

Commodore
Retro
Gaming

on the
Raspberry
Pi

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for TPUG
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What I'm going to cover

- C64 Game Emulation
- Amiga Game Emulation
- ~~Serious software for either~~
- ... all on a Raspberry Pi

What I'm not

- Many old games are in legal limbo
- Only a few have the creator's permission
- Do the research:

DON'T ASK ME WHERE
TO DOWNLOAD ...

Raspberry Pi is ...

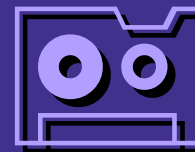
- Cheap!
- small
- More powerful than any old computer
- Lots of great emulators available
- Talks to yer TV or monitor

Raspberry Pi doesn't

- Have capacitor plague
- Use weird video connectors
- Rely on obsolete media like



or



GOLDEN RULE

- You can **trust** old info about C64 & Amiga **BUT**
- For Raspberry Pi:
 - Info $>$ 1 year old is **SUSPECT**
 - Info \geq 2 years old is **WRONG**

RetroPie



<https://retropie.org.uk/>

Retropie is ...

- Best-in-class selection of emulators
- Runs on top of Raspbian Linux and EmulationStation
- Free!

**DON'T PAY FOR
IMPOSTERS!!!**

RetroPie isn't ...

- Cycle-perfect emulation of every system
→ buy an \$\$\$ FPGA system if that matters
- Particularly easy to set up

Supported systems

3do, Amiga, Amstrad CPC, Apple II, Atari 2600, Atari 5200, 8 bit, Atari 7800, Atari Jaguar, Atari Lynx, Atari ST, STE, TT, Falcon, Colecovision, Tandy Color Computer, Commodore 64, Dragon 32, Dreamcast, Game Boy Advance, GameCube, Game Gear, Game Boy, Game Boy Color, Genesis/Megadrive, Intellivision, Macintosh, **MAME**, Master System, MSX, Neo Geo, Nintendo 64, Nintendo DS, Nintendo Entertainment System, Oric, PC, PC Engine/TurboGrafx-16, PlayStation 1, PlayStation 2, PSP, SAM Coupe, Sega 32X, Sega CD, Sega SG-1000, Super Nintendo Entertainment System, TI-99/4A, TRS-80, Vectrex, Videopac/Odyssey 2, Virtual Boy, Wii, Wonderswan, ZX Spectrum, ...

You'll need ...

- Raspberry Pi 3, plus case, **heat-sink**, 16 or 32 GB micro-SD, power supply
- Monitor with audio or TV
- Keyboard (maybe mouse)
- Game controller(s)

Keyboard ... ?



IOGEAR and Rii wireless keypads

Controller



Logitech F310 USB

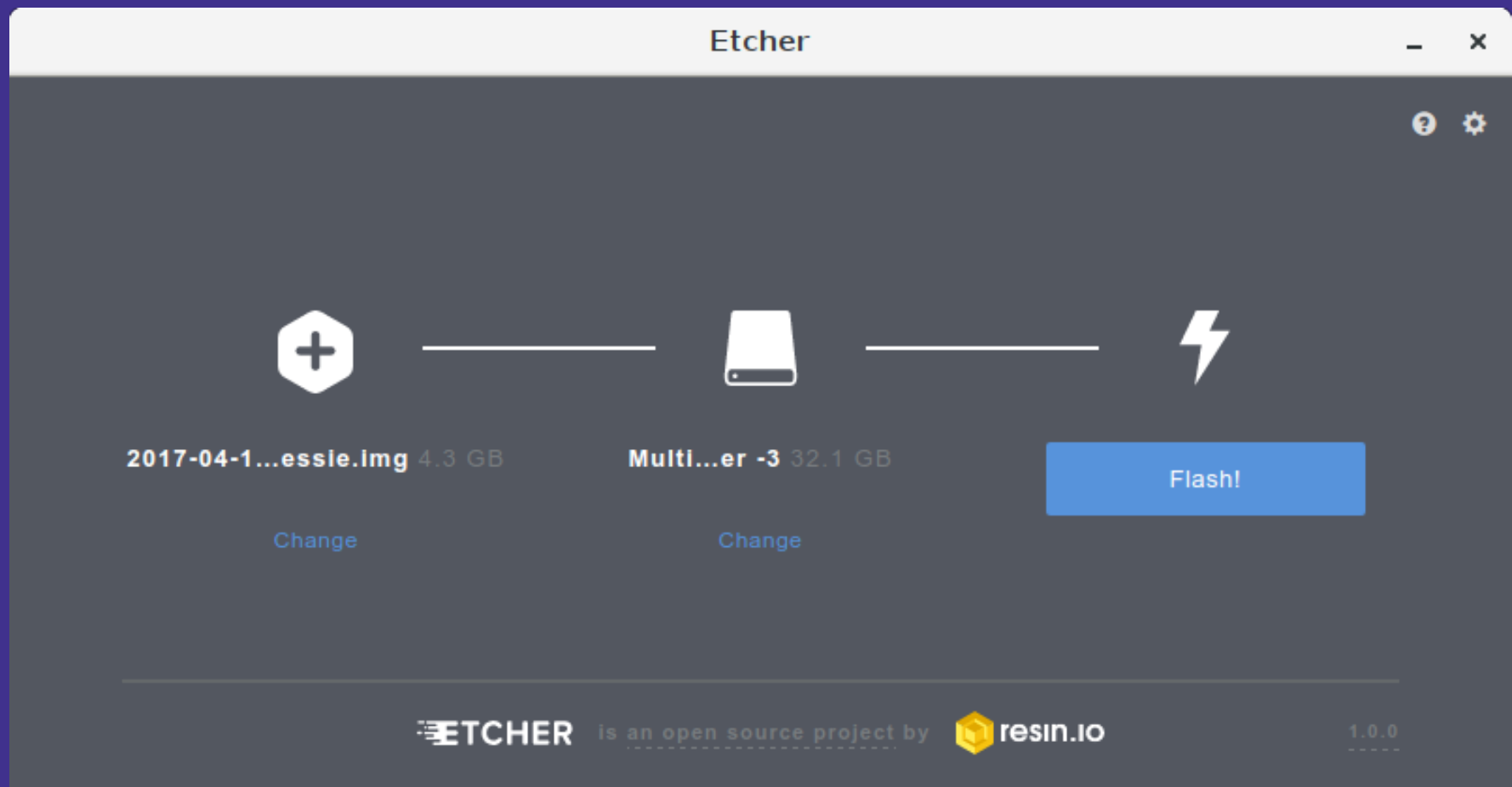
On controls

- Having a keyboard is essential for setup
`LOAD"*",8,1`
- Arcade game controls always a compromise
- Custom cabinets/controllers from Retro X and others

Installation

Grab the image from
<https://retropie.org.uk/>
installing on top of
Raspbian can be done
but is more difficult

Write the uSD card



Etcher – <https://etcher.io/>

Success!

WELCOME

NO GAMEPADS DETECTED

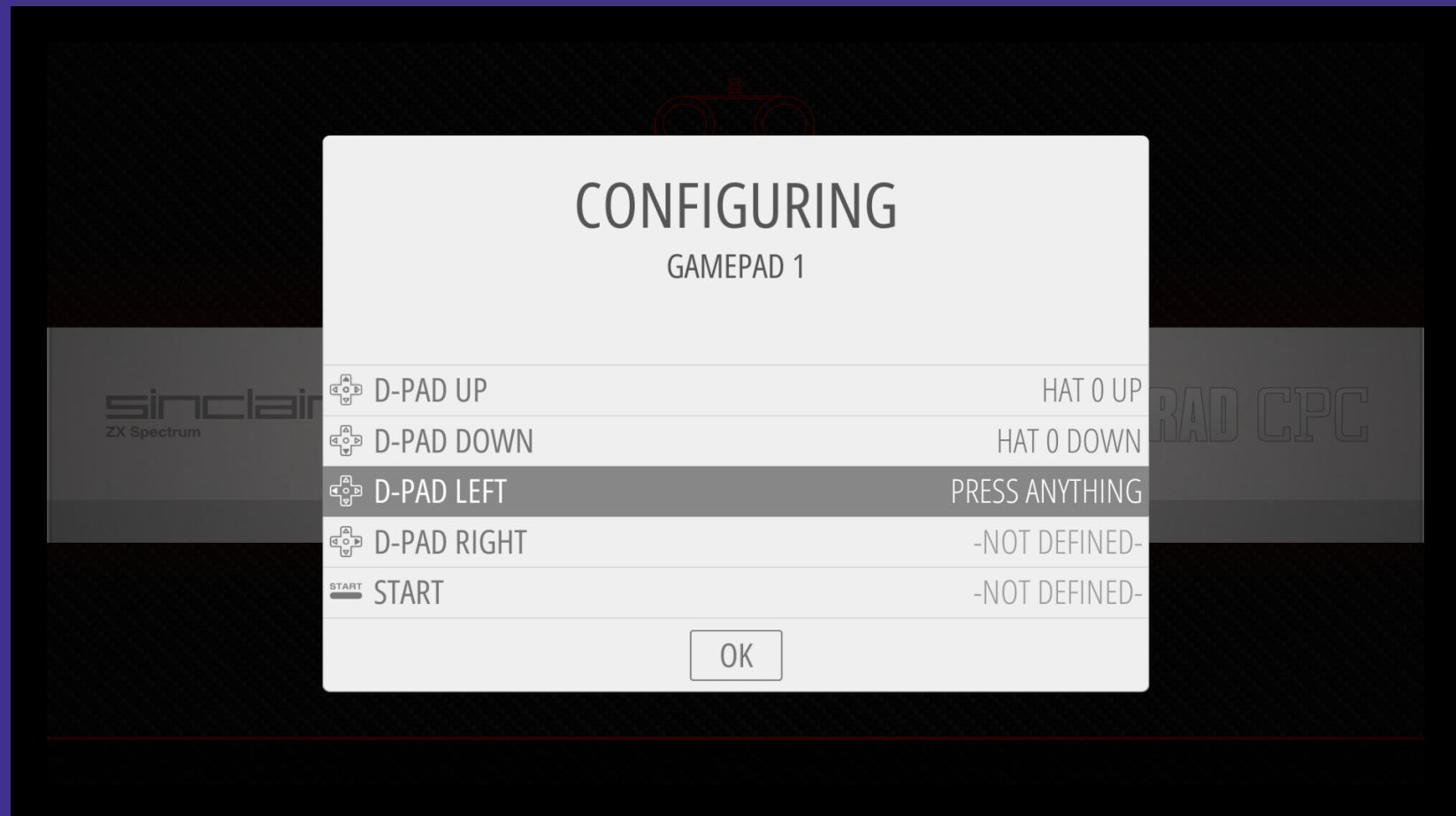
HOLD A BUTTON ON YOUR DEVICE TO CONFIGURE IT.
PRESS F4 TO QUIT AT ANY TIME.

... fail?

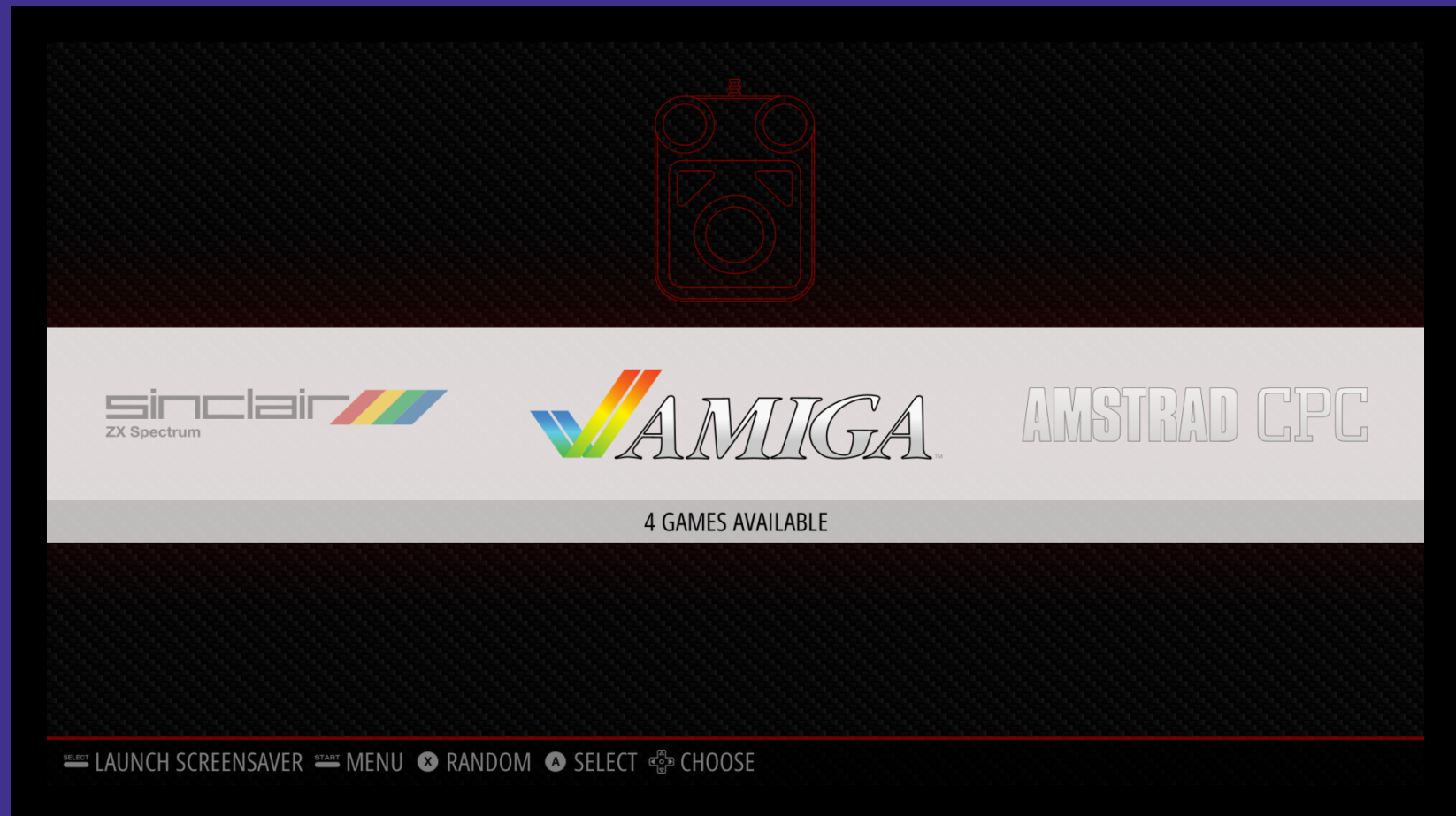
<https://retropie.org.uk/docs/>

- Power Supply?
- Cables OK?
- Card OK?
- ~~have you tried turning it off and on again?~~

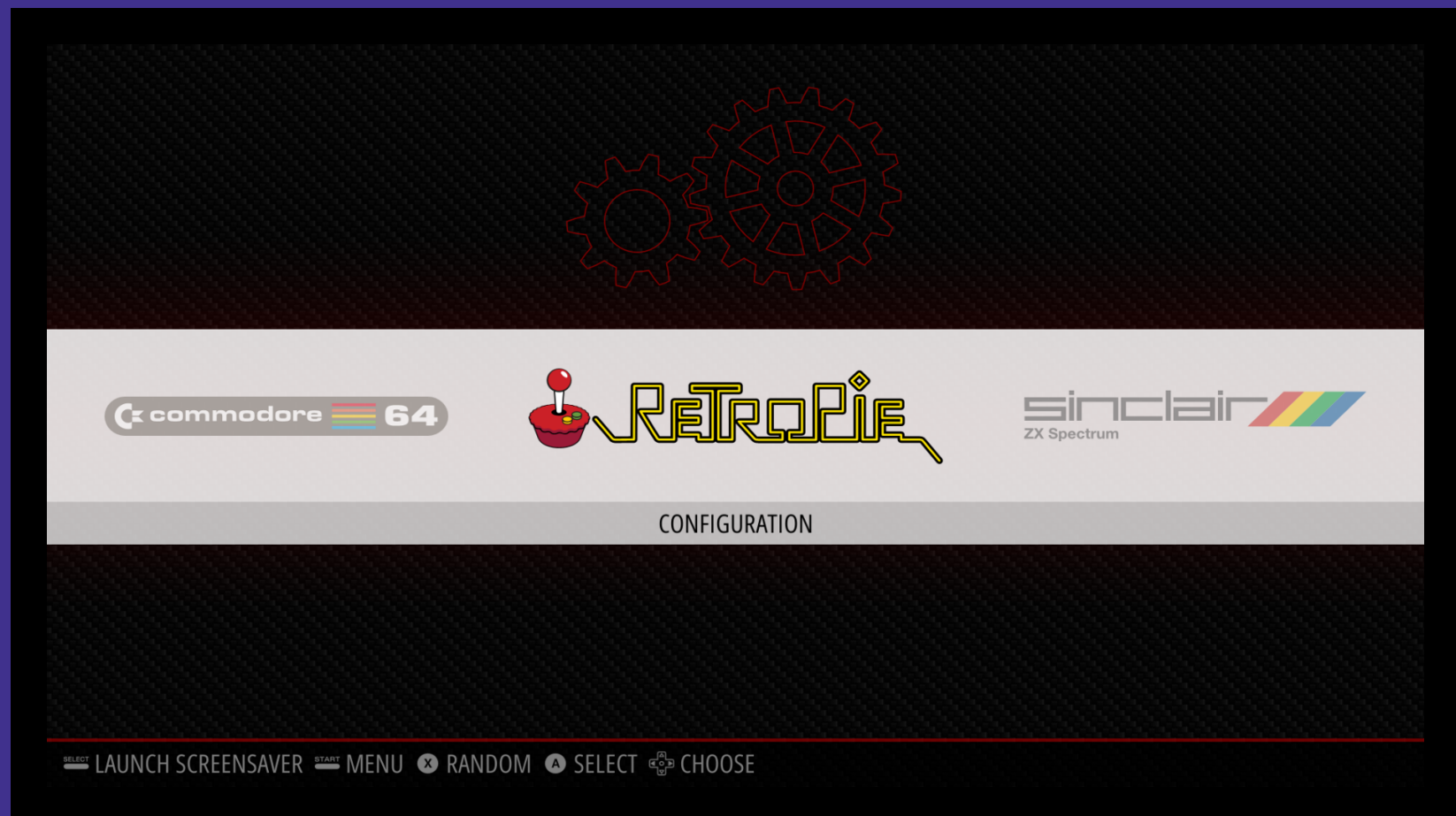
Configure input



Main screen turn on



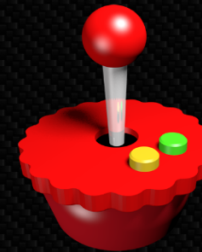
Start with config



Main Config Menu



- AUDIO
- BLUETOOTH
- CONFIGURATION EDITOR
- ES THEMES
- FILE MANAGER
- RASPI-CONFIG
- RETROARCH
- RETROARCH NET PLAY
- RETROPIE SETUP**
- RUN COMMAND CONFIGURATION
- SHOW IP
- SPLASH SCREENS
- WIFI



Install RetroPie from binary or source, install experimental packages, additional drivers, edit samba shares, custom scraper, as well as other RetroPie-related configurations.

 OPTIONS  MENU  RANDOM  BACK  LAUNCH  SYSTEM  CHOOSE

retropie_setup.sh

retropie.org.uk - RetroPie Setup. Installation folder: /opt/retropie for user

RetroPie-Setup Script

Version: 4.2.7

Last Commit: 2 days ago (7364e2a)

- I Basic install
- U Update all installed packages
- P Manage packages**
- C Configuration / tools
- S Update RetroPie-Setup script
- X Uninstall RetroPie
- R Perform reboot

< OK >

< Exit >

< Help >

P Install/Remove and Configure the various components of RetroPie, including e

Adding new systems

- Read specifics on RetroPie website
- Game ROMs or images go in **RetroPie/roms**
- Restart EmulationStation
- Play!

Commodore Amiga

- late 1980s - mid 1990s
- 16 bit, 68000 CPU
- Had (then) amazing graphics
- Still claims on the Amiga Inc IP

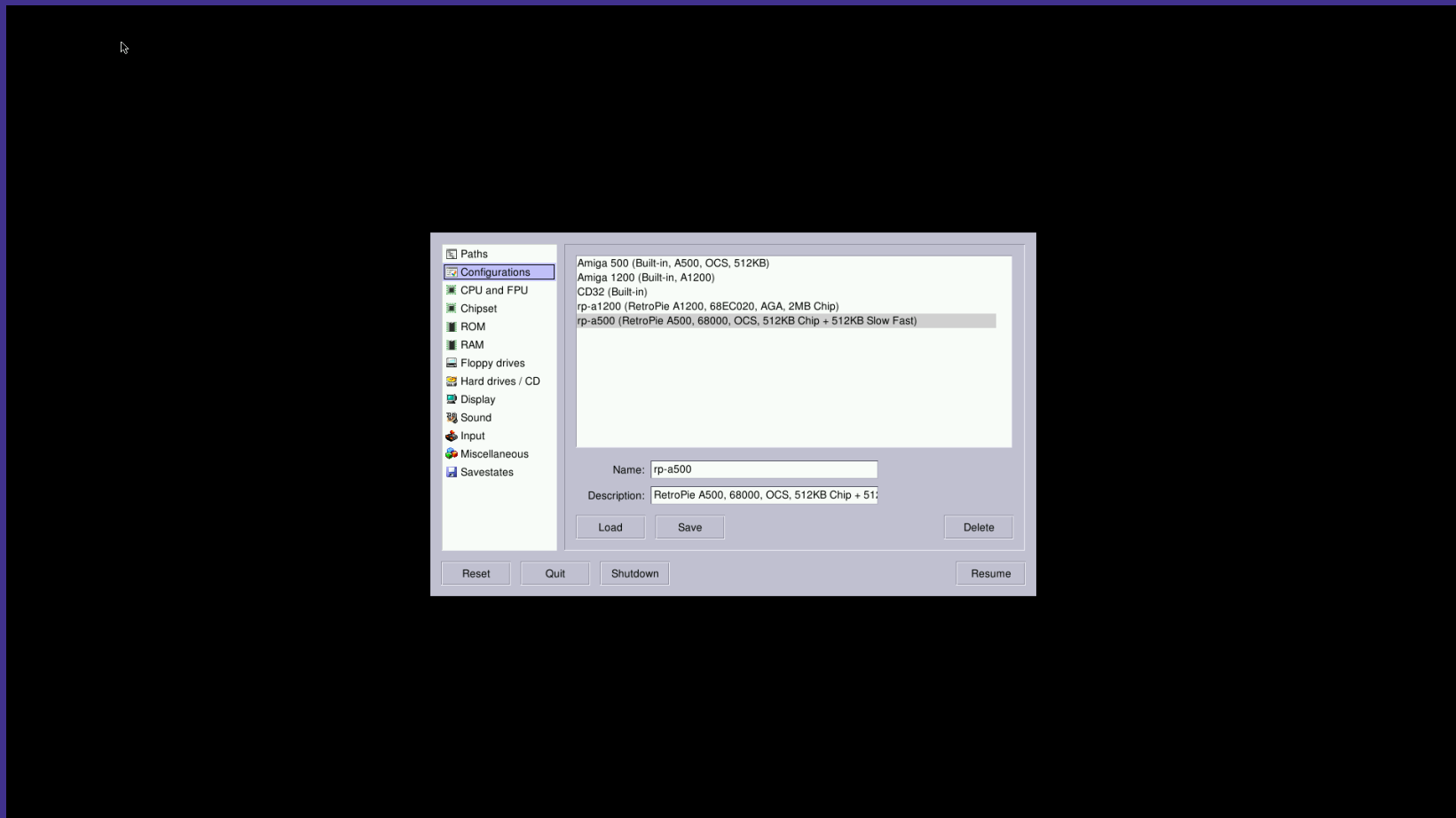
RetroPie Amiga

- Runs UAE4ARM: screamingly fast
- Can make your Raspberry Pi a bit **WARM**
- Comes with AROS mostly-compatible ROM
- You will exercise your F12 key *a lot*
- Setup:
<https://github.com/RetroPie/RetroPie-Setup/wiki/Amiga>

Silkworm on Amiga



Quitting Amiga



you need a mouse & keyboard ...

Commodore 64

- early 1980s
- "biggest selling computer ever"
- 8-bit 650210
- amazing audio
- ... shame about those disc drives tho



RetroPie C64

- Runs VICE for accurate emulation of all C= 8-bit machines
- Joystick setup is a little fiddly
- Setup:
<https://github.com/RetroPie/RetroPie-Setup/wiki/Commodore-64-VIC-20-PET>

Bruce Lee



A very tiny setup



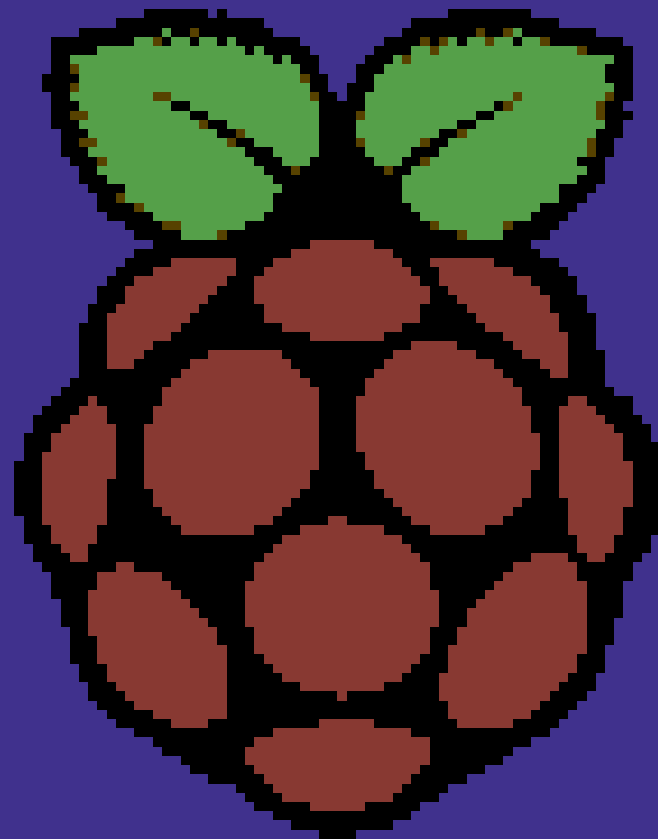
Bear Essentials



commercial break

- I work for
Elmwood Electronics
<https://elmwood.to/>
- We sell Raspberry Pi,
Arduino, etc. in Toronto
- Local pickup option
- Prices in CAD
- I have discount code
flyers ...

thank you!



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