USER MANUAL
for
Room Control Panel

GA01HA - 01

Program version 01

We request that users carefully study applicable Instructions before connecting and starting up any of our products.
Should any doubts arise, please contact our Company between 8 a.m. and 4 p.m.
Attention !!! At the bottom of each page you will find last document's update date. Please, always use the most recent version of the Instructions, which is available free of charge and will be mailed to you if ordered.

TABLE OF CONTENTS

1.   INTRODUCTION

1.1. Graphic symbols

Symbols intended to indicate and at the same time emphasize the importance of text containing information that warns against dangerous situation have the following graphic forms:

Warning

This symbol is used when it is necessary in described instructions to follow the sequence of carried out operations. The unit may be damaged or destroyed in case of any error or proceeding in discord with the description.
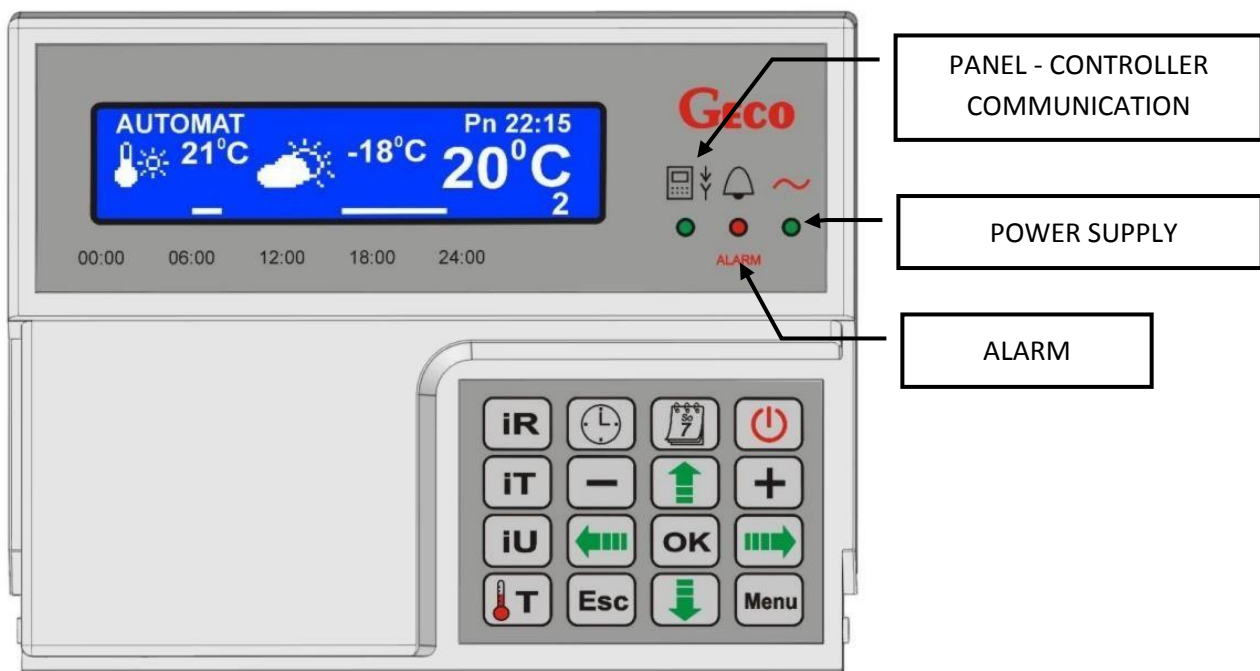
Important!

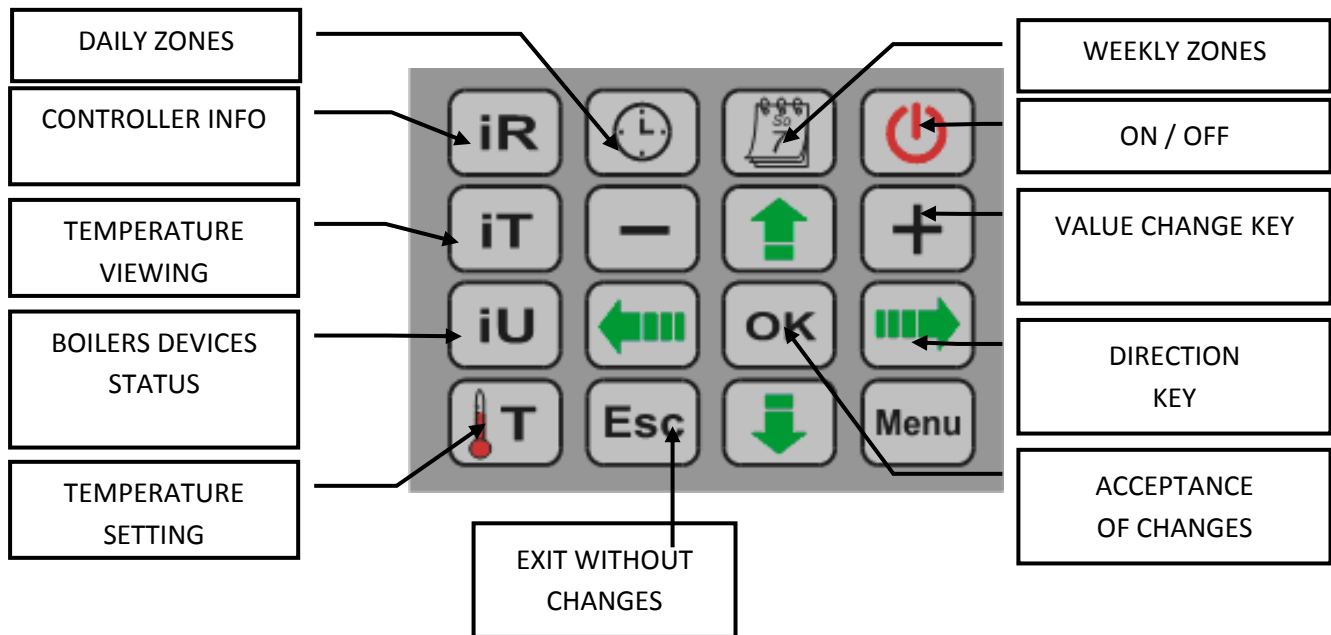This symbol indicates information of particular importance.

Reference

This symbol indicates occurrence of additional information in a chapter.

1.2. Keyboard and function keys

DAILY ZONES		WEEKLY ZONES
CONTROLLER INFO		ON / OFF
TEMPERATURE VIEWING		VALUE CHANGE KEY
BOILERS DEVICES STATUS		DIRECTION KEY
TEMPERATURE SETTING		ACCEPTANCE OF CHANGES

EXIT WITHOUT CHANGES

2.   GENERAL CHARACTERISTICS

The GA01HA-01 room control panel has been designed in microprocessor technology, using automatic surface assembly.

GECO heating controllers have been fitted for full communication with the GA01HA room control panel manufactured by GECO, which allows to control boiler operation comfortably from user's apartment.

The room control panel, as interface of regulator mounted on a boiler, clearly raises convenience of its use. The room control panel GA01HA-01 has a built in sensor, used to measure the temperature in the user's apartment.

The room control panel connected to the GECO controller allows:
- to change boiler preset temperature
- to change HUW preset temperature
- to view boiler operation state
- to view operation states of other units (fan, fuel feeder, central heating pump, HUW pump)
- to view all measured temperature values
- information on all alarms to be displayed in room panel

3.   INSTALLATION AND CONNECTION

The panel is designed for mounting on the wall using the mounting frame to be screwed to the wall, then slam on the panel. Please note that the panel should be installed in the place where the temperature measurement will be model for heated rooms.
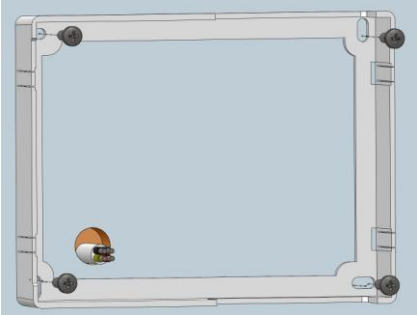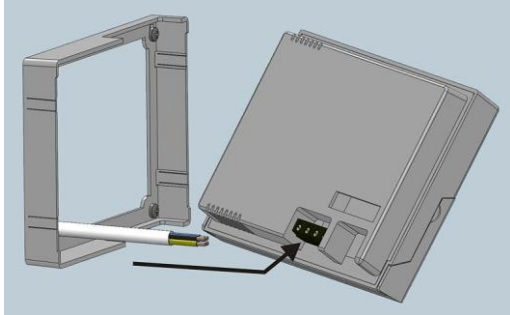
👉

INSTALLING THE ROOM CONTROL PANEL

IN THE IMMEDIATE VICINITY

OF THE WINDOW, RADIATOR AND EXPOSED

TO STRONG SUNLIGHT OR DRAFTS

WILL CAUSE DISTORTION.

Fig. 1 Examples showing mounting room control panel GA01HA in room.

MOUNTING ROOM CONTROL PANEL GA01HA-01 ON THE WALL

STEP 1	STEP 2	STEP 3
Mount mounting frame on the wall (inscription „DO GÓRY" on the inside of the frame shows that it should be mounted on the top)	Connect transmission cable to connection block of GA01HA according to Fig. 2	Slam room control panel in mounting frame

Communication between the controller and the room control panel is in RS485 standard and require to have four lines (two signal lines: RS-A and RS-B and two to power panel: +12V and GND). The room control panel does not require a separate voltage supply, it is supplied using extra-low voltage 12V, to protect against electrical shock, which is driven with the control signal. Connectors to which the wires must be connected are on the back of the panel. As the transmission line can be used twisted pair UTP cable. As the signal lines can serve single wires (A, B), while the other as a power supply. Below is presented an accurate description of the connection between panel and the controller. A detailed description of the connection at the controller is in manual of the controller and depends on its version:
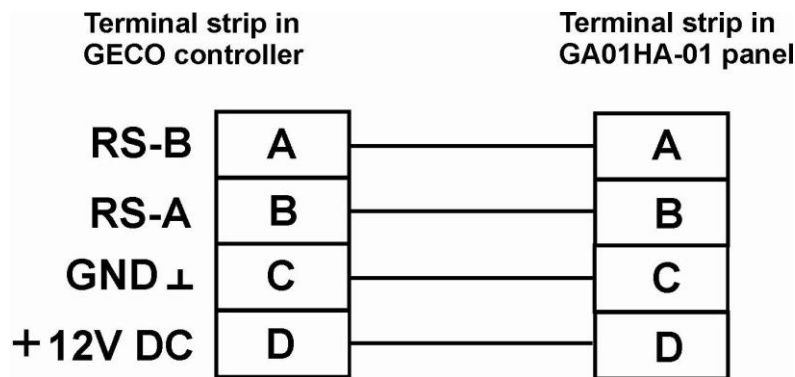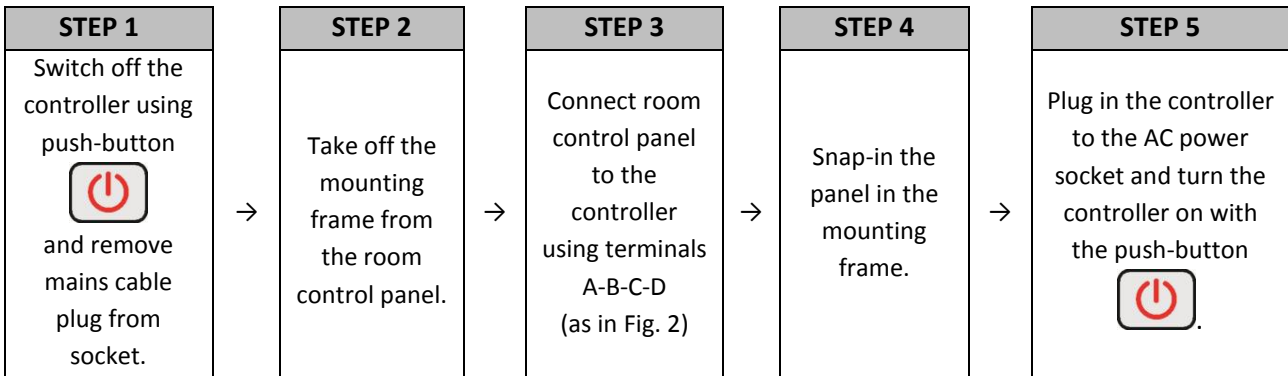
STEP 1		STEP 2		STEP 3		STEP 4		STEP 5
Switch off the controller using push-button ⏻ and remove mains cable plug from socket.	→	Take off the mounting frame from the room control panel.	→	Connect room control panel to the controller using terminals A-B-C-D (as in Fig. 2)	→	Snap-in the panel in the mounting frame.	→	Plug in the controller to the AC power socket and turn the controller on with the push-button ⏻.

Fig. 2. Diagram of connection between the GA01HA room control panel and the controller.

☞   *ESTABLISHING OF CORRECT PANEL-CONTROLLER COMMUNICATION IS*

INDICATED BY LIGHTING OF THE GREEN

DIODE UNDER ICON ▦↧

If the controller on the boiler is properly connected to the panel room GA01HA-01, it will be automatically detected by the controller and does not require any additional actions or settings from the user. After connecting the room control panel, the controller on the boiler operates in accordance with the settings set on the room control panel.

Loss of communication caused by the damage of signal wires or disconnection the panel of the controller, causes the disappearance of main screen icon ▦↧ in 15s after disconnecting the panel.

4.   QUICK START

After connecting the room control panel with the controller on the boiler, the unit is ready to work. In order to make a quick start of the panel GA01HA-01, should be carried out following:

1.   Connect the room control panel with the controller on the boiler ($\Rightarrow$ P.3 page 5).
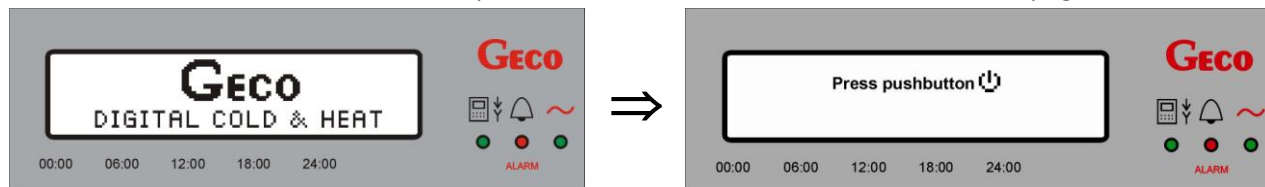
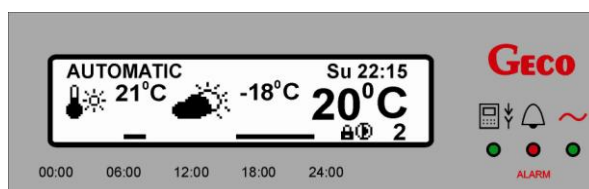1.   Switch on the panel using push-button [button]. The following screen will appear:

Table 1. Table of factory settings.
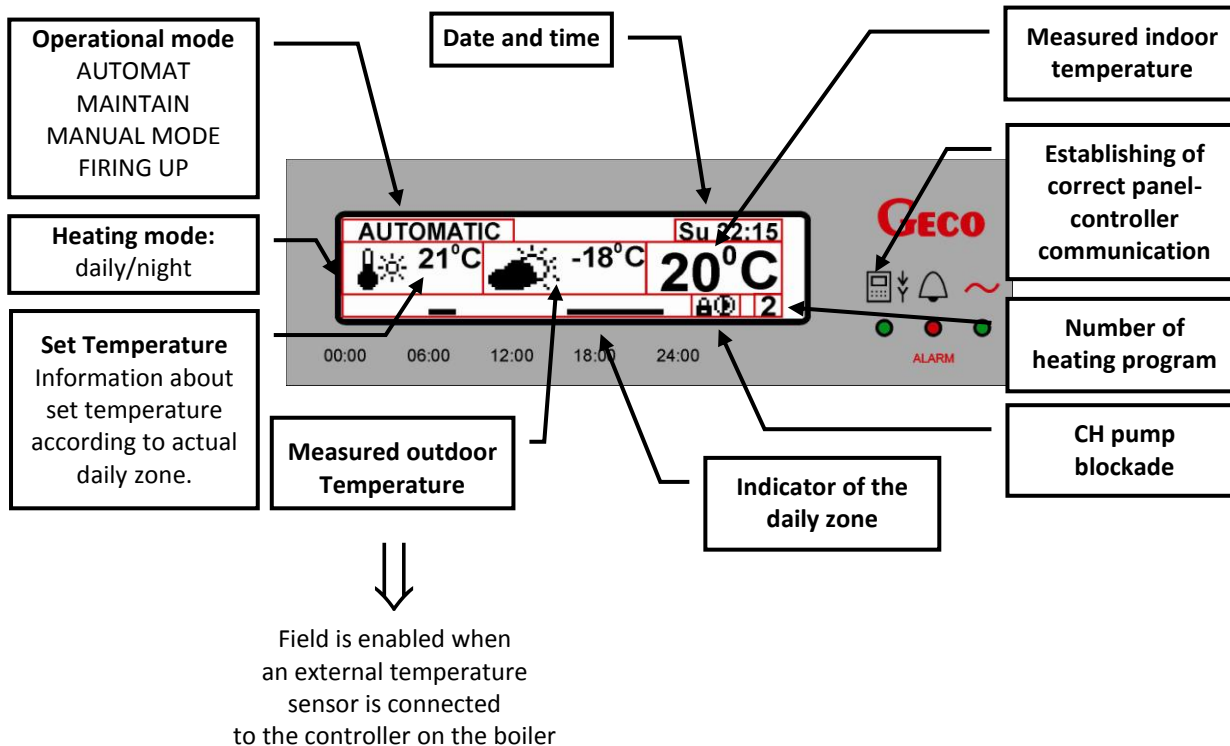
Description	Range	Factory setting
Daily temperature (comfort)	5^0C - 30^0C	21^0C
Night temperature (economic)	5^0C - 30^0C	17^0C
Daily zone	1 - 6	Program 3
Weekly zone	Mo-Su	Program 2
Weather regulation	YES / NO	NO
Heating curve	1 - 10	6

5.   OPERATION OF THE GA01HA-01

5.1.   The controller main screen

After connecting the room control panel with the controller on the boiler and pressing the push-button ⏻ controller starts running and the main screen appears.
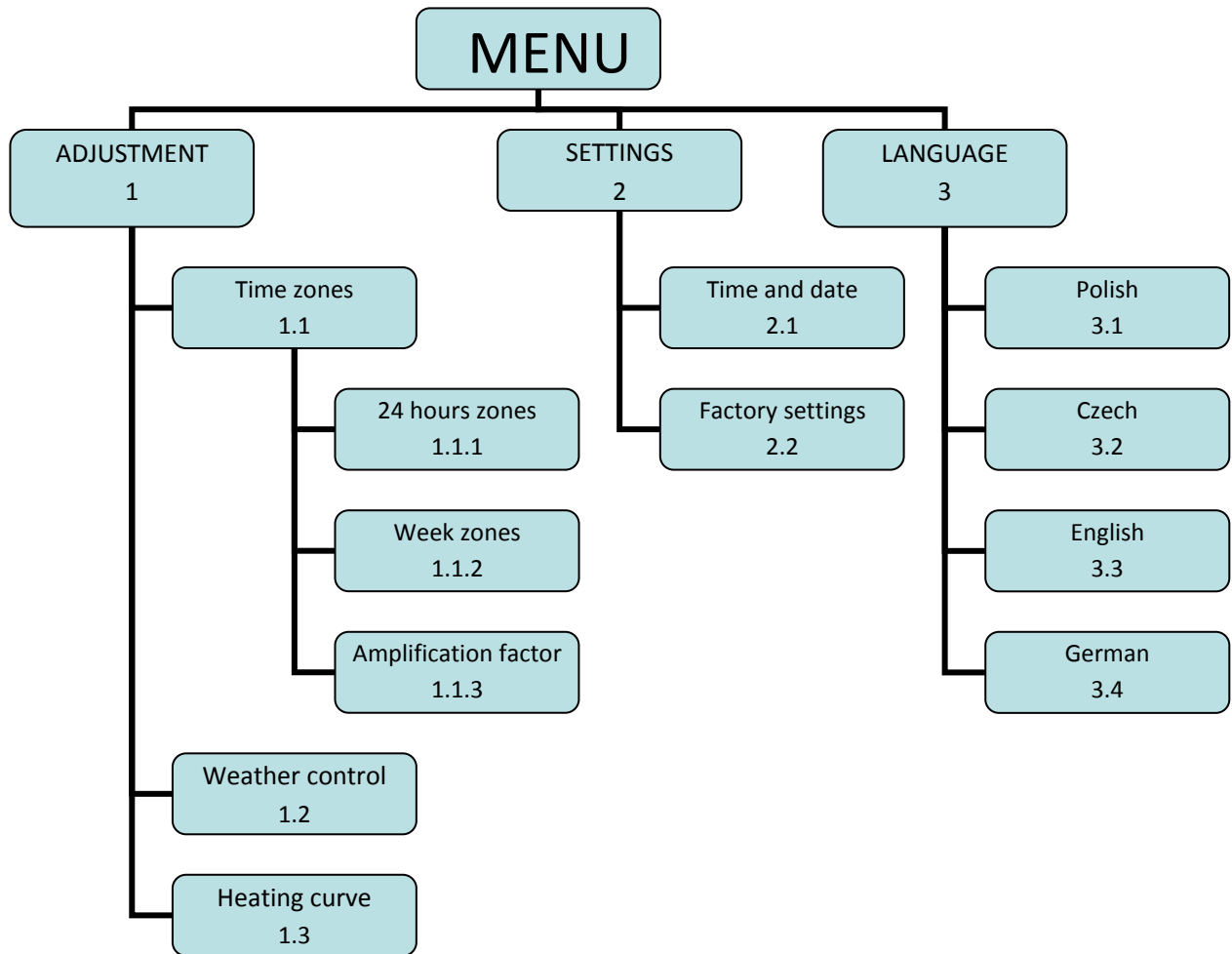
On the main screen will be presented the following information:

Operational mode
AUTOMAT
MAINTAIN
MANUAL MODE
FIRING UP

Date and time

Measured indoor temperature

Establishing of correct panel-controller communication

Heating mode:
daily/night

Number of heating program

Set Temperature
Information about set temperature according to actual daily zone.

Measured outdoor Temperature

Indicator of the daily zone

CH pump blockade

Field is enabled when an external temperature sensor is connected to the controller on the boiler

5.2. Controller menu

Below is presented a schematic drawing showing the controller MENU:

```
                              ┌──────────────┐
                              │    MENU      │
                              └──────────────┘
          ┌───────────────────────┼───────────────────────┐
  ┌───────────────┐       ┌───────────────┐       ┌───────────────┐
  │  ADJUSTMENT   │       │   SETTINGS    │       │   LANGUAGE    │
  │       1       │       │       2       │       │       3       │
  └───────────────┘       └───────────────┘       └───────────────┘
          │                       │                       │
  ┌───────────────┐       ┌───────────────┐       ┌───────────────┐
  │  Time zones   │       │ Time and date │       │    Polish     │
  │      1.1      │       │      2.1      │       │      3.1      │
  └───────────────┘       └───────────────┘       └───────────────┘
          │                       │                       │
  ┌───────────────┐       ┌───────────────┐       ┌───────────────┐
  │ 24 hours zones│       │Factory settings│      │    Czech      │
  │     1.1.1     │       │      2.2      │       │      3.2      │
  └───────────────┘       └───────────────┘       └───────────────┘
          │                                               │
  ┌───────────────┐                               ┌───────────────┐
  │  Week zones   │                               │    English    │
  │     1.1.2     │                               │      3.3      │
  └───────────────┘                               └───────────────┘
          │                                               │
  ┌───────────────┐                               ┌───────────────┐
  │ Amplification │                               │    German     │
  │ factor  1.1.3 │                               │      3.4      │
  └───────────────┘                               └───────────────┘
          │
  ┌───────────────┐
  │Weather control│
  │      1.2      │
  └───────────────┘
          │
  ┌───────────────┐
  │ Heating curve │
  │      1.3      │
  └───────────────┘
```

6. QUICK ACCESS KEYS

The room control panel has 4 quick access keys (iR , iT , iU , T), which allow to perform the following operations quickly and easily: viewing of temperatures currently measured by the controller and setting new temperature values at the boiler, in the boiler, and other.

Information concerning temperatures and information on equipment operation state depends on selected system configuration.

6.1. Controller information

Press push-button iR to obtain information on the controller type and program version.
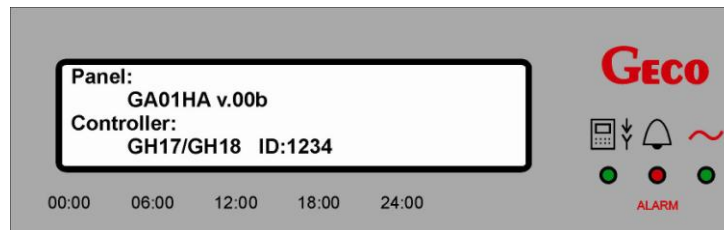
If an error occurs in communication between the panel and controller (for instance in due to improper signal wires connecting), the symbol "**UNKNOWN**" is displayed instead of controller type and program version.
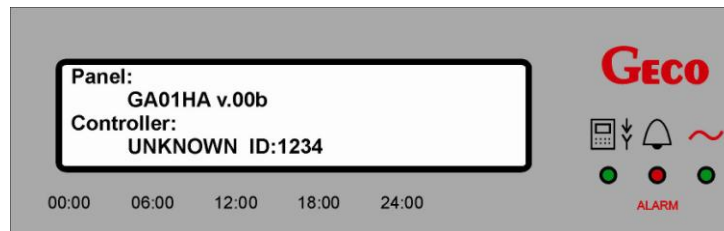
Exit this screen by pressing a push-button. Esc . Do not press any buttons for 60s to return to the main screen.

6.2. Temperature viewing

Press push-button iT to obtain information on current temperatures measured by the controller. Depending on selected heating configuration, the display will show temperature values appropriate to given configuration:

Boiler temperature	Feeder temperature
CH cycle temperature	Chimney temperature
HUW cycle temperature	Second CH cycle temperature
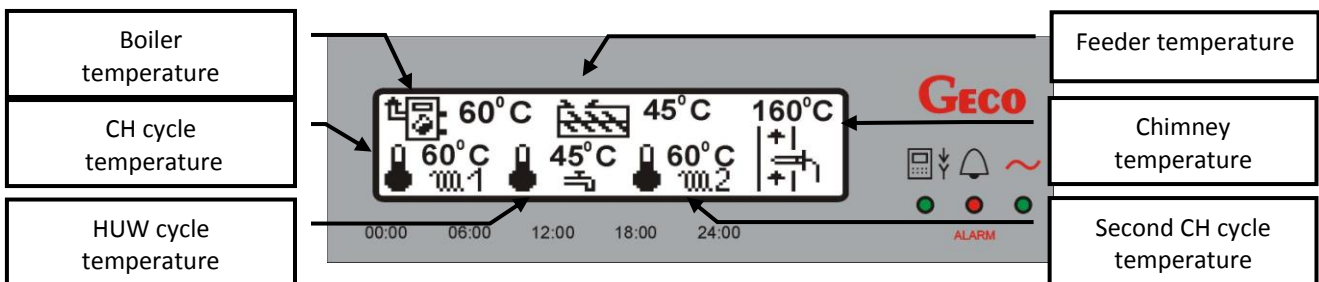
If selected heating system configuration does not support a given cycle, temperature value field for this cycle will show „– –„. For example, the following screen does not support the second heating system – CO2 :
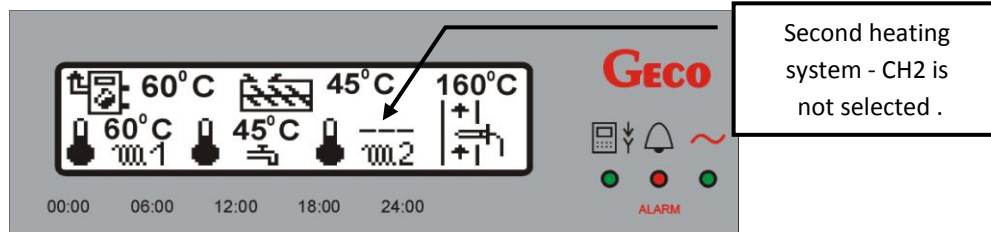
Second heating system - CH2 is not selected .

Exit this screen by pressing a push-button **Esc**. Do not press any buttons for 60s to return to the main screen.

6.3. Viewing the status of working on the boiler's equipment

After pressing the push-button **iU** you can access the devices connected to the controller on the boiler status screen preview, such as feeder, fan, pumps, etc. The running of the device is being signaled on the display with appropriate icon.

Fan		CH 1 pump
Feeder		HUW pump
Hopper feeder		Igniter
Three-way valve		CH 2 pump
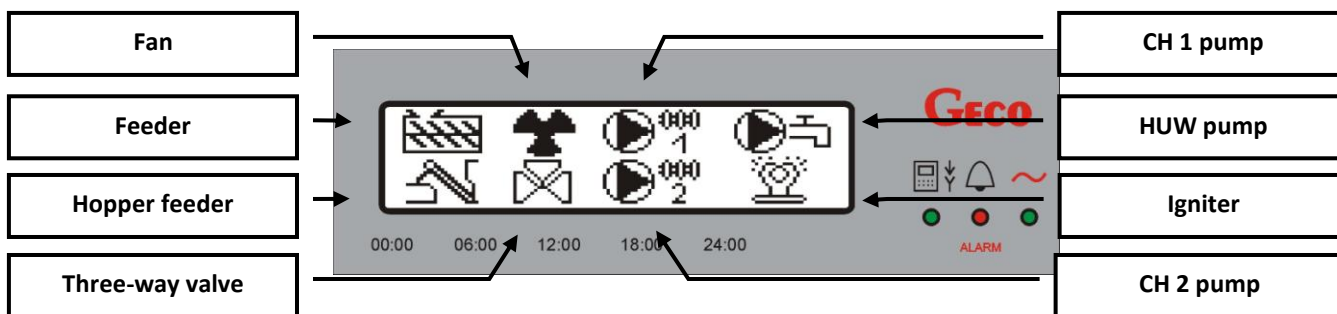
Stopping or no support for the device by a controller on the boiler is signaled by **"X"** on screen, like below:
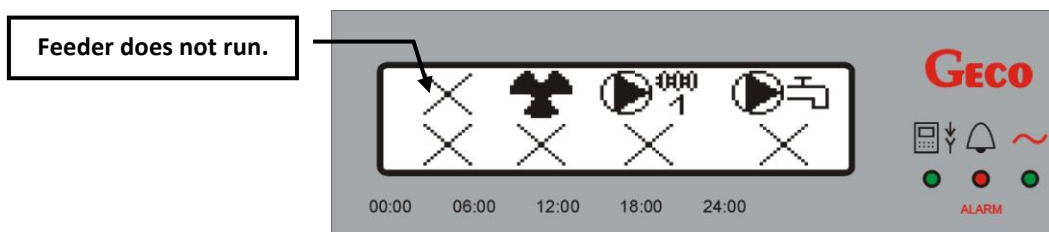
Feeder does not run.

Exit this screen by pressing a push-button. **Esc**. Do not press any buttons for 60s to return to the main screen.

6.4. Quick temperature setting

The following screen will appear after pressing push-button [🌡T] :

Measured temperature · Preset temperature · Boiler · HUW cycle
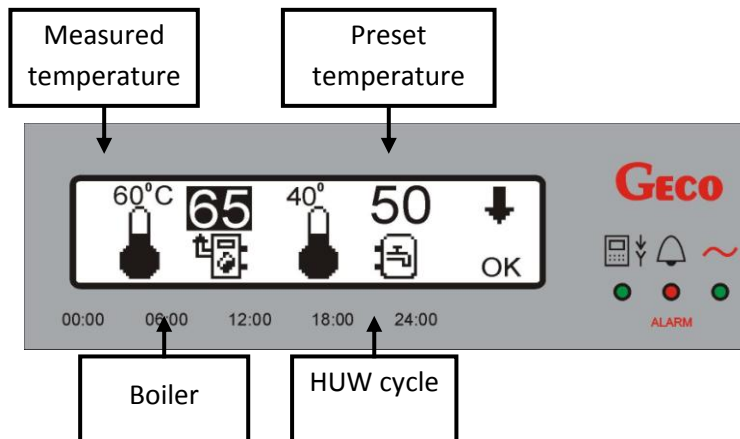
Pressing push-button [🌡T] two times to move to the next screen of temperature settings:

CH1 cycle · CH2 cycle
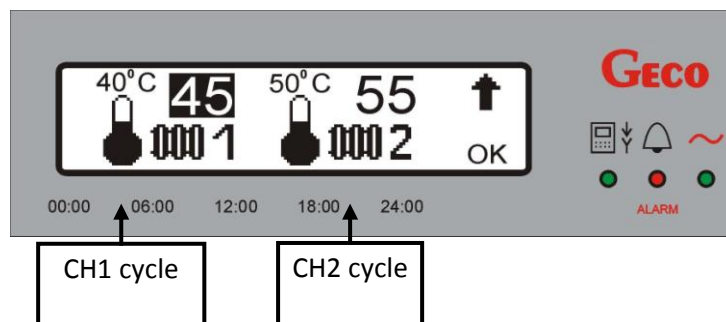
Here, all temperature values for heating system selected by user need to be set:

- temperature at the boiler,
- water temperature in HUW boiler,
- temperature of water supplied to CH1 heating cycle,
- temperature of water supplied to CH2 heating cycle.

Set the required temperature value according to the following diagram:
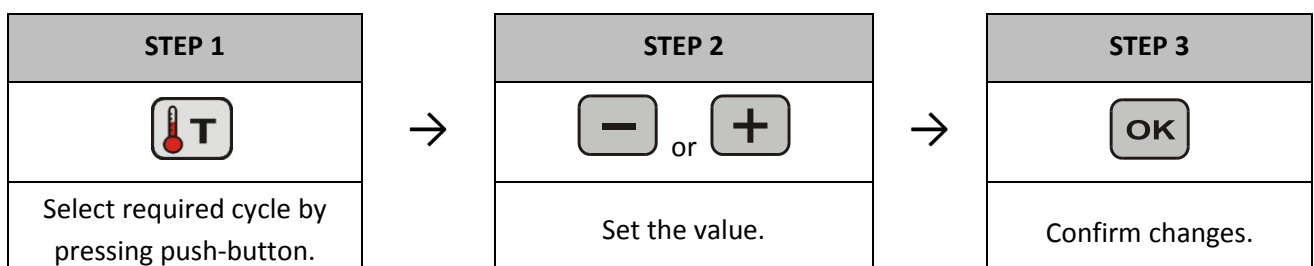
STEP 1		STEP 2		STEP 3
[🌡T]	→	[−] or [+]	→	[OK]
Select required cycle by pressing push-button.		Set the value.		Confirm changes.

Exit this screen by pressing a push-button [Esc]. Do not press any buttons for 60s to return to the main screen.

7.   ADJUSTMENT

7.1. Time zones

7.1.1. 24 hours zones

The room control panel GA01HA-01 enables setting daily work zone. With this feature you can maintain a lower temperature at night or at a time when no one is at home. At the same time, higher temperature can be set in hours spent in the household. Entry into control of this function is from the **MENU** level by: *„Adjustment" => „Time zones" => „24 hours zones"*.

1. Press push-button **Menu**. The following screen will appear:
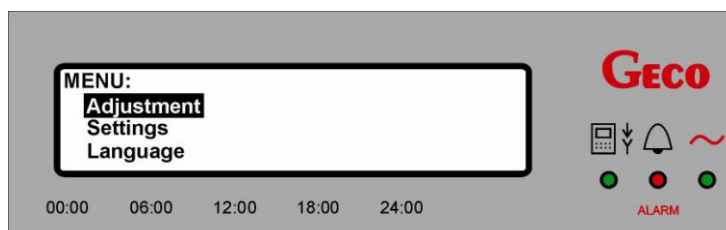
2. Use push-buttons ⬆ and ⬇ to move to "**Adjustment**" item. Press push-button **OK**. The following screen will appear:
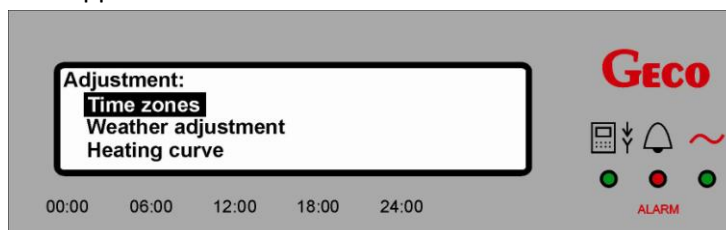
3. Use push-buttons ⬆ and ⬇ to select "**Time zones**". Confirm your select by pressing **OK**. The following screen will appear:
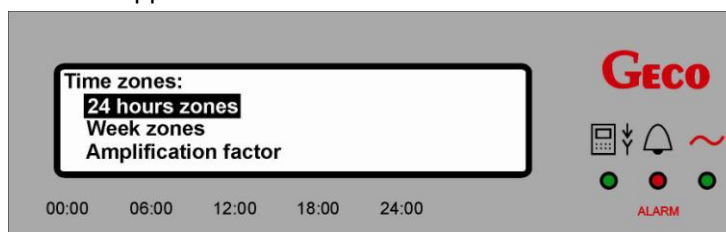
4. Use push-buttons ⬆ and ⬇ to move to "**24 hours zones**" item. Press push-button **OK**. The following screen will appear:

Program number and its name.

Clock Time indicated by the cursor.

PROGRAM 1
Economic
OK
00:00

00:00   06:00   12:00   18:00   24:00

Cursor
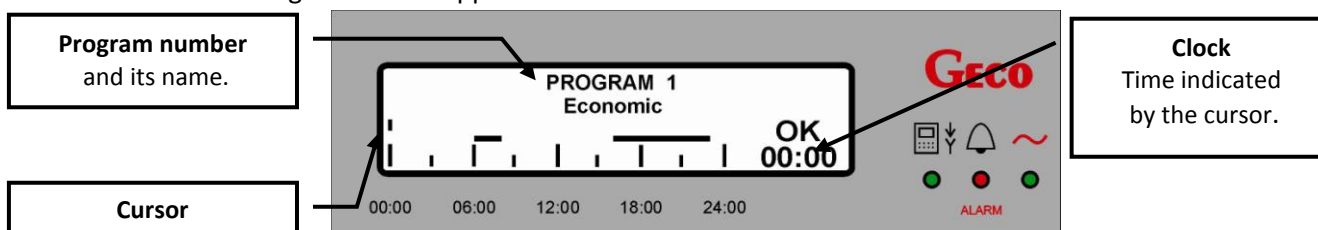
Access to adjustment by daily zones is also possible using the quick access button from the main screen by
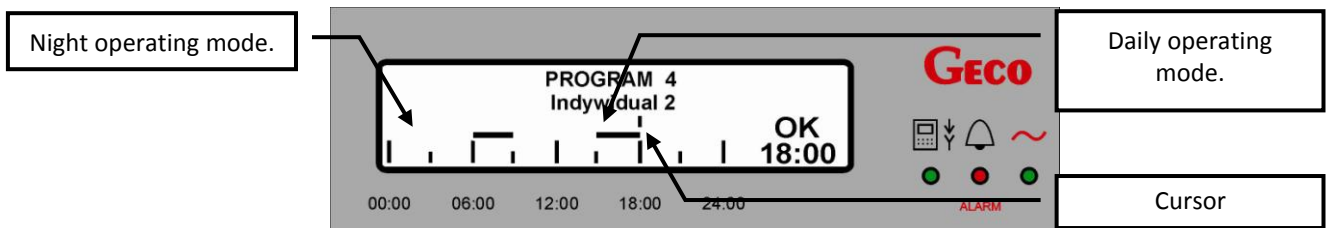
[clock icon]. To make changes follow:

STEP 1		STEP 2		STEP 3		STEP 4
[−] or [+]	→	[→] or [←]	→	[↑] or [↓]	→	[OK]
Choose program to edit.		Select a time for a change to be made.		Set daily or night operating mode for the selected time.		Confirm changes.
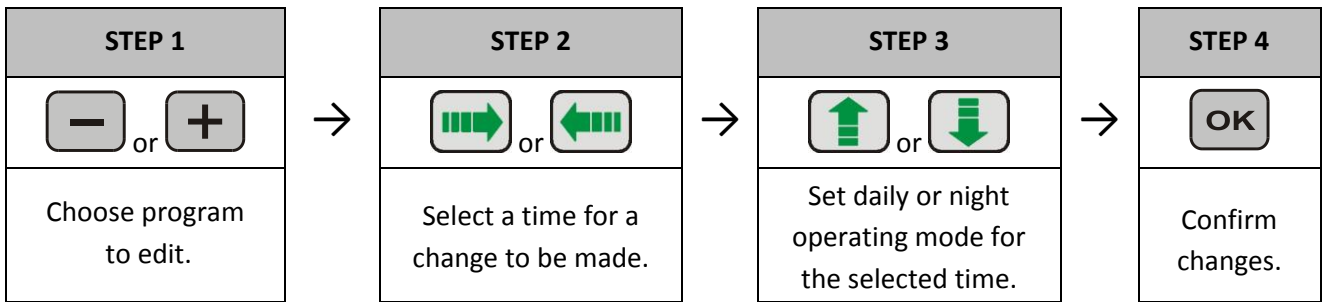
Push-button [↑] is used to set the daily operating mode, while [↓] night operating mode. Selecting the daily operating mode is indicated by the "horizontal line" above the particular time. Time interval (time unit) at which you can change the setting, is 15 minutes.

Confirm changes by pressing a push-button [OK]. In order to return to the previous screen without saving the changes, press [Esc]. Not pressing any buttons for 60s causes returning to the main screen. Below are shown two screens of the heating programs for individual settings. On the first screen, cursor is positioned on the hour 00:00. For the whole day is set daily operating mode (comfortable).

PROGRAM 3
Indywidual 1
OK
00:00

00:00   06:00   12:00   18:00   24:00
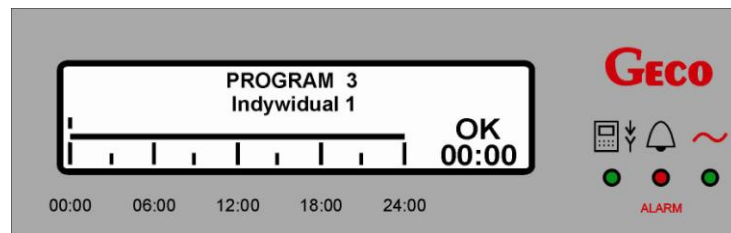
In the second screen, the cursor indicates the 18:00. Daily operating mode is being selected for 06:00 – 09:00 and 15:00 – 18:00. In the remaining hours, the driver will work in the night operating mode (economic) with set temperature ($\Rightarrow$ p.7.1.2 page 15).

Night operating mode.

Daily operating mode.

PROGRAM 4
Indywidual 2
OK
18:00

00:00   06:00   12:00   18:00   24:00

Cursor

It is possible to select one of six heating programs. Programs 1 and 2 are the standard programs, developed by GECO and cannot be edited. The other four, i.e., 3,4,5,6 are editable programs, that can be adjusted to users individual needs.

**Table 2. Table showing possible to select heating programs.**

Program No	Name	Function	Operating time
1	Economic	Heating	06:00-08:00 16:00-23:00
2	Standard	Heating	06:00-23:00
3	Individual 1	Heating	00:00-24:00
4	Individual 2	Heating	00:00-24:00
5	Individual 3	Heating	00:00-24:00
6	Individual 4	Heating	00:00-24:00

7.1.2. Week zones

As in the case of daily zones, access to the week zones is from the **MENU** level: *„Control" =>* *„Time zones" => „Week zones"*. Access to adjustment by week zones is also possible using the quick access button from the main screen by ⬚. The room control panel has only one week zone , which is available to the individual user settings. After turning on a week zone control, the cursor (the lights) is indicating the first editable position, which is the temperature on a day operating mode.
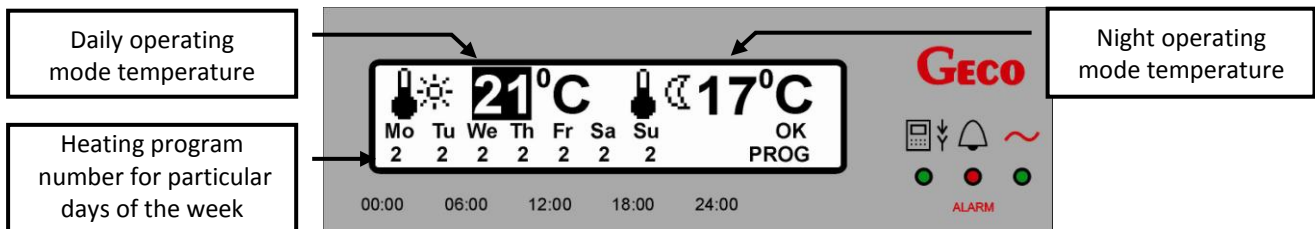
To change the temperature value for any mode, or to select a different heating program for the designated day of the week:

STEP 1		STEP 2		STEP 3
⬅ or ➡	→	− or +	→	OK
Choose field to edit.		Set the value.		Confirm the changes.
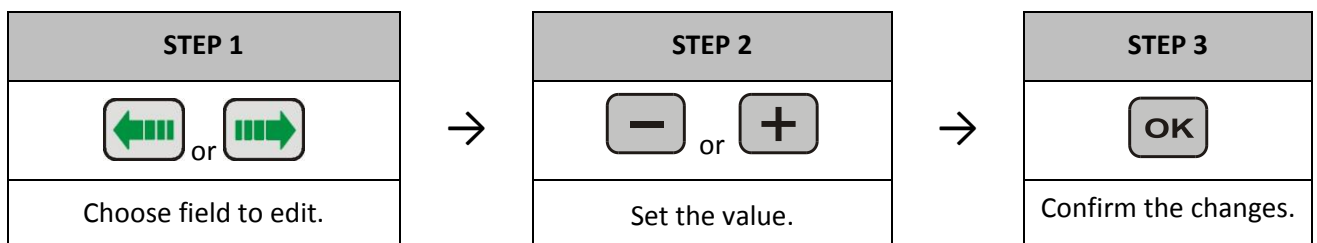
Changes in temperature are with 1^{0}C step, and temperature set as ![icon] (daily operating mode) and ![icon] (night operating mode) are valid for the whole week. After setting a new value on the right bottom side of screen appears the word "**OK**". Save the changes by pressing $\boxed{\text{OK}}$. In order to return to the previous screen without saving the changes, press $\boxed{\text{Esc}}$. Not pressing any buttons for 60s causes returning to the main screen. Actually set temperature for the room, resulting from a daily zone, is shown on the room control panel main screen (=> P. 5.1 page 8).

The room control panel provides a choice of different program for each day of the week from 1 to 6, among which are the standard and those set by the user as. Factory setting of the weekly zones is program 2 for all days of the week. When the indoor temperature set on the panel will be achieved, then on the room control panel screen will appear icon ![icon], signalizing the blockage of the CH pump. Depending on the controller settings, the pump CH will be stopped or will work periodically.

7.1.3. Amplification factor

This parameter allows to strengthen effect of room control resulting from Time zones to boiler temperature and C.H. temperature. It can be helpful in objects with low thermal insulation, in which heat loses are large, and the process of cooling the building is dynamic, occurring in short intervals. This process leads to continuous of boiler temperature, what affects to boiler work and stabilizing fuel combustion.

Parameter range.

Actually set value.
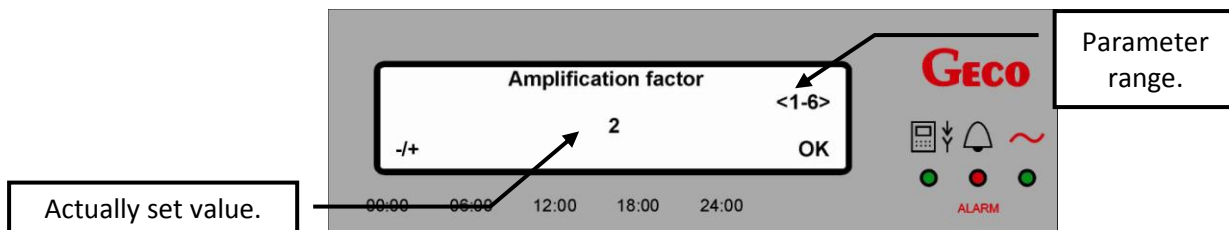
7.2. Weather control

The room control panel GA01HA-01 enables setting weather control. This type of control requires the connection of an external outdoor temperature sensor to the controller, and without its connection is invisible in menu *„MENU"*. When a weather control is enabled, the boiler controller is taking the outdoor temperature account. This allows for greater precision and stability in maintaining a set temperature, and thus comfort. Entry into control of this function is from the **MENU** level by: *„Adjustment" => „ Weather control"*.
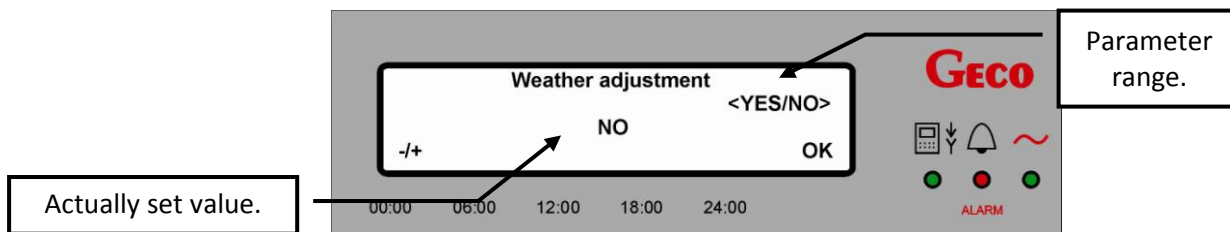
On the screen above, the weather control has not been chosen. To enable it, use the push-buttons ➕ and ➖ and set the value of "**Yes**". After setting a new value on the right bottom side of screen appears the word "**OK**". Save the changes by pressing **OK**. In order to return to the previous screen without saving the changes, press **Esc**. Not pressing any buttons for 60s causes returning to the main screen. Factory setting for weather control is "**NO**".

7.3. Heating curve

The room control panel GA01HA-01 enables setting heating curve. This type of control requires the connection of an external outdoor temperature sensor to the controller, and without its connection is invisible in menu *„MENU"*. Heating curve reflects the properties of thermal insulation of the building.
Entry into control of this function is from the **MENU** level by: *„Adjustment" => „ Heating curve"*.
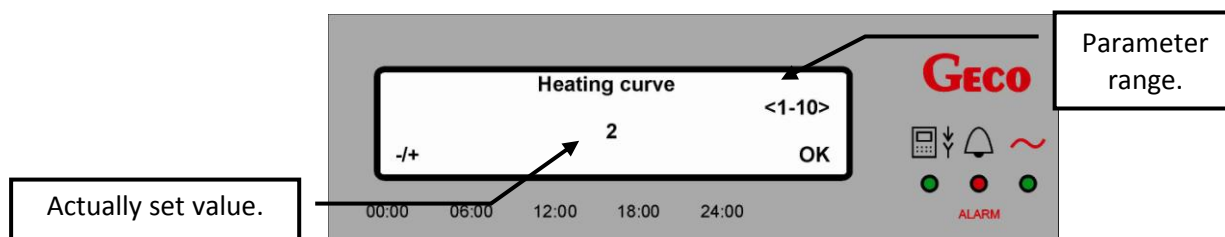
There are 10 lines prepared in GECO company to choose. They are arranged from those describing very poorly insulated buildings where are large heat loss, to these very well isolated. Poorly insulated buildings are described with curve No. 1, then vary proportionately until curve 10, describing very well insulated buildings. It is up to user to define the ranks his building isolation, in case of doubt, it is suggested contact with the person possession of appropriate knowledge. Selected heating curve applies to the circulation of CH with three-way valve. Factory setting is line number „**6**".

Table 3. Dependence of outside temperature and C.H. temperature on heating curves.

Heating Courve No / Outside temp. [^{0}C]	Central Heating temperature [^{0}C]									
	1	2	3	4	5	6	7	8	9	10
15	54	53	51	48	47	45	43	44	42	41
10	63	60	58	54	52	50	48	47	46	44
5	72	68	64	60	58	55	53	51	49	46
0	81	75	71	66	63	60	57	55	52	49
-5	90	83	77	72	69	65	62	59	55	52
-10		90	84	78	74	70	66	63	59	55
-15			90	84	80	75	71	66	62	57
-20				90	85	80	75	70	65	60
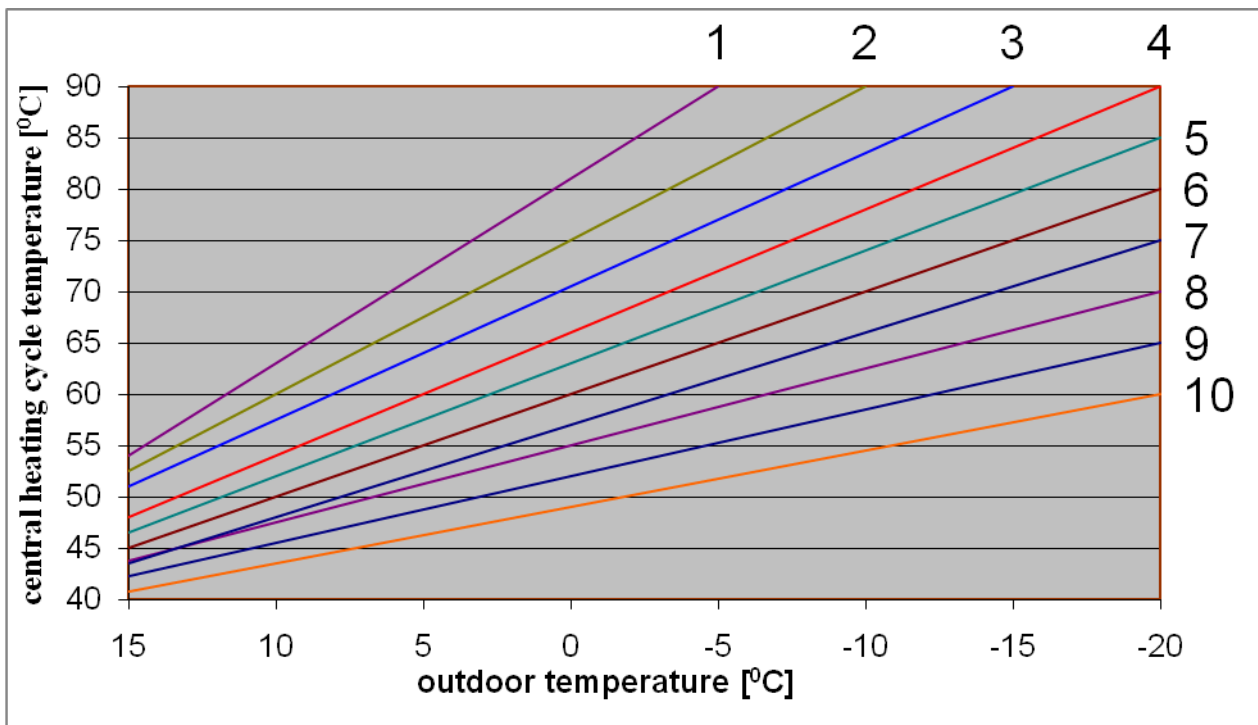
Fig. 3. Heating curve that can be applied in room control panel GA01HA-01.

8.   SETTINGS

8.1.   Time and date

Considering the functions that room control panel is realizing. (i.e. regulation of time zones), the current date and time must be correctly set.

In purpose of setting the current time and date, follow:

1.   Press push-button [Menu]. The following screen will appear:
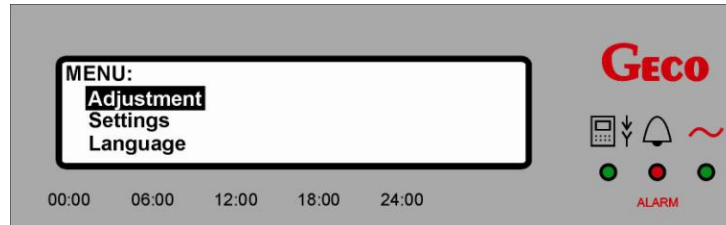
2.   Use push-buttons [↑] and [↓] to move to "*Settings*" item. Press push-button [OK]. The following screen will appear:
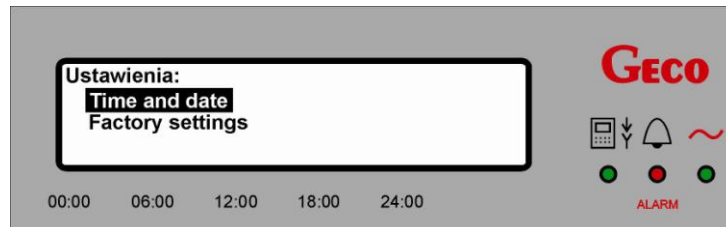
3.   Use push-buttons [↑] and [↓] to move to "*Time and date*" item. Press push-button [OK]. The following screen will appear:
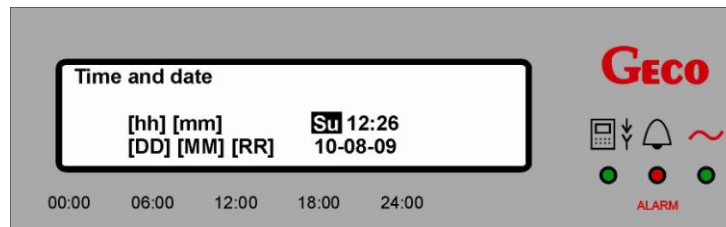
4.   Setting the time and date is started from the first editable field, a day of the week.

STEP 1		STEP 2		STEP 3
[←] or [→]	→	[–] or [+]	→	[OK]
Choose field to edit.		Set the value.		Confirm the changes.
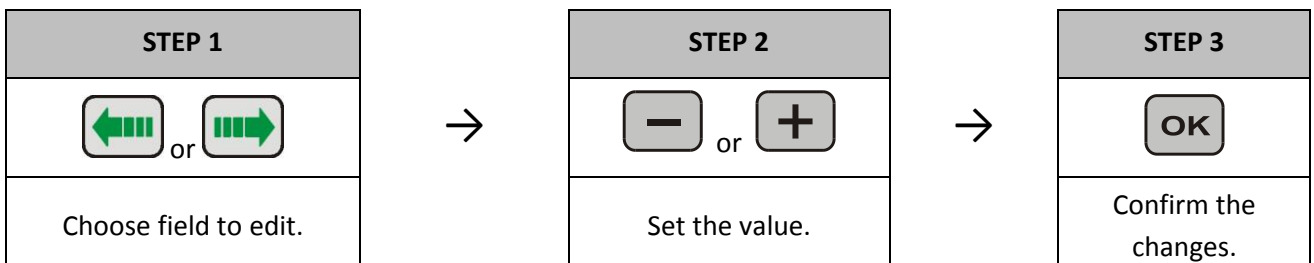
After the value was changed appears in the bottom right side of the word „**OK**". Save the changes by pressing [OK]. In order to return to the previous screen without saving the changes, press [Esc].

Not pressing any buttons for 60s causes returning to the main screen. Actually set time and date is shown on the room control panel main screen in „**Time and date**" field. (=> P. 5.1 page 8).
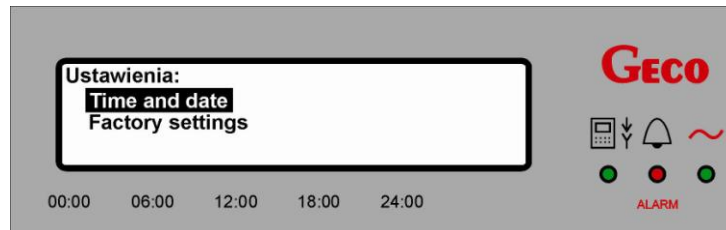
8.2. Restoring factory settings

This function allows to restore the controller factory settings any time in case of entering any individual changes in control parameters, and their reversal will prove to be too difficult or simply impossible.

Proceed as follows to restore factory settings:

1. Press push-button Menu. The following screen will appear:
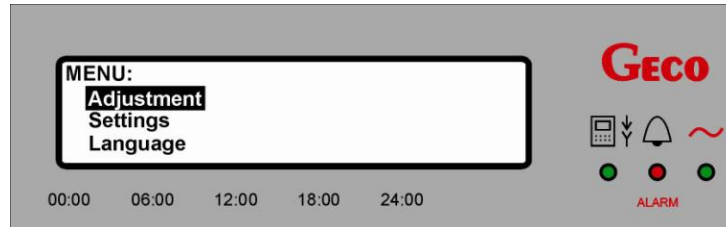
2. Use key ⬆ or ⬇ to move to "**Settings**" item. Confirm your selection with push-button

   OK. The following screen will appear:

3. Use push-buttons ⬆ and ⬇ to select "***Factory settings***".

4. Confirm your selection with push-button OK. Screen informing about restoring of factory settings will appear:

At the same time, the controller to which GA01HA is connected, will be RESET to factory settings and it will return to the same state it was before activation of functions restoring factory parameters.

RESTORING OF FACTORY SETTINGS HAS NO EFFECT ON SELECTED

☞   *LANGUAGE VERSION*

(THE CONTROLLER RESUMES OPERATION WITH FACTORY SETTINGS IN THE SAME LANGUAGE VERSION THAT WAS USED BEFORE ACTIVATION OF THIS FUNCTION).
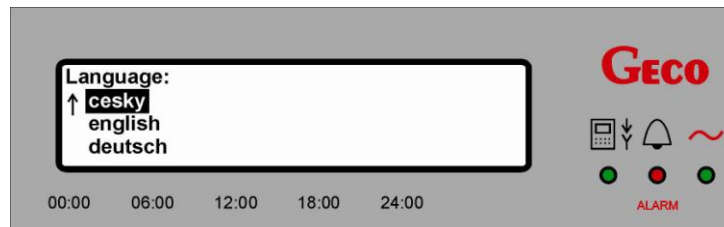
9.   LANGUAGE VERSIONS

The controller allows to select one of four software language versions: Polish, Czech, English and German. Each of the names of the version is presented in the corresponding language (polski in Polish, deutsche in German etc).

Proceed as follows to change the controller language version:

1.   Press pushbutton **Menu**. The following screen will appear:
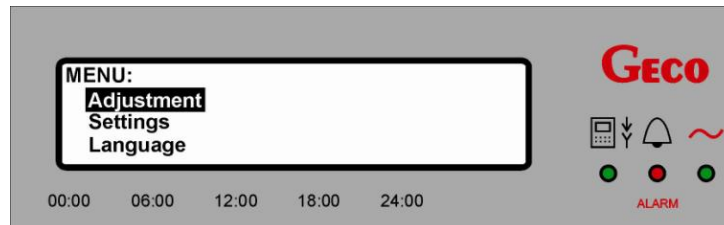
2.   Use pushbuttons and to move to "**Jezyk**" ["Language"] item. Press push-button **OK**. The following screen will appear:

3.   Use pushbuttons and to select language version.

4.   Press pushbutton **OK**. The controller will automatically return to the main screen.

FACTORY SETTING PROVIDES THE CONTROLLER

WITH POLISH LANGUAGE VERSION

10. ALARM STATES

In the case of any alarms on the controller on the boiler, the information of this will be displayed on the room control panel. The room control panel distinguishes 12 alarm states. In each of them acoustic signal is activated in the keyboard and alarm diode glows red.
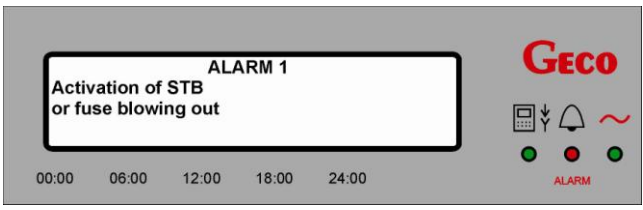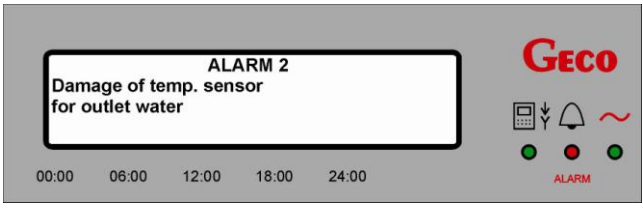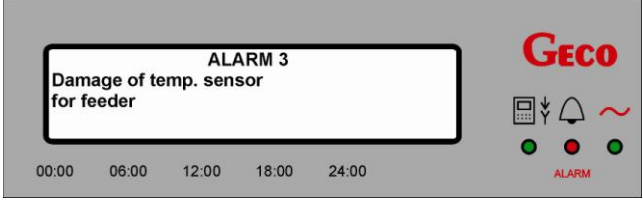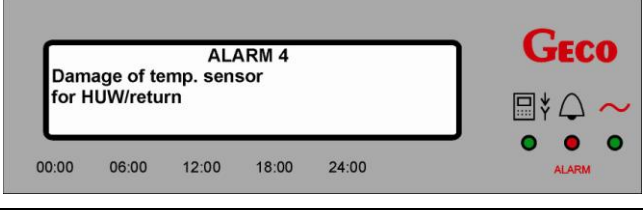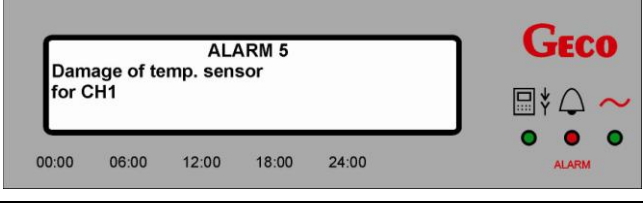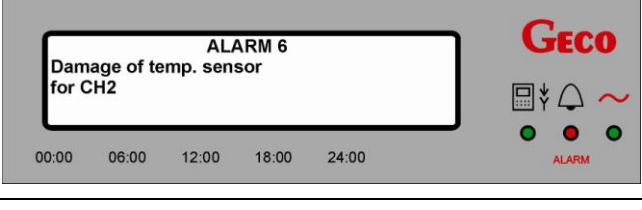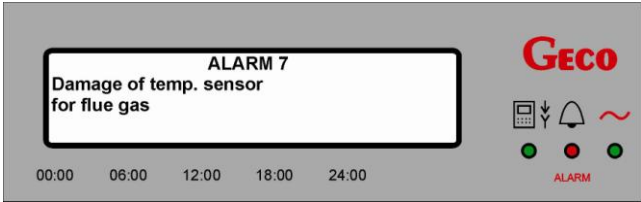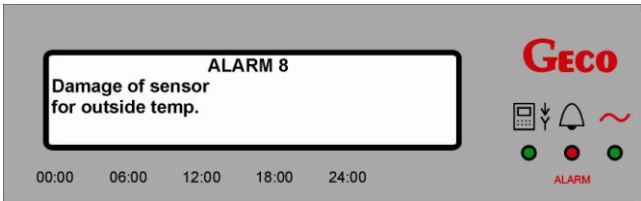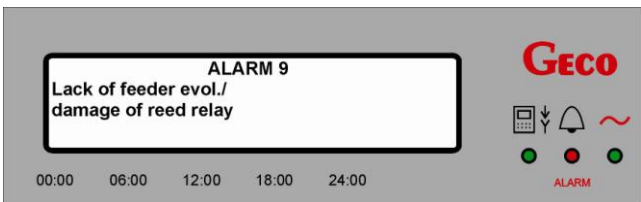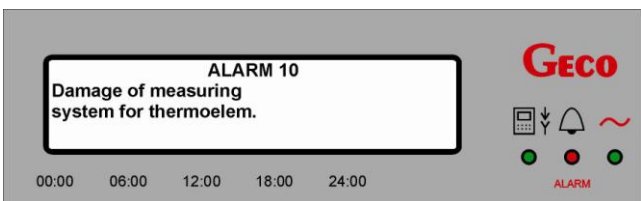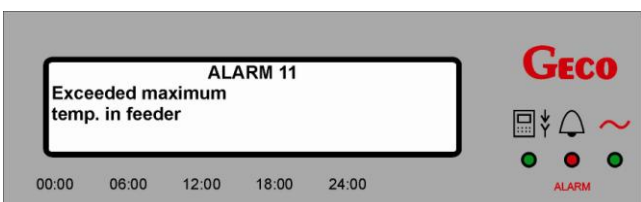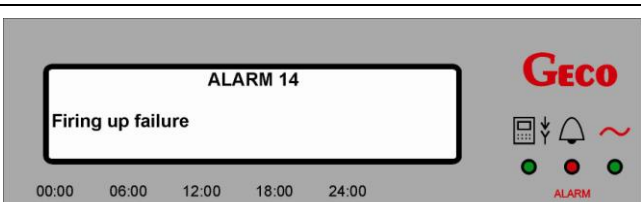
The only possibility of exiting the alarm state is to press [⏻]. **ALARM 12** is the exception here – it clears automatically without user's intervention. In case if any alarm occurs, the controller will switch to the alarm screen and remain in it until user reacts (exception: **ALARM 12** – it clears automatically without user's intervention).

Table 4. Table showing alarm states distinguished by a GA01HA-01 panel.

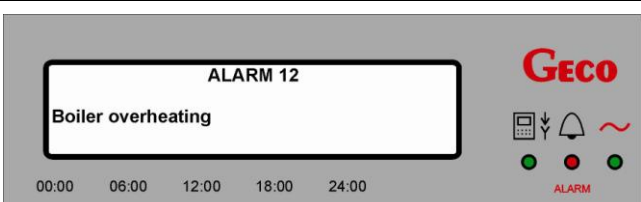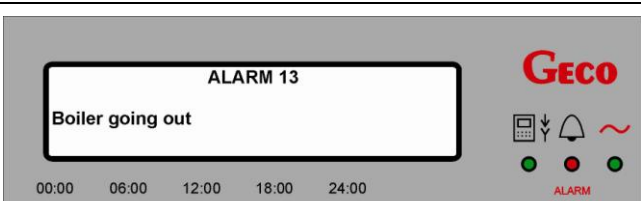| NO.	DESCRIPTION	SCREEN
ALARM 1	Activation of STB or fuse blowing out	
ALARM 2	Damage of temperature sensor for outlet water from the boiler	
ALARM 3	Damage of feeder temperature sensor	
ALARM 4	Damage of temperature sensor for HUW / return	
ALARM 5	Damage of CH1 temperature sensor	
ALARM 6	Damage of CH2 temperature sensor	

ALARM 7	Damage of flue gas temperature sensor	
ALARM 8	Damage of outside temperature sensor	
ALARM 9	Damage of flue gas temperature sensor	
ALARM 10	Damage of outside temperature sensor	
ALARM 11	Exceeded maximum temperature in feeder	
ALARM 12	Boiler overheating	
ALARM 13	Boiler going out	
ALARM 14	Firing up failure	

11. INFORMATION ON LABELLING AND COLLECTION OF WORN OUT ELECTRICAL AND ELECTRONIC EQUIPMENT
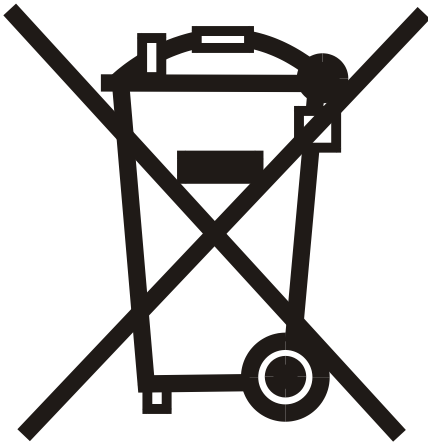
CAUTION!

This symbol placed on the product or its packaging indicates the need for selective collection of worn out electrical and electronic equipment. It means that this product should not be disposed of with other household wastes. Proper disposal of aged and worn out electrical and electronic equipment will help to avoid potentially adverse effects for environment and human health.

It is the user's responsibility to collect worn out equipment separately, and to return it to an authorised disposal company.

12. NOTES

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