The Bottom Line

Principles of Bass Line Construction for Jazz Musicians

Chuck Israels

In most cases, roots will appear on the downbeat of satisfying bass lines. Applying this principle while creating counterpoint with the melody will produce consistently satisfying results. The best bass lines are most often created in intimate relationship to a given melody. Ignoring this relationship can lead to problems.

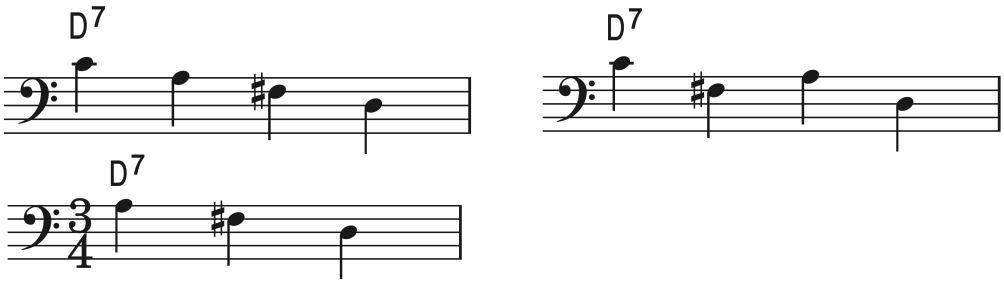
Following the principles exemplified by Bach, we want to achieve a degree of independence of voices even while maintaining the relationship of bass line to melody. We can do this by choosing bass lines which most often move contrary to the motion of the melody.

Anything, even beautiful contrary motion, can become monotonous if its character becomes obvious and predictable. In order to balance this, occasional passages of oblique or parallel motion need to occur to create contrasting textures. Oblique motion occurs when the bass line remains on one note (pedal tone) while the melody ascends or descends by scale or arpeggio, or in the reverse situation, when the melody remains on one note while the bass line moves in one direction or the other by scale or arpeggio. Parallel motion can be judiciously used to good effect when the melody is high enough in the harmonic series not to disappear into the harmonics of the bass notes. Octaves and fifths (and twelfths) above the bass note generally do not welcome this parallel treatment. Thirds, fourths, sixths, sevenths and ninths in the melody can be effectively treated for short passages with parallel bass lines.

This tendency for the bass note to swallow melody notes either an octave or a fifth above them has the effect of reducing the richness of harmonic texture. The independence between the upper and lower voices is lost when octaves or fifths occur in parallel motion. This weakening effect comes out even when the motion is not strictly parallel. If a melody note occurs either an octave or a fifth above a given bass note, that bass note is best approached from a different direction than that from which the melody note is approached if the richness of harmonic texture is to be maintained.

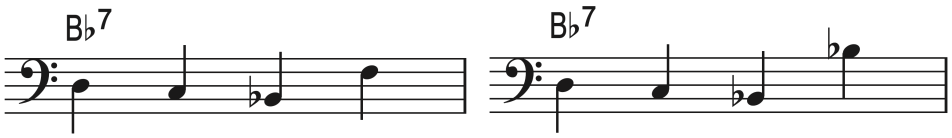
In practical terms, this is usually not so difficult to do. If a fifth or octave in the melody is preceded by a note below it, simply make sure that the bass note is approached from above and vice versa. The student of bass line construction must be trained to hear the results of approaches to these situations from the same and opposite directions and must learn to recognize the impoverishment of texture and loss of independence of line that results from the weaker approach.

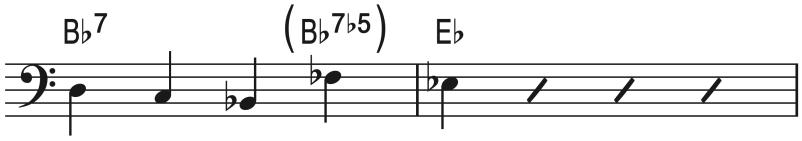
There are a few exceptions to the rule of “roots on the downbeats”. Sometimes it is useful to use a descending arpeggio which ends on the root; 7,5,3,1 (or 7,3,5,1 etc.) (in 4) or 5,3,1 (in 3).



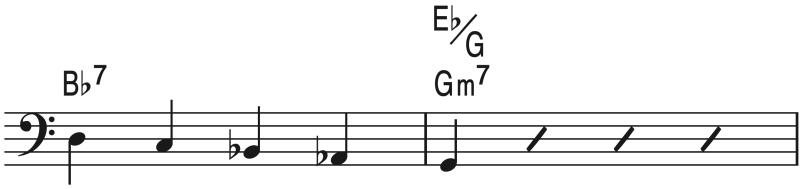
It is also possible to start a measure with the 3rd - descending to the root on the next strong beat;

3,2,1,5 or 3,2,1,8 or 3,2,1, ♭5.

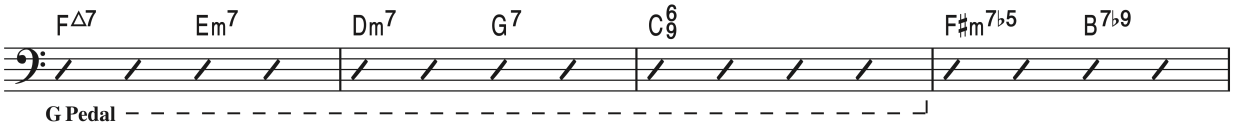




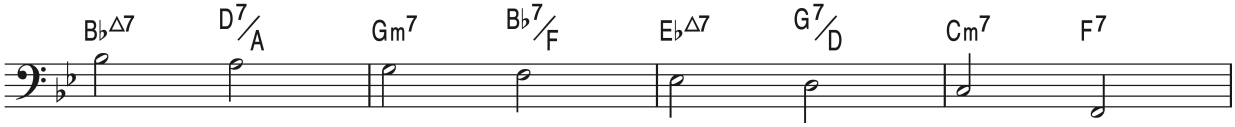
These patterns are often preceded by a measure in which the last note is the seventh of that measure's chord. In fact, when the last note of a measure is the seventh of the chord, it must lead to the third of the following chords the root of a chord bases on that note.



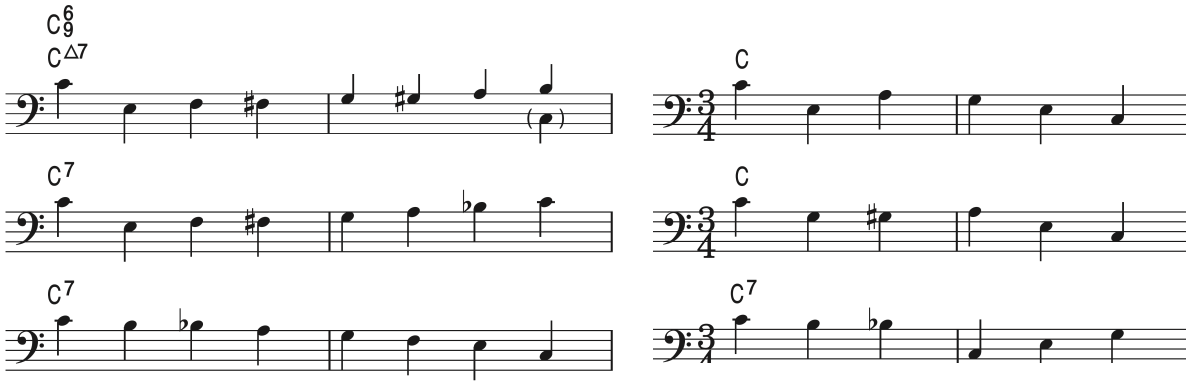
There are only two circumstances in which the 5th of a chord sounds acceptable on the downbeat. The first is when the bass note is a pedal tone with changing chords above it - one of which has a root a fourth above the pedal tone.



The only other acceptable condition for the fifth remaining in the bass is in the passage where the chord in question is approached and left by step.



Almost all of the practices so far have been predicated on the assumption that there will be one or more chord changes per measure of 4/4 or 3/4 time. Other conditions may prevail when one chord is extended over more than one measure. Here are some typical two measure patterns.

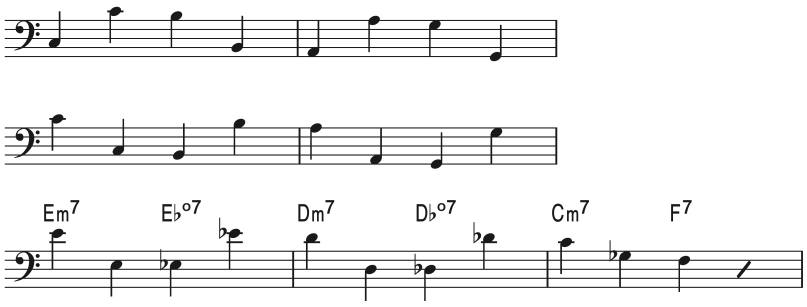


If a bass line changes direction often enough and in a balanced way, problems of range may not arise. Sometimes however, it is useful to keep a bass line moving in one direction for a long enough time that it is possible to run out of practical range for the instrument or voice chosen to realize that line. In such cases a simple switch of register (pivoting) at an appropriate moment can solve the problem while maintaining the illusion that the line is continuing in the same direction. Such changes of register should occur on weak beats so that they are least noticeable (the 2nd or 4th beats of 4/4 lines - or the 2nd beat of 3/4 lines).

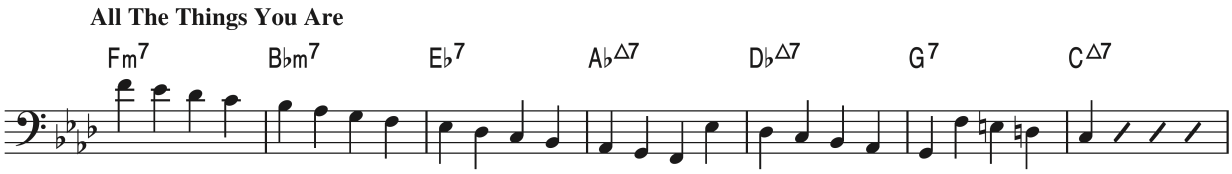
Here are some more useful examples:

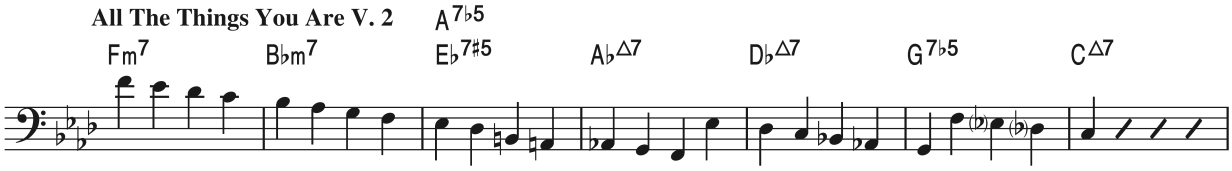
4/4 quarter note lines:

When chords move by step - two per measure, simple octave alternation is often a good choice emphasizing 2 feel - more “pesante”. Make the change to stepwise motion in the opposite direction of the last octave skip.

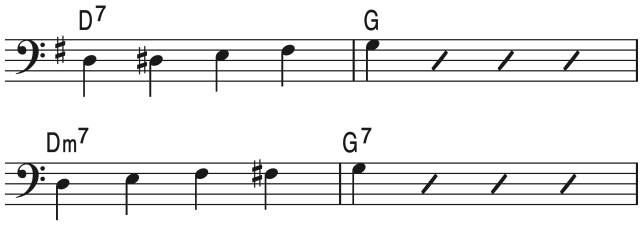


When the roots of the chords outline a cycle of 5ths - descending lines in the scale of the moment will result in smooth lines with correct arrivals (satisfying resolutions).



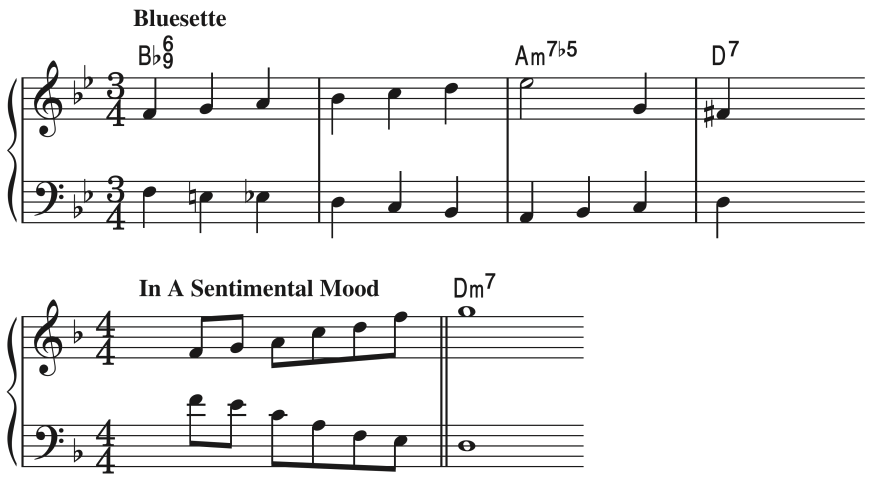


When the roots outline a cycle of 5ths but ascending lines are needed to maintain independence from the motion of the melody, extra passing tones must be inserted to control the arrival time of the next chord root. These chromatic passing tones are best inserted so that chord tones - or at least the tones of the scale (key) of the moment, fall on the strong beats.

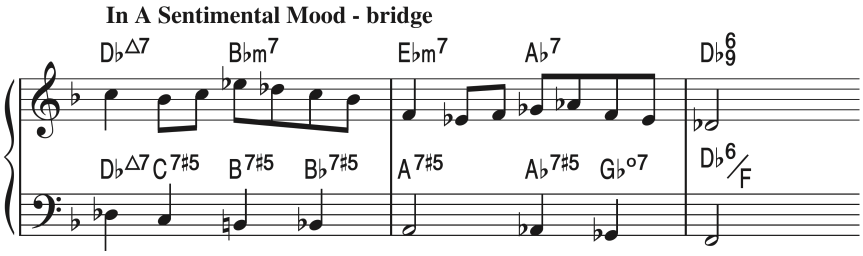


I had a conversation with a well known and excellent musician/composer years ago, in which he complimented me on my playing but expressed the wish that I play more roots. I had no rejoinder at the time. I was grateful for the compliment and somewhat puzzled by his dissatisfaction. I thought every note I played was a root - if not a root of the main chord of the measure - then certainly of a passing chord. To me, playing D,E,F,G when the chord of the measure was G7, represented the correct roots for a series of chords (Dm7, Em7, FM7, G7, which substituted for the simple G7) rather than an incorrect expression of the G7 chord. I had learned from Bill Evans the principle of delaying the dominant 7th chord of the moment as long as possible in order to maintain harmonic movement. My ears have been trained to perceive this practice as useful and correct in constructing interesting bass lines. It's not necessary, or even useful, that the soloist or all upper voices always parallel the bass activity. Sometimes beautiful tension and resolution is achieved by the soloist creating a melodic pattern that expresses a simpler, less active series of chords while some or all of the accompanying voices move logically through passing chords and suspensions to points of agreement and resolution with the melodic line. Much of Bill Evans' music can be correctly analyzed in this light.

When the melody is a simple pattern, sometimes a note for note counterpoint is useful. The chromatic E natural in this example is needed in order that the pitches in the following measures line up with the harmony on the downbeats.

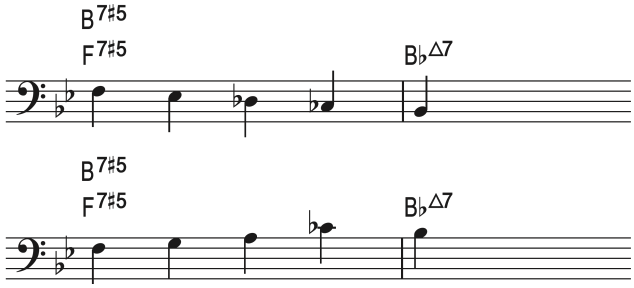


When the melody is complex - like the beginning of the bridge of Sentimental Mood - a steadily moving chromatic line can provide interesting contrast. This line must arrive at a satisfying and correct resolution at an important cadential point.

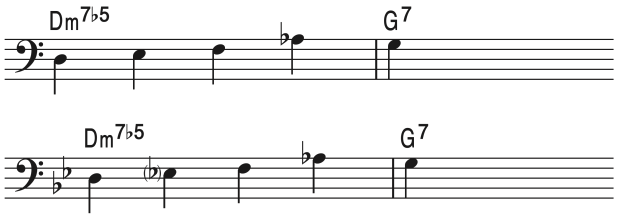


Symmetrical patterns like whole tone scales, dim7th arpeggios (and scales) are useful in suggesting tonal ambiguity and serve to increase harmonic tension until the pattern is broken.

Whole tone patterns are often used to express the harmony of altered chords (see the second example of All the Things You Are). In every case such symmetrical patterns must be resolved on the downbeat by semitone.



Another consideration: passing tones sound least distracting when they clearly describe the key of the moment.



Generally, a balance between stepwise motion and skips is to be sought, not only within the bass line, but in relation to the combined effect of bass line and melody. Since melodies tend towards more disjunct (skip-wise) motion - effective bass lines will tend towards a preponderance of conjunct (step-wise) motion.

There is no substitute for the experience to be gained from listening to and retaining the bass lines of J.S. Bach. Except for the addition of some chromaticism, little has changed in functional harmony since Bach - and no-one does it better.

Good models among jazz bass players include Oscar Pettiford, Ray Brown and Red Mitchell, among many others. Composer/arrangers who demonstrate a high level of sensitivity to the construction of bass lines include Benny Golson, Bill Evans, and John Lewis.

It is important to understand that lead sheets and fake books - while they may include essentially correct chord symbols from which effective lines may be interred - are often full of misleading information (in which the chord symbol represents only the upper voices) that ignores bass line implications. (Chuck Sher's publications are notable exceptions to this rule.) In all cases it 's useful to refer to the best recorded examples in order to select from the most attractive work of experienced bassists and composers.

On rhythmic variety:

Anticipations are more common - and usually more effective than delayed entrances. Delayed entrances are most effective when some or all of the upper voices sound the chord on the beat.

In 4/4 and 3/4 time, anticipations for eighth or quarter notes are common and effective but the must be followed by a silent downbeat - or by the sound of the anticipated note sustaining into the next downbeat, in order to maintain the metrical integrity of the music: i.e., if a downbeat is anticipated by sounding the root on the last quarter or eighth of the preceding measure, nothing else should be played by the bass voice until the second beat of the measure in question and, unless that second beat is also purposefully anticipated, it must occur at its proper time, falling exactly where it belongs, one full beat after the unarticulated first beat. Inattention to this timing is a common weakness of inexperienced players. The cure for the problem requires a profound internalization of the unarticulated down beat pulses so that they are experienced with the same weight as the articulated anticipations. Tapping feet are notoriously ineffective in helping to achieve this stability. Exhaling however - often seems to help (the down beat must be felt as a full bodied release).

Another effective possibility is for some or all of the upper voices to express anticipations while the bass part remains grounded on the beat. Count Basie's music often made effective use of this device.

Effective bass line movement will often suggest a series of substitute chords. There are typical patterns which will appear in certain situations; a series of chords which will serve to provide interesting movement from one harmonic spot to another that is a given distance away. These chord patterns imply particular inner voice motion in what would be the alto and tenor parts were we to reduce the movements to a four voice chorale texture. The bassist (composer/arranger) should become aware of these implications in order to understand how bass note choices might affect decisions made by soloists or "inner voice" accompanists.

These substitute patterns need to connect with the essential cadential points of the composition. There's some artistic leeway in determining where these arrivals might be, but there must be enough of them to allow the composition to remain harmonically recognizable. Once again, the work of Bill Evans provides bellwether examples, especially in his many indelible re-harmonizations of standard tunes.

One of the unfortunate results of the industrialization of music is a tendency towards standardization of aspects of the art which do not benefit from such standardization. (Standardization is a boon to industry but has little to do with art.) One place this habit appears, to the detriment of variety and artistic invention, is in the choice of bass line orchestration. The plucked bass violin in its most developed form has evolved into a nearly ideal instrument for the expression of jazz bass lines. There is a felicitous balance between energetic attack and useful decay; enough impact to express rhythmic vitality and enough resonance to connect notes into recognizable lines. Possibilities of micro dynamics and pitch shading along with the variety of articulation resulting from fingers in intimate contact with strings add to the expressive range. For these reasons, the bass violin has become the instrument of choice for this musical role. There is however, no artistic reason to limit the assignment of bass lines only to the bass violin. A number of other jazz and orchestral instruments are suited to doing the job with resultant refreshing changes of character. The short list certainly must include the baritone saxophone, bass clarinet, trombone, bass trombone and tuba, piano and guitar. Using any of these instruments to fulfill the bass function can provide welcome relief from the sound of the bass violin. The bass violin then acquires the possibility of a dramatic re-entry either in the bass function or in some other role in the ensemble.