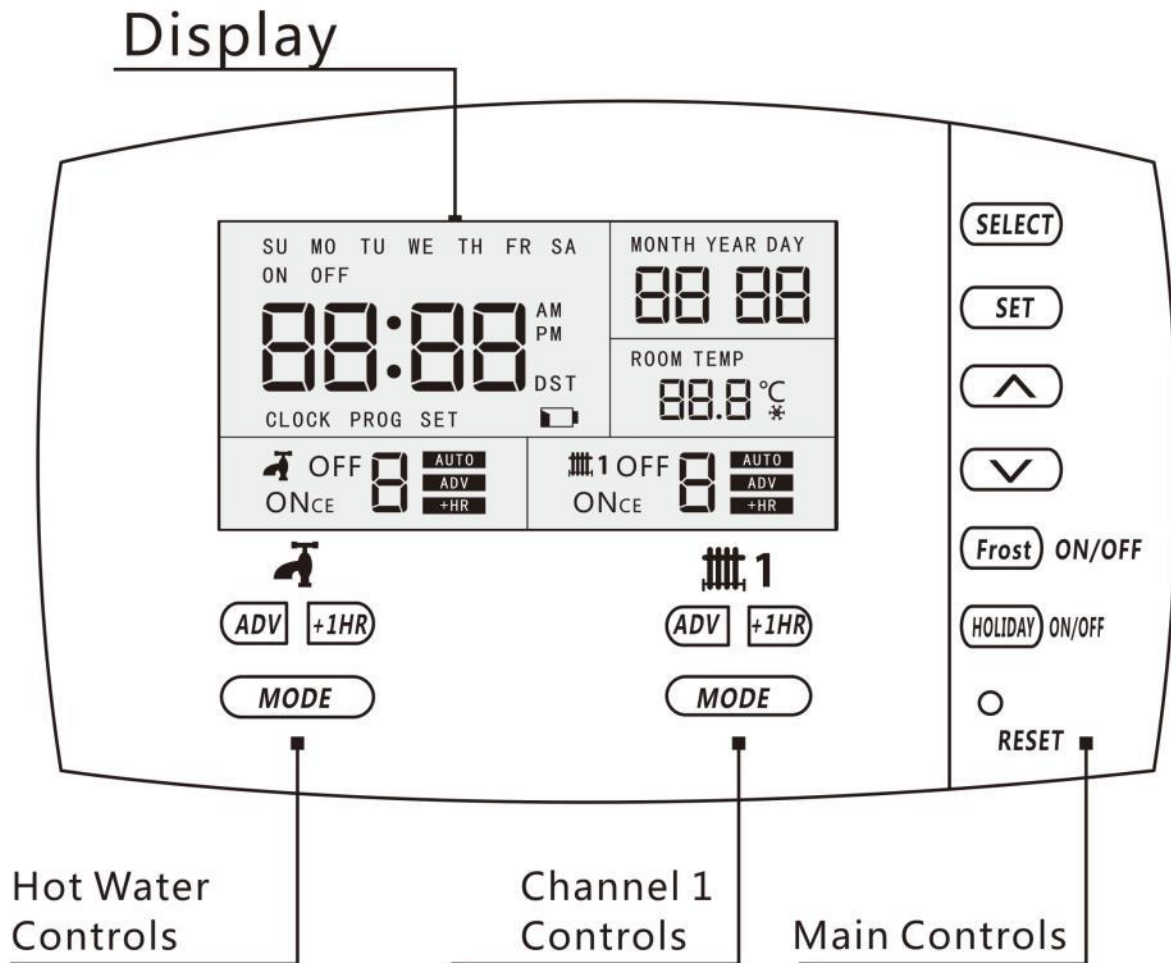


Dual-channel Programmer Instruction



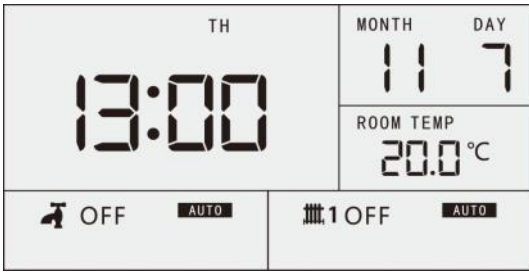
Hot Water Controls & Channel 1 Controls

ADV	Advance mode key
+1HR	Key for temporary override
MODE	Key for operation mode selection

Main Controls

SELECT	Key for Clock/Program settings
SET	Key for Clock/Program settings
^	Up/Increase
∨	Down/Decrease
Frost ON/OFF	Key for frost function switch and settings
HOLIDAY ON/OFF	Key for holiday function switch and settings
RESET	System reset

1.Normal Mode

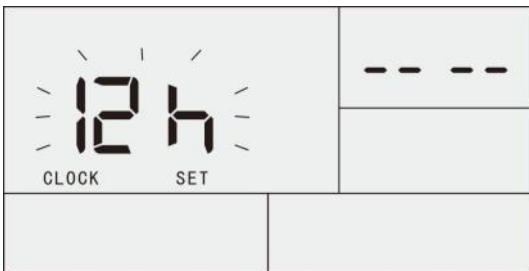


2. Clock and Date Setting

2.1

Press Both [SET] and [SELECT] for 3 seconds during Normal Mode to enter the following screen.

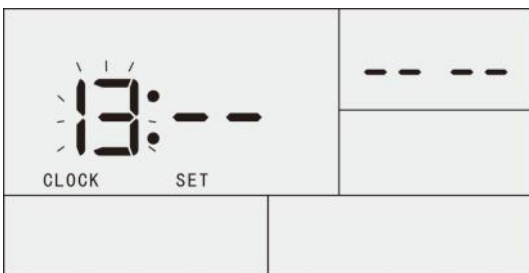
Press [UP] or [DOWN] to select 24hr mode or 12hr mode.



2.2

Press [SELECT] button to set hour in following screen, Then press [UP] or [DOWN] to set hour.

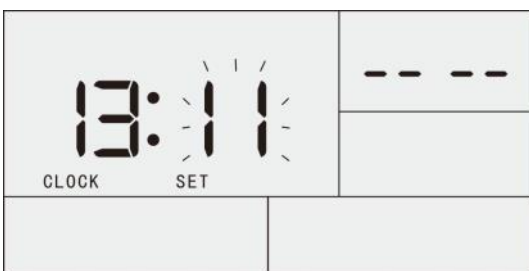
Press and hold [UP] or [DOWN] to scroll quickly.



2.3

Press [SELECT] button to set minute in following screen, Then press [UP] or [DOWN] to set minute.

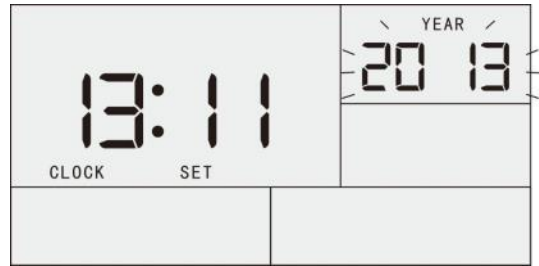
Press and hold [UP] or [DOWN] to scroll quickly.



2.4

Press [SELECT] button to set year in following screen, Then press [UP] or [DOWN] to set year.

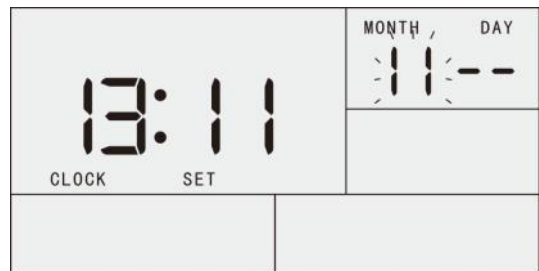
Press and hold [UP] or [DOWN] to scroll quickly.



2.5

Press [SELECT] button to set month in following screen, Then press [UP] or [DOWN] to set month.

Press and hold [UP] or [DOWN] to scroll quickly.

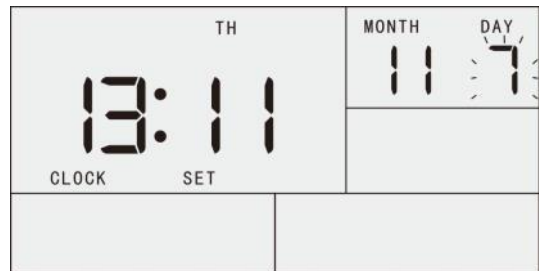


2.6

Press [SELECT] button to set day in following screen, Then press [UP] or [DOWN] to set day.

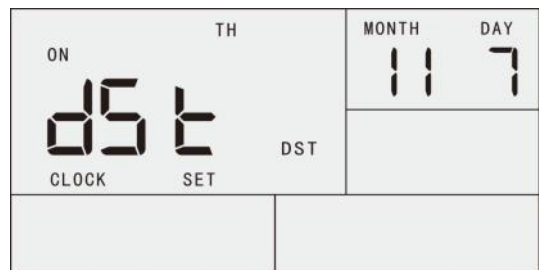
Press and hold [UP] or [DOWN] to scroll quickly.

The weekday will automatically calculate and display during adjusting.

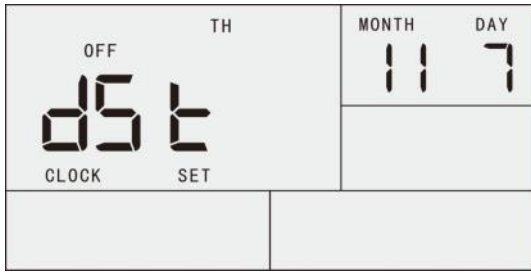


2.7

Press [SELECT] button to set daylight saving time in following screen, Then press [UP] or [DOWN] to switch it on/off.



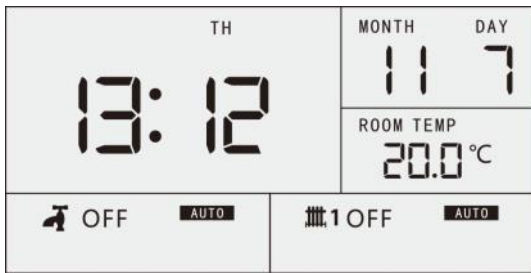
Daylight saving time is set to ON
DST symbol displays.



Daylight saving time is set to OFF
DST symbol disappears.

Daylight saving time : When enabled, the clock will automatically shift 1 hour ahead of the set standard time from the last Sunday in March at 2:00am until the last Sunday in October at 2:00am.

2.8
Press [SELECT] to go back to 2.1.
Press [SET] to confirm setting and back to Normal Mode.
The device will automatically confirm settings and revert to Normal Mode, if no button is pressed for 15 seconds.



3. Program Setting

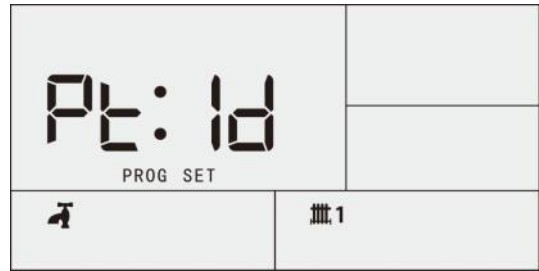
Type	Operation
1day	Every day of the week is programmed with the same ON/OFF times.
5/2day	Monday to Friday are programmed with the same ON/OFF times. Saturday to Sunday are programmed with the same ON/OFF times.
7days	Each day of the week is programmed independently thereby allowing different ON/OFF times.

Factory default program setting for each channel
(in 24hr mode)

Prog	Switching	[1day] [5/2day] [7days]
1	ON	6:00
	OFF	8:00
2	ON	10:00
	OFF	12:00
3	ON	18:00
	OFF	22:00

3.1.1

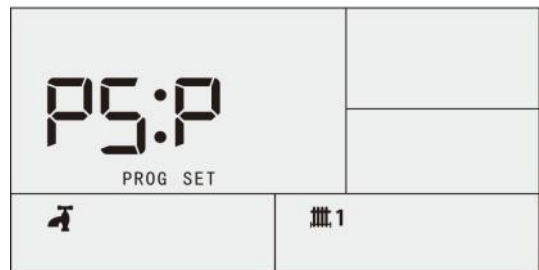
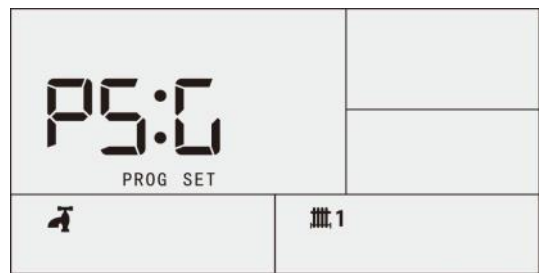
Press [SET] Button at normal mode to enter into Main Program Setting Mode.
Press [UP] or [Down] to select program type.
LCD display: 1day=Pt:1d 5/2day=Pt:52 7day=Pt:7d



3.1.2

Press [SELECT] Button at Main Program Setting Mode to set Program System
Press [UP] or [Down] to select program system.
LCD display:

Gravity-fed Hot Water System=PS:G
Fully Pumped and Controlled System=PS:P



Fully Pumped and Controlled System (P). Central Heating and Hot Water can be operated independently.

Gravity-fed Hot Water System (G). Central Heating cannot be operated without Hot Water.
(When central heating channel needs to turn on, the hot water channel will automatically turn on to support)

Press [SET] button to confirm settings, and back to normal mode.

Or, press Hot Water [MODE] button to confirm settings and go to set hot water channel program. And also press Channel 1[MODE] button to go to set channel 1 program.

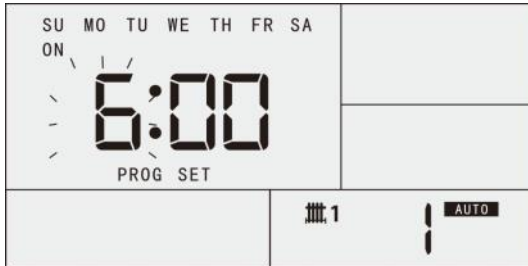
3.2.1

1day mode program setting.

After selecting the 1day program type, press the channel 1 [MODE] button to confirm and to set the channel 1 program.

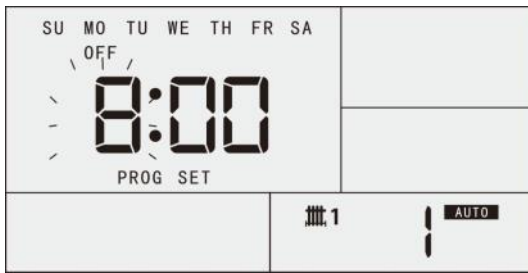
To set Channel 1 P1-ON.

Press [UP] or [DOWN] to set hour. Then press [SELECT] and press [UP] or [DOWN] to set minute.



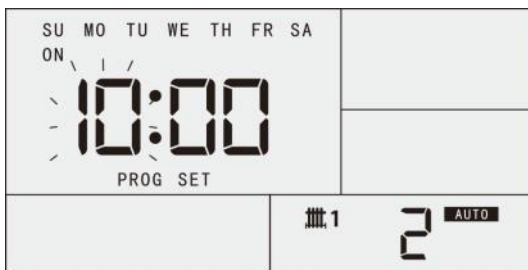
Press [SELECT] to set Channel 1 P1-OFF.

Press [UP] or [DOWN] to set hour. Then press [SELECT] and press [UP] or [DOWN] to set minute.



Press [SELECT] to set Channel 1 P2-ON.

Press [UP] or [DOWN] to set hour. Then press [SELECT] and press [UP] or [DOWN] to set minute.



Press [SELECT] to select among the items to be reviewed or adjusted with the below sequences.

P1ON(Hour→Minute) → P1OFF(Hour→Minute) →
P2ON(Hour→Minute) → P2OFF(Hour→Minute) →
P3ON(Hour→Minute) → P3OFF(Hour→Minute) →
P1ON(Hour→Minute)

Press [SET] at any

time to confirm current setting and go back to main program setting mode, then press [SET] to go back to normal mode.

Press Hot Water [MODE] button to confirm settings and go to set hot water channel program.

The device will automatically confirm current setting and revert to Normal Mode, if no button is pressed for 60

seconds.

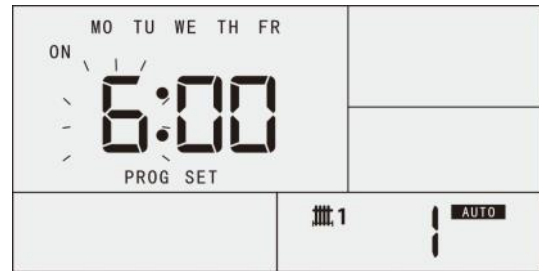
3.2.2

5/2day mode program setting.

After selecting the 5/2day program type, press the channel 1 [MODE] button to confirm and to set the channel 1 program.

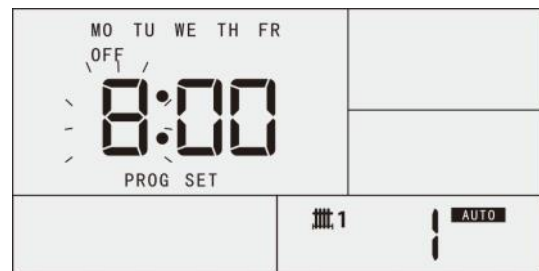
To set Channel 1 Weekday P1-ON.

Press [UP] or [DOWN] to set hour. Then press [SELECT] and press [UP] or [DOWN] to set minute.



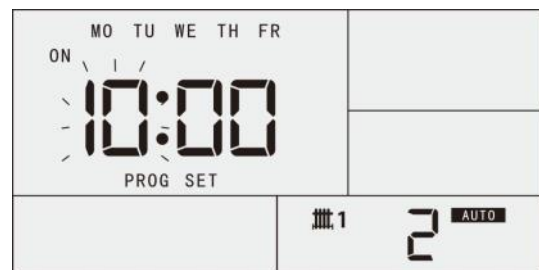
Press [SELECT] to set Channel 1 Weekday P1-OFF.

Press [UP] or [DOWN] to set hour. Then press [SELECT] and press [UP] or [DOWN] to set minute.



Press [SELECT] to set Channel 1 Weekday P2-ON.

Press [UP] or [DOWN] to set hour. Then press [SELECT] and press [UP] or [DOWN] to set minute.



Press [SELECT] to select among the items to be reviewed or adjusted with the below sequences.

Weekday P1ON(Hour→Minute) → Weekday
P1OFF(Hour→Minute) →
Weekday P2ON(Hour→Minute) → Weekday
P2OFF(Hour→Minute) →
Weekday P3ON(Hour→Minute) → Weekday
P3OFF(Hour→Minute) →
Weekend P1ON(Hour→Minute) → Weekend
P1OFF(Hour→Minute) →
Weekend P2ON(Hour→Minute) → Weekend
P2OFF(Hour→Minute) →

Weekend P3ON(Hour→Minute) → Weekend P3OFF(Hour→Minute) → cycle back to Weekday P1ON(Hour→Minute)

Press [SET] anytime to confirm current setting and go back to main program setting mode, then press [SET] to go back to normal mode.

Press Hot Water [MODE] button to confirm settings and go to set hot water channel program.

The system will automatically confirm current settings and go back to Normal Mode, if no button is pressed for 60 seconds.

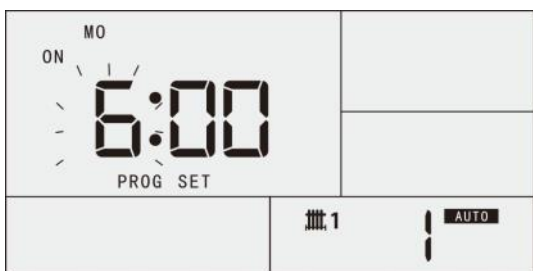
3.2.2

7day mode program setting.

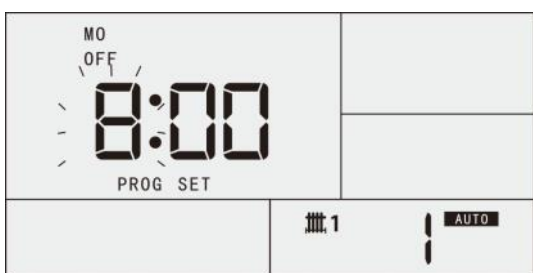
After selecting the 7day program type, press the channel 1 [MODE] button to confirm and to set the channel 1 program.

To set Channel 1 Monday P1-ON.

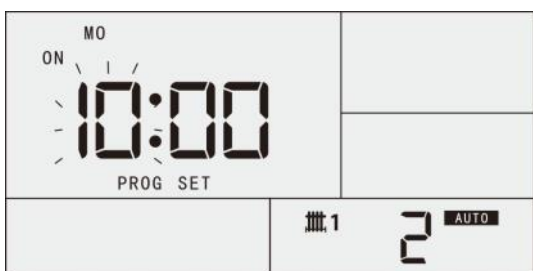
Press [UP] or [DOWN] to set hour. Then press [SELECT] and press [UP] or [DOWN] to set minute.



Press [SELECT] to set Channel 1 Monday P1-OFF. Press [UP] or [DOWN] to set hour. Then press [SELECT] and press [UP] or [DOWN] to set minute.



Press [SELECT] to set Channel 1 Monday P2-ON. Press [UP] or [DOWN] to set hour. Then press [SELECT] and press [UP] or [DOWN] to set minute.



Press [SELECT] to select among the items to be reviewed

or adjusted with the below sequences.

Monday P1ON(Hour→Minute) → Monday P1OFF(Hour→Minute) →
 Monday P2ON(Hour→Minute) → Monday P2OFF(Hour→Minute) →
 Monday P3ON(Hour→Minute) → Monday P3OFF(Hour→Minute) →

 Sunday P1ON(Hour→Minute) → Sunday P1OFF(Hour→Minute) →
 Sunday P2ON(Hour→Minute) → Sunday P2OFF(Hour→Minute) →
 Sunday P3ON(Hour→Minute) → Sunday P3OFF(Hour→Minute) →
 cycle back to Monday P1ON(Hour→Minute)

Press [SET] anytime to confirm current setting and go back to main program setting mode, then press [SET] to go back to normal mode.

Press Hot Water [MODE] button to confirm settings and go to set hot water channel program.

The system will automatically confirm current setting and go back to Normal Mode, if no button is pressed for 60 seconds.

Note: After confirming / adjusting the program settings, all channels will reset to auto mode.

4. Operating Mode Selection

4.1 Normal Operating Mode

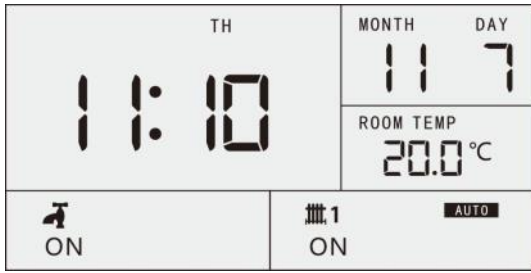
4.1.1 Mode for Program System P

Fully Pumped and Controlled System (P). Central Heating and Hot Water can be operated independently.

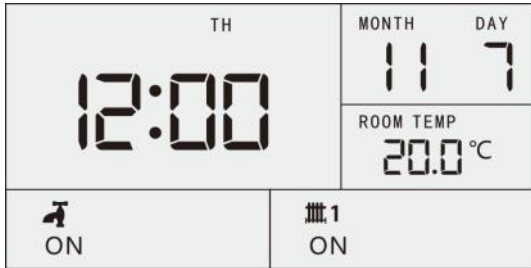
ON	Continuously on
ONCE	On for 1 period a day, from Program 1 ON to Program 3 OFF
AUTO	Automatic program control
OFF	Continuously off

Press [MODE] of Hot Water Controls to select different operating modes with the below sequences.
 ON→ONCE→AUTO→OFF→ON

Press [MODE] of Channel 1 Controls to select different operating modes with the below sequences.
 ON→ONCE→AUTO→OFF→ON



Operating mode: HW:ON C1:AUTO



Operating mode: HW:ON C1:ON



Operating mode: HW:ON C1:ONCE



Operating mode: HW:ON C1:OFF

4.1.2 Mode for Program System G

Gravity-fed Hot Water System (G). Central Heating cannot be operated without Hot Water.

The HW channel mode is limited as following table.

Central Heating Channel 1 (C1)	Selectable mode for Hot Water (HW)
ON	ON
ONCE	ON,ONCE
AUTO	ON,ONCE,AUTO
OFF	ON,ONCE,AUTO,OFF

4.2 Special Operating Mode

4.2.1 [+1Hr] function.

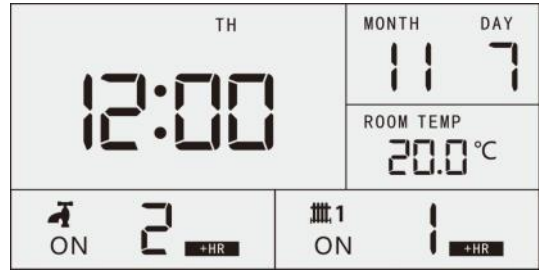
Press [+1Hr] of Channel 1 Controls to temporarily switch on channel 1. Subsequent press of [+1Hr] to increase the duration by 1 hour. Maximum duration is 9 hours. If the

number rolls back to "0", this will disable the [+1Hr] Program Override.

Press [+1Hr] of Hot Water to temporarily switch on hot water in the same way.

Press [SET] or wait 5 seconds without key press to start counting down.

Press [+1Hr] to set the number to "0" to cancel.



+1Hr function is activated.

Note: Remaining run time, 1minute to 60minutes will be indicated as 1hour

[+1Hr] function can be activated from AUTO, ON, ONCE and OFF modes.

When Gravity-fed Hot Water System is selected, pressing of C1 [+1Hr] will set HW duration same as C1 duration.

4.2.2 Advance function.

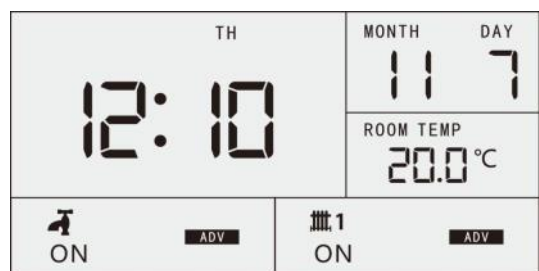
This function allows the user to bring forward the next switching time.

If the channel is currently timed to be OFF and the ADV is pressed, the channel will be switched ON until the next switching time.

if the channel is currently timed to be ON and the ADV is pressed, the channel will be switched OFF until the next switching time.

Press the [ADV] button of channel 1 controls to advance channel 1.

Press the respective [ADV] button to cancel this function. Press [ADV] of Hot Water to advance hot water in the same way.



ADV function is activated

[ADV] function can be activated from AUTO and ONCE modes.

When Gravity-fed Hot Water System is selected, pressing of C1 [ADV] for ADV ON will set HW temporary

ADV ON for the same as C1 duration.

When Gravity-fed Hot Water System is selected, if C1 is on and HW [ADV} is pressed to advance HW OFF, this command will be retained until C1 is turned off (by AUTO or manual control). The retained ADV command is valid from the time the button is pressed, until the next programmed OFF time.

4.2.3 Note

When Gravity-fed Hot Water System is selected. All channels can be activated only one type of special operating modes at the same time.

For each channel only one special operation mode can be activated at the same time. If [+1Hr] is activated, the [ADV] cannot be set to be activated.

When a special operation mode is activated, the normal operation mode cannot be selected, until the special operation is deactivated, or manually cancelled.

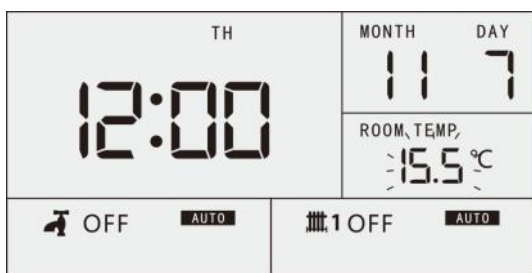
5. Other functions

5.1 Frost Protection function

This function is set to protect pipes against freezing or to prevent low room temperature when the programmer is programmed to be OFF, or is manually OFF.

At normal mode screen, press and hold [Frost ON/OFF] for 3seconds to set the frost protection temperature.

Then press [UP] or [DOWN] to adjust. Selectable range 5~20°C in 0.5°C steps.



At normal mode screen, press [Frost ON/OFF] button one time to activate this function, denoted by the display frost symbol. Press [Frost ON/OFF] button again to deactivate, and the frost symbol will disappear.

When the Frost Protection starts to work, the frost symbol will flash. All channels will be switched ON in the event of the room temperature falling to the frost protection set point.



5.2 Holiday Mode

At normal mode screen, press and hold [HOLIDAY ON/OFF] for 3seconds to enter holiday mode setting mode.

Press [UP] or [DOWN] to adjust. Selectable 0~60days



Then press [SET] to confirm setting, and activate holiday mode.

All channel will be switched OFF, until the holiday mode is deactivated.



Press and hold [HOLIDAY ON/OFF] button for 3seconds to deactivate, when the holiday mode is activated. The programmer returns to normal mode.

The Programmer counts each pass through midnight as a day.

6. Other & Specifications

Press any key to activate Backlight.

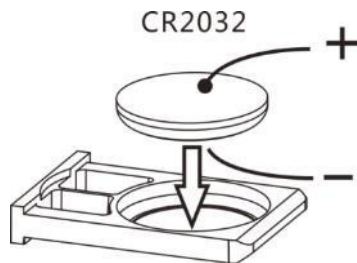
The backlight will automatically turn off 5 seconds after all keys are released.

LCD backlight can only operate when AC supply is connected.

LCD backlight is illuminated throughout the Clock, Program, and Temporary Override Temperature settings.

If the AC supply fails, the programmer will stop working.
The cell battery will keep the clock working and saves the program setting for 1 year.
Replace the cell battery, when the battery symbol is flashing on the display.

Replacement battery model: CR2032



Power supply: 230VAC 50/60Hz

Switch rating: @ 230VAC 3(1)A

Operating temperature range: 0~50°C