INSTALLATION INSTRUCTIONS

-100 Solar Light Option

Thank you for selecting Stern-Williams. To ensure this product is installed properly, please read these instructions carefully before you begin. *(Certain installations may require professional help.)*

IMPORTANT: For installing Model No. -100 to outdoor Bottle Fillers and Shower Towers, observe local plumbing and building codes

NOTE: *Pictures may not exactly define contour of components*

PREPARATION

- The Solar Option is great for remote areas away from an electrical connection, but it does require a full sun location. Solar panel works best when facing south, can be orientated any direction after installation.
- Tools required: 5/32” Hex Wrench (Allen Wrench) for access panels & socket for mounting bolts

INSTALLATION

1. Locate an area preferably in a full sun location. Some shade is okay, but a mostly shaded area will not perform well for any solar device.
2. Reference the General IOM for Outdoor Water Products to install your outdoor fountain and secure it to a permanent base.
3. At the top support brace of the base unit, remove the mounting bolt and washer if present. (See Figure 1).
4. Remove the access panel to expose the inside of the solar unit using a 5/32” Hex key. (See Figure 2).
5. Place the solar unit on top of the base unit and start threading the mounting bolt and washer, that was removed in Step 3, through the support plate on the bottom of the solar unit to secure it to the base unit.
6. Before fully tightening the solar unit to the base unit, direct the solar panel to face south. (This is the optimal solar efficiency position for a non-tracking panel)
7. Tighten the mounting bolt to 15-20 ft-lbs.
8. If installing on a bottle filler: Locate the bottle filler light and disconnect the plug from the 4 way splitter. Insert the plug through the 11/16” hole behind the bottle filler nozzle until the light can be pressed into place using it’s attached grommet.
9. With the bottle filler light secure, take the plug end and connect it to the four way splitter. The connector will only go in one way. (See Figure 3).
10. Remove the included battery and rectangular foam piece from the packaging.
11. Place the foam over the mounting bolt and then the battery on top of the foam. Be sure to orient the battery terminals towards the top of the battery mounts. (See Figure 4).
12. Connect the red wired plug to the positive terminal of the battery and black wired plug to the negative terminal of the battery.
13. If it is past dusk the sensor will turn the LED lights on. If it is daytime, cover the dusk to dawn sensor towards the top of the solar unit by placing your thumb or palm firmly over the sensor for 10-15 seconds. This will trigger darkness and turn the LED lights on.

    NOTE: The sensor takes 10-15 seconds to register a reading before it will turn on the lights.
14. Re-install the access panel. (See Figure 2).

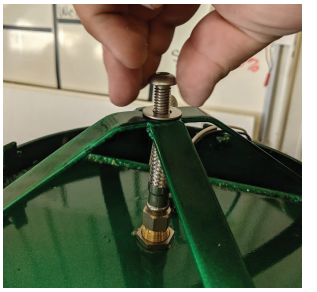


Figure 1 - Step 3

Figure 2 - Step 4

Figure 3 - Step 9

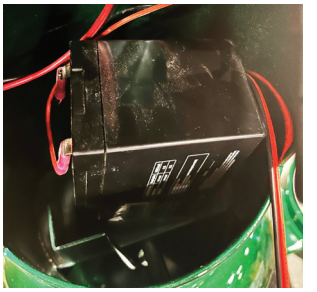


Figure 4 - Step 11

INSTALLATION INSTRUCTIONS

-100 Solar Light Option

STERN-WILLIAMS

OPERATION

- The solar unit will operate automatically. Dusk to dawn photocell sensor will turn on lights in low lit conditions.
- Shade or low lit areas during the daylight will typically not trigger the dusk to dawn sensor to turn the lights on. The sensor reads ambient light.
- Once the lights are on they remain lit until dawn the following day and will turn off when adequate ambient light is detected.
- The solar panel is always in charging mode but will only charge during daylight hours. Even on cloudy days the panel is charging, just not as fast as on bright sunny days.

MAINTENANCE

- The battery has an estimated 5-8 year lifetime.
- If the solar panel gets covered or dirty it may decrease the efficiency of the charging system leading to the LED lights not functioning properly.
- If an LED light goes out, we sell direct replacements. Simply unscrew and unplug the old light, then reverse the process to install the new light.

TROUBLESHOOTING

1. ALL OF THE LED LIGHTS ARE NOT TURNING ON AT DUSK:

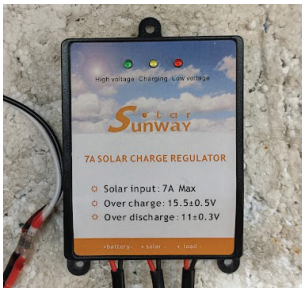
a. Remove the access panel, check the solar charge controller status lights.

I. If the charging status light is illuminated, the solar panel is operating correctly. Check the battery voltage with a voltmeter in DC voltage, if the voltage is 12V or above the battery is okay. Through the process of elimination, the dusk to dawn sensor is bad and needs replaced. Call Stern Williams for more information on replacement components.

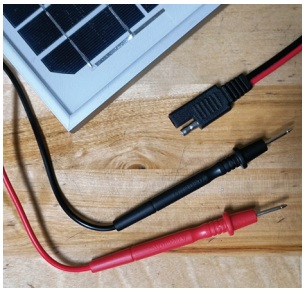
II. If the red light is illuminated, the battery has low voltage and will not discharge the battery voltage further. Check the solar panel and/or battery condition.

a. Checking the Solar Panel: It is ideal to perform this check when the solar panel is in a full sun condition. Remove the access panel and unplug the solar panel. With a voltmeter check the DC voltage of the plug going to the solar panel. Red is positive, black is negative. (do not measure voltage of the plug going to the charge controller) In full sun conditions the panel should read 18-22 volts. If the voltage is low, then a new panel is needed. Call Stern Williams for a replacement.

b. Checking the battery: If the solar panel has an appropriate voltage, check the battery voltage with a voltmeter in DC voltage. If 11.5 volts or less is read, then the battery is not receiving or holding a charge correctly. The battery can be load tested to verify its state of health. **NOTE:** The batteries have an estimated life of 5-8 years and will need to be replaced during the lifetime of the solar unit.



Solar charge controller for step 1.a.



Solar panel plug for step II. a. & b.

TROUBLESHOOTING

III. If no lights are illuminated, check the solar charge controller, it may need to be replaced. Contact Stern Williams for replacement parts.

2. **ONLY ONE LED LIGHT DOESN'T TURN ON AT DUSK:**
   a. That LED light needs to be replaced. Contact Stern Williams for replacement parts.
3. **THE LED LIGHTS TURN ON AND OFF RANDOMLY:**
   a. Remove the access panel, unplug all the components from the solar charge controller. Check each plug for corrosion. If some is found use an abrasive pad or sandpaper to clean the contacts, spray the inside of the plug with electrical terminal protector. Re-plug all components. If issue persists, contact Stern Williams for replacement parts.