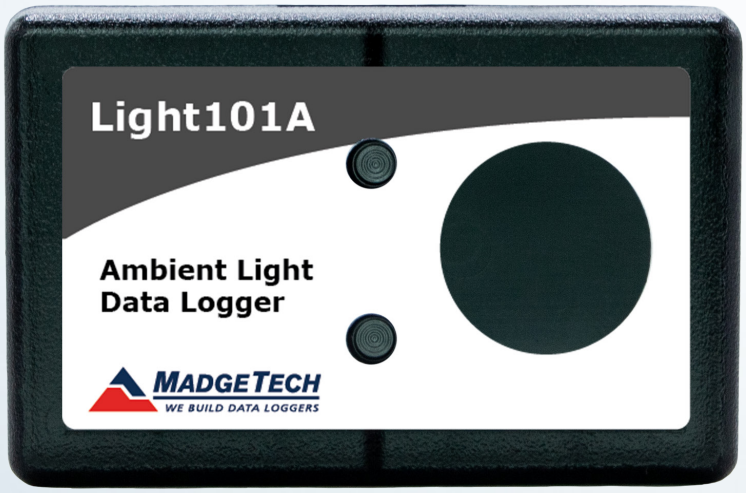
Light101A

Ambient Light Data Logger



Product User Guide

To view the full MadgeTech product line, visit our website at **madgetech.com**.

CE

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WE BUILD DATA LOGGERS

MADE IN THE USA

Product Overview

The **Light101A** data logger is equipped with an integrated light sensor designed to monitor and record the occurrence and duration of light availability, capturing detailed photoperiod data. This standalone unit simplifies deployment and data gathering by autonomously detecting light changes without the need for external connections to switches or relays.

This data logger is particularly useful in a variety of industries and applications, such as agricultural studies for optimizing plant growth cycles and environmental monitoring to study the effects of natural light on ecosystems. The **Light101A** also excels in building management, helping to analyze and enhance energy efficiency through controlled lighting studies. Additionally, it is valuable in zoological research, where understanding the impact of light on animal behaviors is crucial. This device replaces traditional manual monitoring methods, providing reliable and automatic documentation of light patterns.

Device Operation

Connecting and Starting the Data Logger

1. Once the software is installed and running, plug the interface cable into the data logger.
2. Connect the USB end of the interface cable into an open USB port on the computer.
3. The device will appear in the Connected Devices list. Highlight the desired data logger.
4. For most applications, select **Custom Start** from the menu bar and choose the desired start method, reading rate and other parameters appropriate for the data logging application and click **Start**.
   - **Quick Start** applies the most recent custom start options.
   - **Batch Start** is used for managing multiple loggers at once.
   - **Real Time Start** stores the dataset as it records while connected to the logger.
5. The status of the device will change to **Running, Waiting to Start or Waiting to Manual Start**, depending upon your start method.
6. Disconnect the data logger from the interface cable and place it in the environment to measure.

Note: The device will stop recording data when the end of memory is reached or the device is stopped. At this point the device cannot be restarted until it has been re-armed by the computer.

Downloading Data from a Data Logger

1. Connect the logger to the interface cable.
2. Highlight the data logger in the Connected Devices list. Click **Stop** on the menu bar.
3. Once the data logger is stopped, with the logger highlighted, click **Download**.
4. Downloading will offload and save all the recorded data to the PC.

Engineering Units

Engineering units are used to convert one measurement reading to another. The MadgeTech software allows for software level Engineering Units (conversion applied to data after download). Certain devices have device level Engineering Units, which upon download automatically appear in the chosen unit of measure. Please refer to the Engineering Units Video on **madgetech.com/resources/videos** for step-by-step setup instructions.

Set Password

To password protect the device so that others cannot start, stop or reset the device:

1. In the **Connected Devices** panel, click the device desired.
2. On the **Device** Tab, in the **Information** Group, click **Properties**. Or, right-click the device and select **Properties** in the context menu.
3. On the **General** Tab, click **Set Password**.
4. Enter and confirm the password in the box that appears, then select **OK**.

LED Indicators

- **Green LED Blinks:**
  10 seconds to indicate logging and 15 seconds to indicate Delay or Manual Start Mode - Standby (waiting to start)
- **Red LED Blinks:**
  10 seconds to indicate low battery and/or full memory

Multiple Start/Stop Mode Activation

- **To start device:** Press and hold the push button for 5 seconds, the green LED will flash during this time. The device has started logging.
- **To stop the device:** Press and hold the push button for 5 seconds, the red LED will flash during this time. The device has stopped logging.

Device Maintenance

Battery Replacement

Materials: Small Phillips Head Screwdriver and a Replacement Battery (LTC-7PN)

1. Puncture the center of the back label with the screw driver and unscrew the enclosure.
2. Remove the battery by pulling it perpendicular to the circuit board.
3. Insert the new battery into the terminals and verify it is secure.
4. Screw the enclosure back together securely.

Note: Be sure not to over tighten the screws or strip the threads.

Recalibration

The Light101A has an integrated light sensor and cannot be calibrated. A certificate of conformance can be provided.

Need Help?

Product Support & Troubleshooting:

- Visit our Resources online at **madgetech.com/resources**.
- Contact our friendly Customer Support Team at **(603) 456-2011 or support@madgetech.com**.

MadgeTech 4 Software Support:

- Refer to the built-in help section of the MadgeTech 4 Software.
- Download the MadgeTech 4 Software Manual at **madgetech.com**.
- Contact our friendly Customer Support Team at **(603) 456-2011 or support@madgetech.com**.