REDMAX

PORTABLE POWER HUB

RM2000PH & RM3000PH

For your safety, read & understand the instructions before use.

Keep this manual for future reference.

7th July 2024

SAFETY

Please pay attention to the following information before using this product to ensure there is no damage to electronic devices. Observe all input/output ratings of your electronic devices. To avoid fire or electrical shock, ensure that all products connected to the unit are compatible.

1) This product contains a lithium iron phosphate ($LiFePO_4$) battery. Ensure you use this device as described in this document.

2) Recharge using the supplied AC mains powered adapter or cable (or another device which meets the required input specifications). Do not attempt to charge using a device which does not meet the requirements detailed in this document.

3) Only use one charging input socket at a time. Connecting devices to both charging input sockets simultaneously may cause damage to one of the power sources.

4) This product is not waterproof. Do not submerge this product in liquid or use it in the rain. Do not drop or hit this product.

5) Keep this device and accessories in a safe place which is not accessible to children.

6) Do not insert metal objects into the output sockets. Only use the correct plug connectors.

7) Do not cover or obstruct the front and rear panels. Inadequate ventilation will limit air flow and may cause damage to the unit.

8) Do not disassemble, crush, heat or incinerate the device.

9) This device can generate the same AC power as a normal household wall outlet. To prevent injury or death from electrocution, treat it in the same way that you treat a normal AC outlet in your home.

10) Do not attempt to disassemble or repair this device. Any repairs must be carried out by the manufacturer or an authorised repair agent in order to avoid danger.

11) Do not attempt to replace the internal battery.

GENERAL DESCRIPTION

The REDMAX Portable Power Hub is a rechargeable battery powered generator. It contains a rechargeable lithium battery and Battery Management System (BMS) to safely store energy which can then be supplied as either 220VAC for mains powered devices, or as DC voltage for USB & 12V devices. For charging, it requires a 12V to 60V DC input, which can be supplied using the included AC power supply, a suitable solar panel (500W max.), a vehicle accessory socket or another DC power source. The RM3000PH can also be charged using 240VAC input as it has an onboard charger.

The REDMAX Portable Power Hub can be used to deliver safe and reliable power for your devices when travelling or camping as well as in emergency situations when reliable power may not be available. The clear display on the front panel shows the battery level, power consumption (W) and estimated run/charge time which enables you to manage and charge the battery when required.

Power Outputs and applications

USB Ports: Power & charge phones, MP3 players, digital cameras, tablets, e-readers

DC 12V Output Ports: LED lights, fans etc.

DC 12V Cigarette Socket: Portable fridges, 12V automotive appliances, etc.

220VAC Output*: Electric appliances such as Televisions, Laptops, Microwaves, Rice Cookers etc.

* The power consumption of 220V appliances must be less than the device's rated continuous output power (i.e. RM2000PH is rated at 2000W & RM3000PH is rated at 3000W)

Warranty

R&J Batteries warrants the REDMAX Power Hub range to the original purchaser for a period of 2 years subject to the terms and conditions stated herein. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Warranty Coverage

This warranty covers REDMAX Power Hubs which become unusable or unserviceable due to defects in material and/or workmanship. This warranty only applies to devices used in applications for which they are intended and operated within the parameters detailed this booklet. (also detailed in the Product Data Sheet available at www.rjbatt.com.au).

Proof of purchase and return of goods in question must accompany any request for warranty. No exceptions.

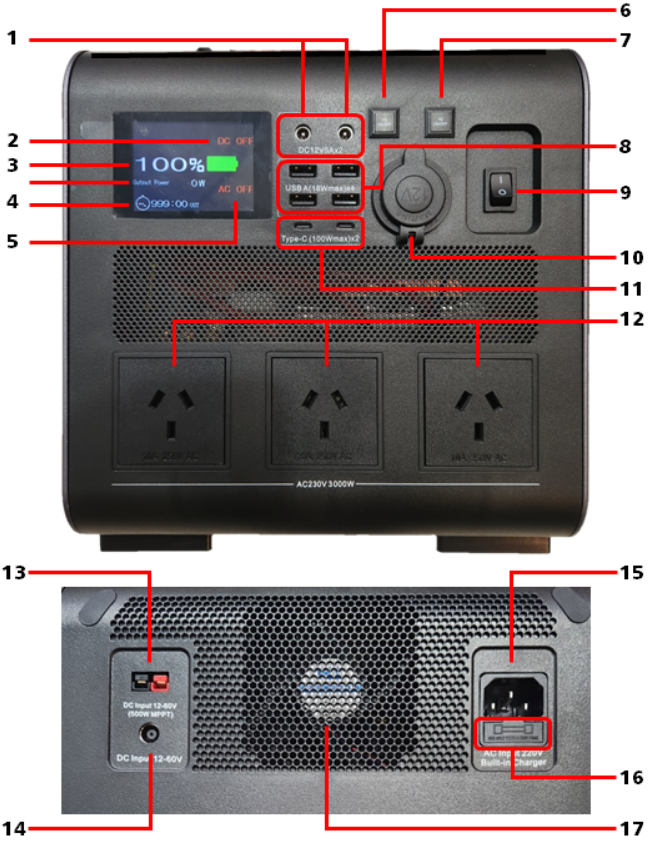
SPECIFICATIONS

	RM2000PH	RM3000PH
Internal Battery Voltage	25.6V	25.6V
Battery Capacity (Ah)	76.5Ah	120Ah
Battery Capacity (Wh)	1,958Wh	3,072Wh
Battery Type	$LiFePO_4$ (Lithium Iron Phosphate)	
AC Output	220VAC, 50Hz, Pure Sine Wave	
AC Power Continuous	2000W	3000W
AC Power Peak	4000W	6000W
DC Output – USB Type A	18W max.	
DC Output – USB Type C	100W max.	
DC Output – 12V 5521	12V, 5A (60W)	
DC Output – 12V Cigarette	12V, 10A (120W)	
Charging Input	12V to 60VDC	
Max. Charging Input Power	500W	
Charging Input Type	240VAC charger, solar panel, 12-60VDC	240VAC cable, solar panel, 12-60VDC
Operating Temperature	0°C to 40°C	
Case Size (LxWxH)	405 x 250 x 310mm	500 x 250 x 310mm
Weight	23kg	32.5kg

Package Contents

- 1 x REDMAX Portable Power Hub
- 1 x 240VAC mains battery charger (RM2000PH)
- 1 x 240VAC mains power cable (RM3000PH)
- 1 x mini Anderson to MC-5 solar input cable
- 1 x mini Anderson to 12V accessory socket
- 1 x User Manual

POWER HUB CONTROLS AND CONNECTIONS



1	DC 12V 5A Output (5521)
2	DC Output Status
3	Battery State of Charge
4	Run/Charge Time
5	AC Output Status
6	DC Power Button
7	AC Power Button
8	USB Type-A x 4 (18W)
9	Power Switch
10	DC 12V 10A Output
11	USB Type-C x 2 (100W)
12	AC Output x 3
13	DC Input - Mini Anderson (500W)
14	DC Input – 7909
15	AC Input (1000W) (RM3000PH only)
16	AC Input Fuse
17	Cooling Fan

NOTE: Only use one charging input socket at a time. Connecting devices to more than one charging input socket (13, 14 & 15) simultaneously may cause damage to one of the power sources.

OPERATION

USING THE POWER HUB

a. Use the power switch **(9)** to turn on the Power Hub. The display **(3)** will show the battery state of charge (%), power consumption (W) and the estimated run time based on the current power usage. The power output indicator will show DC OFF **(2)** and AC OFF **(5)** in red.

b. Press the AC Power Button **(7)** to activate AC power; the AC Output Status **(5)** will change to AC ON.

c. Connect your AC device(s) to the AC socket(s) **(12).**

d. Press AC Power Button **(7)** again to turn off AC power when not in use. The AC Output Status **(5)** will change to AC OFF.

e. Press the DC Power Button **(6)** to activate DC power; the DC Output Status **(2**) will change to DC ON.

f. You can now connect devices any DC port (i.e. USB-A **(8),** USB-C **(11)**, DC 5521 round port **(1)** or 12V accessory socket **(10)**.

g. Press DC Power Button **(6)** to turn off DC power when not in use. The DC Output Status **(2)** status will change to DC OFF.

Will my AC device work with the Power Hub?

First, you need to determine the power consumption of your electronic device. This is normally written on the device and is also specified in the user manual.

You will then need to check the output port you intend to use to ensure that the maximum power output of the port is greater than the device requirement. If your device uses more power (measured in Watts, W) than the port is able to provide, the power supply will shut off automatically.

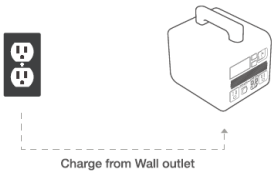
NOTE:

1. When the battery level is 10% or lower, the battery symbol **(3)** will turn red. It is recommended that the Power Hub be charged at this point to ensure reliable operation
2. When the battery level is less than 1%, both AC and DC outputs will deactivate to protect the battery.
3. If the main power supply shuts down automatically because of low battery capacity, you must recharge the power hub as soon as possible.
4. If the Power Hub is not going to be used for an extended period, make sure it is fully charged before being stored.
5. The Power Hub should be charged every 6 months if it is not being used.

CHARGING THE POWER HUB

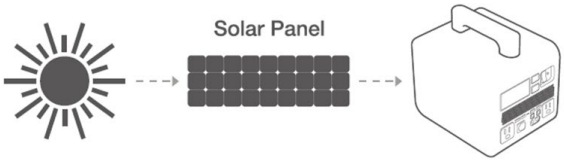
Charging with supplied AC adapter (12-60VDC, 500W)

- Plug the power cable into a wall outlet, then connect the output to the mini Anderson port **(13)** at the rear of the power hub. For the RM3000PH, plug the mains cable into the AC Input socket **(15)** and then plug the 240V plug into the wall socket.
- The display will indicate that the Power Hub is charging **(3)**. When the unit is powered on, the display will show the estimated time until charging is complete.
- The Power Hub will stop charging when the battery is full.



Charging with solar panel (12-60VDC, 500W max.)

- If multiple solar panels are connected in series to increase the charge voltage and efficiency, you must ensure the solar panels are the same brand and specification. Place your solar panel(s) in direct sunlight and face them to the sun to ensure maximum output.
- Connect the output from the solar panel(s) into the DC Input port (13) at the rear of the Power Hub
- The display will indicate that the Power Hub is charging (3).
- When the unit is powered on, the display will show the estimated time until charging is complete.
- The Power Hub will stop charging when the battery is full.



WARNING

DO NOT connect power inputs to multiple charging ports (13, 14 & 15) simultaneously.

Connecting an unregulated solar panel and a 12V vehicle power input simultaneously will result in the high voltage from the solar panel being passed to the vehicle's electrical system. This may damage components in the vehicle including the 12V vehicle battery.

PROTECTION CIRCUITS

Overload

When the AC output power is higher than the specified output power of the Power Hub, the display will show an OVERLOAD message. Depending on the power level, the device output may automatically turn off to protect itself. If this occurs, disconnect the device and press the AC Power Button (7) to restart.

High temperature

When the internal temperature exceeds 35°C or the output power is greater than 200W, the cooling fan is activated. When the internal temperature exceeds 80°C, the temperature alarm is activated. The AC and DC outputs are turned off and the display will show a HI TEMP warning. The internal temperature must fall below 40°C before the Power Hub outputs function again. Do not cover the cooling fan outlet (17) or the front panel as these are required for sufficient air flow for cooling.

STORAGE AND DOWNTIME MAINTENANCE

Failure to maintain your power station by following these steps can result in battery damage.

- Please charge your power station before storage and fully recharge it every 6 months at least.
- Store it in a cool and dry place.

NOTE:

Cold temperatures (below freezing) can impact the battery capacity of the Power Hub.
If you are living in sub-zero conditions, you can use the Power Hub to provide power however you must never charge the Power Hub in the sub-zero conditions (i.e. below 0°C). Charging the battery when it is below 0°C will damage the battery and reduce battery capacity.

Correct Disposal of this product

This marking indicates that this product should not be disposed with other household waste. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources.