# Solar Light Tower - 30' Tower - 7.5' Trailer
# (3) Panels, (4) LED Lamps - (8) 250aH Batteries - Wind Generator
# Instruction Manual



## WARNING:

USER SHOULD BE TRAINED IN THE PROPER USE AND MAINTENANCE OF THIS DEVICE. IMPROPER USE OF THIS DEVICE CAN LEAD TO SERIOUS INJURIES OR DEATH TO PERSONNEL. READ THIS ENTIRE MANUAL AND RETAIN IT AS A REFERENCE FOR FUTURE USE.

## INSTALLING MAST



When the mast is removed from the trailer for shipping, it is located on a separate pallet. Follow the steps below to install mast to trailer.

Place the trailer on a flat level surface and deploy outriggers to limit movement and tilt during installation. (**FIGURE 1**)


FIGURE 1

The mast is located on a pallet. Place mast near the trailer with enough room around to maneuver a lift.

Cut the bands securing the mast to the pallet.



Place a lifting sling around the top mid-section of the mast. **Sling MUST be placed below the top stages and under the winch cable! Do NOT lift from any top stage section or cause pressure to winch cable. Doing so can damage the mast and cause the mast to extend while lifting.**


FIGURE 2

With assistance, slowly lift the mast and position it upright on the pallet. (**FIGURE 2**)

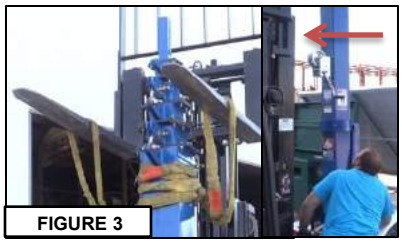


FIGURE 3

Once upright, apply a second sling to maneuver mast towards trailer. Lift mast so the winch will be facing the rear of the trailer when installed. **FIGURE 3**


FIGURE 4

With assistance, slowly transport and position the mast on the trailer. (**FIGURE 4**) There are six (6) mounting holes. Align the holes on the trailer to the holes on the mast. (**FIGURE 5**)

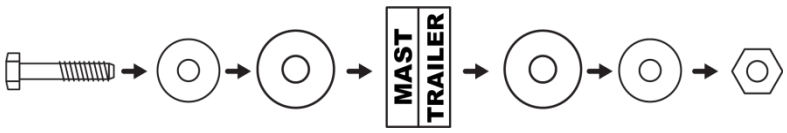





FIGURE 5

Secure the mast with the included mounting hardware. Mounting hardware for each mast is located in a box attached to the top of the green job box. There will be 6 bolts, 6 nuts, 12 small washers, and 12 large washers per mast. Ensure each bolt is tight and secure.

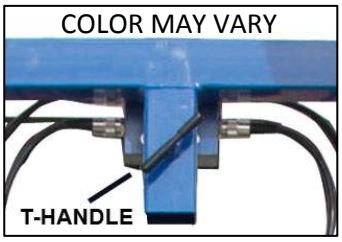
The Larson Electronics SPLT-.9K-LM30-WG.04-4X100LTL-AT-BC-M1 solar powered LED light tower provides a safe and effective way for operators to quickly deploy intense LED illumination to elevations up to thirty feet. This solar light plant features a telescoping light tower that folds over for easy transportation, a rotating boom that allows for 360° rotation and a removable mast head for storing the four LED light fixtures when not in use. The unit features three 300-watt solar panels, a 400-watt wind generator and a deep cycle AGM battery bank. The entire assembly is mounted onto a 7.5` single axle trailer, allowing operators to transport this solar light tower from location to location.

## Light Head Installation

- Locate the light head and unpack it.



- The light head is equipped with a T-handle screw that holds it in place. Be sure this is loose before installing to ensure it will slip over the top stage of the mast.




- Using two slings, wrap each sling around the light head in between the lights on both sides.



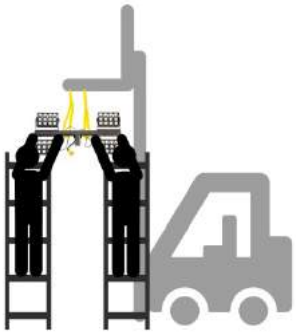
- Attach the slings to a forklift or other heavy lifting device.



- With a person on each side of the light head holding it steady, slowly lift the light head above the mast.



- Place a ladder on either side of the mast to allow the 2 people to guide the light head onto the top of the mast. Once the head is in place, tighten the T-handle to secure the light head to the top of the mast.



**Light Head Installation continued:**

- Make electrical connections between cord and junction box on the light head.






- Repeat this process in reverse to remove the light head for storage or transport.

## Deploying Mast



- Choose a location that is as flat as possible and park the trailer in the desired position. Drop the trailer from the tow vehicle using the forward most jack on the tongue of the trailer. Ensure safety chains and cable have been disconnected from the tow vehicle.

- Once the trailer has been disconnected from the hitch of the tow vehicle, extend the remaining jacks. There are (2) leveling jacks located on the back and (2) jacks located on the front of the trailer. Pull the pin on the side of the jack to rotate it 90° toward the ground and hand crank the jack clockwise to extend it. Use a bubble level to level the trailer front to back, and side to side.





- Unlatch the solar panel and reposition it 45°. There is a hand screw located on each side of the solar panel, and a pin on either side at the bottom where the panel will tilt. With help, remove each bottom pin to allow the panel to reach maximum angle, then remove each hand screw to free the panels and pivot the solar panels down against the frame at a 45° angle. Insert the pin at the bottom on each side to hold the panel in place.



- Pull the pin on the edge of the solar panel to allow the third panel to be pulled outward into position. This will expose the second panel and all 3 will now be exposed to sunlight.

- Before raising the mast, check again with a bubble level to be sure the mast is level. Locate the hand winch on the mast. Turn the handle clockwise to raise the mast until it stops. Watch for snags during this process if there are any cords attached. The mast is now deployed. To rotate the mast, view **ROTATING THE MAST** on this manual.



**The trailer is now deployed.**

## ROTATING THE MAST

The mast can be rotated while fully lowered or elevated.



1. Loosen the bolt located toward the center of the mast on the collar.



2. Once loose, rotate the mast to your desired position

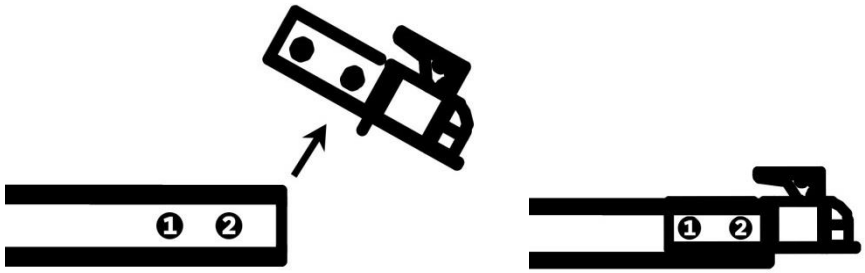


3. Tighten the bolt in order to hold the mast in place

**Note: Pay attention to any attached cords while rotating the unit to prevent tangles or strain around the light mast.**

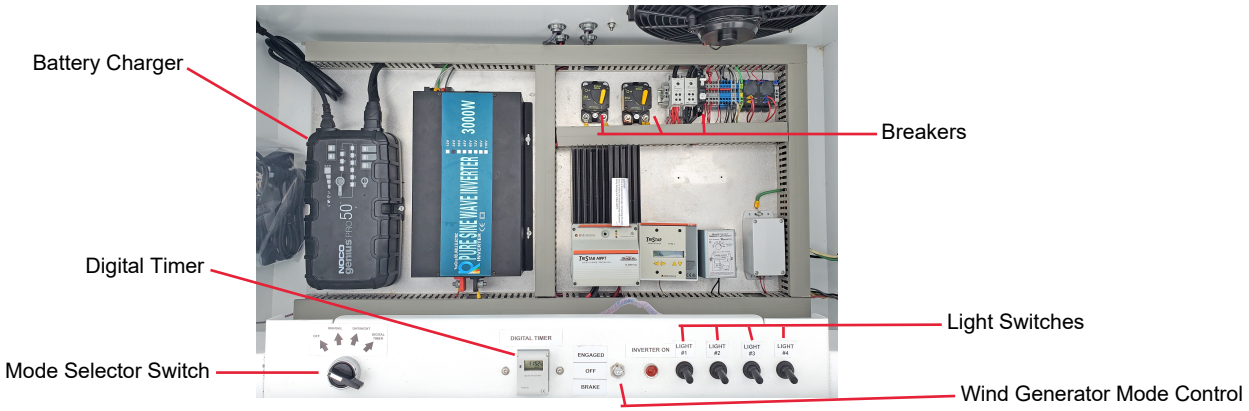
### REMOVING THE HITCH

The trailer hitch can be removed preventing the trailer from unauthorized towing. Remove the two bolts & from the graphic below holding it in place and lift the hitch off. This can be stored inside the job box when not in use. To install the hitch, place it back on the trailer tongue and replace the two bolts. Be sure both safety chains are attached.




# Operation

The job box at the back of the trailer contains all of the electronics, including breakers, solar charger, and controls for lights. Take note of the location of all components and familiarize yourself with their layout for ease of operation.



Once the trailer is in the desired position and mast has been raised and configured as outlined above, open the job box to access controls for solar panels, wind generator, and lights. Be sure all breakers are in the "ON" position. This will allow the lights to operate and the solar panels and wind generator to charge the batteries. If unit dies, or is near available power, there is a cord on the battery charger that can be plugged into an outlet for charging. Unit provides 72 hour runtime on a full charge.



Breakers

Select the desired mode you wish to run the light tower in using the mode selector switch. MANUAL means the lights must be switched on manually by the user via the individual switches for each light. This allows the user to turn on any number or combination of the lamps desired. DAY/NIGHT activates the day/night sensor on the outside of the job box, powering on the lights when ambient light drops due to sunset. DIGITAL TIMER activates the digital timer feature, and will run the lights to the users configuration of the timer.



Mode Selector Switch

The wind generator is weatherproof, and has it's own 3 position mode control selector switch. ENGAGED means the wind generator is actively on, turning, and charging the batteries. OFF means the wind generator is not actively charging, but will still be allowed to turn freely in the wind. It is recommended to NOT leave the switch in this position, as the wind generator could suffer an overspeed and cause damage to the unit in a high winds situation. BRAKE means the wind generator's overspeed protection is active, but it is not charging the batteries. Use BRAKE setting for transporting, or when you don't want the wind generator to be charging the batteries. For best results, the unit should be exposed to a minimum wind speed of 7 mph and a maximum wind speed of 45 mph.



Wind Generator Mode and Light Switches

In MANUAL mode, flip each light switch on as desired to power on the lights.

In DAY/NIGHT mode, the lights will automatically power on when the ambient light drops at sunset, or in a dark area.

In DIGITAL TIMER mode, the lights will run on a timer configured to the user's specifications.



Digital Timer

## Programming the Timer

### Adjusting Clock

Press and hold the CLOCK button, then press DAY, HOUR, and MIN keys respectively to adjust clock to accurate date, hour, and minute. In 24hr format, LCD screen shall indicate 0:00-23:59.

### Timer Setup

Press TIMER key. LCD screen should show 1ON --:--

Press DAY key to select any of 15 combination daily programs to fit your demand. LCD should indicate a new combination each press.

Press HOUR, MIN respectively to set desired hour and minute for 1ON.

After setting time for 1ON, press TIMER key again. LCD should show 1OFF --:--

Repeat previous procedures for setting desired time for 1OFF, and press the TIMER key again. LCD should show 2ON --:--

Repeat programming procedure for rest of ON/OFF program period.

When finished, press CLOCK, Timer should start to execute programs.

| Step | Key | Programming |
|---|---|---|
| 1 | Press P | Setting1 ON time(display 1on) |
| 2 | Press H+/M+ | Setting hours and minutes |
| 3 | Press D+ | To select same every day,or different time each day |
| 4 | Press P | Setting 1 off time (display 1 off) |
| 5 | Press H+/M+ | Setting hours and minutes turn off time |
| 6 | Press D+ | If you want the same every day, you need not press this key |
| 7 | Repeat step2-6 | Set 2-**28** on/off time |
| 8 | Press ◷ | End |

If you do not require **28** settings,press "◷" to the end.

| Step | Button | Function |
|---|---|---|
| 1 | Ⓟ | TIMER |
| 2 | D+ | DATE |
| 3 | H+ | HOUR |
| 4 | M+ | MINUTE |
| 5 | ◷ | CLOCK |
| 6 | RESET | RESET |
| 7 | MANUAL | MANUAL C/R |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. | MO | TU | WE | TH | FR | SA | SU |
| 2. | MO | TU | WE | TH | FR | SA | |
| 3. | MO | TU | WE | TH | FR | | |
| 4. | | | | | | SA | SU |
| 5. | MO | | WE | | FR | | |
| 6. | | TU | | TH | | SA | |
| 7. | MO | TU | WE | | | | |
| 8. | | | | TH | FR | SA | |
| 9. | MO | | | | | | |
| 10. | | TU | | | | | |
| 11. | | | WE | | | | |
| 12. | | | | TH | | | |
| 13. | | | | | FR | | |
| 14. | | | | | | SA | |
| 15. | | | | | | | SU |

**If you have any questions about your trailer please call the manufacturer.**

## PREPARING FOR TRANSPORT

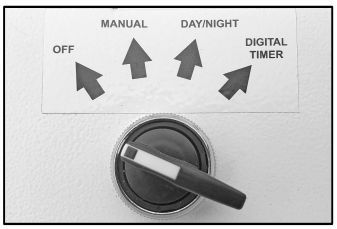
***Warning: Always remove light head before transporting!!***



**1.** Lower the mast by rotating the hand winch counter-clockwise until the light mast is no longer supported by the winch cable. Do not leave slack in the cable to prevent potential issues this can cause.



**2.** If previously rotated, return the mast to its original position.




**3.** Power off all equipment. Open the job box and position the main power switch and all light switches to **OFF**.



**4.** Lock the job box and take the keys to prevent unauthorized access.



**5.** Position the solar panels horizontal and secure them with the two hand screws.



**6.** Lift the (4) jacks on each corner of the trailer by rotating the hand crank counter-clockwise. Pull the pin and rotate each jack 90°.

**7.** When the mast is fully lowered, powered off, light head removed, and the (4) main jacks are raised, you are ready to attach a tow vehicle. Once tied to a tow vehicle, raise the tow jack and ensure all other outriggers are raised. Ensure the trailer hookup and safety chains are connected. Test the trailer lights to ensure stop/tail/brake lights work before operating on public roadways.

THESE INSTRUCTIONS MAY NOT COVER ALL DETAILS OR VARIATIONS OF THIS PRODUCT FOR YOUR EQUIPMENT OR INSTALLATION REQUIREMENTS. SHOULD FURTHER INFORMATION NOT COVERED BY THESE INSTRUCTIONS BE REQUIRED, PLEASE CONTACT LARSON ELECTRONICS BY EMAIL AT SALES@LARSONELECTRONICS.COM OR BY PHONE AT 1-877-348-9680 FOR FURTHER ASSISTANCE.

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