

## Line Interactive UPS

**PowerWalker VI 650 SH**  
**PowerWalker VI 850 SH**  
**PowerWalker VI 1200 SH**  
**PowerWalker VI 2200 SH**  
(Schuko / French / IEC)



**PowerWalker VI 650 SHL**  
**PowerWalker VI 850 SHL**  
**PowerWalker VI 1200 SHL**  
**PowerWalker VI 2200 SHL**  
(Schuko / French / IEC)



## Quick Start Guide

## IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS – This manual contains important instructions for PowerWalker VI 650/850/1200/2200 SH and VI 650/850/1200/2200 SHL series that should be followed during installation and maintenance of the UPS and batteries.

- This product is specially designed for PCs and it is not recommended for use in any medical equipment, life-supporting system and other specific important equipment.
- Do not plug household appliances such as hair dryers, microwave ovens or vacuum cleaners to UPS.
- Do not attach a power strip or surge suppressor to the UPS.
- Do not plug the UPS into its own output.
- Connection to any other type of receptacle other than two-pole, three-wire grounded receptacle may result in shock hazard as well as violate local electrical codes.
- To reduce risk of overheating the UPS, do not cover the UPS' cooling vents.
- This unit intended for installation in a controlled environment (temperature controlled, indoor area free of conductive contaminants). Avoid installing the UPS in locations where there is standing or running water or excessive humidity and do not use it in any of the following environments:
  - Any area with combustible gas, corrosive substance or heavy dust.
  - Any area with extraordinarily high or low temperature (above 40°C or below 0°C) and humidity of more than 90%.
  - Any area exposed to direct sunshine or near any heating apparatus.
  - Any area with serious vibrations.
  - Outdoor.
- The utility power outlet shall be near the equipment and easily accessible. In the event of an emergency, press OFF button and disconnect the power cord from the AC power supply to properly disable the UPS.
- The internal short circuiting of the UPS will lead to dangers such as electric shock or fire; therefore do not allow liquids or any foreign object to enter the UPS. No water containers (such as a water glass) or any other liquid-containing vessels shall be placed on the top of the UPS so as to avoid such dangers as electric shock.
- Please do not use the UPS in excess of the rated load capacity.
- Unplug the UPS prior to cleaning and do not use liquid or spray detergent.
- Risk of electric shock, do not attempt to disassemble the unit. No user serviceable parts inside. Refer servicing to qualified service personnel.
- If UPS is to be stored for a long time, it is recommended to recharge the batteries (by connecting the utility power to UPS, switch "ON"), once a month for 24 hours to avoid a full battery discharge.
- In case smoke is found coming out from the device, please cut off the power supply quickly and contact the distributor.

- The UPS contains one/two large-capacity batteries. So the shell shall not be opened, otherwise such dangers as electric shock will be caused. If any internal overhaul or replacement of the battery is required, please contact the distributor.
- Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries.
- A battery can present a risk of electrical shock and high short circuit current. The following precautions should be observed when working on batteries:
  - Remove watches, rings, or other metal objects from the hand.
  - Use tools with insulated handles and wear rubber gloves and boots.
  - Do not lay tools or metal parts on top of batteries.
  - Disconnect charging source prior connecting or disconnecting batteries terminals.
- When replacing batteries, replace with the same type and number of the sealed lead-acid batteries.
- The maximum ambient temperature rating is 40°C.
- Do not dispose of battery or 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. It may be toxic.
- Icon  $\Phi$  on the rating label stands for phase symbol.
- This pluggable type A equipment with battery already installed by the supplier is operator installable and may be operated by laymen.
- During the installation of this equipment it should be assured that the sum of the leakage currents of the UPS and the connected loads does not exceed 3.5mA.
- Attention, hazardous through electric shock. Also with disconnection of this unit from the mains, hazardous voltage still may be accessible through supply from battery. The battery supply should be therefore disconnected in the plus and minus pole of the battery when maintenance or service work inside the UPS is necessary.
- In the event that there is fire occurring in the vicinity, please use dry-power extinguishers. The use of liquid extinguishers may give rise to the danger of electric shock.

**This product complies with the safety and environmental regulations in EU.**

If the time arises to throw away your product, please recycle all the components possible. Batteries and rechargeable batteries are not to be disposed in your domestic waste! Please recycle them at your local recycling point. Together we can help to protect the environment.



# 1. Introduction

**PowerWalker VI SH and VI SHL series** are intelligent and compact line interactive UPSs (Uninterruptable Power Supplies) which are designed to protect your personal computer or sensitive electronic equipments from all forms of power interference, including complete power failures. It is equipped with many features that allow any attached equipment to operate longer and more reliability.







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# 2. Description of Features

- Easy to use and install utilized microprocessor control to maximize the reliability and efficiency
- Equipped with built-in boost and buck AVR function
- HID support – default O/S drivers can support basic functionality without PowerWalker software
- DC Cold start function
- Auto restart while AC recovery.
- Provides AC Overload protection
- Short recharging time
- RJ11/RJ45 (in/out) LAN/Modem/Phone line protection

# 3. Package Contents

You should have received the following items inside of package:

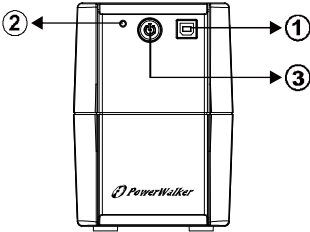
 <p>UPS Unit</p>	 <p>USB Cable</p>	 <p>AC Input Power Cord (does not apply for VI 650/850 SH/SHL FR and Schuko, which have fixed input cable)</p>
 <p>Software CD</p>	 <p>User Manual</p>	 <p>IEC cable (only for IEC outlet models)</p>

## 4. Product Overview

### 4.1. PowerWalker VI 650/850/1200/2200 SH FR/IEC/Schuko

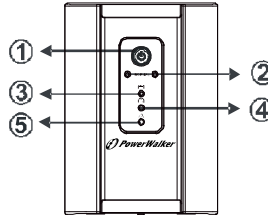
Front Panel:

VI 650/850 SH



- ① USB port
- ② LED Indicators  
AC mode: green lightning  
Battery mode: green flashing
- ③ Power ON/OFF

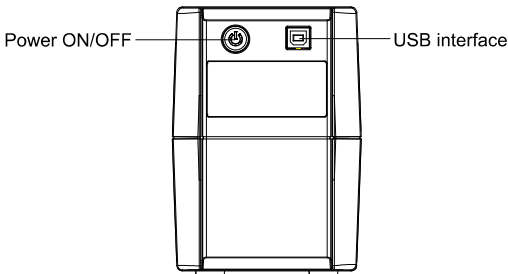
VI 1200/2200 SH



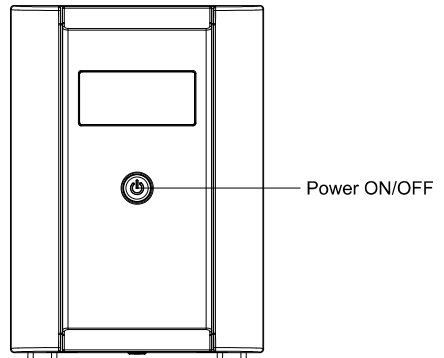
- ① Power ON/OFF
- LED Indicators**
- ② Normal: green lightning
  - ③ Battery mode: yellow flashing
  - ④ AC mode: green lightning
  - ⑤ Fault mode: red lightning

### 4.2. PowerWalker VI 650/850/1200/2200 SHL FR/IEC/Schuko

Front Panel



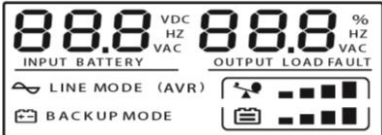






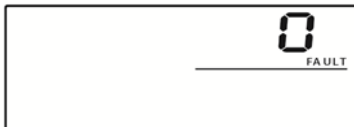
VI 650/850 SHL







VI 1200/2200 SHL

### 4.3. Display for PowerWalker VI SHL series

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




<p>When LCD starts to work, it will display all information for 3 seconds.</p> 	<p>When in normal mode, it will display as below.</p> 
<p>When in AVR mode, it will display as below. And the mark  will flicker every 1second.</p> 	<p>When in battery mode, it will display as below. And the mark  will flicker every 1second.</p>  <p>Note: If I/P-V&lt;40V, input voltage will display "000"</p>
<p>When in off charging mode, it will display as below.</p>  <p>Note: the output voltage always is displayed as "000" in off charging mode.</p>	<p>When in fault mode, it will display as below. "FAULT" character and "0" character only.</p> 

#### 1. Load level definition:

Load level	Load bar Indication
	0%~25%
	25%~50%
	50%~75%
	75%~100%

#### 2. Battery capacity definition:

Battery level

	Battery level < 20%
	20% ≤ Battery level < 40%
	40% ≤ Battery level < 60%
	60% ≤ Battery level < 80%
	80% ≤ Battery level

3. When over load, the mark will flicker every 1second.



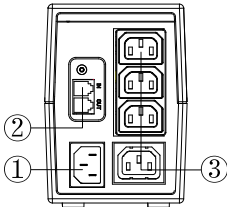
4. When battery low, the mark will flicker every 1second.



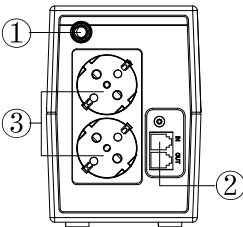
#### 4.4. Back Panel for PowerWalker VI SH and SHL series

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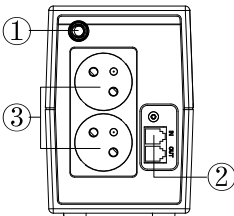
650/850 IEC



650/850 Schuko

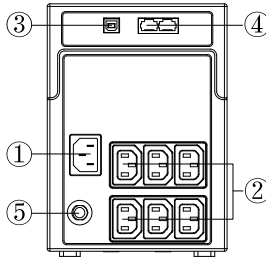


650/850 FR

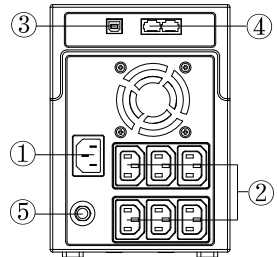


- ❶ AC input
- ❷ RJ11 Modem/phone line Protection
- ❸ 4\*IEC outlet or 2\* Schuko outlet or 2\*French outlet

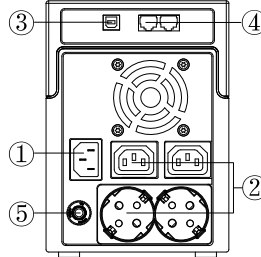
1200 IEC



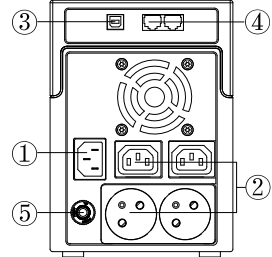
2200 IEC



1200/2200 Schuko



1200/2200 French



- ❶ AC input
- ❷ 6\*IEC outlet or 2\* IEC & 2\* Schuko outlet or 2\* IEC & 2\*French outlet
- ❸ USB port
- ❹ RJ45 LAN/Modem/phone line protection
- ❺ Breaker



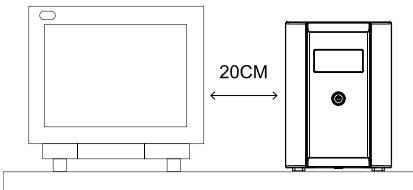
## 5. Installation and Initial Startup



Before installation, please inspect the unit. Be sure that nothing is damaged.

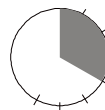
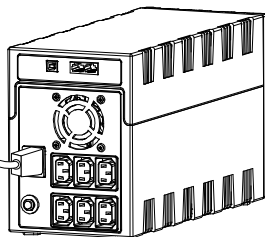
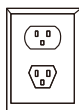
### I: Placement & Storage Conditions

Install the UPS in a protected area that is free of excessive dust and has adequate air flow around the unit, and is free from excessive dust, corrosive fumes and conductive contaminants. Please place the UPS away from other units at least 20 cm to avoid interference. Do NOT operate the UPS where the temperature exceeds 0-40° C and the humidity is over 0-90 % RH.



### II: Connect to Utility and Charge

Plug in the AC input cord to the 2-pole, 3-wire grounded wall outlet. For the best results, we suggest charging the battery at least 6 hours with no load (no electrical devices such as computers, monitors, etc.) connected before initial use. The unit charges its battery while connecting to the utility.



2-4 hours

### III: Connect the Loads

Plug in the loads to output receptacles on the rear panel of the UPS. Simply turn on the power switch of UPS unit, and devices connected to the UPS will be protected by UPS unit.

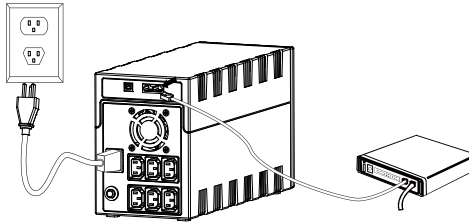


Do not attach a power strip or surge suppressor to the UPS.

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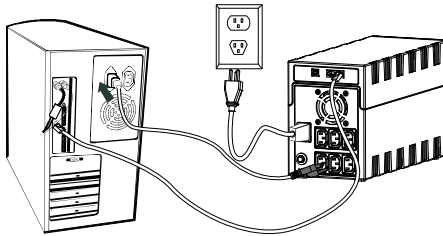
### IV: Connect LAN cable, Modem or Phone line for Surge Protection

Connect for example a single modem or phone line into surge-protected "IN" outlet on the back panel of the UPS unit. Connect from "OUT" outlet to the computer with another phone line cable.



### V: Connect USB Cable

To monitor the UPS status, such as unattended UPS shutdown and start-up, by using bundled software, please connect the UPS and PC with USB cable included.

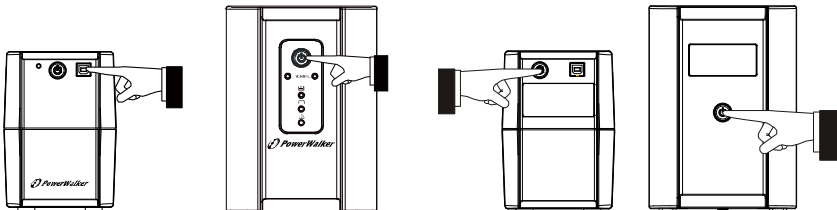


**NEVER** connect a laser printer or scanner to the UPS unit, because in-rush current generated by motor's devices may cause the damage of the unit.



### VI: Turn On/Off the Unit

Turn on the UPS unit by pressing the power switch. Turn off the UPS unit by pressing again the power switch.



## 6. Functions & Operation

### I: DC Start Function

DC Start Function enables UPS to be started up when AC utility power is not available and battery is fully charged. Just simply press the power switch to turn on the UPS.

### II: AVR (Automatic Voltage Regulation)

If the quality of the incoming mains is poor, the AVR boosts a low incoming voltage or reduces a high one. The load receives a voltage within the normal range.

### III: Auto restart while AC recovery

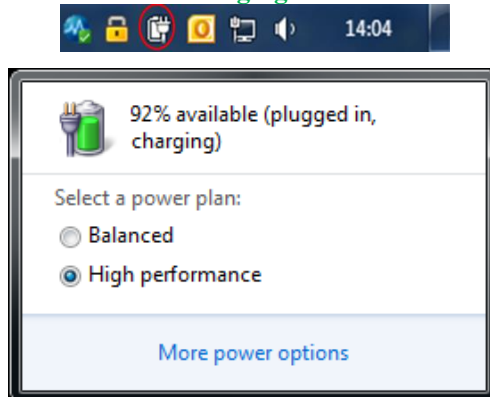
### IV: Audio Indicator

<u>Audible Alarm</u>	<u>Situation</u>
Sounding every 10 seconds	Battery Mode
Sounding every 1 second	Battery Low
Sounding every 0.5 seconds	Overload
continuous sounding	Faulty

### V: HID Support (Human Interface Device)

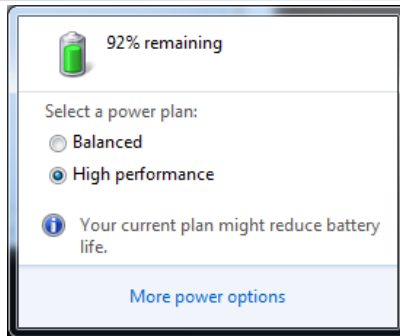
- UPS supports communication with generic system drivers. User is able to control and monitor UPS basic functions without WinPower installed. When UPS is connected to windows PC with USB cable, system will show a battery icon located in the system tray, near the clock. You can get some basic information (ex. Charging/Discharging, battery remaining capacity) by clicking the battery icon.

#### on charging status

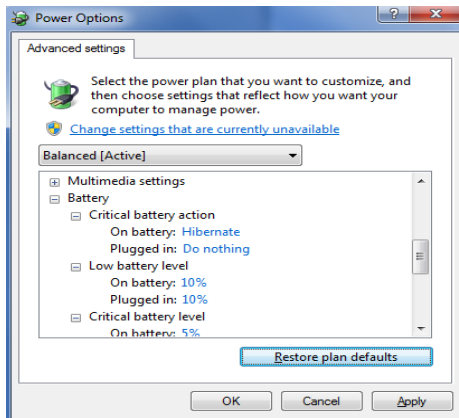
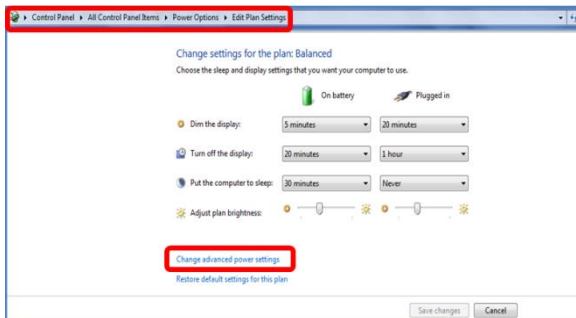


#### on discharging status





- You can set to Sleep/Hibernate/Shutdown OS or do nothing when it reached Battery Low Level or Battery Critical Level (with OS without Winpower).



- For more status to monitor and control, please run the monitor software Winpower which supports HID

#### VI: Strong charger


- UPS is equipped with strong charger which allows recharging batteries in a very short time. Only 2-4h are required to reach 90% capacity of the battery after complete discharge.

#### VII: Small Load detection

- UPS detects even the smallest loads (for example router may require as little as 4W) and supports it with back up power for maximum time during power failure.

## 7. Software Installation on your PC

Connected by USB to a PC or notebook, the Software enables communication between the UPS and the computer. The UPS software monitors the status of the UPS, shuts down the system before the UPS is exhausted and can remotely observe the UPS via the Network (enabling users to manage their system more effectively). Upon AC failure or UPS battery low, UPS takes all necessary actions without intervention from the system administrator. In addition to automatic file saving and system shut-down functions, it can also send warning messages via pager, e-mail etc.

- Use the bundled CD and follow the on-screen instructions to install the software WinPower.
- Enter the following serial No. to install software: **511C1-01220-0100-478DF2A**
- After the software is successfully installed, the communication with UPS has been established and a green icon will appear in the system tray. 
- Double-click the icon to use the monitor software (as above).
- You can schedule UPS shutdown/start-up and monitor UPS status through PC.
- Detail instructions please refer to the e-manual in the software.



Check [winpower.powerwalker.com](http://winpower.powerwalker.com) from time to time to get the latest version of monitoring software.

## 8. Maintenance

### I. General

The UPS is virtually maintenance free: take care of proper environmental conditions and keep air inlets-outlets free of dust.

### II. Fuses

If the AC input fuse is defect, be sure it is replaced by a compatible fuse from the same make and type.

Never short circuit batteries. When working with batteries, remove watches, rings and other metal objects, and only use insulated tools.

### III. Batteries



Read all safety rules before replacing the battery.

When replacing the batteries, use batteries with exactly same specifications.

## 9. Trouble Shooting

Symptom	Possible Cause	Remedy
No LED display on the front panel.	1. Battery weak.	1. Charge battery up to 8 hours.
	2. Battery defect.	2. Replace with the same type of battery.
	3. Power switch is not pressed.	3. Press the power switch again.
Alarm buzzer beeps continuously when AC supply is normal.	Overload of the UPS.	Verify that the load matches the UPS capability specified in the specs.
When power failure, back-up time is shorten.	1. Overload of the UPS.	1. Remove some non-critical load.
	2. Battery voltage is too low.	2. Charge battery 8 hours or more.
	3. Battery defect due to high temperature operation environment, or improper operation to battery.	3. Replace with the same type of battery.
Mains normal but LED is flashing.	Power cord is loose.	Reconnect the power cord properly.

If any abnormal situations occur that are not listed above, please call service people immediately.

## 10. Specifications

Model	650	850	1200	2200
<b>CAPACITY</b>	650VA / 360W	850VA / 480W	1200VA/600W	2200VA/1200W
<b>INPUT</b>				
Voltage	230 VAC			
Voltage Range	170~280 VAC			
<b>OUTPUT</b>				
Voltage	230 VAC			
Voltage Regulation	+/-10% (Battery mode)			
Frequency Range	50/60Hz			
Frequency Regulation	±1Hz (Battery mode)			
Transfer Time	Typical 4-8ms			
Waveform	Modified Sine Wave			
<b>PROTECTION</b>				
Full protection	Discharge, overcharge and overload protection			
<b>ENVIRONMENT</b>				
Humidity	0-90 % RH @ 0° to 40° C (non-condensing)			
Noise Level	Less than 40dB			45dB
<b>Software</b>				
Monitoring Software	WinPower (included)			
<b>BATTERY</b>				
Type & Number	12V/7Ah x 1	12V/9Ah x 1	12V/7Ah x 2	12V/9Ah x 2
Charging Time	2-4 hours recover to 90% capacity			
Backup Time (est. 100W)	16 min	20 min	30 min	50 min
<b>PHYSICAL</b>				
LCD Indicator	<b>VI SH Series:</b> Green LED (AC Mode, Backup Mode) <b>VI SHL Series:</b> LCD display			
Outlet	<b>VI SH/SHL:</b> 2 x Schuko outlet <b>VI SH/SHL FR:</b> 2 x French outlet <b>VI SH/SHL IEC:</b> 4 x IEC outlets		<b>VI SH/SHL:</b> 2 x Schuko + 2 x IEC <b>VI SH/SHL FR:</b> 2 x French + 2 x IEC <b>VI SH/SHL IEC:</b> 6 x IEC outlets	
Connector	USB port, RJ11 Surge Protection		USB port, RJ45 Surge Protection	
Dimension (DxWxH)	290mm x 100mm x 143mm		364mm x 139mm x 195 mm	
<b>WEIGHT</b>				
Net weight	SH: 4.4kg SHL: 4.4kg	SH: 5.0kg SHL: 5.2kg	SH: 8.6kg SHL: 8.9kg	SH: 10.2kg SHL: 10.4kg