

# openTRV

OpenTRV is a device that lets you control the heating individually for each room of your house. It talks wirelessly to a radio controlled radiator valve and signals to another OpenTRV device connected to your boiler to turn it on and off. The controls of OpenTRV are very simple: there are two buttons, one for heating and the second for learning. The target reduction for the heating component of your energy bill is 50%. As OpenTRV only heats rooms when you ask for it or when it has learned to, it uses considerably less energy than a conventional whole house single thermostat.

## DISCLAIMER

OpenTRV is currently in development and you have been supplied with an engineering sample. It is not CE certified and it may still be subject to bugs and hardware problems. For the duration of the trial it will be installed in parallel with your existing thermostat to provide an additional heating control and will be removed after the trial is finished.

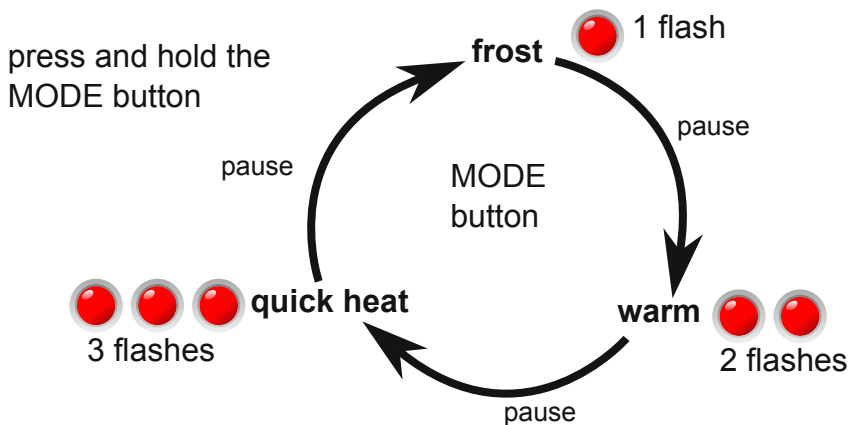
## PHILOSOPHY

What OpenTRV is there to help with:

- designed to get each part of your house warm when you need it
- reduce carbon emissions and save you money
- avoid you getting cold and uncomfortable
- help improve your comfort parsimoniously
- create the bubble of warmth that follows you around
- forget about temperature, it will keep your rooms safe from both frost and cold, and if you ever feel it is not cosy enough, there is a QUICK HEAT feature to give you a warm glow
- if you know there is a certain time every day that you want a room to be warm, it will do that too

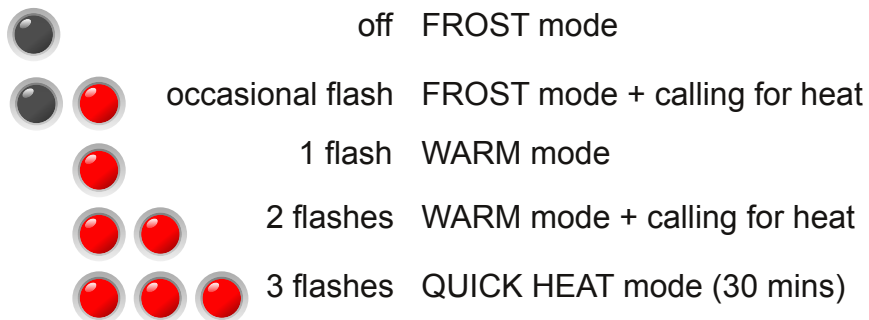
## MODE BUTTON

It is marked M on the OpenTRV controller and coloured black. The OpenTRV mode cycles through three states:



To cycle between the modes, press the black MODE button and hold it down. Within 2 seconds the red LED lamp will flash a number of times to indicate the mode it is in. One flash indicates FROST mode and releasing the button after a single flash sets the controller into FROST mode. Similarly, releasing the button after a double flash sets the controller into WARM (occupied) mode and releasing after a triple flash sets the controller into QUICK HEAT heat mode. QUICK HEAT lasts for 30 minutes.

Once the mode is set, the red LED lamp will flash as follows:



Essentially the more flashes and the more often the flashes, the more the room will be heated.

In a dark room these flashes will not happen.

## LEARN BUTTON

The LEARN button teaches OpenTRV to get the room ready for you in advance.

There are two ways to use the red LEARN button, depending on the current mode. When pressing the LEARN button, press it and hold it in until the LED lights up solid.

- in FROST mode, holding down the LEARN button will clear the schedule
- in WARM or QUICK HEAT mode, holding down the LEARN button will indicate that a few minutes ago is the start of the learned ON period. Every 24 hours from now until you tell it otherwise, OpenTRV will warm up this room for 60 minutes (120 in 'comfort'). There is only ever one ON period set in 24 hours, so this one will take the place of any previously set period.

## OCCUPANCY SENSING

OpenTRV senses the light level in the room and uses that to establish if it is occupied. If it is dark and OpenTRV is in FROST or QUICK HEAT mode, the sensor is ignored and the appropriate action for the mode is taken. If it is dark and the OpenTRV is in WARM mode, the target temperature will be set back a small amount to save money and carbon emissions.

If it is dark the red LED will no longer flash to indicate the mode. There will be a barely noticeable flicker once per minute (indicating a radio communication).

## SETUP, ADJUSTMENTS AND TROUBLESHOOTING

Please refer to the user manual at <http://goo.gl/j1f7nP>

## SITING AND USE

To optimise the OpenTRV system

- Place the OpenTRV controller away from windows, draughts, direct sunlight and sources of heat
- Keep your room doors normally shut

## CONTACT US

The OpenTRV team is always happy to talk. Our email address is [opentrv@opentrv.org.uk](mailto:opentrv@opentrv.org.uk) and we're on twitter [@OpenTRV](https://twitter.com/OpenTRV)

# NOTES