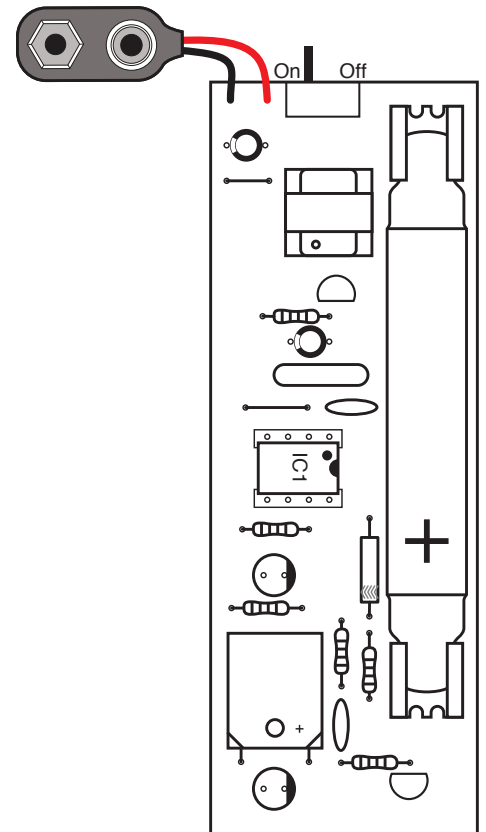
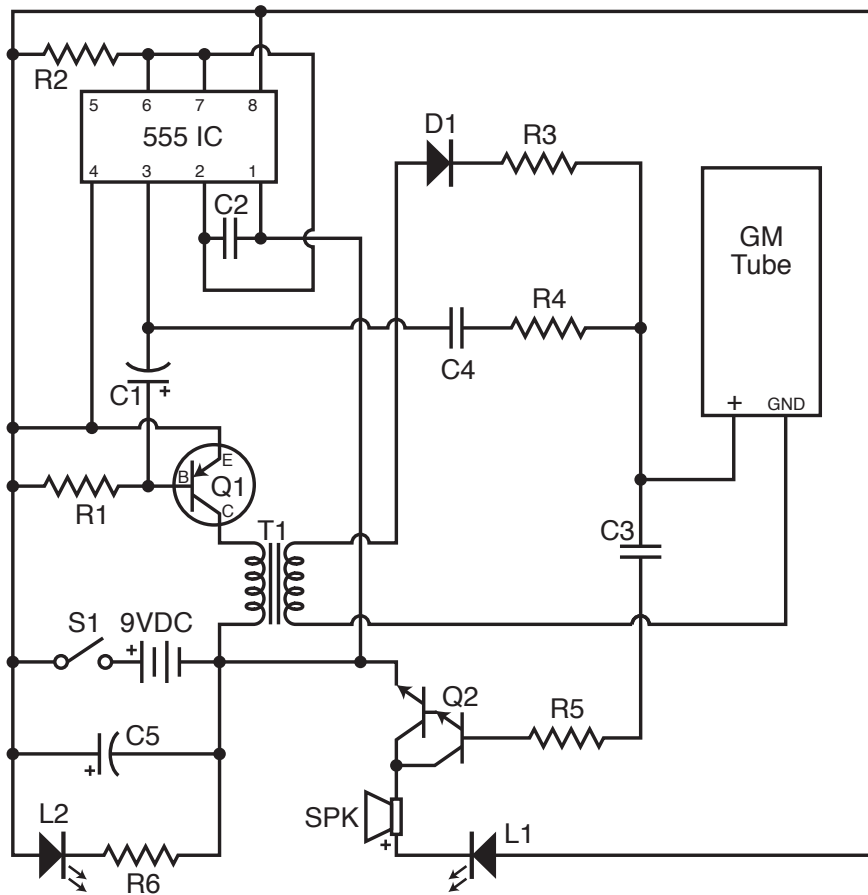
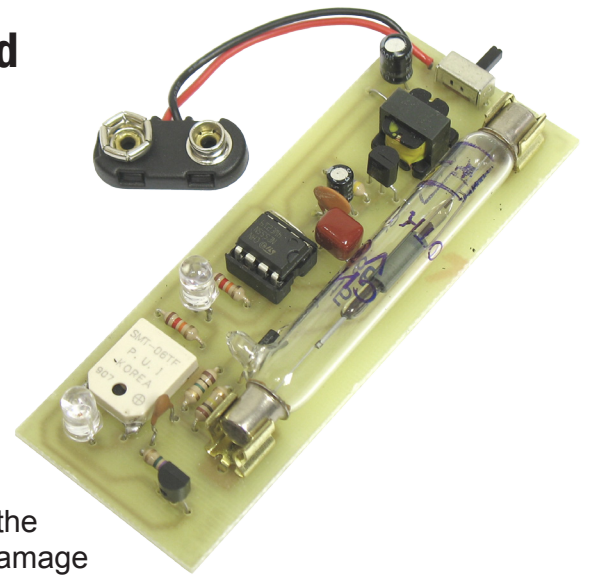


G24730ASB SI-10BG Geiger Counter Assembled

The G24730ASB SI-10BG Geiger Counter comes fully assembled and tested for proper operation.

CAUTION: Reversing battery polarity will damage the kit. To prevent reverse polarity damage, the on/off switch must be in the OFF position before attaching the battery to the snap. After attaching the battery correctly, position the on/off switch in the ON position to operate the kit.

This kit should not be handled while power is supplied. The GM tube uses high voltage at very low current, so handling the kit during operation may cause shorts or component failure (the current is very weak and will not cause harm to you but can damage the components in the kit). This kit should be enclosed within a plastic case during operation. Sorry, we do not have a case available for this geiger counter kit.



THEORY OF OPERATION

The Geiger Counter uses one IC and a Geiger Mueller Tube to detect beta and gamma radiation. The circuit operates as follows: IC1 is configured as an astable multivibrator (oscillator), which has its output signal on pin 3, coupled by capacitor C1 to the base of transistor Q1. Q1 is a PNP type, which has its collector lead connected to the primary of inverter transformer T1. The input signal to Q1 is in the high frequency range. Q1 drives T1, which through turns ratio develops high voltage on its secondary. This is rectified by diode D1 and applied through resistor R3 to the anode (+) of the GM tube. Each time a radioactive particle comes in contact with the GM tube an electrical pulse is generated and applied to the base of transistor Q2. Each time transistor Q2 receives a pulse it amplifies it and drives the speaker and red LED. By counting the clicks that occur per minute the background radiation level can be determined. When a radioactive substance is brought near the GM tube the click rate will increase.