

Table of Sensors and Motors:

Sensor or Motor	Connection(s) to Microcontroller	Purpose
‘Placer’ Motor	Motor port 3	Used to move box containing ball onto platform- “conveyor system”
‘Left’ Motor	Motor port 2	Used to move both left wheels
‘Right’ Motor	Motor port 1	Used to move both right wheels
Button 1	Digital Port 1	Used for signal to start full test
Button 2	Digital Port 2	Used to signal to start test
Ultrasonic sensor input	Digital Port 5	Used to sense distance from objects in front of the robot.
Ultrasonic sensor output	Digital Port 6	Used to communicate distance found by the input to the vex cortex.
Motor Encoder (right motor)	I2C	Used to calculate rotations of right motor for distance calculations
Motor Encoder (left motor)	Connected to ‘Left’ Motor which is then connected to I2C	Used to calculate rotations of left motor for distance calculations
Left Limit	Digital 3	Used to sense if a wall has been hit on the left side
Right Limit	Digital 7	Used to sense if a wall has been hit on the right side
Left red LED	Digital 11	Used as a signal if the robot is too close to an object
Right red LED	Digital 12	Used as a signal if the robot is too far away from an object
IR Left	Analog 1	Used to detect an IR light; if it is closer to the left this value is higher and robot will adjust
IR right	Analog 2	Used to detect an IR light; if it is closer to the right this value is higher and robot will adjust