

# *PondMAX*

FOR GARDENS THAT GO THE EXTRA YARD

## SOLAR BATTERY BACKUP BOX

INSTRUCTION MANUAL



**AQUATEC**  
EQUIPMENT

DATE  
AUG 2022 v2.0

[www.pondmax.com.au](http://www.pondmax.com.au)

MODEL  
02PS007

**WELCOME TO THE WORLD OF PONDMAX™.**  
YOU MADE THE **RIGHT** CHOICE INVESTING IN THIS  
**QUALITY** PRODUCT. THANK YOU AND **ENJOY.**

BEFORE USING THIS PRODUCT, PLEASE READ THESE INSTRUCTIONS CAREFULLY AND MAKE YOURSELF FULLY FAMILIAR WITH THE UNIT. PLEASE KEEP THESE INSTRUCTIONS IN A SAFE PLACE FOR FUTURE REFERENCE.

## TECHNICAL SPECIFICATIONS

DESCRIPTION	02PS007
LEAD ACID BATTERY	12 V, 24 Ah
CHARGING VOLTAGE & POWER	DC 18 V, Maximum input power: 150 W
OUTPUT PUMP	DC 12 V, Maximum output power: 48 W
OUTPUT LIGHT	DC 12 V, Maximum output power: 12 W
UNIVERSAL OUTPUT	DC 12 V, Maximum output power: 12 W
FUSE CURRENT	10A
SIZE	255 x 255 x 205 mm
CABLE LENGTH	0.5m
EXTENSION CABLE LENGTH	5m
NET WEIGHT	9.3 KGS



### WARNING

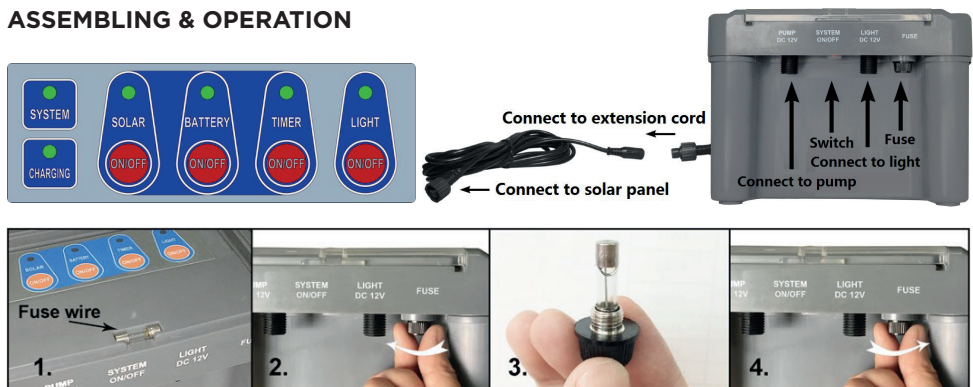
Discharged batteries are still explosive and contain toxic chemicals. **NEVER DISPOSE OF A BATTERY BY THROWING IT INTO THE TRASH, LANDFILL, INCINERATOR OR TRASH COMPACTOR.** Take it to an approved recycling centre. Contact your local council for further information.

# SOLAR BATTERY BACKUP BOX

## BENEFITS INCLUDE

- This special solar battery station is used to store solar energy for day and night use, and is designed for powering fountain pumps, and pond or garden lights.
- The input power should be from a solar module or DC power supply with an output voltage of 18V
- There are three output ports with an output voltage of 12V. One for a pump, one for a light and the one on the back with a universal interface for any 12V third-party device.
- The battery station has built-in functions for overcharging and over-discharging protection. The input has overload protection and anti-access protection. The outputs have overload protection and short-circuit protection.
- There are six LED indicators showing the status of SYSTEM and CHARGING. These lights show the pumps current working mode for solar, battery or timer and the on/off status of the LIGHT output.

## ASSEMBLING & OPERATION

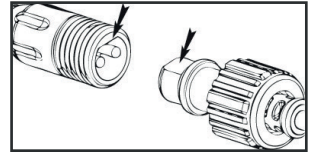


## BEFORE INSTALLING THE SOLAR PUMP SET, PLEASE HAVE THE FUSE IN PLACE FOLLOWING THE BELOW STEPS:

1. Open the transparent plastic lid and take out the fuse mounted on the panel. (See photo 1)
2. Unscrew and take out the fuse holder mounted under beneath the panel. (See photo 2)
3. Insert the fuse inside the fuse holder. (See photo 3)
4. Restore the fuse holder back to its original place and tighten the screw. (See photo 4)

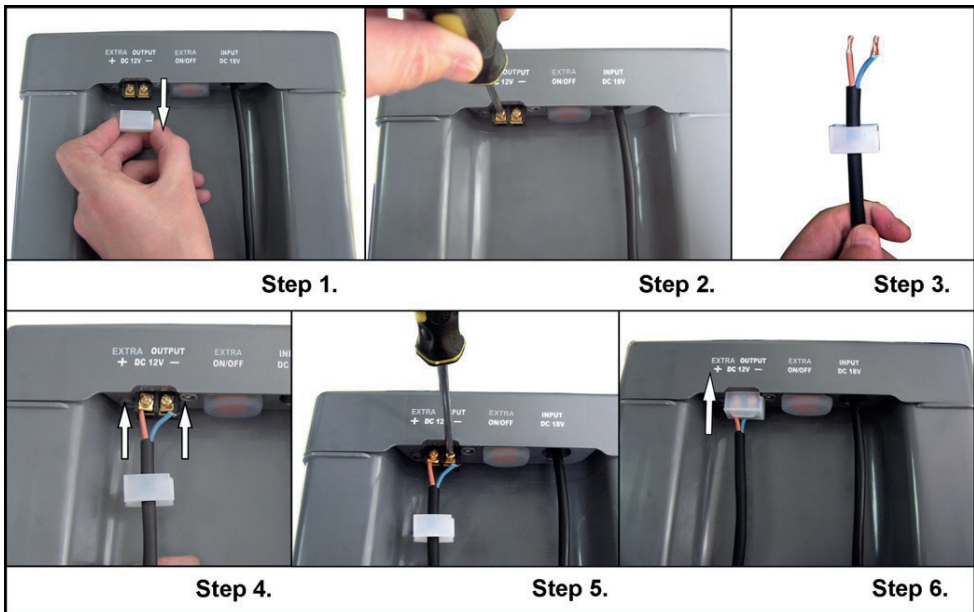
## CONNECTING SOLAR PANEL

- Roll out the INPUT DC 18V cable on the back of the battery pack and connect it with the female end of the solar panel output cable or DC power supply and tighten the protection screws. The connectors are protected against reverse polarity as shown. Don't insert the plug with reverse polarity by using excessive force.



## CONNECTING TO OUTLETS

- For connection to EV Pump, using the adaptor cable provided, connect the male end to the PUMP DV 12V output port on the battery pack and the female end to the EV DC pump cable. Once connected ensure you tighten the protection screw.
- For connection to DC LIGHTS plug in connection for LED lights to the LIGHT output port and tight the protection screw
- For connection to third party DC device connect to the universal output port on the back. To connect the third-party device, remove the port protective cover, connect the wires, and then fit the cover back following the steps specified in the images below. The port will start to output after the EXTRA ON/OFF is switched on if the battery is not






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## CHARGING INDICATOR

- The yellow LED CHARGE indicator lightens when the battery is being charged no matter whether the system switch is ON or OFF; otherwise the LED shuts off.

## SYSTEM INDICATOR



















- The SYSTEM indicator stays in RED before the battery is recharged to its normal voltage. While the battery voltage reaches the normal level, the SYSTEM indicator turns to YELLOW. It will take another 2 hours before it changes to GREEN and both output ports start to function at the same time. The three states are specified as below.

 SYSTEM GREEN	The battery is in normal outputting state.
 SYSTEM YELLOW	The battery is preparing its readiness to output.
 SYSTEM RED	The battery is low and its output is not available

- Press the “ON/OFF” button corresponding to one of the three available pump working modes described below to activate the only mode in which you want the pump to operate, press the “ON/OFF” button again to inactivate the mode:







## SOLAR MODE

If SOLAR mode is activated, the SOLAR mode indicator will be switched to either GREEN or RED from black-out.

 SYSTEM GREEN	 SOLAR GREEN	 	Solar panel is exposed to the sun shine and battery is sufficiently charged, solar panel runs the pump and charges the battery with surplus energy until sun light is no longer available. Battery always stays full.
 SYSTEM GREEN	 SOLAR RED	 	Solar panel is in shadow or darkness while battery is sufficiently charged. Pump stops running without consuming the energy stored in the battery. The pump operation will resume when sunshine is available again. Battery always stays full.
 SYSTEM GREEN	 SOLAR RED BLINK	 	Pump short-circuited, system will reset automatically within 5 seconds after pump being removed or fixed.
 SYSTEM RED or YELLOW	 SOLAR RED	   	Battery is low and solar panel will first charge the battery with all of its energy without operating the pump until the battery is sufficiently charged with SYSTEM and SOLAR mode indicators in GREEN.

## BATTERY MODE









If BATTERY mode is activated, the BATTERY mode indicator will be switched to either GREEN or RED from black-out.

		Battery is full and pump starts to operate with consumption of energy from battery only. Solar panel will keep charging the battery as long as sun shine is available. After battery is exhausted, the SYSTEM and BATTERY mode indicators switch to RED and the pump stops working.
		Pump short-circuited, system will reset automatically within 5 seconds after pump being removed or fixed.
		Battery is low and pump will not work. It will operate only when battery is charged to a certain level and both indicators are in GREEN.

## TIMER MODE

If TIMER mode is activated, the TIMER mode indicator will be switched to either GREEN, or RED or YELLOW from black-out.

*\*Note: put on the TIMER mode, whatever its indicator shows, the built-in TIMER starts to countdown for 4 hours, during which the pump will operate if the SYSTEM indicator is in GREEN.*

		Battery is sufficiently charged, and pump will run for 4 hours before timer times out and TIMER indicator turns to YELLOW. If battery is exhausted before timeout, the pump will stop and TIMER mode indicator turns to RED. Every day, the pump operation will resume automatically for four hours at the same time when TIMER mode was first activated as long as SYSTEM indicator is in GREEN.
		Battery is sufficiently charged but timer times out, pump rests and is waiting for next round of operation.
		Pump short-circuited, system will reset automatically within 5 seconds after pump being removed or fixed.
		Battery is low. TIMER indicator stays RED when TIMER starts to countdown for 4 hours, and pump will not work. TIMER indicator switches to YELLOW after timer times out. If battery has been sufficiently charged before TIMER times out, both indicators turn to GREEN, the pump starts operating. If battery has been sufficiently charged after TIMER times out, then SYSTEM indicator turns to GREEN, TIMER mode indicator turns to YELLOW, pump rests and waits for next round of operation.

















# SOLAR BATTERY BACKUP BOX

**Note: if all the three modes are disabled, there will be no output from the PUMP output port and all the energy from solar panel will flow into the battery**

## LIGHTMODE

Enable the LIGHT output if you want the light to work at night. Please notice that the LED light only works when solar panel is in darkness. If LIGHT output is enabled, the LIGHT indicator will switch to yellow or green or red from black-out.

			Battery is sufficiently charged, but solar panel is exposed to sun shine. The lights shut off, even SYSTEM indicator is in green.
			Battery is sufficiently charged and solar panel is in darkness. The lights light up automatically.
		 	Light short-circuited, system will reset automatically within 5 seconds after light being removed or fixed.
		 	Battery is low. The lights will not light up even at night.

Turn the system switch to “Off” position, both output ports are disabled, the battery will still be charged in the daylight, and then the appliances will have longer operating time when put them to work in the evenings or for special festive occasions. **The battery will always be charged in the sunlight no matter whether the system switch has been put to “On” or “Off”! And the system will automatically cut off the charging current and black out the yellow CHARGING indicator after the battery is fully charged.**

## CAUTIONS

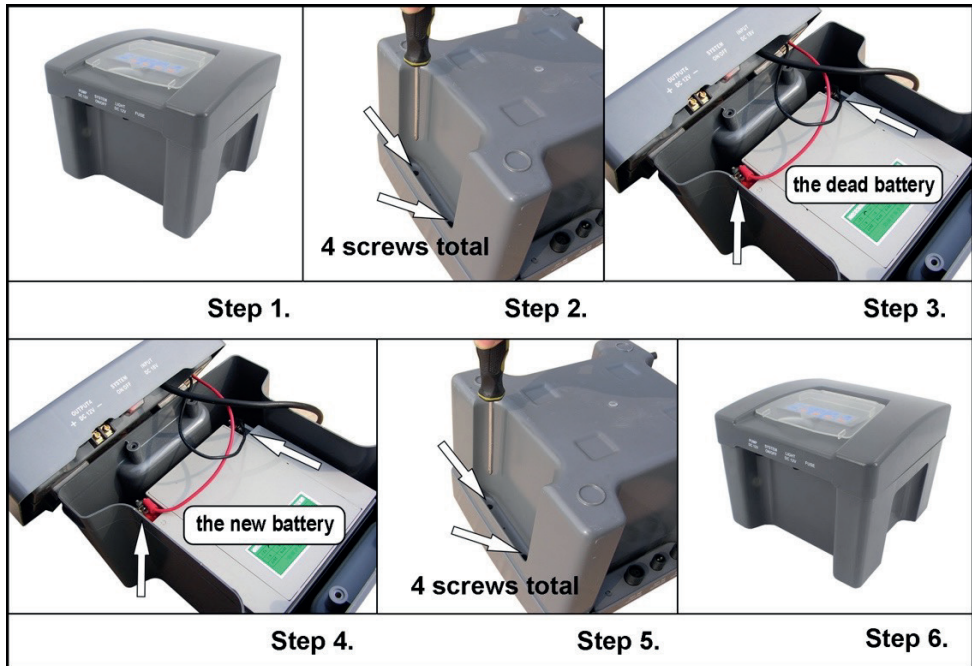
1. Do not charge the solar battery back-up by any AC power supply directly; it is designed ONLY for DC power.
2. Never connect any appliances whose rated power is larger than the maximum power listed in the below technical data list. Otherwise it will be automatically cut off.
3. Do not leave the battery back-up in direct blazing sunlight or expose it to extremes of heat or cold, which can affect its service life. If possible place the battery in the shadow of the solar panel or your house or even a tree etc.
4. Do not dip this battery back-up into water (IP44).

## TROUBLESHOOT

If the SYSTEM indicator shows RED always and the pump does not work even though the solar module is exposed to full sunlight for MORE THAN ONE FULL DAY, please check the possible failures below:

- 1) The CHARGING yellow indicator doesn't lighten
  - a) Check connection to the solar module,
  - b) Clean up the surface of solar panel, move away the leaves or debris, wipe off the dust.
- 2) The battery capacity will be degraded gradually after running for about 2 years; it will run out of its service life finally and needs to be replaced. Replace the battery following the steps shown in the below photos.

***Alternatively pump may bypass the battery backup and connects to the solar panel directly. The pump will operate at a stronger performance when powered by the solar panel directly since the solar panel output voltage is 18v instead of 12v output from battery pack.***





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If the SYSTEM indicator shows GREEN, and the pump still does not work, please check the possible failures below:

- 1) Check if either TIMER or SOLAR mode indicator lightens. Please note that, when TIMER mode, the pump stops after four hours of operation even when SYSTEM indicator stays GREEN. When SOLAR mode, the pump will stop after solar panel is in shadow or darkness even when SYSTEM indicator stays GREEN.
- 2) The pump is blocked, clean the pump by referring to pump manuals.

**If the SYSTEM indicator shows GREEN, light does not illuminate at night.**

Check the LIGHT indicator, if it shows YELLOW, move away other light source from the solar panel so that the solar panel can feel the darkness.







## LIMITED WARRANTY 1 YEAR

- Warranty covers only appliance defects and faulty material and workmanship within a 1 year period.
- Faults arising due to accidents, misuse, not following manufacturer's guidelines/ instructions or power surges/spikes/brownouts will not be covered.
- Warranty will be void if any tampering removal of warranty labels or electrical circuitry is evident.
- Warranty will be void if the power cord is cut or damaged in any way.
- Warranty will be void if any visible signs of overheating are present.
- Loss of livestock, damage to property or personal injury caused by this product will not be covered.
- Warranty claims caused by installation faults will not be covered.
- It is the customer's responsibility to return the faulty appliance for any warranty claim, to Aquatec.
- For any warranty to be valid, an original proof of purchase must be provided.
- 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.
- **A Warranty claim must be made within 1 year of the date of purchase.**
- Where Aquatec determines goods are being used in a manner contrary to the instructions, specifications or this Warranty, Aquatec reserves the right to terminate Extended Warranty for such goods and will provide written notice to the purchaser.

Please consult your retailer for quality original PondMAX replacement parts.

Visit [www.pondmax.com.au](http://www.pondmax.com.au) for your nearest stockists.

E.&O.E.