

Planning Model for Low Power Open Narrowcasting (LPON) Services

Frequency Range

The FM radio sub-band 87.5-88.0 MHz has been made available to accommodate LPON services.

Channels

The channels centred on the frequencies 87.6 MHz, 87.8 MHz and 88.0 MHz may be used for LPON services.

The order of frequency assignment in an area is 88.0 MHz and 87.6 MHz, in either order, followed by 87.8 MHz; co-channel and other frequency availability restrictions permitting.

Frequency Availability Restrictions

There are restrictions on the availability of all, or some, of these frequencies in certain areas of Australia because of the potential for interference to the reception of broadcasting services.

FM Radio Broadcasting Services below 88.4 MHz

Table 1 lists the locations and protection radii for FM radio broadcasting transmitters using 88.1 MHz and 88.3 MHz.

Important Note:

- within the radii for 88.1 MHz transmitters, no LPON services are to be assigned.
- within the radii for 88.3 MHz transmitters, no 87.8 MHz or 88.0 MHz LPON services are to be assigned; and
- within the radii for 88.3 MHz transmitters, LPON services to operate on or below 87.6 MHz may be assigned.

Table 1 - FM Broadcasting Services on 88.1 MHz and 88.3 MHz

Frequency (MHz)	FM Radio Callsign	Site Coordinates (AMG66)			Area Covered	Effective Radiated Power	Protection Radius (kilometres)
		Zone	Easting	Northing			
88.1 MHz	2ABCFM	55	601300	5991800	Khancoban, NSW	36 watts	30
	2ABCFM	55	616600	6060000	Talbingo, NSW	4 watts	10
	2BS	55	726726	6251735	Burruga, NSW	2000 watts	35

	2RDJ	56	324600	6249200	Burwood, NSW	100 watts	50
	2RVR/T ¹	55	314920	6185673	Hay, NSW	6000 watts	100
	3ABCFM	55	497499	5936495	Bright, VIC	50 watts	30
	3MFM	55	392200	5739300	Leongatha, VIC	2000 watts	80
	4HJ/T ¹	55	555200	7490300	Blair Athol, QLD	200 watts	50
	8ABC	52	720776	8480826	Tipperary Station via Daly River, NT	2 watts	10
	8ABCRN	53	234400	8599900	South Alligator, NT	2 watts	50
88.3 MHz	2ABCFM	55	582311	6146329	South West Slopes, NSW	80,000 watts	100
	2UUS	56	284623	6219812	Camden, NSW	100 watts	25
	3SCB	55	327260	5799540	Southern South Melbourne, VIC	200 watts	30
	4ABCRR	56	360282	7310324	Miriam Vale, QLD	100 watts	30
	3ABCRN	54	616375	6031400	Hopetoun, VIC	500 watts	30
	6MER	50	618547	6403429	Kondinin, WA	25 watts	30
	6FMS	50	682335	7442632	West Angelas Mine Dep B, WA	65 watts	30

¹ Translator

LPON Transmitter Technical Characteristics

Radiated Power

Table 2

Location*	Maximum Equivalent Radiated Power (ERP)
Residential	1 Watt (1.64 watts Equivalent Isotropic Radiated Power)
Non-residential	10 Watts (16.4 watts Equivalent Isotropic Radiated Power)

* A residential area is an area within 20 kilometres of the boundary of an Urban Centre or Locality as defined by the Australian Bureau of Statistics (ABS) in the 2021 Census. A complete list of such areas can be found on the ABS website at [Urban Centre Localities](#) page.

A non-residential area is an area at least 20 kilometres from the boundary of an Urban Centre or Locality.

Antenna

Type - Unspecified

Polarisation – Unspecified

Emission Designation

- 200KF8EHF for stereophonic or quadrasonic sound;
- 200KF3EGF monophonic sound.

Minimum Separation Distance Requirements

Co-channel and adjacent channel minimum separation requirements for LPON services are listed in Table 3.

Table 3 - Minimum Separation Distances between LPON Transmitters

In addition to conforming to the planning requirements above, LPON transmitters must maintain the minimum separation distances specified below. For example, a one watt ERP transmitter operating at 87.6 MHz must be situated at least 10km from the nearest one watt ERP transmitter operating at 87.6 MHz and at least 5km from the nearest one watt ERP transmitter operating at 87.8 MHz. It can operate at the same site as a transmitter operating at 88.0 MHz (see column 2).

LPON Carrier Frequency Separation (kHz)	Separation Distance between 1 watt ERP LPON transmitters in kilometres (km)	Separation Distance between 10 watt ERP LPON transmitters (km)	Separation Distance between 1 watt and 10 watt ERP LPON transmitters (km)
0	10	30	20
200	5	15	10
400	0	0	0