

Thank you for the opportunity to present our input to your Discussion Paper titled “UHF Radiomicrophones: Opportunities for Future Use”.

INTRODUCTION:

Syntec International is the distributor in New Zealand (and Australia) for the products manufactured by the German company Sennheiser. This relationship goes back more than 25 years. Sennheiser has been at the forefront of radiomicrophone development since the technology was introduced in 1957.

APPLICATION OF RADIOMICROPHONES:

Radiomicrophones provide a most valuable facility for many kinds of activities that bring important benefits for many industries. They are so widespread in their use that you could say they are ubiquitous, so widespread that we don't even notice them. Speakers at seminars, instructors at the gym, the minister in church, sideline interviews at the football, newsreaders, TV show presenters, music performances big and small, live theatre and the list goes on. It is not uncommon to have 60+ channels of radiomicrophone and In Ear Monitors deployed on a live music production or large scale musical theatre production.

Many of the smaller users have scrimped and saved and sold raffle tickets and lamingtons to fund the purchase of their radiomicrophone systems. The larger commercial users of radiomicrophones have a significant capital investment in these systems.

Both groups will be impacted significantly by changes to the spectrum permitted for the operation of their radiomicrophone systems.

The smaller users are unlikely to know that any change is proposed, and it is quite likely that they will remain unaware of any changes until they turn their radiomicrophone on one day and find it doesn't work. They will then need to start their fund-raising activities and get saving in order to buy new equipment.

Mid-size users might be aware there are changes coming, but are unlikely to know exactly what these changes will be. They are likely to keep operating until they are unable to do so successfully, and then start planning the purchase of new equipment.

Larger operators are aware that there are changes coming, however they too are unsure of what the changes will be and how they will be impacted.

Many of the mid-sized and larger users are rental companies who provide radiomicrophone systems as part of a touring show, or who install systems in different parts of the country. They need to be able to know what frequencies are available for them to operate in at any location across the country so that they can deploy equipment with an appropriate tuning range. It is really important that they know with absolute confidence that the equipment they ship to a particular locality will work there.

As the New Zealand and Australian distributor of one of the most popular brands of radiomicrophone systems in the world, we have a good understanding of what the various market sectors know about the planned changes in both countries. It is our experience that most operators, even those with large and sophisticated systems, find a discussion about spectrum and frequencies quite confusing. Trying to communicate information about these changes needs to be done in very simple language, with clear descriptions of what these changes mean for them, with minimal complexity.

To make the transition as straight forward as it possibly can be for all radiomicrophone users we believe that it is of paramount importance to keep the messages as simple, as clear-cut, and as straight forward as possible. If this can be done successfully then New Zealand will manage the transition of radiomicrophones out of the 700MHz band smoothly and with a minimum of disruption to all those who rely on them, whether that reliance is for the good of their business, or simply to get their message communicated to their audience.

COMMENTS:

Our feedback on the various points raised in your Discussion paper are set out below and come from this point of view.

QUESTION 1:

Do you agree with allowing radio microphones to continue operation in the 703 – 806 MHz band until 11 March 2015 to allow a phase out period, noting that radiomicrophones must cease operation if they are causing interference? If not, why?

No, we don't agree to allow this.

There are two reasons that we disagree with allowing radiomicrophones to operate in the 703 – 806 MHz band until the licence expires in March 2013.

The first reason is that users who operate in this band during this period will not know when a Telco is planning to switch on cellular services in a particular location. They will have no firm idea of when they have to plan to stop using that band. The idea of a phase-out period is a very good one, and an important aspect of delivering a clean piece of spectrum for the Telco to operate their new cellular service. However, by allowing a radiomicrophone operator to keep using it until they find one day that they cannot use it doesn't give them (the radiomicrophone operator) any certainty at all. If you tell people they are allowed to use the spectrum up until a certain date then you can be sure that they will, AND they will expect that it will work right through to the end date, regardless of the caveats that you try to communicate to them.

Radiomicrophone operators will have a much clearer understanding of what they ought to be doing if they are given clear and simple "boundaries" that will ensure they are able to operate with confidence and reliability.

The second reason is that radiomicrophone operators, especially the mid-size and larger operators, frequently send equipment to remote parts of the country, as part of touring shows or installations. It is important that they have a good working knowledge of the frequencies available for them to use in any location so that they can plan equipment deployment for future projects. By allowing radiomicrophone operation in the 700 MHz band while the Telcos are allowed to turn on their services at any time in that same spectrum doesn't allow these radiomicrophone operators any certainty that they can operate in the 700 MHz band at all. No radiomicrophone operator will want to be half way through a two week booking for a theatre show and find that one of the Telcos switches on their new services one night in the middle of their radiomicrophone operating frequency range.

As we see it, the real issue here is clear and simple communication. For operators to have confidence that they can operate reliably in the future they need to understand that they will NOT be able to operate with complete confidence in the 700 MHz from the beginning of 2014. This is because no-one can guarantee that a Telco will not be operating there.

If that is the message that needs to be communicated then that might as well be the regulation. If the regulation is this clear and straight forward then everyone will be able to understand it and there will be no room for mis-interpretation or confusion.

We ask that operation of radiomicrophones not be permitted in the 703 MHz to 806 MHz band from the date that the Management Rights for this spectrum allow the owners of those rights to commence transmissions of any sort.

QUESTION 2:

Do you agree with permitting the operation of radio microphones at low power in the 698 – 703 MHz band (–20dBW / 10mW EIRP) on a non-interference basis?

No, we don't agree to allow this.

We understand that it might work technically. We understand that radiomicrophone operators work on a licence that cannot protect them from interference. We also understand that the 698 – 703 MHz band is a "Guard Band", intended to keep the different services from interfering with each other.

By allowing operation, even low-power operation, in this band, radiomicrophone operators are effectively being given the green light to operate in a band where interference is almost certain to occur from time to time. This will lead to complaints, even though they operate on a "no protection" basis.

We believe it would be better to exclude this band from radiomicrophone operation, thereby helping to give the radiomicrophone operators some better security of operation. In some ways this could be seen as protecting them from themselves.

As with our response to Question 1, if it is better to operate outside this guard band, then that should be communicated in the regulation.

We ask that low power operation of radiomicrophones not be permitted in the 698 MHz to 703 MHz band from the date that the Management Rights for the spectrum between 703 MHz and 806 MHz allow the owners of those rights to commence transmissions of any sort.

QUESTION 3:

Noting the possibility of degradation from cellular mobiles, is providing for radio microphone use in the 698 – 703 MHz band useful to radiomicrophone users?

We don't believe that this will be useful. Our view on this point is explained in our response to question 2, above.

We ask that operation of radiomicrophones not be permitted in the 698 MHz to 703 MHz band from the date that the Management Rights for the spectrum between 703 MHz and 806 MHz allow the owners of those rights to commence transmissions of any sort.

QUESTION 4:

Do you agree with allowing digital radio microphones? What types of emissions / modulation and emission bandwidths would be appropriate?

Yes, we support and encourage operation of radiomicrophones which use digital modulation techniques.

We agree with your intention to not permit digital radiomicrophones in the 703 MHz to 806 MHz band.

We would suggest that the emissions and modulation schemes allowed for within ETSI standard EN 300-422 should be allowed for.

QUESTION 5:

Are there any other performance standards that should be listed in the 'Radiocommunications (Radio Standards) Notice 2010'?

If there is no reference to a standard relating to specific absorption of RF energy then we suggest that reference to EN 62209 could be made in this licence. This could help users to feel confident that the equipment they are using meets international standards relating to their health.

We trust that you find our submission to be of interest.

We invite you to contact us should you have any questions relating to the points covered in our submission or relating to other matters around radiomicrophones or In Ear Monitor systems.

Yours sincerely,

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