

**BRAVER UPS**  
**(Uninterruptible Power System)**

**User's Manual**

## Safety – CAUTION!

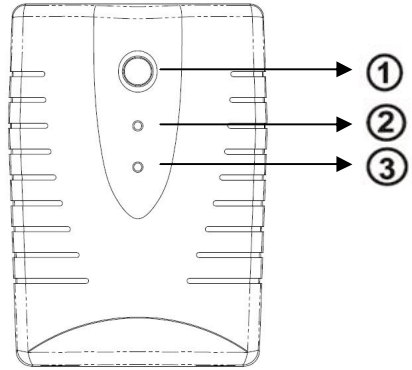
- This UPS utilizes voltages that may be hazardous. Do not attempt to disassemble the unit. The unit contains no user replaceable parts. Only authorized service personnel may perform repairs.
- Internal battery voltage is 12V DC. Sealed, lead-acid, 6 cells battery.
- Connection to any other type of receptacle other than a two-pole, three-wire grounded receptacle may result in shock hazard as well as violate local electrical codes.
- 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.
- 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.
- This unit intended for installation in a controlled environment (temperature controlled, indoor area free of conductive contaminants). Avoid installing the UPS in location where there is standing or running water, or excessive humidity.
- Do not plug the UPS input into its own output.
- Do not attach a power strip or surge suppressor to the UPS.
- Do not attach non-computer-related items, such as medical equipment, life-support equipment, microwave ovens, or vacuum cleaners to UPS
- 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.
- Unplug the UPS prior to cleaning and do not use liquid or spray detergent.
- Do not dispose of batteries in a fire as they may explode.
- Do not open or mutilate the battery or batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.
- A battery can present a risk of electrical shock and high short circuit current. The following precautions should be observed when working on batteries :
  - 1) Remove watches, rings, or other metal objects from the hands.
  - 2) Use tools with insulated handles.
  - 3) Wear rubber gloves and boots.
  - 4) Do not lay tools or metal parts on top of batteries.
  - 5) Disconnect charging source prior to connecting or disconnecting batteries terminal.

- Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions should be taken. Keep unauthorized personnel away from batteries.
- When replacing batteries, replace with the same number of the sealed lead-acid batteries.
- The socket-outlet shall be installed near the equipment and easily accessible.
- With the installation of the UPS, it should be prevented that the sum of (UPS and) the connected (load) leakage current exceeds 3.5mA.
- This pluggable type A equipment with battery installed by the supplier is operator installable and may be operated by laymen.
- 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 at the connectors of the battery when maintenance or service work inside of the UPS is necessary.

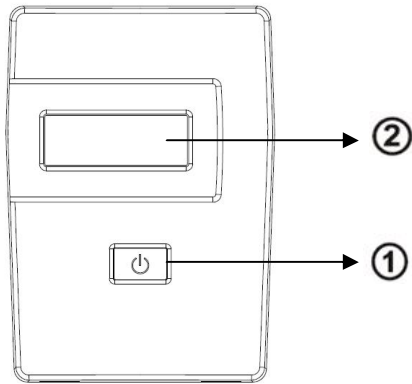
# System Description

## Front Panel –

1. Power Switch & LED Indicator
2. LED Indicators --  
AC Mode: Green Lighting  
Battery Mode: Yellow Flashing  
Fault Mode: Red Lighting

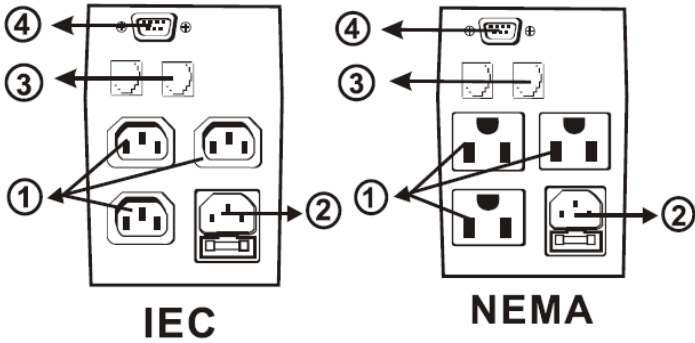


1. Power switch
2. LCD display



## Back Panel –

1. Output receptacles
2. AC Input with AC fuse
3. Modem/Phoneline Surge Protection
4. Communication Port



# Installation and Operation

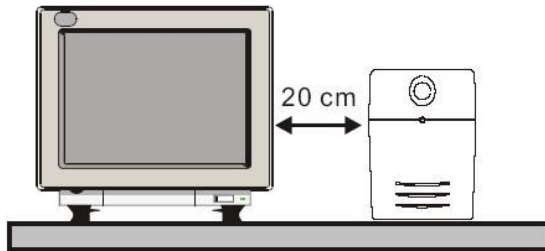
Installing the UPS is as easy as following the steps shown. Be aware of the Power Switch must be kept in the “ON” position, otherwise, the UPS will be disabled and your equipment will not be protected during a power failure.

## 1. Inspection

Remove the UPS from its packaging and inspect it for damage that may have occurred during shipping. If any damage is discovered, repack the unit and return it to the place of purchase.

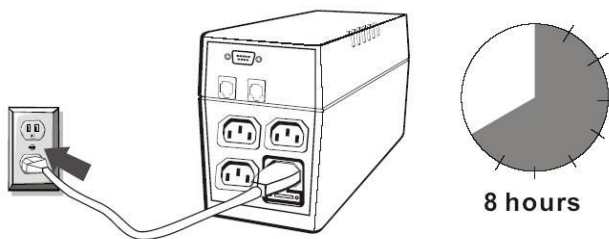
## 2. Placement

Install the UPS unit in any protected environment that provides adequate airflow around the unit, and is free from excessive dust, corrosive fumes and conductive contaminants. Do not operate your UPS in an environment where the ambient temperature or humidity is high. On the other hand, place the UPS unit away from monitor at least 20cm to avoid interference.



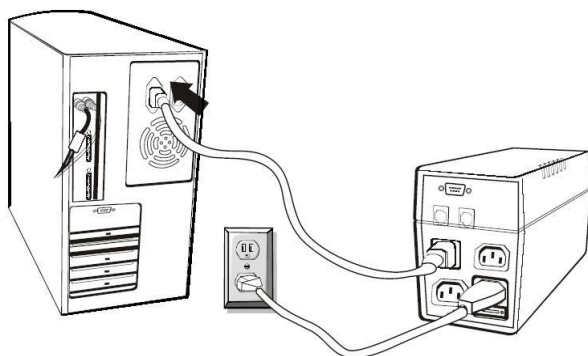
## 3. Charging

This unit is shipped from the factory with its internal battery fully charged, however, some charge may be lost during shipping and the battery should be recharged prior to use. Plug the unit into an appropriate power supply and allow the UPS to charge fully by leaving it plugged in for at least 8 hours.



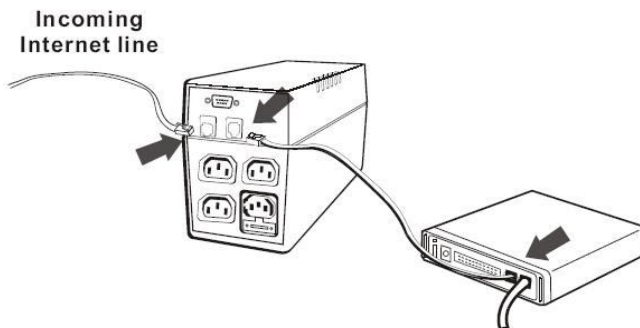
#### 4. Computer Connection

Connect one computer-related device into each of the power receptacles supplied on the back of the UPS (maximum of three devices).



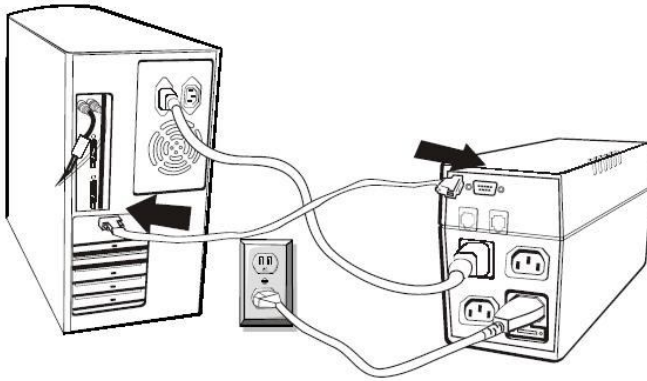
#### 5. Modem / Phone line Connection

Plug incoming internet line into the "In" socket at the back of the UPS. Use one more Internet line cable and plug one end of the Internet line cable to the "Out" socket at the back of the UPS. Plug the other end to the modem input socket as shown.



## 6. Serial Cable Connection

To allow for unattended system shutdown for your operating system, connect the RS-232 serial cable as per diagram below.



## 7. Turn On/Off

To turn on the UPS, press power switch lightly. To turn off the UPS, please press power switch again.

## 8. 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.

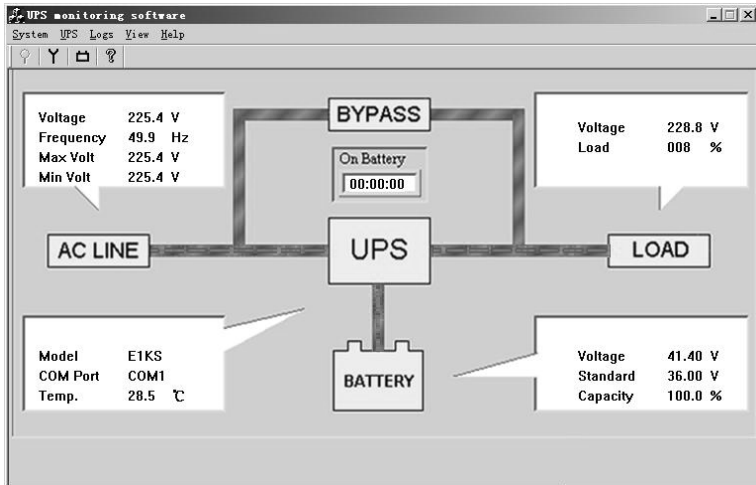
## 9. Green Power Function

Braver UPS is equipped with Green Power Function. For saving power and protecting battery, the method of deep discharging protection is adopted on inverter mode.



# Software Installation – WinPower-XP

WinPower-XP is a UPS monitoring software, which provides user-friendly interface to monitor and control your UPS.



# Trouble Shooting

Symptom	Possible Cause	Remedy
No LED display on the front panel.	1. Battery weak.	1. Re-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, backup 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.
Communication lost between UPS and computer.	1. Software is not installed well.	1. Check the setting of the software.
	2. Cable is not properly connected.	2. Check the RS-232 cable is firmly connected to COM1/COM2 of the computer and confirm the setting again.
Mains normal but orange LED is on.	1. Fuse is blown.	1. Replace the same type of fuse.
	2. Power cord is loose.	2. Reconnect the power cord properly.
	3. Battery defect.	3. Replace the same type of battery.

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

# Specifications

MODEL		Braver UPS		
<b>CAPACITY</b>	VA	400VA	600VA	800VA
	Voltage Range	170-280V AC		
	Frequency	40Hz above		
<b>OUTPUT</b>	Voltage	230V AC		
	Voltage Regulation (Battery Mode)	+ / - 10%		
	Frequency	50Hz or 60Hz		
	Frequency Regulation (Battery Mode)	+ / - 1 Hz		
	Output Waveform	Modified Sinewave		
<b>BATTERY</b>	Battery Type	12V, 4.5Ah	12V, 7Ah	12V, 9Ah
	Recharge Time	8 hours to 90% after complete discharge		
<b>TRANSFER TIME</b>	Typical	4-8ms		
<b>INDICATOR</b>	AC Mode	Green light		
	Backup Mode	Orange light flashing		
<b>AUDIBLE ALARM</b>	Backup Mode	Beeping every 10 seconds		
	Low Battery	Beeping every second		
	Overload	Beeping every 0.5 seconds		
	Battery Defect	Beeping every 2 seconds		
	Fault	Continuously Beeping		
<b>PROTECTION</b>	Full Protection	Discharge, overcharge, and overload protection		
<b>PHYSICAL</b>	Dimension (mm), D x W x H	330 x 100 x 140 mm		
	Net Weight	5 kgs	6kgs	6.5kgs
<b>ENVIRONMENT</b>	Operating Environment	40°C, 0-90 % relative humidity (non-condensing)		
	Noise Level	Less than 40dB		
<b>INTERFACE</b>	Smart RS-232	yes		
	USB	Optional		