

Operation Guide

Thank you for purchasing the Larson Electronics **SPLED-CL1B-MOD2** solar panel. Follow the steps below for installing and maintaining your unit.

IMPORTANT

READ CAREFULLY BEFORE OPERATING THIS LIGHT. SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

WARNING: IF UNSURE ABOUT ANY SECTION OF THESE INSTRUCTIONS, CONSULT A QUALIFIED PROFESSIONAL TO INSTALL THIS DEVICE.

WARNING: DEVICE IS SUITABLE FOR INSTALLATION IN WET LOCATIONS.

WARNING: ALTHOUGH DEVICE IS WATERPROOF, IT IS NOT DESIGNED OR INTENDED TO BE SUBMERGED.

WARNING: DO NOT ALLOW DETACHABLE WIRES TO BECOME SUBMERGED!

- IF DROPPED OR DAMAGED, THE UNIT MAY NO LONGER BE WATERPROOF AND SHOULD BE REPLACED.
- TO AVOID HAZARDS TO CHILDREN, ACCOUNT FOR ALL PARTS AND DESTROY PACKING MATERIALS.
- ON SOME UNITS, THE BASE CONTAINS A MAGNET. PEOPLE WITH PACEMAKERS SHOULD CONSULT THEIR PHYSICIAN(S) BEFORE USE. ELECTROMAGNETIC FIELDS IN CLOSE PROXIMITY TO HEART PACEMAKER COULD CAUSE PACEMAKER INTERFERENCE OR PACEMAKER FAILURE.

HOW SOLAR LIGHT WORKS

Solar light must be placed outdoors. The solar panel collects and converts sunlight into DC power while the pre-installed rechargeable batteries store the energy to power the light at night.

Solar light illumination time

It depends on the seasonal sunlight availability in your geographical area under certain weather conditions. Stronger or longer sunlight hours enable batteries to store more energy which provides more lighting hours. On the contrary, weaker or shorter sunlight hours reduce the lighting hours and its brightness as well.

Solar panel mounting locations

Solar panel must be placed outdoor at a location with its solar panel receiving direct sunlight at least five hours each day. Shadowed locations will not allow batteries to be fully charged and will reduce both the brightness of the light and the lighting hours. Precautions (prior to first time use)

1. To maximize battery capacity, the solar panel should be fully charged by direct sunlight for five hours before initial use.
2. Under extremely cold temperatures, the batteries may not charge fully. In such cases, the Solar Lights may not stay illuminated as long.

MOUNTING SOLAR PANEL

This solar panel includes a permanent mounting system that allows for mounting to square/round poles or flat surfaces such as a wall or post shown in figure 1.



Position the solar panel in a location that receives the maximum amount of sunlight throughout the day. This may need adjusted depending on the season. With pole mounting, loosen the adjustment bolts to fit solar panel onto pole. Once mounted, tighten bolts snug to secure panel to pole. For surface mounting, remove additional plate and use the existing mounting holes to mount directly to surface.

OPERATION

1. Unpack the Solar Panel and beacon fixture.
2. Mount solar Panel on pole using the mount supplied with solar panel. This mount is designed to mount over a pole ranging in diameter from 1" to 2" and acts like a saddle around the pole. You can also mount the bracket flush to a surface by omitting the curved portion of the bracket. Note: Excessive force will cause the bracket to warp hindering the mounting plate. This could cause the mount be loose and not at the desired angle. Care should be taken to not over tighten.
3. For optimum performance of the new solar panel light make sure it is positioned directly in the sun with no shadows on the panel. Any shading will diminish the charge or in some cases, eliminate the charge completely.
4. After mounting your new solar panel and assuring it is in the proper location (Note: it should be noted some fixture supplied with this panel are class 1 division 2. This solar panel is not rated for use in this area and should be installed outside the limits set by the NEC Code and local authority having jurisdiction.) and angle, you are ready to install the fixture. Care should be taken when mounting your fixture and it should be placed in an area not subject to damage.
5. Once your fixture is installed plug in your cord that is supplied with the solar panel to the fixture. Make sure the connector snaps together firmly and is latched.
6. Turn the switch on the side of the solar panel from off to on. The beacon should light up and start operation. (Note: some versions come with a motion control and a photocell. If your unit is equipped with either you

will need to make sure the environment matches the specifications before you test.) Some models come with an option to change the strobe effect on the fixture. If your fixture has this option there will be a rubber grommet on the side of the panel you can open. Once opened, press the red button to change the pattern. Each push will change the strobe to a separate pattern.

7. Set your desired strobe effect and close the rubber cap.

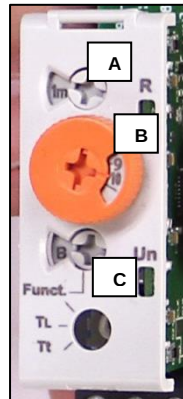
At this point, the solar light should be operational and ready to use. Please note that the panels are solar and require sun light to operate. In some cases a series of cloudy days could affect the system causing it to stop providing battery power until sun light is restored and panel has charged the battery. This solar system has a built-in charge controller in the panel that shows battery status. It is recommended that the back plate for the panel be kept on the unit at all-time to keep the components dry and free from any water.

TIMER: A solid state, encapsulated time delay relay can be found inside the solar panel, which offers an adjustable timer range of time. When the lamp is engaged, the circuit stays closed, keeping the connected device running for the set duration.

Open the solar panel by loosening the screws surrounding the back panel. Make sure the internal contents remain secured when opening.

Once inside, find the timer module. It will have an orange dial. With a screwdriver, rotate the top setting (A) to the nearest desired length of time. The exact length of time can be fine-tuned by rotating the orange knob (B).

For example, when setting to 1 minute, set the top dial to “1m” and the orange dial to “10” This means you want the timer to work for the full minute. If you set the orange dial to “5”, the timer will only work for 30 seconds, etc.



When the top dial is set to 10 minutes, “10m”, the orange dial will control the time in minute intervals. Setting the orange dial to “1” will change the time to 1 minute, “2” will be 2 minutes, “3” will be 3 minutes and so on until you get to 10 which will be the full 10 minutes.

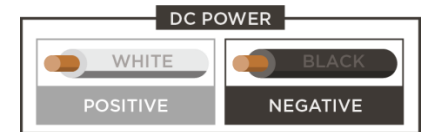
Always, keep the bottom dial set to “B” (C).

Time Abbreviations

1m = 1 minute	10m = 10 minutes	1h = 1 hour
10h = 10 hours	1d = 1 day	10d = 10 days

WIRING DEVICE

Devices are connected to the panel via 10ft 16/2 SOOW cord. Be sure the device is connected to the solar panel and that the connections are correctly terminated. **Test the device function before finalizing the installation.** Run the cord and mount your device within 10ft of solar panel.



DAY/NIGHT SENSOR

The dusk to dawn photocell activates the light at night and turns it off at dawn. For operating the unit full time, slide the cover over the photocell sensor to disable it. This can be repositioned by loosening the set screw on the side and tightening once desired angle is achieved. The selected location should not be near night time light sources such as porch lights or street lights as they may cause attached devices to turn off at night.

ON/OFF SWITCH

The on/off switch powers the device on or off with the flip of a switch. The power switch is located on the solar panel for operating the attached device at a moment's notice.

After the batteries have been fully charged, the attached device will operate with configured panel operation listed. The solar panel surface must be kept clean to collect sunlight effectively.

CHARGING

With up to 5 hours of daily sunlight, the solar panel is designed to function 15 hours depending on power consumed. Ensure there are no obstructions that could result in little to no sun reaching the panels.

FLASH PATTERNS

The CL1B LED Beacon is programmed with 30 different flash patterns listed below. Temporarily toggle pattern switch to change.

Synchronous Flash Patterns

FP1: Single Alert 75 PHASE 1 (sim)	FP12: Single Flash 150 PHASE 2 (sim)
FP2: Single Alert 75 PHASE 2 (sim)	FP13: Single Flash 75 PHASE 1 (sim)
FP3: Quad Flash 75 PHASE 1 (sim)	FP14: Single Flash 75 PHASE 2 (sim)
FP4: Quad Flash 75 PHASE 2 (sim)	FP15: Single Alert 75 (alt)

FP5: Double Flash 150 PHASE 1 (sim)	FP16: Quad Alert 75 (alt)
FP6: Double Flash 150 PHASE 2 (sim)	FP17: Double Flash 150 (alt)
FP7: Double Flash 75 PHASE 1 (sim)	FP18: Double Flash 75 (alt)
FP8: Double Flash 75 PHASE 2 (sim)	FP19: Single Flash 375 (alt)
FP9: Single Flash 375 PHASE 1 (sim)	FP20: Single Flash 150 (alt)
FP10: Single Flash 375 PHASE 2 (sim)	FP21: Single Flash 75 (alt)
FP11: Single Flash 150 PHASE 1 (sim)	

(sim): Front and rear LEDS fire simultaneously
LEDS alternate

(alt) Front and rear

Non-synchronous Flash Patterns

FP22: Single Alert 75 PHASE 1 (sim)	FP27: Single Flash 150 PHASE 2 (sim)
FP23: Single Alert 75 PHASE 2 (sim)	FP28: Single Flash 75 PHASE 1 (sim)
FP24: Quad Flash 75 PHASE 1 (sim)	FP29: Single Flash 75 PHASE 2 (sim)
FP25: Quad Flash 75 PHASE 2 (sim)	FP30: Single Alert 75 (alt)
FP26: Double Flash 150 PHASE 1 (sim)	

(sim): Front and rear LEDS fire simultaneously
LEDS alternate

(alt) Front and rear

Setting the Flash Pattern

Each pattern can be selected by pressing the momentary toggle switch. The selected pattern will remain during power cycles.

- Less than 1 second for the **NEXT** pattern
- 1 to 3 seconds for the **PREVIOUS** pattern
- 3 to 5 seconds for the **DEFAULT** pattern
- Greater than 5 seconds to **TURN OFF** the beacon

MAINTENANCE

If the lens or solar panel becomes dirty, wipe down with a mild soap and water solution.

Keep snow and debris clear of the solar panel so the batteries can charge. If the panels are covered by snow or debris for an extended period of time, allow the battery to charge in full direct sunlight for at least 5 hours for the battery to reach its full capacity.

It is recommended to occasionally inspect the unit for any defects.

TROUBLESHOOTING

If for any reason the device does not power on:

- ➔ **Batteries not fully charged:** Make sure the fixture is placed in an area where the solar panel gets the maximum amount of full, direct sunlight every day. If the solar panel does not receive enough sunlight during the day (e.g. due to cloudy or overcast weather conditions), it will be recharged on the next sunny day and resume operation.
- ➔ **Other light sources:** (For units equipped with a day/night sensor.) If your solar light is located too close to street lights, porch lights or other lights, the solar panel may turn off the fixture. Relocate the solar panel or eliminate those other light sources.
- ➔ **Not enough direct sunlight:** Ensure that the fixtures are not installed in a shady area, for example, in the shadow of a tree or a house. If necessary, move the fixtures to an area that gets full direct sunlight.
- ➔ **Switch is in the OFF position:** (For units equipped with a power switch.) Cycle power button in a dark room. The light(s) should come on when the switch is in the on position if the unit is fully charged.



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