TIME:O:STAT®

THE HMO THERMOSTAT

User Manual and Installation Guide

1. Introduction & Features

Time:o:stat is a thermostat designed for HMO and 'bills included' rental properties. The Time:o:stat is tamper-proof and easy to use. It regulates temperature while controlling the heating period through a time delay countdown timer. When the time runs out the heating shuts down. This lowers heating bills while still allowing tenants to operate the heating when home – helping reduce wasted energy.

Time:o:stat is a room thermostat and can be used to replace an existing room thermostat. Typically a single Time:o:stat is required per house. (Unless the house has multiple boilers or separate switched heating zones).

Time:o:stat is available in four different models: Wired (Battery), Wired (Mains), Wireless and 2 channel.

Time:o:stat Features
      1.1 Countdown Heating duration
      1.2 Auto-Program modes
      1.3 Maximum Temperatures
      1.4 Minimum Temperatures
      1.5 Comfort Warmth Mode
      1.6 Night Comfort Mode Restriction
      1.7 Seasonal Mode
      1.8 Hot Water Modes (2 Channel only)

Featured settings can be changed by following the guide for advanced settings setup in section 3.

1.1 Countdown Heating duration *(Default 2 hours)*
The Time:o:stats main operating mode involves setting a desired temperature and time duration for the heating period. The default maximum duration a user can set for each heating period is 2 hours. When this time has elapsed the heating will stop. Time can be added to the Time:o:stat at any point to re-start or prolong the heating period to the set duration limit. The default duration limit is 2 hours but

this can be changed to 3 hours using the advanced settings.

1.2 Auto-Program modes *(default 2 x 1 hours)*
The auto-program allows a limited period of time to be automatically added to the Time:o:stat countdown timer twice per day. This allows occupants to wake and return to a warm house. Pressing the (:t:) button will activate auto-program mode and bring up two start times at the top of the screen.

These start times can be easily adjusted by the occupants, but the duration is set at installation. The default is 1 hour auto-program twice per day. This can be adjusted in the advanced settings to 2 or 3 hours twice per day. The auto-program default temperature is 21°C, but can be changed to 23°C. Occupants can adjust the time the auto-programs start by holding down the (:t:) button. CH TIMER SET is displayed, and the first auto-program start hour can be adjusted with the (+) and (−) buttons to the right of the screen. Pressing the (:t:) button advances to set the minutes. Pressing the (:t:) button will then advance to set the second auto program start time.

The auto-program is active while the two times (T1 & T2) are visible at the top of the screen. Pressing the (:t:) button will toggle the auto-program on/off. Auto-program can also be permanently disabled in the advanced settings.

1.3 Maximum Temperatures *(default 28°C)*
The maximum temperature that can be selected on the Time:o:stat is 28 degrees. This can be restricted to 23°C.

1.4 Minimum Temperatures *(default 14°C)*
Minimum temperatures can be selected to ensure the house does not fall below a set temperature.
These can be 7, 14, 18, 19 or 20°C. The default setting is 14°C. The minimum temperature can also be deactivated.

1.5 Comfort Mode *(default deactivated)*
Comfort mode can be activated in the advanced settings. This allows up to 8 hours to be added to the countdown

duration at any time of the day. The longer the period of time added to the timer the lower the maximum temperature limit.

0-2 hours there is no temperature limit (28ºC or 23ºC)

3-4 hours the temperature is limited to a maximum of 21ºC.

5-6 hours the temperature is limited to 20ºC.

7-8 hours the temperature is limited to 19ºC.

1.6 Night Comfort Mode Restriction *(default deactivated)*
Night mode can be activated in the advanced settings. This restricts comfort mode, detailed above, to night hours of 8pm and 8 am. This allows longer periods of time to be added to the Time:o:stat on cold nights but prevents the comfort mode function being used during the day.

1.7 Seasonal mode *(default deactivated)*
When in seasonal mode, the Time:o:stat will automatically change many of its settings during the summer months. During June, July and August the functions will be scaled back to the following:

- Countdown heating duration - 2 hrs
- Auto-Program - 2 x 1hr with 48hr Auto-Drop*
- Maximum Temperature - 23ºC
- Minimum Temperate - disabled
- Comfort Modes - disabled

48hr Auto-Drop deactivates the auto-program if the Time:o:stat has been left idle for 48 hours. This prevents prolonged periods of automatic heating when occupants may be away from the property. The auto-program can be reactivated by the occupants by pressing the (:t:) button.
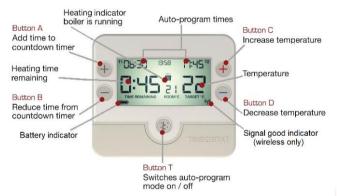
1.8 Hot Water Modes *(2 channel Time:o:stat only)*
There are two water heating modes. 2 x 3hr daily hot water heating durations or a 24hr hot water setting. Pressing the hot water button advances the hot water heating in the first setting but switches the hot water off/on in 24hr setting.

2. Quick Start Guide

1. To start the heating add time to the countdown using button (A)

2. Select desired temperature using buttons (C) (D)

3. Additional time is added by repeatedly pressing button (A)

Time can be reduced from timer by pressing button (B)

4. The autoprogram times can be activated by pressing button (T)

To set autoprogram times, hold button (T) for 3 seconds

The screen will also show the current room temperature.

If the target temperature is above the room temperature the radiator symbol will show and the boiler will turn on.

The Time:o:stat will instruct the boiler to heat the house to the target temperature for the duration of the countdown timer.

When the countdown timer runs out the Time:o:stat will stop instructing the boiler to heat the house.

Additional time can be added to the countdown timer at any time.

3. Configuring your Time:o:stat

The Time:o:stat is shipped with the default advanced settings and locking bitswitch disabled. It is recommended that the locking bitswitch is enabled following changes to the advanced settings. This helps prevent tenants tampering with the advanced settings.

To adjust the advanced settings:
1. Press and hold the button (A) and button (C) then button (T) for around 3 seconds
2. Setup 1 screen (For selecting countdown duration) will then be displayed (see the screen below)

3. In the top right of the screen the advanced setting option being selected is displayed. (in this case 2hr countdown)

Below is the flow of setup screens for the advanced settings. The table shows the options for each advanced setting. The default setting is in bold. To change the advanced setting, cycle the options using the **+** and **−** buttons (C) and (D). To move to the next setup screen, press the (T) button below the screen.

Screen	Code	Advanced Setting	Options (default in bold)
Setup 1	dur	Countdown Duration	**2hrs**, 3hrs
Setup 2	ProG	Auto-Program Duration	**1hr**, 2hrs, 3hrs, OFF
Setup 3	HIGH	Maximum Temperature	**28ºC**, 23ºC
Setup 4	Low	Minimum Temperature	**14ºC**, 18ºC, 19ºC, 20ºC, OFF, 7ºC
Setup 5	CoFt	Comfort Mode	**OFF**, ON, Night
Setup 6	SEAS	Seasonal Mode	**OFF**, ON
Setup 7	dEFt	Starting Temperature	**21ºC**, 23ºC
Setup 8	HW	Hot Water (2-Channel)	**Prog** (2x3hr durations), ON
INFo	InFo	Signal Test / Info	RF Signal Strength / Summary

4. The final INFO screen displays a summary of the selected advanced settings, which is also the RF signal test screen for wireless models. The optimal position for the best signal strength can then be selected for wireless models.

The info screen which can be seen below:

RF Channel

Countdown Duration

Maximum Temperature

Auto-Program Duration

Minimum Temperature

Signal Strength

5. The advanced settings can be **LOCKED** to prevent tampering by switching bitswitch 1 to the up 'on' position. To do this first remove the front lower cover secured with the hex screw. Bitswitch 1 is located to the right of the T button. This will prevent changing the advanced settings until bitswitch 1 is returned to the down 'off' position.

(Ensure mains power to the Timeostat is isolated whenever changing the any bitswitches with the wired mains model)

4. Setting the Time & Date

The Time:o:stat automatically adjusts for BST so it is essential to set the correct date/time for the auto-program feature to operate correctly.

You can set the clock when new batteries are inserted, or by following the procedure below:

1. Hold the left side + and – buttons for 3 seconds. The date setting screen will show displaying DAY MONTH YEAR with the DAY flashing.

2. Set the day using the (+) and (–) buttons.

3. Press the (:t:) button will progress to set the MONTH.

4. Repeat the same process to continue to set the YEAR and finally the TIME using the 24 hour clock format.
When complete the Time:o:stat screen will be blank, with the time at the top.

5. Changing the Wireless (RF) Channel

Normally the radio frequency (RF) channel used for the communications between the Time:o:stat controller and receiver does not need to be changed. However you may be operating two Time:o:stats in close proximity. This could be due to Time:o:stats in adjacent properties or multiple boilers/zones within a property. To change the channel:

1. Turn off the power to the boiler.
2. Remove the both the Time:o:stat controller and receiver from the wall brackets.
3. Adjust bitswitch settings 1.2.3.4 viewed through the aperture on the back of the receiver with a pin.
4. Change the settings in the same aperture on the Time:o:stat master to match. (leave switch 5).
5. Following any setting change you will need to RESET the control unit by holding the RIGHT side **(+)** and **(-)** buttons for 3 seconds. The info screen and signal strength meter will then display, press the (:t:) button to finish.

6. Wireless Signal Strength Test

1. Perform a RESET by holding the RIGHT side **(+)** and **(-)** buttons simultaneously for 3 seconds.
2. This will show the advanced settings info screen and RF signal strength meter. It shows the current signal strength in bars at the bottom of the display.
3. The signal strength indicator is dynamic, so you can move the unit around to find a location with stronger signal strength.

4. To exit this mode and return to normal operation press the (:t:) button.

A desirable signal strength is **at least 2 bars**. Below this indicates a poor signal strength. When connected there will be a small network icon displayed in the bottom right of the screen and the signal strength bars will disappear.

7. Wireless Time:o:stat Location Guide

Connection problems can be prevented by carefully considering the location of the Time:o:stat master and receiver at the point of installation.
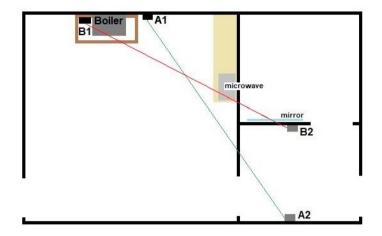
The radio frequency (RF) used by the wireless Time:o:stat passes easily through internal stud walls but poorly through solid brick. RF is also disturbed by metal household appliances (such as microwaves, cookers and fridges).

When wiring the receiver, mount it outside of any cupboard and where the line of signal does not travel through the boiler itself. (Position A1 is better than B1 in the diagram below).
Typically the wireless Time:o:stat has a range of 15 meters, through three stud walls. It will only reliably pass through a single solid brick wall and the range will be dramatically reduced. The diagram on the following page, shows good and bad locations.

A1 to A2 location – **GOOD** line of signal only passing through: one wall
B1 to B2 location – **BAD** line of signal passing through: two walls, cupboard, boiler, microwave and mirror.

You can check the RF signal quality of the Time:o:stat when mounted in the desired location by following the signal testing procedure.

8. TROUBLESHOOTING

Q. How do I change the time?
If the incorrect time is showing then this can be changed by pressing/holding the left hand side **+** and **–** buttons for 3 seconds.
You will be asked to set the DATE, MONTH, YEAR and TIME. Use the + and – buttons to initially change the date. Press the central (:t:) button to confirm at each step.

Q. Low Signal displayed + flashing red LED?
- **Check the orientation** of the receiver and how it is mounted on the wall. The internal aerial in the black Time:o:stat receiver works best then mounted vertically in the suggested landscape orientation. Placing horizontal or in a portrait position will drastically reduce the communication range.
- **Check the green light** is showing on the Time:o:stat receiver next to the boiler. If the green light is not

showing then there is no power. Have a qualified electrician check the wiring to the boiler.

- **Check for low battery** symbol showing on the Time:o:stat. If present replace the existing batteries with new high performance AA batteries.
- **Check signal strength** – follow the wireless signal strength testing procedure and Wireless Time:o:stat location guide.
- **Check the communication channel**, Time:o:stats are factory paired and do not require pairing. Changing the RF channel is only required if there are more than one Time:o:stat in close proximity. However the settings may have been inadvertently changed. You can check that the Master and receiver IDs are the same – look through the aperture on the back of both the receiver and the master and ensure the 5 bitswitch settings are the same. If changing the RF channel you must always RESET the unit by holding the right side **(+)** and **(-)** buttons simultaneously for 3 seconds.
- **Check the range** - The controller and its receiver may be too far apart or there are solid walls in-between the units. Relocate the wireless Time:o:stat closer to the receiver minimising metallic and solid objects in its line of sight. (follow the Wireless Time:o:stat location guide)

Q. There is a blank screen?

- *DO NOT BEND THE BATTERY TERMINALS*
- Try to wake the Time:o:stat by pressing the top left + button
- Factory reset the unit by removing the batteries, then press a few buttons to clear any charge from the memory, wait for 30 seconds, then replace the batteries.
- Repeat the above procedure with new AA high performance batteries. Then RESET the unit by pressing/holding the right hand side + and - temperature buttons for 3 seconds as the settings have been changed.

Q. Low battery symbol is showing?
- Remove the batteries, then press a few buttons to clear any charge from the memory, wait for 30 seconds. Then replace the batteries with new AA high performance batteries.
- Low battery levels may be insufficient for radio frequency signal to operate correctly

Q. Heating is on when it should be off?
- **RESET the unit** by holding the right hand side red **+** and blue **-** temperature buttons for 3 seconds. This may have not been done following an advanced settings change.
- **Check hot water** usage is not being called for that would result in the boiler running.
- **Check RF interference** from another Time:o:stat. - If there is another Time:o:stat in close proximity then each Time:o:stat should be set to a different RF channel and then reset following the change. (A step by step guide to change the RF channel is in section 5.)
- Time:o:stats are factory paired and do not require pairing. Changing the RF channel is only required if there are more than one Time:o:stat in close proximity.
- **Is the wiring correct?** – this should be checked by a qualified person
- Check mains voltage has not passed through the low voltage contacts which may have damaged the unit during installation. (Maximum switchable current is 2A).

Q. Heating is off when it should be on?
- **Check the boilers master thermostat** is not too low. If too low then the boiler will shut off the heating regardless of the temperature selected on the Time:o:stat.
- **Check the heating is set to 'constantly on'** on the boiler. If the heating is selected as off or on a separate timer then the Time:o:stat will not operate during the other timers 'off' periods.

- **Is the wiring incorrect?** - this should be checked by a qualified person - Check mains voltage has not passed through the low voltage contacts which may have damaged the unit during installation. (Maximum switchable current is 2A).

Q. Auto-program comes on at strange times*?*
The two auto-program times displayed at the top of the screen run according to the main clock in the top centre of the screen.
- Ensure this is showing the correct 24hr time.
- If the incorrect time is showing then this can be changed by pressing/holding the left hand side **+** and **−** buttons for 3 seconds
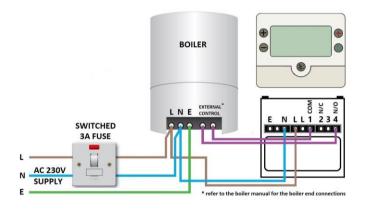
9. Wired (mains) Time:o:stat Installation Guide

A qualified electrician is required to install the Time:o:stat.

Wiring the mounting bracket:
1. Remove the front lower cover from the Time:o:stat using the hex key.
2. Remove mounting bracket by loosening the holding screw located behind the front lower cover to the left of the (:t:) button.
3. Isolate the power to the boiler from the fused spur.
4. Locate the Live (L), Neutral (N) and the external thermostat/timer control connections in the boiler.
5. Using 5A mains rated 3184Y flex, strip the wires and connect to the terminals in the boiler according to the manufacturer's instructions.
6. Secure the wired mounting bracket to the wall with 2 of the screws and plugs.
7. Strip ends of the wires and connect to the wired mounting bracket for the Time:o:stat as shown below. Connect the Live wire to L terminal, Neutral wire to N terminal and the two external control wires to terminal 1 (COM) and 4 (N/O). Use case knock-outs if needed.
8. Refer to the boiler instruction manual for the two boiler end connections. The Time:o:stat will operate with both mains voltage and low voltage boilers and the control is a volt free contact. (Mains voltage uses Live and 'Switch Live' to connect to 1 and 4 terminals. The NEUTRAL should **NOT** be connected to these terminals)
9. For mains voltage connections the link supplied

can bridge the central vacant L terminal to the adjacent terminal 1 for a 3 wire solution.

10. Hook and push the Time:o:stat front panel onto the wired mounting plate so the connecting pins push into the terminal blocks and lock into place with the connecting screw through the front of the case.
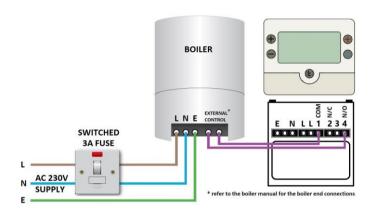

* refer to the boiler manual for the boiler end connections

10. Wired (battery) Time:o:stat Install Guide

A qualified electrician is required to install the Time:o:stat.

Wiring the mounting bracket:
1. Remove the battery cover from the Time:o:stat using the hex key.
2. Remove mounting bracket by loosening the holding screw located behind the battery cover to the left of the (:t:) button.
3. Isolate the power to the boiler from the fused spur.
4. Locate the external thermostat/timer control connections in the boiler.
5. Using 5A mains rated 3184Y flex, strip the wires and connect to the terminals in the boiler according to boiler manufacturer's instructions.
6. Secure the wired mounting bracket to the wall with 2 of the screws and plugs.
7. Strip ends of the wires and connect to the wired mounting bracket for the Time:o:stat as shown below. Connect the two external control wires to the 1 (COM) and 4 (N/O) terminals. Use case knock-outs if needed.
8. Refer to the boiler instruction manual for the two boiler end connections. The Time:o:stat will operate with both mains voltage and low voltage boilers and the control is a volt free contact. (Mains control uses Live and 'Switch Live' to connect to 1 (COM) and 4 (N/O) terminals the NEUTRAL should **NOT** be connected to these terminals)
9. Hook and push the Time:o:stat front panel onto

the wired mounting plate so the connecting pins push into the terminal blocks and lock into place with the connecting screw through the front of the case.
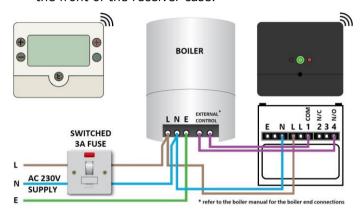

* refer to the boiler manual for the boiler end connections

11. Wireless Time:o:stat Installation Guide

An electrician is required to install the Time:o:stat.

Wiring the Wireless Receiver mounting bracket:
1. Remove the mounting bracket by loosening the front holding screw.
2. Isolate the power to the boiler at the fused spur.
3. Locate Live, Neutral and external thermostat connections in the boiler.
4. Using 5A mains rated 3184Y flex, strip the wires and connect to the terminals in the boiler according to the boiler's instructions.
5. Secure the wired mounting bracket to the wall.
6. Strip the wire ends and connect to the mounting bracket for the Receiver Time:o:stat as shown below. Connect the Live wire to L terminal, Neutral wire to N terminal and the two external control wires to 1 (COM) and 4 (N/O) terminals.
7. Refer to the boiler manual for the two boiler end connections. The Time:o:stat will operate both mains voltage and low voltage boilers and the control is a volt free contact. (Mains control uses Live and 'Switch Live' to connect to 1 (COM) and 4 (N/O) terminals NEUTRAL should not be connected to these terminals)
8. For mains voltage connections the link supplied can bridge the central vacant L terminal to the adjacent 1 terminal for a 3 wire solution.
9. Ensure the dip switch settings 1 2 3 4 viewed through the rectangular aperture on the back of the receiver match those in the same aperture on the Time:o:stat controller These designate the radio frequency (RF) communication channel.

10. Hook and push the Time:o:stat receiver front panel onto the wired mounting plate so the connecting pins push into the terminal blocks and lock into place with the connecting screw through the front of the receiver case.

* refer to the boiler manual for the boiler end connections

Connecting the Time:o:stat Controller

1. Remove the battery cover using the hex key.
2. Remove mounting bracket by loosening the holding screw located behind the battery cover to the left of the (:t:) button.
3. Secure the blank mounting bracket to the wall in the desired position. **IMPORTANT: refer to location and signal strength guide**
4. Hook and push the Time:o:stat controller in place and secure with the screw through the hole to the left of the (:t:) button.
5. Insert the supplied AA batteries and set time/date.
6. Replace the battery cover and secure with the hex screw provided.