



Wesley Jacobs began his orchestral career with the San Francisco Opera Orchestra from 1968 - 1970, performing the entire *Der Ring des Nibelungen* during his time there. In 1970, he was appointed Principal Tuba of the Detroit Symphony Orchestra by Music Director Sixten Ehrling. During his 38-year tenure with the DSO, Wes distinguished himself by bringing the highest level of professionalism to this position.

Possessing a beautiful tone, thoughtful phrasing, and an exceptional sense of balance, he supported the Detroit Symphony with unwavering excellence. Mr. Jacobs performed under six different Music Directors and can be heard on over 60 recordings with the DSO.

Mr. Jacobs is a recipient of the University of California's Lifetime Achievement in Music / Distinguished Artist Award; an award which recognizes his volume of work with the Detroit Symphony Orchestra, the San Francisco Opera Orchestra, and The Carpenters.

Tuning

by Wesley Jacobs

Principal Tubist (ret.) Detroit Symphony Orchestra

Musical intonation is a very complex subject. There are different tuning “systems” (each with its own set of problems and limitations), different reference pitches, commas of intonation, problems specific to individual instruments, human perception issues and practical application issues all of which add to the difficulty and frustration involved with playing “in-tune”. I have chosen to take the simple route with this article and focus on only the most basic issues of intonation.

How to tune an “out of tune” instrument

All brass instruments have notes with undesirable intonation. Our job as musicians is to make our intonation compatible with others. This requires careful tuning with a reference pitch and constant adjustment during performance.

As a practical matter, when tuning in an ensemble, always try to tune two different notes. For example, I would tune the A (on my CC tuba) to the oboe’s reference A and then I would tune the note D (to the oboe’s A) in two different octaves:

CC tuba	1	4
	♯	♯
BB ^b tuba	0	1-2
	♯	♯

This upper D is fingered first valve and tends to be a bit low. I must make my instrument sharp enough to put this note into tune with the oboe’s A. Then I play and adjust the D one octave lower, fingered fourth valve. This allows me to choose a slide position for the fourth valve that should work well for most notes that are fingered with only the fourth valve. On the BB^b tuba it is advisable to tune the open D and the D one octave below with the A or the B^b tuning note.

During performance, it is important to find the path of least resistance for every note. That means adjusting your pitch to achieve either no beats or only very slow beat rates. Some intervals are impossible to play with no out-of-tune beats (depending upon the harmonic context of the music). For these notes, you must find the pitch that produces the closest approximation of “in-tune”.



Remember that adjusting the main tuning slide on a brass instrument does not make the same amount of pitch-change on all notes. The notes with longer-tube fingerings will change pitch less than notes played using fewer valves (and therefore using less tubing length). Most valve brass instruments allow for easy adjustment of the first and third valve slides while playing. Be sure that those valve slides move easily. They need to be adjusted frequently.

Get to know the intonation issues on your instrument(s). It is very helpful to play slow melodies with another musician so that you both may adjust intonation. As a variation, play the slow melodies in fourths or fifths (perfect intervals) to emphasize intonation problems.

Be sensitive, listen carefully and be flexible with your intonation. Be the first person to adjust, not the last.