

## GETTING VISION LOUD AND CLEAR

If you are within reception range of a Vision relay station you may be able to listen in on your radio receiver. This isn't available everywhere, but the number of locations is significant and is always growing.

For your nearest site, go to [www.vision.org.au/christian-radio/station-finder](http://www.vision.org.au/christian-radio/station-finder)

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### FM RECEPTION TIPS

Tuning to most radio stations is pretty easy – turn the dial and there it is. In many locations, this is the case with Vision. However, for some listeners, tuning to Vision requires a little extra effort (which is well worth it!).

The Commonwealth Government regulates use of the 'air' (radio spectrum and, because of this, many of Vision's relay stations are restricted to low power output. These are typically assigned to 87.6, 87.8 or 88.0 FM.

In relatively flat terrain, you can expect to have a broadcast reception range of up to 10 km from the transmitter using a radio with an external antenna (eg a car radio). Reception inside a building will be more limited

and unpredictable due to variations in factors such as:

- the relative height of our broadcast site
  - your distance from our site
  - the nature of the terrain
  - any trees, buildings or other obstacles
  - your building construction
  - where your radio is within the building
  - how good your radio is
  - the type of aerial attached to your radio.
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### THE RIGHT EQUIPMENT CAN MAKE ALL THE DIFFERENCE!

Car radios typically have a more sensitive tuner and an external antenna, so they are better able to pick up weak signals than most portable radios. If you can receive a Vision station on your car radio parked outside your home, you can generally also receive Vision inside the building, provided that you have a good radio tuner and an appropriate, correctly installed antenna.

Portable radios will only be useful when you are reasonably close to a transmitter. The antenna on many smaller radios is inside the unit, but if there is an external one, fully extend it before moving the radio around the house to find where the signal is strongest, then adjust the angle of the antenna for best reception.

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### RECOMMENDED RADIOS FOR FM RECEPTION

Good results have been reported with **Sangean** brand radios which are available from specialist electronics stores such as Tandy. These can cost more than \$100 so before you part with your money, ask if you can return the unit if it doesn't work out for you.

Clock radios and other cheap portable units generally have very insensitive tuners and will therefore have difficulty picking up a weak signal. You may need to try a more sensitive radio receiver.

Non-portable radio tuners (for example, a component in a home stereo) are generally more sensitive, and will usually have the necessary connection for one of the following types of external aerials;

1. Indoor ribbon-type FM antenna - These are often supplied with the radio tuner unit and when correctly installed can be very effective.
2. Outdoor TV antenna - To receive a weaker signal you will need to connect your tuner to an antenna designed for reception of TV channels three, four and five. Install the antenna on the outside of the building with the bars in a vertical position. Increasing the number of bars on the antenna improves its ability to receive a weak or distant signal. Point the antenna in the direction of the transmitter and use RG6 quad-shield coax cable to connect to your radio receiver.

## WHEN YOUR RADIO DOESN'T GO DOWN TO THE LOWER BAND LIMIT FOR FM RECEPTION

There are several alternatives:

1. Download the free app
2. Listen online (take care about your data usage, however)
3. Tune in via the VAST satellite system (channel 614)
4. Buy a radio that covers the bandwidth needed. We've had success with cheap radios from eBay (make sure the FM goes down to 87.6 FM and the AM up to 1692 AM, depending on your locality). The following radios are a bit more expensive, but get excellent results:

### **PR-D 7**

[http://www.amradioantennas.com/quality\\_radios.htm](http://www.amradioantennas.com/quality_radios.htm)

<http://www.ibuys.com.au/sangean-stereo-tuning-portable-radio-receiver-prd7bk-p-1546.html>

### **DPR 45**

<http://www.ibuys.com.au/sangean-portable-digital-radio-dpr45-p-1836.html>

The following are also suitable.

- **PR-D4**
- **PR-D6**
- **DT 120**

<http://www.amradioantennas.com/index.htm>

[http://www.ibuys.com.au/advanced\\_search\\_result.php?keywords=sangean&x=28&y=4](http://www.ibuys.com.au/advanced_search_result.php?keywords=sangean&x=28&y=4)

Loop antennas may be a solution in more difficult areas:

<http://www.amradioantennas.com/index.htm>

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## AM RECEPTION TIPS

AM signals generally travel further than FM, are less hindered by hills and mountains, but are more open to electrical interference. By far, the most effective factor in improving AM reception is a better antenna. That said, it is worth remembering:

- an antenna will generally NOT eliminate radio static.
- the telescopic antenna on a portable AM/FM radio has no effect on AM reception. Portable radios have an internal antenna - try turning the body of the radio in different directions to improve reception.

- receivers that are part of a stereo system usually come with an AM broadcast "loop" antenna. Attach it to the AM terminals on the back of your receiver. Turn the antenna in different directions until optimal reception is obtained.

The key to extending the reception range of an AM broadcast is to improve the quality of the antenna. If you need one, there are a wide variety of higher quality antennas available on the market.

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## NOISE REDUCTION TIPS

Annoying buzzes are often transmitted through an AM radio, for example:

- dimmer switch
- fluorescent light
- touch lamps (even when turned off)
- automatic on and off night lights
- outdoor lights which come on automatically
- electronic bug and pest controllers
- a light bulb that is about to burn out
- a faulty electrical switch of any kind
- a nearby TV
- blinking bulbs of all kinds such as Christmas lights
- scanners of all types
- electric blankets
- smoke detectors that run on AC (battery operated is OK)
- dirty insulators on a nearby power pole causing arcing.

It is best to eliminate the interference at its source. Here's a list of possible solutions:

- Turn off the offending device.
- Try a battery operated radio to see if the interference is coming in from the AC 240v line or through the air or both.
- Turn off the circuit breakers one at a time to see if the noise stops. If it does, than you know it is something in your house and you'll know which circuit it is on.
- Use a battery operated radio as a direction finder. Turn it until the noise is loudest and the front or the back of the radio will be pointing toward the noise origin.
- Carry a radio around the neighbourhood and see if you can find the origin of the noise. Ask your neighbours if they have problems with AM radio noise.
- If a power pole is suspected, call the power company and they will check the area and possibly clean the insulators. Dirty power pole insulators are sometimes a cause of difficult to find radio interference.
- If you have a hum in your receiver from AC noise, sometimes grounding can reduce the hum greatly.

## WHEN YOUR RADIO DOESN'T GO UP TO THE HIGHER BAND LIMIT FOR AM RECEPTION

There are several alternatives:

1. Download the free app
2. Listen online (take care about your data usage, however)
3. Tune in via the VAST satellite system (channel 614)
4. Buy a radio that covers the bandwidth needed. We've had success with cheap radios from eBay (make sure the FM goes down to 87.6 FM and the AM up to 1692 AM, depending on your locality). The following radios are a bit more expensive, but get excellent results:

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## FURTHER HELP

Unfortunately we aren't in a position to offer a support service. However, your local TV antenna installer will usually be a good source of assistance, plus there is a wealth of information available on the internet. For example, the ABC website has an excellent, detailed explanation of FM and AM radio reception issues. Go to [www.abc.net.au/reception/radio](http://www.abc.net.au/reception/radio).