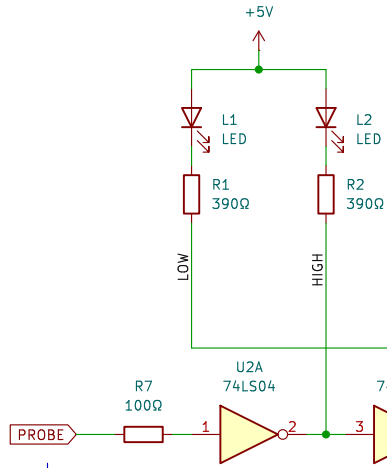
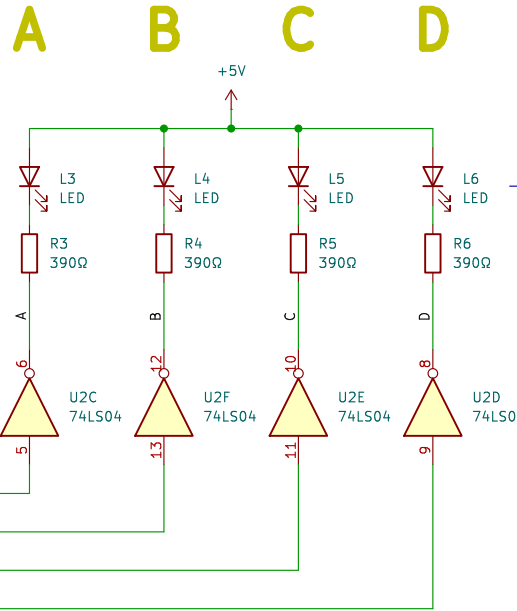
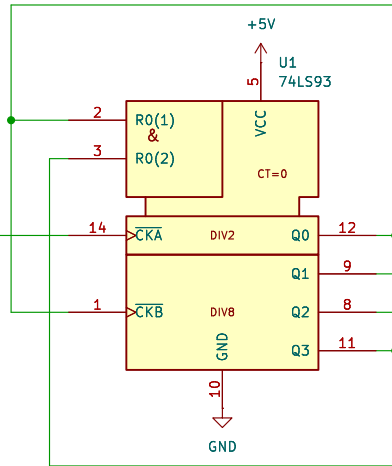


LOW HIGH



The best way to make the end of the probe is by coating a copper nail with solder (to protect against oxidation) and soldering it to the PCB.
A thin nail is most ideal; this will reduce the risk of short circuiting IC pins together.

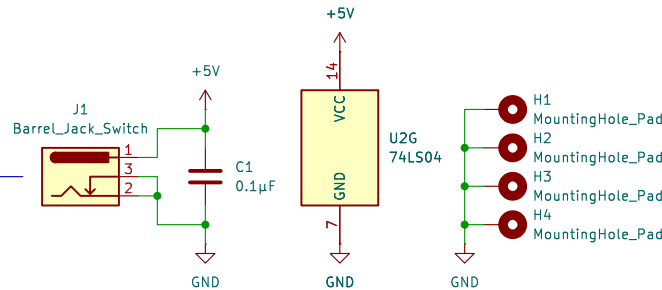
U1 (74LS93) is used as a 4-bit binary counter that resets to 0000 after counting 1000.
CKA increases Q0 by 1, and CKB increases Q1 by 1.
Q0 does not carry to Q1 unless it is connected externally to CKB.
Q1, Q2 and Q3 carry to each other internally.



LEDs light up when cathode (resistor side) is low.
When A and D are both high (binary 1001), the counter resets to 0000.

Designed by Voja Antonić and Dejan Ristanović for troubleshooting the Galaksija, a Yugoslav DIY computer from 1983.
This logic probe is suitable for testing any digital TTL circuit.
The A-B-C-D LEDs indicate an oscillating signal. When testing an oscillating signal, each A-B-C-D LED will flash at half the speed of the LED to its left. This can be used as a rough indication of oscillation speed.

Connect to VCC/GND of test circuit.
Do not connect to separate power supply!



Alex Lowry	
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File: Galaksija_Logic_Probe.kicad_sch	
Title: Galaksija TTL Logic Probe	
Size: A4	Date: 2024-12-22
KiCad E.D.A. 8.0.7	Rev: 1
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