Tuning the Double Horn

With additional notes on playing in tune

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Versions of this article were published in the September, 2001 issue of the Texas Bandmasters Association Journal and the June/July 2000 issue of Horn Notes.

First, an observation: many horn players, especially less accomplished horn players, tune the F side much lower than the B-flat side on the double horn, which will cause the high range to be sharp. The topic of tuning a double horn seems to be much more of a mystery than it should be. The steps to tuning a double horn are simple, as follows.

Begin by matching the tuning of the F and B-flat sides of the horn. This is most easily accomplished by matching the two sides of the horn on the C, third space. For most models of double horn it is best to start with the B-flat horn on this note, tune it exactly in tune using the main slide, and then match the F horn to the B-flat horn. When this note is perfectly in tune with itself you can then begin to adjust the valve slides.

Double horn models do vary in tubing arrangement. The main slide on a double horn will always be the first one you come to if you follow the tubing in from the mouthpiece. You will have at least one additional slide (besides the valve slides) that controls only the F side. Another common design has two F horn slides, however, and some also have still another slide that controls only the B-flat side (the B-flat side is usually "thumb down," at least in the USA).

Another way to check the balance of intonation between the F horn and the B-flat horn is to first carefully tune a written C in the third space on the B-flat horn, using only the main slide. Then tune a G on the second line by adjusting ONLY an F-horn tuning slide, of which again your horn will have one or two, depending on the wrap. Tune the F side to the B-flat side. Open B-flat horn notes such as C on the third space and F on the top line should be the very best notes on your horn, ones that are never sharp.

Many seem to get stumped at this point, as they know their B-flat side is sharp on these notes but they don’t have a separate B-flat horn tuning slide available to lower the notes or the slide is pulled out all the way. Either situation is however not a problem when one realizes that the F side is flat relative to the B-flat side. Push in the F side so that both sides match and then pull the whole horn down to pitch with the main slide.

After this is all sorted out, adjust the first valve slide on both sides of the horn so that it lowers open notes exactly one step.

The second valve should be adjusted next so that it lowers open notes exactly one-half step on both sides of the horn. Make a mark with a pencil to note the exact placement of the first and second valves on both sides.

Next tune the combination fingering of the first and second valve. This invariably requires a longer pull than the setting used for the individually tuned slides. Spread the difference between the slides by a ratio of 2/3 on the first valve and 1/3 on the second. For example, if you need 3/8" more tubing for the combination of the first and second valves to be exactly in tune, pull the first valve out 1/4 inch and the second valve out 1/8 inch. Mark this position with a pencil.

Now, set the first and second valves half way between the two marks you just made on the slides. This will give you a compromise setting that you will want to remember. As Farkas noted in his discussion of the same topic in The Art of French Horn Playing, "While this compromise theoretically results in NO notes being in tune, the amounts involved are so infinitesimal that the embouchure, automatically adjusting as the mental ear dictates, has no difficulty in 'lipping' the notes into pitch."

http://www.public.asu.edu/~jqerics/double_horn.htm
Finally, pull the third valve to tune perfectly those notes you play as a second and third valve combination. (This assumes that you will not normally use the third valve by itself).

Once the horn is completely in tune with itself, as it should be at this time, you should not need to adjust any slide other than the main slide in an ensemble situation. To adjust any other will potentially only make the situation worse. If this tuning method resulted in drastically different slide settings than you are accustomed to using be sure to check yourself with a tuner frequently as you may have been fighting your horn and not playing in its true tonal center for quite some time.

**PLAYING IN TUNE**

Playing in tune is of course very important to every musician. As a hornist, being constantly in the middle voices in ensembles, it is critical to have great intonation. Listen to any recording with horns in the ensemble; typically the horns are fairly easy to hear and thus become a focal point both for listeners and for other musicians in the ensemble. For this reason horns are arguably one of the most critical voices in any ensemble.

I would suggest three points of focus for practicing intonation.

- Practice carefully with a tuner to be sure that you are in tune with yourself. You can easily get used to the way you sound and not realize that you are actually out of tune with reality.
- Make really sure you are not "pushing" pitch up in ascending passages--keep "down" in the "groves."
- Practice listening carefully in ensemble situations to hear the special tonal quality of being very in tune with others. Duets can be great.

With respect to the final point above, you may have to decide exactly who you want focus upon. For example, when I performed third horn in the Nashville Symphony I mainly focused for purposes of intonation on the principal horn and the principal clarinet. The rest of the orchestra was, of course, also well in tune, but I felt that these two instruments were the most critical for me on third horn and among the easiest to focus in on.

When I listen to ensembles I occasionally get the feeling that most of the players are basically in tune with themselves but don't seem to really listen to see if they are in tune with anyone else. To a point it can be a real question, who is correct and on pitch? In the orchestra it has become traditional that the oboe be viewed as being in tune. Therefore, if the strings go sharp relative to the oboe, ignore them! Stay with the oboe and the principal woodwinds; if you, as a horn player, stick with these players well, a large body of sound in the middle of the orchestra will tend to stick together and the rest of the orchestra will sort out their pitch around you. But an added word of caution; if the oboe is moving around trying to match others all is basically lost. There is no rock, only sand to base intonation upon. While you can’t control what others do, at least be certain that pitch in any ensemble is not moving around because of you!

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*Interested to learn more about the history of the double horn? Read* [The Double Horn and Its Invention in 1897](http://www.public.asu.edu/~jqerics/double_horn.htm).