

Cutting the Cord



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What does Cord Cutting mean?

- Cord cutting refers to the process of "cutting" expensive cable connections and replacing them with low-cost or no-cost wireless live TV.
 - Free over-the-air local TV reception with an antenna
 - Streaming live TV via the Internet and your Wi-Fi
- Streaming live TV is simply video content delivered over the internet (or over the air), instead of a via cable in the ground or a dish on the roof.
- Watch on a TV, tablet, phone, laptop.
- If you have a decent internet connection and home Wi-Fi, you are ready to stream

Advantages/Disadvantages

- Some of the **advantages** of cord cutting include:
 - Saves money
 - No annual contracts
 - No equipment rental
 - Advertising is minimal
 - Flexible programming choices
- Some of the **disadvantages** of cord cutting include:
 - Need for faster Internet speed (50Mbs on Cox)
 - Unavailability of certain channels/programs

Live TV Streaming Services

- Live TV streaming looks a lot like what you'd get with cable or satellite: live local and cable channels, channel guides, and programmable DVRs
- They include features like
 - Ability to watch live and pre-recorded shows on TVs, cellphones, tablets, and computers.
 - Unlimited cloud DVRs.
 - Watch wherever Wi-Fi is available.
- Major services available today: Hulu Plus Live TV, Google's YouTube TV, Sling TV, Philo, FuboTV, and DirectTV Stream

Comparing Live TV Streamers

- The main differences between the services:
 - channel lineup
 - monthly price
 - number of simultaneous devices on which you can watch shows
 - number of hours you can record
 - how long you can keep recorded shows
- Links to lists of channels that each service carries
 - [Cord Cutter News](#)
 - [CNET](#) includes Philo

Video On Demand Streaming Services

- TV content that you can watch whenever and wherever you want.
- Streaming video on demand (VOD) can be paid via monthly subscription or pay-per-view
- Cord cutting is not required

[Six top video on demand services compared](#)



What you need to stream Live TV or Video On Demand

- High Speed Internet (50Mbps on Cox) connected to a cable modem
- Wi-Fi Router or Gateway (cable modem + router)
- TV with HDMI port(s)
- Smart TV, Streaming Stick or Streaming box, per TV
 - Roku and Amazon Fire TV, the two most popular streaming sticks, each offer an incredible variety of movie and TV apps (**Thousands**), both free and subscription based.
 - Chromecast with Google TV is a newer streaming stick
 - Apple TV and Android TV boxes are alternate, albeit pricey quality streaming devices.

Best Streaming Sticks for the Price



[\\$50 Roku Streaming Stick 4K](#) and the [\\$50 Amazon Fire TV Stick 4K](#)

Chromecast with Google TV

Streaming stick and remote (\$50) that gives Roku and Amazon Fire TV direct competition.



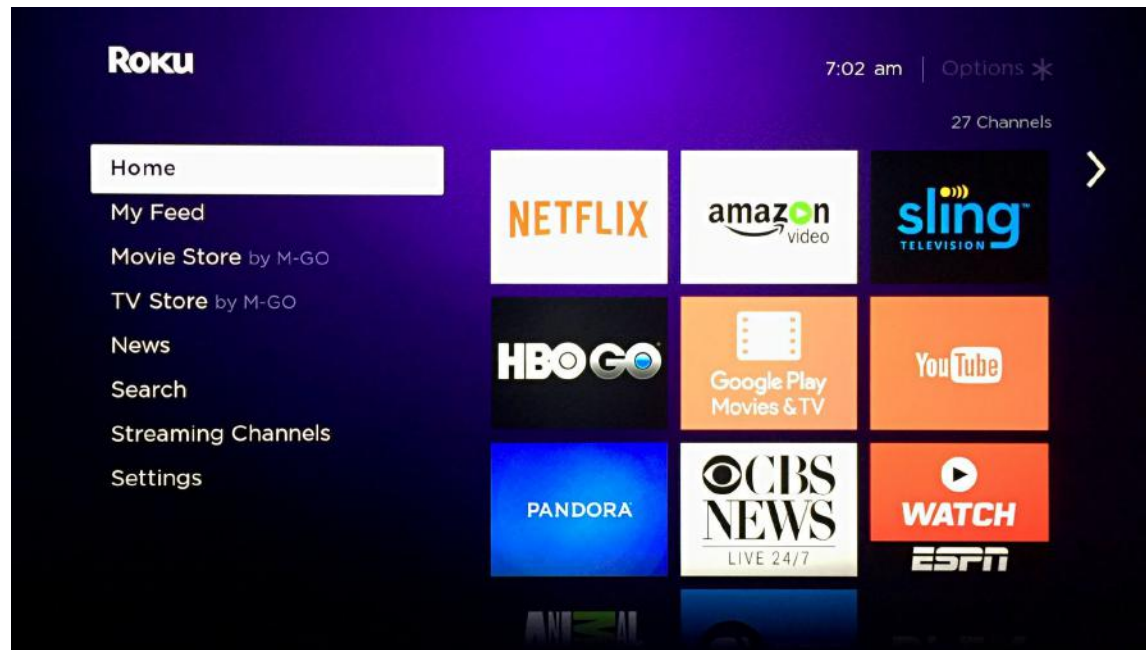
Roku, Fire TV, and Google TV

Streaming Sticks

- Think of Streaming Sticks as miniature cable boxes to access live streaming TV and Video on Demand (VOD) TV shows and movies with a single remote.
- They stream content wirelessly to your TV from the Internet via your Wi-Fi router or Gateway.
- The sticks are designed to hide behind your TV and plug directly into an unused HDMI port.
- The sticks are powered by plugging into electrical outlet or a powered USB port on your TV.
- The sticks come with remotes that have TV volume, power buttons, and voice input to control most TVs, so you can ditch the remote that came with your TV.
- You can take them with you to a hotel or vacation rental!

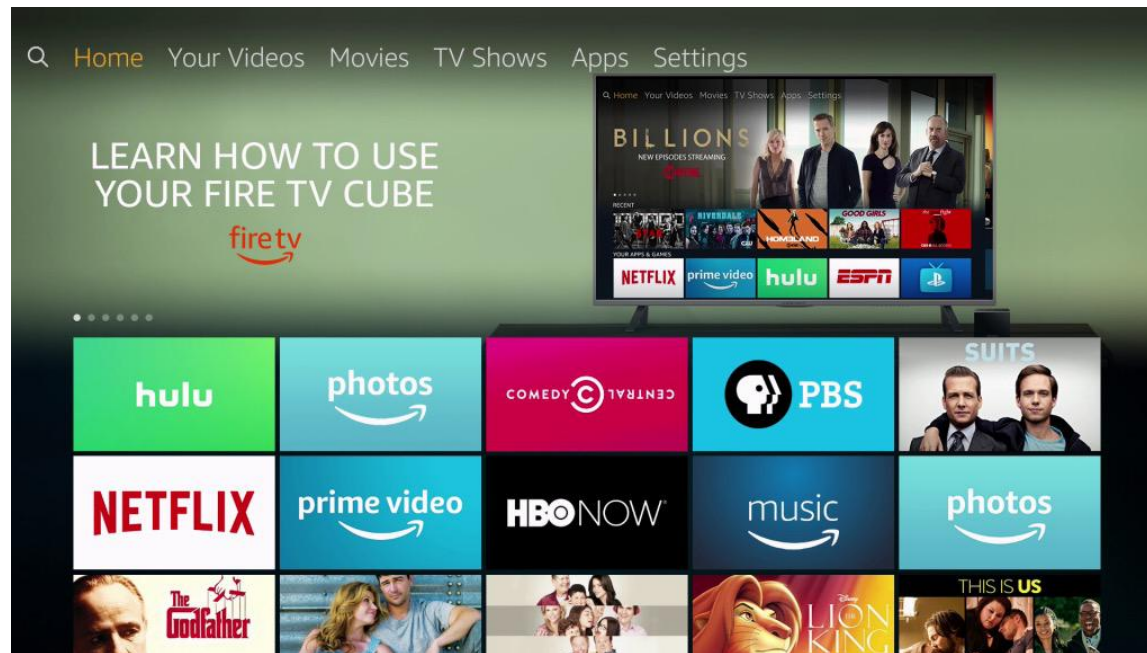
Comparing Roku and Fire TV Streaming Sticks:

Roku's menu system places **your** apps front-and-center and lets you arrange them just like on a phone. You can navigate the apps without dealing with a screen filled with ads. (some call it dated)



Comparing Roku and Fire TV Streaming Sticks:

Fire TV's menus are more modern-looking (similar to Netflix), but they steer you toward Amazon's stuff. (Very ad focused and a bit more cumbersome)



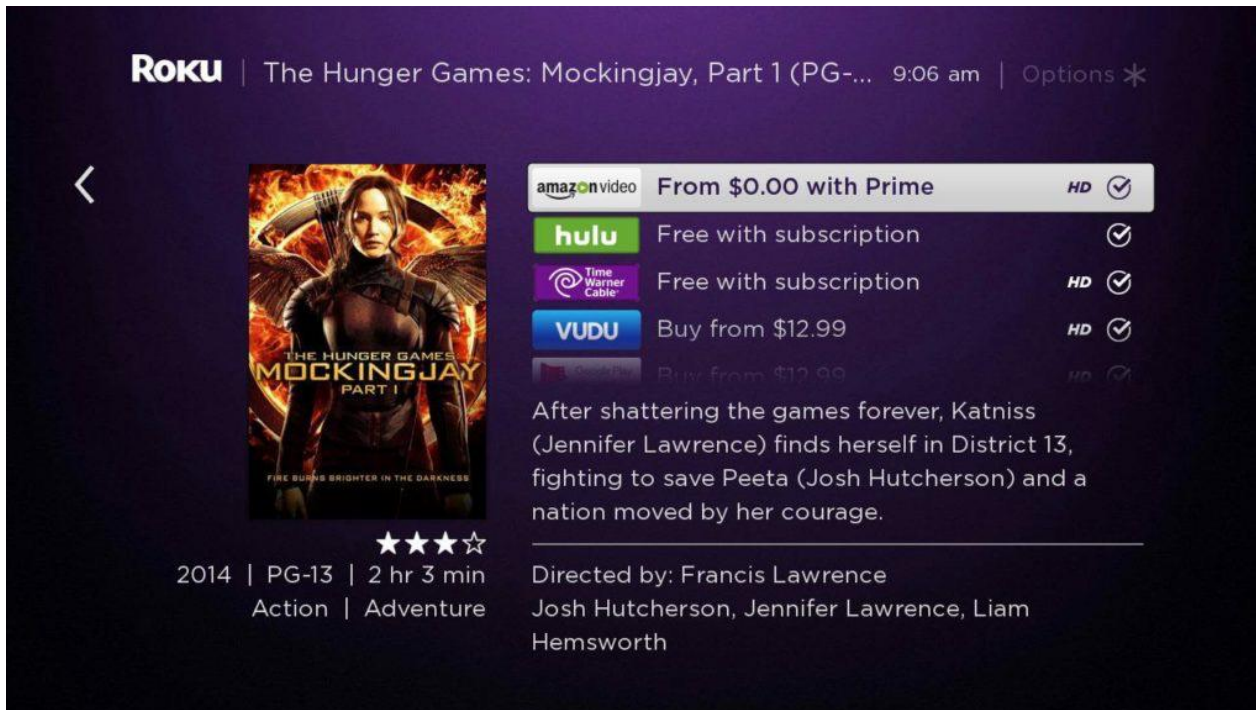
Your recent apps

Sponsored

Available on Prime


Comparing Roku and Fire TV Searches:

Search results on Roku are straightforward and price-centric. You're shown how much a movie or TV show costs (free listed first) and can click through to watch or buy it.



Roku | The Hunger Games: Mockingjay, Part 1 (PG-... 9:06 am | Options *

<



amazon video From \$0.00 with Prime HD ✓

hulu Free with subscription ✓

Time Warner Cable Free with subscription HD ✓

VUDU Buy from \$12.99 HD ✓

Buy from \$12.99 HD ✓

After shattering the games forever, Katniss (Jennifer Lawrence) finds herself in District 13, fighting to save Peeta (Josh Hutcherson) and a nation moved by her courage.

★★★★☆

2014 | PG-13 | 2 hr 3 min
Action | Adventure

Directed by: Francis Lawrence
Josh Hutcherson, Jennifer Lawrence, Liam Hemsworth

Comparing Roku and Fire TV Searches:

Fire TV's results are much more confusing, with multiple options and false positives. Once you find what you want, you're shown one primary service, and have to click through to see "More Ways to Watch."



The screenshot shows the Fire TV interface for the movie "The Station Agent". On the left is a vertical poster for the movie, featuring the title "The Station Agent" in a red banner and a scene with three people at a table. A "1 hour 27 minutes remaining" progress bar is at the bottom of the poster. To the right of the poster, the movie title "The Station Agent" is displayed in large white text. Below the title, it shows the year "2003", runtime "1 hour 30 minutes", and ratings "R" and "CC". A star rating of five stars with "(665)" reviews and an IMDb rating of "7.8/10" are also visible. A synopsis follows: "Winner of 2003 Sundance Film Festival awards, The Station Agent stars Emmy Award winner Patricia Clarkson (TV's Six Feet Under, Far From Heaven), Peter Dinklage (Elf) and Bobby Cannavale (TV's 24, Third Watch) in a comedy about friendship that will have >>". Below the synopsis, the cast "Starring: Peter Dinklage, Paul Benjamin, Jase Blankfort" and director "Directed by: Thomas McCarthy" are listed. At the bottom, there is a row of five buttons: "Resume", "Rent HD \$3.99", "Buy HD \$14.99", "Add to Watchlist", and "Watch Trailer". A yellow button labeled "More Ways to Watch" is positioned to the right of the "Watch Trailer" button.

The Station Agent
2003 1 hour 30 minutes **R** **CC**
★★★★★ (665) **IMDb** 7.8/10

Winner of 2003 Sundance Film Festival awards, The Station Agent stars Emmy Award winner Patricia Clarkson (TV's Six Feet Under, Far From Heaven), Peter Dinklage (Elf) and Bobby Cannavale (TV's 24, Third Watch) in a comedy about friendship that will have >>

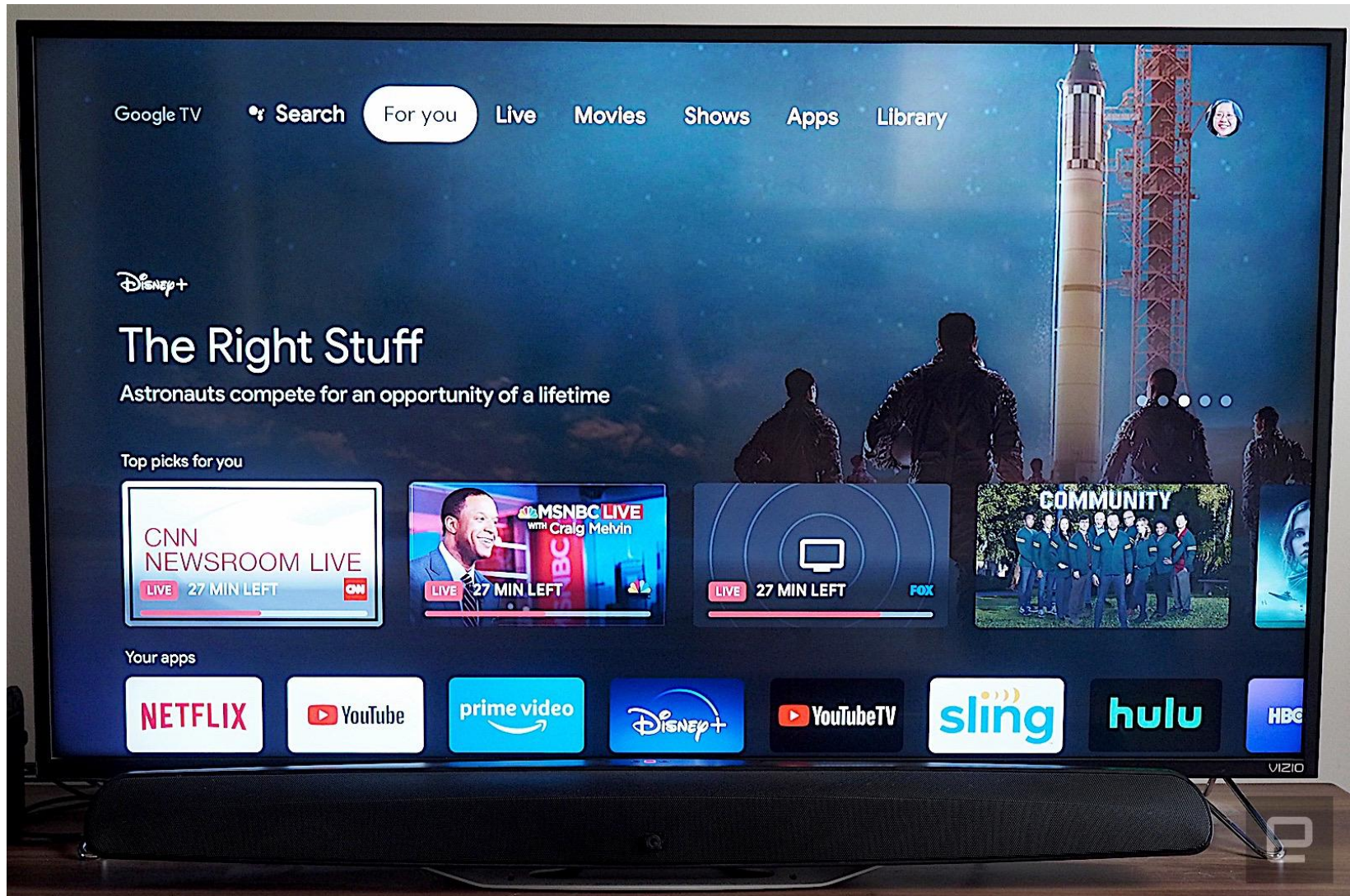
Starring: Peter Dinklage, Paul Benjamin, Jase Blankfort
Directed by: Thomas McCarthy

Resume Rent HD \$3.99 Buy HD \$14.99 Add to Watchlist Watch Trailer **More Ways to Watch**

Chromecast with Google TV: the good

- Recommendations for shows and movies, listed in the many genre lists, are based on what you watch and rate positively.
 - If a program is available from multiple services, they are listed in order by cost
- Cast video from your phone, tablet, or computer to your TV
- Use remote voice button to access Google Assistant and control smart home devices.
- View live pictures from Nest cameras or doorbells on your TV
- Integrated with YouTube TV, currently for one user only.
 - YouTube TV programs in your library are incorporated into the Google TV “Watchlist”.

Google TV Display



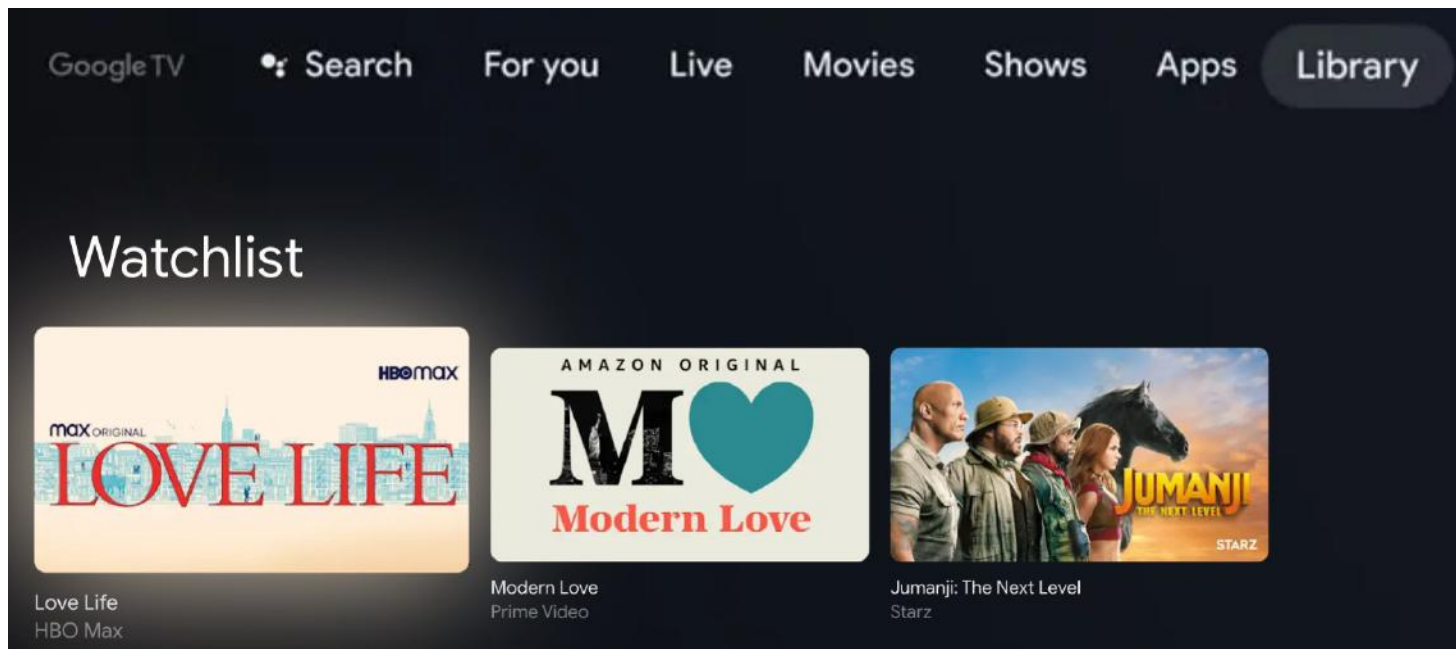
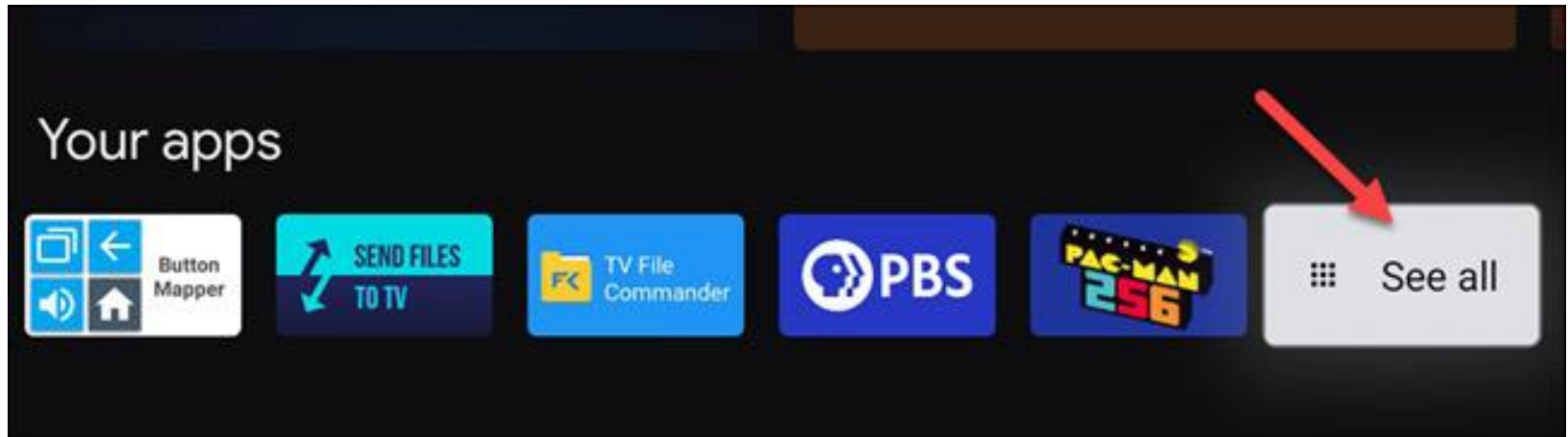
Confusing Google TV interface (1)

- Lists of programs, by genre, from streaming services that you can watch without having to open each streaming service is innovative.
- However, it only works for a limited number of streaming services. (Paramount+, Discovery+, Disney+, Epix Now, HBO Max, Hulu, Netflix, Prime Video, Peacock, Showtime, and Starz).
- When searching for a specific program, only these services are included in the results, although a programs are available on different services (e.g., freevee, Acorn TV, Britbox, PBS, VUDU).
- Recommended programs are supposed to be based on services you select from the above services. However, recommended programs are also included from services you did not select and other services you cannot de-select (e.g., PlutoTV, YouTube, Tubi, Crackle).
- Cannot directly see all installed streaming apps at once like on Roku, Fire TV stick or any cellphone. Must click "See All" first.

Confusing Google TV interface (2)

- The “Watchlist” in your “Library” lets you directly access programs, without having to open a specific streaming service first.
 - It only works for the above listed streaming services.
 - For other streaming services (e.g., freevee, PBS, Acorn TV, Britbox), only information about the show or its episodes is listed. One cannot “watch” the program.
- A cool feature is the ability to directly add programs from Google searches on other devices to your “Watchlist”. Although, as mentioned above, some programs cannot be “watched”.
- Cannot add Netflix programs to the “Watchlist”.
- Cannot sort the “Watchlist” or show it in a grid.
- “Free” programs listed under Search are only “free” if you already subscribe to that streaming service.

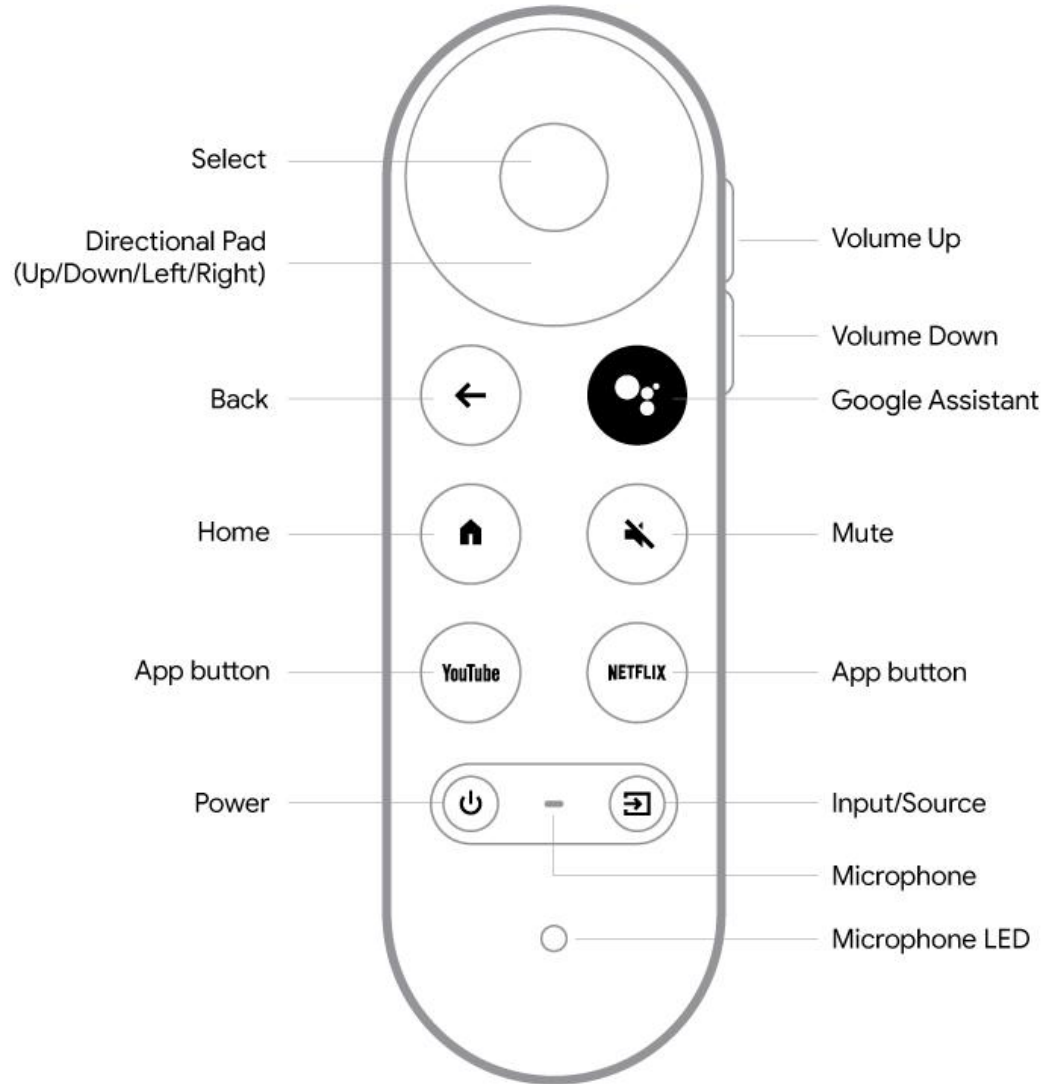
Google TV: Screenshots



Google TV Remote not as user friendly as Roku and Fire TV remotes

- Remote is slippery and difficult to hold in large hands. Size also makes it easy to lose in sofa.
- The recessed 4-way circular directional pad can create errors in selection of direction. Roku 4-way pad with raised arrows is a much better design.
- Fast forward works differently depending on a streaming service.
 - On most services it takes four clicks to fast forward or rewind.
 - Roku and Fire TV have separate buttons for Play, Rewind, and Fast Forward.
- Mute button should be with the volume buttons so you can find it without looking at remote.

Google TV Remote



Roku and Fire TV Remotes



Additional Comparisons:

- Amazon Fire TV sticks are integrated with Amazon Alexa voice control and Echo devices
- Roku provides its own voice control system, but it is compatible with some Alexa and Google Assistant voice commands.
- Roku supports the no commercial streaming TV service [DroidTV.com](https://www.DroidTV.com). (monthly fee of \$6.99)
- Google TV is integrated with Google Assistant Voice Control and Google smart home devices

How to Watch FREE Movies & TV Shows on Fire TV, Roku, Google TV

- Top 11 free ad-supported channels for movies and TV shows:
 - Pluto TV
 - Tubi TV
 - Crackle
 - Xumo TV
 - The Roku Channel: (Roku only)
 - PBS Kids
 - Stirr
 - Vudu
 - Filmrise
 - Kanopy (with Library Membership)
 - Freevee

Cutting Your Cord

- Start Slowly
- Buy a Roku, or a Fire TV stick, or Chromecast with Google TV
- Test a live TV streaming service before cutting your cable or satellite service
- Add a live TV streaming service for a month alongside your current cable or satellite service
- Try a streaming service with free trial (7-30 days)
- Add and drop services whenever you like.

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Home Automation Technology for Seniors (HATS)













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Backup Slides

Modems, Router, and Gateways

- **What is a modem?**
 - A modem, or modulator-demodulator, is a physical device that connects a device to the internet via a broadband connection (for Cox it is a Coaxial cable in the house). It receives signals from the internet service provider (ISP) and sends them to the device. A modem can only connect to one device at a time — in many cases, this is the router.
- **What is a router?**
 - A router is a physical device that connects the modem to all of the network-connected devices like computers, phones, smart TVs and home cameras. Sometimes routers connect via a cable to the modem, while others are completely wireless — most, however, offer both options.
- **Do you need a router if you have a modem?**
 - The technical answer is no, but the practical answer is yes. Because a modem can only connect to one device at a time, you'll need a router if you want to be able to access the internet from multiple devices.
- **What is a gateway?**
 - A gateway is a router-modem combo, sometimes called a gateway router or a gateway modem (or even gateway modem router). Essentially, it combines the two in a single physical piece of hardware. This consolidates your technology so it takes up less space and requires fewer messy cables.

Cables and Connectors

<p>Electrical cord</p>		<p>Power Strip</p> 
<p>Coaxial cable</p>		<p>Splitter</p> 
<p>Ethernet cable</p>		<p>Ethernet Hub</p> 
<p>Telephone cord</p>		<p>Splitter</p> 
<p>HDMI cable</p>		<p>Splitter</p> 

Home Network Diagram

