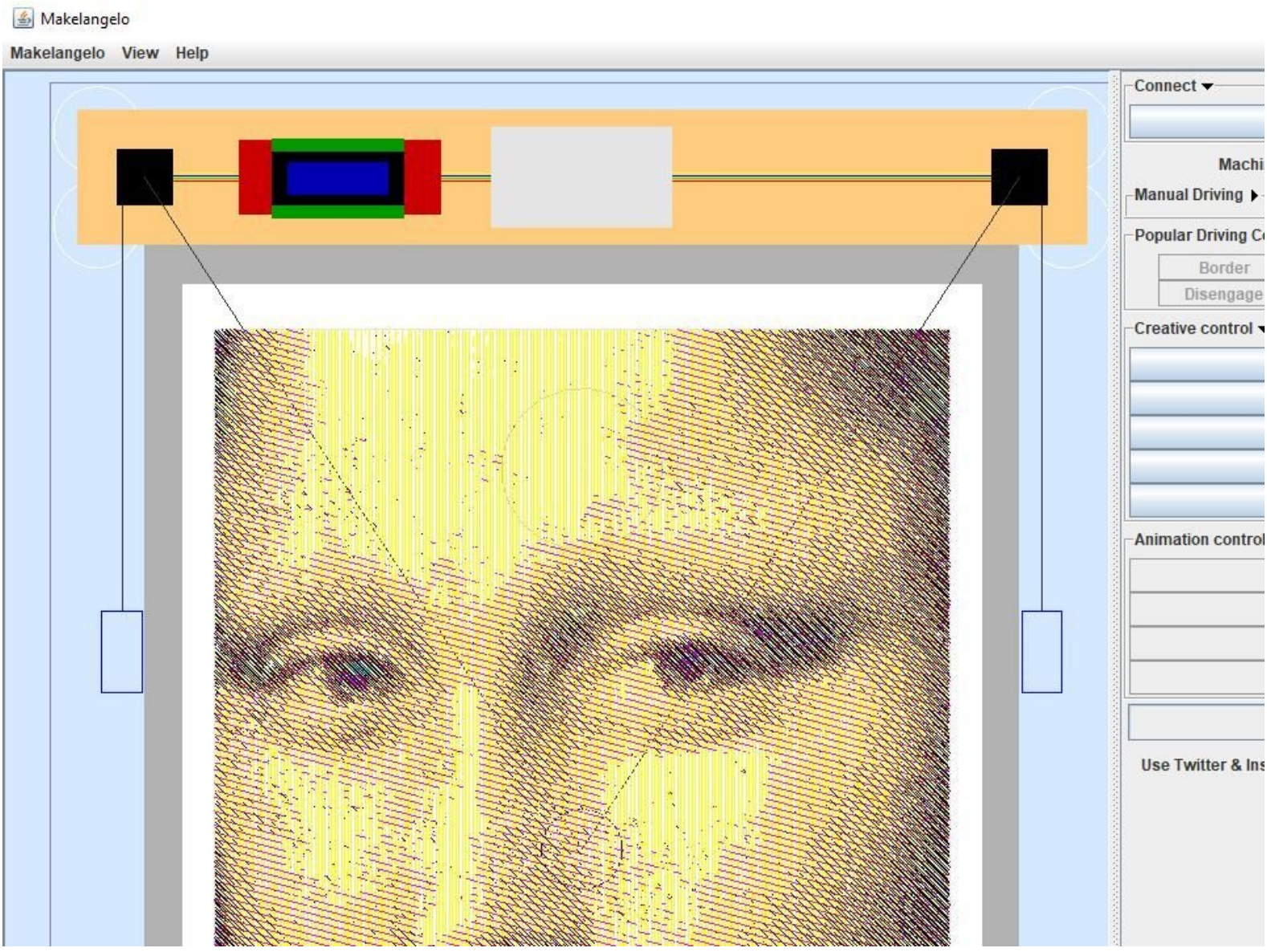
mcr

5. Makelangelo Software Guide

Instructions for running the software for the first time, preparing the drawing and loading it to Makelangelo 3.3 or 5.

Written By: Dan Royer



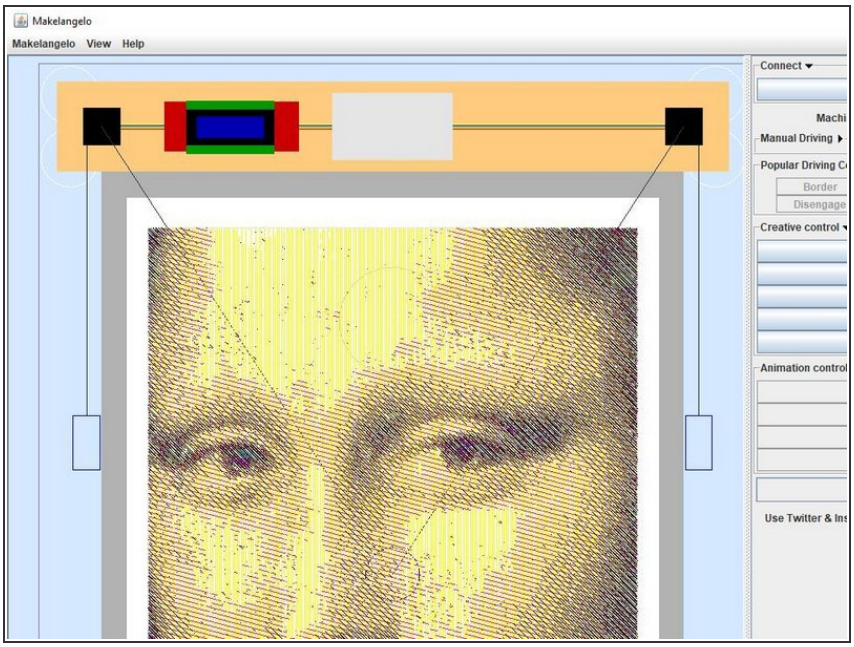
© 2019

INTRODUCTION

There is more than one way to **Prepare** art and more than one way to **Run** the robot. It's OK to skip some steps.

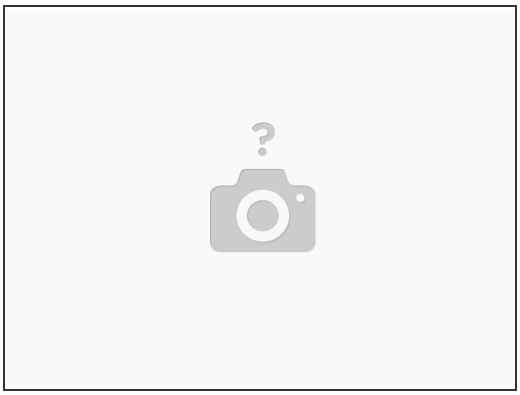
© 2019

Step 1 — Install Java and Makelangelo Software



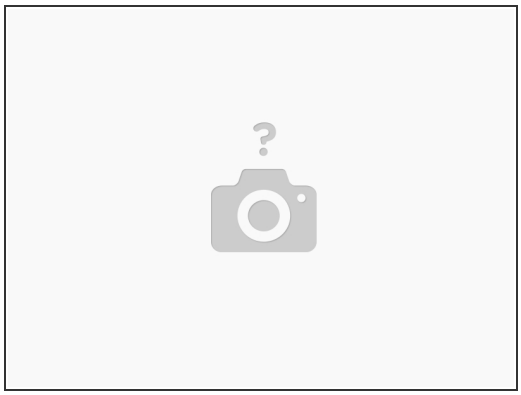
- I don't have a picture for this. Please enjoy this Mona Lisa.
- Java can be downloaded from https://www.java.com/en/download/
- Makelangelo Software can be downloaded from https://www.marginallyclever.com/product...

Step 2 — Install Windows Drivers



- If you are on Windows, please make sure you already have the drivers for the RUMBA board from https://reprap.org/wiki/RUMBA#RUMBA_USB_...

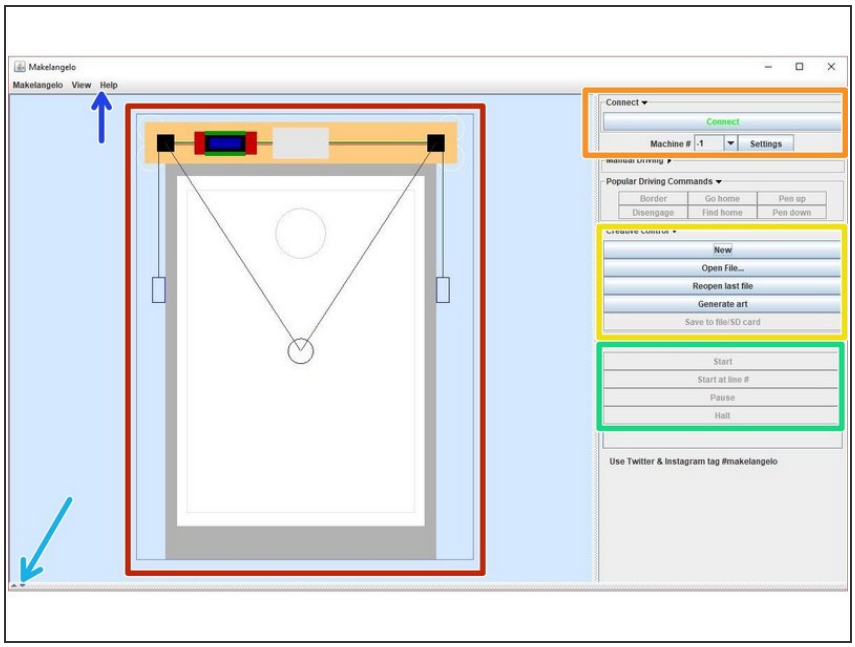
Step 3 — Run Makelangelo Software



- Double click on the app in your PC.
- Some windows users may need to click the *start windows.bat* file instead.

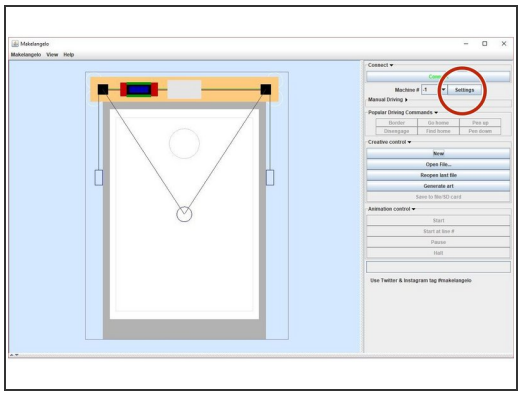
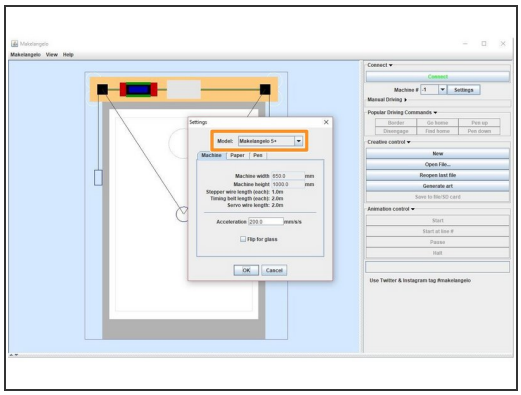
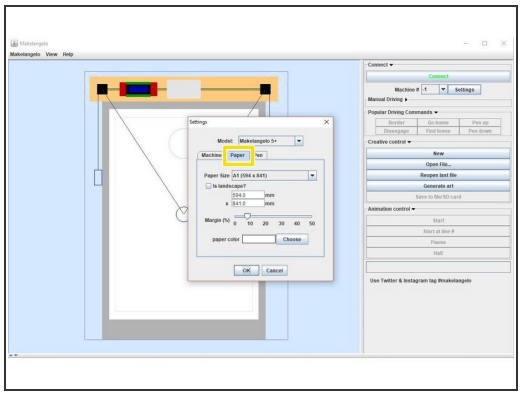
© 2019

Step 4 — Familiarize yourself with the controls



- In the main window you can drag to pan and scroll the mouse wheel to zoom the *what you see is what you get* preview.
- The *Connect* panel is like a phone call from your PC to your robot and allows for direct control.
- The *Creative control* panel is for managing art that will be drawn by the robot.
- The *Animation control* panel is also used for direct control of the robot: start, stop, pause, etc.
- The advanced dialog at the bottom shows the conversation with the robot and gives you a way to directly type commands in text.
- The top level menu has helpful links to the support forums and more configuration options.

Step 5 — Adjust settings

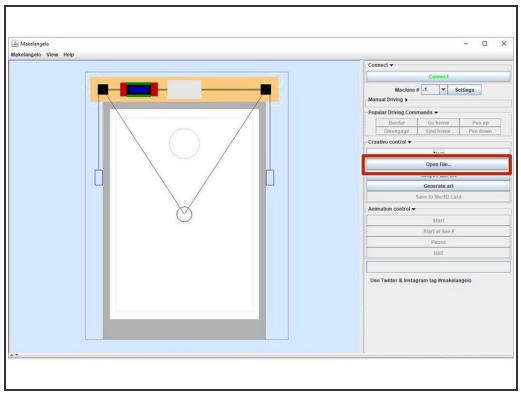
- Click the *Settings* button.
- Change the *Model* to your machine version.
- Click *Paper* and then change the *Paper Size*, *Is Landscape*, and *Margin* to match your preferences.

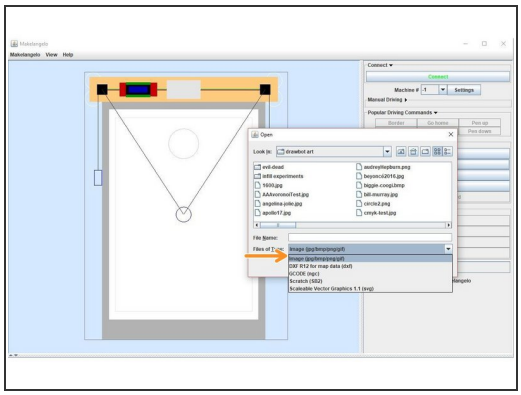
ⓘ A Makelangelo 5 can draw A1 portrait, A2 landscape.

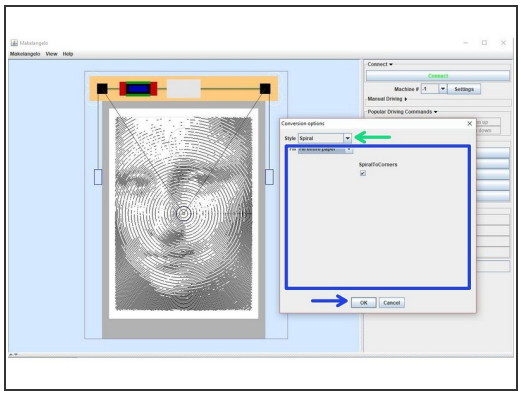
- Close the settings dialog by clicking 'OK'. You are now ready to prepare a drawing.

© 2019

Step 6 — Prepare a photo



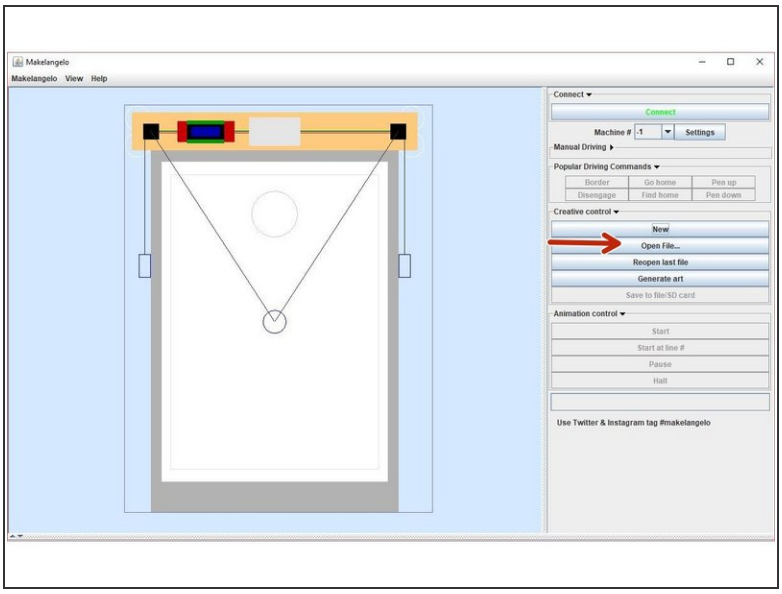


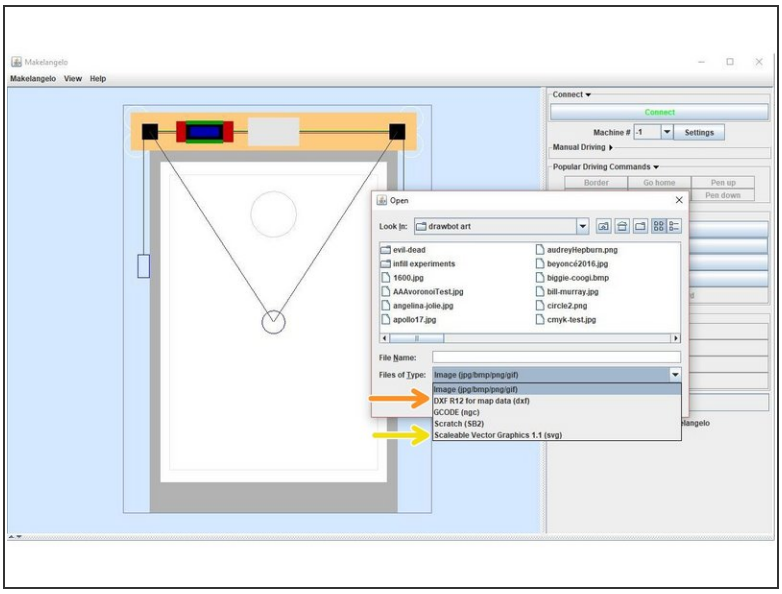


- Click *Open File...*.
- At the bottom of the save dialog change the **Files of Type** to *Image*. Select your jpg, png, bmp, or gif.
- Play with *Conversion Options* until the preview looks appealing. There are several major styles.
- Some styles are *iterative* and take time to generate results - let them run until you are satisfied. Others may have sub-options for tweaking.
- Close the *Conversion Options* dialog. Your image is ready to Run.

© 2019

Step 7 — Prepare a vector file



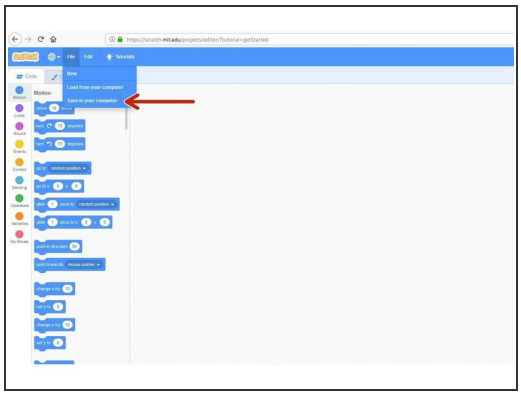
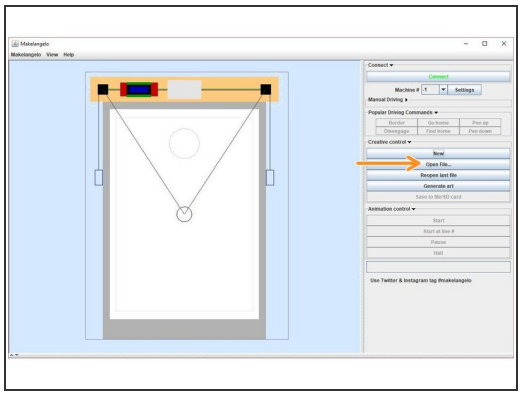
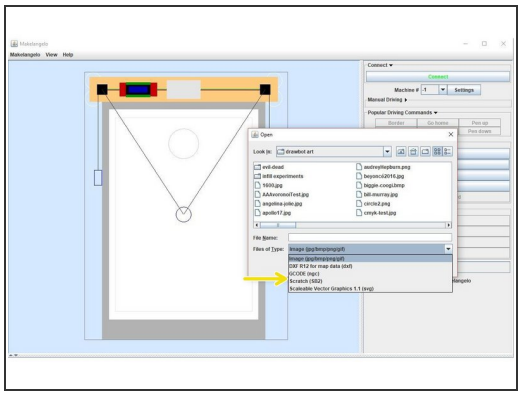


- Click *Open File...*.
- At the bottom of the save dialog change the **Files of Type** to *DXF R12 for map data (dxf)*. Select your file.

DXF may offer to *optimize on load*. This will greatly improve your drawing time AND will take longer to load your file. Choose wisely.

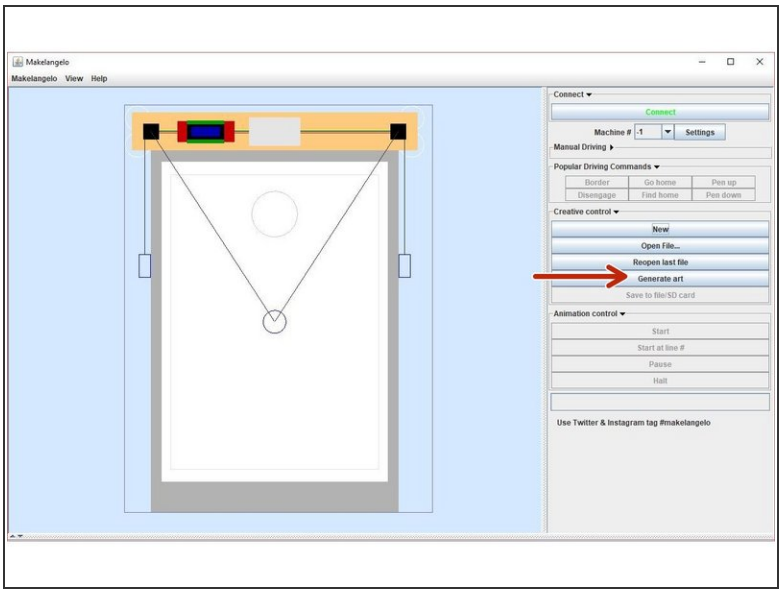
- Another option is *Scalable Vector Graphics 1.1 (SVG)*. SVG files are automtically scaled to fill the margins of the paper.
- Your image is ready to Run.

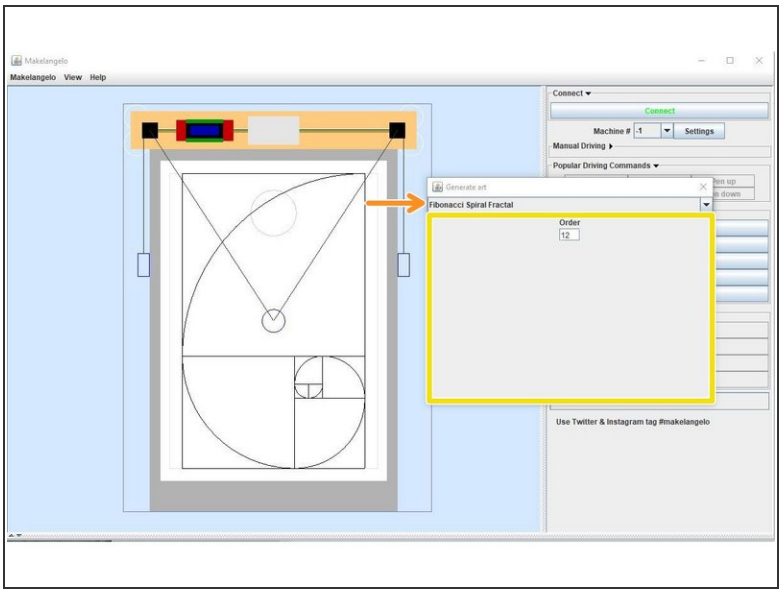
Step 8 — Prepare a Scratch file

- Build your Scratch drawing at https://scratch.mit.edu/.
- Click *File > Save to your computer*.
- In Makelangelo Software, Click *Open File...*.
- At the bottom of the save dialog change the **Files of Type** to *Scratch (SB2)*. Select your file.
- Your image is ready to Run.

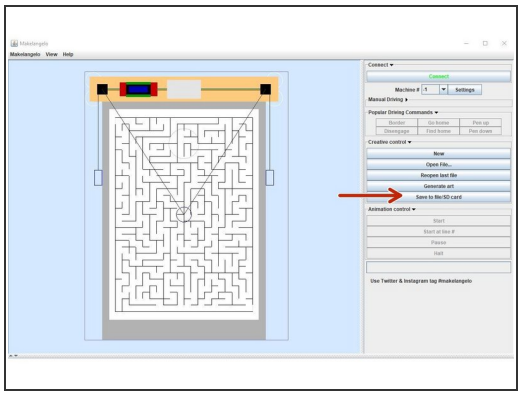
Step 9 — Prepare a Generated drawing

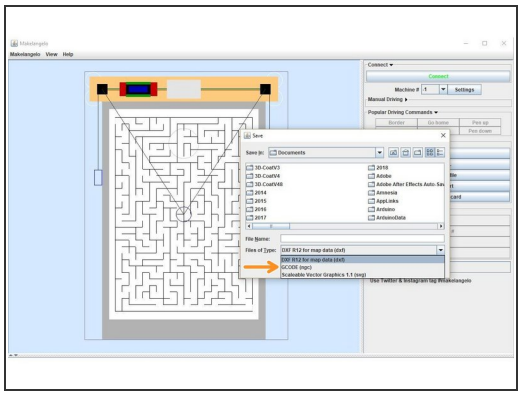


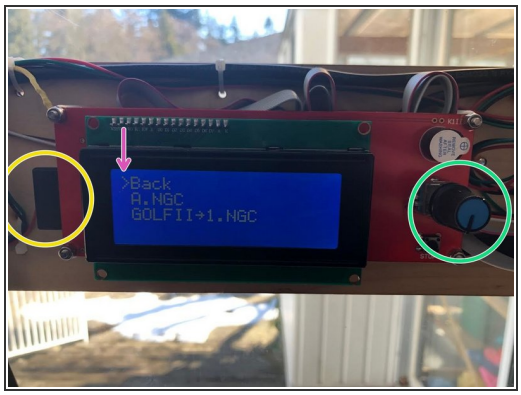


- Click *Generate Art*.
- From the first drop down, select a style of art to generate.
- Adjust any additional parameters. After changing a parameter you may need to press the Tab key to see changes in the preview window.
- Close the additional parameters dialog. Your image is ready to Run.

Step 10 — Run the robot unconnected



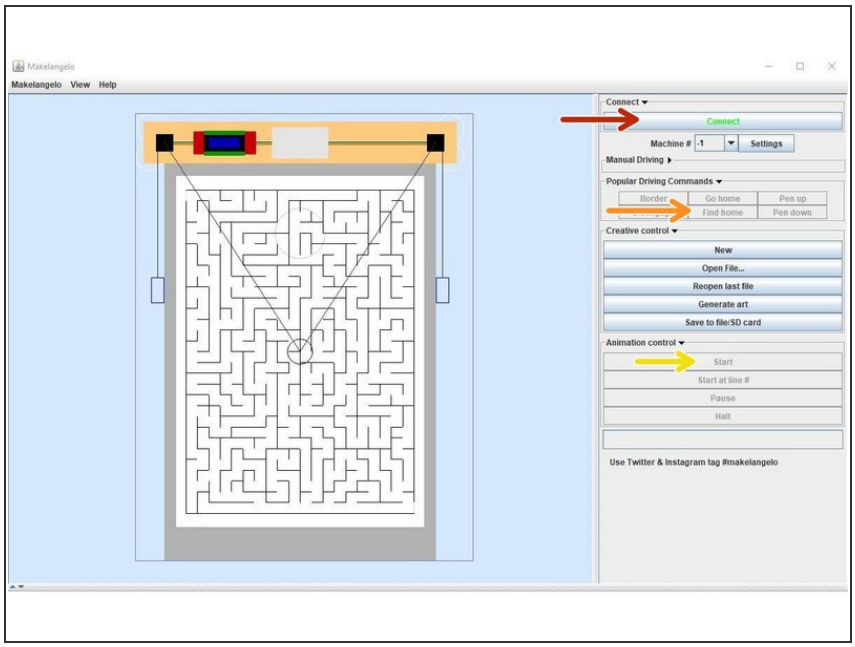




- Put your SD card in your computer and click *save to file/SD card* in the Makelangelo Software.
- At the bottom of the save dialog change the **Files of Type** to *GCODE (ngc)*. Save your file to the SD card.
- Eject the SD card and plug it into the robot on the left side of the LCD panel.
- Click the dial, scroll down to **print from SD card**, click again, scroll to the file, and click one more time. Follow the prompts on the LCD panel.

Don't forget to **Find home** on the robot before starting your drawing! Find home can also be done through the LCD menu.

Step 11 — Run the robot connected

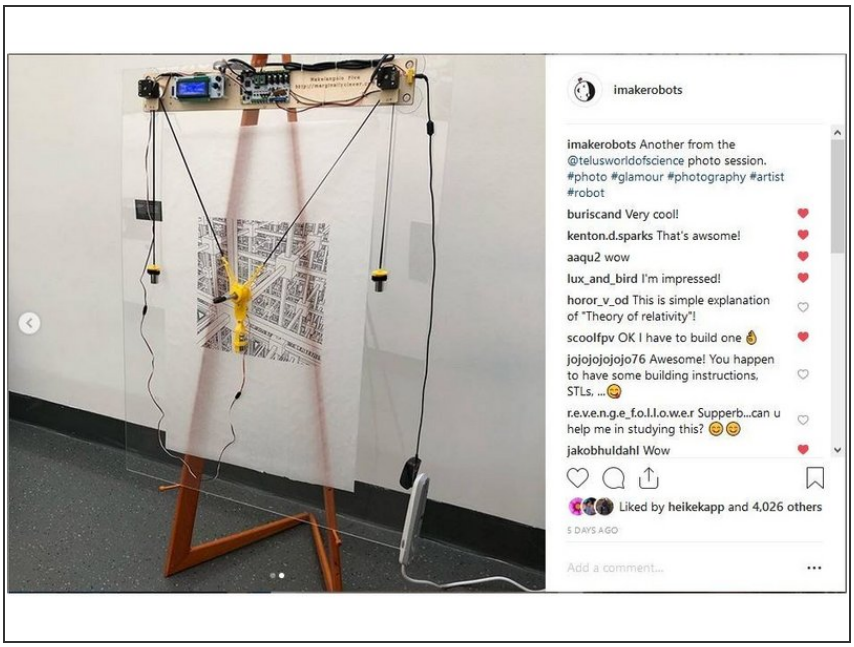


- Plug the a USB cable from the robot into your PC running Makelangelo Software.
- Click *Connect* and choose one of the USB ports. After a few seconds the buttons under connect should turn from grey to black.

If there are no ports, refer to the *Updating Makelangelo firmware* guide steps for updating the USB driver.

- Click *find home*. The weights will move up until they touch the switches next to each motor. Then the pen holder should move back to a point ~20cm below the center of the machine.
- Click *Start*. Follow the prompts on the LCD panel.

Step 12 — Share your results



- Take a picture.
- Post it on social media. #plottertwitter is a great tag to use!
- Tag your post #makelangelo or @imakerobots so we can +1 like kudos it.

Your robot should now be drawing your work of art. Congratulations!