

**Extra Credit**  
**Camera Shooter**

You can receive extra credit this semester for building a shooter out of a disposable camera and an inductor coil. You can get one point per 5 foot interval over 20 feet (maximum 3 points) added to your final grade.

Distance	Points
20-24.9 feet	1 point
25-29.9 feet	2 points
over 30 feet	3 points

Some things to think about:

- 1) The flash will not trigger unless you wind the camera. You may need to access the winding mechanism in order to do this each time you want to shoot.
- 2) Be careful to discharge the flash (by taking a picture and not winding) before you try and do ANYTHING with the camera. You can burn yourself if the flash discharges in contact with your body.
- 3) When you solder the leads, be careful to do a thorough job. The discharge from the flash mechanism has been known to heat up the solder and disconnect the circuit.
- 4) A sample camera is in the studio
- 5) This web site may help, but you do not need to shoot nearly as large a projectile for nearly as far:  
<http://www.electronics-lab.com/projects/science/017/>
- 6) In order to get credit, you must supply the attached document with the names of those students *who actually built the camera shooter*, the distance it shot, and the signature of a staff member.

Some cautions:

- 1) Do not try to do anything with the camera when it is charged.
- 2) If you cause bodily injury to yourself or any other living thing, you do not get the points.
- 3) If you cause major damage to the building or any equipment in the studio, you do not get the points. Major damage to be defined by the staff.

## Extra Credit

Distance \_\_\_\_\_

Signature \_\_\_\_\_

Points \_\_\_\_\_

Designers:

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