

**MUSC 106C Secondary Brass - Trombone  
Handout #5**

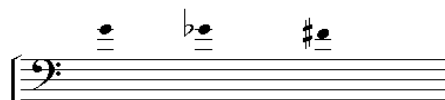
**Two Topics: (1) Intonation Issues in the Overtone Series  
(2) Articulation and Note Shape**

***The Overtone Series and Intonation***

All brass instruments have natural “flaws” in intonation with respect to equal temperament. Please remember that equal temperament is essentially a compromise that allows all keys to sound equally good but none to be optimally in tune. A pure overtone series presents notes that are ideally in tune with the lowest note (or fundamental) even though those notes will appear to be sharp or flat to a tuner. With this in mind, here are intonation problems inherent in the overtone series listed in order of importance and severity...

**7<sup>th</sup> Partial - very flat**

Raise the slide. Main notes: high G, G-flat/F-sharp.



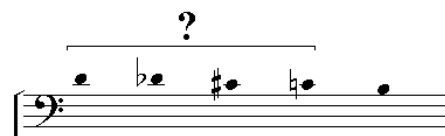
**6<sup>th</sup> Partial - sharp**

Lower the slide. Main notes: high F, E and E-flat.



**5<sup>th</sup> Partial - somewhat flat  
(varies according to instrument)**

Raise the slide a little. Main notes: middle B.  
Possibly middle C, D-flat/C-sharp and D.



**3<sup>rd</sup> Partial - slightly sharp**

Lower the slide a little.  
Main notes: middle F down through low B.



**9<sup>th</sup> Partial - slightly sharp**

Lower the slide a little. Main notes: high C, B



## *Articulation and Note Shape*

### **Basics**

Articulation is simply the partnership between embouchure, air and tongue to begin notes. The **embouchure** should be set a brief moment before the note begins. In repeated attacks or in legato, the embouchure should not relax between notes. The **air** must begin flowing immediately. Many problems in brass tone production occur simply because the air is not fully flowing at the very beginning of the note. Note that I mention the **tongue** last. Most people focus overly on the role of the tongue in articulation. For most situations, place the tip of the tongue behind the upper teeth at the gum line. Here are two useful analogies for good articulation: (1) Use the tip of the tongue as a gate that is 'blown open' by the flowing air. (2) Imagine spitting seeds from between your lips.

### **Note Shape**

All notes have a shape. A good marcato attack will have the following note shape:



The note shape has three basic parts: **beginning, middle and end**. The **beginning** should almost always be an immediate full sound. Quite often brass players will 'sneak into' the beginning of a note resulting in this beginning note shape, often referred to as a "wah" sound.



This problem by making sure the player begins the note immediately with flowing air. A useful saying to remedy this is, "Get right to the "ah" of "tah." Buzzing articulated notes into an Inspiron (see previous handout) is also quite helpful. If the little ball jumps right up at the beginning of each attack, air is flowing well and the "wah's" are less likely.

The **middle** of the note should usually be nice and steady.

The **end** of the note should have a slight taper. This can also be described as a slight 'ring' to the sound. Many intermediate players can significantly improve their sound with more attention to note endings. Only in the rarest of circumstances should one end the note with the tongue. Such endings, even with short notes, help create an immature sound. Conductors should be careful to always sing with the 'tah' syllable rather than 'tut.' With a little practice, you will find it quite easy to produce very short notes using 'tah'.

Trombone players often anticipate slide movement by allowing the end of the note to flair slightly. Such an error can be represented with this note shape..



## ***Staccato Tonguing***

Remember that, technically speaking, the term “*staccato*” refers not so much to shorter notes but to separated notes. Of course, in most cases, it will be necessary to play the notes short in order to separate them. Remember to focus on 'tah' not 'tut' for staccato notes (see previous section). The key to good staccato is in the air. One should rely not so much on the tongue but on a short burst of air.

Staccato notes, due to their greater separation, allow more time for slide movement between notes. Thus the slide can move more smoothly.

Staccato playing is often the enemy of good tone. When younger players play shorter notes, they tend to rely too much on the tongue to begin the notes and give little thought about the tone quality of the note itself. I have heard two wonderful, wise sayings to help one remember to retain a good tone even in short notes...

“There are no short notes. Only short long notes.”

“The bread is made of the same ingredients no matter how thinly you slice it.”

## ***Legato Tonguing***

Whereas valved brass can move from note to note without tonguing, the trombonist must often tongue between notes to prevent glissandi (unless they are using natural slurs). Trombonists often struggle with legato tonguing. Many of these struggles are unnecessary. Try these six steps to improve legato tonguing:

1. Say the syllables, "dah-dah-dah" Keep the 'd' consonant light with most emphasis falling on the 'ah.'
2. Now, blow air against your hand or a tissue paper and repeat these syllables while blowing steadily.
3. Now, repeat these syllables as you buzz on a mouthpiece. Listen carefully. The 'd' consonant, while light, must be pronounced enough to be audible. Make sure the air is flowing smoothly throughout each pattern.
4. Now, repeat these syllables as you play an easy note on your instrument. Again, the 'd' must be strong enough to be audible. Experiment with different strengths of the 'd' syllable, ranging from quite pronounced to barely noticeable. Always keep the air flowing and the tone nice and full.
5. Try moving between first and second position in eighth notes as you pronounce the "dah-dah-dah" syllables. Essentially you are using the 'dah' to cover up the glissando that would normally occur. Snap the slide quickly and lightly at the last possible moment. Don't start to move early, anticipating the slide shift.
6. Once you mastered slide movement between first and second positions, try the same pattern with longer slide jumps (for example, 1st to 3rd or 1st to 4<sup>th</sup>).

In review, the three essential ingredients of good legato tonguing are: smooth, flowing air; light “dah” tongue and quick slide.

## Review Questions

1. In the following melodies, please mark in all slide positions including adjustments for intonation...

A.



B.



C.



2. T/F In repeated attacks or in legato, the embouchure should not relax between notes. Explain your answer.
3. Give two analogies to imagine to help promote good tonguing (hint: gates and seeds).
4. Name a common trombone player's mistake with respect to note endings (especially when moving the slide).
5. What is wrong with the "tut" syllable for staccato tonguing?
6. What are two useful sayings to help improve tone quality in staccato?
8. What are the six steps described for learning legato tonguing?
9. What are the three essential ingredients of good legato tonguing on trombone?
10. Describe the following shape. What does it happen? How can it be remedied?

