

# TV Setup

I got a TV for the first time since 2001 and a couple friends asked me to explain the setup.

Mostly I got it because the only movie theater near me is badly managed, but a new apartment's layout means that if I'm playing games at my desk I can't talk to my spouse sitting in the front room.

## Privacy goal

I care about personal privacy. Basically every TV manufacturer IDs what you're watching and sells that to advertisers, who can correlate it to you personally because the TV will have the same IP as your web browsing. Creepy shit.

People occasionally suggest buying "commercial panels" but the ones I found were more expensive, lower-quality, and had weird limitations. The solution is to never connect a TV to the internet.

So what are the options for an external device?

- All the popular open source media servers have clunky UI or were unreliable; mostly both.
- Amazon Fire and Roku are invasive *and* janky.
- The Google Chromecast was made by Google, and so will be the Google TV Streamer.
- The NVIDIA Shield is not bad.
- The Apple TV 4k is good and has a good ecosystem.

OK!

## Choosing a TV model

My last TV was a 15" CRT with a failing vertical hold that took a couple minutes to warm up before the picture would stop rolling. A 4k OLED is a

Published: [← 2025-01-28 →](#)

Category: [← Life](#)

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There's a persistent conspiracy theory that TVs connect to open wifi. This would be very easy to test but I couldn't find anyone who claimed to have observed it. Luckily TV surveillance is so inefficient about bandwidth that manufacturers can't afford to put cellular modems in like car manufacturers.

This HN thread on Jellyfin hits all of the issues I had with the open source options and also hits all of the "you're doing it wrong" nitpicking I was not interested in participating in.

*stunning upgrade*. I've been rewatching all my favorite movies because they look so good.

I don't have an opinion on manufacturer besides never buying Samsung because of low reliability and poor UX.

Use Rtings to find a good current model. Use their size to distance calculator to pick a size for your room.

## Apple TV setup

Mount the Apple TV 4k to the back of the TV with velcro tape. Ethernet is almost mandatory; more on this below.

Conveniently, you can use the terrible remote that comes with your TV to turn off motion smoothing and then put it in a drawer to never use. The Apple TV remote is nice, though once I had to reset it when it forgot how to control the TV volume. There's a virtual remote that is nice for typing searches but otherwise is a peculiar demonstration that directly translating a physical device to a touchscreen feels clunky.

### Settings:

- General
  - Restrictions: This is the one missing stair on Apple TV. It has the parental controls you'd expect *except* you can't lock the Settings app, so curious kids can change every setting that isn't about watching a TV show that might have a curse word in it. Whyyyyyyyyyyy.
  - Siri: off. It doesn't run on-device.
- Users and Accounts -> Default User
  - Shared with You: off, distracting.
  - Require password for purchases and free downloads. You can auth with an iOS device, which is clever.
- Video and Audio
  - Format: 4k Dolby Vision

- Match Content: Range & Frame Rate
- Check HDMI Connection: run after setting the previous
- Audio: has several accessibility settings, no idea why they're here instead
- Notifications -> Search, TV: off
- AirPlay and HomeKit: weird that nobody's gone after them for antitrust about it, but there's the usual Apple practice of having a wonderful experience for their hardware like AirPods and meh for competitors.
  - Conference Room Display: on, so guests can show things from their phones
  - Require a PIN for AirPlay: on, unless you live somewhere rural
- Remotes and Devices -> Bluetooth: Apple doesn't make a video game controller so they're clunky, but controllers that claim to work on Apple TV/iPad/iPhone work fine, with only the usual Bluetooth pain switching between them between multiple devices.
- Accessibility: There is so much good stuff in here, it's an incredible amount of thoughtful design.
  - Physical and Motor -> Tap to Navigate: off. Guests and kids struggle with the too-clever touchpad on the remote.

## Home Screen:

Apple would really like you to subscribe to their things, so there's a bunch of shovelware you can't delete like Music, TV, Arcade, etc. You can at least make a folder named "Shovelware" and move it to be the last thing on the home screen. You can't set Restrictions to keep curious kids out of these, either.

## Apps

Tailscale, on the off chance you don't already use it for your home network. You don't have to expose your NAS to the internet. The TV app can act as an exit node, which is convenient for dealing with

bank “security” that panics if you log in from a coffeeshop. Beyond TV setup, Tailscale continually impresses me with its features, reliability, and polish. It has solved a ton of hassles that have come with having multiple devices and working remotely.

Infuse for playing any kind of media files from most any storage. Excellent UI with automatic metadata download, overall much better experience than the various streaming services. Calmer, too, it’s trivial to turn off “Watch Next” suggestions and autoplay of the next episode.

We made a category for “Watch Together” and then a category each for a personal queue.

If Apple didn’t limit apps ability to cache so strictly, Infuse could start playback in 0.1s instead of 2s. But I have to assume most apps would be terrible at filling and pruning their caches, so I guess it’s fair.

SpeedTest for diagnosing network issues.

Steam Link for playing games from your desktop. It’s really a general purpose remote desktop tool, you can “Add a Non-Steam Game to My Library” to run anything. I’ve used it to run calibre and YNAB from my iPad. One bug/limitation: many games get letterboxed if the aspect ratio of your monitor doesn’t match the TV. I wrote a small shell script and added it three times for switching ratios to match the device I’m using.

8BitDo makes the best controllers.

While the latency is low enough for action games, it won’t be low enough for competitive shooters, fighting games, or precision platformers. The Apple TV doesn’t have ports for USB and the max cable length is only 2 meters anyways. If you don’t run ethernet to the Apple TV, you’ll get an annoyingly disruptive lag spike when your neighbor turns on their crappy microwave.

Subtitles are only OK. Infuse pulls from OpenSubtitles but could do a much better job of sorting them based on frame rate, resolution, and keywords in the video filename. The UI for styling subtitles lacks a live preview, and the process of adjusting a delay is downright bad.

UFO 50 is an incredible love letter to the weirdness of the NES/Genesis era with a few modern genres reimagined. If you played back then, don’t read or watch anything about it, just go get the buddy whose basement couch you used to play on and fire this up.

I'm surprised to say it, but it's much more reliable to play games from a Linux desktop than Windows. Windows is swarming with intrusive upsell ads and will randomly reboot, so I found myself having to walk over to the desktop fairly often to unbreak it. Valve has put a ton of work into the Steam Deck Compatibility program and Proton so almost every game I play just works. It's worth noting I get motion sick from 3d first-person and over-the-shoulder games and those are the AAA blockbusters, so I wouldn't know if those run worse.

RetroArch has an Apple TV app, but tvOS is still trapped in the old iPhone misdesign that users can't be trusted with files. Loading games or retrieving savegames is a chore. It's acceptable if you *only* play on the TV but if you want to carry a game between platforms you'll have to play via Steam Link.

There's some good settings in this article once you scroll past the affiliate ads.

## Syncthing

One small caveat with Tailscale and Syncthing: many packages bind its web interface to the local network interface so it won't be visible across your intranet. This is annoying for headless devices. Find Syncthing's `config.xml` and change the `<address>` to `0.0.0.0` or, better, the machine's Tailscale IP (`100.x.x.x`).

```
<gui enabled="true" tls="true" debugging="false" sendBasicAuthPrompt="false">
  <address>0.0.0.0:8384</address>
  <user>...</user>
  <password>...</password>
  <apikey>...</apikey>
  <theme>default</theme>
</gui>
```

## Controllers are a cake with too many layers

This is a button on my controller:

A comment on Lobsters reports Linux is bad at HDR. I've never played an HDR game and this falls directly in this blind spot.

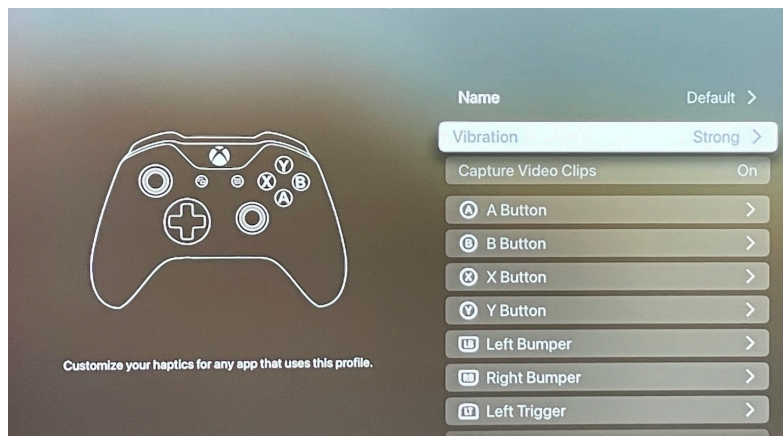
At least on iPhone/iPad you can use the Möbius Sync app for Syncthing to share your RetroArch ROMs and saves. Use an Ignore Pattern for `retroarch.cfg` to keep configs separate.



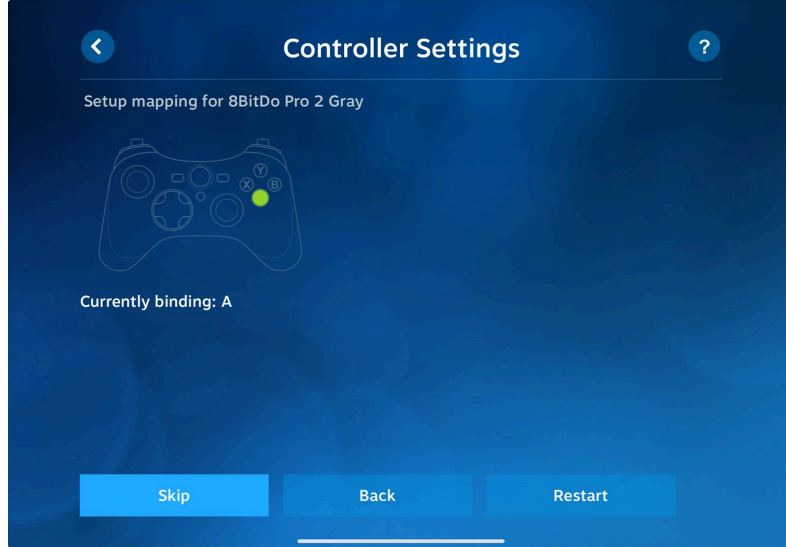
Then I can rebind it in the firmware:



Then I can rebind it in the Apple TV Settings:



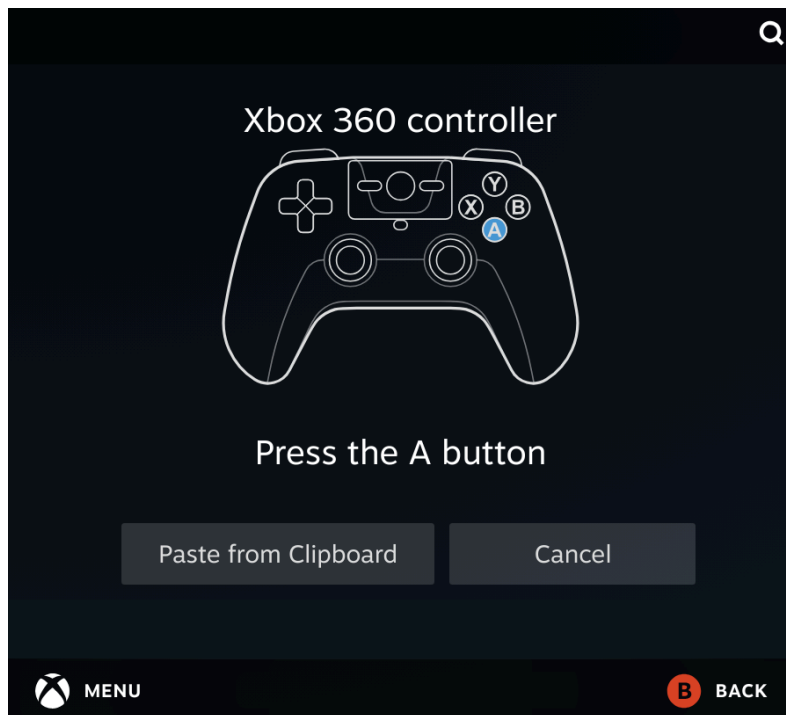
Then I can rebind it in Steam Link:



Then I can rebind it in Linux:



Then I can rebind it in Steam:



Then I can rebind it in a game (here, RetroArch):



Figuring out which layer misconfigs a button is terrible, and it's just sloppy that none of them know what the controller looks like or how its buttons are labeled.

Valve, you are the only company with market position to drag manufacturers, OS developers, and game developers into the same room to sort this out. I know several of them take Not Invented Here to the extreme, but it would be great if you would abuse your monopoly power for my convenience by dragging them kicking and screaming into pleasant interoperability. Please and thank you.

And while you're at it, bring back the Steam Controller.

If you still have one in a drawer, dear reader, here's my notes on flashing the latest firmware.

⬆ [Home](#) Site by Peter Bhat Harkins, mostly spend my time on [Lobsters](#) and [Recheck](#).