

How to get the very best out of your VFB fibre connection



For starters

Once you have a fibre internet connection, you need to know that there are several factors that can reduce the performance of your internet connection.

If you are using a WiFi router in your home or business (most people do), you may not be getting the best speed available. The good news is there is a solution. With a bit of thought, and sometimes an extra device, things will improve rapidly.

If the WiFi range in your house or business is poor, a WiFi range extender may push the signal further; or you can add Powerline adapters that use your home's electrical wiring to create a fast home network.

All buildings have weak or dead WiFi spots - frustrating when these are where you most need a strong WiFi signal. WiFi black spots are often caused by distance from the wireless router (wireless signals weaken with range), thick walls and electrical interference.

Some tips, tricks and inexpensive gadgets can help improve your wireless signal.

The first thing to try is moving your router away from other electronic and electrical equipment, metal objects and solid brick or concrete walls. Sometimes just raising it up a little higher up will increase range and speed.



Update your wireless router

If your house suffers from weak WiFi and you've tried repositioning your WiFi router, think about upgrading your wireless router.

Your Retail Service Provider (RSP) may be able to supply, or recommend, a higher specification router, so talk to them before purchasing to ensure it will work on their network.

The oldest to newest WiFi standards are: 802.11b, 802.11g, 802.11n, and 802.11ac. If you have an older wireless "b" or "g" router, consider replacing it with a newer wireless "n" or "ac" device which offers longer ranges and faster connection speeds.

Though these newer routers may not significantly increase the range of your wireless network, you should at least get better speeds at longer distances.

You won't get the maximum range and performance from the newer wireless router unless your computers, smartphones or tablets also use the same WiFi standard. An old laptop is unlikely to have "ac" or "n" WiFi so check the specifications to see which wireless standard it is using.

Rather than investing in a new computer, you can buy a wireless adapter – from as little as \$50 – that plugs into a USB port. You can also add a new wireless adapter inside a desktop PC case or via a PC Card slot.



Create a new Powerline home network

Consider using Powerline adapters that create a fast home network using the electrical wiring in your house. This means you can take your Internet around your house without losing much performance. Creating a Powerline home network is as easy as plugging into a power socket.

Simply plug a Powerline adapter into a power socket near your router and connect it to the router using an Ethernet cable (usually supplied with the adapter).

Then plug the second adapter into a power socket in a far-away room. You can then attach this to your smart TV, Sky+ box, games console or laptop via another Ethernet cable.

This means that you can do without WiFi for more demanding tasks such as streaming HD TV shows or movies from catch-up TV services such as Netflix, Lightbox, Apple TV and Sky.

Powerline adapters act as if they're directly plugged into your router – even if they're on the other side of the house. You need at least two adapters and the best way to buy these are as part of a starter kit.

Some Powerline adapters can also create a new WiFi hotspot right there in the second (or third or fourth) room. These create boosted signals – like you get with a WiFi extender – plus close-to-fully performing new WiFi hotspots. They cost more but are much more versatile and provide faster speeds than extenders alone.

Unfortunately, if the power circuit you wish to use has an RCD then this will prevent the Powerline system from working. Likewise, it must be on the same electrical 'phase'.

If in doubt contact your electrician.



WiFi Extenders

A new wireless router or Powerline adapter set with built-in wireless are best but can cost more than a simple WiFi extender. WiFi extenders catch a wireless signal and then rebroadcast it, helping to strengthen the signal from a router on a different floor of a house or on the opposite side of a building. It should be noted that they can also limit your network's performance.

A repeater uses half its internal antennae to receive a wireless signal and the other half to transmit a new signal – effectively halving the potential speed of the device's network connection.

This shouldn't be that noticeable for light web browsing or email, but can be felt when streaming video or moving files around the network.

WiFi extenders share the bandwidth with the router. WiFi speeds are slower because data is shared between the router and the extender, whereas the Powerline simply acts as a single device (not sharing the bandwidth) and so you get stronger signals.

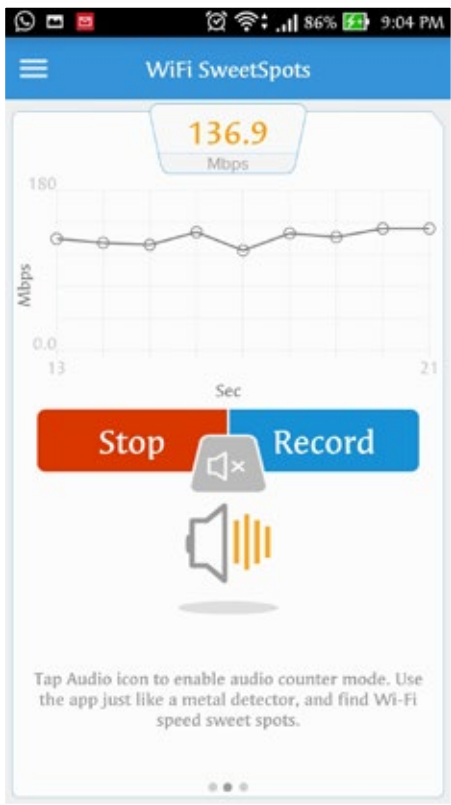
The WiFi extender needs to be placed in a central location, not too far away from the main router. If you put the repeater at the far edge of your main network hoping to strengthen the signal you will reduce the speed of your connection to the rest of the network and to the internet. Remember that the extender is just boosting the signal. If it's placed in a weak WiFi spot then it will only push around that weak signal. Place it in an area with better WiFi and the signal it pushes out will be stronger. The ideal location for a range extender is halfway between your main router and the intended wireless devices – in an open corridor or spacious room rather than a crowded space. It should be away from interfering devices such as cordless phones, bluetooth gadgets and microwave ovens.



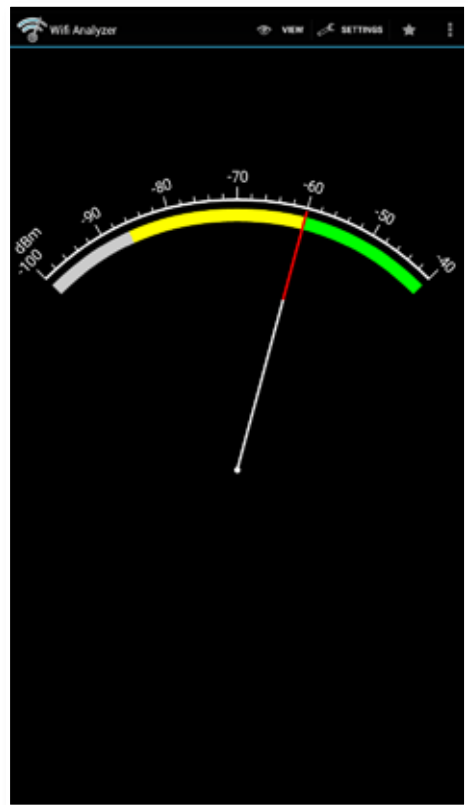
How to check your WiFi range

There are many apps available for Apple and Android smartphones. An example of each is 'SweetSpot' for Apple and 'WiFi analyzer' for Android.

Once installed in your phone you can move around your property checking for dead spots and sweet spots. This will help you to work out where to place WiFi extenders or whether the change of location you made for your WiFi modem has made a difference.



SweetSpot for Apple



WiFi Analyzer for Android

2.4GHz or 5GHz Wireless Band

WiFi can work over one of two spectrum bands: 2.4GHz or 5GHz.

What is the difference between the two WiFi bands? We'll keep this as technically simple as possible.

There are trade-offs between 2.4GHz and 5GHz that have to do with interference, range, and speed.

Each band has its limitations.

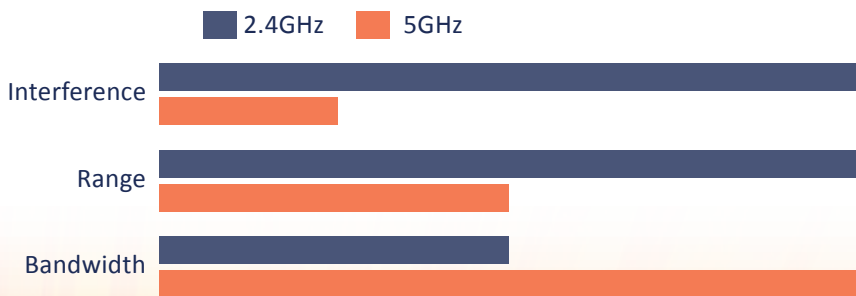
2.4GHz devices face a battle for the available space, and so cause interference between each other. The 2.4GHz band is also divided into overlapping channels. The more overlap, the greater the interference among networks located closely together.

Switching to 5GHz alleviates the channel problem because so many more channels are available without any overlap.

But 2.4GHz does have one big advantage over 5GHz: range. The shorter wavelengths used in the 5GHz band cannot penetrate as well through seemingly solid objects like walls, ceilings, desks, etc.

- The more interference there is, the less speed and range.
- The greater range you want, the less speed you can have.
- The greater speed you want, the closer to an access point you need to be.

2.4GHz vs 5GHz



"I am getting exactly the maximum speed, I am very happy with it."

"It's great, exactly meets my expectations. It's awesome."

"No dramas, communication was great."

"They were really fast, said it would take 4-5 hours, it only took them a couple of hours."

"The overall experience was excellent."

"I'm very happy because they said it would be 6 weeks and we got it in a week."

"I would recommend it. For any household where you are operating more than one computer or tablet it's great."

"Very great, cleaned up behind them. Quick, friendly"