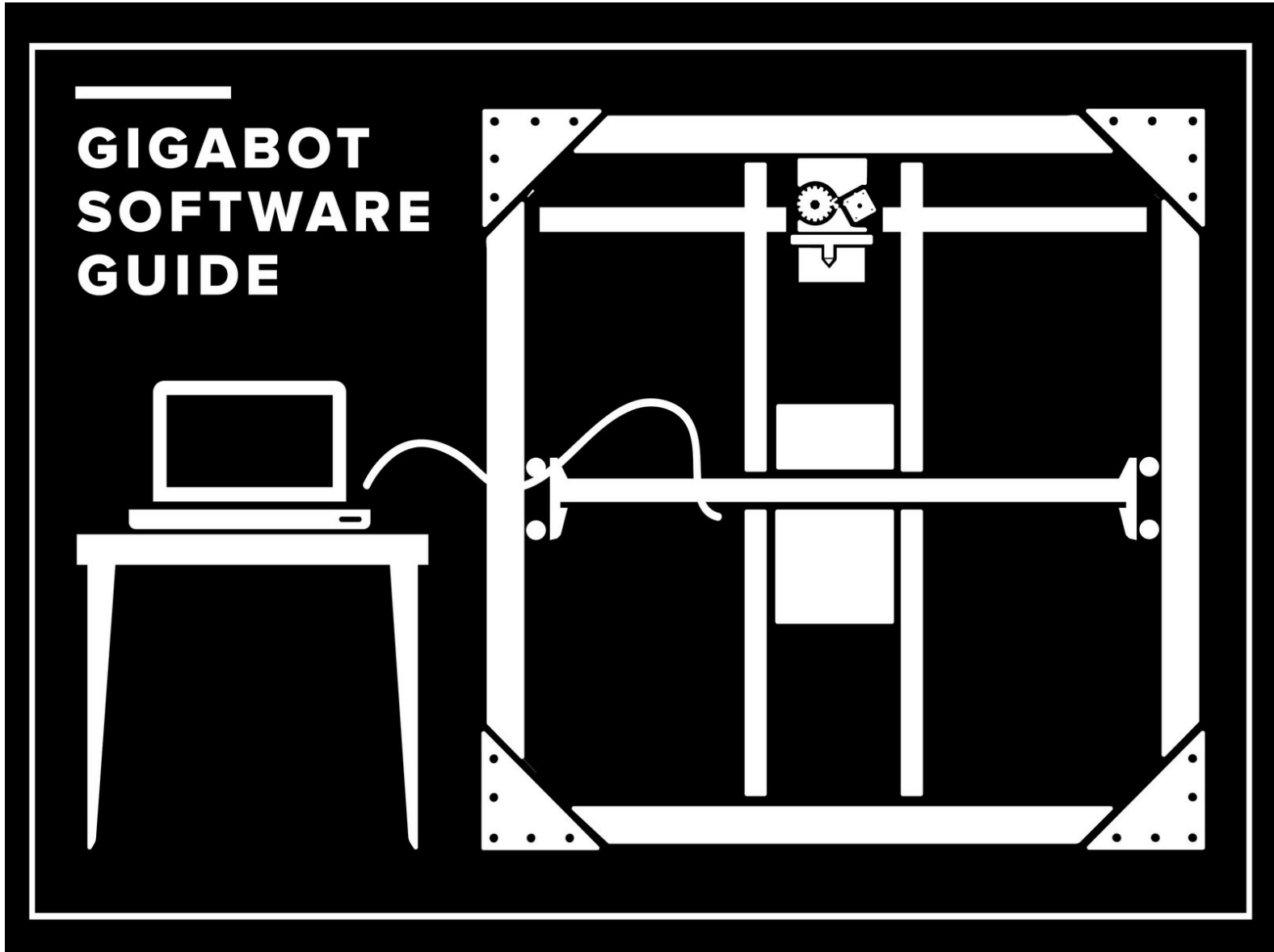


re3D

Gigabot Software Set-Up

This guide will walk you through the steps necessary to install the software to control your Gigabot.

Written By: Chris Gerty



INTRODUCTION

If you have inputs to this guide, feel free to edit it directly, or add comments at the appropriate steps.



TOOLS:

- [Laptop](#) (1)
 - [Internet Connection](#) (1)
 - [Constructed Gigabot](#) (1)
-


Step 1 — Gigabot Software Set-Up



★ Gigabot is fully compatible with **open source programming tools** supported by the [RepRap community](#). *We encourage you to become an active participant in this thriving community!*

- In this guide, you will:
 - **Download the [Virtual Communications Port Driver](#).** The VCP talks to your USB port in a way *Gigabot* understands.
 - **Download [Slic3r](#).** This program allows you to take 3D geometry (.STL files) and convert them into code that communicates with *Gigabot*.
 - **Download [Printrun \(Pronterface\)](#).** This program is the interface you will use to communicate with *Gigabot*.

Step 2 — Install the Virtual Comm Port (VCP) drivers.



2

DOWNLOAD

VISUAL COMMUNICATIONS PORT [VCP]

VCP Drivers

Virtual COM port (VCP) drivers cause the USB device to appear as an additional COM port available to the PC. Application software can access a standard COM port.

This software is provided by Future Technology Devices International Limited "as is" and any express or implied warranties, including, but not limited to, merchantability and fitness for a particular purpose are disclaimed. In no event shall future technology devices international limited be liable for any exemplary, or consequential damages (including, but not limited to, procurement of substitute goods or services; loss of use, data, or profit) arising in any way out of the use of this software.

FTDI drivers may be used only in conjunction with products based on FTDI parts.

FTDI drivers may be distributed in any form as long as license information is not modified.

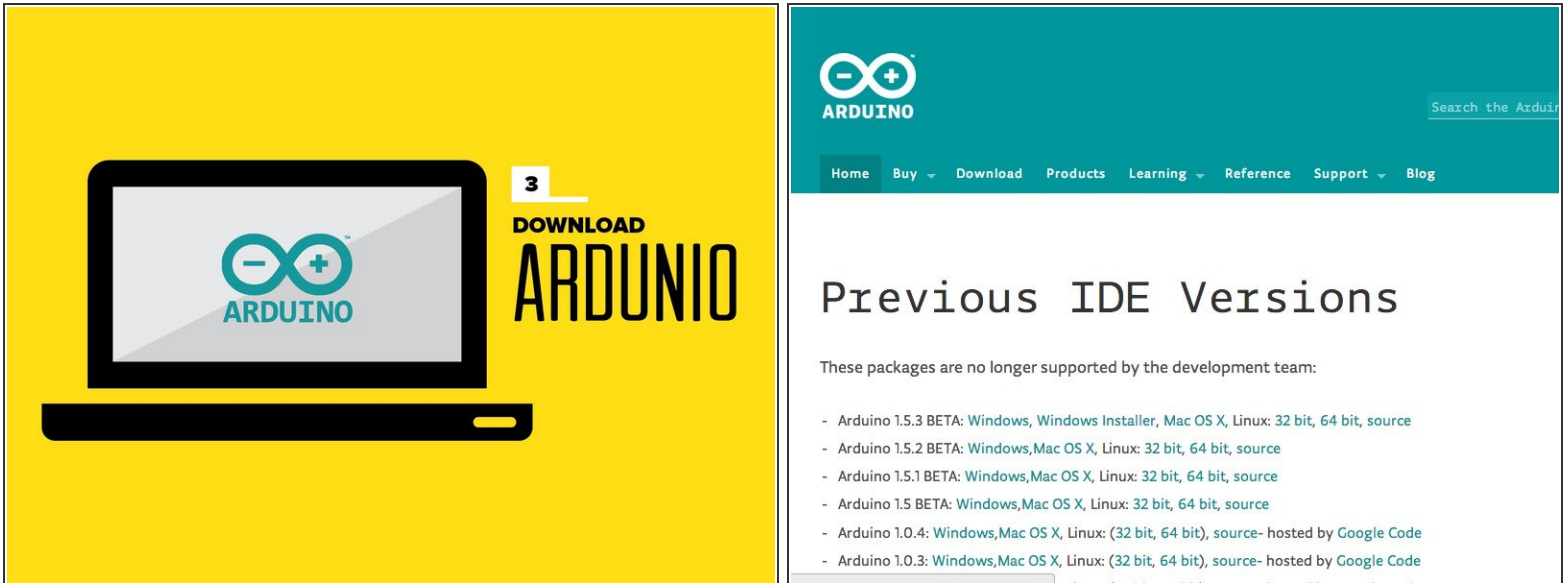
If a custom vendor ID and/or product ID or description string are used, it is the responsibility of the product manufacturer to maintain any result of making these changes.

Currently Supported VCP Drivers:

Operating System	Release Date	Processor Architecture							
		x86 (32-bit)	x64 (64-bit)	PPC	ARM	MIPSII	MIPSIV	SH4	
Windows*	2013-08-01	2.08.30	2.08.30	-	-	-	-	-	
Linux	2009-05-14	1.5.0	1.5.0	-	-	-	-	-	All FTDI devices Refer to TN-10
Mac OS X	2012-08-10	2.2.18	2.2.18	2.2.18	-	-	-	-	Refer to TN-10
Windows CE 4.2-5.2**	2012-01-06	1.1.0.10	-	-	1.1.0.14	1.1.0.10	1.1.0.10	1.1.0.10	
Windows CE 6.0	2012-01-06	1.1.0.10	-	-	1.1.0.14	1.1.0.10	1.1.0.10	1.1.0.10	

- Download the [Virtual Communications Port Driver](#) for your operating system.
- ⓘ *You may need administrator rights, or need to right click and "Run as Administrator".*
- This installation happens quickly, and if you aren't sure if it successfully completed, there is no harm in making a second attempt.

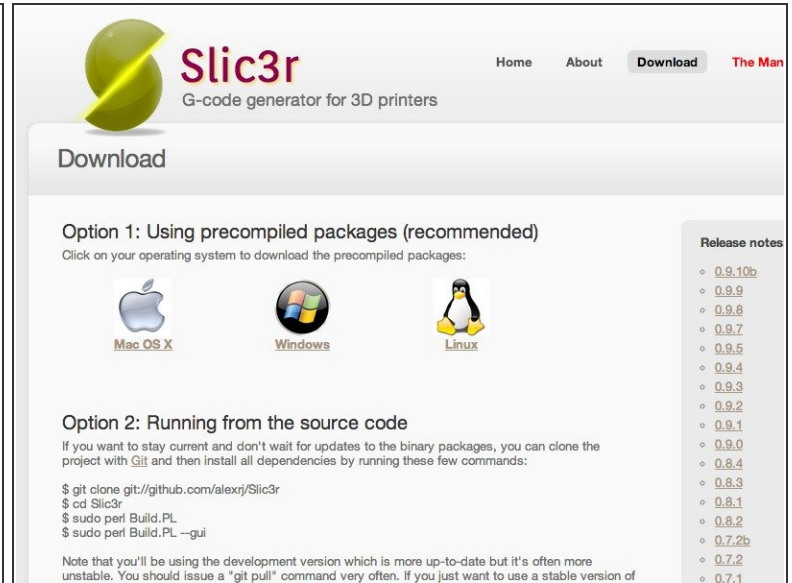
Step 3 — Install Arduino-0022, if you need to load new firmware.



i You can skip this step, unless you're downloading firmware for Gigabot.

- Download the latest (Ver. KS3.1) firmware here: <https://www.dropbox.com/s/swq88e15t8apb6...>
- The version of firmware that ships with your Gigabot speaks with the Viki LCD. To use Gigabot without the Viki LCD, new firmware must be uploaded with code pertaining to the display commented out.
- Run Arduino, open preferences, and specify your Sketchbook location.
 - Libraries must be put in the sketchbook under a directory called "libraries". The library itself must be in its own directory under this.
- Download a desired firmware suite.

Step 4 — Install Slic3r



- **Download [Slic3r](#)** and save to applications.
 - This program allows you to take 3D geometry (.STL files) and convert them into code that communicates with *Gigabot*.
- **Open the application.** Go to printer settings. Replace the contents of the "Start G-Code" box with a copy of the g-code lines below. (Please note it should be 1 g-code per line. Everything after the semicolon is a comment; see g-code image for example)

Step 5 — Install pronterface.



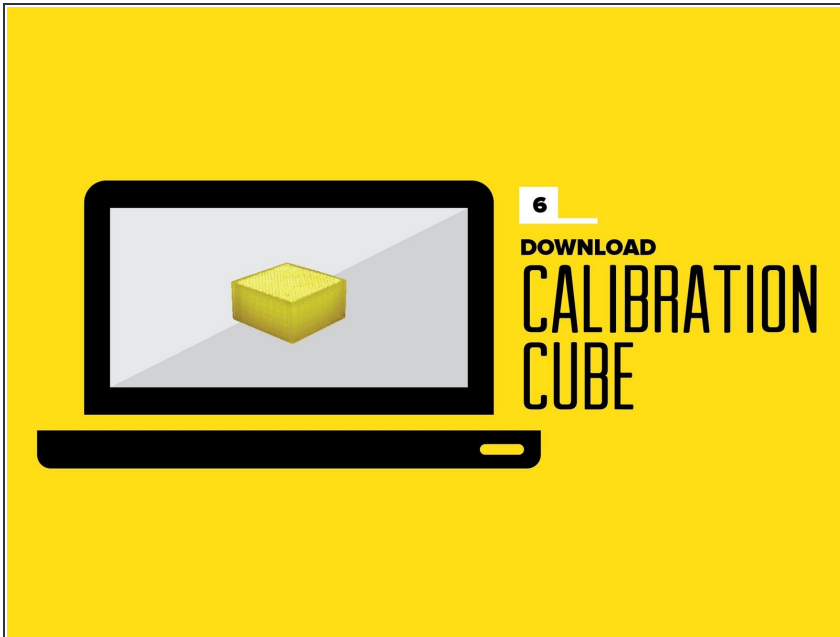
Index of /~kliment/printrun

Name	Last modified	Size	Description
Parent Directory		-	
Printrun-Mac-11July2013.zip	11-Jul-2013 21:10	33M	
Printrun-Mac-12July2013.zip	12-Jul-2013 00:13	33M	
Printrun-Mac-experimental-03Jun2013.zip	03-Jun-2013 18:23	29M	
Printrun-Win-Slic3r-11July2013.zip	11-Jul-2013 21:13	25M	
Printrun-Win-Slic3r-12July2013.zip	12-Jul-2013 00:16	25M	
Printrun-Win-experimental-Slic3r-03Jun2013.zip	03-Jun-2013 18:25	25M	
obsolete/	11-Jul-2013 21:06	-	

Apache/2.2 Server at kotl.kapsi.fi Port 80

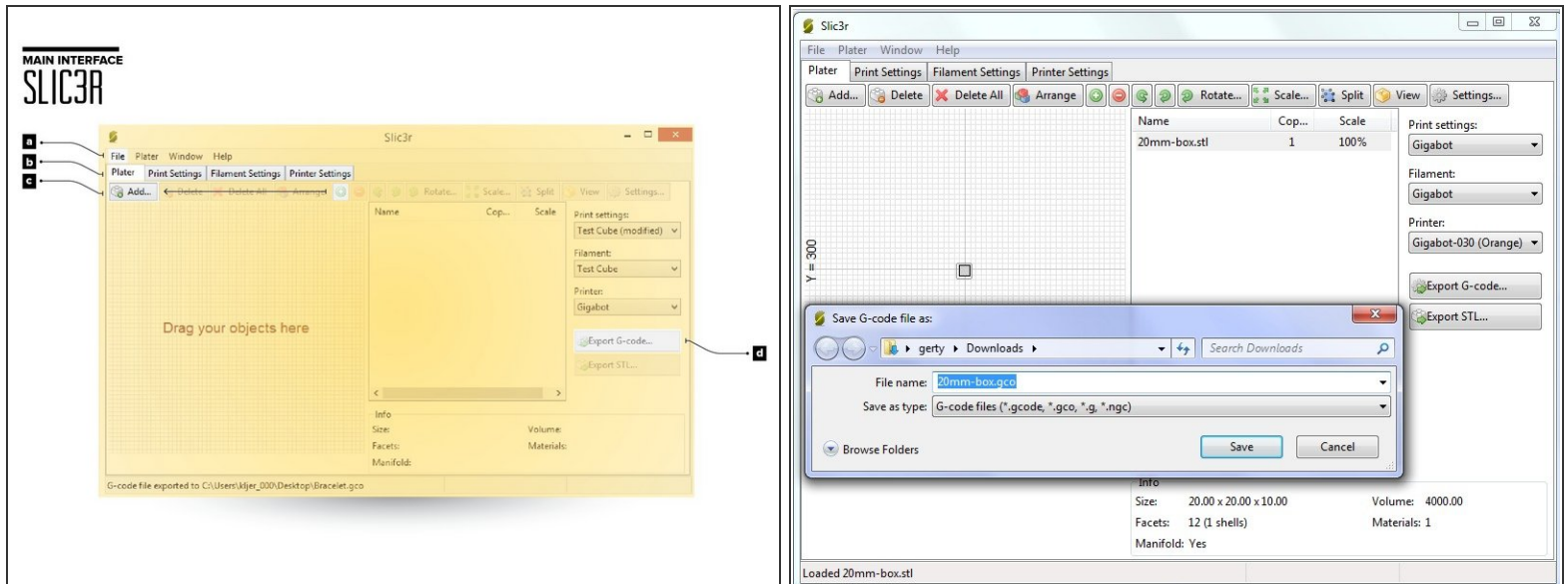
- Download [Printrun \(Pronterface\)](#).
- This program is the interface you will use to communicate with *Gigabot*. This can be done by loading the gcode file onto a micro SD card and putting it into the printer or feeding it through a feeder program.
 - *Run Pronterface and Slic3r separately.*

Step 6 — Download the Calibration Cube File



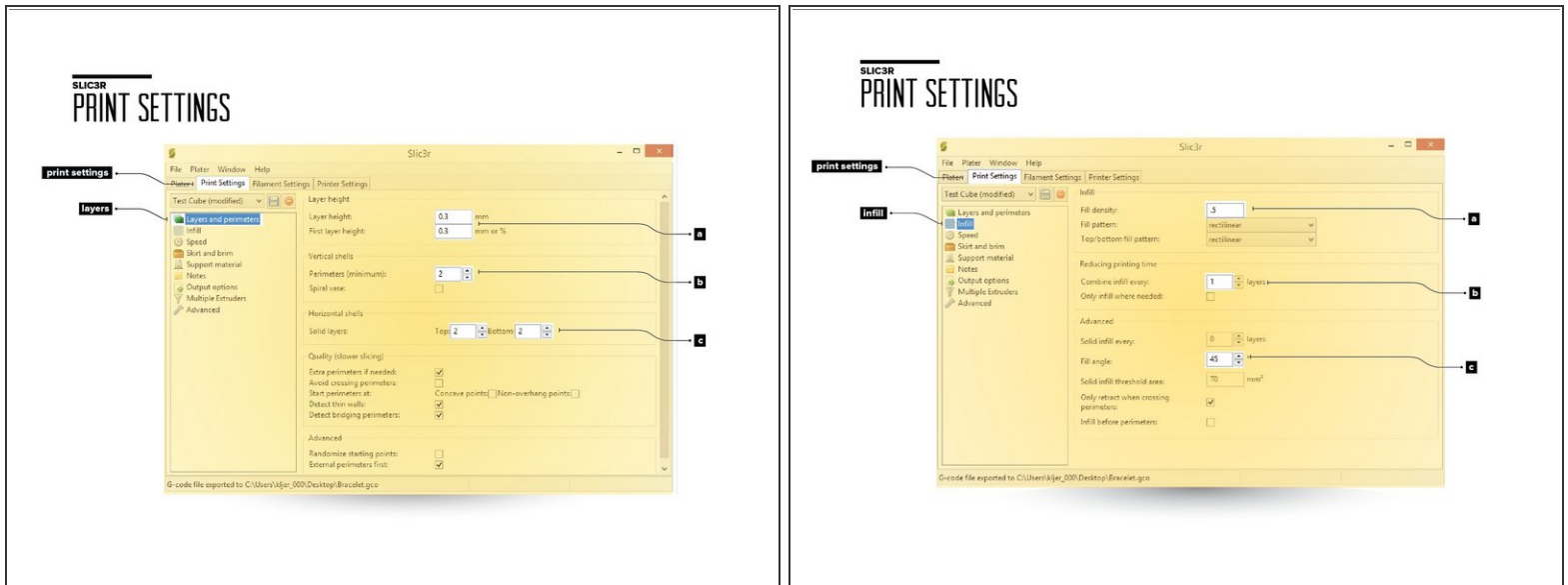
- To get started using the software, we're going to use a Calibration Cube to optimize the Gigabot set-up. Below are two options to work with.
- .STL : **Download the [.stl Calibration Cube](#)** from the re:3D wiki.
 - The .stl file needs to be processed in Slic3r (see next step) and exported as G-Code.
- G-Code : If desired, **Download the [G-code of the Calibration Cube](#)** from the re:3D wiki.
 - This is G-Code generated by re:3D. (This assumes a general calibration number for X, Y, Z, and Extruder steps per mm)

Step 7 — Using the Slic3r Interface



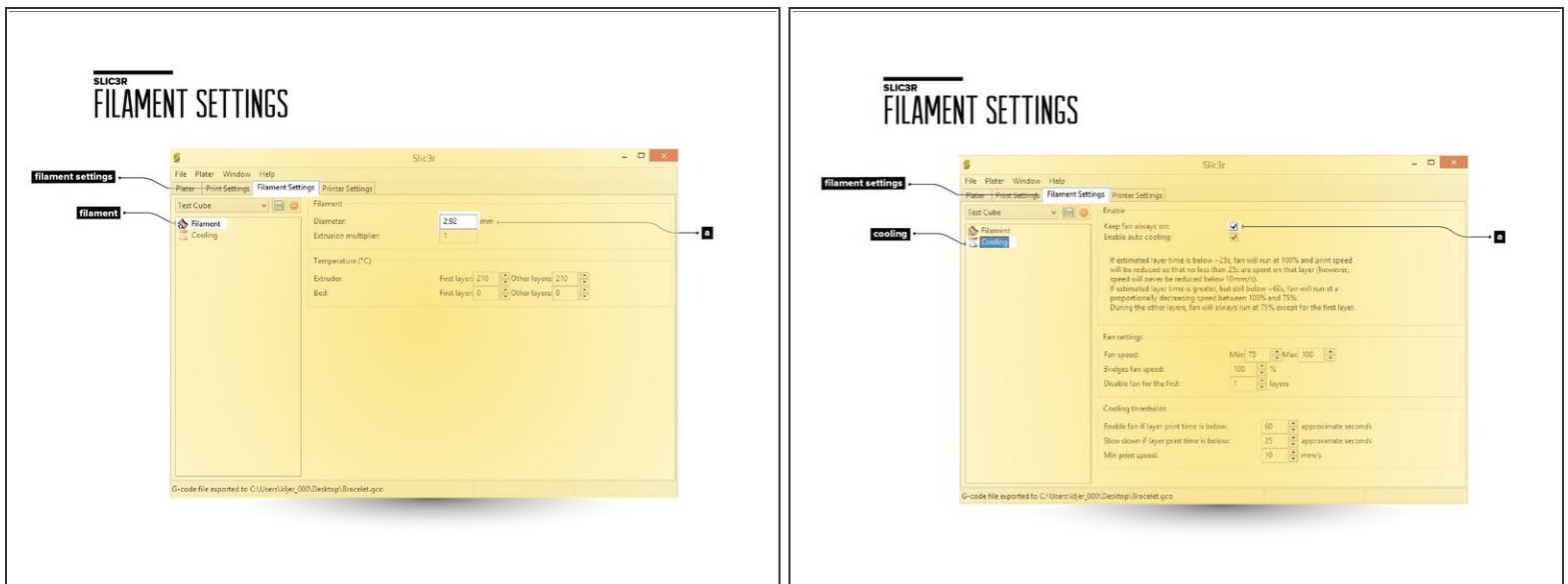
- Open Slic3r and load the .ini file from above. This will load an acceptable set of defaults for the Gigabot.
- Click "Add..." and load the .STL file for the calibration cube.
- Click "Export G-code..." and save the file, to be opened later in Pronterface. (see screenshot)
- Watch the status along the bottom of the screen as your calibration cube is (quickly) sliced.

Step 8



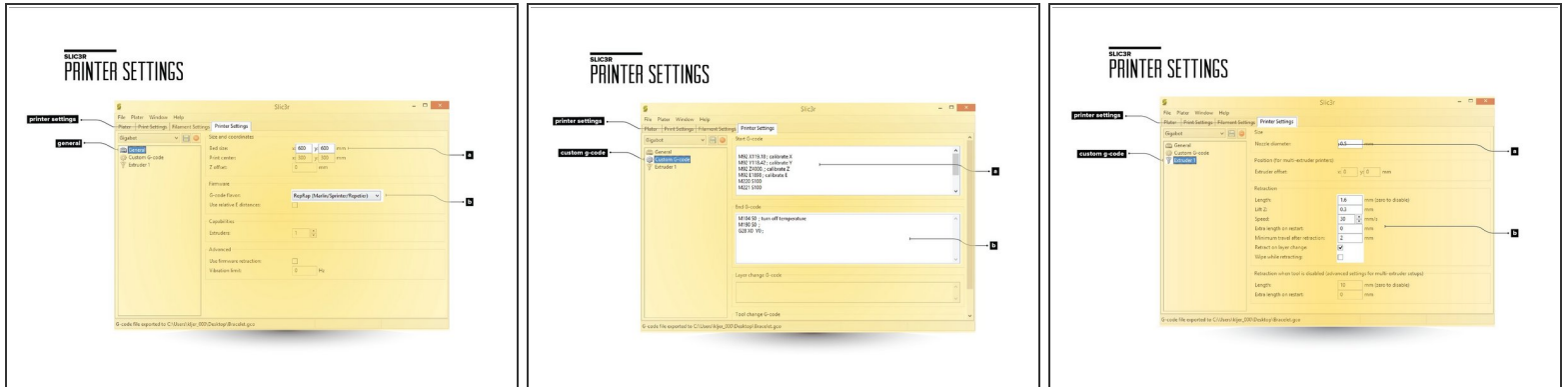
- Using the Slic3r Interface : Print Settings

Step 9



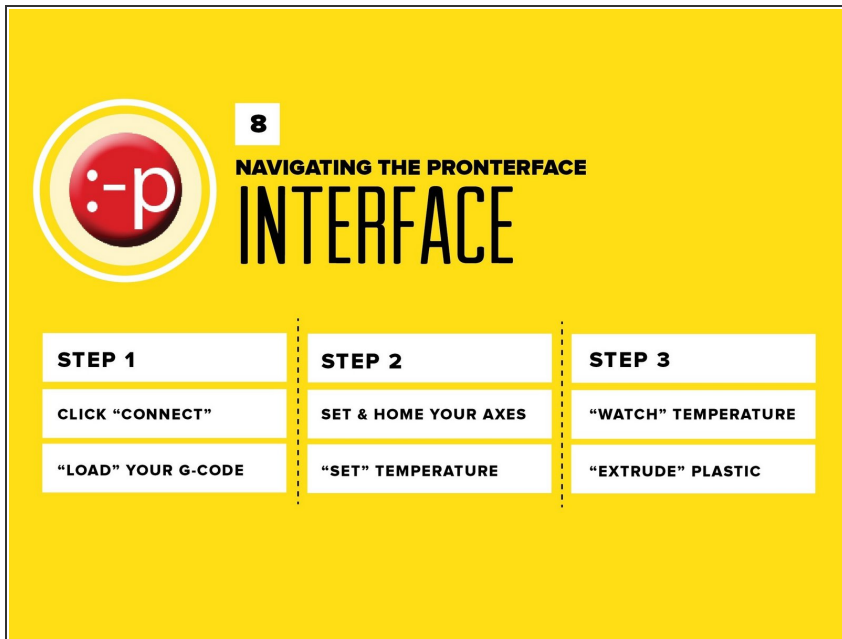
- Using the Slic3r Interface : Filament Settings

Step 10



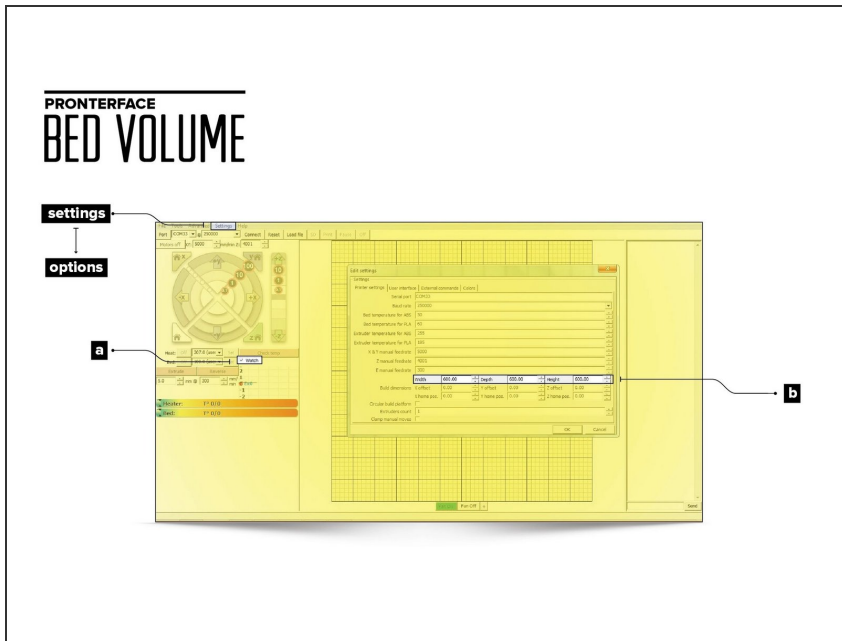
● Using the Slic3r Interface : Printer Settings

Step 11 — Using the Pronterface (PrintRun) Interface



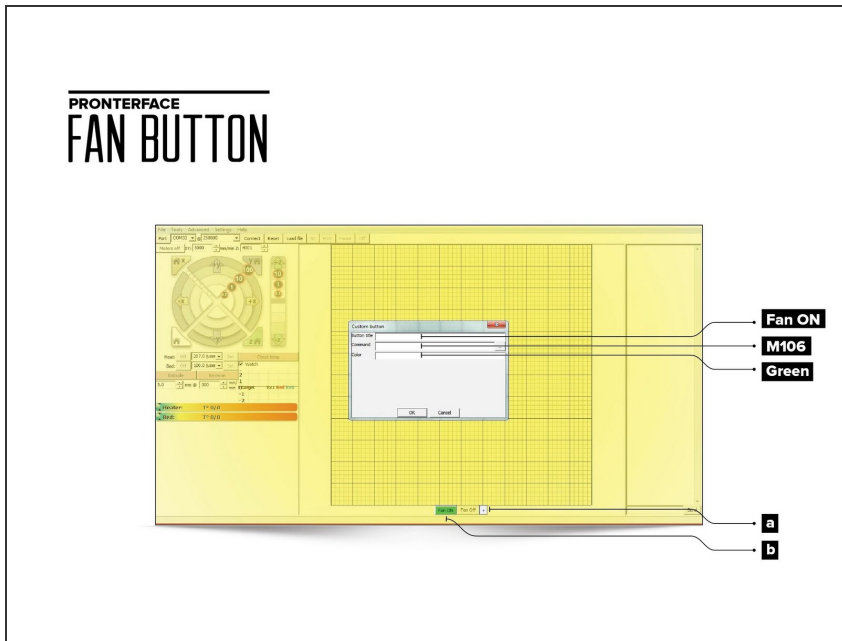
- **Connect Button** : Once you plug in USB connection from your Gigabot, open Pronterface, choose the appropriate comm port (usually the last), select 250000 for the speed, and click "Connect".
- Confirm that you are connected, by witnessing feedback from Gigabot in the status window on the right, ending with the status of the SD card.
- **Load Button** : Choose your G-Code file and upload it into Pronterface. You should see a representation of the first layer of your object on the plater.
- To view the layers that were generated by the G-Code, click on the Grid and scroll.
 - ① More visualization options, including a 3D mode, are available via the Preferences menu.

Step 12



- **Set the Width, Depth and Height to 600.** In pronterface go to Settings -> Options -> and edit the Width, Depth and Height to 600.]
- Close and re-open Pronterface and you will see the whole bed in the print preview screen.

Step 13



- **a: Click the + Button.** At the bottom of the screen is a button with a + symbol. This will let you add custom buttons to the Pronterface front panel. Go ahead and click on the + button.
- in the Button Title field put "Fan ON", in the Command field "M106" and the color Field put "GREEN".

Step 14 — Connect To Gigabot



- After powering up Gigabot and connecting the USB port to your computer, open Printron, select the

proper comm port, and use 250000 for the speed. Click connect.

Step 15 — Calibrate Your Gigabot

- Calibrate your printer

