Welcome to my tutorial on configuring the gamehat for the raspberry pi 3b+:

The first thing we're going to do is flash the raspberry pi which can be done with etcher, win32imager, or dd on linux.

After this please boot up the raspberry pi press f4 with your keyboard and start configuring the wiif:

the first thing we need to do in this setting is change out locale

In the terminal:

sudo raspi-config > localiszation options > change locale > scroll down to your language + country code and utf 8 in my case I'm en-us UTF8 > press space on the locale you want > enter > scroll down to it > enter > the local will generate

please change the timezone to your liking as well

(for information on rfkill please do man rfkill)

Now we must select out wifi country code in a similar manner as we did localization

rfkil unblock all

reboot

Now we must configure wifi:

Sudo nano /etc/wpa_supplicant/wpa_supplicant.conf

Please make your supplicant.conf file look like the following

ctrl_interface=DIR=/var/run/wpa_supplicant GROUP=netdev

update_config=1

country=yourCountryCode

network={

ssid="yourWiFiNetworkNameHere"

psk="******"

key_mgmt=WPA-PSK

}

Next we're going to install the arcade joystick library so that way the control can function properly:

sudo ./RetroPie-Setup/retropie_setup.sh

let the retropie setup script load > in the menu go to > manage packages > driver > mkarcadejoystick > install from source > yes > now we need to edit the configuration file for it.

sudo nano /etc/modprobe.d/mk_arcade_joystick_rpi.conf > change the one line in there to have 5 at the end of it and concatenate this line to coincide with the gamehat:

gpio=5,6,13,19,21,4,26,12,23,20,16,18

now we need to edit the /boot/config.txt file to have the display options we want:

sudo nano /etc//boot/config.txt > add in these lines:

hdmi_force_hotplug=1

hdmi_group=2

hdmi_mode=87

hdmi_cvt=720 480 60 1 0 0 0

save exit and reboot

(what this code does):

Setting hotplug to one forces the pi to think an hdmi connection has been consistently attached and is always on

Hdmi_group=2 sets the display settings to be Display Monitor Timings which is the standard using by computer monitors

Hdmi_mode=87 set a custom hdmi more that will be handled with cvt

Hdmi_cvt = width height framerate aspect margins interlace reduced-blanking

Now we're going to be putting together the gamehat:

The first thing we're going to be doing is mouting the main bracket/stand which should look like this:

After this connect the pi to the main circuit board and attach the hdmi adapter you may have to press up on the pi be sure to not put any pressure on the screen as it may crack

after you've done this add in the additional brackets to hold the main board in place and screw them in:

after this put the black plate on it screw it

in:

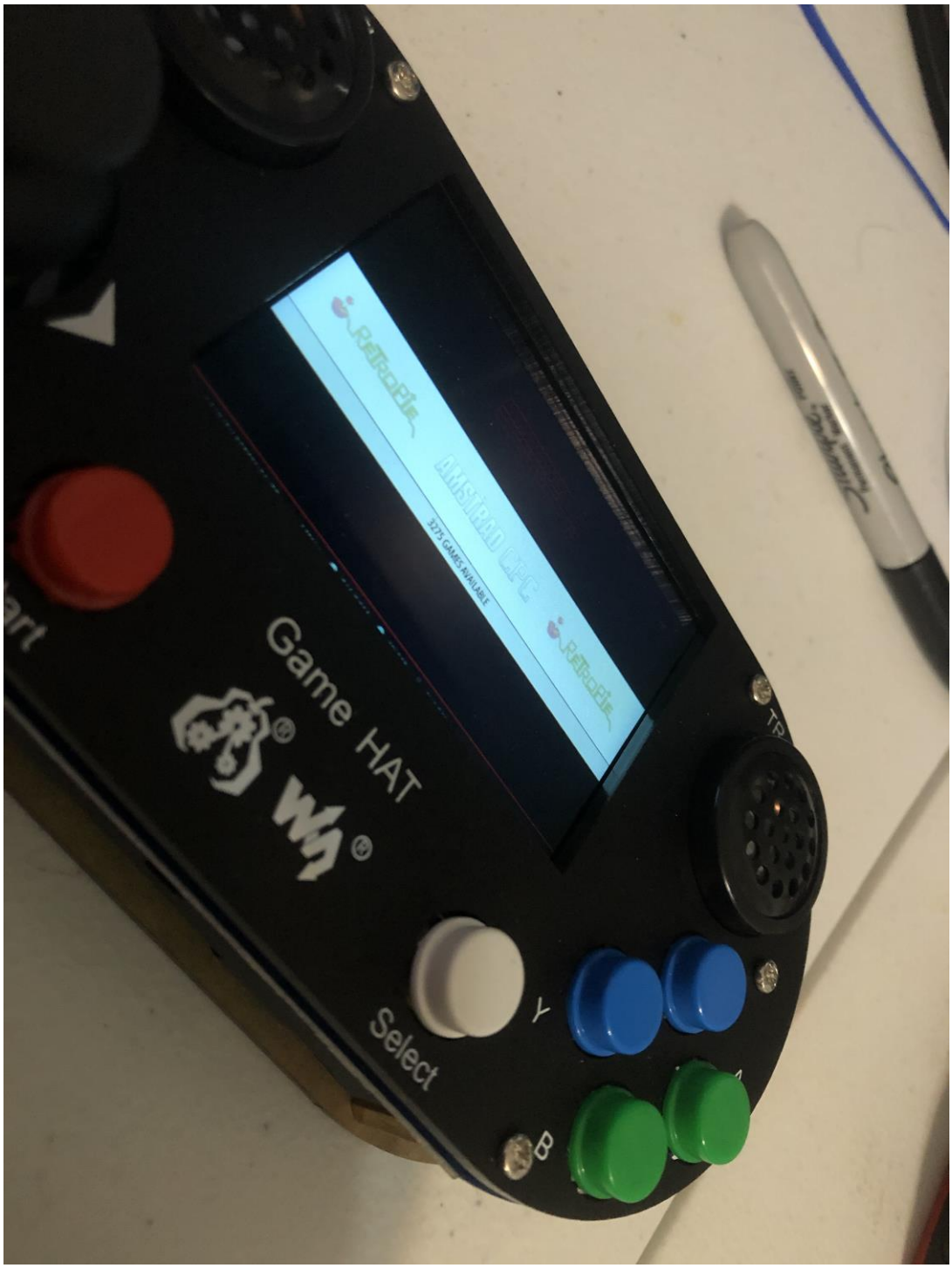
You should be able to boot up the pi and get past the configure controller menu now.

Adding games:

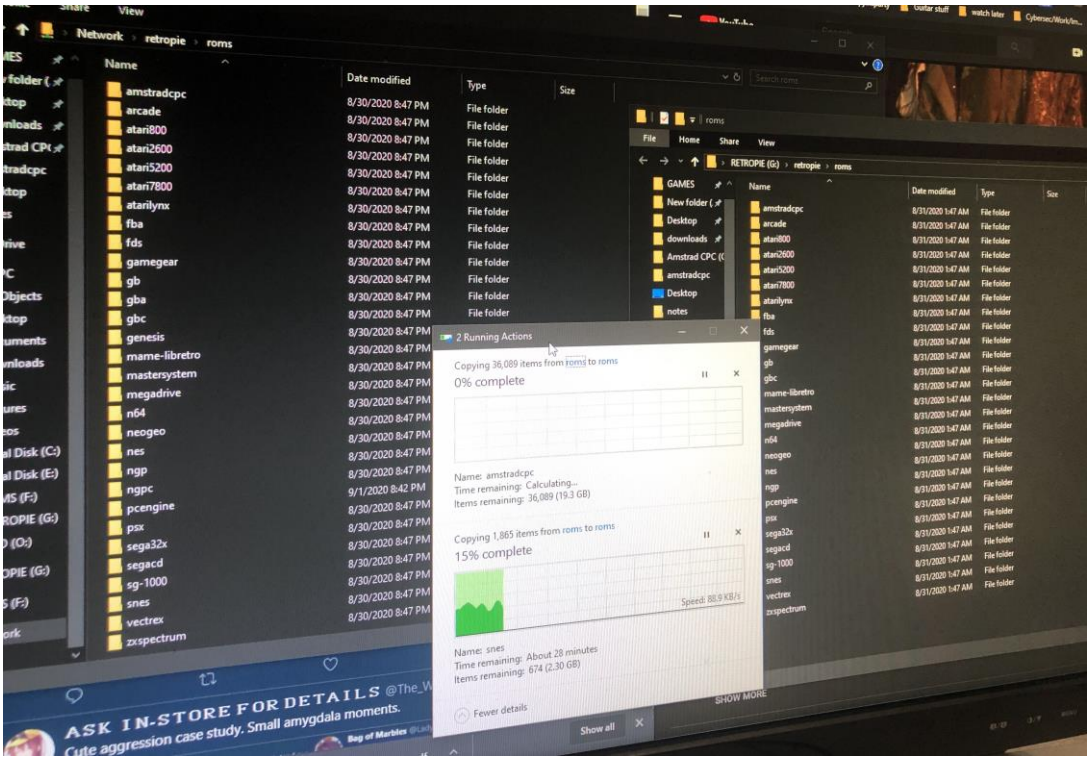
Take a 32gb USB(preferred) > put it into your computer of choice > name it RETROPIE > make a folder in it all lower case called retropie > put this usb into the pi on the gamehat > start it up > shutdown > put it back into your pc of choice > the retropie folder should now be populated with the folders for the games.

To put the games into the pi drag and drop them into their respective console folder in the roms directory > put the usb back in the pi > you may need to reboot a couple of times for it to populate the respective folders on the pi.

If this worked successfully it should look like this but with more games:



If this didn't work on your windows machine you can always open windows explorer and type ¥¥retropie and transfer over all the folders like so:



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an always ssh into the pi from you gnu/linux machine and transfer them over scp:

sudo systemctl start ssh(on pi)

(on gnu/linux box):

scp (file) pi@retropie(or I.P. on network):(pathToWhereYouWantYourFile)

scp -r (directoryPath) pi@(retropie or ip on network):(pathToWhereYouWantYourFile)

alternatively you can set up a keypair on your pi and use scp -i which is the method I'm most familiar with:

scp -i (path to privatekey) (file you want to transfer) pi@(retropie or ip):~(or path to where you want your file) (you could also add -r into it but I recommend zipping all the files/folders into a tar.gz and transferring over that tar.gz archive to the retropie(as this is also what I'm most familiar with)(for more information on scp go here: https://haydenjames.io/linux-securely-copy-files-using-scp/)

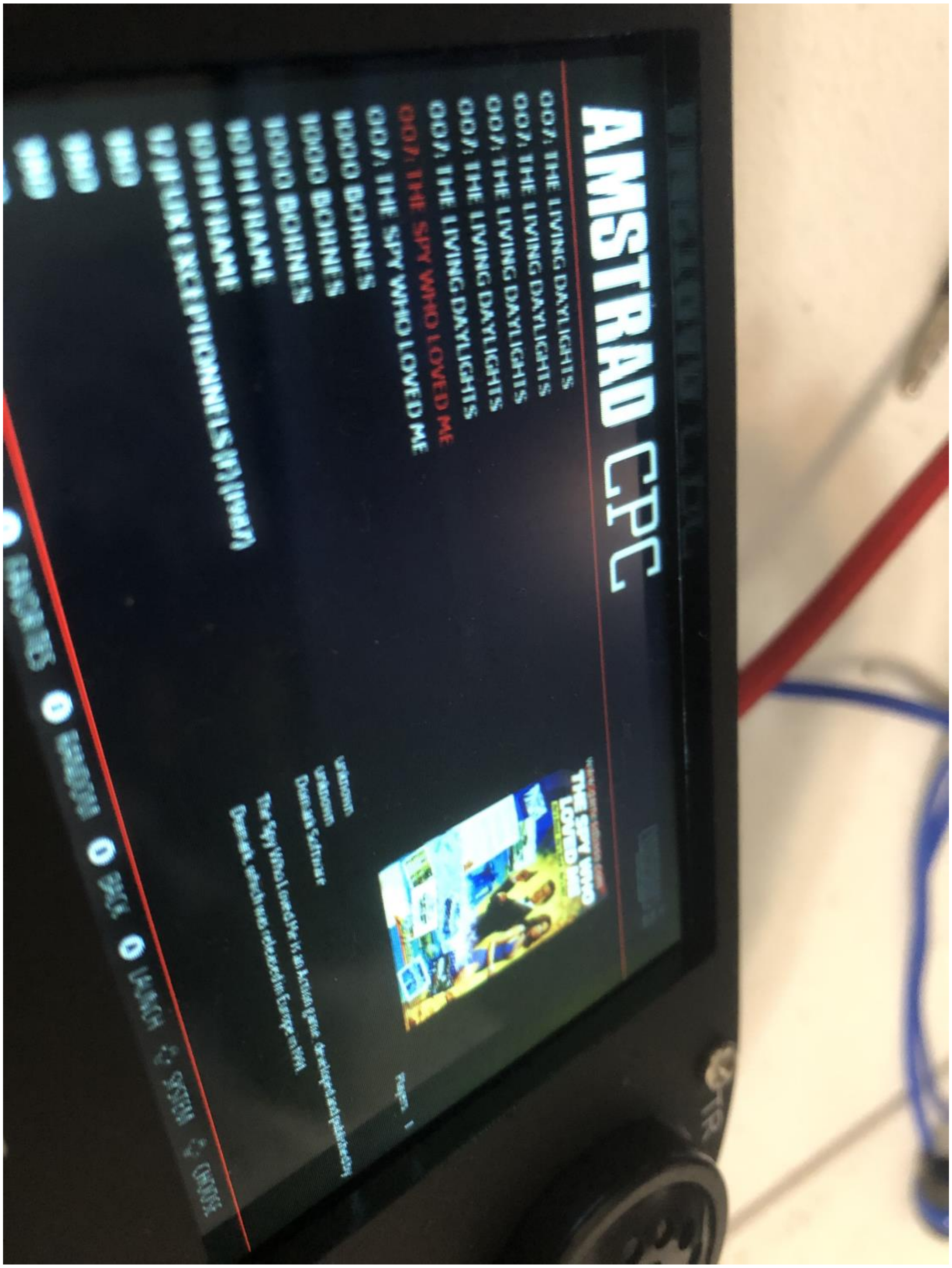
The end result should look something like this:


GAME GEAR
GAME BOY ADVANCE
LYNX
430 GAMES AVAILABLE
LAUNCH SCREENSAVER
MENU
RANDOM
SELECT
CHOOSE
Game HAT
Select
Start
X
A
Y
B

Now we're going to be scraping the descriptions as well as the box art for the game to make our current menu look a bit more nice

Press start > scraper > make sure the scraper is THEGAMESDB > scrape now > user decides on conflicts > off > scrape now(you can stop at any time)

The end results should look something like this:



Now we’re going to be installing a theme onto the gameboy:

Plug a keyboard into your gameboy > f4 > sudo ./RetroPie-Setup/retropie_setup.sh > Configuration/Tools > esthemes > in this case I'm going with snes-mini > install it > exit the script > reboot > after emulation station has loaded up > start button > UI settings > scroll down to theme set select snes-mini

end result should look like this:

Next we'll be configuring overclocking and disabling the low voltage warning:

in the tty go do:

sudo nano /boot/config.txt > add this in at the bottom > avoid_warnings=2 this disables all under voltage warnings and allows you to do overclocking while under-voltage

in this same tile lets set the maximum overclock for the CPU and the GPU we're going to be going with maximum overclock:

add in this line in the config.txt file:

force_turbo=1

which will force it to be maximum overclock at all times

To check if everything succeed we can display the frequency of the CPU by doing the following and then dividing it by 1 million

in the tty:

vcgencmd measure_clock arm

divide that number by 1million the output should be 1400 if you're using a pi3b+

now we're going to be installing steam link onto the gameboy so that way you can play it any where in your house:

f4 > sudo ./RetroPie-Setup/retropie_setup.sh > manage packages > experimental packages > look for steam link > exit back to the terminal > reboot > navigate to ports on the emulation station menu > click into it > steam link should be there > let it set up > get started > on the pair controllers screen choose the second option from the left > bind the controls > if something doesn't work you can either retry it or skip > after you complete this it will proceed to scan for a device on your network that you can link to a 4 digit code will appear on the screen and a message from steam should appear on your pc > click it > you will then be prompted to enter in the code > after you enter in the code press remote play > you will now be remoted into your PC through steam link. > end result should look like this >

Videos
Local Music
Downloads
Search Library...
OPTIONS
182
0
167
6
43
HALO
RESIDENT EVIL
A Short Hike
ZELDA
PHANTASY STAR ONLINE 2
FILTER
BACK