

GW04^{v2} GATEWAY

INSTRUCTIONS



Compatible Systems



PS

RS

TS

US



Welcome



Designed with performance and simplicity in mind, EMBER allows you to control your heating anytime, anywhere in just a few simple steps.

This booklet provides a clear, step-by-step guide to setting up the EMBER Smart Heating Control app and its associated hardware, ensuring a straightforward installation process.

Thank you for choosing EMBER Smart Heating by EPH Controls.

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Getting started

WiFi Requirements

The SSID of the Wi-Fi should not be hidden when pairing the gateway to the router.

The Gateway can only support 2.4GHz and 5GHz wireless routers. Please refer to the gateway pairing section beginning on page 21.

For best connectivity, the Gateway should be paired directly to the main router and not a booster or access point.

Please restart the wireless router periodically or restart it before going on holiday to ensure that the connection is kept after long periods of inactivity or a power cut.

Pay attention to the number of devices connected to the wireless router. Some routers may not work properly if too many devices are connected.

For BT routers the wireless mode should be set to Mode 3 in the router settings.

Device Operating System

- 1) Apple iOS 11.0 or later.
- 2) Android OS 5.1 Lollipop or later.

Positioning of the gateway

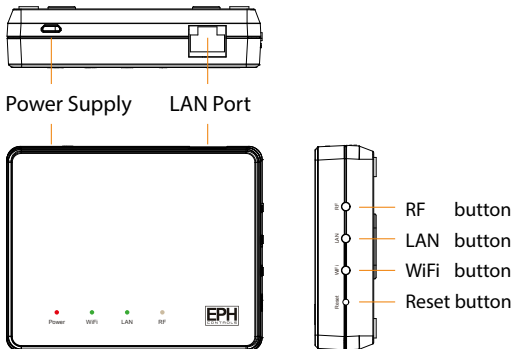
The Gateway should be located near the Hub receiver or main controller in an area with good Wi-Fi signal.

It is important to keep the gateway at least 1 metre away from other electronics. Appliances such as microwaves, T.V's, Wi-Fi Routers and Boosters, Smart Speakers, Wireless Alarm systems etc. These can interfere with the gateway signal.

Choosing a good location will ensure a stable connection for remotely controlling your heating system.

On the Initial Setup screen, click on the Setting icon  to access Tutorials, FAQs and Videos.

LED / Button legend



LED Name	LED Colour	Status when LED is ON
Power	Red	Gateway has power
WiFi	1st Green	Gateway connected to Wi-Fi
LAN	2nd Green	LAN connection established
RF	White	Gateway RF connection established

Important Notes

- If you encounter problems during the Wi-Fi pairing process:
 - Restart your phone.
 - Close background apps.
 - Restart your Wi-Fi router.
- For iOS devices Local Network and Location permission is required.
- If you are using a VPN, this must be disabled during the pairing process.
- To connect to a commercial Wi-Fi, contact your network administrator.
- When the battery low symbol  appears on a wireless thermostat or the EMBER App, the batteries should be changed.
 - Good quality batteries are essential to ensure the correct operation of the wireless thermostats:
 - EPH recommend using Duracell or Energizer batteries with wireless thermostats.
- For ETRV's Li-FeS2 (Lithium Iron) batteries should be used.
- Do not use low quality battery brands, they can cause the following problems:
 - Cause issues with wireless communication.
 - Can cause the equipment to reset.
 - Can cause the EMBER App to display the incorrect information.

Pairing Programmer to Gateway

R17-RF^{V2} | R27-RF^{V2} | R37-RF^{V2} | R47-RF^{V2}



1. On the Programmer:

Press **MENU**, 'P01 rF CON' will appear on the screen.

Press **+** until 'P02 gAtE' will appear on the screen.

Press **OK**. 'CONNECT' will flash on the screen.

2. On the Gateway:

Press and hold the RF connect button until the white RF LED begins to flash.

3. On the Programmer:

When successful 'r1' and 'CONNECTED' will appear on the screen.

Press **OK** to confirm pairing and to return to normal operation.

Note:

Up to 4 programmers can be paired to a GW04^{V2} Gateway. If multiple programmers are paired to the same Gateway r02, r03 or r04 may appear on the screen.

Pairing Controller to Gateway

RF16 Controller



1. On the Gateway:

Press and hold the RF connect button until the white RF LED begins to flash.

2. On the RF16 Controller:

Press **MENU**.

'P01 & rF Cn' will appear on the screen.

Rotate  until 'P02 & gAtE' appears on the screen.

Press  to select.

'CONNECT' will flash on the screen momentarily and the RF16 will return to normal operation.

The GW04^{V2} and RF16 will now pair.

The white light on the GW04^{V2} will stop flashing and will become solid.

Note: Only 1 RF16 can connect to a GW04^{V2} Gateway.

Pairing Receiver to Gateway

Before You Begin

Please read the following information before starting the pairing:

- When installing CP4i or CP5i thermostat, the receiver and the gateway will have pre-established RF connections so there is no need to carry out the steps in this section.
- Ensure that the receiver you are connecting to the boiler is set up as a hub receiver.
- If you are connecting multiple receivers to a gateway, please ensure that all branch receivers are connected to the hub receiver.
- There can only be 1 hub receiver in a system. Allow 5 minutes for all receivers to synchronise with the hub receiver before connecting the gateway to the EMBER App.
- Up to 6 zones can connect to a GW04^{V2} Gateway.

Minimum Installation Distance



Ensure receivers are installed at least 25cm apart to avoid interference.

Pairing Receiver to Gateway

RF1A-OT 1 Zone Receiver



Making the RF1A-OT a HUB receiver:

Press the Reset button  on the receiver that you wish to make the Hub Receiver - Red and Green lights will both be solid on.

Immediately press and hold  and  simultaneously for 5 seconds, until the Red light starts blinking.

Press  once and the Green light will be solid - this is now the hub.

Press  to exit to the normal interface.

1. On the RF1A-OT Receiver:

Press the  button on the receiver. The Red and Green LEDs will begin to flash simultaneously. If only the Red light flashes, please see above to make your receiver into a hub receiver.

2. On the Gateway:

Hold the RF Connect button  until RF LED flashes.

The Gateway & receiver will stop flashing. Pairing is now complete.

The white RF light on the Gateway will stay illuminated.

Pairing Receiver to Gateway

RF1B 1 Zone Receiver



Note: The RF1B must have the HUB light illuminated in order to pair to your Gateway.

- If the HUB light is already illuminated, proceed to Step 1.
- If the HUB light is not illuminated, refer to the “Making a HUB Receiver” instructions below.

Making the RF1B a HUB receiver:

Hold **Manual** & **Connect** for 5 seconds.

The HUB light will illuminate. The receiver is now a HUB.

The RF1B is now ready to pair to the GW04^{V2}.

1. On the RF1B Receiver:

Hold **Connect** on the RF1B until RF LED flashes.

2. On the Gateway:

Hold the RF Connect button  until the RF LED flashes.

The Gateway & receiver will stop flashing. Pairing is now complete.

The white RF light on the Gateway will stay illuminated.

Pairing Receiver to Gateway

RF2B 2 Zone Receiver



Note: The RF2B must have the HUB light illuminated in order to pair to your Gateway.

- If the HUB light is already illuminated, proceed to Step 1.
- If the HUB light is not illuminated, refer to the “Making a HUB Receiver” instructions below.

Making the RF2B a HUB receiver:

Hold **Zone 1 Manual** & **Zone 1 Connect** for 5 seconds.

The HUB light will illuminate. The receiver is now a HUB.

The RF1B is now ready to pair to the GW04^{V2}.

1. On the RF2B Receiver:

Hold **Zone 1 Connect** & **Zone 2 Connect** on the RF2B until the RF1 & RF2 LED flashes.

2. On the GW04^{V2} Gateway:

Hold the RF Connect button  until the RF LED flashes.

The Gateway & receiver will stop flashing. Pairing is now complete.

The white RF light on the Gateway will stay illuminated.

Pairing Wiring Centre to Gateway

UFH10-RF Wiring Centre



1. On the Wiring Centre:

Press **MENU**, 'P01 rF COn' will appear on the screen.

Rotate  until 'P02 gAtE' will appears on the screen.

Press . 'CONNECT' will flash on the screen.

2. On the Gateway:

Press and hold the RF connect button until the white RF LED begins to flash.

3. On the Wiring Centre:

When successful 'r01' and 'CONNECTED' will appear on the screen.

Press  to confirm pairing and to return to normal operation.

Note: Up to 3 UFH10-RF can connect to a GW04^{v2} Gateway.

Pairing Thermostat to Gateway

RDTP-TW Thermostat



Making the RDTP-TW a HUB thermostat:

Hold  &  for 5 seconds. 'br' will appear on the screen.

Press  change to "hUb". Press  to confirm.

The thermostat is now a HUB.

1. On the RDTP-TW Thermostat:

Press and hold  for 5 seconds, 'P01 rF PrOg' will appear.

Press  until 'P03 & rF' on the screen.

Press  to select. '- - -' will appear on the screen.

2. On the Gateway:

Hold the RF Connect button  until RF LED flashes.

3. On the RDTP-TW Thermostat:

Wait for 'r01' to appear solid. Press  to confirm.

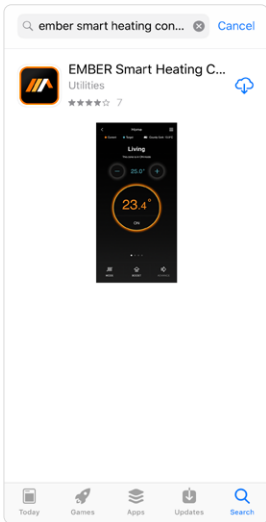
4. On the Gateway:

When the white RF light is solid, pairing is complete.

Note: Up to 10 zones can connect to a GW04^{V2} Gateway.

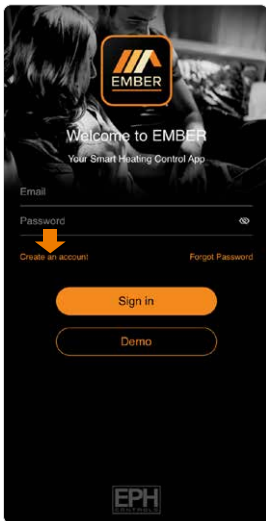
Download the EMBER App

1. Go to the Apple App Store on your iPhone or the Google Play Store on your Android device and download the EMBER Smart Heating Control App.



Set up the EMBER App

2. Once EMBER has been installed, open it.
3. Select '**Create an account**'.



4. Enter your email address.
5. Confirm your email address.
6. Accept the Terms & Conditions.



Email

Confirm Email

☐ Tick the box to accept our [Terms & Conditions](#) and [Privacy Policy](#)

Submit

[Return to Sign in](#)

Set up the EMBER App (Continued)

7. A confirmation email will arrive to your inbox from EMBER.

This can take up to 2 minutes. If you do not receive the email, please search your Junk / Spam email folder.

8. Open the email and you will retrieve your 6 digit code.

Note:

If you are using a company email address the registration may be blocked by your company email policy. Refer to your company IT.

Thank you for creating an EMBER account. To activate your account, please enter the following One Time Password (OTP) in the EMBER App:

046887

Do not share this code with anyone. EMBER takes your account security very seriously. If you did not create an account, or you have received this notification in error, you may ignore this email.

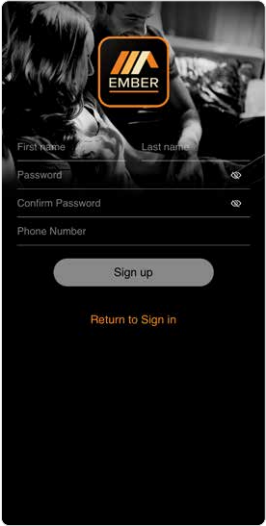
Thank you!

9. Return to the EMBER App and enter your 6 digit code.



Set up the EMBER App (Continued)

10. Enter your First name.
11. Enter your Last name.
12. Enter your Password.
(Minimum 8 characters
- including lowercase,
uppercase and number).
13. Confirm your Password.
14. Enter your Phone Number.
(Optional)



First name Last name

Password

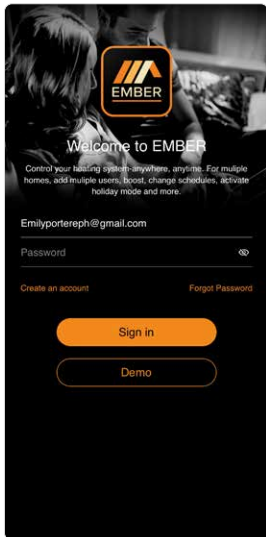
Confirm Password

Phone Number

Sign up

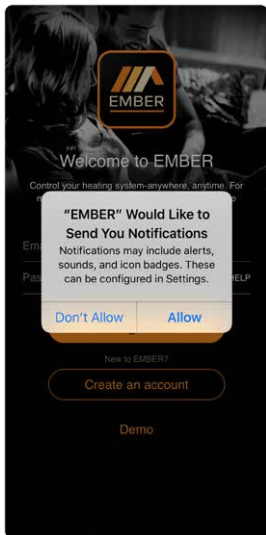
[Return to Sign in](#)

15. You will be returned to the sign in screen where you can enter your email address and password.
16. Press 'Sign in'.



Set up the EMBER App (Continued)

17. Choose **'Allow'** if you would like the EMBER App to send you notifications.



Initial Setup

1. Press '**Network Setup**' and you will be directed to the Wi-Fi Setup screen.

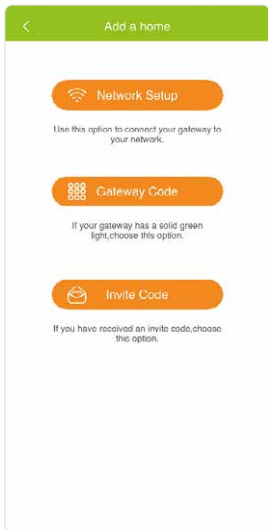
If the Wi-Fi light on the gateway is solid green you can go directly to the '**Gateway Code**' option.

If you have received an invite code, press '**Invite Code**' and enter the code to access the home.

Note:

For the best range and connectivity, WiFi connection is recommended.

If using LAN connection skip WiFi Setup and proceed to page 34.



Initial Setup (Continued)

2. If you are an installer select the **'Installer'** option. If you are the Home owner select the **'Home owner'** option.

Note:

If you select 'Installer' you will set the system up as normal, you can then invite the Home owner. When the Home owner uses the invite code you will be removed from the system and they will take over.

< Status

I'm a

Installer

Chose the "Installer" option if:
You are installing this system for the home owner. This will temporarily provide you access to this home. This access will be removed once the next user joins the home.

Home owner

Chose the "Home owner" option if:
1. You are the home owner
2. You are logged in using the home owner's credentials.

3. On the **'Your System'** screen, you must choose the black GW04 Gateway.



Initial Setup (Continued)

4. On the Network Setup screen choose your desired connection type.

For WiFi connection please see page 27.

For LAN connection please see page 34

Note: WiFi connection is recommended for best range.



Pairing Gateway to Wireless Internet

Android

If using a LAN cable please proceed to page 34.

Attention:

Location permission is required on devices running Android 9 or above. This will allow EMBER to automatically populate the Wi-Fi (SSID) information during Setup.

It is strongly recommended to close all other Apps before beginning the Wi-Fi pairing process.

1. Ensure your mobile device is connected to the same Wi-Fi network that the gateway will be connected to. This will ensure that the SSID will be automatically populated.

Important Step:

After entering the Wi-Fi password in Step 2, do not press the continue button. Complete step 3 and then press continue button as per step 4.

Pairing Gateway to Wireless Internet

Android (Continued)

2. Enter the Wi-Fi password.

3. **On the Gateway:**

Hold the Wi-Fi connect button for 5 seconds.

The green light will begin to flash.

4. **On your mobile device:**

Immediately press '**Continue**'.

5. A pop up dialog box will appear during the process to connect you to a temporary Hotspot connection. '**Press connect**'.

When the gateway is successfully connected the light will be solid green and the EMBER App will bring you to the Gateway Code screen.

<

WiFi Setup

You must be connected to the Wi-Fi network you wish to pair the gateway to. SSID will then be pre-populated

SSID/
Network Name

EPH Guest

Wi-Fi Password

Please enter 

Important: Do not press the "Continue" button below until the gateway is in pairing mode....

1. Enter your WiFi Password.

2. On the gateway, hold the "Wi-Fi Connect" button until the green Wi-Fi LED begins to flash, then release the button.

3. On the EMBER app, press the "Continue" button.

4. A dialogue box will appear to connect you to a temporary Hotspot connection.

5. Press "OK" you will be directed to your IOS Wi-Fi settings. "EPH-TS_Hotspot" will appear. Connect to this network

6. Return to EMBER app and press "Continue" on the Wi-Fi set up screen.

7. Allow up to 2 minutes for pairing to complete.

For detailed instructions please refer to gateway instructions.

Continue

28

Synchronising can take up to 3 minutes.

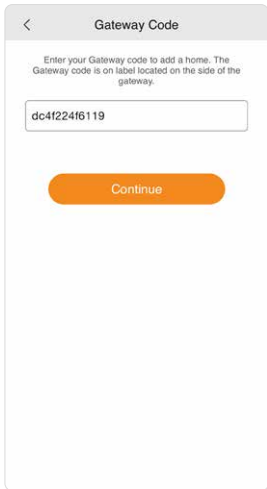
6. If pairing is unsuccessful, please repeat steps 3 and 4.
7. The Gateway now needs to be paired with your EMBER App.
8. Enter the Gateway code located on the gateway housing. The gateway code will normally pre-populate on the Gateway Code screen.
9. Press '**Continue**' once only.

Important Step:

Do not press "Continue" until all 3 LEDs are on constantly.

Note:

If the RF light is not illuminated please refer to the pairing instructions for your system see pages 7 to 11.

A screenshot of a mobile application screen titled "Gateway Code". At the top left is a back arrow icon. Below the title, there is instructional text: "Enter your Gateway code to add a home. The Gateway code is on label located on the side of the gateway." Below this text is a text input field containing the code "dc4f224f6119". At the bottom of the screen is a large orange button with the word "Continue" in white text.

Pairing Gateway to Wireless Internet



If using a LAN cable
please proceed to page 34.

Attention:

Location and Local network permission is required on devices running iOS 13 or above. This will allow EMBER to automatically populate the Wi-Fi (SSID) information during Setup.

It is strongly recommended to close all other Apps before beginning the Wi-Fi pairing process.

1. Ensure your mobile device is connected to the same Wi-Fi network that the gateway will be connected to. This will ensure that the SSID will be automatically populated.

Important Step:

After entering the Wi-Fi password in Step 2, do not press the continue button. Complete step 3 and then press continue button as per step 4.

2. Enter the Wi-Fi password.

3. On the Gateway:

Hold the Wi-Fi connect button for 5 seconds.

The green light will begin to flash.

4. On your mobile device:

Immediately press 'Continue'.

<

WiFi Setup

You must be connected to the Wi-Fi network you wish to pair the gateway to. SSID will then be pre-populated.

SSID/
Network Name

EPH Guest

Wi-Fi Password

Please enter 

Important: Do not press the "Continue" button below until the gateway is in pairing mode....

1. Enter your WiFi Password.
2. On the gateway, hold the "Wi-Fi Connect" button until the green Wi-Fi LED begins to flash, then release the button.
3. On the EMBER app, press the "Continue" button.
4. A dialogue box will appear to connect you to a temporary Hotspot connection.
5. Press "OK" you will be directed to your IOS Wi-Fi settings. "EPH-T5_Hotspot" will appear. Connect to this network.
6. Return to EMBER app and press "Continue" on the Wi-Fi set up screen.
7. Allow up to 2 minutes for pairing to complete.

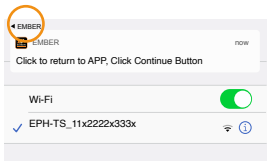
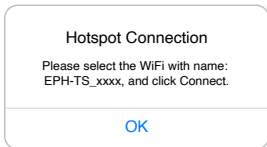
For detailed instructions please refer to gateway instructions.

Continue

Pairing Gateway to Wireless Internet



5. A pop up dialogue box will appear to connect you to a temporary Hotspot connection.
6. Press 'OK'. You will be redirected to your iOS Wi-Fi settings page. Go to Wi-Fi settings.
7. An EPH-TS Hotspot will appear. Tap to select this network.
8. Press EMBER on the top left if you are not automatically redirected back to the EMBER App or manually return to the EMBER App.

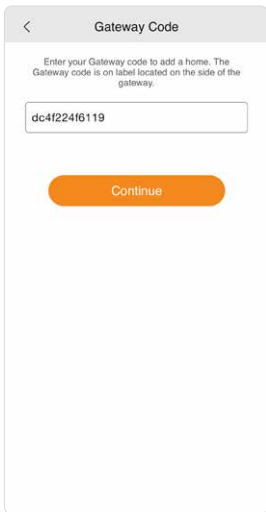


9. Press '**Continue**'.
10. When the Gateway is successfully connected the light will be solid green and the EMBER App will bring you to the Gateway Code screen. Synchronising can take up to 3 minutes.
11. If pairing is unsuccessful, please repeat steps 3 - 8.
12. The Gateway now needs to be paired with your EMBER App.
13. Enter the Gateway code located on the Gateway housing. The Gateway code will normally pre-populate on the Gateway code screen.

Important Step:

Do not press "Continue" until all 3 LEDs are on constantly.

14. Press '**Continue**' once only.

A screenshot of a mobile application screen titled "Gateway Code". At the top left is a back arrow icon. Below the title, there is instructional text: "Enter your Gateway code to add a home. The Gateway code is on label located on the side of the gateway." Below this text is a text input field containing the code "dc4f224f6119". At the bottom of the screen is a large orange button with the word "Continue" in white text.

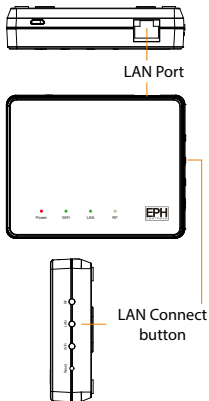
Note:

If the RF light is not illuminated please refer to the pairing instructions for your system see pages 7 to 11.

Connecting Gateway to Router using the LAN Cable Function

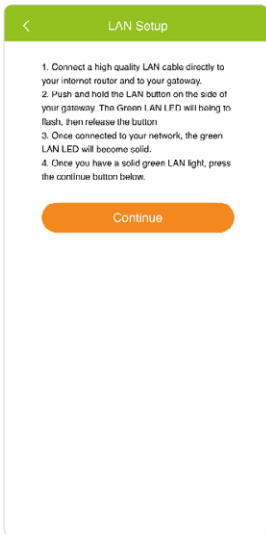
Clearance required 1 - 2m

Ensure the LAN cable is extended after connection to maintain a distance of 1–2 metres between the router and the gateway. This separation helps minimise RF interference and ensures optimal connectivity.



To connect via LAN, use a high quality Ethernet cable and connect it to the dedicated port on the gateway.

1. Connect the LAN cable directly to your internet router.
2. Press & hold the LAN button
○ the Green LED will begin to 'flash'.
3. Once connection is established the green LED will become 'solid'.
4. On the EMBER App. Press Continue.



Connecting Gateway to Router using the LAN Cable Function (Continued)

1. Press & release the LAN button
○ the Green LED will begin to
'flash'.
2. Enter the gateway code.
3. Press '**Continue**' once only.
4. Proceed to Home Setup.

 Gateway Code

1. Push and release the LAN button once.
2. Green LAN light will begin to blink.
3. Enter your gateway code which is located on a label on the side of the gateway.
4. Press the continue button.
5. Proceed to Home Setup.

Enter your Gateway code to add a home. The Gateway code is on label located on the side of the gateway.

Enter the Gateway Code here 

Continue

Home Setup

Home Setup appears on the Screen.

1. Enter the Home name.

2. Enter the Zone names.

(When an RF cylinder thermostat is connected, the zone will automatically be labeled 'Hot Water').

3. Press '**Save**' to continue.

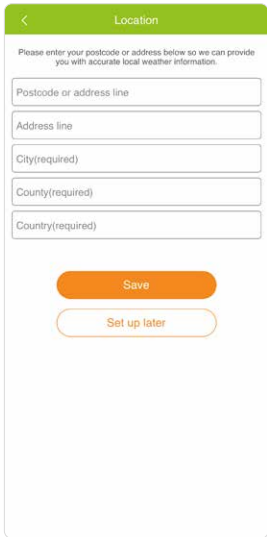
Note: It is recommended to use unique zone names if you are planning to use a third party voice control or smart speaker system. Check with your service provider for compatibility.

The screenshot shows a mobile app interface for 'Home Setup'. At the top is a green header with a back arrow and the title 'Home Setup'. Below the header, a message states: 'We have detected (2) different Zones in your home. Set up your home now by entering information below.' There are three input fields: 'Home' with the text 'Home', 'Zone 1' with the text 'Heating', and 'Zone 2' with the text 'Hot Water'. At the bottom, there are two orange buttons: 'Save' and 'Set up later'.

Field	Value
Home	Home
Zone 1	Heating
Zone 2	Hot Water

Home Setup (Continued)

4. Enter the postcode or your address to set the location of your home.
5. Press **'Save'**.



The screenshot shows a mobile app interface for setting a location. At the top is a green header bar with a white back arrow on the left and the word "Location" in white text on the right. Below the header, a grey instruction box contains the text: "Please enter your postcode or address below so we can provide you with accurate local weather information." Underneath this are five white input fields with grey borders, each containing a placeholder label: "Postcode or address line", "Address line", "City(required)", "County(required)", and "Country(required)". At the bottom of the screen are two orange buttons with rounded corners. The top button is solid orange with the word "Save" in white text. The bottom button is outlined orange with the text "Set up later" in orange text.

6. The Invite Users screen will appear.
7. To allow additional users access to the EMBER home, enter their name and email address here. Press **'Invite'**.

< Invite Users

Invite code for this home:
76E80

You can invite new users by completing the fields below:

Name

Email

Invite

Add more users

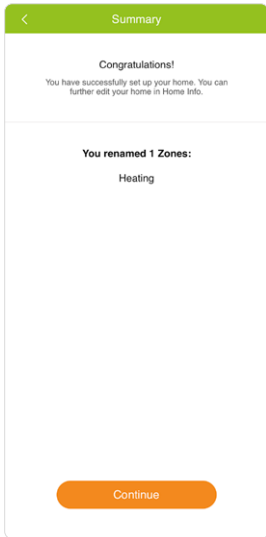
Skip to continue

Home Setup (Continued)

8. A summary confirming the changes that you have made is displayed.
9. Press **'Tutorial'** to view the tutorials.*
10. Press **'Skip'** to complete Home Setup.

Note:

You can access the tutorials from the setting menu  and burger menu  in the EMBER App.

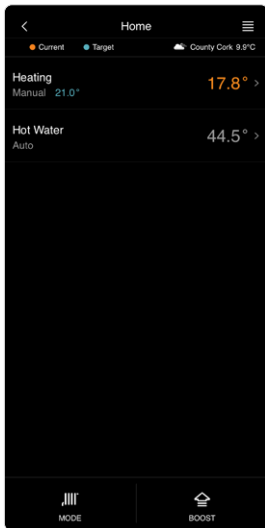


11. The Home screen will appear.

If you have multiple zones, you will see a zone list with the relevant number of zones.

Note:

You can boost or change the mode of multiple zones on the zone overview screen by pressing mode or boost at the bottom of the screen.



Home Setup (Continued)

12. Select one of the zones on the Home screen to access zone control.



Home Menu

Group Zones

When this is set to On it will allow you to drag multiple zones into one group. Once this is done you can activate boost and change mode for all of these zones at once.

Frost Protection

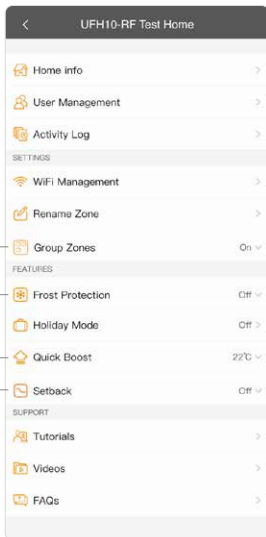
This will activate frost protection for the system. The temperature for this is set on the hardware.

Quick Boost

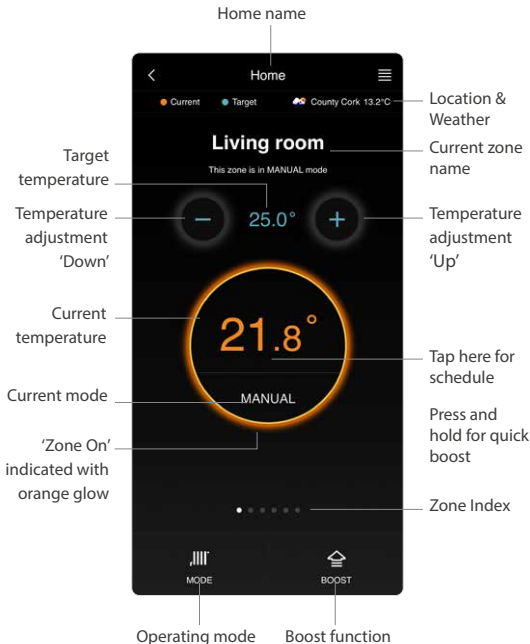
Quick Boost allows a 1 hour boost when you hold down on a zone for 2 seconds. Here you can set the target temperature for this feature.

Setback

This is a feature that operates with the US and PS systems. When the system is set to Auto or All Day it will reduce the temperature by a value set by you when the zone is timed off. The setback temperature can be selected in the programming screen.



Zone control diagram



Resetting the GW04^{V2} Gateway

Resetting the GW04^{V2} will clear the RF connection only. There is a reset button as seen in the diagram on page 5.

- Use a Pin tool to access the button within the housing.
- Hold the reset button for 5 seconds.
- All of the LED lights will flash on the Gateway.
- After 10 seconds the Gateway will return to normal operation.
- The RF connection is now cleared.

Notes

Notes



EPH Controls IE

021 471 8440

Cork, T12 F753

technical@ephcontrols.com

www.ephcontrols.com

EPH Controls UK

01933 322 072

Harrow, HA1 1BD

technical@ephcontrols.co.uk

www.ephcontrols.co.uk



1 APP
4
SYSTEMS



Requires a compatible iOS or Android device
Check the EMBER app on the Apple App Store or
Google Play Store for the latest minimum system
requirements.

