



October 12, 2017

Chairman Ajit Pai
Commissioner Mignon Clyburn
Commissioner Michael O'Rielly
Commissioner Brendan Carr
Commissioner Jessica Rosenworcel
c/o Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: ET Docket No. 14-165 and GN Docket Nos. 12-268 and 14-166 Via Electronic Filing

Dear Chairman Pai, Commissioner Clyburn, Commissioner O'Rielly, Commissioner Carr, Commissioner Rosenworcel, and Ms. Dortch,

On behalf of the Guthrie Theater, located in Minneapolis, MN, that provides approximately 650 performances per year to nearly 400,000 patrons from all 50 states and 28 foreign countries as well as education programs that reach more than 40,000 students from throughout Minnesota, I write with concern about available spectrum and protection for our wireless microphones and backstage communications devices.

Under the visionary leadership of our new artistic director, Joseph Haj, the Guthrie Theater is creating transformative theater experiences that ignite the imagination, stir the heart, open the mind, and build community as they illuminate our common humanity. By engaging exceptional theater artists in the exploration of both classic and contemporary plays, the Guthrie is connecting the community we serve to one another and the world.

The Guthrie is working in partnership with Minneapolis and St. Paul public school districts to create a new model of arts education that reaches substantially more diverse, low-income students and ties arts experiences more closely to classroom goals. Robust access programs address physical and financial barriers to participation in the Guthrie's performances and programs. In addition, the Guthrie now has a full-time director of community engagement who is developing innovative community-based programming and making personal connections with nonprofit organizations that serve low-income and diverse communities.

We strongly support the Commission's proposal to expand Part 74 license eligibility to include persons and organizations that can demonstrate the need for professional, high-quality audio and have the capability of providing it through conscientious use of wireless microphones. We support and endorse the Comments filed in these dockets by The Performing Arts Wireless Microphone Working Group.

Professional performing arts organizations hold thousands of performances each year, and wireless microphones are essential to producing high-quality performances while mitigating significant public safety concerns. Professional wireless capability, with successful interference protection, is essential to our sector.

The Guthrie utilizes a wide range of wireless devices that include microphones, in-ear communications (IFBs), cue and control devices and equipment controlling devices (not transmitting sound). During a typical performance, Guthrie staff will use six to 32 microphones, eight to 15 wireless intercoms, up to four wireless DMXs, up to two wireless MIDIs, one to eight IEMs and two to six WIFI remote controllers. This equipment is used during simultaneous performances on up to three stages (1,100-seat Wurtele Thrust Stage, 700-seat McGuire Proscenium Stage and 200-seat Dowling Studio) six days a week.

The bands and channels utilized by the Guthrie are low UHF (channels 14–36, 470 to 608 MHz). In addition, the Guthrie uses devices that operate on bands outside TV channels, including:

- Intercom 1.9GHz
- Showlink Control of Wireless mics 2.4Ghz Zigbee
- Wireless MIDI 2.4GHz
- Wireless DMX 900MHz
- WIFI remotes 2.4GHz

The Guthrie's microphones able to tune to frequencies from 80MHz analog and 64MHz Digital to 184MHz Digital, depending on system. Currently, 16 channels are analog and the rest are digital. With the move out of the 700 MHz band, the Guthrie moved to renting microphones that are frequency agile and adaptable. The transition out of the 700 MHz band took a full year. The cost to lease microphones for Guthrie productions and events is now approximately \$20,000 annually. The theater owns its IEM, Controllers, DMX and MIDI. The life expectancy for the equipment owned by the theater is 15 years.

The Guthrie has an experienced audio technician on staff who has more than 25 years of experience supporting and coordinating wireless in the theatrical and professional audio industries. He has a Bachelor's degree in Technical Theater, manufacturer-training in coordination and is a CTS recognized technician. He regularly consults with wireless manufacturers on innovative new wireless technologies.

Based on our extensive use of wireless microphones and backstage communications devices, Guthrie urges the Commission to grant a Part 74 license if an applicant can provide certification of:

- A mission statement of providing performing arts to the public;
- A history of professional-quality wireless audio presentations to audiences without interference;
- Technical guidance and frequency coordination by qualified professionals (active in audio engineering who have academic degrees or equivalent professional experience and who are familiar with radio-frequency coordination);
- A commitment to register for protection only the frequencies, times and locations actually needed; and
- A practice of keeping logs of all wireless microphone uses, including frequencies, for all performances.

We at the Guthrie are truly appreciative of the efforts made by the Commission who has sought Public Comment on this very important topic. Professional performing arts organizations and educational institutions that serve local and national communities should have access to reliably available spectrum with interference protection. The Guthrie is requesting that the Commission consider the burden already borne by the performing arts community in vacating the 700 MHz band. We are concerned about the cost of continually financing a yearly lease package of our organization's sound equipment. We would like to make a one-time investment and would like some assurances that the system will work properly and free from interference for decades to come.

Performing arts organizations provide demonstrable service to a plurality of communities in improving quality of life; preserving our cultural heritage; and providing education, enlightenment, and entertainment. We all contribute mightily to our local economies throughout this great country of ours. The Guthrie fully endorses the Commission's proposal to expand Part 74 LPAS rules to accommodate performing arts organizations and educational institutions that use fewer than 50 wireless microphones. The proposal is a much-needed solution that benefits the arts community and the public as well as the many new and emerging unlicensed white space technologies.

Sincerely,

David Stewart
Director of Production
Guthrie Theater
Minneapolis, MN