Helping Your Trombone Section
Play in Tune...

And Why Most Trombone Slide Position Charts
Are Woefully Inadequate

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The trombonist can play perfectly in tune or atrociously out of tune. A trombone student is at a definite disadvantage when it comes to learning to play in tune. Like a string player, he or she must learn where to “put” the slide for each note. This takes a great deal of coordination and will hopefully get better and better with time. Other instruments are able to at least “land” somewhere in the vicinity of a correct pitch by pushing down buttons or keys. With the trombone, however, there is a lot of room for user-error. Beginning slide position charts, a lack of student awareness about intonation on the trombone, as well as differing intonation tendencies among major trombone models are contributing to this wide-spread problem.

Beginning Method Books

For the purpose of this article, I consulted with many beginning method book slide position charts, including several second volumes, and as suspected, I did not find one clear accurate chart. Now, I understand that for the purpose of simplification, beginning method books mostly use the “standard seven” positions without any extra adjustment indicators of longer or shorter positions so that the student will not feel overwhelmed. However, unless the student has access to good private teaching or a trombone-playing band director, the student may never progress to the next step of learning the adjustments of specific partials critical to playing in tune. Most method books try to show adjustments for some of the notes (such as alternate “D”) but ignore other alterations for notes on the same partial. (One recent method book, even publishes the wrong direction for the adjustment for alternate “D”.) By not introducing students to the needed alterations for each slide position, they are not receiving all of the information they need to play in tune.

Ear-Training

A lack of ear-training is contributing to the problem students have of not playing in tune. Too often, students rely on a visual indicator such as the bell to learn where to “put” the slide. Simple frequent reminders to students that they can learn to “hear” intonation problems will help. Also, tell them frequently that if they do not know if they are sharp or flat, try moving the slide in one direction, and if it gets worse, move it the other way. Practicing scales or arpeggios with open fifths also helps students learn to tune specific chord tones (i.e. the third of a major chord is played lower). For despite a fingering chart’s best intentions, all tuning ultimately rests with the player’s “ears”. With digital tuners starting at less than twenty dollars, there should be no excuse for students to not own a tuner.
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**Instrument Models**

Not all slide positions are created equal! Many of the popular brands of trombones do not share the same intonation tendencies, particularly on the fifth partial. The “D” in first position, according to the natural harmonic series, should be flat, however, in many fine current trombone models, the “D” in first position is actually sharp. Subsequently the “C-sharp” in second position is also sharp and the “C” in third position may be slightly sharp. In fact, a horn that has a sharp fifth-partial “D” in first position amazingly may also have a flat alternate “B-flat” in fifth position on the same partial. It is important that each individual student know his or her own instrument tendencies. Again, every student should own a tuner.

**How the Harmonic Series Affects Intonation**

First position notes (or partials) on the trombone are shown in Figure 1. Solid notes indicate that an adjustment should be made to get the note in tune. The arrows indicate which way the adjustment should be made. A downward arrow means move the slide outward. An upward arrow means move the slide inward. Note that only the partials that are octaves of the fundamental “B-flat” are in tune. The first position “A-flat” on the seventh partial should not be played because it is too flat.

**Chart of Positions Requiring Adjustments**

Each slide position on the trombone lowers its pitch by a half-step. Therefore each half step down from the out-of-tune partial generally follows the same adjustments. Figure 2 below indicates what adjustments are needed for each out of tune partial.
What Is Most Likely Out of Tune In Your Trombone Section?

For the reasons listed above, the most likely culprits for out of tune notes are from the sixth and seventh partials. If nothing else, learn the sixth partial notes: “F”, “E”, “E-flat”, and alternate “D” (1st, 2nd, 3rd, and 4th respectively) above the staff should be played in long positions. The seventh partial notes “G” and “F-sharp”/“G-flat” above the staff should be played in extremely short second and third respectively.

Tuning Basics

Tune the main tuning slide on all trombones to top of the staff “B-flat”. Although the fine tuning of the F-attachment and D-attachment will need to be left for another article, tune the tenor trombone F-attachment tuning slide to the bottom of the staff low “F” in first position (all the way in). Bass trombonists should tune their main tuning slide and F-attachment as above, then the D-attachment should be tuned to the below the staff “D” in first position.

All positions should be checked with a tuner frequently, especially middle of the staff “F-sharp”/“G-flat” and “C-sharp”/“D-flat” in 5th, low “C” in 6th, and low “B” in 7th. Remember that young students will be growing (and so will their arms.)

Summary

By following the above recommendations and passing along the information to your students, better intonation in your trombone section will certainly follow. Intonation can and should be taught to students as soon as is feasible. Adjustments for out of tune harmonics, an understanding of intonation tendencies among different trombone models in the fifth partial, as well as attention to the student's ear training will dramatically improve your trombone section.