

Ways to Boost Your Wi-Fi Signal



1. INTRODUCTION

All routers are only capable of broadcasting reliably up to a certain distance. Any further, and the signal gets weak. We have listed below some trouble shooting options you might want to try that may help you to boost your Wi-Fi signal.

2. Update Your Router's Firmware

Perhaps your router just needs an update. Router manufacturers are always tweaking software to eke out a little more performance and speed. Most current routers have the update process built right into the administration interface, so it's just a matter of hitting a firmware upgrade button. Some models, require you to first find and download the firmware from the router manufacturer's website.

3. Optimal Router Placement

Not all rooms and spaces are created equal. The fact is, where you place the router can affect your wireless coverage. It may seem logical to have the router inside a cabinet and out of the way, or right by the window where the cable comes in, but that's not always the case. A wired router can be tucked away, out of sight, out of mind. A wireless router, on the other hand, needs open spaces, away from walls and obstructions. It's not just physical obstructions either; heavy-duty appliances or electronics running in close proximity can impact Wi-Fi performance.

If your router has external antennas, orient them vertically to bump up coverage. Elevate the router if you can. You can mount it on a wall, or put it on top of a shelf or a table to get a better signal. There are plenty of tools to help you visualise your network coverage. There are a number of mobile devices apps which shows you both the weak and strong spots in your Wi-Fi network.

4. What Is Your Frequency?

Take a look at your network's administrator interface, and make sure you have it configured for optimum performance. If you have a dual-band router, you'll likely get better throughput by switching to the 5GHz band instead of using the more common 2.4GHz band. If nothing else, you will likely encounter less interference from other wireless networks and devices because the 5GHz frequency is not as commonly used. Switching is quite simple. See if your router's administrator interface offers 5GHz. If it does, enable it, and set up the network as you would normally.

5. **Change That Channel**

Ever play with walkie-talkies as a kid? You may remember how if the units weren't on the same channel, you couldn't hear each other. Or if you wound up on a different channel, you could listen in on someone else's conversation on a completely different set. Same thing with baby monitors.

In the same way, all modern routers are multichannel, so they can switch across different channels when communicating to your devices. You tend to use whatever the router default is, but if neighbouring wireless networks are also using the same channel, then you are going to encounter signal congestion. On Windows-based PCs, you can see what channels neighbouring Wi-Fi networks are using. Once you know what channels are in use, pick one that's less congested and manually switch your router to broadcast on that channel. You can find this setting in your wireless network's administrator interface. While the interface differs by device and manufacturer, you will generally find the option under the basic wireless settings category.

6. **Control Quality**

Most modern routers come with Quality-of-Service (QoS) tools to limit the amount of bandwidth that apps use.

The last thing you want is to have your video or call quality degrade just because someone is downloading a gigantic video file. You can, for example, specify which applications and services get priority, and set downloaders as lower priority at certain times of the day. Sure, it will take longer to get that file, but everyone else on the network will thank you.

QoS settings can typically be found under advanced settings in the network's administrator interface. Some routers may even make it easier by offering a multimedia or gaming setting, so you know those applications will be prioritised.

7. **Set Up a Wireless Range Extender**

Perhaps it's just a matter of room size. All routers are only capable of broadcasting reliably up to a certain distance. Any further, and the signal gets weak. If your wireless network covers a large area, you may need a wireless range extender—also known as a wireless repeater or a Wi-Fi expander—to help boost your signal. This is also a good idea if there are thick walls or other physical structures that block signals.

The range extender looks similar to a router, but it works differently. For starters, it picks up the existing Wi-Fi signal from your wireless router and just rebroadcasts it. As far as your network router is concerned, the range extender is just another client with an IP address, much like your laptop. Even though it's not a router, you should still use the same rules when figuring out where to put the extender. It should be close enough to your main network router to pick up a good signal—80 percent or more is a good rule of thumb—but close enough to the weak spots of the network so that the repeater actually can do its job.

8. Add Access Points

For an alternative to extenders, consider access points (APs). These can get really expensive, but they work together to create a mesh network, in which each unit transmits signals to each other, creating a strong and stable wireless network. APs are ideal if you are covering a large space, like multiple floors or even different buildings. It might be worth noting that APs may be beyond your needs or budget if you're dealing with a home network.