

## A4988 Stepper Driver (for bipolar stepper)

### How to Adjust the Current Limit

Stepper Motors with Arduino

<https://www.youtube.com/watch?v=0qwrnUeSpYQ&t=952s>

Timestamp: 45:36

1- Check the current rating for the stepper motor on the datasheet. The datasheet for the Nema 14, 35mm stepper shows that the current rating is 0.75A.

2- Set up the multimeter:

- Turn the dial to the 10A (red) setting.
- Move the red cable to the top connector.
- Clip two crocodile clamps onto the leads.

3- Connect the multimeter in series with one of the coils. This means connect one probe to a wire on the motor (e.g. 1B connector), then connect the other probe to the pin on the A4988 where that motor cable is supposed to plug in (1B pin).

4- Disconnect the A4988 Step pin from the Arduino (Arduino pin 2). Now connect the Step pin to a 5V supply from the Arduino.

5- Give 5V power to the Arduino by connecting the laptop USB connection to the Arduino.

6- Switch on the motor power supply (10V). You should see a current reading on the multimeter.

7- Take the smallest flat precision screwdriver and turn the small pot on the A4988 to adjust the current. You will see the values change, on the multimeter, as you rotate the screwdriver. Don't use a star screwdriver. It will turn but nothing will be happening.

8- Switch of the motor 12V power and the Arduino 5V power.

9- Disconnect the multimeter and re-connect the 1B pin.

10- Remove the step connection from the 5V supply and re-connect it to pin 2 on the Arduino.