User Manual

FOR LITHIUM BATTERY ENERGY STORAGE SYSTEM

TG-MA1.8

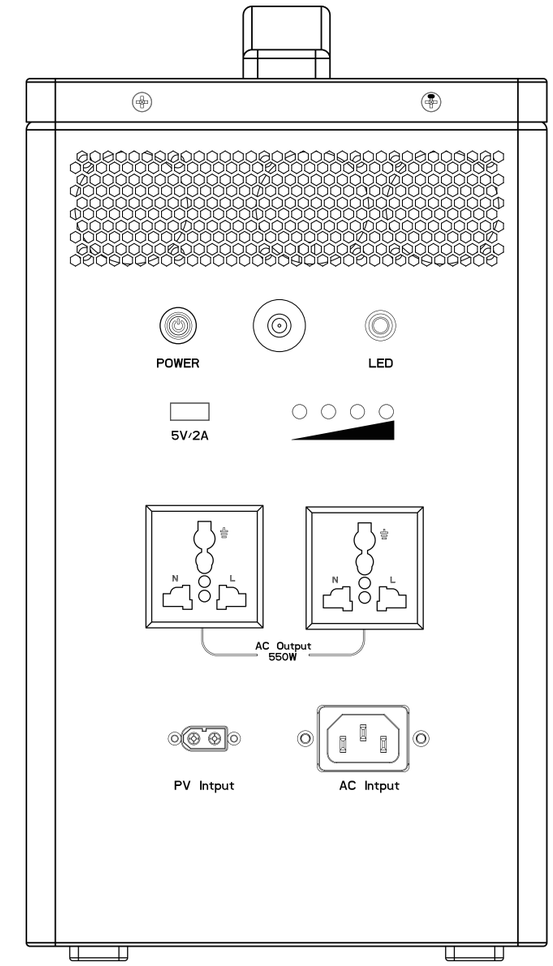




Table of Contents

Mobile energy storage system

- 1.Disclaimer ---- 02
- 2.Technical Specifications ---- 03
- 3. Features ---- 04
- 4. Getting Started ---- 05
- 5. SOC Indicator & Status Indicator Guides ---- 05
- 6. AC Charging ---- 06
- 7. Solar Charging ---- 06
- 8. What's In the Box ---- 07
- 9. Storage and Maintenance ---- 07
- 10. Safety instructions ---- 08

Note: ***Please comply with all warnings and operating instructions in this manual strictly. Save this manual properly and read carefully the following instructions before installing the unit. Do not operate this unit before reading through all safety information and operating instructions carefully.***



Warning



Read instruction before use.



Recyclable.



Do not dispose battery in household trash.

1. Disclaimer

Read this Quick Start Guide carefully before using the product to ensure that you completely understand the product and can correctly use it. After reading this user manual, keep it properly for future reference. Improper use of this product may cause serious injury to yourself or others, or cause product damage and property loss. Once you use this product, it is deemed that you understand, approve and accept all the terms and content in this document.

The product is not liable for any loss caused by the user's failure to use this product in compliance with this Quick Start Guide. In compliance with laws and regulations, the reserves the right to the final interpretation of this document and all documents related to this product. This document is subject to changes (updates, revisions, or termination) without prior notice. Please visit official Guide website to obtain the latest product information.

INSTRUCTIONS PERTAINING TO RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS IMPORTANT SAFETY INSTRUCTIONS.

- WARNING-When using this product, basic precautions should always be followed, including the following:

1. Read all the instructions before using the product.
2. To reduce the risk of injury, close supervision is necessary when the product is used near children.
3. Do not put fingers or hands into the product.
4. Use of an attachment not recommended or sold by TGPRO may result in a risk of fire, electric shock, or injury to persons.
5. To reduce risk of damage to the electric plug and cord, pull the plug rather than the cord when disconnecting the power pack.
6. Do not use abattery pack or appliance that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.
7. Do not operate the power pack with a damaged cord or plug, or a damaged output cable.
8. Do not disassemble the power pack. Take it to a qualified service person when service or repair is required. Incorrect reassembly may result in a risk of fire or electric shock.
9. To reduce the risk of electric shock, unplug the power pack form the outlet before attempting any servicing.
10. WARNING-RISK OF EXPLOSIVE GASES.

To reduce risk of battery explosion, follow these instructions and those published by TGPRO and manufacturer of any equipment you intend to use in vicinity of the battery. Review cautionary marking on the product.

PERSONAL PRECAUTIONS

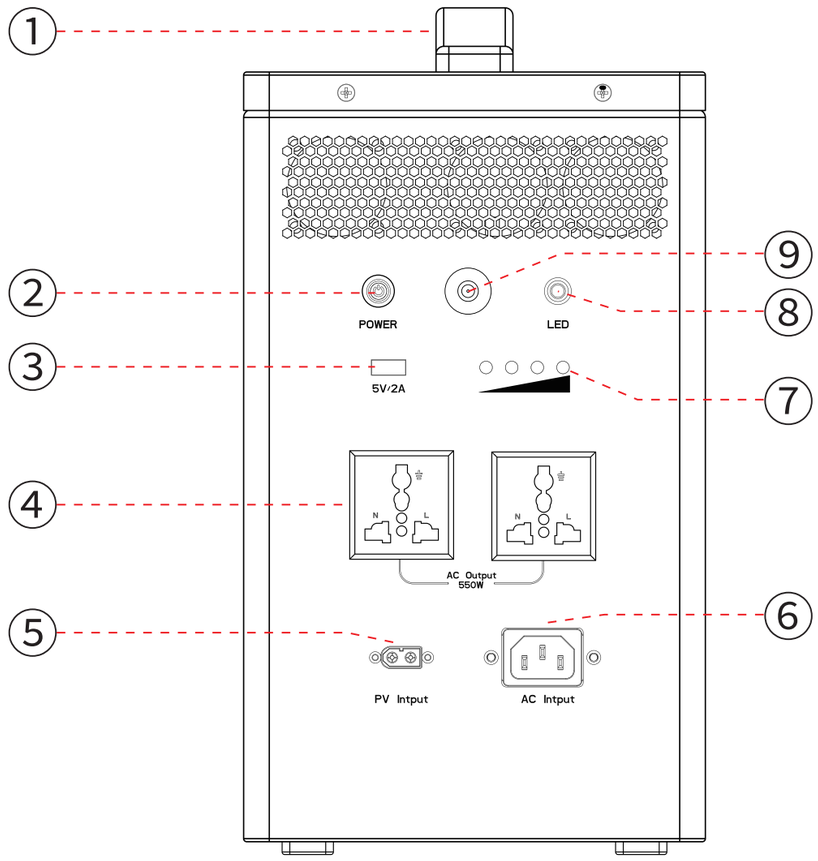
a) Have plenty of fresh water and soap nearby in case battery acidcontacts skin, clothing, or eyes.
b) Wear complete eye protection and clothing protection. Avoid touching eyes while working near the battery.
c) If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eye, immediately flood eye with running cold water for at least 10 minutes and get medical attention immediately.
d) NEVER smoke or allow a spark or flame in vicinity of the battery.
e) Be extra cautious to reduce risk of dropping a metal tool onto battery. It might spark or short-circuit battery or other electrical part that may cause explosion.
11. When charging the internal battery, work in a well-ventilated area and do not restrict ventilation in any way.
12. Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.
13. Do not expose a power pack to fire or excessive temperatures. Exposure to fire or temperatures above 130°C (265°F) may cause an explosion.
14. Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained.

2. Technical Specifications

General	
Weight	16.5Kg
Size	W250*H300*D180mm
Working Temperature	Charging: 0~45°C / Discharging:-20~45°C
Quick charge	Charge to 80% in3h / Charge to 100% in 4.5h
Running Noise	<55dB
IP Level	IP20
Battery	
Battery Voltage	6.4V
Battery Energy	1.8kWh
Cell Chemistry	LFP
Life Span	＞3500 Cycles
Battery Management System	Over Voltage Protection, Overload Protection, Over Temperature Protection, Short Circuit Protection, Low Temperature Protection, Low Voltage Protection, Over current Protection
Max.Charge Rated	Up to 0.4C/40A
Inverter	
Rated AC Output Power	5000W / 220Vac / 50 / 60Hz
Power of Over-load	60s@110% 140% load; 5s@140%~170% load; 0.2s@170%~200% load; 0.05s@>200% load
PV	MPPT Maximum input Power: 450W MPPT Voltage Range:12~50Vdc Max PV charge current:20A
Switch Time	<20 ms
Input	
Charging Method	AC Wall Outlet, Solar Panel
AC Charging	Max.40A
Solar Charging	Max.20A
Input Voltage Range	210~230Vac
Nominal voltage	220Vac (Settable: 208/220/230/240 Vac)
Output	
AC Output Ports	2x10A
USB-A	12W

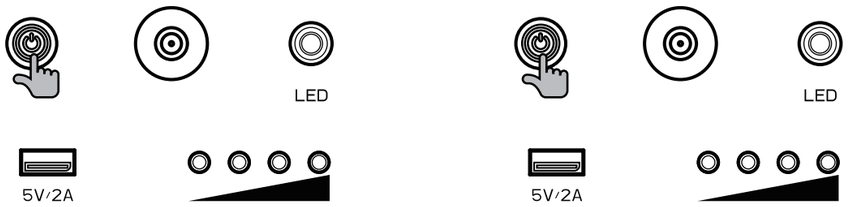
- Whether the product can be charged or discharged depends on the actual temperature of the battery pack.

3. Features



No	Name	Description
1	Battery Handle	Used for handling and pushing equipment
2	Power Button	Turn on and off storage system
3	DC Output	Quick charge USB-A ports
4	2xAC Output	Standard AC receptacle: widely used in areas that use 220V
5	Solar input	Can be connected to solar panels
6	Grid Ac Input	Can connect the to grid for AC charging
7	LED	Capacity indicator
8	Light Button	Turn on and off light
9	Light	Lighting

4. Getting Started



Short press to turn on

Long press to turn off

Startup: Short press the power button for 2 second,Screen illuminated.
Shutdown: Long press the power button for 3 seconds, Screen off, system shutdown.

5. SOC Indicator & Status Indicator Guides

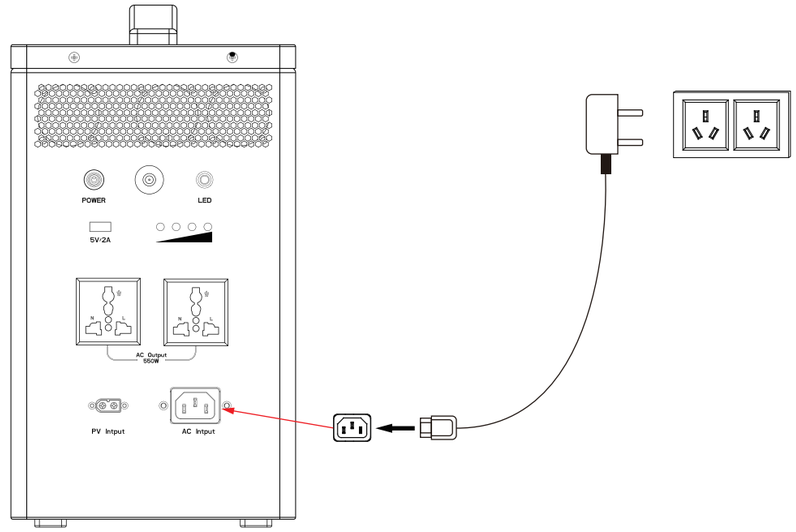
Chart 1: Pack led indicate

L1	L2	L3	L4
SOC			

Chart 2:Pack Capacity indicate

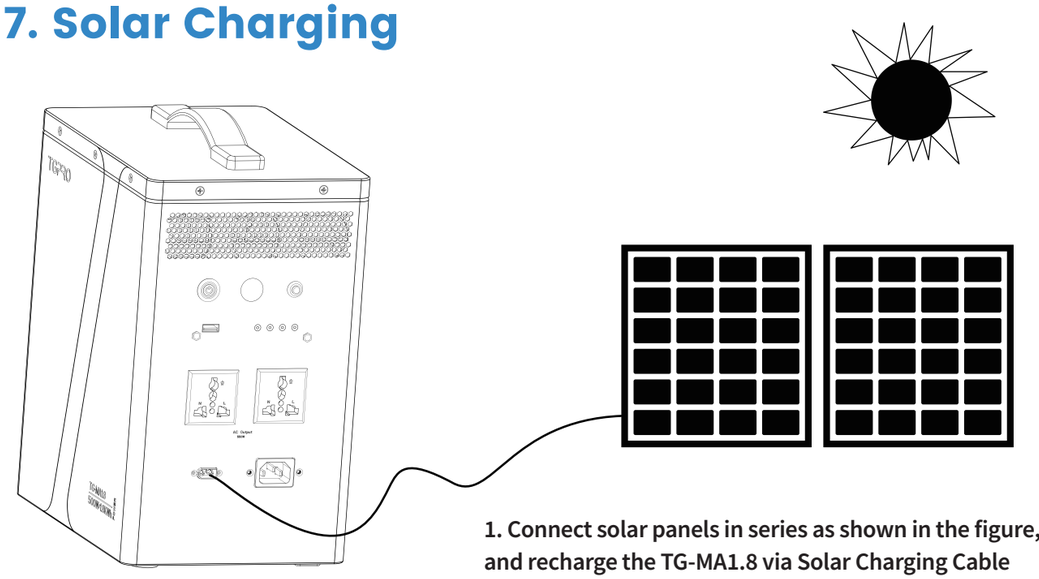
Status	Charge				Discharge			
SOC(%)	L1	L2	L3	L4	L1	L2	L3	L4
0-25%	Flash2	OFF	OFF	OFF	light	OFF	OFF	OFF
25-50%	light	Flash2	OFF	OFF	light	light	OFF	OFF
50-75%	light	light	Flash2	OFF	light	light	light	OFF
75-100%	light	light	light	Flash2	light	light	light	light

6. Ac Charging



Connect the TG-MA1.8 from Grid AC Input port via the inbox 15A AC charging cable to the wall outlet. The default battery charging current is less than 40A.

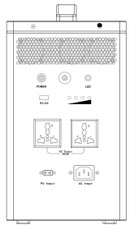
7. Solar Charging



1. Connect solar panels in series as shown in the figure, and recharge the TG-MA1.8 via Solar Charging Cable (XT30-F to aviation cable)

2. TG-MA1.8 supports 12-50V DC input, 20A max current, and 450W max charging power. Before connecting the solar panel, please ensure that the solar panel's output voltage is within 50V to avoid product damages.

8. What's in the Box

No	Category		Quantity
1		TG-MA1.8	1
2		AC Charging Cable	1
3		User Manual	1
4		Warranty Card	1
5		QC PASS Certificate	1

9. Storage and Maintenance

- Ideally, use and store the product in a place of between 20°C~30°C (68°F~86°F), and always keep it away from water, intense heat, and sharp objects. For an extended product lifespan, do not store it in places of temperatures above 45°C (113°F) or below -10°C (14°F).
- For long-term storage, please discharge the product every three months (firstly discharge it to 0%, then fully recharge it, and lastly discharge it to 60%); the product will not be covered by the warranty if it is not charged or discharged for more than 6 months.

10. Safety Instructions

- Carefully read this document before installation and use. Otherwise, serious damage or personal injury may result.
- This battery contains compounds which may be harmful, carcinogenic, or cause fertility disorders if improperly handled. Do not remove the internal battery without the express permission of the manufacturer or one of its designated suppliers.
- We’ re proud of TGPRO the TG-MA1.8 lightweight design, but it is still a 60kg+ product. Please be careful when handling and use an auxiliary transport tool if necessary.
- If you notice any extrusion, deformation, or other defect of your TG-MA1.8, immediately stop use of the product, and contact our support staff.
- Before undertaking any installation or wiring, first make sure the TG-MA1.8 Power Button and Breaker are in the “off” position.
- Do not dismantle or attempt to dismantle the TG-MA1.8 without the express permission of the manufacturer. Some of its parts are not replaceable. If you have any issue with your TG-MA1.8, contact our support staff. If maintenance is required, professional maintenance engineers will be required.
- To protect the product during transportation, please do not stand or sit on the TG-MA1.8 packing boxes. When opening and unpacking, be sure to handle with care. Do not place other items on top of the TG-MA1.8.
- Do not install the TG-MA1.8 near a heater or other heat source. It is prohibited to place or operate this equipment in an environment with any flammable, explosive gas, or smoke.
- Do not install the TG-MA1.8 any place where it will be directly exposed to the rain, and do not allow it to soak in water or any other liquid.
- Please do not use chemical cleaners or expose the TG-MA1.8 to any other flammable or volatile chemicals.
- Do not use spray products to clean the TG-MA1.8.
- This product should only be installed in environments that stay within its operating temperature
- range:Charging:-10°C~45°C(14°F~113°F) Discharging:-20°C~45°C(-4°F~113°F)
- Strictly follow guidelines laid out in this user manual when installing or using your TG-MA1.8.
- Only use official accessories from TGPRO to use in conjunction with your TG-MA1.8.
- Do not insert foreign objects into any of the TG-MA1.8 ports (whether AC or DC or ventilation holes). This power station generates the same potentially lethal AC power as a household wall outlet. Please use it carefully and keep children away from it.