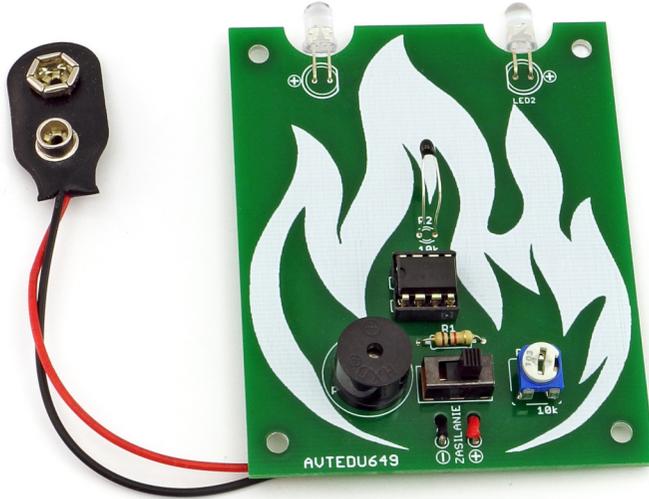




AVT EDU649



Everyone likes to feel pleasant warmth, but it is relative. Not everyone is able to say it's too hot - let alone do something about it. As well as allowing you to develop your soldering skills, our thermal alarm will make sure that you know when, the temperature exceeds an acceptable, preset value. When it is too high, i.e., rises above a preset threshold, the device will start making a loud noise and the red and blue LEDs will start flashing.

## Specifications

- operating range: approx.  $-30^{\circ}\text{C} \dots +150^{\circ}\text{C}$
- integrated buzzer
- two flashing LEDs (red and blue)
- supply voltage: 9 VDC [6F22] - batteries not included
- board size: 77×63 mm

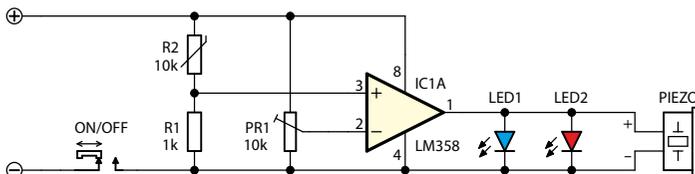


Figure 1. Schematic diagram

## Mounting and start-up

Figure 2 shows the arrangement of the components on the PCB. Solder the components sequentially onto the board, starting with the smallest ones. The R2 thermistor must be soldered above the board, while the LEDs must be soldered by profiling their leads as shown in Figure 3. Once the circuit has been mounted, check it carefully for correct installation.

Check that the components have not been soldered in the wrong direction or in the wrong places and that no soldering points have been short-circuited during soldering.

Heat sensitivity of the screamer can be adjusted with the PR1 potentiometer.

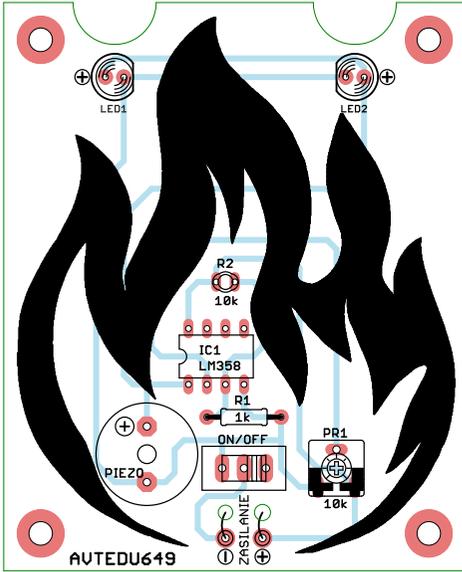
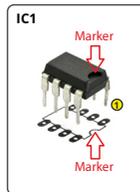


Figure 2. Arrangement of components on the PCB

## Recommended mounting order:

- R1:.....1 k $\Omega$  (brown-black-red-gold)
- IC1: .....LM358 + base !
- PR1: .....mounting potentiometer 10 k $\Omega$
- PIEZO:.....piezo sounder !
- ON/OFF: .....switch
- R2:.....10 k $\Omega$  thermistor (sensor mounted above the board)
- LED1, LED2: .....5 mm LEDs !
- battery connector red , black  $\ominus$



Components received in the kit, may differ in appearance from those shown in the photograph. Despite this, they have the same parameters, and their appearance will not affect their operation in the circuit.



Start mounting by soldering components on the board, in the order of their size, from smallest to largest. When mounting components marked with an exclamation mark, pay attention to their polarity. **To access high-resolution images, download the PDF.**



PDF  
DOWNLOAD

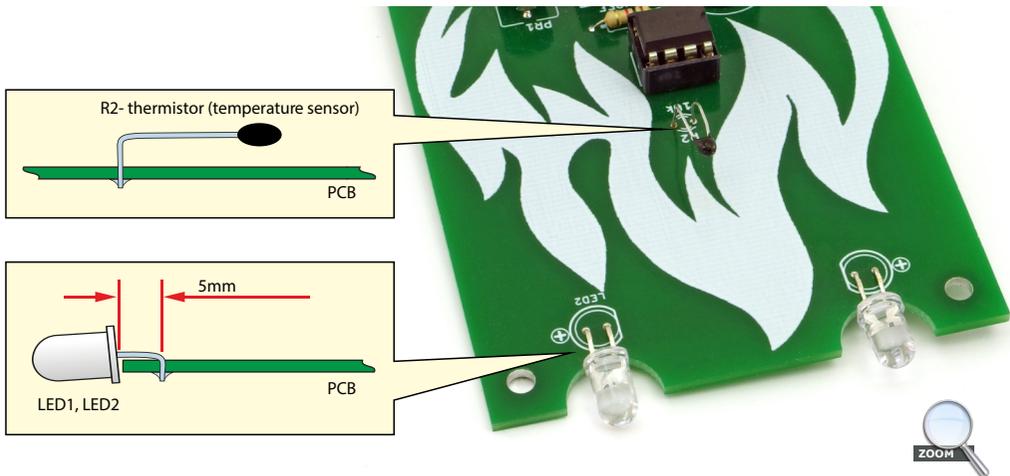
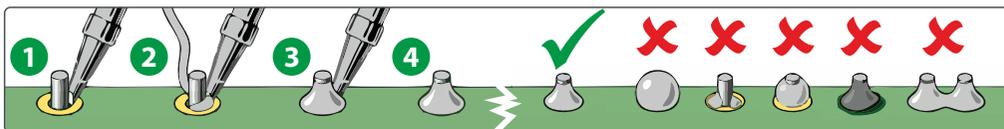


Fig. 3 Mounting of the LED thermistor

## Mounting instructions



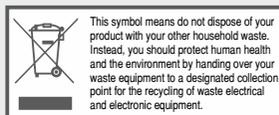
- 1 Use the tip of a hot soldering iron to touch the leg/end of the component just outside the soldering field
- 2 Then apply the "tin"/spoil
- 3 Once the cone has formed, remove the 'tin' and then the soldering iron
- 4 The entire process should take 2-3 seconds  
The prerequisites for the formation of a correct solder are the cleanliness of the surfaces to be joined, the presence of flux in the binder, a sufficiently high temperature (320-360°C) and the correct amount of binder.

Too much binder will cause a bead to form or two adjacent solder points to join.  
Too low a temperature or amount of binder, as well as impurities, can lead to "cold solders", i.e. the binder and the flux contained in it do not wet the surfaces to be joined and an impermanent solder is formed, which will oxidise over time, a break will occur and the device will cease to function



AVT SPV Sp. z o.o.

Leszczynowa 11 Street,  
03-197 Warsaw, Poland  
<https://sklep.avt.pl/>



AVT SPV reserves the right to make changes without prior notice. Installation and connection of the appliance not in accordance with the instructions, unauthorised modification of components and any structural alterations may cause damage to the appliance and endanger persons using it. In such a case, the manufacturer and its authorised representatives shall not be liable for any damage arising directly or indirectly from the use or malfunction of the product.  
The self-assembly kits are intended for educational and demonstration purposes only. They are not intended for use in commercial applications. If they are used in such applications, the purchaser assumes all responsibility for ensuring compliance with all regulations

**Notes**

