Beautifying Tone & Intonation ~

Tangible Strategies, Tips, and Activities for the Effective Band Director

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What we'll talk about today …
A very brief overview:

Overview 1/4:

Long-Term Goals & Solutions:

Beyond our scope *for today*, but important to mention …

- **Recruitment** (Balance/Matrix) and Retention
- **Equipment** / Upgrades$$ / your Facility
- **Modeling** (Demos/Recordings/Guests)

Overview 2/4:

Short-Term Goals & Solutions:

Not our *main focus today*, but let's take a brief stop here …

- **Literature Selection:** Difficulty ~ Cross-cueing ~ Ensemble strengths/weaknesses ~ matching (range, skills, endurance, et al)
- **Seating Plans:** Guided by your students & facility *more than* by what you remember from college ~ the *sound* drives the seating plan, and that might be affected by the literature

Overview 3/4:

***PERSONALIZED* STRATEGIES:**

Along the way, we'll make some pit-stops for …

… **Intonation Maps** (a pitch-tendencies "inventory")

… **Alternate Fingerings/Positions** (*when* can you begin teaching *Theory* for harmonics, overtones, and intonation tendencies?)

… **Lesson Content** (Do you value Tone/Intonation in *every* session with students?)

… **Tech/App options**

Overview 4/4:

<u>Rehearsal Strategies</u>
will remain our *main focus* for today:

"What can I do in rehearsals and lesson classes to help students develop their <u>independence</u> with Tone & Tuning?"

1. **TONE** is Job #1 . . . poor Tone limits tuning success.

2. ***Singing*** is a great pathway to improved Intonation.

So, let's make TONE the first stop:

The Framework of "GIVENS"

1. *The Aural Concept*
2. *The Fundamentals*
   - ***Posture & Positioning*** [Grip]
   - ***Breathing & Breath Control*** [Stroke]
   - ***Articulation*** [Stroke, Mallet Choice, Playing Area]
   - ***Listening & Awareness*** [Balance, Blend, Etc.]
3. *The Equipment*
4. *And the Aural Concept*
5. *Oh and lest I forget: the Aural Concept!*

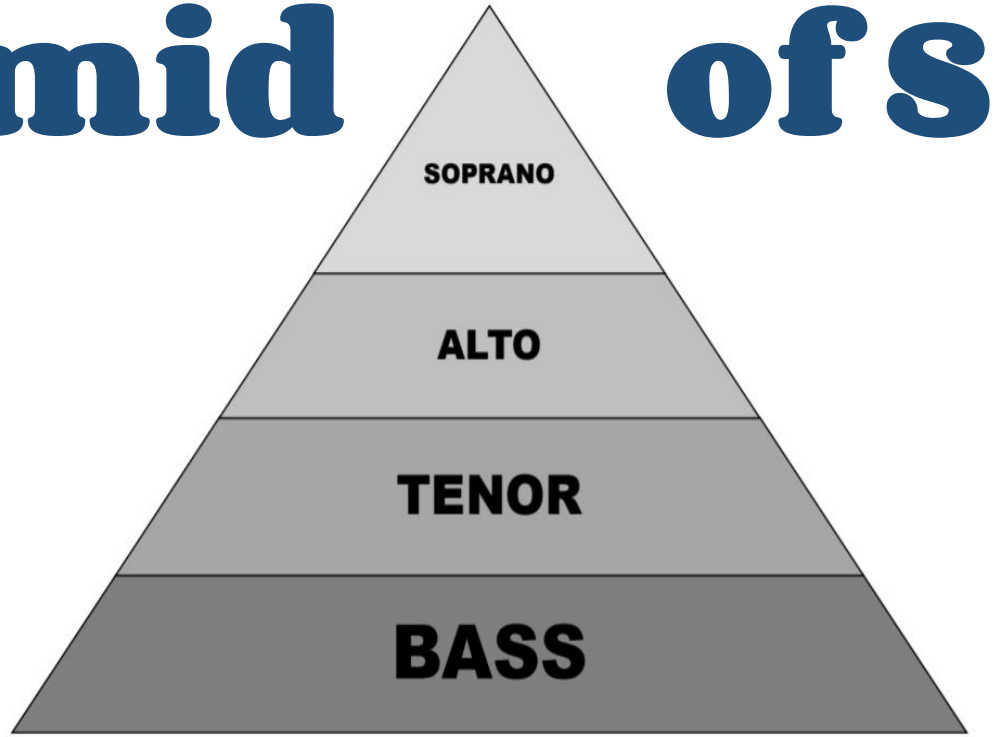
Part 1:

The Band's *SOUND*

Tone Quality - Blend - Dynamics
Ensemble Balance - Articulation

Caveat: *We can't get to all of this in just one hour!*

The Pyramid of Sound



BUT REMEMBER: *The Double-Pyramid … The Pyramid Within the Section … The Christmas-Tree Pyramid … "Treasury of Scales" group suggestions … Ed Lisk's Groupings ("The Creative Director" series)*

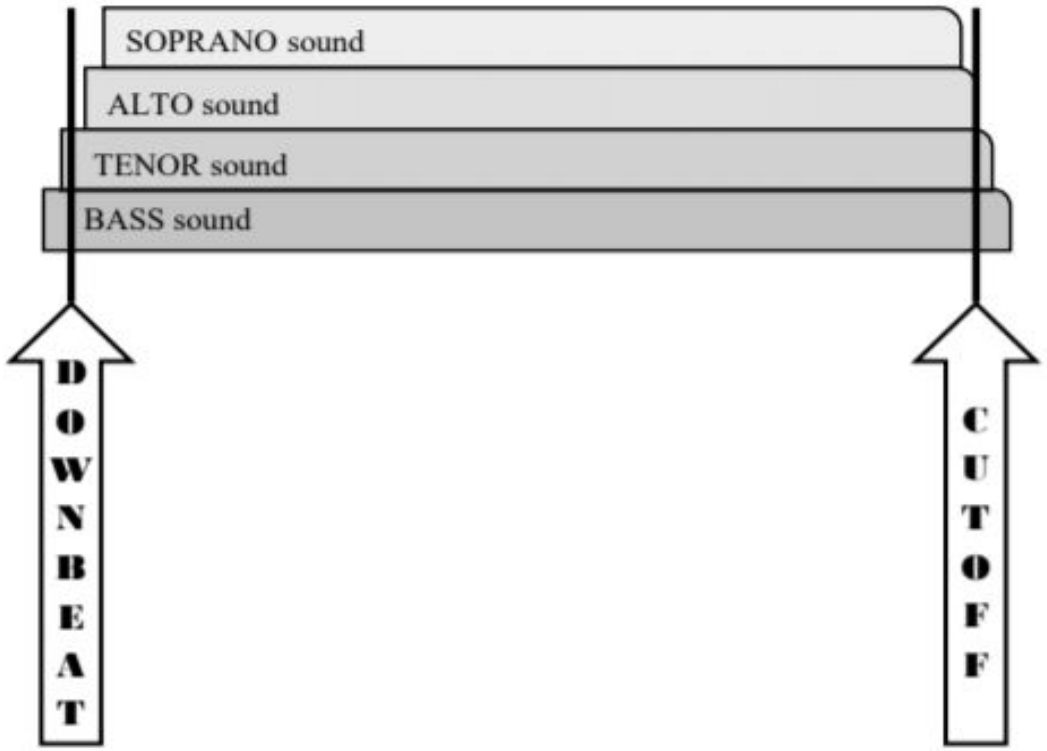
NOTE: **Be *flexible* with the application of the pyramid concept**. As a "recipe" for warm wind-band tone, it should be adjusted for taste, and to reflect the musical needs of the composer, the composition, the excerpt, the performance venue, and many variables within the group.

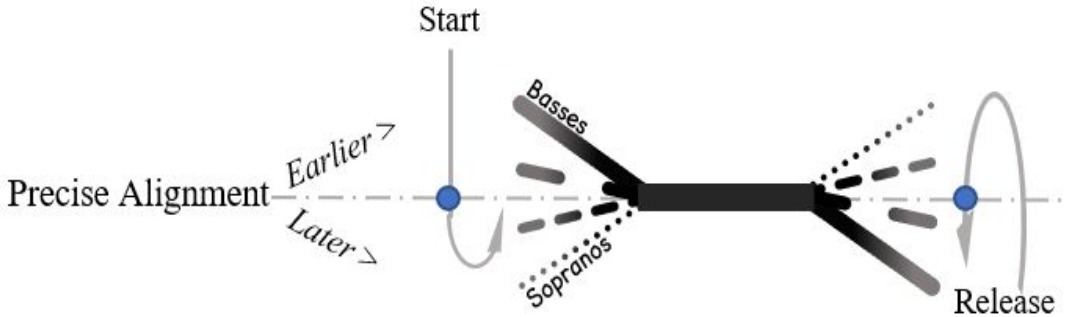
A suggested exercise to develop the SATB Pyramid sound through *layering* - Hear only the bass layer performing as a *Soli*, offering feedback to refine its blend and tone. Then, add Group III, with a single instruction: *"Hear each other clearly, but* hide *inside the sound of the previous group. We should* feel *that you're there, without overpowering the other group."* Continue through other layers. Training for this full-group skill can begin with unisons, scales and chorales, but students will transfer quickly to self-blending during repertoire passages; therefore, remember this process while rehearsing repertoire.

Some Rehearsal Exercises for *Tone – Balance - Blend*

1. "Copy My Sound"
2. SING! (a lot), discussing *vowels, resonance, articulation, etc.*
3. "*Pass the F*" (Bb) a.k.a. *"F-Around-The-Room"*
4. Invert the Pyramid (EQ)
5. Analogies / Descriptors (p. 62-64) incl. *The "Cake" analogies*
6. Comparative Recordings
7. Nesting boxes, Envelopes, and Russian Dolls
8. The Band's *Environment*
9. Seating plan alternatives
10. Redistribution
11. Three components of "Blend" a.k.a. "Don't stick out!"
12. Some GAMES (p. 63-66) Randomness ~ Playing in Trios ~ Isolation ~ *Your creativity*
13. A guideline for *Balance & Dynamics – "Hearing oneself and others"*
14. Some words about Breathing, Posture, *et al*

“First-In, Last-Out” ~ A Concept for *Warmth*





Let’s call it a “Resonant” release … but *why??*

Uh-oh!

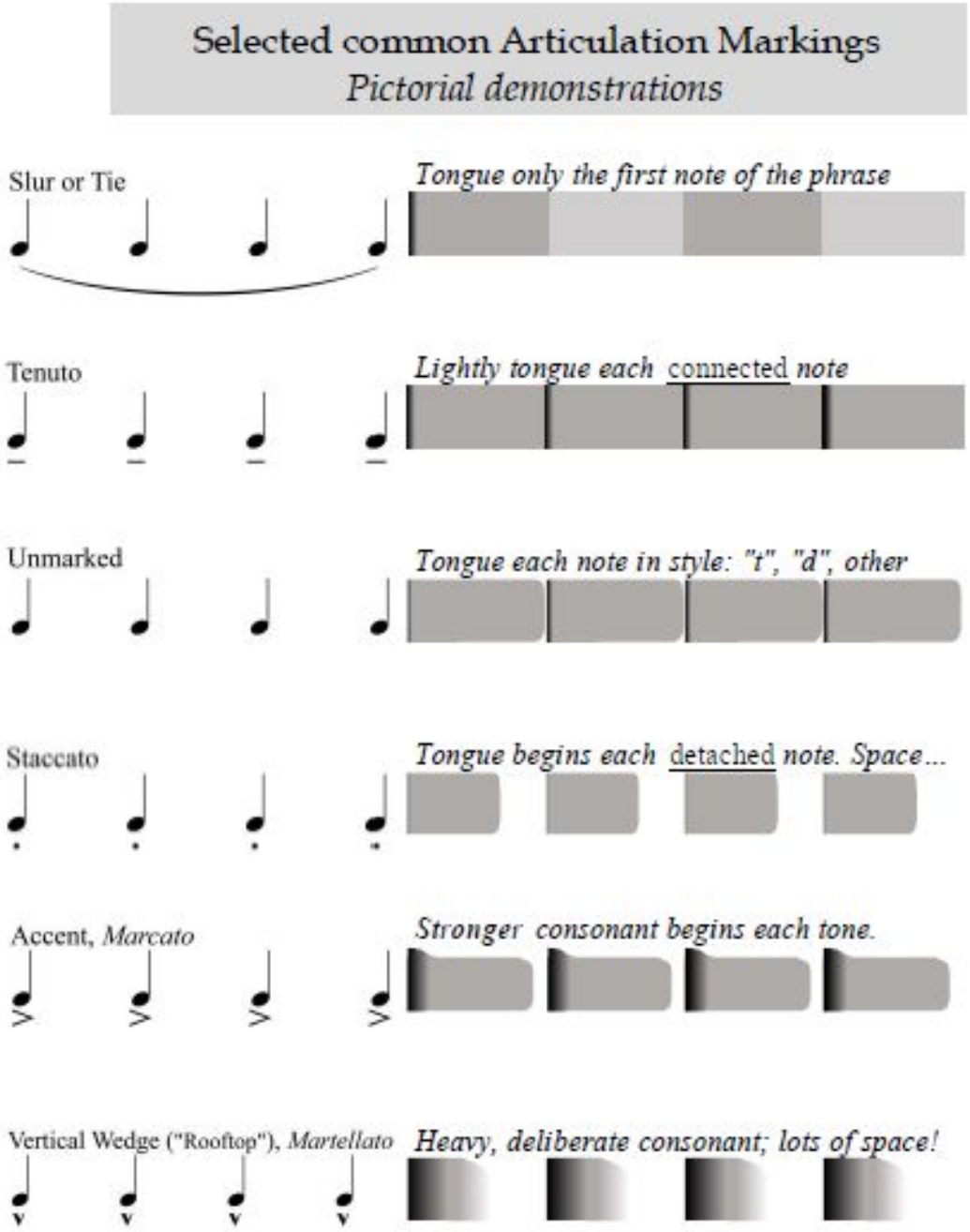
What about …

ARTICULATIONS ??!

Just one minute on this source of many potential problems for Bands …

Wind Articulation: Examples of how tones might “look”

“Strategies, Tips, and Activities for the Effective Band Director”, p. 74
Routledge, 2021



"Quick Fix" examples for Dynamics

- Describe ***pp*** as *"the softest sound you can play* with good Tone", while ***ff*** is *"the loudest sound you can play* with good Tone." Tone is the most important guiding principle.

- Teach with quantifiable labels which, compared to traditional letters, may be easier to conceptualize by younger students. Examples include the following:
  - Assign numbers 1-through-6 for dynamics, which can then be compared to ***pp*** – ***p*** – ***mp*** – ***mf*** – ***f*** – ***ff***: *"Clarinets, please play at a level of '2' here."*
  - Assign numbers 1-through-10, which will align to most volume controllers: *"Low Brass, can you crescendo from a '5' to an '8' in just one measure?"*
  - Speak about percentages (0-100%) to align to other common measurement standards: *"Saxes, please play that accompaniment figure about 50% softer."*
  - Make an analogy using weights: *"If you just played a '10-pound sound', let's make it '25 pounds' instead."*
  - We can even refer to density: For younger students, *"that's a tiny cotton ball; we'll need to make it a huge marshmallow."* And for older, *"you're playing with pumice; can you give me polished marble instead?"*

- Refine students' awareness with behavioral descriptors:
  - "*When playing **pp-p** I strive to hear my neighbor better than I can hear myself."*
  - *"At **mp-mf**, we sound very equal."*
  - *"At **f-ff** I try to hear myself better than I can hear my neighbors."*

"Quick Fix" examples for Full Band TONE

- Turn it upside-down: Perform a short comparison with a full-band unison or chord. Alternate between the desired SATB balanced pyramid and its inversion. *"Sopranos please play **ff**, Altos **mf**, Tenors **mp**, and Basses **pp** … Let's hear that for a moment, and hopefully never again! … On cue, reverse the dynamics so we'll hear the warm tone we're trying to build."*
- Demonstrate balance parameters with EQ controllers: While the band is listening to any recording, manipulate the bands of the equalizer: increase Treble and decrease Bass. Compare to immature Band Tone and then, together, rebuild the favored sound. If possible, *display* the EQ controls.
- Regarding the SATB balance, try non-musical comparisons: *"In a cheerleading or acrobatic pyramid, we never put the heaviest person on top" … "That sound is like a top-heavy building on sand; let's put our bottom-heavy building firmly on bedrock."*
- On dynamic control for Tone: *"Never softer than - nor louder than - beautiful."*
- On blending into the ensemble's Tone: *"We opened our can of beautiful blue paint, and we found some single drops of white lying right on top; let's stir them in" … "Don't be the only thorn in our bouquet of roses"… "You're neon-green in our rainbow" … "I was really looking forward to eating my big bowl of ice cream until I noticed just one tiny fly in it. Ugh."* Follow with your own creative analogies.

Part 2:

INTONATION & TUNING

Guiding Thoughts:

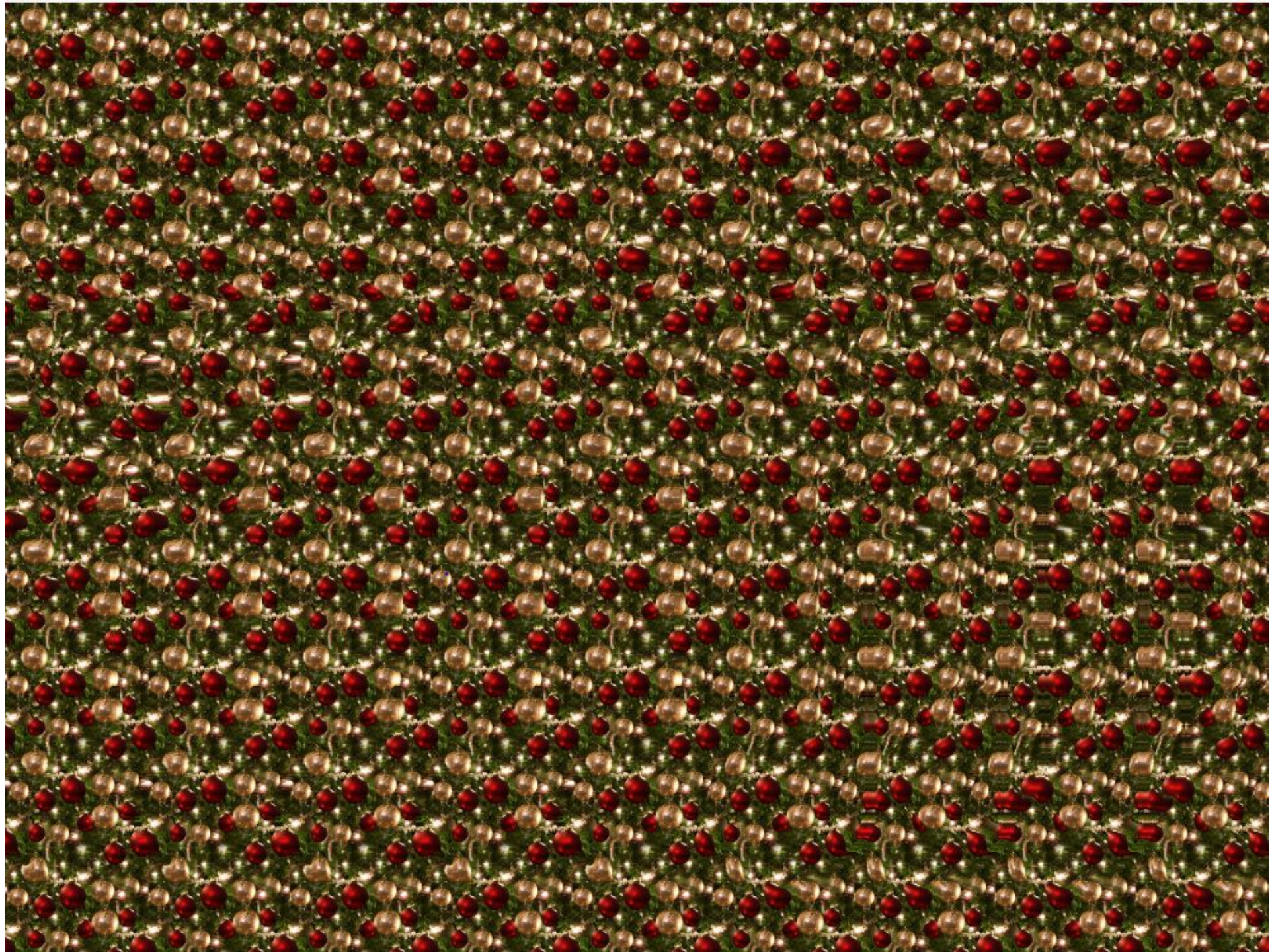
- About *the Tuner*
- About *Listening*
- About *Students' Skill-Development*
- Plus, *some recommended Resources*

First, students must hear it

INTONATION & TUNIN

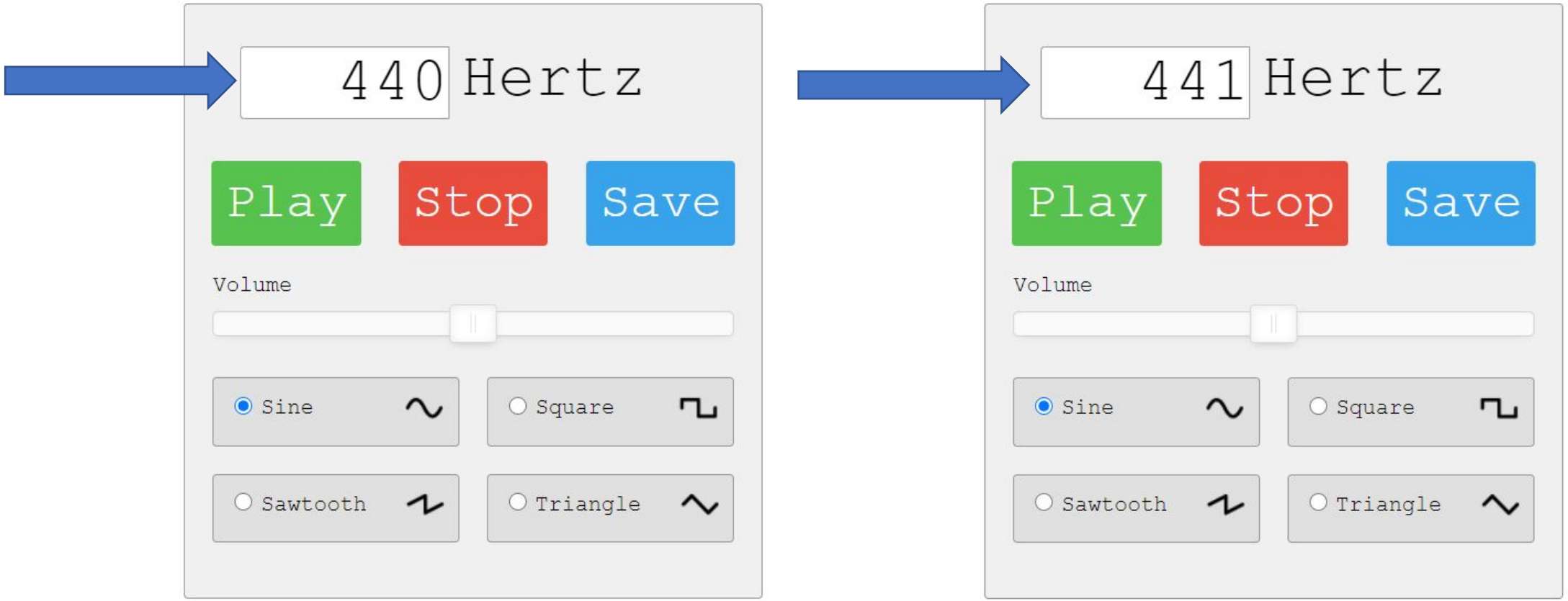
Section I:

About Hearing the Intonation



TWO tabs using "*Online Tone Generator*"

https://onlinetonegenerator.com/



Then USE THIS KNOWLEDGE with practical applications:

Playing in "Trios" … Pitch-Bending … Measurable Games … Randomness Activities

Home
Pitch Shifter
Time Stretcher NEW
Voice Generator
Sweep Generator
Instrument Tuning
Subwoofer Testing
Hearing Test
Noise Generator
Binaural Beats
432Hz Frequency
DTMF Signals
The Pips

Online Tone Generator

Free, Simple and Easy to Use.

Simply enter your desired frequency and press play. You will hear a pure tone sine wave sampled at a rate of 44.1kHz. The tone will continue until the stop button is pushed.

The tone generator can play four different waveforms: Sine, Square, Sawtooth and Triangle. Click on the buttons to select which waveform you would like to generate.

Please always make sure headphones/speakers are set to a low volume to avoid damage to hearing or equipment.

The best "Tuner"

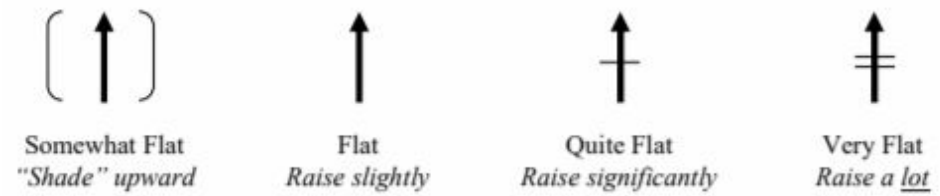
in your bandroom

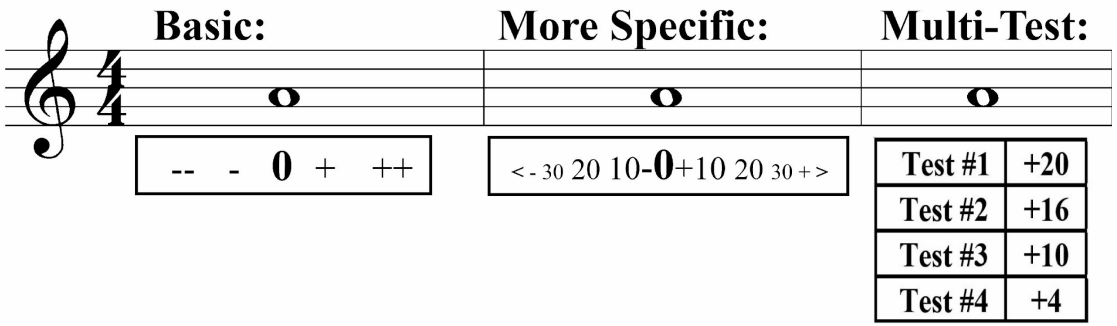
is …

the well-trained ear!

- ✔ **"Can you hear the *beats* when you're playing out of tune?" *Train them!***
- ✔ **"Have you learned skills to *raise* and to *lower* badly-tuned notes to improve intonation?" Practice *pitch-bending, alternate fingerings, embouchure control, etc.***
- ✔ **"Do you know about your instrument's bad notes and other factors so you can *predict* intonation problems before they happen?" *Complete intonation maps***

Give students shorthand marks to identify bad pitches;
Suggestions …





The "Tuning Map"

These are only suggested possibilities:

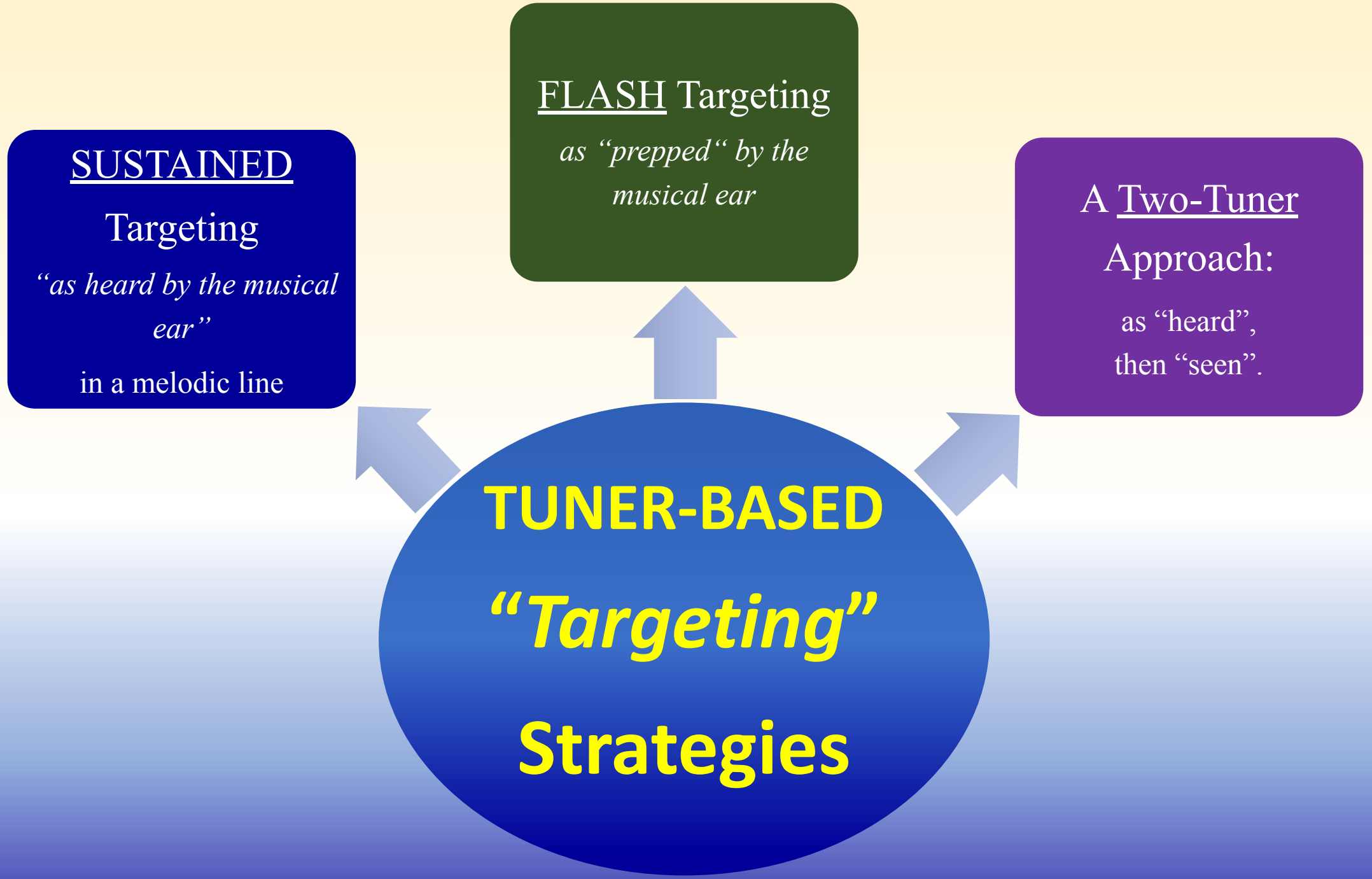
Remember also to evaluate pitches at ***pp – mf – ff***

NATION & TUNIN

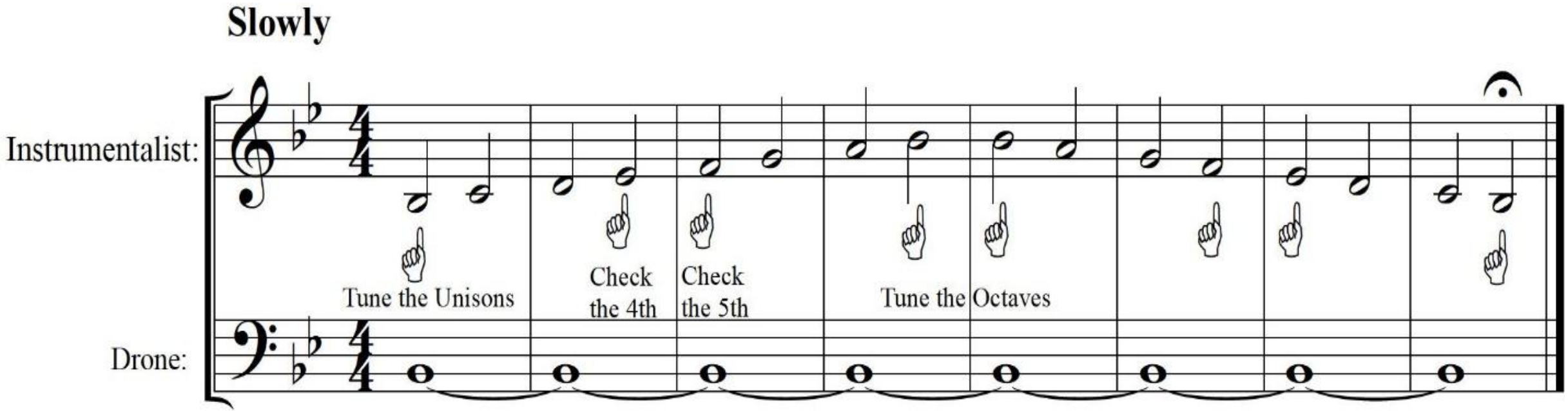
Section 2 :

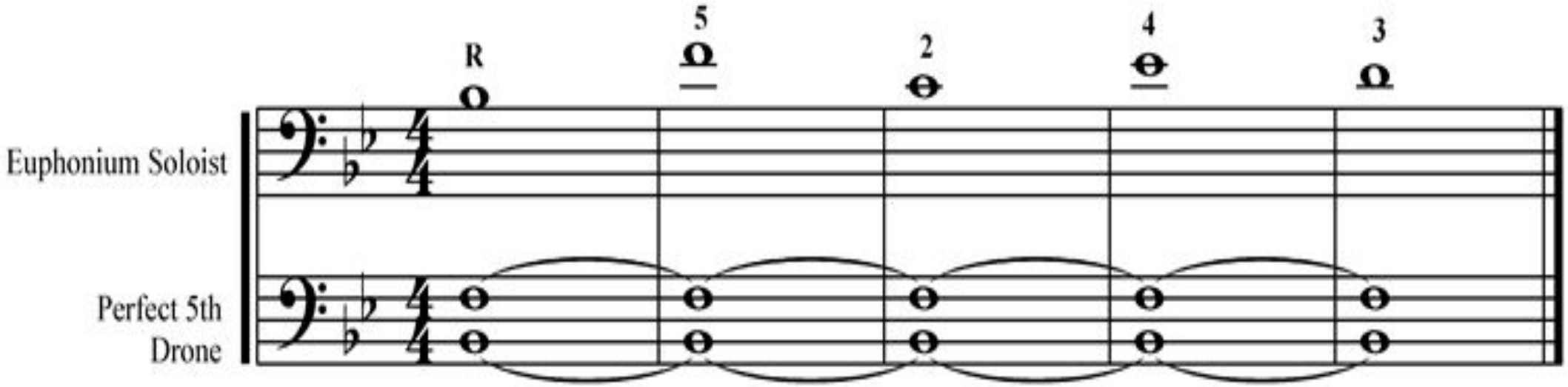
About Teaching Intonation

(Individuals & Smaller Groups)


FLASH Targeting
as "prepped" by the musical ear
SUSTAINED Targeting
"as heard by the musical ear"
in a melodic line
A Two-Tuner Approach:
as "heard", then "seen".
TUNER-BASED
"Targeting"
Strategies

Some exercises utilizing *Drones* …





Do **(Root)** – Tunes as a unison with the bottom of the drone, and a 5th from the top

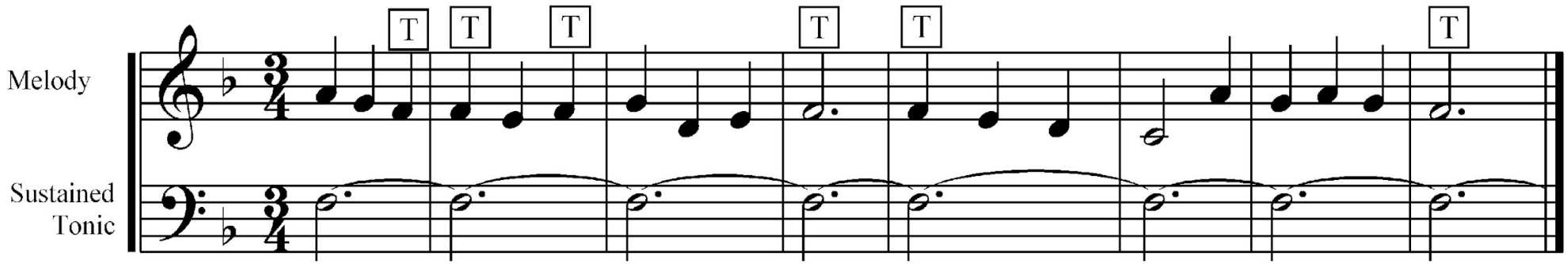
Sol **(5)** – Tunes as a 5th above the bottom of the drone, but a unison with the top

Re **(2)** – Tunes as a Major 2nd above *Do* while also a Perfect 4th below *Sol*

Fa **(4)** – Tunes the Perfect 4th above *Do* and a Major 2nd below *Sol*, plus it helps students hear the typical voice leading as it drops to …

Mi **(3)** – This becomes the first step to helping students hear a *tempered* 3rd in a Major chord. In order for this tone to sound "in tune", it must be played slightly lower than normal, and students can hear *beats* if it's left too high. To sound in tune, the "D" here must align with the slightly-flat D found as the fifth partial in the harmonic series on B-flat.


Instrumentalist
Perfect 5th
Drone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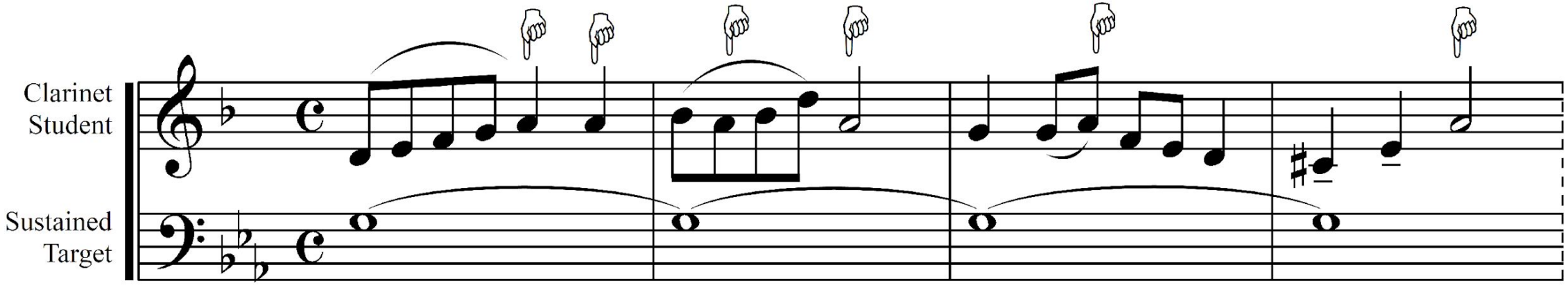
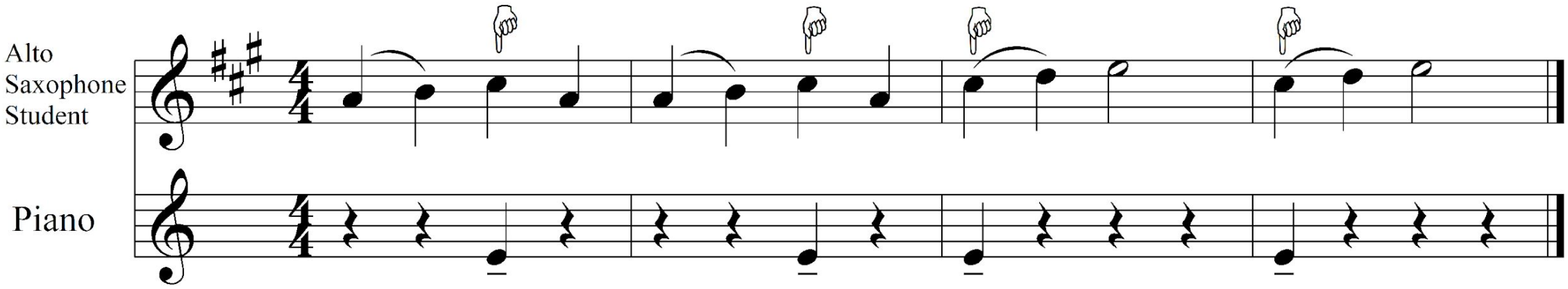
Melody
Sustained
Tonic

Sustaining a Target for a "problem" pitch (here, the Clarinetist's Throat A)



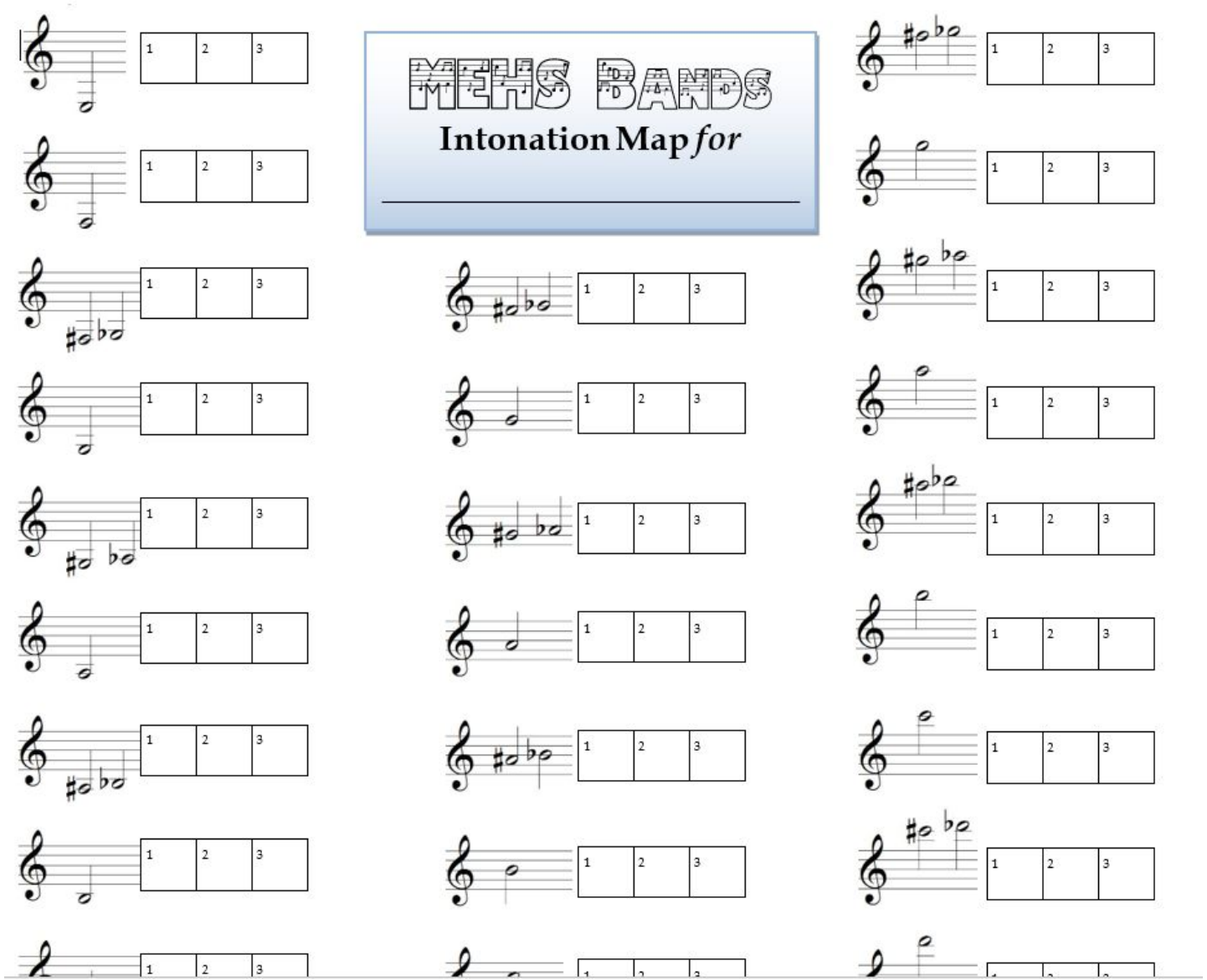
Using a Piano to spot-check a problem pitch



MEHS BANDS

Intonation Map *for*

_____



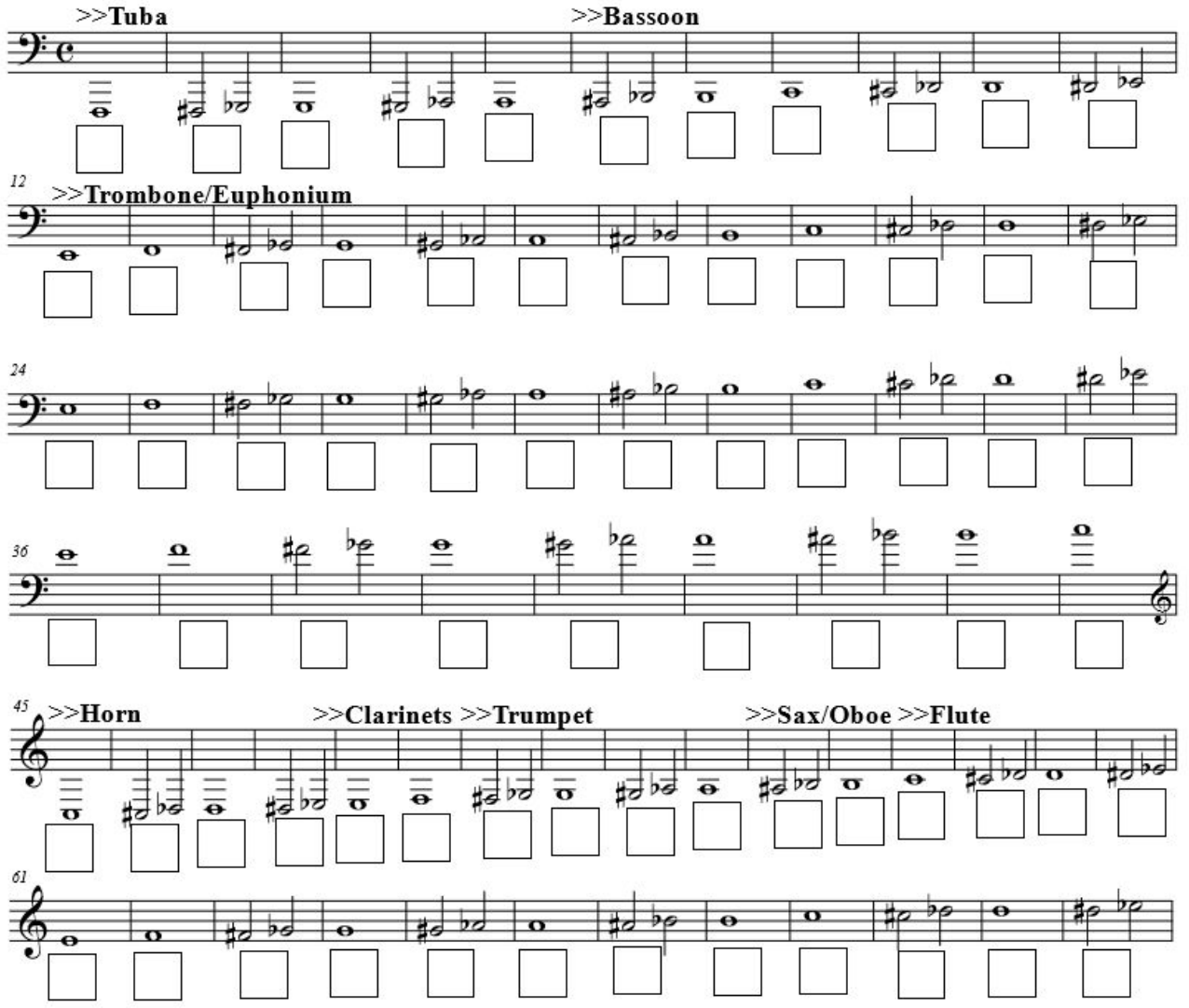
About Intonation Maps …

https://goo.gl/AykLD6

A Sample project for you to revise:

http://www.cherokeebluffband.com/uploads/2/1/1/9/21192838/pitch-tendencies-and-intonation-mapping.pdf

- **From Cherokee Bluff Bands, GA**



Intonation Tendencies

R. Linaberry

Before completing this chart, make sure you are generally ***IN TUNE*** with a tuner, whether you use concert B-Flat, A or F (or all of them!). Then, play carefully through your entire range against a tuner. Mark your own pitch-tendencies, using "+25" for twenty-five cents sharp, or "-10" for ten-cents flat. I recommend letting a friend do the markings for you while watching the tuner so you won't be tempted to adjust. Once you have your chart finished, check it often while also making sure you're addressing the BAD notes. Anything more than 5-10 cents out-of-tune must become part of your personal performance memory. Then, come up your "repairs" for those problematic notes (alternate fingerings, airstream, embouchure changes, covering',etc.).

Good luck!

NATION & TUNIN

Section 3 :

About Teaching Intonation

(In the FULL BAND Setting)

? … but how should I tune the band … ?

(some philosophical opinions)

"TUNING BY THE NUMBERS"

https://goo.gl/kiEqq8

Extracted from "Tuning By The Numbers"

1 – **Tubas:** B^{b}. Match the *given* pitch, then match each other to reach a *beatless* unison. Hold. Continue to hold. When you pass out, keep holding.

2 – **Baritone Sax** (G), **Bass Clarinet** (C), **Contra-Alto Clarinet** (G). Test, adjust and hold.

3 – **Trombones, Euphoniums**: Check B^{b}, then F. Adjust as needed, then hold *one*. **Tenor Sax**: Check low G, high G, and C, adjusting as needed. Hold *one*. **Bassoon**: Slur downward B^{b} – A – G – F. Adjust for F, then hold B^{b} or F.

4 - **Alto Sax**: Check low G, then high G. Adjust as necessary. Then check both middle and low D (adjust embouchure or fingerings to tune D's, but don't re-tune). Hold G.

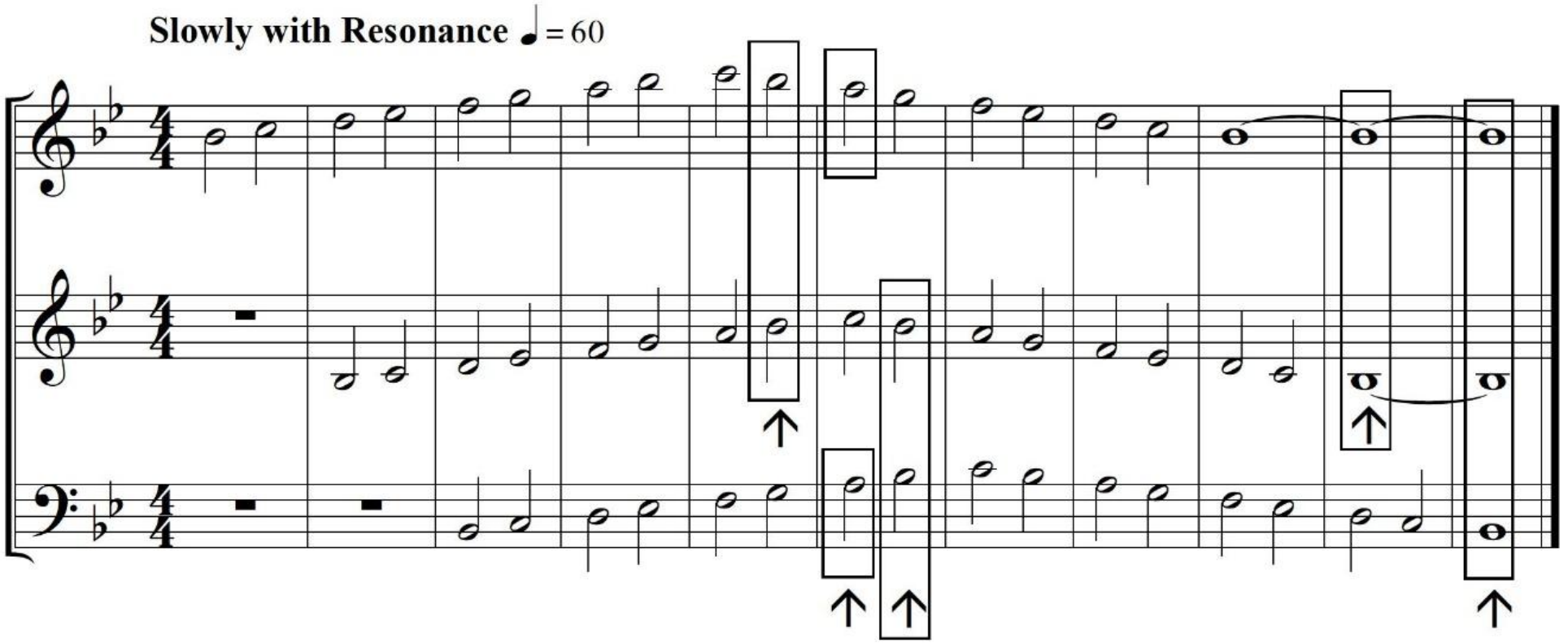
5 - **Horns**: Play the following four notes slowly (watch the conductor) - G – A – B – C. When you pass A, the band will have a major chord for the first time. When you arrive at C, test *both sides* (open = F Horn; Thumb = B^{b} Horn), then adjust the main & B^{b} /F tuning slides to get C in tune equally on both sides. Hold either C, keeping the right hand in proper position.

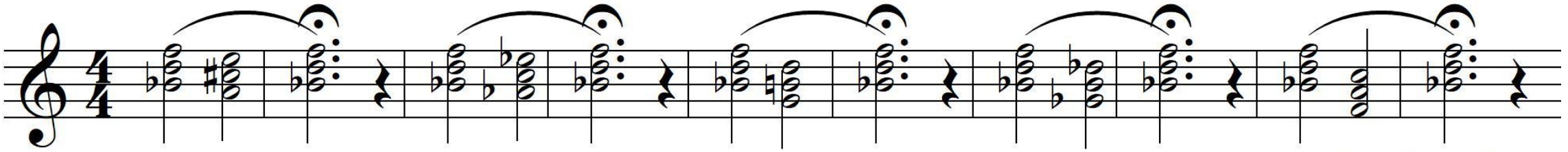
6 - **Clarinets**: Open G (adjust at the *barrel*) , then Clarion G & Chalumeau C (adjust at the *middle joint*), then Clarion C (adjust at the *bell joint*). Test Altissimo C (adjust the *embouchure*). Hold any C or G.

7 - **Oboes, Flutes**: Bb (adjust for tuning), then F (further adjust as necessary). Important – Test *both octaves*. Hold Bb or F.

8 - **Trumpets**: On cue, play "*Sol-La-Ti-Do*" or "G-A-B-C". Use both the G and the C to adjust the main tuning slide. Note: be careful to tune in the register in which you'll play most of your music.

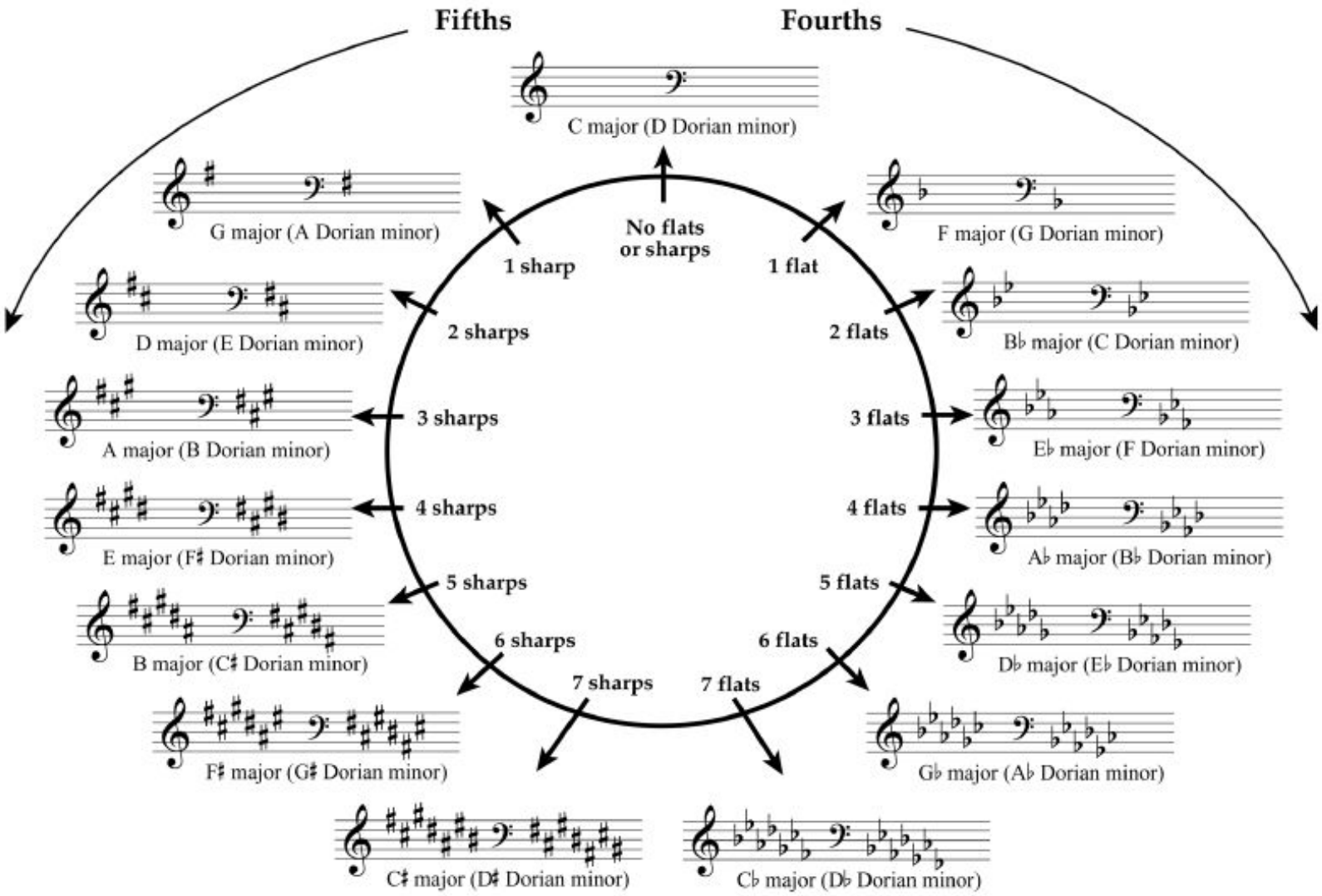
Percussion: At any time during the process, add softly-rolled Bb and/or F at the marimba and/or vibes. Timpani can also check the low F (probably "heel down" on the 29" open drum) and B^{b} (probably "heel down" on the 26" open drum). When those are tuned, raise the 29" to match the sound of B^{b}, and check/adjust the letters on the tuning gauge, if the instruments have gauges. Raise the 26" to high F, and check/adjust the gauge.


Slowly with Resonance ♩= 60

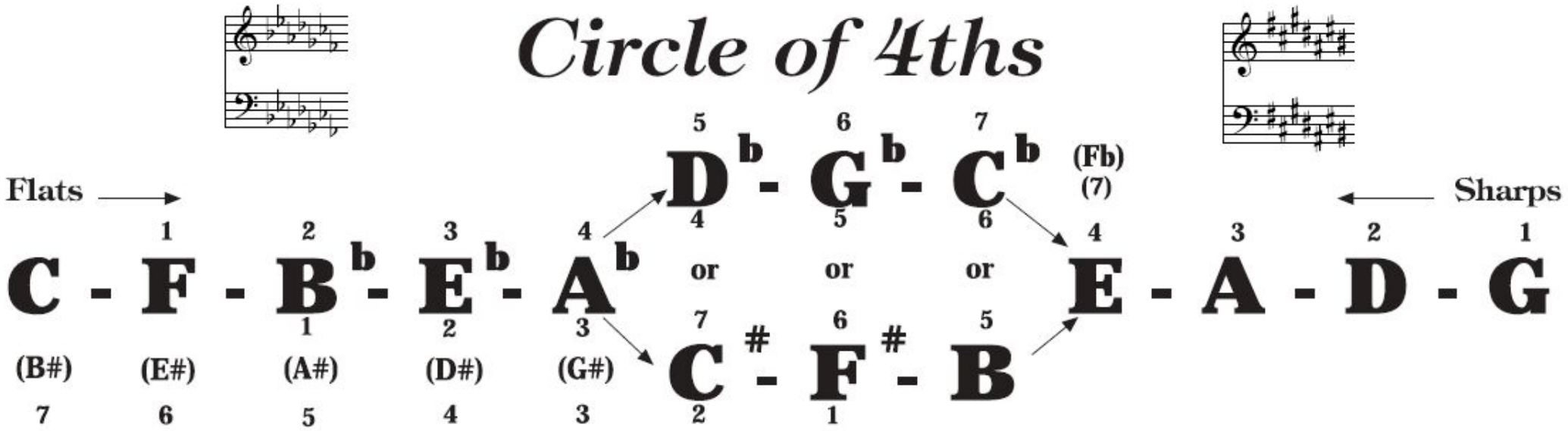


The “Remington”

(condensed to a single Staff)

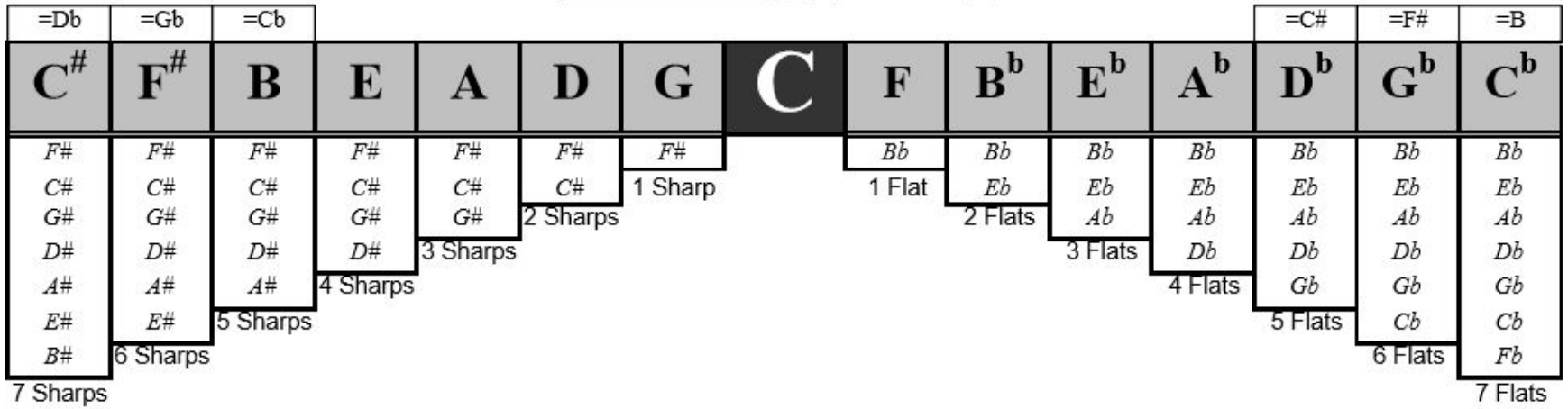


Jamey Aebersold (How to Play and Improvise Jazz) – "The Circle or Cycle of Fourths" – *Used by permission*



Edward S. Lisk (from "The Creative Director" Series) – "The Circle or Cycle of Fourths" – *Used by permission*

The "Circle of Keys", *unwrapped* ...



The Flats appear in Key Signatures in this order: **B E A D G C F**

Notice that the Sharps appear in exactly the opposite, or *BACKWARDS*, order: **F C G D A E B**

Download your copy:
www.robinlinaberrymusic.com
/book-resources
RW 5.2

Figuring out the name of a Major Key when you can see the *Key Signature* :

1) For SHARP keys, *the last sharp in the Key Signature is **Ti***. Go up 1/2 step to the very next line or space to find the name of the Major Key.
2) For FLAT keys, *the last flat in the Key Signature is **Fa***. Count down four notes - "*Fa-Mi-Re-Do*" - to find the name of the Major Key.

NOTE: Coincidentally, the *next-to-last flat* IS the name of the Major Key. This only works with Flat keys!!

Figuring out the Key Signature when you know the name of the *Key or Scale* :

1) First, determine if it's a SHARP Key or a FLAT Key. Notice that "F" is the only Flat key without a flat in its name!
2) Next, use the "Musical Alphabet" to create a basic scale before adding the Key. Example: "EFGABCDE"

3A) Now, if it's a Sharp key, remember that "the last sharp in the Key Signature is **Ti**". Add a sharp to the 7th note, or "Ti".

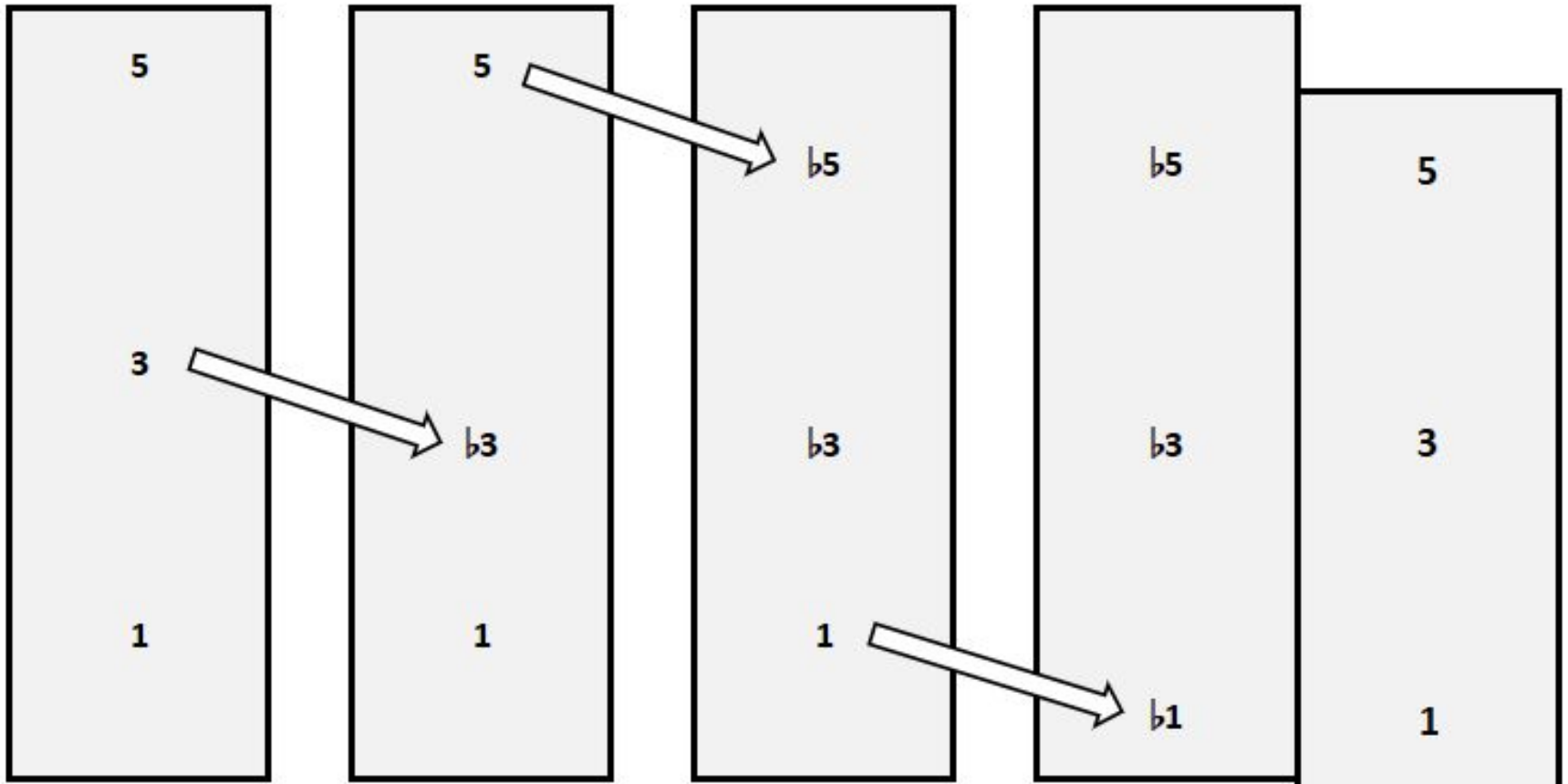
Using the order of the sharps, simply keep adding sharps until you've reached the last sharp on "Ti". See above: E F# G# A B C# D# E

3B) If it's a Flat key, remember that "the last flat in the Key Signature is **Fa**". Add a flat to the 4th note, or "Fa".

Using the order of the flats, simply keep adding flats until you've reached the last flat on "Fa". Using the key of Ab: Ab Bb C Db Eb F G Ab

Some guidelines for figuring out *Transpositions* :

"C" instruments play the "Concert" Key. If asked for "Concert Ab Major", simply play Ab Major.
"F" instruments play a Perfect 5th above Concert Key. **Subtract 1 b, or add 1 #: go 1 Key to the LEFT, above. "Ab" becomes Eb.**
"Bb" instruments play a whole-step above Concert Key. **Subtract 2 b's, or add 2 #'s: go 2 Keys to the LEFT. "Ab" becomes Bb.**
"Eb" instruments play a Major 6th above Concert Key. **Subtract 3 b's, or add 3 #'s: go 3 Keys to the LEFT. "Ab" becomes F.**



Major	minor	diminished	New Major, a semitone lower	Renamed ~ start again
Ex: **B^{b} - D - F**	B^{b} - **$\underline{D^{b}}$** - F	B^{b} - D^{b} - **$\underline{F^{b}}$**	**$\underline{B^{bb}}$** - D^{b} - F^{b} =	**A - $C^{\#}$ - E**

With scale degrees *(numbers)* or Solfege *(syllables)* , musicians can perform simple melodies or even full ***Chorales*** in any Key

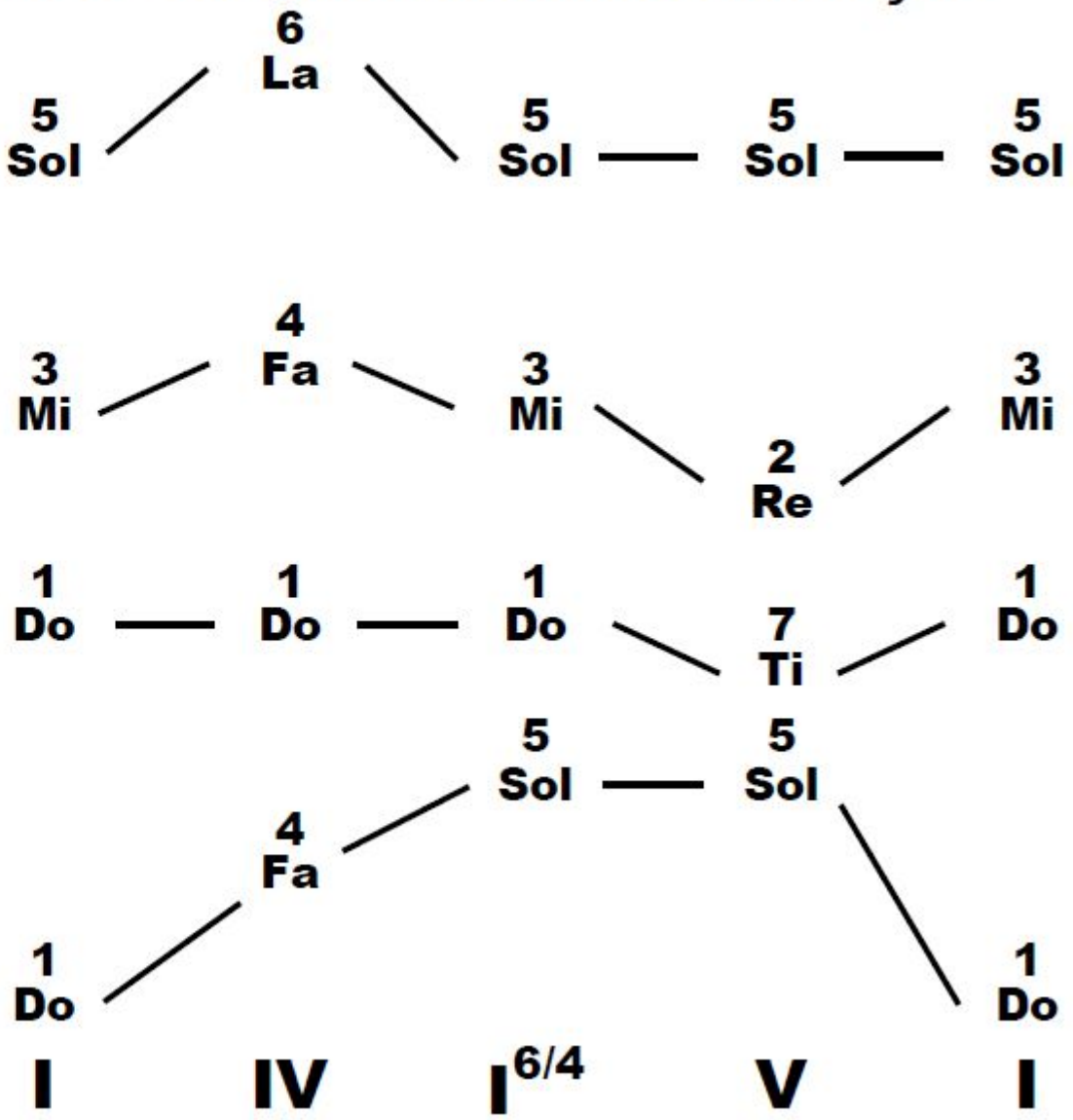
Numbers for *Scale Degrees*:

Soprano:	5	6	5	5	5
Alto:	3	4	3	2	3
Tenor:	1	1	1	7	1
Bass:	1	4	5	5	1

Solfege *(Sing it too!)*:

Soprano:	Sol	La	Sol	Sol	Sol
Alto:	Mi	Fa	Mi	Re	Mi
Tenor:	Do	Do	Do	ti	Do
Bass:	Do	Fa	Sol	Sol	Do

GRAPH - *Full Chorale information and Analysis*:

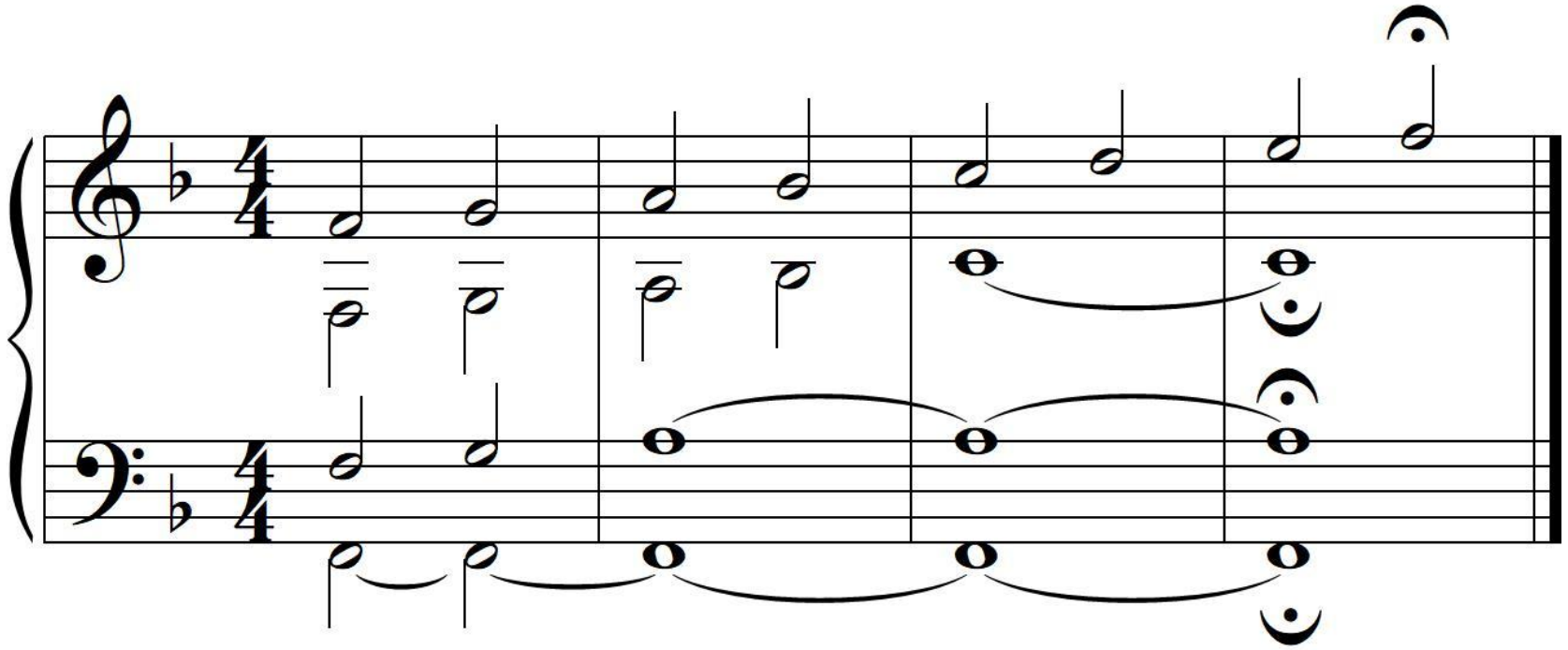


Group 1: Play the entire Scale

Group 2: Arrive and hold "Sol"

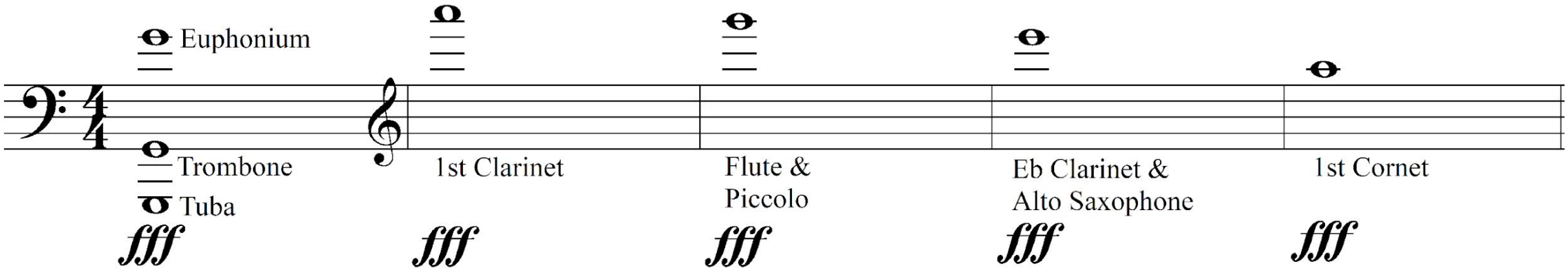
Group 3: Arrive and hold "Mi"

Group 4: Hold "Do"



A method to improve a *specific chord*

1. Identify the *problematic chord*
2. Move pitches to the "Comfort Zone": best Octave, and *mezzo* Dynamic
3. *Tune the chord carefully*
4. Gradually (one-by-one, perhaps) move players back to the pitches in the problem setting



This chord (above) happens at the "climax" moment in "*Elegy For A Young American*" (Lo Presti).

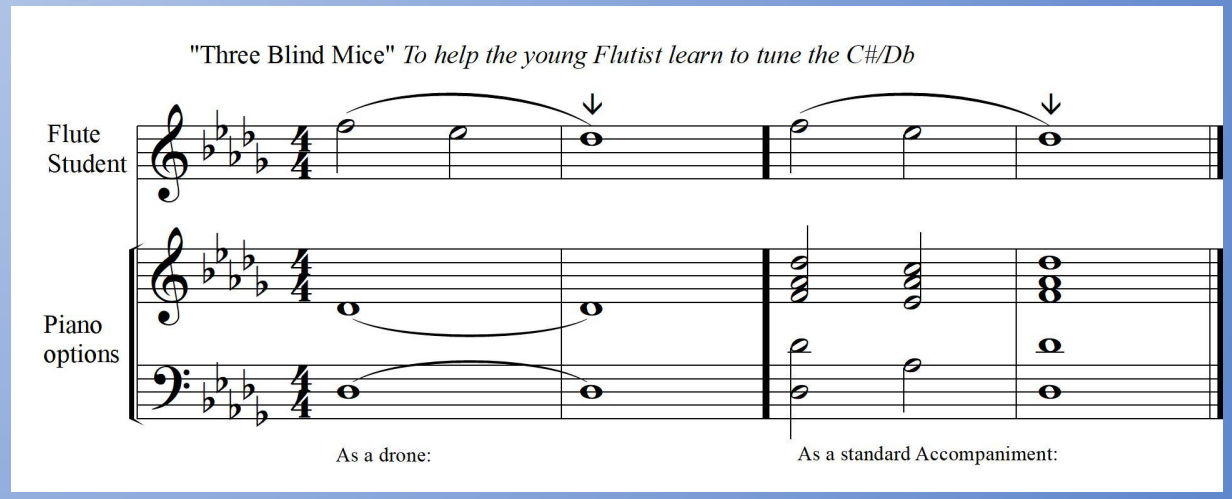
These are the printed pitches!!

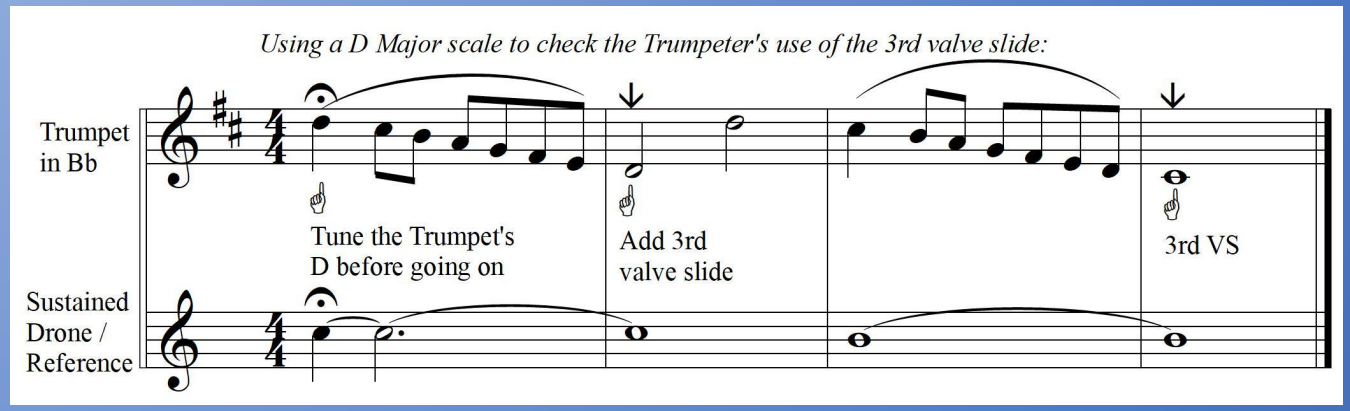
Section 4 :

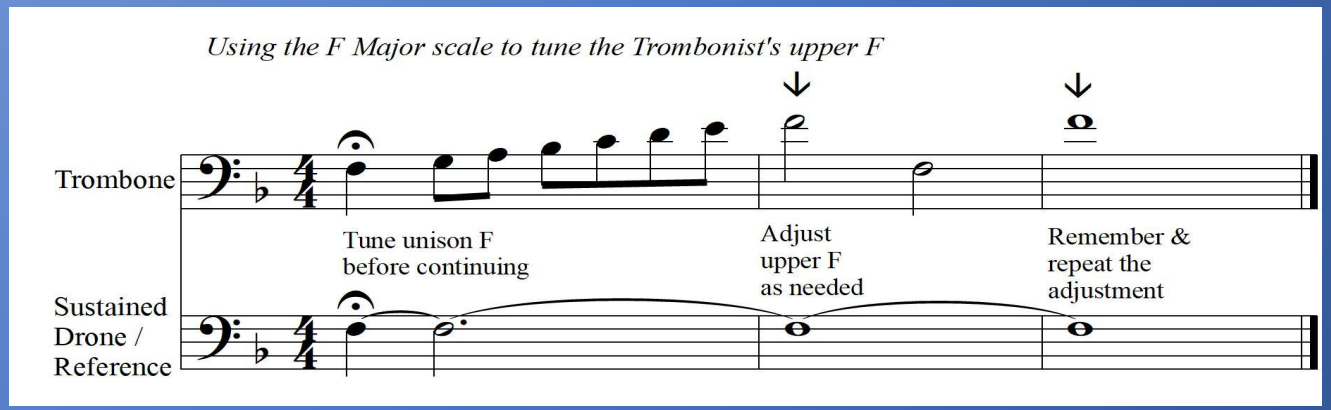
A Variety of Additional Strategies to Teach, Support, and Improve Intonation

Targeting Common TuningProblems:

More Drone Examples







A random sampling of Quick-Fix Ideas:

1. "The *faster* the beats, the further out-of-tune" (*and vice-versa*)
2. Demonstrate beats with amplified strings (Guitar/Bass). Add a 'wet' snare to enhance the effect.
3. Try a 90-degree shift in viewing the Tuner's display ("up" = sharp; "down" = flat)
4. Sustain a "straight-line" sound ~ make the tuner's display stay motionless
5. "*When in doubt, pull it out.*" However. …
6. … watch students (and instruments) carefully for irregularities.
7. *Hum* the tuning pitch before playing. Try Plugging one ear while playing (what?!!)
8. "*Sing* (loo) *the note of your chord*" … "*now play it* "
9. "*Pause after that fermata: now think of the next sound" (audiate) … "let's sing it before we play it*."
10. Use *Parallel* 4ths-5ths to hear the beatless open interval (Scales; Fugue Subjects; *alma mater;* etc.)
11. Recording-playback strategies (e.g. L-R microphones isolating two different students; multi-tracking)
12. *Transpose* for improvement (i.e. when the "D Major" chord sounds bad, tune the *"D-flat Major"* chord instead, and then move the well-tuned sound up a semitone)
13. *Use resonance* in the recipe for better tuning (e.g. sympathetic vibration of Piano strings; Timpani & DoubleBass tuning; 'detune' percussion to avoid room-rumble)
14. Train a *few* students (e.g. Section Leaders) to be *Tuner Mentors*: they'll teach others how to use Tuners
15. Create an 'Instant Chorale' in the accompaniment instruments ("Sustain Beat 1 for the whole measure") to focus on allowing *Melody Instruments* to tune over the basic chord-progression

A word about alternate fingerings

(and slide positions, of course)

But what about the instruments?!

Equipment / Valve-Slides / Repair-Maintenance / Clarinet Joints / Temperature / Fatigue

e t c e t e r a a d i n f i n i t u m . . .

Two *highly-recommended resources:*

- ***Tuning for Wind Instruments:***

  A Roadmap to Successful Intonation

  Shelley Jagow, Ph.D. (2012, Meredith Music Publications)

  This publication offers (among other strengths):
  - Outstanding fingering charts, marked with Intonation Tendencies
  - Blank Intonation Charts (the “maps”)
  - Lists of instrument-specific tuning processes
  - A guide to tuning Brass Instrument valves
  - An innovative listing of “Tuning Truths”
  - And a wide variety of well-researched charts and scientific/acoustical information

- ***The “Tonal Energy” App***

  https://www.tonalenergy.com/

Additional Recommended Reading

“Building Balance, Taming Tone, and Making Cents of Intonation *(blog essay – Dr. Shelley Jagow)*

https://banddirectorstalkshop.com/building-balance-taming-tone-and-making-cents-of-intonation/

“Escaping the Pyramid” *(from the SBO Magazine archives)*

https://sbomagazine.com/51escaping-the-pyramid-trap-reconstructing-conceptions-of-balance/

“Tone, Intonation, and The Young Band” *(A Midwest Clinic presented by Chip De Stefano)*

http://www.mccrackenband.com/resources/articles/beyond2.shtml

“The Power of UNISON” *(A Kjos Webinar presented by David Newell)*

https://www.youtube.com/user/KjosMusicPublishing/videos

Ultimately, <u>of course</u> …

A band can't sound *great* without something more; something "*intangible*" …

t h isi squ iteas im plesen ten cebu ti…tsh ar d tore ad

= *This is quite a simple sentence but it's hard to read.*

Students will need to understand ***note-grouping***, ***phrasing (breathing)***, ***tension-release concepts***, ***style & "feel"***, ***imagery***, ***emotional connections*** (moods/colors/textures/temperatures/etc.), and ***so much more***.

AND, they need to do it all *independently*.

That's an entire presentation! Sometime soon, look for…

"Teaching the Intangibles, *TANGIBLY!*"


Please DO write to me!
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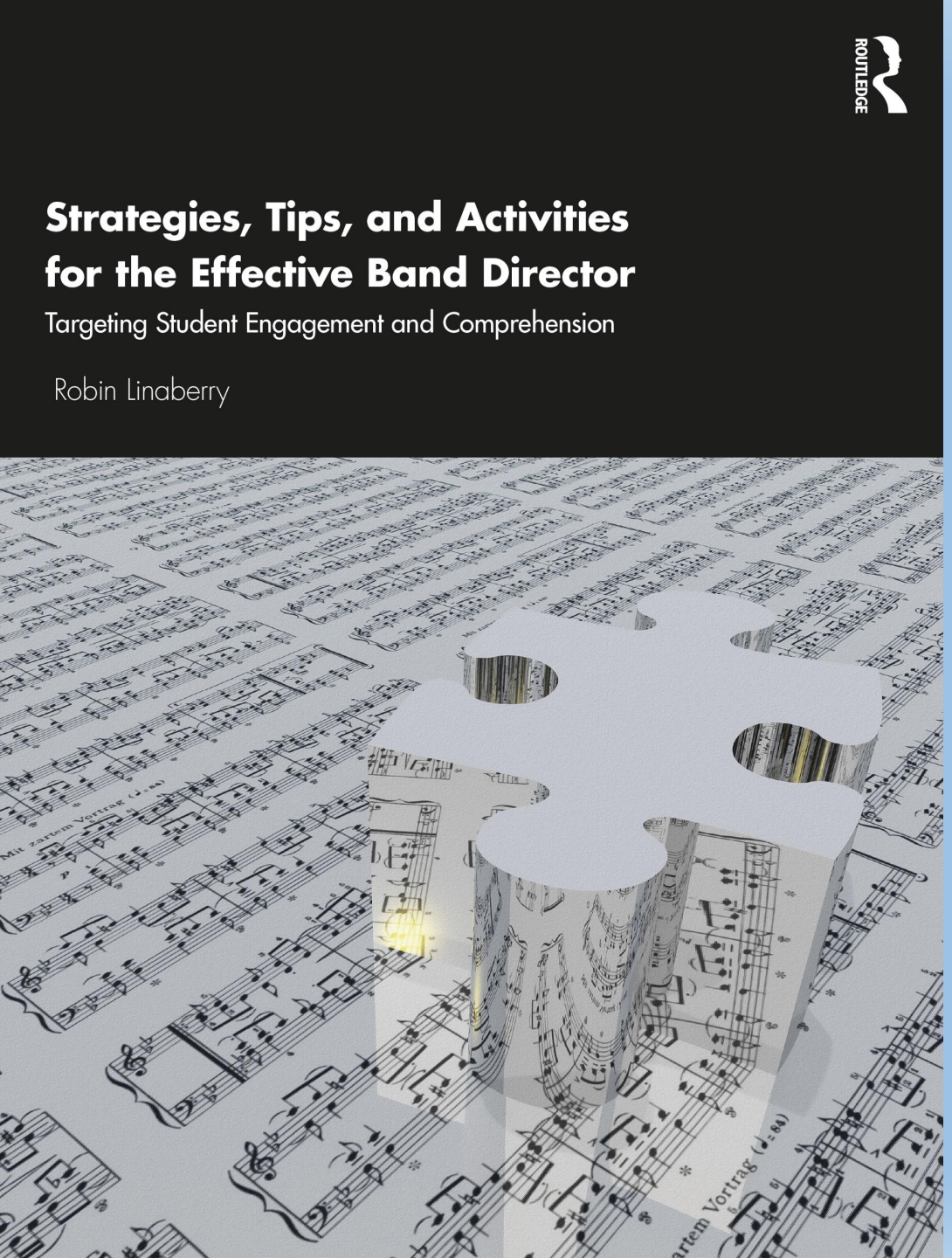

Robin Linaberry

"Strategies, Tips, and Activities for the Effective Band Director"

Routledge
(The Taylor & Francis Group)
2021

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Thank you for attending!