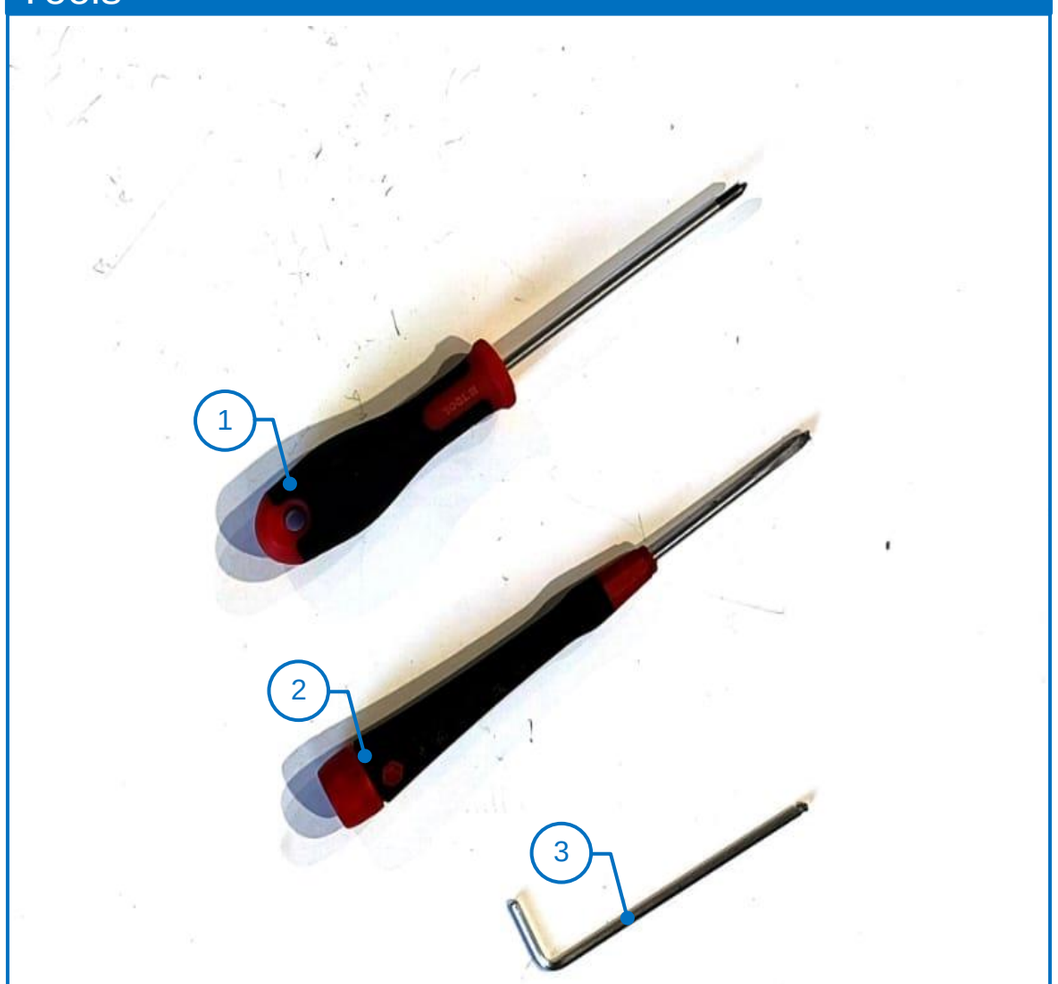
List of parts

1. Pololu 12V DC-Motor with hall encoder
2. Male/female power supply connectors
3. Screw 1 (x6)
4. Screw 2 (x4)
5. Screw 3 (x2)
6. Male/female cable set for arduino
7. L298N – DC motor driver
8. FT232 – serial usb-C converter
9. Arduino Mega rev 3
10. 3D printed part A
11. 3D printed part B
12. 3D printed part C

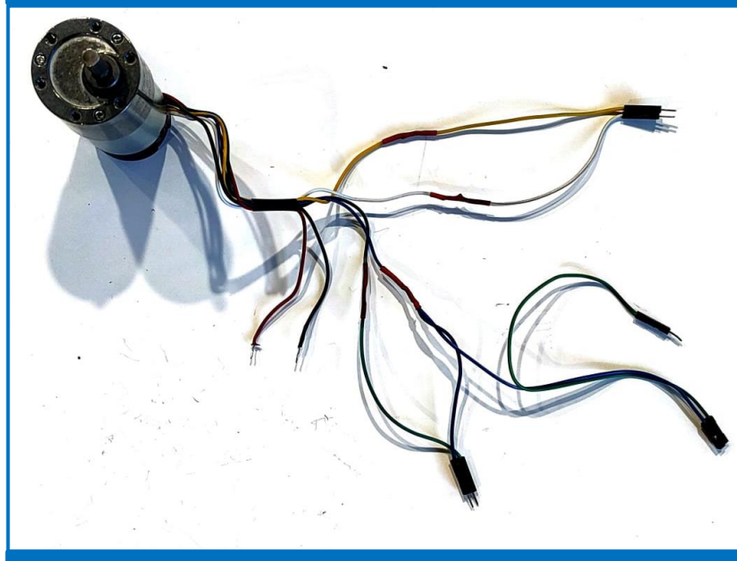
Estimated price: 135€

Tools

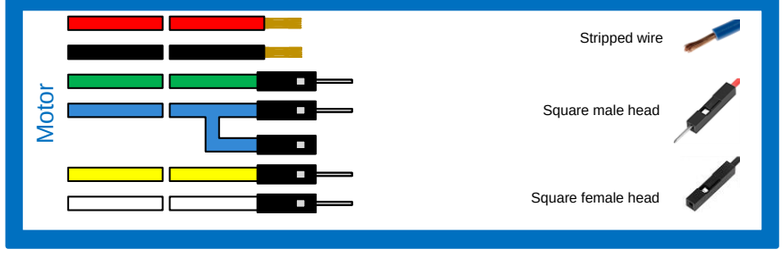


1. Small Phillips screwdriver
2. Small Flathead screwdriver
3. Hex key 2mm

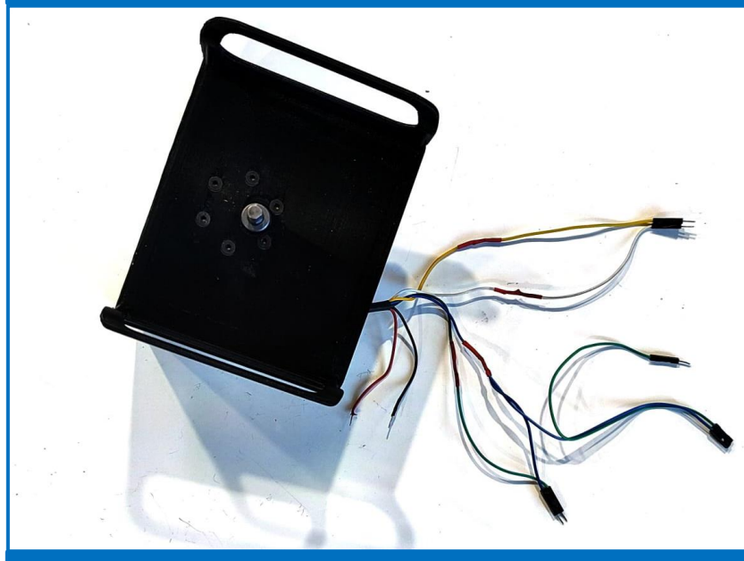
Step 1: Weld motor cables



Cable colours/head



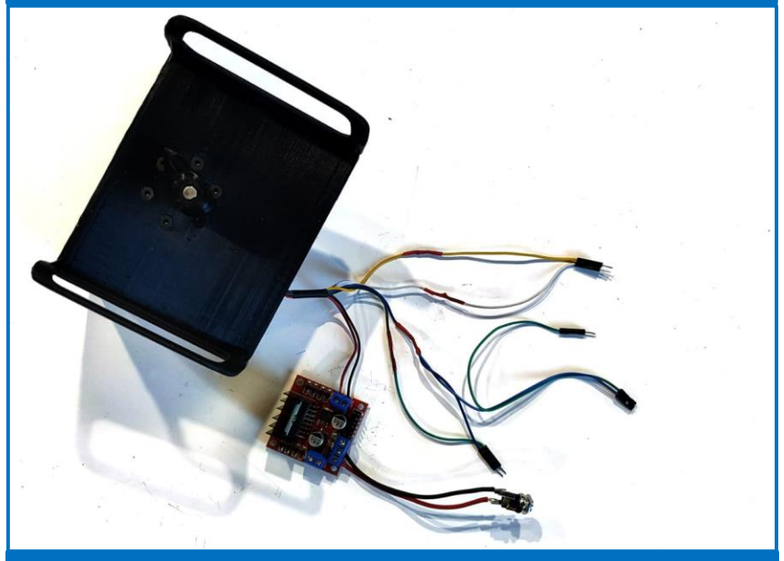
Step 2: Screw motor to 3D printer part B



Instructions

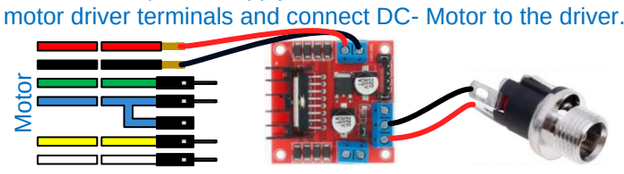
Using Hex key, fix the DC motor to 3D printer part B with the 6 Screws 1

Step 3: Connect driver and power supply connector

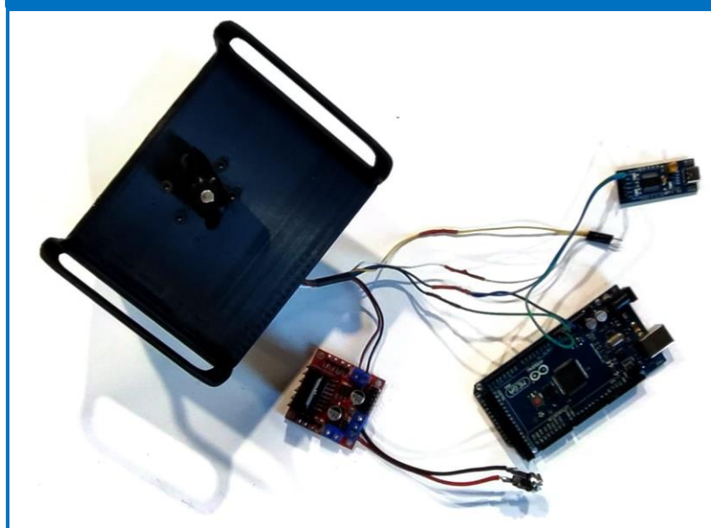


Instructions

Weld female power supply connector to cables, connect them to motor driver terminals and connect DC- Motor to the driver.



Step 4: Connect Arduino and FT232



Instructions

Connect Arduino and FT232 following the cable diagram.

Step 5: Screw Ardunio, FT232 and L298N to part A

Instructions

Use Screws 2 to fix Arduino and L298N to 3D printer part A.

Use Screws 3 to fix FT232 to 3D printer part A

Step 6: Close the cube and insert dial

Instructions

Join 3d printer parts A and B, close it using Screws 2, and insert the dial in the output shaft of the DC-motor.