Pandora Box - The Key to Pandora - Adult version

Hello,

This is an informational guide for the Pandora Box. Below you will find all that is needed to run, control and fix this printer.

Warnings:

- Since the printer is designed to be safe for kids to use, the door must be closed before it starts working. You will not be able to make adjustments to the print while it is printing.
- Do not attempt to do any changes in the Terminal part (<-) on the Pandora page. It is only for a professional programmer.
- Even so, the ingredients of the dough are not toxic we do not recommend that kids eat it.

Setting Up the Printer:

1. Plug the power supply in.
2. Turn on the printer using the power switch. You will notice that the LCD screen will turn on showing *Pandora Box.*

With the printer ON you need to connect your device (computer/tablet/cellphone) to the control platform, called *Octopi*. There are two methods of connecting to Octopi:

METHOD 1:

- Connect to "AVEWIFI_-1" WiFi using the password "aveworld".
- Use this link to access the Octopi. You will need to log in using the username: "Admin" and the password: "Pandora".

METHOD 2:

-On the left side of the printer, you will find two QR codes.

-Use the camera on an electronic device to scan the one named *WiFi* so that you can automatically connect to "AVEWIFI_-1".

-Then the scan the QR code named *Octopi*. With this, you will be able to access the platform to control the printer. You will need to log in using the username: "Admin" and the password: "Pandora". *Remember that you need to be connected to the WiFi to access this website.

1. Once in the platform, check if you are connected to the printer by clicking on the three dash button and seeing if the *connection* button indicates that you are connected. If you are not, click on the three lines button(right top corner), select Connection and hit Connect. *This might take a couple of minutes. If you can't connect restart the process by shutting down the printer.

How to make the Dough

Ingredients (video):
2 ¼ cups of flour
1 cup of water
½ cup of salt
A few drops of food coloring (optional)

Steps:
1. Pour the flour and salt into a bowl
2. Add the drops of food coloring to the water (if you want colorful dough)
3. Pour the water into the bowl
4. Mix the ingredients until you can hold the mix without it sticking to your hands

If your dough is too sticky… add more flour
If your dough is too dry or hard… add more water

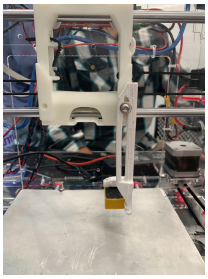
With all of the steps above ready you can begin the process of inserting the dough.

Instructions to fill in material

1. Press the home button in the and use the arrows to adjust the printer position. Retract the plunger all the way up by pressing the retract button.
2. Open the door, twist the syringe to the left and you can easily remove it by pulling it down and holding the motor in place.
3. Fill the syringe making sure that there is no air gap on the top. Follow this video to learn the right proportions.
4. Make sure that the nozzle is unclogged and place back the syringe by inserting it into the gantry (the combination of the extruder and carriage).
5. Twist the syringe to the right and then close the door.

When the door is closed you should see a red light near to the knob that will guaranty it is appropriately closed.

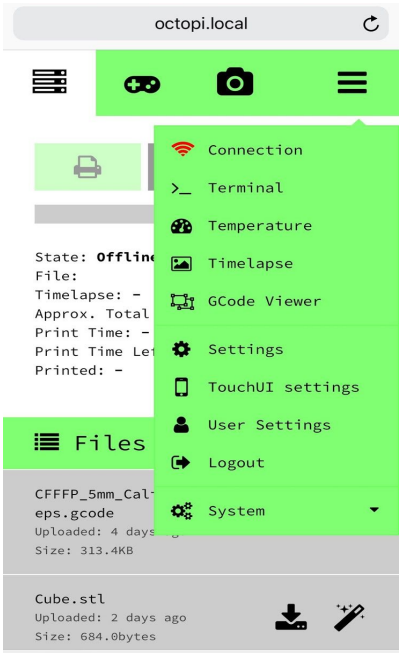
Trouble Shooting



1. If the tip of the syringe is too far from the plate you have to adjust the sensor height. Manually unscrew the sensor mount and move it up so that the sensor can get at the same level as the syringe nozzle. This will also work in the opposite situation. If the syringe is too close to the printer's plate instead of moving the sensor mount up, lower it down. This way the sensor will be close to the plate and will adjust the print.
2. If the dough is not sticking to the plate you can adjust the syringe height using the same method from the item above (changing sensor height). Lowering the syringe will help on sticking the dough to the plate. However, lowering too much the syringe will prevent the print from coming out how it was supposed to.
3. Ask Mateus about the software slicer

After completing the steps above you are ready to start the print:

Octopi Guide



The WiFi sign and *Connection* button are to make sure the printer is connected to the software you are using to control it. Make sure you are connected otherwise you won't be able to control the printer.

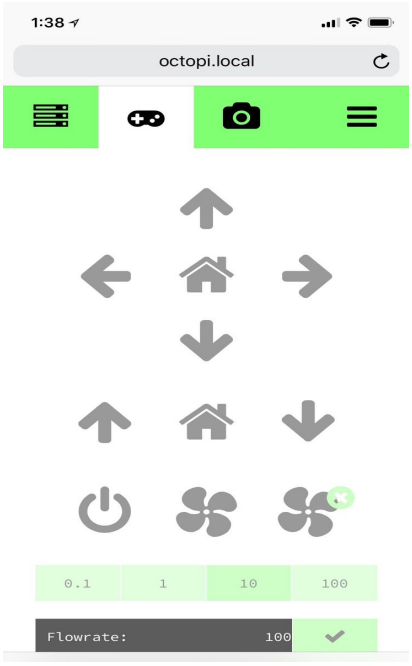
The other options in this tab are mostly for the professional programmer to use. Again, using the terminal is not recommended.

To print go into the interface platform. You will need to choose a file from the *Files* tab. You can also upload a file that you made using the button. *Only stl. files are accepted.

Click the "Select a slicer..." button and select the CuraEngine Legacy and click "Slice."

After choosing a file and slicing it, press the button to start printing.

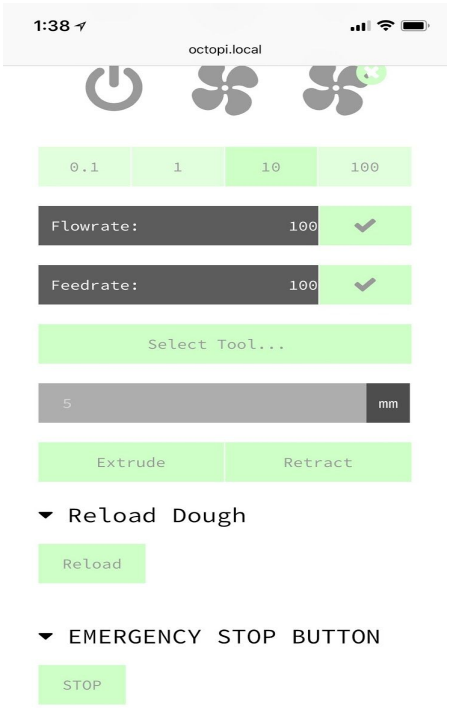
To pause the print you can press the button. This will allow you to come back to the object you were printing. *Remember that it will finish the last movement it was doing before stopping. This is not the option for an emergency stop!



If you need to move the gantry you can use the button is to control x-axis & y-axis. The ↑ and ↓ are y-axis. The ← and → are x-axis.

is to control z-axis which will move the gantry vertically. The button will bring all axis to home position.

When you need to refill the dough, press the button. This will bring the gantry to the home position and you can use the arrows to adjust its position in order to be able to remove the syringe with safety.



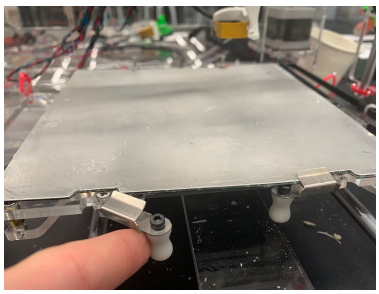
To test extrusion of the dough you can use the Extrude button which will make the material come out from the syringe. On the other hand, the Retract button will move the extrusion motor in the opposite direction making the plunger of the syringe retract. This can prevent you from losing dough as it will be sucked up.

If something is wrong with the printer or you need to stop the print you can use the emergency button

to immediately stop all movements. *It is also possible to shut down the printer manually using the on/off switch on the right side of the printer.

Finishing the print:

1. After the printing is done you can detach the plate where the print is by opening the handles in the lower bed.



2. Once you have the plate outside the printer you can either remove the print with your hands or use a small shovel to carefully take it out.
3. As the filament used in this printer is dough you can reuse it as many times as you want. Even so, we recommend that you make more material to keep the quality of prints better.

Design Creation

To create and design your own models we recommend that you use Tinkercad software. Below you will find the link to start a design and the instructions guide.
Click here to start your models (instruction of Tinkercad)

Contact Information

If there are any questions or help needed please feel free to contact our team:

João Grynberg: joao.grynberg.2021@avenues.org
Clara Zsigmond: clara.zsigmond22@avenues.org
Isabella Gomes: isabella.gomes21@avenues.org
Mateus Ikezaki: mateus.ikezaki21@avenues.org
Gabriel Ikezaki: gabriel.ikezaki21@avenues.org
Peter He: peterhe12366@gmail.com
Katie Wong: katiewong716@gmail.com

Best,

Pandora Box team.

中文版

潘多拉盒子的钥匙-说明书-成人版

你好，

这是Pandora Box的操作指南。您将在下面找到运行，控制和修复此打印机所需的一切。

警告：
由于打印机设计为儿童友好型，因此必须在开始工作之前关闭门。在打印时，您将无法对打印物体进行调整。

准备工作：

插上电源，使用打印机侧边的电源开关打开打印机，您会注意到LCD屏幕亮起，并显示Pandora Box。

打开打印机后，您需要将设备（计算机/平板电脑/手机）连接到名为Octopi的控制平台。
以下是连接Octopifinding控制平台的两种方法：

方法1：
- 使用密码“aveworld”连接到“AVEWIFI_-1”WiFi 。
- 使用此链接访问控制平台，您需要使用用户名：“Admin” 密码：“Pandora”登录平台。（注意大小写）

方法2：
- 在打印机的左侧，您将找到两个二维码。
- 在电子设备上使用**相机**扫描名为WiFi的二维码，以便您可以自动连接到“AVEWIFI_-1”。（不可使用微信）
- 然后扫描名为Octopi的QR码。这样，您就可以访问平台来控制打印机，使用用户名“Admin”和密码：“Pandora”登录访问平台。

***请记住，您需要连接到WiFi才能访问此网站。**

进入平台后，通过单击 按钮并查看连接按钮是否显示您已连接到打印机。
***这可能需要几分钟，如果无法连接，请通过关闭打印机重新启动该过程。**

完成上述所有步骤后，您就可以开始向注射器填充粘土的过程。

如何自制粘土（链接）

配料：

2 ¼ 杯面粉
1 杯水
½ 杯盐
几滴食用色素（可选择不加）

步骤：

1. 将面粉和盐倒入一个碗里
2. 加入几滴食用色素 (可选择不加)
3. 向碗里加水
4. 混合所有的材料直到你可以拿起它并且不粘手

如果面团太粘了… 多加一点面粉
如果面团太干太硬了… 多加些水

上述所有步骤结束后，你就可以开始填充材料了。

填充材料的步骤（链接）

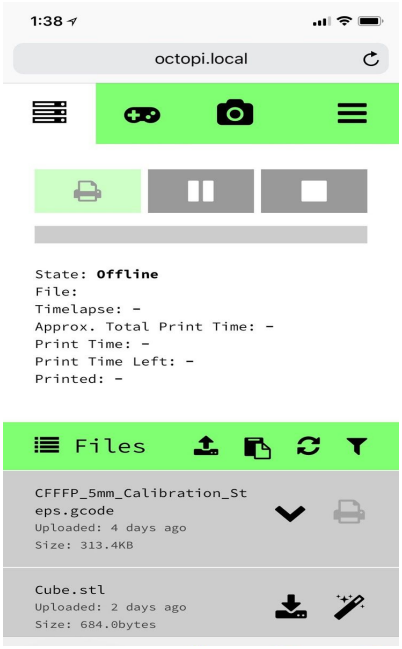
按平台中的reload按钮将打印机设置为“主页”位置。
***如果您正在重新装入注射器并且它继续挤压，您可以按下缩回按钮使其停止。（添加图片）**
打开门将注射器向左旋转180度，将其小心取下，用粘土填满注射器。
将注射器准确放入龙门架（挤出机和托架的组合）后，将其向右旋转然后关好门。

门关闭后，您会看到旋钮附近有红灯，表示门已正确关闭。

完成上述步骤后，您就可以开始打印了:)

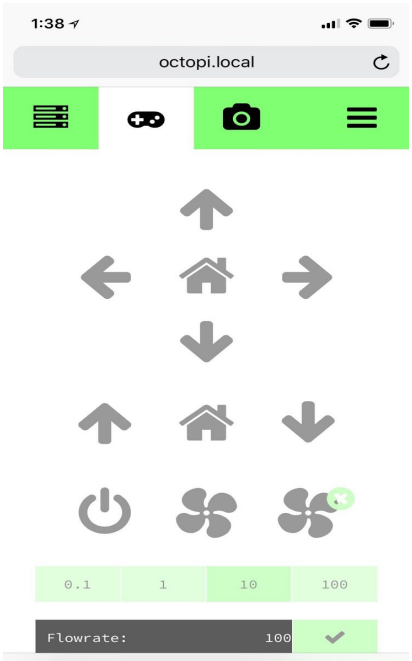
Octopi使用指南（Pandora page）

警告：不要尝试在Pandora页面上的终端（terminal）部分（< - ）进行任何更改，它只适用于专业程序员。



要打印进入界面平台。您需要从“文件”（file）选项中选择一个文件。您还可以使用 上传您创建的文件。
***只有stl.格式可以被接受。**

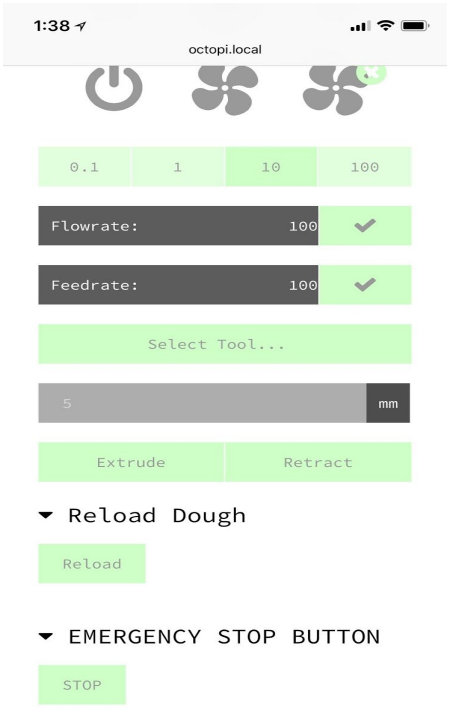
选择文件后，按 开始打印。



如果需要移动龙门架，可以使用 控制x轴和y轴。
↑和↓控制y轴。←和→控制x轴。

是控制z轴，垂直移动龙门架。

如果您需要停止打印，可以使用 。

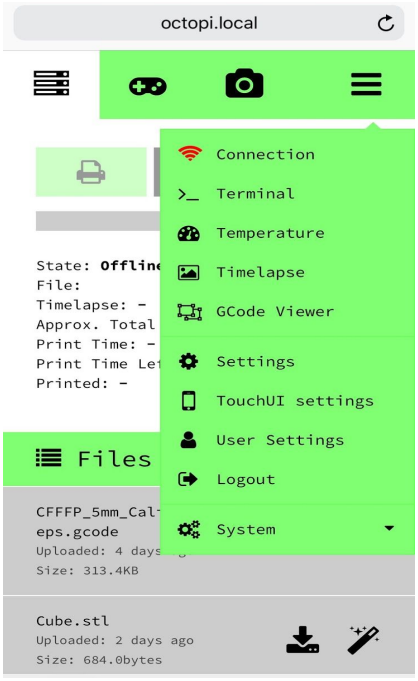


要测试粘土的挤出，您可以使用 Extrude ，从挤出机挤出材料。另一方面， Retract 将使挤出机和注射器活塞沿相反方向移动，这可以防止粘土因为被吸起而丢失。

当你需要重新填充粘土（面团）时，按下 Reload 。这将把龙门架带到原位，您将能够安全地取下注射器。

如果您发现打印机有任何问题，请按 STOP 。这将使打印机停止打印。

*也可以使用打印机右侧的电源开关手动关闭打印机。



Connection 用于确认打印机连接到octopi页面的情况。确保已连接，否则您将无法控制打印机。

其他选项主要供专业程序员使用。

打印完成：
打印结束后，您可以通过打开下层床板上的架子将印版取下。
将印板放在打印机外面后，您可以用手取出打印件或使用小铲子小心地将其铲下。
由于本打印机中使用的材料是粘土，因此您可以将其重复使用多次。但是我们建议您制作更多粘土以更好地保持打印质量。

设计创作
要创建和设计自己的模型，我们建议您使用Tinkercad软件。您可以在下面找到开始设计的链接和说明指南。
点击这里开始你的模型（Tinkercad）

联系方式
如果有任何问题或需要帮助，请随时联系我们的团队：

João Grynberg: joao.grynberg.2021@avenues.org
Clara Zsigmond: clara.zsigmond22@avenues.org
Isabella Gomes: isabella.gomes21@avenues.org
Mateus Ikezaki: mateus.ikezaki21@avenues.org
Gabriel Ikezaki: gabriel.ikezaki21@avenues.org
Peter He: peterhe12366@gmail.com
Katie Wong: katiewong716@gmail.com

祝您在这台打印机上获得不一样的体验！

潘多拉盒子团队