

Take It Higher

BY JON CHAPPELL

(or lower)

IF YOU MASTER THE SKILLS INVOLVED IN **TRANSPOSING**, YOU CAN CRAFT YOUR MUSIC TO SUIT A VARIETY OF PERFORMERS, INSTRUMENTS, AND SITUATIONS.



BECAUSE THEY PLAY TRANSPOSING INSTRUMENTS SUCH AS TRUMPET, SAXOPHONE, AND TROMBONE, MEMBERS OF THE LINCOLN CENTER JAZZ ORCHESTRA SEE DIFFERENT NOTES WHEN THEY HEAR A CONCERT C.

PHOTO: CLAY PATRICK MCBRIDE.

Transposing is the process of taking something from one location and placing it in another—without altering anything in the move. In music, the word relates to pitch. It means to move a note's (or set of notes') pitch up or down by a fixed interval. Doing this changes the notes' absolute position as far as their "highness and lowness," but preserves the relationship of the pitches to one another. It's why you can recognize the melody to "Happy Birthday" whether it's sung by Alvin and the Chipmunks or Darth Vader. (Not that we've ever observed the universe's greatest evildoer engaging in something so jolly!)

Transposing requires an understanding of how changing keys will better suit a performer's range. It also explains why some instruments are designated by a certain pitch—like a "B \flat trumpet." Being able to transpose quickly and accurately is essential for arrangers, composers, improvising musicians, and anyone who needs to take a flexible approach in moving music around the pitch spectrum.

THE KEY TO TRANSPOSING Here's a typical situation where transposing can save the day. You write a melody in your favorite key, C. But when your friend tries to sing it, the melody lies a little low in her range. She tries singing it up an octave, but that's much too high. So instead of performing this melody starting on C, you need to pick another pitch. To do that, you must transpose. In this case, you shift all the pitches so that they're all higher by the same amount. Nothing will sound different as far as the melody is concerned; it's just a little higher than before. And because it's now in a more comfortable register for

the singer, it sounds *much* better. Let's take a look at what is involved in moving these pitches "just a little higher."

If the first melody note is a C, and you raised that to an E, *every other note must also be raised by exactly the same distance*—the interval of a major third. Figure 1 shows the original melody and the transposed version.

Note that your clean-looking melody in C looks a whole lot messier with the addition of *accidentals* (in this case, sharp symbols), which are needed to keep the relationship between the notes that existed in the original version. (Without them, the melody would be different!)

Often, a better way to look at transposing is to *transpose the key signature* of the piece and then move all the notes the appropriate distance on the staff. Figure 2 shows a melody in E \flat , which has three flats. It's then transposed to E in bar 2,



which has four sharps. It looks pretty complicated, even though the notes moved up just a half step! On the second line, however, we use key signatures for both the original and the transposition, and the notation is cleaned up completely. Using key signature transposition (instead of accidentals) is much simpler, isn't it?

Let's take another example. If you play guitar, you know that certain keys are physically easier on your hands than others. A song in the key of A \flat (which has four flats) requires a lot of difficult-to-play barre chords. So you might consider playing it either in A (three sharps and easy chords) or G (one sharp and easy chords). Figure 3 shows the chords to "Let It Be" in the key of A \flat , and then transposed down a half step to the easier key of G.

Figure 3 also shows two other aspects of transposition: 1) the chords have been transposed along with the notes; 2) an accidental appearing in the original (the E natural at the end of bar 1) is also reflected in the transposition. Though the symbol sometimes changes (here, it goes from a natural sign to a sharp sign), the direction of the accidental is the same—in this case, it raises the note.

Of course, it's not just guitar players who have trouble with flats and sharps. Pianists who aren't as comfortable playing the black keys as the white ones will find a mix of black and white notes difficult to master. There are two things you can do: transpose a piece from a harder key (like E) to an easier one (C); or build your understanding of the keyboard by transposing a piece you've already mastered in one key to all the others. In fact, being able to play equally well in all key signatures is the sign of an accomplished musician, no matter your instrument. Some jazz musicians don't feel that they know a tune until they can play its melody and improvise against its chords in every key.

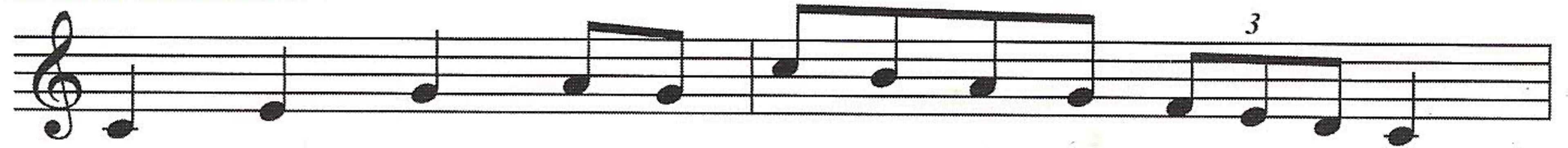
TRANSPOSING INSTRUMENTS It's necessary to understand transposing if you want to know how brass and woodwind instruments work. Many of these are called "transposing instruments" because they *sound* a different pitch from the one that's written in the music. For example, a clarinet is also called a "B \flat clarinet" because it's a transposing instrument. When a clarinetist sees a written C in the score and fingers the correct note he's been taught

INTUNE INTERACTIVE: POWERED BY NOTION

In Tune and Notion Music (notionmusic.com) are teaming up to make our online music examples more student- and teacher-friendly than ever before! Log on to IntuneMonthly.com to hear the music examples shown here.

Figure 1: Transposing by Interval

ORIGINAL MELODY:



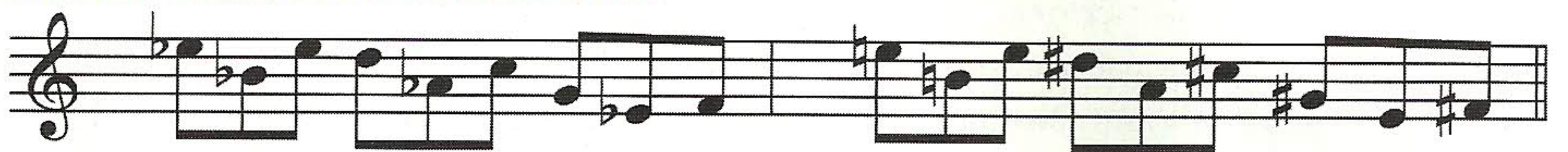
MELODY TRANSPOSED UP A MAJOR THIRD:



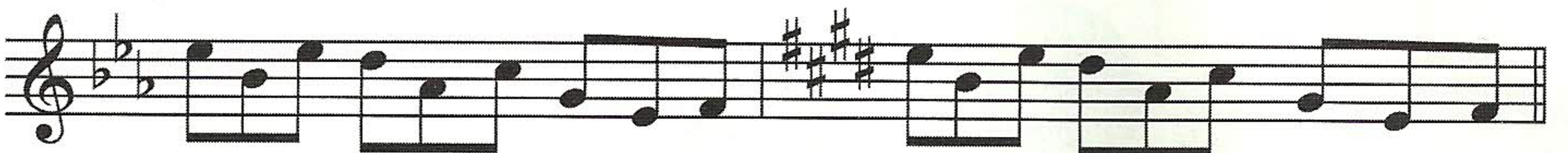
An original melody in C, then transposed by raising each note by a major third.

Figure 2: Transposing by Key Signature

ORIGINAL MELODIES USING ACCIDENTALS:



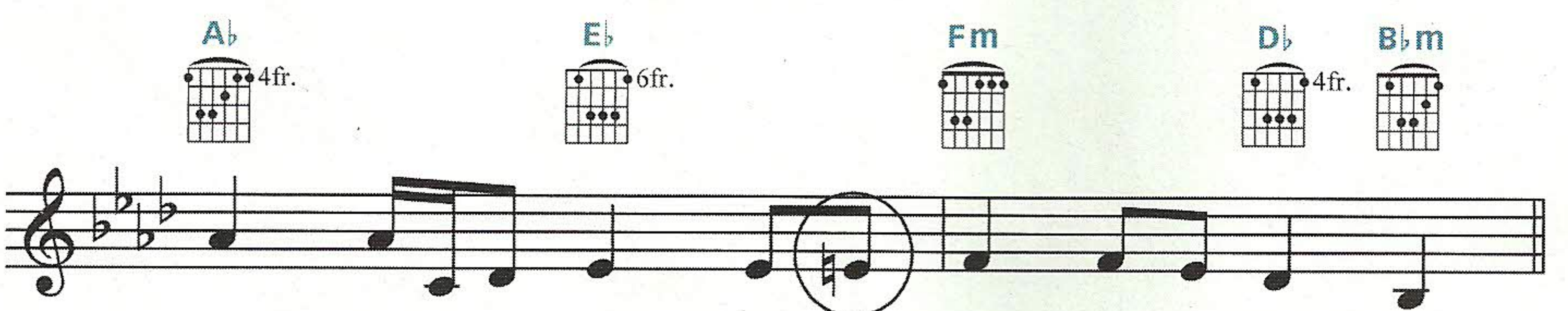
MELODIES USING KEY SIGNATURES:



The E \flat melody in bar 1 is transposed up a half step to E. Line 2: the "cleaner" way, using key signatures.

Figure 3: Making It Easier on Yourself

ORIGINAL MELODY WITH GUITAR CHORDS



TRANSPOSED MELODY WITH EASY GUITAR CHORDS



The key of A \flat poses challenges for guitar players; transposing down a half step to G makes the chords easier. Note that the direction of the accidental in the original is preserved in the transposed version.

for C, the note that actually comes out of the instrument is the same pitch as B \flat on a piano. This is also true of the trumpet and the soprano saxophone. Figure 4 shows the written and sounding notes for these three common transposing instruments in B \flat . Note that the key signature changes in bar 2 as well as the pitches.

There are more transposing instruments than just the clarinet, trumpet, and soprano

sax. The tenor saxophone is a B \flat instrument, too, but it plays an octave lower than the trumpet, soprano sax, and clarinet. The alto sax is an E \flat instrument, sounding a major sixth below its written pitch. The baritone sax is an E \flat instrument, an octave below the alto sax. Of the orchestral woodwinds, the flute, oboe, and bassoon don't transpose, but the English horn does (sounding down a fifth). In the brass family, besides the trum-

Figure 4: Written vs. Sounding Pitch

The image shows three staves of music in 4/4 time. The first staff is labeled 'CLARINET IN B_b' and has two sections: 'WRITTEN:' and 'SOUNDING:'. The 'WRITTEN:' section shows a whole note G4. The 'SOUNDING:' section shows a whole note F4. The second staff is labeled 'SOPRANO SAX.' and also has two sections: 'WRITTEN:' and 'SOUNDING:'. The 'WRITTEN:' section shows a whole note G4. The 'SOUNDING:' section shows a whole note F4. The third staff is labeled 'TRUMPET IN B_b' and has two sections: 'WRITTEN:' and 'SOUNDING:'. The 'WRITTEN:' section shows a whole note G4. The 'SOUNDING:' section shows a whole note F4.

The clarinet, soprano saxophone, and trumpet are all B_b instruments. They sound a whole step lower than written.

Figure 5: A Score of Transposing Instruments

The image shows a musical score for six instruments: FLUTE, CLARINET IN A, ALTO SAX., TENOR SAX., BARITONE SAX., TRUMPET IN B_b, and HORN IN F. The score is in 4/4 time and features a 'UNISON MELODY' across all instruments. The first measure shows the written pitch for each instrument, with arrows pointing to the notes. The second measure shows the sounding pitch for each instrument. The key signatures are: FLUTE (C major), CLARINET IN A (A major), ALTO SAX. (D major), TENOR SAX. (E major), BARITONE SAX. (F# major), TRUMPET IN B_b (B major), and HORN IN F (C major). The melody consists of a sequence of notes: G4, A4, B4, C5, B4, A4, G4.

Except for the flute, all other instruments here are transposing. Note that the key signatures and pitches are all different.

pet, the horn sounds a perfect fifth below written pitch, while the trombone and C trumpet (called for in some orchestral pieces) are non-transposing. Figure 5 shows an ensemble where all the instruments are transposing, except the flute. Note that the flute's G is written different ways, depending on the instrument. Note too that the

key signatures are all different. But when they play, the notes produced by all the instruments *sound like the same pitches*.

The reason an instrument transposes (and causes confusion, until you're used to it) is that throughout history, brass and woodwind instruments were created in many different sizes to suit different keys.

The larger the instrument, the lower the key. But though the keys would vary, the fingering among instruments stayed the same, so that one player could play several different instruments without having to relearn the notes. It became established practice to change the written music depending on which version of the instrument was used, because it was much easier to transpose than it was to make a musician relearn a new instrument every time the key changed.

DO YOU C WHAT I C? An important concept when dealing with transposing instruments is being able to "transpose in both directions." If you're a trumpeter, *reading* C produces a B_b, but when you want to *play* a sounding C, you have to imagine a written D. It all depends on which version of "C" is needed.

If this sounds like a recipe for error, well, it can be—at first. That's why a group of musicians with a mix of transposing and non-transposing instruments have to establish a reference point when discussing pitches. Often that just means saying "concert" before the name of the actual sounding pitch, and "written" before the pitch as it appears in the musician's part.

TRANSPOSING TRAINING A great way to become familiar with transposing is to do a lot of it. It's one of those skills that's not particularly difficult from a conceptual point of view, but that can be developed simply by frequency and repetition. Try looking at a written melody, and then write it in a different key on paper. To make sure your brain is keeping up, learn a melody in an easy key and then transpose it to a more difficult key. Start by using written music; then try it by ear. Make sure you transpose down as well as up.

CONCLUSION Being an adept transposer increases your versatility and musicianship and is also good practice for other related skills, such as clef reading and changing octave displacement. And while it's essential for conductors, arrangers, and multi-instrumentalists, almost everyone has to transpose sometimes—for example, if your band director wants a flute to play a trumpet part and only has the trumpet music. To put the reason into rhyme: The more you can read and play in every key, the better musician you will be. **T**