



Lion UT™ 1300 BT-H

with Internal Battery Heater

User Manual

12.8V / 105Ah / 1344Wh Lithium Iron Phosphate Battery



WELCOME TO THE PRIDE

Our mission is to provide portable products that are safe, silent and renewable so you can use them wherever and whenever you want. We make products that are good for people and good for our planet. Period. We are driven by this passion. Lion Energy products are designed for everyday use – around the house, at work, on the go or during emergencies.

Our products are high-quality, lithium battery based solutions for everyday living. They range from small portable power banks and silent solar generators to RV batteries for auxiliary power and residential energy storage. We help you become energy independent with power to live life on your terms.

The Lion UT™ line is the latest in Lithium battery technology. It replaces traditional deep cycle lead acid batteries with the safest and longest lasting Lithium Iron Phosphate batteries.

For latest info go to www.lionenergy.com



READ THIS MANUAL IN ITS ENTIRETY BEFORE OPERATING THE UNIT.

At Lion Energy we provide portable power that is safe, silent and renewable. Our products are used in emergencies and for work and play. Please read the user manual carefully before using the product and always take care when using this product. This product is not intended for use by young or infirm persons without supervision.

Attentions and Warnings

1. Do not disassemble, resemble or repair the battery. Incorrect reassembly may cause combustion or electric shock.
2. If the battery is damaged, contact the place you purchased it.
3. Do not short-circuit the battery, use it near heat or water sources, or allow it to become wet.
4. Do not insert nails or other objects into the battery, strike it, or weld directly on the battery.
5. Do not use a badly damaged battery or operate it with damaged cables or charging adapters.
6. Do not operate this product in explosive atmospheres (i.e. flammable liquids, gases or dust) or set the unit on flammable materials (i.e. carpeting, upholstery, paper, cardboard).
7. Do not permit the battery to freeze. Never charge a frozen battery.
8. In case of skin or eye contact, rinse immediately with clean water and seek medical attention.
9. Do not keep using this product if it is damaged, waterlogged, distorted or broken.
10. This product contains lithium ion batteries. When it is worn out dispose it properly using local laws and regulations.

Package Contents

Lion UT 1300 BT-H: 1 pc
User Manual: 1 pc

Battery Pack Electrical Specification

#	Item	Parameter
1	Nominal Voltage (Works with 12V Systems)	12.8 (12V)
2	Technical Rated Capacity	105Ah
3	Minimum Capacity	≥104.5Ah
4	Internal Resistance	≤5mΩ
5	Standard Charging Current	45A
6	Max Charging Current	100A
7	Max Charging Volt	14.6V
8	Max Continuous Discharge Current	150A
9	Discharge Over Current Protection	>150A @ > 50sec
10	Battery Low Voltage Cut-Off	10V
11	Operating Temperature	Charge: 32~113°F 45 ~ 85% RH Discharge: -4 ~ 131°F 45 ~ 85% RH
12	Storage Temperature	14 ~ 95°F 45 ~ 85% RH
13	Product Size	10.2"L x 6.6"W x 8.8"H
14	Product Weight	25 pounds
15	Bluetooth® Enabled	Lion Energy App (myapp.lionenergy.com)
16	Fully Automatic Internal Battery Heater	Auto heat on at 32°F (0°C) and off at 41°F (5°C)

Lion UT 1300 BT-H BT-H LED Lights

When the Lion UT 1300 BT-H is not charging, briefly press the button. The state of charge shown by LEDs is as follows:

- Under 10% capacity: 1 LED Flashing
- Up to 20%: 1 LED illuminated
- Up to 40%: 2 LEDs illuminated
- Up to 60%: 3 LEDs illuminated
- Up to 80%: 4 LEDs illuminated
- Up to 100%: 5 LEDs illuminated

Lion UT 1300 BT-H Reset

- Low Voltage Cutoff: Quickly press and release the power button when the Lion UT 1300 BT-H is unresponsive and disconnected from everything. The first LED light will blink, showing that the battery has been reset and needs to be charged.
- Short Circuit and High Temperature Cutoff: Disconnect the Lion UT 1300 BT-H from the cause of the short circuit/high temperature issue. (In the case of high temperature issues, let the Lion UT 1300 BT-H BT-H cool down before trying to reset it.) Quickly press and release the power button which should illuminate the LED lights on the Lion UT 1300 BT-H. Then, press and hold the power button for 4-5 seconds, until the LED lights shut off. This means the Lion UT 1300 BT-H has been reset and is ready to be used/charged.
- The Lion UT 1300 BT-H can also be connected to a 12V lithium (LiFeP04) charger. This automatically resets the battery.

Winter Usage Tips

The Lion UT 1300 BT-H lithium battery can charge between temps of 32°F and 113°F and can discharge between -4°F and 131°F. The internal heater will keep the battery within operating temperature as long as you have a charging source connected.

ALL types of batteries need to be above freezing in order to charge them. As a result, we recommend using the batteries in a climate-controlled location (not on the tongue of a trailer or using a ventilated lead acid battery compartment, which allows freezing air to circulate around the Lion UT 1300 BT-H).

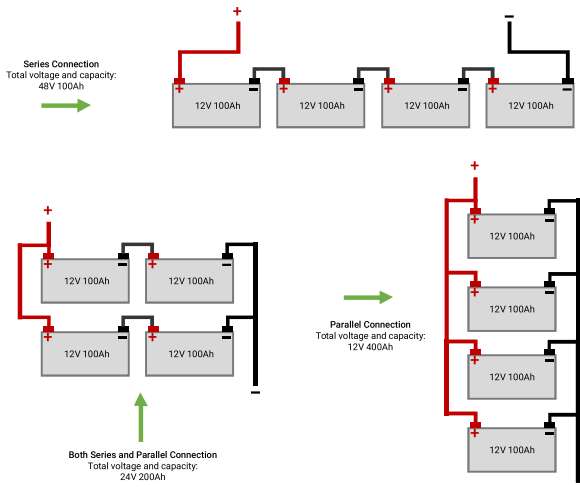
The Lion UT 1300 BT-H and other lithium batteries can be placed in an insulated space, inside the RV, or in other climate-controlled areas. This is possible because lithium batteries do not off gas toxic fumes like a conventional lead acid battery.

Connecting Your Lion UT 1300 BT-Hs Together

The Lion UT 1300 BT-H can be used independently, wired in parallel or series up to 48 volts, and series/parallel combined, with up to four banks of four batteries each. Wire gauge is dependent on the amount of amps being drawn for your specific use case. Use an ampacity chart to size properly or seek professional assistance. Finger tighten battery posts then snug with a wrench. The recommended eyelet size is 3/8".

The diagram on the next page is a reference on how to connect Lion UT 1300 BT-Hs in series and parallel in a 12V (12.8V nominal) system. Before connecting, each Lion UT 1300 BT-H must be independently fully charged.

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- For batteries in series, all batteries must be charged and discharged at the same time for proper functionality.
- To maximize the life span of the battery cells, charge the battery at 45-100A.
- Recommended charge rate (per battery) – when charging at 45A – 14.6 Volts. When charging at >45A (up to 100A) - 13.9 V. We recommend using a battery charger with a lithium (LiFePO4) setting or rating. Charging outside of the recommended parameters could lead to poor performance, mechanical instability, and possible safety issues.
- Never discharge at more than 100A per battery. Discharging outside of the recommended parameters could lead to poor performance, over heat, lead to battery failure, and possible safety issues.
- Optimum operating temperature ranges from 32~113°F. Temperatures that are too high or too low may affect the battery performance.

Lion UT 1300 BT-H Internal Heater

The Lion UT 1300 BT-H requires an external charging source, connected with live current, in order to utilize the auto heating function when needed at low temperatures. The internal heating will not work if there is not live current running to the battery.

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Maintenance Suggestions

- For storage periods over one month, place the Lion UT 1300 BT-H BT-H in a dry and ventilated room that is within the recommended storage temperatures.
- Do not store your Lion UT 1300 BT-H BT-H near corrosive material, fire, or other heat sources.
- Discharge and recharge to 80% (or 13.35 volts) periodically, at least once every 6 months if not being used.

Recycling

The Lion UT 1300 BT-H contains lithium iron phosphate (LiFePO4) cells. Please recycle properly.

Warranty Repairs/Replacements

For repair or replacement, contact customer service at 1-385-375-8191. Do not ship unit until you receive a Return Merchandise Authorization (RMA) number from customer service at Lion Energy. Lion Energy will not be responsible for any shipping or handling damage.

Limited Warranty

This warranty for the unit is extended to the original purchaser or user, and it covers defects in materials and workmanship. The Lion UT 1300 has a lifetime warranty of the battery cells, rated at 80% of the capacity (105Ah x .8 = 84Ah)

Under extreme use (maximum charge and discharge rates) the battery cells expected life cycle is 3500. At "normal usage" the expected life cycles will be greater.

This warranty is invalidated if any of the following occurs, but not limited to:

- Failure to follow the instructions in the User's Manual.
- Accidental damage, unreasonable use, misuse, or overloading. Excludes normal wear and tear.
- Extended storage without recharging or repairs done by an unauthorized person or modification.
- Opening or modifying the battery casing.

This warranty is in lieu of all other express warranties. Lion Energy will not be liable for consequential or incidental damages. Changes or modifications not expressly approved by Lion Energy could void the user's authority to operate this device.

Service Address


Lion Energy
www.lionenergy.com
Address: 735 S. Auto Mall Drive
American Fork, UT 84003
Email: info@lionenergy.com
Tel: 1-385-375-8191


BLUETOOTH COMPATIBLE




LIONENERGY.COM

- ▶ Connect to the UT 1300 BT from a distance through your mobile device.
- ▶ Monitor current energy capacity.
- ▶ See incoming and outgoing energy usage in real time.
- ▶ Search for Lion Energy Smart in your app store, or scan the QR Code above to download now!

 385.375.8191
Monday - Friday
9:00 AM - 5:00 PM

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