



VHF Band I: short range devices at 49 MHz

**Technical consultation
April 2014**

Background

The television digital switchover (DSO) resulted in a large quantity of radio spectrum formerly used for television broadcasting becoming available for new uses, most notably the 700 MHz band which is being allocated for 4G-LTE cellular networks. Other spectrum that has become available includes 44-51 MHz and 54-68 MHz, known as VHF Band I.

VHF Band I is not suitable for cellular use with current technology.

Within this band, 50-51 MHz has been allocated for amateur television services and 51-54 MHz has been allocated for amateur services on a shared basis with fixed and mobile services, as agreed by Cabinet in 2009 [DOM Min (09) 28/10 refers].

44-50 MHz is available for new uses, as shown in the table below. This technical consultation concerns the use of low power short range devices (SRDs) in VHF Band I, channel 1, specifically at 49 MHz.

Table 1: VHF Band I, channel 1								
*Red block shows proposed allocation for short range devices (49.86 MHz) – option one								
	available for new uses							amateur allocation
MHz	44	45	46	47	48	49	*	50

The Ministry of Business, Innovation and Employment (MBIE) does not anticipate a return to general analogue television broadcasting in this band, and as such we are removing the BROADCASTING allocation from *Public Information Brochure 21: Table of Radio Spectrum Usage in New Zealand* ('PIB 21'). This brings New Zealand into line with the International Radio Regulations (IRR). Note that the FIXED and MOBILE primary allocations in New Zealand for 50-54 MHz will remain.

We intend to instigate a more comprehensive public consultation on VHF Bands I and III in due course. We request that at this time submitters keep their feedback focussed on the proposals for 44-50 MHz, noting that there will be an opportunity to comment on broader issues in the VHF bands in the future.

Proposals

MBIE is aware of an ongoing issue with radio-controlled model toys that use 49 MHz (e.g. remote-controlled cars) being imported into New Zealand. There is no licence in place for

these devices at this frequency,¹ and as such MBE's Radio Spectrum Management – Compliance team is obliged under the Radiocommunications Regulations 2001 to attempt to prevent them from being imported (working with Customs) and issue infringement notices to importers and users. This was justified when there was potential for these devices to interfere with broadcasting, but may now be disproportionate to any harmful interference that the devices could cause, given that broadcasters no longer use this spectrum.

We propose to create a General User Licence (GUL) that permits the operation of radio controlled toys at 49 MHz. In practice this would be a General User Spectrum Licence until the current (ex-broadcasting) management right expires in August 2015, and thereafter it could be a General User Radio Licence. For end users, there is no discernible difference between spectrum licences and radio licences.

The technical parameters of the licence could be as shown in the table below:

Table 2: Proposed General User Licence					
	Low frequency	High frequency	Reference frequency	Maximum power	Remarks
Option 1	49.82 MHz	49.90 MHz	49.86 MHz	-10.0 dBW e.i.r.p	Special Condition 3 ²
Option 2	49.82 MHz	49.98 MHz	49.90 MHz	-20.0 dBW e.i.r.p	

We seek feedback on four options:

1. A higher power spectrum block allocated for a specific use e.g. radio-controlled model toys (as illustrated in the table above as Option 1).
2. A lower power spectrum block or blocks allocated for low power short range devices more generally (as illustrated in the table above as Option 2).
3. A hybrid of options 1 and 2. Submitters should provide detailed suggestions as to what this licence would be like, if they favour this option.
4. Allocation to amateur radio services. This would be a non-standard allocation, not in line with the IRR, meaning that amateur radio operators could only use these frequencies to communicate within New Zealand.

We are particularly interested to hear feedback on whether there is demand for other short range devices in this band, such as baby monitors. Option 1 with Special Condition 3 would prevent their use.

¹ Remote-controlled toys usually operate under General User Licences in the name of “all New Zealanders”, which specify a certain power level for their transmissions to help avoid them interfering with other high-value licenced services.

² Special Condition 3 as specified in the *Radiocommunications Regulations 2001 (General User Radio Licence for Short Range Devices)* is ‘Use is limited to model control’.

Feedback

Feedback should be received on or before 29 April 2014.

Feedback should be sent to:

VHF Band I SRD Technical Consultation
Radio Spectrum Management – Policy & Planning
Resources, Energy & Communications Branch
Ministry of Business, Innovation & Employment
P.O. Box 1473
Wellington 6140

Or by email to:

radiospectrum@mbie.govt.nz

Subject line: “VHF Band I SRD Technical Consultation”

We intend to publish all submissions on the Radio Spectrum Management website. If your submission contains commercially sensitive or confidential information, please provide a public version with the sensitive or confidential information removed.

Disclaimers & privacy information

Submitters should be aware that the content of feedback provided may become subject to public release under the Official Information Act 1982. Please advise if you have any objection to the release of any information contained in your submission, and in particular, which part(s) you consider would be withheld, together with the reason(s) for withholding the information. MBIE will take into account all such objections when responding to requests for information under the Official Information Act.

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