

Your response

Question	Your response
<p>Section 3 –Spectrum use by the PMSE sector in the UK</p> <p>Question 1: What are your views on how our processes work - for example our online booking system, turn-around times, and event coordination. Do you think the current approach works well? How could we improve it?</p>	
<p>Section 4 – PMSE historic trends</p> <p>Question 2: Do you have any comments on how we have analysed and characterised wireless microphone and IEM demand, or suggestions for alternative ways of characterising this demand?</p>	Confidential? – Y / N
<p>Question 3: Do you have any comments on how we have analysed and characterised wireless video demand, or suggestions for alternative ways of characterising wireless video demand?</p>	Confidential? – Y / N

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<p>Section 5 – Future trends and opportunities</p> <p>Wireless audio</p> <p>Drivers of demand</p> <p>Question 4: What factors have driven changes in the demand for audio PMSE applications, specifically for:</p> <ul style="list-style-type: none"> a) the increased use of coordinated wireless microphones and IEMs, particularly the peak number of simultaneous assignments used at the largest events? b) the slight decline in the number of national wireless microphone licences (UHF channel 38 and VHF)? Has the extent of use of these licences changed, and if so why? c) the declines in talkback, fixed audio links and ADS licences? 	<p>Confidential? – Y / N</p>
<p>Question 5: What factors could drive further changes in the demand for audio PMSE applications in the future, and what will this mean for future demand, specifically for:</p> <ul style="list-style-type: none"> a) coordinated wireless microphones and IEMs, particularly the peak number of simultaneous assignments used at the largest events? b) national wireless microphone licences (UHF channel 38 and VHF)? 	<p>Confidential? – Y / N</p>

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c) talkback, fixed audio links and ADS licences?	
Question 6: Do you agree that, given the trends, we are right to focus on wireless microphones/IEMs?	Confidential? – Y / N
<p>Changes in the take-up of bands already available</p> <p>Question 7: What factors have driven the take-up of different bands for wireless audio? What are the barriers to greater use of the DME band?</p>	Confidential? – Y / N
Question 8: What actions could enable greater take-up of the DME, DECT and licence exempt bands in the future?	Confidential? – Y / N
<p>Changes in spectrum availability</p> <p>Question 9: Which potential additional bands might be suitable for wireless audio applications, particularly microphones and IEMs at the largest events and venues?</p>	Confidential? – Y / N
Question 10: To what extent do the characteristics of different audio applications drive their requirements for spectrum – for example particular requirements for latency, resilience or capacity?	Confidential? – Y / N

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<p>Changes in efficiency of spectrum use</p> <p>Question 11: What changes in spectrum use (technology, working practices, different bands, etc) have enabled audio wireless growth to be accommodated to date, particularly the increased use of wireless microphones and IEMs at the largest events and venues in the context of reduced UHF spectrum availability?</p>	Confidential? – Y / N
<p>Question 12: What technologies are currently available or are being developed which can improve audio spectrum efficiency in the future, particularly in the use of wireless microphones and IEMs at the largest events and venues?</p>	Confidential? – Y / N
<p>Question 13: Are there any barriers to adopting more efficient technologies for audio applications, particularly for wireless microphones and IEMs at the largest events and venues? What could industry do and what could Ofcom do to facilitate greater use of those technologies?</p>	Confidential? – Y / N
<p>Question 14: What changes to working practices and spectrum planning could improve audio spectrum efficiency in the future, particularly in the use of wireless microphones and IEMs at the largest events and venues?</p>	Confidential? – Y / N
<p>Question 15: Are there any barriers to adopting working practices that could enable more efficient use of spectrum by audio applications, particularly for wireless microphones and IEMs at the largest events and venues? What could industry do and what could</p>	Confidential? – Y / N

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Ofcom do to facilitate those efficiencies?	
<p>Wireless video</p> <p>Drivers of demand</p> <p>Question 16: What factors (such as more complex events and use of higher resolution equipment) have driven the demand for wireless video bandwidth, in particular for:</p> <ul style="list-style-type: none"> a) the increased bandwidth required for the largest sporting events such as Formula 1 at Silverstone and The Open Championship? b) the bandwidth required for nationally important state events such as The Coronation? c) the slow growth or decline in bandwidth used at horse racing fixtures? 	Confidential? – Y / N
<p>Question 17: What factors could drive further changes in the demand for wireless video bandwidth in the future, and what will this mean for future demand, in particular for:</p> <ul style="list-style-type: none"> a) the bandwidth required for the largest sporting events like Formula 1 at Silverstone and The Open Championship? b) the bandwidth required for nationally important state events such as The Coronation? 	Confidential? – Y / N

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c) the bandwidth used at horse racing fixtures and other major sporting events?	
<p>Potential new bands</p> <p>Question 18: What factors have influenced the degree of take-up of existing bands used by wireless video applications, particularly the growth in take-up of the 7 GHz band?</p>	Confidential? – Y / N
<p>Question 19: Which potential additional bands might be suitable for video PMSE applications, particularly at the largest events and venues?</p>	Confidential? – Y / N
<p>Question 20: To what extent do the characteristics of different video applications drive their requirements for spectrum – for example particular requirements for resilience or capacity?</p>	Confidential? – Y / N
<p>Changes in efficiency of spectrum use</p> <p>Question 21: What technologies are currently available or are being developed which can improve wireless video spectrum efficiency in the future?</p>	Confidential? – Y / N
<p>Question 22: Are there any barriers to adopting more efficient technologies for wireless video? What could industry do and what could Ofcom do to facilitate greater use of those technologies?</p>	Confidential? – Y / N
<p>Question 23: What types of video demand could realistically be supported by private (for example 5G) networks?</p>	Confidential? – Y / N

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Question 24: What changes to working practices and spectrum planning could improve video spectrum efficiency in the future?	Confidential? – Y / N
Question 25: Are there any barriers to adopting working practices that could enable more efficient use of spectrum by wireless video? What could industry do and what could Ofcom do to facilitate those efficiencies?	Confidential? – Y / N

Other comments

Question 26: Do you have any other comments or views on the issues raised in this document?

Confidential? – N

LIVE (Live music Industry Venues & Entertainment) is the voice of the UK's £6.7bn live music business. LIVE members are a federation of 15 live music industry associations representing over 4,000 businesses, 40,000 artists and 5,000 backstage workers.

Live music has been recognised by the UK Government as a key driver of economic growth in both the Industrial Strategy and the Creative Industries Sector Plan. Our sector grew by 9.5% in 2024 with one gig every 137 seconds across the UK. The bulk of this growth was driven by large scale concerts at stadia and arena level and our host of major festivals and outdoor show. These concerts, tours, festivals and events are reliant on devices such as wireless microphones, in-ear monitors, wireless video links and wireless talkback systems. Clearly these devices rely entirely on access to sufficient quality and quantity of PMSE spectrum on a daily basis.

Our members are

The Association of British Orchestras (ABO)
The Association for Electronic Music (AFEM)
The Association of Independent Festivals (AIF)
The Association of Independent Promoters (AIP)
The British Association of Concert Halls (BACH)
The Concert Promoters Association (CPA)
Featured Artists Coalition (FAC)
Music Managers Forum (MMF)
Music Venue Trust (MVT)
Musicians Union (MU)
National Arenas Association (NAA)
Production Services Association (PSA)
Professional Lighting and Sound Association (PLASA)
Secure Tickets from Authorised Retailers (STAR)
The Entertainment Agents Association

LIVE works to ensure that the interests of live music in the UK are understood and communicated to Government, policymakers, regulators, the public and the wider music and entertainment industries. Through collective representation, LIVE promotes the interests of artists, venues, festivals, promoters, booking agents, crew and production suppliers.

LIVE's members and their respective stakeholders are all part of the overall ecosystem that falls under the umbrella of the Creative and Cultural Industries. Whether it is a music venue member of the NAA or MVT, or a promoter

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	<p>member of the CPA, an audio rental company represented by PLASA, or the artists and musicians members of the FAC and the MU, to name a few, every composite part of the LIVE is heavily reliant on access to PMSE Radio Spectrum, the subject of this Call for Inputs.</p> <p>LIVE recognises the critical part that the use of devices such as wireless microphones, in-ear monitors, wireless video links and wireless talkback systems plays in delivering the world-class performances and culture-defining festivals that entertain over 30 million fans in the UK each year. Clearly these devices rely entirely on access to sufficient quality and quantity of PMSE spectrum on a daily basis.</p> <p>LIVE is fully aware that the PMSE sector is disparate and fragmented, and as a result, LIVE welcomes Ofcom's actions in seeking industry feedback to ensure its knowledge base is fully accurate and up to date in terms of a number of significant factors:</p> <ul style="list-style-type: none"> • The economic scale of the sector and the part that PMSE plays in enabling the development and growth of the CCI, one of HM Government's eight economic growth pillars. • The additional spend generated outside the direct live music and entertainment industry activities. • The additional social and cultural values of the sector. • The irreversible impact that the wrong decision could have on the CCIs and the UK economy. • The soft and hard power UK export values. • Additionally, it is crucial that Ofcom ensure all appropriate government and civil service departments are fully briefed. • The scale, breadth and depth of daily PMSE spectrum use, including just how embedded it is in our daily lives • Current technology and what it can deliver • Current working practices • What specific factors are considered by the PMSE when deploying wireless systems • How the global reach of live music tours. • The UK's reputation for creating and delivering world class productions both technically and from a creative perspective.

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	<p>While all of LIVE's members are impacted by these factors, we rely on the expert guidance of BEIRG (the British Entertainment Industry Radio Group) which is provided via PLASA's membership of LIVE.</p> <p>Therefore, it should be noted that all the composite members of LIVE recognise BEIRG's expertise and fully endorse their response to this CFI.</p> <p>In view of the above, LIVE has chosen to respond in overall terms rather on a question-by-question basis.</p> <p>The CFI clearly demonstrates significant growth in the use of PMSE spectrum over the last six years and our experience with the live music sector echo these findings. It is clear from the government having identified the sector as a growth pillar, that this growth in recent years is likely to continue, be encouraged and planned for as part of the overall economic recovery plans.</p> <p>It is vital that Ofcom consider this growth and its impact on the demand for radio spectrum.</p> <p>Clearly the spectrum review is as a direct result of the significant uncertainty surrounding the future of Digital Terrestrial Television (DTT), a subject that has already been on World Radio Conference agendas since 2023 and is certain to remain on the agenda for both the WRC-27 and WRC-31 considerations.</p> <p>In the almost certain event of a reduction in scale of DTT, the PMSE sector becomes a very exposed secondary user of spectrum, that has enjoyed the inadvertent protective umbrella of terrestrial television for circa 40 years.</p> <p>LIVE urges Ofcom to recognise the relevance and significance of PMSE as the incumbent users and stresses the need for this to be closely studied before making any decisions on the future of the UHF spectrum band, especially in the context of implementing any further reduction in the available amount of PMSE spectrum.</p> <p>The live music and entertainment sector, whilst growing and successful is finely balanced financially, and any constraint on being able to perform or tour due to insufficient PMSE spectrum will bring severe consequences to the overall viability of the sector.</p> <p>The situation requires a clear strategy to prioritise PMSE requirements to protect the existing requirements and to</p>

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	<p>enable the future growth. It is hard to see a further reduction in available spectrum being a constructive, viable or appropriate part of that strategy. PMSE requires clear policy for the future that delivers security of tenure, scope to grow, certainty to innovate, and clear recognition of the part it plays in enabling the CCI's to flourish and grow.</p> <p>The CFI focusses heavily on Glastonbury, which obviously falls firmly under the LIVE banner, but it is important to stress that this is a short term, annual event but that elsewhere in the sector there are countless, longer term daily music events that still require access to spectrum that deliver year round entertainment providing human connections, creative opportunity, community and enjoyment to a large proportion of our 30 million strong audience. PRS data for the year 2024 showed that there was one gig every 137 seconds in the UK. LIVE's annual research shows a £6.7bn contribution by live music in the UK that year with growth of 9.5%. Figures that go some way to explaining why live music is highly valued by Government and called out as a key engine of economic growth in both the Industrial Strategy and Creative Industries Sector Plan. As a result we would stress the need for Ofcom to study all aspects of the sector and not just the short term events in the CFI.</p> <p>The CFI questions the efficiency of the current usage and working practices which seems unlikely as our sector, as previously mentioned is world leader, and therefore fortunate to have many of the most talented and experienced suppliers, engineers and creative minds and production teams in the world who consistently test the boundaries of the possible, so it seems unlikely to us that our sector operates inefficiently when it comes to radio spectrum usage.</p> <p>The ground-breaking, leading-edge productions are undoubtedly a driver behind the growth in spectrum usage and the creative freedom that these technologies enable should be applauded and embraced rather than potentially dimmed by poor regulatory actions.</p> <p>LIVE is not directly able to comment about alternative spectrum or technological developments and elects to refer you to the BEIRG response for these sections, but would stress the need for caution in implementing changes that are not fully aligned with the sector's needs and that are irreversible once done.</p>

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Please tell us how you came across about this consultation.

- Email from Ofcom
- Saw it on social media
- Found it on Ofcom's website
- Found it on another website
- Heard about it on TV or radio
- Read about it in a newspaper or magazine
- Heard about it at an event
- Somebody told me or shared it with me
- Other (please specify) Shared with LIVE by a number of our board members.

Please complete this form in full and return to liz.hall@ofcom.org.uk.