



RAMBLER

POWER BOX

Product Code: 500-02000

SETUP & OPERATING INSTRUCTIONS

IMPORTANT: Please carefully read this manual before use. Operate strictly in accordance with the instructions & pay attention to warning and important notes. Please store this booklet carefully after reading for future reference.



Contents

Introduction3

Safety Information4

Battery Box Set Up4

Connecting Devices.....7

Port Options – Power IN/OUT.....8

DC/DC Wiring Provision8

Multi-Function Gauge Setup Instructions9

Frequently Asked Questions13

Specifications14

Warranty Policy15

Introduction

Congratulations on purchasing your Sphere Rambler Power Box. A world of off-grid adventure awaits. We hope you will enjoy using this product for many years to come.

In order to get the best out of your product please follow the set-up instructions in this booklet and read all safety information provided. Keep a copy of this booklet for future reference.

Included in Box

- 1 x Rambler Power Box (Case and Lid)
- 1 x Tie Down Strap to secure battery internally
- 1 x Tie down bracket and hardware
- 1 x Set Non-slip base pads
- 1 x Set (5 piece) Anderson Dust Covers

This battery box must only be used for its intended purpose. Any uses other than those mentioned in this manual will be considered a case of misuse. The manufacturer will not be liable for any damage or injury resulting from such cases of misuse.

To use the battery box properly you must observe the safety instructions, assembly instructions and operating instructions found within this manual.

Safety Instructions



- Select a quality brand battery that meets all safety standard and certifications.
- For use with all deep cycle rechargeable batteries. (Lithium, AGM, Lead Acid, Gel)
- For charging 12V deep cycle batteries only. Never attempt to recharge non-rechargeable batteries.
- Do not attempt to disassemble the battery box. Any attempt to disassemble, make unauthorised repairs or modify the box will void the warranty.
- The lid of the battery box must remain shut at all times whilst charging a battery or powering a device from an outlet.
- Do not allow any metal objects to fall into the battery box or enter any of the ports.
- Do not allow any of the ports to get wet. If it accidentally gets wet, please turn off the main power switch and dry the box ASAP.
- Do not allow children to operate this battery box.

Battery Box Set Up

Step 1

Ensure the Battery Master Switch is in the OFF position.

If not already assembled install the provided tie down hardware to the inside of the case. Secure anti slip base pad to the inside of the case to provide additional security against battery movement.

Step 2

Place a 12V battery inside the battery box and secure with the provided strap to minimize movement.

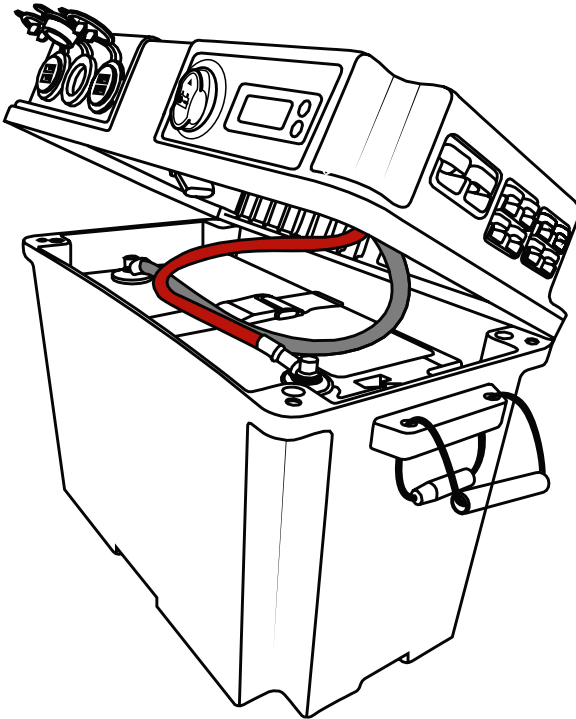


Always select an approved battery to mitigate risk of fire. Follow the manufacturers guidelines and specification for safe use.

Step 3

Connect the red lead to the positive terminal on the battery, then connect the black lead to the negative terminal. Ensure the nuts on each terminal are firmly fastened.

(1) ON/OFF



Note: 12V battery not supplied

Always use an approved battery

Step 4

Close the lid, ensuring the battery box handles are outside the box and all leads remain inside. Insert and tighten the screws in each corner of the box.

Step 5

Turn the Battery Master Switch (1) clockwise to the ON position



Press the  button to illuminate the multi-function display if required.

Press the  button to cycle through the gauge functions.
Display will indicate:

Battery Voltage – State of charge % – Temperature.

Step 6

Connect the battery box to your chosen charging source using one of the Anderson plug inputs.

Step 7

Connect your devices / appliances and enjoy the convenience of having a portable power station and stay off-grid longer.

Connecting Devices

This battery box is able to power many different types of 12V accessories. It is designed to enable you to charge the battery at the same time as your devices are being powered.



Please observe the following precautions and limitations:

If the battery voltage drops below 11.0V on the Multi-Function Display, please immediately disconnect all devices and charge the battery.

Refer to battery manufacturer's guidelines for limitations of input and output current.

Ensure you observe the rated output limits of each port:

- Anderson plug outputs: 50A or 100A
- Cigarette outputs: 15A
- USB outputs: 2.1A – 3.0A



NOTE: The 6 Anderson plugs cannot Exceed a total of 50 amps when combined.

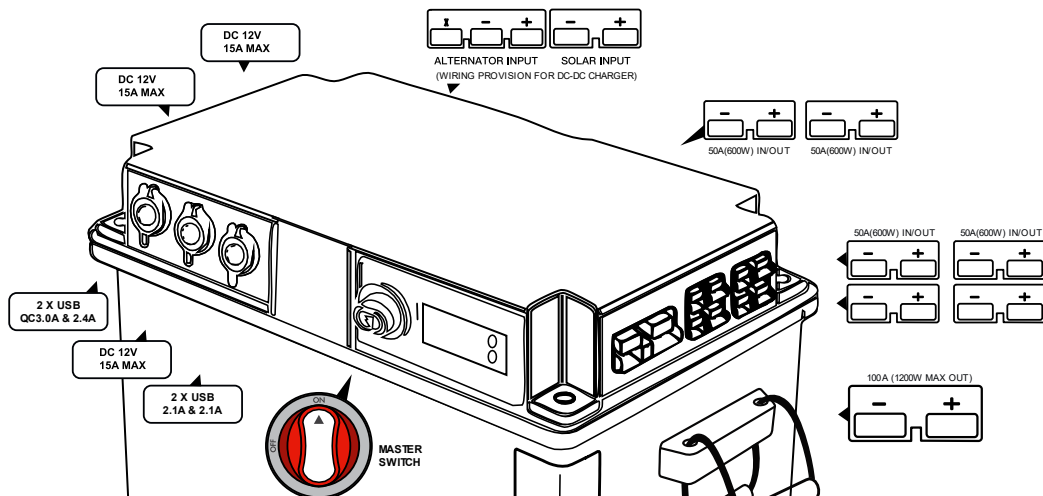
Never insert anything other than a compatible electrical plug into any of the ports on the battery box.

Ensure that the battery box is shut and the screws are tight before powering any devices.



Never use the battery box to power medical equipment.

Port Options – Power IN/OUT



NOTE: Alternator Input & Solar Input are not active until an aftermarket DC-DC charger has been fitted to the Rambler Power Box.

DC to DC Charger Wiring Provision.

The Rambler Power Box is prewired with a provision for the addition of a DC/DC charger (not included).

If so desired at a later point, it is possible to connect a DC/DC charger so that the Alternator port and the Solar input port can be used to charge your battery via an alternator power source.

All other Anderson plug IN/OUT connections can be used to charge or discharge your battery.

Multi-Function Gauge Setup Instructions



NOTE: *Default Gauge Settings will provide an accurate state of charge indication for most Rambler Power Box applications.*

BASIC INTERFACE INSTRUCTIONS

1. The battery meter display will work as soon as it is powered on for the first time, displaying the battery percentage, voltage value and a simulated battery symbol which illustrates the state of charge.
2. Tap the POWER button to turn off the meter. In the OFF state, press any button to wake up the meter.
3. Press the ► button when the display is on to switch between voltage or temperature value. Figures 1 and 2.



FIG 1. Temperature



FIG 2. Voltage

4. The battery symbol displays the battery state of charge into 7 separate bars. The 7 grids represent the battery power from low to high. Refer figure 3 and 4.



FIG 3. 40%



FIG 4. 96%

5. The voltage value on the display interface is the real-time measured voltage value (10–100V)
6. The percentage value on the display interface is the percentage value of remaining battery capacity.
7. When the battery is connected to a charging device, or a large current load is discharged, these values will fluctuate.

8. When the battery is below 20%, the red lightning energy symbol on the display will flash. Refer Figure 5.

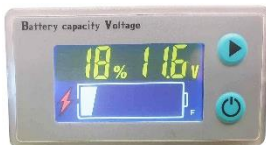


FIG 5. Under 20% charge remaining

9. If the default settings of the display are not accurate enough for your special battery use situations, you can enter programming mode and set the upper and lower limits of the battery to your own specifications.

TO ENTER PROGRAMMING MODE (ONLY RECOMMENDED FOR ADVANCED USAGE)

Whilst the display is ON, press and hold the ► button for 5 seconds to enter the menu shown in figure 6.



FIG 6.

The main menu has a total of 5 sub-menus. 1--, 2--, 3--, 4-- and 5--.



Sub-menu's 4-5 are for service technician use only.

After entering the sub-menu, click PLAY to scroll through the 5 Sub-Menu's.

The Sub-Menu functions are:

- 1-- Select the built-in pre-set battery specification, lithium battery, lithium iron phosphate or lead acid battery.
- 2-- Delay Switch – Delay time selection.
- 3-- Customised percentage of upper and lower voltage limits.
- 4-- Buzzer switch – Buzzer not applicable – these settings will not function
- 5-- Recalibrate the voltage meter – Service setting not applicable – this setting locked out. Do not access.

Click the POWER button to enter the desired sub-menu.

Press and hold ► button to quit.

Parameters will be set to the last saved settings.

DETAILED SUB-MENU INSTRUCTIONS – SUB-MENU 1–BATTERY TYPE SETUP

This menu allows you to set the battery type.

L stands for Lithium Battery (not a common battery in AU), and the following number is the number of series connections (*Series connections refers to individual cell banks within the battery, not amount of batteries in series*).

F stands for Lithium Iron Phosphate (most widely used Lithium battery in AU), and the following number is the number of series connections (*Series connections refers to individual cell banks within the battery, not amount of batteries in series*).

P stands for Lead-Acid Battery (GEL, AGM, any Lead-Acid wet battery) and the number after it refers to the Voltage.

To set, enter the 1-- menu as described above, and you will see L displayed on the right side of the display as per figure 7.



FIG 7.

Click ► button to change the setting between L/F/P. Press the POWER button to confirm your selection.

- If you have chosen L or F, now select the number of series connections (individual cell banks within the battery), and press the POWER button to confirm. Press and hold the POWER button to save settings. (Refer example settings table below)
- If you have chosen P, press the POWER button to confirm your selection. Now select the voltage (12v, 24v, 36v, 48v, 60v, 72v or 84v). After selecting the voltage, press and hold the POWER button to save. (Refer example settings table below)
- If you don't need to change any other settings, press and hold the PLAY button to exit settings.

L3 represents 3 strings of Lithium ION battery cells – 4.2v x3 strings = 12.6 volts
L7 represents 7 strings of Lithium ION battery cells – 4.2v x7 strings = 29.4 volts
F4 represents 4 strings of LiFeP04 battery cells – 3.2v x4 strings = 12.8 volts FACTORY DEFAULT SETTING
F8 represents 8 strings of LiFeP04 battery cells – 3.2v x8 strings = 25.6 volts
P12V represents a 12v Lead Acid (GEL/AGM/wet) battery
P48V represents a 48v Lead Acid (GEL/AGM/wet) battery

When battery type **F** is selected, a small **F** will appear on the lower right corner of the display. Refer figure 8.



FIG 8.

DETAILED SUB-MENU INSTRUCTIONS – SUB-MENU 2—“SCREEN, DELAY, FUNCTION”

This menu allows you to set the screen delay time setting. Screen timer settings control how long a device's screen stays on before turning off when not in use. You can select from ON/OFF and if set to ON, your options are 10/30/60 or 120 seconds.

Enter programming mode as described above. Select Sub Menu 2 and press POWER button. Whilst OFF is flashing, press the PLAY button to change between having the screen timer OFF or ON. Once you have made your selection, press the POWER button to confirm.

If you select OFF, press and hold the POWER button to exit.

If you don't need to change any other settings, press and hold the PLAY button to exit settings.

If you select ON, short press the POWER button to confirm. Now select the delay time by scrolling through 10, 30, 60 and 120 seconds with the PLAY button. You will notice a small (D) appears on your display indicating that the screen timer option is set to ON.

Once you have made your selection, press the POWER button.

If you don't need to change any other settings, press and hold the PLAY button to exit settings.

NOTE: If you have set this function to OFF, no matter what the delay time selection is, the screen will NOT time-out. The delay timer will only function if it is set to ON and confirmed by the (D) indicated on the display. See figures 1, 2 and 3.

DETAILED SUB-MENU INSTRUCTIONS – SUB-MENU 3 – CUSTOM UPPER AND LOWER BATTERY LIMITS

This menu allows you to set custom lower and upper voltage levels.

Enter programming mode as described above. Select Sub Menu 3 and press POWER button.

The first value (that is flashing) to be entered is the lower voltage limit which would represent the battery at 0% charge.

Press the PLAY button to adjust the lower limit value (first digit) and short press POWER button to confirm. Now set your second digit number using the PLAY button and short press POWER to confirm. And finally, set your decimal digit using the PLAY button and short press POWER to confirm.

Repeat the process for setting the UPPER limits of your battery/display.

Press and hold the POWER button to save.

If you don't need to change any other settings, press and hold the PLAY button to exit settings.

DETAILED SUB-MENU INSTRUCTIONS – SUB-MENU 4—ALARM BUZZER

This function has been deactivated. Changes to any settings here will have no effect. Buzzer has been removed.

DETAILED SUB-MENU INSTRUCTIONS – SUB-MENU 5—RECALIBRATE

This menu is for after sales service only. It is not recommended you access this function.

FAQ's

Q. What types of batteries can I charge with this battery box?

A. You can charge 12V AGM, Wet, Calcium, Gel and lithium batteries.

Q. Can I charge the battery and power a device at the same time?

A. Yes.

Q. Does the Battery Main Switch need to be on at all times?

A. Yes, if the battery is being either charged or discharged the Battery Main Switch must be in the on position.

Q. How can I charge the battery box?

A. The battery box can be charged from any battery charger or solar panels via the Anderson plug outlets.

WARNING:

1. Do not plug in multiple chargers as inputs
2. Do not use an external charger while a DC-DC Charger is operating
3. Exceeding 50A combined current rating will trigger the safety breaker.

Q. Do I need to use a regulator if charging via solar panels?

A. Yes, you will need to use a regulator if you are charging the battery with solar panels. (Unless a DC/DC charger has been installed)

Q. Why have my devices suddenly stopped receiving power?

A. The circuit breaker may have been tripped due to a connected device/s drawing too much power. Disconnect all devices and wait for the circuit breaker to reset. If the problem persists, check the fuses and replace any that are blown.

Specifications

Material	ABS
Temperature Range	-10 ° C to 50 ° C
Suitable Battery Types	AGM, Calcium, Wet, Gel or Lithium (Deep Cycle Only)
MAX Battery Dimensions	340mm L x 185mm W x 235mm H (with Silicone Mat)
MAX Battery Weight	35kg
PORTS (INPUT/OUTPUT)	6 x (50A) Anderson Style Plugs Input/Output Capable (Maximum Combined 50A Current Rating) 3 x Cigarette Socket Outputs 2 x Dual USB Outputs (2.1A, 2.4A, QC3.0A)
High Current / Inverter Output	1 x (175A) Anderson Style Plug WARNING: Master switch does not disconnect the battery from this connector This output is NOT Fused or Short Circuit Protected - Do not jump start a vehicle for longer than 7s - Deep cycle batteries should be used for jump starting in emergency situations ONLY, as it will affect battery health - Check battery specifications and compatibility with high current draw before using jump start connector - Lithium batteries should NOT be used in this box when intending to jump start
DC-DC Charger Wiring Provision	1 x Triple Anderson Style Plug (Alternator Input) 1 x (50A) Anderson Style Plug (Solar Input)
Master Switch	1 x ON/OFF – Removable Security Function

WARRANTY AGAINST DEFECTS

1 WHAT THIS WARRANTY RELATES TO

1.1 This warranty covers goods supplied by Coast RV Pty Ltd T/A Coast to Coast RV Services ("Supplier") to the Client ("Goods") and relates to any defects in materials and workmanship under normal use and maintenance ("Defect").

2 WHAT THE SUPPLIER WILL DO TO HONOR THE WARRANTY

2.1 The Supplier will:

- (i) replace or repair the Goods or the defective part of the Goods free of charge;
- (ii) arrange for the Goods or the defective part of the Goods to be repaired or replaced by a qualified repairer free of charge.

2.2 The Supplier reserves the right to replace defective parts of the Goods with parts and components of similar quality, grade or composition where an identical part or component is not available.

2.3 Goods presented for repair may be replaced by refurbished goods of the same type rather than being repaired. Refurbished parts may be used to repair the goods.

3 WHAT THE CLIENT MUST DO TO CLAIM THE WARRANTY

3.1 To claim the benefit of the warranty, the Client will need to (sequentially):

- (i) first contact the Supplier; and
- (ii) present the defective Goods to the Supplier for inspection, including inspection for defective workmanship, or otherwise provide evidence of the claimed Defect, accompanied by evidence of proof of purchase and date of delivery, and if applicable, evidence of maintenance performed in accordance with the relevant maintenance schedules.

3.2 The claim listed in clause 3.1 may be made in person, or the claim may be sent to the address listed on this form, including the particulars required under clauses 3.1(i) and 3.1(ii).

3.3 The appropriate form for making a claim for warranty is as attached.

4 DURATION OF WARRANTY

4.1 This warranty will cease:

- (i) where the Goods are purchased already fitted in or as a component of a vehicle or RV: from the date that is twelve (12) months after the Client takes delivery of the vehicle or RV; and
- (ii) where the Goods are purchased separately or as an after-market item: from the date that is twelve (12) months from the date of purchase.

4.2 If a Defect does not materialise in the Goods prior to the date provided in clause 4.1,

the Supplier will have no liability to the Client under this warranty.

5 RESPONSIBILITY FOR COSTS OF CLAIM UNDER THIS WARRANTY

5.1 The Supplier is responsible for the costs directly associated with repairing or replacing the Goods in accordance with clause 2.1 only.

5.2 Any works required to be completed in addition to fixing the Defect are the responsibility of the Client. Additional works includes any costs associated with any testing or repair of the Goods or any goods to which they are fitted, undertaken by a third party in relation to any defect without prior authorisation from the Supplier.

5.3 Where it is determined that the Goods do not have a Defect, the Client will be charged a GST exclusive inspection fee of forty-five dollars (\$45.00AUD in Australia or \$45.00NZD in New Zealand) plus freight costs for the return of the Goods, this is subject to change without notice.

5.4 The cost of delivery and insurance of the Goods to and from the Supplier, travel costs to and from the Supplier, and the cost of inspecting and testing the Goods are the sole responsibility of the Client.

6 WARRANTY LIMITATIONS

6.1 The Supplier makes no warranties or representations other than those set out in this warranty document except as is required by law.

6.2 The Supplier will not be liable under this warranty:

- (i) to the Client or any other person for any consequential, direct or indirect loss, damage or costs incurred or suffered by the Client or any other person, including but not limited to damage to persons, other property, loss of turnover, loss of profits, loss of business or goodwill;
- (ii) to the Client for transportation or travel costs which are the Client's responsibility;
- (iii) for damage or defects in any Goods caused by improper transportation, storage or any other misuse, neglect or accident.
- (iv) for the installation of the Goods. Any fault or defect due to installation should be referred to the installer. The Goods must be installed in accordance with the Manufacturer's instructions and any relevant legislation or code.

6.3 This warranty covers the Client only and it is not transfer able if the Goods are sold by the Client during the warranty period.

7 WARRANTY EXCLUSIONS

7.1 This warranty will not apply where:

- (i) the Goods have been improperly modified or repaired or the Good's defect has arisen due to the Client's failure to properly install, fit, maintain, service or use the Goods in accordance with the specifications and instructions provided by the Manufacturer, including a failure to comply with the relevant maintenance schedule (where applicable);
- (ii) the Supplier cannot establish any Defect in the Goods after testing;
- (iii) the Goods have been used other than for the purpose for which they were designed;
- (iv) the Goods have been subject to abnormal conditions, including but not limited to temperature, pressure, stress, load or similar;
- (v) the Client or installer have used or fitted non-genuine or non-approved parts and accessories to the Goods or have failed to use recommended parts and accessories;

- (vi) the Good's defect has arisen due to abuse, misuse, neglect or accident;
- (vii) the Goods have not been installed in accordance with the relevant instructions;
- (viii) the Good's defect is caused by use or fair wear and tear of the Goods (or expendable parts).

8 RIGHTS AT LAW

8.1 The benefits given to the Client under this warranty are in addition to other rights and remedies of the Client at law in relation to the Goods.

8.2 In Australia our Goods come with guarantees that cannot be excluded under the Australian Consumer Law. 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 Claim Form



Warranty Providers Name

Coast RV Pty Ltd trading as

Coast to Coast RV Services

ABN 49 097 104 492 - ACN 101 461 330

Warranty Providers Address

PO Box 6287, Silverwater NSW 1811 Australia OR:

PO Box 58-054 Botany AUCKLAND 2163 New Zealand

Client:
Contact No.
Description of Goods provided
Receipt enclosed: (tick box) YES ☐ / NO ☐
Receipt No:
Description of defects (Give as much detail as possible. Use a separate page if required)

Date of purchase/services provided:

I hereby declare that the information provided above is true and correct and to the best of my knowledge and belief and I have complied with all the conditions of the warranty.

Signed:

Name:

Dated:

Please note, the issue or completion of this form by the Client does not constitute an admission of liability by the Supplier.



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