

# Coil Gun like Device

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## MAIN GOAL:

To have a functioning prototype coil gun that meets all of the set goals.

### Goals:

- .20 caliber 3 gram steel projectile at 500 feet per second.
- Semi-automatic, slow controlled rate of fire.
- 10 projectile capacity.
- 3 coils powered by 3 separate capacitors.
- Sensor controlled with a photo interrupter in front of each coil.
- Doesn't have to be light, but you should be able to shoulder it and fire it; not too heavy.
- Battery life that can shoot 10 consecutive shots.
- Can not be fired unless the capacitors are fully charged.
- At least 3 stages.
- Power and discharge switch/button.
- LCD display that shows the charge of the capacitors and whether the device is armed or not.

### Possibilities:

- .20 caliber 3 gram steel projectile at 700 feet per second.
- Battery is housed inside the magazine, changed with each magazine change.
- 3 separate magazines.
- Led charge bar on the sides of the device to show charge.
- 5 stages.

### Constraints:

- Money
- Time
- Difficulty of putting everything together

### Possible materials:

- Capacitors: [Capacitor 1](#)
- Aluminum barrel: [Aluminum Barrel 1](#)

- Photointerrupters? [Photointerrupter 1](#)