

# **Tuning and Toning---Opening Pandora's Box...**

**By Thomas O'Neal  
University of Missouri, Columbia**

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Pandora's Box issues:

- 1) Proper equipment
- 2) Proper warm-up
- 3) Proper set-up (mouthpiece, reed, ligature, etc.)
- 4) Characteristic tone
- 5) Understanding of the pitch tendencies for each instrument
- 6) Tessitura
- 7) Dynamics (Dynamics relationship with other instruments)
- 8) Refined listening skills
- 9) Proper sticks, mallets, and other percussion equipment

*Band tone and intonation is the result of an on-going effort to control the variables listed above.*

Additional Considerations:

- 1) Condition of the instrument
  - a) Woodwinds
    - pad/cork condition
    - mouthpiece
    - head joint
    - ligature
    - reeds
  - b) Brass
    - mouthpiece
    - dents/obstructions
    - mutes
  - c) Percussion
    - quality of drum heads and mallet instrument bars
    - accurate tuning of batter instrument heads
    - appropriate sticks and mallets
- 2) Uniform understanding of Breath Support
  - a) Demonstrate breath support seated/bent, seated, standing
- 3) Posture
- 4) Embouchure
- 5) Individual and ensemble understanding of controlled dynamic range

- 6) Effect of heat or cold on individual instruments
  - a) mallet percussion pitch drops as temperature rises
  - b) wind pitch rises as temperature rises
    - the larger the instrument the more dramatic the effect

*Playing in tone, and in tune, requires memorization of the PHYSICAL PROCESS necessary to play each note accurately.*

Start teaching instrument tendencies to young players (ie. Trumpet 3<sup>rd</sup> valve slide on low C# and D.

### **The definition of a good individual tone?**

Embouchure + Air = Tone

### **Toning difference between woodwinds and brass?**

- Brasses utilize the entire instrument to produce the sound
- Woodwinds sound comes from the first open hole on the instrument

We tend to hear flat sounds as bad (dull) and sharp as good (brilliant).

## **Tuning - Individually**

Sources for individual instrument tendencies:

Fabrizio, Al. *A Guide to the Understanding and Correction of Intonation Problems*. Silver Fox Publishing Company, Fairport, New York 1993

Jurens, James. *Tuning the Band and Raising Pitch Consciousness*. RBC Publications, San Antonio, Texas 1991

Considerations:

- 1) Range tendencies: ascending tendencies  
descending tendencies
- 2) Most instruments are constructed to play well at A = 440
- 3) Most instruments are intended to be played with their tuning mechanism(s) slightly pulled
- 4) Individuals must recognize their range and dynamics limitations as related to intonation
- 5) To play in tune, players must adjust embouchure first and the instrument second
- 6) Teachers should provide players with information regarding the tendencies of their instrument (ie. Fabrizio book)

- 7) Individual must hear pitch internally to produce it externally  
- Head first, horn second
- 8) Brass must recognize the benefits of triggers, valve slides and compensating valves
- 9) Individuals should always begin their playing by adjusting slides and joints to the approximate location that they usually play in tune
- 10) Tuning exercises require that players are warmed up

#### Using a Tuner

- 1) Purchase a quality tuner that has the ability to register timbre and tessitura extremes--  
-I prefer a tuner with a needle rather than an LED screen. Some tuners include a clip-on mic (good idea).

**HANDOUT:** Tuning Sheet- to be done with a partner  
Assists in determining the tendencies of individual instruments

Using the tuner is valuable for learning individual tendencies and for maintaining A=440. As pitch tendency awareness improves, the tuner becomes less necessary.

#### Sample Tuning Sequence:

- 1) Listen to a reference pitch (from a stable pitch source)
- 2) Sing or hum the pitch
- 3) Play the tuning note with your best tone quality at mf
- 4) Match your pitch to the reference pitch
  - a) if yours is noticeably different, exit, adjust, re-enter
  - b) never play out of tone, or disrupt the ensemble tone
  - c) if you are unable to appropriately adjust your pitch with your embouchure, move your tuning mechanism

**Possible demonstration of** the sample tuning sequence with a woodwind and a brass player. Include the difference in tuning issues between brass and woodwinds.

The Chicago Symphony wind section uses tuners!!!

## **Tuning - Ensemble**

- 1) Begin ensemble tuning by playing with like instruments.
  - a) one at a time, matching pitch with the preceding player**Possible demonstration**
- 2) Practice playing unisons with like instruments
- 3) Tune with like choirs
- 4) Tune with full ensemble
- 5) Be comfortable with unisons before adding chord voices
- 6) Tune to the lowest voice in the ensemble
- 7) Understand the concept of “waves”
  - a) The number of waves per second equals your proximity to accurate pitch
  - b) The slower the waves, the closer the pitch center

**Possible demonstration** two tuner waves tones

Excellent example of ensemble tuning guide in Fabrizio book, pages 7-9.

## **Transition from Tuning to Toning**

- 1) Establish an accurate unison, then open 5ths, then major/minor chords, etc.
- 2) Establish an ensemble awareness of the tendencies of certain chord voices
  - a) 5<sup>th</sup> needs to be 2 cents higher
  - b) M3 needs to be 13 cents flatter
  - c) M3 needs to be 2 cents higher
- 3) Ensemble Warm-up
  - a) John Paynter- ie. Remington warm-up
  - b) Ray Cramer- Lip Benders (published)
  - c) Warm-up method books
  - d) Warm-up sequence
    - warm-up instrument/embouchure
    - warm-up ears
    - warm-up brain
    - warm-up fingers
- 4) Play slow, listener-friendly music
  - a) *16 Bach Chorales*, Bach/Lake
  - b) have different (unique) representatives of each part (voice) play in 2-, 3-, 4-part chorales**Possible demonstration**
  - c) Bottom voices must be stable and consistent
- 5) Characteristic tuning/toning of sections
  - a) requires the presence of all voices- SATB
  - b) individual awareness of the prominence/presence of each voice

- 6) Characteristic choir toning/tuning  
**Demonstrate?**
- 7) Characteristic full ensemble toning/tuning  
**Demonstrate?**

## **Toning**

Francis McBeth - Pyramid Principle for Band  
**Handout**

**Possible demonstration of proper pyramid and the effect of too much or too little of any of the SATB voices.**

**Possible demonstration**, with repertoire, an example of music that does not conform to the pyramid, but requires careful prioritization of sounds.

What is a good ensemble tone?

- 1) Bowling Ball analogy---perfectly symmetrical
- 2) Proper prioritization of all participating sounds
- 3) Achieving a balance within the overall ensemble's dynamic range  
f/ff for trumpet?  
for flute?
- 4) All parts are present, in a characteristic, in-tone, in-tune manner

Miscellaneous:

- 1) Singing in rehearsal - encourages pitch consciousness
- 2) In teaching tuning in rehearsal, teach who shares voices, listening across the ensemble
- 3) Consider the effect of mallets and sticks on the ensemble tone
- 4) Consider modified seating/random seating/circle seating to encourage listening habits

**Handout** - Good Tuning notes for each instrument

### **Specific individual issues common to school band players:**

Flute	Head plug adjustment
Clarinet	Tuning is based on the section of the instrument affected by the intonation problem (barrel vs. middle joint vs. bell)
Bassoon	The solution to overall pitch issues is a shorter or longer bocal
Trumpet	Use the first valve trigger on 12 valve combinations
Horn	Refer to Phillip Farkas, <i>The Art of Horn Playing</i> , for a guide to tuning the double horn
Euphonium	Use the compensating valve (tuned!) as a substitute for 13 Use the compensating valve 24, as a substitute for 123

Tuba            See Euphonium

**Selected Bibliography**

Casey, Joseph L. *Teaching Techniques and Insights for Instrumental Music Educators.* GIA Publications.

Fabrizio, Al. *A Guide to the Understanding and Correction of Intonation Problems.* Silver Fox Publishing Company

Jurrens, James. *Tuning the Band and Raising pitch Consciousness.* RBC Publications

Pottle, Ralph R. and Hindsley, Mark. *Tuning the School Band and Orchestra.*