

ADSL Speeds: What slows them down and what you can do

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With more than two decades of internet under our belt, our tolerance for sub-par download speeds is at an all-time low. We expect to see what we're searching for in seconds, and if we don't, we make our voices heard.

If you're suffering from slow speeds, or looking to avoid them after moving house, there are a number of factors to keep in mind. We'll try and make this guide as user friendly as possible, but understand that as simple as the internet seems when you switch your computer on, there's a pretty complex system behind your daily source of news, weather, and cat videos.

Your distance from your exchange

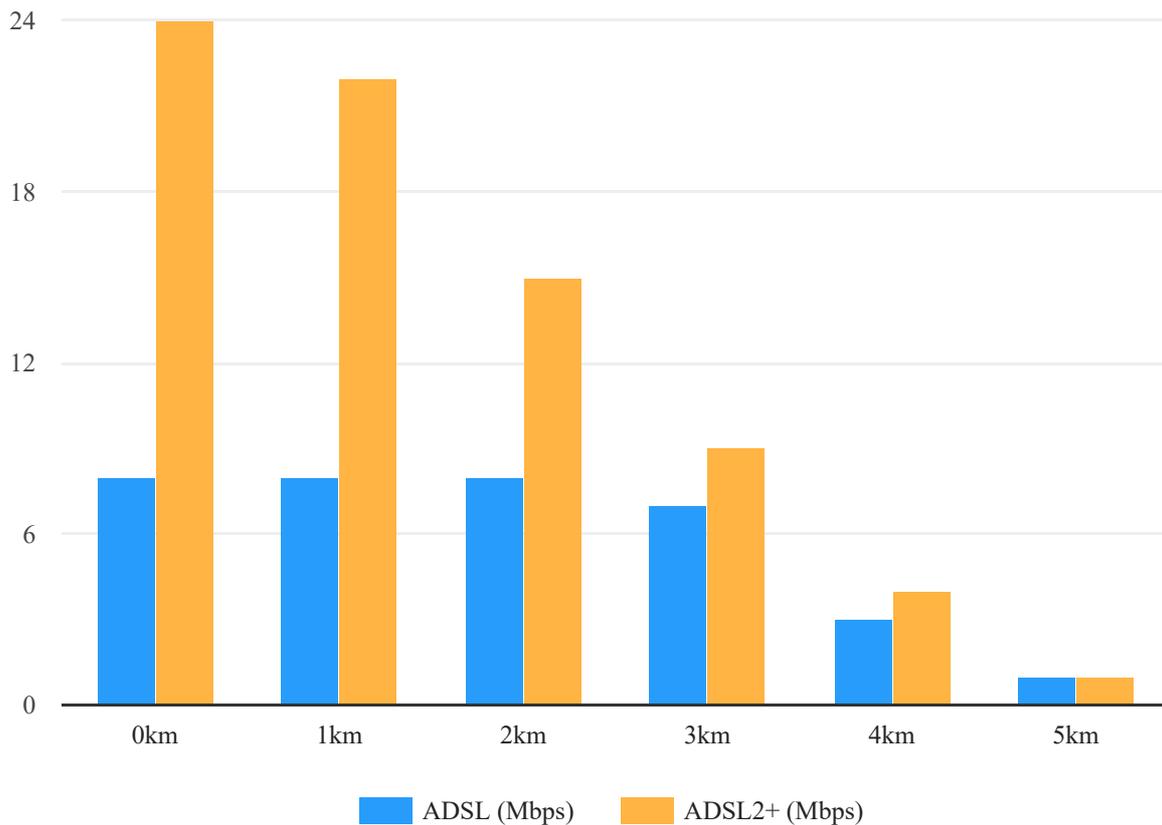
The biggest factor that affects ADSL speed is your distance from your local telephone exchange.

ADSL and ADSL2+ are delivered to your home over copper wires and because of this, the speed of your connection to the network is impacted by the distance the information needs to

travel between the exchange and your home. Copper is a great material for this because it has low resistance, but this resistance increases the longer a signal has to travel, and so your connection speed degrades as the length of copper increases.

This degradation doesn't occur on a straight line. With ADSL2+, you can be up to about 1km from the exchange before you may notice speed starting to dip. But if you're between 2km and 3km from the exchange, you'll really start to notice a difference.

ADSL speed vs. distance from exchange



If you want to see how far your house is from your local telephone exchange, take a look at this [DSLAM Coverage Map hosted by TPG](#).

What you see in the graph above is the best case scenario, and as you can probably guess, this is far from the average user experience.

For your speed to be the same as you see above, the copper cabling to your house would have to be in tip-top shape and preferably running in a straight line from the exchange to your house. Old copper wires are the nemesis of fast internet access, but unfortunately there are plenty of busted wires running through our communities.

A combination of these factors can lead to a household not being able to get ADSL at all. Even if you are connected to an exchange, living too far away from it and the condition of the copper wiring can cause Excessive Transmission Loss. If this is the case, an ISP might

refuse to even sell you a connection. You might not like this, but it is better for an ISP to say no in, rather than sell a service they know will be sub-standard or not even work.

There are other external factors which can impact performance. These include:

- The number of other ADSL services delivered over the same copper wire in your area.
- Electrical interference from sources such as electric motors and electric fences.
- Rain. Yes, seriously. Many copper pits around Australia are prone to flooding (as seen below), which in turn can slow your internet to a complete crawl.



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Things you can fix if you have slow ADSL

You can't pick which exchange you connect to, and you can't fix the copper connecting your house to the exchange, but you can take care of the equipment at your end.

If a telephone technician has ruled out external problems with your connection to the exchange, then having someone test the wiring inside your house may make a difference. This won't affect any of the elements outside of your house, but if you feel like you should be getting better speeds than you are, this is your best option.

If you live in an older house, you might consider contacting a cabling company to take a look at the wires and sockets inside your home. Your wiring or wall sockets might be corroded, there could be kinks and bends in the wire causing interference, or your phone filters might be on the blink.

You could consider installing a central filter to service all phone outlets, rather than having a separate filter on each line. You might also upgrade wall sockets, too. It's probably worth pointing out that it's illegal to change or install these things yourself, so you're best off calling someone in.

An old or faulty modem or router can also affect your ADSL performance. If you think there are issues with your modem, it may **be worth buying a new one**, but we'd say this should probably be your last resort.

What else can do I if I have slow ADSL?

If you can't get an ADSL connection or if you think your speeds are too slow, there are still other options for getting online.

Mobile broadband is the easiest of these. Mobile broadband is a term that refers to an internet connection delivered over the same networks utilised by your smartphone, and provided you can get a decent mobile signal at your place, you'll be able to get online using the same technology.

Since mobile broadband is delivered "over the air", the connection process is much faster and you can often get online the same day. The catch is that it can be more expensive than a fixed-line internet connection.

There's two main types of mobile broadband: "traditional" mobile broadband and fixed home wireless.

Traditional mobile broadband is where you buy a data-only SIM from a telco of your choice and throw it in a SIM enabled device. You can get a USB modem, a portable wireless hotspot, or even throw it in an old phone and tether. These data-only SIMs will run at uncapped 4G speeds; depending on your network and where you live, you can expect speeds of between 20Mbps to 100Mbps by doing this. You can now get **mobile broadband plans** that include over 50GB for around \$50 per month.

Broadband Plans

With at least 50GB data | [Filters](#)

	Inclusions	
OPTUS	\$50 My Mobile Broadband Plus 50GB Mobile Broadband \$50/mth Min. cost \$50	Go

	Inclusions	
	\$54 Data SIM Plan 50GB Mobile Broadband \$54/mth Min. cost \$64	Go
	4G Data Only 50GB - Month to Month 50GB Mobile Broadband \$59/mth Min. cost \$59	Go
	Mobile Broadband Data 50GB 50GB Mobile Broadband \$60/mth Min. cost \$60	Go
	Green 60 60GB Mobile Broadband \$65/mth Min. cost \$780	Go

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Fixed home wireless is a solution-in-a-box. Providers including [Optus](#) and Vividwireless will sell you a ready to go modem that connects to a 4G network rather than the wiring in your street. These plans tend to have larger than data allowances than data-only SIMs, but you're limited to speeds of 12Mbps.

Broadband Plans

With at least 200GB data | [Filters](#)

	Inclusions	
	\$70 My Mobile Broadband Plus 200GB Mobile Broadband \$70/mth Min. cost \$1,680	Go
	200GB Data Plan 200GB Mobile Broadband \$70/mth Min. cost \$269	Go

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Mobile broadband should work almost everywhere in Australia, but if it doesn't suit you, you might just have to wait until the National Broadband Network comes to your area. If you're not sure when that is, [check out the NBN rollout map here](#).