

MMF Weather Keeper Program -

Weather Station Logger Info and Start-up Guide

Instruments attached

1. Anemometer – Wind monitor that measures gust speed, wind speed, and wind direction
2. Rain gauge SmartSensor – Measures rainfall via the number of tips during recording interval
3. PAR SmartSensor – Measures photosynthetically available radiation
4. Barometric Pressure SmartSensor – Measures atmospheric pressure
5. Temperature and Relative Humidity Sensor
6. Solar panel

Setup and test

1. Connect Smart Sensors – Plug in the RJ-12 modular jacks, or the (+) and (-) splitters into their respective ports (this will require a small Phillips screwdriver). Then connect the battery.
2. Close battery switch, then close the logger switch. You can now connect to the hosting computer – Using the USB interface cable, connect the logger to a computer running the HOBOWare software.
3. Run the **Launch** option in the HOBOWare user interface

Launching the Logger

1. Select the **Device** drop down option and interact with **Launch**. Ensure that the HOBOWare Energy Logger is selected and the press **OK**.
2. Select a logging interval of 15 minutes, with a sampling interval of 5 seconds. Then select the **Start Logging at Interval** option, and press **Launch**.
3. The Delayed Start feature will begin logging data on the next 15-minute increment.

Checking logger status

Logger status can be verified via LED indicator lights located on the logger.

1. Push to Start (Green) – This occurs when the logger is launched with the **Trigger** option. Indicator light will continue to blink and not record measurements until the **Push to Start** button is pressed and held for two seconds.
2. Delayed Start (Green) – This occurs when the logger is launched with the **At Interval** or **Delayed** start option. Indicator light will continue to blink and not record measurements until a launch date/time is selected.
3. Logging (Green) – Indicator blinks every two seconds while logger is recording data.
4. Memory Low (Red) – Indicator blinks with <25% of memory remains. Logger will continue to run until all memory is used.
5. Battery Low (Red) – Indicator blinks when battery power is <25% capacity, or batteries have been installed incorrectly.
6. Sensor Fail (Red) – Indicator blinks when a SmartSensor communication failure.

Adding or removing modules and sensors

Adding or removing modules and sensors should always be done in between deployments. Adding a module or sensor while the logger is recording data will cause the module or sensor to be ignored. If a module or sensor is removed while actively logging the **Sensor Fail** indicator will blink. Modules and sensors may be attached at the following times:

1. Any time between deployments or when the logger is stopped.
2. While configuration of launch parameters in HOBOWare is occurring.
3. After logger has been launched with a **Delayed Start** indicator.

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Weather Station Maintenance and Trouble Shooting Guide

Maintenance

Regular maintenance of logger and associated sensors should be done to ensure the accuracy of data, and longevity of the equipment.

1. Inspecting the logger housing and cables – Visually verify that the logger housing box has not been damaged and is clean. Cables should also be inspected at this time to ensure they are free from damage and are properly secured.
2. Cleaning the Logger – If upon visual inspection the logger is dusty, or grimy the logger and sensors should be wiped down. This must be done to ensure dirt or dust from interfering with the sensors.

Problem

Solution

No status indicators are blinking

This may be due to a number of issues:

- Ensure the batteries are not dead. Each battery should have at least 1 volt per cell.
- The memory may be full. Relaunch the logger.
- The logger may not have been launched correctly or at all.

Individual modules or sensors are not found by the HOBOWare logger

If a SmartSensor is removed and then immediately reconnected it may not be detected. This can be fixed with the **Refresh** button in the HOBOWare Launch software.

You may also want to check for a loose connection between the sensor and the logger.

No modules or sensors appear in the HOBOWare Launcher software

Remove all sensors except one and click the **Refresh** button, to see if the sensor appears in the HOBOWare Launch software. Repeat this step with all the sensors in order to determine the issue.

Batteries die prematurely

This can be caused by an excess of moisture or condensation in the logger enclosure. It is important to keep up on general maintenance by checking over the logger box regularly.

Check for damaged wiring and malfunctioning sensors. This can result in short circuits that can rapidly drain batteries.

Logger is not found

Check and replace the batteries and reconnect the logger.

Check communication cable connections, and computers COM port and USB settings.