MITSUBISHI ELECTRIC

CITY MULTI Control System

ME Remote Controller PAR-F27MEA-US

Instruction Book

Thank you for purchasing a Mitsubishi CITY MULTI system.

- To use your CITY MULTI system correctly and safely, please read this book before use.
- After reading this book, keep it and the installation manual in a place where the final user can see them at anytime.
- When the end user has changed, forward this book and the instruction manual to the new final user.
- Do not try to install or move this system by yourself. (Safety and functions cannot be ensured)

1 Safety Precautions

- The following two symbols are used to dangers that may be caused by incorrect use and their degree:

⚠ **WARNING**	This symbol denotes what could lead to serious injury or death if you misuse the PAR-F27MEA-US.
⚠ **CAUTION**	This symbol denotes what could lead to a personal injury or damage to your property if you misuse the PAR-F27MEA-US.

⚠ WARNING

Ask your dealer or technical representative to install the unit.
Any deficiency caused by your own installation may result in an electric shock or fire.

Securely install in a place which can withstand the weight of the controller.
If it is not enough, the controller may drop and cause an injury.

Make sure that the controller is connected to a rated power supply.
If the controller is not connected to a rated power supply, it may cause a fire or damage to the controller.

Stop the operation if any malfunction occurs.
If malfunction occurs (burning smell, etc.) stop the operation and turn off the power supply. Contact the your dealer or technical representative immediate. If the controller continues to operate after a malfunction occurs, this may cause damage, electric shock or fire.

Do not move and re-install the PAR-F27MEA-US yourself.
Any deficiency caused by installation may result in an electric shock or fire. Ask your distributor or special vendor for moving and installation.

To dispose of this product, consult your dealer.

Never modify or repair the PAR-F27MEA-US by yourself.
Any deficiency caused by your modification or repair may result in an electric shock or fire.
Consult with your dealer about repairs.

Stop the operation immediately and notify the your dealer if an error code is displayed or malfunction occurs.
Fire or damage may cause it the controller is operated in this condition.

⚠ CAUTION

Do not install in any place exposed to flammable gas leakage.
Flammable gases accumulated around the body of PAR-F27MEA-US may cause an explosion.

Do not wash with water.
Doing so may cause an electric shock or a malfunction.

Do not touch any control button with your wet hands.
Doing so may cause an electric shock or a malfunction.

Do not use the controller for special applications.
This product is designed for use with the CITY MULTI CONTROL SYSTEM. Do not use the system for other air condition management operation or applications. It may cause malfunctions.

Do not apply insecticide or flammable sprays to the controller.
Do not place flammable spray near the controller and make sure it does not blow directly on the controller as this may cause in fire.

Do not clean the unit using benzene, thinner or other chemicals.
It may cause discoloration or other damage. If the unit should become particularly dirty, apply a mild cleaner that has been diluted with water to a soft cloth and wipe the unit clean. Be sure to wipe away any residual moisture with a dry cloth.

Do not use in any special environment.
Using in any place exposed to oil (including machine oil), steam and sulfuric gas may deteriorate the performance significantly or give damage to the component parts.

Do not press any control button using a sharp object.
Doing so may cause an electric shock or a malfunction.

Operate the controller within the specified temperature range.
Observe the specified temperature range when operating the controller. If the controller is used outside the specified temperature range, it may cause serious damage. Be sure to check the operation temperature range in the operation manual.

Do not pull or twist the transmission line.
It may cause a fire or malfunction.

Do not dismantle the unit.
It is dangerous to touch the internal circuit board. It may cause a fire or malfunction.

2 Part Names

"CENTRALLY CONTROLLED" display
Displayed when air conditioner operation is prohibitted by a central controller, etc. When the remote controller buttons are locked, this display flashes.

"Set temperature" display
Displays the set temperature.

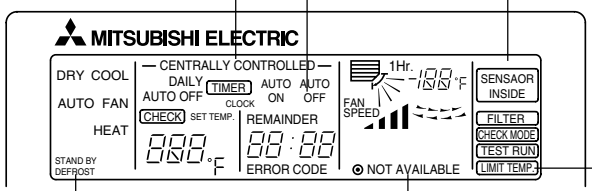
(For description purposes, all the displays are assumed to be on.)

"TIMER" "DAILY" "AUTO OFF" Display
Displays the timer mode when the timer is set.
There are three timers modes: 1 day timer, daily timer, and auto off timer. One of these modes can be selected.

"Current/Starting/ Ending/REMAINING time" display
Displays the current time and timer set times.
When the timer is operating, displays the normal time and the stating, ending, or remaining time.

"Senser" display
Displayed when the remote controller sensor is used.

"FILTER" display
Indicates that it is time to clean the filter.



"LIMIT TEMP." display
Displayed when the set temperature range is controlled by remote controller functions selection.

"Operation mode"
Displays the operation mode.

"Airflow" display
Displays the outlet air direction.

"Wind speed" display
Displays the selected wind speed.

"Louver" display
Displays operation of the swing louver. It is not displayed when the louver is stopped.

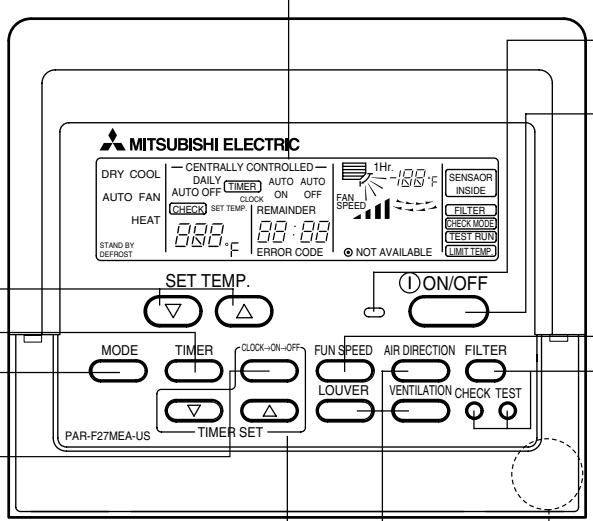
"Room temperature" display
Displays the intake temperature while the air conditioner is operating.

"Set effective for 1 hr." display
Displayed when low downward is selected at cooling and electronics dry operation.
(Differs with the model.)
After one hour, the display goes off, and swing also switches.

"◉" display
Displayed while the power is on.

"NOT AVAILABLE" display
When the button of a function that is not installed at the indoor unit was pressed, this display flashes simultaneously with the corresponding function display.

DISPLAY SECTION



ON/OFF lamp

ON/OFF button

TEMP. buttons
(▼) Lower (▲) Raise

Wind speed button

FILTER button

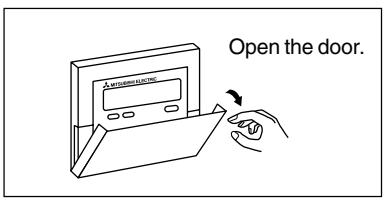
Timer selection button

CHECK button
(Normally not used)

Mode selection button

TEST RUN button
(Normally not used)

Time selection buttons
(▼) Return (▲) Ahead



Airflow button

Louver button

OPERATION SECTION

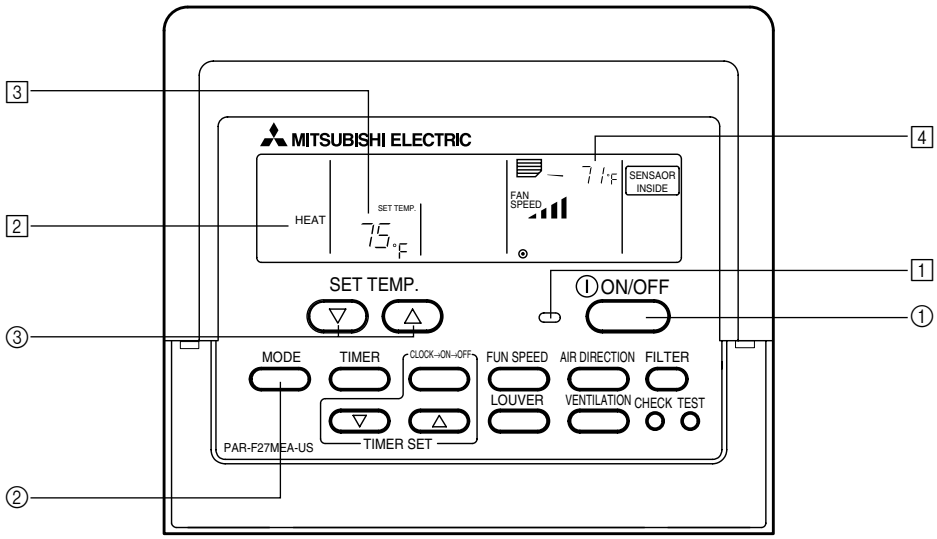
Built-in temperature sensor position

NOTE

When an operation button is pressed, if the indoor unit does not have that function, "NOT AVAILABLE" flashes.
When one remote controller controls multiple indoor units, if the master indoor unit has the selected function, this message is not displayed.

3 How to Operate

(1) On/off and operation mode selection and room temperature adjustment



When starting operation

■ Press the [ON/OFF] button ①.
- The ON lamp [1] and display light.

NOTE The restarting operation contents are shown below.

	Remote controller settings		
Operation mode	Last operation mode		
Temperature setting	Last set temperature		
Wind speed	Last set wind speed		
Airflow	Operation mode	COOL DRY	Horizontal outlet
		HEAT	Last setting
		FAN	Horizontal outlet

When stopping operation

■ Press the [ON/OFF] button ①.
- The ON lamp [1] and display go off.

When selecting the operation mode

■ Press the [MODE] button ② while the air conditioner is operating.
- The setting is switched each time the button is pressed. The operation mode is displayed at [2].

→ COOL → DRY → FAN → AUTO → HEAT →

NOTE

The auto and heating functions may not be installed, depending on the outdoor unit model.

When you want to change the set temperature

<When you want to lower the room temperature>

■ Press the [SET TEMP. (▽)] button ③.

<When you want to raise the room temperature>

■ Press the [SET TEMP. (△)] button ③.
- The set temperature changes 2 °F each time the button is pressed. The set temperature is displayed at [3].
- The following specified temperatures can be set:

Cool/dry operation	Heat operation	Auto operation	Fan
65 to 87 °F	61 to 83 °F	65 to 83 °F	Cannot be set.

NOTE

When “LIMIT TEMP.” is displayed on the screen, the specified temperature range is limited. Therefore, the temperature range that can be changed becomes narrow.

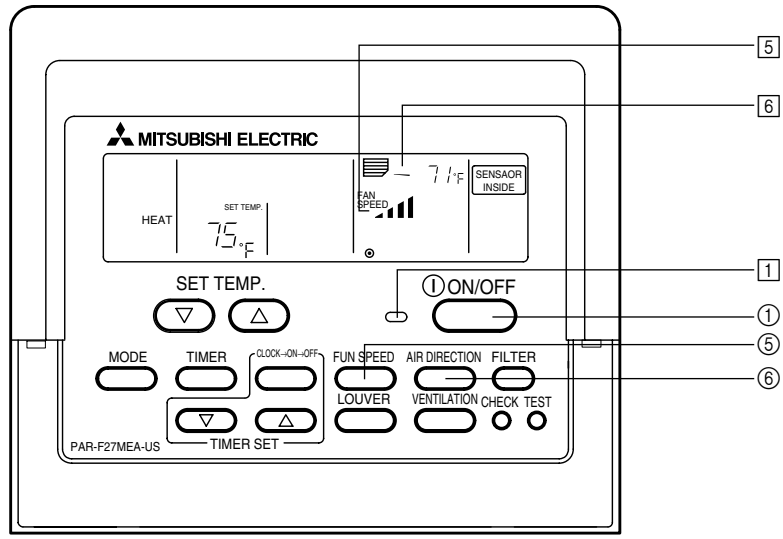
Room temperature display

During operation, the intake temperature is displayed at [4].

NOTES

- The display range is 45 to 102 °F. When this range is exceeded, the room temperature display flashes at 45 °F or 102 °F.
- When multiple indoor units are controlled, the contents of the master indoor unit are displayed on the remote controller.
- The room temperature sensor position can be selected from “INDOOR UNIT” and “REMOTE CONTROLLER”. The initial setting is “INDOOR UNIT”. When you want to change the room temperature sensor position to “REMOTE CONTROLLER”, consult your dealer.
- When “no room temperature display” was selected by remote controller function selection, the room temperature is not displayed.

(2) Wind speed and wind direction adjustment and fan operation



When you want to change the wind speed

■ While the air conditioner is operating, press the [FAN SPEED] button ⑤.

- Each time the button is pressed, the setting changes as shown below.
  The wind speed is displayed at 5.
- The following wind speeds can be selected:

Wind speed	Remote controller display
4-speed model	(Low) (Mid1) (Mid2) (High)
3-speed model	(Mid1) (Mid2) (High)
2-speed model	(Mid1) (High)

* The wind speeds that can be selected depend on the model.

NOTES

- In cases such as the following, the liquid crystal display and unit wind speed are different:
  1. When “HEAT STAND BY” or “DEFROST” is displayed.
  2. Immediately after heating operation (while waiting for mode selection)
  3. When the room temperature is higher than the set temperature in the heating mode.
  4. Dry operation
- For 3-speed models, a central controller wind speed display and the remote controller wind speed display may be different.

When you want to change the wind direction

■ While the air conditioner is operating, press the [AIR DIRECTION] button ⑥.

- Each time the button is pressed, the setting changes as shown below.
  The wind direction is displayed at 6.
- The following wind directions can be selected:

Display		Swing	Setting 1 (horizontal 0˚)	Setting 2 (horizontal 45˚)	Setting 3 (horizontal 60˚)	Setting 4 (horizontal 85˚)
Operation mode	Wind Speed	Swing	Horizontal outlet	Downward 45˚	Downward 60˚	Downward 85˚
Heat/fan	High/Mid1 Mid2/Low					
Cool	High					
	Mid1/Mid2/Low	Swing	Horizontal outlet	Downward 45˚	Downward 60˚	Downward 85˚
Dry	Not settable			* Horizontal after 1 hour		
Airflow setting when operation mode was changed		–	Cool Dry Fan operation	–	–	Heating operation

* After one hour, automatically returns to the horizontal position.
* During swing operation, remote controller display and airflow vane position cannot be synchronized.
* There may not be an airflow function, depending on the model.

NOTE

- In cases such as the following, the liquid crystal display and unit airflow may be different.
  1. When “HEAT STANDBY”or “DEFROST” is displayed
  2. Immediately after heating operation (Waiting for mode selection)
  3. When the room temperature is higher than the set temperature in the HEAT mode

(3) How to operate the timer

There are the following three timer modes. Select one of them.

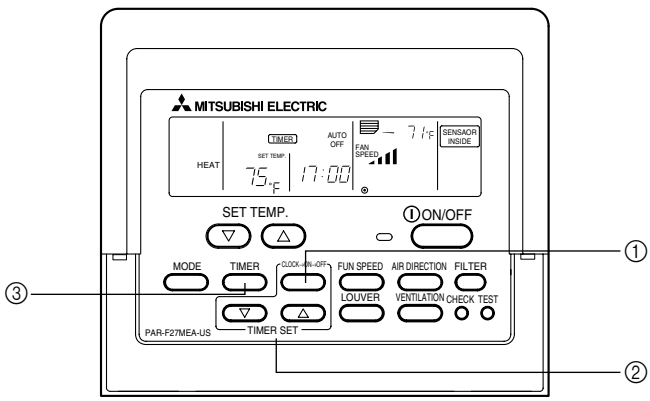
1) 1 day timer mode
In this mode, the ON and OFF timers (10-minute units) can each be set to one time within 24 hours.
This mode has the following three setting methods:
- ON timer operation : Timer only starts the air conditioner.
- OFF timer operation : Timer only stops the air conditioner.
- ON/OFF timer operation: Timer both starts and stops the air conditioner.

2) Daily timer mode
Operation of this mode is the same as that of the 1 day timer mode. However, timer operation can be set to the same time each day in accordance with the set ON/OFF timer time. (ON/OFF timer each 1 time/daily)

3) Auto off timer mode
The OFF timer can be easily set in 30-minute units. (30 minutes to 4 hours range) When the remaining time reaches 0:00, the air conditioner stops. When the Auto off timer mode is selected, the next time the air conditioner is started, the OFF timer operates automatically so that the timer can be used to turn off the air conditioner if you should forget.

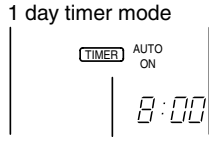
NOTE

When ON/OFF operation from the central controller, etc. was restricted when timer operation was set, the set ON/OFF timer is not executed. After the restriction is removed, timer operation is performed at the ON/OFF time.
When ON/OFF operation was restricted during AUTO OFF timer operation, the remaining time at the point operation was restricted is memorized and the air conditioner is stopped after the memorized remaining time from the time the restriction was removed.



[Timer setting display example]

- 1 day timer mode



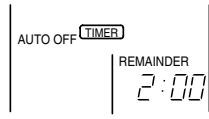
← 1 day timer mode
8 A.M. operation start

- Daily timer mode



← Daily timer mode
5 P.M. daily operation stop

- Auto off timer mode



← Auto off timer mode
Operation stop when 2 hours remain

When setting the current time

■ Press the [Time selection] button ① and display "CLOCK".
- Each time the button is pressed, the time is switched as shown below.



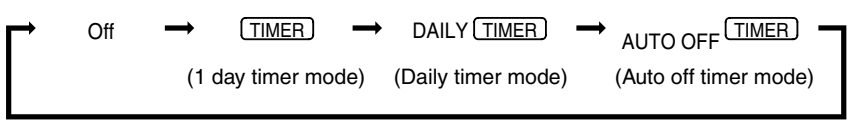
■ Each time the [TIMER SET (△)] button ② is pressed, the time advances one minute and each time the [TIMER SET (▽)] button ② is pressed, the time returns one minute.
- When the button is held down, the time advances or returns continuously. The time changes in 1 minute units → 10 minutes units → 1 hour units order.
- About 10 seconds after the end of setting, the remote controller display goes off.

* When a power failure occurs, the current time is reset. Reset the clock.

When performing ON timer operation (1 day timer mode/daily timer mode)

■ Press the [CLOCK → ON → OFF] button ① and check "Current time (CLOCK)" and display "Starting time (AUTO ON)".
■ Set the ON time by pressing the [TIMER SET (△) or (▽)] button ②.
■ Set the OFF time to "-- : --" display.
- "-- : --" display is displayed between 23 : 50 and 0 : 00.

■ Press the [TIMER] button ③ and set the display to "TIMER" (1 day timer mode) or "TIMER" + "DAILY" (daily timer mode).
- Each time the button is pressed, the timer mode is switched as shown below.



* The Auto off timer mode is skipped at the OFF window.

When performing OFF timer operation (1 day timer mode/daily timer mode)

■ Press the [Time selection] button ① and check "Current time (CLOCK)" and set the display to "Ending time (AUTO OFF)".
■ Set the OFF time by pressing the [Time selection (△) or (▽)] button ②.
■ Set the ON time to "-- : --" display.
■ Press the [TIMER] button ③ and set the display to "TIMER" (1 day timer mode) or "TIMER" + "DAILY" (daily timer mode).

When performing ON/OFF timer operation (1 day timer mode/daily timer mode)

■ See the setting when performing ON timer and OFF timer operation and check “Current time (CLOCK)” and set both the AUTO ON time and AUTO OFF time.

■ Press the [TIMER] button ③ and set the display to “TIMER” (1 day timer mode) or “TIMER” + “DAILY” (daily timer mode).

When performing AUTO OFF timer operation (AUTO OFF timer mode)

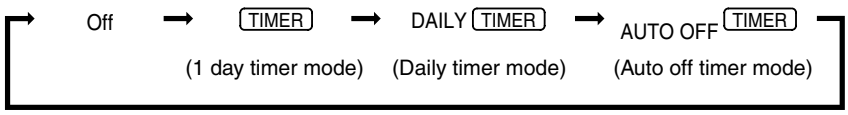
■ The Auto off timer can only be set while the air conditioner is operating.

■ Press the [TIMER] button ③ and set the display to“TIMER” + “AUTO OFF” (Auto off timer mode).

■ Set the desired remaining time by pressing the [TIMER SET (△) or (▽)] button ②. (30 minutes units, 30 minutes to 4 hours)
After remaining time setting, the timer automatically starts.

When releasing timer operation

■ Press the [TIMER] button ③ and turn off the “TIMER” display.



* The Auto off timer mode is skipped at the OFF window.

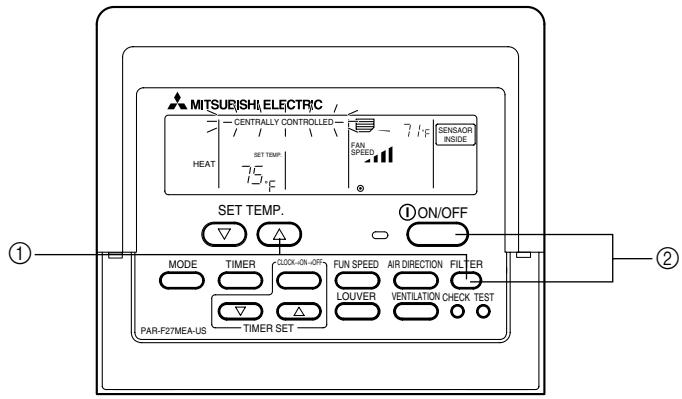
(4) Auto lock

Remote controller buttons operation can be locked. There are two kinds of auto lock.

1) All buttons lock: Locks all the remote controller buttons.
2) Lock other than [ON/OFF] button: Locks all the remote controller buttons except the [ON/OFF] button.

NOTE

When auto lock is set, “– CENTRALLY CONTROLLED –” flashes.



When locking/unlocking all buttons

■ When the [SET TEMP. (△)] button ① is pressed two seconds successively while pressing the [FILTER] button, all the remote controller buttons are locked or unlocked.

All buttons lock ⟷ Unlock

[FILTER] + [SET TEMP. (△)]
Press and hold down at the same time for 2 seconds

• While locked, all the remote controller buttons cannot be operated. When all the buttons are locked in the timer mode, timer operation is performed even though the buttons are locked.

When locking/unlocking all the buttons other than the [ON/OFF] button

■ When the [ON/OFF] button ② is pressed and held down for two seconds while pressing the [FILTER] button, all buttons other than [ON/OFF] button are locked or unlocked.

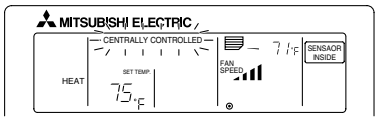
Lock other than [ON/OFF] button ⟷ Unlock

[FILTER] + [ON/OFF]
Press and hold down at the same time for 2 seconds

• While locked, buttons other than the [ON/OFF] button cannot be operated. When locked in the timer mode, the timer operation is performed even though the buttons are locked.

(5) Other displays and flashing

– "CENTRALLY CONTROLLED" display –

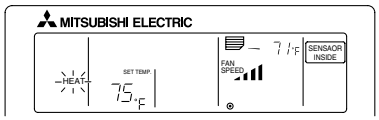


- Displayed when operation is controlled by central controller, etc. Restricted operations are shown below.
  · ON/OFF (including timer operation)
  · Operation mode
  · Set temperature

NOTE

May also be individually restricted.

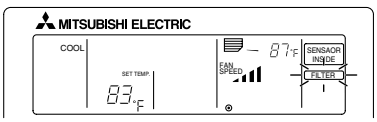
– "Operation mode" flashing –



<When flashes continuously>
- Displayed when another indoor unit connected to the outdoor unit is already operating in a different operation mode. Match with the operation mode of the other indoor unit.

<When mode switched after display flashes>
- Displayed when operation mode is restricted for each season by central controller, etc. Use another operation mode.

– "FILTER" flashing –

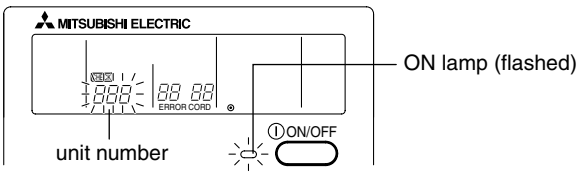


- Indicates that the filter needs cleaning. Clean the filter.
- When resetting "FILTER" display
  When the [FILTER] button is pressed two times successively after cleaning the filter, the display goes off and is reset.

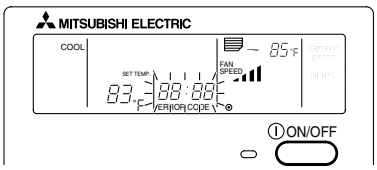
NOTES

- When two or more different types of indoor unit are controlled, the cleaning period differs with the type of filter. When the master unit cleaning period arrives, "FILTER" is displayed. When the filter display goes off, the cumulative time is reset.
- "FILTER" indicates the cleaning period when the air conditioner was used under general indoor air conditions by criteria time. Since the degree of dirtiness depends on the environmental conditions, clean the filter accordingly.
- The filter cleaning period cumulative time differs with the model.

– "ERROR CODE" flashing –



- When both the "ON" lamp and "ERROR CODE" flash, trouble occurred in the air conditioner and the air conditioner stops. Jot down the unit number and error code and turn off the air conditioner power and consult your dealer.



- When only "ERROR CODE" flashes (ON lamp remains a steady light)
  The air conditioner continues to operate, but there is the possibility of trouble occurring.
  Jot down the error code and consult your dealer.

(6) How to select the remote controller functions

In the remote controller function selection mode, three functions can be selected and changed. Select and change them as required.

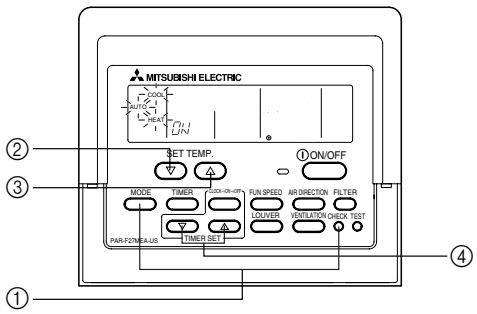
1) Operation mode display selection mode (Automatic mode cool/heat display selection)
   When the AUTO operation mode was set by remote controller, the indoor unit is judged from the room temperature and the cooling or heating operation is performed automatically. In this case, "AUTO" "COOL" or "AUTO" "HEAT" is displayed at the remote controller. However, "AUTO" can be displayed alone without the "COOL" or "HEAT" display.

2) Room temperature display selection mode (Room temperature display/no display selection)
   Normally, the intake temperature is displayed at the remote controller, but setting can be performed so that it is not displayed.

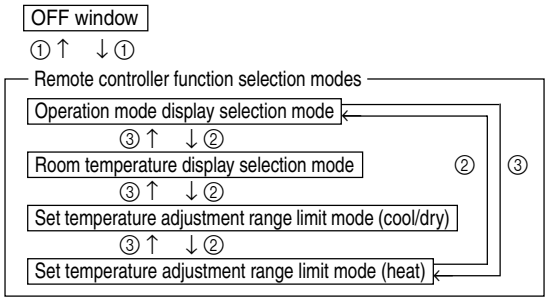
3) Set temperature range limit mode
   Ordinarily, the set temperature adjustment range can be freely set to the 65 °F to 87 °F range for cooling and dry and the 61 °F to 83 °F range for heating. However, the lower limit temperature can be preset to an arbitrary value for cooling and dry and the upper limit temperature can be preset to an arbitrary value for heating. If the set temperature range for cooling and dry is set to a value higher than normal and the set temperature range for heating is set lower than normal in this way, overcooling and overheating can be prevented and energy can be saved.

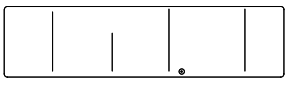
NOTE

When the set temperature adjustment range was changed from the normal set temperature adjustment range by remote controller connected to a cooling/heating simultaneous air conditioner with an AUTO mode, the AUTO mode cannot be selected with the [NODE] button.



[Remote controller function selection mode transition]





[Remote controller OFF window display]

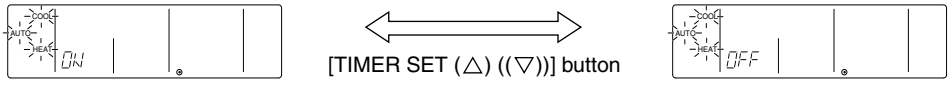
①: Press and hold down the [CHECK] and [MODE] buttons at the same time for 2 seconds
②: [SET TEMP. (▽)] button
③: [SET TEMP. (△)] button

[PROCEDURE]

1. Set the air conditioner to the off state with the remote controller [ON/OFF] button. The remote controller display shifts to the OFF window display shown at the left.
2. When the [CHECK] and [MODE] buttons ① are pressed and held down at the same time for two seconds, the remote controller switches to the remote controller function selection mode and the "OPERATION MODE DISPLAY SELECTION MODE" window appears. The other three modes can be selected by operating the [SET TEMP.] (▽) button ② or (△) button ③. Display the mode whose function you want to change.

OPERATION MODE DISPLAY SELECTION MODE (When you want to change the AUTO mode display)

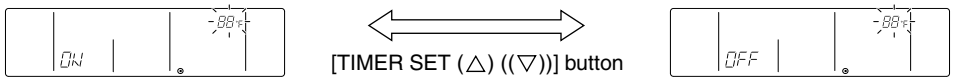
- "AUTO" "COOL/HEAT" flashes and "ON" or "OFF" lights. Each time the [TIMER SET (△) or (▽)] button ④ is pressed in this state, the "ON" and "OFF" display is switched.



- When "ON" was selected, "AUTO" "COOL" or "AUTO" "HEAT" is displayed during AUTO mode operation.
- When "OFF" was selected, only "AUTO" is displayed during AUTO mode operation.

ROOM TEMPERATURE DISPLAY SELECTION MODE (When you want to change room temperature display/no display)

- "88 °C" flashes at the room temperature display and "ON" or "OFF" lights. Each time the [Time selection (△) or (▽)] button ④ is pressed in this state, the "ON" and "OFF" display is switched.



- When "ON" was selected, the room temperature is continuously displayed in the ON window.
- When "OFF" was selected, the room temperature is not displayed in the ON window.

SET TEMPERATURE RANGE LIMIT MODE (When you want to change the set temperature adjustment range)

1) Cool/dry mode temperature selection
   "COOL/DRY" and "LIMIT TEMP." light on the display and the set temperature adjustment range in the cool (dry) mode is displayed.
   The lower limit temperature of the set temperature display flashes. This temperature value can be set and changed.
   [Lower limit temperature adjustment range]: 65 °F ⟺ 87 °F (Mid temperature indoor unit: 55 °F ⟺ 87 °F) (Upper limit temperature 87 °F is fixed. Only the lower limit temperature can be changed.)



   [When set temperature adjustment range in cool/dry mode is 65 °F to 87 °F]

2) Each time the [TIMER SET (△) or (▽)] button ④ is pressed, the lower limit temperature value is increased or decreased. Set it to the desired set temperature adjustment range.



   [When set temperature adjustment range was set to 75 °F to 87 °F]

3) When the [SET TEMP. (▽)] button ② is pressed after the setting above, the remote controller switches to the heat mode temperature selection window.
   "HEAT" and "LIMIT TEMP." light on the display and the heat mode set temperature adjustment range is displayed.
   The upper limit temperature value can be changed by pressing the [TIMER SET (△) or (▽)] button ④, the same as cool/dry mode temperature selection.
   Upper limit temperature adjustment range: 61 °F to 83 °F (61 °F ⟺ 83 °F for mid temperature indoor unit also) (The lower limit temperature 61 °F is fixed. Only the upper limit temperature can be changed.)

3. At the end of selection of each function, release the remote controller function selection mode and display the OFF window by pressing the [CHECK] and [MODE] buttons ① at the same time for two seconds.

4 Specifications

Item		Contents
Size (H × W × D)	mm	120 × 130 × 19
	in	4-3/4 × 5-1/8 × 3/4
Weight	kg	0.2
	lb	7/16
Power requirement		DC30 Power supplied from M-NET transmission line (Normally, power is received from the outdoor unit over the indoor/outdoor unit M-NET transmission line.)
Power consumption		0.5 W
Environmental conditions		Temperature 32 (0) to 104 °F (40°C), humidity 30 to 90 % RH (No condensation)
Material		PS