

Effortless School Communication.

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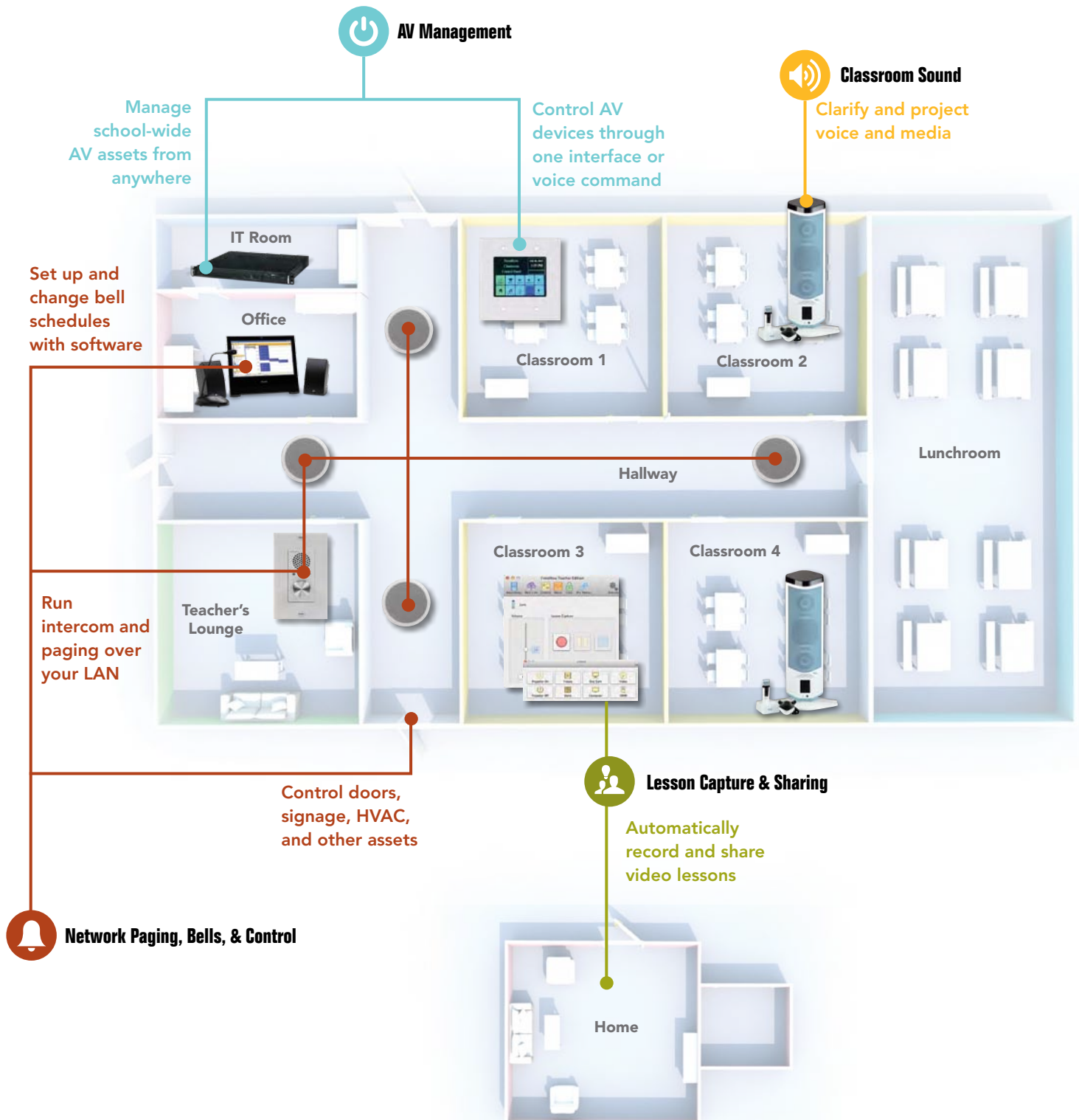


frontrow™
your school. connected.



Your school, connected.

Enjoy effortless communication within classrooms, throughout campus, and even with students at home. FrontRow's technology integrates with your existing network and offers classroom audio, screencasting, AV control, paging, bells, automation, and more — so you can deliver a great education more efficiently.



Which FrontRow system should you start with?

I need:

- an efficient paging/bell solution
- to improve my school's security and emergency preparedness
- to improve my school's operational efficiency

CONDUCTOR

IP Paging, Bells, & Security



- Use the school network to deliver paging, bells, and alerts
- Use the same amps and speakers for paging and classroom media/voice
- Create and manage robust emergency alert communications
- Easy software interface makes setting and adjusting schedules fast
- Control doors, HVAC, and other devices

See Page 14

I need:

- to control projector bulb costs
- to manage my school-wide technology assets
- to help my teachers use classroom technology efficiently

EZROOM

Integrated AV Management



- Online management of both networked and non-networked devices, such as projectors
- Hardware and software interfaces for easy control of all classroom technology
- Integrated media and voice amplification

See Page 12

I need:

- easier screencasting
- to improve student achievement, attentiveness, and behavior
- to improve teacher energy, effectiveness, and vocal health

JUNO

Capture & Connect



- Voice-activated control
- No installation
- Up to 5 mics

See Pages 6 and 8

PRO DIGITAL

Digital Voice Clarity



- OptiVoice™ clarity
- Adapto™ feedback suppression

See Page 10

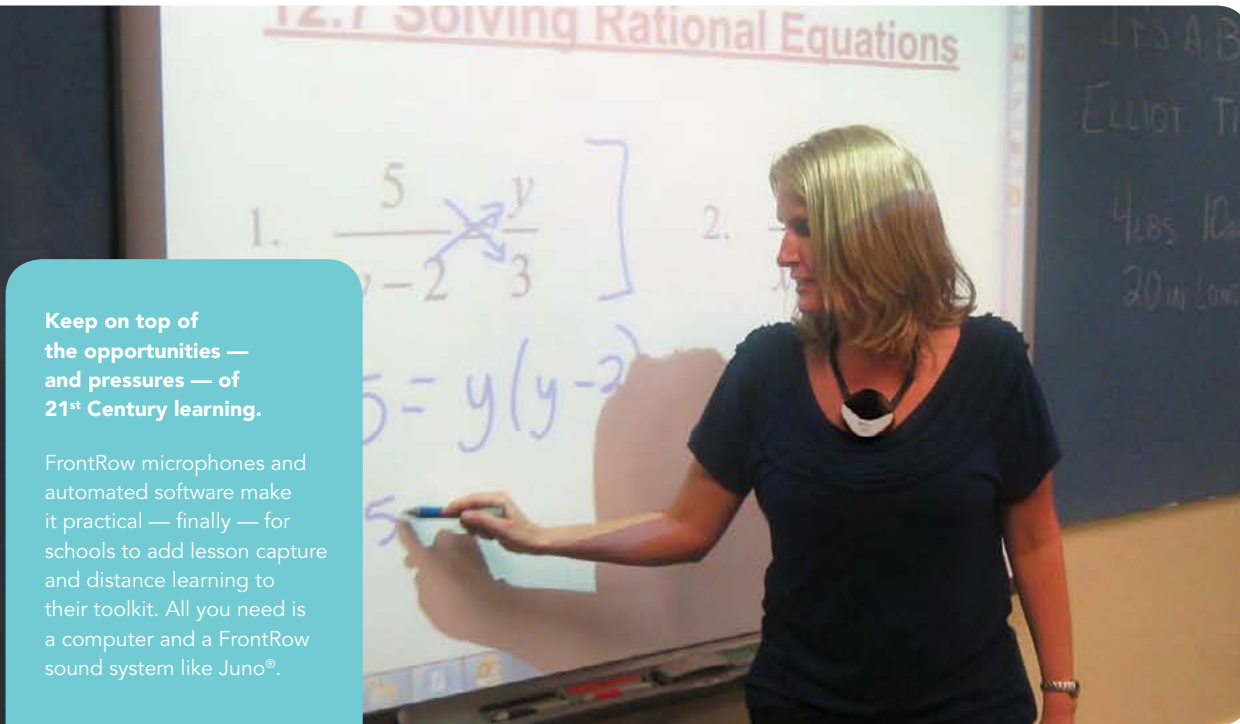
TOGO

Portable Audio



- Portable audio
- Indoor/outdoor
- Battery on board

See Page 11



Keep on top of the opportunities — and pressures — of 21st Century learning.

FrontRow microphones and automated software make it practical — finally — for schools to add lesson capture and distance learning to their toolkit. All you need is a computer and a FrontRow sound system like Juno®.

Record, title, and share screencasts — without touching your computer.

Flipping and screencasting are powerful ways to teach, but who has time to learn how to use the recording software, sit down, record, edit, title, and post these videos?



Lesson capture in a streamlined, time-saving work flow

FRONTROW TEACHER EDITION™ solves this problem by doing the work for you. You can literally record, title, and share screencasts in minutes without ever touching your computer. Just say 'begin' to start recording a video of all the content on your interactive

whiteboard or your computer screen, plus clear voice and media audio. When done, just say 'finish' or press the stop button.

TEACHER EDITION will **automatically title your video with the right name and subject**, then **post it where you need it to go**. Students who missed class can catch up immediately, and those who want a refresher can view the lesson again.

Teachers of all levels can begin capturing their lessons right away. No special knowledge, complicated software, or intensive video editing skills are needed.

TEACHER EDITION gives administrators, teachers, and parents a powerful new tool and for getting a flipped/blended learning program off the ground.

Fantastic audio quality without being tethered to the computer

Because TEACHER EDITION works seamlessly with our high-quality microphones, teachers always have the highest-quality audio in their recordings. When the classroom uses pass-around microphones during a discussion, student contributions and questions are included in the recording as well.

No need to stand close to the computer microphone to be sure their voice is picked up. Teachers have complete freedom to move about the classroom naturally.

Even more benefits for Juno® and ezRoom® users

If you use JUNO, you can take advantage of its voice command features to start and stop TEACHER EDITION recordings.

And users of FRONTROW EZROOM have the added benefit of being able to control their classroom technology too — maintain teaching flow, easily switch between devices, and begin recordings all within the same application.

When students can't hear the teacher clearly, class is over before it starts



Better results through better microphones.

Numerous studies report tremendous benefits from the use of FrontRow, including doubled reading growth, greater student achievement, easier classroom management, and heightened teacher energy.

You'd be shocked to learn how much kids miss in class. And frankly, so would they. FrontRow audio systems overcome a problem most people aren't even aware of – that 25% of what the teacher says in class never reaches students' brains.

Children aren't short adults. They can't listen like we do.

Until about age 14, the brain structures that let us listen effectively in less-than-perfect conditions aren't fully developed — and some aspects don't mature until the end of high school. Because adults are far better at listening amid noise and from a distance, the classroom acoustic environment is almost always misjudged by teachers, administrators and parents.

Most classrooms aren't the ideal place for learning.

To understand 100% of speech sounds, children need to hear the teacher's voice 15 decibels louder than background noise. But in a typical classroom, the teacher's voice is barely 5 decibels above

the noise — so only those nearest the teacher are fully engaged. Students farthest from the teacher can miss up to 40% of what's being said. No wonder some lose focus, cause disruption, and perform more poorly.

Teacher microphones: An essential tool for success

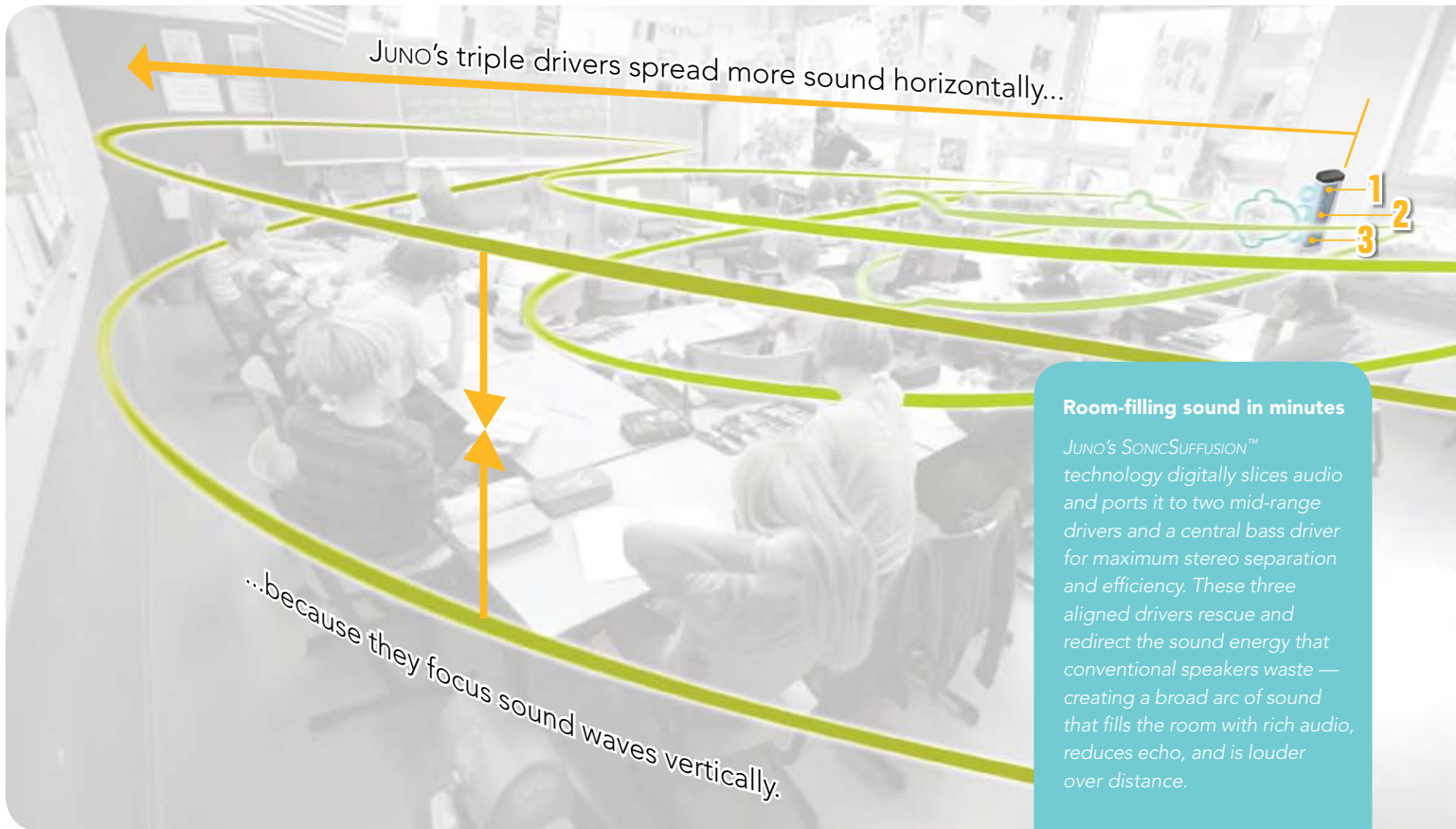
By ensuring the teacher's voice sounds clear no matter where students sit, FrontRow microphones can overcome the hurdles of unamplified classrooms. Our audio technology makes a significant impact on the attentiveness and achievement of hundreds of thousands of students every day.

Understanding words in sentences (median % correct)

Without FrontRow microphones, children are much worse than adults at understanding even simple sentences.

Child (8-10 yrs) **65%**

Adult **98%**



Room-filling sound in minutes

JUNO's SONICSUFFUSION™ technology digitally slices audio and ports it to two mid-range drivers and a central bass driver for maximum stereo separation and efficiency. These three aligned drivers rescue and redirect the sound energy that conventional speakers waste — creating a broad arc of sound that fills the room with rich audio, reduces echo, and is louder over distance.

JUNO®: Too easy to sound so good

In the past, the best way to get even sound coverage in the classroom was to cut holes in the ceiling and install numerous speakers. That's no longer necessary, thanks to FRONTROW's SONICSUFFUSION™ technology built into JUNO. JUNO's engineers packaged three digitally-controlled drivers into a single unit that sets up in minutes — and yet evenly fills your classroom with the kind of exciting, multi-layered stereo sound you'd expect from a much larger installed system.

How JUNO fills your room with sound

JUNO's SONICSUFFUSION technology is intelligent. First, its digital crossover network keeps the two mid-range drivers and the bass module in phase and reproducing your audio at peak efficiency. Then, we exploit the physics of constructive wave propagation to rescue the sound energy that conventional and flat-panel loudspeakers waste and redirect it forward and to the sides in a 180° horizontal layer. This arc of sound spreads more evenly across the room, reduces unwanted echo, and sounds up to 25% greater in volume over distance than conventional or flatpanel speakers.

Built-in recording and more

JUNO is loaded with technologies that give you better results. Like amazing one-step, voice-activated recording and sharing of screen content. And digital feedback suppression that lets you put JUNO practically anywhere without the howling that plagues flat panels. It even includes the OPTIVOICE™ speech clarity enhancer.



RECEIVER/SPEAKER TOWER

- Installation-free, infrared
- Adapto™ Generation II digital signal processing and feedback suppression
- 2.1 stereo line array, expandable with ceiling or wall speakers
- Lockable LCD touch interface
- Class2Class™ distance-learning support
- OptiVoice™ speech clarification
- PrioriTeach™ teacher voice priority
- ALD output supports students with hearing impairment



TEACHER EDITION SOFTWARE

- Simple interface
- Allows voice control of recording, JUNO settings, and — with JUNO CONNECT module — projectors and intercom
- Recordings are universal MP4/M4A format, unlimited length
- Recordings automatically named based on schedule; automatically posted for student access
- Opens advanced digital settings for JUNO



Press and say 'begin' to start recording.



Teach normally. All screen content, media audio, & teacher/student voices are captured.



When finished, press and say 'finish.' Juno automatically titles your recording based on your schedule and preps it for upload.



Students can access the recording that night from Google Apps for Education, Schoology, or any other site you choose.



TEACHER MIC

- Delightfully simple — does more with just one button than other mics do with six
- Accepts voice commands to control the system and initiate Juno automated lesson capture
- The mic you never need to turn off — it just goes to sleep when not in use
- Better sound from a smaller, lighter mic thanks to superior mic suspension, better frequency response, and low-distortion digital synthesis
- Longer-lasting lithium battery



STUDENT MICS

- Use up to five mics simultaneously for smooth participation and natural discussions
- Expand beyond five mics thanks to slider/push-to-talk button
- Easy to hold, even for small hands
- Lavalier/hands-free option
- Digitally nameable for identification on LCD





JUNO CONNECT™ gives you complete control over your classroom with one simple tool – your voice

Classroom Sound



“Good morning students!”

Wearing the comfortable JUNO microphone, teachers easily guide both small-group and whole-classroom discussions. JUNO **clarifies and amplifies** your voice so that every student has a front row seat.

Lesson Capture



“Begin”

Why stay after hours to prepare a video lesson, when you can just **start recording** whenever you need to by saying “begin?” JUNO CONNECT records, automatically titles, and shares the screencast for students to review online later.

Room Control



“Power Up”

Instead of reacting to your technology, it now responds to you. Without a break in instruction, teachers can **control projectors, displays, and other devices just with their voice.**

Paging & Intercom



“Intercom”

Teachers can **talk to the front office** just by saying “intercom.” And pages come through the JUNO CONNECT system too — much more clearly than through a conventional PA system.



JUNO CONNECT also helps administrators run a more efficient school. Because it's networked, JUNO CONNECT lets you see, control, and manage not just one projector, but every AV device in the school. From anywhere in the world. From automatic shut-down to bulb-life alerts, JUNO CONNECT takes

care of the details so technologists can focus on the big picture. With a single investment in JUNO CONNECT, schools can reap huge efficiencies in audio, lesson capture, room control, paging, and intercom — it just makes sense.



JUNO CONNECT offers all the features of JUNO, plus:



COMMUNICATIONS MODULE

- Puts JUNO on the network
- Works with TEACHER EDITION software to enable third-party device control, and with MAESTRO to allow remote asset management
- Works with CONDUCTOR to let JUNO act as the conduit for intercom calls, paging, and bells



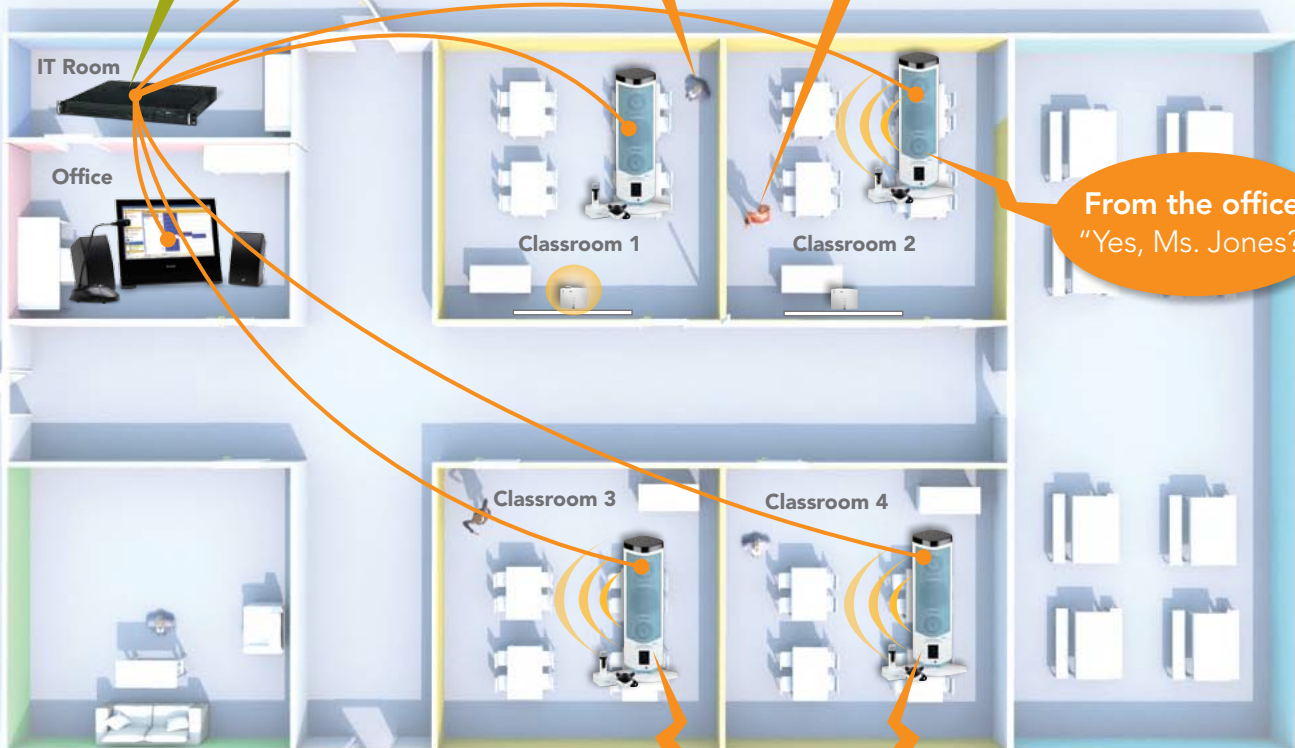
TEACHER EDITION SOFTWARE

- Allows voice control of recording, JUNO settings, projectors and intercom
- Recordings are universal MP4/M4A format, unlimited length
- Recordings automatically named based on schedule; automatically posted for student access
- Opens advanced digital settings for JUNO
- Simple AV control of display and other devices



Projector status:

- ✓ Classroom 1
- ✗ Classroom 2



"Mr. Perry, please report to the teachers' lounge."



Teach seamlessly with Pro Digital™

Crisp, reliable audio that's effective — and efficient

FrontRow Pro Digital is the leading choice of schools for multi-speaker classroom audio. The reason? It's supremely good at delivering on the core mission of sound in the classroom: speech clarity.

Clearer communication with OptiVoice™

Pro Digital features OptiVoice™ — a patented algorithm that makes speech easier to understand for test-taking, directions, and ESL instruction. OptiVoice strengthens fragile consonant sounds with a digital 12-band equalizer in a single switch. A 2011 study by the University of Missouri shows students using systems with OptiVoice understand the teacher better — and perform better academically — than students using other classroom sound systems.

Digitally-intelligent sound

Pro Digital incorporates an Adapto™ digital algorithm that checks hundreds of times per second for acoustic feedback — the harsh squealing that can plague analog mic systems. Teachers can move freely without noisy disruptions, making it easier to teach calmly and clearly.

One-touch operation

Teachers just turn on the mic to start teaching. The receiver automatically wakes from its energy-saving mode, and goes back to sleep when the mic is turned off.



RECEIVER

- Digitally-processed stereo sound
- Automatic feedback suppression and speech clarification
- Energy-saving sleep mode — wakes up when teachers start speaking



TEACHER MIC

- Light and comfortable ergonomic design stays stable even when leaning to help a student
- Prominent, easy-to-find mute button
- 2 directional mics reduce signal reduction with head movement



STUDENT MIC

- Encourages participation and orality
- Easy to hold, even for small hands — just 14.6cm/5.7in tall
- Lavalier/hands-free option



INFRARED SPEAKERS

- Each unit combines two woofers, one tweeter, an IR sensor, and a single cable — saves up to half the installation time
- Great infrared pickup and stereo sound

NOW AVAILABLE WITH



TEACHER EDITION SOFTWARE

- Simple interface for lesson capture
- Universal MP4/M4A format
- Unlimited length
- Automated naming and saving of recordings



Take audio anywhere with FrontRow ToGo™

The hardest part is taking it out of the box

Completely portable, FrontRow ToGo incorporates a DuO™ precision-mounted speaker array for amazingly even coverage of classrooms, cafeteria, meeting spaces — even outdoor events.

Goes from class to playground to assembly

FrontRow ToGo goes anywhere people need to listen. Its powerful rechargeable battery, collapsible stand, and optional carrying case let you talk or play music far from power sources. And with wind-resistant boom microphones and OptiVoice™ speech-clarifying technology, ToGo is as audible at a soccer meet or bus line as it is in a classroom.

Compatible with personal FM systems

FrontRow ToGo operates on the same radio band used by personal assistive listening systems for students with hearing impairment. Use a single transmitter on up to 16 different channels to communicate with both the ToGo and students' personal devices.



RECEIVER

- Installation-free and completely portable — onboard rechargeable battery lasts hours
- Input jack for music and output jack for recording
- OptiVoice™ speech clarification
- Powerful two-driver line array for more even audio coverage than flat panels provide



STUDENT MIC

- Great for pass-around at conferences, outdoor events and lectures
- Encourages student participation and engagement



TEACHER MIC

- Boom mic for excellent sound quality, indoors and out
- Lapel mic options available

NOW AVAILABLE WITH



TEACHER EDITION SOFTWARE

- Simple interface for lesson capture
- Universal MP4/M4A format
- Unlimited length
- Automated naming and saving of recordings





Intuitive, networked AV control with ezROOM[®]

Manage all your teaching technology with one tool

Hear It

Essential reinforcement of audio from teacher/student mics & media sources, plus streaming announcements from Conductor™



Connect It

Plug in computers, audio, and video



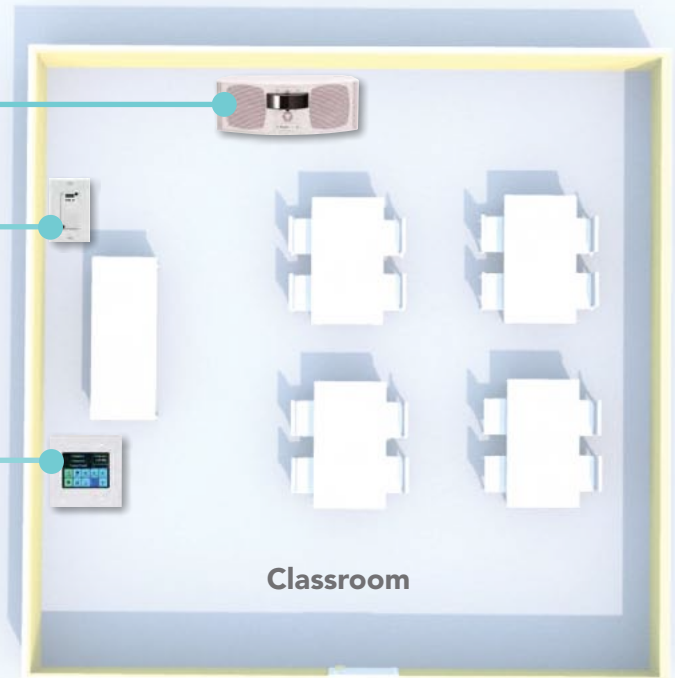
Control It

One interface for all devices – intuitive wall panel and/or the teacher's desktop



Manage It

Remote device monitoring, control and alerts for administrator



It's Friday afternoon in fifth-period Algebra. Mr. Tenuda has spent the last five minutes trying to find the projector remote control. Ten percent of the class time has already evaporated, and the students are restless. When Mr. Tenuda finally finds the remote and tries to display his desktop, he sighs: All that shows up is a blue screen. The technology that was supposed to help improve his brief lesson time has instead derailed it.

FRONTROW ezROOM could have kept Mr. Tenuda's vibrant lesson plan on schedule. From projectors to interactive whiteboards to document cameras, ezROOM integrates multiple AV sources and gives the teacher a single point of control — either a control panel on the wall or a virtual one on the computer. No more fumbling around in front of students. No steep learning curve. Teachers can use what they want, when they want, to connect with students in a media-rich environment.

Save time and money

Now suppose our distracted Mr. Tenuda forgets to turn off the projector. Hours of costly bulb life could burn away in an empty room over the weekend — but they won't. ezRoom creates a seamless bidirectional link between serial projectors and your network. Then, our MAESTRO™ management software lets you control them online — even if they're not directly networkable. Set up a schedule to shut down all projectors automatically, or do it yourself with a single mouse click...even while catching a taxi to the airport.

Networked for total control

The ezROOM platform is highly modular — there are over 360 ways to build yours, and hundreds more tasks you can command it to perform. Yet at the heart of each is a network connection, and in some cases a full network switch. That lets teachers control their equipment from a tablet, and keeps technologists in charge of it all. So the same day you upgrade your projectors, you can update ezRoom from your office.

School-friendly configuration

We know that quickly installing many rooms and managing them for years is key to your success. That's why we offer pre-built configuration templates for classrooms, plus simple tools for activating and updating your ezROOM systems efficiently.



INSTRUCTOR CONTROL PANELS

- Touch-screen, button, or virtual interfaces running on the desktop using Encore software
- Independently networkable — the control panel alone can provide all the in-room control and remote management power you need
- Multiple cascading actions can be programmed to trigger on a button press or external event, or simply on a schedule



NETWORKED AMPLIFIER/CONTROLLER

- Amplifies media audio and CONDUCTOR announcements seamlessly
- IP addressable
- Onboard GUI — directly or remotely program triggered or timed actions
- Built-in 4-port switch eliminates need to add a new network drop



TEACHER & STUDENT MICS

- Connect the FRONTROW SYMBIO™ wireless mic receiver to add critical voice reinforcement that improves comprehension and engagement



INFRARED SPEAKERS

- Each unit combines two woofers, one tweeter, an IR sensor, and a single cable — saves up to half the installation time
- Great infrared pickup and stereo sound



MAESTRO™ MANAGEMENT SOFTWARE

- Single interface for remotely managing and controlling EZROOM components and even non-networked third-party devices like projectors
- PC-based client app; network application runs on same server as CONDUCTOR.



“Using FRONTROW’s EZROOM as the foundation for our classrooms was a great decision. It’s an affordable solution that provides usability and flexibility right out of the box. We were able to customize the system to meet our needs and the support FRONTROW provided was essential to a successful installation.”

BILL SIMPSON,
EXECUTIVE DIRECTOR OF TECHNOLOGY
 San Marcos Unified School District, San Marcos, CA

NOW AVAILABLE WITH



TEACHER EDITION SOFTWARE

- Simple interface
- Allows control of recording, system settings, projectors, and other devices
- Recordings are universal MP4/M4A format, unlimited length
- Recordings are automatically named based on schedule, automatically posted for student access



CONDUCTOR™: Campus-wide control

Communicate with anyone — or anything — from anywhere in your buildings

In an educational environment, communication and control are mission-critical. Whether it's paging, access control, switching to a late-start bell schedule, or keeping students safe during an emergency, FRONTROW CONDUCTOR is the central, integrated solution.

CONDUCTOR is a robust IP-based paging, bell, intercom, and control platform that works seamlessly with FRONTROW ezROOM and JUNO CONNECT. Through an easy software interface in the front office, administrators can set up and talk to any zone in the school, create and change bell schedules, and build cascading actions to automate routine tasks or emergency response — all with a few mouse clicks.

Better building — and budget — management

CONDUCTOR helps you manage your buildings, and use your time and money more efficiently. Because it leverages your existing network and the hardware you need in your classrooms anyway, CONDUCTOR saves on both capital and operational costs. Since it integrates with IP phone systems and door relays, redundancy and complexity in control interfaces goes away. And because CONDUCTOR's open architecture can be easily mastered by your own IT staff, you don't need to call in expensive consultants every time you want to make a change.

Like being three places at once

CONDUCTOR certainly excels at straight paging, intercom, and bell management, but its ability to handle an almost unlimited range of automated tasks is simply astonishing. Your staff can easily program it to perform practically any function you need to multiply your power as an administrator.

Creative principals have used CONDUCTOR to pre-record and play their morning greeting to classrooms while they stroll the campus in person. Districts in the tornado belt program CONDUCTOR to trigger audio instructions and show evacuation maps on all classroom projectors and hallway displays. Others use CONDUCTOR so they're prepared to lock all doors against intruders, communicate what is happening and what to do, and issue a pre-recorded all-clear announcement from the principal's mobile phone.

Whatever your vision for your school's communication and control, CONDUCTOR lets you orchestrate it.

Paging / Intercom

Direct intercom calls and pages to the zones you create.

Bell scheduling

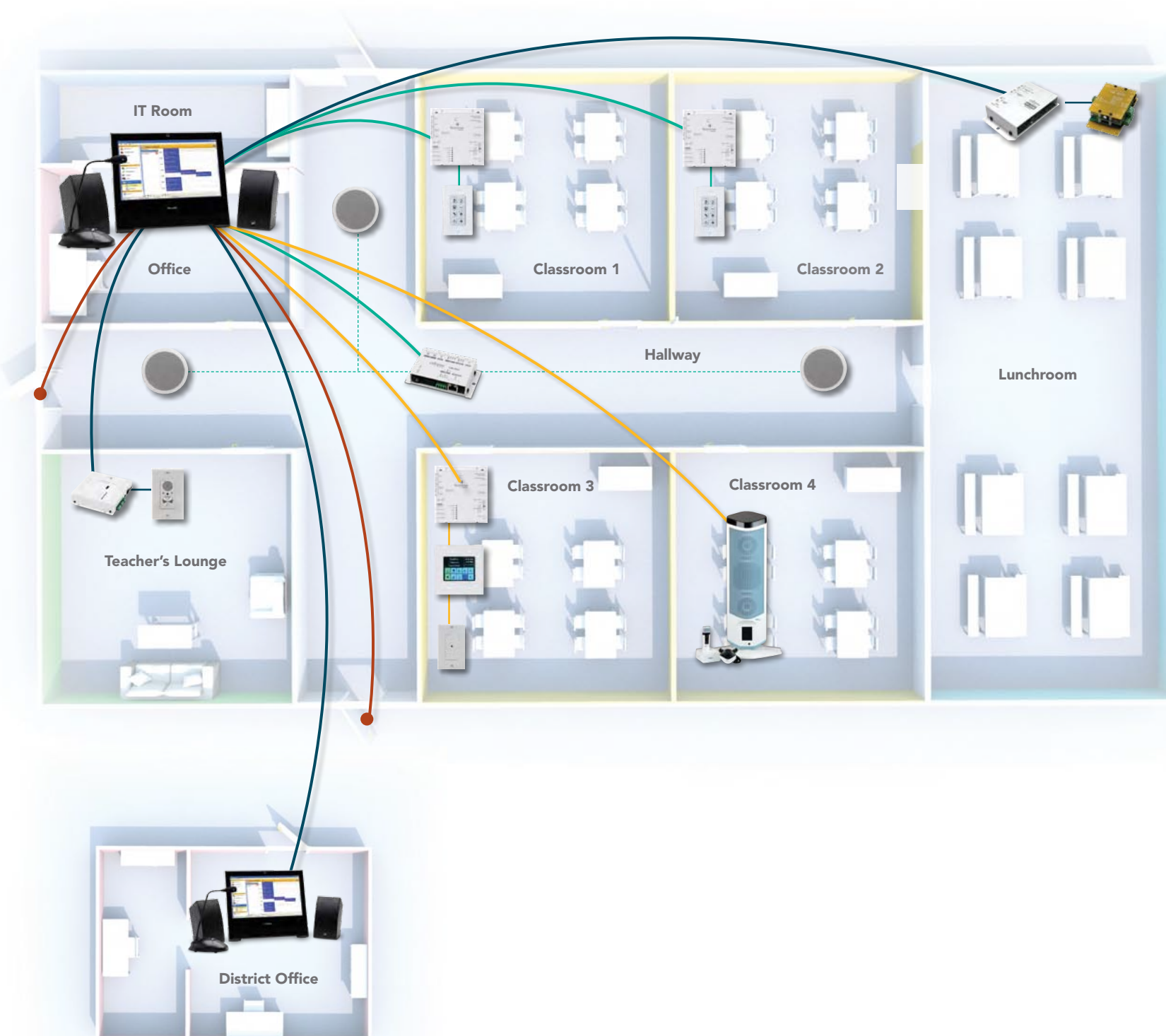
Set up normal and special bell schedules, and change them easily.

Control

Automate routines for HVAC, energy, displays, morning greetings, access control, and more.

Response

Plan in advance what actions you want CONDUCTOR to handle during a fire, natural disaster, or other emergency — like lock doors, issue instructions, and alert authorities — so you can be focused and present where you're most needed.



ADMINISTRATOR STATION

- Dedicated head-end running Conductor client app, 1RU server running Conductor and Maestro™ network apps
- Quickly set up or change zones
- Easily create standard or special bell tones and schedules, deployed by zone
- Prepare cascading actions for emergencies — AV alerts, triggered commands & more
- Push-to-talk mic for spontaneous announcements



NETWORKED AMPLIFIER/CONTROLLER

- Single solution for media and public address audio — classrooms with ezRoom™ AV systems play Conductor announcements seamlessly
- IP addressable
- Onboard GUI lets you directly or remotely program independent triggered or timed actions
- Built-in 4-port switch eliminates need to add a new network drop



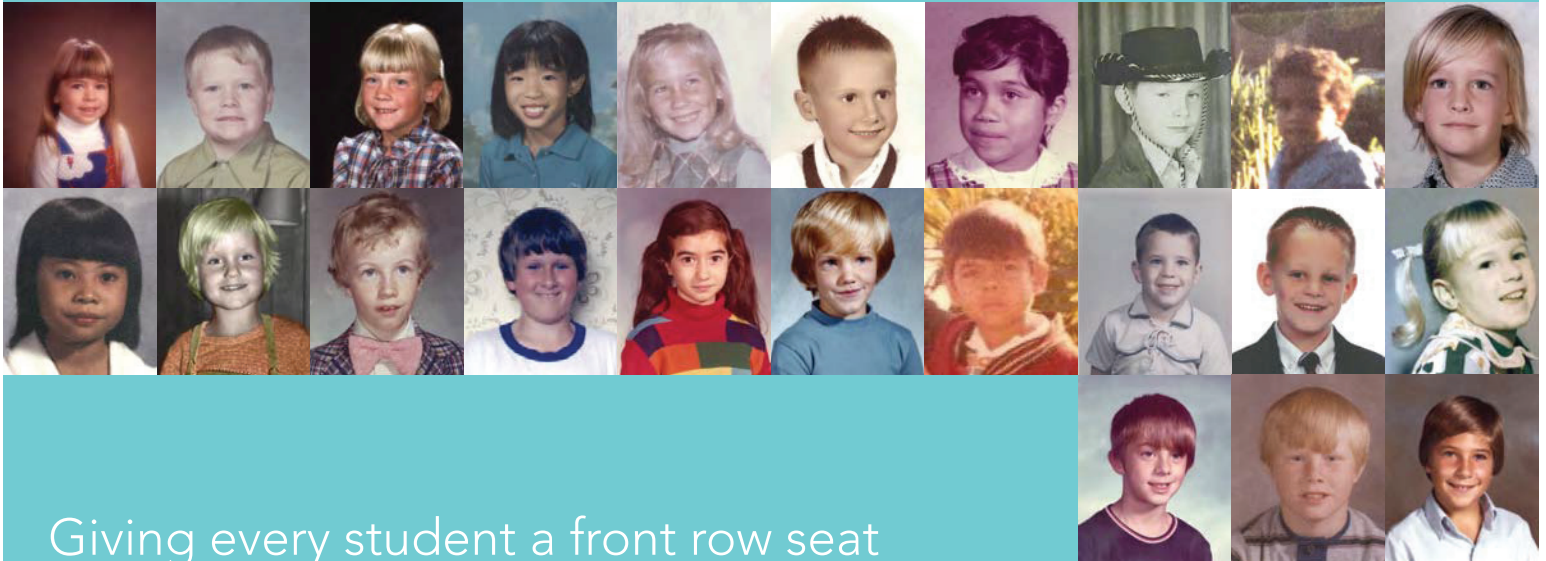
NETWORKED AUDIO ENCODER/DECODER

- Brings IP paging to 70v amps and speakers
- Converts your analog PA system to an IP-based streaming solution
- Programmable to execute actions based on relay/GPI or streaming events
- Optional amplifier can drive speakers for small office or common spaces



UNIVERSAL TELEPHONE INTERFACE

- Allows all-call paging or triggered events from any phone system — even SIP and cell phones
- IP addressable
- CPC detection



Giving every student a front row seat

FRONTRow makes technology for effortless communication in any learning environment. And that helps you deliver a great education more efficiently. Although we think of it as a single platform, most users start out by focusing on one of four major FRONTRow solutions: **Classroom sound, automated lesson capture and distribution, room control, and campus control.**

What drives us

Every day, we put the skills of our great schooling to use, helping the schools that helped us. Thousands of elementary, secondary, and college campuses around the world use FRONTRow technology to simplify, standardize, and improve the way they communicate with students, parents, teachers — and even other technology. They use our products to manage thousands of projectors. To start an intercom call with a simple voice command. Or to improve comprehension, student collaboration, and test scores. Our products help schools overcome very different communication challenges, yet they all have three things in common:

Simplicity

Our engineers based in California, Minnesota, and New Zealand live by a core design principle: “Strength inside, simplicity outside.” That means fewer buttons, more straightforward design, and easier installation. Our microphones, control panels, and software interfaces do the work, so you can do your job.

Long-term cost savings

Tight budgets don’t mean sacrificing quality. Our audio and control products are, by design, a much better return on investment over time. From world-class reliability testing, to dramatic energy savings, to smarter network architecture that saves thousands of dollars in infrastructure and maintenance costs, we’re thinking long-term.

Effectiveness and efficiency

School technology is worthwhile only if it makes technologists, teachers, and students successful. That’s why we devote ourselves to developing technologies like voice command of projectors and other devices, the patented OPTIVOICE™ speech clarification engine, or an open architecture to our control platform that lets you make the changes you want when you want. In ways large or small, FRONTRow products just work better.



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