



USER'S MANUAL

JP5520 2-6KVA

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1. Introduction

(1) Foreword

The UPS are development produce compact and intelligently uninterrupted power system. Which ensure you to operating computer in a stable and pure power circumstance, and to manage network system intelligently. UPS have becoming necessary equipment to computer and information system.

(2) Caution

- a. It's must to reading this manual before operating the UPS.
- b. Follow all operating and user instructions.
- c. Don't uncover the machine during operation.
- d. Please handle with care of the machine.
- e. Don't use UPS over rating lead.
- f. Please time limit charge at battery.
- g. Keep dry and clean of the UPS.
- h. Please well arranged save this manual.

2. Dimension Structure

(1) 2~6KVA UPS appearance

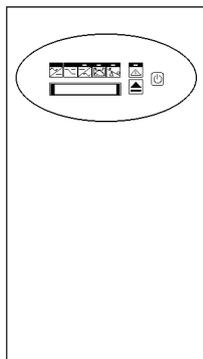


Fig1 Front Panel

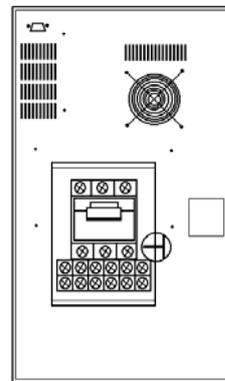


Fig2 Rear Panel

3. Put by UPS

(1) Handle or move

- a. Are all the connection wire essential dismantle to after shut down.
- b. Put lightly with care, Bump with strictly forbid.
- c. Not to be upright and move.

(2) Put by

- a. Not to be tipped Fig3.

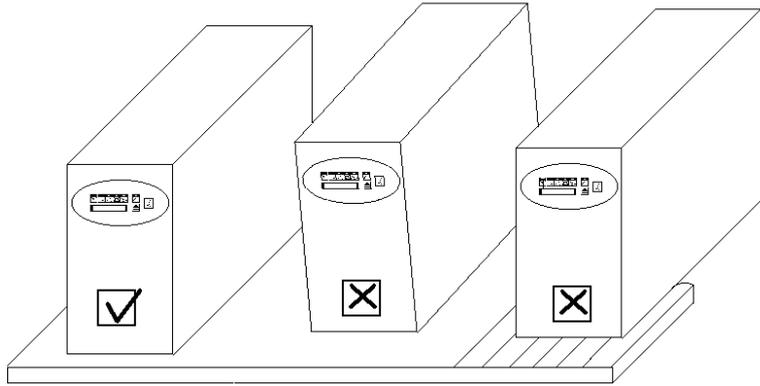


Fig3 Option on place of the UPS

b. Maintain a minimum clearance of 100 mm all around the UPS for proper air flow and cooling Fig.

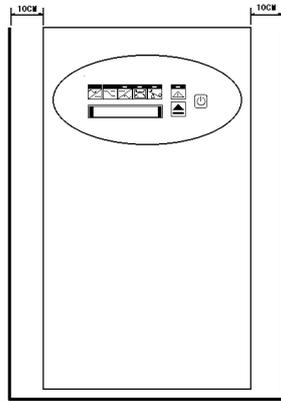


Fig4

c. Free from sun shine, rain drop or moisture Fig5, Fig6.

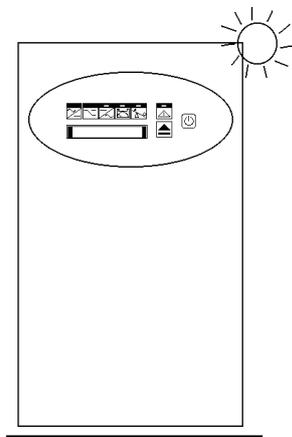


Fig 5

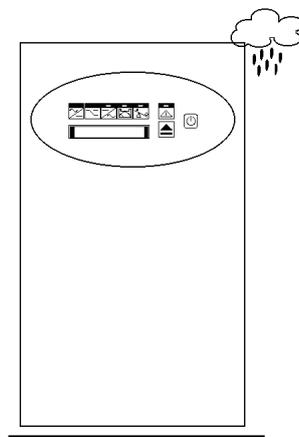
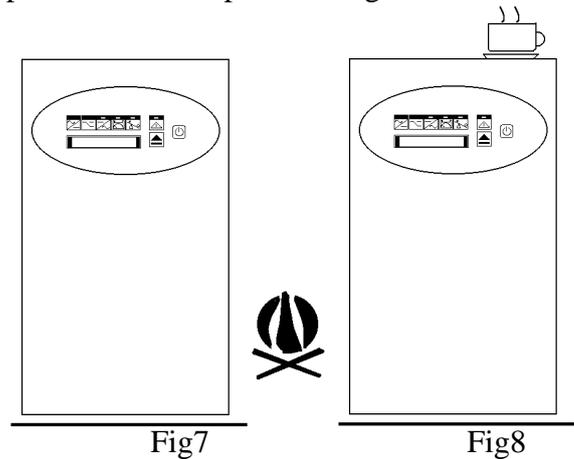
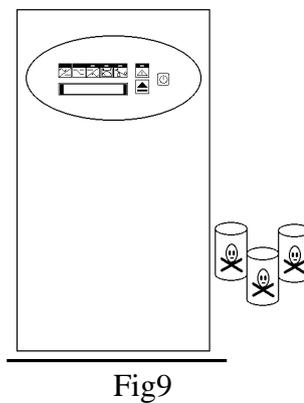


Fig6

- d. Far from fire source and high temperature, prevent over temperature Fig7.
- e. Don't put by objects on top of UPS Fig 8.



- f. Free from moisture, flammable liquids, gasses or corrosive substances Fig9.



- g. Operation environment temperature 0~40°C .

4. Installation and connection

(1) Caution

- a. Follow construction of electrician rule.
- b. Do well to ground connection, be grounded on refer to point. Will grow ups interference and data fault because of not good ground wire, influential at UPS and computers. Joint ground, refer to Fig10.

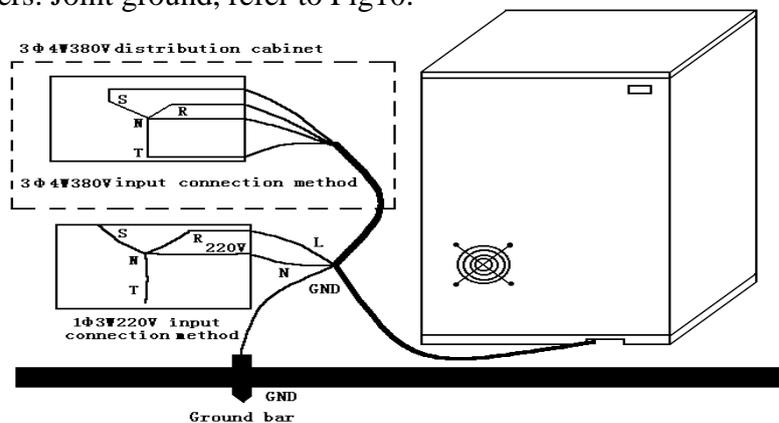
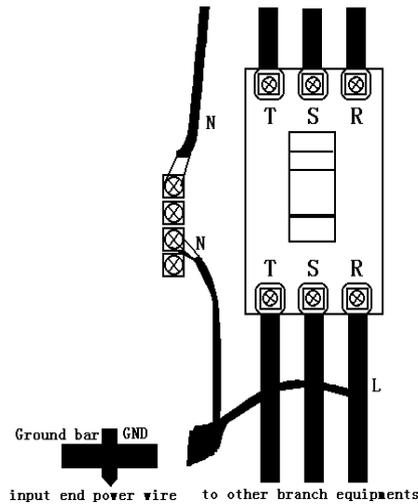


Fig10

Free form electric operating, caution construction safety, will be input mains switch “off”.

- c. If properly input voltage for use all powerful meter measurement.
- d. Power wire, terminal use of high quality products, restrain use of faulty products.
- e. Use of high quality terminal pressure connection to power wire, restrain direct twine on terminal bus.
- f. After fixation input power wire, check if bump bezel, so as not to short circuit or bump other substances.
- g. When connection to distribution box free from common switch and other equipments, be sure to connection to source, refer to Fig11.

Fig11



- h. Don't reverse connection, the polarity of power supply.
- i. Voltage drop must less than 5V, between of neutral and ground.
- j. Generally socket be restrain use, otherwise will bring about load damage.

(2) Single UPS installation

UPS Installation method: refer to Fig1

- Use screw driver to tear down two screws, refer to Fig12
- Opening rear panel, namely seeing downside distribution box of power switch.

Refer to Fig13

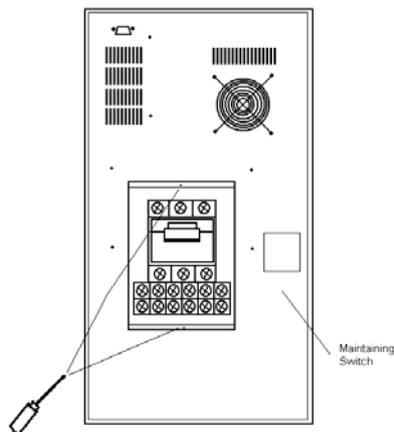


Fig12

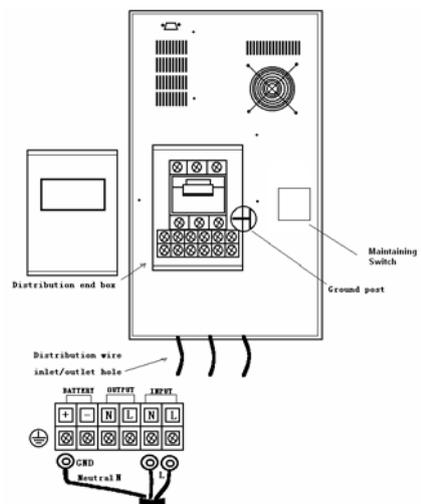


Fig13

- First into the distribution inlet and outlet hole of the output/input and batteries group power wire, after that assembly connection.

Caution: Don't connection to 380V, test take place fault, for the single phase input UPS belong to 2X0V system, when moving or again connection, be sure to again carry on according to more than step.

(3) Connection wire option

Compare with rated value of input current and cross section of input power wire.

Cable 1

TYPE	input current(max)	input cable Sez.(mm ²)	Wire Sep.
2KVA	13A	4	OT4-4
3KVA	21A	4	OT4-4
4KVA	26A	4	OT4-4
6KVA	38A	6	OT6-4

Compare with rated value of output current and cross section of output power wire.

Cable 2

TYPE	Output current(max)	Output cable Sez.(mm ²)	Wire Sep.
2KVA	9A	2.5	OT2.5-4
3KVA	14A	2.5	OT2.5-4
4KVA	17A	4	OT4-4
6KVA	26A	6	OT6-4

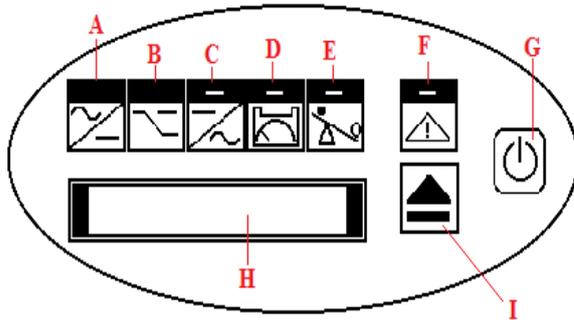
5. UPS Operation

(1) Prepare before for turn-on

For normal running be able to the UPS. Please validation below thing before for turn-on, refer to Fig2

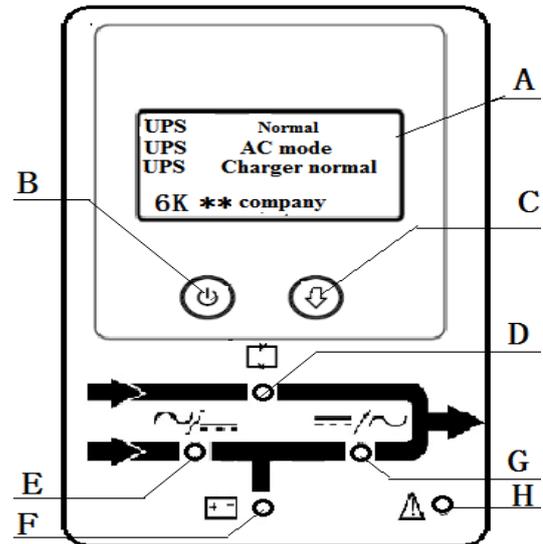
- Validation be located "OFF" for all power switch.
- Again validation primary for installation places.
- Use hand shaking input power wire, whether loose, if loose to screw up.
- No load.
- Whether measure up to $2X0V \pm 10\%$ make use of voltmeter, check input voltage.

(2) Two kinds of LCD panel for choosing:



Panel 1

- A: LCD display
- B: Bypass input indicator
- C: Mains input indicator
- D: Battery indicator
- E: Failure indicator
- F: Inverter indicator
- G: Overloads indicator
- H: Page-up button
- I: ON/OFF button
- J: Page-down button



New panel

- A: LCD display
- B: ON/OFF button
- C: Function button
- D: Bypass input indicator
- E: Mains input indicator
- F: Battery indicator
- G: Inverter indicator
- H: Failure indicator

(3) First start-up operating

After validation properly of more than thing, please according under method turn-on.

- a. Turn on the “NO fuse breaker” with back panel, front panel indicator and bypass indicator at times are lightness. Refer to Fig14。 (panel 1)

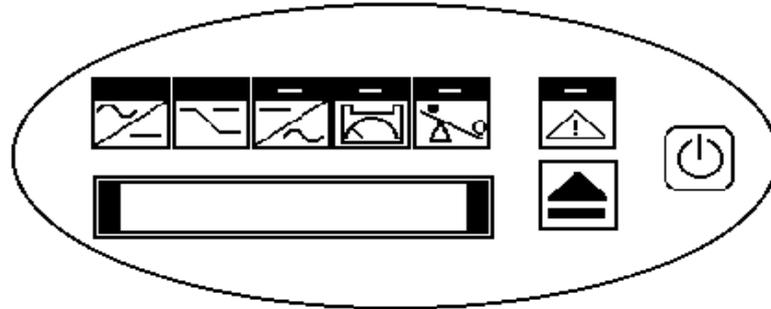


Fig14

- b. Will ON/OFF button push down with front panel, follow on lightness of input indicator and bypass indicator, LCD display mains OK, battery OK, mains output through bypass, refer to Fig15

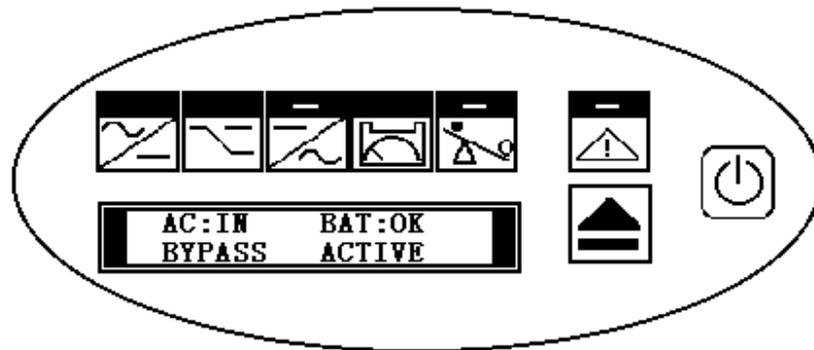


Fig15

- c. After 20 seconds with the front panel, input indicator are lightness LCD display (AC) OK, (BAT) OK, inverter output, refer to Fig16

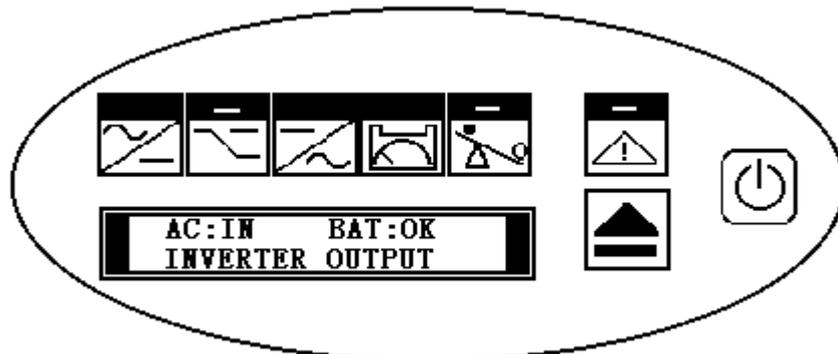


Fig16

- d. Disconnected input power of the UPS, mains indicator are go out, LCD display (AC) OFF, (BAT) OK, inverter output, beeps every 4 seconds will the UPS, show UPS is operating from battery power.
After beeps 90 seconds, beep stop, when battery runs low, beep every 1 second, battery capacity indicator at times flashing. Refer to Fig17.

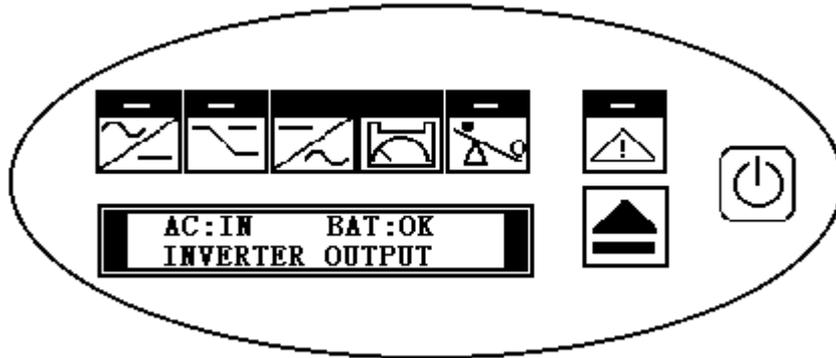
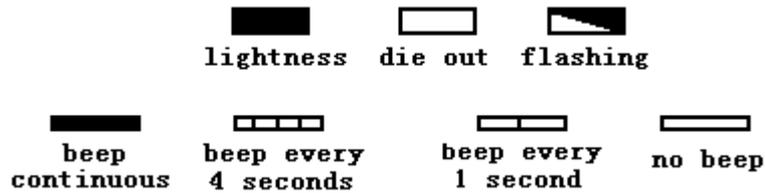


Fig17

- e. Restoration input power of the UPS, mains indicator lightness, push down LCD cycle push button to exchange displays item, check displays value whether normal, first turn-on are that is accomplish. Measurement output voltage whether normal, will the load connection to output end of the UPS, UPS provides clean power to the loads.
- f. More connection load, will exchange displays item to output power displays the percentage(%) on LCD indicator push button, if displays value be greater than 100%, show overload, turn-off unimportant of loads, cause displays value be smaller than 100%.
- (3) If turn-on or turn-off in everyday use, according to below method operating.**
- When everyday turn-off of the UPS, push down “on/off” button on front panel, that is shut-down.
 - When everyday turn-on of the UPS, push down “on/off” button on front panel, that is starting.
- (4) When on/off operation for long be no use of the UPS.**
- If be no use for outmarch (10) days of the UPS, the first push down on/off button that is shut down on the front panel, then will turn power switch (NFB) into OFF on the back panel.
 - If be no use for out march three months of the UPS, according to first turn-on method, will UPS running more than 24 hours, keep batteries at full capacity, and so external battery life.

6. Condition handling

(1) Meaning as follows for representative notation.



[Notes]: indicator flashing, flashing cycle and beep that will do synchronous.

(2) When running condition display of the ups and unusual condition handling method:

Please contrast panel indicators on UPS, LCD display value and buzzer beep, namely can hear of running whether unusual of the UPS, please condition handling on panel indications.

a. Displays condition as follows on panel

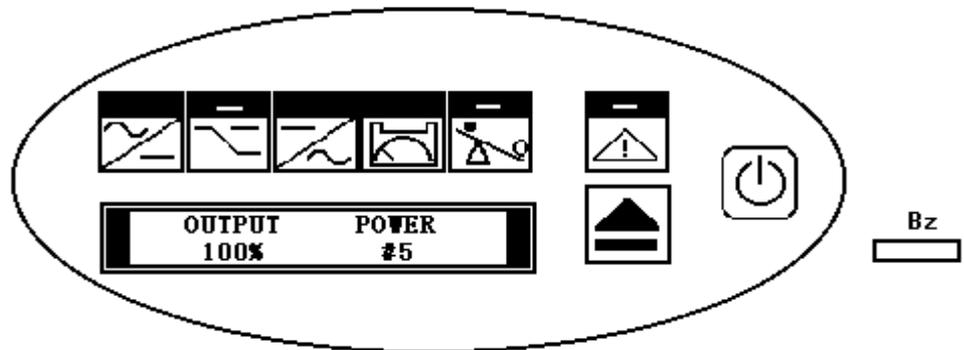


Fig 18

- The ups running condition
Mains power OK, UPS running OK, full load put to use
 - Handling way: No handling
- b. Displays condition as follow on panel

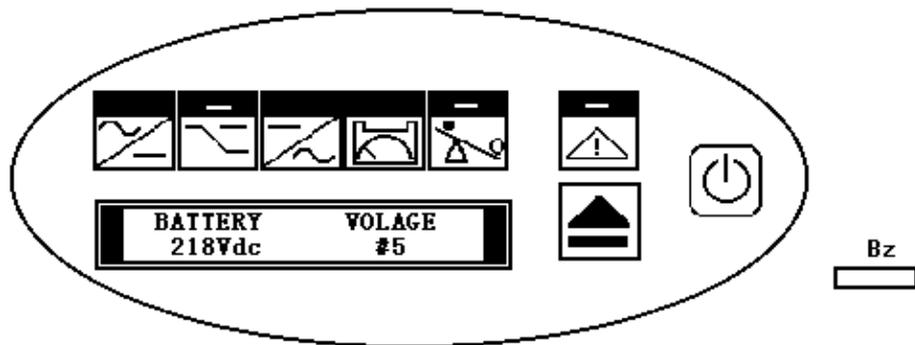


Fig 19

- The ups running condition
Mains power OK, ups running OK, batteries power a full charge to more than 90%
- Handling way: No handling

c. Displays condition as follow on panel

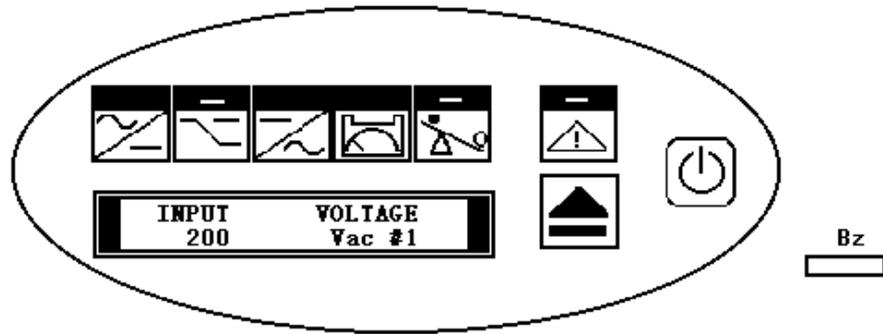


Fig20

- The ups running condition
Mains power with 2X0Vac OK, normal running of the ups

- Handling way: No handling

d. Displays condition as follows on panel

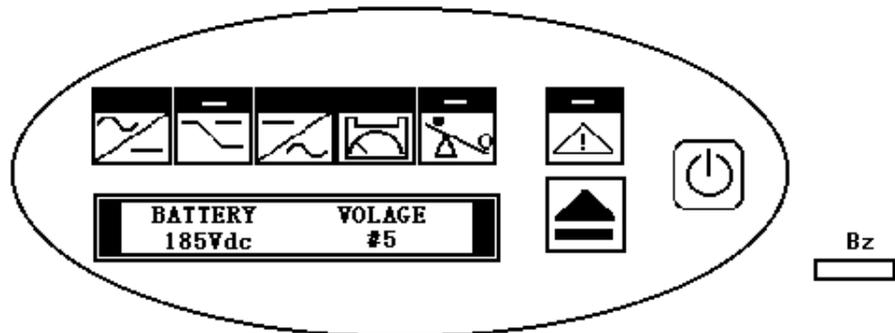


Fig21

- The ups running condition
Mains power OK, ups running OK, battery low capacity
- Handling way: Charger fault, replace charge board

e. Displays condition as follows on panel

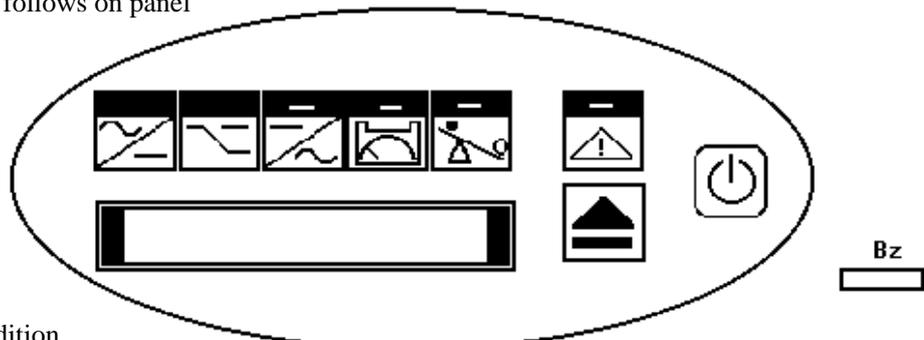


Fig22

- The ups running condition
Mains power OK, power supply through at mains, "ON/OFF" button never pushdown on front panel, the ups never starting

- Handling way

Please according to flow chart 29 handling

f. Displays condition as follows on panel

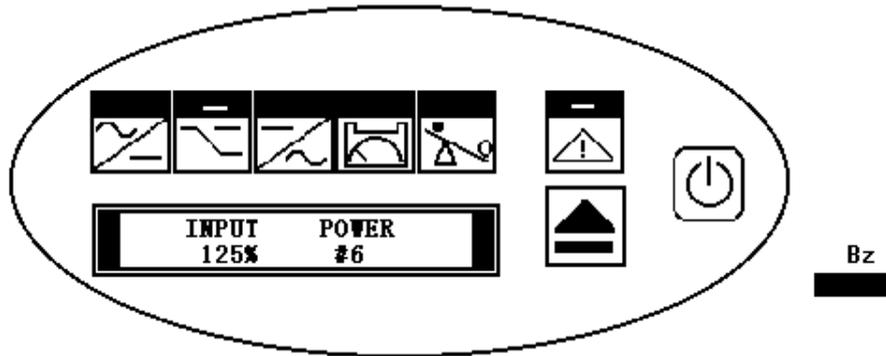


Fig23

- The ups running condition

Mains power supply, overload is 125%, the overload indicator that is lightness, beep continuous

- Handling way

Cut down less load, cause load display be power (%)<100%

If condition never change after grow less load, please according to flow chart 30handling

g. Displays condition as follows on panel

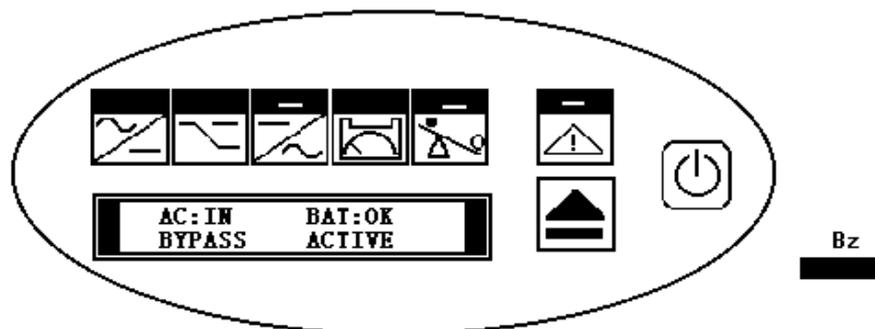


Fig24

- The ups running condition

Mains power OK, ups unusual running, output through to mains bypass.

- Handling way

Please according to flow chart 31 handling.

h. Displays condition as follows on panel

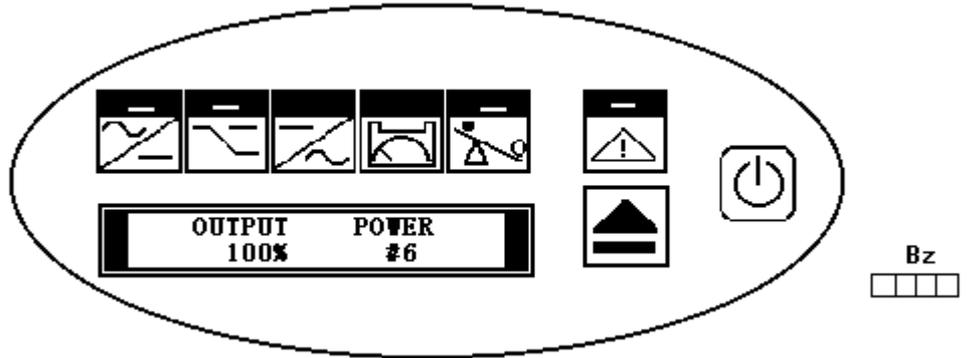


Fig25

The ups running condition

Mains failure, battery output, full load running, beeps every 4 seconds.

Battery capacity indicator lightness (after 90 seconds mute)

- Handling way

Mains failure is really, please remove non-critical loads, and increase running time .If non-normal mains failure, please according to flow chart 28 handling

- Displays condition as follows on panel

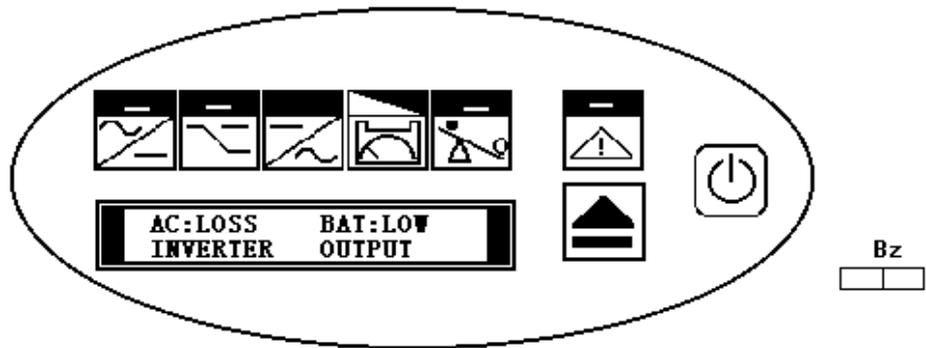


Fig26

- The ups running condition

Mains failure, battery output, battery power will out of store, beep every 1 second battery capacity indicator be flashing every 1 second

- Handling way

Automatic shut down be about to ups, please will at hand works in no time finished, must in time store data in computer.

- Displays condition as follows on panel

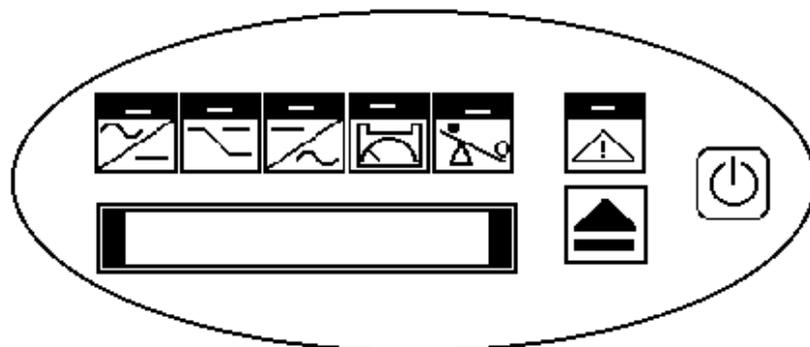


Fig27

- The ups running condition

Mains failure and battery power out of store, automatic shut down will the ups.

- Handling way

Await restoration to mains, automatic once again starting wills the ups

If mains failure at more than 6 hours, please shut down according to long time ON/OFF procedure

New LCD panel display and alarming

Menu	Contents	Description
Menu1	UPS UPS AC MODE UPS CHARGER NORMAL 6K xxxxxxxxx	UPS Running mode, Charger status, UPS model&Company.
Menu2	INPUT : **Vac/**Hz OUTPUT:**Vac/**Hz BATT : **Vdc LOAD : **% T:**°C	Input,output,battery,load,temperature parameters.

Alarming items :

UPS NORMAL/OVERLOAD/FAULT
UPS AC MODE/BYPASS MODE/BATTERY MODE
UPS CHARGER NORMAL/FAULT OR BATTERY VOLTAGE NORMAL/UNDER VOLTAGE
UPS MODEL&COMPANY

Condition handling chart

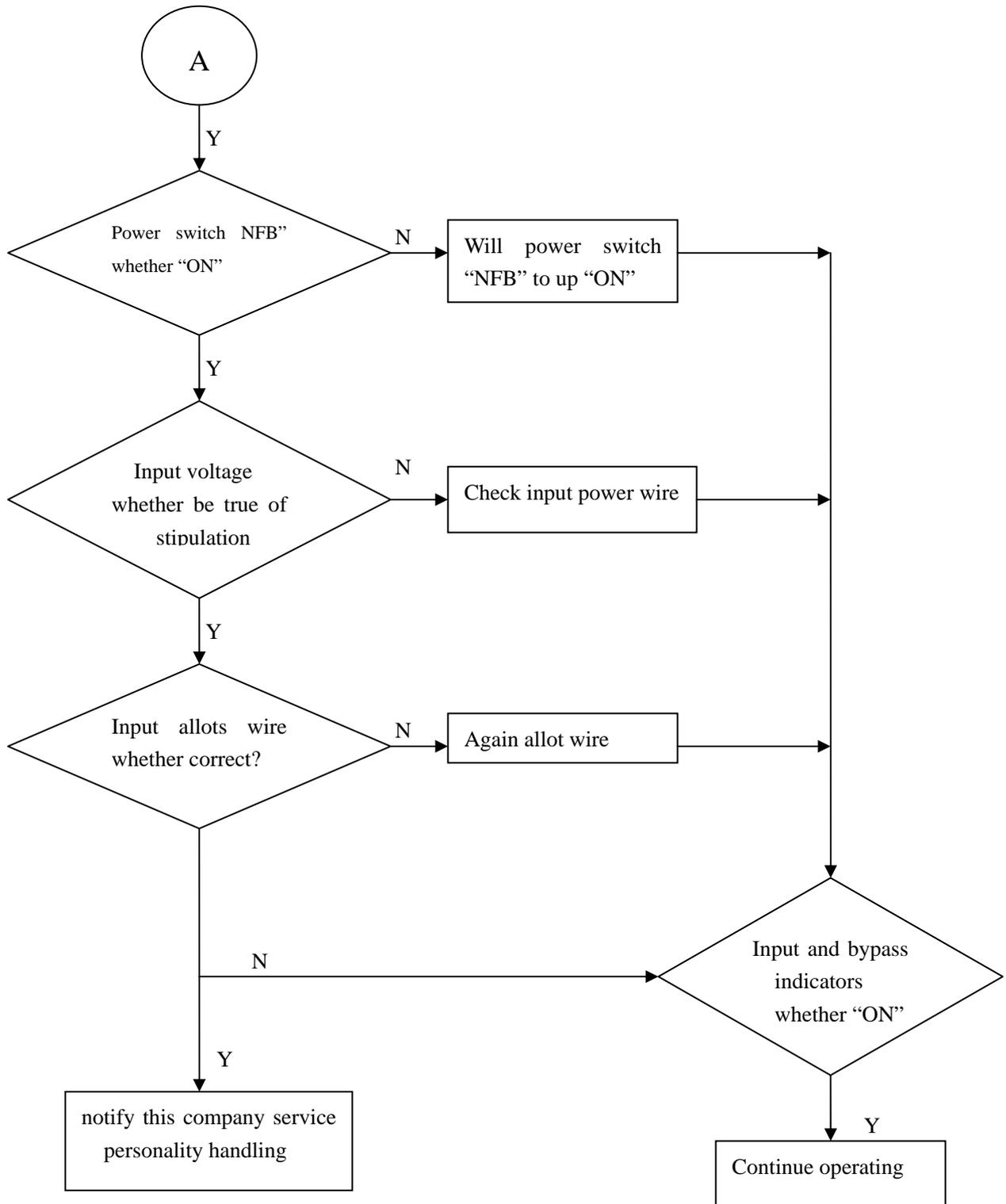


Fig .28 condition handling flow chart

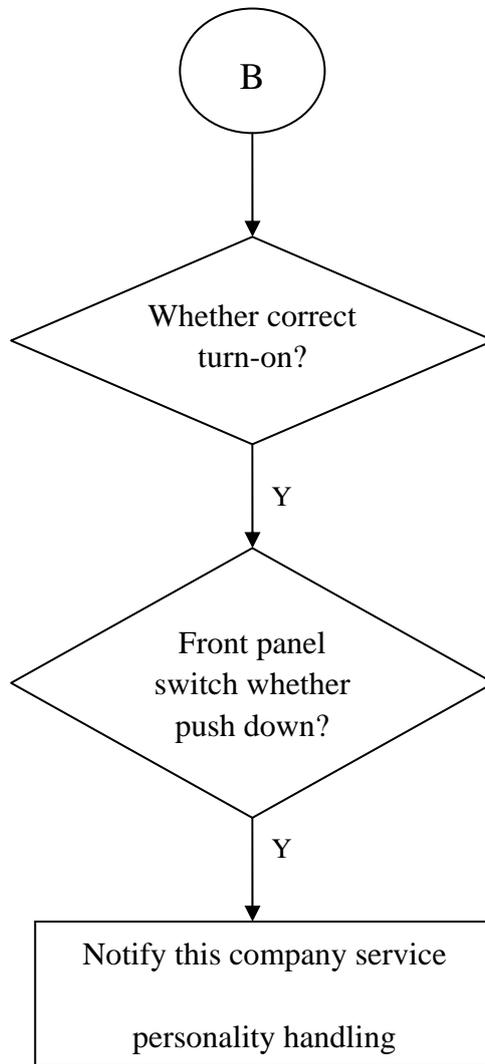


Fig29 Condition handling flow chart

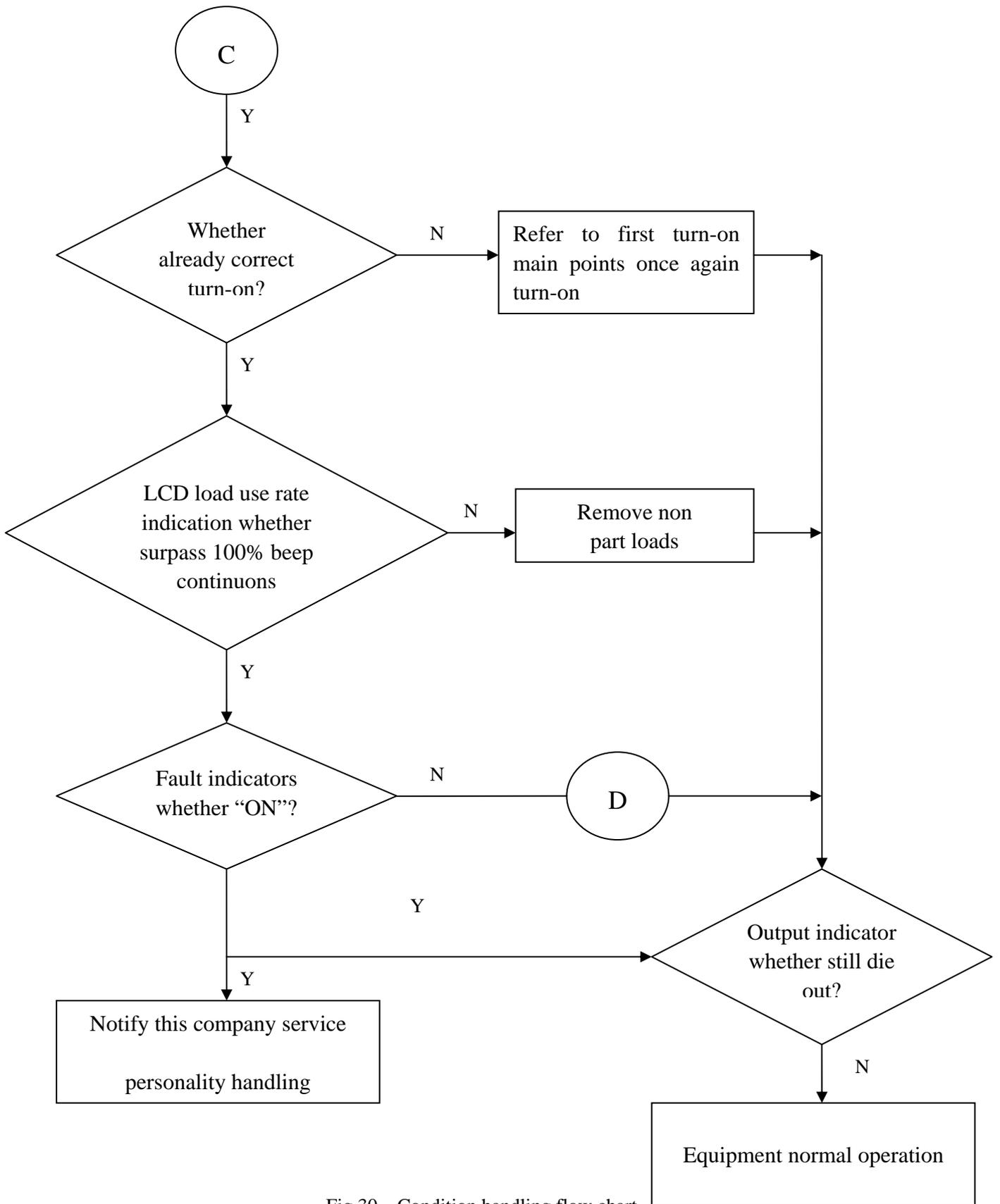


Fig 30 Condition handling flow chart

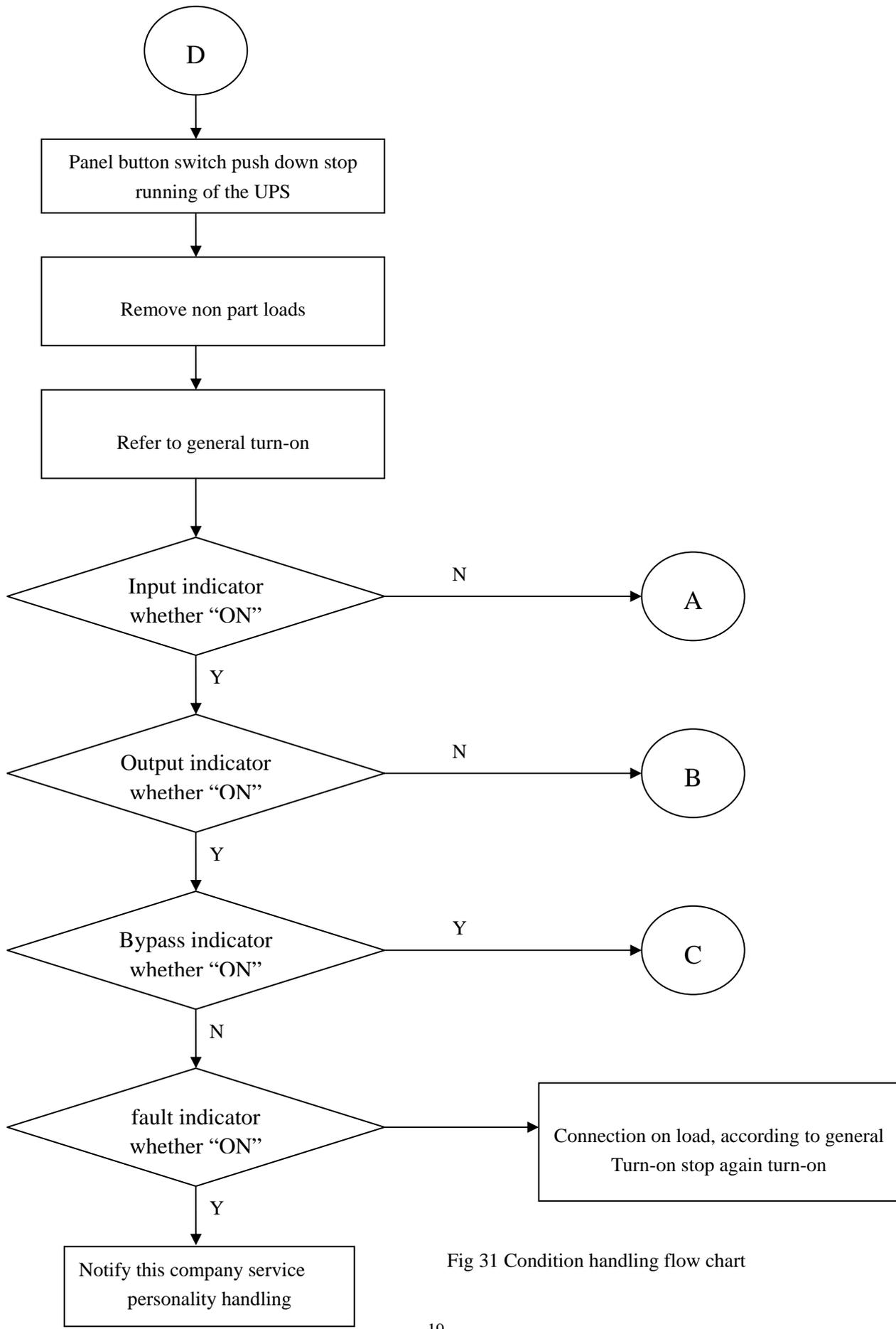


Fig 31 Condition handling flow chart

7. Work theory

(1) UPS system block diagram: showing as Fig32

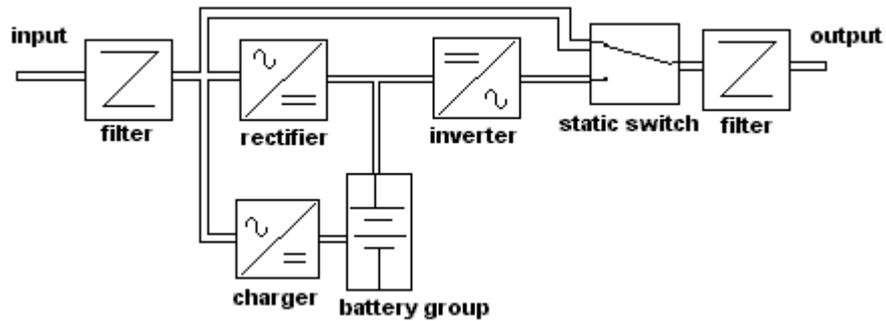


Fig 32 UPS system structure chart

(2) UPS normal running method:

When UPS normal running city power through filter removed high-frequency mixed wave, one way to charge to charge battery another way to rectifier converted DC power ,via inverter output pure sine wave supply for user's equipment.

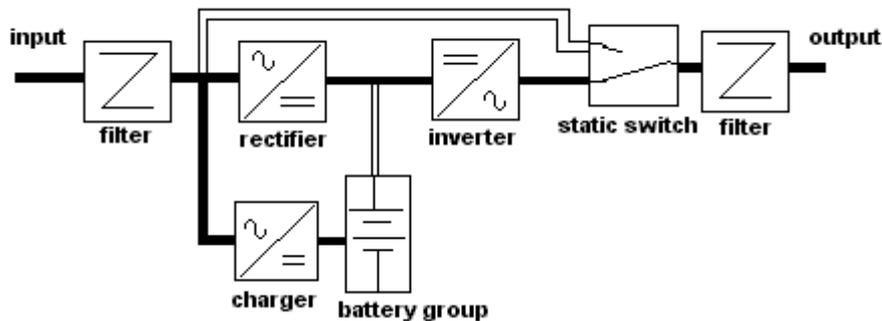


Fig33 normal running method

(3) UPS running method when city power fail.

As fig 34 showing, when city power failed, battery supply to inverter, via static switch and filter to output for user in case, load power interrupt.

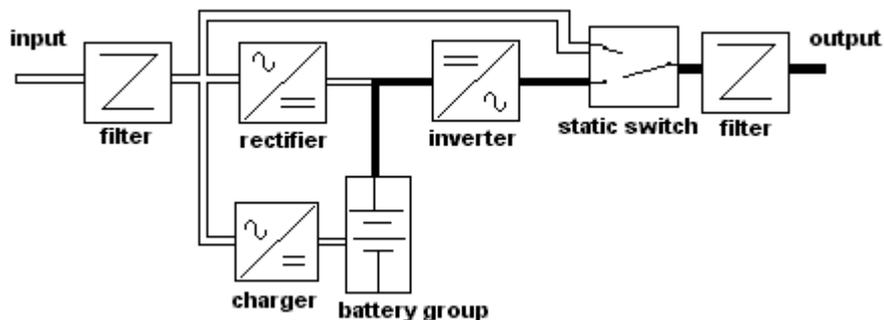


Fig 34 AC power failure, UPS running method

(4) UPS running with by-pass

UPS supply with by-pass when following status happen

1. OVER LOAD
2. INVERTER FAILURE
3. When start, press on/off key within 20S, UPS running slowly.
4. After press on/off key power off.
5. UPS running with inner over temperature.

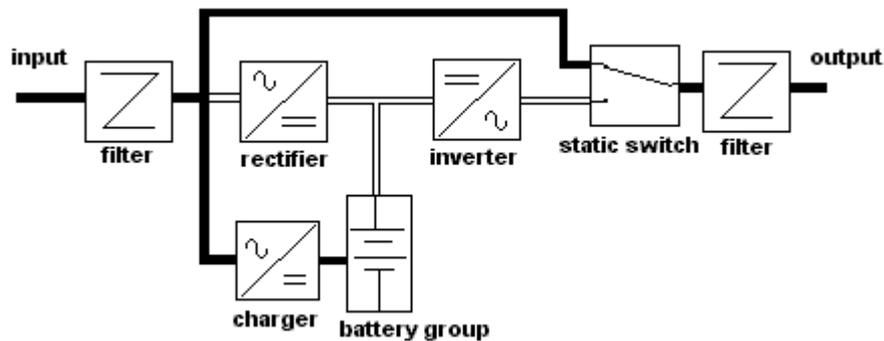


Fig 35 UPS running with by-pass

8. Maintenance of the ups and battery

(1) Everyday maintenance of the UPS

- a. Must in good time maintenance of the UPS, don't be infected with dust, ensure life.
- b. Turn the UPS power switch OFF before cleaning .Use only a soft cloth, never liquid or aerosol cleaners
- c. Must in good time ,check at per month for all connection wire ,prevent bump or loose、 moisture.
- d. Keep with out hindrance be inlet and outlet ventilation holes for the UPS, must in good time check at per month for block or insert any object into the ventilation holes.

(2) Battery and charge

- a. When ups "ON", or will input power switch SW1, battery switch SW3 to ON can be automatic charge at batteries, charging to more than 90% for batteries.
- b. Battery power supply time have to do with load rate.
- c. For the sake of lengthens power supply time can be additional battery.
- d. Must keep full of condition at batteries, be lengthen life.
- e. Battery presents a risk of electrical shock or burn from high short circuit .The following precautions should be observed before replacing the batteries:
 - Turn off and disconnect ups from mains power prior to opening the battery replacement door.
 - Remove rings, watches, and other metal objects.
 - Use a Phillips (cross head) screwdriver with insulated grips .Do not laid tools or other metal objects on top of the batteries.
 - If battery replacement kit is damaged in any way or shows signs of leakage contact your dealer immediately.

9. Communication interface

- (1) Make use of communication interface to connection the computers; monitor it power.
- (2) DB9 communication interface on rear panel connection to computer ,can hear of condition for ups ,task systems are WINDOWSXP、 WINDOWS-NT、 NOVELL etc. User should purchase software of computer, can be cause ups connection to computer, when hear of mains failure with system, send out information alarm, when measure up to predetermine time, can be according to normal shutdown procedure will shutdown system after storage data, after that automatically shutting down ups when restoration at mains power, automatically restoration running of ups, at once automatically restoration running of system.
- (3) This ups interface ,second interface can be provide put to use ,first interface only provide condition of UPS ,fit in with individuality computer put to use .Second interface provide detailed data of ups ,fit in with network servers、 workstations、 monitor system etc .Only provide first interface of the standard ups. Software need moreover to purchase
 - a. First interface :only provide alarm with mains failure、 low battery voltage and shutdown ups
 - b. Second interface :RS232 communications serial port connection to data are provide :input voltage、 output voltage、 output frequency、 input frequency、 battery voltage 、 load percentage(%) internal etc.
 - c. Through SNMP adapter outside connection to ups, that is have functions are network management, ensure at soft and reliability for running network.
 - d. This DB9 are connection signal as follow:

PIN1: UPS Fault
PIN2: Mains Power Failure
PIN3: Inverter Power ON
PIN4: PIN1, 2,3,5,8 Common Grounds
PIN5: Battery Voltage Low
PIN6: Shutdown the UPS or RS232 RXD Wire
PIN7: Pin6 Ground
PIN8: Inverter Output
PIN9: RS232 TXD Wire

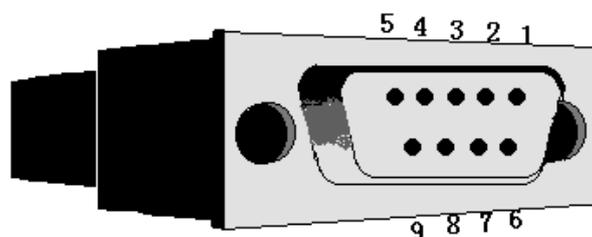


Fig36 DB9 Communication interface on the UPS

10. Specifications

Model	JP5520 1K S/L	JP5520 2K S/L	JP5520 3K S/L	JP5520 4K S/L	JP5520 6K S/L	JP5520 10K S/L	JP5520 15KL	JP5520 20KL	
Capacity	1KVA	2KVA	3KVA	4KVA	6KVA	10KVA	15KVA	20KVA	
INPUT									
Input voltage(Vac)	165~275								
Frequency(HZ)	45~66 Automatically select synchronization range according to grid frequency								
Phase	Single phase three wires								
Battery voltage(VDC)	48	96				192			
Charge Current	2.5A/5A				2.5A/5A		10A		
Battery type	4*7Ah 12V/ External	8*7Ah 12V/ External	16*7Ah 12V/External			16*9Ah 12V/ External			
OUTPUT									
Power factor	0.8/0.9 (optional)								
Voltage(V)	210-240V ±1%								
Frequency(HZ)	50/60±0.5%(Free oscillation)								
Transfer Time(ms)	0								
Waveform	Sine Wave, THD<3%								
Overload Capacity	110%~129% full load keep 10min; 130%~150% load keep 60s;								
Crest Factor	>3:1								
OTHER									
Backup time	Standard time is 10min/ Long backup time can be extended freely								
Charge recovery time	<10hours								
Efficiency	>92%				>90%				
Communication	RS232 connector, support for monitor software								
SNMP(optional)	Can be network monitored by SNMP adapter								
Display	LED display work status and fault indicator; LCD display single phase input voltage, input frequency, single phase output voltage, load, battery voltage etc								
Noise (dB)	<58(1meter)								
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(°C)	0~40								
Humidity	0~95%, No Condensing								
Size(D×W×H) (mm)	590*230*750(S)/590*230*540(L)					596*305*1050(S)/ 596*305*890(L)		596*305*890	700*405*955
Weight(KG)	80/50	99/60	107/52	113/58	115/60	171/116		127	195

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.