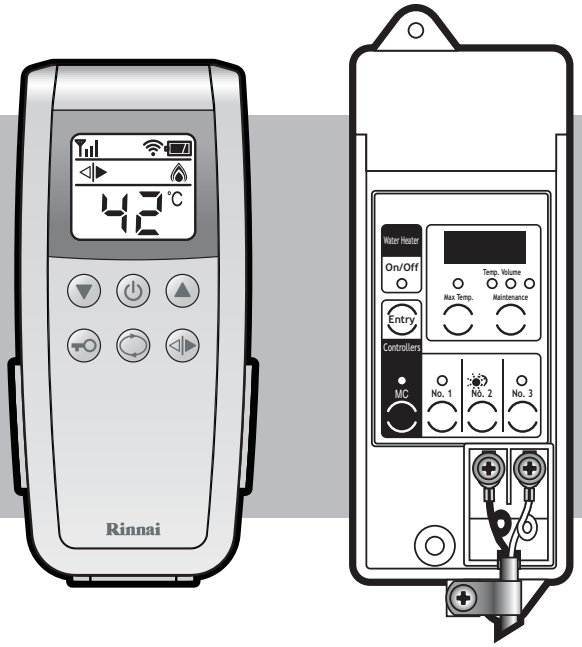
Rinnai

Operation / Installation Manual



Wireless Water Controller

Model: MC-503RC

This manual applies <u>ONLY</u> to the Rinnai MC-503RC wireless water controllers and transceivers.

This manual does <u>NOT</u> apply to MC-502RC wireless water controllers and transceivers.

This manual must be used in conjunction with the Rinnai Water Heater Operation / Installation Manual supplied with Rinnai water heaters.

MC-503RC water controllers are compatible <u>ONLY</u> with current Rinnai water heater and water controller models.

Refer to the table on page 5 of this manual to confirm the maximum number and combination of controllers that can be fitted to your Rinnai water heater model.

For information regarding compatibility with other Rinnai water heater and water controller models contact Rinnai.

This wireless water controller and transceiver must be installed in accordance with the manufacturer's Installation Instructions.

The Australian Gas Association
All Rinnai gas products are A.G.A. certified.

N10378

WaterMark
This Appliance complies with AS 3498:2009
SAI GLOBAL LIC. W208

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OPERATION MANUAL

IMPORTANT INFORMATION

INSTALLATION AND SERVICING

Rinnai Wireless Transceivers can be connected to the current range of water heater models by the end user in accordance with these Instructions. A qualified tradesperson is not required.

Rinnai Wireless Transceivers are also compatible with some older water heater models. In this case they must be installed and commissioned by a suitably qualified trades person. Contact Rinnai for information regarding compatibility with older water heaters.

Regardless of water controller or transceiver installation, all Rinnai water heaters must only be installed by an authorised person.

Water controllers, transceivers and water heaters do not contain user serviceable parts and must only be serviced and repaired only by an authorised person.

Keep this manual in a safe place for future reference.

All dimensions referred to in this manual are in millimetres, unless otherwise specified.

A WARNING ABOUT HOT WATER

Hot water can cause scalding. Those most at risk are children and disabled, elderly and infirm persons. (65°C water can severely burn a child in half a second).

Rinnai have water heater models which limit the delivery temperature to 50°C which significantly reduces the scald hazard. Temperature limiting devices may also be able to be fitted. Contact Rinnai for further information.

Always test the water temperature before use, such as when filling a bath or basin or entering a shower, to ensure it is suitable for the application and will not cause scald injury.

Always supervise children whenever they are in the bathroom or near other sources of hot water. Ensure any hot water taps are closed firmly after use.

RADIO COMMUNICATIONS

Rinnai wireless water controllers are classified as short range radio communications devices and referred to as Low Interference Potential Devices (LIPD's) in AS/NZS 4268 *. As such, they operate in the same radio frequency spectrum as many other devices classified as LIPD's such as garage door openers and keyless automobile entry systems. Although interference with other LIPD's is unlikely, it is not guaranteed interference will not occur.

Rinnai wireless water controllers must not be used in the vicinity of other devices if radio interference with such devices could result in a dangerous situation, unless it is verified that interference will not occur. Possible examples are medical devices and fire alarms.

*AS/NZS 4268 'Radio Equipment and systems – short range devices – Limits and methods of measurement'.

GENERAL WATER CONTROLLER INFORMATION

NOTE

The MC-503RC Wireless water controller is a water resistant device, however excessive exposure to water such as immersion may result in damage to the controller.

- **DO NOT immerse the controller into water.**
- **AVOID direct exposure to water or steam as these conditions may cause a malfunction.**
- **ALWAYS AVOID exposure to water when the battery compartment is open.**

When cleaning your water controller use ONLY a damp cloth and a mild detergent.

TEMPERATURE CONTROL

Water controllers allow precise temperature control by the user. When used correctly, the hot water unit will deliver the selected temperature, even when the water flow is varied, or more than one tap is in use.

Only one MC model water controller can be designated as a 'Master' water controller and this is normally used in the kitchen. All the remaining water controllers are designated as 'Sub' water controllers and are for use in bathrooms, toilets and laundries. The maximum temperature limit for all 'Sub' water controllers is restricted to 50°C to minimise the risk of burns in these areas.

Water Controller	Temperatures (°C)**
Master (MC)	37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48, 50, 55*, 60*
Sub (MC or BC)	37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48, 50

For hygiene in sanitary areas such as bathrooms, the suggested temperature should be 37°C ~ 43°C.

The above is a suggestion only, as you may find higher or lower temperatures more comfortable, however maintaining lower temperatures also helps to save energy.

To obtain water temperatures lower than 37°C, simply open the cold water tap and add cold water until the desired lower temperature is reached.

NOTE

The temperature of outgoing hot water is constantly monitored by a built-in sensor. If the temperature of the outgoing hot water rises to more than 3°C above the selected temperature shown on the digital monitor or the pre-set limit when water controllers are not fitted, the burner will automatically go out. The 'in use' indicator will also go out.

The burner will ignite again once the outgoing hot water temperature falls to that shown on the digital monitor (or the pre-set limit of the appliance)

*** Temperature may not be available on all installations. Some Rinnai Continuous Flow water heaters can be programmed to deliver higher temperatures from the master water controller, or may be programmed to restrict the maximum available delivery temperature. Contact Rinnai for more details.**

**** Temperature limiting devices (where fitted) may further control what maximum delivery temperature is available to outlets.**

Universal and Wireless and water controllers allow temperature selection only. Deluxe water controllers allow temperature selection, have a clock function and the Deluxe Bathroom water controller has a shower saver / bath fill function is also available, contact Rinnai for further information regarding Deluxe water controllers or visit www.rinnai.com.au.

GENERAL WATER CONTROLLER INFORMATION

WATER CONTROLLER COMBINATIONS AND CONFIGURATIONS

Wireless Only Configurations

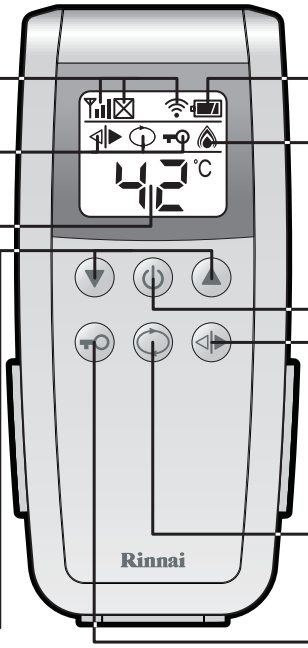
- A maximum of 4 wireless water controllers can be fitted with the following limitation:
- Only ONE MC-503RC can be set as the Master Controller.
- NOT compatible with MC-502RC wireless water controllers.

Combined Wireless & Wired Configurations

- A maximum of 4 water controllers can be fitted. Any combination of deluxe, universal and wireless controllers can be used with the following limitations:
- Only **ONE** master controller can be installed. This can be a MC-100V, a MC-601Q (when programmed as a master controller) or a MC-503RC-S water controller.
  Note that when a MC-100V is fitted it will always functions as a master controller, this is the default setting and can not be changed.
- Up to **TWO** BC-100V water controllers can be installed.
- The **FOURTH** water controller in any installation MUST BE a MC-503RC-S or a MC-601Q.

USING WIRELESS WATER CONTROLLERS

ABOUT THE WIRELESS WATER CONTROLLER (MC-503RC)



COMMUNICATIONS STATUS

Signal strength indicator

◀ Strong signal Weak signal ▶

Out of range indicator

Communications indicator

WATER CONTROLLER STATUS INDICATORS

This indicator illuminates when the water controller is in control of water delivery temperature.

This indicator illuminates when the Smartstart® preheater (when fitted) has been activated.

This Child Lock indicator illuminates when the child lock has been activated.

WATER TEMPERATURE INDICATOR

Indicates the selected hot water temperature.

WATER TEMPERATURE UP AND DOWN BUTTONS

These buttons are used to select the water temperature.

BATTERY STATUS

Full battery indicator.

Low battery indicator.

Replace battery indicator, when flashing.

WATER HEATER 'IN USE' INDICATOR

Indicates that the water heater is in operation and delivering hot water.

ON/OFF BUTTON

Used to switch the water heater on and off.

TRANSFER BUTTON

Used to transfer control priority between the water controllers. The controller with priority has command of the hot water delivery temperature.

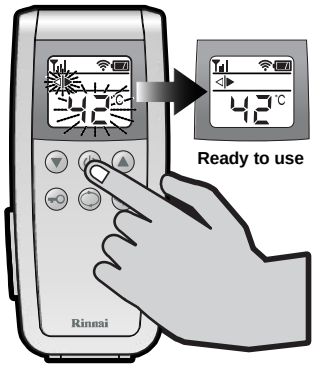
PREHEAT BUTTON

Used to start and stop the Smartstart® preheat unit (when fitted).
See Smartstart® Operation on page 9.

CHILD LOCK BUTTON

Used to switch Child Lock function on and off.

TURNING ON THE WATER HEATER



When the water heater is in the 'Off' condition only the communications and battery status indicators are displayed on the digital monitor. To turn the water heater 'On', press the On/Off ⏻ button once (if Child lock is activated see page 8). The communications indicator will briefly illuminate to confirm that a signal has been sent to the transceiver connected to the water heater.

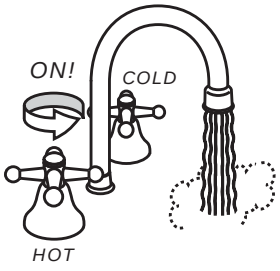
The transfer ◁▶ indicator and the water temperature display will flash until communication between the controller and transceiver is complete. When the display stops flashing the water heater is ready to supply hot water.

ADJUSTING TEMPERATURE

Simply press the 'hot water temp' ▲ or ▼ buttons until the required temperature is displayed on the digital monitor. The water temperature and any active status ◁▶ indicator will flash until communication between controller and transceiver is complete. **DO NOT** open the hot water tap until the flashing stops and the desired temperature is displayed.

To operate the water heater, open any hot water tap. This will automatically light the burner, providing hot water. The 'IN USE' indicator will illuminate on the water controller.

Once the hot water is running, if the set temperature is either too hot or cold press the ▲ or ▼ buttons until the desired temperature is reached.



NOTE

Whilst hot water outlets are open the set temperature may be lowered to a minimum of 37°C. For safety, it cannot then be raised above 43°C until all hot water taps are closed.

If the water heater is turned 'Off' whilst hot water taps are open it can not be turned back 'On' until all hot water taps have been closed.

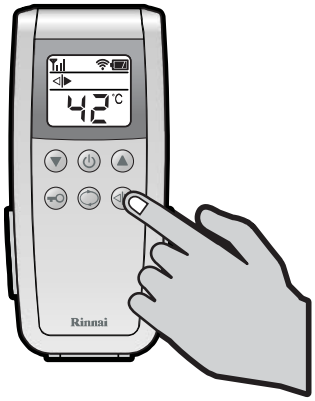
CAUTION

Always check water temperature at the outlet before use.

A parent or carer should always check the temperature before a child is placed in contact with hot water, see page 4.

USING WIRELESS WATER CONTROLLERS

TRANSFERRING PRIORITY BETWEEN WATER CONTROLLERS



To control the water delivery temperatures when using two or more controllers it is necessary to have priority transferred to the water controller you wish to use.

An illuminated Transfer ◁▮▶ indicator confirms that the desired water controller is in control of the water delivery temperature.

If the Transfer ◁▮▶ indicator is not illuminated press the 'Transfer' ◁▮▶ button to transfer priority to the desired water controller.

The Transfer ◁▮▶ indicator on the water controller will now illuminate to indicating that priority has been transferred and that the water heater is ready to supply hot water once a hot water tap is opened.

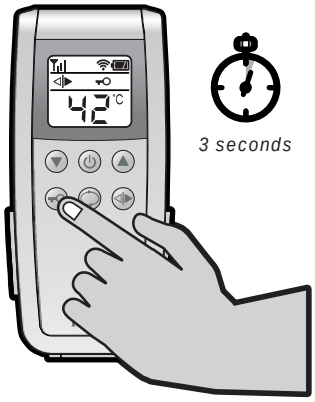
NOTE

Transferring of priority will NOT be possible if the 'IN USE' indicator is currently illuminated, as this indicates hot water is flowing and that another water controller already has priority.

HOT WATER CONTROL
Temperatures higher than 50°C should only be able to be selected on the controller labelled 'Master' controller (used in the kitchen), not on those labelled 'Bathroom' controllers. This helps minimise the risk of burns.

The wireless transceiver has been incorrectly assigned if temperatures in excess of 50°C are able to be selected on controllers used in bathrooms, ensuites, toilets and laundries. Re-assign the wireless transceiver if this is the case. See "UN-ASSIGNING AND RESETTING WIRELESS WATER CONTROLLERS" on page 18 and "INSTALLING WIRELESS WATER CONTROLLERS" on page 17

USING CHILD LOCK FUNCTION



The Child Lock function is designed to prevent small children or the infirm from operating the wireless controllers.

To Activate the Child Lock

To activate the Child Lock function press the 🔑 button for 3 seconds. The Child Lock 🔑 indicator will illuminate to confirm that the function is now active. Once activated only the initiating controller can then deactivate this function?

To Deactivate the Child Lock

To deactivate the Child Lock function press the 🔑 button for 3 seconds. The Child Lock 🔑 indicator will go out to show that the function is no longer active.

NOTE

Child lock only applies to the water controller initiating the function and can be activated / de-activated regardless of priority ◁▮▶ status or whether the water heater is in the 'On' or 'Off' condition.

While the child lock is activated only the 'Child Lock' 🔑 control and the 'Off' ⏻ control are functional from that controller.

When the water heater is turned 'Off' while Child lock is activated it can not be turned 'On' again from a controller where the Child lock is activated.

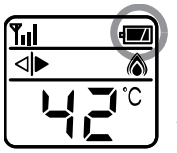
If the water heater is turned 'Off' whilst hot water outlets are open it can not be turned back 'On' until all hot water outlets have been closed.

Child lock is de-activated during a battery change or when batteries fail.

USING WIRELESS WATER CONTROLLERS

WIRELESS WATER CONTROLLERS BATTERIES

Wireless water controllers use 2 x 1.5V AAA batteries. The battery symbol in the display monitor indicates the remaining charge in one of three levels.



Battery charge level OK.

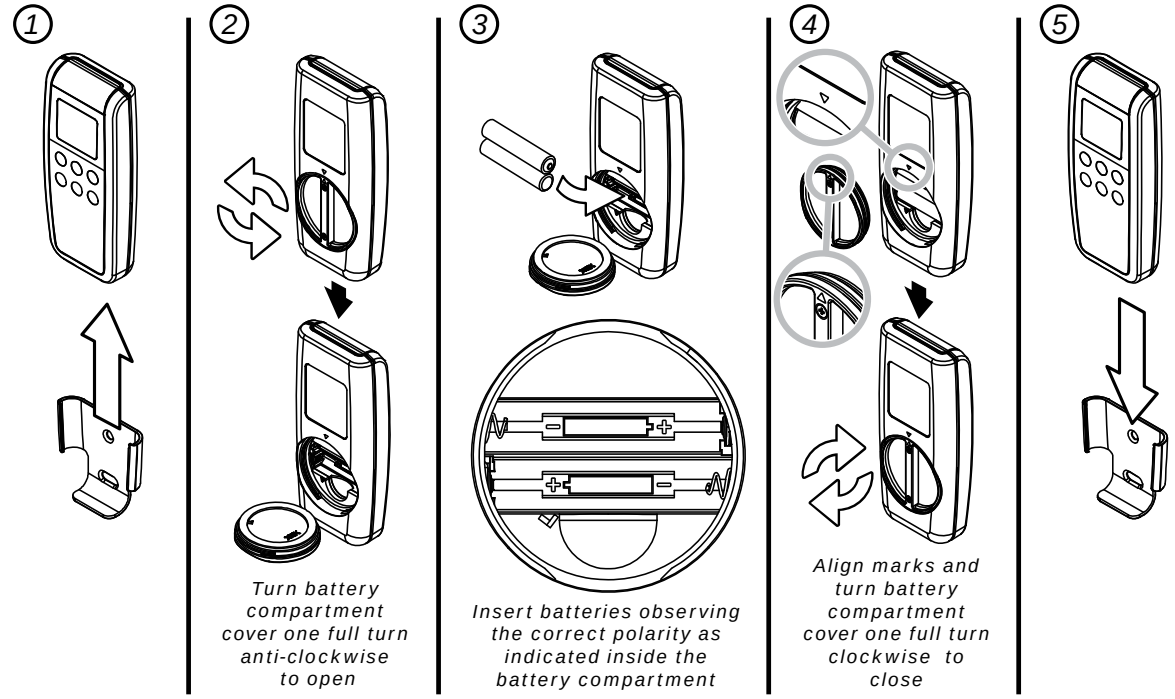
Battery charge level is low.

Batteries need replacing (when flashing)

To replace the batteries:

Before attempting to change the batteries first ensure that all moisture has been removed from the water controller. Failure to do so may allow water to enter the water controller causing damage.

1. Remove the water controller from the wall mounting bracket.
2. To open the battery compartment turn the battery compartment cover a full turn anti-clockwise.
3. Insert the batteries observing the correct polarity as shown on the rear of the controller.
4. To close the battery compartment align the " △ " and " ▽ " marks on the battery compartment cover and the controller body. Then turn the battery compartment cover a full turn clockwise to obtain the correct seal.
5. Return the controller to the wall mounting bracket.



IMPORTANT

Use only 2 x 1.5V AAA alkaline batteries.

DO NOT

- **mix old and new batteries.**
- **use different types of batteries at the same time.**
- **heat or expose to flame.**
- **take apart or short circuit.**
- **attempt to recharge alkaline batteries.**
- **use batteries if their covering has been damaged or peeled off.**

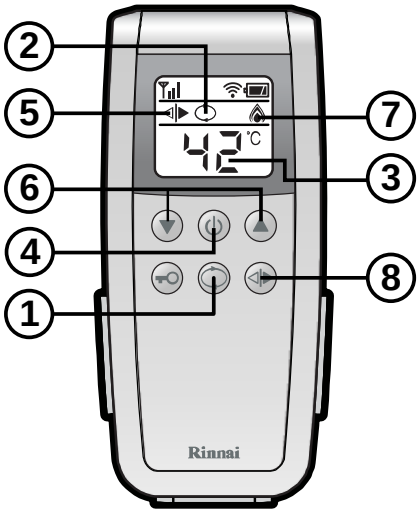
Battery life is approximately 1 year.

- **Dispose of used batteries according to the manufacturers instructions.**

Remove batteries if the water controller is not going to be used for a long period. This will help avoid damage from leaking batteries.

SMARTSTART® PRE-HEAT OPERATION

ABOUT THE SMARTSTART® PRE-HEAT SYSTEM



1 PREHEAT BUTTON
Used to start and stop 'Smartstart ®' preheater.

2 PREHEAT INDICATOR
Indicates that 'Smartstart ®' preheater is activated*

3 DIGITAL MONITOR

4 ON/OFF BUTTON

5 TRANSFER INDICATOR

6 TEMPERATURE BUTTONS

7 WATER HEATER 'IN USE' INDICATOR

8 TRANSFER BUTTON

Preheat Function

The “preheat” function works in conjunction with various Rinnai water heater models and the separately installed and optional Rinnai “Smartstart®” module.

When the “preheat” function is activated and used in accordance with these instructions, water in the pipework connected between the water heater and the hot water outlets in your house is warmed before any outlets are opened. This results in water savings and added convenience.

The preheat function is activated as follows:

1. Ensure that the hot water unit is on (temperature digits are displayed in the digital monitor ③). If more than one controller is fitted press the ‘Transfer’ ⑧ button to pass on priority to your desired controller. The ‘Transfer’ ⑤ indicator will illuminate to confirm that priority has been assigned to this controller and that the hot water unit is ready to deliver hot water.
2. Select the desired temperature using the 'Temperature' ⑥ buttons until the required temperature is displayed in the digital monitor ③.
3. Press the ‘Preheat’ ① button once. The ‘preheat’ ② indicator and the ‘In Use’ ⑦ indicator will illuminate, signifying that the preheat system has been activated.
4. Wait approximately two minutes before opening an outlet. This will allow the water in the pipework to be warmed.

NOTE

The waiting time may be longer or shorter than two minutes depending on your particular installation configuration.

The preheat function is cancelled 5 minutes after activation and the ‘preheat’ indicator will go out. This is to conserve energy. To reactivate, simply repeat steps 2-4 above.

*** If the ‘preheat’ button is pressed and the ‘Smartstart®’ preheat unit is not installed, the ‘preheat’ indicator will still light but there will be no preheat function. The ‘preheat’ indicator will go out after a short time and will not affect the other functions of the water controller or water heater.**

Other Water Controller Functions

Water controller functions such as temperature control and transfer of priority between multiple controllers are not affected by the operation of the preheat. Such functions are described in the applicable sections of this manual.

TROUBLESHOOTING

ERROR CODES

Your Rinnai Continuous Flow water heaters has a self diagnostic capability. If a fault occurs, an Error Code will flash on the digital monitor of your water controllers and on the status monitor* on the front cover of the water heater. This assists with diagnosing the fault, and may enable you to overcome a problem without a service call. Please quote the code displayed when enquiring about service.

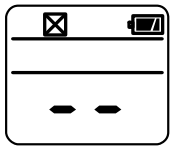
Code	Description	Remedy
-	Noticeable reduction in water flow.	Inlet water filter needs to be cleaned - Service call.
03	Power interruption during Bath fill (Water will not flow on power reinstatement)	Turn off all hot water taps. Press On/Off twice.
10	Air intake or flue blocked.	Service Call.
11	No ignition / No gas supply.	Check gas is turned on at water heater and gas meter or cylinder.
12	Flame Failure / Low gas flow.	Check gas is turned on at water heater and gas meter or cylinder. Check there are no obstructions to the flue outlet.
14	Remaining Flame Safety Device.	Service Call.
16	Over Temperature Warning.	Service Call.
19	Electrical Earth Check Fault.	Service Call.
21	Incorrect Dipswitch Setting Detected	Installer to check Dipswitch Settings / Service Call.
32	Outgoing Water Temperature Sensor Fault.	Service Call.
41	Ambient Temperature Sensor Fault.	Service Call.
52	Gas Modulating Valve Fault.	Service Call.
61	Combustion Fan Fault.	Service Call.
65	Water Flow Control Fault (Does not stop flow properly).	Service Call.
70	Microprocessor Fault.	Service Call.
71	Microprocessor Fault.	Service Call.
72	Microprocessor Fault.	Service Call.
☒	Wireless water controller (when fitted) is ‘Out of Range’ due to the distance from transceiver or an obstruction.	Move wireless water controller or transceiver or remove the obstruction.

TROUBLE SHOOTING

In all cases, you may be able to clear the Error Code simply by turning the hot water tap OFF, then ON again. If this does not clear the Error Code, try pushing the On/Off button OFF, then ON again. If the Error Code still remains, contact Rinnai for advice.

No power display

When power to the water heater is disconnected the LCD of all wireless water controllers will display as shown. Check that power is available, the water heater is plugged in and that the power point is turned 'on'.



NOTE

Faults caused by insufficient gas supply, insufficient water supply, gas quality, water quality, installation errors or operation errors are not covered by the Rinnai warranty. Refer to the separate Warranty Booklet for full warranty details.

SERVICE

Wired and wireless water controllers, transceivers and water heaters DO NOT contain user serviceable parts and must only be serviced and repaired by an authorised person.

Rinnai has a Service and Spare Parts network with personnel who are fully trained and equipped to give the best service on your Rinnai appliance. If your appliance requires service, please call our National Help Line. Rinnai recommends that this appliance be serviced every 3 years.

INSTALLATION MANUAL

INSTALLATION GENERAL

IMPORTANT

Other manufacturers water controllers are NOT compatible with Rinnai water heaters. Water controllers MUST NOT be used with any Solar Boost water heater. Rinnai water controllers brought in from other countries are not compatible with Rinnai appliances sold in Australia.

RINNAI WIRELESS WATER CONTROLLERS

A wireless water controller installation utilises a 'transceiver' and up to 4 wireless water controllers. Unlike most remote control systems, there is 'two way' communication between the transceiver and controllers. The 'transceiver' is connected by electrical cable to the water heater. The 'transceiver' transmits control signals received from the wireless controllers operated by the user to the water heater. The 'transceiver' transmits operational 'status' signals from the water heater which are received by individual wireless controllers to ensure controller displays reflect the operational status of the water heater.

Wireless water controllers can be installed in conjunction with Universal and Deluxe wired water controllers and will function as described in the Operation Section of this manual. Refer to page 6 to confirm the maximum number and combination of water controllers that can be fitted.

Master and Sub controllers and temperatures

Only one wireless or wired controller can be designated the 'Master Controller' (MC). This controller is normally used in the kitchen and usually has a maximum temperature of 55°C, is sufficient for almost all kitchen applications. Temperatures higher than 55°C are possible but usually unnecessary and will result in higher gas use and increase the risk of burns. Some conditions regarding Master Controller maximum temperatures are as follows:

- Temperatures of 55°C or higher can only be selected on the controller designated as Master Controller (MC) if the transceiver 'Max Temp' is also programmed to 55°C or higher.
- The temperature of hot water delivered is always limited to the maximum temperature programmed into the water heater itself. For example, if the transceiver maximum temperature is programmed to 55°C and the water heater is limited to 50°C, the maximum temperature that the water heater will deliver is 50°C. In this case 55°C will be displayed on the wireless Master Controller until a tap is opened after which the display will revert to 50°C.

IMPORTANT

The water heater maximum temperature cannot be adjusted by the user.

These adjustments can only be carried out only by a qualified and licensed trades person.

The remaining controllers are designated 'sub' controllers and are for use in bathrooms, toilets and laundries. The temperature limit for all 'Sub' controllers is always 50°C to minimise the risk of burns in these areas.

Adhesive labels are included for individual identification of wireless controllers as master (Kitchen) or sub (Bathroom No.) controllers. These labels are usually placed on the top back of the wireless water controller body.

GENERAL INSTALLATION INFORMATION

Rinnai Wireless Transceivers can be connected to the current range of water heater models by the end user in accordance with these Instructions. These water heaters contain the ‘Ezi connect’ cable connector and a qualified trades person is not required.

Rinnai Wireless Transceivers are also compatible with some older water heater models. Since older water heater models do not contain the 'Ezi connect' cable connector, wireless water controllers must be installed and commissioned by a suitably qualified and licensed tradesperson. Contact Rinnai for information regarding compatibility with older water heaters.

IMPORTANT

Regardless of water controller installation, all Rinnai water heaters must only be installed only by an authorised person.

Water controllers, transceivers and water heaters do not contain user serviceable parts and must only be serviced and repaired only by an authorised person.

INSTALLATION GENERAL

POSITIONING OF TRANSCEIVER AND WIRELESS WATER CONTROLLERS

The water controllers must be installed in shaded and clean locations. The water controllers and the transceiver should be fitted out of reach of children (suggested height from floor to be at least 1500 mm).

The water controllers are water resistant, however, durability is improved when positioned outside the shower recess. The water controllers must be installed at least 400 mm above the highest part of a sink, basin or bath.

NOTE

The MC-503RC wireless water controller is a water resistant device, however excessive exposure to water such as immersion may result in damage to the controller.

- **DO NOT immerse the controller into water.**
- **AVOID direct exposure to water or steam as these conditions may cause a malfunction.**
- **ALWAYS AVOID exposure to water when the battery compartment is open.**
- **When cleaning your water controller use ONLY a damp cloth and a mild detergent.**

The transceiver comes supplied with a 1.5m length of communications cable.

The transceiver's antenna is located in the top. For the best results mount the transceiver so the top of the transceiver is higher than the top of the water heater. If the transceiver is mounted to the side or below the water heater signal strength may be reduced.

The transceiver may be mounted inside metal recess boxes or pipe covers, however this may also reduce signal strength.

In some cases building construction and design can reduce signal strength and it may be necessary to locate the transceiver in a central location inside the building. For such conditions extended lengths of communication cable are available from Rinnai.

NOTE

Alternatively two core sheathed (double insulated) flex with minimum crosssectional area of 0.5 mm² may be used. Maximum individual cable runs should not exceed 20m.

Take the signal strength into consideration when determinig the best location for both the transceiver and the wireless water controllers.

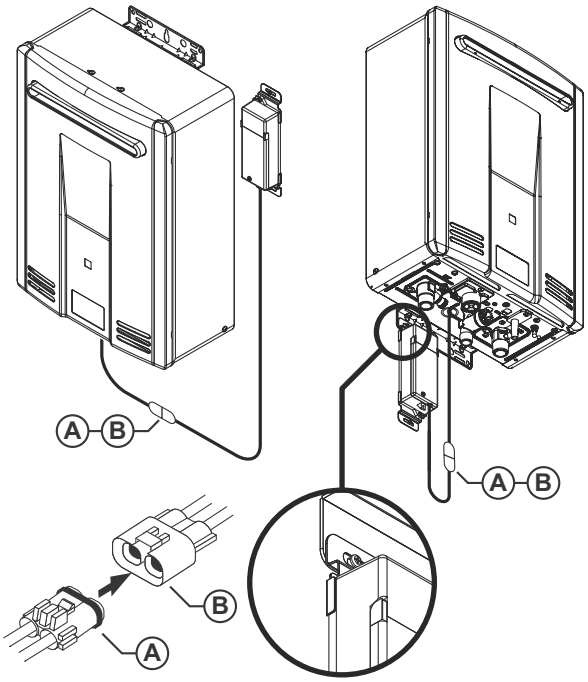
TRANSCEIVER INSTALLATION

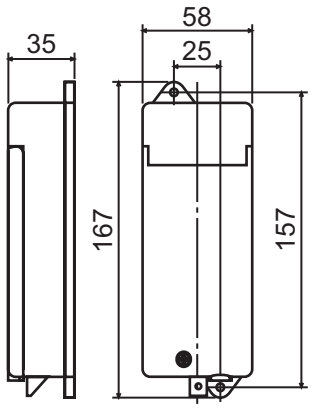
MOUNTING & CONNECTING THE TRANSCEIVER

NOTE

- **The distance between the water heater and the transceiver must not exceed 20m.**
- **Metallic structures, appliances or magnetic fields in the vicinity of transceiver or wireless water controllers may reduce signal strength.**
- **Do not install transceiver near a heat source, such as a cook top, stove or oven. Heat, steam, smoke and hot oil may cause damage.**
- **The transceiver MUST NOT be installed where chemicals such as benzene, alcohol, turpentine, hydrogen sulphide, ammonia, chlorine or similar chemicals are in use.**

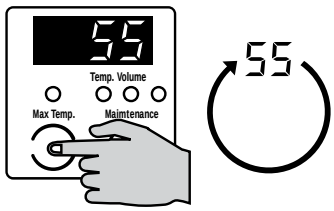
1. Determine the most suitable position for the transceiver (see “POSITIONING OF TRANSCEIVER AND WIRELESS WATER CONTROLLERS” on page 15).
2. The transceiver can be either be mounted under the hot water unit via the lower bracket or to the wall using the screws and/or anchors provided as shown.
3. Connect the communication cable plug **A.** of the transceiver to the communication cable socket **B.** of the hot water unit.





SETTING THE MAXIMUM TEMPERATURE AT THE TRANSCEIVER

1. Ensure the power to the water heater is switched ‘on’.
2. Set the transceiver’s maximum water temperature to 55°C by pressing the ‘Max Temp’ button until 55 is displayed.



NOTE

Refer to “Master and Sub controllers and temperatures” on page 14 for information regarding using of the maximum temperatures with wireless water controllers.

WIRELESS WATER CONTROLLER INSTALLATION

INSTALLING WIRELESS WATER CONTROLLERS

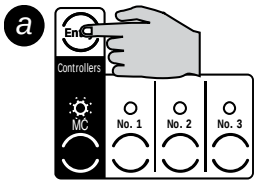
IMPORTANT

This installation procedure applies to wireless water controller installations only. For combined wired and wireless water controller installations refer to "INSTALLING WIRED AND WIRELESS WATER CONTROLLERS" on page 18.

Up to 4 wireless water controllers can be installed. Only one of these can be designated as a 'Master Controller' (MC), others will be designated as 'Sub' controllers.

Only one wireless water controller can be installed at a time. DO NOT insert batteries until step 3.

1. Ensure the power to the water heater is switched 'on'.
2. Press the 'Entry' button (a) on the transceiver for approximately 2 seconds to select a wireless controller channel for tuning**.** The first unassigned wireless controller channel LED will begin a fast flash, signifying that this channel has been selected for tuning.

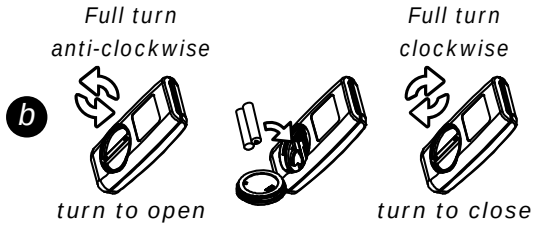


NOTE

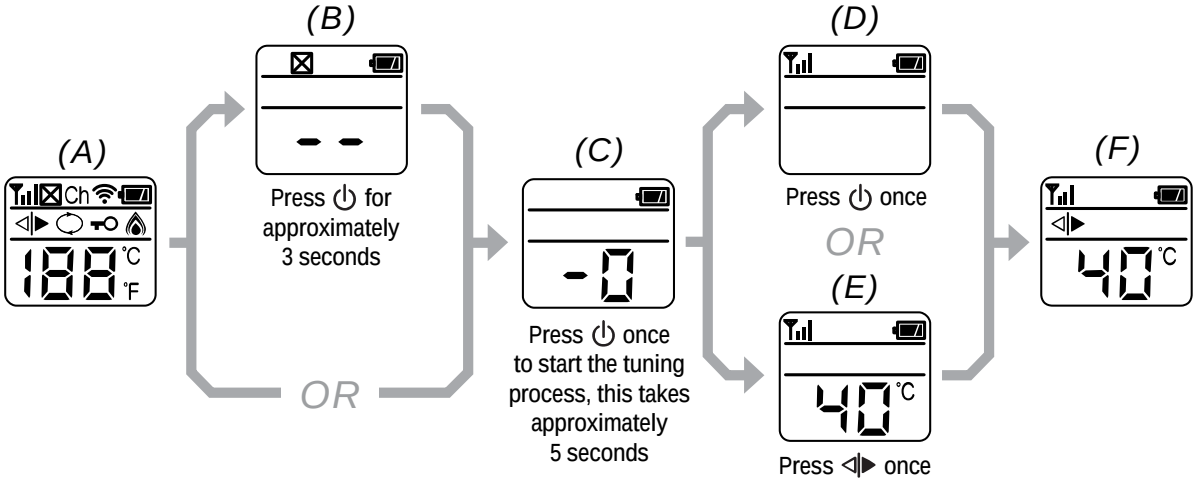
The default order of channel selection is as follows: ➞ MC ➞ No. 1 ➞ No. 2 ➞ No. 3 ➞

The wireless Master Controller is the only wireless controller capable of selecting maximum delivery Temperatures exceeding 50°C. Ensure that the Master Controller (Kitchen) label provided is placed on the top rear of the assigned controller.

3. Select a wireless water controller for tuning to the unassigned transceiver channel and remove the controller from it's wall mounting bracket. Open the battery compartment with a full turn anti-clockwise. Insert the batteries observing the correct polarity. Close the battery compartment with a full turn clockwise (b)



4. After battery installation the wireless controller will momentarily display an initialisation screen **(A)**, which will then switch to screen **(B)** or **(C)**.
5. If screen **(B**) is displayed press and hold the 'On/Off' ⏻ button until screen **(C)** is displayed. This takes approximately 2 seconds.
6. From screen **(C)** press the 'On/Off' ⏻ button once to start the tuning process which will take approximately 5 seconds. Once the controller is tuned the controller channel LED on the transceiver will become steady and the controller LCD will switch to screen **(D)** or **(E)**.
7. From screen **(D)** press the 'On/Off' ⏻ button once or from screen **(E)** press the 'Transfer' ◁▮▶ button once to complete the tuning of this channel. At this point screen **(F)** will be displayed by the controller. The wireless water controller is now tuned and ready to control the delivery temperature of the water heater.
8. Apply one of the self-adhesive identification stickers to the rear of the controller, ensuring that the Master Controller sticker is only applied to the wireless water controller tuned to channel MC.



WIRELESS WATER CONTROLLER INSTALLATION

INSTALLING MULTIPLE WIRELESS WATER CONTROLLERS

To install subsequent wireless water controllers repeat steps 2 to 8 for each additional wireless water controller.

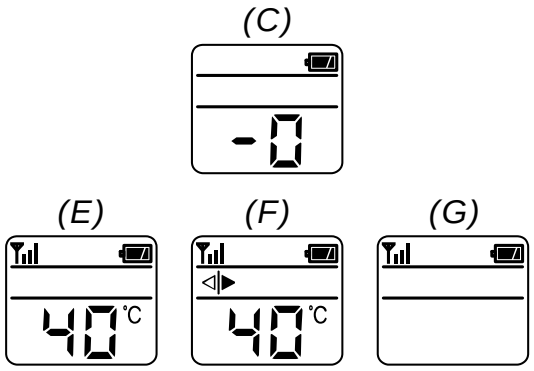
Once all wireless water controllers are installed re-secure the transceiver access cover.

TROUBLE SHOOTING WIRELESS WATER CONTROLLERS CHANNEL ASSIGNMENT

If at the end of the installation process screen **(C)** is displayed do the following:

Confirm first that the power is still on at the water heater.

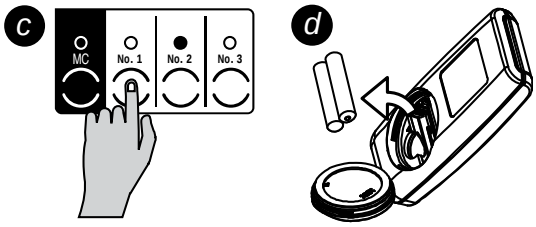
If power is off turn it back on. If the channel has been correctly assigned then the display should show either screens **(E)**, **(F)** or **(G)**.



NOTE **If screen (C) is still displayed un-install and reset the wireless controller and repeat the installation procedure.**

UN-ASSIGNING AND RESETTING WIRELESS WATER CONTROLLERS

1. Press the desired controller channel button ⓒ. The LED will go out to signify that this channel is now un-assigned.
2. Removing the batteries ⓓ from the wireless controller will reset the wireless controller and complete the un-install process.



INSTALLING WIRED AND WIRELESS WATER CONTROLLERS

IMPORTANT **When installing combinations of both wired and wireless controllers, all wired water controllers MUST BE connected before the wireless water controllers are assigned to a transceiver channel.**

Refer to page 6 to confirm the maximum number and combination of water controllers that can be fitted

Wired water controllers can ONLY be added to an existing wireless installation when:

• All wireless transceiver channels have been un-assigned.

• All wireless controllers have been reset.

See "UN-ASSIGNING AND RESETTING WIRELESS WATER CONTROLLERS" above.

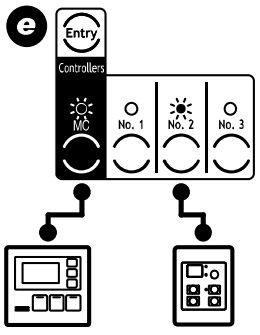
When the wireless transceiver is installed it automatically detects any wired water controllers already connected to the water heater.

The LEDs of the channels assigned to wired controllers ⓔ will slow flash. The channels for wired water controllers are assigned in sequence as follows:

MC-100V or MC-601Q (programmed as a Master Controller) will automatically be assigned to the MC channel.

BC-100V or MC-601Q (not programmed as a Master Controller) will automatically be assigned to an available channel other than the MC channel.

Install the wireless water controllers to any of the unassigned channels following steps 1 to 8 on page 17.



WIRELESS WATER CONTROLLER INSTALLATION

MOUNTING THE WIRELESS WATER CONTROLLER

NOTE

- **Metallic structures, appliances or magnetic fields in the vicinity of transceiver or wireless water controllers may reduce signal strength.**
- **DO NOT install wireless water controllers near a heat source, such as a cook top, stove or oven. Heat, steam, smoke and hot oil may cause damage.**
- **DO NOT install wireless water controllers in direct sunlight.**
- **DO NOT install wireless water controllers outdoors unless protection from dust ingress and sunlight are provided.**
- **Wireless water controllers MUST NOT be installed where chemicals such as benzine, alcohol, turpentine, hydrogen sulphide, ammonia, chlorine or other similar chemicals are in use.**

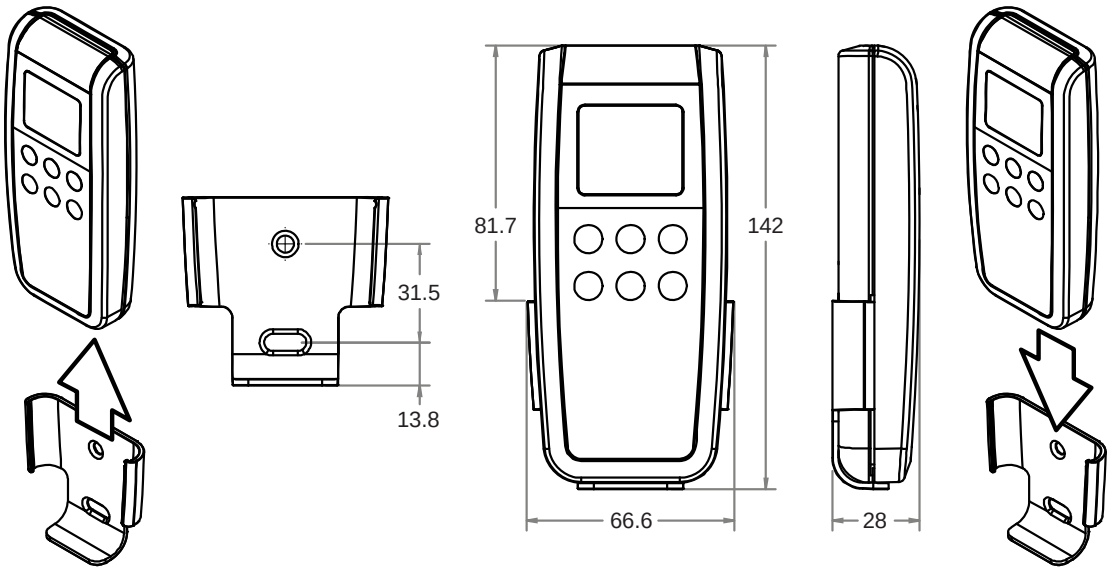
1. Determine the most suitable position for the water controller (see "POSITIONING OF TRANSCEIVER AND WIRELESS WATER CONTROLLERS" on page 15).

   The 'Signal Strength' indicator displays one of four levels. ◀ **Strong** **Weak** ▶

   The 'Out Of Range' ☒ indicator displays when the wireless water controller is out of range of the transceiver or when an object is obstructing the radio signal.

   Wireless water controllers should be positioned such that the signal strength indicator displays at least '2 bars' next to the antenna symbol during installation. Signal strength varies with atmospheric and other conditions. If the signal strength is weaker than '2 bars' during installation, there may be other times when the signal is too weak to allow operation.

2. Slide the wireless water controller from its' wall mounting bracket.
3. Use the wall mounting bracket as a template to mark off and drill 2 holes for use with mounting fixings.
4. Secure the wall mounting bracket to the wall with the screws and or anchors provided. Avoid over-tightening of fixings as this may cause damage. DO NOT use powered tools to tighten fixings.
5. Slide the wireless water controller back into its' wall mounting bracket.

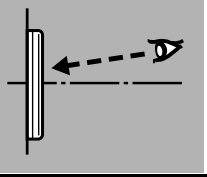


NOTE

ADDITIONAL WATER CONTROLLER MOUNTING CONSIDERATIONS.

The MC-503RC uses a Liquid Crystal Display (LCD) for the digital monitor. Light reflections can make the LCD difficult to see at direct eye level.

For best results when Installing the MC-503RC mount the water controller lower than your eye-level to avoid these light reflections.



Rinnai

Model: MC-503RC

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National Help Line

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Cost of a local call Higher from mobile or public phones.
Hot Water Service Line
Tel: 1800 000 340

Rinnai has a Service and Spare Parts network with personnel who are fully trained and equipped to give the best service on your Rinnai appliance. If your appliance requires service, please call our National Help Line. Rinnai recommends that this appliance be serviced every 3 years.

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