

# T1500 Power Meter



## Instruction Manual

### Introduction

Thank you for purchasing your TED T1500 Power Meter. Please read the following instructions carefully before using your product. By following the steps outlined in this manual your meter will provide years of reliable service.

### Product Quality

This product has been manufactured in an ISO 9001 facility and has been calibrated during the manufacturing process to meet stated product specifications.

### Safety

#### ⚠ Warnings

This manual includes important safety and instrument maintenance information. Please read each part of this manual carefully before use. Any misunderstanding of the information in this manual may lead to physical injury and/or product damage

- Do not expose this product to water, rain, moisture, dust or extreme temperatures.
- Do not expose to naked flames or other heat sources.
- Do not drop or subject the device to undue shock.
- Keep device away from magnets at all times.
- Keep away from direct sunlight. Indoor use only.
- Unplug this device during lightning storms.

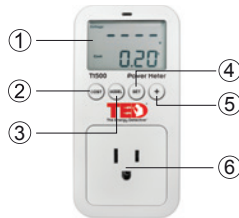
	EU certification related information.
	This symbol signifies the product complies with both USA and Canada requirements.

### Safety Instructions

- Never attempt to repair or modify your instrument. Dismantling your product, other than for the purpose of replacing batteries, may cause damage that will not be covered under the manufacturer's warranty. Servicing should only be provided by an authorized service center.
- Do not use if product is damaged.
- In the event of any abnormal operation, please do not use this power meter. Keep this power meter away from explosive gases, vapor and dust environments.
- The load power of electrical appliance of this product should not exceed its rated power of 1800W or a maximum current of 15A. When running under a full load, it is recommended not to exceed 1 hour of continuous use.

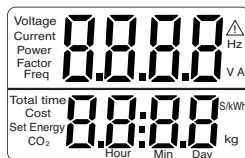
### Instrument Description

1. LCD Display
2. Cost Button
3. Model Button
4. Set Button
5. "+"/Reset/Power Button
6. Power Input Socket



### Display Description

The dual LCD display area provides two readings. The upper reading is the main display area and each unit of measurement can be toggled through by pressing the **MODEL** button. The lower reading is a secondary display area and each logging function can be toggled through by pressing the **COST** button.



### Features and Specifications

The T1500 is an easy-to-use power meter that accurately measures power consumption of household appliances. Simply set the local utility rate in Kilowatt-hours (KWh) and connect an appliance to start tracking cost. The T1500 can be used to verify power quality by monitoring voltage, frequency and power factor.

- Calculates the operating costs of household appliances
- Displays 8 important units of measure (voltage, current, watts, frequency, power factor, energy used (kWh), total cost and elapsed time)
- Over-current warning function
- Easy-to-read, dual LCD display
- Built-in battery backup
- Conforms to UL and CSA standards

#### Measuring Ranges & Accuracy

Voltage:	Range: 100 to 150VAC (60Hz); Accuracy: $\pm(1\% \text{ rdg.} + 1\text{dgt.})$
Current:	Range: 0 to 15A; Accuracy: $\pm(1\% \text{ rdg.} + 10\text{dgt.})$ @ 0.010 to 0.999A; $\pm(1\% \text{ rdg.} + 5\text{dgt.})$ @ 1.00 to 15.00A
Power:	Range: 0 to 1800W; Accuracy: $\pm(1\% \text{ rdg.} + 10\text{dgt.})$ @ 1.0 to 100.0W; $\pm(1\% \text{ rdg.} + 5\text{dgt.})$ @ 100.0 to 999.9W; $\pm(1\% \text{ rdg.} + 1\text{dgt.})$ @ 1000 ~ 1800W
Power Factor:	Range: 0 to 1.00; Accuracy: $\pm(2\% \text{ rdg.} + 10\text{dgt.})$ @ 0.30 to 0.49; $\pm(2\% \text{ rdg.} + 5\text{dgt.})$ @ 0.50 to 1
Frequency:	Range: 45 to 65Hz; Accuracy: $\pm(1\% \text{ rdg.} + 1\text{dgt.})$

#### Logging Ranges

Energy:	0 to 9999kWh
Cost:	\$0 to \$9999
Total Time:	0 minutes to 9999 days
Display:	Dual LCD
Display Update:	1 time/second
Overrange Indicator:	Yes
Power Supply:	1 x 3V (CR2032, back up battery)
Overvoltage Category:	CAT. II 150V
Product Certifications:	CE, ETL, Conforms to UL STD.61010-1, 61010-2-030; Certified to CSA STD. C22.2 NO.61010-1, 61010-2-030
Storage Temperature:	14 to 140°F (-10 to 60°C)
Operating Humidity Range:	10 to 90%
Dimensions:	5.1 x 2.6 x 1.5" (130 x 65 x 37mm)
Weight:	1.9 oz (155g)

### Function Keys Description

1. The **COST** button cycles through each function in the upper display as indicated by "Total time", "Cost", "Set", "Energy" and "CO<sub>2</sub>".
2. The **MODEL** button, cycles through each function in the lower display as indicated by "Voltage", "Current", "Power", "Power Factor" and "Freq".
3. The **SET** button allows you to configure the CO<sub>2</sub> & kWh cost functions.
4. The **+** button has three main functions, the first is to increase the number of digits when configuring the CO<sub>2</sub> & kWh costs at a 0-9 cycle. The second is the reset function; reset the Energy, Cost or emission load of CO<sub>2</sub> by holding it down. The **+** button is also used to power on the unit when power is off.



### Operating Instructions

1. Plug the power meter into a household receptacle and it will automatically start.
2. Select the desired function by pressing the **MODEL** button.
3. Return to the default function ("Voltage") by holding the **MODEL** button.

**Note:** If the unit has been in use for less than 1 day, only "Hour and Min" will be displayed as shown in Figure 1 below. Check elapsed time by pressing the **+** button as shown in Figure 2. If the time accumulated exceeds 1 day, it will be displayed in the form of "Day" as shown in Figure 3. To view the total accumulated time, press the **+** button to display "Day" followed by "Hour and Min".



Figure 1



Figure 2



Figure 3

### Setting the CO<sub>2</sub> Cost Function

The production of energy releases greenhouse gases (among others carbon dioxide CO<sub>2</sub>), which places a burden on the environment. With this device, you are able to determine how much CO<sub>2</sub> is released by an energy supplier with the measured kWh value. There are different CO<sub>2</sub> equivalents depending on the type of energy. The CO<sub>2</sub> equivalent indicates how much of a defined quantity of a greenhouse gas contributes to the greenhouse effect. Carbon dioxide serves as a comparison value.

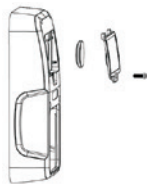
The factor for the CO<sub>2</sub> equivalents is entered in the device in kg/kWh and displayed accordingly in kg/kWh. You can find information on the CO<sub>2</sub> equivalents to be entered on your power bill and on the internet, technical manuals or by contacting your energy supplier.

1. To set your kg/kWh cost, switch to the "CO<sub>2</sub>" cost function by pressing the **COST** button.
2. Once the CO<sub>2</sub> parameter is visible press and hold the **SET** button.
3. Adjust the values by pressing the **+** button.
4. When the desired value has been set, save the data by holding the **SET** button.



### Battery Replacement

Please ensure the meter has been disconnected from power prior to replacing battery. Remove the battery cover with a screwdriver. Once the cover has been removed, replace the battery cell and tighten the cover back on. See the following figure for detailed steps:



### Product Support

If you have any questions on your product, please contact your authorized TED distributor or The Energy Detective Customer Service by phone at 1-800-959-5833 or by email at [info@TheEnergyDetective.com](mailto:info@TheEnergyDetective.com).

Please visit [www.TheEnergyDetective.com](http://www.TheEnergyDetective.com) for the most up-to-date manuals, datasheets and product guides.

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