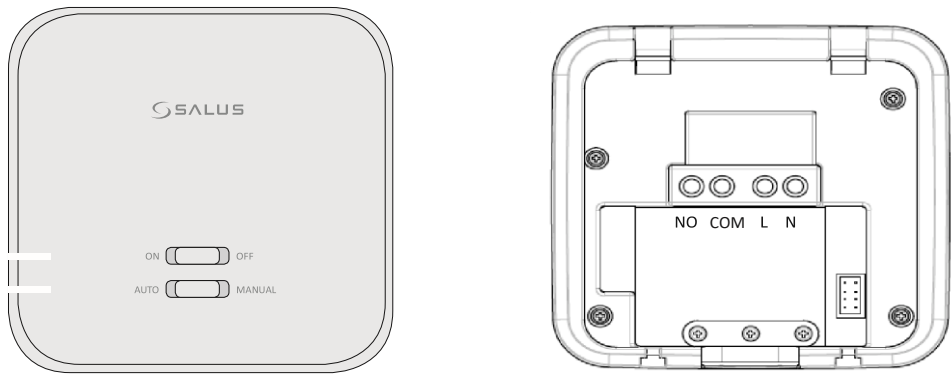


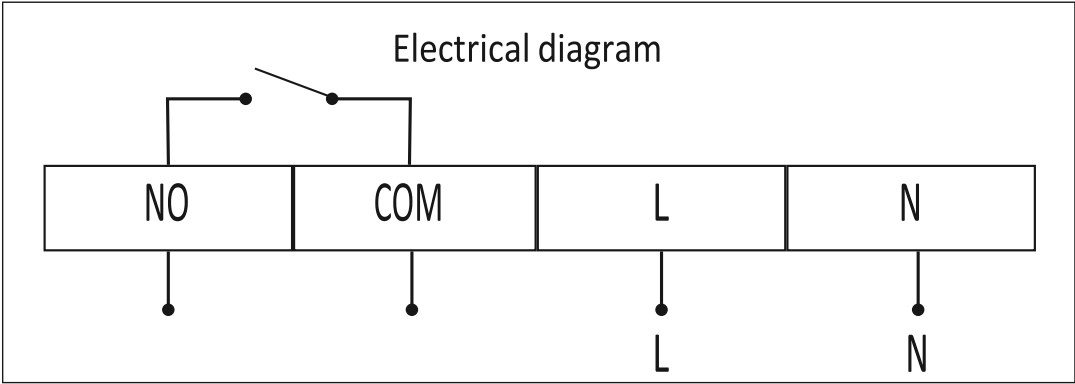
Installation

1. RXRT510 Receiver

Unscrew the backplate of the RXRT510 receiver in order to do the wiring connections. After that please switch the receiver ON.

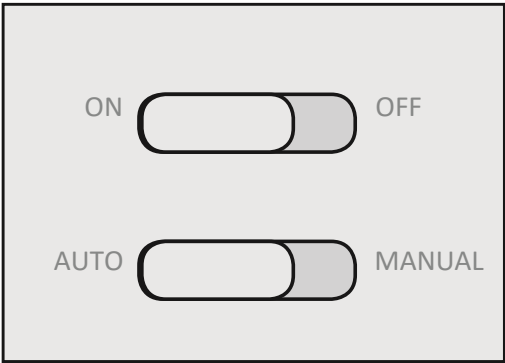


| Terminal | Description            | Receiver Terminals |
|----------|------------------------|--------------------|
| NO       | Switch Terminal        |                    |
| COM      | Common Switch Terminal |                    |
| L        | Mains Live (230VAC)    |                    |
| N        | Mains Neutral          |                    |



Button Description for RXRT510 Receiver

| Button | Function                                                                                      |
|--------|-----------------------------------------------------------------------------------------------|
| ON     | The receiver is enabled, ready for use.                                                       |
| OFF    | The receiver is disabled, will not function.                                                  |
| AUTO   | The receiver will switch on and off automatically, as operated by the thermostat.             |
| MANUAL | Providing ON is selected,the receiver will switch on continuously, overriding the thermostat. |



**Note:** Please make sure to first wire up and turn on the receiver. After that insert the batteries into the thermostat and follow the installation

2. RT510RF Thermostat

Insert the batteries into the thermostat. Please use 2 AA batteries.

Power up

After power up, the thermostat is reset. During system reset, all LCD icons are displayed for 2 seconds and the keys are locked. After that, all keys are unlocked and the thermostat is initialized. Then software version is shown. The typical reset display is shown below.



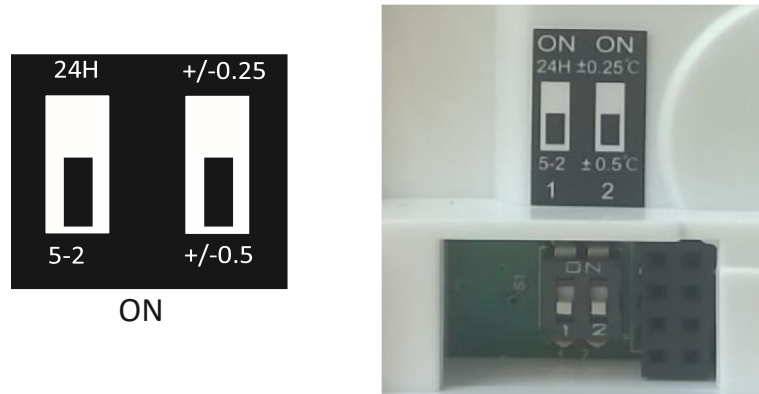
The following tables show the default settings of the RT510 thermostat after Power on, or after Reset button is pressed:

| Function                      | Status                | Program | Weekday (M to F)      | Weekend (SA to SU)    |
|-------------------------------|-----------------------|---------|-----------------------|-----------------------|
| Operation Mode                | Normal m              | 1       | Time: 6:00am          | Time: 8:00am          |
| Room Temperature              | 22.0°C, to within 5 s |         | Setpoint Temp: 21.0°C | Setpoint Temp: 21.0°C |
| °C indicator                  | On                    | 2       | Time: 8:00am          | Time: 10:00am         |
| Clock                         | 12:00                 |         | Setpoint Temp: 14.0°C | Setpoint Temp: 19.0°C |
| AM/PM indicator               | AM                    | 3       | Time: 12:00pm         | Time: 12:00pm         |
| Program                       | Default fa            |         | Setpoint Temp: 14.0°C | Setpoint Temp: 19.0°C |
| Setpoint Temperature          | Default fa            | 4       | Time: 2:00pm          | Time: 2:00pm          |
| Program Number indicator      | 1                     |         | Setpoint Temp: 14.0°C | Setpoint Temp: 19.0°C |
| SET indicator                 | Off                   | 5       | Time: 6:00pm          | Time: 6:00pm          |
| PROG indicator                | Off                   |         | Setpoint Temp: 21.0°C | Setpoint Temp: 21.0°C |
| Frost Protection indicator    | Off                   | 6       | Time: 10:00pm         | Time: 10:00pm         |
| Heat indicator                | Off                   |         | Setpoint Temp: 14.0°C | Setpoint Temp: 14.0°C |
| Low-Battery Warning indicator | Off, to be seconds    |         |                       |                       |
| Output Relay                  | Off                   |         |                       |                       |

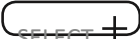
## 06 RT510RF Installation Manual

### DIP Switch Settings

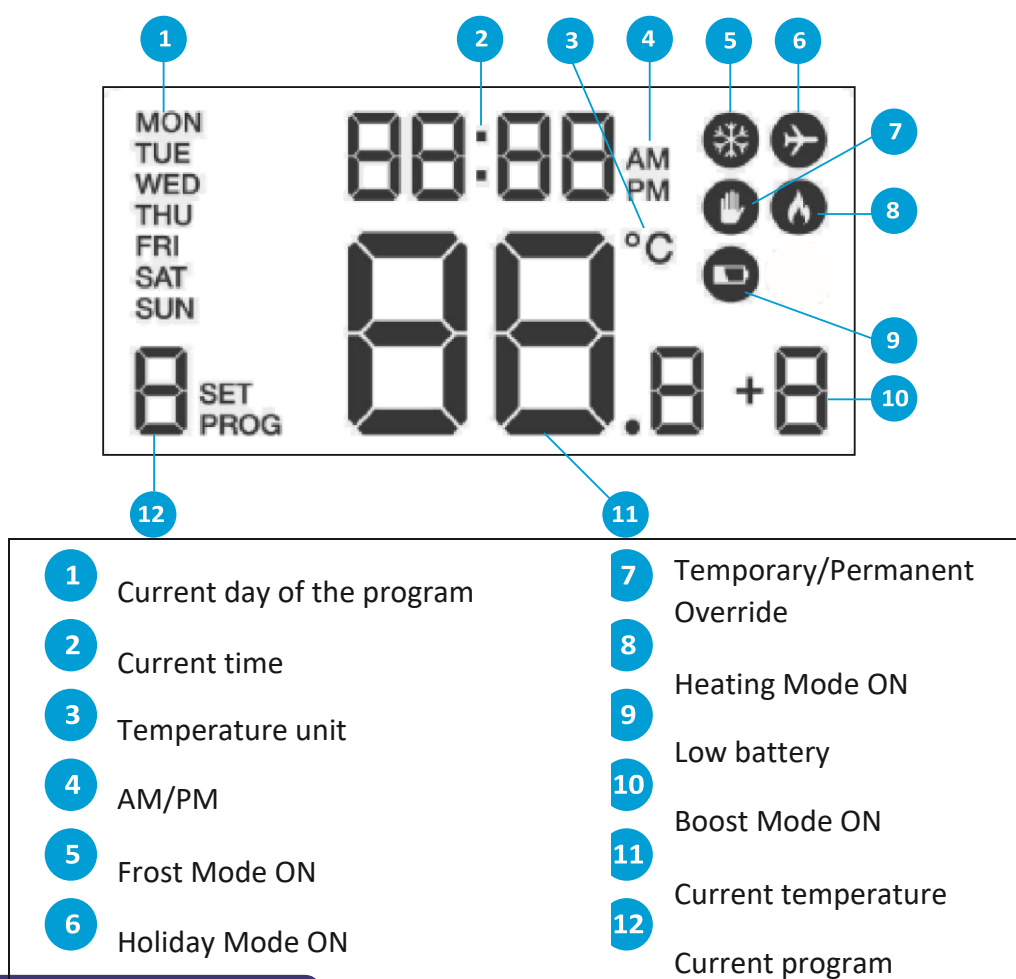
The DIP switches are found on the rear of your thermostat and can be used to change the span (temperature accuracy) of your thermostat from the default +/-0.5°C to +/-0.25°C and the programmes 5-2 or 24h. Changing the Span DIP Switch (2) may cause your boiler to operate more frequently. The DIP switches are located on the back of the thermostat.



## Button Functions

| Key                                                                                                                                                                       | Function                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                          | Press once to activate Frost Mode                                                                                                                                  |
|                                                                                          | Press for 3 seconds in order to activate Holiday Mode.                                                                                                             |
| +Hr                                                                                                                                                                       | Press once to activate/deactivate Boost function                                                                                                                   |
|                                                                                          | Press once to enter/exit Permanent Override function.                                                                                                              |
| ^                                                                                                                                                                         | Increase button                                                                                                                                                    |
| v                                                                                                                                                                         | Decrease button                                                                                                                                                    |
|                                                                                          | Select the clock or programme settings                                                                                                                             |
|                                                                                        | Press to confirm your settings                                                                                                                                     |
|                                                                                        | <ol style="list-style-type: none"> <li>Press once to enter in Test Mode for RT510RF</li> <li>Press for 3 seconds to enter/exit Pairing Mode for RT510RF</li> </ol> |
|  + ^ + v                                                                               | Press the buttons for 3 seconds to enter Installer Mode                                                                                                            |
|  +  | Press the buttons for 3 seconds to enter Clock Settings                                                                                                            |

## LCD Functions

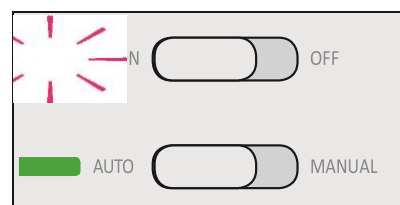
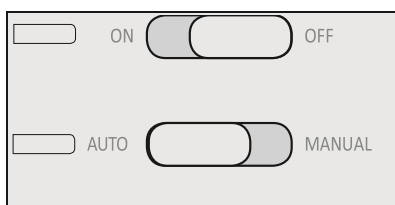
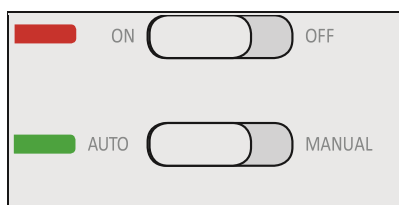


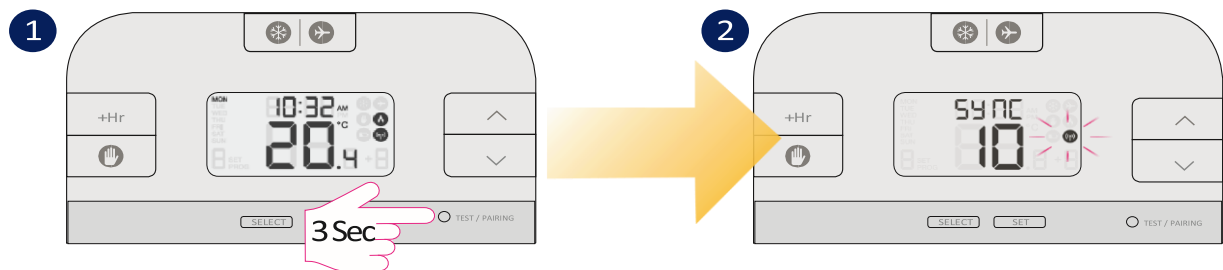
## Pair the RT510RF and RXRT510

Please make sure that the thermostat and the receiver are paired. In order to do this you can use the Pairing or the testing procedure. The Testing procedure will allow you to check if the devices are communicating between them. The Pairing procedure will allow you to set up a communication between them.

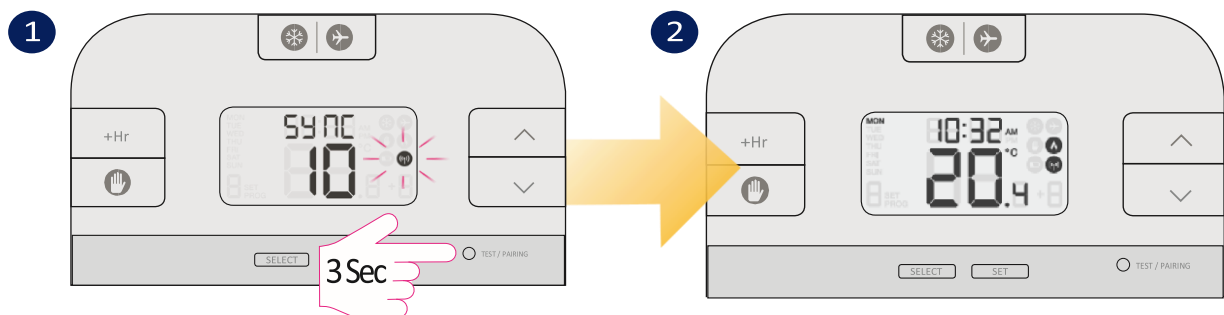
### Pairing procedure

**Note:** Turn the receiver off and on again (ON-OFF-ON). The red LED will start flashing.

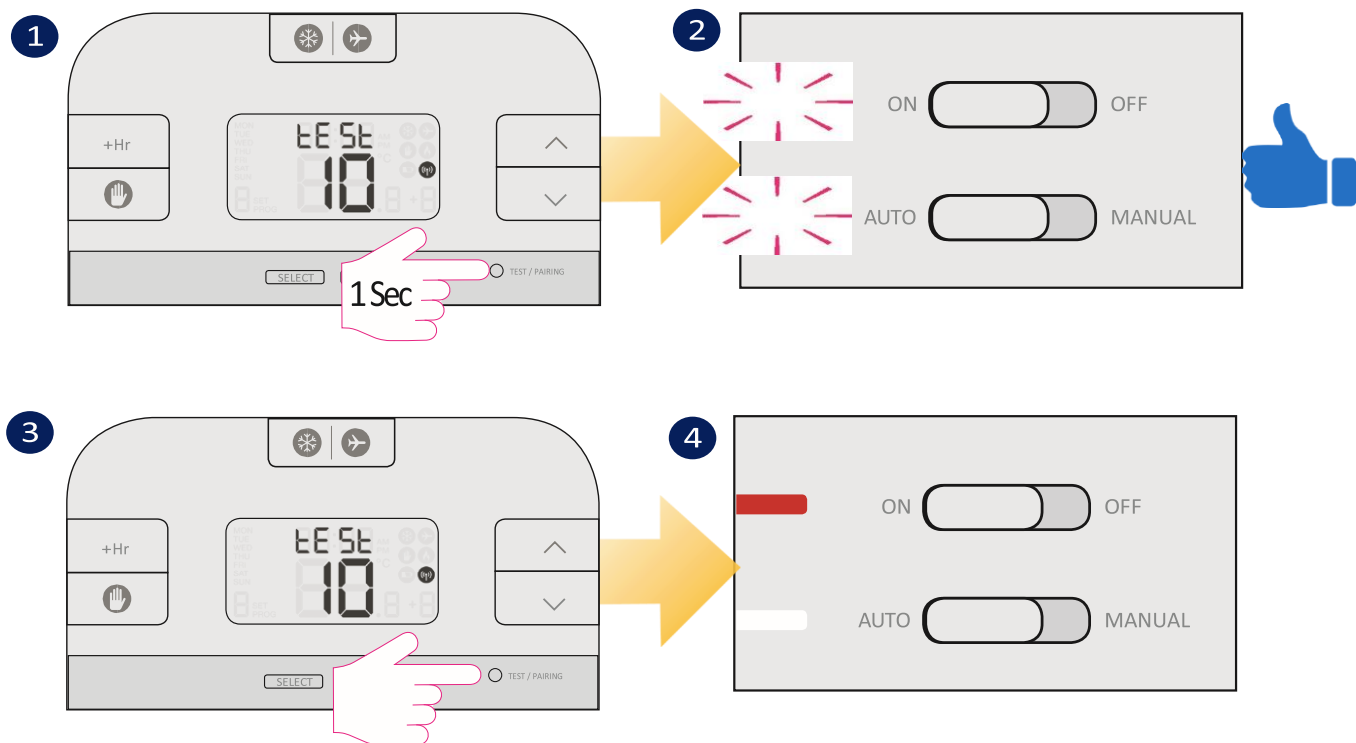


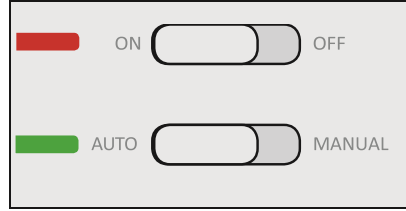
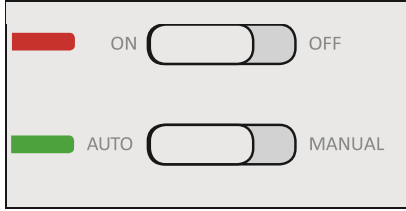


**Note:** For ending the pairing process you have two options. You can either wait for 10 min until the pairing process will automatically end or you can follow the steps below.



## Testing procedure





RT510RF  
Installation Manual

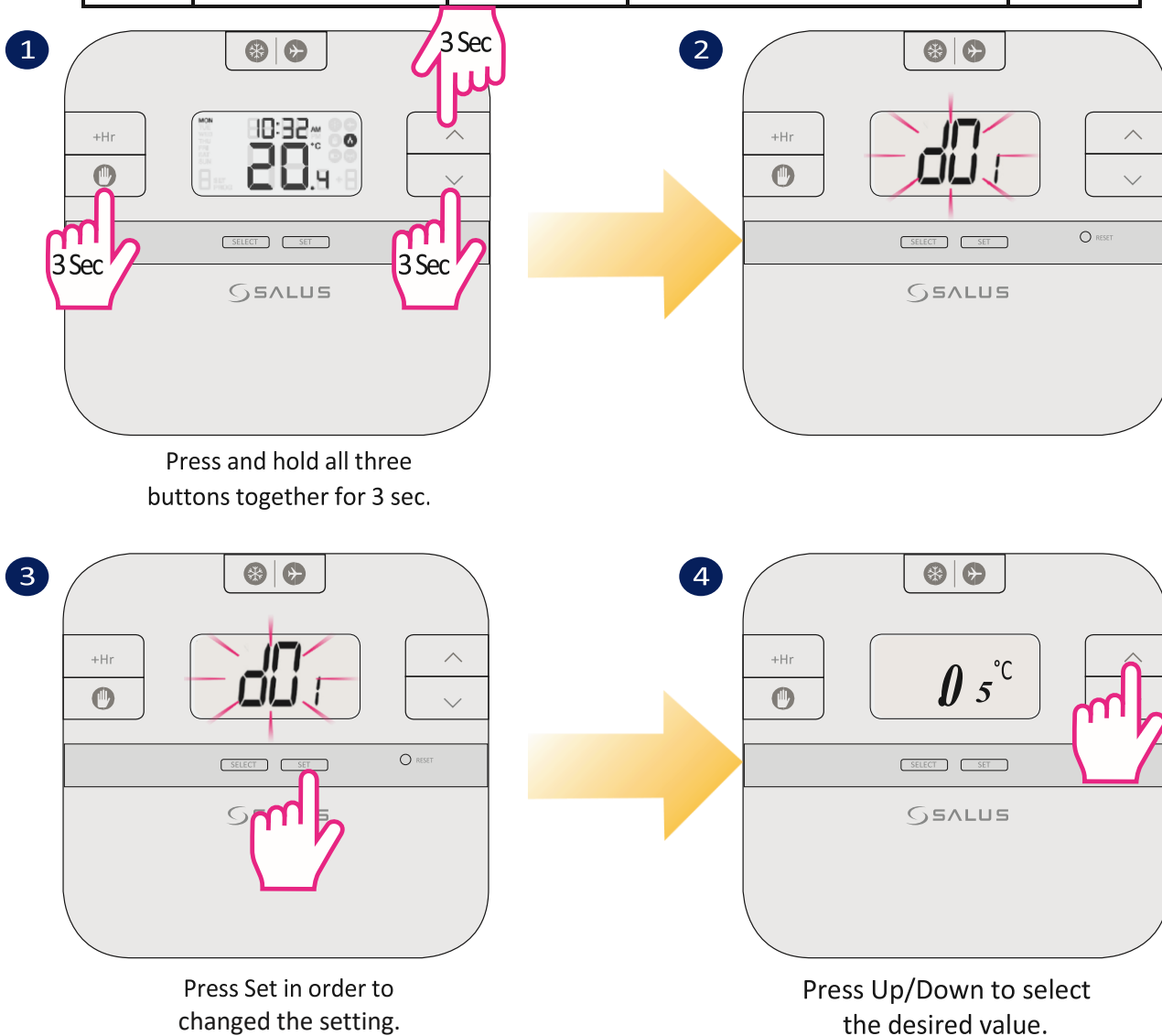
09



## Installer Mode

For any advanced settings please access the Installer Mode. Here you will have the possibility to adjust your frost setpoint, to set the temperature offset and also to choose from two temperature increments. Please follow the steps below in order to modify the installer parameters.

| dxx | Function                       | Parameter    | Description                           | Default value |
|-----|--------------------------------|--------------|---------------------------------------|---------------|
| d01 | Temperature display increments | 0.1 or 0.5°C | Select temperature display increments | 0.5°C         |
| d02 | Temperature offset             | +/-3.0°C     | Calibrate your thermostat temperature | 0.0°C         |
| d03 | Frost setpoint                 | 5.0-17.0°C   | Set the Frost Point temperature       | 5.0°C         |

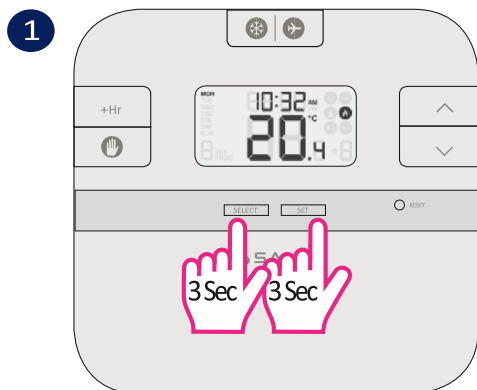




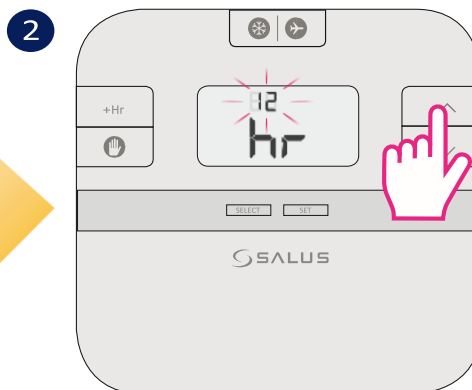
## Operations

The RT510RF is configured and adjusted by the use of a minimal number of user controls, and an intuitive user interface. The Backlight Liquid Crystal Display (LCD) gives a highly visible, easily readable indication of the programmable thermostat status.

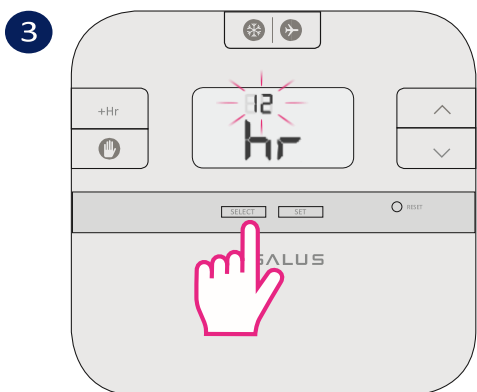
### Setting the time



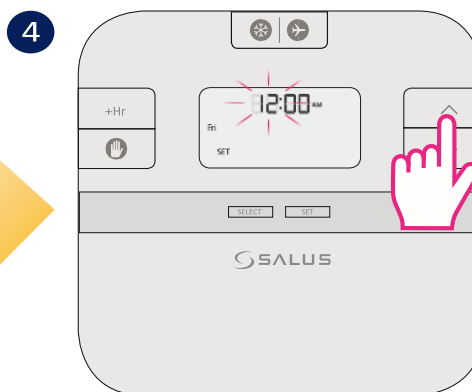
Press the buttons together for 3 sec.



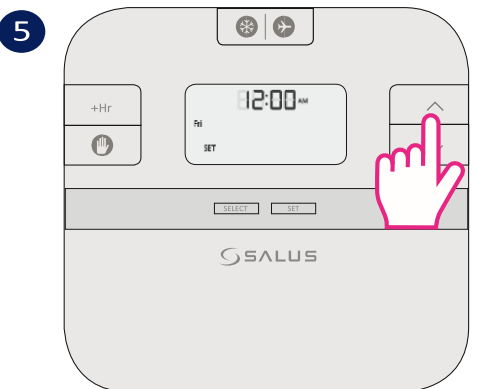
Press Up or Down to select the hour format.



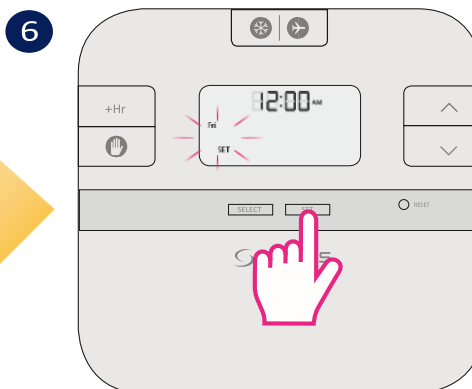
Press Select to confirm.



Press Up or Down to set the hour.



Press Select and after that Up or Down to set the minutes.

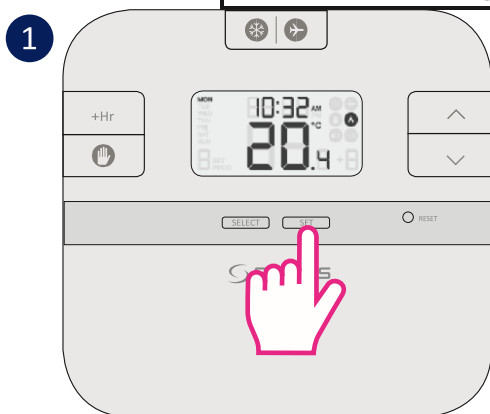


Continue with the same steps for setting the Day. Press Set to save your options and return to the main Screen.

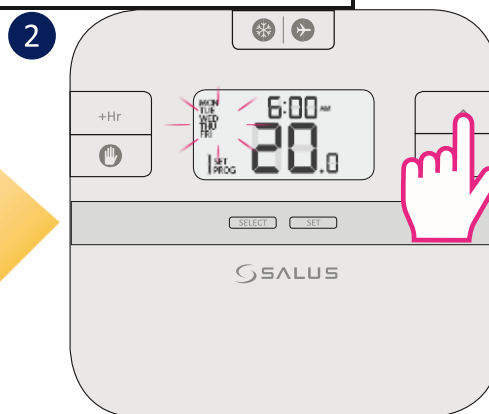
## Programming the RT510RF

You can create personalized programmes for your thermostat. You have the option to choose between a 5-2 days programme or a daily one by using the DIP Switches.

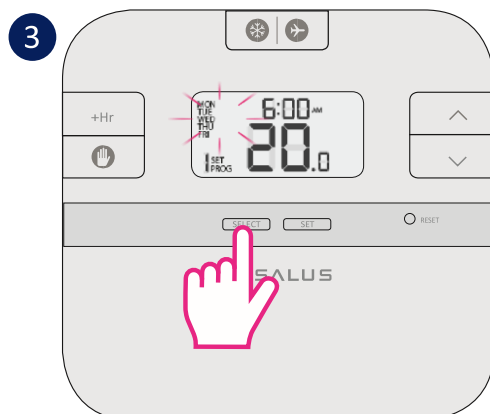
| RT510RF                                                                                             |                                                              |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| 5-2 Days Programme                                                                                  | 24h Programme                                                |
| Weekdays<br>6 sets of time/channel<br>Weekends<br>6 sets of time/channel<br>Total: 12 settings/week | 24h<br>6 sets of time/channel<br><br>Total: 42 settings/week |



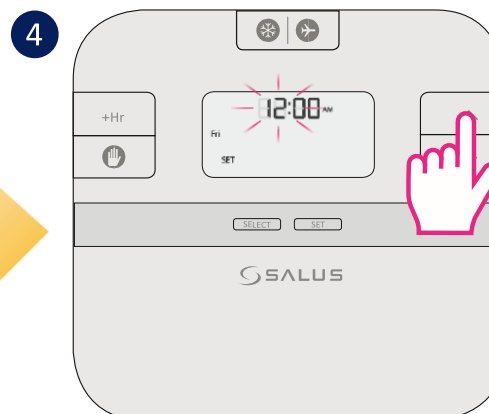
Press Set to change your programmes.



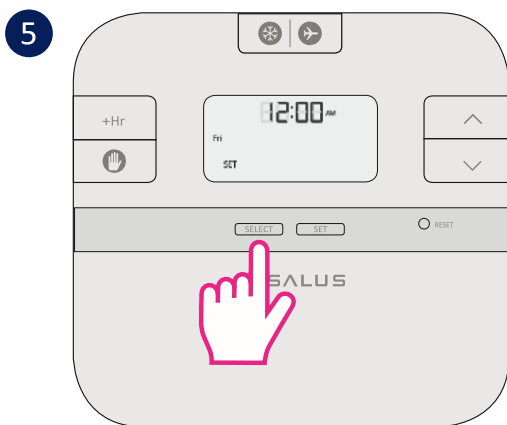
Press Up or Down to select Weekday, Weekend or the Day for which you want to create the program



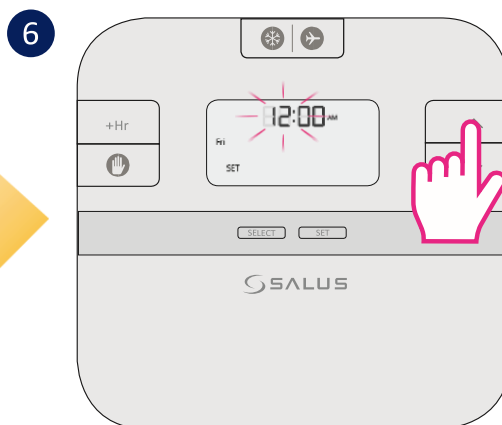
Press Select to confirm your option.



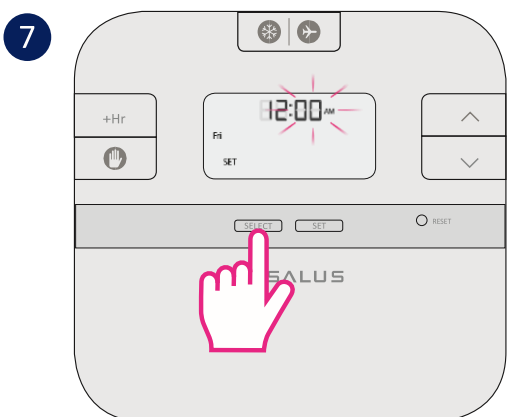
Press Up/Down to set the hour.



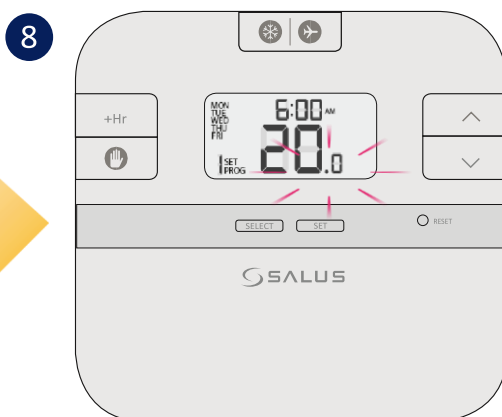
Press Select to confirm your option.



Press Up/Down to set the minutes.



Press Select to confirm your option.



Press Up/Down to set the temperature.

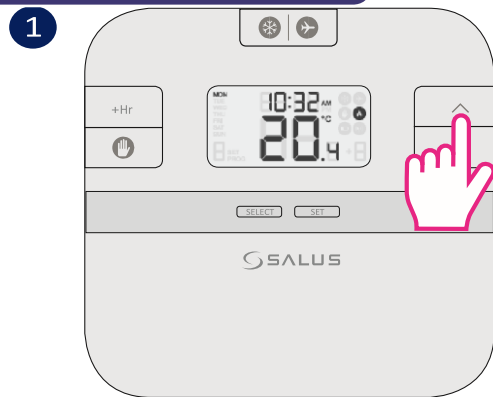
Repeat the steps above for programs 2-6. After you have done all the changes, please press SET to confirm all your choices and to return to the Main Screen.

**Note:** Don't forget to move the DIP Switch to 24h in order to have the individual programme active. After that please follow the same instructions as for the 5-2 days programme.

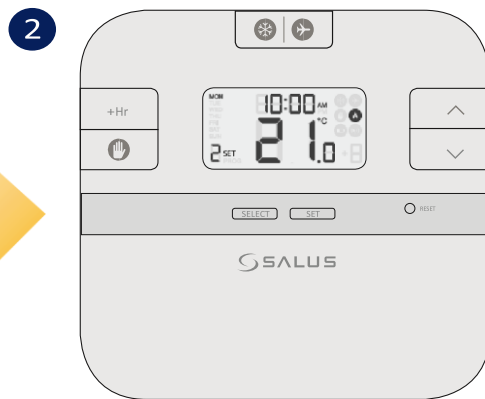
## Review the Setpoint temperature

When no button is pressed, your thermostat is showing the actual temperature of the room. To review the setpoint (desired) temperature follow the steps below:

## Functions



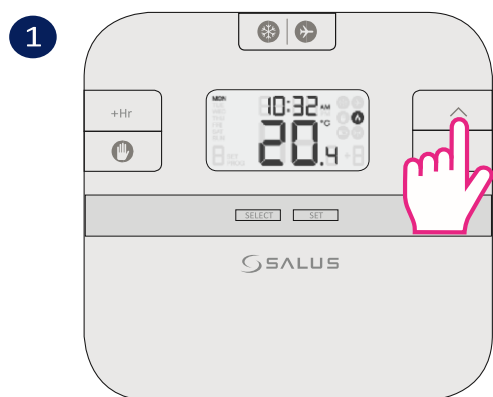
Actual room temperature



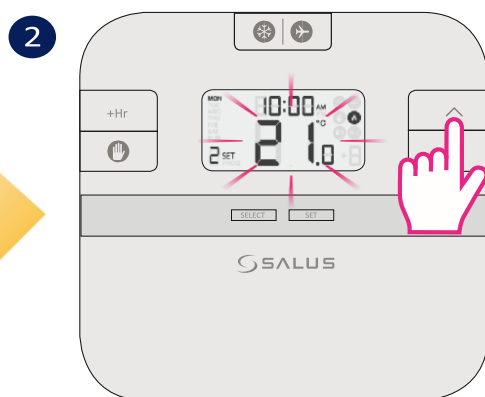
Setpoint (desired) temperature

## Temporary Override

When the temporary override is active, the setpoint temperature will be changed until the next program starts.



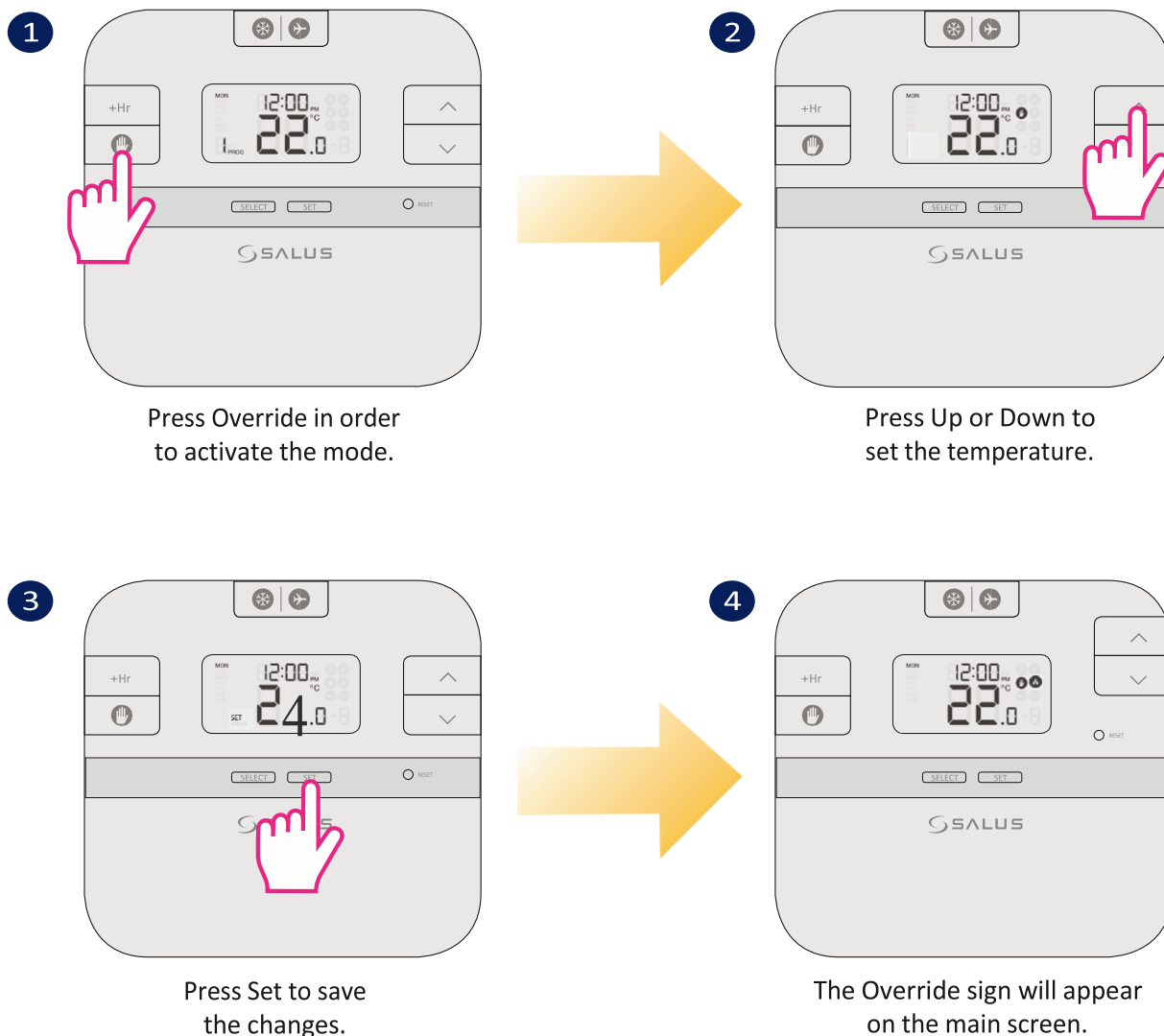
Press Up/Down to review the setpoint temperature.



Press Up/Down to set the temperature.

**Note:** To exit the temporary override procedure, you can wait for 3 seconds until the set temperature stops flashing or you can press on the SET button once.

## Permanent Override



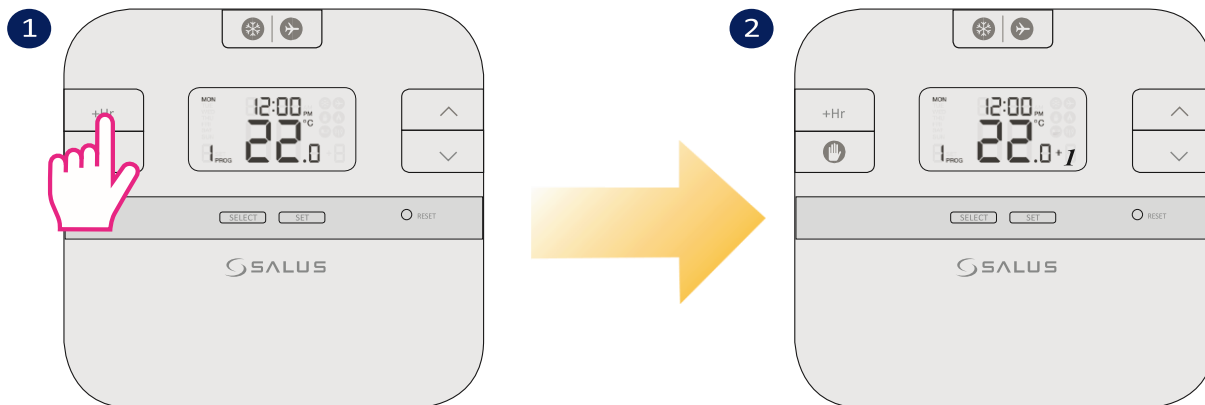
**Note:** To exit the temporary override procedure, you can wait for 3 seconds until the set temperature stops flashing or you can press on the SET button once.

## Boost Function

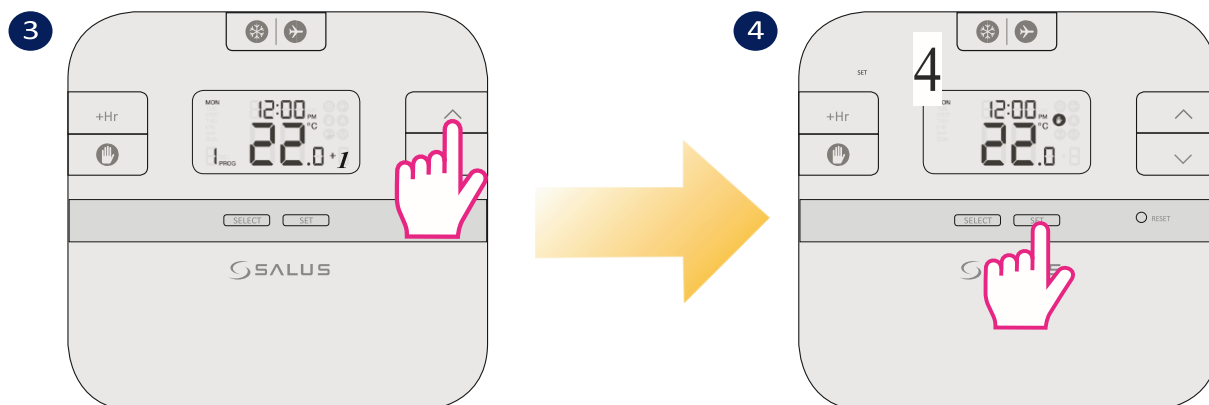
Boost function can be activated when your thermostat is in Normal Mode, in Temporary or Permanent Override. You cannot set the Boost when in Frost or Holiday Mode. With Boost mode activated you can override, temporary override or permanently override the thermostat by setting the period of time and also by changing the Setpoint temperature.

See below the explanations for the Boost Mode settings that are available for each of the modes set on the thermostat. Please follow the one that suits you needs:

### a. Boost Function in Normal Mode



Each press on  means an extra +Hr hour added on the Boost function. The maximum is +9 hours.

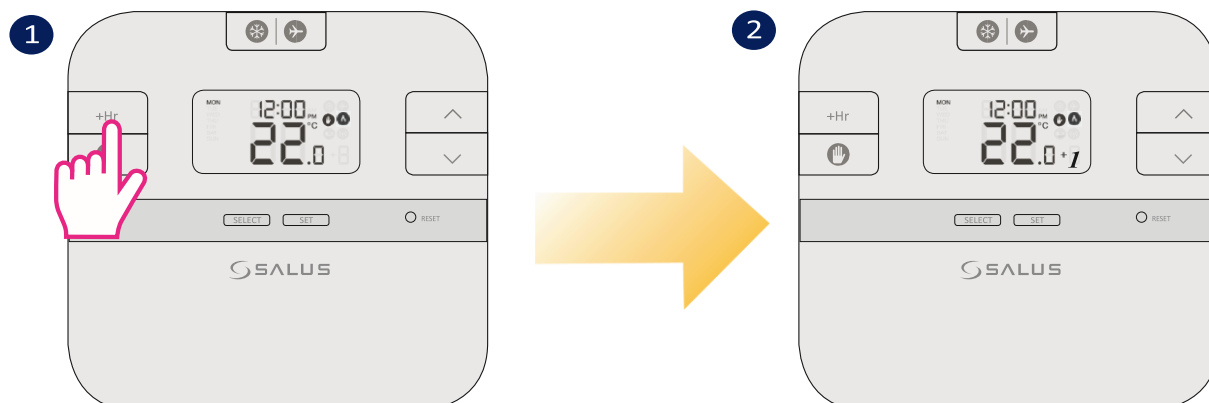


Press Up or Down to set After the temperature is set press Set the temperature. to save your options and to return

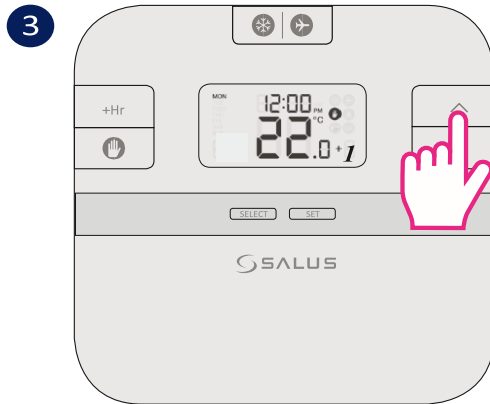
to Main screen.

**Note:** RT510RF will work in Boost Mode for up to 9 hours, set on the desired temperature. After the Boost time is over, the thermostat will return to Normal Mode and will follow the schedule created by

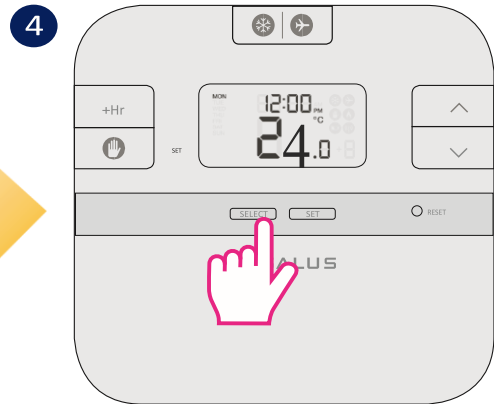
### b. Boost Function in Permanent Override Mode



Each press on  means an extra +Hr hour added on the Boost function. The maximum is +9 hours.



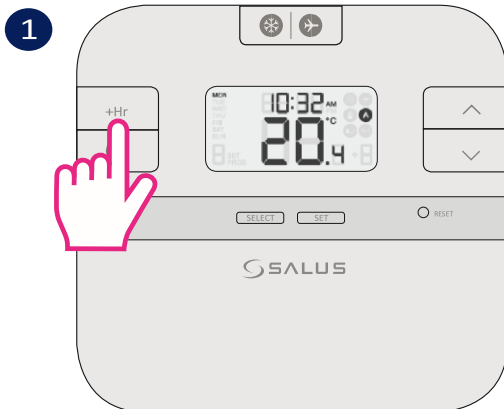
Press Up or Down to set the temperature.



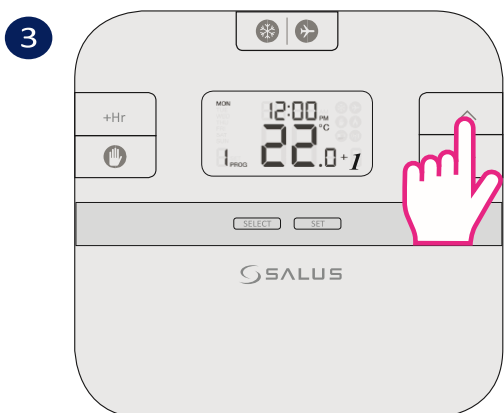
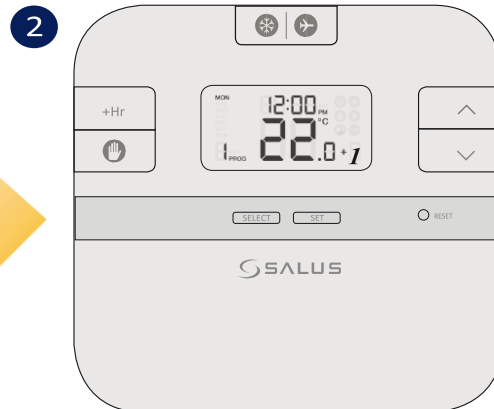
After the temperature is set press Set to save your options and to return to main screen.

**Note:** RT510RF will work in Boost Mode for up to 9 hours, set on the desired temperature. After the Boost time is over, the thermostat will return to the Permanent Override Mode.

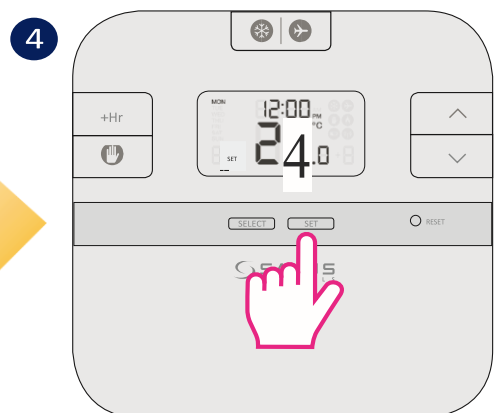
### c. Boost Function in Temporary Override Mode



Each press on +Hr means an extra hour added on the Boost function. The maximum is +9 hours.



Press Up or Down to set the temperature.

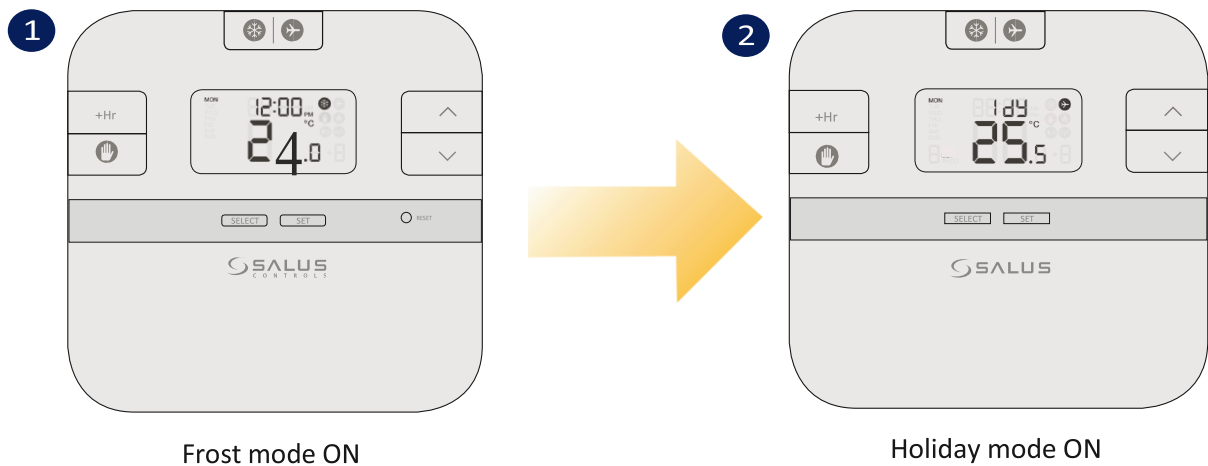


After the temperature is set press Set to save your options and to return to

main screen.

**Note:** RT510RF will work in Boost Mode for up to 9 hours, set on the desired temperature. After the Boost time is over, the thermostat will return to Normal Mode, following the schedule set by you.

#### d. Boost Function in Frost/Holiday Mode



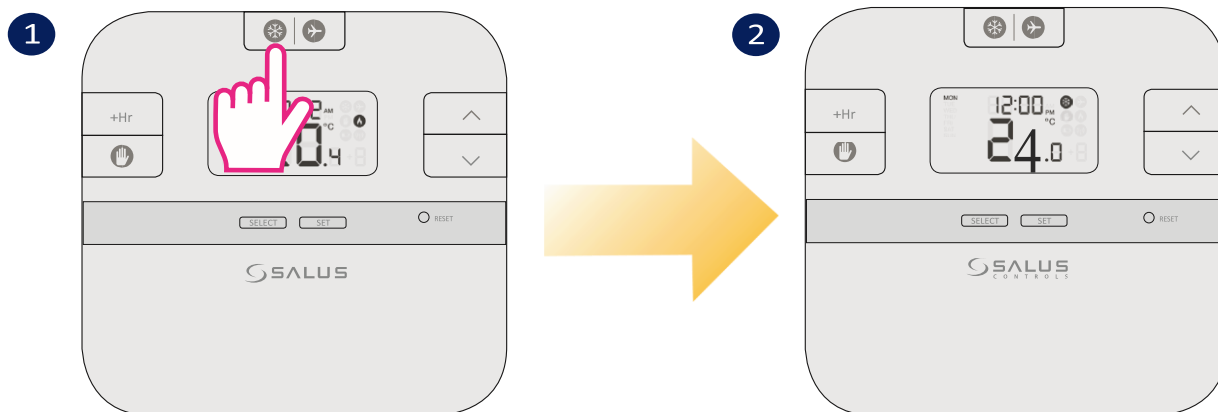
**Note:** When Frost/Holiday Mode are activated, the Boost function will be canceled. Also, you cannot activate the Boost function when the thermostat is set in Frost or Holiday Mode.

### Frost Function

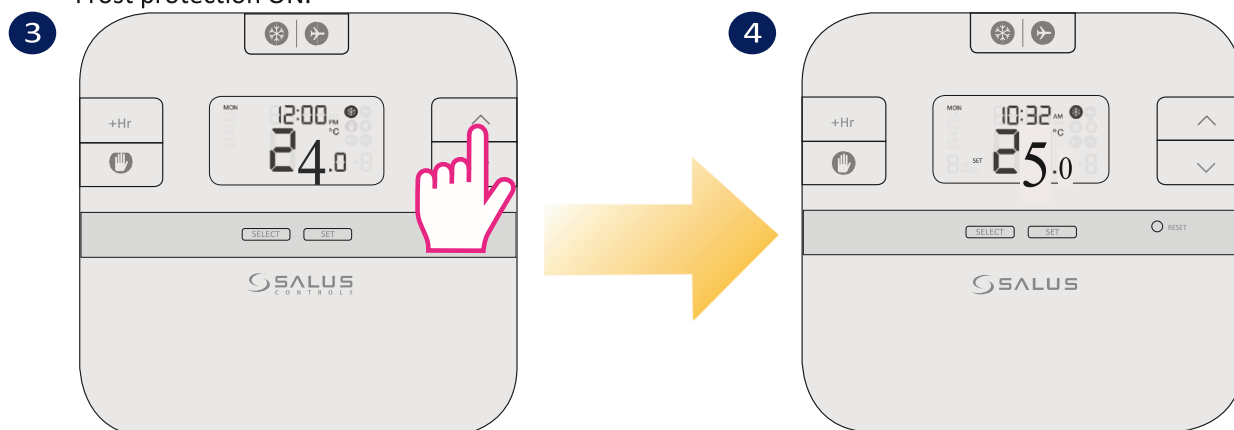
Frost function allows you to turn the Frost protection ON or OFF. The frost setpoint temperature is preset at 5°C. You can change the frost setpoint temperature by modifying the Installer Mode parameters, d03. If the room temperature is lower than the Frost setpoint then the thermostat will automatically change to Frost mode ON.

Follow the steps below for setting up the Frost Mode.

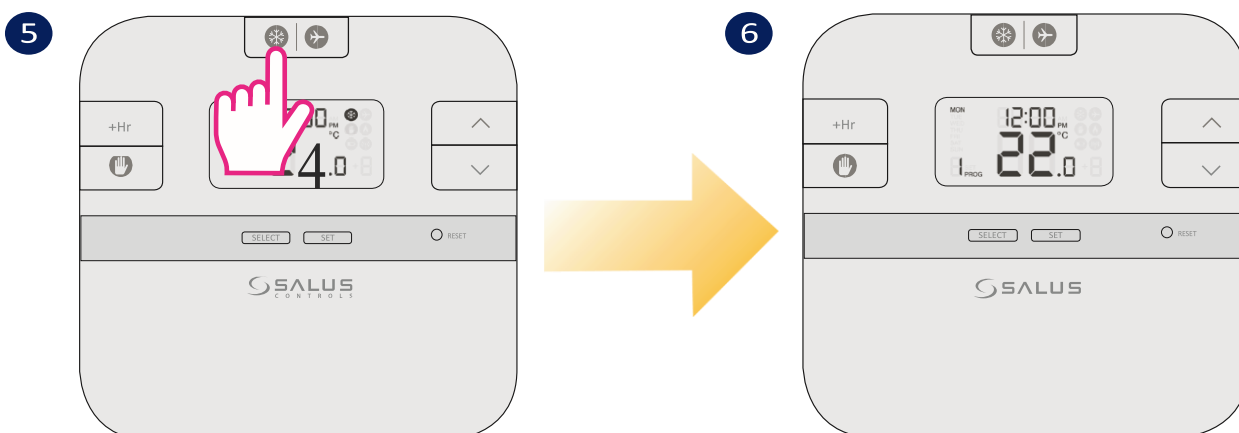




Press the  once for turning the Frost protection ON.



Press Up/Down to review the frost setpoint temperature.

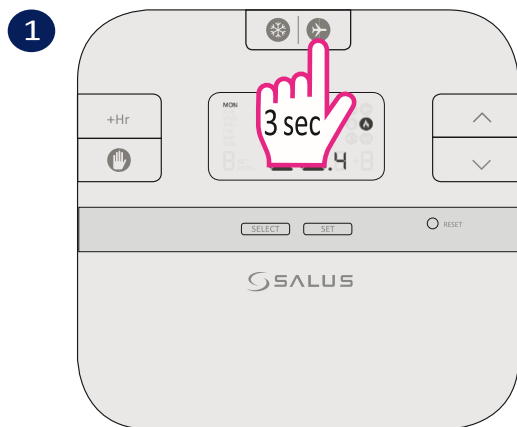


Press the  once for turning the Frost protection OFF.

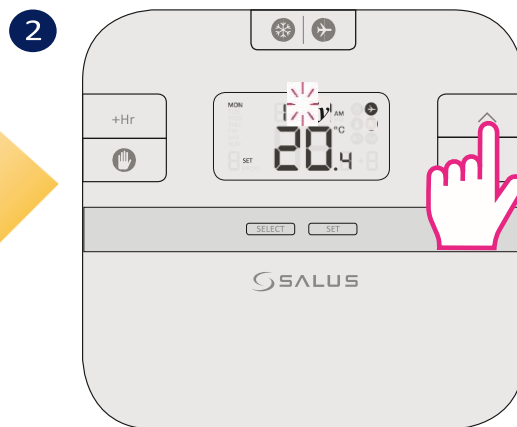
## Holiday Function

Holiday function will turn off the relay, blocking your thermostat from sending any call for heat. If room temperature is lower than the frost setpoint, then Frost Mode will be activated.

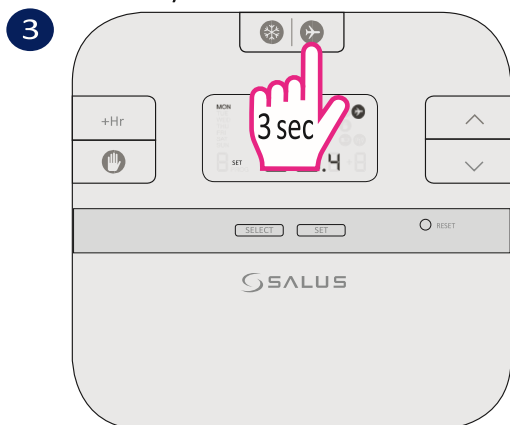
Follow the steps below in order to set the Holiday Mode.



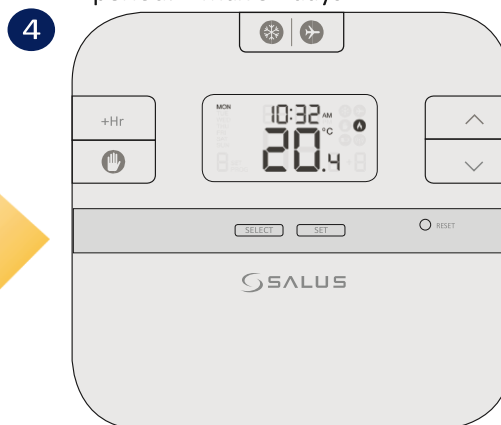
Press the  for 3 sec to turn the Holiday Mode ON.



Press Up/Down to set the Holiday period. \*Max 31 days



Press the  for 3 sec to turn the Holiday Mode OFF.



Note: You can also exit Holiday Mode by setting the day to zero.

## Other Functions

### Backlight

The backlight of the RT510RF is switched on automatically whenever any of the keys are pressed. The backlight will remain illuminated for approximately 5 seconds after the last key press, except if you are changing settings within the Clock, Programme or Temporary Override modes. In this case, the backlight will remain illuminated throughout the setting change process. The backlight will not illuminate if the RT510RF battery is low.

### Battery Status

The RT510RF checks the battery voltage frequently during normal operation. If the battery voltage is sensed as being low (this is normally when the battery voltage falls to a level of around 2.6V), the low battery indicator will be displayed on the screen. You should replace the batteries as soon as possible to prevent any possible operating problems. When you want to change the batteries your device will use the internal memory to backup your settings. You have 30 sec to change the batteries before losing your settings.

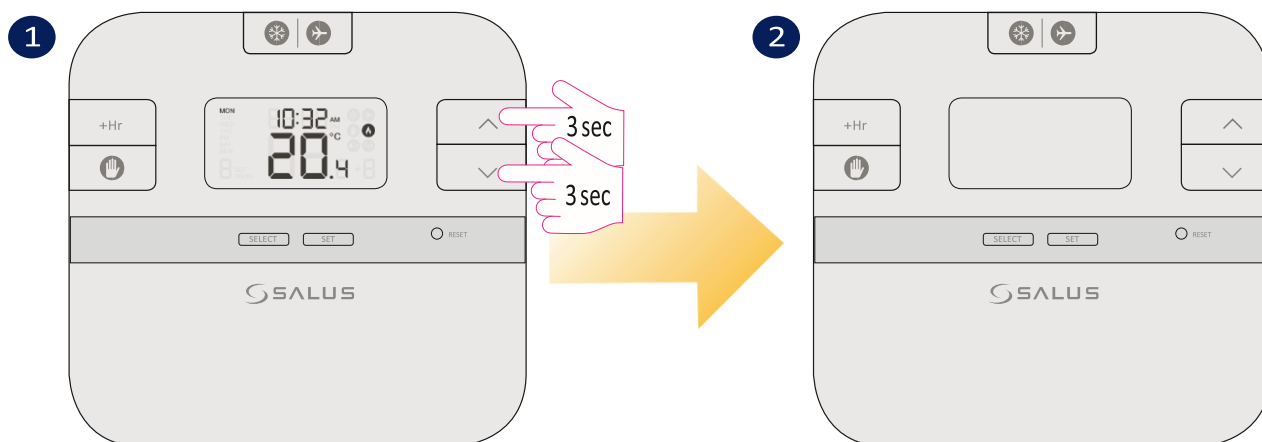
## Reset Function

### Sleep Mode

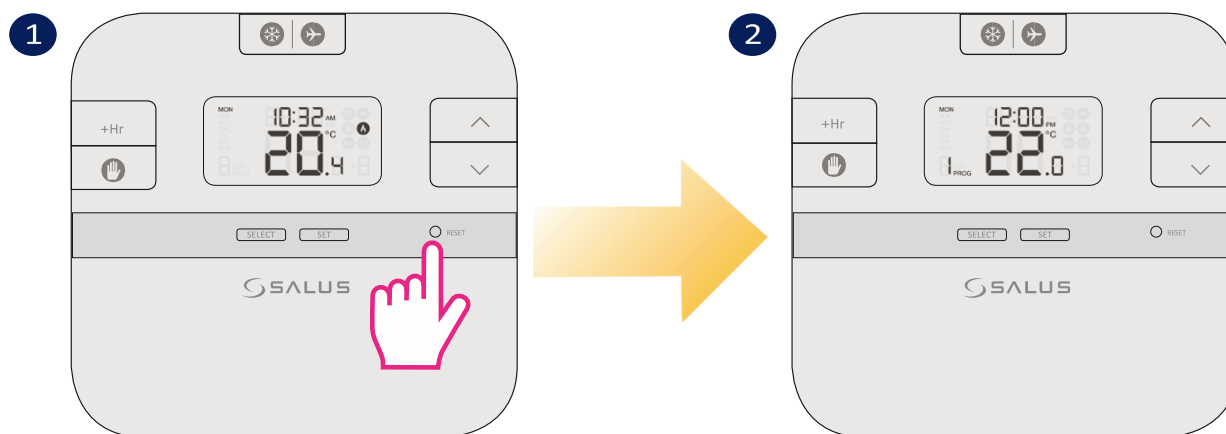
By pressing both the UP and DOWN keys together, the RT510RF will enter SLEEP mode. In this mode, all the RT510RF functions will be paused to save battery power, with the exception of the clock which will continue to run in the background.

While in SLEEP mode:

- The LCD display will be blank.
- All output from the Control Unit will be turned off immediately. Press any key to wake up the RT510RF and cancel SLEEP mode.



The Reset Button is provided as a way to restore the programmable thermostat to its default factory settings. Pressing this button will delete any previously entered settings. This should only be done by your installer.



Press the Reset button once.  
You can use a paper clip.

Your device is now reset  
to factory settings.

