

Mobile Network Performance

What you need to know

We all know how important it is to choose the right mobile device and plan to suit your needs, but good coverage, quality reception and mobile network performance are also very important to mobile users.

Before you buy a mobile service it is important to check the Mobile Service Provider's coverage information to ensure that your smartphone, tablet or other mobile device will work where you intend to use it – at home, at work, during your commute and while on holidays.

Before purchasing a mobile service you need to consider the following:

- > Most Australians live in cities and the majority of people will experience good coverage most of the time. It's still important for consumers to carefully compare coverage information before choosing a mobile service, particularly consumers who live in rural and remote areas of Australia, to ensure the coverage offered will meet your needs.
- > Even in cities, buildings can affect mobile reception so you may wish to discuss with mobile service providers whether the service will work in buildings you spend time in, such as your home or office.
- > Mobile carriers sometimes make statements about the 'percentage of population covered' by their network. This percentage doesn't refer to the area of Australia that is covered by the mobile network but rather it's the percentage of people who live in covered areas, keeping in mind that there may still be large parts of Australia (with very few inhabitants) that are not covered by some mobile networks.
- > So, before you purchase a mobile service, make sure you check the mobile service provider's coverage map. Most providers have interactive coverage maps available online for you to query. Remember that while coverage maps are a useful tool, they are intended as a guide and you should always check with the mobile service provider about detailed coverage information for the locations where you intend to use your mobile.
- > There are many factors that can impact on the quality of reception and mobile network performance you may experience at any given time e.g. surrounding buildings, nearby trees, topography, bad weather, interference from nearby electrical devices, other mobile users using the same base station, or even a mobile device fault/incompatibility. So it always pays to talk to your mobile service provider if you are experiencing persistent problems.

If your mobile network performance falls short of expectations, there are things you can do:

- > Under the Australian Consumer Law (ACL), consumers have rights when they purchase any product or service, including mobile devices and services. If there is a problem with your mobile device, you may be entitled to a repair, replacement or refund. If there is a problem with your service, you may be entitled to cancel your contract. You can read more about consumer rights and guarantees that apply under the ACL at the ACCC's website (www.accc.gov.au).
- > If you find your chosen mobile network's performance is not meeting your expectations, you should in the first instance contact your mobile service provider. Your service provider can help you troubleshoot what may be causing any problems and help find a solution.



- > For example, your mobile service provider can provide advice regarding recommended handsets or devices that will best meet your requirements, depending on how and where you will be using your service. In some cases, they may recommend an additional antenna or other equipment for your mobile device if you will be using it in rural or remote areas of Australia.
- > Your mobile service provider may also be able to provide tools to enhance reception around your home, office or other location. Sometimes installing a car kit, an antenna or femtocell (a small base station that can be used in a home or office) will improve the reception.
- > While these are ways you might be able to safely and legally enhance your mobile coverage if needed, it's also important to remember that mobile phone boosters are banned because they can cause significant interference to mobile networks and coverage. Mobile repeaters can only be used if they have been authorised for use by your mobile carrier. This is because unauthorised use can actually lead to interference with mobile networks. You should check with your mobile service provider before you purchase a mobile repeater. You can read more about the rules relating to boosters and repeaters using the search engine on the ACMA's website (www.acma.gov.au).
- > If you find you are unable to resolve an issue with your mobile service provider directly, you can contact the Telecommunications Industry Ombudsman (www.tio.com.au or 1800 062058).

How mobile networks work

Mobile devices, such as smartphones and tablets, work by sending and receiving low power radio signals. The signals are sent to and received from antennas that are attached to radio transmitters and receivers, referred to as mobile network base stations.

Mobile devices will not work without base stations, which must be carefully located to allow more people to use mobile telecommunications from more locations.

A mobile network is designed on a "cell grid" basis covering a geographic area. The number of base stations required for a given area will depend on the terrain and number of people using mobile devices. The more people using mobile devices, the more capacity is required and this usually means more base stations closer together.

Mobile devices and base stations are designed, built and tested to comply with strict science-based safety standards, which are recognised by national and international health agencies, including the World Health Organization.

Investment in Australian mobile networks

Australia's mobile networks are comprised of around 14,000 sites across Australia. Mobile network providers have invested more than \$10 billion in mobile networks and spectrum between 2011-2013 to roll-out next-generation 4G mobile data and broadband services. This investment continues as demand for mobile data continues to build as customers adopt smartphones, mobile modems and tablets.

You can find out more about Australian mobile networks and how they work at the Mobile Carrier's Forum (MCF) website (www.mcf.amta.org.au).

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