

INDOOR UNIT

No. OBH979

SERVICE MANUAL

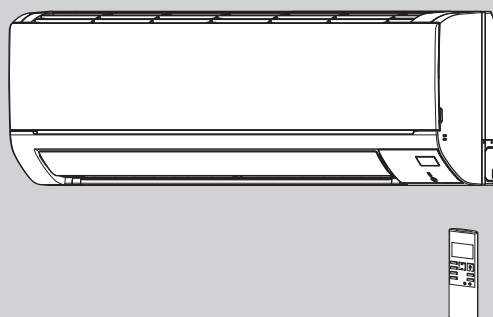
Models

MSZ-DA25VFK - **E1**, **ET1**

MSZ-DA35VFK - **E1**, **ET1**

MSZ-DA50VFK - **E1**, **ET1**

Outdoor unit service manual
MUZ-DA•VF Series (OBH980)
MXZ-HA•VF Series (OBH828)



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PARTS CATALOG (OBB979)

Use the specified refrigerant only

Never use any refrigerant other than that specified.

Doing so may cause a burst, an explosion, or fire when the unit is being used, serviced, or disposed of.

Correct refrigerant is specified in the manuals and on the spec labels provided with our products.

We will not be held responsible for mechanical failure, system malfunction, unit breakdown or accidents caused by failure to follow the instructions.

<Preparation before the repair service>

- Prepare the proper tools.
- Prepare the proper protectors.
- Provide adequate ventilation.
- After stopping the operation of the air conditioner, turn off the power-supply breaker and pull the power plug.
- Discharge the capacitor before the work involving the electric parts.

<Precautions during the repair service>

- Do not perform the work involving the electric parts with wet hands.
- Do not pour water into the electric parts.
- Do not touch the refrigerant.
- Do not touch the hot or cold areas in the refrigeration cycle.
- When the repair or the inspection of the circuit needs to be done without turning off the power, exercise great caution not to touch the live parts.

WARNING

- When the refrigerant circuit has a leak, do not execute pump down with the compressor.
- When pumping down the refrigerant, stop the compressor before disconnecting the refrigerant pipes. The compressor may burst if air etc. get into it.
- When opening or closing the valve below freezing temperatures, refrigerant may spurt out from the gap between the valve stem and the valve body, resulting in injuries.

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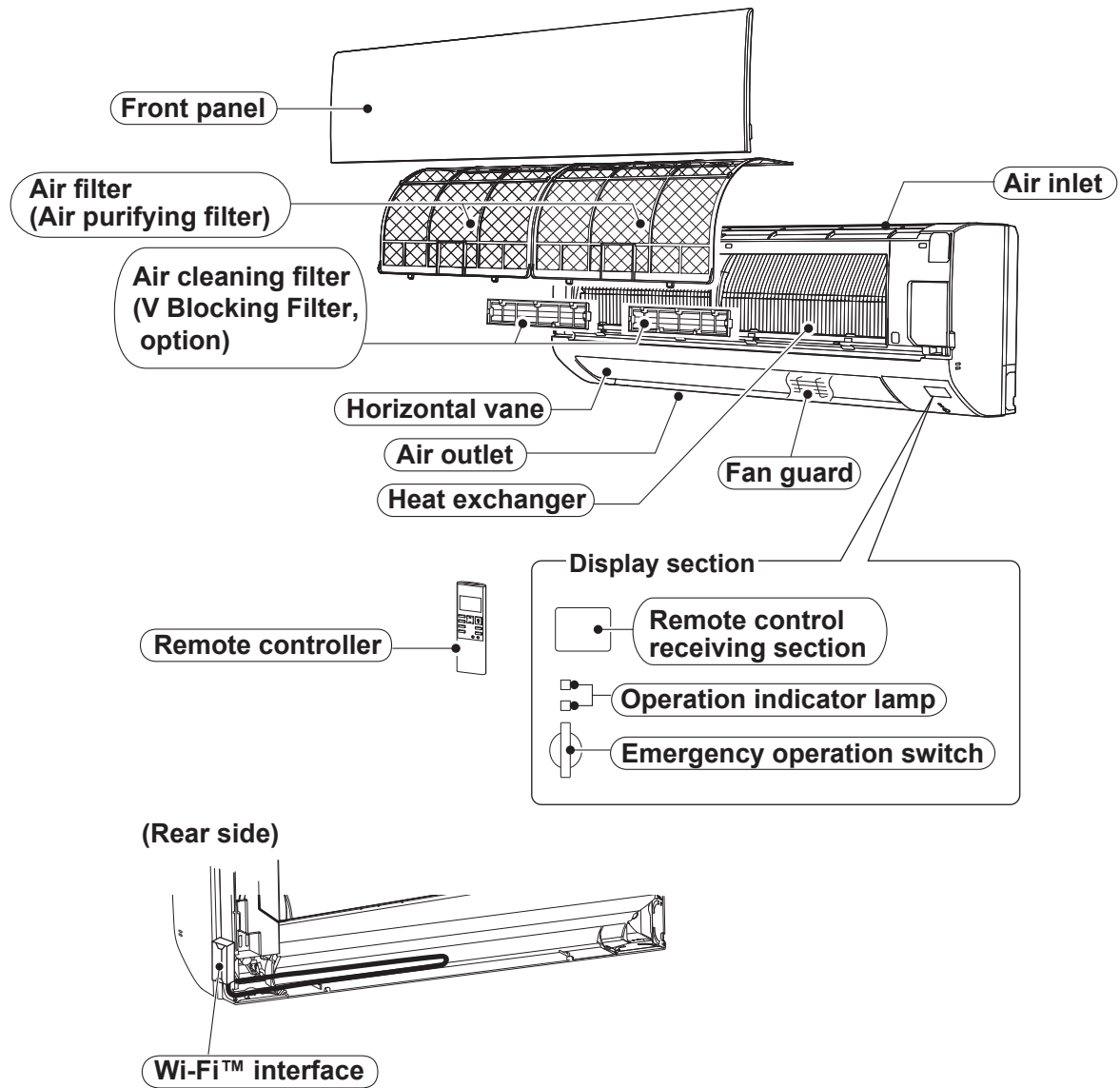
TECHNICAL CHANGES

MSZ-DA25VFK - , 

MSZ-DA35VFK - , 

MSZ-DA50VFK - , 

1. New model



"Wi-Fi" is a trademark or registered trademark of the Wi-Fi Alliance.

Indoor model				MSZ-DA25VFK	MSZ-DA35VFK	MSZ-DA50VFK	
Power supply				Single phase 230 V, 50 Hz			
Electrical data	Power input *1	Cooling	W	19	25	27	
		Heating		14	22	28	
	Running current *1	Cooling	A	0.28	0.32	0.34	
		Heating		0.24	0.30	0.34	
Fan motor	Model			RC0J25-EB			
	Current *1	Cooling	A	0.28	0.32	0.34	
		Heating		0.24	0.30	0.34	
Dimensions W × H × D			mm	799 × 290 × 232			
Weight			kg	8.3		9.6	
Special remarks	Air direction			5			
	Airflow	Cooling	Super High	m³/h	576	660	750
			High		438	474	588
			Med.		324	336	462
			Low		204	204	342
		Heating	Super High		504	630	768
			High		450	450	588
			Med.		324	324	462
			Low		204	204	348
	Sound level	Cooling	Super High	dB (A)	43	46	45
			High		37	38	40
			Med.		30	31	36
			Low		21	22	28
		Heating	Super High		43	44	47
			High		37	37	41
			Med.		30	30	34
			Low		21	21	27
	Fan speed	Cooling	Super High	rpm	1,080	1,200	1,140
			High		880	930	950
			Med.		710	730	800
			Low		520	520	660
		Heating	Super High		980	1,160	1,160
			High		900	900	950
			Med.		710	710	800
			Low		520	520	670
Fan speed regulator			4				
Remote controller model			AEH25B				

NOTE: Test conditions are based on ISO 5151.

Cooling : Indoor Dry-bulb temperature 27°C

Outdoor Dry-bulb temperature 35°C

Heating : Indoor Dry-bulb temperature 20°C

Outdoor Dry-bulb temperature 7°C

*1 Measured under rated operating frequency.

Wet-bulb temperature 19°C

Wet-bulb temperature 6°C

Specifications and rated conditions of main electric parts

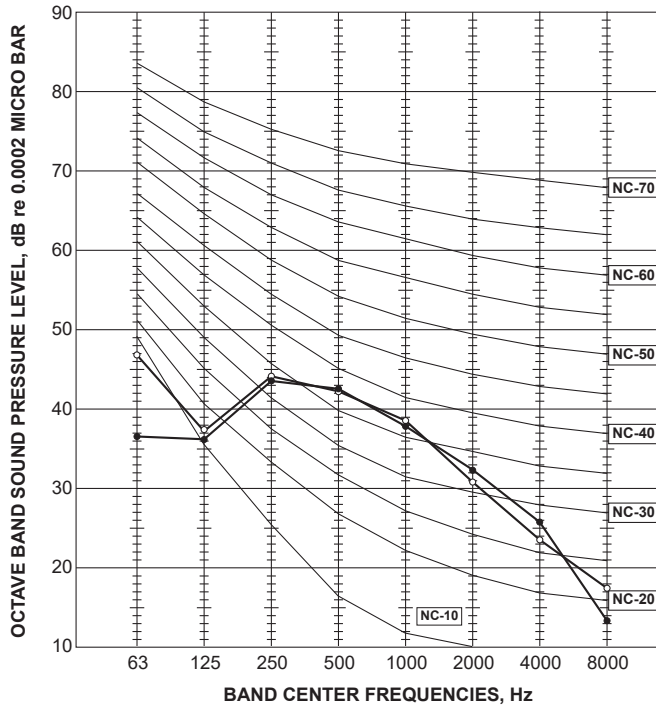
Fuse	(F11)	T3.15AL250V
Horizontal vane motor	(MV)	12 V DC
Varistor	(NR11)	S10K300E2K1 (ERZV10D471)
Terminal block	(TB)	5 P

4

NOISE CRITERIA CURVES

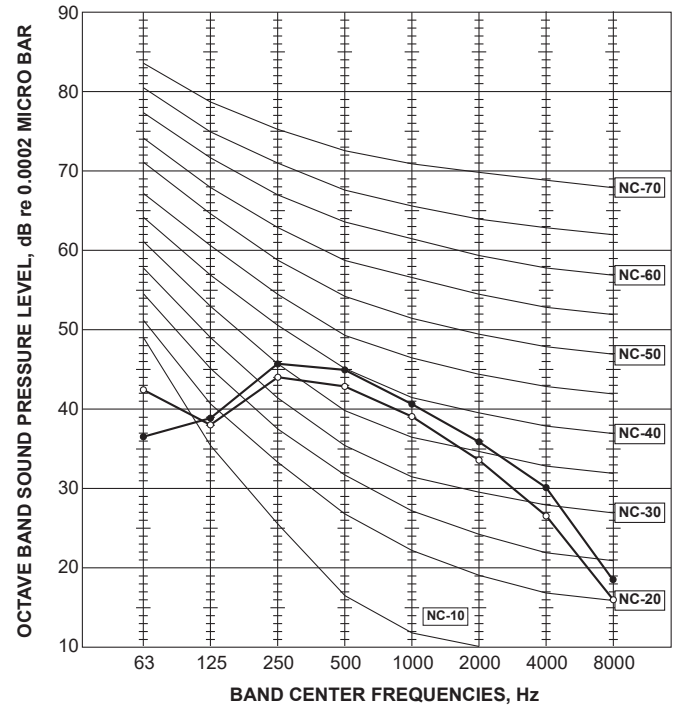
MSZ-DA25VFK

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
Super High	COOLING	43	●—●
	HEATING	43	○—○



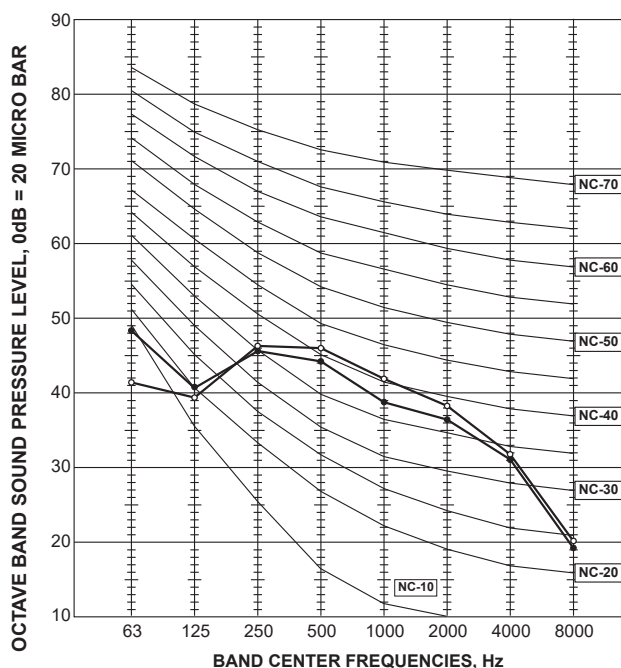
MSZ-DA35VFK

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
Super High	COOLING	46	●—●
	HEATING	44	○—○



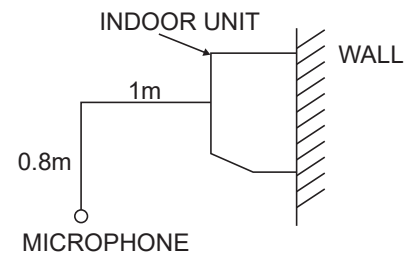
MSZ-DA50VFK

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
Super High	COOLING	45	●—●
	HEATING	47	○—○



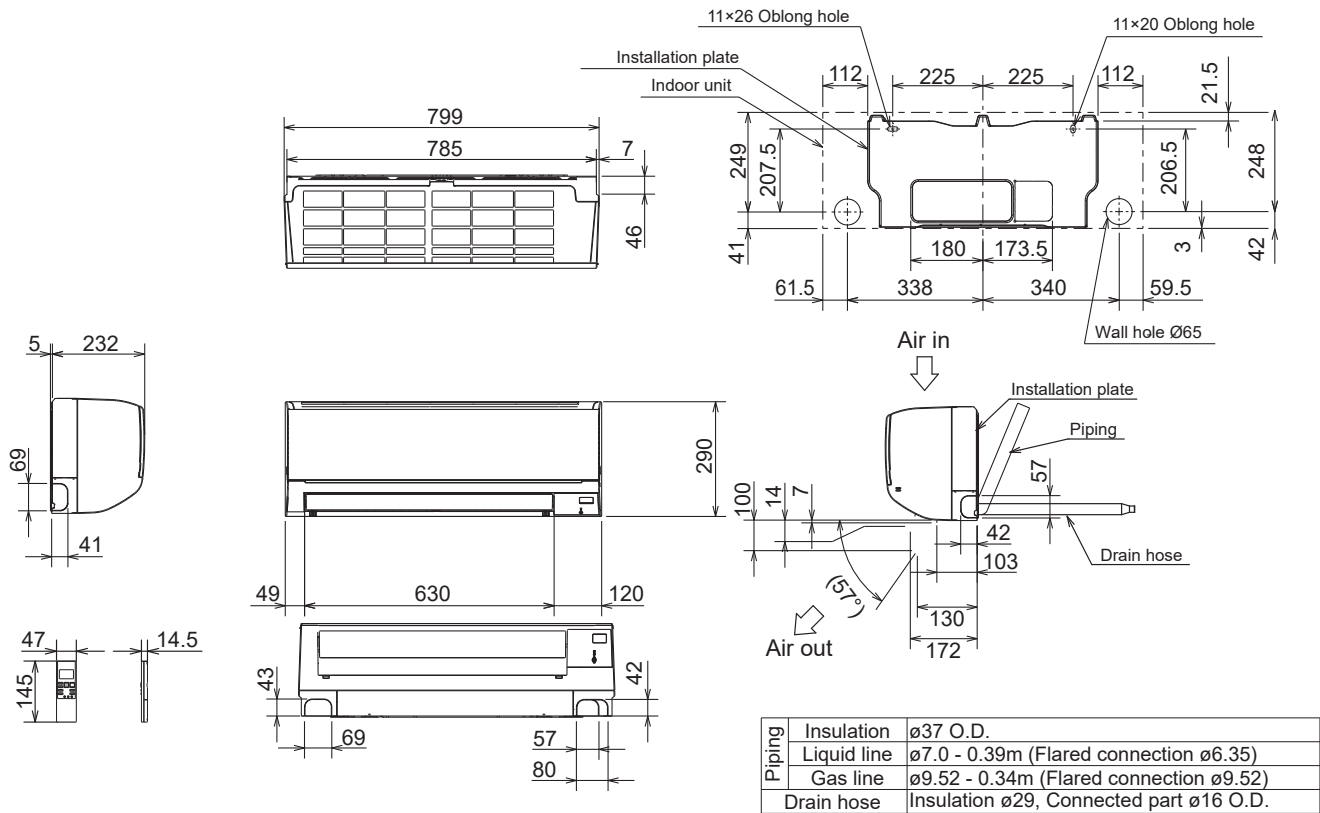
Test conditions

Cooling : Dry-bulb temperature 27°C Wet-bulb temperature 19°C
Heating : Dry-bulb temperature 20°C

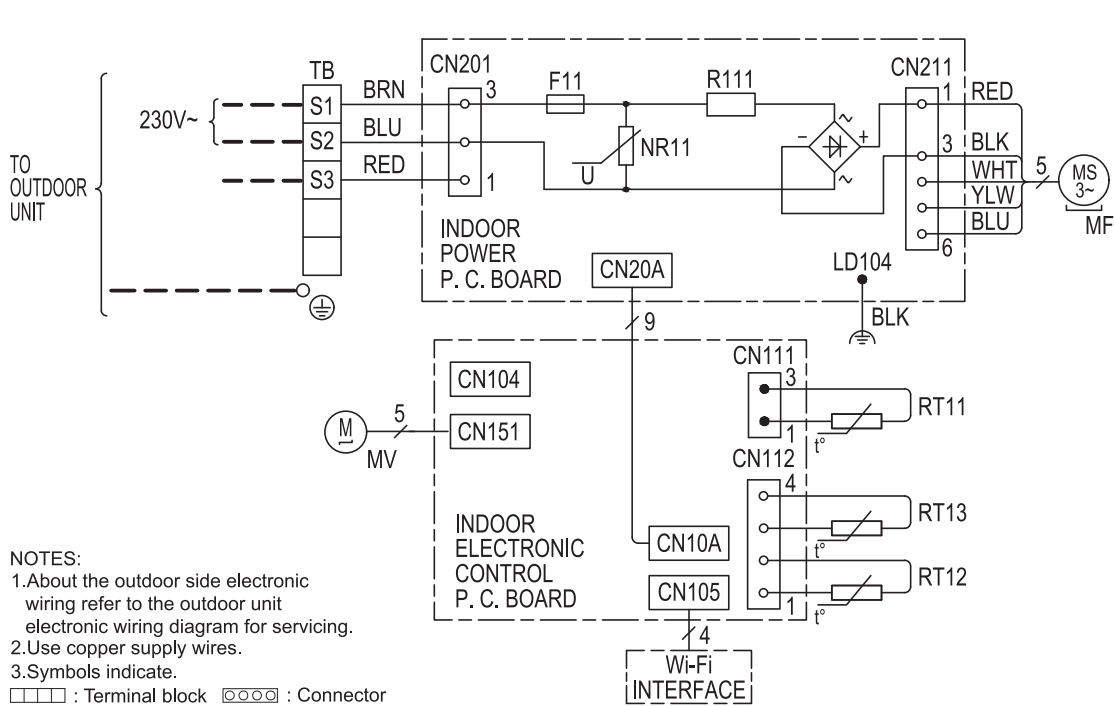


MSZ-DA25VFK MSZ-DA35VFK MSZ-DA50VFK

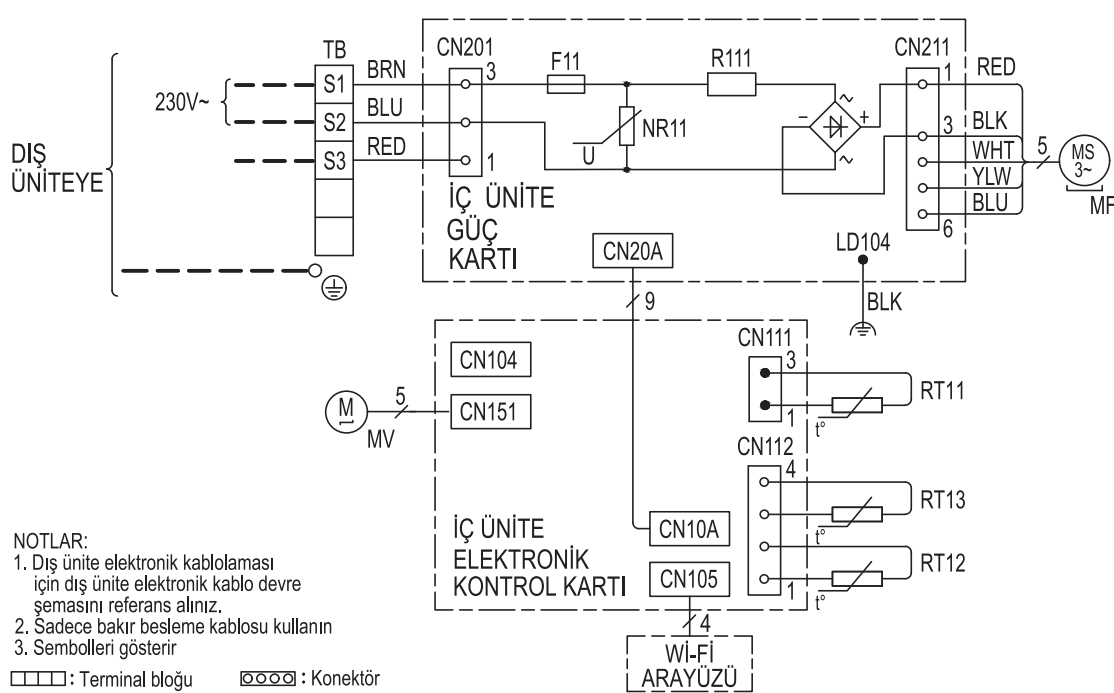
Unit: mm



MSZ-DA25VFK -[E1] MSZ-DA35VFK -[E1] MSZ-DA50VFK -[E1]

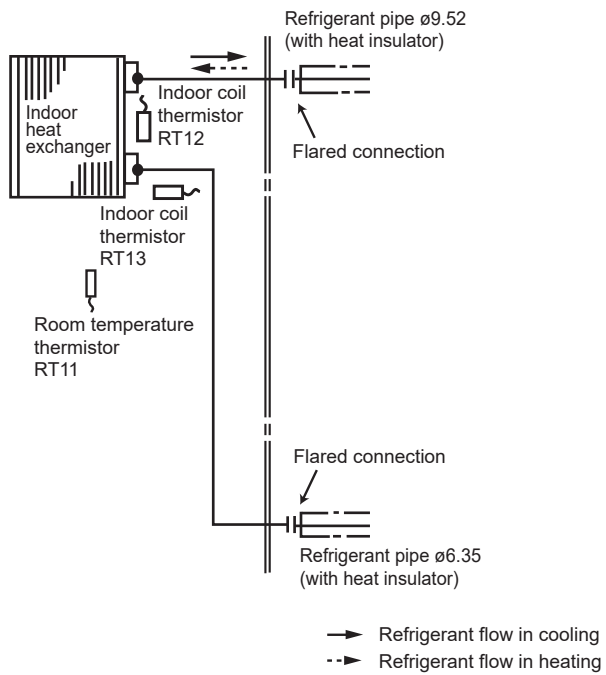


MSZ-DA25VFK -[ET1] MSZ-DA35VFK -[ET1] MSZ-DA50VFK -[ET1]



MSZ-DA25VFK MSZ-DA35VFK MSZ-DA50VFK

Unit: mm



8-1. TIMER SHORT MODE

For service, the following set time can be shortened by bridging the timer short mode point on the electronic control P.C. board. (Refer to 10-7.)

Set time : 3-minute → 3-second (It takes 3 minutes for the compressor to start operation. However, the starting time is shortened by bridging the timer short mode point.)

8-2. HOW TO SET REMOTE CONTROLLER EXCLUSIVELY FOR A PARTICULAR INDOOR UNIT

A maximum of 4 indoor units with wireless remote controllers can be set.

To operate the indoor unit individually with each remote controller, assign a number to each remote controller according to the number of the indoor unit.

Set according to the following procedure:

- (1) Turn the breaker OFF for the unit.
- (2) With the remote controller powered OFF, hold down UNIT button on the remote controller for 2 seconds to enter the pairing mode.
Setting number is displayed in the remote controller.
- (3) Press UNIT button again and assign a number to each remote controller.
Each press of UNIT button advances the number in the following order: 1→2→3→4.
- (4) Press Operation select (MODE) button to complete the pairing setting.

After you turn the breaker ON, the remote controller that first sends a signal to an indoor unit will be regarded as the remote controller for the indoor unit.

Once they are set, the indoor unit will only receive the signal from the assigned remote controller afterwards.

The setting of indoor unit will be cancelled, if the breaker is turned OFF or the power supply is shut down.

8-3. AUTO RESTART FUNCTION

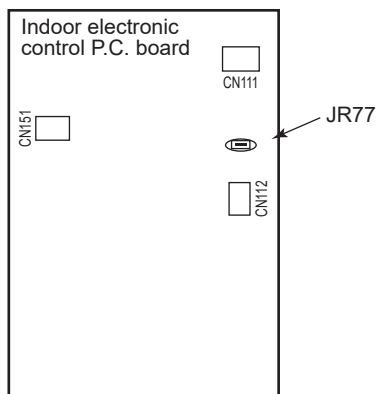
When the indoor unit is controlled with the remote controller, the operation mode, the set temperature, and the fan speed are memorized by the indoor electronic control P.C. board. "AUTO RESTART FUNCTION" automatically starts operation in the same mode just before the shutoff of the main power.

Operation

- ① If the main power has been cut, the operation settings remain.
- ② After the power is restored, the unit restarts automatically according to the memory.
(However, it takes at least 3 minutes for the compressor to start running.)

How to disable "AUTO RESTART FUNCTION"

- ① Turn off the main power for the unit.
- ② Cut the Jumper wire to JR77 on the indoor electronic control P.C. board. (Refer to 10-7.)



NOTE:

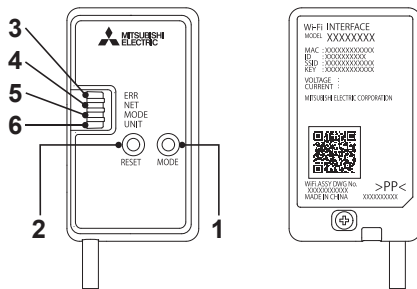
- The operation settings are memorized when 10 seconds have passed after the indoor unit was operated with the remote controller.
- If main power is turned OFF or a power failure occurs while AUTO START/STOP timer is active, the timer setting is cancelled.
- If the unit has been turned OFF with the remote controller before power failure, the auto restart function does not work as the power button of the remote controller is off.
- To prevent the breaker from tripping OFF due to the rush of starting current, systematize other home appliance not to turn ON at the same time.
- When some air conditioners are connected to the same supply system, if they are operated before power failure, the starting current of all the compressors may flow simultaneously at restart.
Therefore, the special countermeasures are required to prevent the main voltage-drop or the rush of the starting current by adding to the system that allows the units to start one by one.

8-4. WI-FI INTERFACE SETTING UP

1. Wi-Fi interface introduction

This Wi-Fi interface, communicates the status information and controls the commands from the MELCloud by connecting to the indoor unit.

No.	Item	Description
1	MODE switch	It selects modes.
2	RESET switch	It resets the system and ALL settings.
3	ERR LED (Orange)	It shows the network error state.
4	NET LED (Green)	It shows the network state.
5	MODE LED (Orange)	It shows the Access point mode state.
6	UNIT LED (Green)	It shows the indoor unit state.



- (1) MODE switch
 - The MODE switch is used for selecting modes in configurations.
- (2) RESET switch
 - Hold down the RESET switch for 2 seconds to reboot the system.
 - Hold down the RESET switch for 14 seconds to initialize the Wi-Fi interface to the factory default.

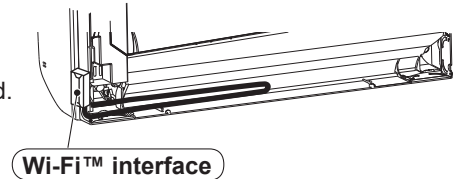
NOTE:

When the Wi-Fi interface is reset to the factory default, ALL the configuration information will be lost. Take great care in implementing this operation.

Wi-Fi Interface connection setup instructions

- (1) Remove the Wi-Fi interface from the holder.
- (2) Set up a connection between the Wi-Fi interface and the router.
- (3) Put the Wi-Fi interface into the holder after the setup is completed.
- (4) For MELCloud User Manual, please go to the website below.
<https://www.melcloud.com/Support>

(Rear side)



2. Setting up

Download the MELCloud application. Please go to the website below.
<https://www.melcloud.com/?qr=1>

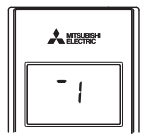
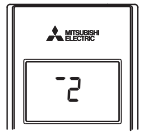
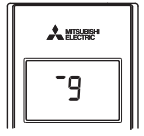


2-1. Selecting the setting up mode

Refer to the MELCloud application to set up the connection between the router and Wi-Fi interface.

To enter the setting up mode

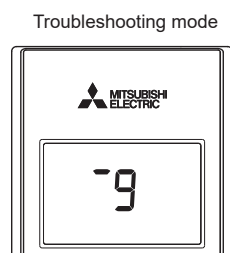
- (1) Hold down the  for 5 seconds.
- (2) Select the mode by pressing  and  as shown on the table below.
- (3) Point the remote controller toward the indoor unit unit and press the .

Number	Mode	Operation
	Pairing mode	[Connecting] A short beep sounds once every 5 seconds for 10 minutes and the operation indicator lamp blinks.
		[Connection fail] After 10 minutes, five beeps sound and the operation indicator lamp blinks.
		[Connection success] The operation indicator lamp lights up for 5 seconds and a long beep sounds.
	NA	This mode is not supported in this model. If this mode is selected, three short beeps will sound.
	NA	This mode is not supported in this model. If this mode is selected, three short beeps will sound.
	Troubleshooting mode	Refer to “3. When it doesn’t connect well”.

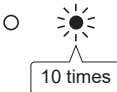
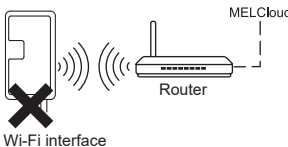
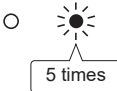
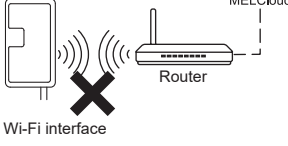
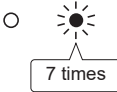
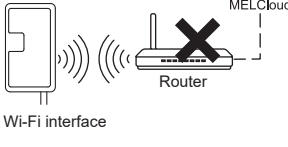
3. When it doesn't connect well

Troubleshooting mode

- Hold down the  for 5 seconds.
- Select “_ 9” by pressing Temperature  and  as shown on the right.
- Point the remote controller toward the indoor unit and press the .



In the troubleshooting mode, you can check what kind of error is occurring by the blinking pattern of the indoor unit operation indicator lamp as follows.

Indication	Description	Check point
 10 times	 Wi-Fi interface	Check the connection between unit and Wi-Fi interface.
 5 times	 Wi-Fi interface	Make sure that DHCP is enabled, or check IP address settings of the Wi-Fi interface.
 7 times	 Wi-Fi interface	Check if the Router is connected to the internet, or check DNS setting the Router and Wi-Fi interface.

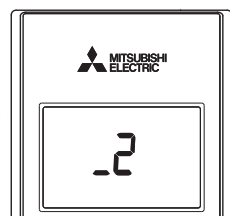
In addition, check the following.

- Make sure that the communication distance is not too far between the Wi-Fi interface and the Router.
- Make sure that the Router uses WPA2™-AES encryption.
- Make sure that the number of connected devices to the Router does not exceed the limit.
- Set up the Wi-Fi interface after operating the air conditioner using the wireless remote controller at least once.

If the connection fails even after checking the above, set up the Wi-Fi interface and the router again by the following method.

To reset connection and set up the Wi-Fi interface and the router again

- Hold down the  for 5 seconds.
- Select “_ 2” by pressing Temperature  and .
- Point the remote controller toward the indoor unit and press the .
- The indoor unit beeps 3 times when resetting is complete.



Other check points

Check the following, and pair the Wi-Fi interface and the router according to Selecting a mode.

- Make sure that the communication distance is not too far between the Wi-Fi interface and the router.
 - Make sure that the router uses WPA2-AES encryption.
 - Make sure that the number of connected devices to the router does not exceed the limit.
 - Make sure that DHCP is enabled, or check IP address setting of the Wi-Fi interface.
 - Check DNS settings of the router, or check DNS address of the Wi-Fi interface.
 - Check if the router is connected to Internet.
 - Set up the Wi-Fi interface after operating the air conditioner using the wireless remote controller at least once.
- If the connection fails even after checking the above, set up the Wi-Fi interface and the router again by the following method.
- Hold down the  for 5 seconds.
 - Select “_ 2” by pressing  and .
 - Point the remote controller toward the indoor unit and press the .
 - The indoor unit beeps 3 times when resetting is complete.

[About trademarks]

- “Wi-Fi”, “Wi-Fi Protected Setup™”, “WPA2™” are trademarks or registered trademarks of the Wi-Fi Alliance.
The Wi-Fi Interface uses Open Source Software.
- The Bluetooth® word mark is registered trademarks owned by Bluetooth SIG, Inc.

For Declaration of Conformity and MELCloud User Manual, please go to the website below.
www.melcloud.com/Support
 After accessing the address above, select “United Kingdom” to view support details.

The Wi-Fi interface uses Open Source Software.
 To view the Open Source software licence(s), please go to the following website.
<https://www2.melcloud.com/?oss=1>

NOTE:

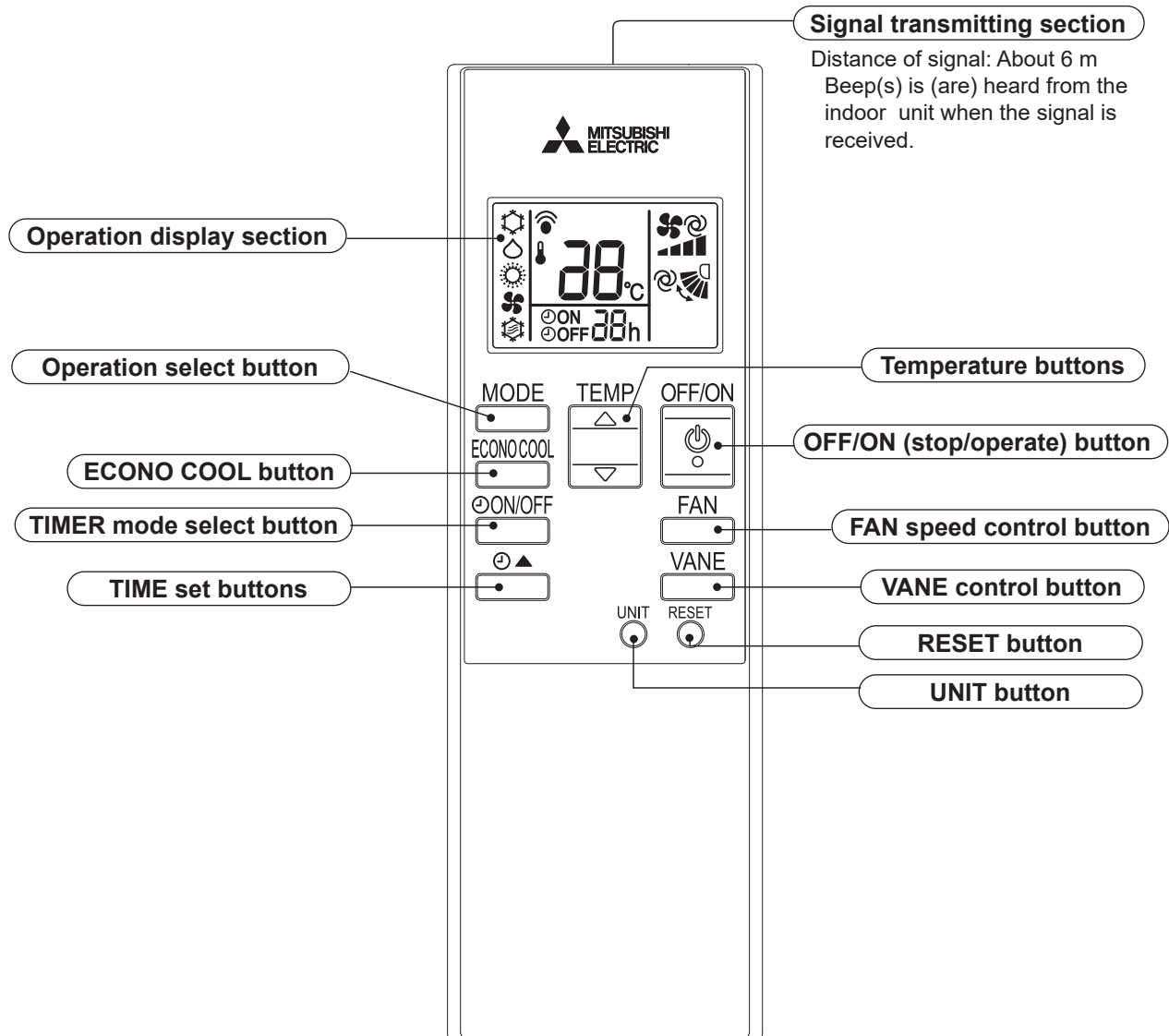
- Ensure that the Router supports the WPA2-AES encryption setting and 2.4GHz before commencement of the installation of this Wi-Fi interface.
- The end user should read and accept the terms and conditions of the Wi-Fi service before using this Wi-Fi interface.
- To complete connection of this Wi-Fi interface to the Wi-Fi service, the Router may be required.
- This Wi-Fi interface will not commence transmission of any operational data from the system until the end user registers and accepts the terms and conditions of the Wi-Fi service.
- Do not place the Wi-Fi interface where it can be easily accessed by third parties.
- This Wi-Fi interface should not be installed and connected to any Mitsubishi Electric system which is to provide application critical cooling or heating.
- Please write down the information regarding the Wi-Fi interface setting on the last page of this manual, when you set up this Wi-Fi interface.
- At the time of relocation or disposal, reset the Wi-Fi interface to the factory default.
- To fully connect this Wi-Fi interface to the Wi-Fi service, you may need a router and a smartphone compatible with Bluetooth® Low Energy 4.2 or later.

Mitsubishi Electric's Wi-Fi interface is designed for communication to Mitsubishi Electric's MELCloud Wi-Fi service. Mitsubishi Electric is not responsible for any (i) underperformance of a system or any product; (ii) system or product fault; or (iii) loss or damage to any system or product; which is caused by or arises from connection to and/or use of any third party Wi-Fi interface or any third party Wi-Fi service with Mitsubishi Electric equipment.

For the latest information regarding MELCloud from Mitsubishi Electric Corporation, please visit www.melcloud.com.

WIRELESS REMOTE CONTROLLER

MSZ-DA25VFK MSZ-DA35VFK MSZ-DA50VFK



NOTE: Last setting will be stored after the unit is turned OFF with the remote controller. Indoor unit receives the signal of the remote controller with beeps.

INDOOR UNIT DISPLAY SECTION

Operation indicator lamp

The operation indicator at the right side of the indoor unit indicates the operation state.

- The following indication applies regardless of shape of the indication.

Indication	Operation state	Room temperature
	The unit is operating to reach the set temperature	About 2°C or more away from set temperature
	The room temperature is approaching the set temperature	About 1 to 2°C from set temperature
	The air filter needs to be cleaned. *1	—
	MSZ-DA25/35 Standby mode (only during multi system operation)	—

Lit

Blinking

Not lit

*1 Timing for air filter cleaning

The air filter needs to be cleaned if the operation indicator lamp blinks when starting or stopping the operation. Follow the OPERATING INSTRUCTIONS to clean and dry the air filter, and then attach it. Hold down the FAN button to stop the operation indicator lamp from blinking.

9-1. COOL (❄️) OPERATION

- (1) Press OFF/ON (stop/operate) button.
OPERATION INDICATOR lamp of the indoor unit turns on with a beep tone.
- (2) Select COOL mode with Operation select button.
- (3) Press Temperature buttons (TOO WARM or TOO COOL button) to select the desired temperature.
The setting range is 16 - 31°C.

1. Coil frost prevention

The compressor operational frequency is controlled by the temperature of the indoor heat exchanger to prevent the coil from frosting.

When the temperature of indoor heat exchanger becomes too low, the coil frost prevention mode works. The indoor fan operates at the set speed and the compressor stops. This mode continues until the temperature of indoor heat exchanger rises.

2. Low outside temperature operation

When the outside temperature is lower, low outside temperature operation starts, and the outdoor fan slows or stops.

9-2. DRY (☀️) OPERATION

- (1) Press OFF/ON (stop/operate) button.
OPERATION INDICATOR lamp of the indoor unit turns on with a beep tone.
- (2) Select DRY mode with Operation select button.
- (3) The set temperature is determined from the initial room temperature.

1. Coil frost prevention

Coil frost prevention works the same way as that in COOL mode. (9-1.1.)

2. Low outside temperature operation

Low outside temperature operation works the same way as that in COOL mode. (9-1.2.)

9-3. FAN (🌀) OPERATION

- (1) Press OFF/ON (stop/operate) button.
OPERATION INDICATOR lamp of the indoor unit turns ON with a beep tone.
- (2) Select FAN mode with Operation select button.
- (3) Select the desired fan speed. When AUTO, it becomes Low.
Only indoor fan operates. Outdoor unit does not operate. Low outside temperature operation works the same way as that in COOL mode. (9-1.2.)

9-4. HEAT (🔥) OPERATION

- (1) Press OFF/ON (stop/operate) button.
OPERATION INDICATOR lamp of the indoor unit turns on with a beep tone.
- (2) Select HEAT mode with Operation select button.
- (3) Press Temperature buttons (TOO WARM or TOO COOL button) to select the desired temperature.
The setting range is 16 - 31°C.

1. Cold air prevention control

When the compressor is not operating or is starting, and the temperature of indoor heat exchanger and/or the room temperature is low or when defrosting is being done, the indoor fan will stop or rotate in Very Low speed.

2. High pressure protection

The compressor operational frequency is controlled by the temperature of the indoor heat exchanger to prevent the condensing pressure from increasing excessively.

When the temperature of indoor heat exchanger becomes too high, the high pressure protection works.

The indoor fan operates following the cold air prevention control. This mode continues until the temperature of indoor heat exchanger falls.

3. Defrosting

Defrosting starts when the temperature of outdoor heat exchanger becomes too low.

The compressor stops once, the indoor/outdoor fans stop, the 4-way valve reverses, and the compressor re-starts.

This mode continues until the temperature of outdoor heat exchanger rises or the fixed time passes.

9-5. MULTI SYSTEM OPERATION (MSZ-DA25/35)

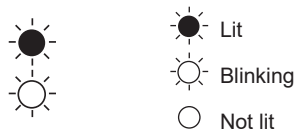
FOR MULTI SYSTEM AIR CONDITIONER

OUTDOOR UNIT: MXZ series

Multi system air conditioner can connect 2 or more indoor units with 1 outdoor unit.

- When trying to operate 2 or more indoor units with 1 outdoor unit simultaneously, one for the cooling and the others for heating, the operation mode of the indoor unit that operates first is selected. Other indoor units cannot operate, and operation indicator lamp blinks as shown in the figure below. In this case, please set all the indoor units to the same operation mode.

OPERATION INDICATOR



- When indoor unit starts the operation while the defrosting of outdoor unit is being done, it takes a few minutes (max. 10 minutes) to blow out the warm air.
- In the heating operation, though indoor unit is not operating, it may get warm or the sound of refrigerant flow may be heard. It is not malfunction. The reason is that the refrigerant continuously flows into it.

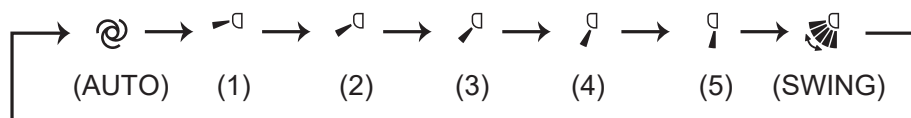
9-6. AUTO VANE OPERATION

1. Horizontal vane

(1) Vane motor drive

These models are equipped with a stepping motor for the horizontal vane. The rotating direction, speed, and angle of the motor are controlled by pulse signals (approximately 12 V) transmitted from indoor microprocessor.

(2) The horizontal vane angle and mode change as follows by pressing VANE control button.



(3) Positioning

To confirm the standard position, the vane moves until it touches the vane stopper. Then the vane is set to the selected angle.

Confirmation of standard position is performed in the following cases:

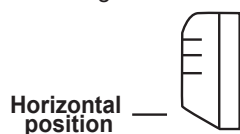
- When the operation starts or finishes (including timer operation).
- When the test run starts.
- When standby mode (only during multi system operation) starts or finishes.

(4) VANE AUTO (⊙) mode

In VANE AUTO mode, the microprocessor automatically determines the vane angle to make the optimum room temperature distribution.

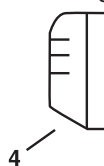
In COOL and DRY operation

Vane angle is fixed to Horizontal position.



In HEAT operation

Vane angle is fixed to Angle 4.



(5) STOP (operation OFF) and ON TIMER standby

In the following cases, the horizontal vane returns to the closed position.

- When OFF/ON (stop/operate) button is pressed (POWER OFF).
- When the operation is stopped by the emergency operation.
- When ON TIMER is ON standby.

(6) Condensation prevention

During COOL or DRY operation with the vane angle at Angle 3 ~ 5 when the compressor cumulative operation time exceeds 1 hour, the vane angle automatically changes to Angle 2 for preventing condensation.

(7) SWING (🌀) mode

By selecting SWING mode with VANE control button, the horizontal vane swings vertically.

(8) ECONO COOL (🌀) operation (ECONomical operation)

When ECONO COOL button is pressed in COOL mode, set temperature and the airflow direction is automatically changed by the microprocessor. However, the temperature on the LCD screen on the remote controller is not changed. Also the horizontal vane swings in various cycle.

SWING operation makes you feel cooler than set temperature. So, even though the set temperature is higher, the air conditioner can keep comfort. As a result, energy can be saved.

To cancel this operation, select a different mode or press one of the following buttons in ECONO COOL operation: ECONO COOL, VANE CONTROL button.

9-7. TIMER OPERATION (ON/OFF TIMER)

1. How to set the timer

(1) Press OFF/ON (stop/operate) button to start the air conditioner.

(2) Select the timer mode by pressing the  button during operation.

Each time this button is pressed, the timer mode is changed in sequence:

⏻ (OFF TIMER) → ⏻ (ON TIMER) → TIMER RELEASE

(3) Set the time of the timer using the  button.

Each time this button is pressed, the set time increase or decrease by 1 hour to 12 hours.

2. To release the timer

Press the  button until ⏻ (OFF TIMER) and ⏻ (ON TIMER) are not displayed.

NOTE :

- The OFF TIMER and the ON TIMER cannot be set at the same time.
- The displayed time is the time remaining and will decrease in 1-hour increments as time passes.

9-8. EMERGENCY/TEST OPERATION

In the case of test run operation or emergency operation, use the emergency operation switch on the right side of the indoor unit. Emergency operation is available when the remote controller is missing or has failed, or when the batteries in the remote controller are running down. The unit will start and OPERATION INDICATOR lamp will light up.

The first 30 minutes of operation is the test run operation. This operation is for servicing. The indoor fan runs at High speed and the temperature control does not work.

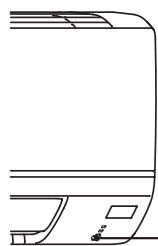
After 30 minutes of test run operation, the system shifts to EMERGENCY COOL/HEAT MODE with a set temperature of 24°C. The fan speed shifts to Med.

The coil frost prevention works even in the test run or the emergency operation.

In the test run or emergency operation, the horizontal vane operates in VANE AUTO (@) mode.

Emergency operation continues until the emergency operation switch is pressed once or twice or the unit receives any signal from the remote controller. In the latter case, normal operation will start.

NOTE: Do not press the emergency operation switch during normal operation.



EMERGENCY OPERATION switch —  E.O.SW

Operation mode	COOL	HEAT
Set temperature	24°C	24°C
Fan speed	Med.	Med.
Horizontal vane	Auto	Auto

The operation mode is indicated by the Operation indicator lamp as follows:

Operation indicator lamp

EMERGENCY COOL		 Lit  Not lit
		
EMERGENCY HEAT		
		
STOP		
		

9-9. 3-MINUTE TIME DELAY OPERATION

When the system turns OFF, compressor will not restart for 3 minutes as 3-minute time delay function operates to protect compressor from overload.

9-10. OPERATION LOCK

This function locks operation mode only. Other functions, such as OFF/ON, temperature setting, or airflow direction adjustment are available.

- (1) Hold down  button and  button simultaneously for 2 seconds while the unit is not operating to enable OPERATION LOCK.

The icon for the locked operation mode blinks.

- (2) Hold down  button and  button simultaneously for 2 seconds again while the unit is not operating to disable OPERATION LOCK.

- The icon for the locked operation mode blinks when  button and  button are held down to enable or disable OPERATION LOCK or  button is pressed during operation while OPERATION LOCK is enabled.
- AIR PURIFYING operation is not available when OPERATION LOCK is enabled in a mode other than FAN mode.

10 TROUBLESHOOTING

10-1. CAUTIONS ON TROUBLESHOOTING

1. Before troubleshooting, check the following:

- 1) Check the power supply voltage.
- 2) Check the indoor/outdoor connecting wire for miswiring.

2. Take care of the following during servicing

- 1) Before servicing the air conditioner, be sure to turn OFF the main unit first with the remote controller, and then after confirming the horizontal vane is closed, turn OFF the breaker and/or disconnect the power plug.
- 2) Be sure to turn OFF the power supply before removing the front panel, the cabinet, the top panel, and the P.C. board.
- 3) When removing the P.C. board, hold the edge of the board with care NOT to apply stress on the components.
- 4) When connecting or disconnecting the connectors, hold the connector housing. DO NOT pull the lead wires.

<Incorrect>



Lead wiring

<Correct>



Connector housing

3. Troubleshooting procedure

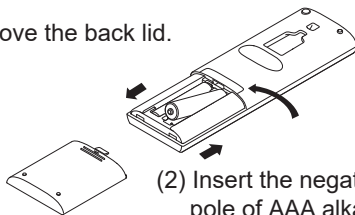
- 1) Check if the OPERATION INDICATOR lamp on the indoor unit is blinking ON and OFF to indicate an abnormality. To make sure, check how many times the OPERATION INDICATOR lamp is blinking ON and OFF before starting service work.
- 2) Before servicing, verify that all connectors and terminals are connected properly.
- 3) When the electronic control P.C. board seems to be defective, check for disconnection of the copper foil pattern and burnt or discolored components.
- 4) When troubleshooting, Refer to 10-2, 10-3 and 10-4.

4. How to replace batteries

Weak batteries may cause the remote controller malfunction.

In this case, replace the batteries to operate the remote controller normally.

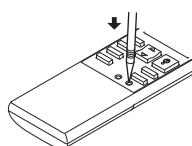
- (1) Remove the back lid.



- (3) Install the back lid.

- (2) Insert the negative pole of AAA alkaline batteries first.

- (4) Press RESET.



NOTE: 1. If RESET button is not pressed, the remote controller may not operate correctly.

2. This remote controller has a circuit to automatically reset the microprocessor when batteries are replaced.

This function is equipped to prevent the microprocessor from malfunctioning due to the voltage drop caused by the battery replacement.

3. Do not use the leaking batteries.

10-2. FAILURE MODE RECALL FUNCTION

Outline of the function

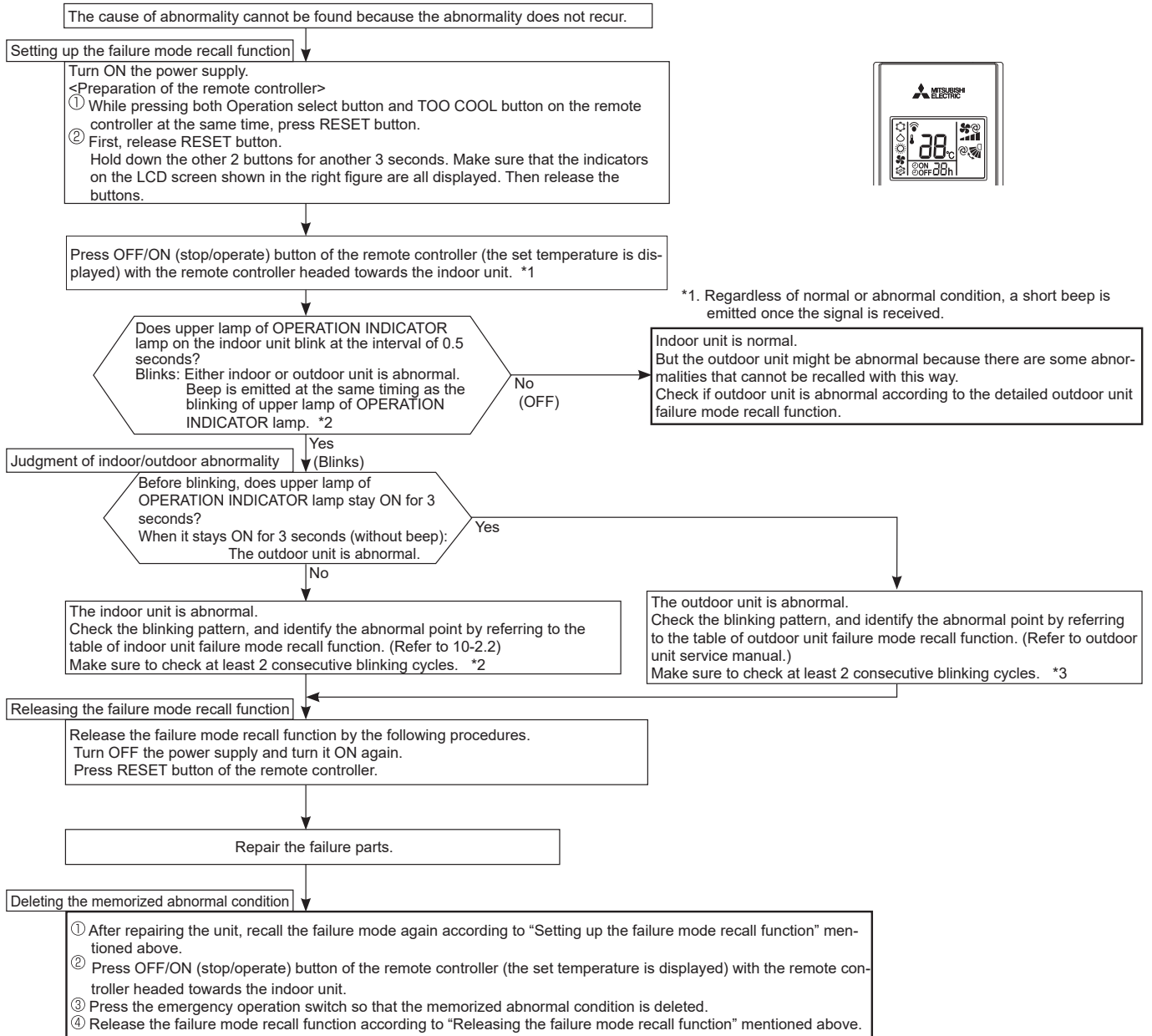
This air conditioner can memorize the abnormal condition which has occurred once.

Even though LED indication listed on the troubleshooting check table (10-4.) disappears, the memorized failure details can be recalled.

This mode is very useful when the unit needs to be repaired for the abnormality which does not recur.

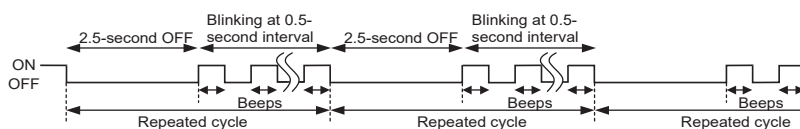
1. Flow chart of failure mode recall function for the indoor/outdoor unit

Operational procedure

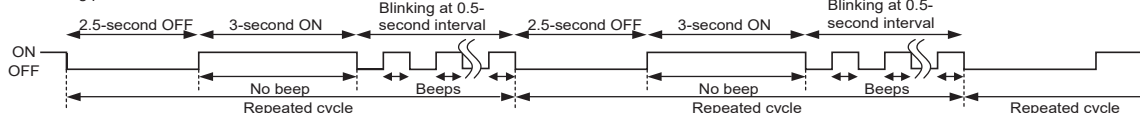


NOTE: 1. Make sure to release the failure mode recall function after it is set up, otherwise the unit cannot operate properly.
2. If the abnormal condition is not deleted from the memory, the last abnormal condition is kept memorized.

*2. Blinking pattern when the indoor unit is abnormal:



*3. Blinking pattern when the outdoor unit is abnormal:



NOTE: Blinking patterns of this mode differ from the ones of TROUBLESHOOTING CHECK TABLE (10-4.).

2. Table of indoor unit failure mode recall function

Upper lamp of OPERATION INDICATOR lamp	Abnormal point (Failure mode)	Condition	Remedy
Not lit	Normal	—	—
1-time blink every 0.5-second	Room temperature thermistor	The room temperature thermistor short or open circuit is detected every 8 seconds during operation.	Refer to the characteristics of the room temperature thermistor (10-7.).
2-time blink 2.5-second OFF	Indoor coil thermistor	The indoor coil thermistor short or open circuit is detected every 8 seconds during operation.	Refer to the characteristics of the main indoor coil thermistor, the sub indoor coil thermistor (10-7.).
3-time blink 2.5-second OFF	Serial signal	The serial signal from outdoor unit is not received for a maximum of 6 minutes.	Refer to 10-6.⑤ "How to check miswiring and serial signal error". Refer to "Check of compressor protector" of outdoor unit service manual.
11-time blink 2.5-second OFF	Indoor fan motor	The rotational frequency feedback signal is not emitted for the 12 seconds after the indoor fan motor is operated.	Refer to 10-6.④ "Check of indoor fan motor".
12-time blink 2.5-second OFF	Indoor control system	It cannot properly read data in the nonvolatile memory of the indoor electronic control P.C. board.	Replace the indoor electronic control P.C. board.

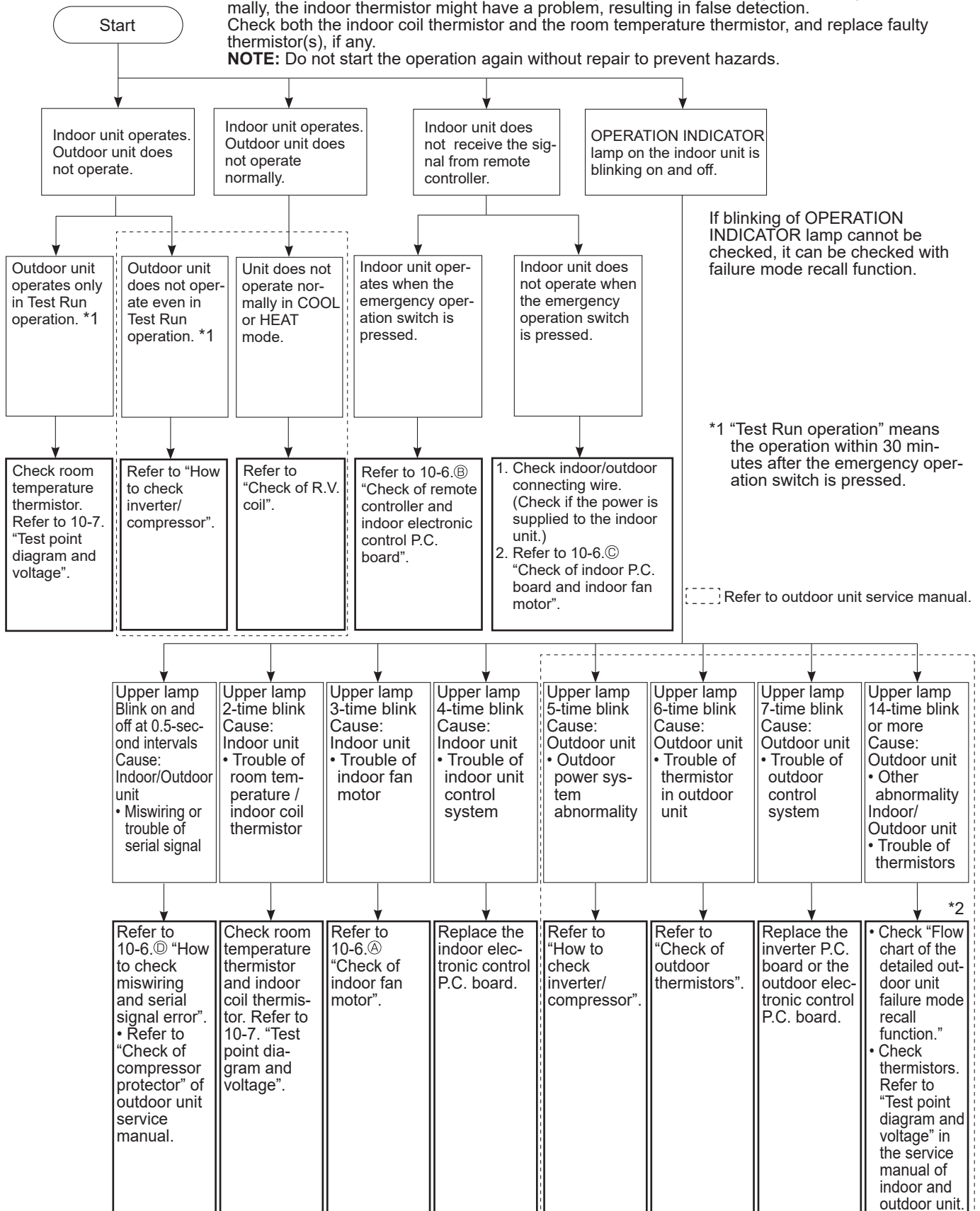
10-3. INSTRUCTION OF TROUBLESHOOTING

1. Check of the unit

*2 There is a possibility that diesel explosion may occur due to the air mixed in the refrigerant circuit. First, ensure that there are no leakage points on the valves, flare connections, etc. that allow the air to flow into the refrigerant circuit, or no blockage points (e.g. clogged or closed valves) in the refrigerant circuit that cause an increase in pressure.

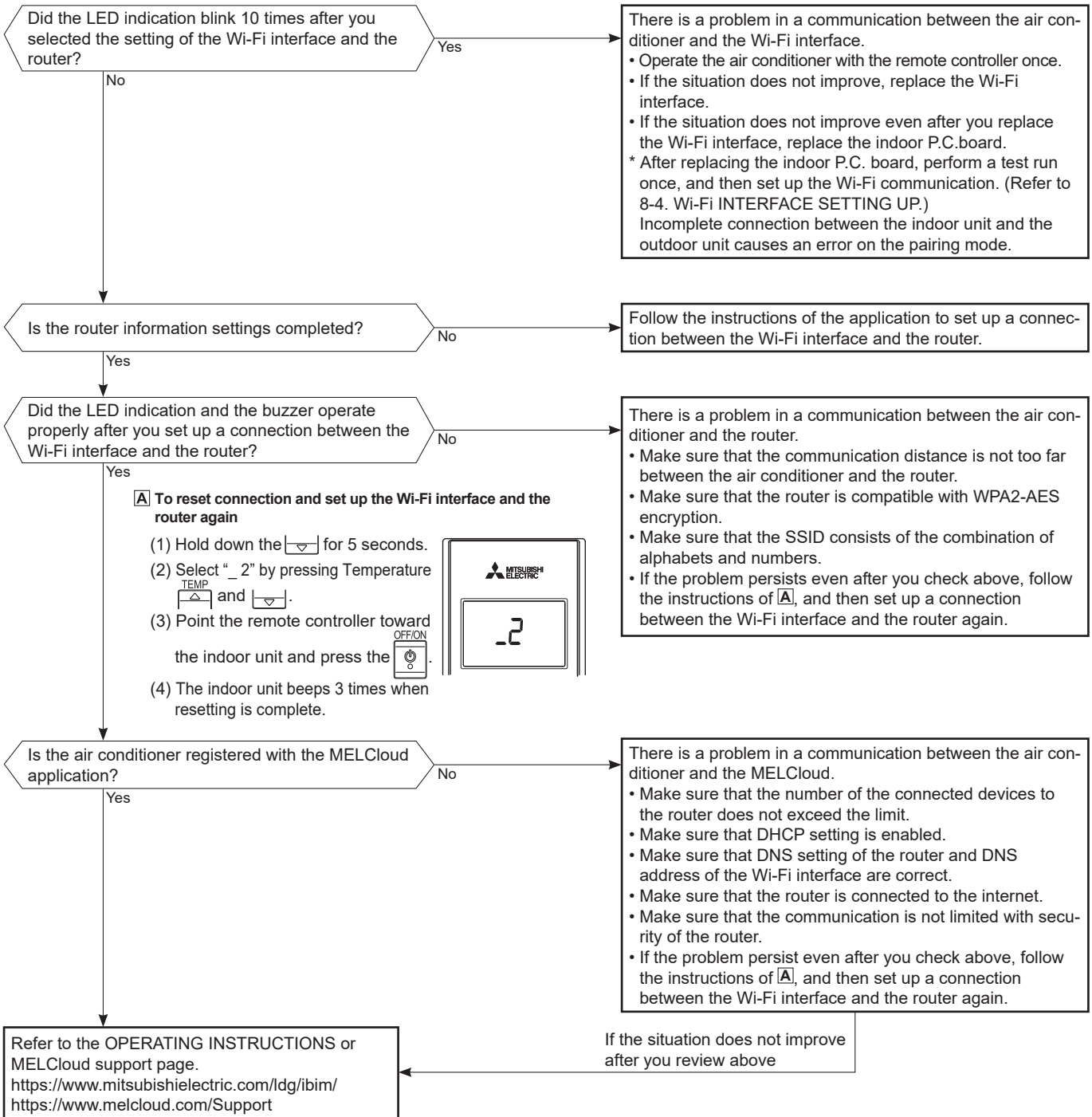
If there is no abnormal point like above and the system operates cooling and heating modes normally, the indoor thermistor might have a problem, resulting in false detection. Check both the indoor coil thermistor and the room temperature thermistor, and replace faulty thermistor(s), if any.

NOTE: Do not start the operation again without repair to prevent hazards.



2. Check of Wi-Fi interface

Follow the procedure below if the air conditioner cannot be monitored or controlled with a device such as a smartphone.



10-4. TROUBLESHOOTING CHECK TABLE

Before taking measures, make sure that the symptom reappears for accurate troubleshooting.

When the indoor unit has started operation and detected an abnormality of the following condition (the first detection after the power ON), the indoor fan motor turns OFF and OPERATION INDICATOR lamp blinks.

OPERATION INDICATOR



Lit



Blinking



Not lit

No.	Abnormal point	Operation indicator lamp	Symptom	Condition	Remedy
1	Miswiring or serial signal	Upper lamp blinks. 0.5-second ON ●○●○●○●○ 0.5-second OFF	Indoor unit and outdoor unit do not operate.	The serial signal from the outdoor unit is not received for 6 minutes.	- Refer to 10-6.③ "How to check miswiring and serial signal error". - Refer to "Check of compressor protector" of outdoor unit service manual.
2	Indoor coil thermistor Room temperature thermistor	Upper lamp blinks. 2-time blink ●○●○●○●○●○●○ 2.5-second OFF		The indoor coil or the room temperature thermistor is short or open circuit.	Refer to the characteristics of indoor coil thermistor, and the room temperature thermistor (10-7.).
3	Indoor fan motor	Upper lamp blinks. 3-time blink ●○●○●○●○●○●○●○ 2.5-second OFF		The rotational frequency feedback signal is not emitted during the indoor fan operation.	Refer to 10-6.④ "Check of indoor fan motor".
4	Indoor control system	Upper lamp blinks. 4-time blink ●○●○●○●○●○●○●○●○ 2.5-second OFF		It cannot properly read data in the nonvolatile memory of the indoor electronic control P.C. board.	Replace the indoor electronic control P.C. board.
5	Outdoor power system	Upper lamp blinks. 5-time blink ●○●○●○●○●○●○●○●○ 2.5-second OFF		It consecutively occurs 3 times that the compressor stops for overcurrent protection or start-up failure protection within 1 minute after start-up.	- Refer to "How to check of inverter/compressor". Refer to outdoor unit service manual - Check the stop valve.
6	Outdoor thermistors	Upper lamp blinks. 6-time blink ●○●○●○●○●○●○●○●○ 2.5-second OFF		The outdoor thermistors short or open circuit during the compressor operation.	Refer to "Check of outdoor thermistor". Refer to outdoor unit service manual.
7	Outdoor control system	Upper lamp blinks. 7-time blink ●○●○●○●○●○●○●○●○ 2.5-second OFF		It cannot properly read data in the nonvolatile memory of the inverter P.C. board or the outdoor electronic control P.C. board.	Replace the inverter P.C. board or the outdoor electronic control P.C. board. Refer to outdoor unit service manual.
8	Other abnormality *1	Upper lamp blinks. 14-time blink or more ●○●○●○●○●○●○●○●○●○●○●○●○ 2.5-second OFF		An abnormality other than the above is detected. An abnormality of the indoor thermistors, the defrost thermistor or ambient temperature thermistor is detected.	- Check the stop valve. - Check the 4-way valve. - Confirm the abnormality in detail using the failure mode recall function for outdoor unit. - Refer to "TEST POINT DIAGRAM AND VOLTAGE" on the service manual of indoor and outdoor unit for the characteristics of the thermistors. (Do not start the operation again without repair to prevent hazards.)
9	Outdoor control system	Upper lamp lights up ●	Outdoor unit does not operate	It cannot properly read data in the nonvolatile memory of the inverter P.C. board or the outdoor electronic control P.C. board.	Check the blinking pattern of the LED on the inverter P.C. board or the outdoor electronic control P.C. board.

*1. Refer to *2 on 10-3. "INSTRUCTION OF TROUBLESHOOTING".

MSZ-DA25VFK MSZ-DA35VFK

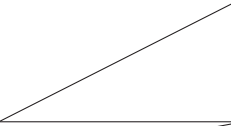
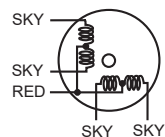
OPERATION INDICATOR



- Lit
- ◐ Blinking
- Not lit

No.	Abnormal point	Operation indicator lamp	Symptom	Condition	Remedy
1	MXZ type Operation mode setting	Upper lamp lights and right lamp blinks. 2.5-second OFF	Outdoor unit operates but indoor unit does not operate.	The operation mode of the each indoor unit is differently set to COOL (includes DRY, FAN) and HEAT at the same time, the operation mode of the indoor unit that has operated at first has the priority.	Unify the operation mode. Refer to outdoor unit service manual.

10-5. TROUBLESHOOTING CRITERION OF MAIN PARTS

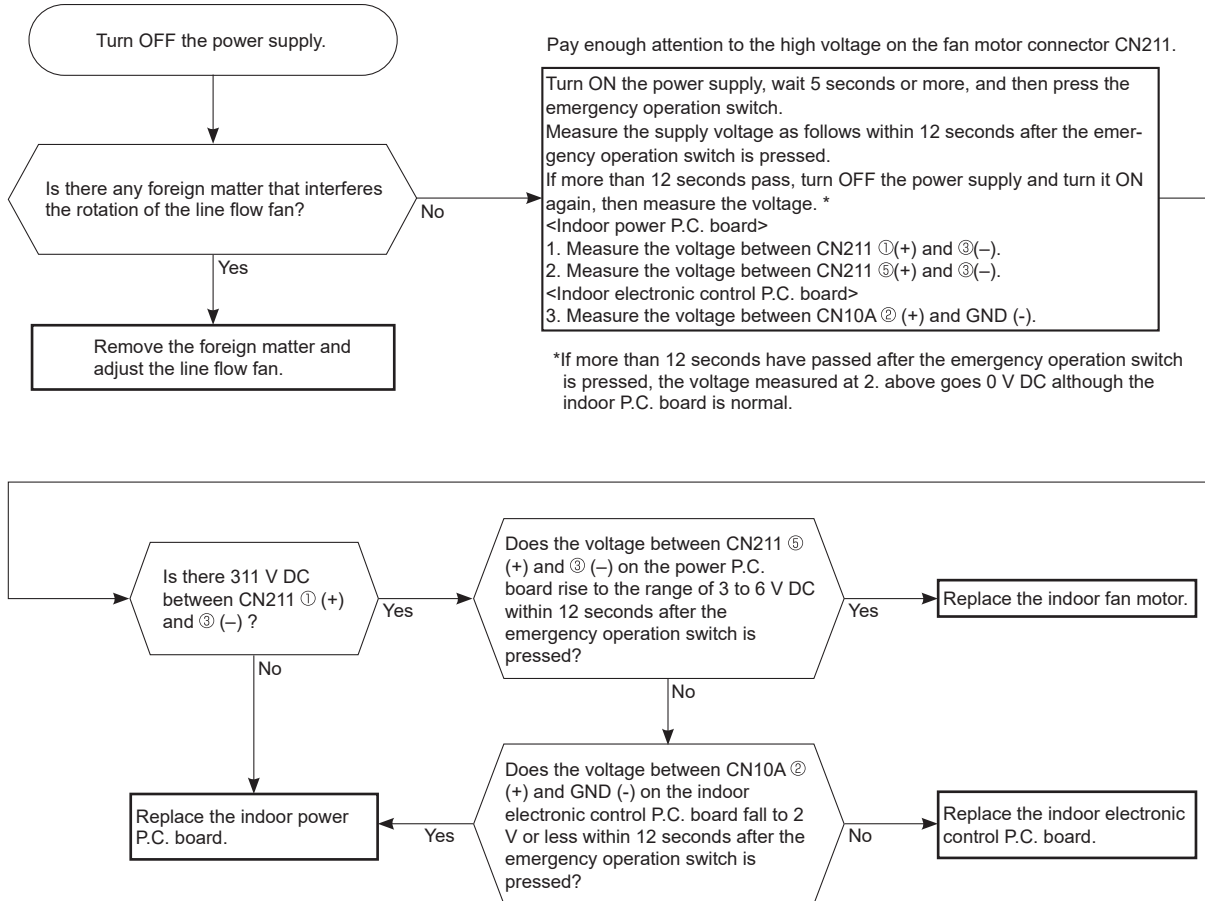
Part name	Check method and criterion	Figure				
Room temperature thermistor (RT11)	Measure the resistance with a multimeter.					
Indoor coil thermistor (RT12, RT13)	Refer to 10-7. "Test point diagram and voltage", "2. Indoor electronic control P.C. board", for the chart of thermistor.					
Indoor fan motor (MF)	Check 10-6.㉔.					
Vane motor (MV)	Measure the resistance between the terminals with a multimeter. (Part temperature 10 ~ 30°C) <table border="1" data-bbox="384 1093 1038 1158"><tr><td>Color of the lead wire</td><td>Normal</td></tr><tr><td>RED - SKY*</td><td>235 ~ 255 Ω</td></tr></table>	Color of the lead wire	Normal	RED - SKY*	235 ~ 255 Ω	
Color of the lead wire	Normal					
RED - SKY*	235 ~ 255 Ω					

*SKY = SKY BLUE

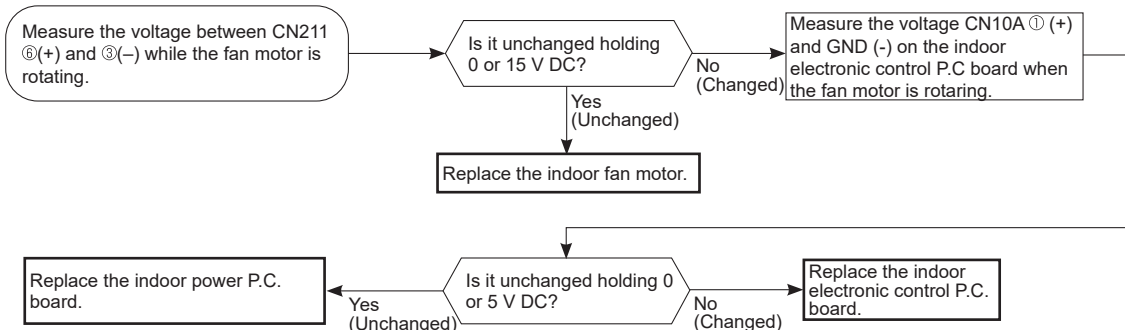
10-6. TROUBLESHOOTING FLOW

A Check of indoor fan motor

The indoor fan motor error has occurred, and the indoor fan does not operate.

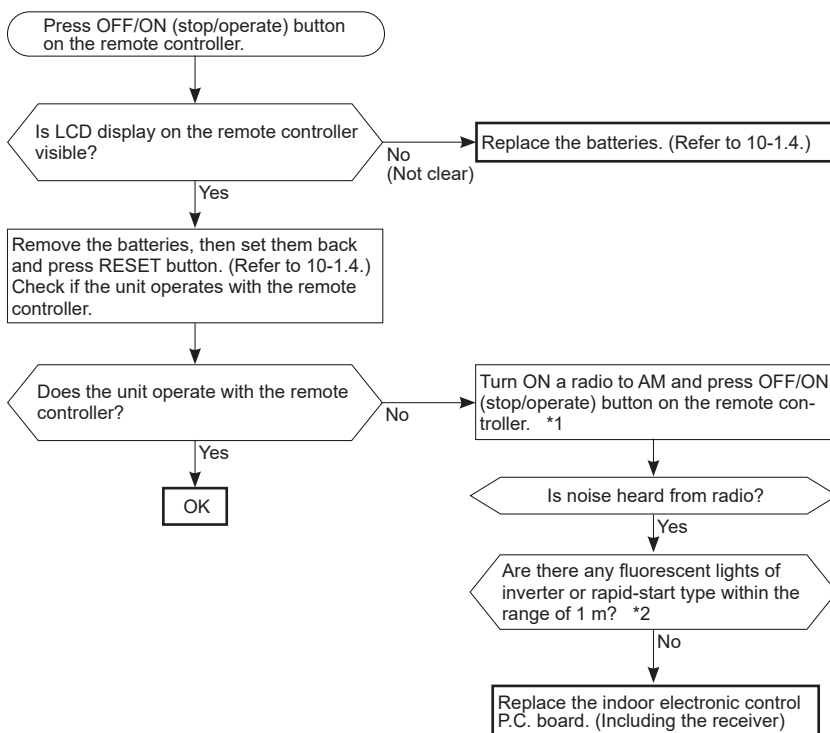


The indoor fan motor error has occurred, and the indoor fan repeats "12-second ON and 30-second OFF" 3 times, and then stops.



B Check of remote controller and indoor electronic control P.C. board

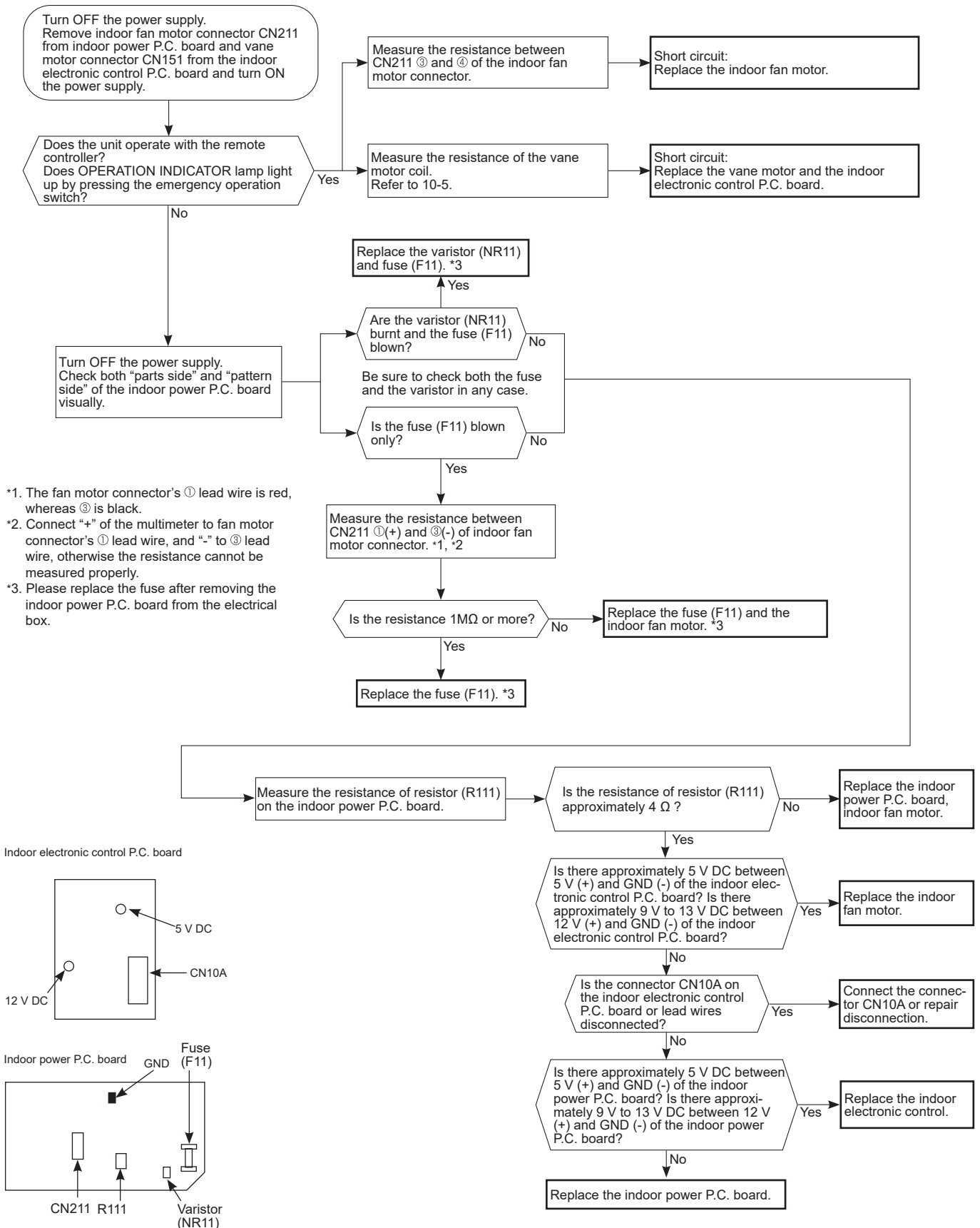
* Check if the remote controller is exclusive for this air conditioner.



*1 Look at the image of the signal transmitting section of the remote controller through the monitor of a digital camera or a camera phone. It is normal if the LED of the signal transmitting section lights up when the OFF/ON (stop/operate) button on the remote controller is pressed. However, it may be difficult to see the illuminated LED of the signal transmitting section with a smartphone camera.

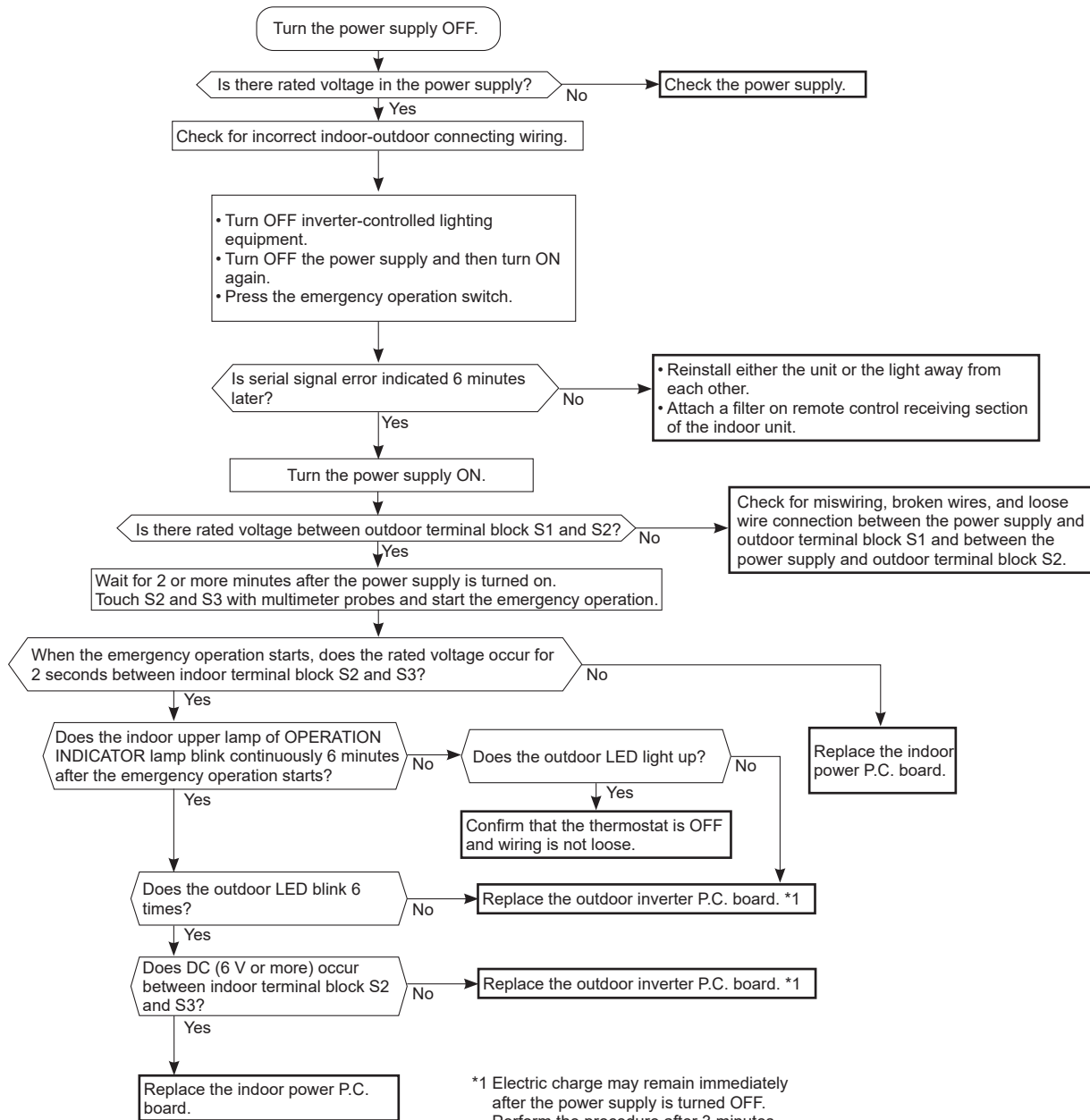
*2 If the inverter fluorescent light is turned on when the room is cool, the unit may have difficulty receiving the signal from the remote controller or may not be able to operate with it; if the inverter fluorescent light is turned on when the room is warm, the unit may be able to operate with the remote controller.

© Check of indoor P.C. board and indoor fan motor



D How to check miswiring and serial signal error

MUZ Type



MXZ Type

LED indication for communication status

Communication status is indicated by the LED.

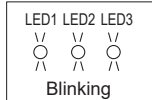
Unit status

Blinking: normal communication
Lighting: abnormal communication or not connected

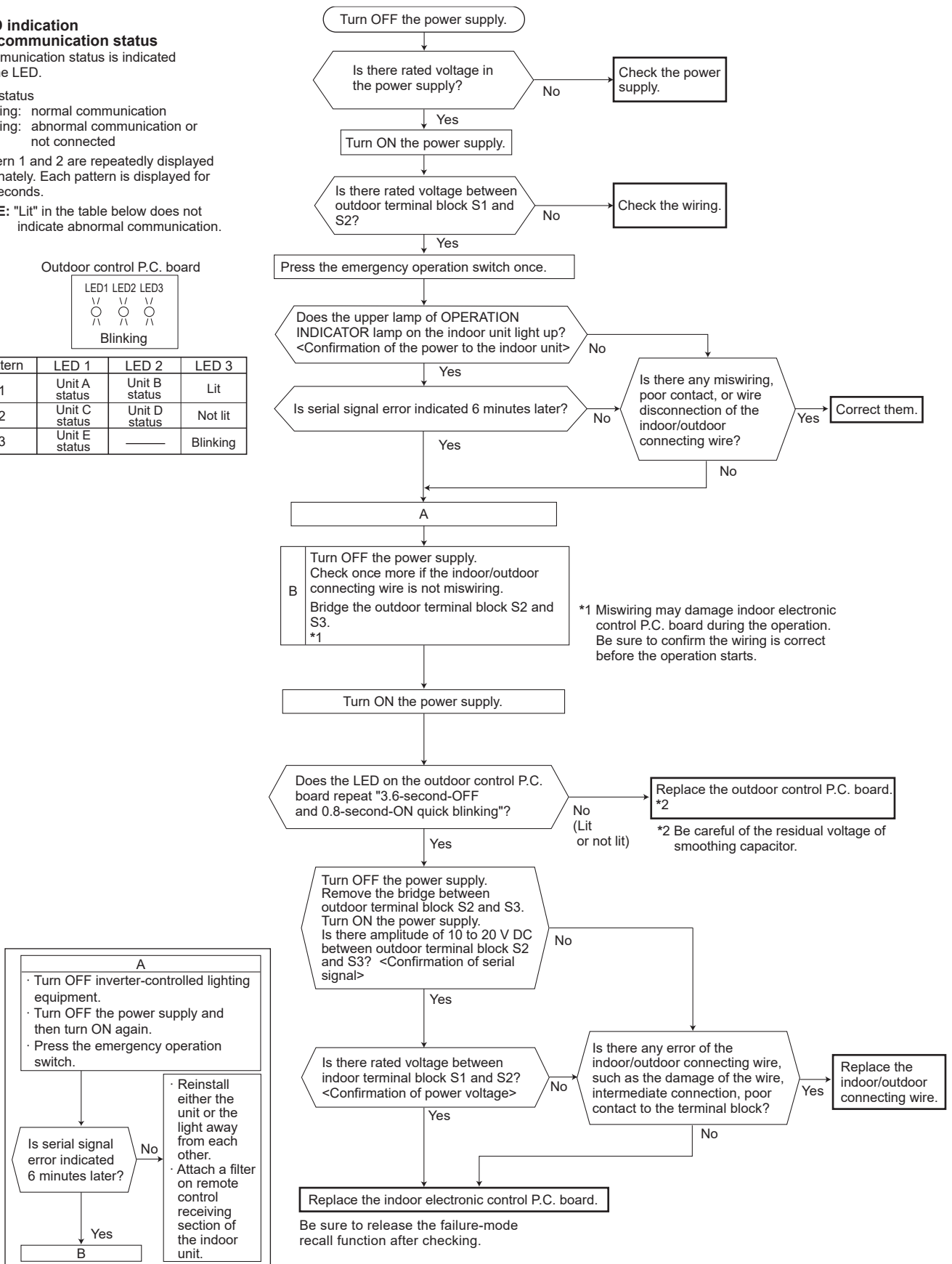
Pattern 1 and 2 are repeatedly displayed alternately. Each pattern is displayed for 10 seconds.

NOTE: "Lit" in the table below does not indicate abnormal communication.

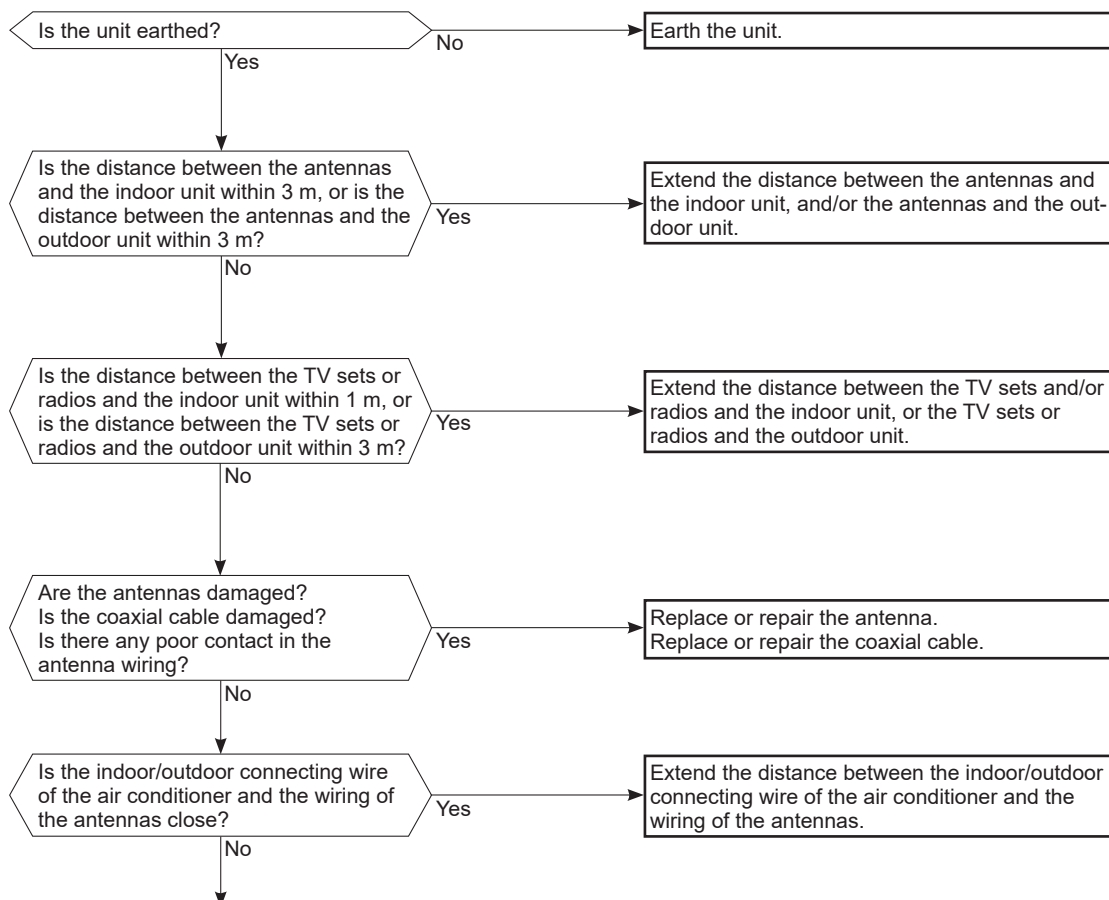
Outdoor control P.C. board



Pattern	LED 1	LED 2	LED 3
1	Unit A status	Unit B status	Lit
2	Unit C status	Unit D status	Not lit
3	Unit E status	—	Blinking



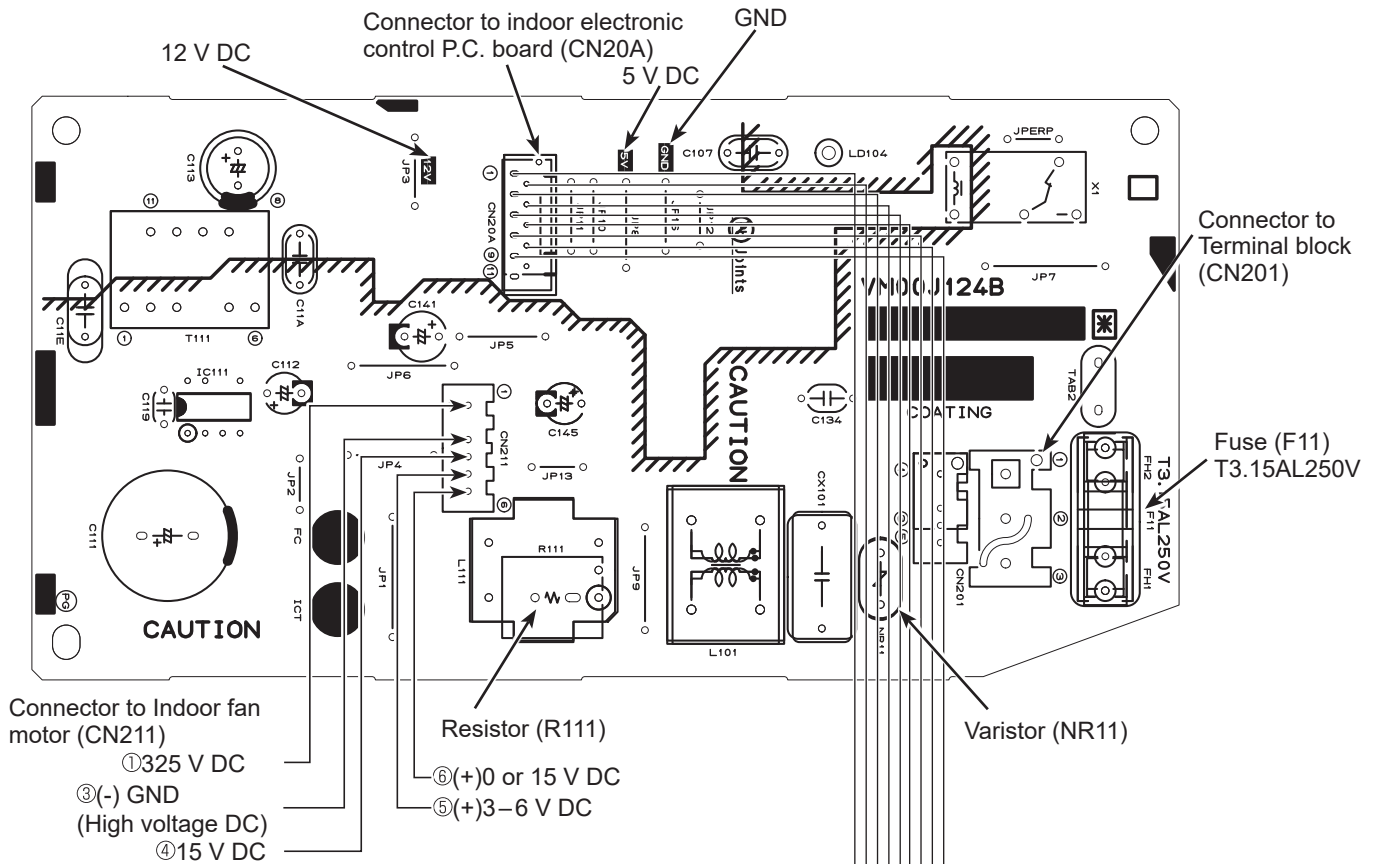
E Electromagnetic noise enters into TV sets or radios



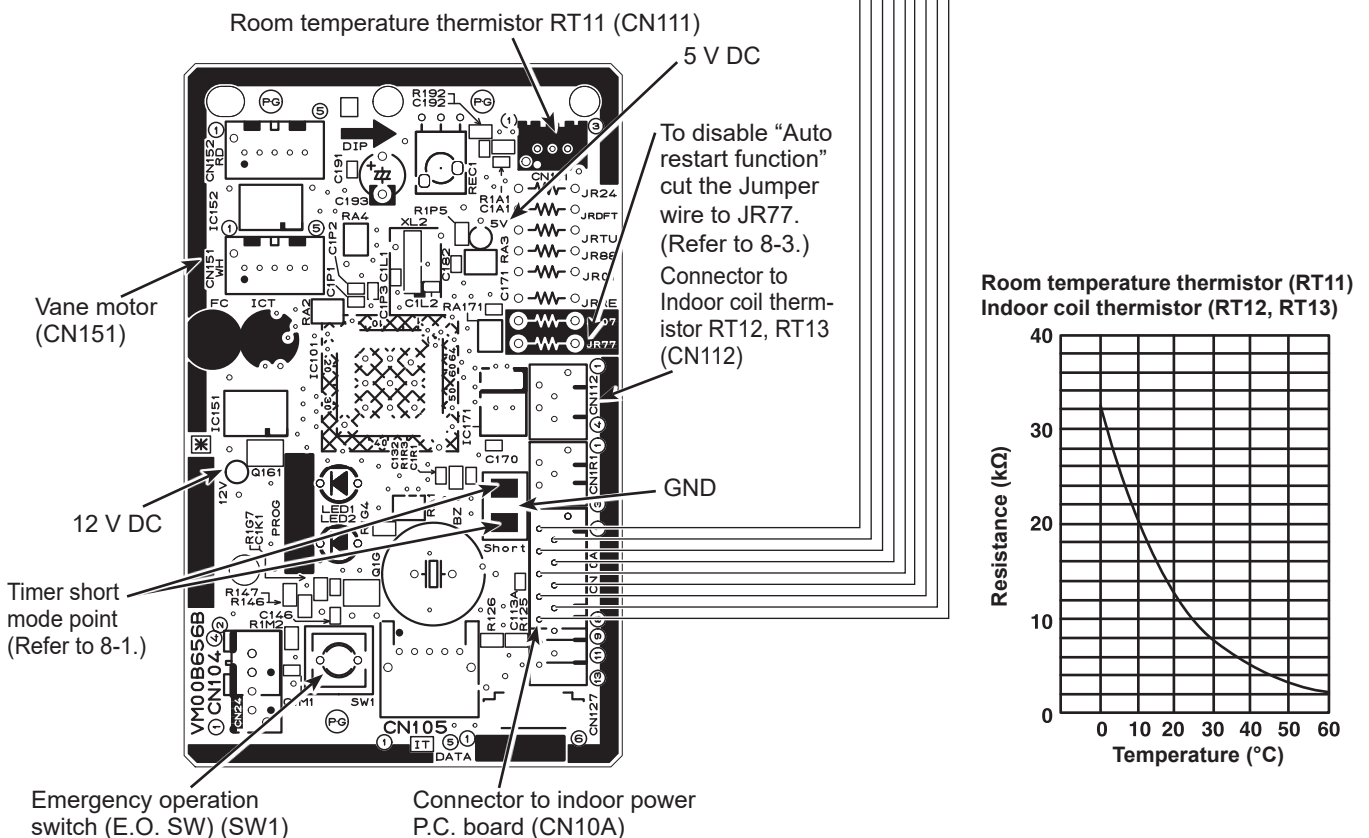
10-7. TEST POINT DIAGRAM AND VOLTAGE

MSZ-DA25VFK MSZ-DA35VFK MSZ-DA50VFK

1. Indoor power P.C. board



Indoor electronic control P.C. board



<Detaching method of the terminal with locking mechanism>

The terminal which has the locking mechanism can be detached as shown below.

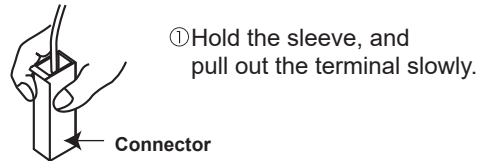
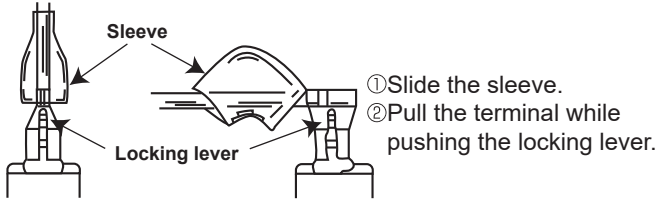
There are 2 types of the terminal with locking mechanism.

The terminal without locking mechanism can be detached by pulling it out.

Check the shape of the terminal before detaching.

(1) Slide the sleeve and check if there is a locking lever or not.

(2) The terminal with this connector shown below has the locking mechanism.

**11-1. MSZ-DA25VFK MSZ-DA35VFK MSZ-DA50VFK**

NOTE: Turn OFF the power supply before disassembly.

—————>: Indicates the visible parts in the photos/figures.
----->: Indicates the invisible parts in the photos/figures.

OPERATING PROCEDURE	PHOTOS/FIGURES
1. Removing the panel (1) Remove the screw caps on the panel and remove the screws of the panel. (2) Pull the panel slightly toward you, and then remove the panel by pushing it upward.	Photo 1 Front panel Horizontal vane Screws of the panel

OPERATING PROCEDURE

2. Removing the indoor power P.C. board and the electrical box

- (1) Remove the panel. (Refer to section 1.) Remove the right corner box.
 - (2) Disconnect the following connectors:
 - <Indoor electronic control P.C. board>
 - CN151 (Vane motor)
 - CN112 (Indoor coil thermistor)
 - CN10A (To the indoor power P.C. board)
 - (3) Unhook the catch on the left side of the control P.C. board holder. Pull the control P.C. board holder as if opening the door at 90 degrees. Remove the control P.C. board holder from the axial rod on the electrical box.
 - (4) Remove the screw of the V.A. clamp.
 - (5) Remove the V.A. clamp and the indoor/outdoor connecting wire.
 - (6) Remove the earth wire connected to the indoor heat exchanger from the electrical box.
 - (7) Remove the screw of the electrical cover and remove the electrical cover.
 - (8) Disconnect the following connectors:
 - <Indoor power P.C. board>
 - CN211 (Indoor fan motor)
 - CN201, TAB1, TAB2 (Terminal block)
 - CN20A (To the indoor electronic control P.C. board)
 - (9) Remove the upper catch of the electrical box, and pull out the electrical box.
- *To attach the electrical box, pass the wires connecting the indoor power P.C. board and the indoor electronic control P.C. board through ㉠. Pass the lead wires of the fan motor through ㉡ as shown in the Photo 3.

PHOTOS/FIGURES

Photo 2

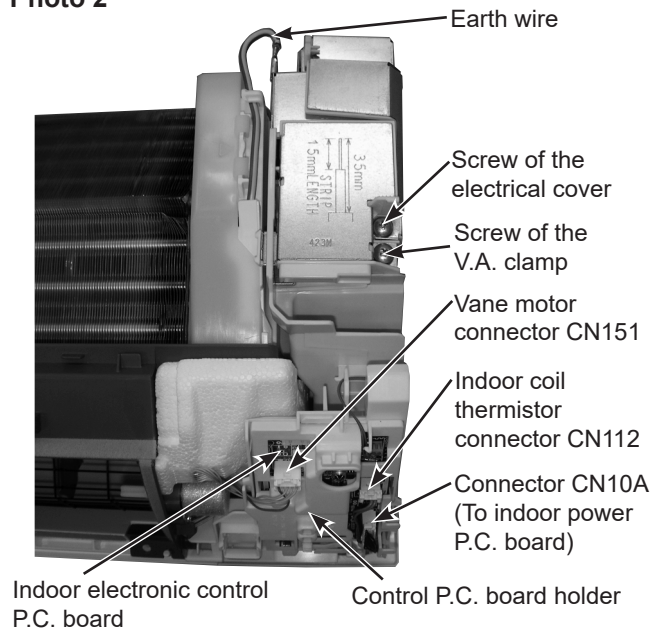
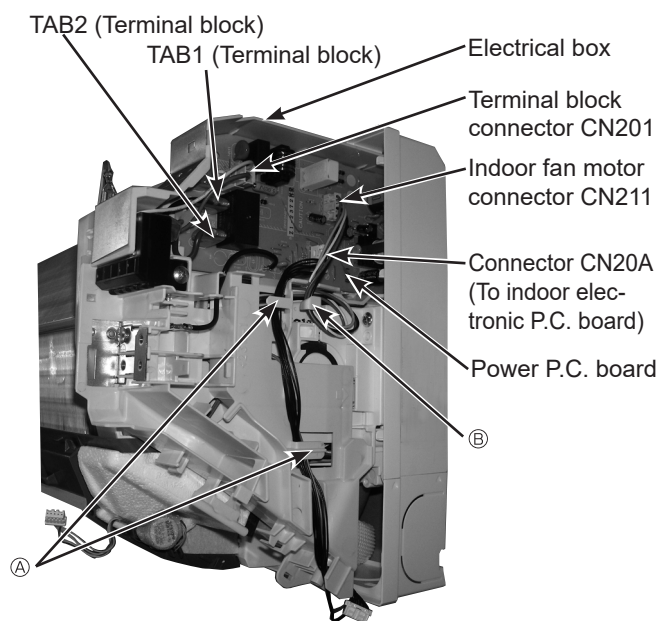


Photo 3



OPERATING PROCEDURE

3. Removing the indoor electronic control P.C. board

- (1) Remove the panel. (Refer to section 1.) Remove the right corner box.
- (2) Disconnect the following connectors:
 <Indoor electronic control P.C. board>
 CN151 (Vane motor)
 CN112 (Indoor coil thermistor)
 CN10A (To the indoor power P.C. board)
- (3) Unhook the catch on the left side of the control P.C. board holder. Pull the control P.C. board holder as if opening the door at 90 degrees. Remove the control P.C. board holder from the axial rod on the electrical box.
- (4) Remove the room temperature thermistor from the back side of the control P.C. board holder.
- (5) Unhook the catches of the control P.C. board holder, and open the control P.C. board holder.
- (6) Remove the indoor electronic control P.C. board from the control P.C. board holder.

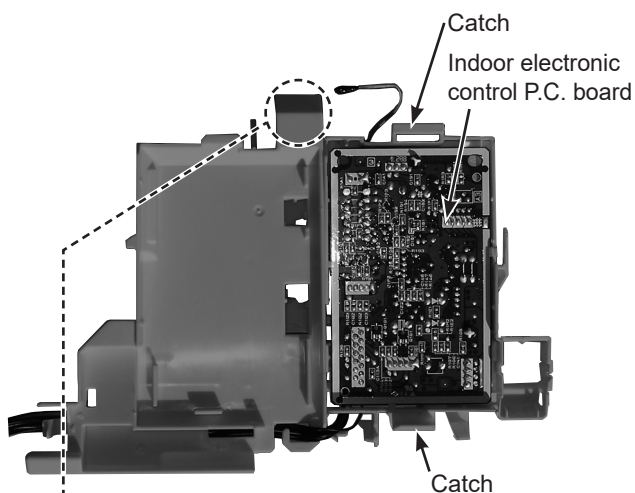
4. Removing the vane motor

- (1) Remove the panel. (Refer to section 1.) Remove the corner box.
- (2) Remove the control P.C. board holder and the electrical box. (Refer to section 2.)
- (3) Pull out the drain hose from the nozzle assembly and remove the nozzle assembly.
- (4) Remove the screws of the vane motor and remove the vane motor.
- (5) Disconnect the connector from the vane motor.

PHOTOS/FIGURES

Photo 4

Control P.C. board holder (Inside)



Control P.C. board holder (Back side)

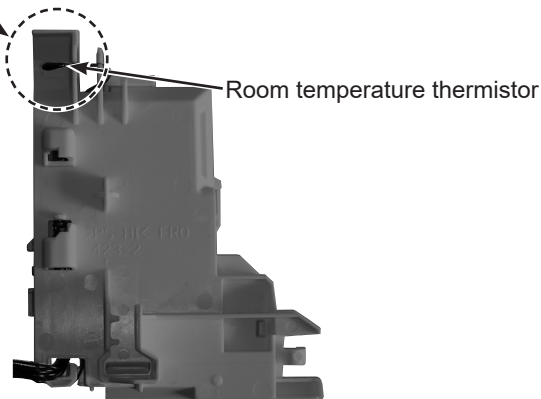
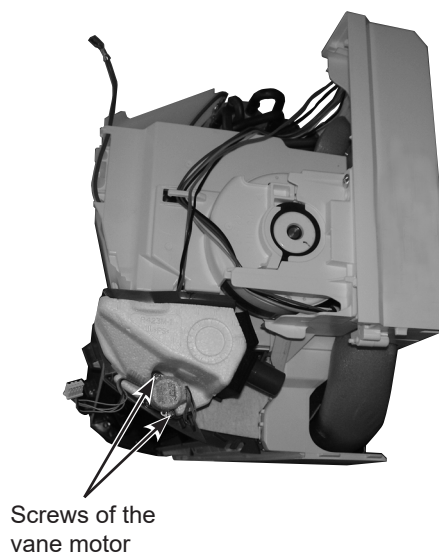


Photo 5



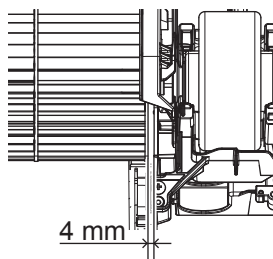
OPERATING PROCEDURE

5. Removing the indoor fan motor, the indoor coil thermistor and the line flow fan

- (1) Remove the panel. (Refer to section 1.) Remove the corner box.
- (2) Remove the control P.C. board holder, the electrical box and the nozzle assembly. (Refer to section 2.)
- (3) Loosen the screw fixing the line flow fan.
- (4) Remove the screws fixing the motor bed.
- (5) Disengage the hooks of the water cover and remove the water cover.
- (6) Disconnect the earth wire from the motor band.
- (7) Remove the indoor coil thermistor from the motor band.
- (8) Remove the motor bed together with the indoor fan motor and the motor band.
- (9) Disconnect the lead wire of the fan motor from the motor band.
- (10) Disengage the hooks of the motor band and remove the motor band. Pull out the indoor fan motor.
- (11) Remove the indoor coil thermistor from the heat exchanger.
* Install the indoor coil thermistor in its former position when assembling it.
- (12) Remove the screws fixing the left side of the heat exchanger.
- (13) Lift the heat exchanger, and pull out the line flow fan to the lower-left.

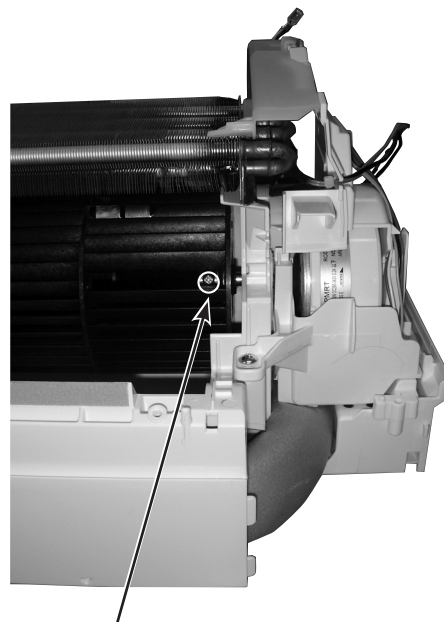
*When attaching the line flow fan, screw the line flow fan so 4 mm gap is provided between the right end of the line flow fan and the right wall of the air passage of the box (Figure 1).

Figure 1



PHOTOS/FIGURES

Photo 6



Screw of the line flow fan

Photo 7

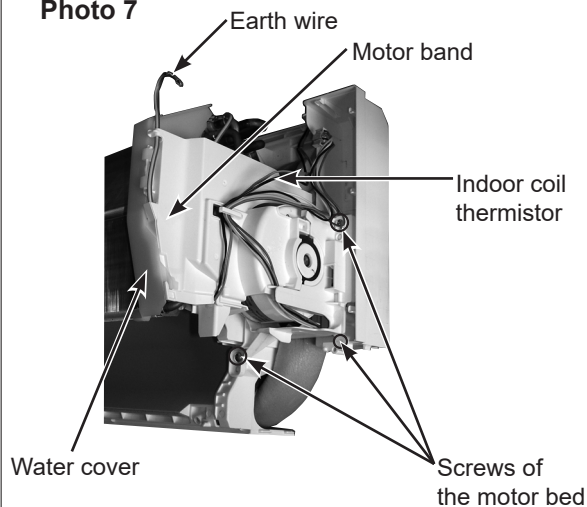
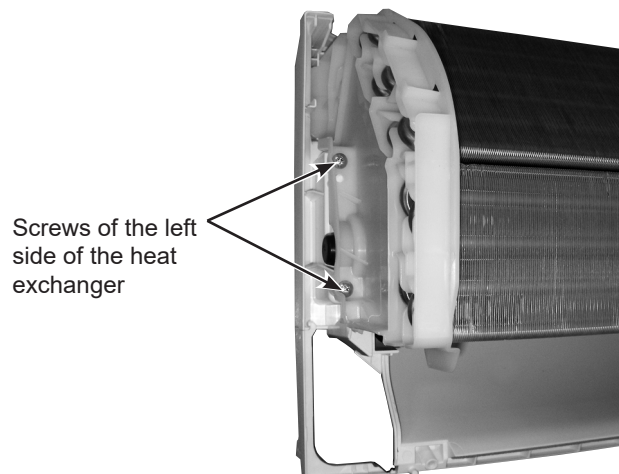


Photo 8



Fixing the indoor coil thermistor

*There are 2 forms of parts for fixing the indoor coil thermistor.

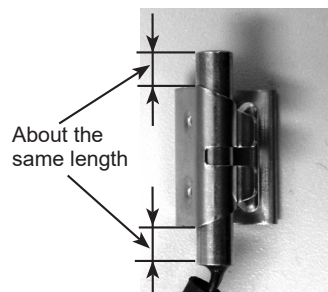
Clip shape



Holder shape



When fixing the indoor coil thermistor to the clip-shape/holder-shape part, the lead wire should point down.



Position and procedure for mounting the clip-shape part

1. Set the indoor coil thermistor in the center of the clip-shape part.



2. Check the (marked) mounting position.



3. Mount the clip-shape part.



NOTE:

- Take care to avoid loss and accidental falling of the clip-shape part inside the unit.
- Mount the clip-shape part on the marked position.
- Do not pull the lead wire when removing the indoor coil thermistor.

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