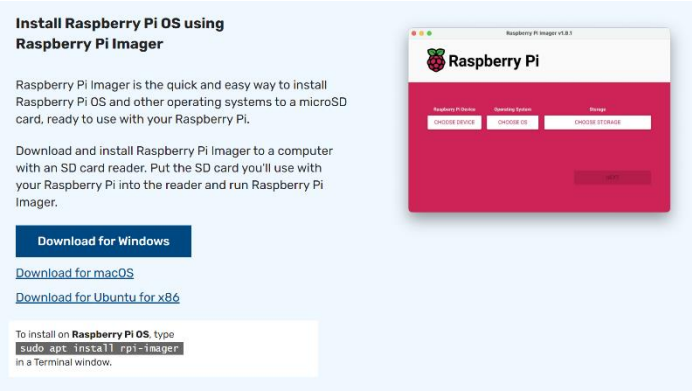
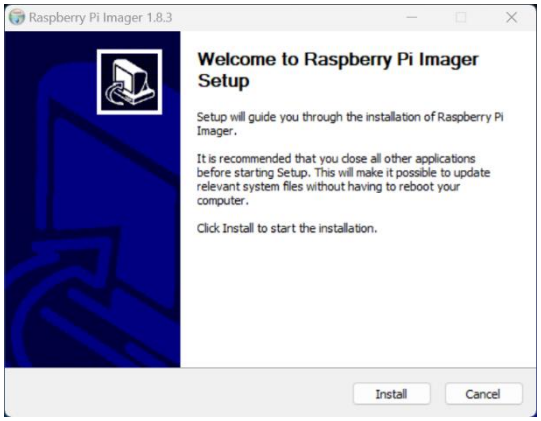
Install the Raspberry Pi Operating System, and Gugusse Compact 2.0 Software for use with the Gugusse PCB Version 3.1

This manual will get your Raspberry Pi and Control board up and running. It was current as of 6/2024. Items might change outside of our control.

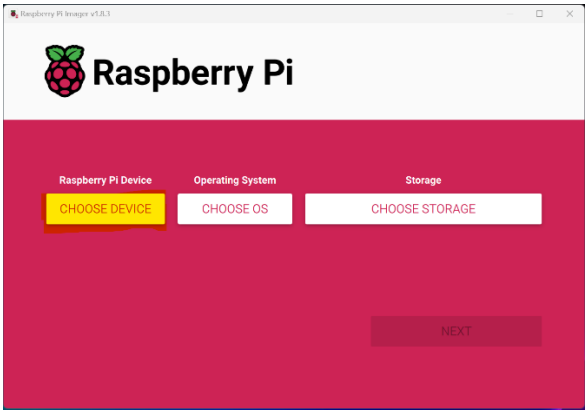
Step 1 - Install the Raspberry Pi Operating System

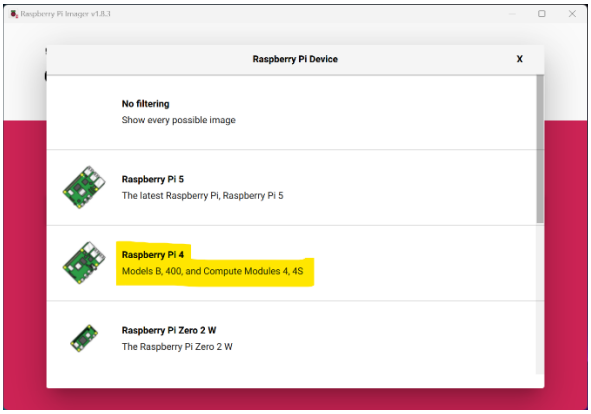
Download and install the Raspberry Pi Imager from **https://www.raspberrypi.com/software/**.



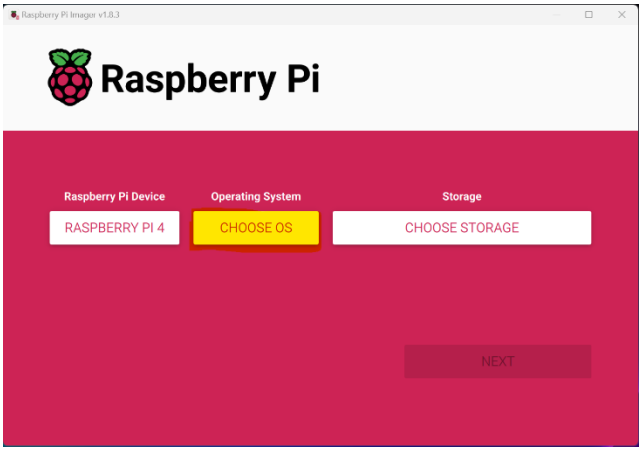


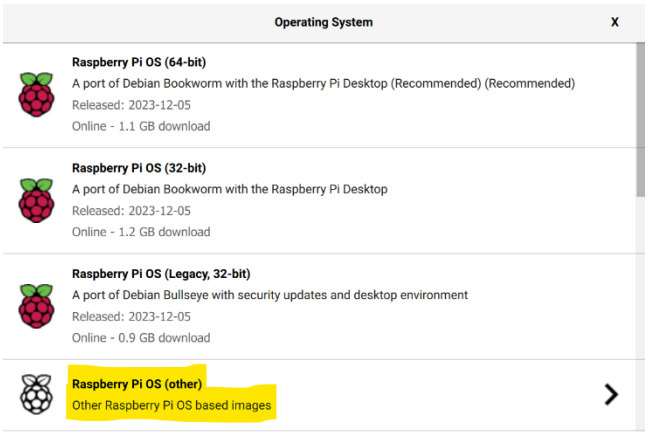
Run the Raspberry Pi Imager. Click CHOOSE DEVICE. “Choose Raspberry Pi 4”



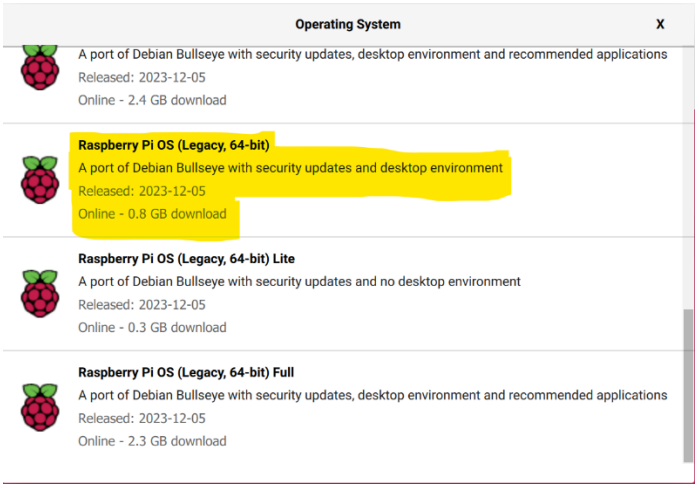


Click on CHOOSE OS. Choose “Raspberry Pi OS (other)” .

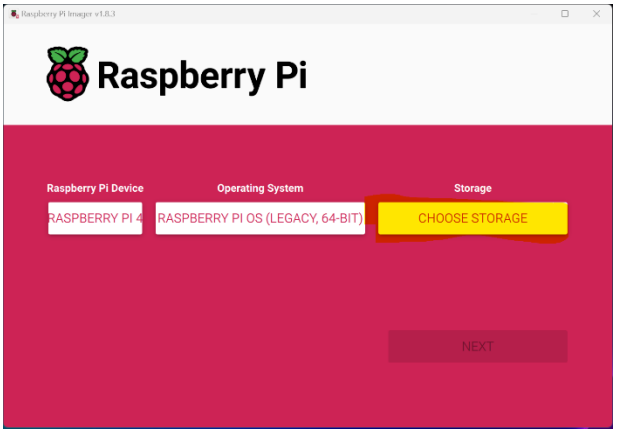


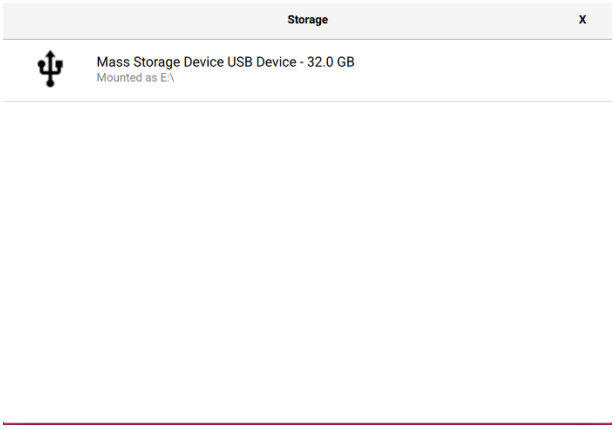


Next choose “Raspberry Pi OS (Legacy 64-Bit) Bullseye”:

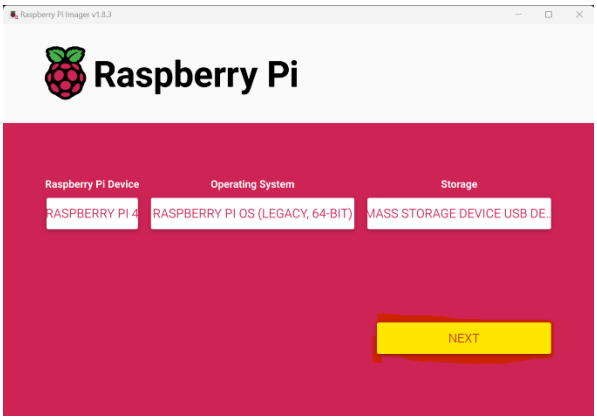


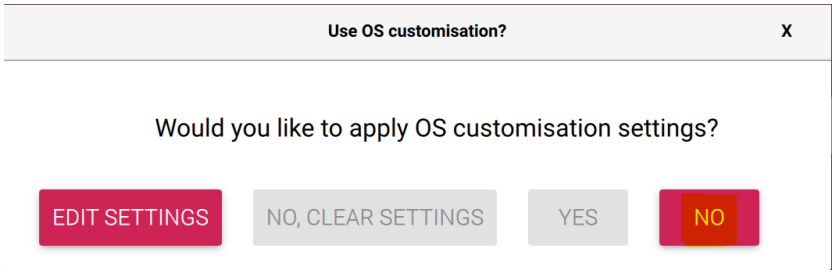
Insert a SD card that is compatible with your Raspberry Pi in your computer. 16GB should be plenty. Click on CHOOSE STORAGE. Then click on your SD card. TIP: Remove all other USB Hard Drives and USB Thumb Drives from your PC prior to avoid confusion.





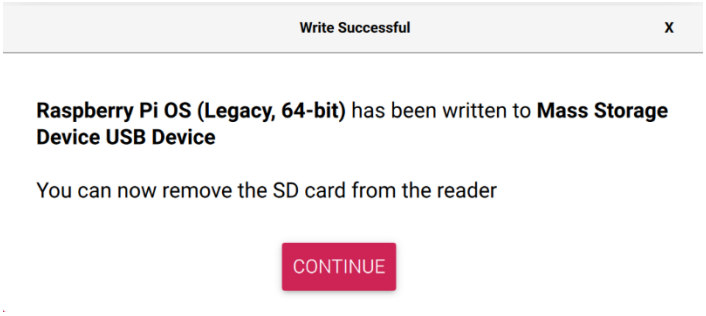
Choose WRITE and say NO to the Customisation [sic] settings question:



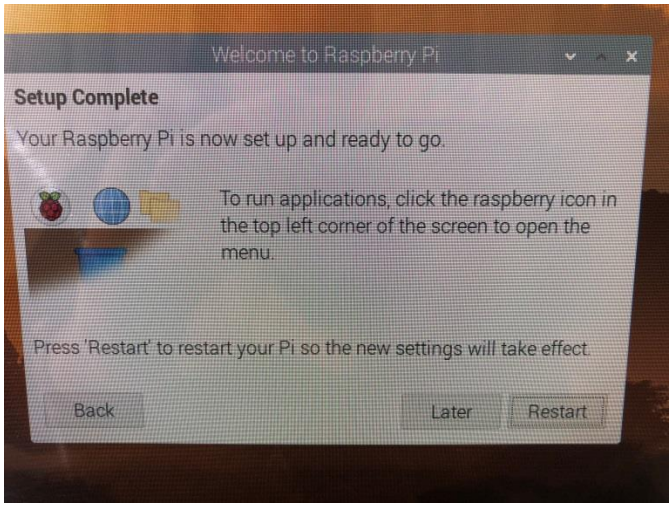


Accept the warning and your Operating System will be installed:

You will be informed when it completes and you can remove the SD card from your computer.

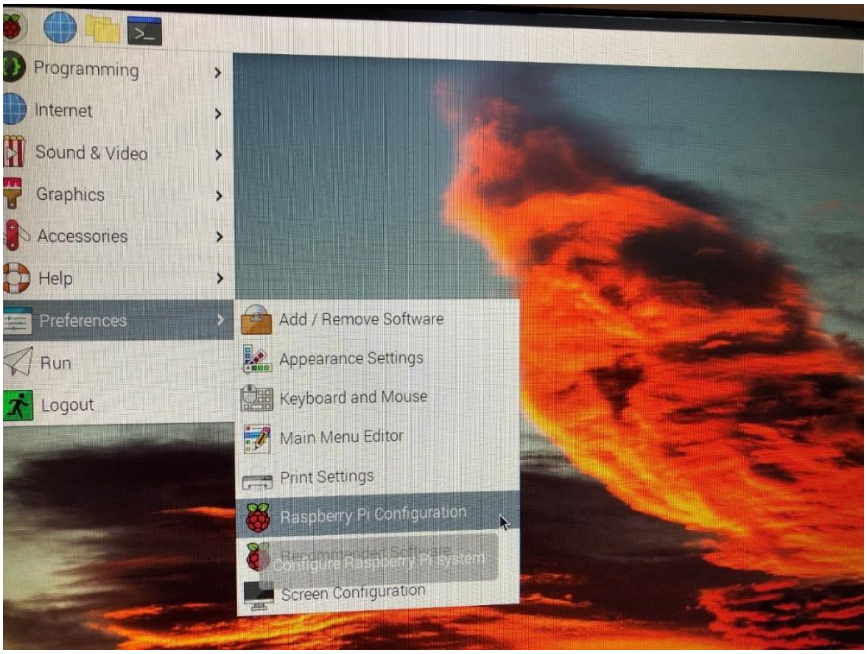


Insert your SD card in your Raspberry Pi and connect it to Power, Keyboard, Mouse, Monitor, and Optionally Network (If not using Wi-Fi). Upon first boot, you will be asked a series of questions about Country and Time Zone, Default User Password (use the username of “pi” and a password of “Raspberry”), Screen Size, WiFi Network Connectivity, and System Update. Reboot to make the changes effective.

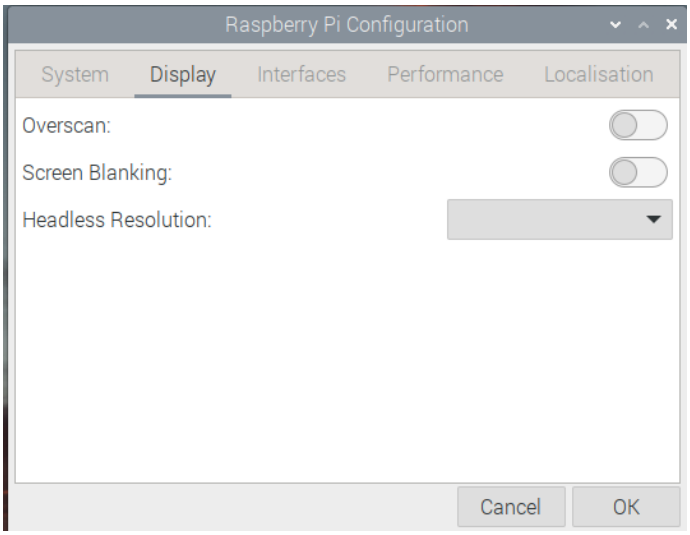


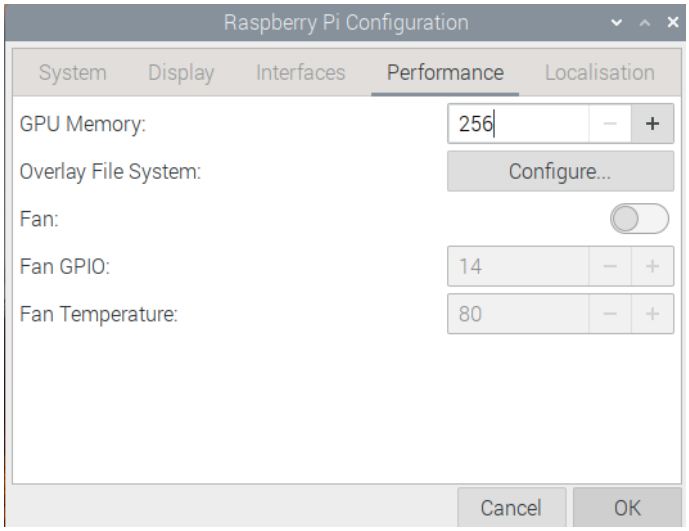
Allocate 256M of System Video Memory and Disable Screen Blanking on your Raspberry Pi

Open the Raspberry Pi Configuration utility from the Preferences menu.:



Click on the top Display Tab and set “Screen Blanking” to “Off”. Click on the Performance Tab and set “GPU Memory” to 256 and click [OK]. Reboot when prompted.





Step 2 – Clone the Gugusse Roller source repository

Click the Terminal Window icon on the top bar; it is the one on the right in the picture below.

Execute the following commands (commands are case sensitive):

```
cd
git clone https://github.com/meantux/GugusseRoller.git
```

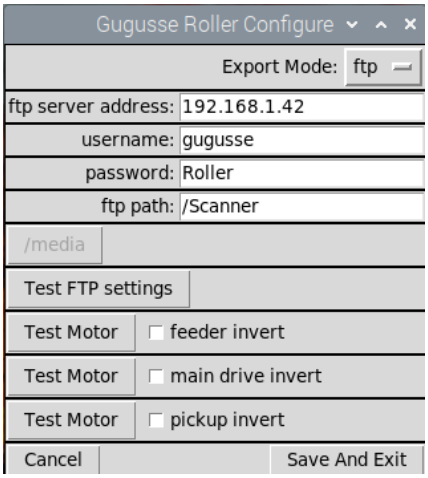
Step 3 - Configure Gugusse Roller for your FTP server

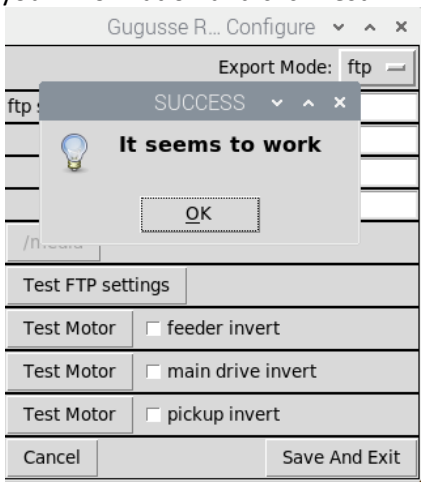
The Gugusse Roller software was designed to send the captured pictures directly to a FTP server of your choice.
A FTP server could easily be configured on your main workstation or on any type of file server. Shared storage systems like the Netgear ReadyNAS, Synology DS, and Drobo N editions provide a way to configure an FTP service. There are literally thousands of ways to install a FTP server at home. Apparently Windows 10 offers it natively as described here.

Once you have configured your FTP server you will need to figure out its IP address (or hostname), the credentials (user and password) and the file path that the Gugusse Roller should use. Execute the following command:

```
cd ~/GugusseRoller
python3 MotorsAndFtpSetup.py
```

Change the information in the GUI to your information and click *Test FTP settings* to test it.





Step 4 - Test the Install (Load the software)

Load the Gugusse Roller Software by running these commands:

```
cd ~/GugusseRoller
python3 GugusseGUI.py
```

Your system is now ready to be connected to your Gugusse and start scanning.