



Advanced Heating Controls

sensible heat



Our Green Vision

Isn't it sensible to use energy wisely?

Did you know that nearly 50% of the CO2 emissions produced by the UK come from heating (and cooling) in buildings ?

Did you know that 60% of the energy we use in a typical UK home is used for heating, and a further 24% is used for heating hot water?

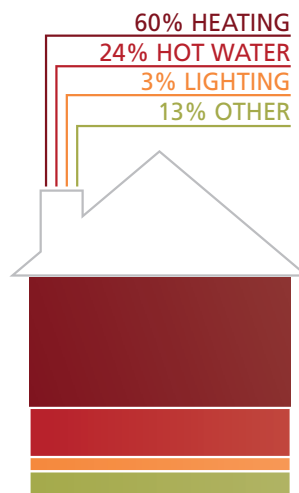
Did you know that by 2020 we will be importing over 90% of our Natural Gas?

Wouldn't it be sensible to tackle some of these issues now?

We think so.

That's why Sensible Heat offers goods and services to address some of these problems. Our mission is to make UK residential buildings greener, but at the same time more comfortable, pleasant places to live, by using modern technology. No need to wear a hair shirt, or extra layers of clothing, in our green vision!

We can design, supply and commission Home Automation systems which can control not only your Heating and Hot Water systems, but also connect to other "smart" systems within your home. These systems will make life easier and more comfortable for you, whilst saving energy and CO2 emissions at the same time. You can even control your home when you are away using the telephone or the internet.



Average domestic energy consumption



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Honeywell Hometronic

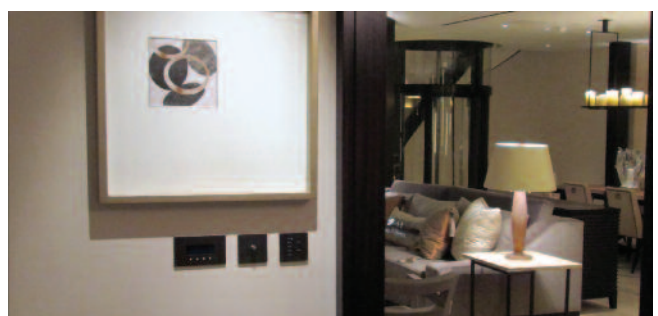
Sensible Heat are the sole UK/Ireland distributors of the Honeywell Hometronic system; we use this unique, wireless system together with our own products, to create complete systems. Because it's wireless, installation is easy and can be done by your own electrician – and of course, it is ideal for retrofitting to an existing house. Wiring is minimal; you only need to wire locally between a Hometronic module and the item being controlled. And yes, it does work! The patented technology has been installed in thousands of homes.

Appropriate Technology

There are many different forms of heating, ventilation and air conditioning (HVAC) controls on the market, ranging from the “traditional” domestic timeclocks and thermostats to complex, commercial-building Building Management Systems (BMS). We believe that timeclocks and stats are too crude, whereas commercial BMS is way too complex for use in the home – what is needed is a mixture of the two; a system which takes the performance benefits from the commercial building systems, but presents an easy-to-use package for the user, and is easy to install and maintain.

We can control the following:

- > radiators, using the unique Hometronic Wireless Radiator Controller – no need for zone valves or additional wiring
- > underfloor heating, from any manufacturer
- > electric heating of any type
- > ventilation systems, including natural/passive
- > comfort cooling systems (underfloor, aircon etc)
- > water and gas leak detection
- > interface to security and lighting systems
- > interface to touchscreen control systems
- > remote control from a pc, iPhone, or conventional phone



About Sensible Heat

Founded in 2004, Sensible Heat was created specifically to supply controls for Heating, Ventilation and Air Conditioning (HVAC) systems in houses.

We recognised that a gap existed between the simplistic, crude timeclocks and thermostats traditionally supplied by heating contractors, and the over-complex, expensive Building Management System (BMS) technology which, although intended for large, managed commercial buildings, was increasingly being fitted into houses.

Designers were faced with a dilemma; the traditional “domestic” timeclocks and thermostats were not up to the job of controlling a modern home in an energy-efficient way, whilst the complex BMS technology introduced a difficult to use, difficult to maintain system.



What was needed was a combination of some features of each approach – the ease of fitting and use of the traditional, simple controls, combined with some of the sophisticated features of the commercial systems, without also inheriting their complexity. We've been supplying systems like these ever since.



Our people

All of our technical staff have a wealth of experience in the building controls industry, without exception they have practical knowledge of large, complex mechanical systems that you'd find in large commercial buildings – far more complex than we encounter in houses. Because we focus almost exclusively on houses, they also understand what is needed from a control system in a house, and crucially how the user will want to interact with it, and how that differs from the way that a commercial building is managed. It is this unique combination of deep technical understanding of building services, and the knowledge of what is the best way to control these services in a domestic setting that sets us apart from others.

How we work

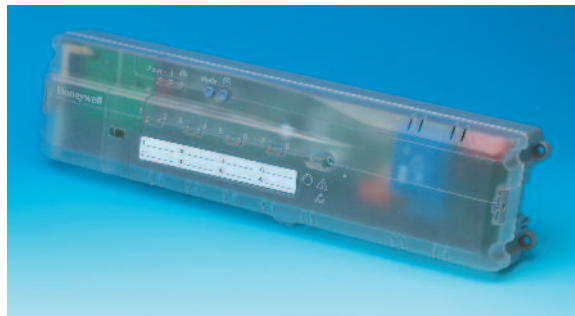
We don't sell component parts for heating controls from our website for “DIY” use, there are plenty of companies who offer this service, if that's what you want. We prefer to apply a more wholistic approach; we want to hear all about your project, maybe review drawings, floorplans etc, possibly even visit site for a survey. Once we've fully understood your property and the HVAC services within it, we'll put together a custom proposal detailing the equipment that you'll need, together with any options. If you decide to go ahead, we will supply the equipment and your own electrician will install it, with any necessary wiring – we'll supply drawings for this, either standard diagrams or bespoke ones for the more complex projects. Once everything is ready, we'll attend site to commission the system and set it up to your requirements.

Our products

As an independent company, we are able to select best-in-class products from the market, and (where they don't already exist) develop our own products. Our mantra in sourcing or developing products is always "add simplicity" – we aim to supply products that are easy to install, easy to use, and easy to maintain, but of course at the same time they need to be capable of the very best levels of control and energy efficiency.

Wherever possible, we like to use products with standard embedded control software – this means that the (sometimes highly complex) control algorithms are built into the products in the factory, just like a television or some other piece of consumer electronics – so they are tried and tested. Most commercial BMS products rely on custom programming by the installer on site, which is expensive and error prone; our approach avoids this pitfall, in fact many of our systems can be completely commissioned and maintained without using a computer at all! For instance, our heating controls contain complicated algorithms called "control loops", which cleverly optimise the amount of heat supplied to a room; they are entirely self-configuring, and they automatically self-tune to the characteristic of each room. This means that the installer can literally "fit and forget", knowing that the factory-tested algorithms will give him the best performance without expecting him to understand how the internal software works.

This standardised approach also extends to integration with other technologies in the house; if we are required to interface with a whole-house touchscreen control system, we'll use one of our standard software "drivers" which we have developed for most popular systems. This allows the audio-visual specialist supplying the touchscreen system to incorporate HVAC control with a minimum of fuss or custom programming, and without becoming an HVAC expert!



Manifold controller with embedded self-tuning algorithms



Evotouch



Sensible Heat WebManager

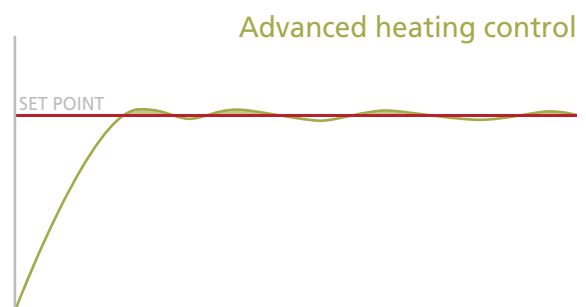
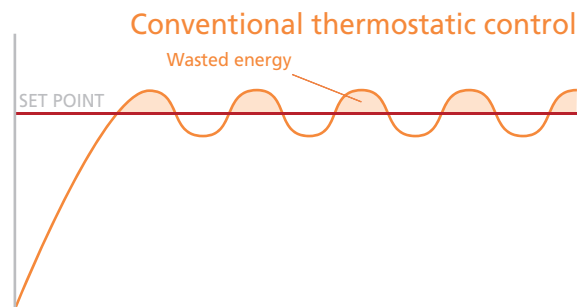
About energy savings

Using advanced heating controls in a house can save perhaps 25% to 30% of the energy used for space heating. This might seem an extravagant claim, how can this possibly be true? As is often the case, the principles are very simple, but the detailed implementation is a little more involved. Basically, we need to ensure that heating systems are only running when they need to be so that we are not heating parts of the house unnecessarily, and that when running, the rooms are heated to the correct temperature - no more, no less.



Temperature control

If we look at temperature control, we see that the typical thermostatic control of most houses allows the temperature to wander up and down by one or two degrees. This is because the thermostat has inherent hysteresis. It only switches the heating off when the temperature has already risen above the desired temperature - far too late! It is reckoned that a one degree decrease in temperature setpoint can save around 10% of the energy costs, so if we can control temperature closely, we can prevent overheating, increase comfort, and use less energy. Our advanced controls can do much better than a thermostat; rather than the discontinuous on/off switching of a thermostat, we use *continuous control*, where the temperature is measured electronically and compared with the desired temperature, and a complex algorithm (often PID, or fuzzy logic) decides how much heat output is required to offset the heat losses. In this way, we can control much more accurately to the desired temperature.



Energy saving advanced control

Zoning

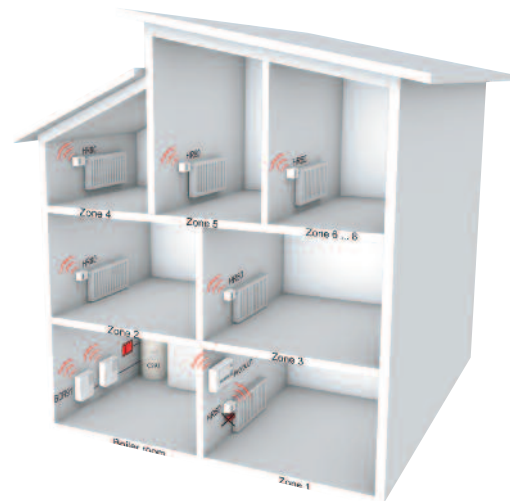
Think about how you use your house; often, parts of the house are only used for parts of the day, or perhaps only on special occasions (when guests are staying, or for parties etc etc).

In order to make sure we only heat the parts of the house which are in use, we must 'zone' the house into multiple zones - ideally a zone per room - allowing each room to be individually controlled.

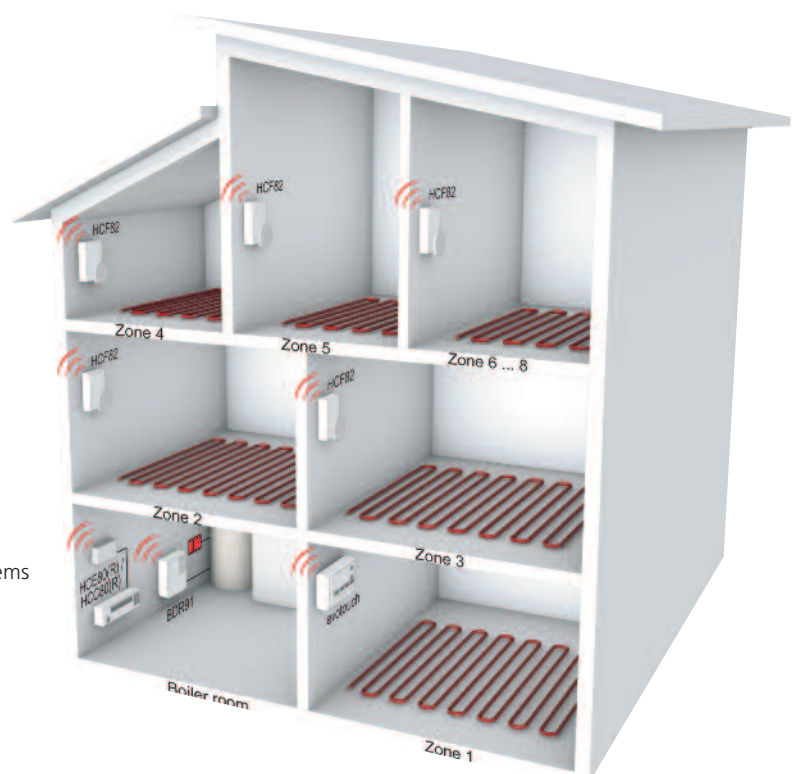
Often, a conventional timeclock will bring on the whole house heating at once, when probably only a handful of rooms are being used at any one time. Also, rooms need to be at different temperatures at different times of the day. Reception rooms should be cool during the daytime, warmer in the evening when you're sitting still, and cold overnight. Such control is not possible using conventional thermostats, so they tend to get set to the highest, 'evening' temperature.

The classic case of the heating being left on during a holiday or even a short absence has got even worse with the rise in popularity of underfloor heating. These systems take so long to heat a cold house that owners are unwilling to wait to be comfortable, so they leave the heating on permanently.

These problems can be solved by proper zoning, and by providing easy-to-use interfaces for the user, so that they can



preset times and temperatures, and also be able to set the 'guest mode' which would liven up the guest rooms for visitors, or the 'vacation mode' for setting holiday dates. Depending on the building and the plant installed, other advanced techniques can sometimes be used. These include 'optimum start' where the heating starts earlier automatically on a cold day, or 'weather compensation' for radiators, where their water supply runs cooler on mild days.



Zoning heating and hot water systems

Controlling Radiators

Radiators are the most common form of heating found in UK homes today, although their popularity in new build properties has been overtaken by underfloor heating.

The Old Way

Many modern installations still rely on Thermostatic Radiator Valves (TRVs) for temperature control. These devices are mounted onto the radiator themselves, and usually have a dial with numbers or symbols for the user to set the temperature. Whilst they are cheap and widely available, they suffer from a number of disadvantages:

- > crude mechanical temperature regulation
- > you have to manually adjust the temperature
- > no timed operation possible; to make a time zone, you have to re-pipe the heating and introduce a zone valve, timeclock, power supply and wiring

The Sensible Way

Using the unique Hometronic Radiator Controller, these problems disappear. Now, for every room in your house, you can choose exactly what temperature you would like in the room, at what time. Every room becomes a time and temperature zone; you can still adjust the temperature locally at the radiator, but normally you won't need to, because it is automatic.

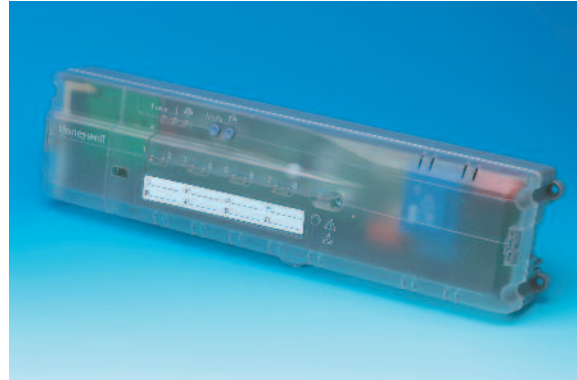
- > Patented wireless technology; no new wiring to install
- > fits onto the valve body of your existing TRV (you unscrew the old head, and discard it – no plumbing changes)
- > excellent electronic temperature control, using fuzzy logic.
- > remote-mounting temperature sensor/adjuster for boxed-in radiators or concealed valves
- > battery powered, min 2 year battery life



Boiler Control Module

Radiator controller





Manifold controller for manifolded radiators

- > local adjustment knob, and LCD display
- > receives signals from the Zoning Manager to tell the radiator what temperature is needed at a particular time and day
- > you can have several temperature setpoints every day (for example, cooler during the day, warmer in the evening for your Lounge)
- > you can shut down rooms to a lower temperature when not in use (e.g. Guest Rooms)
- > the boiler is automatically controlled by the Boiler Control Module; this receives wireless demand signals from the radiators, so the boiler only runs when heat is needed, and you no longer need a "bypass radiator" (with no TRV fitted) to dump excess heat.

Manifolded Radiators

Some new radiator installations are using manifolds: this is where the radiators are plumbed individually back to the central manifold, where all of the control valves are mounted – much like underfloor heating. This has the advantage that the radiators themselves need no valves, useful where the radiators are making an architectural statement, and conventional valves would detract from the effect. In these cases, we utilise our underfloor heating controller and wall mounted sensors (see later for details).

Radiator controller



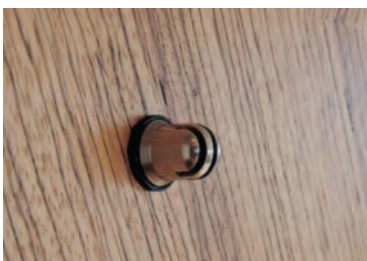
Controlling Underfloor Heating

Underfloor Heating systems are becoming the most popular form of heating for new build houses in the UK. They produce uncluttered, comfortable spaces with fewer draughts, and work well in combination with efficient condensing boilers.

The Old Way

Underfloor systems will produce a “zoned” house by default, because of the way that they are installed, but the benefits of this are rarely exploited by the simple controls that are usually fitted. Each room will have one or more “loops” of heat-emitting pipe buried in the floor, each loop being run in a serpentine pattern so as to cover the entire floor area. The two ends of each loop are connected to a Manifold, which may have an electric control valve (one for each loop) controlling the water flow.

In most systems, the electric control valve is connected to a wall-mounted thermostat, which controls the temperature in the room. Timed operation is usually provided by a timeclock, acting on the whole manifold, or perhaps centrally at the boiler, acting on the whole house. Thus it is not possible to set different rooms to different temperatures at different times of the day, or to put rooms into and out of use, other than by manual adjustment of the thermostat.



Optional 'thimble' sensing elements



Wall mounted wireless sensor



Underfloor Heating Controller

The Sensible Way

By adopting the Hometronic Underfloor Heating Controller, now each room can be individually controlled automatically. Times and temperatures can be set centrally, using the Hometronic Manager, and are sent automatically to the Underfloor Heating Controller (mounted next to the manifold, usually in a cupboard) via radio. Wall-mounting temperature sensors (with adjustment knobs if required) communicate temperature settings for each room without wires.

- > patented wireless technology means less wiring than conventional controls
- > excellent electronic temperature control, using fuzzy logic – much less temperature ‘cycling’ than with conventional thermostats.
- > remote-mounting temperature sensor/adjuster, battery powered, min 2 year battery life
- > discreet ‘thimble’ sensors may be used if desired
- > receives signals from the Hometronic Manager to tell the underfloor controller what temperature is needed at a particular time and day
- > you can have several temperature setpoints every day (e.g. cooler during the day, warmer in the evening for your Lounge)
- > you can shut down rooms to a lower temperature when not in use (e.g. Guest Rooms)
- > shut down the whole house when you leave at the touch of a single button, but have it warm when you arrive home (important with underfloor heating, because it responds very slowly)



Controlling Boilers and Hot Water Systems

Boiler Systems

Most houses have a Boiler to heat the house (space heating) and often the Hot Water for washing, showers etc. Some larger houses have more than one boiler, perhaps one for each end of the house, or maybe they are plumbed in tandem next to each other. There are lots of different types and styles of boiler – but don't worry, we can control just about anything!

Hometronic is designed to control virtually any boiler typically found in UK houses. It works on a demand-driven basis, so that the boiler system only works when the space or the hot water needs heating, rather than on a timeclock.

Some modern boilers come with their own integral controls, providing features such as weather compensation (where the boiler alters its flow temperature according to the outside temperature) – this is usually no problem, let us know the make and model of the boiler you have chosen and we'll check for compatibility

For more complex applications, for instance multiple boilers in larger properties, or alternative heat sources such as Heat Pumps, we may use other complementary product alongside Hometronic to produce a complete solution. If required, we can provide full commercial style control panels for the plant room.



Hot Water zone valve

Hot Water Systems

Hot Water Systems (sometimes called Domestic Hot Water, or DHW systems) are used to provide hot water at the taps for dish washing, showers and baths etc. It can be heated by electricity (usually via an Immersion Heater) or as part of the Gas or Oil fired wet heating system.

Normally, with a Gas/Oil fired system the simple domestic timeclock (or “programmer”) allows selection of space heating only, or hot water only, or both, to operate to a single set of operating times. Some modern timeclocks allow separate times to be set for the hot water system, which is desirable because you may need hot water to be available at different times than the heating.

Using Hometronic, the operation of the Hot water system can be tied into the operation of the whole building, so that when you are away, the hot water is not running needlessly. When you have guests staying, you might need the hot water to run for longer; this is easy to achieve using the Lifestyles feature of Hometronic

Hometronic is easy to integrate with Solar Heating, which is normally supplied with its own integral controls.

Electric Water Heating is also no problem, using a Hometronic Switch Module to switch the heater on and off, with a wireless connection to the Hometronic Manager. Automatic changeover from Gas/Oil fired to Electric heating can also be achieved if required.

Maybe you have a DHW Secondary Circulation Pump? This is a pump which circulates the hot water around the house, providing virtually instantaneous hot water as soon as you turn on the tap (instead of waiting for the cold water to run off first). The downside of using these pumps is that they can waste energy, by circulating hot water through (sometimes poorly insulated) pipes all the time. Using Hometronic, you can time the operation of the pump to suit your usage, ensuring that the pump only runs when it needs to.



Commercial style control panel

Controlling Cooling Systems

These days, more and more people desire cooling in their houses. We have air conditioned offices, shops and cars, why not our house too ?

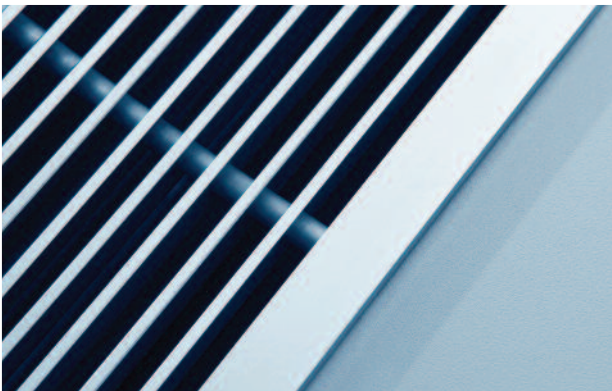
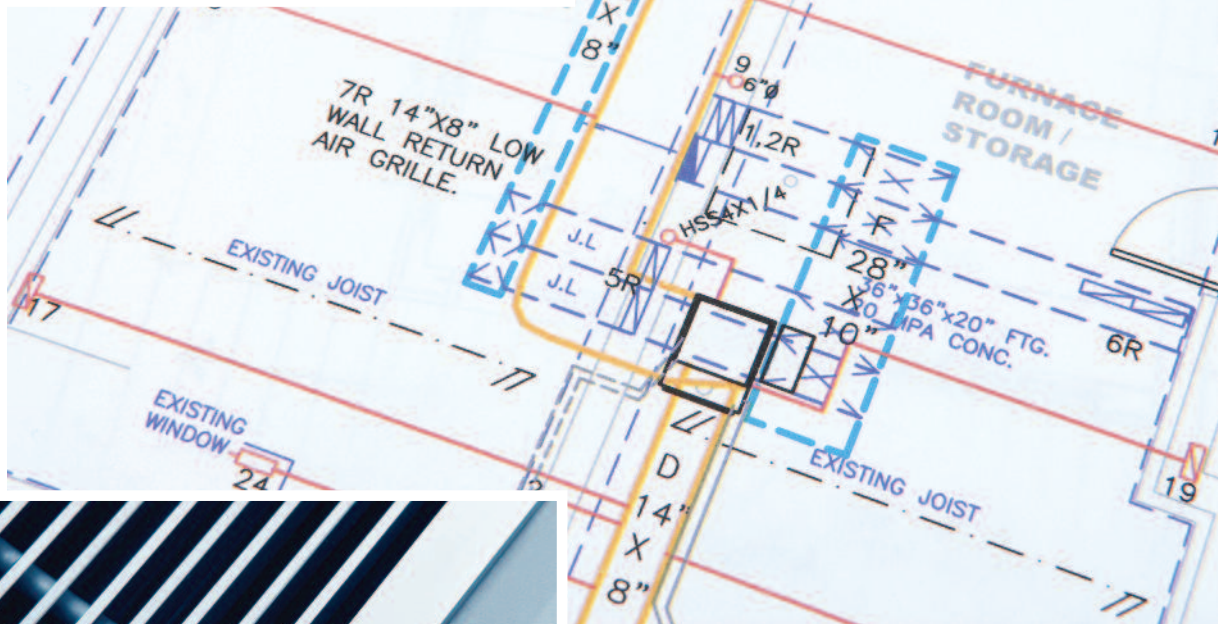
Green Options

Before considering full Air Conditioning, you should spare a thought for the environment, and consider some other options; automation using Hometronic can make these greener options just as effective as aircon under most circumstances, and much cheaper to run.



Air Conditioning / Comfort Cooling

If you have considered all the alternatives, and must have Air Conditioning, then we can ensure two key things; firstly that the heating and cooling systems are not running simultaneously (a very common problem where the control systems for heating and cooling are not interlocked). Secondly, that the cooling is only running when you actually need it, and is not left running accidentally when you leave the house.



We can control most popular air conditioning systems; let us know which system you have in mind, and we can check compatibility.

User Controls

So, we've talked about how we control the various services within the house, heating, hot water, cooling etc- but how do you control the controls? Hometronic allows several different forms of user interface;

Zoning Managers

There are two options:

The Hometronic Manager

Up to 16 heating zones/rooms

This is the user interface for larger houses, and/or houses which need a number of time-switched devices. Using its simple display and buttons, you can control all aspects of your house, setting up operating times and temperatures.



Hometronic Manager

EvoTouch



The EvoTouch Zoning Manager

Up to 8 heating zones/rooms

This is the user interface for smaller homes, or where multiple displays are needed within a property. It uses a touchscreen interface to view and set up times and temperatures.

You can locate the Zoning Manager almost anywhere in your house, because it is a wireless device. You can only have one Zoning Manager per system, but you could have several Hometronic Systems (each with a Manager) in a single building (for instance, a very large house, or multiple-occupancy building may need more than one system). Multiple systems can be brought together using one of our Web Interface options (see later for details).



User Controls



Wall mounted wireless sensor/adjuster

This device is designed for wall-mounting; both adjustable and non-adjustable versions are available. The scale on the adjuster is calibrated plus and minus, as an offset from a "normal" setpoint - this normal setpoint would be set automatically from the Manager, and can change at different times of day – but the offset would always be applied.



Special temperature sensors

For people that do not like the appearance of the standard wall-mounting sensors and adjusters we can offer 'thimble' temperature sensors in a variety of metal finishes. Contact us for further details.



Zip Displays

These discreet, flush-mounting displays use a backlit LCD display and a button-driven menu to view and control the system. The items displayed on the menu can be configured to include a single room, a group of rooms, or the whole property. The front bezel, which is the size of a standard UK 2-gang plate, can be customised to match the rest of your switchplates. Ideal as a partner for our "thimble" sensors, for rooms where subtle wall controls are important.



Telephone Interface*

You can interact with your house using a normal telephone or cellphone; the Telephone Interface works using touch-tones from any phone.



Web and Data Interfaces*

For connection to other intelligent systems in your house, e.g. Touchscreen control system, and for control from a local PC, iPhone, iPad, or via the internet.

* See: [Controlling your house remotely](#)



Controlling your house remotely

What happens if you're away on business, or vacation, and you want to return home early? Maybe you have a second residence that you visit irregularly? Invariably, you'll turn up and the house will be cold, with no hot water available. If you've got underfloor heating, it may take a whole day for the house to warm up; frustrating, if you've just gone for the weekend!

Also, wouldn't you like to know if something serious occurred in your home while you're away? Supposing you were burgled, or the house flooded, or there was a fire?

Sensible Heat can offer two alternatives; a simple **Telephone Interface** (which can be used with Hometronic or "conventional" heating controls, ideal for holiday homes etc) or the **WebManager**, which allows comprehensive monitoring and control of a Hometronic system via a pc or smart phone.



Telephone Interface



Telephone Interface

The Telephone Interface allows remote control of the heating, hot water system and potentially other systems by using a standard voice telephone line. Installation is simple, and can be undertaken by any competent electrician. The Telephone Interface can be used to control a Honeywell Hometronic system, or a simple conventional timeclock-driven system.

Using the Telephone Interface with Hometronic

The Telephone Interface plugs into a standard landline socket. It doesn't need a dedicated line, and it can use a line which also has a broadband connection (you need a filter, just as with a standard telephone handset). The Telephone Interface uses standard DTMF touch-tones, generated by all landline and mobile telephones. You simply dial the number, the Telephone Interface answers the call, and prompts you to enter a PIN code (which you can change to suit yourself). You can then check the on/off status of each of the 4 channels (the Telephone Interface responds with a series of "beeps" to tell you whether the channel is on or off), and you can change the status (i.e. turn a channel "on" or "off").

Can it share a phone line with an answering machine or fax?

Yes, the Telephone Interface has a special mode which means that it will only answer an incoming call under special circumstances, thus leaving the answering machine or fax to pick up the call. If you want the Telephone Interface to answer, you must call the house, allow the phone to ring once, and then hang up. After 10 seconds (and before 30 seconds has elapsed), dial the house again, and this time the Telephone Interface will answer the call.

WebManager

Control from a pc, smart phone

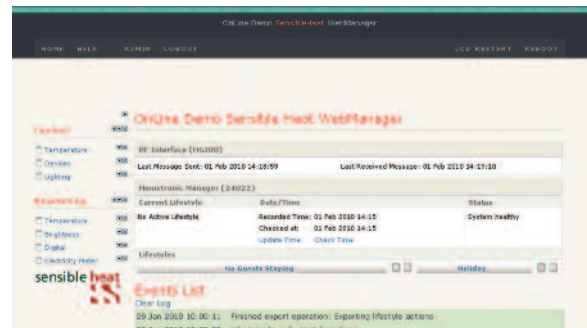
For some users, the ability to view and control a Hometronic system from a computer is an important requirement. Maybe you need to access your property from somewhere else (for instance, a second home where you may wish to turn on the heating remotely before you arrive) or perhaps you just prefer to use a pc to manage the system; either way, the WebManager provides the solution. In addition, the WebManager also provides additional features over a Hometronic system.

Access from any PC – anywhere

The WebManager allows a user to perform all of the normal user functions that are normally performed by the Hometronic Manager; The WebManager does not replace the Hometronic Manager (it is a fundamental part of each Hometronic system) but it does allow a pc to be used as an alternative user interface. In fact, any pc in the house that is connected to the house Local Area Network (LAN) can be used. This means that you don't need to go to the Hometronic Manager to make adjustments, just to the nearest pc, which could be a wireless laptop, or a web tablet. The WebManager can cope with multiple Hometronic Managers, so if you have a large house, all Hometronic functions can be controlled from a single point.

The WebManager acts as a web server; that means it works like a web site, "serving" web pages to any suitable browsing device, like a pc, mac, or web-enabled mobile device. You don't need to add any special software to your pc, it uses your standard web browser (e.g. Internet Explorer, Firefox etc). Also, 3rd party "apps" are available for use with Apple ipad, iPhone etc.

If the house has an appropriate Broadband connection (with a fixed external IP address) then the WebManager can be accessed from anywhere in the world using the internet. Normally we use the Broadband connection to maintain the WebManager as well, so that we are able to offer updates and upgrades.



Using a browser to view web pages from the WebManager



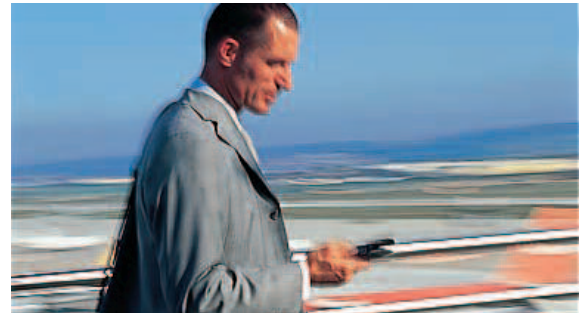
WebManager

How can I use it to control my Hometronic system?

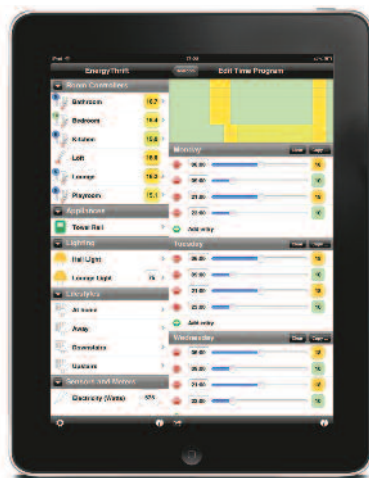
The WebManager allows you to view and adjust all of the normal user functions of the Hometronic system. Using the standard menus, you can view the current room temperature, and you can view and adjust the setpoint (desired temperature). In addition you can view and adjust the underlying Time Programmes for each room, which Hometronic uses to vary the room temperature during the day.

You can also view and adjust the status of On/Off devices, for controlling hot water service, towel rails, lighting etc; and also adjust the underlying Time Programmes for each device, which Hometronic uses to time-control each on/off function.

External sensors and signals; if fitted, you can view signals from outside temperature, light level and wind sensor, and any external signals from intruder alarm, leak detection systems etc.



Lifestyles; these are the “whole house” functions that Hometronic uses for different occupancy patterns e.g. “away” mode, “no guests staying” mode, etc. You can set a Lifestyle to be active for a period (e.g. 1 week) or until a specific date using the calendar.



iPad interface using Energy Thrift app

Controlling your house remotely

Web Interface

Linking with other control systems

An important point when considering technology for your house is to make sure that all of the systems work well together, to make life easier - not more complicated! Sensible Heat regularly work with specialist partner companies from the Custom Installation world; together we can ensure that you have an integrated, easy to live with solution for your house.

You may have already installed, or decided to invest in, a sophisticated Lighting Control system from another manufacturer. There may be an opportunity to integrate the Hometronic system with the Lighting system so that you can, for instance, control your heating from some extra buttons on the lighting keypads. This will depend upon which system you have chosen – speak to us about compatibility.

Maybe you are considering a whole-house touchscreen control system (such as Crestron, AMX, Control4, RTI, Savant or Netstreams Digilink,) to bring together all of the disparate systems in your house? No problem; using the Web or Data Interface developed by Sensible Heat, or simpler volt-free contact interfacing, it is easy for

your supplier to integrate the systems controlled by the Hometronic system with other systems so they can all be viewed and adjusted from the touchscreens.

To make life simple and quick during the installation phase, and also to make ongoing maintenance of the system straightforward, Sensible Heat has produced software “drivers” for many of the popular touchscreen systems. These pre-written drivers mean that the process of commissioning the system is simplified; often data from the heating and cooling systems can be appearing on touchscreens within a couple of hours, even with a large, complex system.

We provide full technical backup to the Custom Installer, there’s no need for them to become HVAC experts!



Savant



Crestron



RTI



Netstreams

How does Hometronic work?

Hometronic works without wires

That's why it can be installed so effortlessly in such a short time, and even taken with you when you move. With Hometronic, you can control everything by -phone or Internet when you're away. And when you're at home, everything works as ordered by remote control, or automatically via Hometronic Manager.

Hometronic works without system cabling (just some local wiring is needed), using new, patented radio technology. It can therefore be installed without special wiring diagrams (just the standard ones which come with each module), and can have any desired application added on later.

Will the radio transmission be reliable?

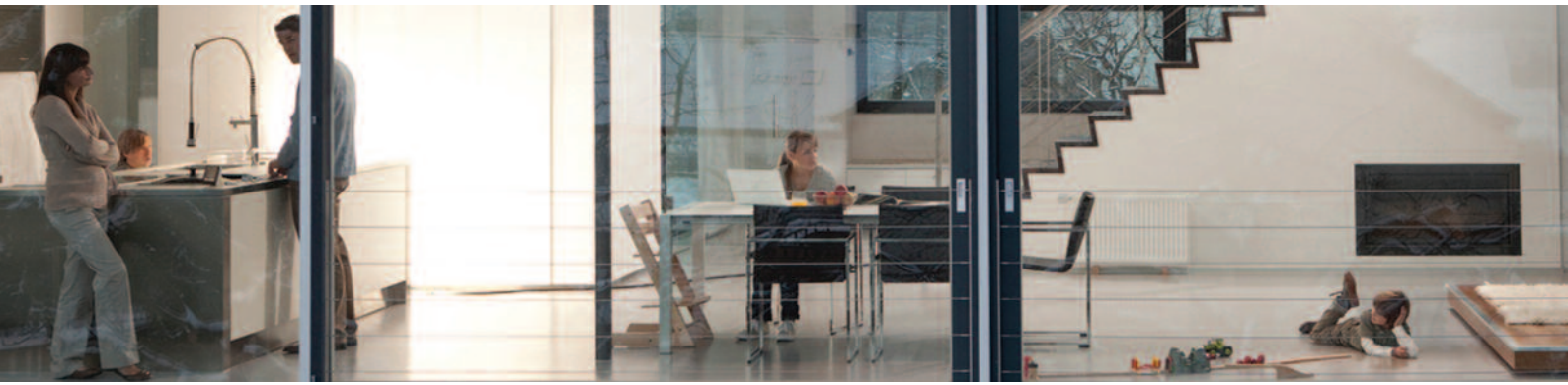
Neither normal partition walls and ceilings, nor other Hometronic systems, can impair your system. Hometronic is absolutely reliable, and has a negligible radiation of less than 1 milliwatt (a cordless telephone transmits at 200 milliwatts, a cellphone at 2000).

Because it works on a much lower frequency, and carries far less information than, say, a typical wireless Ethernet router working on the 802.11 standard, Hometronic modules are able to communicate through most building fabric types. Where you may experience communications difficulties with a wireless router for your computer network, you should find no similar problems with Hometronic. The range of the signal is 100m in free air, and around 25 to 30m through typical building fabric. If you have a particularly demanding application (a below-ground room, or very thick sandstone walls, for example), we're more than happy to come to your site to perform a radio test to put your mind at rest.

What about interference?

Hometronic operates on the unlicensed 433 and 868 MHz bands, which are also used by some other wireless devices (doorbells, wireless mouse, garage door opener etc) – so how do we avoid interference from these devices, or from a neighbour's Hometronic system? Hometronic uses a patented protocol which utilises a unique serial number embedded in every Hometronic device; this number forms part of the wireless message, so ensuring that only legitimate signals are responded to. The possibility of "jamming" by another device transmitting continuously is also catered for; Hometronic uses "frequency hopping" to make sure that the same frequency is not used for every message, thus making jamming almost impossible. Hometronic is a modular system; each module is purpose-designed for its job. You only need to pay for the modules that you need for your specific application. If you want to expand your system later on, this is easy to achieve by simply adding more modules.

Hometronic offers you definite advantages – including the price – compared to traditional systems.



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