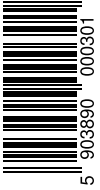
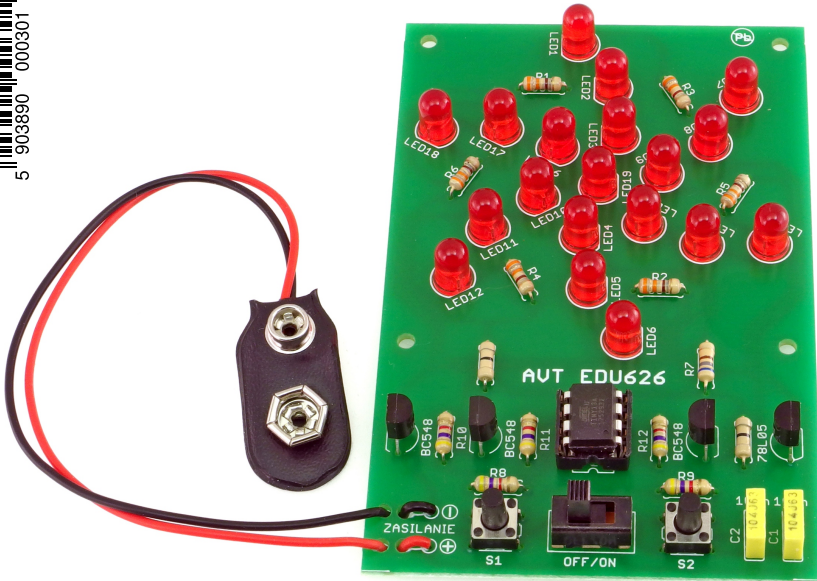




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**AVT EDU626**



The effect of this module is achieved through a system of 19 LED diodes grouped into 3 blade arms and perfectly imitating the movement of a real fan. Two operating buttons control direction and speed of the LED animation and allow for hours of play and creative use of the personally assembled circuit.

### Specifications

- LED animation imitating a rotating electric fan
- 19 LED diodes
- switching LED diodes with the phasing out effect
- 2 buttons for controlling speed and direction
- power supply: 9VDC (6F22 battery not included)

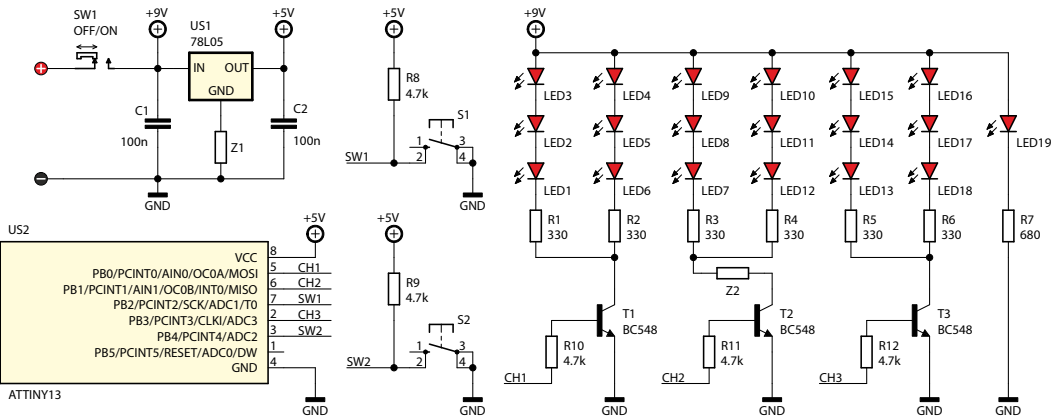


Figure 1. Schematic diagram

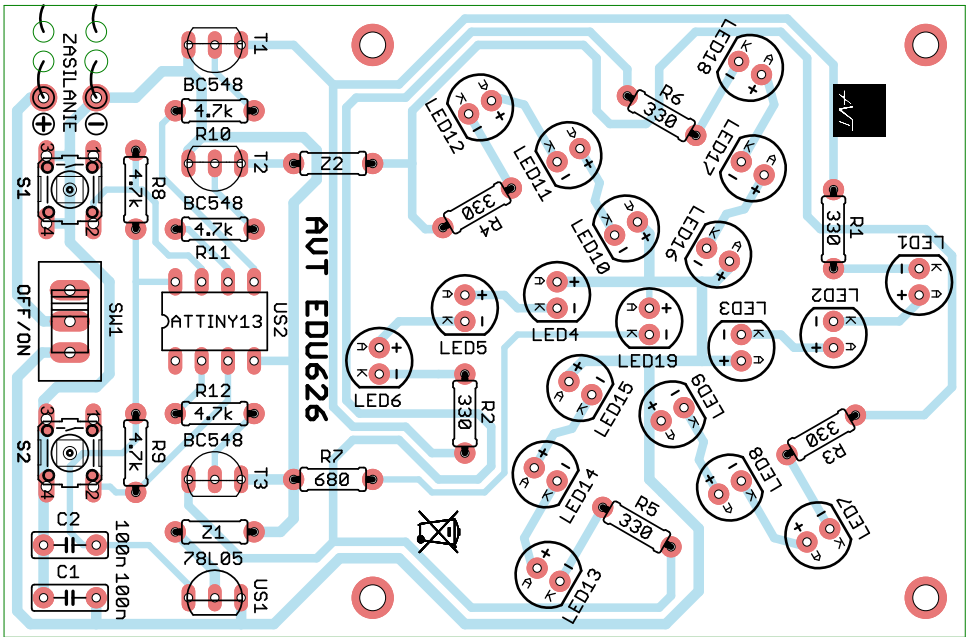
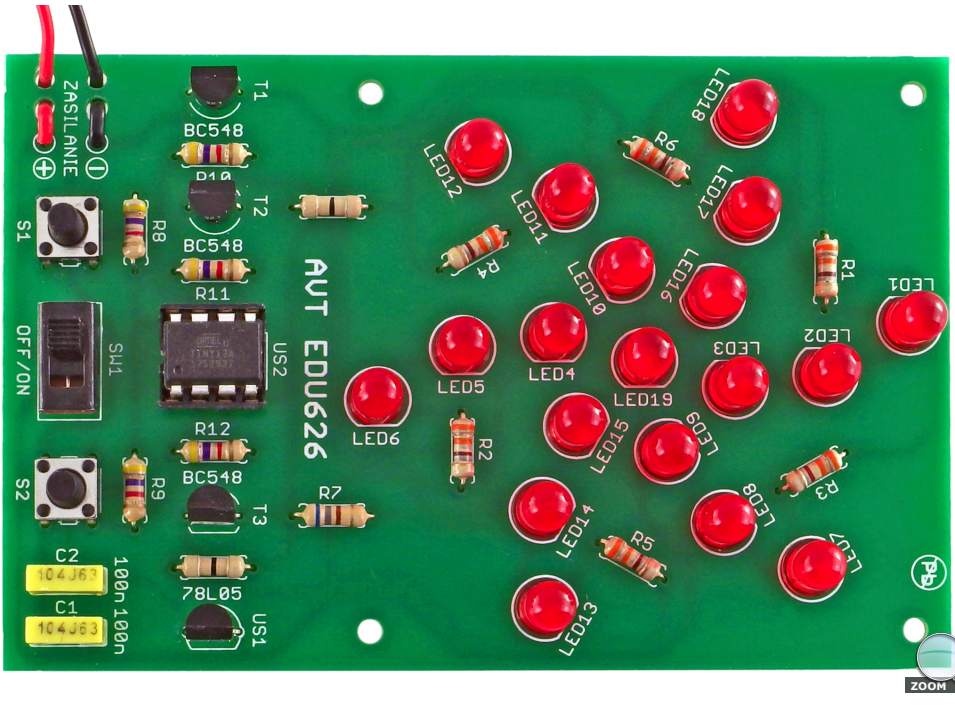
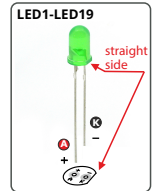
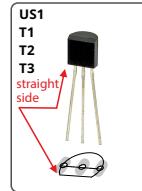
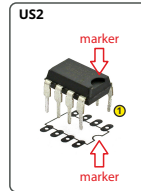


Figure 2. Position of the elements on the printed circuit board



## Suggested order of assembly:

- R1-R6: .....resistor 330Ω (orange-orange-brown-gold)  
 R7: .....resistor 680Ω (blue-gray-brown-gold)  
 R8-R12: .....resistor 4,7kΩ (yellow-violet-red-gold)  
 Z1, Z2: .....resistor 0Ω (black)  
 US2: .....integrated circuit ATTINY13A + IC socket !  
 C1, C2: .....capacitor 100nF (can be marked as 104)  
 US1: .....78L05 !  
 T1-T3: .....BC547 or BC548 !  
 S1, S2: .....microswitch  
 LED1-LED19: .....5mm LED diode !  
 SW1: .....switch  
 battery connector: .....red-positive , black-negative ⊖

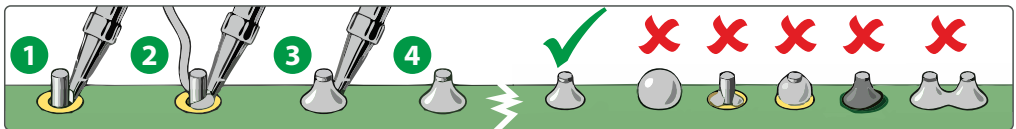


Begin by soldering the elements onto the circuit board in order from smallest to largest.

When assembling the elements marked with "!" pay attention to their polarity and placing of the notch.

You may find the frames with symbols of these elements on the circuit board, as well as photos of the assembled kit helpful.

## Assembly instructions



- 1 Touch the tip of the soldering iron to the end of the element near the soldering field
- 2 Next, apply tin solder
- 3 After the cone forms, remove tin solder first, and then the soldering iron
- 4 The whole process should take approx. 2-3 seconds.

The cleanness of the soldered surfaces, right amount of flux in the solder, adequately high temperature (320-360°C), and sufficient amount of solder are necessary to complete a correct bonding.

Too much tin solder can result in forming a ball instead of a cone or joining of two adjacent soldering points.

Inadequate temperature, amount of tin solder or impurities can lead to so called "cold solder joints, i.e. solder and the flux can't moisten the two surfaces and the resulting solder point is fragile and in time will oxidize, break, and stop working.

