

HSU-18H03(B) HSU-18HB03(B)

Inverter Split type air conditioner Service Manual

Contents

1. Description of product mode coding and series introduction.....	2
2. Specifications.....	6
3. Curves of performance.....	7
4. Description, dimension and function of main components and accessories.....	11
5. Knock-down drawings.....	14
6. Remote controller functions conversion.....	18
7. Brief introduction to Electrical control function.....	29
8. Circuit diagram.....	39
9. Abnormity diagnose.....	42
10. Refrigerating cycle diagram.....	44
11. Noise level test chart and air velocity distribution	46
12. Installation and accessory parts.....	49



● Features

- High efficiency for saving energy
- Quickly cooling and heating
- Lower noise



Split Type Air Conditioner

ENGINEERING DATA

MODELS:

AS182ATAHA+AU182AFAHA (HSU-18H03 (B))

(10102859600, 10102859700)

AS182ASAHA+AU182AFAHA (HSU-18HB03 (B))

(10102862200, 10102859700)

Content

1. Description of product model coding and series introduction.....	2
2. specifications.....	6
3. Curves of performance	7
4. Description, dimension and function of main components and accessories	11
5. knock-down drawings.....	14
6. remote controller functions conversion.....	18
7. brief introduction to electrical control functions.....	29
8. circuit diagram.....	39
9. abnormity diagnose.....	42
10. refrigerating cycle diagram.....	44
11. Noise level test chart and air velocity distribution.....	46
12. installation and accessory parts.....	49

No.0010542675

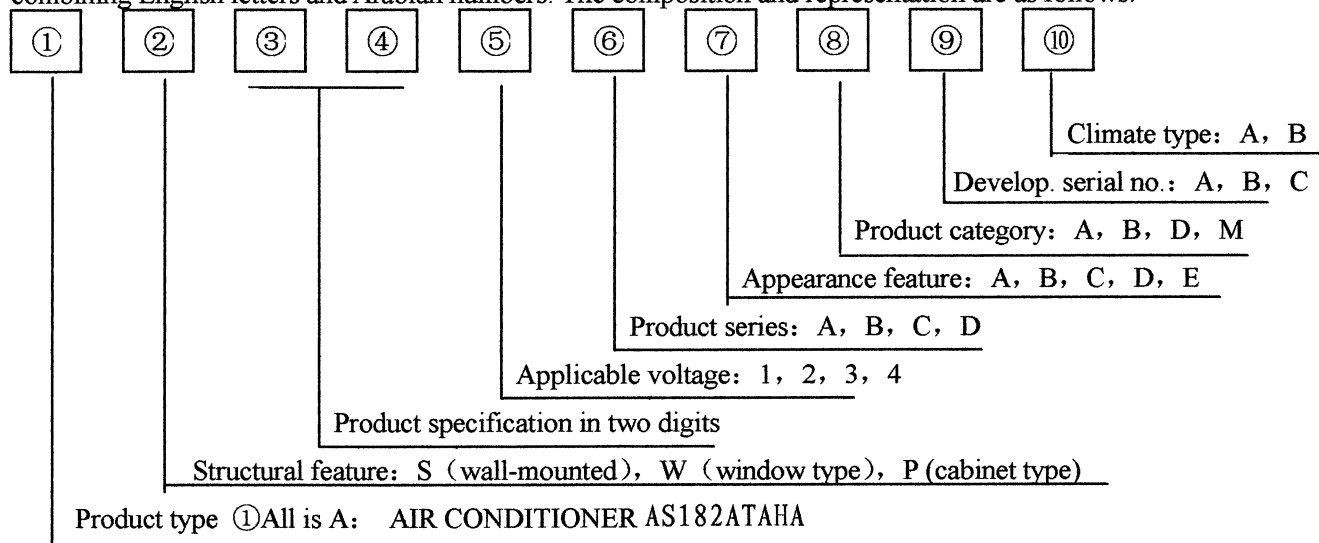
Description of product model coding and series introduction

Introductory Remarks

A. Description of coding rules of unit model

Coding rules and descriptions of new models are as follows:

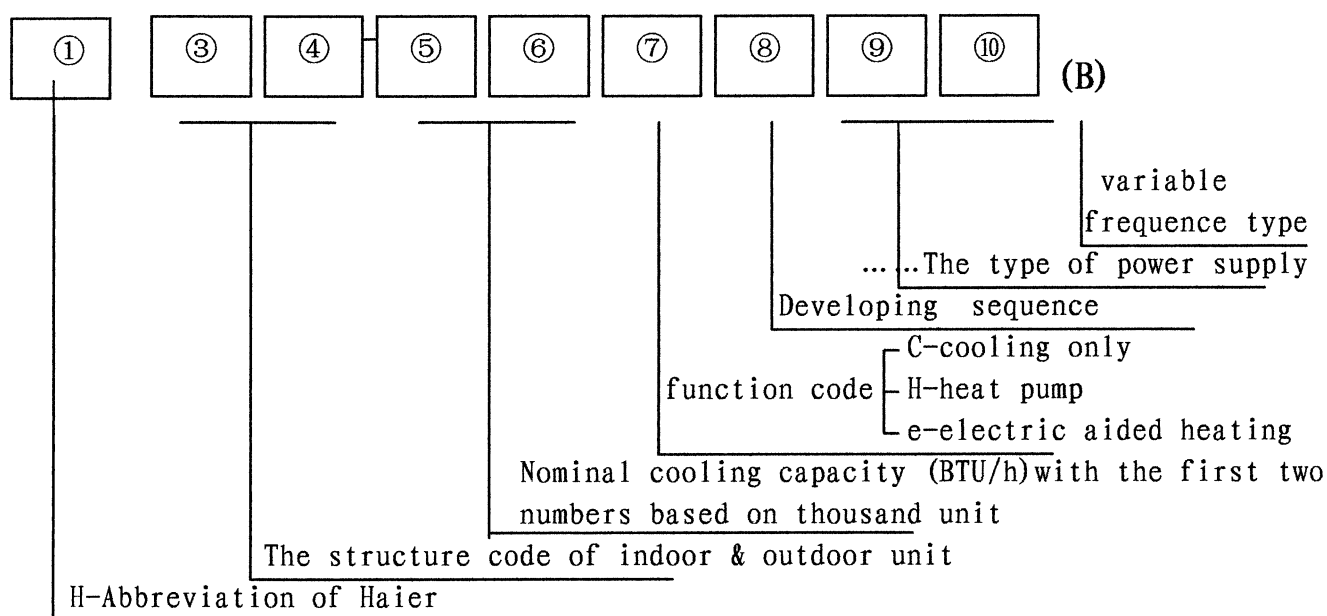
Indoor unit model and outdoor unit model of exported air conditioners shall be separately worked out in 10 digits combining English letters and Arabian numbers. The composition and representation are as follows:



E.g.: in AS182ATAHA, “A” represents air conditioner; “S” means wall mounted indoor unit; “18” indicates heating capacity of 18000BTU/h; “2” means applicable voltage of 220-240V/50Hz; “A” represents single split system; “T” is for appearance characteristics; “A” means heat pump type and refrigerant of R22; “H” is development serial number; “A” represents climate type.

In AU182AFAHA, “A” represents air conditioner; “U” means wall mounted outdoor unit; “18” indicates heating capacity of 18000BTU/h; “2” means applicable voltage of 220-240V/50Hz; “A” represents single split system; “F” is for appearance characteristics; “A” means heat pump type and refrigerant of R22; “H” is development serial number; “A” represents climate type.

B. Another model identification



Examples:

HSU-18HB03(B), It represents wall-mounted split type room air conditioner (variable-frequency type). The cooling capacity is 18000BTU/h, and the power supply is 240V/50Hz. "A" means the first improvement.

a、Standard Situation/conditions

NO.	operating condition	indoor air status		outdoor air status	
		DB°C	WB°C	DB°C	WB°C
1	Nominal cooling	27°C	19°C	35°C	24°C
2	Nominal heating	20°C	-----°C	7°C	6°C
3	Nominal electrical heating	--	--	--	--

C、series brief introduction

Features

1.High efficiency for saving energy

Applying for high efficient digital AC inverter compressor ,the air-conditioner starts smoothly and changes its cooling or heating capacity automatically according to your room's demand,so that the air conditioner will always run in high efficiency for saving energy.

2.Quickly cooling and heating .

Applying for the "SUPER" cooling and heating function ,the compressor will run in a higher frequency and the air-conditioner will generate more cooling or heating,so the room temperature will fall or rise quickly.

3.Lower noise

When the room temperature is near to what you have set by the remote controller ,the compressor will run in a lower frequency,the electric power consumption reduces and the noise gets lower.

4.Healthy and comfortable

An air purifying filter with deodorizing and disinfecting functions keeps the air clean . There is a negative ion generator in the indoor unit,when you set the "HEALTH" function , it will generate negative ions .Negative ions can refresh the air in your room .All this will make you healthy.

5. Convenience

Washable panel: the front grille of the indoor unit can be removed easily and washed when necessary.

6. Power failure resume function

When the power resumes after power failure ,the unit will run automatically,the power indicator lights up, and 3 minutes later the compressor starts running with the indicator lighting up.

7. Wide variety of functions

12-Hour Timer(for any series):

1 Description of product model coding and series introduction

2-hour Timer allows users to select the exact time they would like the air conditioner to turn on and to turn off. Timers on previous models operation based on the number of hours of desired operation.

When the air conditioner is operating on the timer-off circuit. The preset room temperature gradually rises (going down in heating) before the unit stops. Users can sleep comfortably without sudden change in temperature.

Program “dry “

This function automatically reduces the level of humidity while maintaining the preset indoor temperature.

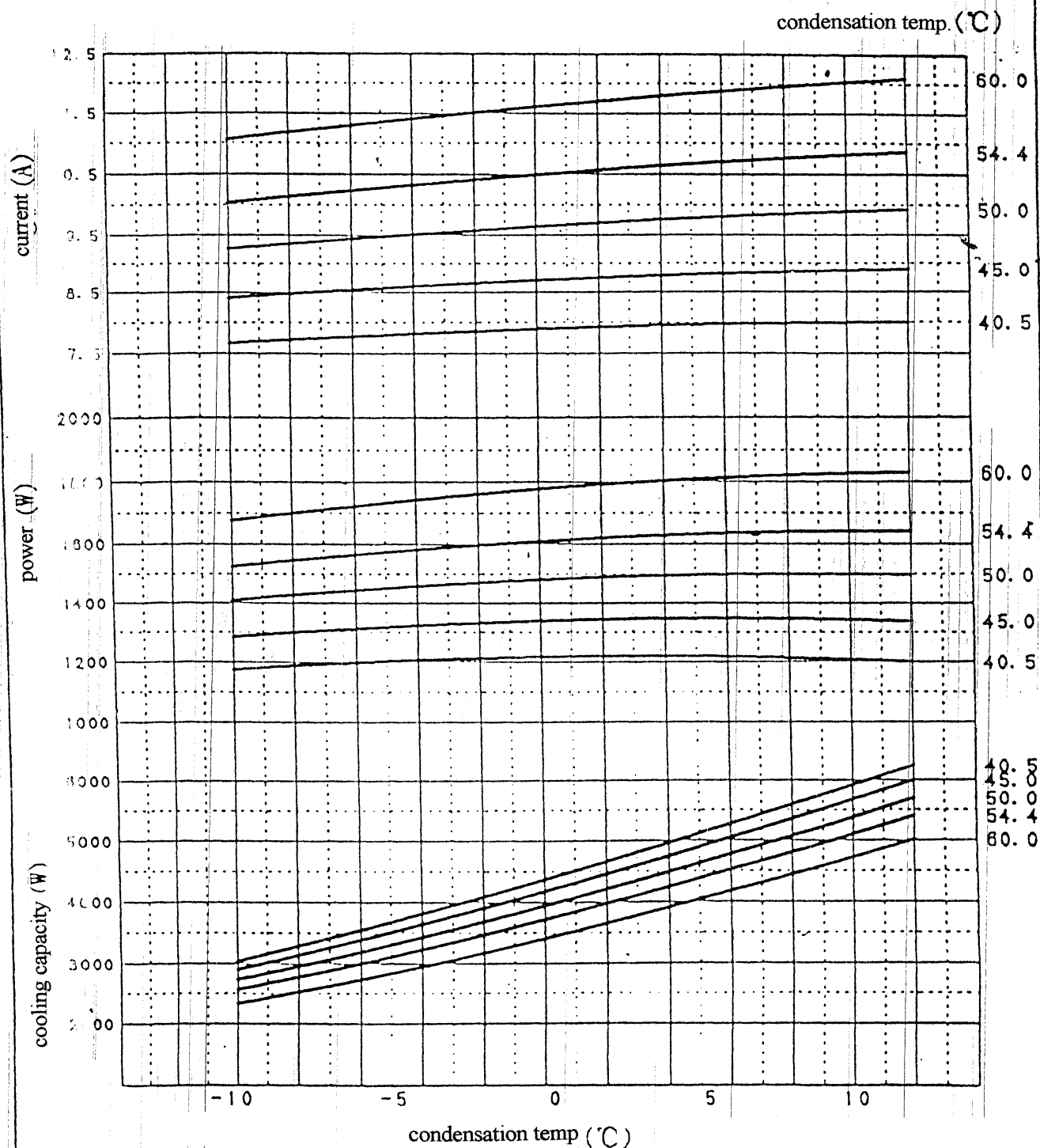
Specifications

Model:	AS182ATAHA/AU182AFAHA (HSU-18H03 (B)) AS182ASAH/AU182AFAHA (HSU-18HB03 (B))	Appearance color (indoor/outdoor):	White/white
Cooling capacity:	18000(3000-20000) BTU/h	Heating capacity:	23000(2550-28000) BTU/h
Cooling coefficient:	9.1BTU/(h • w)	Heating coefficient:	9.27BTU/(h • w)
cooling Power input:	1980(380-2800)W	Heating power:	2480(340-3100)W
Moisture removal	$2.2 \times 10^{-3} \text{ m}^3/\text{h}$	Frequency range:	35-100Hz
Operating voltage range:	1PH, 220-230V~,50Hz	Refrigerant type:	R22
Operating temp. range:	-7℃-43℃	Air sending angle/distance:	10℃~60℃/7m
Variation of temp. adjust:	$\pm 1^\circ\text{C}$	Fan type/quantity:	Cross flow fan (indoor unit) Axial fan (outdoor unit)
Climate type:	T1	Class of electric shock protection:	I
Indoor unit noise: (cooling):	50/45/40 dB (A)	outdoor unit noise: (cooling):	57/46dB (A)
Indoor unit noise: (heating):	50/45/40 dB (A)	outdoor unit noise: (heating):	57/46dB (A)
net dimensions (indoor unit)	1100×205×330 mm	net dimensions (outdoor unit)	810×288 ×680 mm
Packaging dimensions : (indoor unit)	1192×306×427 mm	Packaging dimensions : (outdoor unit)	960×406 ×760 mm
weight(indoor unit)	14/17(net/gross)kg	Piling layers for indoor/outdoor units:	8/4
Max. mounting height difference:	5m	Outdoor unit net/gross weights:	59/66(net/gross) kg
Refrigerant charge:	R22 1800g	Current entering side (indoor/outdoor):	indoor
Frequency of filter cleaning:	Once/2 weeks	Max. refrigerant charge:	1860g
Compressor model	QXB-23 (F)	Compressor manufacturer:	Shenyang SANYO
Compressor oil charge:	500cc	Compressor protector type:	-----
Maxi. length of connecting pipe:	15m	model of 4-way valve:	-----
Cap. tube type 、 muffle model:	TP ₂ Y copper tube	Length/diameter of drain hose:	996mm/Φ17.5mm
Fan speed: (r/min)	1350/1100/920(indoor)/780/500 (outdoor)	Type/size of evaporator and condenser	Internal treaded pipe Φ7/Φ9.52 mm
Max. operating pressure at warm side:	2.65Mpa	Max. operating pressure at cool side:	2.65MPa
cut-off valve:	3/8", 5/8"	Appearance features	Indoor unit:plastic ; Outdoor unit: iron

Curves of performance

Curve of Compressor Performance(1)

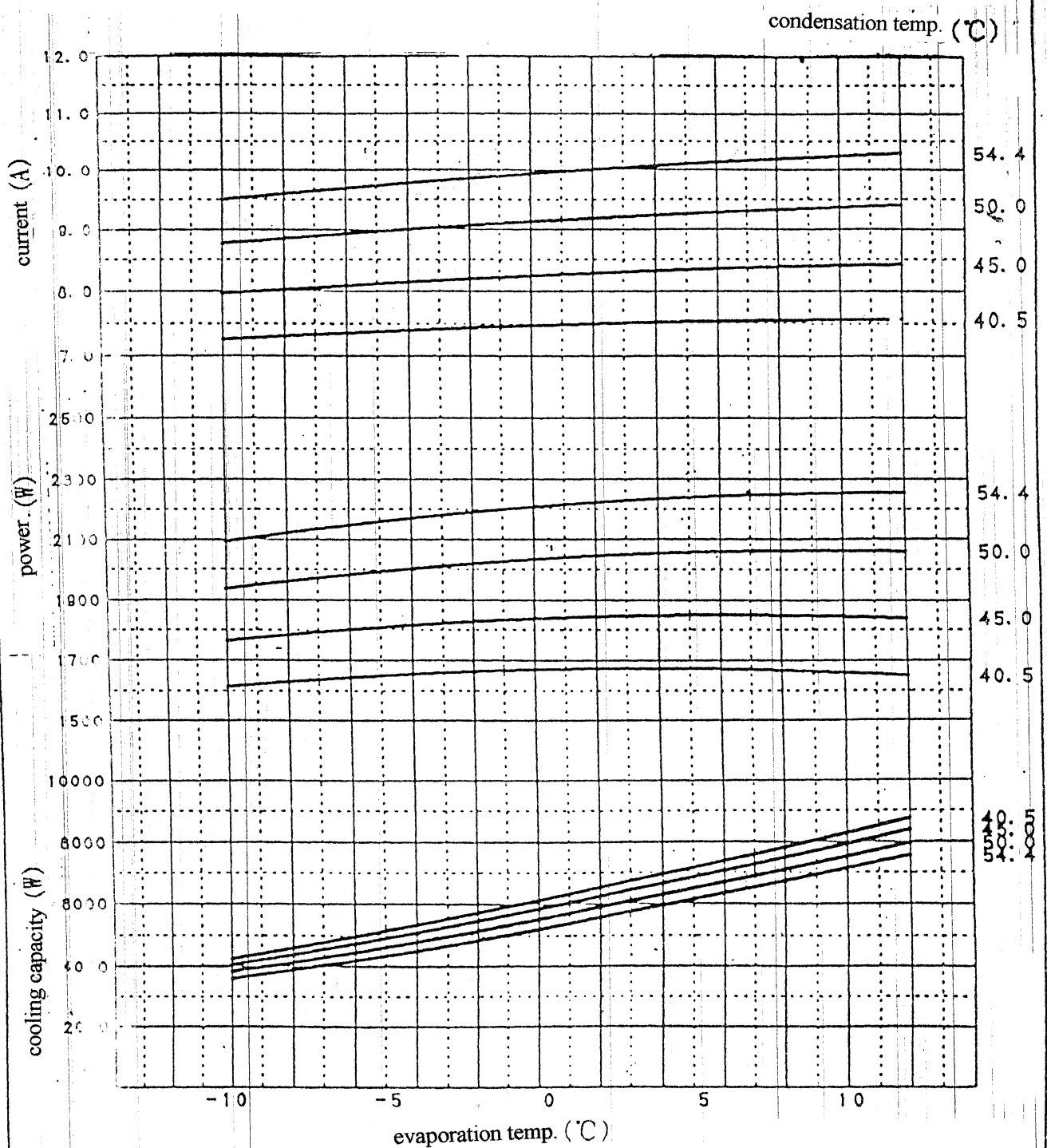
compressor	QXB-23 (F)		A	B	C	D	E
power	3-PH 60Hz 140V	condensation temp (°C)	40.5	45.5	50.5	54.4	60.0
refrigerant	R22	suction temp (°C)	35.0	35.0	35.0	35.0	35.0
cooling type	force air ~3m/s	sub-cooling temp (°C)	32.2	36.7	41.7	46.1	51.7
		ambient temp (°C)	35.0	35.0	35.0	35.0	35.0



Curve of Compressor Performance(2)

compressor	QXB-23 (F)
power	1-PH 50Hz 220V
power	3-PH 80Hz 171V
refrigerant	R22
cooling type	force air 1m/s

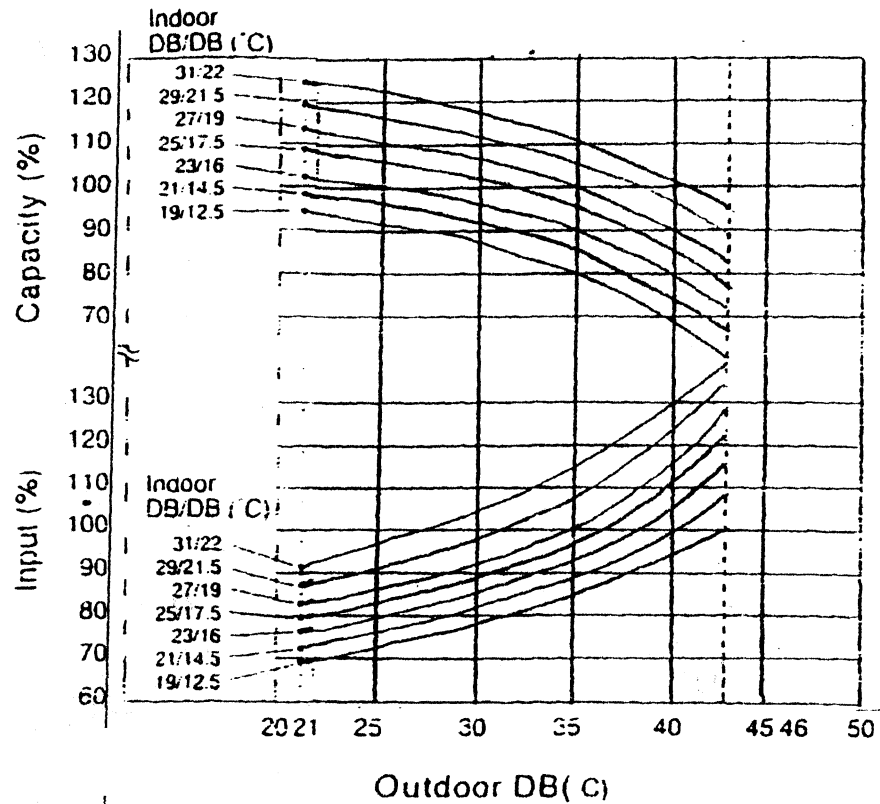
	A	B	C	D	E
evaporation temp. (°C)	40.5	45.5	50.5	54.4	60.0
suction temp (°C)	35.0	35.0	35.0	35.0	35.0
sub-cooling temp. (°C)	32.2	36.7	41.7	46.1	51.7
ambient temp.(°C)	35.0	35.0	35.0	35.0	35.0



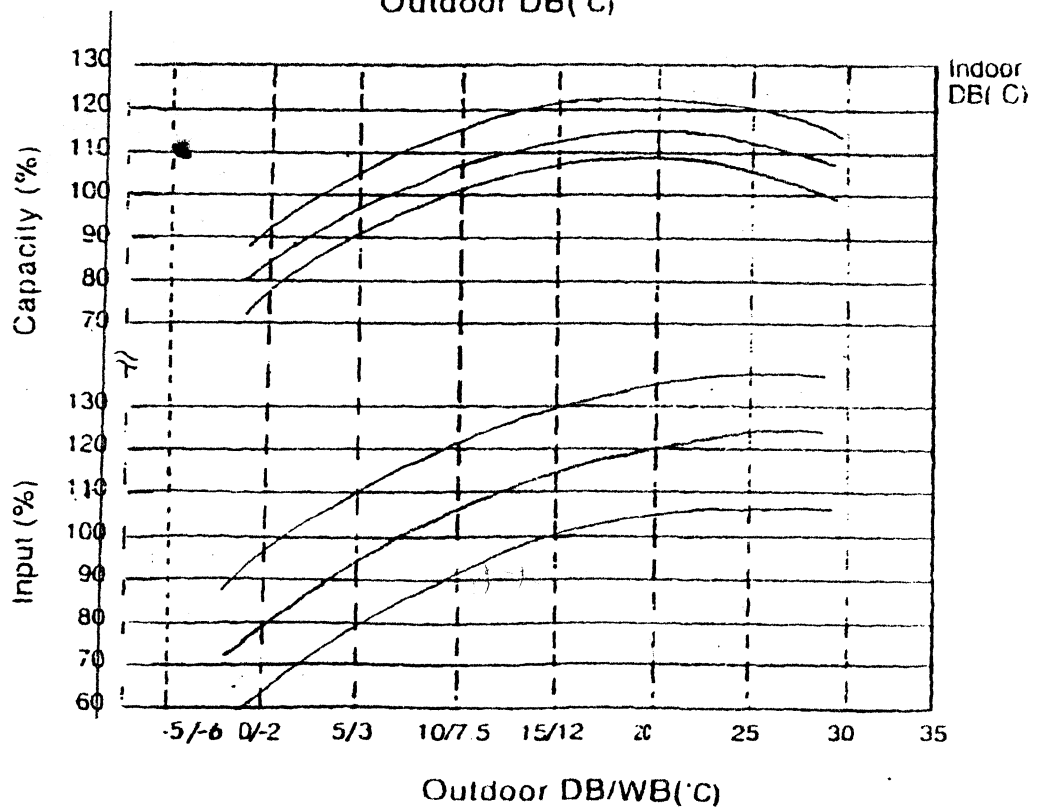
Curves of performance

a. Curves of cooling capacity and heating capacity as a function of outdoor temperature (-7°C ~ $+52^{\circ}\text{C}$):

Cooling



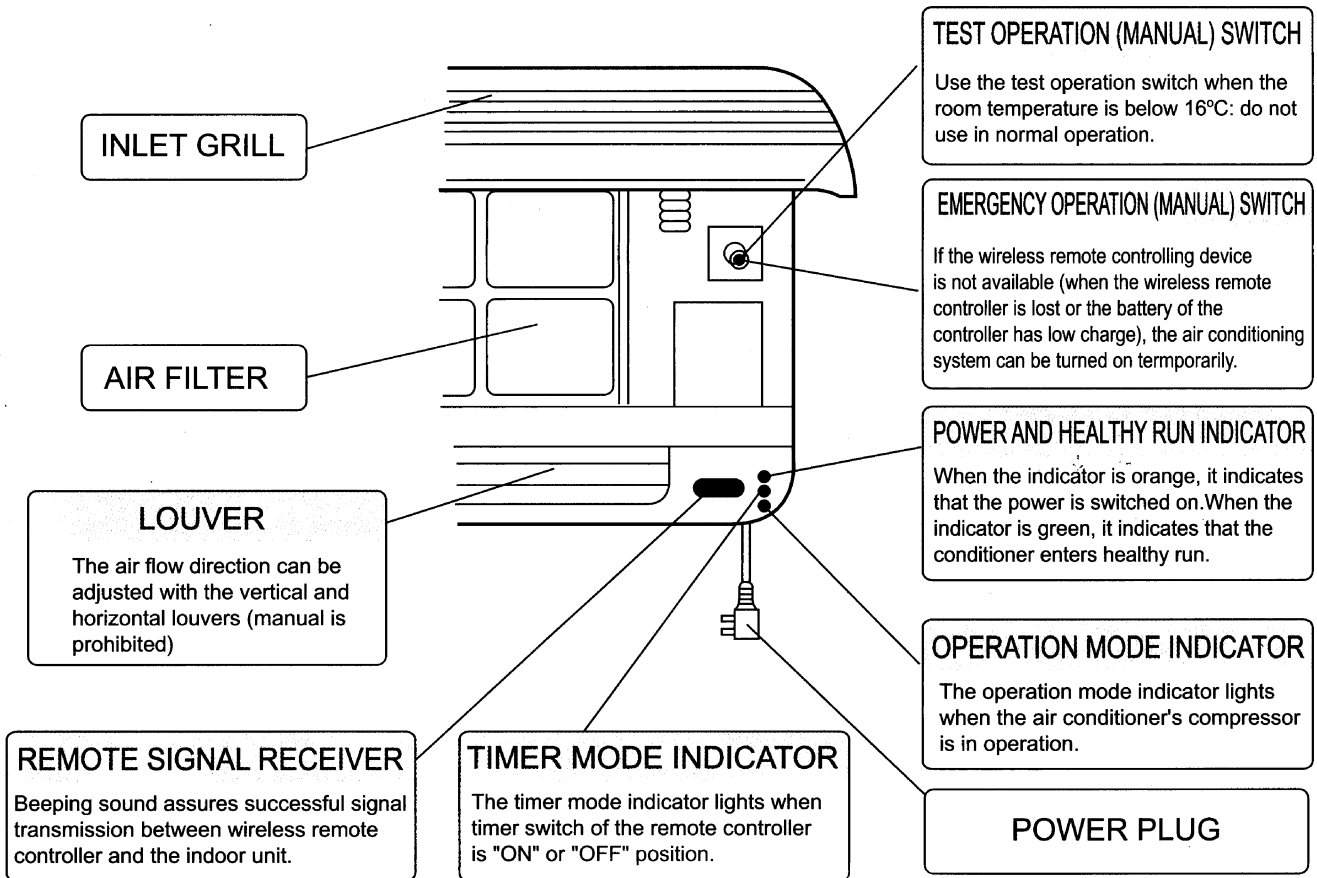
Heating



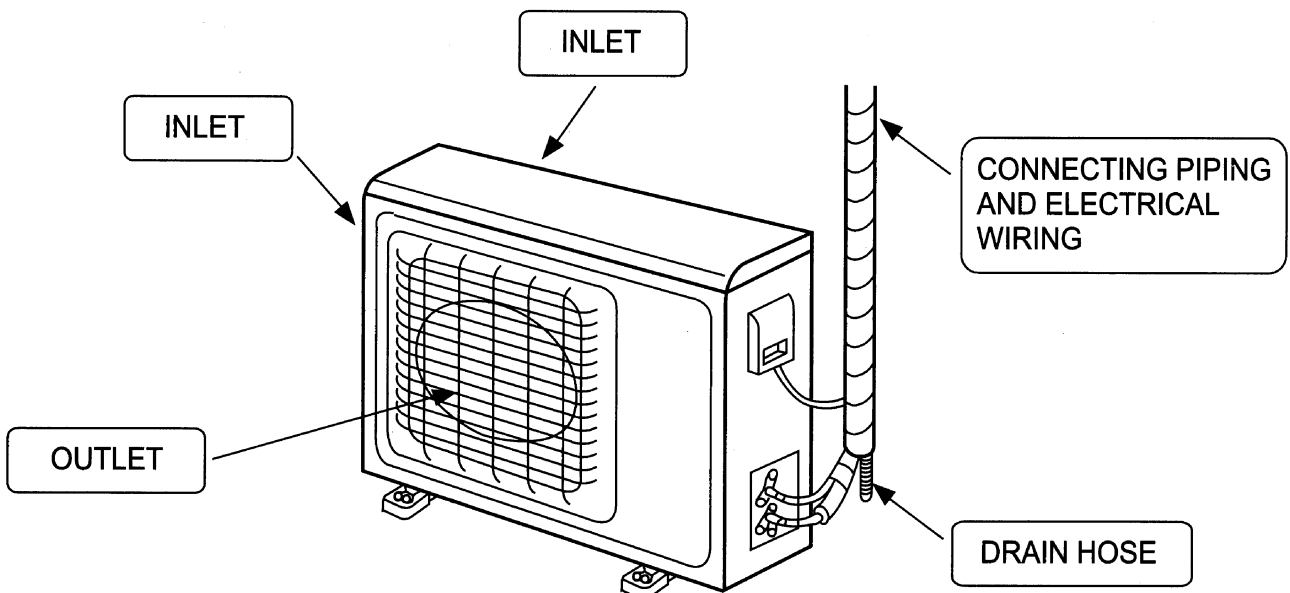
**Description, dimension and function of main components
and accessories**

PARTS AND FUNCTIONS

Indoor unit

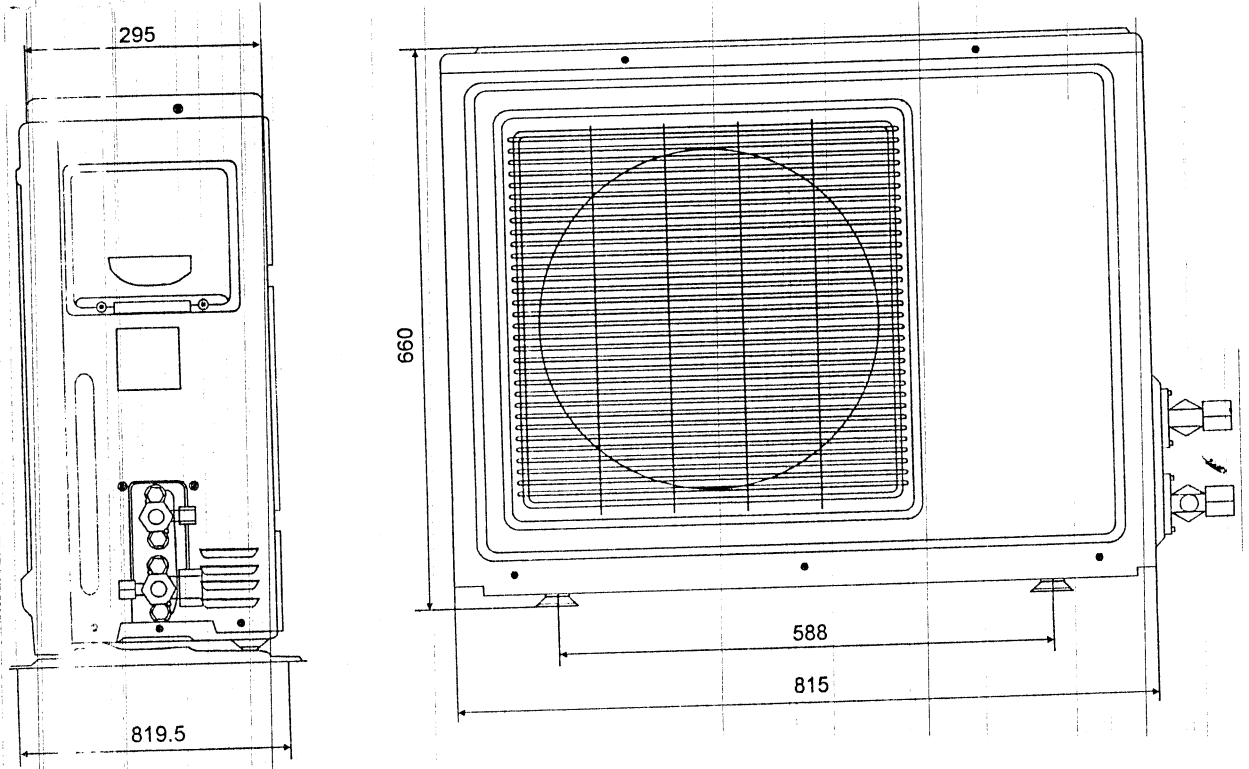


Outdoor unit

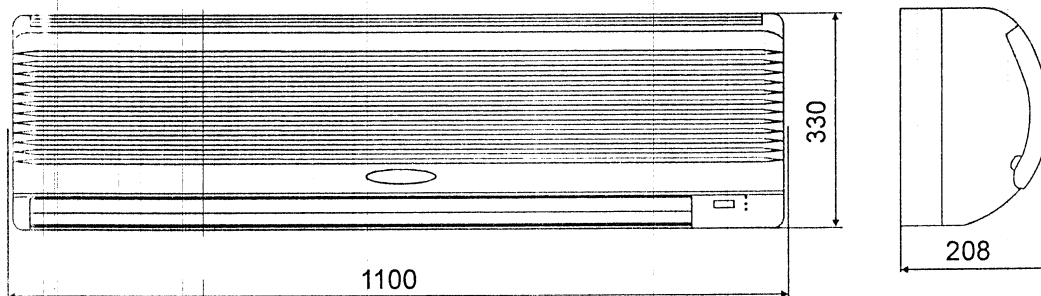


NET DIMENSION FOR INDOOR UNIT

MODELS:

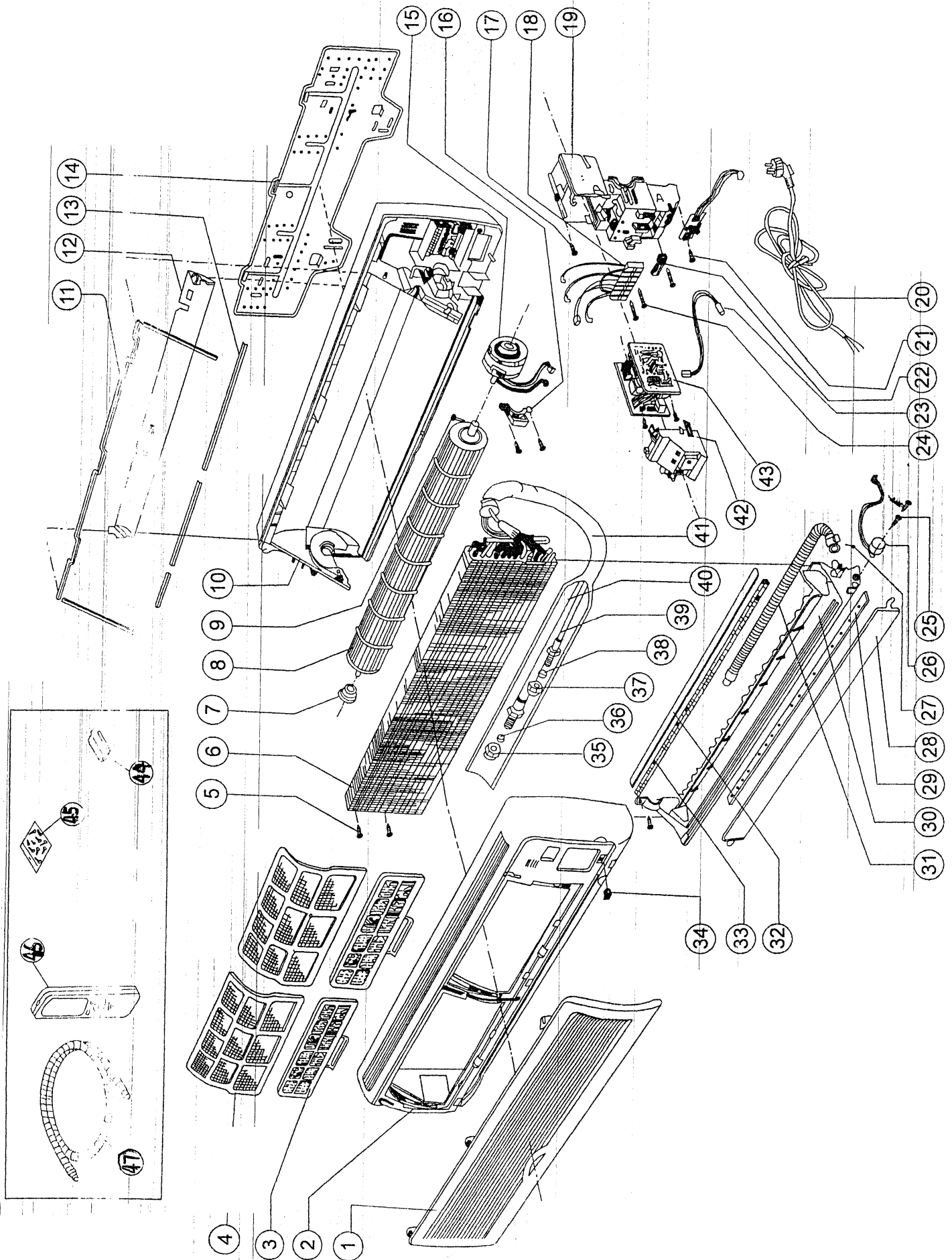


MODELS:

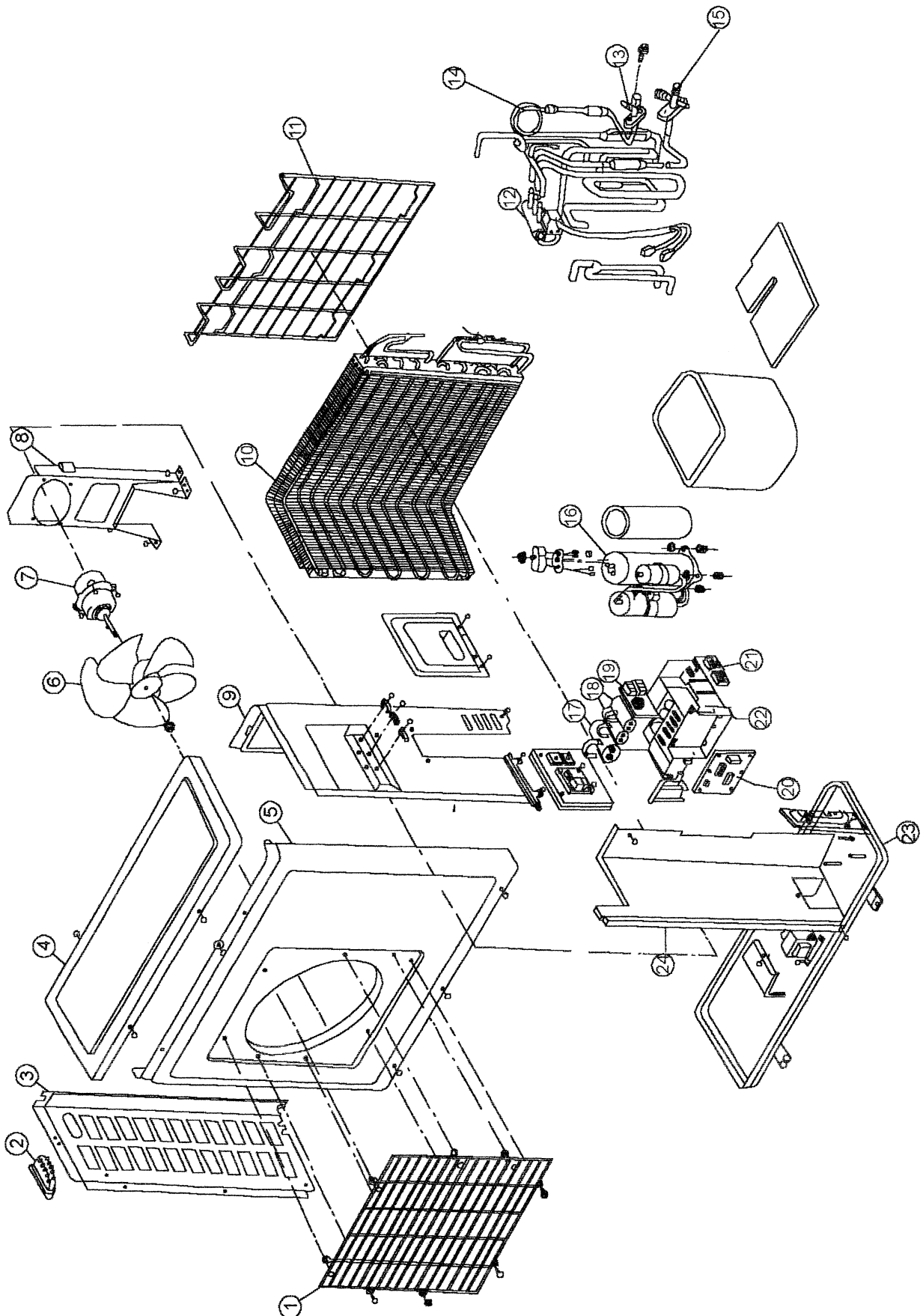


Knock-down drawings

KNOCK-DOWN DRAWINGS FOR INDOOR UNIT



KNOCK-DOWN DRAWINGS FOR OUTDOOR UNIT



KNOCK DOWN DRAWINGS FOR OUTDOOR UNIT

NO	SPECIAL CODE	NAME	NO	SPECIAL CODE	NAME
1	001A1303126A	front grille	13	001A2500046	stop valve
2	001A1436182	handle	14	0010700630	capillary tube
3	001A1101039	side panel(L)	15	001A2500026	stop valve
4	001A1101040	top panel	16	001A2000048	compressor
5	001A1101038	front panel	17	001A3600129	capcator
6	001A2331024	fan	18	001A3600126	capcator
7	001A3000069	motor	19	001A3600126	capcator
8	001A1301133	motor support	20	001A3300275	main controller
9	001A1101041	side panel(R)	21	001A4000115	terminal block
10	001A0400242	heat exchanger	22	001A1431400	electric box
11	001A1303128	back grille	23	001A1101042B	bottom plate
12	001A2500015	four-way valve	24	001A1742650	seperating plate

KNOCK-DOWN DRAWINGS FOR INDDOR UNIT

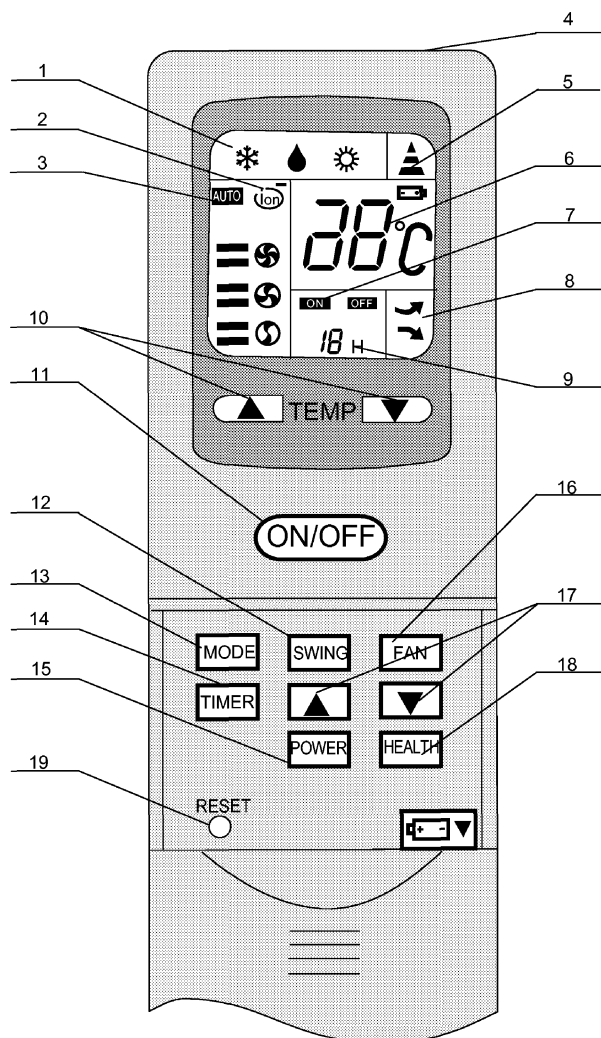
NO	SPECIAL CODE	NAME	NO	SPECIAL CODE	NAME
1	001A1231127	front grille	25	001A5002026	screw
2	001A1232119	front panel	26	001A3000071	swing moter
3	001A0900041	air purifying filter	27	001A5002030	screw
4	001A2400076	air filter	28	001A1231126	flap
5	001A5002013	screw	29	001A1734635	cushion
6	0010700685	heat exchanger	30	001A1231115	drain pan
7	001A2343037	bearing	31	00A0900049	drain hose
8	001A2300034	fan	32	001A1733647	cushion
9	001A5002021	screw	33	001A1733632	cushion
10	001A1232116	bottom plate	34	001A1443459	buttion
11	001A1734630	cushion	35	001A5343026	nut
12	001A1733639	cushion	36	001A2912006	dustproof cover
13	001A1734627	cushion	37	001A5343024	nut
14	001A1101075	mounting plate	38	001A2912001	dustproof cover
15	001A3000050	moter	39	001A0500794	suction pipe assy.
16	001A1431453	motor cover	40	001A0500795	discharge pipe assy.
17	001A5002114	screw	41	0010200003	heat insulation tube
18	001A4000108	terminal block	42	001A1231122	service cover
19	001A1231123	control box	43	001A3300274	PC board
20	—————	power wire	44	001A4600001	cell
21	001A5002116	screw	45	001A0900060	screw assy.
22	001A1231124	wiring clamp	46	001A3400120	remoter controller
23	001A3900059	temperature sensor	47	001A1434481	drain hose
24	001A5002070	screw			

Remote controller functions conversion

PARTS AND FUNCTIONS

Remote controller

LCD contents, name of each key, function introduction.



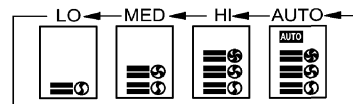
1. MODE DISPLAY:

- Indicates the current operating mode.



2. HEALTHY DISPLAY:

3. FAN SPEED



4. SIGNAL SENDING HEAD:

- Sends signals to the remote signal receive of the indoor unit.

5. SIGNAL SENDING:

- Lights up when a signal is sent to the indoor unit

6. TEMP:

- Indicates the temperature set by the temperature setting switches.

7. TIMER:

- OFF: The air conditioner stops operation after the designated period.
- ON: The air conditioner starts operation after the designated period.

8. POWER DISPLAY

9. DESIGNATED DISPLAY

- Indicates the period set by the time setting switches.

10. TEMP.SETTING

- ▲ : The indicated temperature increases by 1°C per press.
- ▼ : The indicated temperature decreases by 1°C per press.

11. ON/OFF

- Starts operation with a press ; stops operation with another press.

12. SWING

- Air flow direction can be changed vertically by each press.

13. MODE

- Used to select AUTO run ,COOL,DRY,HEAT and FAN operation.

14. TIMER

- Used to select TIMER ON ,TIMER OFF,TIMER ON/OFF.

15. POWER

16. FAN

- Used to select fan speed LO,MED,HI,AUTO.

17. HOUR

- Used to set clock and timer setting.

18. HEALTH

19. RESET

- Used to reset the controller back to normal condition.

Note:

When the remote controller battery is replaced, the working mode will resume like bellow:

MODE: Cool;
TEMP: 26°C;
TIMER: None;
FAN: Auto.

PARTS AND FUNCTIONS

Inserting Dry Batteries

1 Remove the lid.

Gently press the part indicatig OPEN, and slide the lid away from the controller.

2 Insert the dry batteries.

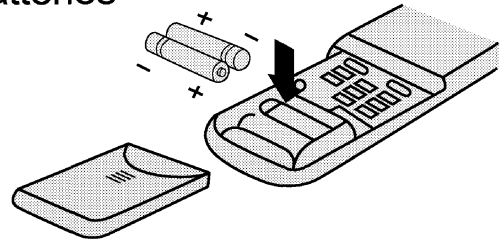
Make sure the dry batteries are set in the right directions according to the diagram in the cavity.

3 Attach the lid.

4 Verify by the indicators.

If displays do not appear after a press on ON/OFF switch, set dry batteries once more.

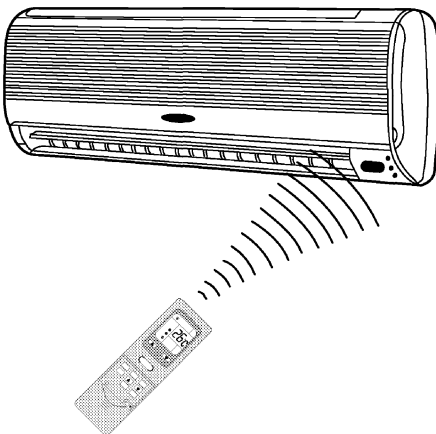
TWO R-03
dry batteries



Note:

- Use two new dry batteries of the same brand and type.
- Remove the batteries from the controller when it is not used for a long period.
- When the remote controller does not work after replacement of new dry batteries, remove the dry batteries and insert them more than 30 seconds later, or press ON/OFF switch in several times without the battery inserted.

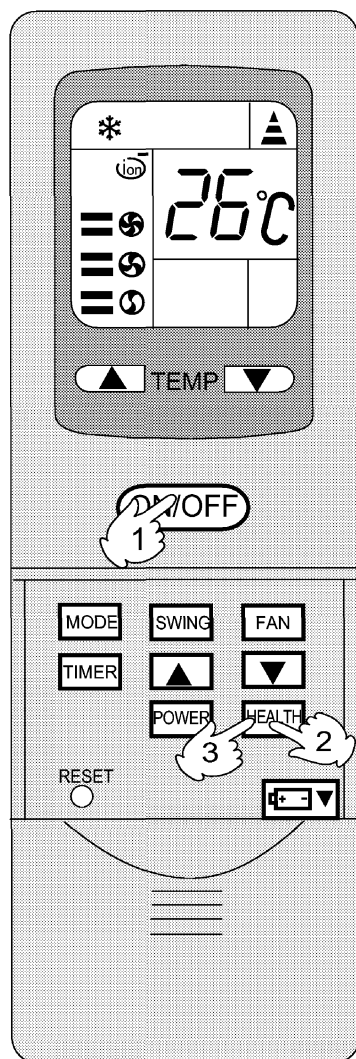
Handling the Wireless Remote Controller



- When operating, point the signal sending head toward the remote signal receiver of the indoor unit.
- Do not allow any obstacles between the signal sending head and the signal receiver.
- The signal receiver may not receive the signal in a room which has an electro-lighting (rapid-start) type fluorescent lamp, an inverter-type fluorescent lamp or a cordless phone.
- When attaching the wireless remote controller to a wall or post, make sure that the indoor unit receives the signals.
- Handle the wireless remote controller with care.
Do not drop, throw or wet the remote controller.
Do not attach the remote controller to a place where it is exposed to direct sunlight or heat.

OPERATION

Health Mode Operation



1 Press the ON/OFF switch.

2 Press the "HEALTH" once, "ion⁻" is displayed now the air conditioners is operating the healthy function.

3 Press the "Health" again, then the

BRIEF INTRODUCTION TO HEALTH OPERATION

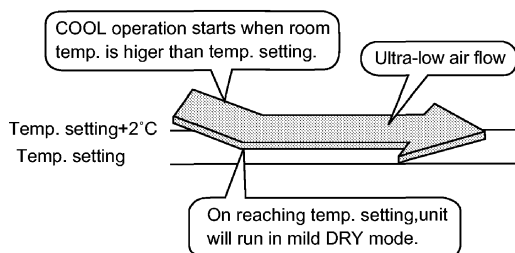
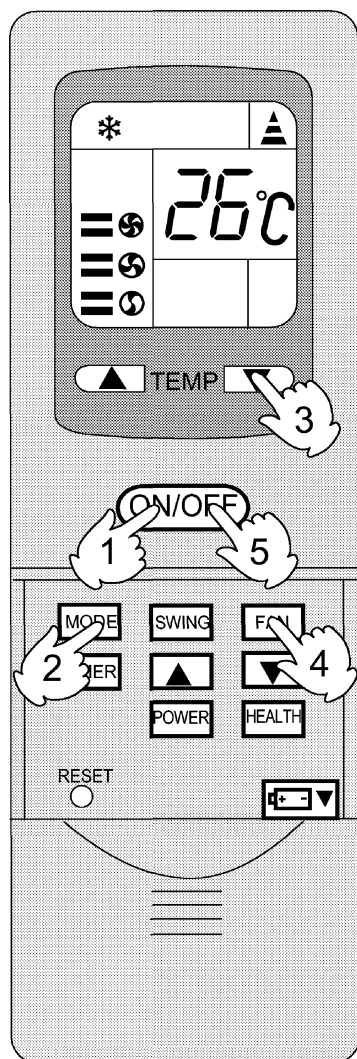
The anion generator in the air conditioner can generate a lot of anion to effectively balance the quantity of position and anion in the air and also to kill bacteria and speed up the dust sediment in the room and finally clean the air in the room.

Note

When the fan in the indoor unit does not work, the health lamp lights up, but the anion generator does not release anion.

OPERATION

COOL, HEAT and DRY Operation



1 Unit start

Press ON/OFF button, unit starts.
Previous operation status appears on display.
(Not Timer setting)
Power indicator on indoor unit lights up.

2 Select operation mode

Press MODE button. For each press, operation mode changes as follows:



Unit will run in operation mode displayed on LCD.
Stop display at your desired mode.

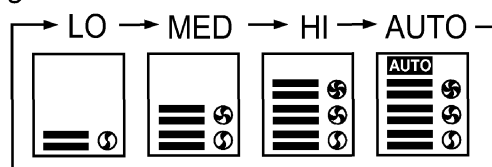
3 Select TEMP.setting

Press TEMP. button

- ▲ Every time the button is pressed, temp. setting increases 1°C
- ▼ Every time the button is pressed, temp. setting decreases 1°C

4 Fan speed selection

Press FAN button. For each press, fan speed changes as follows:



Unit runs at the speed displayed on LCD.
In HEAT mode, warm air will blow out after a short period of time due to cold-draft prevention function.
In DRY mode, when room temp. becomes 2°C higher than temp. setting, unit will run intermittently at LO speed regardless of FAN setting.

5 Unit stop

Press ON/OFF button again, unit stops.

Hints

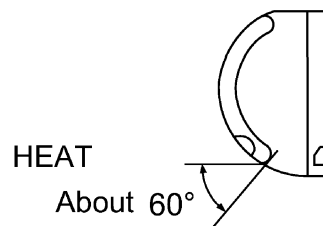
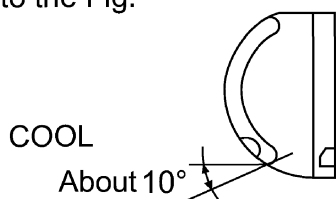
Remote controller can memorize each operation status. When starting it next time, just press ON/OFF button and unit will run in previous status.

OPERATION

Air flow direction adjustment

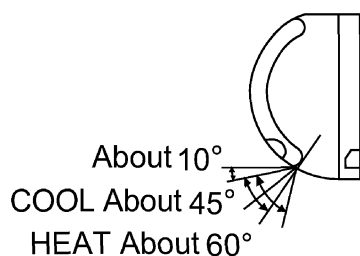
After operation mode is selected, vertical flap will open automatically according to the mode.

Referring to the Fig.



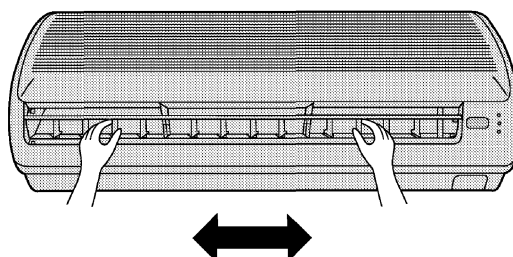
Up and down (Use remote controller)

Press SWING button, vertical flap will move within the range shown in the Fig. Press SWING button stop it at a fixed position.



Left and right air flow adjustment (manual)

Move the horizontal blade by a knob on air conditioner to adjust left and right direction



Cautions:

It is advisable not to keep vertical flap at downward position for a long time in COOL or DRY mode, otherwise, condensate water might occur.

Cautions:

When humidity is high, condensate water might occur at air outlet if all horizontal louvers are adjusted to left or right.

Unit stop

Press ON/OFF button.
Only time remains on LCD.
All indicators on indoor unit go out.
Vertical flap closes automatically.

Cautions:

Unit won't restart until 3 minutes have elapsed, due to system protection.
HEAT mode is not available on cooling only unit.

Hints

As cold air flows downward in COOL mode, adjusting air flow horizontally will be much more helpful for a better air circulation.

As warm air flows upward in HEAT mode, adjusting air flow downward will be much more helpful for a better air circulation.

Be careful not to catch a cold when cold air blows downward.

It is harmful to your health in summer to go frequently in and out of places where temp. difference is above 7°C. Temp. difference of 3-5°C will remove your fatigue.

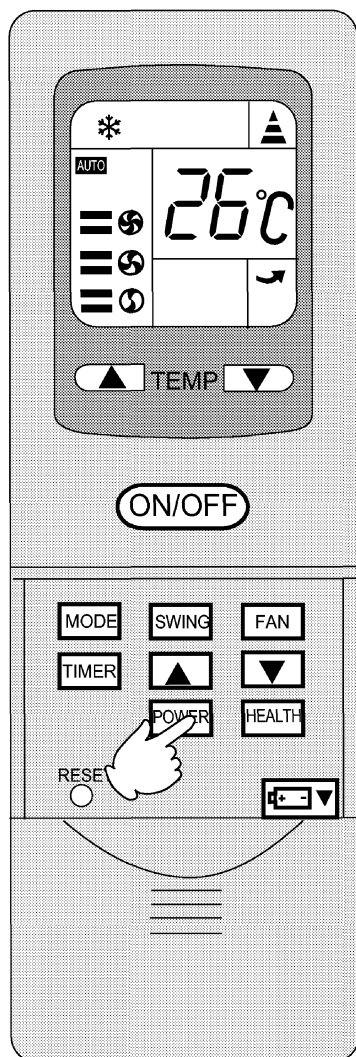
More than this, unit's load can be reduced and power consumption cut down as well. So, you'd better set a temp. diff of 3-5°C between indoor and outdoor temp. in COOL mode.

Power Mode Operation

Power mode operation includes super mode operation and soft mode operation.

Super Mode Operation

This mode is good to have yourself blown directly to feel cooler or warmer.



ON

Press Power Mode Switch once.

The indication  appears on the remote controller and the operation in Super Mode starts.

During the Super Mode operation, the air flow speed is indicated as "AUTO" on the controller.

OFF

Press Power Mode Switch twice.

The indication  appears on the remote controller at one press and it goes out at the second press, then the operation will return to the regular operation.

NOTE

- Unevenness of room air temperature may occur due to the intensive operation in a short time.
- After 15 min., the operation will return to normal automatically.

Power Failure Resume Function

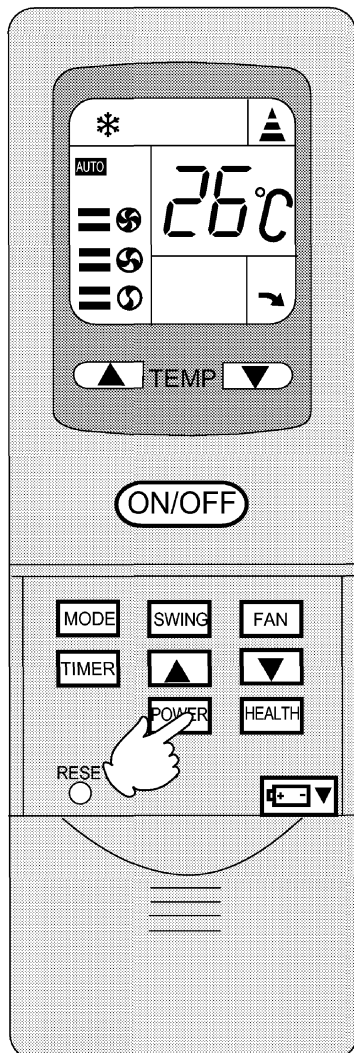
If the unit is started for the first time, the compressor will not start running unless 3 minutes have elapsed. When the power resumes after power failure, the unit will run automatically, the power indicator lights up, and 3 minutes later the compressor starts running with the indicator lighting up.

OPERATION

Power Mode Operation

Power mode operation includes super mode operation and soft mode operation.

Super Mode Operation



Soft mode operation, operating more quietly by controlling the air flow of indoor unit, it is useful when noises should be smaller, such as, for reading and sleeping.

ON

Press Power Mode Switch twice.

The indication  appears on the remote controller and the operation in Soft Mode starts.

During the Soft Mode operation, the air flow speed is indicated as "AUTO" on the controller.

OFF

Press Power Mode Switch once.

The indication  goes out at one press, then the operation will return to the regular operation.

NOTE

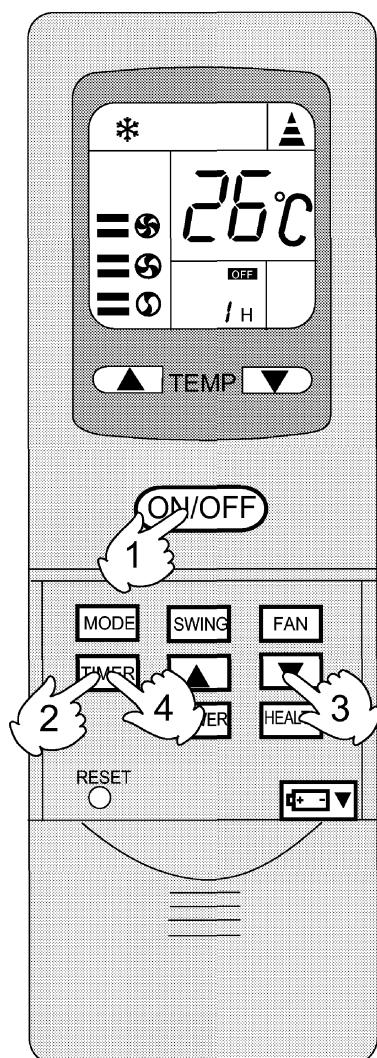
- Soft mode operation may not be powerful enough to keep the room temperature at the designated for a long time.

OPERATION

Timer Function Usage

OFF Timer Function

With this function, the system stops operating after the designated period.



1 Press the ON/OFF switch

Make sure that the operating conditions are those desired.

2 Set the timer mode to "OFF" by pressing the timer mode switch.

Make sure that the timer mode indicator of the indoor unit lights up.

3 Set the operating period by pressing the time setting switches.

The operation period can be set from 1 hour to 12 hour by an hour.

Timer Cancellation

- 4** Just press the timer mode switch several times until TIMER mode disappears.

Changing the Designated Period

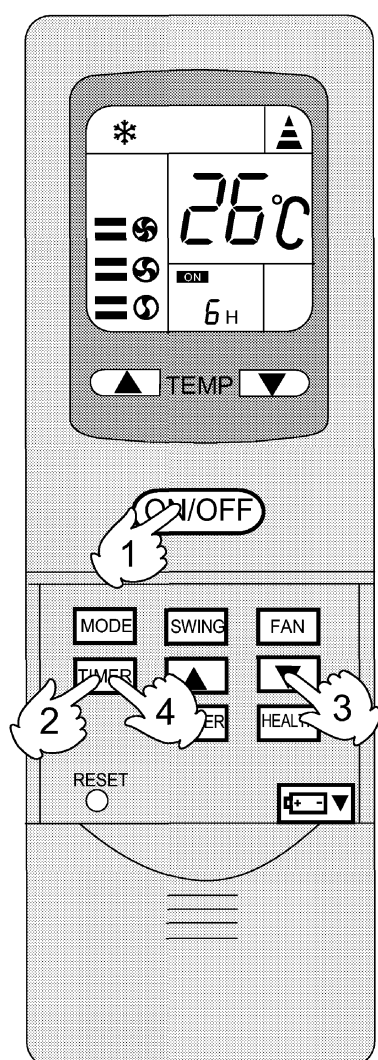
Press either ▲ or ▼ time setting switch to adjust the operating period. The timer then immediately start its function.

OPERATION

Timer Function Usage

ON Timer Function

With this function, the system starts operating after the designated period: the system can be set to turn on automatically at the time of awakening or arriving home.



1 Press the ON/OFF switch

Make sure that the operating conditions are those desired.

2 Set the timer mode to "ON" by pressing the timer mode switch.

Make sure that the timer mode indicator of the indoor unit lights up.

3 Set the operating period by pressing the time setting switches.

The operation period can be set from 1 hour to 12 hour by an hour.

Timer Cancellation

4 Just press the timer mode switch several times until TIMER mode disappears.

Hints

- Once the wireless remote controller set the timer, the period is memorized. From next time, you can operate easily with operation of the ON/OFF switch and the timer mode switch.
- After replacing the dry batteries, the designated period is set automatically as follows: OFF: 1 hour, ON: 6 hours. Set the timer again if necessary.
- If the power fails, set timer again.

OPERATION

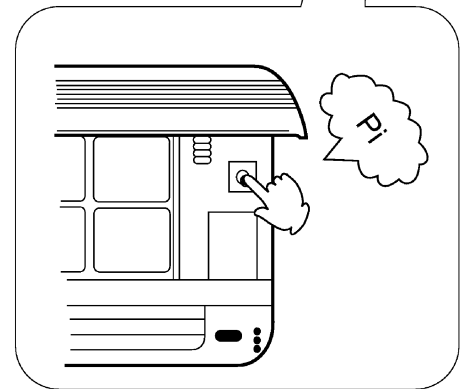
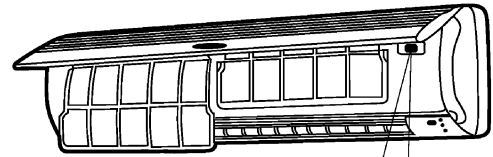
Emergency and Test Operation

Emergency operation:

- Use this operation only when the remote controller is defective or lost.
- When the emergency operation switch is pressed, a "Pi" sound is heard once, which means the start of this operation.
- In this operation, the system automatically selects the operation mode, cooling or heating, according to the room temperature, as follows.

temperature	Operation mode	Designated temperature	Timer mode	Air flow
More than 23 °C	COOLING	26 °C	NONE	AUT
Less than 23 °C	HEATING	23 °C	NONE	AUT

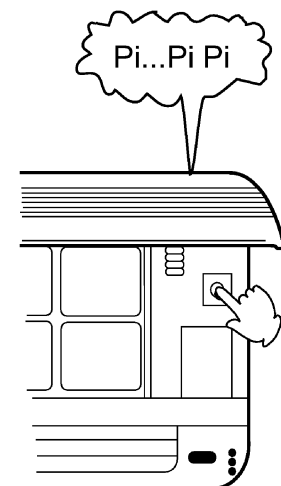
- It is not possible to operate in dry mode.



Test operation:

Test operation switch is the same as emergency switch.

- Use this switch in the test operation when the room temperature is below 16°C, do not use it in the normal operation.
- Continue to press the test operation switch for more than 5 seconds. After you hear the "Pi" sound twice, release your finger from the switch, the cooling operation starts with the air flow speed setting "Hi".
- After 30 minute, test operation ends automatically.



Termination of emergency or test operation:

- Press once more the emergency operation switch once more, or manipulate through the remote controller; the "Pi" sound, the emergency or test operation is terminated.
- When the remote controller is manipulated, it gets the system back to the normal operation mode.

Brief introduction to electrical control functions

1. FAN model operation

The fan speed of indoor unit can be manually set and has no AUTO FAN function. Its initial setting is memorized fan speed.

Having HEALTH function

The outdoor unit does not start.

2. AUTO operation

a. Indoor unit

Temperature set: 24°C;

Initial fan speed: auto;

The setting range of fan speed: AUTO, LOW, MED, HIGH.

(1) Working mode:

After in AUTO mode, first the main unit detects the indoor temperature, then chooses the specific working mode according to the following rules:

- ① When temperature $\geq 27^{\circ}\text{C}$, entering COOLING operation, the working mode is the same as the COOLING operation mode when temperature setting is 26°C.
- ② When $23^{\circ}\text{C} < \text{room temperature} < 26^{\circ}\text{C}$, entering FAN mode. The unit operates according to FAN mode.
- ③ When room temperature $\leq 23^{\circ}\text{C}$, entering HEATING operation, the working mode is the same as the HEATING operation mode when temperature setting is 23°C.
- ④ Entering auto COOLING or HEATING mode, when the temperature sensor is OFF, only after stopping the unit for 20 minutes can determine to enter which kind of auto mode, and work like this repeatedly.

(2) If having TIMER ON/TIMER OFF/TIMER ON-OFF function, the TIMER depends on the display on the display panel.

b. Outdoor unit

AUTO COOLING operation mode is the same as COOLING mode;

AUTO HEATING operation mode is the same as HEATING mode;

AUTO FAN operation mode is the same as FAN mode;

When changing to AUTO mode from other modes, only after the temperature sensor detects the difference can the unit stop the previous working mode. After 20 minutes stop of the unit, entering AUTO mode.

3. COOLING operation

a. Indoor unit

When starting the unit, the negative ion generator or high voltage dust collector does not work;

When using remote control function, press the HEALTH button, the negative ion generator starts work.

When the indoor fan stops, the negative ion generator does not work.

Manual change of the temperature setting can make the thermostat ON: the manual temperature sensor can make the thermostat ON; Manual change of the temperature setting can make the thermostat OFF: the manual temperature sensor can make the thermostat OFF;

According to the temperature set, the thermostat ON/OFF, the temperature difference is 1°C.

Under the condition of thermostat is ON, the outdoor compressor works;

Under the condition of thermostat is OFF, the outdoor compressor does not work;

Once the thermostat is ON, it will not be OFF in 4 minutes. With the change of the temperature

set by the remote controller, the thermostat can be OFF.

When manually control the indoor fan speed, the air volume is the one set.

When the indoor fan motor is automatically controlled, in the 3-minute-waiting mode, the fan speed is low.

The evaporator anti-freeze works.

The temperature cut-off control works.

The indoor fan motor does not stop.

The indoor fan motor can be manually operated.

b. Outdoor unit

The 4-way valve does not work .

Fan motor

The ambient temperature $> 26^{\circ}\text{C}$, high fan speed;

The ambient temperature $< 26^{\circ}\text{C}$, low fan speed;

The back difference is 3°C .

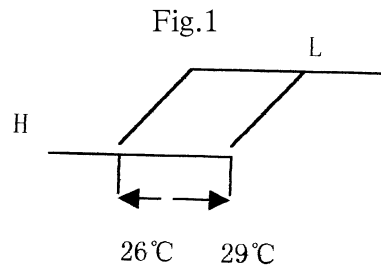
The frequency of compressor: the change procedure of compressor frequency refers to the attached TABLE 2.

Ambient temperature $\leq 16^{\circ}\text{C}$, the maximum frequency 68Hz

$16^{\circ}\text{C} \leq$ Ambient temperature $\leq 41.5^{\circ}\text{C}$, the maximum frequency 108Hz

$41.5^{\circ}\text{C} \leq$ Ambient temperature $\leq 50^{\circ}\text{C}$, the maximum frequency 75Hz

Ambient temperature $\geq 50^{\circ}\text{C}$, the maximum frequency 68Hz



(1) Protection: Current protection

Current $< 1.598\text{V}$, having no limit

$1.598\text{V} \leq$ current $< 1.744\text{V}$, $+1\text{Hz}/20\text{S}$

$1.744\text{V} \leq$ current $< 1.917\text{V}$, the frequency does not change

$1.917\text{V} \leq$ current $< 2.080\text{V}$, $-1\text{Hz}/20\text{S}$

$2.080\text{V} \leq$ current $< 2.300\text{V}$, the frequency drops continuously

Current > 2.320 , the unit stops (15A)

(2) Over-heating protection of compressor

Temperature $< 97^{\circ}\text{C}$, having no limit

$97^{\circ}\text{C} \leq$ temperature $< 103^{\circ}\text{C}$, $+1\text{Hz}/120\text{S}$

$103^{\circ}\text{C} \leq$ temperature $< 111^{\circ}\text{C}$, the frequency does not change

$111^{\circ}\text{C} \leq$ temperature $< 116^{\circ}\text{C}$, $-1\text{Hz}/60\text{S}$

$116^{\circ}\text{C} \leq$ temperature $< 120^{\circ}\text{C}$, $-5\text{Hz}/60\text{S}$

Temperature $\geq 120^{\circ}\text{C}$, the unit stops

97°C , the unit resumes.

(3) Anti-freeze protection

The heat exchanger $> 8^{\circ}\text{C}$, having no limit

$5^{\circ}\text{C} \leq$ the heat exchanger $< 8^{\circ}\text{C}$, $+1\text{Hz}/30\text{S}$

$3^{\circ}\text{C} \leq$ the heat exchanger $< 5^{\circ}\text{C}$, the frequency does not change

$0^{\circ}\text{C} \leq$ the heat exchanger $< 2^{\circ}\text{C}$, $-1\text{Hz}/30\text{S}$

$-1^{\circ}\text{C} \leq$ the heat exchanger $< 0^{\circ}\text{C}$, $2\text{Hz}/30\text{S}$

The heat exchanger $< -1^{\circ}\text{C}$, 5 minutes later the unit stops

The heat exchanger $> 8^{\circ}\text{C}$, the unit resumes

(4) In COOLING, over-load protection of outdoor heat exchanger

The coil pipe $< 52^{\circ}\text{C}$, having no limit

$52^{\circ}\text{C} \leq$ the coil pipe $< 56^{\circ}\text{C}$, $+2\text{Hz}/20\text{S}$

$56^{\circ}\text{C} \leq \text{the coil pipe} < 58^{\circ}\text{C}$, +1Hz/20S

$58^{\circ}\text{C} \leq \text{the coil pipe} < 62^{\circ}\text{C}$, the frequency does not change

$62^{\circ}\text{C} \leq \text{the coil pipe} < 67^{\circ}\text{C}$, -2Hz/10S

$67^{\circ}\text{C} \leq \text{the coil pipe} < 72^{\circ}\text{C}$, -3Hz/10S

The coil pipe $\geq 72^{\circ}\text{C}$, 5 minutes later the unit stops

The coil pipe $< 72^{\circ}\text{C}$, the unit resumes

When protecting, the outdoor fan motor stops.

c. SUPER operation

In SUPER COOLING operation, on the base of temperature set to make the temperature difference increase 4°C , and the compressor will operate according to the frequency of the increased temperature difference. 15 minutes later the SUPER mode will automatically be cancelled.

In SUPER mode, the indoor fan speed is high, the anti-freeze function of evaporator, the over-load protection of outdoor heat exchanger, the over-heat protection of compressor and the over-current protection are valid (same as COOLING).

d. QUIET operation

In QUIET COOLING, its operation frequency depends on that under this frequency the current value does not exceed the half of the current in the rated working condition, the fan speed is auto until the unit changes working mode.

The QUIET auto fan speed changes according to the temperature difference.

$T_a - T_r \geq 5^{\circ}\text{C}$, high fan speed

$1^{\circ}\text{C} \leq T_a - T_r < 5^{\circ}\text{C}$, med fan speed

$-1^{\circ}\text{C} \leq T_a - T_r < 1^{\circ}\text{C}$, low fan speed

Note: T_a : indoor ambient temperature

T_r : temperature set

4. DEHUMIDIFYING operation

a. Indoor unit

Press DEHUMIDIFYING button, the unit starts normal dehumidifying mode.

According to the temperature set, the thermostat will be ON/OFF, temperature difference is 1°C .

Under the condition of thermostat is ON, the outdoor compressor works;

Under the condition of thermostat is OFF, the outdoor compressor does not work;

Once the thermostat is ON, it will not be OFF in 4 minutes.

When the thermostat is OFF, after 3-minute-waiting, the indoor fan speed is low.

During 3-minute-waiting, the indoor fan motor stops.

When the thermostat is OFF or the indoor fan motor operates off and on, the indoor fan motor is in low and can not be operated manually.

The anti-freeze of evaporator works (same as COOLING).

The temperature cut-off control works.

Do not have dehumidifying function.

b. Outdoor unit

$T_r - T_a \geq 2^{\circ}\text{C}$, operates according to COOLING mode.

$T_r - T_a < 2^{\circ}\text{C}$, the compressor will run alternatively between the two frequencies of 34Hz and 60Hz. 34Hz lasts 6 minutes, 60Hz lasts 10 minutes.

$T_r < 15^{\circ}\text{C}$ (minimum $T_a = 16^{\circ}\text{C}$), the compressor runs off and on. ON 10 minutes, OFF 6 minutes and frequency is 60Hz; ON OFF runs alternatively.

5. HEATING operation

a. Indoor unit

Fan speed can be set manually or auto.

According to the temperature set, the thermostat ON/OFF, the temperature difference is 1 °C.

Under the condition of thermostat is ON, the outdoor compressor works.

Under the condition of thermostat is OFF, the outdoor 4-way valve will cut off power after 1 minute and 50 seconds.

Once the thermostat is ON, it will not be OFF in 4 minutes.

With the change of remote controlled temperature setting, it can make the thermostat OFF.

In defrosting, when the coil pipe temperature <23 °C, the indoor fan motor does not work.

b. Outdoor unit

Power on the 4-way valve

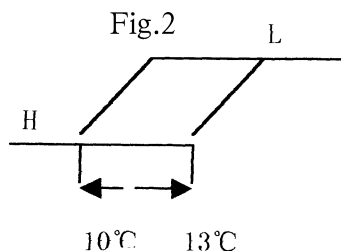
When switching off the unit in HEATING mode or changing the working mode, the 4-way valve will switch off 1 minute and 50 seconds later.

(1) Fan motor

Ambient temperature > 13 °C, low speed.

Ambient temperature < 13 °C, high speed.

The temperature difference is 3 °C.



(2) The frequency of compressor

The change procedure of the frequency of the compressor refers to the attached TABLE 1.

The relationship between compressor and outdoor ambient temperature:

$T \geq 28^{\circ}\text{C}$, the maximum frequency 60Hz.

$22^{\circ}\text{C} \leq T \leq 28^{\circ}\text{C}$, the maximum frequency 72Hz.

$4^{\circ}\text{C} \leq T \leq 16^{\circ}\text{C}$, the maximum frequency 108Hz.

$T \leq 4^{\circ}\text{C}$, the maximum frequency 120Hz.

(3) Protection

In HEATING, the over-heat protection of indoor heat exchanger.

The coil pipe <48 °C, having no limit.

48 °C ≤ the coil pipe < 51 °C, +2Hz/20S

51 °C ≤ the coil pipe < 54 °C, +1Hz/20S

54 °C ≤ the coil pipe < 58 °C, the frequency does not change

58 °C ≤ the coil pipe < 60 °C, -1Hz/10S

60 °C ≤ the coil pipe < 72 °C, -3Hz/10S

The coil pipe >63 °C, the outdoor fan motor stops

The coil pipe <60 °C, the outdoor fan motor resumes

72 °C, the unit stops; 58 °C, the unit resumes.

(4) Current protection

Current < 1.882V, having no limit

1.882V ≤ current < 2.023V, +1Hz/20S

2.023V ≤ current < 2.20V, the frequency does not change

2.141V ≤ current < 2.236V, -1Hz/20S

2.236V ≤ current < 2.59V, the frequency drops continuously

Fan motor stops, (2.32V)

Fan motor starts, (2.25V)

Current > 2.556, the unit stops (17A)

(5) The over-heat protection of compressor

Temperature $< 97^{\circ}\text{C}$, having no limit

$97^{\circ}\text{C} \leq \text{temperature} < 103^{\circ}\text{C}$, $+1\text{Hz}/120\text{S}$

$103^{\circ}\text{C} \leq \text{temperature} < 111^{\circ}\text{C}$, the frequency does not change

$111^{\circ}\text{C} \leq \text{temperature} < 116^{\circ}\text{C}$, $-1\text{Hz}/60\text{S}$

$116^{\circ}\text{C} \leq \text{temperature} < 120^{\circ}\text{C}$, $-5\text{Hz}/60\text{S}$

Temperature $\geq 120^{\circ}\text{C}$, the unit stops

97°C , the unit resumes.

c. SUPER operation

In SUPER HEATING operation, on the base of temperature set to make the temperature difference increase 3°C , and the compressor will operate according to the frequency of the increased temperature difference. 15 minutes later the SUPER mode will automatically be cancelled.

In SUPER mode, the indoor fan speed is high, the over-load protection of indoor heat exchanger, the over-heat protection of compressor and the over-current protection are valid (same as HEATING).

d. QUIET operation

In QUIET HEATING, its operation frequency depends on that under this frequency the current value does not exceed the half of the current in the rated working condition, the fan speed is auto until the unit changes working mode.

The QUIET auto fan speed changes according to the temperature difference.

$T_a - T_r \geq 5^{\circ}\text{C}$, high fan speed

$1^{\circ}\text{C} \leq T_a - T_r < 5^{\circ}\text{C}$, med fan speed

$-1^{\circ}\text{C} \leq T_a - T_r < 1^{\circ}\text{C}$, low fan speed

Note: T_a : indoor ambient temperature

T_r : temperature set

7. DEFROSTING operation

The condition of DEFROSTING:

$-22^{\circ}\text{C} \leq \text{ambient temperature} < -10^{\circ}\text{C}$, temperature of heat exchanger $\leq -18^{\circ}\text{C}$.

$-10^{\circ}\text{C} \leq \text{ambient temperature} < -5^{\circ}\text{C}$, temperature of heat exchanger $\leq -15^{\circ}\text{C}$.

$-5^{\circ}\text{C} \leq \text{ambient temperature} < 0^{\circ}\text{C}$, temperature of heat exchanger $\leq -12^{\circ}\text{C}$.

Ambient temperature $> 6^{\circ}\text{C}$, temperature of heat exchanger $\leq -3^{\circ}\text{C}$.

When the ambient temperature $\leq -2^{\circ}\text{C}$ and can not meet other DEFROSTING condition, perform DEFROSTING forcibly every 90 minutes.

30 minutes later in HEATING operation, if it meets any one of the DEFROSTING condition, 5 minutes later, the unit begins to perform defrosting.

After DEFROSTING start, the compressor and outdoor fan motor stop.

55 seconds after DEFROSTING start, the 4-way valve switches, the coil pipe temperature $< 23^{\circ}\text{C}$, the indoor fan motor stops.

1 minute after DEFROSTING start, the compressor starts operation.

After finishing DEFROSTING, the compressor stops, 30 seconds later the outdoor fan motor starts operation.

60 seconds after finishing DEFROSTING, the 4-way valve starts operation, and the compressor starts.

60 seconds after finishing DEFROSTING, at this time, if the indoor thermostat is ON, the indoor fan motor will start in two steps.

The working time of DEFROSTING is 14 minutes.

In DEFROSTING, the frequency does not drop and the unit operates in 100Hz (discharging

temperature $<90^{\circ}\text{C}$, frequency does not drop; discharging temperature $>90^{\circ}\text{C}$, the frequency drops to 60Hz).

If the temperature of heat exchanger $\geq 12^{\circ}\text{C}$, the frequency will drop to 60Hz, the unit operates 2 minutes, then finishes DEFROSTING.

In DEFROSTING, it is impossible to check if the indoor sensor is normal.

8. Forcible COOLING

a. Indoor unit

When the whole unit stops, press the display panel "ON/OFF" button for about 5 seconds, after hearing the sound of "Pi, Pi" for two times, release the button, the unit begins forcible COOLING operation.

After the two sound of "Pi Pi", the display panel will show the symbol of cooling, fan speed is "HIGH".

In forcible COOLING operation, it has nothing to do with thermostat. The compressor starts, indoor fan motor is high.

In forcible COOLING operation, the anti-freeze function of evaporator works (only limit, do not stop unit for protection).

In forcible COOLING operation, the temperature cut-off control works.

In forcible COOLING operation, press the "ON/OFF" button, the operation stops, press "MODE" button can change the operation mode.

In forcible COOLING operation, when receiving the remote signal, the forcible COOLING will be cancelled automatically. Press the mode selection button of the remote controller.

b. Outdoor unit

(1) The frequency of compressor

After the frequency rises to 60Hz, it keeps steady.

(2) Protection

The over-heat protection of compressor is valid.

The over-current protection is valid.

No-load protection is valid.

Over-load protection of outdoor cooling is valid.

9. Others

a. Remote control operation

When received the remote signal, the indoor unit will give a sound of "Pi" indicating the success of receiving the signal.

The temperature setting range is $16^{\circ}\text{C}\sim 30^{\circ}\text{C}$, it can be set as one scale 1°C .

Change the operation mode by switching the operation mode.

The switch of the operation modes (switch freely between AUTO, COOLING, DEHUMIDIFYING, FAN and HEATING).

It can be set HEALTH, SLEEP, SUPER and QUIET, etc. functions.

In remote control operation, it can receive the signal of the "ON/OFF" button on the display panel to switch on/off the unit.

It can be set TIMER ON or TIMER OFF or TIMER ON-OFF the unit.

The time of TIMER is am/pm 1~12 hours.

b. TIMER operation

The start of the operation is determined by the last signal received from the TIMER setting.

① TIMER ON

In TIMER ON, press "HEALTH" button, the negative ion generator does not work, but the

“HEALTH” symbol is shown on the display; after the unit start, when the indoor fan motor runs, the negative ion generator works.

② TIMER OFF

After setting of TIMER OFF, the symbol of TIMER OFF is shown on the display.

After finishing of the TIMER, the operation stops and the unit stops.

③ TIMER ON-OFF

Set the time of TIMER ON/TIMER OFF, the “ON”, “OFF” and the timer symbol is shown simultaneously. The action of preceding time will act first: for example, set TIMER ON when the unit is on, it will switch off the unit first, when reaching the time of TIMER ON, the unit switches on. When reaching the other time of TIMER OFF, the unit will switch off.

c. Protection function

① The sensor is short/open circuit

The trouble code shows in two states:

The LED lamp on the indoor panel flashes to indicate indoor/outdoor trouble code, referring to the Appendix.

In operation, if any sensor is short/open circuit, the trouble code will be shown on the display panel, and the outdoor unit stops.

In TIMER ON operation, if any sensor is short/open circuit, the unit will not start even when the time of TIMER ON reaches, and the trouble code will show on the display panel.

② No load

When the frequency of compressor $\geq 56\text{Hz}$, the voltage sampling value $< 0.024\text{V}$, the unit will stop for protection.

③ Over/lack voltage protection

When the voltage of power supply is over 27V or lower than 130V, the unit shows trouble, and the outdoor unit stops.

④ After the compressor stops, only after 3 minutes have elapsed can it be restarted.

d. Swing

Press “SWING” button, the louver will swing up and down.

Press “SWING” button again, the louver stops swing and fix at the present position.

e. Control of indoor fan motor in COOLING

① The fan motor operates automatically

In COOLING, the fan motor can not be stopped.

The auto selection of fan motor refers to attached TABLE COOL.

The frequency is at the front 6 rows of the first line, L

The frequency is at the front 6 rows of the second line, M

The frequency is at other position, H.

② Manual control of fan motor

When manually controlling the fan motor, the air volume is the set one.

f. Control of indoor fan motor in DEHUMIDIFYING

① The fan motor operates automatically

When the temperature difference $> 2^{\circ}\text{C}$, the fan speed is auto (same as COOLING) or manual.

When $1^{\circ}\text{C} < \text{the temperature difference} < 2^{\circ}\text{C}$, the fan speed is auto low.

② Manual control of fan motor

When manually controlling the fan motor, the fan speed is the set one in the cooling range.

Off the cooling range, the fan motor is the same as auto.

g. Control of indoor fan motor in HEATING

- ① When HEATING starts, after the thermostat is OFF,:
- The indoor heat exchanging temperature is over 23℃, indoor fan motor is low.
- The indoor heat exchanging temperature is below 23℃, indoor fan motor stops; after the thermostat is ON, it will start in two steps.
- ② When HEATING starts, after the thermostat is ON:
- The indoor heat exchanging temperature is over 23℃, indoor fan motor is low. If lower than 23℃, the unit will stop.
- After HEATING start, after the detection of 23℃, when 38℃ can not be detected, after the compressor starts operation for 4 minutes, the unit changes low fan speed to fan speed set.
- When the heat exchanging temperature is over 38℃, the indoor fan motor will operate in fan speed set or auto operation.
- ③ 2-step start
- When thermostat is ON, when indoor heat exchanging temperature is below 23℃, the indoor fan motor does not start. When indoor heat exchanging temperature is over 23℃ below 38℃, the indoor fan motor is low within 4 minutes; 4 minutes later, it changes to the set fan speed. When the indoor heat exchanging temperature is over 38℃, it operates in set fan speed. (2 steps, anti-cold-air-sending)
- After finishing DEFROSTING, the unit will operate in 2-step HEATING operation.
- ④ Auto air volume in HEATING
- The thermostat is ON, when the indoor fan motor operates in low, when 38℃ is detected or 4 minutes later, it will operate in the set fan speed.
- When choosing fan speed according to the frequency, referring to the attached TABLE HEAT.
- The frequency is at the front 6 rows of the first line, L
- The frequency is at the front 6 rows of the second line, M
- The frequency is at other position, H.
- ⑤ Manual control of air volume
- The manual control of air volume can only be valid when thermostat is ON and after the anti-cold-air-sending.

h. Frequency limit of compressor operation:

The temperature difference >4	The max frequency allowed	Cooling 108	Heating 120	Dehumidifying 108
The temperature difference 4	The max frequency allowed	108	120	108
The temperature difference 3	The max frequency allowed	96	112	96
The temperature difference 2	The max frequency allowed	80	96	60-32 alternate
The temperature difference 1	The max frequency allowed	64	64	Ditto
The temperature difference 0	The max frequency allowed	32	32	Ditto
The temperature difference -1	The max frequency allowed	32	32	Ditto
The temperature difference -2	The max frequency allowed	0	0	0

Attached list
COOL

$\Delta T \backslash \Delta t$	1	2	3	4	5	6	7	8	9
1	15	20	24	28	32	36	40	44	48
2	32	36	40	44	48	52	56	60	64
3	48	52	56	60	64	68	72	76	80
4	64	68	72	76	80	84	88	92	96
5	80	84	88	92	96	100	104	108	108

4Hz/3min →

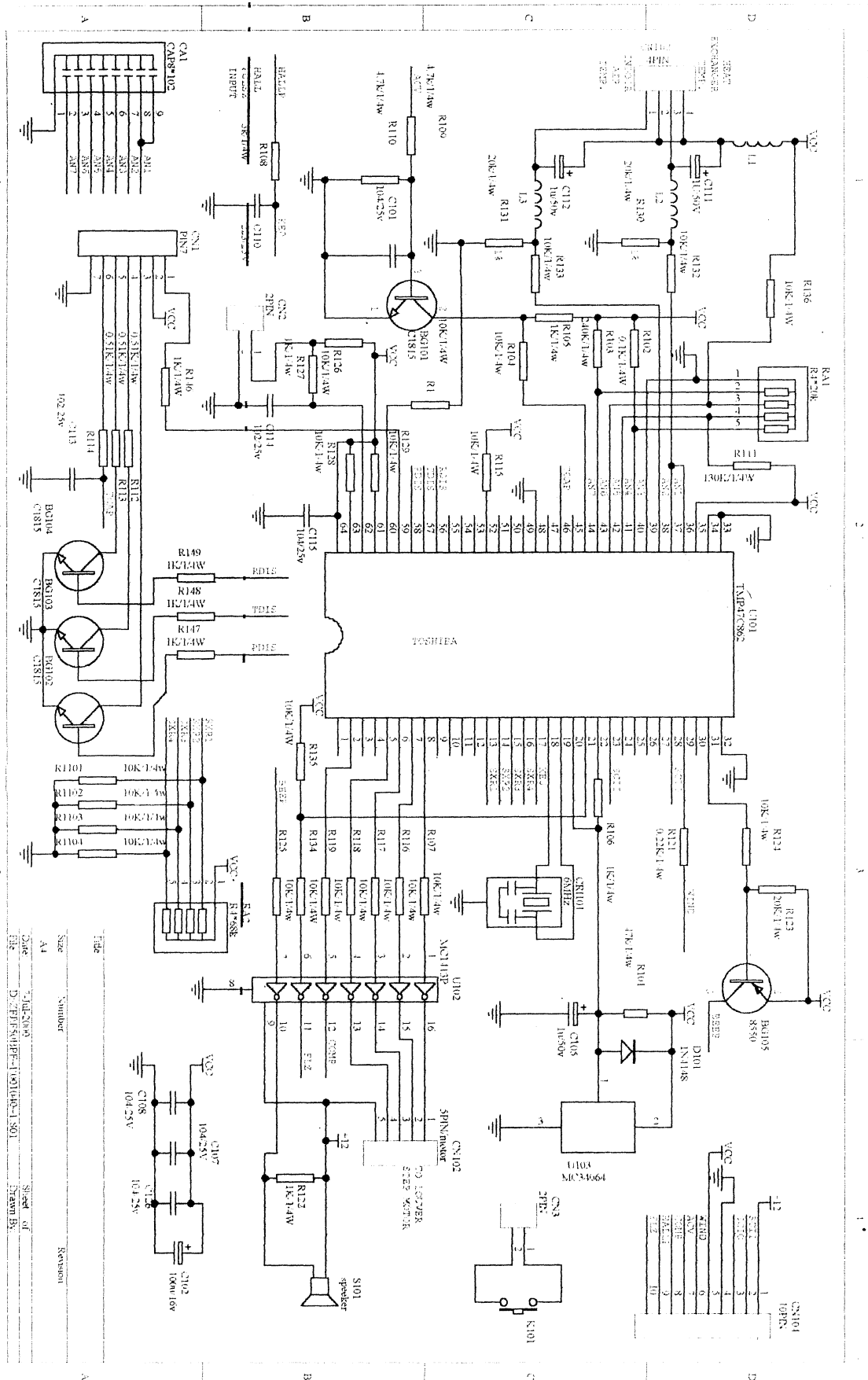
HEAT

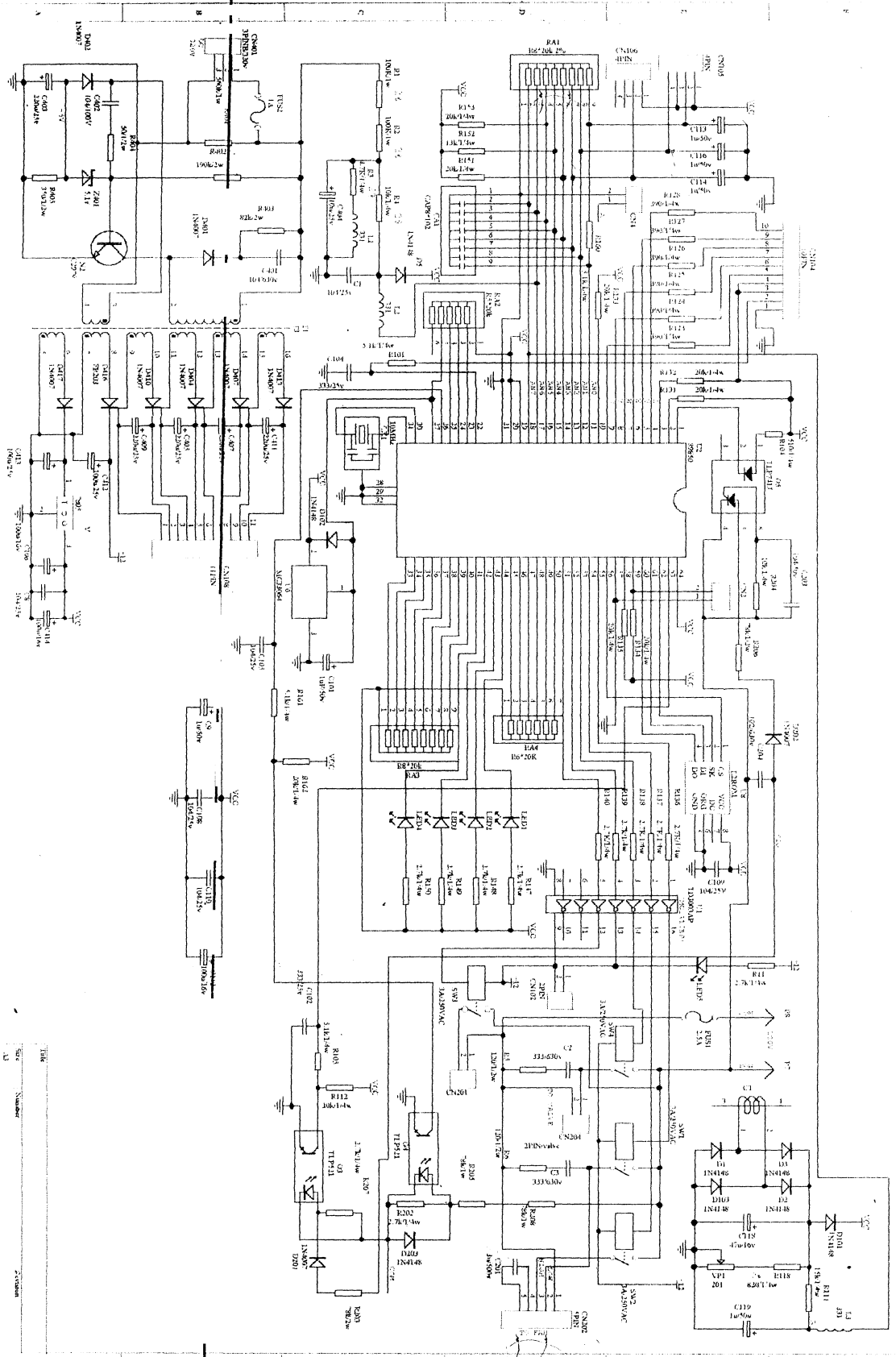
$\Delta t \backslash \Delta T$	1	2	3	4	5	6	7	8	9
1	32	36	40	44	48	52	56	60	64
2	48	52	56	60	64	68	72	76	80
3	64	68	72	76	80	84	88	92	96
4	84	88	92	96	100	104	108	112	116
5	150								

4Hz/3min →

Circuit diagram

indoor wiring diagram





Item	Value	Unit
1	100	Ω
2	100	Ω
3	100	Ω
4	100	Ω
5	100	Ω
6	100	Ω
7	100	Ω
8	100	Ω
9	100	Ω
10	100	Ω
11	100	Ω
12	100	Ω
13	100	Ω
14	100	Ω
15	100	Ω
16	100	Ω
17	100	Ω
18	100	Ω
19	100	Ω
20	100	Ω
21	100	Ω
22	100	Ω
23	100	Ω
24	100	Ω
25	100	Ω
26	100	Ω
27	100	Ω
28	100	Ω
29	100	Ω
30	100	Ω
31	100	Ω
32	100	Ω
33	100	Ω
34	100	Ω
35	100	Ω
36	100	Ω
37	100	Ω
38	100	Ω
39	100	Ω
40	100	Ω
41	100	Ω
42	100	Ω
43	100	Ω
44	100	Ω
45	100	Ω
46	100	Ω
47	100	Ω
48	100	Ω
49	100	Ω
50	100	Ω
51	100	Ω
52	100	Ω
53	100	Ω
54	100	Ω
55	100	Ω
56	100	Ω
57	100	Ω
58	100	Ω
59	100	Ω
60	100	Ω
61	100	Ω
62	100	Ω
63	100	Ω
64	100	Ω
65	100	Ω
66	100	Ω
67	100	Ω
68	100	Ω
69	100	Ω
70	100	Ω
71	100	Ω
72	100	Ω
73	100	Ω
74	100	Ω
75	100	Ω
76	100	Ω
77	100	Ω
78	100	Ω
79	100	Ω
80	100	Ω
81	100	Ω
82	100	Ω
83	100	Ω
84	100	Ω
85	100	Ω
86	100	Ω
87	100	Ω
88	100	Ω
89	100	Ω
90	100	Ω
91	100	Ω
92	100	Ω
93	100	Ω
94	100	Ω
95	100	Ω
96	100	Ω
97	100	Ω
98	100	Ω
99	100	Ω
100	100	Ω

Abnormity diagnose

① Indoor, the time of flash of the operation LED on the indoor unit shows trouble. The time of flash shows the number of trouble.

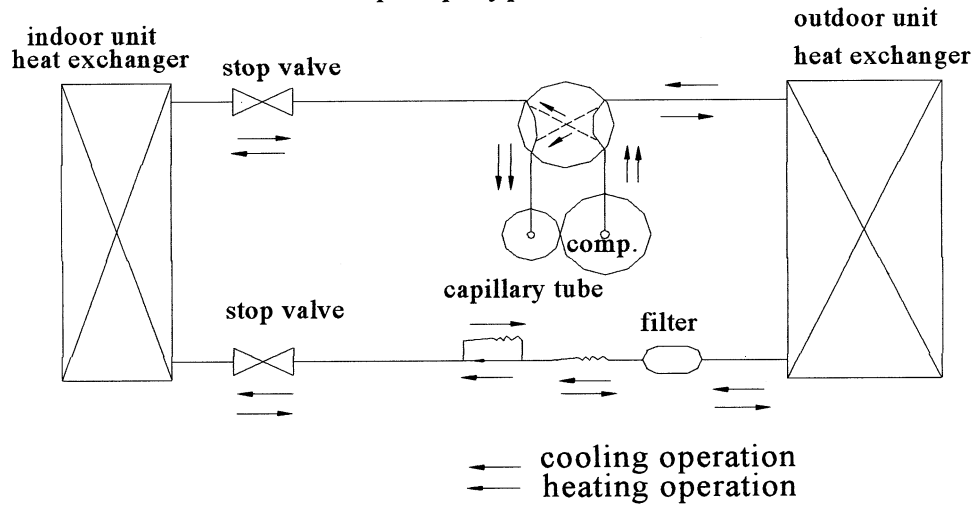
- 1# Trouble of indoor temperature sensor
- 2# Trouble of indoor heat exchanger
- 3# Save
- 4# Over-load of HEATING
- 5# Ice forming in COOLING
- 6# Reset
- 7# Trouble of communication
- 8# Trouble of fan motor
- 9# Instant power failure

② Outdoor:

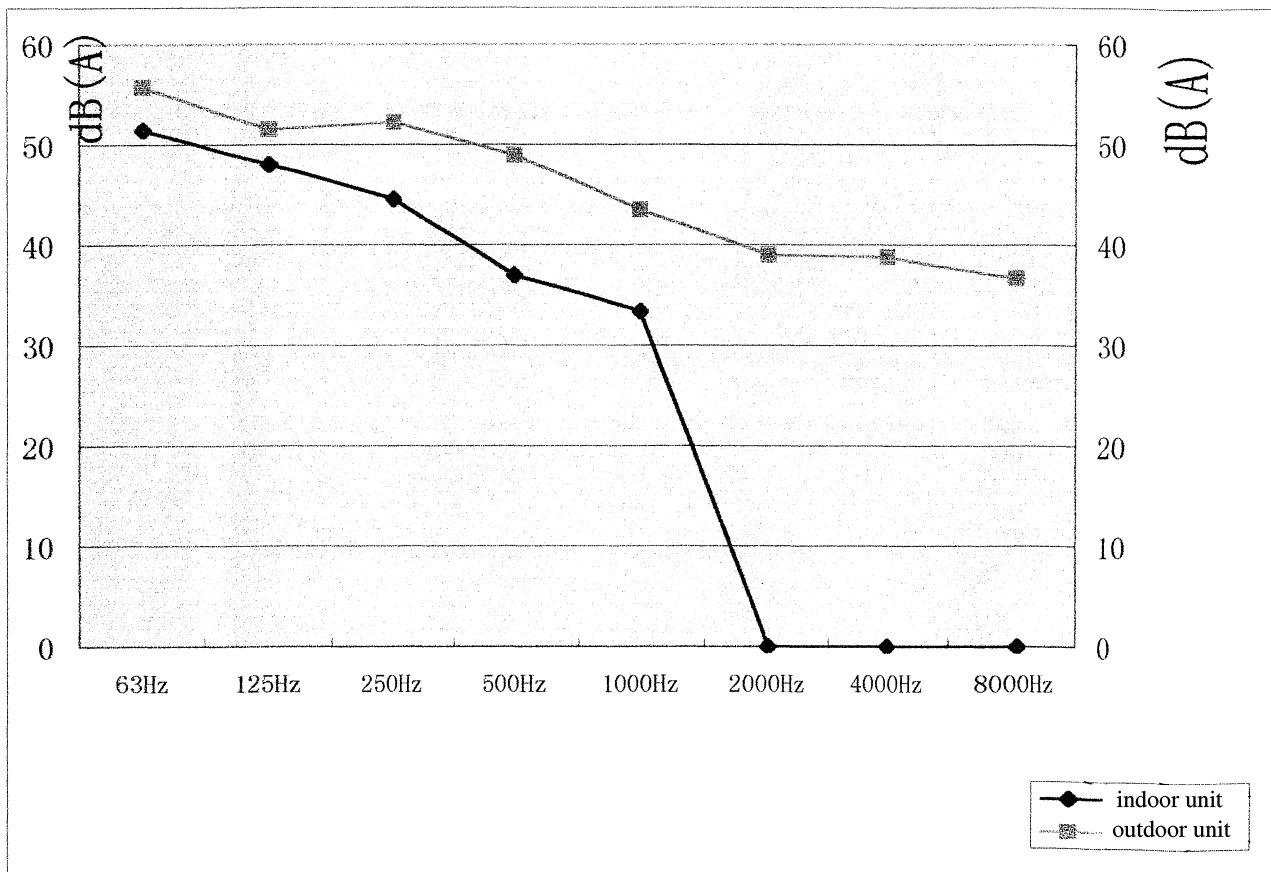
Trouble No.	Notation of outdoor unit				Notation of indoor unit	Description of trouble
	LED4	LED3	LED2	LED1	Time of timer lamp flash	
1#	Out	Out	Out	On	1	Trouble of module
2#	Out	Out	On	Out	2	No load
3#	Out	Out	On	On	3	Save
4#	Out	On	Out	Out	4	Over-heat of compressor
5#	Out	On	Out	On	5	Over-current of general current
6#	Out	On	On	Out	6	Trouble of ambient temp. sensor
7#	Out	On	On	On	7	Trouble of heat exchanging sensor
8#	On	Out	Out	Out	8	Damage of ROM of SCM
9#	On	Out	Out	On	9	Pressure protection
10#	On	Out	On	Out	10	Over/lack voltage of power
11#	On	Out	On	On	11	Instant power failure
12#	On	On	Out	Out	12	Over-load in COOLING
13#	On	On	Out	On	13	Vacant
14#	On	On	On	Out	14	EEPROM wrong
15#	On	On	On	On	15	Reset of SCM

Refrigerating cycle diagram

heat pump type



Noise level test chart and air velocity distribution



AIR VELOCITY DISTRIBUTION MODELS: HSU-18H03(B)

Fig 1
Top View
Flow Control Panel: Horiz.
Louver: Center

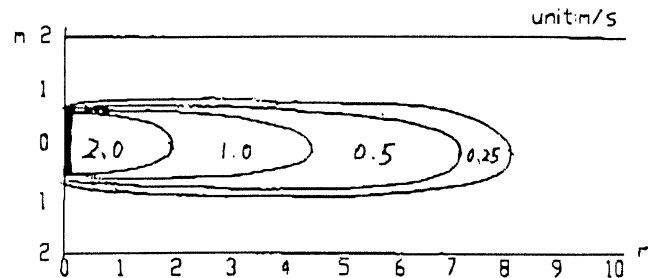


Fig 2
Top View
Flow Control Panel: Horiz.
Louver: right & left

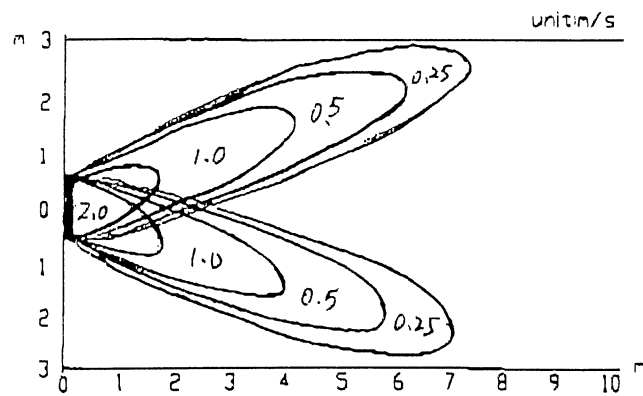


Fig 3
Side View
Flow Control Panel: Horiz.
Louver: Center

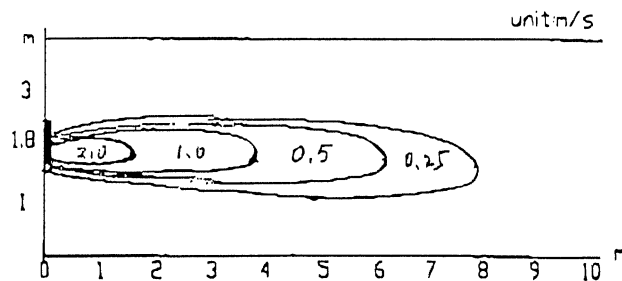
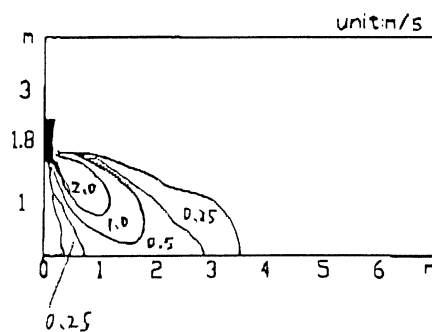


Fig 4
Side View
Flow Control Panel: Vert.
Louver: Center



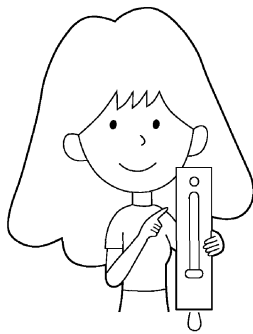
Condition
Fan speed: high
Operation mode: Fan
Voltage: 230V
50Hz mode

Installation and accessory parts

MAINTENANCE

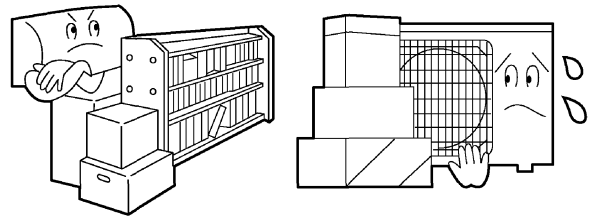
For smart use of the air conditioner

Setting of proper room temperature

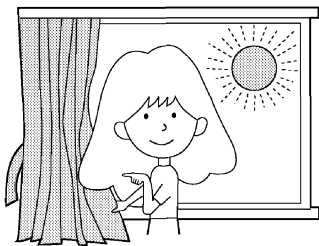


Proper temperature

Do not block the air inlet or outlet

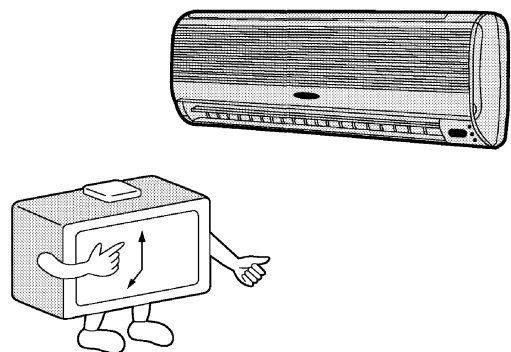


Close doors and windows during operation

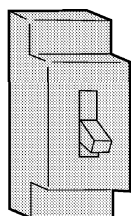


During cooling operation, prevent the penetration of direct sunlight with curtain or blind.

Use the timer effectively

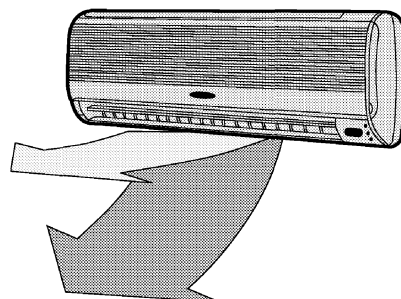


If the unit is not to be used for a long time, turn off the power supply main switch.



OFF

Use the louvers effectively



MAINTENANCE

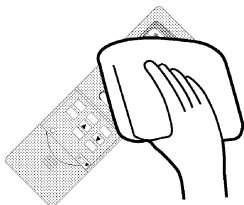
For smart use of the air conditioner



WARNING

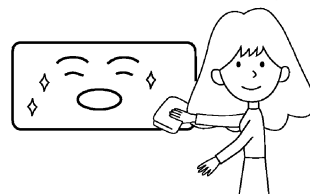
Before maintenance, be sure to turn off the system and the circuit breaker.

Remote Controller



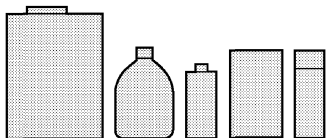
Do not use water, wipe the controller with a dry cloth. Do not use glass cleaner or chemical cloth.

Indoor Body

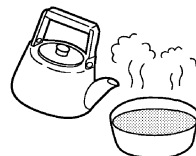


Wipe the air conditioner by using a soft and dry cloth. For serious stains, use a neutral detergent diluted with water. Wring the water out of the cloth before wiping, then wipe off the detergent completely.

Do not use the following for cleaning



Gasoline, benzine, thinner or cleanser may damage the coating of the unit.



Hot water over 40°C (104°F) may cause discoloring or deformation.

Air Filter Cleaning

1 Open the inlet grill by pulling it upward.

2 Remove the filter.

Push up the filter's center tab slightly until it is released from the stopper, and remove the filter downward.

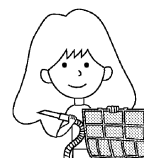
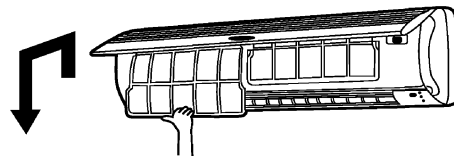
3 Clean the filter.

Use a vacuum cleaner to remove dust, or wash the filter with water. After washing, dry the filter completely in the shade.

4 Attach the filter.

Attach the filter correctly so that the "FROM" indication is facing to the front. Make sure that the filter is completely fixed behind the stopper. If the right and left filters are not attached correctly, that may cause defects.

5 Close the inlet grill.



Once every two weeks

Sincere Forever



Haier Group

Tel :86-532-8938356

Web site : <http://www.haier.com>