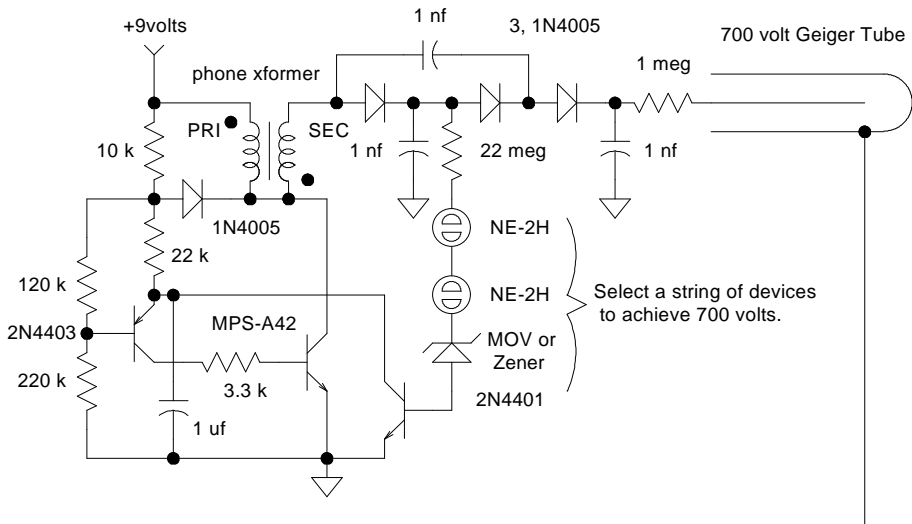


High Voltage Generator for Flash and Geiger Tubes

Here is a 700 volt power supply for powering a Geiger tube or charging a capacitor in a flash unit. The circuit uses a 1:1 telephone isolation transformer typically used in modems. The voltage is determined by the string of devices including the neon bulbs. Select a combination of neon lamps, varistors or zeners to achieve the desired voltage. Zeners are available at high voltages but neon lamps are probably easier to obtain. The circuit shows the power supply in a typical Geiger counter circuit. Geiger tubes draw about 100uA when they pulse but the pulses are very short and relatively far apart so the supply need only source a few micro-amps to the output capacitor. Geiger tubes are available in a variety of sizes and styles including units with thin mylar windows in the end for detecting larger particles besides x-rays. This circuit is nice because it cuts back current consumption to less than 1 ma when the load current is low. It works well from either 9 or 12 volts but it will supply more current with higher supply voltages.



Typical Geiger-counter circuit:

