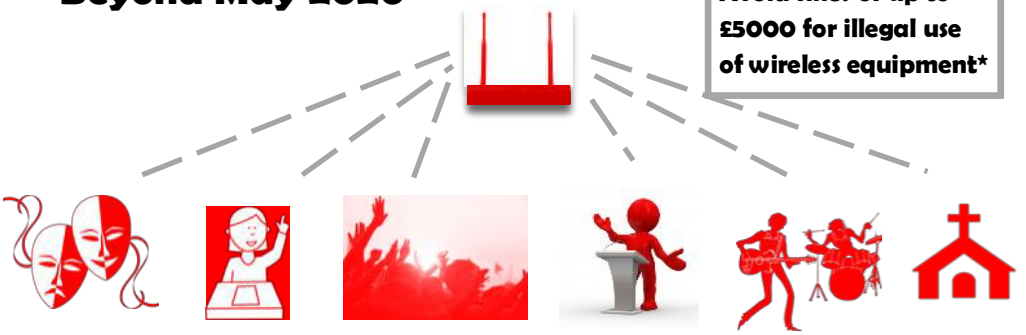
Free Guide:

Wireless Audio

Beyond May 2020

CMS
Complete Music & Sound

Avoid fines of up to £5000 for illegal use of wireless equipment*



Theatre **Education** **Live music venues, Festivals/Tour** **Conference / Meetings** **Bands/Artists** **House of Worship**

All of these organisations use wireless audio and should read this!

What is happening to wireless audio in May 2020?

Wireless audio equipment for the broadcast and entertainment industry is growing in popularity beyond predictions. Approaching 20 million professional wireless devices in Europe in 2019. (Shure UK)

At the same time the amount of "space" for wireless entertainment equipment on the RF (radio frequency) spectrum has been reduced by Ofcom to make way for 5G mobile networks. This will take effect 1st May 2020.

If you own, supervise, or use wireless audio equipment you should read this leaflet*.

***ALWAYS REFER TO OFCOM WEBSITE FOR LATEST LEGISLATION AND GUIDELINES**

Key Information/Myth Buster:

- My wireless equipment I just plug in and it works—FALSE.
- Guaranteed uninterrupted transmission is not possible— TRUE but with best practice and high quality equipment you can improve reliability and performance.
- Reliable wireless systems are expensive, SOMETIMES Depends on RF environment (a system consists of transmitter, receiver, batteries, antenna, antenna distributers, and sometimes RF monitoring equipment)
- Reliable wireless systems require planning TRUE
- 4 mics will be 4 x cost of one mic—FALSE Adding more wireless equipment typically increases costs exponentially.
- If a main vocal mic cuts out it can ruin a performance for everyone involved— TRUE

Who is affected?

Event organisers (including hotels and other temporary venues.): If you are booking bands, lighting, radios for security, video screens, reliability of your wireless audio equipment could be affected

YOU SHOULD BE PLANNING FOR May 2020.

Bands/Artists: If you are going to gigs with your own wireless equipment and /or requesting it on a rider

YOU SHOULD BE PLANNING FOR May 2020.

Corporate Meetings/Presentations: If you are using wireless mics for your presenters and or meetings.

YOU SHOULD BE PLANNIG FOR May 2020.

House of Worship, Schools and Theatres: You probably have wireless systems so...

YOU SHOULD BE PLANNING FOR May 2020.

"I use one or two wireless microphone for regular events at different venues"

You can use Channel 70 (862-865MHz), VHF or WiFI (2.4GHz) systems fairly reliably. However, if you go to a festival, conference, sporting or other large events your system may be compromised (or have negative impact on other people) and you should let organisers know what you are using.

"Our school or House of Worship has several wireless microphones installed at the venue"

You need to check that the channels these are tuned to are legal for 2020. This may require you to get an expert in to set up new frequencies and licences. In some scenarios this may mean upgrading the equipment to comply with new frequencies.

"I run events, festivals, conferences"

You need to ensure someone who is suitably knowledgeable is employed to oversee wireless technology at each event. This person should be involved fairly early in the planning stage as it will have an impact on budget. You should be concerned about what guest speakers, artist, and bands will be bringing with them. The more complex the RF environment gets the more expensive/unreliable these systems will become. There are times when you or your contributors may need to make compromises to avoid costs escalating.

"My band use wireless In Ear Monitors"

The chances are you will be able to continue using your In–Ears post 2019, however you may notice it suddenly gets harder finding useable frequencies. You will need to ensure you use best practice techniques with your equipment and remember you can't use anything between 694 to 862 MHz.. Currently digital technology is not in a position to make improvements to IEM's but watch this space.

Solutions:

Cut back on Wireless—A wired mic will almost always work. If it doesn't, usually changing a £20 cable will fix it. How critical is being able to roam?

Planning—RF planning is the most important step you can make. Businesses like Complete Music and Sound can complete an RF survey at a site and help identify useable frequencies.

Follow Wireless Best Practice—Complete Music and Sound have been trained on using wireless systems so we can ensure that whatever system is in place it is used in the best possible way to ensure RF reliability. Ensure your engineers are suitably trained for wireless post 2019.

Adjust Frequency Tuning—If you are using frequency between 694 and 862MHz you will need to make changes. If you are using frequency below 694 you may find that your system becomes less reliable without making changes.

Go Digital—Leading manufacturers are now able to achieve much more reliability from wireless systems using digital technology - Below are digital systems currently available (they still require licences). The performance improvements of these systems is huge, but it is worth noting that costs are also very high averaging around £2000 per microphone. (CMS rent microphones for far less than that!)

High-end Digital Systems for attaining high channel counts:

SHURE	SENNHEISER
ULX-D	D6000
QLX-D	D9000
Axient	

We have not found equivalent systems available from Beyer, AKG, Audio Technica or Trantec at this time but they may have systems undergoing development.

Most companies now offer 2.4GHz digital systems, which share Wi-Fi space, licence free but are limited to approx. 8 units These can be affected by other Wi-Fi equipment, which can be a problem, however, they are easy for a novice to set up.

This document is published by Complete Music and Sound, a premium London events company with expertise on live music, installations, wireless technology.

www.completemusicandsound.co.uk