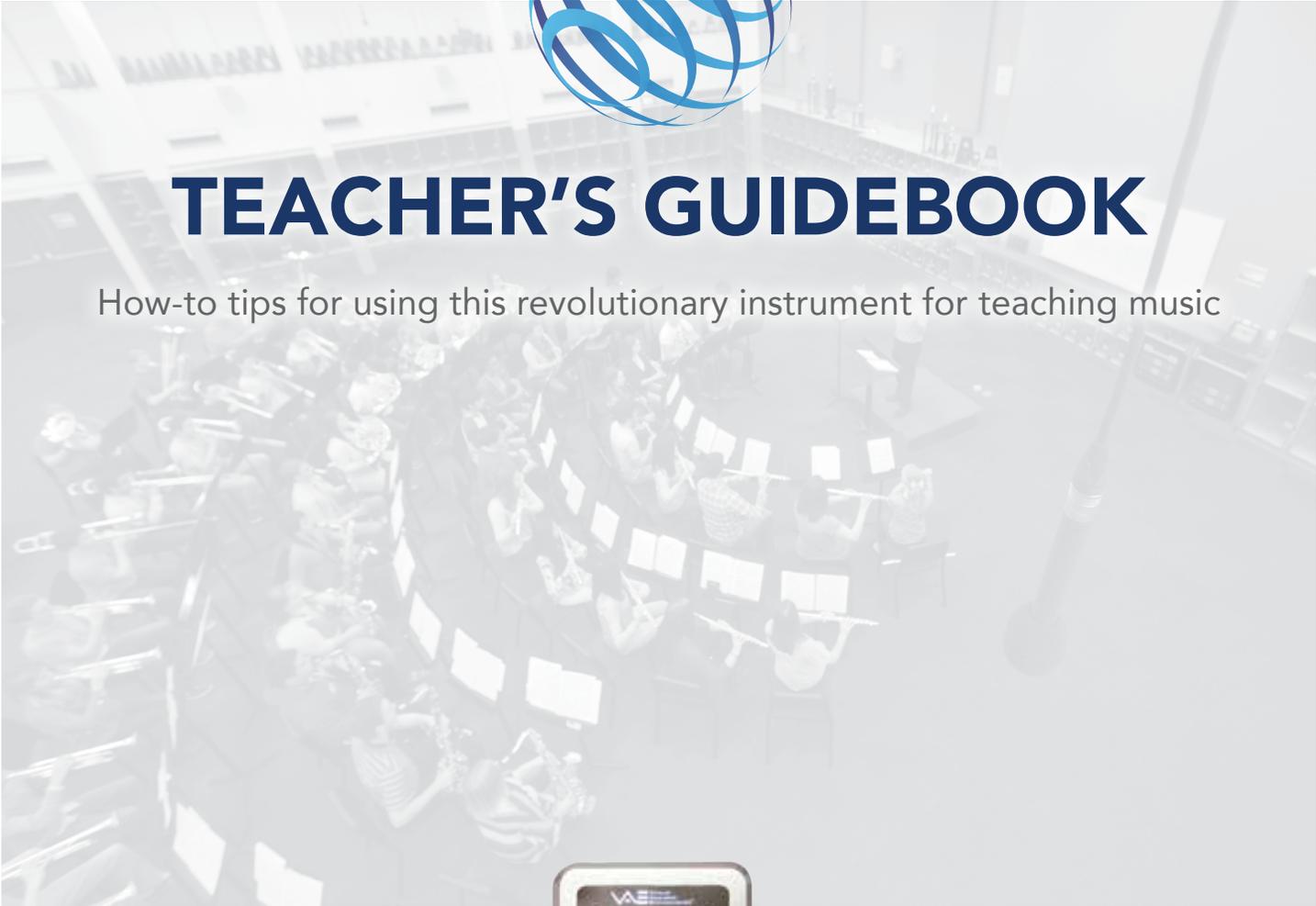




TEACHER'S GUIDEBOOK

How-to tips for using this revolutionary instrument for teaching music



The VAE[®] Rehearsal System

Wenger[®]

This document is a compilation of techniques used by music educators who utilize VAE technology in everyday rehearsals to help improve their students' critical listening and playing skills.

The goal of this guidebook is to offer "How-To" tips to music educators for using the VAE technology in their own rehearsals from elementary to university level.



🎵 The examples given in this guidebook support the three artistic processes of **Performing, Responding, and Creating**, outlined in the National Music Standards.

The National Music Standards' goals include:

- To maintain professional leadership in music training and to develop a national context for the professional growth of individual musicians as artists, scholars, teachers, and participants in music and music-related enterprises.
- To establish that the prime objective of all educational programs in music is to provide the opportunity for every music student to develop individual potentialities to the utmost.

VAE technology will help your students improve intonation, articulation, balance, blend, interpretation, and most of all, critical listening techniques.

Whether you are an instrumental or choral instructor, the VAE system will enhance the music learning of your students as described in the examples on the pages in this guidebook. The possibilities are endless with VAE technology.

We hope this document inspires you to discover how this innovative technology will improve the lives of student musicians and the lives of you as music educators.



VAE Rehearsal helps your students master the art of critical listening, which is foundational for all music learning.

Wenger®

THE VAE® SYSTEM

VAE Rehearsal's ability to instantly change the acoustics of your rehearsal space makes it a revolutionary learning tool. The system is customized to fit your rehearsal room and is compatible with a wide range of room sizes in schools that are brand new or 100 years old. The components of the system include the keypad controller, a processor, suspended microphones and wall and ceiling speakers. Working together, they will dramatically improve how you teach and your students listen!



The Wall and Ceiling Speakers

Placed strategically around your room, these high-quality speakers fill your space with VAE Rehearsal's amazing re-engineered sound.

The Microphones

Just two suspended microphones per room capture sound and send it to the processor.



The Keypad

Placed right next to the conductor. Choose the acoustical environment, adjust volume, control recording, playback and accompaniments.

The Processor

The brains of the system. Wenger worked with Harman and Lexicon to perfect this technology.





PERFORMING

Helping Students Realistically Prepare

“...Perform expressively, with appropriate interpretation and technical accuracy, and in a manner appropriate to the audience and context.” Essential questions include how performers interpret musical works and improve the quality of their performance. (National Music Standards, 2014)

INSTRUMENT REHEARSAL



Joel Ashbrook

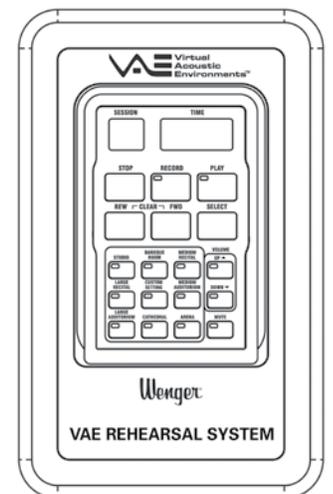
Band Director (retired), San Angelo Central High School, San Angelo, TX

Prepare for an Outdoor Stadium Performance

For marching band rehearsal, we use the arena setting which is similar to our outdoor stadium. With a marching band rehearsal indoors, you can work precision, correctness of notes and articulation. But it's hard to hear balance and blend, especially releases.

Prepare For Festival/Contest Venue

Our custom system settings will simulate our contest venues; we don't have an auditorium. What a great teaching tool – to put a soloist in the middle of the rehearsal room, select the concert hall setting and let them practice. It's just like standing on a stage for them.



The VAE Rehearsal keypad

“VAE Rehearsal has made an incredible difference in learning possibilities, from ear training, listening, vertical alignment, articulation, attacks and releases of notes, even matching vibrato speed. That's how minute the detail can become.”

– Joel Ashbrook, San Angelo Central High School



Matt Weidner

Band Director, Gunnison Valley High School,
Gunnison, UT

Prepare For Festival/Contest Venue

We have our festival performances in a very live hall. In rehearsal, I'm able to choose the medium or large concert hall setting – or somewhere in between using the level setting – and adjust it so it's really close to the hall where we perform for festivals. I listen to our festival recordings and try to match that sound in our room.



Tami Goss

Band Director, Bridge City High School,
Bridge City, TX

Prepare Virtually, Half at a Time

Getting my middle school band classes together to rehearse for a concert is difficult. We usually just get one 30-minute rehearsal with everyone on stage. To prepare for our spring concert, we recorded one of the largest classes – trumpets and clarinets – playing the music and the other two classes could play along later, hearing the other parts and fitting together. This made preparing much easier and I thought our concert turned out much better too.



Natalia Albacete

Band Director, West Lake Middle School,
Humble, TX

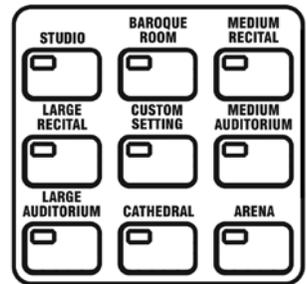
Evaluate Progress

When we're working on a new piece, I usually keep one of our early recordings. Then right before our concert, we'll record the piece again. We listen to both recordings, to help them understand how far they've come. My students love that.

How do I...

Select an environment?

The VAE Rehearsal System includes nine different performance spaces (environments) to choose from. Each space has its own inherent acoustic qualities and will help your students learn how to play in different spaces.



1. Turn on the system.
2. Press the button to choose the environment you'd like.
3. Adjust volume as needed.

CHORAL REHEARSAL



Philip Brown

Choral Director, Bloomington Jefferson High School,
Bloomington, MN

Prepare for Special Performance

If we're getting ready to perform at graduation in the Minneapolis Convention Center, we need to get ready for that acoustic. Or maybe we're going to sing the national anthem outside at a Minnesota Twins game. We've got an arena setting, a cathedral setting. Or maybe we're preparing for a recording session at a beautiful church that has a lot of reverberation in it.

Teach Flexibility

I like to sample a lot of different VAE settings. It keeps the singers flexible, where they're not so comfortable that things get assumed. Sometimes, I'll turn it off so they understand what the room was like before.



Jacquelyn Vondette

Choir Director, West Lake Middle School,
Humble, TX

Teach Flexibility

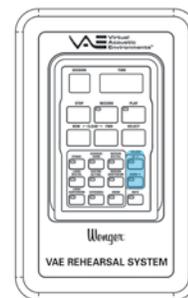
Most often I use our performance space setting, but I do like to switch it up so they don't get accustomed to just one hall. Sometimes I don't tell my students; I like to see if they notice a difference in the way they feel when singing.



How do I...

Adjust the volume?

You can easily adjust how loud or quiet your room is with the volume buttons on your keypad. These buttons also control the volume of any playback. The Session display will show you what level 1-30 you are at.



Tip:

Within any environment you can select a volume level of 30 to automatically simulate that environment with empty seats.



What is the Custom environment?

Wenger can measure the acoustic characteristics of a space that your groups perform in often (example: your school's auditorium) and create a custom environment within the system that mimics that space. It's perfect for programs that can't always rehearse in the auditorium due to scheduling.

2

RESPONDING

Evaluating and Self-Critique

“Support interpretations of musical works that reflect creators’/performers’ expressive intent.” Personally evaluate musical works and performances by analysis, interpretation and established criteria. (National Music Standards, 2014)

INSTRUMENTAL REHEARSAL



Mark Gitch

Orchestra Director, Wayzata High School,
Plymouth, MN

Feel Composer’s Intent

Responding to music, an important component of the National Standards, involves emotional and psychological reflection. The record-playback technology gives student musicians the opportunity to respond artistically with an immediacy that promotes understanding and retention, encouraging them to ask themselves, “Are we telling the story we want to tell? Are we taking the composer’s intent to heart and communicating that intent to one another and to our audience? If I’m not moved as a musician, how can I expect the audience to be moved?” Wrestling with such questions is a core element of the musical experience.

Support Artistic Expression

By providing the opportunity to reflect and respond immediately, VAE recording technology encourages artistic growth. It can be difficult to accurately perceive musical elements such as balance, blend, and phrase shape while performing, particularly so for less experienced musicians. Through listening, analyzing, and adjusting, students engage in an artistic process that moves them beyond pitch and rhythm error detection.

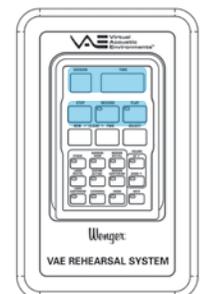


How do I... Record and Play back?

The VAE Rehearsal System can easily create a high-quality recording for instant playback or later use.

1. Press Record.
2. Press Stop when finished.
3. Press Play to instantly play back your recording.

The display will note the length of the recording and the session number. You can record up to nine sessions.



Tip:

Any recording can be played back in the environment you choose simply by pressing Play and then selecting one of the nine environments.

INSTRUMENTAL REHEARSAL (CONT.)

Inspire More Practice

My students across a wide range of skill levels experience similar, positive effects using this technology. They've been inspired to listen differently and to practice more. Anything that inspires more practice is a good thing.

Improve Technical Response

Once students get past the self-conscious aspect, they can start responding in a more technical way: a certain section is out of tune, the playing is not together, one section cannot hear another section, etc.

Develop Critical Listening Skills

After school, many students – and occasionally a faculty member – come in to use the space individually. I think they're inspired by playing in a cathedral setting, for example, along with really listening differently. Maybe they're listening to the last note and asking themselves: 'Is that really the tone I wanted? Is that really the pitch I wanted? Maybe I should do that again...'



Joel Ashbrook

Band Director (retired), San Angelo Central High School, San Angelo, TX

Provide Immediate Feedback

I'll have section play, pulling a part out, and then have that one part play with the group that was missing. It forces the students to listen. In any form of education, immediate feedback is key. Students can hear the problem, fix it and we move on. It's a great time saver.

After my woodwinds rehearsed a long, technical lick in four different room settings – from large arena to small practice room – they listened and immediately corrected a problem we had struggled with for a month.

Improve Technical Response

It has allowed our students to cross-reference with each other across the ensemble. The releases are much better. I'll record and play back for my students. We listen for releases and attacks, balance and blend and intonation which you can hear incredibly well with the system.

Improve Balance and Blend

My students can experience playing in a performance environment: maintaining rhythm, tuning and pitch across the band. We choose different acoustic settings to work on balance, blend and precision between the sections, such as drum line and brass.

How do I...

Save a recording to a digital file that I can email or save for later?

You can easily save any recording to your laptop to share with others or save for later.

1. Connect the VAE's Processor to your laptop or desktop computer with a USB cable.
2. Once connected, the VAE system will appear as an external hard drive on your laptop.
3. Audio files will be labeled by their Session number 1-9. The files are in a folder called Wenger and are named SESSION1.WAV through SESSION9.WAV. Drag and drop to copy the desired file to your laptop's hard drive.

Tip:

To enhance your students' practice at home you can record, download and save a digital file that you can email to them.

Develop Critical Listening Skills

We use this technology daily for comparison listening, to help students understand differences in sound, balance, starts/stops to notes and tonal matching. We begin rehearsing with the system off, then add acoustical enhancements to subsequent recordings so students can compare; finally, they compare with the initial, system-off environment.



Matt Weidner

Band Director, Gunnison Valley High School,
Gunnison, UT

Develop Critical Listening Skills

I pass out judging sheets to our students – the same sheets used by festival and state judges. We then listen to our recorded performance and the kids do the judging – they circle what they hear and know exactly what needs to be corrected and improved.

CHORAL REHEARSAL



Philip Brown

Choral Director, Bloomington Jefferson High School,
Bloomington, MN

Feel Composer's Intent

The VAE settings enable you to feel more authentic. For example, if you are doing a Baroque piece and you're singing in that setting, it feels like you're lifted into that time period. Or if you're doing a European motet, you could use the cathedral setting and feel the architectural characteristics of the concert setting the composer had in mind.

Develop Critical Listening Skills and Self-Critique

With show choir, as the kids are dancing and singing, it changes how they sound – the singing suffers. And they don't really know how much the singing suffers or to what level or where in the music it really does.

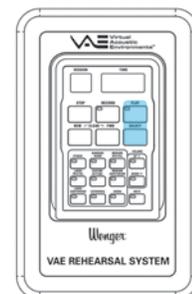
With the record/playback capability, we now can hear it right away. And we can go back and really try to fix it. Or we can adjust the choreography, knowing that singing is just not happening. That knowledge gives us options.

How do I...

Copy an audio file to my VAE system to use in my classroom?

Just about any outside recorded performance (.WAV file @ 44.1k) can be added to the system for playback to use as an accompaniment or for evaluation.

1. Connect the VAE's Processor to your laptop or desktop computer with a USB cable.
2. Once connected, the VAE system will appear as an external hard drive on your laptop.
3. Name your audio file as one of the Session numbers (SESSION1. WAV through SESSION9.WAV) and drag and drop to copy the VAE's hard drive.
4. The recording can then be played just by choosing the Session and hitting Play.



CHORAL REHEARSAL (CONT.)



Jacquelyn Vondette

Choir Director, West Lake Middle School,
Humble, TX

Hone Critical Listening & Evaluation Skills

When we listen to a recording of ourselves, I ask the students to give positives about the performance, along with specific things we can improve upon. They have to offer specific comments like these:

- Our diction was not together.
- Our diction was not clear/words were not understandable.
- We sound under-supported/not enough air.
- Our vowels were not tall/wide mouths.
- Our timing was not together consistently/irregular tempos.
- Voices were not always blending/voices sticking out.
- We did not follow the proper dynamics written in the music.
- We are emphasizing the wrong syllables of words.

At the end I have them rank the performance, like they are judging at the annual state contest.

I like to put them in rooms that make certain things stand out. For example, the Baroque room emphasizes certain bad habits because it's brighter. I'll use some of the larger halls to emphasize how we need to make things clear, like with our diction. The resonance of a large hall will make it hard if you don't enunciate.

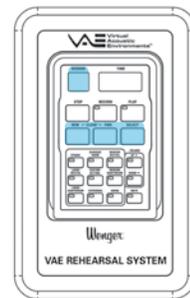


How do I...

Clear/erase one of my recordings?

Erasing a recording to open that session for future recordings is simple.

1. Select the Session using the Select button.
2. Press both the REW and FWD buttons at the same time.



"I inherited a choir room that was acoustically awful – small with a low ceiling – and students didn't want to sing in it. After the VAE Rehearsal, their feeling totally flipped because the system supports a healthy vocal technique."

– Philip Brown, Bloomington Jefferson High School

3

CREATING

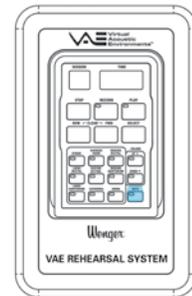
The “work” of individual practice & group rehearsal; Rehearsing more intelligently

“...create musical work that meets appropriate criteria. Share creative musical work that conveys intent, demonstrates craftsmanship and exhibits originality... Musicians evaluate and refine their work through openness to new ideas...” (National Music Standards, 2014)

How do I...

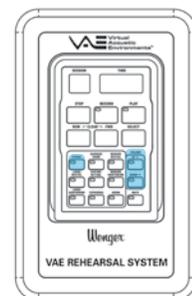
Return to the natural acoustics of my room?

To turn off the system so that none of the programmed environments are engaged, simply press the Mute button.



Tip:

You can use the system in “Voice Lift” mode to speak without having to raise your voice. Just press the Studio button.



CHORAL REHEARSAL



Michael Gutierrez

Director of Choirs, Firebaugh High School, Firebaugh, CA

Improve Vocal Exercises

I recently folded up our choral risers and had everyone sit in a circle, facing each other. First they sang with the system off, then I turned it on to the cathedral setting and we tried again. I didn’t tell them anything, but they were automatically adapting as they listened to each other more. It was really beautiful.

INSTRUMENTAL REHEARSAL



Ryan Dirlam

Director of Bands/District Music Coordinator, Firebaugh High School, Firebaugh, CA

Improve Warm-Up Exercises

I record an ensemble the first time through, then play it back and have them accompany themselves, starting two measures later within the same chord structure.

INSTRUMENTAL REHEARSAL (CONT.)

Improve Split Rehearsals

First I'll record the wind ensemble or symphonic band playing an entire song or part of song, without percussion. Then the percussion class can rehearse along with that recording.



Joel Ashbrook

Band Director (retired), San Angelo Central High School, San Angelo, TX

Improve Warm-Up Exercises

For my wind ensemble, I'll have all of the treble instruments play, and record it. Then I'll ask treble instruments not to play. I'll play the recording back and all of the bass instruments play along. The students really start to hear chords; the pitch tonal center of my band has gone up two division ratings in two months.

Enhance Individual and Sectional Practice

For soloists, we have their piano accompaniments all on the laptop, whether through SmartMusic or not. We brought our accompanist in several weeks ago and recorded the accompaniment, sending a .wav file to the computer. This puts the students in charge of their own rehearsal with their own accompanist, to practice on their own.

Coordinate with Smart Music

We can put the SmartMusic notes – the students' parts – on the board. The students play and the VAE system records them with the acoustic enhancement. I can download a recording onto a flash drive or to e-mail out as .wav file.

Select Accompaniment Options

The piano accompaniments can be recorded in real time through the system with the acoustics turned on. Or you can purchase those accompaniments as pre-done recordings that simply go through your laptop. We just plug in the USB and we're ready to go – onto a flash drive or .wav file via e-mail.

How do I...

Play a song or accompaniment from my smartphone over the VAE system?

Your class can play along with any music file you have on your smartphone.

1. Connect your phone to the VAE system's Processor with an aux. cord.
2. Press Play on your phone to start the track and then you can adjust the volume and environment on your keypad as you usually do.
3. Your music track will play over the VAE system's speakers.

Tip:

To practice for a performance on a basketball gymnasium or outdoors on the football field, choose the Arena Setting.



INSTRUMENTAL REHEARSAL (CONT.)



Natalia Albacete

Band Director, West Lake Middle School,
Humble, TX

Aid Rehearsal Preparation

I record my band and listen afterwards, to make notes for the next day's rehearsal. I just plug my computer in, take a recording and go.



Michael Gutierrez

Director of Choirs, Firebaugh High School,
Firebaugh, CA

Help Prepare for a Substitute Teacher

When the accompanist and I both have to be gone from class, and I have a non-musical substitute teacher, the VAE system could allow the sub to easily lead a productive rehearsal. On one track I could record basic warm-ups for the students to use, with an accompanist; another track could have the full accompaniment for the songs they're working on. The sub can also record the students for me to review later.

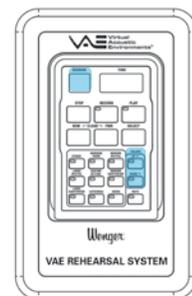
Tip:

VAE Rehearsal is a perfect solution for rooms that lack cubic volume and are too loud. A VAE Rehearsal System installation with acoustical treatment will control the loudness and improve room acoustics dramatically.

VAE Rehearsal can turn your rehearsal room into a flexible space that acoustically accommodates lecture, choir, band AND orchestra.

Tip:

To simulate any of VAE Rehearsal's nine environments as they would sound without an audience, simply set the volume level to 30. The volume level is shown in the Session display.



SUMMARY

The possibilities are endless when it comes to how VAE technology helps your students learn. At Wenger, we are constantly amazed at how music educators who are using the VAE system continue to develop creative techniques to help their musicians improve.

One thing we consistently hear is how the system helps their students learn critical listening skills. Having the ability to hear themselves and the entire ensemble helps students become better musicians. The hope is that this guidebook will inspire you to think of how this technology will improve the lives of your student musicians and the lives of music educators.

"We get a lot of students coming in to practice in my room before school, after school and even during school. I've had to kick students out because they were late for their next class! Any time you can inspire students to practice more, that's a good thing."

– Mark Gitch, Wayzata High School

THE CUSTOM SETTING

The Custom Setting on your keypad is one of the nine environments available on the VAE Rehearsal System. Most of our customers choose to have this setting simulate their school's auditorium so they can practice for that space without leaving the rehearsal room. This is especially valuable when the auditorium is unavailable due to a busy schedule.

Wenger's team of engineers will capture highly accurate measurements of your auditorium's acoustics and program them into your VAE Rehearsal System. This setup is included in the cost of your system. You can also add a second Custom Setting at an additional charge.

Another option is for customers to choose to add off-site venues including professional performance spaces. This is an option for your Custom Setting as long as you can obtain the proper permissions from the venue.

"It's very convenient to have a setting that simulates the acoustics of our auditorium, because it's difficult to hold many rehearsals in there. High school auditoriums are more heavily scheduled these days, including with rental events."

– Philip Brown, Bloomington Jefferson High School

CUSTOMER REVIEWS

"The VAE Rehearsal really transforms the classroom. My students are using their own ears and really becoming musicians. No longer do they have to rely on my ears to tell them how they are doing! It's increased the quality of my program over tenfold."

– Matt Weidner, Band Director, Gunnison Valley High School, Gunnison, Utah

"I think every student can hear and feel a difference with the VAE Rehearsal System. It's adding to their skill set and enhancing their music education."

– Philip Brown, Choral Director, Bloomington Jefferson High School, Bloomington, Minnesota

"Similar to many high schools, our auditorium is shared by many users. As such, our rehearsal time prior to a concert is often limited. With the Custom Setting, we can feel as if we're on stage while rehearsing in our orchestra room."

– Mark Gitch, Director of Orchestras, Wayzata High School, Plymouth, Minnesota

"The VAE technology is a really great teaching resource with terrific educational value."

– Ryan Dirlam, Director of Bands/District Music Coordinator, Firebaugh High School, Firebaugh, California

"The VAE Rehearsal is a great teaching tool that has really helped me daily! When I record something I want my students to work on, it's been an eye-opener for them. I may have explained it a thousand times, but hearing it makes the light bulb go on. Everyone is looking for a way to teach more effectively, and I think this will be the future of music education."

– Joel Ashbrook, Band Director (Retired) San Angelo Central High School, San Angelo, Texas

"The VAE Rehearsal has shaved off hours and hours of rehearsal time. With record/playback, students can assess what they're hearing and make immediate adjustments. I tried to record them before but it was always a lot of trouble. The recording quality wasn't very good; the playback wasn't seamless. Now it's incredibly simple: just push a button."

– Natalia Albacete, Band Director West Lake Middle School, Humble, Texas

"My students love the instant gratification of hearing themselves perform -- they're able to tune and adjust as needed. This self-assessment is an important benefit."

– Jacquelyn Vondette, Choir Director West Lake Middle School, Humble, Texas

ADDITIONAL RESOURCES

You can access a copy of the VAE Rehearsal User's Guide online at this address:

wengercorp.com/vaeuserguide

You can access NAFME's National Music Standards online at this address:

nafme.org/overview-of-2014-music-standards/



© 2019 Wenger Corporation
USA/11-19/500/W/LT0034B



MUSIC EDUCATION AND PERFORMING ARTS

Owatonna Office: Phone 800.4WENGER (493-6437) Worldwide +1.507.455.4100 | Parts & Service 800.887.7145 | wengercorp.com
555 Park Drive, PO Box 448 | Owatonna | MN 55060-0448

Syracuse Office: Phone 800.836.1885 Worldwide +1.315.451.3440 | jrclancy.com | 7041 Interstate Island Road | Syracuse | NY 13209-9713

ATHLETICS Phone 800.493.6437 | email gearboss@wengercorp.com | gearboss.com | 555 Park Drive, PO Box 448 | Owatonna | MN 55060-0448