



USER'S MANUAL

JP5530 6-20KVA

Attention

Notes for Operation

1. Before using this product, please read this “Attention” carefully, and keep this user manual.
2. Please follow the mark and requirements when operate the machine.
3. This machine should be far away from sunshine, rain or humidity.
4. Keep this machine away from electronic equipments, such as electric warming oven, heating furnace.
5. Around UPS should keep some space for ventilation. Please read the user manual when you install this UPS.
6. Please use dry articles for cleaning UPS.
7. Please use powder fire extinguisher instead of liquid fire extinguisher in case of fire.

Notes for Electricity

1. Please confirm whether the UPS already connect to the ground, check the cable and battery before start the UPS.
2. When move UPS or connect the cable again, cut off the AC input power, make sure UPS stop working completely, otherwise there will be danger on the output.
3. Please use the additional equipments and accessories of our company.
4. Output cable of UPS should be no longer than 10m in order to meet the requirements of EMC.

Notes for Battery

1. Life of battery will be shorter if the temperature get higher, please change the battery regularly and make sure it can supply enough back-up time.
2. Maintenance for battery should be operated by the professional

people.

3. Please note the following steps when someone would change the battery:
 - A. Don't wear watch, ring or other metal articles;
 - B. Use the insulating instruments;
 - C. Wear rubber shoes and gloves;
 - D. Don't put the metal articles on the battery;
 - E. Disconnect the load of the battery before disconnect the battery.
4. Don't put the battery near the fire.
5. Don't open the battery, it is very dangerous.
6. Short circuit of the two poles on a battery should not happen, otherwise, there will be fire or electric shock.

Maintenance

1. Life of UPS will be subject to the environment; don't use the UPS in the following environment
 - A. high or lower temperature ($0^{\circ}\text{C} \sim 40^{\circ}\text{C}$), humidity (20%~90%)
 - B. any shake or shock place
 - C. Metal, cankerous, flammable articles around
2. Put the UPS (without battery) in the dry environment if it doesn't be used for a long time, temperature should be around: $-25^{\circ}\text{C} \sim +55^{\circ}\text{C}$. Before starting UPS, the temperature should be higher than 0°C and more than two hours.

Catalogue

1. Brief	1
1.1 Spec. for marks	2
1.2 Front panel	2
1.3 Real panel	3
1.4 Spec for product	6
2. Installation	7
2.1 Checking before using	7
2.2 Table of cable	7
2.3 UPS connection	8
2.4 Installation for external battery	10
2.5 Connection to the computer	11
2.6 Parallel(optional)	12
2.7 Installation for SNMP(optional)	15
2.8 EPO	16
2.9 Maintenance switch (optional)	17
2.10 Dust screen (optional)	18
2.11 Isolated transformer (optional)	18
3. Display panel	19
4. Operation	22
4.1 Start UPS on LED panel	22
4.2 Shut off UPS on LED panel	23
4.3 Start UPS on LCD panel	24
4.4 Shut off UPS on LCD panel	25
5. Battery	26
6. Maintenance	27
7. Lights on LED/LCD panel	28

1、 Brief

This UPS serial is sine wave online system with maintenance switch and the function of parallel. It can supply your equipment with good quality of AC power. It can be used for wide range of areas, from computer, communication system to industrial area. Online UPS can supply the power to the load without any interruption. In case of overload or the failure of inverter, UPS will switch to bypass. When overload disappear, UPS will transfer to the inverter automatically.

This user manual can be applied for the following models:

JP5530 6K/RM6K: standard backup type with internal batteries

JP5530 6KL/RM6KL: long backup type with external battery

JP5530 10K/RM10K: standard backup type with internal batteries












JP5530 10KL/RM10KL: long backup type with external battery

JP5530 15KL/RM15KL: long backup type with external battery

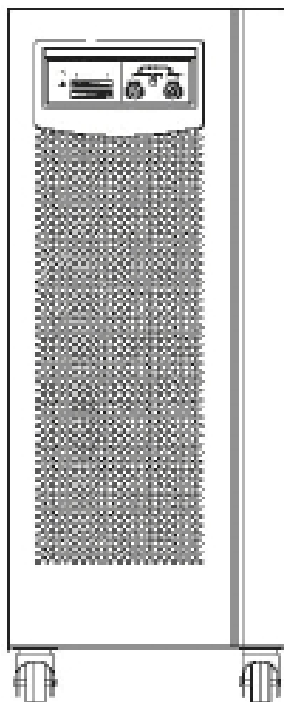
JP5530 20KL/RM20KL: long backup type with external battery

For any type of the model customer can select EPO switch, maintenance switch by hand, the user manual for these two instruments is on 2.8 ,2.9.

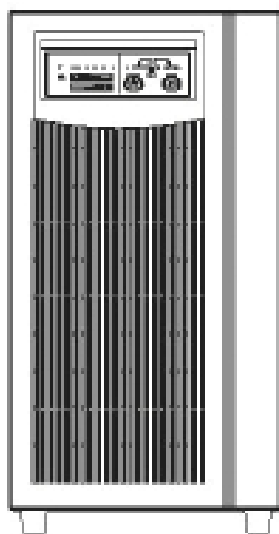
1.1 Spec. for Marks

Marks and Meaning	
	Attention
	Danger
	AC power
	DC power
	Protective Earth Conductor
	Protective Bonding Conductor
	Cycling
	Not Placed With Other Things
	Overload
	Battery
	On/Off Button

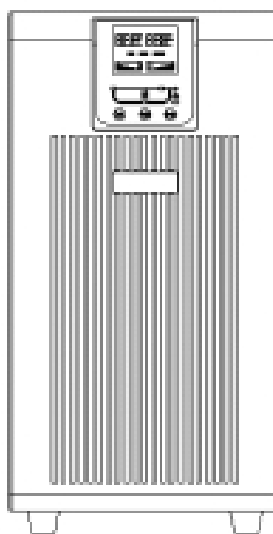
1.2 Front Panel



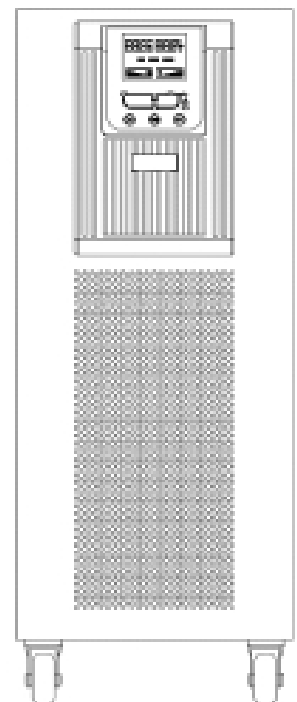
JP5530
6K/10K/15K/20K



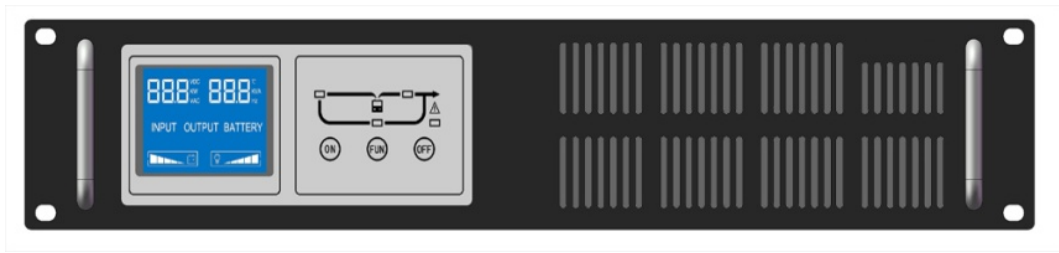
JP5530
6KL/10KL



JP5530
6KL/10KL



JP5530
6K/10K/15K/20K

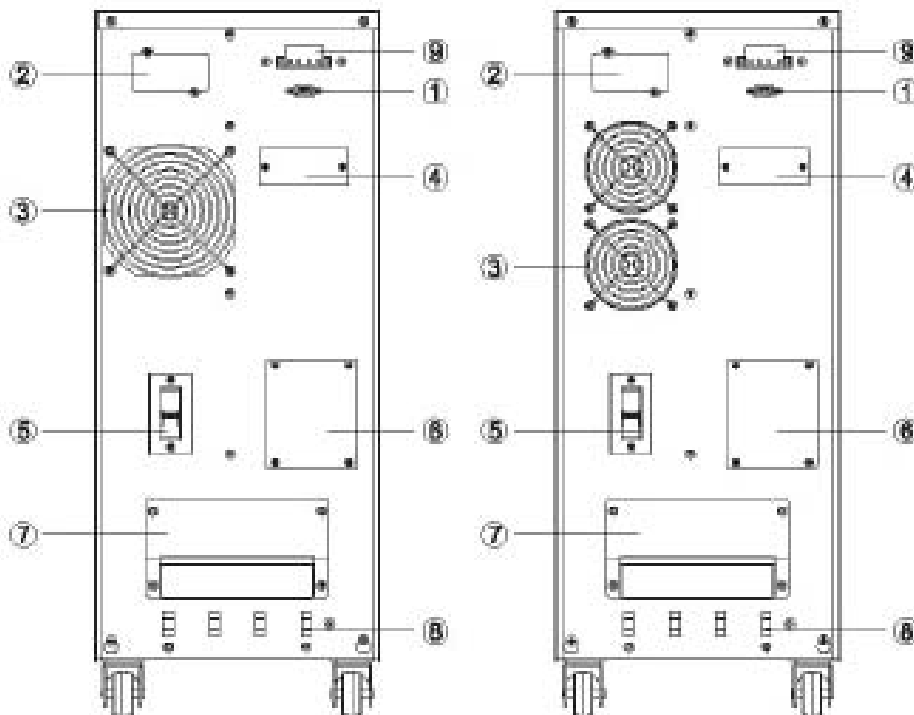


JP5530 RM6K/10K



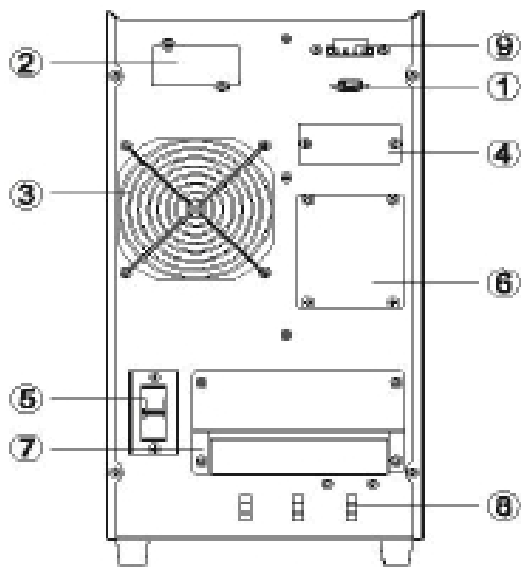
JP5530 RM15K/20K

1.3 Rear Panel

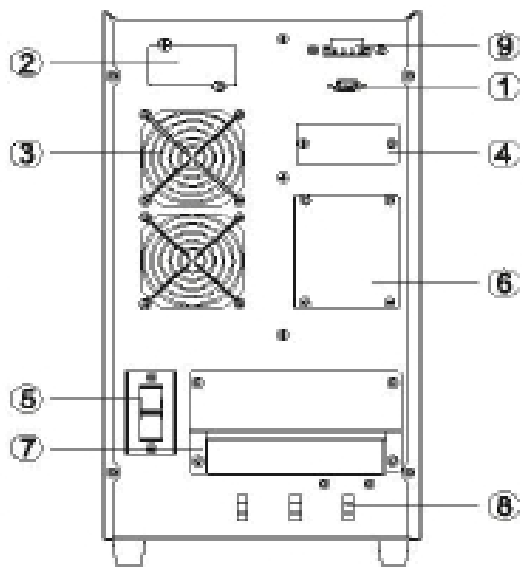


JP5530 6K

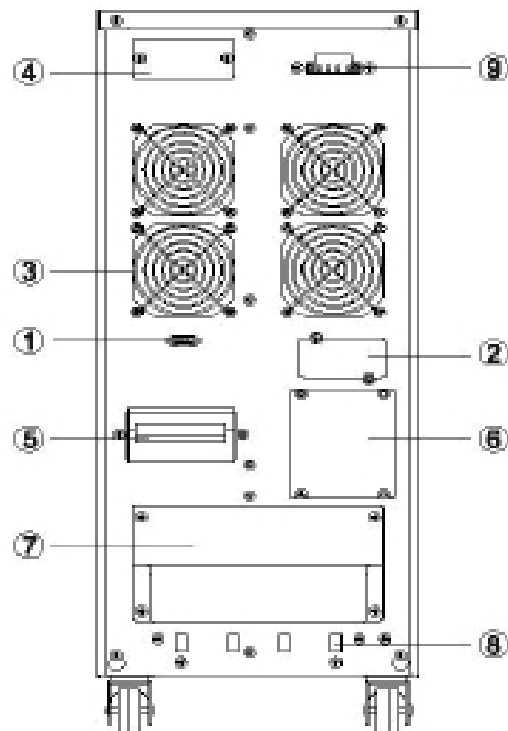
JP5530 10K



JP5530 6KL



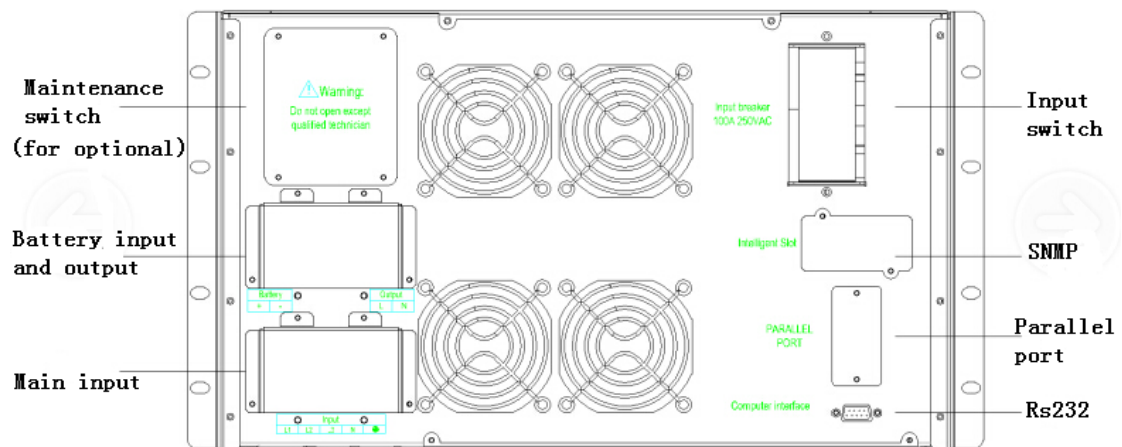
JP5530 10KL



JP5530 15/20K



JP5530 RM6K/10K



JP5530 RM15K/20K

- ① interface for computer
- ② socket
- ③ fan
- ④ parallel card board (parallel card is optional)
- ⑤ switch for input protection
- ⑥ cover panel for maintenance switch(maintenance switch is optional)
- ⑦ terminal board
- ⑧ bracket for cable
- ⑨ EPO(optional)

Please Note:

1. If UPS is with parallel card and maintenance switch, please remove ④、⑥ board and you will see the parallel card, maintenance switch.
2. Above picture is for all the models of UPS.

1.4 Specification

Model	JP5530							
	6K S/L	10K S/L	15KL	20KL	RM6K S/L	RM10K S/L	RM15KL	RM 20KL
Capacity	6KVA/5.4KW	10KVA/9KW	15KVA/13.5KW	20KVA/18KW	6KVA/5.4KW	10KVA/9KW	15KVA/13.5KW	20KVA/18KW
INPUT								
Voltage(Vac)	120V~288V							
Bypass voltage(Vac)	180V~260V							
Frequency(HZ)	45~66 Automatically select synchronization range according to power frequency							
Phase	Single phase three wires							
Power Factor	Full load >=0.98							
Battery voltage(VDC)	192							
Description on Charger(A)	2A/4A	2A/4A	4A		2A/4A	2A/4A		4A
Battery type	16*7Ah / External		External		16*7Ah / External		16*7Ah /External External	
OUTPUT								
Power factor	0.9							
Voltage(V)	200/208/220/230/240V +/- 1%							
Frequency(HZ)	50/60 +/- 0.05% (battery mode)							
Transfer time(ms)	0							
Efficiency	>=93%							
Waveform	Sine wave , Linear Load THD<3%: Non-linear Load THD<5%							
Overload	105%~129% full load keep 60s: 130%~150% load keep 30s; Above 150% load keep 300ms							
Crest factor	>3:1							
OTHERS								
DC start	Yes							
Backup time	Long backup time, can be extened freely							
Charge recovery time	Determined by the extended battery capacity							
Communication function	RS232 connector, support for monitor software, USB port (optional)							
SNMP(optional)	Can be network monitored by SNMP adapter							
Display	LED display UPS work status, LCD display UPS work parameters				LED display UPS work status, LCD display UPS work parameters			
Noise (dB)	<58(1meters)				<50(1meter)		<55(1meter)	
Parallel function	Need to assemble parallel card							
Alarm	Battery low-voltage, mains abnormal, overload, UPS fault, over temperature protection							
Protection	Input over-voltage protection, battery under-voltage protection, overload protection, short circuit protection, over temperature protection							
Working temperature (℃)	0~40							
Humidity	0~95%, Non condensing							
Size(D×W×H) (mm)	500*240*616(S) / 500*248*460(L)		500*248*616		612*447*130(3U)		612*447*130(3U) 660*440*260(6U)	
Weight(KG)	52/21	58/25	36	39	55 /19	57 / 21	37	39

Note:


1 · "L" is long backup UPS, "S" is standard UPS;


2 · Because the products are continuously improved, please contact the company or dealer to inquiry the latest specification.


When input voltage is 187V with rated full load, and charger works fully, UPS can have the maximum current.

Load of the high altitude=rated power ×Rating factor(correspond to altitude)

Altitude (m)	1000	1500	2000	2500	3000	3500	4000	4500	5000
Rating Factor	100%	95%	91%	86%	82%	78%	74%	70%	67%

 **Note:** If UPS are used when the altitude is above 1000m, must use Rating Factor to calculate, please read above table.

 **Danger:** Please cut off the switch of mains before installation, if UPS are long back up type, cut off the input of battery.

 **Note:** 1. Following must be operated by the professional staff
2. Suggest installing UPS falling to the ground.

2、 Installation

2.1 Check when open the package


1. Open the package, and check whether there is any damage during the transportation;
2. If there is any damage or lack of some instruments, please contact with the distributor.

Attachment: A. user manual; B. 6 PCS of terminals.



The package material can be used once more please keep it.

2.2 Table for the cable

 **Note:** Diameter and intersecting surface of the cable are subject to rated capacity of UPS

In the following table, L is for there phase UPS, diameter of L1、 L2、 L3 are the same.

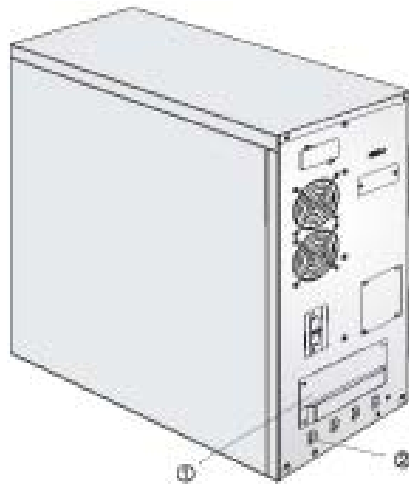
Model		JP5530 6K/RM6K	JP5530 6KL/RM6KL	JP5530 10K/RM10K	JP5530 10KL/RM10K	JP5530 15K/RM15K	JP5530 20K/RM20K
Input	G	10AWG (6mm ²)	10AWG (6mm ²)	8AWG (10mm ²)	8AWG (10mm ²)	6AWG (25mm ²)	6AWG (25mm ²)
	N	10AWG (6mm ²)	10AWG (6mm ²)	8AWG (10mm ²)	8AWG (10mm ²)	6AWG (25mm ²)	6AWG (25mm ²)
	L	10AWG (6mm ²)	10AWG (6mm ²)	8AWG (10mm ²)	8AWG (10mm ²)	6AWG (25mm ²)	6AWG (25mm ²)
Battery	+	10AWG (6mm ²)	10AWG (6mm ²)	8AWG (10mm ²)	8AWG (10mm ²)	6AWG (25mm ²)	6AWG (25mm ²)
	-	10AWG (6mm ²)	10AWG (6mm ²)	8AWG (10mm ²)	8AWG (10mm ²)	6AWG (25mm ²)	6AWG (25mm ²)
	G	10AWG (6mm ²)	10AWG (6mm ²)	8AWG (10mm ²)	8AWG (10mm ²)	6AWG (25mm ²)	6AWG (25mm ²)
Output	L	10AWG (6mm ²)	10AWG (6mm ²)	8AWG (10mm ²)	8AWG (10mm ²)	6AWG (25mm ²)	6AWG (25mm ²)
	N	10AWG (6mm ²)	10AWG (6mm ²)	8AWG (10mm ²)	8AWG (10mm ²)	6AWG (25mm ²)	6AWG (25mm ²)
	G	10AWG (6mm ²)	10AWG (6mm ²)	8AWG (10mm ²)	8AWG (10mm ²)	6AWG (25mm ²)	6AWG (25mm ²)

2.3 UPS connection



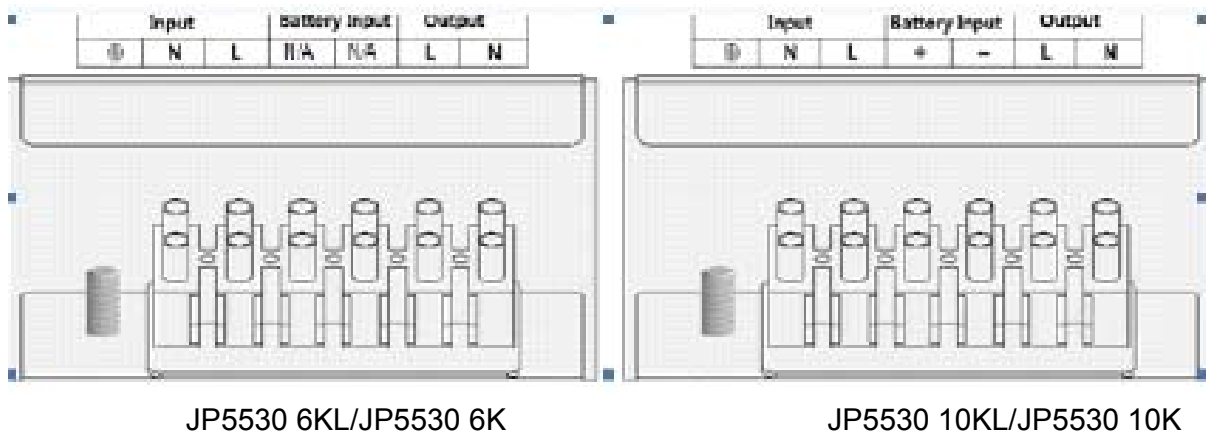
Danger: rated input current of the mains switch must be larger than input voltage of UPS, otherwise, mains switch will be burnt. (Maximum input voltage of UPS please review 1.4 table)

1. Select the input/output cable according to the table 2.2;
2. Open the terminal board on the real panel of UPS①;
3. Connect the output cable to the terminal output;
4. Connect the input cable to the input terminal, and connect the battery cable to the input terminal if batteries need to be connected;
5. Let the cable go through the bracket ②;
6. Fix the input, output and battery cables to the proper position.



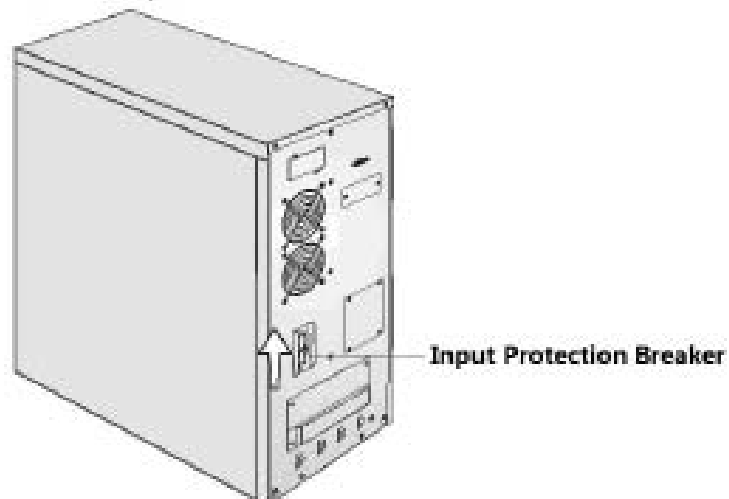
⚠ Danger: when connect the cable, make sure the input/output cable connect the terminal fasten

Terminal for UPS:



7. Fix the cover-plate with screws again.

8. Connect wires and get mains, then turn on the Input Protection Breaker, and UPS will be power-on.




2.4 External Battery Installation of Long-backup Type

JP5530 6-20K Long-backup type apply 16 PCS of 12V batteries (192VDC) in series into one group and several groups can be in parallel.



Please operate as following steps, otherwise, it may occur electric shock:

1. Turn off the battery switch and connect batteries in series;
2. Choose the proper wires to connect the battery cabinet and UPS (refer to table 2.2).An air DC switch must be connected between UPS and Battery groups, the voltage and current of this switch cannot be less than parameters on batteries of each model.

Model	JP5530 6KL/S	JP5530 10KL/S	JP5530 15KL	JP5530 20KL
Battery Voltage	192VDC	192VDC	192VDC	192VDC
Battery current	34A.max	56A.max	83A.max	112A.max

 Danger: don't connect UPS firstly.

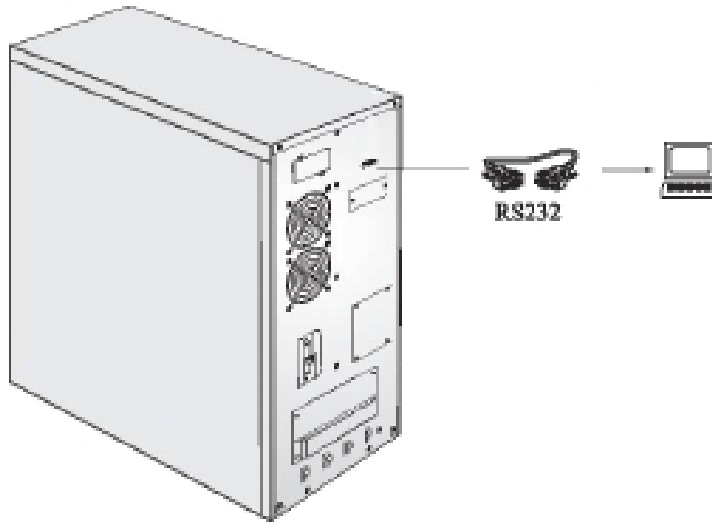
3. Connect the other end of battery cable to UPS, UPS don't connect to the load, put "ON" button of battery, UPS will charge the battery.

 Note: Battery ground on the UPS, the mark is 

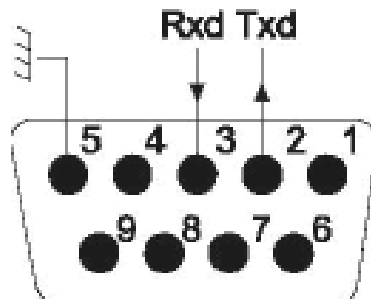
2.5 Connect UPS to the computer socket

Socket of computer: RS232 or USB, will connect the UPS to the monitor.

1. Connect the RS232 or USB to the socket of computer
2. Connect the RS232 or USB to the socket of UPS



The pin bitmap of computer port on UPS as following:



2.6 Parallel card (optional)

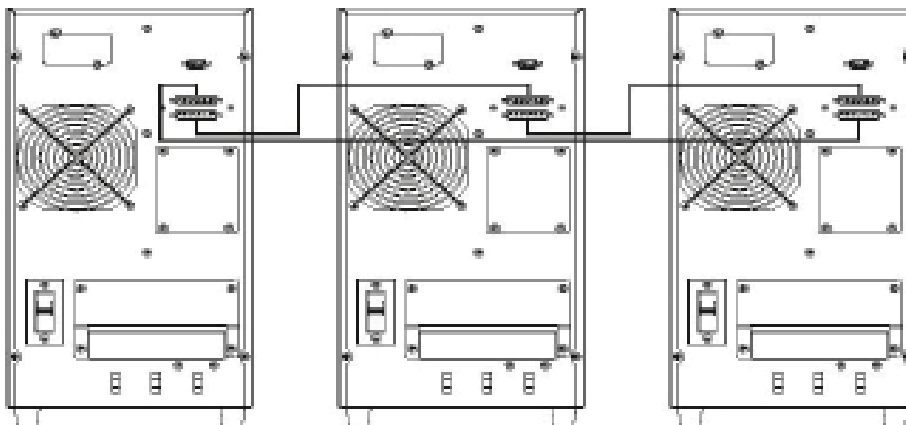
1. Introduction

N+X is the most stable construction for supplying power, N means minimum quantity of UPS needed, X means quantity of UPS parallel, when X becomes larger, the system will be more stable. 3pcs of UPS can be in parallel with parallel cards and cables in this range.

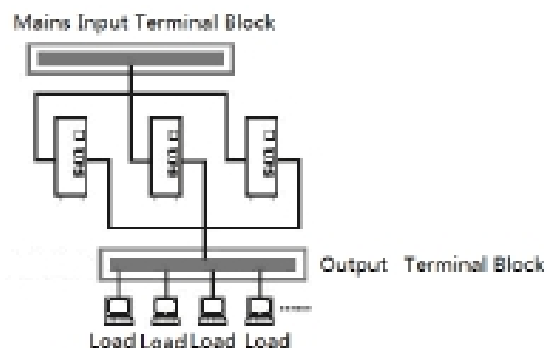
2. Installation for parallel

This function is optional, the user can buy parallel card and cable for installation, and maximum three UPS for parallel, each UPS must use the battery independently

- 1) Remove the board, install the parallel cable: connect the UPS by parallel card and cable.

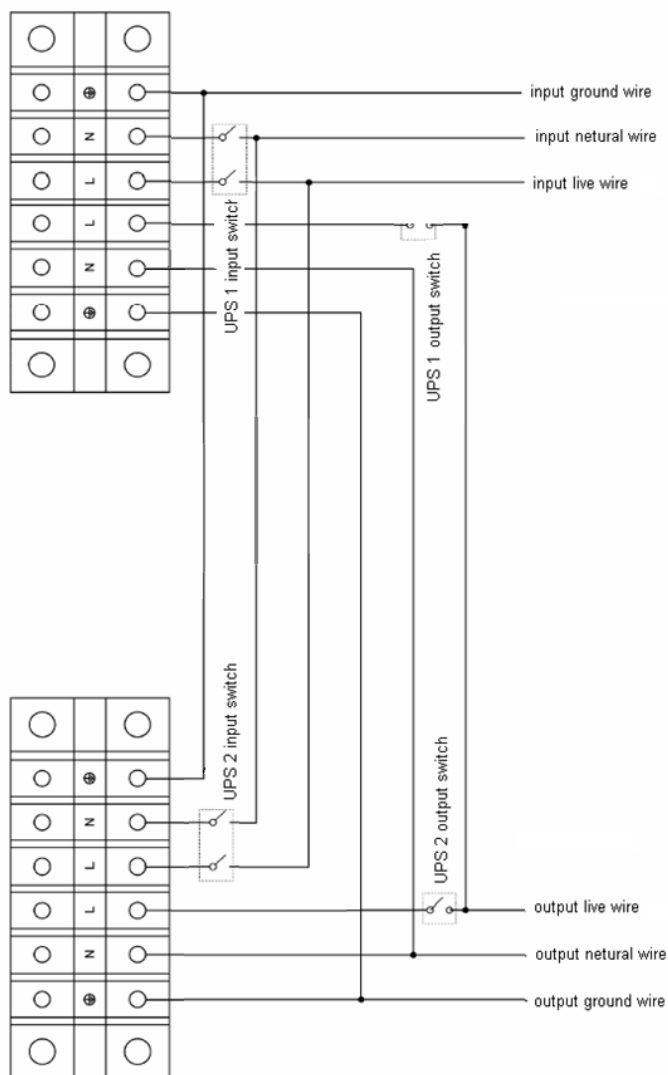


- 2) All the output wires of parallel UPS go to one output terminal block, and then this block will wiring to loads.



Note: Length requirements of output wires:

1) The difference of each wire which connects block and loads must be less than 20% if the distance between loads and every paralleled UPS is less than 20 meters. 2) The difference of each wire which connects block and loads must be less than 10% if the distance between loads and every paralleled UPS is more than 20 meters. 3) The input and output terminals of each paralleled UPS should wire as which in the single UPS, please check the following charts. 4) Every UPS in parallel should connect a battery group separately.



JP5530 6K-20K parallel picture

3. Advantage of parallel

Parallel can improve stability of UPS, when each UPS makes fault, the others still can work, and each UPS need maintenance switch by hand.

4. Operation

1) Follow the operation of single UPS.

2) Start UPS in parallel.

Start UPS when mains on: start any one of the UPS, the other UPS will start working and transfer to inverter.

Start UPS when battery supply power: press button of each UPS for a short time, then press any one of the UPS for a longer time, the other UPS will start and work at the battery mode.

3) Shut off UPS in parallel.

Press the button of any one of the UPS more than 4 seconds, to shut off UPS when parallel; press the button of any one of the UPS more than 1 second, less than 4 seconds to shut off the single UPS.

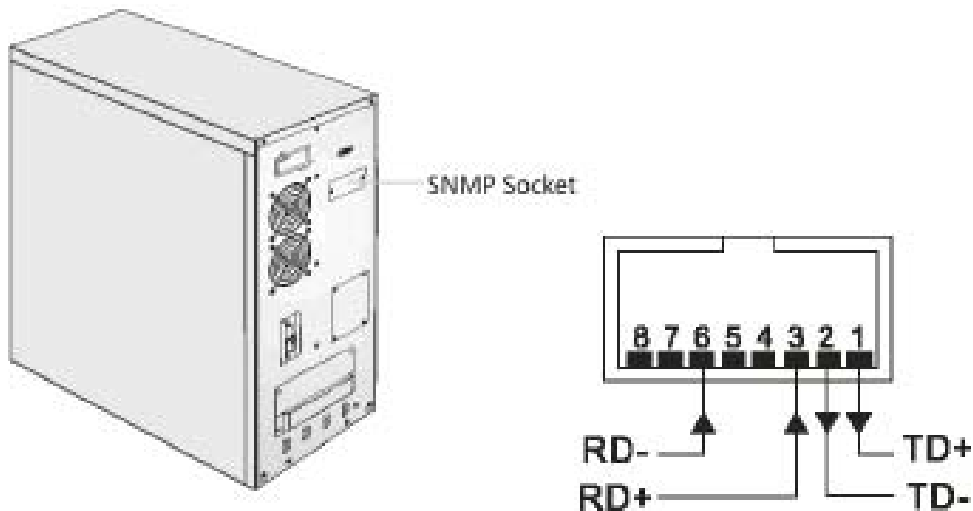


Note: Press for a long time means more than 1 second, for short time means less than 0.5 second.

2.7 Installation of SNMP (optional)

Install SNMP on the above position of the real panel

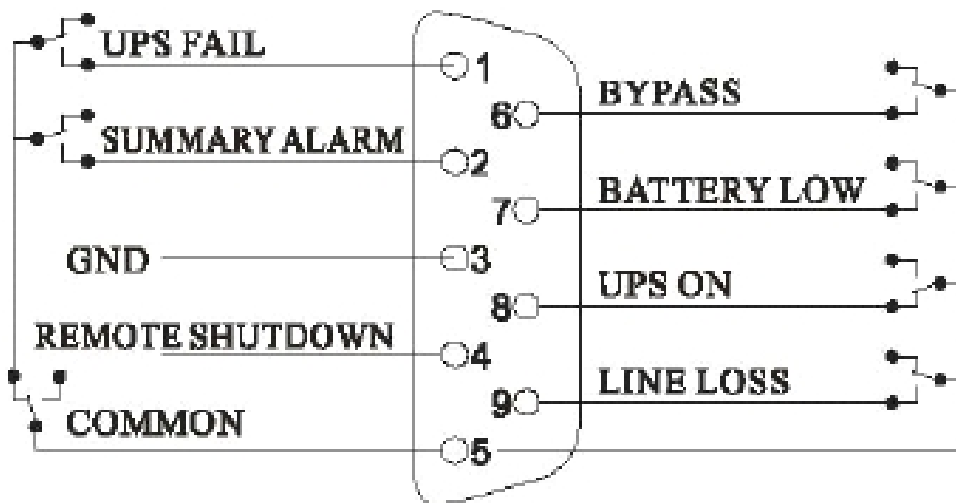
1. Take off the board
2. Install SNMP card
3. Fix it using screws



AS400 card (optional)

Install AS400 card to the socket, the position as below:

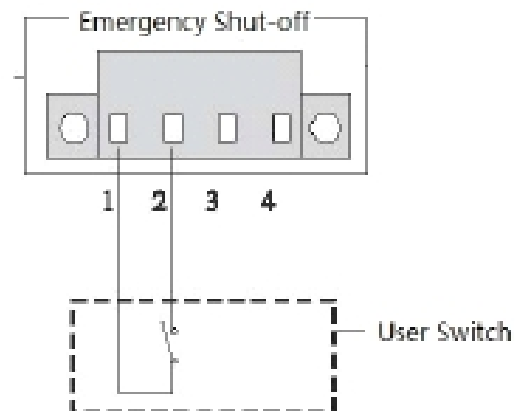
	meaning
PIN1	Break over: UPS fault
PIN2	Break over: alarm
PIN3	Ground
PIN4	Shut off UPS remote control
PIN5	Public terminal non- break over: UPS work
PIN6	Break over: bypass work
PIN7	Break over: low battery voltage
PIN8	Break over: UPS work non break over: bypass work
PIN9	Break over: no power of the mains



2.8 EPO

EPO (Emergent Power Off) ,is on the real panel of UPS, is green terminal.

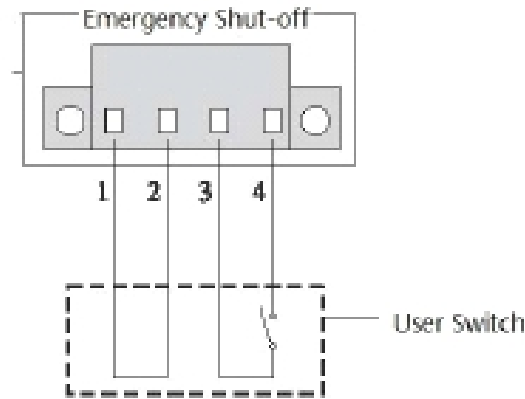
①



1-2 Close, UPS shut off immediately

3-4 Doesn't work

②、

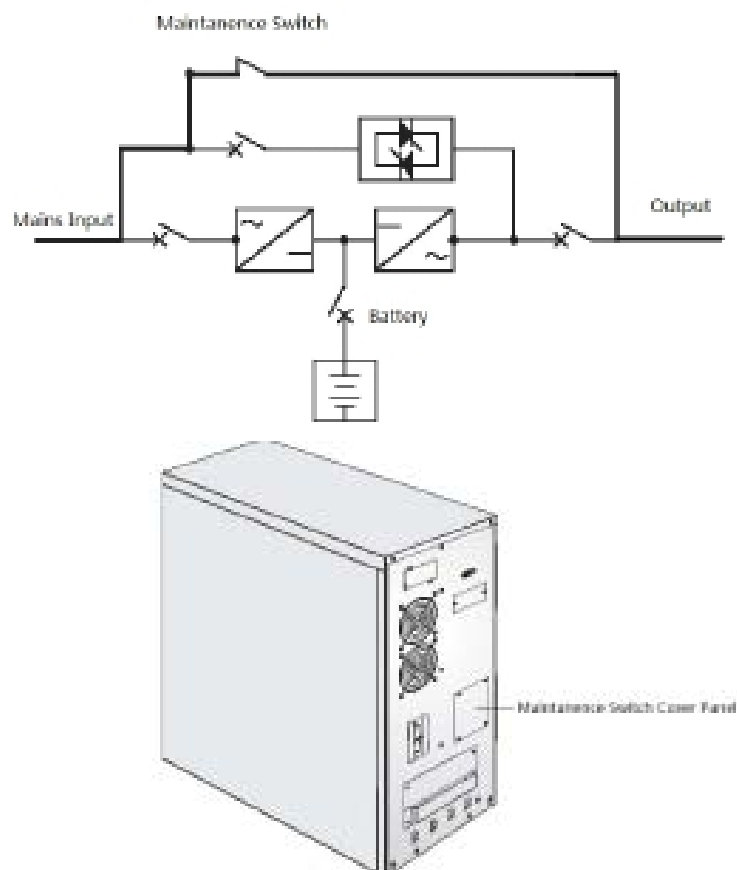


1-2 Connect together, keep this status
3-4 Open, UPS shut off immediately

2.9 Maintenance Switch

To realise online service of UPS

following picture, no matter mains, battery, or bypass mode, internal sections of UPS have power, maintenance switch can let the UPS be away from the mains.



2.10 Dust screen (optional)

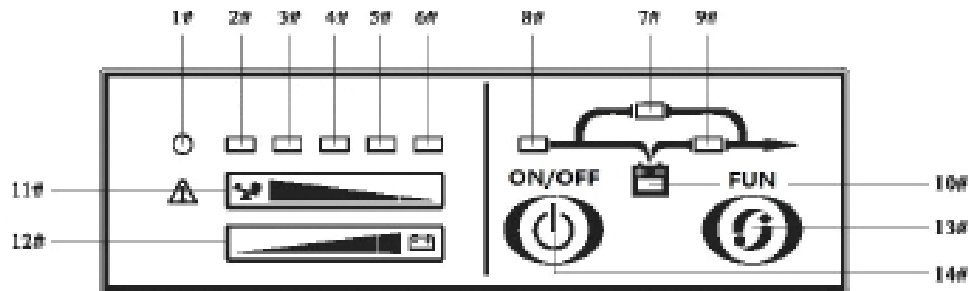
Using dust screen can avoid the dust; in this way UPS can be saved without dust. Installation of the dust screen as below:

1. Remove front panel
2. Install dust screen
3. Install front panel

2.11 Isolated transformer box (optional)

Isolated transformer make the current more balance, user can select it on the output.

3、 Display Panel



1#~10# LED :

1# fault: Flash when UPS fault, it is red

2#~6# load/battery capacity: under the mains mode means load, at the battery mode means battery capacity.

7# bypass: orange

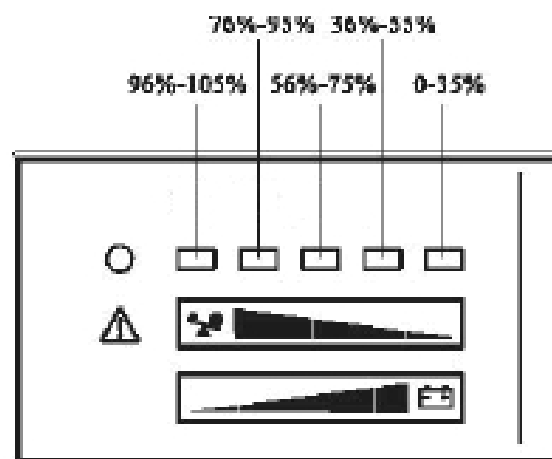
8# mains: green

9# inverter: green

10# battery: orange

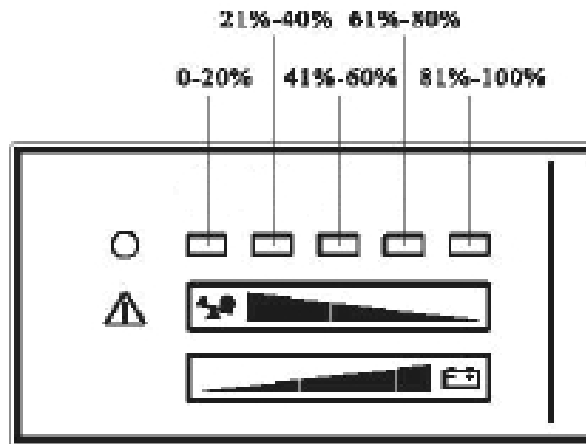
11#load capacity

From right to left 6#→2#, the more LED flash, less load capacity



12# battery capacity

From left to right 2#→6#,more LED flashed, battery capacity increase

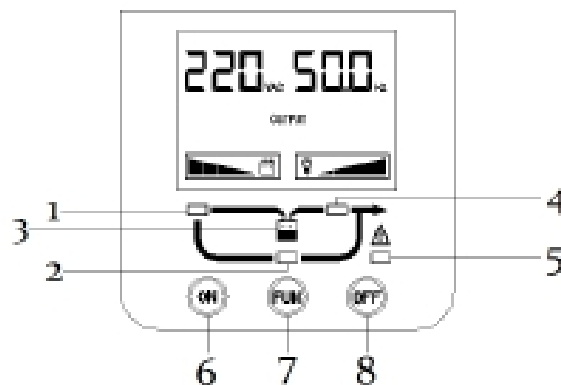


Button:

13# functional button: loudspeaker mute (press more than 2 seconds at bypass or battery mode); battery check (press more than 2 seconds at mains mode)。

14# start/shut off UPS:

LCD panel



1#-5# LED :

1# mains: green

2# bypass: orange

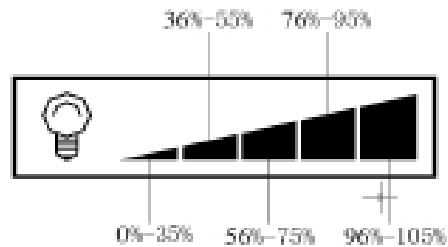
3# battery: orange

4# inverter: green

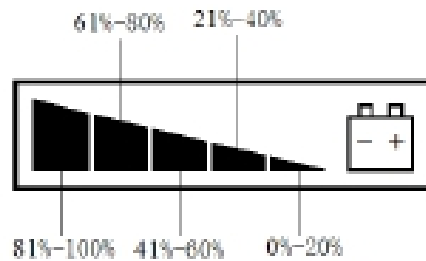
5# fault: red

load/battery capacity:

From left to right, the load increase



From right to left, battery capacity increase



6# start UPS: Start UPS or “increase” when set the parameter

7# function button: Adjust the parameter (adjust BUS voltage, inverter output voltage and change screen to the next page)

8# shut off UPS: Shut off UPS or “decrease” when set the parameter

4、Operation

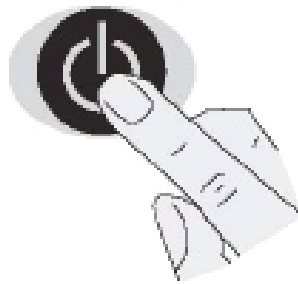
4.1 Start UPS on LED Panel

Note: Even if the battery already charged, however it will consume during transportation, so charge the battery more than 12 hours when use UPS at the first time

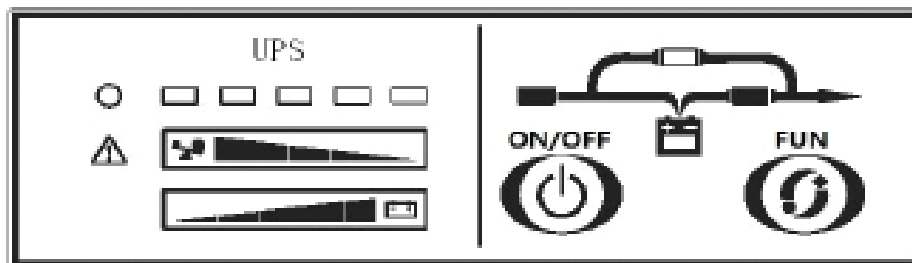
LED status :  flash  not flash

Start UPS when the mains supply

Press button more than 1 second, UPS will start and check itself, at this time, LED for load/battery capacity will flashes, and shut off from right to left



When UPS finish checking itself, it will work normally:



(mains-inverter mode)

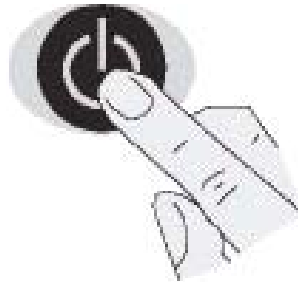


Note: if mains is abnormal, UPS will work at the mode of battery.

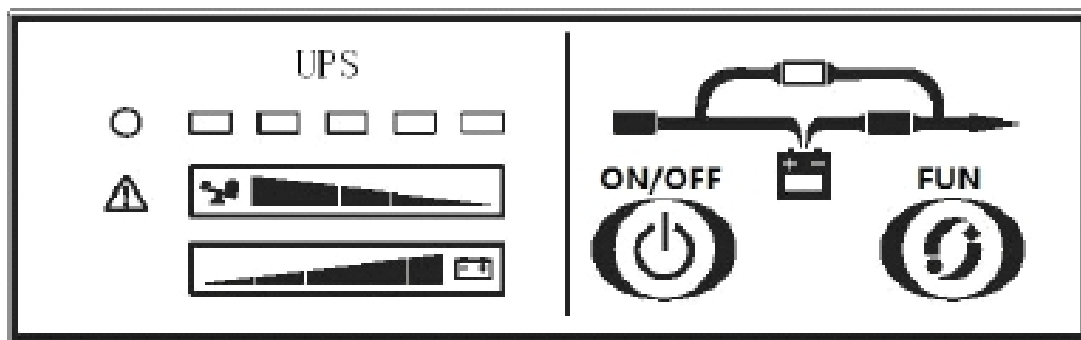
- Loads will be supplied power by battery.

Start UPS without mains, when connect with batteries

- Press the button more than 1 second, UPS will start



- After starting UPS, led for battery will flash, led for mains will shut off, load of the UPS will be supplied by the battery.

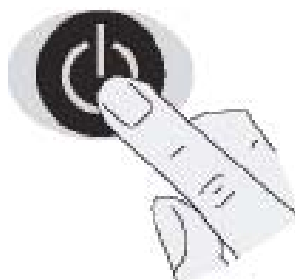


(battery mode)

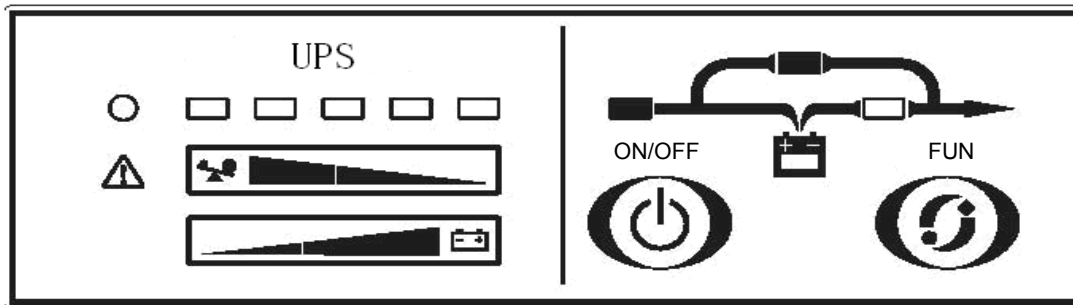
At the battery mode, buzzer will alarm every 4 seconds, if need loudspeaker mute, press functional button more than 2 seconds.

4.2 Shut off UPS on LED Panel

- Press the button more than 1 second, UPS will shut off.



- UPS will have bypass output after shutting off the UPS, following is the picture.



(bypass working mode)

- When UPS work at the bypass mode, led flashed, the buzzer alarm every 2 mints, press “loudspeaker mute” more than 2 seconds, if not need output, disconnect mains.

4.3 Start UPS on LCD Panel

Start UPS with mains

- Press the button for more than 1 second, UPS will start. UPS will check itself, all the light flashes and then shut off one by one



- After finishing checking, UPS will work as below:



(Mains-Inverter Mode)

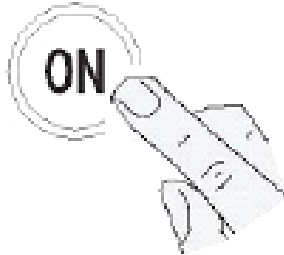


Note: if the mains abnormal, UPS will work at the mode of battery.

- load will be supplied power by batteries

Start UPS with DC

Press the button more than 1 second, UPS will start



- After starting, battery light flashes, mains light will be off, load will be supplied power by the battery.

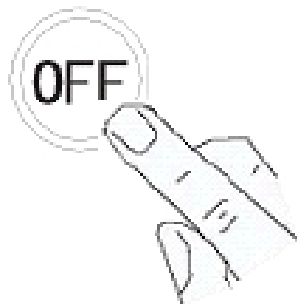


(Battery-Inverter Mode)

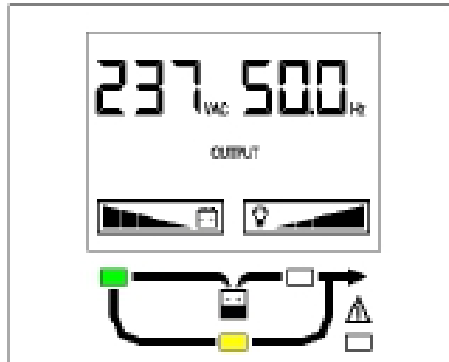
At the battery mode, buzzer will alarm every 4 seconds

4.4 Shut off UPS on LCD Panel

- Press the button more than 1 second, UPS will shut off



- After shutting off, UPS still have bypass output, LED indication as below:



(bypass working mode)

- At the bypass mode, bypass light flashes, buzzer will alarm every 2 mints.
- Disconnect the mains if the UPS do not need output.

5、Maintenance of the battery

UPS will charge the battery all the time.

- If UPS is not used for a long time, charge the battery every 4-6 months; If the temperature around is high, charge or discharge the battery every two months, charging time is more than 12 hours.
- Life of battery is 3-5 years in the normal case.
- When change the battery, the model and the quantity must be the same.
- Better to change the battery by lot.

6、Maintenance

If the light flash or the buzzer alarm, that means something is wrong.
(LED panel)

Fault	Reason	solution
1 # & 6 # flash, buzzer alarm	High temperature within UPS	Check that UPS is not overload, the temperature in the room is not high. Shut off the UPS for 10 mins and then restart, if in this way fail, please contact your supplier.
1 # , 2 # & 5 # flash, the buzzer alarm	UPS output short circuit	shut off UPS, remove all the load, make sure there is nothing wrong with the load, restart the UPS, contact your supplier.
1 # & 4 # flash, the buzzer alarm	Something wrong in the UPS	Please contact your supplier
1 # & 5 # flash, the buzzer alarm	Something wrong in the UPS	Please contact your supplier
Light of the mains flash	voltage or the frequency of the mains is out of the range of UPS	UPS is at the mode of battery, save the data, shut off the software, make sure input voltage and frequency is within the range
1 # & 2 # flash, the buzzer alarm	overload or something wrong with the load	reduce the load and check whether there is something with the load
1 # flash, battery light flash, buzzer alarm every second	Something wrong with the charger of UPS	Please contact the supplier
Battery light flash	Low voltage of battery	check the battery, please replace it if it is damaged ,and make sure the switch of battery is "ON".
No electricity through UPS	input switch is "OFF"	change it to the position "ON"
Time for discharging is short	Battery is not charged enough	make UPS charge the battery more than 10 hours
	UPS overload	check the load and remove something that not important
	Capacity of the battery reduce	change the battery, please contact the supplier

press the button, UPS will not start	Time of pressing button is too short	Press the button for more than 1 second
	UPS does not connect the battery or start the ups with load, or low voltage	connect the battery, if the battery voltage is low, first of all charge the battery and then start UPS.
	Faults in the UPS	Please contact the supplier

Note: The number of the light please review the picture of panel when you need service, please provide the detail as below:

- UPS MODEL NO. , SERIAL NO.
- Date when the problem occur
- Detail description about the problem

7. Lights on LED/LCD Panel

No.	Working mode		Lights on the panel										alarm
			1 #	2 #	3 #	4 #	5 #	6 #	7 #	8 #	9 #	10 #	
1	Mains mode	0-35% load						•		•	•		No
2		36-55% load					•	•		•	•		No
3		56-75% load				•	•	•		•	•		No
4		76-95% load			•	•	•	•		•	•		No
5		96-105 % load		•	•	•	•	•		•	•		No
6	Battery mode	0-20% battery		•							•	•	Alarm every 1 second
7		21-40% battery		•	•						•	•	Alarm every 4 seconds
8		41-60% battery		•	•	•					•	•	Alarm every 4 second
9		61-80% battery		•	•	•	•				•	•	Alarm every 4 second
10		81-100 % battery		•	•	•	•	•			•	•	Alarm every 4 second

11	Bypass mode		↑	↑	↑	↑	●	●	●			Alarm every 2 mints
12	Overload, don't transfer to bypass		●	●	●	●	●		●	●		Alarm two times every 1 seconds
13	Overload and transfer to bypass		●	●	●	●	●	●	●			Alarm two times every 1 second
14	Mains abnormal		↑	↑	↑	↑	↑	↑	★	↑	↑	No
15	Bypass abnormal		↑	↑	↑	↑	↑	★	↑	↑	↑	No
16	Overload at the battery mode, alarm		●	↑	↑	↑	↑			●	●	Alarm two times every 1 second
17	Overload at the battery mode, cut off output	●	●						↑			Alarm continuously
18	High temperature	●					●	↑	↑			Alarm continuously
19	Inverter abnormal	●				●		↑	↑			Alarm continuously
20	Output short circuit	●	●			●		↑	↑		↑	Alarm continuously
21	BUS voltage abnormal	●			●			↑	↑			Alarm continuously
22	Charger or battery damage	●									★	Alarm every 1 second
23	Fan fault	●	●				●	↑	↑	↑		Alarm every 1 second
24	Parallel fault	●	●	●			●	↑	↑			Alarm every 1 min
25	ID fault	●	●		●			↑				Alarm continuously
26	Without battery connection	↑	↑	↑	↑	↑	●				★	Alarm two times every 1 second
27	Low voltage of battery	↑	↑	↑	↑	↑	↑	↑	↑	↑	★	Alarm every 1 second
28	N and L connect incorrect for the input of mains		↑	↑	↑	↑	●	↑	★	↑	↑	Alarm every 2 mints
29	Battery fault	●		●	●			↑	↑			Alarm every 1 second
30	EPO	↑	↑	↑	↑	↑	↑	★	★	★	★	Alarm every 1 second
31	Battery self check	↑	↑	↑	↑	↑	↑	Flash one by one				

Note:

● : flashes continue ★: flash ↑: the light or the alarm subject to the other status

Fault Code displays on LCD Panel

E1: Fan fault
E2: Can not read the model
E3: Power board fault
E4: Address of the module is the same
E5: Don't meet the requirement of starting UPS
E6: Over charging the battery
E7: Charger fault
E8: Eeprom fault
E9: EPO switch wrong

F1: CAN cable fault
F2: Short circuit of inverter voltage
F3: Overload
F4: High temperature
F5: BUS voltage too high or too low
F6: Too high or too low voltage of inverter
F7: PFC fault
F8: Circulation negative work
F9: Not all flow
F10: Working power fault
F11: Inverter fault
F12: Inverter can not close
F13: SCR fault
F14: Input fuse fault
F15: Battery fault

No	Fault code display	Common fault and handle
1	(E 01)	Reason: Fan fault
		Check: check whether fan is normal
2	(E 02)	Reason: Can not indentify the ups model(it will show this fault code only after replace main control board)
		Check: Generally speaking, restart after shut down
3	(E 05)	Reason: Don' t meet the requirement of starting UPS
		Check: Check input voltage, battery voltage or control board
4	(E 06)	Reason: Over charging the battery
		Check: Check the charger board and replace it
5	(E 07)	Reason: Charger fault
		Check: Check the charger board and replace it
6	(F 01)	Reason: CAN cable fault
		Check: Check the control board
7	(F 02)	Reason: Short circuit of inverter voltage
		Check: Check whether output short circuit
8	(F 03)	Reason: output Overload
		Check: Check whether output overload or short circuit
9	(F 04)	Reason: High temperature
		Check: check the temperature of running environment, fans and sensor
10	(F 05, 07 or 13)	Reason: Rectifier voltage too high or too low
		Check: Replace PFC board
11	(F 06, 11 or 12)	Reason: Invert fault
		Check: Replace INV board
12	(F 10) or starting no action	Reason: Working power fault
		Check: Replace SPS board, or check battery voltage
13	(F 14)	Reason: Input fuse fault
		Check: Replace input fuse
14	(F 15)	Reason: Battery fault
		Check: Check the battery pack