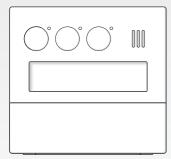
## Remote controller

## **USER'S MANUAL <Operation Guide>**

### Model

### RC-9018C



## **Contents**

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## Note to Owner:

This User's Manual provides additional details on the operation of this remote controller not covered in the water heater Owner's Guide. Keep this and all manuals provided with the water heater for future reference.

Thank you for purchasing this Remote controller.

- \* Please read this User's Manual carefully to ensure appropriate use.
- \* These operating instructions describe the functions of this remote controller.

  Keep these instructions where they can be found whenever necessary, preferably in the same location as the Owner's Guide provided with the water heater.

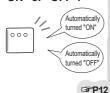
SHC8053 Rev. 10/16



## **RC-9018C Operation Overview**

## **Basic operation**

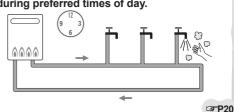
It is possible to automatically turn the water heater "ON" or "OFF".



It is possible to lock remote controller operation.



[For recirculation systems (System [ Rcrc ])] It is possible to circulate hot water only during preferred times of day.



[When using only one water heater:]
It is possible to set the remote controller to alert the user when the

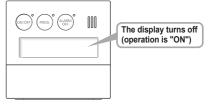
alert the user when the water delivery volume has reached a preset fill volume.



### **Power Saving Mode**

## The initial setting is set to "Powersave dsply: No-1"

If you set "Powersave dsply" to "Yes" (@P15), unnecessary power consumption by the remote controller is prevented. If approximately ten minutes pass without using hot water or without pressing a button, the display of the remote controller turns off.



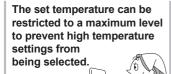
- \* If you use hot water or press a button, "Powersave dsply" is released.

  If you press the PROG button only once, "Powersave dsply" is released and the automatic program function will operate.
- \* If the setting temperature is set to 55°C or more, "Powersave dsply" will not function to prevent accidental scalding.
- \* If "Recirc" is operating, "Powersave dsply" will not function.

This setting is adjustable 🖙 P15

## **User Preferences**

The remote controller can be customized based on the preference of the user in the following ways:



Adjusting the Maximum

₽P15 **Output Temperature** 

The clock display can be shown even though the power ON/OFF button is set to "OFF".



The remote controller display can be turned off to save power.



Power Saving Modes

The brightness of the remote controller can be adjusted for better visibility.

Remote Controller Display ☞P16 **Brightness Settings** 

The remote controller can be muted so that it does not emit a tone when a button is pressed.



Muting the Remote Controller

The remote controller can be muted so that it does not emit a tone when an error occurs.



**Error Tone Settings** 

☞P16

## **Additional Settings**

Draining the water heater (freeze prevention).

P17 "Draining the Water Heater"

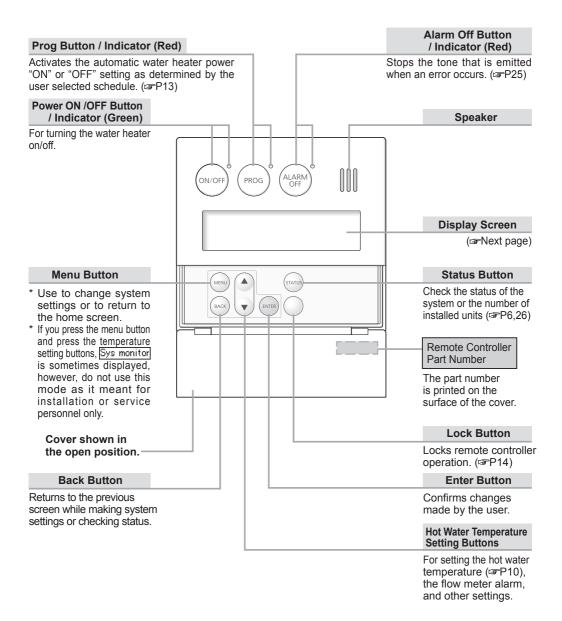
Restoring default remote controller settings.

P17 "Restoring Default Settings"

## **General Parts**

## Remote Controller (RC-9018C)

The remote controller will emit a tone when a button is pressed.



## Screen Display

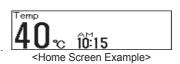
- \* The screen display shown below is for illustration purposes only. The actual display will vary depending on how the water heater is being used.
- \* After a button is pressed, the display will gradually become darker to prevent unnecessary power consumption by the remote controller.

### Flame Symbol Display for Recirculation Operation The flame symbol is displayed during \* For systems that use recirculation operation, the symbol combustion when using hot water or is displayed when the power ON/OFF button is set to "ON". recirculation functions. \* It is displayed during the recirculation operation. (\$\sigma P9\$) **Display for Temperature Setting Locked Display** During normal operation, the set The lock symbol is displayed temperature is displayed. when the remote controller is locked. (GPP14) Display for High Temperature Hi temp Displays when the set temperature is 55°C or higher. (□ P11) [ DLock] Temb Recirc 🕀 **Temperature Setting** (Ex.: 40°C) **Clock Display Recirculation Timer** (Ex.: AM10:15) Normally the clock display is not shown when The clock symbol is displayed the power ON/OFF button is "OFF". when the recirculation timer is \* This setting can be changed so that the clock is displayed activated. (GPP21) even when the power button is turned "OFF". (\$\simp\$P15) **Error Code** A number will flash if a failure occurs. (P25)

## What is the home screen?

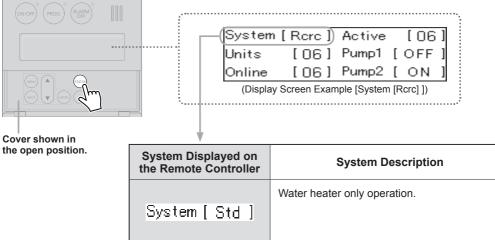
The home screen is displayed when the ON/OFF button is "ON".

Normally, the hot water temperature and the clock, etc. are displayed.



## **System Check**

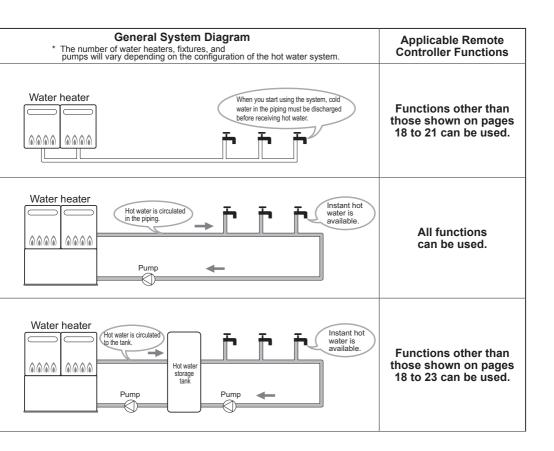
## If you press the (STATUS) button, you can check the status of the system



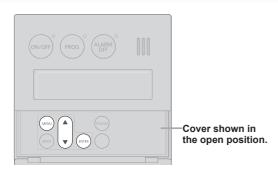
System [Std]	Water heater only operation.
System [Rorc]	* Water heater and recirculation operation.  * During recirculation operation, hot water is always circulated in the piping to provide instant hot water when a fixture is opened.  [If you set the ON/OFF button to "ON",  is displayed. (If "synchro ON/OFF" is set to "ON". (\$\sigma P18\$))]
System [Tank]	* Water heater combined with a storage tank operation.  * If a recirculation system is also installed, hot water is always circulated in the piping to provide instant hot water when a fixture is opened.  [If you set the ON/OFF) button to "ON",  is displayed.]

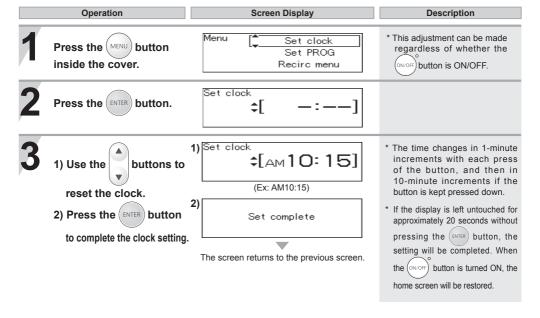


## Depending on the configuration of your system, not all functions may be used.



## For All Systems Clock Adjustment





- \* In the event of a power outage or after disconnecting power to the water heater, when power is restored, the clock on the display screen will show " - : - - " and the clock will need to be reset.
- \* Normally, when the (ONOF) button is turned OFF, the clock display disappears, but it is possible to display the clock when the (ON/OFF) button is turned OFF by changing a setting. (PP15)

## For All Systems Using the Water Heater





If System [ Tank ] is displayed, hot water will be discharged at the temperature of the storage tank.

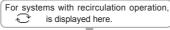
### Operation

### Screen Display

### Description









- \* The (ON/OFF) indicator is lit.

\* The previously set hot water supply temperature is shown.

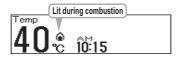
[For systems with recirculation operation]

- \* If you set the (ON/OFF button to "ON", recirculation operation is automatically started. (If "Synchro ON/OFF" was set to "ON".(GPp.18))
  - The setting temperature displayed may vary from the actual temperature at the fixture depending on conditions such as season or length of piping.



### Turn on hot water.





### Turn off the hot water

### Turn off hot water.





 During operation, the symbol may be continuously lit.





To prevent scalding:

Hot Water Heater temperatures over 50°C can cause severe burns instantly or death from scalding.

- Children, disabled and elderly are at the highest risk of being scalded. Feel water temperature before bathing or showering. Temperature limiting valves are available, ask a professional person.
- When setting the unit to 55°C or higher, "Hi temp" will flash for 10 seconds and emit a tone as a high temperature warning.
- Take caution when using the unit again after setting to 50°C or higher. Always check the set temperature before use.
- Do not allow anyone to change the water temperature while hot water is running.

## For All Systems | Setting Hot Water Temperature





If System [Tank] is displayed, hot water will be discharged at the temperature of the storage tank.

Cover shown in the open position.

Operation

### Screen Display

### Description







- indicator is lit.
- \* The previously set hot water supply temperature is shown.



Set the temperature using







the cover.



To prevent scalding:

Hot Water Heater temperatures over 50°C can cause severe burns instantly or death from scalding.

- · Children, disabled and elderly are at the highest risk of being scalded. Feel water temperature before bathing or showering. Temperature limiting valves are available, ask a professional person.
- When setting the unit to 55°C or higher, "Hi temp" will flash for 10 seconds and emit a tone as a high temperature warning.
- Take caution when using the unit again after setting to 50°C or higher. Always check the set temperature before use.
- Do not allow anyone to change the water temperature while hot water is running.

## Temperature Setting Options

When using °C mode: (°C: The temperature settings below are examples. The temperature setting necessary depends on the usage, the length of piping and the time of year.)

Washing dishes, etc.

Shower, hot water supply, etc.

\*Initial factory setting is 40°C

If fixtures incorporate mixing valves, set the temperature higher than usual.

- \* For applications that occasionally require a higher temperature setting, locate the remote controller in a convenient location.
- \* Consult local codes for minimum operating temperatures.
- Hot water temperatures shown are approximate and may differ from the actual temperature at the fixture depending on external factors such as the season and length of piping in the system.
- When low temperatures are set (for washing dishes, etc.), if the incoming water temperature is already quite high, it may be difficult to ensure the outgoing water temperature is as per the setting.
- Please check the temperature displayed before using any hot water.
   Be especially careful using hot water after the set temperature has been changed.
- When the hot water temperature is adjusted using thermostat controlled water mixing valves, set the temperature on the remote controller approximately 10°C higher than the required temperature to ensure the appropriate fixture temperature.

## For All Systems | Automatic Water Heater "ON" or "OFF"



Cover shown in the open position.

- If you set the time to turn "ON" or "OFF" the button, the (ON/OFF) button is automatically turned "ON" or "OFF" at the set time every day by just turning the (PROG) button "ON".
  - \* It is also possible to set only "ON" or "OFF" operation.
  - \* For recirculation systems, circulation is started or stopped according to the (ON/OFF button condition. "ON" or "OFF".

### Set the time to turn "ON" or "OFF" the button automatically

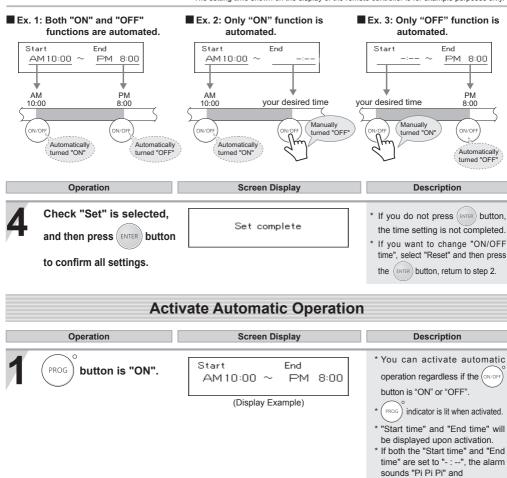
Operation Screen Display Description This example describes setting the "ON time" and "OFF time" to 10:00 am and 8:00 pm, respectively. 1. Check that the current time is properly set. Preparation (Setting the time P.8) 2. Check the button is set to "OFF" 1) Menu \* You can set the time regardless if Set clock 1) Press the (MENU) button Set PROG button is "ON" or "OFF". Recirc menu inside the cover, \* The previously set "Start time" Select "Set PROG" Start and "End time" are displayed. End using the buttons. 2) Press the (ENTER) button. \* The time changes in 10-minute 1) Start End 1) Set the ON time to increments with each press of the \$[AM 10:00] ~ ----"AM10:00" using button, and then in 1-hour increments if the button is kept pressed down. \* If the previous setting is OK, press the the buttons. 2) Start End (ENTER) button without setting "Start time". AM10:00 ~ **\$**Γ \_:\_-2) Press the (ENTER \* If you do not want to set the "Start time", button select "-: --" (located between AM 11:50 to complete the setting.

- 1) Set the OFF time to "PM8:00" using the buttons.
  - 2) Press the (ENTER) button to complete the setting.
- Start End AM 10:00 ~ \$PM 8:00 2) [1 Set AM PMReset 10:00~ 8:00 Confirm?
- and PM 0:00 settings).
- \* The time changes in 10-minute increments with each press of the button, and then in 1-hour increments if the button is kept pressed down.
- \* If the previous setting is OK, press the (ENTER) button without setting "End time".
- \* If you do not want to set the "End time", select "-: --" (located between AM 11:50 and PM 0:00 settings).

## **Operation**

**Hint for operation** Follwing this procedure allows for automated control of water heater operation without user interaction.

\* The setting time shown on the display of the remote controller is for example purposes only.



### To Deactivate Automatic Operation



- \* If the (PROG) button is not set to "OFF", the water heater will automatically turn "ON" or "OFF" at the set times.
- \* If there is a power failure or power is disconnected to the water heater, automatic operation will be deactivated.

Set PROG

is displayed.

## For All Systems Locking the Remote Controller





By locking the remote controller, the settings cannot be accidentally changed if a button is pressed by mistake.

Cover shown in the open position.

### Operation

### Screen Display

### Description



Press and hold for approximately

2 seconds to lock the

remote controller.

button

Lock complete PROG ] 📵 [ MENU ] 📵 Temp

\* The operation can be locked regardless if the (ON/OFF button is "ON" or "OFF".

\* The operations of ( PROS buttons are locked.

\* Approximately 3 seconds after locking the remote controller, the display will return to the previous screen.

## If you press these buttons

while the remote controller is locked, the "Locked" screen will appear.









Locked

\* Approximately 3 seconds after the "locked" screen appears, the display will return to the previous screen.

### To Unlock the Remote Controller

Press and hold



button

for approximately 2 seconds to unlock the remote controller.

Unlock complete PROG [ MENU ] Temp

\* Approximately 3 seconds after unlocking the remote controller, the display will return to the previous screen.

## For All Systems | Customizable Settings < Misc settings > -1



### **Adjusting the Maximum Output** Temperature.

The maximum output temperature can be limited to prevent discharging hot water at too high of a temperature.

- button is "OFF".
- Press the (MENU) button inside the cover. Select Misc settings using the buttons.

Press the (ENTER) button.

The "Misc settings" screen appears.

Select Max set temp using the buttons, and then press the (ENTER) button.

Change the

setting using the buttons. Max set temp ٠ſ 85 œΤ (Ex: 85°C)

37 - 48°C (In 1°C intervals). 50 - 85°C (In 5°C intervals)

(Initial setting=85°C)

Setting completed

### Display Screen Power Saving Mode [powersave dsply]

To conserve power consumption by the display, it can be turned off completely or set to only display the clock when the power ON/OFF button is turned "OFF".

- Press the (MENU) button inside the cover, Select Misc settings
  - Press the (ENTER) button.

using the

The "Misc settings" screen appears.

buttons.

- Select Powersave dsply using the buttons, and then press the ENTER button.
- Change the setting using the buttons.

Powersave dsply (Clock hidden) ¢ſ No-1 (Ex: No-1)

- Yes: the display will turn off and the clock will not be displayed when the power ON/OFF button is turned "OFF".
- No-1: the display will not turn off and the clock will not be displayed when the power ON/OFF button is turned "OFF".
- No-2: the display will not turn off and the clock is displayed when the power ON/OFF button is turned "OFF".

(Default setting=No-1)

Setting completed

To change other settings, select the option and press the (ENTER) button.

## For All Systems

## **Customizable Settings < Misc settings > -2**

Adjusting the brightness of the display screen when the remote controller is turned on.

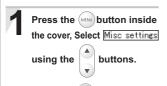
The display screen can be brightened or darkened or the backlight can be turned off completely.

## Muting the remote controller.

The remote controller can be muted so that it does not emit a tone when a button is pressed.

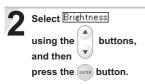
## <System dependent option> Error Tone Settings.

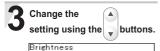
The remote controller can be muted so that it does not emit a tone when an error occurs.



Press the ENTER button.

The "Misc settings" screen appears.





\$\frac{1}{2}[ Normal ]

(Ex: Normal)

## Dark / Dim / Normal / Bright

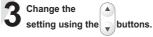
(Default setting=Normal)

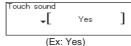
Setting completed



The "Misc settings" screen appears.







### Yes / No

(Default setting=Yes)

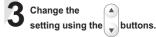
Setting completed ====



Press the ENTER button.

The "Misc settings" screen appears.







Yes / No

(Default setting=Yes)

Setting completed ——

To change other settings, select the option and press the outs button.

To return to the home screen, press the button or let it sit for approximately 20 seconds.



( Refer to "Preventing Damage from Freezing" as shown in the Owner's Guide provided with the water heater.)

## Restoring Default Settings.

Select settings can be restored to the factory default conditions. See items marked with a \* in the "Default Settings" section (P27).



Press the (MENU) button inside the cover, Select Misc settings using the buttons.

Press the (ENTER) button.

The "Misc settings" screen appears.

Select Drain water using the buttons, and then press the (ENTER) button.

Select "YES" using the buttons.

Drain water Yes now?

Press the ENTER button.

Follow the drain procedures in the manual

Drain the water heater following the procedures described in the Owner's Guide provided with the water heater.

### To stop draining water from the water heater

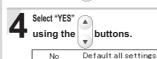
If you press the (ENTER) button again when "Drain water" and "Operating" are alternately displayed following steps 2 to 3, the drain function will stop.



Press the (MENU) button inside the cover, Select Misc settings using the buttons.

> Press the (ENTER) button. The "Misc settings" screen appears.

Select Default all settings using the buttons, and then press the (ENTER) button.



Yes

Press and hold the ENTER button for approximately 5 seconds.

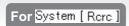
now? Press/hold

Reset complete

Setting completed ==

To change other settings, select the option and press the (ENTER) button.

To return to the home screen, press the (MENU) button or let it sit for approximately 20 seconds.



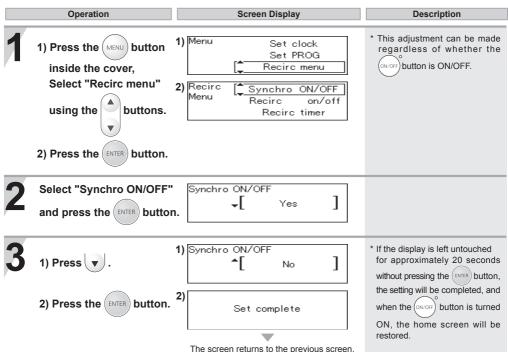
# **Enabling Automatic Recirculation Operation**

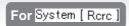




- \* To check system status. (☞P6)
- \* When "synchro ON/OFF" is set to "No", recirculation can be activated manually.
- \* To change "synchro ON/OFF" from "No" to "Yes", follow the same procedure as described below.

Cover shown in the open position.





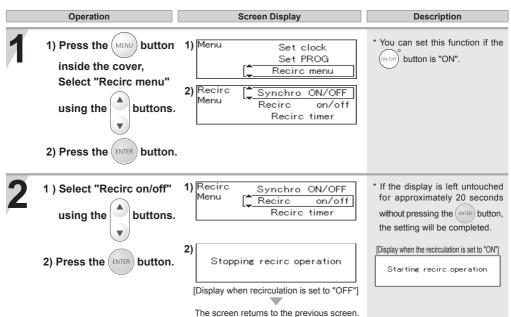
## Manually Stopping Recirculation Operation





Recirculation operation can be manually stopped or started using this procedure.

Cover shown in the open position.



<sup>\*</sup> Even if recirculation is set to "OFF", recirculation operation is restarted by either turning the oworf button "ON", when the water heater is turned ON automatically (@P12) or when the recirculation timer (@P20) is active.

## For System [Rord] Setting the Recirculation System





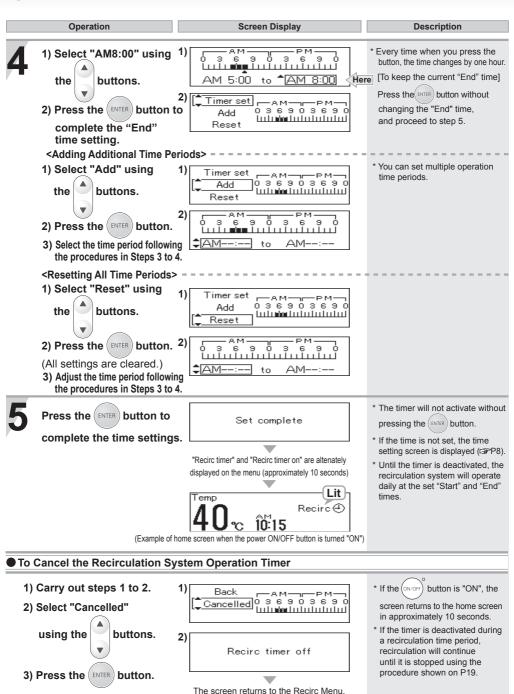


- With the recirculation operation timer set, hot water will be automatically circulated in the hot water pipes. Even with this function activated, it may take several minutes for hot water to be completely circulated through the plumbing system. Set the timer to activate the recirculation system prior to the first use of hot water to ensure hot water is instantly available.
- \* Multiple recirculation time periods can be set.
- \* Until the timer is deactivated (P21), the recirculation system will operate daily at the set times.
- \* When the recirculation system is turned "OFF" by the timer, the water heater will still remain "ON"

"Resetting All Time Periods" (PP21).

and can be used normally. Operation Screen Display Description This example describes setting the recirculation system to operate between 5:00 am - 8:00 am. Check that the current time is properly set. Preparation (Setting the time P.8) You can set the timer regardless Set clock button inside the 1) Press the (MENU) Set PROG (ON/OFF) button is "ON" or "OFF". cover. Select "Recirc menu" using Recirc menu 2) Recirc Synchro ON/OFF the buttons. Menu Recirc on/off Recirc timer 2) Press the (ENTER) button. 1) Select "Recirc timer" 1) Recirc \* The previous setting is displayed. Synchro ON/OFF Menu Recirc on/off using the buttons. Recirc timer (Example of a display) 2) 2)Press the (ENTER) button. AM--: tο Every time when you press the 1) Select "AM5:00" using button, the time changes by one hour. [To keep the current "Start" time] AM 5:00 AM-6:00 buttons. Press the (ENTER) button without the changing the "Start" time, and proceed to step 4. 2) Press the (ENTER) button to AM 6:00 AM 5:00 ITo add additional time periods to the current to complete the "Start" setting, or to cancel the previous setting? time setting. 1) Press the (ENTER) button without setting "Start" time. 2) Press the (ENTER) button without setting "End" time. 3) Follow the procedures "Adding Additional Time Periods" or

## **Operation Timer**



## Single Water Heater Only

## Flow Meter Alarm





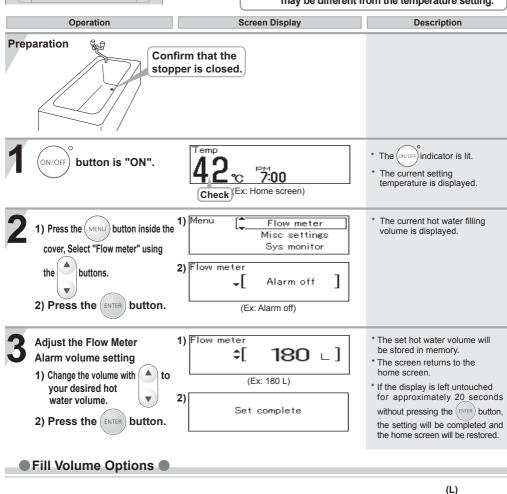
If the flow meter alarm is being used to indicate when water delivery volume is reached to the preset volume.

- If any hot water is being used besides what is going into the tub, the alarm will sound before the tub is full.
- If there was water in the tub before the fill began, or if the water is not shut off manually when the alarm sounds, the tub may overflow.
- If there was water in the tub before the fill began, the temperature in the tub after it is full may be different from the temperature setting.

340 380

Alarm off

(Default setting = Alarm off)



40 60

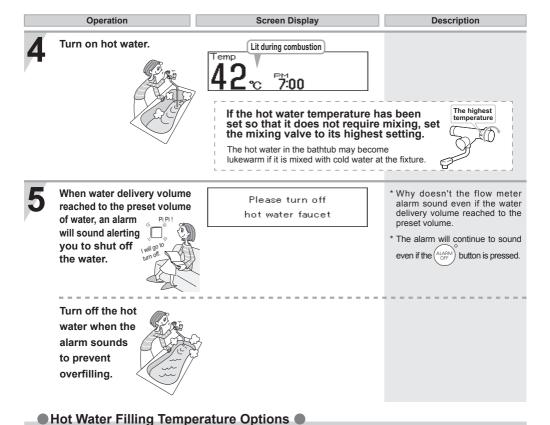
100

120 140

160 180

200

220 240 260 300



C . The temperatures settings below are only examples. The temperature setting necessary will depend on the usage, the length of piping and the time of year.

37 38 39 40 41 42 43 44 45 46 47 48

Hot

\* Initial factory setting: 40°C

Warmer

Warm

\* Although the temperature can be set to 50°C or higher, do not set the temperature to 50°C or higher as it can

cause severe burns instantly or death from scalding.

\* The hot water filling temperature is same as the setting temperature.

\* The setting temperature displayed may vary from the actual temperature at the fixture depending on conditions such as

season or length of piping.

## **Troubleshooting**

★ This section only covers issues with the remote controller.

To diagnose issues with the water heater, consult the Owner's Guide supplied with the water heater.

	Problem	Possible Cause	Action
Remote Controller	The power ON/OFF indicator	There has been a power failure.	Wait for power to be restored.
	does not light up	The power plug is disconnected.	Check the power plug.
	The clock display shows	If the time is not displayed on the clock, either a power failure has occured or power was disconnected resulting in the display showing "-:".	Set the clock again.
	The flow meter alarm does not sound or it sounds before the bathtub has been filled to the set amount.	The flow meter alarm is set to sound when hot water is continuously discharged for the set volume of water. If hot water is used for other fixtures while filling the bath tub, the alarm will sound before the tub is full.	An error has not occured.
		If mixing valves are used, or if cold water is mixed with hot water at the fixture, the tub will fill more than the setting of the flow meter alarm.	An error has not occured.
	The setting cannot be changed when a button is pressed.	The remote controller is locked.  While the remote controller is locked these buttons  PROG CANNOT CANNOT BE USED.	Unlock the remote controller.
	[For recirculation systems] Flame symbol <>> lights up or goes out	During recirculation operation, the water heater will turn on and off to keep the hot water pipes up to temperature.	An error has not occured.



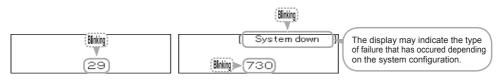
## **Checking for Error Conditions**

When a failure occurs, information relating to the error blinks on the display.

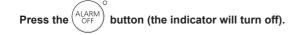
The error alarm may also continuously sound.

For additional details on the cause of the error displayed, refer to the "Troubleshooting" section in the Owner's Guide provided with the water heater.

## Error Code Display Screen



## ■ To Stop the Error Alarm



## Follow-up Service

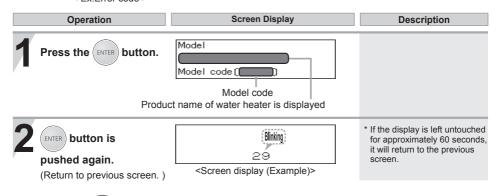
## **Requesting Service**

- \* Service and warranty periods are based on the type of product and the application type. Refer to the Limited Warranty provided with the water heater for complete details.
- \* Refer to the "Troubleshooting" section in this manual as well as the Owner's Guide supplied with the water heater. If the problem is not corrected, please contact Dux Service Department at 1300 365 115 (Australia) or 0800 729 389 (New Zealand).

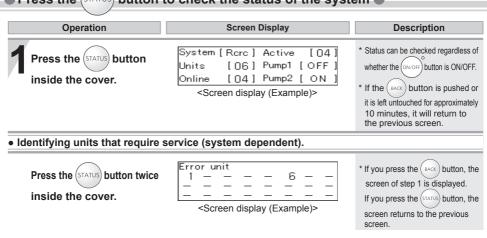
## If an error code is displayed, the model name and code can be checked



\* If more than one water heater is installed, this procedure cannot be used.







## **Default Settings**

Items	Default setting
Clock display (unset)	-:
Hot water temperature	40°C
Hot water volume	alarm off

Customizable Settings (≪ P15 - 17)	Default setting	
Maximum Output Temperature	85°C	*
"Powersave dsply" and clock display	No-1	*
Brightness of the display screen when the remote controller is turned on.	Normal	*
Operation sound of remote controller	Yes	*
Notification when a failure is generated	Yes	*

★ Indicates an item that can be restored to default.

See P17 "Restoring Default Settings".