

WIA Submission – Part 3: Standard Licence Conditions

SUMMARY

- Provide access to more frequency bands
- Relax permitted transmission bandwidths
- Increase maximum permitted power from 100 W to 200 W pX

3.1 Standard Licence Conditions – Frequency Bands as in LCD 2015

Part 5

23 Permitted frequency bands

The licensee must operate an amateur standard station to transmit only on a frequency in a frequency band mentioned in an item in Schedule 3.

Schedule 3 Permitted frequencies and emission modes (amateur standard station)

(sections 23 and 24)

<i>Item</i>	<i>Column 1</i> Frequency band	<i>Column 2</i> Permitted emission modes
1	3.500 MHz–3.700 MHz 7.000 MHz–7.300 MHz 14.000 MHz–14.350 MHz 21.000 MHz–21.450 MHz	Any emission mode with a necessary bandwidth no greater than 8 kHz
2	28.000 MHz–29.700 MHz 52.000 MHz–54.000 MHz 144.000 MHz–148.000 MHz 430.000 MHz–450.000 MHz 1 240.000 MHz–1 300.000 MHz 2 400.000 MHz–2 450.000 MHz 5.650 GHz–5.850 GHz	Any emission mode with a necessary bandwidth no greater than 16 kHz

3.1.1 Access to more bands

The Standard licence was instituted to accommodate the former Novice licence at the time Amateur licensing was reformed in 2004. In the 3-tier licence regimen adopted following licensing reform, the Standard licence is thus an intermediate grade, a concomitant purpose being to provide an upgrade path between Foundation and Advanced, with the ‘incentive’ of better licence conditions.

The number of permitted bands for the Australian Standard licence is quite restricted when compared with the intermediate level licence designations in other countries, as evidenced from **Table 3.1**. The WIA suggests increasing the number of permitted bands for Standard licensees between 1.8 MHz and 28 MHz and, particularly, access to 50-52 MHz.

- The Australian Standard licence's progenitor in the UK has considerably more band access across the spectrum; the WIA is not aware of any evidence regarding notable complaints or issues.
- Likewise, Argentina, Canada, Japan, the UK and the USA also provide wide access to bands across the spectrum; again, the WIA is not aware of any evidence regarding notable complaints or issues.

As noted regarding the Foundation licence, having more bands provides a wider range of opportunities for licensees to learn and gain experience across the radiofrequency spectrum.

The 3-tier Australian amateur licence system had its genesis in the UK amateur licensing system; it was adapted to accommodate the previous five-tier Australian licence system. However, the conditions for the Australian Standard licence largely reflect the previous Novice licence, with three microwave bands added to differentiate it from the Foundation licence.

Hence, in comparison to other countries' Intermediate licences:

- the Australian Standard licence has 10 frequency bands
- the UK Intermediate licence has 25 equivalent bands (4 m / 70 MHz is not available in Australia)
- Argentina's Intermedia has 21 equivalent bands
- Canada's Basic+ has 25 equivalent bands
- the USA's General has 24 equivalent bands
- Japan's 3rd Class has 20 equivalent bands

Australian Standard licence holders have far fewer bands in which to experiment and learn.

The WIA believes that, from the experiences of other countries, there is little evidence that providing access to more bands would act as a disincentive to Standard licensees upgrading to the Advanced licence.

Table 3.1 Intermediate level licences – band access in different countries.

■ = access to part or all of the nominated band

Amateur Band	Australia Standard	Argentina Intermedia	Canada Basic +	Japan 3rd Class	UK Intermediate	USA General
2200m			■	■	■	
600m						
160m			■	■	■	■
80m	■	■	■	■	■	■
80m DX			■	■		■
60m			■		■	■
40m	■	■	■	■	■	■
30m			■		■	■
20m	■	■	■		■	■
17m		■	■		■	■
15m	■	■	■	■	■	■
12m		■	■	■	■	■
10m	■	■	■	■	■	■
6m		■	■	■	■	■
4m					■	
2m	■	■	■	■	■	■
1.25m		■	■			■
70cm	■	■	■	■	■	■
33cm			■			■
23cm	■	■	■	■	■	■
13cm	■	■	■	■	■	■
9cm		■	■	■	■	■
6cm	■	■	■	■	■	■
3cm		■	■	■	■	■
12.5mm		■	■	■	■	■
6.38mm		■	■	■	■	■
4.0mm		■	■	■	■	■
2.5mm			■		■	■
2.24mm		■	■	■	■	■
1.25mm		■	■	■	■	■

3.1.2 WIA survey - Access to more bands

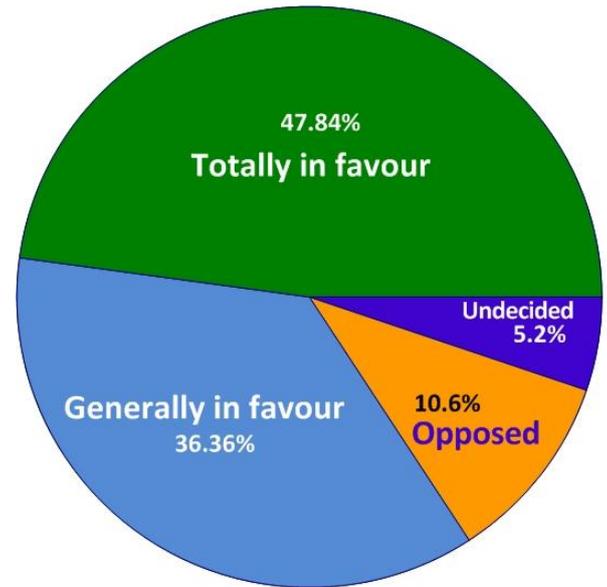
The number of permitted bands for the Australian Standard licence is quite restricted in comparison with the intermediate level licences in other countries.

The WIA advocates increasing the number of permitted bands for Standard licensees between 1.8 MHz and 28 MHz and, particularly, enabling access to 50-52 MHz. This would provide greater opportunities for learning experiences and inter-amateur communications.

Having more bands provides a wider range of opportunities for licensees to learn and gain experience across the radiofrequency spectrum and adds incentives for Foundation licensees to upgrade.

Standard – access to more bands

N = 462	Totally in Favour	Generally in Favour	Undecided	Opposed
No.	221	168	24	49
%	47.8	36.4	5.2	10.6



An overwhelming 84% of respondents were in Favour of an increase in permitted bands for Standard Licensees. Of the 36% Generally in Favour, views were expressed that additional bands should be limited so that an incentive to upgrade was maintained. Among those Opposed, the view was expressed that new privileges beyond what previous Novice licensees had should be ‘earned’.

Phase 2: Standard – access to more bands

WIA Recommendation:

That the number of amateur bands for Standard licensees be increased to provide greater opportunities for learning experiences and inter-amateur communications and to harmonise better with those of other countries’ intermediate level licences, while balancing incentives to upgrade.

3.2 Standard Licence Conditions – Permitted bandwidth as in LCD 2015

Part 5

24 Emissions from an amateur standard station

The licensee must not operate an amateur standard station in a frequency band mentioned in column 1 of an item in Schedule 3 unless:

- (a) the station is operated using an emission mode mentioned in column 2 of the item; and
- (b) the transmission remains entirely within that frequency band mentioned in the item.

3.2.1 Relaxation of permitted bandwidths

The WIA seeks a relaxation of the permitted bandwidths relating to the Standard licence, where practicable, on identified bands below 1 GHz, and on all bands above 1 GHz, to allow the use of wideband transmission modes. Wider permitted bandwidth would enable Standard licensees to experiment with recently developed, and yet to be developed, wide-band transmission technologies.

3.2.2 WIA survey - Relaxation of permitted bandwidths

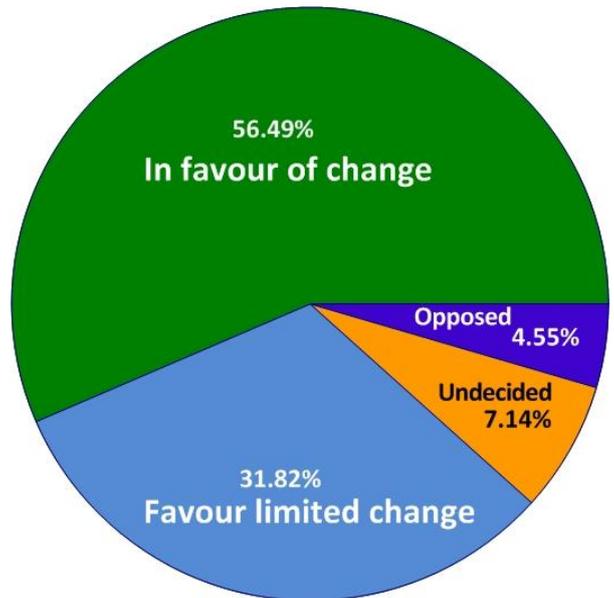
Prescribing permitted bandwidths related to transmission modes locks-in past technologies and locks-out the ability to explore use of technologies emerging in the future.

Respondents were offered four response categories:

Standard – increase permitted bandwidths

N = 462	In Favour of Change	Favour Limited Change	Undecided	Opposed
No.	261	147	33	21
%	56.5	31.8	7.1	4.5

With over 87% of respondents In Favour, the demand for an increase in permitted bandwidths for Standard Licensees is well established. Of the ~32% who Favour Limited Change, the general view concerned maintaining the incentive to upgrade. Maintaining the status quo was a concern among those Opposed.



Phase 2: Standard – relax bandwidths

WIA Recommendation:

1. The WIA seeks relaxation of the permitted bandwidths relating to the Standard licence, where practicable, on identified bands below 1 GHz, and on all bands above 1 GHz, to allow the use of wideband digital and image transmission modes.
2. That **Schedule 1 Emission Modes** be reduced to a practicable minimum to avoid prescribing emission modes in every detail.
3. That **Part 5, Clause 24** be modified to be:

Emissions from an amateur standard station

The licensee must not operate an amateur standard station in a frequency band mentioned in column 1 of an item in Schedule 3A unless the transmission remains entirely within that frequency band, except where transmission bandwidth is otherwise specified.

3.3 Standard Licence Conditions –Transmitter power as in LCD 2015

Part 5

25 Transmitter output power

- (1) The licensee must not operate an amateur standard station, using a transmitter output power of more than 100 watts pX, if the emission mode of the station includes:
 - (a) J3E; or
 - (b) R3E
- (2) The licensee must not operate an amateur standard station, with an emission mode not mentioned in subsection (1), using a transmitter output power of more than 30 watts pY.

3.3.1 Increased power

The WIA notes that the permitted power of 100 W pX for Standard licensees was a carryover from the former Novice licence. The WIA suggests that a permitted power of 200 W pX would be a sensible pragmatic provision for the Standard licence, for these reasons:

- The suggested increased permitted power affords Standard licensees the opportunity to explore and experiment with RF technologies (in commercially-made and home constructed equipment) and on-air operations in the context of an increasing urban RF noise environment on the HF and VHF bands, now being experienced within Australia and across the world.
- Many commercial transceivers currently available, and others produced over the last decade and generally available on the second-hand market, provide output power at the suggested level.

There is a wide disparity between countries in permitted powers for intermediate level licences (as the various regulatory authorities assign them; they are not necessarily equivalent to the Australian Standard licence). The range of this disparity is illustrated in **Table 3.3**.

There is no extant evidence to suggest that operating at the proposed 200 W pX power level, 3 dB above the present 100 W pX limit, creates any additional safety issues regarding the management of electromagnetic emissions (EME).

Additionally, the WIA has conducted an education campaign to raise awareness in the Australian radio amateur community of licensees' responsibility in EME compliance. To encourage and educate members and the radio amateur community:

- material has been published in the WIA journal *Amateur Radio* and on the WIA's website
- presentations have been delivered:
 - to affiliated radio clubs
 - at amateur radio events (including Australia's largest annual field day)
 - at the annual WIA Conference and AGM.

Table 3.3 Permitted power levels for intermediate level licences in different countries

COUNTRY	MAX. PERMITTED POWER (W)	pX / pY	Licence class
Argentina	500	pY	Intermedia
Austria	200	pX	Class B
Canada	560 / 190	pX / pY	Basic+
Chile	1200	pX	General & Novicio
Denmark	100	pY	Category B
France	120	pX	Classe 2
Indonesia	<30 MHz: 150 >30 MHz: 75	pX	General
Israel	250	pX	General
Italy	50	pX	Classe B
Japan	200	pX, pY	2nd Class Operator
Malaysia	50	pX	(new proposal)
Mexico	500	pX, pY	Clase II Aficionado
Peru	250	pY	Intermedia
Portugal	750	pX	Class B (½ Class A pwr)
South Africa	100 (20 dBW)	pX	Class B
UK	50 (17 dBW)	pX	Intermediate
USA	1500	pX	General

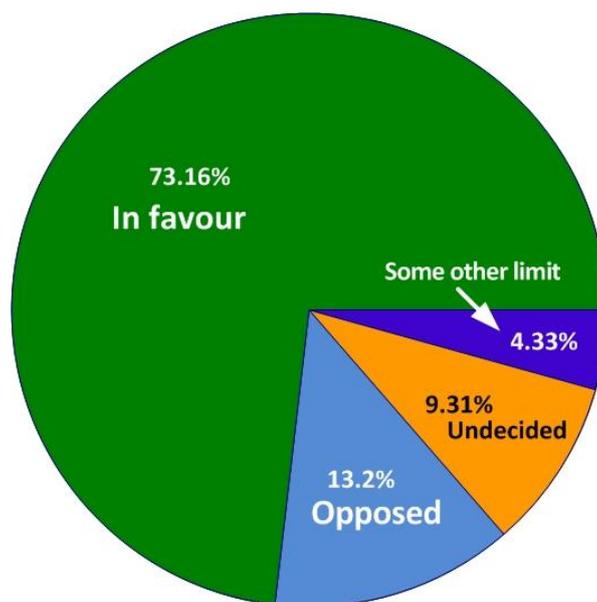
3.3.2 WIA survey - Increased power

Respondents were offered four response categories:

Standard – power increase to 200 W pX

N = 462	In Favour	Some Other Limit	Undecided	Opposed
No.	338	20	43	61
%	73.2	4.3	9.3	13.2

An overwhelming 73% of respondents were In Favour of an increase in permitted transmitter power output for Standard Licensees to 200 W pX. An additional 4.3% of respondents supported Some Other Limit (ranging up to the 400 W limit for Advanced licensees). Those Opposed sought to maintain the status quo and / or expressed the view that going beyond what previous Novice licensees had should be ‘earned’.



Phase 2: Standard – power to 200W pX

WIA Recommendation:

That **Part 5, Clause 25** be modified to:

Transmitter output power

The licensee must not operate an amateur standard station using a transmitter output power of more than 200 watts pX, or more than 60 watts pY.