



Making heating smart, finally.

# Table of Contents

1. Kit Contents
2. Reference Diagram
3. Installation Prep
  - a. Installing the Adia App
  - b. Planning to install with Adia Thermal
4. Adia Hub Setup
  - a. Wet Connections & Wiring
  - b. Connecting the Hub to WiFi
  - c. Pairing the hub to the Adia App
5. Modbus Connectivity
6. The Adia App
  - a. Adding Rooms
  - b. Adding Devices
    - i. Flow Balancing Valve Placement
    - ii. Ambient Temperature Sensor Placement
  - c. Commissioning
    - i. Heating Set Points
    - ii. Heating Offsets
    - iii. Hot Water
    - iv. Customer Handover

# Overview

Adia Thermal is a smart control system that helps your heat pump, hot water, and radiators work together as one.

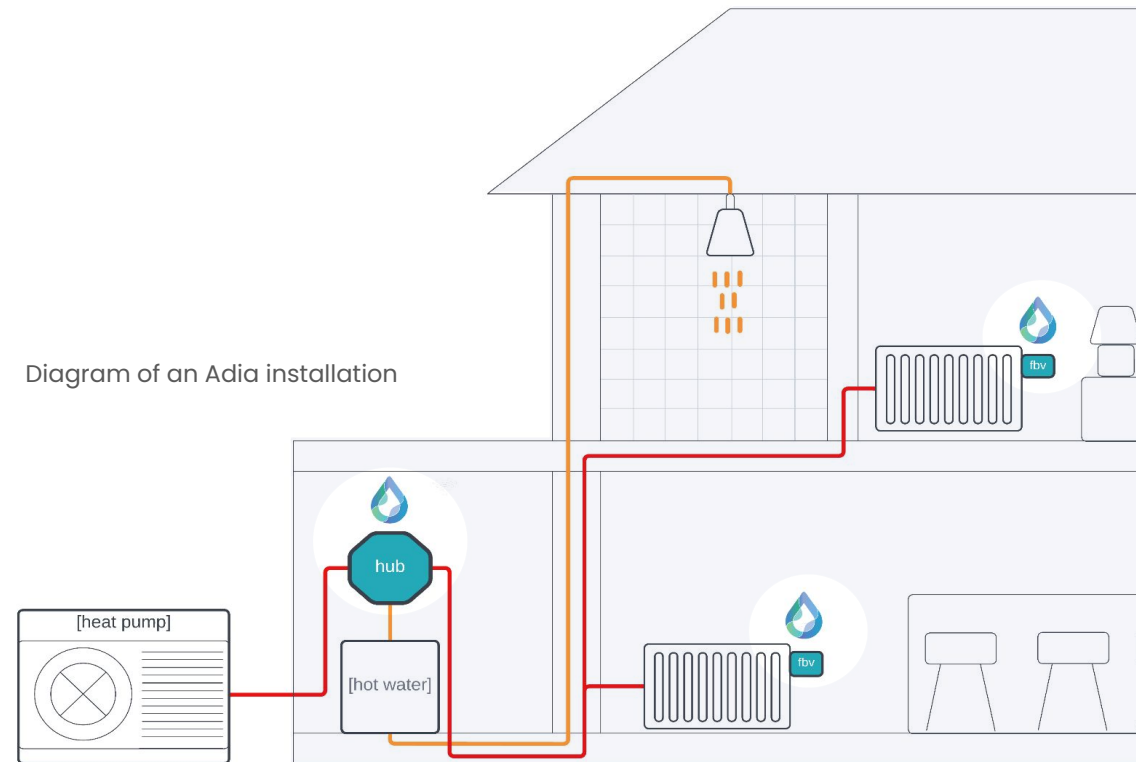
The system includes the Adia Hub and Flow Balancing Valves, which are installed at the same time as your heat pump. These components fit neatly with your existing radiators and pipework, so no major changes are needed.

Once installed, Adia Thermal automatically measures how each room in your home loses heat. It then adjusts the heating system to make sure every room gets the right level of warmth while keeping the heat pump running efficiently.

This means your home is evenly heated, your heat pump performs at its best, and you gain room-by-room control without extra effort.



Above: Adia Hub, Flow Balancing Valves, and Ambient Temperature Sensors



# Key Components

Adia Thermal has three main components for installation.

## Adia Hub

The Adia Hub is a pre-plumbed interface between the heat pump and the existing heating system, as well as the brains of the unit. This will be installed by your installer.

## Flow Balancing Valve (FBV)

A Flow Balancing Valve (FBV) is a small device that attaches to the existing TRV valve body of each radiator, in place of the usual radiator valve head. Its job is to control how much hot water flows through the radiator. By opening or closing slightly, it makes sure the radiator gives out just the right amount of heat for the room.

## Ambient Temperature Sensor (ATS)

These sensors help the system understand the exact temperature in every space, so it can keep your home comfortable and make sure the heating runs as efficiently as possible.



# The Adia App

# Installing the Adia App

The Adia App allows you to control your Adia products, change your heating and hot water schedule, and set the temperatures for each room in your house.

It is available on the Google Play store and Apple App stores. Scan the relevant QR code to the right.

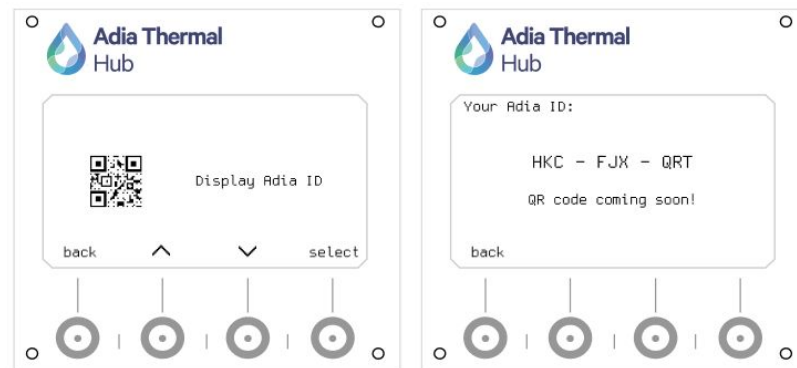
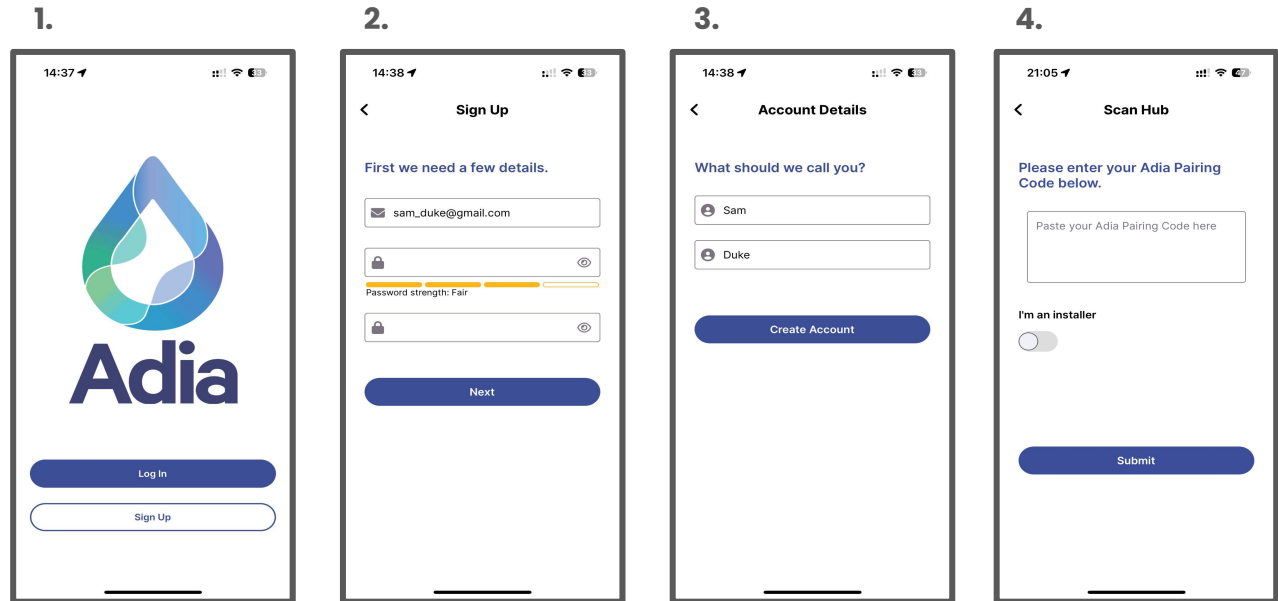


# Pairing the Adia Hub with the Adia App

**Step 1:** Once you have installed the app, you can create an account and reach the 'Scan Hub' page.

**Step 2:**

On the hub, press the button labeled 'Adia ID'. The Hub and QR code will be shown on this page, and you can simply scan the QR code with the app to pair your phone with the hub.



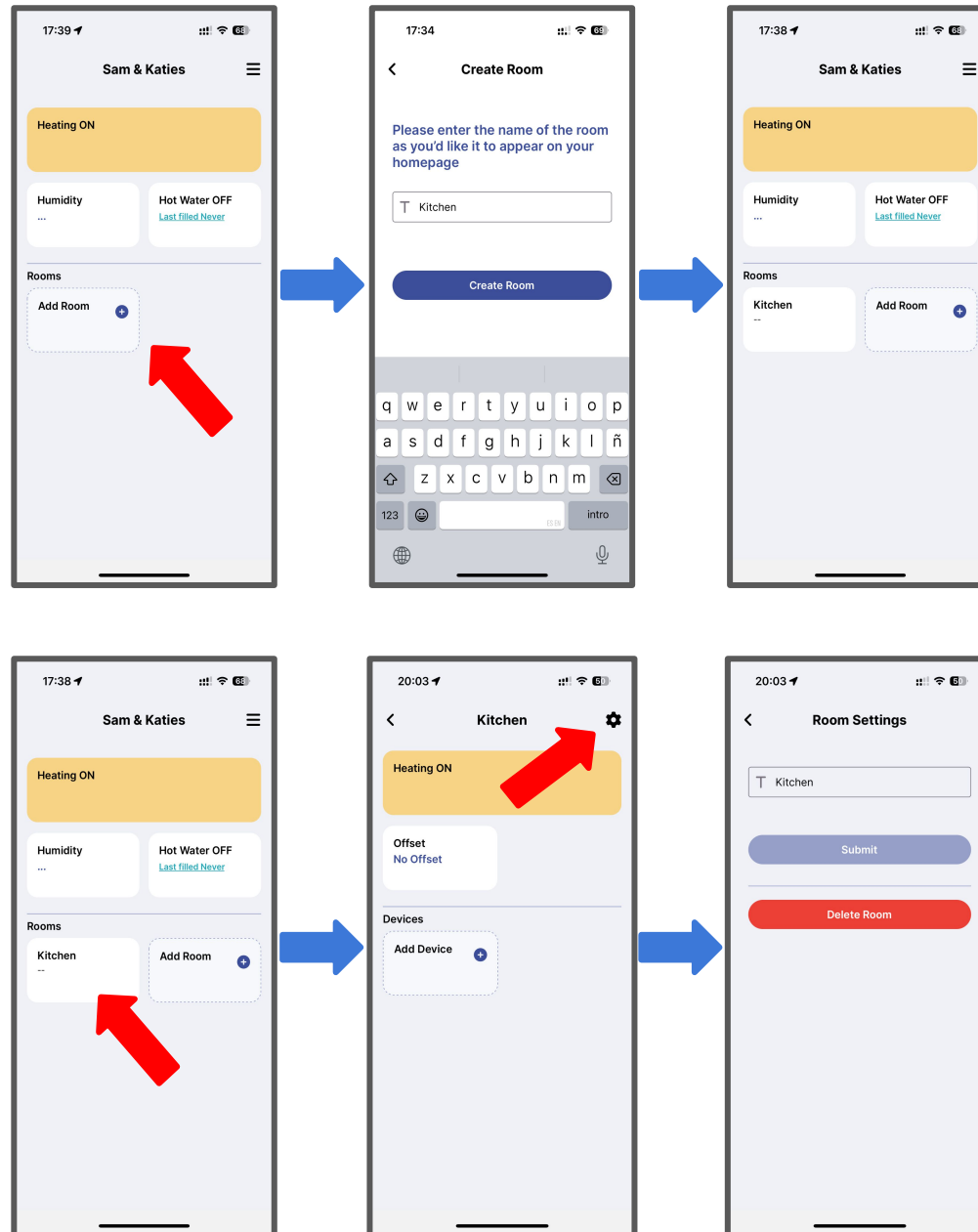
# Adia App: Adding Rooms

- Adia allows for room by room control of heating, so every heated room in the house should be added to the app so that it can be controlled.
- From the homepage, click 'Add Room' and add a name to create the room. Once the room is created it will appear on the homepage.
- Only create one room per heated space - one room can have multiple radiators.



*Adia works best when open-plan spaces are treated as one room.*

- Once a room has been created, you can edit the name or delete it by pressing the cog on the room page.



# Setting Your Heating Schedule

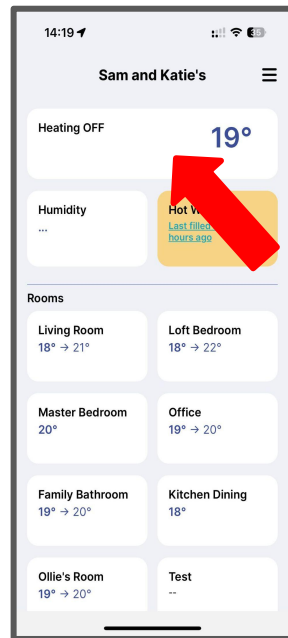
First, define the house temperature set points. These represent the **default** temperature that all rooms try to achieve at various points throughout the day.

Temperature offsets can be added through the Room screens later.

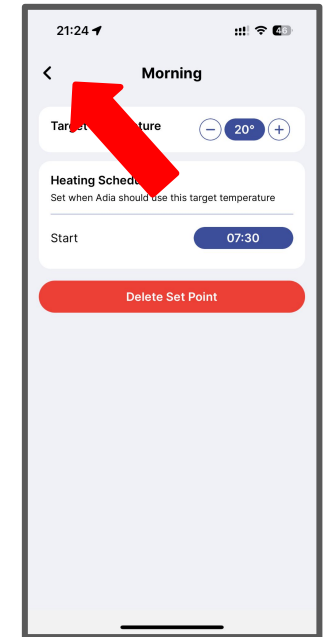
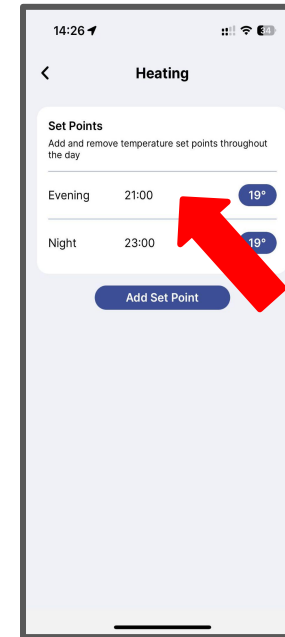
Access the Set Point menu by tapping the 'Heating' card at the top of the home page.

When stepping up, Adia will try to reach the Set Point temperature by the time of the higher Set Point.

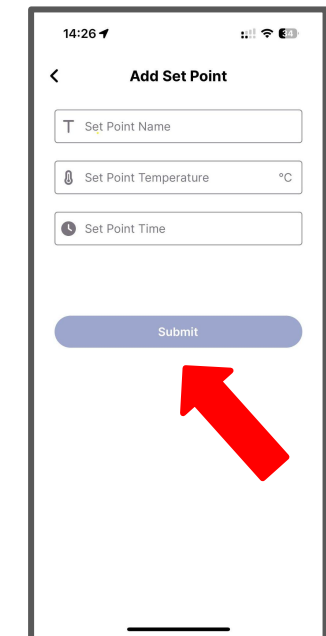
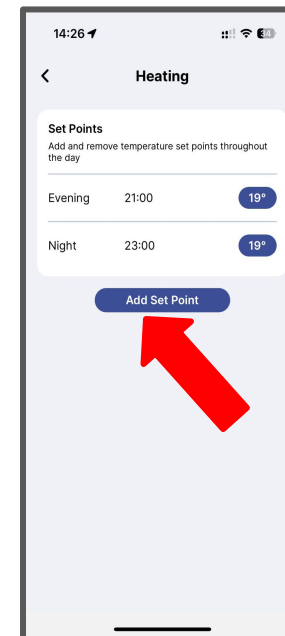
When stepping down, Adia will stop heating the home at the time of the lower Set Point.



Edit a Set Point



Add a new Set Point



# Room by Room Control

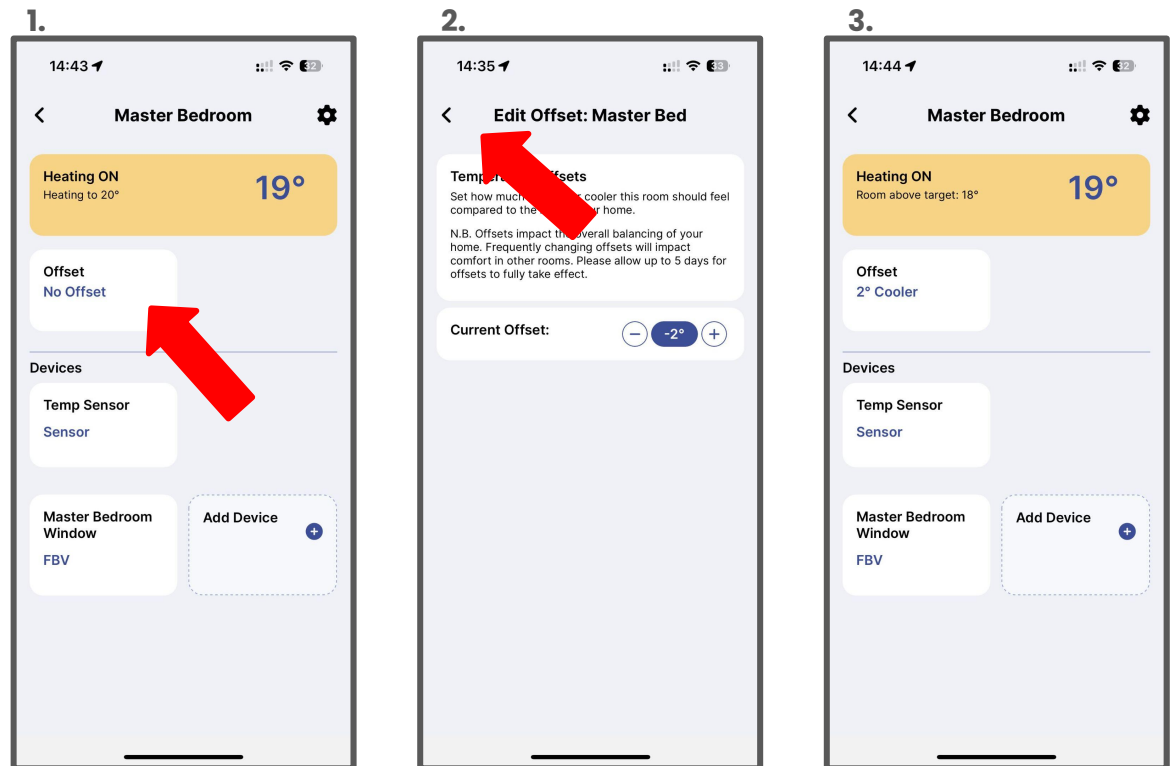
Adia FBVs automatic balancing can finetune comfort room by room to unlock zoned heating without negatively impacting system volume and performance.

If a customer desires a lower temperature in their bedroom, or a higher temperature in their bathroom, this can be achieved with the 'Offset' setting on the room page.

Offsets are constant across all heating schedules and set points.



*Changing offsets will restart Adia's balancing process, so it is important not to change them too often for a consistent comfort experience.*



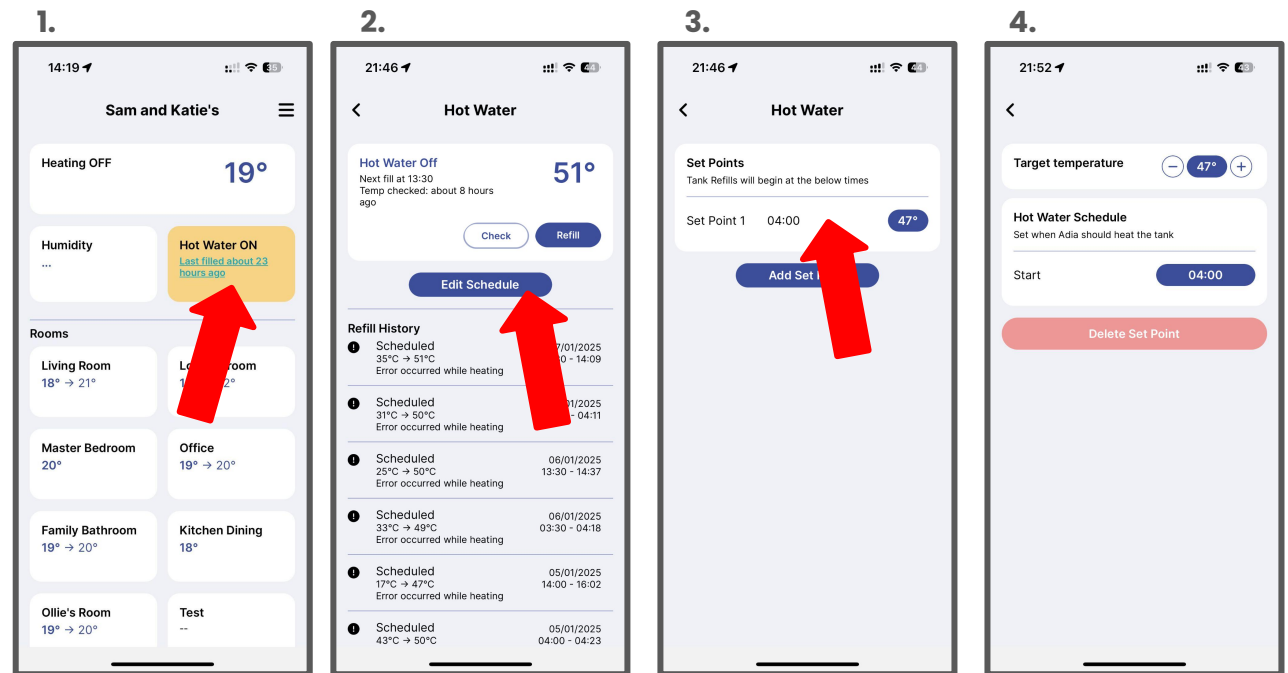
# Hot Water

The Adia App controls DHW scheduling, both the times and the target cylinder temperature.

This allows customers with smart tariffs to heat their tanks to higher temperatures when energy is cheapest, and to do more modest refills at other times.

To access the domestic hot water settings, tap the 'Hot Water' card on the homepage and press 'Edit Schedule' on the 'Hot Water' page.


From here Set Points can be edited and added as with Heating.

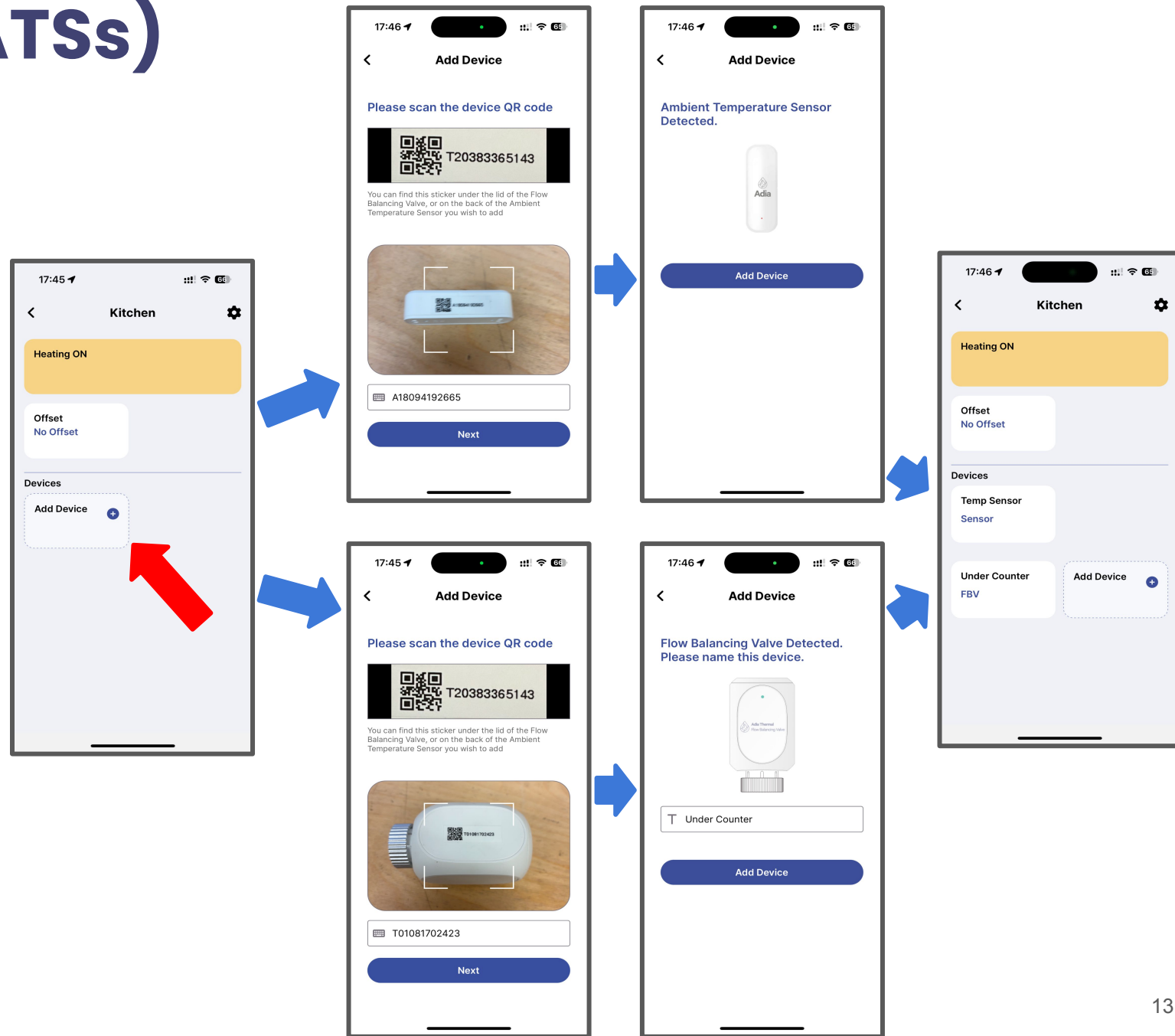


N.B. Adia does not need a tank sensor for DHW (though can be installed with one). Adia measures the secondary return temperature at the hub and stops heating the tank when this reaches the target temperature.

# The Adia App

# Adia App: Adding Devices (FBVs and ATs)


- Adding devices to rooms is simple in the Adia app. Simply click the 'Add Device' card to start.
  - You can then scan the QR code or enter the device pairing code manually.
  - Please note, for both FBVs and ATs this code is found on the side of the device (NOT on the back).
-  **For FBVs the code should start with 'T', for ATs the code should start with 'A'.**
- You can add multiple FBVs to a single room (one for each radiator), however only one ATs can be added.



# Flow Balancing Valves: Placement

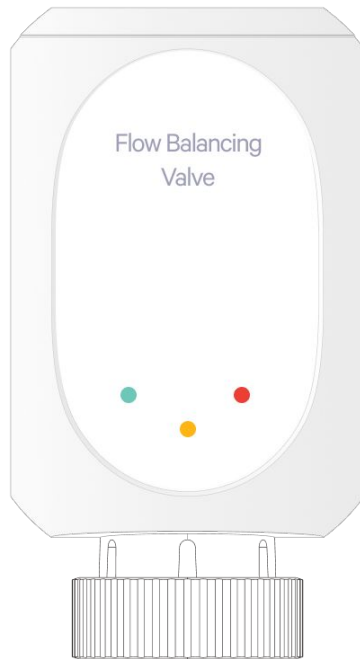


Flow Balancing Valves (FBVs) are used to modulate flow consistently through a radiator.

1. Each FBV should be paired in the app before it is placed.
2. You should test the full travel of the TRV piston by pressing it in firmly. If the pin has any noticeable friction, lubricate it with a short spray of WD40 or a drop of mineral oil. If this doesn't help, the TRV valve body may need replacing.
3. FBVs must be seated firmly on TRV valve bodies. Each FBV comes with a range of attachments to accommodate different models of TRV.
4. If the FBV is still not firmly seated after tightening, you can place a nylon washer (15mm, included) between the FBV and the valve body and re-seat it. 
5. Once the FBV is firmly seated, remove the pull tab to provide it with power. This will start the calibration process *detailed on the next page*.



# Flow Balancing Valves: Calibration



Light Colour	Status	Meaning
Red	Flashing Continuously	The motor is backing out to the top
Red	5 consecutive flashes and then off	Unsuccessful drive of motor. Calibration completed unsuccessfully
Amber	Flashing Continuously	The motor is driving down attempting to find the valve contact point
Green	Flashing Continuously	The valve contact point has been found and the FBV is driving to find the valve close point
Green	5 consecutive flashes and then off	Successful drive of motor. Calibration completed successfully

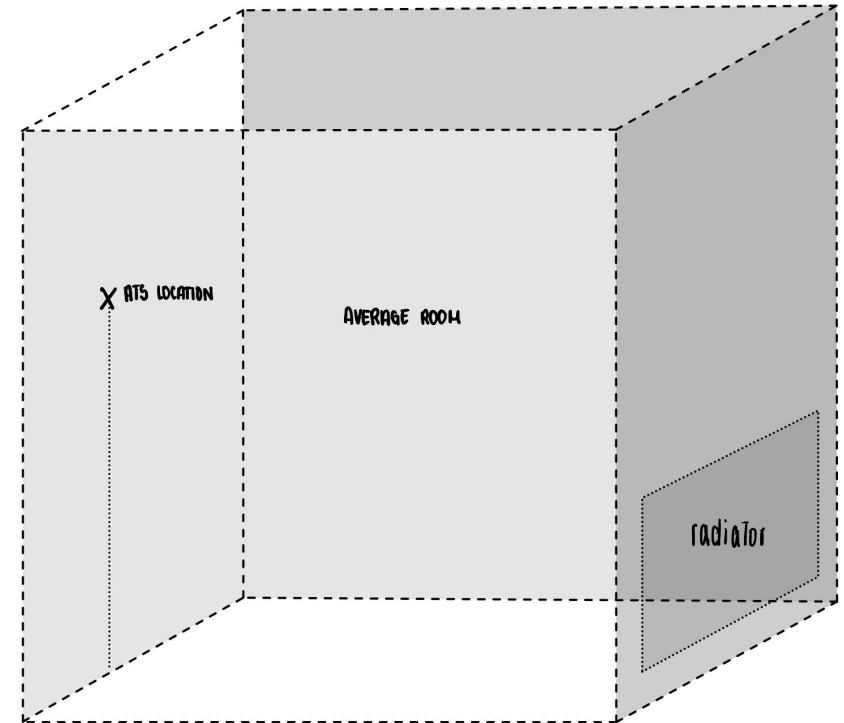
- When an FBV is powered on, it will perform a full calibration of the motor and valve body.
- If the FBV is not on a valve body, it will attempt to calibrate and end in a FAULT state. To reset the fault, put the FBV on a valve body, remove, and reinsert the batteries.
- At the end of calibration you will either get 5 green flashes to indicate success or 5 red flashes to indicate fault.
- If the FBV faults, check the seating on the valve body and try again. FBVs that fault repeatedly should be reported to Adia for a replacement.

# Ambient Temperature Sensors: Placement



Ambient temperature sensors are used by Adia Thermal to determine whether a room has reached its target temperature. As such, these must be placed consistently, and away from elements that may influence temperature readings.

- Apply adhesive strip to the rear of the ATS
- Find a suitable placement for the ATS, avoiding direct sunlight, heat sources, drafts, and doorways
- Adhere ATS to the wall in a vertical position at approximately eye level. Ensure height is consistent across rooms.
- Please ensure that the correct ATS has been placed in each room. Mixing up ATSS can cause really weird behaviour of the heating system!



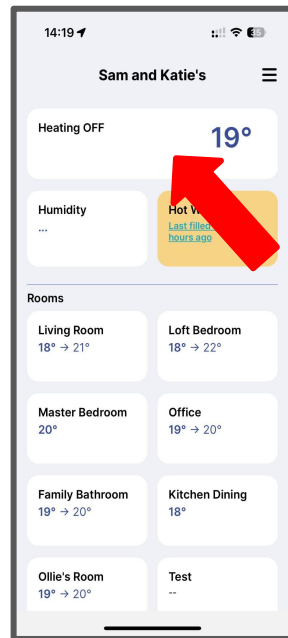
# Commissioning: Set Points

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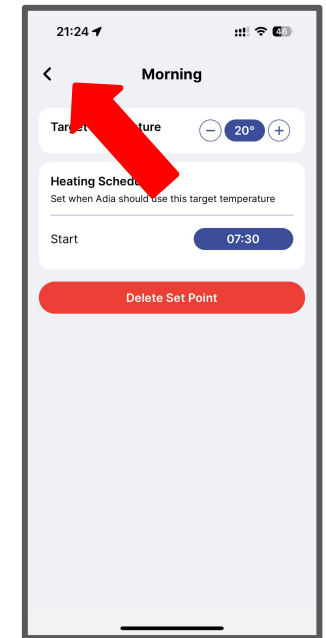
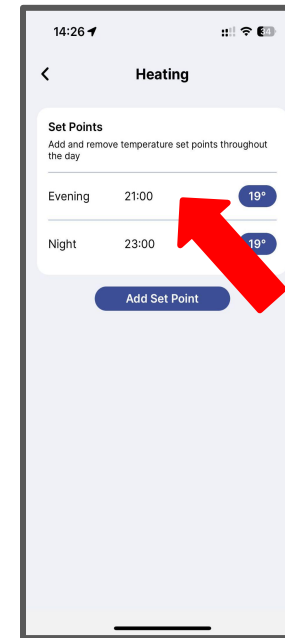
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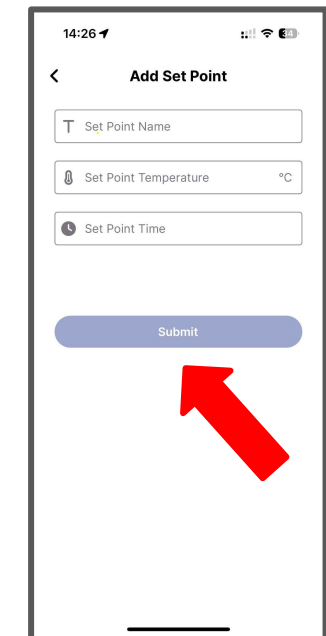
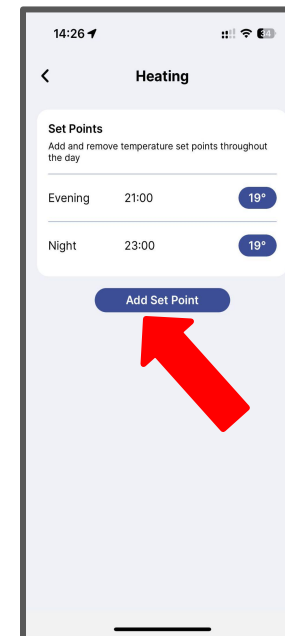
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Add a new Set Point



# Commissioning: Off Sets

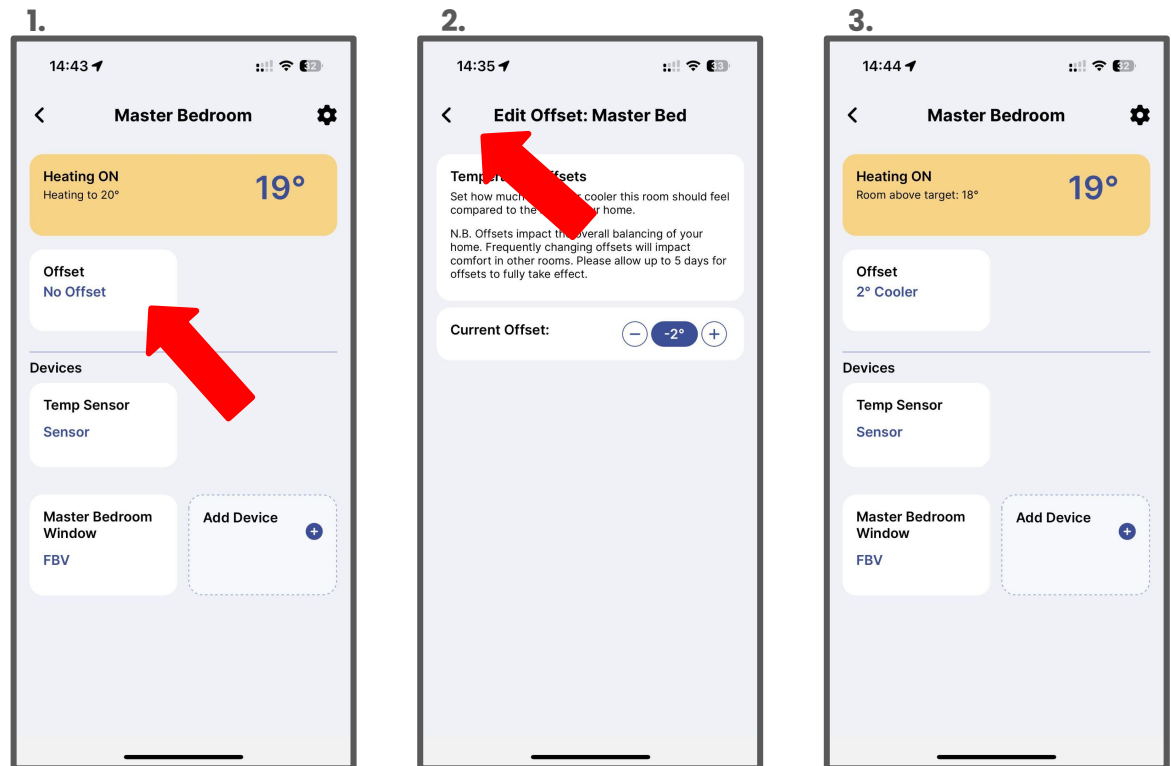
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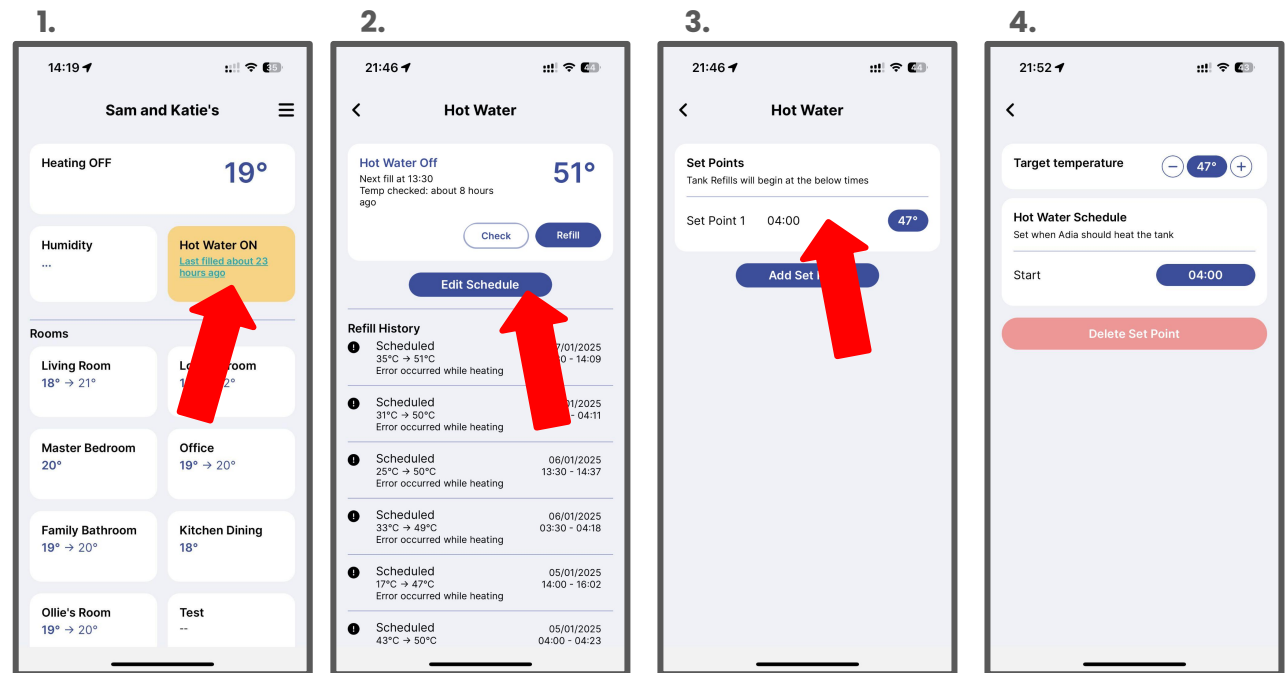
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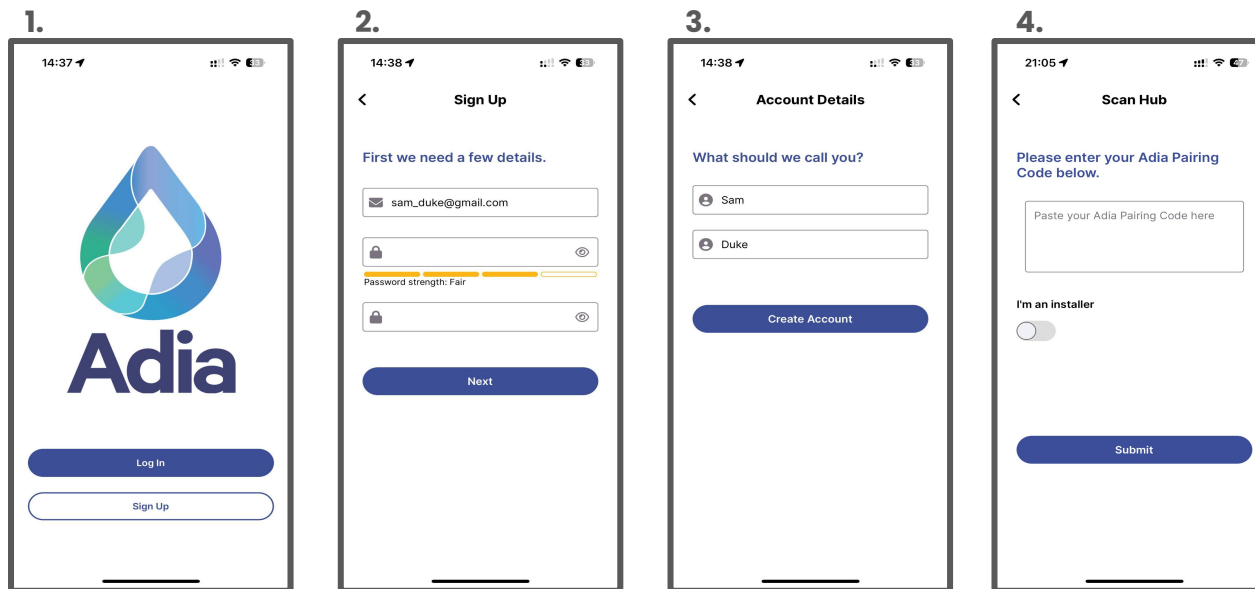


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# Handover

Once commissioning is complete, the customer should be set up on the Adia App. Instruct them to download the app with the relevant QR code, and to create an account using the menu.

Once this account is created, they should pair the app with the hub as described in 'Pairing the Adia Hub with the Adia App'.



# Analytics

Adia Thermal collects huge amounts of data on not only the performance of the heat pump, but also the comfort in the home.

On our platform, you can quickly diagnose issues from heat pump sizing issues, to primary losses, undersized rads, and blockages.

