

# Mini CNC foam cutting

## ABSTRACT

Using the controller we can either manually move the camera around or we can set start and end points and then the camera will automatically move from one to the other position. Also using the supporting arm we can mount the slider even on a smaller tripod, at any angle we want and still get a stable movement.

## Working

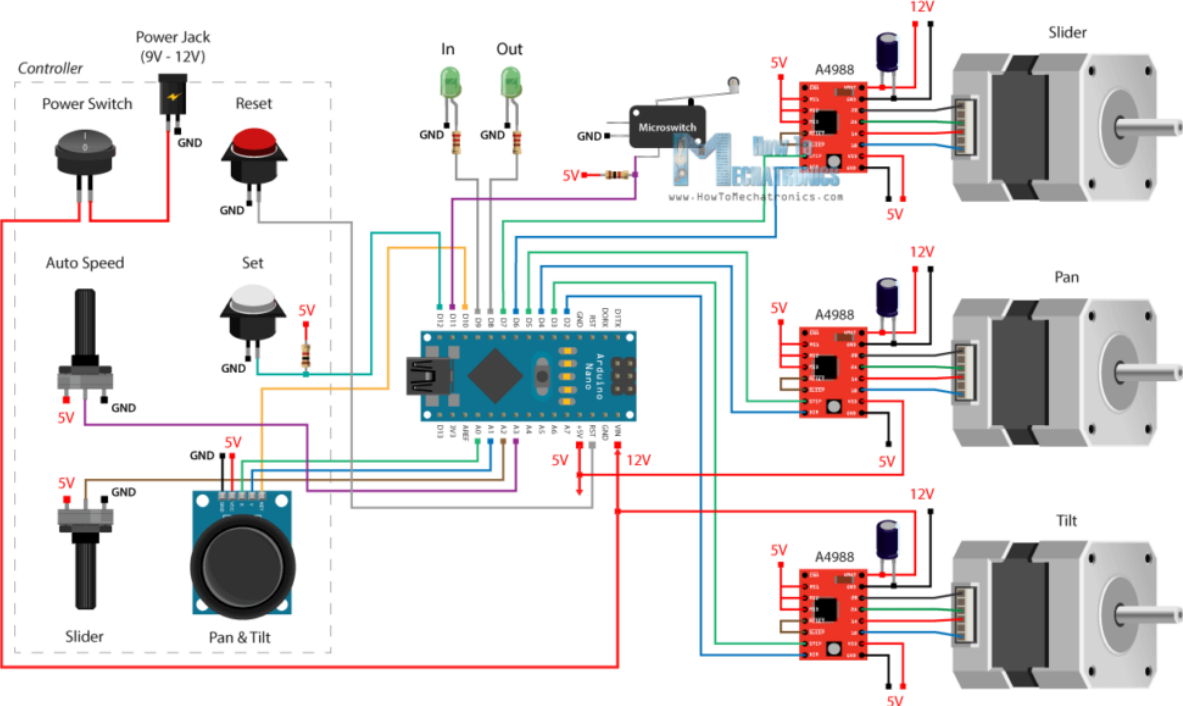
For controlling the slider movement we use a potentiometer connected to an analog input of the Arduino, and for controlling the pan and tilt head we use a joystick module which actually consist of two potentiometers, so it is connected to two analog inputs. There's also another potentiometer used for setting the speed of the automatic movement from the in and out positions. These in and out position are set with the help of push button. This push button has a pull up resistor and it's connected to a digital pin of the Arduino board. There also a reset push button, a power switch and a power jack, as well as a limit switch for the slider and two LEDs for indicating the in and out status. We can power this project with either 9 or 12V.

Nema 17 and A4988 driver will be used to control all the axis of the system

## Components

- Arduino Uno
- Stepper motors
- Drivers
- 3d printed part
- Button
- Joystick
- Battery/adapter
- switches

# Circuit Diagram



0 1 2 3

