

# It's *Just* Intonation - Strategies for Improving Ensemble Intonation

Presented by Christopher Brandt, DMA

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Explore techniques and strategies for improving your ensembles intonation by incorporating prepared chorales, technology, and other resources. This session will survey best practices for introducing various intonation concepts and will identify tangible techniques that can be immediately instituted and can significantly improve instruction. Concepts explored will include "beat-less" tuning, resultant tone listening, and just intonation. Throughout the presentation we will also explore various technological devices and applications that can aid in ensemble instruction including Yamaha's Harmony Director and Tonal Energy.

## Intonation Must Begin at the **Individual Level**

### 1. Mouthpiece Pitching is key\*

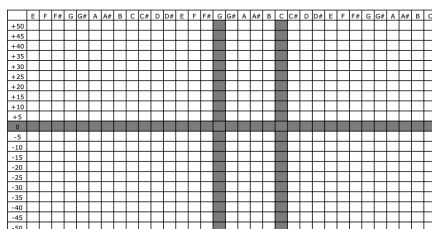
Flute - A (stopped or open)  
Oboe (Reed) - should crow octave C's  
Clarinet - C  
Bass Clarinet - F#  
Soprano Sax - C  
Alto Sax - A  
Tenor Sax - G  
Baritone Sax - D  
Bassoon (Reed) - should crow G or A

\* Reference pitch is approximate with the end goal of eventually achieving embouchure flexibility



Clarinet Intonation Map

Name: \_\_\_\_\_  
Date Completed: \_\_\_\_\_



Instructions:  
Warm up on instrument.  
Tune to G making adjustments with **barrel** joint, and C making adjustments to **middle** joint.  
Starting on your tuning note move down chromatically sustaining each note three times.  
Make sure you center your pitch on each note **without looking at the tuner**.  
While you are playing have a friend notate the average intonation tendency of the three attempts on the chart.  
Repeat process moving upward.  
Identify problem notes and any general patterns.

Designed by Dr. Christopher Brandt  
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### 2. Intonation Surveys

- All instruments have general tendencies (ie. Fourth line D on **all** saxes is sharp)
- Each individual instrument also has tendencies (ie. First ledger line A on **my** sax)

### 3. General Intonation *Tendencies*

Dynamics

Flutes/Double Reeds/ Brass

Loud = Sharp  
Soft = Flat

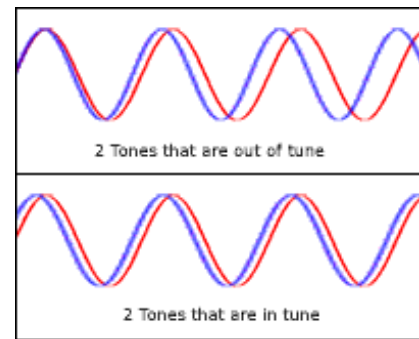
Single Reeds

Loud = Flat  
Soft = Sharp

### Valve Combinations

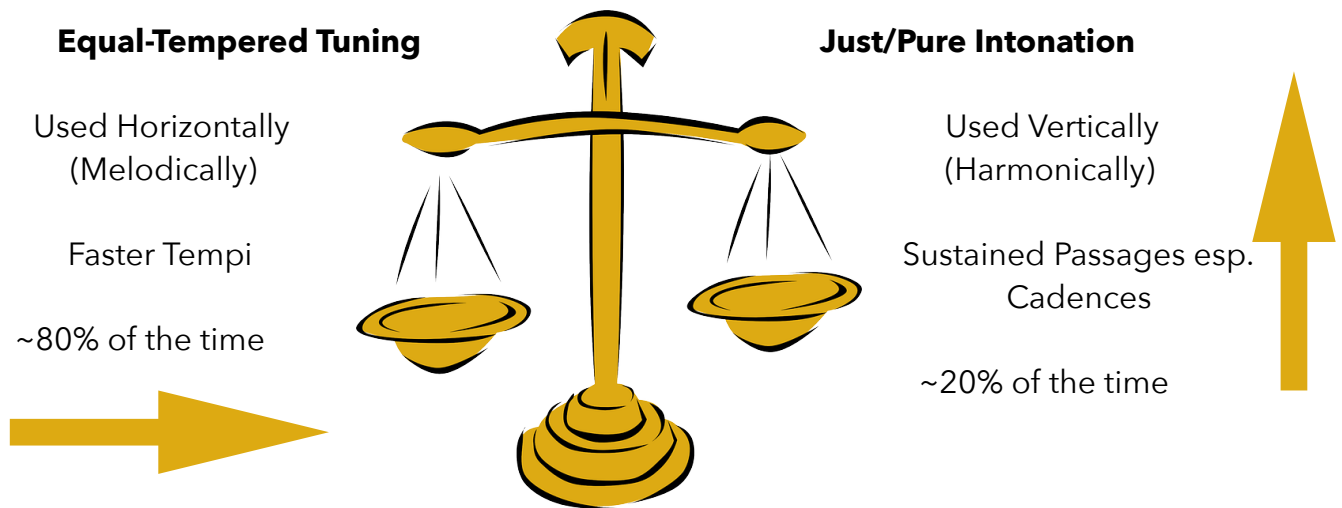


4. Beat-less Tuning - Use as a starting point
  - Start with true unisons, then add other perfect intervals
  - Use physical cues to identify beats to students
  - Transition into listening for **resultant tone\***



**Resultant Tone** - Also called combination tone or subjective tone is an artificially perceived note that is heard when two real tones are sounded at the same time. Ie. Two clarinets playing a unison C will generate a G Resultant tone (if they are in tune and tone)

## Just Intonation vs. Equal Temperament



## Just Intonation Progression

Concert Bb Major

b7th	- 31
5th	+ 2
3rd	- 14
Tonic	

*♩ = 60*

Harmony Training #2 introduces each note of the chord in balance order (Root, Fifth, Third, Seventh)

9 (♩ = 63)

Picc.

Fl.

Ob.

Bsn.



Harmony Director in Rehearsal  
HD-200 (HD-300 likely available 2021)  
\$1,500 MSRP

1. Use as drone throughout fundamentals/warm-up
  - Single pitch/octave or full triads depending on use
2. Isolate Cadences and sustained sonorities
3. Use to demonstrate proper balance of chords by manipulating volume of individual pitches
4. Use to demonstrate proper intuition by manipulating individual pitches
5. Very effective metronome feature

### Closing Thoughts

1. Start simply
2. Don't get bogged down in the minutiae – If they can Hear it/Sing it, they can play it
3. Don't discount the value of singing and chorales
4. Ask for help - find a director in your area with a strong program. (I am also happy to work with your ensembles live or virtually)

## Recommended Resources

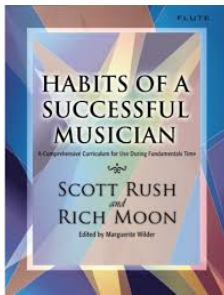
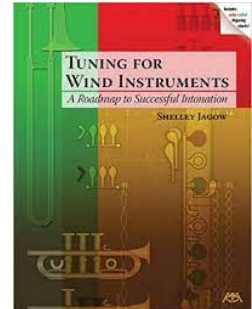


Winds: Basic Training for Concert Band  
\$50.00 for DVD and Parts

Winds: Sonority for Winds  
\$50.00 for DVD and Parts

Jagow: Tuning for Wind Instruments  
\$34.95 Meredith Music

Jagow: Developing the Complete Band Program  
\$34.95 Meredith Music



Habits of a Successful Musician  
\$34.95 Conductor  
\$ 9.95 Individual



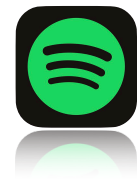
Tonal Energy App  
\$3.99  
IOS and Android

InTunator App  
\$6.99  
IOS and Android



Harmonize  
Free  
IOS and Android

Spotify  
Cello Drones Playlist



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