



Appendix D - The Optimal Transmission Strategy

The ABC Optimal Transmission Strategy has identified the ABC's priority areas and ranked FM frequency availability for the extension of each ABC radio network. The full list is shown below.

The ABC has assumed that FM radio was more readily available for the following reasons:

The Australian market (in addition to close geographic neighbours New Zealand and Indonesia) is congested with AM radio services. Interference due to skywave propagation makes it increasingly more difficult to introduce new AM services.

The sharing of existing AM facilities is problematic if the frequency spacing between the two services is large, as the facility's physical dimensions are built to matching the frequency of the service.

New AM facilities, particularly those with directional patterns, require large portions of flat land, relatively close to the population centre wanting to be served. (i.e., the land is expensive).

The ABC assumed that better costs benefits could be achieved by sharing the existing FM infrastructure. Introducing AM facilities is expected to be more expensive in comparison.

In addition, as was stated at the hearing in Brisbane on 28 May 2001, Australia is a signatory to the International Telecommunications Union (ITU) convention that restricts new AM services to 10 kW in power. This power restriction provides significantly less coverage than existing capital city and some regional area transmitters that were established many years ago

The following table shows the ABC priority extension of each radio network. It should be noted that the estimated funding is on an annual basis and that the frequency availability is a comment based on best knowledge of the individual licence areas.

Coverage Areas	State	Towns Serviced	Local Radio	Radio National	Classic FM	Triple J	PNN	Freq. Availabilit	Funding# (\$'000)
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Australian Capital Territory									
+Canberra*	ACT	Canberra & Queanbeyan	-	-	-	-	U	c	250
New South Wales									
Broken Hill	NSW	Broken Hill	-	-	A	-	A	a	210
Gosford*	NSW	Gosford	ME	-	-	-	ME	a	
Goulburn	NSW	Goulburn	-	-	-	-	A	a	210
Murrumbidgee Irrigation	NSW	Griffith	-	-	-	-	A	a	250
Wagga Wagga*	NSW	Wagga Wagga	-	-	-	-	A	a	210
Armidale	NSW	Armidale	-	-	-	-	A	b	210
Bathurst	NSW	Bathurst	-	-	ME	ME	A	b	210
Batemans Bay/Moruya	NSW	Batemans Bay, Moruya & Ulladulla	-	-	-	A	A	b	210
Central Western Slopes*	NSW	Dubbo	-	-	-	-	A	b	250
Tamworth	NSW	Tamworth	-	-	-	-	A	b	210
Upper Hunter	NSW	Muswellbrook & Scone	-	A	A	A	A	b	210
Upper Namoi	NSW	Gunnedah, Inverell & Moree	-	-	-	-	A	b	210
Central Coast**	NSW	Gosford & Wyong	R	R	R	R	R	c	
Central Tablelands*	NSW	Cowra, Orange & Parkes	-	-	-	-	A	c	250
Grafton/Kempsey	NSW	Coffs Harbour,	-	-	-	-	A	c	210

		Grafton, Kempsey & Sawtell							
Illawarra*	NSW	Bomaderry, Bowral, Nowra, & Wollongong	-	-	-	-	A	c	250
Lithgow	NSW	Lithgow	-	-	A	A	A	c	210
Manning River*	NSW	Forster, Port Macquarie, Taree & Tuncurry	-	-	-	-	A	c	250
Richmond/Tweed*	NSW	Ballina, Casino & Lismore	-	-	-	-	A	c	250
SW Slopes*	NSW	Cootamundra , Gundagai, Junee & Temora	-	-	-	-	A	c	250
+Sydney*	NSW	Katoomba, Richmond, Sydney & Windsor	-	-	-	-	U	c	250
Northern Territory									
Alice Springs	NT	Alice Springs	-	-	-	-	A	a	210
Queensland									
Emerald	QLD	Emerald	-	-	ME	A	A	a	210
Gold Coast*	QLD	Gold Coast, Nerang, Terang & Tweed Heads	-	-	-	-	ME	a	
Mount Isa	QLD	Mount Isa	-	-	-	-	A	a	210
Sunshine Coast*	QLD	Buderim, Caloundra, Maroochydor	-	A	-	-	A	b	250

		e & Nambour							
Wide Bay*	QLD	Bundaberg, Hervey Bay & Maryborough	-	-	-	A	A	b	250
Cairns North*	QLD	Cairns North	-	-	-	-	A	c	210
Cairns*	QLD	Cairns & Innisfail	-	-	-	-	A	c	250
Darling Downs*	QLD	Dalby, Toowoomba	-	-	-	-	A	c	250
Gladstone*	QLD	Gladstone	-	-	-	A	A	c	250
Gympie*	QLD	Gympie, Noosa & Tewantin	-	-	-	A	A	c	250
Mackay*	QLD	Mackay	-	-	-	-	A	c	250
Rockhampton*	QLD	Rockhampton , Yeppoon	-	-	-	-	A	c	250
Southern Downs	QLD	Warwick	-	-	-	-	A	c	210
Townsville North*	QLD	Townsville	-	-	-	-	A	c	210
Townsville*	QLD	Townsville	-	-	-	-	A	c	250
South Australia									
Port Lincoln	SA	Port Lincoln, Tumby Bay	-	-	A	A	A	a	210
Renmark/Loxton	SA	Renmark & Loxton	-	-	-	-	A	b	250
South East	SA	Mt Gambier	-	-	-	-	A	b	210
Spencer Gulf*	SA	Port Augusta, Port Pirie, Whyalla	-	-	-	-	A	b	250
Tasmania									
Burnie/Wynyard	TAS	Burnie, Somerset & Wynyard	-	A	A	A	A	b	210

NE Tasmania*	TAS	Devonport, Launceston, & Ulverstone	-	-	-	-	A	b	250
Victoria									
Bairnsdale	VIC	Bairnsdale	-	-	A	A	A	a	210
Latrobe Valley*	VIC	Moe-Yallourn, Morwell, Sale & Warragul	-	A	-	-	A	a	250
Horsham	VIC	Horsham	-	ME	A	A	A	a	210
Mildura/Sunraysia a	VIC	Mildura	-	-	-	-	A	b	210
Murray Valley	VIC	Swan Hill	-	A	-	-	A	b	210
Portland	VIC	Portland	-	-	A	A	A	b	210
Upper Murray*	VIC	Albury, Wodonga	-	-	-	-	A	b	210
Warnambool*	VIC	Warnambool	-	-	A	-	A	b	210
Ballarat*	VIC	Ballarat & Colac	-	-	-	-	A	c	250
Bendigo*	VIC	Bendigo, Echuca, Moama	-	-	-	-	A	c	250
Goulburn Valley*	VIC	Benalla, Shepparton & Wangaratta	-	-	-	-	A	c	250
Western Victoria	VIC	Hamilton	-	A	-	-	A	c	250
Western Australia									
Broome	WA	Broome	-	-	-	A	A	a	210
Kalgoorlie*	WA	Kalgoorlie	-	-	-	-	A	a	250
Karratha	WA	Karratha	-	-	-	A	A	a	210
Port Hedland	WA	Port Hedland	-	-	-	A	A	a	210
Southern Agricultural	WA	Albany	-	-	-	-	A	a	250

Central Agricultural	WA	Northam	-	-	-	-	A	b	250
Geraldton	WA	Geraldton	-	-	-	-	A	b	210
Bunbury	WA	Bunbury & Busselton	-	-	-	-	A	c	210
								Total	\$13.972m

Notes:**Frequency Availability**

ME ABC's Minor extensions program

a good

A Add to radio network

b fair

U Upgrade required to improve coverage

c poor

R Reservation rejected, no spectrum remaining

#Estimate Funding (per annum per
service)

- Covered by existing service

* Centres above 30,000 persons