Section VI:

Chorales

What ARE Chorales And Why Do We Play Them?

Originally, "chorale" was the term used for the hymns written for use in European Protestant churches after the Reformation of the sixteenth century. Even Martin Luther wrote a few chorales, himself, and left some ideas about how they should be used in church services. Because chorales are usually fairly pure examples of good voice leading and harmonic progression at a tempo slow enough to hear how the chords interact with each other, bands use them to work on ensemble concepts and to improve the listening skills of players.

Today, many chorales are written specifically for bands to use during warming up. We will use some of the more traditional chorales as well as some written for band warm ups. No matter which ones we play, however, the following ideas should always be kept in mind while doing chorale work:

- Every note of every part is of equal importance, even if some notes should be played with more or less strength to achieve proper balance and blend. All parts of the phrase should be heard as well as the cadence is, all beats should be evenly stressed (2 and 4 should not be weaker than 1 and 3), and inner voices should be heard as clearly as outer voices.

- Create the rhythms with your fingers and breath more than with your tongue.

- Push the air to the ends of the notes and to the ends of the phrases.

- The end of each note is the beginning of the next note. Each note "kisses' the next.

- Listen for all parts while playing. There are usually four parts. In the chorales that follow, all parts are shown. Once you are playing your part with confidence, try to hear each other part and how it fits into yours.

- Start listening to each chord member for proper intonation. Review the section of this notebook that deals with intonation to understand how each member of a chord relates to each other member.

- Watch the conductor closely. Use the visual cues in tandem with the aural cues from fellow band members to play perfectly together. **In tone, in tune, in time**.

Tuning Revisited

Because chorales are usually slow-moving studies in harmonic progression – one chord after another moving in very familiar patterns – they are perfect exercises for learning to listen and adjust the balance, blend, and intonation of individual chords while playing in a group. When playing chorales, intonation becomes more than just making sure your own tone and those of all your neighbors are in perfect, beatless tune with each other. Chorale playing forces us to understand how chords are built, how we need to adjust each member of the chord to the other chord members, and the two different types of tuning used in contemporary bands.

Once you have learned to blend and balance your sound and to play with the same articulations as the rest of the winds in a group, it is time to begin learning how the "members" of chords (the root, third, and fifth – and sometimes the seventh, ninth, eleventh, and thirteenth – of each scale) relate to each other. In other words, because the intonation of each pitch on your horn actually must change to fit into the particular scale, chord, and key you are currently in, you have to "humor" – to use an old-fashioned word for changing your embouchure tension – each pitch. So how do we know which notes to humor, which direction to humor them (flatter or sharper? looser or tighter? look up or look down?), and how much to humor them? Read the next section over and over until you understand all the relationships between the notes.

When you look at the Master Scale Matrix, you can see that each degree of each scale is assigned a number. While there are many chords that can be built from each scale, we will focus right now on just a major triad (a "triad" is a chord with three notes built either line-line-line or space-space-space) to keep things simple and understandable. You will receive more advanced information later as we learn more and more about the acoustics involved in building proper chords.

For now, just remember that there are two primary tuning systems used by bands. The first is called Equal Temperament and it is how all keyboard instruments (including mallet percussion) are set up. On a piano, the distance between the pitch of each and every key on the keyboard is exactly the same. That's where the "Equal" part of the name comes from. Equal temperament was developed about five hundred years ago when composers wanted to change keys in the middle of a piece of music. Before then, the whole concert had to stop and wait while the performer went to a different keyboard that was tuned for the new key.

The second type of tuning is called Just Intonation, which is a very old system (variations of it were used by the ancient Greeks and Romans) and is based on the mathematical and scientific principles that make all intervals sound as pure and perfect as possible. In other

words, if a piano was tuned using Just Intonation, only one or two keys would be usable because the intervals between notes of different scales would have much different distances than if they were Equal Tempered. The advantage of Just Intonation is that it sounds so much better than Equal Temperament because all the intervals in a chord are adjusted to each other so they sound the best they possibly can. Just Intonation has been around for so long because it is based on the natural, scientific principles of acoustics and is related to the harmonic series and lots of math. ☺

The difference between the two from a listening standpoint is really obvious if you compare a C major triad (the notes C, E, and G) in Equal Temperament to one in Just Intonation. For both tunings, the C will have a frequency of around 262 vibrations per second and the G will have about 392 vibrations per second. The E, however, will vibrate at 330 in Equal Temperament and 327 in Just Intonation. That is a big enough difference that anyone who is not deaf can tell. It is also why we must pull the pitch of the third of a major chord down 14 cents. Think of cents as though there is a dollar's worth of space (100 cents) between each pitch in the ET chromatic scale. A Just Intonation E in a C Major triad is 14 cents (or a whole 14%) closer to an Eb than the same E in Equal Temperament. In other words, everyone who plays that E must lip the pitch down quite a bit for the chord to sound in tune with the C and the G. Now read this paragraph again five more times slowly – you'll eventually get it. ☺

A fantastic example of this can be found on the Internet (at least, as of this writing) by entering the following URL into a web browser:

http://en.wikipedia.org/wiki/File:A-major-triad-equal-temperament-compared-to-just-intonation-6-2008C.ogg

You can literally hear the difference between the two tuning systems on an A Major triad as the file plays the triad (1) in Equal Temperament, (2) in Just Intonation, and (3) gradually moving from ET to JI over about 15 seconds. Listen to how the beats disappear. Magic, huh?

What does all this mean for us while playing in band? First, you have to know what the quality of the chord is – major, minor, diminished, etc. Second, we must know which chord member we are personally playing. The director may actually tell you these two pieces of information during rehearsal. If he or she does, write it down on the music in pencil. As you get more proficient as a musician, you will actually learn to tell the quality of a chord and which member you are playing just by listening.

Once you know the chord quality and the member you are responsible for, the third step is to know how much to humor the note up or down to get it to fit into the sound. The chart called "Common Chords of Just Intonation" will give you this information. Notice that the

fifth – the G in our C Major example – is only 2 cents higher from ET to JI. So those playing the root and fifth don't have much adjustment to do. Remember that changes of five or more cents are the intervals we really need to pay attention to – that is the threshold for most humans when they hear those out of tune beats. In the C Major triad, that E with a difference of 14 cents really needs to be changed. Check out the other chords on that sheet and you'll see that there is really lots of work to do when tuning each individual chord in a piece.

Now, take a look on the "Common Chords . . ." sheet at the second section that shows the relationships of each interval of the chromatic scale to the tonic or first note of the scale. Remember when we used a tuner and our fingering chart to find out which pitches on our own instrument were naturally out of tune and how much we had to humor them into tune? That was to get them in tune for an Equal Tempered chromatic scale. Can you see now how that information can be used in connection with the info from this section to really "fine tune" each and every pitch we play in a piece of music?

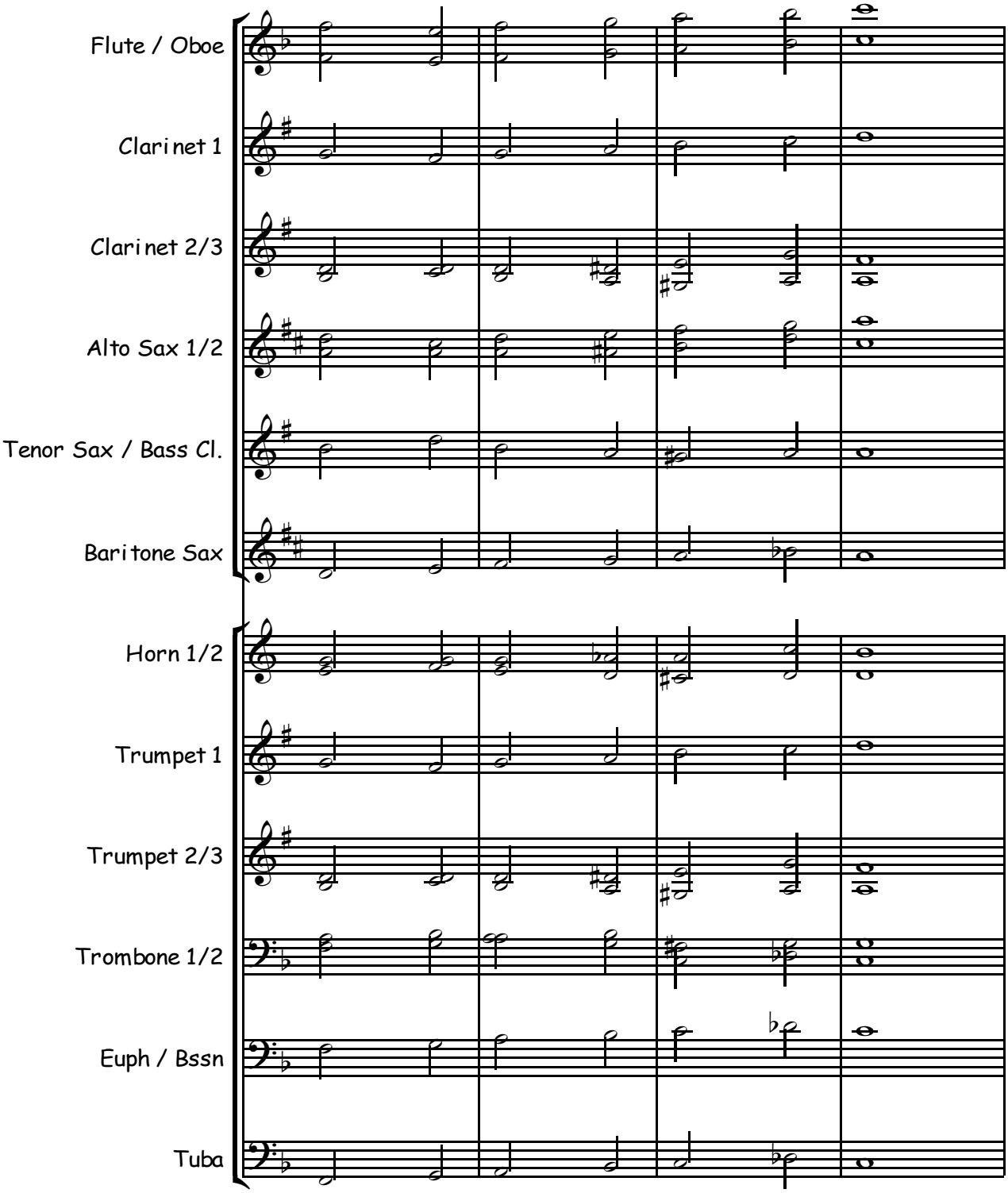
Remember that there is no such thing as your instrument being exactly in tune just because you have it set up properly and your embouchure and air are great. There are so many factors – temperature and humidity, are the bells playing the melody (and so, using, ET against your JI)?, every other horn's set up in the band, which key we're in, is it major or minor or modal?, have we changed keys?, which instruments are actually playing this particular chord, etc. – that the only rule you can possibly follow is:

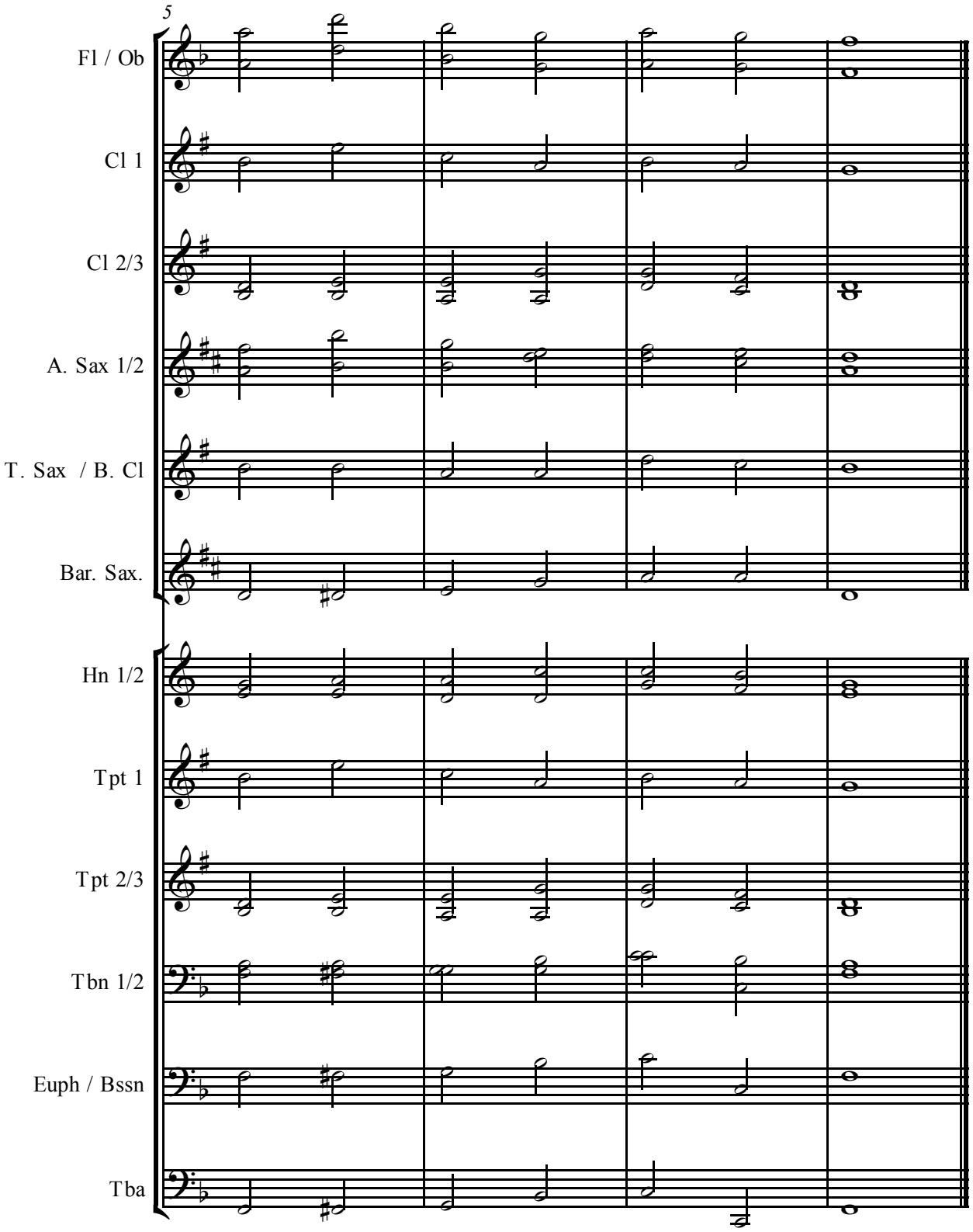
Listen, Listen, Listen! And adjust your pitch so that it fits whatever is being played at this particular moment in time! Do not fight about pitch and insist you are correct. Just be harmonious with each other – personally as well as musically.

Remember the story about the ship's captain who always followed the rules. He saw another ship's lights approaching on a stormy night at sea. He kept radioing and signaling for the other ship to pass him on the right – which is a steadfast rule of seamanship. It would not move and it would not answer him. Stubbornly, he kept his course, hoping the other ship would eventually see his lights and change course. Unfortunately, the other ship was actually a lighthouse and the captain ran his ship aground! Whether it's a true story or not, the story's moral of adjusting your own course instead of insisting that you are always right is also true for us as band members when we are tuning to each other. Tuning is relative…

First Chorale

Borrowed from Brian Wilson

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Patterson Chorale