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Central heating controls

Making the most of your heating system

Decent central heating controls will help you heat your home more efficiently and lead to lower energy bills. This page looks at various types of heating control. Your system won't have all of them ...

- Programmers or timers
- Room thermostats
- Hot water cylinder thermostats
- Weather and load compensation
- Thermostatic radiator valves
- Smart heating controls

Programmers or timer

A timer or programmer allows you to control when your heating and hot water comes on and when it goes off.

This means you can programme your central heating to fit around your needs. If you're not at home or you're in bed asleep, then the heating doesn't need to be on.

Most programmers are wireless and digital (they have a little screen). Older systems may have a non-digital timer that works by moving 'tappets' (little plastic things) around a dial.

The trick is to set your heating to come on half an hour before you get home or get up, and set it to switch off half an hour before you no longer need it. This is because an average home takes around 30 minutes to heat up when the heating comes on and 30 minutes to cool down when it goes off.

Here's a film about how to use a digital central heating programmer: **https://youtu.be/VMQJmw0DMpE**

And here is one specifically on the Danfoss central heating programmer. (We made this because the Danfoss is the model that Bristol council has been installing in its own housing stock): **https://youtu.be/nXnm77TyAGM**

And here's a film about using a non-digital programmer: **https://youtu.be/RKVQQxHuEPU**

Make good use of your heating controls and you'll stay warm while spending less

Say you get up at 7.30am, leave for work at 8.30am and get home at 6.00pm. It would make sense to set the heating to turn on at 7:00am and off at 8.00am, and then on again at 5.30pm. In the evenings you should set the heating to turn off half an hour before you go to bed.

Your programmer may also have the option of setting different on/off times at the weekend.

A well-insulated home warms up faster and cools down more slowly - meaning you can set the heating to come on later and turn off sooner, saving energy and money. Play with the timer to see what works best for your home.

Setting the hot water timing depends on the type of boiler you have. A combi boiler only heats up water when you turn on a hot tap, so you don't need to programme it. But if you have a hot water tank, the water in the tank will need to be heated up every now and then during the day.

The number of times the water needs to be heated depends on how big and how well insulated your hot water tank is, and how much water the household uses. Try an hour in the morning and an hour in the evening; if you don't run out of hot water, then that's enough – no need to spend more money than you have to!

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Heating controls jargon-buster ...

What the different settings mean

'Auto' or **'Twice'** means the heating goes on and off during the day at the times it has been programmed to do so.

'24hrs' or **'On'** means the heating stays on all the time.

'Off' means the heating will remain off all the time.

'All day' or **'Once'**, means the heating will switch on at the first 'on' setting you have programmed and then remain on until the last 'off' setting of the day.

'Boost' or **'+1hr'** switches the heating on for a one hour 'boost' of heat.

'Advance' moves the programmer to the next **'on'** or **'off'** setting in the daily cycle.

Room thermostat

Room thermostats are usually found in a hallway or sitting room. Their job is to monitor the temperature in the house and send a signal to the boiler telling it to switch off when the house is warm enough.

Thermostats are normally set between 18 and 21ºC. This is a comfortable temperature for most people. Some people need to keep their home warmer than 21ºC due to their age or health problems.

Some modern heating controls now combine the timer and the thermostat, allowing you to set different temperatures for different times of the day.

Here's our film about setting a programmable room thermostat **https://youtu.be/O3ECpfj-ZWU**

Setting a room thermostat

Hot water cylinder thermostats

Hot water tank/cylinder thermostats regulate the temperature of your domestic hot water by switching off the heat supply from your boiler once the set temperature has been reached. They can save you money and avoid wasting energy by over-heating your water.

If your hot water tank has its own thermostat, set it to 60°C: that's hot enough to kill harmful bacteria like legionella, but not so hot that you're wasting energy. If you find 60°C too hot, mixer taps can help.

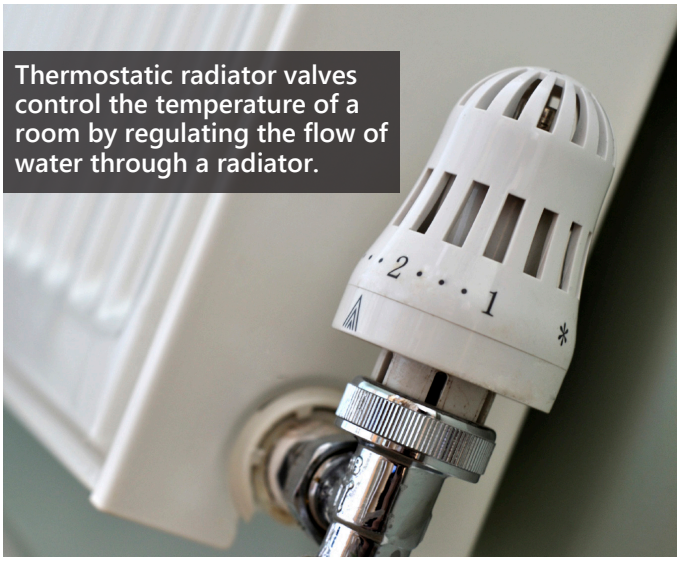
To read more about hot water cylinders (including thermostats and cylinder insulation) go to **www.cse.org.uk/advice-leaflets**

Thermostatic radiator valves

Thermostatic radiator valves (sometimes abbreviated to TRVs) allow you to control the temperature of a room by regulating the flow of water through the radiator.

If, for example, during the day you spend most of the time downstairs, you could set the TRVs on the downstairs radiators to medium or high and leave the upstairs radiators on low.

It's not generally a good idea to turn radiators off completely for weeks or more, because very cold rooms can develop damp and mould. Instead, set the radiators in rooms you're not using to low, and close the doors so that the heat from your warm rooms doesn't travel there.



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Weather and load compensation

Weather and load compensation devices can help reduce the amount of energy used by your boiler by adjusting the boiler thermostat and therefore the flow temperature of the water from your boiler in response to conditions either outside or inside your home.

A weather compensator monitors the temperature outside and will automatically reduce the flow temperature when the weather is mild.

Load compensators adjust the flow temperature in response to changes to the indoor temperature. When the heating first comes on, the flow temperature will be set higher to warm your home more quickly, but when the desired temperature has nearly been reached, the flow temperature will be reduced which will avoid overheating.

These devices work differently to room thermostats or thermostatic radiator valves which only affect whether the boiler is on or off, or water flows to an individual radiator.

The best option for you will depend on your individual needs and system set up, and we recommend you get advice from a heating expert.

Smart Heating Controls

It's possible to control your heating system with an app on your smartphone or tablet. These allow you to turn your heating and hot water on and off or adjust the temperature from wherever you are, as long as you're connected to the internet.

And there are advantages to being able to control your heating while you're out. For example, your heating may be scheduled to come on at 5.30pm. But if you're held up, you can use the phone app to tell the heating to come on later.

On some apps, you have the option of using GPS technology to turn the temperature of the home up or down, depending on whether you - or family or housemates - are in or out or travelling towards the house.

And some will respond to weather forecasts, so if, for example, some warm weather is on the way, the app will reduce the temperature setting of your heating.

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A few ways to cut your electricity and gas use, and save money ...

Give your clothes a day in the sun; and give your tumble drier a break. Clothes dried in the fresh air feel great, and there are drying days in winter, too.

When you're cooking, keep the oven door shut as much as possible; every time you open it, nearly a quarter of the heat escapes.

Food in the oven cooks faster when the air inside flows freely, so don't put foil on the racks.

Don't leave your phone on charge all night. It only needs three hours – and try not to leave the TV and other kit on stand-by.

Catch 'em young. Encourage your children to switch off electric toys and lights that they're not using. They'll soon get the hang of saving energy.

Cup of tea or coffee? Only fill the kettle with as much water as you'll actually use (but make sure you cover the metal element at the base).

Dodge the draught! Fit draught-excluders to your front door, letter box and key hole, and draw your curtains at dusk to keep the heat in.

Buying a new appliance? Check the energy label and buy A-rated goods for the most efficient.

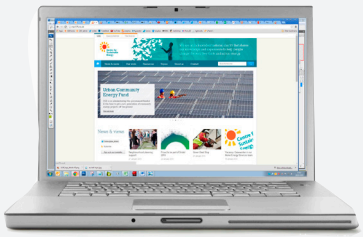
Be a friend to your freezer. Defrost it regularly to help it run more efficiently.

Turn your heating down by just 1 degree. You'll hardly notice the change in temperature, but it'll make a big difference to your heating bill.

Wait until you have a full load before running the dishwasher or washing machine. One full load uses less energy (and water) than two half-loads.

Sleep tight. Make sure all the lights are turned off when you go to bed, or use a low-wattage night light if you do need to leave one on.

New computer? Laptops typically use around 85% less energy than a new desktop PC.



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Charity: 298740
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We're a charity supporting people and organisations across the UK to tackle the climate emergency and end the suffering caused by cold homes.

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