

QTC



Messages and news from RASA
The Radio Amateur Society of Australia

September/October 2020



INSIDE:

Protecting your antennas

Review: FlexRadio 6400

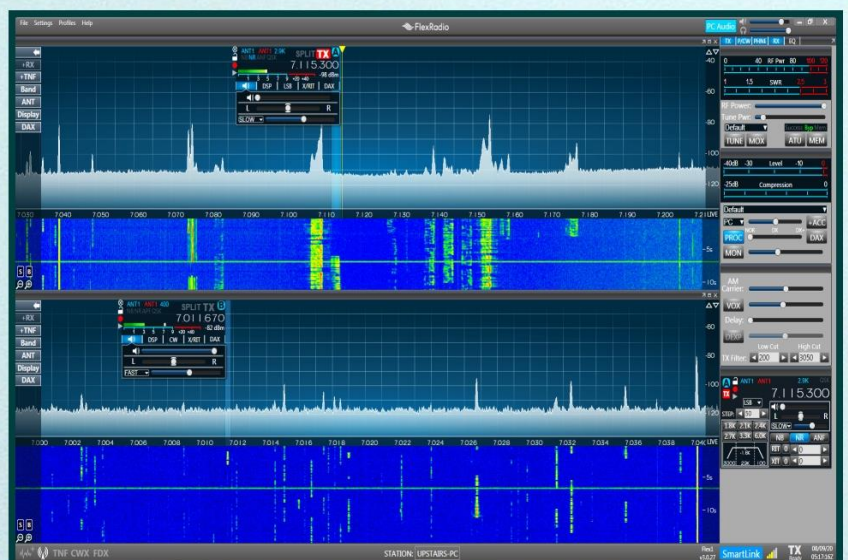
Updates on regulations

MF & CW: Part 2

**New Initiative: Tech
Support for newcomers**

Killing QRM

Pictures & Video



Clear Channel Medium Wave Broadcast Stations in Australia

By Glenn VK4DU

The Medium Wave (MW) broadcast band

The MW broadcast band in Australia runs from 526.5 to 1606.5 kHz. In practice, the lowest and highest channels are 531 and 1602 kHz respectively. Channel spacing is 9 kHz.

Although many stations have migrated to VHF FM over the past few decades, the MW band is still used extensively across the country. There are a limited number of channels available, so some sharing between stations is required.

Geographic separation and directional antennas are used to reduce interference between stations sharing a channel.

Clear that channel

A few of the ABC transmitters have large service areas, so they have been assigned their own dedicated channel.

These are known as “clear channel” transmitters in broadcast parlance; they can be received over a wide service area with no interference from other stations.

It's not all about the watts

Most commercial stations run between 2 and 5 kW output power. ABC transmitters in capital cities and some regional areas operate at up to 50 kW.

MW broadcast stations are rated by field strength, rather than transmitter power. MW station field strength is expressed as Cymomotive Force (CMF).

CMF is measured in volts and is a product of antenna efficiency and transmitter power.

The big guns

The two Australian stations with the most powerful signals – i.e., the highest licenced field strength, are 3LO in Melbourne (774 kHz) and 2BL in Sydney (702 kHz); otherwise known as ABC Radio Melbourne and Sydney.

Both of these stations use 50kW transmitters feeding 200m high mast antennas.

Although 2BL is technically not a clear channel station – it shares the channel with Karratha, WA – its signals, like those of its southern counterpart, are very strong on the eastern seaboard.

You can receive 2BL north of Melbourne and 3LO south of Sydney on your car radio, in daylight.... At night, 2BL can be received driving around Cairns.

Some other clear channel stations with big signals are:

- Horsham 3WV 594 kHz
- Emerald 4QD 1548 kHz
- Adelaide 5RN 729 kHz
- Sydney 2RN 576 kHz (same tower as 2BL, slightly lower field strength)

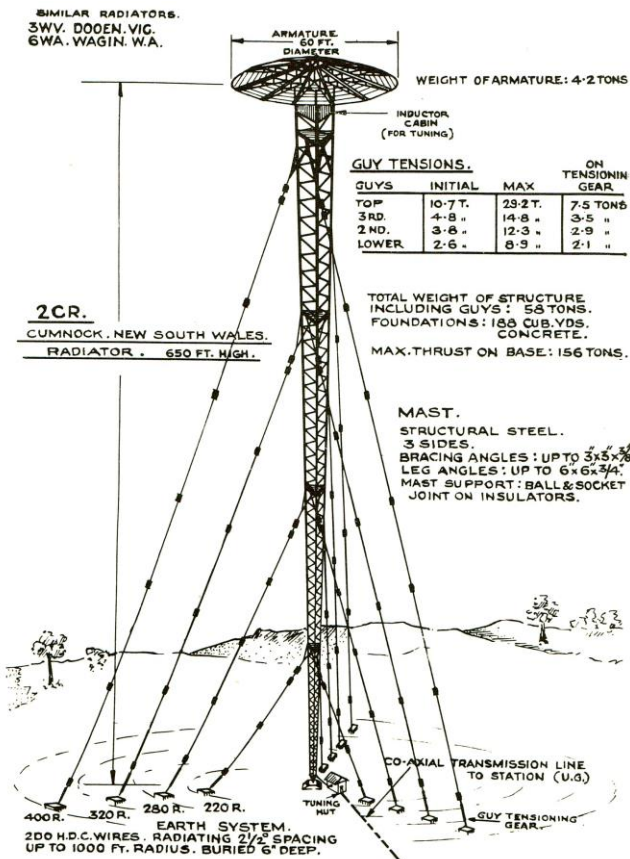
The ABC station at Cumnock, 2CR (549 kHz), between Wellington and Molong in western NSW is not far behind the two big guns in field strength – it is audible all over NSW and parts of Qld and Vic in daylight.

2CR commenced operation in 1935.

The ABC produced a [good video](#) of the Cumnock site recently:

Because of the low frequency of operation, the 2CR antenna uses a capacity top hat to provide extra electrical length.

See the drawing overleaf.



2CR antenna details, Australian Post Office, 1951

For a more detailed picture – click this [link](#)

International DX

The Sydney station 2BL has been received by DX'ers in the US – click this [link](#) for a video.

3LO Melbourne shares 774 kHz with a New Zealand station in New Plymouth.

If you are outside VK3, you can hear the ZL station under 3LO at dusk and at night....but you do need a decent receiver and antenna.

The guide

ACMA publish the best reference for Australian broadcasting stations.

The official list of Australian broadcast stations is available as a [downloadable](#) excel spreadsheet. It covers all

broadcasting – AM, FM, Digital Audio Broadcasting (DAB) and TV stations.

An oldie but a goodie

MW broadcast radio is very much the poor relation in this age of internet streaming and DAB.

The ABC seem almost reluctant to promote their AM transmitters....the AM frequency always comes last in station announcements...

Despite this, MW broadcasting will be with us for some time yet – no other technology covers rural and regional Australia like good old *Medium Wave*....static crashes and all...

Happy DX-ing.