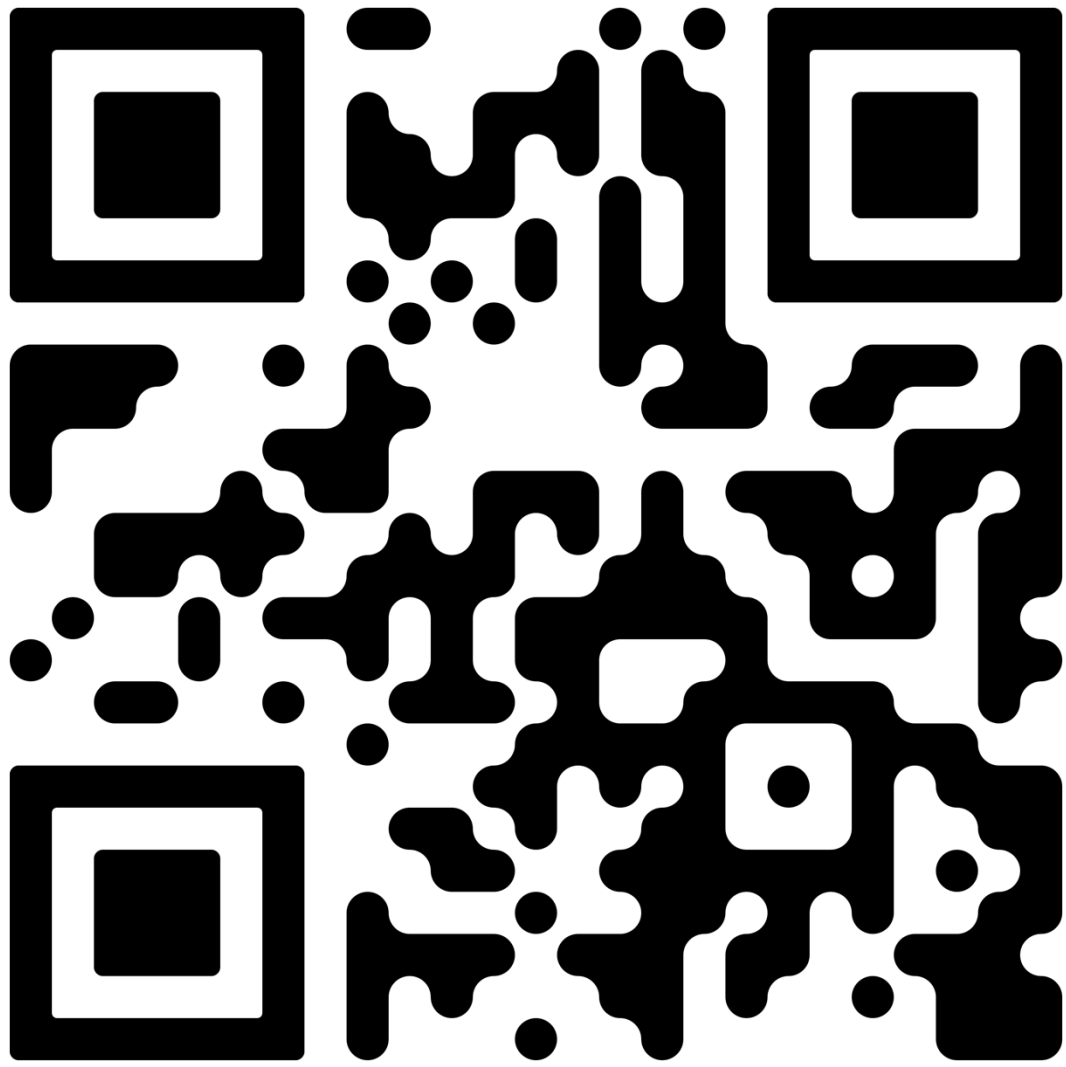




Recording for the 21st Century Classroom

Craig A. Edgar
Sweetwater Institutional Sales

Scan This for later!



Some quick Context

Band Director:

- National Music Festivals, Memorial Day in DC etc
- Started students in 4th grade, designed a fully vertically and horizontally aligned curriculum
 - Juilliard Creative Classroom
- Grammy Nominated Music Educator 2017

General Music Teacher:

- Early Childhood through Middle School General music
- STEM & Project based learning initiatives
- Rock Band Program & Music Theater

Sweetwater:

- How to Buy A Bass You'll Love
- Sweetwater University
- Best Mics for Saxophone
- Institutional Sales Training



A Performance in Two Acts:

WHY Recording is Worth Exploring in Your Classroom....

- Boost Culture In and Outside the Classroom
- Support Curricular Goals

HOW to do it

- Best Practices for Ensembles and Soloists
- Video

Act I: The WHY

Recording as a Rehearsal Tool

- The most honest mirror we have to our performance



**BUT WHO ARE WE
PLAYING TO?**

Recording as a Rehearsal Tool

- The most honest mirror we have to our performance
- Reference for rehearsal Planning

Recording as a Rehearsal Tool

- The most honest mirror we have to our performance
- Reference for rehearsal Planning
- Invites Students to become a part of the reflective process
 - Drives Student Ownership
 - Foster more Parent and Administrator Buy-In

Fostering Student Ownership



Set Objective Goals



Develop Targeted Practice (*or get them to practice in the first place...*)



Invite student leadership to lead sectionals

Recording as a Rehearsal Tool

- The most honest mirror we have to our performance
- Reference for rehearsal Planning
- Invites Students to become a part of the reflective process
 - Drives Student Ownership
 - Foster more Parent and Administrator Buy-In

A Critical Truth about Parents and Administrators

*You cannot expect anyone to care about your program if
they don't know what you're doing*



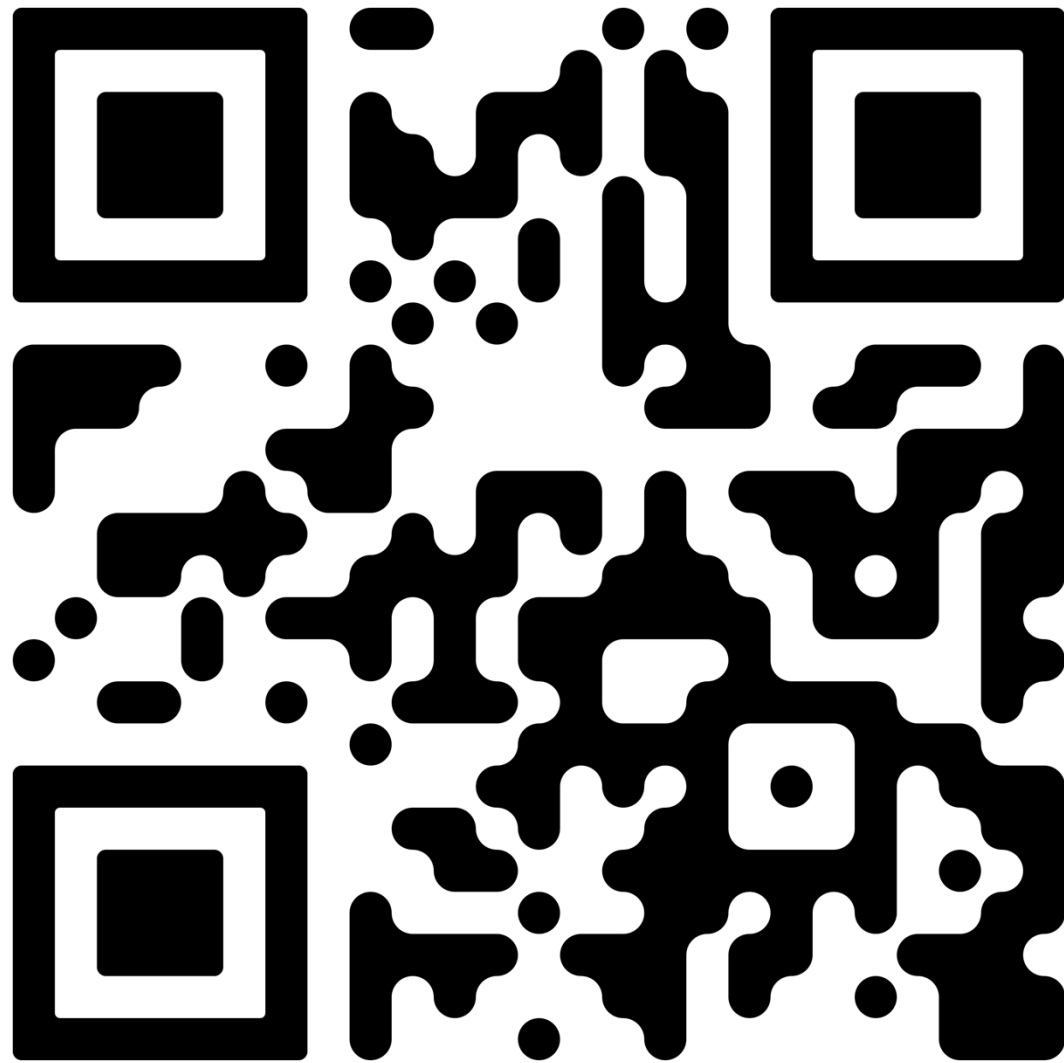
Another Critical Truth about Administrators

*Administrators WANT to support your program...
But they need the ammunition to do it!*

"In God we trust, all others bring data"

Let's Take a Look at Some Standards...





*Not a Rick Roll
I Promise!!*

Example Activity 1

Record a section of a piece for review. Have the ensemble listen as a group, and identify 3 areas of improvement for the next rehearsal.

PERFORMING

Rehearse, Evaluate and Refine

Evaluate and refine personal and ensemble performances, individually or in collaboration with others.

Enduring Understanding: To express their musical ideas, musicians analyze, evaluate, and refine their performance over time through openness to new ideas, persistence, and the application of appropriate criteria.		Essential Question: How do musicians improve the quality of their performance?			
Common Anchor #5	Novice	Intermediate	Proficient	Accomplished	Advanced
	MU:Pr5.3.E.5a Use self-reflection and peer feedback to refine individual and ensemble performances of a varied repertoire of music.	MU:Pr5.3.E.8a <i>Develop strategies to address technical challenges in a varied repertoire of music and evaluate their success using feedback from ensemble peers and other sources to refine performances.</i>	MU:Pr5.3.E.1a Develop strategies to address expressive challenges in a varied repertoire of music, and evaluate their success using feedback from ensemble peers and other sources to refine performances .	MU:Pr5.3.E.11a Develop and apply appropriate rehearsal strategies to address individual and ensemble challenges in a varied repertoire of music, and evaluate their success.	MU:Pr5.3.E.11a Develop, apply, and refine appropriate rehearsal strategies to address individual and ensemble challenges in a varied repertoire of music.

RESPONDING

Evaluate

Support personal evaluation of musical works and performance(s) based on analysis, interpretation, and established criteria.

Enduring Understanding: The personal evaluation of musical work(s) and performance(s) is informed by analysis, interpretation, and established criteria.		Essential Question: How do we judge the quality of musical work(s) and performance(s)?			
Common Anchor #9	Novice	Intermediate	Proficient	Accomplished	Advanced
	MU:Re9.1.E.5a Identify and describe the effect of interest, experience, analysis , and context on the evaluation of music.	MU:Re9.1.E.8a <i>Explain the influence of experiences, analysis, and context on interest in and evaluation of music.</i>	MU:Re9.1.E.1a Evaluate works and performances based on personally- or collaboratively-developed criteria , including analysis of the structure and context .	MU:Re9.1.E.11a Evaluate works and performances based on research as well as personally- and collaboratively-developed criteria , including analysis and interpretation of the structure and context .	MU:Re9.1.E.11a <i>Develop and justify evaluations of music, programs of music, and performances based on criteria, personal decision-making, research, and understanding of contexts.</i>

Example Activity 2

Compare/Contrast a rehearsal recording with another piece of similar genre/style. Listen specifically for execution of stylistic elements (ex. Idiomatic ornaments, localized diction etc.)

RESPONDING

Analyze

Analyze how the structure and context of varied musical works inform the response.

Enduring Understanding: Response to music is informed by analyzing context (social cultural, and historical) and how creators and performers manipulate the elements of music.

Essential Question: How does understanding the structure and context of the music influence a response?

Novice	Intermediate	Proficient	Accomplished	Advanced
MU:Re7.2.E.5a Identify how knowledge of context and the use of repetition, similarities, and contrasts inform the response to music.	MU:Re7.2.E.8a Describe how <i>understanding</i> context and the way the elements of music are manipulated inform the response to music.	MU:Re7.2.E.1a Explain how the analysis of passages and understanding the way the elements of music are manipulated inform the response to music.	MU:Re7.2.E.1a Explain how the analysis of structures and contexts inform the response to music.	MU:Re7.2.E.11a Demonstrate and justify how the analysis of structures , contexts , and <i>performance decisions</i> inform the response to music.

PERFORMING

Analyze

Analyze the structure and context of varied musical works and their implications for performance.

Enduring Understanding: Analyzing creators' context and how they manipulate elements of music provides insight into their intent and informs performance.

Essential Question: How does understanding the structure and context of musical works inform performance?

Novice	Intermediate	Proficient	Accomplished	Advanced
MU:Pr4.2.E.5a Demonstrate, using music reading skills where appropriate, how knowledge of formal aspects in musical works inform prepared or improvised performances .	MU:Pr4.2.E.5a Demonstrate, using music reading skills where appropriate, <i>how the</i> setting and formal characteristics <i>of</i> musical works contribute to understanding the context of the music in prepared or improvised performances .	MU:Pr4.2.E.1a Demonstrate, using music reading skills where appropriate, <i>how</i> compositional devices employed and theoretical and structural aspects of musical works impact and inform prepared or improvised performances .	MU:Pr4.2.E.1a Document and demonstrate, using music reading skills where appropriate, how compositional devices employed and theoretical and structural aspects of musical works may impact and inform prepared and improvised performances .	MU:Pr4.2.E.11a Examine, evaluate, and critique, using music reading skills where appropriate, how the structure and context impact and inform prepared and improvised performances .

Act II: The HOW

3 Sections:

- Ensembles (Large and Small)
- Soloists
- Video

Some Basic Gear

- Something to Listen (Microphone)



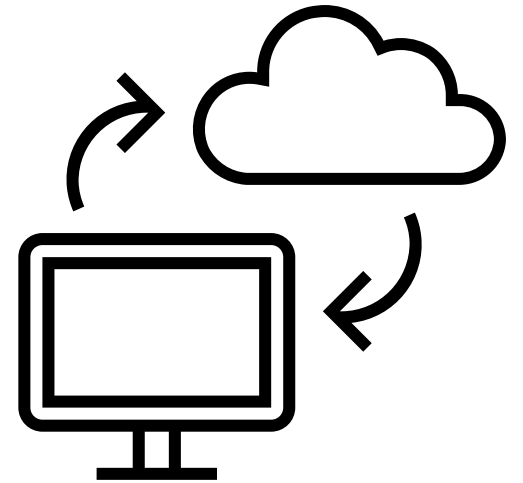
Some Basic Gear

- Something to Listen (Microphone)
- Something to Record/Playback



Some Basic Gear

- Something to Listen (Microphone)
- Something to Record/Playback
- A Way to Share the Recording



Ensembles – Large or Small

- Most Useful Day-To-Day
- Basic Setup:
 - 1-2 Mics into an interface
 - Digital Recorder to SD Card



Microphone Placement





Dynamic Microphones

- Heavy Diaphragm (less responsive, and that's not always a bad thing!)
- Usually End Address (talk into the end of the mic)
- Live Performance
 - Less Handling noise
 - Less responsive = less FEEDBACK potential
- Recording
 - Closer to the source is better
 - Usually don't make great Room mics (need a LOT of gain)

Condenser Microphones

- Light Diaphragm = Faster response
 - WAY more sensitive
- Can Be either End or Side Address
- Live Application
 - Lots of Feedback Potential
 - High Handling noise
 - Easier to Clip than Dynamic microphones
- Recording Application
 - Ensembles, Soloists, Percussion Overheads – Usually won't use on loud Brass/percussion if mic-ing up close.
- ALWAYS require +48v Phantom power



How Diaphragm Size Affects the Sound

LARGE

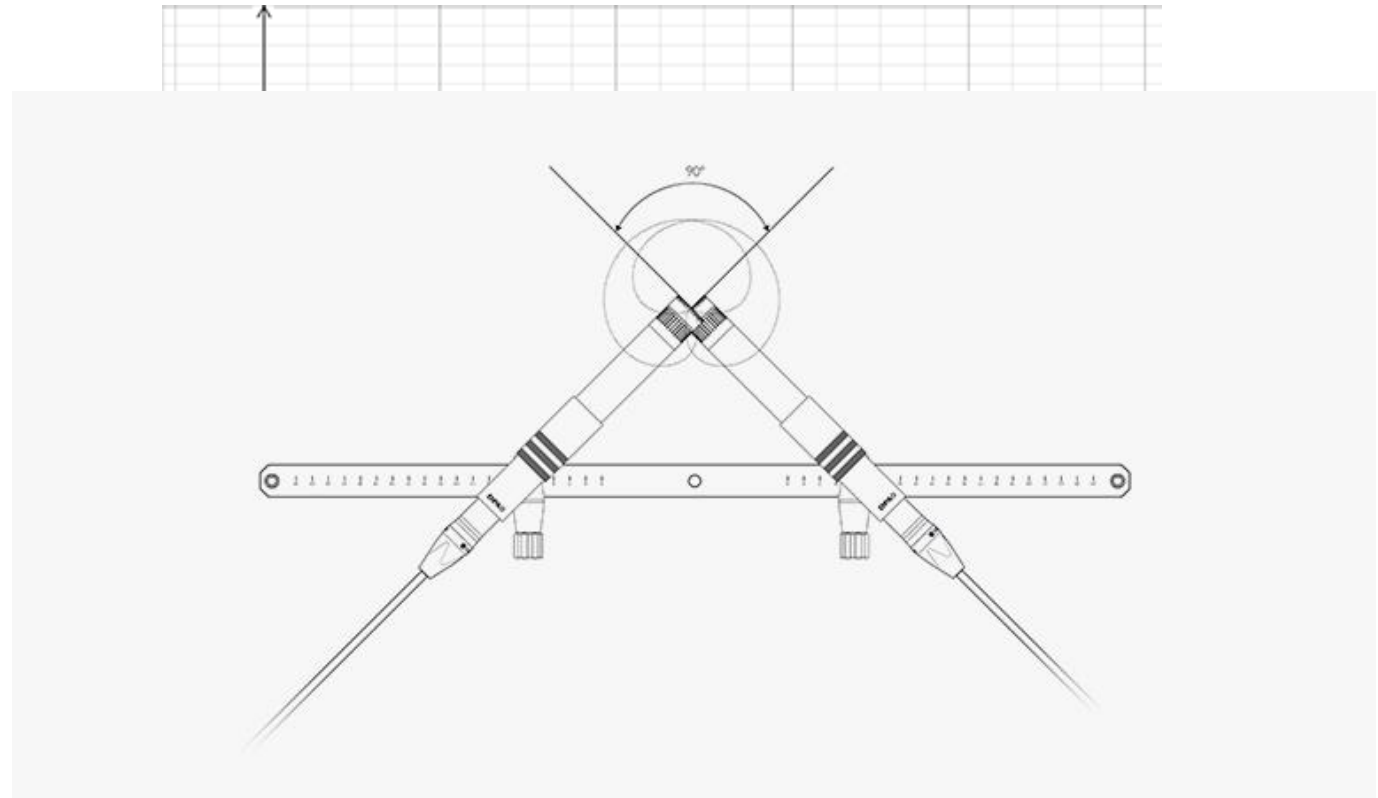
- Changes in sensitivity based on frequency
- Can be very clean, or add a lot of color to the sound.
- Need a Shockmount
- Strong Suit: Close to the source, best for soloists/small ensembles

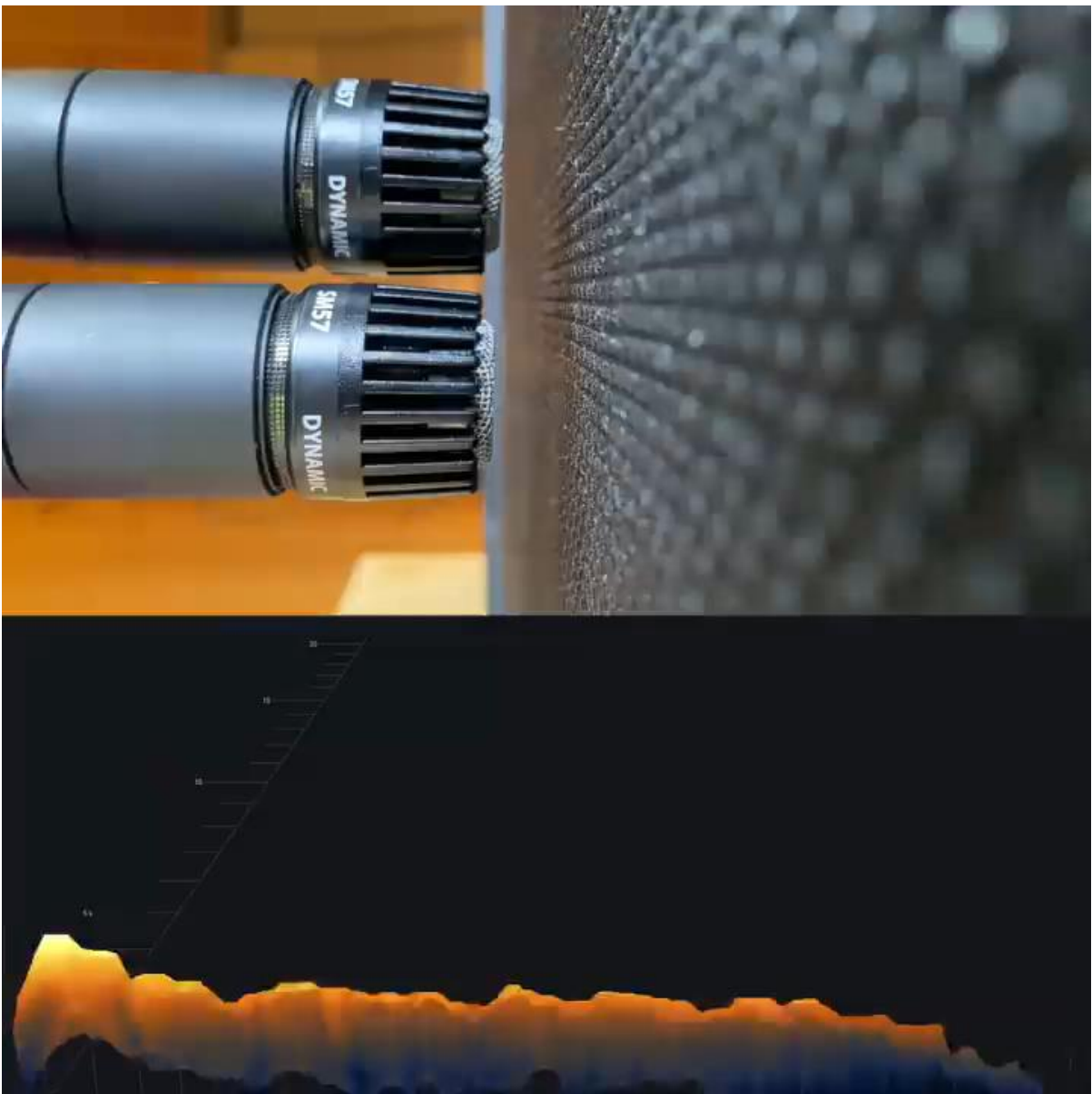
Small

- Even frequency response
- Fast Transient Response
- Usually very clean, borderline 'sterile' sounding
- Strong Suit: Large Ensemble/Hall recording, can be placed further away from the source.
- Stereo Pair of Pencil Mics, Shotgun Mics – what's the difference?

A Note on Stereo Mic Placement

- PHASE = Time of arrival for a sound to a microphone or listener.
- Keep Stereo Mics close together, XY Pattern
- What happens if they're too Far apart?
 - Wouldn't it be cool if we could see it in real time?





Real world Examples

- Same Kids, Same Room, Same Mixer, Same Take
- Courtesy of Colleen Phillips at Memorial Park MS in Fort Wayne
- Captured on Allen and Heath CQ18T, Post Preamp (only gain, no Processing)
- Level Matched to -14LUFS (Spotify Loudness Standard for Translation)

How to Listen to These Examples

- Homogeneity
- Tone (Bright/Dark)
- Other Noise (HVAC, taps from feet/baton/metronome etc.)
- Overall Detail



Soloists

- Mind Your Levels/Distance from the mic
 - Dynamic Range
- Don't Ask "Where are my Ears?"
 - Find where it sounds most authentic to the instrument
- Guide for Close Mic-ing Instruments



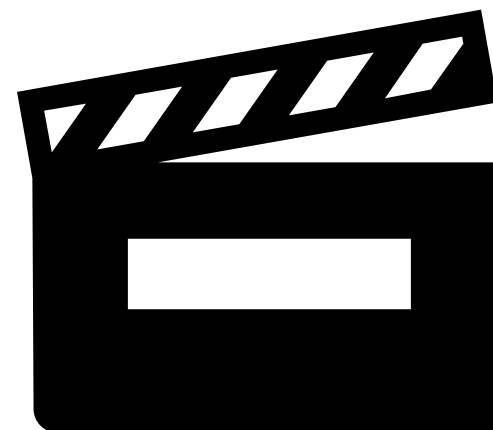
So What Mic Should I Use?

Short answer – the one you have!

- You can get solid recordings for rehearsal usage using any microphone
- Just because a mic is more expensive, doesn't mean it's the better tool for your application
- Good Starting point for rehearsal recording:
 - Stereo Pair of Small Diaphragm Condensers (Starting around \$2-300)
 - Single Large Diaphragm Condenser (Start around \$200)
- Neutral, Even Response, Transparent (No Coloration)

So What About Video?





Questions?