LANDLORD_TENANT 3 18/11/05 12:35 pm Page 1

Heating controls on electric systems

To get the best out of your heating system, you need to use the controls you have in the best possible way. Look out for one or more of these controls on your system and have a go at setting them.

What is a thermostat?

A thermostat adjusts the amount of heating and cooling produced and/or distributed by automatically responding to the temperature surrounding it

Electric Storage Heaters

Storage heaters 'charge up' at night, using electricity supplied at a cheaper night-time rate, and store the heat in special heat-retaining bricks. This heat is then given out slowly during the following day. You can only get cheap night-time electricity if you are on an off-peak tariff such as Economy 7 – if you are unsure, speak to your electricity supplier. Modern storage heaters are slim-line and have a number of controls designed to make sure you are getting the most from your system.

- **manual controls** consist of dials which you can use to set how much heat is stored over night (input control) and then how quickly this is released (boost control). To use most efficiently, the settings need to be judged every evening and morning against the likely temperature that night and the following day. You would also need to think about when you would need this heat and set the controls accordingly. If your system includes a timer and a room thermostat, controlling the heat output will be simpler.
- **automatic charge controls.** More modern systems have these controls and they set the amount of heat stored overnight according to the room temperature at that time. This is a good way of determining how much heat might be required the following day and means less fiddling around for you. Some more sophisticated systems set the amount of heat according to external temperatures or even to a weather forecast signal

Warm air heating

Warm air systems can run on gas, bottled gas (LPG), oil or electricity. Generally, the main heater will be positioned in the centre of the house and heat is distributed through ducts around the property. Some models also provide hot water via a storage tank, or circulate hot water via radiators. A new system will be about 78% efficient, compared to around 95% for a condensing boiler working on a wet central heating system. To make sure you are getting the most from your warm air heating, you should have a programmer and a room thermostat.

Individual room heaters

You may have individual room heaters to add to your central heating on particularly cold nights. Alternatively, it may be that you live in a small flat or house that doesn't need a full central heating system. Room heaters vary in type and can run on gas, bottled gas, electricity, solid fuel or oil. The newer versions are equipped with time and temperature controls, meaning that they work more efficiently, providing the right amount of heat when you need it. A programmer or time clock allows you to programme when you want the heating and hot water to switch on and off. Newer versions allow you to set a different time table for weekdays and weekends, when you may need more heating and hot water.

Warming up and cooling down

When you are setting the programmer, remember to consider how long it will take for your house to heat up. For example, if you think it will take an hour, set the heating to come on one hour before you come home from the office or shops so you are returning to a warm home. Likewise, take into account how long your home will stay hot for once the heating is off. It may be that you can switch the heating off 30 minutes before leaving the house in the morning for example.

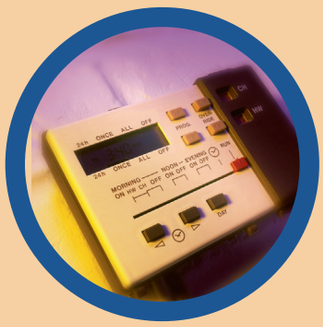
Heating your water

If you have electric heating, chances are that your water is heated in a cylinder that incorporates electric immersion heater elements running on off peak or on peak electricity. You may have instantaneous water heaters which provide water when you need it – these are generally hung on the wall above a bath (electric shower) or a sink (single point wall heater). Whatever your system, there are things you can do to make sure you're getting most for your money.

1 Make sure your hot water tank and pipes are well insulated - insulating them is an easy and cheap way of reducing their heat loss by up to 75%.

2 Make sure you are using the correct controls to determine when the water switches on and off and how hot it gets.

Controls for your hot water system



A **programmer** or **time clock** allows you to programme when you want the hot water to switch on and off. If you have a wet central heating system, this will often be the same programmer as you use to set you heating to come on and off. If you heat your water with an electric immersion, you may have a separate timer. Remember to take into account the amount of time it takes to heat the water and, provided the hot water cylinder is well Insulated, how long it will stay heated for.

A **hot water cylinder thermostat** fits on to the cylinder and switches the water heating off when the set temperature is reached. The recommended temperature to set this at is 60°c - not too hot but hot enough to make sure no bacteria can breed in the cylinder.

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The Kent Energy Centre works in partnership with Kent's 13 local authorities