

July FCC Meeting Recap: Wireless Microphones Order on Recon and Further Notice: A Mixed Bag for Manufacturers and Users

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On July 13, 2017, the Federal Communications Commission (“FCC” or the “Commission”) revisited the regulatory framework applicable to wireless microphones in several important ways. The [Order on Reconsideration](#) addressed petitions for reconsideration pertaining to licensed and unlicensed wireless microphone operations under the 2015 *Wireless Microphones Order* and *TV Bands Part 15 Order*. The 2015 *Wireless Microphones Order* sought to provide licensed wireless microphones users with access to different spectrum bands such as VHF channels, the 600 MHz duplex gap, and the 1435-1525 MHz aeronautical mobile telemetry (“AMT”) band to address the needs of various types of wireless microphone users, particularly in wake of the broadcast incentive auction. In the *TV Bands Part 15 Order*, the Commission established rules on a broad range of issues pertaining to unlicensed operations in the television bands, the 600 MHz guard bands and duplex gap, the 600 MHz service band, and Channel 37. The results of the Wireless Microphones Order on Reconsideration will be welcomed in some circles by manufacturers and bemoaned in others.

The Commission granted the petitions of wireless microphone manufacturers to relax the limit on spurious emissions. The FCC concluded that its prior specification in the *Wireless Microphones Order* of a -90 dBc limit at all frequencies more than one megahertz above and below the carrier frequency is not necessary to protect radio services in shared or adjacent bands. In its place, the Commission adopted the European Telecommunications Standards Institute (“ETSI”) spurious emission limits for licensed and unlicensed wireless microphones, such that emissions more than one megahertz above and below a wireless microphone carrier frequency must comply with the limits in Section 8.4 of ETSI EN 300 422-1.

With respect to output power measurement applicable to both licensed and unlicensed wireless microphone operations in the VHF TV bands, the Commission clarified that manufacturers may show compliance with the 50 mW equivalent isotropically radiated power (“EIRP”) limit for licensed wireless microphones operating in the VHF band by making either radiated or conducted measurements.

The Commission denied the requests of manufacturers to increase the EIRP limit of wireless microphones (20 mW) that operate in the 600 MHz guard band and duplex gap. The agency found the proponents of change had not adequately substantiated their request, observing that “[n]o party provided an analysis demonstrating that the maximum power could be increased without causing

harmful interference to licensed wireless services.”

However, in a long sought victory for manufacturers, the FCC also decided on reconsideration to exempt unlicensed wireless microphone operations in the TV bands from antenna connector restrictions. Specifically, the Commission waived a requirement in Section 15.203 of its rules that unlicensed wireless microphones utilize either a permanently attached antenna or an antenna that is uniquely coupled to the device. The Commission’s rationale for doing so reflected both the fact that some microphones require detachable antennas in order to function effectively, and its assessment that the other unique connector requirement would not be necessary to prevent harmful interference to authorized services. This result is limited to unlicensed wireless microphones and does not extend to other Part 15 devices which are not already exempt from the still generally applicable integrated or unique antenna requirement.

For operations of legacy wireless microphone equipment, the Commission clarified that unlicensed users can continue to operate equipment that had been certified under Part 74 in portions of the 600 MHz service band until the end of the 39-month post auction transition period. After that time, however, unlicensed wireless microphone users are only authorized to operate wireless microphone equipment that has been certified under the Part 15 rules. The Commission will also allow operation of legacy wireless microphone equipment that was originally certified under Part 74, but can be modified and certified to operate in portions of the 600 MHz service band under the new Part 15 rules, to do so.

The Commission declined to adopt Shure’s proposal to allow unlicensed wireless microphone users to register for protection from other unlicensed operations in the TV bands on the grounds that doing so would be inconsistent with their fundamental status as unlicensed services. Instead, the Commission sought to accommodate mid-sized professional theater, music, performing arts, or similar organizations by issuing a further notice on creating a regime for such parties to attain licenses for their wireless microphone operations, as discussed below.

In the 169-172 MHz band, the Commission revised the center frequencies for two of the 200-kilohertz wireless microphone channels, shifting the authorization to operate on channels centered at 169.475 and 170.275 MHz to 169.575 MHz and 170.025 MHz. They also permitted 54-kilohertz operations on four new channels that would correspond with these 200-kilohertz channels, specifically authorizing such wireless microphone operations on frequencies centered at 169.545 MHz, 169.605 MHz, 169.995 MHz, and 170.055 MHz.

In the 1435-1525 MHz AMT band, the Commission, denying several petitions for reconsideration on the issue by manufacturers, affirmed a decision establishing a 30 MHz limit on the amount of spectrum available for wireless microphone operations at a particular location and clarified how that limit would work with multiple wireless microphone users in the same geographic area. Specifically, the FCC clarified that the 30-megahertz limit applies to each licensed wireless microphone user seeking access to spectrum in the 1435-1525 MHz band for its own wireless microphone operations at a particular location or venue. Licensed wireless microphone users seeking access first need to coordinate with the Aerospace and Flight Test Radio Coordinating Council (“AFTRCC”), which must determine whether to permit access to the 1435-1525 MHz band in that area during the specified period and to indicate whether any specific frequencies in the 90 megahertz of spectrum of the band is unavailable for use. The Commission also clarified that, in extraordinary circumstances in which a wireless microphone user demonstrates that access to more than 30 megahertz for “a specified event” is merited, an STA process will be available which requires prior coordination with AFTRCC. For example, the Commission suggested that isolated, “super-scale” professional entertainment

productions, such as a seasonal holiday production at Radio City Music Hall, may qualify for an STA.

The Commission also sought to facilitate coordination between wireless microphone operations and incumbent primary Federal fixed services in the 941.5-944 MHz band. Ultimately, the FCC decided that, after coordination of proposed wireless microphone operations with incumbent non-Federal users through the local SBE coordinator, a license applicant is to file its application for an LPAS license with the Commission. In addition to basic technical information, the applicant must provide a description of the proposed location and area (or areas) of operation.

In the companion Further Notice of Proposed Rulemaking (“FNPRM”), the Commission proposed to permit certain professional theater, music, performing arts, or similar organizations that operate unlicensed wireless microphones to obtain Part 74 licenses to operate in the TV bands, thereby gaining the ability to register in the white spaces database and gain protection from unlicensed white space devices at the same venues. The Commission proposes a 50 microphone license eligibility threshold for such entities, but seeks comment on whether the threshold should be even smaller. The FNPRM seeks comment on whether such users should also be able to obtain a Part 74 license to operate in other bands available for use by Part 74 wireless microphone licensees, provided that they meet all applicable requirements in the respective bands. Specifically, the Commission seeks comment on allowing professional theater, music, and performing arts organizations under the proposed definitions access to portions of the 900 MHz band, the 1435-1525 MHz band, and the 6975-7125 MHz band. Comments will be due 30 days after publication in the Federal Register, which hasn’t yet occurred.