INTELLIJay by PROJECTA

POWER MANAGEMENT SYSTEMS

FOR YOUR JAYCO



Jayco
Your GREAT ESCAPE

INTELLI-JAY
POWER MANAGEMENT RANGE

Projecta's Intelli-Jay range is designed exclusively to meet the lighting and electrical requirements of Jayco Caravans, Campers and Motorhomes. Offering a complete power management solution, Intelli-Jay allows you the freedom to control and monitor lighting, electrical and water systems from the comfort of your smart phone or tablet, via Bluetooth.

PM100-BTJ System

PM235J-NODE System



Three innovative systems make up the Intelli-Jay range – check with your dealer to confirm which is fitted to your Jayco model. At the heart of all Intelli-Jay systems is a transformer that unifies all wiring in your Jayco at a central point, managing the charging of your house battery, solar (if fitted) and the distribution of DC power to appliances, pumps and lighting throughout. Intelli-Jay incorporates a host of safeguards, including short circuit, reverse polarity, overload, over-temperature and over-voltage protections for complete peace of mind on your adventure.

Bluetooth®

PM200-BTJ System



INTELLI-JAY
CONNECTED LIKE NEVER BEFORE

(PM200-BT pictured*)

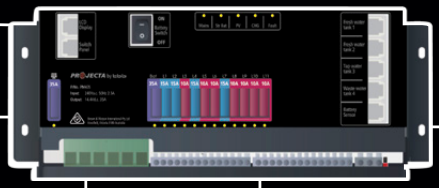


BLUETOOTH® CONTROL
VIA SMART PHONE

LCD MONITOR

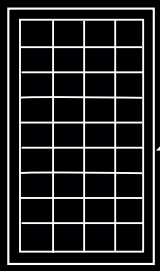


TRANSFORMER UNIT

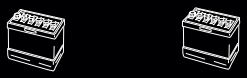


SPHERE WIRELE

SOLAR PANEL



VEHICLE BATTERY HOUSE BATTERY



Wet, AGM, Gel or Lithium

WATER PUMP



Managing power to run your 12V DC appliances and



Pump



Hot Water Service



Television



Coffee Maker/ Kettle



Stove Hot Plates



Refrigerator



Lights

*Schematic is an example only and installed features/appliances may vary

ESS

LIGHTING SWITCHES

TANK LEVEL MONITORING

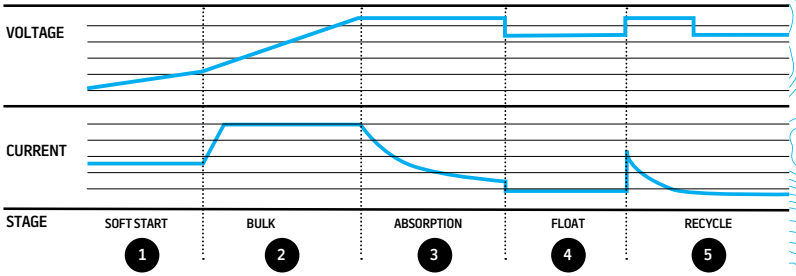
lighting

Music

Microwave Oven

INTELLI-JAY BATTERY CHARGING CYCLE

5 STAGE CHARGING



SOFT START
Increases battery life by gently starting to charge the battery 50% of bulk.

BULK
Reduces charging time by delivering maximum charge to set voltage.

ABSORPTION
Ensures a full charge to the battery without overcharging.

FLOAT
Float charge maintains the battery at 100% charge.

RECYCLE
Restarts the charge cycle every 10 days.



INTELLI-JAY PM100-BTJ System



30A
35A

30A Charger
35A Power Supply

Voltage Sensitive Relay engages and disengages with engine operation*

x3

Water tank monitoring

Control/monitor via smart phone

The Intelli-Jay PM100-BTJ works hard behind the scenes so you can focus on the real priorities: your adventure, your time away and your relaxation. Set and forget. Key information is here when you need it: view vehicle and house battery levels, water and waste tank levels, charging and load status from the comfort of your phone or tablet using the Bluetooth powered smart app. When it's time for lights out, turn it all off from your bedside with a simple touch of the "PWR" button in the app. Rest easy knowing the Low Voltage Disconnect won't leave you with a flat battery. Be confident that when you plug in to mains power, your battery is getting most efficient charge possible thanks to Intelli-Jay's advanced 5 stage charging system.

*100A for 30mins 60A continuous

SPECIFICATIONS: PM100-BTJ System

MODEL PM100J		
ELECTRICAL SPECIFICATIONS		
Mains	Nominal input voltage (V)	240±10%VAC 50/60Hz
	Power factor	0.95
	Input current at full load	2.5A
Battery	Vehicle battery	12VDC
	Vehicle battery voltage range	12.8-16VDC
	House battery	12VDC
	House battery voltage range	10.5-16VDC
Voltage Sensitive Relay	Relay specification	12Vdc 60A Continuous, Peak current 100A, 30min
	Connect voltage	13.4V (Lead Acid) / 13.7V (Lithium)
	Connection delay time	10 sec
	Disconnect voltage	12.8V (Lead Acid) / 13.3V & ←2A (Lithium)
	Disconnect delay time	60 sec
	High voltage limit	16.0VDC
House battery charger Charge / Power Supply switch set to OFF	Charge Algorithms	5 steps, soft start, bulk, absorption, float, recycle
	Battery type	AGM, GEL, WET, LiFePO4
	Start Voltage	2VDC (lead acid), 0VDC (lithium)
	Bulk current	30A
	Absorption Voltage	14.1/14.4/14.4/14.7VDC (Gel/AGM/LFP/Wet)
	Float voltage	13.5/13.5/13.5/13.8VDC (Gel/AGM/LFP/Wet)
Power Supply Mode AC Charging	Norminal output voltage	12.8±0.2 VDC
	Rated output current	35A (Continuous)
Efficiency		88%
Working temperature		-40°C~+65°C (50°C: full load; 60°C:20A; 65°C: shutdown the output)
OTHERS		
Battery Disconnect (LVD)	Disconnect voltage	10.5VDC (lead acid), 11.2VDC (lithium)
	Delay off time	60 sec
	Reconnect voltage	11.5VDC (lead acid), 12.2VDC (lithium)
Current draw on Battery	240VAC is off, no vehicle charging	200mA
	When battery disconnected by LVD	60mA
	When insufficient voltage available	When remote switch is turn off = 0mA
Fused outputs	Rated Current	8 x 10A + 2 x 15A
Protection	Short circuit on output	Fuse protected
	Reverse polarity	
	Overload protection	
	Battery charger over temperature	Automatic Shutdown
	Battery over voltage limits	
PHYSICAL SPECIFICATIONS		
Dimensions (L*W*H)		270 x 197 x 70mm
Weight (kg)		2.6kgs
Enclosure		Steel Case
Battery terminals		M4 Screw (16mm²)
Load terminals		M3 Screw (4mm²), M3.5 Screw (6mm²)
Cooling		Automatic fan

INTELLI-JAY PM235J-NODE System





Bluetooth®

30A
35A

30A Charger
35A Power Supply

Voltage Sensitive Relay engages and disengages with engine operation*

PWM Solar Input (800W, 30A)

x4

Water tank monitoring and pump control

Control/monitor via smart phone

Incorporating a 30A PWM solar charge controller, the Intelli-Jay PM235J-NODE expands on the ‘set and forget’ mantra of the PM100-BTJ, covering the needs of those with solar power fitted. PM235J-NODE will cleverly take charge from both solar panels as well as your vehicle alternator for optimum charging efficiency. In addition, the Bluetooth smart app can monitor up to 4 water and waste tank levels, plus advanced state of charge, charging input source, load usage information and temperature. It also features separate on/off buttons for your Hot Water System and Water Pump, so you can turn them on/off without using the whole system “PWR” on/off button.

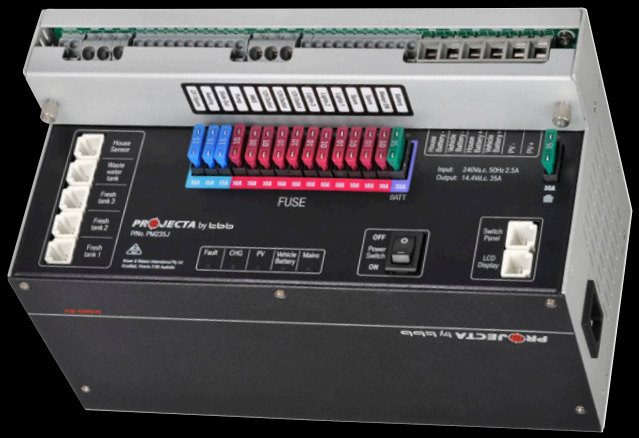
*100A for 30mins 60A continuous

SPECIFICATIONS: PM235J-NODE System

MODEL PM235J		
ELECTRICAL SPECIFICATIONS		
Mains	Nominal input voltage (V)	240±10%VAC 50/60Hz
	Power factor	0.95
	Input current at full load	2.5A
Battery	Vehicle battery	12VDC
	Vehicle battery voltage range	12.8-16VDC
	House battery	12VDC
	House battery voltage range	10.5-16VDC
Solar	Charger type	PWM
	Open circuit voltage	25VDC
	Max charging current	30A
	Maxium solar input	800W
Charging Relay	Relay specification	12VDC 60A continuous, peak current 100A, 30mins
	Connect voltage	Lead Acid - 13.4VDC LiFePO4 - 13.7VDC
	Connect delay time	10sec
	Disconnect voltage	Lead Acid - 12.8VDC LiFePO4 - 13.3VDC←2A
	Disconnect delay time	60sec
	High voltage limit	16.0VDC
Charger Mode	Charge Algorithms	5 Stage
	Battery type	AGM/GEL/LFP ($LiFePO_4$)// WET
	Start voltage	2V for Lead Acid 0V for LFP
	Bulk current	30A (Max)
	Absorption voltage	(14.4/14.1 /14.4/14.7) ±0.15VDC
	Float voltage	(13.5/13.5 /13.5/13.7) ±0.13VDC
Power Supply Mode	Nominal output voltage	12.8±0.2 VDC
	Rated output current	35A (Continuous)
Efficiency		88%
Working temperature		-40°C~+65°C (50°C:full load; 60°C:20A; 65°C: shutdown the output)

MODEL PM235J			
ELECTRICAL SPECIFICATIONS			
Battery Disconnect (LVD)	Disconnect voltage	AGM/GEL/WET	10.5VDC (default)
		LFP ($LiFePO_4$)	11.2 VDC (Default)
	Delay off time	60 sec	
	Reconnect voltage	AGM/GEL/WET	11.5VDC (default)
		LFP ($LiFePO_4$)	12.2 VDC (Default)
Current draw on Battery	240VAC is off, no vehicle charging	330mA	
	Load switch off	255mA	
	LVD off, Service←10.5V current draw on battery	180mA	
	Battery switch OFF ←10V draw on battery	0mA	
Fused outputs	Numbers	14	
	Rated Current	10A x 11, 15A x 3	
Protection	Short circuit on output	Fuse blown	
	Reverse polarity	Diode reverse isolation	
	Overload protection	Derate the output until overload is removed	
	Battery charger over temperature	Shut down PM235J	
	Ambient over temperature	Alarm	
	Battery over voltage limits	Battery charger disconnect, loads disconnect	
PHYSICAL SPECIFICATIONS			
Dimensions (L*W*H)	264×164×128mm		
Weight	3kgs		
Enclosure	Steel Case		
Battery Connector	M4 Screw (16mm^2)		
Load Connector	Wago804-114 (2.5mm^2)	Wago2706-103 (6mm^2)	
Cooling	Forced cooling		
Protection category	IP20		
Approvals			
Electrical	AS/NZS 60335.2.29		
EMC	CISPR14		

INTELLI-JAY PM200-BTJ System





Bluetooth®

30A Charger
35A Power Supply

Voltage Sensitive Relay engages and disengages with engine operation*

PWM Solar Input (800W, 30A)

x4

Water tank monitoring and pump control

Control/monitor via smart phone

Remote mounted LCD screen

Convenience when and where you need it. The Intelli-Jay PM200-BTJ shares the same specifications as the PM235J-NODE, but comes equipped with a remote LCD screen that allows you to monitor and control the system from where it is mounted, without needing to use the Bluetooth smart app. Of course, if you prefer to use your phone or tablet, you can – the wonderfully clear LCD screen syncs brilliantly with the smart app to give you a wealth of system information from either source. It also includes touch buttons like the app, for remote operation from the LCD, which is dimmable so you don't end up with an unintended night light. See page x for an explanation of the LCD screen layout.

*100A for 30mins 60A continuous

SPECIFICATIONS: PM200-BTJ System

MODEL PM235J		
ELECTRICAL SPECIFICATIONS		
Mains	Nominal input voltage (V)	240±10%VAC 50/60Hz
	Power factor	0.95
	Input current at full load	2.5A
Battery	Vehicle battery	12VDC
	Vehicle battery voltage range	12.8-16VDC
	House battery	12VDC
	House battery voltage range	10.5-16VDC
Solar	Charger type	PWM
	Open circuit voltage	25VDC
	Max charging current	30A
	Maxium solar input	800W
Charging Relay	Relay specification	12VDC 60A continuous, peak current 100A, 30mins
	Connect voltage	Lead Acid - 13.4VDC LiFePO4 - 13.7VDC
	Connect delay time	10sec
	Disconnect voltage	Lead Acid - 12.8VDC LiFePO4 - 13.3VDC←2A
	Disconnect delay time	60sec
	High voltage limit	16.0VDC
Charger Mode	Charge Algorithms	5 Stage
	Battery type	AGM/GEL/LFP ($LiFePO_4$)// WET
	Start voltage	2V for Lead Acid 0V for LFP
	Bulk current	30A (Max)
	Absorption voltage	(14.4/14.1 /14.4/14.7) ±0.15VDC
	Float voltage	(13.5/13.5 /13.5/13.7) ±0.13VDC
Power Supply Mode	Nominal output voltage	12.8±0.2 VDC
	Rated output current	35A (Continuous)
Efficiency		88%
Working temperature		-40°C~+65°C (50°C:full load; 60°C:20A; 65°C: shutdown the output)

MODEL PM235J			
ELECTRICAL SPECIFICATIONS			
Battery Disconnect (LVD)	Disconnect voltage	AGM/GEL/WET	10.5VDC (default)
		LFP ($LiFePO_4$)	11.2 VDC (Default)
	Delay off time	60 sec	
	Reconnect voltage	AGM/GEL/WET	11.5VDC (default)
		LFP ($LiFePO_4$)	12.2 VDC (Default)
Current draw on Battery	240VAC is off, no vehicle charging	330mA	
	Load switch off	255mA	
	LVD off, Service←10.5V current draw on battery	180mA	
	Battery switch OFF ←10V draw on battery	0mA	
Fused outputs	Numbers	14	
	Rated Current	10A x 11, 15A x 3	
Protection	Short circuit on output	Fuse blown	
	Reverse polarity	Diode reverse isolation	
	Overload protection	Derate the output until overload is removed	
	Battery charger over temperature	Shut down PM235J	
	Ambient over temperature	Alarm	
	Battery over voltage limits	Battery charger disconnect, loads disconnect	
PHYSICAL SPECIFICATIONS			
Dimensions (L*W*H)	264×164×128mm		
Weight	3kgs		
Enclosure	Steel Case		
Battery Connector	M4 Screw ($16mm^2$)		
Load Connector	Wago804-114 ($2.5mm^2$)	Wago2706-103 ($6mm^2$)	
Cooling	Forced cooling		
Protection category	IP20		
Approvals			
Electrical	AS/NZS 60335.2.29		
EMC	CISPR14		

GETTING CONNECTED:
PM100-BTJ System

Connecting to a Smart Device (BlueTooth®)

1. Go to your smart device's App Store (iPhone/iPad) or Play Store (Android) and search for the Jayco"Intelli-Jay PM100-BTJ" app. Download this app to your smart device.
2. Ensure Bluetooth® is enabled on your smart device and that permission is granted for the app to use Bluetooth and discover new connections.
3. Open the app and it will begin searching for your system's PMBTJ-02 Bluetooth® node. When this node shows up in the device list, tap and you will be prompted to enter a pairing code.
4. The default pairing code Is the last four (4) digits of your PMBTJ-02 node's serial number. You can find this serial number printed on the side of the node.

If the Bluetooth node does not show up in the device list, ensure the following:

- You are within close enough proximity to the PM100-BTJ system
- The PM100J transformer is connected to sufficient power and operational
- The Bluetooth® node is properly connected to the PM100J transformer
- Your smart device operating system is up to date (iOS 8.0 and higher, or Android 4.4 and higher)

Scan the QR with your phone or tablet to see a "how to" video





Using the Intelli-Jay PM100-BTJ App

1. Once you have established a paired connection with your smart device, the app will take you to its home screen where you may see a variety of system parameters.
2. From here you can access the settings menu via the white cog/gear in the top right of the screen. This menu allows you to choose your battery type from AGM, GEL, LFP (lithium) or WET. Note: your Jayco dealer has already selected the most appropriate option for you here.
3. It is recommended that you update your PM100-BTJ system to the latest firmware – this can be done by via the update function in the settings menu (your system may already be up to date). Please ensure you remain in close proximity to the system and do not disconnect power to the system or your phone during an update.
4. From the home screen, the PM100-BTJ app allows the user to remotely monitor key aspects of the power system from the convenience of their phone or tablet, as well as remotely switch the output load's power on or off.

The following information is displayed in the app's home screen:

- House battery volts and amps (charge and discharge)
- Vehicle battery voltage
- Charging mode/status
- Power input source (grid or VCR)
- Water tank levels (when sensors connected/installed/ operational)
- Load status and power button

Note: The power button may be used to turn output load power on or off, resulting in startup or shutdown of all appliances and lighting wired to outputs on the PM100J transformer. This switch only affects output load - the app will continue monitoring parameters and retain its Bluetooth connection to your smart device, even with the load off.

GETTING CONNECTED:
PM235J-NODE System & PM200-BTJ System

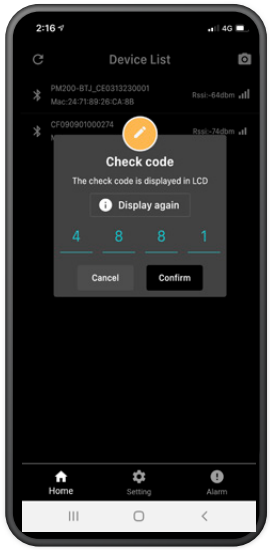
Connecting to a Smart Device (BlueTooth®)

1. Go to your smart device's App Store (iPhone/iPad) or Play Store (Android) and search for the Jayco "Intelli-Jay PM200-BTJ" app. Download this app to your smart device.
2. Ensure Bluetooth® is enabled on your smart device and that permission is granted for the app to use Bluetooth® and discover new connections.
3. Open the app and it will begin searching for either your PMLCD-BTJ LCD monitor (for PM200-BTJ systems), or your PMBTJ-02 Bluetooth® node (for PM235J-NODE systems). When it shows up in the device list, tap and you will be prompted to enter a pairing code.
4. This pairing code will be displayed on the LCD monitor/screen of PM200-BTJ systems. For PM235-NODE systems, the pairing code is the last 4 digits of the serial number located on the side of the PMBTJ-02 Bluetooth® node. Enter this code on your smart device and confirm.

If your system does not show up in the device list, ensure the following:

- You are within close enough proximity to the LCD monitor or Bluetooth® node.
- The LCD monitor or Bluetooth® node is properly connected to the PM235J transformer and operational
- Your smart device operating system is up to date (iOS 8.0 and higher, or Android 4.4 and higher)

Scan the QR with your phone or tablet to see a "how to" video





Using the Intelli-Jay PM200-BTJ App

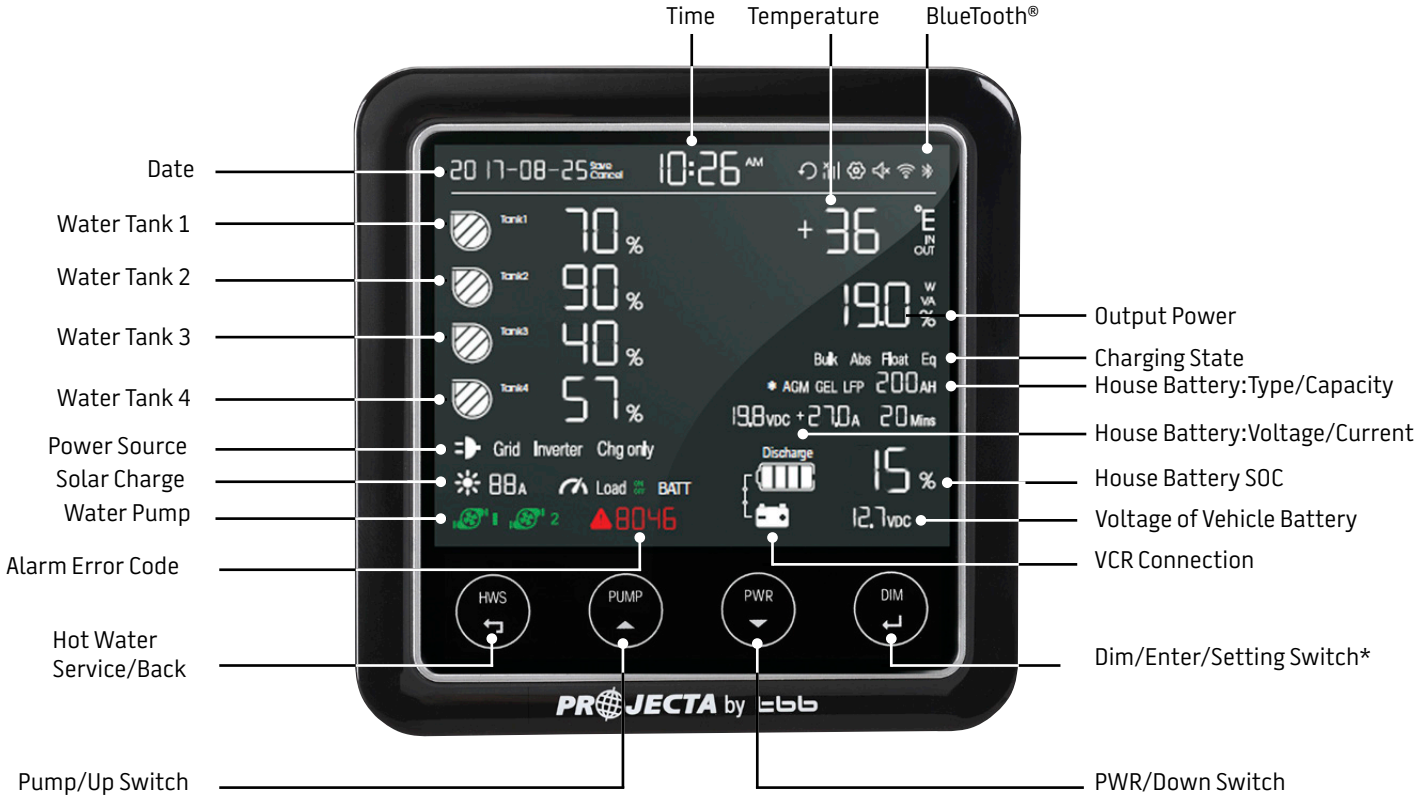
1. Once you have established a paired connection with your smart device, the app will take you to its home screen where you may see a variety of system parameters.
2. From here you can access the settings menu via the white cog/gear at the bottom of the screen - depending on your device, you may need to scroll down to reveal this. This menu allows you to choose your battery type from AGM, GEL, LFP (lithium) or WET, as well as set your battery capacity. Note: your Jayco dealer has already selected the most appropriate options for you here.
3. It is recommended that you update your PM200-BTJ or PM235J-NODE system to the latest firmware – this can be done by via the update function in the settings menu (your system may already be up to date). Please ensure you remain in close proximity to the system and do not disconnect power to the system or your phone during an update.
4. From the home screen, the PM200-BTJ app allows the user to remotely monitor key aspects of the power system from the convenience of their phone or tablet, as well as remotely switch on or off power to the output load, hot water system and water pump.

The following information is displayed in the app's home screen:

- House battery SOC, volts, amps, time remaining and temperature
- Vehicle battery voltage
- Charging mode/status
- Power input source (grid, solar/PV or VCR)
- Water tank levels (when sensors connected/ installed/operational)
- Load, hot water system and water pump status and power buttons

Note: The power button may be used to turn output load power on or off, resulting in startup or shutdown of all appliances and lighting wired to outputs on the PM235J transformer. This switch only affects output load - the app will continue monitoring parameters and retain its Bluetooth connection to your smart device, even with the load off.

LCD MONITOR OVERVIEW



The PM200-BTJ's LCD monitor provides key information on the house battery, such as charging source, time until full charge when connected to AC mains, vehicle or solar input, and time left until battery is discharged. Also displayed are up to 4 water tank levels and the voltage/current being drawn from the house battery (output power).

There are 4 touch sensitive buttons that can turn on/off the outputs (PWR), the water pump (PUMP) and the hot water service (HWS), or dim the LCD screen (DIM) from 100% to 50% and blank (sleep mode). The monitor will automatically enter sleep mode when idle for 30 seconds. To wake the monitor, press any of the 4 buttons.

*Settings menu: press and hold the DIM button to enter the settings menu, where you can change time/date, battery type and capacity etc. Refer to owner's manual for more detail.

Scan the QR with your phone or tablet to see a "how to" video



LCD MONITOR OVERVIEW

INTELLI Jay by PROJECTA

Need help with your Intelli-Jay?

Give the Projecta Technical Support Line
a call on national Toll Free 1800 294 294

PROJECTA
MORE SWITCHED ON

Brown & Watson International Pty Ltd
1500 Ferntree Gully Road
Knoxfield Victoria 3180

Telephone (03) 9730 6000
Facsimile (03) 9730 605

Jayco
Your GREAT ESCAPE