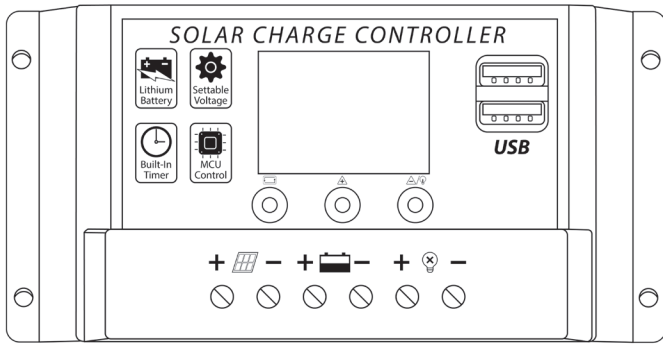




# 15A PWM SOLAR CONTROLLER USER MANUAL

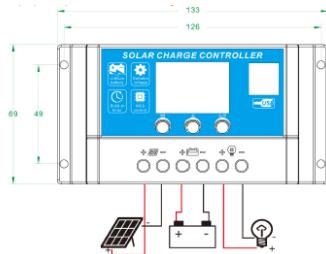
AKSR-RG15A\_01



V1.3

**PLEASE READ AND UNDERSTAND THIS MANUAL COMPLETELY BEFORE USING THIS PRODUCT.**

## OPERATING THE PWM CONTROLLER

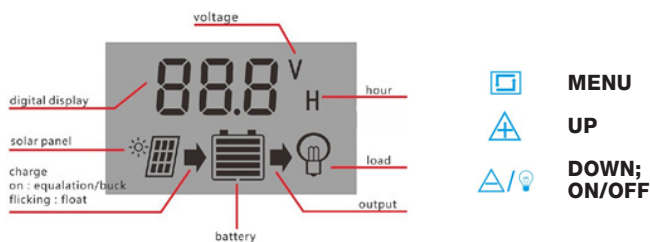


Please note: not following these instructions may cause damage to the PWM controller. Ensure that you attach the positive (+) and negative (-) wires to the appropriate terminals.

1. Connect the positive and negative wires from the battery into the terminals with the battery icon ensuring polarity is correct.
2. The screen should turn on and display the battery voltage.
3. Connect positive and negative solar input into the two terminals with the solar icon, ensuring polarity is correct.
4. The controller is now ready to use.
5. For additional load circuit, connect positive and negative wires to the terminals with the lightbulb icon on the controller.

**NOTE: Ensure a fuse is used on battery positive wiring to prevent short circuits and potential damage to the unit or your vehicle.**

## PWM CONTROLS



**Menu:** short press: cycle through the different menu options; long press: confirm selection or return to the main display  
**Up:** increase value  
**Down:** decrease value

## SAFETY

- Keep your Pulse Width Modulation (PWM) controller & battery away from any liquids at all times.
- Keep the controller clean at all times (always check connectors to ensure they're free of grit before plugging them in).
- Do NOT use the solar controller to charge non-rechargeable batteries. Doing so may result in harm to the user and/or damage the solar module, battery and controller. Only use the provided solar blanket, regulator and adaptors/wiring provided in the kit.
- All lead-acid batteries produce harmful, explosive gases. The battery should be mounted in a well-ventilated area, as far as possible from any ignition sources. Do NOT smoke or have a naked flame in the vicinity of the battery under charge.
- Never tamper with or pull any component of the regulator apart. Doing so will void the warranty.
- The PWM controller is only suitable for regulating solar modules.
- The PWM controller is only suitable for lead-acid batteries: LEAD, AGM, GEL & LITHIUM. The Solar Blanket & Controller should not be used with nickel metal hydride batteries.
- Never connect more than 1 charging source to the PWM controller.

## CONTENTS



1 x 15A PWM Solar Controller

## SPECIFICATIONS

Max Solar Input	<50V
Float Charge	13.7V - Default, Adjustable
Discharge Stop	10.7V - Default, Adjustable
Discharge Reconnect	12.6V - Default, Adjustable
USB Output	5V / 2A
Dimensions	133 x 70 x 34 mm
Weight	154g

## MENU SCREENS AND THEIR FUNCTIONS

1. Press the menu button to cycle through the six different settings screens. Each screen is explained below.
2. Holding the menu button for 6 to 7 seconds will allow you to change the settings on a screen. Use the up or down buttons to change the values.
3. Hold the menu button again to confirm your settings.

### MAIN DISPLAY

Displays details about voltage and connections to the PWM controller. (Not pressing any button for 10 seconds will return you to this screen.)



### FLOAT OR CV VOLTAGE

Accept power from the solar panel until the battery's voltage reaches the set value. Default: 13.7V



### DISCHARGE RECONNECT

Connect to the load when the battery's voltage reaches the set value. Default: 12.6V



## MENU SCREENS AND THEIR FUNCTIONS CONT'D

### DISCHARGE STOP

Sever the connection to the load when the battery's voltage reaches the set value.  
Default: 10.7V



### WORK MODE

Control when the battery supplies power to the load.

**24H** – constantly provide battery power to the load.

**1-23H** – provide battery power to the load for the set number of hours after the solar panel has stopped receiving sunlight.

**0H** – provide power only when the solar panel is not receiving sunlight.



### BATTERY TYPE

Shows type of battery attached to the PWM controller.

b01 – Lead Acid/ AGM Sealed (default)

b02 – Gel

b03 – Dry Cell

b04 – Iron Lithium 4 Strands

b05 – Iron Lithium 5 Strands

b06 – Lithium Ion 3 Strands

b07 – Lithium Ion 4 Strands

\*b04-b07 parameters cannot be set



## OPERATION INSTRUCTIONS



Connect the alligator clips onto the battery.



Connect the extension lead to the battery.



Then connect the controller onto the battery.



Connect the solar blanket to the controller.

**NOTE:** The extension lead is between the controller and battery.

## DISCONNECTING



Disconnect the solar from the controller.



Disconnect the controller and battery.

## TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Charging symbol not displaying even when the solar panel is in the sun	Panel has been improperly connected to the PWM controller.	Reconnect the solar panel, ensuring that the positive and negative terminals are appropriately connected
Load icon is off	Battery is low	Charge the battery
	Incorrect menu setting is selected	Select a menu setting where the load is displayed
Load icon flashes slowly	Overload	Reduce the load's power draw
Load icon flashes quickly	Short circuit protection	System should reconnect automatically
The PWM controller will not turn on	Battery is insufficiently charged	Charge the battery
	Battery has been connected improperly	Check, and if necessary alter, the battery's connection to the PWM controller

KINGS 4

KINGS 5

KINGS ADVENTURE

## 12 MONTH LIMITED WARRANTY

### WARRANTY PERIOD:

Full 12 month warranty from date of purchase against all manufacturing defects.

### WHAT DOES THE WARRANTY COVER?

Under normal usage conditions, this warranty covers:

- Any defect in design or manufacture which results in the product failing to perform substantially as described in authorised advertising or literature.
- We will either repair or replace the product at our discretion providing that the fault is found to have been caused by a design or manufacturing defect and not misuse or tampering.

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. The benefits provided to you as the consumer by this warranty are in addition to other rights and remedies available to you under the law.

### THE WARRANTY DOES NOT COVER:

- Any damage resulting from improper use
- Faulty installation or modification made during installation
- The cost of removing and reinstalling the product
- Travel and /or other expenses due to customer's remote location
- Transport charges and damage in transit. It is your responsibility to deliver and pick up your product, including any costs associated with the postage of your repair or replacement product. If you do freight your product we recommend that you insure against loss or damage.
- Any loss directly or indirectly associated with the product failing to operate.
- Damage caused by mould, insects, animals, misuse, incorrect operation, adverse weather, accidents and fair wear and tear

TO MAKE A CLAIM, PLEASE ENSURE YOU RETAIN YOUR SALES RECEIPT OF PURCHASE

1800 88 39 64



OUTDOOR SUPACENTRE PTY LTD  
2 Stanley St Silverwater NSW, 2128  
PHONE: 1800 88 39 64  
www.4wdsupacentre.com.au

KINGS 6

KINGS 7