



# ALHAMBRA

UNIFIED SCHOOL DISTRICT

**MARK KEPPEL HIGH SCHOOL**  
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October 6, 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 Mark Keppel high school, located in Alhambra, California, that provides approximately 15 performances per year to a few thousand audience members and education programs to over a thousand students, I write with concern about available spectrum and protection for our wireless microphones and backstage communications devices.

Mark Keppel high school's visual and performing arts mission is to provide a well-rounded, industry-relevant education to the students at the school.

I 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.

School theatre programs and professional performing arts organizations hold thousands of performances each year, and wireless microphones are essential to producing high-quality performances while limiting significant public safety concerns. Professional wireless capability, with successful interference protection, is essential to educational theatre, both in the training and safety of students, onstage and backstage.

We have found that the use of wireless microphones has become an integral part of our performances. In our performance space, we use handheld wireless microphones and belt pack transmitters in a variety of applications, from dance performances to instrumental music shows to musicals. We use wireless systems dependent on the needs of each show, but during shows we use as few as one microphone but have gone as large as twenty one individual wireless systems in the past. We use these systems very often, putting wireless presentations into effect at least once a month and oftentimes much more frequently.

Our school theatre program owns twenty one wireless systems, some of which are analog and some of which are digital. We expect these systems to last us several years, as our systems are seven years old and are still very

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effective for our school's needs. We were lucky enough to avoid the 2010 move out of the 700 MHz band because we bought our systems just as that mandate was handed down. However, if we had been forced to buy new equipment, that equipment would have cost us roughly \$20,000.

The channels that our systems are able to use sit in the Low UHF area, within the 500MHz range, which means that we have access to a limited number of frequencies. Some of our units have more flexibility when it comes to choosing frequencies to utilize, while other units have very limited tuning ability. This means that protected frequencies are absolutely necessary, especially for our wireless units with less flexibility.

I would urge 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.

I appreciate that the Commission has sought Public Comment on this very important issue. Educational institutions and professional performing arts organizations should have access to reliably available spectrum with interference protection. I would request that the Commission consider the burden already borne by the performing arts community in vacating the 700 MHz band. I am concerned about the cost of once again replacing my organization's sound equipment. Once that investment has been made, I would like some assurance that the system will work properly and without interference.

Schools have limited funds with which to purchase wireless systems, which can be very expensive in their own right. It has become increasingly difficult to purchase wireless systems that have access to frequencies that are free of interference. This has had a strong impact on our performances, both from the student technician perspective and from the audience perspective. In order to create quality productions that will build audience loyalty in our community, we must have clear and vibrant sound, which can only be achieved through the use of wireless systems that have clear frequencies devoid of interference.

I respectfully endorse the Commission's proposal to expand Part 74 LPAS rules to accommodate schools and performing arts organizations 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,

Tim Gillette  
Social Science Chair  
Theatre Technical Director  
Mark Keppel High School

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