

HOUSEHEAT

An Overview

The main benefit of the HouseHeat system is that the simple wireless radiator controls allow the user to heat rooms to a desired level when they are using the room and programme them so they automatically reduce the temperature in rooms when they are not using the room. The room thermostat can be programmed according to times (of usage of the room) and temperature (to within half a degree).

The system

The radio-controlled radiator thermostat system comprises two components: -

- The heating control (the thermostat)
- The valve operating mechanism

The system is used for temperature control in rooms where the heat from the radiators is controlled by reducing the flow of hot water in the heating system. The thermostatic heating control measures the room temperature by means of an integrated sensor and transmits the corresponding control data to the radiator valve.

Thermostat

Valve (attached to radiator)



Fig 2



Fig 1

Important steps to program the system

1. Set the date and time on room thermostat

- Insert batteries in room thermostat
- Use selection (grey) wheel to change year, press the PROG (Middle) key
- Then use selection wheel to change month, again press the PROG key
- Do the above for date and time
- After setting the minutes, “Sync” and “120” are displayed. The room thermostat now counts down 120 seconds.

2. The Radiator Valve

- Insert batteries into the valve
- You will see “C1” followed by a 2 digit number (this number is unimportant), then “C2” followed by a 2 digit number is displayed (this number is also unimportant), finally an acoustic signal is heard and “A1” is displayed. The valve fully retracts the control pin to facilitate mounting (a noise can be heard as it does this).
- **When “A2” is displayed then screw the valve onto the radiator**



Fig 3

- **Press grey button on the valve and “A3” is displayed**
- The valve will now close which can take a minute or so, you will hear a noise. On the valve display the antenna symbol flashes and “0%” is seen. (0% means that the valve is fully closed. 99% means that it is fully open.)

The valve must now be paired to the thermostat for that room. If it is not paired after a while 30% is seen on the valve display and it will start to beep warning you it needs to be paired to the room thermostat.

3. How to pair the room thermostats to the valves/radiators in that room.

- a. First you need to tell the thermostat how many valves it needs to communicate with. To set the number of valves for each room;
 - First press and hold PROG on room thermostat until “Sond” is displayed. Release the PROG button and you will then see “CALC” on the display
 - Turn selection wheel clockwise on heating control to “An A”, then press PROG and “001” is displayed
 - Use selection wheel to select the number of radiators you wish to control (up to 008)
 - To confirm selection press PROG, Thermostat shows 001, now go to step 2

- b. Now go to valve operating mechanism on the radiator;
 - Press and hold the grey central key, see Fig 3 on the first valve operating mechanism for a couple of seconds. An acoustic signal is heard “3 beeps” and “AC” is displayed on the valve.
 - Press PROG on room thermostat, the room thermostat display will now show 001 if you have entered the fact that you wish to control 2 valves, (or one less than it showed before).
 - Valve operating mechanism makes an acoustic signal and “AC” display changes to “0” on the display.
 - Replace cover on battery compartment
 - Repeat above for second and other valve operating mechanisms

4. Set the room Comfort/warm and cool temperature

- Press and hold the sun and moon button (lowest of the three buttons on the thermostat) on the room thermostat for more than 3 seconds
- The comfort/warm temperature is displayed as well as a ‘sun’ symbol, use selection wheel to set the desired comfort temperature and confirm by briefly pressing the sun/moon button
- The cool temperature is now displayed as well as a ‘moon’ symbol, use selection wheel to set the desired cool temperature and confirm by briefly pressing the sun/moon button
- Next the window sensor is temperature is displayed if you have window sensors follow the above. If not just press sun /moon button again and the room thermostat returns to the normal operating mode

NOTE. You can manually override the temperature at any time by using the selection wheel to alter the desired comfort temperature. It will return to the pre-set mode at the next programmed time (or you can re-set it manually, of course).

5. Set temperatures through the week

- Briefly press PROG key on room thermostat and “Prog” is shown on the display with an arrow pointing to the current day above it, see Note below if you want these settings to apply to all days.
- Press PROG key and a time is displayed with a “sun” picture, use selection wheel to adjust this time for when you want the room temperature to increase (if required) to the first comfort/warm time on the room thermostat.
- Press PROG key; the first low temperature time is displayed by moon symbol, again use the wheel to adjust the time for when you want the room temperature to reduce to the cooler temperature on room thermostat
- Press PROG to adjust for second comfort/warm time on room thermostat, time is displayed with a “sun” picture. Use wheel to adjust for second comfort time on room thermostat
- Press PROG key; the second low temperature time is displayed by moon symbol, again use the wheel to adjust the time for when you want the room temperature to reduce to the cooler temperature on room thermostat
- Press PROG key to set

Note. Do the above process for each day of the week, or alternatively you can select groups of days or select the whole week. To do this press PROG key then spin the wheel clockwise and all days of the week will have an arrow under them. Then follow the above steps.

OPERATING MODES

Press the ‘Function’ key to select either Automatic or manual operation.

Automatic operation

In the ‘Auto’ mode the room temperature is controlled according to the set program for the weekday (advised for Max energy savings).

Note, a temporary temperature change can be set with the selection wheel. The next time a regular temperature change is scheduled the thermostat will automatically return to the time-controlled program

Manual operation

In the ‘Manu’ mode the heating control maintains the set temperature. An automatic time-controlled change will not be performed

Switching between the comfort/warm and low temperatures

- You may change the temperature at any time by using the selection wheel
- You may also switch directly from comfort to low temperature by pressing the sun/moon key

Holiday/party function (Suitcase symbol)

The temperature is kept at a fixed level for a defined period of time. After this the heating control automatically switches to the automatic mode.

- Select the suitcase symbol with the 'Function' key
- Set period of time this function will be active
- After 24 hours the temperature will reduce every day (holiday function)
- Set the day you will return from your holidays.
- On this day at 0.00 hours the heating will be at the normal time program
- Confirm your setting of the desired period by briefly pressing the PROG key
- Use the selection wheel to set the desired temperature

Key lock

To protect the device from unintentional operation (e.g. by children)

- To activate, simultaneously press 'Function' and PROG
- 'LOC' is displayed briefly. All functions are blocked
- To deactivate, simultaneously press 'Function' and PROG until 'LOC' disappears (after about 2 seconds)
- All functions are available again

Set time for decalcification (CALC) cleaning of your radiator TRV pin.

The pre-set time is every Saturday at 1100 hours. To change the day or time;

- Press PROG key until 'Sond' is displayed
- Release PROG key
- Turn selection wheel to 'CALC'
- Briefly press PROG key
- Turn selection wheel to select the weekday
- Briefly press PROG key
- Time when decalcification takes place is displayed
- Turn selection wheel to change time
- Briefly press PROG key
- Control returns to normal mode

Location of room thermostat

Do not mount;

- On badly insulated outer wall
- In direct sunlight
- Near heat sources; e.g. radiators, TVs, lamps, refrigerators etc.
- Next to a window
- Near metal objects

Room Settings

You may find it convenient to decide what temperature you require to be set in each room (section 4) and also when you require these temperature (section 5) and then write these down as below before you start the installation.

Possible Room Settings

Room	Rads	Settings
Sitting room	2	22° at 07.00, 17° at 22.30
Dining room	2	21° at 07.00, 17° at 22.30
Kitchen	2	21° at 07.00, 17° at 22.30
Study	1	21° at 07.30, 17° at 22.00
Bed 1	2	22° at 06.00, 17° at 08.30, 22° at 21.00, 17° at 23.00
Bed 2	1	21° at 06.00, 17° at 08.30, 21° at 21.00, 17° at 23.00
Bed 3	1	21° at 06.00, 17° at 08.30, 21° at 21.00, 17° at 23.00

Problem solving

Battery

The battery lasts for approximately two years in both the thermostat and the valve dependent on usage. If you see a battery symbol on the display of either the thermostat or the valve then it is time to replace the batteries. You will also hear an audible beep 3 times a day. The symbol will appear in the last month/two months of the life of the battery.

Replace valve motor batteries

- Remove batteries and insert 2 new **ones of the same type**. The system does not work with rechargeable batteries. When “A2” is displayed, press the grey button on valve motor once - that’s it! (see section 2)

Replace thermostat batteries

- Take batteries out and insert 2 new ones of the same type. The thermostat does not have to be paired again to the valves, as it will remember this as long as it has not been taken out of the room and away from the valves it was paired to. The only thing you have to do is set the date and time as detailed in section 1. In summary once you have replaced the batteries;
- **Year** appears in display...Spin grey wheel on thermostat to select the correct year, press PROG button
- **Month** appears in display spin grey wheel to select the correct month, press PROG button
- **Date in month** appears in display, again select the correct date and also the **Time**.

Note never take the thermostat out of the room and away from the radiators it has been paired to as this will drain the life of the batteries as it will keep sending out signals to find the radiators it was paired to.

F2 symbol on the valve motor

This means that either the valve motor is pressing on air and not finding the pin on the TRV body. Take out batteries screw down the valve motor tighter on to the radiator TRV body. **Do not over tighten** or you will damage the thread. Insert batteries press the grey button until “0” appears. Turn the thermostat up and down to check it is talking to the valve motors.

No antenna symbol displayed and 30% is showing on the valve motor

There has been a loss of signal due to interference. The thermostat will need to be re-synchronised to the offending valve motors/window sensors. Perhaps mount thermostat in different location._

To resynch the thermostat with the valve;

- Press and hold top 2 buttons (Function and PROG) to unlock thermostat if required.
- Press and hold middle prog button for 5 seconds
- Spin Selection wheel to “An A”
- NOW go to valve, slide down battery cover press and hold grey button until valve beeps and “AC” is displayed
- Go back to thermostat and press prog button a few times quickly a beep will be heard on the radiator valve and after 3 minutes the valve will start to move (it will still say 30 for a short time).

Do this for each valve which is required to be re-synched