# Check if ball-thrower can throw ball with manually entered input speeds

# Summary

## Location & Date

TBD

## Description & Aim

After combining minor components, we need to check if ball-thrower can throw balls with desired speed and desired direction.

## Participants

TBD

# Preconditions & Environment Requirements

1. Power Supply
2. Ball
3. Ball-Thrower Body with controller elements

# Scenario

|  |  |  |  |
| --- | --- | --- | --- |
| **Step** | **Data** | **Expected Result** | **Actual Result** |
| Check if all motor components are connected to input terminal | - | All motors should be connected to the related port of motor driver |  |
| Then, power up controller but not dc motors | 5V | Arduino and Controller Circuit leds should be activated |  |
| Then, set PWM of motor controller inputA | 20% | Only motors 1 should starts to run |  |
| Then, push a ball to the barrel and check if it is thrown by whell |  | Ball, should be thrown with low speed |  |
| Then, change the PWM of motor controller inputA | 70% | * Motor should accelerate * Possible “zzz” noise can be occurred * Motor should run continously |  |
| Then, change the PWM of motor controller inputA | 0% | Motor 1 should decelerate and stop. |  |
| Then, repeat the steps above for the motor 2 | - | - |  |

# Check if balls are sent to barrel with manually entered input speeds

# Summary

## Location & Date

TBD

## Description & Aim

Balls should be pushed to the barrel in order to throw them. Thus, we build a push mechanism that contains a turning platform and 1 dc motor.

## Participants

TBD

# Preconditions & Environment Requirements

1. Balls
2. Box Mechanism which contains all dc motors, turning platform(floor) and controller

# Scenario

|  |  |  |  |
| --- | --- | --- | --- |
| **Step** | **Data** | **Expected Result** | **Actual Result** |
| Check the motor is connected to the input terminal. |  | Motor terminals should be connected the terminals properly. |  |
| Then, give power to the controller but not motors. |  | Arduino and Controller Circuit leds should be activated |  |
| Then, set PWM of motor controller | 30% | Balls should be pushed to the barrel slowly (1ball/1 sec) |  |
| Then, change the PWM of motor controller | 80% | Balls should be pushed to the barrel fastly (2 balls /3sec) |  |

# Check if Barrel and Motors Are Connected Properly

# Summary

## Location & Date

TBD

## Description & Aim

DC motors of ball thrower should be integrated to the barrel in order to proper throw mechanism. Thus, we need to do test this part carefully because in case of any error or mistake, the balls can’t be accelarated properly.

## Participants

TBD

# Preconditions & Environment Requirements

1. Printed Barrel
2. Printed Motor Bed
3. DC Motor connected with a Whell
4. DC Supply
5. Ball

# Scenario

|  |  |  |  |
| --- | --- | --- | --- |
| **Step** | **Data** | **Expected Result** | **Actual Result** |
| Check if Motor Bed and Barrel is well connected |  | When someone tries to seperate bed from barrel, it should not be seperated |  |
| Then, check if DC motor can fit into motor bed |  | DC motor should fit into the bed and there should not be any space. |  |
| Then, put DC motor into the bed and connect its terminal to dc supply directiy |  | Motor is ready to be run |  |
| Then, activate dc supply and set the voltage | V = 9V | Motor should start to accelerate and motor should be stationary inside the bed |  |