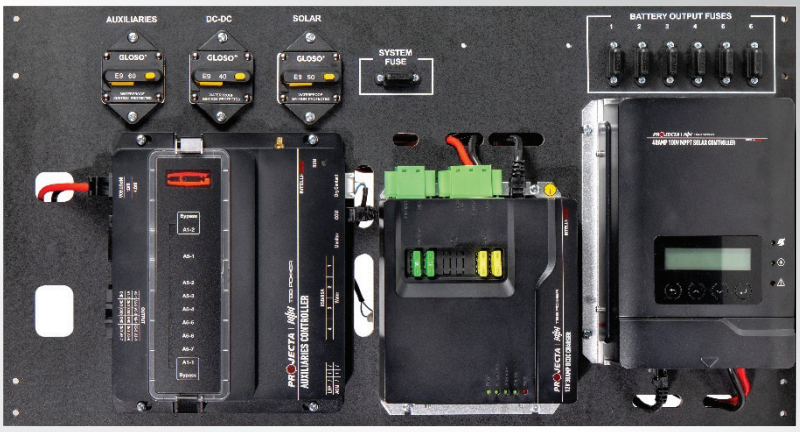
PROJECTA

INTELLI-GRID 12V COMPACT70/100

HIGH POWERED MANAGEMENT WITH BLUETOOTH MONITOR



P/No IGCMPT70, IGCMPT100

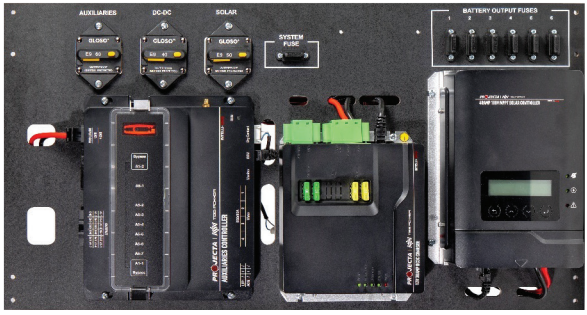
SYSTEM INTRODUCTION

The Compact70/100 is a 2000W/3000W power solution for all your power, lighting and water requirements. It is connected to a color monitor with Bluetooth, so you can check and control the system from your phone.

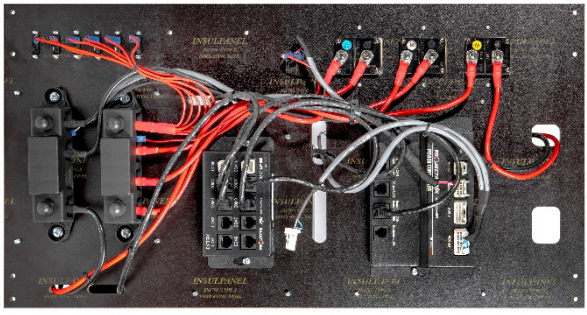
SYSTEM COMPONENTS

- 7" Monitor with App
- 2KW/3KW Inverter/Charger with AC change over switch
- 40A MPPT Solar controller
- DC-DC Charger 30A/60A
- Controller Box
- Auxiliaries Controller with 9 outputs & Water Tank Measurement
- 200Ah/400Ah Lithium Battery
- Wireless Switch (Not supplied)
- 4 Water tank sensors (Not supplied)

FRONT: 625 x 300mm



BACK



KEY FEATURES

INVERTER & GRID POWER

2000/3000W inverter with 120/180Amp charging, grid power booster and AC transfer switch.
AS/NZS 3001 ready

LITHIUM BATTERY

An advanced and powerful 200/400Ah lithium battery perfectly matched to the Intelli-Grid system provides the ultimate power for off grid requirements

BLUETOOTH MONITOR

Bluetooth 7" Colour monitor showing SOC, full control of the RV, it's water, lighting and hardware

MULTIPLE CHARGING OPTIONS

30/60A DC-DC charging and 40A MPPT solar charging for charging from vehicle or when sun is shining

SOLAR AWAKENING FUNCTION

When enabled, this feature allows the system to wake up and automatically charge via solar power (as long as the sun is shining), even if the system is turned OFF.

LOW VOLTAGE PROTECTION

Multiple strategies for low voltage protection of service batteries to avoid failure of lithium batteries by over-discharge

MONITORING THE 7" COLOUR DISPLAY INTRODUCTION

Home Page

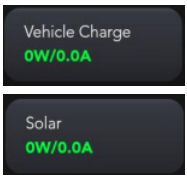
The above is the home page, the details are as follows:

1) Region 1: Area for time and date display.
2) Region 2: Blank
3) Region 3: Area for showing battery information.
   In this area, the user can see the battery power data and status. It contains the following points:
   a) Check the batteries are charging or discharging.
   b) Check the batteries voltage and current.
   c) Check the batteries SOC value.
   d) Check the time to go or time to full of batteries.
4) Region 4: Area of shortcut keys.
   a) PWR: All DC and AC outputs turned ON/OFF with this key. Only the constant live output of IGCMD and the class C3 output of C12 are retained.
   b) Main Lights: Main Lights ON/OFF switch.
   c) Pump1/Pump2: Water pumps ON/OFF switch.

5) Region 5: Charging source information display area.
In this area, the user can check the charging data as follows:

a) Vehicle charger: Checks the output current and power of vehicle charger.

b) Solar charger: Checks the output current and power of solar charger.



6) Region 6: Scene mode.

a) ECO mode: System will enter "ECO" Mode automatically after being started. When SOC drops to 15% (it can be set within 15% - 20%), the system shuts down the inverter outputs and the heavy loads, keeping ONLY the essential loads on.

i. Typically, Main Lights, Kitchen, Pumps and circuits for Bathroom and Lounge are ON.

ii. TV, EXT 12V and Bedroom circuits can be turned ON manually.

When SOC is back to 15% (or other setting value) + 3% or there is AC grid charging, system exits ECO mode automatically. Customer can also exit the mode manually.

b) Night mode: Designed for a silent environment for customers. It can be activated at the front page of 7'' colour display. When entering the mode:

i. The system will shut down the lights and the back lights of the screens.

ii. De-rate the charging current of inverter/charger to reduce the fan noise.

7) Region 7: Charging source information display area.
In this area, the user can check the charging data as follows:

a) Inverter/Charger:

i. Display output voltage, power and load rate.

ii. The user can select the AC input source. "Mains" means the source is grid, "Gen" means it is generator.

8) Region 8: Water tank level display area.

a) If the fresh water is lower than the warning value, the alarm is triggered.

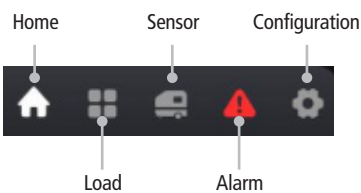
b) If the gray or black water is greater than the warning value, the alarm is triggered.

9) Region 9: Navigation area.

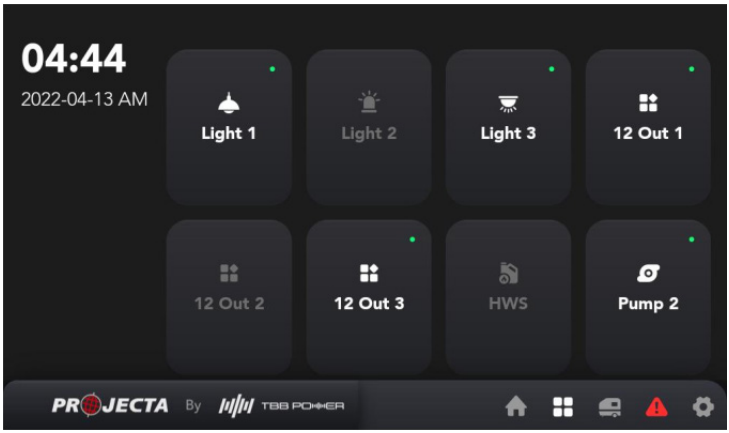
Note:

a) The icon will turn white when switched to the corresponding page.

b) When the alarm icon turns red, it means that one or more alarms exist. After the alarm is removed, the icon turns to gray.



Load Control Page

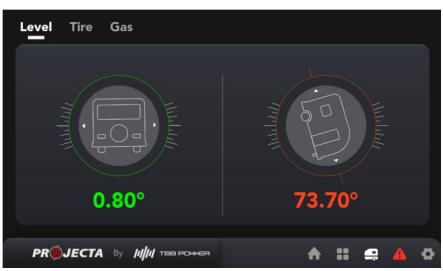


The load control page displays all switchable outputs with their functions named.
When the load is turned on, the load icon is white with a green dot in the upper right corner.
If the load is turned off, the icon turns gray and the green dot disappears.

Sensor Page (Add-on)

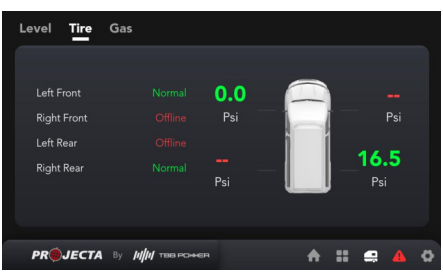
1) Leveling

   Ensures your RV is leveled when parked.



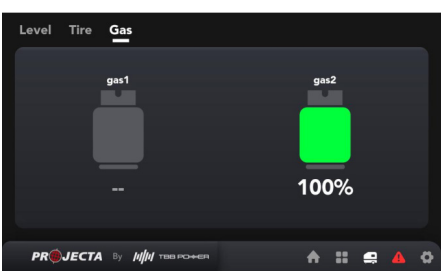
2) TPMS

   Monitors tyre pressure to prevent premature wear with high / low warning setting.



3) GAS sensor

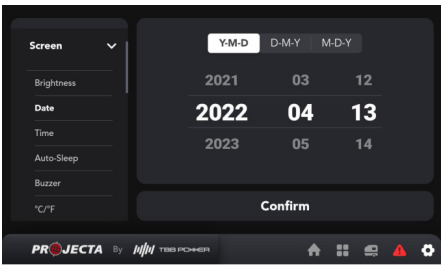
   Monitors the level of gas available within the gas cylinders.



Setting Page

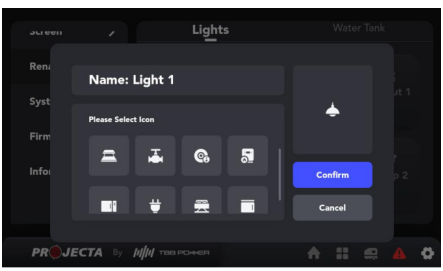
The setting menu allows the user to make basic changes to the system, including:

1) Screen setting.
   The user can set screen brightness level, time and date, sleep time, buzzer enable, temperature unit and language selection.

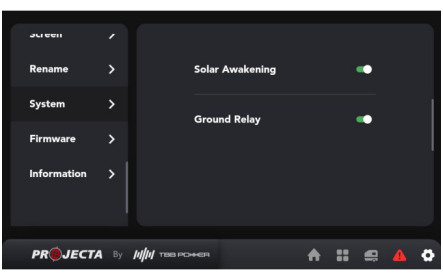


2) Rename.
   In this page, the load and water tank can be renamed.

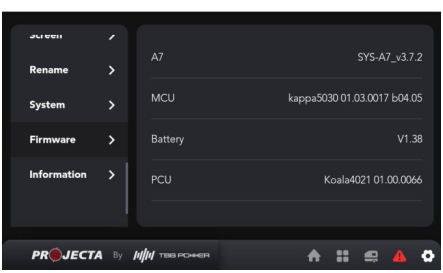
   Further, the icon can also be changed when renaming the load.



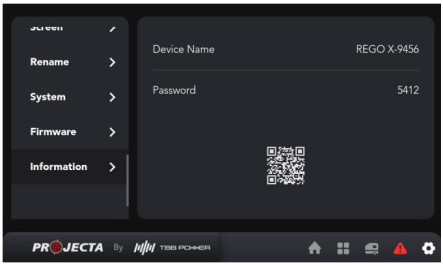
3) System.
   The user can engage the 'Solar Awakening Function' as well as disengage the 'Ground Relay'.
   WARNING: Ground relay MUST be left on for correct RCD operation.



4) Firmware.
   Displays all software revisions of available components.

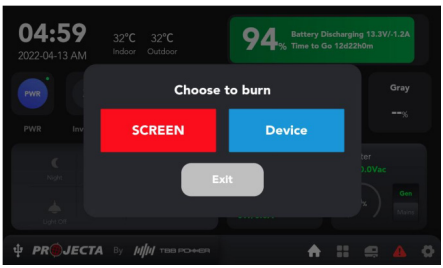


5) QR code information.
After running the app, users can directly scan the QR code to log in without entering the user name and password.



System Updating

This system can be upgraded via a USB stick. First, copy the files that need to be updated to a USB stick and place them all in a folder named IDM. Insert the USB stick into the U disk port located on the back of 7'' colour display. The upgrade dialogue box will pop up on the 7'' colour display as shown right.



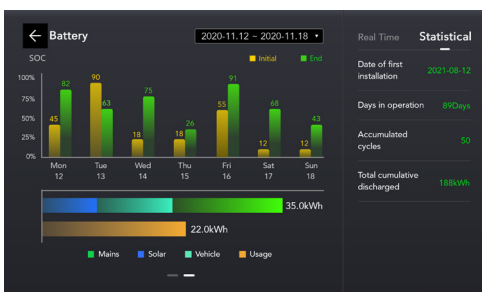
The 'Screen' selection refers to updating the 7'' colour display files while 'Device' refers to system components such as IGCMD, IGCOM, etc. After selecting the correct update action, update each piece of software, one at a time. Power must not be turned off or removed from the system during update process.

The latest software will be available at www.projecta.com.au

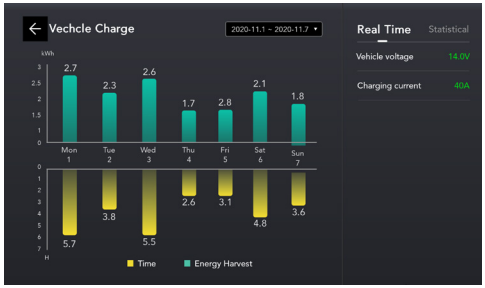
Data Analysis

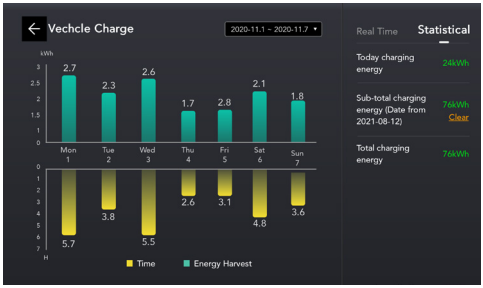
In Region 3 and Region 8 on the main display, double click the corresponding icon to enter the data analysis page. The screen can display the history data of multiple devices in the system.

1) Battery

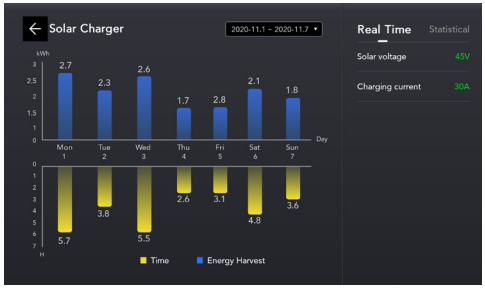


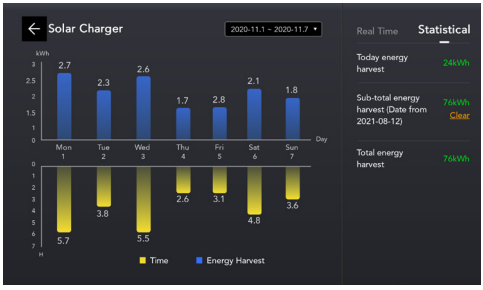
2) Vehicle Charger



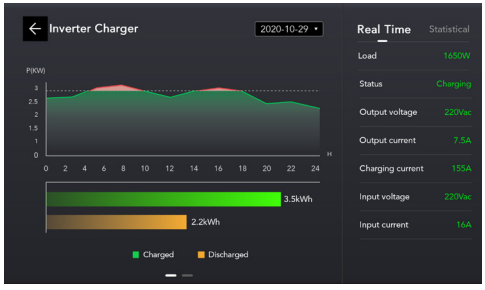


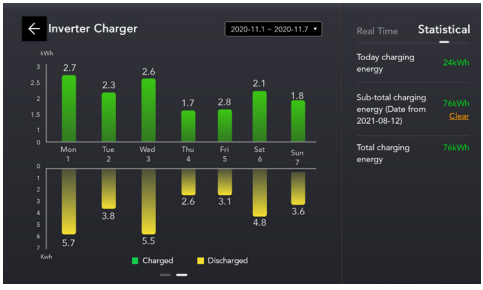
3) Solar Charger





4) Inverter Charger



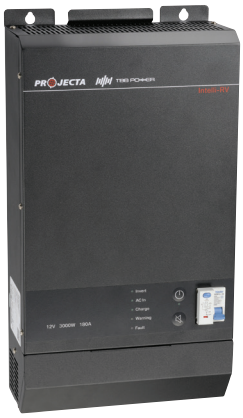


COMPONENT SPECIFICATIONS

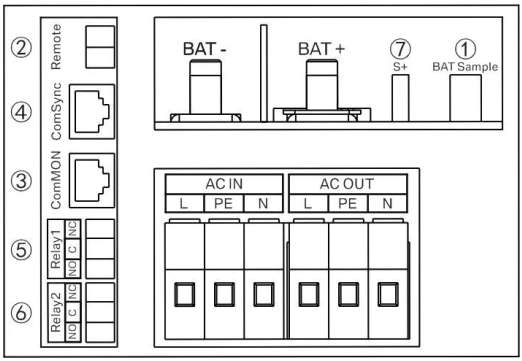
INVCHR2 & INVCHR3 (Add-on)

2000W/3000W 12V INVERTER/CHARGER

Perfect for powering the most demanding 240V appliances on the go this inverter/charger is ideal for operating on or off the grid. An RCD is included to ensure maximum safety for the unit and operator. The inverter/charger is fitted with grid power boost which is great if the shore power or generator is weak. Grid power boost will supplement the shore power to ensure all your appliances can run.



SPECIFICATIONS		
PART NO	INVCHR2	INVCHR3
240V CHARGING		
CHARGE TYPE	5 Stage Automatic	
INPUT	240VAC, 50/60Hz, 32A(MAX)	
OUTPUT	12V, 120A	12V, 180A
BATTERIES SUPPORTED	GEL, AGM, WET, Lithium	
TEMPERATURE COMPENSATION	YES	
INVERTER		
INPUT	12V (10.5V~17V)	
OUTPUT	220/230/240 VAC	
FREQUENCY	50/60 Hz	
OUTPUT POWER	2000W (4000W peak)	3000W (6000W peak)
GRID BOOST OUPUT	24Amps, Mains Supply + 8.3Amps Inverter RCBO limited to 16Amps max.	28Amps, Mains Supply + 12.5Amps Inverter RCBO limited to 16Amps max.
AC TRANSFER	<2m Sec	
OPERATING TEMPERATURE	-20°C ~ 65°C	
WEIGHT	17KG	21KG
IP RATING	IP20	



SIGNAL TERMINAL INTRODUCTION

NO.	LABEL	DEFINITION
1	Bat Sample	Battery temperature and voltage sample.
2	Remote	A dry contact input for remote on/off, often IGN was connected.
3	Com MON	RS485 port for external monitor such as INVCHRD-BT.
4	Com Sync	Communication with PROJECTA's LB-HD series lithium battery, which is able to synchronize lithium battery's charging and discharging strategy
5	Relay1 (NO,C,NC)	Dry contact output control 1(NO,C,NC)
6	Relay2 (NO,C,NC)	Dry contact output control 2(NO,C,NC)
7	S+	Slave charger for starter battery

SC540

5 STAGE MPPT SOLAR CHARGER CONTROLLER WITH 100V INPUT

Get the most out of your solar array using these Maximum Power Point Tracking (MPPT) solar controllers increasing the charging output by up to 30% (compared to PWM Solar controllers).

SPECIFICATIONS	
PART NO	SC540
BATTERY VOLTAGE	12/24/48V
MAXIMUM SOLAR VOLTAGE	100V
STANDBY CURRENT	1mA 12V
CHARGER TYPE	5 Stage
INPUT	100V
CONTROL TYPE	MPPT
BATTERIES SUPPORTED	GEL, AGM, WET, Lithium
TEMPERATURE COMPENSATION	Yes
COMMUNICATION	RS485
STORAGE TEMPERATURE	-40°C ~ 70°C
HUMIDITY	5 – 95%
IP RATING	IP31
WEIGHT	1.4KG
COOLING	Convection

LABEL		DEFINITION
PV	+	Connection terminal for PV array Positive
	-	Connection terminal for PV array Negative
BAT	+	Connection terminal for Battery Positive
	-	Connection terminal for Battery Negative
EPO		EPO contacts, defined for remote on/off.
NC		Output dry contacts.
C		
NO		
RS485		Connection terminal for RS485 communication.
Temp. Sensor		Connection terminal for battery temperature sensor.

PIN DEFINITION OF TEMP SENSOR

PIN	DEFINITION
Pin 1	Battery Positive
Pin 2	Battery Negative
Pin 3	Temperature sensor
Pin 4	Battery Negative

PIN DEFINITION OF RS485 COMMUNICATION PORT

PIN	DEFINITION
Pin 1	
Pin 2	
Pin 3	RS485_A
Pin 4	
Pin 5	
Pin 6	RS485_B
Pin 7	
Pin 8	

PMDCS30/60

DC-DC 12V CHARGER

Smart DC to DC chargers specifically designed for Intelli-RV and Intelli-Grid.

SPECIFICATIONS	
PART NO	PMDCS30/60
CHARGER TYPE	5 Stage
ALTERNATOR INPUT VOLTAGE	12–16V
OUTPUT	12V, <30A/60A
BATTERIES SUPPORTED	GEL, AGM, WET, Lithium
STORAGE TEMPERATURE	-40°C ~ 70°C
OPERATING TEMPERATURE	-40°C ~ 70°C
IP RATING	IP20
WEIGHT	1.0KG
COOLING	Convection
SMART ALTERNATOR	Turn on: 12.2V Turn off: 11.9V
CONVENTIONAL	Turn on: 13.2V Turn off: 12.8V

CONNECTORS AND TERMINALS

Connectors and terminals guide

No.	Print	PMDCS30/60	Remarks	Circuit colours and labelling
1	Alternator	Connects to positive of Alternator	Connects to positive battery post	Red + Label "Aux+"
	BAT-	Connects to negative of Alternator	Connects to negative battery post	Black – Label "Aux-"
2	AUX BAT	Connects to positive of auxiliary battery		Red + Label "Vehicle Batt+"
	BAT-	Connects to negative and negative of auxiliary battery		Black – Label "Vehicle Batt-"
3	COM	For communication of RS485		
4	1	Not used		
	2	Set on for 30Amp, off for 15Amps		
	3	Used to set battery chemistry		
	4			
5	BAT-	Connects to BTS' black cable	For battery temperature sensing	RED Ring Terminal connect to Battery +ve
	Temp	Connects to BTS' white cable		
	V-Sen	Connects to BTS' red cable	For voltage sensing	

Fuse specification

No.	Print	PMDCS30	PMDCS60	Protection for
6	Alternator	30A/32VDC	Internal	Input from alternator
7	AUX BAT	20A/32VDC	Internal	Output to charge auxiliary battery

IGCMD

INTELLI-GRID AUXILIARIES CONTROLLER

This is the input and output controller, with water sensors and switchable devices being connected with built in fused outputs.

SPECIFICATIONS	
PART NO	IGCMD
INPUT VOLTAGE	9~32V
INPUT CURRENT	<60A
OUTPUTS	2 x 15A Relay with Bypass, 7 x 15A Relay, 4 x Dry contact
INPUTS	4 x Dry contact, 4 x conductive water measurement
COMMUNICATION	CAN bus, RS485, RF

OUTPUT					
A5-1	A5-2	A5-3	A5-4	A5-5	A1-1
A1-2	GND	GND	GND	GND	A5-6
GND	GND	GND	GND	GND	A5-7

OUTPUTS	FUSE	OUTPUT LABEL
A5-1 (15A)	A5-1 (15A)	Main Lights
A5-2 (15A)	A5-2 (15A)	Kitchen
A5-3 (15A)	A5-3 (15A)	EXT. 12V
A5-4 (15A)	A5-4 (15A)	TV
A5-5 (15A)	A5-5 (15A)	Bedroom
A5-6 (15A)	A5-6 (15A)	Bathroom
A5-7 (15A)	A5-7 (15A)	Lounge
A1-1 (15A) With optional Bypass fuse	A1-1 (15A)	PUMP 1
A1-2 (15A) With optional Bypass fuse	A1-2 (15A)	PUMP 2
Water Sensor 1		Tank 1
Water Sensor 2		Tank 2
Water Sensor 3		Tank 4
Water Sensor 4		Tank 3

IGCOM

INTELLI-GRID CONTROLLER

This is the brain of the INTELLI-Grid system. Controlling communications to external sensors and devices and shutting down power on non essential loads when the battery power gets low.

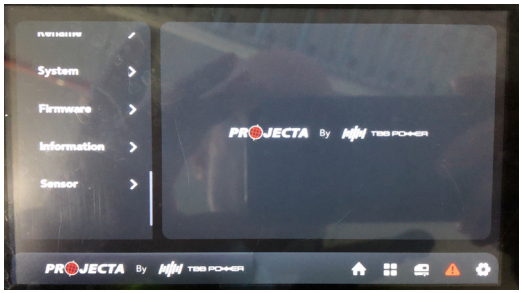
SPECIFICATIONS	
PART NO	IGCOM
INPUT	12V
WORKING CURRENT	80mA
STANDBY CURRENT	5mA
COMMUNICATION	CAN bus, RS485 Bluetooth
WORKING TEMPERATURE	-25°C ~ 60°C
STORAGE TEMPERATURE	-30°C ~ 85°C
WEIGHT	200g
IP RATING	IP20

INSTRUCTIONS ON HOW TO PAIR THE GAS SENSORS

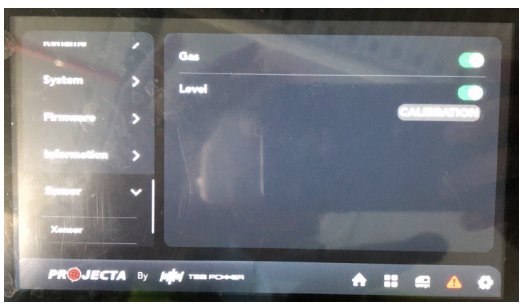
Ensure you are using the LCI Lippert Bottle check Bluetooth Gas Gauge.

Enable the GAS Feature.

Go to the Setting Page.

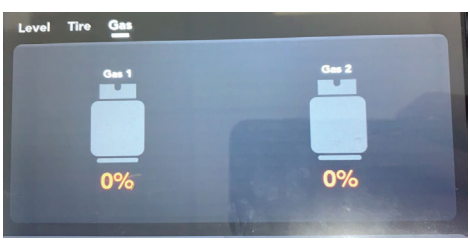


Find the Sensors Page and enable it.



Paring the Sensors.

Long press the "SYNC" button on the gas sensor until a value is displayed on the GAS.



Repeat the process to pair second gas sensor.

IGD-BT7

7'' COLOUR DISPLAY

The 7" colour display, enables complete control of the RV or commercial application. Its smart, intuitive design provides all the vital information with a single press of a button.

SPECIFICATIONS	
PART NO	IGD-BT7
WORKING VOLTAGE	12V
WORKING CURRENT	350mA Screen ON, 200mA Screen OFF
RESOLUTION	1024 x 600
COMMUNICATION	RS485.CAN.Bluetooth
WORKING TEMPERATURE	-30°C ~ 70°C
STORAGE TEMPERATURE	-30°C ~ 85°C
WEIGHT	200g
IP RATING	IP 20

BATTERIES

LB200-HD (Add-on)

12V HIGH DISCHARGE 200AH LITHIUM BATTERY

LB200-HD boast impressive capabilities and are ideal for 4WDs and caravans with high power demands.

SPECIFICATIONS	
PART NO	LB200-HD
NOMINAL VOLTAGE	12.8V
NOMINAL CAPACITY	200Ah
NOMINAL ENERGY	2560Wh
CHARGE VOLTAGE	14.2V
DISCHARGE CUT-OFF VOLTAGE	11.2V
STANDARD CHARGE CURRENT	100 Amps
MAXIMUM CHARGE CURRENT	200 Amps
MAXIMUM DISCHARGE CURRENT	200 Amps
PEAK DISCHARGE CURRENT	300 Amps (10Mins)
OPERATING TEMPERATURE	-20°C ~ 60°C
MAXIMUM NUMBER OF BATTERIES IN PARALLEL	4
NUMBER OF DISCHARGE CYCLES	3000
WEIGHT	22KG
IP RATING	IP20

LB400-HD (Add-on)

12V HIGH DISCHARGE 400AH LITHIUM BATTERY

The LB400-HD boasts an astonishing 400Ah capacity and a market leading 300A discharge capability, making it ideal to partner with high current drawing appliances such as 3000W inverters.

SPECIFICATIONS	
PART NO	LB400-HD
NOMINAL VOLTAGE	12.8V
NOMINAL CAPACITY	400Ah
NOMINAL ENERGY	5120Wh
CHARGE VOLTAGE	14.2V
DISCHARGE CUT-OFF VOLTAGE	11.2V
STANDARD CHARGE CURRENT	100 Amps
MAXIMUM CHARGE CURRENT	200 Amps
MAXIMUM DISCHARGE CURRENT	200 Amps
PEAK DISCHARGE CURRENT	300 Amps (10Mins)
OPERATING TEMPERATURE	-20°C ~ 60°C
MAXIMUM NUMBER OF BATTERIES IN PARALLEL	4
NUMBER OF DISCHARGE CYCLES	3000
WEIGHT	42.5KG
IP RATING	IP20

NOTE: For the battery to work (if it is not connected to INTELLI-Grid), the green connector on top of the battery must be connected with pins 1& 2 (remote) shorted with a small bridging wire. The Power switch must be turned on too.

PMWSW4 (Add-on)

Wireless switches make it easy to install additional switches if required. i.e. additional bedroom switch is easy as 2 screws for installation.

SPECIFICATIONS	
PART NO	PMWSW4
RATED VOLTAGE	5V
BATTERY TYPE	2 x CR2032
COMMUNICATION	RF 433Mhz
EFFECTIVE RANGE	Outdoor 30m, Indoor 15m
IP RATING	IP20
WORKING TEMPERATURE	-20°C ~ 60°C
MOUNTING	Surface
WEIGHT	40g

WATER TANK PROBE (Add-on)

For Intelli-Grid system, a maximum of 4 probes can be monitored.

Note: Always check the probe required for the water tank before purchase. There are 2 probe styles.

PMWS200

- Side installation
- Suitable for water tank
- Depth >200mm

PMWS400

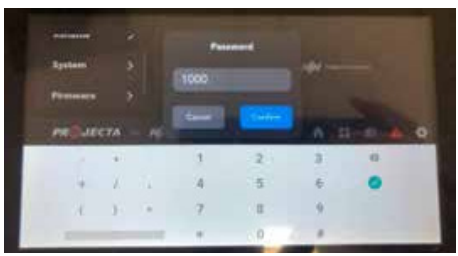
- Side installation
- Suitable for water tank
- Depth <400mm

To program the wireless switches (P/n: PMWSW4) follow these steps.

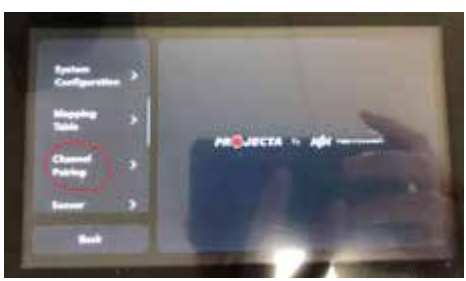
1. Turn on the INTELLI-Grid screen.

2. Go to the home page. Press the setting button in the bottom righthand corner.

3. Go to the bottom of the menu selection the left, tap the blank space 3 times and enter password 1000.

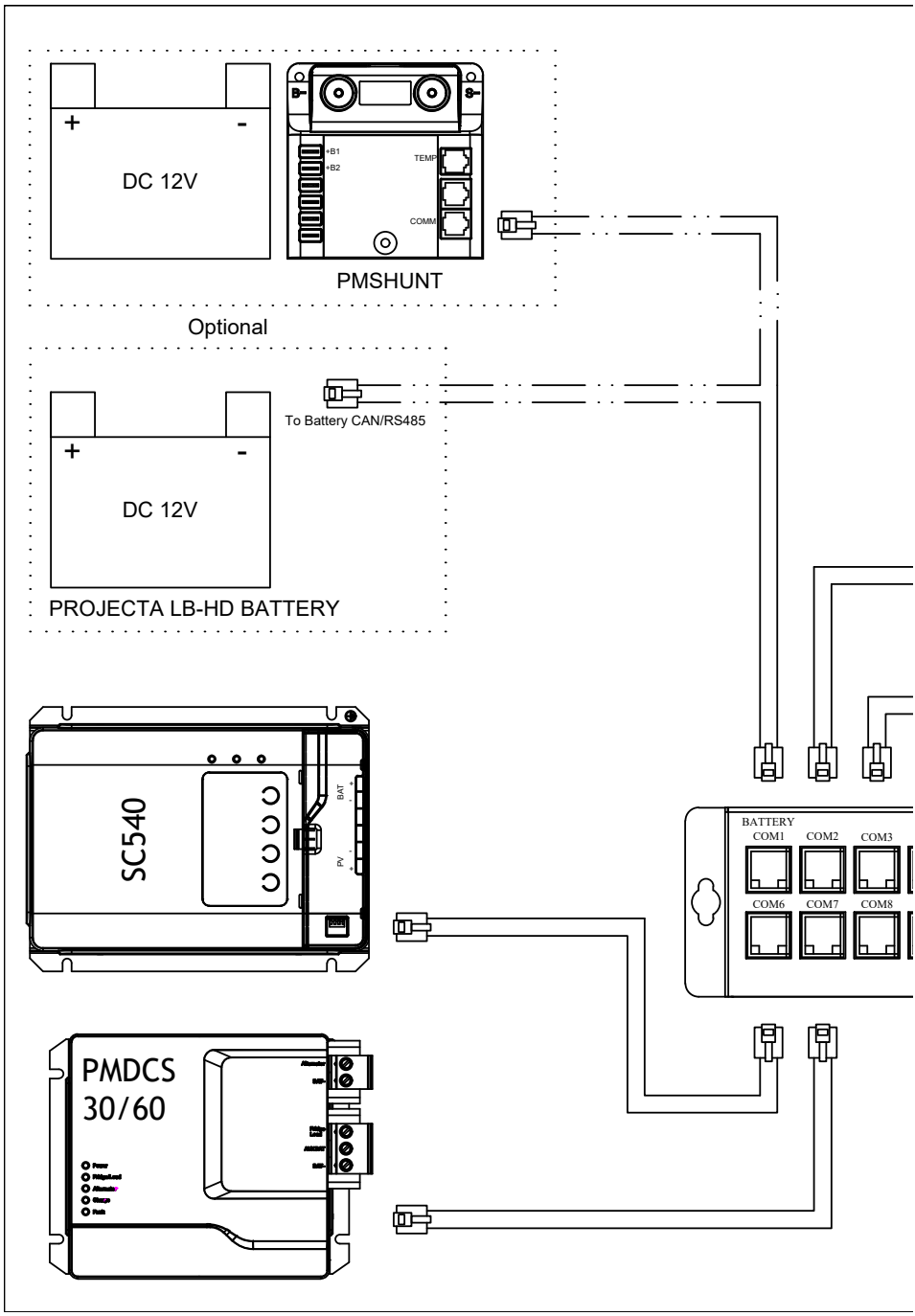


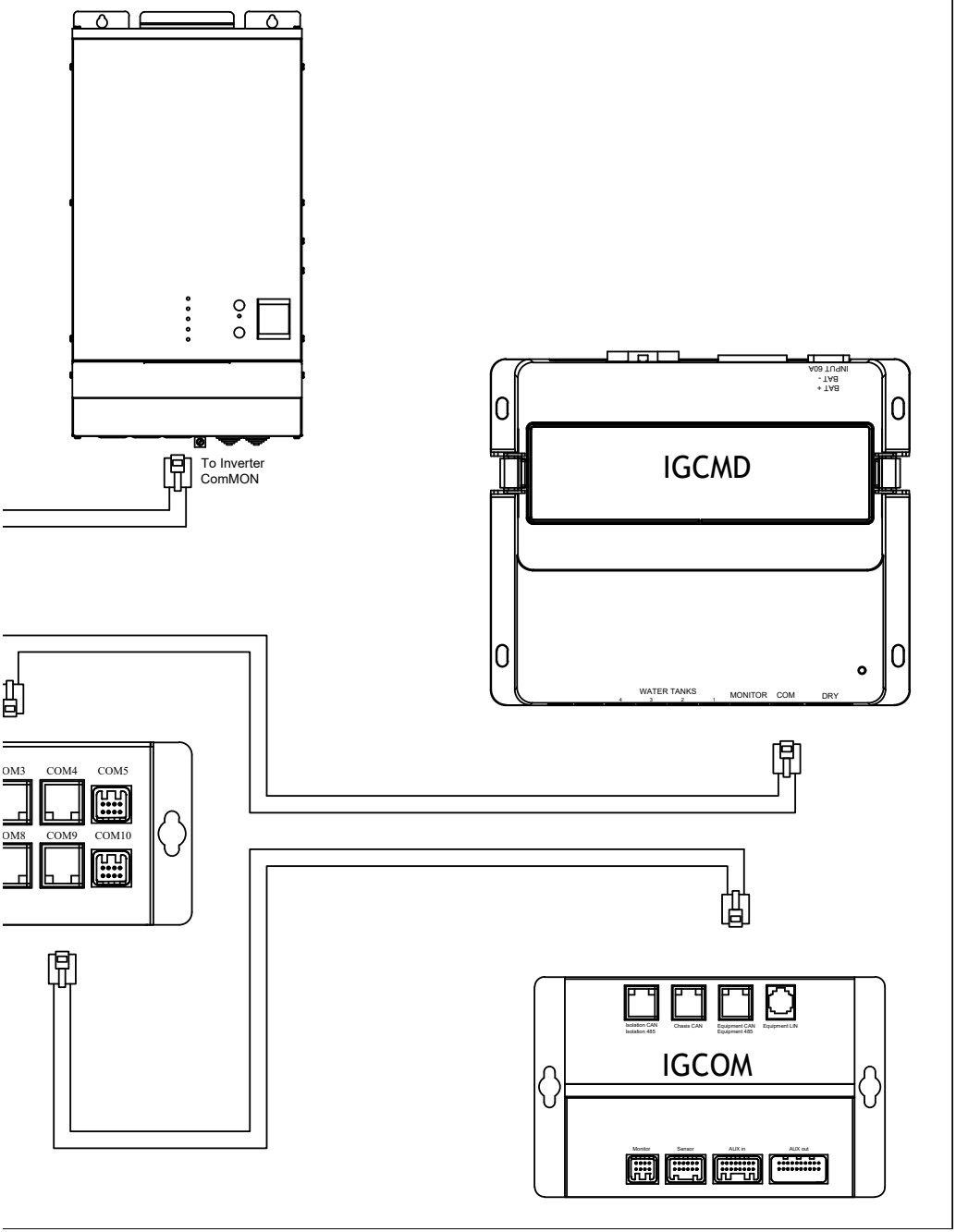
4. Press "Channel Pairing" on the screen then press the + symbol on the screen.

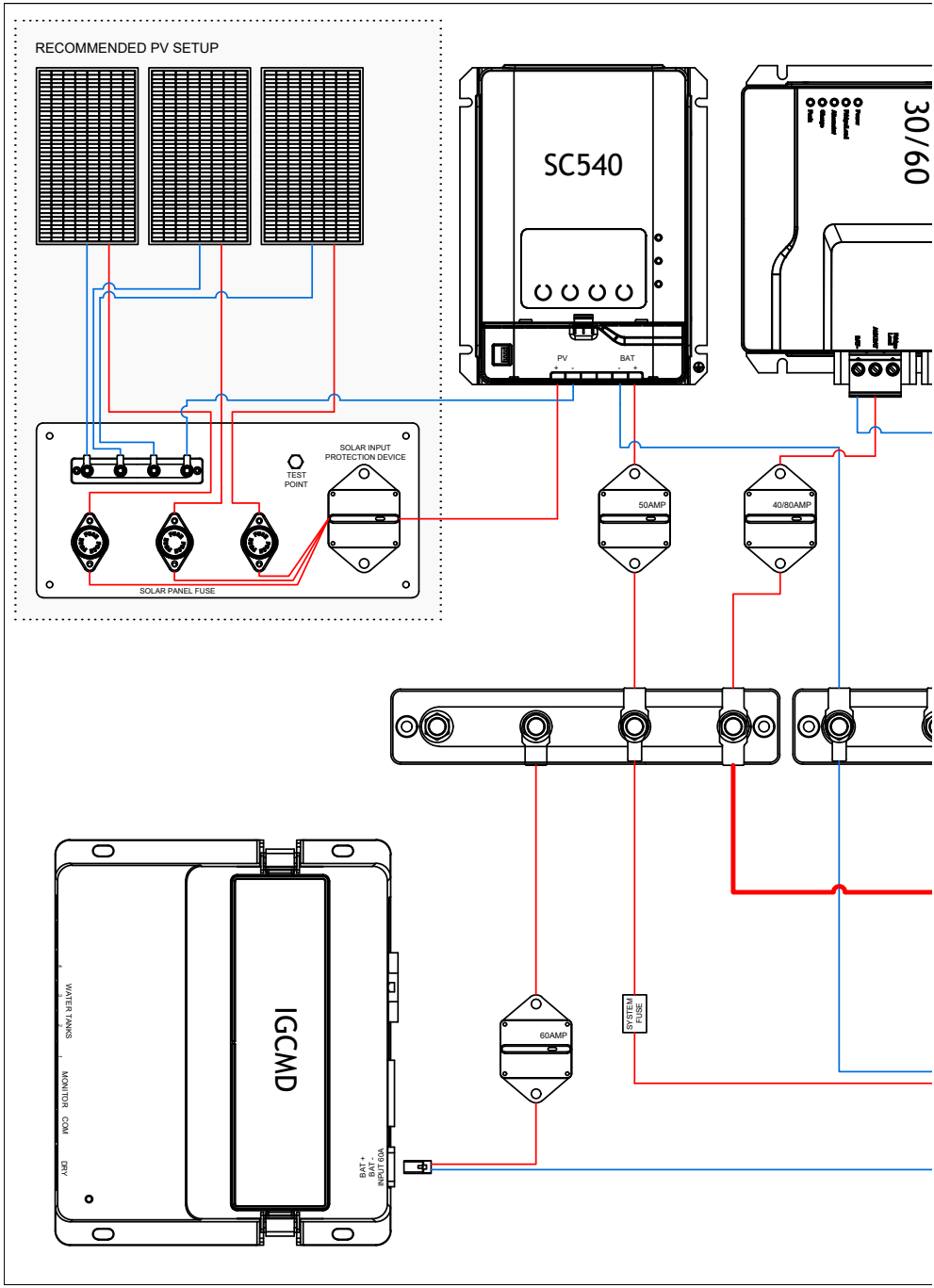


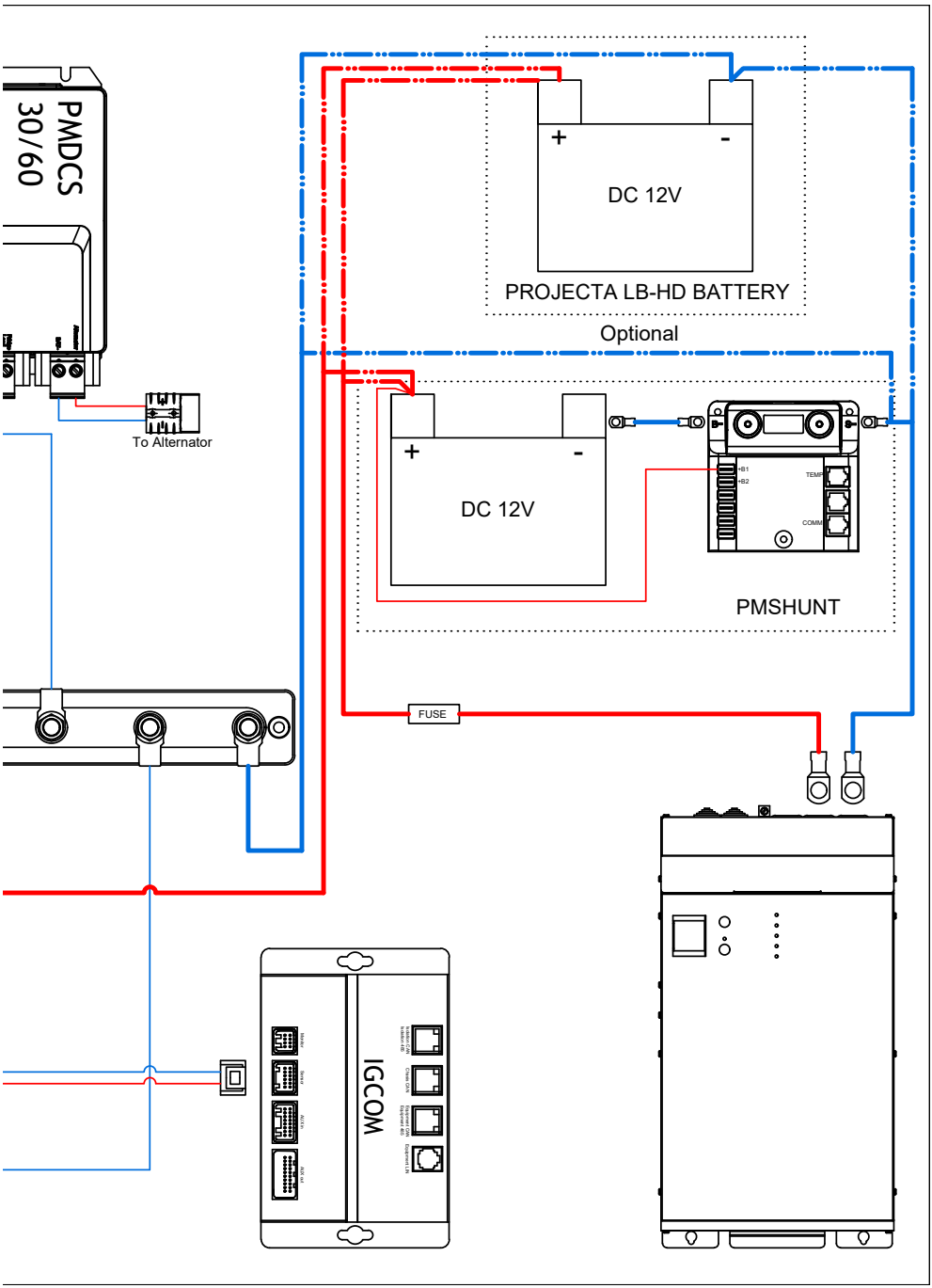
5. Follow the screen prompts which will mean you will need to press one of the buttons on the 4-position switch.

WIRING DIAGRAMS




To Inverter
ComMON
BAT +
BAT -
INPUT 60A
IGCMD
WATER TANKS
MONITOR
COM
DRY
OM3
COM4
COM5
OM8
COM9
COM10
Isolation CAN
Isolation 485
Chassis CAN
Equipment CAN
Equipment 485
Equipment LIN
IGCOM
Monitor
Sensor
AUX in
AUX out


RECOMMENDED PV SETUP
SC540
30/60
PV
BAT
SOLAR INPUT
PROTECTION DEVICE
TEST
POINT
SOLAR PANEL FUSE
50AMP
40/80AMP
IGCMD
WATER TANKS
MONITOR COM
DRY
BAT +
BAT -
INPUT 60A
60AMP
SYSTEM
FUSE


PMDCS
30/60
To Alternator
+
-
DC 12V
PROJECTA LB-HD BATTERY
Optional
+
-
DC 12V
PMSHUNT
FUSE
IGCOM

WARRANTY STATEMENT

Applicable only to product sold in Australia

Brown & Watson International Pty Ltd of 1500 Ferntree Gully Road, Knoxfield, Vic., telephone (03) 9730 6000, fax (03) 9730 6050, warrants that all products described in its current catalogue (save and except for all bulbs and lenses whether made of glass or some other substance) will under normal use and service be free of failures in material and workmanship for a period of five (5) years (unless this period has been extended as indicated elsewhere) from the date of the original purchase by the consumer as marked on the invoice. This warranty does not cover ordinary wear and tear, abuse, alteration of products or damage caused by the consumer. Projecta solar panels are covered by a 1 year warranty for materials and workmanship and a 20 year warranty for at least 80% power output.

To make a warranty claim the consumer must deliver the product at their cost to the original place of purchase or to any other place which may be nominated by either BWI or the retailer from where the product was bought in order that a warranty assessment may be performed. The consumer must also deliver the original invoice evidencing the date and place of purchase together with an explanation in writing as to the nature of the claim.

In the event that the claim is determined to be for a minor failure of the product then BWI reserves the right to repair or replace it at its discretion. In the event that a major failure is determined the consumer will be entitled to a replacement or a refund as well as compensation for any other reasonably foreseeable loss or damage.

This warranty is in addition to any other rights or remedies that the consumer may have under State or Federal legislation.

IMPORTANT NOTE

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 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.

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IS635

Issue 1: 15/07/2024