VIII. Shell-Voicings

A. The Concept

The 5th (and often the root as well) can be omitted from most 7th-chords.

Rationale: Most chords have perfect 5ths. The P5th is also present as the 3rd partial in the overtone series of the root. Whether sounded or not, it will be felt to be there. When included in a voicing, the perfect 5th does not tell the listener anything he doesn't already know about the chord and it can, therefore, usually be omitted.

Many times, the 5th of a chord can be omitted even in a chord-type with an altered 5th. An altered 5th can often be implied by a pre-established key feeling, or by the chords immediately preceding or following the chord containing the altered 5th.

Example: F♯m7b5, in the key of C major. There is no real need to have a C natural in the voicing for this chord because C is felt so strongly as the tonic of the key. A C♯ would be unexpected.

Even if the altered 5th is not implied by context it can also often be omitted anyway, because it will probably not be essential to the chord's function within the progression.

Example: G7♯5. as V7 in the key of C major. In this example the ♯5 is really just a colour tone. G7 will still function like V7, with-or-without, the D♯.

When playing with a bass player, the root is usually taken care of by him. It can then be viable for a guitarist to omit the root from a voicing as well as the 5th, without losing that much information.

The concept of "root" is one that is inextricably tied up with acoustics and the overtone series. Most (but not all) sets of pitches sounding together (as an interval or as a chord) will have an "acoustical root" that is felt to exist and that can also be deduced by comparing the intervals in that pitch set with the intervals found in the overtone series of a hypothetical fundamental root tone. This is much too complicated to go into here, but I learned about this stuff through Gordon Delamont's great book Modern Harmonic Technique (Volume 1). I can't recommend his books highly enough. The point is, that another reason why we can often get away with omitting the root (even when there is no bass player playing it for us) is because it is often felt to be present as the acoustical root of the intervals that make up the rest of the chord voicing, whether the root itself is actually sounding or not!

On the other hand... The 3rd tells the listener whether the chord is major or minor, in relation to the root, and the 7th further defines the chord. These notes are essential to the sound of a 7th-chord, most of the time, although there are situations where even they might also be omitted from a voicing of a 7th chord.

All we really need then is either a 2-note "shell-voicing" (3rd and 7th; using only 2 strings), or a 3-note shell-voicing (Root, 3rd and 7th; using only 3 strings) for any 7th chord. This greatly frees up the hands. Plus, it allows for the embellishment of the chord with appropriate extensions (and/or other chord-tones), since up to 4 strings are still available above the shell. Most colour tones are added above rather than below a shell-voicing. Sometimes though, the extra colour tones can be squeezed between your 3rds and 7ths. You might decide to add back the 5th or the root too, in between the 3rds and 7ths.

This concept can also help to facilitate a quick and dirty type of chord-melody style by simply placing the appropriate shell-voicing underneath the melody note being harmonized. See Chapter XII.

Much of the attention paid in effective line writing has to do with joining 3rds and 7ths together from one chord to the next at the point of the chord change. The lines that result from this type of voice leading are often referred to as "guide-tone lines". Pay special attention to how the 3rd of a chord, whose root is moving up a 4th (down a 5th), joins into the 7th of the next chord. Pay attention to the way the 3rds and the 7ths, of ALL 7th chords, move from one chord to the next.

So, when I speak of "shell-voicings" in the course of this book I will usually mean 7th-chords with the 5th omitted. Sometimes the root may also be omitted.

Shell = R, 3, 7 (or just 3 & 7)

For now, we will keep the root on the bottom, and we will start with the simplest formations that use the following formulas. Note: Omitting the root usually works best when there is a bass player playing with you.

Two Basic Forms: R 3 7 and R 7 3
[On sus4 chords, replace 3 with 4.]
[On 6th chords and diminished 7th chords, replace 7 with 6 (or ♭7).]

The following chart shows the approximate physical location on the fretboard where the 3rd and 7th happen to fall under your fingers, depending on where the root is fretted (or merely visualized in a voicing with omitted root). Above each shell, on the remaining strings, there also happen to be some notes, with various qualities, that are available and within reach.

1	7 or R or 9	7 or R or 9	11 or 5 or 13	11 or 5 or 13	R or 9 or 3	3	7
2	11 or 5 or 13	11 or 5 or 13	R or 9 or 3	3	7	7	3
3	R or 9 or 3	3	7	7	3	X	(R)
4	7	7	3	X	(R)	(R)	
5	3	X	(R)	(R)			
6	(R)	(R)					

The 1st column, on the left, merely denotes the string number.

The 2nd column, from the left, shows what happens when the Root is fingered (or merely visualized) on the 6th string. You will then find that the 3rd just happens to be within reach on the 5th string. You will also find the 7th within reach on the 4th string. R-3-7.

Example: If you fret a C natural on the 6th string, 8th fret; you will find an E natural nearby on the 5th string at the 7th fret. You will also find a B natural nearby on the 4th string at the 9th fret. These 3 notes (C, E and B), sounded together, are a shell-voicing for Cmaj7. Put another way... These 3 notes are all you need to get the sound of Cmaj7 across to your listener. Sometimes all you need is E & B, especially with a bass player playing a low C.

If you were playing Cm7, the E and the B would be E♭ and B♭. If you were playing C6, you would substitute A natural for the B natural. If you were playing C7sus4, the shell would have F natural instead of E natural, and the B would be B♭. Etc. The shells for Cm7 and Cm7♭5 will be identical, because we are omitting the 5th. The shells for Cm6 and C°7 will be identical for the same reason.

Within your reach, above the 4th string, you will find the Root, the 9th, and the 3rd are available as extra tones on the 3rd string.

Note: The Root does not make for a very good sounding doubled note on a chord with a Maj7 interval (like Cmaj7, Cm(maj7), Cmaj7♯5 etc.) when it is sounded above the major 7th. This is because it creates a rather harsh sounding min 2nd interval, or an even harsher sounding min 9th interval, with the chord's maj 7th below. These two intervals are the most avoided sounds in Tonal music, although they do have their uses. The root sounds fine on chords with ♭7's (like C7, Cm7 etc.), or Maj6ths (like C6, Cm6, etc.), because the intervals created are either maj 2nds or maj 9ths, which are much more pleasant sounding to most people's ears than ♭9s.

Locating the extensions on the higher strings (the strings not being used for the basic shell), is easy if you first start by locating the Root and/or the P5th on those strings.

Get used to thinking that the note that functions as a major 9th on a given chord, can be found 2 frets above the root. (9ths and 2nds are the same pitch-class, i.e. they share the same letter name.) Minor 9ths (♭9) are 1 fret above the root. Augmented 9ths (♯9) are 3 frets above the root.

Major 13ths can be found 2 frets above the Perfect 5th. (13ths and 6ths are the same pitch-class/letter name.) Minor 13ths (♭13) are found 1 fret above the Perfect 5th.

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Perfect 11ths can be found 2 frets below the Perfect 5th. (11ths and 4ths have the same pitch-class/letter name.) Augmented 11ths (♯11) are found 1 fret below the perfect 5th.

Whether the 9th, when added as a colour tone, should be a maj 9th a min 9th or an aug 9th depends largely on the chord-type and on the context of the chord's occurrence within a progression (including the voice-leading). In general, "non-chord-tones" should not form a min 2nd or a min 9th with any chord-tone sounding BELOW it if the intention is for the non-chord-tone to blend into the chord as an "Available Tension". This is for the same reasons that the Root does not sound very good when voiced above the maj 7th. (I.e. Because ♭2's and ♭9's are rather harsh sounding.) The main exception to this "avoid ♭9 intervals rule" is the ♭9 extension which is used all the time on Dom7 chords. Eg. C7♭9. The reasons for this particular exception have to do with musical acoustics again, as well as with symmetrical divisions of the octave, and the qualities of 12 Tone Equal Temperament. Too much to really go into here. Sorry. Memorize this exception now.

[Hint: C7♭9 = E°7/C. One of the 4 possible acoustical roots of E°7 is C. So the ♭9 interval between C and D♭ is acceptable for acoustical reasons. D♭ is heard as a slightly distorted version of C's 9th partial by this theory.]

Example: With the shell for Cmaj7 (still Column 2 above), adding a C natural (the root) on the 3rd string doesn't sound so hot. This is because it is clashing with the B natural right below it. Neither does the D♭ (♭9). This is mostly because it is clashing with the C natural a ♭9 below it. The D natural (9) sounds fine. D♯ (♯9) is a little weird, but not nearly as harsh as the ♭9 was.

Example: With the shell for C6 (C, E, A), adding a C natural (the root) on the 3rd string sounds fine. The D♭ still clashes with the C natural below it. D natural is still good. And D♯, although a little "out", sounds OK.

Example: With the shell for C7 (C, E, B♭), adding C (the root) or D♭ (♭9 - the exception to the rule!) or D♮ (9) or D♯ (♯9) are all fine.

Also... Tensions should *generally* be diatonic tones in the key that the progression is in at any particular moment.

Example: Adding a maj 9th (D natural) to a Cm7 usually sounds fine when the chord is functioning as IIm7 in the key of B♭ major, or as VIm7 in the key of E♭ major. But it might sound out of place when Cm7 is functioning as IIIm7 in the key of A♭ major. This is because the key of A♭ major uses D♭s, not D♮s.

On a chord with a ♭5 (eg. Cm7♭5) you should consider the P5th to be an avoid-note even if there is no ♭5 present in your shell-voicing for it to clash with. This is because it is highly likely that someone else in your ensemble (the bassist or the soloist, etc.) might be sounding the ♭5 at any given moment, and you might clash with *them*.

• Tip: On a chord with a ♯5, the P5th doesn't sound too bad when sounded above the main body of the chord, as Tension 12. Eg. On C7♯5, a high G♮ (T12) creates a maj7 interval with the G♯/A♭ down in the chord, not a ♭9.

Please see Chapter XI. - Chord-Scales Via Modal Theory for a more detailed explanation of the various non-chord-tone types available within any given chord-scale relationship.

Within your reach on the 2nd string (still using Column 2 shells btw); you will find the 5th, and therefore the 11th and the 13th. Whether or not to use a P11th or a ♯11th, a maj 13th or a ♭13, depends on the same considerations discussed above, namely, avoiding the creation of ♭2's and ♭9's with lower chord-tones, and on the context in which the chord is occurring within the key.

It is quite common to add two colour tones at once to a shell-voicing (eg. on the 3rd string and the 2nd string), if a decent fingering and can be achieved. Sometimes the root may need to be omitted.

Within your reach on the 1st string (still using Column 2 shells); you will find the 7th, the Root and the 9th.

It is also quite possible to add three colour tones at once to a shell-voicing (on the 3rd, 2nd, and 1st strings; for example) if a decent fingering and sound can be achieved. Sometimes the Root may need to be omitted. Various combinations of roots 5ths and extensions are possible on the remaining strings above a shell voicing.

Important!:

Don't get *too* hung up on figuring out voicings with added tensions just yet. Concentrate rather on learning all the basic shells (R 3 7 - R 7 3, etc.) for all the basic 7th-chord-types, with the roots located on the various strings.

The 3rd column shows what happens when the root is fingered (or merely visualized) on the 6th string still, but where the 5th string is not used. You will then find that the 7th still happens to be within reach on the 4th string. The 3rd can be found nearby on the 3rd string, an octave higher than it was originally seen in the Column 2 shell-voicing type. On the 2nd string you will find the 11th, the 5th, and the 13th still within your reach. On the 1st string you will find the 7th, the root, and the 9th still within your reach.

The 4th column shows what happens when the root is fingered (or merely visualized) on the 5th string. You will then find that the 3rd is nearby on the 4th string. The 7th can be found nearby on the 3rd string. On the 2nd string you will find the root, the 9th, and the 3rd within your reach. On the 1st string you will find the 11th, the 5th, and the 13th within your reach.

The 3rd column and 4th column shell-voicing types work exceptionally well together because the 3rds and 7ths are always on the same 2 strings. Also, the 5th and 6th strings are then reserved for just the roots. Confining yourself to these 2 chord-types often results in some very strong voice-leading between the 3rds and 7ths of the various chords in a progression, without even knowing what "voice-leading" is. Of all the suggested fingerings for shell-voicings found here, these 2 are the most widely used and the most useful. Learn them well before you attempt to tackle the other ones.

The 5th column also shows what happens when the root is fingered (or merely visualized) on the 5th string, but now the 4th string is not used. You will then find that the 7th still happens to be within reach on the 3rd string. The 3rd can now be found nearby on the 2nd string, an octave higher than it was in the Column 4 shell-voicing type. On the 1st string you will find the 11th, the 5th and the 13th still within your reach.

The 6th column shows what happens when the root is fingered (or merely visualized) on the 4th string. You will then find that the 3rd is nearby on the 3rd string. The 7th can be found nearby on the 2nd string. On the 1st string you will find the root, the 9th and the 3rd within your reach.

The 5th column and the 6th column shell types also work very well together for the same reasons that the 3rd and 4th column shell types work so well.

The 7th column also shows what happens when the root is fingered (or merely visualized) on the 4th string, but now the 3rd string is not used. You will then find that the 7th still happens to be within reach on the 2nd string. The 3rd can now be found nearby on the 1st string, an octave higher than it was in the column 6 shell-voicing type. There are no strings available above this shell-grip-type for adding colour tones.

The 8th column shows what happens when the root is fingered (or merely visualized) on the 3rd string. You will find that the 3rd is nearby on the 2nd string. The 7th can be found nearby on the 1st string. There are no strings available above this shell for added colour tones.

Shell-Voicing Exercises

Use the shell types from *Columns 3 and 4 only* for now. (Go back later and work on the others.)

1. Learn to comp through a blues (Pg. 53) and several standard tunes (see the back of Chapter VI) using these two chord voicing types (i.e. the Column 3 & 4 shell/grip-types). Watch how the 3rds and 7ths join together from one chord to the next. Also play the exercises on Pg. 54 using these 2 shell-grip-types.

2. When you are comfortable with this, try adding some appropriate extensions and/or desirable chord-tones on the 2nd and 1st strings. It helps if you know the proper chord-scale relationships beforehand (see Chapter XI.), but try just using your ears for now. You might get lucky. If an extension doesn't sound good, don't use it.

3. Repeat the above with the other shell-voicing formations.

It is possible to take the concept of shell-voicings *MUCH* farther.

Consider this: If you are playing with a bass player, and he's playing off of the root of a C chord, then anywhere on the fretboard that you play the notes E and B♭ together will create the sound of a C7 chord between you and him. If you play the E on the 5th string at the 7th fret, and the B♭ on the 1st string at the 6th fret, then you have 3 strings *in the middle of the shell* in which to experiment with colour tones. Etc.

The possibilities for placement of 3rds and 7ths are:

3rd on 6th string - 7th on 5th string, or 4th string, or 2nd string

7th on 6th string - 3rd on 5th string, or 4th string, or 2nd string

3rd on 5th string - 7th on 4th string, or 3rd string, or 1st string

7th on 5th string - 3rd on 4th string, or 3rd string, or 1st string

3rd on 4th string - 7th on 3rd string, or 2nd string, or 1st string

7th on 4th string - 3rd on 3rd string, or 2nd string, or 1st string

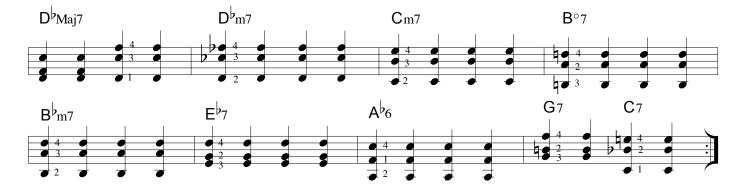3rd on 3rd string - 7th on 2nd string, or 1st string

7th on 3rd string - 3rd on 2nd string, or 1st string

3rd on 2nd string - 7th on 1st string

7th on 2nd string - 3rd on 1st string

Here's an example of one way to play the basic (R,3,7 or R,7,3) shell-voicings on All The things You Are, using alternating Column 3 and Column 4 shell/grip types. Note and adhere to the suggested fingerings.

D♭Maj7　　　D♭m7　　　Cm7　　　B°7

B♭m7　　　E♭7　　　A♭6　　　G7　　C7

Here's the same tune with some available tensions added on the 2nd string. Note: These particular tensions might clash with the actual melody of the tune, if the melody was sounding. The real art of comping has everything to do with supporting the melody or the soloist's improvised melody. My choice of tensions here is to be thought of as a very generalized usage. The tensions I have picked are derived, mostly, from the scale of the key-of-the-moment, and they also happen to fit the chord vertically.

The given fingerings are designed for strumming with the pick. It is often possible to use much easier finger-ings than these when playing finger-style or pick+fingers.

Guitar

Medium

Freddie Green Style

Swing

Fm7(9)　　etc.　　B♭m7(11)　　E♭7(9)　　A♭Maj7(13)

D♭Maj7(9)　　Dm7(9)　　G7(13)　　CMaj7(9)　　CMaj7(13)

Cm7(11)　　Fm7(9)　　B♭7(13)　　E♭Maj7(9)

A♭Maj7(13)　　Am7♭5(♭13)　D7(♭9) D7(♯9)　GMaj7(13)　　Em7(9)

Am7(11)　　D7(9)　　GMaj7(13)　　GMaj7(9)

F♯m7(9)　　B7(13)　　EMaj7(9)　　C7(♭13)

88

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