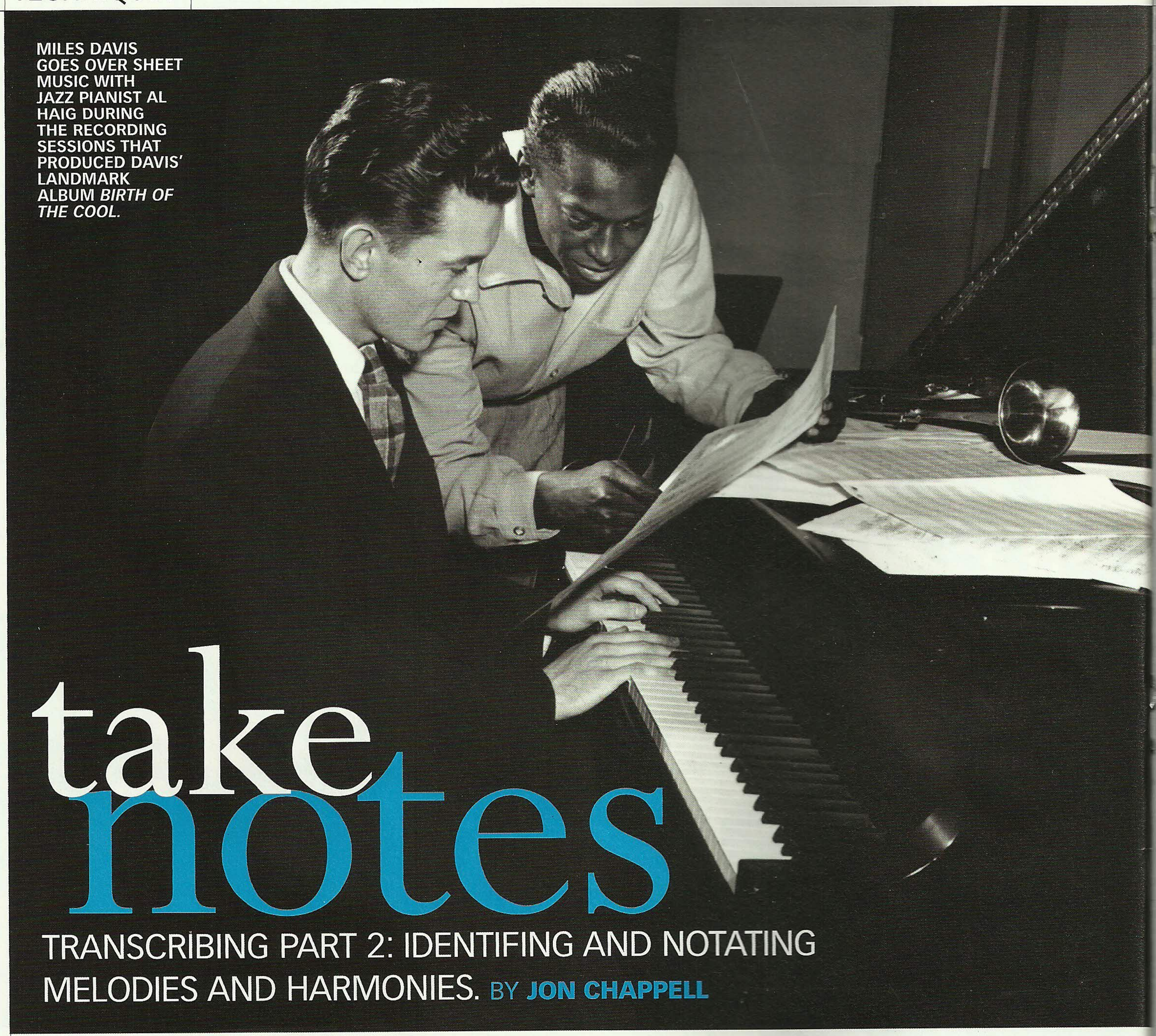


MILES DAVIS GOES OVER SHEET MUSIC WITH JAZZ PIANIST AL HAIG DURING THE RECORDING SESSIONS THAT PRODUCED DAVIS' LANDMARK ALBUM *BIRTH OF THE COOL.*

take notes

TRANSCRIBING PART 2: IDENTIFING AND NOTATING MELODIES AND HARMONIES.

BY **JON CHAPPELL**

PART 2 OF 2 ▼

IN THE FIRST article in this two-part series, we introduced the art of *transcribing*—using notation to write down the music you hear. Being able to transcribe can help you learn a recorded song, capture a piece of music as someone plays or sings it to you in person, or put musical ideas from your imagination into a form others can read. To transcribe, you must be able to identify and interpret music's two principal elements, rhythm and pitch. We explored rhythmic transcribing in the October issue; now we'll take a look at pitch.

MAKING THE PITCH

As we discussed last month, rhythm describes the way music relates to time, as defined by a reference beat, or pulse. Music can have rhythm without having pitch. You can hear this if you clap your hands, or tap on a tabletop. But this is only half of the musical equation. If you assign a variety of higher and lower notes, or *pitches,* to each note in a rhythm, it becomes something new: a melody. For many listeners, rhythm provides the structure, but it's pitch that makes music truly *musical*.

PHOTO: FRANK DRIGGS COLLECTION/

To transcribe a melody, you need to learn how each note in a piece of music relates to those around it. And as with rhythm, you can develop your ear to hear and identify the distance in pitches, or *interval*, between any two notes. Once you know these intervals, you write the correct notes on a staff. At its most basic, transcribing pitch is the process of identifying the intervals you hear and writing down the pitches they yield. Let's take a look at how to learn your intervals using real-world examples.

GOING THE DISTANCE

Believe it or not, everything you need to know about transcribing pitch is shown in the first two music examples, Figures 1 and 2. These represent all the available intervals within one octave, ascending (Fig. 1) and descending (Fig 2.). Know these, and you will know how to write down any melody.

That's not to say it's easy to master the way the 12 ascending and 12 descending intervals work in a musical context. When you're new to transcribing, it can be hard to find the intervals without the help of an instrument like a piano. In fact, even with an instrument as a guide, you may feel like you're guessing at the notes while you're playing along. But once you can determine when the note you're hearing matches the note you're playing on the instrument, you can compare it to the intervals shown in these figures. After a while, you'll get to know the intervals just by hearing them.

Figure 1 shows the 12 ascending intervals in order of smallest to largest, including the octave. (For now, we'll ignore the *unison* interval, where there is no change between repeated notes, but it too is part of transcribing.) Next to the numbers are letters: a small *m* indicates a *minor* interval; a capital *M* means it's *major*; *P* stands for *perfect* (a designation given only to fourths, fifths, unisons, and octaves); and *aug* and *dim* stand for *augmented* (increased by a half step) and *diminished* (decreased by a half step).

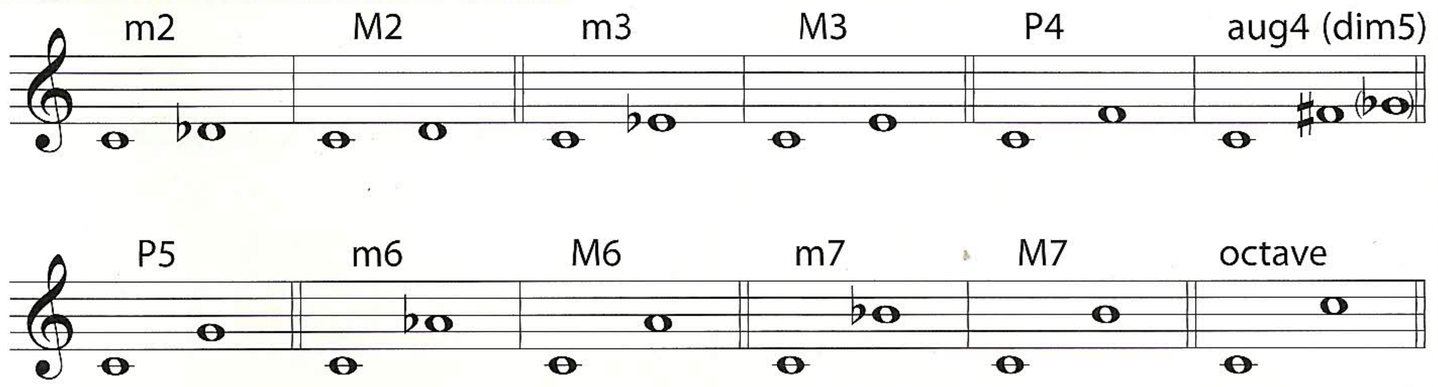
How can you relate these numbers to the music you hear? One trick is to develop "melodic memory devices." These help you remember how certain intervals sound by associating them with melodies you already know. For example, the first two notes of "Here Comes the Bride" is an ascending perfect fourth. The first two notes of the classic pop ballad "Georgia on My Mind" is a minor third. And the first two notes of *The Simpsons* theme is an augmented fourth! Look at the sheet music of a song you've memorized well enough to "hear" in your head and identify the intervals. Then "collect" all the melodic segments you know and use them as a guide to help you identify any new music you hear. This is easier with some intervals than with others: Sixths and sevenths are unusual, so you may just have to learn those through repeated listenings. But most other intervals are easy to match up to a song you already know.

Figure 2 shows the descending intervals in the same sequence as the ascending ones in Fig. 1 (small to large). Some musicians find descending intervals harder to learn than their ascending counterparts. Fortunately, you can also match a descending interval to any melody you already know. For example, the first two notes of "Swing Low, Sweet Chariot" form a descending major third. The first interval in "America the Beautiful" is a descending minor third.

Of course, most melodies use both ascending and descending intervals. And, depending on the rhythm and tempo, these can come at you fairly quickly. Before attempting to transcribe a fast song, you may want to practice by working on some slower melodies that give you plenty of time to hear and identify the pitch of each note. As the music you're trying to transcribe becomes more complex, you may want to divide longer melodies into smaller parts, or *phrases*. Listen to where the phrase rises and falls, without worrying about the exact distance between the notes as they go up and down in pitch. After you've determined if the interval is ascending or decending, you can get more specific.

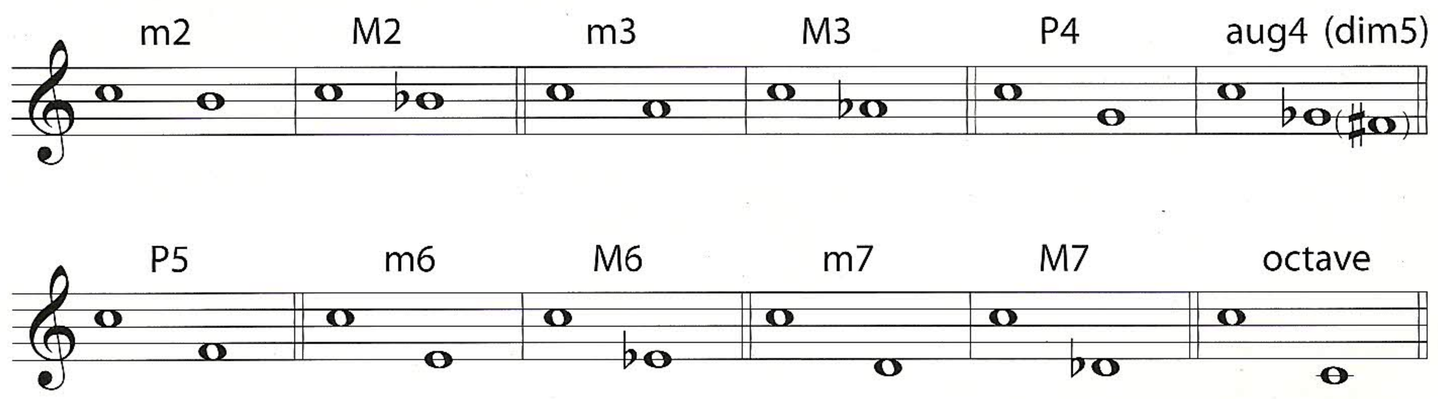
Once you can hear the pitch difference between two notes, the next step is learn how to pick out sequences of intervals. Figure 3 shows a simple three-note melody in the first bar. It's composed of two major seconds. It could be the first three notes of the song "Doe a Dear," or it could simply be a major scale. But look at bar two, which has large and small

Figure 1: ASCENDING INTERVALS



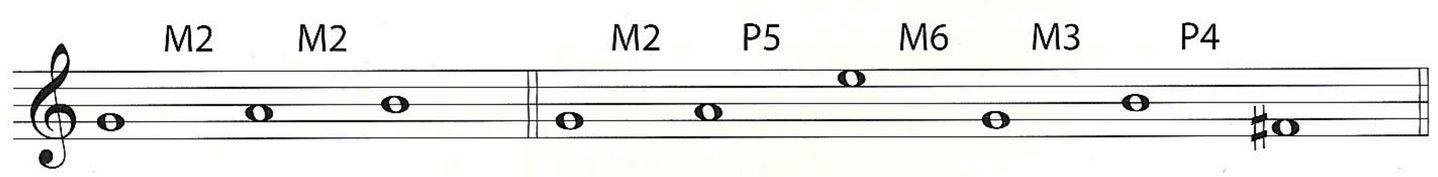
The 12 ascending intervals in a one-octave span.

Figure 2: DESCENDING INTERVALS



The 12 descending intervals in a one-octave span. These are a little more difficult to learn than ascending intervals.

Figure 3: MELODIC SEQUENCES



A melody is just a series of intervals, ascending and descending, large and small.

intervals that rise and fall. This melody is much more difficult to transcribe. Here's where you may need to listen to the passage more than once, or to slow it down. Professional transcribers often rely on digital recorders that can slow down such passages, to make them easier to hear.

KEY TO THE TRANSCRIBING HIGHWAY

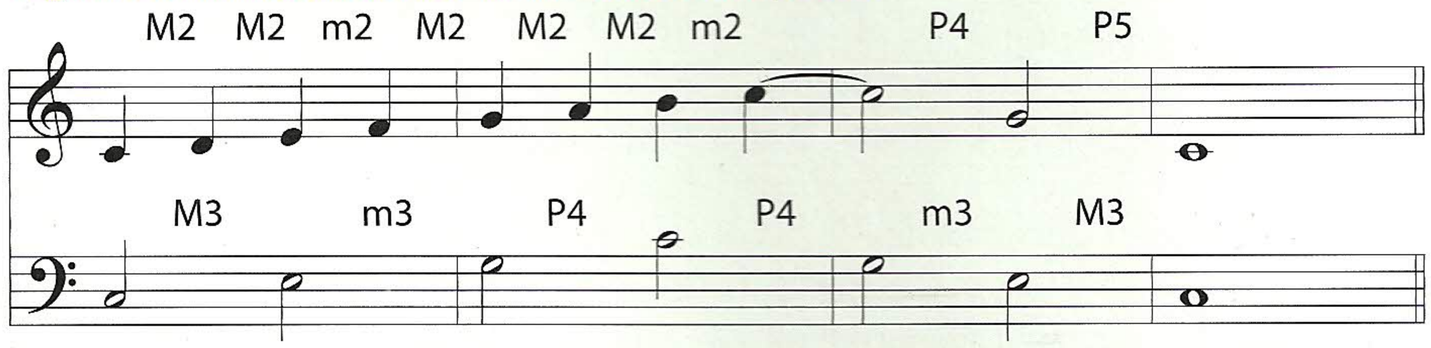
If you can determine the *key* of a song, it's easier to see how the intervals you're hearing relate to one another. (It's also easier to write the notes down without using too many sharps or flats.)

When you know a song's key, you'll often be able to relate parts of the melody to its major or minor scale. For example, look at Fig. 4, which has a series of *stepwise* (no skips) intervals in the treble clef. The intervals proceed as M2 (major second), M2 (major second), m2 (minor second), etc. But what song is this? It's just a C major scale! The bass clef shows *skips*—wider intervals—but it's just a C major *arpeggio* (a chord whose notes are played in sequence).

Putting the melody in the correct key can make your transcription much easier to read. Look at the top line of Fig. 5: With all those sharps you might think this would be a difficult tune. But Fig. 5's bottom line takes all those intervals and puts them in the proper key: B major (five sharps). This seemingly difficult sequence of intervals is now easier to see as a descending B major scale—and the opening phrase to the well-known Christmas carol "Joy to the World."

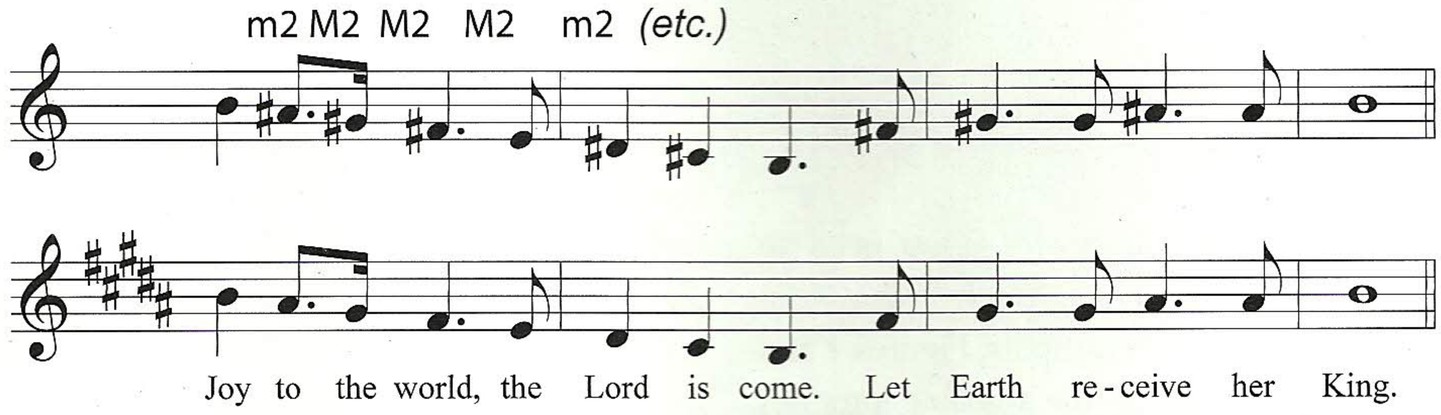
In fact, as long as the melody fits within a key (no matter how "difficult" the key is)—and you know your keys well enough—you can transcribe it without too much trouble. Figure 6 is in a difficult key, D♭ (with five flats), but the melody is as easy as pie. The opening figure (bar one) is simply an ascending D♭ major arpeggio (with each note repeated). Bar two is easy because it's all stepwise motion (a major scale passage), and bar three is a repeat of bar one. Bar four does contain a large skip (a descending perfect fifth), but it lands on a "strong" note of the scale, the fifth. It's a classic melody to one of J. S. Bach's most famous melodies, the theme from the *Brandenburg Concerto No. 5*.

Figure 4: A MAJOR SCALE WITH ACCOMPANIMENT



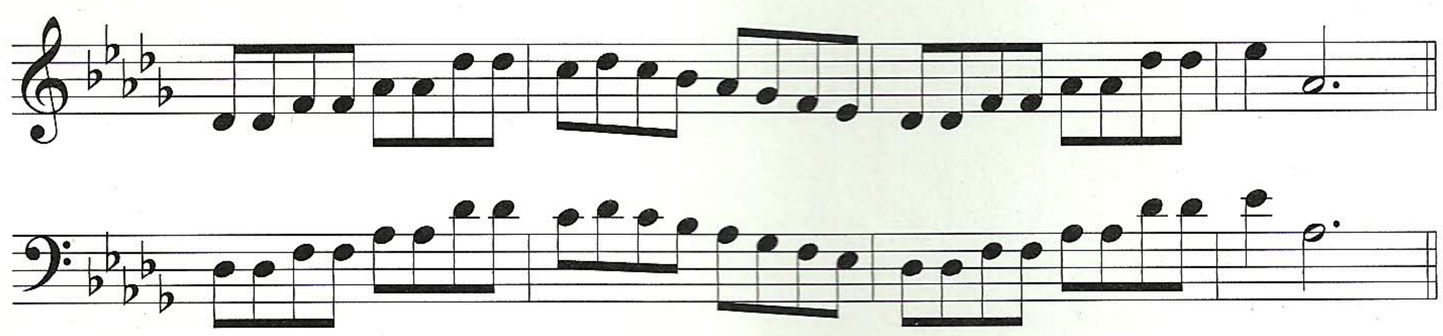
A C major scale and underlying accompaniment, as seen according to intervals.

Figure 5: KEY CONTEXT



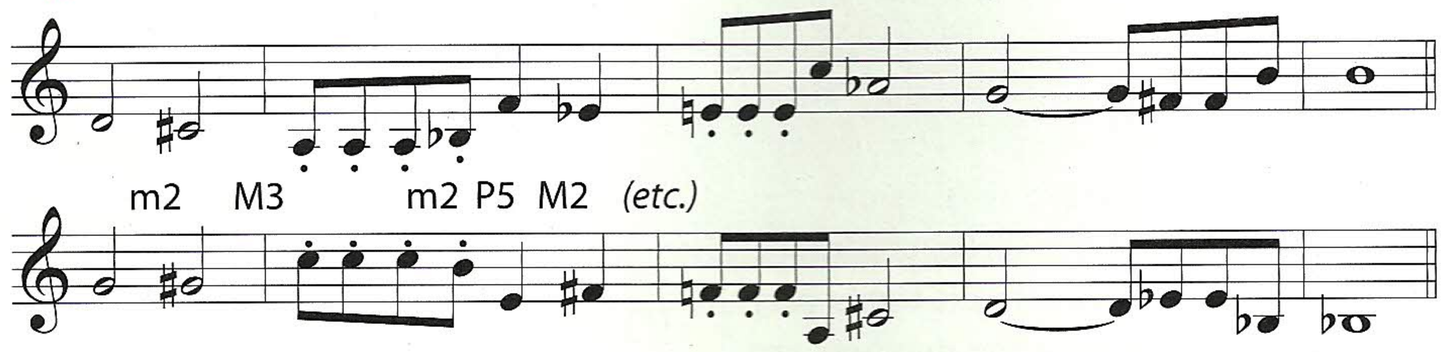
"Joy to the World" is much easier to imagine when placed in its proper key, B major, as it is on line two.

Figure 6: BACH'S BRANDENBURG



This very famous melody, from J. S. Bach's *Brandenburg Concerto No. 5*, is just a simple diatonic sequence of intervals.

Figure 7: 12-TONE PUZZLE

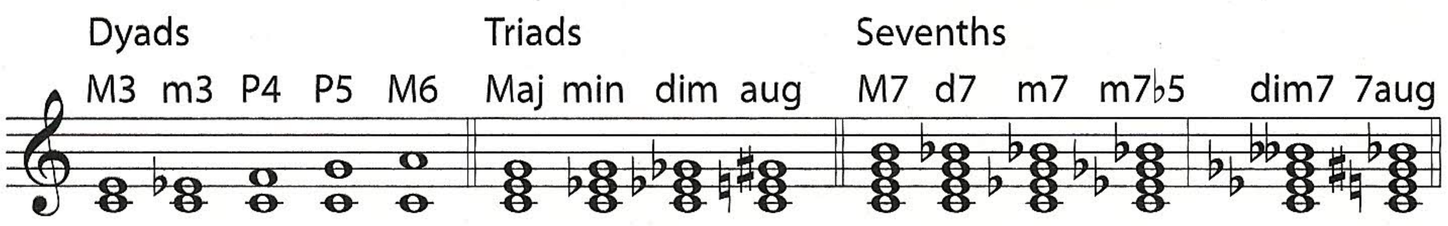


Schoenberg's *String Quartet No. 4* poses a difficult transcribing challenge because it contains all 12 notes.

KEYS TAKE A BREATHER

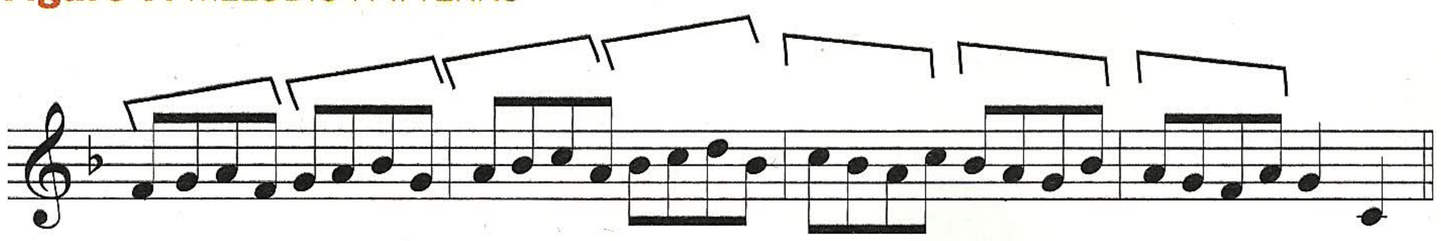
Life would be sweet if you only had to transcribe *diatonic* melodies (those that fall within the given key). But very few songs are completely diatonic. *Chromaticism* (the use of notes outside of the key) means transcribers have to know all intervals equally well, not just the ones that relate to a diatonic scale. The most extreme example of chromaticism was achieved in an early 20th century style of composition known as *12-tone*, or *dodecaphonic*. Invented by Arnold Schoenberg, the style demands that you play all 12 tones of the chromatic scale before repeating any others. Though difficult to master, it created a sound no one had ever heard before, and it is still in use today. But it *really* tests the transcriber. Figure 7 shows the theme to Schoenberg's *String Quartet No. 4*. Although there are repeated *notes*, no *pitches* are

Figure 8: HARMONIC INTERVALS



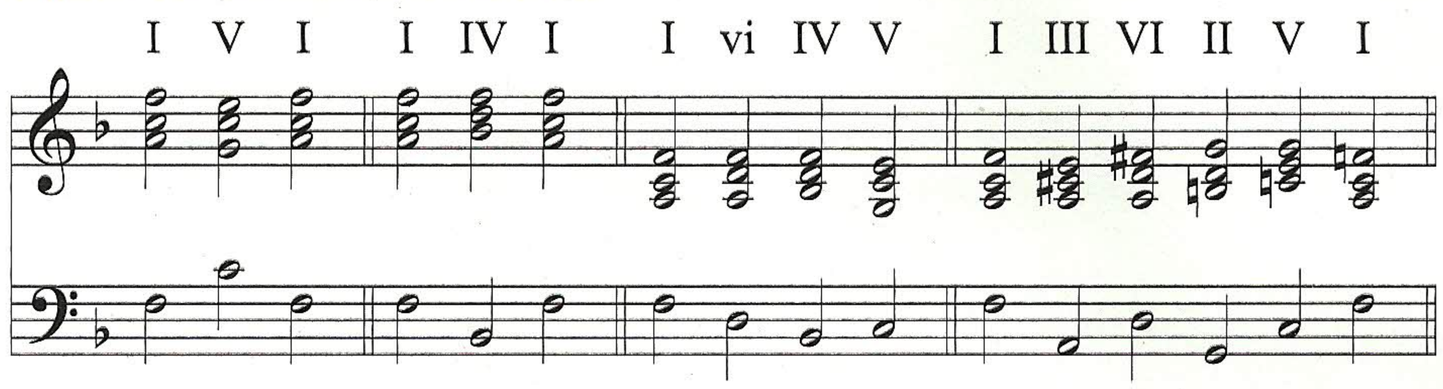
Harmony is the simultaneous sounding of intervals. Dyads are two-note harmonies; triads are three-note chords; and seventh chords contain four notes.

Figure 9: MELODIC PATTERNS



Identifying common melodic patterns can speed up the transcribing process considerably.

Figure 10: CHORD PROGRESSIONS



Four of the most common chord progressions in music, appearing in popular and classical forms alike. (Note: The lower-case Roman numerals indicate minor chords.)

repeated. The second line shows what's called the *inversion*—the same intervals transposed (moved up a perfect fourth) and *inverted*, so that the direction of the intervals is reversed. If you can transcribe lines one and two of Figure 7, you're ready to go pro!

HARMONY AND ME

In a melody, intervals are heard one by one, over time. In harmony, notes are sounded simultaneously. To transcribe harmony, you must learn the *quality* of the intervals themselves. For example, a major chord sounds happy; a minor chord sounds sad. These descriptions may be oversimplified, but they help when you're memorizing qualities of harmonies and chords.

Figure 8 shows several approaches to harmony. Bar one shows some examples of the two-note harmonies known as *dyads*. Bar two shows four types of *triads* (the simplest form of chords): major, minor, diminished, and augmented. And the last two bars show seventh chords: major seventh, dominant seventh, minor seventh, minor seventh flatted fifth, diminished seventh, and seventh augmented. The first four appear diatonically; the last two don't exist within a key, but are quite popular and often used. The best way to learn to hear these chords is to listen to them separate from melody. You can use a chording instrument like piano or guitar, or use recordings. (Find the chords from this figure at InTuneMonthly.com.)

TRANSCRIBER SHORTCUTS

As you get better at identifying intervals and relating the melodies and harmonies to various keys, you can start looking for patterns in the music.

Often, you can use a part of the song you've already transcribed to help you figure out its other sections. Many songs include repeated phrases, similar passages where only one note in a phrase changes, or sections where the same intervals are used for a phrase that's either higher or lower than another in the same song.

Figure 9 shows an ascending four-note pattern that gets repeated four times, climbing up the staff. Then the pattern changes to a different one, this time descending. But both will sound familiar to you, and once you hear what's going on, you may be able to transcribe the two figures without repeated listenings. If you learn to anticipate how the pattern unfolds and changes, you can "fill in the blanks," then check your work by playing or singing along.

Harmonies also follow patterns, called *chord progressions*. You can learn to identify the sound of common chord progressions in the same way you learn stock melodic phrases and scales. The most popular and "satisfying" progression is the V-I ("five one"): The chord built on the fifth degree of the scale resolves to the chord built on the first degree of the scale (the one that names the key). In Fig. 10, bar one shows a I-V-I progression. Bar two shows the second most popular progression, I-IV ("one four"). Bars three and four show two of the most popular chord progression in music. Do they sound familiar?

FINE

Developing a "transcriber's ear" takes lots of practice and patience, but the good news is that you can tune that ear any time you play or listen to music. Try to identify the intervals and pick out the chords of everything you hear. Sing melodies back to yourself, and if you can, look up the sheet music for any melodies you memorize and make a mental note of the intervals it contains. Work with friends: take turns playing melodies and chords. Test each other. Practice writing pitches and rhythms as often as possible; you can always check your work with your teacher or against a piece of published music. The more you practice, the easier it will be the next time you want to translate a song from your ear to the page. T