

USER MANUAL

Golf Cart Lithium Battery & Charger



WARRANTY INFO:

Battery Serial Number: _____

Charger Serial Number: _____

Purchase Date: _____

Product

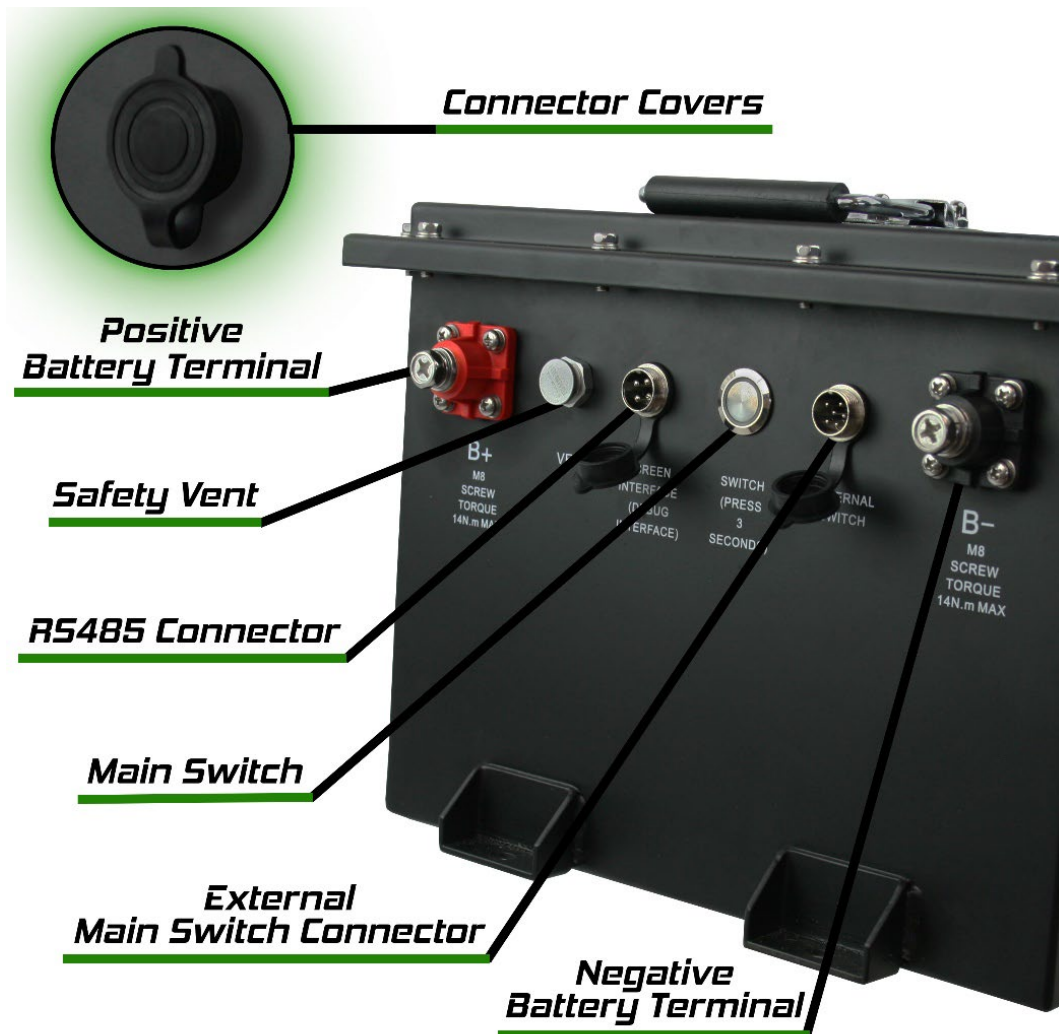
We provide golf cart batteries that are safe and reliable. Our golf cart lithium battery packs are designed to replace lead-acid battery setups, and are available for drop-in replacement.

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.

Overview

This battery is equipped with an integrated cell management system which features:

- 1.) Cell balancing.
- 2.) Battery voltage monitoring.
- 3.) Battery current monitoring.
- 4.) Pre-warning when battery capacity less than 10% (communication by means of RS485).
- 5.) Battery temperature monitoring (integrated temperature sensor).



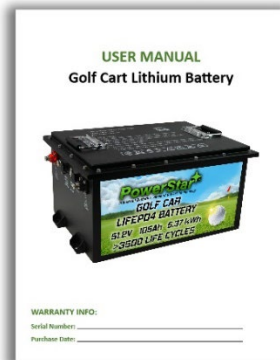
Note: Press and hold the "SWITCH" button for 3 seconds to turn the battery ON/OFF. Green light indicates the power is on.

DELIVERY CONTENTS

PowerStar LiFePO4 Battery



User Manual



Golf Cart Charger

*Comes with one of four different cart make and model charger plugs.
(SEE BELOW)*



Club Car Charger



Yamaha G19 Charger



E-Z-GO TXT Charger



E-Z-GO RXV Charger



External Power Switch



External Switch



Connector

Battery SOC Indicator



State Of Charge Indicator



Connector

External Debug Line



4 Pin Peripheral Power Cable



Connector

BATTERY SPECIFICATIONS

Model		MC51105P
Technical Parameters	Nominal Voltage	51.2V
	Nominal Capacity	105Ah
	Stored Energy	5.37 kWh
	Life Cycles	>3500 times
	Self Discharge	Max 3% per month
Charge Current	Maximum Charge	50A
	Standard Charge	22A
	Standard Charge Time	5 hr
	Continuous Discharge	50A
	Maximum Discharge	100A
	Peak	315A with 10S (SOC>30%)
Environment	Charge Temperature Range	32°F ~ 131°F (0°C ~ 55°C)
	Discharge Temperature Range	-4°F ~ 131°F (-20°C ~ 55°C)
	Storage Temperature Range	1 MONTH= -4°F ~ 131°F (-20°C ~ 55°C)
		1 YEAR= 32°F ~ 131°F (0°C ~ 55°C)
General	Cell Combination	1P16S
	Cell Model	LF105 (3.2V 105Ah)
	Casing Material	Stainless Steel
	Weight	101.4 lbs (46 kg)
	Dimensions (LxWxH)	52.5 cm x 33 cm x 25 cm
	IP Rating	IP67

WARNINGS

1. Do not disassemble, resemble, or repair the battery, Incorrect reassembly may cause combustion or electric shock.
2. Do not keep using this product if it is damaged, waterlogged, distorted, or broken.
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 permit the battery to freeze. Never charge a frozen battery.
7. Do not operate this battery in explosive atmospheres (i.e. flammable liquids, gases, dust) or set the unit on flammable materials (i.e. carpeting, upholstery, paper, cardboard).
8. In case of skin or eye contact, rinse immediately with clean water and seek medical attention.
9. When the battery is worn out, dispose of it properly and according to local laws and regulations.
10. Contact the seller if the battery is damaged.

CHARGER SPECIFICATIONS

Model		JZ5822-LFP
DC Output	Max DC Output Voltage	58.4V
	Max DC Output Current	22A
	Max DC Output Power	1250W
	Nominal DC Output Current	22A@110 VAC, 22A@220 VAC
	Battery Type	16S LiFePO4 Battery
AC Output	AC Input Voltage Range	85-265 VAC
	Nominal AC Input Voltage	100-240 VAC
	Nominal AC Input Frequency	47-63 Hz
	Maximum AC Input Current	16A
	Nominal AC Input Current	10A
	Power Factor	>0.9
Mechanical	Dimensions (LxWxH)	11.1 x 6.57 x 4.5 inches
		(28.2 x 16.7 x 11.4 cm)
	Weight	10.4 lbs (4.7 kg)
	Cooling	Active cooling with fan
	Power Efficiency	≥91%
Environmental	Enclosure	IP66
	Humidity	5% - 95%
	Operating Temperature	-40°F~149°F (-40°C~65°C)
		Derated at 104°F (>40°C)
	Storage Temperature	-40°F~185°F (-40°C~85°C)

Charger Protections:

- Overload, over-voltage, over-heating, short circuit, and reverse polarity protection.

Charging Program Steps:

- Constant current, constant voltage, and float charging.

WARNINGS

- 1.) Never leave the charger unattended when it is connected to its power supply.
- 2.) The allowable AC input voltage is 100-240VAC. Never connect it to any other voltage.
- 3.) Never place the charger and batteries connected to it on any form of flammable surface. Never operate the charger in the vicinity of flammable materials or gas.
- 4.) Ensure that there is an unrestricted airflow to and from the charger's cooling slots. Never place on a carpet or similar surface.
- 5.) Take great care to maintain correct polarity, and avoid short-circuit. Adhere to these instructions strictly.

EXPLANATION OF CHARGER LED STATUS

LED	CHARGER STATUS
1. Solid Green.	Power on / Charging complete.
2. Green blinking.	Battery is charging.
3. Red blinking quickly.	Input power failure.
4. Red and Green blinking alternately.	The output is short-circuited or the poles of the battery are reversed.
5. Red light blinks 2 times, interval 1 second, blinks 2 times again.	Charger temperature over-heating alarm.
6. Red light blinks 3 times, interval 1 second, blinks 3 times again.	Output over-current alarm.
7. Red light blinks 4 times, interval 1 second, blinks 4 times again.	Output over-voltage alarm.

Note: If there is a problem with the charger, the fan will stop rotating and the LED indicator will blink red light as an error warning. Please disconnect the charger from the wall socket.

MAINTENANCE

Battery Storage

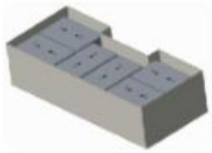

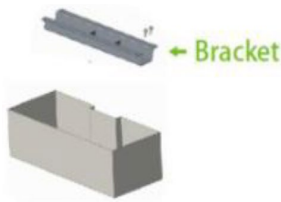


- 1.) Do not store near corrosive material, fire, and heat sources.
- 2.) When required to be stored for more than a month, store the battery in a dry and ventilated room that is 32°F-95°F.
- 3.) For long-term storage:
 - a. Turn the power OFF and keep the SOC above 60% (to avoid over discharge).
 - b. Charge every 8 months.

Charger Storage

- 1.) Do not store near corrosive material, fire, and heat sources.
- 2.) Store the charger in a dry and ventilated room that is -40°F~185°F.

BATTERY REPLACEMENT STEPS

***ATTENTION: Make sure all appliances are turned OFF before installation.**

	<p>1. Open the golf cart compartment. You will see the original lead-acid batteries. Make sure all appliances are OFF before installation.</p>
	<p>2. Safely disconnect all the wires. Pull the old batteries out.</p>
	<p>3. Fasten the bracket in the compartment as the base.</p>
	<p>4. Put the pack inside and fasten the pack to the bracket base.</p>
	<p>5. Connect the wires safely, and your cart will be ready to go!</p>

BATTERY OPERATION

ATTENTION: Make sure all appliances are turned OFF before installation.

1.) Turning On/Off

- a. Press and hold the "SWITCH" button for 3 seconds.
- b. Green light indicates the power is on.

2.) Reading Remaining Battery Capacity

- a. Turn the battery ON.
- b. Connect the battery meter to the RS485 cord.
- c. Connect the RS485 cord to the RS485 connector on the battery.
- d. The battery meter will light up and show the remaining power. There are 10 bars total, each bar representing 10% power.

3.) Charging

- a. Turn the battery OFF.
- b. The LED light of the meter keeps rolling while charging.

Note: This battery must be charged with the designated charger. Using the incorrect charger may cause insufficient charging or battery damage. Problems caused by using the incorrect charger will not be our responsibility and will void the warranty.

WARRANTY

Warranty Period: 5 years.

Definition of Warranty Time: Calculated from the date of invoice. If there is no invoice, it will be according to the production date indicated on the battery's factory series number.

Policy

- 1.) We make no warranty other than this limited warranty, and expressly exclude any implied warranty including any warranty for consequential damages. This limited warranty is non-transferrable.
- 2.) The seller warrants this product (if used with all applicable instructions) to be free from original defects in material and workmanship within the warranty period.
- 3.) If the product has any failure problem within the warranty period, the seller will repair or replace the product at its sole discretion according to the failure situation.

LIMITED WARRANTY (This warranty is in lieu of all other express warranties.)

- 1.) Save proof of purchase, such as a dated receipt. This warranty for the unit is extended to the original purchaser or user, and may cover defects in materials and workmanship. The seller will not be liable for consequential or incidental damages.
- 2.) For malfunction due to defects in materials or workmanship six months from the purchase date, the seller will repair or replace the unit at their discretion after inspection.
- 3.) This warranty is invalidated if any of the following occurs, but is not limited to:
 - a. Failure to follow the instructions in the User's Manual.
 - b. Accidental or unreasonable use, misuse, or mishandling, over charging or loading, or normal wear.
 - c. Extended storage without recharging or repairs done by an unauthorized person.
 - d. Unauthorized modifications by any unauthorized personnel.