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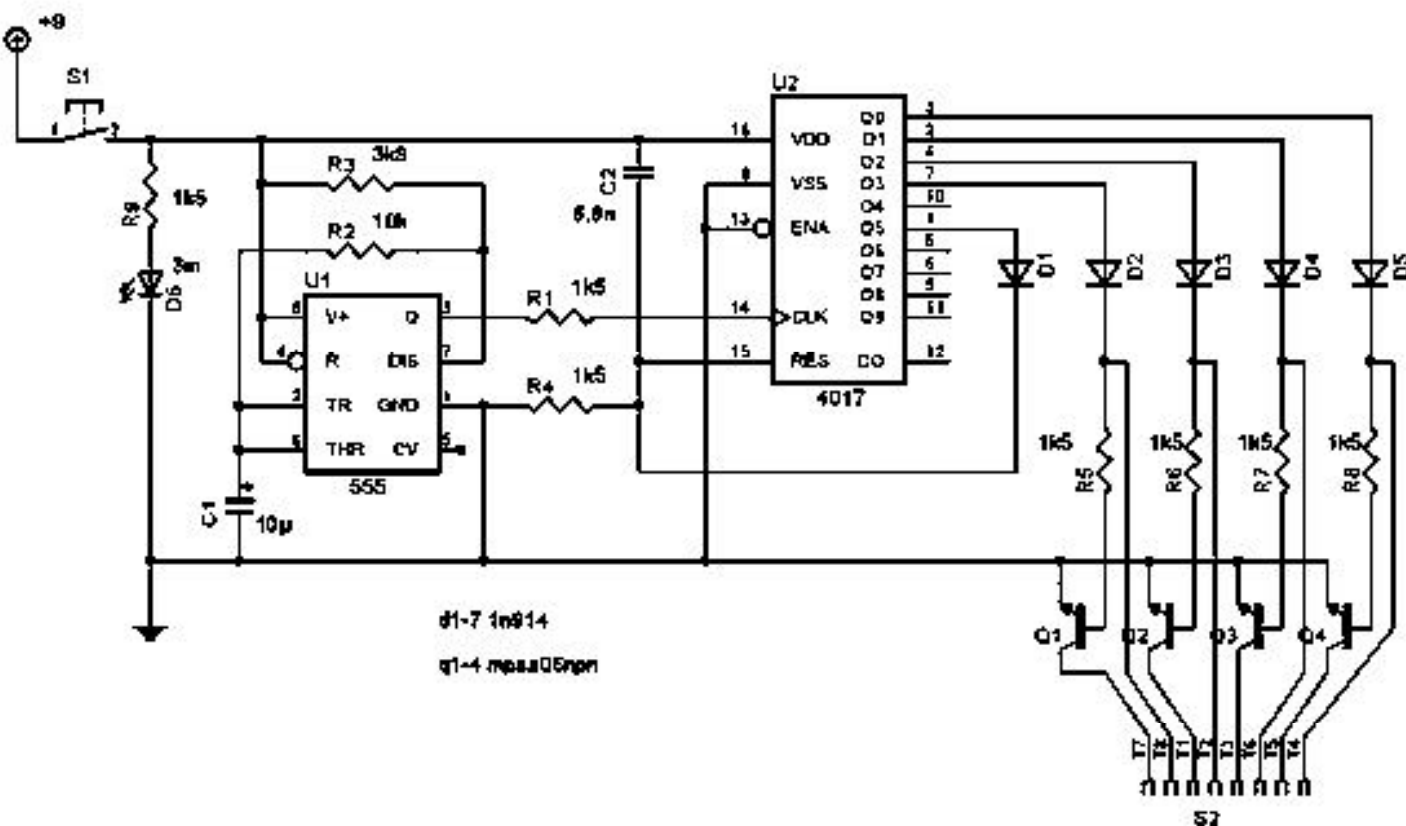
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This analog tester will verify straight and crossover cables for continuity, polarity and pair sequence. It consists of a transmitter and a remote. The schematics and PCB were made with Cadsoft Eagle layout editor available at <http://www.cadsoft.de>.

Part 1:

Schematic of the transmitter.



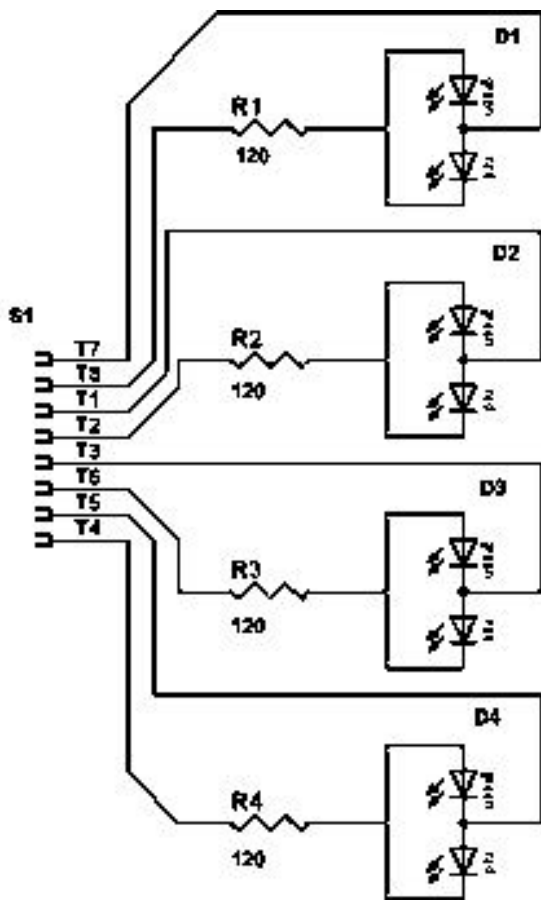
Click [here](#) to see a larger version of the schematic.

Schematic description:

The transmitter consists of a timing chip (555) and a decade counter (NTE4017B). The 555 runs in astable mode providing a pulse to trigger incrimination in the decade counter. Transistors act as switches; this prevents false positives for transposed wires. C2 and R4 reset the counter to 0 when first powered up. Pin 1 of the decade counter is looped to the reset pin 15 via diode. This prevents the counter from continuing to 9 before returning to 0.

Part 2:

Schematic of the remote section



Click [here](#) to see a larger version of the schematic.

Schematic description:

Use 5V dual color LED's with two terminals if you use my PCB. The purpose of the dual color LED's is to test the polarity of each pair of wires in the cable under test. Single color LED's may be used but you will not be able to detect polarity errors.

PNG's of [PCB](#) and [component](#) side of transceiver unit.

PNG's of [PCB](#) and [component](#) side of the remote unit.

[Pictures](#) of my completed tester. I've named this version "Jack" because of Sabrina, a good friend of mine. When she saw it, she asked, "Who's Jack?"

Last updated December 26, 2004

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