Reinstallation / Recreation Guide

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# Hardware

## Recreating the arcade box

The arcade box has a plan of how it could be made but we didn’t follow it to a tee. More to this in the process section.

### Tools

* Milling machine and preferable a guide for the mill (ours was from Fastool)
* Plunge saw, and plunge saw guide (outs was from Fastool)
* Jigsaw (ours was from Bosch)
* Hinges (any)
* Screws (any not to long)
* Screw Clamps (any preferably multiples)
* Sandpaper and a sandpaper block (120, 180 and 240)
* Laser cutter
* Any Paint (This isn’t used for painting just for marking where to draw holes)
* Hammer (any)
* Chisel (thinner than your wood boards)

### Material

* Wood (the looks depend on what wood you use)
* Wood Glue
* Power Switch

### Process

You can ether try to follow to plan or do it how we did it:

#### Step 1 Rough pieces

Cut out the blocs for the following pieces:

* RIGHT SIDE PANEL\_R2
* LEFT SIDE PANEL\_R2
* CONTROL PANEL\_R2
* BACK DOOR\_R2
* BOTTOM PANEL\_R2
* SPEAKER PANEL\_R2
* BOTTOM FRONT COVER\_R2
* TOP FRONT COVER\_R2
* BACK BOTTOM PIECE\_R2
* TOP PANEL\_R2

We recommend using a cut list optimiser like <https://cutlistoptimizer.com> to make a plan on how to cut out your pieces. (We also did not use the other pieces on the plan)

After you made your plan use a plunge saw to cut them out. Also notice that two pieces (the top panel and the back door) need an angle we also used the plunge saw to cut that.

#### Step 2 Side Panels

Next, we used the laser cutter to cut out a template of the side panels. (The .svg we used is saved next to this document).

Once you have the template roughly cut it out of the side panel pieces with a jigsaw and then follow the template exactly with a milling machine.

Instead of following the plan its easier if you just place the individual pieces on the side panel (I would still use the plan to roughly see where the pieces go but you can figure it out by its name). You will notice four pieces are longer. Now draw and outline around those longer pieces.

Once you have the outlines place a milling machine guide over the outlines and mill 5 mm deep holes. You will have to punch out the corners with a hammer and chisel.

After you have the four indents milled out put a think layer of paint on the edges of the indent and then press the other side panel on the paint. This will create new outlines on the other side panel.   
  
Repeat milling out the indents now on the other side.

#### Step 3 Monitor panel and power switch

For the power switch you will wand to drill a hole and then mill out a piece as large as your switch on your Back Bottom panel. Then attach the switch.  
  
For the Monitor Panel you should assemble the arcade box with the pieces you cut out and then measure how large a space you have for the monitor.  
  
Next cut out a piece that is that large out of your leftover wood. Place the monitor centred and draw around it. Draw another line that is at least 4 mm smaller on all edges inside the box. You can now cut out the inner box and mill out the outer box.

The Outer box is where the monitor rests against.

#### Step 4 Glueing

Next put glue the pieces that go into the indents into them on one side. Glue on the other pieces against the first pieces you glued on (not the back door). Glue on the other panel.

#### Step 5 Back door

For the backdoor use two+ hinges to attach it against the back bottom piece (against the back bottom piece so that the hinges don’t hold to much weight).

# Electronics

## Raspberry Pi

### Tools

### Process

## Monitor

### Tools

### Process

## Joysticks

### Tools

### Process

# Software

## Reinstallation

### Tools

* Maven 3.9.9
* Java 21.0.4
* Debian, Debian GNU/Linux 12 (bookworm), bookworm, release 12 (our raspberry pi Linux version)

### Process

#### Step 1 Code

Clone the Git Repository and add the pom.xml as a Maven project and run “mvn clean install”.  
Next to run Locally just run the main function in App.java.  
To install on the pie you must connect it and your device to the same network. First go to the pom and change the IP address of the pi on line 34 to what your pis IP is. select the “run on pi” profile and run it.

#### Step 2 Auto start on Pi