

**STANDARD OPERATING PROCEDURES**  
**DIVISION OF COMPARATIVE MEDICINE**  
**UNIVERSITY OF SOUTH FLORIDA**

SOP#: 1145.1

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<b>TITLE:</b>	<b>HOBO® Data Logger Model U9-002 (Light On/Off Sensor)</b>
<b>SCOPE:</b>	Animal Care Personnel
<b>RESPONSIBILITY:</b>	Facility Manager and Technical Staff
<b>PURPOSE:</b>	To Outline the Proper Procedures for the Operation and Maintenance of the HOBO Data Logger

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**I. PURPOSE**

1. This procedure outlines the use and maintenance of the HOBO Data Logger used to monitor/confirm diurnal light timers in animal housing rooms are functional and accurate.

**II. RESPONSIBILITY**

1. Facility Managers are responsible for monitoring and recording light cycles in animal housing rooms monthly. Facility Managers may designate a staff member to monitor and record light cycles.
2. It is the responsibility of designated staff using the data loggers to read, understand, and follow the procedures outlined below.

**III. EQUIPMENT APPLICATION**

1. **Adjust the sensitivity screw** (plastic dial set in face of logger) to mid range for normal room light conditions
  - a. Counter Clockwise (turning left) increases sensitivity.
  - b. Clockwise (turning right) decreases sensitivity.
  - c. For Reverse room lighting adjust sensitivity by decreasing control (Clockwise or right turn) until red light blinks.
2. **Install HOBOWare CD** in computer
  - a. Installation should start automatically.
  - b. Follow the prompts.
  - c. If you require assistance with the installation of the software contact the Computer Support Specialist.
3. **Connect the HOBO Data Logger to the computer**
  - a. Using the USB cable that comes with the data logger.
  - b. First connect the cable to the USB port in your computer.
  - c. Second connect the cable to the data logger.
  - d. Wait for program to recognize connection of data logger device.

#### 4. **Launch Data Logger** (this prepares logger for use)

- a. Click the Launch icon  on the toolbar. This displays the logger's Launch window.
- b. Review the default Launch settings and change the launch option to "Trigger" (last choice on launch options page).
- c. Enter a new name in the **Description** field.
- d. Select or deselect **Channels to Log**.
  1. Use the defaults.
  2. Do not select Battery voltage as the battery level displays when the logger is downloaded and selecting this log uses more battery power.
- e. Click Launch (this clears prior data from logger and prepares it for next reading session)
- f. **Do not set the trigger button** until you are ready to perform the next room logger readings.

#### 5. **Placement in Room or Hood** for Light Readings

- a. **Disinfect data logger by wiping with Sporicidin** (wipes only) prior to placing in room. **Do not spray** disinfectant (or any) liquid directly on data logger as it may cause permanent damage to the logger.
- b. Always **place logger where sensor/face is unobstructed from light source**.
- c. Logger should be positioned so that it will not be damaged (e.g., where it will not get wet or knocked off counter). Logger can be attached to metal (e.g., door or paper towel holder) using adhesive magnet supplied with the unit.
- d. When placing data logger in a hood, make sure it is placed where it will detect the hood light source and not the room light source.
- e. **Press and hold down the "Trigger" button for 3 seconds** (green light should blink once) to begin the logging process.
- f. Always press and hold the "Trigger" button immediately prior to placing logger in a room or hood, this will insure the correct date and time of data logging.
- g. Leave loggers in room or hood for a duration of at least 36 to 48 hours to ensure a full day of light sensing.

#### 6. **Download and Save Logger Data**

- a. **Disinfect data logger by wiping with Sporicidin** (wipes only) prior to removal from room. **Do not spray disinfectant** (or any) liquid directly on data logger as it may cause permanent damage to the logger.
- b. Remove data logger from room.
- c. **Connect to USB cable** that is already connected to computer.
- d. **Click the Readout** icon  on the toolbar.
- e. Click **Stop** when HOBOWare asks if you want to stop the logger before reading out.
- f. After reading out the logger, HOBOWare prompts you to save the datafile.
- g. Select a location for the file (defaults to HOBOWare folder in the computer hard drive (usually your "C" drive), you should change the file location to your host server drive where a back up will always be available by making a new folder and naming it HOBOW Downloads or similar. If you do not know how to perform this step contact the Computer Support Specialist.

- h. Open the folder where the downloaded data will be saved.
  - i. **Enter a name for the file** you are currently downloading.
  - j. Click the **Save** button.
  - k. Plot Setup window appears.
  - l. Check (green check mark box) the Light Sensor (uncheck battery, if checked) and All Events.
  - m. **Click Plot** to review the readings.
  - n. Minimize the logger screen without closing it.
  - o. Open the file folder and confirm that your data was downloaded and saved.
  - p. Re-open the logger screen
  - q. **Select Launch Logger**
  - r. **Confirm that “Trigger” is selected** for launching
  - s. **Click Launch** (this clears prior data from logger and prepares it for next logging session)
  - t. **Do not set the trigger button** until you are ready to perform the next room logger readings.
7. HOBOs are not capable of recording lighting levels < 65 lux (e.g., when used within a BIO-36 Ventilated Cabinet BIO-36 or CEU) and will indicate lights are “OFF”. Manual verification of light cycles is required when light levels are <65 lux (i.e., physically observe the time when lights turn “ON” and “OFF”). Manual verification of light cycles will be recorded on the chamber-specific **Room Status Sheet** at least quarterly.
8. Monthly, Facility Managers communicate the results of monitoring to animal care technician and the technician records these results to the **Room Status Sheet**.

#### IV. MAINTENANCE

1. Clean/disinfect unit by wiping with Sporicidin and a soft cloth.
2. Replace battery as needed (refer to manufacturer’s directions).
3. Abnormal readings not corrected by battery replacement should be reported to the facility manager or surgical core manager.

Approved:

Date: