MITSUBISHI ELECTRIC

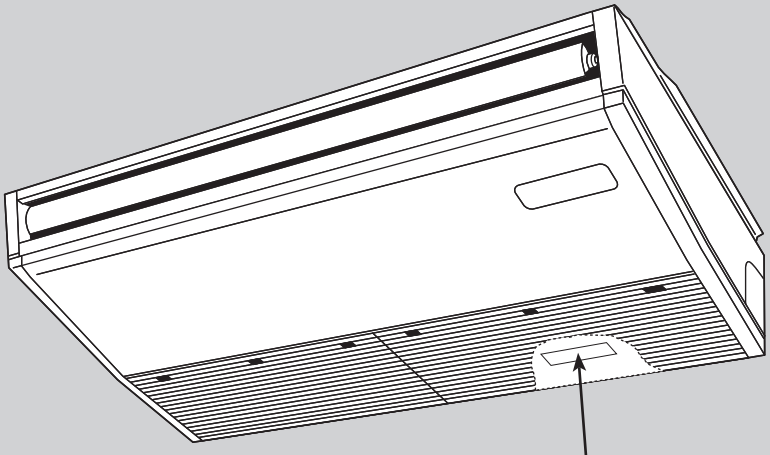
SPLIT-TYPE, HEAT PUMP AIR CONDITIONERS

November 2023
No. TCH131

TECHNICAL & SERVICE MANUAL

Series PCFY Ceiling Suspended R410A

Indoor unit [Model names]	[Service Ref.]
PCFY-P15NKMU-E	PCFY-P15NKMU-ER2.TH
PCFY-P24NKMU-E	PCFY-P24NKMU-ER2.TH
PCFY-P30NKMU-E	PCFY-P30NKMU-ER2.TH
PCFY-P36NKMU-E	PCFY-P36NKMU-ER2.TH



INDOOR UNIT

CONTENTS

1. SAFETY PRECAUTION 2
2. PART NAMES AND FUNCTIONS 4
3. SPECIFICATION 5
4. OUTLINES AND DIMENSIONS 9
5. WIRING DIAGRAM 12
6. REFRIGERANT SYSTEM DIAGRAM 13
7. MICROPROCESSOR CONTROL 14
8. TROUBLESHOOTING 21
9. DISASSEMBLY PROCEDURE 29
10. REMOTE CONTROLLER 35

PARTS CATALOG (TCB131)

CITY MULTI

1 SAFETY PRECAUTION

Cautions for units utilizing refrigerant R410A

Do not use the existing refrigerant piping.

The old refrigerant and lubricant in the existing piping contains a large amount of chlorine which may cause the lubricant deterioration of the new unit.

Use "low residual oil piping"

If there is a large amount of residual oil (hydraulic oil, etc.) inside the piping and joints, deterioration of the lubricant will result.

Store the piping indoors, and both ends of the piping sealed until just before brazing. (Leave elbow joints, etc. in their packaging.)

If dirt, dust or moisture enters into refrigerant cycle, that can cause deterioration of refrigerant oil or malfunction of compressor.

The refrigerant oil applied to flare and flange connections must be ester oil, ether oil or alkylbenzene oil in a small amount.

If large amount of mineral oil enters, that can cause deterioration of refrigerant oil etc.

Charge refrigerant from liquid phase of gas cylinder.

If the refrigerant is charged from gas phase, composition change may occur in refrigerant and the efficiency will be lowered.

Do not use refrigerant other than R410A.

If other refrigerant (R22, etc.) is used, chlorine in refrigerant can cause deterioration of refrigerant oil, etc.

Use a vacuum pump with a reverse flow check valve.

Vacuum pump oil may flow back into refrigerant cycle and that can cause deterioration of refrigerant oil, etc.

Use the following tools specifically designed for use with R410A refrigerant.

The following tools are necessary to use R410A refrigerant.

Tools for R410A	
Gauge manifold	Flare tool
Charge hose	Size adjustment gauge
Gas leak detector	Vacuum pump adaptor
Torque wrench	Electronic refrigerant charging scale

Handle tools with care.

If dirt, dust or moisture enters into refrigerant cycle, that can cause deterioration of refrigerant oil or malfunction of compressor.

Do not use a charging cylinder.

If a charging cylinder is used, the composition of refrigerant will change and the efficiency will be lowered.

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.

Ventilate the room if refrigerant leaks during operation. If refrigerant comes into contact with a flame, poisonous gases will be released.

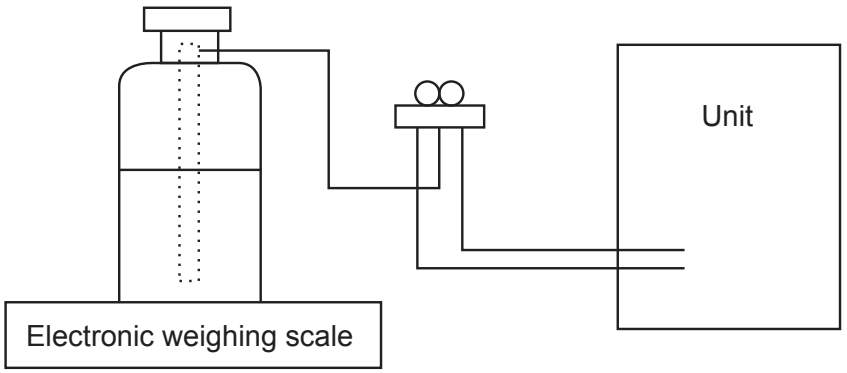
[1] Cautions for service

(1) Perform service after collecting the refrigerant left in the unit completely.
(2) Do not release refrigerant in the air.
(3) After completing service, charge the cycle with specified amount of refrigerant.
(4) When performing service, install a filter drier simultaneously.
Be sure to use a filter drier for new refrigerant.

[2] Additional refrigerant charge

When charging directly from cylinder

(1) Check that cylinder for R410A on the market is syphon type.
(2) Charging should be performed with the cylinder of syphon stood vertically. (Refrigerant is charged from liquid phase.)



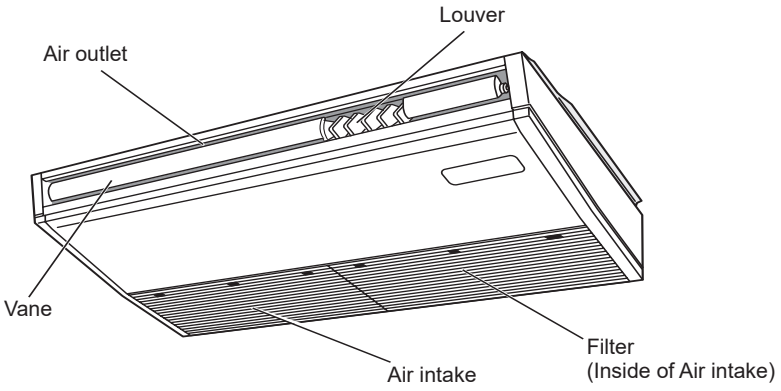
[3] Service tools

Use the below service tools as exclusive tools for R410A refrigerant.

No.	Tool name	Specifications
①	Gauge manifold	· Only for R410A
		· Use the existing fitting specifications. (UNF1/2)
		· Use high-tension side pressure of 768.7 PSIG [5.3MPa.G] or over.
②	Charge hose	· Only for R410A
		· Use pressure performance of 738.2 PSIG [5.09MPa.G] or over.
③	Electronic weighing scale	—
④	Gas leak detector	· Use the detector for R134a, R407C or R410A.
⑤	Adaptor for reverse flow check	· Attach on vacuum pump.
⑥	Refrigerant charge base	—
⑦	Refrigerant cylinder	· Only for R410A Top of cylinder (Pink) Cylinder with syphon
⑧	Refrigerant recovery equipment	—

2 PART NAMES AND FUNCTIONS

2-1. Indoor unit



2-2. WIRED REMOTE CONTROLLER <PAR-41MAA> <PAC-YT53CRA>

The functions which can be used are restricted according to each model.

○ : Supported ✕ : Unsupported

	Function		PAR-41MAA		PAC-YT53CRA
			Slim	CITY MULTI	
Body	Product size H × W × D	(mm)	120 × 120 × 14.5		120 × 70 × 14.5
		(inch)	4-3/4 × 4-3/4 × 9/16		4-3/4 × 2-3/4 × 9/16
	LCD		Full Dot LCD		Partial Dot LCD
	Backlight		○		○
Energy saving	Energy saving operation schedule		○	✕	✕
	Automatic return to the preset temperature		○		✕
Restriction	Setting the temperature range restriction		○		○
Function*	Operation lock function		○		○
	Weekly timer		○		✕
	ON/OFF timer		○		✕
	High Power		○	✕	✕
	Manual vane angle		○		✕

*Some functions may not be available depending on model types.

Refer to "10-1. REMOTE CONTROLLER FUNCTIONS" for details.

3 SPECIFICATION

3-1. SPECIFICATIONS

Service ref.			PCFY-P15NKMU-ER2.TH	PCFY-P24NKMU-ER2.TH	PCFY-P30NKMU-ER2.TH	PCFY-P36NKMU-ER2.TH
Power source			1-phase 208/230V 60Hz			
Cooling capacity (Nominal)	*1	kW	4.4	7.0	8.8	10.6
	*1	Btu/h	15,000	24,000	30,000	36,000
	Power input	kW	0.03	0.04	0.09	0.11
	Current input	A	0.35	0.41	0.83	0.97
Heating capacity (Nominal)	*2	kW	5.0	7.9	10.0	11.7
	*2	Btu/h	17,000	27,000	34,000	40,000
	Power input	kW	0.03	0.04	0.09	0.11
	Current input	A	0.35	0.41	0.83	0.97
External finish			MUNSELL (6.4Y 8.9/0.4)			
External dimensions H x W x D		mm	230×960×680	230×1280×680	230×1600×680	
		in.	9-1/16×37-13/16×26-3/4	9-1/16×50-3/8×26-3/4	9-1/16×63×26-3/4	
Net weight		kg (lb)	24 (53)	32 (71)	36 (79)	38 (84)
Heat exchanger			Cross fin (Aluminum fin and copper tube)			
FAN	Type x quantity		Sirocco fan × 2	Sirocco fan × 3	Sirocco fan × 4	
	External static press.	Pa	0			
		mmH_2O	0			
	Motor type		DC motor			
	Motor output	kW	0.090	0.095	0.160	
	Driving mechanism		Direct-driven by motor			
	Airflow rate (Low-Mid2-Mid1-High)	m^3/min	10-11-12-13	14-15-16-18	20-22-25-28	21-24-27-31
		L/s	167-183-200-217	233-250-267-300	333-367-417-467	350-400-450-517
		cfm	353-388-424-459	494-530-565-636	703-777-883-989	742-847-953-1095
Noise level (Low-Mid2-Mid1-High) (measured in anechoic room)		dB <A>	29-32-34-36	31-33-35-37	34-37-40-43	36-39-42-44
Insulation material			Polyethylene sheet			
Air filter			PP honeycomb			
Protection device			Fuse			
Refrigerant control device			LEV			
Connectable outdoor unit			R410A, CITY MULTI			
Diameter of refrigerant pipe	Liquid (R410A)	mm(in.)	ø6.35 (ø1/4) Flare	ø9.52 (ø3/8) Flare	ø9.52 (ø3/8) Flare	ø9.52 (ø3/8) Flare
	Gas (R410A)	mm(in.)	ø12.7 (ø1/2) Flare	ø15.88 (ø5/8) Flare	ø15.88 (ø5/8) Flare	ø15.88 (ø5/8) Flare
Field drain pipe size		mm(in.)	O.D. 26mm (1)			
Standard attachment	Document		Installation Manual, Instruction Book			
	Accessory		Drain joint socket			
Optional parts	High efficiency filter		PAC-SH88KF-E	PAC-SH89KF-E	PAC-SH90KF-E	
	External heater adapter		PAC-YU25HT			
	i-see Sensor		PAC-SH91MK-E			
	Wireless remote controller with i-see Sensor		PAR-SA92MW-E			
	Wireless remote controller kit		PAR-SL93B-E			
Remarks	Installation		Details on foundation work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.			

Note :

*1 Nominal cooling conditions

Indoor :	80°FDB/67°FWB (26.7°CDB/19.4°CWB)
Outdoor :	95°FDB (35°CDB)
Pipe length :	25 ft. (7.6 m)
Level difference :	0 ft (0 m)

*2 Nominal heating conditions

	70°FDB(21°CDB)
	47°FDB/43°FWB (8.3°CDB/6.1°CWB)
	25 ft. (7.6 m)
	0 ft (0 m)

*3 Connect the joint (purchased locally) for R22

* Due to continuing improvement, above specification may be subject to change without notice.

Unit converter

kcal/h = kW × 860
Btu/h = kW × 3,412
cfm = m^3/min × 35.31
lb = kg/0.4536

*Above specification data is subject to rounding variation.

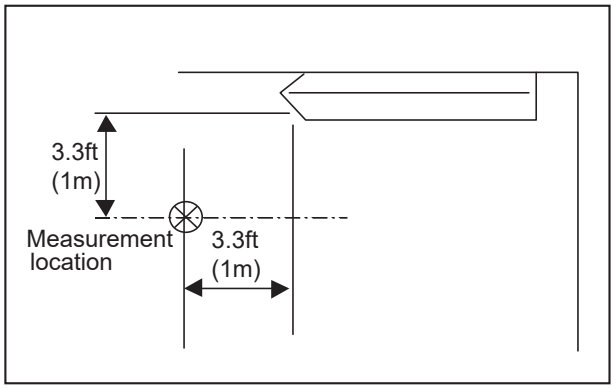
3-2. ELECTRICAL PARTS SPECIFICATIONS

Service Ref. / Parts name	Symbol	PCFY-P15NKMU-ER2.TH	PCFY-P24NKMU-ER2.TH	PCFY-P30NKMU-ER2.TH PCFY-P36NKMU-ER2.TH
Room temperature thermistor	TH21	Resistance 30°F/15.8kΩ, 50°F/9.6kΩ, 70°F/6.0kΩ, 80°F/4.8kΩ, 90°F/3.9kΩ, 100°F/3.2kΩ		
Liquid pipe thermistor	TH22	Resistance 30°F/15.8kΩ, 50°F/9.6kΩ, 70°F/6.0kΩ, 80°F/4.8kΩ, 90°F/3.9kΩ, 100°F/3.2kΩ		
Gas pipe thermistor	TH23	Resistance 30°F/15.8kΩ, 50°F/9.6kΩ, 70°F/6.0kΩ, 80°F/4.8kΩ, 90°F/3.9kΩ, 100°F/3.2kΩ		
Fuse (Indoor controller board)	FUSE	250V 6.3A		
Fan motor	MF	8-pole OUTPUT 90W	8-pole OUTPUT 95W	8-pole OUTPUT 160W
Vane motor	MV	MSBPC20 DC12V 300Ω/phase		
Drain-pump (Option)	DP	INPUT 10.8W 24ℓ/Hr		
Drain float switch	FS	Open / Short detection DC 5V		
Linear expansion valve	LEV	DC12V Stepping motor drive Port dimension ø3.2 (0~2000pulse) EFM-40YGME		DC12V Stepping motor drive Port dimension ø5.2 (0~2000pulse) EFM-80YGME
Power supply terminal block	TB2	(L1, L2) Rated to 330V 30A ※		
Transmission terminal block	TB5	(M1, M2, S) Rated to 250V 20A ※		
MA remote controller terminal block	TB15	(1, 2) Rated to 250V 10A ※		

※Note : Refer to WIRING DIAGRAM for the supplied voltage.

3-3. SOUND LEVEL

PCFY-P•NKMU-ER2.TH



* Measured in anechoic room.

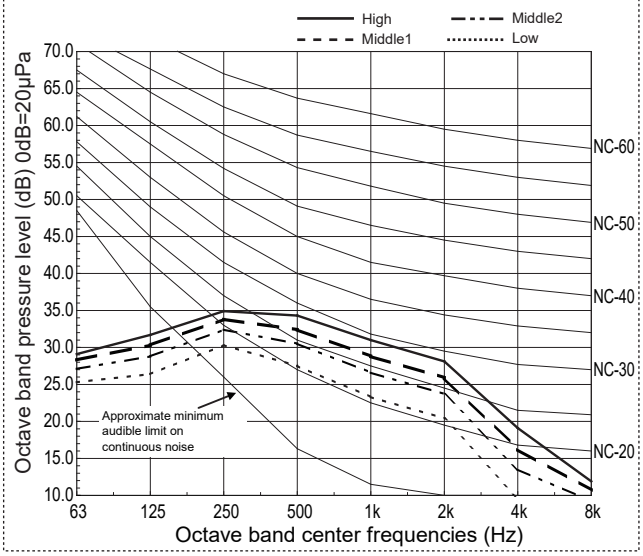
Sound level at anechoic room : Low-Mid2-Mid1-High

Service Ref.	Sound level dB (A)
PCFY-P15NKMU-ER2.TH	29-32-34-36
PCFY-P24NKMU-ER2.TH	31-33-35-37
PCFY-P30NKMU-ER2.TH	34-37-40-43
PCFY-P36NKMU-ER2.TH	36-39-42-44

3-4. NOISE CRITERION CURVES

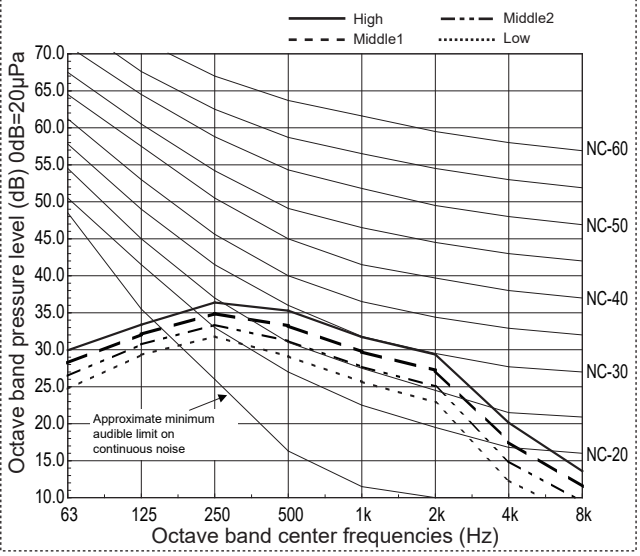
PCFY-P15NKMU-ER2.TH

External static pressure : 0Pa
Power source : 208/230V, 60Hz



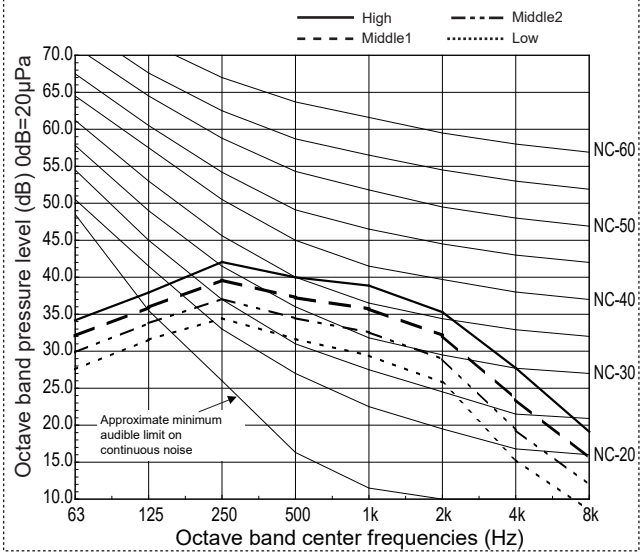
PCFY-P24NKMU-ER2.TH

External static pressure : 0Pa
Power source : 208/230V, 60Hz



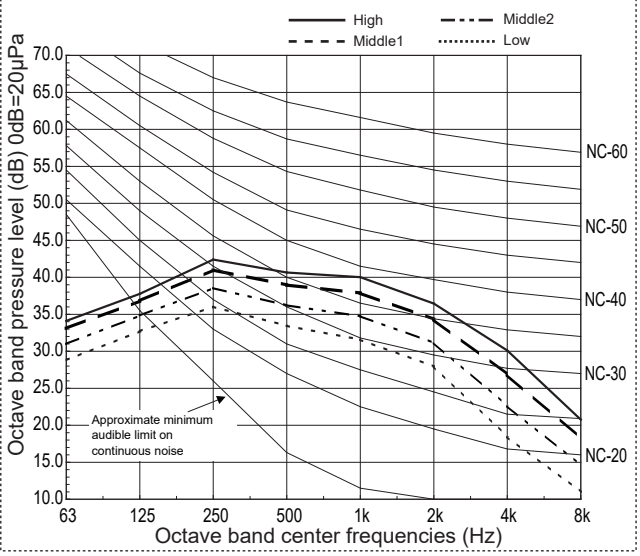
PCFY-P30NKMU-ER2.TH

External static pressure : 0Pa
Power source : 208/230V, 60Hz



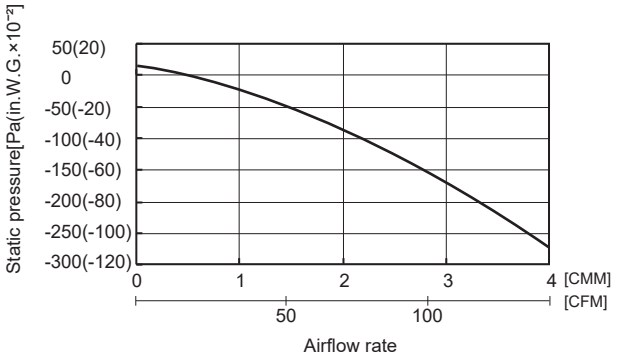
PCFY-P36NKMU-ER2.TH

External static pressure : 0Pa
Power source : 208/230V, 60Hz

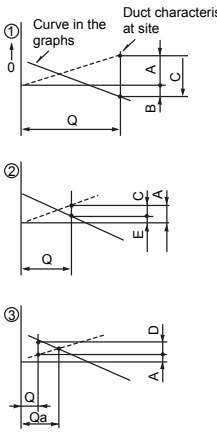


3-5. FRESH AIR INTAKE AMOUNT & STATIC PRESSURE CHARACTERISTICS

■ PCFY-P15NKMU-ER2.TH

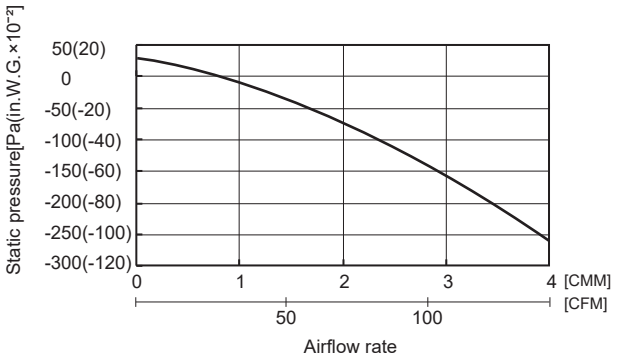


How to read curves

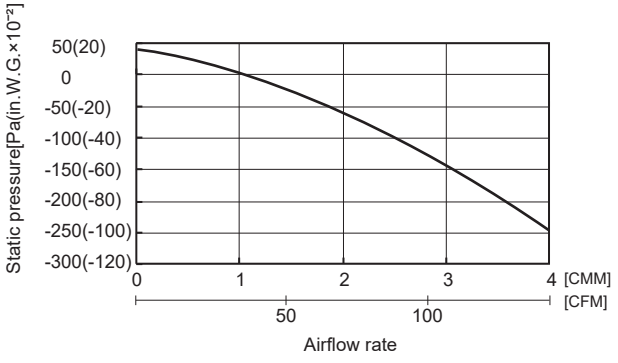


Q···Designed amount of fresh air intake <CMM(CFM)>
A···Static pressure loss of fresh air intake duct system with airflow amount Q <Pa(in.W.G.x10^{-2})>
B···Forced static pressure at air conditioner inlet with airflow amount Q <Pa(in.W.G.x10^{-2})>
C···Static pressure of booster fan with airflow amount Q <Pa(in.W.G.x10^{-2})>
D···Static pressure loss increase amount of fresh air intake duct system for airflow amount Q <Pa(in.W.G.x10^{-2})>
E···Static pressure of indoor unit with airflow amount Q <Pa(in.W.G.x10^{-2})>
Qa···Estimated amount of fresh air intake without D <CMM(CFM)>

■ PCFY-P24NKMU-ER2.TH



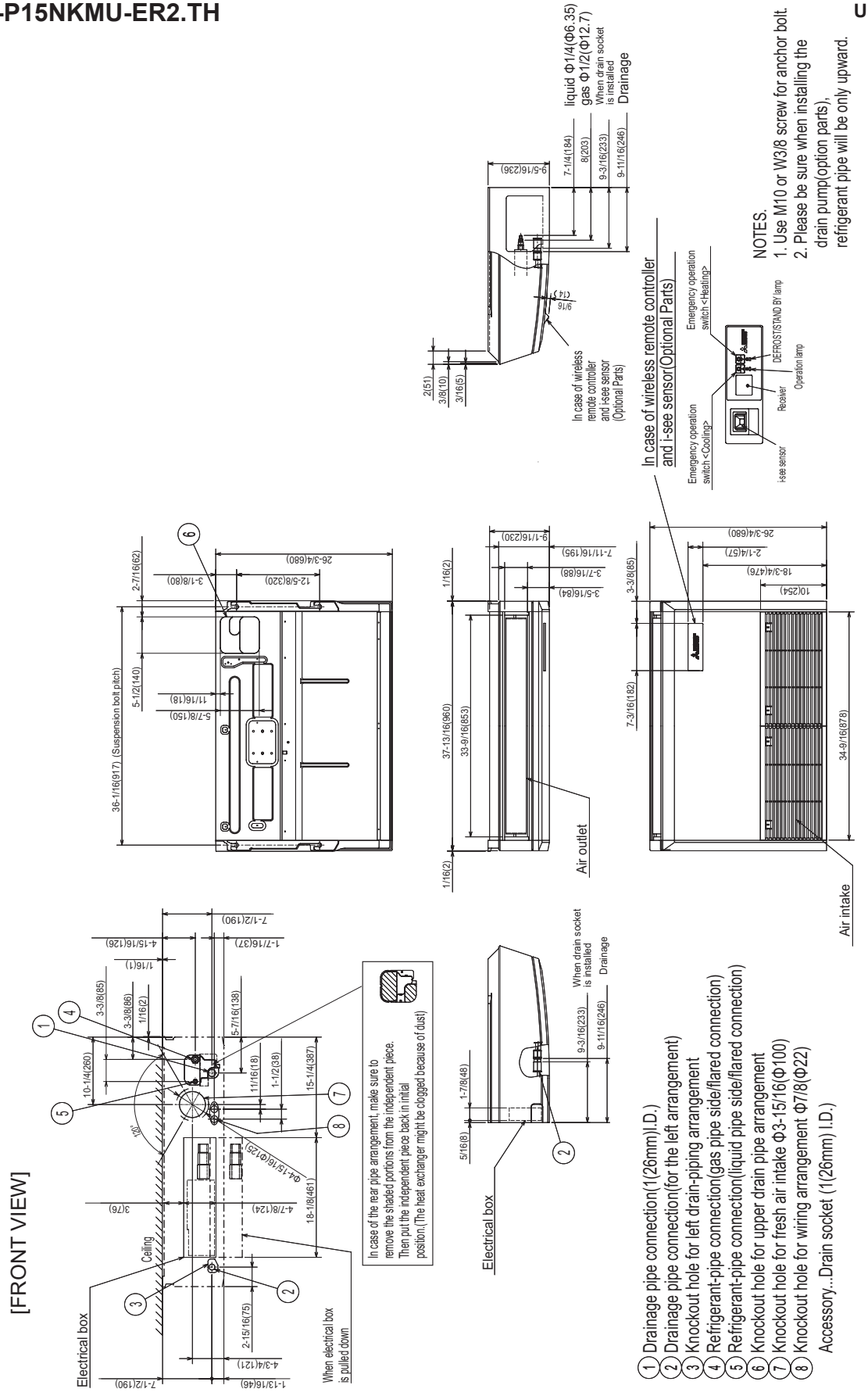
■ PCFY-P30, 36NKMU-ER2.TH



4 OUTLINES AND DIMENSIONS

PCFY-P15NKMU-ER2.TH

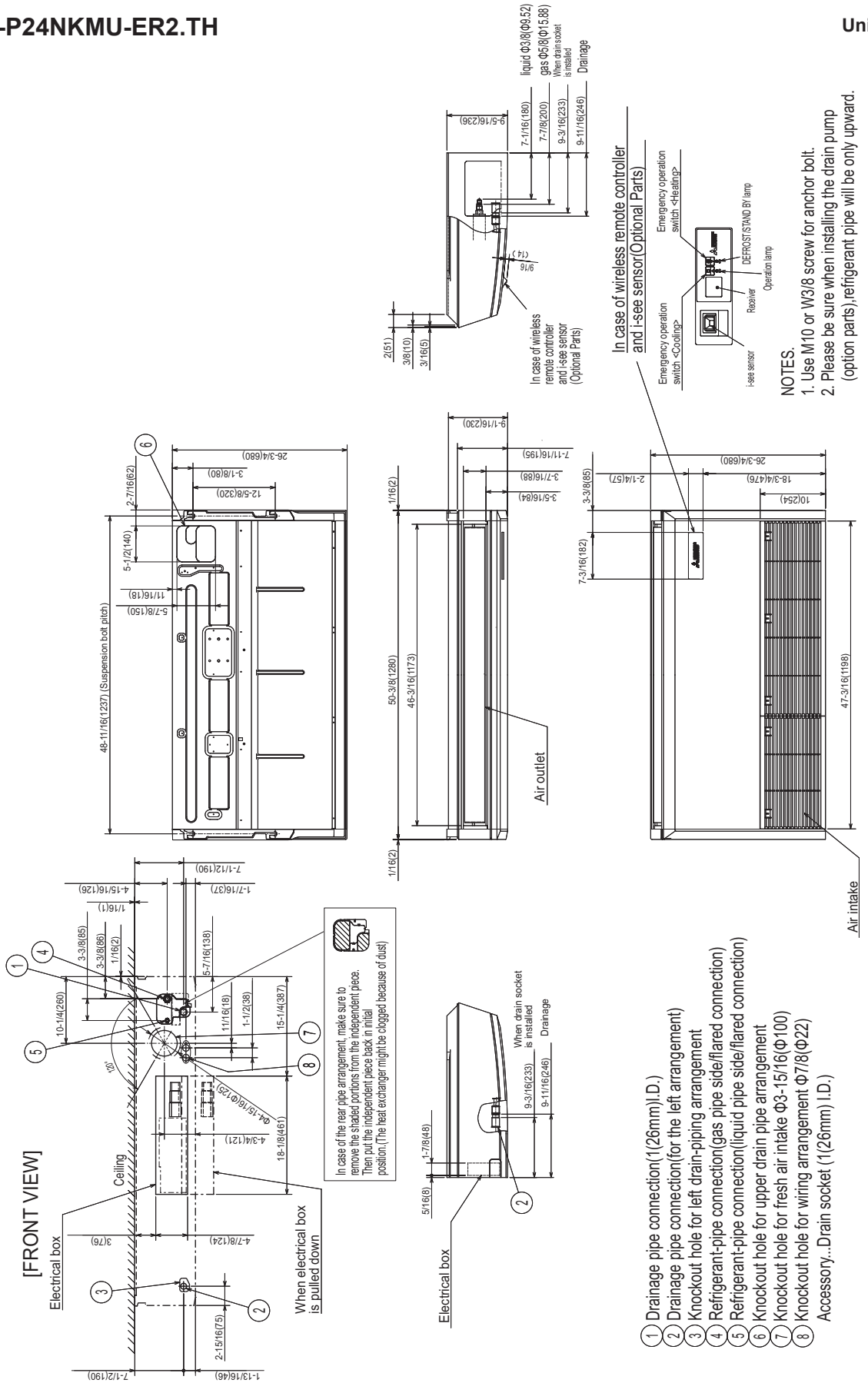
Unit : inch(mm)



① Drainage pipe connection(1(26mm)I.D.)
② Drainage pipe connection(for the left arrangement)
③ Knockout hole for left drain-piping arrangement
④ Refrigerant-pipe connection(gas pipe side/flared connection)
⑤ Refrigerant-pipe connection(liquid pipe side/flared connection)
⑥ Knockout hole for upper drain pipe arrangement
⑦ Knockout hole for fresh air intake Φ3-15/16(Φ100)
⑧ Knockout hole for wiring arrangement Φ7/8(Φ22)
Accessory...Drain socket (1(26mm) I.D.)

PCFY-P24NKMU-ER2.TH

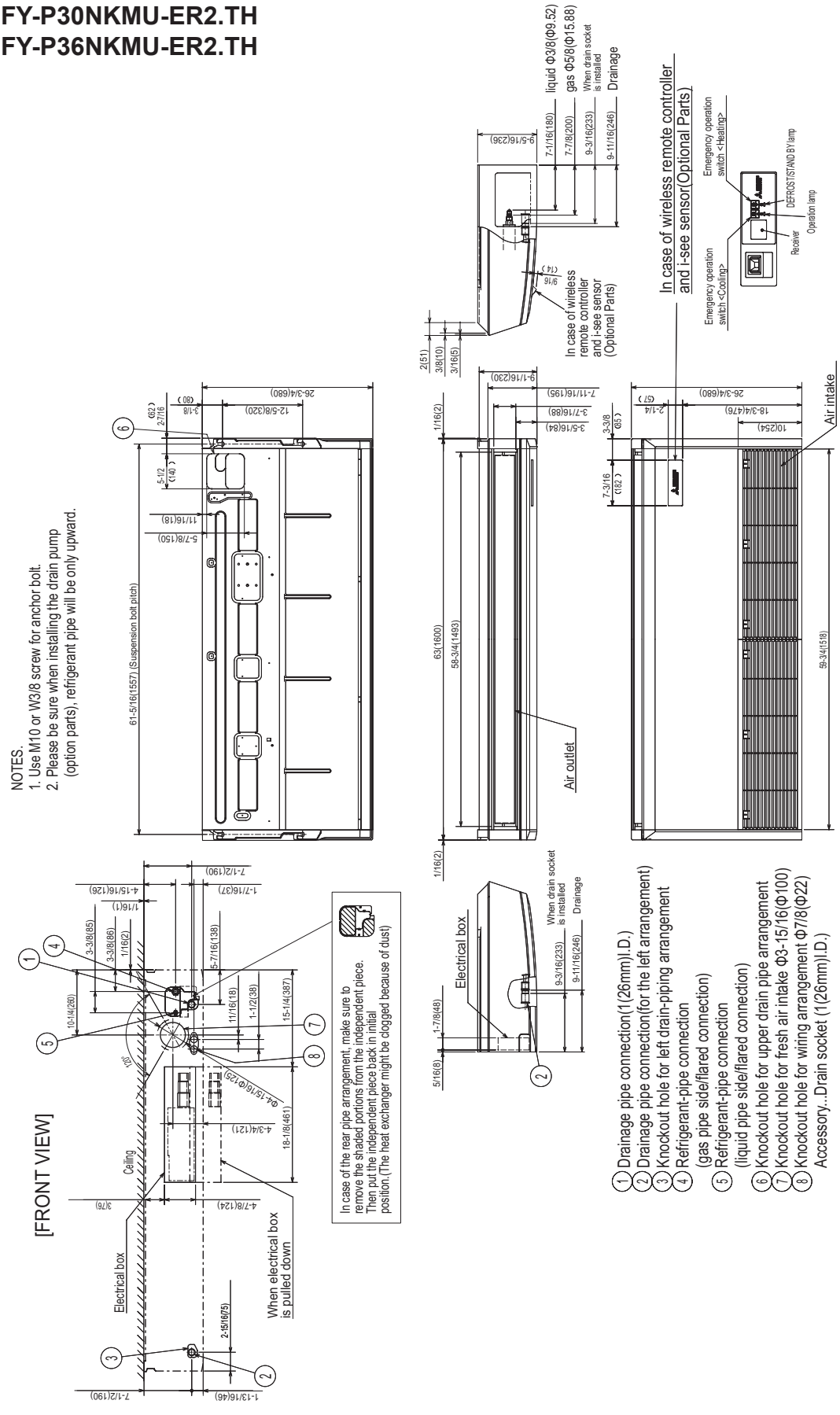
Unit : inch(mm)



① Drainage pipe connection(1(26mm)I.D.)
② Drainage pipe connection(for the left arrangement)
③ Knockout hole for left drain-piping arrangement
④ Refrigerant-pipe connection(gas pipe side/flared connection)
⑤ Refrigerant-pipe connection(liquid pipe side/flared connection)
⑥ Knockout hole for upper drain pipe arrangement
⑦ Knockout hole for fresh air intake Φ3-15/16(Φ100)
⑧ Knockout hole for wiring arrangement Φ7/8(Φ22)
Accessory...Drain socket (1(26mm) I.D.)

PCFY-P30NKMU-ER2.TH
PCFY-P36NKMU-ER2.TH

Unit : inch(mm)



5 WIRING DIAGRAM

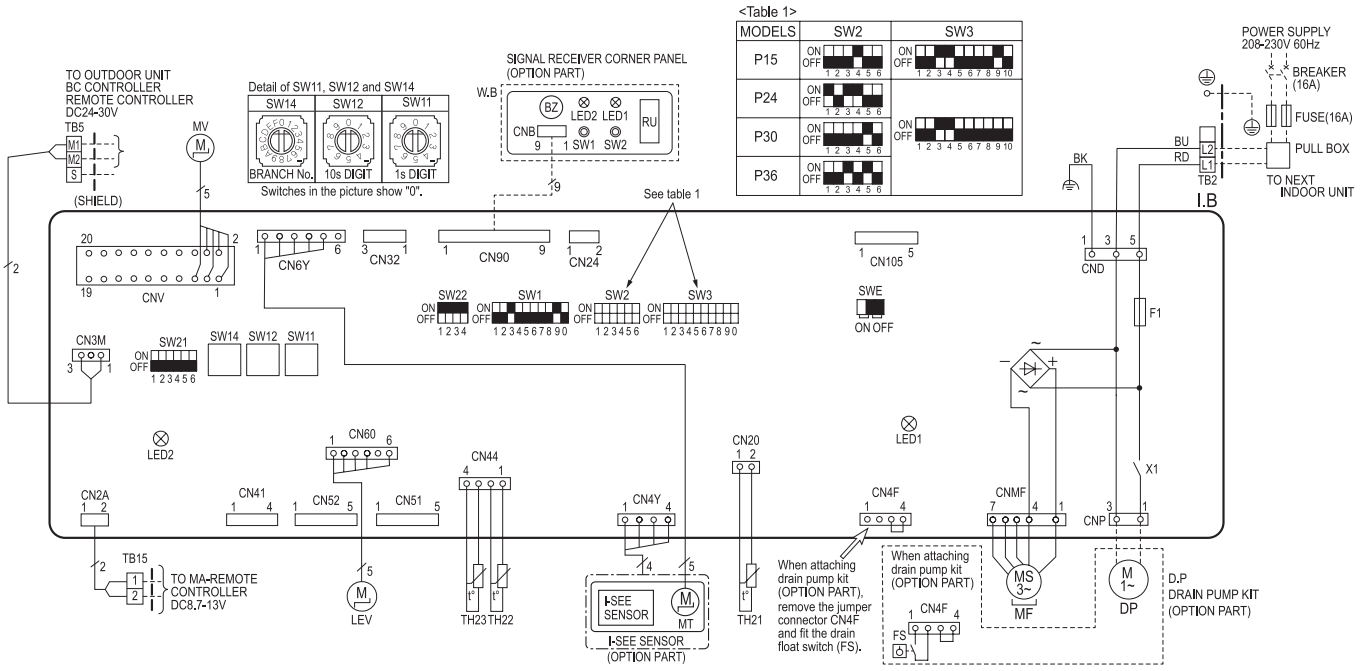
PCFY-P15NKMU-ER2.TH PCFY-P24NKMU-ER2.TH
PCFY-P30NKMU-ER2.TH PCFY-P36NKMU-ER2.TH

[LEGEND]

SYMBOL		NAME		SYMBOL		NAME
I. B		INDOOR CONTROLLER BOARD		TB2	TERMINAL BLOCK	POWER SUPPLY
	CN24	CONNECTOR	EXTERNAL HEATER	TB5		TRANSMISSION
	CN32		REMOTE SWITCH	TB15		MA-REMOTE CONTROLLER
	CN51		CENTRALLY CONTROL	TH21	THERMISTOR	ROOM TEMP. DETECTION (0°C / 15kΩ, 25°C / 5.4kΩ)
	CN52		REMOTE INDICATION			
	CN105		IT TERMINAL	TH22		PIPE TEMP. DETECTION / LIQUID (0°C / 15kΩ, 25°C / 5.4kΩ)
	F1	FUSE (T6.3AL250V)				
	SW1	SWITCH	MODE SELECTION	TH23		PIPE TEMP. DETECTION / GAS (0°C / 15kΩ, 25°C / 5.4kΩ)
	SW2		CAPACITY CODE			
	SW3		MODE SELECTION	OPTIONAL PARTS		
	SW11		ADDRESS SETTING 1s DIGIT		W.B	PCB FOR WIRELESS REMOTE CONTROLLER
	SW12		ADDRESS SETTING 10s DIGIT		BZ	BUZZER
	SW14		BRANCH No.		LED1	LED (OPERATION INDICATION : GREEN)
	SW21		CEILNG HEIGHT SELECTOR OPTION SELECTOR		LED2	LED (PREPARATION FOR HEATING : ORANGE)
					RU	RECEVING UNIT
	SW22		PAIR NO. SETTING		SW1	EMERGENCY OPERATION (HEAT / DOWN)
	SWE		DRAIN PUMP (TEST MODE)		SW2	EMERGENCY OPERATION (COOL / UP)
	X1	AUX.RELAY	DRAIN PUMP (OPTIONAL PARTS)	D.P		DRAIN PUMP KIT
LEV		LINEAR EXPANSION VALVE			DP	DRAIN PUMP
MF		FAN MOTOR			FS	DRAIN FLOAT SWITCH
MV		VANE MOTOR		MT		I-SEE SENSOR MOTOR

LED on indoor board for service

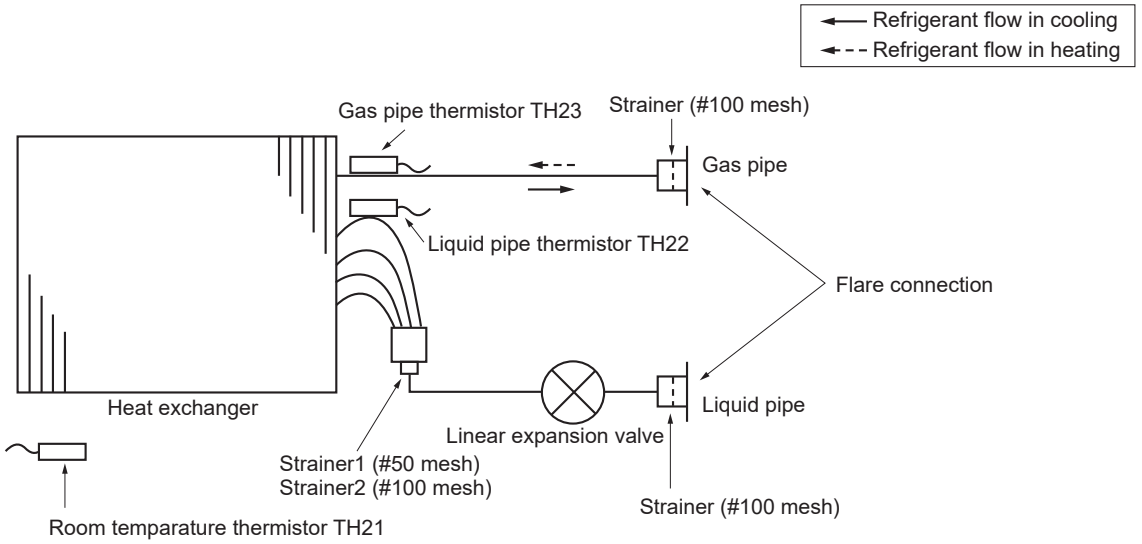
Mark	Meaning	Function
LED1	Main power supply	Main Power supply (Indoor unit) power on → lamp is lit
LED2	Power supply for MA-Remote controller	Power supply for MA-Remote controller on → lamp is lit



NOTES:
1. At servicing for outdoor unit, always follow the wiring diagram of outdoor unit.
2. In case of using MA-Remote controller, please connect to TB15.
   (Remote controller wire is non-polar.)
3. In case of using M-NET, please connect to TB5. (Transmission line is non-polar.)
4. Symbol [S] of TB5 is the shield wire connection.
5. Symbols used in wiring diagram above are, ▭▭ : terminal block, ▭▭▭ , ▭ : connector.
6. The setting of the SW2, SW3 differs in the capacity. For the detail, see table 1.
7. The black square (■) in the wiring diagram indicates a switch position.

6 REFRIGERANT SYSTEM DIAGRAM

PCFY-P15NKMU-ER2.TH PCFY-P24NKMU-ER2.TH
PCFY-P30NKMU-ER2.TH PCFY-P36NKMU-ER2.TH

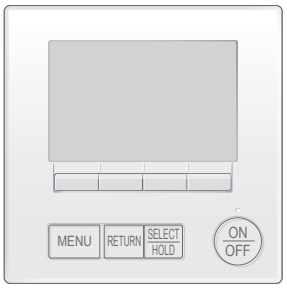


Unit : mm (inch)

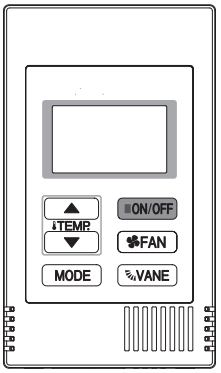
Item \ Service Ref.	PCFY-P15NKMU-ER2.TH	PCFY-P24NKMU-ER2.TH PCFY-P30NKMU-ER2.TH PCFY-P36NKMU-ER2.TH
Gas pipe	ø12.7 (1/2)	ø15.88 (5/8)
Liquid pipe	ø6.35 (1/4)	ø9.52 (3/8)

7 MICROPROCESSOR CONTROL

INDOOR UNIT CONTROL
7-1. COOL OPERATION



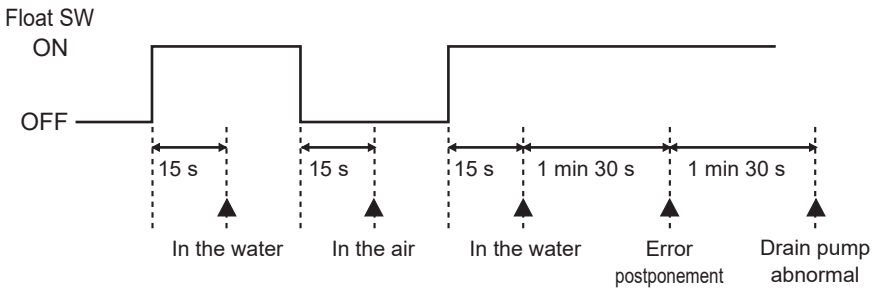
<How to operate>
① Press ON/OFF button.
② Press [F1] button to display COOL.
③ Press [F2] [F3] button to set the set temperature.
NOTE: The settable temperature range varies with the model of outdoor units and remote controller.



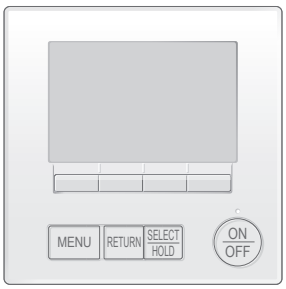
<How to operate>
① Press POWER ON/OFF button.
② Press the operation MODE button to display COOL.
③ Press the TEMP. button to set the set temperature.
NOTE: The set temperature changes 1°F when the ▽ or △ button is pressed one time. Cooling 67 to 87°F

Control Mode	Control Details	Remarks
1. Temperature adjustment function	1-1. Determining temperature adjustment function (Function to prevent restarting for 3 minutes) • Room temperature ≧ Set temperature + 2°F ⋯Thermo-ON • Room temperature ≦ Set temperature ⋯Thermo-OFF 1-2. Anti-freeze control ■ Condition to detect When the pipe temperature detection thermistor/liquid (TH22) detects 32°F or less in 16 minutes from thermo-ON, the anti-freeze control initiates, and the unit enters to the thermo-OFF. ■ Condition to release The timer which prevents reactivating is set for 3 minutes, and anti-freeze control is cancelled when any one of the following conditions has been satisfied: ① Pipe temperature detection thermistor/liquid (TH22) reaches 50°F or above. ② The condition of thermo-OFF has been completed by the thermostat. ③ The operation has changed to a mode other than COOLING.	• The ON/OFF commands by the indoor unit thermostatic control are not an ON/OFF commands to the compressor but an open/close commands to the linear expansion valve. (The compressor stops only when the thermostatic control for all the indoor units connected to the same outdoor unit turns OFF.)
2. Fan	By the remote controller setting (switch of 4 speeds+Auto) Type: 4 speeds + Auto type Fan speed notch: Auto → ⋅ → ⋅ → ⋅ → ⋅ When [Auto] is set, fan speed is changed depending on the value of: ΔT = Room temperature − Set temperature High Med2 Med1 Low 1.8ºF 3.15ºF 5.4ºF ⊿T	

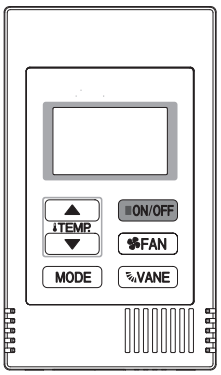
Continue to the next page

Control Mode	Control Details	Remarks
3. Drain pump	3-1. Drain pump control • The drain pump will always run when the unit is in COOL or DRYING mode. (Regardless of the thermo ON/OFF) • Whenever the operation is changed over to the other modes (including Stop), the drain pump will stop pumping after approximately 3 minutes.	
	Float switch control • Float switch control judges whether the sensor is in the air or in the water by turning the float switch ON/OFF. In the water: Detected that the float switch is ON for 15 seconds. In the air: Detected that the float switch is OFF for 15 seconds 	
4. Vane (up/down vane change)	(1) The initial vane setting for COOL mode is the horizontal position. (2) Vane position: Horizontal →Downward A →Downward B →Downward C→Downward D→Swing→Auto (3) Restriction of the downward vane setting If the vane position is set to Downward A/B/C/D in [Med1], [Med2], or [Low], the vane will return to the horizontal position after 1 hour has passed.	• "1 h" appears on the wired remote controller.

7-2. DRYING OPERATION



<How to operate>
① Press ON/OFF button.
② Press [F1] button to display DRYING.
③ Press [F2] [F3] button to set the set temperature.

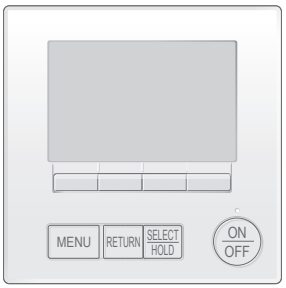


<How to operate>
① Press POWER ON/OFF button.
② Press the operation MODE button to display DRYING.
③ Press the TEMP. button to set the set temperature.
NOTE: The set temperature changes 1°F when the ▽ or △ button is pressed one time. Dry 67 to 87°F

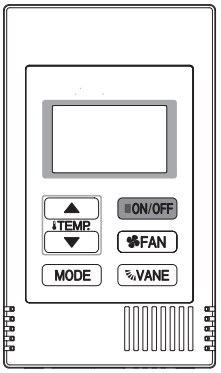
<table>
<tr><th>Control Mode</th><th>Control Details</th><th>Remarks</th></tr>
<tr><td>1. Temperature adjustment function</td><td>1-1. Determining temperature adjustment function
(Function to prevent restarting for 3 minutes)
Setting the Dry thermo by the thermostat signal and the room temperature (TH21).
Dry thermo-ON Room temperature ≧ Set temperature + 2°F
Dry thermo-OFF Room temperature ≦ Set temperature

<table>
<tr><th rowspan="2">Room temperature</th><th colspan="2">3 minutes passed since starting operation</th><th rowspan="2">Dry thermo-ON time (min)</th><th rowspan="2">Dry thermo-OFF time (min)</th></tr>
<tr><th>Thermostat signal</th><th>Room temperature (T1)</th></tr>
<tr><td rowspan="5">Over 64°F</td><td rowspan="4">ON</td><td>T1 ≧ 83°F</td><td>9</td><td>3</td></tr>
<tr><td>83°F > T1 ≧ 79°F</td><td>7</td><td>3</td></tr>
<tr><td>79°F > T1 ≧ 75°F</td><td>5</td><td>3</td></tr>
<tr><td>75°F > T1</td><td>3</td><td>3</td></tr>
<tr><td>OFF</td><td>Unconditional</td><td>3</td><td>10</td></tr>
<tr><td>Below 64°F</td><td colspan="4">Dry thermo OFF</td></tr>
</table>
</td><td></td></tr>
<tr><td></td><td>1-2. Anti-freeze control
No control function</td><td></td></tr>
<tr><td>2. Fan</td><td>Indoor fan operation control depends on the compressor conditions.
<table>
<tr><th>Dry thermo</th><th colspan="2">Fan speed notch</th></tr>
<tr><td>ON</td><td colspan="2">[Low]</td></tr>
<tr><td rowspan="2">OFF</td><td>Excluding the following</td><td>Stop</td></tr>
<tr><td>Room temp. < 64°F</td><td>[Low]</td></tr>
</table>
Note: Fan speed change is not allowed during DRYING operation.</td><td></td></tr>
<tr><td>3. Drain pump</td><td>Operates as it would in COOL operation.</td><td></td></tr>
<tr><td>4. Vane (up/down vane change)</td><td>Settings are the same in DRY operation as they are in COOL operation.</td><td></td></tr>
</table>

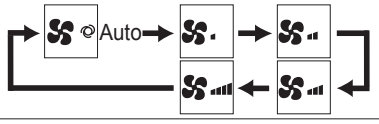
7-3. FAN OPERATION



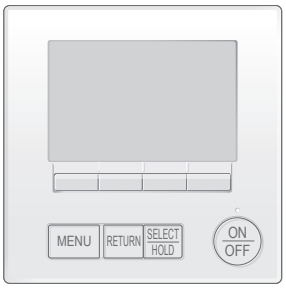
<How to operate>
① Press ON/OFF button.
② Press [F1] button to display FAN.



<How to operate>
① Press POWER ON/OFF button.
② Press the operation MODE button to display FAN.

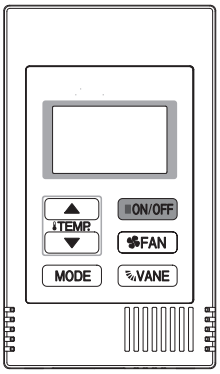
Control Mode	Control Details	Remarks
1. Temperature adjustment function	Set by remote controller. Type: 4 speeds + Auto type Fan speed notch:  When [Auto] is set, fan speed becomes [Low].	
2. Drain pump	2-1. Drain pump control The drain pump turns ON for the specified amount of time when any of the following conditions has been satisfied: ① ON for 3 minutes after the operation mode is switched from COOL or DRYING to another operation mode (FAN). ② ON for 6 minutes after the float switch is submerged in the water when the float switch control judges the sensor is in the water.	
	2-2. Float switch control • Float switch control judges whether the sensor is in the air or in the water by turning the float switch ON/OFF. In the water: Detected that the float switch is ON for 15 seconds. In the air: Detected that the float switch is OFF for 15 seconds.	• Operates as it would in COOL operation.
3. Vane (up/down vane change)	Same as the control performed during the COOL operation, but with no restriction on the vane's downward blow setting	

7-4. HEAT OPERATION



<How to operate>

① Press ON/OFF button.
② Press [F1] button to display HEAT.
③ Press [F2] [F3] button to set the set temperature.
NOTE: The settable temperature range varies with the model of outdoor units and remote controller.

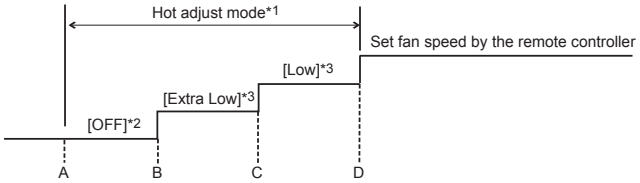


<How to operate>

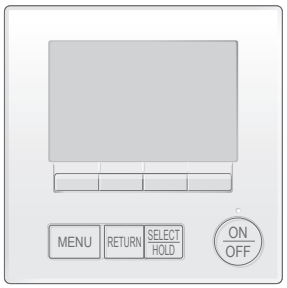
① Press POWER ON/OFF button.
② Press the operation MODE button to display HEAT.
③ Press the TEMP. button to set the set temperature.
NOTE: The set temperature changes 1°F when the ▽ or △ button is pressed one time. Heating 63 to 83°F

Control Mode	Control Details	Remarks
1. Temperature adjustment function	1-1. Determining temperature adjustment function (Function to prevent restarting for 3 minutes) • Room temperature ≦ Set temperature −2°F ⋯Thermo-ON • Room temperature ≧ Set temperature ⋯Thermo-OFF	
2. Fan	By the remote controller setting (switch of 4 speeds+Auto) Type: 4 speeds + Auto type; Fan speed notch: Auto → ▪ → ▪▪ → ▪▪▪ → ▪▪ When [Auto] is set, fan speed is changed depending on the value of: ΔT = Set temperature − Room temperature Give priority to under-mentioned controlled mode 2-1. Hot adjust mode 2-2. Residual heat exclusion mode 2-3. Thermo-OFF mode (When the compressor off by the temperature adjustment function) 2-4. Cool air prevention mode (Defrosting mode)	

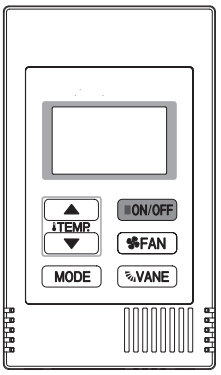
Continue to the next page.

Control Mode	Control Details	Remarks
	2-1. Hot adjust mode The fan controller becomes the hot adjust mode for the following conditions. ① When starting HEAT operation ② When the temperature adjustment function changes from OFF to ON. ③ When release the HEAT defrosting operation  A: Hot adjust mode starts. B: 5 minutes have passed since the condition A or the indoor liquid pipe temperature reached 86°F or more. C: 5 minutes have passed since the condition A or the indoor liquid pipe temperature reached 95°F or more. D: 2 minutes have passed since the condition C. (Terminating the hot adjust mode) <table><tr><td colspan="2" rowspan="2"></td><td colspan="2">DIP SW 1-8</td></tr><tr><td>ON</td><td>OFF</td></tr><tr><td rowspan="2">DIP SW 1-7</td><td>ON</td><td>B to C [Extra Low] C to D [Low]</td><td>B to C [Low] C to D [Low]</td></tr><tr><td>OFF</td><td>B to C [Setting airflow] C to D [Setting airflow]</td><td>B to C [Extra Low] C to D [Low] Note: Initial setting</td></tr></table>	*1 "Heat Standby" will be displayed during the hot adjust mode. *2 The step change of A to B will not be performed at the first thermo-ON mode since HEAT operation has started. *3 The fan speed varies according to the setting of DIP SW1-7 and 1-8 as shown in the table below.
	2-2. Residual heat exclusion mode When the condition changes the auxiliary heater ON to OFF (temperature adjustment function, or operation stop, etc.), the indoor fan operates in [Low] mode for 1 minute.	• This control is same for the model without auxiliary heater.
	2-3. Thermo-OFF mode When the temperature adjustment function changes to OFF, the indoor fan operates in [Extra low].	
	2-4. Heat defrosting mode The indoor fan stops.	
3. Drain pump	3-1. Drain pump control The drain pump turns ON for the specified amount of time when any of the following conditions has been satisfied: ① ON for 3 minutes after the operation mode is switched from COOL or DRYING to another operation mode (FAN). ② ON for 6 minutes after the float switch is submerged in the water when the float switch control judges the sensor is in the water.	
	3-2. Float switch control • Float switch control judges whether the sensor is in the air or in the water by turning the float switch ON/OFF. In the water: Detected that the float switch is ON for 15 seconds. In the air: Detected that the float switch is OFF for 15 seconds.	• Operates as it would in COOL operation.
4. Vane control (Up/down vane change)	(1) Initial setting: OFF → HEAT⋯[last setting] When the last setting is [Swing] ⋯ [Downward D] When changing the mode from exception of HEAT to HEAT operation ⋯[Downward D] (2) Vane position: Horizontal →Downward A →Downward B →Downward C→Downward D→Swing→Auto (3) Restriction of vane position ① The vane is horizontally fixed for the following modes. (The control by the remote controller is temporally invalidated and control by the unit.) • Thermo-OFF • Hot adjust [Extra low] mode • Heat defrost mode	

7-5. AUTO OPERATION [AUTOMATIC COOL/HEAT CHANGE OVER OPERATION]



<How to operate>
① Press ON/OFF button.
② Press [F1] button to display AUTO.
③ Press [F2] [F3] button to set the set temperature.
NOTE: The settable temperature range varies with the model of outdoor units and remote controller.



<How to operate>
① Press POWER ON/OFF button.
② Press the operation MODE button to display AUTO.
③ Press the TEMP. button to set the set temperature.
NOTE: The set temperature changes 1°F when the ▽ or △ button is pressed one time. Automatic 67 to 83°F

Control Mode	Control Details	Remarks
1. Initial value of operation mode	HEAT mode for room temperature < Set temperature COOL mode for room temperature ≧ Set temperature	
2. Mode change	(1) HEAT mode → COOL mode Room temperature ≧ Set temperature + 3°F or 3 minutes have passed. (2) COOL mode → HEAT mode Room temperature ≦ Set temperature − 3°F or 3 minutes have passed.	
3. COOL mode	Operates as it would in COOL operation.	
4. HEAT mode	Operates as it would in HEAT operation.	

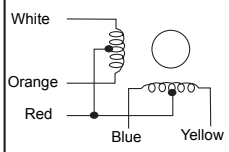
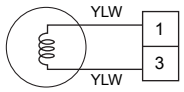
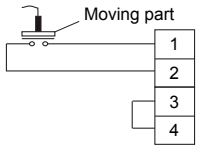
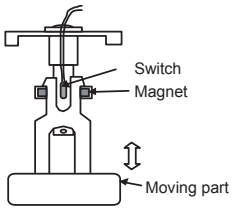
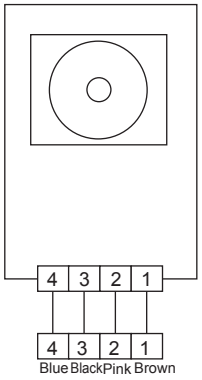
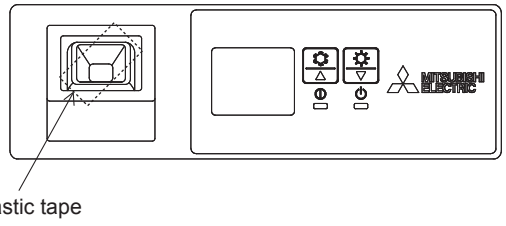
7-6. WHEN UNIT IS STOPPED CONTROL MODE

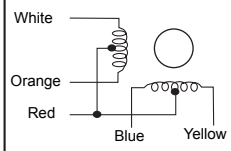
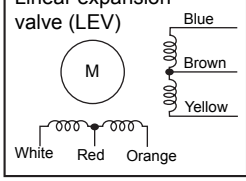
Control Mode	Control Details	Remarks
1. Drain pump	1-1. Drain pump control The drain pump turns ON for the specified amount of time when any of the following conditions has been satisfied: ① ON for 3 minutes after the operation mode is switched from COOL or DRY to another operation mode (FAN). ② ON for 6 minutes after the float switch is submerged in the water when the float switch control judges the sensor is in the water.	
	1-2. Float switch control • Float switch control judges whether the sensor is in the air or in the water by turning the float switch ON/OFF. In the water : Detected that the float switch is ON for 15 seconds. In the air : Detected that the float switch is OFF for 15 seconds.	• Operates as it would in COOL operation.

8 TROUBLESHOOTING

8-1. HOW TO CHECK THE PARTS

PCFY-P15NKMU-ER2.TH PCFY-P24NKMU-ER2.TH PCFY-P30NKMU-ER2.TH PCFY-P36NKMU-ER2.TH

<table>
<tr><th>Parts name</th><th>Check points</th></tr>
<tr><td>Room temperature thermistor (TH21)
Liquid pipe thermistor (TH22)
Gas pipe thermistor (TH23)</td><td>Disconnect the connector then measure the resistance with a tester.
(At the ambient temperature 50°F~86°F)
<table><tr><th>Normal</th><th>Abnormal</th></tr><tr><td>4.3kΩ~9.6kΩ</td><td>Open or short</td></tr></table>(Refer to the next page for a detail.)</td></tr>
<tr><td>Vane motor (MV)

</td><td>Measure the resistance between the terminals with a tester.
(At the ambient temperature of 68°F~86°F)
<table><tr><th>Connector</th><th>Normal</th><th>Abnormal</th></tr><tr><td>Red - Yellow</td><td rowspan="4">300Ω</td><td rowspan="4">Open or short</td></tr><tr><td>Red - Blue</td></tr><tr><td>Red - Orange</td></tr><tr><td>Red - White</td></tr></table></td></tr>
<tr><td>Drain pump (DP) (Option)

</td><td>Measure the resistance between the terminals with a tester.
(Winding temperature 68°F)
<table><tr><th>Normal</th><th>Abnormal</th></tr><tr><td>290Ω</td><td>Open or short</td></tr></table></td></tr>
<tr><td>Drain float switch (FS) (Option)

</td><td>Measure the resistance between the terminals with a tester.
<table><tr><th>State of moving part</th><th>Normal</th><th>Abnormal</th></tr><tr><td>UP</td><td>Short</td><td>Other than short</td></tr><tr><td>DOWN</td><td>Open</td><td>Other than open</td></tr></table>
</td></tr>
<tr><td>i-see sensor (Option)

</td><td>①Turn on the indoor unit with the black plastic tape on the outside of i-see sensor controller board.
②i-see sensor rotates then pull out the connector of motor for i-see sensor.
③With electricity being turned on, measure the power voltage between connectors with tester.


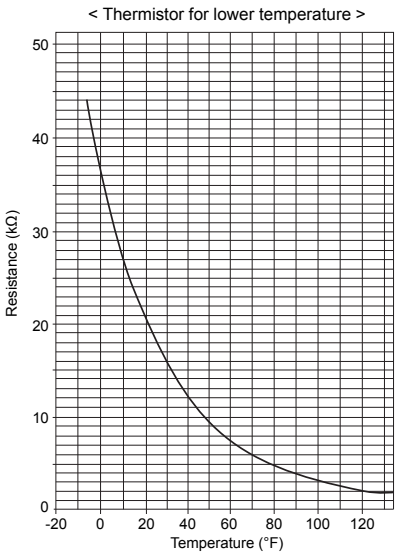
Black plastic tape
i-see sensor (At the ambient temperature of 50°F~104°F)
<table><tr><th>i-see sensor connector</th><th>Normal</th><th>Abnormal</th></tr><tr><td>②(–)—④(+)</td><td>DC 1.857V~ 3.132V</td><td>Other than the normal</td></tr><tr><td>①(+)—②(–)</td><td>DC 0.939V~ 1.506V</td><td>Other than the normal</td></tr></table>**NOTE** : Be careful of handing such a static electricity.</td></tr>
<tr><td>Vane motor for i-see sensor (Option)

</td><td>Measure the resistance between the terminals with a tester.
(At the ambient temperature of 68°F~86°F)
<table><tr><th>Connector</th><th>Normal</th><th>Abnormal</th></tr><tr><td>Red - Yellow</td><td rowspan="4">250Ω</td><td rowspan="4">Open or short</td></tr><tr><td>Red - Blue</td></tr><tr><td>Red - Orange</td></tr><tr><td>Red - White</td></tr></table></td></tr>
<tr><td>Linear expansion valve (LEV)

</td><td>Disconnect the connector then measure the resistance valve with a tester.
<table><tr><th colspan="4">Normal</th><th>Abnormal</th></tr><tr><td>White-Red</td><td>Yellow-Brown</td><td>Orange-Red</td><td>Blue-Brown</td><td rowspan="2">Open or short</td></tr><tr><td colspan="4">200Ω ±10%</td></tr></table>Refer to 8-1-2.</td></tr>
</table>

8-1-1. Thermistor

<Thermistor characteristic graph>

Thermistor for lower temperature

Room temperature detection thermistor (TH21)
Pipe temperature detection thermistor/liquid (TH22)
Pipe temperature detection thermistor/gas (TH23)



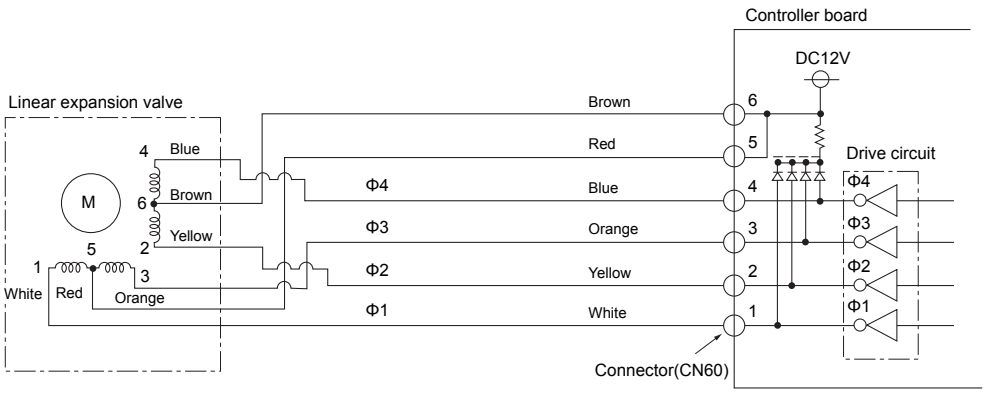
Thermistor R_0=15kΩ ± 3%
Fixed number of B=3480 ± 2%

$$Rt=15\exp\{3480(\frac{1}{273+(t-32)/1.8}-\frac{1}{273})\}$$

30°F	15.8kΩ
50°F	9.6kΩ
70°F	6.0kΩ
80°F	4.8kΩ
90°F	3.9kΩ
100°F	3.2kΩ

8-1-2. Linear expansion valve

① Operation summary of the linear expansion valve
• Linear expansion valve open/close through stepping motor after receiving the pulse signal from the indoor controller board.
• Valve position can be changed in proportion to the number of pulse signals.
<Connection between the indoor controller board and the linear expansion valve>



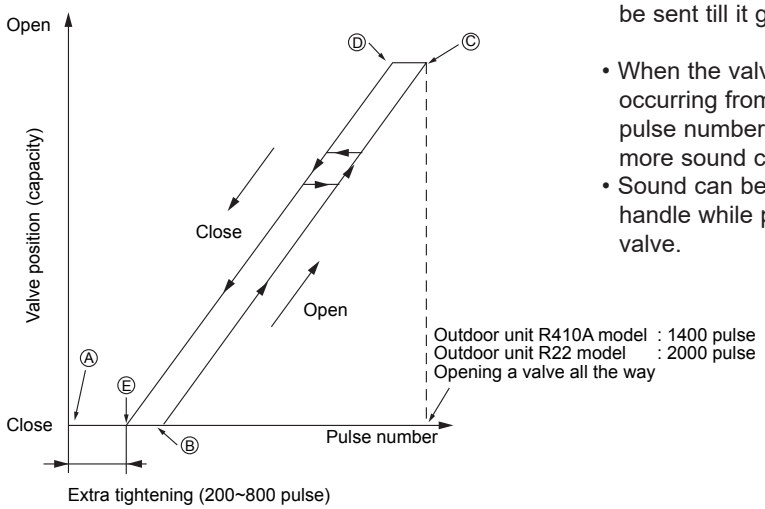
<Output pulse signal and the valve operation>

Output (Phase)	Output			
	1	2	3	4
Φ1	ON	OFF	OFF	ON
Φ2	ON	ON	OFF	OFF
Φ3	OFF	ON	ON	OFF
Φ4	OFF	OFF	ON	ON

Closing a valve : 1 → 2 → 3 → 4 → 1
Opening a valve : 4 → 3 → 2 → 1 → 4
The output pulse shifts in above order.

Note:
- When linear expansion valve operation stops, all output phase become OFF.
- At phase interruption or when phase does not shift in order, motor does not rotate smoothly and motor will lock and vibrate.

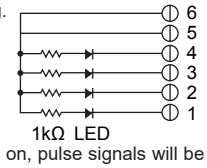
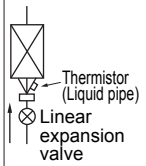
② Linear expansion valve operation



- When the switch is turned on, 2200 pulse closing valve signal will be sent till it goes to point Ⓐ in order to define the valve position.

- When the valve moves smoothly, there is no sound or vibration occurring from the linear expansion valves, however, when the pulse number moves from Ⓔ to Ⓐ or when the valve is locked, more sound can be heard than in a normal situation.
- Sound can be detected by placing the ear against the screw driver handle while putting the screw driver tip to the linear expansion valve.

③ Troubleshooting

Symptom	Check points	Countermeasures
Operation circuit failure of the micro processor	Disconnect the connector on the controller board, then connect LED for checking.  When power is turned on, pulse signals will be output for 10 seconds. There must be some defects in the operation circuit if the LED does not light while the signals are output or keeps lighting even after the signals stop.	Exchange the indoor controller board at drive circuit failure.
Linear expansion valve mechanism is locked.	Motor will idle and make a ticking noise when the motor is operated while the linear expansion valve is locked. This ticking sound is the sign of the abnormality.	Exchange the linear expansion valve.
Short or breakage of the motor coil of the linear expansion valve	Measure the resistance between each coil (white-red, yellow-brown, orange-red, blue-brown) using a tester. It is normal if the resistance is in the range of 200Ω ±10%.	Exchange the linear expansion valve.
Valve does not close completely.	To check the linear expansion valve, operate the indoor unit in fan mode and at the same time operate other indoor units in cooling mode, then check the pipe temperature <liquid pipe temperature> of the indoor unit by the outdoor multi controller board operation monitor. During fan operation, linear expansion valve is closed completely and if there is any leaking, detecting temperature of the thermistor will go lower. If the detected temperature is much lower than the temperature indicated in the remote controller, it means the valve is not closed all the way.  It is not necessary to exchange the linear expansion valve, if the leakage is small and not affecting normal operation.	If large amount of refrigerant is leaked, exchange the linear expansion valve.
Wrong connection of the connector or contact failure	Check the color of lead wire and missing terminal of the connector.	Disconnect the connector at the controller board, then check the continuity.

8-1-3. DC Fan motor (fan motor/indoor controller circuit board)

Check method of DC fan motor (fan motor/indoor controller circuit board)

① Notes

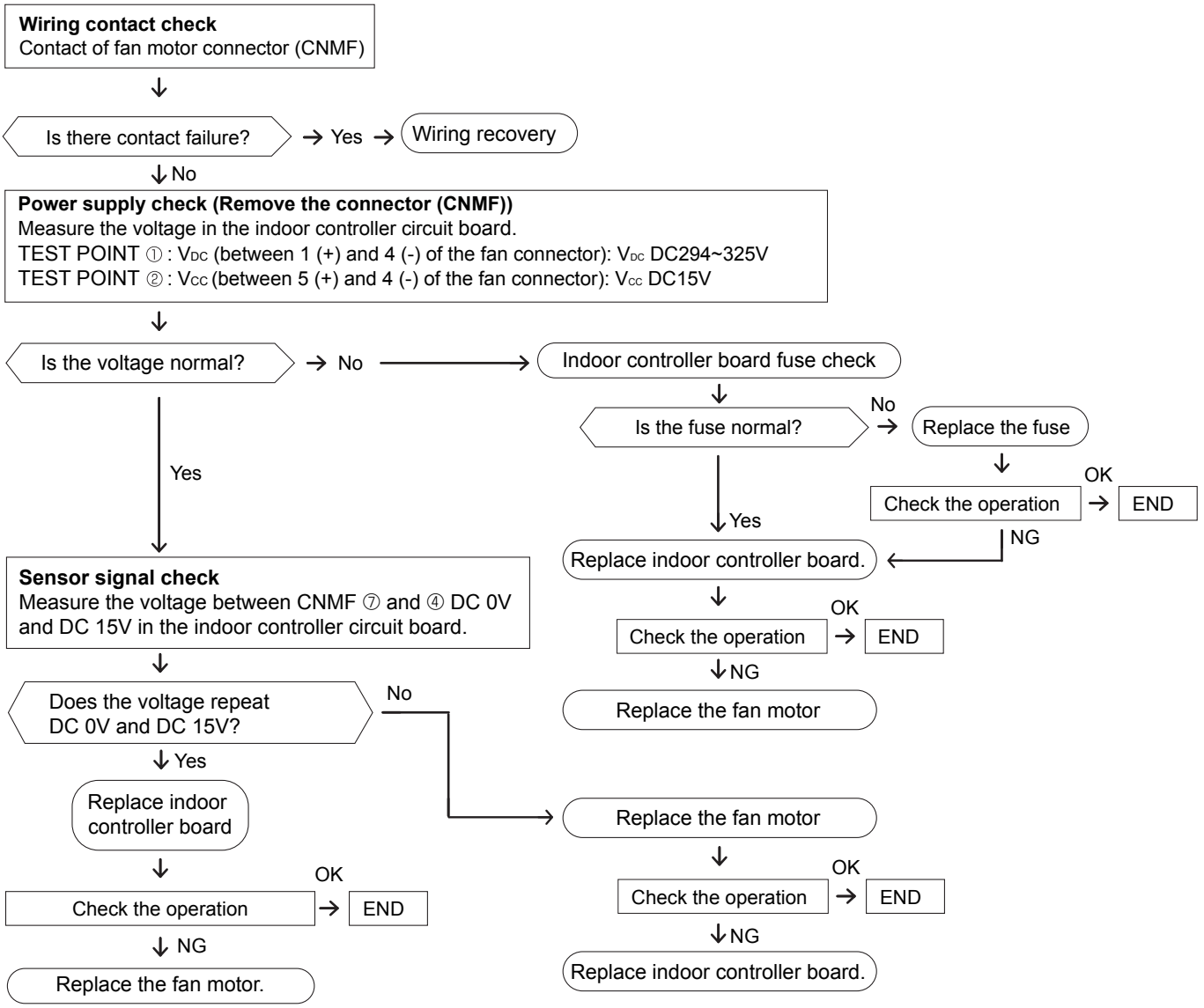
· High voltage is applied to the connecter (CNMF) for the fan motor. Pay attention to the service.

· Do not pull out the connector (CNMF) for the motor with the power supply on.

(It causes trouble of the indoor controller circuit board and fan motor.)

② Self check

Symptom : The indoor fan cannot turn around.

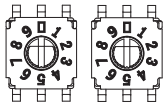
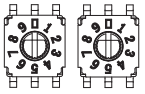
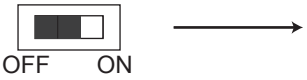


8-2. FUNCTION OF DIP SWITCH

<table>
<tr><th rowspan="2">Switch</th><th rowspan="2">Pole</th><th rowspan="2">Function</th><th colspan="2">Operation by switch</th><th rowspan="2">Effective timing</th><th rowspan="2">Remarks</th></tr>
<tr><th>ON</th><th>OFF</th></tr>
<tr><td rowspan="10">SW1 Function setting</td><td>1</td><td>Thermistor <Room temperature detection> position</td><td>Built-in remote controller</td><td>Indoor unit</td><td rowspan="10">Under suspension</td><td rowspan="10"><Initial setting>
ON
OFF
1 2 3 4 5 6 7 8 9 10
Note :
※1 Fan operation at heating mode
※2 Thermo ON operation at heating mode
※3
<table><tr><td>SW1-7</td><td>SW1-8</td><td></td></tr><tr><td>OFF</td><td>OFF</td><td>Extra low</td></tr><tr><td>ON</td><td>OFF</td><td>Low</td></tr><tr><td>OFF</td><td>ON</td><td>Setting airflow</td></tr><tr><td>ON</td><td>ON</td><td>Stop</td></tr></table></td></tr>
<tr><td>2</td><td>Filter clogging detection</td><td>Provided</td><td>Not provided</td></tr>
<tr><td>3</td><td>Filter cleaning</td><td>2,500 hr</td><td>100 hr</td></tr>
<tr><td>4</td><td>Fresh air intake</td><td>Effective</td><td>Not effective</td></tr>
<tr><td>5</td><td>Switching remote display</td><td>Thermo ON signal display</td><td>Indicating fan operation ON/OFF</td></tr>
<tr><td>6</td><td>Humidifier control</td><td>Always operated while the heat in ON ※1</td><td>Operated depends on the condition ※2</td></tr>
<tr><td>7</td><td rowspan="2">Airflow set in case of Heat thermo OFF at heating mode</td><td>Low ※3</td><td>Extra low ※3</td></tr>
<tr><td>8</td><td>Setting air flow ※3</td><td>Depends on SW1-7</td></tr>
<tr><td>9</td><td>Auto restart function</td><td>Effective</td><td>Not effective</td></tr>
<tr><td>10</td><td>Power ON/OFF by breaker</td><td>Effective</td><td>Not effective</td></tr>
<tr><td>SW2 Capacity code setting</td><td>1~6</td><td colspan="3"><table><tr><td>Capacity</td><td>SW 2</td><td>Capacity</td><td>SW 2</td></tr><tr><td>P15</td><td>ON
OFF
1 2 3 4 5 6</td><td>P24</td><td>ON
OFF
1 2 3 4 5 6</td></tr><tr><td>P30</td><td>ON
OFF
1 2 3 4 5 6</td><td>P36</td><td>ON
OFF
1 2 3 4 5 6</td></tr></table></td><td>Before power supply ON</td><td><Initial setting>
Set for each capacity.</td></tr>
<tr><td rowspan="10">SW3 Function setting</td><td>1</td><td>Heat pump/Cooling only</td><td>Cooling only</td><td>Heat pump</td><td rowspan="10">Under suspension</td><td rowspan="10"><Initial setting>
ON
OFF
1 2 3 4 5 6 7 8 9 10
Note :
※4 SW3-5
※5 Please do not use SW3-9 and SW3-10.
<SW9 setting>
P15: ON
P24,P30,P36: OFF
※6 Each angle can be used only 1 hour when fan speed setting Low and Middle 1,2</td></tr>
<tr><td>2</td><td>Louver</td><td>Available</td><td>Not available</td></tr>
<tr><td>3</td><td>Vane</td><td>Available</td><td>Not available</td></tr>
<tr><td>4</td><td>Vane swing function in heating (wave-flow)</td><td>Available</td><td>Not available</td></tr>
<tr><td>5</td><td>Vane horizontal angle</td><td>Second setting ※4</td><td>First setting ※4</td></tr>
<tr><td>6</td><td>Vane cooling limit angle setting</td><td>Horizontal</td><td>Setting A,B,C,D</td></tr>
<tr><td>7</td><td>Changing the opening of linear expansion valve</td><td>Effective</td><td>Not effective</td></tr>
<tr><td>8</td><td>4-deg up (Heating mode)</td><td>Not effective</td><td>Effective</td></tr>
<tr><td>9</td><td>Superheat setting temperature ※5</td><td>—</td><td>—</td></tr>
<tr><td>10</td><td>Sub cool setting temperature ※5</td><td>—</td><td>—</td></tr>
</table>

Note : ※4 SW3-5

SW3-5	Vane setting	Initial setting	Setting	Vane position
OFF	Set up ①	●	Standard	Standard
ON	Set up ②		Less draft	Upward position than the standard

Switch	Pole	Function	Operation by switch		Effective timing	Remarks
			ON	OFF		
SW11 1s digit address setting SW12 10s digit address setting	Rotary switch	SW12 SW11  10 1	How to set address Example : If address is "3", remain SW12 (for over 10) at "0", and match SW11 (for 1 to 9) with "3".		Before power supply ON	<Initial setting> SW12 SW11  10 1
SW14 Branch No. setting	Rotary switch	SW14 	How to set branch number SW14 (Series R2 only) Match the indoor unit's refrigerant pipe with the BC contoller's end connection number Remain other than series R2 at "0".			<Initial setting> SW14 
SWE Test run for Drain pump (Option)	Connector	Drain pump and fan are activated simultaneously after the connector SWE is set to ON and turn on the power. SWE  OFF ON SWE OFF ON The connector SWE is set to OFF after test run. The connector SWE is set to OFF after test run.			Under operation	<Initial setting> SWE  OFF ON

* Set the switch while the indoor unit and the outdoor unit are both OFF.

The black square (■) indicates a switch position.

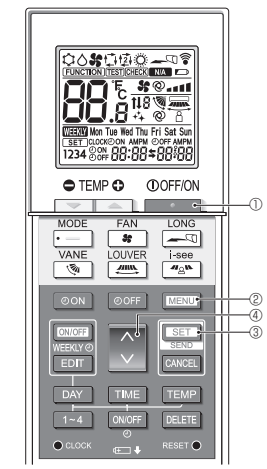
<table>
<tr><th>Switch</th><th>Pole</th><th>Function</th><th colspan="2">Operation by switch</th><th>Effective timing</th><th>Remarks</th></tr>
<tr><td></td><td></td><td></td><td>ON</td><td>OFF</td><td></td><td></td></tr>
<tr><td rowspan="6">SW21
Function selection</td><td>1</td><td>Setting the ceiling height</td><td colspan="2" rowspan="2">Depends on the combination of SW21-1and SW21-2</td><td rowspan="6">Under suspension</td><td rowspan="6"><Initial setting>

</td></tr>
<tr><td>2</td><td>Setting the ceiling height</td></tr>
<tr><td>3</td><td>Not used</td><td>Not used</td><td>Not used</td></tr>
<tr><td>4</td><td>Not used</td><td>Not used</td><td>Not used</td></tr>
<tr><td>5</td><td>Setting for optional parts</td><td>Option</td><td>Standard</td></tr>
<tr><td>6</td><td>Not used</td><td>Not used</td><td>Not used</td></tr>
<tr><td>SW22
Function selection</td><td>Jumper</td><td colspan="3">
<table>
<tr><th></th><th>Function</th><th>ON</th><th>OFF</th></tr>
<tr><td>1</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td>2</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td>3</td><td>Pair No. of wireless remote controller</td><td colspan="2" rowspan="2">Depends on SW22-3, 22-4</td></tr>
<tr><td>4</td><td>Pair No. of wireless remote controller</td></tr>
</table>
• To operate each indoor unit by each remote controller when installed 2 indoor units or more are near, Pair No. setting is necessary.
●Pair No. setting is available with the 4 patterns (Setting patterns A to D).
●Make setting for J41, J42 of indoor controller board and the Pair No. of wireless remote controller.

• You may not set it when operating it by one remote controller. Setting for indoor unit
●Cut jumper wire J41, J42 on the indoor controller board according to the table below.

Wireless remote controller pair number:
●Setting operation (Fig. 1 Ⓐ)
1. Press the [ ] button ① to stop the air conditioner.
2. Press the [MENU] button ②.
3. Check that function No."1" is displayed, and then press the [SET] button ③. The Screen display setting screen will be displayed. (Fig. 2.)

●Pair No. changing operation (Fig. 2 Ⓑ)
1. Press the [∧∨] button ④.
2. Each time the [∧∨] button ④ is pressed, the pair No.0–3 changes.
3. Press the [SET] button ③ to check the setting.
4. Press the [MENU] button ②.

<table>
<tr><th colspan="2">Indoor unit SW22</th><th rowspan="2">Pair No. of wireless remote controller</th><th rowspan="2"></th></tr>
<tr><th>SW22-3</th><th>SW22-4</th></tr>
<tr><td>ON</td><td>ON</td><td>0</td><td>Initial setting</td></tr>
<tr><td>OFF</td><td>ON</td><td>1</td><td>—</td></tr>
<tr><td>ON</td><td>OFF</td><td>2</td><td>—</td></tr>
<tr><td>OFF</td><td>OFF</td><td>3–9</td><td>—</td></tr>
</table>
</td><td>Under operation or suspension</td><td><Initial setting>


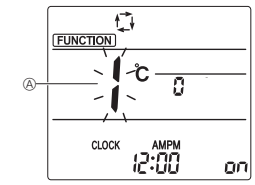


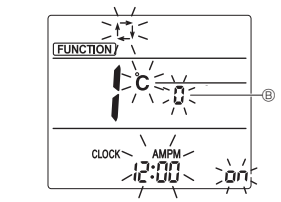
Fig. 1


Fig. 2</td></tr>
</table>

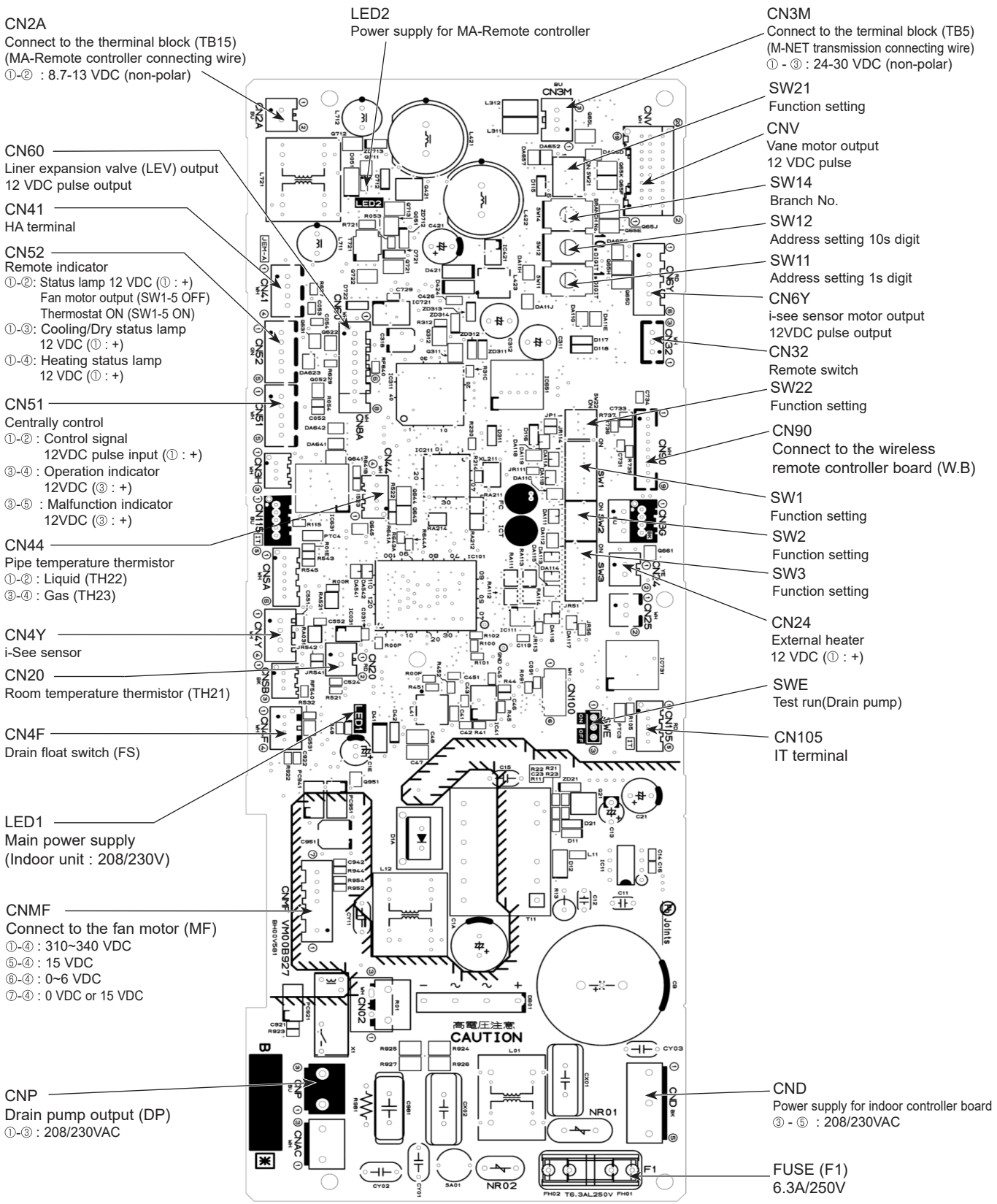
Note: SW21-1, SW21-2

	Silent		Standard		High ceiling	
	SW21-1	SW21-2	SW21-1	SW21-2	SW21-1	SW21-2
	OFF	ON	OFF	OFF	ON	OFF
P15, P24	2.5 m, 8.2 ft		2.7 m, 8.9 ft		3.5 m, 11.5 ft	
P30, P36	2.6 m, 8.5 ft		3.0 m, 9.8 ft		4.2 m, 13.8 ft	

8-3. TEST POINT DIAGRAM

8-3-1. Indoor controller board

PCFY-P15NKMU-ER2.TH PCFY-P24NKMU-ER2.TH PCFY-P30NKMU-ER2.TH PCFY-P36NKMU-ER2.TH



9 DISASSEMBLY PROCEDURE

PCFY-P15NKMU-ER2.TH **PCFY-P24NKMU-ER2.TH**
PCFY-P30NKMU-ER2.TH **PCFY-P36NKMU-ER2.TH**

Be careful when removing heavy parts.
(Photo: **PCFY-P36NKMU-ER2.TH**)

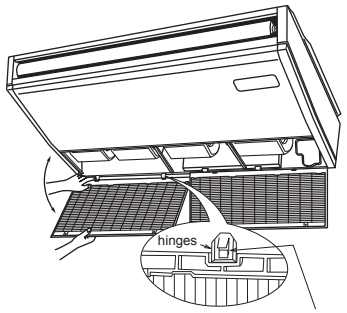
OPERATING PROCEDURE

1. Removing the air intake grille

(1) Slide the air intake grille holding knobs (at 2 or 3 locations) to the rear to open the air intake grille. (See Figure 1)

(2) While the air intake grille left open, push the stoppers on the rear hinges (at 2 or 3 locations) to pull out the air intake grille. (See Figure 2)

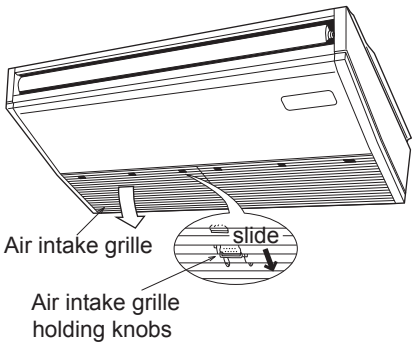
Figure 2



Pull out the air intake grille

PHOTOS & ILLUSTRATIONS

Figure 1



2. Removing the indoor controller board and the electrical box

(1) Remove the air intake grille. (See Figure 1, 2)

(2) Remove the screw from the beam and remove the beam. (See Photo 1)

(3) Remove 2 screws from the electrical cover, and remove the electrical cover.

(4) Remove 2 screws from the electrical box and pull the electrical box downward.
Temporarily secure the electrical box using 2 hooks in the back of electrical box.

(5) Disconnect the connectors on the indoor controller board.

[Removing the electrical box]

(6) Disconnect the wires from the terminal blocks and pull out the electrical box. (See Photo 2)

[Removing the indoor controller board]

(6) Remove the 6 supports from the indoor controller board and remove the indoor controller board. (See Photo 3)

Photo 1

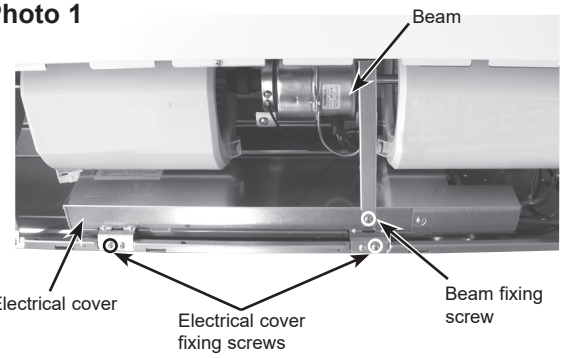


Photo 2

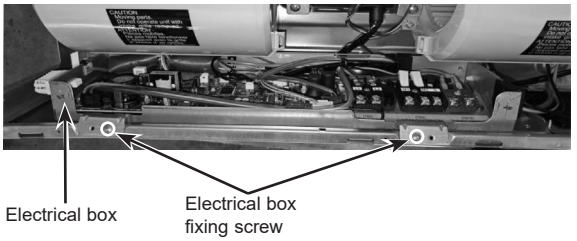
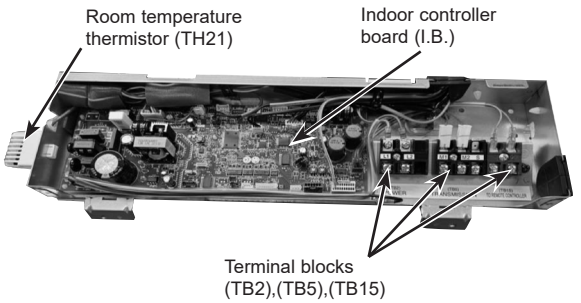
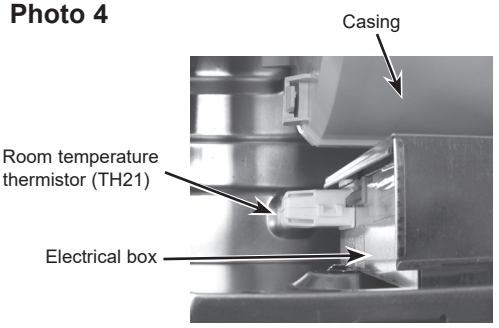
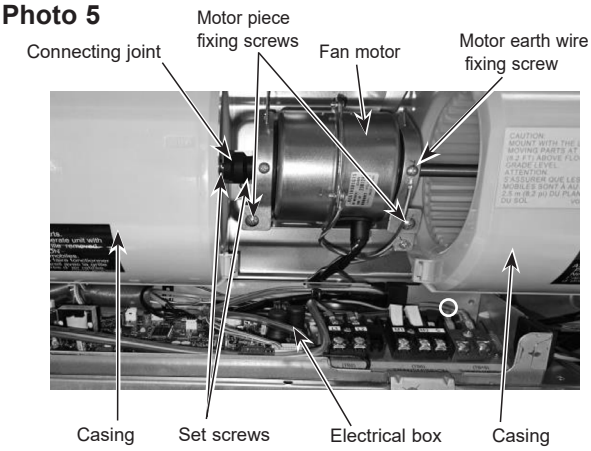
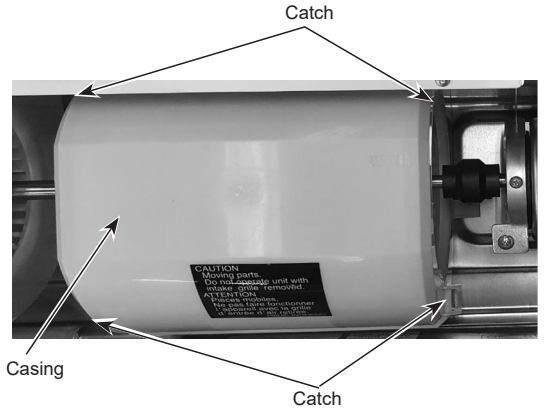
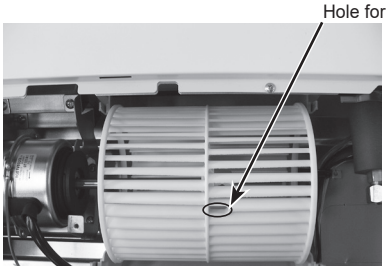
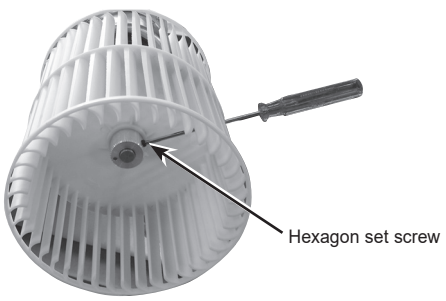
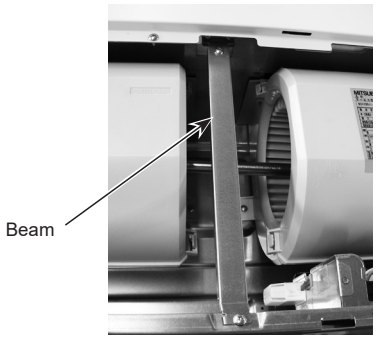
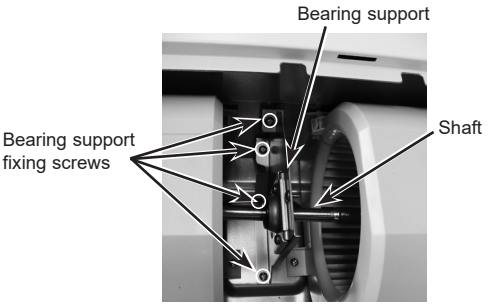
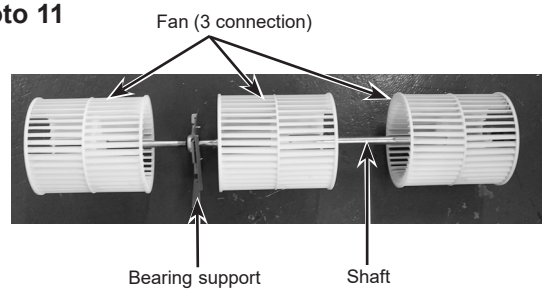
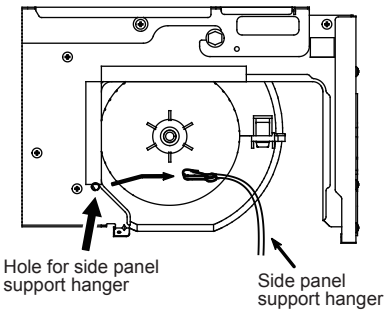
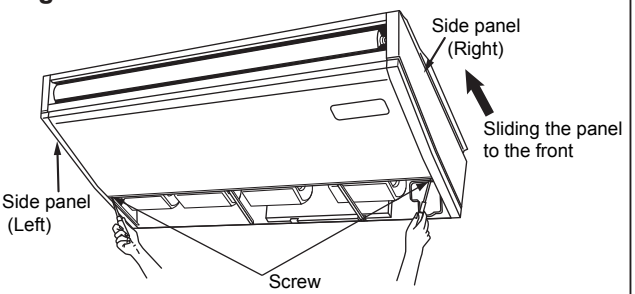
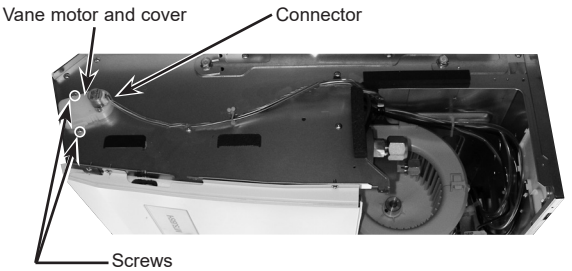
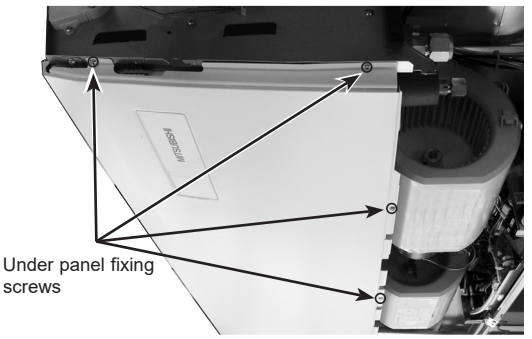
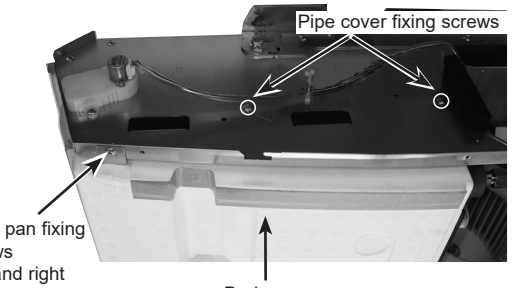
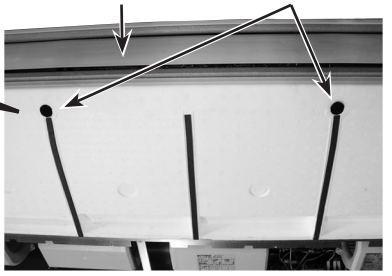
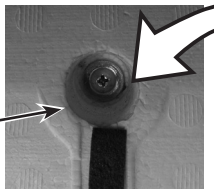


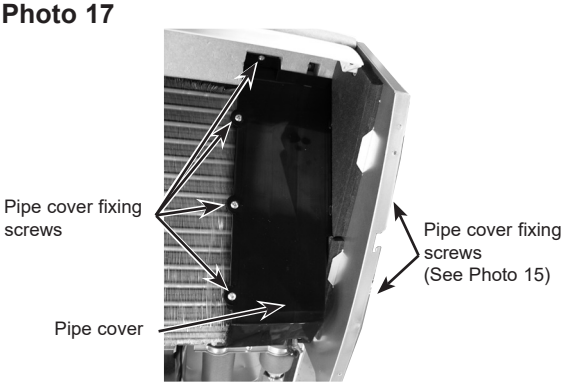
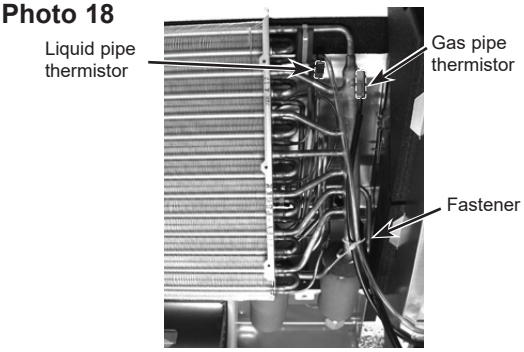
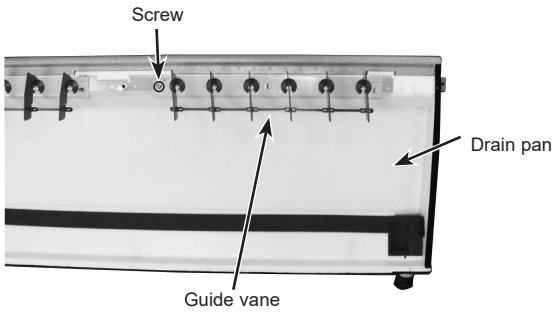
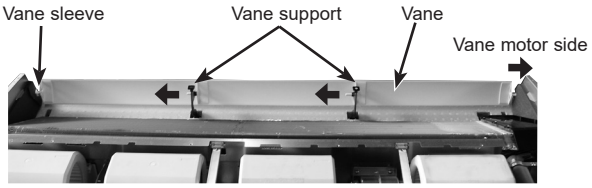
Photo 3

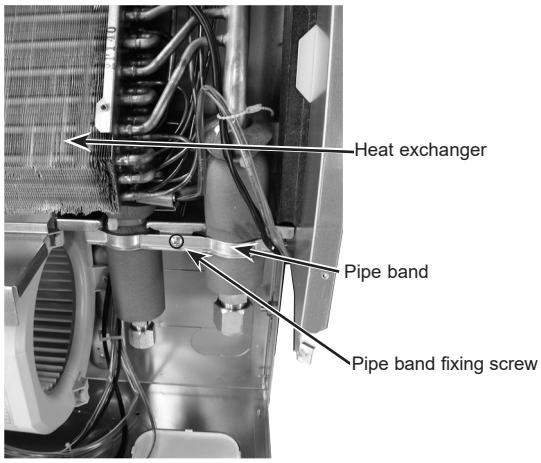
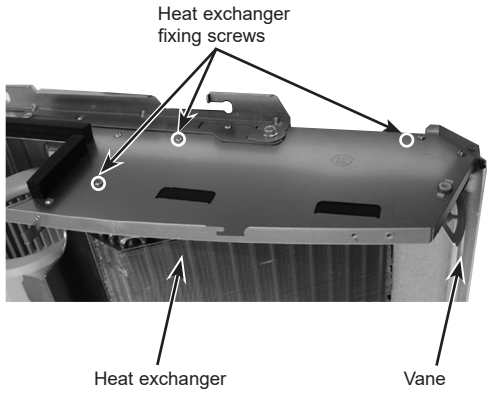


OPERATING PROCEDURE	PHOTOS & ILLUSTRATIONS
3. Removing the room temperature thermistor (TH21) (1) Remove the air intake grille. (See Figure 1, 2) (2) Remove the screw from the beam and remove the beam. (See Photo 1) (3) Remove 2 screws from the electrical cover, and remove the electrical cover. (4) Remove 2 screws from the electrical box and pull the electrical box downward. Temporarily secure the electrical box using 2 hooks in the back of electrical box. (5) Disconnect the connector CN20 (red) from the indoor controller board. (6) Remove the sensor holder from the electrical box and remove the thermistor form the holder.	**Photo 4** 
4. Removing the fan motor and right side fan (1) Remove the air intake grille. (See Figure 1, 2) (2) Remove the screw from the beam and remove the beam. (See Photo 1) (3) Remove 2 screws from the electrical cover, and remove the electrical cover. (4) Remove 2 screws from the electrical box and pull the electrical box downward. (5) Temporarily secure the electrical box using 2 hooks in the back of electrical box. (6) Remove the lower casing while pressing the 4 catches of the casing (right side of the fan motor). (See Photo 6) (7) Loosen the 2 set screws (2 hexagon set screws) of connecting joint and slide the fan motor to the left. (See Photo 5) (8) Remove the screw for motor earth wire. (See Photo 5) (9) Remove the motor piece (left and right, each 1 screw). (See Photo 5) (10) Remove the fan motor and right side fan together. (11) Loosen the set screw (hexagon set screw) of fan and remove the fan from the shaft. (See Photo 7, 8)	**Photo 5**  **Photo 6**  **Photo 7** 
Photo 8  	

OPERATING PROCEDURE	PHOTOS & ILLUSTRATIONS
5. Removing the fan (3 connection) (1) Remove the air intake grille. (See Figure 1, 2) (2) Remove the screw from the beam and remove the beam. (See Photo 1) (3) Remove 2 screws from the electrical cover, and remove the electrical cover. (4) Remove 2 screws from the electrical box and pull the electrical box downward. Temporarily secure the electrical box using 2 hooks in the back of electrical box. (5) Remove 2 screws from the left side beam and remove the beam. (See Photo 9) (6) Loosen 2 set screws (2 hexagon set screws) of connecting joint. (See Photo 5) (7) Remove 3 lower casings while pressing each 4 catches of the casing. (See Photo 6) (8) Remove the 4 screws from the bearing support. (See Photo 10) (9) Slide the connecting joint to the left and remove the fans and shaft together. (See Photo 11) (10) Remove the fan from the shaft. (See Photo 7, 8)	**Photo 9**  **Photo 10** 
Photo 11  	
6. Removing the side panel (1) Remove the air intake grille. (See Figure 1, 2) (2) Remove the screw from the side panel, and remove the side panel by sliding the panel to the front. (3) Unhook the side panel support hanger, and then slide the side panel forward to remove it.  	**Figure 3** 

OPERATING PROCEDURE	PHOTOS & ILLUSTRATIONS
7. Removing the vane motor (1) Remove the air intake. (See Figure 1, 2) (2) Remove the right side panel. (See Figure 3) (3) Remove the connector of vane motor. (4) Remove 2 screws of vane motor cover , then remove vane motor.	**Photo 12** 
8. Removing the under panel (1) Remove the air intake grille. (See Figure 1, 2) (2) Remove the left and right side panels. (See Figure 3) (3) Remove the beam. (See Photo 1) (4) Remove the electrical cover. (See Photo 1) (5) Pull the electrical box downward. (See Photo 2) (6) (Wireless remote controller receiver type only) Disconnect the connector CNB from the PCB for wireless remote controller and remove the clamp and strap for wires. (7) Remove 8 screws from the under panel. (8) Move the under panel forward by about 7/16 in. (10mm) and remove the under panel.	**Photo 13** 
9. Removing the drain pan (1) Remove the air intake grille. (See Figure 1, 2) (2) Remove the side panel (right and left). (See Figure 3) (3) Remove the under panel. (See Photo 13) Remove the screws of the right and left side drain pan. (See Photo 14) (4) Remove 2 insulation in centre of the drain pan, and after removing 2 screws with washer, remove the drain pan. (See Photo 15, 16) (Note) Please be aware that there might be some drainage left in the drain pan when you remove the drain pan.	**Photo 14**  **Photo 15**  **Photo 16** 

OPERATING PROCEDURE	PHOTOS & ILLUSTRATIONS
10. Removing the pipe thermistors/Liquid (TH22) and Gas (TH23) (1) Remove the air intake grille. (See Figure 1, 2) (2) Remove the left and right side panels. (See Figure 3) (3) Remove the under panel. (See Photo 13) (4) Remove the drain pan. (See Photo 14, 15, 16) (5) Disconnect the connector CN44 (white) from the indoor controller board. (6) Remove 6 screws from the pipe cover and remove the pipe cover. (See Photo 14, 17) (7) Remove the fastener for wires and remove the thermistors (liquid and gas) from each holder. (See Photo 18)	**Photo 17**  **Photo 18** 
11. Removing the guide vane (1) Remove the intake grille. (See Figure 1, 2) (2) Remove the side panel (right and left). (See Figure 3) (3) Remove the under panel. (See Photo 13) (4) Remove the drain pan. (See Photo 14, 15, 16) (5) Remove the screw from the guide vane, then remove the guide vane.	**Photo 19** 
12. Removing the Auto vane (1) Remove the intake grille. (See Figure 1, 2) (2) Remove the right side panel. (See Figure 3) (3) Remove the vane motor and cover. (See Photo 12) (4) Slide the auto vane to the vane motor side. (5) Remove 2 axes from each vane support pushing the vane support to the vane sleeve side.	**Photo 20** 

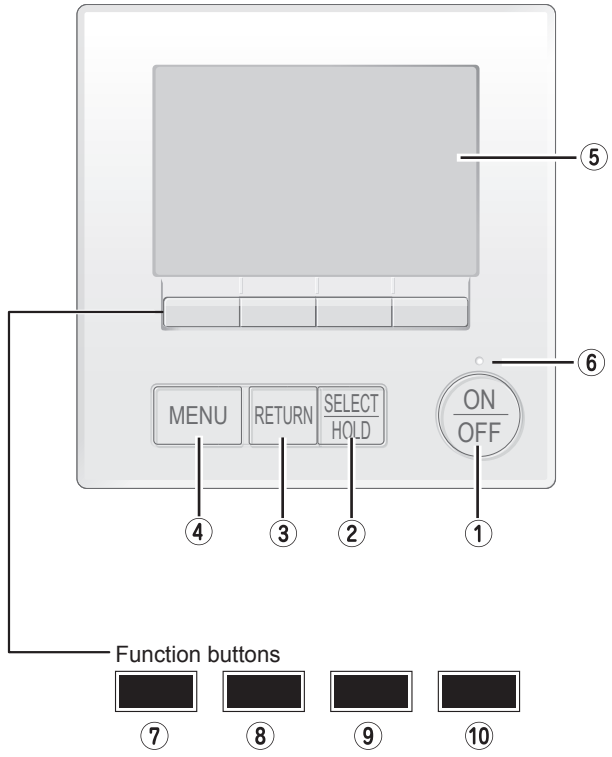
OPERATING PROCEDURE	PHOTOS & ILLUSTRATIONS
13. Removing the heat exchanger and LEV (1) Remove the air intake grille. (See Figure 1, 2) (2) Remove the beam. (See Photo 1) (3) Remove the electrical cover. (See Photo 1) (4) Pull the electrical box downward. (See Photo 2) (5) Disconnect the connector CN60 (white) from the indoor controller board. (6) Remove the left and right side panels. (See Figure 3) (7) Remove the under panel. (See Photo 13) (8) Remove the drain pan. (See Photo 14, 15, 16) (9) Remove the pipe cover. (See Photo 17) (10) Remove the pipe thermistors (TH22 and TH23) from each holder. (See Photo 18) (11) Remove the pipe band fixing screw and remove the pipe band. (See Photo 21) (12) Remove 3 screws from the heat exchanger and remove the heat exchanger with LEV.	**Photo 21**  **Photo 22** 

10 REMOTE CONTROLLER

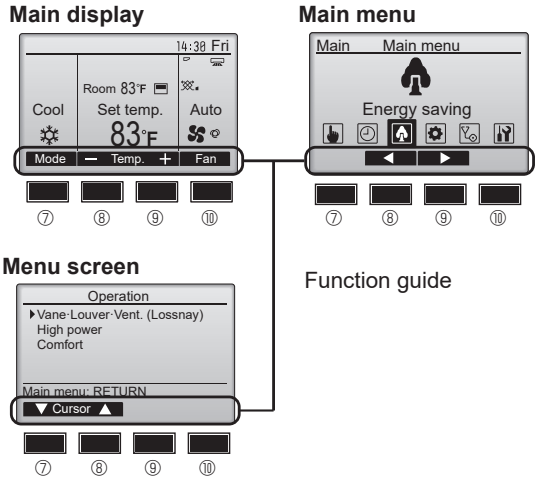
10-1. REMOTE CONTROLLER FUNCTIONS

<PAR-41MAA>

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.



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]

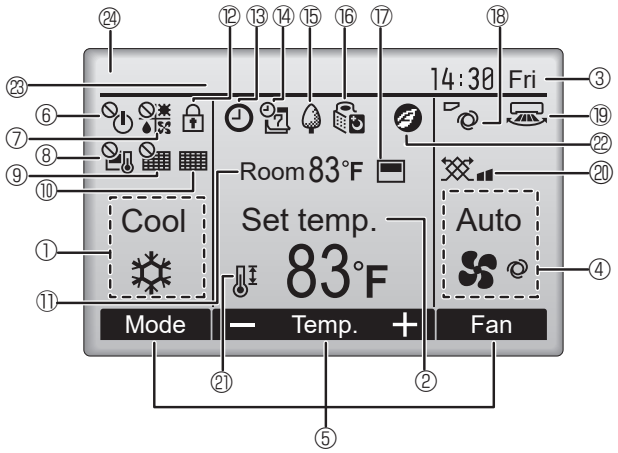
Main display: Press to change the fan speed.
Menu screen: The button function varies with the screen.

Display

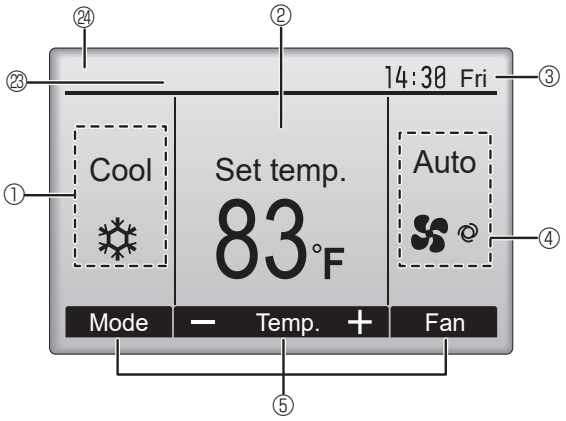
The main display can be displayed in two different modes: “Full” and “Basic”. The initial setting is “Full”. To switch to the “Basic” mode, change the setting on the Main display setting. (Refer to operation manual included with remote controller.)

<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.

⑥

Appears when the ON/OFF operation is centrally controlled.

⑦

Appears when the operation mode is centrally controlled.

⑧

Appears when the preset temperature is centrally controlled.

⑨

Appears when the filter reset function is centrally controlled.

⑩

Indicates when filter needs maintenance.

⑪ Room temperature

⑫

Appears when the buttons are locked.

⑬

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.

⑭

Appears when the Weekly timer is enabled.

⑮

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

⑯

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

⑰

Appears when the built-in thermistor on the remote controller is activated to monitor the room temperature (1).

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

⑱

Indicates the vane setting.

⑲

Indicates the louver setting.

⑳

Indicates the ventilation setting.

㉑

Appears when the preset temperature range is restricted.

㉒

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

㉓ Centrally controlled

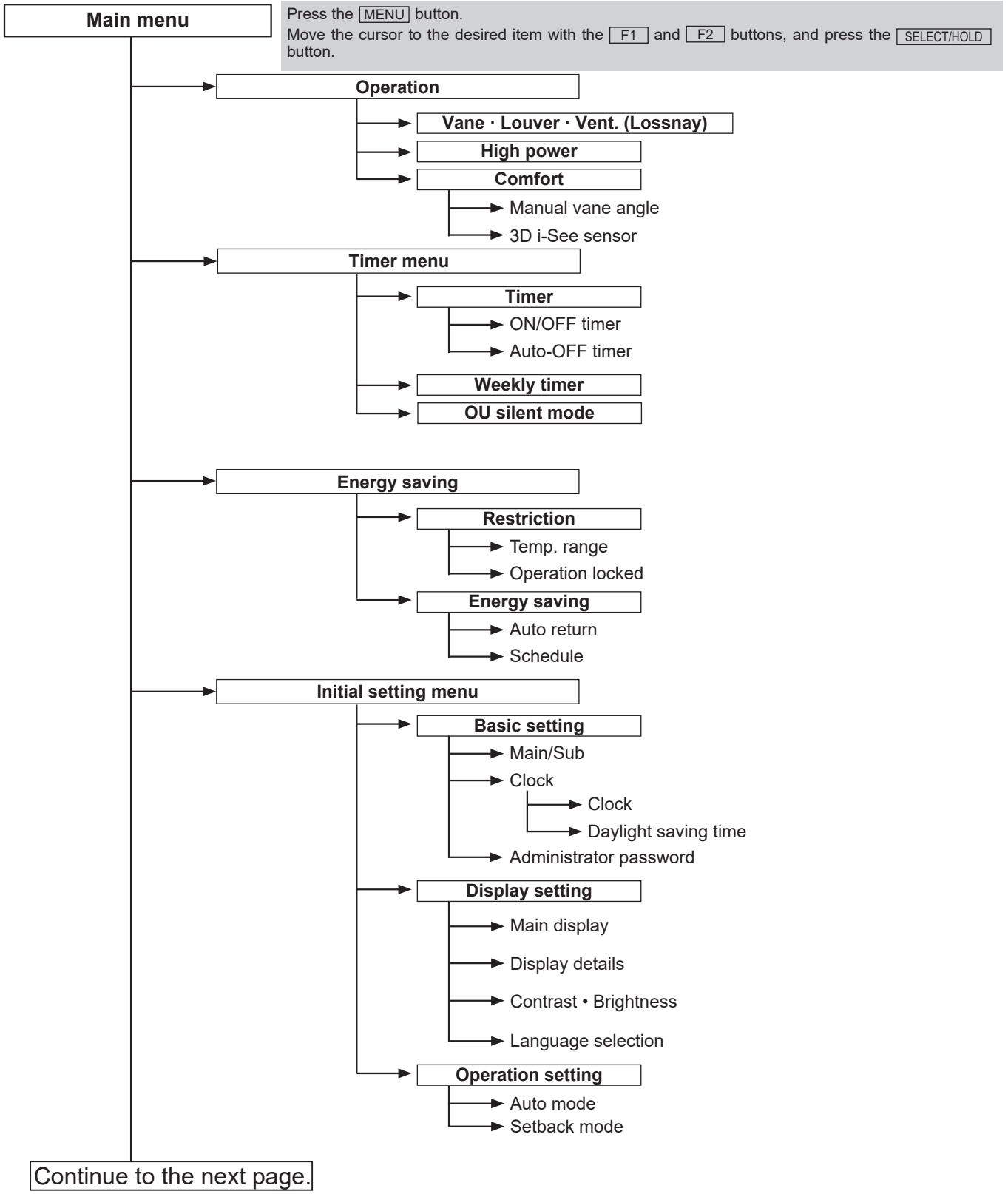
Appears for a certain period of time when a centrally-controlled item is operated.

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.

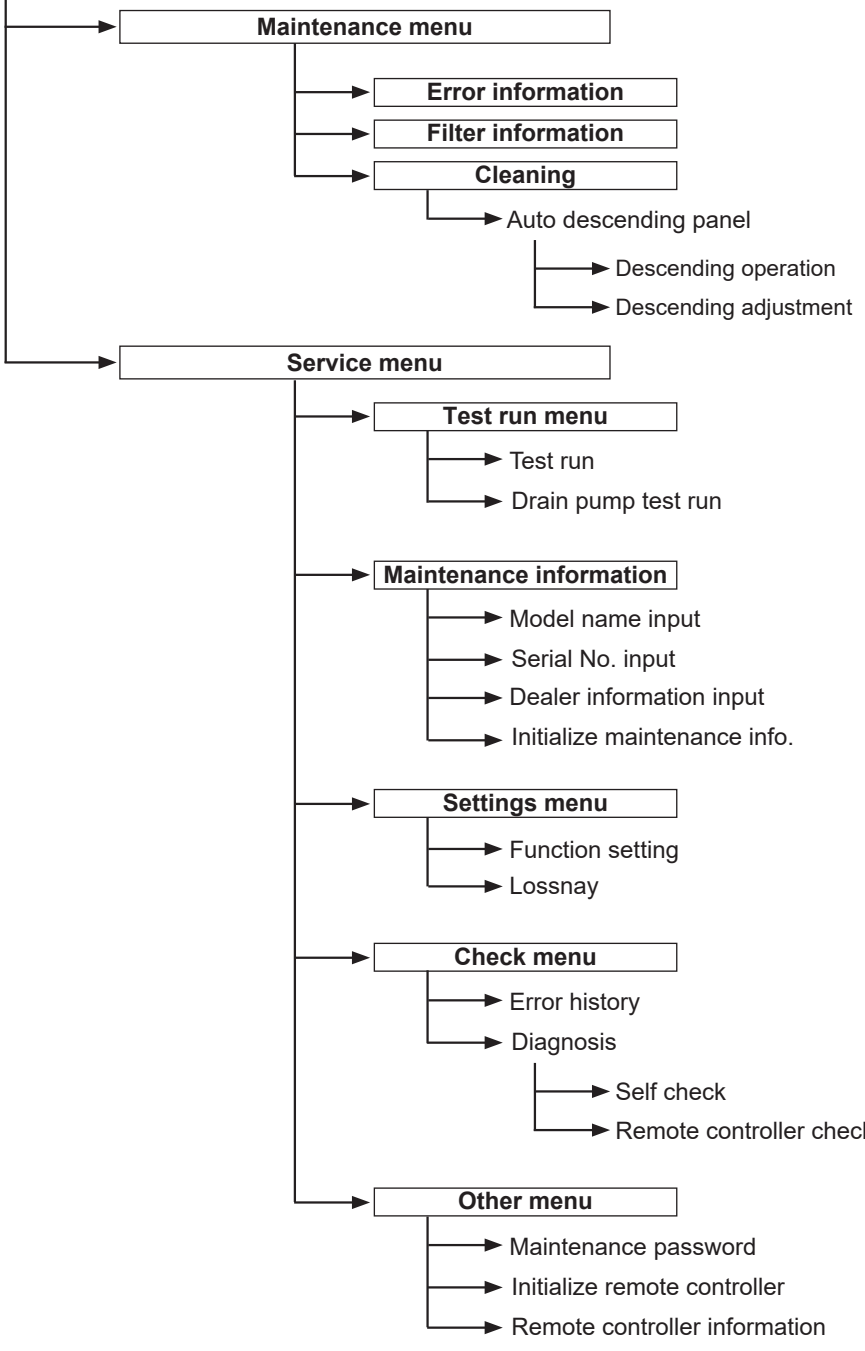
Menu structure



Continue to the next page.

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 from 5 different settings. **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		**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		**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 lock	**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	**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.

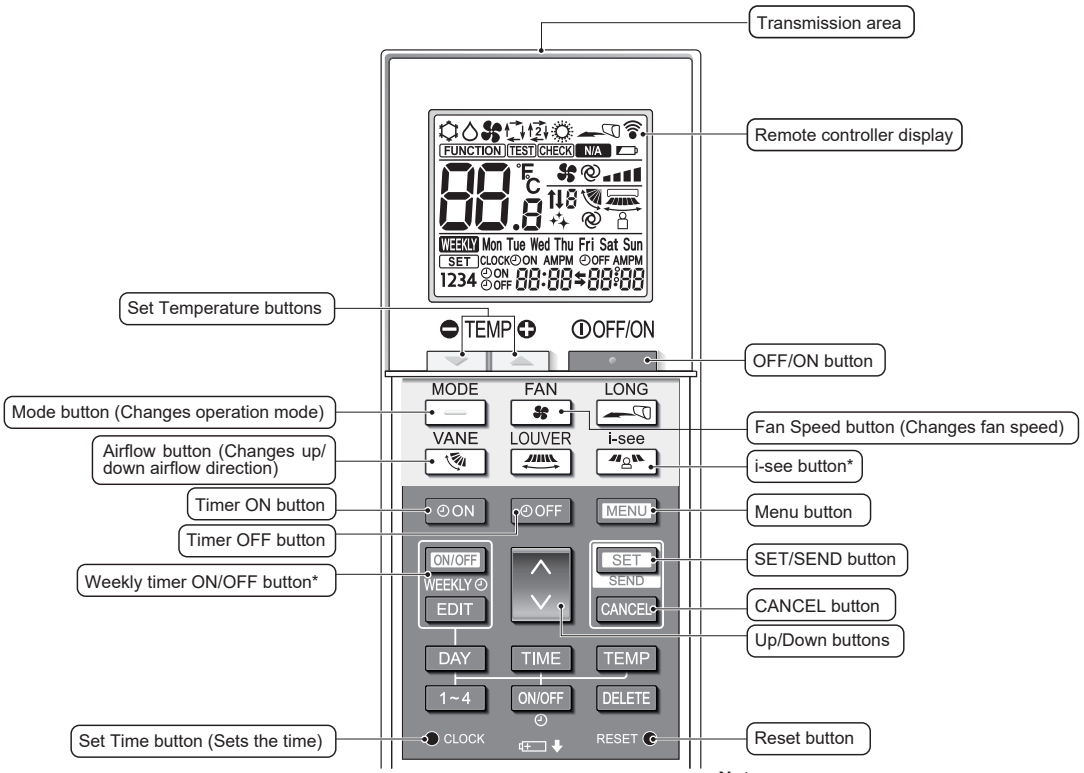
*1 Clock setting is required.

*2 33.8°F (1°C) increments.

Main menu	Setting and display items		Setting details
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 • Night set back
	Display setting	Main display	**Use to switch between "Full" and "Basic" modes for the Main display.** • The initial setting is "Full."
		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 the 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 the Auto mode can be selected by using the button. This setting is valid only when indoor units with the 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, unit model, manufacturing number, contact information (dealer's phone number) can be displayed. (The unit model, 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.**
		LOSSNAY setting	**This setting is required only when the operation of CITY MULTI units is interlocked with LOSSNAY units.**
	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.
	Other	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.**

<PAR-SL101A-E>

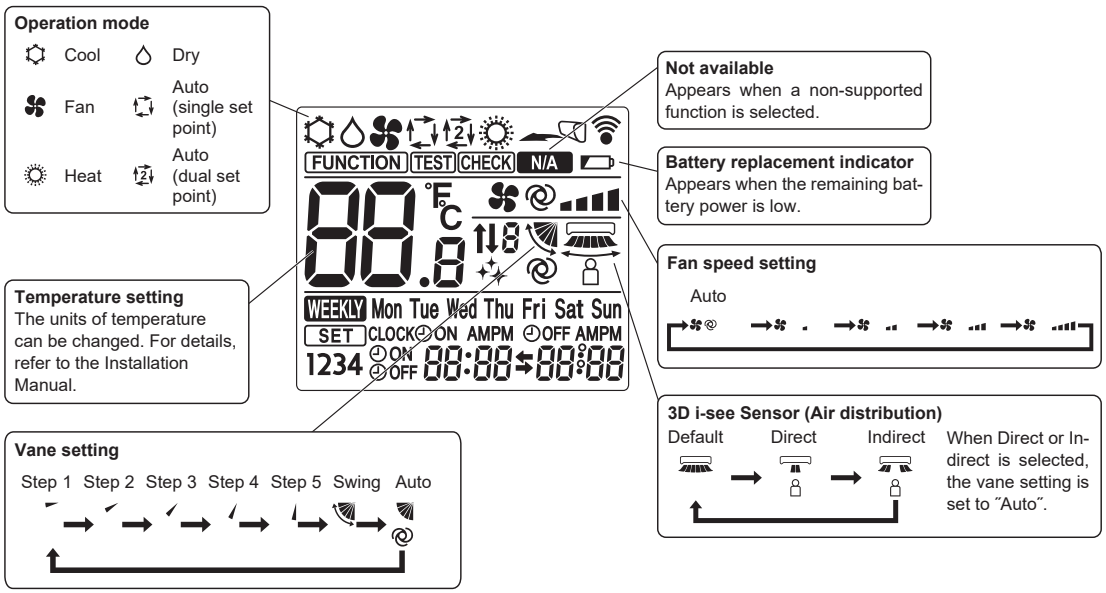
Controller interface



Note:

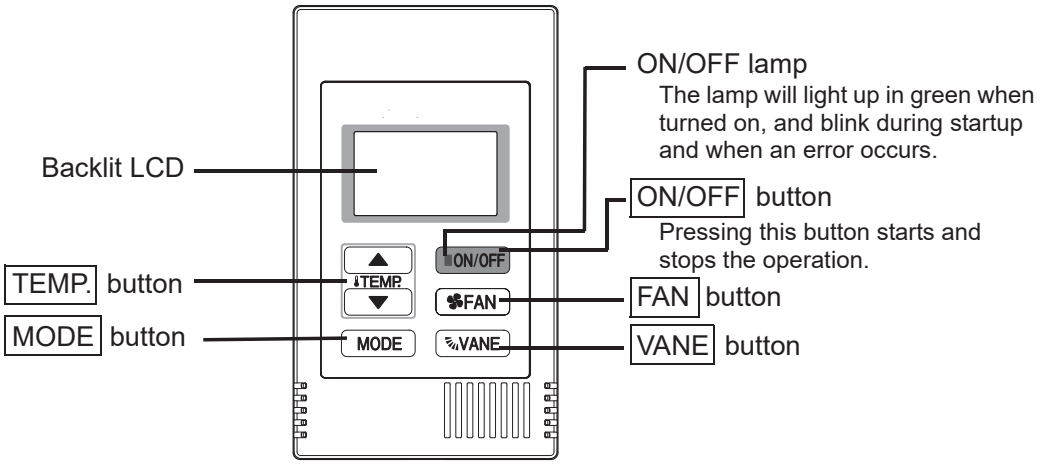
*** This button is enabled or disabled depending on the model of the indoor unit.**

Display



<PAC-YT53CRAU>

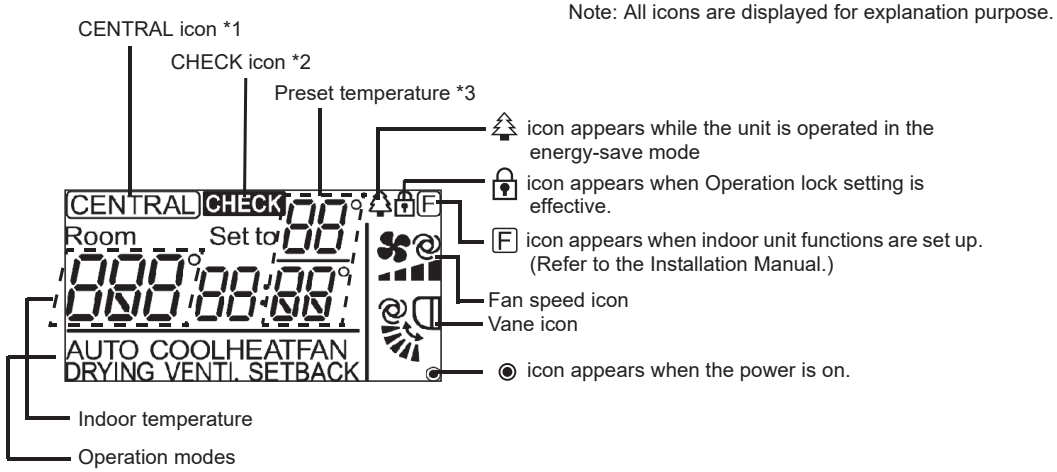
Note:
The phrase "Wired remote controller" in this manual refers only to the PAC-YT53CRAU.
If you need any information for the other remote controller, please refer to either the installation manual or initial setting manual which are included in remote controller's box.



Note: To set the functions that are not available on this controller (PAC-YT53CRAU) such as Louver, use the centralized controller.

Display section

Note: All icons are displayed for explanation purpose.



*1 CENTRAL icon

Appears when one of the following local operations is prohibited: ON/OFF; operation mode; preset temperature; fan speed; vane.

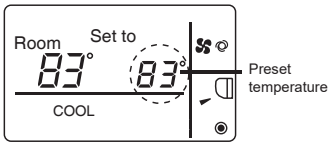
*2 **CHECK** icon

For City Multi, when an error occurs, power indicator will blink, and unit address (3 digits) and check code (4 digits) will blink.
Check the error status, stop the operation, and consult your dealer.

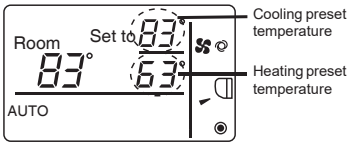
*3 Preset temperature

* Centigrade or Fahrenheit is selectable. Refer to the Installation Manual for details.

In COOL, DRYING, HEAT, or AUTO (single set point) modes



In AUTO (dual set point) or SETBACK modes

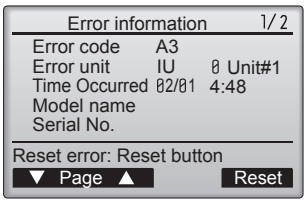


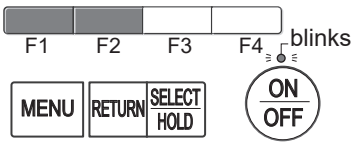
10-2. ERROR INFORMATION

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

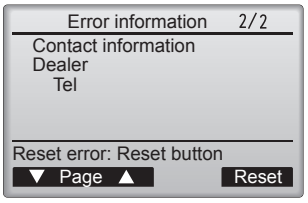
1. Check code, error unit, refrigerant address, model name, and serial number will appear.
   The model name and serial number will appear only if the information has been registered.

   Press the F1 or F2 button to go to the next page.





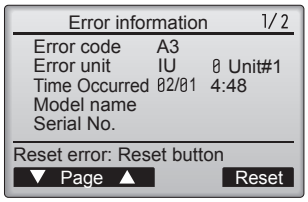
Contact information (dealer's phone number) will appear if the information has been registered.

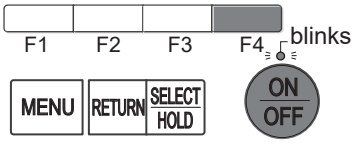


---

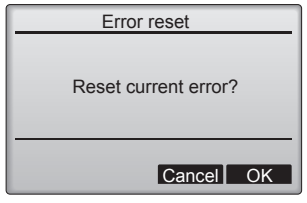
2. Press the F4 button or the [ON/OFF] button to reset the error that is occurring.

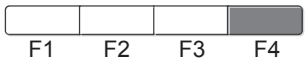
Errors cannot be reset while the ON/OFF operation is prohibited.

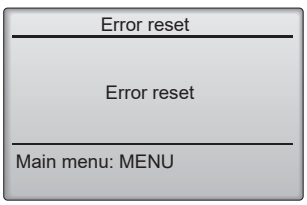




Select "OK" with the F4 button.



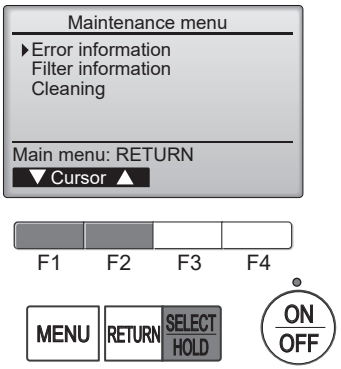




Navigating through the screens
• To go back to the Service menu ..... [MENU] button

• 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.

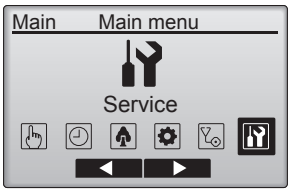


10-3. SERVICE MENU

Maintenance password is required

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

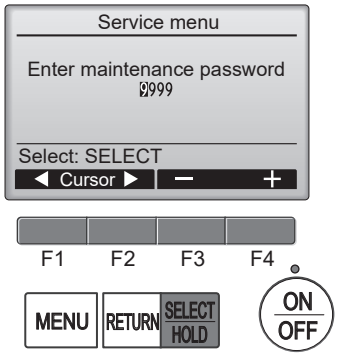
   To enter the current maintenance password (4 numerical digits), move the cursor to the digit you want to change with the F1 or F2 button.

   ▼

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

   ▼

   Then, press the [SELECT/HOLD] button.



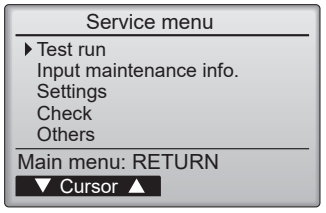
Note: The initial maintenance password is "9999". Change the default password as necessary to prevent unauthorized access. Have the password available for those who need it.

: 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.



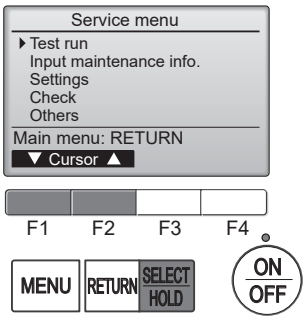
Navigating through the screens

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

10-4. TEST RUN

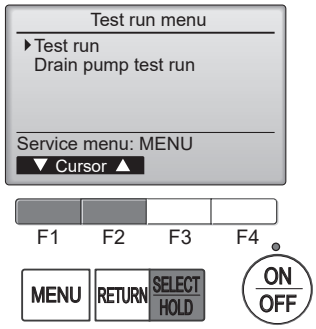
10-4-1. PAR-41MAA

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



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

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



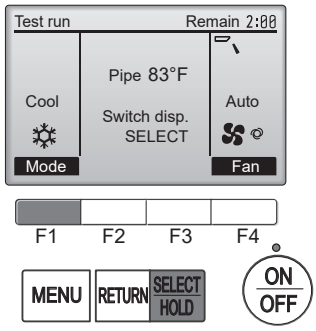
Test run operation

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/HOLD] button and open the Vane setting screen.



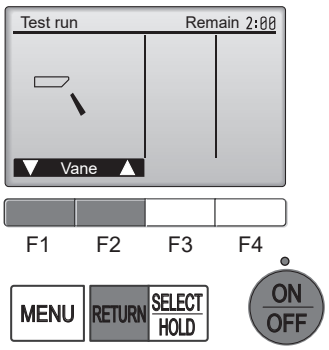
Auto vane check

Check the auto vane with the F1 F2 buttons.

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

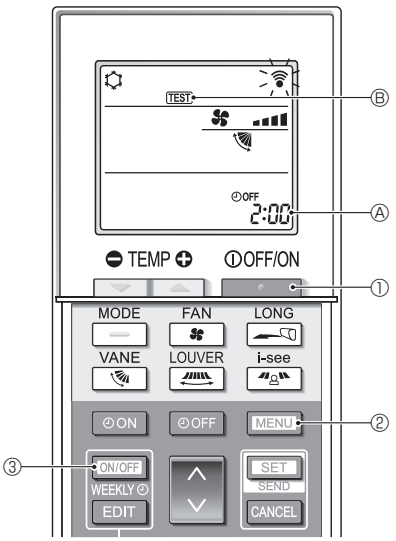
Press the [ON/OFF] button.

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.



10-4-2. PAR-SL101A-E

1. Press the [ ] button ① to stop the air conditioner.
   - If the weekly timer is enabled (WEEKLY is on), press the [ON/OFF WEEKLY] button ③ to disable it (WEEKLY is off).
2. Press the [MENU] button ② for 5 seconds.
   - CHECK comes on and the unit enters the service mode.
3. Press the [MENU] button ②.
   - TEST Ⓑ 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.
   [SET]: 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.



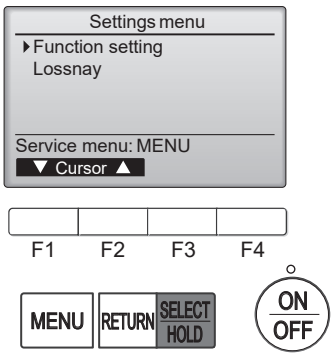
10-5. FUNCTION SETTING

10-5-1. PAR-41MAA

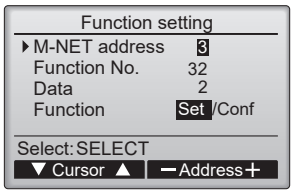
1. Select ″Service″ from the Main menu, and press the [SELECT/HOLD] button.

   Select ″Setting″ from the Service menu, and press the [SELECT/HOLD] button.

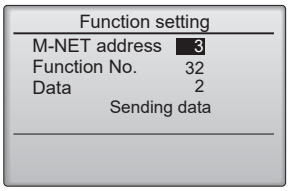
   Select ″Function setting″, and press the [SELECT/HOLD] button.



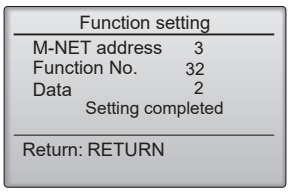
2. The Function setting screen will appear.
   Press the F1 or F2 button to move the cursor to one of the following: M-NET address, function setting number, or setting value. Then, press the F3 or F4 button to change the settings to the desired settings.



   Once the settings have been completed, press the [SELECT/HOLD] button.
   A screen will appear indicating that the settings information is being sent.
   To check the current settings of a given unit, enter the setting for its M-NET address and function setting number, select Conf for the Function, and press the [SELECT/HOLD] button.
   A screen will appear indicating that the settings are being searched for.
   When the search is done, the current settings will appear.



   When the settings information has been sent, a screen will appear indicating its completion.
   To make additional settings, press the [RETURN] button to return to the screen shown in the above step. Set the function numbers for other indoor units by following the same steps.



Note:
- Refer to the indoor unit Installation Manual for information about the factory settings of indoor units, function setting numbers, and setting values.
- 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.

10-5-2. PAR-SL101A-E

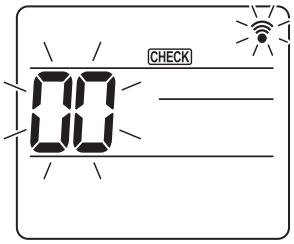


Fig. 10-1

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. 10-1)
   Press the ∧ button to set the ″50″.
   Direct the wireless remote controller toward the receiver of the indoor unit and press the SET button.

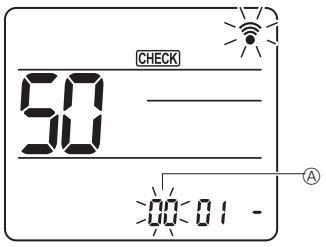


Fig. 10-2

2. Setting the unit number
   Press the ∧ button to set unit number Ⓐ. (Fig. 10-2)
   Direct the wireless remote controller toward the receiver of the indoor unit and press the SET button.

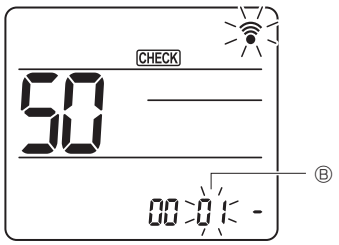


Fig. 10-3

3. Select a mode
   Press the ∧ button to set Mode number Ⓑ. (Fig. 10-3)
   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)

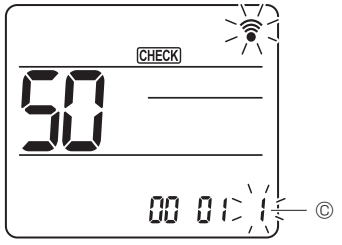


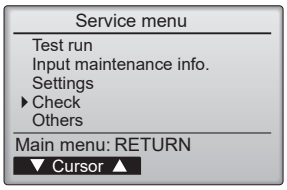
Fig. 10-4

4. Selecting the setting number
   Use the ∧ button to change the Setting number Ⓒ. (Fig. 10-4)
   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 ⏻OFF/ON button.

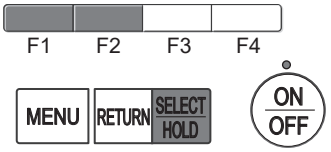
Note:
Make the above settings on Indoor units as necessary.
- **Be sure to write down the settings for all functions if any of the initial settings has been changed after the completion of installation work.**

10-6. ERROR HISTORY

1. Select ″Service″ from the Main menu, and press the [SELECT/HOLD] button.

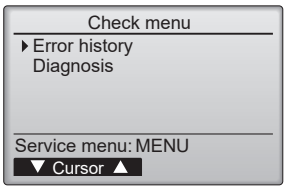


Select ″Check″ with the F1 or F2 button, and press the [SELECT/HOLD] button.



---

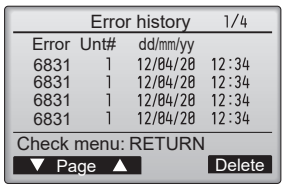
2. Select ″Error history″ with the F1 or F2 button, and press the [SELECT/HOLD] button.

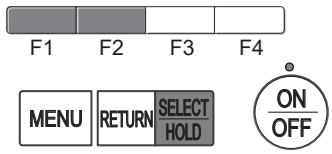


---

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.





---

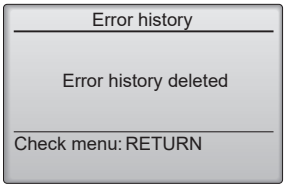
4. Deleting the error history

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.

10-7. SELF-DIAGNOSIS

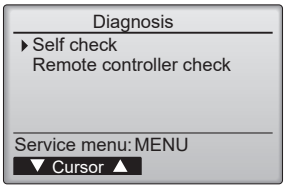
10-7-1. PAR-41MAA

1. Select ″Service″ from the Main menu,
and press the [SELECT/HOLD] button.

Select ″Check″ from the Service menu,
and press the [SELECT/HOLD] button.

Select ″Diagnosis″ from the Check menu,
and press the [SELECT/HOLD] button.

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





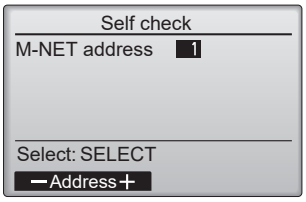


---

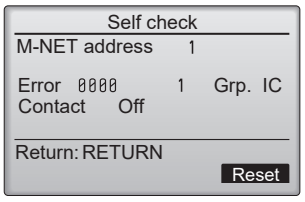
2. Select “Self check” from the Diagnosis menu, and press the [SELECT/HOLD] button to view the Self check screen.

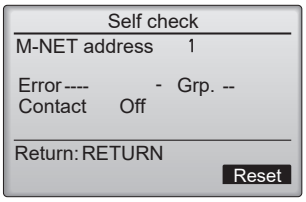
With the F1 or F2 button, enter the M-NET address, and press the [SELECT/HOLD] button.

Check code, unit number, attribute, and indoor unit demand signal ON/OFF status at the contact will appear. “-” will appear if no error history is available.



When there is no error history

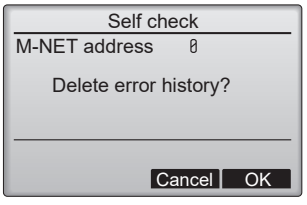


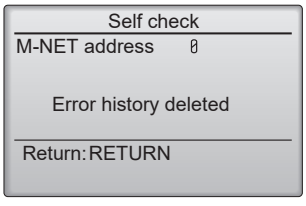


3. <u>Resetting the error history</u>

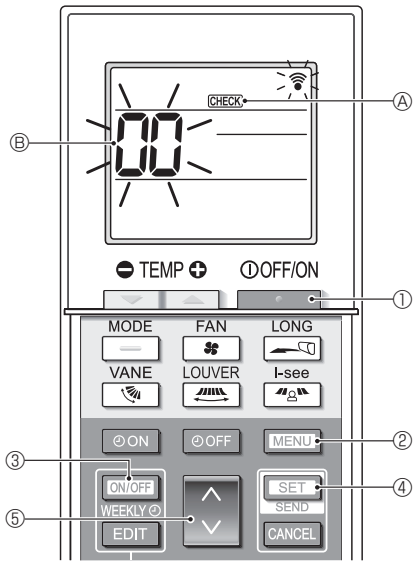
Press the F4 button (Reset) on the screen that shows the error history. A confirmation screen will appear asking if you want to delete the error history.

Press the F4 button (OK) to delete the error history. If deletion fails, “Request rejected” will appear, and “Unit not exist” will appear if indoor units that are correspond to the entered address are not found.





10-7-2. PAR-SL101A-E



1. Press the [ ] button ① to stop the air conditioner.
   - If the weekly timer is enabled (WEEKLY is on), press the [ON/OFF WEEKLY] button ③ to disable it (WEEKLY is off).
2. Press the [MENU] button ② for 5 seconds.
   - CHECK Ⓐ comes on and the unit enters the self-check mode.
3. Press the [▲▼] button ⑤ to select the refrigerant address (M-NET address) Ⓑ of the indoor unit for which you want to perform the self-check.
4. Press the [SET] 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.
   - CHECK Ⓐ and the refrigerant address (M-NET address) Ⓑ go off and the self-check is completed.

10-8. 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/HOLD] button.

   ▼

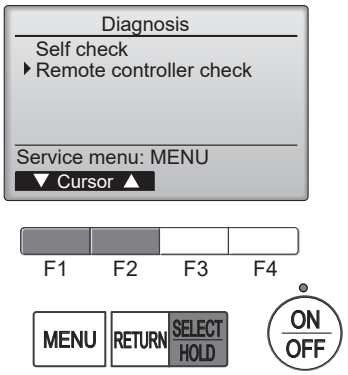
   Select "Check" from the Service menu, and press the [SELECT/HOLD] button.

   ▼

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

   ▼

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



---

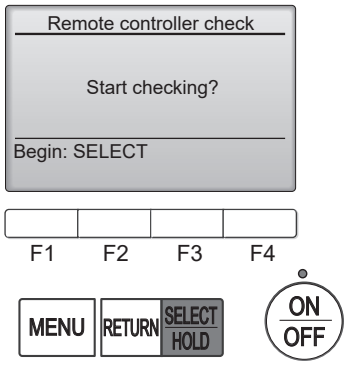
2. Select "Remote controller check" from the Diagnosis menu, and press the [SELECT/HOLD] button to start the remote controller check and see the check results.

   ▼

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

   ▼

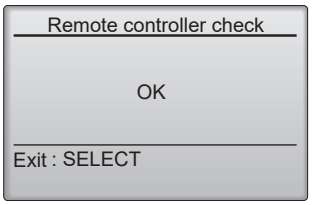
   The remote controller will not reboot itself.



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 (ALL0, 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.

Remote controller check results screen



▼

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

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.

CITY MULTI

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE : TOKYO BLDG., 2-7-3, MARUNOUCHI, CHIYODA-KU TOKYO 100-8310, JAPAN

MITSUBISHI ELECTRIC CONSUMER PRODUCTS (THAILAND) CO., LTD.
700/406 MOO 7, TAMBON DON HUA ROH,
AMPHUR MUANG, CHONBURI 20000 THAILAND
Published: Nov. 2023. No. TCH131
Made in Thailand

Specifications are subject to change without notice.