



070 00012 55124 1

U284-0180×01

Wireless Controller

Installation Instructions

To the Installer

The wireless controller can only be used with these serial numbers or higher.
The first four digits of the serial number are the month and year.

Model	Serial NO.
R85i / C85i	05.05 - 117257
R85e / C85e	05.05 - 117257
R70e	05.05 - 110434
R53i / C53i	05.05 - 109539
R53e / C53e	05.05 - 000001
R42e / C42e	05.05 - 000001

To correctly and safely install this product, please read this document carefully before installation.

After installation is complete, explain to the customer how to use the device according to the Wireless Controller Manual.

Name	Model
Transceiver	MC-502RC-1US-M
Wireless Controller	MC-502RC-1US-S
Transceiver and Wireless Controller	MC-502RC-1US-MS

Parts List

Confirm that the following parts are included for your product.

(1) MC-502RC-1US-M

Part name	Appearance	Qty
Transceiver		1
Screw		2
Anchor		2

(2) MC-502RC-1US-S

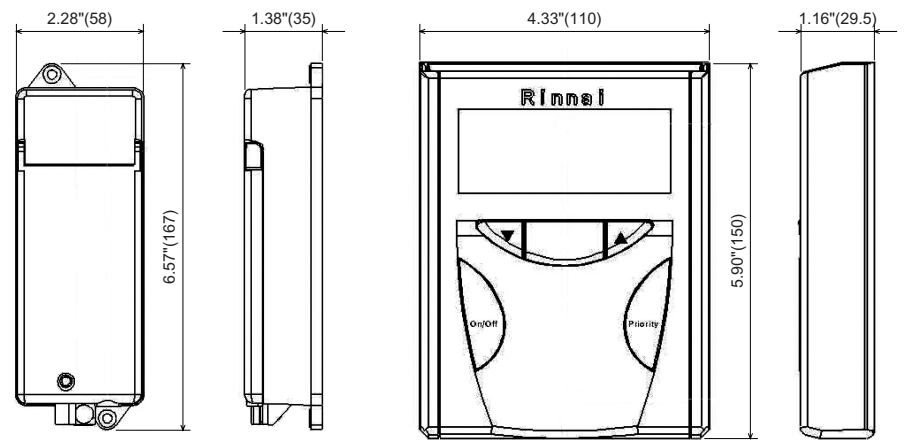
Part name	Appearance	Qty
Wireless Controller		1
Screw		2
Anchor		2
Wireless Controller Manual		1

(3) MC-502RC-1US-MS includes all of the parts in MC-502-1US-M (transceiver) and MC-502RC-1US-S (wireless controller).

Installation Location

- The installation must conform with local codes.
- The distance between the transceiver and the water heater should be less than 65 feet (20 meters).
- In order for the wireless controller to communicate with the transceiver do not install either unit in an enclosure surrounded by metal. Do not install the wireless controller or transceiver where metal appliances would block their signals.
- Do not install the transceiver or wireless controller where there are strong magnetic fields.
- Do not install the transceiver or the wireless controller in a high temperature area.
- Do not install either component in a location where there is a lot of hydrogen sulfide or ammonia.
- Do not install either component where water may splash on it.

External Dimensions Diagram (units: inches and mm)



MC-502RC-1US-M
(Transceiver)

MC-502RC-1US-S
(Wireless Controller)

Transceiver

- The top of the transceiver should be higher than the top of the water heater because the antenna is in the top of the transceiver.
- Install the transceiver in a location that is accessible for servicing.

Wireless controller

- Do not install the wireless controller on a table or in a drawer.
The wireless controller is designed to be used in the holder which is attached to a wall.
- Select a location for the wireless controller where the liquid crystal display can be easily read (i.e. away from direct sunlight).
- Do not install either component in a location where there is a lot of hydrogen sulfide or ammonia.
- Do not install either component where water may constantly splash on it.



NOTE

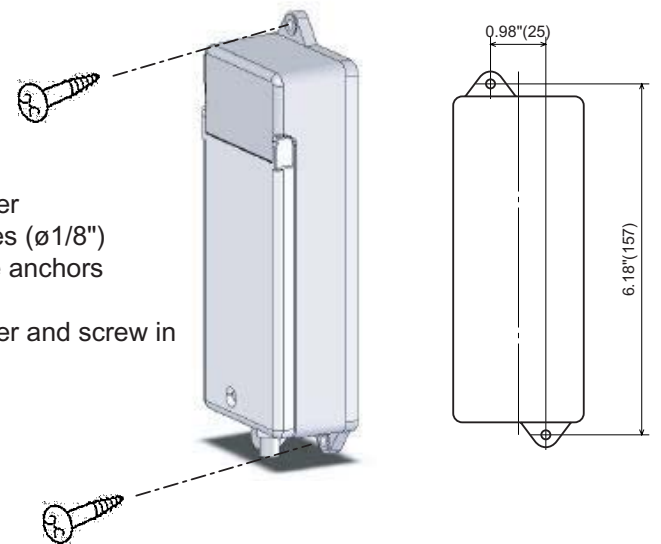
If installed in the shower, the suggested mounting location is directly below the shower head at shoulder high level.

Transceiver Installation

WARNING

To prevent electric shock or damage to the appliance, disconnect the power to the water heater before installing the transceiver.

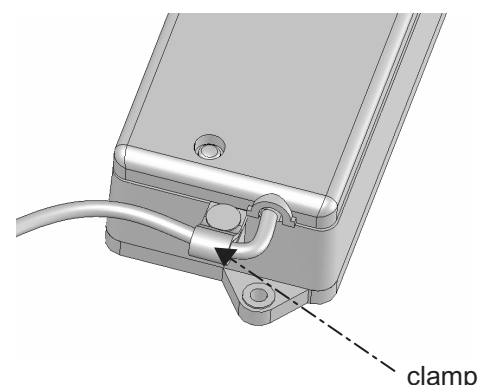
- Attach the transceiver to the wall with two screws. Use the anchors with the screws if installing on a concrete wall or sheetrock. Do not over tighten. Do not tighten using a powered screwdriver.



- Position transceiver
- Mark and drill holes ($\varnothing 1/8"$)
- If necessary place anchors in holes ($\varnothing 3/16"$)
- Position transceiver and screw in

- Connecting the communications cable to the transceiver

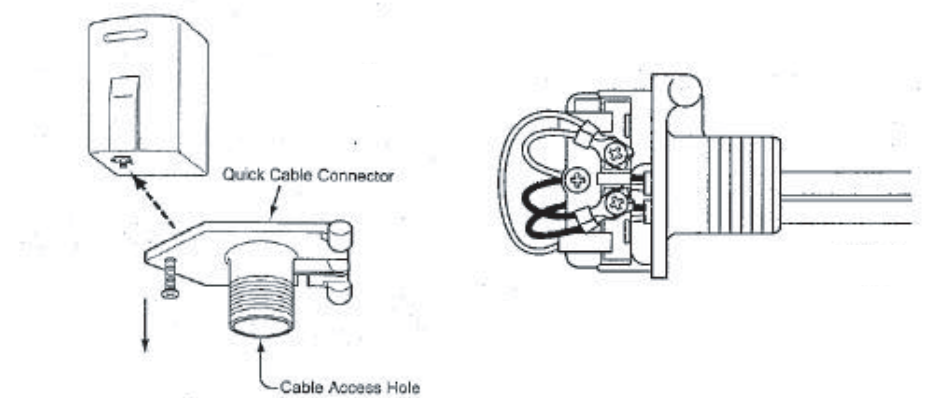
- Remove the screw in order to open the cover.
- Remove the screw from the cable clamp at the bottom of the transceiver.
- Attach the communications cable to both terminals inside.
- Position the cable through the hole in the bottom of the transceiver and secure with the cable clamp. The cover should be able to close. The screw will be installed in the cover after you have set the maximum temperature in step [Set the Maximum Temperature].



Connecting the Transceiver to the Water Heater

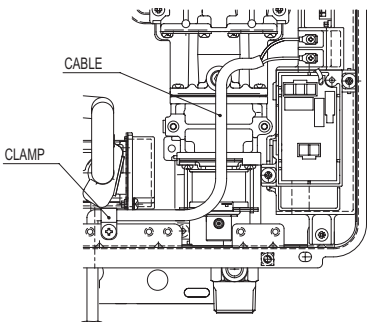
Refer to the water heater owner’s manual. Connections will be made using the quick cable connector or the PC Board depending on your model.

In Case of The Quick Cable Connector



Cut the communication cable to the appropriate length.

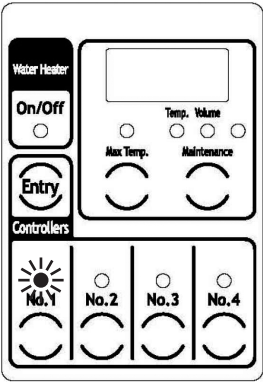
In Case of PC Board



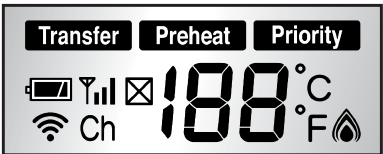
Wireless Controller Initialization

To enable communication, each wireless controller needs to be initialized with the transceiver. Up to 4 wireless controllers can be initialized with the transceiver. When installing different types of controllers, install the wired controllers before initializing the wireless controllers.

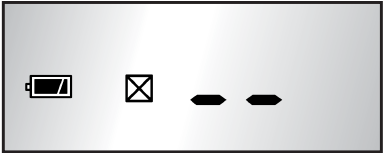
1. Insert the batteries
 - Check the polarity
 - Use new 4 AA batteries
 - Do not mix old and new batteries
 - When installed the display will light up momentarily as shown in screen A and then the display will show screen B.
2. Turn on the power supply to the water heater.
3. At the transceiver, press and hold the “Entry” button until the No. indicator starts to flash (about 3 seconds). The figure of the transceiver shows the No. 1 light as an example.
4. On the wireless controller, press and hold the “ON/OFF” button until the display shows the “-0” as in Screen C (about 2 seconds).
5. On the wireless controller, press the “ON/OFF” button once to start initialization. This will take a few seconds.
6. Once the components are initialized then the No. button on the transceiver will stop flashing and light continuously; and the wireless controller display will show normal indications as in Screen D.
7. To erase the initialization of a wireless controller, on the transceiver press the appropriate No. button. The light will turn off. The wireless controller will display the out of communication indicator.



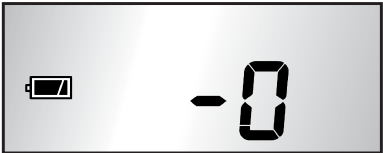
screen A



screen B



screen C



screen D

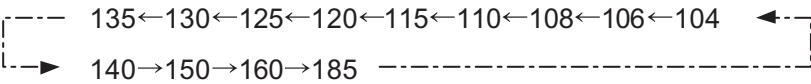
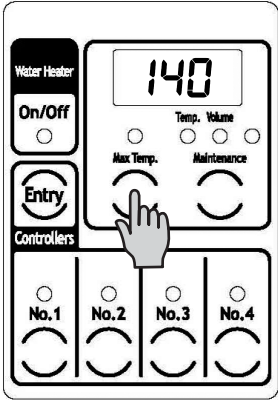


Set the Maximum Temperature

Set the maximum temperature on the transceiver by pressing the Max Temp button. Pressing repeatedly will cycle through the temperatures shown below. On residential units the maximum temperature is 140° F and on commercial units the maximum temperature is 185° F.

Choosing a lower maximum temperature will limit your available temperatures at the wireless controller. The maximum temperature on the transceiver will have no effect on the wired controllers (MC-91-1US, MC-100V, and BC-100V).

Install the screw in the cover.



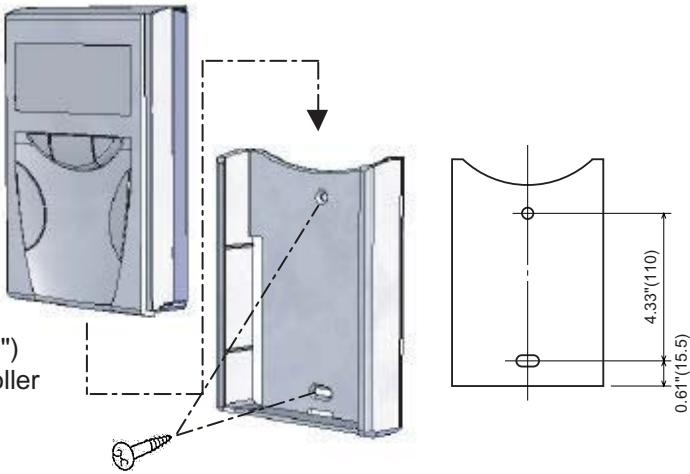
NOTE: It may appear that you are able to set the maximum temperature higher than 140° F on a residential unit but the PC Board will override the setting on the transceiver and only allow 140° F maximum.

Install the Wireless Controller

Note: Before attaching the holder, confirm that the wireless controller is within range with any intervening doors closed.

- (1) Select a level surface on the wall.
- (2) Install the holder using two screws. Use the anchors with the screws if installing on a concrete wall or sheetrock. Do not over tighten. Do not tighten using a powered screwdriver.
- (3) Slide the remote control into the holder.

- Position wireless controller
- Mark and drill holes (ø1/8")
- If necessary place anchors in holes (ø3/16")
- Position wireless controller and screw in



(This device complies with Part 15 of FCC Rules and RSS-Gen of IC Rules.) Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of this device.

FCC Warning
Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.