations of data loggers at each site
- clipboard, data sheet, pen
- compass
- gloves
- measuring tape
- spray paint
- ladder for canopy loggers
- folding table and chair
- USB memory stick
- #2032 batteries for loggers

Pre-field Prep

None needed

General Instructions

Finding the logger

Each site has three temperature loggers—one about 15 feet up in the canopy (near the canopy rain gauge), one at the base of the canopy rain gauge, and one at the base of the open rain gauge. The subsurface temperature loggers are about 1 foot from the base of the post on the east side of the gauge indicated by a brown spray-painted dot on the rain gauge post. Subsurface loggers are inside PVC containers buried about 1 foot deep.

Downloading the Data

1. To download the temperature data, you will need to have the software 'Log Master 4' pulled up on the computer.
2. Plug the USB end of the cord into the computer and then the attached cable into the logger. The attached logger should show up on the screen.
3. Ensure that the name of the device on the computer matches the logger you are working with.
4. Hit the big red 'Stop' button to stop data recording. Then hit the blue arrow to download the data. A graph will pop up in the lower panel.
5. Under the Reports tab, on the far right in 'Report Options,' click 'Export to Excel'. It will ask you if you want a chart generated, go ahead and click 'yes'.



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6. Save this Excel file in the folder on the Desktop labeled 'TempLoggers'. Name the Excel file in this way: SiteNumber_LoggerLocationYYYY. For example, the canopy subsurface logger at Alameda would be named: 1_CanopySub2016.
7. Make a second copy of the file and save it to the USB.

Re-deploying the Logger

1. Once the data are downloaded and saved, you can redeploy the logger.
2. Start by resetting the logger by hitting 'Reset' under the Device tab.
3. Note the SN of the logger, the amount of battery life left, and the date at which it will need to be calibrated (right-click on the logger name, hit properties, go to calibration).
Note-if this date is coming up soon, go ahead and recalibrate the logger.
4. Hit the big green button labeled "Custom Start." Click the option for 'delayed start' and set the time for 5:00:00 pm for the same day. The Stop Method should be manual. Make sure the reading interval says 1 hour, and then hit Start.
5. Replace the logger to its original location
 - a. The subsurface gauges must be placed vertically in the ground to discourage water from entering the PVC container.
 - b. Ensure that the desiccants are replaced or still fresh.
 - c. Replace the logger battery if necessary.
 - d. Make sure the spray paint at the base of the rain gauge post on the east side is still clearly visible.

Citizen Science Oversight

This procedure is typically carried out by staff.

Double check before leaving

- All equipment is accounted for
- All temperature loggers were found and data exported correctly
- Datasheet is filled out correctly

Data storage

Submit datasheet to the science coordinator for entry. Copy exported data to
Drobox/Data/Datasets/TemperatureLoggers/YYYY

This procedure document has been approved by _____

Date _____