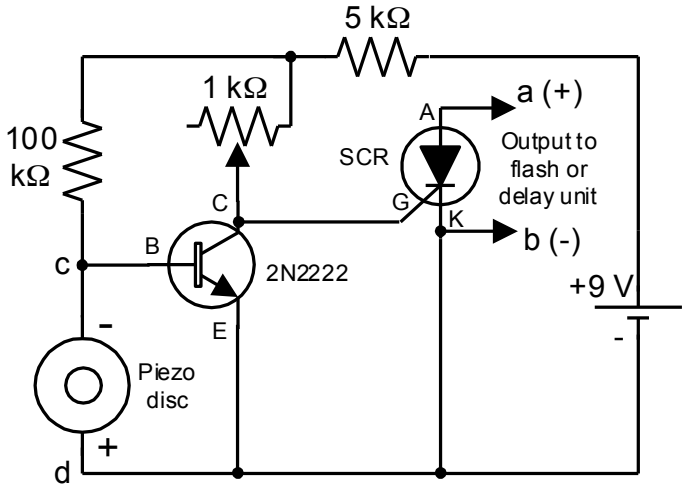
Piezoelectric Sound Trigger Kit

The kit includes parts for a sound trigger that can detect sharp sounds such as handclaps, balloon bursts, and finger snaps. The circuit is sensitive enough to respond to a finger snap from across a room. The trigger can be used to automatically discharge a flash unit.

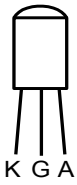
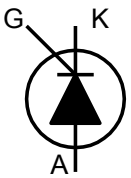
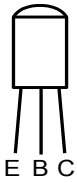
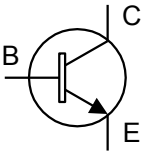
The circuit diagram is shown to the right. The piezoelectric element responds to sharp sounds. The sensitivity of the trigger is controlled with the 1-kΩ variable resistor. The circuit runs on a 9-V battery, although lower voltages can be used.



A cable must be prepared to connect the output of the trigger to a flash unit. If the flash unit has a PC jack, a PC cord can be spliced to a 2-conductor cable to connect to points *a* and *b* indicated above. If the flash unit doesn't have a PC jack or cord, a hot shoe adapter may be required.

Parts List

Piezoelectric element (for example, Radio Shack part 273-073)
400-V SCR (for example, Digi-Key part EC103D-ND)
NPN switching transistor (for example, 2N22222)
100-kΩ resistor
5.1-kΩ resistor
1-kΩ potentiometer (A 1-kΩ fixed resistor may be substituted.)
Battery clip
2-conductor cable
Hook up wire

SCR pin diagram	**SCR circuit symbol**
 A = anode (+) K = cathode (-) G = gate	
2N2222 transistor	**Transistor circuit symbol**
 E = emitter (-) B = base C = collector (+)	

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