

Heritage Home Automation Club

Share Ideas - Help Each Other - Learn and Grow

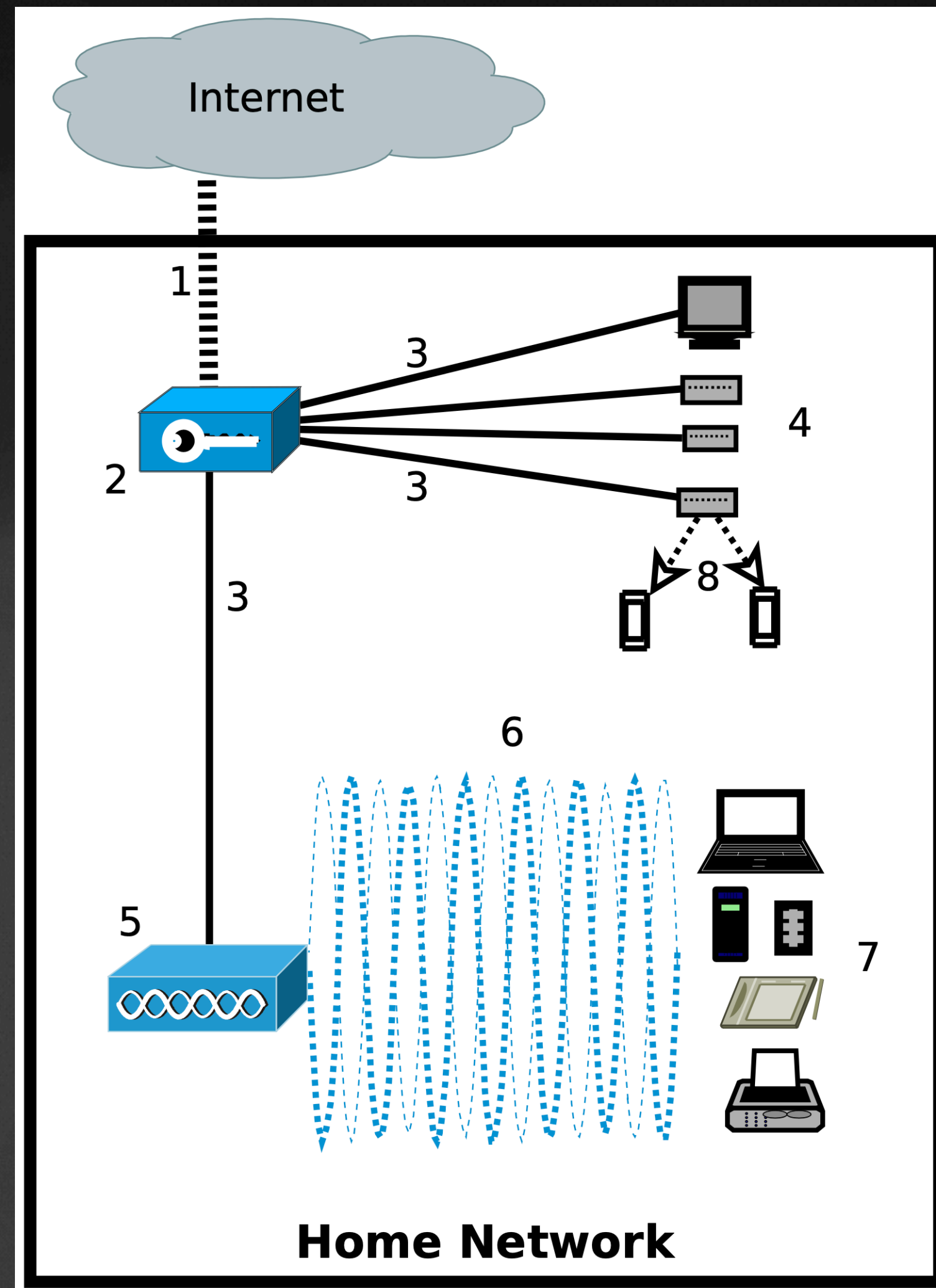
Howard - August 18, 2022

WiFi

Concepts & Troubleshooting

What is WiFi

Wireless Connectivity to the Internet



1 Internet Connection

2 Home Gateway

3 Wired Connections

4 Wired Devices

5 Wireless Access Point

6 Home WiFi Signals

7 Home WiFi Devices

8 Other Type RF Devices

Thank you Larry! This is awesome!

Where Does WiFi Start?

What is an Access Point?



- Really Two Wireless Networks
 - 2.4 GHz & 5 GHz
- 2.4 Ghz
 - Slower
 - Passes through structures
 - More prone to interference
- 5 GHz
 - Faster
 - Walls cause problems

What Can Cause Interference

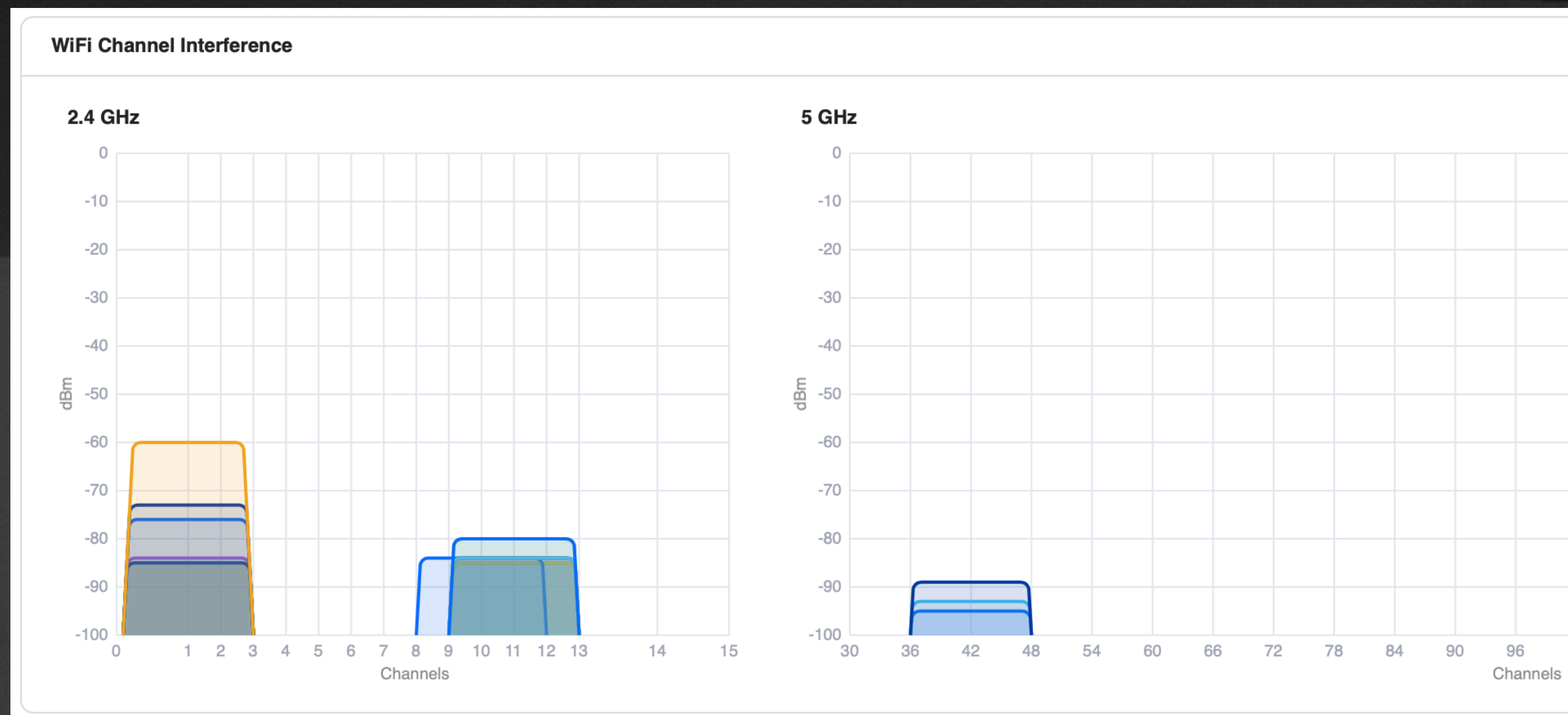
Almost Everything

- Your Neighbors Network
- Other WiFi Networks in Your Home
- Bluetooth
- Baby Monitors, Walkie Talkies & Other Radios
- Microwave Ovens
- Concrete or Masonry Walls
- Thick Timber Walls
- Metal and Floor Heating
- Water!
- The TV

What Can You Do?

How Do You Avoid Interference?

Pick a Channel That Isn't Being Used



2.4 GHz Wi-Fi Channel Selection

Current Channel N/A

Channel Scan

5 GHz Wi-Fi Channel Selection

Current Channel N/A

Channel Scan

What Can You Do?

Change Your Access Points



Unify6 LR

- Up to 3Gb Speed
- WiFi6 Compatible
- More Powerful Transmitter

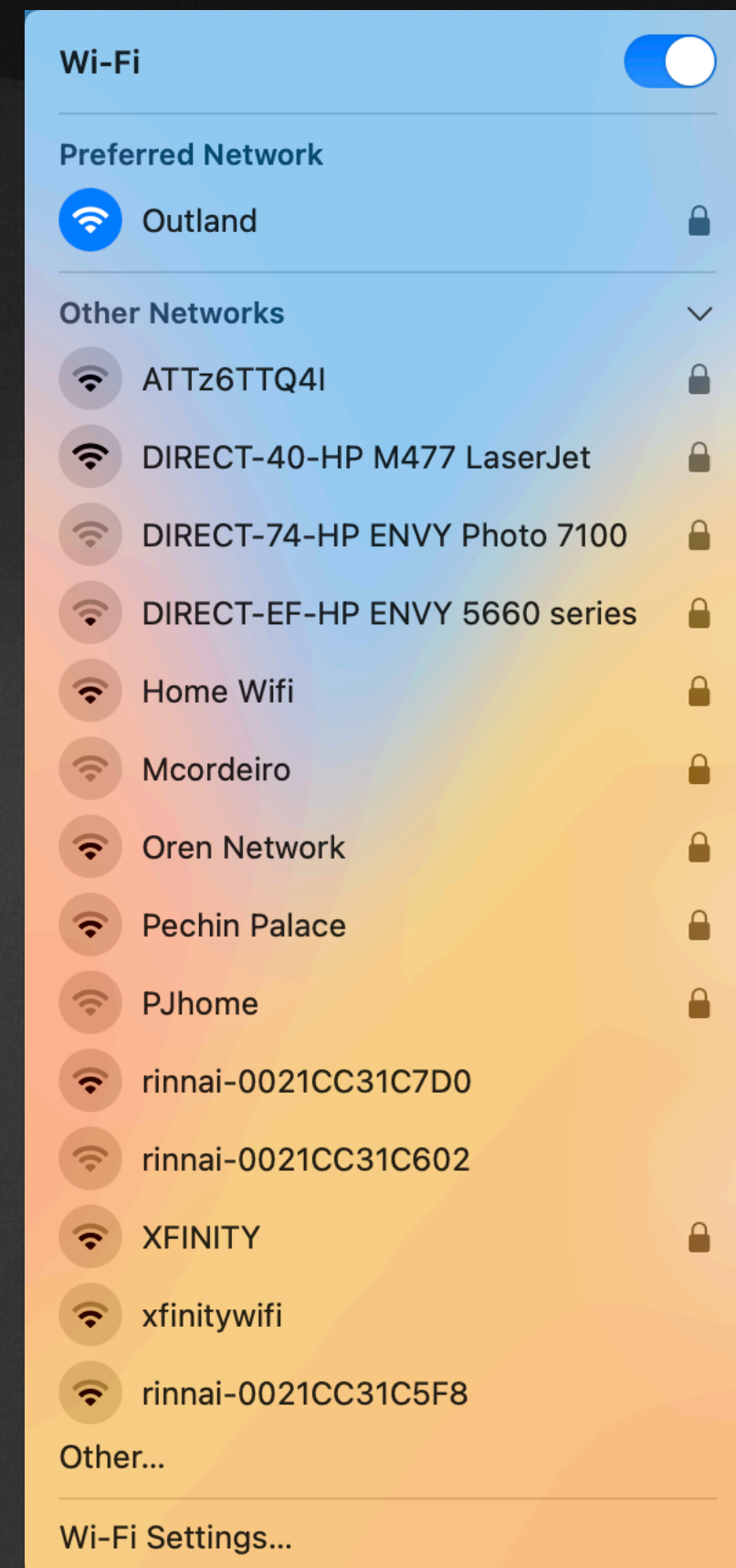


Eero Pro 6

- Replaces Your Router
- WiFi6 Compatible
- Mesh Network - No Deadspots

What Can You Do?

Disable Unwanted Networks



Biggest Culprits

- Printers
- Water Heaters
- Routers
- Neighbors

What Can You Do?

Go Hardwired



PowerLine

- Uses Electrical Wiring
- Gigabit Speeds Possible
- May Need to Bridge Phases



Ethernet

- Fastest Possible Speeds
- Most Reliable
- May Need to Run Cable

Club Mailing Website

heritage.howardprice.name

Club Mailing List

- For any communication between club members, open to all
- Subscribe by sending an email to -
 - homeautomation-subscribe@howardprice.name
 - Title “[Subscribe](#)”
- To send to all, use the address -
 - homeautomation@howardprice.name

Questions?

Possible Topics

- Convenience
 - Door unlocking
 - Turning on/off lights
 - Battery monitoring
 - Presence detection
- Security
 - Automatically locking doors
 - Notification of open windows/gates
 - Motion outside
 - Arming alarms when away
 - Displaying who's at the door
 - Automating lights on motion outside
 - Remote alerting
- Comfort
 - Controlling temperature
 - Lowering shades
 - Using scenes
- Energy Saving
 - Turning off devices not in use
 - Monitoring power consumption
 - Warning when moving to higher tariff
 - Optimizing solar usage
- Remote Access
 - eKeys
 - Remote monitoring of cameras
- Control
 - Dashboards
 - Remote Control
- Whole home audio/video
- Controlling holiday lights
- Integrating multiple controllers
- Understanding automation platforms (HomeKit, Alexa, Google Assistant, SmartThings, Home Assistant, etc)
- Home automation protocols (Zwave, Zigbee, WiFi, Matter, Insteon, X10, etc)
- Water saving/monitoring