4. Set Up the Model Option

4-1 Setting Option Setup Method

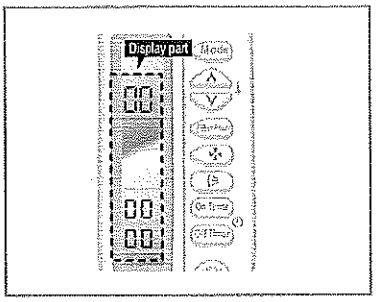
ex) Option No. : 085115-1d2340

Step 1 : Enter the Option Setup mode.

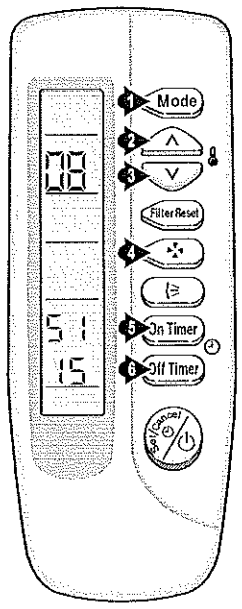
1st Take out the batteries of remote control.

2nd Press the temp. button simultaneously and insert the battery again.

3rd Make sure the remote control display shown as 88 88 88.



Step 2 : Enter the Option Setup mode and select your option according to the following procedure.



※ Setting is not required if you must 0 a value which has a 0 default.

1. The default value is 88 88 88.
Otherwise, push the Mode button to 0.
Every time you push the button, the display panel reads 1 or 0 repeatedly.

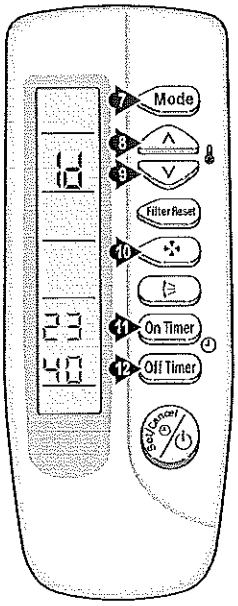
2. Push the button to set the display panel to 8.
Every time you push the button, the display panel reads 0 → 1 → 2 → 3 → ··· 9 → A → b → c → d → E → F repeatedly.

3. Push the button to set the display panel to 5.
Every time you push the button, the display panel reads 0 → 1 → 2 → 3 → ··· 9 → A → b → c → d → E → F repeatedly.

4. Push the button to set the display panel to 1.
Every time you push the button, the display panel reads 0 → 1 → 2 → 3 → ··· 9 → A → b → c → d → E → F repeatedly.

5. Push the On Timer button to set the display panel to 1.
Every time you push the button, the display panel reads 0 → 1 → 2 → 3 → ··· 9 → A → b → c → d → E → F repeatedly.

6. Push the Off Timer button to set the display panel to 5.
Every time you push the button, the display panel reads 0 → 1 → 2 → 3 → ··· 9 → A → b → c → d → E → F repeatedly.



* Setting is not required if you must 0 a value which has a 0 default.

7 Press Mode button, then the default value is 25.

8 Push the ∧ button to set the display panel to d.
Every time you push the button, the display panel reads 0 → 1 → 2 → 3 → ··· 9 → A → b → c → d → E → F repeatedly.

9 Push the ∨ button to set the display panel to 2.
Every time you push the button, the display panel reads 0 → 1 → 2 → 3 → ··· 9 → A → b → c → d → E → F repeatedly.

10 Push the button to set the display panel to 3.
Every time you push the button, the display panel reads 0 → 1 → 2 → 3 → ··· 9 → A → b → c → d → E → F repeatedly.

11 Push the On Timer button to set the display panel to 4.
Every time you push the button, the display panel reads 0 → 1 → 2 → 3 → ··· 9 → A → b → c → d → E → F repeatedly.

12 Push the Off Timer button to set the display panel to 0.
Every time you push the button, the display panel reads 0 → 1 → 2 → 3 → ··· 9 → A → b → c → d → E → F repeatedly.

Step 3 : Upon completion of the selection, check you made right selections.

Press the Mode Selection key, Mode to set the display part to 0 and check the display part.

→ The display part shows 08.

Press the Mode Selection key, Mode to set the display part to 1 and check the display part.

→ The display part shows 1d.

Step 4 : Pressing the ON/OFF button ( )

When pressing the operation ON/OFF key with the direction of remote control for unit, the sound "Ding" or "Diriring" is heard and the OPERATION ICON( ) lamp of the display is flickering at the same time, then the input of option is completed. (If the diriring sound isn't heard, try again pressing the ON/OFF button.)

Step 5 : Unit operation test-run

First, Remove the battery from the remote control.

Second, Re-insert the battery into the remote control.

Third, Press ON/OFF button( ) with the direction of remote control for set.

• Error Mode

1st If all lamps of indoor unit are flickering, Plug out, plug in power plug again and press ON/OFF key to retry.

2nd If the unit is not working properly or all lamps are continuously flickering after setting the option code, see if the correct option code is set up for its model.

■ OPTION ITEMS

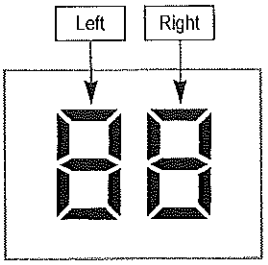
REMOTE CONTROL / MODEL	SEG1	SEG2	SEG3	SEG4	SEG5	SEG6	SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
CH070EZM	0	5	5	0	0	0	1	c	0	0	0	0
CH105EZM1	0	5	5	4	0	0	1	F	0	0	0	0
CH128EZM1	0	5	5	c	0	0	1	3	0	0	0	0
CH140EZM1	0	5	5	c	0	0	1	3	0	0	0	0

5. Control Specification & Troubleshooting

5-1 Operation Specification

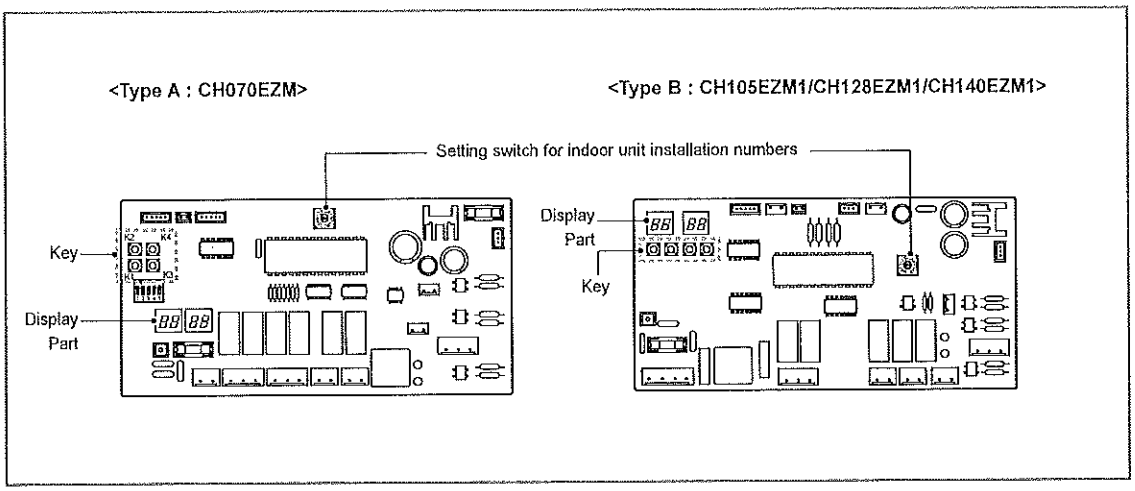
5-1-1 Tracking process marked on display part

- Left numeral is an address that outdoor unit transfers communication.
  0 - 1 - 2 - 3 ... - F (Calling indoor unit)
- Right numeral marks address that is answered.
- During the tracking, left calls indoor unit through
  0 - 1 - 2 - 3 ... - d - E - F and checks. At this time
  connected indoor unit set on " 0 " and the indoor unit set 0 address
  marked on right.
  Right side mark is marked by when left side is 0 .
  (If SW02(MAIN) that set indoor unit address is controlled to " 0 ",
  indoor unit number marked on outdoor unit is marked by " 0 ".)



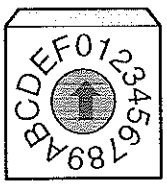
DISPLAY PART (DS1)

5-1-2 Option set part for Outdoor unit PCB



Setting switch for indoor unit installation numbers

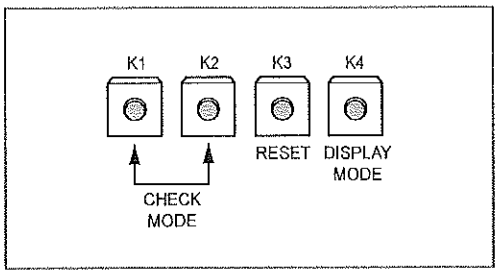
Counts of Indoor Unit Installation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Numbers of the switch	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F



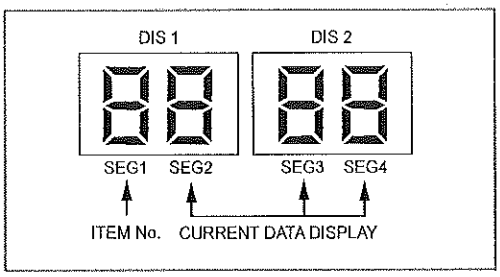
● Example : When the installed indoor unit is one, control the arrow of switch forward to '0' or '1' as figure.

5-1-3 Setting Up Option Switches

■ KEY



■ Display



■ Summary of KEY functions

Function / Number of press times	K1 (Displayed on SEG 3, 4)	K2 (Displayed on SEG 3, 4)	K3 (Displayed on SEG 3, 4)	K4 (Displayed on SEG 3, 4)
1	Adding refrigerant at heating mode	Adding refrigerant at cooling mode	Reset	Displays data
2	Test operation at heating mode	Test operation at cooling mode	-	-
3	End	Pump Down for recovery of refrigerant	-	-
4	-	End	-	-

* Use the K1 only for heat pump models.

■ Reading data indicated on the display

KEY	Number of press	Item	Example	
			Display	Meaning
K1	1	Adding refrigerant for heat pump models	H1	
	2	Test operation for heat pump models	H2	
	3	End		
K2	1	Adding refrigerant for cooling only models	H3	
	2	Test operation for cooling only models	H4	
	3	Pump Down for recovery of refrigerant	H5	
	4	End		
K3		Reset		
K4	1	Discharge temperature of compressor	31:10	110 °C
	2	Temperature of outdoor heat exchanger	4:38	38 °C
	3	Outdoor temperature	5:34	34 °C
	4	Step of electronic expansion valve (0 step : all closed, 480 step : all open)	6:12	120STEP (12 x 10)
	5	Temperature of evaporator	7:-2	-2 °C
			7:12	12 °C
	6	Indoor temperature	8:22	22 °C
	7	Stopping view mode & display communication data		

5-2 Troubleshooting

When error occurs in air conditioner, error code is displayed on indoor unit display lamp and outdoor unit.

5-2-1 Indoor unit LED error diagnosis

■ Error detection and reoperation

- If error occurs during the operation, badness is indicated by LED flickering and all operation is stopped except LED.
- When reoperating by remote control and switch determine the error mode after normal operation.

■ Indoor unit LED lamp display at error detecting

Error type	LED lamp display					Remarks
	Operation	Defrost	Timer	Air flow	Filter	
	⏻	❄	🕒	🌀	▦	
Power reset	◑	×	×	×	×	
Error of temperature sensor in the indoor unit (Open/Short)	×	×	◑	×	×	
Error of heat exchanger sensor in the indoor unit	◑	×	◑	×	×	
Error of the outdoor temperature sensor Error of the condensor temperature sensor Error of the discharge temperature sensor	◑	×	×	◑	×	
1. No communication for 2 minutes between indoor units (Communication error for more than 2 minutes) 2. Indoor unit receiving the communication error from outdoor unit 3. Outdoor unit tracking 3 minutes error 4. When sending the communication error from the outdoor unit, the mismatching of the communication numbers and installed numbers after completion of tracking (Communication error for more than 2 minutes)	×	×	◑	◑	×	1. Indoor unit error (Display is unrelated with operation) 2. Outdoor unit error (Display is unrelated with operation)
Communication error between indoor units	◑	×	×	×	◑	
1. Error of electronic expansion valve close 2. Error of electronic expansion valve open 3. 2'nd detection of high temperature cond 4. 2'nd detection of high temperature discharge 5. Error of reverse phase 6. Compressor down due to 6'th detection of freezing	×	×	◑	◑	◑	
Detection of the float switch	×	×	×	◑	◑	
Error of setting option switches for optional accessories	×	×	◑	×	◑	
EEPROM error	◑	×	◑	◑	×	
EEPROM option error	◑	◑	◑	◑	◑	

● : On ◑ : Flickering × : Off

※ If you turn off the air conditioner when the LED is flickering, the LED is also turned off.

5-2-2 Outdoor Unit

If an error occurs during the operation, it is displayed on the outdoor unit PCB.

Display	Explanation	Remark
Er↔P0	High temperature of Discharge (Protection control)	Error about protection control of outdoor unit
Er↔P1	High temperature of outdoor heat exchanger (Protection control)	
Er↔P4	Reverse phase error (Protection control)	
Er↔P5	COMP DOWN to protect being frozen	
Er↔P9	In removing frost	
Er↔t1	Error of OUT TEMP sensor (OPEN/SHORT)	Errors about outdoor unit sensor (OPEN/SHORT) Detection during the operation of indoor unit (Sensing and sending errors into the communication data)
Er↔t2	Error of temperature sensor in outdoor heat exchanger (OPEN/SHORT)	
Er↔t3	Error of Discharge TEMP sensor (OPEN/SHORT)	
Er↔E1	System Down caused by communication error after completion of tracking	Communication and indoor unit errors
Er↔E2	Mismatching of the indoor unit numbers set with those communicated after completion of tracking	
Er↔E3	Error of float switch in indoor unit	Self-diagnosis of indoor and outdoor unit (x:indoor unit address)
Er↔E5	Error of setting option switches for optional accessories	
Er↔9x	OPEN/SHORT error of room sensor in indoor unit	
Er↔rx	OPEN/SHORT error of eva in sensor in indoor unit	
Er↔Ux	EEPROM option error	Displays of operating status
Er↔ux	Error of fan starting	
Er↔G4	Open error of electronic expansion valve in outdoor unit (Detected once or more times)	
Er↔G5	Close error of electronic expansion valve in outdoor unit (Detected once or more times)	
tU Flicker	Below -5°C when cooling (Outdoor temperature)	
tO Flicker	Over 30°C when heating (Outdoor temperature)	
K1, K2, K3, K4, K5 Flicker		

The order of priority : E1 → E2 → E3 → E5 → P0 → P1 → P4 → P5 → P9 → t1 → t2 → t3 → tu → to → G4 → G5 → E3 → qx → rx → vx → K1, K2, K3, K4, K5

- In case that the same error displays from multi-indoor units, the one having the faster address has the priority.

5-2-3 Wired remote controller

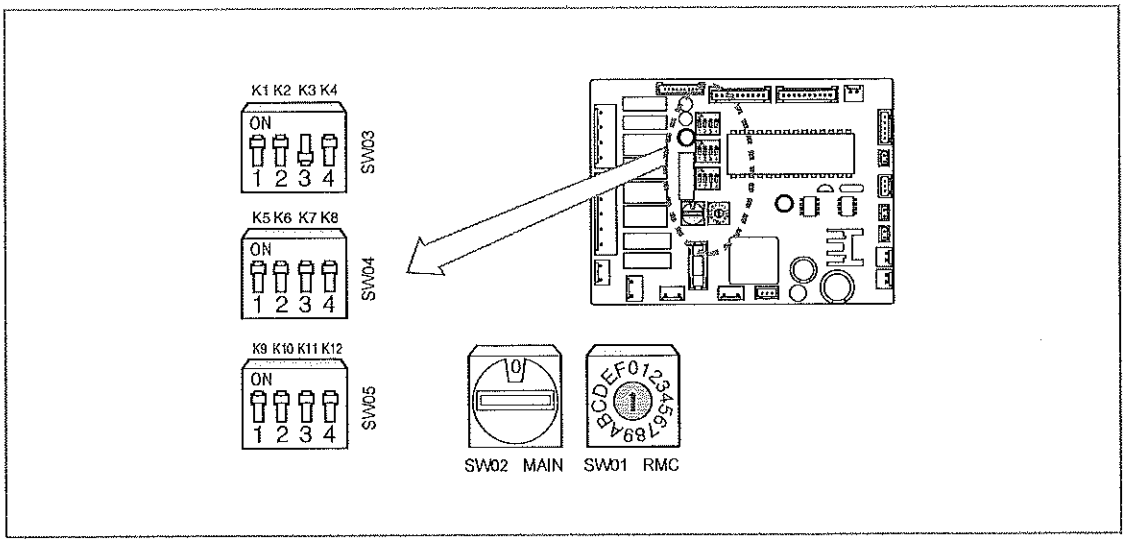
● If an error occurs, is displayed on the wired remote controller.
If you would like to see an error code, press the Test button.

Display	Description	Remarks
416	Compressor down due to protection control of the discharge temperature sensor	Error about protection control of the outdoor unit
450	Control due to the condenser temperature sensor when cooling mode	
451	Error of the low pressure switch (Protection control)	
425	Reverse phase error (Protection control)	
551	In removing frost	
221	Error of the outdoor temperature sensor (Open/Short)	Error about the outdoor unit sensor (Open/Short) Detection during the operation of the indoor unit (sensing and sending errors into the communication data)
237	Error of condensor temperature sensor (Open/Short)	
251	Error of discharge temperature sensor (Open/Short)	
201	- System down caused by communication error after completion of tracking - Mismatching of the indoor unit numbers set with those communication after completion of 5 times tracking	Communication and the indoor unit errors
121	Error of temperature sensor in the indoor unit (Open/Short)	Self-diagnosis of the indoor and outdoor unit
122	Error of the heat exchanger sensor in the indoor unit (Open/Short)	
419	Error of electronic expansion valve open in the outdoor unit (when it is detected more than once)	
422	Error of electronic expansion valve close in the outdoor unit (when it is detected more than once)	
601	Error of communication between the indoor unit and the wired remote controller	Wired remote controller errors
602	Master wired remote controller ↔ Slave wired remote controller	
606	COM1/COM2 Cross-installed error	
0EA	Error of setting option for wired remote controller COM2	

5-3 Assigning Address to Indoor Unit

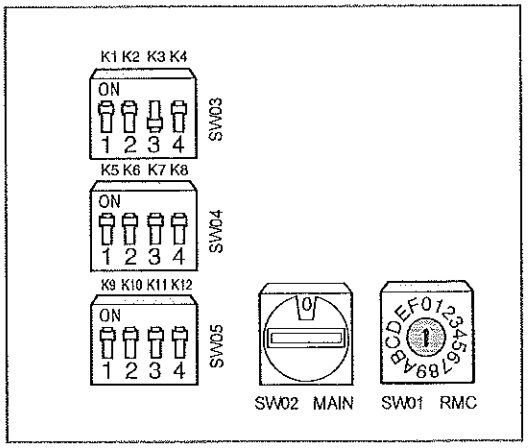
5-3-1 CH070EZM

1. Before installing the indoor unit, assign an address to the indoor unit according to the air conditioning system plan.
2. The address of the indoor unit is assigned by adjusting MAIN(SW02) and RMC(SW01) rotary switches.



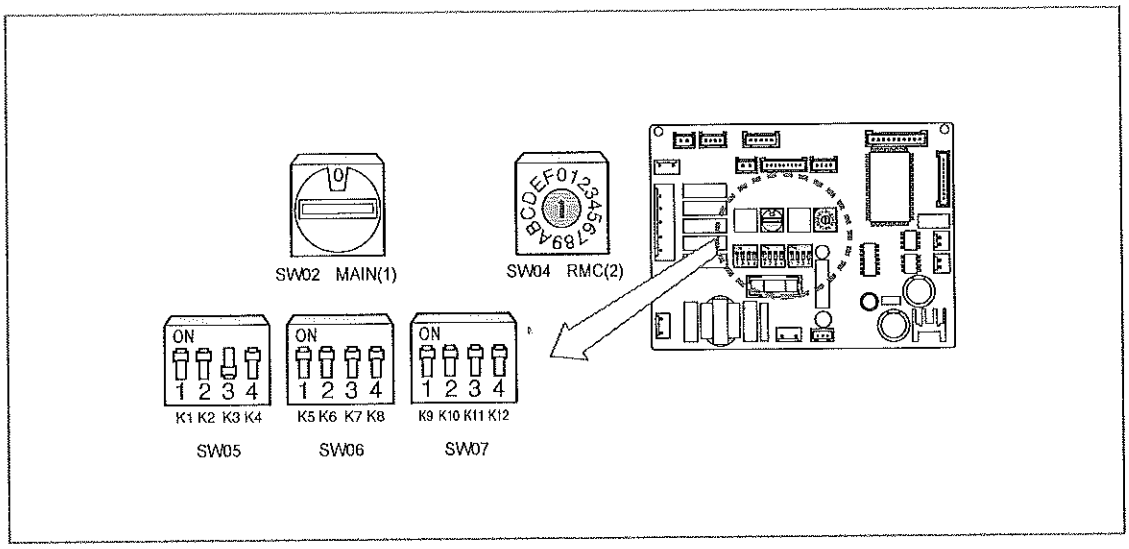
3. The MAIN address is for communication between the indoor unit and the outdoor unit. Therefore, you must set it to operate the air conditioner properly.
4. It is required to set the RMC address if you install the wired remote controller and/or the centralized controller.
5. If you install optional accessories such as the wired remote controller, centralized controller, etc. see an appropriate installation manual.
6. If an optional accessory is not installed, you do not have to set the RMC address. However, adjust K1 and K2 switches of the SW03 DIP switch to "ON" position in this case.
7. Set the MAIN address by adjusting the rotary switch(SW02) from 0 to F. Each indoor unit connected to the same outdoor unit must have different address.

   i. e. If an indoor unit does not have an optional accessory and its MAIN address is "0"



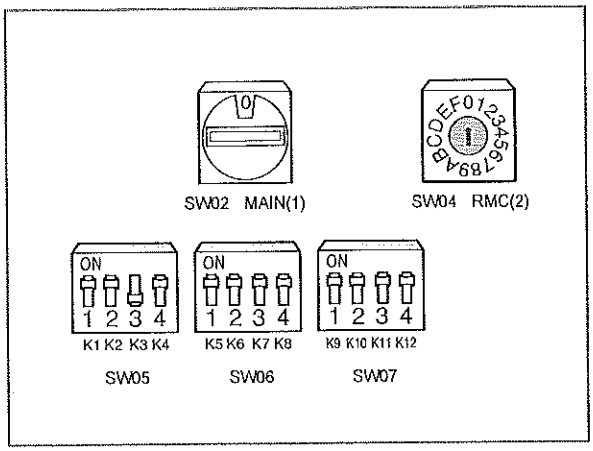
5-3-2 CH105EZM1 / CH128EZM1 / CH140EZM1

1. Before installing the indoor unit, assign an address to the indoor unit according to the air conditioning system plan.
2. The address of the indoor unit is assigned by adjusting MAIN(SW02) and RMC(SW04) rotary switches.



3. The MAIN address is for communication between the indoor unit and the outdoor unit. Therefore, you must set it to operate the air conditioner properly.
4. It is required to set the RMC address if you install the wired remote controller and/or the centralized controller.
5. If you install optional accessories such as the wired remote controller, centralized controller, etc. see an appropriate installation manual.
6. If an optional accessory is not installed, you do not have to set the RMC address. However, adjust K1 and K2 switches of the SW05 DIP switch to "ON" position in this case.
7. Set the MAIN address by adjusting the rotary switch(SW02) from 0 to F. Each indoor unit connected to the same outdoor unit must have different address.

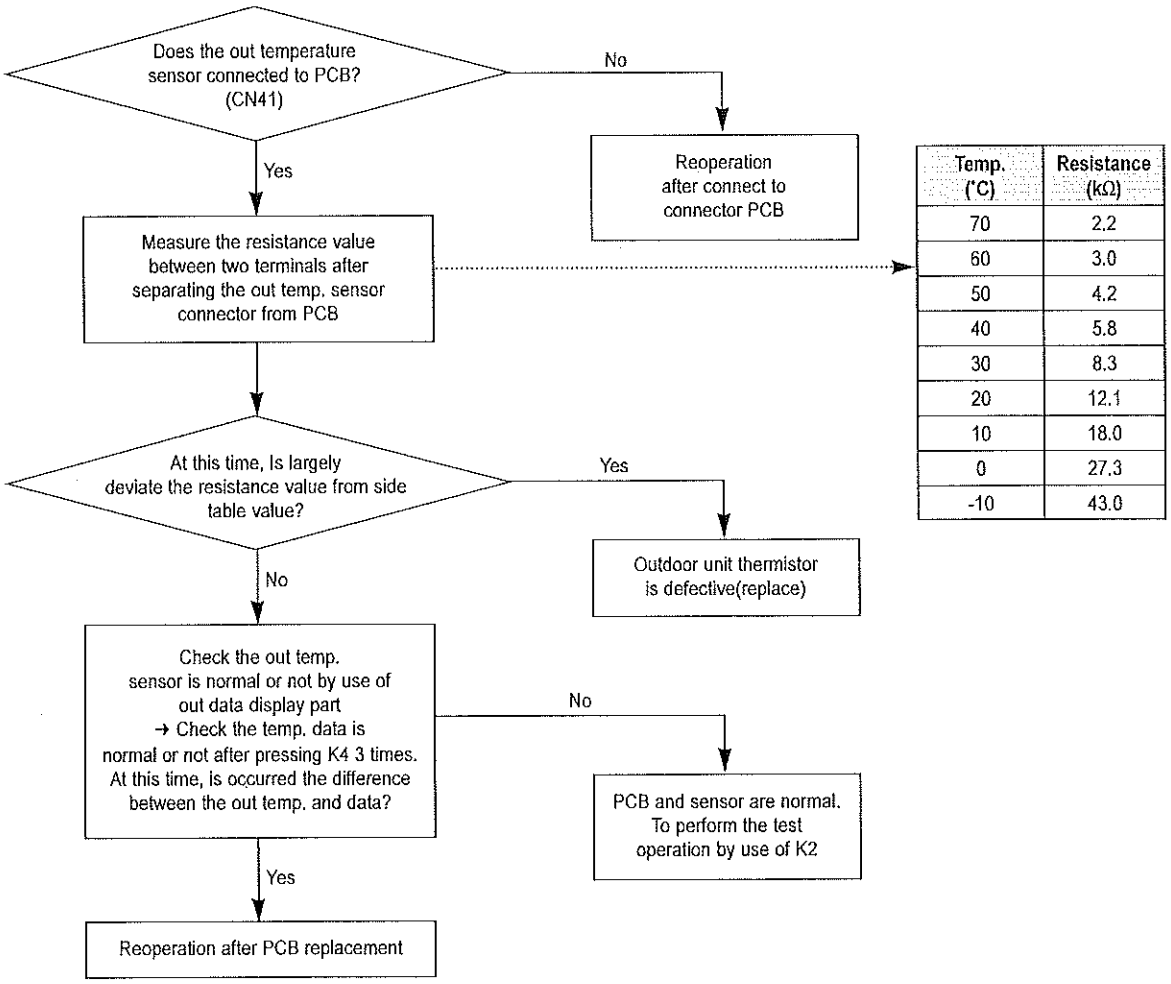
   i. e. If an indoor unit does not have an optional accessory and its MAIN address is "0".



5-4 Sequence for trouble diagnosis

5-4-1 Outdoor temp. sensor(OPEN/SHORT)

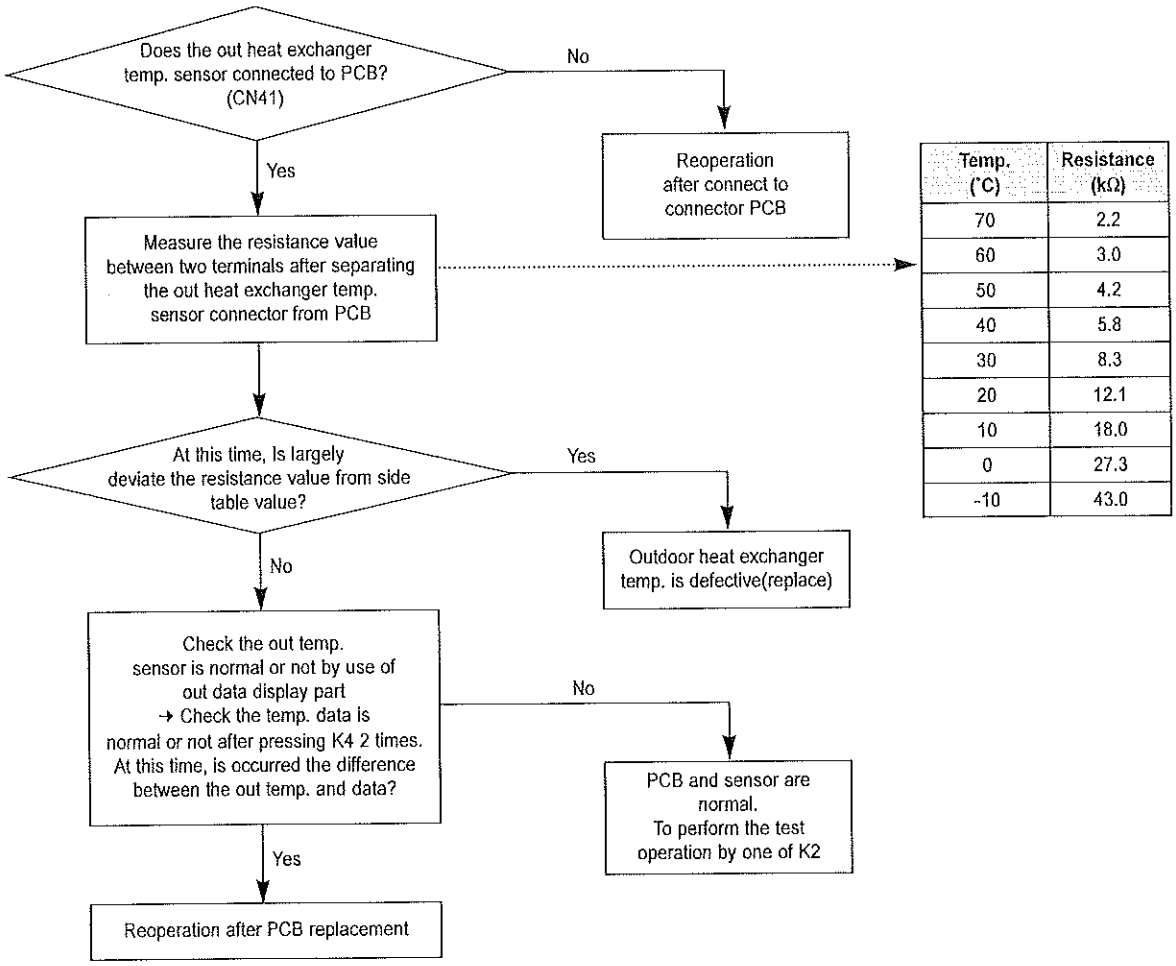
Outdoor unit display	Er → t1 (Outdoor temp. sensor OPEN/SHORT error)
Indoor unit display	◑ (Operation) × (Timer) ◑ (Airflow) × (Filter)
How to determine	Disconnection and short of outdoor temp. sensor
Reason of error	Disconnection or leak of applied sensor



Temp. (°C)	Resistance (kΩ)
70	2.2
60	3.0
50	4.2
40	5.8
30	8.3
20	12.1
10	18.0
0	27.3
-10	43.0

5-4-2 Outdoor heat exchanger temp. sensor error(OPEN/SHORT)

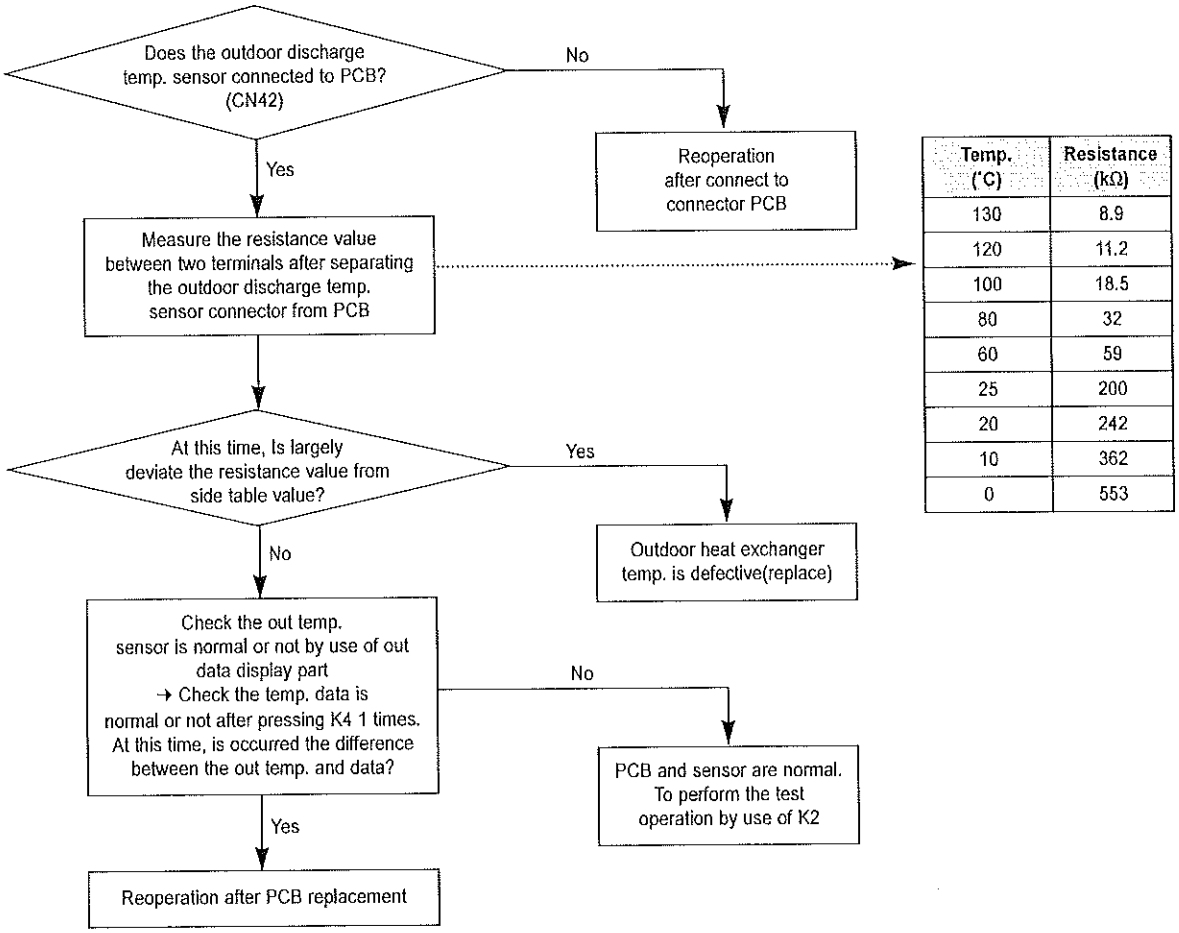
Outdoor unit display	Er → t2 (Outdoor heat exchanger temp. sensor error(OPEN/SHORT)
Indoor unit display	◑ (Operation) × (Timer) ◑ (Airflow) × (Filter)
How to determine	Disconnection and short of outdoor heat exchanger temp. sensor
Reason of error	Disconnection or leak of Applied sensor



Temp. (°C)	Resistance (kΩ)
70	2.2
60	3.0
50	4.2
40	5.8
30	8.3
20	12.1
10	18.0
0	27.3
-10	43.0

5-4-3 Outdoor discharge temp. sensor error(OPEN/SHORT)

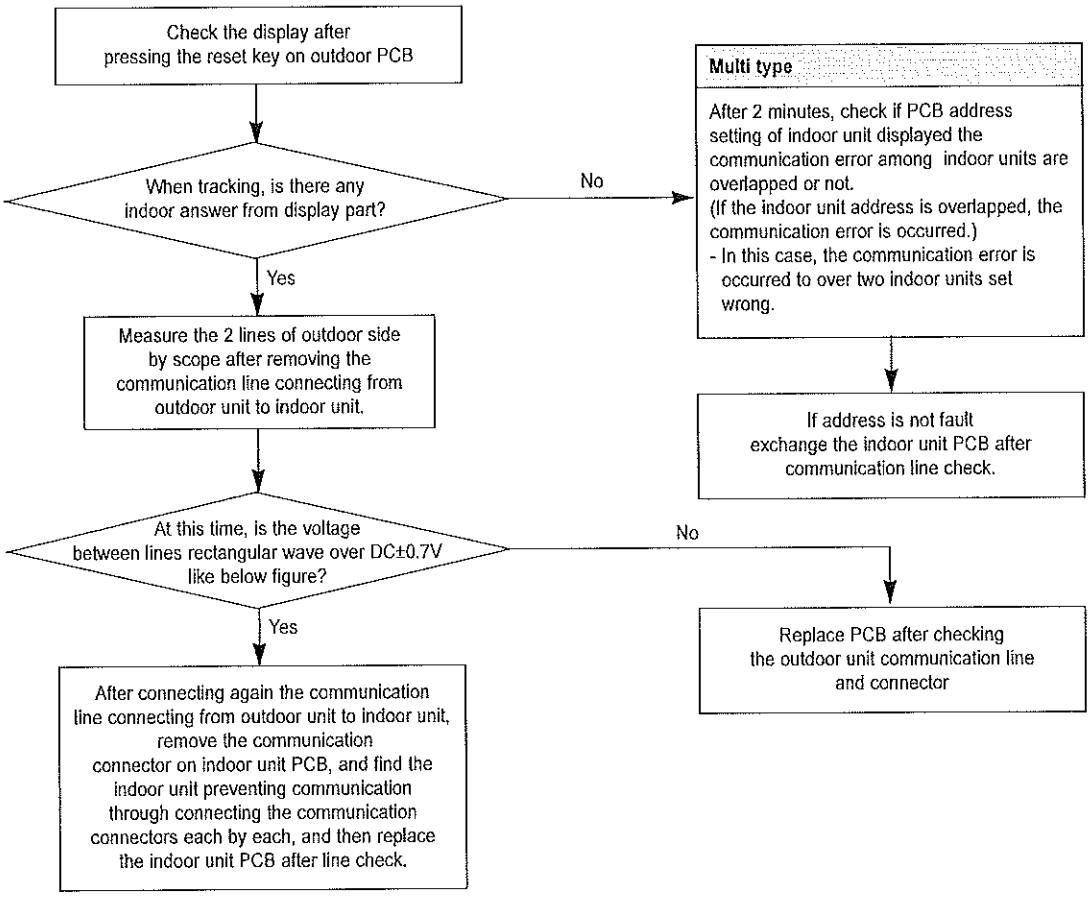
Outdoor unit display	Er → t3 (Outdoor discharge temp. sensor OPEN/SHORT error)
Indoor unit display	◑ (Operation) × (Timer) ◑ (Airflow) × (Filter)
How to determine	Disconnection and short of outdoor discharger temp. sensor
Reason of error	Disconnection or leak of Applied sensor

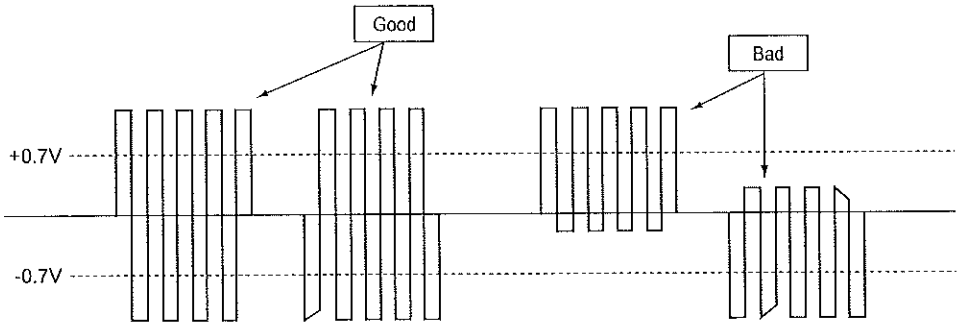


Temp. (°C)	Resistance (kΩ)
130	8.9
120	11.2
100	18.5
80	32
60	59
25	200
20	242
10	362
0	553

5-4-4 Communication error during the operation

Outdoor unit display	Er → E1 (Communication error during the operation)
Indoor unit display	× (Operation) ◑ (Timer) ◑ (Airflow) × (Filter)
How to determine	Disconnection and short of communication lines
Reason of error	Communication error between the indoor unit and outdoor unit.





5-4-5 Communication error between indoor and outdoor after initial power input.

Outdoor unit display	Er → E2 (Tracking error)
Indoor unit display	× (Operation) ◑ (Timer) ◑ (Airflow) × (Filter)
How to determine	Mismatching the communicating indoor unit and setting switch indoor numbers When outdoor tracking
Reason of error	Communication error between the indoor unit and outdoor unit, and installation number switch setting miss