



Logamatic EMS

RC35 programming unit

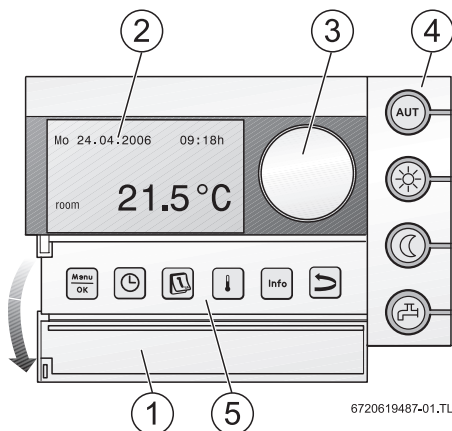
For users

Read carefully before
use.





Overview of controls

Key to diagram:

- 1 Flap; pull the recessed grip on the left to open
- 2 Display
- 3 Rotary selector for changing values and temperatures or for navigating through the menus




4 Buttons for basic functions:

-  "AUT" (automatic)
-  "Daytime operation" (manual)
-  "Night mode" (manual)
-  "DHW"

When the LED lights up,

- the switching program is active (automatic switchover between day and night room temperatures).
- the heating system operates at the set day room temperature. DHW heating is on (factory setting).
- the heating system operates at the set night room temperature. Frost protection is active. DHW heating is off (factory setting).
- the DHW temperature has fallen below its set value. The DHW can be reheated by pressing the button (the LED will then flash).

5 Buttons for additional functions:

-  "Menu/OK"
-  "Time"
-  "Date"
-  "Temperature"
-  "Info"
-  "Back"

Function:

- Open the user menu and confirm the current selection.
- When the rotary selector is turned at the same time: change setting. Set the time.
- Set the date.
- Set the room temperature.
- Open the Info menu (to view values).
- Go back one step or one menu item.

In automatic mode, an additional LED lights up with the "AUT" LED to indicate the current operating status ("day mode" or "night mode"). Exception: in the case of boilers with UBA1.x only the "AUT" LED lights up. The "DHW" LED can also be switched off. On boilers with UBA1.x the "DHW" LED does not illuminate.

Contents

Overview of controls	2
-----------------------------------	----------

Guide to instructions	5
------------------------------------	----------

1 Explanation of symbols and safety instructions	6
1.1 Explanation of symbols	6
1.2 Safety instructions	7

2 Getting started	8
--------------------------------	----------

3 Information about the appliance	11
3.1 Product description	11
3.2 Correct use	11
3.3 EU Declaration of Conformity	11
3.4 Cleaning	11
3.5 Disposal	11

4 Principles of operation	12
4.1 Display	12
4.2 Notes on functional scope	12
4.3 Setting the operating mode	13
4.4 Changing the room temperature temporarily	14
4.5 Changing the room temperature permanently	15
4.6 Setting the room temperature for particular heating circuits	16
4.7 Setting the date and time	17
4.8 Setting DHW functions	18
4.9 Viewing information (Info menu)	20
4.10 Messages on the display	22
4.11 Shutting down/switching off	22

5 Operation with the user menu	23
5.1 Introduction to the user menu	23
5.2 Overview of the user menu	25
5.3 Selecting a heating circuit	26
5.4 Selecting the standard display	29
5.5 Selecting the operating mode	29

5.5.1	Operating modes for RC35 heating circuits	29
5.5.2	Operating modes for DHW	30
5.5.3	Operating modes for DHW circulation	30
5.5.4	Operating modes for solar	30
5.6	Setting the switching program	31
5.6.1	Selecting a program	32
5.6.2	Viewing the current program	34
5.6.3	Changing the switching point	34
5.6.4	Entering a switching point	35
5.6.5	Deleting a switching point	36
5.6.6	Setting room temperatures	37
5.7	Setting a DHW program	38
5.8	Setting a DHW circulation program	38
5.9	Setting the switchover threshold for summer/winter mode	39
5.10	Setting the summer/wintertime changeover	39
5.11	Setting the DHW temperature	40
5.12	Setting holiday mode	40
5.13	Setting the party function	43
5.14	Setting the pause function	43
5.15	Setting thermal disinfection	44
5.16	Calibrating the room temperature display	44
5.17	Setting the preheating phase for a Loganova heat pump with gas booster heater ...	45
6	Information on setting the programming unit	46
6.1	Control modes for heating control	46
6.2	Tips for energy efficiency	47
7	Troubleshooting	48
7.1	Frequently asked questions	48
7.2	Fault messages and service messages	50
7.3	Resetting faults	52
8	Setup report	53
9	User overview of RC35	55
	Index	56

Guide to instructions

These operating instructions contain all information on the function and operation of the Logamatic RC35 programming unit.

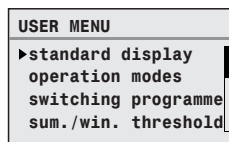
Introduction to the user menu

Chapter 5.1 explains in detail the steps needed for programming all the settings in the user menu. The operation is only briefly dealt with in the following sections.

Display texts

Words appearing on the display are shown in **bold** in flowing text.

Example: **USER MENU**



1 Explanation of symbols and safety instructions

1.1 Explanation of symbols

Warning symbols



Safety instructions in this document are framed and identified by a warning triangle which is printed on a grey background.



Electrical hazards are identified by a lightning symbol surrounded by a warning triangle.

Signal words indicate the seriousness of the hazard in terms of the consequences of not following the safety instructions.

- **NOTICE** indicates possible damage to property or equipment, but where there is no risk of injury.
- **CAUTION** indicates possible injury.
- **WARNING** indicates possible severe injury.
- **DANGER** indicates possible risk to life.

Important information



Notes contain important information in cases where there is no risk of personal injury or material losses and are identified by the symbol shown on the left. They are bordered by horizontal lines above and below the text.

Additional symbols

Symbol	Meaning
►	a step in an action sequence
→	a reference to a related part in the document or to other related documents
•	a list entry
–	a list entry (second level)

Tab. 1

1.2 Safety instructions

Installation and commissioning

- ▶ Observe these instructions to ensure satisfactory operation.
- ▶ The appliance must only be installed and commissioned by an authorised installer.

Risk of damage due to operator error

Operator errors can lead to injuries and/or material losses.

- ▶ Ensure that children never operate this appliance unsupervised or play with it.
- ▶ Ensure that only individuals who can operate this appliance correctly have access to it.

Risk of scalding at the hot water draw-off points

- ▶ During thermal disinfection: do not draw DHW without mixing in cold water as well.
- ▶ If the DHW temperatures are set to above 60 °C: do not draw DHW without mixing in cold water as well.








Warning: frost

The heating system can freeze up in cold weather if it is not in operation:









- ▶ Leave the heating system permanently switched on.
- ▶ In case of faults: remedy any faults immediately.

2 Getting started

Initial situation: the flap is closed.

What do I do ...	Operation	Display/result
if it is temporarily too cool/warm in the entire home on a particular day?	<ul style="list-style-type: none"> ▶ Turn rotary selector . The current room temperature setting starts flashing. ▶ Turn the rotary selector to set the required room temperature. ▶ Release the rotary selector. The modified room temperature is saved (and stops flashing). The standard display reappears. <p>In automatic mode, the modified room temperature remains active until the next switchover between night/day mode.</p>	<div> SET ROOM TEMPERATURE Until next switch point, room temp. changed to: 21.0°C </div>
if it is permanently too cool/warm in the entire home? → Change room temperature and activate automatic mode	<ul style="list-style-type: none"> ▶ To change the day room temperature: hold down  and simultaneously turn rotary selector . ▶ To change the nighttime room temperature: hold down  and turn rotary selector  at the same time.¹⁾ ▶ We recommend activating automatic mode: Press . The modified room temperatures are saved. The LED next to  lights up. 	<div> SET ROOM TEMPERATURE Room temperature setting for daytime operation. 20.5°C </div> <div> Automatic operation selected. Change between: day: 20.5°C night: 17.0°C </div>

Tab. 2 Getting started – room temperatures

What do I do ...	Operation	Display/result
<p>for one-off heating outside the usual times (outside the switching program)?</p> <p>→ manual day mode ("continuous heating"); automatic mode is switched off</p>	<p>► Activate manual day mode: press .</p> <p>The LED next to  lights up.</p> <p>To end the one-off heating phase:</p> <p>► Activate automatic mode again: press .</p> <p>The LED next to  lights up.</p>	<div> <p>You have selected daytime operation. The room temperature set is:</p> <p style="text-align: right;">20.5°C</p> </div>
<p>to save energy during long absences?</p> <p>→ manual night mode ("permanently reduced"); automatic mode is switched off</p>	<p>► Activate manual night mode: press .</p> <p>The LED next to  lights up.¹⁾</p> <p>When you return:</p> <p>► Activate automatic mode again: press .</p> <p>The LED next to  lights up.</p>	<div> <p>You have selected nighttime operation The room temperature set is:</p> <p style="text-align: right;">14.0°C</p> </div>

Tab. 2 Getting started – room temperatures

- 1) If "shut-down mode" is selected as the night setback mode, the heating system is switched off at night. A nighttime room temperature cannot be set. The display will show a message to this effect.

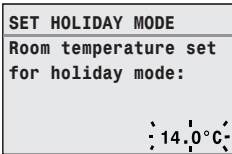


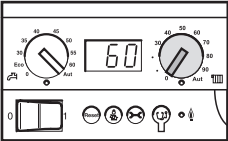





In the case of large heating systems with multiple heating circuits, note the following: The modifications to the room temperature described above apply to all heating circuits assigned to the RC35 programming unit (referred to as **"RC35 heat. circuits"** → page 26). This is the standard application. However, if you wish to change the room temperature for other heating circuits: see page 37.

Getting started – additional functions



Some of the following functions are accessible via the user menu. To learn how to use this menu, read the section starting on page 23.

What do I do ...	Operation	Display/result
to save energy when on holiday?	<ul style="list-style-type: none"> ▶ Set holiday mode in the user menu (→ page 40). 	
to change the holiday temperature?	<p>Requirement: holiday mode is active.</p> <ul style="list-style-type: none"> ▶ Turn rotary selector . The room temperature is changed for the rest of the holiday period. 	
in summer (DHW only, no central heating)?	<p>The programming unit switches automatically between summer mode and winter mode, triggered by temperature. However, if you want to switch the system over manually:</p> <ul style="list-style-type: none"> ▶ Turn rotary selector  on the boiler programming unit to "0" or disable central heating. ▶ Leave the RC35 settings unchanged. 	 <p>Example: BC10 on the boiler</p>
if I feel too cool or too warm in spring or autumn?	<ul style="list-style-type: none"> ▶ Change the setting for the summer/winter switchover threshold in the user menu (→ page 39). <p>-or-</p> <ul style="list-style-type: none"> ▶ Use manual mode. 	
when the clocks change between summer and wintertime?	<p>The RC35 programming unit automatically adjusts its clock for summer or wintertime (→ page 39).</p>	
if my day/night rhythm changes (e.g. shift work)?	<ul style="list-style-type: none"> ▶ Select a different switching program in the user menu (→ page 31). ▶ If necessary, adjust the switching program to suit your needs: change, insert or delete switching points (→ page 34). 	
to change the contrast on the display?	<ul style="list-style-type: none"> ▶ To change the contrast: hold down  and  and turn rotary selector  at the same time. 	

Tab. 3 Getting started – additional functions

3 Information about the appliance

3.1 Product description

The RC35 programming unit makes it easy to operate your Buderus heating system. You can set the room temperature for your entire home using the rotary selector. You only need to adjust the thermostatic valves on the radiators if it is too cool or too warm in individual rooms.

The automatic mode with its adjustable switching programs ensures energy saving operation by reducing the room temperature at certain times or shutting down the heating system completely (adjustable night setback). The heating system is controlled in such a way that you benefit from optimum heating comfort and minimum energy consumption.

3.2 Correct use

The RC35 programming unit must only be used to operate and control Buderus heating systems in detached houses and residential buildings.

The boiler must be equipped with EMS (energy management system) or UBA1.x (universal burner controller). We recommend always operating the heating system with a programming unit (otherwise the system only operates in emergency mode).

3.3 EU Declaration of Conformity

The design and operation of this product conform to the European Directives and the supplementary national requirements. Its conformity is demonstrated by the CE designation. You can call up the Declaration of Conformity for this product at the internet at www.buderus.de/konfo or request it from your local Buderus sales office.

3.4 Cleaning

- ▶ Clean the programming unit only with a damp cloth.

3.5 Disposal

- ▶ Dispose of packaging in an environmentally responsible manner.
- ▶ When replacing components, dispose of the used ones in an environmentally responsible manner.

4 Principles of operation

4.1 Display

The following elements appear on the display of the RC35 programming unit during standard operation:

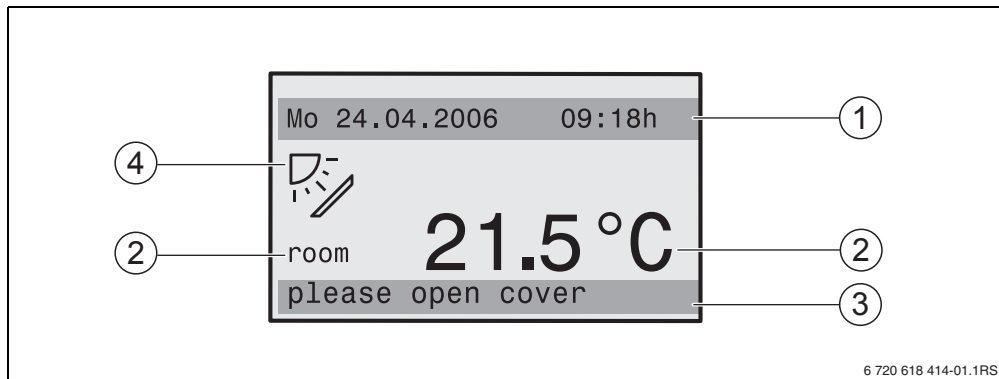


Fig. 1 Elements on the display

- 1** Top information row: standard display (factory setting: date and time)
- 2** Large display of room or boiler temperature
- 3** Bottom status row: displays various operating modes and indicates any error messages or service messages
- 4** Solar symbol (if solar thermal system is installed and active)



You can set (→ page 29) which value is shown permanently in the first row of the **standard display** (→ Fig. 1, [1]).



If the programming unit is installed on the boiler, the room temperature cannot be recorded. The boiler water temperature (**boiler**) is then displayed instead of the room temperature [2].




4.2 Notes on functional scope

These instructions describe all the possible functions of the RC35. Some of these functions may not be available, depending on which boiler and combustion controller version are used. For more information, refer to the relevant chapter. Contact your heating contractor for further details. To check the version of the combustion controller used (here: UBA1.5), see the info menu under **INFO\VERSIONS** (→ page 20).

INFO\VERSIONS	
RC35	1.02
UBA1.5	1.21

4.3 Setting the operating mode

You can activate the operating mode directly by pressing the button shown.

Operating mode	Button	Meaning
automatic operation (recommended setting)		<p>The switching program is active. The system will switch over automatically between day mode and night mode at a set time (switching point).¹⁾ At night the heating system will operate with a reduced room temperature (factory setting; night shutdown is also possible).</p> <p>DHW heating is on during the day and off at night (factory setting).</p> <p>The LED for the automatic button is lit up, along with the LED for either day or night mode, depending on which is currently active.</p>
continuous heating (manual day mode)		<p>Factory setting: 21 °C. Manual day mode is useful if you want to heat outside the usual times. Automatic mode is switched off.</p> <p>DHW heating is on (factory setting).</p> <p>Only the day mode LED is lit up.</p>
permanently reduced (manual night mode)		<p>Factory setting: 17 °C. The heating system operates with a reduced room temperature (factory setting). Manual night mode is useful if you are occasionally absent for long periods. Automatic mode is switched off.</p> <p>DHW heating is off (factory setting).</p> <p>Only the night mode LED is lit up.</p>

Tab. 4 Meaning of the operating modes

- 1) The automatic day and night modes correspond to the manual day and night modes. The only difference lies in the automatic switchover.









The settings made using the buttons above apply to all heating circuits assigned to the RC35 programming unit (these are referred to as the **"RC35 heat. circuits"**, → page 26).

To set the operating mode for other heating circuits: use the **user menu\operation modes** (→ Page 29).

4.4 Changing the room temperature temporarily




Follow this procedure if you only want to change the room temperature up until the next switching point. At the switching point, the system switches over automatically between day and night modes (→ page 31). The heating system will then go back to the standard room temperature setting.

Initial situation: the flap is closed.

	Operation	Result
1.	Turn rotary selector  . The current room temperature setting starts flashing. Turn rotary selector  further. Turn the rotary selector clockwise to increase the room temperature and anti-clockwise to lower it.	<div> SET ROOM TEMPERATURE Until next switch point, room temp. changed to: 21.0°C </div>
2.	When you have reached the required room temperature: release the rotary selector. The modified room temperature is saved (and stops flashing). The standard display reappears.	<div> SET ROOM TEMPERATURE Until next switch point, room temp. changed to: 22.5°C </div>
In manual mode, the LED next to  is not lit up. In this case, the modified room temperature applies until you press  ,  or  .		

Tab. 5

Ending a temporary change in room temperature

- To return to automatic mode: press .
The automatic program uses the temperatures normally set for day and night mode.
- or-
- To return to manual mode: press  or .
The temperatures normally set for day or night mode will be used.



If the heating system is equipped with a RC2x remote control (→ page 27), and the date of manufacture of the remote control is January 2006 or later, the room temperature can also be modified temporarily at the remote control.







4.5 Changing the room temperature permanently



NOTICE: System damage due to frost!

If room temperatures are set below 10 °C, rooms may cool down so much that pipes in external walls (for example) may freeze in cold weather.


- Set room temperatures higher than 10 °C.

	Operation	Result
1.	To change the day room temperature: hold down  and simultaneously turn rotary selector  .	<div> SET ROOM TEMPERATURE Room temperature setting for daytime operation. : 20.5°C : </div>
2.	Changing the night room temperature ¹⁾ : hold down  and turn rotary selector  at the same time.	<div> SET ROOM TEMPERATURE Room temperature setting for nighttime operation. : 17.0°C : </div>
3.	<p>We recommend activating automatic mode. Automatic mode ensures automatic switchover between day and night mode (night setback).</p> <p>Press .</p>	<div> Automatic operation selected. Change between: day: 20.5°C night: 17.0°C </div>
Automatic mode is now active with the modified room temperatures. The LED next to  lights up. The standard display reappears.		

Tab. 6

- 1) If "shut-down mode" is selected as the night setback mode, the heating system will be switched off at night. A night time room temperature cannot be set. The display will show a message to this effect.

4.6 Setting the room temperature for particular heating circuits

If the heating system comprises several heating circuits (→ page 27), you can adjust the room temperature for selected heating circuits with .

Only heating circuits that are not equipped with an RC2x remote control unit will be displayed. No selection is possible if there is only one heating circuit. All **RC35 heat. circuits** have the same room temperature set values.










If no selection is possible or if you select **RC35 heat. circuits**, you will be setting the same temperatures as described on page 15.



NOTICE: System damage due to frost!

If room temperatures are set below 10 °C, rooms may cool down so much that pipes in external walls (for example) may freeze in cold weather.

- ▶ Set room temperatures higher than 10 °C.

- ▶ Open the flap (by pulling the recessed grip on the left).
- ▶ Press  and release.
- ▶ Select the heating circuit (→ page 26 – 28). Heating circuit selection is not available if only one heating circuit is installed.
- ▶ To change the day room temperature: hold down  and simultaneously turn rotary selector  until the required temperature is displayed. Release . The required temperature is saved.
- ▶ Turn rotary selector  to switch to the night room temperature.
- ▶ To change the night room temperature: hold down  and simultaneously turn rotary selector  until the required temperature is displayed. Release . The required temperature is saved.
- ▶ Press  several times or shut the flap to return to the standard display. The modified room temperatures are now active.





If “shut-down mode” is selected as the night setback mode, the heating system will be switched off at night. A nighttime room temperature cannot be set. The display will show a message to this effect.



4.7 Setting the date and time

Your heating system requires the date and time to operate correctly. The clock keeps running for about 8 hours in the event of a power failure. If a power failure lasts longer than that, the display will indicate that you need to reset the date and time.

Setting the date:

1. Open the flap (by pulling the recessed grip on the left).
2. Press . The year starts flashing.
3. To set the year: hold down  and turn the rotary selector at the same time.
4. Release button. The year is saved.
5. Repeat steps 2 to 4 to set the month and day.
The set date is displayed briefly. The standard display then reappears.

Setting the time:

1. Press . The hours start flashing.
2. To set the hours: hold down  and simultaneously turn the rotary selector.
3. Release button. The hours are saved.
4. Repeat steps 1 to 3 to set the minutes.
The set time is displayed briefly. The standard display then reappears.








4.8 Setting DHW functions

Risk of scalding from DHW temperatures over 60 °C!


WARNING: Risk of scalding!

The factory setting for the DHW temperature is 60 °C. There is a risk of scalding at the hot water draw-off points if the temperature is set higher than this and also following thermal disinfection.

- If the temperature set is higher than 60 °C or following thermal disinfection: never open any hot water tap without mixing in cold water as well.

What is it for?	Operation
	Initial situation: the flap is closed.
Changing DHW temperature With factory settings, hot water is available during the heating phases (day mode) of the selected switching program. The water in the DHW cylinder is heated once in the morning for 30 minutes before central heating starts. If your heating system is equipped with a remote control unit (e.g. RC2x, → page 27), the DHW temperature for the entire heating system can also be changed at the remote control unit.	► To change the DHW temperature: hold down  and turn rotary selector  at the same time. If a message is issued that this adjustment is not possible: At the boiler programming unit, turn rotary selector  to "AUT" ¹⁾ or enable DHW heating.
Heating up DHW once¹⁾ To save energy, during day mode DHW is only reheated automatically when its temperature falls 5 °C below the set DHW temperature. If you need large amounts of hot water one evening or outside the set times for day mode, you can heat up the DHW. This function is not available with boilers with UBA1.x.	If the  LED ²⁾ illuminates, the DHW temperature has fallen below the set value. ► To heat up the DHW manually: press  . The LED on  starts flashing ²⁾ . Heat-up starts, and is later terminated automatically. If no heating is necessary (because the water is still hot), a message will appear. Only the DHW circulation pump will start (if fitted) to transport the hot water more quickly to the draw-off points. ► If you want to stop the heating process: press  again.

Tab. 7 Setting DHW functions





What is it for?	Operation
Heating up DHW regularly	If you regularly need large amounts of hot water outside the set times for day mode, you can set a separate program for DHW (→ page 38).
Switching thermal disinfection on/off This function heats up the DHW to a temperature sufficient to kill pathogens (e.g. legionella).	► Set thermal disinfection (→ page 44).

Tab. 7 *Setting DHW functions*



- 1) Setting subject to the boiler installed.
- 2) The "DHW" LED may also have been disabled by the heating contractor.

4.9 Viewing information (Info menu)

You can use the **INFO** menu to view set and recorded values. The exact information available depends on the components installed in your heating system.

	Operation	Result
1.	Open the flap (by pulling the recessed grip on the left).	<div> Fr 02.12.2005 10:20h 21.5°C </div>
2.	Press  to open the INFO menu. The message on the right is displayed for five seconds. It then moves on automatically. -or- Turn rotary selector  to move immediately to the next display.	<div> By turning the dial you can obtain plant information. </div>
3.	Turn rotary selector  to view further information.	<div> INFO \ ROOM \ HTG. CIRC. 1 room temperature set: 20,5°C measured room temperature: 20,6°C </div>
4.	To exit the info menu: press  or close the flap. The standard display reappears.	

DHW message in the INFO menu

DHW is switched off at the boiler. This message means that rotary selector  on the boiler programming unit is set to "0". To enable DHW heating to be adjusted via the RC35, turn rotary selector  to "AUT"¹⁾.



The operating mode buttons do not do anything in the **INFO** menu.

1) Setting subject to the boiler installed.

Graph displays in the INFO menu (outside temperature variation and solar gain)

The **INFO** menu gives you the option of, for example, viewing graphs showing the variation in outside temperature over the past two days and (if solar components are installed) the solar gain. This way you have a clear overview allowing easy comparison of the relevant values.



The graphs in both displays are updated every 15 minutes and a new graph is started at 00:00 h (midnight). This means that no graph is displayed for the current day between 00:00 h and 00:14 h.

The minimum and maximum values are dynamically adapted.

Outside temperature variation (weather station)

The temperature variation over the current and previous day is shown across two screens. The minimum and maximum values recorded since 00:00 h on the previous day are also displayed.

Solar gain¹⁾

The solar gain display (current and previous day) tells you how much the solar collector has contributed to DHW heating. This is calculated using the temperature differential between the cylinder and the solar collector in conjunction with the modulation of the solar circuit pump.

The solar gain is highly dependent on the system installed and its components and therefore cannot be expressed as a value in kWh. This means that the value displayed is a variable specific to the particular system, which cannot be easily compared with other solar thermal systems. However, it is very useful for comparing the amount of gain on different days.

This information is displayed as a graph for the previous and current day.

The solar gain per day and the weekly total are listed in a table: **SOLAR GAIN THIS WEEK** and also for the previous week: **SOLAR GAIN LAST WEEK**.

In both cases the current day is indicated by a flashing dot. This value is updated every 15 minutes (also in the graph for the "current day") and the total is saved at 0:00 h as the value for the relevant day. The daily values for the current week (MO – SU are also added up every 15 minutes.

The days in the current week which have not yet passed are marked with "---". Days for which no solar gain could be determined show "0".

SOLAR GAIN THIS WEEK	
Mo: 10	Fr: ---
Tu: 115	Sa: ---
We: 53	Su: ---
Th: ---	Mo-Su: 178

SOLAR GAIN LAST WEEK	
Mo: 10	Fr: 75
Tu: 0	Sa: 102
We: 15	Su: 125
Th: 0	Mo-Su: 327

1) This function depends on the boiler installed.

Saving data

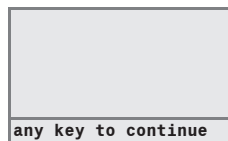
If the power supply is interrupted, the RC35 programming unit saves the solar gain data for as long as the time buffer lasts. If the interruption lasts longer, the recordings are reset to zero and start again. The same applies if the date in the RC35 is changed. If the time is changed, the graphic display is set to zero and the data recorded in the table for the week is retained. During commissioning, the recording of data only starts once the date and time have been set.

4.10 Messages on the display

The programming unit will display a message if, for example, a particular setting is not available under the current circumstances.

When the display shows **any key to continue** in its bottom row:

- Press any key to confirm and close the message.



4.11 Shutting down/switching off

The RC35 programming unit is powered via the heating system and remains permanently ON. The heating system is only switched off, for example, for maintenance work.

- To switch the heating system on and off: set the ON/OFF switch on the boiler programming unit to position **1** (ON) or **0** (OFF).











After shutting down or in the event of a power failure, the date and time are retained for up to 8 hours. All other settings are retained permanently.



5 Operation with the user menu

5.1 Introduction to the user menu


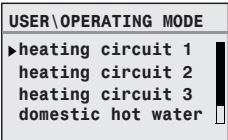

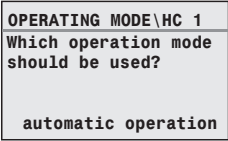


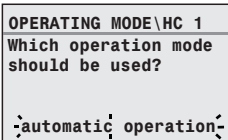

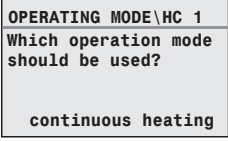
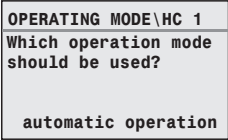
The user menu allows you to make specific settings. The procedure for operation is always the same:

1. Open the flap (by pulling the recessed grip on the left).
2. Press  to open the **USER MENU**.
3. Turn rotary selector  to change the selection.
4. Press  to make your selection.
5. To change the value, hold down  (the value starts flashing) and turn rotary selector  at the same time. Release .
The modified value is saved.
6. Press  to go back one step.
Press  several times or close the flap to return to the standard display.



Example: setting the **continuous heating** operating mode for heating circuit 1

	Operation	Result
1.	Open the flap (by pulling the recessed grip on the left).	<div>Fr 02.12.2005 10:20h 21.5°C</div>
2.	Press  to open the USER MENU .	<div>USER MENU ▶standard display operation modes switching programme sum./win. threshold</div>
3.	Turn rotary selector  to the left until operation modes is selected.	<div>USER MENU standard display ▶operation modes switching programme sum./win. threshold</div>

Tab. 8 How to use the user menu (example)

	Operation	Result
4.	<p>Press  to confirm the selection.</p> <p>The USER\OPERATING MODE menu is opened.</p> <p>The appearance of the display depends on the number of heating circuits. If there is only one heating circuit installed with no DHW and no DHW circulation pump, this screen will not appear at all (→ page 26).</p> <p>Continue to the next step.</p>	
5.	Press  to select heating circuit 1.	
6.	To change the value, hold down  (the value starts flashing) and turn rotary selector  at the same time.	
7.	Release  .	
8.	<p>If you have carried out this example as practice only, make sure that the original setting is retained.</p> <p>To do so, repeat steps 6 and 7 if necessary.</p>	

Tab. 8 How to use the user menu (example)

	Operation	Result
9.	Press  to go back one step. -or- To finish making settings: press  several times or close the flap. The standard display reappears.	
You can enter all settings in the USER MENU using this procedure.		

Tab. 8 How to use the user menu (example)

5.2 Overview of the user menu

The user menu is divided into the following menu items:

Menu item	Purpose of the menu item	Page
standard display	Selecting the standard display (= "permanent display")	29
operating modes	Setting the operating mode for all installed heating circuits (automatic operation, continuous heating, permanently reduced); also possible for the DHW and DHW circulation heating circuits	29
switching programme	Switching between day and night mode at defined times and on defined days (only active in automatic mode); separate programs possible for DHW and DHW circulation	31
sum./win. threshold	Switching automatically between summer mode and winter mode (subject to outside temperature)	39
summer / winter	Setting the clock to change over automatically between summer and wintertime	39
DHW temperature	Setting the DHW temperature	40
holiday	Interrupting the set switching program when on holiday (to save energy if away or to ensure comfort if at home)	40
party function	One-off extension of day mode for a certain amount of time	43
pause function	One-off interruption of day mode for a certain amount of time (when absent)	43
therm. disinfection ¹⁾	Heating up DHW to kill off pathogens	44
room temp. correct.	Calibrating the displayed room temperature with the aid of a thermometer	44
GWP preheat phase	Setting a heat pump with gas booster heater	45

Tab. 9 User menu overview

1) This function depends on the boiler used.

5.3 Selecting a heating circuit

If your heating system is equipped with more than one heating circuit: prior to making some adjustments, you will need to select the heating circuit(s) to which the settings should apply. Only the heating circuits that are actually installed will be displayed:

Heating circuit selection	Meaning
heating circuit 1	Heating circuit without mixing valve
From heating circuit 2 ¹⁾	Heating circuits with mixing valve, i.e. with reducible flow temperature
RC35 heat. circuits	All heating circuits assigned to the RC35, i.e. those which do not have their own remote control unit (→ Fig. 2, [1], page 27); displayed only if more than one heating circuit is assigned to the RC35
domestic hot water	DHW heating which is controlled by the RC35
circulation ¹⁾	DHW circulation pump which is controlled via the RC35
solar ¹⁾	Solar thermal system, if installed
complete system	All heating circuits, DHW, DHW circulation pump, and solar

Tab. 10 Heating circuits which could be installed in your heating system

1) This function depends on the boiler used.



Recommended: if more than one heating circuit is installed, it is usually advisable to select **RC35 heat. circuits**.



No heating circuit can be selected if there is only one heating circuit installed with no DHW, no DHW circulation pump and no solar thermal system. No selection is possible for boilers with only one heating circuit.

What is a heating circuit?

A heating circuit describes the circuit taken by the heating water from the boiler via the radiators and back again. Multiple heating circuits can be connected to one boiler; for example, one heating circuit for radiators and another heating circuit for underfloor heating. The radiators are supplied with a higher flow temperature than the underfloor heating system. The flow temperature is the temperature of the heating water generated by the boiler that flows into the heating circuit.

With the RC35 programming unit, you can operate and control multiple heating circuits [1]. In addition to the RC35, a separate “remote control” (e.g. RC2x) can also be installed for additional heating circuits [2]. A remote control is advisable if you want to control different heating systems (e.g. radiators/underfloor heating) and/or different temperature levels.

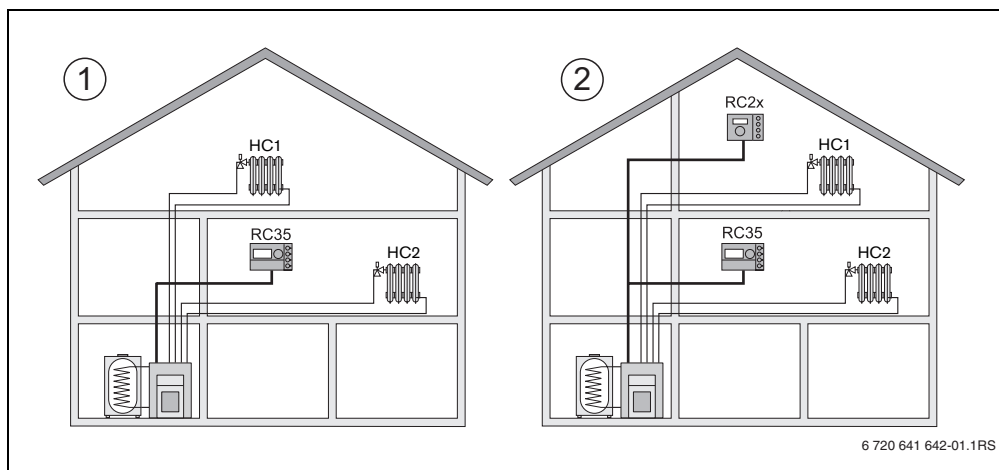


Fig. 2 Options for a heating system with two heating circuits

- 1 Both heating circuits are controlled by one programming unit.
- 2 Each heating circuit has its own programming unit / remote control unit.

Designations of the heating circuits in the example in Fig. 2

When you make adjustments to a particular heating circuit, first select the appropriate heating circuit. A list of designations as shown in Tab. 11 is available for selection.

Different temperatures for the heating circuits (→ Tab. 11, [1] b) can also be entered using the RC35 programming unit without a remote control, if your heating contractor has made corresponding settings. In this case, the room temperatures for the separate heating circuit can be set via the user menu (→ page 37).

Fig. 2	For heating circuit 1+2:	Designation of the heating circuits on the display	Setting the room temperature
[1]	Identical room temperature (factory setting)	HC1+HC2 = RC35 heat. circuits ¹⁾	Page 14 – 16
[1]	Different room temperatures possible ²⁾	HC1 = heating circuit 1 HC2 = RC35 heat. circuits	HC1: page 16 or 37 HC2: page 14 – 16
[2]	Different room temperatures possible	HC1 = heating circuit 1 HC2 = RC35 heat. circuits	HC1: via RC2x HC2: page 14 – 16

Tab. 11 Designations of the heating circuits in the example in Fig. 2, page 27

1) No heating circuit selection is possible if no other heating circuit is available, e.g. DHW.

2) Here: adjustment by the heating contractor HC 1 = none, HC 2 = RC35.


5.4 Selecting the standard display

This menu item can be used to select the default value to be displayed in the upper row of the display screen (permanent display).

1. Open the **user menu**.
2. Select **standard display**. You can choose from the following standard displays:
 - **date + time** (factory setting)
 - **outside temperature** (recorded outside temperature)
 - **boiler temperature** (recorded boiler water temperature, flow temperature)
 - **DHW temperature** (in DHW water cylinder)
 - **collector temperature** (with solar thermal systems only)

5.5 Selecting the operating mode

5.5.1 Operating modes for RC35 heating circuits

The operating mode for the **RC35 heat. circuits** can be set directly by pressing the corresponding button (e.g. ). For other heating circuits, use this menu item. If the heating circuit is equipped with a remote control unit (e.g. RC2x/RC20/RF), you can also use the operating mode keys on the remote control.

1. Open the **user menu**.
2. Select **operation modes**.
3. If your heating system is equipped with more than one heating circuit (→ page 26): select the required heating circuit and confirm.
4. Set the operating mode for the selected heating circuit:
 - **automatic operation** (switching program)
 - **continuous heating** (manual day mode)
 - **permanently reduced** (manual night mode)




For more information on the operating modes, refer to page 13.

If there is only one heating circuit installed and no DHW, heating circuit selection is not possible.

5.5.2 Operating modes for DHW


You can set one of the following operating modes for DHW heating:

- **automatic operation** (switching program). This can be either the switching program for central heating or a specific DHW program (→ page 38).
- **permanently ON** (manual continuous mode). The DHW is permanently maintained at the set temperature.
- **permanently OFF/ECO** (manual night mode). You can use  to start DHW heating when needed ("Heating up DHW once", → page 18).

5.5.3 Operating modes for DHW circulation

The DHW circulation pump ensures quick supply of DHW to the draw-off points (if installed). This is achieved by circulating the DHW once or more per hour through the DHW circulation pump via a separate DHW circulation line. This interval can be adjusted by your heating contractor in the Service menu.

You can set one of the following operating modes for DHW circulation:

- **automatic operation**: DHW circulation starts 30 minutes prior to the first heating circuit being heated up and stops with the last heating circuit (factory setting). Alternatively, you can set a separate DHW circulation program (→ page 38).
- **permanently ON**: The DHW circulation pump runs constantly at the set interval, regardless of the heating circuits.
- **permanently OFF**: The DHW circulation pump is not triggered at the set interval. You can use  to heat up DHW and start DHW circulation when needed.

5.5.4 Operating modes for solar

- **automatic operation** (default setting)
- **permanently OFF** (manually switched off)
- **permanently ON** (constant manual operation). The solar thermal system will be in constant operation for 30 minutes at maximum pump output. After 30 minutes the solar heating system automatically switches back into automatic mode.
The operating mode "constant operation" effects a manual control of the solar circuit pump. However, the solar thermal system will cut out if either the collector array or the cylinder exceeds their maximum permissible temperatures (collector protection function).



For explanations regarding the settings, see the solar module documentation.

5.6 Setting the switching program

Automatic mode ensures automatic changeover between day and night mode at defined times. The factory settings means 21 °C or 17 °C are set for day or night mode.

Before you select a switching program (i.e. a heating program), consider the following:

- At what time in the morning should your home be warm? Is this time also subject to the day of the week?
- Are there days when you don't want to heat during the day?
- From what time in the evening do you no longer need to heat? This may also depend on the day of the week.

1. Open the **user menu**.
2. Select **switching programme**.
3. If your heating system is equipped with more than one heating circuit (→ page 26): select the required heating circuit and confirm. A separate switching program can be set for each heating circuit.

You will then see the following options:

- **select programme** (→ page 32)
 - **display curr. prog.** (→ page 34)
 - **change switch point** (→ page 34)
 - **enter switch point** (→ page 35)
 - **delete switch point** (→ page 36)
 - **room temperatures** (→ page 37, not possible for DHW, DHW circulation and solar heating circuits)
4. Recommended: use the **select programme** option to select the program which best corresponds to your lifestyle.
 5. If the standard program needs to be adjusted: change, insert or delete individual switching points.
 6. If you want to create a completely new switching program: go to **select programme** and set a **new programme**.
The **enter switch point** menu item (→ page 35) opens automatically for you to create your program.






With the factory settings, the switching program also determines the times for DHW heating and operation of the DHW circulation pump. However, you can also set separate switching programs for both functions (→ Chapter 5.7 and 5.8).

5.6.1 Selecting a program

Here you can select and activate a switching program. This can be one of the preset standard programs (→ Tab. 12, page 33) or one created or modified by you.

You can save and later select two new or modified switching programs as **user defined 1** or **user defined 2**.

Selecting a preset switching program:

1. Hold down  and turn the rotary selector to select and activate a switching program.
2. Press  to return to the list of options.
3. To view the selected program as a graph, select **display curr. prog.** (→ page 34) or press  several times to return to the standard display.

Creating a new program:

- Select **new programme**.

The **enter switch point** menu item (→ page 35) opens automatically for you to create your program.



If your heating system is equipped with a remote control (e.g. RC2x → page 27) and the RC2x remote control was produced in 2006 or later, the **user defined 2** program can also be activated by the remote control.

Start and stop points in the standard programs

Program	Day	ON	OFF	ON	OFF	ON	OFF
family (factory setting)	Mon–Thu	5:30	22:00				
	Fri	5:30	23:00				
	Sat	6:30	23:30				
	Sun	7:00	22:00				
early morning (early shift work)	Mon–Thu	4:30	22:00				
	Fri	4:30	23:00				
	Sat	6:30	23:30				
	Sun	7:00	22:00				
evening (late shift work)	Mon–Fri	6:30	23:00				
	Sat	6:30	23:30				
	Sun	7:00	23:00				
morning (part-time work, mornings only)	Mon–Thu	5:30	8:30	12:00	22:00		
	Fri	5:30	8:30	12:00	23:00		
	Sat	6:30	23:30				
	Sun	7:00	22:00				
afternoon (part-time work in the afternoon)	Mon–Thu	6:00	11:30	16:00	22:00		
	Fri	6:00	11:30	15:00	23:00		
	Sat	6:30	23:30				
	Sun	7:00	22:00				
midday (at home at midday)	Mon–Thu	6:00	8:00	11:30	13:00	17:00	22:00
	Fri	6:00	8:00	11:30	23:00		
	Sat	6:00	23:00				
	Sun	7:00	22:00				
single person	Mon–Thu	6:00	8:00	16:00	22:00		
	Fri	6:00	8:00	15:00	23:00		
	Sat	7:00	23:30				
	Sun	8:00	22:00				
senior citizens	Mon–Sun	5:30	22:00				
new program	<p>If you select new programme, you can use the enter switch point option to create a new program.</p> <p>You can save and later select two new or modified switching programs as user defined 1 or user defined 2.</p>						
user defined 1	Mon–Thu Fri Sat Sun						
user defined 2	Mon–Thu Fri Sat Sun						

Tab. 12 Standard programs (ON = day mode, OFF = night mode)

5.6.2 Viewing the current program

You can use **display curr. prog.** to view the currently set switching program in the form of a graph (→ Fig. 3).

- The graph always shows the switching program for one day or a block of days.
- The current switching point will flash (circle and cross alternately). Below the graph, you can see the time for that switching point and the temperature that applies from that time onwards.
- Other switching points are marked with a cross.

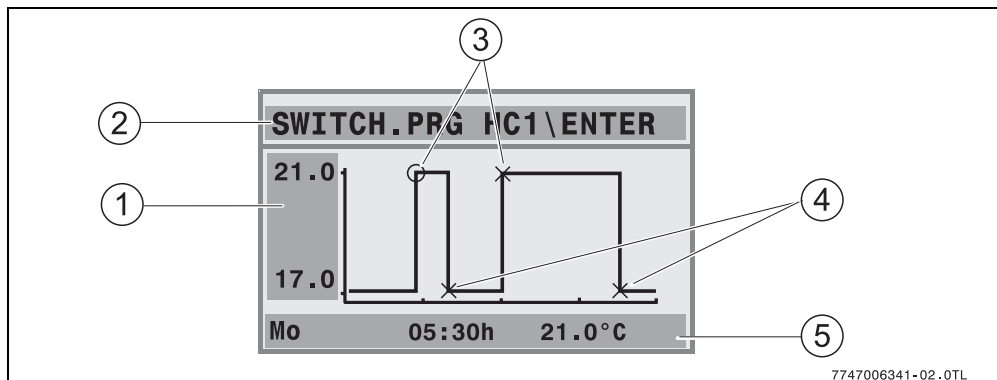








Fig. 3 Example from the "morning" switching program


- 1 Day and night temperature
- 2 Orientation row
- 3 Start points (switchover to day mode)
- 4 Stop points (switchover to night mode)
- 5 Row showing status and settings for the selected switching point

1. Turn the rotary selector  to the right.
The next switching point is displayed.
2. Turn the rotary selector  further to display the other days.
3. Press  to return to the list of options.

5.6.3 Changing the switching point


Use **change switch point** to change the times in a switching program at which the system switches over to a different temperature level.

1. Turn the rotary selector  to select a different switching point. Turn it further to go to a different day of the week.
The selected switching point starts flashing.
2. Hold down  and turn the rotary selector to change the time for that switching point.
3. If required: hold down  and turn the rotary selector to change this switching point from a stop point to a start point or vice versa.

4. Repeat steps 1 to 3 to change other switching points.
5. Press  when you have finished making entries.



If you have changed the program and then do not press any button for five minutes, the system assumes you have finished making entries and goes on to the next step.

6. Hold down  and turn the rotary selector, to save the modified program as **user defined1** or **user defined2**.

The selected program, **user defined1** or **user defined2**, is used from now on for that heating circuit.

7. Select **do not save** to cancel.



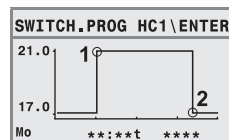
If you want to set switching points for a block of days (**Mo-Th, Mo-Fr, Mo-Su, Sa-Su**), select **select programme\new programme**.






5.6.4 Entering a switching point

You can use **enter switch point** to add additional switching points for a heating phase or energy saving phase (day/night mode) or create a new switching program. You can enter switching points separately for each day. The minimum time between switching points is 10 min (period for which the circuit is switched on or off).

For each start point ([1], day mode), you also need to enter a stop point ([2], night mode) so that the heating will switch back to night mode again.


The maximum number of switching points is 42 per heating circuit.



1. Turn rotary selector  to select the day of the week.
2. Hold down  and turn the rotary selector to change the time for that switching point.
The switching point will flash on the graph until it has been entered completely.
3. Hold down  and turn the rotary selector to specify whether the point is a start or a stop point.
Once the switching point has been entered completely, all the values flash for three seconds. The switching point can still be changed during this time. After that the switching point is saved.
4. Repeat steps 1 to 3 to enter other switching points.
5. Turn rotary selector  to go to other days.
6. Press  when you have finished making entries.








If you have changed the program and then do not press any button for five minutes, the system assumes you have finished making entries and goes on to the next step.

7. Hold down  and turn the rotary selector to save the modified or new program as **user defined1** or **user defined2**.
The selected program, **user defined1** or **user defined2**, is used from now on for that heating circuit.
8. Select **do not save** to cancel.

5.6.5 Deleting a switching point


You can use **delete switch point** to delete switching phases you no longer require.

Ensure that you always delete two switching points for every switching phase (the start point and the stop point) to ensure that the heating system reverts to night mode again.

1. Turn the rotary selector  to select a different switching point.
The selected switching point starts flashing.
2. Hold down  and turn the rotary selector  to **yes**.
The switching point is deleted.
3. Turn rotary selector  to go to other days.
4. Press  when you have finished making entries.




If you have changed the program and then do not press any button for five minutes, the system assumes you have finished making entries and goes on to the next step.

5. Hold down  and turn the rotary selector to save the modified or new program as **user defined1** or **user defined2**.
The selected program, **user defined1** or **user defined2**, is used from now on for that heating circuit.
6. Select **do not save** to cancel.

5.6.6 Setting room temperatures

The **room temperatures** menu item is only available for heating circuits without a remote control unit (the first case below). In the other two cases, the **room temperatures** menu item is not displayed.

Possible case scenarios:

- Heating circuits *without* remote control (→ page 53, setting “none”): different room temperatures are possible for each circuit, in contrast to the RC35 heating circuits. The room temperature is set as described below.
- **RC35 heat. circuits:** the room temperatures are the same for all heating circuits assigned to the RC35. For the RC35 heating circuits, you need to set the room temperature using , not in the user menu (→ page 16).
- Heating circuits *with* a remote control, e.g. RC2x, RC20/RF: you set the room temperatures at the remote control, not at the programming unit.



If “shut-down mode” is selected as the night setback mode, the heating system will be switched off at night. A nighttime room temperature cannot be set. The display will show a message to this effect.

Setting room temperatures with user menu\switching program

Here you can set the room temperature for the heating circuit previously selected in the switching program.


1. Open the **user menu**.
2. Select **switching programme**.
3. Select the heating circuit (→ page 26 – 28).
4. Select **room temperatures**.



NOTICE: System damage due to frost!

If room temperatures are set below 10 °C, rooms may cool down so much that pipes in external walls (for example) may freeze in cold weather.

- ▶ Set room temperatures higher than 10 °C.

5. Set the required room temperature.
6. Turn the rotary selector  to switch between the temperatures for day and night mode.

5.7 Setting a DHW program

With the setting **by heating circuit** (factory setting), the start and stop times for DHW heating follow those of the selected switching program. This ensures that DHW is available during the heating phases (day mode).

If you want to enter a separate DHW program, we recommend:

- Only charging the DHW cylinder once in the morning before the heating start time and possibly also programming another heating phase in the evening if more hot water is regularly needed at that time.

This would allow you to significantly reduce your energy consumption even further.

To set a DHW program which is independent of the heating phases:

1. Open the **user menu**.
2. Select **switching programme**.
3. Select the **domestic hot water** heating circuit.
4. Use **change switch point** to enter, delete or modify a switching point (→ page 34) or enter a new program.
5. Save the program as **user defined 1** or select **do not save** to cancel.
6. Check that **automatic operation** is set for **operation mode\domestic hot water** to make sure that the program you have set is also active (→ page 30).



If you occasionally need more DHW outside the set time, you can activate the DHW heating for a short time ("**Heating up DHW once**", → page 18).

5.8 Setting a DHW circulation program

You can use a DHW circulation program¹⁾ to enter the start and stop times for the DHW circulation pump independently of the switching program for the heating system. Follow the same procedure as for entering a DHW program (→ Chapter 5.7).

1) This function depends on the boiler used.

5.9 Setting the switchover threshold for summer/winter mode

Requirements: an outside temperature sensor must be fitted. The heating system is **controlled by the outside temperature** (with or without influence of room temperature → page 46). In the case of room temperature control, the **sum./win. threshold** menu item is not displayed.

When the outside temperature falls below an adjustable threshold, the heating system automatically switches over to winter mode (heating on).

Ensure that automatic mode is active.

1. Open the **user menu**.
2. Select **sum./win. threshold**.
3. If your heating system is equipped with more than one heating circuit (→ page 26): select the required heating circuit and confirm.
4. To save energy in spring and autumn: lower the changeover threshold (factory setting: 17 °C).
5. To heat your home more comfortably in spring and autumn: increase the switchover threshold.



If you occasionally feel too warm or too cold, you can also make use of the manual mode (→ page 14).



The heat storage capability of the building is also taken into consideration and utilised during the switchover. Since the temperature in your home falls gradually, you may find that the heating system does not switch over to winter mode until some time after the outside temperature has dropped below the switchover threshold.

5.10 Setting the summer/wintertime changeover

The programming unit automatically changes over between summer and wintertime. The **summer / winter** menu item can be used to switch off this automatic changeover function.

The date on which the automatic changeover takes place is determined according to the statutory rules:

- Changeover to summertime:
On the last Sunday in March the time changes from 2:00 am to 3:00 am (+1 h).
- Changeover to wintertime:
On the last Sunday in October the time changes from 3:00 am to 2:00 am (–1 h).

1. Open the **user menu**.
2. Select **summer / winter**.
3. Set **yes** or **no** (factory setting: **yes**).



Should the official details for the changeover change, adjust the summer/wintertime changeover to **no**.

- ▶ Change the time manually.

5.11 Setting the DHW temperature

The DHW temperature is the temperature to which the water in the DHW cylinder is heated.¹⁾



WARNING: Risk of scalding!



The factory setting for the DHW temperature is 60 °C. There is a risk of scalding at the draw-off points if the temperature is set higher than this.

- ▶ If the temperature set is higher than 60 °C, do not open any hot water tap without mixing in cold water as well.

1. Open the **user menu**.
2. Select **DHW temperature**.
3. Set the required DHW temperature (factory setting: 60 °C).




You can also enter the same setting without going through the user menu:

- ▶ Hold down  and simultaneously turn rotary selector .



Should a message be issued that this setting is not possible:

- ▶ At the boiler programming unit, turn rotary selector  to "AUT" or enable DHW heating.




5.12 Setting holiday mode

Use holiday mode¹⁾ to run the heating system differently from the standard switching program when on holiday.

You can only set one holiday period at a time.


1. Open the **user menu**.
2. Select **holiday**.
3. Select the heating circuit to be switched over to holiday mode:
 - **complete system:** heating circuits, DHW and DHW circulation
 - **RC35 heat. circuits:** this option is only displayed if one or several heating circuits are assigned to the RC35; DHW and the other heating circuits remain active.

1) This function depends on the boiler used.

- Individual heating circuits: only heating circuits which are not assigned to the RC35 will be displayed; in other words, those which have their own remote control unit or which have no remote control unit.
4. Setting at home or away from home (absent):
 - **absent**: heating is operated at a reduced, adjustable holiday temperature (reduced mode). If “complete system” was previously selected, DHW and DHW circulation are switched off. If only some heating circuits are in holiday mode, DHW heating and DHW circulation remain active (→ Tab. 13, page 42).
 - **at home**: heating and DHW are available every day as on a normal Saturday.
 5. Set the year, month and day, one after the other, for the first day of the holiday period. Holiday mode starts at 00:00 h (midnight) on the first day.
 6. Press . The year starts flashing.
 7. To set the year: hold down  and turn the rotary selector at the same time.
 8. Release button. The year is saved.
 9. Repeat steps 6 to 8 to set the month and day.
The start date of the holiday period has now been set.
 10. Turn rotary selector  clockwise to set the end date of the holiday period.
 11. Set the end date of the holiday period by following steps 6 to 9.



To ensure that your home is warm when you return, when **absent**, set as the first day for standard operation the end date (date of arrival).
When **at home**, set the last day of your holiday as the end date.

12. In addition, for **absent** only: turn rotary selector  clockwise to set the temperature for the holiday period (factory setting: 17 °C).
The holiday mode is now fully set.
13. Close the flap to finalise your settings.

During the holiday period, the end date is displayed when the flap is open.



During **absent** holiday mode, you can change the temperature simply by turning the rotary selector. The flap must be closed when you do so.

If you want to exit the holiday mode early:

- ▶ Open **user menu\holiday** again.
- ▶ Answer the question **Do you wish to end the holiday function?** with **yes**.


Holiday set as	Domestic hot water (DHW)		DHW circulation pump (CP) ¹⁾		
	DHW program as for heating circuits (factory setting)	Separate DHW program (p. 38)	DHW program according to heating circuits and no separate DHW CP program ²⁾ (factory setting)	Separate DHW program (p. 38) and no separate DHW CP program ²⁾	Separate DHW CP program (p. 38)
absent: complete system	Holiday mode (DHW off/ ECO)		Holiday mode (CP off)		
absent: individual heating circuits	With all HC in holiday mode: holiday mode (DHW off/ ECO)	No holiday mode	If all HC set to holiday: holiday mode (CP off)	No holiday mode	No holiday mode
	If at least one HC not set to holiday: no holiday mode ³⁾		If at least one HC not set to holiday: no holiday mode ³⁾		
at home: complete system	As per Saturday switching program	As per DHW program for Saturday ³⁾	As per Saturday switching program	Same as DHW program for Saturdays ³⁾	Same as CP program for Saturdays
at home: individual heating circuits	If all HC set to holiday: same as switching program for Saturdays ³⁾	No holiday mode	If all HC set to holiday: same as switching program for Saturdays ³⁾	No holiday mode	No holiday mode
	If at least one HC not set to holiday: no holiday mode ³⁾		If at least one HC not set to holiday: no holiday mode ³⁾		

Tab. 13 Function of domestic hot water (DHW) and DHW circulation pump (CP) in holiday mode

- 1) This function depends on the boiler used.
- 2) No separate program has been set for DHW circulation, i.e. the times for the DHW circulation pump match the times for the DHW program.
- 3) The earliest start point and latest stop point out of all heating circuits on this day will apply.

5.13 Setting the party function

You can use the **party function** (extension of period of use) to postpone the time when your heating system normally switches to night mode (as defined in the switching program) to a later time. This means your home will be heated for longer in day mode (**continuous heating**) if you want to stay up later than usual in the evening.



1. Open the **user menu**.
2. Select **party function**.
3. If your heating system is equipped with several heating circuits (→ page 26):
Select and confirm the required heating circuit.
4. Hold down  and turn the rotary selector at the same time to set the number of hours (0 to 99) for your home to be heated in day mode.
The party function is activated. The remaining duration is shown on the display. Once the time has expired, automatic mode starts again.

Ending the party function early:

- Open **USER MENU\party function** again and select **end**.




Instead of making the setting via the user menu, you can use the following shortcut:

- Press and hold down .
- Open flap.
- Turn rotary selector  at the same time to set the number of hours (0 to 99).

5.14 Setting the pause function

You can use the **pause function** (heating pause) to switch your heating to night mode (**permanently reduced**) for a certain period, regardless of the current switching program - when you are away from home, for example. Once this period has elapsed, normal operation is automatically resumed as defined in the switching program.



1. Open the **user menu**.
2. Select **pause function**.
3. If your heating system is equipped with several heating circuits (→ page 26):
Select and confirm the required heating circuit.
4. Hold down  and simultaneously turn the rotary selector to set the number of hours (0 to 99) when heating should be reduced.
The pause function is activated. Once the time has expired, automatic mode starts again.

Ending the pause function early:

- Open **USER MENU\pause function** again and select **end**.



Instead of making the setting via the user menu, you can use the following shortcut:

- ▶ Press and hold down .
- ▶ Open flap.
- ▶ Turn rotary selector  at the same time to set the number of hours (0 to 99).

5.15 Setting thermal disinfection

If this function¹⁾ is activated, DHW is heated once a week or once a day to a temperature sufficient to kill pathogens (e.g. legionella).



WARNING: Risk of scalding from hot water at the draw-off points!

During the thermal disinfection process the DHW can be heated to a temperature above 60 °C.

- ▶ Do not open a DHW tap without mixing in cold water as well during or after the thermal disinfection process.

1. Open the **user menu**.
2. Select **therm. disinfection**.
3. Set **yes** or **no**.
If thermal disinfection is switched on:
4. Set the temperature to which the hot water should be heated during thermal disinfection (factory setting: 70 °C).
5. Set the day of the week (factory setting: Tuesday).
6. Set the time (factory setting: 01:00 h; can only be started on the hour).

5.16 Calibrating the room temperature display

If there is a separate thermometer near the programming unit, it may show a different room temperature to that shown on the programming unit. If you wish to adjust ("calibrate") the programming unit to match the thermometer, you can use the **room temp. correct.** function.

Before matching the room temperature, consider the following:

- Is the thermometer more accurate than the programming unit?
- Is the thermometer located close to programming unit so that they are both subject to the same heat influences (e.g. sunlight, fireplace)?

1) The function depends on the boiler used



A thermometer may indicate temperature fluctuations more slowly or rapidly than the programming unit.

- Therefore, never calibrate the programming unit during phases when your heating system is cooling down or heating up.

1. Open the **user menu**.
2. Select the **room temp. correct.** option.
3. Setting the **Calibration of the room temperature**: the "K" on the display stands for the unit Kelvin; 1 K corresponds to 1 °C. The factory setting is 0.0 K.
Example: if the thermometer displays a temperature that is 0.5 °C higher than the temperature displayed at the programming unit, enter "+0.5 K" as the calibration value.
The result will be displayed immediately as the corrected room temperature.

5.17 Setting the preheating phase for a Loganova heat pump with gas booster heater

You can use **GWP preheat phase** to set a preheating phase for a heat pump with gas booster heater (the Loganova heat pump)¹⁾. This setting is not relevant for alternative equipment.

During the preheating phase, the heat pump unit with gas booster heater preheats the heating system without a peak load boiler. Generally, the permanent operation of the heat pump raises the overall efficiency and saves more energy than in room temperature reduction mode. We therefore recommend setting a preheating phase.

1. Open the **user menu**.
2. Select **GWP preheat phase**.
3. Set the preheating phase: set the required duration (00:00 to 16:30 hours:minutes).
The preheating phase commences by the set time before the day mode of the first heating circuit begins.



You will achieve the highest efficiency if the heat pump with gas booster heater operates constantly. For this, set the preheating phase so it is longer than the night mode period of the current switching program.

1) This function depends on the boiler used.

6 Information on setting the programming unit

6.1 Control modes for heating control

The heating control can operate in three control modes: Upon request, your heating contractor will select and set up one of these options:

- **Outside temperature control (weather-compensated control):** the outside temperature is recorded by means of a temperature sensor. The flow temperature is calculated solely on the basis of the outside temperature in accordance with the set heating curve.
You can set the room temperature for the entire home at the programming unit (which will shift the heating curve up or down). Adjust the thermostatic radiator valves in every room to achieve the required room temperature.
- **Room temperature control:** in this case, the programming unit must be mounted in a room which is representative of your home. The programming unit records the room temperature in this "reference room". Control of the flow temperature is determined by the set room temperature and the recorded room temperature. Consequently external temperature influences in the reference room (e.g. open windows, sunlight or heat from a fireplace) will affect your entire home.
Set the room temperature of your home or reference room at the programming unit. You can achieve higher or lower temperatures in the other rooms by adjusting the thermostatic radiator valves.
- **Weather-compensated control with room temperature hook-up:** with this control mode the flow temperature is primarily determined by the outside temperature, but it is also partly determined by the room temperature according to the range of adjustments which can be made by your heating contractor.



The following applies to **room temperature control** and for weather-compensated control **with room temperature hook-up:**
the thermostatic radiator valves in the "reference room" (the room where the programming unit is located) **must be fully opened**. Control of the flow temperature is determined by the room temperature recorded there. It must not be limited by closed thermostatic valves.

6.2 Tips for energy efficiency

- You can save around 6 % on your heating costs by reducing the daytime room temperature by 1 °C.
- Only heat if you need warmth. Use the switching programs for automatic night setback.
- Air your home wisely: leave the windows wide open for a few minutes rather than leaving them slightly open all the time.
- Close the thermostatic valves whilst airing heated rooms.
- Make sure that your windows and doors form a proper seal and do not allow slight draughts when closed.
- Never position large objects such as a sofa immediately in front of radiators (maintain a clearance of at least 50 cm). Otherwise, the heated air cannot circulate and heat the room adequately.
- You can also increase the energy efficiency of your DHW heating: compare the times when you want your rooms to be warm with the times when you need hot water. It may be practical to use a separate switching program to heat water.
- Arrange for your heating contractor to service your heating system annually.



7 Troubleshooting

This chapter deals with frequently asked questions about your heating system. This will in many cases enable you to eliminate suspected faults. At the end of the chapter you will find a table listing faults and corresponding remedies.

7.1 Frequently asked questions

Why do I set a room temperature, even though it is not measured?

When you set a room temperature – even if room temperature is not recorded, as is the case when the heating control is weather-compensated – you are changing the heating curve. This changes the room temperature, because the temperature of the heating water changes and with it the temperature of the radiators.

Why does the room temperature measured with a separate thermometer not correlate with the set room temperature?

The room temperature is influenced by a number of different variables. If the RC35 programming unit is installed on a cold wall, it will be influenced by the cold temperature of the wall. If it is installed in a warm part of the room, such as close to a fireplace, it will be influenced by the heat there. This is why a separate thermometer can display a different room temperature from that set on the RC35 programming unit. If you wish to compare the measured room temperature with the values recorded using another thermometer, it is important to observe the following:

- The separate thermometer and the programming unit must be physically close to each other.
- The separate thermometer must be accurate.
- When comparing, do not measure the room temperature when the heating system is heating up, as the two devices may react at different speeds to the change in room temperature.

If you have followed these instructions and you can still detect a discrepancy, you can calibrate the room temperature display (→ page 44).

Why do the radiators get too hot when the outside temperature is relatively high?

If you have a heating system with one heating circuit and no mixing valve (heating circuit 1), this is normal. The pump only starts up when the boiler reaches a predefined flow temperature. If the flow temperature is higher than required based on the outside temperature, the radiators may get hotter for a short time. The heating control detects this and responds accordingly after a short time. Do not adjust the thermostatic valves on the radiators and wait until the set room temperature is reached. Even in summer mode, radiators may be heated briefly under specific circumstances: namely when the pump is started up automatically at a predefined interval to prevent it from “seizing up” (jamming). If the pump happens to start immediately after DHW heating, the unusable residual heat is dissipated via the heating circuit and the radiators.

Why does the pump run at night, even though the home is not being heated at all or only very little?

This depends on the setting chosen by your heating contractor for night setback.

- **reduced operation:** Even when the home is only being heated a little, the pump runs to achieve the set room temperature, even if low.
- **shut-down mode:** the heating system (and therefore also the pump) is automatically shut down in night mode. If the outside temperature falls below the frost protection temperature, the pump is automatically switched on by the "Frost protection" function.
- **Outdoor setback mode** and **Room setback mode:** the heating system starts automatically when the actual temperature falls below the set value. The pump will then also start.

The actual room temperature is higher than the set room temperature. Why is the boiler still running?

The boiler can heat to increase the temperature of DHW. Your heating system can be set to three possible control modes (→ page 46):

- Room temperature control: the boiler shuts down automatically once the set room temperature has been reached.
- Weather-compensated control: the heating system operates based on the outside temperature.
- Weather-compensated control with room temperature hook-up: the heating system utilises both the control types referred to above.

The boiler may still operate in the latter two cases, even if the captured room temperature is higher than the displayed room temperature.

7.2 Fault messages and service messages

The RC35 programming unit differentiates between three types of messages:

- Faults (in boiler operation)
- Plant errors (incorrect settings on the programming unit, or component malfunctions)
- Service messages (indicating that some servicing is required)

Faults


The display shows the following message: **Your system has a malfunction. Please open the cover of the operating unit.**




NOTICE: System damage due to frost!

The heating system can freeze up if it has been switched off through a fault shutdown.

- ▶ Try and reset the fault.
- ▶ If this is impossible, immediately notify your heating contractor.

1. Open the flap (by pulling the recessed grip on the left).
The display may show the name and telephone number of your heating contractor if these are programmed.
2. Turn rotary selector  (several times if necessary, if there are multiple messages) to display the message and the code (in the last row on the display).
3. Check whether you can eliminate the fault yourself with a reset (→ page 52).
4. Otherwise notify your heating contractor immediately (stating the message and code).

To return to the standard display:



- ▶ Press  or close the flap.




The faults depend on the boiler used. Information about the faults can be found in the boiler documentation.

Plant errors and service messages

The display shows **please open cover** in the bottom row on the display. The heating system stays operational for as long as possible; in other words, central heating can continue.

1. Open the flap (by pulling the recessed grip on the left).
2. Turn rotary selector .
The display indicates whether there is a **fault** message (= plant error) or a **servicing** message. The display may show the name and telephone number of your heating contractor if these are programmed.
3. Turn rotary selector  (several times if necessary, if there are multiple messages) to display the message and the code (in the last row on the display).
4. Check whether the message can be removed using Tab. 14.
5. Otherwise notify your heating contractor (stating the message and code).

To return to the standard display:

- Press  or close the flap.

Code	Display	Cause	Remedy
	Nothing appears on the display	Heating system has been switched off.	► Switch on the heating system.
		The power supply to the heating system has been interrupted.	► Check that the programming unit is correctly seated in its wall mounting base. ► Check that the cables are connected on the programming unit wall mounting base.
	RC35 version: ... connect to: ... connection setup...	After start-up, data is transferred between EMS/UBA and the RC35 (no fault).	► Wait a few seconds.
A01/816	No communication with UBA/MC10/DBA or UBA-H3.	Communication to EMS/UBA is faulty, possibly due to a loose contact or electromagnetic interference, for example.	► Check that the programming unit is correctly seated in its wall mounting base. ► Check that the cables are connected on the programming unit wall mounting base.
A11/802	Time is not yet set.	Time or date settings are missing. This may have been caused by a lengthy power failure, for example.	► Enter the time or date so that the switching program and other functions can work correctly.
A11/803	Date is not yet set.		

Tab. 14 Table with plant errors and service messages

Code	Display	Cause	Remedy
Hxx	please open cover	Maintenance is required. The heating system remains operational for as long as possible.	► Make arrangements to have the system serviced by your heating contractor.
H07	Water pressure too low.	The water pressure in the heating system has dropped to a low level. This value is only displayed if your heating system is equipped with a digital pressure sensor.	This is the only service message (H07) that you can remedy yourself. ► Top up the heating water as described in the boiler operating instructions.

Tab. 14 Table with plant errors and service messages

“Code” column in Tab. 14

The messages are marked with codes. These inform your heating contractor about the possible cause.

The codes are shown at the bottom of the display, on the left and right.



Service messages are not displayed on all boilers.

7.3 Resetting faults

Some faults can be rectified by resetting the system. This applies to locking faults, for example. Locking faults are those which cause the display on the boiler programming unit to flash.

- Press reset on the boiler programming unit to reset the fault.
For instructions regarding the reset function on the boiler programming unit, see the technical documentation for the boiler and/or boiler programming unit.
- If the fault cannot be reset (the display continues to flash), notify your heating contractor.

8 Setup report

The setup report is to be completed by your heating contractor during commissioning and is for your information.

Allocation of heating circuits:

	Area of dwelling (examples: ground floor, granny flat)	Remote control (RC35, RC2x, RC20/RF, none ¹⁾)
Heating circuit 1		
Heating circuit 2 ²⁾		
Heating circuit 3 ²⁾		
Heating circuit 4 ²⁾		

Tab. 15 Allocation of heating circuits

- 1) With the setting “none”, the heating circuit can be set via the RC35; it does not, however belong to the so-called RC35 heating circuits (consequently, the room temperatures can be adjusted separately).
- 2) Not available with some boilers.

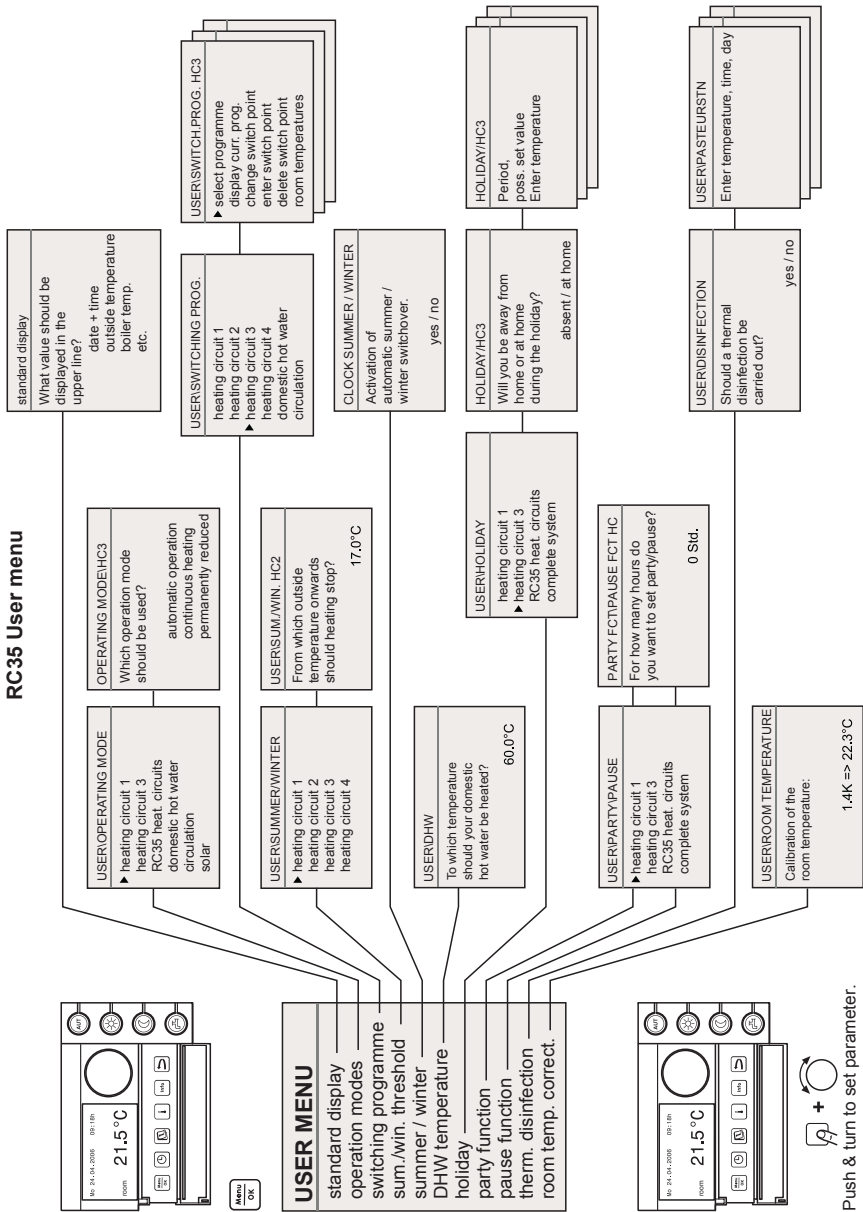
Important settings for your heating system:

	Setting options	Setting
Reduction mode (night setback)	Outdoor setback mode, Room setback mode, shut-down mode, reduced operation	
Control function (→ page 46)	Outside temperature control (with/ without room influence), room temp. controlled	
Htg. charact. curve	Design temperature: Minimum outside temperature: Offset:	
Type of building	light, medium, heavy	
DHW circulation pump runtime ¹⁾	durat., 2 x, 3 x, 4 x, 5 x, 6 x per hour for three minutes each time	
Priority DHW	yes, no	
Switching programme (times → page 31)	Standard program name: user defined program	

Tab. 16 Settings made during commissioning

1) This function depends on the boiler used.

9 User overview of RC35



Push & turn to set parameter.

Index

A

Automatic mode 13, 29
 Away from home 8–9

C

Calibrating room temperature 44
 Cleaning 11
 Continuous heating (manual day) 13, 29
 Contrast on display 9–10
 Control modes for heating control 46

D

Date, setting 17
 Day mode 13, 34
 Day/night rhythm 9–10
 DHW (operating modes) 30
 DHW circulation (operating modes) 30
 DHW circulation program 38
 DHW messages in the info menu 20
 DHW program 38
 DHW temperature, setting 18
 DHW, heating up once 18
 Disinfection, thermal 44
 Display, explanation of 12
 Disposal 11

E

Energy 9, 11, 25, 38–39
 - tips for energy efficiency 47
 Errors 50

F

Faults 50
 Faults, resetting 52
 Flow temperature 27
 Frost 7, 52
 - faults when there is a risk of frost 50
 Frost protection 49

G

Getting started 8–9

H

Heat pump 45
 Heat pump with gas booster heater 45
 Heating circuit
 - designations in list of options for
 selection 28
 - explanation 27
 Heating circuit, selecting 26–28
 Heating circuits (operating modes) 29
 Holiday mode 40
 Holiday temperature 9–10

I

Info menu 20

M

Manual day/night mode 13
 Messages on the display 22

N

Night mode 13, 34
 Night time reduction 49

O

Operating modes 13, 29
 - DHW 30
 - DHW circulation 30
 - heating circuits 29
 - solar 30
 Outdoor setback mode 49
 Outside temperature control 46, 49
 Outside temperature variation 21
 Outside temperature, higher 48

P

Party function 43
 Pause function 43
 Permanent display 29
 Permanently reduced (manual night) 13, 29
 Plant errors 51
 Please open cover 51
 Power failure 22

Preheating phase, heat pump with gas booster heater	45	Switching program	29
Pump	49	- DHW	38
R		- DHW circulation	38
RC35 heating circuits	26–28	- selecting a program	32
Reduced operation	49	- setting	31
Reference room	46	- viewing	34
Remote control	27	Switchover threshold for summer/winter mode	39
Reset	52	T	
Room setback mode	49	Temperature, see Room temperature	
Room temperature		Thermal disinfection	44
- calibrating displayed temperature	44	Thermostatic valves	11, 46
- changing permanently	15	Time, adjusting for summer/winter time	9–10
- changing temporarily	14	Time, setting	17
- different temperatures in heating circuits	28	Time, summer/wintertime	9
- discrepancy in displayed temperature	48	U	
- setting	28, 37	User menu	
- setting for particular heating circuits	16, 28	- introduction to using	23
- too cool/too warm	8	- overview of the menu items	25
Room temperature control	46, 49	W	
S		Weather-compensated control	46
Safety instructions	7		
Service messages	51		
Setting the DHW temperature	40		
Setup report	53		
Shutdown operation	49		
Shutting down	22		
Solar (operating modes)	30		
Solar gain	21		
Spring/autumn, heating during	9–10		
Standard display	29		
Start point	33–34		
Stop point	33–34		
Sum./win. threshold	39		
Summer/winter mode, switching between	9–10		
Summer/wintertime changeover	39		
Switching off	22		
Switching point			
- changing	34		
- deleting	36		
- entering	35		



Notes



Notes

Buderus
Cotswold Way, Warndon, Worcester WR4 9SW
Customer service: 0844 892 3004
Technical support: 0844 892 4224
Fax: 01905 753130
www.buderus-commercial.co.uk

In the UK and IE, Buderus is a brand name of
Bosch Thermotechnology Ltd.

Buderus