Glowforge Projects: Get to Know Your Machine with Lauren Marcinek

Chapter 1 - Glowforge Projects: Get to Know Your Machine

Overview

(upbeat music) - Hi, everyone, my name is Lauren Marcinek. I'm a member of the Creativebug family here. I'm also a huge Glowforge enthusiast. So for those of you that are not familiar with the Glowforge, it's a laser engraver/cutter that you can make all sorts of projects with. So my favorite thing about this machine is the ability to make personalized gifts to give to friends and family. To get you started, I'm gonna show you the ins and outs of the machine, how to add the materials, how to get connected, and then we're actually gonna do a little project that'll be helpful for future projects that you make.

Parts & Materials

- Let me walk you through the machine. This is the Glowforge Pro. It's one of three models that Glowforge offers. They have the Basic, the Pro, and the Plus. And they're all about the same size. The only difference is how fast the machine itself can engrave or can cut. This is the start and stop button, and you're gonna use that to start your projects and also stop it. So if you're running a project and midway something's not looking right, you can hit that, and the laser will pause. And everything will stop, and that's the safest way to stop a project while it's running. Next, we have the lid, the little lip. You're gonna use this to open and to close the machine, and you'll do this to feed in the material that you want to cut or engrave. So we're gonna open this up, just gonna push up as far as it'll go. And then there is a little lever here, so that will keep it open. You don't have to worry about it falling back down. The other thing is this lip right here actually snaps down. Can pull that down, and that way the machine is flush. If you're putting a large item in here, you don't have to hurdle it over the lip. Comes right down, and it will rest here. Next, we have the camera. It's located on the underside of the lid, and what the camera does is it shows what is within the Glowforge chamber. So when you're adding materials to here that you're gonna cut and engrave, the camera will show you what is in the chamber, and you can drag that design to fit appropriately on those materials. Here's the laser, and that is actually what's going to cut and engrave. It goes back and forth using this arm. We have the crumb tray here, which is really useful for when you're working on intricate projects. When you go and you cut something and you pick it up, a lot of the small pieces are gonna fall out. So this crumb tray will collect that for you so that it's not such a mess. The other piece with the crumb trays, if you're working on a project that the material has a lot of depth to it and you put it on the crumb tray, it's not going to clear the space between the laser and the crumb tray, and so you might find yourself in some scenarios where you actually need to remove the crumb tray. You can simply do that by pulling down this lip, like we did, and then you're gonna grab the lip of the crumb tray and you can pull it out. When you're pulling it out, you need to make sure that you don't hit the tray on the top of the laser. That will cause the machine to fall out of calibration, and then it won't engrave or cut correctly. We're gonna just pull this out right here. And now from a depth perspective, you've got a lot more room for that thick item that you're gonna be engraving on. An example would be if you're doing a really thick cutting board, engraving on that, or a sign. You'd want a little bit more space than what you would have between the crumb tray and the laser. I'm gonna put the tray back in. Slide it right in there. All right. Now this bottom piece will snap, on both ends, back up, and you can grab the lid and gently pull it back down. Lastly, we have

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the filter. With Glowforges, it's really important that you ventilate your machine. So on the back of the machine, there is a little port for the ventilation. There are several options for all of the machines. One is to just snake the coil out the window, which some folks do. The other option is to have more formal ventilation put in. But lastly, and probably most conveniently, Glowforge sells a filter. So the snake will go right into the filter and will ventilate properly. You'll plug that in to electricity, and make sure that you turn it on every single time that you run the Glowforge. It doesn't matter which way you choose to ventilate your machine. It's just really important that you do it. If not, all of the particles from the projects that you're working on, whether you're cutting or engraving, become airborne. That's not great. Also, for your machine maintenance, it's really important that all of the particles are getting sucked out of the machine and not leaving a lot of residue on the lid or on the camera. There are a variety of different materials that you can use with the Glowforge. Some of my favorites I have here. So there's medium maple hardwood, some thin natural leather, acrylic. I've pulled the corners back on each of these so that you can see, but typically I would not recommend pulling the masking off of your materials until you're ready to use it and you know what project you're doing just because, depending on the project, you might want that masking to help minimize the burn marks and protect the material. You'll notice that the materials here have QR codes on them, and that means that they're Proofgrade. They're sold by Glowforge. And the nice part about working with Proofgrade material is when you place them in the Glowforge chamber, the camera that is located in the lens actually reads the QR code, and it will automatically populate the settings you need to print and engrave. You won't need to go in and set those for yourself. While it's recommended that you work with Proofgrade materials, it's not totally necessary. So you'll see here that I have a slate table mat. I also have a wooden sign. These items don't have QR codes, meaning I'll have to manually set them in the Glowforge when I would do a project. However, you can engrave on them just fine. Also, I haven't tried it, but one of the things that I've seen online on the Glowforge site is you can actually engrave a MacBook. The machine has the ability to do that. So you could place your MacBook in there, you could put a design, and it would engrave the surface of the MacBook. For a complete list of materials that you can use with the Glowforge, please visit Glowforge.com.

Sample Project

- A great first project that you can make is a Glowforge tool that's really helpful for future projects. The template is actually provided by Glowforge, and it's located in your Glowforge Design Library. Grab your laptop and go to app.glowforge.com. It's really easy to create an account, and that'll allow you to access the Design Library. Now that you've logged in, you can access the Design Library. Here, this will hold all of the different projects that you've done previously, and it will also have some preloaded templates for you to use. If we scroll down to the bottom here, you'll see that these are all different templates that Glowforge has actually provided us with to get us started and get us familiar with all of the different things the machine can do. So down here is where we're gonna find the template for the tool that we're going to make. The first step is to turn the machine on. When you turn the machine on, note that it might take a couple minutes for it to calibrate, and that arm and the laser are gonna move around a little bit. Completely normal. It's just getting the lay of the land within the Glowforge chamber. If this is the first time that you're using your printer, you wanna make sure that the printer is paired with your WiFi and your computer. To do that, you can click on the upper right-hand corner. It'll show you any printers that are currently linked. If you need to add a printer, you can select settings, Glowforge Printer, Add a Printer, and you're going to

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follow the step-by-step instructions that Glowforge provides in order to set up your machine and then also how to set up the device to pair to your WiFi. Since we've already done that, we can go ahead and select our file to get started. I've gone ahead and opened the file, and you'll see on my computer here, we've got the design file, along with live footage of what's in the chamber. So it looks pretty dark in there right now because we have nothing in the Glowforge. We're gonna go ahead and add our material. For this project, we're gonna go ahead and use medium maple hardwood to complete it, and this is Proofgrade materials. To put it into the machine, I'm going to lift the lid. Place the material in the Glowforge, and you can put it anywhere on the crumb tray. I'm just gonna put it in the lower left-hand corner and close the Glowforge. The Glowforge has scanned, so now it recognizes that there is material in the machine on the crumb tray. We can go ahead and select our artwork just by clicking on it and dragging it onto the material itself. I'll place it right there. You'll notice in the upper left-hand corner, it's displayed medium maple hardwood. This means that the machine has recognized the QR code, and it's preset all of the different settings to engrave and to score and also to cut. To see in detail what the settings for each of these are, you can click on the component. You will see it selected Cut for this specific component. If I click into that, you'll see the specific settings that it's pulling through. Again, this is really nice, you don't have to think about what those should be. It will auto-generate for you and makes the process a lot easier. This looks great. Before we get started, I've got one last step, and that is to turn on the filter. (Glowforge beeps) (Glowforge whirs) Click Print. And then press the glowing button. I've gone ahead and already turned off the filter just so you all can hear me a little bit better. Once the print status on your screen has updated to Print Done, it's safe to remove your project from the machine. You can simply just lift the lid on your Glowforge, pick up the piece of material, and you'll see that the tool falls right out. Now I'll grab the tool, and you'll see very quickly that some of the little cut pieces fall out. This is where the crumb tray comes in handy. It'll help to collect the really small pieces, and then the others you can simply gather from the crumb tray. Close the lid. And the last step is to pull the masking off of the tool. To do this, I would highly recommend using a weeding tool. Makes it a lot easier. Another at-home solution would be to use a pair of tweezers. And your tool is ready to go.

Doâ ™s and Donâ ™ts

- Now we're gonna wrap up with some dos and don'ts. A very important do is to make sure that you're taking care of your machine and that you're doing regular maintenance. This is really important because when there's a lot of dust particles in the Glowforge chamber, that can affect the lens and the accuracy of your engraving and your cutting. To maintain your machine, go ahead and open the lid. When you've used your Glowforge a lot, you'll notice that there's a residue that sticks to this upper lid. I like to use just a little bit of Windex or sometimes a disinfectant wipe to wipe that down and to get all of the residue off. When you're wiping down the lid, just make sure that you're careful and that you avoid your lens. Cleaning the lens is also a very important part of the maintenance process. To do that, I would use one of the wipes that you use on your glasses, something that's not going to scratch the lens, or Glowforge actually provides a couple wipes within a sealed little packet that you can open and you can use to clean your lens. You'll also see that some residue will collect up here. It's okay to wipe this down with a rag as well. That will pull all of it up. One thing that you do want to be careful of is not to disrupt the arm and not to disrupt the laser. Any time you hit the laser, you're at risk of the machine needing to be recalibrated so that it knows its position within the Glowforge and it can move appropriately throughout the chamber. So some

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other dos for you to take with you, some tips and tricks that I've learned throughout my time Glowforging is when you're working on a project that involves engraving on an item that is already cut, do make sure to center that. So typically I will use chalk, or I will use a pencil, and I'll kinda measure out the dimensions, and I'll mark off the center point on the sign or on the cutting boards that I know that, and that helps when I put the material in the Glowforge to center it appropriately before I click the print button and start to engrave. Another do is to use some products that I've got here, a Magic Eraser, as well as some Windex, to pull off any burn marks that might stay on your wood. On the sign, for instance, this is not Proofgrade. This didn't have the masking, but I really like the sign. I wanted to engrave in it. So I did that, but you'll notice I've got a little bit of burn marks around the C and around the wreath here. So I can either use this Magic Eraser with a little bit of water to kind of pass over the surface, and it'll come right off. Or I can actually spray it down with Windex, and you'll see very quickly that a lot of the burn marks start to melt off, and I can just use an old towel to wipe that right off, and it will give a really clean aesthetic to the sign that I'm making. The last thing is if you're engraving on wood and you're really looking for the wood to pop and for the engraved area to be a little bit darker than it came out initially, I highly recommend using cutting board oil. That will make the definition a little bit crisper and really make the design stand out. Now we'll talk about some don'ts. First and foremost, do not forget to turn on the filter when you are running your Glowforge. So the Glowforge can be a little bit noisy, which sometimes can make you forget to turn the filter on 'cause that's noisy as well, but really important, again, to maintaining the machine and good for your health as well. Another don't is when the machine is running and it's engraving something, if something starts to go awry or the design is not printing the way that you had envisioned, do not open the lid while the machine is moving. Rather, you can push that glowing button that you hit to start the print to pause it. So you can use that to stop it as well. You can cancel the print. And then when your machine arm has moved into the back left-hand corner, then you can go ahead and open the machine. The final don't is don't let the material hang over the crumb tray when you're loading it into the machine. If you do, it might interfere with the arm's ability to move back and forth, and your print might turn out not the way that you wanted it to. You're ready to get started with your Glowforge. Have fun, be inspired, and make something amazing.

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