

ATW WIRELESS SYSTEM PAR-WT40R-E PAR-WR41R-E



Installation and Setting Manual FOR INSTALLER For safe and correct use, please read this manual thoroughly before operating the PAR-WT40R-E and PAR-WR41R-E devices. FOR INSTALLER	English
Installations- und Konfigurationsanleitung FÜR DEN INSTALLATEUR Lesen Sie sich zur sicheren und korrekten Verwendung diese Anleitung bitte sorgfältig durch, bevor Sie die Geräte PAR-WT40R-E und PAR-WR41R-E verwenden.	Deutsch
Manuel d'installation et de configuration POUR LES INSTALLATEURS Pour garantir une utilisation sûre et appropriée, lisez attentivement le présent mode d'emploi avant d'utiliser les dispositifs PAR-WT40R-E et PAR-WR41R-E.	Français
Handleiding voor installeren en instellen VOOR DE INSTALLATEUR Voor een veilig en juist gebruik moet u deze handleiding goed doorlezen alvorens de PAR-WT40R-E en PAR- WR41R-E apparaten in gebruik te nemen.	Nederlands
Manual de instalación y configuración PARA EL INSTALADOR Para un uso correcto y seguro de los dispositivos PAR-WT40R-E y PAR-WR41R-E, lea este manual antes de su utilización. Para este manual antes de su utilización.	Español
Manuale di installazione e impostazione Per un uso corretto e sicuro, leggere attentamente il presente manuale prima di utilizzare i dispositivi PAR-WT40R-E e PAR-WR41R-E.	Italiano
Manual de Instalação e Definição PARA O INSTALADOR Para uma utilização segura e correcta, é favor ler cuidadosamente este manual antes de trabalhar com os dispositivos PAR-WT40R-E e PAR-WR41R-E.	Português
Installations- og indstillingsvejledning TIL INSTALLATØR Læs venligst denne vejledning grundigt inden betjening af enhederne PAR-WT40R-E og PAR-WR41R-E af hensyn til sikker og korrekt brug. TIL INSTALLATØR	Dansk
Installations- och Inställningsmanual FÖR INSTALLATÖREN För säker och korrekt användning, var god läs denna manual noggrant innan du använder PAR-WT40R-E-och PAR-WR41R-E-enheterna. För INSTALLATÖREN	Svenska
Installasjons- og konfigurasjonsanvisning FOR INSTALLATØREN Les denne bruksanvisningen nøye før du bruker PAR-WT40R-E og PAR-WR41R-E, for å sikre trygg og riktig bruk.	Norsk
Asennus- ja asetusopas Asentajalle	

Turvallisen ja asianmukaisen käytön varmistamiseksi lue tämä käyttöopas huolellisesti ennen PAR-WT40R-Eja PAR-WR41R-E-laitteiden käyttöä. Suomi

This manual explains installation of the PAR-WR41R-E wireless receiver and the PAR-WT40R-E wireless remote controller, and settings of these devices. Before installing the devices, read this manual thoroughly. After reading, be sure to hand this manual to the user.

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1. Safety Precautions

- The precautions mentioned below are important to use the device safely. Be sure to understand and follow them.
- The following hazardous classification shows the likelihood and severity of hazards if a person does not follow the instructions contained on the following signs.

A Warning	Indicates a hazardous situation which, if a person does not follow the instruc- tions, could result in death or serious injury.
▲ Caution	Indicates a potentially hazardous situation that, if a person does not follow the instructions, may result in bodily injury or property damage.

► Installation		
Do not use the device in particular en- vironments.	Do not use the device in particular environments where the following substances are present in large amounts: oil, vapour, organic solvent, corro- sive gas (such as ammonia, sulphuric compounds, and acid or the like), or where acid or alkali solu- tion, or particular sprays are used frequently. This could affect operating performance, or cause corrosion, which could result in electrical shock, breakdown, smoke generation, or fire.	
Do not place the devices in an environ- ment where flammable gas may occur, stay, flow in, or leak.	Build-up of flammable gas could result in fire or explosion.	

<u>∧</u> Warning		
The device must be installed by dealer or an authorised technician a cording to the appropriate installati manual.	a If the device is installed improperly, electric shock or fire could result.	
Do not place the device in an environment that exposes it to large amount of vapor or condensation.	Electric shock, fire, or breakdown could result.	
► Wiring		
The wireless receiver's maximum vo age is 12V DC. Do not connect 23 AC power source to the wireless ceiver.	DIt- DIt- DV re- Breakdown, ignition, or fire could result.	
Connections must be made secure and without tension or external for on the terminals.	lf connections are made improperly, breaking of wire, heat generation, or fire could result.	
► Others		
Do not use sharp objects to press t buttons.	he Electric shock or breakdown may result.	
Do not touch or operate the device w wet hands.	ith Electric shock or breakdown may result.	
Do not wash the device with water solution or the like.	or Electric shock or breakdown may result.	
When installing or repairing the device ask a dealer or a qualified technician	ce, If the device is not installed properly, electric shock, smoke generation, or fire could result from	
Do not disassemble or modify.	entry of dust or water.	
Do not drop the device	This could break the case or affect the device enough	

·	to make it inoperable.
Install the device in a place capa- ble of bearing its own weight .	If the device is not installed securely or properly, the wireless receiver may fall.

Disposal

This symbol mark is for EU countries only.



This symbol mark is according to the directive 2002/96/EC Article 10 Information for users and Annex IV, and/or to the directive 2006/66/EC Article 20 Information for end-users and Annex II.

Your MITSUBISHI ELECTRIC product is designed and manufactured with high quality materials and components which can be recycled and/or reused. This symbol means that electrical and electronic equipment, batteries and accumulators, at their end-of-life, should be disposed of separately from your household waste. If a chemical symbol is printed beneath the symbol, this chemical symbol means that the battery or accumulator contains a heavy metal at a cer-

tain concentration.

This will be indicated as follows: Hg: mercury (0.0005%), Cd; cadmium (0.002%), Pb: lead (0.004%)

In the European Union there are separate collection systems for used electrical and electronic products, batteries and accumulators.

Please, dispose of this equipment, batteries and accumulators correctly at your local community waste collection/recycling centre.

Please, help us to conserve the environment we live in!

2. Accessories and Installation Tool

The following items are included in the box.ItemNos.① Wireless receiver <PAR-WR41R-E>
(2 m long cable included)1② Bracket1③ Flat head screw (4.1 × 6)4④ Installation and setting manual1

* Installing of the devices requires a Phillips-head screwdriver (No.2 6 mm).



3. Before using ATW wireless system

Following is the summary of the procedure for installing and setting the wireless system.

1. Devices and manuals required to set and install the wireless system

- ① PAR-WR40R-E wireless remote controller
- 2 PAR-WR41R-E wireless receiver
- ③ ATW wireless system installation and setting manual (this manual)
- ④ Wireless remote controller operation manual (hereinafter abbreviated as OM)
- (5) ATW system installation manual (hereinafter abbreviated as IM)

2. Installing and setting procedure

- ① Power off the ATW system.
- ② Install the wireless receiver on the ATW system.
 - (See "4. Installing the Wireless Receiver" in this manual.)

When installing the wireless receiver, be sure to set the SW1-8 on the control board to ON. (See "5.1 DIP Switch Functions" in IM.)

- ③ Power on the ATW system, and the LEDs will blink on the receiver for 3 seconds.
- Place two size AA alkaline batteries in the wireless remote controller. (See "·Battery" in "4. Before Operation" in OM.)
- ⑤ Perform pairing process between the wireless receiver and the remote controller. (See "5.2. Pairing" in "5. Setting the Wireless Remote Controllers" in this manual.)

The wireless receiver goes through a pairing process only while the ATW system is off. When the system is ON, be sure to turn it off before beginning the pairing process. 6 Test wireless communication between the wireless remote controller and the wireless receiver.

(See "5.4 Communication Test" in "5. Setting the Wireless Remote Controllers" in this manual.)

- Position the wireless remote controller in an appropriate place. (See "4. Before Operation" in OM.)
- It is the wireless remote controller as a room sensor that monitors room temperature, see "5.4 Main Controller Initial Settings" in IM.
- ④ Use the main controller to set the ATW system to the room temp. (▲) mode.
 When the flow temp. (▲) mode or the compensation curve (►) mode is selected, the wireless remote controller will operate as a thermostat. (See "■ Initial Settings" of "5.4 Main Controller" in IM.)

When the remote controller set as a room sensor runs out of battery or gets a communication error during room temp. mode, the room temp. mode will automatically switch to the compensation curve mode.

The room temp. mode will be restored by battery replacement or solution of communication error.

Installation and setting of the wireless remote controller is complete. To set additional wireless remote controllers, repeat from Step 5 to 8.

4. Installing the Wireless Receiver

4.1 Connecting to the Cylinder unit

* Before installation, be sure to turn off the main power supply.

Remove the handle by removing four screws.
 Remove the two screws that hold the front panel, and remove the panel.



If the removed front panel is set aside away from the indoor unit, ensure the relay connector on the main controller is disconnected.

② Remove the four screws to remove the electrical box cover.



③ Remove the two screws to pull the electrical box so that the electrical box is swung toward you from right.





④ Run the receiver's cable into the cylinder unit through the left-most opening on top of the unit.

Do not run the receiver's cable through an opening that a power cable goes through and do not bundle the cable together with a power cable.



^⑤ Route the cable out the back of the electrical box, and run the cable into the box through any of the shown openings on the underside of the box.



6 Connect the cable connector to the CNRF terminal on the control board. Switch ON SW1-8.



⑦ Remove excessive slack on the cable and secure the cable with two cable fasteners on the side of the electrical box.



- ⑧ Place the electrical box back in the original position and reinstall the two screws.
- ③ Check the maximum reach of the cable and install the bracket on the wall with screws.

Do not excessively pull the cable when checking the maximum reach.

<Notice>

- Do not overtighten the screws.
 - ► The bracket may deform or break.
- When installing the bracket, select an interference-free space.
 - ► Keep the installing area at least 10 cm away from metal or a wall box. If unable to do so, always place the room wireless remote controllers in locations where the communication test determines that the wireless remote controllers are fully capable of communication with the wireless receiver.
- Do not install the bracket with screws on the exterior casing of the cylinder unit.
 - The internal parts may be damaged, which could result in breakdown of the indoor unit.
- In Place the wireless receiver on the fixed bracket.

Hook the holes on the back of the wireless receiver onto the projections on the bracket, and fix the wireless receiver in place.



<Notice>

- Do not place the wireless receiver inside the cylinder unit.
 - ► Both the wireless receiver and the indoor unit may break down, produce heat, and the wires may break.
- Do not let the wireless receiver stand on top of the cylinder unit. Always fix the wireless receiver onto the bracket.
 - ► Wireless communication performance may be affected.
- Do not pull the cable excessively.
 Breakdown, ignition, or fire may result.
- Do not leave the wireless receiver suspended.
 - Breakdown, ignition, or fire may result.

① Close the electrical box cover, and fix it with screws.

1 Fix the front panel and the handle with screws.

If the relay connector on the main controller has been removed, connect the relay connector again before reinstalling the front panel.



② Remove the four screws to remove the electrical box cover.



③ Route the receiver's cable into the hydrobox unit through the opening on the underside of the unit. Then route into the electrical box through any of the shown openings on the underside of the box.

Do not bundle the receiver's cable together with a power cable or run the cable through an opening that a power cable goes through.



④ Connect the cable connector to the CNRF terminal on the control board. Switch ON SW1-8.



(5) Check the maximum reach of the cable to install the bracket with screws.

Do not excessively pull the cable when measuring the maximum reach.



<Notice>

- Do not overtighten the screws.
 - ► The bracket may deform or break.
- When installing the bracket, select an interference-free space.
 - Keep the installing area at least 10 cm away from metal or a wall box. If unable to do so, always place the wireless remote controllers in locations where the communication test determines that the wireless remote controllers are fully capable of communication with the wireless receiver.
- Do not install the bracket with screws on the exterior casing of the hydrobox unit.
 - The internal parts may become damaged, which could result in breakdown of the indoor unit.

When installing the wireless receiver, observe the following.

- Keep the other electric or electronic devices (e.g. radio, induction cooker, microwave, and refrigerator, mobile phone or the like) at least 50 cm away from the wireless receiver.
- As much as possible, place the wireless receiver in an interference-free area and keep the wireless receiver away from metal.



⑥ Place the wireless receiver on the fixed bracket.

Hook the holes on the back of the wireless receiver onto the projections on the bracket, and fix the wireless receiver.



<Notice>

- Do not place the wireless receiver inside the hydrobox unit.
 - ► Both the wireless receiver and the hydrobox unit may break down, produce heat, and the wires may break.
- Do not pull the cable excessively.
 - Breakdown, ignition, or fire may result.
- Do not have the wireless receiver suspended.
 - ► Breakdown, ignition, or fire may result.

 \bigcirc Close the electrical box cover, and fix it with the screws.

(8) Hold the front panel with the screws.

5. Setting the Wireless Remote Controllers

- Pairing of the wireless remote controllers and the wireless receiver enables the wireless remote controllers to communicate with the wireless receiver. The indoor unit can then operate from the wireless remote controllers.
- Before using the wireless remote controllers, always ensure that the room wireless remote controllers go through a pairing process.
- Holding down the ▲, ▼ and ➡ buttons simultaneously for at least 3 seconds goes to the setting mode, which blinks the mode number (room temp. display).



Press the or button to choose the mode number.



③ Save setting by pressing the houtton. The display stops blinking.

Pressing of the 🖾 button in the middle of setting returns to the previous indication.

When the battery replacement indicator appears, do not operate the setting mode. The power may turn off in the middle of setting, which may lose the setting information.



Mode No.	Names	Functions	Initial settings
0	Pairing address dis- play	Views the own pairing address of the wireless re- mote controller.	66 <u> </u>
1	Pairing	Performs a pairing process with the wireless re- ceiver.	No setting
2	Temperature unit switch	Switches temperature unit used to display temperatures.	°C
3	Communication test	Tests communication with the wireless receiver.	
4	Room temperature display switch	Displays or hides the room temperature.	OFF

5.1. Viewing the Address Number (Mode No. : 0)

The set temp. display shows the address number that is set when paired with the wireless receiver.

* The figure to the right shows the display when the address no. is set to 2.



5.2. Pairing (Mode No. : 1)

The mode is intended to pair the wireless remote controller with the wireless receiver to enable wireless communication. Pairing requires operation on the wireless receiver as well, so operate the wireless remote controller near the wireless receiver.



Pairing method

 Hold down the button on the wireless receiver for 3 seconds or more to enter the pairing mode.



The \triangle LED will blink orange.

The wireless receiver, once into the pairing mode, keeps the mode active for 5 minutes unless the mode is cancelled by re-pressing the button.

The wireless receiver goes through a pairing process only while the ATW system is off. When the system is ON, be sure to turn it off before beginning the pairing process.

2 Press the or button to select the pairing address, and press the button to save the setting.

The initial address is " – " (no setting), and the available address ranges from 1 to 8.

After saving the setting, the wireless remote controller starts communication with the wireless receiver.



When pairing multiple wireless remote controllers, be sure to set different address for each individual controller.

③ When the pairing process has been successfully performed, the set temp.display shows "off" . If unsuccessfully, "frr" will appear, so correctly repeat the same process.

When the pairing process failed, the wireless receiver keeps the pairing mode active for 5 minutes unless cancelled.

This makes it possible to continuously pair multiple wireless remote controllers.

<Pairing is successful>



<Pairing is unsuccessful>



<<Main causes that prevent successful pairing>>

- The wireless receiver does not enter the pairing mode.
 - Press the button for 3 seconds or more to enter the pairing mode. Note that the wireless receiver performs a pairing process only if the main system is off.
- Pairing is attempted outside the transmission range of the wireless receiver.
 - Adjust the distance between the wireless receiver and remote controller, so try again. If the distance is excessively short, pairing may fail. Keep the distance of about 50 cm.
- The wireless remote controller has been already paired with the wireless receiver.
- ► The paired wireless remote controller is not allowed to be paired with the same wireless receiver again with another address.

The wireless remote controller does not clear the pairing information. Only the wireless receiver does. However, when pairing the paired wireless remote controller with a new wireless receiver, the pairing information does not need to be cleared. Even when power fails or when the batteries run down, the pairing information will not be lost.

5.3. Switching the Temperature Unit (Mode No. : 2)

The unit used to display temperature can be switched between Celsius (°C) and Fahrenheit (°F).

Press the \blacktriangle or \bigtriangledown button to select the unit that the set temp. display uses and press the button to confirm the selection.

The set temperature and room temperature are to use the same unit to show temperatures.

* The figure to the right shows the display when Celsius (°C) is used.



5.4. Communication Test (Mode No. : 3)

Communication test is performed between the wireless remote controller and the wireless receiver.

The set temp. display shows the communication status is OK or NG. When the display shows " $_{O}$ ", this indicates that the wireless remote controller is available for communication with the wireless receiver. If " ξ_{Γ} , " is shown, the wireless remote controller is outside the communication range of the wireless receiver.



Do not place the wireless remote controller in a location where the communication test results in " $\xi r r$ ".

When the wireless remote controller is not paired, a communication error results even in the test mode. When testing communication in the test mode, ensure in advance that the wireless remote controller goes through a pairing process.

5.5. Displaying or Hiding the Room Temperature (Mode No. : 4)

Select either displaying or hiding the room temperature.

Press the \blacktriangle or \bigtriangledown button to select displaying or hiding the room temperature, and press the \bowtie button to save the setting.

- **Displaying** :The set temp. display shows the actual space temperature.
- Hiding :The set temp.display shows

<Displaying>



<Hiding>



When the indoor unit is operating, the room temperature display shows the actual space temperature (18° C) and the set temperature (20° C) as shown in the figure to the right. The measurable temperature ranges from 0° C to 40° C.

If the measured room temperature is out of 0°C to 40°C range, the room temperature display blinks.



The wireless remote controller that is installed with a bracket may not be able to correctly detect the room temperature due to being affected by the wall temperature. Perform a test run and place the remote controller where the room temperature can be correctly detected.

6. Wireless Receiver Operation

The wireless receiver is powered by the indoor unit. It communicates wirelessly with the wireless remote controllers, and transmits to the indoor unit the operation status and commands received by the wireless remote controllers. The wireless receiver has two modes available: pairing mode and pairing reset mode.



6.1. Functions of Buttons and Displays

Number	Item	Description
1	Setting button	Switches the operating mode.
2	Communication LED (yellow green)	Shows that the wireless receiver is communicating.
3	Operation LED (orange)	Shows the operating status on the wireless receiver.

The following table shows the operating and illuminating status of the LEDs.

Operation LED (orange)	Communication LED (yellow green)	Description	
Ô	\bigcirc	Power is ON (for 3 seconds).	
_	_	Normal mode: Not paired	
_	0	Normal mode: Paired	
_	Ô	Normal mode: Communicating	
O	_	Performing a pairing process	
Ô	0	Pairing: Successful	OFF.
Ô	Ø	Pairing: Unsuccessful	ON:
0	0	Pairing information is cleared	Blink:

○ k: ◎

6.2. Turning on Power

When the wireless receiver is powered by the indoor unit after installation, the $\widehat{\Rightarrow}$ indicator and the $\underline{\land}$ indicator blink in yellow green and in orange for 3 seconds respectively.

6.3. Wireless Receiver Functions

(1) Normal mode



Ĩ

(2) Pairing mode

Hold down the <u>button</u> button on the wireless receiver for 3 seconds or more to enter the pairing mode.

Power ON

Pairing requires operation on the wireless remote controller as well, so operate the wireless remote controller near the wireless receiver.

*For pairing details, refer to "5.2 Pairing" in this manual.

When the wireless remote controllers are not paired, transmission is not available. Before using an un-paired wireless remote controller, be sure to have it go through a pairing process.

(3) Resetting pairing information

When pairing information has been cleared, ALL the wireless remote controllers need go through a pairing process again. Therefore, implement this operation with great care.

Holding down the button for 5 seconds while in the pairing mode clears all the pairing information.



<u>7.Q&A</u>

<i>Q.</i>	А.
How many wireless remote controllers are allowed to be paired?	Up to 8 controllers allowed.
What are requirements for pairing?	 When the wireless remote controller is not paired, it can be successfully paired. The wireless remote controller that is already paired with a wireless receiver goes through a pairing process with the other wireless receivers. The wireless receiver can not have the same address registered on multiple wireless remote controllers. When pairing multiple wireless remote controllers, assign different address on each wireless remote controller. When multiple remote controllers have the same address for the same receiver, only the last-paired remote controller controller can communicate with the receiver.
What causes a communica- tion error between the wire- less remote controller and wireless receiver?	 Check the following possible causes. The batteries on the wireless remote controller are running out. The transmitted signal does not reach the wireless receiver. The wireless remote controller is not paired.
What measures should be taken when the set temp. 1 display indicates <u>A</u> all the time?	The indoor unit or outdoor unit has a failure. Referring to the indications on the main controller, take appropriate measures. Along with the indications, refer to the appropriate installation and service manuals for the indoor unit.
What measures should be taken when the set temp. 2 display indicates <u>A</u> all the time?	The thermistor inside the wireless remote controller has a failure.Check the resistance of the thermistor. (When the room temperature is between 0 and 40°C, the resistance must be between 5 and 28 K Ω .)
What measures should be taken when the set temp. 3 display indicates <u>A</u> all the time?	 A communication error occurs between the wireless remote controller and the wireless receiver. Check the following possible causes. The signal that is transmitted by the wireless remote controller does not reach the wireless receiver. The wireless remote controller is not paired.
What measures should be taken when the set temp. 4 display indicates <u>A</u> all the time?	 A communication error occurs between the wireless receiver and the indoor unit. Check the following possible causes. The cable connecting between the wireless receiver and the indoor unit has severed. The connector on the wireless receiver is not correctly connected to the indoor unit.

<i>Q.</i>	A .
What measures should be taken if error E occurs?	Heater backup is running due to a failure of the indoor unit or the outdoor unit. Check the error code displayed on the main controller with the operation manual or the installation manual of the ATW system, and take appropriate measures accordingly. The holiday mode will be deactivated during heater backup.
Can the remote controller set a target room?	Use the main controller to set a target room. * For details about target room, see below.

<<What's target room?>>

- The indoor unit controls the temperatures, by reference to the temperature in a target room.
- The target room can be fixed or changed according to time, using a schedule function.
- The number of rooms that can be set to as a target room is always limited to one.

When setting a target room, use the main controller.



* The above figure shows the examples when the living room is set as a target room RC 1 (wireless remote controller 1), and when the bed room is set as a target room RC 2 (wireless remote controller 2).

8. Specifications

ltem	Description
Power source	12V DC (powered by the indoor unit)
Operating temperature and humidity re- quirements	Temperature: 0 to 40°C Humidity 30 to 90%RH (No condensation)
Weight	0.15 kg (excluding a cable)
Dimension (W×H×D)	100 mm × 80 mm × 30 mm