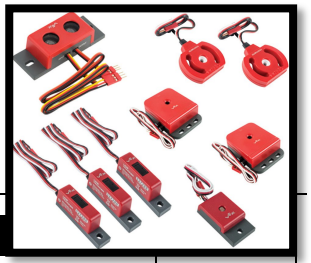
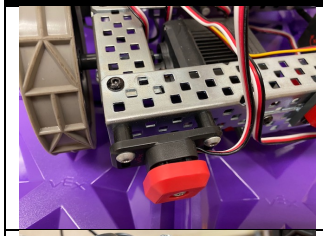
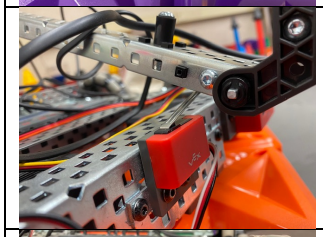
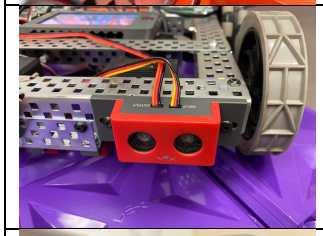
Programming Sensors
"The Grand Challenge"

Gradesheet – *(50 pts.)*



***Purpose**: Students will learn how to program Sensors.*

Programming Sensors			
	**Bumper Switch**	Create a program in which your robot drives forward and stops when the Bumper Switch touches an inanimate object (wall, box, etc.). It waits one second and then continues turns 180 degrees and moves in the opposite direction until it touches another inanimate object.	10pts
	**Limit Switch Sensor** *(code)*	Create a program that has the Limit Switch stop the arm from over lowering and hitting the steel frame.	10pts
	**Ultrasonic Range Finder** *(code)*	Program the Ultrasonic Range Finder so that the sensor will stop the robot 10 inches from an object. Your robot shall wait, back up and then turn(90 degrees) and moves in that direction until it senses another object. Your robot continues to 'sense' and turn until you turn it off.	10pts
	Vision Sensor*(code)*	Position your robot in the center of the Competition Court. The boxes Purple, Green, Orange and Yellow cones will be positioned on the four sides. Program the Robot so that it will drive forward and when it senses one of the four colors, the robot will back up to the center of the course, turn 90 degrees and begin to move toward the next color. The robot needs to sense all four colors and return to center.	10pts
	Line/Color Sensor Simple *(code)*	Program the Robot so that it will follow the White Elliptical Line and the Squigley Line in class.	10pts

jharrington@sthelenaunified.org