

5G and wireless microphones (= Programme Making and Special Events, PMSE)

5G is not currently suitable for wireless microphones. Even with 5G, UHF spectrum will still be required for cultural and media purposes.

What is 5G?

primarily a transmission standard, not a frequency band



developed by [and primarily for] the mobile phone industry

not a miracle weapon, which can solve all problems

Can wireless microphones use 5G?

No, at present, wireless microphones can't use this new transmission standard.



Will 5G offer a technical solution for wireless microphones (PMSE) in the future?
This is currently being explored. As yet, no firm conclusions.

Will culture and media with 5G still need 'dedicated' frequencies? Yes, because some PMSE use cases would be only conceivable across a 'private network'. Only with 'dedicated' frequencies would PMSE equipment operators have sovereignty over the necessary network optimization, e. g. for latency (delay).

Problem 1: poor latency

< 4 Ms



Wireless live performance systems require a latency of less than 4 Ms (round trip – microphone capsule to in-ear monitor system earpieces)

5G

5G currently only manages 75 ms (one way) or according to mobile phone providers 5 to 8 ms

Problem 2: great energy requirements



Batteries for radio microphones have to fit inside the devices used by actors or musicians; once in place, they often need to work for many continuous hours.

5G

With 5G not (yet) possible