In this assignment, you will be assembling a predefined circuit, Nema 23 Stepper Control. This circuit will test all the assembly knowledge you've learned within this module thus far as it combines sensors and motors to create a cohesive circuit.

Final Deliverables

One Functioning Circuit

A3- Nema 23 Stepper Control

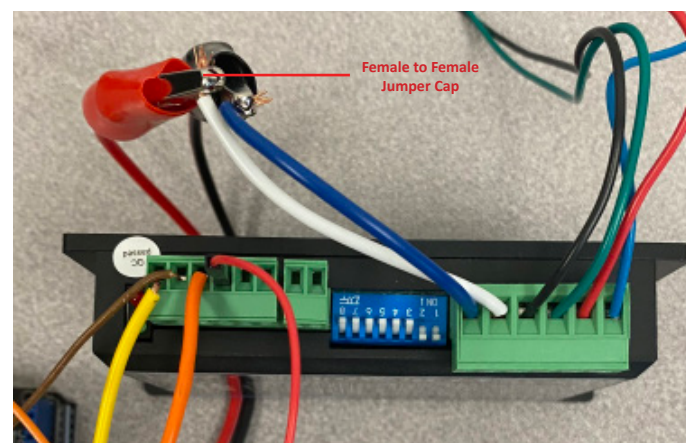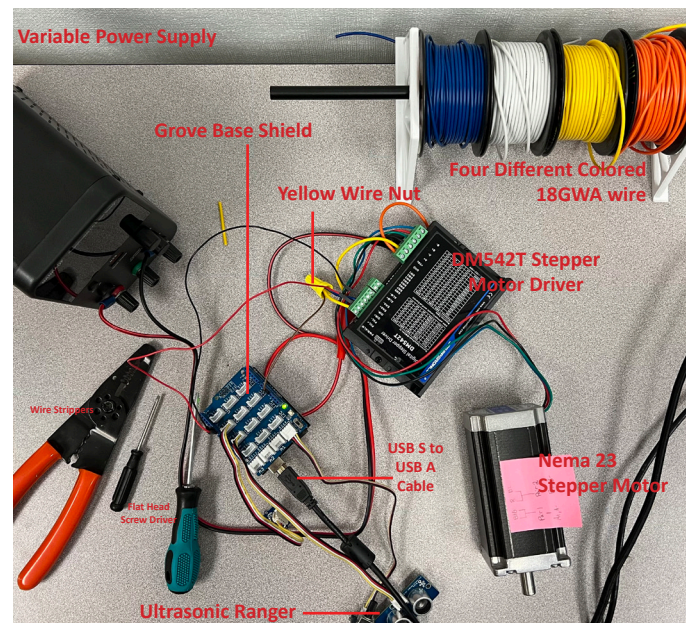What you'll need

CNC Nema 23 Control Sketch(Code)-

Follow the Instructions and Parts list found at the top of the code provided. It will walk you through connections, switches, compiling, and uploading your code. Then once finished test out your circuit by moving your hand in front of the sensor and watching the motor spin. Adjust the Potentiometer to control speed and press the button to reverse the direction

Components Required

Arduino Uno- Arduinos
Grove Base Shield- Arduinos
DM542T Stepper Motor Driver
USB B to USB A Cable- Misc Cables
Nema 23 Stepper Motor
Button- Dials/Switches/LEDS
Potentiometer- Dials/Switches/LEDS
Ultrasonic Ranger- Sensors
Variable Power Supply - 24v 2.5A
Flat Head Screw Driver
Four different colored 18GWA wire
Wire Strippers
Male to Male Bread Board Jumpers
Multimeter
Yellow Wire Nut

Instructions

All instructions on assembly and programming are within the Sketch/Code.

M5A3

(Code Download Link)