



## **RADIO MICS, DIGITAL 2012**

### **2012 Digital Switch Over - Wireless Microphone Frequency Information**

There have been many questions surrounding the 2012 digital switch over and its effect on Wireless Microphone Frequencies across the UK.

To help clarify some frequently asked questions, here is a source of reference with the current plans from Ofcom.

Please be aware, the detail is not yet finalised and may change.

### **Which frequency ranges are affected?**

The changes will affect the frequencies 854-862 MHz (TV channel 69), which is available nationwide in the UK on a light license basis. Nearly 80% of the wireless microphone systems currently in use operate in this frequency range. Other frequency ranges affected - mostly used by professionals in the rental and broadcast media on a licensed basis - are 550-606 MHz (TV channels 31-37) and 790-854 MHz (TV channels 61-68).

Please Note: Frequencies 863 to 865MHz in the Ch 69 Band will remain unaffected, these will continue to exist as de-regulated Frequencies

### **What will happen with the current available frequencies?**

The affected bands will be auctioned off to other services and the 790-862 MHz band will be auctioned to the International Mobile Telecommunications industry (IMT) for the provision of wireless broadband internet services. When the new IMT services are activated, wireless microphones will experience severe interference.

### **When will this be implemented?**

Wireless microphones will have to 'vacate' the above-mentioned bands from January 1, 2012 and TV channel 69 will no longer be available nationwide. It is thought that wireless microphones will still have regional access until the completion of the Digital Switch Over (DSO) expected by the end of 2012.

### **Which frequencies will then be available for us to use?**

The main alternative for TV channel 69 users will be 606-614 MHz (TV channel 38), the new band available nationwide from January 1, 2012 on a light license basis.

470-550 MHz (TV channels 21 to 30) and 614-790 MHz (TV channels 39 to 60) will be available for wireless microphones on a secondary use with Digital Terrestrial Television (DTT) and on a license basis (called: "interleaved spectrum: spectrum between TV transmitters that cover only regions").

The deregulated band 863 - 865 MHz will be available throughout Europe for wireless microphones, license free. In this very small frequency band it is possible to run 3 or 4 wireless microphones simultaneously, depending on the series used.

### **Do I need to change hardware when changing to new frequencies?**

Possibly, yes. We have to take into account how the signal is distributed through splitters, antennas and cables and are more than happy to assist and advise you in this matter.



## Are there any other possible frequency bands?

The VHF band 174-216 is not yet affected by the Digital Dividend, and there is some interleaved VHF spectrum availability. There are three frequencies within the VHF that can be used license free - 173,800 MHz, 174,500 MHz and 175.000 MHz.

Because the new IMT services use an up and down link and these need to be separated to overcome interference, the band 790-862 MHz will be split in 2 parts of 30 MHz. In the middle will be a "Duplex Centre Gap" running from 821-832 MHz. There is a possibility that this gap will become available for wireless microphones in the future. However, with current technology and the noise created in this band by the IMT service, we would question its suitability for wireless microphones at this time. It is anticipated that only 3-4 MHz in the middle of the gap will be usable. This band is under investigation on European and national levels.

In the 1.8GHz band (1785-1800 MHz) Ofcom grants access for digital wireless microphones only. This frequency range is not really suited for wireless microphones, as the higher frequencies (i.e. shorter wavelengths) create more body absorption and shadow effects due to the directivity, etc. The use of these frequencies will only work adequately when there is a line of sight and a short distance between the transmitter and the receiver.

## Do I need a spectrum analyser for frequency planning?

Not really if you're running 4 or less wireless microphone systems in the license free band 863-865 MHz. If you are using a greater number of channels in the interleaved spectrum (470-550 and 614-790 MHz), we highly recommend using an RF spectrum analyser. Please note there are several systems available that have this feature available on them.

## How about licenses and license fees?

Only the deregulated band 863-865 MHz, which is deregulated in the European Union, and the VHF frequencies 173,800 MHz; 174,500 MHz and 175,000 MHz are license free.

The UK shared microphone license (so called light license) is used by users of TV channel 69 and after January 1, 2012, for TV channel 38. Only spot frequencies provided by the band manager can be used. Prices are £75.00 annually or £135.00 per 2 years when ordered online. The number of channels is not relevant, only the user.

Coordinated frequency licenses have pricing and frequencies depending on site, date, time, usage, number of channels, etc.

The Joint Frequency Management Group (JFMG) is the UK's band manager for the Program Making and Special Events (PMSE) industry. For further licensing details please contact JFMG at <http://www.jfmg.co.uk/>.

## Is it possible to modify current wireless microphones to other frequency ranges?

Yes in many instances, but this is dependant on the make and model and in some circumstances it may be more economical to purchase a new system.

## Does Ofcom compensate equipment becoming redundant as a result of these plans?

Yes, some funding is available to cover the movement of equipment out of TV channel 69 towards TV channel 38. On August 14, 2009 Ofcom published a consultation document on eligibility criteria, we recommend users to read this consultation [www.ofcom.org.uk/consult/condocs/pmse\\_funding/](http://www.ofcom.org.uk/consult/condocs/pmse_funding/).

## Where can I find more detailed information on available frequencies beyond 2012?

Please contact us more information as it becomes available, or alternatively the British Entertainment Industry Radio Group (BEIRG) provides a lot of information and makes a great effort to preserve the spectrum for our industry. See <http://www.beirg.co.uk/>.

Find more helpful information on the JFMG website <http://www.jfmg.co.uk/> and regular updates from <http://www.ofcom.co.uk/>.

## How do I obtain a frequency plan for an available spectrum?

Also JFMG can provide frequency plans: [www.jfmg.co.uk/pages/freq/freq.htm](http://www.jfmg.co.uk/pages/freq/freq.htm).

## For further information, please contact a member of our sales team: 01277 372321

