

In this Assignment, you will continue on from M4A3. Taking your Complex Machine and automating its mechanical system through electronic motors. By completing this assignment you should begin to understand how machines begin to work. This will also stress test your Complex Machine by allowing you to move your system at greater speeds

possible than cranking by hand. Look for lockups, loose connections, or bent components during your stress test to improve your design.

Final Deliverables
One Motorized Complex Machine

1. Define your Input Shaft(Hand Crank Shaft). This will be different for all projects.

2. Define which motor you plan on using.

- Nema 17
- Nema 23
- 5v Stepper

3. Find an adapter to connect your input shaft to the rotational shaft of the motor. You may have to laser cut or 3D Print an adapter plate depending on the size and shape of your input shaft.

4. Assemble your circuit. Depending on which motor you decide to use, you will have to assemble a functioning motor circuit to test your machine.

5. Flash your code. Once again depending on your chosen circuit you will have a slightly different code. To help we have some basic format code to get you started but you may have to edit inputs or names dependent on how you have configured your assembly. Use prior assignments to reference your code if needed.

Nema 17 Continuous Spin:

Nema 23 Continuous Spin:

5v Continuous Spin:

Proceed to M5A6

