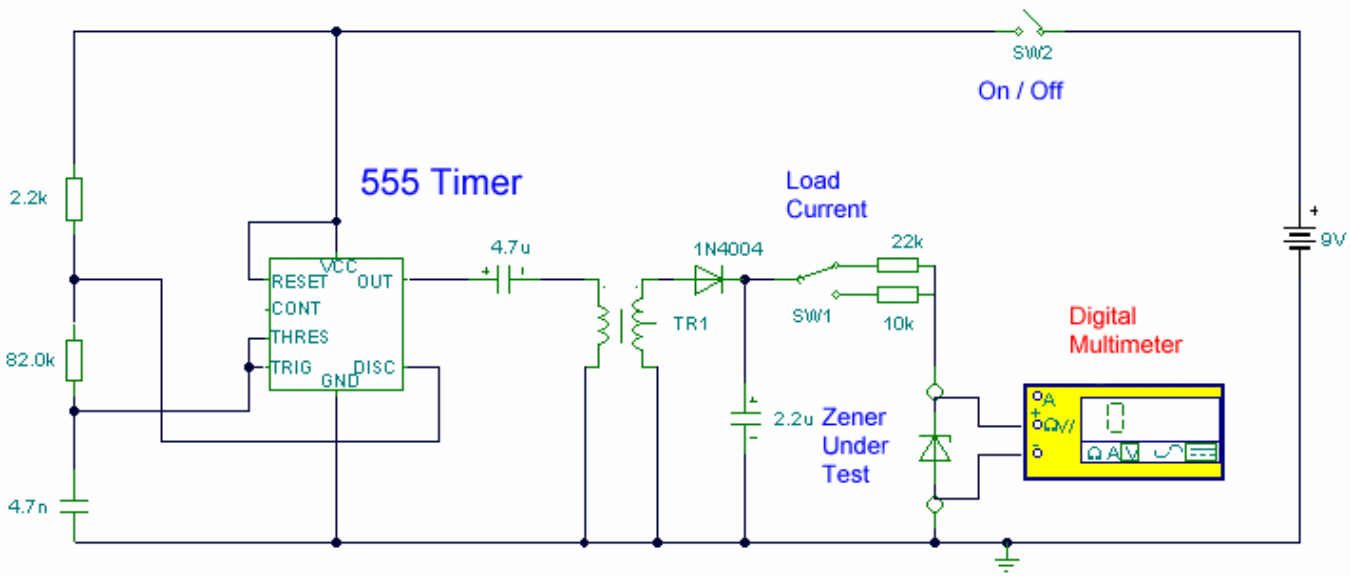
Zener Diode Tester

I have teamed up with Magazine Mikro Elektronica for this project. Please visit their site. I am very grateful to Aleksandar Dakic for the kind translation into Serbian and Romanian languages.



Notes:

Using a single 555 Timer IC and a small transformer to generate a high voltage, this circuit will test zener diodes of voltage ratings up to 50VDC. The 555 timer is used in the astable mode, the output at pin3 drives a small audio transformer such as the LT700. This has a primary impedance of 1K and a secondary impedance of 8 ohms. Used in reverse the unloaded ac voltage is around 120volts ac. This is rectified by the 1N4004 diode and smoothed by the 2.2u capacitor which MUST be rated at 150 VDC. The zener under test is measured with a multimeter set to DC volts as shown. The load current switch enables the zener to be tested at 1 or 2mA DC. The rectified DC load, but a good zener should maintain the reading on the volt meter.