User Manual

Line-interactive UPS

ECO II-801/ECO II-1k LED/ ECO II-1K LCD
ECO II-1.2k LED/ ECO II-1.2K LCD/ ECO II-1.5k LED
ECO II-1.5K LCD/ECO II-2.2k LED/ ECO II-2.2K LCD

IMPORTANT SAFETY INSTRUCTIONS

(SAVE THESE INSTRUCTIONS)

This manual contains important safety instructions. Please read and follow all instructions carefully during installation and operation of the unit. Read this manual thoroughly before attempting to unpack, install, or operate your UPS.

CAUTION! To prevent the risk of fire or electric shock, install in a temperature and humidity controlled indoor area free of conductive contaminants. (See the specifications for the acceptable temperature and humidity range.)

CAUTION! To reduce the risk of overheating the UPS, do not cover the UPS' cooling vents and avoid exposing the unit to direct sunlight or installing the unit near heat emitting appliances such as space heaters or furnaces.

CAUTION! Do not attach non-computer-related items, such as medical equipment, life-support equipment, microwave ovens, or vacuum cleaners to UPS.

CAUTION! Do not plug the UPS input into its own output.

CAUTION! Do not allow liquids or any foreign object to enter the UPS. Do not place beverages or any other liquid-containing vessels on or near the unit.

CAUTION! In the event of an emergency, press the OFF button and disconnect the power cord from the AC power supply to properly disable the UPS.

CAUTION! Do not attach a power strip or surge suppressor to the UPS.

CAUTION! Unplug the UPS prior to cleaning and do not use liquid or spray detergent.

CAUTION! Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries.

CAUTION! The battery supply should be therefore disconnected in the plus and minus pole at the quick connectors of the battery when maintenance or service work inside the UPS is necessary.

CAUTION! Internal battery voltage is 12Vdc. Sealed, lead-acid, 6-cell battery.

CAUTION! When replacing the batteries, use the same number and type of batteries.

CAUTION! Do not dispose of batteries in a fire. The battery may explode. Do not open or mutilate the battery or batteries. Released electrolyte is harmful to the skin and eyes.

INSTALLING YOUR UPS SYSTEM

UNPACKING

The box should contain the following:
(1) UPS Unit x1; (2) User Manual x 1

OVERVIEW

The UPS provides automatic voltage regulation for inconsistent utility power, and provides battery backup during power outages, and ensures consistent power to your computer system.

HARDWARE INSTALLATION GUIDE

1. Your new UPS may be used immediately upon receipt. However, recharging the battery for at least 8 hours is recommended to ensure that the battery's maximum charge capacity is achieved. Charge loss may occur during shipping and storage. To recharge the battery, simply leave the unit plugged into an AC outlet. The unit will charge in both the on and off position.

2. With the UPS unit off and unplugged, connect the computer, monitor, and any externally powered data storage device (Zip drive, Jazz drive, Tape drive), etc. into the battery power supplied outlets. DO NOT plug a laser printer, copier, space heater, vacuum, paper shredder or other large electrical device into the battery power supplied outlets. The power demands of these devices will overload and possibly damage the unit.

3. Plug the UPS into a 2 pole, 3 wire grounded receptacle (wall outlet). Make sure the wall branch outlet is protected by a fuse or circuit breaker and does not service equipment with large electrical demands (e.g. air conditioner, refrigerator, copier, etc. Avoid using extension cords.

4. Press the power switch to turn the unit on. The power on indicator light will illuminate and the unit will "beep".

5. If an overload is detected, an audible alarm will sound and the unit will emit one long beep. To correct this, turn the UPS off and unplug at least one piece of equipment from the battery power supplied outlets. Wait 10 seconds. Make sure the circuit breaker / fuse is normal and then turns the UPS on.

6. To maintain optimal battery charge, leave the UPS plugged into an AC outlet at all times.

7. To store your UPS for an extended period, cover it and store with the battery fully charged. Recharge the battery every three months to ensure battery life.

BASIC OPERATION

Front panel

1. Power Switch
Press the switch for 2 seconds to turn the UPS ON/OFF
Mute setting: The audible alarm can be turned OFF or ON by quickly pressing the Power button twice. The default setting is for the Alarm On.

2. Power On Led Indicators
This LED is illuminated when the UPS is working.

3. LCD Display
The LCD will display the UPS status including input voltage, output voltage, percentage of load and battery…etc.

4. AC Mode LED
The green LED will light when utility power is normal.

5. Battery Mode LED
The yellow LED will light when input power is abnormal and the unit will work in battery mode.

6. Fault LED
The red LED will light when fault or over load occurs.

Rear panel

1. Battery Backup & Surge Protected Outlets
Provide battery backup and surge protection. They ensure power is provided to connected equipment over a period of time during a power failure.

2. USB COMM. Port(only for LCD models)
This port allows connection and communication from the USB port on the computer to the UPS unit.
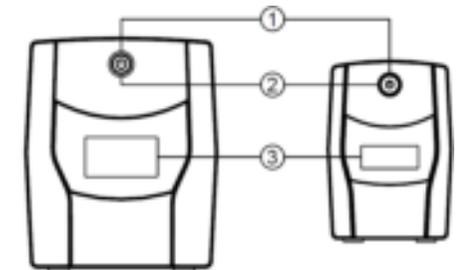
3. Input power cord Connect to utility power.

4. Surge Protected Outlets
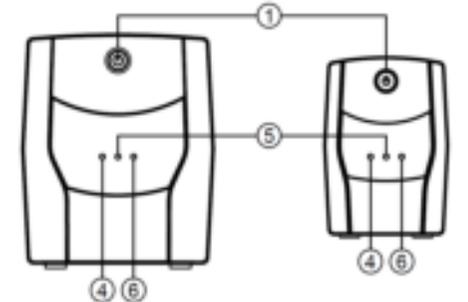Provides surge protection for devices that don't require battery backup.

5. Input Circuit Breaker
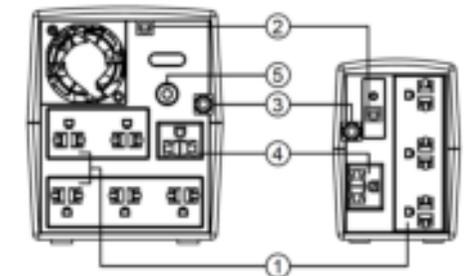The circuit breaker provides optimal overload protection.

ECO Ⅱ-1.2/1.5/2.2K LCD   ECO Ⅱ-1 K LCD

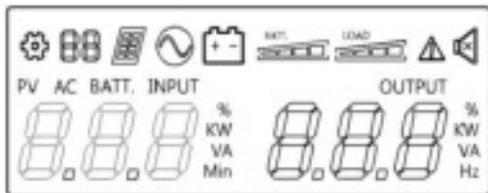ECO Ⅱ-1.2/1.5/2.2k LED   ECO Ⅱ-1k LED/801

ECO Ⅱ-1.2/1.5/2.2K   ECO Ⅱ-1K/801

TECHNICAL SPECIFICATIONS

Model	ECO II-801	ECO II-1k LED ECO II-1K LCD	ECO II-1.2k LED ECO II-1.2K LCD	ECO II-1.5k LED ECO II-1.5K LCD	ECO II-2.2k LED ECO II-2.2K LCD
Capacity (VA/W)	800/480	1000/630	1200/720	1500/900	2200/1320
Input					
Nominal Voltage	220Vac				
Nominal Frequency	50/60Hz				
Output					
On Battery Output Voltage	Simulated Sine Wave at 220Vac +/-10%				
On Battery Output Frequency	50/60Hz +/-1%				
Overload Protection	Fuse/Breaker				
Physical					
Dimensions (W x H x D)(mm)	96 x 138 x 286		148 x 178 x 298		
Battery					
Sealed Maintenance Free Lead Acid Battery	12V x1		12V x2		
Typical Recharge Time	8 Hours				
Warning Diagnostics					
Indicators	Power On				
Audible Alarms	On Battery, Low Battery, Overload, Fault				
Display	LED(For ECO II-801/ ECO II-1k LED/ ECO II-1.2k LED/ ECO II-1.5k LED/ ECO II-2.2k LED) LCD(For ECO II-1K LCD/ ECO II-1.2 K LCD / ECO II-1.5 K LCD / ECO II-2.2 K LCD)				
Environmental					
Operating Temperature	0℃ to 40℃				
Operating Relative Humidity	0 to 90%				
Management					
Auto-Charger	Yes				
Auto-Restart	Yes				
USB COMM. Port	Only for LCD models				

DEFINITIONS FOR ILLUMINATED LCD INDICATORS

LCD Indication

⚙ 88	Setting Item	∿	Line mode
(PV icon)	PV mode	(battery icon)	Bat-mode
⚠	Fault	🔇	Sound disable (Press the display key 3s to disable and enable the buzzer sound)
BATT. (bar icon)	Bat mode: battery capacity Line mode: 1. Battery charging: cycle lighting 2. Battery full charged: lighting 3. Line mode without charger: battery capacity	LOAD (bar icon)	Load capacity

Line mode & Batt. Mode

	(display icon PV AC BATT. INPUT 888)		(display icon OUTPUT 888)	
Initial	AC INPUT (Voltage) V	(AC INPUT 220v)	OUTPUT (Voltage) V	(OUTPUT 220v)

LED Indication and Alarm

	LED Display (only for LED models)	Alarm
Normal	Green LED lighting	Off
Battery Discharge	Yellow LED flash once every 30 seconds	Beep once every 30 seconds
Battery Low	Yellow LED flash once every 2 seconds	Beep once every 2 seconds
Overload	Red LED flash once every 0.5 second	Beep once every 0.5 second
Off mode charging	All LED off	Off
Fault	Red LED lighting	Continuous alarm

TROUBLE SHOOTING

Problem	Possible Cause	Solution
The UPS does not perform expected runtime	Batteries are not fully charged.	Recharge the battery by leaving the UPS plugged in.
	Battery is slightly worn out.	Contact Technical Support.
The UPS will not turn on.	The on/off switch is designed to prevent damage by rapidly turning it off and on.	Turn the UPS off. Wait 10 seconds and then turn the UPS on.
	The unit is not connected to an AC outlet.	The unit must be connected to a 220Vac 50/60Hz outlet.
	The battery is worn out.	Contact Technical Support.
	Mechanical problem.	Contact Technical Support.
Outlets do not provide power to equipment	Circuit breaker is tripped due to overload	Turn the UPS off and unplug at least one piece connected equipment. Unplug the power cord of the UPS then press the circuit breaker knob.
	Batteries are discharged	Allow the unit to recharge for at least 4 hours.
	Unit has been damaged by a surge or spike	Contact Technical Support.
Fault code F09	Output Short : Output circuit short.	Shut down the UPS Your attached equipment may have problems, please remove them and check again.
Fault code F12	Battery voltage is too low.	Shutdown your computer and recharge the battery immediately.
Fault code F13	Battery is overcharged.	Contact Technical Support.
Fault code F14	Overload occurs: Your equipment requires more power than the UPS can provide. It will shutdown.	Shut off non-essential equipment. If this solves the overload problem, the UPS will transfer to normal operation.

SOFTWARE DOWNLOAD

Power Master management software provides a user-friendly interface for your power systems. The graphic user interface is intuitive and displays essential power information at a glance. Please follow procedure below to install the software.

Installation procedure:

1. Download Power Master from the website: http://www.powermonitor.software/

2. Double-click the file and follow the installation steps.

When your computer restarts, the Power Master software will appear as a blue icon located in the system tray.

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