

USER MANUAL

57193A 03/10 (DJU)
© 2010 OJ Electronics A/S

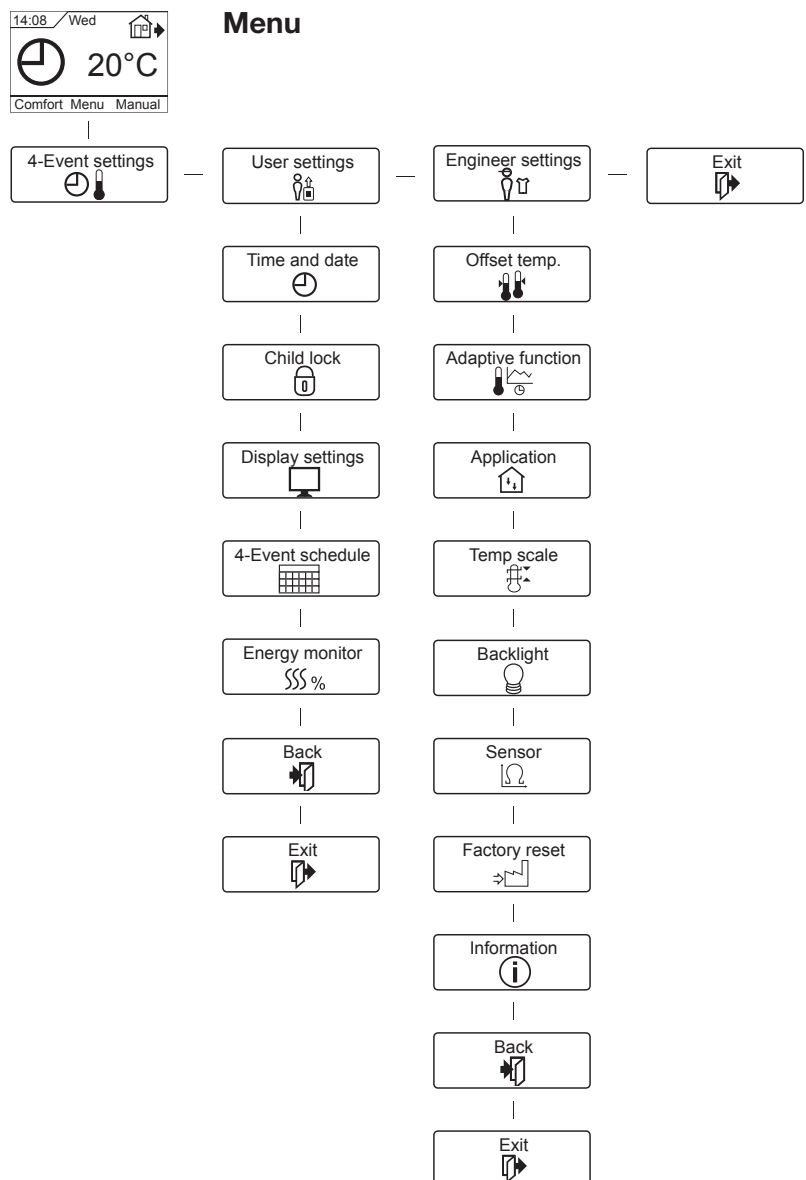


NGT-567-0010 Thermostat

Contents

Introduction.....	2
First time settings.....	2
General operation.....	2
Back.....	2
Exit.....	2
Operation mode.....	2
Auto mode	2
Manual mode	2
Comfort mode	2
Thermostat setup menus.....	2
4-event settings.....	2
User settings.....	3
Time and date	3
Child lock	3
Display settings	3
4-event schedule	3
Energy monitor	3
Engineer settings.....	3
Offset temperature.....	3
Adaptive function.....	3
Application.....	3
Temperature scale	4
Backlight.....	4
Floor sensor.....	4
Factory reset.....	4
Information	4
Back.....	4
Exit.....	4
Error messages	4
Factory settings.....	4
Preset schedule.....	4

Menu



Introduction

The NGT thermostat can switch your underfloor heating system on and off at predetermined times throughout the week. Each day of the week is split up into four separate periods, each of which can have a different target temperature. This allows you to lower the temperature in rooms that are unoccupied at different times reducing your energy usage without reducing your comfort.

Your NGT thermostat comes ready programmed with a default schedule which is suitable for most homes. If you do not change the settings your thermostat will follow the default schedule.

Your thermostat also features an adaptive function that learns how long the floor takes to heat up and cool down as the seasons change and takes this into account when turning the heating on and off. This ensures the room is always up to temperature at the desired time. The adaptive functions fuzzy logic takes three days to learn the heat characteristics of the room before it operates efficiently.

First time settings

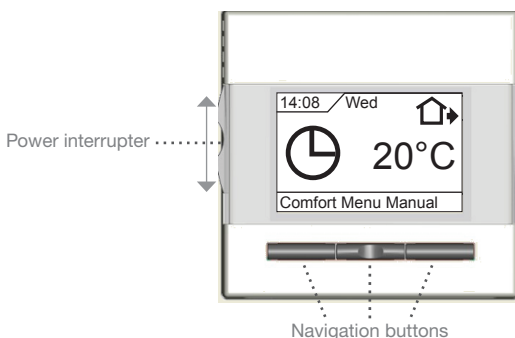
The first time you switch the thermostat on the time, application, floor type and load must be set. The menu will automatically guide you through the process.

- Set the hour and press the **OK** button. Then set the minutes. Press **OK**.
- Now set the date: year, month and day. Confirm the settings with the **OK** button.

The next menu allows you to select the application you want the thermostat to run on. If the thermostat is in the room to be heated select Room/limit. If the thermostat is outside of the room to be heated select Floor. Once you have chosen your setting press **OK**. You now need to select your chosen floor covering so the thermostat can take this into account on its settings. Select your chosen floor covering and press **OK**.

You now need to enter the loading of the system, this is the kW output of the heating system powered by the thermostat. Select the appropriate loading and then press **OK**.

The thermostat is now ready for use and your underfloor heating will operate in accordance with the pre-programmed 4-event schedule. See **Factory Settings** for full details of this.



General operation

The on/off button allows you to turn the thermostat on "1" and off "0" by sliding the button up and down. When the thermostat is switched off "0", the relay disengages and your underfloor heating system will not heat up whatever the temperature. All settings, including time and date, will be saved into the thermostats memory.

The thermostat is simple to use and program by using the navigation buttons.

The function of each button is indicated above the button in the display.

Back

In various parts of the menus and submenus you will find the **Back** menu item.

Use **Back** to return to the previous screen

Exit

Exit returns you to the main operating screen.

Operation mode

The thermostat features three different modes of temperature control:

Auto mode

☰ Select Auto if you want the temperature to be controlled automatically via the 4-event schedule.

Manual mode

☰ Select Manual to cancel the programmed 4-event schedule (e.g. during holidays) and to set the required temperature manually. You may, for example, want to adjust the temperature to 5°C for frost protection while you are away.

- Press **Manual**, confirm with **OK** and choose the required temperature.

Comfort mode

☰ Select Comfort to set a temporary comfort temperature (so-called party mode) for a single event.

- Press **Comfort**, confirm with **OK** and choose the required temperature. Then enter the required duration of comfort mode.

After the set time has elapsed, the thermostat will automatically revert to **Auto mode**.

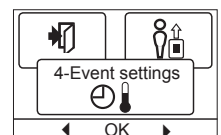
Please note: Comfort mode is a temporary manual setting that will be automatically cancelled by the next event in the programmed 4-event schedule.

Thermostat setup menus

The menu allows you to select the following options:

4-event settings

The four event settings allow your thermostats to control the temperature automatically in accordance with the program of your own choice. You can select temperature settings for four different periods during the day:



☀ Morning

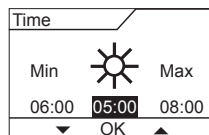
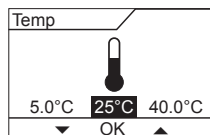
🏠➔ Daytime

🏠← Afternoon/evening

🌙 Overnight

The thermostat is pre-programmed with a 4-event schedule for simple and economic heating control, see **Preset schedule** under **Factory settings**. The schedule can be easily changed in the following way:

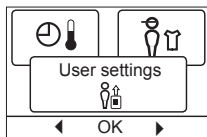
1. Press the **OK** button to activate the 4-event settings display.
2. Choose the days for which you want to change the settings, **Mon-Fri** or **Sat-Sun** using the up or down button. Press **OK**.
3. Now select the time and temperature for each daily event in the program. Press **OK** and set the start time for the event concerned. Confirm with **OK**. Set the temperature for this event and confirm with **OK**.
4. After setting the required events, select **Exit** in the menu to return to the initial display.



User settings

In the user settings menu you can change the following items:

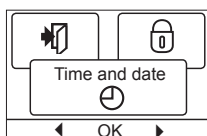
- Time and date
- Child lock
- Display settings
- 4-event schedule
- Energy monitor



Time and date

Press **OK** and set the actual time in hours and minutes.

The date will then be displayed. Set the date and confirm with **OK**.

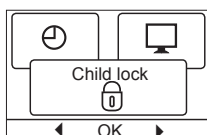


Child lock

This setting allows you to lock the thermostat if you do not want the settings changed, e.g. if it is situated in a public area.

Press **OK** and set the child lock **On** using the **Up** button. Confirm with **OK**.

The child lock can be unlocked by pressing the **Left** and **Right** hand buttons simultaneously for ten seconds.



Display settings

Allows you to select what is shown on the main display.

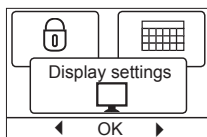
Time/day: Shows the actual time and day at the top of the display.

Set temp.: Shows the current target temperature.

Act. temp.: Shows the actual measured temperature.

Scr. saver: Switches off the display after 30 seconds if no button is pressed. Any subsequent press of a button reactivates the display. The thermostat remains on and runs the selected program.

Press the **OK** button to select or deselect the display options. Then select **Exit** in the menu to return to the initial display and view your chosen settings.



4-event schedule

This setting allows you to choose the format of the 4-event settings to suit your requirements.

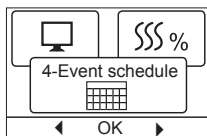
5:2 : Monday to Friday with 4 events and Saturday and Sunday with 2 events. Typically used if you work from Monday to Friday.

6:1 : Monday to Saturday with 4 events and Sunday with 2 events. Typically used if you work from Monday to Saturday.

7:0 : Monday to Sunday with 4 individual events. This allows you to choose individual programs for each day of the week.

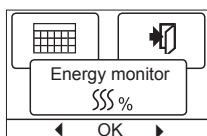
Select the required 4-event schedule and confirm with **OK**.

For instructions on programming the time and temperature for the 4-event schedule, see **4-event settings**.



Energy monitor

The energy monitor allows you to view your underfloor heating system's energy consumption for the past 2 days, month or year. Press **OK** for the chosen period. The value in



per cent (%) shows the relative amount of time the heating has been on. The actual running cost shown on the screen is a calculated figure. To ensure this figure is correct you should ensure the information for the currency, price per kWh and load are correct.

Currency: Press **OK** and choose your required currency, either Pounds or Euros.

Confirm with **OK**.

Cost/unit: Press **OK** and set your cost for one unit of electricity.

The unit cost should be per kWh. Press **OK**.

Load: Press **OK** and enter the power of the heating system connected to the thermostat. The installer of the system should have already done this when the thermostat was first set up.

The value should be in kW. 1,000 Watts equals 1 kW.

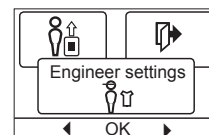
Press **OK**.

Leave the menu by pressing **Exit**.

Engineer settings

The Engineering settings menu contains the following options:

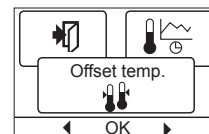
- Offset temperature
- Adaptive function
- Application
- Temperature scale
- Backlight
- Floor sensor
- Factory reset
- Information



Offset temperature

If the temperature the thermostat displays does not correspond to the actual temperature in the room you can make an adjustment to the sensor.

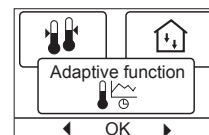
Press **OK** and then enter the correct temperature for the air or floor. The thermostat will then automatically correct itself in the future. Please note that the thermostat anticipates rises and drops in temperature by a few minutes so that it does not over-run the target temperatures. This can lead to the temperature reading shown on the thermostat to be slightly above or below the actual readings but is perfectly normal. Confirm with **OK**.



Adaptive function

The adaptive function ensures that the required temperature has already been reached when you get up in the morning or come home from work. If this function is operating and you have set your underfloor heating to come on at 6:30am, the floor will already be warm by that time, rather than just starting to heat. The adaptive function takes a few days to learn the heat characteristics of your room before it functions correctly.

Press **OK** and set the function to **On**. Confirm with **OK**.



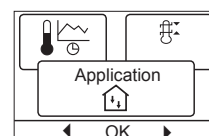
Application

Set the type of regulation used.

There are two options:

Floor reg. : The thermostat controls the floor temperature only. A floor sensor must be connected.

Room/limit : The thermostat controls the air temperature in the room whilst ensuring the floor never drops below or rises above the floor temperature limits. For this function the floor sensor must be installed. A floor sensor must be connected.

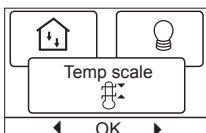


Press **OK** and select the required application. Confirm with **OK**.

Temperature scale

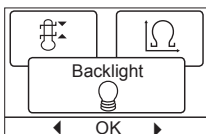
The temperature scale allows you to set maximum and minimum floor temperatures and the thermostat will ensure that the floor never operates outside of these limits. Even if a higher target temperature is set for the room, the thermostat will stop the floor overheating. This is particularly useful for systems used beneath wooden or laminate floors.

Press **OK** to highlight **Min** temperature. Use the up or down button to select the minimum permissible temperature. Press **OK** and then select the maximum permissible temperature. Confirm the settings with **OK**.



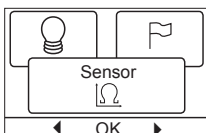
Backlight

The backlight menu allows you to choose when the display is lit up. The options are as follows: **Auto**: The thermostat backlight comes on if any button is pressed and switches off again if no button is pressed for 30 seconds. **On heat**: The backlight comes on when buttons are pressed and also whenever the underfloor heating is powered up. **Const on** – The backlight stays on constantly, although it swaps to a lower power state after 30 seconds. This is useful if you want your thermostat to constantly display the time.



Floor sensor

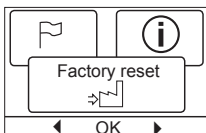
The NGT thermostat can operate with many different models of floor sensor. This allows you to replace most older underfloor heating thermostats with the NGT thermostat without having to replace the floor sensor. The value of your original floor sensor can be set in this menu, and this value is usually listed in the instructions that were supplied with the previous thermostat. If you have any questions on this function please contact Heat Mat on 01444 247020.



Factory reset

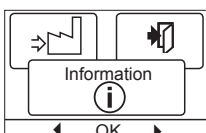
This menu allows the factory settings to be restored. Your personal settings will be lost, see **Factory settings**.

Press **OK** and choose **Reset** in the menu. Confirm with **OK**.



Information

The information screen displays Heat Mat's contact details, the current temperatures (and offset) of the two sensors, the software version of your thermostat and the individual model number, which is used for warranty purposes.



Back

In various parts of the menus and submenus you will find the **Back** menu item.

Use **Back** to return to the previous screen

Exit

Exit returns you to the main operating screen.

Error messages

If a fault or error occurs the thermostat will display an error code message as follows:

E0: Internal failure. The thermostat is defective. Speak to your supplier to arrange a replacement.

E1: Internal sensor is damaged. Speak to your supplier to arrange a replacement.

E2: External sensor is damaged or disconnected. Contact Heat Mat technical support.

E5: Internal overheating. Check the thermostat installation and ensure there is free air movement around it.

Factory settings

Preset schedule

Day 1-5			
Event	Time	With floor sensor	With room sensor
Day	06:00-08:00	25°C	20°C
Out	08:00-16:00	20°C	15°C
Home	16:00-22:30	25°C	21°C
Night	22:30-06:00	20°C	15°C
Day 6-7			
Event	Time	With floor sensor	With room sensor
Day	08:00-23:00	25°C	21°C
Night	23:00-08:00	20°C	15°C