



## USER'S MANUAL M-7

EN



[WWW.TECH-CONTROLLERS.COM](http://WWW.TECH-CONTROLLERS.COM)

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### I. Safety

Before using the device for the first time the user should read the following regulations carefully. Not obeying the rules included in this manual may lead to personal injuries or controller damage. The user's manual should be stored in a safe place for further reference. In order to avoid accidents and errors it should be ensured that every person using the device has familiarized themselves with the principle of operation as well as security functions of the controller. If the device is to be sold or put in a different place, make sure that the user's manual is there with the device so that any potential user has access to essential information about the device.

The manufacturer does not accept responsibility for any injuries or damage resulting from negligence; therefore, users are obliged to take the necessary safety measures listed in this manual to protect their lives and property.



#### **WARNING**

- High voltage! Make sure the regulator is disconnected from the mains before performing any activities involving the power supply (plugging cables, installing the device etc.)
- The device should be installed by a qualified electrician.
- Before starting the controller, the user should measure earthing resistance of the electric motors as well as the insulation resistance of the cables.
- The regulator should not be operated by children.



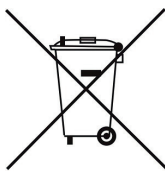
#### **WARNING**

- The device may be damaged if struck by a lightning. Make sure the plug is disconnected from the power supply during storm.
- Any use other than specified by the manufacturer is forbidden.
- Before and during the heating season, the controller should be checked for condition of its cables. The user should also check if the controller is properly mounted and clean it if dusty or dirty.

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Changes in the merchandise described in the manual may have been introduced subsequent to its completion on April 29th 2016. The manufacturer retains the right to introduce changes to the structure. The illustrations may include additional equipment. Print technology may result in differences in colours shown.

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We are committed to protecting the environment. Manufacturing electronic devices imposes an obligation of providing for environmentally safe disposal of used electronic components and devices. Hence, we have been entered into a register kept by the Inspection For Environmental Protection. The crossed-out bin symbol on a product means that the product may not be disposed of to household waste containers. Recycling of wastes helps to protect the environment. The user is obliged to transfer their used equipment to a collection point where all electric and electronic components will be recycled.

## **II. Description**

M-7 is intended for cooperation with L-7 external controller. It enables the user to control the devices of the underfloor heating system.

M-7 offers the possibility of changing the pre-set temperature in each zone, setting up a weekly schedule or deactivating the zone altogether.

Controller functions:

- Communication with L-7 (via RS cable)
- Displaying settings: date and time
- Screen adjusting its brightness depending on the time of the day
- Parental lock
- Alarm clock
- Screensaver – possibility of uploading photos, slide show
- Software update via USB
- Managing parameters of other zones– pre-set temperature, schedule, zone name etc.
- Possibility of introducing changes in global schedules

Controller equipment:

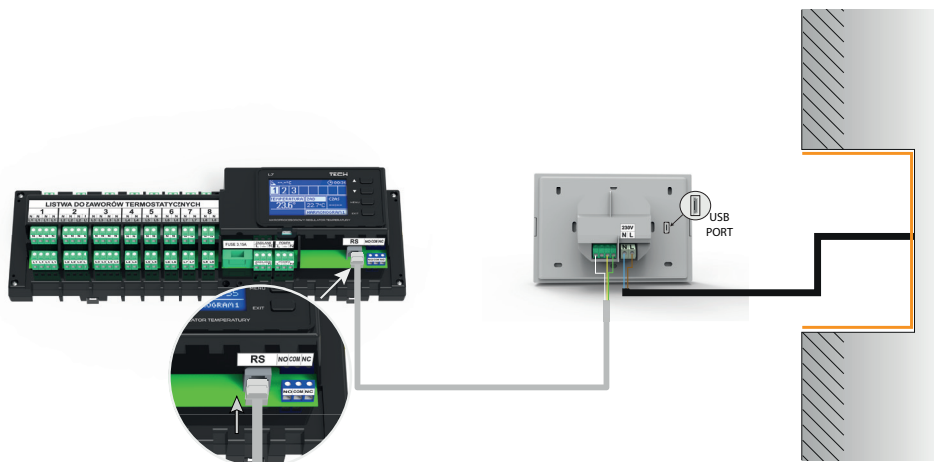
- Front panel made of 2mm glass
- Wireless communication
- Large, easy-to-read colour touch screen
- Built-in temperature sensor
- Flush-mountable

### III. Installation

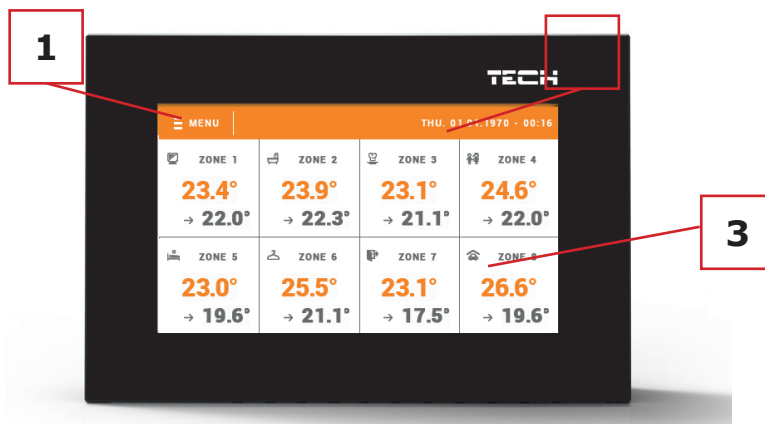
The controller should be installed by a qualified person.

**⚠ WARNING**  
Risk of fatal electric shock from touching live connections. Before working on the controller switch off the power supply and prevent it from being accidentally switched on.

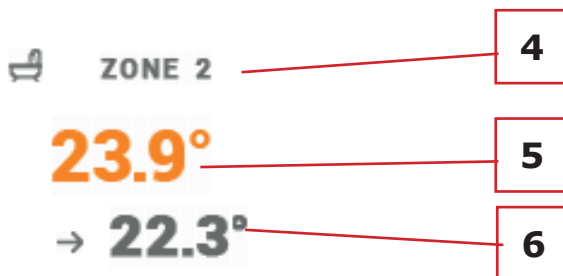
**⚠ WARNING**  
Incorrect connection of wires may damage the regulator!



## IV. How to use the controller



1. Enter the controller menu
2. Current time and date
3. Status of particular zones:



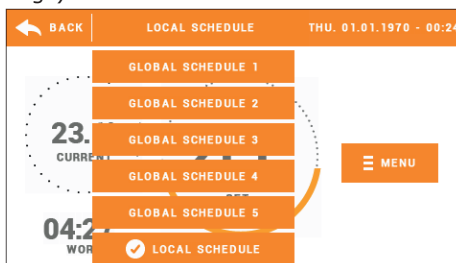
4. Zone number
5. Current zone temperature
6. Pre-set zone temperature

# V. Controller operation modes

## V.a) Schedule

Once a particular schedule has been activated, the pre-set temperature depends on pre-defined settings. It is possible to assign separate pre-set temperature values to the maximum of 3 time periods (see: Schedule settings).

In order to change the schedule, tap on the area of the screen displaying information about current operation mode (area number 2 How to manage zones – see below). Choose the schedule from the list and tap on it.



Two types of zone schedules are available to choose from:

- global schedule – its settings are defined via the internet website and apply in all zones in which the global schedule has been selected
- local schedule – individual settings for a given zone

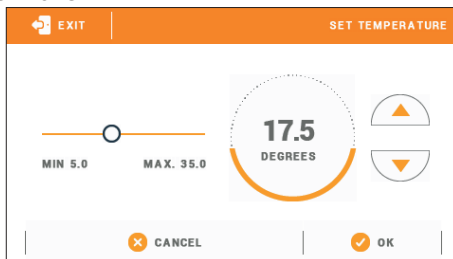
In order to configure advanced settings, go to Schedule settings in the submenu of a given zone.



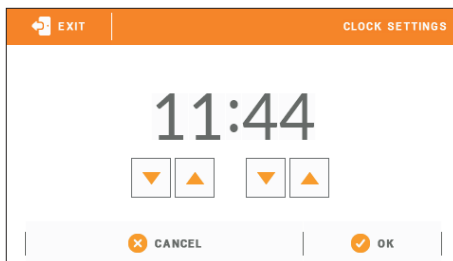
## V.b) Manual mode

Tap on the pre-set temperature in order to activate manual mode – define the pre-set temperature and how long it will apply in a given zone.

Use ▲ and ▼ to adjust the pre-set temperature, or drag the temperature slider (displayed on the left-hand side of the screen). Press OK to confirm



Next, define the pre-set temperature application time (when this period of time is over, the controller returns to the previous operation mode).



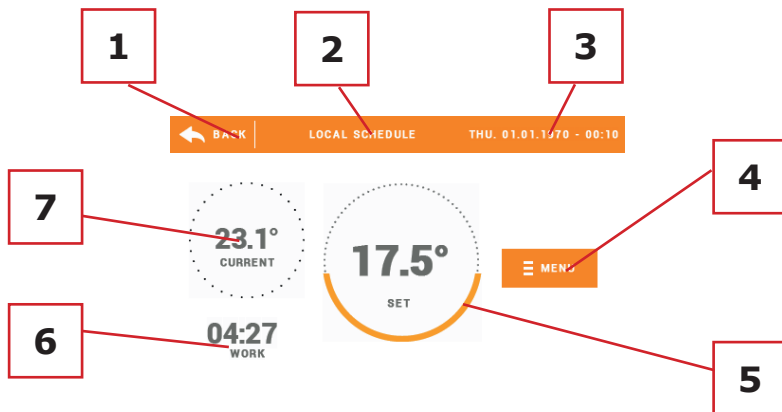
By tapping on the clock icon the user may set the pre-set temperature to apply for an indefinite period of time. The part of the zone screen labelled no. 6 (see: How to manage zones) displays CON.



### VI. How to manage zones

M-7 is a master room regulator – it enables the user to edit most parameters of other zones.

In order to edit a given zone parameters, tap on the area of the screen with zone status information. The display shows the basic zone editing screen:



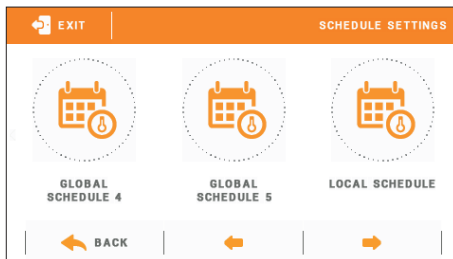
1. Return to the main menu
2. Operation mode of the controller – pre-set temperature according to the schedule or manual settings (manual mode). Tap here to open up schedule selection screen.
3. Current time and date
4. Enter the zone menu – tap on this icon to see further menu options: Zone name, Schedule settings and Operation.
5. Pre-set zone temperature – tap here to adjust the value.
6. Time left before the next pre-set temperature change
7. Current zone temperature

## VI.a) Schedule settings

M-7 room regulator offers two types of schedules – local and global.

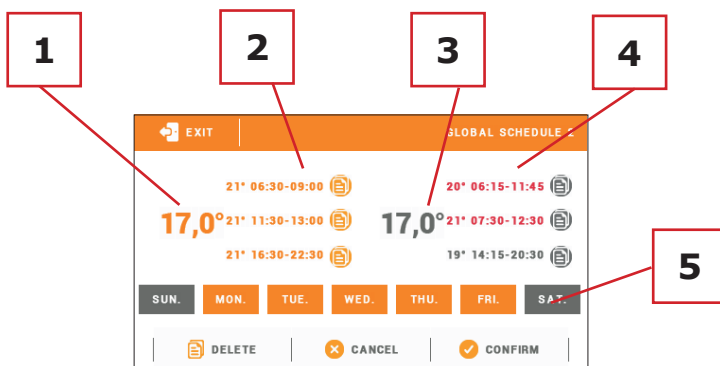
Global schedules are available in all zones – in each zone only one such schedule may be activated. The global schedule settings apply automatically in all remaining zones where a given global schedule is active.

Local schedule is assigned only to the controlled zone. Any changes introduced in the local schedule apply only in this particular zone.



### How to edit the schedule:

After entering the schedule editing screen, the schedule may be adjusted to the user's needs. The settings may be configured for two separate groups of days – the first group marked with orange colour, the second one with grey colour. It is possible to assign up to 3 time periods with separate temperature values to each group. Outside these periods of time, a general pre-set temperature will apply (its value may also be edited by the user..

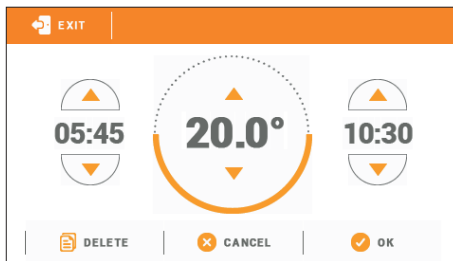


1. General pre-set temperature for the first group of days (orange colour – in the example above the colour is used to mark working days Monday-Friday). The temperature applies outside the time periods defined by the user.
2. Time periods for the first group of days – the pre-set temperature and the time limits. Tapping on a given period opens up an editing screen.
3. General pre-set temperature for the second group of days (grey colour – in the example above the colour is used to mark Saturday and Sunday).
4. Time periods for the second group of days. In the example above only one period has been created. In order to add new periods, tap on „+“.
5. Days of the week – orange days are assigned to the first group whereas grey days are assigned to the second one. In order to change the group, tap on a selected day.

## User's manual

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Time period editing screen enables the user to adjust the pre-set temperature and the time limits of the period with the accuracy of 15 minutes.



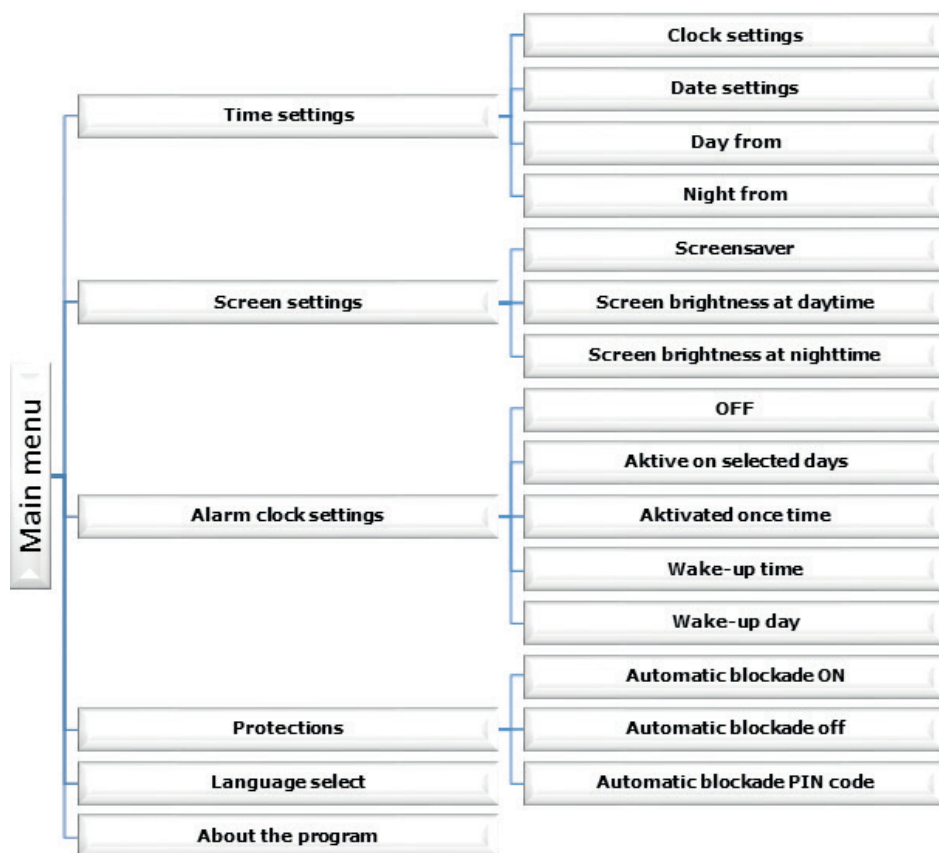
If the time periods overlap, they are marked with red colour. Such settings cannot be confirmed.

### VI.b) Operation

This function is used to deactivate a given zone by selecting OFF.

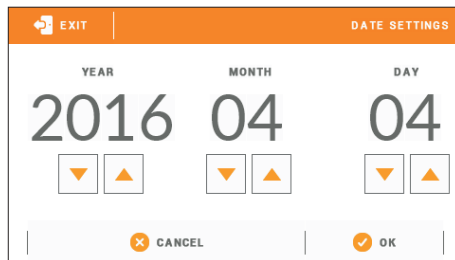
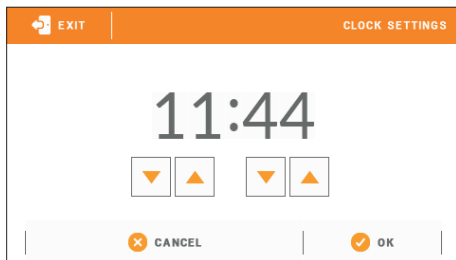
## VII. Controller menu

Tap on MENU icon in the main screen to enter the controller menu.



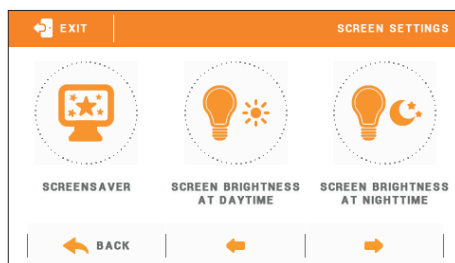
### VII.a) Time settings

Tapping on this icon opens up a screen enabling the user to set the time, date and define the time limits for daytime and nighttime (Day from... and Night from...).



### VII.b) Screen settings

Tap on this icon to adjust the screen settings to individual needs.



#### Screensaver

The user may activate a screensaver which will appear after a pre-defined time of inactivity. In order to return to the main screen view, tap on the screen. The following screensaver settings may be configured by the user:

- **Screensaver selection**  
After tapping on this icon, the user may deactivate the screensaver (No screensaver) or set the screensaver in the form of:
  - Slideshow – (this option may be activated if the photos have been uploaded first). The screen displays the photos at a user-defined frequency.
  - Clock – the screen displays the clock.
  - Blank – after the pre-defined time of inactivity the screen goes blank.
- **Uploading photos**  
Before importing the photos to the controller memory they must be processed using ImageClip (the software may be downloaded from [www.techsterowniki.pl](http://www.techsterowniki.pl)).

After the software has been installed and started, load the photos. Select the area of the photo which will be displayed on the screen. The photo may be rotated. After one photo has been edited, load the next one. When all the photos are ready, save them in the main folder of the memory stick. Next, insert the memory stick into the USB port and activate Picture import function in the controller menu.

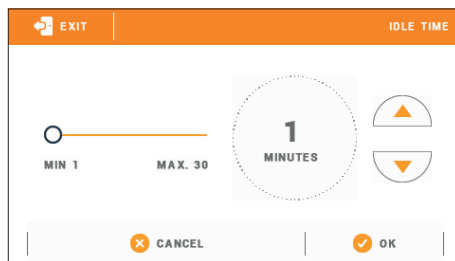
It is possible to upload up to 8 photos. When uploading new photos, the old ones are automatically removed from the controller memory.

- Idle time

This function is used to define the time after which the screensaver is activated.

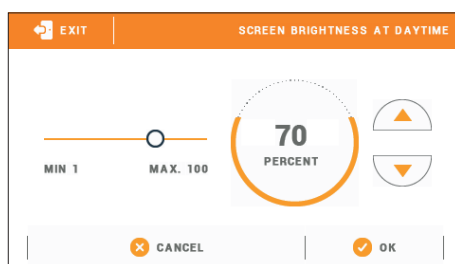
- Slide show frequency

This option is used to set the frequency at which the photos are displayed on the screen if the Slideshow is activated.



### **Daytime screen brightness / Nighttime screen brightness**

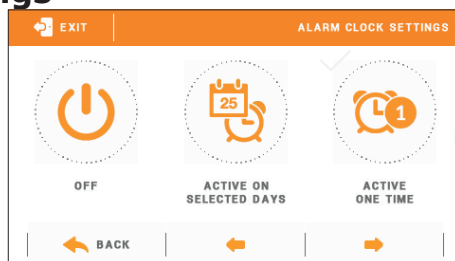
After tapping on screen brightness icon, the user may adjust the screen brightness (in percentages) both for the daytime and the nighttime.



## **VII.c) Alarm clock settings**

This submenu is used to activate and edit the alarm clock function.

The alarm clock may be activated once or on selected days of the week – select the days in Waking up day option.



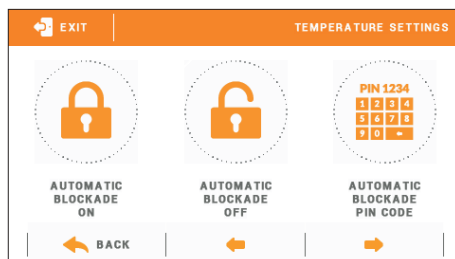
## **VII.d) Protections**

Tapping on this icon in the main menu opens up a screen enabling the user to configure the parental lock function. When this function is activated by selecting Auto-lock ON, the user may set the PIN code necessary to access to the controller menu.



### **NOTE**

0000 is the default PIN code.



### VII.e) Language

This function enables the user to select the language version of the controller menu.

### VII.f) About the software

When this option is selected, the screen displays the controller manufacturer's logo and the current software version.



## VIII. Protections

M-7 room temperature regulator signalizes all alarms which occur in L-7 external controller. In the event of alarm, the room regulator sends a sound signal and the display shows the same message as the external controller. If the internal sensor is damaged, the following alarm appears: 'Room temperature sensor damaged'.

## IX. Software update



### WARNING

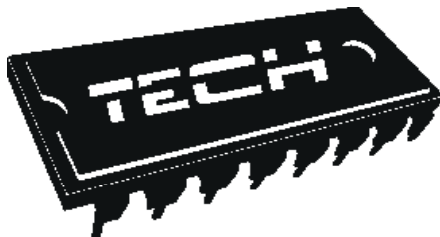
Software update shall be conducted only by a qualified fitter. After the software has been updated, it is not possible to restore previous settings.

In order to install new software, the controller must be unplugged from the power supply. Next, insert the memory stick with the new software into the USB port. Connect the controller to the power supply. A single sound signalizes that the software update process has been initiated.

## X. Technical data

Room temperature adjustment range	5°C ÷ 40°C
Power supply	230V
Max. power consumption	1,3W
Measurement error	+/-0,5°C
Operation temperature	5°C ÷ 50°C





### EU Declaration of conformity

Hereby, we declare under our sole responsibility that M-7 manufactured by TECH, headquartered in Wieprz Biała Droga 31, 34-122 Wieprz, is compliant with:

- Directive 2014/35/EU of the European Parliament and of the Council of February 26, 2014 on the harmonisation of the laws of Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits (EU Journal of Laws L 96, of 29.03.2014, p. 357),
- Directive 2014/30/EU of the European Parliament and of the Council of February 26, 2014 on the harmonisation of the laws of Member States relating to electromagnetic compatibility (EU Journal of Laws L 96 of 29.03.2014, p.79),
- Directive 2009/125/EC establishing a framework for the setting of ecodesign requirements for energy-related products,
- the regulation by the Ministry of Economy of May 8, 2013 concerning the essential requirements as regards the re-striction of the use of certain hazardous substances in electrical and electronic equipment, implementing provisions of RoHS directive 2011/65/EU.

For compliance assessment, harmonized standards were used:

**PN-EN 60730-2-9:2011, PN-EN 60730-1:2012**

  
**PAWEŁ JURA**

  
**JANUSZ MASTER**

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Wieprz, 23 V. 2016







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