

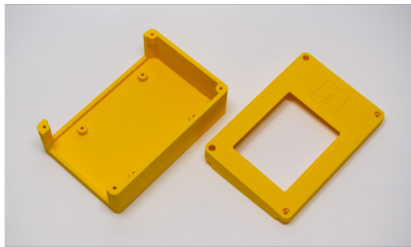


Bill of materials

- Raspberry Pi 5, 2GB RAM
- Raspberry Pi Active Cooler
- Raspberry Pi 27W USB-C Power Supply
- USB stick for Raspberry Pi
- Elecrow 2.8inch IPS SPI LCD
- Capacitive Touch Display Module with ILI9341 Driver (240x320)
- Jumper wires socket/socket (7pc, short)
- 8 Screws M2.5x4, 4 Screws M2.5x6
- Computer Keyboard, e.g. Raspberry Pi Keyboard
- (3D Printer for the enclosure)

1) Enclosure

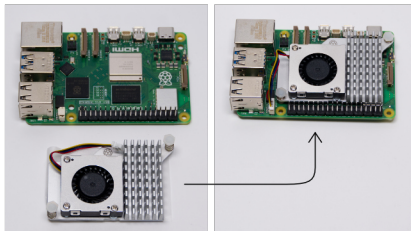
Download the latest 3D-files from vm-1.com, unzip them and print them on a 3D-printer.



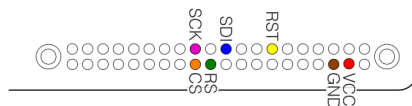
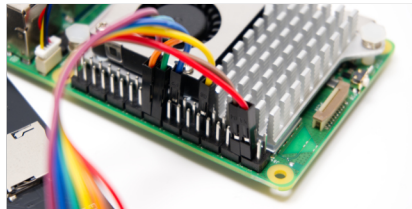
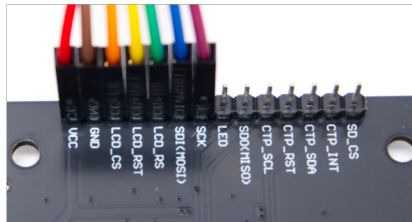
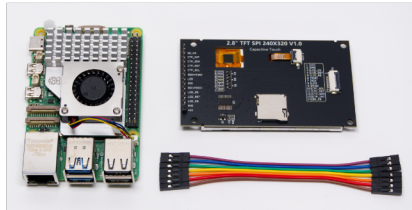
2) Assembly

Note: Make sure the Raspberry Pi is powered off and unplugged before starting assembly.

Remove the protective film from the bottom of the cooling fan. Place the fan on top of the Raspberry Pi and press the two plastic pins through the mounting holes until they click into place. Connect the fan cable to the Raspberry Pi.



Connect the display to the Raspberry Pi using the seven jumper wires. This is the trickiest part of the assembly, but it's manageable if you take it one wire at a time. Start with red for VCC and brown for GND (see table below), then work through the remaining five signal wires in order.



Place the Raspberry Pi and display into the enclosure and secure them with four M2.5x4mm screws.

Close the enclosure and secure it with four M2.5x6mm screws:



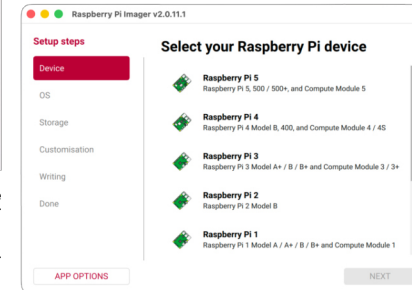
Congratulations! You've successfully assembled your VM-1. Take a short break, have a glass of water, and then continue with the software installation.

3) Installation

On your laptop or computer, download the VM-1-image file from vm-1.com.

Next, download and install the Raspberry Pi Imager from raspberrypi.com/software.

Insert the USB stick into your computer and open the Raspberry Pi Imager application.



Within the Raspberry Pi Imager application, choose Raspberry Pi 5 as the device and click NEXT. As Operating System, scroll down to Use custom and select the vm1-basic-v2.x.x.img.zip file you downloaded earlier. As Storage, choose your USB stick and click NEXT. Click WRITE and confirm the final dialog. Wait until the process has finished.

Unplug your USB stick and insert it into one of the blue USB 3.0 ports of your VM-1.

4) Final Setup

Connect the VM-1 as shown. The first startup may take a minute or two. The VM-1 will restart during the initial installation. As soon as you see the VM-1 Logo on the display, you're ready to go on stage and play a show.

First Steps



After the VM-1 has successfully started, you see the VM-1 logo on the integrated display and a blank screen on your main screen.

To assign a video to a button, press [Shift] + [Q] to select the first media slot A1. Press [1] to navigate to the SOURCE menu. Using the arrow-keys, press [→] to select MEDIA and press [↓] and [→] to choose a video file. Press [→] again to assign the chosen video to media slot A1. Hit [Q] to play the video.

Buttons

[Q] to [I] and [A] to [K]: Media buttons 1-16.

[1] SRC: Assign a media source to a media button. A source can be a videofile, HDMI-Input or Shader).

[2] CTL: Change settings for the currently selected media button and select the plane where the media plays on.

[3] FX: Add effects to the selected plane.

[4] OUT: Adjust the selected plane.

[5] SETTINGS: General settings like Fade Time, Volume or Initialize the VM-1

[6] PERFORMANCE: The Performance Screen is useful to see which media button play on which plane.

[Shift] + [Arrow Keys]: Change values, e.g. in the CTL menu.

[Page Up] or [Page Down]: Change plane (only in FX and OUT menu)

[Shift] + e.g. [Q]: Switch to a media slot without triggering playback.

Finally: have fun with your VM-1!

Connecting the VM-1



Codec Settings for video files

→H.265/HEVC
→1920x1080
→30 fps
→8 bit
→20 Mbit/s
→keyframe every frame