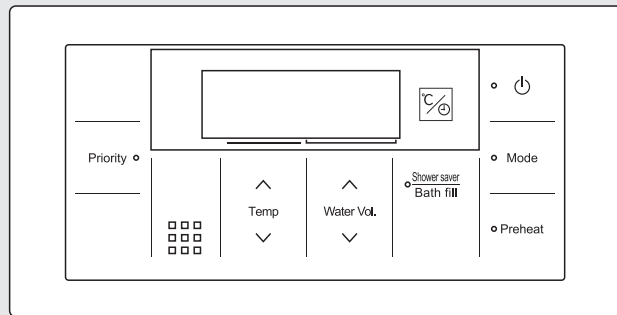
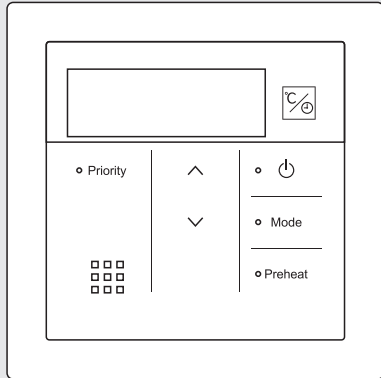


MODELS

Kitchen (MC-145V)

Bathroom (BC-145V)



Deluxe Water Controller

Operation & Installation Manual

Rinnai

Your guide on how to use and install Rinnai Deluxe Water Controllers

This guide is for the use and installation of Rinnai Deluxe water controller models Kitchen (MC-145V) and Bathroom (BC-145V).

These instructions **MUST BE** used in conjunction with the Rinnai Water Heater Operation / Installation Manual supplied with Rinnai water heaters.

These water controllers are compatible **ONLY** with the Rinnai water heater and other water controller models shown.

Refer to the Water Heater Operation / Installation Manual to confirm the maximum number and combination of water controllers that can be fitted to your Rinnai water heater model.

This appliance must be installed in accordance with:

- Manufacturer's Installation Instructions
- Current AS/NZS 3000, AS/NZS 3500 & AS/NZS 5601
- Local Regulations and Municipal Building Codes including local OH&S requirements

This appliance must be installed, maintained and removed by an Authorised Person.

For continued safety of this appliance it must be installed and maintained in accordance with the manufacturer's instructions.



This Appliance complies
with current AS 3498
SAI GLOBAL LIC.W208



**The Australian
Gas Association**
All Rinnai gas products
sold in Australia are
A.G.A certified

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WARNINGS & IMPORTANT INFORMATION



READ ALL INSTRUCTIONS BEFORE USING THE APPLIANCE

Always comply with the following precautions to avoid dangerous situations and to ensure optimum performance.

Failure to carefully read and follow all instructions in this manual can result in equipment malfunction, property damage, personal injury and/or death.

DANGER: Indicates an imminently hazardous situation which, if not avoided, will result in personal injury or death.

WARNINGS: Indicates a potentially hazardous situation which, if not avoided, could result in personal injury or death.

CAUTIONS: Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury or damage to the appliance. It may also be used to alert against unsafe practices.



REGULATORY INFORMATION

Controllers and water heaters must be installed correctly by an appropriately licensed tradesperson.

The installation of gas, water, and electricity must conform to local regulations, including local OH&S requirements.

The installation must also comply with the instructions supplied by Rinnai.

Please keep this instruction booklet in a safe place for future reference.

All dimensions referred to in these instructions are in millimetres, unless otherwise specified.



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).

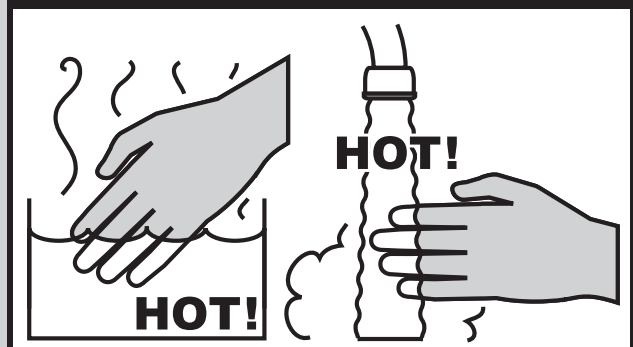
Rinnai have water heater models which limit the delivery temperature to 50°C which significantly reduces the scald hazard. Temperature limiting devices may also be able to be fitted. Contact Rinnai for further information.

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.



DANGER BEWARE OF SCALDING HAZARDS



WATER TEMPERATURE CONTROL

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.

Any water controller that currently has priority is capable of setting the water temperature to be delivered. However, the water heater can only assign 'priority' to one controller at a time and deliver the one set temperature.




Whilst hot water outlets are open **ONLY the control used to set the delivery temperature may be used to further adjust it. Transfer of 'priority' between controllers is **NOT** possible until all hot water taps have been closed. These are safety features.**

The available temperatures (°C) are as follows:

Water Controller Temperatures (°C) ⁽²⁾	Master (MC)	35 ⁽¹⁾ , 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48, 50, 55 ⁽¹⁾ , 60 ⁽¹⁾ , 65 ⁽¹⁾ , 70 ⁽¹⁾ , 75 ⁽¹⁾ , 80 ⁽¹⁾ , 85 ⁽¹⁾
	Sub (MC or BC)	35 ⁽¹⁾ , 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 35°C ~ 43°C. This 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 35°C, simply open the cold water tap and add cold water until the desired lower temperature is reached.



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).

⁽¹⁾ 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 and minimum available delivery temperature. Contact Rinnai for more details.

⁽²⁾ Temperature limiting devices (where fitted) may further control what maximum delivery temperature is available to outlets.

Universal and Wireless water controllers allow for 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. The MC-145V can set the current time. The BC-145V displays the current time only when used in conjunction with MC-145V. Contact Rinnai for further information regarding Wireless and Deluxe water controllers or visit www.rinnai.com.au.

WATER CONTROLLER CONFIGURATIONS

Wired Only Configurations

A maximum of **FOUR** ⁽³⁾ water controllers can be fitted. Any combination of deluxe and universal controllers can be used with the following limitations:

- Only **ONE** master controller can be installed. This can be a MC-145V, a MC-601Q (when programmed as a master controller) water controller. Note that when a MC-145V is fitted it will always function as a master controller, this is the default setting and can not be changed.
- **ONE** BC-145V water controller can be installed.
- When installing the **THIRD** or **FOURTH** water controller, it **MUST BE** a MC-601Q.

Combined Wireless & Wired Configurations

A maximum of **FOUR** ⁽³⁾ 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-145V, a MC-601Q (when programmed as a master controller) water controller or a MC-503RC-S water controller. Note that when a MC-145V is fitted it will always function as a master controller, this is the default setting and can not be changed.
- Up to **ONE** BC-145V water controllers can be installed.
- The **THIRD** water controller in any installation **MUST BE** a MC-503RC-S or a MC-601Q.



⁽³⁾ Some Rinnai water heater models can only have a maximum of three water controllers fitted, refer to the Water Heater Operation / Installation Manual to confirm the maximum number and combination of water controllers that can be fitted to your Rinnai water heater model.

WATER CONTROLLER OPERATION

DELUXE KITCHEN WATER CONTROLLER (MC-145V)

SHOWER SAVER / BATH FILL INDICATOR

Indicates that the Shower Saver / Bath Fill function is operating.

LOCK

Illuminates when the switch on the remote control is locked.

WATER HEATER 'In Use' INDICATOR

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

WATER TEMPERATURE INDICATOR

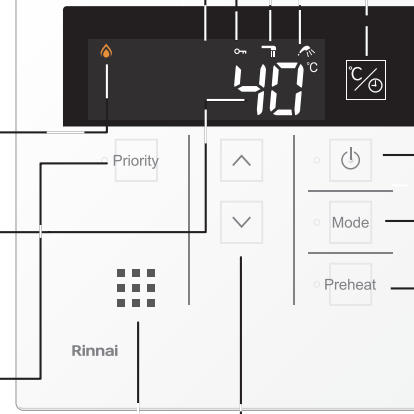
Indicates the selected hot water temperature.

PRIORITY BUTTON

Used to transfer control priority between the Water Controllers. The controller with priority has command of the hot water delivery temperature. This button is illuminated when this controller has priority.

SPEAKER

DIGITAL MONITOR



TEMPERATURE / CLOCK BUTTON

Used to switch between temperature display and clock display.

ON/OFF BUTTON

Used to switch the water heater on and off. This button is illuminated when the hot water heating system is on.

MODE BUTTON

Is used to configure various settings.

PREHEAT BUTTON

Used to start and stop the Smartstart preheat unit (when fitted). See Smartstart Operation on page 12. This button is illuminated when the Smartstart preheater (when fitted) is activated.

UP AND DOWN BUTTONS

When in Normal mode these buttons are used to select the water temperature.

Is used to change the setting values of various settings.

Turning On

If the water controller is switched off (No digits displayed in the digital monitor window) press the On/Off button once.

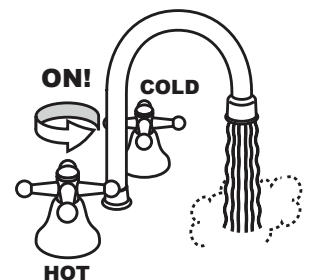
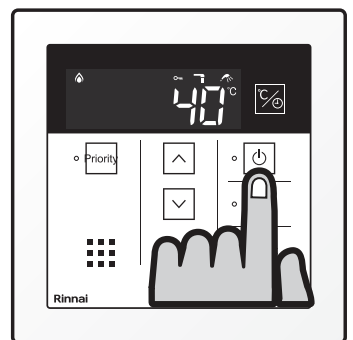
The On/Off button illuminates to indicate that the hot water unit will be ready to supply hot water once a hot water tap is opened.

Adjusting Temperature

Select the desired temperature using the Temperature \wedge or \vee buttons until the required temperature is displayed on the digital monitor.

To operate the hot water unit, open any hot water tap. This will automatically light the burner providing hot water. The water heater 'In Use' flame indicator will illuminate on the water controller(s).

Once the hot water is running, if the set temperature is either too hot or cold press the Temperature \wedge or \vee buttons until the desired temperature is reached.



NOTE While hot water outlets are open the set temperature may be lowered, however it cannot then be raised above 43°C. In addition transfer of 'priority' between controllers is not possible. These are safety features.

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.

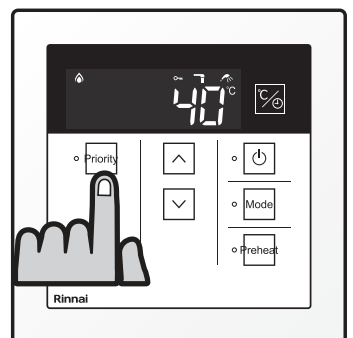


CAUTION Always check water temperature at the outlet before use. A parent or carer should always check the temperature before a child is placed in contact with hot water, see "Warning About Hot Water" on page 4.

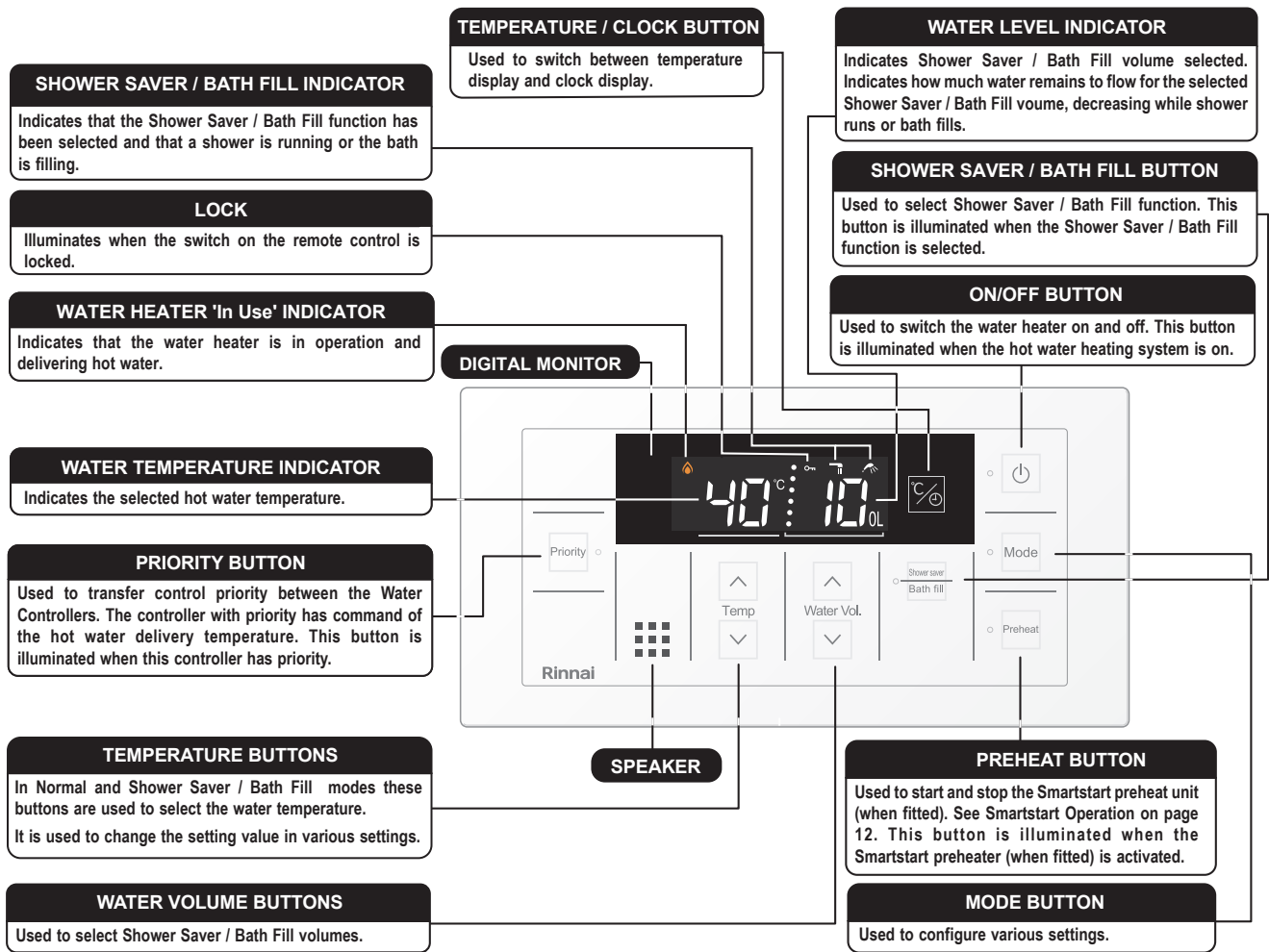
Transferring Priority

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. 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.

Illuminated On/Off and priority buttons confirm that the desired controller is in control of the water delivery temperature. If On/Off button is illuminated and priority button is not illuminated, press the priority button once. The priority button will then illuminate indicating that hot water temperature control has been transferred and the hot water unit will be ready to supply hot water once a hot water tap is opened. If On/Off button is not illuminated, press the On/Off button once. The On/Off and priority buttons will then illuminate indicating the hot water temperature control has been transferred and will allow temperature setting.



DELUXE BATHROOM WATER CONTROLLER (BC-145V)



Turning On

If the water controller is switched off (No digits displayed in the digital monitor window) press the On/Off button once.

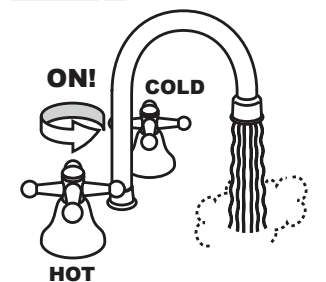
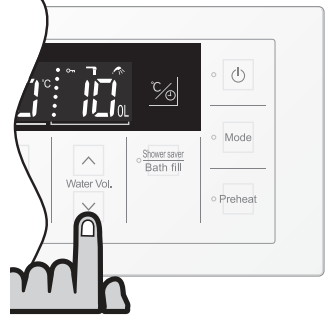
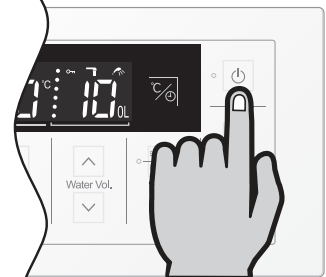
The On/Off button will illuminate to indicate that the hot water unit will be ready to supply hot water once a hot water tap is opened.

Adjusting Temperature

Select the desired temperature using the Temperature \wedge or \vee buttons until the required temperature is displayed on the digital monitor.

To operate the hot water unit, open any hot water tap. This will automatically light the burner providing hot water. The water heater 'In Use' flame indicator will illuminate on the water controller(s).

Once the hot water is running, if the set temperature is either too hot or cold press the Temperature \wedge or \vee buttons until the desired temperature is reached.



NOTE Whilst hot water outlets are open the set temperature may be lowered, however it cannot then be raised above 43°C. In addition transfer of 'priority' between controllers is not possible. These are safety features.

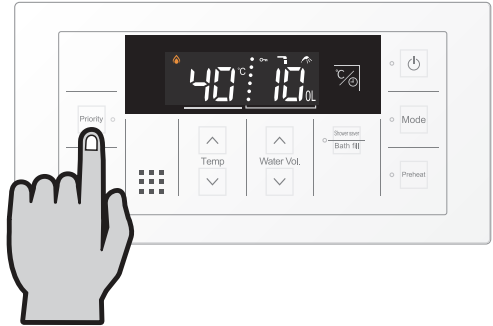
If the water heater is turned 'Off' whilst hot water taps are open it can not be turned back 'On' until all hot water taps have been closed.

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 "Warning About Hot Water" on page 4.

Transferring Priority

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. 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.

Illuminated On/Off and priority buttons confirm that the desired controller is in control of the water delivery temperature. If On/Off button is illuminated and priority button is not illuminated, press the priority button once. The priority button will then illuminate indicating that hot water temperature control has been transferred and the hot water unit will be ready to supply hot water once a hot water tap is opened. If On/Off button is not illuminated, press the On/Off button once. The On/Off and priority buttons will then illuminate indicating the hot water temperature control has been transferred and will allow temperature setting.



Setting Shower Saver / Bath Fill

The 'Shower Saver / Bath Fill' function allows a pre-set water volume and temperature to be selected and run automatically.



No voice prompts will be available if the 'Voice OFF' or 'Sound OFF' options are selected. With 'Sound OFF' there will also be no audible tones.

When a deluxe bathroom controller is first turned on, the default shower / bath fill temperature is set to 40°C and the shower / bath volume is set to 100 litres.

The shower / bath volume can be lowered to a minimum of 30 litres or raised to a maximum of 400 litres and the temperature adjusted as desired.

Setting Shower / Bath Temperature and Volume

With the system on, select a Deluxe Bathroom water controller and ensure that it currently has priority.

If it does not have priority press the Priority button once and the Priority button will illuminate. You can change the amount of hot water set by pressing the ^ or v buttons.

Press Shower Saver / Bath Fill button once. The Shower Saver / Bath Fill button will illuminate and a voice prompt and tone will sound.

The hot water supply temperature and set hot water volume will flash for about 10 seconds, during which time you can change the hot water supply temperature and set hot water volume. You can alter the water heating temperature at any time during Shower Saver / Bath Fill operation.

To select the desired delivery temperature use the 'Temperature' ^ or v buttons.

The selected temperature will be displayed on the digital monitor and will remain as the default Shower Saver / Bath Fill temperature until it is changed or if the mains power is turned off for an extended period.

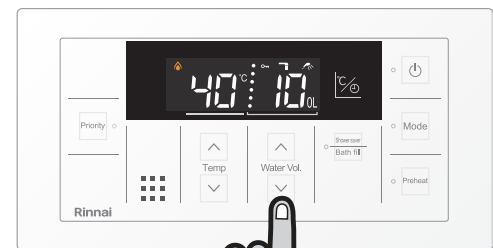
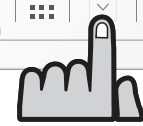
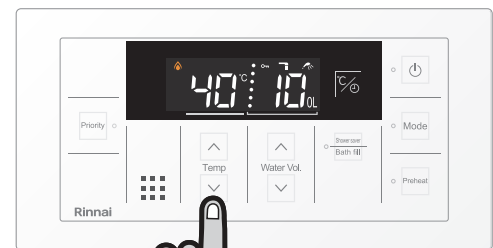
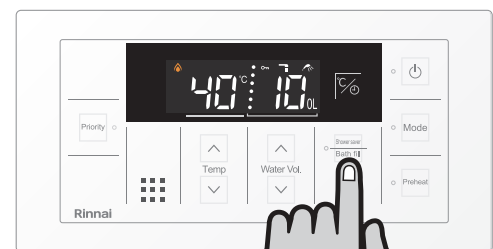
To select the volume of water to be used in the shower / bath use the Water Volume ^ or v buttons.

The selected volume is displayed in large digits to the right and will remain as the default Water Volume until it is changed or if the mains power is turned off for an extended period.

The selected volume is also repeated in the form of a remaining volume counter below the temperature and replaces the clock during Shower Saver / Bath Fill operations.

When filling a bath for the first time, it is recommended that a low bath fill volume such as 60 litres or lower be used.


During any subsequent bath fills the volume can then be adjusted to suit your known bath volume and or desired fill level.





Be careful not to overfill the bath, an average bath volume is 160 litres. It is recommended that when filling a bath for the first time you should:



- Remain by the bath during the filling process.
- Use a low bath fill volume such as 60 litres or less.

When Smartstart® (page 13) is in operation, the Shower Saver / Bath Fill function is unavailable while the water heater 'In Use' indicator  is illuminated.


Do not press the Preheat button whilst Shower Saver / Bath Fill is in operation as the programmed bath fill volume will not be met.

Using Shower Saver / Bath Fill

Press Shower Saver / Bath Fill button once. The Shower Saver / Bath Fill button will illuminate and a voice prompt and tone will sound. During Shower Saver / Bath Fill operations the 'Shower Saver / Bath Fill' indicator and temperature of hot water supply will also be displayed in the Deluxe Kitchen water controller digital monitor (when fitted).

The voice prompt will say "The hot water system is ready. Open the hot water tap". The hot water temperature and volume numerals will flash for approximately 10 seconds. During this time you may change the hot water temperature and Water Volume by pressing  or  buttons.

After checking the hot water temperature and Water Volume, open the hot water tap for the relevant shower or bath operation.

The 'In Use' indicator  will illuminate on all Deluxe water controllers and the shower will run or the bath will start to fill.

You can change the hot water temperature at any time during the Shower Saver / Bath Fill operation.

To Stop Shower Saver / Bath Fill Operation

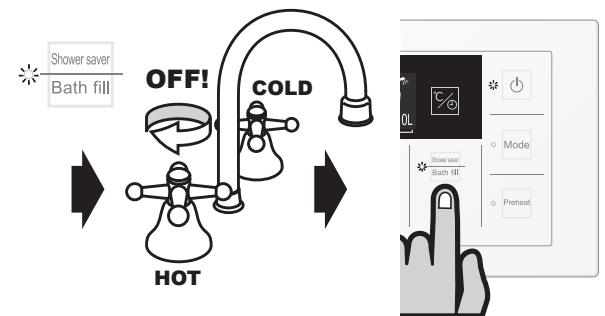
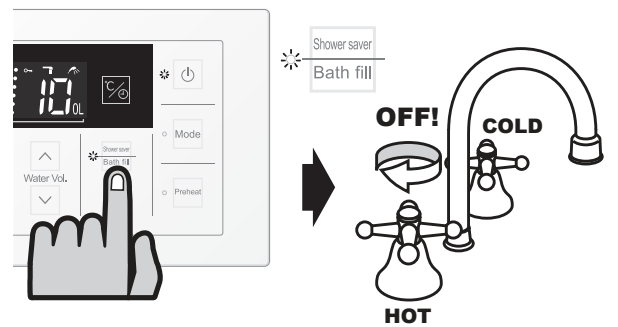
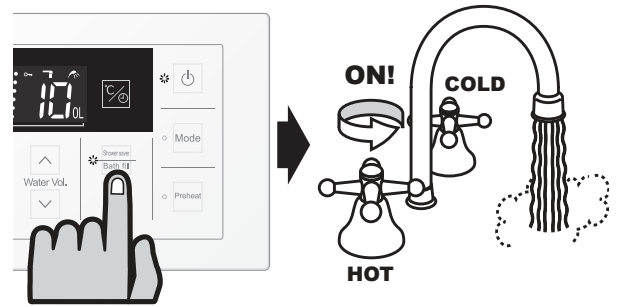
If you wish to stop the water flow whilst the Shower Saver / Bath Fill function is in operation, simply press the Shower Saver / Bath Fill button.

The Shower Saver / Bath Fill button will flash and the voice prompt will say "Hot water is not available, Turn off all hot water taps and push the Bath Fill button". Follow the voice prompt instructions.

When Shower Saver / Bath Fill Operations Finishes

Once the Shower Saver / Bath Fill operation finishes the following events will occur:

1. The flow from the shower / bath hot water tap ceases.
2. The Shower Saver / Bath Fill button will flash.
3. The Deluxe Kitchen water controller 'Bath' indicator will flash.
4. A tone will sound.
5. The voice prompt will say "Bath fill is complete. Turn off the bath hot water tap and push the Bath Fill button." Follow the voice prompts instructions.



The water heater will not allow hot water to flow from any fixture until the Shower Saver / Bath Fill button has been pressed.

6. The Shower Saver / Bath Fill button light on the Deluxe Bathroom water controller and the 'Bath' indicator on the Deluxe Kitchen water controller monitor (when fitted) will go out.



CHECK WATER TEMPERATURE BEFORE USE.

A parent or carer should always check the temperature before a child is placed in contact with hot water, see page 8.

NEVER LEAVE YOUNG CHILDREN UNATTENDED IN THE BATH.

When using the 'Shower saver / Bath fill' function, ALWAYS close the hot water tap for the bath or shower after the flow has stopped.

Water Controller Combinations & Configurations

Deluxe, Universal and Wireless water controllers can be combined. Refer to "Water Controller Configurations" on page 5 to confirm the maximum number and combination of controllers that can be fitted.

Various settings

You can change functions such as volume levels and setting the clock.

Both MC-145V and BC-145V use the same operation method EXCEPT for (4).

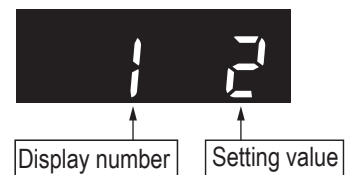
(1) Sound option setting

Press  'Mode' button once.


Number '1' is displayed on the left and the setting value is displayed on the right.

Press the  or  buttons to change the setting value.

Setting value	Volume of Voice	Volume of Sound
3	Loud	Normal
2 (factory default)	Normal	Normal
1	Quiet	Normal
0	Mute	Normal
–	Mute	Mute



(2) Power saving setting

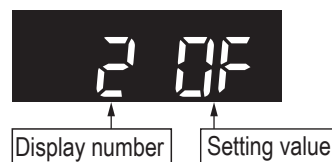
To prevent unnecessary power consumption of the remote control, after a certain period has passed after using hot water, the display will turn off and only Water heater 'ON/OFF'  indicator is still light up.

Press  'Mode' button twice.

Number '2' is displayed on the left and the setting value is displayed on the right.


Press the  or  buttons to change the setting value.

Setting value	Amount of Time
25	After 25 minutes
10	After 10 minutes
OF (factory default)	Not turned off



(3) Clock display setting

The clock will always be displayed even when operation is turned off.

Press  'Mode' button three times.

The number '3' is displayed on the left and the setting value is displayed on the right

Press the  or  buttons to change the setting value.

Setting value	Clock display during operation is turned off
ON	Display ON
OF (factory default)	Display OFF




When the set Display is 'ON', the BC-145V displays only when it is used in conjunction with the MC-145V.

(4) Setting the clock





The clock has a 12 hour AM/PM style display. (Setting is only available for model MC-145V).



Model BC-145V does not have the setting clock function. When MC-145V and BC-145V are installed, BC-145V reads the clock information of the MC-145V and displays the clock.

Press  'Mode' button four times.

The clock digits will flash.

Use the  or  buttons to select the desired time. Holding these buttons down continuously cycles the digits. You can set the required time by moving the time forwards or backwards with the  or  button.

When you get close to the time you choose to set, press the button intermittently to avoid going further than the desired time.

To return to normal operation press the  'Mode' button once.





If the switch is not pressed for about 60 seconds while setting, the setting will be completed automatically.

If power to the water heater unit is disrupted due to a power failure, (1) (2) (3) (4) may need to be reset.

LOCK

You can lock the water controller to prevent small children or the infirm from operating the controller.

For model MC-145V, hold down the  'Priority' button and press the  button for 5 seconds.

For model BC-145V, hold down the  'Priority' button and press the Temp  switch for 5 seconds.



The lock indication will then light up.



If the On/Off indication is lit up, you can **only** lock from the controller when the priority indication is lit up.

If the On/Off indication is off, you can lock from **any** controller. The digital monitor and indicators lock in the same state as when they are locked.

To unlock, refer to the following steps.

UNLOCK

For model MC-145V, hold down the  'Priority' button and press the  button for 5 seconds.

For model BC-145V, hold down the  'Priority' button and press the Temp  switch for 5 seconds.

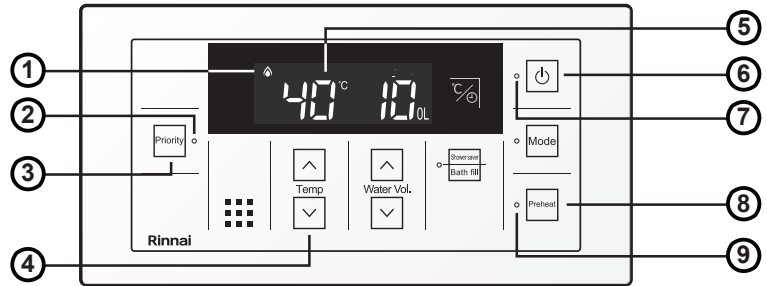
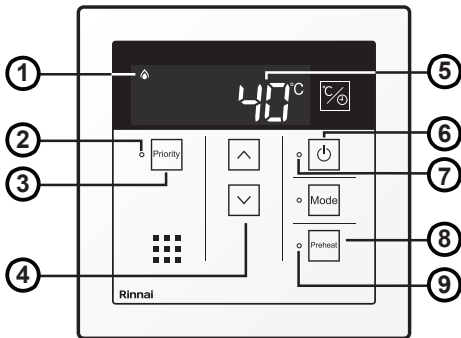
The lock indication light will then turn off.

Regardless of the current display state, you can unlock from **any** controller.

SMARTSTART PRE-HEAT SYSTEM



The 'Preheat' function is only available on Rinnai water heater models installed in conjunction with the optional Rinnai Smartstart® module.



- ① Water Heater 'In Use' Indicator
- ③ Priority Transfer Button
- ⑤ Digital Monitor
- ⑦ Water Heater On Indicator
- ⑨ Preheat Indicator
*Indicates that Smartstart pre-heater is activated**

- ② Priority Indicator
- ④ Temperature Control Buttons
- ⑥ On/Off button
- ⑧ Preheat Button
Used to start and stop Smartstart pre-heater

Preheat Function

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.

Preheat Operation

1. Ensure that the hot water unit is on (temperature digits are displayed in the digital monitor ⑤). If more than one water controller is fitted press the 'Priority Transfer' button ③ to pass on priority to your desired water controller. The 'Controller Priority' indicator ② will illuminate to confirm that priority has been assigned to this water controller and that the hot water unit is ready to deliver hot water.
2. Select the desired temperature using the 'Temperature Control' buttons ④ until the required temperature is displayed in the digital monitor ⑤.
3. Press the 'Preheat' button ⑧ once. The 'Preheat' indicator ⑨ and the 'In Use' indicator ① will illuminate, signifying that the preheat system has been activated.
4. Wait for the 'In Use' indicator ① to go out (this may take 2 to 5 minutes). When this happens it signifies that the water in the pipework has now been pre-warmed and is ready for delivery, and that a hot water tap can now be opened.



The waiting time may be longer or shorter depending on your particular installation configuration. For best results always wait for the 'In Use' indicator ① to go out before opening a hot water tap.

The preheat function is completed 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.

After using the Shower Saver / Bath Fill function wait 30 seconds before activating the 'Preheat' function. Attempting to use the 'Preheat' function earlier will result in voice prompts being repeated until the system is reset. The system can be reset by pressing the 'On /Off' button twice.

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.

WATER CONTROLLER INSTALLATION

GENERAL INFORMATION



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.

Regardless of water controller 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 by an authorised person.

Master / Sub Water Controllers & Associated Temperatures

Only one MC model water controller can be designated as the 'Master' water controller. This water controller is normally used in the kitchen and usually has a maximum temperature of 55°C, which 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 additional conditions regarding Master Controller maximum temperatures apply when a wireless water controller is used as the 'Master' water controller.

- (i) Temperatures of 55°C or higher can only be selected on the controller designated as the 'Master' water controller if the transceiver 'Max Temp' is also programmed to 55°C or higher.
- (ii) 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.



The water heater maximum temperature cannot be adjusted by the user. These adjustments can **ONLY** be carried out by a qualified and licensed trades person.

The remaining water 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 water controllers as master (Kitchen) or sub (Bathroom) water controllers. These labels are usually placed on the top back of the wireless water controller body.

Water Controllers Limitations

An installation can have up to **FOUR** ⁽¹⁾ universal MC-601Q water controllers.

Deluxe kitchen, bathroom and wireless water controllers are also available and various combinations of universal and the deluxe and wireless water controllers can be used with the following limitations:

- A maximum of **FOUR** ⁽¹⁾ water controllers can be fitted.
- Only **ONE** master controller can be installed. This can be a deluxe kitchen, wireless or a universal (when programmed as a master controller) water controller.



When a deluxe kitchen is fitted it will always function as a master controller, this is the default setting and can not be changed.

- **ONE** BC-145V can be installed.
- When installing the **THIRD** or **FOURTH** remote water controller, install the MC-503RC-S or MC-601Q.



⁽¹⁾ Some Rinnai water heater models can only have a maximum of three water controllers fitted, refer to the Water Heater Operation / Installation Manual to confirm the maximum number and combination of water controllers that can be fitted to your Rinnai water heater model.

For more information regarding deluxe kitchen, bathroom and wireless water controllers, contact Rinnai or visit: www.rinnai.com.au.

Location



- **DO NOT** install 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 water controllers outdoors unless protection from water / dust ingress and sunlight are provided.
- The **MC145V** water controller **MUST NOT** be installed in a bathroom.
- **DO NOT** install water controllers in direct sunlight.
- **DO NOT** install wireless water controllers outdoors unless protection from dust ingress and sunlight are provided.
- **DO NOT** install water controllers against a metal wall unless the wall is earthed in accordance with AN/NZS 3000.
- Water controllers **MUST NOT** be installed where chemicals such as benzene, alcohol, turpentine, hydrogen sulphide, ammonia, chlorine or other similar chemicals are in use.

The Water controller is a water resistant device, however excessive exposure to water may result in damage to the water controller. Durability is improved when positioned outside the shower recess.

- **AVOID** direct exposure to water or steam as these conditions may cause a malfunction.
- Water controllers must be installed in shaded and clean locations. They should be fitted out of reach of children (suggested height from floor to be at least 1500 mm). Water controllers **MUST BE** installed at least 400 mm above the highest part of a sink, basin or bath.
- When cleaning your water controller use **ONLY** a damp cloth and a mild detergent.

For all water controller dimensions refer to "Dimensions" on page 18.

Communication Cables

Wired water controllers operate at an extra low voltage (12 Volts DC) which is supplied from the water heater, a 10 metre long communications cable is supplied for connection to the water heater. **ONLY** Rinnai supplied communication cables may be used.

An alternative per metre communication cable option (up to 20 metres) is also available, Part No. 92078609.



The per metre communication cable does not come supplied with spade connectors, spade connectors are available from your local electrical component retailer.

The water heater end of the cables are fitted with spade terminals. Only two pairs of cables (4 spade connectors in total) may be terminated. When attaching three or four cables it is necessary to join the cable terminals as follows:

For each pair cut off the existing spade connectors and re-terminate each pair into a new spade connector (A) so that there are only two sets of spade connectors (4 spade connectors in total) to be terminated (spade connectors are available from your local electrical component retailer).

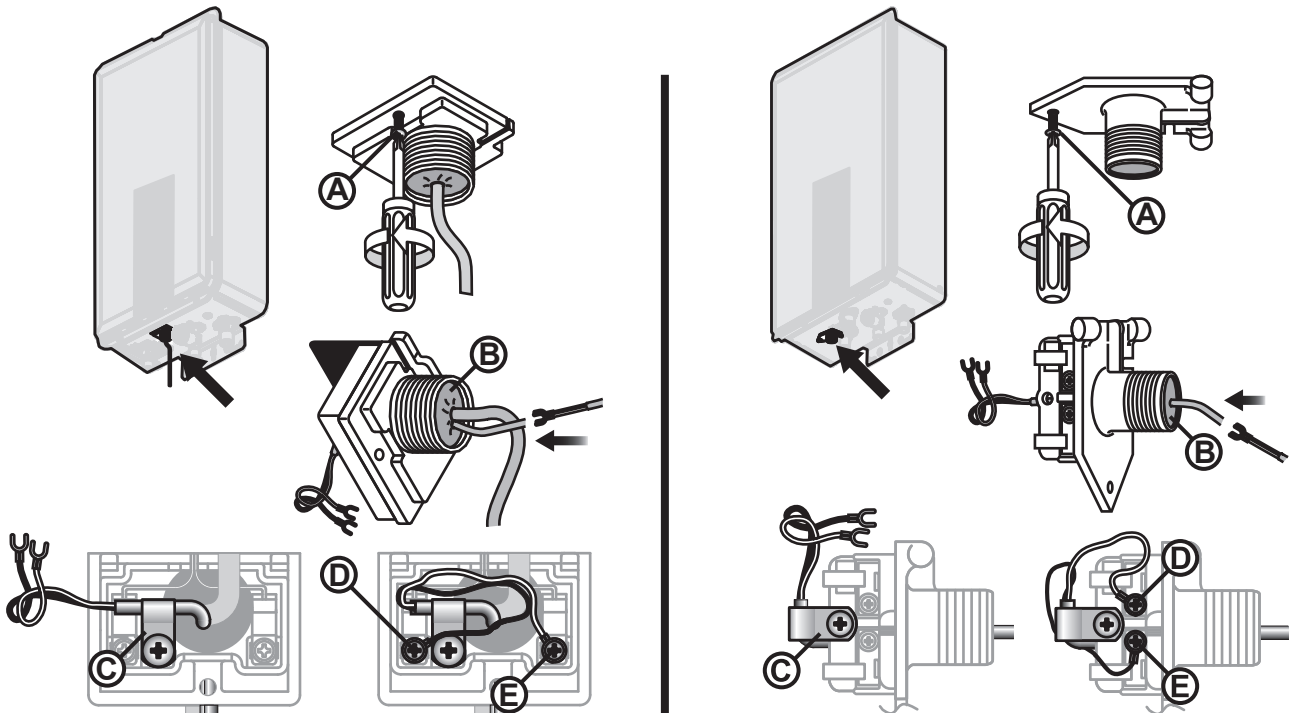


Connecting Communication Cable(s) & 'Ezi connect'



DO NOT attempt to connect cables to the 'Ezi connect' cable connector at the water heater unless the electric power to the water heater is switched 'off' otherwise damage to electrical components may occur.

If your water heater is not fitted with an 'Ezi connect' cable connector, installation must be completed by a qualified and licensed trades person.

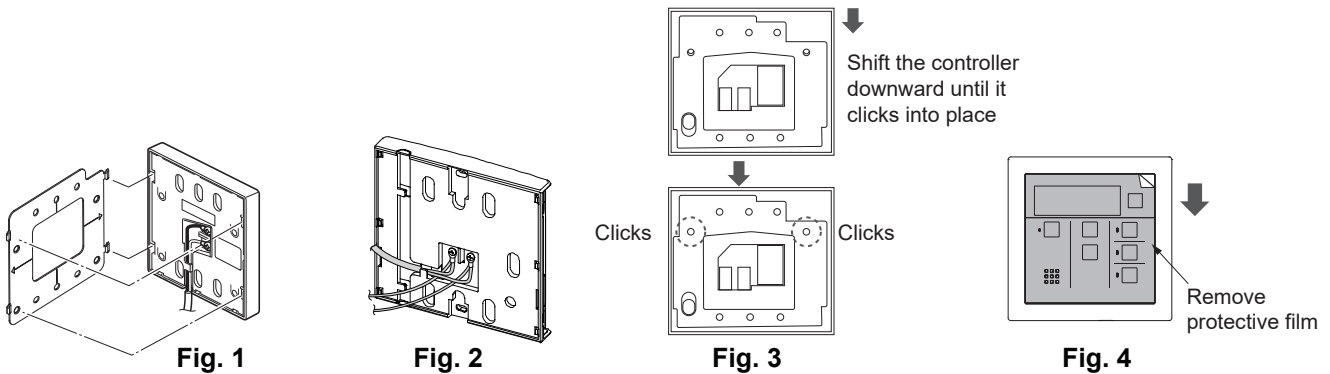


1. Isolate the electric power supply by switching the power point off and removing the power plug of the water heater from the electric power socket.
2. Remove the retaining screw **(A)** of the 'Ezi connect' cable connector at the base of the appliance.
3. Swing the 'Ezi connect' cable connector door open and thread the cable through the weather seal of the cable access hole **(B)** in the direction shown allowing sufficient cable length so that the sheath of the cable can be secured with cable clamp **(C)**.
4. Loosen screw terminals **(D)** & **(E)** and connect the cable spade connectors to these terminals and re-tighten. Polarity is not important, either wire colour can be connected to either terminal.
5. Return the 'Ezi connect' cable connector to the original position taking care not to damage cable wires in the process and replace the retaining screw **(A)**.

DELUXE KITCHEN WATER CONTROLLER (MC-145V)

1. Determine the most suitable position, refer "Location" on page 15.
2. Using the wall mounting bracket as a template mark and drill 3 holes (mounting and cable access) refer to "Dimensions" on page 16
3. Fix the mounting bracket to the wall using the appropriate fixings.

- Run the cable through the hole in the wall.



- Connect the cable to the water controller (Fig. 1).

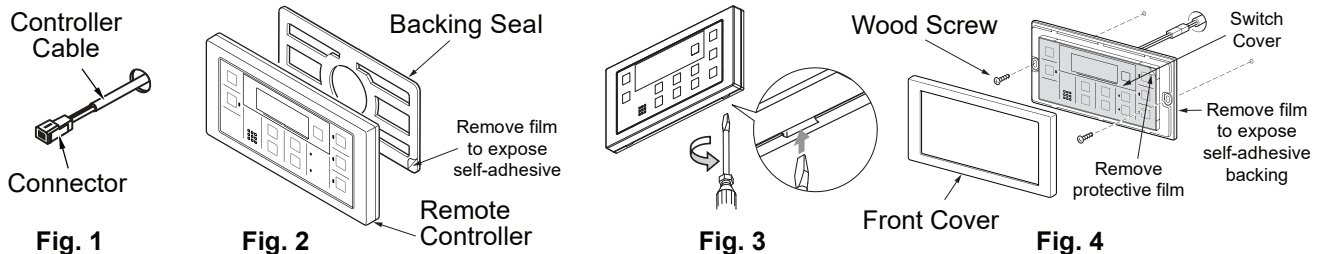
At this point cables from other controllers (if fitted) may also be connected to the screw terminals of the Kitchen water controller (Fig. 2) eliminating the need for multiple cable runs directly to the water heater.

Water controllers are not polarity sensitive. Feed any excess cable lengths into the wall cavity to avoid the pinching of cables between the wall and the controller.

- After attaching the mounting bracket so that it connects into the hole of the remote controller (Fig. 1), shift the remote control downward until it clicks into place (Fig. 3). Remove the transparent protective film on the front of the remote water controller (Fig 4).

DELUXE BATHROOM WATER CONTROLLER (BC-145V)

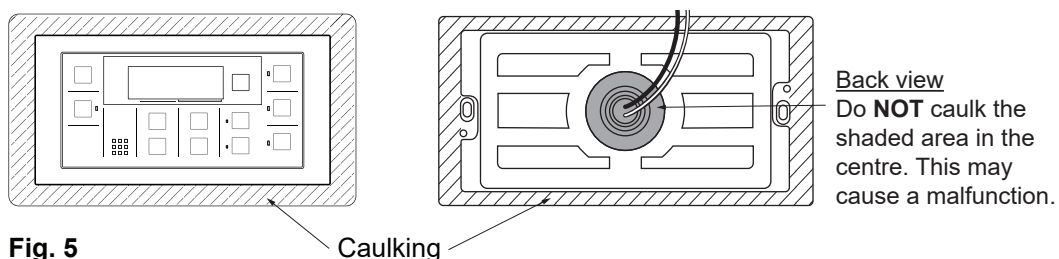
- Determine the most suitable position, refer "Location" on page 15.
- Using the wall mounting bracket as a template mark and drill 3 holes (mounting and cable access) refer to "Diagram 1. Dimensions" on page 18.



- When running cable through the access hole ensure the connector end of the cable is located nearest to the controller (Fig. 1).
- Affix the double sided self-adhesive seal to the back of the water controller (Fig. 2).
- Remove the front cover of the remote water controller as follows.

Carefully insert a flat-head screwdriver into the groove on the bottom of the remote controller and slowly rotate to remove the cover. Repeat the process on the other side (Fig. 3).

- Connect the cable to the water controller. Feed any excess cable lengths into the wall cavity to avoid the pinching of cables between the wall and the controller.
- Remove release film of the packing attached to the remote controller, then fasten it to the wall. When attaching, press the entire remote controller against the wall. Secure the remote controller to the wall with the two wood screws provided. Remove the protective film attached to the Switch Cover (Fig. 4).
- Place caulking around the entire circumference along the trim (Fig. 5). Once secured, replace the front cover.



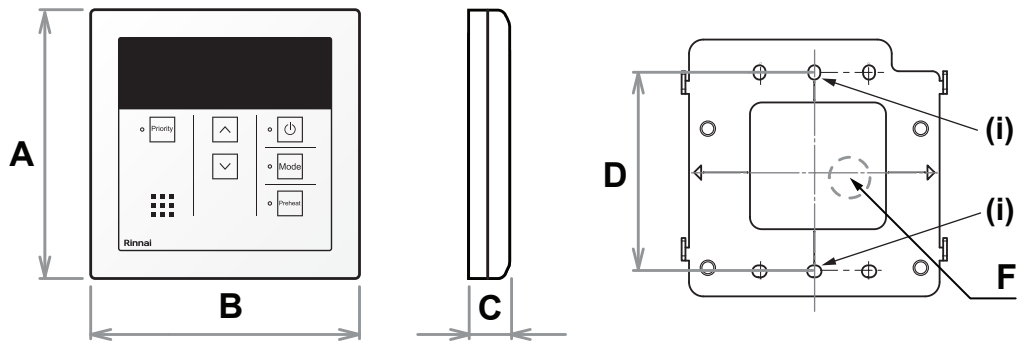
SPECIFICATIONS

DIMENSIONS

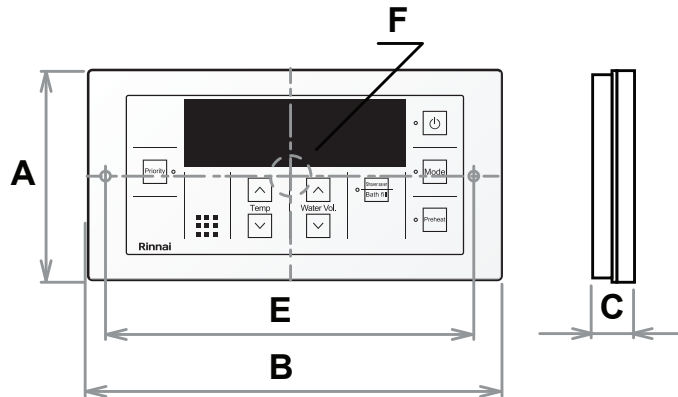
(All dimensions in mm)		Model	
		MC-145V <i>Deluxe Kitchen Controller</i>	BC-145V <i>Deluxe Bathroom Controller</i>
A	Height	120	99
B	Width	120	195
C	Depth	17	17
D	Vertical Mounting Hole Centres	83 (i)	—
E	Horizontal Mounting Hole Centres	—	181
F	Cable Access Hole Size / Position	Ø20 / Centre	Ø20 / Centre

(i) The MC-145V uses a metal mounting bracket that has 3 upper and lower mounting points both on and either side of the vertical centre line.

MC-145V



BC-145V



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P.O. Box 460, Braeside, Victoria 3195
Tel: (03) 9271 6625

National Help Line

Tel: 1300 555 545*

Monday to Friday, 8.00 am to 5.00 pm EST.

After Hours Hot Water Service Line

Tel: 1800 000 340*

**Cost of a local call may be higher from a mobile phone.
(National calls from public phones in Australia are free.)*

For further information visit www.rinnai.com.au
or email enquiry@rinnai.com.au

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 2 years.

With our policy of continuous improvement, we reserve the right to change, or discontinue at any time, specifications or designs without notice.