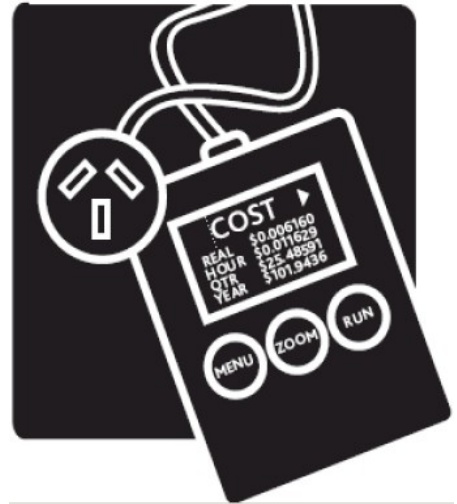# Power-Mate Lite "Quick-Start" Operating Instructions

Warning: This product contains live mains voltages and should be used only by an adult or under adult supervision. If the power cord or case becomes damaged, please return to either the manufacturer or an authorised service company for repair. Do not use in wet areas or if the unit becomes wet.

Introduction

The Power-Mate Lite (PML) reveals Running cost, Energy use, Greenhouse Gas (G/Gas) all expected Meter readings (including VA & PF) and it has a selectable timer function built in for taking readings over a preset period.

Terms used in this manual

The Power-Mate Lite (PML) screen shows multiple lines of data at the same time.

There are 3 buttons, which you either "click" with a short press or "hold" with a long press.

The "Zoom" button selects a line to magnify by clicking, or zooms into the line by holding.

The "Menu" button changes between the screens for Cost, Greenhouse Gas, Energy, Meter and Timing by clicking, or enters the setting mode for Cost, G/Gas and the Timer screen by holding.

The "Run" button starts, stops or pauses a measurement by clicking the button or resets the meter and clears all data by holding.

In the Time screen, a convenient count-down timer can be set by choosing between 9 selectable preset times or "Not Set". If "Not Set " is chosen, the Timer counts time up from zero and the display shows the total measurement elapsed time or **Runtime**. If a time period is selected though, the display then shows the time remaining or **Endtime** for the measurement.

Entering initial Cost and Greenhouse Gas (G/Gas) data

When delivered from new, the Power-Mate Lite will be prompting you to enter the cost value of your electricity when power is first applied. To obtain best accuracy, the cost must be entered in cents per kilowatt-hour (kWh) from your energy providers' most recent account.

Note: 1) Some energy providers refer to kWh as units. PML's are shipped preset to 18c/kWh.

2) You must first be in either the Cost or G/Gas screens to be able to set their values, then simply hold the "menu" button depressed until the "Set" screen is displayed.

To modify the Cost or G/Gas value, click the Zoom button to change the number (this cycles through 0-9). Clicking the Run key moves to the next digit, like setting a typical digital clock.

Similarly, enter the greenhouse gas coefficient, which can be found on the website: www.climatechange.gov.au/ table #39 which is measured in kg CO_2-e/kWh.

Note: the G/Gas coefficient varies from state to state – look to "**Table 5:** Indirect (scope 2) emission factors for consumption of purchased electricity from the grid" for your state's value. If accurate figures are not available, 1.0kg CO_2-e/kWh can be used as a reasonable approximation (units come shipped with the G/Gas value pre-set to 1.0kg CO_2-e/kWh).

Display

The Cost, G-Gas and Energy screens simultaneously provide four lines of information, shown in order here:

1) The real (or actual) figure to date (since the measurement was started).

2) The estimated Hourly amount.

3) The estimated Quarterly amount.

4) The estimated Yearly amount

These estimated amounts are calculated from the average energy consumption of the appliance, derived from the data collected during a measurement period.

The Meter screen displays simultaneously True Power (W), Apparent Power (VA), Volts (V), Amps (A), Power-Factor & Frequency (Hz). Using "Zoom", the meter screen also displays minimum and maximum values for V, A, W & VA

Note: the minimum and maximum figures will not be updated if the PML is stopped or paused.

A click of the Run key will start or stop a measurement period, whilst a hold will reset (clear) the data in the PML. When the PML is running, a flashing triangle icon shows on the top right corner of the LCD.

If the power fails during a measurement period, data is not lost and the PML resumes when power returns, another icon though will show next to the run icon showing that the power was disconnected.

Making your first measurement

Plug an appliance into the piggy-back plug of the PML and switch on the appliance. If you are not on the cost screen, click the menu button a few times until cost is displayed.

Now hold the Run button until prompted "clear all data" click the button under "Yes". Now click the Run button to start your measurement. The cost screen will instantly update with the running cost data for the appliance.

Note: devices with a thermostat, like a fridge, should be measured over a 24Hr period to obtain the best accuracy.

Complete operating instructions and specifications can be downloaded from:

www.power-mate.com.au

Overload

When the current exceeds 10A, the display flashes the message:

"WARNING, OVERLOAD", turn off or disconnect the excessive load as soon as possible to avoid overloading and damaging the Power-Mate.

Specifications

NOTE: This unit is intended for operation @ 240Volts AC with a maximum load current of 10Amps.

Setting	Range	Units	Resolution	Units
Rate Setting	0 – 99.999	c/kWh		
G/Gas Setting	0 – 9.999	kg/kWh		
Inbuilt Timer	1, 8, 12, 24	Hours		
	2, 5, 7, 14, 28	Days		
Cost	0 – 999999	± $	0.01	c
Energy	0 – 99999	± kWh	0.01	kWh
G-Gas	0 – 99999	± kg	0.01	g
Volts	170.0 – 270.0	V_{RMS}	0.1	V
Amps	00.000 – 10.000	A_{RMS}	0.001	A
Power	0 – 2,400.0	± W	0.1	W
Apparent Power	0 – 2,400.0	VA	0.5	W
Power Factor	± 0.001 to 1	(dimensionless)	Leading/Lagging	
Frequency	45-65	Hz	0.1	Hz
Run-time measurement	99:23:59:59	Days:Hours:Min.:Sec.		

Accuracy error for all ranges is better than 2%, (typical accuracy error is better than 1%)

Note 1: The VA and Power Factor accuracy is as specified when measuring above 2W.

Note 2: Where more digits are displayed than the resolution specified, the accuracy of any extra displayed digits is not guaranteed.

Warranty:

This product is guaranteed against faulty components and workmanship for a period of 12 months from the date of purchase. It is the responsibility of the purchaser to return the unit to the manufacturer or place of purchase with a copy of the sales receipt or invoice when requesting warranty repairs to be undertaken.

After the warranty repairs or work is completed, the manufacturer will return the goods to the purchaser using the Australian Post standard parcel service at no extra cost to the purchaser. If insurance or registered or express post is required, the cost shall be borne by the purchaser.

The Manufacturer is not responsible for goods lost or damaged by the Australian Post service. Great care was taken to ensure the integrity of data and information and correct operation of this product. The Manufacturer though will not accept any claims for data loss, financial loss or any other losses or consequential damage resulting from the data, use or failure to perform of this product, no other guarantees are implied or given.

To obtain warranty service on your Power-Mate Lite, please send it, together with your full name and return address, directly to the manufacturer:

Computer Control Instrumentation

A division of Hendon Semiconductors

1 Butler Drive

Hendon   5014

South Australia

Ph: (08) 8373 6611 Fax: (08) 8373 2311

Internet: www.power-mate.com.au

Name	
Address	
Date of Purchase	
Place of Purchase	
Invoice no.	