Changes for the Better



CITY MULTI and Mr.SLIM Air Conditioners

New MA Remote Controller PAR-21MAA

TECHNICAL MANUAL

< for USA / Canada >





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I. Advantage of New MA Remote Controller

1. Weekly Timer

The built-in weekly timer enables you not only to make on/off settings but also temperature settings. Up to eight patterns can be set for each day of the week.



Setting example (Restaurant in summer)

Economical operation according to air conditioner use



2. Easy Maintenance Function

Enables you to check necessary data on site, drastically reducing the time required for maintenance work.

• Information useful for maintenance can be displayed on the remote controller.

Outdoor unit information can be checked even from inside a building. Furthermore, use of maintenance stable-operation control that fixes the operating frequency, allows smooth inspection, even for inverter models.

<Display information> Outputs data for nine items.

Compressor information	Outdoor unit information	Indoor unit information
 Accumulated operating time 	 Heat exchanger temperature 	Heat exchanger temperature
Number of ON/OFF times	 Discharge temperature 	 Intake air temperature
 Operating current 	 Outside air temperature 	 Filter operating time

The contact telephone number to be called when an error occurs is displayed automatically.

This helps smooth contact with appropriate personnel in when an error occurs. The contact telephone number of the maintenance company to be called when an error occurs can be registered in advance. When an error occurs, the contact telephone number will automatically appear, allowing you to call without difficulty. Displays the contact number in case of abnormality.





CALL·XXX XXXXXXX Telephone number registered in advance

3. New Display

Various information is displayed and conveyed clearly, enabling more accurate operation of the air conditioner.

3.1 Dot Liquid Crystal Display (LCD)

The dot liquid crystal display enables quick understanding of the operation state.

Display example [Operation mode]





Display example [Cool mode]									
[English]	[German]	[Spanish]	[Russian]						
©COOL	≪Xihlen	≪¥FRíO	©Холоа						
[Itarian]	[Chinese] (注制)令	[French]	[Japanese] 〇冷肩						

3.2 Multi-language Display

In addition to English, contents can be displayed in seven other languages. This function makes the remote controller very useful in facilities where foreigners are present.

4. The Other Functions

4.1 Temperature Range Limit Setting

Enables operation of air conditioner at comfortable temperatures at all times.

Upper and lower limits can be established for the temperature setting. This prevents overcooling or overheating, thereby contributing to energy saving.

4.2 Auto Off Timer

Shuts off wasteful air conditioner operations.

Operation is stopped automatically when the preset time elapses following the start of operation, thereby preventing wasteful operations.

The time can be set from 30 minutes to 4 hours in 30-minute increments.

4.3 Simple Operation Lock

Prevents others from changing settings without permission.

This lets you disable all the buttons or all the buttons except for the [ON/OFF] button, preventing mischief and incorrect operations.

II. New Functions

Function	Description	Go to page
Easy maintenance function	Displays information necessary for maintenance. Below information for easy maintenance of air-conditioner can be dis- played. • Compressor • Accumulated operating time • Number of ON/OFF times • Operating current (A) • Outdoor unit • Heat exchanger temperature (°F) • Discharge temperature (°F) • Outside air temperature (°F) • Indoor unit • Intake air temperature (°F) • Heat exchanger temperature (°F) • Heat exchanger temperature (°F) • Filter operating time (hours)	6
Operation data monitor function	Information necessary for maintenance can be displayed on the remote controller.	48
Operation Hz fixing	The operation state of inverter models can be monitored using the maintenance stable-operation control (fixed frequency).	6
Error code monitor function	Error code is displayed in the service inspection monitor.	44
Contact number display	Displays the contact telephone number to be called when an error oc- curs.	33
Multi language display	In addition to English, contents can be displayed in seven other lan- guages.English, German, Spanish, Russian, Italian, Chinese, French, Japanese	12
Temperature display (°C/°F) setting	Enables you to set the unit (°C/°F) in which temperatures are to be displayed.	35
Room temperature display setting	Enables you to set whether to show or hide the indoor (room) tempera- ture.	36
Auto heat/cool display setting	Enables you to set whether to display or hide "COOL"/"HEAT" in auto mode.	37
Weekly schedule timer	Provides a built-in weekly timer that allows you to make on/off and tem- perature settings. Up to eight patterns can be set for each day of the week.	23
"Operation limit function setting (Operation lock)"	Lets you disable all the buttons or all the buttons except for the [ON/ OFF] button, preventing mischief and incorrect operations.	14
Temperature range limit function	Enables you to establish upper and lower limits for the temperature set- ting. This prevents overcooling or overheating, thereby contributing to energy saving.	18
Clock function setting	Enables you to set whether to use the clock function.	21
Auto off timer	Stops operation when the preset time elapses following the start of operation.The time can be set from 30 minutes to 4 hours in 30-minute increments.By default, the weekly timer is selected.To switch to the auto off timer, select it using the remote controller's function selection.	26
Simple timer	Enables you to set on/off settings in 1-hour increments within 72 hours.	29
Remote controller main/sub setting	Enables you to set the remote controller as the main or sub.	20

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III. Appearance 1. Display Section



Note:

 If you press a button for a feature that is not installed at the indoor unit, the remote controller will display the "Not Available" message.

If you are using the remote controller to drive multiple indoor units, this message will appear only if the feature is not present at every unit connected.

IV. Easy Maintenance Function (For Mr.SLIM P series)

- Reduces maintenance work drastically.
- Enables you to check operation data of the indoor and outdoor units by remote controller.
- Furthermore, use of maintenance stable-operation control that fixes the operating frequency, allows smooth inspection, even for inverter models.



* The filter operating time is the time that has elapsed since the filter was reset.

1. Maintenance Mode Operating Method

If you are going to use the "2. Guide for Operation Condition", set the airflow to "High" before activating maintenance mode.

Switching to maintenance mode

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2

3

Maintenance mode can be activated either when the air conditioner is operated or stopped. It cannot be activated during test run.

* Maintenance information can be viewed even if the air conditioner is stopped.



(1) Press the **TEST** button for three seconds to switch to maintenance mode.

[Display (A)] MAINTENANCE

If stable operation is unnecessary or if you want to check the data with the air conditioner stopped, skip to step (4).

Fixed Hz operation

The operating frequency can be fixed to stabilize operation of inverter model. If the air conditioner is currently stopped, start it by this operation.

(2) Press the (MODE) button to select the desired operation mode.



Data measurement

When the operation is stabilized, measure operation data as explained below.

ightarrow(4) Press the [TEMP] buttons ((\bigtriangledown) and (\triangle)) to select the desired refrigerant address.





2. Guide for Operation Condition

		Inspection ite	m		Res	sult	
~	-uo		Breaker	Good		Retigh	tened
lddr	se c tion	Terminal block	Outdoor Unit	Good		Retigh	tened
sr sr	Loo nect		Indoor Unit	Good		Retigh	tened
OWe		(Insulation resista	ance)				MΩ
٩, e		(Voltage)					V
Com		① Accumulated o	perating time				Time
press	-	② Number of ON	OFF times				Times
	501	③ Current				А	
	ure	④ Refrigerant/heat exc	COOL	۴	HEAT	°F	
±	eratu	⑤ Refrigerant/discha	COOL	۴F	HEAT	°F	
Ľ.	Tempe	6 Air/outside air t	emperature	COOL	۴F	HEAT	۴F
loo		(Air/discharge t	COOL	۴F	HEAT	°F	
Dutc	<u>.</u>	Appearance		Good		Cleaning	required
	ear ss	Heat exchanger	Good		Cleaning	required	
	с е	Sound/vibration	Sound/vibration			Pres	sent
	er	⑦ Air/intake air te	mperature	COOL	۴F	HEAT	۴F
	eratı	(Air/discharge t	emperature)	COOL	۴F	HEAT	۴F
	du	(8) Refrigerant/heat exc	changer temperature	COOL	۴F	HEAT	°F
Unit	Te	9 Filter operating	time*				Time
or	~	Decorative panel		Good		Cleaning	required
Inde	Jess	Filter		Good		Cleaning	required
	anlir	Fan		Good		Cleaning	required
	Cle	Heat exchanger		Good		Cleaning	required
		Sound/vibration		None		Pres	sent

* The filter operating time is the time that has elapsed since the filter was reset.

Check Points

Enter the temperature differences between (5), (4), (7) and (8) into the graph given below.

Operation state is determined according to the plotted areas on the graph.

For data measurements, set the fan speed to "Hi" before activating maintenance mode.

С	lassification	Item	Re	esult		
	Inspection	Is "000" displayed stably in Display \textcircled{D} on the remote controller?	Stable	Unstable		
Cool	Temperature difference	(5) Discharge temperature) - (4) Outdoor heat exchanger temperature)	°F			
		$(\bigcirc$ Indoor intake air temperature) - ((\circledast) Indoor heat exchanger temperature)	۱			
Heat	Inspection	Is "000" displayed stably in $\mbox{Display}(\mbox{D}$ on the remote controller?	Stable	Unstable		
	Temperature difference	(5) Discharge temperature) - (8) Indoor heat exchanger temperature)				
		(⑧Indoor heat exchanger temperature) - (⑦Indoor intake air temperature)		۴		

* Fixed Hz operation may not be possible under the following temperature ranges.

- A)In cool mode, outdoor intake air temperature is 104°F or higher or indoor intake air temperature is 73°F or lower
- B)In heat mode, outdoor intake air temperature is 68 °F or higher or indoor intake air temperature is 77 °F or lower
- * If the air conditioner is operated at a temperature range other than the ones above but operation is not stabilized after 30 minutes or more have elapsed, carry out inspection.
- * In heat mode, the operation state may vary due to frost forming on the outdoor heat exchanger.



[5] Discharge temperature] - [4] Outdoor heat exchanger temperature)

Result

	°F									_
	81									
	72	Fili	ter i	nsp	pect	ion				
e) (ə	63									
atur	54									
mper	45		No	orm	al					
uir te	36									
akea	27						In	spe	ctio	n B
orint	18	In	spe	ctic	on A	1				
op u	9									
26		18	36	54	72	90	108	126	144	F

ture] - [④Outdoor [⑤Discharge temperature] - [⑧Indoor rature) heat exchanger temperature)

Area	Check item	Judgment		
Aicu	Check Reli	Cool	Heat	
Normal	Normal operation state			
Filter inspection	Filter may be clogged. *1			
Inspection A	Performance has dropped. Detailed in-			
	spection is necessary.			
Inspection B	Refrigerant amount is dropping.			
Inspection C	Filter or indoor heat exchanger may be			
	clogged.			

* The above judgement is just guide based on Japanese standard conditions.

It may be changed depending on the indoor and outdoor temperature.

V. How to Select Functions of remote controller 1. Function Items

The setting of the following remote controller functions can be changed using the remote controller function selection mode. Change the setting when needed.

Item 1	Item 2	Item 3 (Setting content)
1.Change Language	Language setting to display	 Display in multiple languages is possible.
("CHANGE LANGUAGE")		
2.Function limit	(1) Operation function limit setting (operation lock) ("LOCKING FUNCTION")	 Setting the range of operation limit (operation lock)
("FUNCTION SELECTION")	(2) Use of automatic mode setting ("SELECT AUTO MODE")	 Setting the use or non-use of "automatic" operation mode
	(3) Temperature range limit setting ("LIMIT TEMP FUNCTION")	 Setting the temperature adjustable range (maximum, minimum)
3.Mode selection	(1) Remote controller main/sub setting ("CONTROLLER MAIN/SUB")	Selecting main or sub remote controller
("MODE SELECTION")		* When two remote controllers are connected to one group, one controller must be set to sub.
	(2) Use of clock setting ("CLOCK")	Setting the use or non-use of clock function
	(3) Timer function setting ("WEEKLY TIMER")	Setting the timer type
	(4) Contact number setting for error situation ("CALL.")	Contact number display in case of error
		Setting the telephone number
4.Display change	(1) Temperature display°C /°F setting ("TEMP MODE°C /°F")	 Setting the temperature unit (Cor °F) to display
("DISP MODE SETTING")	(2) Room air temperature display setting ("ROOM TEMP DISP SELECT")	Setting the use or non-use of the display of indoor (suction) air temperature
	(3) Automatic cooling/heating display setting ("AUTO MODE DISP C/H")	• Setting the use or non-use of the display of "Cooling" or "Heating" display during
		operation with automatic mode

[Function selection flowchart] Refer to next page.

[1] Stop the air conditioner to start remote controller function selection mode. \rightarrow [2] Select from item1. \rightarrow [3] Select from item2. \rightarrow [4] Make the setting. (Details are specified in item3) \rightarrow [5] Setting completed. \rightarrow [6] Change the display to the normal one. (End)

- [Detailed setting]
- [4] -1. CHANGE LANGUAGE setting
- The language that appears on the dot display can be selected.
- ① Japanese (JP), ② English (GB), ③ German (D), ④ Spanish (E),
- 6 Russian (RU), 6 Italian (I), 7 Chinese (CH), 8 French (F)

[4] -2. Function limit (FUNCTION SELECTION)

- (1) Operation function limit setting (operation lock)(LOCKING FUNCTION)
- ① no1: Operation lock setting is made on all buttons other than the [① ON/OFF] button.
- 2 no2: Operation lock setting is made on all buttons.
- ③ OFF (Initial setting value) : Operation lock setting is not made * To make the operation lock setting valid on the normal screen, it is
- and [① ON/OFF] buttons at the same time for two seconds.) on the normal screen after the above setting is made.

(2) Use of automatic mode setting

When the remote controller is connected to the unit that has automatic operation mode, the following settings can be made.

- ① ON (Initial setting value) : The automatic mode is displayed when the operation mode is selected.
- ② OFF
 The automatic mode is selected.
 When the operation mode is selected.

(3) Temperature range limit setting (LIMIT TEMP FUNCTION)

After this setting is made, the temperature can be changed within the set rangel ① LIMIT TEMP COOL MODE :

The temperature range can be changed on cooling/dry mode. OLIMIT TEMP HEAT MODE :

The temperature range can be changed on heating mode.

- ③ LIMIT TEMP AUTO MODE :
- The temperature range can be changed on automatic mode. ④ OFF (initial setting) : The temperature range limit is not active.
- * When the setting, other than OFF, is made, the temperature range limit setting I on cooling, heating and automatic mode is made at the same time. However I
- the range cannot be limited when the set temperature range has not changed.
- To increase or decrease the temperature, press the [] ITEMP (▽) or (△)] button.
 To switch the upper limit setting and the lower limit setting, press the [♣n]
- button. The selected setting will blink and the temperature can be set. • Settable range Cooling/December 1 over limit: 10° - 20° - 67° E 87° E

Cooling/Dry mode :	Lower limit: 190~300, 67 F~87 F
	Upper limit: 30°C ~ 19°C , 87°F~67°F
Heating mode :	Lower limit: 17℃ ~ 28℃ , 63°F~83°F
	Upper limit: 28°C ~ 17°C , 83°F~63°F
Automatic mode :	Lower limit: 19°C ~ 28°C , 67°F~83°F
	Upper limit: 28°C ~ 19°C . 83°F~67°F

[4] -3. Mode selection setting

- (1) Remote controller main/sub setting(MODE SELECTION)
- $\ensuremath{\textcircled{}}$ Main : The controller will be the main controller.
- O Sub : The controller will be the sub controller.

(2) CLOCK setting

- \bigcirc ON : The clock function can be used.
- OFF : The clock function cannot be used.

(3) Timer function setting

- ① WEEKLY TIMER (initial setting):
 - The weekly timer can be used.
- $\ensuremath{\textcircled{@}}$ AUTO OFF TIMER: The auto off timer can be used.
- 3 SIMPLE TIMER : The simple timer can be used.
- (4) TIMER MODE OFF: The timer mode cannot be used.
- * When the use of clock setting is OFF, the "WEEKLY TIMER" cannot be used.

(4) Contact number setting for error situation

- ① CALL OFF: The set contact numbers are not displayed in case of error.
- ② CALL **** **** : The set contact numbers are displayed in case of error.
- ③ CALL_ : The contact number can be set when the display is as shown on the left.
- Setting the contact numbers
- To set the contact numbers, follow the following procedures.

Move the blinking cursor to set numbers. Press the [$\frac{1}{2}$ TEMP. (\bigtriangledown) and (\triangle)] button to move the cursor to the right (left). Press the [\bigcirc CLOCK (\bigtriangledown) and (\triangle)] button to set the numbers.

[4] -4. Display change setting(DISP MODE SETTING)

- (1) Temperature display °C / °F setting
- ①℃: The temperature unit ℃ is used.
- $@\,{}^\circ\mathsf{F}: \$ The temperature unit $\,\,{}^\circ\mathsf{F}$ is used.

(2) Room air temperature display setting(ROOM TEMP DISP SELECT)

- 0 ON $% \sub{0}$: The room air temperature is displayed.
- ② OFF: The room air temperature is not displayed.
- (3) Automatic cooling/heating display setting(AUTO MODE DISP C/H)
- ① ON : One of "Automatic cooling" and "Automatic heating" is displayed under the automatic mode is running.
- ② OFF: Only "Automatic" is displayed under the automatic mode.

2. Flowchart of Function Setting

Setting language (English)



3. Screen Structure for Function Setting

Description of each screen

- Function selection of remote controller
- Set day time
- Standard control screen
- Timer monitor screen
- : Used to set the current day of the week and time.

: Used to set the timer function and operation limit function, etc.

- : Used to set the air conditioner's operating state.
 - : Used to display the current settings of the timers (weekly, simple, auto off).
 - : Used to set the timers (weekly, simple, auto off).



How to change the screen display

- (A): Press the [ON/OFF] button for two seconds while holding down the [MODE] button.
- (B): Press the [MENU] button.
- C: Press the [MODE] (BACK) button.
- (\overline{D}) : Press the [CLOCK] buttons (\bigtriangledown and \triangle).



4. Function Setting Mode

4.1 Change Language

The language that appears on the dot display can be selected.

The following languages can be selected.									
1) English (GB)	② German (D)	③ Spanish (E)	④Rus						
5 Italian (I)	6 Chinese (CH)	(7) French (F)	(8) Jap						

④ Russian (RU)⑧ Japanese (JP)

Changing the Display Language



- (1) While pressing the MODE button, press the ON/OFF button for two seconds to activate the remote controller's function selection mode.
- (2) Press the MODE button until ^{CHANGE} appears on the screen (at (2)).



Multi Language Display

[Dot display table]

Selecting	language	English	Germany	Spanish	Russian	Italy	Chinese	French	Japanese
Waiting for start-up Operation mode Cool		PLEASE WAIT	←	<i>←</i>	←	<i>←</i>	←	←	←
Operation mode	Cool	©COOL	©Kühlen	©FRí0	ФХолоа	©COOL	◎制冷	©FROID	②冷房
	Dry	○ DRY	Trocknen	ODIFICACION	ОСушка	○ DRY	○除湿	ODESHU	0ドライ
	Heat	☆HEAT	¤Heizen	¤(ALOR	⇔Тепло	☆HEAT	登制热	¤(HAUD	☆暖房
	Auto	‡;‡AUTO	t;tAUTO	↑→ AUTO- ←↓MÁTICO	‡;;Авто	t;tAUTO	料自动	‡‡AUTO	\$₽自動
	Auto(Cool)	‡‡COOL	‡‡Kühlen	‡⊋FRíO	‡;;Холоя	‡‡COOL	試制冷	‡;‡FROID	\$\$冷房
	Auto(Heat)	‡;‡HEAT	‡⊒Heizen	‡‡(ALOR	‡́↓Тепло	‡;‡HEAT	(1) 制热	‡‡(HAUD	\$₩暖房
	Fan	\$\$FAN	\$\$ Lüfter	S LACIÓN	\$\$ Вент		\$\$送风	S LATION	\$\$送風
	Ventilation	382 VENTI	₩Gebläse Setrieb	300 LACIÓN	₩Венти-		簗换气	300 UENTI	簗换気
	Stand by (Hot adjust)	STAND BY	STAND BY	CALENTANDO	ОБОГРЕВ: Пауза	STAND BY	准备中	PRE CHAUFFAGE	準備中
	Defrost	DEFROST	Altaven	DESCONGE - LACIÓN	ОТТАИВАНИЕ	SBRINA MENTO	除霜中	DEGIVRAGE	霜取中
Set temperature		SET TEMP	TEMP einstellen	TEMP. CONSIGNA	ЦЕЛЕВАЯ Температура	IMPOSTAZIONE TEMPERTURA	设定温度	REGLAGE Temperature	設定温度
Fan speed		FAN SPEED	Lüftersesch windiskeit	VELOCIDAD VENTILADOR	СКОРОСТЬ ВЕНТИЛЯТОРА	VELOCITA' VENTILATORE	凤速	VITESSE DE VENTILATION	風速
Not use button		NOT AVAILABLE	NiCht Verfusbar	NO DISPONIBLE	НЕ АОСТУПНО	NON DISPONIBILE	无效按钮	NON DISPONIBLE	無効がり
Check (Error)		Снеск	Prüfen	COMPROBAR	ПРОВЕРКА	Снеск	检查	CONTROLE	点検
Test run		TEST RUN	Testbetrieb	TEST FUNCIO NAMIENTO	ТЕСТОВЫЙ ЗАПУСК	TEST RUN	试运转	TEST	試ウソテソ
Self check		SELF CHECK	Selbst- diASNOSe	AUTO REVISIÓN	Самодиаг- Ностика	SELF CHECK	自我诊断	AUTO CONTROLE	自己リソダリ
Unit function select	ction	FUNCTION	FUNKTION SAUSWAHI	SELECCIÓN DE FUNCIÓN	Выбор Функции	SELEZIONE	功能选择	SELECTION	もりう選択
Setting of ventilati	on	SETTING OF VENTILATION	Lüfterstufen Wahlen	CONFIG. VENTILACIÓN	Настройка вентустан.	IMPOSTAZIONE ARIA ESTERNA	换气设定	SELECTION	換氮定
Selecting	language	English	Germany	Spanish	Russian	Italy	Chinese	French	Japanese
Eunction selection	1	LANGUAGE	← Fund ture	←	← 5::::::::::::::::::::::::::::::::::::	←		←	←
Operation function	limit setting	SELECTION	auswahien	DEFUNCIONES	БЫБОР ФУНКЦИИ	FUNZIONE	功能限制	FONCTIONS	キノウ制限
Lise of automatic	mode setting	FUNCTION	SPerr - FUNKtion	FUNCION BLOQUEADA	ФУНКЦИЯ БЛОКИРОВКИ	FUNZIONI	操作限制	FONCTIONS	操作
Tomporature rang	a limit cotting	AUTOMODE	HUSWAhi AVto Bétrieb	SELECCIÓN MODO AUTO	БЫБОР РЕЖИМА АВТО	SELEZIONE MODO AUTO	自动模式	SELECTION DU MODE AUTO	自動話
Limit temperature		FUNCTION	Limit TemP FUNKtion	LIMIT TEMP CONSIGNA	UTPARMYENNE Vet. Temnepat		温度限制		温度制限
mode	booting/day		Limit Kuhl Temp	LÍMIT TEMP Modo Frío	ОГРАНИЧЕНО Охлаждение	LIMITAZIONE MODO COOL	制冷范围	LIMITE TEMP MODE FROID	襟冷房
Limit temperature	neating mode	LIMIT TEMP HEAT MODE	Limit Heiz Temp	LÍMIT TEMP MODO CALOR	ОГРАНИЧЕН ОБОГРЕВ	LIMITAZIONE MODO HEAT	制热范围	LIMITE TEMP MODE CHAUD	都暖房
Limit temperature	auto mode	LIMIT TEMP AUTO MODE	Limit AUto Temp	LÍMIT TEMP Modo Auto	ОГРАНИЧЕН РЕЖИМ АВТО	LIMITAZIONE MODO AUTO	自动范围	LIMITE TEMP MODE AUTO	都自動
Mode selection		MODE SELECTION	Betriebsart Wahlen	SELECCIÓN DE MODO	выбор Режима	SELEZIONE	基本模式	SELECTION DU MODE	基本キノウ
Remote controller	setting MAIN	CONTROLLER	Haupt controller	CONTROL PRINCIPAL	ОСНОВНОЙ Пульт	CONTROLLO	遥控 主	TELCOMMANDE MAITRE	咿□□■従
Remote controller	setting SUB	CONTROLLER SUB	Neben controller	CONTROL SECUNDARIO	Дополните- Лжынпульт	CONTROLLO SUB	遥控 辅	TELCOMMANDE	「ビン」主题
Use of clock settin	ng	CLOCK	Uhr	RELOJ	Часы	OROLOGIO	时钟	AFFICHAGE HORLOGE	時計。書の
Setting the day of time	the week and	TIME SET	Uhrstellen 49:einstellen	CONFIG RELOJ	ЧАСЫ:УЕТ. ₩:ВВОА	OROLOGIO	时间finiter	HORLOGE #:ENTRER	トケイセッテイ サンカクテイ
Timer set		TIMER SET	Zeitschaltuhr 44:einstellen	TEMPORIZA - DOR#:(ONFIG	Таймер:уст. €Ч÷ввод	TIMER #:ENTER	定時 器都ER	PROG HORAIRE	タイマーセッテイ ギ:カフテイ
Timer monitor		TIMER MONITOR	Uhrzeit Anzeise	VISUALIZAR Temporizad.	ПРОЕМОТР ТАЙМЕРА	VISUALIZ TIMER	定据状态	AFFICHAGE PROG HORAIRE	917-E=9-
Weekly timer		WEEKLY TIMER	WOCHENZEIT SCHAIT UHI	TEMPORIZA - DOR SEMANAL	НЕДЕЛЬНЫЙ ТАЙМЕР	TIMER SETTIMANALE	每周定播	PROG HEBDO MADAIRE	⁹¹⁷⁻ 週間
Timer mode off		TIMER MODE OFF	Zeitschaltuhr AUS	TEMPORIZA - Dor apagado	Таймер выкл.	TIMER OFF	定擺及效	PROG HORAIRE INACTIF	⁹¹⁷ "無効
Auto off timer		AUTO OFF TIMER	AUTO Zeit funktion aus	APAGADO Automático	АВТООТКЛЮЧ. ПО ТАЙМЕРУ	AUTO OFF TIMER	解除定时	PROG HORAIRE ARRET AUTO	タイマ-ケシウスレ 赤やら
Simple timer		SIMPLE TIMER	Einfache 2017 fünktion	TEMPORIZA - DOR SIMPLE	ПРОЕТОЙ ТАЙМЕР	TIMER SEMPLIFICATO	简易跑播	PROG HORAIRE SI MPLIFIE	⁹¹⁷⁻ カンイ
Contact number s situation	etting of error	CALL	←	←	←	~	←	←	←
Display change		DISP MODE SETTING	Anzeise Befriebsart	MOSTRAR MODO	НАСТРОЙКА ИНА РЕЖИМА	IMPoSTAZIONE MODO DISPLAY	转换表示	AFFICHAGE SOUS MENU	表示切替
Temperature displ	ay °C/°F setting		Wechsel *C/*F	TEMPGRADOS *C/*F	EANH.TEMNER *C/*F	TEMPERATURA *C/*F	温度°%₽	TEMPERATURE *C/*F	温度°%₽
Room air tempera setting	ture display	ROOM TEMP DISP SELECT	Raum TEMP sewahit	MOSTRAR TEMR	Показывать темп.в комн.	TEMPERATURA	吸入温度	TEMPERATURE	スイコミオンド と日ウが
Automatic cooling setting	/heating display	AUTO MODE DISP C/H	Auto Betrieb C/H	MOSTRAR F/C EN AUTO	ИНД.Т/Х В РЕЖИМЕ АВТО	AUTO C/H	自动标示	AFFICHAGE AUTO F/C	自動認知
			-			-			

4.2 Function Setting

4.2.1 Operation Lock (Operation Function Limit Setting)

The following settings can be made.

- ① no1 :All buttons except for the [ON/OFF] button are locked.
- ② no2 :All buttons are locked.
- 3 OFF (default) :No buttons are locked.
- * To activate this operation lock function on the normal screen, hold down the ON/OFF button for two seconds while holding down the FILTER (+) button.

How to Lock the Buttons



(1) While pressing the MODE button, press the ON/OFF button for two seconds to activate the remote controller's function selection mode.

2) Press the $MODE$ button to select $_{SELECTION}^{FUNCTION}$ on the screen (at \triangle).
$[Display \textcircled{0}] \longrightarrow (Display \textcircled{0}) \longrightarrow (Display \textcircled{0}) (Display \textcircled{0}) \longrightarrow (Display \textcircled{0}) (Display \textcircled{0}$
3) Press the (Implementation Method Strain Control Con
[Display (Decision)] LOCKING FUNCTION SELECT AUTO MODE FUNCTION FUNCTION
* Displays the mode that is set in "Temperature Range Limit Setting".
4) Press the ON/OFF button until the desired lock mode appears on the screen (at 0).
$[Display \ \bigcirc] \longrightarrow No \ limitation \longrightarrow \ Lock \ All \ Except \longrightarrow \ Lock \ All \ Buttons \ of f \ of f \ ool \ ooo$
5) While pressing the MODE button, press the ON/OFF button for two seconds to return to normal mode. Setting is now complete.

Completing steps (1) to (5) allows use of the operation lock function. To enable the lock function, carry out the following steps.

Enabling the Lock Function

(6) While pressing the FILTER (4) button, press the ON/OFF button for two seconds to enable the operation lock

FUNCTION appears on the screen (at 🕒).

* If a locked button is pressed while the operation lock function is in use, FUNCTION will blink on the screen (at 🕒).

Display example when operation lock function is in use



How to Unlock the Buttons

- (7) While pressing the FILTER (+) button, press the ON/OFF button for two seconds.
 - Display example when the operation lock function is not in use



4.2.2 Auto Mode Setting

4.2.2 Auto mode Setting
The following settings can be made. ①ON (default) : Auto mode is displayed when selecting an operation mode only if the unit to be connected supports the auto mode. However, this does not apply if the unit to be connected does not support the auto mode. Operation mode can be switched: → COOL → DRY → FAN → AUTO → HEAT →
②OFF : Even if the unit supports the auto mode, auto mode is not displayed when selecting an operation mode. Operation mode can be switched : → COOL → DRY → FAN → HEAT
How to Set Auto Mode
Display example
(1)(5) (1)(5) (1)(5) (2) (3) (4) PAR-21MAA (4) (5) (4) (5) (6) (7) (7) (7) (7) (7) (7) (7) (7
(1) While pressing the MODE button, press the ON/OFF button for two seconds to activate the remote controller's function selection mode.
(2) Press the $MODE$ button to select $\stackrel{\text{FUNCTION}}{\text{SELECTION}}$ on the screen (at \textcircled{A}). [Display \textcircled{A}] \longrightarrow $\stackrel{\text{CHANGE}}{\text{LANGUAGE}}$ \longrightarrow $\stackrel{\text{FUNCTION}}{\text{SELECTION}}$ \longrightarrow $\stackrel{\text{MODE}}{\text{SELECTION}}$ \longrightarrow $\stackrel{\text{DISP MODE}}{\text{SETTING}}$
(3) Press the \bigcirc MENU button so that $_{AUTO MODE}^{SELECT}$ appears on the screen (at \bigcirc).

- * The current setting is displayed.
- (4) Press the ON/OFF button to select whether auto mode is to be used (on) or not (off).



(5) While pressing the MODE button, press the ON/OFF button for two seconds to return to normal mode. Setting is now complete.

* If you press the ON/OFF button before the MODE button, the settings you have made will be cancelled.

• Screen display when auto mode is set to ON

(1) Press the ON/OFF button.

The ON lamp lights up and operating contents are displayed on the LCD.

(2) Press the MODE button.

Each time the (MODE) button is pressed, the operation mode switches from one to another. "AUTO" is also displayed.

$$\longrightarrow \text{COOL} \longrightarrow \text{DRY} \longrightarrow \text{FAN} \longrightarrow \text{AUTO} \longrightarrow \text{HEAT} \longrightarrow \overset{*1}{}_{1} \overset{*1}{}_{1}$$

- *1: If the remote controller is connected with the unit for cool operation only, "AUTO" and "HEAT" will not be displayed, nor will it be possible to select them.
 - Display example when auto mode is set to ON







• Screen display when auto mode is set to OFF

(1) Press the ON/OFF button.

The ON lamp lights up and operating contents are displayed on the LCD.

(2) Press the MODE button.

Each time the (MODE) button is pressed, the operation mode switches from one to another, but "AUTO" is not displayed.

$$\rightarrow$$
 COOL \rightarrow DRY \rightarrow FAN \rightarrow HEAT $-$ *1

*1: If the remote controller is connected with the unit for cool operation only, "HEAT" will not be displayed.

4.2.3 Temperature Range Limit Setting

The temperature setting range can be limited.

It can be limited for each mode.

- ① Cool mode : The temperature setting range for cool/dry mode can be changed.
- ② Heat mode : The temperature setting range for heat mode can be changed.
- ③ Auto mode : The temperature setting range for auto mode can be changed.
- ④ OFF (default) : The temperature setting range is not limited.
- * When a mode other than OFF mode is set, temperature setting range limit setting for cool, heat and auto modes will be made simultaneously.

However, limit setting will not be made unless the range has been changed.

	Settir	Standard setting	
COOL·DRY Mode	Lower limit	67 °F – 87 °F	67 °E 07 °E
	Upper limit	87 °F – 67 °F	0/ - 0/ -
HEAT Mode	Lower limit	63 °F – 83 °F	
	Upper limit	83 °F – 63 °F	63°F - 83°F
AUTO Mode	Lower limit	67 °F – 83 °F	67 °F 02 °F
	Upper limit	83 °F – 67 °F	0/ 7 - 03 7

* Temperatures can be set within the range of "upper limit \geq " "lower limit".

Limiting the Temperature Range



(1) While pressing the MODE button, press the ON/OFF button for two seconds to activate the remote controller's function selection mode.

(2) Press the MODE button to select ^{FUNCTION} on the screen (at (2)).

 $[Display \textcircled{A}] \longrightarrow \begin{array}{c} CHANGE \\ LANGUAGE \end{array} \longrightarrow \begin{array}{c} FUNCTION \\ SELECTION \end{array} \longrightarrow \begin{array}{c} MODE \\ SELECTION \end{array} \longrightarrow \begin{array}{c} DISP MODE \\ SELECTION \end{array}$

(3) Press the \bigcirc MENU button to select $\frac{\text{LIMIT TEMP}}{\text{FUNCTION}}$ on the screen (at (A)).

* If a setting change was made previously, the mode that was set (one of the modes shown in step (4)) will be displayed.

(4) Press the (ON/OFF) button to select the mode for which temperature range limit setting is to be made.

[Display 🗛]	DRY mode COOL mode	HEAT mode	AUTO mode*	No limitation
	→ LIMIT TEMP COOL MODE -	HEAT MODE	→ LIMIT TEMP AUTO MODE Display D	→ LIMIT TEMP FUNCTION off

* No operation modes will be displayed if auto mode has been set to OFF.

(5) Press the **button to select lower limit or upper limit.** Lower limit blinks. Upper limit blinks.

[Display C]

$$\rightarrow \overset{(1)}{\underset{r}{\mathcal{S}}} \overset{(1)}{\underset{$$

(6) Press the [TEMP] buttons ((∇) and (\triangle)) to set the desired temperature setting range.

[Setting example for lower limit]

Display
$$\bigcirc \begin{tabular}{c} & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & \\ & & & & & & \\ & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ &$$

(7) While pressing the MODE button, press the ON/OFF button for two seconds to return to normal mode. Setting is now complete.

* If you press the ON/OFF button before the MODE button, the settings you have made will be cancelled.

* If an attempt is made to set a temperature outside the range when the temperature range limit function is in use, "LIMIT TEMP FUNCTION" will blink.

■ Display example when the temperature range limit function is in use If employees tend to lower the temperature excessively in the office without permission, set the temperature setting range for cool/dry mode to 77 °F-87 °F.

Setting



Even if someone who feels hot tries to press remote the controller's buttons to lower the temperature below 76 $^{\circ}$ F, or lower...

 $_{\rm FUNCTION}^{\rm LIMIT\ TEMP}$ blinks and the command is not accepted.



4.3 Basic Functions Setting

4.3.1 Remote Controller Main/Sub Setting

When using two remote controllers, they must be designated as the main and sub remote controllers. The following settings can be made.

① MAIN (default) : The remote controller is set as the main controller.

②SUB : The remote controller is set as the sub controller.

To Change the Main/Sub Setting



- (1) While pressing the (MODE) button, press the (ON/OFF) button for two seconds to activate the remote controller's function selection mode.
- (2) Press the MODE button until MODE SELECTION appears on the screen (at (2)). CHANGE FUNCTION MODE DISP MODE [Display] SELECTION LANGUAGE SELECTION SETTING
- (3) Press the (MENU) button to select "CONTROLLER" on the screen (at ().
- (4) Press the (ON/OFF) button to select "CONTROLLER MAIN" or "CONTROLLER SUB" on the screen (at ().

[Display A] CONTROLLER MAIN SUB

(5) While pressing the (MODE) button, press the (ON/OFF) button for two seconds to return to normal mode.

4.3.2 Timer function setting (Weekly timer/Auto off timer/Simple timer)

The following settings can be made.

①Weekly Timer (default) : The weekly timer can be used.

- ②Auto Off Timer : The auto off timer can be used.
- ③ Simple Timer : The simple timer can be used.
- (4) Timer Mode Off : Timer mode cannot be used.

* If the clock function is disabled (OFF), "Weekly Timer" cannot be selected.

Clock function setting

The following settings can be made.

- ①ON (default) : The clock function can be used.
- ②OFF : The clock function cannot be used.

If "OFF" is selected to disable the clock function, the weekly timer cannot be used to make day of the week/time settings. To use the weekly timer to set the day of the week and time, the clock function must be set to "ON" (default).

To Use the Clock



(1) While pressing the MODE button, press the ON/OFF button for two seconds to activate the remote controller's function selection mode.

(2) Press the MOE)E) bu	tton until ^M	ODE ELECTION	appears on	the scre	een (at 🗛)			
[Display 🚯]	\rightarrow	CHANGE LANGUAGE	\rightarrow	FUNCTION SELECTION	\rightarrow	MODE SELECTION	\rightarrow	DISP MODE SETTING	

(3) Press the (MENU) button to select "CLOCK" on the screen (at ().

(4) Press the (ON/OFF) button so that "ON" appears on the screen (at **D**).

 $[\text{Display} \bullet] \longrightarrow \overline{on} \longrightarrow \overline{on}^{c} \overline{c} -$

(5) While pressing the MODE button, press the ON/OFF button for two seconds to return to normal mode.

* If you press the ON/OFF button before the MODE button, the settings you have made will be cancelled.

- Day of the week and time setting
- The day of the week and time can be set and changed. [The time can be set in 1-minute increments.]

Notes

- This setting is not possible if the clock function is disabled by the function setting.
- The day of the week and time are not displayed if the clock function is disabled by function selection.
- This setting is not possible if the simple timer or auto off timer has been selected.

Setting the Day of the Week and Time

■ Display example
TEMP. ON/OFF
(1)(3) $PAR-21MAA / OCLOCK / VOPERATION \triangle CLEAR$
(1) Press the [CLOCK] buttons (\bigcirc and \bigcirc) to display $\underset{L}{\text{IME SET}}$ on the screen (at \textcircled{A}).
(2) Press the ON/OFF button until the desired day of the week appears.
$[Display] \longrightarrow Sun \longrightarrow Mon \longrightarrow Tue \longrightarrow Wed \longrightarrow Thu \longrightarrow Fri \longrightarrow Sat $
(3) Press the [CLOCK] buttons (\bigtriangledown and \bigtriangleup) to set the desired time.
Press the [CLOCK] buttons (\bigcirc and \bigcirc) longer will switch the time in 10-minute and 1-hour increments.
$[Display \bullet] \longrightarrow One-minute \longrightarrow Ten-minute \longrightarrow One hour$
(4) Press the (FILTER) (+) button to confirm the time.
Note The time you have set can be cancelled by pressing the MODE (RACK) button without confirming it

(5) Press the MODE (BACK) button to return to the normal screen and complete the day of the week/time setting. * The day of the week and time you have set are displayed on the normal screen.

① Weekly Timer

- The weekly timer allows you to set up to eight operations per day of the week.
- For each operation, you can set the ON (start) or OFF (stop) timer and temperature. The start timer, stop timer and temperature ٠ can also be set individually.
- The air conditioner is operated at the times you have set and according to the settings you have made.
- The time for the weekly timer can be set in 1-minute increments.
- If "OFF" is selected to disable the clock function, the weekly timer cannot be used to make day of the week/time settings. To use the weekly timer to set the day of the week and time, the clock function must be set to "ON" (default). (Refer to page 21.)

Note

With the weekly timer, it is not possible to designate an operation mode.

The air conditioner will be operated in the currently selected operation mode. (Cool, Dry, Heat or Auto)

How to set the Weekly Timer



(1) Make sure that "WEEKLY" is displayed on the screen (at (2)).

(2) Press the ⁽²⁾ MENU button to select → ENTER on the screen (at (▲)).

TIMER [Display (A)] MONITOR (3) Press the $(\bigcirc ON/OFF)$ button until the desired day of the week appears.

→ Sun-Sat ---→ Sun →Mon → - → Fri → Sat -[Display **C**]

(4) Press the () and () buttons to set the desired operation No. (Up to 8 patterns can be set.)

TIMER SET

←:ENTER

→ 8on ↔ Fon ↔ — ↔ Son ↔ Ion ← [Display D]

* A cell from the

Op No.	Sunday	Monday		Saturday	
no1	• 8:30				- Setting contents -
	• ON • 73 °F				Starts the air conditioner at 8:30 with the ten perature set to 73 °F.
no2	• 10:00	• 10:00	• 10:00	• 10:00	
	• OFF	• OFF	• OFF	• OFF	- Setting contents -
					Stops the air conditioner at 10:00.
			_		-
no8					

If "Sun – Sat" is set in step (3), the same pattern can be set for each day of the week at a time. The same pattern is set in the shaded areas in the above setup matrix. (Example: Selecting "Sun - Sat" and setting operation No. "no2")

(5) Press the [CLOCK] buttons (\bigcirc and \bigcirc) to set the desired time. (0:00 to 23:59)
$[Display \odot] \longrightarrow 9:00 \leftrightarrow 9:01 \leftrightarrow 23:59 \leftrightarrow 0:00 \leftrightarrow 0:01 \leftrightarrow - \leftrightarrow 8:58 \leftrightarrow 8:59 \leftarrow 1$
(6) Press the ON/OFF button to select whether to start or stop the air conditioner at the time you have set in step (5).
$[Display \bigcirc] \longrightarrow ON \longrightarrow OFF - (Space)$
(7) Press the [TEMP] buttons (\bigcirc and \bigcirc) to set the desired room temperature. (53 °F to 87 °F)
$[Display \ \textcircled{B}] \longrightarrow_{(Space)} \longleftrightarrow ' \overleftarrow$
Temperature setting range : The temperature can be set within a range of 53 °F to 87 °F. However, the setting range varies with the type of the air conditioner. (Refer to 4-2-3.)
(8) After completing the settings in steps (4) to (7), press the FILTER (+) button to confirm them.
To cancel the settings you have made, press the CHECK (CLEAR) button once.
(To clear all the weekly timer settings you have made, hold down the CHECK) (CLEAB) button for two seconds or
more until the settings blink. All of the settings will be cleared.)
Note
The settings you have made can be cancelled by pressing the (MODE) (BACK) button befor pressing (FILTER) (+) button.
When two or more different operations for the same time are set, only the operation with the larger operation No. will be
(9) Repeat step (3) to (8) to set the contents in the setup matrix.
(10) Press the MODE (BACK) button to return to the normal screen and complete weekly timer setting.
(11) If you press the ON/OFF button, the weekly timer will start and " 👿 " will disappear from the screen.
Make sure that " 🕲 " disappears.
How to Review the Weekly Timer Settings
(1) Make sure that "WEEKLY" is displayed on the screen (at 🕒).
(2) Press the OMENU button to display MONITOR on the screen (at 🔊).
(3) Press the ON/OFF button to select the day of the week you want to check.
(4) Press the x and x a time.
* The settings are displayed in order of time setting.
(5) To close the MODE button.
To Turn Off the Weekly Timer
(1) Press the 🕘 ON/OFF) button to display 🔞 on the screen (at 🕞).

	() () ()	<i>19:35</i>	-	
G		<i>₿ [•]</i> ⊧ ⊚	5.11	OWEEKLY)

(1) Press the $\bigcirc ON/OFF$ button so that \bigcirc disappears from the screen (at \bigcirc).



• Weekly timer setting procedure

To facilitate weekly timer setting, it is recommended that the settings (day of the week, time, operation (on/off)) you are going to make be entered in the setup table shown below.

Weekly timer setup table (up to 8 patterns can be set for each day of the week, 56 patterns in total for a week)

	Operation No.		Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		Time setting							
1 no	no 1	On/off setting							
		Temperature							
		Time setting							
2	no 2	On/off setting							
		Temperature							
		Time setting							
3	no 3	On/off setting							
		Temperature							
		Time setting							
4	no 4	On/off setting							
		Temperature							
		Time setting							
5	no 5	On/off setting							
		Temperature							
		Time setting							
6	no 6	On/off setting							
		Temperature							
		Time setting							
7	no 7	On/off setting							
		Temperature							
		Time setting							
8	no 8	On/off setting							
		Temperature							
Opera	ation No.	: Use the 🕵	and 😂	button:	s to select th	e desired ope	ration No.		
Day c	of the week	: Use the 🕘 ON	OFF butto	on to select th	e desired day	y. ("Sun to Sať	", "Sun", "Mon	", "Tue", "Weo	1", "Thu", "Fri"
-		or "Sat" can be	celected)		-				
			selected.)						
Time		: Use the [@CLC	CK1 buttons	$(\bigcirc$ and	\bigtriangleup)) to s	et the desired	time. (The ti	me can be s	set from 0:00
		to 22:50 in 1 mi	outo incromo	ntc.)					
		10 23.39 11 1-111		1115.)					
Opera	ation (ON/OFF	() : Use the () Of	V/OFF butt	on to select t	the desired o	peration (ON,	OFF, (space)).		
Temp	erature	: Press the [🙀 TE	MP] buttons	$(\bigcirc $ and	\bigtriangleup) to se	et the desired	temperature.		

2 Auto Off Timer

- The auto off timer begins counting down when the air conditioner starts, and stops the air conditioner when the set time passed.
- The time on the auto off timer can be set in a range of 30 minutes to 4 hours, in 30-minute increments.

* By default, the weekly timer is selected as the remoter controller's timer function. To use the auto off timer, switch the timer function to the auto off timer using the remote controller's function selection.

Note 1 : If the auto off timer is selected, it is not possible to use the weekly and simple timers.

Note 2 : Timer operation is not possible when:

A timer is operating, an error has occurred, the air conditioner is operating, the remote controller is diagnosing a problem, function selection is in progress, timer setting is in progress, or the system is centrally controlled. (ON/OFF operation is prohibited under the above conditions.)

Selecting the Auto Off Timer



Steps (1) to (5) are necessary when switching the timer function from simple timer, weekly timer and no timer.

- (1) While pressing the MODE button, press the ON/OFF button for two seconds to activate the remote controller's function selection mode.
- (2) Press the MODE button until MODE selection appears on the screen (at A).



(5) While pressing the MODE button, press the ON/OFF button for two seconds to return to normal mode.

* If you press the ON/OFF button before the MODE button, the settings you have made will be cancelled.

How to Set the Auto Off Timer



TIMER

MONITOR

A

TIMER AFTER AUTO OFF-

B

To Turn Off the Auto Off Timer...

- (1) Press the (ON/OFF) button for 3 seconds so that the timer execution time disappears from the screen (at O).
 - If the air conditioner is operated with the auto off timer turned OFF, will appear on the screen (at).
 - * The auto off timer will be effective the next time that the air conditioner is operated.
 - Display example (auto off timer is off)



To Turn On the Auto Off Timer...

(1) Press the ON/OFF button for 3 seconds while the timer is OFF, so that 🕲 disappears from the screen (at 🕞) and the timer execution time appears on the screen (at 🕒).

* The timer execution time that was set previously will be displayed.

Display example (auto off timer is on)



③ Simple Timer

- You can set the simple timer in any of three ways.
- Start time only : The air conditioner starts when the set time has passed.
- Stop time only : The air conditioner stops when the set time has passed.
- Start & Stop times : The air conditioner starts and stops at the respective passed times.
- The simple timer (Start and stop) can be set only once within a 72-hour period. The time setting is made in hour increments.

Note 1: Timer operation is not possible when:

A timer is operating, an error has occurred, the air conditioner is operating, the remote controller is diagnosing a problem, function selection is in progress, timer setting is in progress, or the system is centrally controlled. (ON/OFF operation is prohibited under the above conditions.)

If the simple timer is not currently selected, select it and make the necessary changes to the current settings as explained below.

Switching to the simple timer
Display example Display example Image: Construction of the construct
(4) PAR-21MAA OCLOCK VOPERATION A QLEAR Steps (1) to (5) are necessary when switching the timer function from auto off timer, weekly timer and no timer. (1) While pressing the MODE button, press the ON/OFF button for two seconds to activate the remote controller's function selection mode.
(2) Press the $(MODE)$ button until $\stackrel{\text{NODE}}{\text{SELECTION}}$ appears on the screen (at (2)). $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{FUNCTION}}$ $\xrightarrow{\text{MODE}}$ $\xrightarrow{\text{DISP MODE}}$ $\xrightarrow{\text{DISP MODE}}$ $\xrightarrow{\text{DISP MODE}}$ $\xrightarrow{\text{DISP MODE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{SELECTION}}$ $\xrightarrow{\text{SELECTION}}$ $\xrightarrow{\text{DISP MODE}}$ $\xrightarrow{\text{DISP MODE}}$ $\xrightarrow{\text{DISP MODE}}$ $\xrightarrow{\text{DISP MODE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{SELECTION}}$ $\xrightarrow{\text{SELECTION}}$ $\xrightarrow{\text{DISP MODE}}$ $\xrightarrow{\text{DISP MODE}}$ $\xrightarrow{\text{DISP MODE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{SELECTION}}$ $\xrightarrow{\text{SELECTION}}$ $\xrightarrow{\text{DISP MODE}}$ $\xrightarrow{\text{DISP MODE}}$ $\xrightarrow{\text{DISP MODE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{SELECTION}}$ $\xrightarrow{\text{SELECTION}}$ $\xrightarrow{\text{DISP MODE}}$ $\xrightarrow{\text{DISP MODE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{CHANGE}}$ $\xrightarrow{\text{SELECTION}}$ $\xrightarrow{\text{DISP MODE}}$ $\xrightarrow{\text{DISP MODE}}$ $\xrightarrow{\text{CHANGE}}$ $\text{CHA$
 (3) Press the MENU button so that "TIMER" appears on the screen (at). (4) Press the ON/OFF button until "SIMPLE TIMER" appears on the screen (at). TIMER MODE → AUTO OFF → SIMPLE TIMER → WEEKLY TIMER [Display]
(5) While pressing the MODE button, press the ON/OFF button for two seconds to return to normal mode. * If you press the ON/OFF button before the MODE button, the settings you have made will be cancelled.

How to Set the Simple Timer

■ Display example
Image: Set indicating the set indin set indicating the set indicating the set indicating th
$(6) \\ (1) \\ BACK \\ (3) \\ PAR-21MAA \\ (3)$
Make sure that "SIMPLE TIMER" is displayed on the screen (at 🕒).
(1) Press the OMENU button to select TIMER SET on the screen (at \Lambda).
(2) Press the ON/OFF button to select "Start time only" or "Stop time only".
$\xrightarrow{Hr} AFTER \xrightarrow{ON} \xrightarrow{Hr} AFTER OFF $
 Start time only (Displays the time at which the air conditioner starts) : "Hr AFTER ON" Stop time only (Displays the time at which the air conditioner stops) : "Hr AFTER OFF"
(3) Press the [OCLOCK] buttons (→ and) to set the desired time. (The time can be set up to 72 hours in 1-hour increments.)
$[Display \bigcirc] \longrightarrow 1 \leftrightarrow 2 \leftrightarrow - \leftrightarrow 71 \leftrightarrow 72$
* To cancel the time you have set, press the CHECK (CLEAR) button.
 (4) Press the FILTER (←) button to confirm the setting. *1. When using only the start timer or stop timer, make sure that "" is displayed for the timer you are not going to use.
*2. To cancel the time you have set, press the CHECK (CLEAR) button to display "", and then press the FILTER (+) button to confirm it.
(5) When using both the start and stop timers, carry out steps (2) to (4) to set both the start and stop times.
(6) Press the MODE button to complete the setting procedure.
[Display] [Display] SIMPLE
(7)Press the ON/OFF button. The simple timer will start to operate and the timer execution time you have set will be displayed.
If both start and stop timers are set, whichever time will come first will be displayed.

Review the Current Simple Timer Settings

(1) Be sure that the "SIMPLE" indicator is displayed on the screen (at \blacksquare).

- (2) Press the (2) MENU button, so that the ^{TIMER}_{MONITOR} appears on the screen (at (2)).
- The time you have set to start or stop the timer appears on the screen (at $\boldsymbol{\Theta}$).
- (3) Press the MODE button to close the TIMER display and return to the standard control screen.



To Turn Off the Simple Timer...

(1) Press the (ON/OFF) button so that the timer setting no longer appears on the screen (at O).





④ Timer Mode Off

Timer mode cannot be used.



* If you press the ON/OFF button before the MODE button, the settings you have made will be cancelled.

V. How to Select Functions of remote controller

4.3.3 Contact Number Setting for Error Situation

The following settings can be made.

- CALL OFF (default) : The preset contact number is not displayed even when an error occurs.
 CALL ************ : The preset contact number is displayed when an error occurs. (The cor : The preset contact number is displayed when an error occurs. (The contact number can consist of up to 12 digits.)
 - CALL -: The contact number is not set in default setting. It is displayed as shown on the left.

Setting the Contact Numbers

Display example
$(1, \langle 0 \rangle)$ (2) (3) (4) $PaR-21MAA$ (3) (4) $PaR-21MAA$ (3) (4) (5) (7) (7)
(1) While pressing the MODE button, press the ON/OFF button for two seconds to activate the remote controller's function selection mode.
(2) Press the MODE button until appears on the screen (at 🔕).
$[Display \textcircled{O}] \longrightarrow (Display \textcircled{O}) \longrightarrow (Di) \longrightarrow (Display \textcircled{O}) \longrightarrow (Display \textcircled{O}) \longrightarrow (Display \textcircled{O})$
(3) Press the \bigcirc MENU button until "CALL" appears on the screen (at \blacksquare).
(4) Press the ON/OFF button to select whether or not to show the contact number.
Do not show Show [Display (A)] CALL CALL CALL CALL CALL CALL CALL CAL
$[Display \bullet] \longrightarrow \Box \Box \Box \Box \Box = -$
(5) Press the [CLOCK] buttons ((∇) and (\triangle)) to set the desired contact number, one digit at a time. To move the input digit
position left or right, press the [TEMP] buttons (\bigcirc and \bigcirc).
$[Display \textcircled{0}] \longrightarrow 0 \nleftrightarrow 1 \bigstar - \bigstar 9 \bigstar []$
The contact number can contain up to 12 digits. [When entering "012"]
[Display 🚯] CALL • 012_
"0" Press the [CLOCK] button () once.
Each time a value is entered, press the [TEMP] button (\triangle) to move the cursor to the next digit to the right.
"1" Press the [CLOCK] button (\bigtriangleup) twice.
"2" Press the [CLOCK] button (\bigtriangleup) three times.

- (6) While pressing the MODE button, press the ON/OFF button for two seconds to return to normal mode.
 - * If you press the ON/OFF button before the MODE button, the settings you have made will be cancelled.
- (7) If you press the CHECK (CLEAR) button, the contact number will be displayed for five seconds.
- Once the contact number has been set, the error code and contact number will be displayed alternately when an error occurs.



4.4 Display Change Setting

4.4.1 Temperature Display °F/°C Setting

The following settings can be made.

① °F(default)	: Temperatures are displayed in Fahrenheit
	(Degrees F = $1.8 \times \text{degrees C} + 32$)
② °C	: Temperatures are displayed in Celsius.
	(Degrees C = (Degrees F - 32) / 1.8)

Switching the Temperature Display Unit between °F and °C



- (1) While pressing the MODE button, press the ON/OFF button for two seconds to activate the remote controller's function selection mode.
- (2) Press the MODE button until DISP MODE appears on the screen (at (2)).



- (3) Press the (I MENU) button to select "TEMP MODE °C/°F" on the screen (at ().
- (4) Press the ON/OFF button to select "°F" or "°C"on the screen (at **D**).

[Display D]	\rightarrow	۴	\rightarrow	Ĉ	

TIME SUN

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Ø

(5) While pressing the MODE button, press the ON/OFF button for two seconds to return to normal mode.

F

- * If you press the ON/OFF button before the MODE button, the settings you have made will be cancelled.
 - ■Temperature display example when "°F" is selected

 $Q_{1}Q_{2}$

 ηq

Temperature display example when "°C" is selected



4.4.2 Room air Temperature Display Setting

The following settings can be made.

① ON (default) : The room air temperature is displayed.
 ② OFF : The room air temperature is not displayed.

Setting the Room Air Temperature



(1) While pressing the MODE button, press the ON/OFF button for two seconds to activate the remote controller's function selection mode.

(2) Press the M	ODE) button unti	I DISP MOD	DE appears	on the s	creen (at	A).		
[Display A]	→	CHANGE LANGUAGE	\rightarrow	FUNCTION SELECTION	\rightarrow	MODE SELECTION	\rightarrow	DISP MODE SETTING	
(3) Press the 🕘	MENI	J button s	so that "F	ROOM TEN	1P DISP	SELECT"	appears	s on the scr	een (at \land).

(4) Press the ON/OFF) button to select "on" or "oFF" on the screen (at **D**).

→ on → off-[Display D]

- (5) While pressing the MODE button, press the ON/OFF button for two seconds to return to normal mode.
 - * If you press the ON/OFF button before the MODE button, the settings you have made will be cancelled.
 - Room air temperature display example when "ON" is selected



Room air temperature display example when "OFF" is selected

K≫CUUI	
 ™	

4.4.3 Automatic Cooling/Heating Display Setting

- This section explains how to set whether to display "COOL"/"HEAT" in auto mode. It will not be displayed if auto mode is set to OFF.
- ① ON (default) : One of "Automatic cooling" and "Automatic heating" is displayed under the automatic mode is displayed.
- ② OFF : Only "Automatic" is displayed under the automatic mode.

Selecting Whether to Display "COOL"/"HEAT" in Auto Mode



(1) While pressing the MODE button, press the ON/OFF button for two seconds to activate the remote controller's function selection mode.



(3) Press the (MENU) button so that "AUTO MODE DISP C/H" appears on the screen (at ().

(4) Press the ON/OFF button to select "on" or "oFF" on the screen (at **D**).

 $[Display \bullet] \longrightarrow on \longrightarrow off -$

(5) While pressing the MODE button, press the ON/OFF button for two seconds to return to normal mode. * If you press the ON/OFF button before the MODE button, the settings you have made will be cancelled.

■ Display example when "AUTO MODE DISP C/H" is set to "ON"

[During auto (cool) mode]



Display example when "AUTO MODE DISP C/H" is set to "OFF"



[During auto (heat) mode]



VI. Unit Function Setting by the Remote Controller (for Mr. SLIM P Series)

Perform the following settings only to change the functions for Mr. Slim series. (This setting is not possible with the City-Multi series.)

Each unit's functions can be set by a remote controller. Setting of each unit's functions is possible by remote controller only. Table Functions Available (For details regarding initial settings and operation modes of each unit, refer to the unit installation manual.)

(1) Itemised functions of the entire refrigerant system (select unit number 00)

Function	Settings	Mode No.	Setting No.	Check	Remarks
Device failure	Not available		1		
Power failure	Available	1	0		
automatic recovery	(Approx. 4-minute wait-period after power is restored.)		2		
Indoor tomporature	Average data from each indoor unit		1		
Indoor temperature	Data from the indoor unit with remote controllers	2	2		
	Data from main remote controller		3		
	Not supported		1		
	Supported (Indoor unit does not intake outdoor air through LOSSNAY.)	3	2		
	Supported (Indoor unit intakes outdoor air through LOSSNAY.)		3		
Bower veltage	230V	1	1		
rower voltage	208V	4	2		
Auto operating mode	Auto energy-saving operation ON	5	1		
*2	Auto energy-saving operation OFF	5	2		
Frost prevention	2°C [36°F](Normal)	15	1		
temperature	[3℃[37°F]	15	2		
Defrosting control	Standard	17	1		
	For high humidity		2		

*1. Can be set only when a wired remote controller is used. This function cannot be set for floor type models. When using two remote controllers (two-remote controller operation), the remote controller with a built-in sensor must be set as the main remote controller.

Meaning of "Function setting"

Mode No.02 : indoor temperature detecting

No	Indoor temperature : ta					
No1.	Average data of the sensor on all the indoor units	factory setting	ta=(A+B)/2	ta=(A+B)/2	ta=A	(MAIN)
No2.	the data of the sensor on the indoor unit that connected with remote controller		ta=A	ta=B	ta=A	ta=A
No3	the data of the sensor on main remote controller.		ta=C	ta=C	ta=C	ta=C

*2. Can be set only when the outdoor unit is an inverter type.

(2) Itemised functions of the indoor unit (select unit numbers 01 to 03 or AL [Wired remote controller] / 07 Wireless remote controller])

Function	Settings	Mode No.	Setting No.	Check	Remarks
	100Hr		1		
Filter sign	2500Hr	07	2		
	"Clean the filter" indicator is not displayed.		3		
Airflow	Quiet Standard		1		
All llow	Standard High ceiling (1) PLA-A·AA type	08	2		
(Fan speed)	High ceiling High ceiling		3		
No. of air outlate	4 directions		1		
	3 directions	09	2		
of PLA-A·AA	2 directions		3		1
Installed options	Not supported	10	1		1
(highperformance filter)	Supported	10	2		1
	No vanes(Vane No.3 setting : PLA-A.AA only)		1		1
Vane setting	Vane No. 1 setting	11	2		1
Ũ	Vane No. 2 setting		3		1
Energy saving air	OFF	10	1		1
flow (Heating mode)	ON	12	2		1
Swing.	Not available	00	1		1
Swing	Available	23	2		1
Set temperature in	ON	0.4	1		1
heating mode 4deg-up	OFF	24	2		1
	Extra low		1		1
Fan speed when the heating thermostat is OFF	Stop	25	2		1
	Keeping fan speed set by remote controller		3		1
Fan speed when the	Keeping fan speed set by remote controller	07	1		1
cooling thermostat is OFF	Stop	27	2		1
Detection of abnormality	Detect	00	1		1
(P8) of the pipe temperature	Neglect	28	2		

Note

If a function of an indoor unit is changed by function selection after installation is complete, make sure that a " \bigcirc " mark, etc., is given in the "Check" column of Table to indicate the change

[Flow of function selection]

First, try to familiarize yourself with the flow of the function selection procedure. In this section, an example of setting the room temperature detection position is given.

For actual operations, refer to steps ${\mathbb O}$ to ${\mathbb O}$.



Selecting functions using the wired remote controller



[Operating Procedure] Check the setting items provided by function selection. If settings for a mode are changed by function selection, the functions of that mode will be changed accordingly. Check all the current settings according to steps 2 to 0, fill in the "Check" column in Table, and then change them as necessary. For factory settings, refer to the indoor unit's installation manual. 2 Switch off the remote controller. ③ Set the outdoor unit's refrigerant address. mode is 15 to 28)and ® TEST @ Press the [OCLOCK] buttons (\bigtriangledown and \bigtriangleup) to select the desired refrigerant address. The refrigerant address changes from "00" to "15". buttons simultaneously for atleast two seconds. FUNCTION will start to blink, (This operation is not possible for single refrigerant systems.) and then the remote controller's display content will change as shown below. þģ Refrigerant address FUNCTION FUNCTION SELECTION display section - - -- - -If the unit stops after FUNCTION SELECTION blinked for two seconds or "88" blinks in the room temperature display area for two seconds, a transmission error may have occurred. Check to see if there are any sources of noise or interference near the transmission path. Note If you have made operational mistakes during this procedure, exit function selection (see step 💿), and then restart from step ②. ④ Set the indoor unit number. ര Press the [\bigcirc CLOCK] buttons (\bigcirc and \bigcirc) to select the unit number Press the ON/OFF button so that "--" blinks in the unit number display of the indoor unit for which you want to perform function selection. The unit number changes to "00", "01", "02", "03",04" and "AL" each time a button is area. pressed Unit number FUNCTION 00 FUNCTION SELECTION 00 DÓ display section To set modes 01 to 06 or 15 to 22 select unit number "00". © When the refrigerant address and unit number are confirmed by pressing the To set modes 07 to 14 or 23 to 28 carry out as follows: (MODE) button, the corresponding indoor unit will start fan operation. This

To set each indoor unit individually, select "01" to "04". To set all the indoor units collectively, select "AL".

- © Press the MODE button to confirm the refrigerant address and unit number.
 - After a while, "- " will start to blink in the mode number display area.

Mode number display section	FUNCTION SELECTION	00) (<u> </u>
--------------------------------	-----------------------	--------------	----------

* "88" will blink in the room temperature display area if the selected refrigerant address does not exist in the system.

Furthermore, if "F" appears and blinks in the unit number display area and the refrigerant address display area also blinks, there are no units that correspond to the selected unit number. In this case, the refrigerant address and unit number may be incorrect, so repeat steps (2) and (3) to set the correct ones.

⁶ Select the mode number.

 (c) Press the [∯ TEMP] buttons ((⊂) and △)) to set the desired mode number. (Only the selectable mode numbers can be selected.) 	Mode number FUNCTION DD Díá display section Díá
⑦ Select the setting content for the selected mode.	\mathbb{P} Press the [H TEMP] buttons (\bigtriangledown and \bigtriangleup) to select the desired setting
© Press the OMENU button. The currently selected setting number will	number.
blink, so check the currently set content.	
Setting number display section/ \$ Setting number 1 = Indoor unit c	operating average
Image: Begister the settings you have made in steps Image: Ima	ne mode number and setting number will stop blinking and remain lit, indicating the
© Press the MODE button. The mode number and setting number will start en to blink and registration starts.	Id of registration.
	FUNCTION 00 00
* If "" is displayed for both the mode number and setting number and "88" blinks in Check to see if there are any sources of noise or interference near the transmission	the room temperature display area, a transmission error may have occurred.

 \circledast If you wish to continue to select other functions, repeat steps \circledast to \circledast

① Complete function selection.

Note

A Hold down the FILTER (mode is 15 to 28) and TEST buttons simultaneously for at least two seconds. After a while, the function selection screen will disappear and the air condi-

After a while, the function selection screen will disappear and the air conditioner OFF screen will reappear.

Do not operate the remote controller for at least 30 seconds after completing function selection. (No operations will be accepted even if they are made.)

helps you find the location of the indoor unit for which you want to perform function selection. However, if "00" or "AL" is selected as the unit number, all the indoor

units corresponding to the specified refrigerant address will start fan operation.

When grouping different refrigerant systems, if an indoor unit other than the

one to which the refrigerant address has been set performs fan operation,

there may be another refrigerant address that is the same as the specified one.

In this case, check the DIP switch of the outdoor unit to see whether such a

Unit number 02

Fan draft

Example) When the refrigerant address is set to 00 and the unit number is 02.

00 refrigerant address
Outdoor unit

Unit number 01

Remote controller

Indoor unit

refrigerant address exists.

Designate operation

If a function of an indoor unit is changed by function selection after installation is complete, make sure that a O " mark, etc., is given in the "Check" column of Table to indicate the change.

⁶ Confirm the refrigerant address and unit number.

VII. Test Run by the Remote Controller (for Mr. SLIM P Series) 1. Check Points Under Test Run

Before test run

- After installation of indoor and outdoor units, piping work and electric wiring work, re-check that there is no refrigerant leakage, loosened connections and incorrect polarity.
- Measure impedance between the ground and the power supply terminal block(L1, L2) on the outdoor unit by 500V Merger and check that it is 1.0MΩ or over.
- *Don't use 500V Merger to indoor/outdoor connecting wire terminal block(S1, S2, S3) and remote controller terminal block (1, 2). This may cause malfunction.
- Make sure that test run switch (SW4) is set to OFF before turning on power supply.
- Turn on power supply twelve hours before test run in order to protect compressor.
- For specific models which requires higher ceiling settings or auto-recovery feature from power failure, make proper changes of settings referring to the description of Selection of Functions through Remote Controller.
- Make sure to read operation manual before test run. (Especially items to secure safety.)

2.Test Run using the Wired Remote Controller



- In case of test run, the OFF timer will be activated, and the test run will automatically stop after two hours.
- The room temperature display section shows the pipe temperature of indoor units during the test run.
- Check that all the indoor units are running properly in case of simultaneous twin and triple operation. Malfunctions may not be displayed regardless of incorrect wiring.
- *1 After turning on the power supply, the system will go into startup mode, "PLEASE WAIT" will blink on the display section of the room temperature, and lamp(green) of the remote controller will blink.
 - As to INDOOR BOARD LED, LED1 will be lit up, LED2 will either be lit up in case the address is 0 or turned off in case the address is not 0. LED3 will blink.

As to OUTDOOR BOARD LED, LED1(green) and LED2(red) will light up. (After the startup mode of the system finishes, LED2(red) will be turned off.)

In case OUTDOOR BOARD LED is digital display, [-] and [-] will be displayed alternately every second.

 If one of the above operations doesn't function correctly, the causes written below should be considered. Find causes from the symptoms.

The below symptoms are under test run mode. startup in the table means the display status of *1 written above.

Symptoms in test	run mode	0		
Remote Controller Display	OUTDOOR BOARD LED Display < > indicates digital display.	Cause		
Remote controller displays "PLEASE WAIT", and cannot be operated.	After "startup" is displayed, only green lights up. <00>	 After power is turned on, "PLEASE WAIT" is displayed for 2 minutes during system startup. (Normal) 		
After power is turned on, "PLEASE WAIT"	After "startup" is displayed, green(once) and red(once) blink alternately. <f1></f1>	 Incorrect connection of outdoor terminal block (L1, L2, and S1, S2, S3.) 		
is displayed for 3 minutes, then error code is displayed.	After "startup" is displayed, green(once) and red(twice) blink alternately. <f3, f5,="" f9=""></f3,>	Outdoor unit's safeguard installation connector is open.		
No display appears even when remote	After "startup" is displayed, green(twice) and red(once) blink alternately. <ea. eb=""></ea.>	 Incorrect wiring between the indoor and outdoor unit (Polarity is wrong for S1, S2, S3.) Remote controller transmission wire is short circuit. 		
(Operation lamp does not light up.)	After "startup" is displayed, only green lights up. <00>	 There is no outdoor unit of address 0. (Address is other than 0.) Remote controller transmission wire is open-circuit. 		
Display appears but soon disappears even when remote controller is operated.	After "startup" is displayed, only green lights up. <00>	After canceling function selection, operation is not possible for about 30 seconds. (Normal)		

* Press the remote controller's CHECK button twice to perform self-diagnosis. See the table below for the contents of LCD display.For details, please refer to "VIII.2. Error code list".

LCD	Contents of inferior phenomena
P1~9	Malfunction indoor unit
Fb	Malfunction indoor unit
U1~UP	Malfunction outdoor unit
F3~F9	Malfunction outdoor unit
E0~E5	Remote controller transmitting error
E6~EF	Indoor/outdoor unit communication error
	No error history
FFFF	No applied unit

See the table below for details of the LED display (LED 1, 2, 3) on the indoor controller board.

LED1 (microcomputer power supply)	Lits when power is supplied.
LED2 (remote controller)	Lits when power is supplied for wired remote controller.
	The indoor unit should be connected to the outdoor unit with address "0" setting.
LED3 (indoor/outdoor communication)	Blink when indoor and outdoor unit are communicating.

VIII. Self-Diagnosis by the Remote Controller (for Mr.SLIM)

1. How To Proceed "Self-Diagnosis"

1-1. When a Problem Occurs During Operation

If a problem occurs in the air conditioner, the indoor and outdoor units will stop, and the problem is shown in the remote controller display.

[CHECK] and the refrigerant address are displayed on the temperature display, and the error code and unit number are displayed alternately as shown below.

①(If the outdoor unit is malfunctioning, the unit number will be "00".)

② In the case of group control, for which one remote controller controls multiple refrigerant systems, the refrigerant address and error code of the unit that first experienced trouble (i.e., the unit that transmitted the error code) will be displayed.

③To clear the error code, press the ① ON/OFF button.

Снеск



(Alternating Display)



-<u>`</u>P'2'-

Address (3 digits) or unit number (2 digits)

)))) :)(

When using remote operation of remote/local combined control,clear the error code by pressing the ① ON/OFF button on remote controller after changing operation from remote to local.During central control by MELANS control , clear the error code by pressing ① ON/OFF button on MELANS remote controller.

Снеск

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1-2. Self-Diagnosis During Maintenance or Service

Since each unit has a function that stores error codes, the latest check code can be recalled even if it is cancelled by the remote controller or power is shut off.

Check the error code history for each unit using the remote controller. ① Switch to self-diagnosis mode. ④ Press the CHECK button twice within three seconds. The display content

- ② Set the unit number or refrigerant address you want to diagnose.
- ⑦ Press the [TEMP] buttons (♥ and △) to select the desired number or address. The number (address) changes between [01] and [50] or [00] and [15].



③ Display self-diagnosis results.

will change as shown below.

When there is error code history>

(For the definition of each error code, refer to the indoor unit's installation manual or service handbook.)





④ Reset the error history.

Display the error history in the diagnosis result display screen (see step ③).

00



Press the ON/OFF button twice within three seconds. The self-diagnosis address or refrigerant address will blink.

When the error history is reset, the display will look like the one shown below. However, if you fail to reset the error history, the error content will be displayed again.



⑤ Cancel self-diagnosis. Self-diagnosis can be cancelled by the following two methods.

Press the CHECK button twice within three seconds.	\rightarrow Self-diagnosis will be cancelled and the screen will return to the previous state in effect before the start
	of self-diagnosis.
6 Press the ON/OFF button.	ightarrow Self-diagnosis will be cancelled and the indoor unit will stop.

1-3. Remote Controller Diagnosis

If the air conditioner cannot be operated from the remote cor	ntroller, diagnose the remote controller as explained below.
 First, check that the power-on indicator is lit. If the correct voltage (DC12 V) is not supplied to the remote controller, the indicator will not light. If this occurs, check the remote controller's wiring and the indoor unit. 	SELF CHECK
 ② Switch to the remote controller self-diagnosis mode. ④ Press the CHECK button for five seconds or more. The display content will change as shown below. 	Press the FILTER button to start self-diagnosis.
SELF CHECK	
 Remote controller self-diagnosis result 	
[When the remote controller is functioning correctly]	[When the remote controller malfunctions] (Error display 1) "NG" blinks. → The remote controller's transmitting-receiv- ing circuit is defective.
SELF CHECK	Self Check
Check for other possible causes, as there is no problem with the remote controller.	The remote controller must be replaced with a new one.
[Where the remote controller is not defective, but cannot be operated.] (Error display 2) [E3], [6833] or [6832] blinks. \rightarrow Transmission is not possible.	(Error display 3) "ERC" and the number of data errors are displayed. → Data error has occurred.
	SELF CHECK
There might be noise or interference on the transmission path, or the indoor unit or other remote controllers are defective. Check the transmission path and other controllers.	The number of data errors is the difference between the number of bits sent from the remote controller and the number actually transmitted through the transmis- sion path. If such a problem is occurring, the transmitted data is affected by noise, etc. Check the transmission path.
	When the number of data errors is "02": Transmission data from remote controller

(Press the CHECK) button for five seconds or more. Remote controller diagnosis will be cancelled, "PLEASE WAIT" and operation lamp will blink. After approximately 30 seconds, the state in effect before the diagnosis will be restored.

2.Error Code List(for Mr.SLIM P series)

<Display function of inspection for outdoor unit>

The blinking patterns of both LED1(green) and LED2(red) indicate the types of abnormality when it occurs. Types of abnormality can be indicated in details by connecting an optional part A-Control Service Tool (PAC-SK52ST) to connector CNM on outdoor controller board.

[Display]

(1)Normal condition

Linit condition	Outdoor cor	troller board	A-Control Service Tool		
	LED1 (Green)	LED2 (Red)	Error code	Indication of the display	
When the power is turned on	Lighted	Lighted	-⇔-	Alternately blinking display	
When unit stops	Lighted	Not lighted	00, etc.	Operation mode	
When compressor is warming up	Lighted	Not lighted	08, etc.		
When unit operates	Lighted	Lighted	C5, H7 etc.	1	

(2)Abnormal condition

Indication		Error				
Outdoor con	troller board	Contonto		Inspection method		
LED1 (Green)	LED2 (Red)	Contents	code ※1	Inspection method		
1 blinking	2 blinking	Connector(63L) is open.	F3	①Check if connector (63L or 63H) on the outdoor controller board is not		
		Connector(63H) is open.	F5	disconnected.		
		2 connectors are open.	F9	②Check continuity of pressure switch (63L or 63H) by tester.		
2 blinking	1 blinking	Mis-wiring of indoor/outdoor unit conne- cting wire, excessive number of indoor units (4 units or more)	(EA)	 ①Check if indoor/outdoor connecting wire is connected correctly. ②Check if 4 or more indoor units are connected to outdoor unit. 		
		Mis-wiring of indoor/outdoor unit co- nnecting wire (converse wiring or di- sconnection)	(Eb)	③Check if noise entered into indoor/outdoor connecting wire or power supply.		
		Startup time over	(EC)	(4) He-check error by turning off power, and on again.		
	2 blinking	Indoor/outdoor unit communication error (signal receiving error) is detected by in- door unit.	E6	 ①Check if indoor/outdoor connecting wire is connected correctly. ②Check if noise entered into indoor/outdoor connecting wire or power 		
		Indoor/outdoor unit communication error (transmitting error) is detected by indoor unit.	E7	supply. ③Check if noise entered into indoor/outdoor controller board.		
		Indoor/outdoor unit communication error (signal receiving error) is detected by outdoor unit.	(E8)	Re-check error by turning off power, and on again.		
		Indoor/outdoor unit communication error (transmitting error) is detected by outdoor unit.	(E9)			
	3 blinking	Remote controller signal receiving error is detected by remote controller.	E0	①Check if connecting wire of indoor unit or remote controller is connected correctly.		
		Remote controller transmitting error is detected by remote controller.	E3	 Check if noise entered into transmission wire of remote vcontroller. Re-check error by turning off power, and on again. 		
		Remote controller signal receiving error is detected by indoor unit.	E4			
		Remote controller transmitting error is detected by indoor unit.	E5			
	4 blinking	Error code is not defined.	EF	 ①Check if remote controller is MA remote controller(PAR-21MAA). ②Check if noise entered into transmission wire of remote controller. ③Check if noise entered into indoor/outdoor connecting wire. ④Re-check error by turning off power, and on again. 		
	5 blinking	Serial communication error <communication between="" outdoor<br="">controller board and outdoor power board> <communication between="" outdoor<br="">controller board and M-NET p.c. board></communication></communication>	Ed	 ① Check if connector (CN4) on outdoor controller board and outdoor power board is not disconnected. ② Check if there is poor connection of connector on outdoor controller board(CNMNT and CNVMNT). ③ Check IMNET commission is included. 		
		Communication error of high prior signal(M-NET)	A0~A8	©uneck wi-ine i communication signal.		

*1.Error code displayed on remote controller.Error codes given in () are not displayed on remote controller.

Indic	ation			Error
Outdoor con	troller board	Cantanta		Inspection method
LED1 (Green)	LED2 (Red)	Contents	code ×1	Inspection method
3 blinking	1 blinking	Abnormality of shell thermostat and discharging temperature (TH4)	U2	 ①Check if stop valves are open. ②Check if connectors (TH4, LEV-A) on outdoor controller board are not disconnected. ③Check if unit fills with specified amount of refrigerant. ④Measure resistance values among terminals on indoor valve and outdoor linear expansion valve using a tester.
	2 blinking	Abnormal high pressure (High pressure switch 63H worked.)	U1	 ①Check if indoor/outdoor units have a short cycle on their air ducts. ②Check if connector (63H) on outdoor controller board is not disconnected. ③Check if heat exchanger and filter is not dirty. ④Measure resistance values among terminals on linear expansion valve using a tester.
	3 blinking	Abnormality of outdoor fan motor rotational speed	U8	①Check the outdoor fan motor.
	4 blinking	Compressor over current breaking (Start-up locked) Compressor over current breaking Abnormality of current sensor (P.B.) Abnormality of power module	UF UP UH U6	 ①Check if stop valves are open. ②Check looseness, disconnection, and converse connection of compressor wiring. ③Measure resistance values among terminals on compressor using a tester. ④Check if outdoor unit has a short cycle on its air duct.
	5 blinking	Open/short of discharge thermistor (TH4) Open/short of outdoor thermistors (TH3, TH6, TH7 and TH8)	U3 U4	 ①Check if connectors (TH3, TH4, TH6 and TH7) on outdoor controller board and connector (CN3) on outdoor power board are not disconnected. ②Measure resistance value of outdoor thermistors.
	6 blinking	Abnormality of radiator panel temperature	U5	 ①Check if indoor/outdoor units have a short cycle on their air ducts. ②Measure resistance value of outdoor thermistor(TH8).
	7 blinking	Abnormality of voltage	U9	 Check looseness, disconnection, and converse connection of compressor wiring. Measure resistance value among terminals on compressor using a tester. Check the continuity of contactor (52C). Check if power supply voltage decreases. Check the wiring of CN52C. Check the wiring of CNAF.
4 blinking	1 blinking	Abnormality of room temperature thermistor (TH1) Abnormality of pipe temperature thermistor /Liquid (TH2) Abnormality of pipe temperature thermistor/Condenser-Evaporator	P1 P2 P9	 ①Check if connectors (CN20, CN21 and CN29) on indoor controller board are not disconnected. ②Measure resistance value of indoor thermistors.
	2 blinking	Abnormality of drain sensor (DS) Indoor drain overflow protection	P4 P5	 ①Check if connector (CN31) on indoor controller board is not disconnected. ②Measure resistance value of indoor thermistors. ③Measure resistance value among terminals on drain-up machine using a tester. ④Check if drain-up machine works. ⑤Check drain function.
	3 blinking	Freezing (cooling)/overheating (heating) protection	P6	 ①Check if indoor unit has a short cycle on its air duct. ②Check if heat exchanger and filter is not dirty. ③Measure resistance value on indoor and outdoor fan motors. ④Check if the inside of refrigerant piping is not clogged.
	4 blinking	Abnormality of pipe temperature	P8	 ①Check if indoor thermistors (TH2 and TH5) are not disconnected from holder. ②Check if stop valve is open. ③Check converse connection of extension pipe. (on plural units connection) ④Check if indoor/outdoor connecting wire is connected correctly. (on plural units connection)
	5 blinking	Abnormality of indoor controller board	Fb	① Replace indoor controller board.
-	-	Abnormality of remote controller board	E1,E2	①Replace the remote controller.

*1.Error code displayed on remote controller.Error codes given in () are not displayed on remote controller.

IX. Monitoring the Operation Data by the Remote Controller(for Mr. SLIM)

1. How to "Monitor the Operation Data"

• Turn on the [Monitoring the operation data]



- (1) Press the TEST button for three seconds so that [Maintenance mode] appears on the screen (at (a)).
- (2) Press the CHECK button for three seconds to switch to [Maintenance monitor].
 - Note) It is not possible to switch to [Maintenance monitor] during data request in maintenance mode (i.e., while "----" is blinking), since no buttons are operative.
- Operating the service inspection monitor
- $[\mbox{---}]$ appears on the screen (at $\ensuremath{\mathbb{O}})$ when [Maintenance monitor] is activated.
- (The display (at $\ensuremath{\mathbb{O}}$) now allows you to set a request code No.)
- (3) Press the [TEMP] buttons (\bigodot and \frown) to select the desired refrigerant address.

 $[Screen \ @] \rightarrow 00 \leftrightarrow 0! \leftrightarrow \cdots \leftrightarrow !5 \leftarrow$

- (4) Press the [CLOCK] buttons (\bigcirc and \bigcirc) to set the desired request code No.
- (5) Press the FILTER button to perform data request.

(The requested data will be displayed at [©] in the same way as in maintenance mode.)

Data collected during operation of the remote controller will be displayed. The collected data such as temperature data will not be updated automatically even if the data changes. To display the updated data, carry out step (4) again.

- Canceling the Monitoring the operation data
- (6) While [Maintenance monitor] is displayed, press the CHECK) button for three seconds to return to maintenance mode.
- (7) To return to normal mode, press the ON/OFF button.

2. Request Code List

* Certain indoor/outdoor combinations do not have the request code function; therefore, no request codes are displayed.

Request code	Request content	Description (Display range)	Unit	Remarks
	Operation state	Refer to 2-1. Detail Contents in Request Code	_	
1	Compressor-Operating current (rms)	0-50	Α	
2	Compressor-Accumulated operating time	0 - 9999	10 hours	
3	Compressor-Number of operation times	0 - 9999	100 times	
4	Discharge temperature (TH4)	37 ~ 327	°F	(3 ~ 164°C)
5	Outdoor unit - Liquid pipe 1 temperature (TH3)	-40 ~ 194	°F	(-40~90°C)
6	Outdoor unit - Liquid pipe 2 temperature	-40 ~ 194	°F	(-40~90°C)
7	Outdoor unit-2-phase pipe temperature (TH6)	-38 ~ 190	°F	(-39~88°C)
8			•	
9	Outdoor unit-Outside air temperature (TH7)	-38 ~ 190	°F	(-39 ~ 88°C)
10	Outdoor unit-Heat sink temperature (TH8)	-40 ~ 327	°F	(-40 ~ 164°C)
11			•	
12	Discharge super heat (SHd)	0 - 327	dea F	(0 ~ 182 deg C)
13	Sub-cool (SC)	0 - 234	deg F	(0~130 deg C)
14			uog i	
15				
16	Compressor-Operating frequency	0 – 255	Hz	
17	Compressor-Target operating frequency	0 - 255	Hz	
18	Outdoor unit-Ean output sten	0 - 10	Sten	
	Outdoor unit-Fan 1 speed		Otep	
19	(Only for air conditioners with DC fan motor)	0 – 9999	rpm	
	Outdoor unit-Fan 2 speed			$\ \Omega^{*}\ $ is displayed if the air conditioner is a single-fan
20	(Only for air conditioners with DC fan motor)	0 – 9999	rpm	
21				
22		0 - 500	Pulses	
22		0 - 500	Pulses	
20			1 41303	
25	Primary current	0 - 50	Δ	
20		180 - 370	N N	
20		100 - 570	v	
27				
20	Number of connected indoor units	0 - 4	Linits	
30	Indoor unit-Setting temperature	62 ~ 86	°F	(17~30°C)
31	Indoor unit-Intake air temperature < Measured by thermostat	46 ~ 102	°F	(8~39°C)
01	Indoor unit-Intake air temperature (I Init No. 1)	46 - 102	•	"O" is displayed if the target unit is not present
32	Heat mode-4-deg correction>	40 ~ 102	۴F	(8 ~ 39°C)
	Indoor unit-Intake air temperature (I Init No. 2)	46 ~ 102		
33	<pre><heat correction="" mode-4-deg=""></heat></pre>		۴F	†
	Indoor unit-Intake air temperature (Unit No. 3)	46 ~ 102		
34	Heat mode-4-deg correction>		°F	†
	Indoor unit-Intake air temperature (Unit No 4)	46 ~ 102		
35	<pre><heat correction="" mode-4-deg=""></heat></pre>		۴F	1
36				
07	Indoor unit - Liquid pipe temperature (Unit No. 1)	-38 ~ 190	°F	"0" is displayed if the target unit is not present.
3/	· · · · · · · · · · · · · · · · · · ·			(-39~88°C)
38	Indoor unit - Liquid pipe temperature (Unit No. 2)	-38 ~ 190	°F	↑
39	Indoor unit - Liquid pipe temperature (Unit No. 3)	-38 ~ 190	°F	↑
40	Indoor unit - Liquid pipe temperature (Unit No. 4)	-38 ~ 190	°F	↑
41				
42	Indoor unit-Cond./Eva. pipe temperature (Unit No. 1)	-38 ~ 190	۴F	"0" is displayed if the target unit is not present.
43	Indoor unit-Cond /Eva_pipe temperature (Unit No_2)	-38 ~ 190	°F	↑ (-03 ~ 00 0)
44	Indoor unit-Cond /Eva, pipe temperature (Unit No. 2)	-38 ~ 190	°F	↑ ↑
45	Indoor unit-Cond /Eva. pipe temperature (Unit No. 3)	-38 ~ 190	°F	↑ ↑
40	indoor drift-oond./Eva. pipe temperature (onit No. 4)	00 - 190	1	•
40				
47	Thermostat ON operating time	0 - 999	Minutos	
10	Test run elansed time	0 – 120	Minutes	Not possible to activate maintenance mode during the test run.
1 49	ו ייטריטון בומאסבת ווווב	V 12V	winnutes	I ← mor possible to activate maintenance mode during the test full.

Request code	Request content	Description (Display range)	Unit	Remarks
50	Indoor unit-Control state	Refer to 2-1.Detail Contents in Request Code.	-	
51	Outdoor unit-Control state	Refer to 2-1.Detail Contents in Request Code.	_	
52	Compressor-Frequency control state	Refer to 2-1.Detail Contents in Request Code.	_	
53	Outdoor unit-Fan control state	Refer to 2-1.Detail Contents in Request Code.	_	
54	Actuator output state		_	
55	Error content (U9)		_	
56				
57				
58				
59				
60	Signal transmission demand capacity	0 – 255	%	
61	Contact demand capacity	Befer to 2-1. Detail Contents in Bequest Code.	_	
62	External input state (silent mode, etc.)	Befer to 2-1 Detail Contents in Bequest Code	_	
63				
64				
65				
66				
67				
69				
60				
09	Outdoor unit Consolity acting display	Defente 0.4 Detail Orestante in Democrat Oreite		
70	Outdoor unit-Capacity setting display	Refer to 2-1.Detail Contents in Request Code.		
/1	Outdoor unit-Setting information	Refer to 2-1. Detail Contents in Request Code.	-	
72				
73	Outdoor unit-SW1 setting information	Refer to 2-1. Detail Contents in Request Code.	_	
74	Outdoor unit-SW2 setting information	Refer to 2-1.Detail Contents in Request Code.	-	
75				
76	Outdoor unit-SW4 setting information	Refer to 2-1.Detail Contents in Request Code.	-	
77	Outdoor unit-SW5 setting information	Refer to 2-1.Detail Contents in Request Code.	_	
78	Outdoor unit-SW6 setting information	Refer to 2-1.Detail Contents in Request Code.	_	
79	Outdoor unit-SW7 setting information	Refer to 2-1.Detail Contents in Request Code.	_	
80	Outdoor unit-SW8 setting information	Refer to 2-1.Detail Contents in Request Code.	_	
81	Outdoor unit-SW9 setting information	Refer to 2-1.Detail Contents in Request Code.	-	
82	Outdoor unit-SW10 setting information	Refer to 2-1.Detail Contents in Request Code.	_	
83				
84	M-NET adapter connection (presence/absence)	"0000": Not connected "0001": Connected	-	
85				
86				
87				
88				
89	Display of execution of replace/wash operation	"0000": Not washed "0001": Washed	-	
90	Outdoor unit-Microcomputer version information	Examples) Ver 5.01 \rightarrow "0501"	Ver	
		Auxiliary information (displayed after		
91	Outdoor unit-Microcomputer version information (sub No.)	version information)	_	
		Examples) Ver 5.01 A000 \rightarrow "A000"		
92				
93				
94				
95				
96				
97				
98				
99				
		Displays postponement code (" " is		
100	Outdoor unit - Error postponement history 1 (latest)	displayed if no postponement code is present)	Code	
		Displays nostronement code ("" is		
101	Outdoor unit - Error postponement history 2 (previous)	displayed if no postnonement code is present)	Code	
		Displays a not positionement code (" " is		
102	Outdoor unit - Error postponement history 3 (last but one)	displayed if no postponement code is present)	Code	

Request code	Request content	Description (Display range)	Unit	Remarks
103	Error history 1 (latest)	Displays error history. (" " is displayed if no history is present.)	Code	
104	Error history 2 (second to last)	Displays error history. (" " is displayed if no history is present.)	Code	
105	Error history 3 (third to last)	Displays error history. (" " is displayed if no history is present.)	Code	
106	Abnormal thermistor display (TH3/TH6/TH7/TH8)	3 : F TH3 6 : F TH6 7 : F TH7 8 : F TH8 0 : F No thermistor error	Sensor number	
107	Operation mode at time of error	Displayed in the same way as request code "0".	-	
108	Compressor-Operating current at time of error	0 – 50	А	
109	Compressor-Accumulated operating time at time of error	0 – 9999	10 hours	
110	Compressor-Number of operation times at time of error	0 – 9999	100 times	
111	Discharge temperature at time of error	37 ~ 327	°F	(3~164°C)
112	Outdoor unit - Liquid pipe 1 temperature (TH3) at time of error	-40 ~ 194	°F	(-40~90°C)
113	Outdoor unit - Liquid nine 2 temperature at time of error	-40 ~ 194	°F	$(10, 00^{\circ}C)$
114	Outdoor unit-2-phase pipe temperature (THE) at time of error	-38 ~ 190	۲	(30, 88°C)
114	Outdoor unit-2-phase pipe temperature (1110) at time of error	-58 ~ 190	I	(-39~88 C)
115			• F	
116	Outdoor unit-Outside air temperature (1H7) at time of error	-38 ~ 190	F	(-39~88°C)
117	Outdoor unit-Heat sink temperature (TH8) at time of error	-40 ~ 327	۴	(-40 ~ 164°C)
118	Discharge super heat (SHd) at time of error	0 – 327	deg F	(0 ~ 182 deg C)
119	Sub-cool (SC) at time of error	0 – 234	deg F	(0 ~ 130deg C)
120	Compressor-Operating frequency at time of error	0 – 255	Hz	
121	Outdoor unit at time of error • Fan output step	0 – 10	Step	
122	Outdoor unit at time of error • Fan 1 speed (Only for air conditioners with DC fan)	0 – 9999	rpm	
123	Outdoor unit at time of error • Ean 2 speed (Only for air conditioners with DC fan)	0 – 9999	rpm	"0" is displayed if the air conditioner is a single-
104				
124	LEV(A) apoping at time of arrar	0 500	Bulaaa	
125	LEV (A) opening at time of error	0 = 500	Pulses	
126	LEV (B) opening at time of error	0 - 500	Puises	
127				
128				
129				
130	Thermostat ON time until operation stops due to error	0 – 999	Minutes	
131				
132	Indoor - Liquid pipe temperature at time of error	-38 ~ 190(-39~88°C)	°F	Average value of all indoor units is displayed if the air condi- tioner consists of two or more indoor units.
133	Indoor-2-phase pipe temperature at time of error	-38 ~ 190(-39~88°C)	°F	Average value of all indoor units is displayed if the air condi- tioner consists of two or more indoor units.
134	Indoor at time of error • Intake air temperature < Thermostat judge temperature >	-38 ~ 190	°F	(-39~88°C)
135				
136				
137				
139				
100				
140				
140				
~				
146				
147				
148				
149				
150	Indoor-Actual intake air temperature	-38 ~ 190	۴F	(-39~88°C)
151	Indoor - Liquid pipe temperature	-38 ~ 190	۴F	(-39~88°C)
152	Indoor-2-phase pipe temperature	-38 ~ 190	°F	(-39~88°C)

Request code	Request content	Description (Display range)	Unit	Remarks	
153					
154	Indoor-Fan operating time (After filter is reset)	0 – 9999	1 hour		
155	Indoor-Total operating time (Fan motor ON time)	0 – 9999	10 hours		
156					
157	Indoor fan output value (Sj value)	0 – 255 Fan control data	-	For indoor fan phase control	
158	Indoor fan output value (Pulsation ON/OFF)	"00 **" "**" indicates fan control data.	-	For indoor fan pulsation control	
159	Indoor fan output value (duty value)	"00 **" "**" indicates fan control data.	_	For indoor DC brushless motor control	
160					
161					
162	Indoor unit-Model setting information	Refer to 12-2-1 Detail Contents in Request Code.	-		
163	Indoor unit-Capacity setting information	Referto 12-2-1 Detail Contents in Request Code.	-		
164	Indoor unit-SW3 information	Undefined	-		
165	Wireless pair No. (indoor control board side) setting	Refer to 12-2-1 Detail Contents in Request Code.	_		
166	Indoor unit-SW5 information	Undefined	-		
167					
~					
189					
190	Indoor unit-Microcomputer version information	Examples) Ver 5.01 → "0501"	Ver		
191	Indoor unit-Microcomputer version information (sub No.)	Auxiliary information (displayed after version information) Examples) Ver 5.01 A000 \rightarrow "A000"	-		
192					
~					
764					
765	Stable operation (Heat mode)	This request code is not provided to collect data. It is used to fix the operation state.			
766	Stable operation (Cool mode)	This request code is not provided to collect data. It is used to fix the operation state.			
767	Stable operation cancellation	This request code is not provided to collect data. It is used to cancel the operation state that has been fixed by request codes "765" and "766".			

2-1. Detail Contents in Request Code





- D: Request code display area

[Operation state] (Request code "0")

Relay output state

Data display

С	4	
		-Relay output state
		-Operation mode

Display	Power currently supplied to compressor	Compressor	Four-way valve	Solenoid valve
0	-	-	-	-
1				ON
2			ON	
3			ON	ON
4		ON		
5		ON		ON
6		ON	ON	
7		ON	ON	ON
8	ON			
A	ON		ON	

Operation mode

Display	Operation mode	
0	STOP • FAN	
С	COOL • DRY	
Н	HEAT	
d	Defrost	

[Indoor unit - Control state] (Request code : " 50")

Data display



Display	State	
0	Normal	
1	Preparing for heat operation.	
2	-	
3	_	
4	Heater is ON.	
5	Anti-freeze protection is ON.	
6	Overheat protection is ON.	
7 Requesting compressor to turn O		
F	There are no corresponding units.	

Frequency control state 2

[Outdoor unit - Control state] (Request code "51")

Data display			y	State
0	0	0	0	Normal
0	0	0	1	Preparing for heat operation.
0	0	0	2	Defrost

[Compressor - Frequency control state] (Request code "52")

Data display

	*	*	0	0
Frequency control state				
Frequency control state				

Dicplay	Discharge temperature	Condensation temperature	Anti-freeze	Heat sink temperature
Display	overheat prevention	overheat prevention	protection control	overheat prevention
0				
1	Controlled			
2		Controlled		
3	Controlled	Controlled		
4			Controlled	
5	Controlled		Controlled	
6		Controlled	Controlled	
7	Controlled	Controlled	Controlled	
8				Controlled
9	Controlled			Controlled
А		Controlled		Controlled
b	Controlled	Controlled		Controlled
С			Controlled	Controlled
d	Controlled		Controlled	Controlled
E		Controlled	Controlled	Controlled
F	Controlled	Controlled	Controlled	Controlled

Frequency control state ①

Display	Current limit control	
0	0 No current limit	
1	Primary current limit control is ON.	
2	Secondary current limit control is ON.	

[Fan control state] (Request code : "53")

Data display

Fan step correction value by heat sink temperature overheat prevention control Fan step correction value by cool condensation temperature overheat prevention control

Display	Correction value
- (minus)	- 1
0	0
1	+1
2	+2

[Actuator output state] (Request code :"54")

Data display 0 0 * * Actuator output state ① -Actuator output state 2

Actuator output state $\ensuremath{\textcircled{}}$

Display	SV1	Four-way valve	Compressor	Compressor is warming up
0				
1	ON			
2		ON		
3	ON	ON		
4			ON	
5	ON		ON	
6		ON	ON	
7	ON	ON	ON	
8				ON
9	ON			ON
Α		ON		ON
b	ON	ON		ON
С			ON	ON
d	ON		ON	ON
E		ON	ON	ON
F	ON	ON	ON	ON

Actuator output state 2

Display	52C	SV2	SS
0			
1	ON		
2		ON	
3	ON	ON	
4			ON
5	ON		ON
6		ON	ON
7	ON	ON	ON

[Error content (U9)] (Request code : "55")



Error content ①

Error content ①					
Dieplay	Overvoltage	Undervoltage	L1-phase	Power synchronizing	
Display	error	error	open error	signal error	
0					
1	•				
2		•			
3	•	•			
4			•		
5	•		•		
6		•	•		
7	•	•	•		
8				•	
9	•			•	
А		•		•	
b	•	•		•	
С			•	•	
d	•		•	•	
E		•	•	•	
F	•	•	•		

	Error cont	: Detected	
	Display	Converter Fo error	PAM error
	0		
	1	•	
	2		•
	3	•	•

[Contact demand capacity] (Request code "61")

0 0 0

0 0

Data display

*

Setting content

Setting content

Display	Sotting value	Setting	
Display	Setting value	SW7-1	SW7-2
0	0%		
1	50%	ON	
2	75%		ON
3	100%	ON	ON

[External input state] (Request code "62")

Data display

0 * Input state

nput state				: Input pres
Display	Contact demand	Silent mode	Spare 1	Spare 2
Display	input	input	input	input
0				
1				
2		•		
3		•		
4			•	
5			•	
6		•	•	
7		•	•	
8				
9	•			•
А		•		
b	•	•		•
С			•	
d			•	
Е			•	
F			•	

[Outdoor unit -- Capacity setting display] (Request code : "70")

Data display	Capacity
9	35
10	50
11	60
14	71
20	100
25	125
28	140
40	200
50	250

[Outdoor unit - Setting information] (Request code "71")

Data display 0 0

* * Setting information ① Setting information ②

Setting information ①			
Display	Defrost mode		
0	Standard		
1	For high humidity		

Setting information @

Dicplay	Single-/	Heat pump/		
Display	three-phase	cooling only		
0	Single phase	Heat pump		
1	Single-phase	Cooling only		
2	Three phase	Heat pump		
3	rinee-phase	Cooling only		

[Outdoor unit switch setting display (SW1 to SW10, except SW3)] Request codes: 73 to 82

0: Swich OFF 1	: Swich ON
----------------	------------

0: Swich OFF 1: Swich ON

0. 30	vicn	UFF	1:	SWI	cn O	N
SI	W1, S	SW2,	SW	5, SV	V7	Data display
1	2	3	4	5	6	Data display
0	0	0	0	0	0	00 00
	0	0	0	0	0	00 00
	0	0	0	0	0	00 01
0	1	0	0	0	0	00 02
1	1	0	0	0	0	00 03
0	0	1	0	0	0	00 04
1	0	1	0	0	0	00 05
	1	1	0	0	0	00 06
	1		0	0	0	00 00
1	1	1	0	0	0	00 07
0	0	0	1	0	0	00 08
1	0	0	1	0	0	00 09
0	1	0	1	0	0	00 0A
1	1	0	1	0	0	00 0b
0	0	1	1	0	0	00 00
-	0	-	4	0	0	00 00
	0			0	0	00 00
0	1	1	1	0	0	00 0E
1	1	1	1	0	0	00 OF
0	0	0	0	1	0	00 10
1	0	0	0	1	0	00 11
0	1	0	0	1	0	00 12
	4	0	<u>^</u>	-	0	00 12
0	0	1	0	1	0	00 14
1	0	1	0	1	0	00 15
0	1	1	0	1	0	00 16
1	1	1	0	1	0	00 17
0	0	0	1	1	0	00 18
	0	0	1	1	0	00 10
1	0	0	1	1	0	00 19
0	1	0	1	1	0	00 1A
1	1	0	1	1	0	00 1B
0	0	1	1	1	0	00 1C
1	0	1	1	1	0	00 1D
	1	1	1	1	0	00 15
	1	1	1	1	0	00 1
1	1	1	1	1	0	00 1F
0	0	0	0	0	1	00 20
1	0	0	0	0	1	00 21
0	1	0	0	0	1	00 22
1	1	0	0	0	1	00 23
0	0	1	0	0	1	00 24
	0	1	0	0	1	00 24
	0		0	0	1	00 25
0	1	1	0	0	1	00 26
1	1	1	0	0	1	00 27
0	0	0	1	0	1	00 28
1	0	0	1	0	1	00 29
0	1	0	1	0	1	00.24
	4	0	4	-	4	
		0		0		00 2B
0	0	1	1	0	1	00 20
1	0	1	1	0	1	00 2D
0	1	1	1	0	1	00 2E
1	1	1	1	0	1	00 2F
	0	0	0	1	1	00 30
	0		0			
\vdash^1	U	0	0		1	00 31
0	1	0	0	1	1	00 32
_ 1	1	0	0	1	1	00 33
0	0	1	0	1	1	00 34
1	0	1	0	1	1	00 35
-	1	1	<u> </u>	-	1	00.36
	1					00 00
1	1	1	0	1	1	00 37
0	0	0	1	1	1	00 38
1	0	0	1	1	1	00 39
0	1	0	1	1	1	00 3A
1	1	1 n		-	1	00 20
\vdash						
0	0	1	1	1	1	00 30
1	0	1	1	1	1	00 3D
0	1	1	1	1	1	00 3E
1	1	1	1	1	1	00 3F
L .	1 · ·	· ·			1 · ·	

SW5				Data diaplay	
1	2	3	4	Data display	
0	0	0	0	00 00	
1	0	0	0	00 01	
0	1	0	0	00 02	
1	1	0	0	00 03	
0	0	1	0	00 04	
1	0	1	0	00 05	
0	1	1	0	00 06	
1	1	1	0	00 07	
0	0	0	1	00 08	
1	0	0	1	00 09	
0	1	0	1	00 0A	
1	1	0	1	00 Ob	
0	0	1	1	00 OC	
1	0	1	1	00 Od	
0	1	1	1	00 0E	
1	1	1	1	00 0F	

0: Sv	0: Swich OFF		1: Swich ON
	SW8		Data display
1	2	3	Data display
0	0	0	00 00
1	0	0	00 01
0	1	0	00 02
1	1	0	00 03
0	0	1	00 04
1	0	1	00 05
0	1	1	00 06
1	1	1	00 07

0: Swich (OFF 1:	Swich ON		
SW4, SW9, SW10				
1	2	Data display		
0	0	00 00		
1	0	00 01		
0	1	00 02		
1	1	00 03		

[Indoor unit – Model setting information] (Request code : 162)





Display	Model setting state	Display	Model setting state
00		20	
01		21	
02		22	
03		23	PKA-A•GA(L)
04		24	PKA-A•FA(L)
05		25	PCA-A•GA
06		26	PLA-A•AA
07		27	
08		28	
09		29	
0A		2A	
0b		2b	
0C		2C	
0d		2d	
0E		2E	
0F		2F	
10		30	
11		31	
12		32	
13		33	
14		34	
15		35	
16		36	
17		37	
18		38	
19		39	
1A		ЗA	
1b		3b	
1C		3C	
1d		3d	
1E		3E	
1F		3F	

[Indoor unit - Capacity setting information] (Request code 163)





Display	Capacity setting state	Display	Capacity setting state
00		10	42
01		11	
02		12	
03		13	
04		14	
05		15	
06	12	16	
07		17	
08		18	
09	18	19	
0A		1A	
0b	24	1b	
0C		1C	
0d	30	1d	
0E		1E	
0F	36	1F	

[Wireless pair No. (indoor control board side) setting] (Request code 165)

Data display

0 0 * *

— See the table on the right.

Display	Pair No. setting state		
00	No. 0		
01	No. 1 J41 disconnected		
02	No. 2 J42 disconnected		
03	No. 3 J41, J42 disconnected		

X. System Control (for Mr. SLIM)

■ VARIETY OF SYSTEM FUNCTION

System Name	System Diagram	Features	Parts Required in Addition to Standard System Components (Indoor/Outdoor Units, Remote Controller)
A.Remote control- ler operation (Standard)	Indoor unit Outdoor Remote unit Controller	There are two types of remote controllers: wired type and wireless type. Simultaneous twin units are counted as one unit, and the indoor units are started or stopped simultaneously.	
B. Remote control- ler operation Use of two con- trollers enables operation of the air conditioner both from a distance and nearby.	* One of the wired remote con- trollers must be set as a sub remote controller.	Up to two remote controllers can be connected to one group. Simultaneous twin units are counted as one unit. Operation control by the latest command (last en- tered priority) Wired and wireless remote controllers can be com- bined as a pair.	Wired remote controller (addi- tional) (PAR-21MAA)
C.Group control operation Use of one remote controller to con- trol multiple air conditioners with the same settings simultaneously. * Outdoor unit's re- frigerant address needs to be set.	Remote Controller	One group can consist of up to 16 indoor units, and they can be started sequentially by connecting the remote controller to them and assigning an address to each outdoor unit. Simultaneous twin units are counted as one unit. All the units belonging to the same group are oper- ated in the same mode, but thermostats can be turned ON/OFF individually for each outdoor unit. Up to two remote controllers can be connected.	
D.Remote/local combined control operation Allows start/stop of the air condi- tioner from a dis- tance, and prohib- its/permits start/ stop from remote controllers.	Relay box	All the air conditioners can be turned ON/OFF collectively from a distance. Operation can be switched between the remote operat- ing panel and local controller. Operations (e.g., temperature adjustment, airflow, air- flow direction) except for start/stop operations can be performed even if the operations from the local remote controllers are prohibits. In the case of simultaneous twin units, connect the controller to one indoor unit only. If connected to two or more indoor units, an error (operation stop) may occur. Control by an external timer is possible by connecting it.	Remote ON/OFF adapter (PAC-SE55RA-E) Relay box (Part to be provided at your site) Remote operating panel (Part to be provided at your site)
E.Operation by external signal		Use of optional "remote ON/OFF adapter" enables remote control via relay. (Level signal)	Remote ON/OFF adapter (PAC-SE55RA-E)
F.Control by external signal and remote display Enables you to display the op- eration state and	Adapter	Extraction of non-voltage contact output Use of optional "remote operation adapter" and "remote display panel" (Part to be provided at your site) provides non-voltage contact outputs of signals (operation, error) and operation/stop input function.	Remote operation adapter (PAC-SF40RM-E) Remote display panel (Part to be provided at your site)
from a distance.		Extraction of DC12 V contact output Use of optional "Multiple remote controller adapter" and "remote display panel" (Part to be provided at your site)provides DC12 V contact outputs of signals (operation, error) and operation/stop input function.	Multiple remote controller adapter (PAC-SA88HA) Remote display panel (Part to be provided at your site)

System Name	System Diagram	Features	Parts Required in Addition to Standard System Components (Indoor/Outdoor Units, Remote Controller)
		Weekly timer: In addition to ON/OFF, up to eight temperature patterns can be set for each day of the week.	
G. Timer operation Enables control of start and stop. * For control by external timer, refer to Remote/ local combined control operation".		 Only one timer can be selected, the auto on, simple and weekly timers cannot be combined. Simple timer: Start and stop operations can each be performed once within 72 hours (can be set in 1-hour increments). Auto off timer: Operation is stopped when the preset time elapses following the start of operation. The time can be set from 30 minutes to 4 hours in 30-minute increments. * Only one timer can be selected; the simple and auto off timers cannot be combined. 	MA Remote controller (PAR-21MAA)
H.Interlock opera- tion with periph- eral equipment Enables control of Mitsubishi Lossnay ventilator by remote controller	Lossnay ventilator Remote Controller	 Connecting a Lossnay ventilator and an indoor unit enables control of interlock/solo ventilation opera- tion and airflow. (Only the microcomputer type Lossnay ventilator can be used.) 	
I.Centralized control	<connection m-net="" system="" with=""> Outdoor unit Power supply unit Indoor unit Remote Controller, etc.</connection>	 Connecting the M-NET connection adapter to outdoor unit enables connection of MELANS system control- ler (for M-NET). When using A-control operation, the number of indoor units in a MELANS system is limited to the number of outdoor units. (Simultaneous twin units are counted as one unit.) Number of controlled outdoor units Central controller: 50 units Group remote controller (PAC-SC30GR): 16 units 	M-NET adapter (Option PARTS) Central controller (G-50A) Group remote controller (PAC-SC30GR), etc.
J.Demand control	Adaptor to input external demand signal Relay box Outdoor unit Remote Indoor unit Operating panel	Demand control is available by external input. In this mode, power consumption iis decreased within the range of usual 0-100%.	Adapter to input external demand signals. (PAC-SC36NA) Relay box (Part to be provided at your site) Remote operating panel (Part to be provided at your site)

1. One Remote Controller (Standard) Operation

1-1 One Wired Remote Controller

(OC: Outdoor unit IC: Indoor unit R: Remote controller (for wireless type: optical receiver adapter)

Slim Air Conditioners System		Standard 1:1		Simultaneous Twin
System diagram (Wired remote	Outdoor unit OC	Indoor/Outdoor connection	OC ↓3(2)	OC
controller)	Indoor unit IC	cable Remote	IC-1	
	Wired remote controller R	cable	R	R

(Reference)

* Numbers given in () apply when power is supplied to the indoor and outdoor units separately.

① If simultaneous twin, connect the remote controller to any one of the indoor units. All functions of the indoor unit can

be controlled even if different models (different types) are mixed.

 $\ensuremath{ @ }$ Do not use crossover wiring among indoor units with simultaneous twin units. (Prohibited item.)

3 Electrical wiring diagram



1-2 Wireless remote controller



* Numbers given in () apply when power is supplied to the indoor and outdoor units separately.

(Reference)

① If simultaneous twin, connect the remote controller to any one of the indoor units. All functions of the indoor unit can be controlled even if different models (different types) are mixed.

2 Do not use crossover wiring among indoor units with simultaneous twin units. (Prohibited item.)

③ Electrical wiring diagram



2. Two-remote Controller Operation

2-1 Two Wired Remote Controllers

Slim Air Conditioner System		Standard 1:1	Simultaneous Twin		
	Outdoor unit OC		OC 3(2) , 3(2)		
	Indoorunit IC	Remote			
System diagram (Wired remote	Wired remote controller R	cable R-1 R-2	R-1 R-2		
controller)	Outdoor unit OC				
	Indoorunit IC				
	Wired remote controller R	R-1 R-2	R-1 R-2		

[Reference]

* Numbers given in () apply when power is supplied to the indoor and outdoor units separately.

In the case of free component multi type systems consisting of simultaneous twin units, connect the remote controllers to any one of the

indoor units. All the functions of the connected indoor units can be controlled even if the system consists of different models.

In the case of free component multi type systems consisting of simultaneous twin units, the indoor units should not be connected

by crossover wiring. (Prohibited)

3 Set one of the remote controllers as the main controller (factory setting) and the other as the sub controller using the remote controller's function selection.

2-2 Two Wireless Remote Controllers

Slim Air Conditioner System		Standard 1:1	Simultaneous Twin	
System diagram (Wireless remote controller receiver)	Outdoor unit OC Indoor unit IC Wireless remote controller receiver section R'	_	Indoor/outdoor connection cable Receiver cable $\begin{array}{c} OC \\ 3(2) & 3(2) \\ \hline IC-1 & IC-2 \\ 9 & 4 \\ R'-1 & R'-2 \end{array}$	
	indoor and outdoor units separately.			

[Reference]

- In the case of free component multi type systems consisting of simultaneous twin units, connect two wireless remote controller receivers **D** (one each) to any two of the indoor units. All the functions of the connected indoor units can be controlled even if the system consists of different models.
- 2 In the case of free component multi type systems consisting of simultaneous twin units, the indoor units should not be connected by crossover wiring. (Prohibited)
- In the case of "standard 1:1" connection, it is not possible to connect two remote controller receivers to the indoor units. However, with systems consisting of simultaneous twin units, it is possible to connect a remote controller receiver to two indoor units. In this case, all the pair numbers will be "0" (factory setting, no change necessary), and all the units will be turned ON/OFF simultaneously.
- When using two or more wireless remote controllers, the display contents on the remote controllers may differ from the actual settings, since the operation made last by any of the remote controllers will be effective.

2-3 One Wired and One Wireless Remote Controller (R: Wired remote controller, R': Wireless remote controller receiver)

Slim Air Conditioner System		Standard 1:1	Simultaneous Twin
System diagram (Wired remote controller and wireless remote controller	Outdoor unit OC Indoorunit IC	Indoor/outdoor connection cable Remote connection remote connection remote connection	OC 3(2) 3(2) IC-1 IC-2
receiver)	Wired remote controller Receiver R·R'		¹ / ₂ ×9 R R'

* Numbers given in () apply when power is supplied to the indoor and outdoor units separately.

[Reference]

① In the case of free component multi type systems consisting of simultaneous twin units, connect both the wired remote controller and wireless remote controller receiver to any one of the indoor units. All the functions of the connected indoor units can be controlled even if the system consists of different models.

In the case of free component multi type systems consisting of simultaneous twin units, the indoor units should not be connected by crossover 2 wiring. (Prohibited)

When using two or more wireless remote controllers, the display contents on the remote controllers may differ from the actual settings, since the 3 operation made last by any of the wireless remote controllers will be effective.

(B: Wired remote controller)

(B': Wireless remote controller receiver)

3. Group Control Operation (Collective Operation and Control of Multiple Refrigerant Systems (2 to 16))

- Multiple Mr.Slim air conditioners can be operated with the same settings (e.g., operation mode, preset temperature, etc.) by using one remote • controller. Each outdoor unit can be turned ON/OFF individually by the intake sensor.
- Up to 16 refrigerant systems can be controlled as a group by one remote controller.
- A refrigerant address must be set for each outdoor unit. Addresses "0" to "15" can be set with no duplicates. Address "0" must be set for one of the outdoor units

* In the case of simultaneous twin, triple and quad units, only one refrigerant system is used.



[Reference]

* Numbers given in () apply when power is supplied to the indoor and outdoor units separately.

For two-remote controller control, refer to "2. Two-Remote Controller Operation". However, when using both wired and wireless remote controllers, (II) receivers must be connected to indoor units that are connected by crossover wiring.

Connect an indoor unit having the highest functions among the group to the outdoor unit assigned to refrigerant address "0". < Refer to the example given below> If indoor units with vanes are used with those without vanes, connect the outdoor unit to a unit with vanes.

Function specifications <Example>

ltem –		4-way ceiling cassette	Ceiling suspended	Wall mounted		
		PLA-A.AA	PCA-A.GA	PKA-A.GA(L)	PKA-A.FA(L)	
c	Fan	Number of fan speeds	4	4	4	2
<u>i</u>	Up/down	Presence / absence	0	0	0	0
n.	vane	Swing function	0	0	0	0
"	Left / right swing louver	Presence / absence	×	×	×	×

In the case of free component multi type systems consisting of simultaneous twin units, the indoor units should not be connected by crossover 3 wiring. (Prohibited)

Outdoor unit address setting

For group control, an address must be set for each outdoor unit. •

To set addresses to outdoor units, use the DIP switch SW1 (3-6) provided on each outdoor control board (factory setting: all are set to "OFF"). • Address setting by SW1 is as follows.

		Function	Operation by switch		
		FUNCTION	ON	OFF	
	1	Forced defrosting	Start	Normal	
SW1 Function selection	2	Error history clear	Clear	Normal	3
	3	Refrigerant address setting			5
	4	↑	Used to set outdo	o set outdoor unit addresses	
	5	↑	("0" to "15").		
	6	↑			



* Checking the outdoor unit refrigerant addresses

To find the location of an outdoor unit with a specific refrigerant address, specify the address in self-diagnosis mode. The outdoor unit will operate intermittently. (For details on using self-diagnosis mode.)

Group operation by multiple remote controllers

Up to two remote controllers can be connected to each group. For details, refer to "2. TWO-REMOTE CONTROLLER OPERATION".

XI. External Dimensions

unit:mm <inch>





CITY MULTI and Mr.SLIM Air Conditioners

New MA Remote Controller PAR-21MAA

