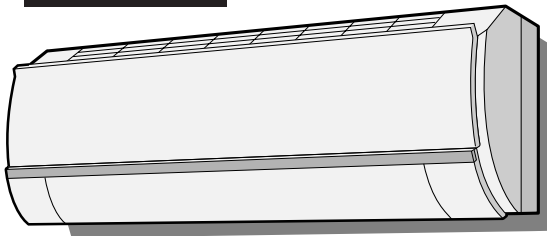


SHARP SERVICE MANUAL

S8525AYAP7FHRT

SPLIT SYSTEM ROOM AIR CONDITIONER

MODELS	INDOOR UNIT	OUTDOOR UNIT
	AY-AP7FHR	AE-A7FHR
	AY-AP9FHR	AE-A9FHR



In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

CONTENTS

CHAPTER 1. PRODUCT SPECIFICATION

[1] SPECIFICATION.....	1-1
[2] EXTERNAL DIMENSION.....	1-3
[3] WIRING DIAGRAM.....	1-4
[4] ELECTRICAL PARTS	1-5

CHAPTER 2. ELECTRIC CIRCUIT

[1] MICRO-COMPUTER CONTROL SYSTEM...	2-1
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CHAPTER 3. FUNCTIONS

[1] FUNCTION.....	3-1
[2] TEST MODE	3-5
[3] DIAGNOSIS PROCEDURE	3-6

CHAPTER 4. TROUBLESHOOTING

[1] TROUBLESHOOTING GUIDE OF CONTROL CIRCUIT	4-1
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CHAPTER 5. REFRIGERATION CYCLE AND PERFORMANCE CURVES

[1] REFRIGERATION CYCLE	5-1
[2] PERFORMANCE CURVES.....	5-2

CHAPTER 6. DISASSEMBLING PROCEDURE

[1] INDOOR UNIT	6-1
[2] OUTDOOR UNIT	6-5

REPLACEMENT PARTS LIST

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

CHAPTER 1. PRODUCT SPECIFICATION

[1] SPECIFICATION

1. AY-AP7FHR—AE-A7FHR

ITEMS		INDOOR UNIT		OUTDOOR UNIT	
		AY-AP7FHR		AE-A7FHR	
Cooling capacity ☆	kW	2.05			
Heat pump Heating capacity	kW	2.4			
Moisture removal ☆	Liters/h	0.7			
Electrical data					
Phase		Single			
Rated frequency	Hz	50			
Rated voltage range	V	198 to 264			
Rated voltage	V	220 - 240			
Rated current ☆	Cool	A	3.0 - 2.8		
	Heat	A	3.1 - 2.9		
Rated input ☆	Cool	W	635 - 635		
	Heat	W	660 - 660		
Power factor ☆	Cool	%	96 - 94		
	Heat	%	97 - 95		
Compressor	Type	Hermetically sealed rotary type			
	Model	5RS084DAA01			
	Oil charge	300cc (RB68A or Freolalpha68M)			
Refrigerant system	Evaporator	Louver fin and Grooved tube type			
	Condenser	Corrugate fin and Grooved tube type			
	Control	Capillary tube			
	Refrigerant volume	670g			
De-Ice system		Micro computercontrolled reverse system			
Noise level	High	dB(A)	37	44	
	Low	dB(A)	33	-	
	Soft	dB(A)	28	-	
Fan system					
Drive		Direct drive			
Air flow quantity	High	m ³ /min.	7.3	28	
	Low	m ³ /min.	6.6	-	
	Soft	m ³ /min.	3.5	-	
Fan		Cross flow fan	Propeller fan		
Connections					
Refrigerant coupling		Flare type			
Refrigerant tube size Gas, Liquid		3/8", 1/4"			
Drain piping	mm	O.D φ18			
Others					
Safety device		Compressor : Overload protector			
		Fan motor : Thermal Protector			
		Fuse, Micro computer control			
Air filters		Polypropylene net (Washable)			
Net dimensions	Width	mm	810	730	
	Height	mm	270	540	
	Depth	mm	184	250	
Net weight	kg	9	28		

NOTE: The conditions of star(☆) marked items sre 'ISO151' : 1994(E), condition T1.

2. AY-AP9FHR—AE-A9FHR

ITEMS		INDOOR UNIT	OUTDOOR UNIT
		AY-AP9FHR	AE-A9FHR
Cooling capacity ☆	kW	2.64	
Heat pump Heating capacity	kW	3.1	
Moisture removal ☆	Liters/h	0.8	

Electrical data

Phase		Single		
Rated frequency	Hz	50		
Rated voltage range	V	198 to 264		
Rated voltage	V	220 - 240		
Rated current ☆	Cool	A	3.8 - 3.5	
	Heat	A	4.0 - 3.6	
Rated input ☆	Cool	W	820 - 820	
	Heat	W	855 - 855	
Power factor ☆	Cool	%	98 - 98	
	Heat	%	97 - 99	
Compressor	Type	Hermetically sealed rotary type		
	Model	44A233AJ-FEKD		
	Oil charge	320cc (NMOCZe-Gles RB68EP)		
Refrigerant system	Evaporator	Louver fin and Grooved tube type		
	Condenser	Corrugate fin and Grooved tube type		
	Control	Capillary tube		
	Refrigerant volume	880g		
De-Ice system		Micro computercontrolled reverse system		
Noise level	High	dB(A)	38	45
	Low	dB(A)	34	—
	Soft	dB(A)	28	—

Fan system

Drive		Direct drive		
Air flow quantity	High	m ³ /min.	7.8	28
	Low	m ³ /min.	7.1	—
	Soft	m ³ /min.	3.5	—
Fan		Cross flow fan	Propeller fan	

Connections

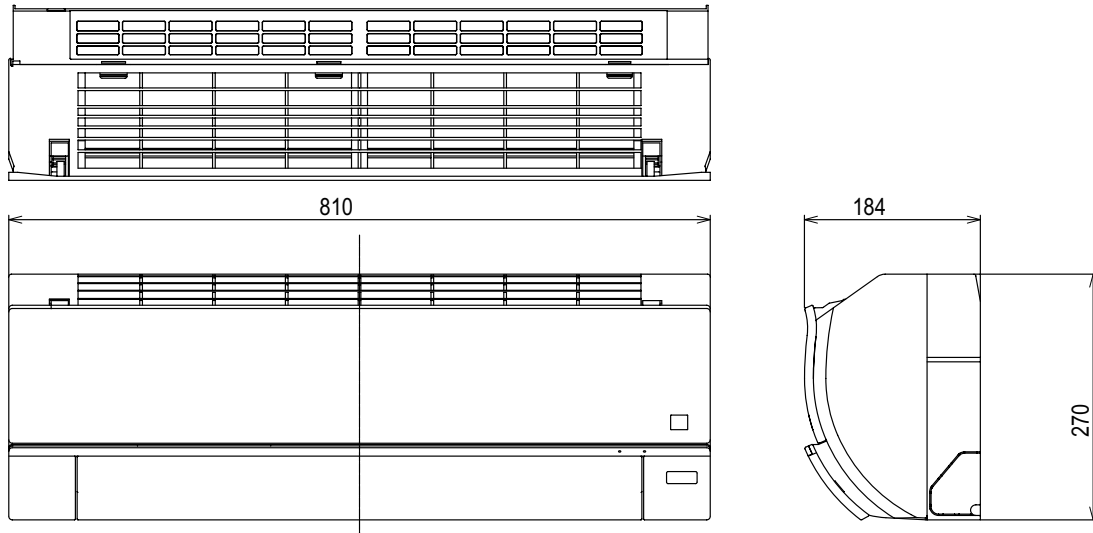
Refrigerant coupling	Flare type		
Refrigerant tube size Gas, Liquid	3/8", 1/4"		
Drain piping	mm	O.D φ18	

Others

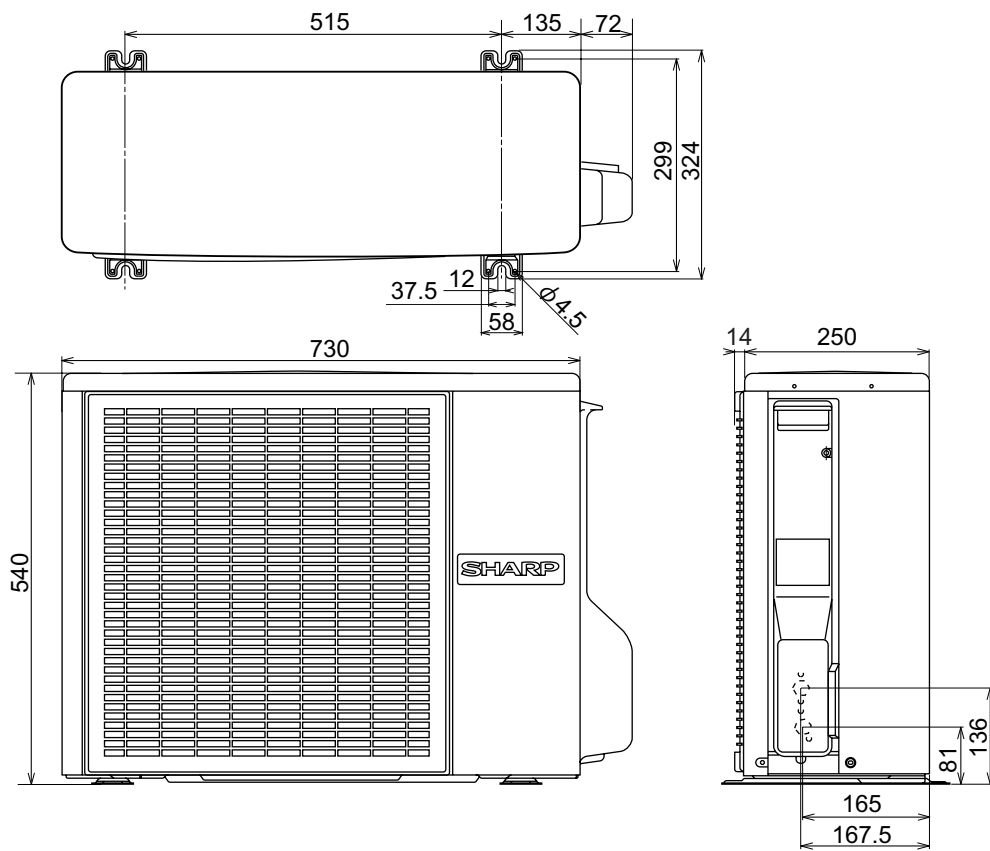
Safety device		Compressor : Overload protector		
		Fan motor : Thermal Protector		
		Fuse, Micro computer control		
Air filters		Polypropylene net (Washable)		
Net dimensions	Width	mm	810	730
	Height	mm	270	540
	Depth	mm	184	250
Net weight		kg	9	32

NOTE: The conditions of star(☆) marked items sre 'ISO151' : 1994(E), condition T1.

1. Indoor unit

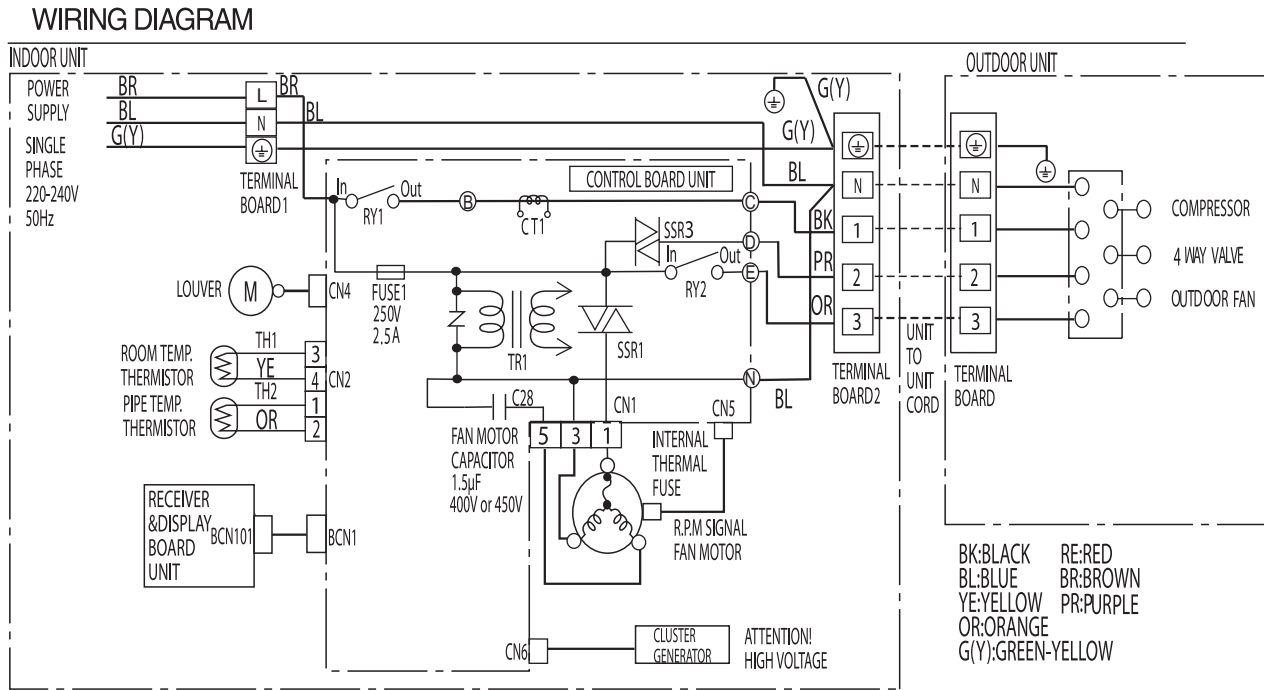


2. Outdoor unit



[3] WIRING DIAGRAM

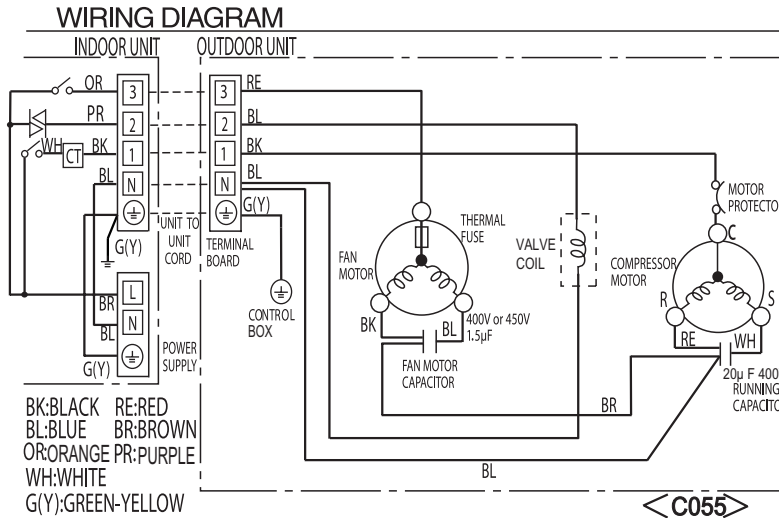
1. Indoor unit



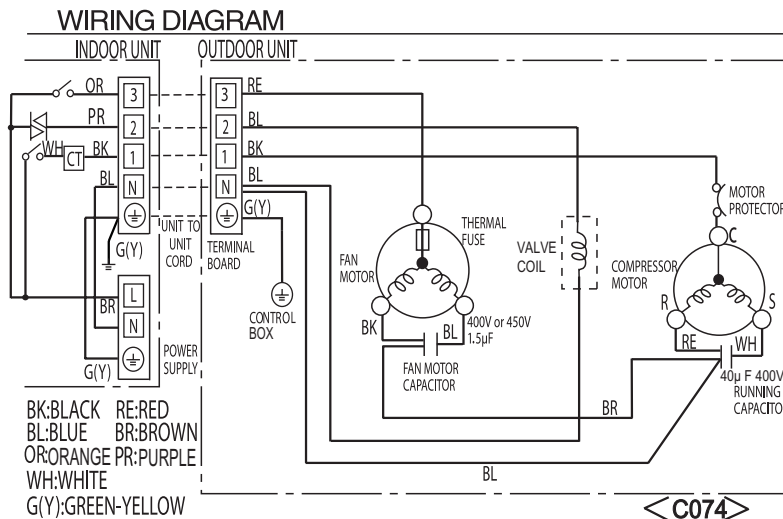
< C053 >

2. Outdoor unit

2.1. AE-A7FHR



< C055 >



[4] ELECTRICAL PARTS

1. AY-AP7FHR, AE-A7FHR

DESCRIPTION	MODEL	REMARKS	SITE
Compressor	5RS084DAA01	220 - 240V, 50Hz, 600W	OUTDOOR
Indoor fan motor	SFS-230-22-4A	220 - 240V, 50Hz	INDOOR
Outdoor fan motor	YDK21-6S-2	220 - 240V,50Hz	OUTDOOR
Indoor fan motor capacitor	—	400V, 1.5 μ F	INDOOR
Outdoor fan motor capacitor	—	400V, 1.5 μ F	OUTDOOR
Running capacitor	—	400V, 20 μ F	OUTDOOR
Transformer	—	Primary ; AC 220V, 50Hz	INDOOR
	—	Secondary ; AC17.0V, 50Hz	
Fuse	—	250V, 2.5A	INDOOR
Reverse valve	SHF-4H-23U	—	OUTDOOR
Reverse valve coil	—	220 - 240V, 50/60Hz	OUTDOOR

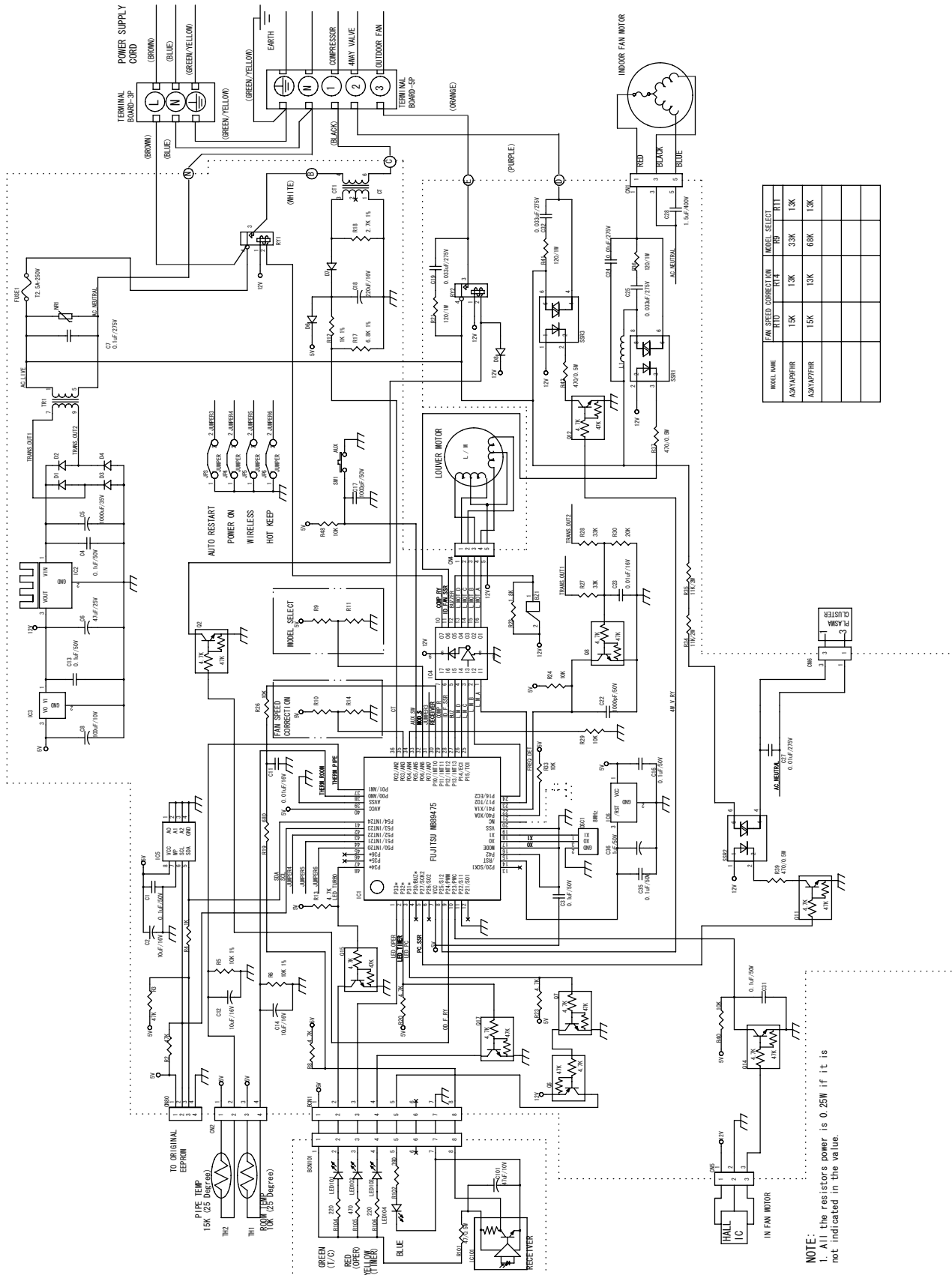
2. AY-AP9FHR, AE-A9FHR

DESCRIPTION	MODEL	REMARKS	SITE
Compressor	44A233A	220 - 240V, 50Hz, 930W	OUTDOOR
Indoor fan motor	SFS-230-22-4A	220 - 240V, 50Hz	INDOOR
Outdoor fan motor	YDK21-6S-2	220 - 240V,50Hz	OUTDOOR
Indoor fan motor capacitor	—	400V, 1.5 μ F	INDOOR
Outdoor fan motor capacitor	—	400V, 1.5 μ F	OUTDOOR
Running capacitor	—	400V, 40 μ F	OUTDOOR
Transformer	—	Primary ; AC 220V, 50Hz	INDOOR
	—	Secondary ; AC17.0V, 50Hz	
Fuse	—	250V, 2.5A	INDOOR
Reverse valve	SHF-4H-23U	—	OUTDOOR
Reverse valve coil	—	220 - 240V, 50/60Hz	OUTDOOR

CHAPTER 2. ELECTRIC CIRCUIT

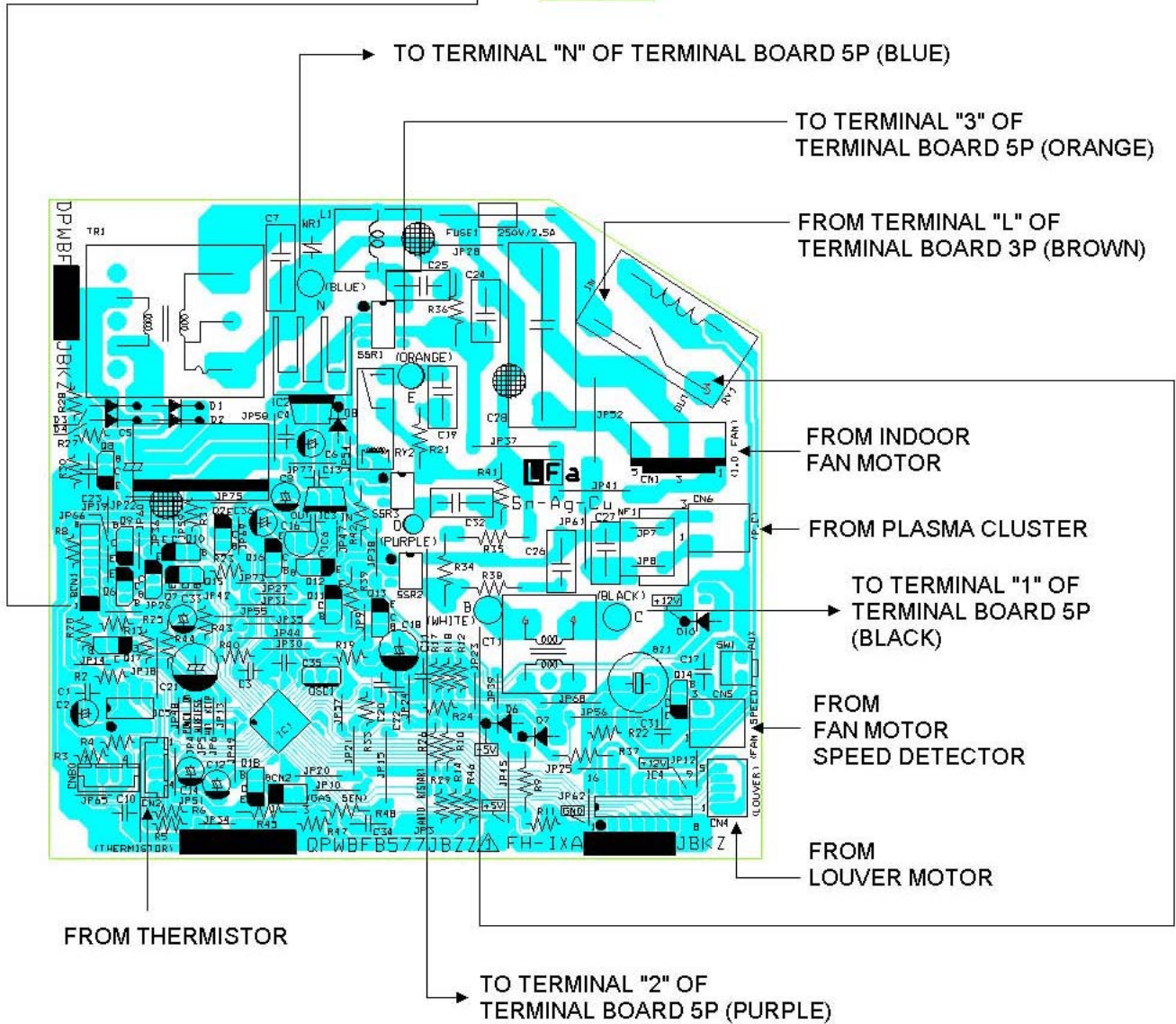
[1] MICRO-COMPUTER CONTROL SYSTEM

1. Electronic Control Diagram



NOTE:
1. All the resistors power is 0.25W if it is not indicated in the value.

2. Printed Wiring Diagram



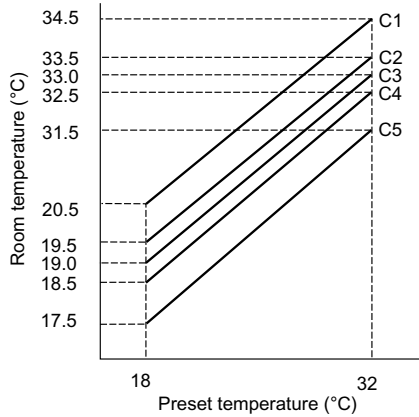
CHAPTER 3. FUNCTIONS

[1] FUNCTION

1. TEMPERATURE CONTROL CHARACTERISTIC

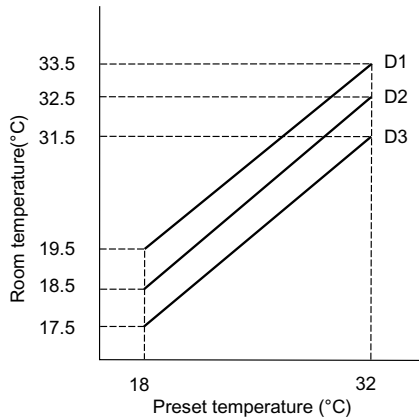
1.1. COOL operation

In the "COOL" mode, the thermostat circuit is controlled by four thermostat lines (C1 thru C5).



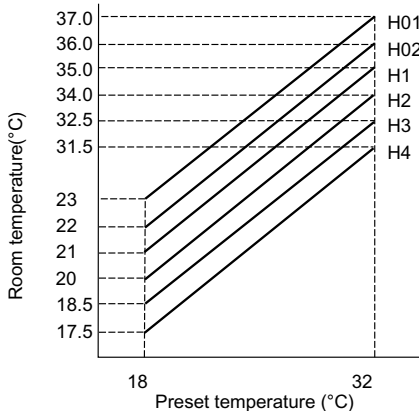
1.2. DRY operation

In the "DRY" mode, the thermostat circuit is controlled by three thermostat lines (D1 thru D3).



1.3. HEAT operation

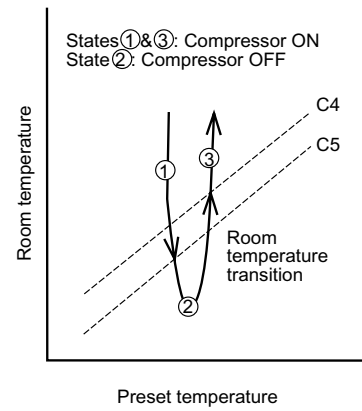
In the "HEAT" mode, the thermostat circuit is controlled by six thermostat lines (H01 thru H4).



2. OPERATION MODES

2.1. COOL operation

The compressor turns on or off, at the thermostat lines C3 and C4. The outdoor fan motor is also controlled with the compressor.



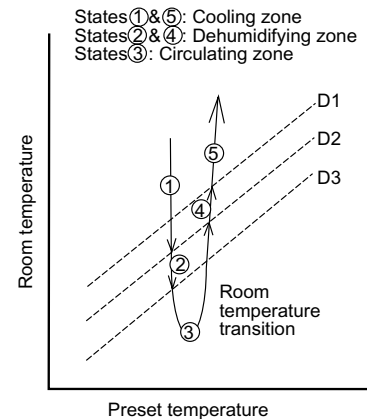
2.2. DRY operation

On the switch on, the compressor always starts to operate for 2 minutes with fan speed "DL".

The microcomputer reads the room temperature 2 minutes after this first compressor operation.

This room temperature is set as the preset temperature automatically. The preset temperature ranges from 18°C to 32°C. When the room temperature is below 18°C, the preset temperature is set to 18°C, and when the room temperature is over 32°C, the preset temperature is set to 32°C.

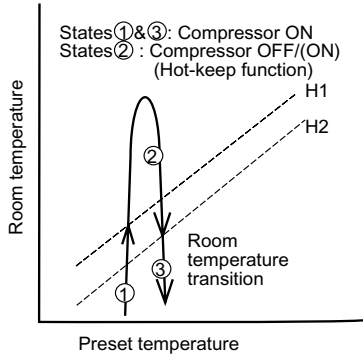
Dry operation is divided into three zones (Cooling zone, Dehumidifying zone and Circulating zone) by thermostat lines (D1 to D3), and the compressor and the fan motor are controlled in each zone as shown in Table.



	Compressor	Fan speed
Cooling zone	ON	DH
Dehumidifying zone	ON	DL
Circulating zone	OFF	DL or OFF

2.3. Heat operation

The compressor turns on or off, at State 2, turns on continuously at State 1 & 3.



3. FAN SPEED

Fan speeds are given by the indoor fan motor, "DL"~"HH" which are available in the following operation mode.

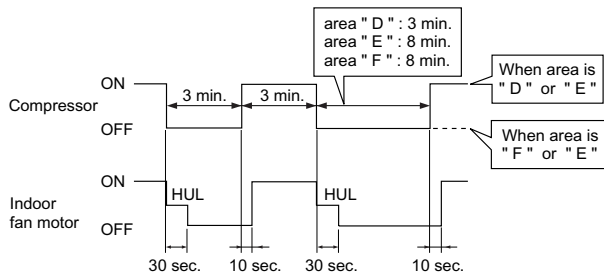
Fan speed	Fan switch	Fan switch (AUTO)	AY-AP7FHR	AY-AP9FHR
DL	—	DRY	700	770
DH	—		790	820
CL	COOL SOFT	—	650	650
CAL	—	COOL	790	820
CM	COOL LOW		950	1010
CAH	—		1040	1100
CH	COOL HIGH	—	1055	1115
HUL	—	—	780	800
HL	HEAT SOFT	—	880	900
HAL	—	HEAT	880	900
HM	HEAT LOW		980	1050
HAH	—		1100	1130
HH	HEAT HIGH		1175	1205

(r.p.m.)

4. HOT-KEEP

This function automatically controls the on-off operation of the indoor fan motor in accordance with the ON-OFF operation of the compressor during the heating operation, thereby preventing the air conditioner from delivering a cold air when the compressor is off. When the room temperature enters area "D", the compressor is turned off, and the indoor fan motor is turned off after rotating at "HUL" for 30 seconds. 3 minutes after turning on the compressor, the compressor is turned on for 3 minutes. At 10 seconds after turning on the compressor, the indoor fan motor is turned on. The next compressor OFF time is accordance with the room temperature area when 3 minutes elapse after turning on the compressor. If the area "D", compressor OFF time is for 3 minutes and if "E", it's for 8 minutes. If the area "F", compressor is not turned on. Only the indoor fan motor is turned on 8 minutes later for 3 minutes.

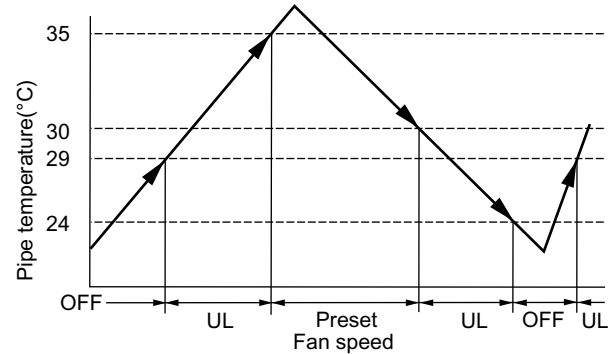
Area "D": To becoming below line H2 after becoming above line H1
Area "E": To becoming below line H1 after becoming above line H02
Area "F": To becoming below line H02 after becoming above line H01



5. PREHEAT AIR FLOW

This function is intended to prevent cold air from being discharged when the heating operation starts or when defrosting. When the indoor pipe temperature is below 29°C at the beginning of the heat operation or after defrosting, the indoor fan motor stays.

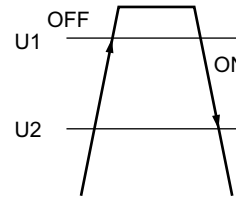
When the indoor pipe temperature gets higher than 29°C, the fan motor is turned on at speed "HUL" after compensation of starting. When the indoor pipe temperature exceeds 35°C, the specified fan speed is restored. When the indoor pipe temperature falls below 30°C, the fan speed shifts down to "HUL". And, when the indoor pipe temperature falls below 23°C, the fan motor turns off. Then, over 29°C, it turns on again at speed "HUL".



6. OVERHEATING PROTECTION SYSTEM

When overloading occurs during the heating operation, this system controls the outdoor fan motor according to the indoor pipe temperature to prevent the overloading of the compressor and restrain the rise in high pressure.

When the indoor pipe temperature exceeds U1digC, the outdoor fan motor is turned off, and when the indoor pipe temperature falls U2digC, the outdoor fan motor turns on.



U1 and U2 are different by the time.

- ① within 3 minutes
- ② over 3 minutes

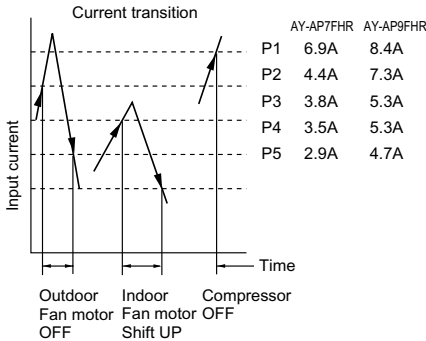
MODELS	Fan Lline	HH		HAH		HM	
		①	②	①	②	①	②
AY-AP7FHR	U1	53°C	53°C	53°C	53°C	54°C	54°C
	U2	49°C	52°C	49°C	52°C	50°C	53°C
AY-AP9FHR	U1	53°C	53°C	53°C	53°C	54°C	54°C
	U2	49°C	52°C	49°C	52°C	50°C	53°C

MODELS	Fan Lline	HAL		HL		HUL	
		①	②	①	②	①	②
AY-AP7FHR	U1	54°C	54°C	54°C	54°C	54°C	54°C
	U2	50°C	53°C	50°C	53°C	50°C	53°C
AY-AP9FHR	U1	54°C	54°C	54°C	54°C	54°C	54°C
	U2	50°C	53°C	50°C	53°C	50°C	53°C

7. CURRENT CONTROL

This system, in order to prevent overcurrent during heating operation, controls the outdoor fan motor and changes the indoor fan motor speed by detecting total current. When the current exceeds P2, the outdoor fan motor is automatically turned off, and when the current falls below P4, the outdoor fan motor is turned on.

When the current exceeds P3 and the indoor fan speed shifts down because of cold air (5. Preheat air flow), the changes in the indoor fan speed shifts up as follows, from "off" to "HUL", or from "HUL" to "HL". And when the current falls below P5, the indoor fan speed shift up is canceled.



8. FREEZE PREVENTIVE

When the indoor pipe temperature falls below 0°C during cool operation or dry operation, the compressor is turned off.

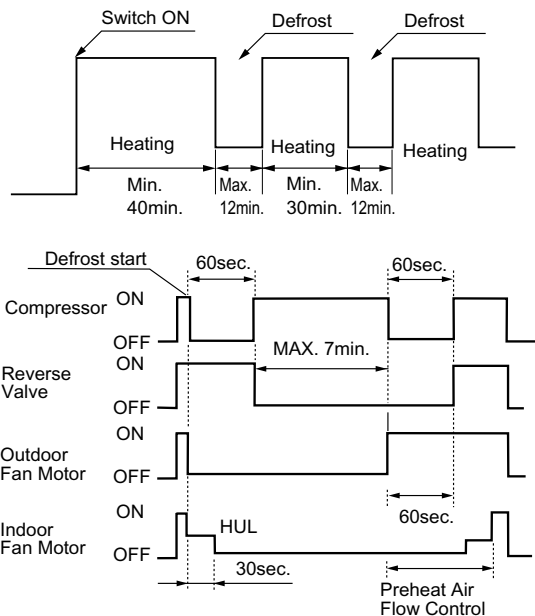
9. DEFROST

The defrost timer (integrating the operation time of compressor) counts time with microcomputer during heat operation.

Frost of outdoor pipe is estimated by indoor pipe temperature (TH2), room temperature (TH1), indoor fan speed and operation state of compressor.

In the defrost operation, first the compressor is turned off, the fan speed is set to "HUL" and the outdoor fan motor is turned off.

30 seconds later the indoor fan motor is turned off, 60 seconds later the reverse valve is turned off, and the compressor is turned on. In the end of defrosting, the compressor is turned off, the outdoor fan motor is turned on, 60 seconds later the reverse valve is turned on, and the compressor is turned on, starting heat operation. At this time, the indoor fan motor is turned off or the fan speed is set to "HUL" if preheat air flow function is effective.



10. DELAYED OPERATION OF THE REVERSE VALVE

the heat operation is shut down or the operating mode is switched from heat to cool or dry, or vice versa, the reverse valve is switched after 3 minutes.

11. TEST RUN

If the "AUX" button on the unit is pressed for 5 seconds or more during operation, cool test operation starts. The operation LED (red) flickers during test run.

To put the system in the heating test run mode, start the cooling operation and select the heating mode on the remote control. In cool and heat mode continuous compressor on operation is performed. In dry mode the operation is in dehumidifying zone. In fan only mode the indoor fan motor runs continuously.

12. TIMER

12.1. ON/OFF TIMER

When the unit operates during one hour after the OFF-time is set, thermostat setting is automatically shifted (+1digC in cool operation and dry operation, -3digC in heat operation, 16digC - 32digC). When the ON-timer is set in heat operation and cool operation, operation starts before 0 to 30 minutes(depends on the room temperature) so that pre-set temperature is obtained at set time.

12.2. ONE-HOUR TIMER

When ONE-HOUR timer is set, the unit turns off automatically after one hour. The one hour timer operation has priority over other time operation, such as the TIMER ON and TIMER OFF. If the ONE-HOUR TIMER button is pressed again during operation, the unit will operate additionally for another one hour.

13. AUTOMATIC AIR CONDITIONING

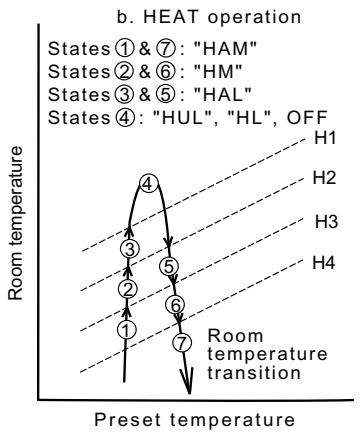
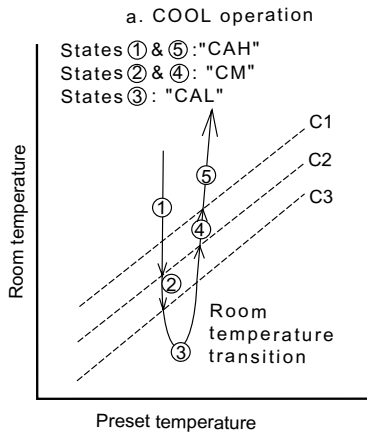
Automatic air conditioning is selected, the operation mode and preset temperature are set automatically according to the room temperature on starting operation.

Room temperature at operation start	Operation Mode	Preset Temperature
Above 28°C	COOL	26°C
26°C ~ 28°C		25°C
24°C ~ 26°C		24°C
21°C ~ 24°C	DRY	Room temperature at operation start
Below 21°C	HEAT	23°C

When DRY mode is selected by the micro computer with AUTO operation, the fan speed lamps on the indoor unit panel will indicate identically with the fan speed symbols on the remote control display, as the FAN speed setting is changed accordingly. Despite, the actual fan speed will not change, as it is determined automatically by the micro computer.

14. AUTOMATIC FAN SPEED

When the automatic fan speed is selected in cool or heat operation, the fan speed is automatically changed by the thermostat lines C1 to C3 in cool operation, and H1 to H4 in heat operation.



15. OUTPUTS IN EACH OPERATION MODE

Mode	Compressor	Outdoor Fan Motor	Indoor Fan Motor	Valve Coil
COOL	Cooling	ON	ON	ON
	Circulating	OFF	OFF	ON
HEAT	Normal	ON	ON	ON
		OFF	OFF	ON/UL/OFF
	Preheat Air Flow Control	ON	ON	UL/OFF
ON Defrost	ON	OFF	OFF	
DRY	Cooling	ON	ON	L/UL
	Dehumidifying	ON	ON	UL/D
	Circulating	OFF	OFF	D/OFF

16. POWER ON START

If the connecting wire JP4 is cut on the PWB ass'y, when the power is supplied by turning on a circuit breaker, the air conditioner automatically starts of operation in "AUTO".

(Refer to Figure L-5. ~ L-8. Printed Wiring Board.)

17. AUTO RESTART

Power failure occurs during operation, the unit will restart in the same operation mode as before after power recovery.

18. PLASMA CLUSTER

Plasma cluster ion mode

SSR2 : ON

[2] TEST MODE

Keep pushing the "AUX." buttons and supply the power, the system will go to the test mode. In this mode, the output of operation is switched by pushing the "AUX." button in the unit or the "OI" button in the remote controller. Normal outputs are shown in Table.

1. AY-AP7FHR

STEPNo	Buzzer	LED				P. C Power	Outdoor Fan	4W-Valve	Compressor	Indoor Fan	Louver	
		Operation LED102 (RED)	Timer LED103 (YELLOW)	Turbo LED101 (GREEN)	P. C LED104 (BLUE)							
0	2times	Room temp	Heat-exchanger	○	○	x	x	x	x	OFF	OFF	
		7~42°C ○ Except above x	-2~45°C ○ Except above x									
1	1time	CT	Auto-restart	Model select		x	x	○	x	○	SETTING TEMP: AUTO 1225rpm HEATING TURBO 18°C 700rpm DRY LOW 19°C 790rpm DRY HIGH 20°C 650rpm COOLING LOW 21°C 790rpm COOLING AUTO LOW 22°C 930rpm RESTRICTED SWEATING 23°C 950rpm COOLING MIDDLE 24°C 1040rpm COOLING AUTO HIGH 25°C 1055rpm COOLING HIGH 26°C 1155rpm COOLING TURBO 27°C 780rpm PREVENTED COLD WIND 28°C 880rpm HEATING LOW 29°C 880rpm HEATING AUTO LOW 30°C 980rpm HEATING MIDDLE 31°C 1100rpm HEATING AUTO HIGH 32°C 1175rpm HEATING HIGH	OPEN
		0.3~4.5V ○ Except above x	x	Bit7	x							
2	1time	I.D Fan speed	WIRELESS	Model select		○	○	x	○	x		OFF
		○	x	Bit6	x							
3	1time	Hot keep	Power on	Model select		x	○	○	x	x		OFF
		x	x	Bit5	○							
4	1time	EEPROM	Test	Model select		x	x	x	x	x		OFF
		○	○	Bit4	x							
5	1time	EEPROM version	EEPROM version	Fan speed correction		x	x	○	x	x		OFF
		BIT7	x	BIT3	x							BIT7
6	1time	EEPROM version	EEPROM version	Fan speed correction		x	x	x	x	x	OFF	
		BIT6	x	BIT2	x						BIT6	○
7	1time	EEPROM version	EEPROM version	Fan speed correction		x	x	○	x	x	OFF	
		BIT5	x	BIT1	○						BIT5	○
8	1time	EEPROM version	EEPROM version	Fan speed correction		x	x	○	x	x	CLOSE	
		BIT4	○	BIT0	○						BIT4	○

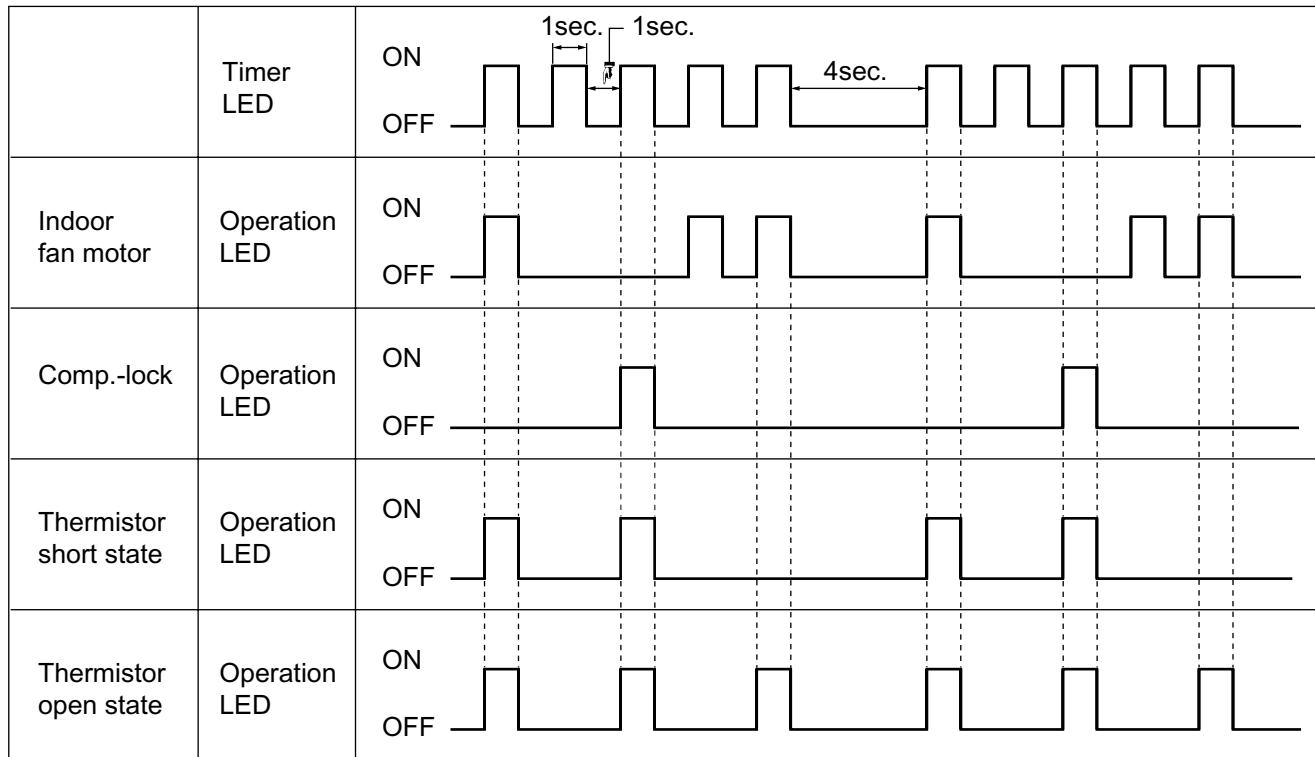
2. AY-AP9FHR

STEPNo	Buzzer	LED				P. C Power	Outdoor Fan	4W-Valve	Compressor	Indoor Fan	Louver	
		Operation LED102 (RED)	Timer LED103 (YELLOW)	Turbo LED101 (GREEN)	P. C LED104 (BLUE)							
0	2times	Room temp	Heat-exchanger	○	○	x	x	x	x	OFF	OFF	
		7~42°C ○ Except above x	-2~45°C ○ Except above x									
1	1time	CT	Auto-restart	Model select		x	x	○	x	○	SETTING TEMP: AUTO 1255rpm HEATING TURBO 18°C 770rpm DRY LOW 19°C 820rpm DRY HIGH 20°C 650rpm COOLING LOW 21°C 820rpm COOLING AUTO LOW 22°C 1040rpm RESTRICTED SWEATING 23°C 1040rpm COOLING MIDDLE 24°C 1100rpm COOLING AUTO HIGH 25°C 1115rpm COOLING HIGH 26°C 1215rpm COOLING TURBO 27°C 800rpm PREVENTED COLD WIND 28°C 900rpm HEATING LOW 29°C 900rpm HEATING AUTO LOW 30°C 1050rpm HEATING MIDDLE 31°C 1130rpm HEATING AUTO HIGH 32°C 1205rpm HEATING HIGH	OPEN
		0.3~4.5V ○ Except above x	x	Bit7	x							
2	1time	I.D Fan speed	WIRELESS	Model select		○	○	x	○	x		OFF
		○	x	Bit6	○							
3	1time	Hot keep	Power on	Model select		x	○	○	x	x		OFF
		x	x	Bit5	x							
4	1time	EEPROM	Test	Model select		x	x	x	x	x		OFF
		○	○	Bit4	x							
5	1time	EEPROM version	EEPROM version	Fan speed correction		x	x	○	x	x		OFF
		BIT7	x	BIT3	x							BIT7
6	1time	EEPROM version	EEPROM version	Fan speed correction		x	x	x	x	x	OFF	
		BIT6	x	BIT2	x						BIT6	○
7	1time	EEPROM version	EEPROM version	Fan speed correction		x	x	○	x	x	OFF	
		BIT5	○	BIT1	○						BIT5	○
8	1time	EEPROM version	EEPROM version	Fan speed correction		x	x	○	x	x	CLOSE	
		BIT4	x	BIT0	○						BIT4	○

[3] DIAGNOSIS PROCEDURE

When indoor fan motor is out of order or compressor lock occurs, the compressor, indoor fan motor, outdoor fan motor, and louver are all stopped and the operation LED(red) turns on or off synchronously with the timing of the timer LED.

When the thermistor for room temperature or pipe temperature is open or short state, the operation LED turns on or off synchronously with the timing of the timer LED by pushing continuously for more than 5 seconds "AUX." button during suspension of operation.

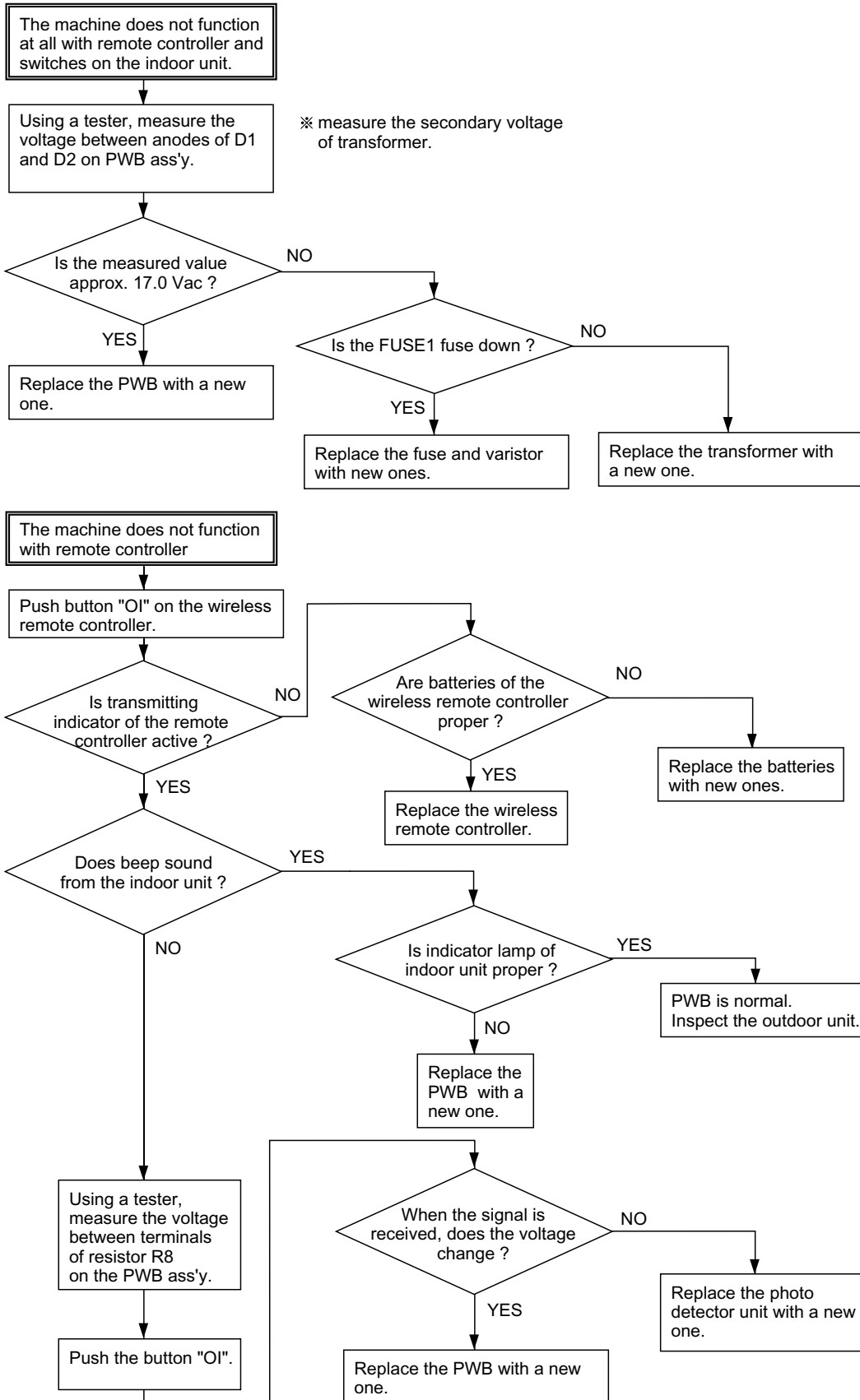


Timing chart of Timer LED and Operation LED of DIAGNOSIS PROCEDURE.

When "OI" button the remote controller or "AUX." button in the unit is pushed, the unit is free from DIAGNOSIS PROCEDURE.

CHAPTER 4. TROUBLESHOOTING

[1] TROUBLESHOOTING GUIDE OF CONTROL CIRCUIT



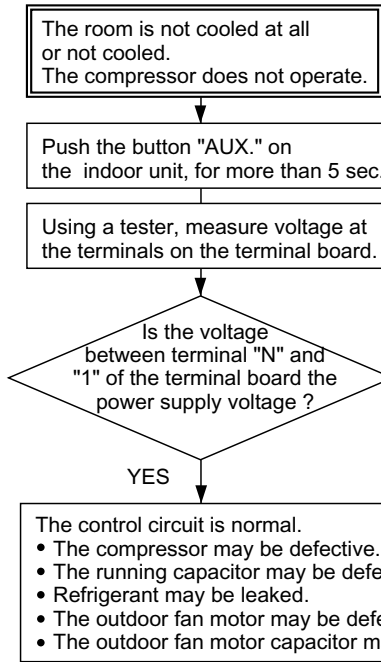
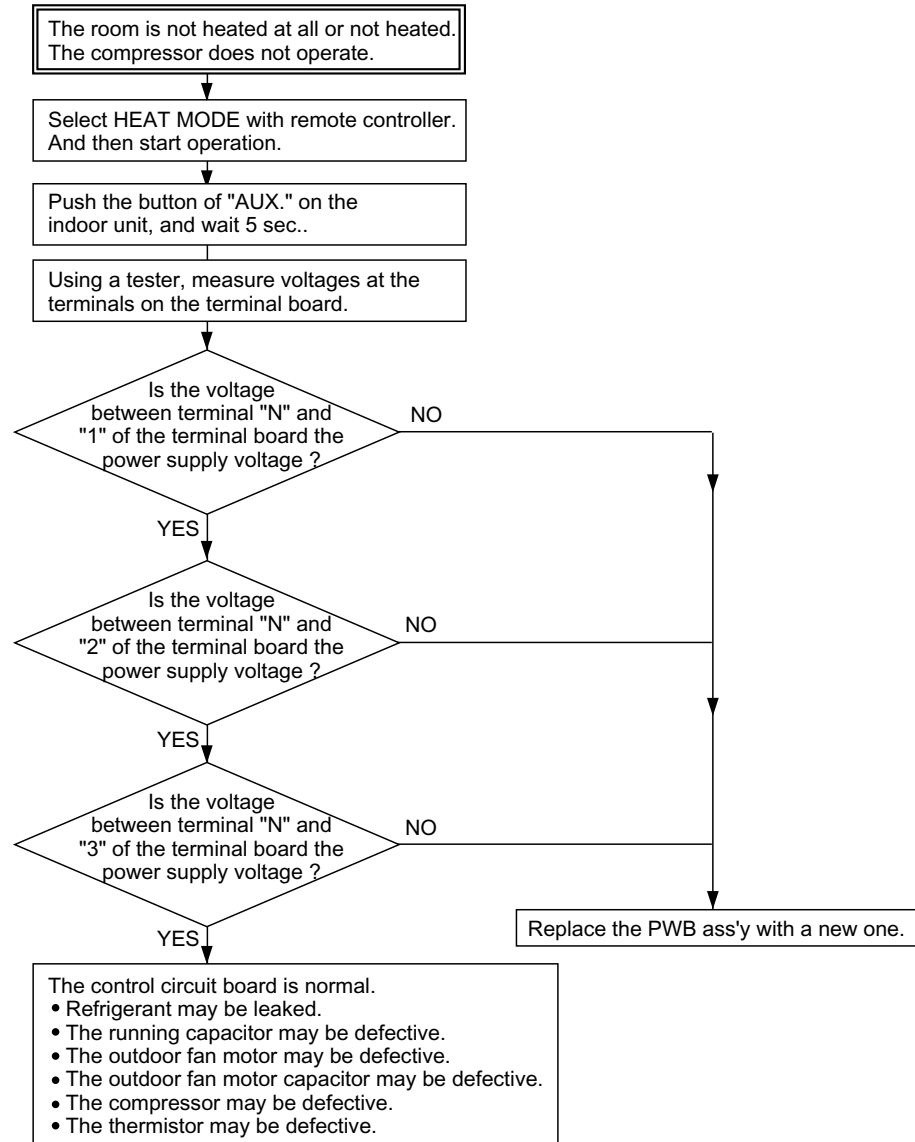
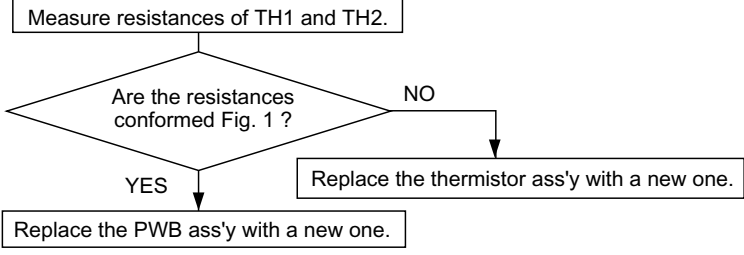
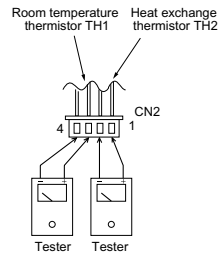
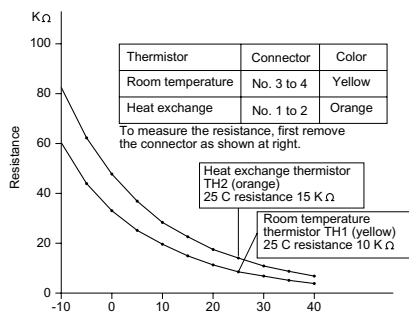


Fig. 1 Temperature properties of indoor thermistors

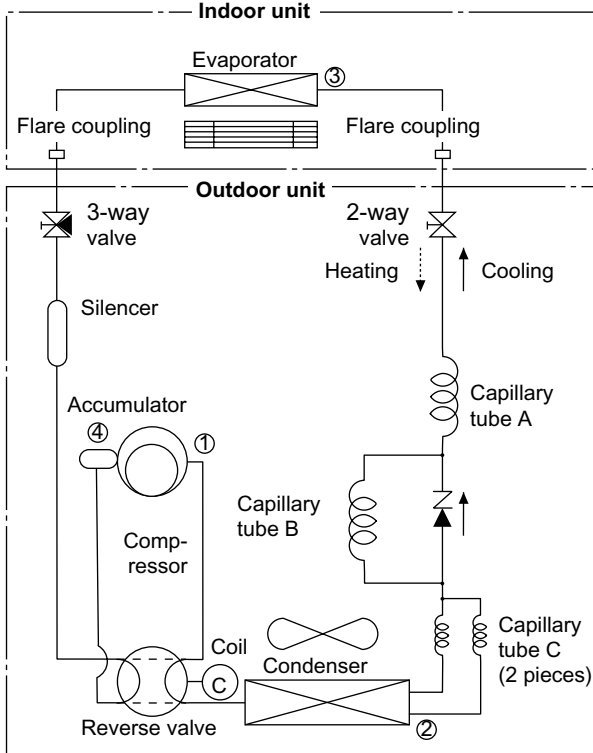


CHAPTER 5. REFRIGERATION CYCLE AND PERFORMANCE CURVES

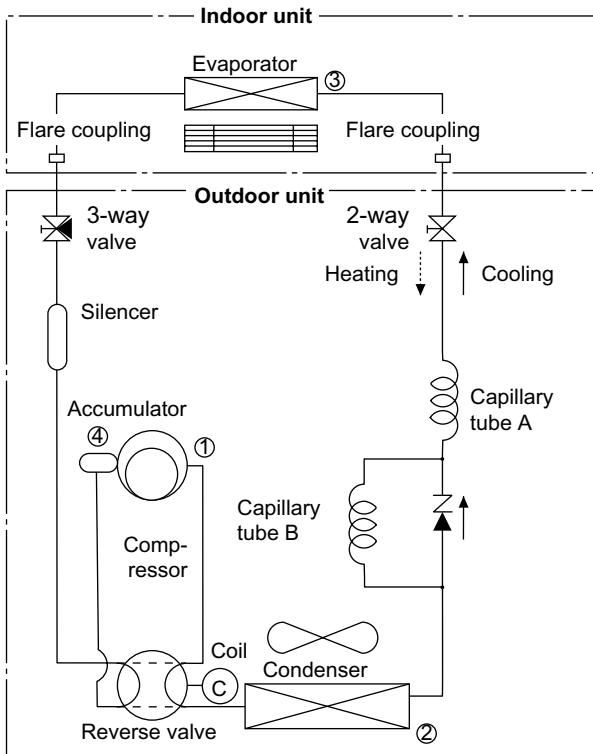
[1] REFRIGERATION CYCLE

1. Refrigeration cycle

1.1. AY-AP7FHR



1.2. AY-AP9FHR



2. Standard conditions

		Cooling	Heating
Indoor side	Dry-bulb Temp.	27°C	20°C
	Relative Humidity	47%	–
Outdoor side	Dry-bulb Temp.	35°C	7°C
	Relative Humidity	40%	87%

* REFRIGERANT PIPE LENGTH 5m

3. Temperature at each part and pressure in 3-way valve

NO. Condition	Model			
	AY-AP7FHR		AY-AP9FHR	
1	Cooling	Heating	Cooling	Heating
2	72°C	69°C	72°C	75°C
3	42°C	2°C	42°C	2°C
4	12°C	31°C	12°C	33°C
5	13°C	7°C	11°C	4°C
3-way valve pressure (MPaG)	1.03	2.25	0.95	2.35

4. Dimension of Capillary tube

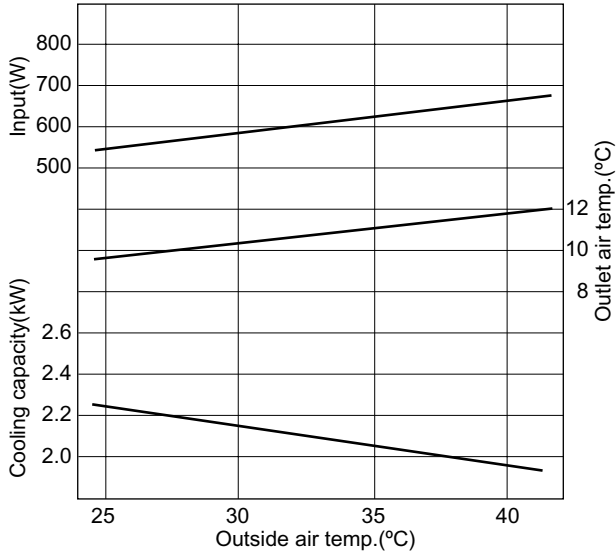
Model	AY-AP7FHR			AY-AP9FHR		
	O.D	I.D	L	O.D	I.D	L
Capillary tube A	φ2.7	φ1.3	600	φ2.7	φ1.3	250
Capillary tube B	φ2.7	φ1.3	500	φ2.7	φ1.3	850
Capillary tube C	φ2.7	φ1.5	150	–	–	–

[2] PERFORMANCE CURVES

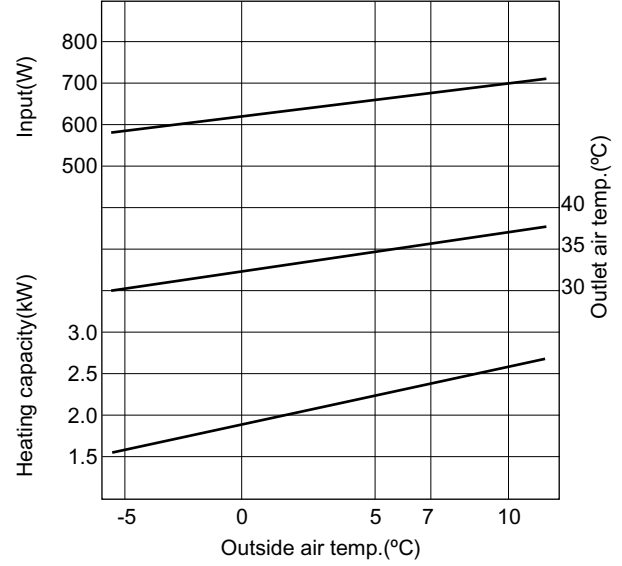
- NOTE: 1) Indoor fan speed : Hi
 2) Vertical adjustment louver "45°", Horizontal adjustment louver "Front"
 3) Indoor air temp. : Cooling 27°C, Heating 20°C
 4) Power source : 230V, 50Hz

1. AY-AP7FHR

1.1. Cooling

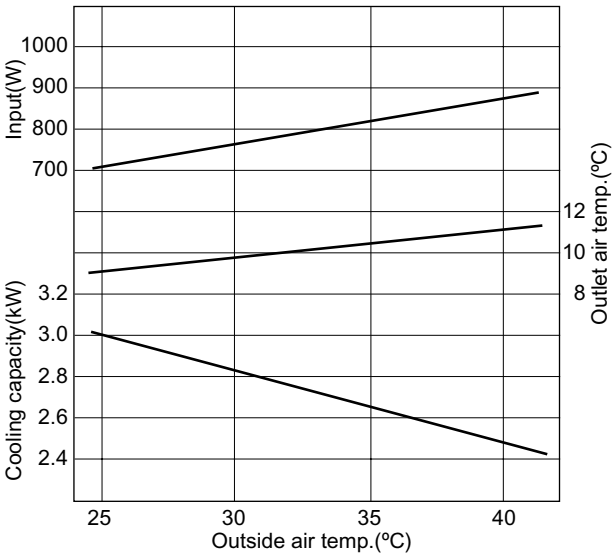


1.2. Heating

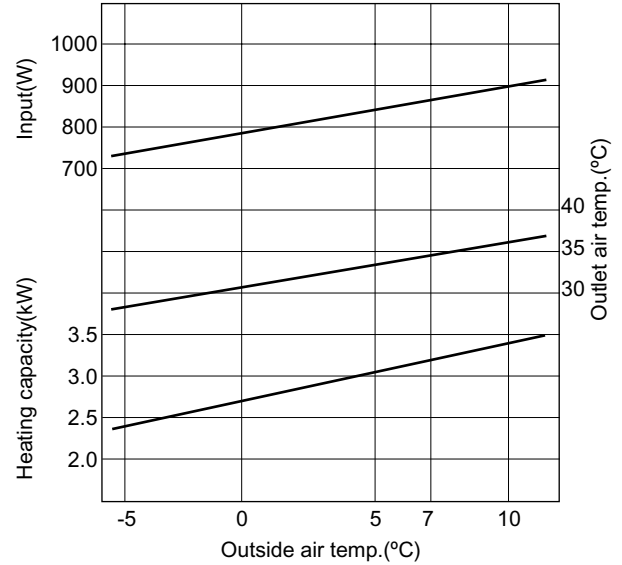


2. AY-AP9FHR

2.1. Cooling



2.2. Heating



CHAPTER 6. DISASSEMBLING PROCEDURE

CAUTION: DISCONNECT THE UNIT FROM THE POWER SUPPLY BEFORE ANY SERVICING

[1] INDOOR UNIT

1) Open the open panel.



2) Remove the screw fixing the cord clamp.



3) Remove the cord clamp.



4) Remove the unit-to-unit wiring from the terminal board.



5) Remove 2 air filters.



6) Remove 3 screw covers on front panel, push the bottom with minus driver and draw them out.



7) Remove 4 screws fixing the front panel.



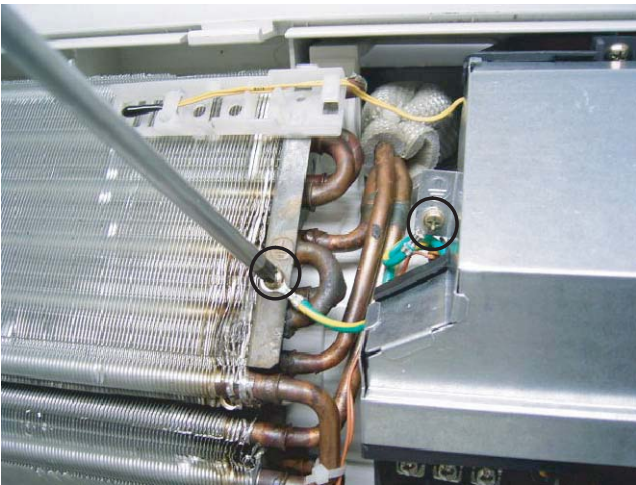
8) Release 3 hooks out from cabinet.



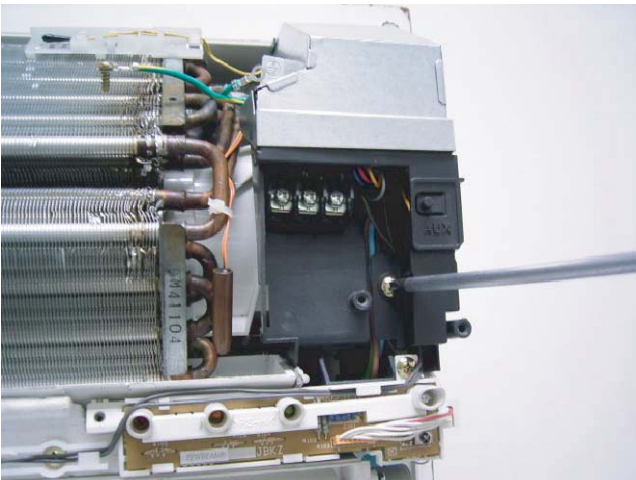
9) Take down the front panel.



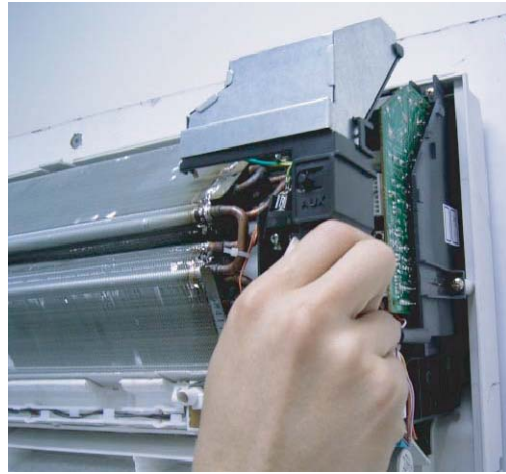
10) Remove 2 screws fixing the earth wire.



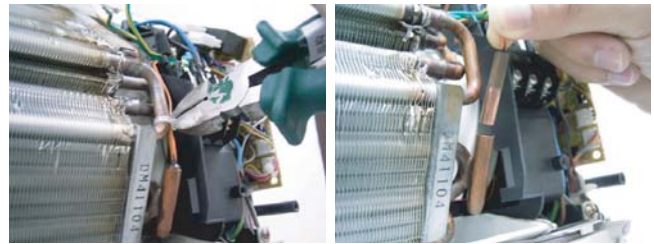
11) Remove a screw fixing the control box cover.



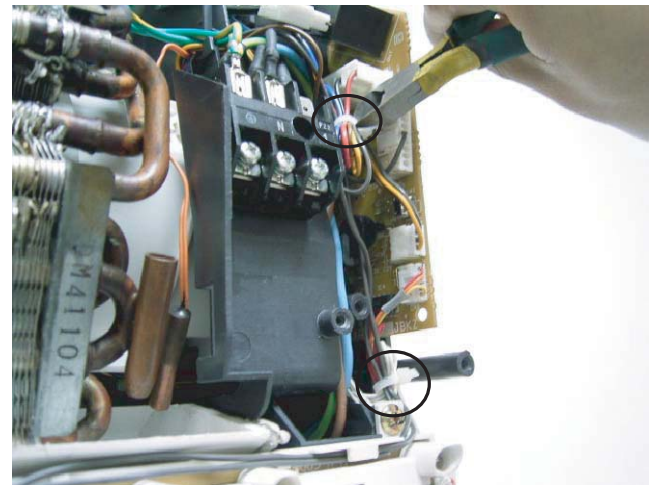
12) Remove the control box cover.



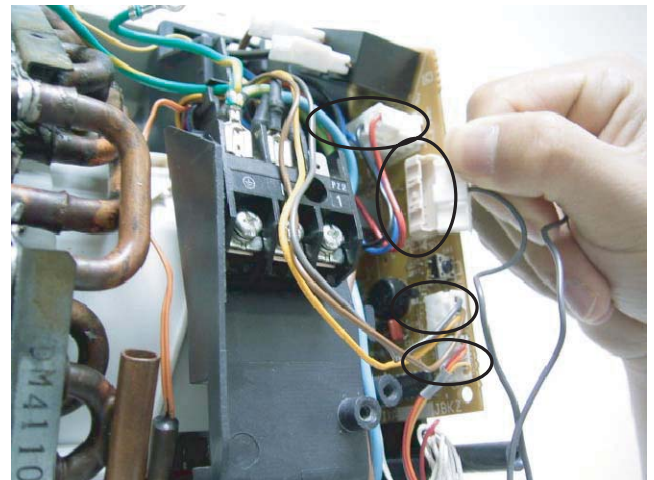
13) Cut the band and take out the sensor from sensor holder.



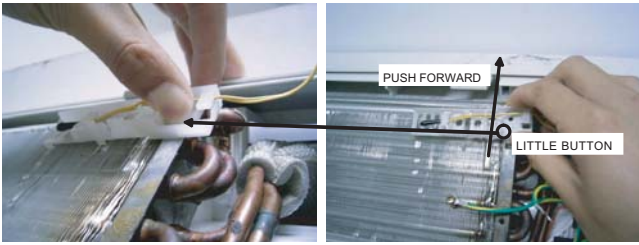
14) Cut the 2 bands fixing the wires.



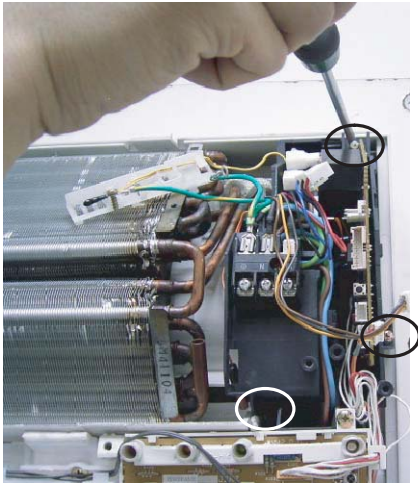
15) Remove 4 connectors.(CN1-CN4)



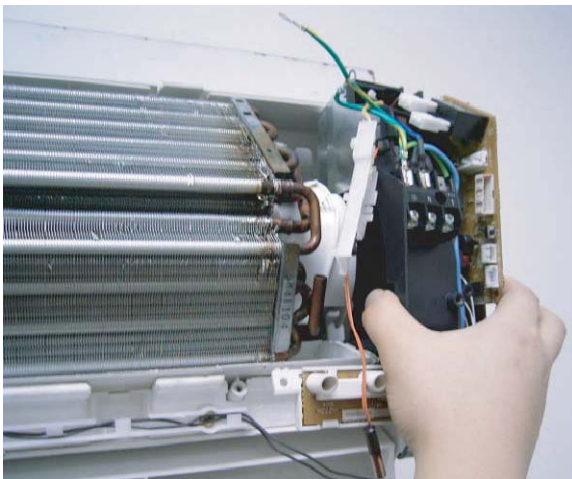
16) Remove the thermistor holder from the evaporator, push up the little button and then draw out.



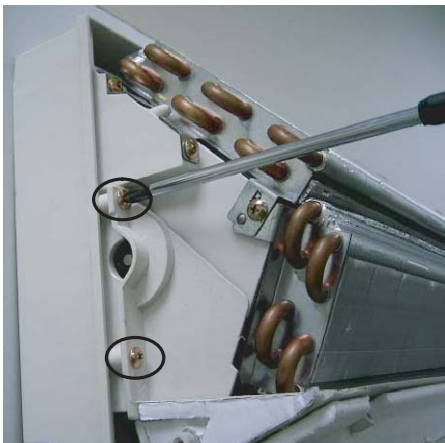
17) Remove 3 screws fixing the control box.



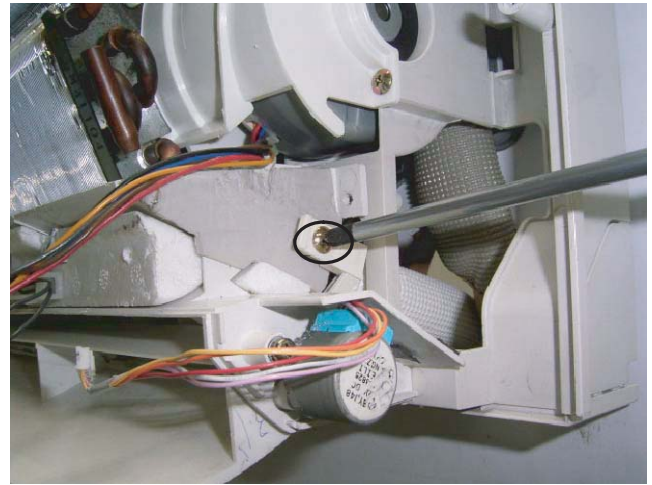
18) Take out the control box.



19) Remove 2 screws fixing drain pan.



20) Remove drain joint screw.



21) Release 4 hooks fixing drain pan.



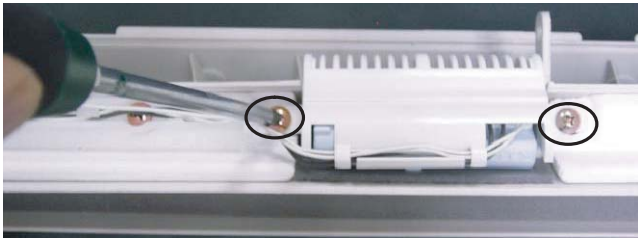
22) Take out the left side of the drain pan.



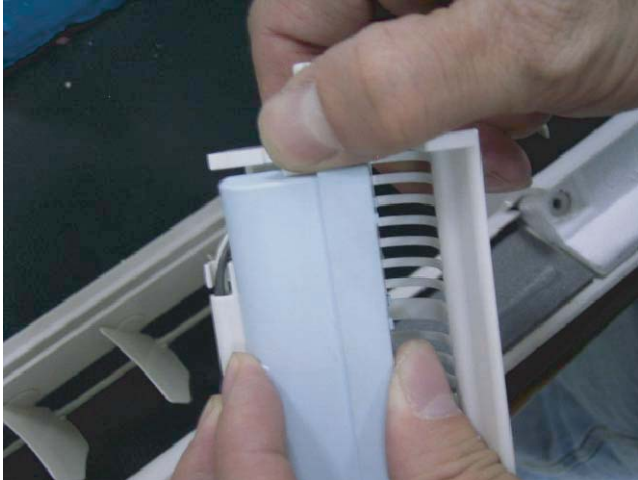
23) Take out the right side of the drain pan, leaving drain hose in cabinet.



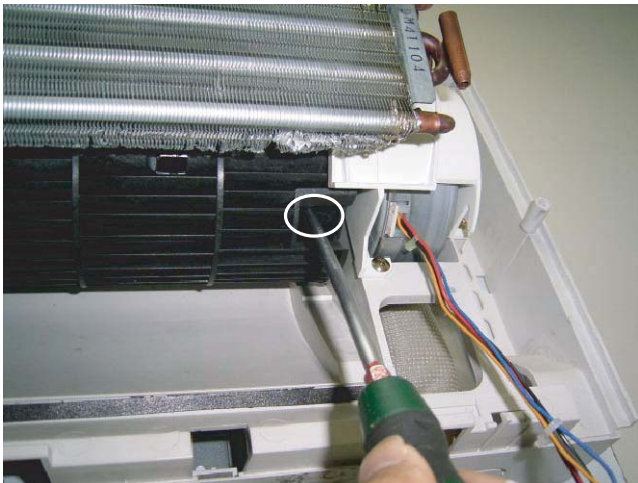
24) Remove 2 screws fixing the cluster holder.



25) Release hooks of cluster holder and take out plasma cluster.



26) Remove the screw fixing cross flow fan.



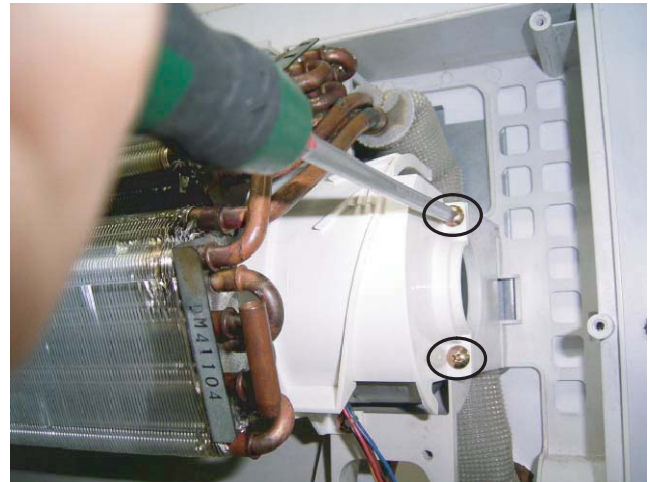
27) Remove 2 screws fixing the evaporator by the left side.



28) Hold up the left side of evaporator, pull out cross flow fan.



29) Remove 4 screws fixing motor cover.



30) By holding up the left side of evaporator, take out fan motor with cover.



[2] OUTDOOR UNIT

1) Loose a screw fixing the side cover.



2) Loose 2 screws fixing the terminal cover and 1 screw fixing the cord clamp.

Remove terminal cover and cord clamp.



3) Loose the unit-to-unit cord.



4) Loose 6 screws fixing the top panel.

- Right side view



- Left side view



- Front view



- 5) Loose 5 screws fixing the front panel.

- Right side view



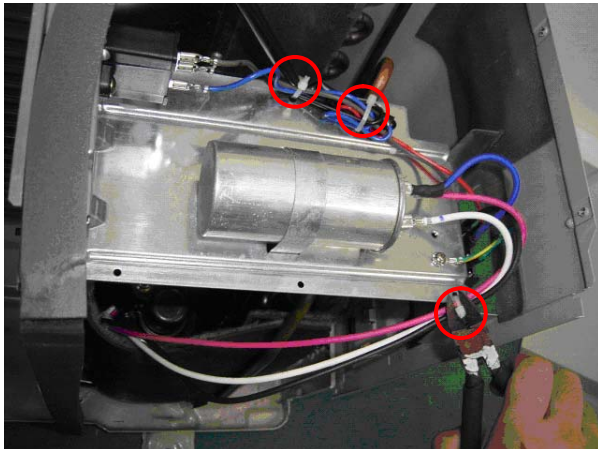
- Left side view



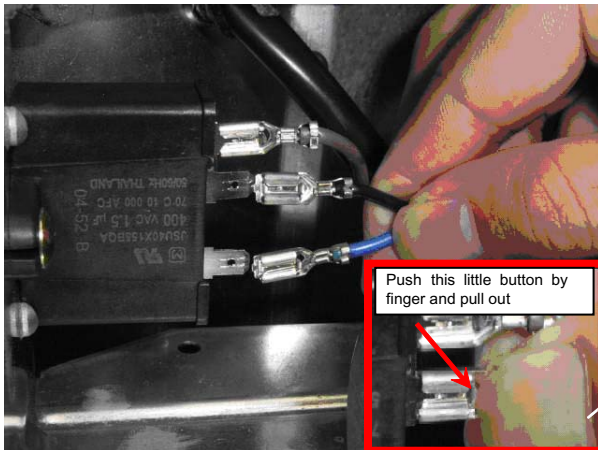
- Front view



- 6) Cut 3 plastic bands.



- 7) Remove 2 terminals. (connecting with fan condenser)



- 8) Remove the terminal cover.



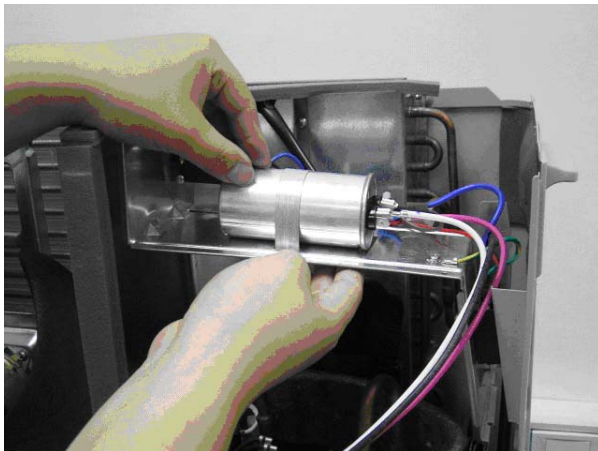
- 9) Remove 3 terminals of compressor.



- 10) Loose 4 screws fixing the control box.

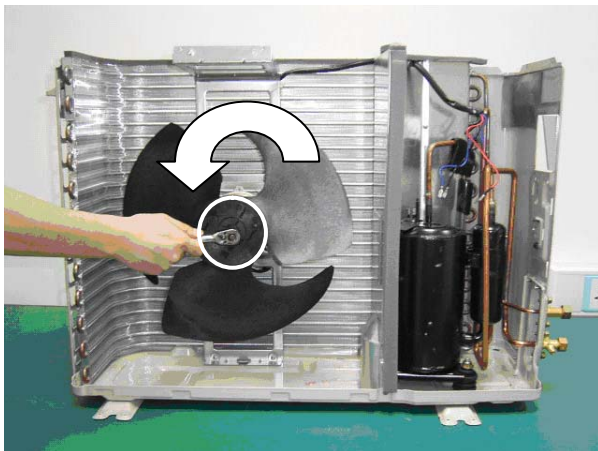


11) Take out the control box.



1. DISASSEMBLING PROCEDURE OF THE FAN

1) Loose the fan nut and take out fan.

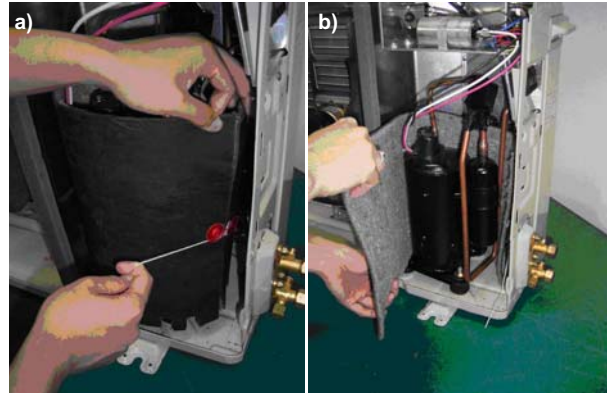


2) Loose 4 screws fixing fan motor.



2. ASSEMBLING PROCEDURE OF COMPRESSOR COVER

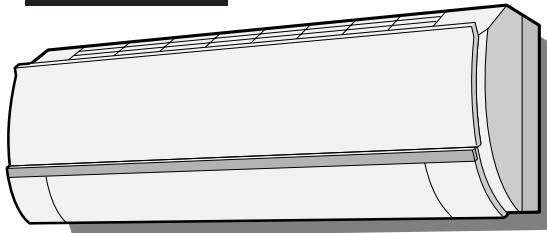
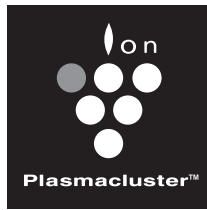
- 1) Remove: Unlace the fastener and pull the compressor cover out from left side. [a)→ b)]
- 2) Assembly: Insert the compressor cover from left side, cover the tube and fasten. [b)→ a)]



REPLACEMENT PARTS LIST

SPLIT SYSTEM ROOM AIR CONDITIONER

MODELS	INDOOR UNIT	OUTDOOR UNIT
	AY-AP7FHR	AE-A7FHR
	AY-AP9FHR	AE-A9FHR



CONTENTS

- | | |
|------------------------------|-------------------------------------|
| [1] INDOOR UNIT PARTS | [5] OUTDOOR UNIT PARTS |
| [2] ACCESSORY PARTS | [6] PARTPACKING PARTS(OUTDOOR UNIT) |
| [3] INDOOR PACKING PARTS | ■ INDEX |
| [4] OTHER PARTS(INDOOR UNIT) | |

“HOW TO ORDER REPLACEMENT PARTS”

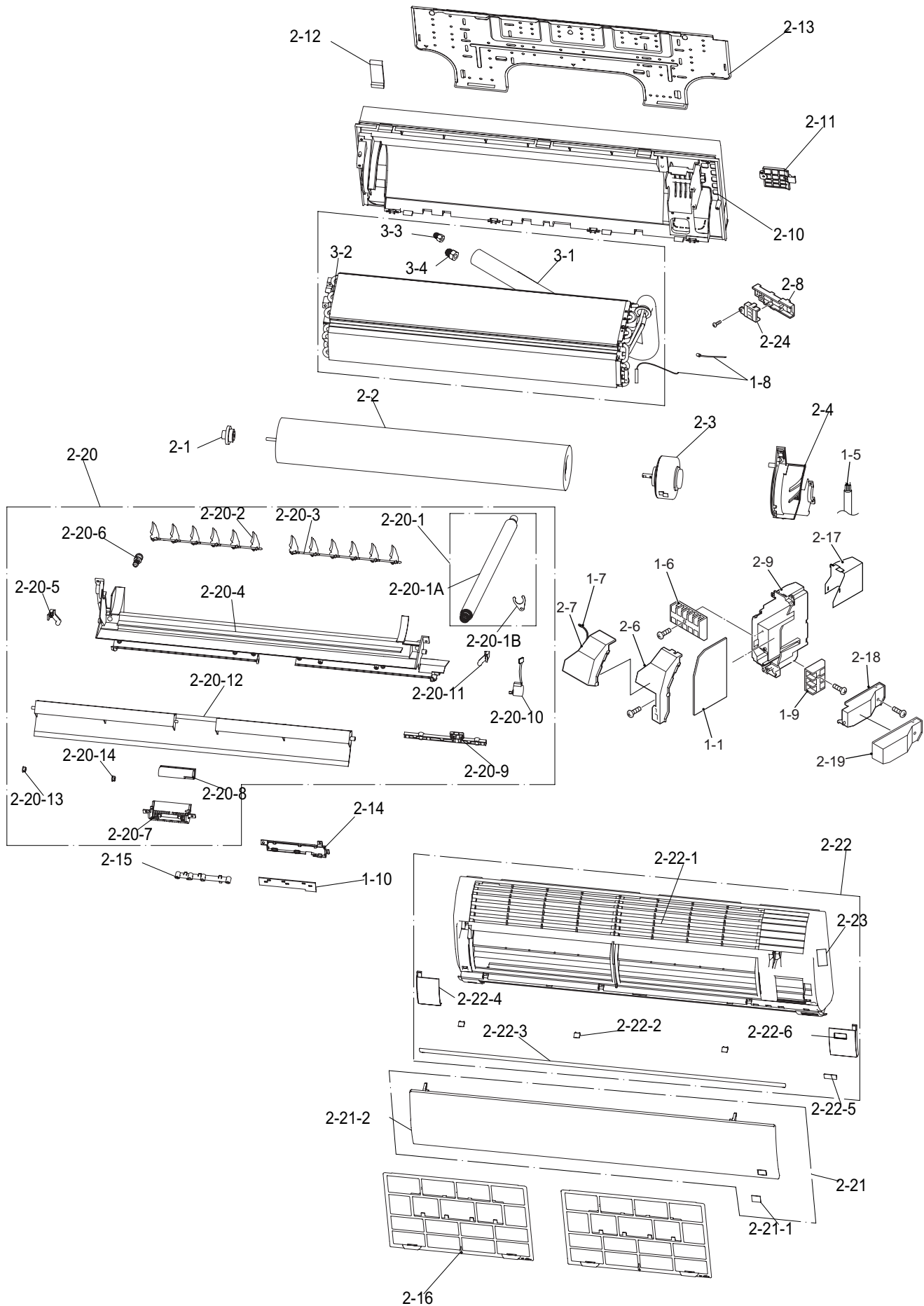
To have your order filled promptly and correctly, please furnish the following information.

- | | |
|-----------------|----------------|
| 1. MODEL NUMBER | 2. REF. No. |
| 3. PART NO. | 4. DESCRIPTION |

★ MARK: SPARE PARTS-DELIVERY SECTION

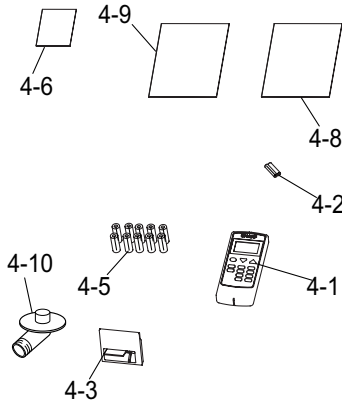
Parts marked with "▲" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for

[1] INDOOR UNIT PARTS



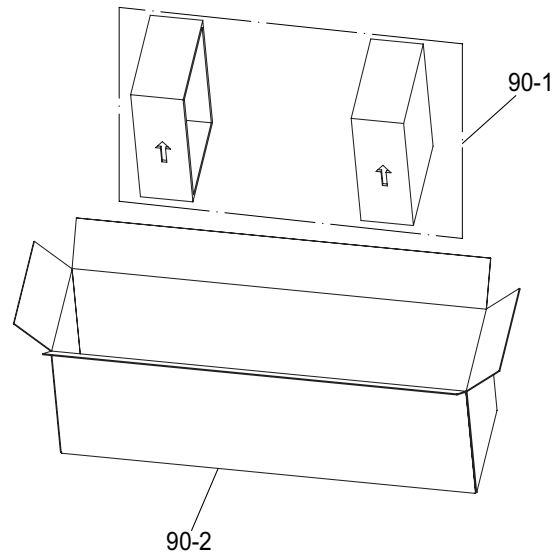
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[1] INDOOR UNIT PARTS					
1-1	DPWBFA411JBKZ	BM			Control unit[AYAP7FHR]
1-1	DPWBFA396JBKZ	BM			Control unit[AYAP9FHR]
1-5	QACC-A305JBZZ	AN			Power supply cord
1-6	QTANZA027JBZZ	AQ			Terminal board
1-7	QW-VZE874JBZZ	AF			Earth lead
1-8	RTHM-A300JBE0	AN			Thermistor
1-9	QTANZA022JBZZ	AH			Terminal board
1-10	FPWBFA586JBKZ	AZ			Display c-b-u k
2-1	CHLD-A067JBK0	AL			Bearing ass'y
2-2	NFANCA099JBEZ	BC			Cross flow fan
2-3	CMOT-A443JBKZ	BE			Fan motor
2-4	PCOV-B072JBFZ	AN			Motor cover
2-6	PCOV-B073JBFA	AN			Control box cover
2-7	PCOV-B074JBPZ	AM			Control box cover
2-8	LHLD-A500JBFZ	AC			Thermistor holder
2-9	PBOX-A442JBFA	BH			Control box
2-10	DCHS-A530JBKZ	BG			Cabinet sub ass'y
2-11	LHLD-A478JBFZ	AF			Tube holder
2-12	LHLD-A303JBFA	AD			Tube cover
2-13	PPLTNA081JBPZ	AX			Mounting angle
2-14	LHLD-A716JBFA	AF			LED holder
2-15	PCOV-B076JBFZ	AF			LED guide
2-16	PFILMA204JBEZ	AM			Air filter
2-17	PCOV-B075JBPZ	AR			Control box cover
2-18	LHLD-A756JBFA	AF			Cord holder
2-19	PCOV-B144JBPZ	AK			Cord holder cover
2-20	CSRA-A624JBKZ	BX			Drain pan ass'y
2-20-1	CHOS-A018JBKZ	AN			Drain hose ass'y
2-20-1A	PHOS-A044JBEZ	AM			Drain hose
2-20-1B	LPLT-A058JBPZ	AC			Hose holder
2-20-2	MLOV-A299JBFA	AC			Vertical louver
2-20-3	MJNTPA082JBFA	AC			Louver link
2-20-4	DSRA-A265JBKZ	BL			Drain pan
2-20-5	LPFT-A152JBFZ	AF			Dorain joint L
2-20-6	PGUMMA110JBE0	AD			Drain plug
2-20-7	LHLD-A720JBFA	AK			PCI holder
2-20-8	CKITTA071AKKZ	BD			Plasmacluster unit
2-20-9	LHLD-A719JBFA	AF			Lead wire guide
2-20-10	RMOT-A115JBEZ	AS			Louver motor
2-20-11	LPFT-A151JBFZ	AF			Drain joint
2-20-12	MLOV-A396JBFA	AX			H-louver
2-20-13	NBRG-A026JBFA	AB			Louver bushing
2-20-14	LHLD-A197JBFM	AC			Louver holder
2-21	CPNL-A515JBKZ	BC			Open panel ass'y
2-21-1	HBDG-A002KKEA	AE			Badge
2-21-2	HPNL-A721JBRA	AU			Open panel
2-22	DWAK-A915JBKZ	BB			Front panel ass'y
2-22-1	GWAK-A317JBFA	AZ			Front panel
2-22-2	PCOV-B077JBFA	AK			Screw cover
2-22-3	HDECQA125JBRB	AZ			Display panel
2-22-4	FCOV-A194JBFA	AK			Front cover L
2-22-5	FCOV-A193JBFA	AF			Cover
2-22-6	FCOV-A195JBFA	AK			Front cover R
2-23	TLABCC053JBRZ	AF			Wiring diagram
2-24	PCOV-A300JBF0	AB			Thermo holder cover
3-1	CPIPCA918JBKZ	AZ			Tube ass'y
3-2	CEVA-A115JBKZ	BU			Evaperator sub ass'y
3-3	PVLV-0341JBE0	AG			Flare union 2S
3-4	PVLV-0342JBE0	AH			Flare union 3S

[2] ACCESSORY PARTS



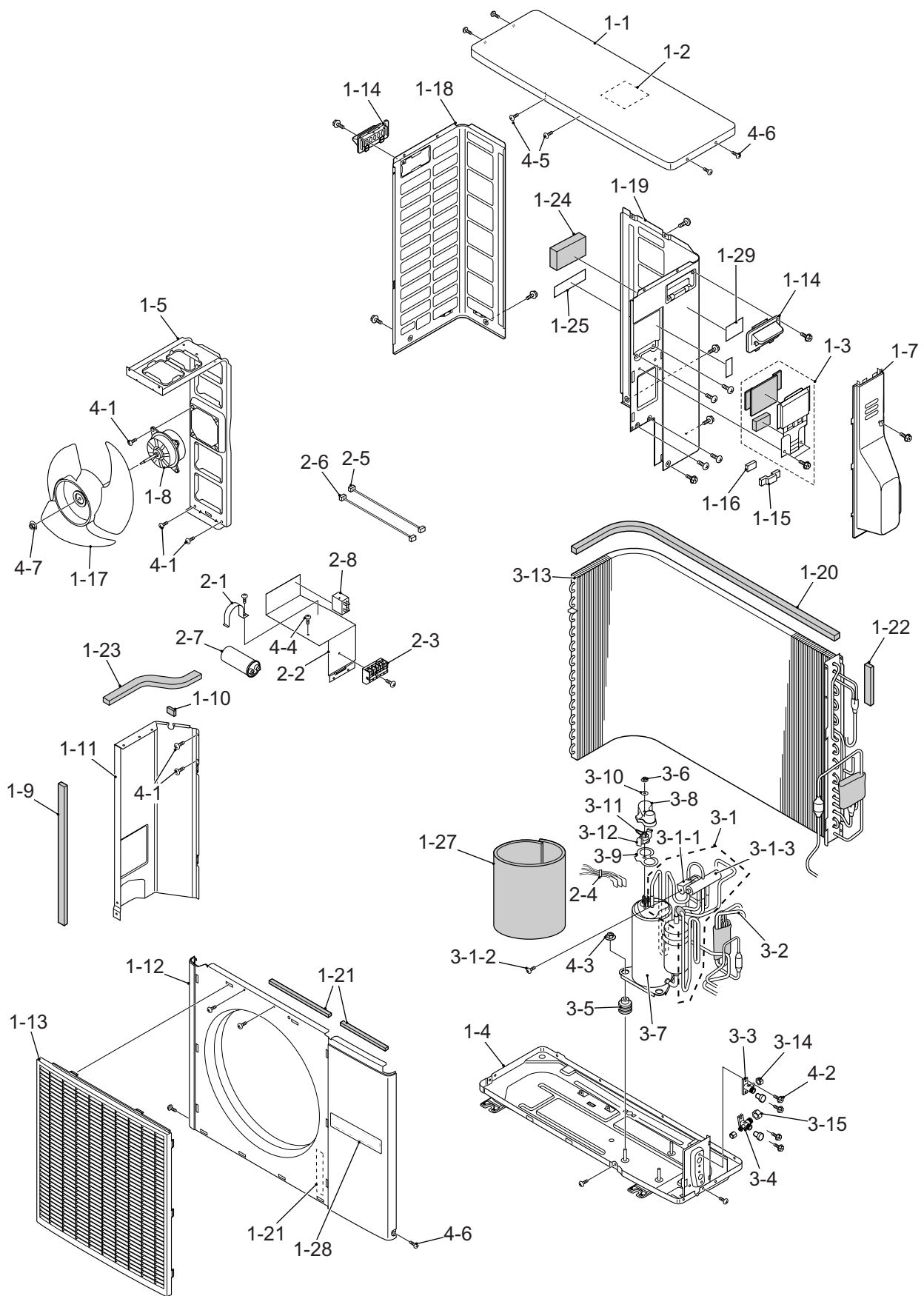
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[2] ACCESSORY PARTS					
4-1	CRMC-A665JBEZ	AZ			Remote control
4-2	UBATUA027JBE0	AE			Battery pack
4-3	LHLD-A721JBFA	AK			Cord holder
4-5	LX-NZA207JBEZ	AE			Special nut
4-6	TLAB-C800JBEZ	AK			EU energy label[AYAP7FHR]
4-6	TLAB-C801JBEZ	AK			EU energy label[AYAP9FHR]
4-8	TINSEA406JBRZ	AX			Operation manual
4-9	TINS-A876JBRZ	AK			Installation manual
4-10	LHLD-A484JBFA	AE			Drain joint

[3] INDOOR PACKING PARTS



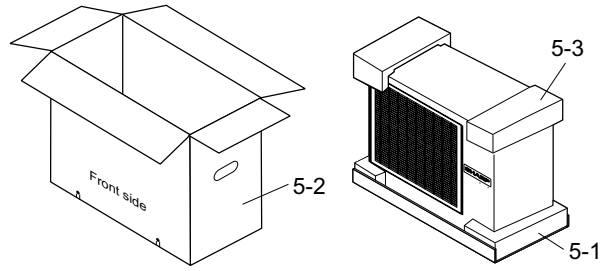
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[3] INDOOR PACKING PARTS					
90-1	CPADBA086JBKZ	AM			Packing pad ass'y
90-2	SPAKCB832JBEZ	AT			Packing case[AYAP7FHR]
90-2	SPAKCB822JBEZ	AK			Packing case[AYAP9FHR]
[4] OTHER PARTS(INDOOR UNIT)					
1-2	QFS-1A001KKZZ	AD			Fuse
1-3	RH-IXA829JBZZ	AV			IC
1-4	RRMCUA003JBZZ	AM			Receiver unit

[5] OUTDOOR UNIT PARTS



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[5] OUTDOOR UNIT PARTS					
1-1	GCAB-A210JBTA	AS			Top table
1-2	TLABCC055JBRZ	AF			Wiring diagram[AEA7FHR]
1-2	TLABCC074JBRZ	AF			Wiring diagram[AEA9FHR]
1-3	CCOV-A130JBKZ	AM			Cover ass'y
1-4	CCHS-A919JBYA	BK			Base pan ass'y
1-5	LANGKA124JBPZ	AR			Fan motor angle
1-7	CFTA-A337JBKZ	BC			Side cover ass'y
1-8	CMOTLB181JBEZ	BH			Fan motor
1-9	PSEL-C834JBEZ	AK			Seal
1-10	PSEL-C895JBEZ	AF			Bulkhead seal C
1-11	PSKR-A288JBPZ	AX			Bulkhead
1-12	GCAB-A282JBTA	BC			Front panel
1-13	GGADPA004JBFA	AR			Fan guard
1-14	JHNDPA011JBFA	AS			Holder
1-15	LHLD-A573JBFA	AC			Cord clamp
1-16	LPLTPA026JBFA	AC			Cord clamp plate
1-17	NFANPA101JBEZ	AR			Propeller fan
1-18	PPLT-A385JBTA	AU			Side cover L
1-19	PPLT-A421JBTZ	AX			Side cover R[AEA9FHR]
1-19	PPLT-A392JBTA	AV			Side cover R[AEA7FHR]
1-20	PSEL-C837JBEZ	AE			Condenser seal[AEA7FHR]
1-20	PSEL-C850JBEZ	AF			Condensor seal[AEA9FHR]
1-21	PSEL-C838JBEZ	AC			F-panel seal
1-22	PSEL-C839JBEZ	AC			Insulator
1-23	PSEL-C867JBEZ	AF			Seal[AEA7FHR]
1-23	PSEL-C835JBEZ	AC			Seal[AEA9FHR]
1-24	PSEL-C870JBEZ	AD			Seal
1-25	PSEL-C871JBEZ	AD			Seal
1-27	PSPF-A941JBEZ	AV			Compressor cover[AEA7FHR]
1-27	PSPF-A946JBEZ	AV			Compressor cover[AEA9FHR]
1-28	TLABBA149JBRZ	AG			Sharp badge
1-29	TSPC-F038JBRZ	AK			Name badge[AEA7FHR]
1-29	TSPC-F057JBRZ	AK			Name badge[AEA9FHR]
2-1	LBNDKA062JBW0	AD			Capacitor clamp
2-2	PBOX-A447JBPZ	AR			Control box
2-3	QTANZA027JBZZ	AQ			Terminal board
2-4	QW-IZA082JBZZ	AP			Comp wiring[AEA7FHR]
2-4	QW-IZA089JBZZ	AN			Comp wiring[AEA9FHR]
2-5	QW-VZE889JBZZ	AF			Lead wire
2-6	QW-VZE890JBZZ	AF			Lead wire
2-7	RC-HZA517JBZZ	AX			Running capacitor[AEA7FHR]
2-7	RC-HZA516JBZZ	AZ			Running capacitor[AEA9FHR]
2-8	RC-HZA513JBZZ	AR			Fan motor capacitor
3-1	CVLV-A764JBKZ	BP			Reverse valve ass'y[AEA7FHR]
3-1	CVLV-A767JBKZ	BP			Reverse valve ass'y[AEA9FHR]
3-1-1	CCIL-A122JBEZ	AU			Coil
3-1-2	LX-BZA268JBEZ	AB			Special screw
3-1-3	PVLVXA052JBEZ	BB			Reverse valve
3-2	CCPY-A189JBKZ	BB			Capillary ass'y[AEA7FHR]
3-2	CCPY-A190JBKZ	BB			Capillary ass'y[AEA9FHR]
3-3	DVLV-A530JBKZ	AT			2way valve unit
3-4	DVLV-A529JBKZ	AW			3way valve unit
3-5	GLEG-A123JBEZ	AN			Compressor cushion[AEA7FHR]
3-5	GLEG-A103JBE0	AG			Compressor cushion[AEA9FHR]
3-6	LX-NZA002JBE0	AA			Special nut[AEA7FHR]
3-6	LX-NZA148JBE0	AD			Frang nut[AEA9FHR]
3-7	PCMPRA472JBEZ	CD			Compressor[AEA7FHR]
3-7	PCMPRA473JBEZ	CB			Compressor[AEA9FHR]
3-8	PCOV-A002JBE0	AE			Terminal cover[AEA7FHR]
3-8	PCOV-A371JBE0	AF			Terminal cover[AEA9FHR]
3-9	PSEL-A006JBE0	AC			Terminal gasket[AEA7FHR]
3-9	PSEL-B160JBE0	AH			Terminal gasket[AEA9FHR]
3-10	PSEL-B161JBE0	AH			Gasket washer[AEA9FHR]
3-11	RHOG-A236JBZZ	AZ			Overload relay[AEA7FHR]
3-11	RHOG-A237JBZZ	AV			Overload relay[AEA9FHR]
3-12	MSPR-A005JBE0	AB			Protector spring[AEA7FHR]
3-12	MSPR-A114JBE0	AF			Protector spring[AEA9FHR]
3-13	DCON-A284JBPZ	BU			Condenser[AEA7FHR]
3-13	DCON-A288JBPZ	CA			Condenser[AEA9FHR]
3-14	PSEN-A044JBKZ	AG			Flare nut ass'y
3-15	PSEN-A045JBKZ	AK			Flare nut ass'y
4-1	LX-BZA351JBEZ	AD			Special screw
4-2	LX-BZA355JBEZ	AE			Special screw
4-3	LX-NZA313JBEZ	AE			Special nut
4-4	LX-BZA075JBE0	AA			Special screw
4-5	LX-BZA353JBEZ	AD			Tapping screw
4-6	LX-BZA364JBEZ	AC			Special screw
4-7	LX-NZA326JBEZ	AA			Special nut

[6] PARTPACKING PARTS(OUTDOOR UNIT)



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[6] PARTPACKING PARTS(OUTDOOR UNIT)					
5-1	CPADBA774YDKZ	AN			Bottom pad ass'y
5-2	SPAKCB826JBEZ	AX			Packing case[AEA7FHR]
5-2	SPAKCB848JBEZ	AX			Packing case[AEA9FHR]
5-3	CPADBA093JBKZ	AR			Top pad ass'y

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
[C]				
CCHS-A919JBYA	5-1-4	BK		
CCIL-A122JBZ	5-3-1-1	AU		
CCOV-A130JBKZ	5-1-3	AM		
CCPY-A189JBKZ	5-3-2	BB		
CCPY-A190JBKZ	5-3-2	BB		
CEVA-A115JBKZ	1-3-2	BU		
CFTA-A337JBKZ	5-1-7	BC		
CHLD-A067JBK0	1-2-1	AL		
CHOS-A018JBKZ	1-2-20-1	AN		
CKITTA071AKKZ	1-2-20-8	BD		
CMOT-A443JBKZ	1-2-3	BE		
CMOTLB181JBEZ	5-1-8	BH		
CPADBA086JBKZ	3-90-1	AM		
CPADBA093JBKZ	6-5-3	AR		
CPADBA774YDKZ	6-5-1	AN		
CPIPCA918JBKZ	1-3-1	AZ		
CPNL-A515JBKZ	1-2-21	BC		
CRMC-A665JBEZ	2-4-1	AZ		
CSRA-A624JBKZ	1-2-20	BX		
CVLV-A764JBKZ	5-3-1	BP		
CVLV-A767JBKZ	5-3-1	BP		
[D]				
DCHS-A530JBKZ	1-2-10	BG		
DCON-A284JBPZ	5-3-13	BU		
DCON-A288JBPZ	5-3-13	CA		
DPWBFA396JBKZ	1-1-1	BM		
DPWBFA411JBKZ	1-1-1	BM		
DSRA-A265JBKZ	1-2-20-4	BL		
DVLV-A529JBKZ	5-3-4	AW		
DVLV-A530JBKZ	5-3-3	AT		
DWAK-A915JBKZ	1-2-22	BB		
[F]				
FCOV-A193JBFA	1-2-22-5	AF		
FCOV-A194JBFA	1-2-22-4	AK		
FCOV-A195JBFA	1-2-22-6	AK		
FPWBFA586JBKZ	1-1-10	AZ		
[G]				
GCAB-A210JBTA	5-1-1	AS		
GCAB-A282JBTA	5-1-12	BC		
GGADPA004JBFA	5-1-13	AR		
GLEG-A103JBE0	5-3-5	AG		
GLEG-A123JBEZ	5-3-5	AN		
GWAK-A317JBFA	1-2-22-1	AZ		
[H]				
HBDG-A002KKEA	1-2-21-1	AE		
HDECQA125JBRB	1-2-22-3	AZ		
HPNL-A721JBRA	1-2-21-2	AU		
[J]				
JHNDPA011JBFA	5-1-14	AS		
[L]				
LANGKA124JBPZ	5-1-5	AR		
LBNDKA062JBW0	5-2-1	AD		
LHLD-A197JBFM	1-2-20-14	AC		
LHLD-A303JBFA	1-2-12	AD		
LHLD-A478JBFZ	1-2-11	AF		
LHLD-A484JBFA	2-4-10	AE		
LHLD-A500JBFZ	1-2-8	AC		
LHLD-A573JBFA	5-1-15	AC		
LHLD-A716JBFA	1-2-14	AF		
LHLD-A719JBFA	1-2-20-9	AF		
LHLD-A720JBFA	1-2-20-7	AK		
LHLD-A721JBFA	2-4-3	AK		
LHLD-A756JBFA	1-2-18	AF		
LPFT-A151JBFZ	1-2-20-11	AF		
LPFT-A152JBFZ	1-2-20-5	AF		
LPLT-A058JBPZ	1-2-20-1B	AC		
LPLTPA026JBFA	5-1-16	AC		
LX-BZA075JBE0	5-4-4	AA		
LX-BZA268JBEZ	5-3-1-2	AB		
LX-BZA351JBEZ	5-4-1	AD		
LX-BZA353JBEZ	5-4-5	AD		
LX-BZA355JBEZ	5-4-2	AE		
LX-BZA364JBEZ	5-4-6	AC		
LX-NZA002JBE0	5-3-6	AA		
LX-NZA148JBE0	5-3-6	AD		
LX-NZA207JBEZ	2-4-5	AE		
LX-NZA313JBEZ	5-4-3	AE		
LX-NZA326JBEZ	5-4-7	AA		

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
[M]				
MJNTPA082JBFA	1-2-20-3	AC		
MLOV-A299JBFA	1-2-20-2	AC		
MLOV-A396JBFA	1-2-20-12	AX		
MSPR-A005JBE0	5-3-12	AB		
MSPR-A114JBE0	5-3-12	AF		
[N]				
NBRG-A026JBFA	1-2-20-13	AB		
NFANCA099JBEZ	1-2-2	BC		
NFANPA101JBEZ	5-1-17	AR		
[P]				
PBOX-A442JBFA	1-2-9	BH		
PBOX-A447JBPZ	5-2-2	AR		
PCMPRA472JBEZ	5-3-7	CD		
PCMPRA473JBEZ	5-3-7	CB		
PCOV-A002JBE0	5-3-8	AE		
PCOV-A300JBF0	1-2-24	AB		
PCOV-A371JBE0	5-3-8	AF		
PCOV-B072JBFZ	1-2-4	AN		
PCOV-B073JBFA	1-2-6	AN		
PCOV-B074JBPZ	1-2-7	AM		
PCOV-B075JBPZ	1-2-17	AR		
PCOV-B076JBFZ	1-2-15	AF		
PCOV-B077JBFA	1-2-22-2	AK		
PCOV-B144JBPZ	1-2-19	AK		
PFILMA204JBEZ	1-2-16	AM		
PGUMMA110JBE0	1-2-20-6	AD		
PHOS-A044JBEZ	1-2-20-1A	AM		
PPLT-A385JBTA	5-1-18	AU		
PPLT-A392JBTA	5-1-19	AV		
PPLT-A421JBTZ	5-1-19	AX		
PPLTNA081JBPZ	1-2-13	AX		
PSEL-A006JBE0	5-3-9	AC		
PSEL-B160JBE0	5-3-9	AH		
PSEL-B161JBE0	5-3-10	AH		
PSEL-C834JBEZ	5-1-9	AK		
PSEL-C835JBEZ	5-1-23	AC		
PSEL-C837JBEZ	5-1-20	AE		
PSEL-C838JBEZ	5-1-21	AC		
PSEL-C839JBEZ	5-1-22	AC		
PSEL-C850JBEZ	5-1-20	AF		
PSEL-C867JBEZ	5-1-23	AF		
PSEL-C870JBEZ	5-1-24	AD		
PSEL-C871JBEZ	5-1-25	AD		
PSEL-C895JBEZ	5-1-10	AF		
PSEN-A044JBKZ	5-3-14	AG		
PSEN-A045JBKZ	5-3-15	AK		
PSKR-A288JBPZ	5-1-11	AX		
PSPF-A941JBEZ	5-1-27	AV		
PSPF-A946JBEZ	5-1-27	AV		
PVLV-0341JBE0	1-3-3	AG		
PVLV-0342JBE0	1-3-4	AH		
PVLVXA052JBEZ	5-3-1-3	BB		
[Q]				
QACC-A305JBZZ	1-1-5	AN		
QFS-IA001KKZZ	4-1-2	AD		
QTANZA022JBZZ	1-1-9	AH		
QTANZA027JBZZ	1-1-6	AQ		
"	5-2-3	AQ		
QW-IZA082JBZZ	5-2-4	AP		
QW-IZA089JBZZ	5-2-4	AN		
QW-VZE874JBZZ	1-1-7	AF		
QW-VZE889JBZZ	5-2-5	AF		
QW-VZE890JBZZ	5-2-6	AF		
[R]				
RC-HZA513JBZZ	5-2-8	AR		
RC-HZA516JBZZ	5-2-7	AZ		
RC-HZA517JBZZ	5-2-7	AX		
RH-IXA829JBZZ	4-1-3	AV		
RHOG-A236JBZZ	5-3-11	AZ		
RHOG-A237JBZZ	5-3-11	AV		
RMOT-A115JBEZ	1-2-20-10	AS		
RRMUA003JBZZ	4-1-4	AM		
RTHM-A300JBE0	1-1-8	AN		
[S]				
SPAKCB822JBEZ	3-90-2	AK		
SPAKCB826JBEZ	6-5-2	AX		
SPAKCB832JBEZ	3-90-2	AT		
SPAKCB848JBEZ	6-5-2	AX		

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
[T]				
TINS-A876JBRZ	2-4-9	AK		
TINSE4406JBRZ	2-4-8	AX		
TLABBA149JBRZ	5-1-28	AG		
TLAB-C800JBEZ	2-4-6	AK		
TLAB-C801JBEZ	2-4-6	AK		
TLABCC053JBRZ	1-2-23	AF		
TLABCC055JBRZ	5-1-2	AF		
TLABCC074JBRZ	5-1-2	AF		
TSPC-F038JBRZ	5-1-29	AK		
TSPC-F057JBRZ	5-1-29	AK		
[U]				
UBATUA027JBE0	2-4-2	AE		

SHARP