

SAMSUNG

ROOM AIR CONDITIONER

AW078AA

AW069AB

AW088AA

AW089AB

AW108AA

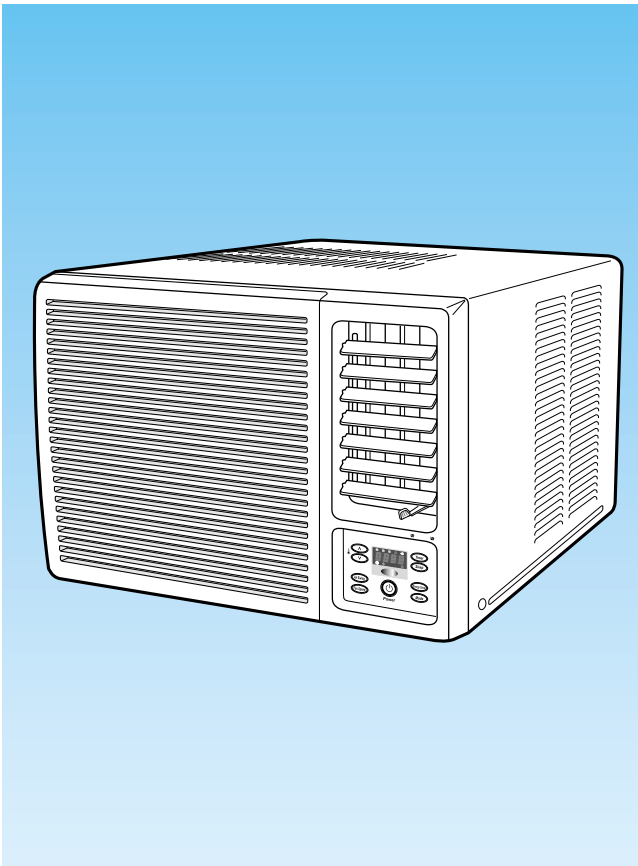
AW109AB

AW128AA

AW129AB

SERVICE *Manual*

AIR CONDITIONER



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1. Precautions

1. **Warning:** Prior to repair, disconnect the power cord from the circuit breaker.
2. **Use proper parts:** Use only exact replacement parts. (Also, we recommend replacing parts rather than repairing them.)
3. **Use the proper tools:** Use the proper tools and test equipment, and know how to use equipment may cause problems later-intermittent contact, for example.
4. **Power Cord:** Prior to repair, check the power cord and replace it if necessary.
5. **Avoid using an extension cord, and avoid tapping into a power cord.** This practice may result in malfunction or fire.
6. **After completing repairs and reassembly, check the insulation resistance.**
Procedure: Prior to applying power, measure the resistance between the power cord and the ground terminal. The resistance must be greater than 30 megaohms.
7. **Make sure that the grounds are adequate.**
8. **Make sure that the installation conditions are satisfactory.**
Relocate the unit if necessary.
9. **Keep children away from the unit while it is being repaired.**
10. **Be sure to clean the unit and its surrounding area.**

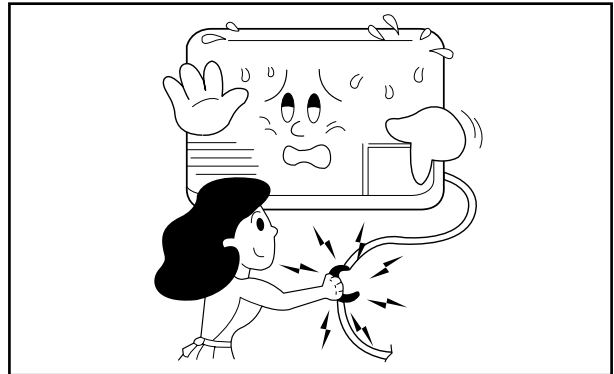


Fig. 1-1 Avoid Dangerous Contact

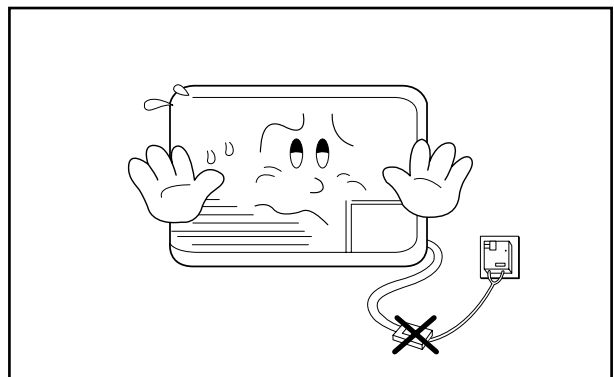


Fig. 1-2 No Tapping and No Extension Cords

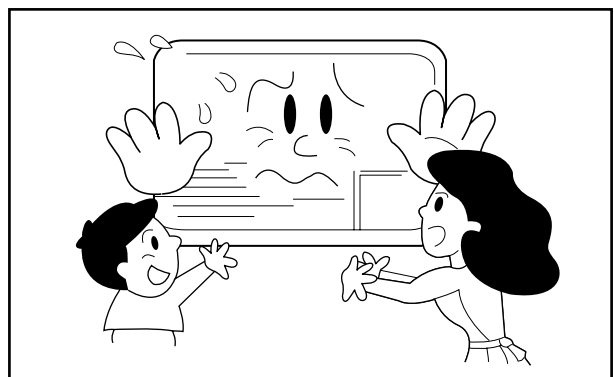


Fig. 1-3 No Kids Nearby!

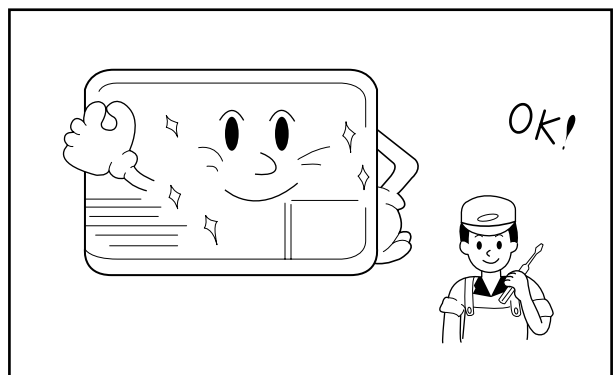


Fig. 1-4 Clean the Unit

Notice : The symbol of model name

Type	Model Name
A	AW078AA AW088AA AW069AB AW089AB
B	AW109AB AW128AA AW129AB
C	AW108AA

2. Product Specifications

2-1 Table

Item	Unit of Measure	AW069AB	AW078AA	AW088AA	AW089AB
Type	-	WINDOW			
Dimensions: (Width Height Depth)	mm	520 345 485			
Packing size: (Width Height Depth)	mm	571 454 546			
Voltage	Volt	115			
Phase	-	Single			
Frequency	Hz	60			
Operating Current	A	5.5	6.8	7.4	6.9
Power Consumption	W	590	720	820	740
Refrigerant Type	FREON	R22			
Refrigerant Charge	g	440	365	380	510
Capacity	BTU/h	6300	7200	8000	8000
EER	BTU/h.W	10.7	10.0	9.8	10.8
Net Weight	kg	29	29	29	29
Condenser	Row	3 15	2 15	2 15	3 15
Condenser Fan	Type	Propeller Fan			
Evaporator	Row	2 14	2 14	2 14	3 14
Evaporator Fan	Type	Blower			
Fan Motor	Model	YGN55-6F	YGN55-6E	YGN55-6B	YGN55-6B
Compressor(Rotary)	Model	44C062HU1EA	44A072HW1EB	44A080HU1EB	44A076HU1EB
Overload Protect	-	MRA12040-12008	MRA98706-12008	MRA12083-12008	MRA12083-12008
Compressor Capacitor	μ F/VAC	35/370	25/370	35/370	35/370
Fan Motor Capacitor	μ F/VAC	5/250	6/450	6/250	6/250
Fan speed	RPM	780/750/670	780/720/650	880/780/710	880/780/710
Thermo Control	-	THERMISTOR			
Air Swing	Model	M2CK59ZT79-H			

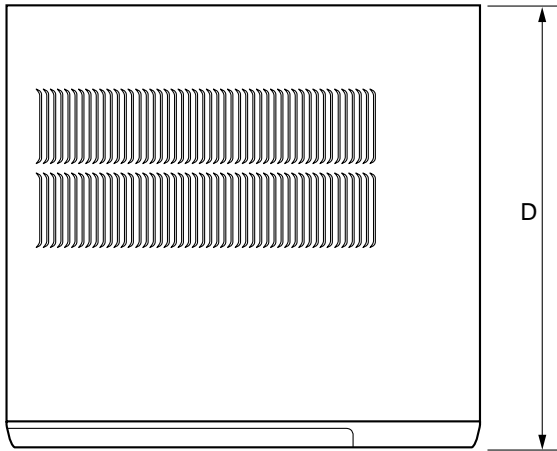
Table (cont.)

Item	Unit of Measure	AW108AA	AW109AB	AW128AA	AW129AB	Remarks
Type		WINDOW				
Dimensions: (Width Height Depth)	mm	550 345 485	660 394 595			
Packing size: (Width Height Depth)	mm	590 468 578	728 459 647			
Voltage	Volt	115				
Phase	-	Single				
Frequency	Hz	60				
Operating Current	A	9.2	8.7	11.7	11.2	
Power Consumption	W	1020	930	1250	1200	
Refrigerant Type	FREON	R22				
Refrigerant Charge	g	500	610	580	590	
Capacity	BTU/h	10000	10000	12200	12900	
EER	BTU/h.W	9.8	10.8	9.8	10.8	
Net Weight	kg	35	43	43	43	
Condenser	Row	3 15	3 17	3 17	3 17	
Condenser Fan	Type	Propeller Fan				
Evaporator	Row	2 12	2 16	3 16	2 14	
Evaporator Fan	Type	Blower				
Fan Motor	Model	YGN61-6A	YFK70-6A	YGN60-6B	YGN60-6G	
Compressor(Rotary)	Model	44B098HU2EF	44B098HU2EF	44B124HX1EL	44B124HX1EL	
Overload Protect	-	MRA12132-12007	MRA12132-12007	MRA98693-12007	MRA98693-12007	
Compressor Capacitor	μ F/VAC	45/370	45/370	50/370	50/370	
Fan Motor Capacitor	μ F/VAC	15/250	8/250	15/250	15/250	
Fan speed	RPM	1020/970/900	880/800/740	880/780/710	880/780/710	
Thermo Control	-	THERMISTOR				
Air Swing	Model	M2CK59ZT79-H				

2-2 Dimensions

2-2-1 Main Unit

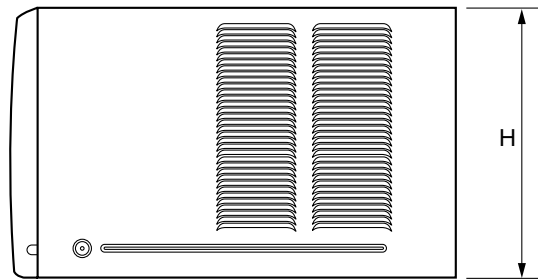
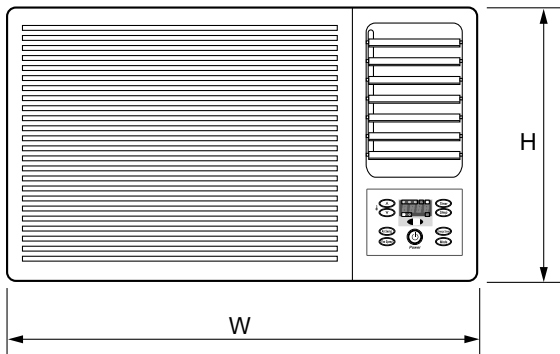
(Unit : mm)



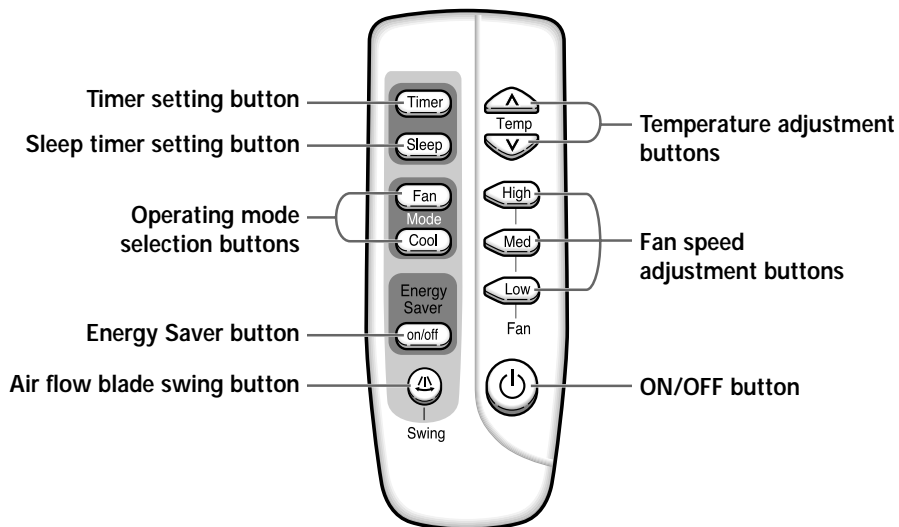
Type	W	H	D
A	520	345	485
B	600	394	595
C	550	345	485

Front view

Side view



2-2-2 Remote Control



MEMO

3. Installation and Operating Instructions

3-1 Installation

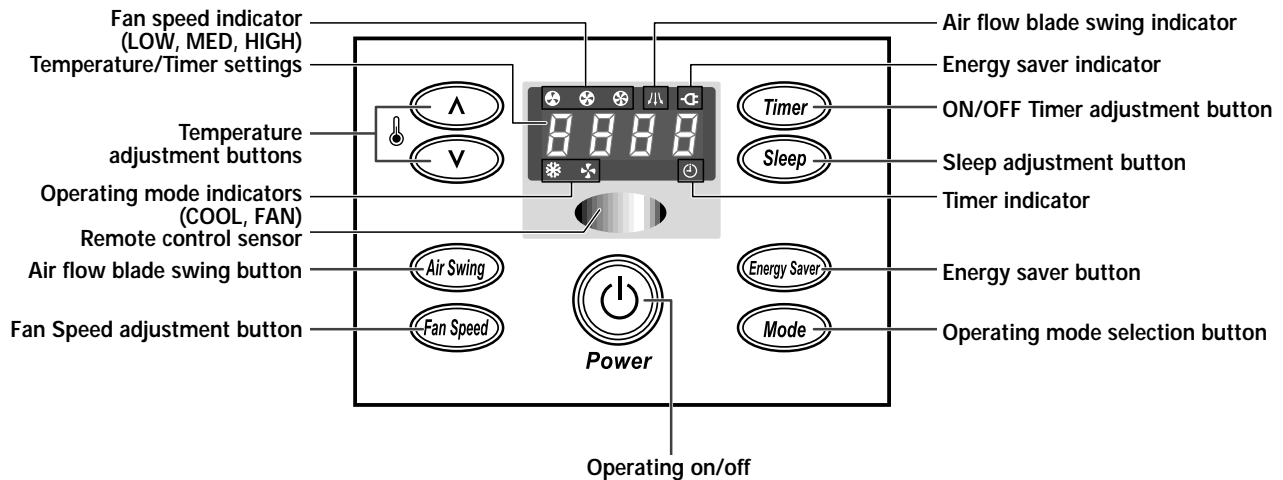
3-1-1 Selecting Area for Installation

1. Make sure that you install the unit in an area providing good ventilation. The air conditioner must not be blocked by any obstacle affecting the air flow near the air inlet and air outlet.
2. Make sure that you install the unit in an area that allow good air handling. The installation area must be able to endure vibration from the unit.
3. Make sure that you install the unit away from heat or vapor.
4. Make sure that you install the unit in an area which is cool and has adequate space.
5. Make sure that you install the unit in an area away from TVs, audio units, cordless phones, fluorescent lighting fixtures and other electrical appliances (obtain a clearance of at least one meter).
6. Make sure that you install the unit in an area which provides easy drainage for condensed water.
7. Make sure that you install the unit in an area not exposed to rain or direct sunlight. (Install a separate sunblind if exposed to direct sunlight.)
8. Make sure that you install the unit in an area allowing good air movement. Do not install it in a space that would cause noise amplification of noise.
9. Fix the unit firmly if mounted in a high place.

Caution:

Do not use the air conditioner in the following environments : greasy areas (including areas near machines), or marine areas. Contact your local dealer for advice.

3-2 Function Description



3-2-1 Cooling operation mode

The compressor is turned on and off according to the ambient temperature and set temperature.

- 1) Compressor on and off control
 - Compressor on and off control according to the ambient temperature
 - * The compressor is turned off when "ambient temperature = set temperature"
 - * The compressor is turned on when "ambient temperature = set temperature + 1°C"
- 2) Default value after power reset → set temperature = 24°C
Fan speed = High
- 3) Set temperature indicating (setting) range : 1°C interval from 18°C to 30°C.

3-2-2 Fan operation mode

- 1) If "Fan operation mode" signal is received from remote or panel.
 - the compressor is immediately turned off and only fan motor is operated at set blowing speed.
 - it changes such as "High → Med → Low → High" (if Fan speed is selected).
- 2) The initial Fan motor speed is set to "High".
- 3) The set temperature can not be indicated and set.

3-2-3 Energy saver operation mode

- * If the compressor turn off at the cooling operation, the fan motor turn off after operation during the fixation time only, and operation that energy saver by turn off the fixation time only, and operation that energy saver by turn off the motor continuously before the condition of the compressor on.
- * The fan motor is not operated at flow wind operation.
- * Energy saver operation specification at the cooling operation.
 - 1) Fan motor control in compressor on : operate with setting wind speed
 - 2) Fan motor control in compressor off : After compressor off, the fan motor is operated breeze for 2 minutes and then it turn off.
 - 3) After the fan motor off, the compressor and fan motor is operated normally when the compressor on.

3-2-4 Sleep operation mode

- 1) Enable to sleep operation only when cooling operation.
- 2) First, 7-SEG LED DISPLAY "SLEEP" while 15 second, Second, 7-SEG LED DISPLAY "8Hr"
And, automatically SET OFF after operated while 8 Hour
- 3) If sleep operation, setting Temperature rise 1°C after 1 Hour
- 4) ON TIMER operation, not operation, ENERGY SAVER operation, not sleep operation.

3-2-5 Air flow blade swing motor operation

- 1) The Air flow blade swing motor is turned on and off according to Air flow blade swing operation in remote control or panel, if SET is cooling or Fan operation mode.
- 2) If the operation mode is "ENERGY SAVER", in case of fan motor being turned off Air flow blade swing motor is immediately turned off.

3-2-6 LED display indication in case of error detection

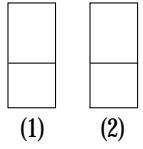
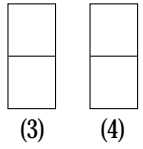
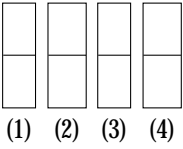
ERROR OPERATION	7-SEG LED DISPLAY
ROOM THERMISTOR (OPEN or SHORT)	E1 displayed

- 1) Set operation in case of error occurrence.
 - Malfunction of each temperature sensor (open, short)
 - Error mode display, warning sound.
 - The operation status is off.

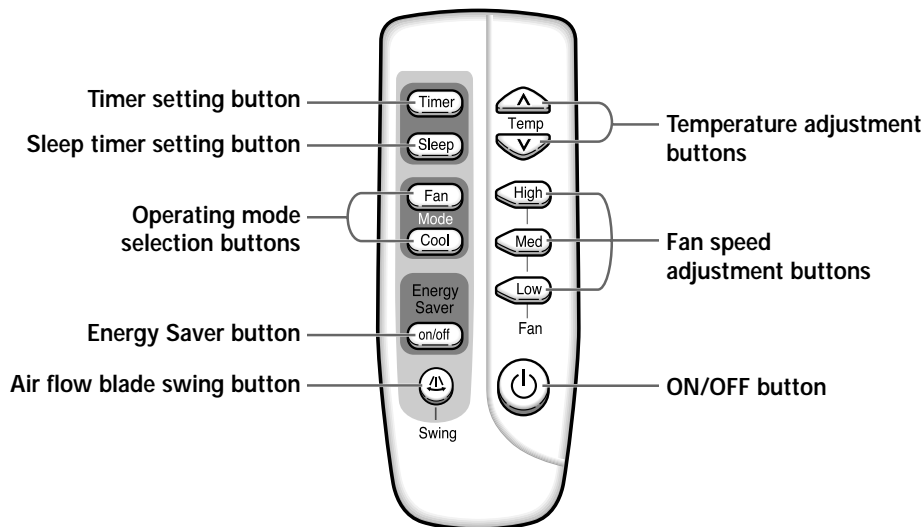
3-2-7 Panel key operation

Key discription Key name	Key operational function
POWER	Operation start and stop * First ON = operation start, second ON = operation stop - Selected as "OFF -> COOL or FAN". (DEFAULT=OFF) * Continuous operation is not available.
Mode	Operation mode change * at every ON - Selected as "COOL -> FAN". (Default=COOL) * If operation is OFF, it is considered as an invalid key. * Continuous operation is not available.
Fan speed	Fan motor speed setting * at every ON - Selected as "HIGH -> MED -> LOW -> HIGH". (DEFAULT=HIGH)
Temperature (▲▼)	Currently displayed set temperature increase/decrease * At every pressing, the set temperature is changed by 1°C (increase(▲) : 18°C → 19°C → ... → 29°C → 30°C) (decrease(▼) : 24°C → 23°C → ... → 17°C → 18°C) * In case of the set temperature of 30°C, when the "increase" key is pressed temperature does not increase any more. * In case of the set temperature of 18°C, when the "decrease" key is pressed temperature does not decrease any more. * In case of above situation, when "increase/decrease" key is pressed by remocon, warning sound is generated. * If operation is OFF, it is considered as an invalid key. * In case of "FAN" mode operation, it is considered as an invalid key. * Continuous operation is available.
Circulaire	Circulaire motor operation and stop * Once ON=Circulaire motor operation. Another ON-Circulaire motor stop. * Continuous operation is not available. * In case of operation stop, when the fan motor is turned off it is considered as an invalid key.
Timer (ON/OFF)	Setting the on/off timer * Can set "OFF TIMER HOUR" if set is operation * Can set "ON TIMER HOUR" if set is not operation * Once ON = standby setting TIMER : "--" displayed * In case of key pressing in status of standby setting ON/OFF TIMER (—Hr → 1Hr → 2Hr → ... -> 23Hr → 24Hr) * If press TIMER key countinuously operate such the lower part (—Hr → 1Hr → 2Hr → ... → 24Hr → -Hr) * Continuous operation is available.
Sleep	SLEEP mode on and off * Once ON=SLEEP mode on, Another ON=SLEEP mode off • Continuous operation is not abailable • Operation off, on timer Operation, save operation , not key operation * Not SLEEP operation is FAN mode
Energy Saver	Power save mode on and off * Once ON=Power save mode on, Another ON=Power save mode off * Continuous operation is not available. * If operation is OFF, it is considered as an invalid key.

3-2-8 LED lamp operation specifications

LAMP name	Operations specifications
COOLING	The mode is set to "COOL" → ON Others → OFF
FAN	The mode is set to "FAN" → ON Others → OFF
HIGH	The mode is set to "HIGH" → ON Others → OFF
MED	The mode is set to "MED" → ON Others → OFF
LOW	The fan speed is set to "LOW" → ON Others → OFF
TIMER	The mode is set to "TIMER" → ON Others → OFF
ENER SAVER	The mode is set to "ENERGY SAVER" → ON Others → OFF
CIRCULAIRE	The mode is set to "CIRCULAIRE" → ON Others → OFF
	<p>In case of set temperature display → NO. (1) 7-SEG LED DISPLAY indicates temperature of the tens digit → NO. (2) 7-SEG LED DISPLAY indicates temperature of the units digit</p> <p>In case of time display → NO. (1) 7-SEG LED DISPLAY indicates time of the tens digit → NO. (2) 7-SEG LED DISPLAY indicates time of the units digit</p>
	<p>In case of set temperature display → NO. (3) 7-SEG LED DISPLAY indicates temperature unit(°) → NO. (4) 7-SEG LED DISPLAY indicates temperature unit(C)</p> <p>In case of time display → NO. (3) 7-SEG LED DISPLAY indicates time unit(H) of the tens digit → NO. (4) 7-SEG LED DISPLAY indicates time unit(r) of the units digit</p>
	<p>First, 7-SEG LED DISPLAY "SLEEP" while 15 second, Second, 7-SEG LED DISPLAY "8Hr"</p>

3-3 Remocon Control



3-3-1 Remocon key operation

- 1) In case of pressing "POWER" key, operation start and stop.
- 2) In case of pressing "COOL" key, cool mode operation start.
- 3) In case of pressing "FAN" key, fan mode operation start.
- 4) In case of pressing "HIGH" key, fan motor operates high speed.
- 5) In case of pressing "MED" key, fan motor operates mid speed.
- 6) In case of pressing "LOW" key, fan motor operates low speed.
- 7) In case of pressing "ENERGY SAVER" on/off key, set operates as power saving mode.
- 8) In case of pressing "▲" key, set temperature increase by 1°C(18°C ~ 30°C).
- 9) In case of pressing "▼" key, set temperature decrease by 1°C(30°C ~ 18°C).
- 10) In case of pressing "TIMER" key, the convenient reserve TIMER time increase by 1 Hr (1Hr ~ 24Hr).
- 11) In case of pressing "SLEEP" key, SLEEP operates.
- 12) In case of power off, all keys except POWER key are considered as an invalid key.

3-3-2 Resistor values table of "ROOM THERMISTOR" for each temperature

<Room thermistor>

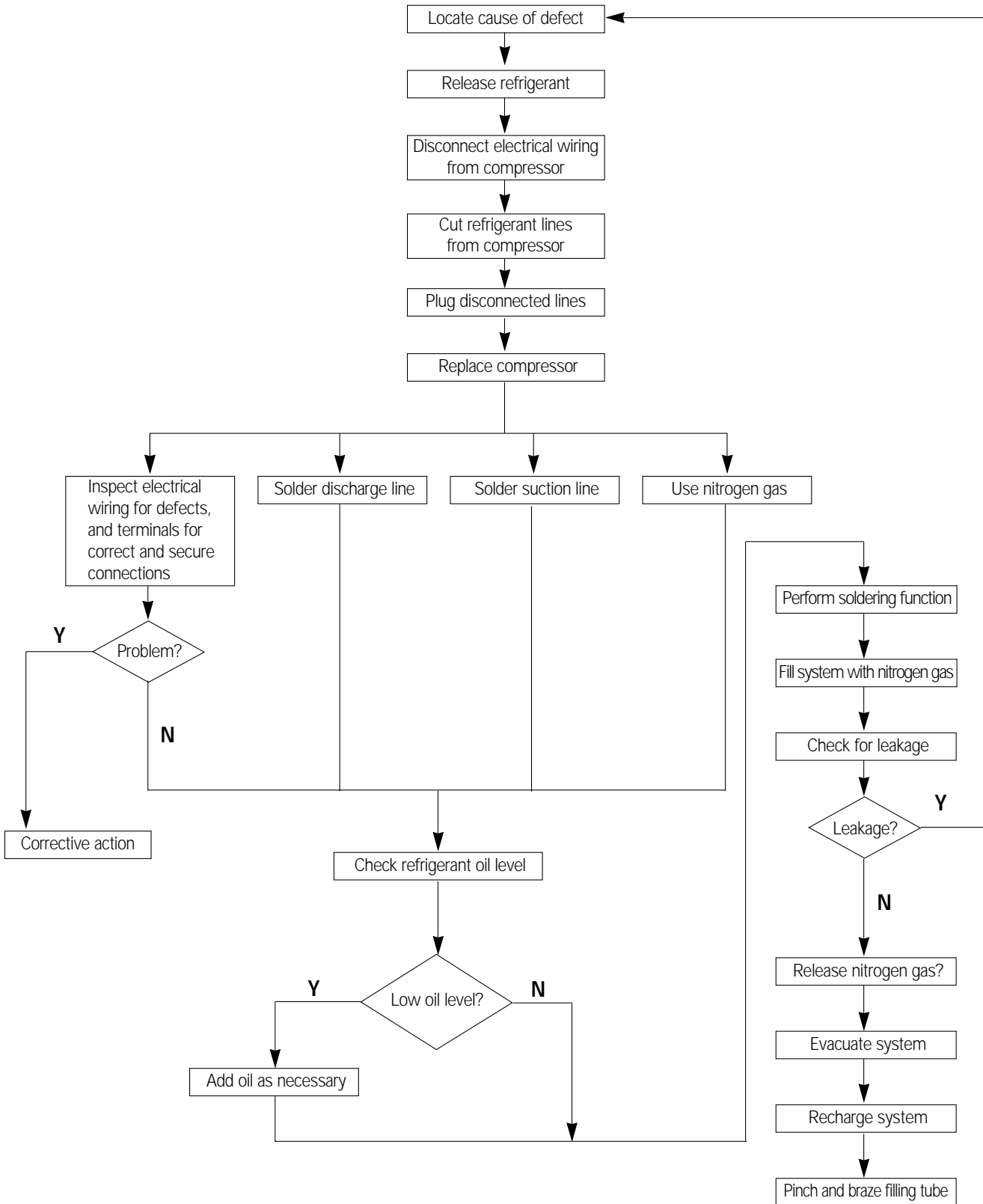
Temperature [°C]	THERMISTOR RESISTOR [Kohm] ±1%
70	2.229
69	2.296
68	2.365
67	2.437
66	2.512
65	2.589
64	2.669
63	2.752
62	2.838
61	2.928
60	3.021
59	3.116
58	3.216
57	3.319
56	3.426
55	3.537
54	3.652
53	3.772
52	3.897
51	4.026
50	4.161
49	4.300
48	4.444
47	4.594
46	4.749
45	4.912
44	5.080
43	5.256
42	5.439
41	5.630
40	5.828
39	6.033
38	6.246
37	6.468
36	6.699
35	6.941
34	7.192
33	7.455
32	7.729
31	8.015
30	8.313

Temperature [°C]	THERMISTOR RESISTOR [Kohm] ±1%
29	8.622
28	8.944
27	9.281
26	9.632
25	10.000
24	10.380
23	10.780
22	11.200
21	11.630
20	12.090
19	12.560
18	13.060
17	13.570
16	14.120
15	14.680
14	15.280
13	15.900
12	16.550
11	17.240
10	17.960
9	18.700
8	19.480
7	20.290
6	21.150
5	22.050
4	22.990
3	23.900
2	25.030
1	26.130
0	27.280
-1	28.470
-2	29.720
-3	31.040
-4	32.430
-5	33.890
-6	35.430
-7	37.050
-8	38.760
-9	40.560

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4. Disassembly and Reassembly

4-1 Compressor Replacement Flow Chart



4-2 Checking the oil

Fill the transparent container with 10cc of oil, and then conduct the test.

4-2-1 Oil quality

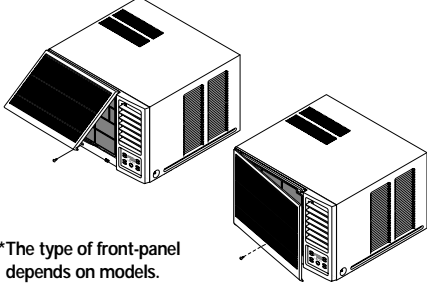
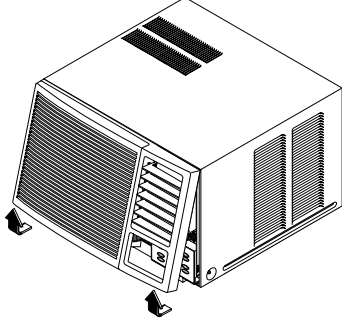
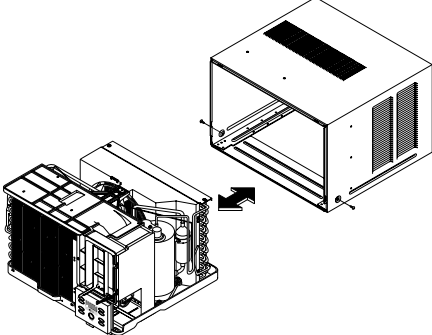
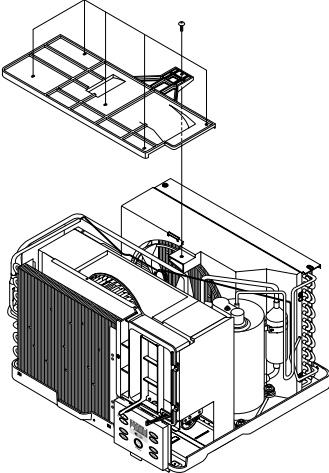
Condition of Refrigerant Cycle	Oil Condition		Remarks
	Color	Odor	
Normal	Straw Yellow	No Odor	Return with the system
Over-heated	Brown Color	-	Change the oil
Compressor Damage	Dark Brown	Pungent oil	Change the oil

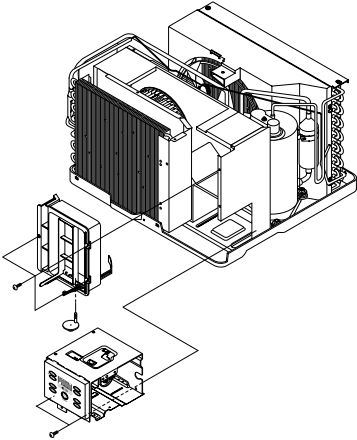
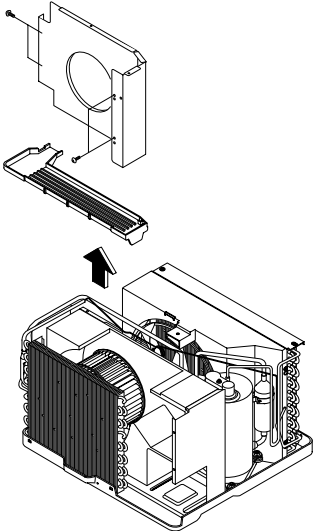
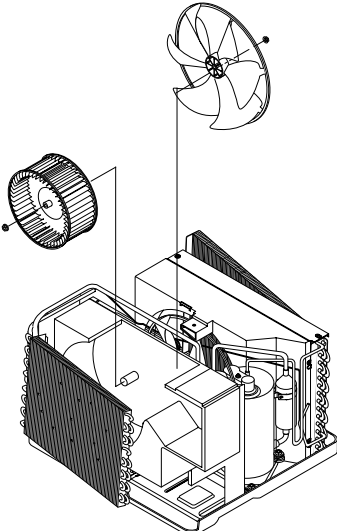
4-2-2 Replacing and refilling the refrigerant oil

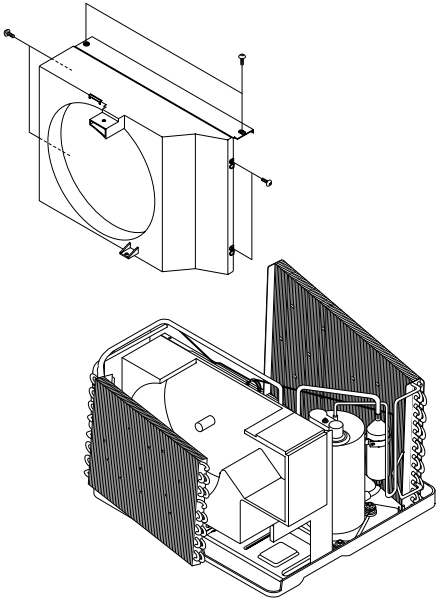
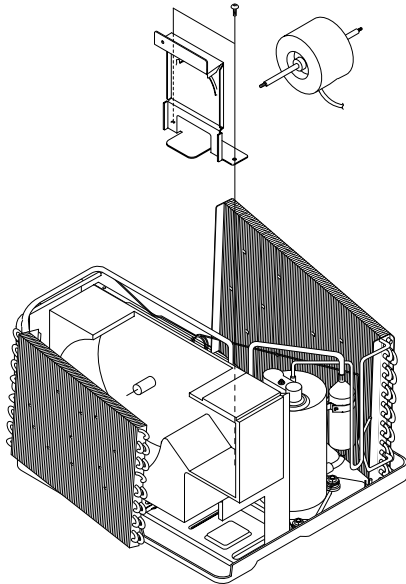
1. Change the compressor - DO NOT recharge the oil as the compressor itself is already charged.
2. Change the condenser add 50cc
3. Change the evaporator add 50cc
4. When the refrigerant is replaced add 30cc oil.
5. After vacuum is completed, the oil is filled through the high pressure side.
6. In the event of a refrigerant leak, generally it is not necessary to add oil.
(Unless the oil has leaked significantly.)

4-3 Disassembly and Reassembly Procedure (Type "A")

Stop operating the air conditioner, and pull out the power cord before repair.

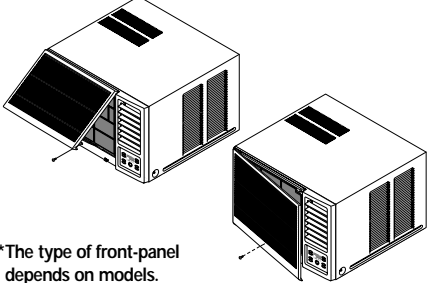
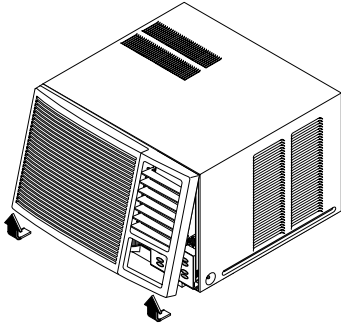
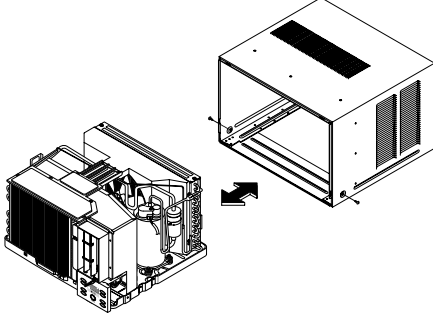
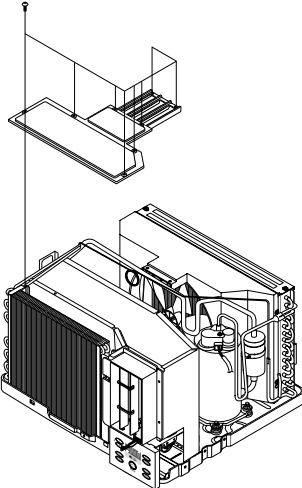
No.	Part name	Procedures	Remarks
①	Ass'y Grill	<ol style="list-style-type: none"> 1. Pull the panel front and remove the screw on the grille. 2. Hold the lower part of grill with two hands while pressing down on both sides of the lower part of the cabinet, pull it forward by about 30, and the then lift it up for removal. 	 
②	Ass'y Cabinet	<ol style="list-style-type: none"> 1. Remove the two screws both side cabinet. 2. Pull the front both side, and remove the unit from the cabinet. 	
③	Ass'y COVER EVAP	<ol style="list-style-type: none"> 1. Remove 6 screws on the COVER EVAP. 2. Remove the COVER EVAP. 	

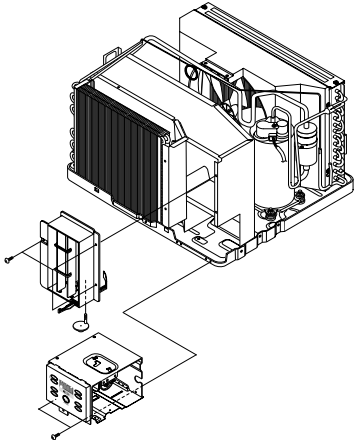
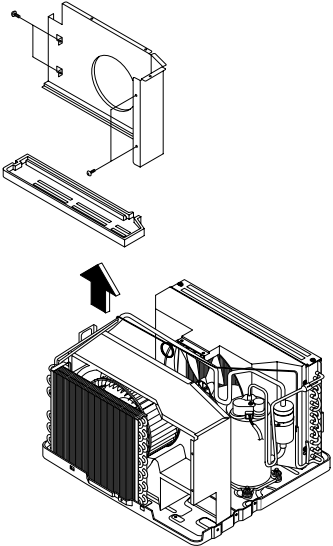
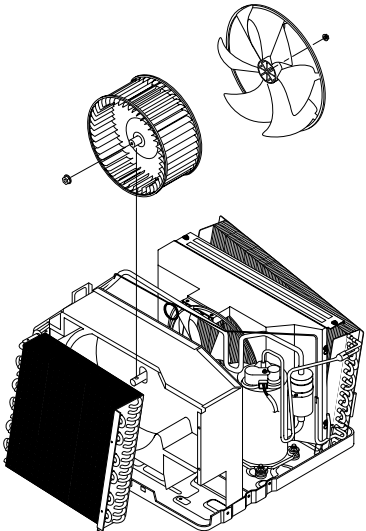
No.	Part name	Procedures	Remarks
④	Ass'y Control	<ol style="list-style-type: none"> 1. Remove the blade V(and arm blade). 2. Remove 3 screws on the FRAME BLADE. 3. Remove the FRAME BLADE. 4. Remove 1 screw under the Base pan, and earth wire screw. 5. Remove two lead wire assemblies. 6. Take out the control box forward. 	
⑤	PLATE EVAP CASING & TRAY DRAIN	<ol style="list-style-type: none"> 1. Remove 2 screws on the front side. 2. Remove 4 screws on the left side. 3. Pull up the PLATE EVAP CASING and TRAY DRAIN. 	
⑥	Blower & Propeller Fan	<ol style="list-style-type: none"> 1. Remove 2 screws on the rear side (Base pan), and 7 screws on the case cond. 2. Pull up the CONDENSER from the Base pan. 3. Remove the nut, and remove the propeller fan. 4. Remove the nut, and remove the BLOWER. 	

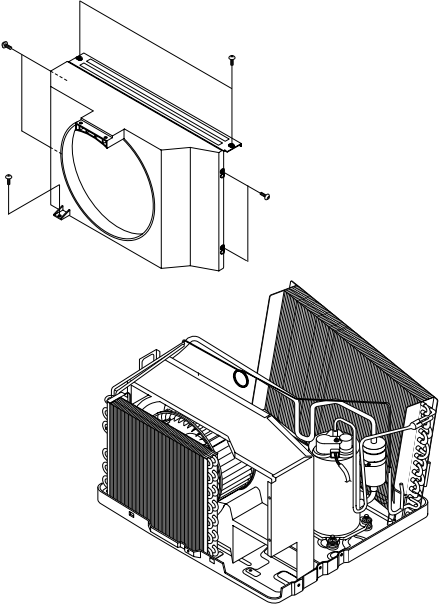
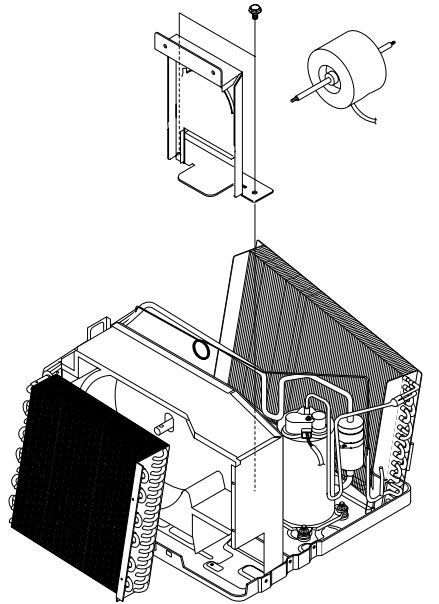
No.	Part name	Procedures	Remarks
⑦	CASE COND	1. Remove the CASE COND.	
⑧	Motor & the others parts	<ol style="list-style-type: none"> 1. Remove 4 screws on the MOTOR, and remove the motor. 2. Remove 4 screws on the mounter motor, and remove the mounter motor. 3. Remove the CASE BLOWER. 4. Remove 4 screws on the PARTITION. 	

Disassembly and Reassembly Procedure (cont.) (Type "B")

Stop operating the air conditioner, and pull out the power cord before repair.

No.	Part name	Procedures	Remarks
①	Ass'y Grill	<p>1. Pull the grille air inlet and remove the screw on the grille.</p> <p>2. Hold the lower part of the grill with two hands while pressing down on both sides of the lower part of the cabinet, pull it forward by about 30, and then lift it up for removal.</p>	 <p>*The type of front-panel depends on models.</p> 
②	Ass'y Cabinet	<p>1. Remove the screws on both sides of the cabinet to disconnect the cabinet and frame.</p> <p>2. Pull the handle on the front side of the bottom, and remove the unit from the cabinet.</p>	
③	COVER-EVAP	<p>1. Remove the 8 screws on the COVER EVAP.</p> <p>2. Remove the COVER EVAP.</p>	

No.	Part name	Procedures	Remarks
④	Ass'y Control	<ol style="list-style-type: none"> 1. Remove the blade V(and arm blade). 2. Remove 4 screws on the FRAME BLADE. 3. Remove the FRAME BLADE. 4. Remove 2 screws under the BASE PAN, and earth wire screw. 5. Remove two lead wire assemblies. 6. Take out the control box forward. 	
⑤	PLATE EVAP CASING & TRAY DRAIN	<ol style="list-style-type: none"> 1. Remove 2 screws on the front side. 2. Remove 3 screws on the left side. 3. Remove 1 screw from the Base pan. 4. Pull up the PLATE EVAP CASING and TRAY DRAIN. 	
⑥	Case Cond & Propeller Fan	<ol style="list-style-type: none"> 1. Remove 2 screws on the rear side (Base pan), and 7 screws on the case cond. 2. Pull up the CONDENSER from the Base pan. 3. Remove the Nut, and remove the propeller fan. 4. Remove the Nut, and remove the BLOWER. 	

No.	Part name	Procedures	Remarks
⑦	CASE COND	1. Remove the CASE COND.	
⑧	MOTOR & the others parts	<ol style="list-style-type: none"> 1. Remove 4 screws on the MOTOR, and remove the motor. 2. Remove 4 bolts on the mounter motor, and remove the mounter motor. 3. Remove the CASE EVAP. 4. Remove 4 screws on the partition. 	

5. Troubleshooting

Check the basic checkpoints first to determine whether it is machine trouble or a problem in the operation method. When it is not related to the basic checkpoints, perform checking in accordance with the procedures of troubleshooting by symptom.

5-1 Basic Checkpoints for Troubleshooting

- 1) Is the voltage of the power source appropriate ?
 - (1) It should be within the rating voltage $\pm 10\%$ range.
 - (2) The air conditioner may not operate properly when the voltage is out of this range.
- 2) Is the connection with the fan motor, compressor wire, and starting condenser appropriately made ?
- 3) The symptoms listed in the table below are not indicative of machine trouble.

Symptom	Cause and check
No operation	<ul style="list-style-type: none"> • Check whether there is power failure or the power plug is pulled out. • Check whether the unit is stopped as a result of completion of the sleep time. • Pull out the power plug for ten seconds, and then insert it again.
Air flows, but no cooling	<ul style="list-style-type: none"> • Check whether the Air filter is clogged with dust or is dirty. • Check whether the desired temperature is too high. Set the desired temperature to a lower level than the current temperature. • Check whether it is in "FAN" mode.
The remote does not operate	<ul style="list-style-type: none"> • Check whether battery is completely depleted. • Check whether the battery is properly inserted. • Check whether the receiving window of the remote for the assembly main PCB is blinded. • Check whether the remote is affected by jamming due to a neon sign.
No temperature setting	<ul style="list-style-type: none"> • Check whether the unit is in "FAN" mode. (In "FAN" mode, only the current temperature is displayed, and the desired temperature is not set.)

✳ Checking and Display of Fault Area

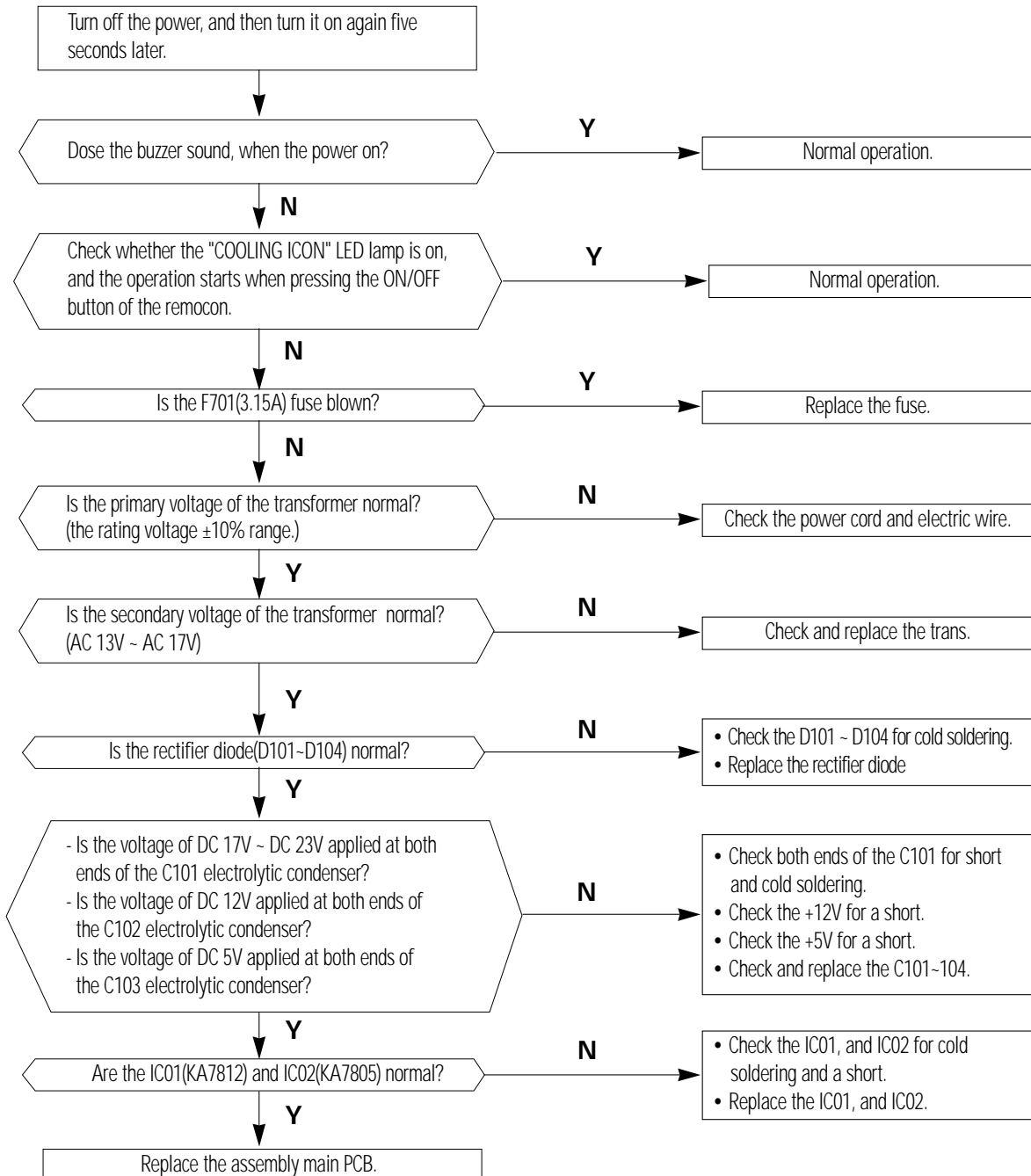
ERROR OPERATION	ERROR OPERATION
ROOM THERMISTOR (OPEN OR SHORT)	E1 displayed

5-2 Troubleshooting by Symptom

5-2-1 No power

1) Check points

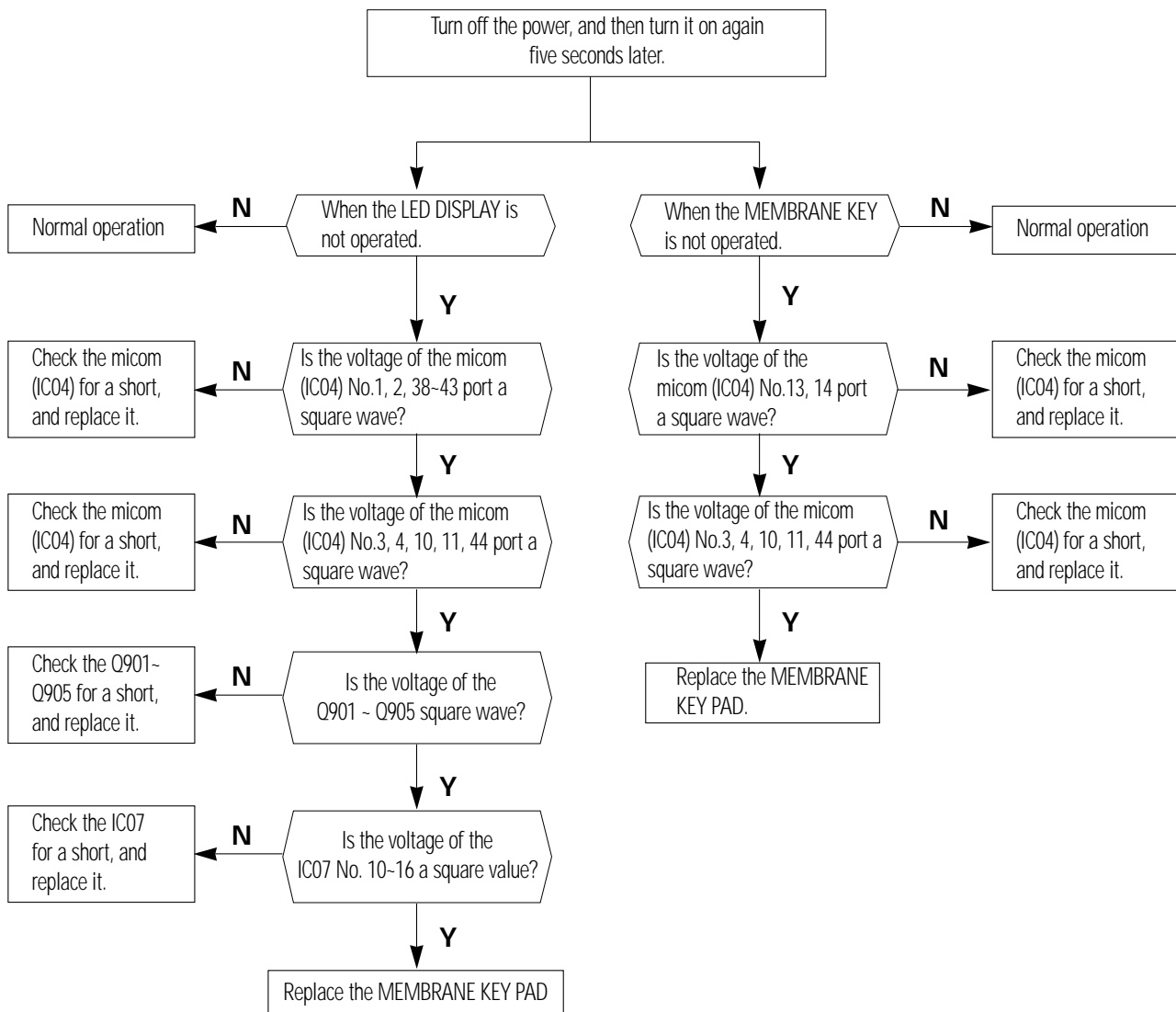
- (1) Is the voltage of the power source normal ? (the rating voltage $\pm 10\%$ range.)
- (2) Is the electric wire in good contact ?(CN 71, RY 71)
- (3) Is the output voltage of the IC01(KA 7812) normal ?(DC 11.5V ~ DC 12.5V)
- (4) Is the output voltage of the IC02(KA 7805) normal ?(DC 4.5V ~ DC 5.5V)



5-2-2 When the Membrane Key pad and Led Display

1) Check points

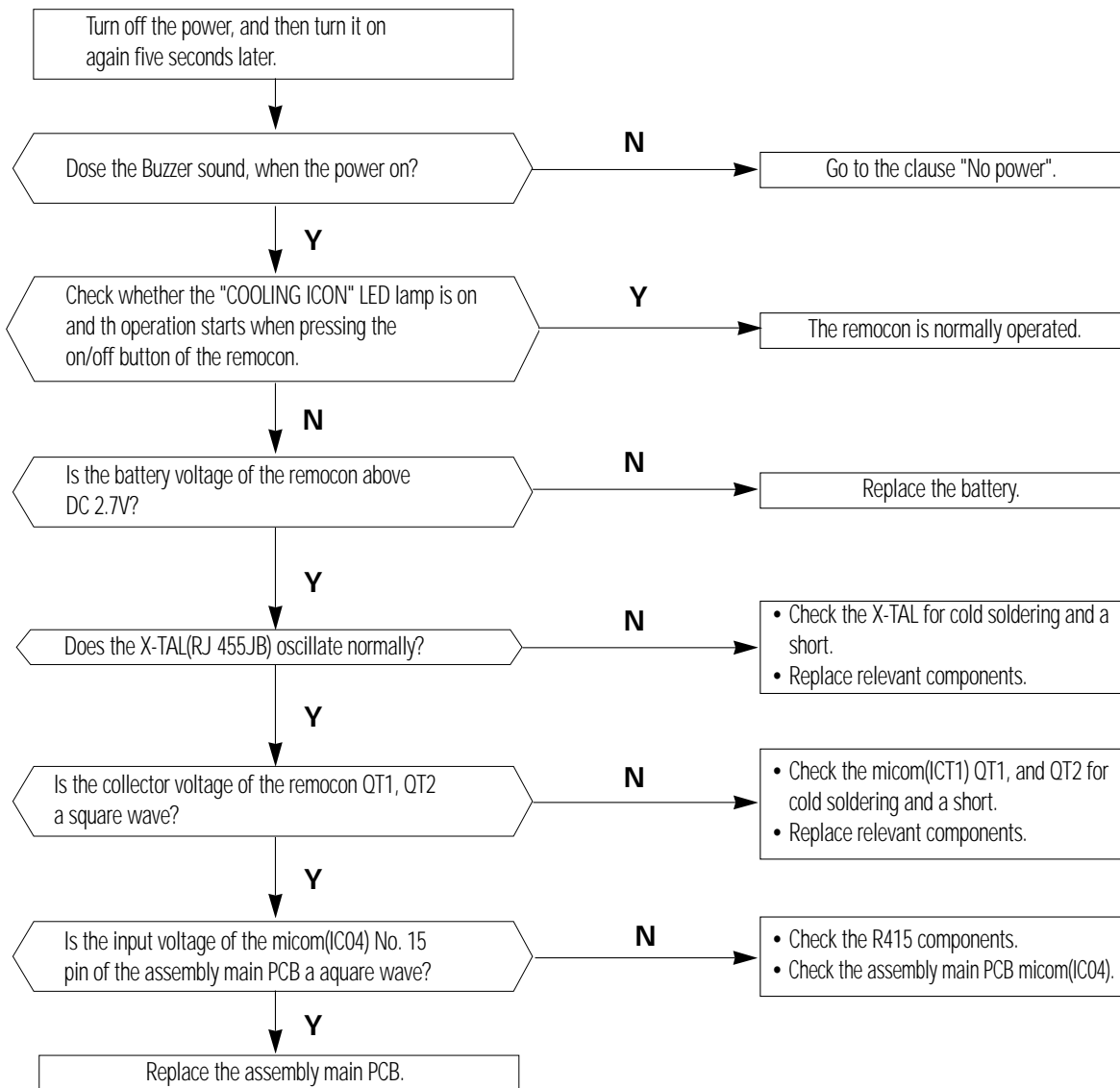
- (1) Is the voltage of the power source normal ? (the rating voltage $\pm 10\%$ range.)
- (2) Is the electric wire in good contact ?(CN71, RY71)
- (3) Is the connection of the assembly main PCB, and MEMBRANE KEY PAD in good contact? (CN91)



5-2-3 When the remocon is not operated

1) Check points

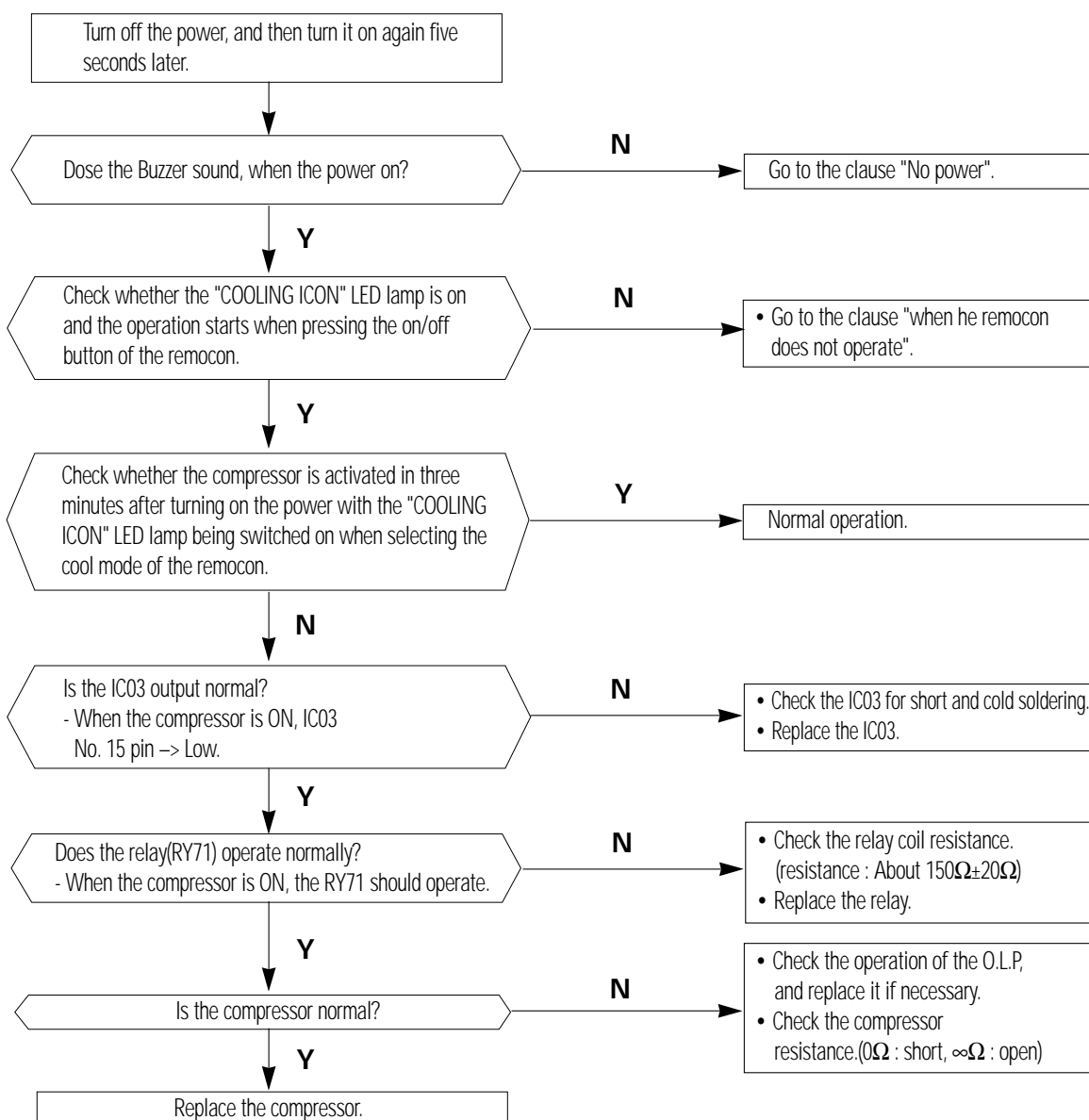
- (1) Is the voltage of the power source normal ? (the rating voltage $\pm 10\%$ range.)
- (2) Is the electric wire in good contact ? (CN71, RY71)
- (3) Is the assembly main PCB in good contact with the MEMBRANE KEY PAD(CN91)
- (4) Is the battery voltage of the remocon above DC 2.7V?



5-2-4 When the compressor is not operated

1) Check points

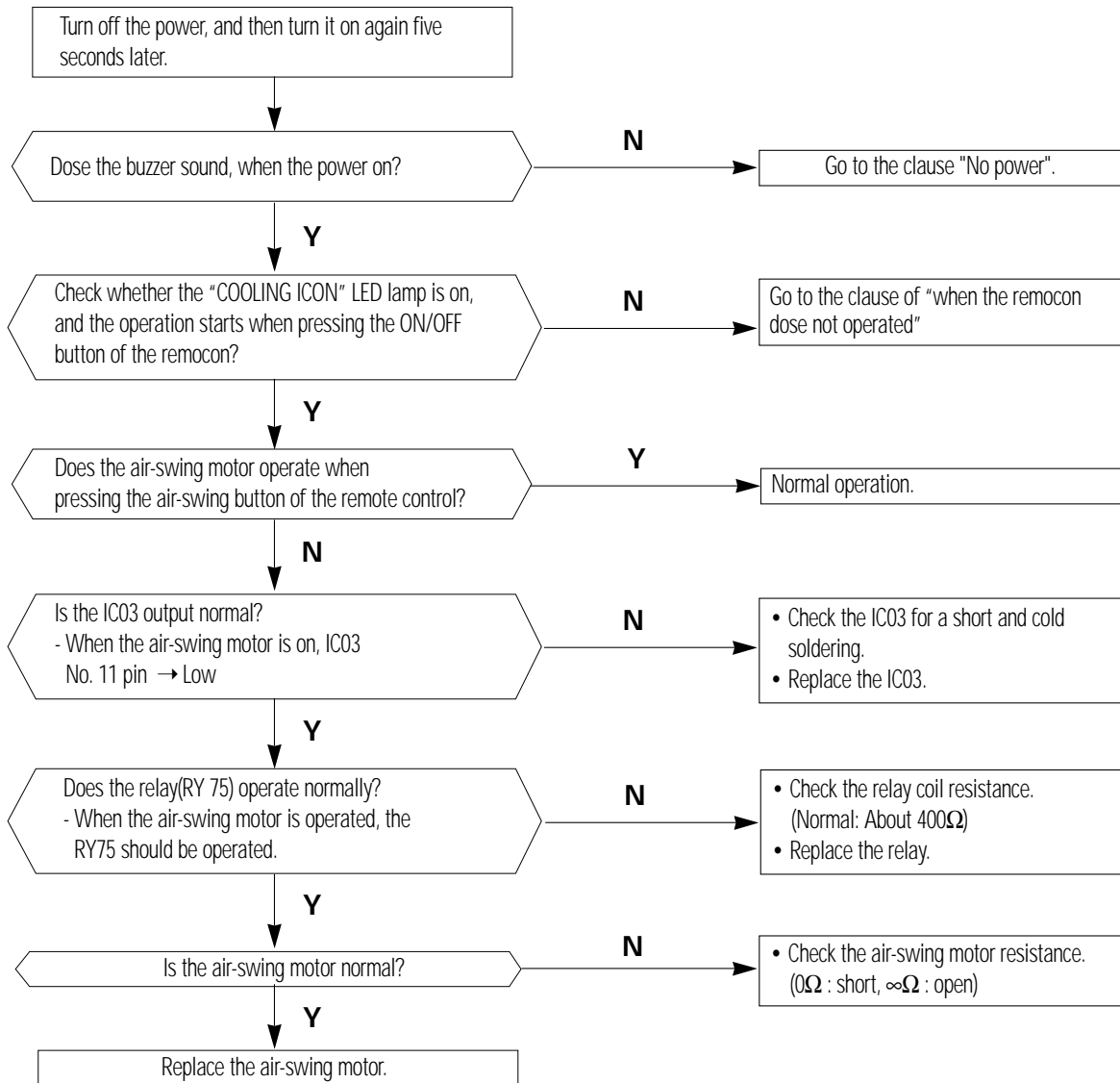
- (1) Is the voltage of the power source normal ? (the rating voltage $\pm 10\%$ range.)
- (2) Is the desired temperature lower than the indoor temperature in the "COOL" mode?
(Compressor stopped)
- (3) Is the starting condenser in good contact?
- (4) Is the electric wire in good contact ? (CN71, RY71)
- (5) Is the output voltage of the IC01(KA7812) and IC02(KA7805) normal ?



5-2-5 When the air swing motor is not operated

1) Check points

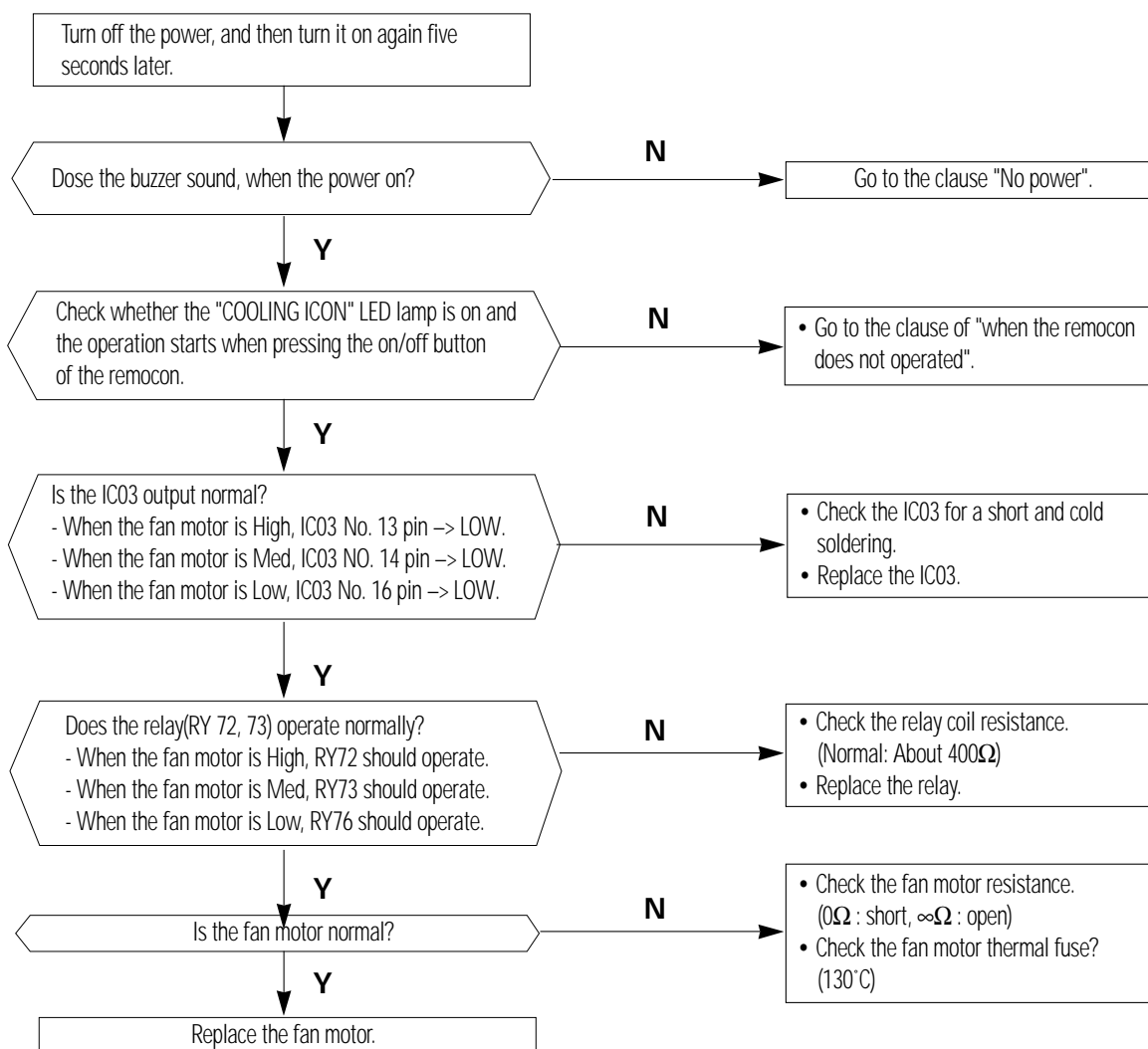
- (1) Is the voltage of the power source normal ? (the rating voltage $\pm 10\%$ range.)
- (2) Is the electric wire in good contact ?(CN71, RY71)
- (3) Is the swing motor connector in good contact?(CN71)
- (4) Is the terminal connected to the swing motor in good contact?
- (5) Is the output voltage of the IC01(KA7812) and IC02(KA7805) normal?



5-2-6 When the fan motor does not operated

1) Check points

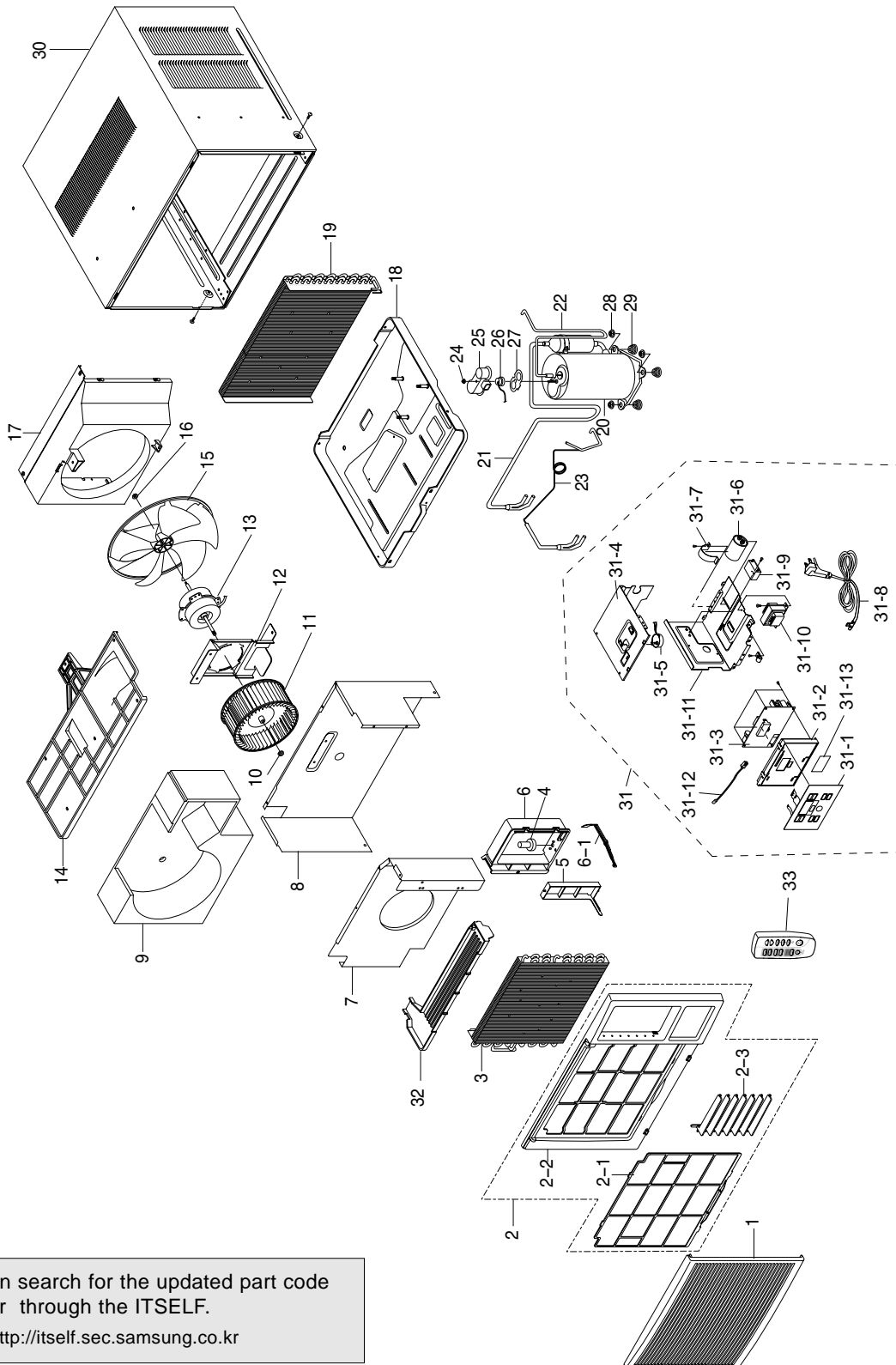
- (1) Is the voltage of the power source normal ? (the rating voltage $\pm 10\%$ range.)
- (2) Is the electric wire in good contact ?(CN71, RY71)
- (3) Is the starting condenser(FAN MOTOR) in good contact?
- (4) Is the fan motor connector in good contact?(CN73)
- (5) Is the output voltage of the IC01(KA7812) and IC02(KA7805) normal ?



MEMO

6. Exploded View and Parts List

6-1 Main unit (Type "A" And "C")



You can search for the updated part code number through the ITSELF.

URL : <http://itself.sec.samsung.co.kr>

Exploded View and Parts List

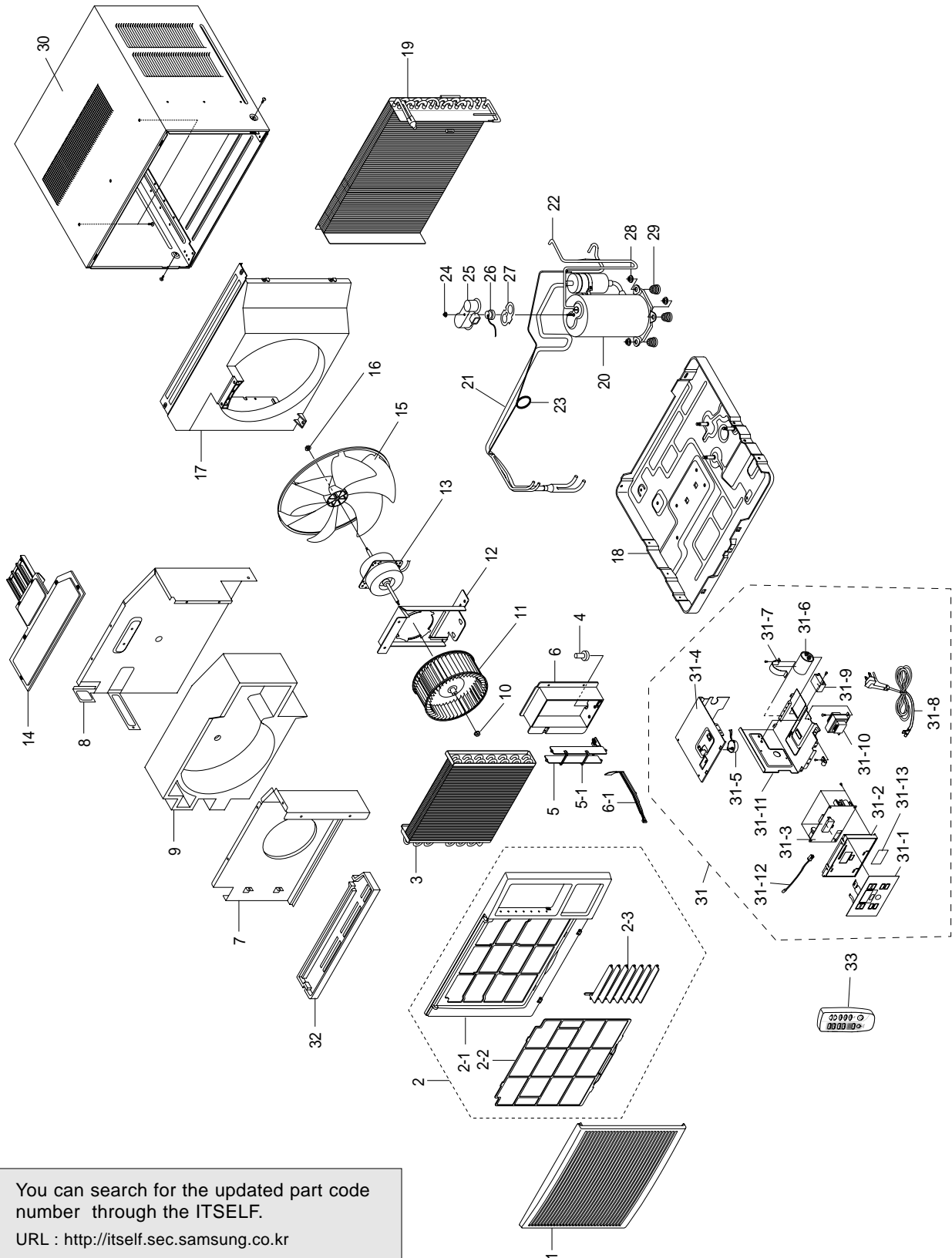
■ Part List (Type "A" And "C")

NO	DESCRIPTION	CODE NO	SPECIFICATION	QTY				
				AW069AB	AW078AA	AW088AA	AW089AB	AW108AA
1	GRILLE AIR-INLET	DB64-10158A	HIPS	1	1	1	1	1
2	ASSY PANEL FRONT	DB92-00042E	SC94445R	1	1	1	1	1
2-1	GUARD AIR-FILTER	DB63-30158A	HIPS	1	1	1	1	1
2-2	PANEL FRONT	DB64-70093A	HIPS	1	1	1	1	1
2-3	BLADE-H	DB66-30191A	HIPS	1	1	1	1	1
3	ASSY EVAP	DB96-00994A	OD7.0*2*14	1	1	1	-	-
		DB96-01574A	OD7.0*3*14	-	-	-	1	-
		DB96-01514A	OD9.52*2*12	-	-	-	-	1
4	ARM BLADE	DB66-70031A	PS	1	1	1	1	1
5	BLADE-V	DB66-30211B	PP,SC-97525R	1	1	1	1	1
6	FRAME BLADE	DB90-00508A	ASSY	1	1	1	1	-
		DB90-00508B	ASSY	-	-	-	-	1
6-1	LEVER DAMPER	DB66-00278A	ABS,T2.0	-	-	-	-	1
		DB66-00126A	ABS,T2.0	1	1	1	1	-
7	PLATE EVAP CASING	DB61-00644A	SGCC-M	1	1	1	1	-
		DB61-00689A	SGCC-M	-	-	-	-	1
8	PLATE PARTITION	DB71-00068B	SGCC-M,T0.8	1	1	1	1	1
9	CASE EVAP	DB61-00645A	30FO-PS,T10	1	1	1	1	1
10	NUT WASHER	DB60-30004A	M6 SM20C NTR	1	1	1	1	1
11	BLOWER	DB67-00013A	ABS,OK-PJT	1	-	-	-	-
		DB67-50078A	ABS,180	-	1	1	1	1
12	MOUNT MOTOR	DB61-00651A	SGCC-M	1	1	1	1	-
		DB61-00690A	SGCC-M	-	-	-	-	1
13	MOTOR FAN	DB31-00123C	YGN55-6F	1	-	-	-	-
		DB31-00123B	YGN55-6E	-	1	-	-	-
		DB31-00123A	YGN55-6B	-	-	1	1	-
		DB31-00140A	YGN61-6A	-	-	-	-	1
14	ASSY COVER EVAP	DB90-00539A	ASSY	1	1	1	1	-
		DB90-00539B	ASSY	-	-	-	-	1
15	FAN PROPELLER	DB67-50077A	ABS,290	1	1	1	1	1
16	NUT FLANGE	DB60-30020A	M6,FEFZY,LF	1	1	1	1	1
17	CASE COND	DB61-00423A	PP	1	1	1	1	1
18	ASSY BASE	DB90-20212F	SGCC-M	1	1	1	1	-
		DB90-00544B	SGCC-M	-	-	-	-	1
19	ASSY COND	DB96-01027A	OD7*3*15	1	-	-	1	-
		DB96-01515A	OD7*3*15	-	-	-	-	1
		DB96-00995A	OD7*2*15	-	1	1	-	-
20	COMPRESSOR	44C062HU1EA	115V/60Hz	1	-	-	-	-
		44A072HW1EB	115V/60Hz	-	1	-	-	-
		44A080HU1EB	115V/60Hz	-	-	1	-	-
		44A076HU1EB	115V/60Hz	-	-	-	1	-
		44B098HU2EF	115V/60Hz	-	-	-	-	1
21	TUBE SUCTION	DB96-00966A	OD9.52	1	1	1	1	-
		DB62-00871A	OD9.52	-	-	-	-	1
22	TUBE DISCHARGE	DB62-00483A	8K TOP	1	-	-	1	-
		DB62-00675A	OD7.93	-	1	1	-	-
		DB62-00826A	T-PJT	-	-	-	-	1

■ Part List (Type "A" And "C")

NO	DESCRIPTION	CODE NO	SPECIFICATION	QTY				
				AW069AB	AW078AA	AW088AA	AW089AB	AW108AA
23	TUBE CAPILARY	DB96-01018A	ID1.3*1100	1	-	-	-	-
		DB96-00992A	ID1.3*900	-	1	-	-	-
		DB96-00993A	ID1.42*1200	-	-	1	1	-
		DB62-00872A	2-ID1.2*1200	-	-	-	-	1
24	NUT WASHER	DB60-30018A	M5 SM20C	1	1	1	1	1
25	COVER TERMINAL	DB63-10026A	NORYL,SEI-701	1	1	1	1	1
26	OLP	DB47-20002F	MRA12040-12008	1	-	-	-	-
		DB47-20001V	MRA98706-12008	-	1	-	-	-
		-	MRA12083-12008	-	-	1	1	-
		-	MRA12132-12007	-	-	-	-	1
27	GASKET	DB63-20002A	EPDM T0.8	1	1	1	1	1
28	NUT WASHER	DB60-30028A	HEX 2C M8 ZPC	3	3	3	3	3
29	GROMMET ISOLATER	DB73-00070A	NR 3	3	3	3	3	3
30	ASSY CABINET	DB90-00133P	N-PJT	1	1	1	1	-
		DB90-00701A	T-PJT	-	-	-	-	1
31	ASSY CONTROL	DB93-00465B	6K	1	-	-	-	-
		DB93-00465F	7K	-	1	-	-	-
		DB93-00465A	8K	-	-	1	1	-
		DB93-00465E	10K	-	-	-	-	1
32	TRAY DRAIN	DB63-00274A	HIPS,T1.5	1	1	1	1	-
		DB63-00296A	HIPS,T2.0	-	-	-	-	1
33	ASSY REMOCON	DB93-00284K	ARC-709	1	1	1	1	1

6-2 Main unit (Type "B")



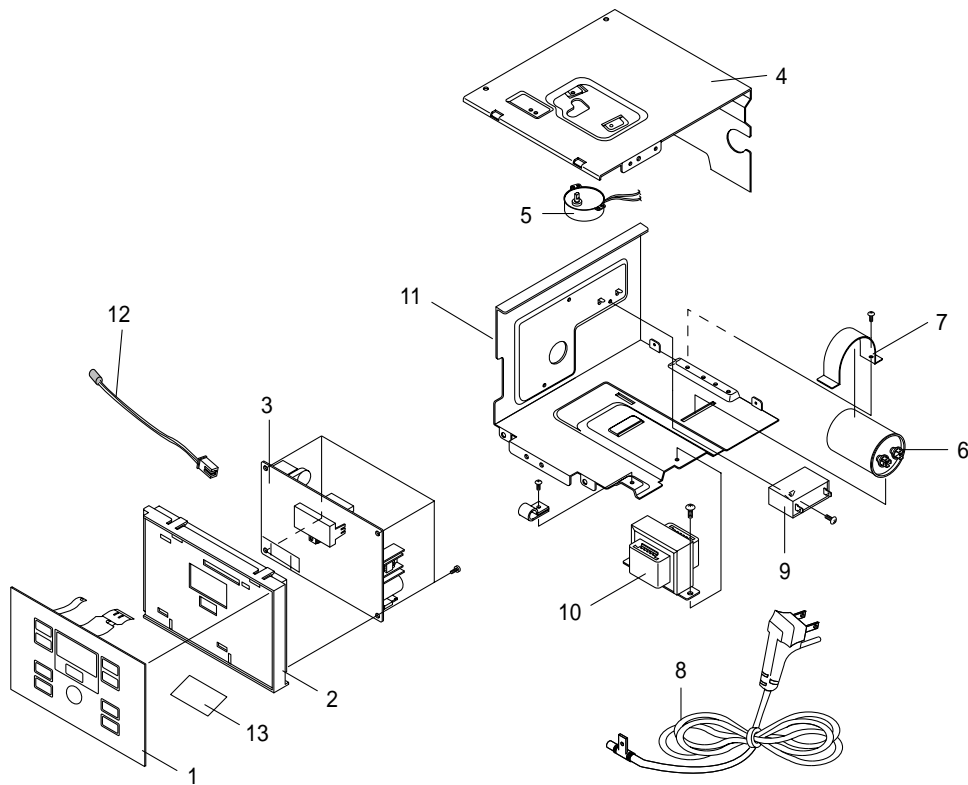
You can search for the updated part code number through the ITSELF.
 URL : <http://itself.sec.samsung.co.kr>

■ Part List (Type "B")

NO	DESCRIPTION	CODE NO	SPECIFICATION	Q'TY		
				AW109AB	AW128AA	AW129AB
1	GRILLE AIR-INLET	DB64-10145A	HIPS,T2.5	1	1	1
2	ASSY PANEL FRONT	DB92-10319C	ASSY	1	1	1
2-1	GUARD AIR-FILTER	DB63-30142A	HIPS,T2	1	1	1
2-2	PANEL FRONT	DB64-70080A	HIPS,T2.5,W600	1	1	1
2-3	BLADE-H	DB66-30169A	PP,T2.5	1	1	1
3	ASSY EVAP	DB96-00983A	7-2*16*273	1	-	-
		DB96-00978A	9.52-2*14*355	-	-	1
		DB96-01002A	9.52-2*14*355	-	1	-
4	ARM BLADE	DB66-70022D	PS,T2,SC-96527R	1	1	1
5	BLADE-V	DB66-30170A	PP,SC-97525R	1	1	1
6	FRAME BLADE	DB90-00510B	AW129AB/XAA	1	1	1
6-1	LEVER DAMPER	DB66-70024A	HIPS,T2.5	1	1	1
7	PLATE EVAP CASING	DB71-00074B	SGCC-M,T0.7	1	1	1
8	PLATE PARTITION	DB71-00075B	SGCC-M,T0.8,358	1	1	1
9	CASE EVAP	DB61-00649A	30FO-PS,T10	1	1	1
10	NUT WASHER	DB60-30004A	M6 SM20C NTR	1	1	1
11	BLOWER	DB67-50078A	ABS,180	1	-	1
		DB67-50073A	ABS,200	-	1	-
12	MOUNT MOTOR	DB61-00650A	SGCC-M	1	1	1
13	MOTOR FAN	DB31-00122F	YGN60-6A	1	-	-
		DB31-00122A	YGN60-6B	-	1	-
		DB31-00122E	YGN60-6G	-	-	1
14	ASSY COVER EVAP	DB90-00511A	ASSY	1	1	1
15	FAN PROPELLER	DB67-00139A	ABS+G.F20%	1	1	1
16	NUT FLANGE	DB60-30020A	M6,FEFZY,LF	1	1	1
17	CASE COND	DB61-00647A	PP,T2	1	1	1
18	ASSY BASE	DB90-00514A	D-PJT	1	1	1
19	ASSY COND	DB96-00979A	7-3*17*510.4	1	1	1
20	COMPRESSOR	44B098HU2EF	115V,60Hz	1	-	-
		44B124HX1EL	115V,60Hz	-	1	1
21	TUBE SUCTION	DB62-00684A	OD12.7	1	1	1
22	TUBE DISCHARGE	DB62-00327A	OD9.52,T0.7	1	1	1
23	TUBE CAPILARY	DB62-00687A	ID1.7*900	-	1	-
		DB62-00687B	ID1.5*900	1	-	-
		DB62-01026A	2-ID1.3*1000	-	-	1
24	NUT FLANGE	DB60-30018A	M5 SM20C	1	1	1
25	COVER TERMINAL	DB63-10026A	NORYL,SEI-701	1	1	1
26	OLP	-	MRA12132-12007	1	-	-
		DB47-20001U	MRA98693-12007	-	1	1
27	GASKET	DB63-20002A	EPDM T0.8	1	1	1
28	NUT WASHER	DB60-30028A	HEX 2C M8 ZPC	3	3	3
29	GROMMET ISOLATER	DB73-00070A	NR 3	3	3	3
30	ASSY CABINET	DB90-00364B	D-PJT	1	1	1
31	ASSY CONTROL	DB93-00674B	10K	1	-	-
		DB93-00674A	12K	-	1	1
32	TRAY DRAIN	DB63-00276A	30FO-PS,T10	1	1	1
33	ASSY REMOCON	DB93-00284K	ARC-709	1	1	1

■ Part List (Type "B")

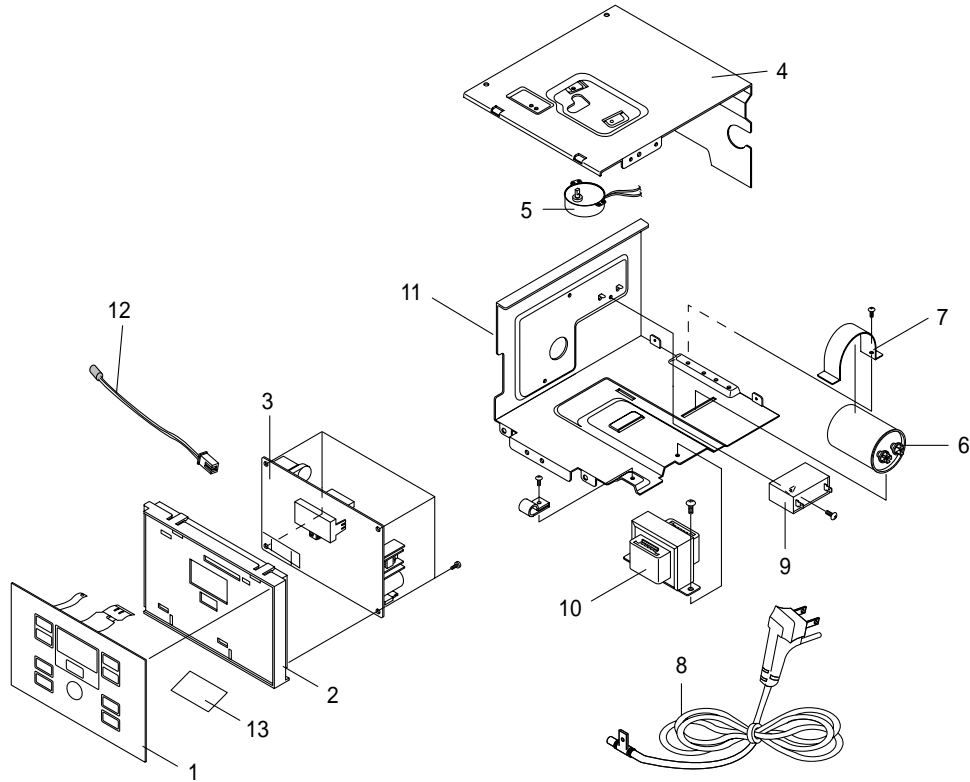
6-3 Ass'y Control



■ Part List (Type "A" And "C")

NO	DESCRIPTION	CODE NO	SPECIFICATION	Q'TY			
				AW069AB	AW078AA	AW088AA AW089AB	AW108AA
0	ASSY CONTROL	DB93-00465B	6K	1	-	-	-
		DB93-00465F	7K	-	1	-	-
		DB93-00465A	8K	-	-	1	-
		DB93-00465E	10K	-	-	-	1
1	SWITCH MEMBRANE	DB34-00013B	99*134.5,PC	1	1	1	1
2	PANEL CONTROL	DB64-00259B	HIPS,T2.0,V5	1	1	1	1
3	ASSY PCB MAIN	DB93-00407A	COOLING	1	1	1	1
4	CASE CONTROL UP	DB61-00419A	SGCC-M, T0.7	1	1	1	1
5	SWING MOTOR	DB31-00084A	M2CK59ZT79-H	1	1	1	1
		2501-001228	35 μ F, 370VAC	1	-	1	-
		2501-001226	25 μ F, 370VAC	-	1	-	-
6	C-OIL	2501-001230	45 μ F, 370VAC	-	-	-	1
		DB65-10008B	SGCC-M, T0.8	1	1	1	1
		7	CLIP CAPACITOR	DB65-10008B	SGCC-M, T0.8	1	1
8	POWER CORD ASSY	DB39-00343A	125V,13A	1	1	1	1
9	C-FILM	2301-001451	5 μ F, 250VAC	1	-	-	-
		2301-001449	6 μ F, 450VAC	-	1	1	-
		2301-001452	15 μ F, 250VAC	-	-	-	1
10	TRANSFORMER	DB26-00006B	AC115V,50Hz/60Hz	1	1	1	1
11	CASE CONTROL LOW	DB61-00417A	SGCC-M, T0.7	1	1	1	1
12	THERMISTOR	DB32-10051B	10K/25, 103AT	1	1	1	1
13	WINDOW REMOCON	DB64-00321A	MTN-G2	1	1	1	1

Exploded View and Parts List

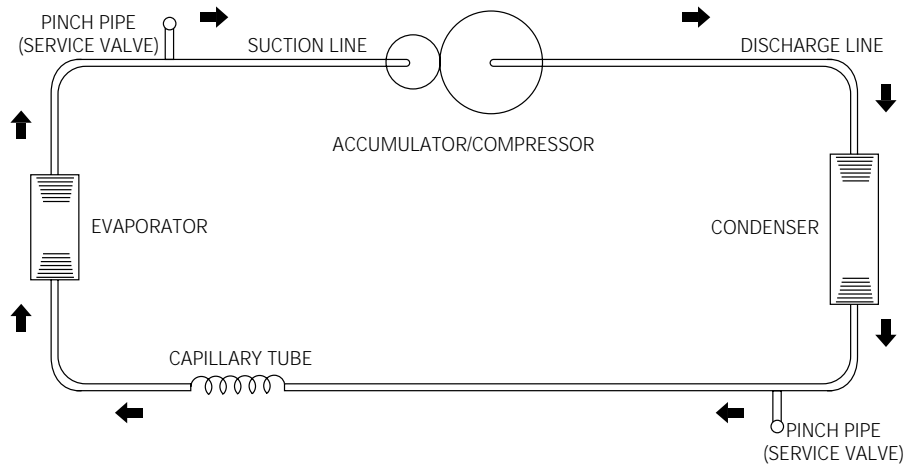


■ Part List (Type "B")

NO	DESCRIPTION	CODE NO	SPECIFICATION	Q'TY	
				AW 109AB	AW 128AA AW 129AB
0	ASSY CONTROL	DB93-00674B	10K	1	-
		DB93-00674A	12K	-	1
1	SWITCH MEMBRANE	DB34-00013B	99*134.5,PC	1	1
2	PANEL CONTROL	DB64-00259B	HIPS ,T2.0,V 5	1	1
3	ASSY PCB MAIN	DB93-00407A	COOLING	1	1
4	CASE CONTROL UP	DB61-00421A	SGCC-M, T0.7	1	1
5	SWING MOTOR	DB31-00084A	M2CK59ZT79-H	1	1
6	C-OIL	2501-001230	45 μ F, 370VAC	1	-
		2501-001231	50 μ F, 370VAC	-	1
7	CLIPCAPACITOR	DB65-10008B	SGCC-M, T0.8	1	1
8	POWER CORD ASSY	DB39-00343B	125V,15A	1	1
9	C-FILM	2301-001448	8 μ F, 250VAC	1	-
		2301-001452	15 μ F, 250VAC	-	1
10	TRANSFORMER	DB26-00006B	AC115V,50Hz/60Hz	1	1
11	CASE CONTROL LOW	DB61-00417A	SGCC-M, T0.7	1	1
12	THERMISTOR	DB32-10051B	10K/25, 103AT	1	1
13	WINDOW REMOCON	DB64-00321A	MTN-G2	1	1

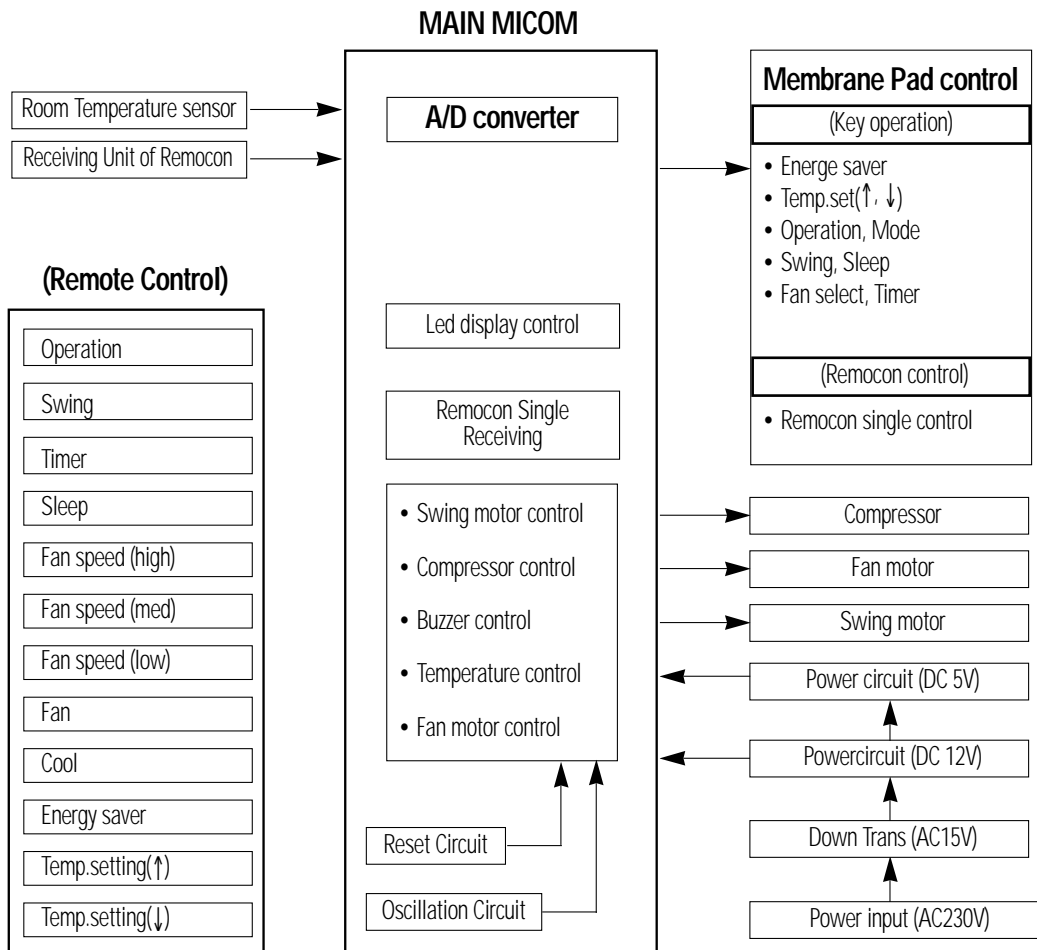
7. Block Diagram

7-1 Refrigerating Cycle Block Diagram



7-2 Basic Structure

7-2-1 Micom Control Diagram



7-2-2 Micom pin assignment

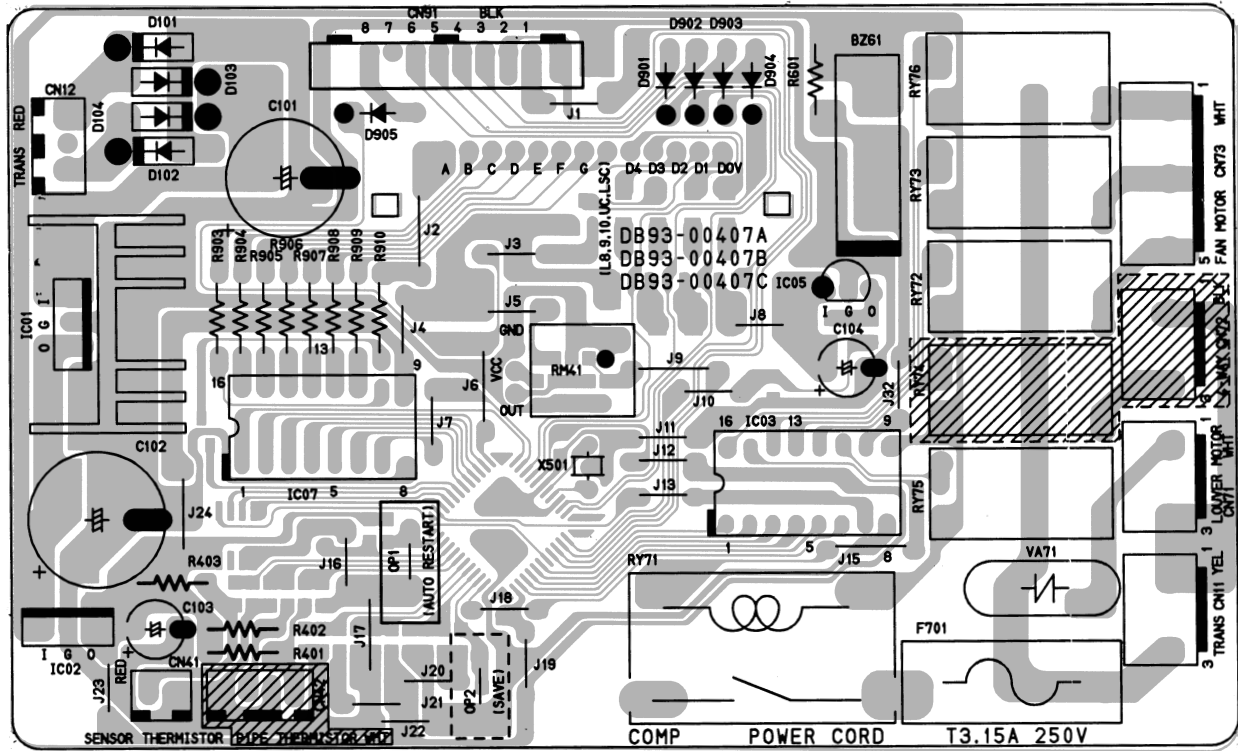
KS88C4716					
SEG-DATA(c)	1	P0.1	P4.4	44	GRID5
SEG-DATA(b)	2	P0.0	P0.2	43	SEG-DATA(d)
GRID4	3	P4.3	P0.3	42	SEG-DATA(e)
GRID3	4	P4.2	P0.4	41	SEG-DATA(f)
Vcc	5	VDD	P0.5	40	SEG-DATA(g)
Vss	6	VSS	P0.6	39	SEG-DATA(h)
10MHz RESONATOR	7	Xout	P0.7	38	SEG-DATA(a)
10MHz RESONATOR	8	Xin	P1.0	37	EEPROM CLK
TEST	9	TEST	P1.1	36	EEPROM IN
GRID2	10	P4.1	P1.2	35	EEPROM OUT
GRDI1	11	P4.0	P1.3	34	BUZZER
RESET IC OUTPUT	12	RESET	P1.4	33	OPTION
KEY-IN1	13	P2.0	P1.5	32	JIG OUTPUT
KEY-IN2	14	P2.1	P3.7	31	OPTION
REMOCON	15	P2.2	P3.6	30	SENSOR THERMISTOR(103AT)
EEPROM CS	16	P2.3	P3.5	29	OPTION
LOW FAN	17	P2.4	P3.4	28	OPTION
COMPERSOR	18	P2.5	P3.3	27	OPTION
MIDDLE FAN	19	P2.6	P3.2	26	OPTION
HIGH FAN	20	P2.7	P3.1	25	SAVE OPTION
4-WAY VALVE	21	P4.5	P3.0	24	SWING MOTOR
Vcc	22	AVref	AVss	23	GND

MEMO

8. PCB Diagram

8-1 ASS'Y Main PCB

- DB93-00407B



■ Part List

NO.	CODE-NO	DESCRIPTION	SPECIFICATION	Q'TY	REMAKRS
1	-	DIODE-RECTIFIER	1T4	4	D101~D104
2	1405-000147	VARISTOR	470V 4500A	1	VA71
3	DE13-20017A	IC-DRIVE	KID65003AP	2	IC03, IC07
4	DE13-20009A	IC	KA7533Z	1	IC05
5	DE13-20016A	IC-VOLT REGU	KA7805A	1	IC02
6	DE13-20008A	IC-VOLT REGU	KA7812A	1	IC01
7	DE60-10100A	SCREW TAPPING	PH-3 L6	1	
8	DE62-30031A	HEAT SINK	A6063 L23.5 W30	1	
9	-	C-AL	2200μF 25V	1	C102
10	-	C-AL	1000μF 35V	1	C101
11	-	C-AL	100μF 10V	1	C103
12	-	C-AL	22μF 16V	1	C104
13	-	CONNECTOR WAFER	YW396-03AV YEL	1	CN11
14	-	CONNECTOR WAFER	YW396-03AV WHT	1	CN71
15	3711-003407	CONNECTOR WAFER	YW396-05AV WHT	1	CN73
16	-	CONNECTOR WAFER	JSW250-02 RED	1	CN41
17	-	CONNECTOR WAFER	JSW250-03 RED	1	CN12
18	DE32-10037A	FUSE	250V 3.15A	1	F701
19	-	FUSE HOLDER	FB 58 20MM	1	F701
20	DE30-20016A	BUZZER	CSB2220BA	1	BZ61
21	2001-001172	R-CARBON	620 OHM 1/2W	1	R601
22	-	REMOCON MODULE	KSM713TE5	1	RM41
23	-	CONNECTOR WAFER	FCZ254-08S	1	CN91
24	-	JUMPER WIRE	PI0.6 52MM	24	J1~J13, J15~J24, J32
25	-	JUMPER WIRE	PI0.6 52MM	1	OP01
26	-	JUMPER WIRE	3216 TYPE	7	J25~J31
27	DB93-00407B	PCB-MAIN	FR-1 81.5*134.5	1	
28	-	R-CARBON	RD 1/4W 180-J	8	R903~R910
29	-	R-CARBON(2012)	MCR10 330-J	5	R404~R406, R415, R902
31	-	R-CARBON(2012)	MCR10 10K-J	10	R301, R407, R408, R410~R414, R501, R901
32	2004-001137	R-CARBON	RD 1/8W 6.8K-F	1	R403
33	2004-000218	R-CARBON	RD 1/8W 10K-F	2	R401, R402
34	-	R-CARBON(2012)	MCR10 1K-J	2	R201, R202
35	-	R-CARBON(2012)	MCR 100K-J	1	R409
36	-	C-CERAMIC(2012)	MCR21 2F 104Z	9	C105, C106, C401~C406, C410
37	-	C-CERAMIC(2012)	MCR21 2F 223Z	4	C501, C502, C601, C901
38	-	C-CERAMIC(2012)	MCR21 2F 101Z	1	C407
39	-	C-CERAMIC(2012)	MCR21 2F 102Z	3	C408, C409, C902
40	-	TRANSISTOR	KRA226S	5	Q901~Q905
41	-	TRANSISTOR	KRC246S	1	Q906
42	-	DIODE-SWITCHING(SMALL)	1N4148	5	D901~D905
43	DB09-00091A	IC-MCU	KS88C4716	1	IC04
44	3501-001058	RELAY-POWER	ID 1U	1	RY71
45	2802-000103	CERAMIC RESONATOR	10MHz	1	X501
46	DB07-00010A	LED DISPLAY	ELF-316GWB	1	
47	3501-000399	RELAY	JQ1A 12V	4	RY72, 73, 75, 76

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9. Wiring Diagram

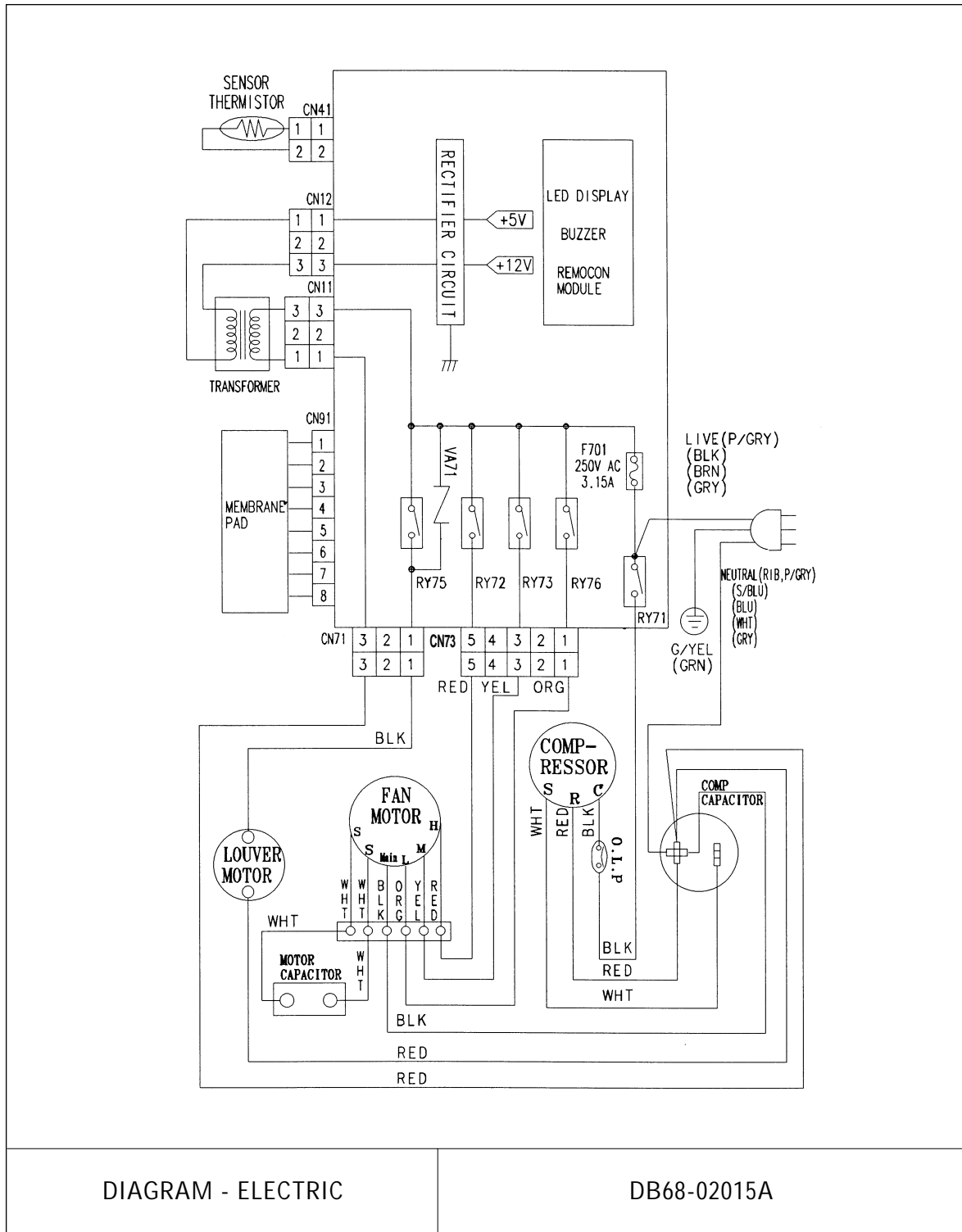
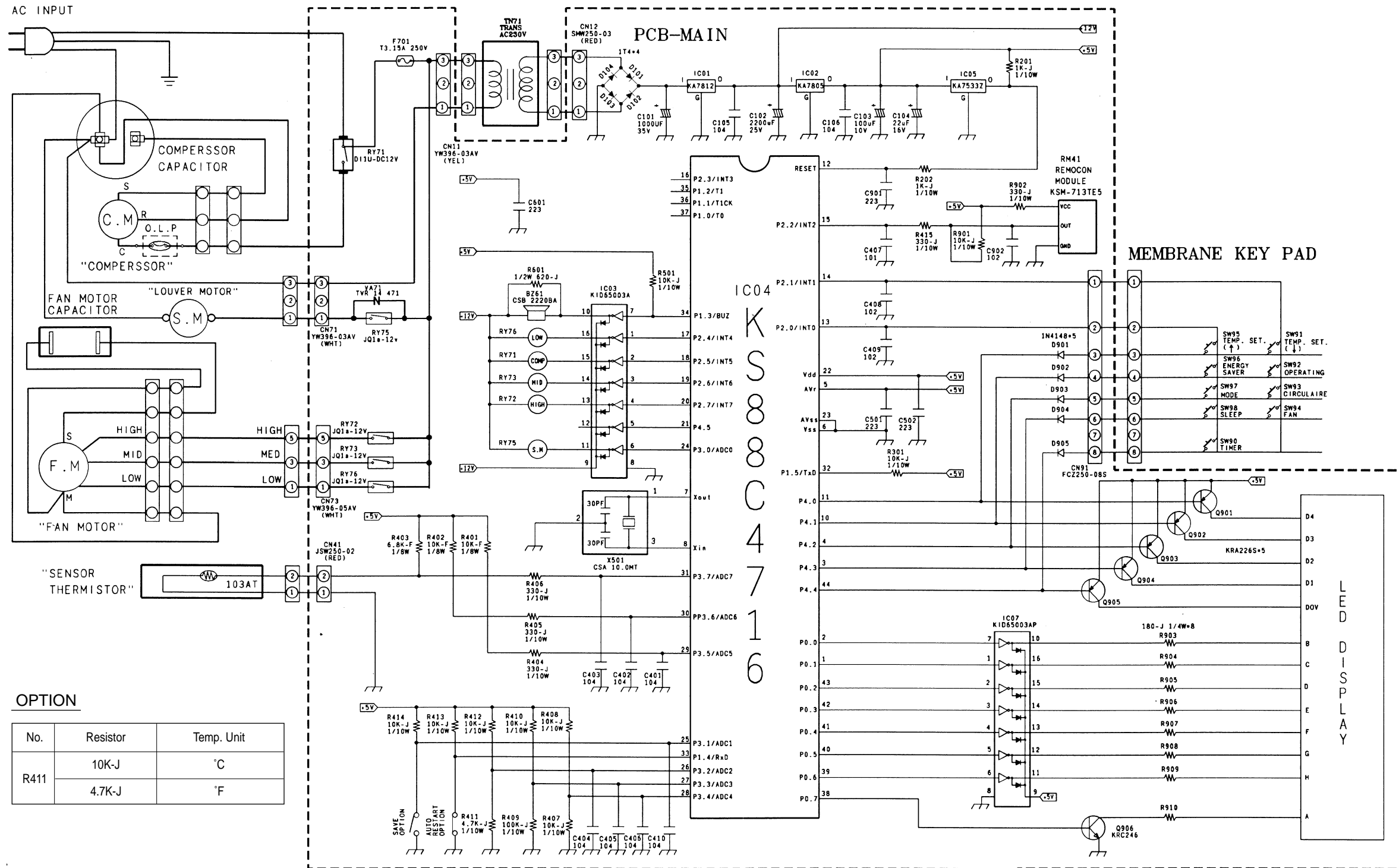


DIAGRAM - ELECTRIC

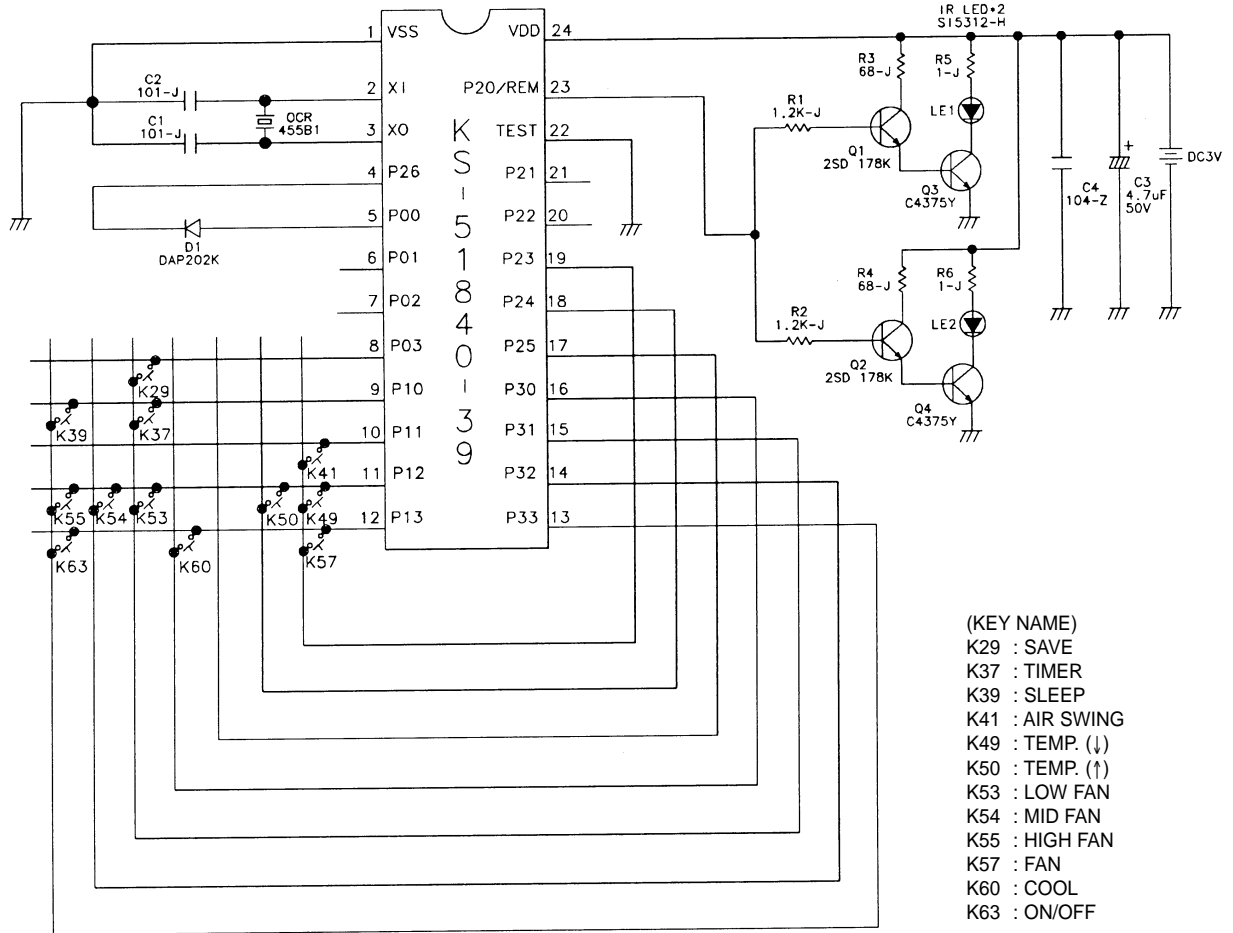
DB68-02015A

10. Schematic Diagrams

10-1 Main PCB



10-2 Remote Control



UPDATE LOG SHEET

Application date	Page	Part#	Note(Cause & Solution)	S/Bulletin#

Use this page to keep any special servicing information. (Service Bulletin, etc.)
If only parts number changes, Just change parts number directly on parts list.
And if you need more information, please see the service website.

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