

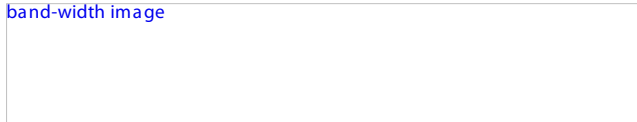
RADIO SPECTRUM MANAGEMENT



Band Expanders

The frequency range agreed internationally for FM broadcasting includes 88-108 MHz and is used in many countries including New Zealand. Japan, however, uses the frequency range 76-90 MHz. If you drive a used car imported from Japan it will probably be fitted with a Japanese car radio which, without modification, only receives some New Zealand radio stations.

[band-width image](#)



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In order to receive all available local radio stations, many people chose to fit a band expander in their aerial lead.

Band expanders "shift" FM radio signals used in New Zealand to the frequency range used in Japan. If you have fitted or are thinking of fitting a band expander in your car then it is important that you read the following information.

Radio Spectrum Management (RSM) consider band expanders to be unsuited for New Zealand conditions. RSM does not endorse or encourage the use of band expanders and does not take band expanders into consideration when planning and engineering FM broadcasting bands.

Degradation of your listening experience

If you own a Japanese second-hand import car which has been fitted with a band expander you may experience some or any of these problems with your reception:

- Wrong interpretation of frequency
- Distortion due to high signal levels (overload)
- Degraded reception due to Radiotelephone signals
- Intermixing of radio stations
- Radio may switch between signals, seemingly at random
- Blank-spots at some places on the tuning range

The above is not considered "interference" in terms of the Radiocommunications Act as the degradation occurs within the receiving equipment.

You may even hear some of these effects on your normal car radio when parked near to a car using a band expander.

Harmful interference to other signals (EMC Compliance)

Band expanders have also been found to cause harmful interference to sensitive two way radio systems at Airports and other important radio infrastructure. RSM has undertaken laboratory testing of some band expanders offered for sale in New Zealand and have determined that they may not conform to New Zealand electromagnetic compatibility (EMC) standards.

The supply, installation or use of interfering equipment may result in compliance action by RSM in accordance with the penalty provisions of the Radiocommunications Regulations.

Solution

The most practicable solution to allow full reception of all local radio stations (without degradation or interference) is to replace your Japanese car radio with a model designed for the FM band used in New Zealand. Talk to your local car audio supply for more information or for further information, call: 0508 RSM INFO (0508 776 463). Overseas callers please call +64-3-962 2603.