

HIVE



Hive Thermostat



Here's what you'll need to install Hive Active Heating

- A working gas central heating system
- An existing broadband connection with a spare Ethernet port

Installation order

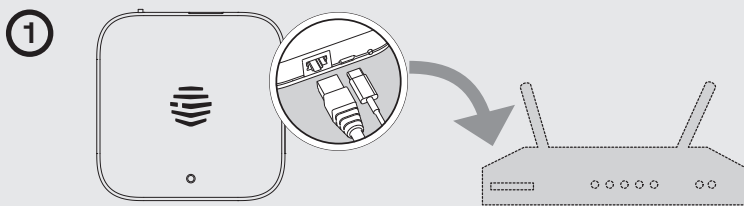
To install this Hive thermostat, you need to complete 6 steps. For the quickest set-up, install them in this order:

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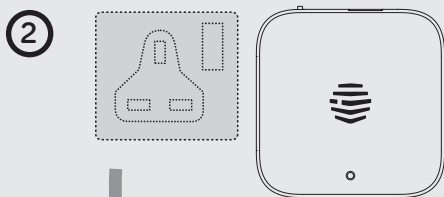
1 The Hive Hub

1a Connecting the Hub:

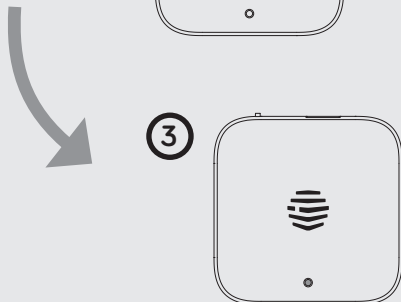
To connect the Hub, there must be a broadband connection with a spare network port and a power socket must be nearby. Once this has been located, connect the Hub as follows:



Connect the Hub to the household's broadband router using the network cable provided.



Fit the power cable into the Hub and plug it into a power socket.



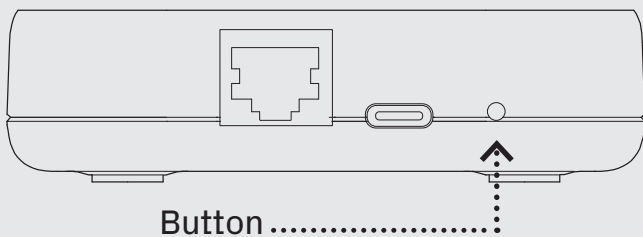
The Hub should now flash green. If the light goes to solid GREEN then it has found the Hive network and it is updating to the latest Firmware version. If there is no update available, the Hub will go straight into pairing mode and flash AMBER. In either scenario, move on to stage 2.

1b If the customer already has a Hub

If the customer already has a Hive Hub, just put it into pairing mode. To do this press, the button at the rear of the Hub for 1 second and release.

The light should now flash AMBER showing that it is in pairing mode. When you see this, move on to stage 2.

If the light does not flash AMBER, look at the lights and meanings table on page 5.



1c Where to locate the Hub in the home

Don't place the Hub directly on the floor, in an enclosed area such as a cupboard, or near large metal objects.

Each Hive device has a range of about 10 meters in every direction, but this will be severely impacted by the thickness of the walls between devices.

Try to avoid placing the Hub in the kitchen as they are often full of other electronic devices that can disrupt your signal.

Also avoid placing the Hub near mirrors or fish tanks as this can also disrupt the signal.

After the Firmware has downloaded, the light sequence should change from solid GREEN to flashing AMBER. This means that the Hub is ready to pair with the thermostat and other Hive devices.

If no lights are displayed immediately after the Hub has been turned on, check all cables are connected and the power socket works. If the problem still persists, contact Hive Technical Support.

1d Hub lights and what they mean

| Colour | Pattern | What does this mean? | Notes |
|--------------------------|-------------------|---|--|
| GREEN | Flashing | Installation and start-up. The Hub is attempting to connect to the Hive servers and update itself. | Do not disconnect the Hub. If flashing continues after 15 minutes, contact Hive Technical Support to confirm that it has connected. |
| AMBER | Flashing | Installation. The Hub is actively seeking to connect to the Receiver and thermostat. | The Hub will search for devices for 2 hours at a time. It will then pause, and show solid AMBER. |
| AMBER | Solid | Installation. The Hub has paused its search for other devices. | To restart the search, simply turn the Hub off then on. The AMBER flashing light should then return. |
| GREEN | Solid | Normal operation. The Hub is connected. | This happens once the Hub, Receiver and thermostat are all installed and synchronised. |
| RED | Solid or Flashing | Error. The Hub has failed to connect to the Hive servers. | Check that the Hub is plugged in and that the broadband is working. If the problem persists, call Technical Support. |
| GREEN AND RED | Alternating | Error. The Hub has an internet connection but is not able to connect to the Hive platform. | This is most likely because there is parent control or a security layer on the local internet connection. Ask the customer to change the router's settings. If the problem persists, call Technical Support. |
| BLUE [Nano3 Hub only] | Flashing | Installation. The Hub is actively seeking to connect to a phone's Bluetooth® connection. | This method of connection is for the customer's app only. Do not connect the Hub via Wi-Fi®. |
| BLUE [Nano3 Hub only] | Solid | Installation. The Hub is connected to the customer's handset via Bluetooth. | This method of connection is for the customer's app only. Do not connect the Hub via Wi-Fi®. |

2 Mount the Receiver

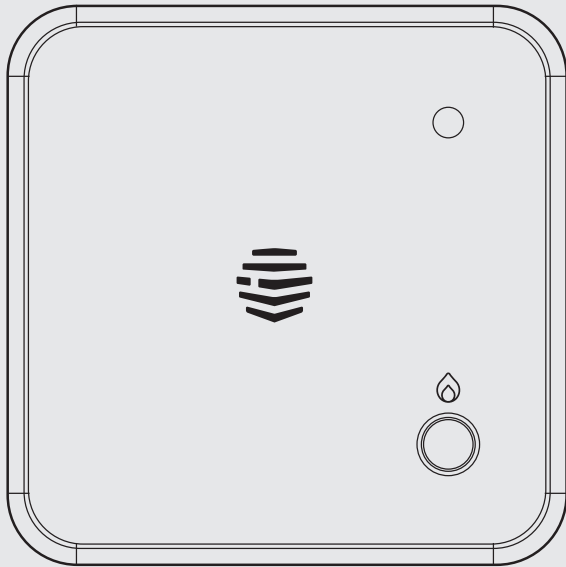
Important information: Before you get started

- Before fitting, isolate the mains electricity supply to the central heating system. Confirm it is isolated and secured in the off position for the duration of the installation. Remember to always follow appropriate safe electrical isolation procedures and test to confirm that the supply is isolated before touching any electrical connections.
- This product should only be installed by an electrically skilled person competent in the installation of electrical accessories.
- The Hive Receiver is double insulated, so it doesn't need an earth connection. You'll find a tether on the backplate to secure an earth wire if needed.
- This product is designed for fixed wiring installation only. It must be supplied via a switched fused spur with a minimum contact separation of 3mm (both live and neutral) and fitted with a 3A fuse.
- Replacing existing controls: If there's an existing single zone timer or wireless Receiver, you should remove it completely and wire in the Hive Receiver in its place. If needed, you can use a stand-off plate (SP, supplied separately) to create space to accommodate existing wiring or use a decoration plate (DP) when replacing a larger controller.
- Replacing an existing thermostat: If you're replacing an existing wired thermostat, you should ensure that the pre-existing wires and connections are made safe. This can be achieved by disconnecting or bridging out the wired thermostat in the wiring centre or boiler. Where cables are left at the wireless thermostat position, they should be housed and terminated within an enclosure to prevent access. If you're replacing an existing wireless thermostat, decommission it by detaching it from the wall and removing its batteries.
- The Receiver should be placed near the boiler or central heating system, and at least 30cm from large metal objects to prevent interference. Avoid buried cables and pipes.

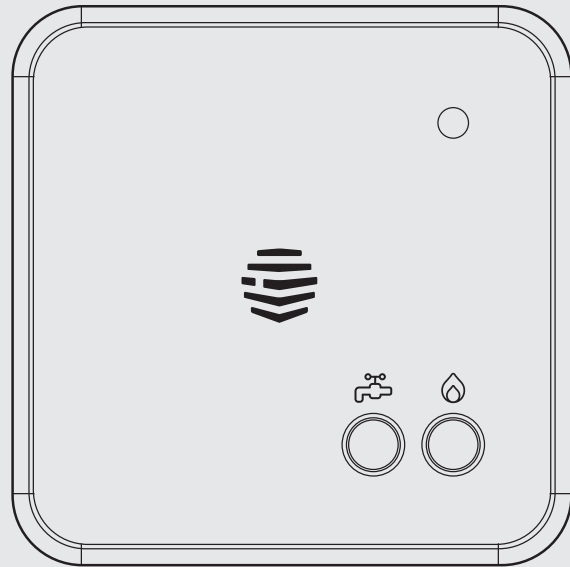
Installing the correct Receiver

Hive Active Heating has two types of Receivers:

Single channel Receiver for combi boilers and additional plumbed heating zones.

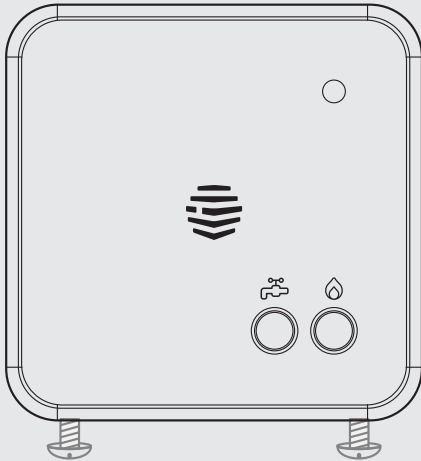


Dual channel Receiver for conventional boilers with hot water tanks.



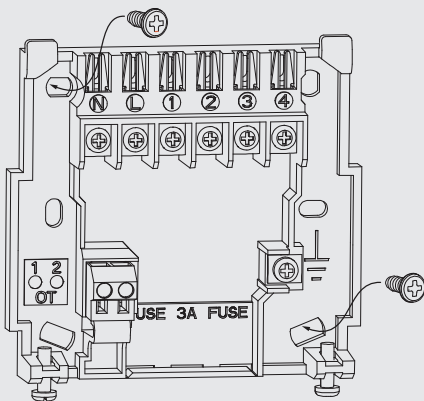
Now you've chosen the correct Receiver and found a suitable location, mount the backplate as follows:

1



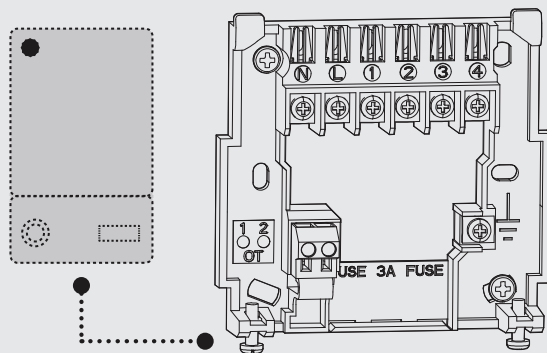
Loosen the screws on the underside of the Receiver and remove the backplate by pulling the bottom of it away from the front panel.

2



Fix the backplate to the wall with the terminals at the top.

3



Run cable from the boiler or wiring centre (if required), then continue to the next section to wire up the backplate.

Note: if installing in OpenTherm mode ensure you use separate cables for the low/high voltage connections. These should not share the same shrouding.

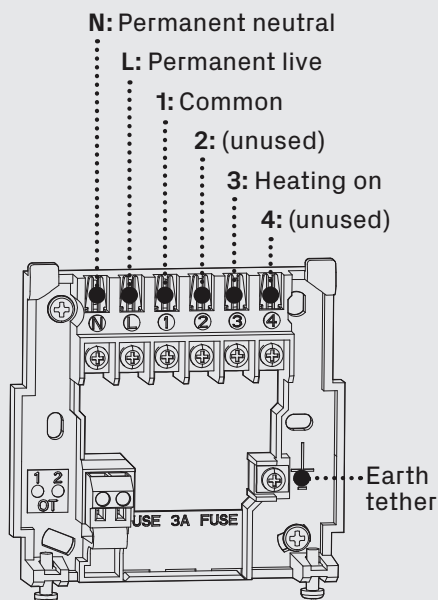
3 Wire the Receiver

Combi Boilers: Getting the single channel Receiver in the correct mode

- The new Receiver (Model OTR1) supports both standard Relay and OpenTherm operating modes.
- Many modern combi boilers, including the brands listed below, support OpenTherm.
1. Ideal 2. Baxi 3. Ariston 4. Main 5. Vokera 6. Atag 7. Ferroli
- If unsure, check the manufacturer's instructions, usually found in the wiring or external controls section.

3a Single channel standard relay wiring:

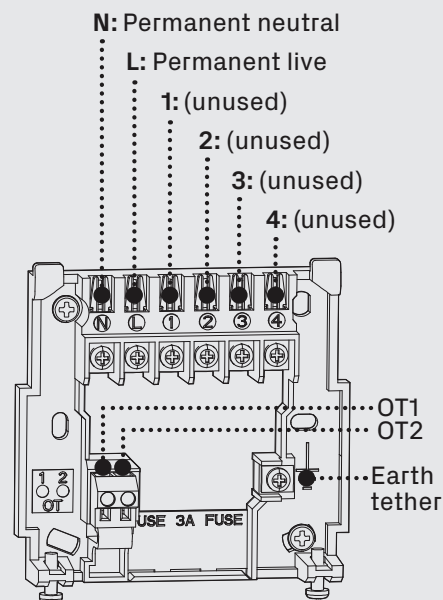
The default switch position on the Receiver is relay mode (position 2). Use the diagram to wire the system.



NOTE: Remove any existing controls or programmers and ensure pre-existing wires or connections are made safe.

3b OpenTherm wiring:

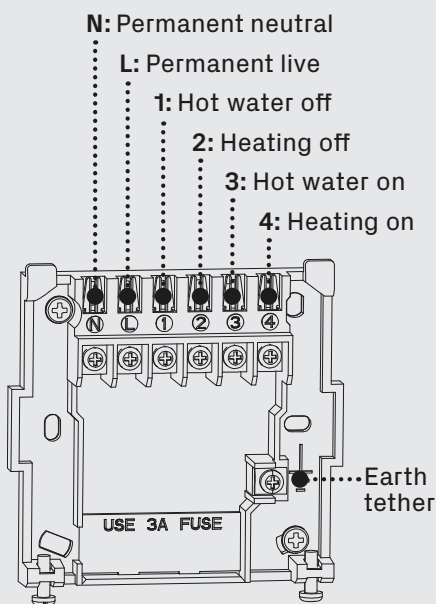
Move the switch to position 1 to put the Receiver in OpenTherm mode. Do this before using the diagram to wire the system.



NOTE: If installing in OpenTherm mode, ensure you use separate cables for the low/high voltage connections. These should not share the same shrouding.

3c Dual channel Receiver wiring:

Dual channel Receivers do not have a switch, so you do not need to worry about operating modes.



NOTE: Remove any existing controls or programmers and ensure pre-existing wires or connections are made safe.

S-Plan wiring: (typically has two, two-port valves)

If there is an existing room thermostat, this may need to be bypassed or linked out. If you need to link it out, this can either be done in the wiring centre or at the thermostat, but best practice would always be at the wiring centre. A direct feed from the central heating on terminal needs to communicate with the brown of the two-port valve.

Y-Plan wiring: (typically has a single three-port valve)

If there is an existing room thermostat, this may need to be bypassed or linked out. If you need to link it out, this can either be done in the wiring centre or at the thermostat, but best practice would always be at the wiring centre. A direct feed from the central heating on terminal needs to communicate with the white of the three-port valve.

3d Multizone systems – Important things to know

- 1 If you're installing Hive on multiple zones, you'll need to install all the Receivers before testing the boiler and pairing the thermostats (stages 4 and 5).
- 2 Hive Multizone can support an unlimited amount of heating and hot water zones.
- 3 OpenTherm is not currently supported on central heating systems with multiple zones. If the boiler is OpenTherm compliant and is configured with a plumbed zone system, please ensure all Receivers are set to standard relay mode (the default switch position: 2).
- 4 If installing a dual channel Receiver, the chosen central heating zone will need to be wired into the dual channel Receiver, and this zone will control the hot water.

Hot tips:

Ensure you complete stage 4 (page 15) to confirm Receivers are installed and operating the heating system correctly.

Label the Receivers once you have installed them so that it's clear which Receiver controls which zone.

When you are pairing the Receivers to the thermostats, (stage 5) ensure that you pair the Receivers once at a time so you can identify which thermostat is paired to which Receiver.

3e Gravity-fed and pumped systems

Gravity-fed and part-pumped systems are wired differently to standard boilers. With these, the hot water relay switches on the boiler, whilst the heating relay opens a valve, operates a pump, or both, to divert hot water to the heating. If you are installing into a gravity-fed or part pumped system, complete the wiring and then switch the Hive Receiver to 'gravity-fed' mode as follows:

- 1 Switch off the power to the boiler and Receiver.
- 2 Wait at least 5 seconds, then switch the boiler and Receiver back on.
- 3 Press and hold the hot water button for at least 10 seconds.

The Receiver status light will flash BLUE for 3 seconds when entering 'gravity-fed' mode. Or GREEN for 'fully pumped' mode. Fully pumped mode is the default for new devices.



3f Stand-alone installations (without Hub)

For Hive Active Heating a Hub, a Receiver and a thermostat are installed. When this service hasn't been bought, the thermostat and Receiver can also be installed without a Hub. This is known as 'stand-alone' mode.


Follow the steps in the next section if the thermostat and Receiver are to be installed without a Hub in 'stand-alone' mode.

In 'stand-alone' mode the thermostat acts as a standard wireless thermostat without the remote heating control features and functionality of Hive Heating.

Activating stand-alone mode



- 1 Remove the batteries from the thermostat.
- 2 Switch off the boiler and Receiver.
- 3 Wait at least 5 seconds, then turn the boiler and Receiver back on.
The Receiver's status light will begin to flash AMBER.
- 4 Press and hold the heating button for at least 10 seconds until the status light begins to flash WHITE. The Receiver is now in 'stand-alone' mode and is searching for a thermostat.
- 5 Insert the batteries into the thermostat, press and hold down the menu  and back buttons  on the thermostat and follow the factory reset instructions on screen. After about 10 seconds, 'Welcome' and 'Searching...' will be displayed on screen. If the thermostat shows 'REJOIN' then try steps 1 and 5 again.





To switch back to 'Connected mode'

- A. Switch the Hub off and then on again. If it begins to flash AMBER continue on to step B.
If all the lights go out and the Hub does not flash AMBER.
- B. Press the button on the back of the Hub for 1 second. The Hub should now begin to flash AMBER.
- C. Now follow steps 1–5 on **page 12** but note that the lights will be different. At step 3 the Receiver's status light will initially flash WHITE/PINK and in step 4 it will change to AMBER (for Connected mode) once you have held the  Central heating button down.
- D. At any time, you can check what mode the Receiver is set to by switching it off then on. When power is restored, the status light will flash for 5 seconds, AMBER for Hive Active Heating, WHITE for 'stand-alone' mode.

3g Receiver lights and what they mean

The Receiver has lights on its front panel to show what it's doing.


A single channel Receiver has two lights, Status and  Central heating. A dual channel Receiver has an additional light for  hot water. This is what the lights mean:

| Light | Colour | Pattern | Meaning | Notes |
|--|--------|----------|--|--|
| Central Heating  | GREEN | Solid | Heating is on. | |
| Central Heating  | GREEN | Flashing | Commands queued. The Receiver has received 2 or more commands to switch the boiler on or off within 1 minute. Or, Heating Boost mode with target temperature lower than room temperature. | The Hive Receiver protects the boiler from damage that may occur if it's switched on and off very quickly. Once the boiler has been switched on (or off), it will not change state again for 1 minute as a protective measure. |
| Hot Water  | GREEN | Solid | Hot water is on. | This light is only present on dual channel Receivers. |
| Hot Water  | GREEN | Flashing | Commands queued. The Receiver has received 2 or more commands to switch the boiler on or off within 1 minute. | See 'Central heating'. |
| Status | GREEN | Solid | Normal operation. The Receiver is connected to the rest of the Hive system and operating normally. | |
| Status | BLUE | Solid | The system is in gravity-fed mode and is connected to the rest of the Hive system. | See gravity-fed mode section of this manual on page 11 . Gravity-fed mode is only applicable to dual channel Receivers. |

| Light | Colour | Pattern | Meaning | Notes |
|--------|----------------|-----------------|--|---|
| Status | AMBER | Flashing | Installation. The Receiver is trying to connect to other Hive devices. | The Receiver will search for devices for 40 minutes at a time. |
| Status | WHITE | Flashing | The Receiver is in stand-alone mode and is actively seeking to connect to a Hive thermostat. | The Receiver will search for a thermostat for 40 minutes. If no thermostat is found within this time it will stop searching and the status light will turn solid WHITE. |
| Status | AMBER or WHITE | Solid | Installation. The Receiver has paused its search for other devices. | The Receiver will search for a thermostat for 40 minutes. If no thermostat is found within this time it will stop searching and the status light will turn solid WHITE. |
| Status | RED | Solid | Error. The Receiver has lost its wireless connection to the thermostat. | Whilst in this state heating and hot water will default to off. They can be switched on manually by pressing the 'heating' and 'hot water' buttons on the Receiver (hot water only available on dual channel Receivers). For help call Hive Technical Support. |
| Status | RED | Single Flashing | The Hive Receiver has been set to OpenTherm mode , but no OpenTherm data is being returned from the boiler. | Ensure the boiler is powered up. If it is, please verify the Receiver's wiring is correct using the diagram above. However, if the boiler doesn't support OpenTherm, revert the switch inside the Receiver to Relay mode [2] and check wiring. |
| Status | BLUE | Flashing | If the OTR1 flashes blue after being reset from 'stand-alone' mode, reset it again until it flashes amber. | Blue flashing is an unsupported feature. Ensure the Hub is not in pairing mode (flashing amber) if the OTR1 is flashing blue. |
| Status | BLUE | Solid | If the OTR1 turns solid blue, please contact support for assistance. | Solid Blue is an unsupported feature. If the OTR1 turns solid blue, please contact support for assistance. |

4 Test the Boiler

After completing the wiring of the backplate, check that the boiler fires with a demand from Hive:

- ① Visually check the wiring to confirm that the connections have been carried out correctly.
- ② For single channel Receivers, ensure that the switch position is in the correct operating mode (if the switch is in the wrong position the boiler will not fire up).
- ③ Confirm that the Receiver's front panel is secured in place, and it is safe to commission the boiler.
- ④ Restore power to the central heating system and test the boiler connection by pressing the  Central heating button. The central heating should come on and the boiler should fire up.

For dual channel Receivers: do the same test for the hot water button.

- ⑤ When you are confident the connection between the Receiver and the boiler is working, press the central heating button again to cancel the boiler demand.
- ⑥ After completing the test, leave the Receiver with the status light flashing AMBER, (this means it's ready to connect to the Hub and thermostat) and move on to stage 5.

For multizone systems, complete steps 1–5 for all Receivers.

5 Setting up the Thermostat

5a Selecting a location for the thermostat

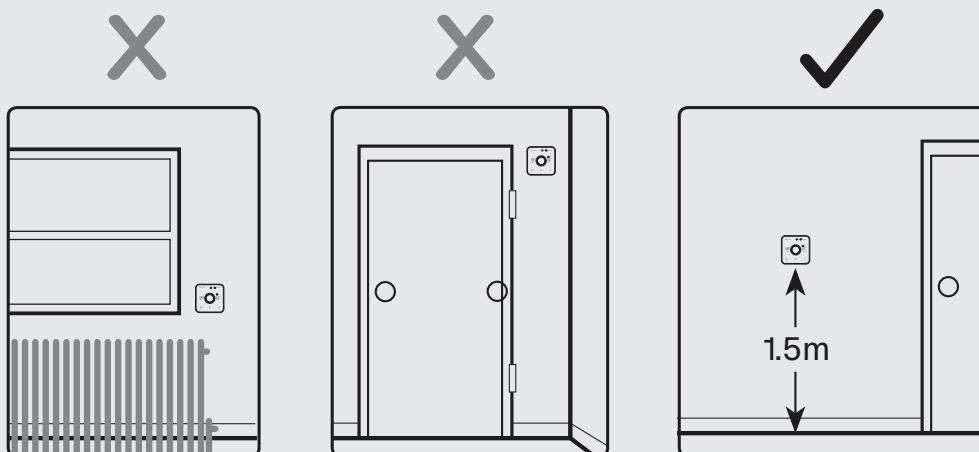
The thermostat should be fixed to an internal wall, 1.5m from the floor and away from heat sources that could affect its operation, such as radiators and areas in direct sunlight. To make accurate temperature readings, the thermostat needs a free flow of air, so make sure it's installed in an area not covered by curtains or similar objects.

The thermostat should not be installed in the same room as a radiator that's controlled by a thermostatic radiator valve (TRV). Installing the two in the same room may result in the central heating being permanently on.

The maximum distance between the thermostat, Hub and Receiver is 10 metres. Thick walls and obstructions will decrease that working distance substantially. Keep your thermostat, Hub and other devices at least 1 metre from sources of electrical interference, such as TVs or speakers.

Hot tips:

Hive Active plugs boost the Hive network signal. If the devices are far apart or you have thick walls, consider adding some plugs to improve the signal.



5b Wall mounting the thermostat



Remove the backplate of the thermostat by pressing the lever at the bottom and pulling away from the front of the device.

Once you've found a suitable location, fix the backplate to the wall using the appropriate fixings. The backplate is designed for 3.5mm/size 6 or size 8 screws. Be careful to avoid any cables and pipes that may be buried in the wall.

Note: The backplate is designed to mount directly onto a single gang back box, if available.

5c Pairing with the Hub and Receiver (single zone)

After restoring power to the central heating system, the status light on the Receiver should begin to flash AMBER as it looks for a thermostat.

Before inserting the batteries into the thermostat, check that the light on the Hub is also flashing AMBER indicating it is in pairing mode. If it is displaying a different state, you can hold the button on the back of the Hub for 1 second to put it into pairing mode.

Once both the Hub and Receiver are both in pairing mode, follow the steps below.

1

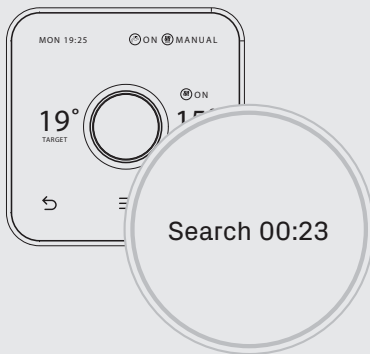


↑
Press to open

Insert the 4x AA batteries provided.

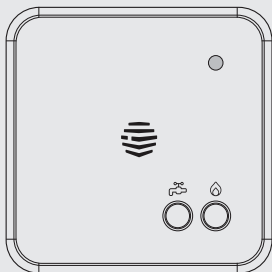
If you are installing Hive Multizone only insert batteries into one thermostat at a time.

2



The thermostat display will show 'Search' – meaning it's searching for the Hub and Receiver. A timer will show how long the thermostat has been searching. If this lasts for longer than five minutes, move the thermostat closer to the Receiver. Ensure the Hub is flashing amber; if not, press the button on the Hub briefly to start device pairing.

3



The Receiver will display a solid GREEN status light or a BLUE light if it's in gravity-fed mode.

If installing Hive Multizone the status light will go GREEN on one Receiver only. This is correct as the batteries should only be inserted into one thermostat at a time.

4



The thermostat will then go onto the 'Welcome' screen and a solid GREEN light will appear on the Hub.

5d Pairing with the Hub and Receiver (multizone):

If you haven't done so already, install all additional Receivers and power them up. Their status lights should be double flashing AMBER.

It is important for each heating zone to pair with the Hub one zone at a time. Do this by following the steps below:

- ① Press the button at the rear of the Hub for 1 second and release it. The light should start to flash AMBER.
- ② Now add the batteries to one new thermostat.
- ③ Wait until the thermostat display stops showing 'Search'. Now check that the status light on one of the Receivers that was previously flashing AMBER has turned solid GREEN.
- ④ If there are still more zones to install, repeat steps 2–3.
- ⑤ When all zones have been added, press the button on the rear of the Hub to exit from pairing mode. The light will stop flashing.

5e Final steps

Installation is almost complete. All that's left to do is:

- ① Hook the thermostat onto the backplate and click it in place.
- ② Remove the screen protector from the front of the thermostat.
- ③ Confirm the system is properly configured by checking:
 - a. The thermostat is displaying room temperature
 - b. The Receiver's status light is solid GREEN or solid BLUE if it's a dual channel system and set to gravity fed mode. If it's a single channel OTR1 and its solid blue, please contact Hive support.
 - c. The Hub has solid GREEN lights.

If the system is not properly configured, it will not be possible to control your thermostat remotely.

6 Hand over to the customer

Now that you have completed the installation, instruct the customer to download the Hive app so they can link the Hub and devices to their Hive account.

The steps they will need to complete are:

- 1 Download the Hive app.
- 2 Log in using the email address and password they registered with.
OR if they don't already have a Hive account, they can tap 'Create Account' on the app login screen or create one at hivehome.com/register. Once they've created their account then they will need to log in.
- 3 Select 'Hub' then enter the Hub ID when prompted. This is the ABC-123 formatted number on the underside of the Hub.
- 4 Once the Hub ID has been entered, set-up is complete, and they will land on the Hive dashboard.

Can we help?

You can view our handy how-to-use videos along with hints and tips at hivehome.com/support

If for any reason you need to return your Hive Hub, simply return your box and its contents to the retailer. Any return is subject to the retailer's refund policy so please don't forget to check the retailer's refund policy too.

Need help?

If you're a qualified professional installing Hive Active Heating and need any help during the installation process, just visit our technical support page at hivehome.com/installation

If you need further help, you can contact our support team at hivehome.com/contact-us