

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

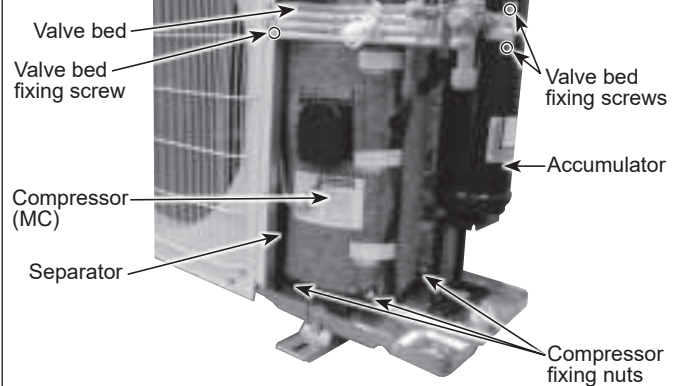
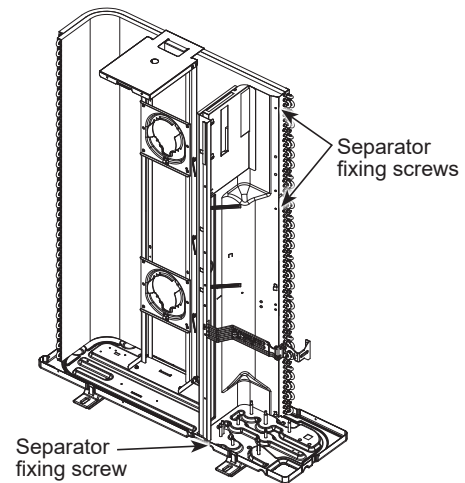


Figure 2



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. (Refer to 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

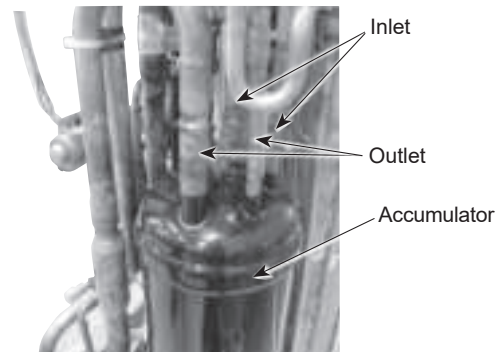
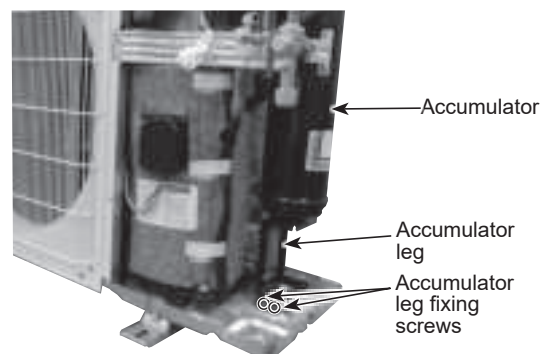
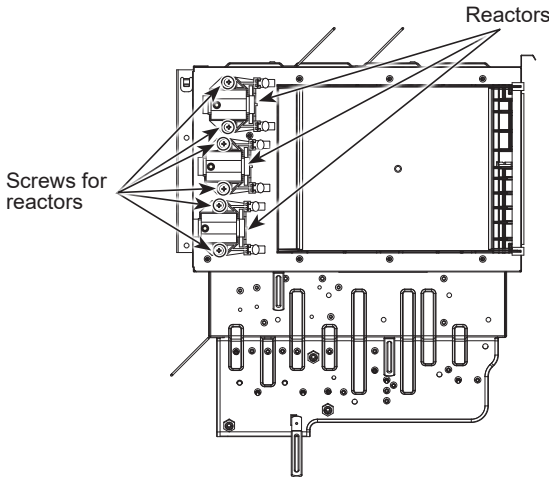


Photo 15



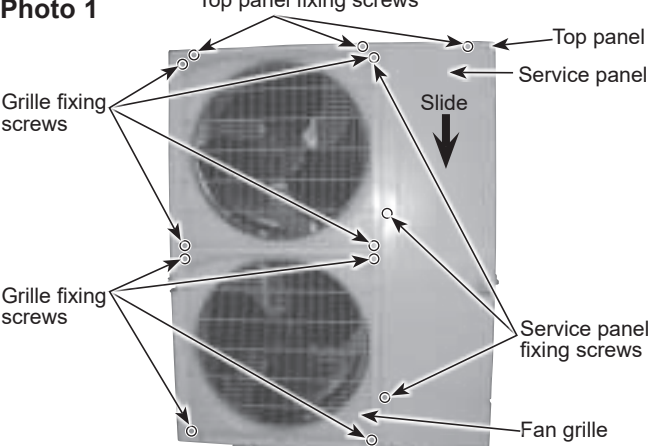
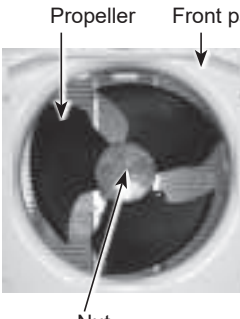
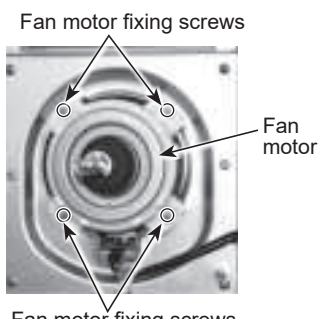
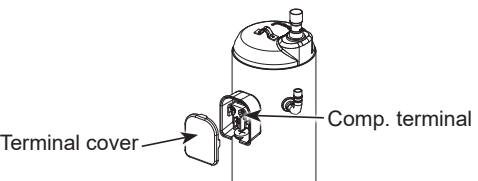
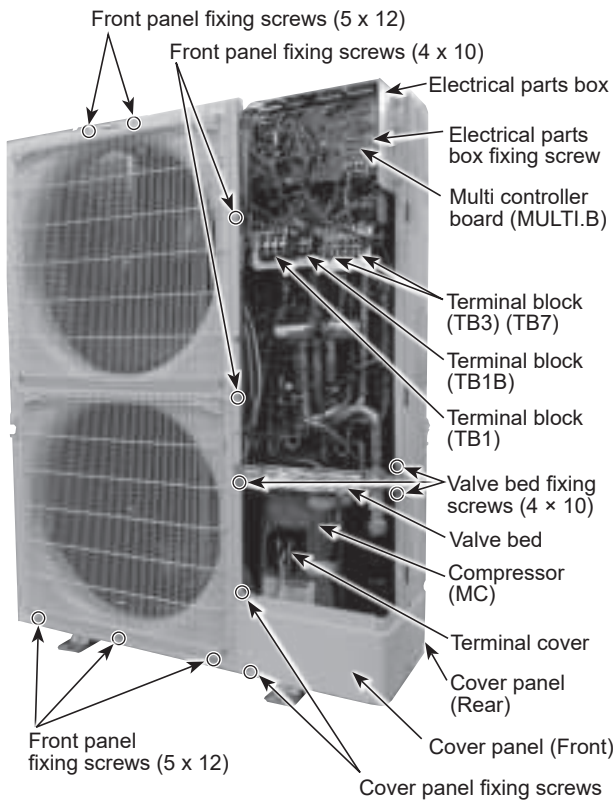


OPERATING PROCEDURE	PHOTOS/FIGURES
15. Removing the reactor (DCL) (1) Remove the service panel. (See Photo 1) (2) Remove the top panel. (See Photo 1) (3) Remove the electrical parts box (See photo 5) (4) Remove 6 screws (4 x 10) for reactors to remove the reactors. (See Figure 3)	Figure 3  The diagram shows a top-down view of a rectangular metal chassis. On the left side, there is a vertical stack of components. Six screws are indicated by arrows pointing to them, labeled 'Screws for reactors'. To the right of these screws, there are two rectangular components labeled 'Reactors'. Below the main chassis, there is a separate rectangular plate with several vertical slots and small circular holes.

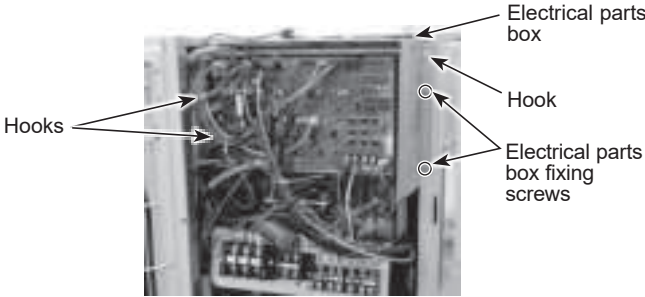
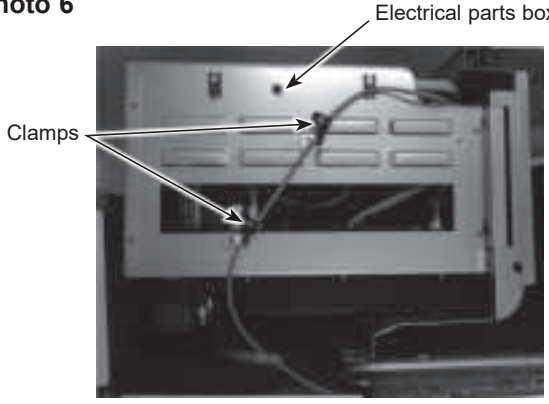
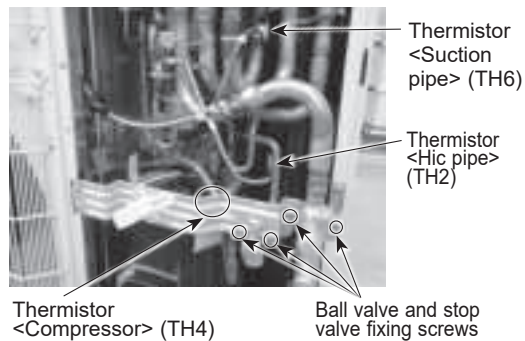
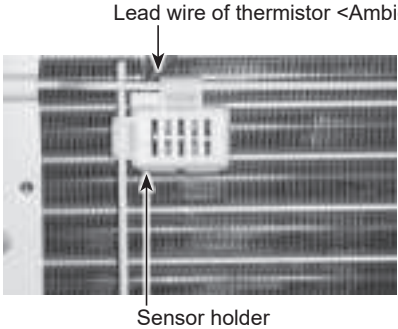
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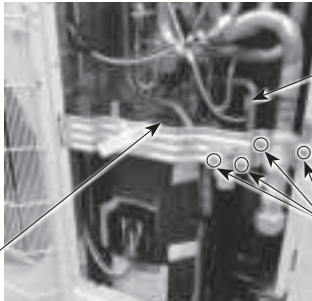
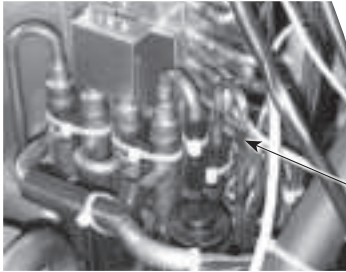
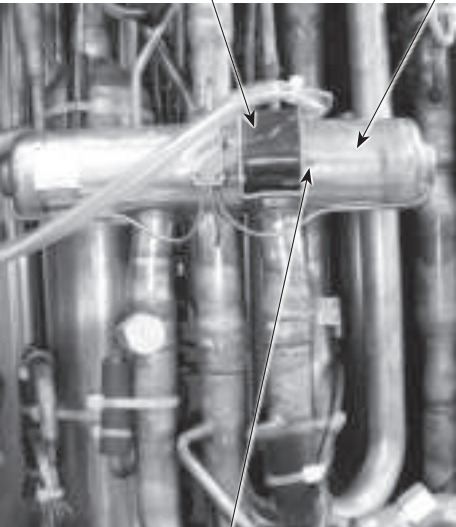
Note: Turn OFF the power supply before disassembly.

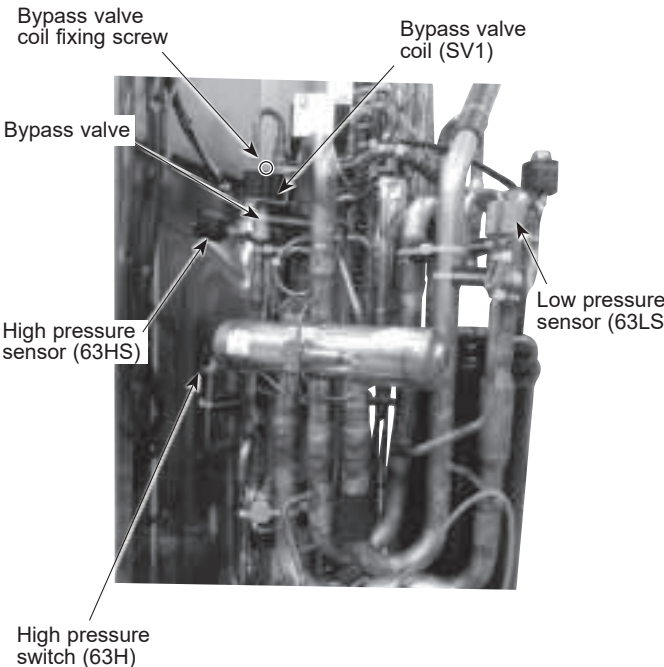
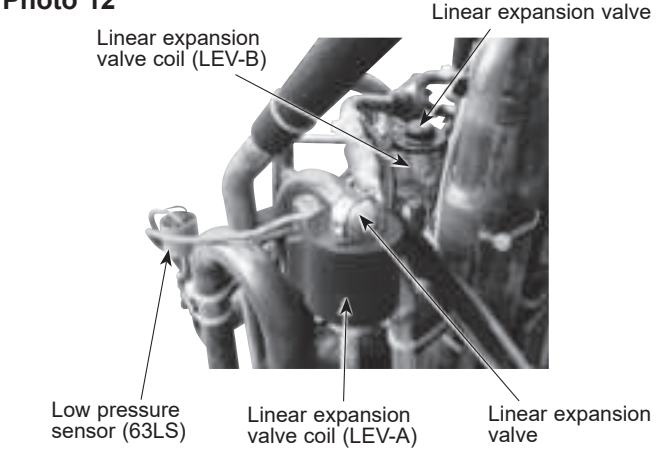
→ : Indicates the visible parts in the photos/figures.

OPERATING PROCEDURE	PHOTOS/FIGURES
1. Removing the service panel and top panel (1) Remove 3 service panel fixing screws (5 × 12) 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 4 fan grille fixing screws (5 × 12) to detach the fan grille. (See Photo 1) (3) Remove a nut (for right handed screw of M6) to detach the propeller. (See Photo 2) (4) Disconnect the connectors, CNF1 and CNF2 on multi controller board in electrical parts box. (5) 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. (See Photo 4) (4) Remove all the following connectors from outdoor 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 (CNLVA/CNLVB) Pull out the disconnected wire from the electrical parts box. (5) Remove the terminal cover and disconnect the compressor lead wire. 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 
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 connectors, TH7/6 (red), on the multi controller circuit board in the electrical parts box. (4) Loosen the wire clamps on the back of 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 
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 7  Photo 8 

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 9-1 and 9-2)	Photo 9-1  Photo 9-2 
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 
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) 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 right side panel. 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), 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 12) (7) Remove the electrical parts box. (See Photo 5) (8) Recover refrigerant. (9) Remove the welded part of linear expansion valve.	

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 front cover panel. (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

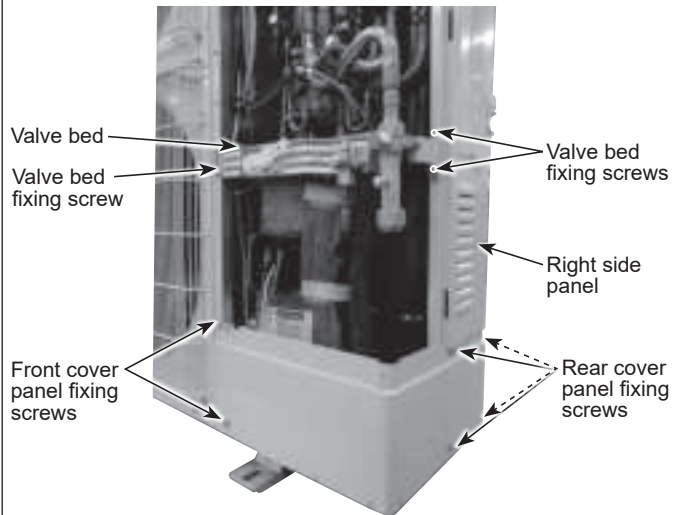


Figure 2

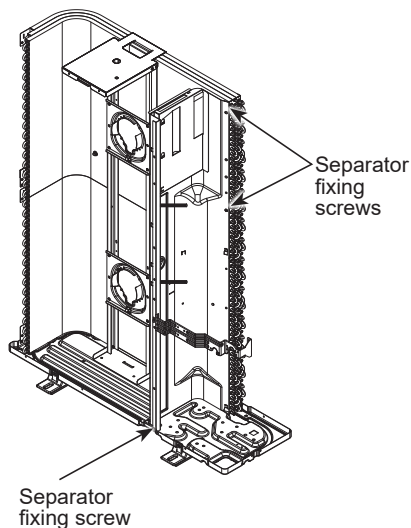
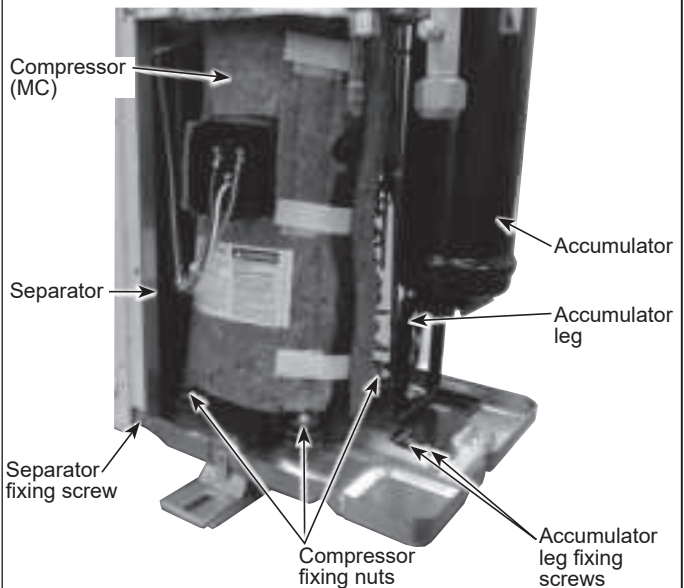
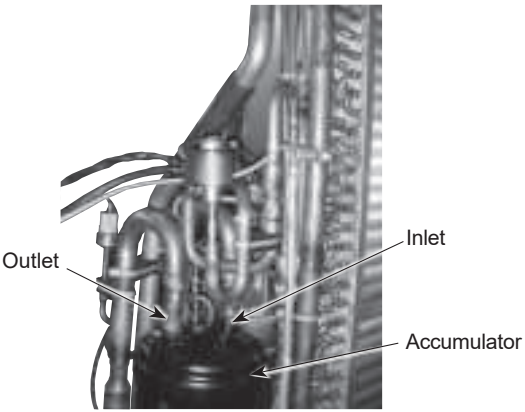
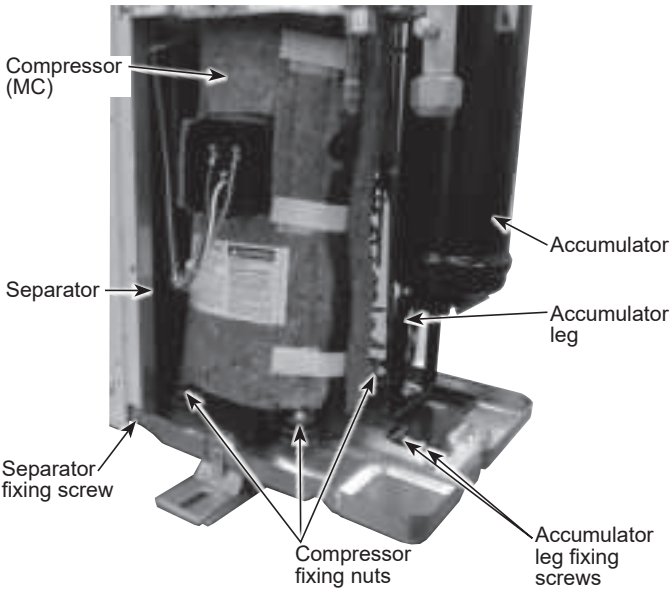
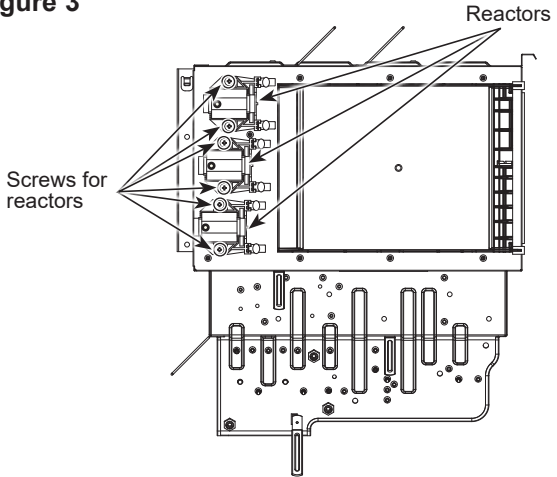


Photo 14





OPERATING PROCEDURE	PHOTOS/FIGURES
14. Removing the accumulator (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 the valve bed. (See procedure 8 (4)) (5) Remove the cover panel (front). (Refer to procedure 8(5)) (6) Remove the cover panel (rear) (Refer to procedure 8(6)) (7) Remove the side panel (R). (Refer to procedure 8 (7)) (8) Recover refrigerant. (9) Remove 2 welded pipes of accumulator inlet and outlet. (10) Remove 2 accumulator leg fixing screws (4 × 10). (See Photo 16) Note: Recover refrigerant without spreading it in the air.	Photo 15  Outlet Inlet Accumulator Photo 16  Compressor (MC) Separator Separator fixing screw Accumulator Accumulator leg Compressor fixing nuts Accumulator leg fixing screws
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 reactors to remove the reactors. (See Figure 3)	Figure 3  Reactors Screws for reactors

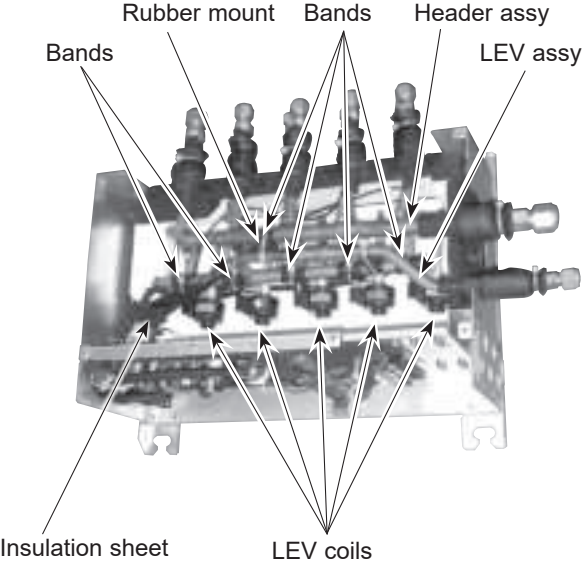
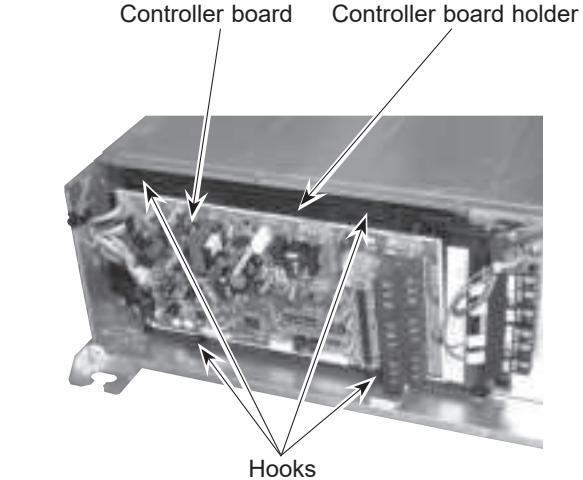
10-2. BRANCH BOX: PAC-MKA52BC
PAC-MKA32BC
PAC-MKA53BC
PAC-MKA33BC

PHOTO: PAC-MKA52BC

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

OPERATING PROCEDURE	PHOTOS/FIGURES
1. Removing the controller cover and under panel (1) Remove 3 controller cover fixing screws (4 × 10) to detach the controller cover. (See Photo 1) (2) Remove 4 under panel fixing screws (4 × 10) to remove the under panel. (See Photo 1)	Photo 1
2. Removing the thermistor (TH-A to E*) (1) Remove the controller cover. (See Photo 1) (2) Remove the under panel. (See Photo 1) (3) Remove 8 insulations, then remove 9 pipe box (under) fixing screws (4 × 10). (See Photo 2-1) (4) Pull out the thermistor(s), TH-A to E, from the sensor holders mounted on the gas pipe. (See Photo 2-2) (5) Loosen the insulation sheet which bundles the thermistor connectors. (6) Loosen the side clamps, then disconnect the connector(s) on the controller board. (7) Pull out the lead wire(s) through the hole to the controller board side. *TH-A to C for PAC-MKA32/33BC. (See Photo 2-3) Notes: 1. Attach the insulation sheet to the thermistor(s) and the lead wire(s) of LEV coil after replacing thermistor(s). 2. Install the pipe box not to twine the lead wire(s) and the pipe cover around the pipe box.	Photo 2-1
Photo 2-3	Photo 2-2



OPERATING PROCEDURE	PHOTOS/FIGURES
3. Removing the LEV coil (LEV-A to E*) (1) Remove the controller cover. (See Photo 1) (2) Remove the under cover. (See Photo 1) (3) Remove 8 insulations, then remove 9 pipe cover fixing screws (4 x 10). (See Photo 2-1) (4) Cut the bands that fixes the lead wire, then pull out the LEV coil(s) (LEV-A to E*). (See Photo 3) (5) Loosen the insulation sheet which bundles the LEV lead wires. (6) Loosen the side clamps, then disconnect the connector(s) on the controller board. (7) Pull out the lead wire(s) through the hole to the pipe box side. (See Photo 2-2 or 2-3) *LEV-A to C for PAC-MKA32/33BC. (See Photo 2-3) Notes: 1. Attach the insulation sheet to the thermistor(s) and the lead wire(s) of LEV coil after replacing thermistor(s). 2. Install the pipe box not to twine the lead wire(s) and the pipe cover around the pipe box.	Photo 3 
4. Removing the controller board (1) Remove the controller cover. (See Photo 1) (2) Loosen the side clamps, then disconnect the connectors on the controller board. (3) Pick an upper edge of the controller board, then pull forward. The controller board is fixed to the controller board holder with 4 hooks. (See Photo 4) (4) Remove the controller board from the controller board holder.	Photo 4 

OPERATING PROCEDURE

5. Removing the LEV assy

- (1) Remove the controller cover. (See Photo 1)
- (2) Remove the under panel. (See Photo 1)
- (3) Remove 8 the insulations, then remove 9 pipe box (under) fixing screws (4 x 10). (See Photo 2-1)
- (4) Loosen the side clamps, then disconnect the LEV and thermistor connectors on the controller board.
- (5) Remove the earth lead wires from the LEV assy.
- (6) Pull out the lead wires through the hole to the pipe box side.

<Removing the header assy>

- (7) Cut the band which fixes the header assy and LEV assy together, then remove the rubber mount. (See Photo 3)
- (8) Remove the header assy. (See Photo 3)

<Disassembling the pipe box>

- (9) Remove 2 side panel fixing screws (4 x 10). (See Photo 5-1)
- (10) Pull out the pipe box (top) and separate it from the side panel. (See Photo 5-2)
- (11) Turn the pipe box (top) upside down. (See Photo 5-3).
- (12) Remove 5 insulations, then remove 5 pipe box (top) fixing screws (4 x 10).
- (13) Turn the pipe box (top) upside down again, facing the pipe side up.
- (14) Separate the pipe box (center) from the pipe box (top). (See Photo 5-4.)
- (15) Remove the LEV assy.

<Pipe box cap only for PAC-MKA32/33BC>

The pipe box caps are placed in 2 unused pipe holes between the pipe box top, center and under. (See Photo 5-5)

Notes:

1. Attach the insulation sheet to the thermistor(s) and the lead wire(s) of LEV coil after replacing thermistor(s).
2. Install the pipe box not to twine the lead wire(s) and the pipe cover around the pipe box.

PHOTOS/FIGURES

Photo 5-1

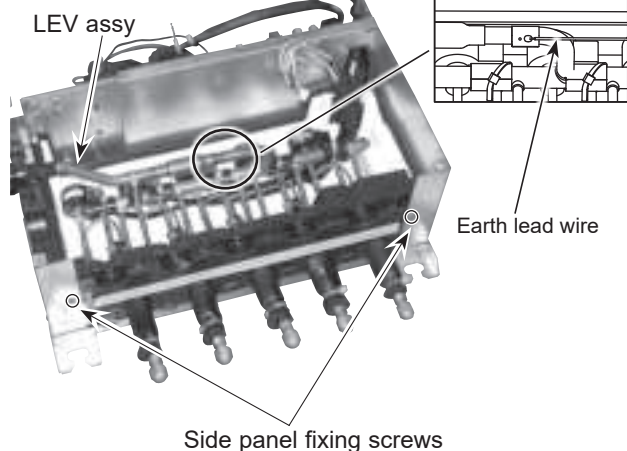


Photo 5-2

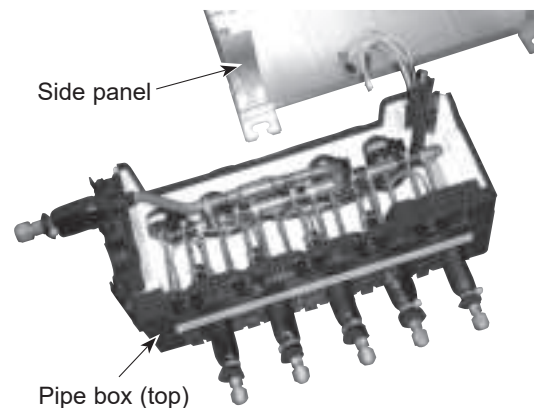


Photo 5-3

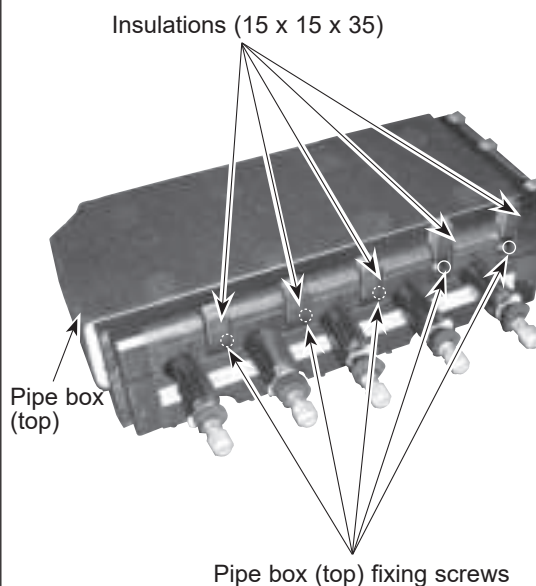


Photo 5-4

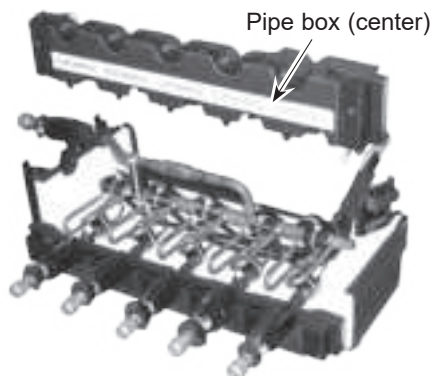
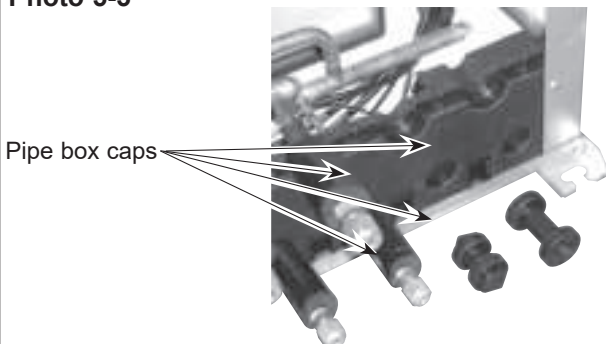


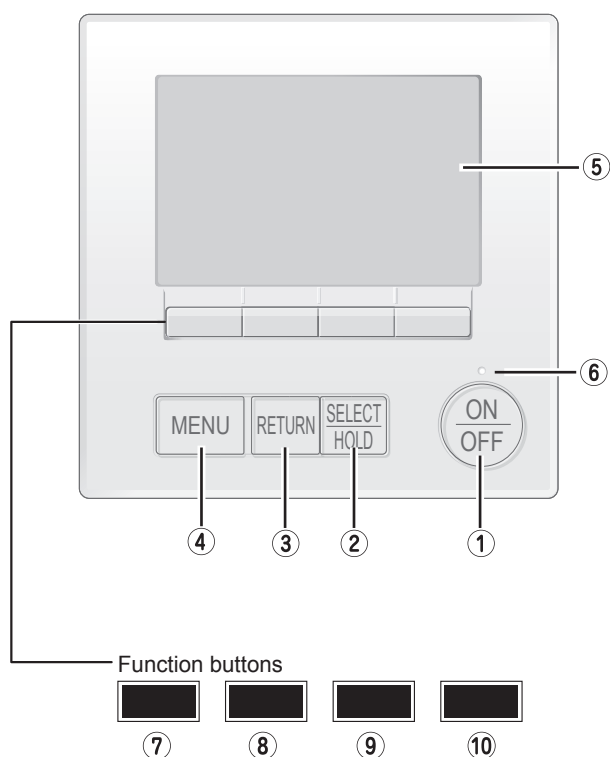
Photo 5-5



11-1. REMOTE CONTROLLER FUNCTIONS

<PAR-40MAA>

Controller interface

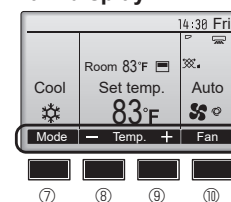


The functions of the function buttons change depending on the screen.

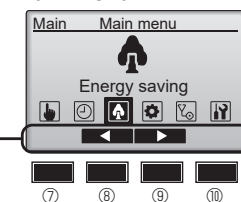
Refer to the button function guide that appears at the bottom of the LCD for the functions they serve on a given screen.

When the system is centrally controlled, the button function guide that corresponds to the locked button will not appear.

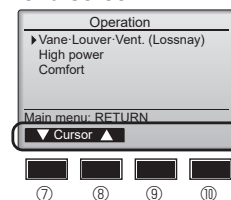
Main display



Main menu



Menu screen



Function guide

① [ON/OFF] button

Press to turn ON/OFF the indoor unit.

② [SELECT/HOLD] button

Press to save the setting.

When the Main menu is displayed, pressing this button will enable/disable the HOLD function.

③ [RETURN] button

Press to return to the previous screen.

④ [MENU] button

Press to bring up the Main menu.

⑤ Backlit LCD

Operation settings will appear.

When the backlight is off, pressing any button turns the backlight on and it will stay lit for a certain period of time depending on the screen.

When the backlight is off, pressing any button turns the backlight on and does not perform its function. (except for the [ON/OFF] button)

⑥ ON/OFF lamp

This lamp lights up in green while the unit is in operation. It blinks while the remote controller is starting up or when there is an error.

⑦ Function button [F1]

Main display: Press to change the operation mode.

Menu screen: The button function varies with the screen.

⑧ Function button [F2]

Main display: Press to decrease temperature.

Main menu: Press to move the cursor left.

Menu screen: The button function varies with the screen.

⑨ Function button [F3]

Main display: Press to increase temperature.

Main menu: Press to move the cursor right.

Menu screen: The button function varies with the screen.

⑩ Function button [F4]

Main display: Press to change the fan speed.

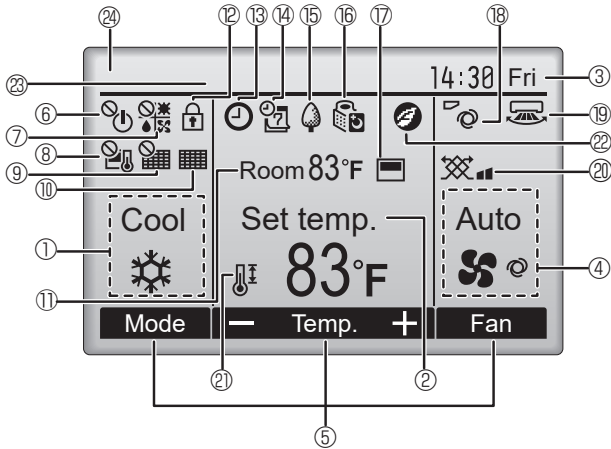
Menu screen: The button function varies with the screen.

Display

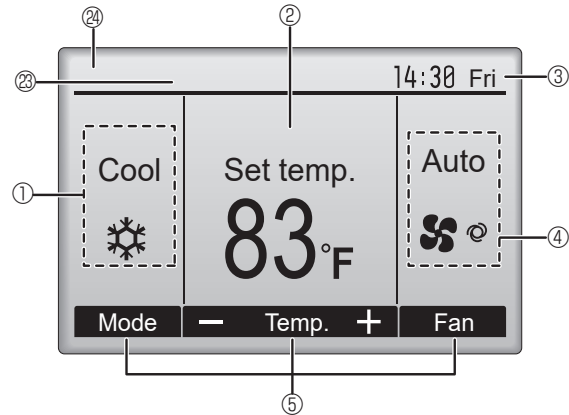
The main display can be displayed in two different modes: "Full" and "Basic". The initial setting is "Full". To switch to the "Basic" mode, change the setting on the Main display setting. (Refer to operation manual included with remote controller.)

<Full mode>

All icons are displayed for explanation.



<Basic mode>



① Operation mode

② Preset temperature

③ Clock

④ Fan speed

⑤ Button function guide

Functions of the corresponding buttons appear here.



Appears when the ON/OFF operation is centrally controlled.



Appears when the operation mode is centrally controlled.



Appears when the preset temperature is centrally controlled.



Appears when the filter reset function is centrally controlled.



Indicates when filter needs maintenance.

⑪ Room temperature



Appears when the buttons are locked.



Appears when the On/Off timer or Auto-off timer function is enabled.

⌚ appears when the timer is disabled by the centralized control system.
⌚ appears when the HOLD function is enable.



Appears when the Weekly timer is enabled.



Appears while the units are operated in the energy saving mode. (Will not appear on some models of indoor units)



Appears while the outdoor units are operated in the silent mode.



Appears when the built-in thermistor on the remote controller is activated to monitor the room temperature (⑪).

⌚ appears when the thermistor on the indoor unit is activated to monitor the room temperature.



Indicates the vane setting.



Indicates the louver setting.



Indicates the ventilation setting.



Appears when the preset temperature range is restricted.



Appears when an energy saving operation is performed using a "3D i-See sensor" function.

⑳ Centrally controlled

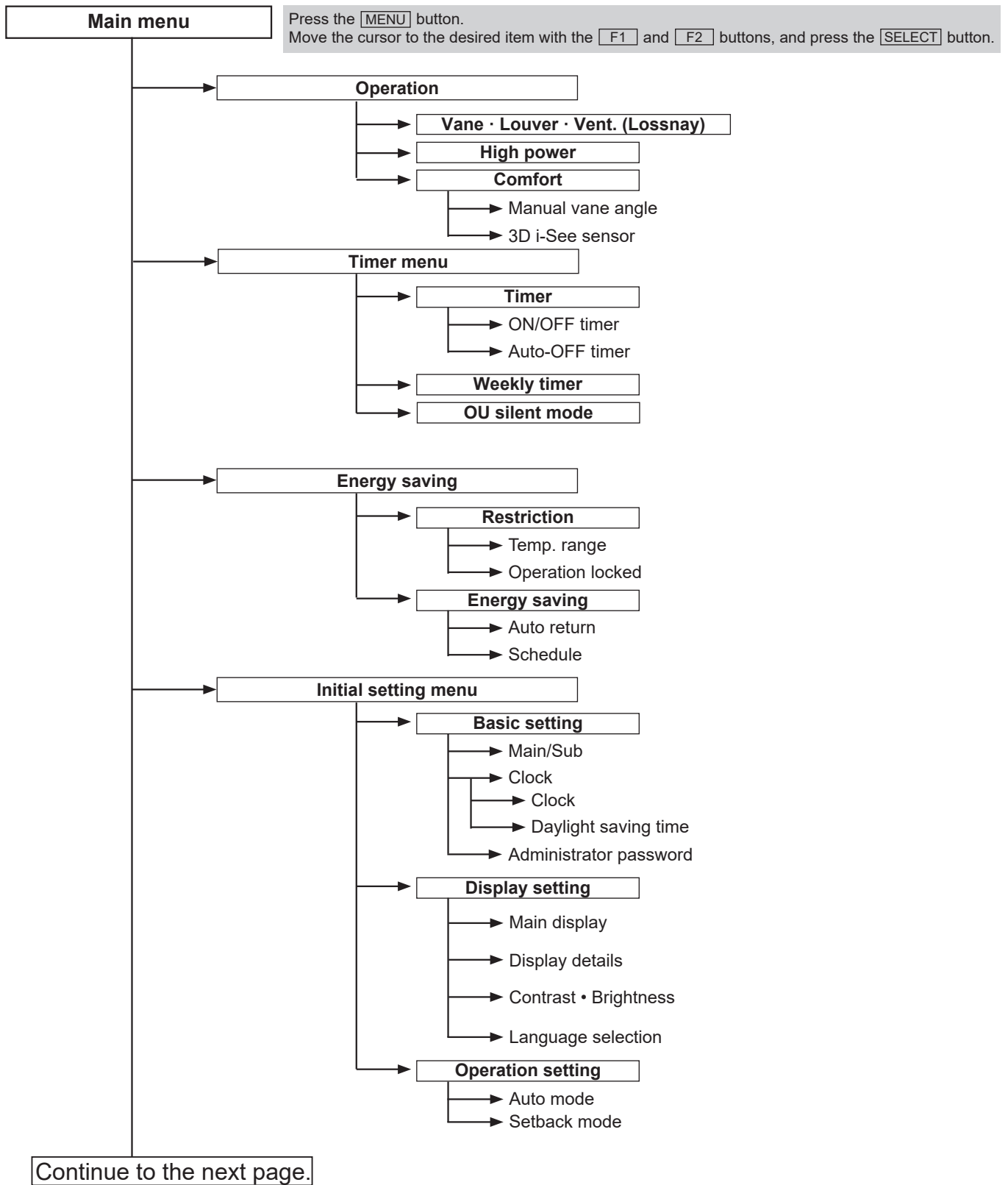
Appears for a certain period of time when a centrally-controlled item is operated.

㉔ Preliminary error display

A check code appears during the preliminary error.

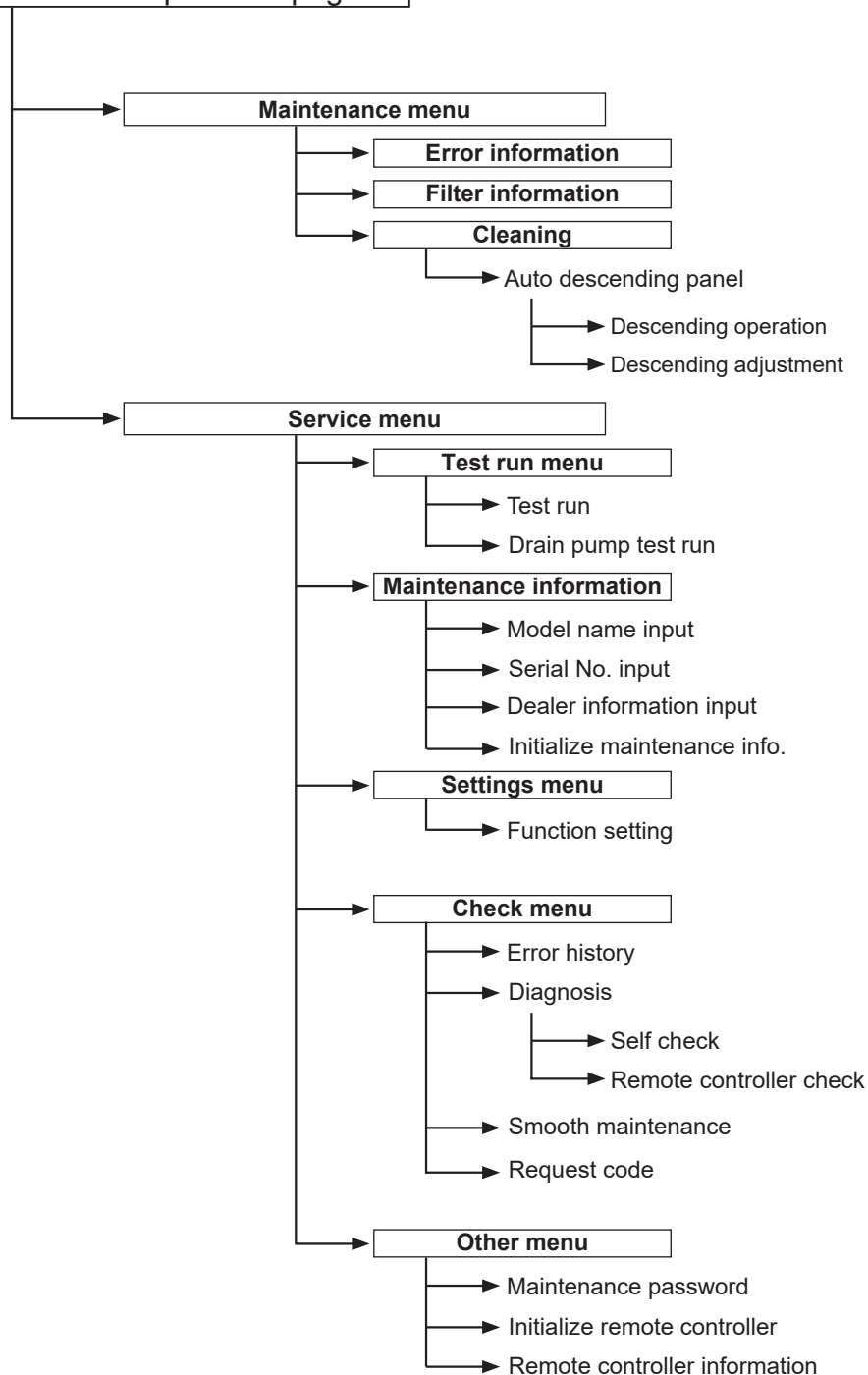
Most settings (except ON/OFF, mode, fan speed, temperature) can be made from the Main menu.

Menu structure



Not all functions are available on all models of indoor units.

Continue from the previous page.



Not all functions are available on all models of indoor units.

Main menu list

Main menu	Setting and display items		Setting details
Operation	Vane · Louver · Vent. (Lossnay)		Use to set the vane angle. • Select a desired vane setting. Use to turn ON/OFF the louver. • Select a desired setting from "ON" and "OFF." Use to set the amount of ventilation. • Select a desired setting from "Off," "Low," and "High."
	High power ^{*3}		Use to reach the comfortable room temperature quickly. • Units can be operated in the High-power mode for up to 30 minutes.
	Comfort	Manual vane angle	Use to fix each vane angle.
		3D i-See sensor	Use to set the following functions for 3D i-See sensor. • Air distribution • Energy saving option • Seasonal airflow
Timer	Timer	ON/OFF timer ^{*1}	Use to set the operation ON/OFF times. • Time can be set in 5-minute increments.
		Auto-Off timer	Use to set the Auto-Off time. • Time can be set to a value from 30 to 240 in 10-minute increments.
	Weekly timer ^{*1, *2}		Use to set the weekly operation ON/OFF times. • Up to 8 operation patterns can be set for each day. (Not valid when the ON/OFF timer is enabled.)
	OU silent mode ^{*1, *3}		Use to set the time periods in which priority is given to quiet operation of outdoor units over temperature control. Set the Start/Stop times for each day of the week. • Select the desired silent level from "Normal," "Middle," and "Quiet."
Energy saving	Restriction	Temp. range ^{*2}	Use to restrict the preset temperature range. • Different temperature ranges can be set for different operation modes.
		Operation locked	Use to lock selected functions. • The locked functions cannot be operated.
	Energy saving	Auto return ^{*2}	Use to get the units to operate at the preset temperature after performing energy saving operation for a specified time period. • Time can be set to a value from 30 and 120 in 10-minute increments. (This function will not be valid when the preset temperature ranges are restricted.)
		Schedule ^{*1, *3}	Set the start/stop times to operate the units in the energy saving mode for each day of the week, and set the energy saving rate. • Up to 4 energy saving operation patterns can be set for each day. • Time can be set in 5-minute increments. • Energy saving rate can be set to a value from 0% or 50 to 90% in 10% increments.
Initial setting	Basic setting	Main/Sub	When connecting 2 remote controllers, one of them needs to be designated as a sub controller.
		Clock	Use to set the current time.
		Daylight saving time	Set the daylight saving time.
		Administrator password	The administrator password is required to make the settings for the following items. • Timer setting • Energy saving setting • Weekly timer setting • Restriction setting • Outdoor unit silent mode setting

^{*1} Clock setting is required.

^{*2} 2°F (1°C) increments.

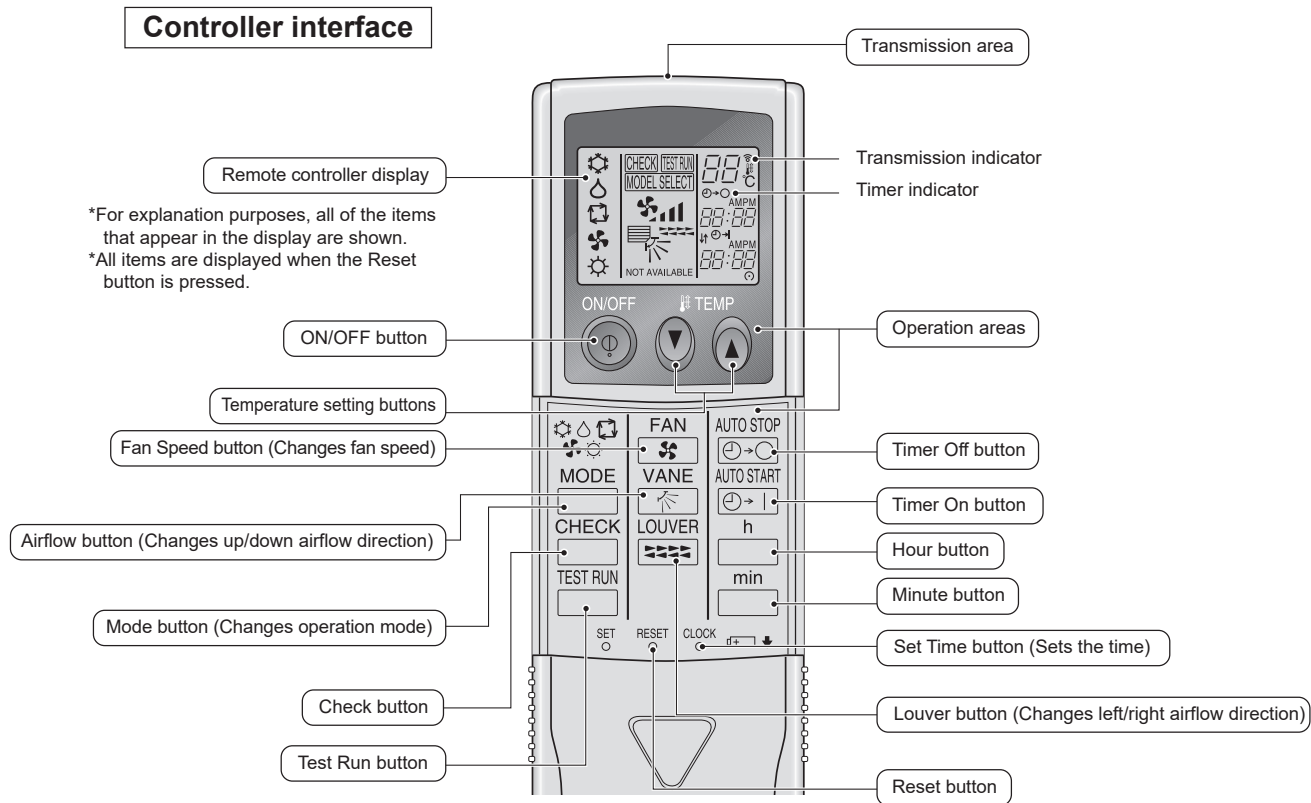
^{*3} This function is available only when certain outdoor units are connected.



Main menu	Setting and display items		Setting details
Initial setting	Display setting	Main display	Use to switch between "Full" and "Basic" modes for the Main display, and use to change the background colors of the display to black.
		Display details	Make the settings for the remote controller related items as necessary. Clock: The initial settings are "Yes" and "24h" format. Temperature: Set either Celsius (°C) or Fahrenheit (°F). Room temp.: Set Show or Hide. Auto mode: Set Auto mode display or Only Auto display.
		Contrast • Brightness	Use to adjust screen contrast and brightness.
		Language selection	Use to select the desired language.
	Operation setting	Auto mode	Whether or not to use Auto mode can be selected by using the button. This setting is valid only when indoor units with Auto mode function are connected.
		Setback mode	Whether or not to use the Setback mode can be selected by using the button. This setting is valid only when indoor units with the Setback mode function are connected.
Maintenance	Error information		Use to check error information when an error occurs. • Check code, error source, refrigerant address, model name, manufacturing number, contact information (dealer's phone number) can be displayed. (The model name, manufacturing number, and contact information need to be registered in advance to be displayed.)
	Filter information		Use to check the filter status. • The filter sign can be reset.
	Cleaning	Auto descending panel	Use to lift and lower the auto descending panel (Optional parts).
Service	Test run		Select "Test run" from the Service menu to bring up the Test run menu. • Test run • Drain pump test run
	Input maintenance		Select "Input maintenance Info." from the Service menu to bring up the Maintenance information screen. The following settings can be made from the Maintenance Information screen. • Model name input • Serial No. input • Dealer information input • Initialize maintenance info.
	Settings	Function setting	Make the settings for the indoor unit functions via the remote controller as necessary.
	Check	Error history	Display the error history and execute "delete error history".
		Diagnosis	Self check: Error history of each unit can be checked via the remote controller. Remote controller check: When the remote controller does not work properly, use the remote controller checking function to troubleshoot the problem.
		Smooth maintenance * ¹	Use to display the maintenance data of indoor/outdoor units.
		Request code * ¹	Use to check operation data such as thermistor temperature and error information.
	Others	Maintenance password	Use to change the maintenance password.
		Initialize remote controller	Use to initialize the remote controller to the factory shipment status.
		Remote controller information	Use to display the remote controller model name, software version, and serial number.

*¹ This function is available only when certain outdoor units are connected.

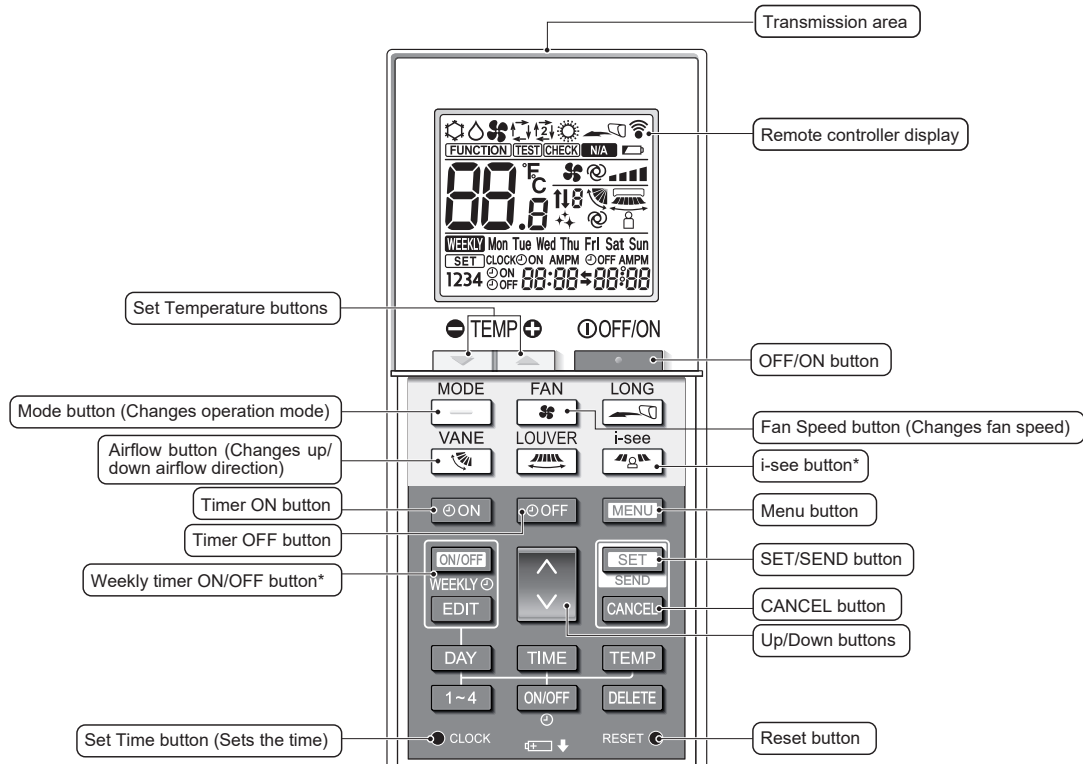
<PAR-FL32MA>



- When using the wireless remote controller, point it towards the receiver on the indoor unit.
- If the remote controller is operated within approximately two minutes after power is supplied to the indoor unit, the indoor unit may beep twice as the unit is performing the initial automatic check.
- The indoor unit beeps to confirm that the signal transmitted from the remote controller has been received. Signals can be received up to approximately 7 meters in a direct line from the indoor unit in an area 45° to the left and right of the unit. However, illumination such as fluorescent lights and strong light can affect the ability of the indoor unit to receive signals.
- If the operation lamp near the receiver on the indoor unit is blinking, the unit needs to be inspected. Consult your dealer for service.
- Handle the remote controller carefully! Do not drop the remote controller or subject it to strong shocks. In addition, do not get the remote controller wet or leave it in a location with high humidity.
- To avoid misplacing the remote controller, install the holder included with the remote controller on a wall and be sure to always place the remote controller in the holder after use.

<PAR-SL100A-E>

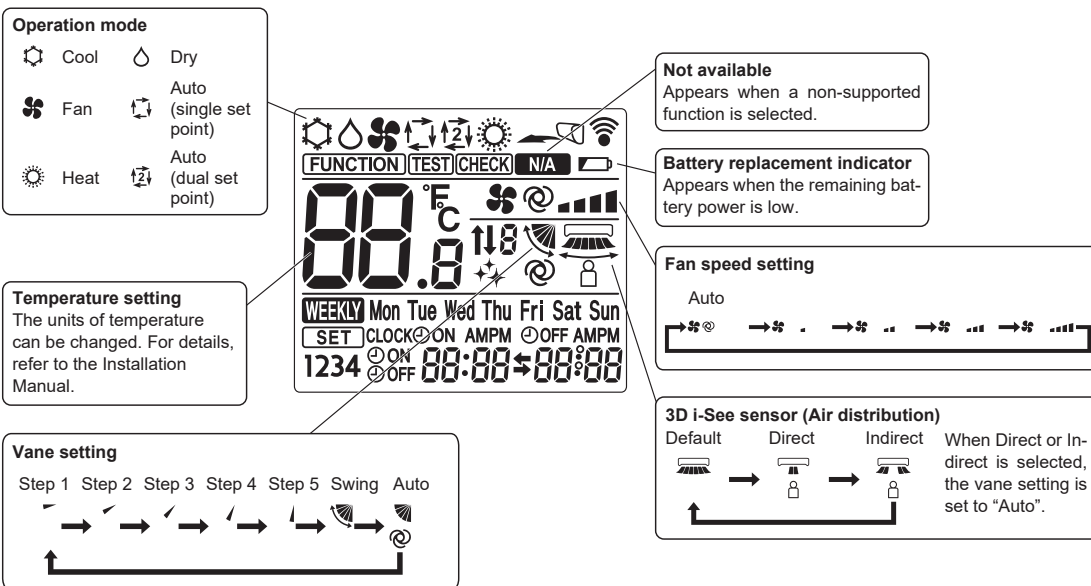
Controller interface



Note:

* This button is enabled or disabled depending on the model of the indoor unit.

Display



11-2. ERROR INFORMATION

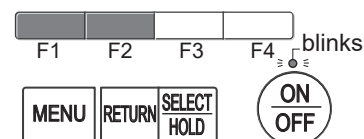
When an error occurs, the following screen will appear.
Check the error status, stop the operation, and consult your dealer.

1. Check code, error unit, refrigerant address, model name, and serial number will appear.
The model name and serial number will appear only if the information has been registered.

Press the **[F1]** or **[F2]** button to go to the next page.

Contact information (dealer's phone number) will appear if the information has been registered.

Error information		1/2
Error code	A3	
Error unit	IU	8 Unit#1
Time Occurred	02/01 4:48	
Model name		
Serial No.		
Reset error: Reset button		
▼ Page ▲	Reset	

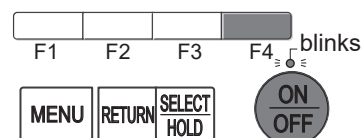


Error information		2/2
Contact information		
Dealer		
Tel		
Reset error: Reset button		
▼ Page ▲	Reset	

2. Press the **[F4]** button or the **[ON/OFF]** button to reset the error that is occurring.

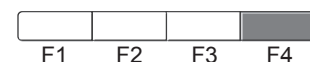
Errors cannot be reset while the ON/OFF operation is prohibited.

Error information		1/2
Error code	A3	
Error unit	IU	8 Unit#1
Time Occurred	02/01 4:48	
Model name		
Serial No.		
Reset error: Reset button		
▼ Page ▲	Reset	



Select "OK" with the **[F4]** button.

Error reset	
Reset current error?	
Cancel	OK



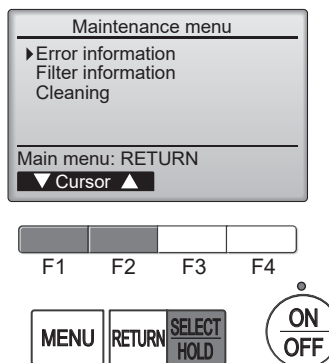
Error reset	
Error reset	
Main menu: MENU	

Navigating through the screens

- To go back to the Service menu **[MENU]** button

• Checking the error information

While no errors are occurring, page 2/2 of the error information can be viewed by selecting "Error information" from the Maintenance menu. Errors cannot be reset from this screen.

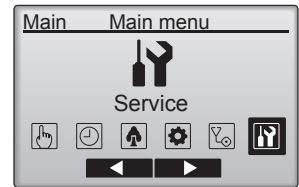


11-3. SERVICE MENU

Maintenance password is required

1. Select "Service" from the Main menu, and press the [SELECT] button.

*At the main display, the menu button and select "Service" to make the maintenance setting.



2. When the Service menu is selected, a window will appear asking for the password.

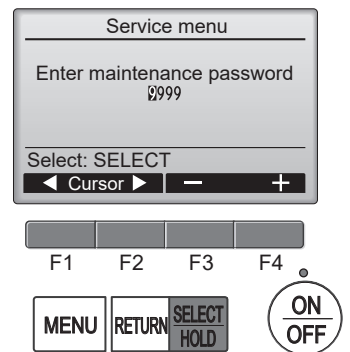
To enter the current maintenance password (4 numerical digits), move the cursor to the digit you want to change with the [F1] or [F2] button.



Set each number (0 through 9) with the [F3] or [F4] button.



Then, press the [SELECT] button.



Note: The initial maintenance password is "9999". Change the default password as necessary to prevent unauthorized access. Have the password available for those who need it.

: If you forget your maintenance password, you can initialize the password to the default password "9999" by pressing and holding the [F1] button for 10 seconds on the maintenance password setting screen.

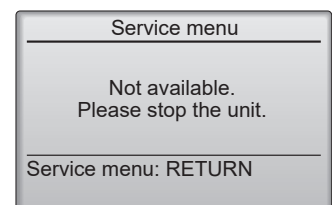
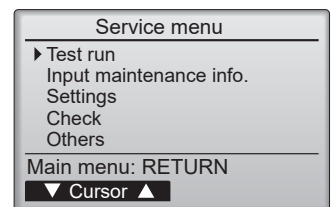
3. If the password matches, the Service menu will appear.

The type of menu that appears depends on the connected indoor units' type.

Note: Air conditioning units may need to be stopped to make only at "Settings". There may be some settings that cannot be made when the system is centrally controlled.



A screen will appear that indicates the setting has been saved.



Navigating through the screens

- To go back to the Service menu [MENU] button
- To return to the previous screen..... [RETURN] button

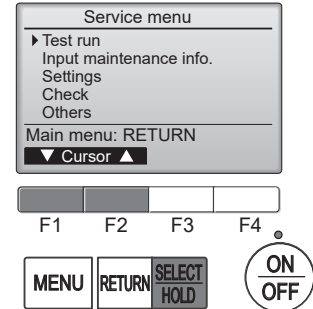
11-4. TEST RUN

11-4-1. PAR-40MAA

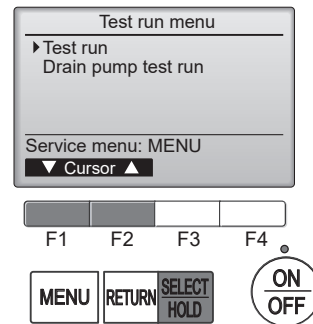
1. Select "Service" from the Main menu, and press the [SELECT] button.



Select "Test run" with the [F1] or [F2] button, and press the [SELECT] button.



2. Select "Test run" with the [F1] or [F2] button, and press the [SELECT] button.



Test run operation

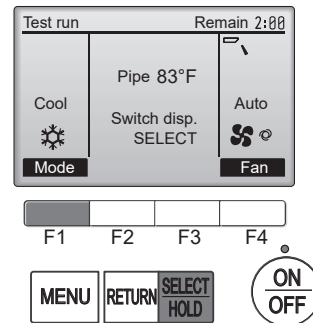
Press the [F1] button to go through the operation modes in the order of "Cool and Heat".

Cool mode: Check the cold air blows out.
Heat mode: Check the heat blows out.

Check the operation of the outdoor unit's fan.



Press the [SELECT] button and open the Vane setting screen.



Auto vane check

Check the auto vane with the [F1] [F2] buttons.



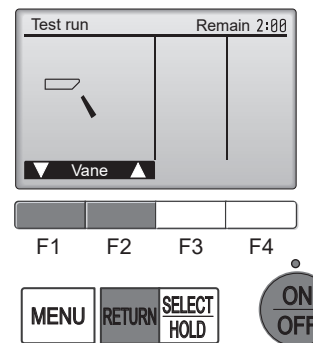
Press the [RETURN] button to return to "Test run operation".



Press the [ON/OFF] button.

When the test run is completed, the "Test run menu" screen will appear.
The test run will automatically stop after 2 hours.

*The function is available only for the model with vanes.



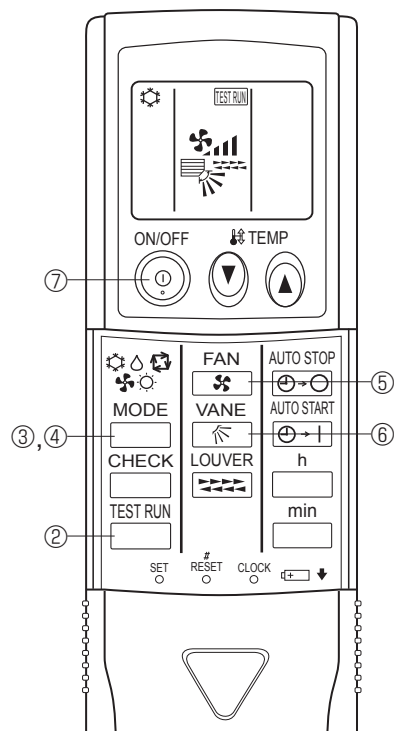
11-4-2. PAR-FL32MA

Measure an impedance between the power supply terminal block on the outdoor unit and ground with a 500 V Megger and check that it is equal to or greater than 1.0 MΩ.

- ① Turn on the main power to the unit.
- ② Press the  button twice continuously.
(Start this operation from the status of remote controller display turned off.)
A  and current operation mode are displayed.
- ③ Press the  () button to activate  mode, then check whether cool air blows out from the unit.
- ④ Press the  () button to activate  mode, then check whether warm air blows out from the unit.
- ⑤ Press the  button and check whether strong air blows out from the unit.
- ⑥ Press the  button and check whether the auto vane operates properly.
- ⑦ Press the ON/OFF button to stop the test run.

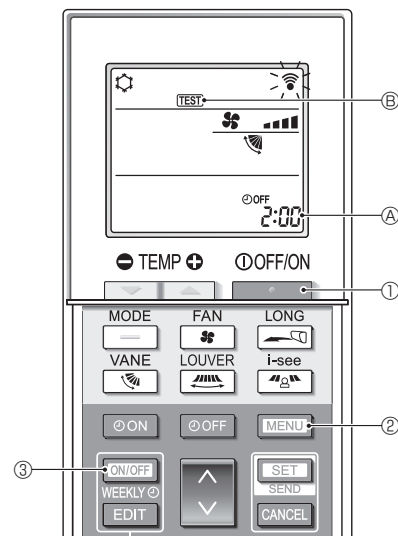
Note:

- Point the remote controller towards the indoor unit receiver while following steps ② to ⑦.
- It is not possible to run in FAN, DRY or AUTO mode.



11-4-3. PAR-SL100A-E

1. Press the  button ① to stop the air conditioner.
 - If the weekly timer is enabled ( is on), press the  button ③ to disable it ( is off).
2. Press the  button ② for 5 seconds.
 -  comes on and the unit enters the service mode.
3. Press the  button ②.
 -  ⑧ comes on and the unit enters the test run mode.
4. Press the following buttons to start the test run.
 - : Switch the operation mode between cooling and heating and start the test run.
 - : Switch the fan speed and start the test run.
 - : Switch the airflow direction and start the test run.
 - : Switch the louver and start the test run.
 - : Start the test run.
5. Stop the test run.
 - Press the  button ① to stop the test run.
 - After 2 hours, the stop signal is transmitted.



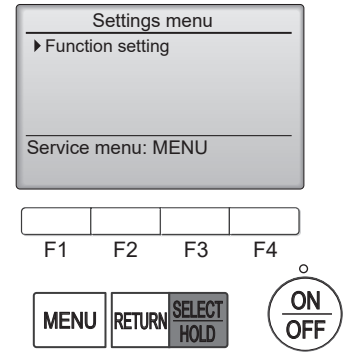
11-5. FUNCTION SETTING

11-5-1. PAR-40MAA

1. Select "Service" from the Main menu, and press the [SELECT] button.

Select "Setting" from the Service menu, and press the [SELECT] button.

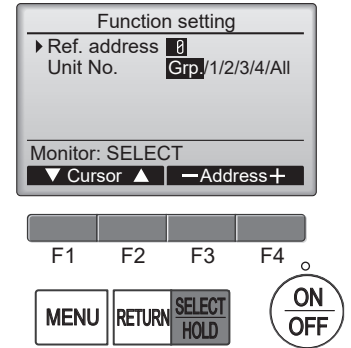
Select "Function setting", and press the [SELECT] button.



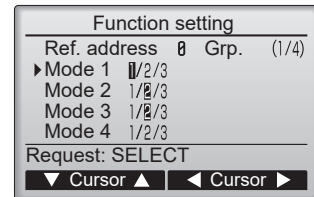
2. Set the indoor unit refrigerant addresses and unit numbers with the [F1] through [F4] buttons, and then press the [SELECT] button to confirm the current setting.

Note: Checking the indoor unit No.

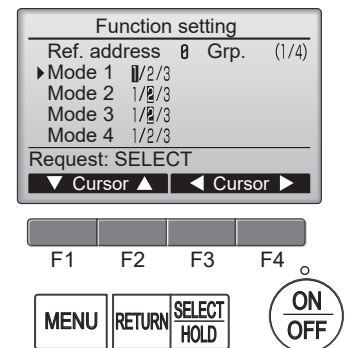
When the [SELECT] button is pressed, the target indoor unit will start fan operation. If the unit is common or when running all units, all indoor units for the selected refrigerant address will start fan operation.



3. When data collection from the indoor units is completed, the current settings appears highlighted.
Non-highlighted items indicate that no function settings are made.
Screen appearance varies depending on the "Unit No." setting.



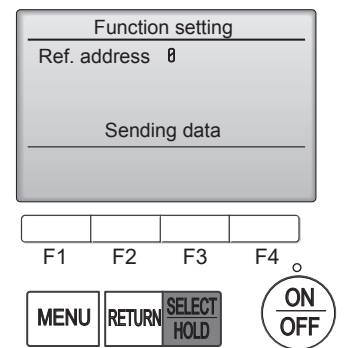
4. Use the [F1] or [F2] button to move the cursor to select the mode number, and change the setting number with the [F3] or [F4] button.



5. When the settings are completed, press the [SELECT] button to send the setting data from the remote controller to the indoor units.
When the transmission is successfully completed, the screen will return to the Function setting screen.

Note: • Make the above settings only on Mr. Slim units as necessary.

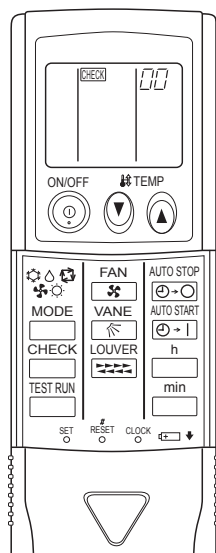
- The above function settings are not available for the CITY MULTI units.
- Table 1 summarizes the setting options for each mode number. Refer to the indoor unit Installation Manual for the detailed information about initial settings, mode numbers, and setting numbers for the indoor units.
- Be sure to write down the settings for all functions if any of the initial settings has been changed after the completion of installation work.



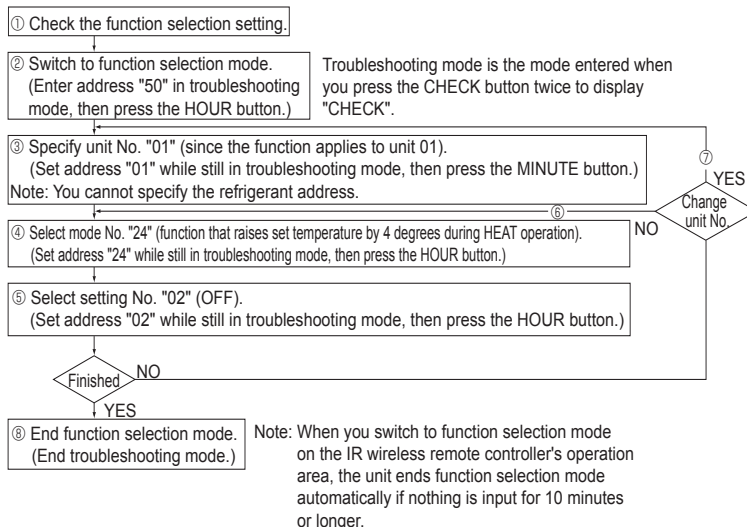
11-5-2. PAR-FL32MA

Functions can be selected with the wireless remote controller. Function selection using wireless remote controller is available only for refrigerant system with wireless function. Refrigerant address cannot be specified by the wireless remote controller.

[Flow of function selection procedure]



The flow of the function selection procedure is shown below. This example shows how to turn off the function that raises the set temperature by 4 degrees during HEAT operation. The procedure is given after the flow chart.



[Operating instructions]

① Check the function settings.

② Press the button twice continuously. → **CHECK** is lit and "00" blinks.

Press the **TEMP** button once to set "50". Direct the IR wireless remote controller toward the receiver of the indoor unit and press the button.

③ Set the unit number.

Press the **TEMP** button to set the unit number. (Press "01" to specify the indoor unit whose unit number is 01.)

Direct the IR wireless remote controller toward the receiver of the indoor unit and press the button.

(By setting unit number with the button, specified indoor unit starts performing fan operation.

Detect which unit is assigned to which number using this function. If unit number is set to AL, all the indoor units in same refrigerant system start performing fan operation simultaneously.)

Notes:

1. If a unit number that cannot be recognized by the unit is entered, 3 beeps of 0.4 seconds will be heard. Reenter the unit number setting.
2. If the signal was not received by the sensor, you will not hear a beep or a "double ping sound" may be heard. Reenter the unit number setting.

④ Select a mode.

Press the **TEMP** button to set a mode. Press "24" to turn on the function that raises the set temperature by 4 degrees during heat operation. Direct the IR wireless remote controller toward the sensor of the indoor unit and press the button.

→ The sensor-operation indicator will blink and beeps will be heard to indicate the current setting number.

Current setting number:

- 1 = 1 beep (one second)
- 2 = 2 beeps (one second each)
- 3 = 3 beeps (one second each)

Notes:

1. If a mode number that cannot be recognized by the unit is entered, 3 beeps of 0.4 seconds will be heard. Reenter the mode number.
2. If the signal was not received by the sensor, you will not hear a beep or a "double ping sound" may be heard. Reenter the mode number.

⑤ Select the setting number.

Press the **TEMP** button to select the setting number. (02: Not available)

Direct the IR wireless remote controller toward the receiver of the indoor unit and press the button.

→ The sensor-operation indicator will blink and beeps will be heard to indicate the setting number.

Setting number:

- 1 = 2 beeps (0.4 seconds each)
- 2 = 2 beeps (0.4 seconds each, repeated twice)
- 3 = 2 beeps (0.4 seconds each, repeated 3 times)

Notes:

1. If a setting number that cannot be recognized by the unit is entered, the setting will turn back to the original setting.
2. If the signal was not received by the sensor, you will not hear a beep or a "double ping sound" may be heard. Reenter the setting number.

⑥ Repeat steps ④ and ⑤ to make an additional setting without changing unit number.

⑦ Repeat steps ③ to ⑤ to change unit number and make function settings on it.

⑧ Complete the function settings

Press button.

Do not use the wireless remote controller for 30 seconds after completing the function setting.

11-5-3. PAR-SL100A-E

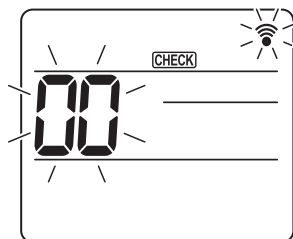


Fig. 1

1. Going to the function select mode

Press the **[MENU]** button between of 5 seconds.

(Start this operation from the status of remote controller display turned off.)

[CHECK] is lit and "00" blinks. (Fig. 1)

Press the **[↓]** button to set the "50".

Direct the wireless remote controller toward the receiver of the indoor unit and press the **[SET]** button.

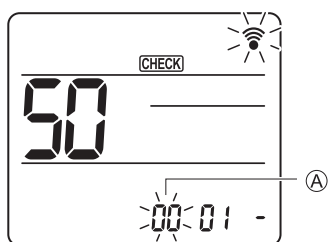


Fig. 2

2. Setting the unit number

Press the **[↓]** button to set unit number **Ⓐ**. (Fig. 2)

Direct the wireless remote controller toward the receiver of the indoor unit and press the **[SET]** button.

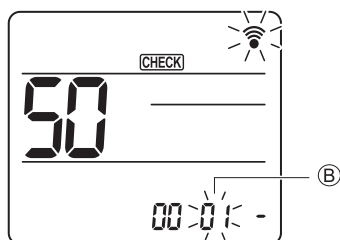


Fig. 3

3. Select a mode

Press the **[↓]** button to set Mode number **Ⓑ**. (Fig. 3)

Direct the wireless remote controller toward the receiver of the indoor unit and press the **[SET]** button.

Current setting number:

- 1=1 beep (1 second)
- 2=2 beep (1 second each)
- 3=3 beep (1 second each)

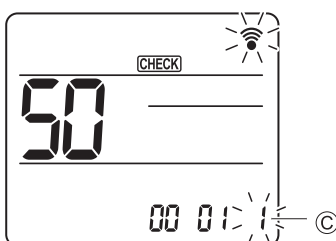


Fig. 4

4. Selecting the setting number

Use the **[↓]** button to change the Setting number **Ⓒ**. (Fig. 4)

Direct the wireless remote controller toward the receiver of the indoor unit and press the **[SET]** button.

5. To select multiple functions continuously

Repeat select ③ and ④ to change multiple function settings continuously.

6. Complete function selection

Direct the wireless remote controller toward the sensor of the indoor unit and press the **⓪OFF/ON** **[*]** button.

Note:

Make the above settings on Mr. Slim units as necessary.

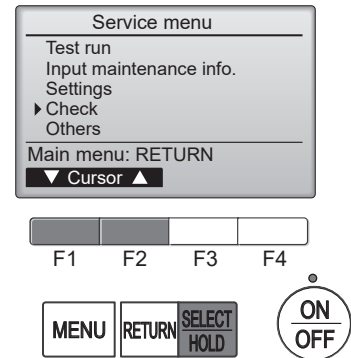
- Be sure to write down the settings for all functions if any of the initial settings has been changed after the completion of installation work.

11-6. ERROR HISTORY

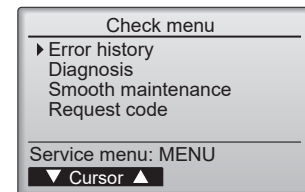
1. Select "Service" from the Main menu, and press the [SELECT] button.



Select "Check" with the [F1] or [F2] button, and press the [SELECT] button.

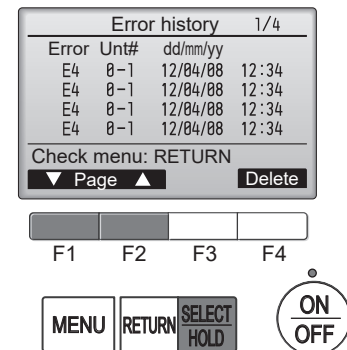


2. Select "Error history" with the [F1] or [F2] button, and press the [SELECT] button.



3. 16 error history records will appear.

4 records are shown per page, and the top record on the first page indicates the latest error record.



4. Deleting the error history

To delete the error history, press the [F4] button (Delete) on the screen that shows error history.

A confirmation screen will appear asking if you want to delete the error history.

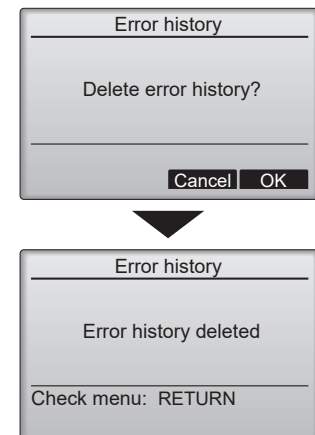


Press the [F4] button (OK) to delete the history.



"Error history deleted" will appear on the screen.

Press the [RETURN] button to go back to the Check menu screen.



11-7. SELF-DIAGNOSIS

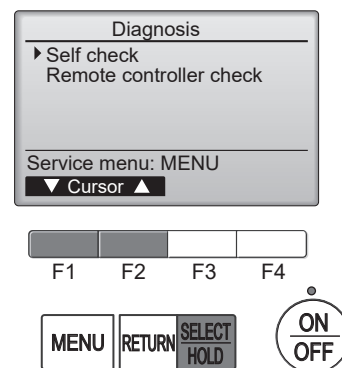
11-7-1. PAR-40MAA

1. Select "Service" from the Main menu,
and press the [SELECT] button.

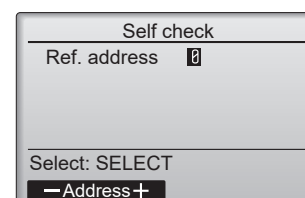
Select "Check" from the Service menu,
and press the [SELECT] button.

Select "Diagnosis" from the Check menu,
and press the [SELECT] button.

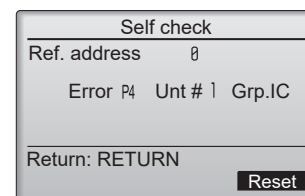
Select "Self check" with the [F1] or [F2] button,
and press the [SELECT] button.



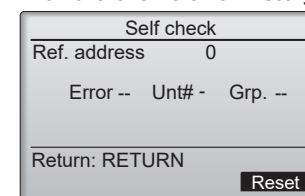
2. With the [F1] or [F2] button, enter the refrigerant address, and press the [SELECT] button.



3. Check code, unit number, attribute will appear.
"-" will appear if no error history is available.



When there is no error history



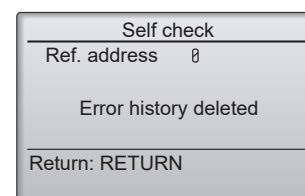
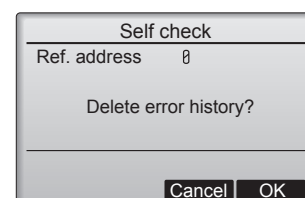
4. Resetting the error history

Press the [F4] button (Reset) on the screen that shows the error history.

A confirmation screen will appear asking if you want to delete the error history.

Press the [F4] button (OK) to delete the error history.

If deletion fails, "Request rejected" will appear.
"Unit not exist" will appear if no indoor units that are correspond to the entered address are found.



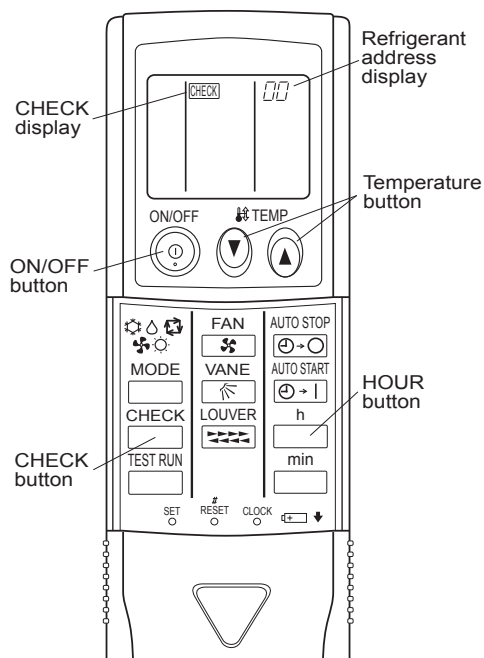
Navigating through the screens

- To go back to the Service menu [MENU] button
- To return to the previous screen..... [RETURN] button

11-7-2. PAR-FL32MA

When a malfunction occurs to air conditioner, both indoor unit and outdoor unit will stop and operation lamp blinks to inform unusual stop.

<Malfunction-diagnosis method at maintenance service>

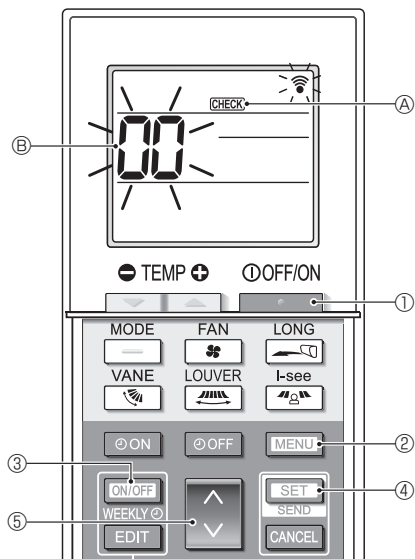


[Procedure]

1. Press the CHECK button twice.
 - "CHECK" lights, and refrigerant address "00" blinks.
 - Check that the remote controller's display has stopped before continuing.
2. Press the TEMP buttons.
 - Select the refrigerant address of the indoor unit for the self-diagnosis.

Note: Set refrigerant address using the outdoor unit's DIP switch (SW1). (For more information, see the outdoor unit installation manual.)
3. Point the remote controller at the sensor on the indoor unit and press the HOUR button.
 - If an air conditioner error occurs, the indoor unit's sensor emits an intermittent buzzer sound, the operation light blinks, and the check code is output.
 - (It takes 3 seconds at most for check code to appear.)
4. Point the remote controller at the sensor on the indoor unit and press the ON/OFF button.
 - The check mode is cancelled.

11-7-3. PAR-SL100A-E



1. Press the button ① to stop the air conditioner.
 - If the weekly timer is enabled (WEEKLY is on), press the button ③ to disable it (WEEKLY is off).
2. Press the button ② for 5 seconds.
 - (A) comes on and the unit enters the self-check mode.
3. Press the button ⑤ to select the refrigerant address (M-NET address) ⑥ of the indoor unit for which you want to perform the self-check.
4. Press the button ④.
 - If an error is detected, the check code is indicated by the number of beeps from the indoor unit and the number of blinks of the OPERATION INDICATOR lamp.
5. Press the button ①.
 - (A) and the refrigerant address (M-NET address) ⑥ go off and the self-check is completed.

11-8. REMOTE CONTROLLER CHECK

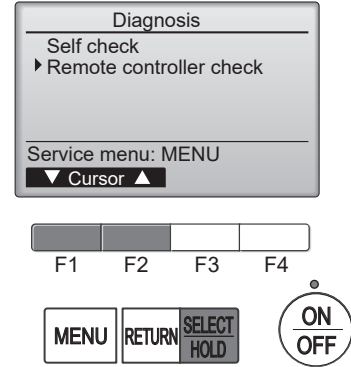
If operations cannot be completed with the remote controller, diagnose the remote controller with this function.

1. Select "Service" from the Main menu, and press the [SELECT] button.

Select "Check" from the Service menu, and press the [SELECT] button.

Select "Diagnosis" from the Check menu, and press the [SELECT] button.

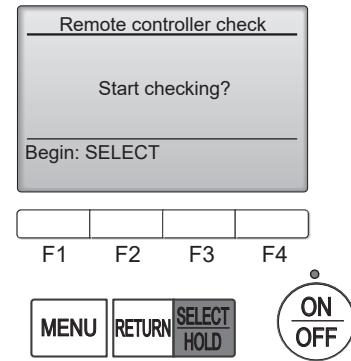
Select "Remote controller check" with the [F1] or [F2] button, and press the [SELECT] button.



2. Select "Remote controller check" from the Diagnosis menu, and press the [SELECT] button to start the remote controller check and see the check results.

To cancel the remote controller check and exit the "Remote controller check" menu screen, press the [MENU] or the [RETURN] button.

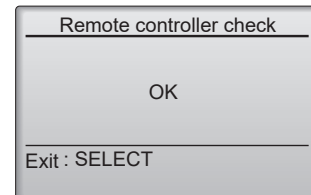
The remote controller will not reboot itself.



3.
 - OK: No problems are found with the remote controller. Check other parts for problems.
 - E3, 6832: There is noise on the transmission line, or the indoor unit or another remote controller is faulty. Check the transmission line and the other remote controllers.
 - NG (ALLO, ALL1): Send-receive circuit fault. The remote controller needs replacing.
 - ERC: The number of data errors is the discrepancy between the number of bits in the data transmitted from the remote controller and that of the data that was actually transmitted over the transmission line. If data errors are found, check the transmission line for external noise interference.

If the [SELECT] button is pressed after the remote controller check results are displayed, remote controller check will end, and the remote controller will automatically reboot itself.

Remote controller check results screen



Check the remote controller display and see if anything is displayed (including lines). Nothing will appear on the remote controller display if the correct voltage (8.5–12 VDC) is not supplied to the remote controller. If this is the case, check the remote controller wiring and indoor units.

11-9. SMOOTH MAINTENANCE

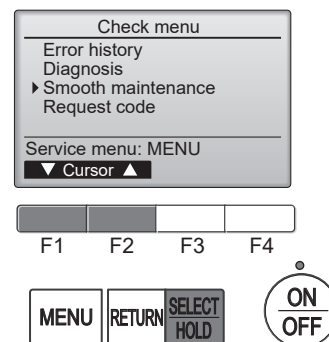
1. Select "Service" from the Main menu, and press the [SELECT] button.



Select "Check" with the [F1] or [F2] button, and press the [SELECT] button.



Select "Smooth maintenance" with the [F1] or [F2] button, and press the [SELECT] button.



2. Set each item.

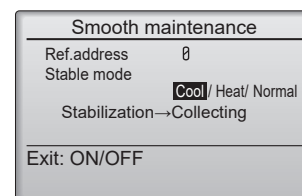
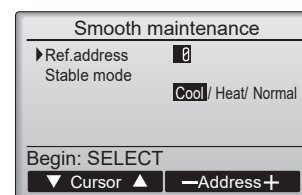
Select the item to be changed with the [F1] or [F2] button.

Select the required setting with the [F3] or [F4] button.

- <Ref.address> setting [0] – [15]
- <Stable mode> setting [Cool] / [Heat] / [Normal]

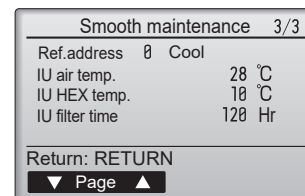
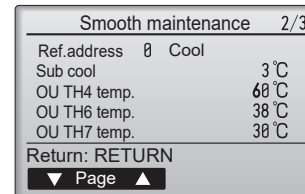
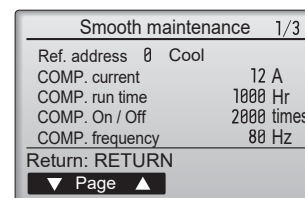
Press the [SELECT] button, Fixed operation will start.

Note: Stable mode will take approx. 20 minutes.



3. The operation data will appear.

The Compressor-Accumulated operating (COMP. run) time is 10-hour unit, and the Compressor-Number of operation times (COMP. ON/OFF) is a 100-time unit (fractions discarded).



Navigating through the screens

- To go back to the Service menu [MENU] button
- To return to the previous screen [RETURN] button

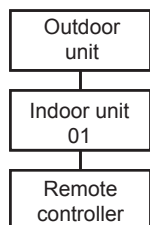
■ Refrigerant address

Single refrigerant system

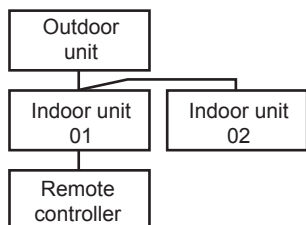
In the case of single refrigerant system, the refrigerant address is "00" and no operation is required.

Simultaneous twin, triple units belong to this category (single refrigerant system).

[1:1]
Refrigerant
address=00

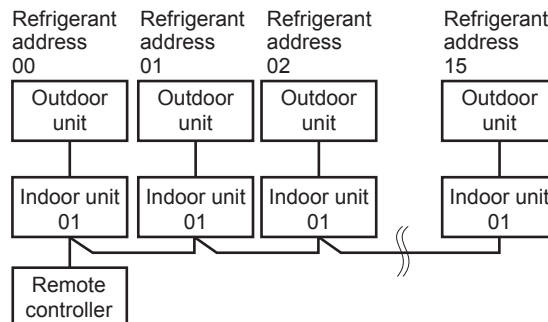


[Twin]
Refrigerant
address=00



Multi refrigerant system (group control)

Up to 16 refrigerant systems (16 outdoor units) can be connected as a group by 1 remote controller. To check or set the refrigerant addresses.



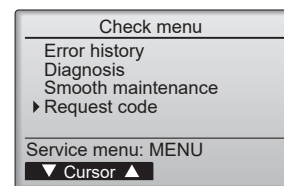
11-10. REQUEST CODE

Details on the operation data including each thermistor temperature and error history can be confirmed with the remote controller.

1. Select "Service" from the Main menu, and press the [SELECT] button.

Select "Check" with the [F1] or [F2] button, and press the [SELECT] button.

Select "Request code" with the [F1] or [F2] button, and press the [SELECT] button.



2. Set the Refrigerant address and Request code.

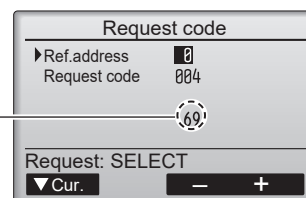
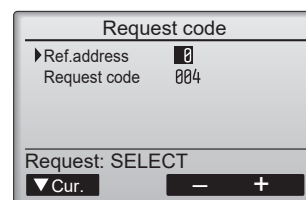
Select the item to be changed with the [F1] or [F2] button.

Select the required setting with the [F3] or [F4] button.

■ <Ref.address>setting [0] – [15]

■ <Request code>setting

Press the [SELECT] button, Data will be collected and displayed.



Request code: 004
Discharge temperature: 69°C

mitsubishi electric corporation

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