(The) Hoodie

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Introduction

This model is created to provide a nice-looking case to your retro arcade machine. As it is intended to allow you some flexibility in terms of hardware, you will find some orientation in this guide, but the final hardware and its placement (you will need some hot glue for some options) it is up to you. If you need more help or another version for your project you can contact me in my email (rubiobo@gmail.com)

Bill of Materials:

If you have or are planning to purchase a wonderful Picade from Pimoroni Guys the good news is you probably don't need anything apart from the printed parts.

Even Pimoroni Picade is wonderful I was missing a Stereo sound and I had several problems with the power management of my project: That's thec reason you will find and alternative to include GeekPi USB driver (which you can also purchase with Joystick and buttons) and a DC/DC converter to spice up your already power-hungry Raspberry 4 (or Odroid N2 / C4)

Here is the hardware I used in my setup:

- Single Board Computer: Raspberry 3B+ (But you can use a 4 or Odroid if you are going to use the GeeekPi joystick board)
- Screen: Pi Moroni 10'' LCD Screen including the drivers.
- Speakers: 3" Speaker 4Ω (5W) 1 or 2 if you want to implement stereo sound (with GeekPi)

- Controls:
  - 8-way Joystick
  - 6 x 30mm Arcade buttons
  - 2 x 24mm Arcade buttons
  - Volume control
- Joystick driver / board: GeeekPi Board / Including joystick and buttons:
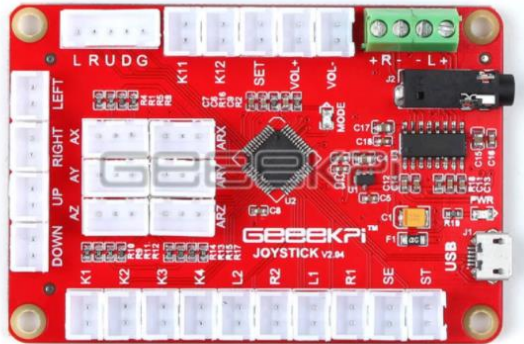
  (It should include also the wiring)
- DC/DC Power converter
- Connectors
  - Outer (Important to match the existing space in the STL)
    - Female – Male USB cable
    - 5,5 x 2,5 mm Jack Adaptor
  - Inner (check connection diagram and also your need according to your SBC):
    - HDMI male to HDMI male
    - 3 x USB to micro usb
    - DC 5,5 x 2,5mm male cable
    - 1 x Male audio 3.5mmjack to male audio jack
- Power Source: 12V 3A power source
- Other:
  - 8 x M2.5 screws / spacers to fix the electronics
  - Hot glue pistol
 - 4 x M3 Ruthex Inserts
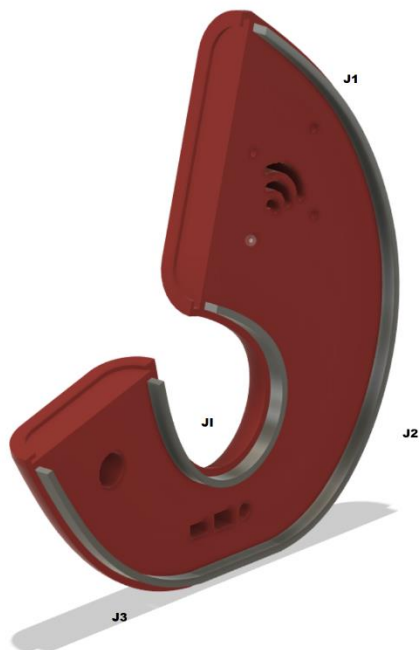
Printed Parts:

You will need to print:

- Left Side: L1,L2,L3
- Right Side: R1,R2,R3
- Inner part: In
- Outer part: O1,O2,O3 (If you are going to use X-Hat Print O2P instead of O2 it has a windows to acces the raspberry if you place it in the base)
- Joints: 2x (J1, J2, J3, JI)
- Screen: Screen Front + Screen Back (size for the Pimoroni 10'' screen with screw holes for the driver (and a raspberry)).
- Deck: Deck (There are two holes in deck to place 2x M3 Ruthex)
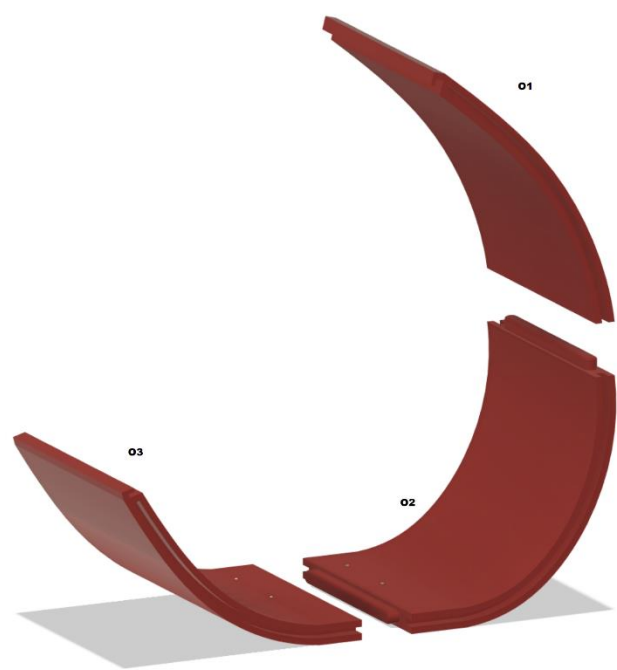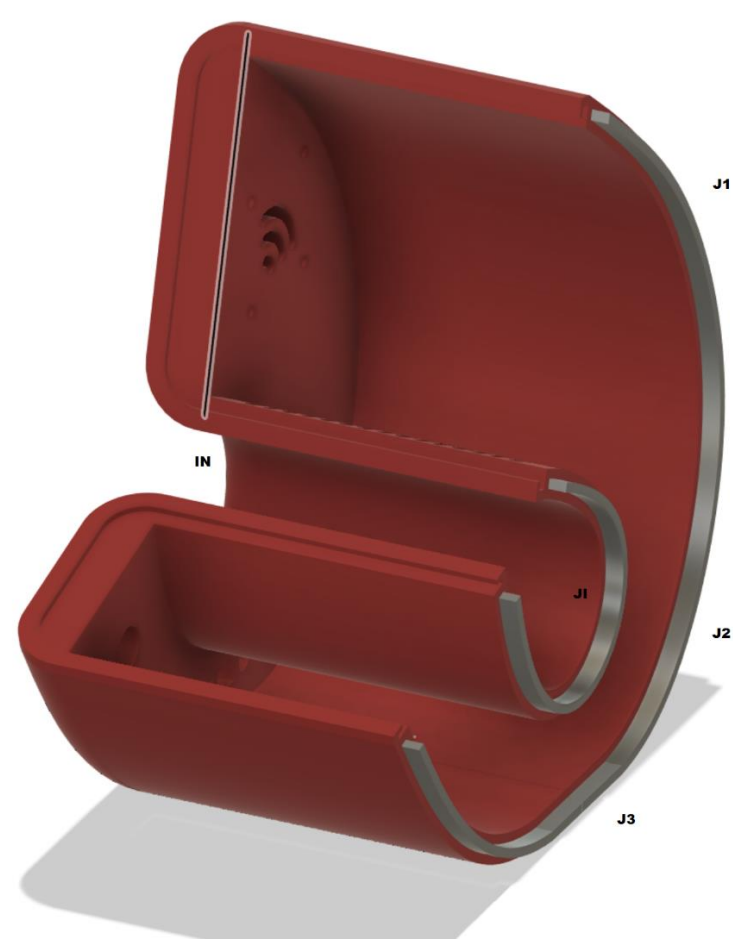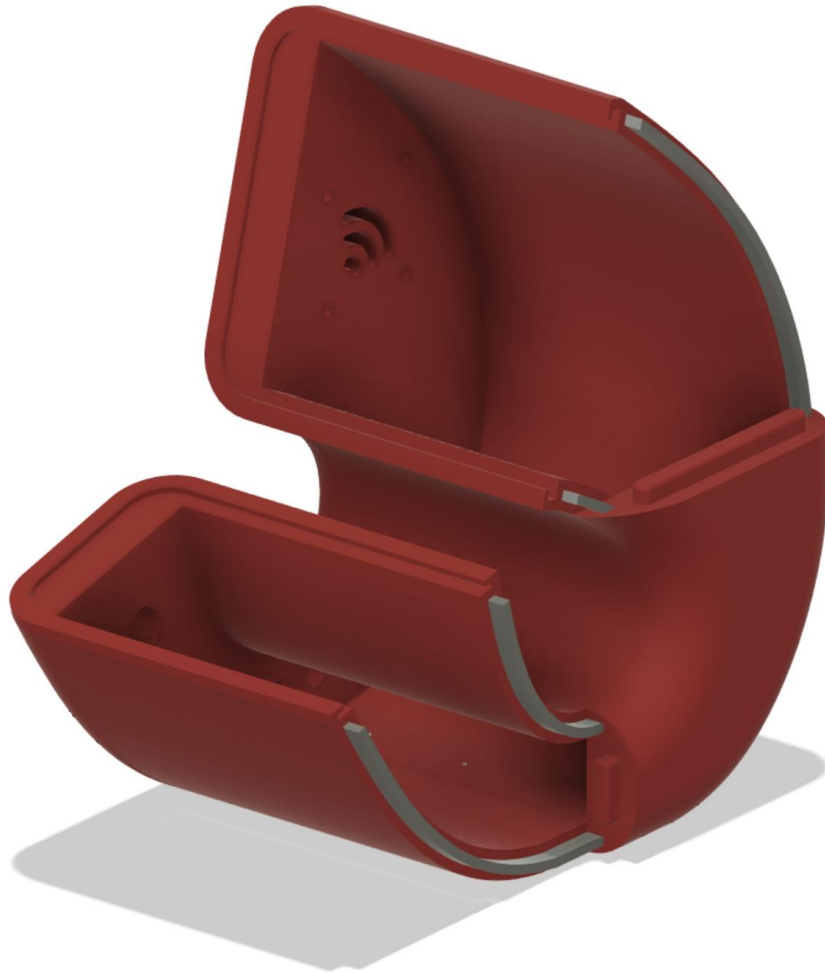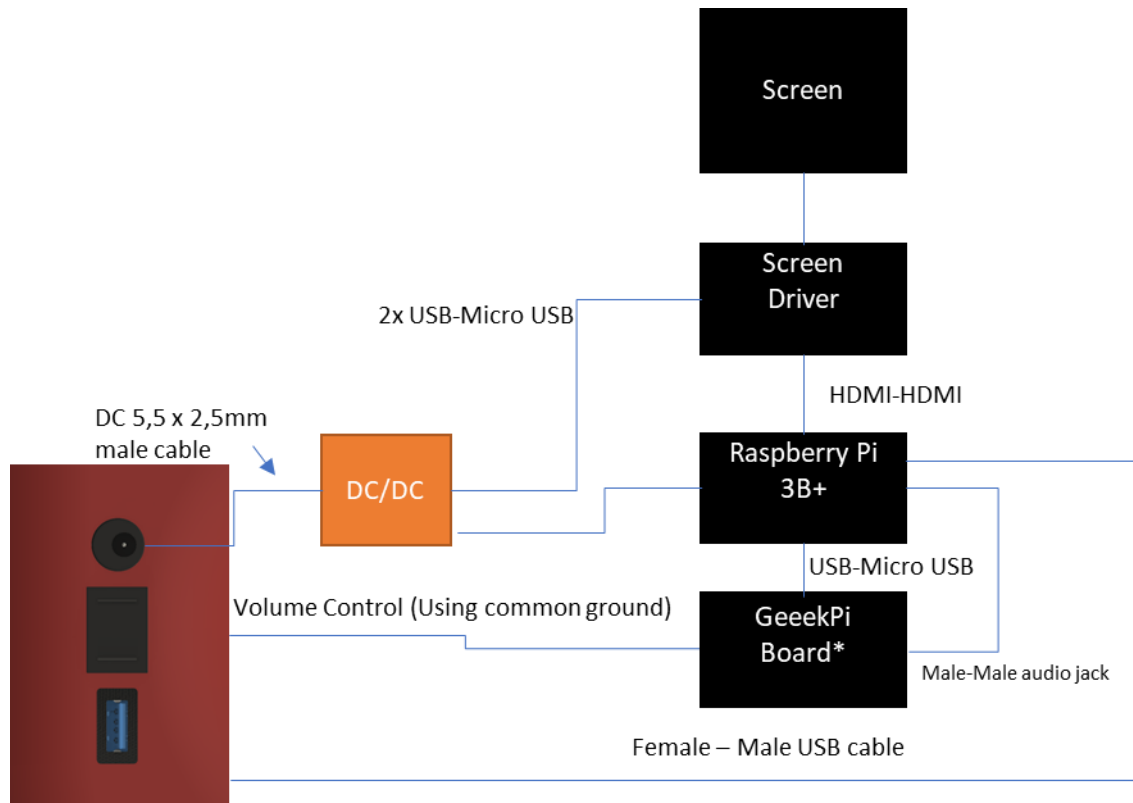
Assembly

Step 1
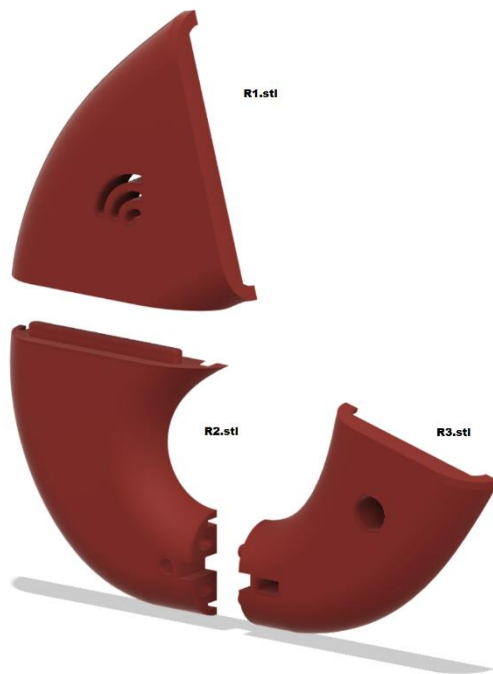
Step 2

Step 3

Step 4

Step 5

At this point:

-Glue all the parts

-Install the electronics

Electronics:

Screen

Screen Driver

HDMI-HDMI

Raspberry Pi 3B+

2x USB-Micro USB

DC 5,5 x 2,5mm male cable

DC/DC

USB-Micro USB

Volume Control (Using common ground)

GeeekPi Board*

Male-Male audio jack

Female – Male USB cable

*GeeekPi Board conected to arcade joystick and buttons
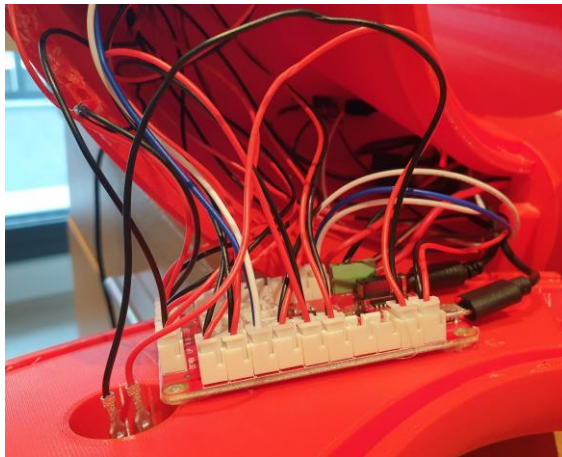
Step 6

L1 and L3 should click-fit

Software:

Check Retropie for software installation and troubleshooting.

Version 1.0

11/01/2021

Rafael Rubio

If you enjoyed this project and want to make a donation do it to this NGO:
https://www.juegaterapia.org/