

## NS1001 Installation Guide *Rev 1.0*



CAUTION: High Voltage Wires

**WARNING Electricity is dangerous.** Before commencing work, ensure that you read and understand these instructions and isolate the relevant circuit. **This product should only be installed by a qualified electrician or heating engineer** and should be installed in accordance to BS 7671 (IEE Wiring Regulations), or to another equivalent standard.

### Whats in the box

1 x Assembled Room Thermostat consisting of

- 1 x Room Thermostat
- 1 x Wall Mount
- 1 x Wiring Cover

1 x Thermostat screw pack

2 x Batteries

(If you have ordered a zoned system you will receive one set of above per zone)

1 x Gateway

1 x Network Cable

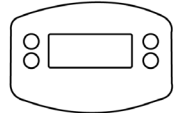
1 x Power Supply



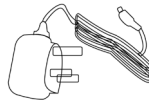
Batteries



Thermostat  
Screw Pack



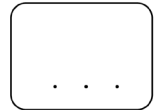
Room Thermostat



Power Supply



Network Cable



Gateway

The NS1001 series is designed to replace an existing wired Thermostat in a property.

If you do not have an existing wired Thermostat then you would need to run cable, or consider using our NS1002 wireless series.

Once installed, your central heating can be switched on and off in response to commands from the Thermostat or remotely using a computer or smart phone.

# Specifications

## Room Thermostat

Thermostat Power Supply:	2x AA batteries
Output:	2 Wire Volt-Free Switch
Switch Rating (Max):	240v ac, 5A.
Controllable Temperature Range:	10 – 30°C
Frost Protection:	Programmable from 0.5 - 30°C
Radio Frequency:	2.4 GHz
Dimensions:	119 x 88 x 22 mm

## Gateway

Power input:	5V 1A
Internet Connection:	Wired Ethernet Cable
Radio Frequency:	2.4 GHz
Dimensions:	94 x 79 x 24 mm

## Radio Signal

Consideration for location of your new system components and the affects that this may have on the radio signal is extremely important. The signal will travel between units in a straight line and will degrade both with distance and (much more importantly) objects that it has to pass through.

For zoned systems each Thermostat needs to connect to the Wireless Internet Gateway or a Repeater (sold separately)

Every house is different and this is NOT a gaurantee, but as a guide, the units should be able to communicate with each other through two single skin brick or stud walls.

If the above is not possible, then you may need to consider adding our repeater(s) into the system, or moving one or more of the system components.

Also, the radio can be adversely affected by large metal objects such as your boiler, radiators and mirrors. For best performance, ensure that your units are placed at least 1 metre away from such objects.

Do not place the gateway on the floor, instead position it on a surface, e.g. small table.

Do not place the gateway on top of, or adjacent to your internet router, or any other devices that transmit.

If you cannot get a signal using these suggestions, consider using home plugs. These will allow you to use your home's power cables to locate your gateway next to any power point. You can find home plugs on Amazon, eBay, PCWorld etc.



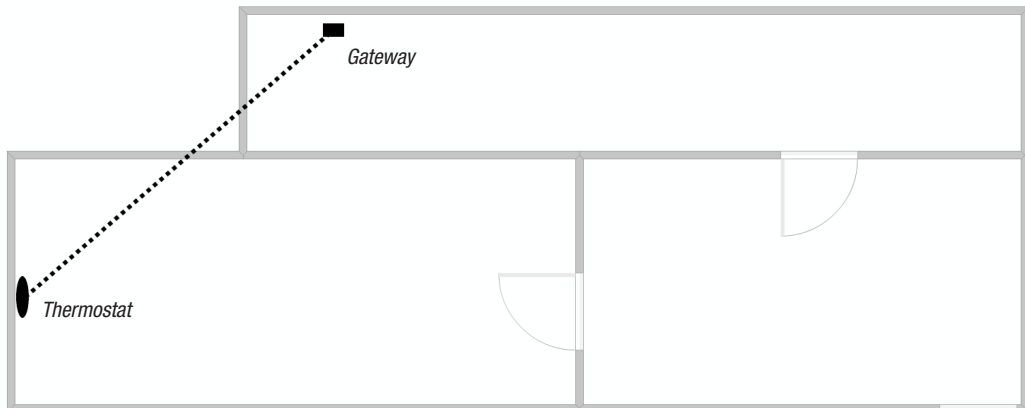
Inspire Home Automation

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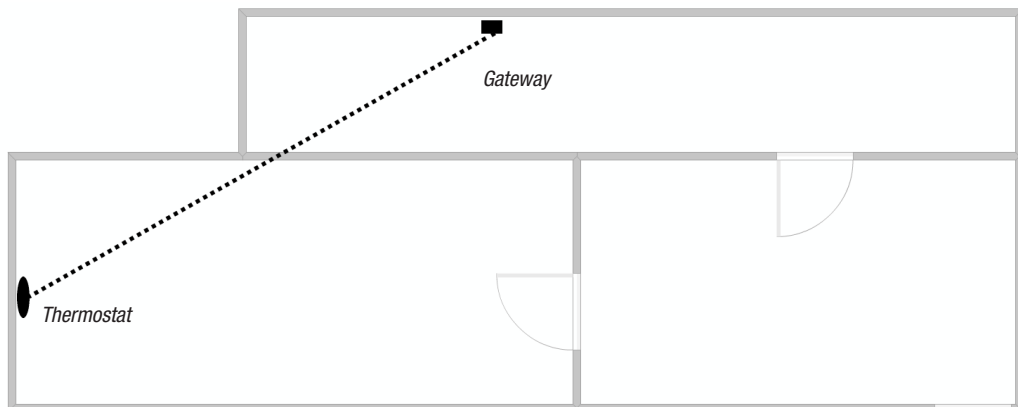
## Bad Positioning



The above image shows the path that the signal will travel to communicate between the 2 units. This is an example of badly positioned items for the following reasons.

- ✘ The signal travels between 2 external walls.

## Good Positioning

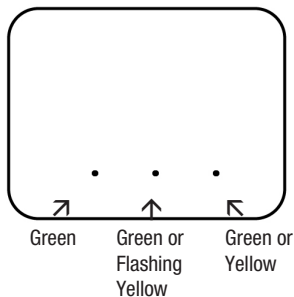


Simply by moving the gateway slightly to the right we have greatly improved the signal.

- ✓ The signal will now only travel through one internal wall

## Installation - Gateway

Plug the Gateway into a spare ethernet port on the router using the supplied cable, then plug the supplied power adapter into the back of the gateway and plug into a spare power outlet. Allow 30 seconds for the Gateway to power up. You should see a Green Power Light and a Flashing Amber or Green centre light. The Radio light may be Amber or Green, depending on whether other units are switched on.



If the Middle light is not on, then the device does not have a valid connection to our Web Servers. Try the following.

- Move our device to a different port. Some routers only have a single 10Mbps port. Try all the ports, especially port 1 and port 4.
- Do you have a valid internet connection? Check by plugging in another device.
- Unplug both the Router and the Gateway. Wait 30 seconds, then plug the router back in. Wait 2 minutes, then plug our Gateway back in.

# Installation - Thermostat

## Removal of your old Thermostat (if applicable)

Ensure that your electrical supply is isolated and then remove your old Room Thermostat from the wall. Before removing any wires, be sure to write down which wire goes to which connection. Note that the colour codes are not standard.

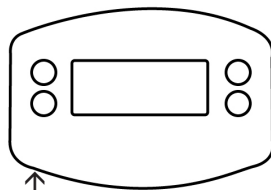
These should be

- Live or L
- Switch, Switched Live, Call, Call for Heat
- Neutral or N (optional)
- Earth or E (optional)

## Preparing your new Thermostat

Remove the two securing screws on the bottom edge of the thermostat and lift the thermostat off the wall mount.

Remove the Wiring cover from the wall mount by removing the two securing screws.



## Installing the Wall Mount

For reliable operation, the Thermostat must mount correctly on the wall mount. Ensuring this is correct starts with the correct fitting of the wall mount.

Wherever possible, please use our supplied fixing screws. If you have to use different screws, these must not protrude either above or to the sides of the surrounding wall mount plastic.

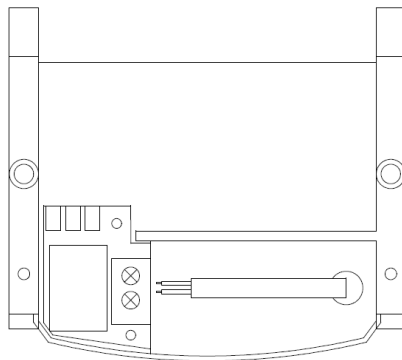
Incorrect mounting of the wall mount is likely to result in a poor connection between the Thermostat and the Wall mount. This will result in either no or intermittent operation of the Thermostat Relay

The wall mount is supplied with fixings suitable for a solid wall. If you are fixing to another type of wall, then different fixings may need to be obtained.

Using the wall mount as a template, mark the location of the two holes on the wall. For reference, the two holes are 75.5mm apart.

Drill suitable holes (6mm diameter for the wall plugs supplied), insert wall plugs and screw the wall mount to the wall.

**WARNING be aware of any buried cables before drilling.**

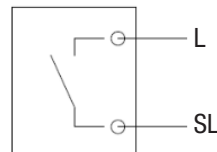


## Attaching the wall mount to a back box.

The unit has not been designed for back box mounting, care must be taken to ensure that the wall mount is level with the surrounding wall. This can usually be achieved by using several washers to pack out the wall mount where it mounts onto the backbox. Note that the 2nd wall mount screw hole will not line up with the back box screw hole. You will need to mount this screw into the wall next to the back box, using a wall plug if required. DO NOT drill the wall mount to use the 2nd back box screw hole.

## Wiring

Your new room thermostat is a two wire device. Therefore it only requires Live (L) and Switched Live (SL). It does not matter which wire is connected to which terminal. If you have a Neutral and/or an earth present, these are not required and should be made safe.



- **Ensure you do not break the earth continuity of the circuit.**
- **Ensure that the circuit is protected by a 3 amp fuse.**

## WARNING

Great care must be taken to ensure that your Room Thermostat is wired correctly. Incorrect wiring can be dangerous and could result in a blown fuse and / or a damaged Room Thermostat. Inspire Home Automation will not accept any liability whatsoever for damage caused to your central heating system and/or electrical system as a result of the incorrect wiring of the Thermostat. Also damage to the Thermostat due to incorrect wiring is not covered by your guarantee. **If you are in any doubt whatsoever about the wiring, we strongly recommend that you consult a qualified electrician or heating engineer.**

Prepare the two cables by stripping 5mm off the wire ends. Then insert the two wires into the connector and tighten the connector screws. Ensure the wires are securely in place by slightly tugging on them. Also make sure that no bare wire is showing outside the connector block. If it is, remove the wire and remedy the issue. Finally, screw the Wiring Cover over the wall mount using the supplied screws.

Install the supplied batteries into the back of the room thermostat, and ensure that the display is illuminated.

It is easiest to start the two securing screws off before placing it on the wall, however do ensure that these screws do not protrude inside the room thermostat.

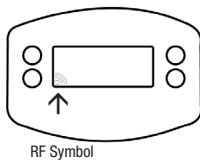
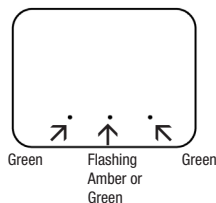
Carefully locate the Room Thermostat over the wall mount, taking great care not to damage the spring pins on the back. The room thermostat should slide over the wall mount with little effort. If it does not, do not force it, but check the following then try again

- Securing screws do not protrude into the thermostat
- Wiring cover is located correctly
- Wall mount screws are the correct size

Hold the room thermostat in place and lightly tighten the screws underneath to secure the unit – these screws only need the lightest of pressure and must not be over tightened

## Testing the system

You should have the following.



If there is no RF link displayed on the Thermostat, and it was switched on before the Gateway, it may take up to 10 minutes to link up. To avoid waiting, ensure the Gateway is plugged in, then reset the Thermostat by pressing and holding all four buttons for 5 seconds. The unit should reset and connect within 30 seconds.

### Testing the Central Heating

On the Thermostat, repeatedly press the 'S' key to cycle between the modes until 'ON' is displayed. Then press and hold the '+' key to raise the target temperature several degrees above the room temperature, eg 25 degrees. Check that the boiler has fired up and any zone valves have moved to their appropriate positions. Press the 'S' key again on the Thermostat to switch it off.

**Please leave this installation manual with the user.**

## Pairing

Your units were all pre paired before they left the factory. If they do not connect up correctly, and you have waited for at least 10 minutes, the most likely reason is radio range, see the section on 'Radio Signal' above.

In the unlikely event that you need to pair the units to each other:

To Pair the Thermostat to the Internet Gateway.

- Press the pairing button on the back of the Gateway, (The RF light will flash amber)
- Press and hold the M & S keys on the Thermostat for 5 seconds, the RF symbol, bottom left should start to flash.



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