

BLUE *line* INNOVATIONS

INNOVATIVE ENERGY SOLUTIONS

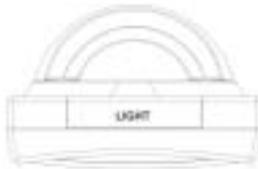
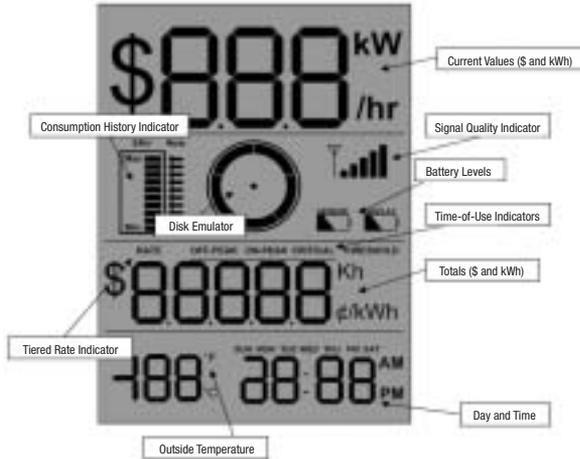


THE POWERCOST MONITOR™
Set Up Guide

Display Unit - Icons And Buttons

Now that you have installed your PowerCost Monitor™ Sensor Unit successfully, you must program your Display Unit.

The pictures below illustrate all the various icons and values that can be displayed at any given time on your Display Unit, as well as the locations of all the available buttons.



Icon/Button

Disk Emulator

Purpose

When spinning, indicates that the Display Unit is receiving a signal from the Sensor Unit. The higher the energy consumption, the faster the disk emulator spins.

Consumption History

Graphical representation of the power consumption over the last 7 days. See the User Manual for more detailed explanations

Battery Levels

Status of the Display Unit and Sensor Unit batteries. When a battery is fresh, the icon is not visible; the black area on the icon increases as the battery becomes depleted.

Icon/Button

Signal Quality

Purpose

Provides an indication of the quality of the signal from the Sensor Unit. The more bars the better the signal.

\$

Dollar Mode: Current Values are shown in dollars-per-hour (\$/hr) and consumption totals are shown in dollars (\$).

KW

Kilowatt Mode: Current Values are shown in kilowatts (kW) and consumption totals are shown in kilowatt-hours (kWh).

RATE

Tiered Rate Indicator: Appears on the display with a number under it indicating the current rate in tiered rate mode. This indicator only appears in Configuration mode

THRESHOLD

Tiered Rate Indicator: Appears on the display indicating that the value to enter or modify represents the number of kilowatts at which the rate changes. Appears during normal operation to indicate that a consumption threshold has been exceeded and that a new rate applies.

OFF-PEAK
ON-PEAK

Time of Use Indicators: Appear on the display to indicate one of two possible different rates charged by the utility company during the day.

↑

Increase: During setup, each press of the button INCREASES the target value on the display by various increments. In some cases, if you Press-and Hold, the value is increased by a much larger increment; for example, the Kh increases by increments of 1.0 instead of 0.1.

↓

Decrease: During setup, DECREASES the target value on the display by various increments. In some cases, if you Press-and Hold, the value decreases by a much larger increment; for example, the Kh value decreases by increments of 1.0 instead of 0.1.

CLEAR

Press and hold to reset the Totals to zero.

SYNC

Press and hold to enter ID mode.

SET

Press and hold to enter configuration mode.

MODE

In Configuration Mode, press and hold to switch between Tiered-Rate and Time-of-Use operating modes.

12/24

Time Format: Press to switch the clock between 12-hour and 24-hour time display format.

°C/°F

Temperature Format: Press to switch between Celsius and Fahrenheit degrees temperature display format.

Light

Backlight: Press to illuminate the display backlight for 5 seconds.

Before Starting

If you need any clarification of the procedures detailed below, please refer to the appropriate section of your User Manual.

Before you start setting up your Display Unit, you must determine the type of billing your electricity provider is applying to your account. Retrieve a recent electricity bill and find out which of the following three billing modes applies in your case.

SINGLE (FLAT) RATE Mode

Your bill shows a single value in cents per kilowatt-hour

You are charged a SINGLE (FLAT) RATE for electricity consumption.

Single (Flat) Rate Example:

\$0.063/kWh
\$0.063 = 6.3 cents
kWh = kilowatt/hour

You are paying 6.3 cents per kilowatt/hour at all times.

TIERED RATE Mode

Your bill shows more than one value in cents per kilowatt-hour

You are charged a TIERED RATE for electricity consumption. You pay the first (usually the lowest) rate until you reach a threshold, and you start paying another (usually higher) rate thereafter.

Tiered Rate Example:

1200 kWh @ \$0.063/kWh
and 1369 kWh @ \$0.075 /kWh
\$0.063 = 6.3 cents
\$0.075 = 7.5 cents
kWh = kilowatt/hour

You are paying 6.3 cents per kilowatt/hour (the first rate) for the first 1200 kilowatt/hours (the threshold), and 7.5 cents per kilowatt/hour (the second rate) thereafter. In our example, you consumed 2,569 kilowatt/hours in total, of which the last 1,369 were charged the second rate (7.5 cents).

TIME OF USE RATE Mode

Your bill shows different values according to various time periods during the day.

You are billed on a TIME OF USE basis. You pay different Off-Peak and On-Peak rates, reflecting the overall demand your electricity provider must satisfy between given hours of the day.

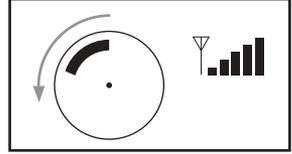
YOU CANNOT SETUP YOUR DISPLAY UNIT USING THIS QUICK START GUIDE IF YOU ARE BILLED ON A TIME OF USE BASIS.

See section 6.5 in your User Guide.

SETUP SEQUENCE - Common Steps

IMPORTANT: The instructions that follow assume that your Sensor Unit is transmitting signals normally to your Display Unit. Your Display Unit should show:

1. The Disk Emulator spinning.
2. The Signal Quality indicator showing a good quality signal.



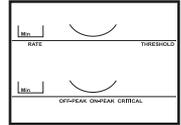
1: Press-and-Hold SET

After 3 seconds, the Display Unit beeps and enters Configuration Mode. The **HOURS** digits of the clock are flashing.



2: Press-and-Hold MODE (if required)

If the **OFF-PEAK/ON-PEAK** indicators are displayed, press and hold to display the **RATE** and **THRESHOLD** indicators.



3: Press ↑ or ↓

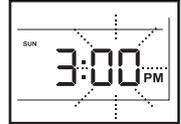
Set the correct hour of the day.

Increase or decrease the **HOURS** value. If the Display Unit is not in 24-hour mode, the **AM/PM** indicator changes whenever the **HOURS** value exceeds 12.



4: Press SET

The **HOURS** value you set is stored and the **MINUTES** value starts flashing.



5: Press ↑ or ↓

Set the correct minutes of the time of day.

Increase or decrease the **MINUTES** value.



6: Press SET

Your **MINUTES** value is stored and a Day-of-Week segment starts flashing.



7: Press ↑ or ↓

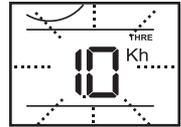
Set the correct day of the week.

Select the correct Day-of-Week segment.



8: Press SET

Your Day-of-Week segment is stored and the currently stored Kh value flashes.

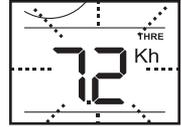


9: Press OR Press-and-Hold ↑ or ↓

Set your meter's Kh Factor.

Each button press increases or decreases the Kh value by 0.1.
Press-and-hold to change the value by increments of 1.0.

If you have an *electromechanical meter*, enter 7.2.
If you have an *electronic meter*, enter 1.0.



Now, from the two setup procedures below, select the one that is appropriate for your billing mode (SINGLE or FLAT RATE, or TIERED RATE - for TIME OF USE, please refer to section 6.5 of the User Guide).

SETUP SEQUENCE - Single (Flat) Rate Mode

10: Press SET

Your Kh value is stored. "1" is displayed under RATE, and the currently stored value for Rate 1 flashes next to the ¢/kWh segment.



11: Press ↑ or ↓

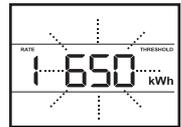
Set your electricity rate

Each button press increases or decreases the displayed Rate value by 0.1.



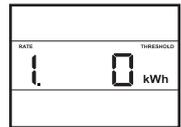
12: Press SET

Your Rate is stored. The **THRESHOLD** segment appears and the currently stored Threshold flashes.



13: Press ↓

SET THE THRESHOLD TO "0"



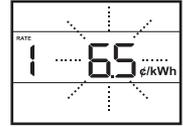
14: Press SET

Your electricity rate is now stored. The Display Unit quits Configuration mode and is now fully configured for operation.

SETUP SEQUENCE - Tiered Rate Mode

10: Press SET

Your Kh value is stored. “1” is displayed under Rate, and the currently stored value for Rate 1 flashes next to the ¢/kWh segments.



11: Press \uparrow or \downarrow

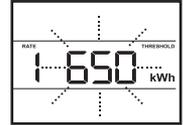
Set your first electricity rate

This is generally the lowest rate on your bill. Each button press increases or decreases the displayed Rate value by 0.1.



12: Press SET

Your Rate is stored. The **THRESHOLD** segment appears and the currently stored Threshold flashes.



13: Press OR Press-and-Hold \uparrow or \downarrow

Set your first rate threshold

Each button press increases or decreases the displayed **THRESHOLD** value by 10 units. Press and hold to change the value changes by increments of 100.



14: Press SET

Your Threshold value is set. “2” is displayed under **RATE**, and the currently stored value for the Rate 2 flashes next to the ¢/kWh segments.



15: Press \uparrow or \downarrow

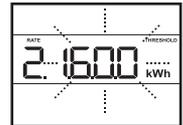
Set your second electricity rate

This is generally the highest rate on your bill. Each press of one of these buttons increases or decreases the displayed Rate value by 0.1.



16: Press SET

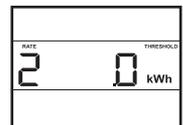
Your second rate is stored. The **THRESHOLD** segment appears and the currently stored value for the second Threshold flashes.



17: Press \downarrow

SET THE SECOND THRESHOLD TO “0”

If needed, you can set a 2nd threshold and a 3rd rate by repeating steps 12 to 15 above. Your Display Unit can accommodate up to 9 rates.



18: Press SET

Your second electricity rate is now stored. The Display Unit quits Configuration mode and is now fully configured for operation.

Display Functions

This is a short description of the Display Unit functions. For a full description of each function, please read Section 7 in the User Guide.

CHANGING THE TEMPERATURE DISPLAY FORMAT

Press °C/°F This button changes the temperature display from degrees Celsius (°C) to degrees Fahrenheit (°F) and vice-versa.

CHANGING THE TIME OF DAY DISPLAY FORMAT

Press 12/24 This button changes the time display from 12-hour (AM/PM) to 24-hour (military) format and vice-versa.

ILLUMINATING THE DISPLAY

Press LIGHT This button turns on the blue display backlight for 5 seconds.

ACTIVATING DOLLARS AND CENTS MODE

Press \$ All values are displayed in either dollars and cents or cents per kilowatt/hour (¢/kWh).

ACTIVATING KILOWATT MODE

Press KW All totals are displayed in either kilowatts (kW) or kilowatt/hours (kWh).

RESETTING THE CONSUMPTION TOTALS

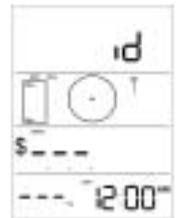
Press CLEAR All consumption totals and consumption history peak values are set to zero.

LOSS OF SIGNAL

In the event that your Display Unit loses the signal from the Sensor Unit, the screen displays dashes instead of numbers.

1: Take your Display Unit to your meter. Press and hold the SYNC button on the front of the Display Unit until it beeps (approx. 3 seconds). The Display Unit goes into ID Mode and it begins to search for your Sensor Unit.

2: Press and release the RESET button on the battery cover of the Sensor Unit. The indicator light flashes and the Display Unit exits ID mode. Your values should be appearing after a few minutes. If this is not the case, see the Troubleshooting section in the User Guide.





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P/N: BLI-00195 Rev2

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