

# Chapter Two

## Troubleshooting

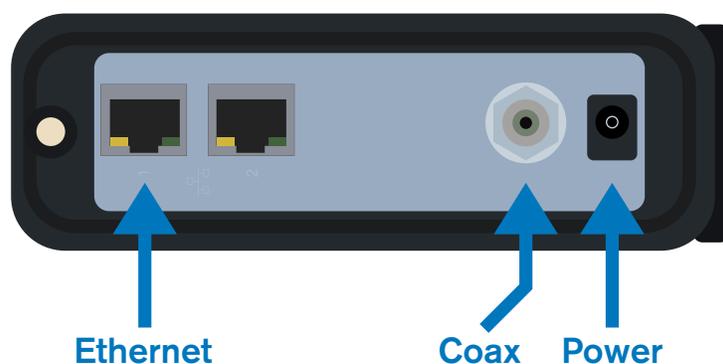
In this chapter you'll learn all the basics on how to troubleshoot your connection and what may be causing a less than desirable experience. Many factors can slow down your internet speeds and many of them are within your control to ensure you get the most out of your speed package.

# How to Run a Powercycle

## Running a Powercycle

Always start with a powercycle. In other words, try turning it off and turning it back on again. To properly powercycle, disconnect the power supply from your modem or router. Leave it unplugged for about 30-60 seconds. Reconnect the power supply and wait for the modem to reboot.

Disconnecting both cords gives the modem a chance to reset, disconnect from the entire network, remove any static and begin fresh with a new connection. If you're on the phone with us and we do ask you to powercycle, it's because we haven't seen a clean drop from the network



## How to Resolve Wireless Connectivity if the Powercycle Fails

If you have your own router, you will need to powercycle that as well. If you cannot find your network connection, ensure your WiFi is enabled on that device or try another device in the house.

If you have your own router you can disconnect the router and directly connect to the modem with an Ethernet cord and a laptop. If you are able to access the internet using the Ethernet cord, the issue lies within either your router, your devices or both. You will need to troubleshoot those for a wireless issue.

## None of my devices will connect. Now what?

If none of your devices will connect, give us a call at 1-800-236-8434 We'll have to help resolve this issue on our end.



### PRO TIP

Turn your other devices on and off, too. Whether it's a laptop, Xbox, or phone, try turning it off and allow it to connect again.

# Top 5 Reasons for Slow Internet Speeds

Because there are several potential causes for slow internet signal, there are several potential solutions. You'll want to run a speed test to help narrow down what is causing your slow speeds. Here are the top 5 reasons we find cause slow speeds:

- 1** | Your modem, router or device may need to be replaced.
- 2** | The amount of connected devices is causing speed interruptions, including background devices. Using aggressive applications, like Netflix, at the same time or while other applications may be using up your bandwidth.
- 3** | Use of the internet connection is too great. For example, online gaming requires a significant amount more speed and bandwidth in comparison to checking email.
- 4** | Modem or home router may need a firmware update.
- 5** | The device is not capable of speed desired.

**Make sure to run a speed test to help uncover the reason for slow speeds.**

If your speed test results show you that you're currently getting the speeds your package includes, you may have too many connected devices utilizing the connection, your usage needs require more speeds or a combination of the two. Contact us at 1-800-236-8434 to increase your internet speed package.

Another reason for slow internet speeds are WiFi dead spots in your home. Certain spots yield faster speeds than others or some spots go completely dead. If this is what you are experiencing, you may need to consider Whole Home WiFi which gives you wall-to-wall coverage.

On WiFi, you can either select the 2.4G or the 5.0G option. Each has a different use depending on where you need to connect and what you need to use the internet for. Ensure you're connected to the correct band.

# Speed Testing Your Internet

How to run a speed test, why you should run one, evaluating your results and the best practices to getting the most accurate results.

## Why Should You Test Your Internet Speed?

Identify performance trends

Identify devices that may be causing issues

Ensure you are getting the speeds you purchased

## Four Tips to Get the Most Accurate Results

**1** Power cycle your modem or router and your device before testing. This is an important step because the speed test needs to utilize parts of your device's hardware to get an accurate speed test.

**2** Avoid running a speed test on your gaming console. It does not have the option to verify the connection through your wireless system. Often times, gaming systems will run speeds through their own remote servers which will impair your speed test results.

**3** Avoid running a speed test wirelessly. This can be done even if you are experiencing wireless issues. Run the test using a laptop or desktop that is directly connected to the modem. If you must run the speed test wirelessly, you may not see accurate speeds due to device limitations or wireless capability. If you have your own router, be sure to disconnect this device from the modem.

**4** Determine how many devices you currently have connected to your wireless network. Even if you are not using that device at the moment, it is likely still connected to the network and passing data on your internet system. If you can, turn off all your connected devices. This will get you the most accurate speed test and minimize excess noise on your network.

## Elements of a Speed Test

The elements of your speed test will consist of three major components: download, upload and ping. Let's break down what each of these means:



### Download:

The amount of time it takes to obtain data (mbps)



### Upload:

The amount of time it takes to send data (mbps)



### Ping:

The time it takes between sending and receiving data (ms)



## How to Run a Speed Test

We suggest using speedtest.net. It is a very powerful tool and it is easy to read and understand. Simply navigate to their site and follow the prompts.

## Evaluating the Results of Your Speed Test

### *“I’m Getting About The Same Speed as What I Pay For”*

If you are receiving the speed that you are paying for, you may be hitting the max of usage for the speed provided. You're using more internet than the speed you have can deliver without buffering or slow load times. This is a key indicator that you may need to upgrade your speed package.

You can test your usage on a laptop in your task manager on a PC or the Activity Monitor on a Mac. From there, you can see the utilization of your network. If you notice peak usage times in your household where the network is nearing 100 percent, you will want to consider a speed upgrade.

#### Shortcuts to Access the Activity Monitor

##### MAC

⌘ + ⇧ + ⌘

##### Windows

Ctrl + Shift + Esc

### *“I’m Not Getting Near The Same Speed as What I Pay For”*

If you are testing wirelessly, you will need to directly connect to your modem and run a speed test directly as the results from testing wirelessly may not be as accurate.

However, if you can't directly connect, try your speed test from another device. Ensure you are physically close to the modem or router. If you are away from the modem or router you may experience a dead spot in your WiFi network. If that is the case, you may want to consider Whole Home, wall-to-wall WiFi service.

Your speeds may be suffering if your modem needs a firmware update. Give us a call at 800-236-8434 and we can update this for you.

If you have your own router, you will need to contact the manufacturer of your router to complete that update. Furthermore, if you have your own router you may simply need a new or faster router.

At this point you can evaluate if your internet is performing to the speeds you've purchased. If not, there may be several causes. Some of these causes may be the number of connected devices you have, how old your device is, or the band frequency you're connected to.

## PRO TIP

Other providers may be experiencing issues. For example, if your Xbox is down, it may be Microsoft that's down and not your internet. In times of increased overall usage during the COVID-19 pandemic, many providers are experiencing new challenges and interruptions.

Check [downdetector.com](https://downdetector.com) for up-to-date information on other providers.



# Installing Your Home Router

You've purchased an internet package and now you'd like to get your WiFi network set up. In order to do so, you'll need a router to connect to your modem. Use this guide to get your router set up and to troubleshoot any issues that may arise.

## Initial Set-Up

- 1 | First, connect a laptop or desktop to your modem directly with an Ethernet cord to ensure that your internet is online.
- 2 | Next, unpack your router and follow all the instructions given by the manufacturer.
- 3 | Connect your router to a power outlet to power it on.
- 4 | Once your router is powered on, connect it to the modem with an Ethernet cord.
- 5 | On your laptop or desktop, connect directly to your router with an Ethernet cord. Bring up a browser while connected to the router and follow the manufacturer's instructions to set up your WiFi network.

## Troubleshooting

Turn the router off and disconnect the router from the modem. Disconnect the router from the power source. Next, unplug your modem from the power source. Let this completely power down for a minute.

Reconnect the modem to the power source. Connect your router back to the power source then connect the router to the modem.

Wait for services to come back online. Note, this could take anywhere from 3 to 5 minutes. While you wait for your services to come back online, powercycle your devices as well.

### What to do if the powercycle fails to restore your connection:

Disconnect your router from the modem. Use an Ethernet cord to connect a laptop or a desktop computer directly to the modem. Are you able to connect?

#### Yes, I'm able to connect.

Contact the manufacturer of your router for assistance. Since your modem is still providing the internet connection properly, the problem lies with your router.

#### No, I'm not able to connect.

Contact Astrea for assistance. If your modem is not connecting properly to the internet, we have to troubleshoot from our end.