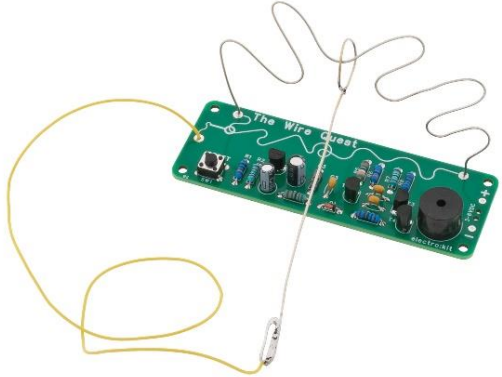


# EK035 – Wire game

## Kit description:

Test your concentration and coordination skills with Electrokit's wire game! The kit itself is easy to assemble, with standard through-hole components and a copper wire that is bent into any shape and soldered together to form the game track. A piece of hookup wire and the remaining copper wire are soldered together to make the loop that the player holds. The circuit is built with two transistors connected as an astable multivibrator, or square wave oscillator, which is activated and plays a tone in the speaker as soon as the copper wire is touched with the loop. The game is reset with the push button on the circuit board.



- \* Supply voltage: ~3 - 9VDC
- \* Dimensions: 86 x 30mm

## Assembly guide:

Before you start soldering, check that the circuit board is free from damage and scratches. Make sure you have all the included components. Compare with the component list!

Start by mounting all the resistors and the ceramic capacitors (C3, C4, C5). Continue with the transistors, diode, and the electrolytic capacitors (C1, C2). Be careful to mount these in the correct orientation! Note the markings on the circuit board. Finish with the speaker and the push button.

When all components are soldered to the board and the leads have been clipped, it's time to shape the game track and make the loop. Cut a short piece of the copper wire, about 12 cm. Shape the longer part of the wire into the game track. The beginning and end of the track are soldered into the two holes at each end of the board. The loop is made from the shorter, previously cut piece of copper wire. Shape one end into a loop around the track. The size of the loop together with the twistiness of the track determines the game's difficulty. Strip and solder the connecting wire into the handle and the other end into the hole on the circuit board.

Component list:

RefDes	Value	Qty	Part.no.	
C1	1uF 50V	1	40520010	
C2	10uF 50V	1	41017674	
C3, C4, C5	33nF 50V	3	41024647	
D1	1N4148	1	40310010	
R1, R8, R9	1kohm	3	40811310	Brown, black, black, brown, brown
R2	10kohm	1	40811410	Brown, black, black, red, brown
R3	100kohm	1	40811510	Brown, black, black, orange, brown
R4	5.1kohm	1	40811351	Green, brown, black, brown, brown
R5	3.9kohm	1	40811339	Orange, white, black, brown, brown
R6	22kohm	1	40811422	Red, red, black, red, brown
R7	15kohm	1	40811415	Brown, green, black, red, brown
SW1	6x6mm	1	41001412	
T1	BC557 PNP	1	40320002	
T2, T3, T4	BC547 NPN	3	41015024	
U1	Speaker 12mm	1	41016069	
	Hookup wire AWG28	0.2		~250mm
	Copper wire 1mm	0.4		~400mm

Schematic:

