

Life In The Deep End: Low Brass Revisited

A review of low brass methods, teaching and playing

Overall Information

(Not specific to level)

Breathing

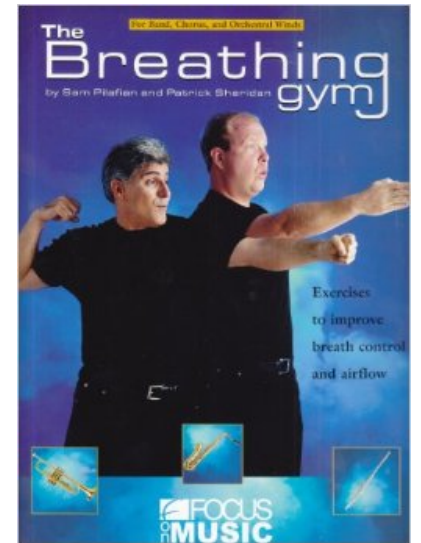
- Breathing exercises are the most basic and important things you can teach students
- Full, Deep and (eventually) Quick breaths are required to play well
- Always breath to the diaphragm. If the chest or shoulders move, you're working too hard and inefficiently.
- When students (or teachers!) are first learning to breathe properly, it's normal to get light-headed. When this happens, simply wait for a few seconds.

Breathing

- Breathing exercises should part of every lesson.
- A (friendly) competition between student and teacher is sometimes useful in motivating students to breath properly.
- Focus on full, complete breaths, and even air on the exhale – just as much air at the end of the exhale as at the beginning.
- The goal is to train the diaphragm.

Favorite Breathing Exercises

- Slow, Relaxed Breaths – in for 4, out for 4 (then 8, 12, etc...)
- Slow, Relaxed Breaths – in for 4 (then 3, 2, 1; out for 4 (then 8, 12, etc...))
- Floor Breathing (lay on floor w/ books on chest)
- Vertical Snow Angel (move arms with breath)
- Power Breathing (weight lifting butterfly movement)
- Paper Test
- Strongly Recommend “The Breathing Gym” (Sam Pilafian, Patrick Sheridan)



Hand Position on Trombone

- Left hand needs to hold the trombone correctly – the pistol grip – in order to provide balanced support for the instrument, and to prepare for the eventually addition of the trigger.
- The right hand is far more critical – it must stay relaxed at all times.
- Especially critical regarding fast movement between positions. (we'll look at this more in-depth with regard to slide maintenance)



Holding the Tuba/Euphonium

- The student should never, ever slouch
- Maintaining good posture in the upper body allows the air to flow easier and more evenly
- The right hand needs to be naturally curved, and fingertips need to be emphasized for use on the valve caps.
- For piston valves, nothing changes – fingertips should be near the end of the valves
- Euphonium/Baritone – left hand should “hug” the instrument
- Tuba – left hand should hold the tuba to be accessible to the valve slides, if possible (pictures of various tuba designs)



British euphonium
www.dwerden.com



Posture

- Back should be straight while playing
- For tuba players – I strongly recommend a tuba stand
- Trombone and Baritone/Euphonium Players – stand whenever possible



Harmonic Series

- Extremely important for teachers to understand, as well as students (when they can)
- Largest value lies in fingering / slide position options (alternate positions are needed for some level 3 music from trombone, and some level 5 literature on tuba/euphonium works best with alternate fingerings), and intonation
- Each slide position or valve combination lowers the fundamental pitch by $\frac{1}{2}$ step

Harmonic Fingering Pattern (Tuba/Euphonium)

- 2nd valve – lowers the pitch $\frac{1}{2}$ step
- 1st valve – lowers the pitch 1 whole step
- 1st & 2nd valves – lowers the pitch $1\frac{1}{2}$ steps (3rd valve alone also does this)
- 2nd & 3rd valves – lowers the pitch 2 whole steps
- 4th valve (or 1st & 3rd) – lowers the pitch $2\frac{1}{2}$ steps
- 2nd & 4th valves (or 1st, 2nd, & 3rd) – lowers the pitch 3 steps

Tuba Fingering Chart - Pitch tendencies based on partial

(adjusted for the beginning to intermediate player. Please note - 6th overtone is NEVER used.)

	1st Overtone (in tune)	2nd Overtone (in tune)	3rd Overtone (slightly #)	4th Overtone (slightly b)	5th Overtone (slightly #)	6th Overtone (very flat)	7th Overtone (in tune)	8th Overtone (slightly #)	9th Overtone (slightly flat)
Open									
2nd Valve									
1st Valve									
1st & 2nd Valves									
2nd & 3rd Valves									
4th Valve (also 1&3)									
2nd & 4th Valves (also 123)									

Beginner Level Information

Embouchure

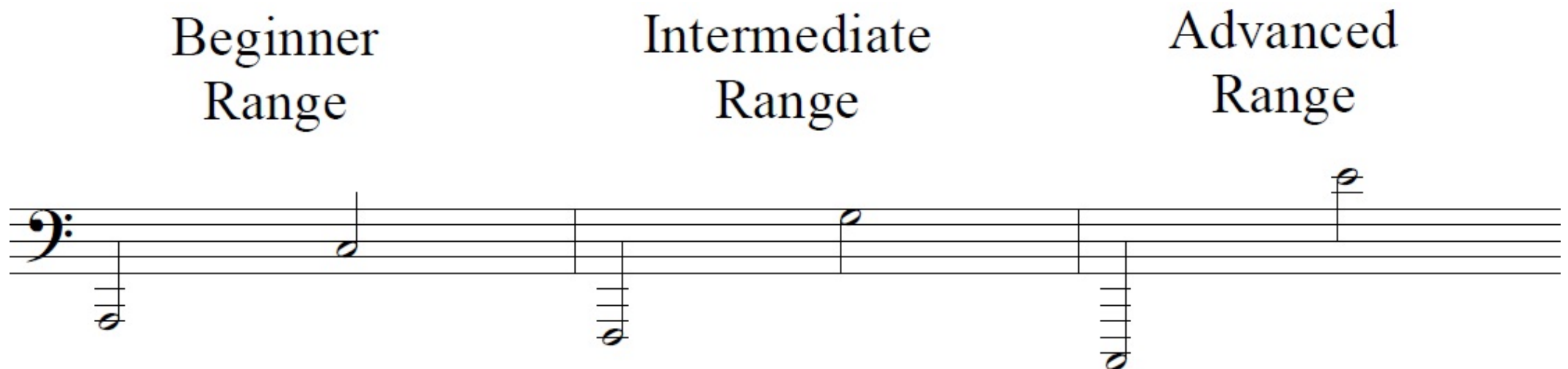
- Needs to be relaxed – lips should barely make contact with mouthpiece.
- Corners of the lips should be firm, especially for higher notes.
- If embouchure is proper, large leaps should be effortless.
- Faster air for higher notes, slower air for lower notes.
- Sometimes, louder for higher notes and softer for lower notes works – but you'll need to adjust this later.

First Notes

- These are often dependent upon the player.
- While method books go through a wide variety of methods for getting those first notes out, I prefer to keep it simply, and just have kids flap their lips.
- From there, we try to find their easiest first note, and focus on the corners of the embouchure and faster or slower air to try to change harmonics/pitches.
- It is critical that you play with the students, so they can match pitch.
- Students will continue to struggle if they cannot hear the pitch they are trying to play.

Expected Range

- It is fair to expect your beginning level students to play a range of a little more than 1 octave, give or take a few notes. This may not always be the same octave for each students.
- Ranges below are for tuba – roughly an octave higher for trombone/euphonium



Basic articulations

- At this level, almost every articulation should be a “ta” (crisp start to the sound) or a “da” (smooth start to the sound).
- Practice tonguing without instrument, then on a single pitch.
- The lower the pitch, the more challenging the act or articulation, due to physical distance the tongue must travel.

Slide maintenance

- NO SLIDE OIL.
- This does not clean off the slide well (builds up over time), and creates a tremendous amount of friction (rough slide).
- I recommend a good quality slide cream (I use trombotine, but also like Slide-O-Mix and Yamaha Slide Lubricant).
- I do not recommend students clean their own instruments at this level, as they don't have the physical control necessary to not damage the instrument.



6th position troubles

- For young, and especially short, trombone players, positions beyond 4th position present special issues.
- There is no great solution to this. Whatever you choose to do, please ensure that students maintain a good hand position and embouchure.

Beginning Tone Production

- I emphasize an open throat (think about eating something spicy), and dropping the back of the tongue.
- The goal is as open and unrestricted an airflow as possible from the lungs to the mouthpiece.
- The more open the path, the more open the tone.
- Students at any level can (and should) produce a nice, “warm” tone

Intermediate Level Information

(roughly NYSSMA levels 2-3)

Increasing range

- this is critical for level 2 or 3 players (on up).
- It is critical that range be expanded in both directions (lower and higher), at the same time.
- Embouchure must be well-developed (meaning firm corners of the lips, no pushing into the mouthpiece for any notes, and lots of air).
- Long tones are critical, as well as scales. Add one step (whole or half) at a time.

Advanced articulation

- speed becomes more important.
- Repetition of faster articulations will assist in strengthening the tongue muscle, as well as promoting independence (tongue independent from lip muscles).
- Mixing staccato and slurred/legato articulations becomes a necessary element.

Purpose of the 4th Valve

- it is time to begin thinking about a 4 valve instrument for tuba and euphonium students.
- The use of the fingering in regular practice and performance is the goal at this level.
- Practically, it lowers the pitch slightly for the 4th valve (13 combination), making it in tune – and brings the 24 combination (replaces the 123 combination) closer to in tune.

Warming up

- This process should be introduced to students at this level.
- A daily 5-minute warm-up exercise, consisting of long tones in various ranges, should become a requirement.
- Additionally, scale exercise (all major scales, not just common ones) should be happening by the end of level 3.

Scales

- There is no practical reason students cannot know all major scales by level 3, unless 7th position is still posing a physical issue for trombone students.
- If they do not, they should be well on their way.
- For many scales, playing the entire range of the instrument (their range) should also be happening as a warm-up exercise.

Good solos and method books

(meaning the ones I use)

- Walter Beeler method (moves very quickly)
- Rubank books (I don't use these often, but they are slower than Beeler)
- First and Second books of Practical Studies (these are lower intermediate level etudes)
- Vandercook etudes (intermediate etudes)
- 27 Etudes for the Advancing Tuba Player (mine – these are more advanced intermediate level etudes)
- Introducing legato (Fink – especially good for trombone)

Ear training

- they need to play by themselves a lot more
- I will often put on a background track (usually Aebersold Volume 24) in a key, and we'll employ a question and answer.
- Students should be able to hear more in the music, especially pitch tendencies (example – the dominant/tonic relationship, leading tone, etc...).
- Students should be listening to good players on their instrument. YouTube also allows them to see good technique (so choose video recommendations wisely!)

Advanced Level Information

(roughly NYSSMA levels 4-5)

Increasing range further

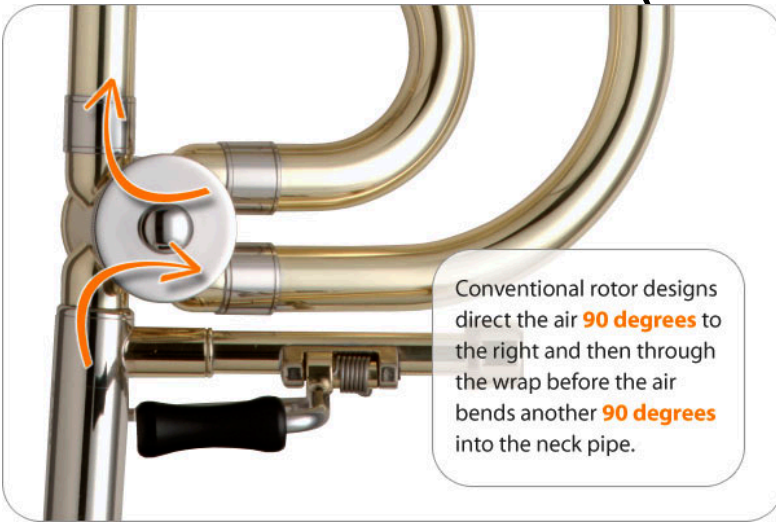
- long tones in range extremes (builds embouchure strength in upper range, breath control in lower range).
- Scale exercises.
- Extended warm-up.
- As the embouchure strength improves, so will the range, as well as playing ability.

Articulation needs and tricks

- large leaps become quite common
- double and triple tonguing becomes necessary.
- A slight legato tongue can be used to “cheat” for large leaps
- alternate positions should be used for aiding in legato tonguing and slurred passages.
- Large leaps (all leaps) are easier (and sound better) with no pressure from lips to mouthpiece
- Firm corners!
- Lots of air!

Triggers

- trombone students should be introduced to the trigger at this point in their development, if at all possible.
- This should not be used as simply an alternate to 6th and 7th position, but as a fourth valve in only certain instances.
- The trigger lowers the fundamental pitch of the trombone to F, instead of Bb (still reads concert pitch).



Triggers

- I highly recommend using etudes specifically designed to aid in the use of the trigger.
- There are only 6 positions with the trigger, each a bit further spaced than without the trigger.
- It should be noted the trigger (except bass trombone) is seldom used for jazz – most professional jazz trombonists use a “straight” horn.

Bass Trombone

- for students interested in the lower end of the trombone range.
- These come in single or double triggers.
- Double triggers can be independent (each one independently changes the fundamental pitch of the instrument), or dependent (the second trigger only works with the first trigger).
- The second trigger can be in Eb or in D (D is more common). There are only 5 positions with the double trigger.

TROMBONE SLIDE POSITION CHART

FOR BASS TROMBONE WITH F/D-ATTACHMENTS

REGULAR POSITION

1

2

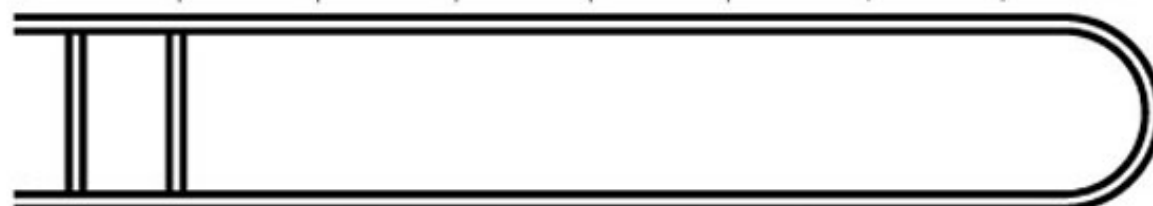
3

4

5

6

7



F-TUNING

1V

2V

3V

4V

5V

6V



D-TUNING

1D

2D

3D

4D

5D



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Baritone vs. Euphonium

- your former baritone students should be playing Euphonium by now.

What are the differences?

- More conical tubing (usually)
- definitely 4-valves,
- a larger bore.



Buzzing (the mouthpiece kind)

- students should be buzzing through parts of their music (with the mouthpiece off of the instrument).
- Pitch should be accurate.
- No pressure on mouthpiece.
- Should barely hold onto mouthpiece, so as not to add pressure.
- Can use the pinky to cover part of the end of the mouthpiece for lower notes if embouchure not formed enough.

Recommended literature

(standard stuff, NYSSMA Level 4 and 5)

Trombone Level 4:

- Handel – Thunder, Lightning and Whistling Wind
 - Mozart Sonatina
- Bach for the Trombone

Trombone Level 5

- Galliard Sonatas
 - Fasch Sonata
 - Corelli Sonatas
- Mozart Sonata in Bb

Recommended literature

(standard stuff, NYSSMA Level 4 and 5)

Euphonium Level 4:

- Handel – Honor and Arms
 - Mozart Sonatina
 -

Euphonium Level 5:

- Barat – Andante et Allegro
- Capuzzi – Allegro Moderato
 - Galliard Sonatas
- Haddad – Suite for Baritone
 - Marcello Sonatas
- Telemann Twelve Fantasies

Recommended literature

(standard stuff, NYSSMA Level 4 and 5)

- Tuba Level 4:

- Buchtel – Introduction and Rondo
 - Handel – Honor and Arms
- Handel – Thrice Happy the Monarch

- Tuba Level 5

- Beethoven – Variations on a Theme from Judas Maccabaeus
- Frackenpohl – Concertino for Tuba
 - Grundman – Tuba Rhapsody
 - Haddad – Suite for Tuba *
- Hartley – Suite for Unaccompanied Tuba
 - Holmes – Emmett's Lullaby
- Marcello – either sonata (or Sonata No. 2 in E minor)

College Preparatory Level Information

(roughly NYSSMA level 6)

Daily routine

- at this level, students should be playing consistently every day.
- A good daily routine should be established for practice, beginning with warm-up, scales, etudes, solo work, ensemble literature, other materials as necessary/desired, and ending with a warm-down to relax the embouchure.

Instrument choices

- these become very personal.
 - Large or small bore
 - type of mouthpiece(s)
- physical design of the instrument
 - Type of metal and finish
 - Valve design
 - etc...

“toys” (mutes, mouthpieces, etc...)

- trombone players should have a straight and cup mute as a minimum, and a plunger if doing jazz.
- Optional mutes include harmon, bucket, and others.
- Warm-up mutes, while expensive, may also be a good investment if student is gigging.
- Mouthpiece choices and preferences also become specialized.
- A trombone stand is highly recommended.

Recommended literature

(standard stuff, NYSSMA Level 6)

Trombone:

- Barat – Andante et Allegro
 - Creston – Fantasy
 - Ewazen – Sonata
- Uber – Ballad of Enob Mort

Recommended literature

(standard stuff, NYSSMA Level 6)

Euphonium:

- Bach Suites
- Capuzzi – Andante and Rondo
 - Hartley – Sonata Breve
 - Jacob – Fantasia

Recommended literature

(standard stuff, NYSSMA Level 6)

Tuba:

- Arnold – Fantasy for Tuba
- Frackenpohl – Sonata for Tuba and Piano
 - Gregson – Tuba Concerto
 - Uber – Ballad of Enob Mort
 - Uber – Legend of the Purple Hills
- Vaughan Williams – Concerto for Bass Tuba
- Wilder – Effie Suite (Suite No. 1 for Tuba and Piano)

Recommended literature

(standard stuff, NYSSMA Level 6)

Etude Books:

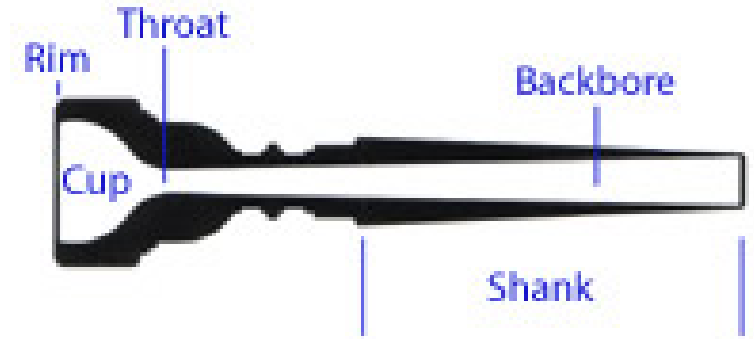
- Remington Warm-Ups
 - Tyrrell
 - Rochut
 - Fink
- Blazhevich 70 Studies
 - Paudert 24 Studies
 - Kopprasch 60 Studies
- Kuehn 28 Advanced Studies for Tuba
 - Kuehn 60 Musical Studies for Tuba

Other non-level
Information

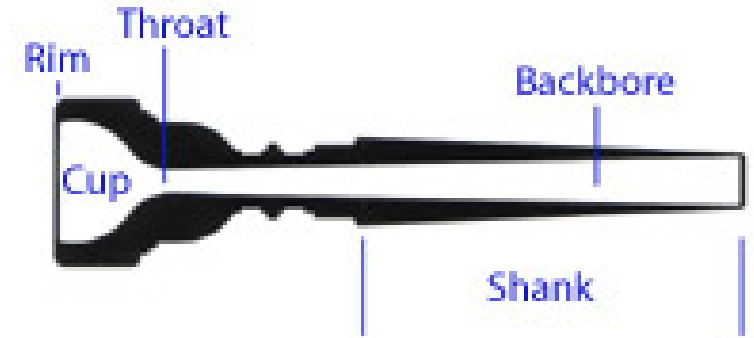
Mouthpieces

- Rim
- Wide: Increases endurance.
- Narrow: Improves flexibility.
- Round: Improves comfort.
- Sharp: Increases precision of attack.

- *Information taken from MouthpieceExpress.com*



Mouthpieces



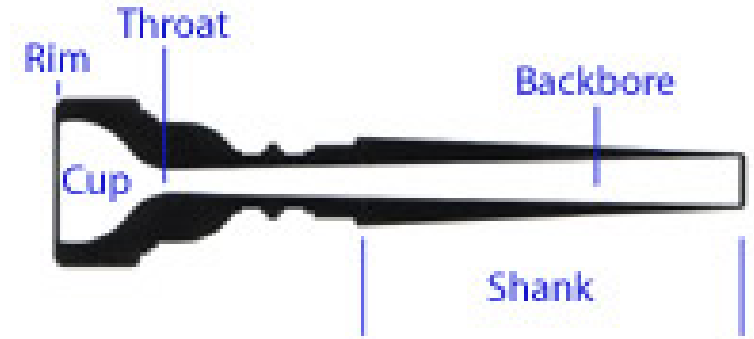
Cup

- Large: Increases volume, control.
- Small: Relieves fatigue, weakness.
- Deep: Darkens tone, especially in low register.
- Shallow: Brightens tone, improves response, especially in high register.

• *Information taken from MouthpieceExpress.com*

Two basic styles – bowl shape (typical of Bach), funnel shape (a.k.a. helleberg) (more typical of Schilke)

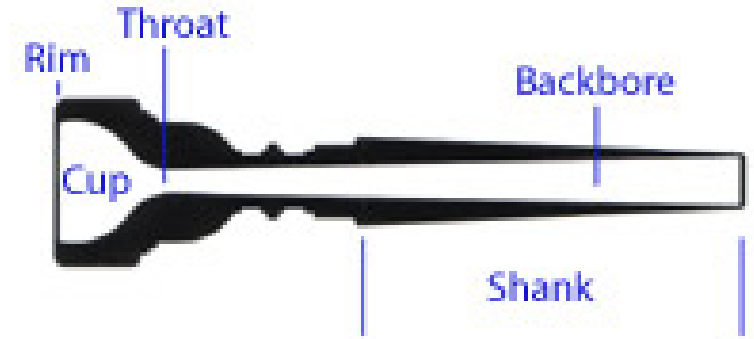
Mouthpieces



- Throat
- Large: Increases blowing freedom, volume, tone; sharpens high register (largest sizes also sharpen low register).
- Small: Increases resistance, endurance, brilliance; flattens high register.

• *Information taken from MouthpieceExpress.com*

Mouthpieces



- Backbore
- Combinations of size and shape make the tone darker or brighter, raise or lower the pitch in one or more registers, increase or decrease volume. The backbore's effects depends in part also on the throat and cup.
- *Information taken from MouthpieceExpress.com*

Mouthpiece “Codes”

- Each Number and Letter has a meaning, and each manufacture uses different codes
- Cup Diameter and Depth are most common concerns – followed by through and rim shape

Usually indicators for:

- Number for cup diameter
- Letters refer to cup depth
 - Rim contours
 - Backbore

Recommended/Common Mouthpieces

- Trombone:

Bach 6 ½ AL, Bach 12C (smaller), Schilke 51D

- Euphonium (large-bore – can use Bass Trombone also):

Bach 3G, Schilke 47C4, Wick SM3.5 (Steven Mead)

- Bass trombone (can use Euphonium also):

Yamaha “Doug Yeo” signature, Bach 1.5G

- Tuba:

Conn Helleberg S (standard), Bach 24AW (Conn is best)

Switching students

- Best switches tend to be from trumpet – for both tuba and baritone
- Baritone TC works well through roughly NYSSMA Grade 3
- Baritone TC needs to switch to Baritone BC for much of the NYSSMA Grade 4 literature
- Biggest issue (other than reading) is the more open embouchure

Switching students:

Other keys to success

- Move your seating in rehearsals so new Baritone students can hear trombone and tenor saxophone parts easily
- Have tuba players sit near baritone saxophone, bass clarinet and bassoon.
- In a pinch, baritone saxophone parts may be interchanged with tuba parts – just change clef and key signature (lines/spaces stay the same)
- This trick also works for Alto Sax/Baritone (BC) students
- Baritone TC students who sit next to Tenor Sax students should sound the same playing the same parts
- Finally, have students practice with the instrument for a while before you add them on the new instrument to the band. It takes longer, but they are more successful.

Purchasing

- Specific to student
- Pricing of used instruments is like buying a car – the price is negotiable
- Try before you buy
- Know what you want – the more specific, the easier to find something you'll be happy with
- I'm a big fan of used instruments – more stable, and often better built

Purchasing

Places I use:

- John Keal, Northeast Music, Music and Arts
- Dillon Music (for instruments especially)
- Hickey's Music (especially trombone)
- Various online stores

What I use

- 3 tubas:

- Meinl-Weston 20 BBb Tuba (rotary valves, large bore, lacquer, dark tone)
- Conn “Wonder” BBb Tuba (piston valves, slightly smaller bore, silver plate)
 - Conn Eb Tuba (upright piston valves, silver plate)

-

- 4 trombones:

- King 3B Tenor Trombone w/F attachment (small bore, early 1970's)
- King 6B Bass Trombone (double dependent triggers, early 1970's)
 - Yamaha YSL-682G
 - Red PBone (for fun)

Maintenance

- Every instrument should be professionally cleaned once a year
- Trombone slides should be cleaned and re-creamed as needed – slide should move freely.
- Water from a spray bottle can help a slide move freely
- Don't just add more cream – remove the old first
- Older students should bath their trombone slides – use warm (not hot or cold) water, I use Dawn soap. Use a trombone snake and cleaning rod to clean out inner slides. Green and black are bad colors!

Basic Maintenance

- Euphonium and Tubas with piston valves – these are oiled the same way trumpets are
- Never pour oil in the holes at the bottom of the valve – these are to help expel dirt
- Regularly loosen valve caps (top and bottom) to prevent them from becoming stuck. A touch of valve oil can help if necessary, as can LIGHTLY tapping with a small rawhide mallet
- For slow valves – remove valve, dry it off, remove spring and lower cap, wipe out casing with a paper towel (lint free). Make sure you re-oil the valve!

Basic Maintenance

- Rotary Valves (usually just tubas and horns) – oil goes in the valve slide.
- Always hold down the valve (all instruments) while moving valve slide
- You can't over-oil – excess will come out the spit valve
- Valve and tuning slides – grease can be wiped off and slides re-greased
- You can use tuning slide grease (Selmer tends to work well), or White Lithium Grease also works well

Solving Common Problems

- Tight tone – not enough air is getting into the instrument, or the throat is too closed
- Notes unfocused – student is not hearing notes accurately, poor articulation or embouchure, not enough air support, or an incorrect fingering
- Gurgles in the instrument (especially in tuba or euphonium) – there is moisture (spit) in the instrument. Spin the instrument to work it out. (This is common with the 4th valve)
- Notes on wrong partial – poor embouchure.

Question time

That's it! Thanks!