



Rock Canyon High School

A Douglas County School

5810 McArthur Ranch Rd.
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October 11, 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 Rock Canyon High School, located in Lone Tree, Colorado, that provides approximately **18** performances per year to **4000** audience members and education programs to **2200** students, I write with concern about available spectrum and protection for our wireless microphones and backstage communications devices.

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.

It is the mission of the theatre program here at Rock Canyon to expose as many students to theatre in as many different ways as possible. Our mission dovetails with the school's mission: to Empower; to Explore; to Encourage; and to Excel. Students may take a more academic approach through classes and skill work; students may become a member of Drama Club, which is more of a student-led pursuit of dramatic activities; and finally, they may become involved in the many productions here either by acting, directing, or pursuing backstage work. But it is also the mission of this program to provide as many leadership and design opportunities as possible in order to better prepare students for college and for a career in the theatre, and this includes practice with technical resources including audio engineering. We have a well-established history of providing performing arts productions to the public to great accolades---and without signal interference to surrounding areas and facilities.

To Empower, To Explore, To Encourage and to Excel in Education



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We use a few different types of wireless devices in pursuit of this mission. When performing in a gymnasium setting the use of hand-held wireless mics are essential for communication for audiences of 1000 or more, and our gym was not outfitted with the ability to use wired devices effectively. Indeed, the basic facility equipment when the school opened in 2005 included two handheld devices for the gym and two for the auditorium. While the auditorium is better equipped to run wired devices, the use of cords becomes unwieldy, expensive and a bit of a trip hazard. When producing plays with high activity and/or live or recorded music, we very often run as many as 13 wireless theatrical body/hair mics...and even this doesn't seem to be enough at times. Though we added several hanging and shotgun condensers to capture large choruses of actors in our musicals, recent judges for the Bobby G/ Jimmy Awards for high school musical theatre docked us points for not providing more individual body mics to chorus members. We also use wireless in-house communication devices for communication between student leadership backstage and in the booth. The wired headsets became heavily damaged from pulled cords or cords twisted and run over by scenery. We recently paid almost \$2000 for a set of these devices. And finally, we are moving toward LED lighting for our facility to save on energy and lamp costs. To run these requires the use of "Show Baby" wireless equipment controlling devices. We typically run 3 to 20 devices during a typical presentation or performance, and we hold 18 or so single nights of performance per year, roughly 2 different types of presentations per month. Our microphones are able to tune to more than one frequency though in a particular range. I believe all of them are digital, and we own them all. We have no experienced audio technician on staff or as a contractor; however, we can request assistance from the school district maintenance department, which has a liaison that is knowledgeable in audio. He has demonstrated knowledge in frequency coordination, though I am unaware of his degree. However, I myself have taken classes on this rising issue. Our district liaison is on-call, and has demonstrated his willingness to help us modulate the wireless audio for our productions. It was this liaison that facilitated the move out of the 700 MHz band in 2010. Each school automatically received replacement hand-held microphones (two for the auditorium; two for the gym) for the original facility equipment issued on the school's opening in 2005, as mentioned above. We already owned some microphones that could tune to more than one frequency, so the time and cost to us were minimal. The vast majority of our wireless devices were acquired after 2010, but the acquisition of these has cost us thousands. I would say that the reasonable life-expectancy for all of these mics is six to eight years. Our mics operate in 541.5-566.375 band. The Show Baby is 2.4GHz Frequency Hopping Spread Spectrum (FHSS) Radio. The Eartec Wireless intercom system is in the 1900 MHz band.

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;
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- 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. I can't imagine the heartbreak of young performers who can't be heard without adequate audio reinforcement. And the effect on our audiences would be significant, either reducing their desire to view our productions or by their vocal protests. Educational institutions and professional performing arts organizations should have access to reliably available spectrum with interference protection. What young student would even want to learn audio if the equipment was unable to operate without protection, therefore exposing his work to public condemnation?

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.

Sincerely,

Cindy Baker M.Ed.
Rock Canyon High School
Theatre Arts Instructor
Auditorium Manager