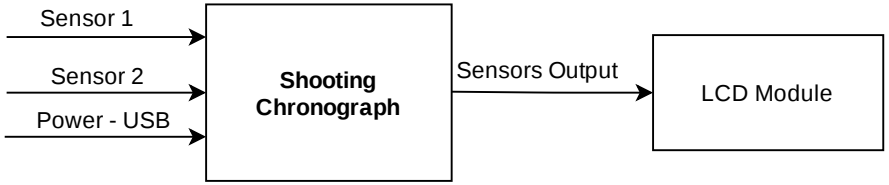
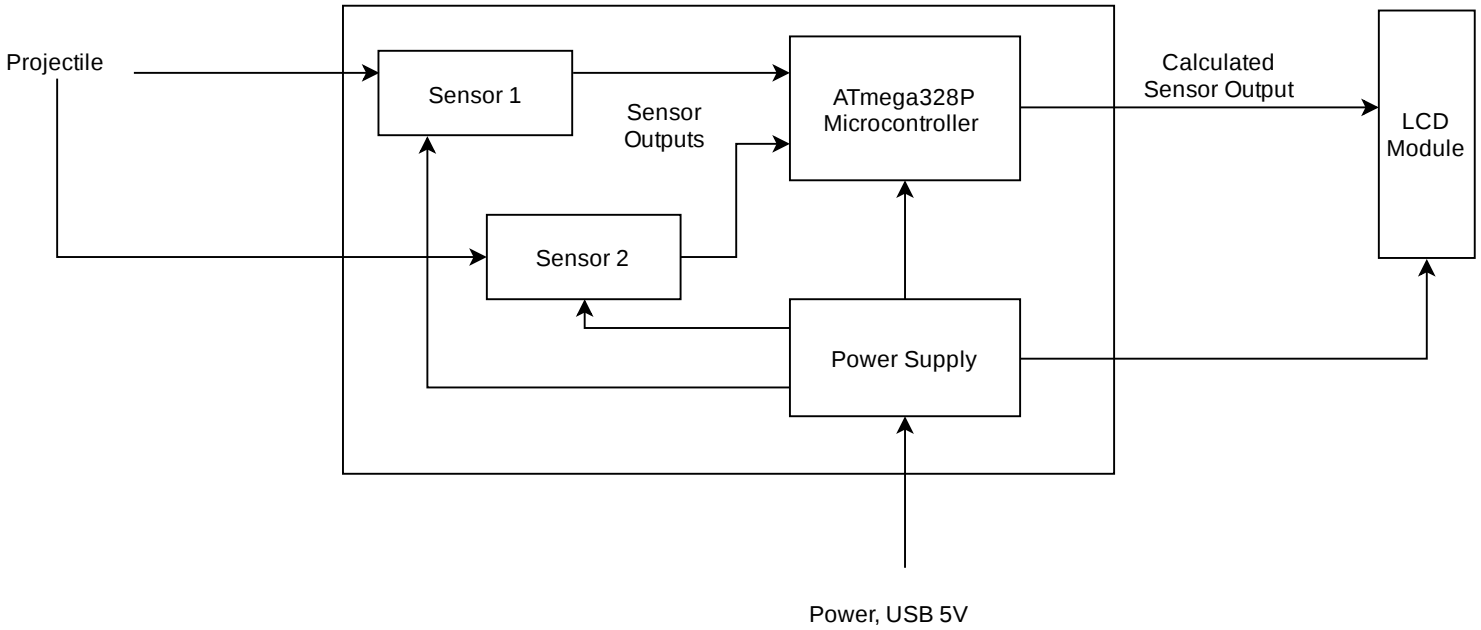
Shooting Chronograph: Level 0

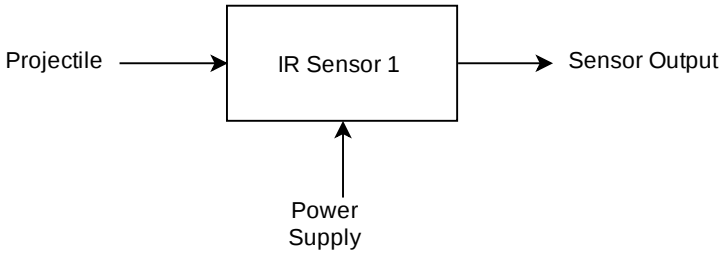


Module	Shooting Chronograph
Inputs	IR Sensor 1, IR Sensor 2, Power - USB
Outputs	LCD Screen, Sensor Output (Time between clocks)
Functionality	A flying projectile (BB, dart) will pass sensor 1. start clock, pass sensor 2, stop the clock. The time passed between the sensor interruptions will be displayed on an LCD screen

Shooting Chronograph : Level 1

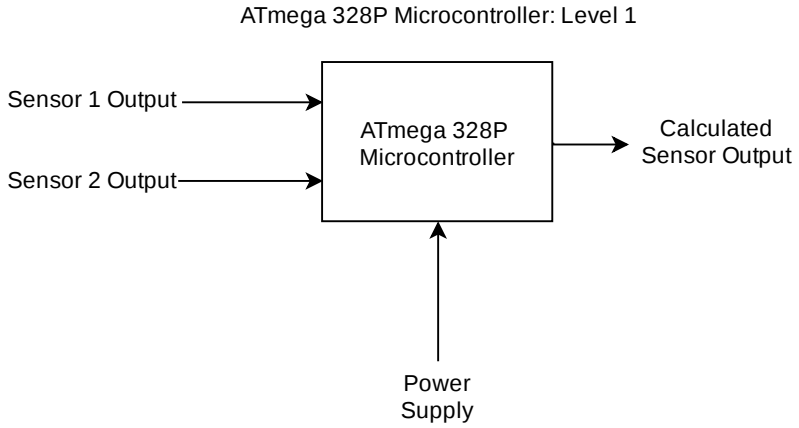


IR Sensor 1 and Sensor 2: Level 1



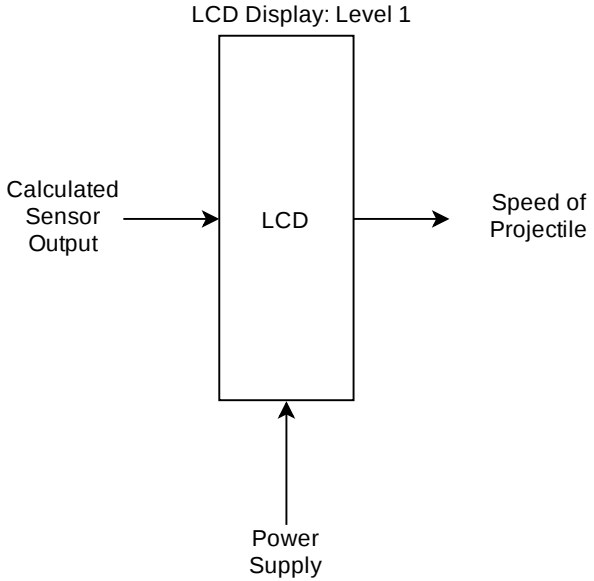
Module(s)	IR Sensor 1 / IR Sensor 2
Inputs	Projectile
Outputs	Sensor Output sent to ATmega328P Microcontroller
Functionality	The sensor will change sensor value if a projectile blocks emitter-detector communication

ATmega 328P Microcontroller: Level 1



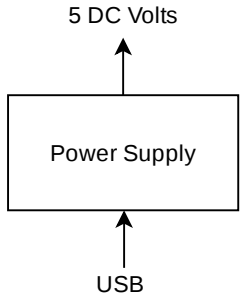
Module	ATmega 328P Microcontroller
Inputs	IR Sensor 1 and IR Sensor 2 Outputs
Outputs	Calculated Sensor Output - Velocity of Projectile
Functionality	The microcontroller will start the clock when sensor 1 is interrupted, and stop the clock once sensor 2 is interrupted. The microcontroller will calculate the speed of the projectile and send that data out.

LCD Display: Level 1



Module	LCD

Power Supply: Level 1



Module	Power Supply

Inputs	Microcontroller Sensor Calculations
Outputs	Speed of Projectile
Functionality	The LCD screen will display the speed of the projectile.

Inputs	USB
Outputs	5 DC Volts
Functionality	Power supply via USB Cable