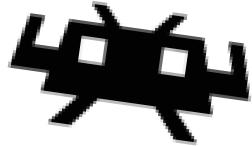


# RetroArch



*My harvesting and personal contributions of digital media and content in support of retro gaming and computing from 1976*

Since November 2021, select digital content pulled off of my [Drive folder](#) to make this into a plug & play **RetroArch** configuration that loads from a Debian 13 **Trixie** boot image for a user & developer friendly **Raspberry Pi 4/400** or **Pi 5** desktop (or console).

```
$ lsblk -S # find your target device NAME (SD card, USB stick)
$ xzcat RA-playlists-rpi-distro.img.xz | sudo dd of=/dev/[NAME] bs=4k status=progress
$ sync
```

The first boot may take a little longer ~ *be patient*. Once that has settled, configure your [network](#), [sound](#), and any [bluetooth](#) devices using the system panel controls.

## Notes

- do read the included [HELP](#) document off the Desktop or the console Playlists
- both desktop and console auto login as user [pi](#) with password [Freedom](#)
- console menu: press left [Alt](#) for a prompt to switch between the running shell profiles
- emulation configuration tweaks off detection whether Pi 4/400 or 5/500 model on autostart
- nearly [128gb](#) for systems emulation and content with another [50gb](#) of multimedia

## Latest Changes

Use console Playlists menu [upgrade](#) option off the latest SD card image to apply these enhancements:

3-Feb-2026

- new Debian 13 Trixie with latest dot [release 3](#): built+tested on Pi models: 4/400/5 **and new 500+**
  - added desktop printer support
- added Pi 500+ **keyboard lighting** support to highlight relevant keycaps used by content
- latest git commits off RetroArch v1.22.2 [release](#), with rebuilt cores
  - [CAPSLOCK](#) is now designated as game / keyboard toggle focus mode
- latest hypseus singe emulator
- dropped all Saturday cinema and movie content to move into Videos FFmpeg playlist
- reorganized console playlists menu into more era-targeted with curated lists
- updated [EmulationStation](#) themes
  - added [ARTFLIX-Cobalto](#), [iconic-es](#) and [Hypermax-Plus-PixN](#)
  - dropped FakeXMB

# Technical

## Layout

This **RetroArch** configuration is designed to be ‘plug & play’. And while it allows for flexibility to make some runtime modifications, it is designed to revert back to its original state after reboot. This is intentional, not to annoy you, but to protect from changes that lead to incidental havoc to gameplay.

That said, feel free to drop to a terminal shell prompt by using left **Alt** then **2** off the console menu to check out the differences between a default and its startup template configuration:

```
$ ll *.cfg
$ diff default.cfg template.cfg | less
$ micro template.cfg
```

Thus, **template.cfg** gets copied over to **retroarch.cfg** → which points to the pi temporary runtime memory space. It is the “base” configuration that gets loaded first. Subsequently, the other configuration files listed – *aptly named to follow the console playlist menu* – are “appended” in the order received to override base values.

## Overclocking

These are safe values that bump the CPU (+ GPU) clocks up in /boot/firmware/config.txt

```
[pi4]
# enables highest gpu settings at the expense of dual displays
hdmi_enable_4kp60=1
arm_freq=1980
#gpu_freq=550
#over_voltage=4

[pi5]
dtparam=nvme
dtparam=pcie1_gen=3
kernel=kernel8.img
arm_freq=2760
gpu_freq=920
#over_voltage=3
```

If using an NVME drive on Pi 5, enable it to boot:

```
$ sudo rpi-eeprom-config --edit

[all]
BOOT_UART=0
POWER_OFF_ON_HALT=1
BOOT_ORDER=0xf461
PCIE_PROBE=1
WAKE_ON_GPIO=0
```

## Startup

As noted, the **pi** user account is configured to auto login in both console and desktop modes. Its shell profile **.bashrc** script initiates Pi **MODEL** detection and prepares the console playlists menu. There is also an automated startup task script **autostart.sh** between modes to assure the machine's runtime environment is prepared for optimized use.

## Cores

There is a convenience script that can fetch and build RetroArch and some key emulation cores:

```
$ make-retroarch.sh
```

This table represents the active cores installed and referenced within the various playlists. It is useful to know the name of the core for **Netplay** connections to another host – as both the core and the content should be (optimally) identical:

The 3DO Company (Opera)	Nintendo - Game Boy Advance (gpSP)
Arcade (FinalBurn Neo Light)	Nintendo - Game Boy / Color (Gambatte)
Arcade ( <b>MAME</b> )	Nintendo - GameCube (Dolphin)
Arcade (MAME 2003-Plus)	Nintendo - <b>NES</b> / Famicom (Mesen)
Apple II / IIGS ( <b>MAME</b> )	Nintendo - 64 (Mupen64Plus-Next)
Apple Macintosh / Color Classic ( <b>MAME</b> )	Nintendo - Pok��mon Mini (PokeMini)
Atari - 2600 ( <b>Stella</b> 2014)	Nintendo - <b>SNES</b> / SFC (snes9x or bsnes-jg)
Atari - 7800 (ProSystem)	Nintendo - Virtual Boy (Beetle VB)
Atari - 800 (Atari800)	Sega - <b>Dreamcast</b> / Naomi (Flycast)
Atari - Lynx (Beetle Handy)	Sega - <b>MS/GG/MD/CD</b> (Genesis Plus GX)
Commodore - Amiga 500 / 1200 / CD32 (PUAE)	Sega - MS/MD/CD/ <b>32X</b> (PicoDrive)
Commodore - C64 ( <b>VICE</b> x64sc, accurate)	Sega - Saturn (Yabause)
Commodore - PET ( <b>VICE</b> xpet)	Sharp X68000 Compact (PX68k)
Commodore - Plus/4 ( <b>VICE</b> xplus4)	SNK - Neo Geo CD (NeoCD)
Commodore - VIC-20 ( <b>VICE</b> xvic)	SNK - Neo Geo Pocket / Color (Beetle NeoPop)
DOS (DOSBox-Pure)	Sony - PlayStation (PCSX ReARMed)
GCE - Vectrex (vecx)	Sony - PlayStation Portable (PPSSPP)
Mattel - Intellivision (FreeIntv)	Sony - PlayStation 2 (LRPS2) *tbd for aarch64
MSX/SVI/ <b>ColecoVision</b> /SG-1000 (blueMSX)	Tandy - Color Computer ( <b>MAME</b> )
NEC - <b>PC Engine</b> / CD (Mednafen_PCE)	Tandy - TRS-80 Model I ( <b>MAME</b> )
Nintendo - 3DS (Citra) *tbd for aarch64	Texas Instruments - TI-99/4A ( <b>MAME</b> )

*Actively used and participated in MAME, VICE, and Stella developments as standalone emulators since 1999 on Linux and Windows. The suite of UAE emulators would follow. Then RetroArch replaced them all in 2021.*

## Emulation Station

In addition to my custom themes for Playlists to launch an **exhaustive** list of content out of **RetroArch**, a comprehensive list of **fun games** using **Emulation Station** is added for its multiple gaming themes with a modern kiosk look & feel experience.

Collections	All Games	Favorites	Last Played
Educational	Pinball	Racing	Sports

Arcade		1976	
10-yard Fight 1994: The Loop Master 2 on 2 Open Ice Challenge Asteroids Berzerk Black Tiger Blasteroids Bubble Bobble Burger Time Carnival Cyberball Defender Donkey Kong Elevator Action Frogger Galaga Galaxian Gauntlet 2 Ghosts'n Goblins Ghouls'n Ghosts	Gladiator Gorf Gravitar Gun.Smoke Gyruss Joust Jungle King Karate Champ Kung-fu Master Lady Bug Life Force Make Trax Mappy Martial Masters Mercs Moon Patrol Mortal Kombat 2 Mr. Do! Mr. Do's Castle Ms. Pac-Man	NBA Hangtime Pac-Man Phoenix Pigskin 621ad Popeye Pop'n Pop Q*bert Rampage Rampart Robotron: 2084 Rolling Thunder Rolling Thunder 2 R-Type R-Type II Rush'n Attack Salamander 2 Satan's Hollow Scramble Sea Wolf Sea Wolf II	Space Duel Space Invaders Spiders Stone Ball Street Fighter II: CE Sunset Riders (4 Players) Super Punch-out!! Tapper Tecmo Bowl Time Pilot Time Pilot '84 Trog Ultimate Tennis Vampire: The Night Warriors Vanguard Wizard Of Wor Xevious X-Men (4 Players) Zaxxon

Apple 2		1977	
Beyond Castle Wolfnsta Beyond Pinball Castle Wolfenstein	Game of the States Injured Engine	Ultima I Ultima II: Killer Character Ultima III: Exodus	United States Adventure Yahtzee

Atari 2600			1977
Air-Sea Battle Asteroids Atlantis Basketball Battlezone Berzerk Bowling Boxing Breakout Carnival Chopper Command Combat Cosmic Ark	Demon Attack Dodge 'Em Dragonfire Enduro Frogs and Flies Ice Hockey Krull Lock 'n' Chase Medieval Mayhem MegaMania Missile Command Ms. Pac-man Night Driver	Pac-Man Phoenix Pitfall II: Lost Caverns Pitfall! RealSports Boxing RealSports Football RealSports Tennis River Raid Robot Tank Skiing Space Invaders Space War Spider Fighter	Stargate Star Voyager Super Challenge Baseball Super Challenge Football Threshold Title Match Pro Wrestling Tunnel Runner Vanguard Video Pinball : Arcade Pinball Warlords Yars' Revenge

Commodore VIC 20			1980
Amok Avenger Dragonfire Fun with Music Garden Wars Gorf Home Babysitter Jupiter Lander	Kids On Keys Mega-Cart (2009) Number Crunch Number Nabber Omega Race Pipes Radar Rat Race Raid on Fort Knox	Sargon II Chess SeaWolf Serpentine Shamus Speed & Bingo Math Spiders of Mars Spills and Fills	Star Trek - S.O.S Sub Chase Super Amok Super Slot Sword of Fargoal Type Attack Visible Solar System

Commodore 64			1982
Advanced Pinball Simulator Afterburner Arkanoid Battle Valley Beach Head Beach Head II Boulder Dash Bruce Lee Bubble Bobble California Games Caveman Ugh-lympics Commando Decathlon Delta Digiloi	Dropzone Druid First Samurai Flimbo's Quest Ghostbusters Ghosts'n Goblins Grand Prix Circuit Gunship Hardball H.E.R.O. Hyper Sports Impossible Mission II Infiltrator Into the Eagle's Nest Jumpman	Karateka Kung-Fu Master Match Day II Metro-Cross MicroProse Soccer Mikie Miner 2049er Pac-Mania Platoon Raid on Bungeling Bay Raid over Moscow Rescuing Orc Rolling Thunder Sanxion Scooby and Scrappy-doo	Stormlord Stunt Car Racer Super Robin Hood Thrust Toy Bizarre Track & Field Turbo Outrun Way of the Exploding Fist Winter Games Wizball Wolfing World Class Leaderboard World Games World Karate Championship X-Out

ColecoVision			1982
Bump 'n' Jump Burgertime Carnival Centipede Cosmic Avenger Decathlon Defender Donkey Kong	DragonFire Frenzy Frogger Frogger II Galaxian Gateway to Apshai Jumpman Junior Jungle Hunt	Ken Uston Blackjack-Poker Keystone Kapers Lady Bug Montezuma's Revenge Mr. Do! Mr. Do!'s Castle Popeye	Qbert's QUBES Space Fury Spy Hunter Super Cobra Time Pilot Tutankham Zaxxon

Vectrex			1982
Armor Attack Berzerk MineStorm	Pole Position Rip-Off Scramble	Space Wars Spin Ball	Star Castle Star Trek

Daphne			1983
Astron Belt Cliff Hanger	Dragon's Lair Drgn's Lair II: Time Warp	Space Ace	Super Don Quix-Ote

Nintendo Entertainment System			1985
Adventure Island II Baseball Stars II Batman Battletoads Bionic Commando Blades of Steel Castlevania Castlevania II Castlevania III Contra Crystallis Cyberball Cyber Stadium Series Disney's DuckTales Donkey Kong	Double Dragon II Excitebike Final Fantasy Gargoyle's Quest II Garry Kitchen's BattleTank Gradius Gun Nac Hammerin' Harry IronSword Iron Tank Kabuki Quantum Fighter Kid Icarus Kirby's Adventure Legend of Zelda	Little Samson Low Gravity Man Mega Man 2 Mega Man 3 Mega Man 5 Metroid Mike Tyson's Punch-Out!! Ninja Gaiden Ninja Gaiden II Power Blade 2 R.B.I. Baseball 3 River City Ransom Rollerball Shockwave Solstice Spot	Super Mario Bros. Super Mario Bros. 2 Super Mario Bros. 3 Super Turrican Tecmo Bowl Tecmo Cup Tecmo NBA Basketball Tecmo Super Bowl Tecmo World Cup TMNT III Top Players' Tennis Tetris Ufouria Wizards & Warriors III Zelda II: Adv of Link

Sega Master System			1985
Alien Syndrome Astérix Bubble Bobble Castle of Illusion Choplifter! Desert Strike Double Dragon Fantasy Zone II	Ghouls'n Ghosts Golvellius Joe Montana Football Jurassic Park Kenseiden Laser Ghost Mercs Ninja Gaiden	Operation Wolf Ottifants Phantasy Star Prince of Persia Rambo II Reggie Jackson Baseball R-Type	Space Harrier Spider-Man vs. The Kingpin Submarine Attack The Simpsons Ultima IV Wonder Boy III World Soccer

Atari 7800			1986
Alien Brigade Asteroids Centipede Choplifter! Commando Crossbow Dark Chambers	Dig Dug Donkey Kong Double Dragon Galaga Ikari Warriors Joust Karateka	Kung-Fu Master Mario Bros. Mean 18 Ultimate Golf Midnight Mutants Ms. Pac-Man Ninja Golf One-on-One Basketball	Pete Rose Baseball Pole Position II Robotron: 2084 Tomcat F-14 Touchdown Football Xevious

TurboGrafx-16			1987
Bloody Wolf Magical Chase	Neutopia Neutopia II	The Legendary Axe The Legendary Axe II Time Cruise	TV Sports Basketball TV Sports Football TV Sports Hockey

Sega Genesis			1988
Air Buster Aladdin Alien Soldier Castlevania Dinosaurs for Hire Dragon's Fury Dune Faery Tale Adventure Exodus Exo Squad Fatal Fury 2 Formula One Frank Thomas Baseball Gain Ground Gargoyles Gauntlet IV	Ghostbusters Golden Axe Golden Axe II Holyfield's Boxing Jerry 's Pigskin Footbrawl John Madden Football '93 King's Bounty Landstalker Lightening Force Lotus II Man Overboard! Master of Monsters Mazin Saga Mega Bomberman Mega Man	Micro Machines 2 Micro Machines: Military Mic Machines: Turbo 96 Mortal Kombat III MUSHA Mutant League Football Mutant League Hockey NBA Live 98 NHLPA Hockey 93 Pagemaster Pat Riley Basketball Pete Sampras Tennis PGA Tour 96 Phantasy Star IV Shinobi III Skitchin'	Sonic The Hedgehog 2 Steel Empire Street Fighter II Sub-Terrania Super Street Fighter II Team USA Basketball Toy Story Two Tribes: Populous II Vectorman 2 Virtual Pinball Wardner WeaponLord World Trophy Soccer X-Men 2: Clone Wars Ys III

Super Nintendo Entertainment System			1990
Aero Fighters Animaniacs Battletoads - Battlemaniacs Chrono Trigger Donkey Kong Country 2 Donkey Kong Country 3 Extra Innings F1 Pole Position 2 Final Fantasy VI Firepower 2000 Hagane Illusion of Gaia	Kirby Super Star Legend of Zelda Lemmings 2 Mega Man X Mega Man X2 Mega Man X3 Micro Machines Micro Machines 2 NBA Jam Tournament NBA Showdown NHL '94 Operation Logic Bomb Peace Keepers	PGA Tour Golf Phalanx Pop'n TwinBee Pacific Theater Operations Q*bert 3 R-Type III Space Megaforce Star Fox Stone Protectors Street Fighter II Turbo Super Baseball 2020 Super Dropzone	Super Mario Kart Super Mario RPG Super Mario World 2 Super Metroid Super Punch-Out!! Super Smash T.V. Tecmo Super Baseball Tecmo Super Bowl Tecmo Super Bowl II Tecmo Super Bowl III Tecmo Super NBA Tiny Toon Adventures

<b>Sega CD</b>				<b>1991</b>
Ecco: The Tides of Time Eternal Champions	Popful Mail	Sonic the Hedgehog CD	Soul Star	

<b>Sony PlayStation</b>			<b>1994</b>
Asteroids Big Strike Bowling Bishi Bashi Special Blood Omen Bowling Castlevania: Symphony Championship Motocross Crash Bandicoot: Warped	Darkstone Diablo Hot Shots Golf 2 Madden NFL 2001 Medal of Honor Mega Man 8 Mega Man Legends 2	Megaman: Battle+Chase Missile Command NBA Hoopz NFL GameDay Pong: The Next Level Rage Racer Resident Evil 3: Nemesis	Star Wars: Dark Forces Star Wars: Masters Star Wars: Reb Assault II Tiger Woods PGA Tour Twisted Metal 2 WarCraft II: Dark Saga Xena: Warrior Princess Xevious 3D-G+

<b>Sega 32X</b>				<b>1994</b>
Chaotix Kolibri	Mortal Kombat II NBA Jam: Tournament	NFL Quarterback Club Shadow Squadron	Star Wars Arcade Virtua Racing Deluxe	

<b>Sega Saturn</b>			<b>1995</b>
Albert Odyssey Burning Rangers Fighters Megamix	Galactic Attack Guardian Heroes Mass Destruction	Panzer Dragoon Panzer Dragoon II Powerslave	Saturn Bomberman Shining Force III Three Dirty Dwarves

<b>Nintendo 64</b>				<b>1996</b>
Beetle Adventure Racing! F-Zero X Legend of Zelda: Majora Legend of Zelda: Ocarina	Mario Golf Mario Kart 64 Mario Party 2 Mario Tennis	Mickey's Speedway USA Ogre Battle: Lrdly Caliber Pokemon Stadium 2 Snowboard Kids	Star Fox 64 Star Wars: Rogue Squad Turok 2: Seeds Of Evil Wave Race 64	

<b>Sega Dreamcast</b>				<b>1998</b>
F355 Challenge Gauntlet Legends Hoyle Casino Ikaruga Legacy of Kain: Soul Looney Tunes: Race Magforce Racing Marvel vs. Capcom: Clash Marvel vs. Capcom 2 Maximum Pool Max Steel: Covert	Mortal Kombat Gold Ms. Pac-Man Maze Madness NBA 2K2 NBA Hoopz NCAA College Football 2K2 NFL 2K1 NFL 2K2 NHL 2K2	Phantasy Star Power Stone 2 Pro Pinball Trilogy Rayman 2: Great Escape Record of Lodoss War Red Dog: Superior Power Resident Evil: Veronica SnoCross Championship Sonic Adventure Sonic Shuffle	Soul Calibur Spawn: Demon's Hand Sports Jam StarLancer St.Fighter III: 3rd Strike Stunt GP Tennis 2K2 Test Drive 6 Test Drive Le Mans Test Drive V-Rally	

<b>Nintendo GameCube</b>			<b>2001</b>
Mario Party 6	Super Smash Bros. Melee		

Nintendo Game Boy Advance				2001
Advance Wars Castlevania Dragon Ball Dragon Ball Z: Buu's Fury Dragn Ball Z: Supersonic Final Fantasy Tactics Final Fantasy VI Fire Emblem Fire Emb: Sacred Stones Golden Sun Golden Sun: Lost Age	Harvest Moon Harv Moon: More Friends Incredibles Invincible Iron Man Jungle Book King of Fighters EX King of Fighters EX 2 Leg of Zelda: 4 Swords Leg of Zelda: Minish Cap Mario & Luigi: Superstar Mario Golf: Adv Tour	Mario Kart Mario Pinball Land Mario Tennis Metroid Fusion Metroid: Zero Mission Muppet Pinball Mayhem Ninja Five-0 Pac-Man Pinball Advance Pinball Challenge Deluxe Pokémon: Emerald Pokémon: Emerald (hack)	Pokémon: FireRed Pokémon: LeafGreen Pokémon Myst Dungeon Pokémon: Ruby Pokémon: Sapphire Super Mario Super Mario 2 Super Mario 3 Super Mario 4 Super Monkey Ball Jr. Super Street Fighter II	

Sony PlayStation Portable				2004
Age Of Hammer Wars Age of Zombies Angry Birds Arcade Darts Arcade Essentials Arcade Evolution Arcade Pool & Snooker Blitz: Overtime Blood Bowl Bowling 3D Crisis Core: FF VII Duodecim Final Fantasy Dracula	D&D Tactics Dungeon Siege Final Fantasy Tactics Ghost Rider God of War: Sparta Golf Mania Halfbrick Blast Off Half-Minute Hero Let's Golf! Lord of the Rings: Tactics Marvel Nemesis Marvel: Ultimate Alliance	Marvel: Ult. Alliance 2 Metal Gear Acid Metal Gear Solid: Ops Metal Gear Solid: Peace Monochrome Racing Monopoly Monster Hunter Freedom Pac-man Championship Pinball Dreams Pinball Fantasies Sky Force Space Invaders Extreme	Spider-Man 2 Tetris Top Gun Trailblazer Twin Blades Vector TD Virtua Tennis: World Tour VT Tennis X-Men Legends II X-Men Origins: Wolverine Young Thor Zombie Racers	

# Prior Changes

18-Jun-2025

-  **MAGA** rebranded release: *My Awesome Games Archive*
- Debian 12 Bookworm with latest dot [release 11](#): built+tested on Pi 4gb models: 4/400 and Pi 5
- latest git commits off RetroArch v1.21 [release](#), with rebuilt cores, of note:
  - latest autoconfig controller profiles in support of the new input detection strategy
  - BlueMSX, Citra, FBNeo Light, Genesis Plus GX, MAME 2003-Plus, [MAME 0.277](#), PCSX ReARMed, PPSSPP, Stella, VICE [3.9](#)
- added launch Chromium web browser off the console menu using [weston](#)
- updated [Animatics-DX](#) and [PlayStation-X](#) theme
- latest Angband [build](#)

20-Jan-2025

-  **MAGA** release: *Making Arcade Games Accessible*
- Debian 12 Bookworm with latest dot [release 9](#): built+tested on Pi 4/400 and Pi 5
- latest git commits off RetroArch v1.20 [release](#), with **62** cores rebuilt, of note
  - bsnes-jg, [MAME 0.273](#), PCSX ReARMed, PUAE, VICE
- updated PlayStation-X theme to v.41 to use its PS4 style gamelists
- improved Cheevos account+password save support for more eligible Cheevos games
- improved upgrade option to manage more folders and to maintain symbolic links
- added a [udev](#) rule to address an 8BitDo retro mechanical keyboard issue with its 2.4ghz adapter that registers a “mouse” device along with the keyboard – RetroArch’s Mouse Index selects it first even though there is no mouse/trackball physical device attached to it
- minor menu cosmetic changes and many updated emulator screen overlays + fixes

28-Dec-2024

- latest git commits off RetroArch v1.19.1 [release](#), with cores rebuilt
  - bsnes-jg, Flycast, MAME 2003-Plus, [MAME 0.272](#), PCSX ReARMed
- added **Alt** keypress to Playlists: left prompts to switch virtual terminal and right for splash image
- Pi 5 using kernel8 image reported an issue with its new default 64mb CMA for [bug fixing](#)
- loaded up Sega Dreamcast collection with **40** titles in EmulationStation
- locally added game manual links for EmulationStation collections for faster viewing
- corrected Hypseus for all laserdisc games and added default bezel
- refreshed Sinden light gun support
- improved udev detection of usable input event device(s): joystick, keyboard and mouse

25-Nov-2024

- three years of retro computing and gaming on Raspberry Pi: I rate it an **A-** experience
- refresh [new](#) Raspberry Pi OS using default LightDM with its Lab Wayland Compositor ([labwc](#))
- Debian 12 Bookworm with latest dot [release 8](#): built+tested on Pi 4/400 and Pi 5
- latest git commits off RetroArch v1.19.1 [release](#), with cores rebuilt
  - Atari 800, Citra, FBNeo (Light), Gambatte, Genesis Plus GX, MAME [0.271](#), MAME 2003-Plus, PCSX ReARMed, PicoDrive, PPSSPP, Stella
  - add more game manual links whenever possible for its integrated PDF image viewer

- continue custom build out using [EmulationStation](#) with curated playlists (**700** titles)
  - updated themes and allow for user selection over the random pick before launching
  - added [FakeXMB](#) theme
  - show a random system hype video out of the PlayStation-X theme
- reduced console [tty](#): 1 - playlists menu with 2 - 4 auto login [pi](#) shells, 5 - fbi splash, 7 - lxde
- Pi 5 eeprom config: [PSU\\_MAX\\_CURRENT=5000](#) with boot [usb\\_max\\_current\\_enable=1](#)

27-Oct-2024

- latest git commits off RetroArch v1.19.1 [release](#), with cores rebuilt
  - blueMSX, DOSBox Pure, FBNeo (Light), MAME [0.270](#), MAME 2003-Plus, Mesen, Mupen64plus-Next, NeoCD, PCSX ReARMed, Snes9x
- WIP: custom build [EmulationStation](#) with curated playlists (**583** titles) since dropping CoinOps Legends RetroFE last year
  - starts up using a random 5-star theme out of a set of 4: [Animatics-DX](#), [Arcadeplanet](#), [PlayStation-X](#) with built-in [Carbon](#)
  - Arcade, Atari 2600 & 7800, Commodore VIC 20, 64, CD32, ColecoVision, Daphne (with latest [Hypseus](#) emulator), Nintendo NES, SNES, GameCube, Gameboy Advance, Sega SMS, Genesis, 32X, Saturn, Sony PlayStation, PSP, Vectrex
  - add link to my game manuals whenever possible for its integrated PDF image viewer
- Raspberry model detect in [autostart.sh](#) to prep best performance & visual tweak differences for Pi 4/400 and 5 startups, including which core to use: faster Snes9x or more accurate bsnes-jg
- new [ColecoVision](#) keyboard mapping option enabled: simply press 1 - 8 to start most games

28-Sep-2024

- Debian 12 Bookworm with latest dot [release 7](#): built+tested on Pi 4/400 and Pi 5
  - added Endless Sky game to desktop toolbar
- latest git commits off RetroArch v1.19.1 [release](#), with active cores rebuilt
  - Dolphin, FBNeo (Light), Flycast, Genesis Plus GX, MAME [0.270](#), MAME 2003-Plus, Opera, PPSPP, PUAE [5.3](#), PX68K, and VICE [3.8](#) (with C128 40/80 hotkey symbolic mapped as F9)
- replaced cores Beetle PCE FAST with Beetle PCE and snes9x with bsnes-jg for more emulation accuracy over speed hacks in playlists
- added ad hoc content off playlists menu
  - Sega Dreamcast NBA + NFL 2K2 to Niche games
  - Nintendo GameCube Super Mario Smash Bros Melee with Sega Dreamcast Gauntlet Legends and Hoyle Casino to Party games
  - 3DO Road Rash as a quick-pick

28-Aug-2024

- latest git commits off RetroArch v1.19.1 [release](#), with cores rebuilt
  - FBNeo (Light), MAME 0.268, MAME 2003-Plus, gpSP
- updated config overlays with custom x,y offsets to use absolute (0,0) centering bias and suppressed those fixed offsets to use the new bias default centering values instead
- updated all Arcade - Analog content to use the MAME core
- added [Raiden DX](#) to Arcade
- replaced the more obscure MAME rom naming used for playing the attract videos value
- added custom MAME crosshair cursors for Crossbow, Seawolf, etc.

## 24-Jul-2024

- Debian 12 Bookworm with latest dot [release 6](#): built+tested on Pi 4/400 and Pi 5
- latest git commits off RetroArch v1.19.1 [release](#), with cores rebuilt
  - FBNeo (Light), Genesis Plus GX, MAME 0.267, MAME 2003-Plus, Mupen64+ Next, and VICE
- WIP to replace the more obscure MAME rom naming used for playing the attract videos
- added **Marble Madness 2, Martial Masters** to Arcade
- added **Vanguard** to my main quick picks
- added **0 A.D.** (akin to Age of Empires II) and latest Windows application installer (Wine)

## 21-Jun-2024

- latest git commits off RetroArch v1.19.1 [release](#), with
  - assets and databases updated
  - added hotkey (**K, L, N, P**) support for running game Save States
  - cores rebuilt: FBNeo (Light), Genesis Plus GX, MAME 0.266, MAME 2003-Plus, NeoCD
  - PCSX ReARMed for PlayStation new TurboCD option enabled
- WIP to replace the more obscure MAME rom naming used for playing the attract videos
- WIP install mancave wallpapers (action, fantasy, pinups) as a desktop slideshow mode option
- Steam and Wine (WOW64 mode and box64) installed
- added **Field Combat** to main picks

## 31-May-2024

- latest git commits off RetroArch v1.19.0 [release](#) with cores rebuilt, of note
  - FBNeo (Light), MAME 2003-Plus, PUAE, and VICE
- always invoke [GameMode](#) when playing RetroArch off Desktop or Console – addresses the potential for significant input latency issues especially when using modern 4K/8K displays in spite forcing 1080p
- added some desktop strategy games
- enhanced Playlists menu **upgrade** option that adds rclone copy off this GDrive **aarch64** folder to apply updates from changes made within the past **9** months against RetroArch runtimes, configs, and supporting scripts

## 30-Apr-2024

- latest RPi eeprom firmware, Linux (6.6.28+rpt-rpi-v8), and Mesa (24.0.5) updated
- latest git commits off RetroArch v1.18.0 [release](#) with **66** cores rebuilt, of note
  - refreshed assets, controllers, databases, overlays and shaders
  - FBNeo (Light), MAME 0.265, PCSX ReARMed, PicoDrive and VICE for Commodore 8-bit computers
  - VecX changed to use software renderer not GLES3
- added Tandy and Texas Instruments ([MAME](#)) to Museum list, formerly Computers
- added Intellivision artwork, game bezels and manuals
- console playlists menu reorg with enhancements and reorganized quick-picks into **.local**
  - **main** menu lists the simpler 1 or 2 player arcade games
  - added subcategories: Board & Party, Pinball, RTS & Turn-based, Niche Controllers, and Homebrews
  - added a play VT240 terminal emulator script to telnet play.ddgame.us

## 28-Feb-2024

- Debian 12 Bookworm with latest dot [release 5](#): built+tested on Pi 4/400 and Pi 5

- latest Linux (6.6.18) with firmware (Feb 16)
  - Pi 5 firmware setup for 15% overclocking with boot order: SD card, NVMe drive, USB stick
- latest git commits off RetroArch v1.17.0 [release](#) with active cores rebuilt, of note
  - FBNeo (Light), MAME 0.262 and moved off Stella and onto Stella 2014
  - added Sega Naomi2 (Flycast) support
- KDE Plasma 5 updated
  - Wayland autostart scripts include changing display settings to HD + 120% scaling
  - bluetooth adapter automatically detects & powers on at desktop (or console) startup
  - desktop RetroArch apps run content out of a Wayland window properly, but note that Nintendo 64 and arcade vector games still run their best out of a console screen
  - added Chromium apps and the Pi-Apps store
- added mouse button + wheel controls to console playlists menu

## 26-Jan-2024

- latest Linux (6.1.74), firmware (Jan 24), and Mesa (23.2.1) updated
  - boot config enable PCI express for NVMe as gen 3
  - `sudo rpi-eeprom-config --edit` commented entries to boot off NVMe
- latest git [commits](#) off RetroArch future v1.17 with **61** cores rebuilt
  - converged non-working MAME 2003-Plus content to latest MAME 0.261 core with artwork
- added desktop menu favorites shortcut to Commodore VIC 20 with the Mega-Cart attached
- added desktop PS2 shortcut to [AetherSX2](#) emulator with a games playlist  
*Note: the sizable content is missing until it is actually playable - works on Linux x64 [Ryzen 9](#)*
- added machines and content to playlists
  - Apple IIgs ([MAME](#)) to Computers
  - Mattel Intellivision ([FreeIntv](#)) to Consoles
  - Pokémon Mini to Handhelds
  - Apple models and Sharp X68000 ([PX68k](#)) and modified Commodore models to Museum
  - TIC-80 to Big Menu

## 25-Dec-2023

- Debian 12 Bookworm with latest dot [release 4](#): built+tested on Pi 4/400 and Pi 5
  - Pi 5 boots using kernel8.img and includes latest firmware
  - Mesa lib refresh – Vulkan GPU screenshots are working
- latest git [commits](#) off RetroArch base v1.16.0.3 release
  - dropped gl (OpenGL 2.0+) in favor of glcore (OpenGL 3.1+) video driver
  - udev rule and custom [patch](#) to sysled driver to enable the keyboard LEDs
  - latest git commits for [DOSBox Pure](#) and [Mupen64Next-Plus](#) cores
- desktop menu and UI improvements
  - added F11 hotkey in desktop mode to toggle fullscreen
  - Saturday shows off desktop uses MPlayer GUI
  - flatpak integration with KMahjongg and KPatience installed
- modified Bubble Bobble quick start to have [Cheevos](#) compete or just play options
- added some game content requests
  - 40 Winks, Tomba!, and Tomba 2 (PlayStation)
  - Secrets of Monkey Island (Sega CD)

## 25-Nov-2023

- Debian 12 Bookworm with latest dot release 2 (built for Pi 4/400) and updates
- KDE Plasma desktop improvements with bluetooth control + gamemode enabled

- added 8BitDo [Retro Mechanical Keyboard](#) volume control in console menu
- added [cc65](#) 6502 compiler suite – I use its [ca65](#) assembler [myself](#)
- corrected lib installs for Daphne 32-bit build
- dropped CoinOps Legends (incompatible) keeping BezelDay overlays for matching arcade content
- latest git [commits](#) off RetroArch base v1.16.0.3 release
  - added Qt 5 and Wayland support to run in a Plasma desktop window
  - built Final Burn Alpha (Light) core
  - both gl and vulkan support can run in dedicated console kms mode

24-Sep-2023

- added KDE Plasma with autologin as the default startup
- installed my personal TTF font library
- added trailers to some Saturday show selections
- replaced timeout alarm to send SIGTERM instead of SIGQUIT to retroarch

26-Aug-2023

- added audio volume adjustment operator controls to console menu playlists
- updated PlayStation Personal core for Linux 6.1 (Debian Bookworm)
- added [support](#) for PlayStation 5 [DualSense](#) controller detection with LED support
- removed 10gb of local Bookshelf manuals; [remote mount](#) cloud drive for latest access
- added Bruce Lee movies to Saturday Theater

## About

<https://robert.hurst-us.net/rob/retrocomputing>

