Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Revisions to Rules Authorizing the Operation of Low Power Auxiliary Stations in the 698-806 MHz Band	)	WT Docket No. 08-166
	)	
Public Interest Spectrum Coalition, Petition for Rulemaking Regarding Low Power Auxiliary Stations, Including Wireless Microphones, and the Digital Television Transition	)	WT Docket No. 08-167
	)	
Amendment of Parts 15, 74 and 90 of the Commission's Rules Regarding Low Power Auxiliary Stations, Including Wireless Microphones	)	ET Docket No. 10-24

COMMENTS

Pursuant to The Wireless Telecommunications Bureau and the Office of Engineering and Technology Seek to Update and Refresh Record in the Wireless Microphones Proceeding, WT Docket Nos. 08-166, 08-167, ET Docket No. 10-24, *Public Notice*, DA 12-1570 (rel. Oct. 22, 2012) ("Public Notice"), the John F. Kennedy Center for the Performing Arts ("Kennedy Center" or "Center") hereby submits these Comments in support of an expansion of license eligibility that would permit some wireless microphone and other low power auxiliary station users, which currently operate in the TV broadcast spectrum on an unlicensed basis, to operate on a licensed basis under the Part 74 rules applicable to low power auxiliary stations.

The Kennedy Center is America's living memorial to President Kennedy and its nine theaters and stages make it the nation's busiest performing arts facility. The Center attracts audiences and visitors totaling 3 million people annually, and Center-related touring productions, television, and radio broadcasts welcome 40 million more. In accordance with its congressionally-mandated mission,[1] the Kennedy Center presents performances of music, dance, and theater; supports artists in the creation of

[1] *See* 20 U.S.C. § 76j.

new work; and serves the nation as a leader in arts and arts management education. With its artistic affiliates, the National Symphony Orchestra and Washington National Opera, the Center's achievements as a commissioner, producer, and nurturer of developing artists have resulted in more than 300 theatrical productions, and dozens of new ballets, operas, and musical works.

Each year, millions of people nationwide take part in innovative and effective education programs initiated by the Kennedy Center, including free or subsidized performances, and the Center has been at the forefront of making the performing arts accessible to persons with disabilities and children, young adults, and people who have little or limited ability to attend and enjoy the performing arts. In addition, as part of the Kennedy Center's Performing Arts for Everyone outreach program, the Center stages close to 400 free performances of music, dance, and theater by artists from throughout the world each year on the Kennedy Center's main stages, and every evening at 6 p.m. on its Millennium Stage.

In order to maintain this programming and carry out its congressionally-mandated mission to present the performing arts, it is critical that the Kennedy Center's, and other large event presenters and venues', wireless microphone and communications use be protected from interference. Since the unlicensed wireless microphone registration system process is not practical for large, multi-theater presenters like the Kennedy Center, providing the Kennedy Center and similar presenters and venues with the interference protection afforded to Part 74 licensees is imperative.

I. Expansion of Part 74 Eligibility to Include Large Venues and Multi-Theater Presenters, like the Kennedy Center, is Critical to Ensuring the Safety and Interference-Free Enjoyment of the Performing Arts.

The use of wireless microphones and communications for large venues and multi-theater presenters, like the Kennedy Center, must be protected from interference, which would negatively affect the performance or event and the audience's enjoyment of such performance or event, and possibly the safety of performers, production staff and audience members. Venues and presenters the size of the Kennedy Center, with the large number of events and performances presented at them every night, require a large number of wireless frequencies that need to be fully protected from interference. That can only be

accomplished if such venues or presenters are eligible to apply for a Part 74 license. For example, the chart below demonstrates that, on a typical Saturday at the Kennedy Center, the Center uses close to 200 wireless frequencies, which includes not only wireless microphones, but wireless in-ear monitors,[2] wireless speakers and wireless intercoms.[3] If the Kennedy Center's Eisenhower Theater and Opera House are both presenting musicals, the number of wireless microphones required, not even counting wireless in-ear monitors, speakers, and intercoms, can be over 100 for just those two theaters.

Theater	Event	Wireless Microphones & Instruments	Wireless In Ear Monitors & Speakers	Communications	
				Channels (units*6)	Units
Opera House	Broadway Musical	48	8	24	4
Eisenhower	Modern Dance	8	0	12	2
Concert Hall	NSO Pop's	16	8	6	1
Family Theater	Children's Musical	8	0	6	1
Millennium Stage	Ethnic Music	2	4	6	1
Terrace Theater	Cabaret Singer	8	2	6	1
Theater Lab	Shear Madness	0	0	6	1
Jazz Club	Jazz Quintet	2	2	6	1
Atrium	Panel Discussion	9	0	0	0
		101	24	72	

Total Discrete Frequencies Used 197

[2] More and more performers are eschewing traditional "floor wedges" for wireless in-ear monitors ("I.E.M."). When operated properly the I.E.M.s preserve the performers hearing, and, in some instances are the only solution for artists that move constantly while performing. When combined with a monitor engineer that has his or her show programmed on a digital console, and saved to a flash drive, an artist can achieve a level of consistency in performance with an equipment package that can be provided locally by a venue. This saves the artist and venue thousands of dollars in trucking, not to mention the impact the elimination of required trucking has on the environment.

[3] Wireless intercoms are used for wireless communications between technicians and stage management, which is, in some respects, more critical than wireless microphones. A wireless microphone can fail and only the performance and what the audience sees is compromised, but when wireless communications, such as intercoms, fail, there is the possibility of serious injury or death from being hit or crushed by a piece of moving scenery. It is dangerous to everyone on or around the stage if interference causes wireless communications to fail.

If presenters, such as the Kennedy Center, are not permitted to be eligible for Part 74 license protection and are only permitted to make unlicensed use of the available TV white spaces, and possibly, the 2 reserved channels awarded per event in the registration process discussed below, their wireless microphone and communications use will be subject to interference by TV white space devices, such as handheld cell phones and other portable electronic devices. The potential for interference from these handheld electronic devices is of great concern to the Kennedy Center because there would be no practical way to police the use of such handheld devices brought in the building every day by the large number of visitors to President Kennedy's memorial and the large number of patrons attending events in all 9 of its theaters, which, based on the annual total stated above, averages out to about 8,200 people per day. Any one of the numerous handheld devices carried into the Kennedy Center in the course of a day or an evening could potentially cause interference to the wireless microphones and communications being used in one or more of the theaters or event spaces at the Kennedy Center. Such interference would not only ruin the performers' and the Kennedy Center's ability to present the performing arts and the audiences' ability to enjoy it, but could also pose serious safety concerns to performers, production staff and audience members. Venues and performing arts presenters, such as the Kennedy Center, rely on wireless communications for more than just presenting a show, they rely on wireless communications to ensure the safety of performers, production staff and audience members from special effects such as moving scenery, flying and pyrotechnics, which are common in large productions and musicals.[4] If wireless communications in such shows fail due to interference issues, even for a few seconds, there is the possibility of serious injury or death to performers, production staff or audience members from moving scenery, flying effects or pyrotechnics.

To ensure safety and protect the presentation and audience enjoyment of theatrical events and concerts that make use of wireless communications, the Commission should expand the Part 74 license eligibility to large venues and multi-theater presenters, like the Kennedy Center.

---

[4] Examples of such effects that the Kennedy Center has recently presented would include the flying witch in "Wicked," the flying nanny in "Mary Poppins," the moving barricade in "Les Miserables," and the dropping chandelier in "Phantom of the Opera."

II. The Unlicensed Wireless Microphone Registration System is Not a Practical Solution for Large Venues and Multi-Theater Presenters, like the Kennedy Center.

The unlicensed wireless microphone registration system requirement that each event be registered separately 30 days in advance of each event, the notice and comment period before each event can be awarded registration, and the 2 "reserved" channel and any other free channel availability, which can accommodate only 6-8 analog microphones and up to 15 digital microphones per channel, make the registration system process impractical for presenters, such as the Kennedy Center.

First, the Kennedy Center often presents shows in all 9 theaters throughout the day, and may have up to 6 or 7 theaters presenting performing arts on any given night. Kennedy Center-programmed or produced events that are part of its performance season are scheduled well in advance; however, theaters are often rented and the wireless microphone use for rentals booked less than 30 days in advance, or for any event planned even a year in advance, may change. In addition, the Kennedy Center is often not notified about the technical specifications of an artist or company or theatrical production more than 30 days in advance. For example, large, celebrity-filled events, such as the Kennedy Center Honors, require changes in wireless communications requirements based on changes in talent or show revisions, which result in frequency coordination and wireless equipment updating, that can occur up to a day or two prior to the event. This is the nature of the business of producing events around talent that is in great demand, and there is no possible way, with the frequency of such events at the Kennedy Center, that this 30 day advance requirement will ever be practical for venues and presenters like the Kennedy Center. Consequently, it is burdensome administratively, and from a production standpoint, based on the number of shows and events every night at the Kennedy Center, for the Center to meet this requirement to register each of its events 30 days in advance.

Second, even if the Kennedy Center could overcome the production and administrative burden of registering each and every event that uses wireless microphones, based on the required notice and comment period, the Kennedy Center cannot be guaranteed it will be awarded wireless microphone interference protection for any of its events. The requirement to track all its registrations for opposition, the possibility of not being awarded registration for any of its numerous scheduled events, and the

possible resulting interference to the Kennedy Center's wireless microphone use is unacceptable because, as stated above, it would negatively affect the performance and the audience's enjoyment of the performance, and possibly the safety of performers and production staff at the Kennedy Center.

Third, even if the Kennedy Center is awarded registration and receives interference protection on the two "reserved" channels allotted for such unlicensed wireless microphone use, in addition to any other available channels, the Center's wireless microphone requirements may surpass the 8 analog, and 15 digital, wireless microphone maximum for each reserved and any other available channels many, if not most, of the nights during the Kennedy Center's performance season. As demonstrated in the chart above, one theatrical production, especially a musical, can make use of 60-70 wireless microphones or 100 pieces of wireless equipment. If wireless communications use in the other Kennedy Center theaters is counted on nights that a large theatrical production is in the Kennedy Center's Opera House and the needs are close to 200 wireless frequencies, as demonstrated in the chart above, the 2 "reserved" channels allotted if registration is granted, in addition to any other available channels, will be insufficient for the Kennedy Center's wireless microphone and communications needs. In addition, the constant frequency coordination created by this situation will be burdensome and costly, in the short-term because of increased labor hours and in the long-term because of the high cost to upgrade to digital equipment. For these reasons, the unlicensed microphone registration system process is not a practical solution for a large, multi-theater presenter like the Kennedy Center to prevent interference to its wireless communications use.

Consequently, the Kennedy Center respectfully requests that the Commission expand Part 74 license eligibility to include large venues and multi-theater presenters, such as the Kennedy Center, to ensure that wireless microphone and communications use is adequately protected from interference. This Commission action will ensure that the Kennedy Center can fulfill its congressionally-mandated mission, as the National Center for the Performing Arts, to "present classical and contemporary music, opera, drama, dance and other performing arts from the United States and other countries."[5]

Respectfully submitted,

JOHN F. KENNEDY CENTER FOR THE PERFORMING ARTS

By:

JoEllen Dinges, Esq.
Assistant General Counsel

2700 F Street, NW
Washington, D.C. 20566-0001

[5] 20 U.S.C. § 76j.