

# Tahoe Truckee offers equality to listening in portable classrooms

Tahoe Truckee Unified School District encompasses 12 campuses in northeastern California. Providing all its elementary, middle and high school students with equity of access is outlined as a top priority. This includes equity for all students to be able to hear and understand all content presented in the classroom.

## THE CHALLENGE: ACOUSTICS IN PORTABLE CLASSROOM

Access to listening proved more difficult in the portable structures that comprise 20% of Tahoe Truckee’s classrooms, where sound tends to be muffled. This includes the teacher’s voice and music and sound effects from multimedia.

## THE SOLUTION: INCLUDE CLASSROOM AUDIO

To address this challenge, they formed a Technology & Information Services department, combining IT expertise with instructional requirements. This coordinating effort between IT and instructional methodologies created a program for equipping every classroom (kindergarten through grade 12), with a Standard Classroom Technology Package.

Integral to the classroom technology package is Lightspeed’s Topcat wireless audio system. Topcat had already proven a valuable enabling tool for the school district’s eight portable classrooms used by grades one through six.

*“This is a standard part of all classroom upgrades, right along with lighting, carpet, paint and fixtures. It is considered required infrastructure”*

Edward Hilton,  
Director of Technology

*“Topcat is especially important in solving the acoustics challenges for our portables, where without it sound is absorbed and not delivered well unless the teacher is directly facing the student. Without Topcat, it is difficult to get sound to all students in the classroom,”* said Edward Hilton.

With the new Standard Classroom Technology Package, all 262 school district classrooms, all grade levels, will be equipped with a Topcat audio system, Large Format Projection TV/

Projector, Document Projection Device, Apple TV, and Google Chromecast, among other components. Topcat controls the output of all the audio, ensuring high-quality audio easily heard and understood by the entire class.

Delivering high speech intelligibility is invaluable in dynamic Tahoe Truckee classrooms. With teachers moving around, interacting with student projects and teams, turning to whiteboards and visual displays, their voices are directed at times away from the class, and visual cues are reduced.

Add to that the typical noise level from active students and there can be significant



## TAHOE TRUCKEE UNIFIED SCHOOL DISTRICT

### CHALLENGE

How to create equity in the learning environment between portable and traditional classrooms

### LIGHTSPEED SOLUTION

Lightspeed Topcat ceiling-mounted audio system



### RESULTS

- Students can all hear equally throughout the portable
- Teachers have fewer incidence of voice strain
- Digital audio is delivered easily
- Engaging in new instructional techniques with small groups

## CASE STUDY

gaps in speech intelligibility. With Topcat's full dispersion of both low and high frequencies, every word, every vowel and consonant, can be heard clearly, with no additional stress on the teacher's voice.

Topcat's wireless connectivity proves valuable in connecting with other devices in the TTUSD's Standard Technology Package, meeting the full range of classroom media requirements.

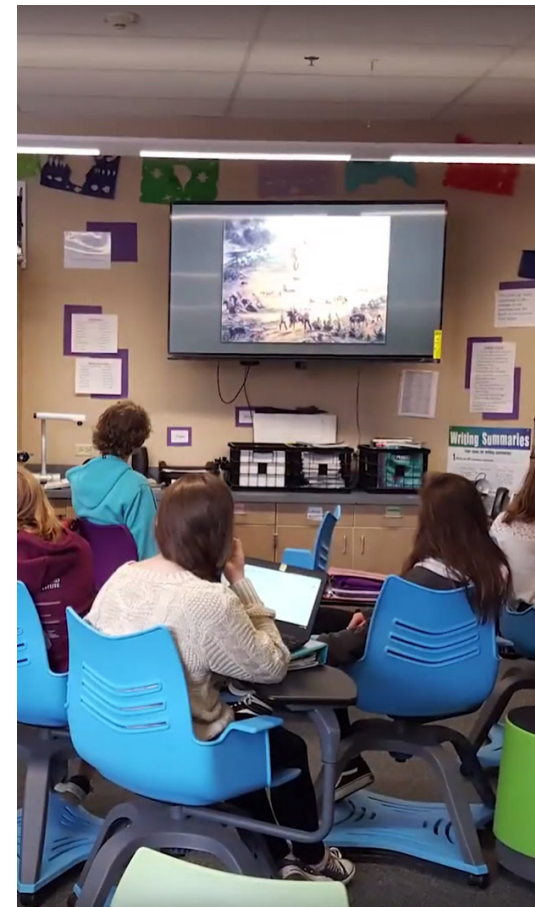
All audio output is seamlessly managed through Topcat and the Lightspeed Media Connector, eliminating complicated teacher set up. It's a wireless system with the flexibility to integrate a wide range of leading-edge content without a steep learning curve. Plus, the simple ceiling installation, means there's no complex speaker configuration needed.

The TTUSD package also includes a second microphone in each Topcat configuration for student use. For project-based, small group learning, Topcat supports individual 2-way microphone/speaker pods.

## RESULTS

Including classroom audio in the technology package TTUSD delivers to portable and traditional classrooms has improved access to learning across the district:

- Students can all hear equally throughout the classroom, and teachers talk at a more natural level, reducing voice strain. Their energy level is up in class and at end of the day.
- Digital audio is delivered easily through the wireless system, with better quality, making it easier to understand the words and content.
- Portable classrooms are seeing an expanded role. With their ease of parking and access, and clear audio with Topcat, they are particularly attractive as rental facilities for educational outreach programs.
- New instructional techniques with small groups are all possible with the flexibility of the wireless microphones and speaker systems that can easily move around to individual stations as students work on different types of lessons and projects.



*“Tahoe Truckee values the Lightspeed solution so much we’ve built it into our standard classroom program and funding plan for portables and traditional classrooms.”*

*Amplification is important to our stringent goal that any student can sit anywhere – in any portable classroom as well as traditional ones, with equal access to learning.”*

*Edward Hilton*