

Outdoor power circuit board

MXZ-4C36NAHZ2-U1

MXZ-5C42NAHZ2-U1

MXZ-8C48NAHZ2-U1

MXZ-8C60NA2-U1

Brief Check of POWER MODULE

If they are short-circuited, it means that they are broken.

Measure the resistance in the following points (connectors, etc.).

1. Check of POWER MODULE

① Check of DIODE circuit

R - **L1** , **S** - **L1** , **R** - **N1** , **S** - **N1**

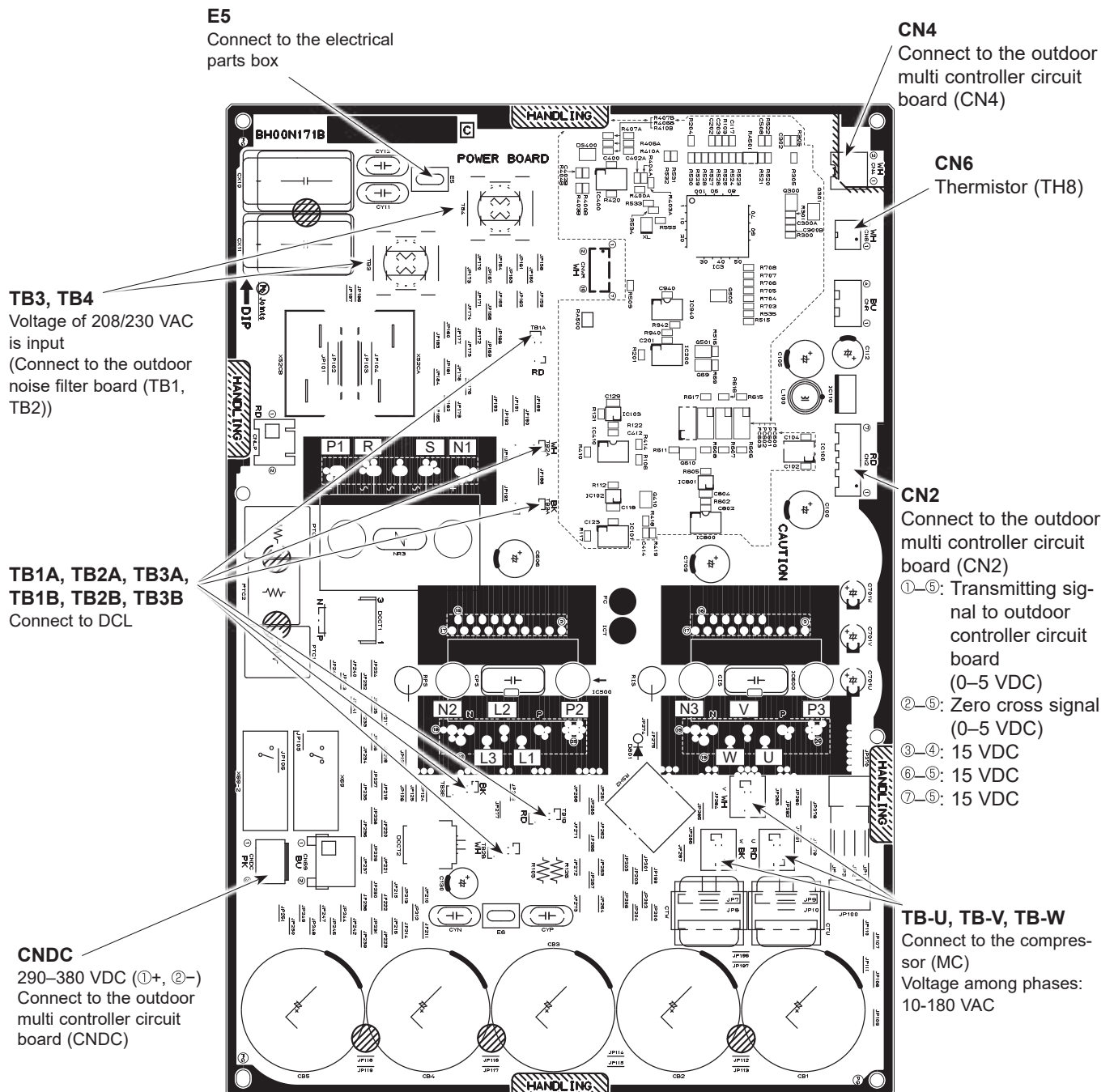
② Check of IGBT circuit

L2 - **N1**

③ Check of INVERTER circuit

P - **U** , **P** - **V** , **P** - **W** , **N1** - **U** , **N1** - **V** , **N1** - **W**

Note: The marks **R** , **S** , **L1** , **L2** , **P** , **N1** , **U** , **V** and **W** shown in the diagram are not actually printed on the board.



Outdoor power circuit board

MXZ-8C48NA2-U1

CN2

Connect to the outdoor multi controller circuit board (CN2)

- ①-⑥: Transmitting signal to outdoor controller circuit board ((0-5 VDC)
- ②-⑤: Zero cross signal (0-5 VDC)
- ③-④: 15 VDC
- ⑥-⑦: 15 VDC
- ⑦-⑧: 15 VDC

TB1B, TB3B, TB2B, TB1A, TB2A, TB3A
Connect to DCL

CNDC

290-380 VDC (①+, ③-)
Connect to the outdoor controller circuit board (CN52)

Brief Check of POWER MODULE

If they are short-circuited, it means that they are broken.
Measure the resistance in the following points (connectors, etc.).

1. Check of POWER MODULE

① Check of DIODE circuit

R - P1 S - P1 R - N1 S - N1

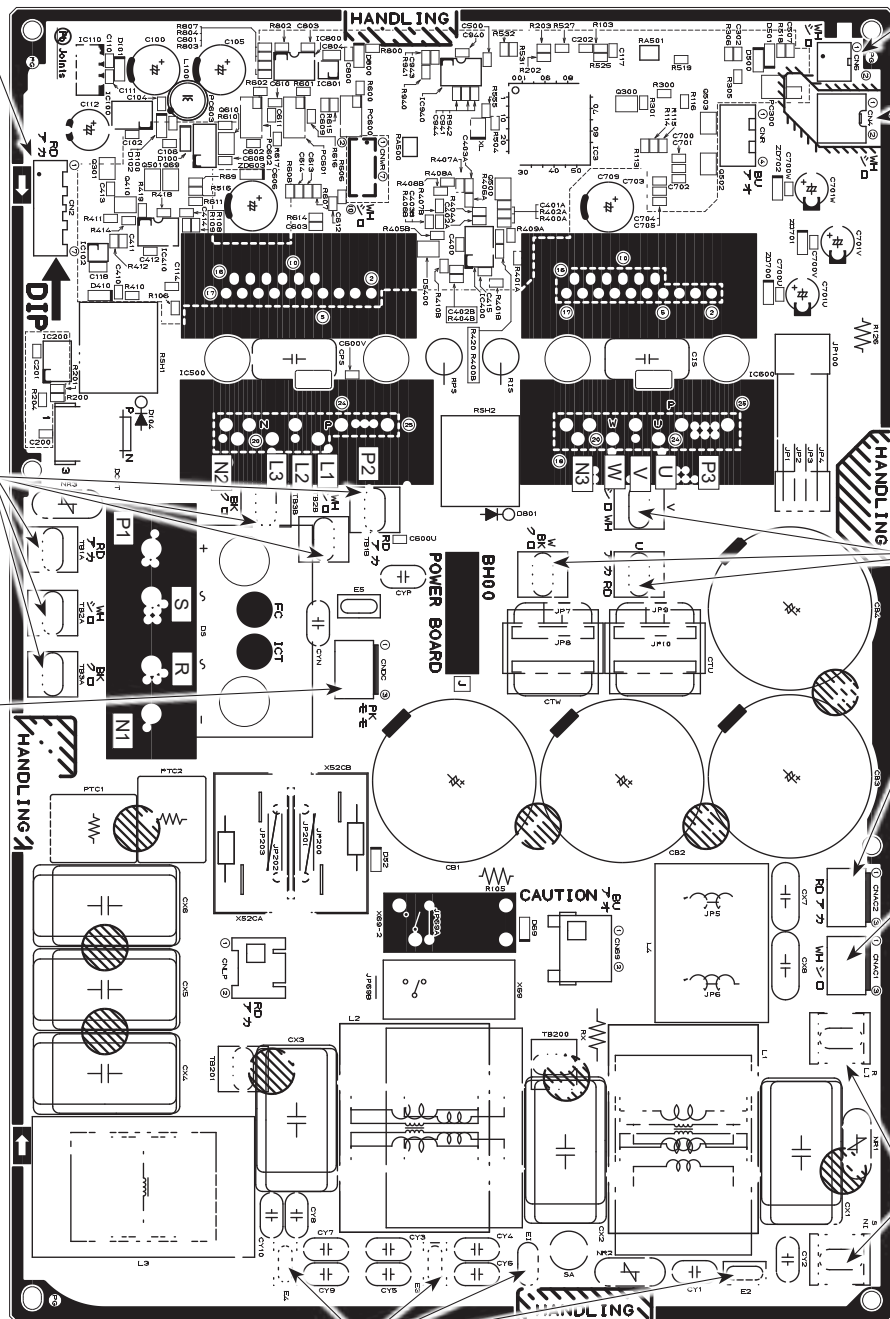
② Check of IGBT circuit

P2 - L1 P2 - L2 N2 - L1 N2 - L2

③ Check of INVERTER circuit

P3 - U, P3 - V, P3 - W, N3 - U, N3 - V, N3 - W

Note: The marks R, S, L1, L2, P1, N1, U, V and W shown in the diagram are not actually printed on the board.



CN6

Thermistor (TH8)

CN4

Connect to the outdoor multi controller circuit board (CN4)

U/V/W

Connect to the compressor (MC) Voltage among phases: 10-180 VAC

CNAC2

208/230 VAC
Connect to the outdoor multi controller circuit board (CNAC)

CNAC1

208/230 VAC
Connect to the M-NET power circuit board (CN1)

R/LI, S/NI

Voltage of 208/230 VAC is input
(Connect to the terminal block (TB1))

E1, E2, E3, E4

Connect to the electrical parts box

MXZ-4C36NAHZ2-U1
MXZ-5C42NAHZ2-U1
MXZ-8C48NAHZ2-U1
MXZ-8C60NA2-U1

LI, NI
POWER SUPPLY
Voltage of 208/230 VAC is input
(Connect to the terminal block (TB1))



M-NET power circuit board

MXZ-4C36NAHZ2-U1

MXZ-5C42NAHZ2-U1

MXZ-8C48NAHZ2-U1

MXZ-8C48NA2-U1

MXZ-8C60NA2-U1

CN2

Connect to the outdoor multi controller circuit board (CN102)

①-②: 24-30 VDC

③-④: 24-30 VDC

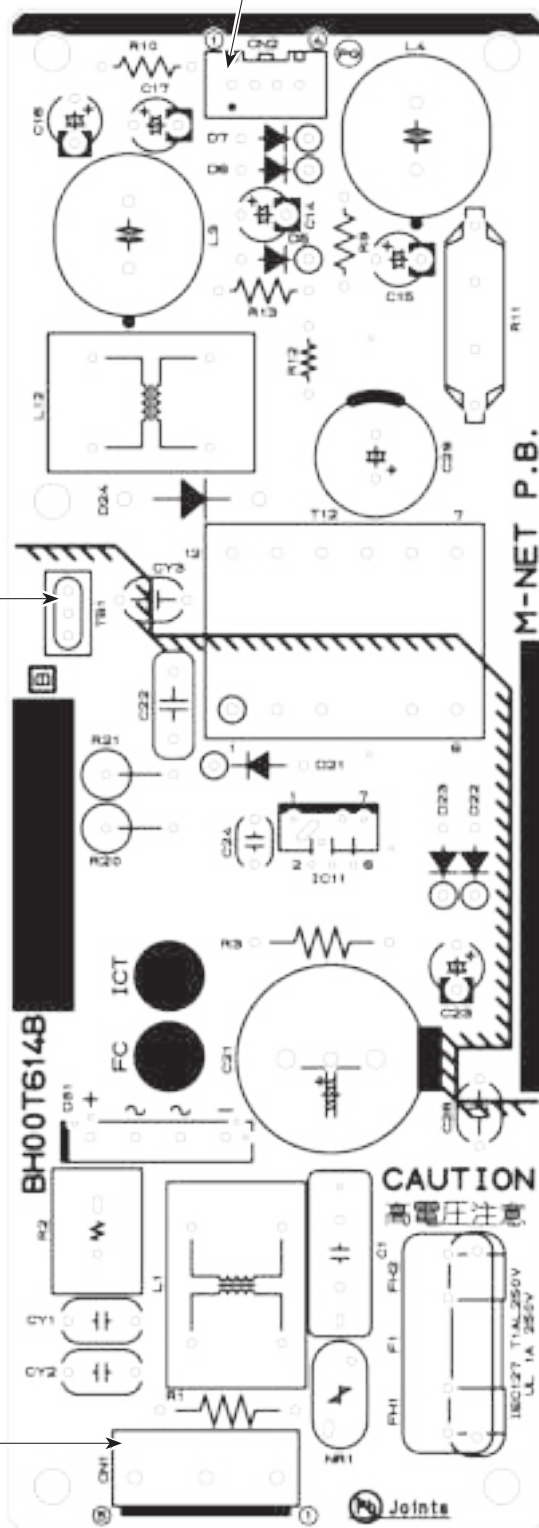
TB1

Connect to the electrical parts box

CN1

Connect to the outdoor power circuit board (CNAC1)

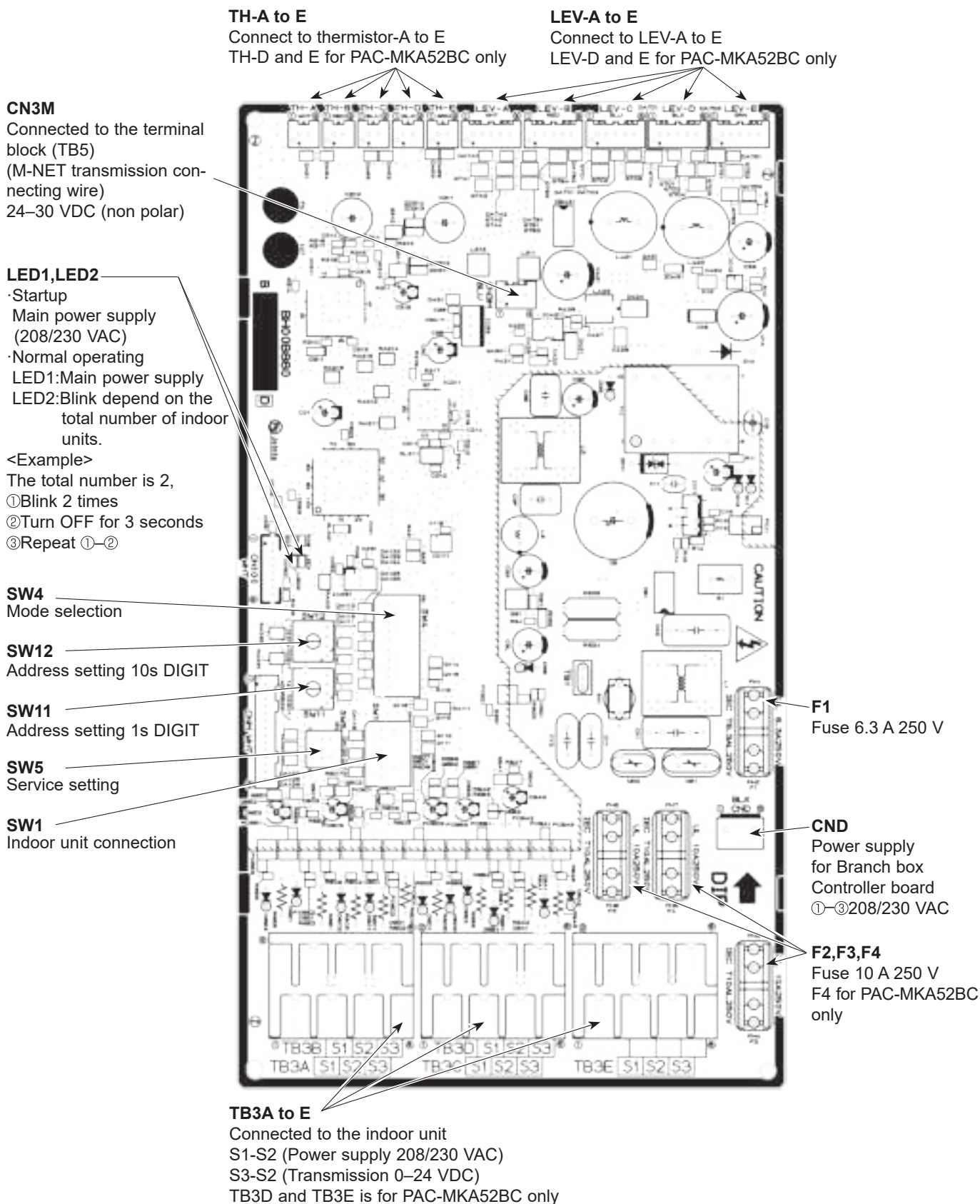
①-③: 208/230 VAC



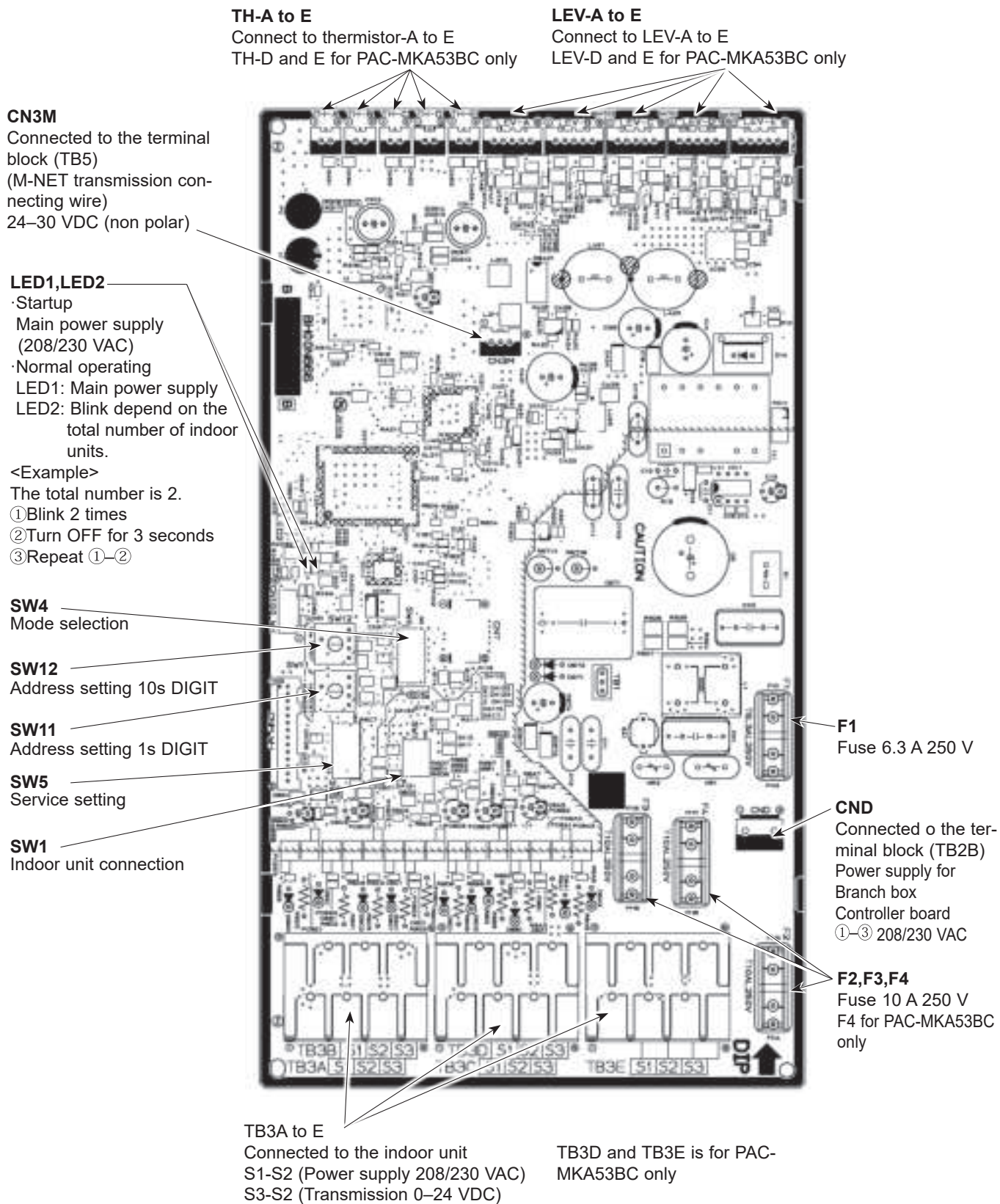
Branch box controller board (B.C.)

PAC-MKA52BC

PAC-MKA32BC



Branch box controller board (B.C.)
PAC-MKA53BC
PAC-MKA33BC

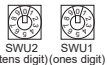
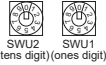
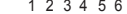


8-9. INTERNAL SWITCH FUNCTION TABLE

(1) Function of switches

MXZ-4C36NAHZ2-U1 MXZ-5C42NAHZ2-U1 MXZ-8C48NAHZ2-U1 MXZ-8C60NA2-U1

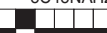
The black square (■) indicates a switch position.

Switch	Step	Function	Operation in Each Switch Setting			Remarks	Purpose	Additional Information																						
			ON	OFF	When to Set																									
SWU1 ones digit SWU2 tens digit	Rotary switch	 SWU2 (tens digit) SWU1 (ones digit)			Before turning the power ON	<Initial settings>  SWU2 (tens digit) SWU1 (ones digit)	—	—																						
SW1 Digital Display Switch	1-8	ON  OFF  1 2 3 4 5 6 7 8			Can be set either during operation or not.	<Initial settings> ON  OFF  1 2 3 4 5 6	—	—																						
SW2 Function Switch	1	Selects operating system startup	With centralized controller	Without centralized controller	Before turning the power ON	<Initial settings> ON  OFF  1 2 3 4 5 6	Turn ON when the centralized controller is connected to the outdoor unit.	•SW2-1 must be turned ON if a central controller is connected to the system. An example of this would be a TT-24, TW-50A, TE50 or TE200. If SW2-1 is not turned on, while using a central controller, in rare circumstances problems may be encountered such as indoor units not responding to group commands. Therefore, turning SW2-1 ON is recommended if a central controller is used. •Group setting of 2 or more A-IC units which is connected to branch box via centralized controller is not allowed.																						
	2	Connection Information Clear Switch	Clear	Do not clear					When relocating units or connecting additional units.	—																				
	3	Abnormal data clear switch input	Clear abnormal data	Normal	OFF to ON any time after the power is turned on.		To delete an error history.	—																						
	4	Pump down	ON	OFF	During compressor running		To facilitate outdoor unit the pumping down operation. Frequency = Fixed to 65 Hz Indoor linear expansion valve = Fully open Outdoor fan step = Fixed to 10	Please refer to a section referring to the pumping down on outdoor units Installation Manuals. It might not be possible to collect all the refrigerant if the amount is excessive.																						
	5	—	—	—	—		—	—																						
	6	—	—	—	—		—	—																						
SW2-5, 6/ SW4/ SW8/ SW9-3 Model Switch	1-6	MODEL SELECTION			Before the power is turned ON.	<Initial settings> Set for each capacity.	—	—																						
		<table><tr><th>MODELS</th><th>SW2</th><th>SW4</th><th>SW8</th><th>SW9</th></tr><tr><td>MXZ-4C36NAHZ2</td><td>ON  OFF  5 6</td><td>ON  OFF  1 2 3 4 5 6</td><td>ON  OFF  1 2</td><td>ON  OFF  3</td></tr><tr><td>MXZ-5C42NAHZ2</td><td>ON  OFF  5 6</td><td>ON  OFF  1 2 3 4 5 6</td><td>ON  OFF  1 2</td><td>ON  OFF  3</td></tr><tr><td>MXZ-8C48NAHZ2</td><td>ON  OFF  5 6</td><td>ON  OFF  1 2 3 4 5 6</td><td>ON  OFF  1 2</td><td>ON  OFF  3</td></tr><tr><td>MXZ-8C60NA2</td><td>ON  OFF  5 6</td><td>ON  OFF  1 2 3 4 5 6</td><td>ON  OFF  1 2</td><td>ON  OFF  3</td></tr><tr><td>MXZ-8C48NA2</td><td>ON  OFF  5 6</td><td>ON  OFF  1 2 3 4 5 6</td><td>ON  OFF  1 2</td><td>ON  OFF  3</td></tr></table>	MODELS	SW2					SW4	SW8	SW9	MXZ-4C36NAHZ2	ON  OFF  5 6	ON  OFF  1 2 3 4 5 6	ON  OFF  1 2	ON  OFF  3	MXZ-5C42NAHZ2	ON  OFF  5 6	ON  OFF  1 2 3 4 5 6	ON  OFF  1 2	ON  OFF  3	MXZ-8C48NAHZ2	ON  OFF  5 6	ON  OFF  1 2 3 4 5 6	ON  OFF  1 2	ON  OFF  3	MXZ-8C60NA2	ON  OFF  5 6	ON  OFF  1 2 3 4 5 6	ON  OFF  1 2
MODELS	SW2	SW4	SW8	SW9																										
MXZ-4C36NAHZ2	ON  OFF  5 6	ON  OFF  1 2 3 4 5 6	ON  OFF  1 2	ON  OFF  3																										
MXZ-5C42NAHZ2	ON  OFF  5 6	ON  OFF  1 2 3 4 5 6	ON  OFF  1 2	ON  OFF  3																										
MXZ-8C48NAHZ2	ON  OFF  5 6	ON  OFF  1 2 3 4 5 6	ON  OFF  1 2	ON  OFF  3																										
MXZ-8C60NA2	ON  OFF  5 6	ON  OFF  1 2 3 4 5 6	ON  OFF  1 2	ON  OFF  3																										
MXZ-8C48NA2	ON  OFF  5 6	ON  OFF  1 2 3 4 5 6	ON  OFF  1 2	ON  OFF  3																										
SW3 Trial operation	1	ON/OFF from outdoor unit	ON	OFF	Any time after the power is turned ON.	<Initial settings> ON  OFF  1 2	—	—																						
	2	Mode setting	Heating	Cooling			—	—																						

Switch	Step	Function	Operation in Each Switch Setting			Remarks	Purpose	Additional Information																																
			ON	OFF	When to Set																																			
SW5 Function switch	1	—	—	—	Can be set when off or during operation	<Initial settings> ON <table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr></table> OFF <table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr></table>									1	2	3	4	5	6	7	8									1	2	3	4	5	6	7	8	—	—
	1	2	3	4			5	6	7	8																														
	1	2	3	4	5		6	7	8																															
	2	Change the indoor unit's LEV opening at startup	Enable	Normal	To set the LEV opening at startup higher than usual (+150 pulses). To improve the operation with the LEV almost clogged.		The refrigerant flow noise at startup become louder.																																	
	3	—	—	—	—		—																																	
	4	Auxiliary heater	Enable	Disable	Before turning the power ON		Turn ON when an auxiliary heater is connected. (It transmits a connection permission signal of the auxiliary heater to the connected CITY MULTI indoor unit.)	Turn ON only when the auxiliary heater is connected and operated.																																
5	Change the indoor unit's LEV opening at defrost	Enable	Normal	Can be set when OFF or during operation	To set the LEV opening higher than usual during defrosting operation. (Only Qj ≤ 10 is valid, + 300 pulses) To avoid the discharge temperature increase and provide efficient defrosting operation.	The refrigerant flow noise during the defrosting operation becomes louder.																																		
6	Switching the target sub cool (Heating mode)	Enable	Normal		To decrease the target sub cool value. To reduce the discharge temperature decrease due to refrigerant liquid accumulation in the units.	A refrigerant flow noise might be generated if the sub cool value is too small.																																		
7	While the outdoor unit is in HEAT operation, additionally increase about 50 to 70 pulses of the LEV opening on the indoor unit which is in FAN, STOP, COOL, or thermo-OFF.*1	Active	Inactive		<Initial settings>	To additionally increase about 50 to 70 pulses of the LEV opening for units other than in HEAT operation. To avoid a refrigerant shortage (less capacity) due to refrigerant liquid accumulation in the units which is not in operation.	A refrigerant flow noise might be generated in units other than the one in operation.																																	
8	While the outdoor unit is in HEAT operation, fully close the linear expansion valve on the indoor unit which is in FAN or COOL.*2	Enable	Normal	To reduce the room temperature increase by setting the LEV opening lower for the indoor units in FAN or COOL.		The refrigerant is more likely to collect in the indoor units in FAN or COOL, which can cause refrigerant shortage of units. (Results in less capacity and increase of discharge temperature.)																																		
SW6 Function switch	1	—	—	—	<Initial settings>	—	—																																	
	2	—	—	—		—	—																																	
	3	—	—	—		—	—																																	
	4	Change of defrosting control	Enable (For high humidity)	Normal	Can be set when OFF or during operation	<table><tr><td>SW6-6</td><td>OFF</td><td>ON</td></tr><tr><td>Target Pdm (kg/cm²)</td><td>29.5</td><td>31.5</td></tr></table>	SW6-6	OFF	ON	Target Pdm (kg/cm²)	29.5	31.5	To shorten the defrosting prohibition time in high humidity (or heavy snow) region, in order to reduce malfunctions caused by frost .	The performance of the HEAT operation is somewhat reduced since the defrosting operation is frequently performed.																										
	SW6-6	OFF	ON																																					
	Target Pdm (kg/cm²)	29.5	31.5																																					
	5	—	—	—		—	—																																	
	6	Switching the target discharge pressure (Pdm)	Enable	Normal		To raise the performance by setting the PDM higher during HEAT operation.	Power consumption is raised due to a higher frequency. (The performance would not be raise at the maximum operating frequency.)																																	
7	Switching (1) the target evaporation temperature (ETm)	Enable	Normal	<table><tr><td>SW6-7</td><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td></tr><tr><td>SW6-8</td><td>OFF</td><td>OFF</td><td>ON</td><td>ON</td></tr><tr><td>Target ETm (°C)</td><td>9</td><td>11</td><td>6</td><td>14</td></tr></table>	SW6-7	OFF	ON	OFF	ON	SW6-8	OFF	OFF	ON	ON	Target ETm (°C)	9	11	6	14	To raise/reduce the performance by changing the target ETm during COOL operation. Switch to raise the performance: raises the performance Switch to reduce the performance: prevents dew condensation	Switching it to raise the performance, it raises the power consumption, and produces more dew condensation. Switching it to reduce the performance, it makes the performance insufficient.																			
SW6-7	OFF	ON	OFF		ON																																			
SW6-8	OFF	OFF	ON	ON																																				
Target ETm (°C)	9	11	6	14																																				
8	Switching (2) the target evaporation temperature (ETm)	Enable	Normal																																					

*1 SW5-7 Opens the indoor linear expansion valve as a countermeasure against the indoor unit in FAN, COOL, STOP, or thermo-OFF operation with refrigerant-shortage status due to an accumulation of liquid refrigerant in the indoor unit.

*2 SW5-8 Countermeasure against room temperature rise for indoor unit in FAN and COOL mode.

Switch	Step	Function	Operation in Each Switch Setting			Remarks	Purpose	Additional Information
			ON	OFF	When to Set			
SW7 Function switch	1	Ignore current sensor abnormality and rotational frequency abnormality of outdoor fan motor	Enable	Normal	After turning the power ON.	<Initial settings> MXZ-8C48/60NA ON  OFF  1 2 3 4 5 6 MXZ-4C36/5C42/ 8C48NAHZ ON  OFF  1 2 3 4 5 6	To perform a test run for electrical parts alone without running the compressor. Also, to perform the troubleshooting of electrical parts without operating the outdoor unit's fan.	Make sure to connect the connectors to the compressor after checking the electrical parts. Be careful not to get electrical shock while working on electrical parts.
	2	Setting to energize the freeze stat heater (optional part)	During heating operation only*3	Include when the heating operation is OFF.*4	Can be set when OFF or during operation		It reduces snow on the base, even it blows inside the unit, by setting the base heater ON while the HEAT operation is stopped.	Power consumption raises while the operation is stopped.
	3	—	—	—	—		—	—
	4	Maximum frequency down at 1 hour after COOL operation	Enable	Normal	Can be set when OFF or during operation		To reduce dew condensation on the indoor unit by lowering the frequency.	The performance might be insufficient.
	5	—	—	—	—		—	—
	6	Manual defrost	Manual defrost	Normal	During compressor running in HEAT mode.		Turn ON when it is necessary to perform the defrosting operation forcedly. (Effective only at startup, or 10 minutes after the last defrosting operation)	It performs the defrosting operation forcedly. (HEAT operation is stopped temporarily.)
SW9 Function Switch	1	Auto change over from remote controller (IC with the minimum address)	Enable	Disable	Before turning the power ON	<Initial settings> ON  OFF  1 2 3 4	Enables the indoor unit with the minimum address to select AUTO mode, and switches the operation mode of the other indoor units to the same mode.	Cannot be set when the centralized control is ON.
	2	Switching the Silent/ Demand mode	Demand control	Silent mode	Can be set when OFF or during operation		—	About the Silent mode/Demand control setting, refer to "8-5. OUTDOOR UNIT INPUT/OUTPUT CONNECTOR".
	4	—	—	—	—		—	—

*3 During heating operation and the ambient temperature is 39°F [4°C] or below, the freeze prevention heater is energized.

*4 During heating mode is OFF (include thermo-OFF in cooling mode), and the ambient temperature is 39°F [4°C] or below, the freeze prevention heater is energized.

The black square (■) indicates a switch position.

Switch	Step	Function	Operation in Each Switch Setting			Remarks	Additional Information																							
			ON	OFF	When to Set																									
SWU11 1s digit address setting SW12 10s digit address setting	Rotary switch	How to set addresses Example: if address is "3", remain SW12 (for over 10) at "0", and match SW11 (for 1 to 9) with "3".			Before turning the power ON	<Initial settings> <PAC-MKA32/52BC> SW12 SW11  10s digit  1s digit <PAC-MKA33/53BC> SW12 SW11  10s digit  1s digit	—																							
SW1 Indoor unit connection	1-5	<table><tr><td rowspan="6">SW1</td><td>1</td><td>Indoor unit A</td><td>OFF Not connected</td><td>ON Connected</td></tr><tr><td>2</td><td>Indoor unit B</td><td>Not connected</td><td>Connected</td></tr><tr><td>3</td><td>Indoor unit C</td><td>Not connected</td><td>Connected</td></tr><tr><td>4*1</td><td>Indoor unit D</td><td>Not connected</td><td>Connected</td></tr><tr><td>5*1</td><td>Indoor unit E</td><td>Not connected</td><td>Connected</td></tr><tr><td>6</td><td>Not used</td><td></td><td></td></tr></table>	SW1	1	Indoor unit A	OFF Not connected	ON Connected	2	Indoor unit B	Not connected	Connected	3	Indoor unit C	Not connected	Connected	4*1	Indoor unit D	Not connected	Connected	5*1	Indoor unit E	Not connected	Connected	6	Not used			Before turning the power ON	<Initial settings> ON  OFF  1 2 3 4 5 6	After each indoor unit is connected to the outdoor unit, turn ON the switch corresponding to each indoor unit. For example, when the indoor units are connected to INDOOR UNIT-A and C, turn SW1-1 and SW1-3 to ON.
SW1	1	Indoor unit A		OFF Not connected	ON Connected																									
	2	Indoor unit B		Not connected	Connected																									
	3	Indoor unit C		Not connected	Connected																									
	4*1	Indoor unit D		Not connected	Connected																									
	5*1	Indoor unit E		Not connected	Connected																									
	6	Not used																												
SW4 Mode selection	1	—	—	—	—	<Initial settings> <PAC-MKA32/52BC> ON  OFF  1 2 3 4 5 6 7 8 9 10	—																							
	2	Power-supply voltage setting	230 V	208 V	Set at factory only	<PAC-MKA33/53BC> ON  OFF  1 2 3 4 5 6 7 8 9 0																								
	3	Change operation if M-NET communication error occurs.	Stop operation	Continued operation	Before turning the power ON																									
	4	Automatic restoration when the power comes back ON.*2	Inactive	Active																										
	5-8	—	—	—	—	—																								
	9	Detection of branch box pipe thermistors	No Detection	Detection	Before turning the power ON	—																								
	10(0)	—	—	—	—	—																								
SW5 Service setting	1-3	Change INDOOR UNIT No. for monitoring	Refer to "8-11. BRANCH BOX UNIT OPERATION MONITOR FUNCTION".		Can be activated at any time	<Initial settings> <PAC-MKA32/52BC> ON  OFF  1 2 3 4 5 6 <PAC-MKA33/53BC> ON  OFF  1 2 3 4 5 6 7 8 9 0	—																							

*1 Only for 5-branches model; NOT USED for 3-branches model.

*2 Note that the automatic restoration starts after the unit has stopped once.

PAC-MKA52BC

PAC-MKA32BC

PAC-MKA53BC

PAC-MKA33BC

SW: setting
0....OFF
1....ON

No.	SW1 setting	Display mode	Display on the LED1, 2 (display data)								Notes	
	12345678		1	2	3	4	5	6	7	8		
0	00000000	Relay output display	Compressor operation	52C	21S4	SV1	(SV2)			Always lighting	ON: light on OFF: light off	
		Check display	0000–9999 (Alternating display of addresses and check code)									•When abnormality occurs, check display.
1	10000000	Indoor unit check status	No.1 unit check	No.2 unit check	No.3 unit check	No.4 unit check	No.5 unit check	No.6 unit check	No.7 unit check	No.8 unit check	Light on at time of abnormality	
2	01000000	Protection input	High pressure abnormality	Superheat due to low discharge temperature	Compressor shell temperature abnormality	TH4 abnormality	TH3 abnormality	Outdoor fan rotation frequency abnormality	TH7 abnormality	TH8 abnormality	Display detected microprocessor protection or abnormality	
3	11000000	Protection input	Heat sink overheating	Compressor over current interception	Voltage abnormality	Insufficient refrigerant amount abnormality	Current sensor/primary current abnormality	63LS abnormality	63HS abnormality	start over current interception abnormality delay		
4	00100000	Protection input	Abnormality in the number of indoor units	Address double setting abnormality	Indoor unit capacity error	Over capacity	Indoor unit address error	Outdoor unit address error	Current sensor open/short	serial communication abnormality (outdoor unit)		
5	10100000	Abnormality delay display 1	High pressure abnormality delay	Superheat due to low discharge temperature delay	Compressor shell temperature abnormality delay	TH4 abnormality delay	TH3 abnormality delay	Outdoor fan rotation frequency abnormality delay	TH7 abnormality delay	TH8 abnormality delay	Display all abnormalities remaining in abnormality delay	
6	01100000	Abnormality delay display 2	Heat sink overheating delay	Compressor over current interception delay	Voltage abnormality delay	Insufficient refrigerant amount abnormality delay	Current sensor/primary current abnormality delay	63LS abnormality delay	63HS abnormality delay	start over current interception abnormality delay		
7	11100000	Abnormality delay display 3	63LS abnormality delay	TH2 abnormality delay	4-way valve abnormality delay	Delay caused by blocked valve in cooling mode	Power module abnormality delay	TH6 abnormality delay	Current sensor open/short delay			
8	00010000	Abnormality delay history 1	High pressure abnormality delay	Superheat due to low discharge temperature delay	Compressor shell temperature abnormality delay	TH4 abnormality delay	TH3 abnormality delay	Outdoor fan rotation frequency abnormality delay	TH7 abnormality delay	TH8 abnormality delay	Display all abnormalities remaining in abnormality delay	
9	10010000	Abnormality delay history 2	Heat sink overheating delay	Compressor over current interception delay	Voltage abnormality delay	Insufficient refrigerant amount abnormality delay	Current sensor/primary current abnormality delay	63LS abnormality delay	63HS abnormality delay	start over current interception abnormality delay		
10	01010000	Abnormality delay history 3	63LS abnormality delay	TH2 abnormality delay	4-way valve abnormality delay	Delay caused by blocked valve in cooling mode	Power module abnormality delay	TH6 abnormality delay	Current sensor open/short delay			
11	11010000	Abnormality code history 1 (the latest)	Alternating display of addresses 0000–9999 and abnormality code (including abnormality delay code)									• Display abnormalities up to present (including abnormality terminals) • History record in 1 is the latest; records become older in sequence; history record in 10 is the oldest.
12	00110000	Abnormality code history 2										
13	10110000	Abnormality code history 3										
14	01110000	Abnormality code history 4										
15	11110000	Abnormality code history 5										
16	00001000	Abnormality code history 6										
17	10001000	Abnormality code history 7										
18	01001000	Abnormality code history 8										
19	11001000	Abnormality code history 9										
20	00101000	Abnormality code history 10 (the oldest)										
21	10101000	Cumulative time	0–9999 (unit: 1 hour)									Display of cumulative compressor operating time
22	01101000	Cumulative time	0–9999 (unit: 10 hour)									
23	11101000	Outdoor unit operation display	Compressor energizing	Compressor operating prohibition	Compressor in operation	Abnormality detection					Light ON/Light OFF	
24	00011000	Indoor unit operation mode	No.1 unit mode	No.2 unit mode	No.3 unit mode	No.4 unit mode	No.5 unit mode	No.6 unit mode	No.7 unit mode	No.8 unit mode	Cooling: light on, Heating: light blinking Stop fan: light off	
25	10011000	Indoor unit operation display	No.1 unit operation	No.2 unit operation	No.3 unit operation	No.4 unit operation	No.5 unit operation	No.6 unit operation	No.7 unit operation	No.8 unit operation	Thermo ON: light on Thermo OFF: light off	

No.	SW1 setting	Display mode	Display on the LED1, 2 (display data)								Notes
	12345678		1	2	3	4	5	6	7	8	
26	01011000	Capacity code (No. 1 indoor unit)	0–255								•Display of indoor unit capacity code •The No. 1 unit will start from the M-NET address with the lowest number
27	11011000	Capacity code (No. 2 indoor unit)									
28	00111000	Capacity code (No. 3 indoor unit)									
29	10111000	Capacity code (No. 4 indoor unit)									
30	01111000	Capacity code (No. 5 indoor unit)									
31	11111000	IC1 operation mode	STOP	Fan	Cooling thermo-ON	Cooling thermo-OFF	Heating thermo-ON	Heating thermo-OFF			•Display of indoor unit operating mode
32	00000100	IC2 operation mode									
33	10000100	IC3 operation mode									
34	01000100	IC4 operation mode									
35	11000100	IC5 operation mode									
36	00100100	OC operation mode	Compressor ON/OFF	Heating/Cooling	Abnormal/normal	DEFROST/NO	Refrigerant pull back/no	Excitation current/no	3-minute delay/no		Light on/light off
37	10100100	External connection status	CN3N1–3 input	CN3N1–2 input	CN3S1–2 input	CN3D1-3 input	CN3D1-2 input				
38	01100100	Communication demand capacity	0–255 (%)								Display of communication demand capacity
39	11100100	Number of compressor ON/OFF	0000–9999 (unit: x10)								Display a count of compressor operation/stop
40	00010100	Compressor operating current	0–999.9 (Arms)								Display detected current
41	10010100	Input current of outdoor unit									
42	01010100	Thermo-ON operating time	0000–9999 (unit: x10)								Display cumulative time of thermo-ON operation
43	11010100	Total capacity of thermo-ON	0–255								Display total capacity code of indoor units in thermo-ON
44	00110100	Number of indoor units	0–255								Display number of connected indoor units
45	10110100	DC bus voltage	0–9999(V)								Display bus voltage
46	01110100	State of LEV control	Td over heat prevention	SHd decrease prevention	Min.Sj correction depends on Td	Min.Sj correction depends on Shd	LEV opening correction depends on Pd	LEV opening correction depends on Td	Correction of high compression ratio prevention		Display active LEV control
47	11110100	State of compressor frequency control 1	Condensing temperature limit control	Compressor temperature control		Discharge temp. (heating) backup control	Pd abnormality control (heating)	Pd Back up control(heating)		Freeze prevention control at the beginning of SHd	Display active compressor frequency control
48	00001100	State of compressor frequency control 2	Heat sink over heat prevention control	Secondary current control	Input current control		Frequency restrain of receipt voltage change	Low pressure decrease prevention	Hz-up inhibit control at the beginning of SHd		
49	10001100	Protection input	63LS abnormality	HIC abnormality		Frozen protection	4-way valve disconnection abnormality	Delay caused by blocked valve in cooling mode	TH6 abnormality	Power module abnormality	
50	01001100	The second current value when microprocessor of POWER BOARD abnormality is detected	0–999.9 [Arms]								Display data at time of abnormality
51	11001100	Heatsink temperature when microprocessor of POWER BOARD abnormality is detected	–99.9–999.9 (°F)								

State of compressor frequency(Hz) control	Content
Discharge pressure control	Hz control by pressure limitation
Compressor temperature control	Hz control by discharge temperature limitation
SV control	Hz control by bypass valve
Abnormal rise of Pd control	Control that restrains abnormal rise of discharge pressure
Heat sink over heat prevention control	Heat sink over heat prevention control
Secondary current control	Secondary current control
Input current control	Input current control
Hz correction of receipt voltage decrease prevention	Max.Hz correction control due to voltage decrease
Hz restrain of receipt voltage change	Max.Hz correction control due to receipt voltage change

No.	SW1 setting	Display mode	Display on the LED1, 2 (display data)								Notes
	12345678		1	2	3	4	5	6	7	8	
52	00101100	Outdoor LEV-A opening pulse	0–2000 (pulse)								Display of opening pulse of outdoor LEV
53	10101100	Outdoor LEV-A opening pulse abnormality delay									
54	01101100	Outdoor LEV-A opening pulse abnormality									
55	11101100	Outdoor LEV-B opening pulse									
56	00011100	Outdoor LEV-B opening pulse abnormality delay									
57	10011100	Outdoor LEV-B opening pulse abnormality									
58	01011100	63LS (Low pressure)	–99.9–999.9 (PSIG)								Display of data from sensor and thermistor
59	11011100	63LS abnormality delay									
60	00111100	63 LS abnormality									
61	10111100	TH2 (HIC pipe)									
62	01111100	TH2(HIC) abnormality delay									
63	11111100	TH2 (HIC) abnormality									
64	00000010	Operational frequency	0–255 (Hz)								Display of actual operating frequency
65	10000010	Target frequency	0–255 (Hz)								Display of target frequency
66	01000010	Outdoor fan control step number	0–15								Display of number of outdoor fan control steps (target)
69	10100010	IC1 LEV Opening pulse	0–2000 (pulse)								Display of opening pulse of indoor LEV
70	01100010	IC2 LEV Opening pulse									
71	11100010	IC3 LEV Opening pulse									
72	00010010	IC4 LEV Opening pulse									
73	10010010	IC5 LEV Opening pulse									
74	01010010	High pressure sensor (Pd)	–99.9–999.9 (PSIG)								Display detected data of outdoor unit sensors and thermistors
75	11010010	TH4(Compressor)(Td) data	–99.9–999.9 (°F)								
76	00110010	TH6(Suction pipe)(ET) data									
77	10110010	TH7(Ambient) data									
78	01110010	TH3(Outdoor liquid pipe) data									
80	00001010	TH8(Heat sink) data									
81	10001010	IC1 TH23 (Gas)	–99.9–999.9 (°F) (When indoor unit is not connected, it is displayed as 0.)								Display detected data of indoor unit thermistor
82	01001010	IC2 TH23 (Gas)									
83	11001010	IC3 TH23 (Gas)									
84	00101010	IC4 TH23 (Gas)									
85	10101010	IC5 TH23 (Gas)									

No.	SW1 setting	Display mode	Display on the LED1, 2 (display data)								Notes
	12345678		1	2	3	4	5	6	7	8	
86	01101010	IC1 TH22 (Liquid)	-99.9~999.9 (°F) (When the indoor unit is not connected, it is displayed as 0.)								Display detected data of indoor unit thermistors
87	11101010	IC2 TH22 (Liquid)									
88	00011010	IC3 TH22 (Liquid)									
89	10011010	IC4 TH22 (Liquid)									
90	01011010	IC5 TH22 (Liquid)									
91	11011010	IC1 TH21 (Intake)									
92	00111010	IC2 TH21 (Intake)									
93	10111010	IC3 TH21 (Intake)									
94	01111010	IC4 TH21 (Intake)									
95	11111010	IC5 TH21 (Intake)									
96	00000110	Outdoor SC (cooling)	-99.9~999.9 (degree)								Display of outdoor subcool (SC) data
97	10000110	Target subcool step	-2~4								Display of target subcool step data
98	01000110	IC1 SC/SH	-99.9~999.9 (degree) during heating: subcool (SC)/during cooling: superheat (SH) (Fixed to "0" during cooling operation)								Display of indoor SC/SH data
99	11000110	IC2 SC/SH									
100	00100110	IC3 SC/SH									
101	10100110	IC4 SC/SH									
102	01100110	IC5 SC/SH									
103	11100110	Discharge superheat (SHd)	-99.9~999.9 (degree)								Display of outdoor discharge superheat (SHd) data
105	10010110	Target Pd display (heating) kgf/F	Pdm (0.0~30.0) (kgf/cm²)								Display of all control target data
106	01010110	Target ET display (cooling)	ETm (~2.0~23.0) (°C)								
107	11010110	Target outdoor SC (cooling)	SCm (0.0~20.0) (degree)								
108	00110110	Target indoor SC/SH (IC1)	SCm/SHm (0.0~20.0) (degree)								
109	10110110	Target indoor SC/SH (IC2)									
110	01110110	Target indoor SC/SH (IC3)									
111	11110110	Target indoor SC/SH (IC4)									
112	00001110	Target indoor SC/SH (IC5)									
113	10001110	Indoor unitcheck status (IC9-12)	No.9 unit check	No.10 unit check	No.11 unit check	No.12 unit check					Light on at time of abnormality
114	01001110	Indoor unit operation mode (IC9-12)	No.9 unit mode	No.10 unit mode	No.11 unit mode	No.12 unit mode					COOL/DRY: light on HEAT: light blinking FAN/STOP: light off
115	11001110	Indoor unit operation display (IC9-12)	No.9 unit operation	No.10 unit operation	No.11 unit operation	No.12 unit operation					Thermo-ON: light on Thermo-OFF: light off
116	00101110	IC9 operation mode	STOP	Fan	Cooling Thermo-ON	Cooling thermo-OFF	Heating thermo-ON	Heating thermo-OFF			Display of indoor unit operation mode
117	10101110	IC10 operation mode									
118	01101110	IC11 operation mode									
119	11101110	IC12 operation mode									
120	00011110	Target indoor SC/SH (IC9)	SCm/SHm (0.0~20.0) (degree)								Display of all control target data
121	10011110	Target indoor SC/SH (IC10)									
122	01011110	Target indoor SC/SH (IC11)									
123	11011110	Target indoor SC/SH (IC12)									
124	00111110	IC9 LEV opening pulse abnormality delay	0~2000 (pulse)								Display of opening pulse of indoor LEV at time of abnormality delay
125	10111110	IC10 LEV opening pulse abnormality delay									
126	01111110	IC11 LEV opening pulse abnormality delay									
127	11111110	IC12 LEV opening pulse abnormality delay									

No.	SW1 setting	Display mode	Display on the LED1, 2 (display data)								Notes	
	12345678		1	2	3	4	5	6	7	8		
128	00000001	Actual frequency of abnormality delay	0–255 (Hz)								Display of actual frequency at time of abnormality delay	
129	10110001	Fan step number at time of abnormality delay	0–15								Display of fan step number at time of abnormality delay	
131	11000001	IC1 LEV opening pulse abnormality delay	0–2000 (pulse)								Delay of opening pulse of indoor LEV at time of abnormality delay	
132	00100001	IC2 LEV opening pulse abnormality delay										
133	10100001	IC3 LEV opening pulse abnormality delay										
134	01100001	IC4 LEV opening pulse abnormality delay										
135	11100001	IC5 LEV opening pulse abnormality delay										
136	00010001	High pressure sensor data at time of abnormality delay	–99.9–999.9 (PSIG)								Display of data from High pressure sensor, all thermistors, and SC/SH at time of abnormality delay	
137	10010001	TH4 (Compressor) sensor data at time of abnormality delay	–99.9–999.9 (°F)									
138	01010001	TH6 (Suction pipe) sensor data at time of abnormality delay										
139	11010001	TH3 (Outdoor liquid pipe) sensor data at time of abnormality delay										
140	00110001	TH8 (Heat sink) sensor data at time of abnormality delay										
141	10110001	OC SC (cooling) at time of abnormality delay	–99.9–999.9 (degree) During heating: subcool (SC) During cooling: superheat (SH) (Fixed to "0" during cooling operation)									
142	01110001	IC1 SC/SH at time of abnormality delay										
143	11110001	IC2 SC/SH at time of abnormality delay										
144	00001001	IC3 SC/SH at time of abnormality delay										
145	10001001	IC4 SC/SH at time of abnormality delay										
146	01001001	IC5 SC/SH at time of abnormality delay										
147	11001001	IC9 SC/SH at time of abnormality delay										
148	00100001	IC10 SC/SH at time of abnormality delay										
149	10101001	IC11 SC/SH at time of abnormality delay										
150	01101001	IC12 SC/SH at time of abnormality delay										

No.	SW1 setting 12345678	Display mode	Display on the LED1, 2 (display data)								Notes
			1	2	3	4	5	6	7	8	
151	11101001	IC9 LEV opening pulse at time of abnormality	0~2000 (pulse)								Display of opening pulse of indoor LEV at time of abnormality
152	00011001	IC10 LEV opening pulse at time of abnormality									
153	10011001	IC11 LEV opening pulse at time of abnormality									
154	01011001	IC12 LEV opening pulse at time of abnormality									
155	11011001	IC9 SC/SH at time of abnormality	-99.9~999.9 (degree) During heating: subcool (SC) During cooling: superheat (SH) (Fixed to "0" during cooling operation)								Display of indoor SC/SH data at time of abnormality
156	00111001	IC10 SC/SH at time of abnormality									
157	10111001	IC11 SC/SH at time of abnormality									
158	01111001	IC12 SC/SH at time of abnormality									
159	11111001	IC9 Capacity code	0~255								Display of indoor unit capacity code The No.1 unit will start from the M-NET address with the lowest number
160	00000101	IC10 Capacity code									
161	10000101	IC11 Capacity code									
162	01000101	IC12 Capacity code									
163	11000101	IC9 SC/SH	-99.9~999.9 (degree) During heating: subcool (SC) During cooling: superheat (SH) (Fixed to "0" during cooling operation)								Display of indoor SC/SH data
164	00100101	IC10 SC/SH									
165	10100101	IC11 SC/SH									
166	01100101	IC12 SC/SH									
170	01010101	ROM version monitor	0.00~99.99 (ver)								Display of version data of ROM
171	11010101	ROM type									Display of ROM type
172	00110101	Check sum mode	0000~FFFF								Display of check sum code of ROM
173	10110101	IC9 TH23 (Gas)	-99.9~999.9 (°F)								Display detected data of indoor unit thermistors
174	01110101	IC10 TH23 (Gas)									
175	11110101	IC11 TH23 (Gas)									
176	00001101	IC12 TH23 (Gas)									
177	10001101	IC9 TH22 (Liquid)									
178	01001101	IC10 TH22 (Liquid)									
179	11001101	IC11 TH22 (Liquid)									
180	00101101	IC12 TH22 (Liquid)									
185	10011101	IC9 TH21 (Intake)									
186	01011101	IC10 TH21 (Intake)									
187	11011101	IC11 TH21 (Intake)									
188	00111101	IC12 TH21 (Intake)									
189	10111101	History of voltage error (U9/4220)	-	-	PAM error	Converter Fault	Power synchronization signal error	L1 open phase error	Under voltage error	Over voltage error	
190	01111101	External connection status at time of abnormality delay	CN3N 1-3 input	CN3N 1-2 input	CN3S 1-2 input	CN3D 1-3 input	CN3D 1-2 input				
191	11111101	External connection status at time of abnormality	CN3N 1-3 input	CN3N 1-2 input	CN3S 1-2 input	CN3D 1-3 input	CN3D 1-2 input				

No.	SW1 setting	Display mode	Display on the LED1, 2 (display data)								Notes
	12345678		1	2	3	4	5	6	7	8	
192	00000011	Actual frequency of abnormality	0–255 (Hz)								Display of actual frequency at time of abnormality
193	10000011	Fan step number at time of abnormality	0–15								Display of fan step number at time of abnormality
195	11000011	IC1 LEV opening pulse at time of abnormality	0–2000 (pulse)								Display of opening pulse of indoor LEV at time of abnormality
196	00100011	IC2 LEV opening pulse at time of abnormality									
197	10100011	IC3 LEV opening pulse at time of abnormality									
198	01100011	IC4 LEV opening pulse at time of abnormality									
199	11100011	IC5 LEV opening pulse at time of abnormality									
200	00010011	High pressure sensor data at time of abnormality	–99.9–999.9 (PSIG)								Display of data from High pressure sensor, and all thermistors, at time of abnormality.
201	10010011	TH4 (Compressor) sensor data at time of abnormality	–99.9–999.9 (°F)								
202	01010011	TH6 (Suction pipe) sensor data at time of abnormality									
203	11010011	TH3 (Outdoor liquid pipe) sensor data at time of abnormality									
204	00110011	TH8 (Heat sink) sensor data at time of abnormality									
205	10110011	OC SC (cooling) at time of abnormality	–99.9–999.9 (degree)								Display of outdoor SC data at time of abnormality
206	01110011	IC1 SC/SH at time of abnormality	–99.9–999.9 (degree) During heating: subcool (SC) During cooling: superheat (SH) (Fixed to "0" during cooling operation)								Display of indoor SC/SH data at time of abnormality
207	11110011	IC2 SC/SH at time of abnormality									
208	00001011	IC3 SC/SH at time of abnormality									
209	10001011	IC4 SC/SH at time of abnormality									
210	01001011	IC5 SC/SH at time of abnormality									
211	11001011	IC6 Capacity code	0–255								Display of indoor unit capacity code The No.1 unit will start from the M-NET address with the lowest number
212	00101011	IC7 Capacity code									
213	10101011	IC8 Capacity code									
214	01101011	IC6 operation mode	STOP	Fan	Cooling thermo-ON	Cooling thermo-OFF	Heating thermo-ON	Heating thermo-OFF			Display of indoor unit operation mode
215	11101011	IC7 operation mode									
216	00011011	IC8 operation mode									

No.	SW1 setting	Display mode	Display on the LED1, 2 (display data)								Notes
	12345678		1	2	3	4	5	6	7	8	
217	10011011	IC6 LEV opening pulse	0–2000 (pulse)								Display of opening pulse of indoor LEV
218	01011001	IC7 LEV opening pulse									
219	11011001	IC8 LEV opening pulse									
220	00111011	IC6 TH23 (Gas)	–99.9–999.9 (°F)								Display detected data of indoor unit thermistor
221	10111011	IC7 TH23 (Gas)									
222	01111011	IC8 TH23 (Gas)									
223	11111011	IC6 TH22 (liquid)									
224	00000111	IC7 TH22 (liquid)									
225	10000111	IC8 TH22(liquid)									
226	01000111	IC6 TH21 (intake)									
227	11000111	IC7 TH21 (intake)									
228	00100111	IC8 TH21 (intake)									
229	10100111	IC6 SC/SH	–99.9–999.9 (degree) during heating: subcool (SC)/during cooling: superheat (SH) (Fixed to "0" during cooling operation)								Display of indoor SC/SH data
230	01100111	IC7 SC/SH									
231	11100111	IC8 SC/SH									
232	00010111	Target indoor SC/SH (IC6)	SCm/SHm (0.0–20.0) (degree)								Display of all control target data
233	10010111	Target indoor SC/SH (IC7)									
234	01010111	Target indoor SC/SH (IC8)									
235	11010111	IC6 LEV opening pulse abnormality delay	0–2000 (pulse)								Display of opening pulse of indoor LEV at time of abnormality delay
236	00110111	IC7 LEV opening pulse abnormality delay									
237	10110111	IC8 LEV opening pulse abnormality delay									
238	01110111	IC6 SC/SH at time of abnormality delay	–99.9–999.9 (degree) During heating: subcool (SC) During cooling: superheat (SH) (Fixed to "0" during cooling operation)								Display of indoor SC/SH data at time of abnormality delay
239	11110111	IC7 SC/SH at time of abnormality delay									
240	00001111	IC8 SC/SH at time of abnormality delay									
241	10001111	IC6 LEV opening pulse at time of abnormality									
242	01001111	IC7EV opening pulse at time of abnormality	0–2000 (pulse)								Display of opening pulse of indoor LEV at time of abnormality
243	11001111	IC8 LEV opening pulse at time of abnormality									
244	00101111	IC6 SC/SH at time of abnormality	–99.9–999.9 (degree) During heating: subcool (SC) During cooling: superheat (SH) (Fixed to "0" during cooling operation)								Display of indoor SC/SH data at time of abnormality delay
245	10101111	IC7 SC/SH at time of abnormality									
246	01101111	IC8 SC/SH at time of abnormality									
250	01011111	IC9 LEV opening pulse	0–2000 (pulse)								Display of opening pulse of indoor LEV
251	11011111	IC10 LEV opening pulse									
252	00111111	IC11 LEV opening pulse									
253	10111111	IC12 LEV opening pulse									

8-11. BRANCH BOX UNIT OPERATION MONITOR FUNCTION

[When optional part 'A-Control Service Tool (PAC-SK52ST)' is connected to branch box controller board (CNM)]

Digital indicator LED1 displays 2 digit number or code to inform operation condition and the meaning of check code by controlling DIP SW2 on 'A-Control Service Tool'.

<Table1> SW5 setting

The black square (■) indicates a switch position.

SW5 setting	Detail
	Common
	Indoor-A
	Indoor-B
	Indoor-C
	Indoor-D
	Indoor-E

Operation indicator:

- SW2 - Use to set the displayed item
- SW5 - Use to set the displayed unit

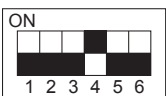
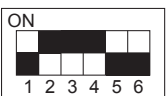
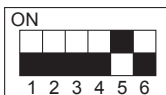
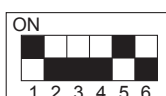
<Table2> Functions

The black square (■) indicates a switch position.

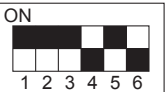
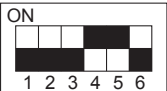
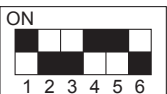
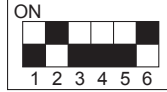
SW2 setting	SW5 setting*1	Display detail	Explanation for display	Unit
	Common	Status of branch box	During startup During error detection Displays a check code, and M-NET address of the unit which the check code was detected. Example: If the check code 2520 is detected in the address3, During no power supply F8 Other Displays the number of units in operation. 0 to 5	—
	Individual unit	Status of branch box	During startup During error detection Displays a check code, and M-NET address of the selected unit. During no power supply F8 Other Displays an operation mode of the selected unit. 0: Stop C: Cool/Dry H: Heat d: Defrost	—

*1 Refer to the <Table 1> for the appropriate setting for the function.

The black square (■) indicates a switch position.

SW2 setting	SW5 setting* ¹	Display detail	Explanation for display	Unit
	Common	Not used	—	—
	Individual unit	Actual opening pulse of LEV (Direct-operated conversion value) 0 to 500	0 to 500 (When it is 100 pulse or more, it displays a hundredth, tens, and unit digit by turns.) Example: When 150 pulse, 0.5 s 0.5 s 2.0 s □ 1 → 50 → □ □ ↑—————	Pulse
	Common	Not used	—	—
	Individual unit	Error history	Displays a check code, and M-NET address of the unit which the check code was detected. Example: If the check code 2520 is detected in the address3, 0.5 s 0.5 s 0.5 s 2.0 s 03 → 25 → 20 → □ □ ↑—————	Code display
	Common	The number of unit(s) operating in Thermo-ON	0 to 5	Number
	Individual unit	Operating status of unit	83: Abnormal 00: Stop 06: Forced stop 0C: Defrost 29: Hot adjust mode 05: Standby mode 2A: Auxiliary heater is ON. 0A: Thermo-ON 01: In operation	Code display
	Common	The number of indoor unit(s) connected to this branch box.	0 to 5	Number
	Individual unit	M-NET address	00 to FF Displays an M-NET address of the selected unit.	Code display
	Common	Not used	—	—
	Individual unit	Capacity setting in Qj	03 to 50	Code display
	Common	Not used	—	—
	Individual unit	Indoor thermistor <pipe temperature/ liquid> (TH2)	-38 to 190 [-39 to 88] (When the temperature is 0°F or less, "-" and temperature are displayed by turns.) Example: When -5°F, 0.5 s 0.5 s 2.0 s - □ → □ 5 → □ □ ↑—————	°F

*1 Refer to the <Table 1> for the appropriate setting for the function.

SW2 setting	SW5 setting*1	Display detail	Explanation for display	Unit
	Common	Not used	—	—
	Individual unit	Indoor thermistor <pipe temperature/ 2-phase> (TH5)	-38 to 190 [-39 to 88] (When the temperature is 0°F or less, "-" and temperature are displayed by turns.) Example: When -5°F, 0.5 s 0.5 s 2.0 s -□ → □5 → □□ ↑—————┘	°F
	Common	Not used	—	—
	Individual unit	Branch box pipe thermistor (TH-A, B, C, D, E)	-43 to 196 [-42 to 91] (When the temperature is 0°F or less, "-" and temperature are displayed by turns.) Example: When -5°F, 0.5 s 0.5 s 2.0 s -□ → □5 → □□ ↑—————┘	°F
	Common	Not used	—	—
	Individual unit	Indoor thermistor <room temperature> (TH1)	43 to 102 [8 to 39]	°F
	Common	Not used	—	—
	Individual unit	Set temperature of indoor unit	61 to 88 [10 to 31]	°F
	Common	S/W version	Displays a S/W version number.	Code display
	Individual unit		Example: If it is a ver. 12.34, 0.5 s 0.5 s 2.0 s 12 → 34 → □□ ↑—————┘	
	Common	Not used	—	—
	Individual unit	LEV opening pulse (gear operated value)	0 to 2000	Pulse
	Common	S/W ROM check sum	0000 to FFFF	Code display
	Individual unit		Example: If it is 0BC9h, 0.5 s 0.5 s 2.0 s 0b → C9 → □□ ↑—————┘	

*1 Refer to the <Table 1> for the appropriate setting for the function.

8-12. SELECTING FUNCTIONS USING THE REMOTE CONTROLLER

Each function can be set as necessary using the remote controller. The setting of function for each unit can only be done by the remote controller. Select function available from the <Table 1> .

(1) Functions available when setting the unit number to 00

Note that the functions in the table below are available only when P-series indoor unit and the wired remote controller is used.

<Table 1> Function selections

Function	Settings	Mode No.	Setting No.	● : Initial setting (when sent from the factory)	Remarks
Power failure automatic recovery	OFF	01	1		The setting can be made to each indoor unit individually.
	ON*		2	●	
Indoor temperature detection	Average data from each indoor unit	02	1	●	
	Data from the indoor unit with remote controller		2		
	Data from main remote controller		3		
LOSSNAY connectivity	Not supported	03	1	●	
	Supported (Indoor unit does not intake outdoor air through LOSSNAY)		2		
	Supported (Indoor unit intakes outdoor air through LOSSNAY)		3		
Power supply voltage	230V	04	1	●	
	208V		2		
Frost prevention temperature	36°F [2°C]	15	1		
	37°F [3°C]		2	●	
Humidifier control	When the compressor operates, the humidifier also operates.	16	1	●	
	When the fan operates, the humidifier also operates.		2		

* After the power supply returns, the indoor unit will not operate for 3 minutes
(Some kind of indoor units operate for 30 seconds, after that, it stops for 3 minutes). This is normal operation.

Meaning of "Function setting"

Mode02: indoor temperature detecting

No.	Indoor temperature(ta)=			
No.1	Average data of the sensor on all the indoor units*	Initial setting	ta=A	ta=A
No.2	The data of the sensor on the indoor unit that is connected with remote controller	Initial setting	ta=A	ta=A
No.3	The data of the sensor on main remote controller	Initial setting	ta=B	ta=B

*Since the setting is applied to each indoor unit while branch box is connected, the indoor unit is controlled based on the sensor data of itself, not the average data.

9-1. PRECAUTIONS AGAINST REFRIGERANT LEAKAGE

9-1-1. Introduction

R410A refrigerant of this air conditioner is non-toxic and non-flammable but leaking of large amount from an indoor unit into the room where the unit is installed may be deleterious. To prevent possible injury, the rooms should be large enough to keep the R410A concentration specified by ISO 5149-1 as follows.

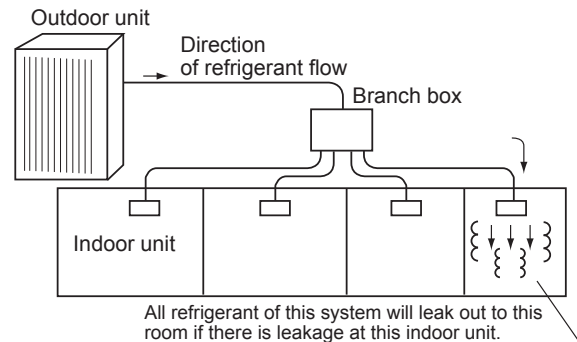
Maximum concentration

Maximum refrigerant concentration of R410A of a room is 0.44kg/m^3 accordance with ISO 5149-1.

To facilitate calculation, the maximum concentration is expressed in units of kg/m^3 (kg of R410A per m^3)

Maximum concentration of R410A: 0.44kg/m^3

(ISO 5149-1)



9-1-2. Confirming procedure of R410A concentration

Follow (1) to (3) to confirm the R410A concentration and take appropriate treatment, if necessary.

- (1) Calculate total refrigerant amount by each refrigerant system. Total refrigerant amount is precharged refrigerant at ex-factory plus additional charged amount at field installation.**

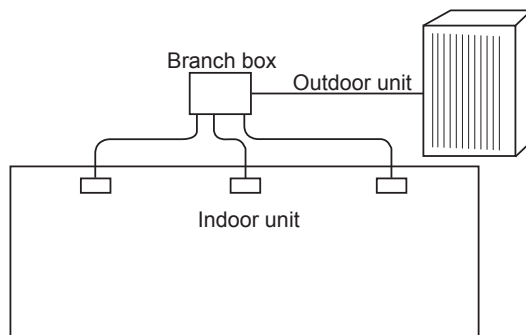
Note:

When the air conditioning system consists of several independent refrigerant system, figure out the total refrigerant amount by each independent refrigerant system.

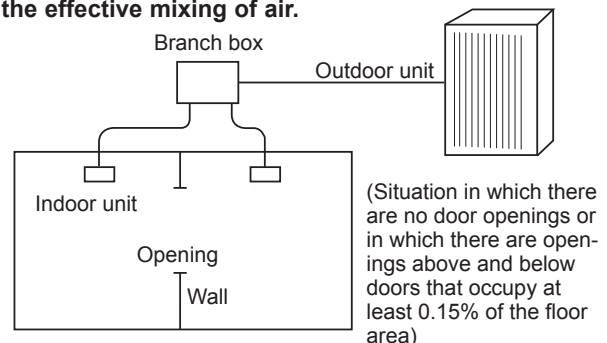
- (2) Calculate room volumes (m^3) and find the room with the smallest volume**

The part with represents the room with the smallest volume.

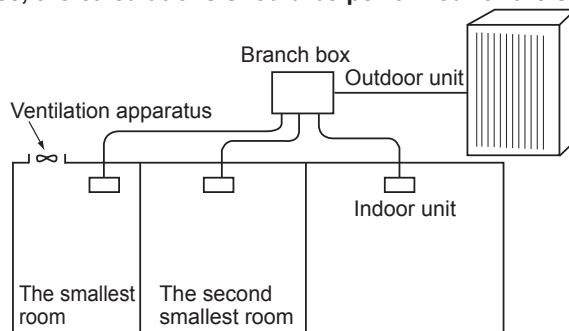
- (a) Situation in which there are no partitions**



- (b) There are partitions, but there are openings that allow the effective mixing of air.**



- (c) If the smallest room has mechanical ventilation apparatus that is linked to a household gas detection and alarm device, the calculations should be performed for the second smallest room.**



- (3) Use the results of calculations (1) and (2) to calculate the refrigerant concentration:**

$$\frac{\text{Total refrigerant in the refrigerating unit (kg)}}{\text{The smallest room in which an indoor unit has been installed (m}^3\text{)}} \leq \text{Maximum concentration (kg/m}^3\text{)}^*$$

*Maximum concentration of R410A: 0.44kg/m^3

If the calculation results do not exceed the maximum concentration, perform the same calculations for larger rooms until it has been determined that nowhere exceeds the maximum concentration.

10-1. OUTDOOR UNIT

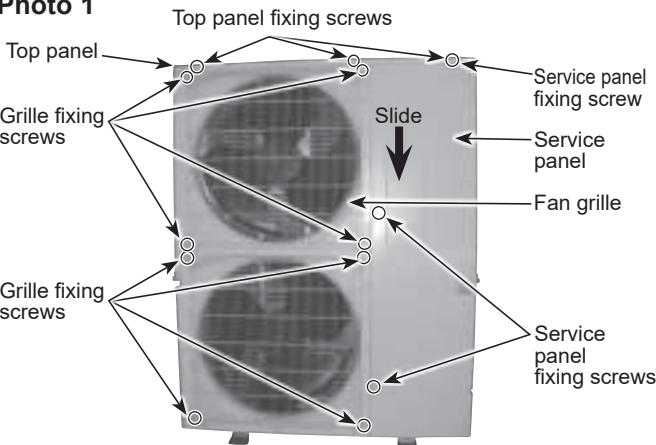
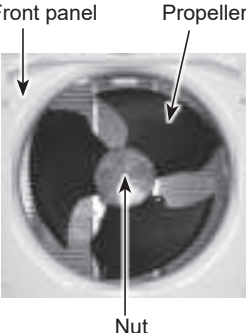
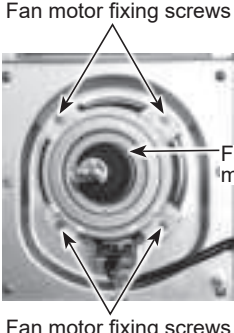
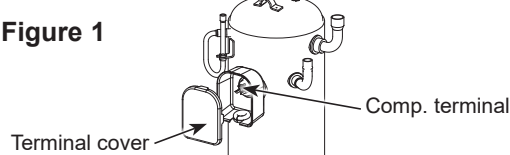
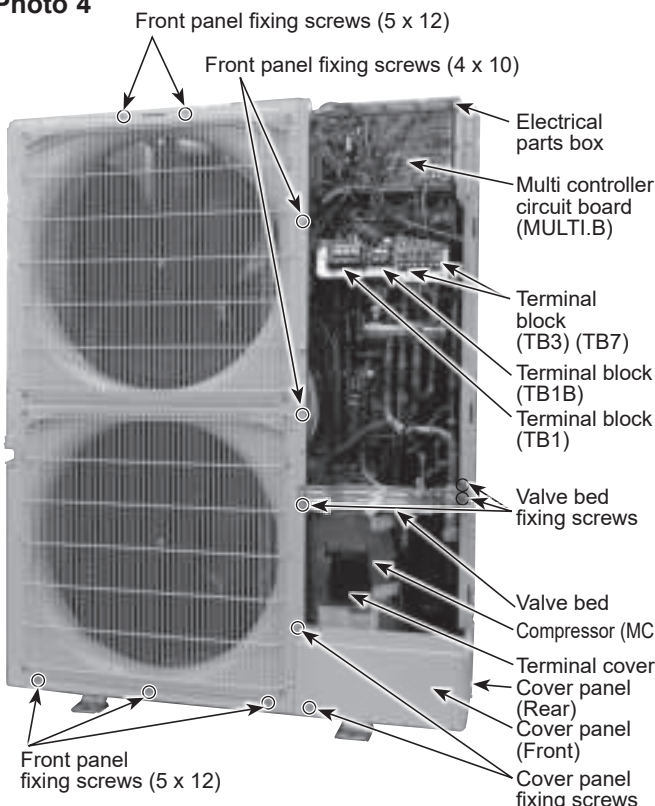
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MXZ-5C42NAHZ2-U1

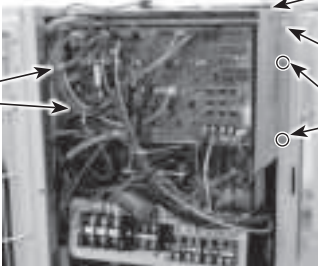
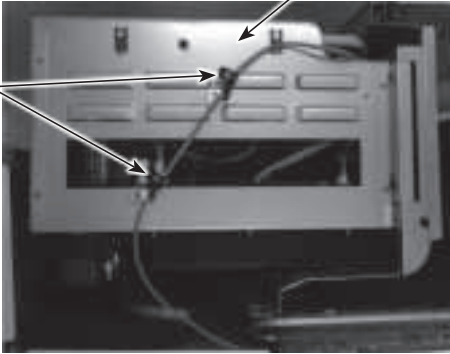
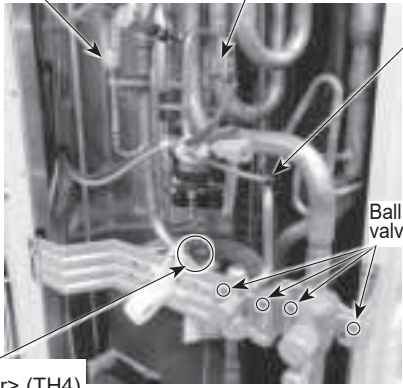
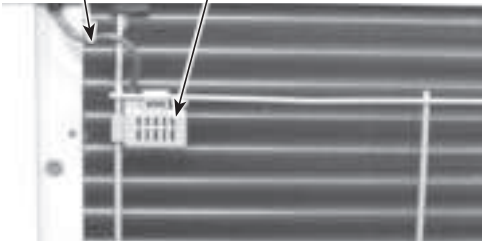
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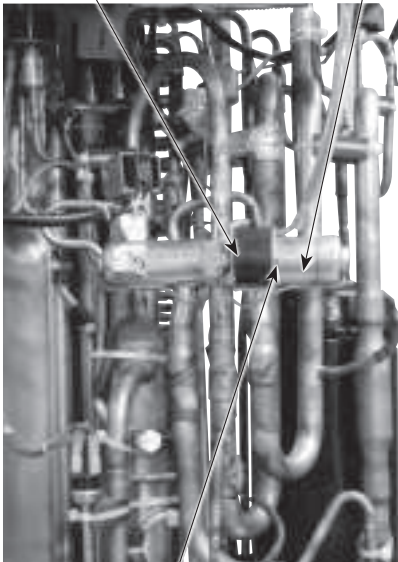
Note: Turn OFF the power supply before disassembly.

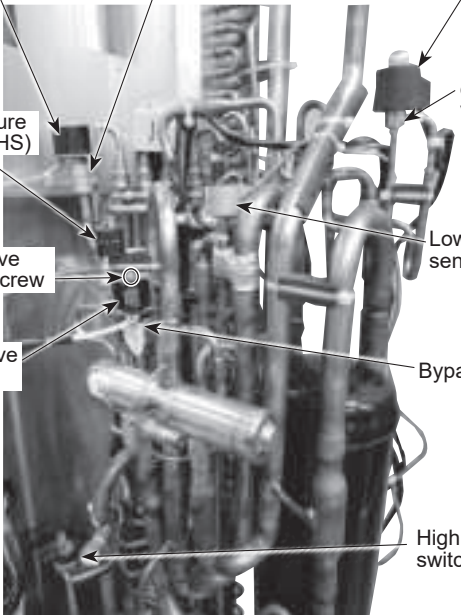
→ : Indicates the visible parts in the photos/figures.

OPERATING PROCEDURE	PHOTOS/FIGURES
1. Removing the service panel and top panel (1) Remove 3 service panel fixing screws (5 × 12), then slide the hook on the right downward to remove the service panel. (2) Remove screws (2 for front, 3 for rear/5 × 12) of the top panel and remove it.	Photo 1 
2. Removing the fan motor (MF1, MF2) (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Remove 4 fan grille fixing screws (5 × 12) to detach the fan grille. (See Photo 1) (4) Remove a nut (for right handed screw of M6) to detach the propeller. (See Photo 2) (5) Disconnect the connectors, CNF1 and CNF2 on the multi controller circuit board in the electrical parts box. (6) Remove 4 fan motor fixing screws (5 × 20) to detach the fan motor. (See Photo 3) Note: Tighten the propeller fan with a torque of $5.7 \pm 0.3 \text{ N}\cdot\text{m}$. [$4.2 \pm 0.2 \text{ ft} \cdot \text{lbs}$]	Photo 2  Photo 3 
3. Removing the electrical parts box (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Disconnect the connecting wire from terminal block. (4) Remove all of the following connectors from multi controller circuit board; <Diagram symbol in the connector housing> • Fan motor (CNF1, CNF2) • Thermistor <HIC pipe> (TH2) • Thermistor <Outdoor liquid pipe> (TH3) • Thermistor <Compressor> (TH4) • Thermistor <Suction pipe/Ambient, Outdoor> (TH7/6) • High pressure switch (63H) • High pressure sensor (63HS) • Low pressure sensor (63LS) • 4-way valve (21S4) • Bypass valve (SV1, SV2) • Linear expansion valve (LEV-A, LEV-B) • Base heater (SS) Pull out the disconnected wire from the electrical parts box. (5) Remove the terminal cover and disconnect the compressor lead wire from the comp. terminal. (See Figure 1) Note: The terminal cover can be easily removed by using a blade of flathead screwdriver. Figure 1 	Photo 4 

From the previous page.

OPERATING PROCEDURE	PHOTOS/FIGURES
(6) Remove 2 electrical parts box fixing screws (4 × 10), then detach the electrical parts box by pulling it upward. The electrical parts box is fixed with 2 hooks on the left and 1 hook on the right.	Photo 5  Electrical parts box Hook Electrical parts box fixing screws Hooks
4. Removing the thermistor <Suction pipe> (TH6) (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Disconnect the connector, TH7/6 (red), on the multi controller circuit board in the electrical parts box. (4) Loosen the wire clamps on the top of the electrical parts box. (See Photo 6) (5) Pull out the thermistor <Suction pipe> (TH6) from the sensor holder. (See Photo 7) Note: When replacing thermistor <Suction pipe> (TH6), replace it together with thermistor <Ambient> (TH7) since they are combined together. Refer to procedure No.5 below to remove thermistor <Ambient> (TH7).	Photo 6  Electrical parts box Clamps Photo 7  High pressure switch (63H) Thermistor <Suction pipe> (TH6) Thermistor <Hic pipe> (TH2) Ball valve and stop valve fixing screws Thermistor <Compressor> (TH4)
5. Removing the thermistor <Ambient> (TH7) (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Disconnect the connector TH7/6 (red) on the multi controller circuit board in the electrical parts box. (4) Loosen the wire clamps on top of the electrical parts box. (See Photo 6) (5) Pull out the thermistor <Ambient> (TH7) from the sensor holder. Note: When replacing thermistor <Ambient> (TH7), replace it together with thermistor <Suction pipe> (TH6), since they are combined together. Refer to procedure No.4 above to remove thermistor <Suction pipe> (TH6).	Photo 8  Lead wire of thermistor <Ambient> (TH7) Sensor holder

OPERATING PROCEDURE	PHOTOS/FIGURES
6. Removing the thermistor <Outdoor liquid pipe> (TH3) and thermistor <Compressor> (TH4), thermistor <HIC pipe> (TH2) (1) Remove the service panel. (See Photo 1) (2) Disconnect the connectors, TH3 (white) and TH4 (white), TH2 (black) on the multi controller circuit board in the electrical parts box. (3) Pull out the thermistor <Outdoor liquid pipe> (TH3) and thermistor <Compressor> (TH4) from the sensor holder. (See Photo 7 and 9)	Photo 9  Thermistor <Outdoor liquid pipe> (TH3)
7. Removing the 4-way valve coil (21S4) (1) Remove the service panel. (See Photo 1) (2) Remove 4-way valve coil fixing screw (M5 × 7). (3) Remove the 4-way valve coil by sliding the coil to the right. (4) Disconnect the connector 21S4 (green) on the multi controller circuit board in the electrical parts box.	Photo 10  4-way valve coil (21S4) 4-way valve 4-way valve coil fixing screw
8. Removing the 4-way valve (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Remove the electrical parts box (See Photo 5) (4) Remove 3 valve bed fixing screws (4 × 10) and 4 ball valve and stop valve fixing screws (5 × 16), then remove the valve bed. (See Photo 4 and 7) (5) Remove 2 cover panel fixing screws (5 × 12), then slide the cover panel (front) upward to remove it. (The cover panel (front) is fixed to the cover panel (rear) with a hook on the rear side. (See Photo 4) (6) Remove the cover panel (rear) fixing screws (2 for right side and 2 for rear/ 5 × 12), then slide the cover panel (rear) upward to remove it. (The cover panel (rear) is fixed to the side panel (R) with 2 screws.) (7) Remove 3 side panel (R) fixing screws (5 × 12) in the rear of the unit, then slide the side panel (R) upward to remove it. (The side panel (R) is fixed to the side plate with hooks on the rear side.) (8) Remove the 4-way valve coil. (See Photo 10) (9) Recover refrigerant. (10) Remove the welded part of 4-way valve. Notes: 1. Recover refrigerant without spreading it in the air. 2. The welded part can be removed easily by removing the side panel (R). 3. When installing the 4-way valve, cover it with a wet cloth to prevent it from heating (248°F [120°C] or more), then braze the pipes so that the inside of pipes are not oxidized.	

OPERATING PROCEDURE	PHOTOS/FIGURES
9. Removing bypass valve coil (SV1, SV2) and bypass valve (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Remove the cover panel (front). (Refer to procedure 8(5)) (4) Remove the cover panel (rear) (Refer to procedure 8(6)) (5) Remove the side panel (R). (Refer to procedure 8 (7)) (6) Remove the bypass valve coil fixing screw (M4 × 6). (7) Remove the bypass valve coil by sliding the coil upward. (8) Disconnect the connector SV1 (gray) or SV2 (blue) on the multi controller circuit board in the electrical parts box. (9) Remove the electrical parts box. (See Photo 5) (10) Recover refrigerant. (11) Remove the welded part of bypass valve. Refer to the notes below.	Photo 11 
10. Removing the high pressure switch (63H) and high pressure sensor (63HS) (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Remove the cover panel (front). (Refer to procedure 8(5)) (4) Remove the cover panel (rear) (Refer to procedure 8(6)) (5) Remove the side panel (R). (Refer to procedure 8 (7)) (6) Pull out the lead wire of high pressure switch and high pressure sensor. (7) Remove the electrical parts box. (See Photo 5) (8) Recover refrigerant. (9) Remove the welded part of high pressure switch and high pressure sensor. Refer to the notes below.	Photo 12 
11. Removing the low pressure sensor (63LS) (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Remove the cover panel (front). (Refer to procedure 8(5)) (4) Remove the cover panel (rear) (Refer to procedure 8(6)) (5) Remove the side panel (R). (Refer to procedure 8 (7)) (6) Disconnect the connector 63LS (blue) on the multi controller circuit board in the electrical parts box. (7) Remove the electrical parts box. (See Photo 5) (8) Recover refrigerant. (9) Remove the welded part of low pressure sensor. Refer to the notes below.	Notes: 1. Recover refrigerant without spreading it in the air. 2. The welded part can be removed easily by removing the side panel (R). 3. When installing the following parts, cover it with a wet cloth to prevent it from heating as the temperature below, then braze the pipes so that the inside of pipes are not oxidized; • Bypass valve (procedure 9), 248°F [120°C] or more • High pressure switch and high pressure sensor (procedure 10), 212°F [100°C] or more • Low pressure sensor (procedure 11), 212°F [100°C] or more • LEV (procedure 12), 248°F [120°C] or more
12. Removing linear expansion valve (LEV-A, LEV-B) (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Remove the cover panel (front). (Refer to procedure 8(5)) (4) Remove the cover panel (rear) (Refer to procedure 8(6)) (5) Remove the side panel (R). (Refer to procedure 8 (7)) (6) Remove the linear expansion valve coil. (See Photo 11,12) (7) Remove the electrical parts box. (See Photo 5) (8) Recover refrigerant. (9) Remove the welded part of linear expansion valve. Refer to the notes on the right.	

OPERATING PROCEDURE

13. Removing the compressor (MC)

- (1) Remove the service panel. (See Photo 1)
- (2) Remove the top panel. (See Photo 1)
- (3) Remove the cover panel (front). (Refer to procedure 8(5))
- (4) Remove the cover panel (rear). (Refer to procedure 8(6))
- (5) Remove the side panel (R). (Refer to procedure 8 (7))
- (6) Remove 2 front cover panel fixing screws (5 × 12) and remove the cover panel (front). (See Photo 4)
- (7) Remove the electrical parts box. (See Photo 5)
- (8) Remove the valve bed. (Refer to procedure 8 (4))
- (9) Remove 3 separator fixing screws (4 × 10) and remove the separator. (See Figure 2)
- (10) Recover refrigerant.
- (11) Remove the 3 compressor fixing nuts for motor using spanner or adjustable wrench.
- (12) Remove the welded pipe of compressor inlet and outlet and then remove the compressor.

Note: Recover refrigerant without spreading it in the air.

PHOTOS/FIGURES

Photo 13

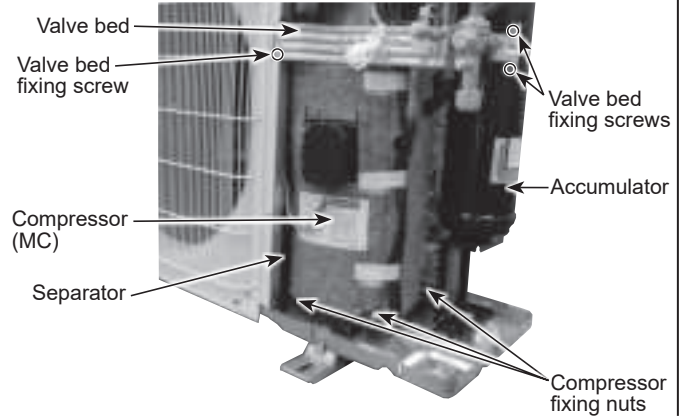
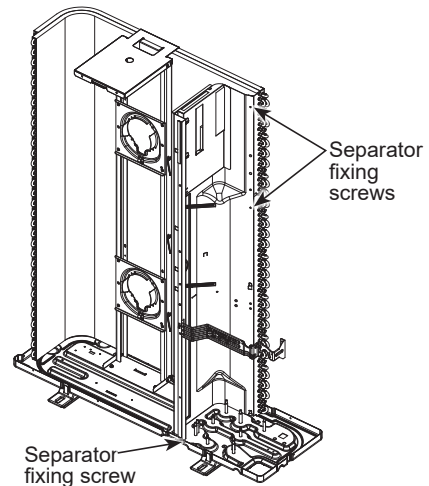


Figure 2



14. Removing the accumulator

- (1) Remove the service panel. (See Photo 1)
- (2) Remove the top panel. (See Photo 1)
- (3) Remove the cover panel (front). (Refer to procedure 8 (5))
- (4) Remove the cover panel (rear). (Refer to procedure 8 (6))
- (5) Remove the side panel (R). (Refer to procedure 8 (7))
- (6) Remove the electrical parts box. (See Photo 5)
- (7) Remove the valve bed. (See procedure 8 (4))
- (8) Recover refrigerant.
- (9) Remove 4 welded pipes of accumulator inlet and outlet.
- (10) Remove 2 accumulator leg fixing screws (4 × 10). (See Photo 15)

Note: Recover refrigerant without spreading it in the air.

Photo 14

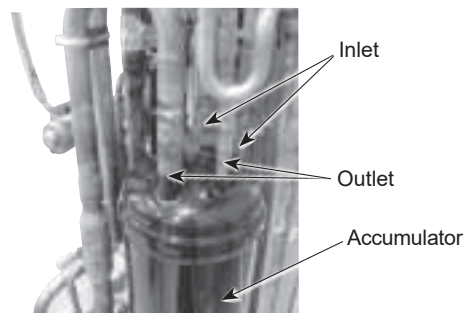
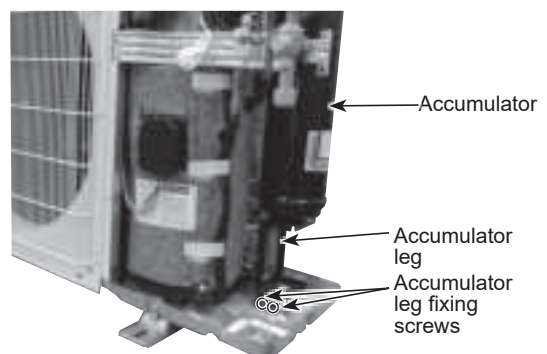
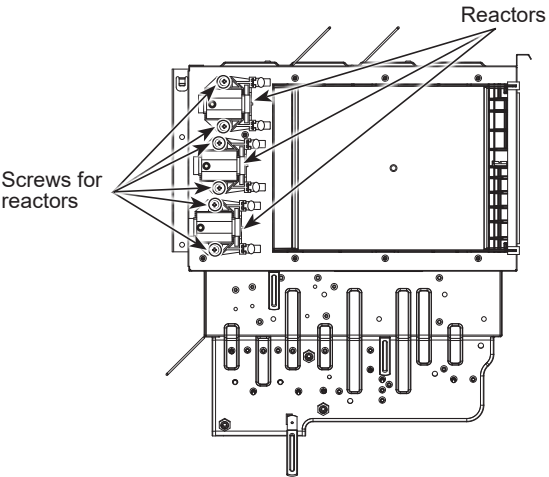
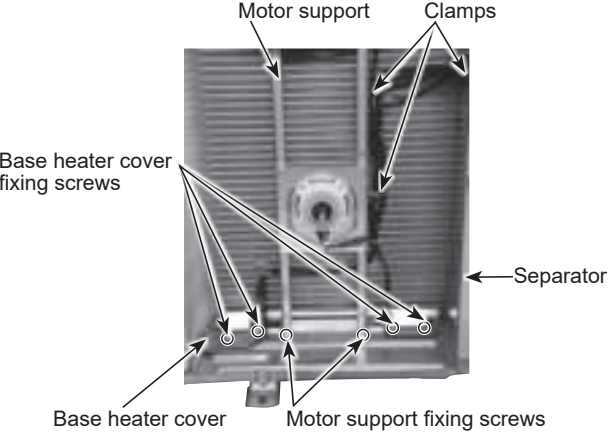
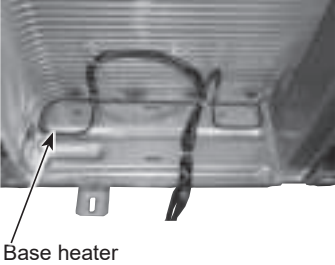


Photo 15



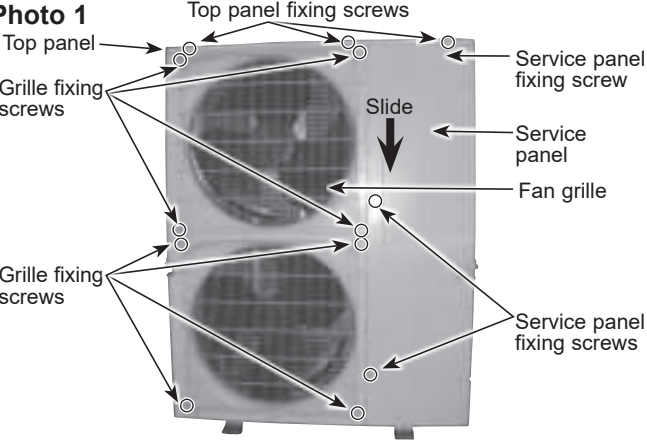
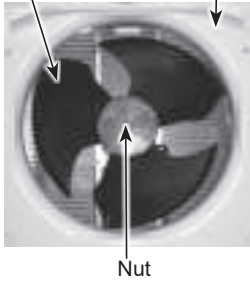
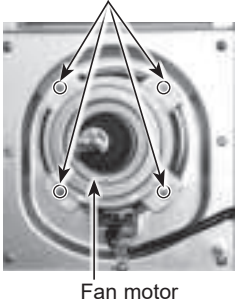
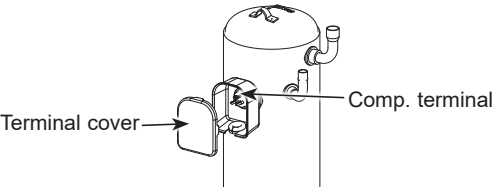
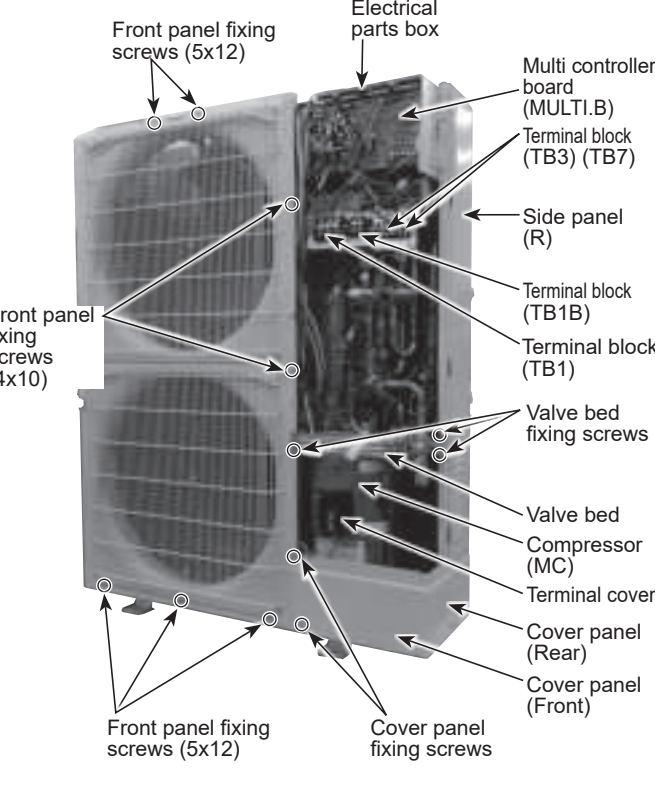


OPERATING PROCEDURE	PHOTOS/FIGURES
15. Removing the reactor (DCL) (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Remove the electrical parts box (See Photo 5) (4) Remove 6 screws (4 x 10) for reactor to remove the reactors. (See Figure 3)	Figure 3 
16. Removing the base heater (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Remove 4 fan grille fixing screws (5 x 12) to detach the fan grille. (See Photo 1) (4) Remove a nut (for right handed screw of M6) to detach the propeller. (See Photo 2) (5) Remove all of the following connectors from multi controller circuit board; <Diagram symbol in the connector housing> • Fan motor (CNF1, CNF2) • Base heater (SS) Pull out the disconnected wire from the electrical parts box. (See Photo 4) (6) Loosen the wire clamps on the side of the motor support and separator. (7) Remove 2 motor support fixing screws (5 x 12), then remove the motor support with fan motor still attached. (See Photo 16) (8) Remove 4 base heater cover fixing screws (4 x 10), then remove the base heater cover. (9) Remove the base heater. (See Photo 17) Notes: 1. Tighten the propeller fan with a torque of $5.7 \pm 0.3 \text{ N}\cdot\text{m}$ [$4.2 \pm 0.2 \text{ ft} \cdot \text{lbs}$] 2. Rotate the propeller fan and make sure that the base heater and the lead wires do not interfere with the movement of the propeller fan.	Photo 16  Photo 17 

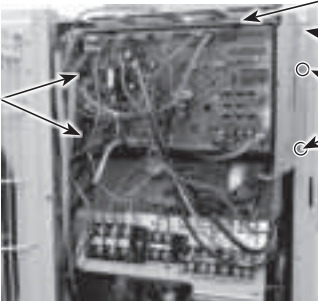
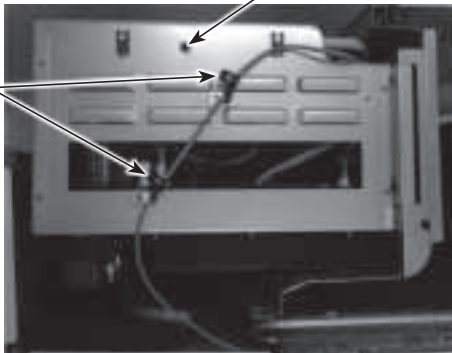
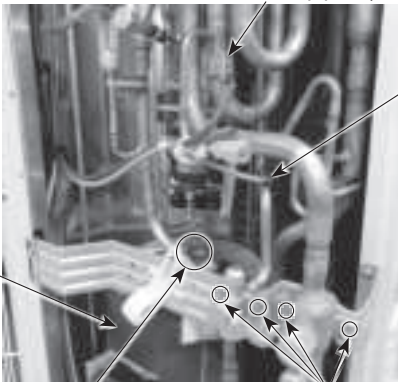
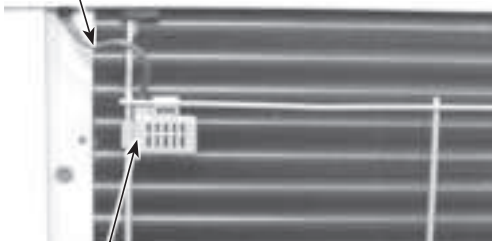
MXZ-8C48NA2-U1

Note: Turn OFF the power supply before disassembly.

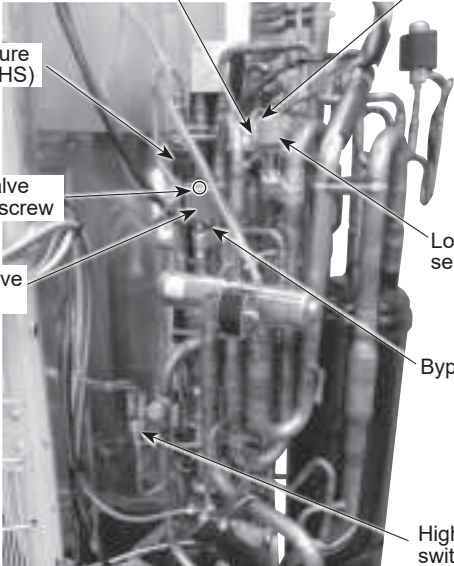
→ : Indicates the visible parts in the photos/figures.

OPERATING PROCEDURE	PHOTOS/FIGURES
1. Removing the service panel and top panel (1) Remove 3 service panel fixing screws (5 × 12) and slide the hook on the right downward to remove the service panel. (2) Remove screws (2 for front, 3 for rear/5 × 12) of the top panel and remove it.	Photo 1 
2. Removing the fan motor (MF1, MF2) (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Remove 4 fan grille fixing screws (5 × 12) to detach the fan grille. (See Photo 1) (4) Remove a nut (for right handed screw of M6) to detach the propeller. (See Photo 2) (5) Disconnect the connectors, CNF1 and CNF2 on multi controller circuit board in electrical parts box. (6) Remove 4 fan motor fixing screws (5 × 20) to detach the fan motor. (See Photo 3) Note: Tighten the propeller fan with a torque of 5.7 ± 0.3 N·m [4.2 ± 0.2 ft = lbs]	Photo 2  Photo 3 
3. Removing the electrical parts box (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Disconnect the connecting wire from terminal block. (4) Remove all the following connectors from multi controller circuit board; <Diagram symbol in the connector housing> • Fan motor (CNF1, CNF2) • Thermistor <HIC pipe> (TH2) • Thermistor <Outdoor liquid pipe> (TH3) • Thermistor <Compressor> (TH4) • Thermistor <Suction pipe/Ambient, Outdoor> (TH7/6) • High pressure switch (63H) • High pressure sensor (63HS) • Low pressure sensor (63LS) • 4-way valve (21S4) • Bypass valve (SV1) • Linear expansion valve (LEV-A, LEV-B) Pull out the disconnected wire from the electrical parts box. (5) Remove the terminal cover and disconnect the compressor lead wire from the comp. terminal. (See Figure 1) Note: The terminal cover can be easily removed by using a blade of flathead screwdriver. Figure 1 	Photo 4 

From the previous page.

OPERATING PROCEDURE	PHOTOS/FIGURES
(6) Remove 2 electrical parts box fixing screws (4 × 10) and detach the electrical parts box by pulling it upward. The electrical parts box is fixed with 2 hooks on the left and 1 hook on the right.	Photo 5  Electrical parts box Hook Hooks Electrical parts box fixing screws
4. Removing the thermistor <Suction pipe> (TH6) (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Disconnect the connector, TH7/6 (red), on the multi controller circuit board in the electrical parts box. (4) Loosen the wire clamps on top of the electrical parts box. (5) Pull out the thermistor <Suction pipe> (TH6) from the sensor holder. (See Photo 7) Note: When replacing thermistor <Suction pipe> (TH6), replace it together with thermistor <Ambient> (TH7) since they are combined together. Refer to procedure No.5 below to remove thermistor <Ambient> (TH7).	Photo 6  Electrical parts box Clamps Photo 7  Thermistor <Suction pipe> (TH6) Thermistor <Hic pipe> (TH2) Compressor (MC) Thermistor <Compressor> (TH4) Ball valve and stop valve fixing screws
5. Removing the thermistor <Ambient> (TH7) (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Disconnect the connector TH7/6 (red) on the multi controller circuit board in the electrical parts box. (4) Loosen the wire clamps on top of the electrical parts box. (See Photo 6) (5) Pull out the thermistor <Ambient> (TH7) from the sensor holder. Note: When replacing thermistor <Ambient> (TH7), replace it together with thermistor <Suction pipe> (TH6), since they are combined together. Refer to procedure No.4 above to remove thermistor <Suction pipe> (TH6).	Photo 8  Lead wire of thermistor <Ambient> (TH7) Sensor holder

OPERATING PROCEDURE	PHOTOS/FIGURES
6. Removing the thermistor <Outdoor liquid pipe> (TH3) and thermistor <Compressor> (TH4), thermistor <HIC pipe> (TH2) (1) Remove the service panel. (See Photo 1) (2) Disconnect the connectors, TH3 (white) and TH4 (white), TH2 (black) on the multi controller circuit board in the electrical parts box. (3) Pull out the thermistor <Outdoor liquid pipe> (TH3) and thermistor <Compressor> (TH4) from the sensor holder. (See Photo 7 and 9)	Photo 9  Thermistor <Outdoor liquid pipe> (TH3)
7. Removing the 4-way valve coil (21S4) (1) Remove the service panel. (See Photo 1) (2) Remove 4-way valve coil fixing screw (M5 × 7). (3) Remove the 4-way valve coil by sliding the coil to the right. (4) Disconnect the connector 21S4 (green) on the multi controller circuit board in the electrical parts box.	Photo 10  4-way valve coil (21S4) 4-way valve
8. Removing the 4-way valve (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Remove the electrical parts box (See Photo 5) (4) Remove 3 valve bed fixing screws (4 × 10) and 4 ball valve and stop valve fixing screws (5 × 16), then remove the valve bed. (See Photo 4 and 7) (5) Remove 2 cover panel fixing screws (5 × 12), then slide the cover panel (front) upward to remove it. (The cover panel (front) is fixed to the cover panel (rear) with a hook on the rear side. (See Photo 4) (6) Remove the cover panel (rear) fixing screws (2 for right side and 2 for rear/ 5 × 12), then slide the cover panel (rear) upward to remove it. (The cover panel (rear) is fixed to the side panel (R) with 2 screws.) (7) Remove 3 side panel (R) fixing screws (5 × 12) in the rear of the unit, then slide the side panel (R) upward to remove it. (The side panel (R) is fixed to the side plate with hooks on the rear side.) (8) Remove the 4-way valve coil. (See Photo 10) (9) Recover refrigerant. (10) Remove the welded part of 4-way valve. Notes: 1. Recover refrigerant without spreading it in the air. 2. The welded part can be removed easily by removing the side panel (R). 3. When installing the 4-way valve, cover it with a wet cloth to prevent it from heating (248°F [120°C] or more), then braze the pipes so that the inside of pipes are not oxidized.	 4-way valve coil fixing screw

OPERATING PROCEDURE	PHOTOS/FIGURES
9. Removing bypass valve coil (SV1) and bypass valve (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Remove the cover panel (front). (Refer to procedure 8 (5)) (4) Remove the cover panel (rear). (Refer to procedure 8 (6)) (5) Remove the side panel (R). (Refer to procedure 8 (7)) (6) Remove the bypass valve coil fixing screw (M4 × 6). (7) Remove the bypass valve coil by sliding the coil upward. (8) Disconnect the connector SV1 (gray) on the multi controller circuit board in the electrical parts box. (9) Remove the electrical parts box. (See Photo 5) (10) Recover refrigerant. (11) Remove the welded part of bypass valve. Refer to the notes below.	Photo 11 
10. Removing the high pressure switch (63H) and high pressure sensor (63HS) (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Remove the cover panel (front). (Refer to procedure 8 (5)) (4) Remove the cover panel (rear). (Refer to procedure 8 (6)) (5) Remove the side panel (R). (Refer to procedure 8 (7)) (6) Pull out the lead wire of high pressure switch and high pressure sensor. (7) Remove the electrical parts box. (See Photo 5) (8) Recover refrigerant. (9) Remove the welded part of high pressure switch and high pressure sensor. Refer to the notes below.	Photo 12 
11. Removing the low pressure sensor (63LS) (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Remove the cover panel (front). (Refer to procedure 8 (5)) (4) Remove the cover panel (rear). (Refer to procedure 8 (6)) (5) Remove the side panel (R). (Refer to procedure 8 (7)) (6) Disconnect the connector 63LS (blue) on the multi controller circuit board in the electrical parts box. (7) Remove the electrical parts box. (See Photo 5) (8) Recover refrigerant. (9) Remove the welded part of low pressure sensor. Refer to the notes below.	Notes: 1. Recover refrigerant without spreading it in the air. 2. The welded part can be removed easily by removing the side panel (R). 3. When installing the following parts, cover it with a wet cloth to prevent it from heating as the temperature below, then braze the pipes so that the inside of pipes are not oxidized; • Bypass valve (procedure 9), 248°F [120°C] or more • High pressure switch and high pressure sensor (procedure 10), 212°F [100°C] or more • Low pressure sensor (procedure 11), 212°F [100°C] or more • LEV (procedure 12), 248°F [120°C] or more
12. Removing linear expansion valve (LEV-A, LEV-B) (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Remove the cover panel (front). (Refer to procedure 8 (5)) (4) Remove the cover panel (rear). (Refer to procedure 8 (6)) (5) Remove the side panel (R). (Refer to procedure 8 (7)) (6) Remove the linear expansion valve coil. (See Photo 11,12) (7) Remove the electrical parts box. (See Photo 5) (8) Recover refrigerant. (9) Remove the welded part of linear expansion valve. Refer to the notes on the right.	