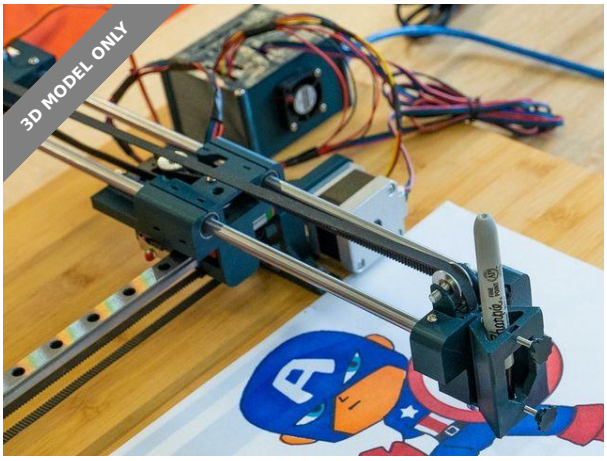

Easy 3D Printable CNC Drawing Machine - Draw on Cakes, Phones, Paper, Shirts | Arduino GRBL Plotter

DIY Machines

VIEW IN BROWSER

updated 12. 4. 2022 | published 16. 12. 2021

Summary

How to make a simple and high quality CNC drawing machine to draw on almost anything. I'll step you through how to...

Hobby & Makers > Electronics

Tags: printer diy stepper arduino cnc drawingmachine drawingrobot drawing gcode arduinouno cncmachine grbl tmc2208

If you like this project please do press the like button above. It really helps me out. Thank you. 😊

How to make a simple and high quality CNC drawing machine to draw on almost anything. I'll step you through how to build your own including all the files you need.

I made a video guide for assembly instructions here: https://youtu.be/XYqx5wg4oLU

and another video detailing the software side of things: https://youtu.be/8scKLHz77Lg

This project has a relatively low cost and can produce some very detailed drawings. I've used it to create t-shirts, cake decorations, drawings to colour in myself (and some it coloured in for me!). You could also use it to draw out scale drawings, wedding invitations, birthday and Christmas cards and anything else you can think of. :)

A second video covering uploading the code, creating drawings, and sending them to your machine will be ready in about a week. Subscribe to my Youtube channel to be notified when it is posted.

(I'll also update this Thinigverse page with a link. Thanks for waiting a few more days.)

List of items used in this project and where to find them:

■ 8 x15 x 45mm Linear Bearing (x2): https://geni.us/LinearBearing45mm
■ 8 x 15 x 25mm Linear Bearing (x1): https://geni.us/LinearBearing25mm
■ 12v Nema 17 stepper motors (x2): https://geni.us/StepperMotor
■ GT2 Timing belt and pulleys: https://geni.us/TimingBelt5m
■ Micro servo (x1): https://geni.us/MicroServo
■ Elegoo Arduino Uno (x1): https://geni.us/ArduinoUno
■ Nuts, bolts and screws (See list below): https://geni.us/NutsAndBolts
■ Stepper drivers - TMC2208 (x2): https://geni.us/TMC2208
■ Contact switch (x2): https://geni.us/ContactSwitch
■ Arduino CNC Shield (x1): https://geni.us/ArduinoCNCShield
■ 30mm 5V Fan (x1): https://geni.us/30mm5vFan
■ 8mm Chromed Steel Rod (35cm x2 & 5.5cm x1): https://geni.us/8mmChromedSteelRod
■ 30cm long linear rail with block (x1): https://geni.us/LinearRail300mm
■ Electrical wire: https://geni.us/22AWGWire
■ 12v power supply - 2A or greater (x1): https://geni.us/12VPowerSupply2A
■ 6mm Idler Wheel - 3mm Bore (1): https://geni.us/6mmIdlerWheel3mmBore
■ Wooden panel to mount project at least 36x42cm (I used an Ikea ‘LÄMPLIG’ chopping board)

Nuts, bolts and screws needed:
■ M5 x 25mm (x2)
■ M3 x 18 (x3)
■ M3 x 12 (x2)

■ M3 x10 (x3)
■ M3 x 6 (X14)
■ M3 nuts (x9)
■ M5 nut (x1)
■ Short wood screws (x8)

These are some of my favourite tools I use and can recommend:
■ Battery-powered glue gun: http://geni.us/BoschBatteryGlueGun
■ Bosch Bit Driver: https://geni.us/Bosch-Screwdriver

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The code can be downloaded from here:
https://github.com/DIY-Machines/CNC-DrawingMachine

https://diymachines.co.uk/

The drawings I created for use with my machine:
https://geni.us/EtsyCNCDrawingFiles

Inkscape 0.48.5 for Windows:
https://inkscape.org/release/inkscape-0.48/?latest=1

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SAY THANKS:

Provide continual and dependable support through Patreon:
Support us on Patreon: https://www.patreon.com/diymachines

Buy me a coffee to say thanks: https://ko-fi.com/diymachines

SUBSCRIBE:
■ https://www.youtube.com/channel/UC3jc4X-kEq-dEDYhQ8QoYnQ?sub_confirmation=1

INSTAGRAM: https://www.instagram.com/diy_machines/?hl=en
FACEBOOK: https://www.facebook.com/diymachines/

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List of camera and lighting equipment I use:

Sony A7 III: https://geni.us/Sony-Alpha7-III
Tamron 28-75mm F2.8 RXD A036SF Lens for Sony-FE : https://geni.us/TamronRXD-28-75mm
Aputure Amaran HR672C: https://geni.us/AputureAmaranHR672C
Aputure MC: https://geni.us/FAPGL
RØDE VideoMic Pro+: https://geni.us/RodeVideoMic-ProPlus

Blue Snowball iCE: https://geni.us/BlueSnowball-iCE
Philips Hue Lightstrip Plus: https://geni.us/PhilipsHue-LightStrip

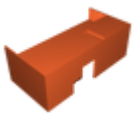
Disclaimer:
This video is shared for demonstration purposes only.

Custom Section Custom Section

Category: Electronics

Model files

raftmount.stl



y-servo-housing.stl

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electronicshousing-lid.stl

Find source .stl files on Thingiverse.com

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