



How to Extend Your Wireless Network's Range

Getting more range out of your wireless networking gear can be a challenge, but it isn't impossible. Here are some recommendations on how to extend your Wi-Fi range, hopefully letting you cover your entire house or office.

- **Upgrade to 802.11n** -It's not a free solution, but it's the best one there is. The new 802.11n access points (and soon to be 802.11AC) has dramatically better range, speed, and stability than 802.11b or g: After simply upgrading your router to an 802.11N model, you will likely find that your signal is stronger and more reliable in every room, plus you'll experience faster throughput all around (especially if your laptop has 802.11n technology in it).
- **Try a Range Extender or Repeater** - You'll find lots of repeaters on the market. Some of it works well, some doesn't. In general, GNS Wireless has the best luck installing additional access points, that are configured to repeat the signal. The "plug in the wall" type of repeaters generally do not work very well for extending the range of outdoor wireless networks. GNS Wireless also offers "high-gain" antennas as a replacement for the little ones on your router. These will boost the signal, and are recommended for increasing outdoor wireless network range.
- **Upgrade Those Antennas** - They're not *just* for decoration: Orienting your antennas (try horizontal, vertical, and/or a 45-degree angle) differently can offer decent results with minimal effort. In general, all antennas should be oriented the same way. Again, experiment to see what works best. If you need more range, upgrade to a larger gain antenna, which generally works well when broadcasting to an outdoor area.
- **Change Channels** - To do this, you'll need to get into your router's or access point's management screen, by typing the IP address of the router/access point into a web browser. You'll find a "Wireless Channel" (or similar) setting in the wireless configuration portion of your router. Most routers default to channel 1, 6, or 11, but if your neighbors are all on channel 6, then you might be seeing slow speed and lower range due to interference. On the new 802.11N and 802.11AC routers, most of the time the channel is set to default on AUTO channel, which means this step can be skipped on new routers.