



Whether you're taking one small step or a giant leap, mastery of intervals will improve your playing and make it easier to learn songs—and write or improvise music of your own.

By Jon Chappell

Jump into Intervals

INTERVAL: just the word sounds intimidating. It has the air of some difficult exercise (in fact, athletes use something called *interval training* to get into shape).

But in music, an interval is simply the distance in pitch between any two notes. That sounds simple enough. But learning how to identify intervals by sight and by ear takes some practice.

The unit of measurement is the *step* (for example, A to B, or B_b to A_b). Whether the distance in question is in a melody or harmony, the notes in any musical passage can be analyzed in interval terms, such as seconds, thirds,

fourths, sevenths, octaves and so on. Intervals can go higher (ascend) or lower (descend).

Intervals remain consistent in every key. For example, an interval of a *major 3rd* is two steps, whether you're in the key of C (C to E), A (A to C[#]), or B_b (B_b to D). Because of this, once you learn to hear and play 3rds in C, you can use that skill to hear and play 3rds in A, B_b, D and so on. The same holds true for other intervals.

Smaller intervals are generally easier to hear and play, but large intervals can add drama to a piece of music. Most songs use a combination of the two.

Techniques: Intervals

Interestingly, it's generally easier to play and sing ascending intervals than descending ones. But as a well-rounded musician, you need to be able to play or sing all varieties—small, large, ascending and descending—with equal facility.

INTERVALS BY THE NUMBERS

One rule about intervals is that the distance between any two notes can't be zero, even if the notes are of the same pitch. For example, let's say you're playing a figure that includes two middle C's in a row: The interval between them is *one*, or *unison*. Therefore, the distance between C and D is a 2nd (even though D is only one step away from C). This may be a tricky concept at first, because it seems that between C and C there is no movement, pitch-wise. But you'll get the hang of it soon enough.

Beyond defining an interval by steps in letter names (A to A is a unison, A to B is a 2nd, A to C is a 3rd), each interval also has a *quality*. For example, C to E and C to E_b are both 3rds, but C to E is a *major* 3rd, while C to E_b is a *minor* 3rd (it's a half step smaller). Now here's the weird part: Some intervals are called *major* and *minor*. But others—unisons, 4ths, 5ths and octaves—are called *perfect* (we'll explain why in a moment). When a perfect interval is raised by a half step it's called *augmented*; when it's lowered, it's called *diminished*.

THIRDS AND PERFECT INTERVALS

One of the sweetest sounding and most useful intervals is the 3rd. Thirds look nice when written on the page because they fall either all on the lines or all on the spaces, as shown in Ex. 1a. Try playing or singing the melody to "America (My Country, 'Tis of Thee)" in C, and then harmonize it in 3rds, as shown in Ex. 1b.

Melodically, 3rds work well, as in the opening verses of Norah Jones' "Don't Know Why." The descending 3rds in this case give a relaxed sound to the line, and the notes perfectly outline the jazzy B_bmajor7 chord that provides the accompaniment (Ex. 2).

You can change a major interval like a 3rd into a minor interval and vice versa. Most musicians are familiar with the way major 3rds sound "bright" and minor 3rds sound "sad."

The differences between perfect and diminished intervals may be a little harder to pick out. Try this simple experiment: Simultaneously play middle C and the G above it. What kind of sound does that have? If you said "restful" or "hollow," you've got the right idea. Try the same with D and A above it, and move between the two interval pairs. They should sound similar.

Now play middle C and G_b (a diminished 5th). Then play D and A_b above it. What kind of sound is that? Words like "strange," "blue" and "clashing" come to mind.

The word "perfect" is used to describe certain intervals because early musicians thought there was something natural and correct about them. Deviations—going to diminished and augmented states—were to be avoided. In fact, at one time Europeans thought the diminished 5th was *diabolus in musica*—the devil in music! Diminished and augmented intervals are good for tension, conflict and horror-movie soundtracks, but we usually like to hear the music pay off by resolving into a

Example 1

My coun-try, 'tis of thee, sweet land of lib-er-ty.

The melody to "America," and then the same melody harmonized in 3rds.

Example 2

When I saw the break of day

The first phrase in the verses to Norah Jones' "Don't Know Why" descends in 3rds, outlining the B_b major 7th chord.

Example 3

Chest-nuts roast-ing on an o-pen fire. So,ie-where

o-ver the rain-bow. (Instrumental)

Three songs that all use the interval of an ascending octave to kick off their melodies.

perfect interval. Knowing the terminology isn't essential for understanding how intervals work. It's more important to learn what intervals sound like, so that you can hear them, play them and recognize them. Then you can focus on the names and rules. (See the sidebar "Half Measures.")

Some intervals go higher than an octave. The 9th, for example, is an octave plus a 2nd (e.g. E1 and F#2). Others include 10ths (octaves+3rds), 11ths (octaves+4ths) and 13ths (octaves+6ths).

HOW TO LEARN INTERVALS

There are two important ways to learn intervals: by sight and by sound. You must first learn the names of intervals before you can hope to hear them, identify them, and sing or play them on your instrument. Theoretically, intervals go from unison (no change in pitch between two notes) to an infinitely large number (the entire range of your instrument, voice, or even human hearing).

But in most cases, you'll usually be dealing with intervals of less than an octave, with occasional jumps of more than an octave. And speaking of octaves, although they are quite large as intervals go, they are very common and useful jumps in music. The first two notes of "The Christmas Song (Chestnuts Roasting on an Open Fire)," "Over the Rainbow" and the synthesizer lick in Lazlo Bane's "Superman" (also known as the theme from *Scrubs*) all begin with an ascending octave, as shown in Ex. 3.

