

# USER MANUAL

## KI 1000R 1U 1000VA Line Interactive Sinewave UPS



Version:

# Line-interactive UPS 1000 R1U User Manual

## 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.

## INSTALLING YOUR UPS SYSTEM

### UNPACKING

The box should contain the following:

(1)UPS Unit□1; (2)User Manual□1;

### HOW TO DETERMINE THE POWER REQUIREMENTS OF YOUR EQUIPMENT

1. Ensure that the equipment plugged into the battery power-supplied outlets does not exceed the UPS unit's rated capacity. If rated unit capacities are exceeded, an overload condition may occur and cause the UPS unit to shut down or the fuse blow.
2. There are many factors that can affect the amount of power that your computer system will require. For optimal system performance keep the load below 80% of the unit's rated capacity.

### 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.
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.
4. Depress the power switch to turn the unit on. The LCD indicator light will illuminate and the unit will "beep".
5. To maintain optimal battery charge, leave the UPS plugged into an AC outlet at all times.
6. 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.

# ROUTINE MAINTENANCE AND STORAGE

## ROUTINE MAINTENANCE

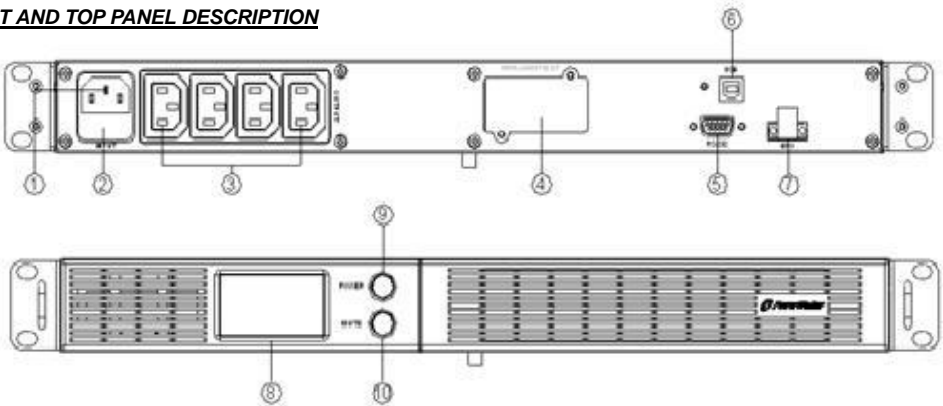
1. Use dry soft clothes to clean the front panel and plastic parts. Do not use any detergent that contains alcoholic ingredient.
2. The expected lifetime of the battery is around 3 years. Improper operation and harsh environment will reduce the actual lifetime.
3. Unplug the UPS from power inlet if the UPS will not operate for long period of time.

## STORAGE

1. First turn off your UPS and disconnect its power cord from the wall outlet. Disconnect all cables connected the UPS to avoid **battery drain**.
2. The UPS should be stored in a cool dry location.
3. Make sure the battery is fully charged before the UPS is stored.
4. For extended storage in moderate climates, the battery should be charged for 12 hours every 3 months by plugging the power cord into the wall receptacle and turning on the main switch. Repeat it every 2 months in high temperature locations.

# BASIC OPERATION

## FRONT AND TOP PANEL DESCRIPTION



## 1000/1500 R1U

1. **AC Inlet**  
Connect to utility power through the input power cord.
2. **Input Circuit Fuse**  
The fuse provides optimal overload protection.
3. **AC outlet**  
The UPS provides outlets for connected equipment to insure temporary uninterrupted operation during a power failure and against surges and spikes.
4. **SNMP/HTTP Network Port**  
The SNMP/HTTP port provides remote monitoring and management of your UPS over a network.
5. **Serial Port**  
This port allows connection and communication from the DB9 serial on the computer to the UPS unit. The UPS communicates its status to the software.

**6. USB Port**

This port allows connection and communication from the USB port on the computer to the UPS unit.

**7. EPO Port**

Enables an emergency UPS Power-Off from a remote location. EPO terminal open, the UPS will turn off and the output shutdown immediately.

**8. LCD Display**

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

**9. Power On/Off Switch**

Press the power switch to turn the UPS ON or OFF.

**10. Mute Button**

The audible alarm can be turned off/on by pressing this button.

## 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.

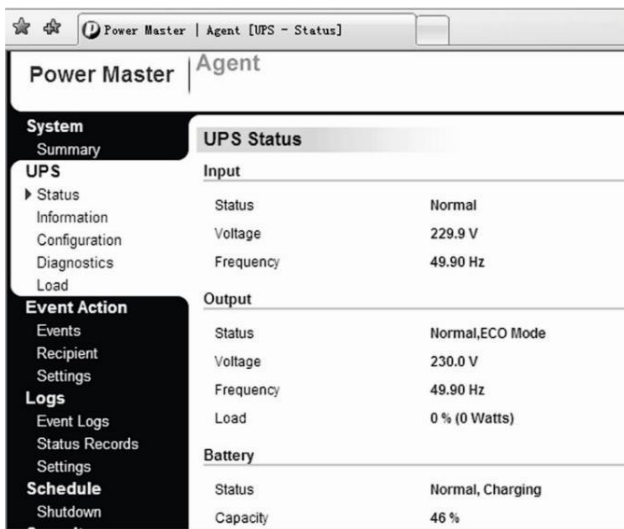
**Installation procedure:**

1. Download Power Master from the website:

<https://www.powermonitor.software/#PowerMasterPlusSoftware>

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

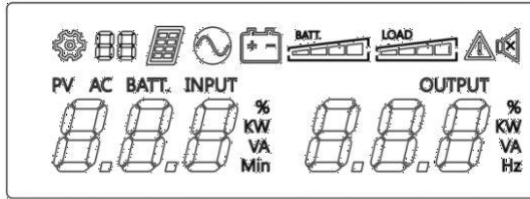
3. When your computer restarts, the Power Master software will appear as a blue icon located in the system tray









## TECHNICAL SPECIFICATIONS

| General features               |   |
|--------------------------------|---|
| Type                           | Line-Interactive  |
| Power capacity                 | 1000VA / 600W   |
| Output Power Factor            | 0.60  |
| Input                          |   |
| Input Voltage Range            | 165-290 VAC   |
| Frequency (Synchronized Range) | +/- 5Hz / 50Hz or 60Hz  |
| Output                         |   |
| Nominal Output Voltage         | 230 VAC   |
| Pure Sine Wave                 | Yes   |
| THDv                           | ≤3% Full Linear Load; ≤5% Non-Linear Load                                   |
| Voltage Regulation (Bat. Mod.) | ±10%  |
| Frequency (Battery Mode)       | ±0,5 Hz   |
| Technical details              |   |
| Transfer Time [AC to Battery]  | 5ms typical / <10ms max.  |
| Charger                        | 1A  |
| Protection                     | Overload protection on utility: fuse; on battery: internal current limiting |
| Efficiency                     |   |
| LINE mode full Load            | 95.0%   |
| Batteries and autonomy time    |   |
| Batteries                      | 4x 6V / 7 Ah  |
| DC Voltage                     | 24 V  |
| Recharge Time                  | 8h to 90%   |
| Connections and communication  |   |
| IEC 320 C13 Outlet             | 4   |
| Input                          | IEC 320 C14   |
| Software                       | Power Master  |
| USB port & HID Support         | Yes   |
| RS-232 Port & Extension Slot   | Yes   |
| EPO Port                       | Yes   |
| Environment                    |   |
| Noise Level                    | No Fan / <40dB  |
| Temperature & Humidity         | 0°C – 40°C / 0% - 90% RH (non-condensing)                                   |
| Dimentions                     |   |
| Width x Height x Depth         | 433 x 44 x 389 mm   |
| Weight                         | 14.2 kg   |

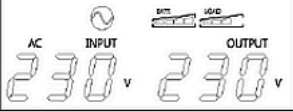
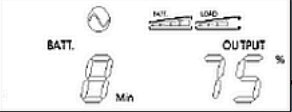
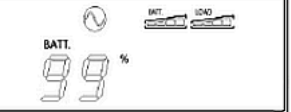
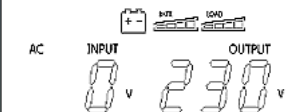
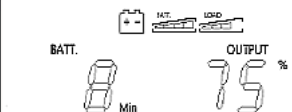

## DEFINITIONS FOR ILLUMINATED LCD INDICATORS



### LCD indication

|   |   |   |   |
|---|---|---|---|
|  | Line mode   |  | Bat-mode  |
|  | Alarm/Fault   |  | Sound disable<br>(Press the mute key 3s to disable and enable the buzzer sound) |
|   | Bat mode: battery capacity<br>Line mode: 1. Battery charging: cycle lighting<br>2. Battery full charged: lighting<br>3. Line mode without charger: battery capacity |  | Load capacity   |

### Line & Battery Mode

|                  | Initial  | 2th  | 3th   |
|------------------|--|--|---|
| <b>Line mode</b> |   |   |   |
| <b>Batt Mode</b> |  |  |  |

## ALARM DEFINITIONS

| Alarm                           | Condition   |
|---------------------------------|---|
| Off                             | Normal  |
| Beep 1 time In Every 30 Seconds | Utility Failure – The UPS is providing battery power to outlets.  |
| Beep 1 time In Every 2 Seconds  | Utility Failure – The UPS is providing battery power.<br>The rapid beeps indicate the battery will run out of power shortly.                            |
| Beep 1 time In Every 0.5 Second | Overload - Occurs when connected equipment exceeds the rating of the unit.<br>Turn the UPS off and unplug at least one piece of equipment from the UPS. |

# TROUBLE SHOOTING

| Problem                                   | Possible Causes                                    |  | Remedy  |                |                   |
|---|--|--|---|----------------|-------------------|
| <b>Abnormal</b>                           |  |  |   |                |                   |
| Mains normal but not Works in AC mode     | 1. AC Input missing                                |  | 1. Check AC input connection.   |                |                   |
|   | 2. Input Breaker is tripped                        |  | 2. Unplug the power cord of the UPS, then press the circuit breaker knob.   |                |                   |
| Alarm buzzer beeps 10s                    | Overload   |  | Verify that the load matches the capability specified in the specs.   |                |                   |
| The UPS will not turn on                  | The on/off Button is designed to prevent damage by |  | 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 220-240V 50/60Hz outlet.  |                |                   |
|   | The battery is worn out.<br>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.  |                |                   |
| <b>Alarm</b>                              |  |  |   |                |                   |
| Alarm code A06                            | Battery capacity is low                            | Alarm code A09   | Battery disconnected  | Alarm code A14 | Over load occurs. |
| Alarm code A16                            | EPO active   | Alarm code A18   | Over temperature  |                |                   |
| <b>Fault</b>                              |  |  |   |                |                   |
| Fault code F06                            | INV soft start fail                                | Restart the UPS, if the fault is still, contact Technical Support  |   |                |                   |
| Fault code F07                            | INV volt high                                      |  |   |                |                   |
| Fault code F08                            | INV Volt low                                       |  |   |                |                   |
| Fault code F09                            | Output circuit short.                              | Your attached equipment may have problems, please remove them and check again.   |   |                |                   |
| Fault code F11                            | Battery voltage is too high.                       | 1. Shut down the UPS<br>2. Check the counts of Battery<br>3. Check battery connector when use battery packages.                                    |   |                |                   |
| Fault code F12                            | Battery voltage is too low                         |  |   |                |                   |
| Fault code F13                            | Battery is overcharge                              |  |   |                |                   |
| Fault code F14                            | Over load occurs.                                  | Shut off non-essential equipment. If this solves the overload problem, the UPS will transfer to normal operation.                                  |   |                |                   |
| Fault code F15                            | load unbalance                                     |  |   |                |                   |
| Fault code F18                            | Fan has been damaged.                              | Shut down the UPS, Replace the fan   |   |                |                   |
| Fault code F19                            | Over temperature                                   | 1. Shut down the UPS. Restart the UPS to Check the fan for operation and if the ventilation hole has been covered<br>2. Contact Technical Support. |   |                |                   |
| <b>Other</b>                              |  |  |   |                |                   |
| Software is inactive                      | The serial is not connected.                       |  | Connect the serial cable to the UPS unit and an open serial port on the back of the computer. You must use the cable that came with the unit. |                |                   |
|   | The unit is not providing battery power.           |  | Shutdown your computer and turn the UPS off. Wait 10 seconds and turn the UPS back on. This should reset the unit.                            |                |                   |

# UPS REAL VIEW



Front view



Back view

