



GOLF CART BATTERY USER MANUAL



VOLTAGE REDUCER
TRANSFORMER



UNIVERSAL CHARGER
CABLE / ADAPTER



LCD CHARGE
INDICATOR



BLUETOOTH
MONITORING



INSTALLATION
BRACKETS

Sonny Power provides Lithium Iron (LiFePO4)



WARNING:

- Only install or service this battery if you have received proper training.
- Ensure the battery is manually turned off before touching or connecting to the terminals.
- Do not open or attempt to service the battery; there are no user-serviceable parts inside.
- Do not pressure wash, submerge, or use chemical agents to clean the battery.
- Working with lithium batteries can be hazardous. Always wear safety gear, including protective eyewear, insulated gloves, and insulated tools during installation.
- Use only with components that match the battery's voltage and current ratings.
- Charge the battery before use.
- Damage to the battery, system components, or property due to incorrect or improper installation is not covered by the warranty. Avoid short circuits or reverse polarity connections, as these are not covered by warranty.
- Important: Inspect the battery upon arrival for any signs of damage that may have occurred during shipping. If any damage is visible, do not proceed with installation and contact your dealer immediately.

BATTERY COMPONENTS



Nº.	Item	Note
1	Positive Terminal	M8 thread
2	Negative Terminal	M8 thread
3	Power Button	Power switch with activation
4	Charge Meter	LCD Gauge
5	COM Port	RS485/CAN



BATTERY BRACKET

Equipped with various battery mounting brackets,
Can be matched with different vehicle installation
methods.

Support brackets can also be customized
according to customer needs.



LCD METER (SOC DISPLAY)

- * Batteries are only compatible with SOC meters.
- * The voltage will vary based on the current load or charge placed on the battery.
- * The Battery SOC meter does not require calibration by the end user. The SOC meter performs self-calibration at the end of each full charge cycle. Accuracy is $\pm 5\%$.
- * Please monitor the SOC % rather than battery voltage when determining when to charge.

ROUND DESIGN LCD DISPLAY

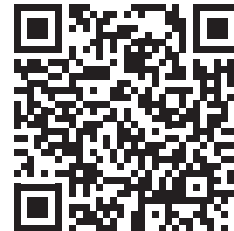
Voltage, Capacity, Current and SOC.

The displayed SOC color changes with the

Percentage

(Built battery or connect cable built-in car).

It comes with a 5M cable can be built into your car.



Browser Scan
Android

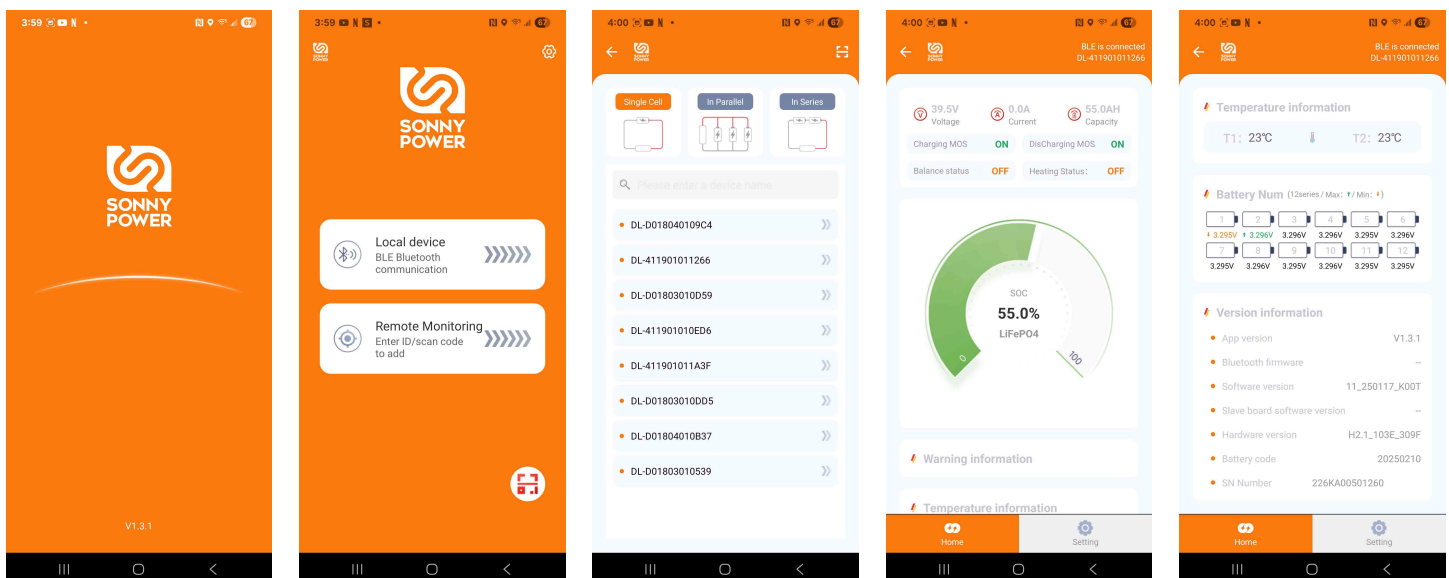


Browser Scan
iOS

BLUETOOTH MONITORING

Go to the Google app and Apple Store to
install our APP - **SONNY POWER**

The Bluetooth APP displays the Current,
total voltage, single cell voltage, SOC %,
temperature, cycles, etc.





POWER BUTTON

Equipped with various battery mounting brackets,
Can be matched with different vehicle installation methods.

Support brackets can also be customized according to customer needs.



BATTERY CHARGER (WATERPROOF SPECIAL CHARGER)

Please use the provided charger or the matched lithium battery charger to charge the battery. This will ensure optional charging and will extend the batteries service life.

DO NOT CONNECT DC OUTPUT CABLES TO BATTERY WITH REVERSE POLARITY Doing so will cause irreversible damage and is not covered under warranty.

PS: Various models of DC and AC plugs can be customized and equipped according to customers.

CHARGER INSTRUCTIONS

1. Connect the DC output ring terminals to the battery terminals.
2. Connect AC input to AC power.
3. Charger LED will blink red when charging and be steady green when complete.

CHARGER INDICATOR

1. Waiting Mode: LED (RED)OR(GREEN)flash
2. Capacity<80%: LED (RED)flash
3. Capacity>80%: LED (Yellow)flash
4. Capacity>100%: LED(Green)light
5. Fulling Charge: LED(Green)on always



CHARGE TIME

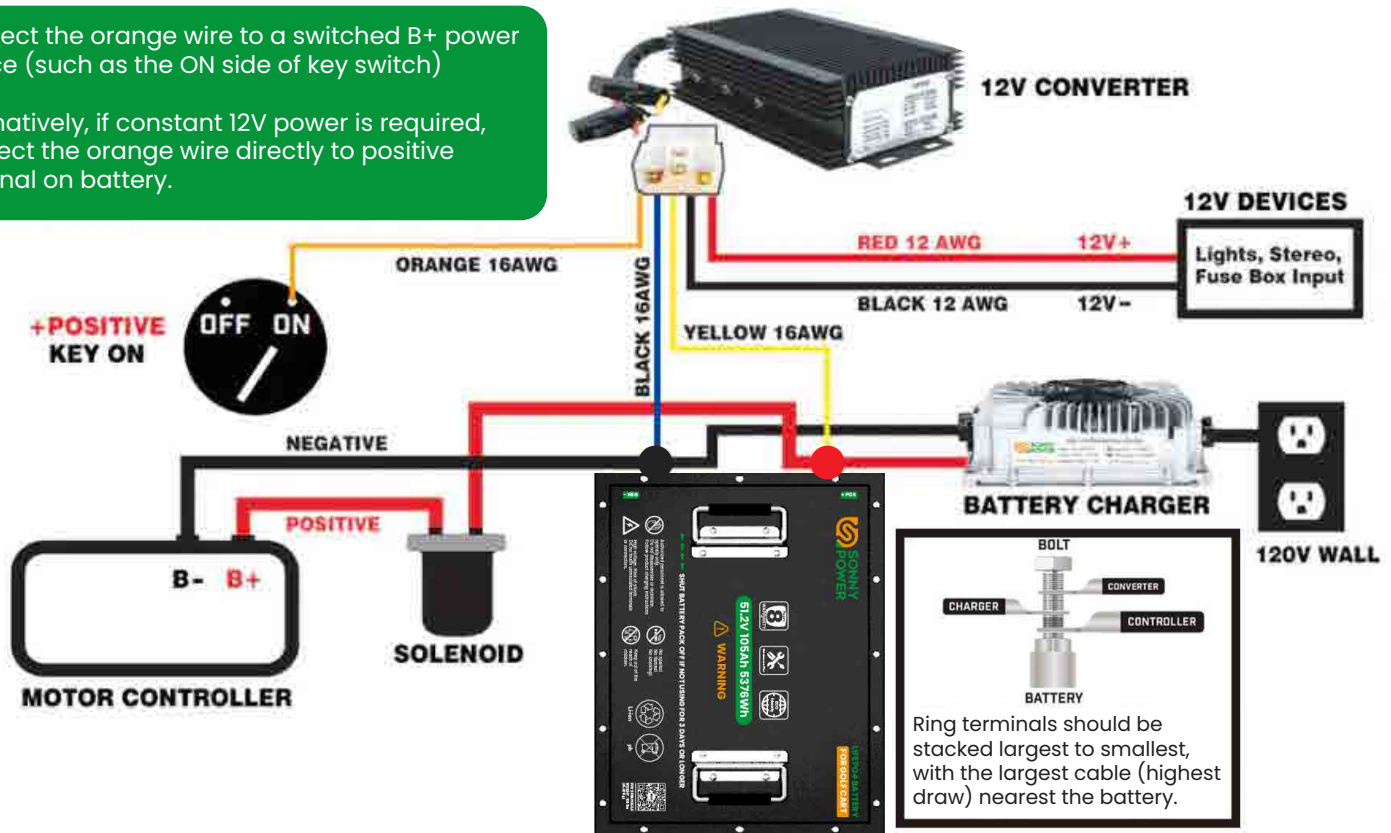
1. The charge time can be calculated by the formula below: Ah capacity of Battery /Charging Amps of Charger
Example:105Ah/15A =7 hours (assuming the battery is fully depleted)
2. The Battery charger is not a float charger or battery maintainer and will not hold the battery at 100%after a charge. It is normal for the state of charge to drop as low as 70-80%before the charger begins a new cycle.
3. The battery does not need to be completely discharged and charged with each use.
Charging every day will not harm the battery and topping off or partially charging to extend the range is perfectly acceptable



HOW TO CONNECT BATTERY TO YOUR GOLF CART

Connect the orange wire to a switched B+ power source (such as the ON side of key switch)


Alternatively, if constant 12V power is required, connect the orange wire directly to positive terminal on battery.



CHARGE

1. When the battery power is low, it should be charged in time to avoid long-time low-power operation. A special charger must be used when charging. Different types of chargers cannot be mixed. Before connecting the charger to the external power supply, confirm whether the grid voltage and frequency match the charger.
2. When charging and operating the battery, you need to wear rubber gloves for insulation protection.
3. Make sure there is no foreign matter or water stain in the charger connector and battery connector before operation.
4. When the battery is connected to the charger, if it cannot be connected normally, it is necessary to confirm that the problem is eliminated before operation. Violent connection is strictly prohibited.
5. When charging starts, check to make sure that the battery is charging normally
6. When the battery is fully charged, it should stop charging in time. It is recommended not to charge the battery for a long time when there is no one.



 Common problems handling According to the tips in this manual, organize professional engineering and technical personnel to carry out necessary treatment. If the abnormal state cannot be eliminated. Please contact the relevant technical department or after-sales service department of the company in time to obtain professional technical support.

CHARGE FAILURE

1. Disconnect the plug of the battery and charger, and visually check whether the connecting
2. Charging failure plug-in between the battery and the charger is loose, and whether the pin of the plug terminal is retracted, if it is found that there is loosening or needle withdrawal, try to install it in place first, If the terminal has needle withdrawal phenomenon repeatedly, please contact our after-sales technical personnel.
3. Use a multimeter to measure whether the voltage at both ends of the positive and negative poles of the battery harness is normal; If the voltage is abnormal, please if there is a charging power supply, confirm whether the power supply of contact our after-sales technicians. The charger is normal.

DISCHARGE FAILURE

1. I confirm whether the remaining power of the battery is normal. If the remaining power is insufficient, it needs to be charged in time.
2. Check whether the plug between the battery and the whole vehicle is loose and whether the plug terminal is retracted. If any looseness or needle pulling is found, try to install it in place first. If the pin is pulled out repeatedly at the plug end, please contact our after-sales technicians.
3. After the switch is powered off, unplug the plug-in, and use a multimeter to measure whether the voltage comparison of the discharge port when the power lock is opened and closed is consistent If so, please contact our after-sales.
4. No correct SOC of BMS management system: use the supporting charger to charge-discharge the battery. The battery system will calibrate the SOC. If the abnormality is not eliminated, please contact our after-sales technicians



BATTERY STORAGE

1. It is always good practice to turn the key off to your golf cart when not in use.
2. For long-term storage, fully charge the battery, unplug the AC power source to the charger, and turn off the power button.
3. When the battery is stored, it is charged about 60–80%.
4. During long-term storage, the calibrated SOC may drift and must be fully charged to re-calibrate.
5. The battery must be charged at least once every 6 months. Failure to charge for 6 months may permanently damage the lithium cells and is not covered under warranty. If your golf cart will be stored below -20°C , remove the battery from the cart and store at an ambient temperature above -20°C .
6. It is forbidden to store in the state of connected load or hidden load, that is, it is forbidden to discharge in any form during storage.
7. It is forbidden to invert the battery and avoid mechanical impact and heavy pressure.
8. When the battery is stored, other items shall not be stacked above the battery.
9. The self-discharge of lithium-ion batteries is affected by the ambient temperature and humidity. High temperature and humidity will accelerate the self-discharge of the battery. The storage environment. The temperature should be 5°C – 45°C in a clean, dry, and ventilated room, avoid water drenching, avoid contact with corrosive substances and keep away from fire and heat sources.

MAINTENANCE

1. If there is a lot of dust, metal shavings, or other debris on the battery pack, use compressed air to clean it in time, and avoid using water or water-soaked objects for cleaning.
2. During charging and discharging, try to avoid water or other conductive objects splashing on the upper cover and pole of the battery; Avoid drenching or soaking a lot of water during use, such as exposure to rain.
3. Estimate the charging time and discharging time of the battery according to the actual use state of the battery or battery pack. Pay attention to observing whether the battery or battery pack is abnormal at the end of charging and discharging, such as the voltage.
4. Check whether the power line, low-voltage acquisition terminal, and other nodes are different from the battery. Loose, falling off, rusty, or deformed to ensure that the series-parallel wiring harness used by the battery pack is firm and reliable.
5. Check the battery shell for cracks, deformation, pole looseness, and other abnormalities.
6. Check the insulation resistance of the battery pack and the car body to ensure that there are conditions.
7. When carrying out professional maintenance, you can contact the relevant technical is no leakage of the battery. Department or after-sales service department of the company for professional technical.
8. Perform standard discharge and charge maintenance on the battery every three months support.



PRECAUTIONS

1. Before using the battery pack, please read the operation manual carefully to understand the operation method and precautions.
2. Keep the battery or battery pack away from dangerous goods or materials, such as corrosive chemicals, dangerous mechanical equipment, and high-temperature environments.
3. Non professionals are not allowed to dismantle the battery without authorization.
4. Be sure to use the original special charger or the charger agreed by both parties.
5. When the battery pack is exhausted, it must be charged in time. When not in use, be sure to turn off the power lock; when not in use for a long time, the battery must be charged regularly according to the remaining power and voltage of the battery to avoid excessive discharge of the battery pack.
6. Avoid squeezing and piercing the battery, avoid placing the battery in a high-temperature environment or baking, and avoid exposing the battery to excessive vibration and external impact.
7. It is forbidden to directly short-circuit the positive and negative poles of the battery. Avoid any metal or other conductive objects in contact with the positive and negative poles of the battery. Illegal operations may cause personal injury or property loss.
8. It is forbidden to use this series of products in series or parallel with other models or types of batteries. Any damage to the battery pack caused by abnormal use or natural. Do not flush, rain, or soak the battery disasters above are not within the scope of warranty.



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