

## **3-Watt Multi Colored LED Lighting Instructions**

### **SAFETY GUIDELINES**

#### **WARNING**

**Make certain the unit is disconnected from the power source before attempting to service or remove any component!**

1. Choose a location for both safe and easy installation and avoid areas with chemicals, explosives or other dangerous materials.
2. Do not handle light with wet hands or when standing on a wet or damp surface, or in water.



### **ELECTRICAL CONNECTIONS**

#### **WARNING**

**Do not connect to a voltage other than stated voltage.**

1. The lights are rated 3W, 50/60 Hertz 12VAC
  2. Connect to 12V transformer included in this package.
- The Power House, Inc. model LED also meets Canadian requirements.

### **OPERATION**

1. Lights are designed to be used completely submerged or out of the water.
2. Select a location for both safe and easy installation and avoid areas with chemicals, explosives or other dangerous materials.
3. **CAUTION: Do not let the unit freeze.** This may cause cracking or distortion that may destroy the unit or cause safety problems.
4. The Power House LED light has eleven pre-programmed operation modes from which to choose. Refer to the "Operation Mode Table" for a description of the operating modes.

### **SELECTING OPERATION MODE**

Setting programs is determined by how long the power is removed before restarting. To switch modes, simply turn the power switch off for ½ to 3 seconds, and then back on to advance to the next state.

If the on/off switch is left in the "off" position for 4 to 8 seconds, the LED lights will resynchronize when powered up by flashing red three times at which point all of the lights in the system will initialize in the same state (Mode 1; Red).

The LED lights have a memory that when switched off for more than 8 seconds, all the lights will power up in the last state they were in when powered down. This allows users to leave lights in a favorite mode without having to hunt for it when powering up the lights. If the unit is turned off during the running of modes 10 or 11, and the power is off longer than 8 seconds, (color/ mode memory state) the Mode Indicator Flash will reactivate immediately upon power up. This is a visual reminder to you of which mode is running.

### **OPERATION MODE TABLE**

<b>Operation Mode Sequence Number</b>	<b>Color / Function</b>
1	<b>Red</b>
2	<b>Yellow</b>
3	<b>Green</b>
4	<b>Aqua</b>
5	<b>Blue</b>
6	<b>Purple</b>
7	<b>White</b>
8	<b>Multi-Mode*</b>
9	<b>Color Wheel - Standard**</b>
10	<b>Color Wheel - Slow**</b>
11	<b>Color Wheel - Slowest**</b>

\* Multi-Mode produces random colors and flashing patterns.

\*\* Color Wheel mode is the smooth color changing pattern from Aqua to Blue to Purple to Red to Orange to Yellow to Green and back to Aqua and repeat.

The 'Standard' mode gradually changes through all the colors every 30 seconds. The 'Standard' color wheel mode does not flash at all but starts transitioning in color from Aqua through its cycle.

The 'Slow' mode takes 6 minutes to cycle through all the colors before repeating. For the 'Slow' mode, the green LEDs will flash 3 times before going to Aqua and transitioning through the color wheel.

The 'Slowest' mode takes 2 hours for each pass through the colors. For the Color Wheel modes, there is a visual indication of which mode you are in.

For the 'Slowest' mode, the blue LEDs will flash 3 times before starting the initial gradual changing from Aqua. The LEDs flash only on the initial startup; on subsequent cycles of the color wheel the LEDs will not flash.



## LED Lighting Instructions

### SERVICE INSTRUCTIONS

#### WARNING

**Make certain the unit is disconnected from the power source before attempting to service or remove any component!**

**1. CAUTION: Do not remove cord strain relief (hex nut).**

This will damage the seal and result in possible leakage.

**2. BULB REPLACEMENT:**

#### WARNING

**Do not use any tools.**

**No tools are required to service light.**

- a. Unscrew the outer ring by turning it counterclockwise. Next, remove the lens and O-ring.
- b. **CAUTION: Do not pull on the bulb itself.** The bulb and plastic bulb holder are one piece. Pull only on the plastic bulb holder.
- c. To install the bulb, simply plug bulb into the socket. Ensure that the two pins of the bulb are well seated in the two small inner holes of the socket.
- d. Make sure O-ring is in good shape and clean. Reinstall O-ring and lens.
- e. Reinstall the outer ring. Tighten outer ring until tab on light ring touches mounting rib on lamp housing.

**CAUTION: Do not touch the new bulb.** Only touch the plastic bulb holder. Touching the bulb may shorten bulb life. As you push the bulb assembly down into the light housing, twist the bulb assembly so that the openings in the plastic bulb holder are oriented with the ribs on the inside of the light housing.

**3. CLEANING:**

- a. The lens will require periodic cleaning. Simply wipe off the outside of lens with a soft cloth.
- b. **CAUTION: Do not use abrasives.** This may damage lens.
- c. **CAUTION: If lamp is disassembled for cleaning, be certain lamp housing is not submerged in water.**

This will allow water to enter cord which could result in an electrical hazard.

### TRANSFORMER FUNCTIONS

**PHOTO SENSOR:** Bulb will light automatically when surroundings turn dark. Sensor is equipped with a 30 second delay to avoid error in response. Bulb will turn off automatically if intense light is sensed for more than 30 seconds.

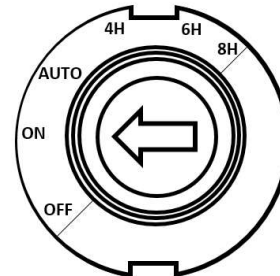
#### TIMER SETTINGS (Fig. 1)

**OFF:** NO POWER

**ON:** CONTINUOUS ON

**AUTO:** BULB TURNS ON AND OFF WITH PHOTO SENSOR

**4H, 6H, 8H:** BULB TURNS ON WITH PHOTO SENSOR, TURNS OFF 4, 6, OR 8 HOURS LATER.



TIMER FIG. 1

**CIRCUIT BREAKER:**

(SECONDARY SIDE - 12 VOLT SIDE)

- Circuit Breaker will trip if there is a short or if total wattage installed exceeds rated wattage per circuit.
- To reset breaker, push in button.
- If unit cycles on and off without regard to the timer setting, it should be checked by a qualified service person.

**THERMAL PROTECTION:**

(PRIMARY SIDE - 120 VOLT SIDE)

- This unit is equipped with a thermal protector and will shut off if overheated.

#### HI-LOW SWITCH

For optimum light output the voltage at socket should be between 10 and 12 volts.

**LOW:** Use if total wattage is less than half of the transformer capacity, cable distances are short or if the starting voltage coming from the house is high.

**HI:** Use if the transformer is fully loaded (maximum wattage capacity), cable distances are long or if the starting voltage is low coming from the house.

