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SPLT-1.2K-LM30-WG-2000AH.GC-BC.120V

1.2 kW Portable Solar Equipment Tower - 30' Light Tower, 7.5' Trailer - (8) Gel Cell Batteries - Wind Generator

Product ID: 314818



Larson Electronics LLC manufactures a wide variety of products, including custom built to spec designs. The pictures displayed for this unit are a general representation of form factor for the product line and may not accurately represent this exact configuration in every detail due to custom builds and changes between similar products in our standard catalog. The specifics for this configuration are listed in the specification table and supporting documentation (CAD files, Dimensional Drawing, Name Plate Diagram, Wiring Diagram, etc.). This means that specific details (receptacles, plugs, wires, connections, mounting brackets, external finishes, etc.) may not be accurately represented in images vs specifications. Please review specifications and do not order based solely on images.

SPLT-1.2K-LM30-WG-2000AH.GC-BC.120V Trailer Mounted 5-Stage Portable Tower Equipment Mast Specs

Tower Length: 13.5` to 30`
Mast Head Length: 44"
Stages: 5
Winch Type: Manual Crank
Materials: Steel
Finish: Powder Coated - Gloss Blue
Operation: (1) 1,000lbs Hand Winch
Cable: 3/16" Galvanized Aircraft Cable

Solar Panel/Battery Bank Specs

Panes: (4) 300W Panels
Method of Deployment: Slider
System Voltage: 12 Volts
Battery Bank: (8) 12V 8D 250aH Gel Cell Batteries
Battery Capacity: 2,000 aH Total / 1,000 aH Usable
Battery Charger: 30A, 120V AC
Battery Charger Duration: < 24 Hours from Dead to Full Battery
Battery Charger Cord: 15' 10/3 SOOW Cord w/ L5-30P

Charge Controller Specs

Solar, Load, or Diversion Current: 45A
Voltage Range: 12-48V
Minimum Voltage: 9V

Quick Summary

Certified to United States & Canada Standards
NRTL Listed to UL 508A
NRTL Listed to CSA C22.2 No. 14
13.5` to 30` Equipment Mast
Steel Construction
Powder Coated Finish
Removable Mast Head
(4) 1,000lb Outriggers
125 mph Wind Resistance
Manual or Optional Electric Operation
(4) 300W Solar Panels w/ Sliders
Fully Solar, No Fuel Needed
Battery Charger
Gel Cell Batteries for Cold Environments
Meets DOT Height Requirements
Street Legal Trailer
License Plate Holder and Lights
Temperature Controlled Cooling Fans in Solar Control Box
(2) Locking Points on Solar Control Box

Maximum Solar Voltage: 125V

Protection: Reverse Polarity, Short Circuit, Over Current, High Temperature and Over Voltage

Wind Generator Specs

Rotors: (3)

Rotor Diameter: 5.57'

Rated Power: 1,200W

Rated Speed: 14 M/S

Starting Wind Speed: 6 MPH

Survival Wind Speed: 110 MPH

Materials: Polypropylene and Fiber Glass

Sound: 40dB @ 32.8'

Trailer Specs

Materials: Steel

Trailer Dimensions: 7.5`L` x 7`W Trailer Bed - 10.75` Total Length

Hitch: 2" Ball Coupler

Wiring: 7-Pin Flat

Axle: 3,500lb

Tongue Jack: 1,000 lb w/ Wheel

Transportation Assist: 4-corner D-rings

Suspension: 3,500 Lb 4-Leaf Double Eye Springs

Leveling Jacks: Adjustable

Wheels: (2) 15" 5x4.5 Steel Rims

Tires: ST205/75/D15 H188

Towing Weight: 2,000 lbs

Shipping: Common Freight

Shipping Dimensions: 8`-L x 8`-W x 12`-H

Shipping Weight: +-600 lbs

Options: Length- Mounting-Fixtures/ Call Us for Special Requirements

Special Orders - Special Requirements

Contact us for special requirements

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Made in the USA

The Larson Electronics SPLT-1.2K-LM30-WG-2000AH.GC-BC.120V Solar Powered Equipment Tower provides a safe and effective way for operators to quickly deploy equipment to elevations up to thirty feet. This solar equipment mast features a telescoping tower, a rotating boom that allows for 360° rotation and a removable mast head for storing equipment when not in use. The unit has four 300-watt solar panels supported by a 2,000 aH capacity gel cell battery bank and a wind generator. The entire assembly is mounted onto a 7.5` single-axle trailer that is street legal and meets DOT height requirements, allowing operators to transport this solar equipment tower from location to location.

PLEASE NOTE: ANY FREE SHIPPING OFFERS DO NOT APPLY TO LIGHT MASTS OR LIGHT TOWERS

Solar Powered Equipment Tower: This solar equipment tower includes four solar panels, solar charging system, wind generator, gel cell battery bank, battery charger and a manual crank up mast mounted on a trailer with adjustable leveling jacks. The 1.2 kW solar generator system replenishes amp hours of usable battery capacity per day, assuming 5.5 hours of peak charging sunlight. This system delivers 12 volts for equipment mounted atop the 30` telescoping mast. A battery charger provides flexibility during deployment, which allows operators to supply power to the batteries using an external 120V power source.

Equipment Mast: This telescoping five stage steel mast from Larson Electronics is designed to allow operators to quickly and safely deploy equipment and a wind

generator in locations where this equipment must be elevated to heights up to 30` for effective coverage. This boom can be extended to 30` above the trailer floor for maximum area coverage, and collapsed to 13.5` for applications where a smaller footprint is required. The tower is constructed of square steel tubing with a base section 6.6` in length and 6" by 6" by 3/16" thick, lower section 6.78` in length and 5" by 5" by 3/16" thick, middle section 6.93` in length and 4" by 4" by 1/8" thick, upper section 7.08` in length and 3" by 3" by 1/8" thick, and top section 7.58` in length and 2" by 2" by 1/8" thick. Each section has a 1`+ overlap. The mast is extended to its full height using an included 1,000lb rated hand winch with 3/16" galvanized steel cable.

A 44" wide and 2" by 2" by 1/4" thick mounting plate is attached to the upper section of the mast which provides a strong and stable platform for equipment and wind generator. When elevated to its full upright position, the mast can be rotated a full 360°. By loosening the T-Handle, operators can rotate the mast in either direction. The mast can be positioned in one of four different positions and locked back in place by re-tightening the T-handle. The mast itself spins freely and can typically be rotated with a single hand. The LM series of towers are powder coated with glossy blue finish for corrosion resistance and aesthetics.

The LM family of telescoping towers feature a proprietary mast guidance system, which provide increased stability during high winds. When lowered to 13.5`, the mast can withstand winds up to 125 mph. Custom builds can be provided for higher wind speed resistance when fully raised.



44" Mast Head for mounting lights and equipment
Click Image to Enlarge

Solar Panel Assembly: This unit is comprised of four 300-watt solar panels, generating a total maximum output of 1.2 kW. The panels are mounted securely on a sliding assembly. During deployment, the top solar panels slide out to form a four-panel array for maximum exposure to sunlight. The panels are wired to the solar charger control box which manages the charging system. When in use, the four solar panels are angled at 45° to capture the intensity of the sun for optimized light intake.

Battery Bank: The solar unit contains a battery bank that consists of eight 250 aH gel cell batteries for a 2,000 aH battery bank (1,000 aH usable). An included battery level indicator that provides real-time power monitoring for the battery bank.

Charging is monitored by a 45-amp MPPT charge controller (40A and 50A available upon request). This component maximizes the charging process and offers the following protective features: reverse polarity, short circuit, over current, high temperature and over voltage. An included 30-amp battery charger with a 15' 10/3 SOOW cord and L5-30 plug can be used to fully recharge batteries using 120V AC power sources (120/240V and 240V chargers available upon request). Charging takes approximately < 24 hours from a completely dead state to full.

Wind Generator: An included 1.2kW wind turbine generates power when outdoor conditions exceed 6 mph. Equipped with three fiber glass rotors, the unit is resistant to harsh weather, UV rays, heavy rain and up to level 3 hurricanes. At a distance of 32.8', the wind turbine generates 40dB of noise.

Component Control Center: All the electrical components are encapsulated in a NEMA 3R job box that is bolted to the trailer. Since most of these components are not rated for high heat, our component cooling system circulates air within the job box at 1400 CFM when the ambient temperature exceeds 90 degrees Fahrenheit. The job box that contains the component control system includes two locking points for security purposes.

Trailer Assembly: The entire assembly is mounted to a 7.5` by 7`, single axle

trailer via six 1/2" anchor bolts. The two-wheel trailer is equipped with 3,500 lbs axle and leaf springs with 15" trailer tires. A standard 2" ball coupling, two standard safety chains, and 7-pin flat trailer plug allow for easy hookup and towing. NATO pintle hitch available upon request. 4-corner D-rings are available for securing the trailer during transport (flatbed, container or ship) or for crane picking. The trailer tongue can be removed for long-term deployment. A rugged and waterproof job box is included, safely secured to the trailer. Adjustable leveling jacks provide stabilization during deployment. All trailer lighting complies with DOT/FMVSS regulations. This trailer is street legal and comes with a license plate holder and license plate lights.

Applications: Remote work locations, construction sites, military bases, camping sites, outdoor events, security applications, emergency services, outdoor lighting, portable lighting and more.

At Larson Electronics, we do more than meet your lighting needs. We also provide replacement, retrofit, and upgrade parts as well as industrial grade power accessories. Our craftsmen can custom build any lighting system and/or accessories to fit the unique demands of your operation. A commitment to honesty, quality, and dependability has made Larson Electronics a leader in the lighting and electronics business since 1973. Contact us today at 800-369-6671 or message sales@larsonelectronics.com for more information about our custom options tailored to meet your specific industry needs.

Summary:

Solar Systems

- Fully independent solar system, with all system components mounted on a single street legal trailer that meets DOT height requirements. Capable of 7-day/week operation.
- Solar system components: four solar panels with charge controller, wind generator, gel cell battery bank and solar charge box with temperature controlled cooling fans and (2) locking points.
- Total deployment can be completed by one person in under 30 minutes.

Renewable Energy Power Generation

- Four, 300-watt solar panels (1.2kW total)
- Solar panels mounted on sliders (transport mode has two stacks of panels)
- Quick, sliding solar panel deployment
- 1.2kW wind generator
- Wind generator starts generating power at 6 MPH
- Wind generator sound: 40dB @ 32.8'
- Wind generator withstands harsh weather, UV rays, heavy rain and up to level 3 hurricanes

Charge Control Module

- 45A MPPT charge controller to maximize battery charging
- Solar charge controller protection: reverse polarity, short circuit, over current, high temperature and over voltage
- Solar control box with temperature controlled cooling fans protect equipment in hot weather; (2) locking points on box deters tampering with customer-provided pad locks

Power Storage

- (8) 12V 8D 250aH gel cell batteries - 2,000aH total battery bank
- 12V battery system
- 30A 120V AC battery charger with 15' 10/3 SOOW cord and L5-30 plug that is capable of fully recharging batteries from a completely dead state to full in

<24 hours using common 120V AC power sources

Trailer and Housing

- Meets DOT height requirements without folding over tower for clearing bridges and overhead structures; reduces deployment time
- Street legal trailer; includes trailer lights, license plate holder and license plate lights
- 7-pin trailer plug for connecting to common tow vehicles
- Adjustable leveling jacks
- 4-corner D-rings for securing trailer during transport (flatbed, container and ship) or for crane picking
- Standard 2" ball hitch
- 1000 lb tongue jack w/ wheel
- Towing weight - 2,000 lbs
- Heavy-duty steel construction

Equipment Tower

- 13.5' to 30' adjustable steel mast with durable powder coated finish
- 5 stages
- Manual crank deployment
- Removable mast head





Frequently Asked Questions (FAQ)