Team Kit Components and Description

1 *MCHE201* Board:

- Circuit board provided to each team for controlling both DC motors, the stepper motor, linear actuator, and many sensors.
- Approximate dimensions (L x W x H): 4” x 2.5” x 0.5”

1 Large DC Gearmotor

- Used for driving the robot. High torque with low angular velocity.
- Approximate dimensions (L x W x H): 6” x 4” x 4”

1 Small DC Gearmotor

- Used for triggering and small tasks. Not powerful enough to drive the robot. Low torque and medium angular velocity.
- Approximate dimensions (L x W x H): 2” x 2” x 1”

1 Stepper Motor

- Used for triggering and small tasks. Very precise movement. High torque with low angular velocity.
- Approximate dimensions (L x W x H): 3” x 2” x 2”

1 Small Solenoid

- Used to provide a quick pop of force. Only extend out about 0.5 inch but very quickly with a surface diameter of about 0.5 inch.
- Approximate dimensions retracted (L x W x H): 1.5” x 1” x 0.5”
- Approximate dimensions extended (L x W x H): 2” x 1” x 0.5”

1 Linear Actuator

- Used for extending out a specific range and back. Only translation motion about 6 inches.
- Approximate dimensions retracted (L x W x H): 10” x 2” x 2”
- Approximate dimensions extended (L x W x H): 16” x 2” x 2”

1 IR Distance Sensor

- Infrared sensor for sensing the distance to an object. Could mount to front of robot to sense distance to the center of track.
- Approximate dimensions (L x W x H): 1” x 1” x 0.5”

1 Magnetic Proximity Switch

- Magnetic sensor that detects when the two companion magnets are connected. Like a sensor that can detect if a cabinet is closed if one magnet is mounted to the door and the other is mounted to the main cabenet.
- Approximate dimensions (L x W x H): 1” x 0.5” x 0.5”

1 Power Supply

- AC to DC converter. Provides 12VDC to the *MCHE201* board from a 120VAC outlet.
- Approximate dimensions (L x W x H): 6” x 2.5” x 2”