

# TP-150 wireless indoor thermostat

The TP-150 is a wireless indoor thermostat. It serves for the measuring and regulation of temperature. The temperature is set by the knob. The thermostat regulates a pre-set temperature 24hrs per day.

The thermostat can be locked against unwanted manipulation. As well as the regulation of temperature it can also report reaching the high and low temperature limits.

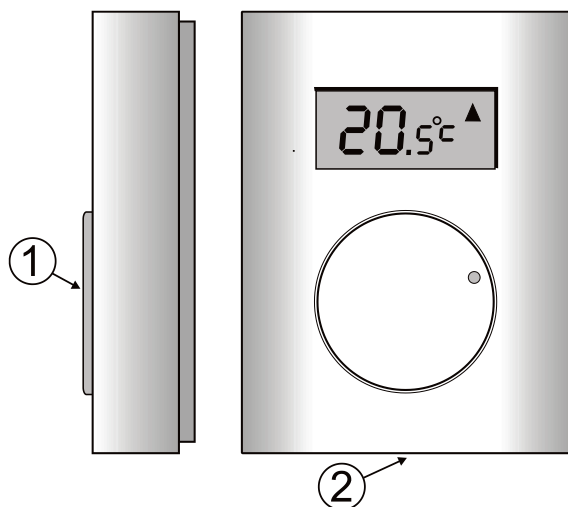


Figure 1: 1 - knob (encoder) combined with button 2 - tab

## Thermostat installation

The product can only be used in an indoor environment. Install the thermostat 1.5 m above the floor in a place where there is good natural air circulation. Don't install the thermostat where the measuring can be influenced by drafts, sunlight, heaters or any other effects. Avoid mounting the thermostat on metal objects or metal bases which block radio communication.

1. By pressing the tab (by screwdriver for instance) release the front part of the thermostat.
2. Install the rear part of the thermostat at the choose place (tab down).
3. Insert the batteries; the polarity is marked on the plastic.
4. Put back the front thermostat part and close it.

## Enrolling the thermostat

Install and connect the receiving unit to the heating appliance. If the receiver has been bought independently, you have to enroll the thermostat to it first. Open the enrollment mode on the receiver (see its manual) and insert the batteries into the thermostat or press and hold the knob for 5s. In both cases the thermostat will send an enrollment signal. The text **LRn** appears on the LCD display when the enrolling procedure (with AC-116 only) has been done successfully.

Symbols on the LCD:

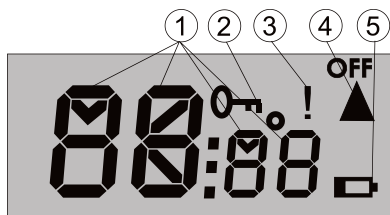


Figure 2: 1 – Symbols of temperature and texts; 2 – Locking the thermostat; 3 – Alarm temperature-limits / Loss of communication; 4 – Heating ON / OFF; 5 – Low battery

## Settings and programming

Do the complete settings using the knob – encoder. By pressing the knob 2 sec enter the programming mode.

General rules for programming:

1. Flashing of any icon on the LCD allows changing the option(s) or choosing a next item.
2. Perform choosing or changing by turning the knob (turning the knob is possible from left to right and vice versa).
3. Confirm the selection or change by briefly pressing the knob.
4. When the value of an item has been changed, then after this briefly press the knob and the changes are saved. Then the thermostat goes to the next item in the programming menu.
5. After the setting / change of the chosen items, select the parameter „OK“, in the menu. By short pressing the system returns back to the previous menu (up to the main menu).

6. If there is no manipulation of the knob for 30 sec, it returns you back to the previous menu automatically.

The basic menu has 4 groups of settings.

<b>LOc</b>	Locking the thermostat
<b>OFF</b>	Switching off the thermostat
<b>SEt3</b>	Service menu
<b>OK</b>	Saving the parameters and leaving the service menu

### 1. LOc – Locking the thermostat

To protect the thermostat against unwanted manipulation you can lock the thermostat. Enter the menu and press the knob on item **LOc**, the options **ON/OFF** appear. By turning the knob select the requested state and confirm by pressing. Choosing **ON** enables the function **Lock**, and **blocks** thermostat control. To unlock the thermostat choose the option **OFF**. Locking the thermostat is indicated on the LCD by the **0m** symbol.



### 2. OFF – Switching off the thermostat

The thermostat can be switched off by the option **OFF**. Enter the menu and press the knob on the item **OFF**, the options **ON/OFF** appear. By turning the knob select the requested state and confirm by pressing. Choosing **ON** enables the function **OFF**, and **switches off** the thermostat. This is indicated on the LCD by the text **OFF**. Although the thermostat has been switched off, it still measures and detects the antifreeze temperature (see SE t3, Stby). To unlock the thermostat enter the menu and choose the option **OFF**. When the knob is pressed the thermostat will be unlocked.



### 3. SEt3 – Service menu

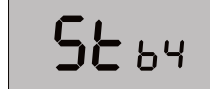
The service parameters can be pre-programmed here. In a normal mode it is not necessary to change those parameters. The Service menu includes 8 items. Open by scrolling the knob to the requested item and by pressing the knob enter the programming mode. Select the value again by scrolling the knob. Confirm it by pressing the knob and it returns you back to the service menu.



**HYst** is an item, where you can program the range of the switching thresholds around the requested temperature (hysteresis). The range can be set with a 0.1°C step from 0.1°C to 1°C. (Default setting  $\pm 0.2^\circ\text{C}$ )

**Example:** With a set accuracy of  $\pm 0.5^\circ\text{C}$  a temperature of  $24^\circ\text{C}$  will be kept this way, at  $23.5^\circ\text{C}$  it starts heating and at  $24.5^\circ\text{C}$  it stops heating. In real conditions regulation could have a much bigger temperature scatter because of the thermal inertia in the heated premises.

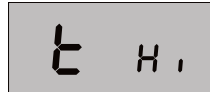
**Warning:** An over-narrow pre-programmed hysteresis range could perform on/off switching of the heating very often.



The item **Stby** sets the temperature which will be kept in the case of switching off the thermostat (item **OFF**). The **Stby** temperature is always at least 3°C higher than **ALLo**. The value of the **Stby** temperature does not have to be set higher than the **tLo** temperature.



The **tLo** item is the lower limit to which economical temperate can be set.



The **tHi** item is the upper limit to which the comfort temperature can be set.



**ALLo** is the lower critical temperature. When the temperature drops under the pre-set value, the thermostat sends an alarm report to the receiver and this state is indicated by a permanently lit (!) symbol. The **ALLo** temperature is always at least 3°C lower than **tLo**.



**ALHi** is the upper critical temperature. When the temperature increases above the pre-set value, the thermostat sends an alarm report to the receiver and this state is indicated by a permanently lit (!) symbol. The **ALHi** temperature is always at least 3°C higher than **tHi**.



For a reset to factory default settings the **RES** item is used. After you enter the menu and press the knob on the **RES** item **ON/OFF** appears. By scrolling the knob select **ON**, and press the knob. Then a **RESET** will be done. When the reset is finished, a  $20^\circ\text{C}$  temperature is pre-set.

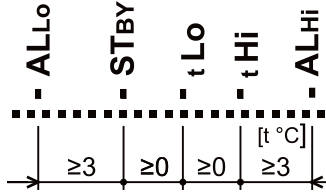


By pressing the knob when the thermostat shows you **OK** you leave the service menu and return to the basic thermostat menu.

Range of temperatures settings.

Settings item	Range	Factory settings	Description
<b>HYst</b>	0.1°C to 1°C	0.2°C	Hysteresis
<b>t Lo</b>	+ 6°C to + 40°C*	6°C	Lower limit of regulated temperature
<b>t Hi</b>	+ 6°C to + 40°C*	40°C	Upper limit of regulated temperature
<b>AL Lo</b>	- 9°C to + 20°C	3°C	Low temperature alarm report
<b>AL Hi</b>	+ 30°C to + 70°C	60°C	High temperature alarm report

\* The ranges of **t Lo** and **t Hi** can't overlap each other.



### Showing the pre-set temperature

The thermostat always shows the current room temperature in the normal mode. Briefly pressing the knob will show the temperature which has been set for this time. The pre-set temperature flashes 3s then it shows the current temperature again.

### Replacing the batteries

When the thermostat starts to indicate the Low Batt symbol (🔋) or stops working completely, replace the batteries for new ones. A Low battery report is sent to the receiver.

**Note:** We strongly recommend only using alkaline batteries, type AA 1.5V.

### Use with the AC-116 receiver

When the thermostat has been enrolled to a 2-way receiver (AC-116) it can indicate by a blinking exclamation symbol (!) on the LCD of the thermostat that communication has been lost.

You can block the channel to which the thermostat is enrolled with a different device (magnetic contacts in windows for instance). Blinking of the (▲) symbol on the thermostat LCD indicates that the thermostat is blocked.

Using the AC-116 receiver you can block the control of the thermostats at 3 levels.

- 1 – temperature adjustment (when the **LOc** menu is entered it can be unlocked)
- 2 – entering the menu (the temperature can be changed but access to the menu is blocked)
- 3 – Locked completely (control from the thermostat is completely blocked)

When control is blocked from the AC-116 receiving unit, it is indicated on the thermostat LCD display by the key symbol (0→).

A weekly schedule can be set for each channel and be saved wirelessly to the thermostat. This can be done by a AC-116 receiving unit equipped with an AC-100LCD touch screen module. The thermostat then starts working as a thermostat with a weekly schedule. This option is not programmable directly on the thermostat but just from the AC-116 receiving unit.

### Technical specifications

Power:	2x AA 1.5 V alkaline batteries
Lifetime of batteries:	typically 1 year
Regulation range:	+6°C to +40 °C
Temperature regulation sensitivity:	adjustable: ± 0.1- 1 °C
Alarm when temperature drops below ALLo:	-9 to +20°C
Alarm when temperature exceeds ALHi:	+30°C to +70°C
Communication band:	868.1 MHz, JA-100 protocol
RF range:	up to 100 m (open area)
Operational temperature:	-10°C to + 70°C (no condensation)
Dimensions:	66 x 90 x 22 mm
Complies with:	ETSI EN 300220, EN50130-4, EN55022, + EN 60950-1
Can be operated according to	ERC REC 70-03



JABLOTRON ALARMS a.s. hereby declares that the TP-150 module is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC and 2011/65/EU. The original of the conformity assessment can be found at [www.jablotron.com](http://www.jablotron.com) - Technical Support section



**Note:** Although this product does not contain any harmful materials we suggest you return the product to the dealer or directly to the producer after use. For more detailed information visit [www.jablotron.com](http://www.jablotron.com).