[http://www.vesternet.com/resources/scenarios/heating]

Heating

JavaScript seem to be disabled in your browser.

You must have JavaScript enabled in your browser to utilize the functionality of this website.

Vesternet-Home Automation

Worldwide Shipping

Click here for a full list of countries we ship to.

Simply add products to cart to see real time shipping prices within the cart itself.

If your country isn't listed, we likely will still deliver - simply ask for a quote by emailing:

[email&#160;protected]

Europe

USA

Support

About

Contact

Blog

Customers

0845 226 8572

Sales Chat

Search:

Go

Resources

Shop

Z-Wave

Controllers

Sensors

Fibaro

Lighting and Sockets

Door Locks

Thermostats

Windows

Qubino

Zipato

LightwaveRF

Sockets

Switches

Security

Accessories

Bulbs

Plus

WiFi

Mydlink

WeMo

Evohome

Netatmo

Audio

IR Control

Blustream

Batteries

Light Bulbs

Expansion Modules

Books

Power Supplies

Cameras

BlueTooth

Coming Soon

Learn

Overview

How Home Automation Works

Application Notes

Information, Guides & Tutorials

Knowledge Base

Help, Tips & Tricks

Technology Guides

Detailed Technology Information

Compatibility Guides

Tested & Certified Devices

Case Studies

Real Customers&rsquo; Homes

Plan

Design your own custom smart home

Forget pre-packaged kits. Everyone&rsquo;s smart home is different and packages from other shops will never fit your exact needs. Vesternet is the ONLY place you can design your own solution from the ground up...

✓

Fully interactive design tool

Beginner to Advanced levels

Browse lighting, heating, security,

&nbsp;&nbsp;&nbsp;&nbsp; audio & more

Guides to help at every step

Save your progress & retrieve later

Forever FREE...

My Account

Login

My Orders

My Wishlist

Cart

You have no items in your shopping cart.

View Cart & Checkout

&nbsp;

Thousands of Happy Smart Home Customers

But don&rsquo;t just take our word for it...

We offer great products & great knowledge all backed up with great service - and our customers agree!

We&rsquo;re very proud of our independent Excellent Trustpilot rating, backed up by the many repeat customers we&rsquo;ve been supporting for years.

Read More

Help and Advice

Home automation can be confusing, especially if you&rsquo;re new to the technology. Our experts use the products every day and most of them also have them installed in their homes - you can be sure we know what we&rsquo;re talking about.

So whatever question you have, we'd love to hear from you...

- click the orange link in the bottom corner for instant contact with a sales advisor

Email

- we promise a fast response:

Call us

- our number is 0845 226 8572 and we'd love to hear from you

World-Class, Industry-Leading Technical Support - Forever Free

You&rsquo;ll always have FREE access to our technical knowledgebase, application guides, YouTube tutorials & Customer Services, as well as all other online resources, help, white papers and articles.

If none of these answer your query you can also raise a ticket and get direct access to our team of smart home specialists for one to one help.

Access to technical specialists

100&rsquo;s of in-depth help resources

Video guides via YouTube channel

Product compatibility tests & results

The Vesternet Promise

As Founder & CEO of Vesternet, I personally guarantee your 100% satisfaction on any purchase.

I&rsquo;d never want you to be unhappy with something you buy from us, so here&rsquo;s my promise - if you buy anything you&rsquo;re not happy with, our support team will work with you to resolve. And if we still can&rsquo;t get it working for you, then you can return it within a year for replacement or refund. Just send it back in a saleable condition within original packaging.

In addition, here&rsquo;s my personal email should you ever have any problems or feedback:

We&rsquo;re not just a shop, we&rsquo;re with you all the way on building your smart home.

Home Automation control of Heating

What can Home Automation bring to your Heating?

Your heating system is probably already controlled from a timer, so what more can home automation bring? Well in just a few words, more comfort, lots more convenience and reducing your energy bills by intelligent control of your home's heating and temperature. And in a single word -

Intelligence!

Comfort

You decide which areas of your home are heated, when they're heated and to what temperature. For instance you may decide you want the rooms heated to 18&deg;C in the morning, 12&deg;C during the day and 20&deg;C in the evening. The home automation system handles it all for you - no need to worry or think about it.

Convenience

No need to go around your home changing room or radiator temperatures, they can look after themselves based on automatic schedules or when the relatives come to visit. Just as importantly, you can operate them from your smartphone whether you're at home or away. You can change the heating, even if you're stuck in traffic!

Zones

Create zones that can be individually turned On/Off or be set to different temperatures through the day. This really delivers smart home living, allowing you to only heat the parts of your home that you need, helping save money and waste. You can even create zones in systems that would otherwise have needed expensive plumbing and changes.

Saving Energy

You can significantly reduce your energy costs by intelligently controlling your heating - even small changes can have a big impact. It's not just about controlling the time and temperature, it's also about using other components of the home automation system to create intelligent heating. For instance my son's bedroom is the warmest in the house. When it get's too hot, his solution is to open his window, which works quite well in January, but wastes a lot of heat. An intelligent solution is to fit a detector to the window, when the window is opened, the home automation system automatically switches off the room's radiators helping to reduce wasted heat and save costs.

Intelligent Heating - your dream and reality

Adding intelligent wireless control of your heating has real benefits and it's relatively easy to do using home automation systems from Vesternet.

Our Z-Wave and LightwaveRF systems deliver home automation to your home, expanding with you and can control many parts of your home.

Z-Wave is a wireless home automation technology supported by many vendors. It enables you to easily build a system that covers your complete home and it will automatically tell you the status of your heating and the temperature of each zone - you always know what's happening in your home.

LightwaveRF is a relatively new home automation technology that is mainly aimed at lighting and power control. They plan to have a new range of heating products available during Autumn 2014.

Automating your heating system

How you have the home automation system control your heating depends on they type of heating you have and how you wish for it to work. We've divided these into the most common systems, each section includes a separate guide giving your more information on how it will work in reality. As well as the products listed, we have a huge range of installation and configuration guides, all backed by our renowned technical support.

Boiler - Radiator System (Basic Single Thermostat)

This is the traditional heating and hot water system in many homes in the UK and Europe. A central boiler heats water that is circulated through wall mounted radiators around the home. A single thermostat, usually in the hall, regulates the temperature for the whole house and the boiler is controlled by a timer. The boiler also provides hot water.

More Information...

Boiler - Radiator System (Multi-Zone)

Being able to control the temperature of different parts of your home through the day can make using your heating more convenient and will give you significant savings. An example would be to create two zones. During the day only one zone is active and in the evening both become active. This is a great idea if you work from home during the day and only need a small number of rooms heating.

Electric Panel Heaters

This type of heating is often found in rural homes that don't have a gas or oil supply. Each panel heater is wired to the mains, most have an integrated thermostat that controls that particular panel. There is rarely a room or house thermostat to control the system as a whole. The systems are expensive to run, so any intelligent control that you can add will quickly save you money as well as making the system more convenient to use and monitor.

Under-Floor Heating (Water)

These systems use a central boiler to heat the water which is circulated around the system, they often include multiple zones. Home Automation enables you to more easily control the heating together with your home automation appliances in one system. It also allows you to control the system remotely from the office, in the car or anywhere.

Under-Floor Heating (Electric)

Electric underfloor heating (UFH) systems are relatively self contained, but the home automation system will allow you to control it from one integrated system and control it remotely.

Copyright Vesternet 2014

Updated: 2/10/2014

blog

Latest Posts

Belkin Wemo - at Vesternet

Blustream AV Products at Vesternet - Now!

mydlink Home Test & Review

mydlink home at Vesternet

HDMI Distribution - Coming Soon

Copyright 2015 Vesternet Ltd. All Rights Reserved.

Terms of Service

Privacy Policy

Find us on Google+

Products in this Guide

X

Add Selected to Cart

Please wait...

Item(s) Added

Continue shopping

or

View cart & checkout

video title

video content

[http://www.vesternet.com/resources/scenarios/heating/boiler-radiator]

Boiler-Radiator\_Basic

*JavaScript seem to be disabled in your browser.*

*You must have JavaScript enabled in your browser to utilize the functionality of this website.*

*Vesternet-Home Automation*

*Worldwide Shipping*

*Click here for a full list of countries we ship to.*

*Simply add products to cart to see real time shipping prices within the cart itself.*

*If your country isn't listed, we likely will still deliver - simply ask for a quote by emailing:*

*[email&#160;protected]*

*Europe*

*USA*

*Support*

*About*

*Contact*

*Blog*

*Customers*

*0845 226 8572*

*Sales Chat*

*Search:*

*Go*

*Resources*

*Shop*

*Z-Wave*

*Controllers*

*Sensors*

*Fibaro*

*Lighting and Sockets*

*Door Locks*

*Thermostats*

*Windows*

*Qubino*

*Zipato*

*LightwaveRF*

*Sockets*

*Switches*

*Security*

*Accessories*

*Heating*

*Bulbs*

*Plus*

*WiFi*

*Mydlink*

*WeMo*

*Evohome*

*Netatmo*

*Audio*

*IR Control*

*Blustream*

*Batteries*

*Light Bulbs*

*Expansion Modules*

*Books*

*Power Supplies*

*Cameras*

*BlueTooth*

*Coming Soon*

*Learn*

*Overview*

*How Home Automation Works*

*Application Notes*

*Information, Guides & Tutorials*

*Knowledge Base*

*Help, Tips & Tricks*

*Technology Guides*

*Detailed Technology Information*

*Compatibility Guides*

*Tested & Certified Devices*

*Case Studies*

*Real Customers&rsquo; Homes*

*Plan*

*Design your own custom smart home*

*Forget pre-packaged kits. Everyone&rsquo;s smart home is different and packages from other shops will never fit your exact needs. Vesternet is the ONLY place you can design your own solution from the ground up...*

*✓*

*Fully interactive design tool*

*Beginner to Advanced levels*

*Browse lighting, heating, security,*

*&nbsp;&nbsp;&nbsp;&nbsp; audio & more*

*Guides to help at every step*

*Save your progress & retrieve later*

*Forever FREE...*

*My Account*

*Login*

*My Orders*

*My Wishlist*

*Cart*

*You have no items in your shopping cart.*

*View Cart & Checkout*

*&nbsp;*

*Thousands of Happy Smart Home Customers*

*But don&rsquo;t just take our word for it...*

*We offer great products & great knowledge all backed up with great service - and our customers agree!*

*We&rsquo;re very proud of our independent Excellent Trustpilot rating, backed up by the many repeat customers we&rsquo;ve been supporting for years.*

*Read More*

*Help and Advice*

*Home automation can be confusing, especially if you&rsquo;re new to the technology. Our experts use the products every day and most of them also have them installed in their homes - you can be sure we know what we&rsquo;re talking about.*

*So whatever question you have, we'd love to hear from you...*

*- click the orange link in the bottom corner for instant contact with a sales advisor*

*Email*

*- we promise a fast response:*

*Call us*

*- our number is 0845 226 8572 and we'd love to hear from you*

*World-Class, Industry-Leading Technical Support - Forever Free*

*You&rsquo;ll always have FREE access to our technical knowledgebase, application guides, YouTube tutorials & Customer Services, as well as all other online resources, help, white papers and articles.*

*If none of these answer your query you can also raise a ticket and get direct access to our team of smart home specialists for one to one help.*

*Access to technical specialists*

*100&rsquo;s of in-depth help resources*

*Video guides via YouTube channel*

*Product compatibility tests & results*

*The Vesternet Promise*

*As Founder & CEO of Vesternet, I personally guarantee your 100% satisfaction on any purchase.*

*I&rsquo;d never want you to be unhappy with something you buy from us, so here&rsquo;s my promise - if you buy anything you&rsquo;re not happy with, our support team will work with you to resolve. And if we still can&rsquo;t get it working for you, then you can return it within a year for replacement or refund. Just send it back in a saleable condition within original packaging.*

*In addition, here&rsquo;s my personal email should you ever have any problems or feedback:*

*We&rsquo;re not just a shop, we&rsquo;re with you all the way on building your smart home.*

Basic Boiler-Radiator system with Single Thermostat

The traditional Basic Boiler- Radiator system provides hot water and heating in many homes in the UK and Europe.

The system uses a central boiler to heat the water, a pump then circulates this through radiators situated around the house. The overall temperature is regulated by a single wall thermostat that is typically positioned in the coolest part of the house, most often the hall. A timer controls when the boiler and pump are activated, so that you can choose when the heating system is On.

The boiler also produces hot-water to be used for bathing or washing - depending on the type of boiler system you have this can be 'on-demand' or stored in a hot-water cylinder.

This type of Basic system is quite simple, but this simplicity also means that it can be quite inefficient.

Boiler and Heating Types

There are three main types of heating system in common use, it's best to know which one you have before investigating how to control it with home automation:

Combi boiler

This type is becoming increasingly common. It provides heating based on the timer/controller and provides instantaneous hot-water 'on-demand'. The timer is a single channel type as there is no need to control the hot-water.

Y-Plan system

This is probably the most common system in the UK. The boiler provides heating based on the timer, and heats hot-water to be stored in a hot-water cylinder; also controlled by the timer. It includes a single motorised valve that sends heated water to either the hot water tank, the heating or both. The timer is a 2-channel type to allow the heating and hot-water to operate independently.

S-Plan system

This is very similar to the 'Y-plan' system, but uses two motorised valves, one regulating the supply for the hot water and one for the heating.

Add Home Automation to Control Your Heating

Adding home automation to control this type of Basic Boiler-Radiator heating system is quite straightforward. You replicate the basic functionality of the thermostat and boiler control with Z-Wave devices. This enables the system to run in exactly the same way as it always has, but gives you further refinement to save you money. You can have wireless control of the system, so you can easily make adjustments. You can create intelligent 'Scenes' to manage the heating more efficiently, and you can control it whether you are at home or away - so if you're going to be late home, you can delay the heating turning on. These refinements give you a more convenient heating system and will save you money.

How it works

The home automation system replaces the functionality of the current timer and thermostat with Z-Wave devices. The

Thermostat

and

Boiler Receiver

control your heating based on a schedule '

Scene

' running in the Z-Wave Controller which changes the thermostat's set-point temperature at different times of the day. You can also choose a thermostat that has an integrated 7-day timer, so that it runs the heating schedule itself. If you have a Y-plan or S-plan system, the hot-water will be run by a separate schedule 'scene' in the Z-Wave Controller. In this system, the Thermostat and Boiler Receiver are configured to work in Z-Wave Association mode, allowing the thermostat to directly control the receiver without having to communicate via the Z-Wave controller. It also means that the Thermostats's TPI control software is used to efficiently control your heating.

Components - what they do

To add home automation control of your radiator-based heating system, you only need to add three components (less if you already have a Z-Wave system). Below we explain the function of each component and our recommended products.

This is a Z-Wave Switch (Relay) that replaces your existing heating controller/timer. It enables the Z-Wave system to control when the boiler is On or Off. If you have a Combi boiler, you will need a single-channel receiver, if you have a Y-plan or S-plan system you will need a 2-channel receiver or switch as you will also need to control the hot-water system.

Secure Single-Channel Boiler Receiver

Purpose designed Z-Wave Receiver for controlling a Combi boiler. It enables the Z-Wave system to control the boiler and has buttons and LEDs for manual On/Off control.

Secure 2-Channel Boiler Receiver

Purpose designed Z-Wave Receiver for controlling a Y-plan or S-plan boiler. It enables the Z-Wave system to control the boiler and has buttons and LEDs for manual On/Off control of the heating and hot-water.

Fibaro 2x1.5Kw Relay

Dual relay that can control the boiler's heating and hot-water channels.

Wall Thermostat

Communicates directly with the Boiler Receiver or Relay to control the boiler (heating) depending on the room's ambient temperature and the 'set-point' temperature you've selected. This allows the system to run the heating system with the optimum efficiency as the thermostat has in-built heating algorithms (TPI) that optimise the boiler On/Off periods. You can change the thermostat's set-point temperature wirelessly, giving you complete control over your heating system.

Secure Wall Thermostat (SRT321)

Wall mounted thermostat controls the boiler (via the receiver) and can have it's set-point changed by the Z-Wave controller. All heating schedules will be run in the Z-Wave controller and the heating's On/Off periods controlled by changing the wall thermostat's set-point.

Secure Programmable 7-day Thermostat (SCS317)

Very similar to the Secure Wall Thermostat, except it has an integrated 7-day timer that enables it to run the heating based on schedules you program into the thermostat - it can have up to 6 temperature periods per day.

Z-Wave Controller

The controller enables you to add and configure devices to your Z-Wave system and run 'schedule scenes'. It also acts as a gateway allowing you to control the system from a smartphone even when you are away from home. In the case of heating, the controller will run the schedules to control when the heating is On/Off and at what temperature, it will also run the hot-water times.

Fibaro Home Center Lite

Flexible Z-Wave controller with an intuitive User Interface (UI) and includes dedicated Heating 'panels' for easier schedule and control of your heating system.

VERA Edge

Low cost, very capable Z-Wave controller for heating and complete home automation.

Technical Guides

These guides and videos show how these various systems can be integrated with Vesternet's home automation products.

Installing Secure Thermostats

Configuring Secure Thermostats

Controlling a heating System with VERA

Using Fibaro Home Center as a Heating Controller

Multi-Zone Boiler-Radiator Heating

*Copyright Vesternet 2014*

Updated: 03/01/2015

*blog*

*Latest Posts*

*Belkin Wemo - at Vesternet*

*Blustream AV Products at Vesternet - Now!*

*mydlink Home Test & Review*

*mydlink home at Vesternet*

*HDMI Distribution - Coming Soon*

*Copyright 2015 Vesternet Ltd. All Rights Reserved.*

*Terms of Service*

*Privacy Policy*

*Find us on Google+*

*Products in this Guide*

*X*

*Add Selected to Cart*

*Please wait...*

*Item(s) Added*

*Continue shopping*

*or*

*View cart & checkout*

*video title*

*video content*

[http://www.vesternet.com/resources/scenarios/heating/boiler-radiator-multizone]

Boiler-Radiator\_Multizone

*JavaScript seem to be disabled in your browser.*

*You must have JavaScript enabled in your browser to utilize the functionality of this website.*

*Vesternet-Home Automation*

*Worldwide Shipping*

*Click here for a full list of countries we ship to.*

*Simply add products to cart to see real time shipping prices within the cart itself.*

*If your country isn't listed, we likely will still deliver - simply ask for a quote by emailing:*

*[email&#160;protected]*

*Europe*

*USA*

*Support*

*About*

*Contact*

*Blog*

*Customers*

*0845 226 8572*

*Sales Chat*

*Search:*

*Go*

*Resources*

*Shop*

*Z-Wave*

*Controllers*

*Sensors*

*Fibaro*

*Lighting and Sockets*

*Door Locks*

*Thermostats*

*Windows*

*Qubino*

*Zipato*

*LightwaveRF*

*Sockets*

*Switches*

*Security*

*Accessories*

*Heating*

*Bulbs*

*Plus*

*WiFi*

*Mydlink*

*WeMo*

*Evohome*

*Netatmo*

*Audio*

*IR Control*

*Blustream*

*Batteries*

*Light Bulbs*

*Expansion Modules*

*Books*

*Power Supplies*

*Cameras*

*BlueTooth*

*Coming Soon*

*Learn*

*Overview*

*How Home Automation Works*

*Application Notes*

*Information, Guides & Tutorials*

*Knowledge Base*

*Help, Tips & Tricks*

*Technology Guides*

*Detailed Technology Information*

*Compatibility Guides*

*Tested & Certified Devices*

*Case Studies*

*Real Customers&rsquo; Homes*

*Plan*

*Design your own custom smart home*

*Forget pre-packaged kits. Everyone&rsquo;s smart home is different and packages from other shops will never fit your exact needs. Vesternet is the ONLY place you can design your own solution from the ground up...*

*✓*

*Fully interactive design tool*

*Beginner to Advanced levels*

*Browse lighting, heating, security,*

*&nbsp;&nbsp;&nbsp;&nbsp; audio & more*

*Guides to help at every step*

*Save your progress & retrieve later*

*Forever FREE...*

*My Account*

*Login*

*My Orders*

*My Wishlist*

*Cart*

*You have no items in your shopping cart.*

*View Cart & Checkout*

*&nbsp;*

*Thousands of Happy Smart Home Customers*

*But don&rsquo;t just take our word for it...*

*We offer great products & great knowledge all backed up with great service - and our customers agree!*

*We&rsquo;re very proud of our independent Excellent Trustpilot rating, backed up by the many repeat customers we&rsquo;ve been supporting for years.*

*Read More*

*Help and Advice*

*Home automation can be confusing, especially if you&rsquo;re new to the technology. Our experts use the products every day and most of them also have them installed in their homes - you can be sure we know what we&rsquo;re talking about.*

*So whatever question you have, we'd love to hear from you...*

*- click the orange link in the bottom corner for instant contact with a sales advisor*

*Email*

*- we promise a fast response:*

*Call us*

*- our number is 0845 226 8572 and we'd love to hear from you*

*World-Class, Industry-Leading Technical Support - Forever Free*

*You&rsquo;ll always have FREE access to our technical knowledgebase, application guides, YouTube tutorials & Customer Services, as well as all other online resources, help, white papers and articles.*

*If none of these answer your query you can also raise a ticket and get direct access to our team of smart home specialists for one to one help.*

*Access to technical specialists*

*100&rsquo;s of in-depth help resources*

*Video guides via YouTube channel*

*Product compatibility tests & results*

*The Vesternet Promise*

*As Founder & CEO of Vesternet, I personally guarantee your 100% satisfaction on any purchase.*

*I&rsquo;d never want you to be unhappy with something you buy from us, so here&rsquo;s my promise - if you buy anything you&rsquo;re not happy with, our support team will work with you to resolve. And if we still can&rsquo;t get it working for you, then you can return it within a year for replacement or refund. Just send it back in a saleable condition within original packaging.*

*In addition, here&rsquo;s my personal email should you ever have any problems or feedback:*

*We&rsquo;re not just a shop, we&rsquo;re with you all the way on building your smart home.*

Multi-Zoned Boiler-Radiator System

Separating your home's heating into 'Zones' enables you to control each zone individually. For instance, during the day you may want all of your heating turned off except for one or two rooms - maybe you work from home so you just need your office heating, rather than heating the whole house. Being able to control the temperature of different parts of your home through the day can make using your heating more convenient and will give you significant savings.

Traditionally, if you wanted heating zones like this, you would need to design them at the time the heating system was installed, as each zone would need separate hot water pipes and control valves. However, using Z-Wave home automation you can easily upgrade your heating system to benefit from multiple zones.

This guide extends the Basic Boiler-Radiator system shown in the

Basic Boiler Radiator system with Single Thermostat

guide and shows how a multi-zoned heating system can be easily creating using Z-Wave heating products. Remember, when we say '

Zone

', this can be a floor, a room, or even a single radiator.

Multi-Zone Heating Options

Before looking at how to install home automation into your heating system, you need to first determine how you want the system to work.

There are an infinite number of ways to configure a Multi-Zone heating system, but we see two basic options; Simple Multi-Zone and Full Multi-Zone. The following sections explain the differences, how they would work, and important things to consider.

1. Simple Room Control

The first option, and the simplest, is to run the heating system as shown in the

Basic Boiler Radiator system

guide and add Z-Wave TRVs (Thermostatic Radiator Valves) to the radiators you wish to run at a lower temperature or off. This option is great if you have rooms that are rarely used or only used at the weekends - you can run your heating as normal but have these room's radiators turned off or reduced to a minimum temperature, helping to save heat and reduce costs.

This type of 'Simple' zoned heating is easy to implement, you can start by adding just one Z-Wave TRV to a radiator.

How it Works

The heating system is still controlled by the main Z-Wave

*Thermostat*

*and*

Receiver

(see

), it will turn On and Off based on your programmed times and temperatures, all radiators without Z-Wave

TRVs

will be On when the system is On. However, you are able to control the radiators with Z-Wave TRVs wirelessly - selecting times when they are Off or run at a lower temperature compared to the rest of the system. You can also wirelessly change their 'Setpoint' temperature so they increase their temperature inline with the rest of the system. The TRVs would normally be controlled by a Schedule '

*Scene*

' running in the Z-Wave controller.

The important aspect of this option is that the 'Zones' can only be On when the rest of the system is On - they are not totally independent and cannot independently 'call for heat'. When the system is Off or the main Z-Wave thermostat has told the boiler to turn Off as it has reached its 'Setpoint', then all radiators are Off.

2. Full Multi-Zoned Heating

Full Multi-Zoned heating means that each zone can call for heat - each one can independently tell the boiler to turn On and start supplying hot water to the radiators in that zone, and not to other zones. This approach gives you the most flexibility and will deliver the most cost savings. You are able to create as many zones as you like (floors, rooms or areas) and each will be able to be individually controlled - independently of all other zones.

This type of system is also the most complex to create and configure. Even though it uses the same Z-Wave components as the Simple MultiZone system, you will need to pay special attention to how you control it using '

Scenes

' or 'Scripts' running in the Z-Wave controller.

Each Zone will have TRVs installed on the radiators in that zone, these allow you to control whether the radiators are On or Off - whether hot water is actually flowing through the radiators. In this respect you are using them in a similar way as actuator valves to control the flow of hot water to the zones/radiators. This is similar to how you use them in the 'Simple' system.

The difference in this system is that each zone will have a thermostat or temperature sensor, rather than having a single thermostat that governs the system as a whole. Each thermostat reports its zone's temperature to the Z-Wave Controller. The Z-Wave Controller runs a 'Scene' that determines which zone should be on and whether it requires heat. If it does require heat, then the Z-Wave Controller tells the boiler and pump to turn On and supply hot water - the TRVs then control which radiators receive the hot water. Just as importantly, the Z-Wave Controller monitors the zones, when it detects that no heat is required, as all zones are up to temperature, it turns the boiler Off - this is also know as the

Boiler Interlock

.

Important Considerations

After you've decided how you'd like the system to behave, you should take note of some important points - some are required by current Building Regulations.

Don't forget about the Boiler Interlock!

The heating system must be able to turn off the boiler when no heat is required. For example if you just used TRV's on the radiators and no way to monitor the zone or room's temperature you would quickly have a situation where all the radiators are turned off, as the TRVs have reached their 'Setpoint' temperature, but the boiler is still on. This would result in the boiler sending hot water around the system (but not through the radiators) and therefore wasting energy and money. This would continue until the room temperatures reduced or the heating system was turned off.

The Boiler Interlock is required by Building Regulations.

Hot Water Flow

In the Boiler-Radiator system the hot water is pumped around the system through the main pipes. Each radiator is connected in 'parallel' to the main pipe - hot water flows through the main pipe as well as the radiator. If the radiator's valve is turned off, then the hot water does not flow into the radiator, but continues flowing through the main pipe. This is an important distinction as it means that you cannot stop the water flowing through the complete system by turning off one radiator valve - this is why all radiators you wish to control must have their own TRV.

Multi-Zone Control

For full Multi-Zone systems, creating 'Scene' and control 'algorithms' can become complicated very quickly, so you need to plan your system before you start implementing it. You should plan how the 'Scene' logic will actually control the system - making sure that each zone can control the boiler and that the boiler will be turned off when no heat is required by any zones.

All Z-Wave Controllers will be able to run this type of control logic, but few of them will be able to do it using their standard scene editors. Most people use LUA scripting to control more complex multi-zone heating systems. Before going too far, it's worth researching examples of how this is done - so you can decide if it is something you're capable of developing for your own system.

Design the best system for You

The Full Multi-zone system is probably what you'd love to have, but it may not be what you actually need. The Simple system may be a better fit and very easy to install. So go for the system that makes practical sense for your home - and remember, you can always expand it later as Z-Wave devices can be fitted at anytime.

*Components - what they do*

Whichever type of Multi-Zone system you decide to implement, they both use the same Z-Wave devices.

TRV - Thermostatic Radiator Valve

Control when hot water is allowed to flow into the radiator based on the TRV's setpoint temperature. When the ambient temperature is lower then the setpoint, the radiator valve is 'Open' and water flows through the radiator. When the setpoint is reached, the valve closes, stopping the water flow and allowing the radiator to cool. Some TRVs have complex algorithms that automatically how quickly the temperature changes, this reduces the chance of over-shooting the setpoint and wasting heat. Some TRVs report the actual ambient temperature to the system, these can be used in place of a wall thermostat, but the temperature readings may not be very accurate as they are positioned very close to the hot radiator.

Danfoss TRV

You can wireless change the Danfoss' 'Setpoint' although it does not report the room's temperature back to the Z-Wave system. The Danfoss does include an LCD to indicate the current setpoint and buttons that enable you to manually change the setpoint. It also features in-built algorithms to open and close the valve as efficiently as possible.

StellaZ TRV

StellaZ TRV can have it's 'Setpoint' changed wirelessly and reports the ambient temperature back to the controller. It does not feature any manual control, so all changes have to be made wirelessly via the Z-Wave Controller.

*Boiler Receiver*

This is a Z-Wave Switch (Relay) that replaces your existing heating controller/timer. It enables the Z-Wave system to control when the boiler is On or Off. If you have a Combi boiler, you will need a single-channel receiver, if you have a Y-plan or S-plan system you will need a 2-channel receiver or switch as you will also need to control the hot-water system. More Details -

*Secure Single-Channel Boiler Receiver*

*Purpose designed Z-Wave Receiver for controlling a Combi boiler. It enables the Z-Wave system to control the boiler and has buttons and LEDs for manual On/Off control.*

*Secure 2-Channel Boiler Receiver*

*Purpose designed Z-Wave Receiver for controlling a Y-plan or S-plan boiler. It enables the Z-Wave system to control the boiler and has buttons and LEDs for manual On/Off control of the heating and hot-water.*

*Wall Thermostat*

Communicates directly with the Boiler Receiver or Relay to control the boiler (heating) depending on the room's ambient temperature and the 'set-point' temperature you've selected. This allows the system to run the heating system with the optimum efficiency as the thermostat has in-built heating algorithms that optimise the boiler On/Off periods. You can change the thermostat's set-point temperature wirelessly, giving you complete control over your heating system. More Details -

*Secure Wall Thermostat (SRT321)*

*Wall mounted thermostat controls the boiler (via the receiver) and can have it's set-point changed by the Z-Wave controller. All heating schedules will be run in the Z-Wave controller and the heating's On/Off periods controlled by changing the wall thermostat's set-point.*

*Secure Programmable 7-day Thermostat (SCS317)*

*Very similar to the Secure Wall Thermostat, except it has an integrated 7-day timer that enables it to run the heating based on schedules you program into the thermostat - it can have up to 6 temperature periods per day.*

Temperature Sensors and more...

Can be used as an alternative to Wall Thermostats or as an extra 'independent' sensor to monitor the temperature of different parts of the house. For example, your Wall Thermostat may be positioned near the light switch, but may not be the best place to measure the room temperature - perhaps next to the sofa is more appropriate. Adding additional Temperature sensors allows you to fine tune the heating to suit the use of the room - perhaps you could create an averaged Temperature reading between the Wall Thermostat, TRV and the additional sensor and control the system based on that.

Secure Wall Temperature Sensor

Wall mounted temperature sensor can report the room's temperature to the 'Scene' running the heating control.

Fibaro Door/Window Sensor with Temp Sensor

Flexible Door/Window sensor can also use the optional DS18B20 temperature sensor to report the room's temperature - gives you extra functionality and helps optimise your heating control.

Fibaro 3-in-1 Motion Sensor

Tiny Motion sensor that also monitors temperature - this can also be configured to account for temperature differences if it is positioned near the ceiling.

Aeon 4-in-1 MultiSensor

Versatile sensor for motion, temperature, light and humidity - great for primary or secondary control of your environment.

*Z-Wave Controller*

*The controller enables you to add and configure devices to your Z-Wave system and run 'schedule scenes'. It also acts as a gateway allowing you to control the system from a smartphone even when you are away from home. In the case of heating, the controller will run the schedules to control when the heating is On/Off and at what temperature, it will also run the hot-water times.*

Fibaro Home Center 2 (HC2)

Flexible Z-Wave controller with an intuitive User Interface (UI), includes dedicated Heating 'panels' for easier schedule and control of your heating system and advanced LUA programming capabilities.

*VERA Edge*

*Low cost, very capable Z-Wave controller for heating and complete home automation.*

*Technical Guides*

*These guides and videos show how these various systems can be integrated with Vesternet's home automation products.*

*Installing Secure Thermostats*

*Configuring Secure Thermostats*

*Controlling a heating System with VERA*

*Using Fibaro Home Center as a Heating Controller*

*Multi-Zone Boiler-Radiator Heating*

*Copyright Vesternet 2014*

*Updated: 03/01/2015*

*blog*

*Latest Posts*

*Belkin Wemo - at Vesternet*

*Blustream AV Products at Vesternet - Now!*

*mydlink Home Test & Review*

*mydlink home at Vesternet*

*HDMI Distribution - Coming Soon*

*Copyright 2015 Vesternet Ltd. All Rights Reserved.*

*Terms of Service*

*Privacy Policy*

*Find us on Google+*

*Products in this Guide*

*X*

*Add Selected to Cart*

*Please wait...*

*Item(s) Added*

*Continue shopping*

*or*

*View cart & checkout*

*video title*

*video content*

[http://www.vesternet.com/resources/scenarios/heating/electric-panels]

Electric-Panels

*JavaScript seem to be disabled in your browser.*

*You must have JavaScript enabled in your browser to utilize the functionality of this website.*

*Vesternet-Home Automation*

*Worldwide Shipping*

*Click here for a full list of countries we ship to.*

*Simply add products to cart to see real time shipping prices within the cart itself.*

*If your country isn't listed, we likely will still deliver - simply ask for a quote by emailing:*

*[email&#160;protected]*

*Europe*

*USA*

*Support*

*About*

*Contact*

*Blog*

*Customers*

*0845 226 8572*

*Sales Chat*

*Search:*

*Go*

*Resources*

*Shop*

*Z-Wave*

*Controllers*

*Sensors*

*Fibaro*

*Lighting and Sockets*

*Door Locks*

*Thermostats*

*Windows*

*Qubino*

*Zipato*

*LightwaveRF*

*Sockets*

*Switches*

*Security*

*Accessories*

*Heating*

*Bulbs*

*Plus*

*WiFi*

*Mydlink*

*WeMo*

*Evohome*

*Netatmo*

*Audio*

*IR Control*

*Blustream*

*Batteries*

*Light Bulbs*

*Expansion Modules*

*Books*

*Power Supplies*

*Cameras*

*BlueTooth*

*Coming Soon*

*Learn*

*Overview*

*How Home Automation Works*

*Application Notes*

*Information, Guides & Tutorials*

*Knowledge Base*

*Help, Tips & Tricks*

*Technology Guides*

*Detailed Technology Information*

*Compatibility Guides*

*Tested & Certified Devices*

*Case Studies*

*Real Customers&rsquo; Homes*

*Plan*

*Design your own custom smart home*

*Forget pre-packaged kits. Everyone&rsquo;s smart home is different and packages from other shops will never fit your exact needs. Vesternet is the ONLY place you can design your own solution from the ground up...*

*✓*

*Fully interactive design tool*

*Beginner to Advanced levels*

*Browse lighting, heating, security,*

*&nbsp;&nbsp;&nbsp;&nbsp; audio & more*

*Guides to help at every step*

*Save your progress & retrieve later*

*Forever FREE...*

*My Account*

*Login*

*My Orders*

*My Wishlist*

*Cart*

*You have no items in your shopping cart.*

*View Cart & Checkout*

*&nbsp;*

*Thousands of Happy Smart Home Customers*

*But don&rsquo;t just take our word for it...*

*We offer great products & great knowledge all backed up with great service - and our customers agree!*

*We&rsquo;re very proud of our independent Excellent Trustpilot rating, backed up by the many repeat customers we&rsquo;ve been supporting for years.*

*Read More*

*Help and Advice*

*Home automation can be confusing, especially if you&rsquo;re new to the technology. Our experts use the products every day and most of them also have them installed in their homes - you can be sure we know what we&rsquo;re talking about.*

*So whatever question you have, we'd love to hear from you...*

*- click the orange link in the bottom corner for instant contact with a sales advisor*

*Email*

*- we promise a fast response:*

*Call us*

*- our number is 0845 226 8572 and we'd love to hear from you*

*World-Class, Industry-Leading Technical Support - Forever Free*

*You&rsquo;ll always have FREE access to our technical knowledgebase, application guides, YouTube tutorials & Customer Services, as well as all other online resources, help, white papers and articles.*

*If none of these answer your query you can also raise a ticket and get direct access to our team of smart home specialists for one to one help.*

*Access to technical specialists*

*100&rsquo;s of in-depth help resources*

*Video guides via YouTube channel*

*Product compatibility tests & results*

*The Vesternet Promise*

*As Founder & CEO of Vesternet, I personally guarantee your 100% satisfaction on any purchase.*

*I&rsquo;d never want you to be unhappy with something you buy from us, so here&rsquo;s my promise - if you buy anything you&rsquo;re not happy with, our support team will work with you to resolve. And if we still can&rsquo;t get it working for you, then you can return it within a year for replacement or refund. Just send it back in a saleable condition within original packaging.*

*In addition, here&rsquo;s my personal email should you ever have any problems or feedback:*

*We&rsquo;re not just a shop, we&rsquo;re with you all the way on building your smart home.*

Electric Panel Heating

*This type of heating is often found in rural homes that don't have a gas or oil supply. Each panel heater is wired to the mains, most have an integrated thermostat that controls that particular panel. There is rarely a room or house thermostat to control the system as a whole. The systems are expensive to run, so any intelligent control that you can add will quickly save you money as well as making the system more convenient to use and monitor.*

Types and Connections

There are two types of electrical connection used for panel heaters:

Wall Plug

The Panel heater simply plugs into a wall socket (outlet), adding home automation control for this type is incredibly simple by using a Z-Wave Wall plug.

Fused Spur

Each Panel is wired into a 'fused-spur' that provides power from the house's main power circuit, you can use a Z-Wave Relay/Switch (wired after the fused spur) to control power to the panel heater.

Add Home Automation to Control Your Panel Heating

Adding home automation to control this type of Electric Panel heating system is very easy straightforward. By adding a Z Wall Plug or Relay/Switch you have wireless control of each heating panel. You can decide when each one is active to ensure they are only used when they need to be - they are expensive to run, so the less time they are active the better. When they are active the in-built thermostat will control the temperature around that panel, however, these can be mistakenly set, so we also suggest using a Z-Wave Wireless Thermostat. The Thermostat will control the room's overall temperature, making sure it is comfortable and that all the panels work together in the most efficient manner.

*Components - what they do*

To add home automation control of your electric panel-based heating system, you only need to add three components (less if you already have a Z-Wave system). Below we explain the function of each component and our recommended products.

This is a simple Z-Wave On/Off Wall plug that allows you to wirelessly control the panel's power. There's also a version that measures the power consumed by the heating panel, so you know exactly how much it's costing you.

TKB On/Off Wall Plug

Simple, reliable plug to control the panel's power.

TKB Wall Plug Switch/Meter

Provides On/Off control of the heating panel and measures its power consumption.

Relay / Switch

The Z-Wave Relay/Switch is wired into the mains after the fused spur, it then allows you to wirelessly control the panel's power.

Fibaro 1x3Kw Relay

Ideal for controlling panels up to 3Kw (13A).

Aeon Micro Smart Energy Switch

Provides On/Off control of the heating panel, up to 2.4Kw (10A) and measures its power consumption.

*Wall Thermostat*

Communicates directly with the Wall Plug or Relay to control the heating panel depending on the room's ambient temperature and the 'set-point' temperature you've selected. You can change the thermostat's set-point temperature wirelessly, giving you complete control over your heating system.

*Secure Wall Thermostat (SRT321)*

Wall mounted thermostat controls the panels and can have it's set-point changed by the Z-Wave controller. All heating schedules will be run in the Z-Wave controller and the heating's On/Off periods controlled by changing the wall thermostat's set-point.

*Secure Programmable 7-day Thermostat (SCS317)*

*Very similar to the Secure Wall Thermostat, except it has an integrated 7-day timer that enables it to run the heating based on schedules you program into the thermostat - it can have up to 6 temperature periods per day.*

*Z-Wave Controller*

*The controller enables you to add and configure devices to your Z-Wave system and run 'schedule scenes'. It also acts as a gateway allowing you to control the system from a smartphone even when you are away from home. In the case of heating, the controller will run the schedules to control when the heating is On/Off and at what temperature, it will also run the hot-water times.*

*Fibaro Home Center Lite*

*Flexible Z-Wave controller with an intuitive User Interface (UI) and includes dedicated Heating 'panels' for easier schedule and control of your heating system.*

*VERA Edge*

*Low cost, very capable Z-Wave controller for heating and complete home automation.*

*Copyright Vesternet 2014*

*Updated: 03/01/2015*

*blog*

*Latest Posts*

*Belkin Wemo - at Vesternet*

*Blustream AV Products at Vesternet - Now!*

*mydlink Home Test & Review*

*mydlink home at Vesternet*

*HDMI Distribution - Coming Soon*

*Copyright 2015 Vesternet Ltd. All Rights Reserved.*

*Terms of Service*

*Privacy Policy*

*Find us on Google+*

*Products in this Guide*

*X*

*Add Selected to Cart*

*Please wait...*

*Item(s) Added*

*Continue shopping*

*or*

*View cart & checkout*

*video title*

*video content*

[http://www.vesternet.com/resources/scenarios/heating/under-floor-heating-water]

Under-floor-heating-water

*JavaScript seem to be disabled in your browser.*

*You must have JavaScript enabled in your browser to utilize the functionality of this website.*

*Vesternet-Home Automation*

*Worldwide Shipping*

*Click here for a full list of countries we ship to.*

*Simply add products to cart to see real time shipping prices within the cart itself.*

*If your country isn't listed, we likely will still deliver - simply ask for a quote by emailing:*

*[email&#160;protected]*

*Europe*

*USA*

*Support*

*About*

*Contact*

*Blog*

*Customers*

*0845 226 8572*

*Sales Chat*

*Search:*

*Go*

*Resources*

*Shop*

*Z-Wave*

*Controllers*

*Sensors*

*Fibaro*

*Lighting and Sockets*

*Door Locks*

*Thermostats*

*Windows*

*Qubino*

*Zipato*

*LightwaveRF*

*Sockets*

*Switches*

*Security*

*Accessories*

*Heating*

*Bulbs*

*Plus*

*WiFi*

*Mydlink*

*WeMo*

*Evohome*

*Netatmo*

*Audio*

*IR Control*

*Blustream*

*Batteries*

*Light Bulbs*

*Expansion Modules*

*Books*

*Power Supplies*

*Cameras*

*BlueTooth*

*Coming Soon*

*Learn*

*Overview*

*How Home Automation Works*

*Application Notes*

*Information, Guides & Tutorials*

*Knowledge Base*

*Help, Tips & Tricks*

*Technology Guides*

*Detailed Technology Information*

*Compatibility Guides*

*Tested & Certified Devices*

*Case Studies*

*Real Customers&rsquo; Homes*

*Plan*

*Design your own custom smart home*

*Forget pre-packaged kits. Everyone&rsquo;s smart home is different and packages from other shops will never fit your exact needs. Vesternet is the ONLY place you can design your own solution from the ground up...*

*✓*

*Fully interactive design tool*

*Beginner to Advanced levels*

*Browse lighting, heating, security,*

*&nbsp;&nbsp;&nbsp;&nbsp; audio & more*

*Guides to help at every step*

*Save your progress & retrieve later*

*Forever FREE...*

*My Account*

*Login*

*My Orders*

*My Wishlist*

*Cart*

*You have no items in your shopping cart.*

*View Cart & Checkout*

*&nbsp;*

*Thousands of Happy Smart Home Customers*

*But don&rsquo;t just take our word for it...*

*We offer great products & great knowledge all backed up with great service - and our customers agree!*

*We&rsquo;re very proud of our independent Excellent Trustpilot rating, backed up by the many repeat customers we&rsquo;ve been supporting for years.*

*Read More*

*Help and Advice*

*Home automation can be confusing, especially if you&rsquo;re new to the technology. Our experts use the products every day and most of them also have them installed in their homes - you can be sure we know what we&rsquo;re talking about.*

*So whatever question you have, we'd love to hear from you...*

*- click the orange link in the bottom corner for instant contact with a sales advisor*

*Email*

*- we promise a fast response:*

*Call us*

*- our number is 0845 226 8572 and we'd love to hear from you*

*World-Class, Industry-Leading Technical Support - Forever Free*

*You&rsquo;ll always have FREE access to our technical knowledgebase, application guides, YouTube tutorials & Customer Services, as well as all other online resources, help, white papers and articles.*

*If none of these answer your query you can also raise a ticket and get direct access to our team of smart home specialists for one to one help.*

*Access to technical specialists*

*100&rsquo;s of in-depth help resources*

*Video guides via YouTube channel*

*Product compatibility tests & results*

*The Vesternet Promise*

*As Founder & CEO of Vesternet, I personally guarantee your 100% satisfaction on any purchase.*

*I&rsquo;d never want you to be unhappy with something you buy from us, so here&rsquo;s my promise - if you buy anything you&rsquo;re not happy with, our support team will work with you to resolve. And if we still can&rsquo;t get it working for you, then you can return it within a year for replacement or refund. Just send it back in a saleable condition within original packaging.*

*In addition, here&rsquo;s my personal email should you ever have any problems or feedback:*

*We&rsquo;re not just a shop, we&rsquo;re with you all the way on building your smart home.*

*Under-Floor Heating (Water)*

Under-Floor Heating is becoming much more common in new homes as it is a great way to heat large or open spaces - it also provides a nice convenient heating system that's always warm on your toes.

The system uses a central boiler to heat the water, a pump then circulates this through long pipe runs that are positioned just below the floor's surface. The water flow is controlled by an

Actuator

valve.

The majority of Under-Floor Heating (UFH) systems have multiple zones, so the water is pumped through a central

Manifold

which distributes the water to the various zones. The manifold also houses the electrically-operated

Actuator Valves

that control the water to each zone. When the actuator is turned On, water flows to that zone. When it is Off, no water flows to that zone. Importantly the system also monitors when no heat is required or when all zones are off - if this is the case, it shuts down the boiler and maintains the Boiler Interlock.

This guide extends how a multi-zoned Under-Floor Heating system can be easily creating using Z-Wave heating products.

Add Home Automation to Your Under-Floor Heating

Most UFH systems are relatively self-contained - the actuators, thermostats, and control system work together to run the system smoothly and efficiently. But you may want to control the system remotely (from your smartphone) or as part of a wider system that runs your home's lights, multimedia, security - and that's where Home Automation comes in.

Using home automation you can add as little or as much control to your UFH system as you wish, and if you are just implementing you system, you can use Z-Wave home automation to run the entire system.

*How it Works*

The boiler control and actuators are kept the same as in the original system. Z-Wave

Relays

(Switches) are added to control each Actuator Valve, this allows each Actuator valve to be controlled wirelessly by the Z-Wave system. Each heating zone has a Z-Wave thermostat that controls the temperature of that zone by monitoring the zone's temperature and turning the actuator valve On or Off to control the flow of hot-water into that zone.

The Z-Wave controller will run a Schedule '

*Scene*

' that determines when each zone should be active and at what temperature. It will also monitor the zone's temperature and determine if the actuator should be On or Off. This enables the system to run itself automatically, but you can over-ride it even if you are away from home, stuff in traffic on a dark December night.

*Important Considerations*

*After you've decided how you'd like the system to behave, you should take note of some important points - some are required by current Building Regulations.*

*Boiler Interlock*

*Don't forget about the Boiler Interlock!*

The heating system must be able to turn off the boiler when no heat is required. For example, if all the zones are off, as they have reached temperature, then the boiler must be switched off to avoid wasting energy. Otherwise the boiler would continue to heat water and send it around the system (but not through the zones). This would continue until the room temperatures reduced or the heating system was turned off.

*The Boiler Interlock is required by Building Regulations.*

*Hot Water Flow*

The flow of hot water is controlled by the Manifold and Actuator valves. The Z-Wave system needs to be able to control the actuator valves in order to control the heating system efficiently.

*Multi-Zone Control*

For Multi-Zone systems, creating 'Scene' and control 'algorithms' can become complicated very quickly, so you need to plan your system before you start implementing it. You should plan how the 'Scene' logic will actually control the system - making sure that each zone can control the boiler and that the boiler will be turned off when no heat is required by any zones.

*All Z-Wave Controllers will be able to run this type of control logic, but few of them will be able to do it using their standard scene editors. Most people use LUA scripting to control more complex multi-zone heating systems. Before going too far, it's worth researching examples of how this is done - so you can decide if it is something you're capable of developing for your own system.*

*Components - what they do*

*Whichever type of Multi-Zone system you decide to implement, they both use the same Z-Wave devices.*

Z-Wave Relays

These control the Actuator Valves, ensuring that you can control the water flow to each zone of the UFH heating system.

*Fibaro 2x1.5Kw Relay*

Dual relay that can control two Actuator Valves and therefore two zones.

*Wall Thermostat*

*Communicates directly with the Boiler Receiver or Relay to control the boiler (heating) depending on the room's ambient temperature and the 'set-point' temperature you've selected. This allows the system to run the heating system with the optimum efficiency as the thermostat has in-built heating algorithms that optimise the boiler On/Off periods. You can change the thermostat's set-point temperature wirelessly, giving you complete control over your heating system. More Details -*

*Basic Boiler Radiator system with Single Thermostat*

*Secure Wall Thermostat (SRT321)*

*Wall mounted thermostat controls the boiler (via the receiver) and can have it's set-point changed by the Z-Wave controller. All heating schedules will be run in the Z-Wave controller and the heating's On/Off periods controlled by changing the wall thermostat's set-point.*

*Secure Programmable 7-day Thermostat (SCS317)*

*Very similar to the Secure Wall Thermostat, except it has an integrated 7-day timer that enables it to run the heating based on schedules you program into the thermostat - it can have up to 6 temperature periods per day.*

*Boiler Receiver*

This Z-Wave Switch (Relay) enables you to control the boiler wirelessly. You may need this if you are implementing a new UFH system that does not have any boiler control via the Manifold and Actuator Valves.

*Secure Single-Channel Boiler Receiver*

*Purpose designed Z-Wave Receiver for controlling a Combi boiler. It enables the Z-Wave system to control the boiler and has buttons and LEDs for manual On/Off control.*

*Temperature Sensors and more...*

Can be used as an alternative to Wall Thermostats or as an extra 'independent' sensor to monitor the temperature of different parts of the house. For example, your Wall Thermostat may be positioned near the light switch, but may not be the best place to measure the room temperature - perhaps next to the sofa is more appropriate. Adding additional Temperature sensors allows you to fine tune the heating to suit the use of the room - perhaps you could create an averaged Temperature reading between the Wall Thermostat and the additional sensor and control the system based on that.

*Secure Wall Temperature Sensor*

*Wall mounted temperature sensor can report the room's temperature to the 'Scene' running the heating control.*

*Fibaro Door/Window Sensor with Temp Sensor*

*Flexible Door/Window sensor can also use the optional DS18B20 temperature sensor to report the room's temperature - gives you extra functionality and helps optimise your heating control.*

*Fibaro 3-in-1 Motion Sensor*

*Tiny Motion sensor that also monitors temperature - this can also be configured to account for temperature differences if it is positioned near the ceiling.*

*Aeon 4-in-1 MultiSensor*

*Versatile sensor for motion, temperature, light and humidity - great for primary or secondary control of your environment.*

*Z-Wave Controller*

*The controller enables you to add and configure devices to your Z-Wave system and run 'schedule scenes'. It also acts as a gateway allowing you to control the system from a smartphone even when you are away from home. In the case of heating, the controller will run the schedules to control when the heating is On/Off and at what temperature, it will also run the hot-water times.*

*Fibaro Home Center 2 (HC2)*

*Flexible Z-Wave controller with an intuitive User Interface (UI), includes dedicated Heating 'panels' for easier schedule and control of your heating system and advanced LUA programming capabilities.*

*VERA Edge*

*Low cost, very capable Z-Wave controller for heating and complete home automation.*

*Copyright Vesternet 2014*

*Updated: 03/01/2015*

*blog*

*Latest Posts*

*Belkin Wemo - at Vesternet*

*Blustream AV Products at Vesternet - Now!*

*mydlink Home Test & Review*

*mydlink home at Vesternet*

*HDMI Distribution - Coming Soon*

*Copyright 2015 Vesternet Ltd. All Rights Reserved.*

*Terms of Service*

*Privacy Policy*

*Find us on Google+*

*Products in this Guide*

*X*

*Add Selected to Cart*

*Please wait...*

*Item(s) Added*

*Continue shopping*

*or*

*View cart & checkout*

*video title*

*video content*

[http://www.vesternet.com/resources/scenarios/heating/under-floor-heating-electric]

Under-floor-heating-electric

*JavaScript seem to be disabled in your browser.*

*You must have JavaScript enabled in your browser to utilize the functionality of this website.*

*Vesternet-Home Automation*

*Worldwide Shipping*

*Click here for a full list of countries we ship to.*

*Simply add products to cart to see real time shipping prices within the cart itself.*

*If your country isn't listed, we likely will still deliver - simply ask for a quote by emailing:*

*[email&#160;protected]*

*Europe*

*USA*

*Support*

*About*

*Contact*

*Blog*

*Customers*

*0845 226 8572*

*Sales Chat*

*Search:*

*Go*

*Resources*

*Shop*

*Z-Wave*

*Controllers*

*Sensors*

*Fibaro*

*Lighting and Sockets*

*Door Locks*

*Thermostats*

*Windows*

*Qubino*

*Zipato*

*LightwaveRF*

*Sockets*

*Switches*

*Security*

*Accessories*

*Heating*

*Bulbs*

*Plus*

*WiFi*

*Mydlink*

*WeMo*

*Evohome*

*Netatmo*

*Audio*

*IR Control*

*Blustream*

*Batteries*

*Light Bulbs*

*Expansion Modules*

*Books*

*Power Supplies*

*Cameras*

*BlueTooth*

*Coming Soon*

*Learn*

*Overview*

*How Home Automation Works*

*Application Notes*

*Information, Guides & Tutorials*

*Knowledge Base*

*Help, Tips & Tricks*

*Technology Guides*

*Detailed Technology Information*

*Compatibility Guides*

*Tested & Certified Devices*

*Case Studies*

*Real Customers&rsquo; Homes*

*Plan*

*Design your own custom smart home*

*Forget pre-packaged kits. Everyone&rsquo;s smart home is different and packages from other shops will never fit your exact needs. Vesternet is the ONLY place you can design your own solution from the ground up...*

*✓*

*Fully interactive design tool*

*Beginner to Advanced levels*

*Browse lighting, heating, security,*

*&nbsp;&nbsp;&nbsp;&nbsp; audio & more*

*Guides to help at every step*

*Save your progress & retrieve later*

*Forever FREE...*

*My Account*

*Login*

*My Orders*

*My Wishlist*

*Cart*

*You have no items in your shopping cart.*

*View Cart & Checkout*

*&nbsp;*

*Thousands of Happy Smart Home Customers*

*But don&rsquo;t just take our word for it...*

*We offer great products & great knowledge all backed up with great service - and our customers agree!*

*We&rsquo;re very proud of our independent Excellent Trustpilot rating, backed up by the many repeat customers we&rsquo;ve been supporting for years.*

*Read More*

*Help and Advice*

*Home automation can be confusing, especially if you&rsquo;re new to the technology. Our experts use the products every day and most of them also have them installed in their homes - you can be sure we know what we&rsquo;re talking about.*

*So whatever question you have, we'd love to hear from you...*

*- click the orange link in the bottom corner for instant contact with a sales advisor*

*Email*

*- we promise a fast response:*

*Call us*

*- our number is 0845 226 8572 and we'd love to hear from you*

*World-Class, Industry-Leading Technical Support - Forever Free*

*You&rsquo;ll always have FREE access to our technical knowledgebase, application guides, YouTube tutorials & Customer Services, as well as all other online resources, help, white papers and articles.*

*If none of these answer your query you can also raise a ticket and get direct access to our team of smart home specialists for one to one help.*

*Access to technical specialists*

*100&rsquo;s of in-depth help resources*

*Video guides via YouTube channel*

*Product compatibility tests & results*

*The Vesternet Promise*

*As Founder & CEO of Vesternet, I personally guarantee your 100% satisfaction on any purchase.*

*I&rsquo;d never want you to be unhappy with something you buy from us, so here&rsquo;s my promise - if you buy anything you&rsquo;re not happy with, our support team will work with you to resolve. And if we still can&rsquo;t get it working for you, then you can return it within a year for replacement or refund. Just send it back in a saleable condition within original packaging.*

*In addition, here&rsquo;s my personal email should you ever have any problems or feedback:*

*We&rsquo;re not just a shop, we&rsquo;re with you all the way on building your smart home.*

*Under-Floor Heating (Electric)*

Electric Under-Floor Heating is a common way to add comfortable heating to smaller spaces - it has a lot of the advantages of water Under-Floor heating but is easier to install. However, it will be more expensive to run, which is why it's usually used in smaller spaces.

An Electric Under-Floor Heating (UFH) system is powered by its own electrical circuit, which powers the electric heating matt that is installed below the floor. The wall mounted controller sets the times when the heating will be active and at what temperature, it also includes a thermostat to maintain the room's temperature at the correct level. These systems often have a temperature sensor installed in the under-floor matt to ensure that it does not get excessively hot.

This guide shows you how to add Z-Wave home automation to an Electric Under-Floor heating system

Add Home Automation to Electric Under-Floor Heating

These systems are quite self-contained, and the possibilities to add home automation control to them is quite limited unless you want to redevelop the whole system based on Z-Wave products.

Most people want to have the ability to remotely activate the system - this is what we recommend as being the most straightforward and cost effective way to add home automation to Electric UFH systems.

*How it Works*

The easy way to control the system using Z-Wave is to add a Z-Wave

Relay/Switch

into the main power feeding the system. You will then have control of the electric matt allowing you to over-ride the wall controller's On periods. This approach enables you to turn the matt Off when the timer says it should be On, but it does not allow you to turn the matt On if the timer is in an Off period. The main reason for doing it this way is to allow you to turn the system Off if you are away from home for a long time, or if you've forgotten to turn the system off - helping to save wasted energy and power.
When the Relay is On, the Electric UFH system run itself in the normal way.

The Z-Wave Relay can be controlled wirelessly, so you have access to it whether you are at home or away.

*Components - what they do*

To add home automation control of your electric under-floor heating system, you only need to add two components (only one if you already have a Z-Wave system). Below we explain the function of each component and our recommended products.

*Z-Wave Relays*

These control the power to the electric matt, some can even report the power being consumed by the electric under-floor heating.

*Fibaro 1x3Kw Relay*

Single relay that can control electric heating matts up to 3Kw (13A).

*Aeon Micro Smart Energy Switch*

Single relay switch that can control up to 2.5Kw (10A) and reports to the Z-Wave system the power and accumulated power used by the heating matt.

*Z-Wave Controller*

*The controller enables you to add and configure devices to your Z-Wave system and run 'schedule scenes'. It also acts as a gateway allowing you to control the system from a smartphone even when you are away from home. In the case of heating, the controller will run the schedules to control when the heating is On/Off and at what temperature, it will also run the hot-water times.*

*Fibaro Home Center Lite*

*Flexible Z-Wave controller with an intuitive User Interface (UI) and includes dedicated Heating 'panels' for easier schedule and control of your heating system.*

*VERA Edge*

*Low cost, very capable Z-Wave controller for heating and complete home automation.*

Copyright Vesternet 2015

Updated: 12/02/2015

*blog*

*Latest Posts*

*Belkin Wemo - at Vesternet*

*Blustream AV Products at Vesternet - Now!*

*mydlink Home Test & Review*

*mydlink home at Vesternet*

*HDMI Distribution - Coming Soon*

*Copyright 2015 Vesternet Ltd. All Rights Reserved.*

*Terms of Service*

*Privacy Policy*

*Find us on Google+*

*Products in this Guide*

*X*

*Add Selected to Cart*

*Please wait...*

*Item(s) Added*

*Continue shopping*

*or*

*View cart & checkout*

*video title*

*video content*