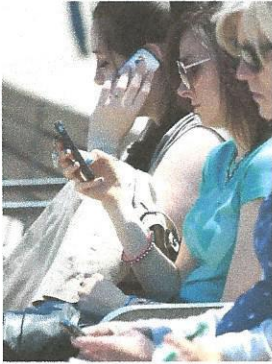


5 reasons why your Wi-Fi is slow (and how to fix it)



Kim Komando, Special for USA TODAY 4:30 p.m. EDT August 5, 2016



(Photo: Dan J Loh, for USA TODAY)

For the two decades that the internet has been in our lives, despite all the changes and technology improvements, one constant has remained: pokey connections. Frustration quickly sets in when pages won't load, videos buffer, or email crawls to a halt. Here are five common problems and solutions to try.

1. Internet thieves

One of the best things about Wi-Fi is the easy access it provides to the internet. But, if your network password is too simple, there could be more people tapping into it than you originally bargained for.

Obviously, this isn't something you want. Networks with weak passwords or no passwords can be accessed by almost anyone. Use a free program called [Wi-Fi History View](#) (<http://www.komando.com/downloads/342777/make-sure-that-no-one-is-stealing-your-wi-fi>) to review each device that has connected to your network, and look for IP addresses you don't recognize.

Prevent this by first changing the password for your router. If you don't know where to find it, a site called [RouterPasswords](#) (<http://www.komando.com/cool-sites/325751/find-your-routers-password-fast-then-change-it/all>) can help you locate the manufacturer's default password. From there, create a password that is complex and difficult to guess. [Click here to see a simple formula for creating secure passwords you can actually remember](#) (<http://www.komando.com/tips/359866/how-to-create-the-perfect-password>).

2. Congestion

This is a problem in crowded neighborhoods or apartments. When too many people try to connect at the same time on the same Wi-Fi channel, connection speed is significantly impacted.

When your connection slows during peak hours, usually in the evening when everyone gets off work or on Sunday night when *The Walking Dead* is airing, that's a sure sign of congestion.

Fix this by selecting a different channel for your router. If you have a 2.4 gigahertz frequency router, there are usually 11 channels to choose from. Channels 1, 6 and 11 are recommended but try other channels, to find a faster connection. Or buy a new 5 gigahertz router.

3. Outdated equipment

Wi-Fi routers are not all created equal. "AC" routers are a step up from the older "B" and "G" models and even "N" models. They have more features and offer better performance. If you're shopping for a new router, that's what you want to look for.

AC routers have a maximum spectral bandwidth of around 8 x 160MHz, compared to the 4 x 40MHz standard of N routers. In other words, the increased bandwidth allows more data to be transmitted without slowing down.

4. Your router's security settings

Aside from protecting your network from unauthorized bandwidth usage, which could slow down your network without your knowledge, did you know that the type of wireless security you use could impact your overall speeds too?

If your network is Open (no security) or is using WEP, change the security setting immediately! Obviously, an open network will make it easy for someone to steal your Wi-Fi, and the older WEP security is easily hacked, so avoid it at all costs.

This leaves you with WPA, WPA2 with TKIP or WPA2 with AES.

WPA and TKIP are what you want to avoid. Not only are these protocols older and insecure, they can actually slow down your network.

The best option is WPA2 with AES. AES is a newer and more secure setting that lets you achieve higher speeds. [Click here for additional tweaks you can make to get more out of your router](#) (<http://www.komando.com/tips/361188/3-wi-fi-router-tweaks-to-speed-things-up/all>).

5. You're too far out of range

Sometimes the easiest fixes are right there under our noses. Routers are not designed to transmit signals over long distances, so there may be hot spots and dead zones in your home.

To map out your network, use a tool called [HeatMapper](http://www.komando.com/downloads/1994/pinpoint-wi-fi-issues-in-your-home-or-office) (<http://www.komando.com/downloads/1994/pinpoint-wi-fi-issues-in-your-home-or-office>). It helps you see where Wi-Fi signals are strongest in your home or office. HeatMapper is a free download for Windows users. [NetSpot](http://www.komando.com/downloads/1990/visualize-your-wireless-coverage?auth=checked) (<http://www.komando.com/downloads/1990/visualize-your-wireless-coverage?auth=checked>) is a good alternative for Mac users.

Once you've identified the problem areas in your home, you have a few options available. One option is to purchase a Wi-Fi extender that can boost the range of your router's transmission. Wi-Fi extenders range in price from around \$20-\$120, depending on the features included in the model. However, a mid-range extender should work just fine. [Click here for a full breakdown of Wi-Fi extender options](http://www.komando.com/columns/363544/how-to-boost-your-wi-fi-for-50/all) (<http://www.komando.com/columns/363544/how-to-boost-your-wi-fi-for-50/all>).

The second option is to purchase a mesh system. The \$500 [Eero Home Wi-Fi system](http://www.komando.com/happening-now/366903/extend-your-wi-fi-and-knock-out-dead-zones) (<http://www.komando.com/happening-now/366903/extend-your-wi-fi-and-knock-out-dead-zones>) promises "no more dead zones" in their product description. A mesh system consists of a series of smaller routers that sync with one another to boost the coverage area of your network. Spread these mini routers here and there throughout your home, and you'll have a strong connection no matter what room you're in.
