# Last revision: 2/1/2016

# Nerf Gun Mod

Difficulty: Intermediate to Difficult

Parts needed for the LED counter:

* 1pc x Arduino (any will do, however pro Mini 328 – 5V/16MHz would be best as it can fit into tight spaces.) - $9.95
* 2 x 7 segment display – LED Red – ($0.95 each) - $1.90
* 21pcs x 330 ohm resistors – ($0.25 each) - $5.25
* 2pcs x 10K ohm resistors – We have in stock.
* 2pcs x Infrared emitters & detectors – ($1.95 each) - $3.90
* 1pc x Sparkfun FTDI Basic Breakout Board 5V - $14.95
* Break away headers – Straight - $1.50
* Break away headers Male headers – Right Angle - $1.95
* 2 x 20 pack Female connectors – ($1.95 each) - $3.90

For 3-Round Burst Fire Option

* SPDT Mini Power Switch - $1.50

To increase the velocity of the flywheels on the gun

* XT60 Connectors – Male/Female Pair - $1.50
* Tenergy 11.1V 2700mAh 25C LIPO Battery pack w/ XT60 connector - $23.95
* Tenergy TN267 1-4 Cells LiPO/LiFe Balance Charger - $24.99

## Purpose

Purpose of this project is to increase the velocity in the nerf gun by making the flywheels spin faster and to see how much ammo is left on the magazine through a 7 segment LED display. Also we will to modify it to fire in full-auto and add a SPDT switch to change firing modes from 3-burst to full-auto.

Wish List of Parts: <https://www.sparkfun.com/wish_lists/123311>

Battery:

<http://www.all-battery.com/111volt-2700mah25cli-polylipobatterypack-31425.aspx>

<http://www.amazon.com/Tenergy-2700mAh-Battery-Connector-Phantom/dp/B00JLWERGG>

Battery Charger:

<http://www.all-battery.com/TenergyBalanceCharger-01267.aspx>