idealheating.com

HALO

2-Zone Upgrade Halo Combi Installation Guide

For use with

WI-FI

RF))) ZIGBEE RF

HALO COMBI 2-ZONE UPGRADE

Product Code: 222144

2-Zone upgrade kit for Halo Combi Wi-Fi or Halo Combi RF.

Compatible with the following boilers serial letter code AFQ onwards: Logic Combi C, Logic Combi C IE, Logic Combi ESP1, Logic Code Combi ESP1, Logic+ Combi C, Logic Max Combi C, Logic Max Combi C IE, iMini, Keston Combi, Vogue GEN2 Combi, Vogue Max Combi, Vogue Max Combi IE.

To install Halo with older boilers a separate bracket is required (Product Code: 220366), for further details on the compatibility of older boilers with Halo plus installation details please go to **idealheating.com**

The Halo Combi 2-Zone Upgrade is an add-on kit to the Halo Combi RF and Halo Combi Wi-Fi (UIN 222140 & 222142). The Halo Combi 2-Zone upgrade consists of an additional Halo Combi Programmable Room Thermostat (PRT) and a Smart Wiring Centre. The Halo Smart Interface from the Halo Combi RF or Wi-Fi plugs into the front aperture on the boiler and communicates to the boiler via OpenTherm. The Smart Interface communicates to the Smart Wiring Centre and Halo PRTs via Zigbee, a local RF protocol. The Halo Combi PRT units are powered by 4 AA batteries.

For Halo Combi Wi-Fi, the Smart Interface is Wi-Fi enabled and can be linked to the home Wi-Fi network to allow app-controlled heating via the Halo app, if you wish to upgrade your Halo Combi RF follow the instructions via the Halo App. A one-time payment will need to be made for this upgrade.

The Halo Combi 2-Zone Upgrade, including the Smart Wiring Centre, must be installed by a competent person with the appropriate safety qualifications. Please read the instructions carefully. Failure to follow these instructions can damage the product or cause a hazardous condition.

These instructions are applicable to the Ideal Boiler models stated and must not be used with any other make or model of boiler. This product must be installed to all applicable standards

Always isolate the mains supply before installing or working on any components that require a 230V ac supply.

GETTING STARTED

For Installation, please disregard any previous instructions and follow this guide only.

The Ideal Halo app is available to download from the Apple app store and on Google Play. To save time the householder may want to download the app and set up the account whilst the thermostat is being installed.
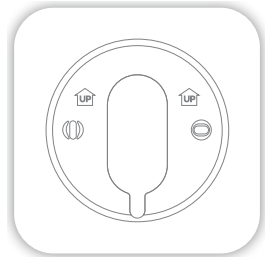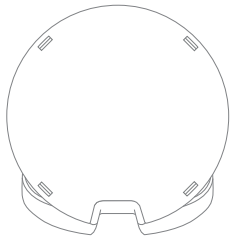
A. KIT CONTENTS

1. Halo Combi PRT display unit
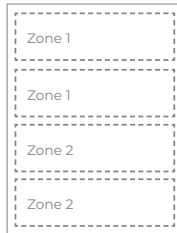

2. PRT rear housing

3. Trim plate

4. Desk stand

5. Smart wiring centre

6. Installation guide

7. User guide

| Zone 1 |
| Zone 1 |
| Zone 2 |
| Zone 2 |

8. Zone labels

9. 4x AA Batteries


10. Screws & Rawlplugs™

In addition to this kit you must have either a Halo Combi RF (222140) or a Halo Combi Wi-Fi (222142) to complete installation.
Please note: For installation, please disregard any previous instructions and follow this guide only.

B. LOCATION GUIDELINES

The Halo Combi uses wireless Zigbee communication from the Smart Interface to the Smart Wiring Centre and Halo Combi PRTs up to a maximum distance of 30 meters. Occasionally house constructions and materials can reduce this communication range and it is advisable, where possible, to try and avoid directing communications through metal frames or solid concrete walls.

If the distance between the Halo Combi PRT and Smart Interface or the Smart Wiring Centre and Smart Interface is greater than 30m or the install location is challenging, consider using the Zigbee Booster (UIN 221132) or mounting the smart interface externally to the boiler using a bracket (further details available at idealheating.com)
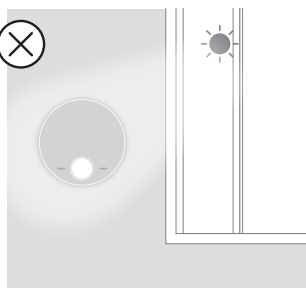
The Halo control system connects to the home Wi-Fi network through a module in the Smart Interface. The home Wi-Fi router should be positioned no more than 30m from the Smart Interface. Where possible avoid directing communications through metal frames or solid concrete walls.
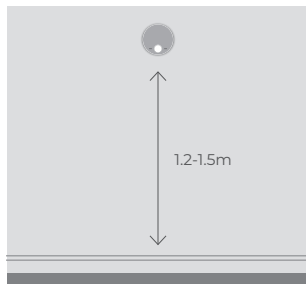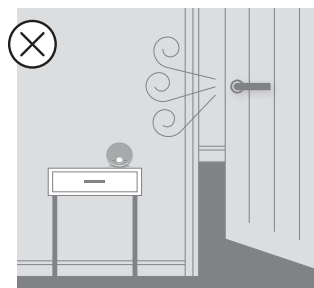

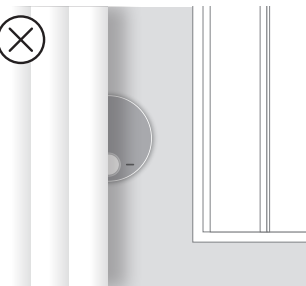1. Mounted 1.2-1.5m above the floor
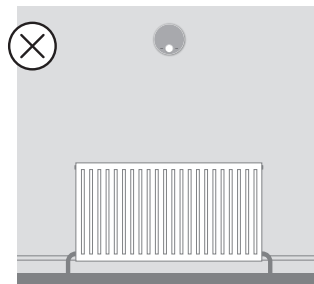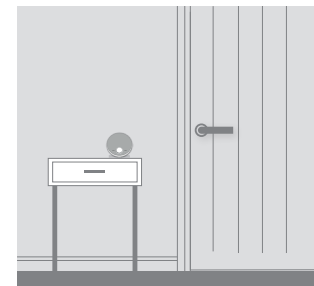

2. Not above a radiator/heat source

3. Not in direct sunlight

4. Away from any drafts

5. Not fitted behind curtains

6. Internal use only

C. SYSTEM OVERVIEW

This is a simplified diagram of how the Halo units, Smart Wiring Centre and Smart Interface communicate. Some wiring and pipework has been omitted for clarity.

SI	Smart Interface
——	Pipework
- - - -	RF Connection

TOP TIP: For a robust signal between units, where possible, ensure that the line of communication between the Smart Interface and other units is not through any stone or metallic object.

*solid and metallic objects will reduce maximum distance

ZONE 2

Zone 2 PRT

30m*

ZONE 1

Smart Wiring Centre

Zone 1 PRT

Boiler with plug-in SI

30m*

30m*
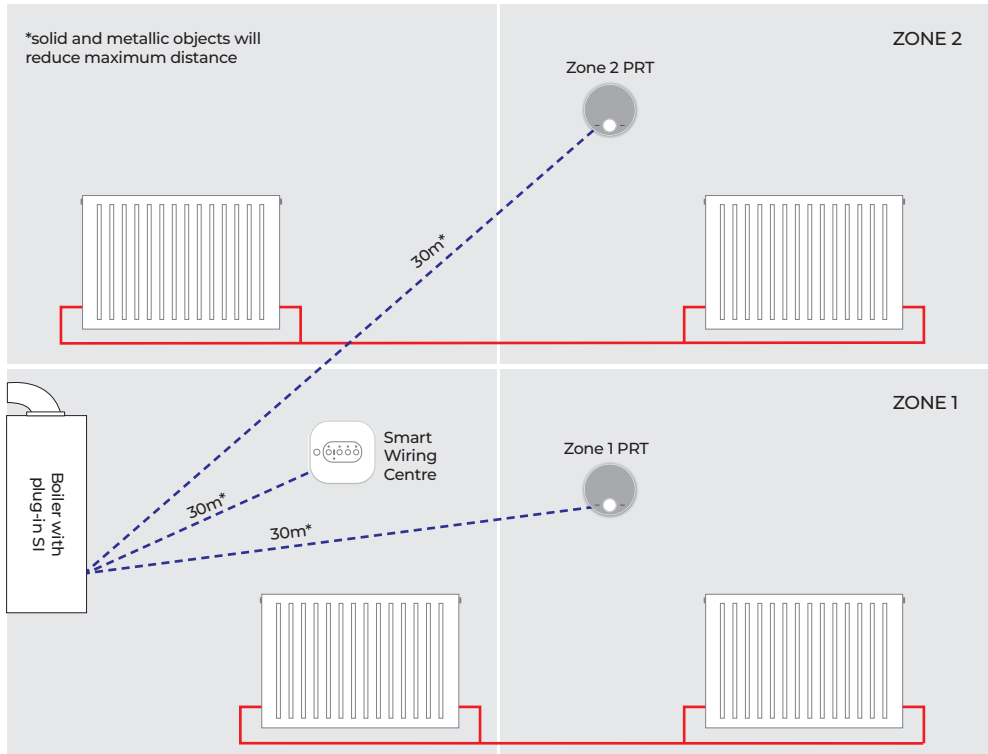
D. INSTALLING BOTH HALO COMBI PRT'S

The Halo can be either wall mounted or desk mounted.

WALL MOUNTING THE HALO

If there are any concerns regarding signal strength and location of the wall mounted Halo Combi it is advisable to pair the control and check the signal strength before fixing to the wall.
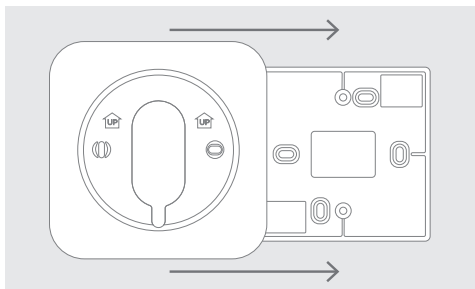
1. The Halo can be installed with or without the provided trim plate.
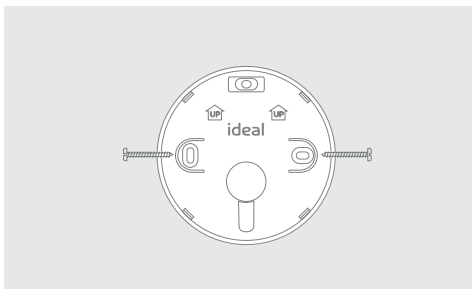
2. If no trim plate is required, use the rear housing of the Halo to position the unit on the wall, alternatively secure rear housing to trim plate. Take care not to overtighten the screws.
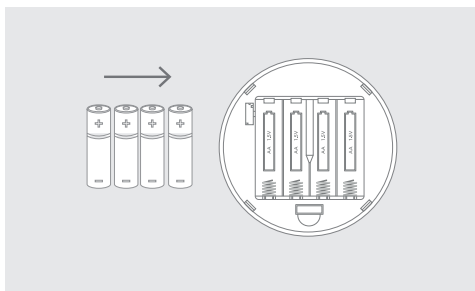
3. Insert the 4 AA batteries provided into the front housing of the Halo. Pay close attention that the orientation of the batteries is as indicated in the housing.
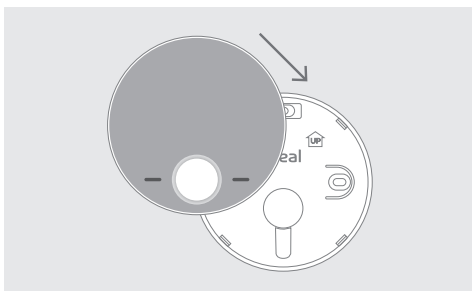
4. Locate the front housing (display) in position perpendicular to the rear housing and clip into place.

DESK MOUNTING THE HALO
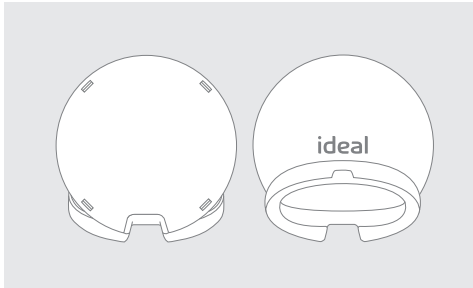
1. The Halo has an integrated rear housing and desk stand.
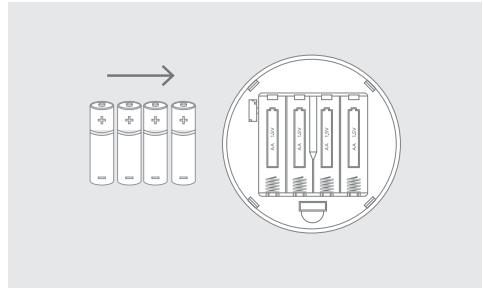
2. Insert the 4 AA batteries provided into the front housing of the Halo. Pay close attention that the orientation of the batteries is as indicated in the housing.
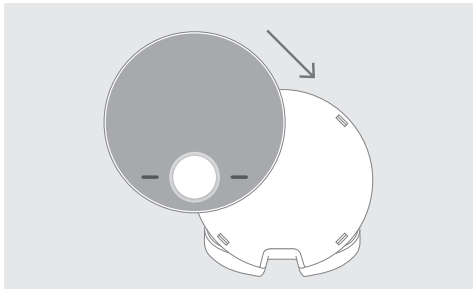
3. Clip the combined rear housing and desk stand into place.

E. INSTALLING THE SMART WIRING CENTRE

The Smart Wiring Centre controls the operation of the zone valves for the central heating system. The Smart Wiring Centre communicates wirelessly to the Smart Interface via the Zigbee RF protocol. The Smart Wiring Centre must be mounted to a fixed surface before installation.

Removing the cover

Using a suitable screwdriver turn the locking key one quarter turn anticlockwise to the [UNLOCK] position. Remove the front panel by lifting the left hand edge first. Assemble in reverse order. Always remember to lock the front panel to the Smart Wiring Centre

Wall mounting the Smart Wiring Centre

Please refer to the location guidelines before fixing the Smart Wiring Centre to the wall.

Using the 4 fixing locations on the Smart Wiring Centre secure to the Wall with adequate fixings for the wall type.
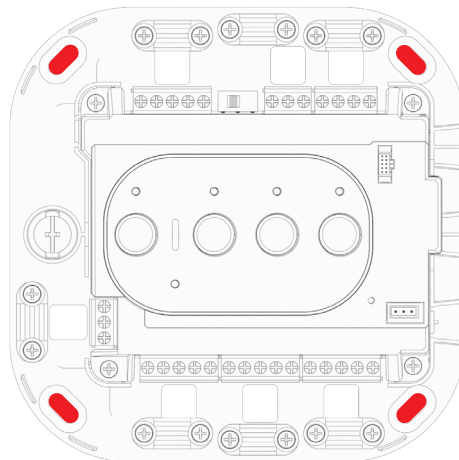
Do not remove the cover unless you are qualified to do so.

The Smart Wiring Centre must be installed by a competent person with the appropriate safety qualifications. All wiring must be adequately sheathed and insulated. The Smart Wiring Centre must be mounted to a fixed surface before installation.

Isolate any 230V ac mains supply to the Smart Wiring Centre and any other linked components before commencing works.

TOP TIP: This kit comes with labels to identify heating zones. Fix one to the zone valve and the other to the inside cover of the smart wiring centre to easily identify each zone.
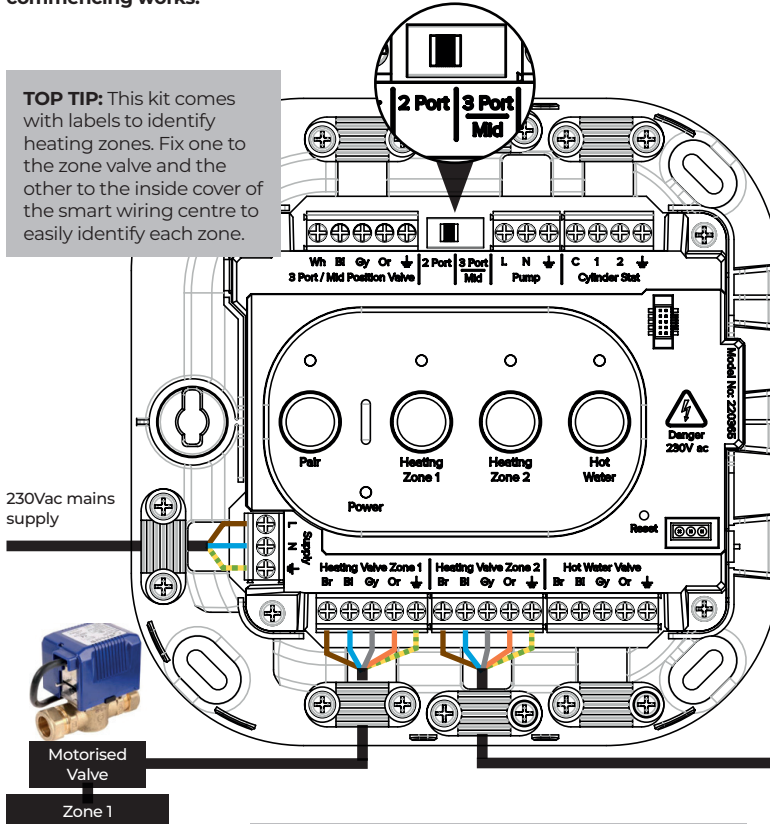
Ensure selector switch is in the correct position for the installed system.

Wiring can either be installed from the rear of the device through the back housing cut outs or surface mounted.

When surface mounting any wiring use the reversable omega clamps provided. Remove all appropriate cut outs on front cover for wiring.

2 Port 3 Port Mid

Wh Bl Gy Or ⏚ 2 Port 3 Port Mid L N ⏚ C 1 2 ⏚
3 Port / Mid Position Valve   Pump   Cylinder Stat

Model No: 22098G

⚠ Danger 230V ac

Pair   Heating Zone 1   Heating Zone 2   Hot Water

Power

Reset

230Vac mains supply

Supply L N ⏚

Heating Valve Zone 1   Heating Valve Zone 2   Hot Water Valve
Br Bl Gy Or ⏚   Br Bl Gy Or ⏚   Br Bl Gy Or ⏚

Motorised Valve
Zone 1

Motorised Valve
Zone 2

Do not reinstate power once wiring is complete

F. INSTALLATION OF THE SMART INTERFACE

To install the Halo Smart Interface into a new boiler with serial letter code AFQ onwards (found on the data plate) follow the steps below. For further details on the compatibility of older boilers and how to install the Smart Interface into a bracket and wire into the boiler please visit idealheating.com

OFF

1. Isolate the mains supply.

2. Locate the blanking plate on the front of the boiler and remove carefully with a flat bladed screwdriver.

Blanking plate
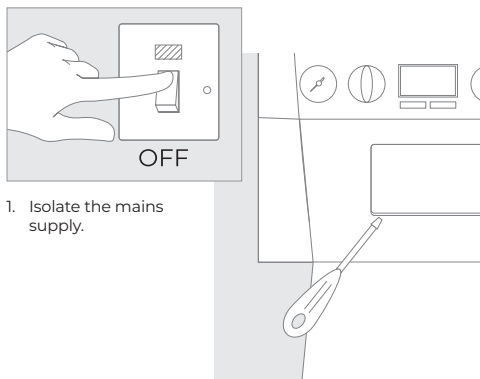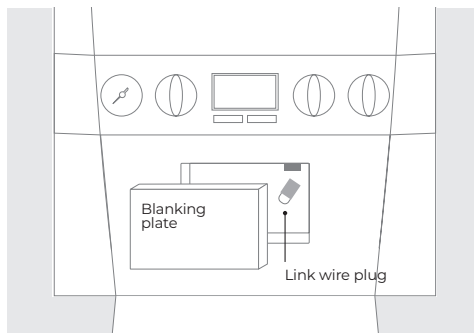
Link wire plug

3. Remove link wire plug and keep in a safe place.
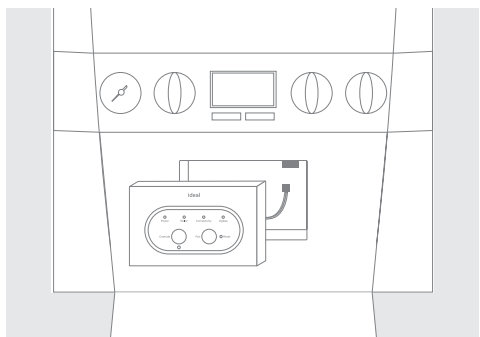
4. Connect the plug on the Halo Smart Interface to the connector in the aperture.
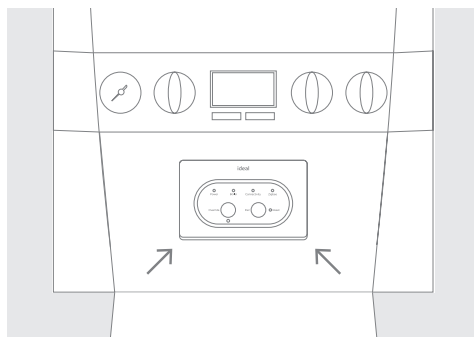
5. Push fit the Halo Smart Interface into the boiler aperture.

G. PAIRING OF THE SMART INTERFACE TO THE SMART WIRING CENTRE

To pair the Smart Wiring Centre to the Halo Smart Interface follow the steps below.
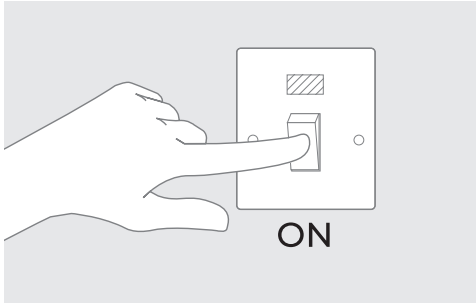
1. Turn the power back on to the boiler and Smart Wiring Centre.

2a. The Smart Wiring Centre will power up and automatically enter into pairing mode shown by the pairing LED flashing **red**, this mode will be active for 10 minutes. If further time is required after 10 minutes hold the pair button until the pair light flashes **red.**
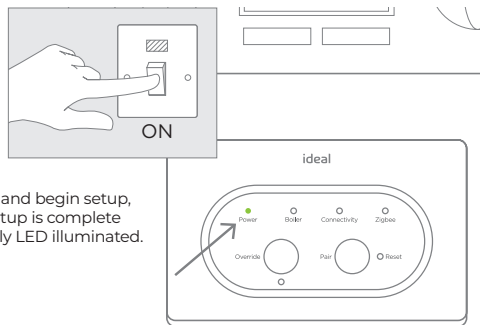
2b. The Halo Smart Interface will power up and begin setup, this can take up to 90 seconds. Once setup is complete the **green** Power LED should be the only LED illuminated.
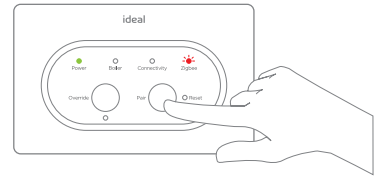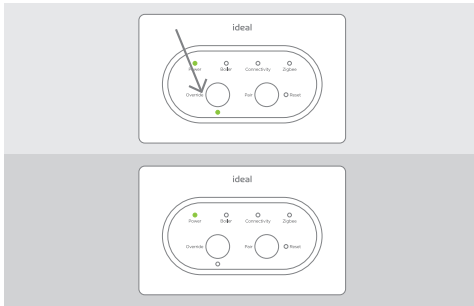
3. Check the Smart Interface connection to the boiler by pressing the override button. The override LED should be green and the boiler will fire. Press the override button again to switch off the boiler, the override LED should now go out*

4. Press and hold the Pair button on the Smart interface till the Zigbee LED flashes **red.**

5. Pairing will now commence between the units. To show a successful pairing process the Pair LED on the Smart Wiring Centre will turn Solid **Green.**

*The override button will only operate the boiler before the Halo units are connected. Once the Halo units are connected the override button will not activate the boiler unless communication is lost.

H. PAIRING OF THE HALO

The Halo Combi PRT units now need to be paired with the Smart Interface installed in the boiler. Ensure the Halo Smart Interface is still in pairing mode with the Zigbee LED flashing red.

1. When the batteries are inserted, the Halo Combi will power up automatically.

2. The device will prompt pairing with the Halo Smart Interface using an easy step-by-step process.

3. Simply follow the on-screen guide to select the type of boiler, **Combi**, the number of zones, **Multizone**, and which zone the PRT is controlling. The default selection is Zone 1.

4. The Halo Combi screen will show "Pairing in Progress", then "Synchronisation in Progress" and then "Pairing Complete" when the Halo Combi has successfully connected to the Smart Interface.

5. The device will automatically prompt set up of the time and date.

6. There is the opportunity to add an installer contact phone number into the device at this stage, if not changed this will default to the Ideal Heating Customer Service number.

7. The home screen will be displayed showing the current and target temperature and the temperature bar. The Zigbee communication icon will also be visible on the display

8. Repeat steps 1 – 7 for the second Halo Combi PRT ensuring the Halo Smart Interface is still in pairing mode and that you adjust the zone selected in step 3 to Zone 2.

9. Once the 2nd Halo Combi PRT is paired to the Halo Smart Interface press and hold the pair button on the Halo Smart Interface until the Zigbee LED goes to solid green.

How many heating zones
Single Zone ☐
Multi Zone ☐
Use dial to scroll and press select when complete
select

Please check you have selected the correct system configuration and ensure the smart wiring centre is paired to the smart interface and the smart interface is in pairing mode before proceeding.
Press confirm when ready
back   confirm

Please select a zone
Zone 1 ☐
Zone 2 ☐
Use dial to scroll and press select when complete
cancel   select

Pairing to smart interface in progress, this could take a little while

🏠📶🔋 9:33p

Set 17 Now   Zone 1 CH   📶📶 9:33pm
21.0 | 19.5
target temp   current room
until 10:00pm   temp
menu   auto mode

Zigbee icon

I. CONNECTING THE HALO TO THE INTERNET*

1. Check the home router is connected to the internet.

2. Ensure 2.4GHz is enabled on the home Wi-Fi router.

3. If it has not been done already, download and install the Ideal Halo app onto the householders phone. (Available on Google Play or the Apple App Store.)

4. Open the Ideal Halo app, tap on create an account and follow the in-app instructions.

5. Once an account has been set up the app will automatically guide the user through connection of the Halo. This will involve using the app to link the Halo Smart Interface to the home Wi-Fi network by following the instructions on the screen.

6. The householder will need the name of their home Wi-Fi network and the password or network key to complete the setup.
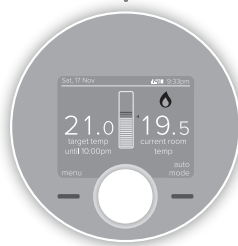
Minimum operating requirements

Smart Phone/Tablet - iOS 9 Android 4.4.3

PC latest version of Chrome, Safari, Firefox or Internet Explorer on Mac OS or Windows 7

*Halo Combi Wi-Fi only

If you wish to upgrade your Halo Combi RF follow the instructions via the Halo App. A one-time payment will need to be made for this upgrade.

GET IT ON
Google Play

Download on the
App Store

ADVANCED SETTINGS

Description	Factory setting	New setting
Optimised start Boiler starts heating in advance of schedule so heating reaches the required temperature at the time specified.	OFF	
Optimised stop Boiler stops heating in advance of schedule so heating reaches the required temperature at the time specified.	OFF	
Delayed start If the room temperature is close to target temperature the heating start time is delayed to save energy.	OFF	
Display tolerance Select the display tolerance of the room temperature, this can be set at increments of 0.5 or 0.1°C.	0.1°C	
Temperature offset Fine tune the room temperature display -2.5 to 2.5°C.	0°C	
Daylight saving time Automatically move to daylight saving.	ON	
Frost protection The temperature that will be used to protect your home when the thermostat is off. Can be set 5°C.	5°C	
Service phone number Opportunity to input Installer contact number for service reminders.	Ideal Heating number	

HALO FEATURES AND CONFIGURATION

To enter the settings menu press the menu button.

Menu options	Action
Holiday	Holiday mode allows the device to be switched off for a pre-defined period of time then automatically returns to the pre-programmed heating schedule.
Timed heating schedule	Set a heating schedule with up to 6 periods per day.
Support	Includes information such as software version and key contact numbers.
Fault page	Shows the latest fault code and fault description.
Time and date	Time and date are set on power up and can be adjusted via the menu.
Advanced settings	Advanced features of the device setup should be set by a competent person.
Landlord settings	Specific settings for landlords.

SMART INTERFACE LED KEY

LED	Status
Power	Green - Power ON No illumination - No power
Boiler	Green - Demand No illumination - No demand
Connectivity	No illumination - Cloud connection not configured Red - No connection Blue - Connection to Wi-Fi network OK, no cloud connection Green - Connection to Wi-Fi and cloud OK Blue flashing - Access point mode
Zigbee	No illumination - No Zigbee network Green - Zigbee network active Green flashing - Identify function Red flashing - Pairing Red flashing then orange - Zigbee network deletion Orange for 30s - Factory reset
Override	Green - Override active* Green flashing - Failsafe active* No illumination - Override OFF*

*Override and Failsafe only active when communication is lost between Halo and Halo Smart Interface. See Halo User Guide for more information.

SMART WIRING CENTRE LED KEY

LED	Status
Power	Green - Power ON No illumination - No power
Pair	No illumination - No Zigbee network Green - Zigbee network active Green flashing - Identify function Red flashing - Pairing Red flashing then orange - Zigbee network deletion
Heating Zone 1	Green - Demand Green Flashing - Failsafe mode active No illumination - No demand
Heating Zone 2	Green - Demand Green Flashing - Failsafe mode active No illumination - No demand
Hot Water	Not used

*Override and Failsafe only active when communication is lost between the Smart Wiring Centre and Halo Smart Interface. This allows for manual opening and closing of the zone valves.

COMMISSIONING CHECKLIST

Description		Confirmed	
		Zone 1	Zone 2
Use the "Identify" function to confirm successful pairing has taken place. Short press on the Pair button on the Smart Interface. Press Pair button again to exit "Identify" function.	Zigbee LED on Smart Interface flashes green		
	Halo home screen flashes to indicate successful pairing		
Halo is positioned in the homeowners chosen location if desk mounted.			
Check RSSI (Received Signal Strength Indication) of the Zigbee wireless connection via support page on the PRT (access via the menu).	Target RSSI between 0 and -65 and text green		
Check RSSI (Received Signal Strength Indication) of the Zigbee wireless connection and the Wi-Fi connection via the support information in the Halo app. (Wi-Fi only)	Target RSSI between 0 and -65 and text green		
On the Halo set the mode to AUTO then increase the temperature to 30°C (repeat using Halo app if applicable). Note: The boiler will only fire once the zone valve is in the fully open position.	Flame ON		
	Heating zone on Smart Wiring Centre ON		
	Boiler ON		
	Boiler LED on Smart Interface ON (Green)		
On the Halo set the mode to AUTO then decrease the temperature to 5°C (repeat using Halo app if applicable).	Flame OFF		
	Heating zone on Smart Wiring Centre OFF		
	Boiler OFF		
	Boiler LED on Smart Interface OFF		
Check the Smart Interface indication is correct.	Power LED green Zigbee LED green Connectivity LED green		
Check the Smart Wiring Centre indication is correct.	Power LED green Pair LED green		
Full battery level indication on Halo home screen.	🔋		
Zigbee network icon is present on the Halo home screen.	🔲		
Cloud network icon is present on Halo home screen. (Wi-Fi only)	⬆️		
Time and date correct. Note: on Halo Wi-Fi time and date taken from the cloud.			
Correct Zone shown on each Halo Unit			
Installer contact details inputted if required.			
Zone valves labelled using provided labels.			
Suitable schedule has been entered for the user.			
General overview of operation provided to user - refer to use guide.			
Any advanced settings changes have been recorded.			
Remember to leave this guide with the householder.			

TROUBLE SHOOTING

No power LED on Smart Interface	Check Smart Interface is securely plugged into boiler aperture. Check boiler power is on.
Halo screen is flashing continuously	The Smart Interface is in 'Identify' mode press the Pair button to cancel this mode.
Boiler fails to fire when increasing target temperature on the Halo	Check the target temperature is above current temperature. Check Smart Interface power LED is green. Check Smart Interface is securely plugged into boiler aperture.
Halo screen shows failed to pair	Check Smart Interface is in paring mode (Zigbee LED flashing red). Check distance between Smart Interface and Halo (see section B). Reset Smart Interface by inserting a paperclip or pen tip into reset button. Start pairing mode again on the Smart Interface and press retry on the Halo. If the situation persists then consider using Zigbee Booster (available separately) or mounting the Smart Interface externally to the boiler using a bracket (further details on **idealheating.com**).
Halo screen shows Replace Halo	If you have no other Halo thermostats connected to the Smart Interface or are not replacing an existing Halo then press accept.
In the support page the Zigbee RSSI is lower than -75 and text red	Consider moving the Halo closer to the Smart Interface. If the situation persists then consider using Zigbee Booster (available separately) or mounting the Smart Interface externally to the boiler using a bracket (further details on **idealheating.com**).
Smart Interface will not connect to home Wi-Fi	Check Smart Interface is in Access Point (AP) mode (refer to setup sequence in app). Check Wi-Fi router configuration, check Wi-Fi security is set to WPA/WPA2. Check range <30M between Smart Interface and Wi-Fi router. If the situation persists then consider using a Wi-Fi Booster or mounting the Smart Interface externally to the boiler using a bracket (further details on **idealheating.com**).
Deleting Halo from the Zigbee Network	On the Halo press the dial and the right hand key together for 15 seconds, this will delete the Halo from the Zigbee network and factory reset the device.
Deleting the Smart Wiring Centre from the Zigbee Network	On the Smart Wiring Centre press and hold pair button, the Pair LED on the Smart Wiring Centre will flash red then orange to confirm the device has been deleted from the network.
Factory reset of the Halo Smart Interface	Press and hold the Pair button and the Override button for 20 seconds. The Halo Smart Interface will delete all Zigbee devices from the network, this will take approximately 20 seconds and detach from the Wi-Fi network if the control is a connected control. On disconnection, the Smart Interface will automatically begin the setup process as per section F3 of the installation guide.
Halo unit shows CF01	The Halo unit has lost communication to the Smart Interface, move the unit closer to the Smart Interface or consider an additional Zigbee booster.
Halo unit shows CF02	The Smart Wiring Centre has lost communication with the Smart Interface. Check power LED on the Smart Wiring Centre is solid Green, consider an additional Zigbee booster.

ideal
HEATING

Hereby, Ideal Boilers Ltd declares that this device (model 222144) is in compliance with: Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address **idealheating.com**

For more information and FAQs visit the Ideal Heating website **idealheating.com**

UIN: 225540 A02

CE UKCA   RF frequency: 2405 – 2480MHz Max.
RF output power: 10dBm

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