WT05310X01

# MITSUBISHI ELECTRIC

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## CITY MULTI R410A SERIES HOT WATER SUPPLY, AIR TO WATER, and FLOW TEMP. CONTROLLER Remote Controller PAR-W21MAA

**Instruction Book**

## Contents
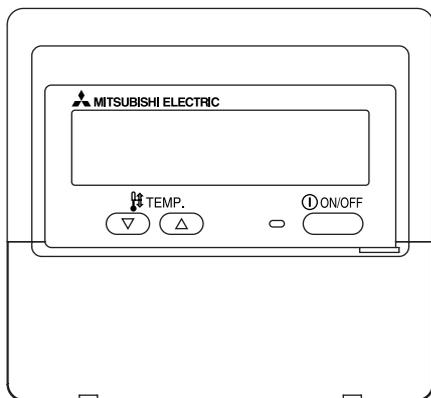
Please read these instructions carefully and take care to use this equipment correctly. Store these instructions safely for future reference.
Be sure to pass these instructions and the corresponding installation instructions to anyone subsequently appointed to maintain this equipment. Installation and relocation of this equipment should be carried out by qualified persons only. Attempts by end users to install or move this equipment may lead to unsafe conditions or improper operation.

# 1 | Safety Precautions

● Precautions are classified as follows, according to the level of potential danger.

| ⚠ **WARNING** | Denotes a condition or operation which, if handled incorrectly, may lead to serious injury or death. |
|---|---|
| ⚠ **CAUTION** | Denotes a condition or operation which, if handled incorrectly, may lead to bodily injury or property damage. |

## ⚠ WARNING

**Do not attempt to install this equipment yourself.**
Please have your dealer or a qualified engineer install this equipment.
Improper installation may result in fire, electric shock, or other severe accident.

**Be sure that the equipment has been fastened securely.**
Be sure that equipment is securely fastened to a sturdy support so that there is no risk that it will fall.

**Be sure that you are supplying the rated voltage.**
Supply of an incorrect voltage may lead to fire or equipment failure.

**Turn off this equipment immediately if operation becomes abnormal.**
Continued use may lead to equipment failure, electric shock, or fire.
If you notice a burning smell or other abnormality, turn off the power switch immediately and consult your dealer.

**Do not attempt to relocate this equipment yourself.**
Improper reinstallation may result in fire, electric shock, or other severe accident.
Please have your dealer or a qualified engineer carry out relocation.

**Do not dispose of this equipment yourself.**
Please consult the dealer when it comes time to discard this equipment.

**Do not attempt to modify or repair this equipment yourself.**
Attempted modification or repair may lead to fire, electric shock, or other severe accident. Please consult with your dealer if repair is required.

**Stop using this equipment if it fails to operate correctly (if error messages recur and the unit does not run as expected).**
Continued use or attempted use of this equipment may lead to fire or equipment failure. Consult your dealer for advice.

# ⚠ **CAUTION**

**Keep hazardous materials away from this equipment.**
Do not install this equipment in locations where there is risk of combustible gas leakage. The presence of combustible gas may result in explosion or fire.

**Do not wash this equipment with water.**
Washing with water may result in electric shock or equipment failure.

**Do not touch buttons when hands are wet.**
Doing so may result in electric shock or equipment failure.

**Do not use this equipment for purposes for which it was not intended.**
This equipment is for use with CITY MULTI R410A SERIES HOT WATER SUPPLY, AIR TO WATER, and FLOW TEMP. CONTROLLER Remote Controller. Please do not use it with any other systems, or for any other purpose, as such usage may result in improper operation.

**Do not spray insect repellant or combustible substances on the equipment.**
Keep combustible sprays and substances away from this equipment, and never spray them directly onto this equipment. Contact with or proximity to such substances poses risk of explosion or fire.

**Do not use this equipment in improper environments.**
Do not use in areas where there may be large quantities of oil (machine oil, etc.), exhaust gas, or sulfide gas. Such environments may degrade the performance or cause equipment failure.

**Do not use sharp-tipped objects to press the buttons.**
Use of sharp tips may lead to electric shock or equipment failure.

**Do not use under extreme temperatures.**
Use only when ambient temperature is within the limits indicated in the instructions. (If the instructions do not indicate limits, use only at temperatures between 0°C (32°F) and 40°C (104°F).) Use of this equipment at temperatures outside of this range may result in major equipment failure.

**Do not pull or twist the communication cables.**
Pulling or twisting a cable may result in fire or equipment failure.

**Do not disassemble.**
Attempted disassembly may result in injury from contact with internal parts, or may lead to fire or equipment failure.

**Do not wipe this equipment with benzene, paint thinner, or chemical cleaning cloths.**
These substances may cause discoloration or equipment failure. If the equipment becomes noticeably dirty, clean it with a wrung-out cloth that has been moistened with water-diluted neutral solvent, and then wipe it with a dry cloth.

## 2 | Parts Names

### Display Section

For purposes of this explanation, all parts of the display are shown as lit. During actual operation, only the relevant items will be lit.

**Day-of-Week**

Shows the current day of the week.

**Time/Timer Display**

Shows the current time, unless the simple or Auto Off timer is set.
If the simple or Auto Off timer is set, shows the time remaining.

**"Locked" indicator**

Indicates that remote controller buttons have been locked.

**Identifies the current operation**

Shows the operating mode, etc.
* Multilanguage display is supported.

**"Centrally Controlled" indicator**

Indicates that operation of the remote controller has been prohibited by a main controller.

**Timer indicators**

The indicator comes on if the corresponding timer is set.

**Error indicator**

Comes on when error occurs.

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TIME SUN MON TUE WED THU FRI SAT
TIMER ON
AFTER AFTER OFF
ERROR CODE ˚F˚C
FUNCTION
WEEKLY
SIMPLE
AUTO OFF
˚F˚C
Hr

**"Timer Is Off" indicator**

Indicates that the timer is off.

**Water Temperature Display**

Shows the water temperature during water temperature display operation.

**(Power On indicator)**

Indicates that the power is on.

**Temperature Setting**

Shows the target temperature.

**Note:**
- "PLEASE WAIT" message
  This message is displayed for approximately 3 minutes when power is supplied to the unit or when the unit is recovering from a power failure.
- "NOT AVAILABLE" message
  This message is displayed if a button is pressed to operate a function that the unit does not have, or a function that is not available due to the setting.

## Operation Section

Set Temperature buttons

▽ Down

△ Up

Timer Menu button
(Monitor/Set button)

Mode button (Return button)

Set Time buttons

▽ Back

△ Ahead

Timer ON/OFF button
(Set Day button)

ON/OFF button

INITIAL SETTING button

▽ Down

△ Up

CIR.WATER
( ↵ Enter button)

Not available

Test Run button

Check button (Clear button)

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‡ TEMP.

▽ △

Ⓘ ON/OFF

☼ ☾ ⟊ ⌂ ⚙   ⏱MENU   ⏱ON/OFF   ▽INITIAL SETTING△   CIR.WATER

BACK   MONITOR/SET   DAY   CHECK   TEST

PAR-W21MAA   ▽   △   CLEAR

⏱CLOCK

Opening the lid.

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# 3 | Screen Configuration

**<Screen Types>**
- Function Selection of remote controller:
  Set the functions and ranges available to the remote controller (timer functions, operating restrictions, etc.).
- Set Day/Time: Set the current day of the week or time.
- Standard Control Screens: View and set the unit's operation status.
- Timer Monitor: View the currently set timer (weekly timer, simple timer, or Auto Off timer)
- Timer Setup: Set the operation of any of the timers (weekly timer, simple timer, or Auto Off timer).
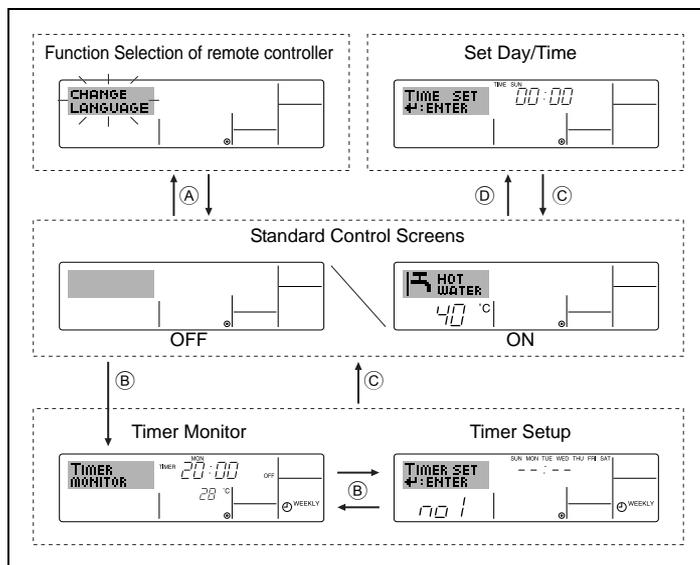


**<How to change the screen>**
Ⓐ : Hold down both the Mode (Return) button and the Timer ON/OFF button for 2 seconds.
Ⓑ : Press the Timer Menu button.
Ⓒ : Press the Mode (Return) button.
Ⓓ : Press either of the Set Time buttons ( ▽ or △ ).

# 4 | Setting the Day of the Week and Time

■ Use this screen to change the current day of the week and time setting.

**Note:**
The day and time will not appear if clock use has been disabled at Function Selection of remote controller.



1 Day of the Week & Time display

**<How to Set the Day of the Week and Time...>**



3 Day of the Week Setting
4 Time Setting
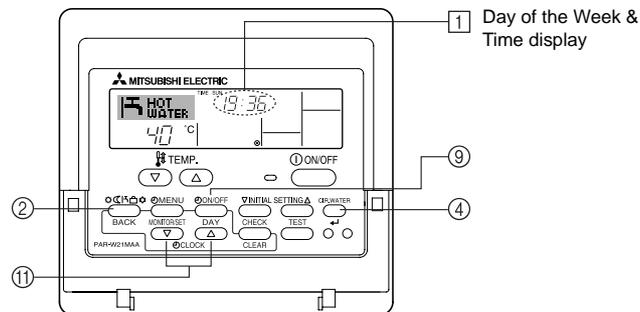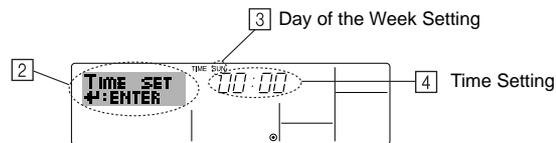
1. Press the ▽ or △ Set Time button ⑪ to show display 2.
2. Press the Timer ON/OFF (Set Day) button ⑨ to set the day.
   * Each press advances the day shown at 3 : Sun → Mon → ... → Fri → Sat.
3. Press the appropriate Set Time button ⑪ as necessary to set the time.
   * As you hold the button down, the time (at 4) will increment first in minute intervals, then in ten-minute intervals, and then in one-hour intervals.
4. After making the appropriate settings at Steps 2 and 3, press the CIR.WATER ↵ button ④ to lock in the values.

**Note:**
Your new entries at Steps 2 and 3 will be cancelled if you press the Mode (Return) button ② before pressing the CIR.WATER ↵ button ④.

5. Press the Mode (Return) button ② to complete the setting procedure. This will return the display to the standard control screen, where ① will now show the newly set day and time.

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## 5 | Using the Remote Controller

### (1) How to Start, Stop, Change the Mode, and Adjust the Water Temperature
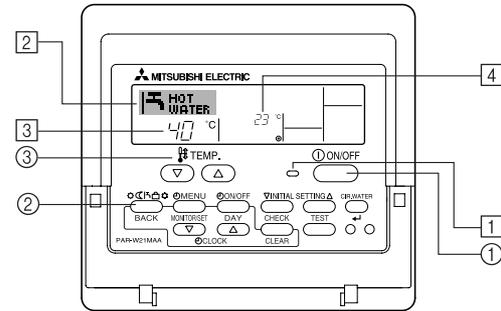


**<To Start Operation>**
■ Press the ON/OFF button ①.
  • The ON lamp ① and the display area come on.

**Note:**
● When the unit is restarted, initial settings are as follows.

| | Remote Controller settings |
|---|---|
| Mode | Last operation mode |
| Temperature setting | Last set temperature |

**<To Stop Operation>**
■ Press the ON/OFF button ① again.
  • The ON lamp ① and the display area go dark.

**<Selecting the Mode>**

■ With the unit running, press the Mode button ② as many times as necessary.
  • Each press switches operation to the next mode, in the sequence shown below. The currently selected mode is shown at ②.

```
┌→ Heating → Heating ECO → Hot Water → Anti-freeze → Cooling ┐
│     *1*2         *1*2          *1*2        *1*2        *1*2  │
└─────────────────────────────────────────────────────────────┘
```

**Note:**
*1  Availability of this mode depends on the type of unit connected.
*2  Does not appear if Mode has been disabled at the Function Selection of remote controller. For information about how to set this function, refer to section 6, item [4]-2 (2).

**<To Change the Temperature Setting...>**

■ To lower the temperature: Press the ▽ Set Temperature button ③.
■ To raise the temperature: Press the △ Set Temperature button ③.
  • Each press changes the setting by 1°C (1°F). The current setting is displayed at ③.
  • The available ranges are as follows. *1, *2

| Heating mode | Hot Water mode | Anti-freeze mode | Cooling mode | Heating ECO mode |
|---|---|---|---|---|
| 20 - 90°C (68 - 194°F) *3 | 20 - 90°C (68 - 194°F) *3 | 5 - 45°C (41 - 113°F) *3 | 5 - 30°C (41 - 87°F) *3 | Cannot be set. |

**Note:**
*1  Available ranges vary according to the type of unit connected.
*2  If temperature range limits have been set at Function Selection of remote controller, the available ranges will be narrower than shown above. If you attempt to set a value outside of the restricted range, the display will show a message indicating that the range is currently restricted.
    For information about how to set and clear these range limits, refer to section 6, item [4]-2 (3).
*3  If Function Selection of remote controller are set to display the temperature in Fahrenheit. For information about how to select °C or °F , refer to section 6, item [4]-4 (1).

**<Water Temperature Display>**
During operation, the water temperature is shown at ④.

**Note:**
● To display range is 10°C to 90°C (50°F to 194°F).
● If you are using the remote controller to drive multiple units, the display will show the temperature at the main unit.
● If water temperature display is disabled in Function Selection of remote controller, the water temperature will not appear. For information about how to enable or disable this feature, refer to section 6, item [4]-4 (2).
● If Fahrenheit display is selected at Function Selection of remote controller, the display will show the °F mark. For information about how to select °C or °F, refer to section 6, item [4]-4 (1).

## (2) Using the Timer

This section explains how to set and use the timer. You can use Function Selection of remote controller to select which of three types of timer to use: ① Weekly timer, ② Simple timer, or ③ Auto Off timer.
For information about how to set the Function Selection of remote controller, refer to section 6, item [4]-3 (3).

### ① Using the Weekly Timer
■ The weekly timer can be used to set up to six operations for each day of the week.
  • Each operation may consist of any of the following: ON/OFF time together with a temperature setting, or ON/OFF time only, or temperature setting only.
  • When the current time reaches a time set at this timer, the unit carries out the action set by the timer.
■ Time setting resolution for this timer is 1 minute.

**Note:**
*1  Weekly Timer/Simple Timer/Auto Off Timer cannot be used at the same time.
*2  The weekly timer will not operate when any of the following conditions is in effect.
    The timer feature is off; the system is in an malfunction state; a test run is in progress; the remote controller is undergoing self-check or remote controller check; the user is in the process of setting a function; the user is in the process of setting the timer; the user is in the process of setting the current day of the week or time; the system is under central control. (Specifically, the system will not carry out operations (unit on, unit off, or temperature setting) that are prohibited during these conditions.)



Operation No.

Day Setting
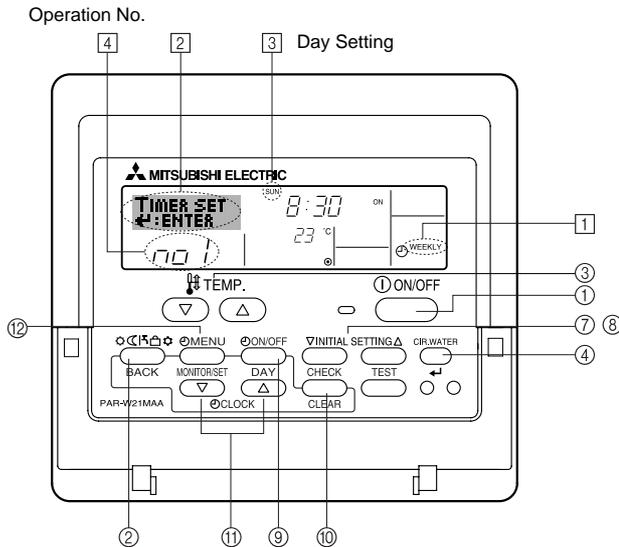
**<How to Set the Weekly Timer>**
1. Be sure that you are at a standard control screen, and that the weekly timer indicator ⑴ is shown in the display.
2. Press the Timer Menu button ⑫, so that the "Set Up" appears on the screen (at ⑵). (Note that each press of the button toggles the display between "Set Up" and "Monitor".)
3. Press the Timer ON/OFF (Set Day) button ⑨ to set the day. Each press advances the display at ⑶ to the next setting, in the following sequence: "Sun Mon Tues Wed Thurs Fri Sat" → "Sun" → ... → "Fri" → "Sat" → "Sun Mon Tues Wed Thurs Fri Sat"...
4. Press the ▽ or △ INITIAL SETTING button (⑦ or ⑧) as necessary to select the appropriate operation number (1 to 6) ⑷.
   * Your inputs at Steps 3 and 4 will select one of the cells from the matrix illustrated below.
     (The remote-controller display at left shows how the display would appear when setting Operation 1 for Sunday to the values indicated below.)

**Setup Matrix**

| Op No. | Sunday | Monday | … | Saturday | |
|--------|--------|--------|---|----------|---|
| No. 1 | • 8:30<br>• ON<br>• 23 °C (73 °F) | | | | <Operation 1 settings for Sunday><br>Start the unit at 8:30, with the temperature set to 23°C (73°F). |
| No. 2 | • 10:00<br>• OFF | • 10:00<br>• OFF | • 10:00<br>• OFF | • 10:00<br>• OFF | <Operation 2 settings for every day><br>Turn off the unit at 10:00. |
| … | | | | | |
| No. 6 | | | | | |

**Note:**
By setting the day to "Sun Mon Tues Wed Thurs Fri Sat", you can set the same operation to be carried out at the same time every day.
(Example: Operation 2 above, which is the same for all days of the week.)

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### &lt;Setting the Weekly Timer&gt;

Shows the time setting  ⑤          ⑥  Shows the selected operation (ON or OFF)
                                      * Does not appear if operation is not set.

**TIMER SET**
**↓:ENTER**    `8:30`  `ON`

`no 1`  `23 ℃`     ⊕ WEEKLY    ⑦  Shows the temperature setting
                                    * Does not appear if temperature is not set.
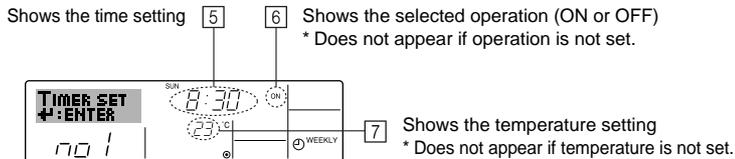
5. Press the appropriate Set Time button ⑪ as necessary to set the desired time (at ⑤).
   * As you hold the button down, the time first increments in minute intervals, then in
     ten-minute intervals, and then in one-hour intervals.
6. Press the ON/OFF button ① to select the desired operation (ON or OFF), at ⑥.
   * Each press changes the next setting, in the following sequence: No display (no setting)
     → "ON" → "OFF"
7. Press the appropriate Set Temperature button ③ to set the desired temperature (at ⑦).
   * Each press changes the setting, in the following sequence: No display (no setting)
     ⇔ 5 (41) ⇔ 6 (43) ⇔ ... ⇔ 89 (192) ⇔ 90 (194) ⇔ No display.
     (Available range: The range for the setting is 5°C (41°F) to 90°C (194°F). The actual
     range over which the temperature can be controlled, however, will vary according to the
     type of the connected unit.)
8. To clear the currently set values for the selected operation, press and quickly release the
   Check (Clear) button ⑩ once.
   * The displayed time setting will change to "—:—", and the ON/OFF and temperature
     settings will all disappear.
     (To clear all weekly timer settings at once, hold down the Check (Clear) button ⑩ for two
     seconds or more. The display will begin flashing, indicating that all settings have been
     cleared.)
9. After making the appropriate settings at Steps 5. 6. and 7, press the CIR.WATER ↵
   button ④ to lock in the values.

**Note:**
Your new entries will be cancelled if you press the Mode (Return) button ② before pressing
the CIR.WATER ↵ button ④.
If you have set two or more different operations for exactly the same time, only the operation
with the highest Operation No. will be carried out.
10. Repeat Steps 3 to 8 as necessary to fill as many of the available cells as you wish.
11. Press the mode (Return) button ② to return to the standard control screen and complete
    the setting procedure.
12. To activate the timer, press the Timer ON/OFF button ⑨, so that the "Timer Off"
    indication disappears from the screen. **Be sure that the "Timer Off" indication is no
    longer displayed.**
    * If there are no timer settings, the "Timer Off" indication will flash on the screen.

### &lt;How to View the Weekly Timer Settings&gt;

⑧          ⑨  Timer Settings

**TIMER**
**MONITOR**   SUN TIMER `8:30`  ON OFF

`23 ℃`     ⊕ WEEKLY  ①
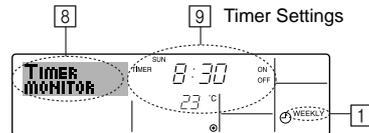
1. Be sure that the weekly timer indicator is visible on the screen (at ①).
2. Press the Timer Menu button ⑫ so that "Monitor" is indicated on the
   screen (at ⑧).
3. Press the Timer ON/OFF (Set Day) button ⑨ as necessary to select the
   day you wish to view.
4. Press the ▽ or △ INITIAL SETTING (⑦ or ⑧) as necessary to change
   the timer operation shown on the display (at ⑨).
   * Each press will advance to the next timer operation, in order of time
     setting.
5. To close the monitor and return to the standard control screen, press the
   Mode (Return) button ②.

### &lt;To Turn Off the Weekly Timer&gt;
Press the Timer ON/OFF button ⑨ so that "Timer Off" appears at ⑩.
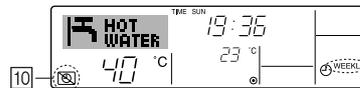
TIME SUN
**HOT**
**WATER**   `19:36`

⑩  `40 ℃`  `23 ℃`     ⊕ WEEKLY

### &lt;To Turn On the Weekly Timer&gt;
Press the Timer ON/OFF button ⑨ so that the "Timer Off" indication (at ⑩)
goes dark.

TIME SUN
**HOT**
**WATER**   `19:36`

⑩  `40 ℃`  `23 ℃`     ⊕ WEEKLY
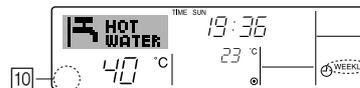
② **Using the Simple Timer**

■ You can set the simple timer in any of three ways.
- Start time only : The unit starts when the set time has elapsed.
- Stop time only : The unit stops when the set time has elapsed.
- Start & stop times : The unit starts and stops at the respective elapsed 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 Weekly Timer/Simple Timer/Auto Off Timer cannot be used at the same time.
*2 The simple timer will not operate when any of the following conditions is in effect. The timer is off; the system is in malfunction state; a test run is in progress; the remote controller is undergoing self-check or remote controller check; the user is in the process of selecting a function; the user is in the process of setting the timer; the system is under central control. (Under these conditions, ON/OFF operation is prohibited.)



**<How to Set the Simple Timer>**



Timer Settings

Action (ON or OFF)
* "— —" is displayed if there is no setting.
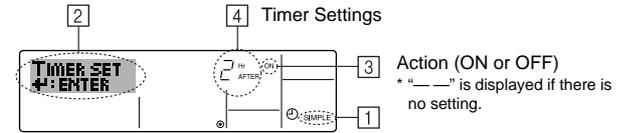
1. Be sure that you are at a standard control screen, and that the simple timer indicator is visible in the display (at ①).
When something other than the Simple Timer is displayed, set it to SIMPLE TIMER using the function selection of remote controller (see 6.[4]–3 (3)) timer function setting.
2. Press the Timer Menu button ⑫, so that the "Set Up" appears on the screen (at ②). (Note that each press of the button toggles the display between "Set Up" and "Monitor".)
3. Press the ON/OFF button ① to display the current ON or OFF simple timer setting. Press the button once to display the time remaining to ON, and then again to display the time remaining to OFF. (The ON/OFF indication appears at ④).
- "ON" timer: The unit will start operation when the specified number of hours has elapsed.
- "OFF" timer:The unit will stop operation when the specified number of hours has elapsed.
4. With "ON" or "OFF" showing at ③: Press the appropriate Set Time button ⑪ as necessary to set the hours to ON (if "ON" is displayed) or the hours to OFF (if "OFF" is displayed) at ④.
- Available Range: 1 to 72 hours
5. To set both the ON and OFF times, repeat Steps 3 and 4.
* Note that ON and OFF times cannot be set to the same value.
6. To clear the current ON or OFF setting: Display the ON or OFF setting (see step 3) and then press the Check (Clear) button ⑩ so that the time setting clears to "—" at ④. (If you want to use only an ON setting or only an OFF setting, be sure that the setting you do not wish to use is shown as "—".)
7. After completing steps 3 to 6 above, press the CIR.WATER ↵ button ④ to lock in the value.

**Note:**
Your new settings will be cancelled if you press the Mode (Return) button ② before pressing the CIR.WATER ↵ button ④.

8. Press the Mode (Return) button ② to return to the standard control screen.
9. Press the Timer ON/OFF button ⑨ to start the timer countdown. When the timer is running, the timer value is visible on the display. **Be sure that the timer value is visible and appropriate.**

**\<Viewing the Current Simple Timer Settings\>**



5      6  Timer Settings
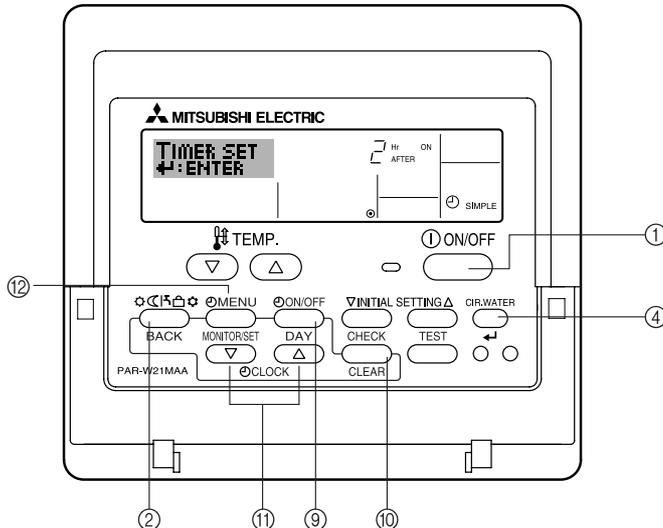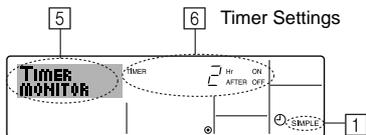
1. Be sure that the simple timer indicator is visible on the screen (at ①).
2. Press the Timer Menu button ⑫, so that the "Monitor" appears on the screen (at ⑤).
   • If the ON or OFF simple timer is running, the current timer value will appear at ⑥.
   • If ON and OFF values have both been set, the two values appear alternately.
3. Press the Mode (Return) button ② to close the monitor display and return to the standard control screen.

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**\<To Turn Off the Simple Timer...\>**
Press the Timer ON/OFF button ⑨ so that the timer setting no longer appears on the screen (at ⑦).



7
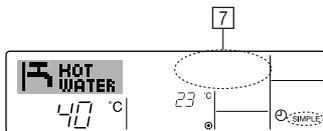
**\<To Turn On the Simple Timer...\>**
Press the Timer ON/OFF button ⑨ so that the timer setting becomes visible at ⑦.



7
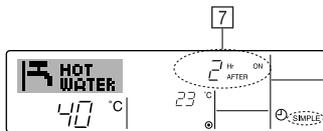
**Examples**
If ON and OFF times have both been set at the simple timer, operation and display are as indicated below.

Example 1:
    Start the timer, with ON time set sooner than OFF time
    ON Setting:  3 hours
    OFF Setting: 7 hours



At Timer Start — Display shows the timer's ON setting (hours remaining to ON).
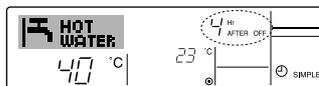
At 3 hours after timer start — Display changes to show the timer's OFF setting (hours remaining to OFF).
The time displayed is OFF setting (7 hours) – ON setting (3 hours) = 4 hours.

At 7 hours after timer start — The unit goes off, and will remain off until someone restarts it.

Example 2:
    Start the timer, with OFF time is sooner than ON time
    ON Setting:   5 hours
    OFF Setting: 2 hours
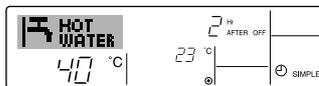


At Timer Start — Display shows the timer's OFF setting (hours remaining to OFF).

At 2 hours after timer start — Display changes to show the timer's ON setting (hours remaining to ON).
The time displayed is ON setting (5 hours) – OFF setting (2 hours) = 3 hours.
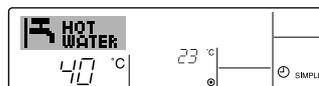
At 5 hours after timer start — The unit comes on, and will continue to run until someone turns it off.

③ **Using the Auto Off Timer**

- This timer begins countdown when the unit starts, and shuts the unit off when the set time has elapsed.
- Available settings run from 30 minutes to 4 hours, in 30-minute intervals.

**Note:**

*1  Weekly Timer/Simple Timer/Auto Off Timer cannot be used at the same time.

*2  The Auto Off timer will not operate when any of the following conditions is in effect.
   The timer is off; the system is in malfunction state; a test run is in progress; the remote controller is undergoing self-check or remote controller check; the user is in the process of selecting a function; the user is in the process of setting the timer; the system is under central control. (Under these conditions, ON/OFF operation is prohibited.)



**<How to Set the Auto Off Timer>**



2  3  Timer Settings
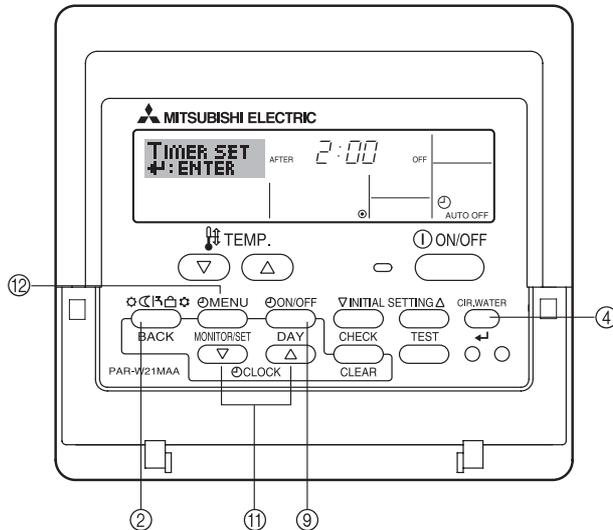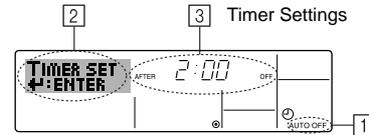
1. Be sure that you are at a standard control screen, and that the Auto Off timer indicator is visible in the display (at 1).
   When something other than the Auto Off Timer is displayed, set it to AUTO OFF TIMER using the function selection of remote controller (see 6.[4]–3 (3)) timer function setting.
2. Hold down the Timer Menu button ⑫ for **3 seconds**, so that the "Set Up" appears on the screen (at 2).
   (Note that each press of the button toggles the display between "Set Up" and "Monitor".)
3. Press the appropriate Set Time button ⑪ as necessary to set the OFF time (at 3).
4. Press the CIR.WATER ↵ button ④ to lock in the setting.

**Note:**
Your entry will be cancelled if you press the Mode (Return) button ② before pressing the CIR.WATER ↵ button ④.

5. Press the Mode (Return) button ② to complete the setting procedure and return to the standard control screen.
6. If the unit is already running, the timer starts countdown immediately. **Be sure to check that the timer setting appears correctly on the display.**

**<Checking the Current Auto Off Timer Setting>**



4  5  Timer Settings
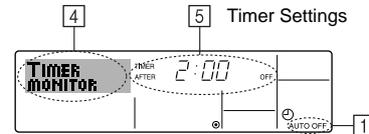
1. Be sure that the "Auto Off" is visible on the screen (at 1).
2. Hold down the Timer Menu button ⑫ for **3 seconds**, so that "Monitor" is indicated on the screen (at 4).
   • The timer remaining to shutdown appears at 5.
3. To close the monitor and return to the standard control screen, press the Mode (Return) button ②.

**<To Turn Off the Auto Off Timer...>**

● Hold down the Timer ON/OFF button ⑨ for **3 seconds**, so that "Timer Off" appears (at ⑥) and the timer value (at ⑦) disappears.
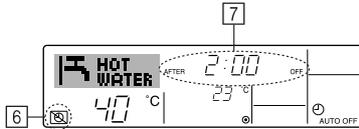


● Alternatively, turn off the unit itself. The timer value (at ⑦) will disappear from the screen.



**<To Turn On the Auto Off Timer...>**
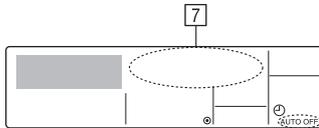
● Hold down the Timer ON/OFF button ⑨ for **3 seconds**. The "Timer Off" indication disappears (at ⑥), and the timer setting comes on the display (at ⑦).
● Alternatively, turn on the unit. The timer value will appear at ⑦.
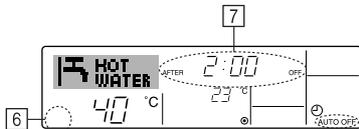
## (3) Locking the Remote Controller Buttons (Operation function limit controller)

■ If you wish, you can lock the remote controller buttons. You can use the Function Selection of remote controller to select which type of lock to use. (For information about selecting the lock type, see section 6, item [4]–2 (1)).
Specifically, you can use either of the following two lock types.

① Lock All Buttons : Locks all of the buttons on the remote controller.
② Lock All Except ON/OFF : Locks all buttons other than the ON/OFF button.

**Note:**
The "Locked" indicator appears on the screen to indicate that buttons are currently locked.
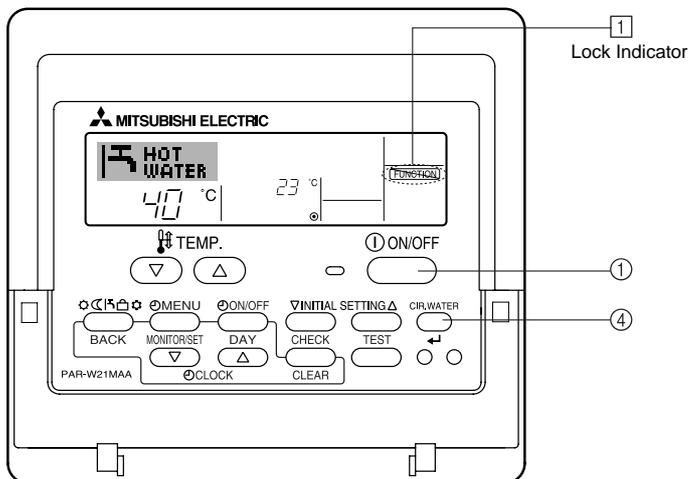


Lock Indicator

**<How to Lock the Buttons>**
1. While holding down the CIR.WATER ↵ button ④, press and hold down the ON/OFF button ① for 2 seconds. The "Locked" indication appears on the screen (at 1), indicating that the lock is now engaged.
   * If locking has been disabled in Function Selection of remote controller, the screen will display the "Not Available" message when you press the buttons as described above.



• If you press a locked button, the "Locked" indication (at 1) will blink on the display.
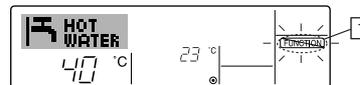


**<How to Unlock the Buttons>**
1. While holding down the CIR.WATER ↵ button ④, press and hold down the ON/OFF button ① for 2 seconds—so that the "Locked" indication disappears from the screen (at 1).
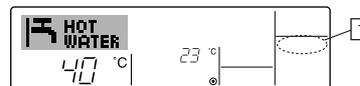
## (4) Other Indications

**\<Centrally Controlled\>**
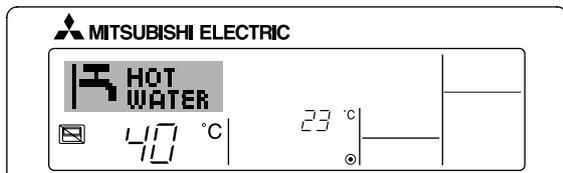


- ● ✉ will be displayed when operation is controlled by central controller, etc.
  Restricted operations are shown below.
  - • ON/OFF (including timer operation)
  - • Operation mode
  - • Set temperature

**Note:**
May also be individually restricted.

**\<Flashing Mode Indicator\>**
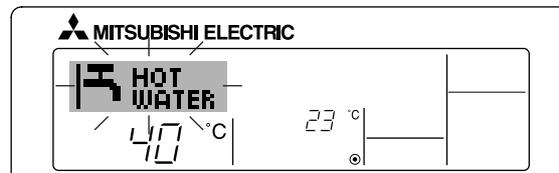


- ■ When flashes continuously
  Displayed when another unit connected to the outdoor unit is already operating in a different operation mode.
  Match with the operation mode of the other unit.

- ■ When operation mode switches after display blinked
  Displayed when operation mode is restricted for each season by central controller, etc.
  Use another operation mode.

**\<Flashing "Check water circuit" display\>**

 Alternating Display 

- ● Indicates that the water circuit replacement is required.
  Replace the water circuit.

 → 
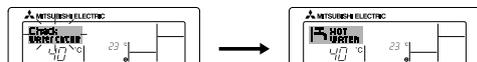
- ■ To reset "Check water circuit" display
  When the CIR.WATER ↵ button is pressed twice, "Check water circuit" display blinks.
  Then the display goes off and is reset.

**Note:**
- ● When two or more different types of unit are controlled, the water circuit replacement period differs with the unit model. When the main unit water circuit replacement period arrives, "Check water circuit" is displayed. When the Check water circuit display goes off, the cumulative time is reset.
- ● The water circuit replacement period cumulative time differs with the model. Depending on the model, this display will not be appeared.

**<Flashing Error Codes>**

HOT WATER SUPPLY AIR TO WATER Models

MITSUBISHI ELECTRIC

CHECK

ERROR CODE

ON/OFF

ON lamp
(Flashing)

Error Code

HOT WATER SUPPLY
AIR TO WATER unit No.

If you have entered contact number to be called in the event of a problem, the screen displays this number.
(You can set this up under Function Selection of remote controller. For information, refer to section 6.)
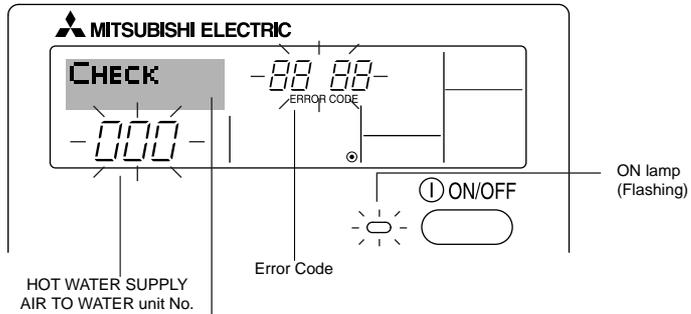
FLOW TEMP. CONTROLLER Models

MITSUBISHI ELECTRIC

CHECK

ERROR CODE

ON/OFF

ON lamp
(Flashing)

Refrigerant Address

Error Code    FLOW TEMP. CONTROLLER unit No.

Alternating Display

● If the ON lamp and error code are both flashing: This means that the unit is out of order and operation has been stopped (and cannot resume). Take note of the indicated unit number and error code, then switch off the power to the unit and call your dealer or servicer.

Example A

MITSUBISHI ELECTRIC

HOT
WATER

ERROR CODE

40 ˚C

ON/OFF

Error Code

Example B

MITSUBISHI ELECTRIC

HOT
WATER

ERROR CODE

40 ˚C

ON/OFF
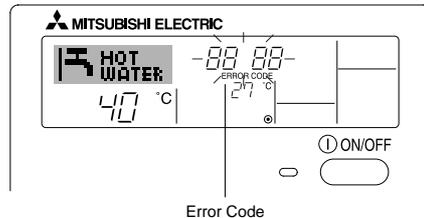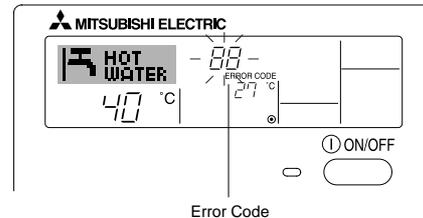
Error Code

When the Check button is pressed:

MITSUBISHI ELECTRIC

CALL:012.
34567890

ON/OFF
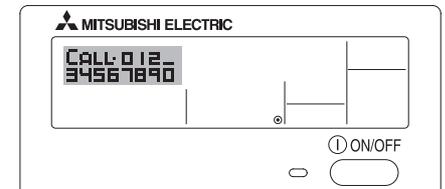
● If only the error code is flashing (while the ON lamp remains lit): Operation is continuing, but there may be a problem with the system. In this case, you should note down the error code and then call your dealer or servicer for advice.
* If you have entered contact number to be called in the event of a problem, push the Check button to display it on the screen. (You can set this up under Function Selection of remote controller. For information, refer to section 6.)

# 6 | Function Selection

**Function selection of remote controller**

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 ("CHANGE LANGUAGE") | Language setting to display | • Display in multiple languages is possible |
| 2. Function limit ("FUNCTION SELECTION") | (1) Operation function limit setting (operation lock) ("LOCKING FUNCTION") | • Setting the range of operation limit (operation lock) |
| | (2) Operation mode skip setting ("SELECT MODE") | • Setting the use or non-use of each operation mode |
| | (3) Temperature range limit setting ("LIMIT TEMP FUNCTION") | • Setting the temperature adjustable range (maximum, minimum) |
| 3. Mode selection ("MODE SELECTION") | (1) Remote controller main/sub setting ("CONTROLLER MAIN/SUB") | • Selecting main or sub remote controller<br>  * 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<br>• Setting the telephone number |
| | (5) Temp off set setting ("TEMP OFF SET FUNCTION") | • Setting the use or non-use of setback amount setting |
| 4. Display change ("DISP MODE SETTING") | (1) Temperature display °C/°F setting ("TEMP MODE °C/°F") | • Setting the temperature unit (°C or °F) to display |
| | (2) Water temperature display setting ("WATER TEMP DISP SELECT") | • Setting the use or non-use of the display of water temperature |

**[Function selection flowchart]**

[1] Stop the unit to start remote controller function selection mode. → [2] Select from item 1. → [3] Select from item 2. → [4] Make the setting. (Details are specified in item 3) →
[5] Setting completed. → [6] Change the display to the normal one. (End)

Normal display (Display when the unit is not running)

(Hold down the Ⓔ button and press the Ⓓ button for two seconds.)
* The display cannot be changed during the test run and the self diagnosis.

(Hold down the Ⓔ button and press the Ⓓ button for two seconds.)
* The remote controller records the setting that is made in this way.
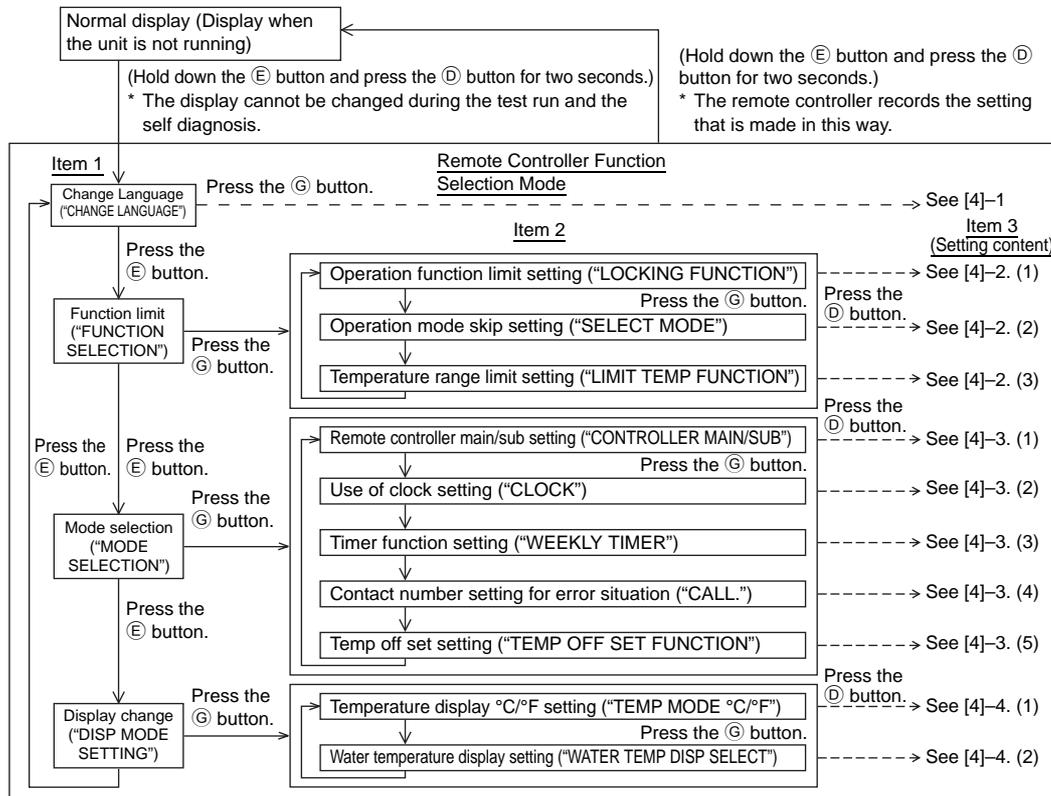
NOTE
Timer operation stops when the display for remote controller function selection is changed to the normal one.

Item 1

Change Language ("CHANGE LANGUAGE")

Press the Ⓖ button.

Remote Controller Function Selection Mode

Item 2

Item 3 (Setting content)

See [4]–1

Press the Ⓔ button.

Function limit ("FUNCTION SELECTION")

Press the Ⓖ button.

Operation function limit setting ("LOCKING FUNCTION") — See [4]–2. (1)
Press the Ⓖ button.
Operation mode skip setting ("SELECT MODE") — See [4]–2. (2)
Temperature range limit setting ("LIMIT TEMP FUNCTION") — See [4]–2. (3)

Press the Ⓓ button.

Press the Ⓔ button. Press the Ⓔ button.

Mode selection ("MODE SELECTION")

Press the Ⓖ button.

Remote controller main/sub setting ("CONTROLLER MAIN/SUB") — See [4]–3. (1)
Press the Ⓖ button.
Use of clock setting ("CLOCK") — See [4]–3. (2)
Timer function setting ("WEEKLY TIMER") — See [4]–3. (3)
Contact number setting for error situation ("CALL.") — See [4]–3. (4)
Temp off set setting ("TEMP OFF SET FUNCTION") — See [4]–3. (5)

Press the Ⓓ button.

Press the Ⓔ button.

Display change ("DISP MODE SETTING")

Press the Ⓖ button.

Temperature display °C/°F setting ("TEMP MODE °C/°F") — See [4]–4. (1)
Press the Ⓖ button.
Water temperature display setting ("WATER TEMP DISP SELECT") — See [4]–4. (2)

Press the Ⓓ button.

Dot display
The language that is selected in CHANGE LANGUAGE mode appears on this display. English is set in this manual.

MITSUBISHI ELECTRIC

FUNCTION SELECTION

PAR-W21MAA

Ⓕ Ⓔ Ⓖ Ⓒ Ⓓ Ⓗ Ⓘ Ⓐ Ⓑ

– 19 –
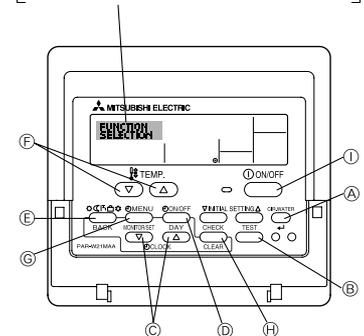
**[Detailed setting]**

## [4]–1. CHANGE LANGUAGE setting

The language that appears on the dot display can be selected.
- Press the [ ⏱ MENU] button to change the language.
① English (GB), ② German (D), ③ Spanish (E), ④ Russian (RU), ⑤ Italian (I),
⑥ French (F), ⑦ Swedish

## [4]–2. Function limit

### (1) Operation function limit setting (operation lock)
- To switch the setting, press the [ ⏱ ON/OFF] button.
  ① no1 : Operation lock setting is made on all buttons other than the
    [ ⏻ 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
    necessary to press buttons (Press and hold down the [CIR.WATER] and
    [ ⏻ ON/OFF] buttons at the same time for two seconds.) on the normal
    screen after the above setting is made.

### (2) Operation mode skip setting
After setting is changed, the operation mode can not be changed within the
changed range.
- To switch the following settings, press the [ ⏱ ON/OFF] button.
  ① Heating mode          : Sets the use or non-use of the Heating mode.
  ② Heating ECO mode      : Sets the use or non-use of the Heating ECO
                            mode.
  ③ Hot Water mode        : Sets the use or non-use of the Hot Water
                            mode.
  ④ Anti-freeze mode      : Sets the use or non-use of the Anti-freeze
                            mode.
  ⑤ Cooling mode          : Sets the use or non-use of the Cooling mode.
  ⑥ OFF (Initial setting value): Operation mode skip is not executed.
  * When the setting, other than OFF, is made, the skip settings of the Heating,
    Heating ECO, Hot Water, Anti-freeze, and Cooling modes are executed at
    the same time.
  * A mode that is not available on the unit to connect cannot be used even if
    the setting is "AVAILABLE."

### (3) Temperature range limit setting
After this setting is made, the temperature can be changed within the set
range.
- To switch the setting, press the [ ⏱ ON/OFF] button.
  ① LIMIT TEMP HEATING MODE:
    The temperature range can be changed on heating mode.
    This mode cannot be used with FLOW TEMP. CONTROLLER.
  ② LIMIT TEMP HOT WATER MODE:
    The temperature range can be changed on hot water mode.
    Heating mode can be used with FLOW TEMP. CONTROLLER.
  ③ LIMIT TEMP ANTI-FREEZE MODE:
    The temperature range can be changed on anti-freeze mode.
  ④ LIMIT TEMP COOLING MODE:
    The temperature range can be changed on cooling mode.
  ⑤ OFF (Initial setting) : The temperature range limit is not active.
  * When the setting, other than OFF, is made, the temperature range limit
    setting on hot water, anti-freeze and cooling mode is made at the same
    time. However, the range cannot be limited when the set temperature range
    has not changed.
- To increase or decrease the temperature, press the [ 🌡 TEMP. ( ▽ ) or
  ( △ )] button.
- To switch the upper limit setting and the lower limit setting, press the
  [INITIAL SETTING ( ▽ )] button. The selected setting will flash and the
  temperature can be set.
- Settable range
  Heating/Hot Water mode: Lower limit: 20 ~ 90°C   (68 ~ 194°F)
                          Upper limit: 90 ~ 20°C  (194 ~  68°F)
  Anti-freeze mode       : Lower limit:  5 ~ 45°C   (41 ~ 113°F)
                          Upper limit: 45 ~  5°C  (113 ~  41°F)
  Cooling mode           : Lower limit:  5 ~ 30°C   (41 ~  87°F)
                          Upper limit: 30 ~  5°C   (87 ~  41°F)
  * The settable range varies depending on the unit to connect.

## [4]–3. Mode selection setting

(1) Remote controller main/sub setting
- To switch the setting, press the [ ⏱ ON/OFF] button Ⓓ.
  ① Main : The controller will be the main controller.
  ② Sub : The controller will be the sub controller.

(2) Use of clock setting
- To switch the setting, press the [ ⏱ ON/OFF] button Ⓓ.
  ① ON : The clock function can be used.
  ② OFF : The clock function cannot be used.

(3) Timer function setting
- To switch the setting, press the [ ⏱ ON/OFF] button Ⓓ (Choose one of the followings.).
  ① WEEKLY TIMER (Initial setting value): The weekly timer can be used.
  ② 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
- To switch the setting, press the [ ⏱ ON/OFF] button Ⓓ.
  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.
     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 flashing cursor to set numbers. Press the [ 🌡 TEMP. ( ▽ ) or ( △ )] button Ⓕ to move the cursor to the right (left). Press the [ ⏱ CLOCK ( ▽ ) or ( △ )] button Ⓒ to set the numbers.

(5) Temp off set setting
- To switch the following settings, press the [ ⏱ ON/OFF] button Ⓓ.
  ① ON : The setback amount setting is displayed under the water temperature initial setting mode.
  ② OFF : The setback amount setting is not displayed under the water temperature initial setting mode.

## [4]–4. Display change setting

(1) Temperature display °C/°F setting
- To switch the setting, press the [ ⏱ ON/OFF] button Ⓓ.
  ① °C : The temperature unit °C is used.
  ② °F : The temperature unit °F is used.

(2) Water temperature display setting
- To switch the setting, press the [ ⏱ ON/OFF] button Ⓓ.
  ① ON : The water temperature is displayed.
  ② OFF : The water temperature is not displayed.

## 7 | Initial Setting
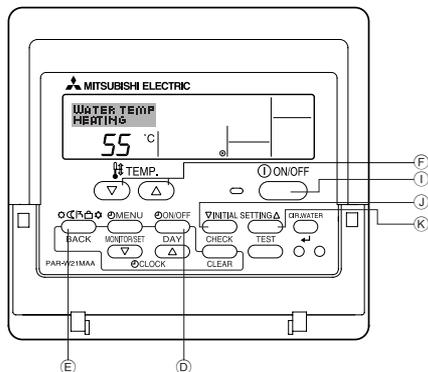


The initial operation mode can be set. Change the setting when needed.

(1) Water temperature initial setting mode
① Stop the unit by pressing the [ ① ON/OFF] ① button.
② To enter the water temperature initial setting, press and hold down the [INITIAL SETTING ( ▽ )] ① button for three seconds or longer. (Any of 1. to 8. will be displayed.)
* Wait a while because the water temperature initial setting takes approximately 30 seconds to display after the [INITIAL SETTING ( ▽ )] ① button is pressed.
* Depending on the model of the unit to connect, the water temperature initial setting may not be possible. In such case, the screen transitions to the unit stop screen after the display of the error.
③ To select a water temperature initial setting from 1. to 8., press the [Mode (Return)] ⑤ button.

1. Water temperature initial setting
   Water Temp Heating
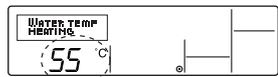


1 Water temperature display

2. Water temperature initial setting
   Water Temp Heating ECO No.1
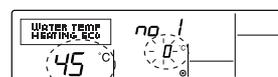


2 Water temperature display        3 Outside air temperature display

Outside air temperature setting of Heating ECO No.2 must be higher than that of Heating ECO No.1.

3. Water temperature initial setting
   Water Temp Heating ECO No.2
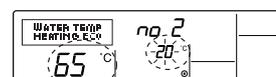


4 Water temperature display        5 Outside air temperature display

Outside air temperature setting of Heating ECO No.2 must be higher than that of Heating ECO No.1.

4. Water temperature initial setting
   Water Temp Hot Water
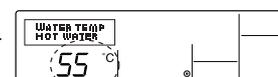


6 Water temperature display

8. Water temperature initial setting
   Temp Offset Cooling
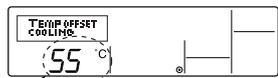


10 Offset amount display

7. Water temperature initial setting
   Temp Offset Heating
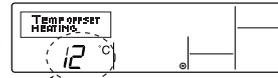


9 Offset amount display

6. Water temperature initial setting
   Water Temp Cooling
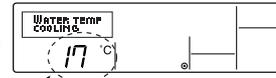


8 Water temperature display

5. Water temperature initial setting
   Water Temp Anti-freeze
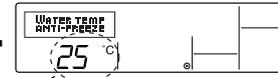


7 Water temperature display

*The available settings differ depending on the model of the unit to connect.

| | | |
|---|---|---|
| 1. Water Temp Heating | : | Sets the water temperature to ①°C when starting operation in Heating mode. |
| 2. Water Temp Heating ECO No.1 | : | Sets the water temperature to ②°C for an outside air temperature of ③°C when operating in Heating ECO mode. |
| 3. Water Temp Heating ECO No.2 | : | Sets the water temperature to ④°C for an outside air temperature of ⑤°C when operating in Heating ECO mode. |
| 4. Water Temp Hot Water | : | Sets the water temperature to ⑥°C when starting operation in Hot Water mode. |
| 5. Water Temp Anti-freeze | : | Sets the water temperature to ⑦°C when starting operation in Anti-freeze mode. |
| 6. Water Temp Cooling | : | Sets the water temperature to ⑧°C when starting operation in Cooling mode. |
| 7. Temp Offset Heating | : | Sets the offset amount of the Heating system to ⑨°C. |
| 8. Temp Offset Cooling | : | Sets the offset amount of the Cooling system to ⑩°C. |

④ Switch the outside air temperature or water temperature setting by pressing the [ ⏻ ON/OFF] Ⓓ button.

⑤ To set the water temperature, outside air temperature, or offset amount, press the [ 🌡 TEMP. ( ▽ ) or ( △ )] Ⓕ (setting temperature) button.
The adjustment range is as shown below.

| | | |
|---|---|---|
| Water Temp Hot Water (Heating, Heating ECO) | : | 20°C ~ 90°C (68°F ~ 194°F)    *1 |
| Water Temp Anti-freeze | : | 5°C ~ 45°C (41°F ~ 113°F)    *1 |
| Water Temp Cooling | : | 5°C ~ 30°C (41°F ~ 87°F)    *1 |
| Outside air temperature | : | -20°C ~ 40°C (-4°F ~ 104°F) |
| Temp Offset Heating (Cooling) | : | -15°C ~ 15°C (5°F ~ 59°F) |

*1  The adjustment range differs depending on the model of the unit to connect.

⑥ To cancel the water temperature initial setting, press the [INITIAL SETTING ( ▽ )] Ⓙ button for three seconds or longer.
Alternatively, press the [ ⏻ ON/OFF] Ⓘ button.

(2) Interface (I/F) Option Setting mode

The upper and lower limit values for the "water temperature switching by analog input (4-20 mA/0-10 V)" used by the interface (I/F) can be set. Change the setting when needed.

① Stop the unit by pressing the [ ① ON/OFF] Ⓘ button.
② To enter the interface (I/F) option setting, press the [INITIAL SETTING ( △ )] Ⓚ button for three seconds or longer. (1. or 2. will be displayed.)
\* Depending on the model of the unit to connect, the "Interface (I/F) Option Setting mode" may not be available. In such case, the screen transitions to the unit stop screen after the display of the error.
③ To select an interface (I/F) option setting 1. or 2., press the [Mode (Return)] Ⓔ button.

1. Interface (I/F) option setting
   Heating system

2. Interface (I/F) option setting
   Cooling system
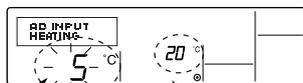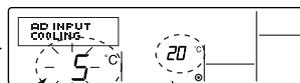


1 Lower limit value display    2 Upper limit value display    3 Lower limit value display    4 Upper limit value display

\* The available settings differ depending on the model of the unit to connect.

| Ⓐ Heating system | Lower limit value setting: | Defines the "4 mA/0 V" input as the "water temperature 1°C" of the Heating, Hot Water, and Anti-freeze modes. |
| --- | --- | --- |
| | Upper limit value setting: | Defines the "20 mA/10 V" input as the "water temperature 2°C" of the Heating, Hot Water, and Anti-freeze modes. |
| Ⓑ Cooling system | Lower limit value setting: | Defines the "4 mA/0 V" input as the "water temperature 3°C" of the of the Cooling mode. |
| | Upper limit value setting: | Defines the "20 mA/10 V" input as the "water temperature 4°C" of the Cooling mode. |

④ To switch the upper/lower limit value display, press the [ ⏻ ON/OFF] Ⓓ button.

⑤ To set the upper/lower limit value, press the [ TEMP. ( ▽ ) or ( △ )] Ⓕ (setting temperature) button.
• The adjustment range for both the upper and lower limit values is -20°C (-4°F) to 90°C (194°F).

⑥ To cancel the interface (I/F) option setting, press the [INITIAL SETTING ( △ )] Ⓚ button for three seconds or longer.
Alternatively, press the [ ① ON/OFF] Ⓘ button.

# 8  Specifications

| Item | Details |
|---|---|
| Dimensions (H × W × D): | 120 × 130 × 19 (mm) / 4-$3/4$ × 5-$1/8$ × $3/4$ (in) |
| Weight | 0.2 kg ($7/16$ lb) |
| Power Source | 10 to 13V DC (Supplied from unit) |
| Power Consumption | 0.3 W |
| Ambient Usage Environment | 0 to 40°C (32 to 104°F), 30% to 90% relative humidity |
| Composition | PS |

This product is designed and intended for use in the residential, commercial and light-industrial environment.

The product at hand is • Low Voltage Directive 2006/95/EC
based on the following • Electromagnetic Compatibility Directive
EU regulations.:    2004/108/EC

Please be sure to put the contact address/telephone number on this manual before handing it to the customer.

## MITSUBISHI ELECTRIC CORPORATION

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