

LASER



PW-METERBD SMART POWER BOARD
WITH CONSUMPTION METER

User Manual

PW-METERBD USER MANUAL

IMPORTANT SAFETY INSTRUCTIONS AND PRECATIONS

IMPORTANT SAFETY INSTRUCTIONS AND PRECAUTIONS

- Read instruction carefully before using this product
- Observe all warnings and cautions when using this product.
- Retain all manuals and documentation for future referral.
- This product is designed for indoor use only.
- Only use this product in a manner described in this manual.
- Do not overload. The maximum resistive load is 10 Amps, 2400W
- Do not use this device in extremely hot, cold, humid, dusty or sandy environments.
- Do not use this device in electrical storms or other conditions if the likely hood of lightning is possible.
- Before using this device, check and make sure the electrical appliances are correctly and properly connected and installed according to the requirements of those appliances.
- Remove the plug top from the mains outlet before cleaning. To unplug the plug top, always grasp the plug and pull from the main outlet. Never pull cord.
- Do not operate any appliances with a damaged cord or plug.
- Do not try to repair, disassemble or modify this device. There are no user-serviceable parts.
- This device is intended to be plugged in or connected to a 240 VAC., 50Hz and grounded power supply only.
- Arrange the power cord away from traffic areas where it will not be tripped over.
- This device may be warm while in use. Keep it in dry and cool place well ventilated place. Do not cover this product.
- Extreme Care should be taken when using this product near any body of water such as kitchen sinks, baths and alike.

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- This device is not waterproof. Do not use this device in the open if there is a high level of moisture in the air.
- Only place the device on a stable surface and ensure that cables attached to the device can not cause the device to fall.
- There are no serviceable parts in this device. Attempts to open this device by unauthorised personnel may cause further damage and void the warranty.
- Images of product used in this manual are indicative only and may vary slightly from actual product.
- We reserve the right to make changes to this document and the product without notification.

COMPULSORY WARNING

Discard this device if the plug top, supply cord or enclosure is damaged.

Loads on any power boards or surge protectors of this type are shown as a maximum only.

Please ensure that power loads are balanced over the available power circuits in the premises that this product is to be used in.

Do **not** connect other power distribution boards or "Double Adaptors" to this board.

Please connect no more than 6 devices to this board.

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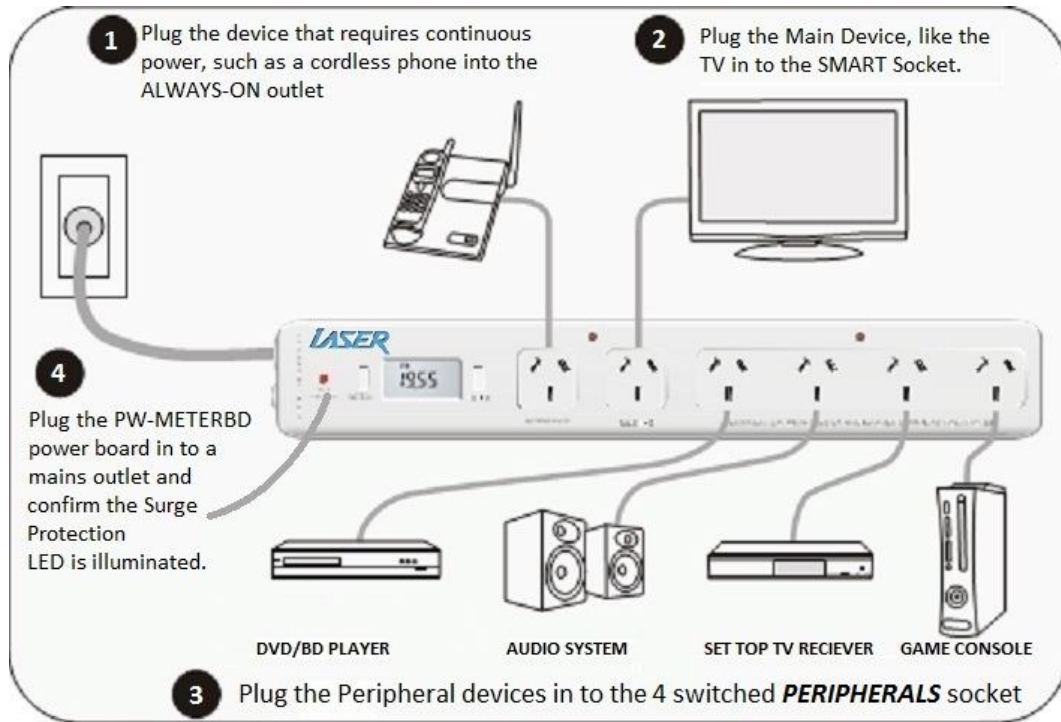
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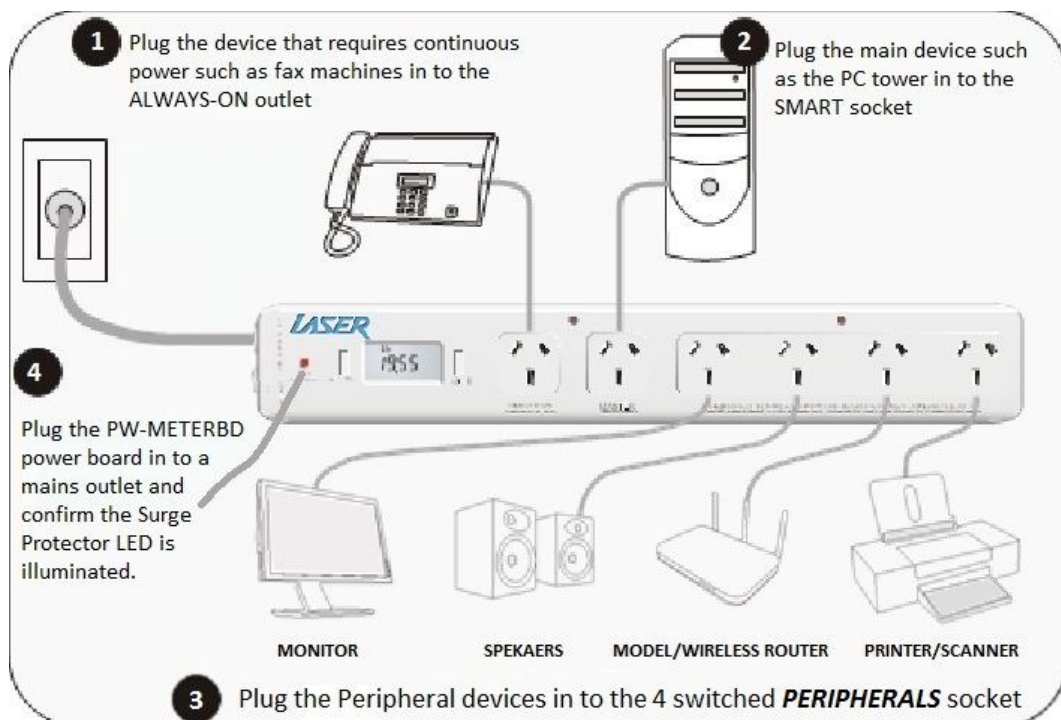
GETTING STARTED

Getting Started

Suggested Home Entertainment System setup



Suggestion Computer Setup



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HOW DOES THE SMART SOCKET WORK?

How does the SMART socket work?

The PW-METERBD measures the load of the MASTER device plugged in to the SMART socket (known as the **Wmaster**) and compares it with the preset threshold wattage (known as **Wthr**). When the demand used by the master device is lower than the preset wattage, the PW-METERBD switches **OFF** the **4 switched PERIPHERALS** outlets. When the demand from the Master device is higher than the preset, the PW-METERBD will switch the 4 switched PERIPHERALS Outlets **ON**. The PW-METERBD keeps measuring and comparing the demand by the Master device and the **4 switched PERIPHERALS** Outlets are turned **ON** and **OFF** automatically.

Adjusting the Master Socket Threshold

The threshold wattage (**Wthr**) is preset to 10W. It is suitable for most applications. In case you have turned **ON** your Master device but the peripheral devices plugged in to the **4 switched PERIPHERALS** Outlets do not turn on, you will need to lower the threshold. In case you have turned the Master device off and the peripheral devices remain on you will need to raise the threshold.

1. With the Master Device plugged in and in standby mode or OFF, press the **METER ↑** button and repeat until the LCD display shows **Wmaster**.
2. Turn the Master Device on as you would normally do. Watch the LCD display for a few seconds and record the lowest displayed figure as **WORKING Wmaster**_____
3. Turn the Maser Device back to STANDBY BY mode or OFF as you would normally do and then record the figures shown on the LCD display as **STANDBY Wmaster**_____
4. The threshold should be lower than the **WORKING Wmaster** figure and higher than the **STANDBY Wmaster**. Record the threshold wattage to be set **Wthr**_____
5. Press the **METER ↑** button again, the LCD show the preset threshold **Wthr** with the symbol **SET** flashing.
6. Press the **ENTER** button once. The first figure will flash for adjustment. Press **METER ↑** to adjust the flashing figure upwards, press the **ENTER** button to confirm.
7. The second figure will flash for adjustment. Press the **METER ↑** button to adjust and then the **ENTER** button to confirm.
8. When the second figure is confirmed the new threshold is set and the LCD will display the new threshold. Repeat step 6 to re-adjust the threshold or press the **METER ↑** button to move to other display modes.

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MORE ABOUT THE AUTOMATIC SWITCHING

[More About the Automatic Switching](#)

The load of the Master Device can range from 0 watts to 2400 watts.

Before adjusting the threshold you do not need to unplug the other device from the PW-METERBD. The PW-METERBD is capable of measuring the load separately.

If you set the threshold at 00watts, the **4 switched PERIPHERALS** Sockets will always be powered **ON** and the PW-METERBD will work like a normal power board.

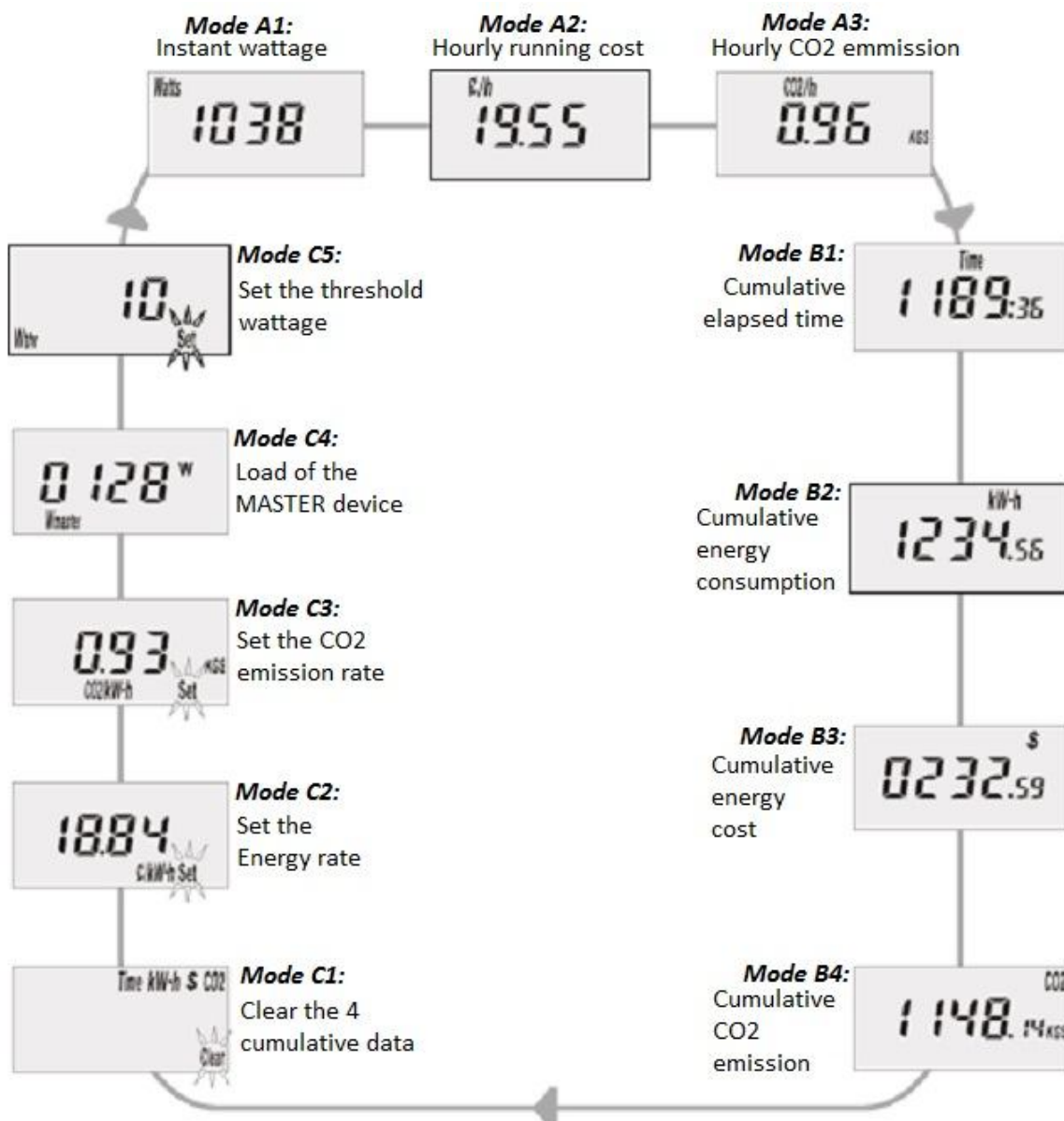
Devices that need to be powered at all times such as Digital Set Top Boxes that have PVR functions should not be connect to the **4 switched PERIPHERALS** outlets as they will only function correctly when the Master Device is ON. Timed functions of the devices will not work when the **4 switched PERIPHERALS** Outlets are powered **OFF**. Please refer to the devices documentation to confirm the devices power needs.

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DISCOVERING THE ENERGY METER

Discovering the Energy Meter with COST and CO2

Press the **METER ↑** button to step through the features, The LCD will cycle the display modes from **MODE A1** to **MODE C5** as shown below. Modes **A1** to **B4** display the information about all the devices plugged in to the PW-METERBD.



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CLEARING ALL CUMULATIVE DATA

Clearing all the Cumulative Data

1. Press the **METER ↑** button and repeat to step through the displays **MODE C1** is shown. The screen should show all four data types and the word **CLEAR** should be flashing in the lower right hand corner of the display.
2. With the word **CLEAR** flashing, press the **ENTER** button once to clear all stored cumulative data. The data collection will begin again.

Setting New Energy Rate

The energy rate is preset at 18.84 cents per kilowatt-hour ((kW-h) Australian average figure as per 2008).

Please use the following to reset the cost as per your energy provider.

1. Press the **METER ↑** button and repeat to step through the displays **MODE C2** is shown. **¢/kW-h** should be displayed and the word **SET** should be flashing in the lower right hand corner of the display.
2. With the word **SET** flashing, press the **ENTER** button once. The first figure will start flashing ready for adjustment.
3. Press the **METER ↑** button to adjust the flashing figure upwards. When the figure is correct press the **ENTER** button to confirm.
4. Repeat steps 2 and 3 to adjust the following two figures. When the last figure has been adjusted the LCD will display the new rate.

Setting a New CO2 Emission Rate

The CO2 emission rate is preset at 0.93 kilograms per kW-h (Australian average figure in 2008).

Please use the following to reset the rate if update figures become available.

1. Press the **METER ↑** button and repeat to step through the displays **MODE C3** is shown. **CO2/kW-h** should be displayed and the word **SET** should be flashing in the lower right hand corner of the display.
2. With the word **SET** flashing, press the **ENTER** button once. The first figure will start flashing ready for adjustment.

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ABOUT THE ENERGY METER

3. Press the **METER ↑** button to adjust the flashing figure upwards. When the figure is correct press the **ENTER** button to confirm.
4. Repeat steps 2 and 3 to adjust the following two figures. When the last figure has been adjusted the LCD will display the new rate.

About the Energy Meter

1. All cumulative data is set to zero before leaving the factory after testing.
2. If the power supply to the PW-METERBD is interrupted, all cumulative data is saved.
3. When one of the cumulative data records reaches its maximum value, all data sets will be zeroed. And data recording will begin again.

Surge Protection

The PW-METERBD has in-built surge suppressors to protect all plugged in devices from a power spike or surge.

The Surge Protection LED will light to indicate that the board is protected. If LED does not light when the PW-METERBD is connected to a mains outlet, the Surge Protection may be damaged and all devices plugged in to the PW-METERBD will **not** be unprotected.

Protection rating

Surge Current (3 lines): Max = 30,000A
Surge Energy: 1,050 Joules

Energy Saving Tips

1. The MASTER outlet is always on. If the device is not to be used for long periods unplug the Master Device until needed.
2. If the Peripheral devices connected to the **4 switched PERIPHERALS** Sockets are not need when powered up from the Maser Device, please power down until required.
3. Monitor and record the power needs of all device connected to the PW-METERBD. When these products need to be replaced, use the recorded power consumption information to make informed decisions for purchasing low power and Greener products.

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TROUBLE SHOOTING

TROUBLE SHOOTING

PROBLEM	SOLUTION
The PW-METERBD has no power.	<ul style="list-style-type: none">•The wall outlet may not function. Try another outlet.•Press the rest button near the mains power cord.
The 4 switched PERIPHERALS outlets do not power ON when the Master Device is turned on.	<ul style="list-style-type: none">•The threshold wattage (<i>Wthr</i>) may not be set correctly. Please refer to section Adjusting the Master Socket Threshold for details on setting the threshold correctly.
The 4 switched PERIPHERALS outlets do not power OFF when the Master Device is turned off.	<ul style="list-style-type: none">•The threshold wattage (<i>Wthr</i>) may not be set correctly or is set to 0. Please refer to section Adjusting the Master Socket Threshold for details on setting the threshold correctly.
The Surge Protector LED does not come on when the PW-METERBD is connected to a mains power outlet.	<ul style="list-style-type: none">•The LED will only illuminate when the protection circuitry is functioning. If the LED does not come on when the PW-METERBD is connected to a mains outlet the board may have been subjected to a surge/spike.•If the LED is not illuminated the PW-METERBD cannot protect connected devices but may continue to function as a normal power board.• If the Board has suffered from a power surge/spike that has damaged the protection we strongly recommend that the PW-METERBD be disposed of and a replacement purchased.

WEEE Directive & Product Disposal:



At the end of its serviceable life, this product should not be treated as household or general waste. It should be handed over to the applicable collection point for the recycling of electrical and electronic equipment, or return to the supplier for disposal.

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TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

Product Code	PW-METERBD
Length	385 mm (not including power cord)
Depth	60 mm
Height	32 mm
Weight	476 grams (including power cord)
Rated Voltage	240V AC @ 50Hz
Rated Current	10A (resistive)
Surge Current (3Lines)	Max. 30,000A
Surge Energy	Max. 1,050 Joules
Meter Accuracy	1watt (typical), 2watts (max) for loads below 100W: 1% (typical), 2% (max) of measured values for loads above 100W.
Power Meter Consumption	<0.9W
Conforms with:	AS/NZS 3100, AS/NZS 3112, AS/NZS 3197, AS/NZS 61010. Certificate: SAA 110050EA

FOR OTHER ACCESSORIES AND PRODUCTS

<http://www.laserco.net>

CONTACT INFORMATION

For more information on this product and technical support please visit

[HTTP://WWW.LASERCO.NET](http://www.laserco.net)