

Mobile Type Air Conditioner

- 1. Features**
- 2. Specification**
- 3. Wiring diagram**
- 4. Trouble shooting**
- 5. Electronic function**

1. Features

1.1 The currently manufactured mobile air conditioners include the following types:

MPA-09CE	MPA-09CR
MPA-09EE	MPA-09ER
MPA1-09CE	MPA1-09CR
MPA1-09EE	MPA1-09ER
MPA-09CEN2	MPA-09CRN2
MPA-09EEN2	MPA-09ERN2
MPA1-09CEN2	MPA1-09CRN2
MPA1-09EEN2	MPA1-09ERN2
MPA-09CEN1	

1.2 Structural characteristics

- (1) There are four casters on the bottom for easy movement.
- (2) There is only one exhaust pipe (the length is from 0.5 to 2m), which makes the A/C easier to use.
- (3) The condensate is received by large volume container, which is convenient to use.

1.3 Performance characteristics

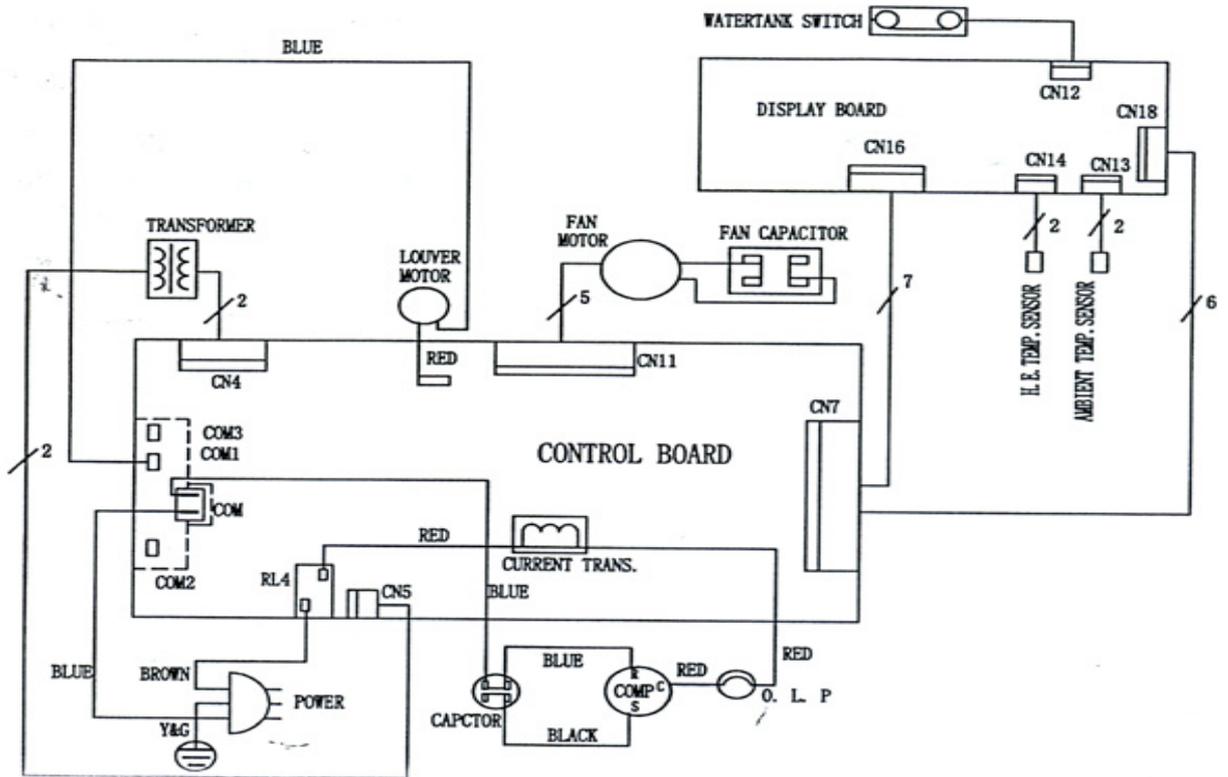
- (1) Compressors of famous brands are adopted for reliability and low noise.
- (2) The products have multiple uses: dehumidifying and cloth drying.
- (3) There is no need for special installation; they can be moved around for simple and convenient use.
- (4) The heating system uses PTC electrical heater and will not be affected by ambient temperature, which saves energy.
- (5) They are suitable for local cooling and heating.

2. Specification

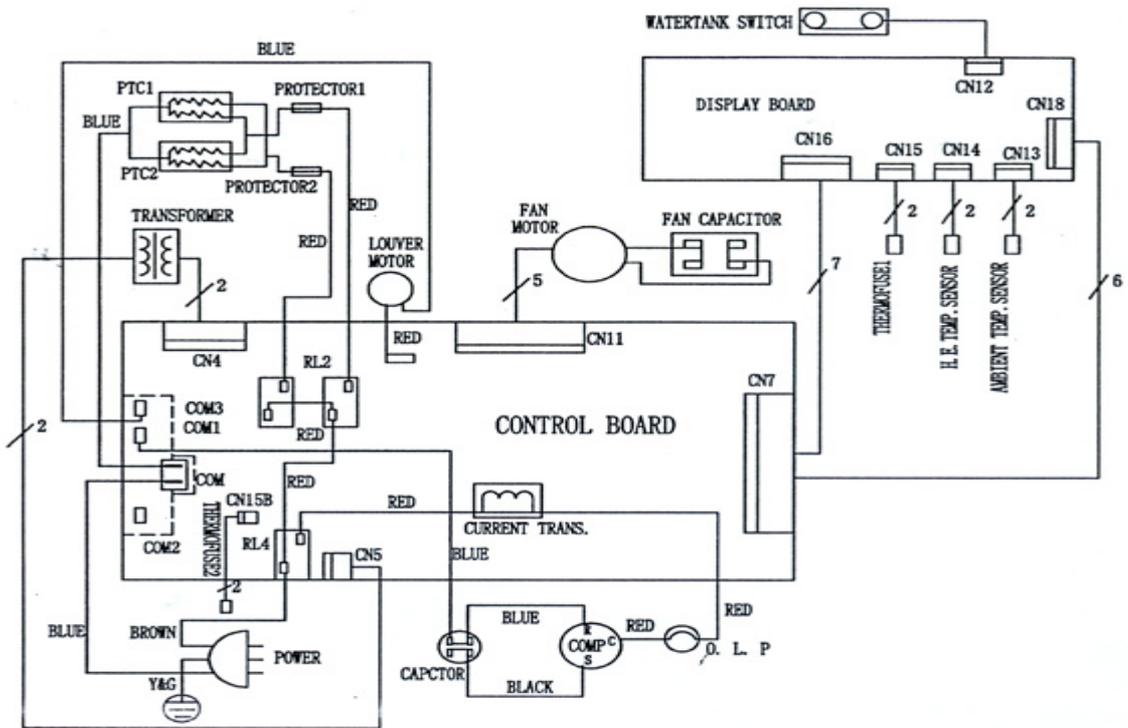
Keystroke Control Model Remote Control Model			MPA-09CE MPA-09CR MPA1-09CE MPA1-09CR	MPA-09EE MPA-09ER MPA1-09EE MPA1-09ER	MPA-09CEN1
Power supply		Ph-V-Hz	220-240V,50Hz		
Cooling	Capacity	Btu/h	9000	9000	9000
	Input	W	1000	1000	1000
	Rated current	A	4.4	4.4	4.4
	EER	Btu/w.h	9.0	9.0	9.0
Heating	Capacity	Btu/h	-	7000	
	Input	W	-	2000	-
	Rated current	A	-	8.7	-
Air Flow Volume		M ³ /h	320	320	320
Moisture Removal		L/h	1.1	1.1	1.1
Refrigerant		g	560/R22	560/R22	580/410A
Water Tank Volume		L	5.5	5.5	5.5
Noise Level		Db(A)	≤54	≤54	≤54
Dimension(W×H×D)		mm	387×830×456	387×830×456	387×830×456
Packing(W×H×D)		mm	460×887×667	460×887×667	460×887×667
Net/Gross Weight		kg	37/41	37/41	37/41
Applicable Area		M ²	14-20	14-20	14-20

Keystroke Control Model Remote Control Model		MPA-09CEN2 MPA-09CRN2 MPA1-09CEN2 MPA1-09CEN2	MPA-09EEN2 MPA-09ERN2 MPA1-09EEN2 MPA1-09EEN2	
Power supply		Ph-V-Hz	220-240V,50Hz	
Cooling	Capacity	Btu/h	9000	9000
	Input	W	1040	1040
	Rated current	A	4.7	4.7
	EER	Btu/w.h	8.7	8.7
Heating	Capacity	Btu/h	-	7000
	Input	W	-	2100
	Rated current	A	-	9.0
Air Flow Volume		M ³ /h	320	320
Moisture Removal		L/h	1.1	1.1
Refrigerant		g	580g/R407C	580g/R407C
Water Tank Volume		L	5.5	5.5
Noise Level		Db(A)	≤54	≤54
Dimension(W×H×D)		mm	387×830×456	387×830×456
Packing(W×H×D)		mm	460×887×667	460×887×667
Net/Gross Weight		kg	37/41	37/41
Applicable Area		M ²	14-20	14-20

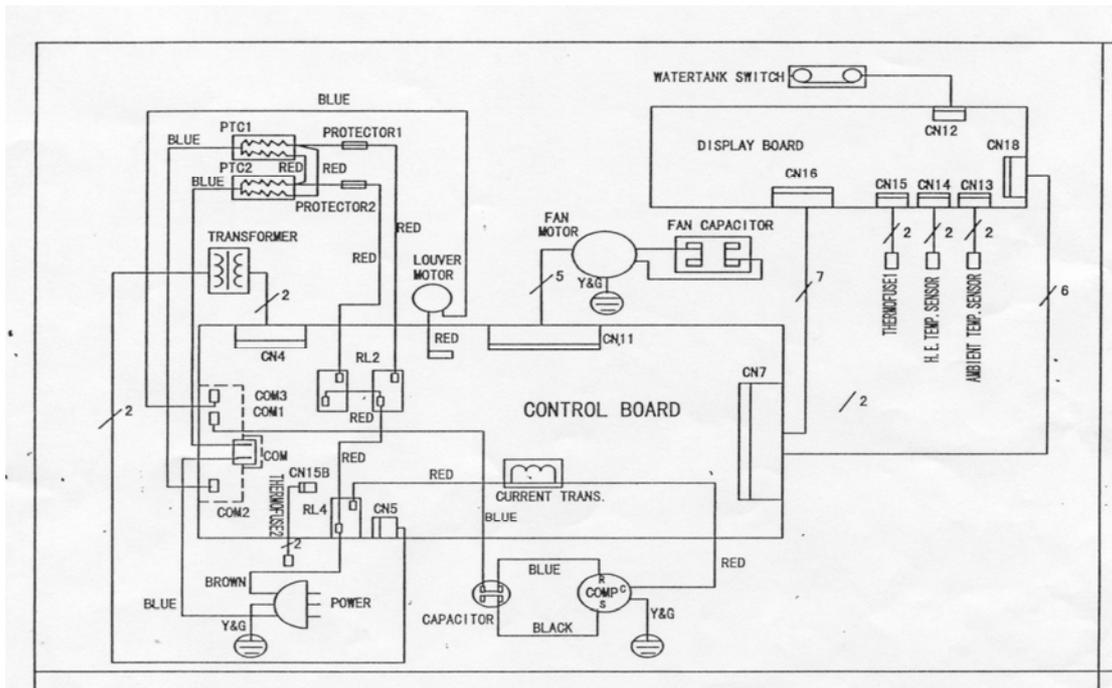
Keystroke Control Model Remote Control Model		MPA-09CE MPA-09CR	MPA-09EE MPA-09ER	MPA-09CE MPA-09CR	MPA-09EE MPA-09ER	
Power supply		Ph-V-Hz	220-230V,60Hz		115V,60Hz	
Cooling	Capacity	Btu/h	9000	9000	9000	9000
	Input	W	1000	1000	850	850
	Rated current	A	4.4	4.4	7.4	7.4
	EER	Btu/w.h	9.0	9.0	9.4	9.4
Heating	Capacity	Btu/h	-	7000	-	7000
	Input	W	-	2000	-	1500
	Rated current	A	-	8.7	-	13.0
Air Flow Volume		M ³ /h	320	320	320	320
Moisture Removal		L/h	1.1	1.1	1.1	1.1
Refrigerant		g	680/R22	680/R22	560/R22	560/R22
Water Tank Volume		L	5.5	5.5	5.5	5.5
Noise Level		Db(A)	≤54	≤54	≤54	≤54
Dimension(W×H×D)		mm	387×830×456	387×830×456	387×830×456	387×830×456
Packing(W×H×D)		mm	460×887×667	460×887×667	460×887×667	460×887×667
Net/Gross Weight		kg	37/41	37/41	37/41	37/41
Applicable Area		M ²	14-20	14-20	14-20	14-20



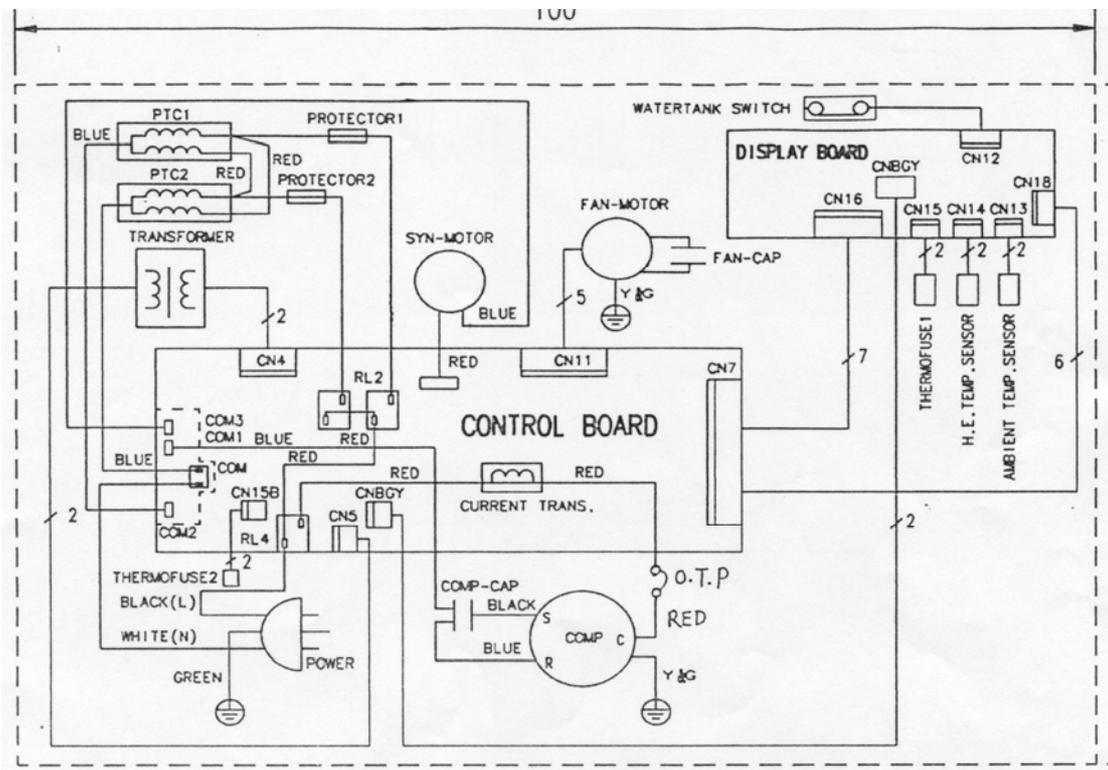
Wiring diagram for MPA-09CEN2 (220V,50Hz)



Wiring diagram for MPA-09EEN2 (220V,50Hz)



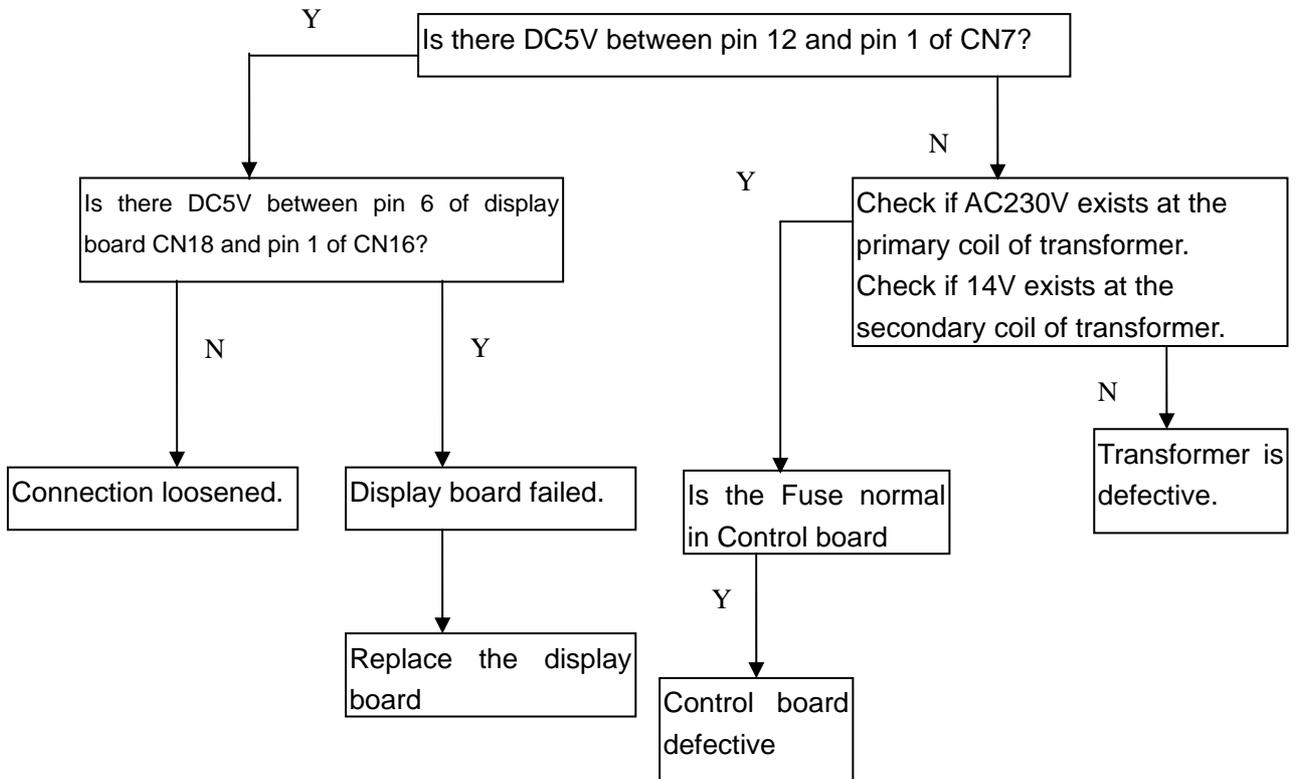
Wiring diagram for MPA-09CE (230V,60Hz)



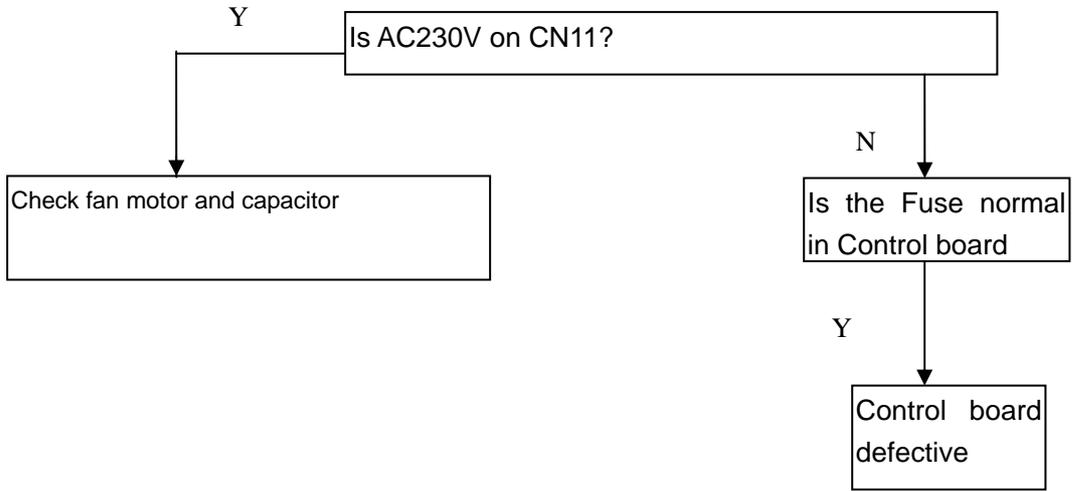
Wiring diagram for MPA-09CR (230V,60Hz)

4. Malfunction and troubleshooting

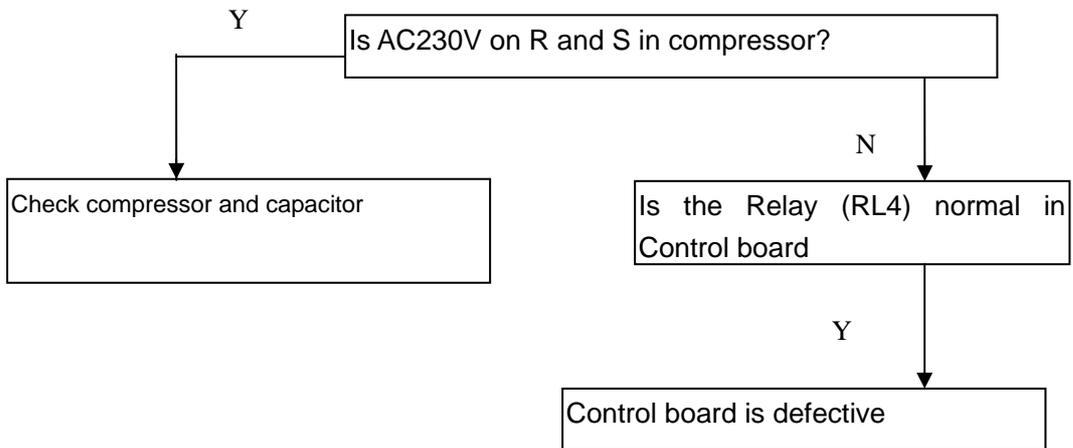
a. No display.



b. No fan running.

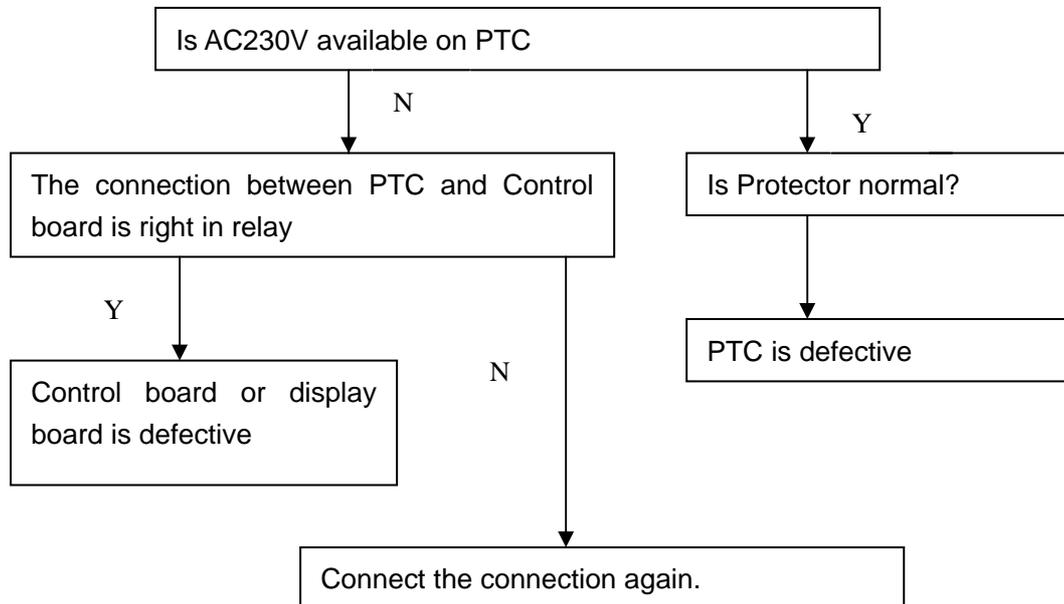


c. No compressor working.



d. **No PTC working.**

Set temperature at 32°C and make sure the room temperature is below 30°C.



5. Electronic function

5.1 The basic functions of the electrical control system

4.1.1 Operational modes

(1) Cooling mode

The air flow speed can be set at high, medium and low; the fan can run continually in accordance with the air flow speed.

The temperature can be set from 16°C~-32°C.

The compressor starts operation when the ambient temperature is higher than “setting temp. + 1°C”. When the ambient temperature is lower than the setting temp, the compressor stops.

(2) Heating mode

The air flow speed can be set at high or low; the fan actually operates at low and super low speed. When the ambient temperature is higher than the setting temp, the fan stops.

The temperature can be set from 16°C~32°C.

When the ambient temperature is lower than “setting temp - 1°C”, the PTC heater begins to work; when the ambient temperature is higher than the setting temp, the PTC heater stops.

(3) Dehumidifying mode

The temperature can be set from 10°C~32°C.

The fan works at medium speed; the working conditions of the compressor are the same as those in cooling mode.

(4) Air blowing mode

The fan can run at high, medium or low speed.

5.1.2 The setting of auto swing

When the air conditioner is operating, press the “SWING” key at any mode to start the auto swing.

5.1.3 The setting of “TIMER” and “CLOCK”

(1) OFF TIMER

You can set the OFF TIMER at any mode when the machine is operating.

Press “TIMER +” or “TIEMER - ”, the LED will display “TIMER OFF” and flash with the close-down time. Press “TIMER +” or “TIMER - ” continually, you can adjust the close-down time.

Press “CLOCK” key, you can verify the close-down time.

(2) ON TIMER

Set the starting up time before closing down the air conditioner. And its starting up status

will be the working status of last time.

The setting and verifying methods are the same with "OFF TIMER".

(3) **CLOCK**

The clock displays time in the 24-hour system with ":" flashing at 1 Hz.

Setting:

At any mode, press and hold the "CLOCK" key for more than 3 seconds, the clock display will flash at 1 Hz. Then press "TIMER +" or "TIMER - ", you can adjust time.

Verifying:

Press "CLOCK" to verify.

5.1.4 Temperature setting

At cooling, dehumidifying or heating mode, you can set the temperature. Press "TEMP +" key once, the setting temp increases for 1°C; press "TEMP - " key once, the setting temp decreases for 1°C.

5.1.5 Forced operation

- (1) When the power is turned on for the first time and no other keys are pressed, press both "CLOCK" and "TEMP+", the machine instantly enters forced heating mode.
- (2) When the power is turned on for the first time and no other keys are pressed, press both "CLOCK" and "TEMP - ", the machine instantly enters forced cooling mode.
- (3) During the forced operation, you can set air flow, auto swing, etc.
- (4) During the forced operation, press "TEMP+" or "TEMP - ", you can see the pipe temperature "P××" and room temperature "R××" at clock position.
- (5) Press "I/O" key or when the forced operation has lasted for 30 minutes, the machine enters into "standby".

5.1.6 Keys and its functions

- (1) I/O key: start up or close down the machine.
- (2) MODE: set the operation modes. Press the key and the mode will cycle with "FAN→COOL→DRY→HEAT→FAN". (There is no HEAT for cooling only machine.)
- (3) TEMP. ▲ key: press once, the set temperature goes up 1°C until 32°C.
- (4) TEMP. ▼ key: press once, the set temperature goes down 1°C until 16°C. (10°C for dehumidifying.)
- (5) FAN key: set air flow at three levels: cycling with "HIGH→MED→LOW→HIGH".
- (6) SWING key: set the auto swing on or off.
- (7) TIMER + key: set ON TIMER and OFF TIMER (clock adjustment as well).

(8) **TIMER -** key: set ON TIMER and OFF TIMER (clock adjustment as well).

(9) **CLOCK** key: adjust the clock.

Except for the "TIMER+" and "TIMER -", all keys have lock-on function. That is, they can only receive the pressing once in a second.

5.1.7 Display

(1) LED display

LED1: red and green lamp. When compressor works, the green is normally on; when the PTC works, the red is normally on.

LED2: red lamp. When the level of the water tank is up to the limit, the lamp flashes at 1 Hz.

(2) LCD display

Modes: COOL, DRY, HEAT, FAN (as signed).

Temperature setting: SET TEMP, "88" C (no display in FAN mode).

Air flow: HIGH, MED, LOW (as signed).

Auto swing: "ON", "TIMER", "OFF", "88" ":" "88".

5.1.8 Protective functions

(1) Alarm on water tank level

At any mode, when the water tank level is up to the limit, the buzzer alarms 8 times before it stops, the alarm lamp flashes and the machine enters into air blowing. (At heating mode, the machine keeps original status.) The machine restores to former operating status after the alarms go off. After 3 minutes, if the alarms can not go off, the machine will enter into standby automatically.

(2) Low temperature protection for the evaporator

At cooling and dehumidifying modes, if the pipe temperature is lower than -3°C after compressor runs for 10 minutes, the compressor will be shut down instantly, the fan will start at high speed and the green LED will flash at 1 Hz. When the pipe temperature goes up to 10°C , the alarm goes off and the machine operates at set conditions.

(3) High temperature protection

At heating mode, when the temperature at air outlet is too high, the PTC will be turned off (without turning off the fan); when the temperature lowers to normal, the PTC returns to work.

At heating mode, when the temperature above the PTC is too high, the thermal fuse will be burnt out and the power supply to PTC will be cut off.

At heating mode, when the temperature above PTC increases abnormally, the PTC and the fan will be turned off; red LED1 lamp flashes rapidly. When the temperature lowers to normal, the machine returns to work.

(4) The delayed protection for compressor

When the power is on for the first time, the compressor starts without waiting for 3 minutes;

re-starting the machine after the compressor is stopped needs to wait for 3 minutes.

(5) Current protection for compressor

During operation, if over-current lasts for 3 seconds, the compressor will be shut down instantly and the green LED1 flashes. After 3 minutes, the compressor will re-start.

5.1.9 Other functions

(1) Fan starting

When the fan works at medium, low, or super low speed, there must be 3-second high speed starting.

(2) The initial values when the power is on

When the power is on, the starting status are:

MODE: FAN

FAN: HIGH

CLOCK: 12:00

There are no other displays.

(3) Buzzer

When the machine starts up, the buzzer sounds twice; press any key, the buzzer sounds once; when there is water level alarm, the buzzer sounds 8 times.