## Accessories

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</table>

Due to continuing improvement, above specification may be subject to change without notice.
## 1. CONTROLS

| Series Name | Outlet | | | | | | | |
|-------------|--------|--------|--------|--------|--------|--------|--------|
| MSZ-F series | | | | | | | | |
| MSZ-FH 06NA | 09NA | 12NA | 15NA | 18NA2 | | | | |
| MSZ-FE 09NA | 12NA | | | | | | | |
| MSZ-E series | | | | | | | | |
| MSZ-EF 09NAW(B)(S) | 12NAW(B)(S) | 15NAW(B)(S) | 18NAW(B)(S) | | | | | |
| MSZ-G series | | | | | | | | |
| MSZ-GL 06NA | 09NA | 12NA | 15NA | 18NA | 24NA | | | |
| MSZ-D series | | | | | | | | |
| MSZ-D 30NA | 36NA | | | | | | | |
| MSY-G series | | | | | | | | |
| MSY-GL 09NA | 12NA | 15NA | 18NA | 24NA | | | | |
| MSY-D series | | | | | | | | |
| MSY-D 30NA | 36NA | | | | | | | |
| Floor standing | | | | | | | | |
| MFZ-KJ 09NA | ● | ● | | | | | | |
| 12NA | ● | ● | | | | | | |
| 15NA | ● | ● | | | | | | |
| 18NA | ● | ● | | | | | | |
| 4-way cassette | | | | | | | | |
| SLZ-KA 09NA | ● | ● | ● | ● | ● | | | |
| 12NA | ● | ● | ● | ● | ● | | | |
| 15NA | ● | ● | ● | ● | ● | | | |
| Ducted | | | | | | | | |
| SEZ-KD 09NA4 | ● | ● | ● | ● | ● | | | |
| 12NA4 | ● | ● | ● | ● | ● | | | |
| 15NA4 | ● | ● | ● | ● | ● | | | |
| 18NA4 | ● | ● | ● | ● | ● | | | |
| Multi Position | | | | | | | | |
| MVZ-A 09A4 | 12A4 | 15A4 | 18A4 | 24A4 | | | | |

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

1-1. System Control

### MAJOR SYSTEM CONTROL

<table>
<thead>
<tr>
<th>Indoor Unit</th>
<th>M Series Indoor Unit</th>
<th>S Series</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Outdoor Unit</td>
<td>M Series and MXZ-B Series Outdoor</td>
<td>S Series and MXZ-B Series Outdoor</td>
<td>P Series Outdoor</td>
</tr>
</tbody>
</table>

#### PAC-YT53CRAU Control

- **Details**
  - Wired remote controller can be connected to indoor unit
  - Standard equipment (for indoor units compatible with wired remote controllers)

- **Major Optional Parts Required**
  - MAC-333IF-E (Interface)
  - PAC-YT53CRAU (Wired remote controller)
  - PAC-SC51KUA (Power supply unit)

#### System Group Control

- **Details**
  - One remote controller can control plural air conditioners with the same settings simultaneously.
  - One remote controller can control up to 16 refrigerant systems. (When connected to a MXZ unit, MAC-333IF-E is counted as one system.)
  - Up to two remote controller can be connected.

- **Major Optional Parts Required**
  - MAC-333IF-E (Interface)
  - PAC-YT53CRAU (Wired remote controller)
  - Relay box (to be purchased locally)

#### M-NET Connections

- **Details**
  - Group of air conditioners can be controlled by MELANS system controller (M-NET).

- **Major Optional Parts Required**
  - MAC-333IF-E (M-NET Interface)
  - MELANS System controller
  - PAC-SC51KUA (power supply unit)
  - PAC-SF83MA-E or PAC-SJ19MA-E (M-NET converter)
  - MELANS System controller
  - PAC-SC51KUA (power supply unit)

---

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

1-1. System Control, cont.

### MAJOR SYSTEM CONTROL

<table>
<thead>
<tr>
<th>Indoor Unit</th>
<th>M Series Indoor Unit</th>
<th>S Series</th>
<th>P Series Indoor Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor Unit</td>
<td>M Series and MXZ-C series outdoor</td>
<td>S Series and MXZ-C series outdoor</td>
<td>P Series and MXZ series outdoor</td>
</tr>
</tbody>
</table>

#### PAC-YT53CRAU Control

**Details**
- Wired remote controller can be connected to indoor unit

**Major Optional Parts Required**
- MAC-333IF-E (Interface)
- PAC-YT53CRAU (Wired remote controller)

#### System Group Control

**Details**
- One remote controller can control plural air conditioners with the same settings simultaneously.
- One remote controller can control up to 16 refrigerant systems. (When connected to a MXZ unit, MAC-333IF-E is counted as one system.)
- Up to two remote controller can be connected.
- When connected to the branch box or PAC-IF01MNT-E, cannot use group control.

**Major Optional Parts Required**
- MAC-333IF-E (Interface)
- PAC-YT53CRAU (Wired remote controller)

#### M-NET Connections

**Details**
- Group of air conditioners can be controlled by MELANS system controller (M-NET).
- When connected to the branch box or PAC-IF01MNT-E, cannot group.

**Major Optional Parts Required**
- MAC-333IF-E (M-NET Interface)
- MELANS System controller
- PAC-SC51KUA (power supply unit)

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

1-1. System Control

- **OTHERS**

**For M Series Indoor Units (New A-control Models Only)**

<table>
<thead>
<tr>
<th>System Examples</th>
<th>Connection Details</th>
<th>Control Details</th>
<th>Major Optional Parts Required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. **Remote On/Off Operation**
   - Air conditioner can be started/ stopped remotely. *Remote display panel* and *remote display unit* can be used in combination.
   - Remote display panel (to be purchased locally)
   - Remote display unit (to be purchased locally)

2. **Remote Display of Operation Status**
   - The On/Off status of air conditioners can be confirmed remotely. *Remote display panel* and *remote display unit* can be used in combination.
   - Remote display panel (to be purchased locally)
   - Remote display unit (to be purchased locally)

**For M Series Indoor Units (FH series Only)**

<table>
<thead>
<tr>
<th>System Examples</th>
<th>Connection Details</th>
<th>Control Details</th>
<th>Major Optional Parts Required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. **Interface which outputs the ON/OFF signals from the air conditioner to the back-up heater.**
   - (This and MAC333IF-E can be used in combination)
   - Remote display panel 2 (Connector Cable)
   - Relay box (to be purchased locally)
   - Lead wire, etc. (to be purchased locally)

**For P Series and S Series Indoor Units**

<table>
<thead>
<tr>
<th>System Examples</th>
<th>Details</th>
<th>Major Optional Parts Required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A. **2-remote Controller Control**
   - With two remote controllers, control can be performed locally and remotely from two locations.
   - **PAC-YT53CRAU**
   - **Remote Display Panel**
   - **Remote Display Unit**

B. **Operation Control by Level Signal**
   - Air conditioner can be started/ stopped remotely. In addition, On/Off operation by local remote controller can be prohibited/ permitted.
   - **PAR-F103MA-E**
   - **PAR-F101MA-E**
   - **PAR-F102MA-E**

C. **Operation Control by Pulse Signal**
   - **Remote Display Panel**
   - **Remote Display Unit**
   - **Remote Operation Panel**

D. **Remote Display of Operating Status**
   - Operating status can be displayed at a remote location.
   - **Remote Display Panel**
   - **Remote Display Unit**

Due to continuing improvement, above specification may be subject to change without notice.
Advanced MA remote controller with the large size dot liquid crystal display. Multi-language display and weekly timer function are available.

**Applicable Models**

- MSZ-FH06/09/12/15NA *
- MSZ-FH18NA2 *
- MSZ-FE09/12NA *
- MSZ-EF09/12/15/18NAW(B)(S) *
- MSZ-GL06/09/12/15/18/24NA *
- MSZ-D30/36NA *
- MSY-GL09/12/15/18/24NA *
- MSY-D30/36NA *
- SLZ-KA09/12/15NA
- SEZ-KD09/12/15/18NA4
- MVZ-09/12/15/18/24AA4

* MAC-333IF-E required with Weekly Timer Function PAR-32MAA

**Specifications**

<table>
<thead>
<tr>
<th>External colors</th>
<th>Cover</th>
<th>Clear white (Munsell 1.0Y 9.2/0.2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCD peripheral area</td>
<td>Medium gray</td>
<td></td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm [in.]

- Rear view: 46 [1-13/16] x 83.5 [3-9/32]

Due to continuing improvement, above specification may be subject to change without notice.
1. System Requirements

**WARNING** The CD-ROM that is supplied with the unit can only be played on a CD-drive or a DVD-drive. Do not attempt to play this CD-ROM on an audio CD player as this may damage your ears and/or speakers.

Your computer must meet the following requirements to run Manual Navigation Software.

- **[PC]** PC/AT compatible
- **[CPU]** Core2 Duo 1.66 GHz or faster (Core2 Duo 1.86 GHz or faster recommended)
Pentium D 1.7 GHz or faster (Pentium D 3.0 GHz or faster recommended)
Pentium M 1.7 GHz or faster (Pentium M 2.0 GHz or faster recommended)
Pentium 4 2.4 GHz or faster (Pentium 4 2.8 GHz or faster recommended)
* Core2 Duo or faster processor is required to run Manual Navigation Software on Windows Vista or later.
- **[RAM]** Windows Vista or later: 1 GB minimum (2 GB or more recommended)
Windows XP: 512 MB minimum (1 GB or more recommended)
- **[HDD space]** 1 GB minimum (available space)
  * Windows Vista or later: Available space in the drive that has the Document folder
  * Windows XP: Available space in the drive that has the My Document folder
- **[Resolution]** SVGA 800 × 600 or greater
- **[OS]** Windows8/Pro/Enterprise (Pro recommended)
Windows7 Ultimate/Enterprise/Professional/Home Premium Service Pack1 (Professional recommended)
Windows Vista Ultimate/Business/Home Basic Service Pack1 (Business version recommended)
Windows XP Professional/Home Edition Service Pack2 or Service Pack3 (Professional version recommended)
- **[Required software]**
  * Windows8: Adobe Reader 11.0.2 or later (Windows Reader, installed by default in Windows8, cannot be used.)
  * Windows7: Adobe Reader 10.1.0 or later
  * Windows XP and Windows Vista: Adobe Reader 8.1.3 or later
  * Software to view PDF files

"Windows", "Windows XP", "Windows Vista", "Windows7" and "Windows8" are registered trade marks of Microsoft Corporation.
"Adobe Reader" and "Adobe Acrobat" are registered trademarks of Adobe Systems Incorporated.
"Core2 Duo" and "Pentium" are registered trademarks of Intel Corporation.

2. Component names and supplied parts

The following parts are included in the box.

<table>
<thead>
<tr>
<th>Parts name</th>
<th>Qty.</th>
<th>Appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote controller (front cover)</td>
<td>1</td>
<td>Right figure *1</td>
</tr>
<tr>
<td>Remote controller (top case)</td>
<td>1</td>
<td>Right figure *2</td>
</tr>
<tr>
<td>Remote controller (bottom case)</td>
<td>1</td>
<td>Right figure *3</td>
</tr>
<tr>
<td>Roundhead cross slot screws M4×30</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Wood screw 4.1×16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(for direct wall installation)</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Installation Manual (this manual)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Simple Operation Manual</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>CD-ROM (Instruction Book and Installation Manual)</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

*4 The front cover (*1) is already installed on the top case (*2) at factory shipment.
*5 Remote controller cable is not included.

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


3. Field-supplied parts/Required tools

(1) Field-supplied parts

The following parts are field-supplied parts.

<table>
<thead>
<tr>
<th>Parts name</th>
<th>Qty.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double switch box</td>
<td>1</td>
<td>Not required for direct wall installation</td>
</tr>
<tr>
<td>Thin metal conduit</td>
<td></td>
<td>Necessary</td>
</tr>
<tr>
<td>Lock nut and bushing</td>
<td></td>
<td>Necessary</td>
</tr>
<tr>
<td>Cable cover</td>
<td></td>
<td>Required for routing remote controller cable along a wall</td>
</tr>
<tr>
<td>Putty</td>
<td></td>
<td>Reasonable</td>
</tr>
<tr>
<td>Molly anchor</td>
<td></td>
<td>Necessary</td>
</tr>
<tr>
<td>Remote controller cable</td>
<td></td>
<td>Necessary</td>
</tr>
<tr>
<td>(Use a 0.3 mm² (AWG22) 2-core sheathed cable.)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(2) Field-supplied tools

- Flat-tip screwdriver (Width: 4-7 mm (5/32-9/32 inch)) or Plate service tool (Part No.R61008235)
- Nipper
- Miscellaneous tools

4. Selecting an installation site

This remote controller is for the wall installation. It can be installed either in the switch box or directly on the wall. When performing direct wall installation, wires can be thread through either back or top of the remote controller.

(1) Selecting an installation site

Install the remote controller (switch box) on the site where the following conditions are met.

(a) For connection to the indoor unit with an Auto descending panel, a place where people can check the Auto descending panel operation of the indoor unit while they are operating the remote controller (Refer to the indoor unit Instructions Book for how to operate Auto descending panel.)
(b) A flat surface
(c) A place where the remote controller can measure the accurate indoor temperature

- Sensors to monitor indoor temperature are on the indoor unit and on the remote controller. When the room temperature is monitored with the sensor on the remote controller, the main remote controller monitors the room temperature. When using the sensor on the remote controller, follow the instructions below.
  - To monitor the accurate indoor temperature, install the remote controller away from direct sunlight, heat sources, and the supply air outlet of the air conditioner.
  - Install the remote controller in a location that allows the sensor to measure the representative room temperature.
  - Install the remote controller where no wires are routed around the temperature sensor on the controller.
    (If wires are routed, the sensor cannot measure accurate indoor temperature.)

Important

- Do not install the controller in a place where the difference between the remote controller surface temperature and the actual room temperature will be great.
  If the temperature difference is too high, room temperature may not be adequately controlled.

- To avoid deformation and malfunction, do not install the remote controller in direct sunlight or where the ambient temperature may exceed 40ºC (104ºF) or drop below 0ºC (32ºF).

- To reduce the risk of shorting, current leakage, electric shock, malfunctions, smoke, or fire, do not install the controller in a place exposed to water or in a condensing environment.

- To reduce the risk of malfunctions and damage to the controller, avoid installing the remote controller on an electrically conductive surface, such as an unpainted metal sheet.

(2) Installation space

Leave a space around the remote controller as shown in the figure at right, regardless of whether the controller is installed in the switch box or directly on the wall. Removing the remote controller will not be easy with insufficient space.

Also, leave an operating space in front of the remote controller.

Minimum required space around the remote controller

External dimensions of remote controller

unit: mm(in)
1. CONTROLS


5. Installation/Wiring work

(1) Installation work
Controller can be installed either in the switch box or directly on the wall. Perform the installation properly according to the method.

① Drill a hole in the wall.
   ■ Installation using a switch box
      • Drill a hole in the wall, and install the switch box on the wall.
      • Connect the switch box to the conduit tube.
   ■ Direct wall installation
      • Drill a hole in the wall, and thread the cable through it.

② Seal the cable access hole with putty.
   ■ Installation using a switch box
      • Seal the remote controller cable access hole at the connection of switch box and conduit tube with putty.

To reduce the risk of electric shock, malfunctions, or fire, seal the gap between the cables and cable access holes with putty.

③ Prepare the bottom case of the remote controller.

④ Connect the remote controller cable to the terminal block on the bottom case.
   Peel off 6 mm of the remote controller cable sheath as shown in the figure below, and thread the cable from behind the bottom case. Thread the cable to the front of the bottom case so that the peeled part of the cable cannot be seen behind the bottom case. Connect the remote controller cable to the terminal block on the bottom case.

To reduce the risk of electric shock, shorting, or malfunctions, keep wire pieces and sheath shavings out of the terminal block.

Important
Do not use solderless terminals to connect cables to the terminal block. Solderless terminals may come in contact with the circuit board and cause malfunctions or damage the controller cover.

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


6 Install the bottom case.
   ■ Installation using a switch box
     • Secure at least two corners of the switch box with screws.
   ■ Direct wall installation
     • Thread the cable through the groove.
     • Secure at least two corners of the remote controller with screws.
     • Be sure to secure top-left and bottom-right corners of the remote controller (viewed from the front) to prevent it from lifting.
       (Use molly anchor etc.)

   ■ Installation using a switch box
   ■ Direct wall installation

   • Secure at least two corners of the switch box with screws.

   • Thread the cable through the groove.

    Seal the cable access hole with putty.

7 Cut out the cable access hole.
   ■ Direct wall installation (when running the cable along the wall)
     • Insert a flat-tip screwdriver with a blade width of 4–7 mm (5/32–9/32 inch) or a Plate service tool into either of the two latches at the bottom of the remote controller, and move it in the direction of the arrow as shown in the figure at right.
     • The top case will come loose from the front cover. Pull the top case toward you to remove it.
     • Cut out the thin-wall part on the front cover (indicated with the shaded area in the right figure) with a nipper.
       (This cutout hole will be used to thread the remote controller cable through, after the cable is threaded through the groove on the back of the bottom case.)
     • Place the top case onto the front cover.

   ■ Installation using a switch box

   • Secure at least two corners of the switch box with screws.

   • Thread the cable through the groove.

   • Seal the cable access hole with putty.

   Refer to 2.

8 Route the wire to the top case.
   Connect the connector on the bottom case to the connector on the top case.

Important

To avoid damage to the controller, do not overtighten the screws.

To prevent damage to the circuit board, remove the front cover from the top case before cutting out a cable access hole.

Notice

To avoid damage to the controller, do not make holes on the controller cover.

To prevent damage to the circuit board, remove the protective film or the circuit board from the casing.

Important

To prevent cable breakage and malfunctions, do not hang the top controller casing hang by the cable.

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


⑧ Route the wire to the top case.

Important
Hold the cables in place with clamps to prevent undue force from being applied to the terminal block and causing cable breakage.

⑨ Install the front cover and top case on the bottom case.
Two mounting tabs are at the top of the top case. (A cover is already installed on the case at the time of factory shipment.) Hook those two tabs onto the bottom case, and click the top case into place. Check that the case is securely installed and not lifted.

Important
When attaching the cover and the top casing to the bottom casing, push it until it they click into place. If they are not properly locked into place, they may fall, causing personal injury, controller damage, or malfunctions.

Direct wall installation (when running the cable along the wall)
- Thread the cable through the access hole at the top of the remote controller.
- Seal the cut-out part of the cover with putty.
- Use a cable cover.

Installation is complete.
Follow the instructions below when uninstalling them.

• Uninstalling the front cover and top case
  ① Uninstalling the front cover
  Insert a flat-tip screwdriver or a Plate service tool into either of the two latches at the bottom of the remote controller, and move it in the direction of the arrow as shown in the figure at right. Note that the top case may also be removed if the driver or the tool is inserted deeply.

  ② Uninstalling the top case
  Insert a flat-tip screwdriver or a Plate service tool into either of the two latches at the bottom of the remote controller, and move it in the direction of the arrow as shown in the figure at right.

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


Important

Use a flat-head screwdriver with a blade width of 4-7 mm (5/32-9/32 inch). The use of a screwdriver with a narrower or wider blade tip may damage the controller casing.

To prevent damage to the controller casing, do not force the driver to turn with its tip inserted in the slot.

Refer to the section on initial setting in this Manual for remote controller main/sub setting.

Refer to either of the following manuals for temperature sensor setting: indoor unit Installation Manual for City Multi; this manual for Mr. Slim.

At the time of factory shipment, protective sheet is on the operation interface of the front cover. Peel off the protective sheet on the operation interface prior to use.

Important

When attaching the cover and the top casing to the bottom casing, push it until it they click into place. If they are not properly locked into place, they may fall, causing personal injury, controller damage, or malfunctions.

3. Installing the cover and top case

Two mounting tabs are at the top of the top case. Hook those two tabs onto the bottom case, and click the top case into place. Install the cover on the top case in the same way as with the top case. Check that the top case is securely installed and not lifted.

Important

When attaching the cover and the top casing to the bottom casing, push it until they click into place. If they are not properly locked into place, they may fall, causing personal injury, controller damage, or malfunctions.

6. Important

Discrepancy between the indoor temperature measured at the wall and the actual indoor temperature may occur.

If the following conditions are met, the use of the temperature sensor on the indoor unit is recommended.
- Supply air does not reach to the wall easily where the remote controller is installed due to improper airflow distribution.
- There is a great discrepancy between the wall temperature and the actual indoor temperature.
- The back side of the wall is directly exposed to the outside air.

Note: When temperature changes rapidly, the temperature may not be detected accurately.

Using a flat-head screwdriver with a blade width of 4-7 mm (5/32-9/32 inch). The use of a screwdriver with a narrower or wider blade tip may damage the controller casing.

To prevent damage to the control board, do not insert the driver strongly into the slot.

To prevent damage to the controller casing, do not force the driver to turn with its tip inserted in the slot.

Important

No lifting

Wall

Top case

Front cover

Top case
7. Remote controller button functions

(1) **ON/OFF button**
Use to turn ON/OFF the indoor unit.

(2) **Function buttons**
Use to select the operation mode or to set the temperature and fan speed on the Main display.
Use to select items on other screens.

(3) **MENU button**
Use to bring up the Main menu.

(4) **RETURN button**
Use to return to the previous screen.

(5) **SELECT button**
Use to jump to the setting screen or to save the settings.

(6) **Operation indicator**
Stays lit during normal operation. Blinks during startup and when an error occurs.

(7) **Backlit LCD**
Dot display. When the backlight is off, pressing any button turns the backlight on and it will stay lit for a certain period of time depending on the screen. Performing any button operation keeps the backlight on.

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

Pressing the MENU button will bring up the Main menu as shown below. (Refer to section 9.2 "Main display" for details.)

<table>
<thead>
<tr>
<th>Page</th>
<th>1/3 Vane-Louver-Vent. (Lossnay)</th>
<th>High power</th>
<th>Timer</th>
<th>Weekly timer</th>
<th>OU silent mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/3</td>
<td>Restriction</td>
<td>Energy saving</td>
<td>Night setback</td>
<td>Filter information</td>
<td>Error information</td>
</tr>
<tr>
<td>3/3</td>
<td>Maintenance</td>
<td>Initial setting</td>
<td>Service</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1 Refer to the Instructions Book in the CD-ROM for details.
*2 Explained in this manual.
*3 If no buttons are pressed for 10 minutes on the initial setting screens, or 2 hours on the service screens (10 minutes on some screens), the screen will automatically return to the Main display. Any settings that have not been saved will be lost.

The available items on the menu depend on the connected indoor unit model. For items not described in the manuals that are enclosed with the MA remote controller, refer to the manuals that came with the air conditioning units.

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


8. Turning on the power
Make sure that the MA remote controller is properly installed according to the instructions in the Installation Manual and that the indoor and outdoor unit installation has been completed before turning on the power.

(1) When the power is turned on, the following screen will appear.

![Please Wait](image)

Normal start up (indicating the percentage of process completion)

Notes
- When the power is on for the first time, the Language selection screen will be displayed. Refer to section 11 (8). Select a desired language. The system will not start-up without language selection.
- Some models of City Multi cannot have more than one remote controller connected. Refer to relevant documents (e.g., catalogs) for usage compatibility.

(2) Main display
After the successful startup, the Main display will appear. The Main display can be displayed in two different modes: "Full" and "Basic." Refer to section 11 "Initial settings" for how to select the display mode. (The factory setting is "Full.")

![Main display in Full mode](image)

Main display in the Full mode (while the unit is not in operation)

![Main display in Full mode](image)

Main display in the Full mode (while the unit is in operation)

9. Test run <Maintenance password is required.>

(1) Read the section about Test run in the indoor unit Installation Manual before performing a test run.
(2) At the Main display, press the MENU button and select Service>Test run>Test run.
(3) Press the ON/OFF button to cancel the test run if necessary.
(4) Refer to the indoor unit Installation Manual for the detailed information about test run and for how to handle the errors that occur during a test run.

Note: Refer to section 12 "Service menu" for information about the maintenance password.

10. Initial settings (Remote controller settings)
<Administrator password is required.>

From the Main display, select Main menu>Initial setting, and make the remote controller settings on the screen that appears.

![Initial setting menu](image)

Initial setting menu (1/2)
- Main/Sub
- Clock
- Main display
- Contrast
- Display details
- Clock
- Temperature
- Room temp.
- Auto mode

Initial setting menu (2/2)
- Auto mode
- Administrator password
- Language selection

Note: The initial administrator password is "0000." Refer to section (7) "Administrator password setting" for how to change the password.

(1) Main/Sub setting
When connecting two remote controllers, one of them needs to be designated as a sub controller.

[Button operation]

1. When the F3 or F4 button is pressed, the currently selected setting will appear highlighted. Select "Sub" and press the SELECT button to save the change.
2. Press the MENU button to return to the Main menu screen. (This button always brings up the Main menu screen.)

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


(2) Clock setting
[Button operation]
1. Move the cursor with the F1 or F2 button to the desired item.
2. Change the date and time with the F3 or F4 button, and press the SELECT button to save the change. The change will be reflected on the clock display on the Main display.

Note: Clock setting is necessary for time display, weekly timer, timer setting and error history. Make sure to perform clock setting when the unit is used for the first time or has not used for a long time.

(3) Main display setting
Use the F3 or F4 button to select the display mode "Full" or "Basic." (The factory setting is "Full.")

(4) Display contrast
[Button operation]
Adjust LCD contrast with the F3 or F4 button. The current level is indicated with a triangle.

Note: Adjust the contrast to improve viewing in different lighting conditions or installation locations. This setting can not improve viewing from all directions.

(5) Remote controller display details setting
Make the settings for the remote-controller-related items as necessary. Press the SELECT button to save the changes.

[1] Clock display
[Button operation]
· Select "Clock" from the remote controller display details setting screen, and press the F4 button (Change) to bring up the clock display setting screen.
· Use the F1 through F4 buttons to select "Yes" (display) or "No" (non-display) and its format for the Main display.
· Save the settings with the SELECT button.
  (The factory settings are "Yes" (display) and "24 h" format.)

Clock display: Yes (Time is displayed on the Main display.)
No (Time is not displayed on the Main display.)
Display format: 24-hour format
  12-hour format
AM/PM display: Effective when the display format is 12-hour):
AM/PM before the time
AM/PM after the time

Note: Time display format will also be reflected on the timer and schedule setting display. The time is displayed as shown below.

12-hour format: AM12:00 ~ AM1:00 ~ PM12:00 ~ PM1:00 ~ PM11:59
24-hour format: 0:00 ~ 1:00 ~ 12:00 ~ 13:00 ~ 23:59

[2] Temperature unit setting
[Button operation]
Move the cursor to the "Temperature" on the display details setting screen, and select the desired temperature unit with the F3 or F4 button. (The factory setting is Centigrade (°C).)
· °C: Temperature is displayed in Centigrade. Temperature is displayed in 0.5- or 1-degree increments, depending on the model of indoor units.
· °F: Temperature is displayed in Fahrenheit.
· 1 °C: Temperature is displayed in Centigrade in 1-degree increments. This item will not appear on a sub remote controller.

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


[3] Room temperature display
[Button operation]
Move the cursor to the "Room temp." on the display details setting screen, and select the desired setting with the F3 or F4 button.
(The factory setting is "Yes").
- Yes: Room temperature appears on the Main display.
- No: Room temperature does not appear on the Main display.

Note: Even when "Yes" is set, the room temperature is not displayed on the Main display in the "Basic" mode.

[4] Auto (single set point) mode display setting
[Button operation]
Move the cursor to the "Auto mode" on the display details setting screen, and select the desired mode with the F3 or F4 button.
(The factory setting is "Yes").
- Yes: "AUTO COOL" or "AUTO HEAT" is displayed during operation in the AUTO (single set point) mode.
- No: Only "AUTO" is displayed during operation in the AUTO (single set point) mode.

(6) Auto mode setting
[Button operation]
Whether or not to use the Auto (single set point) or Auto (dual set points) mode can be selected by using the F3 or F4 button. This setting is valid only when indoor units with the AUTO mode function are connected.
(The factory setting is "Yes").
Press the SELECT button to save the changes made.
- Yes: The AUTO mode can be selected in the operation mode setting.
- No: The AUTO mode cannot be selected in the operation mode setting.

(7) Administrator password setting
[Button operation]
[1] To enter the current Administrator password (4 numerical digits), move the cursor to the digit you want to change with the F1 or F2 button, and set each number (0 through 9) with the F3 or F4 button.

Note: If your administrator password, you can initialize the password to the default password "0000" by pressing and holding the F1 and F2 buttons simultaneously for three seconds on the administrator password setting screen.

[3] If the password matches, a window to enter a new password will appear. Enter a new password in the same way as explained above, and press the SELECT button.
[4] Press the F4 button (OK) on the password change confirmation screen to save the change.
Press the F3 button (Cancel) to cancel the change.

Note: The administrator password is required to make the settings for the following items.
- Timer setting  · Weekly timer setting  · Energy-save setting
- Outdoor unit silent mode setting  · Restriction setting
Refer to the Instruction Book that came with the remote controller for the detailed information about how to make the settings for these items.

(8) Language selection
[Button operation]
Move the cursor to the language you desire with the F1 through F4 buttons.
Press the SELECT button to save the setting.
1. CONTROLS


11. Service menu (Maintenance password is required.)

At the Main display, press the MENU button and select "Service" to make the maintenance settings.

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

To enter the current maintenance password (4 numerical digits), move the cursor to the digit you want to change with the F1 or F2 button, and set each number (0 through 9) with the F3 or F4 button. Then, press the SELECT button.

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

Note: If you forget your service maintenance password, you can initialize the password to the default password "9999" by pressing and holding the F1 and F2 buttons simultaneously for three seconds on the maintenance password setting screen.

If the password matches, the Service menu will appear.

The type of menu that appears depends on the connected indoor units’ type (City Multi or Mr. Slim).

<Mr. Slim>

(1) Test run (City Multi and Mr. Slim)

Select "Test run" from the Service menu to bring up the Test run menu.

· Test run: Select this option to perform a test run.
· Drain pump test run: Select this option to perform a test run on the drain pump on the indoor unit. Applicable only to the type of indoor units that support the test run function.

Note: Refer to the indoor unit Installation Manual for the detailed information about test run.

(2) Input maintenance Info. (City Multi and Mr. Slim)

Select "Input maintenance Info." from the Service menu to bring up the Maintenance information screen. Refer to the indoor unit Installation Manual for how to make the settings.

Note: The following settings can be made from the Maintenance Information screen.

- Registering model names and serial numbers
  Enter the model names and serial numbers of outdoor and indoor units. The information entered will appear on the Error information screen. Model names can have up to 18 characters, and the serial numbers can have up to 8 characters.
- Registering dealer information
  Enter phone number of a dealer. The entered information will appear on the Error information screen. Phone number can have up to 13 characters.
- Initializing maintenance information
  Select the desired item to initialize the above settings.

(3) Function setting (Mr. Slim)

Make the settings for the indoor unit functions via the remote controller as necessary.

Select "Function setting" from the Service menu to bring up the Function setting screen.

[Button operation]

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

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

Due to continuing improvement, above specification may be subject to change without notice.
# 1. CONTROLS


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

![Function setting](image)

**Individual items**
(Unit No. 1 through 4)

[4] When the settings are completed, press the SELECT button to send the setting data from the remote controller to the indoor units.

[5] When the transmission is successfully completed, the screen will return to the Function setting screen.

### Note:
- Make the above settings on Mr. Slim units as necessary.
- Refer to the Instructions Book when it is necessary to set the settings for City Multi units.
- **Table 1** summarizes the setting options for each mode number. Refer to the indoor unit Installation Manual for the detailed information about initial settings, mode numbers, and setting numbers for the indoor units.
- Be sure to write down the settings for all functions if any of the initial settings has been changed after the completion of installation work.

### Table 1. Function setting options

<table>
<thead>
<tr>
<th>Function</th>
<th>Settings</th>
<th>Mode No.</th>
<th>Setting No.</th>
<th>P-Series</th>
<th>PUMY</th>
<th>MXZ-2C/3C/4C/5C</th>
<th>MXZ-8C (PAC-MKA*BC)</th>
<th>MXZ-8B (PAC-AKA*BC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power failure automatic recovery</td>
<td>Disable</td>
<td>01 (101)</td>
<td>1</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Enable (Four minutes of standby time is required after the restoration of power)</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Thermistor selection</td>
<td>Average temperature reading of the indoor units in operation</td>
<td>02 (-)</td>
<td></td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(Indoor temperature detection)</td>
<td>Thermistor on the indoor unit to which the remote controller is connected (fixed)</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Built-in sensor on the remote controller</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>LOSSNAY connectivity</td>
<td>Not supported</td>
<td>03 (103)</td>
<td>1</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Supported (Indoor unit does not intake outdoor air through LOSSNAY)</td>
<td>-</td>
<td></td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Supported (Indoor unit intake outdoor air through LOSSNAY)</td>
<td>-</td>
<td></td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Power voltage</td>
<td>230V</td>
<td>04 (104)</td>
<td>1</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>208V</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Frost prevention temperature</td>
<td>2°C [36 °F] (Normal)</td>
<td>15 (115)</td>
<td>1</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>3°C [37°F]</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Humidifier control</td>
<td>Heat operation &amp; Thermo ON</td>
<td>16 (116)</td>
<td>1</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Heat operation</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Change of defrosting control</td>
<td>Standard</td>
<td>17 (117)</td>
<td>1</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>For high humidity</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

( )RF thermostat setup function No.

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


Table 2

<table>
<thead>
<tr>
<th>Function</th>
<th>Settings</th>
<th>Mode No.</th>
<th>Setting No.</th>
<th>Initial setting (Factory setting)</th>
<th>4 way casette</th>
<th>Ceiling suspended</th>
<th>Wall mounted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PLA-BA</td>
<td>SLZ-KA-NA</td>
<td>PCA-KA</td>
</tr>
<tr>
<td>Filter sign</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PKA-HA</td>
<td>PKA-KA</td>
<td></td>
</tr>
<tr>
<td>100Hr</td>
<td></td>
<td>07</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2500Hr</td>
<td></td>
<td></td>
<td>2</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No filter sign indicator</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air flow (fan speed)</td>
<td>Quiet</td>
<td>06</td>
<td>1</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard</td>
<td></td>
<td>2</td>
<td>–</td>
<td>–</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hi ceiling</td>
<td></td>
<td>3</td>
<td>–</td>
<td>–</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of air outlets</td>
<td>4 directions</td>
<td>09</td>
<td>1</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 directions</td>
<td></td>
<td>2</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 directions</td>
<td></td>
<td>3</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Installed options (High performance filter)</td>
<td>Not supported</td>
<td>10</td>
<td>1</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supported</td>
<td></td>
<td>2</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Horizontal vane setting</td>
<td>No vanes (Vane No.3 setting: PLA only)</td>
<td>11</td>
<td>1</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vane No.1 setting</td>
<td></td>
<td>2</td>
<td>–</td>
<td>–</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vane No.2 setting</td>
<td></td>
<td>3</td>
<td>–</td>
<td>–</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vane differential setting in heating mode (cold wind prevention)</td>
<td>Low (24C-28C)</td>
<td>14</td>
<td>1</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard (28C-32C)</td>
<td></td>
<td>2</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>High (35C-38C)</td>
<td></td>
<td>3</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Vane Swing</td>
<td>Not supported (Swing: PLA only)</td>
<td>23</td>
<td>1</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supported (Wave airflow: PLA only)</td>
<td></td>
<td>2</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Setting temperature in heating (4 deg up)*1/ PKA: 2 deg up</td>
<td>Available</td>
<td>24</td>
<td>1</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not available</td>
<td></td>
<td>2</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Fan speed during the heating thermostat is OFF</td>
<td>Extra low</td>
<td>25</td>
<td>1</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stop</td>
<td></td>
<td>2</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Fan speed during the cooling thermostat is OFF</td>
<td>Setting fan speed</td>
<td>27</td>
<td>1</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stop</td>
<td></td>
<td>2</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Detection of abnormality of the pipe temperature (P8)</td>
<td>Available</td>
<td>28</td>
<td>1</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not available</td>
<td></td>
<td>2</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
</tbody>
</table>

( )RF thermostat setup function No.

Due to continuing improvement, above specification may be subject to change without notice.
## 1. CONTROLS

### 1-2. Wired Remote Controller [PAR-32MAA-J], cont.

Table 2, cont.

<table>
<thead>
<tr>
<th>Function</th>
<th>Settings</th>
<th>Mode No.</th>
<th>Setting No.</th>
<th>Initial setting (Factory setting)</th>
<th>Ceiling concealed</th>
<th>Multi position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter sign</td>
<td>100Hr</td>
<td>07 (107)</td>
<td>1</td>
<td>-</td>
<td>PEA-AA</td>
<td>PEAD-AA4</td>
</tr>
<tr>
<td></td>
<td>2500Hr</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>No filter sign indicator</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>External static pressure setting</td>
<td>*Refer to Table 3</td>
<td>08 (108)</td>
<td>1</td>
<td>-</td>
<td>PEA-AA</td>
<td>PEAD-AA4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>1</td>
<td>-</td>
<td>PEA-AA</td>
<td>PEAD-AA4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Heater control</td>
<td>*Refer to Table 4</td>
<td>11 (111)</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Setting temperature in heating (4 deg up)</td>
<td>Available</td>
<td>24 (124)</td>
<td>1</td>
<td>-</td>
<td>PEA-AA</td>
<td>PEAD-AA4</td>
</tr>
<tr>
<td></td>
<td>Not available</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Humidifier</td>
<td>Not supported</td>
<td>13 (113)</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Supported</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fan speed during the heating thermostat is OFF</td>
<td>Extra low *1</td>
<td>25 (125)</td>
<td>1</td>
<td>-</td>
<td>PEA-AA</td>
<td>PEAD-AA4</td>
</tr>
<tr>
<td></td>
<td>Stop *1</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Setting fan speed *1</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fan speed during the cooling thermostat is OFF</td>
<td>Setting fan speed</td>
<td>27 (127)</td>
<td>1</td>
<td>-</td>
<td>PEA-AA</td>
<td>PEAD-AA4</td>
</tr>
<tr>
<td></td>
<td>Stop</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Detection of abnormality of the pipe temperature (P8)</td>
<td>Available</td>
<td>28 (128)</td>
<td>1</td>
<td>-</td>
<td>PEA-AA</td>
<td>PEAD-AA4</td>
</tr>
<tr>
<td></td>
<td>Not available</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*1 High speed setting depending on heater control.

( ) RRF thermostat setup function No.
1. CONTROLS


Table 3

<table>
<thead>
<tr>
<th>Function</th>
<th>Setting No. of</th>
<th>SEZ, PEA</th>
<th>PEAD</th>
<th>MVZ, PVA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mode No. 08</td>
<td>Mode No. 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External static pressure</td>
<td>1 15 Pa</td>
<td>75 Pa</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 35 Pa</td>
<td>35 Pa</td>
<td>125 Pa</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 50 Pa</td>
<td>50 Pa</td>
<td>200 Pa</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 5 Pa</td>
<td>70 Pa</td>
<td>75 Pa</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 –</td>
<td>100 Pa</td>
<td>125 Pa</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 –</td>
<td>150 Pa</td>
<td>200 Pa</td>
<td></td>
</tr>
</tbody>
</table>

Table 4

MVZ, PVA

<table>
<thead>
<tr>
<th>Function</th>
<th>Setting</th>
<th>Mode No.</th>
<th>Initial setting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(RF thermostat) setup function No. (Factory setting)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>23 (123)</td>
<td>11 (111)</td>
</tr>
<tr>
<td>Enable heater basic control</td>
<td>Heater OFF</td>
<td>Heater ON</td>
<td>Inlet air temp. &gt; set temp</td>
</tr>
<tr>
<td></td>
<td>Inlet air temp. &lt; set temp - 4.5°F (2.5°C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The fan will stop and the heater will turn off when [DEFROST] or [ERR] is displayed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enable heater comfort mode</td>
<td>Heater OFF</td>
<td>Heater ON</td>
<td>Inlet air temp. &gt; set temp</td>
</tr>
<tr>
<td></td>
<td>Inlet air temp. &lt; set temp - 1.8°F (1°C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The fan will stop and the heater will turn off when [DEFROST] is displayed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enable heater economy mode</td>
<td>Heater OFF</td>
<td>Heater ON</td>
<td>Inlet air temp. &gt; set temp</td>
</tr>
<tr>
<td></td>
<td>Inlet air temp. &lt; set temp - 3.6°F (2°C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The fan will stop and the heater will turn off when [DEFROST] is displayed.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1st: Heater output from CN24-1 (yellow) on the indoor unit control board.
2nd: Heater output from CN24-2 (Blue) on the indoor unit control board.

Due to continuing improvement, above specification may be subject to change without notice.
## 1. CONTROLS

### 1-2. Wired Remote Controller [PAR-32MAA-J], cont.

#### PEAD-AA5

<table>
<thead>
<tr>
<th>Function</th>
<th>Setting</th>
<th>Mode No.</th>
<th>RF thermostat setup function No.</th>
<th>Initial setting (Factory setting)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Enable heater basic control</strong></td>
<td><strong>1st</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heater OFF</td>
<td>23</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inlet air temp. ≥ set temp</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heater ON</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inlet air temp. ≤ set temp - 4.5°F (2.5°C)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The fan will stop and the heater will turn off when [DEFROST] or [ERROR] is displayed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Set temp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Set temp. -1.8°F (1°C)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inlet air temp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heater output</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Enable heater comfort mode</strong></td>
<td><strong>1st</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heater OFF</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inlet air temp. ≥ set temp</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heater ON</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inlet air temp. ≤ set temp - 1.8°F (1°C)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The fan will stop and the heater will turn off when [DEFROST] is displayed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Set temp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Set temp. -1.8°F (1°C)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inlet air temp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heater output</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Enable heater economy mode</strong></td>
<td><strong>1st</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heater OFF</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inlet air temp. ≥ set temp</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heater ON</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inlet air temp. ≤ set temp - 2.7°F (1.5°C)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The fan will stop and the heater will turn off when [DEFROST] is displayed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Set temp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Set temp. -1.8°F (1°C)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Set temp. -2.7°F (1.5°C)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inlet air temp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heater output</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1st: Heater output from CN24-1 (yellow) on the indoor unit control board.
2nd: Heater output from CN24-2 (Blue) on the indoor unit control board.

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

**PEAD-AA4, PEA, SEZ**

### Table 1. Function setting options

<table>
<thead>
<tr>
<th>Function</th>
<th>Setting</th>
<th>Mode No.</th>
<th>Initial setting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heater control</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>( )RF thermostat setup function No.</td>
<td>(Factory setting)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Heater OFF</strong></td>
<td>Inlet air temp. ≥ set temp</td>
<td>23</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Heater ON</td>
<td>(123)</td>
<td>(111)</td>
</tr>
<tr>
<td></td>
<td>Inlet air temp. &lt; set temp - 4.5°F (2.5°C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>The fan will stop and the heater will turn off when [DEFROST] or [ERROR] is displayed.</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Inlet air temp.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Heater output</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>(High-efficiency filter)</strong></td>
<td>Yes</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>(Room temperature setting)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Set temp.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>(indoor temperature detection)</strong></td>
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</tr>
<tr>
<td><strong>Set temp. -4.5°F (2.5°C)</strong></td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Heater OFF</strong></td>
<td>Inlet air temp. ≥ set temp</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heater ON</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inlet air temp. &lt; set temp - 4.5°F (2.5°C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>The fan will drive and the heater will turn off when [DEFROST] is displayed.</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Inlet air temp.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Heater output</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>(High ceiling)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Standard (or High ceiling 1)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3 directional</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>High ceiling (or High ceiling 2)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Equipped with vanes (The vane setting No. 1 is effective.)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Equipped with vanes (The vane setting No. 2 is effective.)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Filter sign</strong></td>
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</tr>
<tr>
<td><strong>100 hours</strong></td>
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</tr>
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<td></td>
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</tr>
<tr>
<td><strong>Power voltage</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>220 V, 230 V</strong></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Thermistor selection</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Built-in sensor on the remote controller</strong></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Thermistor on the indoor unit to which the remote controller is connected (fixed)</strong></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average temperature reading of the indoor units in operation</strong></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Enable (Four minutes of standby time is required after the restoration of power.)</strong></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Thermistor on the remote controller</strong></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Thermistor on the indoor unit (or the remote controller)</strong></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ref. address</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lossnay address</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>IU address</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lossnay address</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Collecting data</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:**
- Use the centralized controller to make the settings if it is connected.
- To interlock the operation of the indoor units with the LOSSNAY units, be sure to interlock the addresses of ALL indoor units in the group and that of the LOSSNAY unit.

**[Button operation]**

1. When "Lossnay" on the Service menu is selected, the remote controller will automatically begin searching for the registered LOSSNAY addresses of the currently connected indoor unit.

3. Enter the addresses of the indoor unit and the LOSSNAY unit to be interlocked, with the F1 through F4 buttons, select "Set" in the "Function", and press the SELECT button to save the settings. "Sending data" will appear on the screen. If the setting is successfully completed, "Setting completed" will appear.

2. When the search is completed, the smallest address of the indoor units that are connected to the remote controller and the address of the interlocked LOSSNAY unit will appear. "..." will appear if no LOSSNAY unit is interlocked with the indoor units.

If no settings need to be made, press the RETURN button to go back to the Service menu.

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

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1. CONTROLS


To search for the LOSSNAY address

[4] Enter the address of the indoor unit to which the remote controller is connected, select "Conf" in the "Function", and press the SELECT button. "Collecting data" will appear on the screen. If the signal is received correctly, the indoor unit address and LOSSNAY address will appear. "--" will appear when no LOSSNAY unit is found. "Unit not exist" will appear if no indoor units that are correspond to the entered address are found.

To delete the interlock setting

[5] To delete the interlocked setting between LOSSNAY unit and the indoor units to which the remote controller is connected, enter the indoor unit address and LOSSNAY address with the F1 through F4 buttons, select "Del." in the "Function", and press the SELECT button. "Deleting" will appear. The screen will return to the search result screen if the deletion is successfully completed. "Unit not exist" will appear if no indoor units that are correspond to the entered address are found. If deletion fails, "Request rejected" will appear on the screen.

(5) Check

Select "Check" on the Service menu to bring up the Check menu screen. The type of menu that appears depends on the type of indoor units that are connected (City Multi or Mr. Slim).

(When City Multi is connected, only "Error history" will appear in the menu.)

[1] Error history

Select "Error history" from the Check menu, and press the SELECT button to view up to 16 error history records. Four records are shown per page, and the top record on the first page indicates the latest error record.

[Deleting the error history]

To delete the error history, press the F4 button (Delete) on the screen that shows error history. A confirmation screen will appear asking if you want to delete the error history. Press the F4 button (OK) to delete the history.

(6) Diagnostic function.

Error history of each unit can be checked via the remote controller.

[Procedures]

[1] Select "Self check" from the Service menu, and press the SELECT button to view the Self check screen.

[2] With the F1 or F2 button, enter the refrigerant address (Mr. Slim) or the M-NET address (City Multi), and press the SELECT button.

[3] Error code, unit number, attribute, and indoor unit demand signal ON/OFF status at the contact (City Multi only) will appear. "--" will appear if no error history is available.

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


[Resetting the error history]

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

[2] Press the F4 button (OK) to delete the error history. If deletion fails, "Request rejected" will appear, and "Unit not exist" will appear if no indoor units that are correspond to the entered address are found.

(7) Setting the maintenance password

Take the following steps to change the maintenance password.

[Procedures]

[1] Select "Maintenance password" on the Service menu, and press the SELECT button to bring up the screen to enter a new password.

[2] Move the cursor to the digit you want to change with the F1 or F2 button, and set each digit to the desired number (0 through 9) with the F3 or F4 button.

[3] Press the SELECT button to save the new password.

[4] A confirmation screen will appear asking if you want to change the maintenance password. Press the F4 button (OK) to save the new change. Press the F3 button (Cancel) to cancel the change.

[5] "Changes saved" will appear when the password is updated.

[6] Press the MENU button to return to the Service menu or press the RETURN button to go back to the "Maintenance password" screen.

12. Remote controller check

When the remote controller does not work properly, use the remote controller checking function to troubleshoot the problem.

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

[Procedures]

[1] Select "Remote controller check" from the Service menu, and press the SELECT button to start the remote controller check and see the check results. To cancel the remote controller check and exit the Remote controller check menu screen, press the MENU or the RETURN button. The remote controller will not reboot itself.

OK: No problems are found with the remote controller. Check other parts for problems.

E3, 6832: There is noise on the transmission line, or the indoor unit or another remote controller is faulty. Check the transmission line and the other remote controllers.

NG (ALL0, ALL1): Send-receive circuit fault. Remote controller needs replacing.

ERC: The number of data errors is the discrepancy between the number of bits in the data transmitted from the remote controller and that of the data that was actually transmitted over the transmission line. If data errors are found, check the transmission line for external noise interference.

[2] If the SELECT button is pressed after the remote controller check results are displayed, remote controller check will end, and the remote controller will automatically reboot itself.
New functions have been added to the CITY MULTI series that enable the setting of certain indoor unit functions (such as static pressure) from the remote controller. (For more detailed information, please contact your nearest sales office or distributor.)

### Applicable Models

- MSY-GL09/12/15/18/24NA*
- MSZ-D30/36NA*
- MSZ-FH06/09/12/15/18/24NA*
- MSZ-FH18NA2*
- MSZ-EF09/12/15/18/24AW(B)(S)*
- MSZ-GL06/09/12/15/18/24/24NA*
- MSZ-EF09/12/15/18/24NAW(B)(S)
- SLZ-KA09/12/15NA
- SEZ-KD09/12/15/18NA4
- MVZ-A09/12/15/18/24AA4

* MAC-333IF-E required

### Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product size</td>
<td>70 (W) × 120 (H) × 14.5 (D) mm (2-3/4 × 4-3/4 × 9/16 [in]) (not including the protruding part)</td>
</tr>
<tr>
<td>Net weight</td>
<td>0.1 kg (1/4 lb.)</td>
</tr>
<tr>
<td>Rated power supply voltage</td>
<td>12 VDC (supplied from indoor units)</td>
</tr>
<tr>
<td>Power consumption</td>
<td>0.3 W</td>
</tr>
<tr>
<td>Usage environment</td>
<td>Temperature 0 ~ 40°C (32 ~ 104°F) Humidity 30 ~ 90%RH (with no dew condensation)</td>
</tr>
<tr>
<td>Material</td>
<td>PC + ABS</td>
</tr>
</tbody>
</table>

### Dimensions

- **Unit:mm[in.]**
  - Width: 14.5 [9/16]
  - Height: 193.3 [7-5/32]
1. CONTROLS


How to Use / How to Install

1 Component names and supplied parts

The following parts are included in the box.

<table>
<thead>
<tr>
<th>Parts name</th>
<th>Qty.</th>
<th>Appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote controller (top case)</td>
<td>1</td>
<td>Right figure *1</td>
</tr>
<tr>
<td>Remote controller (bottom case)</td>
<td>1</td>
<td>Right figure *2</td>
</tr>
<tr>
<td>Roundhead cross slot screws M4×30</td>
<td>2</td>
<td>*3</td>
</tr>
<tr>
<td>Wood screw 4.1×16</td>
<td>2</td>
<td>*3</td>
</tr>
<tr>
<td>Installation Manual (this manual)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Instruction Book</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

*3 ISO metric screw thread
*4 Remote controller cable is not included.

2 Field-supplied parts/Required tools

(1) Field-supplied parts

The following parts are field-supplied parts.

<table>
<thead>
<tr>
<th>Parts name</th>
<th>Qty.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single switch box</td>
<td>1</td>
<td>Not required for direct wall installation</td>
</tr>
<tr>
<td>Thin metal conduit</td>
<td></td>
<td>Necessary</td>
</tr>
<tr>
<td>Lock nut and bushing</td>
<td></td>
<td>Necessary</td>
</tr>
<tr>
<td>Cable cover</td>
<td></td>
<td>Required for routing remote controller cable along a wall</td>
</tr>
<tr>
<td>Putty</td>
<td></td>
<td>Reasonable</td>
</tr>
<tr>
<td>Molly anchor</td>
<td></td>
<td>Necessary</td>
</tr>
<tr>
<td>Remote controller cable</td>
<td></td>
<td>Necessary</td>
</tr>
<tr>
<td>(Use a 0.3 mm² (AWG22) 2-core sheathed cable.)</td>
<td></td>
<td>If you need to use a cable extension longer than 10 m (32 ft), select an electric wire that meets the following specifications: Wire specification VCTF or CVV (2-core): 1.25 mm² (stranded 16 AWG) or equivalent</td>
</tr>
</tbody>
</table>

(2) Field-supplied tools

- Flat-tip screwdriver (Width: 3 - 5 mm (1/8 - 7/32 inch))
- Knife or Nipper
- Miscellaneous tools

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

3 How To Wire Transmission Line

The wiring is different when the remote controller is connected to a CITY MULTI control system (“A” type and later) and when it is connected to a M-Series and P-Series air conditioner (A control type). The wiring also differs with the system configuration. Check the system used.

1. Connecting to CITY MULTI control system

The numbers (1) to (4) in the figure correspond to items (1) to (4) in the following description.

(1) Wiring from the remote controller
• Connect to the MA remote controller terminal block (TB15) on the indoor unit.
• The terminal block has no polarity. Connect to the terminal block at the rear bottom of the remote controller.

(2) Operating in a group (Groups 03, and 04 above)
• Interconnect the MA remote controller terminal block (TB15) of the indoor units you want to operate as a group, and connect the MA remote controller to that point.
• When the remote controller is used in combination with the system controller as shown in the figure above, group setting at the system controller (central controller in the figure above) is necessary.

(3) Number of connectable remote controllers (groups 02 and 04)
• A main remote controller and one sub remote controller, a total of two, can be connected to a group made up of indoor units.

NOTE: When using this Simple MA remote controller in combination with other MA remote controllers, be sure to follow the compatibility rules below.

<table>
<thead>
<tr>
<th>Indoor unit function</th>
<th>Main remote controller</th>
<th>Sub remote controller</th>
<th>Compatibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Models applicable for AUTO (dual set point) and SETBACK mode</td>
<td>This Simple MA remote controller</td>
<td>This Simple MA remote controller</td>
<td>Compatible, and AUTO (dual set point) and SETBACK mode can be used depending on the indoor units to be connected.</td>
</tr>
<tr>
<td>Other MA remote controllers</td>
<td>This Simple MA remote controller</td>
<td></td>
<td>Compatible, but AUTO (dual set point) and SETBACK mode cannot be used.</td>
</tr>
<tr>
<td>This Simple MA remote controller</td>
<td>Other MA remote controllers</td>
<td></td>
<td>Incompatible</td>
</tr>
<tr>
<td>Models not applicable for AUTO (dual set point) and SETBACK mode</td>
<td>Combination with all of the above</td>
<td></td>
<td>Compatible</td>
</tr>
</tbody>
</table>

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


(4) To interlock to a LOSSNAY or OA processing unit, make the following settings using the remote controller. (For a description of how to set an interlock, see section "Ventilation Setting".)

Set the LOSSNAY or OA processing unit address and the address of all the indoor units you want to interlock.

(5) Total length of remote controller wiring

- The simple MA controller can be wired up to 200 m (656 ft). Procure 0.75 - 1.25 mm² (stranded 16 - 28 AWG), 2-core cable at the installation site.

⚠️ CAUTION: Remote controllers cannot be wired together. Only one wire can be connected to the remote controller terminal block.

NOTE: When interlocking the MA remote controller with a LOSSNAY or OA processing unit, always set the address of all the indoor units in the group and the address of the LOSSNAY or OA processing unit.

2. Connecting to M-Series and P-Series air conditioner

The remote controller wiring depends on the system configuration. Check the system configuration. Wire the remote controller as shown in the example below.

The numbers (1) to (3) in the figure correspond to items (1) to (3) in the following description.

[1] Connecting the remote controller for each refrigerant system (Standard 1:1, simultaneous twin, simultaneous triple, simultaneous four, individual twin)

[2] When grouping by different refrigerant systems

- Set the refrigerant address using the outdoor unit dip switches. (For more information, refer to the outdoor unit installation manual.)
- All the indoor units enclosed in are controlled as one group.

(1) Wiring from remote controller

- Connect to indoor unit TB5 (remote controller terminal block). (The terminal block has no polarity.)
- For simultaneous multi type, when mixing various types of indoor units, always connect the remote controller to the indoor unit with the most functions (wind velocity, vane, louver, etc.).

(2) When grouping with different refrigerant systems

- Group using the remote controller wiring. Connect the remote controller to an arbitrary indoor unit of each refrigerant system you want to group.
- When mixing different types of indoor units in the same group, always make the outdoor unit connecting the indoor unit with the most functions (wind velocity, vane, louver, etc.) the Main unit (refrigerant address = 00). Also, when the Main unit is the simultaneous multi type, always satisfy the conditions of (1) above.
- The Simple MA Remote Controller can control up to 16 refrigerant systems as one group.
1. CONTROLS


(3) Up to two remote controllers can be connected to one group
- When two remote controllers are connected to one group, always set the Main remote controller and Sub remote controller.
- When only one remote controller is connected to one group, set it as the Main controller. When two remote controllers are connected to one group, set the Main remote controller and Sub remote controller. (For a description of how to set the Main/Sub switch, see step 5 in section 5 How To Install.)

NOTE: When using this Simple MA remote controller in combination with other MA remote controllers, be sure to follow the compatibility rules below.

<table>
<thead>
<tr>
<th>Indoor unit function</th>
<th>Main remote controller</th>
<th>Sub remote controller</th>
<th>Compatibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Models applicable for AUTO (dual set point) and SETBACK mode</td>
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</tr>
<tr>
<td>Other MA remote controllers</td>
<td>This Simple MA remote controller</td>
<td>compatible, but AUTO (dual set point) and SETBACK mode cannot be used.</td>
<td></td>
</tr>
<tr>
<td>This Simple MA remote controller</td>
<td>Other MA remote controllers</td>
<td>Incompatible</td>
<td></td>
</tr>
</tbody>
</table>

| Models not applicable for AUTO (dual set point) and SETBACK mode | Combination with all of the above | Compatible |

(4) Total length of remote controller wiring
- The Simple MA Remote Controller can be wired up to 200 m (656-1/8 ft).
Procure 0.75 ~ 1.25 mm² (16 ~ 28 AWG), 2-core cable at the installation site.

⚠️ CAUTION - The wiring cannot be connected to TB5 of the indoor unit of the same refrigerant system. If so connected, the system will not operate normally.
- Remote controllers cannot be wired together. Only one wire can be connected to the remote controller terminal block.
- When connecting to TB5, connect up to two wires of the same size to one terminal block.

![Diagram of wiring connections](image)

4 How To Install

This remote controller is for the wall installation. It can be installed either in the switch box or directly on the wall. When performing direct wall installation, wires can be thread through either back or top of the remote controller.

(1) Selecting an installation site
Install the remote controller (switch box) on the site where the following conditions are met.
(a) A flat surface
(b) A place where the remote controller can measure the accurate indoor temperature
Sensors to monitor indoor temperature are on the indoor unit and on the remote controller. When the room temperature is monitored with the sensor on the remote controller, the built-in sensor on the Main remote controller monitors the room temperature. When using the sensor on the remote controller, follow the instructions below.

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


- To monitor the accurate indoor temperature, install the remote controller away from direct sunlight, heat sources, and the supply air outlet of the air conditioner.
- Install the remote controller in a location that allows the sensor to measure the representative room temperature.
- Install the remote controller where no wires are routed around the temperature sensor on the controller. (If wires are routed, the sensor cannot measure accurate indoor temperature.)

**Important**

Do not install the controller in a place where the difference between the remote controller surface temperature and the actual room temperature will be great. If the temperature difference is too high, room temperature may not be adequately controlled.

To avoid deformation and malfunction, do not install the remote controller in direct sunlight or where the ambient temperature may exceed 40°C (104°F) or drop below 0°C (32°F).

Do not install the remote controller directly onto electrically conductive objects such as metal plate that has not been painted.

To reduce the risk of malfunctions, do not install the controller in a place where water or oil may come into contact with the controller, or in a condensing or corrosive environments.

(2) Installation space

Leave a space around the remote controller as shown in the figure shown below, regardless of whether the controller is installed in the switch box or directly on the wall. Removing the remote controller will not be easy with insufficient space. Also, leave an operating space in front of the remote controller.

(3) Installation work

Controller can be installed either in the switch box or directly on the wall. Perform the installation properly according to the installation method.

1. **Drill a hole in the wall.**
   - **Installation using a switch box**
     - Drill a hole in the wall, and install the switch box on the wall.
     - Connect the switch box to the conduit tube.
   - **Direct wall installation**
     - Drill a hole in the wall, and thread the cable through it.

2. **Seal the cable access hole with putty**
   - **Installation using a switch box**
     - Seal the remote controller cable access hole at the connection of switch box and conduit tube with putty.

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


3) Prepare the bottom case of the remote controller.

4) Connect the remote controller cable to the terminal block on the bottom case.
Peel off the remote controller cable sheath as shown below to connect to the terminal block properly.
Secure the remote controller cable so that the peeled part of the cable will fit into the case.

- Direct wall installation
  - Seal the hole through which the cable is threaded with putty.

---

**Important**

Do not use solderless terminals to connect cables to the terminal block. Solderless terminals may come in contact with the circuit board and cause malfunctions or damage the controller cover.

---

To reduce the risk of electric shock, shorting, or malfunctions, keep wire pieces and sheath shavings out of the terminal block.
1. CONTROLS


5 Install the bottom case.
Be sure to secure two places of the bottom case.

6 Cut out the cable access hole.
Direct wall installation (when running the cable along the wall)
- Cut out the thin-wall part on the cover (the shaded area in the right figure) with a knife or a nipper.
- Thread the cable from the groove behind the bottom case through this access hole.

7 Set the dip switches on the top case.
When using two remote controllers in one group, set the dip switches.
When using two remote controllers in one group, specify the main and sub remote controllers using dip switch No. 1 shown below.
- When connecting only one remote controller to one group, it is always the main remote controller.
  When connecting two remote controllers to one group, set one remote controller as the main remote controller and the other as the sub remote controller.
- The factory setting is “Main”.

Important
To avoid deformation and damage to the bottom case, do not overtighten the screws.
To avoid damage to the bottom case, do not make holes on it.

<table>
<thead>
<tr>
<th>SW No.</th>
<th>SW contents Main</th>
<th>ON</th>
<th>OFF</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Remote controller Main/Sub setting</td>
<td>Main</td>
<td>Sub</td>
<td>Set one of the two remote controllers at one group to “ON”.</td>
</tr>
<tr>
<td>2</td>
<td>Temperature display units setting</td>
<td>Celsius</td>
<td>Fahrenheit</td>
<td>When the temperature is displayed in [Fahrenheit], set to “OFF”.</td>
</tr>
<tr>
<td>3</td>
<td>Cooling/heating display in AUTO mode</td>
<td>Yes</td>
<td>No</td>
<td>When you do not want to display “Cooling” and “Heating” in the AUTO mode, set to “OFF”.</td>
</tr>
<tr>
<td>4</td>
<td>Indoor temperature display</td>
<td>Yes</td>
<td>No</td>
<td>When you do not want to display the indoor temperature, set to “OFF”.</td>
</tr>
</tbody>
</table>

Refer to 1, 3, 4.

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


8 Connect the connector to the top case.
Connect the connector on the bottom case to the socket on the top case.

Important
To prevent malfunctions, do not remove the protective sheet or the circuit board from the top case.

To prevent cable breakage and malfunctions, do not hang the top controller casing hang by the cable as shown in the figure above.

9 Insert the wires into the clamp.

Important
Hold the wires in place with the clamp to prevent undue force from being applied to the terminal block and causing cable breakage.

10 Install the top case on the bottom case.
Two mounting tabs are at the top of the top case. Hook those two tabs onto the bottom case, and click the top case into place. Check that the case is securely installed and not lifted.

Important
When attaching the top casing to the bottom casing, push it until it they click into place. If they are not properly locked into place, they may fall, causing personal injury, controller damage, or malfunctions.

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


- Direct wall installation (when running the cable along the wall)
  - Thread the cable through the access hole at the top of the remote controller.
  - Seal the cut-out part of the cover with putty.
  - Use a cable cover.

- Uninstalling the top case
  1. Uninstalling the top case
  Insert a flat-tip screwdriver with a blade width of 3-5 mm (1/8-7/32 inch) into the latches at the bottom of the remote controller and lift the latches. Then, pull up the top case.

**Important**

- To prevent damage to the controller casing, do not force the flat-tip screwdriver to turn with its tip inserted in the slot.
- Do not insert the flat-tip screwdriver too far. Doing so will damage the circuit board.
1. CONTROLS


5 Test Run

1. Before making a test run, refer to the “Test Run” section of the indoor unit installation manual.
2. When the [ON/OFF] button and [TEMP. ▲] button are pressed simultaneously for 2 seconds or longer, test run is performed.
3. Stop the test run by pressing the [ON/OFF] button.
4. If trouble occurred during the test run, refer to the “Test Run” section of the indoor unit installation manual.

![Test Run display](image)

Indoor unit piping temperature
Display range: -4°F (-20°C) to 158°F (70°C)
"-4°F" or "158°F" flashes on the display.

Test run time
The remaining time for test run is displayed.
Display range: 2:00 to 0:01
After two hours, the test run stops automatically.

6 Ventilation Setting

Make this setting only when interlocked operation with LOSSNAY or OA processing unit is necessary with CITY MULTI models.
(This setting cannot be made with M-Series and P-Series air conditioners.)

Perform this operation when you want to register the LOSSNAY or OA processing unit, confirm the registered units, or delete the registered units controlled by the remote controller.
The following uses indoor unit address 05 and LOSSNAY or OA processing unit address 30 as an example to describe the setting procedure.

[Setting Procedure]
① Stop the air conditioner using the remote controller [ON/OFF] button.
② Press and hold down the [Fan] and [TEMP. ▼] buttons at the same time for two seconds. The display shown below appears. The remote controller confirms the registered LOSSNAY or OA processing unit addresses of the currently connected indoor units.

![Ventilation Setting display](image)

③ Registration confirmation result
- The indoor unit address and registered LOSSNAY or OA processing unit address are displayed alternately.

![Registration confirmation result](image)

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

- When LOSSNAY or OA processing unit are not registered

4 If registration is unnecessary, end registration by pressing and holding down the [FAN] and [TEMP. ▼] buttons at the same time for two seconds.
   If a new LOSSNAY or OA processing unit must be registered, go to step 1. Registration procedure.
   If you want to confirm another LOSSNAY or OA processing unit, go to step 2. Confirmation procedure. To delete a registered LOSSNAY or OA processing unit, go to step 3. Deletion procedure.

<1. Registration procedure>

5 Set the address of the indoor unit to be interlocked with the LOSSNAY unit using the [TEMP. ▲] and [TEMP. ▼] buttons. (01 to 50)
6 After setting, press the [FAN] button and set the Lossnay address you want to register by operating the [TEMP. ▲] and [TEMP. ▼] buttons. (01~50)

7 Press the [ON/OFF] button, and register the set indoor unit address and LOSSNAY address.
   - Registration end display
     The indoor unit address and “IC” and LOSSNAY address and “LC” are alternately displayed.

   - Registration error display
     If the address is not registered correctly, the indoor unit address and [ ], and the registered LOSSNAY (or OA processing unit address) and [ ] are alternately displayed.

     Cannot be registered because the registered indoor unit or LOSSNAY or OA processing unit does not exist.
     Cannot be registered because another LOSSNAY or OA processing unit was registered at the registered indoor unit.
1. CONTROLS


<2. Confirmation procedure>

⑧ Set the address of the indoor unit connected by the remote controller whose LOSSNAY or OA processing unit you want to confirm using the [TEMP. ▲] and [TEMP. ▼] buttons. (01 to 50)

⑨ Press the [ON/OFF] button and [fan button simultaneously for 2 seconds, and check the LOSSNAY address registered at the set indoor unit address.

- Confirmation end display (When LOSSNAY is connected.)
  The indoor unit address and “IC” and registered LOSSNAY address and “LC” are alternately displayed.

- Confirmation end display (When LOSSNAY or OA processing unit is not connected.)

- Registered indoor unit address does not exist.

<3. Deletion procedure>

10. Use this procedure when you want to delete registration of indoor units connected by the remote controller and LOSSNAY or OA processing unit.

11. Confirm (see 2. Confirmation procedure) the LOSSNAY or OA processing unit you want to delete and display the indoor units and LOSSNAY or OA processing unit confirmation results.

Press the [TEMP. ▲] and [TEMP. ▼] buttons simultaneously for 2 seconds, and delete registration of the LOSSNAY or OA processing unit address registered at the set indoor unit.

- Deletion end display
  Indoor unit address and “——” and registered LOSSNAY or OA processing unit address and “——” are alternately displayed.

- Deletion error display
  When deletion was not performed properly.
Make the following settings for M-Series and P-Series if necessary. (This setting cannot be made with CITY MULTI Control System. To make CITY MULTI indoor unit settings from the remote controller, refer to section [Function Selection for CITY MULTI].)

Set the functions of each indoor unit from the remote controller, as required. The functions of each indoor unit can be selected only from the remote controller. Set the functions by selecting the necessary items from Table 1.

Table 1. Function selection contents
(For a detailed description of the factory settings and mode of each indoor unit, refer to the indoor unit installation manual.)

<table>
<thead>
<tr>
<th>Mode No.</th>
<th>Mode</th>
<th>Settings</th>
<th>Setting No.</th>
<th>Check</th>
<th>Unit numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Automatic recovery after power failure</td>
<td>Disable, Enable (Four minutes of standby time is required after the restoration of power.)</td>
<td>1, 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>02</td>
<td>Thermistor selection (Indoor temperature detection)</td>
<td>Average temperature reading of the indoor units in operation, Thermistor on the indoor unit to which the remote controller is connected (fixed), Built-in sensor on the remote controller</td>
<td>1, 2, 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>03</td>
<td>LOSSNAY connection</td>
<td>Not connected, Connected (without outdoor air intake by the indoor units), Connected (with outdoor air intake by the indoor units)</td>
<td>1, 2, 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>04</td>
<td>Power voltage</td>
<td>240 V, 220 V, 230 V</td>
<td>1, 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>05</td>
<td>AUTO mode</td>
<td>Enable (Automatically the unit achieves effective energy saving operation.), Disable</td>
<td>1, 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>07</td>
<td>Filter sign</td>
<td>100 hours, 2500 hours, Not displayed</td>
<td>1, 2, 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>08</td>
<td>Fan speed</td>
<td>Silent mode (or standard), Standard (or High ceiling 1), High ceiling (or High ceiling 2)</td>
<td>1, 2, 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>09</td>
<td>No. of air outlets</td>
<td>4 directional, 3 directional, 2 directional</td>
<td>1, 2, 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Installed options (High performance filter)</td>
<td>No, Yes</td>
<td>1, 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Vane setting</td>
<td>No vanes (or the vane setting No.3 is effective.), Equipped with vanes (The vane setting No.1 is effective.), Equipped with vanes (The vane setting No.2 is effective.)</td>
<td>1, 2, 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Static pressure setting can be made by using Mode 08 in combination with Mode 10 depending on the indoor unit model. Refer to the Indoor unit Installation Manual for details.
* For mode numbers other than listed above, refer to the indoor unit installation manual.

NOTE: When the indoor unit functions were changed using the function selection after installation is complete, always indicate the set contents by entering check marks or other marks in the appropriate check field of Table 1.

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

[Function selection flow]
First grasp the function selection flow. The following describes setting of “Thermistor selection” of Table 1 as an example.
(For the actual setting procedure, see [Setting procedure] ① to ⑩.)

1. Check the function selection set contents.

2. Switch to the FUNCTION SELECTION mode.
(Press D and C simultaneously in the remote controller OFF state.)

3. Refrigerant address specification
→ 00 (Outdoor unit specification)
(Unnecessary for single refrigerant system)
4. Unit address No. specification
   (Buttons B, C and D)
   → 00 (Indoor unit specification)

5. Register (Press button A.)
(Specified indoor unit → Fan operation)

6. Mode No. Selection
   → 02 (Thermistor selection)
7. Setting No. selection
   (Buttons B, C and D)
   → 3 (Built-in sensor on the remote controller)

8. Register (Press button A.)

9. Change refrigerant address and unit address No.?
   Yes
   No

10. Ending function display
   (Press buttons D and C simultaneously.)

[Setting procedure] (Set only when change is necessary.)
① Check the set contents of each mode. When the set contents of a mode were changed by function selection, the functions of that mode also change.
Check the set contents as described in steps ② to ⑦ and change the setting based on the entries in the Table 1 check field. For the factory settings, refer to the indoor unit installation manual.

② Set the remote controller to Off.
Press and hold down the D [FAN] and the C [TEMP. ▼] buttons at the same time for two seconds or longer.
“FUNCTION” blinks for a while, then the remote controller display changes to the display shown below.

③ Set the outdoor unit refrigerant address No.
When the B [TEMP. ▲] and C [TEMP. ▼] buttons are pressed, the refrigerant address No. decreases and increases between 00 and 15.
Set it to the refrigerant address No. whose function you want to select.
(This step is unnecessary for single refrigerant system.)
1. CONTROLS


* If the remote controller enters the OFF state after the “FUNCTION” and room temperature displays “ ” have flashes for two seconds, communication is probably abnormal. Make sure there are no noise sources near the transmission line.

NOTE: If you make a mistake during operation, end function selection by step ③ and repeat selection from step ③.

③ Set the indoor unit address No.
Press the ⑤ [FAN] button. The unit address No. display “– –” flashes.
When the ③ [TEMP. ▲] and ⑤ [TEMP. ▼] buttons are pressed, the unit address No. changes in the order of 00 ↔ 01 ↔ 02 ↔ 03 ↔ 04 ↔ AL. Set it to the unit address No. of the indoor unit whose functions you want to set.

Unit address No. display

* When setting mode 1 ~ 6, set the unit address No. to “00”.
* When setting modes 7 to 14:
  - When setting for each indoor unit, set the unit address No. to “01-04”.
  - When batch setting for all indoor units, set the unit address No. to “AL”.

⑤ Refrigerant address and unit address No. registration
Press the ② [ON/OFF] button. The refrigerant address and unit address No. are registered.
After a while, the mode No. display “– –” flashes.

Mode No. display

* When “ ” flashes at the room temperature display, the selected refrigerant address is not in the system. When “F” is displayed at the unit address No. display, and when it flashes together with the refrigerant address display, the selected unit address No. does not exist. Correctly set the refrigerant address and unit address No. by repeating steps ③ and ④.

When registered using the ② [ON/OFF], the registered indoor unit begins fan operation.
When you want to know the location of the indoor units of the unit address No. whose functions were selected, check here.
When the unit address No. is 00 or AL, all the indoor units of the selected refrigerant address perform the fan operation.

EX): When refrigerant address 00, unit address No. = 02 registered

Recheck the refrigerant address at the outdoor unit dip switches.

* When grouping by different refrigerant systems and an indoor unit other than the specified refrigerant address performs the fan operation, the refrigerant address set here is probably duplicated.
  Recheck the refrigerant address at the outdoor unit dip switches.

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

⑥ Mode No. selection
Select the mode No. you want to set with the ⑤ [TEMP. ▲] and ⑤ [TEMP. ▼] buttons. (Only the settable mode numbers can be selected.)

⑦ Select the setting contents of the selected mode.
When the ⑤ [FAN] button is pressed, the current setting No. flashes. Use this to check the currently set contents.
Select the setting No. using the ⑤ [TEMP. ▲] and ⑤ [TEMP. ▼] buttons.

⑧ The contents set at steps ⑤ to ⑦ are registered.
When the ⑤ [ON/OFF] button is pressed, the mode No. and setting No. flash and registration begins. The flashing mode No. and setting No. change to a steady light and setting ends.

* When “ ” flashes at the Mode No. display, communication is probably abnormal. Make sure there are no noise sources near the transmission line.

---

⑨ To select more functions, press the ⑤ [FAN] and repeat steps ⑤ to ⑦.

⑩ End function selection.
Press and hold down the ⑤ [TEMP. ▼] and ⑤ [FAN] buttons at the same time for two seconds or longer.
After a while, the function selection display disappears and the remote controller returns to the air conditioner off display.
* Do not operate the air conditioner from the remote controller for 30 seconds after the end of function selection.

NOTE: When the functions of an indoor unit were changed by function selection after the end of installation, always indicate the set contents by entering check marks or other marks in the appropriate check field of Table 1.
Make this setting only when the function settings need to be changed on CITY MULTI. (This setting cannot be made with M-Series and P-Series Control System. To make settings for M-Series and P-Series, refer to section 8 Function Selection for M-Series and P-Series.)

Set the functions of each indoor unit from the remote controller, as required. Refer to the Indoor unit Installation Manual for factory settings, mode No., and the setting No. of the indoor units.

NOTE: Be sure to write down any settings that you change performing the following steps.

### Setting the indoor unit Setting Value

<table>
<thead>
<tr>
<th>Steps</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Press the [ON/OFF] button to stop the operation of the air conditioner.</td>
</tr>
<tr>
<td>2</td>
<td>Press and hold down the [MODE] and the [FAN] buttons at the same time for two seconds or longer to check the current settings.</td>
</tr>
<tr>
<td>3</td>
<td>When the response has been received from the indoor unit, the current settings appear. If there is no response, nothing appears.</td>
</tr>
<tr>
<td></td>
<td><strong>Procedure A</strong></td>
</tr>
<tr>
<td></td>
<td>Air conditioner stops.</td>
</tr>
<tr>
<td></td>
<td>2 sec. [MODE] + [FAN]</td>
</tr>
<tr>
<td></td>
<td><strong>Waiting for response</strong></td>
</tr>
<tr>
<td></td>
<td><strong>No response</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Response is received.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Response has been received.</strong></td>
</tr>
<tr>
<td>4</td>
<td>Press the [TEMP. ▲] and the [TEMP. ▼] buttons to set the address of the indoor unit whose settings to be made. (0 to 50)</td>
</tr>
<tr>
<td>5</td>
<td>Press the [MODE] button, then press the [TEMP. ▲] and the [TEMP. ▼] buttons to set the Function Setting No. to be set. (000 to 255)</td>
</tr>
<tr>
<td>6</td>
<td>Press the [MODE] button, then press the [TEMP. ▲] and the [TEMP. ▼] buttons to set the Function Setting Value. to be set (00 to 15)</td>
</tr>
<tr>
<td>7</td>
<td>Press the [ON/OFF] button to set the settings.</td>
</tr>
</tbody>
</table>

8 If the set settings need to be changed, repeat steps 4 to 7.
To complete the settings, press the [MODE] and the [FAN] buttons at the same time for two seconds or longer.

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

---

### Checking the indoor unit Function Setting Value

1. Perform the Procedure A on the previous page.
2. Press the [TEMP. ▲] and the [TEMP. ▼] buttons to set the address of the indoor unit whose settings to be checked. (0 to 50)
3. Press the [MODE] button, then press the [TEMP. ▲] and the [TEMP. ▼] buttons to set the Function Setting No. to be checked. (000 to 255)
4. Press the [FAN] button to display the current Function Setting Value.

---

Response has been received.

[TEMP. ▲] [TEMP. ▼]

Indoor unit address setting

Function Setting No. setting

Function Setting Value setting

[ON/OFF]

Waiting for response

No response

The specified indoor unit does not exist.

Response has been received.

2 sec. [MODE] + [FAN]

Setting completed

The setting for the specified Function Setting No. has not been completed.

---

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


5. To check the settings, repeat steps 2 to 4.
   To complete the checking process, press the [MODE] and the [FAN] buttons at the same time for two seconds or longer.

![Image of control settings]

Response has been received.

9. Self diagnosis

Retrieve the error history of each unit using the Simple MA controller.

1. Switch to the self-diagnosis mode.
   When the [ON/OFF] button and the [TEMP. ▼] button are pressed for 5 seconds or longer, the figure shown below is displayed.

2. Set the address or refrigerant address No. you want to self-diagnosis.
   When the [TEMP. ▲] and [TEMP. ▼] are pressed, the address decreases and increases between 01 and 50 or 00 and 15. Set it to the address No. or refrigerant address No. you want to self-diagnosis.

![Image of self-diagnosis]

Response has been received.

The setting for the specified Function Setting No. has not been completed.

The specified indoor unit does not exist.

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


③ Self-diagnosis result display <Error history> (For the contents of the error code, refer to the indoor unit installation manual or service handbook.)

Error code 4 digits or error code 2 digits

Error detection attribute
Address 3 digits or unit address No. 2 digits

<When there is no error history>
<When opposite side does not exist>

④ Error history reset
The error history is displayed in ③ self-diagnosis results display.
When the ⑪ [FAN] button is pressed two times successively within three seconds, the self-diagnosis object address and refrigerant address flash.
When the error history was reset, the display shown below appears.
When error history reset failed, the error contents are displayed again.

⑤ Self-diagnosis reset
There are the following two ways of resetting self-diagnosis.
Press the ⑩ [ON/OFF] button and the ⑫ [TEMP. ▽] button simultaneously for 5 seconds or longer. → Resets self-diagnosis and returns to the state before self-diagnosis.
Press the ⑩ [ON/OFF] button. → Self-diagnosis resets and indoor units stop. (When operation is prohibited, this operation is ineffective.)

10 Remote Controller Check

When the air conditioner cannot be controlled from the Simple MA controller, use this function to check the remote controller.

① First check the power mark.
When normal voltage (DC12V) is not applied to the remote controller, the power mark goes off.
When the power mark is off, check the remote controller wiring and the indoor unit.

② Switch to the remote controller check mode.
When the ⑩ [TEMP. ▲] button and ⑪ [FAN] button are pressed simultaneously for 5 seconds or longer, the figure shown below is displayed.
When the ⑩ [ON/OFF] button is pressed, remote controller check begins.

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


③ Remote controller check result
  <When remote controller is normal>

Since there is no problem at the remote controller, check for other causes.

<When remote controller is faulty>

(Error display 1) “NG” flashes → Remote controller send/receive circuit abnormal

Remote controller switching is necessary.

When the problem is other than the checked remote controller

(Error display 2) “E3” “6833” “6832” flash → Cannot send

There is noise on the transmission line, or the indoor unit or another remote controller is faulty. Check the transmission line and the other remote controllers.

(Error display 3) “ERC” and data error count are displayed → Data error generation

“Data error count” is the difference between the number of bits of remote controller send data and the number of bits actually sent to the transmission line. In this case, the send data was disturbed by the noise, etc. Check the transmission line.

When data error count is 02
Remote controller send data
Send data on transmission line

④ Remote controller check reset
When the [TEMP. ▲] button and [FAN] button are pressed simultaneously for 5 seconds or longer, remote controller diagnosis is reset and the [HO] and run lamp flash and 30 seconds later the remote controller returns to its state before diagnosis.
1. CONTROLS

1-4. System Control Interface [MAC-333IF-E]

**Descriptions**

Enables to control multiple air conditioners from a (remote) location by connecting the On/Off contact point. It can also control the operation of the relay with error signals by connecting the MA remote controller PAR-32MAA-J.

**Applicable Models**

- MSZ-FH06/09/12/15NA
- MSZ-FH18NA2
- MSZ-FE09/12NA
- MSZ-EF09/12/15/18NA(B)(S)
- MSZ-GL06/09/12/15/18/24NA
- MSZ-D30/36NA
- MSY-GL09/12/15/18/24NA
- MSY-D30/36NA
- SLZ-KA09/12/15NA
- SEZ-KD09/12/15/18NA4
- MVZ-A09/12/15/18/24AA4
- PCA-A24KA6 *1
- PLA-A18/24BA6 *1
- PEA-A12/18AA6 *1
- PEAD-A24AA5 *1

*1 P series indoor units can be used in combination SUZ or MXZ outdoor units.

**Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>12V DC (supplied from indoor unit)</td>
</tr>
<tr>
<td>Operating conditions</td>
<td>Indoor only (ambient temperature: 0 to 40°C, no condensation)</td>
</tr>
<tr>
<td>Connection of MA smooth remote</td>
<td>Communication cable</td>
</tr>
<tr>
<td>Communication cable distance</td>
<td>2-wire (recommended: optional PAC remote controller cable PAC-YT81HC)</td>
</tr>
<tr>
<td>Indoor unit connecting cable</td>
<td>Dedicated 5-wire cable</td>
</tr>
<tr>
<td>Weight</td>
<td>360 g (including indoor unit connecting cable)</td>
</tr>
</tbody>
</table>

**Dimensions**

- Unit: mm
- Holes to fix the interface to the wall (2 places indicated by asterisks)
- 2000 mm
- 160 mm
- 15 mm
- 39.5 mm
- 13.5 mm
- 70 mm
- 54 mm

Due to continuing improvement, above specification may be subject to change without notice.
1. Before Installation

1.1. How to Use the SYSTEM CONTROL Interface.

**Functions**

- **Connecting with M-NET system (Fig. 2-1)**
  The room air conditioner can be managed centralized or individually by the system controller using M-NET communications control.

- **Used as wired remote controller (Fig. 2-2)**
  MA remote controller can be used as a wired remote controller.

- **Remote control (Fig. 2-3)**
  Contact signals enable inputting of ON/OFF, prohibiting/allowing operation, and heating/cooling.

- **Status indicator output (Fig. 2-4)**
  Signals of ON/OFF, error/normal, heater ON/OFF, and humidifier ON/OFF are output.

**Sample System Configuration**

![Diagram 2-1](image1)

![Diagram 2-2](image2)

![Diagram 2-3](image3)

![Diagram 2-4](image4)
2. Function and electric wiring of interface each part

1. Before Installation
1.1. How to Use the SYSTEM CONTROL Interface.

- **Functions**
  - Connecting with M-NET system (Fig. 2-1)
    The room air conditioner can be managed centralized or individually by the system controller using M-NET communications control.
  - Used as wired remote controller (Fig. 2-2)
    MA remote controller can be used as a wired remote controller.
  - Remote control (Fig. 2-3)
    Contact signals enable inputting of ON/OFF, prohibiting/allowing operation, and heating/cooling.
  - Status indicator output (Fig. 2-4)
    Signals of ON/OFF, error/normal, heater ON/OFF, and humidifier ON/OFF are output.

- **Sample System Configuration**

```
1. System controller, etc
2. SYSTEM CONTROL Interface
3. Indoor Unit
4. MA remote controller
5. Contract point
6. Relay
7. Coil
8. Power supply unit for M-NET transmission line
9. External power supply for DC12V
```

- **Electric Wiring**
  - To use centralized control by M-NET
    MELANS system controller
  - To use MA remote controller
    MA remote controller

- **Relay Items**
  - Relay items, such as heater and humidifier, etc. connected to the relay.
  - DC power supply (12V)

- **LEDs**
  - LED for checking communications with connected equipment
    "Refer to section 12 "Interface status monitor" for details.
  - LED for checking communications with connected equipment
    "Refer to section 12 "Interlace status monitor" for details.

- **Function Setting Switches**
  - Function setting switch A
    "Refer to section 3 "Dip Switch Details" for details.
  - Function setting switch B
    "Refer to section 3 "Dip Switch Details" for details.

- **Address Setting Switches**
  - M-NET address setting switch
    "Refer to section 7 "Connecting with M-NET system" for details.
  - Refrigerant address setting switch
    "Refer to section 7 "Connecting with MA remote controller" for details.

Due to continuing improvement, above specification may be subject to change without notice.
## 3. Dip Switch Details

<table>
<thead>
<tr>
<th>Functions</th>
<th>SW No.</th>
<th>Functions</th>
<th>OFF (Factory setting)</th>
<th>ON</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SW500-1</td>
<td>Not in use</td>
<td>— (Set to OFF)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>SW500-2</td>
<td>Turn on/off with power</td>
<td>Not available</td>
<td>Available</td>
</tr>
<tr>
<td></td>
<td>SW500-3</td>
<td>Room temperature detector</td>
<td>Indoor unit</td>
<td>MA remote controller</td>
</tr>
<tr>
<td></td>
<td>SW500-4</td>
<td>Output setting</td>
<td>Switching output of ON/OFF, error/normal, heater ON/OFF, and humidifier ON/OFF</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SW500-5</td>
<td>Input setting</td>
<td>Input of ON/OFF and prohibiting/allowing operation</td>
<td>Input of ON/OFF and heating/cooling</td>
</tr>
<tr>
<td></td>
<td>SW500-6</td>
<td>Interface status display switching</td>
<td>LE501: Confirmation of communications with indoor unit</td>
<td>LE501: Confirmation of communications with MA remote controller</td>
</tr>
<tr>
<td></td>
<td>SW500-7</td>
<td></td>
<td>LE502: Confirmation of communications with M-NET system controller</td>
<td>LE502: Extinguished</td>
</tr>
<tr>
<td></td>
<td>SW500-8</td>
<td>Not in use</td>
<td>— (Set to OFF)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>SW502-1</td>
<td>Output switching</td>
<td>DC12V output during operation or error, etc</td>
<td>DC12V output during stop or operating normally, etc</td>
</tr>
<tr>
<td></td>
<td>SW502-2</td>
<td>Input mode</td>
<td>Level contact</td>
<td>Pulse contact</td>
</tr>
<tr>
<td></td>
<td>SW502-3</td>
<td>Setting of range of prohibited operations by contact point</td>
<td>M-NET system controller ON/OFF operation allowed</td>
<td>M-NET system controller ON/OFF operation prohibited</td>
</tr>
<tr>
<td></td>
<td>SW502-4</td>
<td>Input switching</td>
<td>Running or operating the machine is prohibited, etc by short circuiting the level contact</td>
<td>Running or operating machine is prohibited, etc by level contact opening</td>
</tr>
<tr>
<td></td>
<td>SW502-5</td>
<td>Behavior when operation by contact point is prohibited</td>
<td>State before prohibition of operation by contact point</td>
<td>Air conditioner running stop</td>
</tr>
<tr>
<td></td>
<td>SW502-6</td>
<td>Behavior when prohibition of operation by contact point is canceled</td>
<td>State before canceling prohibition of operation by contact point</td>
<td>Running air conditioner</td>
</tr>
<tr>
<td></td>
<td>SW502-7</td>
<td>Not in use</td>
<td>— (Set to OFF)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>SW502-8</td>
<td>Setting when P series is mixed in the same group (only when running group operation using the MA remote controller)</td>
<td>No mixture</td>
<td>Mixed</td>
</tr>
</tbody>
</table>

---

*Function setting Switch A*

*Function setting Switch B*

---

---

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

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface unit [with connecting cable (5-core)]</td>
<td>1</td>
</tr>
<tr>
<td>Mounting cord clamps (medium)</td>
<td>1</td>
</tr>
<tr>
<td>Fasteners (for joining the wires)</td>
<td>4</td>
</tr>
<tr>
<td>Lead wires (3-core)</td>
<td>3</td>
</tr>
<tr>
<td>Mounting cord clamps (large)</td>
<td>2</td>
</tr>
<tr>
<td>Lead wires (3-core)</td>
<td>1</td>
</tr>
<tr>
<td>Screws for mounting 3.5×12</td>
<td>2</td>
</tr>
<tr>
<td>Screws for mounting 3.5×12 and 6.5 (Use when attaching the clamps to the interface unit)</td>
<td>4</td>
</tr>
<tr>
<td>Cable ties</td>
<td>9</td>
</tr>
<tr>
<td>Screws for mounting 4 x 10 (Use when fixing near the room air conditioner)</td>
<td>1</td>
</tr>
<tr>
<td>Screws for mounting 4 x 16 (Use when joining room air conditioner parts)</td>
<td>1</td>
</tr>
<tr>
<td>Screws for mounting 3.5×12 and 6.5 (Use when attaching the clamps to the interface unit)</td>
<td>4</td>
</tr>
<tr>
<td>2-core sheath cable 0.3mm² to 1.25mm² [AWG22 to 16]*</td>
<td>1</td>
</tr>
</tbody>
</table>

Item to be Prepare at the Installation Site

<table>
<thead>
<tr>
<th>Item to be Prepare at the Installation Site</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-NET communication cable</td>
<td>2-core shield cables CVVS/CPEVS, 1.25mm² [AWG16] or more. *</td>
</tr>
<tr>
<td></td>
<td>• When cross-wired by same terminal box, 1.25mm² [AWG16] is used. CPEVS: PE insulated PVC jacketed shielded communication cable</td>
</tr>
<tr>
<td></td>
<td>CVVS: PVC insulated PVC jacketed shielded control cable</td>
</tr>
<tr>
<td></td>
<td>PE: Polyethylene PVC; Polyvinyl chloride</td>
</tr>
<tr>
<td>Remote control cable (for connecting the ME Remote Controller)</td>
<td>2-core shield cables CVVS/CPEVS*</td>
</tr>
<tr>
<td></td>
<td>• When the distance from the interface unit is less than 10m: 0.3mm² [AWG22] or more.</td>
</tr>
<tr>
<td></td>
<td>• When the distance from the interface unit is not less than 10m: 1.25mm² [AWG16] or more.</td>
</tr>
<tr>
<td>Remote control cable (for connecting the MA Remote Controller)</td>
<td>2-core sheath cable 0.3mm² to 1.25mm² [AWG22 to 16]*</td>
</tr>
<tr>
<td>Signal cable (also used as extension cable)</td>
<td>Sheath cable 0.3mm² [AWG22] or more.</td>
</tr>
<tr>
<td></td>
<td>• When remote control: The extension cable of Lead wires</td>
</tr>
<tr>
<td></td>
<td>• When status signal output: The cable for relay connection, or cable for DC power</td>
</tr>
<tr>
<td>Related parts sold separately</td>
<td>Prepare the necessary number of parts sold separately as needed for your system.</td>
</tr>
</tbody>
</table>

* Please use cable with supplementary insulation.

Use wires which have insulation more than the MAX voltage.

MAX voltage is defined according to the law of the country where the interface is used.
1-4. System Control Interface [MAC-333IF-E], cont.

5. Connecting the SYSTEM CONTROL Interface to a room air conditioner

- Connect the interface unit 1 and the indoor control board of a room air conditioner using the connecting cable (5-core) that comes with the interface unit 1.

![Diagram of Connecting the SYSTEM CONTROL Interface to a room air conditioner]

- The connecting cable (5-core) connected to a room air conditioner should be wired according to the room air conditioner installation manual.

**Notes**
- Extending or shortening the connecting cable (5-core) that comes out of the interface unit 1 can cause it to malfunction. Also, keep the connecting cable (5-core) as far as possible away from the electrical wires and ground wire. Do not bundle them together.
- To prevent the board from being damaged by static electricity, always remove static electricity before starting work.

6. Connecting the SYSTEM CONTROL Interface with each system

(For details on each system, see the relevant instruction manual.)

- Screw the mounting cord clamp 1-4 according to the thickness of the connecting cable used for each system. Fasten the cable tie 5 as shown in the figure to prevent undesirable movement of the connecting cable.

- The connecting cable (5-core) connected to a room air conditioner should be mounted at the room air conditioner or its vicinity. If the screw for the cable mount of the room air conditioner cannot be used, replace with the screw for mounting 1.

**Notes**
- If the connecting cable is not securely mounted, the connector may come off, break, or malfunction.
- The dip switch (SW500, SW502) and the rotary switch (SW501, SW510, SW580) on the interface unit 1 do not operate if they are not set correctly.

- Conduct the settings of the interface unit 1 dip switch (SW500, SW502) and rotary switch (SW501, SW510, SW580) before turning on the power.
7. Connecting with M-NET system

Connecting the SYSTEM CONTROL Interface to M-NET cable

The room air conditioner can be managed centralized or individually by the system controller using M-NET communications control.

- To connect with the system controller and ME remote controller, connect the M-NET communication cable A or ME remote control cable B with TB520. (It is unpolarized.) Connect 2 core communication cable with A1/B1 or A2/B2. (There will be no problems with connecting to either one.)
- Cross the shield portion of each connecting cable using the S terminal only when cross wiring the communication cables.
- After wiring is complete, mount securely with any of mounting cord clamp to , and fix with cable tie as shown in the figure.

Note
When cross-wired by the same terminal box, a 1.25mm² [AWG16] line is used.

- To prevent penetration by condensation, insects, etc., seal the opening well with putty.
- Setting when M-NET is connected

<table>
<thead>
<tr>
<th>SW No.</th>
<th>Address</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW510</td>
<td>M-NET address 10s position 1s position</td>
<td>SW510 sets the 10s position of the address and SW501 sets the 1s position of the address. (Address setting can be set from 01 ~ 50.) For example, to set a unit to the address 25, set SW510 to “2” and SW501 to “5.” <em>The figure to the left is for address 1.</em></td>
</tr>
<tr>
<td>SW501</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SW580</td>
<td>Refrigerant address</td>
<td>When the MA remote controller is not used, set the refrigerant address (SW580) to “1.”</td>
</tr>
</tbody>
</table>

*To prevent penetration by condensation, insects, etc., seal the opening well with putty.

Notes
- Electrical work should be performed in accordance with the Technical Standards Regarding Electrical Equipment and the Interior Wiring Standards.
- Connecting wires and remote control cables should be located as far away from other electrical wiring as possible. Placing them too closely together could cause a malfunction.
- To connect with the M-NET system and MA remote controller, connection is limited to only one unit of the MA remote controller.
- Do not put in the same group as City Multi or P series.
- Test run cannot be conducted from the ME remote controller or the system controller.

Due to continuing improvement, above specification may be subject to change without notice.
8. Connecting with MA remote controller

A room air conditioner can be operated with the wired remote control.

- To connect with the MA remote controller, connect the MA remote control cable with TB580. (It is unpolarized.)
- When more than one unit of room air conditioner is operated in a group, make a cross wire connection at TB580 with the MA remote control cable.
- The MA remote controller can carry out simultaneous control of up to 16 sets of room air conditioners.
- Up to two MA controllers can be connected in one group.
- Wiring length from the interface at the refrigerant address “0” to the MA remote controller should be less than 10m [33ft].
- To operate the room air conditioner in a group, make the total length of wiring for the MA remote controller less than 50m [164ft].

Notes:
- Be sure to set the “Auto Heating/Cooling Display Setting” of the MA remote controller OFF before use.
  * For details on the “Auto Heating/Cooling Display Setting”, refer to the MA remote controller instruction manual.
  * When the “Auto Heating/Cooling Display Setting” is ON, the remote controller display may differ from the actual operating status of the unit.
- A test run cannot be initiated using the test run switch on the MA remote controller.
- Group control with CITY MULTI is unable.

Setting when MA remote controller is connected

- Setup of an refrigerant address

<table>
<thead>
<tr>
<th>SW No.</th>
<th>Refrigerant address</th>
<th>Comments</th>
</tr>
</thead>
</table>
| SW580  | Address can be set from 0 to 15 | • Set the refrigerant address of the unit that supplies electric power to the MA remote controller to “0.”
• When carrying out group operation of two of more room air conditioners, set different refrigerant addresses within the group.
* A to F of the rotary switch correspond to refrigerant addresses 10 to 15. |

- Setup of Room temperature detector position

<table>
<thead>
<tr>
<th>Functions</th>
<th>SW No.</th>
<th>Operating details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room temperature detector position</td>
<td>SW500-3: OFF</td>
<td>• Temperature detected by suction temperature sensor of the unit is made to be room temperature.</td>
</tr>
<tr>
<td></td>
<td>SW500-3: ON</td>
<td>• Temperature detected by temperature sensor of the remote controller is made to be room temperature.</td>
</tr>
</tbody>
</table>

- Setting when P series is mixed in the same group (only when running group operation using the MA remote controller)

<table>
<thead>
<tr>
<th>Functions</th>
<th>SW No.</th>
<th>Operating details</th>
</tr>
</thead>
<tbody>
<tr>
<td>P series is mixed in the same group</td>
<td>SW502</td>
<td>• Set to ON when P series is mixed in the same group.</td>
</tr>
<tr>
<td></td>
<td>SW502-8: OFF</td>
<td>• Set to OFF when P series is not mixed in the same group.</td>
</tr>
<tr>
<td></td>
<td>SW502-8: ON</td>
<td>• Set to ON when P series is mixed in the same group.</td>
</tr>
</tbody>
</table>
9. Remote Control

Connecting the SYSTEM CONTROL Interface

You can turn room air conditioner on/off, prohibit/allow manual operations, or input of heating/cooling with the ON/OFF switch.

• Connect CN591 with Switch1 and Switch2 as shown in figure above.
• Connect the supplied lead wires (3-core) to the connector CN591 on the interface unit.
• Connect the supplied lead wires (3-core) to the connecting cable in the interface as shown in the figure on the right side.
• Wiring length from the interface to the Switch1 and Switch2 should be less than 50m [164ft].
• Procure and wire locally the remote control part including the switches.
• For each connection pattern, refer to “Setting when using remote control.”
*When using a Card key/Coin timer, make connections shown in the figure to the right.

Due to continuing improvement, above specification may be subject to change without notice.
## 1. CONTROLS

### 1-4. System Control Interface [MAC-333IF-E], cont.

**Setting when using remote control (Select one between No.1 through 5 and set.)**

*Set No.1, No.6, and No.7 when using the card key/coin timer.*

<table>
<thead>
<tr>
<th>No.</th>
<th>Functions</th>
<th>SW No.</th>
<th>How to use</th>
<th>Operating details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ON/OFF Manual operation prohibited/allowed (Level Contact)</td>
<td>SW500</td>
<td>Switch1: ON/OFF</td>
<td>• Unit is turned on when Switch1 has a short-circuit, and off when open. (Regardless of the Switch1 operation condition, the latest operation is prioritized.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SW502</td>
<td>Switch2: Manual operation prohibited/allowed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>CN591</td>
<td></td>
<td>• When Switch2 has a short-circuit, manual operation is prohibited.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• When SW502-4 is turned on, the opening and short-circuiting of Switch1 and Switch2 result in their operating in the opposite manner.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><em>When manual operation is prohibited, ON/OFF operation of the wireless remote controller, the MA remote controller, and the ME remote controller is prohibited. (Operation from Switch1 and M-NET system controller is possible.)</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Every time Switch1 is pressed, ON/OFF is switched over. (Regardless of the Switch1 operation condition, the latest operation is prioritized.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Every time Switch1 is pressed, the manual operation allowed is switched over.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><em>When the manual operation is prohibited, ON/OFF operation of the wireless remote controller, the MA remote controller, and the ME remote controller is prohibited. (Operation from Switch1 and M-NET system controller is possible.)</em></td>
</tr>
<tr>
<td>2</td>
<td>ON/OFF Manual operation prohibited/allowed (Pulse Contact)</td>
<td>SW500</td>
<td>Switch1: ON/OFF</td>
<td>• Unit is turned on when Switch1 has a short-circuit, and off when open. (Regardless of the Switch1 operation condition, the latest operation is prioritized.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SW502</td>
<td>Switch2: Manual operation prohibited/allowed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>CN591</td>
<td></td>
<td>• When Switch2 has a short-circuit, manual operation is prohibited.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• When SW502-4 is turned on, the opening and short-circuiting of Switch1 and Switch2 result in their operating in the opposite manner.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><em>When manual operation is prohibited, ON/OFF operation of the wireless remote controller, the MA remote controller, and the ME remote controller is prohibited. (Operation from Switch1 and M-NET system controller is possible.)</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Every time Switch1 is pressed, ON/OFF is switched over. (Regardless of the Switch1 operation condition, the latest operation is prioritized.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Every time Switch1 is pressed, the manual operation allowed is switched over.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><em>When the manual operation is prohibited, ON/OFF operation of the wireless remote controller, the MA remote controller, and the ME remote controller is prohibited. (Operation from Switch1 and M-NET system controller is possible.)</em></td>
</tr>
<tr>
<td>3</td>
<td>ON/OFF Remote operation/ Manual operation (Level Contact)</td>
<td>SW500</td>
<td>Switch1: ON/OFF</td>
<td>• Unit is turned on when Switch1 has a short-circuit, and off when open. (Regardless of the Switch1 operation condition, the latest operation is prioritized.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SW502</td>
<td>Switch2: Manual operation prohibited/allowed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>CN591</td>
<td></td>
<td>• When Switch2 has a short-circuit, manual operation is prohibited.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• When SW502-4 is turned on, the opening and short-circuiting of Switch1 and Switch2 result in their operating in the opposite manner.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><em>In remote operation, ON/OFF operation from the wireless remote controller, the MA remote controller, the ME remote controller, and the M-NET system controller cannot be used.</em></td>
</tr>
<tr>
<td>4</td>
<td>ON, OFF (Pulse Contact)</td>
<td>SW500</td>
<td>Switch1: ON/OFF</td>
<td>• Unit is turned on when Switch1 has a short-circuit, and off when open. (Regardless of the Switch1 operation condition, the latest operation is prioritized.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SW502</td>
<td>Switch2: OFF</td>
<td>• Unit is turned off no matter how many times Switch2 is pressed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>And regardless of the Switch1, Switch2 operation condition, the latest operation is prioritized.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CN591</td>
<td></td>
<td>• On/Off operation from the wireless remote controller, the ME remote controller, the MA remote controller, and the M-NET system controller is enabled.</td>
</tr>
</tbody>
</table>

**Setting operation (Valid only for No.1 and No.2. The following 2 functions can be used at the same time.)**

<table>
<thead>
<tr>
<th>No.</th>
<th>Functions</th>
<th>SW No.</th>
<th>How to use</th>
<th>Operating details</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Behavior when operation is prohibited.</td>
<td>SW502</td>
<td>ON OFF</td>
<td>Operational status of room air conditioner when manual operation is prohibited can be set.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SW502-6: OFF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• When manual operation is prohibited by Switch2, operational status is maintained as that before manual operation is prohibited.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SW502-5: ON</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• When manual operation is prohibited by Switch2, the room air conditioner turns off.</td>
</tr>
</tbody>
</table>

| 7   | Behavior when prohibition of operation is canceled. | SW502 | ON OFF | Operational status of room air conditioner when prohibition of manual operation is canceled can be set. |
|     |           |        |            | SW502-6: OFF |
|     |           |        |            | • When prohibition of manual operation is canceled by Switch2, operational status is maintained as that before cancelation. |
|     |           |        |            | SW502-6: ON |
|     |           |        |            | • When prohibition of manual operation is canceled by Switch2, the room air conditioner turns on. |

**Setting operation (Valid only for No.1 and No.2. The following 2 functions can be used at the same time.)**

<table>
<thead>
<tr>
<th>No.</th>
<th>Functions</th>
<th>SW No.</th>
<th>How to use</th>
<th>Operating details</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Behavior when operation is prohibited.</td>
<td>SW502</td>
<td>ON OFF</td>
<td>Operational status of room air conditioner when manual operation is prohibited can be set.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SW502-6: OFF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• When manual operation is prohibited by Switch2, operational status is maintained as that before manual operation is prohibited.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SW502-5: ON</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• When manual operation is prohibited by Switch2, the room air conditioner turns off.</td>
</tr>
</tbody>
</table>

| 7   | Behavior when prohibition of operation is canceled. | SW502 | ON OFF | Operational status of room air conditioner when prohibition of manual operation is canceled can be set. |
|     |           |        |            | SW502-6: OFF |
|     |           |        |            | • When prohibition of manual operation is canceled by Switch2, operational status is maintained as that before cancelation. |
|     |           |        |            | SW502-6: ON |
|     |           |        |            | • When prohibition of manual operation is canceled by Switch2, the room air conditioner turns on. |

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

1-4. System Control Interface [MAC-333IF-E], cont.

10. Setting Signal Output

Connecting the SYSTEM CONTROL Interface
Each relay can be turned ON/OFF by synchronizing with the room air conditioner’s ON/OFF, error/normal, Heater ON/Heater OFF, and Humidifier ON/Humidifier OFF.

Indoor unit

Interface unit

Please use the cable of 0.5mm² [AWG20] or more.
The cable must fit into TB530 and meet DC12V power supply.

- Connecting terminal TB530 for power supply is polarized, so confirm proper polarity of the terminals before connecting.
- Do not connect DC12V from the DC power supply to TB571.
- Confirm polarity when using a diode built-in relay. C of TB571 is electropositive potential φ, and R1 and R2 are negative potential φ.

For TB571 and TB530, insert wiring after inserting the flathead screwdriver into the terminal.
- Appropriate electric wire for TB571 and TB530 is as follows. Stranded wire: 0.3mm² to 1.25mm² [AWG22 to 16] Solid wire: ø0.4mm to ø1.2mm [ø1/64in. to ø3/64in.]
- Peeling dimension of the electric wire for TB571 and TB530 is 7mm to 10mm [9/32in. to 25/64in.],
- Wiring length from the interface to Relay 1 and Relay 2 should be less than 50m [164ft].

Setting when using Status Signal Output

<table>
<thead>
<tr>
<th>Functions</th>
<th>SW No.</th>
<th>Operating details</th>
</tr>
</thead>
</table>
| ON/OFF, Error/Normal Output | SW500 | • Relay 1 is on when room air conditioner is on, and off when room air conditioner is off.  
• Relay 2 is on when room air conditioner is in error, and off when room air conditioner is operating normally.  
SW502-1: OFF  
• Relay 1 and 2 behavior are opposite of those above. |
| ON/OFF, Heater Control Output | SW500 | • Relay 1 is on when room air conditioner is on, and off when room air conditioner is off.  
• When the air conditioner runs in the heating (automatic heating) mode and room temperature becomes the set temperature - 4.5 °F (2.5 °C) or lower, the Relay 2 (heater) turns on.  
When the air conditioner runs in a mode other than the heating (automatic heating) or it is OFF, or when room temperature becomes the set temperature or higher, the Relay 2 (heater) turns off.  
SW502-1: ON  
• Relay 1 and 2 behavior are opposite of those above. |
| ON/OFF, Humidifier Control Output | SW500 | • Relay 1 is on when room air conditioner is on, and off when room air conditioner is off.  
• When the air conditioner runs in the heating (automatic heating) mode, Relay 2 (humidifier) turns on. When the air conditioner runs in a mode other than heating (automatic heating) or it is OFF, Relay 2 (humidifier) turns off.  
SW502-1: ON  
• Relay 1 and 2 behavior are opposite of those above. |
| Heater Control, Humidifier Control Output | SW500 | • When the air conditioner runs in the heating (automatic heating) mode and room temperature becomes the set temperature - 4.5 °F (2.5 °C) or lower, Relay 1 (heater) turns on.  
When the air conditioner runs in a mode other than the heating (automatic heating) or it is OFF, or when room temperature becomes the set temperature or higher, Relay 1 (heater) turns off.  
• When the air conditioner runs in the heating (automatic heating) mode, Relay 2 (humidifier) turns on. When the air conditioner runs in a mode other than heating (automatic heating) or OFF, Relay 2 (humidifier) turns off.  
SW502-1: ON  
• Relay 1 and 2 behavior are opposite of those above. |
11. Turn on/off with power

The room air conditioner turns on when power is supplied.

- When using for the first time, set to the operational status of your choice with the remote controller and leave the power off for 1 minute.
- When not used for a long period of time, you should set to the operational status of your choice again with the remote controller.

<table>
<thead>
<tr>
<th>Functions</th>
<th>SW No.</th>
<th>Operating details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turn on/off with power</td>
<td>SW500</td>
<td>After the power is supplied, the room air conditioner resumes working in the previous running condition. When AUTO RESTART FUNCTION is not set to the room air conditioner, it remains off. SW500-2: ON.</td>
</tr>
<tr>
<td></td>
<td>SW500-2</td>
<td>The room air conditioner turns on when power is supplied.</td>
</tr>
</tbody>
</table>

Notes
- The turn on/off with power function cannot be used when connected to multiple outdoor units.
- When starting two or more room air conditioners by using the turn on/off with power function, make the system so they do not recover simultaneously. (To avoid inrush current, start sequentially.)

12. Interface status monitor

You can check the status of the interface unit by the LED lamp on the interface unit board.

- Use the table below to check communications. If communications cannot be carried out normally, check that the relevant communications line is not disconnected from the connector or terminal box.

<table>
<thead>
<tr>
<th>Functions</th>
<th>SW No.</th>
<th>Operating details</th>
</tr>
</thead>
</table>
| Interface status monitor   | SW500  | SW500-7: OFF  
  ● LE501 (Orange): When blinking at an interval of about 1 second, the interface unit is communicating normally with the room air conditioner. When the lamp is off, the Interface unit is not communicating normally with the room air conditioner.  
  ● LE502 (Red): When blinking at an interval of about 1 minute, the Interface unit is communicating normally with the M-NET controller. When the lamp is off, the Interface unit is not communicating normally with the M-NET controller.  

  SW500-7: ON  
  ● LE501 (Orange): When blinking at an interval of about 10 second, the Interface unit is communicating normally with the MA remote controller. When the lamp is off, the Interface unit is not communicating normally with the MA remote controller.  
  ● LE502 (Red): Extinguished  
  * LE581 (Orange) displays the following status irrespective whether SW500-7 is on or off.  
  * When lit, power is supplied to the MA remote controller from the Interface unit. When extinguished, power is not supplied.  

* LE581 (Orange) displays the following status irrespective whether SW500-7 is on or off.  
* When lit, power is supplied to the MA remote controller from the Interface unit. When extinguished, power is not supplied.
1. CONTROLS

1-4. System Control Interface [MAC-333IF-E], cont.

13. Mounting the SYSTEM CONTROL Interface Unit

Notes
- The Interface unit should be placed in a location where the connecting cable (5-core) from the interface unit can reach an indoor unit.
- The device will not function properly if the connecting cable is extended, so the connecting cable (5-core) should not be extended.
- Mount the interface unit securely to a pillar or wall using 2 or more screws.

Attach the connecting cable (5-core) of the interface unit here. Store extra connecting cable (5-core) in the ductwork space behind the air conditioner.
If there is any slack in the connecting cable (5-core), use a fastener to keep it in place.

When Mounting Directly to a Wall
Mount the interface unit case to the wall using the mounting screws.

When the interface unit is mounted above an indoor unit, it should be positioned 40 mm [1-9/16in.] or more away from the unit to ensure that ceiling grills can be removed.

When mounting the interface unit inside a ceiling
When mounting the interface unit inside a ceiling or wall, install an access door to facilitate maintenance.

* When mounting the interface unit using a cushioning material, be sure to mount it in a location where it will not fall.

14. Notes Regarding Use

The following control information should be thoroughly explained and provided to the users of this device. (Please provide these instructions to the user once the installation is complete.)

This Interface unit operates room air conditioners using the controls of a City-Multi or P series, but there are several limitations imposed as a result of the functional differences between room air conditioners and packaged air conditioners.

1. When operating the system using a System Controller, MA Remote Controller, or ME Remote Controller these operations will not appear on the display of the wireless remote controller.

2. When original dehumidification mode is set with the remote controller attached to the room air conditioner, “Dry” is displayed because there is no mode corresponding to dehumidification on the MA remote controller, ME remote controller, and the system controller.

3. Because the temperature range of the room air conditioners is broader than a System Controller, MA Remote Controller, or ME Remote Controller, when the room air conditioners is set to lower than 17°C (63°F) or higher than 30°C (87°F), the temperature display on the a System Controller, MA Remote Controller, or ME Remote Controller will show the minimum or maximum temperature that can be set. (For example, even if the room air conditioner is set to cool a room to 16°C (61°F), the display on a System Controller, MA Remote controller, or ME Remote Controller may read “17°C” (63°F)).

4. Timer operations should be set using only the remote controller that came with the room air conditioners or the a System Controller, MA Remote Controller, or ME Remote Controller. If both are used to set the timer to the same time, the timer will not function properly.

5. When “Manual operation prohibited” (ON/OFF, setting temperature, operation mode) is set with the system controller, the corresponding operation by the remote controller attached to the room air conditioner is not accepted, but allowed operation is reflected. A beep sounds during operation to confirm reception.

6. A part of functions including the operation of horizontal air blow direction cannot be used from the ME remote controller, the system controller, and the MA remote controller.

15. Specifications

<table>
<thead>
<tr>
<th>Indoor unit side</th>
<th>Power supply unit side</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input voltage</td>
<td>12V</td>
</tr>
<tr>
<td>Power consumption</td>
<td>1.8W</td>
</tr>
<tr>
<td>Input current</td>
<td>0.15A</td>
</tr>
<tr>
<td>Input voltage</td>
<td>12V</td>
</tr>
<tr>
<td>Power consumption</td>
<td>4.8W</td>
</tr>
<tr>
<td>Input current</td>
<td>0.4A</td>
</tr>
</tbody>
</table>

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

1-5. Wireless Adapter [PAC-WHS01WF-E]

Photo

Descriptions

Allows for a Mitsubishi Electric indoor unit to communicate with the kumo cloud™ app and web.

Applicable Models

- MSZ-FH06/09/12/15NA
- MSZ-FH18NA2
- MSZ-EF09/12/15/18NAW(B)(S)
- MSZ-GL06/09/12/15/18/24NA
- MSZ-D30/36NA
- MSZ-GL09/12/15/18/24NA
- MSZ-D30/36NA

- SLZ-KA09/12/15NA
- SEZ-KD9/12/15/18NA4
- MVZ-A09/12/15/18/24AA4
- PKA-A12/18HA6
- PKA-A24/30/36KA6
- PCA-A24/30/36/42KA6
- PLA-A12/18/24/30/36/42BA6
- PEA-A12/18AA6
- PEAD-A24/30/36/42AA5
- PVA-A30/36/42AA4

Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Voltage</td>
<td>DC12.7V (from indoor unit)</td>
</tr>
<tr>
<td>Power consumption</td>
<td>MAX 2W</td>
</tr>
<tr>
<td>Size W×H×D (mm,inch)</td>
<td>89×48.6×19.2, 3.5×1.9×0.8</td>
</tr>
<tr>
<td>Weight</td>
<td>105g, 3.7oz (including cable)</td>
</tr>
<tr>
<td>RF channel</td>
<td>1ch ~ 11ch</td>
</tr>
<tr>
<td>Radio protocol</td>
<td>IEEE 802.11b/g/n (20)</td>
</tr>
<tr>
<td>Encryption</td>
<td>AES</td>
</tr>
<tr>
<td>Authentication</td>
<td>PSK</td>
</tr>
</tbody>
</table>

Components

- Interface unit (with connecting cable (5-core)) 1
- Mounting cord clamp 1
- Screw for mounting 3.5×16 1
- Fastener (for bundling the wires) 1
- Screw for mounting 4×16 1

No | Item | Description
---|------|-------------
1  | WPS switch | It activates WPS.
2  | RESET switch | It resets the system and ALL settings.
3  | LED1 (Green) | It shows the wireless communication state.
4  | LED2 (Orange) | It shows the PAC-WHS01WF-E state.
5  | LED3 (Green) | It shows the local communication state.
Mitsubishi Electric’s Wi-Fi Interface is designed for communication to Mitsubishi Electric’s Wi-Fi service. Third party Wi-Fi interface cannot connect to Mitsubishi Electric’s Wi-Fi service. Mitsubishi Electric is not responsible for any (i) underperformance of a system or any product; (ii) system or product fault; or (iii) loss or damage to any system or product; which is caused by or arises from connection to and/or use of any third party Wi-Fi interface or any third party Wi-Fi service with Mitsubishi Electric equipment.
1. Connecting the Wi-Fi interface

(For details on each system, see the relevant instruction manual.)

- Before dismantling the indoor unit: Turn off and verify the power has been disconnected to the Complete air-conditioning system.
- Dismantle the indoor unit in accordance with the service manual and locate CN105 on the Main control PCB.
- The connecting cable (5-core) connected to a room air conditioner (CN105) should be mounted at the room air conditioner or its vicinity.
- Cable length outside air conditioner: less than 50 cm, 19.7 inch.

---

**Do not install the Wi-Fi interface inside the indoor unit.**

---

**Establishing Wi-Fi connection**

After connecting the Wi-Fi interface to the air conditioner and reassembling the system, the Wi-Fi interface must register with the access point or Wi-Fi router (to communicate with the server). For this Wi-Fi interface, the use of WPS-Push is recommended. (Refer to 6.)

1) Hold down the WPS switch on the Wi-Fi interface for about 2 seconds to activate WPS-Push. When WPS-Push on the Wi-Fi interface is ready to communicate with the access point, LED 1 blinks at a 0.5-second interval.
2) Activate WPS-Push on the access point.
3) When WPS-Push is successfully enabled, LED 1 lights up for 5 seconds. If it failed, LED 2 lights up for 5 seconds, so try again from step 1.

**Main Causes that WPS failed are as follows.**

Communication distance (from the Wi-Fi interface to access point), access point settings (encryption, authentication, limit of connections, etc.)

Refer to the instruction manual for more information.
2. LED pattern

<table>
<thead>
<tr>
<th>Description</th>
<th>LED1</th>
<th>LED2</th>
<th>LED3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power is ON or software downloaded</td>
<td>(0.5-sec interval)</td>
<td>(0.5-sec interval)</td>
<td>(0.5-sec interval)</td>
</tr>
<tr>
<td>ALL settings reset</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>WPS activated (PBC)</td>
<td>(0.5-sec interval)</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>WPS activated (PIN)</td>
<td>(0.2-sec interval)</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>WPS enabled</td>
<td>● (5-sec)</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>WPS failed</td>
<td>○</td>
<td>● (5 sec)</td>
<td>○</td>
</tr>
<tr>
<td>Server and access point communication connected, and air conditioner</td>
<td>(once or twice every 5 sec)</td>
<td>(0.5-sec interval)</td>
<td>○</td>
</tr>
<tr>
<td>communication failed</td>
<td>○</td>
<td>● (5-sec interval)</td>
<td>○</td>
</tr>
<tr>
<td>Server and access point communication connected, and air conditioner</td>
<td>(once or twice every 5 sec)</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>communication starting up</td>
<td>○</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Server communication failed, and air conditioner communication connected</td>
<td>○</td>
<td>(0.5-sec interval)</td>
<td>(once every 5 sec)</td>
</tr>
<tr>
<td>Server communication or access point communication failed, and air</td>
<td>○</td>
<td>(0.5-sec interval)</td>
<td>●</td>
</tr>
<tr>
<td>conditioner communication failed, and air conditioner communication starting</td>
<td>○</td>
<td>(0.5-sec interval)</td>
<td>○</td>
</tr>
<tr>
<td>up</td>
<td>○</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Access point communication failed, and air conditioner communication</td>
<td>○</td>
<td>○</td>
<td>(once every 5 sec)</td>
</tr>
<tr>
<td>connected</td>
<td>○</td>
<td>○</td>
<td>(once every 5 sec)</td>
</tr>
</tbody>
</table>

3. Switch Function

(1) WPS switch
   The WPS switch is used for pairing the Wi-Fi interface with the access point. There are two types of WPS: push button configuration (WPS-Push) and PIN code method (WPS-PIN).
   - **WPS-Push**
     Hold down the WPS switch for 2 seconds to start WPS-Push pairing.
     When WPS-Push is enabled on the Wi-Fi interface, LED1 starts flashing green (0.5-sec interval) and the pairing can be completed by enabling WPS-Push on the access point.
   - **WPS-PIN**
     Hold down the WPS switch for 15 seconds to start WPS-PIN pairing.
     When WPS-PIN is enabled on the Wi-Fi interface, LED1 starts flashing green (0.2-sec interval) and the pairing can be completed by enabling WPS-PIN on the access point.
     Before using WPS-PIN, the PIN code of the Wi-Fi interface needs to be set on the access point.

   **This product is only compatible with the access point that supports WPS.**

(2) RESET switch
   - Hold down the RESET switch for 2 seconds to reboot the system.
   - Hold down the RESET switch for 15 seconds to initialize the Wi-Fi interface to the factory default.

   **When the Wi-Fi interface is reset to the factory default, ALL the configuration information will be lost. Take great care in implementing this operation.
1. CONTROLS

1-5. Wireless Adapter [PAC-WHS01WF-E], cont.

**Photo**

![Wireless Adapter](image)

**Descriptions**

Allows a HVAC Thermostat or I/O Controller to control a Mitsubishi Electric Cooling & Heating CITY MULTI® or M-Series or P-Series indoor unit.

**Applicable Models**

- MSZ-FH06/09/12/15NA
- MSZ-FH18NA2
- MSZ-EF09/12/15/18NAW(B)(S)
- MSZ-GL06/09/12/15/18/24NA
- MSZ-D30/36NA
- MSZ-D30/36NA
- MSY-GL09/12/15/24/24NA
- MSY-GL09/12/15/24/24NA
- SLZ-KA09/12/15NA
- SEZ-KD09/12/15/18NA4
- MVZ-A09/12/15/18/24AA4
- PKA-A12/18HA6
- PKA-A24/30/36KA6
- PAC-A24/30/36/42KA6
- PLA-A12/18/24/30/36/42BA6
- PEA-A12/18AA6
- PEAD-A24/30/36/42AA5
- PVA-A30/36/42AA4

**Specifications**

<table>
<thead>
<tr>
<th>Indoor unit mode</th>
<th>Cool, Heat, Fan, and Off</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide 3 input terminals to control fan speed control</td>
<td>High, Medium, Low</td>
</tr>
<tr>
<td>Addressing</td>
<td>No addressing required</td>
</tr>
<tr>
<td>Connection</td>
<td>CN105 - IT Terminal</td>
</tr>
<tr>
<td>Dimensions (H x W x D) [in]</td>
<td>3.96 x 3.17 x 0.93</td>
</tr>
<tr>
<td>Terminal Block</td>
<td>20 - 30 VAC Rated</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

![Dimension Diagram]

Due to continuing improvement, above specification may be subject to change without notice.
Warning: Thermostat should be configured for use with a conventional system (not heat pump).

Note: When either Y2 or W2 is left unconnected, it is recommended to set SW2-6 to the OFF position.

1. All wiring shown should be performed with 18 AWG thermostat wire.
2. Terminals on the PAC-US444CN-1 support 20-30VAC.
3. High/medium/low fan signals are optional, and may not be available on all thermostat models.
4. W2 and Y2 signals are optional, and may be omitted for single-stage thermostats.

Example 1: Two-stage Cooling and Heating

Note: When both Y2 and W2 are connected, it is recommended to set SW2-6 to the ON position.
Example 2: Single-stage Cooling and Heating

Note: When either Y2 or W2 is left unconnected, it is recommended to set SW2-6 to the OFF position.

Example 3: Single-stage Cooling and Heating with Dedicated Fan Speed Relays

Note: When connecting only first stage signals (Y1/W1), it is recommended to set SW2-6 to the OFF position.
Example 4: Single-stage Cooling with Alternate Primary Heating Source

Note: For this configuration, it is recommended to set SW2-6 to the OFF position.

Follow the wiring from example 2, with the following adjustments:

1. Connect thermostat W1 to the alternate heat source.
2. Connect the thermostat W2 terminal to the PAC-US444CN-1 W1 terminal.

<table>
<thead>
<tr>
<th>Connector</th>
<th>Purpose</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC</td>
<td>Common (In)</td>
<td>C</td>
</tr>
<tr>
<td>C</td>
<td>Common (Out)</td>
<td>C</td>
</tr>
<tr>
<td>TR</td>
<td>24VAC (In)</td>
<td>R</td>
</tr>
<tr>
<td>R</td>
<td>24VAC (Out)</td>
<td>R</td>
</tr>
<tr>
<td>G3</td>
<td>Fan High</td>
<td>High Fan Speed</td>
</tr>
<tr>
<td>G2</td>
<td>Fan Medium</td>
<td>Medium Fan Speed</td>
</tr>
<tr>
<td>G1</td>
<td>Fan Low</td>
<td>Low Fan Speed</td>
</tr>
<tr>
<td>Y2</td>
<td>Y2</td>
<td>Stage 2 Cooling</td>
</tr>
<tr>
<td>Y1</td>
<td>Y1</td>
<td>Stage 1 Cooling</td>
</tr>
<tr>
<td>W2</td>
<td>W2</td>
<td>Stage 2 Heating</td>
</tr>
<tr>
<td>W1</td>
<td>W1</td>
<td>Stage 1 Heating</td>
</tr>
<tr>
<td>G</td>
<td>G</td>
<td>Fan</td>
</tr>
</tbody>
</table>
1. CONTROLS

1-5. Wireless Adapter [PAC-WHS01WF-E], cont.

**How to Use / How to Install**

1. Choose a place where to install the PAC-US444CN-1. The device provides two mounting holes that can be used to mechanically affix the case to a solid surface. Double-sided tape may be used to affix the device. When using tape, ensure that the tape is approved for use within the anticipated operating temperature ranges.

2. Install the transformer, as necessary, per building code and manufacturer's installation instructions.

3. Connect the PAC-US444CN-1 cable to the connector CN105 on the indoor unit control board.


**Device Configuration**

Initial settings can be configured via the two banks of dip switches on the circuit board, SW1 and SW2. The circuit board can be accessed by unfastening the four screws on the back of the case.

**DIP Switch Definitions (Factory default is OFF for all switches):**

**Delayed Off**

SW1-1/2: After reaching thermostat set point, the unit will continue to run for a set period of time in order to improve efficiency. The period of time is set by adjusting SW1-1 and SW1-2 according to the following table:

<table>
<thead>
<tr>
<th>SW1-1</th>
<th>SW1-2</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>5 minutes (Default)</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>10 minutes</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>30 minutes</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>0 minutes</td>
</tr>
</tbody>
</table>
1. CONTROLS

1-5. Wireless Adapter [PAC-WHS01WF-E], cont.

SW1-3/4: The indoor unit fan speed can be adjusted via the following settings:

<table>
<thead>
<tr>
<th>SW1-3</th>
<th>SW1-4</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>Auto (Default)</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>Medium</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>High</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>Custom Auto</td>
</tr>
</tbody>
</table>

Note: Custom Auto provides more comfortable fan speed operation vs. the more efficient Auto (default).

Two-Stage Thermostat Operation

SW2-6: Adjusts indoor unit operation during stage 1 heating and stage 1 cooling according to the following table:

<table>
<thead>
<tr>
<th>SW2-6</th>
<th>Operation during stage 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>Full capacity</td>
</tr>
<tr>
<td>ON</td>
<td>The capacity is adjusted so that the room temperature is adjusted (heated or cooled) at a fixed rate.</td>
</tr>
</tbody>
</table>

Note: When either Y2 or W2 is left unconnected, it is recommended to set SW2-6 to the OFF position. When both Y2 and W2 are connected, it is recommended to set SW2-6 to the ON position.

Static Pressure Settings

SW2-1, SW2-2, SW2-3: These adjust the static pressure function settings of the indoor unit according to the following table:

<table>
<thead>
<tr>
<th>DIP switch position on PAC-US444CN-1</th>
<th>Indoor Unit Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW2-1 SW2-2 SW2-3</td>
<td>Mode 8</td>
</tr>
<tr>
<td>OFF OFF OFF</td>
<td>Not set</td>
</tr>
<tr>
<td>OFF OFF ON</td>
<td>Not set</td>
</tr>
<tr>
<td>OFF ON OFF</td>
<td>2</td>
</tr>
<tr>
<td>OFF ON ON</td>
<td>2</td>
</tr>
<tr>
<td>ON OFF OFF</td>
<td>1</td>
</tr>
<tr>
<td>ON OFF ON</td>
<td>1</td>
</tr>
<tr>
<td>ON ON OFF</td>
<td>3</td>
</tr>
<tr>
<td>ON ON ON</td>
<td>3</td>
</tr>
</tbody>
</table>

*Refer to the appropriate Indoor Unit Installation Manual for Mode 8 and Mode 10 function setting definitions.
1. CONTROLS

1-5. Wireless Adapter [PAC-WHS01WF-E], cont.

**CN24 Operation During Defrost**

SW2-4: Adjusts Mode 23 function settings according to the following table:

<table>
<thead>
<tr>
<th>SW2-4</th>
<th>Result</th>
<th>Fan and CN24</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>Setting 2 (Default)</td>
<td>ON</td>
</tr>
<tr>
<td>ON</td>
<td>Setting 1</td>
<td>OFF</td>
</tr>
</tbody>
</table>

*Refer to the appropriate Indoor Unit Installation Manual for Mode 23 function setting definitions.

**Fan Speed During Heating Mode, Thermal Off**

SW2-5: Adjusts Mode 25 initial setting (fan speed in thermal off for heating) according to the following table:

<table>
<thead>
<tr>
<th>SW2-5</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>Extra low (Default)</td>
</tr>
<tr>
<td>ON</td>
<td>Set by Thermostat Interface</td>
</tr>
</tbody>
</table>

In addition, the adapter also affects the following function settings of the connected indoor unit:

<table>
<thead>
<tr>
<th>Mode</th>
<th>When using the adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode 1 (auto recovery after power failure)</td>
<td>Always enabled</td>
</tr>
<tr>
<td>Mode 2 (room temperature detection location)</td>
<td>Unused (room temperature detected by the connected thermostat)</td>
</tr>
<tr>
<td>Mode 24 (heat offset for height)</td>
<td>Unused</td>
</tr>
</tbody>
</table>

Additional function settings not addressed by the thermostat interface may be configured by temporarily connecting an MA remote controller.

**Grouping**

The connection of more than one PAC-US444CN-1 to a single set of thermostat dry-contacts is not supported.

**Temperature Sensing**

The PAC-US444CN-1 relies upon both the dry-contact thermostat and the indoor unit’s thermistors in order to monitor room temperature. The thermostat’s temperature sensing is used to set the room temperature. The indoor unit thermistor is used when calculating cooling and heating rates of change.
Operate the third-party thermostat per the manufacturer’s instructions. During normal operation, the connection of Mitsubishi remote controllers (e.g. MA/ME) is not supported, as they will interfere with the correct operation of the PAC-US444CN-1.

Notes:

1. The indoor unit will limit the internal temperature control set point based on the indoor unit specification.
2. Fan signals G1,G2,G3, when energized, take precedence over SW1-3&4.
3. Only fan speeds available on the IDU can be set by the Thermostat Interface.
4. The G signal is used only for operating the IDU in ventilation mode when all cooling and heating signals are disabled.
5. When all cooling and signals are disabled, energizing G will place the IDU into ventilation mode.
1. CONTROLS

1-6. T-STAT Interface [PAC-US444CN-1]

Photo

This product is an adapter which inputs the incoming signals from an open/close switch to the air conditioner and outputs the ON/OFF signals from the air conditioner to the back-up heater.

Specifications

<table>
<thead>
<tr>
<th>Part name</th>
<th>Illustration</th>
<th>Q'ty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mounting cord clamp</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Screw for mounting 4×16</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Fastener (for bundling the wires)</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Use one mounting cord clamp per cable.

How to Use / How to Install

1. Card key/Window connection with the open/close switch

1. How to connect the open/close switch
   - Connect the connector to CN104 on the indoor electronic control P.C. board.
   - Connect the electrical wires with the tag of “IN” to the switch.
   - Separately insulate the wires with the tag of “OUT”.

2. Operation details
   - Opening the switch stops operation of the air conditioner.
     A remote controller is enabled even the switch is open. To disable the remote controller, cut JR88 on the indoor electronic control P.C. board.
   - When the switch closes, the ON/OFF operation from the remote controller is enabled.

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

1-6. T-STAT Interface [PAC-US444CN-1], cont.

System Configuration

2. Back-up heating function

1. How to connect the relay
   • Connect the connector to CN104 on the indoor electronic control P.C. board.
   • Connect the electrical wires with the tag of “OUT” to the relay.
   • Separately insulate the wires with the tag of “IN”.

   ![Diagram of relay connection]

   ( Coil rating of DC 12V, 75mA or less.) Use relay with reinforced insulation

2. Operation details
   (1) Starting conditions
      When both a) and b) are satisfied, the relay turns ON.
      a) The HEAT mode is selected. (The unit operates in the HEAT mode when the AUTO operation is selected.)
      b) In the figure below, the conditions for ON are satisfied. (NOTE 1)
   (2) Releasing conditions
      When either a) or b) is satisfied, the relay turns OFF.
      a) The modes other than HEAT are selected. (The unit operates in the mode other than HEAT when the AUTO operation is selected.)
      b) In the figure below, the conditions for OFF are satisfied. (NOTE 1)

   NOTE 1: Relay (heater) turns ON or OFF by the difference between room temperature and set temperature.

<table>
<thead>
<tr>
<th>Relay(heater)</th>
<th>Room temperature minus set temperature(Initial)</th>
<th>Room temperature minus set temperature (During operation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ON</td>
<td>more than -2.5°C or less</td>
<td>-2.5°C or less</td>
</tr>
<tr>
<td>OFF</td>
<td>more than -2.5°C or less</td>
<td>-2.5°C or less</td>
</tr>
</tbody>
</table>

   Connecting an connector cable to the air conditioner

   Models for which the mounting cord clamp is used
   ![Mounting cord clamp]

   Models for which the fastener is used
   ![Fastener]

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

1-7. Signal Receiver [PAR-SA9CA-E]

Enables the use of wireless remote controller.

Applicable Models
- SEZ-KD09/12/15/18NA4
- PEA-A12/18AA6
- PEAD-A24/30/36/42AA5
- PVA-A30/36/42AA4

Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>external dimensions</td>
<td>120(H)×70(W)×22.5(D) mm</td>
</tr>
<tr>
<td>Weight</td>
<td>0.2kg</td>
</tr>
<tr>
<td>Power</td>
<td>DC12V ( supplied from indoor unit control)</td>
</tr>
<tr>
<td>Temperature</td>
<td>0 ~ 40°C Humidity : 30 ~ 90%RH (no condensing)</td>
</tr>
<tr>
<td>Material</td>
<td>ABS</td>
</tr>
<tr>
<td>Colour (Munsell)</td>
<td>White Grey (4.8Y7.92/0.66)</td>
</tr>
</tbody>
</table>

Dimensions

Unit : mm [in.]

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

1-7. Signal Receiver [PAR-SA9CA-E], cont.

How to Use / How to Install

[Fig. 8-7]

Standard 1:1

Indoor/outdoor wiring

Signal receiving unit wiring

A. CC(00)

B. Remote controller wire (Accessory)

C. Locknut

D. Sealing with putty around here

E. Wiring pipe

F. Signal receiving unit

G. Fix tightly with tape.

H. 150 mm (5 - 15/16 inch)

I. Remote controller wire

J. Order wire

[Fig. 8-8]

Ceiling concealed type

Indoor unit

A. Center of Signal receiving unit external

B. Hole (drill a hole on the ceiling to pass the remote controller wire.)

C. Signal Receiving Unit

[Fig. 8-9]

Fix tightly with tape.

[Fig. 8-10]

[Fig. 8-11]

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

1-7. Signal Receiver [PAR-SA9CA-E], cont.

[Fig. 8-12]

Insert the minus screwdriver toward the arrow pointed and wrench it to remove the cover.
A flat screwdriver whose width of blade is between 4 and 7mm (5/32 - 9/32inch) must be used.

[Fig. 8-13]

Thin-wall portion
Bottom case
Remote controller wire
Conducting wire

[Fig. 8-14]

Screw (M4 x 30)
* When installing the lower case directly on the wall or the ceiling, use wood screws.

[Fig. 8-15]

1. Hang the cover to the upper hooks (2 places).
2. Mount the cover to the lower case
3. Cross-section of upper hooks

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

1-7. Signal Receiver [PAR-SA9CA-E], cont.

Signal Receiving Unit
1) Sample system connection
   [Fig. 8-7]
Only the wiring from the signal receiving unit and between the remote controllers is shown in [Fig. 8-7]. The wiring differs depending on the unit to be connected or the system to be used.
For details on restrictions, refer to the installation manual or the service handbook that came with the unit.
1. Connecting to Mr. SLIM air conditioner
   (1) Standard 1:1
      ① Connecting the signal receiving unit
         Connect the signal receiving unit to the CN90 (Connect to the wireless remote controller board) on the indoor unit using the supplied remote controller wire. Connect the signal receiving units to all the indoor units.
2) How To Install
   [Fig. 8-8] to [Fig. 8-15]
1. Common items for “Installation on the ceiling” and “Installation on the switch box or on the wall”
   [Fig. 8-8]
   ⑤ Signal receiving unit external
   ⑥ Center of Switch box
   ⑦ Switch box
   ⑧ Installation pitch
   ⑨ Remote controller wire
   ⑩ Hole (drill a hole on the ceiling to pass the remote controller wire.)
   ⑪ Signal Receiving Unit
(1) Select the installation site.
The following must be observed.
   ① Connect the signal receiving unit to the indoor unit with the supplied remote controller wire. Note that the length of the remote controller wire is 5 m (16 ft).
   Install the remote controller within the reach of the remote controller wire.
   ② When installing on either the switch box or the wall, allow space around the Signal Receiving Unit as shown in the figure in [Fig. 8-8].
   ③ When installing the Signal Receiving Unit to the switch box, the Signal Receiving Unit slipped downward for 6.5 mm (1/4 inch) as right illustrated.
   ④ Parts which must be supplied on site.
      Switch box for one unit
      Thin-copper wiring pipe
      Lock nut and bushing
   ⑤ The thickness of the ceiling to which the remote controller is installed must be between 9 mm (3/8 inch) and 25 mm (1 inch).
   ⑥ Install the unit on the ceiling or on the wall where the signal can be received from the wireless remote controller.
      The area where the signal from the wireless remote controller can be received is 45 ° and 7 m (22 ft) away from the front of the signal receiving unit.
   ⑦ Install the signal receiving unit to the position depending on the indoor unit model.
   ⑧ Connect the remote controller wire securely to the order wire. To pass the remote controller wire through the conduit, follow the procedure as shown in [Fig. 8-10].
   [Fig. 8-10]
   ① Fix tightly with tape.
   ② Order wire
   ③ Remote controller wire
Note:
   • The point where the remote controller wire is connected differs depending on the indoor unit model.
   Take into account that the remote controller wire cannot be extended when selecting the installation site.
   • If the Signal Receiving Unit is installed near a fluorescent lamp specially inverter type, signal interception may occur.
      Be careful for installing the Signal Receiving Unit or replacing the lamp.
(2) Use the remote controller wire to connect it to the connector (CN90) on the controller circuit board on the indoor unit.
   Refer to the 2) Setting the Pair Number Switch for details on controller circuit board on the indoor unit.
(3) Seal the Signal Receiving Unit cord lead-in hole with putty in order to prevent the possible entry of dew, water droplets, cockroaches, other insects, etc.

---

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


**Photo**

Wireless remote controller for P series and SEZ models. (The receiver is necessary.)

**Applicable Models**

- SEZ-KD09/12/15/18NA4
- PKA-A12/18HA6
- PKA-A24/30/36/42KA6
- PCA-A24/30/36/42KA6
- PLA-A12/18/24/30/36/42BA6
- PEA-A12/18AA6
- PEAD-A24/30/36/42AA5
- PVA-A30/36/42AA4

**Specifications**

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;AAA&quot; LR03 alkaline batteries</td>
<td>2 pcs</td>
</tr>
<tr>
<td>4.1×16 tapping screws</td>
<td>2</td>
</tr>
</tbody>
</table>

**Dimensions**

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


**Figure**

Enables to pick up the room temperature at the remote position.

**Specifications**

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>External dimensions (mm)</td>
<td>120 (H) x 70 (W) x 15 (D)</td>
</tr>
<tr>
<td>Exterior</td>
<td>White gray (Munsell 4.48Y 7.92/0.66)</td>
</tr>
<tr>
<td>Material</td>
<td>ABS resin</td>
</tr>
<tr>
<td>Operating conditions</td>
<td>Temperature: -20 to 65°C, Humidity: 30 to 90% RH (no condensation)</td>
</tr>
<tr>
<td>Installation method</td>
<td>Mounting on single-type switch box (JIS C8336) or directly mounting on wall</td>
</tr>
<tr>
<td>Accessory</td>
<td>2-wire cable (12m), Connector with post, Fixing screw (x2)</td>
</tr>
<tr>
<td>When combining with environmental measurement controller</td>
<td>Temperature measuring range -20 to 65°C</td>
</tr>
<tr>
<td></td>
<td>Measurement resolution 0.1°C (10 to 35°C), 0.5°C (other temperature ranges)</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

**Applicable Models**

- SLZ-KA09/12/15NA
- SEZ-KD09/12/15/18NA4
- PKA-A12/18HA6
- PKA-A24/30/36KA6
- PCA-A24/30/36/42KA6
- PLA-A12/18/24/30/36/42BA6
- PEA-A12/18AA6
- PEAD-A24/30/36/42AA5
- PVA-A30/36/42AA4

---

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


How to Use / How to Install

1 How to Install

(1) Determine the installation of the remote sensor (switch box).

The following items must be observed:

1. Select a place where the remote sensor will detect an average temperature of the room, and where the sensor will not be subject to direct sunlight, heat sources, or the blow-off from the air conditioner, etc.

2. Install the sensor within the length of the cable provided (12m).

(The cable cannot be extended. If extended, it may cause misoperation due to noise.)

3. The following parts must be procured at the site:

- Cross-recessed pan head screw
- M4 ... Torx screws
- Single switch box
- Thin steel conduit
- Lock nut, bushing

(2) Connect the wires.

Connect the 2-core cable to the terminal block in the lower case. Peel the sheath of the 2-core cable as shown in Fig.1, and correctly wire it as shown in Fig.2.

(3) Install the lower case on the wall or switch box.

NOTE: The recommended tightening torque for installing the 2-core cable to the terminal block is 1.17N-m.

(4) Fit the upper case.

Catch the two upper claws first, and fit the case as shown on the left.

CAUTION: Securely fit the case until a catching sound is heard. It may drop off if it is not fitted securely.

To remove the case, fit a flat flap screwdriver into the claw section as shown below, and move the screwdriver in the direction of the arrow.

CAUTION: Do not turn the screwdriver when it is fit into the claw section as the claws may be broken.

(5) Wiring hole for direct installation on wall, etc.

Cut the thin section (shaded section) of the lower case with a knife or pair of nippers, etc. The 2-core cable connected to the terminal block is led out from here.

(6) Securely seal the wiring lead hole with putty or silicon to prevent dew, water drops, cockroaches and other insects from entering.

- When installing directly on the wall, seal the section cut on the lower case with putty or silicon.
- If the wiring is to be passed through a hole in the wall (when leading the wiring from the rear of the remote sensor), seal the hole in the same manner.

- When installing on a switch box, seal the connection of the switch box and conduit with putty or silicon.

2 Setting of indoor unit

When the remote sensor is connected to the indoor unit and room temperature detection position is changed, reset the setting of “Set temp. 4-deg. up” in the heating mode as shown below.

1. K control models: DIP switch Nos. 1-6 on the control PCB of the indoor unit.
2. M-NET control models: DIP switch Nos. 3-8 on the control PCB of the indoor unit.
3. A control models: Refer to A-control air-conditioners SERVICE TECHNICAL GUIDE.
1. CONTROLS

1-10. Connector Cable for Remote Display [PAC-SA88HA-E/PAC-725AD-E]

**Figure**

![Connector Cable Image]

**Descriptions**

• This adapter enables control of several units with a multiple remote control display.

**Applicable Models**

- SLZ-KA09/12/15NA
- SEZ-KD09/12/15/18NA4
- PKA-A12/18HA6
- PKA-A24/30/36KA6
- PCA-A24/30/36/42KA6
- PLA-A12/18/24/30/36/42BA6
- PEA-A12/18AA6
- PEAD-A24/30/36/42AA5
- PVA-A30/36/42AA4

**Specifications**

<table>
<thead>
<tr>
<th>Function</th>
<th>Connecting cable to output status signal of the air conditioner, and ON/OFF by external (pulse) signal.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input signal</td>
<td>Pulse signal (no voltage instantaneous ON contact) Pulse duration 200m/s or more.</td>
</tr>
<tr>
<td>Connector</td>
<td>5P (connector to CN51 or CN52 on indoor unit control board)</td>
</tr>
<tr>
<td>Cable type</td>
<td>5-wire vinyl cable, for extension: sheathed vinyl cord or cable (0.5 to 1.25mm²)</td>
</tr>
<tr>
<td>Cable length</td>
<td>2m (max. 10m when extended locally)</td>
</tr>
<tr>
<td>Output capacity</td>
<td>DC12V 75mA (Max 0.9W)</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

- **<PAC-SA88HA-E>**
  - Cable length 2000
  - Colors: Brown, Red, Orange, Yellow, Green

- **<PAC-725AD>**
  - 10 pieces
  - PAC-SA88HA-E

Due to continuing improvement, above specification may be subject to change without notice.
MULTIPLE REMOTE CONTROL DISPLAY

You can control several units with a multiple remote control display, by wiring an optional multiple remote controller adapter (PAC-SA88HA-E) with relays and lamps on the market.

How to wire

1. Connect the multiple remote controller adapter to the connector CN51 on the indoor controller board.
2. Wire three of the five wires from the multiple remote controller adapter as shown in the figure below.

<Notes on Signs>
- X1: Relay (for operation lamp)
- X2: Relay (for check lamp)
- RL: Operation Lamp
- GL: Check Lamp

<System>

<Wiring diagram>

Multiple Remote Control Display

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

1-10. Remote On/Off Adapter [PAC-SE55RA-E]

**Descriptions**

- Operation other than ON/OFF (adjustment of temperature, fan speed, and air direction, for example) can be performed even when remote controller operation is prohibited.

**Applicable Models**

- SLZ-KA09/12/15NA
- SEZ-KD09/12/15/18NA4
- PKA-A12/18HA6
- PKA-A24/30/36KA6
- PCA-A24/30/36/42KA6
- PLA-A12/18/24/30/36/42BA6
- PEA-A12/18AA6
- PEAD-A24/30/36/42AA5
- PVA-A30/36/42AA4

**Specifications**

<table>
<thead>
<tr>
<th>Function</th>
<th>ON/OFF by external signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input signal</td>
<td>No-voltage contact (ON/OFF level signal)</td>
</tr>
<tr>
<td>Connector</td>
<td>3P (connected to CN32 on outdoor unit control board)</td>
</tr>
<tr>
<td>Cable type</td>
<td>3-wire cable, for extension: Sheathed vinyl cord or cable (0.5 to 1.25mm²)</td>
</tr>
<tr>
<td>Cable length</td>
<td>2m (max. 10m when extended locally)</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

- Heat contraction insulation tube
- Resistor
- Orange
- Red
- Brown
- 2000
1. CONTROLS


How to Use / How to Install

1. Connecting to the Indoor Unit
1. Connect to the connector CN32 on the indoor controller board.
2. Press the connector for the remote ON/OFF adapter into the CN32 connector.
   The connector can only be connected in one direction only. Do not force the connection.

2. Locally Procured Wiring
With the remote ON/OFF adapter, variations of connection method with the locally installed circuit will provide different types of operating configurations.

   Example: External timer operation, remote control operation
1. Basic Connection Method
   SW1 - Operating switch
   Performs operation/stop of indoor unit.
   SW2 - Selecting switch
   For selecting whether the operation/stop is to be performed by external circuit
   or remote control.*
   * Also includes system controller (central controller).
2. Switch Settings (Refer to table at right for details.)
   SW2 - If on, • Operation/stop cannot be controlled from remote controller.
   Other operations (such as temperature settings and changing fan speed) can be performed.
   Operation/stop can be performed by SW1.
   SW2 - If off, • Operations can be performed from remote controller.
   • Operation/stop cannot be performed by SW1.

3. Examples of Usage
In either case, there is a 5 to 6 second delay from the time when the operating command is sent until the unit operates.

1. To perform operation/stop by only remote operation or external timer and to prohibit operation/stop by the remote controller, use the following circuits.

2. To perform operation/stop by remote operation or external timer and allow operation/stop by the remote controller, use the following circuits.

3. To start operation by remote operation and then freely use remote controller, use the following circuit.

4. To permit/prohibit the use of the remote controller by an external circuit.

4. Wiring Restrictions
Keep the length of wire from the circuit board of the indoor unit within 10 meters. Excessive length could cause improper operation.

Use a relay when extending wiring such as remote wiring.

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


- **Specifications**
  - Power: Supplied from indoor unit
  - External dimensions (mm): 160 x 70 x 30
  - Exterior: Material: ABS resin, Color: Gray (Munsell 3.07Y 6.16/0.33)
  - Weight: 200g
  - Operating conditions: Indoor only, Temperature: 0 to 40°C, Humidity: 35 to 85%RH (no condensation)
  - Connecting cable (indoor unit): 5-wire (3 + 2) cable with connector (9-pin, 4-pin)
  - Output signal: No-voltage "a" contact (relay contact method)
    - Number of Contacts: 2 (Operation / Alarm)
    - Contact capacity: 200V AC (30V DC)/1A or less
    - Minimum load: 10mA
  - Input signal: Pulse signal (instantaneous non-voltage "a" contact), pulse width: 200ms or more
    - Number of Contacts: 1 (start/stop)
  - Input/output signal cable (locally prepared): Type: CV, CVS, or equivalent sheathed vinyl cord/cable
    - Diameter: Twisted: 0.5 to 1.25mm², Single: Ø0.65 to Ø1.2mm
    - Distance: Output signal cable: Max. 100m, Input signal cable: Max. 10m (Extension relay must be used when exceeding 10m)

- **Applicable Models**
  - SLZ-KA09/12/15NA
  - SEZ-KD09/12/15/18NA4
  - PCA-A24/30/36/42KA6
  - PLA-A12/18/24/30/36/42BA6
  - PEA-A12/18AA6
  - Pead-24/30/36/42AA5
  - PVA-A30/36/42AA4

- **Descriptions**
  - 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.
  - Unable to use with wireless remote controller. (except for PKA-RP-HAL/KAL)

- **Dimensions**
  - Unit: mm

  - 2000
  - 160
  - 25
  - 15
  - 130

  - Hole for wall installation (2 places)
  - Locally prepared cable taking cut hole

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


How to Use / How to Install

1 Confirming the Supplied Parts

(1) Parts Provided

Check that the box includes the following parts in addition to this installation manual.

<table>
<thead>
<tr>
<th>Parts</th>
<th>1 Remote operation adaptor unit</th>
<th>2 Cord clamp</th>
<th>3 Wall mount bracket</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shape</td>
<td>(with 2 meter wire for connecting with indoor unit)</td>
<td>(Use this clamp if the local wiring is too thick to be held by the clamp inside the main unit.)</td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Parts</td>
<td>4 Screws for mounting ②</td>
<td>5 Cushion material</td>
<td>③ Tie-wrap</td>
</tr>
<tr>
<td>Shape</td>
<td>3.5 x 12 (Black)</td>
<td>(With adhesive on both sides.)</td>
<td>(Use this for bundling lead wires.)</td>
</tr>
<tr>
<td>Quantity</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Parts</td>
<td>⑥ Cord clamp</td>
<td>⑦ Screws for mounting ②</td>
<td>⑨ Screws for mounting main unit</td>
</tr>
<tr>
<td>Shape</td>
<td>3.5 x 12 (Black)</td>
<td>3.5 x 12 (Black)</td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>5</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

(2) Locally Procured Parts

Note: Please keep LVD. LVD: Low Voltage Directive (EC Directive of Europe).
Apply some countermeasure for wiring and relay not to be touched from outside. ① Wiring should be covered by the insulation tube. ② Use relay with EU regulation.

<table>
<thead>
<tr>
<th>Item</th>
<th>Part Name</th>
<th>Model &amp; Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>External output function</td>
<td>External signal output wire</td>
<td>Use a vinyl cord with sheath or cable Electric wire type: CV, CVS or equivalent Electric wire size: 0.5 mm² to 1.25 mm² Single wire: ø0.65 mm to ø1.2 mm</td>
</tr>
<tr>
<td>Display lamp, etc.</td>
<td></td>
<td>No-voltage contact AC 220 to 240 V (DC30V), 1A or less</td>
</tr>
<tr>
<td>External input function</td>
<td>External signal input wire</td>
<td>Use a vinyl cord with sheath or cable Electric wire type: CV, CVS or equivalent Electric wire size: 0.5 mm² to 1.25 mm² (Single wire: ø0.65 mm to ø1.2 mm)</td>
</tr>
<tr>
<td>Switch</td>
<td></td>
<td>No-voltage momentary contact (Operation + Stop is switched by input of a pulse of 200 ms or more)</td>
</tr>
</tbody>
</table>

2 External Dimension Drawing

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


3 Wiring

![Diagram showing wiring connections and labels such as CB, CN1, CN90, etc.]

△Caution

1) TB3 is a dedicated terminal for contact input. Do not apply voltage. Applying voltage will cause damage to the circuit board inside the indoor unit controller.
2) Always use the cable provided for connecting the unit to the indoor unit. Never make modifications to extend this cable. Extensions could cause the cable to be affected by external noise which could lead to mis-operation. If an extension is needed, refer to specification chart in “6. Product Specifications” a follow it when extending the external signal wire.

<Connecting to the indoor unit>
① If external output functions are used —— Insert the 9-electrode (3 core) side of the cable provided into CN90 on the controller circuit board for the indoor unit.
② If external input functions are used —— Insert the 4-electrode (2 core) side of the cable provided into CN41 on the controller circuit board for the indoor unit.
※ The connector can only be inserted in one direction. Be sure to check that the connector is in the proper direction before inserting. Forcing the connector will cause damage.

4 How to Install

There are three ways to mount the remote operation adaptor main unit: [A] Using mounting bracket, [B] Mounting directly, and [C] Using the cushion material.

(1) Installation Example (Suspended Type)

[A] Mounting to wall mounting bracket

![Diagram showing mounting bracket installation details]

△Caution

1) When mounting the remote operation adaptor main unit, be sure to use the mounting hardware to mount it to a wall or beam so that an inspection port is available for servicing.
2) If there is any loose remaining wire after installation, use a tie-wrap to bundle it.

[B] Mounting directly to wall

![Diagram showing direct wall mounting details]

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


(2) Installation Example 2 [Cassette Type]

![Diagram of installation example 2]

**Caution**

1) When mounting the remote operation adaptor main unit, be sure to use the mounting hardware to mount it to a wall or beam so that an inspection port is available for servicing.
2) If there is any loose remaining wire after installation, use a tie-wrap to bundle it.

---

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

1.12. System Control Interface [PAC-IF01MNT-E]

**Descriptions**

A-control MXZ models can be connected to “M-NET” through optional M-NET converter so that they can be monitored / controlled effectively and meticulously.

**Applicable Models**

- MXZ-3C24/3C30/4C36/5C42NA2

**Specifications**

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>Supplied from power supply unit</td>
</tr>
<tr>
<td>Power consumption</td>
<td>0.8 W (at 30 V DC)</td>
</tr>
<tr>
<td>Operating conditions</td>
<td>Mounted inside the electrical utility box of outdoor unit. (Temperature: -20 to 60°C, humidity: 90% or less (no condensation))</td>
</tr>
<tr>
<td>Weight</td>
<td>0.3kg</td>
</tr>
</tbody>
</table>

**Dimensions**

Unit: mm

- CN2M (M-NET)
- SW1
- CN5 (Connect to outdoor controller board)
- SW11 (M-NET Address<ones digit>)
- SW12 (M-NET Address<tens digit>)

Due to continuing improvement, above specification may be subject to change without notice.
1. Wiring diagram

The electrical box of outdoor unit.

- Lead wire (M-NET/Power supply) no polarity
- M-NET board
- Outdoor controller board
- Lead wire (Signals)
- M-NET Transmit wire
- M-NET terminal block
- Earth wire
1. CONTROLS

1-12. System Control Interface [PAC-IF01MNT-E], cont.

Attention for M-NET connection
Pay attention to the next points for wiring of shielded wires.

<table>
<thead>
<tr>
<th>CAUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>The shielded wires of M-NET transmission should be connected with the ground wire at any only one place of the unit to be connected.</td>
</tr>
<tr>
<td>• It can cause the transmission error due to noise. Centralized control remote controller reads “0403” “6607” error.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bad example (Multiple ground of shielded wire)</th>
</tr>
</thead>
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<tr>
<td>System controller</td>
</tr>
<tr>
<td>M-NET transmit wire</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Good example (One spot ground of shielded wire)</th>
</tr>
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<td>System controller</td>
</tr>
<tr>
<td>M-NET transmit wire</td>
</tr>
</tbody>
</table>

(※1) Refer to the appendix List of Models to check the applicable models.
(※2) In case that the outdoor unit is grounded, connect the ground wire supplied as accessory to the S terminal (secondary) of M-NET terminal block and M-NET Ground terminal inside of electric box with using screws supplied.
(※3) If the shield and earth are grounded in two or more locations, electrical circuit is generated through them, and a potential difference is created because of the impedance difference between or among the ground locations. This may cause noise in the shield. Ground at only one point, then no circuit is created and no noise gets in.

1. Parts List

3. Switch setting

<table>
<thead>
<tr>
<th>Before installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set M-NET address on M-NET board in advance before installing on the electrical box.</td>
</tr>
</tbody>
</table>

(1) M-NET head address setting
The setting should be done by rotary switches SW11 and SW12 on M-NET board. (Factory settings are all Zero)
Make sure to set M-NET address within the range of 01 to 50. When installing two or more outdoor units, do not use the same number more than once for M-NET address.

(2) Indoor unit connection switch setting
Set each indoor unit to ON or OFF with SW1.

♦ M-NET address setting
Starting with the M-NET head address set with SW11 and SW12, the M-NET address is automatically allocated in numerical order to each indoor unit which is connected.