heatmiser



Model: neo Air







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What is a Programmable Room Thermostat?

A programmable room thermostat is both a programmer and a room thermostat.

A programmer allows you to set "On" and "Off" periods to suit your own lifestyle.

A room thermostat works by sensing the air temperature, switching on the heating when the air temperature falls below the thermostat setting, and switching it off once this set temperature has been reached.

So a programmable room thermostat lets you choose what times you want the heating to be on, and what temperature it should reach while it is on. It will allow you to select different temperatures in your home at different times of the day (and days of the week) to meet your particular needs and preferences.

Setting a programmable room thermostat to a higher temperature will not make the room heat up any faster. How quickly the room heats up depends on the design and size of the heating system.

Similarly reducing the temperature setting does not affect how quickly the room cools down. Setting a programmable room thermostat to a lower temperature will result in the room being controlled at a lower temperature, and saves energy.

The way to set and use your programmable room thermostat is to find the lowest temperature settings that you are comfortable with at the different times you have chosen, and then leave it alone to do its job.

The best way to do this is to set the room thermostat to a low temperature – say 18° C, and then turn it up by 1° C each day until you are comfortable with the temperature. You won't have to adjust the thermostat further. Any adjustment above this setting will waste energy and cost you more money.

You are able to temporarily adjust the heating program by overriding or using the temperature hold feature. These features are explained further on pages 17 and 18 of this manual.

Programmable room thermostats need a free flow of air to sense the temperature, so they must not be covered by curtains or blocked by furniture. Nearby electric fires, televisions, wall or table lamps may also prevent the thermostat from working properly.



Installation Procedure



Do

Mount the thermostat at eye level.

Read the instructions fully so you get the best from our product.



Don't

Do not install near to a direct heat source as this will affect functionality.

Do not push hard on the LCD screen as this may cause irreparable damage.

This wireless thermostat is designed to be surface mounted.

Step 1

Carefully separate the front half of the thermostat from the back plate by placing a small flat head terminal driver into the slots on the bottom face of the thermostat.

Step 2

Mark 2 hole positions on the wall using the back plate as a positioning template.

Drill at the marked positions and insert a wall plug into each hole.

Step 3

Screw the thermostat back plate securely on the wall.

Step 4

Clip the front of the thermostat back onto the thermostat back plate.











Installing the Batteries

4 x AAA batteries have been supplied with this thermostat.

To access the battery holder, push and release the compartment door located on the bottom face of the thermostat. The thermostat will inform you when the batteries need to be replaced by displaying the battery icon on screen.

Do **not** use rechargeable batteries with this product!







Insert the batteries in the empty battery holder, ensuring that each battery is orientated for the correct polarity +/-.

Push the battery holder back inside the thermostat until it is secured in its closed position.



The neoAir can either be used as a Thermostat, standalone Time Clock, or combined Thermostat and Time clock.

To change between thermostat or time clock modes, follow these steps.

	Use the Left / Right keys to scroll to SETUP
•	Press and hold the Tick button for 10 seconds
	Use the Left / Right keys to scroll between modes

Mode 1 = Thermostat

Mode 2 = Time Clock

Mode 3 = Combined Thermostat & Time Clock

Note: the selected option will flash.

Press the Tick key to confirm selection

The neoAir will revert to the main display screen for the selected mode. For time clock mode instructions, first pair the time clock with the neoHub as explained on page 10, then turn to page 34.



Pairing the neoHub

To pair the neoHub with the neoApp, follow these steps.

- Connect the power supply to the neoHub.
- Connect the neoHub to your router with the Ethernet cable provided. The router will automatically assign an IP address to the neoHub, the Link LED will light up once the neoHub has connected to your network.
- Connect your smartphone or tablet device to the same WiFi network as your router.
- Download the FREE Heatmiser neoApp from the Apple App Store, Google Play Store, Amazon App Store or Windows Phone App Store and register an account.
- Once you have registered your account, press the Login button then press the Add Location option.
- Press the connect button on the neoHub to add the location to your account.
- When successfully connected, enter a title for the new location (e.g. Home) and configure the time zone for the system.



Pairing the neoAir

The next step is to join the neoAir to the neoHub. We recommend joining any wired neoStat or neoPlug (if used) to the neoHub first. This will help to extend the wireless network for areas where radio signals are problematic.

To add a neoAir, follow these steps:

- Select Add Zone, enter a zone title and press Add Zone again.
- You now have two minutes to join the neoAir to the neoHub.
- Feature 01 is displayed on screen.



- Press the Tick key to pair the neoAir to the neoHub
- The COMMS symbol appears flashing on the display.
- Once the neoAir has successfully paired to the neoHub the COMMS symbol will remain permanently displayed.
- Press Next to add more zones or press Finish to complete the setup.

Please note, you only have to pair the hub to your account once. To pair any additional neoAir's, select Add Zones from the Manage Zones option in the neoApp.



NeoAir and MESH

NeoAir isn't capable of relaying signals from one thermostat to another (or MESH). To create an extension of the wireless network you will need to add a neo-X repeater, neoPlug or Heatmiser Boost to the system. The neoAir can also talk via wired (MESH capable) neoStats.



Pairing With the RF-Switch

- - During the countdown press and hold either 'Boiler' or 'CH1' pairing buttons on the RF-Switch for 5 seconds.

Boiler = When wiring to terminal marked 'SL'&'LR'

 $CH1 = When \ wiring \ to \ terminals \ marked \ 'COM1' \& 'NO1'$

The LED on the RF-Switch will flash to indicate it's in pairing mode. Once paired the LED will stop flashing.



Pairing With the UH8-RF Wiring Centre

On the UH8-RF, take note of the numbers set on the rotary switches (UH8-RF ID numbers 01-99).

Use the Left/Right arrow keys to scroll to SETUP and press tick key once

Each UH8-RF on the system needs to have a different ID number.

Set your first UH8-RF to 01



Example: Rotary Switch showing ID No. 99

At the	thermos	tat
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	* * * * * * * * * * * * * * * * * * *	
•	The display will now show 01 in the top right hand corner.	
•	Press the Down key twice so that P2 shows on the display	•
	Press Tick once	
	Use the Left/Right arrow keys to set the large digits to the board address of the UH8-RF.	
	This is the number set on the UH8-RF rotary switches	>
	(You must set a unique board address for each UH8-RF installed).	
•	Press Tick once. Small digits in the top right hand corner of the display will	
	now flash	1
	The UH8-RF is an 8 zone receiver. Use the Up/Down buttons to select the zone	
	this thermostat should be linked to	•
	Press Tick to select zone type (Radiators or Underfloor Heating)	1
	Use the Up/Down buttons to select either: RA = Radiators or	
	UF = Underfloor Heating	1
	Press Tick to finish and confirm settings. Display will return to the main screen	







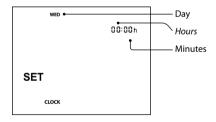
LCD Display

- 1. Day Indicator Displays the day of the week.
- 2. Comms Symbol Displayed when connected to the neoHub.
- 3. Frost Symbol Displayed when frost protection mode is active.
- Flame Symbol Displayed when the thermostat is calling for heat, flashes when optimum start is active.
- 5. Floor/Room Temp Indicates the current sensor mode.
- Set Displayed when changes are being made to the program schedule or current set point.
- 7. Key Lock Indicator Displayed when the KeyLock is Locked.
- Program Indicator Displayed during programming to show which period is being altered.
- 9. Main Menu Displays which option is currently selected.
- 10. Battery Indicator Shown when batteries need replacing.
- 11. Timer Status Displays the current state of the timed output.
- 12. Temperature Format Degrees Celsius or Fahrenheit.
- 13. Temperature Displays the current sensor temperature.
- 14. Clock Time displayed in 24 hour format.
- 15. Holiday Left Displayed when the thermostat is in holiday mode.
- Hold Left Displayed when a temperature hold is active, the remaining time will be shown.





To set the clock, follow these steps.





The neoAir offers three program mode options; Weekday/Weekend programming, 7 Day programming and 24 Hour programming. There is also the option to use the thermostat as a Non-Programmable thermostat.

When thermostats are connected to a network, the program mode for the system is configured by using the neoApp.

The thermostat is supplied with comfort levels already programmed, but these can be changed easily. The default times and temperature settings are:

07:00 - 21°C (Wake) 09:00 - 16°C (Leave) 16:00 - 21°C (Return) 22:00 - 16°C (Sleep)

If you only want to use 2 levels, you should program the unused levels to --:--

For Weekday/Weekend programming, the four comfort levels are the same for Mon-Fri, but can be different for Sat-Sun. For 7 Day programming each day of the week can have four different comfort levels. In 24 Hour mode all days are programmed with the same comfort levels.

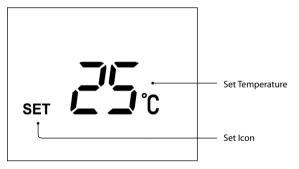
- Press Tick to confirm selection
- Use the Left / Right keys to select day / period of week (the selection will flash).
- Press Tick to confirm selection

 WAKE will now flash and the current time and temperature setting will be shown.
- WAKE will now hash and the current time and temperature setting will be shown.

•	Use the Up / Down keys to set the hours		V
	Press Tick to confirm		
	Use the Up / Down keys to set the minutes	^ \	✓
	Press Tick to confirm		/
	Use the Up / Down keys to set the temperature	^ \	V
	Press Tick to confirm the settings		/
	Press the right arrow key		>
	LEAVE will now flash and the current settings will be displayed.		
	Press Tick to alter LEAVE settings		/
	Repeat these steps to set all comfort levels.		
	For any unused periods set time to:		
	Use the Left / Right keys to scroll to DONE and press Tick	_<>、	/



Temperature Control



Note: This new temperature is maintained only until the next programmed comfort level. At this time, the thermostat will revert back to the programmed levels.



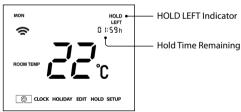
Temperature Hold (Mode 01 Heating only)

The temperature hold function allows you to manually override the current operating program and set a different temperature for a desired period.

Use the Left / Right keys to scroll to HOLD
Press Tick to confirm selection
Use the Up / Down keys to set the desired Hold period
Press Tick to confirm selection
Use the Up / Down keys to set the desired Hold temperature

You will see the HOLD LEFT indication is displayed on screen.

The time will countdown the set duration and then revert to the normal program.



To cancel a temperature Hold, repeat these steps but reduce the Hold time to 00:00 hrs.



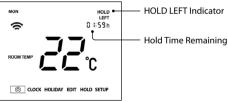
Temperature Hold (Mode 03 Heating and Hot Water)

The temperature hold function allows you to manually override the current operating program and set a different temperature for a desired period.

- Press Tick to confirm selection
- The word "Heating" is highlighted, press Tick to confirm

You will see the HOLD LEFT indication is displayed on screen.

The time will countdown the set duration and then revert to the normal program.

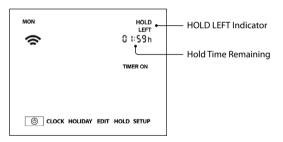


To cancel a temperature Hold, repeat these steps but reduce the Hold time to 00:00 hrs.



Hot Water Boost (Mode 03 Heating and Hot Water)

To boost the hot water output on, follow these steps. - Use the Left / Right keys to scroll to HOLD	<>
Press Tick to confirm selection	
The word "Heating" is highlighted, use the Left / Right keys to select TIMER then press TICK to confirm	<> \
• Use the Up / Down keys to set the boost duration e.g. 02:00 hours	N V
Press Tick to confirm settings and return to main display	



"Hold Left" and the remaining time will now be displayed.



Locking the neoAir

The thermostat has a keypad lock facility. To activate the lock follow these steps.

- Use the Left / Right keys to scroll to HOLD & press Tick for 10 seconds. <>> \checkmark
- The display will show 00:00 and you will need to enter a four digit pin number.
- \cdot Use the Up / Down keys to enter the first two digitsigwedge V
- Press Tick to confirm

 Use the Up / Down keys to enter the second two digits
- Press Tick to confirm
- The display will return to the main screen and display the keypad lock indicator



Unlocking the neoAir

To unlock the neoStat press Tick once. The display will show 00:00 and you will need to enter the four digit pin number you set previously.

- Use the Up / Down and Tick keys to enter the second two digits $\bigwedge V \checkmark$

The display will unlock and return to the main screen.



In this mode, the neoStat will display the frost icon and will only turn the heating ON should the room temperature drop below the set frost temperature (see page 23). If the heating is turned ON whilst in frost mode, the flame symbol will be displayed.

To cancel the frost protect mode, navigate to the Power button again and press Tick. \checkmark



Frost Protection Mode Enabled



The heating is indicated ON when the flame icon is displayed.

When the flame icon is absent, there is no requirement for heating to achieve the set temperature but the neoAir remains active.

.

The display and heating output will be turned OFF.

To turn the thermostat back ON, press the Tick key once

Thermostat completely OFF



Thermostat powered ON





In thermostat mode, the holiday function reduces the set temperature in your home to the frost protection temperature setting (see page 24).

In time clock mode, the holiday function maintains the timed output as OFF.

The thermostat will maintain this temperature for the duration of the holiday and will then automatically return to the program mode on your return.

Use the Left / Right keys to scroll to HOLIDAY and press Tick
 Using the Up / Down keys enter the number of days holiday
 Press Tick to confirm settings

Note: A holiday period does not start until 00:00 the next day. For example, if you set a holiday period on Friday for 2 days, Saturday will be counted as the first day and the thermostat will revert back to the programmed schedule at 00:00 on Monday.

To cancel, repeat these steps but reduce the Holiday duration to 00 days.

Optional Features Explained

THE FOLLOWING SETTINGS ARE OPTIONAL AND IN MOST CASES NEED NOT BE ADJUSTED

Feature 01 – Pairing To neoHub: This function is used to connect the thermostat to the neoHub.

Feature 02 - Switching Differential: This function allows you to increase the switching differential of the thermostat. The default is 1°C which means that with a set temperature of 20°C, the thermostat will switch the heating on at 19°C and off at 20°C. With a 2°C differential, the heating will switch on at 18°C and off at 20°C.

Feature 03 - Frost Protect Temperature: This is the temperature maintained when the thermostat is in Frost Mode. The range is 07 - 17°C. The default is 12°C and is suitable for most applications.

Feature 04 – Output Delay: To prevent rapid switching, an output delay can be entered. This can be set from 00 - 15 minutes. The default is 00 which means there is no delay.

Feature 05 – Temperature Up/Down Limit: This function allows you to limit the use of the up and down temperature arrow keys. This limit is also applicable when the thermostat is locked and so allows you to give others limited control over the heating system.

Feature 06 – Sensor Selection: On this neoAir, you can select which sensor should be used. You can select between air temperature only, floor temperature, or both. When you enable both sensors, the floor sensor is used as a floor limiting sensor and is designed to prevent the floor from overheating.

Feature 07 – Floor Temp Limit: This function is available when feature 06 is set to 03. You can set a floor limiting temperature between 20-45°C (28°C is the default setting). Note: neoAir MUST NOT be used to control electric under-floor heating.

Feature 08 – Optimum Start: Optimum start will delay the start-up of the heating system to the latest possible moment to avoid unnecessary heating and ensure the building is warm at the programmed time. The thermostat uses the rate of change information to calculate how long the heating needs to raise the building temperature 1°C (with a rate of change of 20, the thermostat has calculated the heating needs 20 minutes to raise the building temperature 1°C) and starts the heating accordingly.

Feature 09 - Rate of Change: Number of minutes for 1°C temperature rise.

Feature 10 - Not used on this model.

Feature 11 - Not used on this model.

Feature 12 – Program Mode: Non-Programmable, Weekday/Weekend (5/2), 7 Day Programming or 24 Hour. The thermostat offers three programming modes and the option of configuring it to work as a non-programmable thermostat.

Weekday/ Weekend - allows you to program 4 comfort levels for the weekday and 4 different comfort levels for the weekend.

7 Day Program Mode - Each day has 4 comfort levels that can be programmed independently.

24 Hour Mode - All days are programmed the same and repeat continuously.

Feature 13 - Temperature Format: This function allows you to select between °C and °F.

Feature P1 - Pairing: to the RF-Switch.

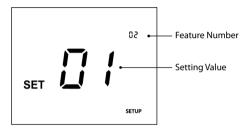
Feature P2 - Setting the UH8-RF address: This is the number set on the rotary dials inside the UH8-RF unit.

Feature P3 - Failsafe: If the RF-Switch or UH8-RF fails to receive a signal from the thermostat within 40 minute period, it will activate to output for 12 minutes every hour. The RF-Switch/UH8-RF will continue to do this until it receives a new signal from the thermostat.



Adjusting the Optional Settings

Use the Left / Right keys to select SETUP Press Tick to confirm selection



- Use the Up / Down keys to scroll through features Use the Left / Right keys to adjust the setting within each feature
- Press Tick to confirm settings



Optional Settings - Feature Table

FEATURE	DESCRIPTION	SETTING
Р3	Failsafe	00 = Disabled 01 = Enabled (Default)
P2	Pairing to UH8-RF	00 – 99 = Receiver address
P1	Pairing to RF-Switch	Commences countdown from 99 – 00 seconds.
01 Menu Entry Point	Pairing to Hub	Used to add zone to the neoHub
02	Switching Differential	00 = 0.5°C 01 = 1.0°C (Default) 02 = 2.0°C 03 = 3.0°C
03	Frost Protection Temperature	07° - 17°C (12°C = Default)
04	Output Delay	00 - 15 Minutes (00 = Default)
05	Up/Down Temperature Limit	$00^{\circ} - 10^{\circ}C$ ($00 = Default$)
06	Sensor Selection	00 = Built in Sensor (Default) 01 = Remote Air Sensor 02 = Remote Floor Sensor 03 = Built in Sensor & Remote Floor
07	Floor Temperature Limit	20°C - 45°C (28°C = Default)
08	Optimum Start	00 - 05 Hours (00 = Default)
09	Rate of Change	Minutes to raise by 1°C
10	Not used on this model	, and the second
11	Not used on this model	
12	Program Mode	00 = Non - Programmable 01 = Weekday/Weekend (Default) 02 = 7 Day Programming 03 = 24 Hour Mode
13	Temperature Format	$00 = ^{\circ}C$, $01 = ^{\circ}F$ ($00 = Default$)



Re-calibrating the Thermostat



Error Codes

When terminated for thermostat operation the screen will display an error code if a fault is detected.

- E0 = The internal sensor has developed a fault.
- E2 = The remote AIR probe has not been connected.

 The remote AIR probe has not been wired correctly.

 The remote AIR probe is faulty.



To reset the device to factory default settings, follow these steps:

•	Use the Left / Right keys to scroll to SETUP	<	>	>
	Press and hold the Tick key for 10 seconds	✓	,	

- All of the icons on the display will appear for 2 seconds, then the display will show options 1, 2 & 3.
- Use the Left / Right keys to scroll between modes (selection will flash)

 Mode 1 = Thermostat

 Mode 2 = Time Clock

Mode 2 = Time Clock

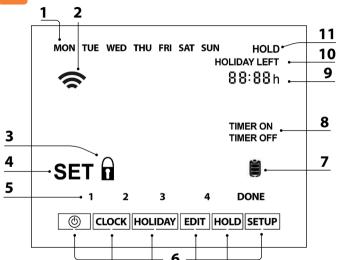
Mode 3 = Thermostat with Hot Water

Press the Tick key to confirm selection

The thermostat will revert to the main display screen for the selected mode.

Note: Factory reset will cancel all parameters that were entered during the set-up and pairing operations. These processes must be repeated after factory reset is completed.

Mode 2 - Time Clock



LCD Display

- 1. Day Indicator Displays the day of the week.
- 2. Mesh Symbol Displayed when connected to the neoHub.
- 3. Key Lock Indicator Displayed when the Keypad is Locked.
- Set Displayed when changes are being made to the program schedule or current set point.
- Program Indicator Displayed during programming to show which period is being altered.
- 6. Main Menu Displays which option is currently selected.
- 7. Battery Indicator Shown when batteries need replacing.
- 8. Timer Status Displays the current state of the timed output.
- 9. Clock Time displayed in 24 hour format.
- 10. Holiday Left Displayed when the time clock is in holiday mode.
- Hold Left Displayed when a timed set period is active, the remaining time will be shown.



Setting the Switching Times

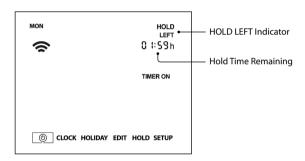
To	pro	ogram the switching times, follow these steps.	
	•	Use the Left / Right keys to scroll to EDIT and press Tick	
	•	Use the Left / Right keys to select day/period of the week	<>
	•	Press Tick to confirm selection	✓
		1 will now flash and the current ON time will be displayed.	
		The OFF time can be viewed by pressing the Down key	V
		Select a switching time and press the Tick key	✓
	•	Use the Up / Down keys to select the ON time HOURS and press Tick \dots	V۸
	•	Use the Up / Down keys to select the ON time MINUTES	$\wedge \vee$
		Press Tick to confirm selection	✓
	•	Use the Up / Down keys to select the OFF time HOURS and press Tick \dots	$\wedge \vee \checkmark$
	•	Use the Up / Down keys to select the OFF time MINUTES	Λ٧
		Press Tick to confirm selection	✓
		Press the Right arrow key	>
		2 will now flash and the current ON time will be displayed.	
		Repeat the steps above to set all periods. For any unused periods enter	:-
	•	When complete, use the Left / Right keys to scroll to DONE and press	
		Tick to confirm all changes	<> ✓



To override the timed output on, follow these steps.

- Use the Up / Down keys to set the override duration e.g. 02:00 hours $\boldsymbol{\mathsf{V}}$
- Press Tick to confirm settings and return to main display

Hold Left and the remaining time will now be displayed.





Optional Features Explained

Feature 01 - Pairing To neoHub: This function is used to connect the thermostat to the neoHub.

Feature 02 - Program Mode: The time clock offers three programming modes.

Weekday/Weekend - allows you to program 4 On/Off levels for the weekday and 4 different levels for the weekend

7 Day Program Mode - Each day has 4 comfort levels that can be programmed independently.

24 Hour Mode - All days are programmed the same and repeat continuously.

Feature P1 - Pairing: to the RF-Switch.

Feature P2 - Setting the UH8-RF address: This is the number set on the rotary dials inside the UH8-RF unit

Feature P3 - Failsafe: If the RF-Switch or UH8-RF fails to receive a signal from the thermostat within 40 minute period, it will activate to output for 12 minutes every hour. The RF-Switch/UH8-RF will continue to do this until it receives a new signal from the thermostat.



Optional Settings - Feature Table

FEATURE	DESCRIPTION	SETTING
Р3	Failsafe	00 = Disabled 01 = Enabled (Default)
P2	Pairing to UH8-RF	00 - 99 = Receiver address
P1	Pairing to RF-Switch	Commences countdown from 99 – 00 seconds.
01	Pairing to Hub	Used to add zone to the neoHub
02	Program Mode	01 = 5/2day 02 = 7day 03 = 24 hour

Notes	



Notes		

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Want More Information?

Call our support team on: +44 (0)1254 669090

Or view technical specifications directly on our website: www.heatmiser.com







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