RRevo

Stephen's Raspberry Pi Computer

You will familiarize yourself with all the basic components of building a fully functioning computer based around a Raspberry Pi!

Written By: Bradley Hanstad

This document was generated on 2022-01-08 03:33:54 AM (MST).

© 2022

rrevo.dozuki.com/

Page 1 of 16

INTRODUCTION

You will familiarize yourself with all the basic components of building a fully functioning computer based around a Raspberry Pi!

This document was generated on 2022-01-08 03:33:54 AM (MST).

© 2022

rrevo.dozuki.com/

Page 2 of 16

Step 1 — You may require help!

● Enlist the help of your mom or Uncle Brad for this project if needed!

Step 2 — Check your loot - Monitor!
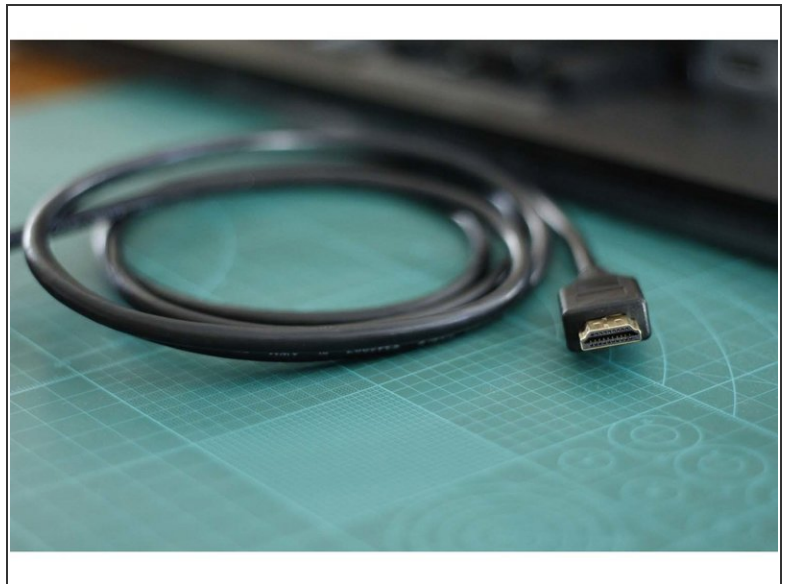
● This is a 24" LED backlit computer monitor which allows you to see everything you do!

● The HDMI cable takes the signal from the Raspberry Pi to show up as images on this monitor!

This document was generated on 2022-01-08 03:33:54 AM (MST).

Step 3 — More Goodies - Speakers!
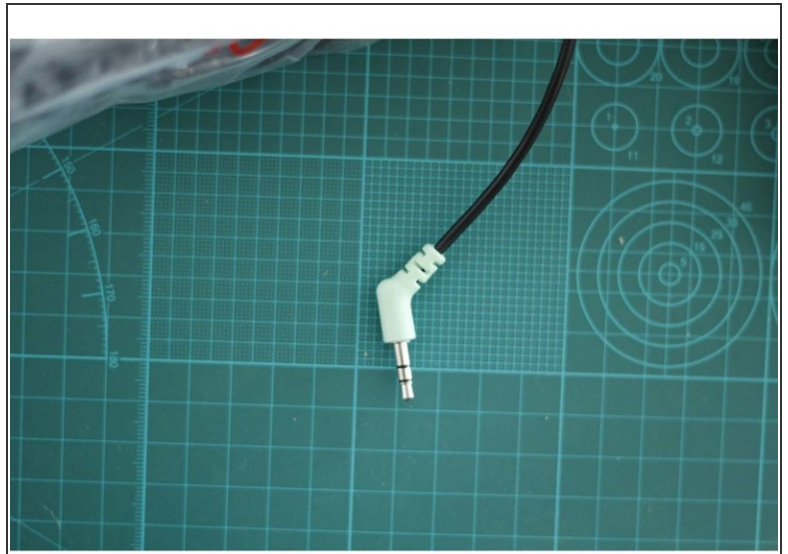
- These are powered stereo speakers. This means that you can position them to the left and right of you to get more immersed in the sounds!

- The audio cable from the speakers connects to the Raspberry Pi to allow electric pulses to turn these signals into sounds and music!

This document was generated on 2022-01-08 03:33:54 AM (MST).

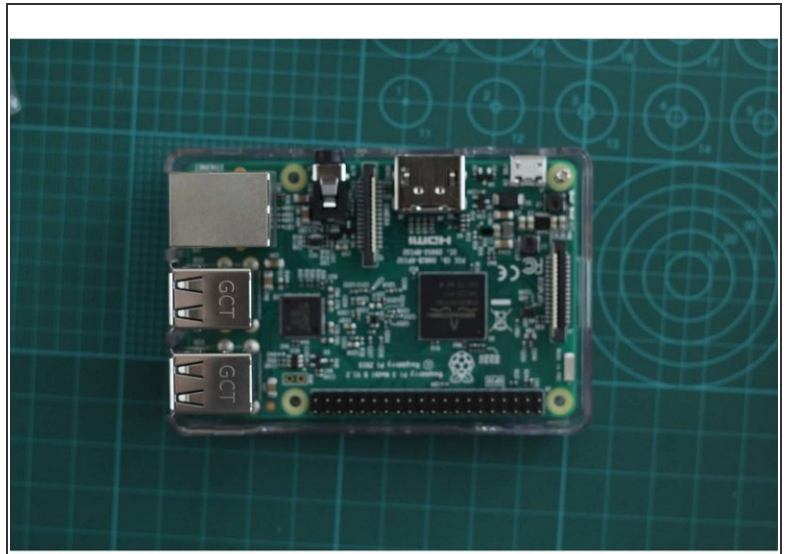© 2022

rrevo.dozuki.com/

Page 4 of 16

## Step 4 — Perfect Peripherals - Keyboard and Mouse with lights!

- The keyboard and mouse are key components to allow you to enter key strokes and clicks to make the raspberry pi do your bidding!

- The keyboard and mouse both light up with bright red LEDs!

- These both connect to the raspberry pi via their own USB cable connector.

This document was generated on 2022-01-08 03:33:54 AM (MST).

© 2022

rrevo.dozuki.com/

Page 5 of 16

Step 5 — Pi Payday! Your Raspberry Pi

- This is the Raspberry Pi 3. The tiny computer that is capable of almost whatever you can imagine!

- Once you make all the needed connections you will have a fully functioning computer capable of amazing things.

## Step 6 — TIME TO GET BUILDING! - Monitor Assembly
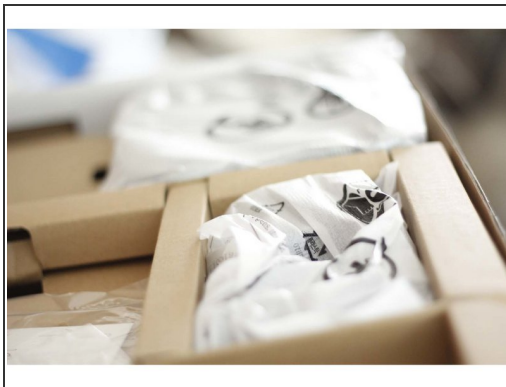
- Let us build our computer!

- Open up the Monitor box and assemble the monitor with help from Mom or Uncle Brad using the following steps

This document was generated on 2022-01-08 03:33:54 AM (MST).

© 2022

rrevo.dozuki.com/

Page 6 of 16

Step 7 — Monitor Assembly

- Insert the vertical riser into the base plate as shown in the picture

Step 8 — Monitor Assembly
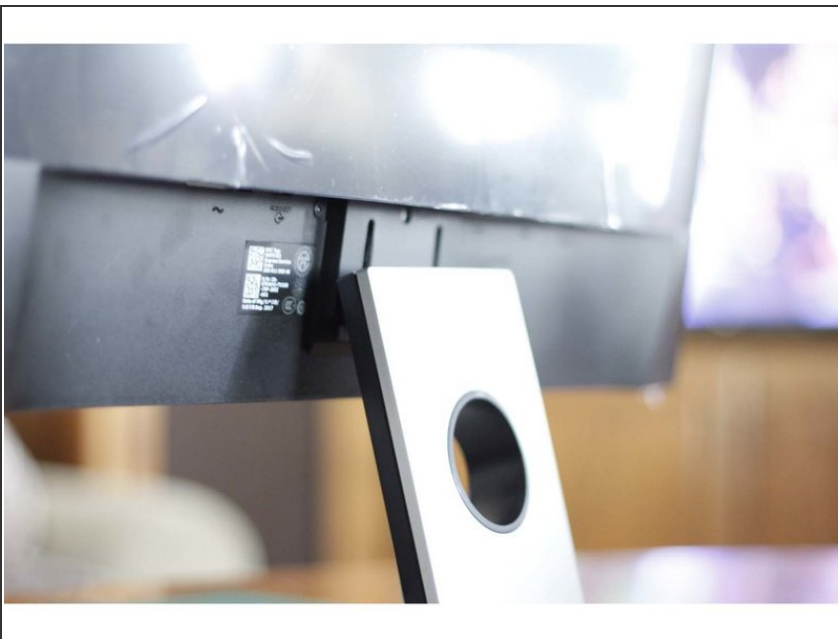
- Now carefully lower the monitor onto the bracket of the vertical upright that was previously attached to the base. This may need adult help!

- Make sure not to put pressure on the monitor screen as you lower it down!

This document was generated on 2022-01-08 03:33:54 AM (MST).

Step 9 — Monitor Connections - HDMI

- Now time to connect the HDMI connector (High-Definition Multimedia Interface)

- Route the cable through the circular cut out in the vertical upright and connect using the right orientation to the back-bottom of the monitor

Step 10 — Monitor Connections - Power

- Do the same with the power cable for the monitor

- The connection side going to the monitor is called an IEC connector. The other side is a standard plug for a wall outlet in America.

This document was generated on 2022-01-08 03:33:54 AM (MST).

© 2022   rrevo.dozuki.com/   Page 8 of 16
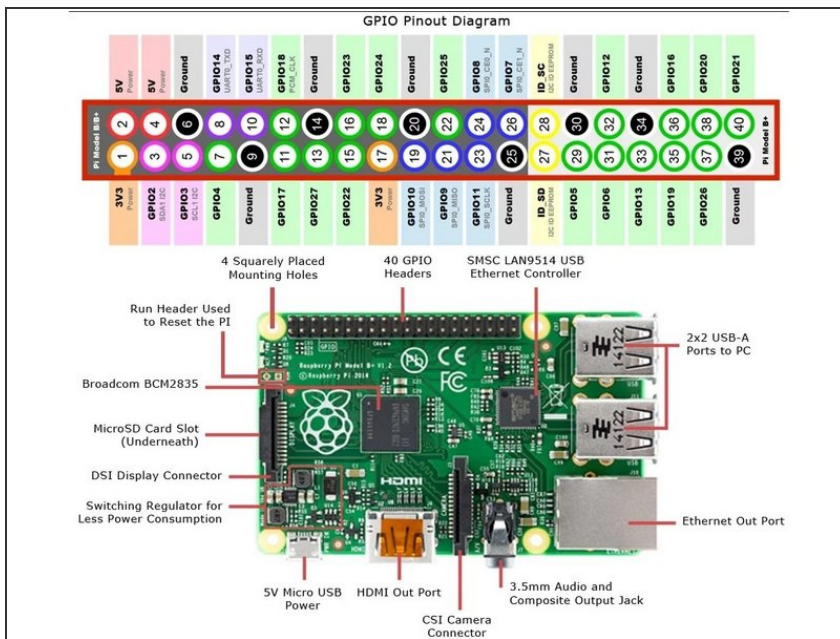
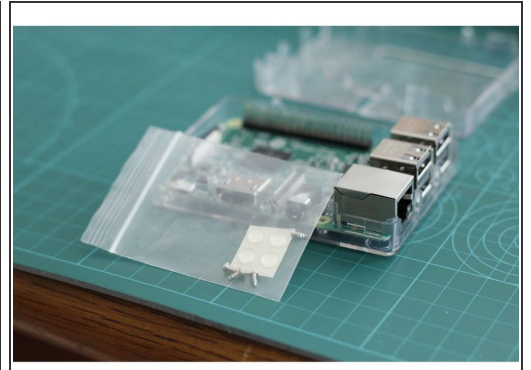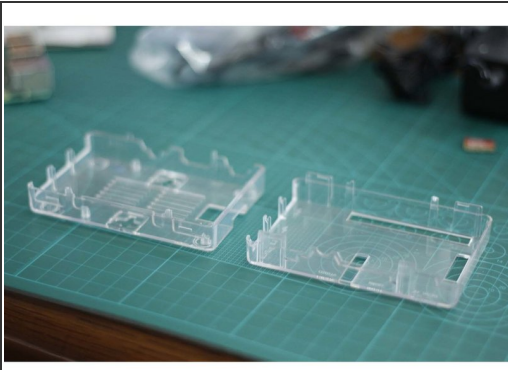## Step 11 — Open the rest and be ready to build!

- Open up all these things from their boxes and take a look at the various cables and connections at the ends to prepare for the next steps.

Step 12 — Look at the Raspberry Pi 3!

- There are so many awesome things built into such a tiny board. This functions as a computer but still has all the key components just like other full sized computers!

This document was generated on 2022-01-08 03:33:54 AM (MST).

© 2022

rrevo.dozuki.com/

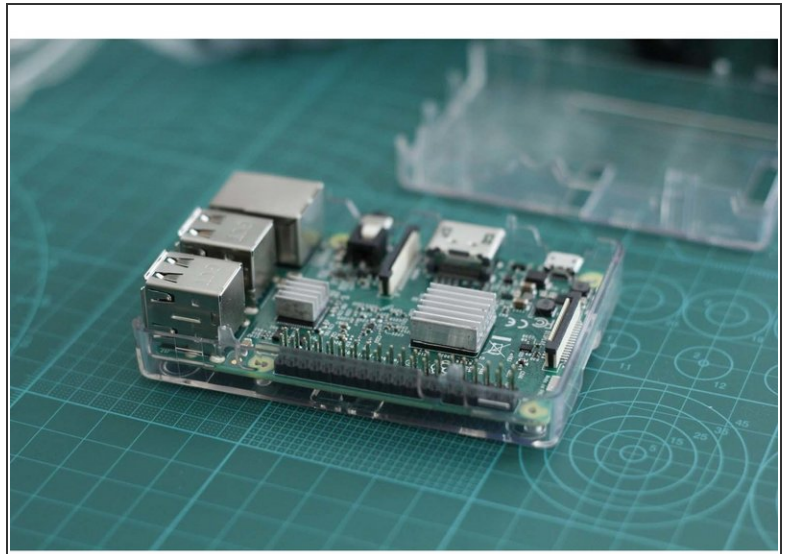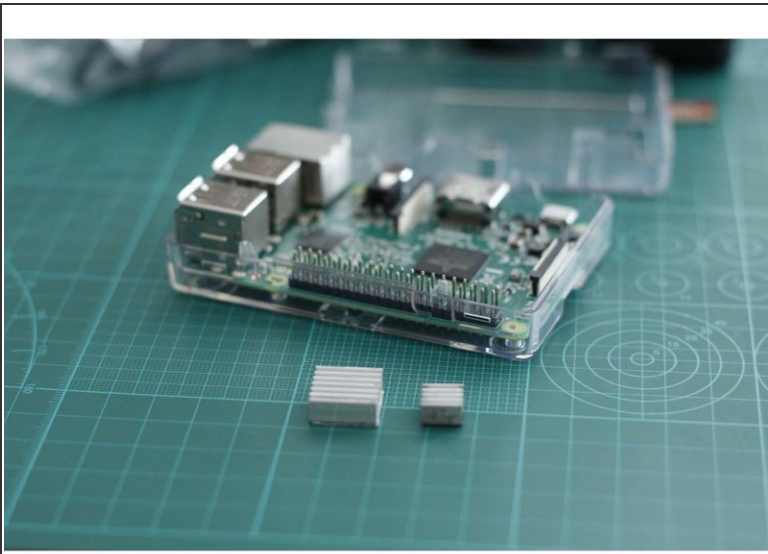Page 9 of 16

Step 13 — Time to case it up!

- Take out your Raspberry Pi clear case and orientate the board into the base plate

- Find your bag of small screws to lock the Raspberry Pi in as well as some feet to prevent the case from slipping on smooth surfaces

Step 14 — Screw it down!

- Have Uncle Brad or Mom help you put all 4 tiny screws into the raspberry pi case to hold it down!

This document was generated on 2022-01-08 03:33:54 AM (MST).

© 2022

rrevo.dozuki.com/

Page 10 of 16

Step 15 — It's Getting Hot in Here....

- Find your two small heatsinks

- The Raspberry Pi can get very hot if used for long periods of time, to help keep it cool and operating at peak performance we will add some heatsinks!

- These heatsinks have sticky thermal tape on them so they will stick to the components but allows heat to pass through into the aluminum heatsinks for maximum performance!

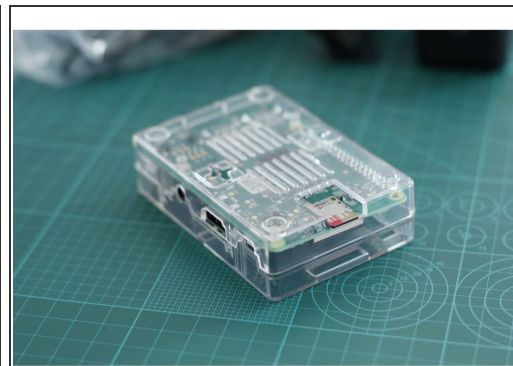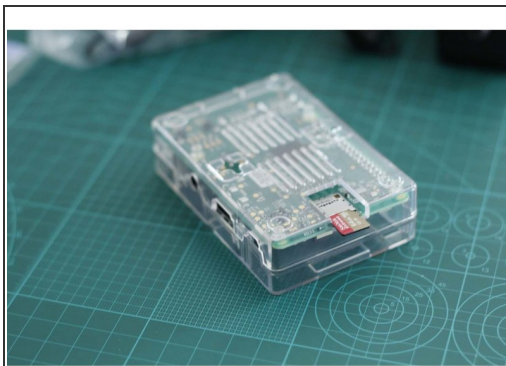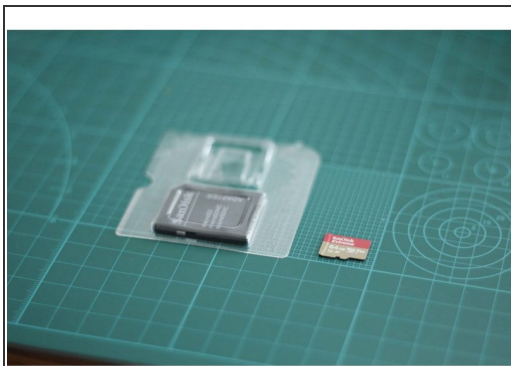- The heatsinks actually go on top of the CPU/main chip and the ethernet chip.

This document was generated on 2022-01-08 03:33:54 AM (MST).

© 2022

rrevo.dozuki.com/

Page 11 of 16

Step 16 — Close it on up

- Now gentle snap in the top cover of the clear Raspberry Pi case

- Your Raspberry Pi is now more protected and ready to go with connections!

This document was generated on 2022-01-08 03:33:54 AM (MST).

© 2022

rrevo.dozuki.com/

Page 12 of 16

Step 17 — Adding the Data

- Find your Micro SD Card and plug it in on the bottom of the Raspberry Pi just like in the pictures.

- This little chip is similar to what you have in your smart phones that hold data (information for the computer to use)

- Your microSD card is SUPER fast and already has an entire OS (operating system), or the building blocks of running as a computer, already downloaded ready to go.

- The Raspberry Pi will use this has a hardrive to store and read information as you use it. This particular card has 128gb or GIGABYTES! Things like pictures, videos, and files can be stored here for some time to come.

Step 18 — Connecting the Audio
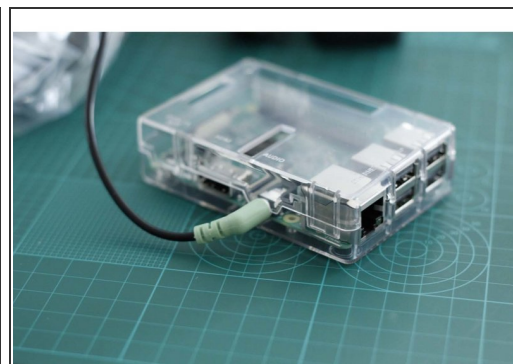
- Get your speakers and find the audio cable as seen in the picture

- Insert this cable into the Raspberry Pi's Audio port until it bottoms out. It may need a bit of force but be gentle!

This document was generated on 2022-01-08 03:33:54 AM (MST).

© 2022   rrevo.dozuki.com/   Page 13 of 16

Step 19 — HDMI time again!

- Take the other side of the HDMI cable that you connected at the Monitor and plug it into the Raspberry Pi's HDMI port

- Pay attention to the orientation of the HDMI before trying to shove it in!
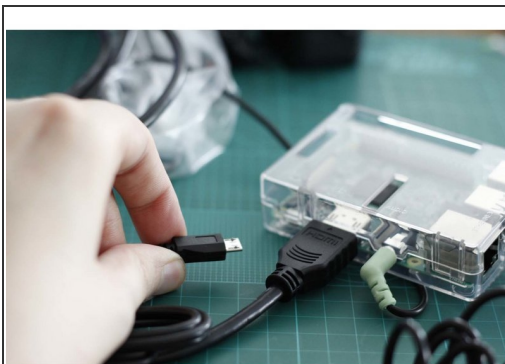
Step 20 — Keyboard and Mouse are lonely

- Take the USB (universal serial bus) connectors from the keyboard and mouse and plug them into 2 of the 4 USB ports on the Raspberry Pi similar to the pictures.

This document was generated on 2022-01-08 03:33:54 AM (MST).

Step 21 — TIME FOR POWER

- Your Raspberry Pi now needs it's power to turn on! Plug the microUSB connector into the port on the Raspberry Pi

- This is a AC/DC power supply. It can be plugged into standard American 110volts AC power and it converts those magical electrons into DC 5volts with up to 3amps of power.

- While these numbers and units are likely foreign to you, understand that this little box does a lot of work to give the Raspberry Pi exactly what power it demands to function safely without blowing up!

Step 22 — Plug it all in and turn it on!
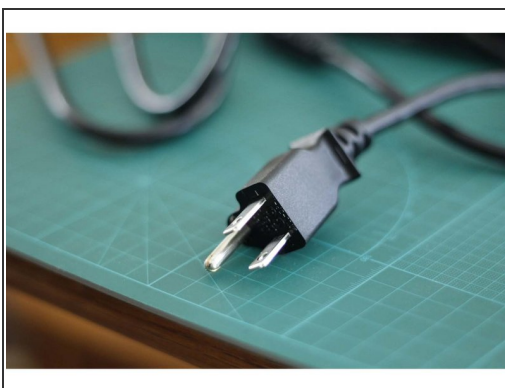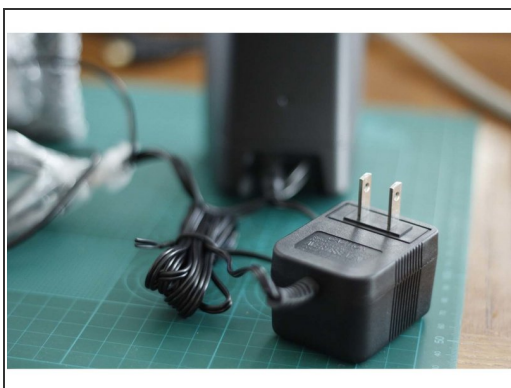
- Now take the power cables from the Raspberry Pi, the speakers and the monitor and plug those three into a power strip or outlet

- Ask Mom or Uncle Brad for help doing this step. AC 110volts is not to be played with. You can get shocked very badly if you dont respect those electrons coming from the wall.

This document was generated on 2022-01-08 03:33:54 AM (MST).

© 2022

rrevo.dozuki.com/

Page 15 of 16

Step 23 — Time to watch the monitor

- Have Mom or Uncle Brad check your work and ensure everything gets powered up

- Watch the monitor and follow the directions as you are now entering the world of software and programming!

- Kano OS will walk you through setup and account creation to get you doing everything from playing games to hacking Minecraft!

This document was generated on 2022-01-08 03:33:54 AM (MST).

© 2022

rrevo.dozuki.com/

Page 16 of 16