

Chords Within Chords

Most musicians learn chords as fixed units: a major triad is three notes, a seventh chord is four, an extended chord might be six or seven. We tend to think of them as solid vertical structures, like blocks in a building. But here's the secret: every extended chord is really a constellation of smaller chords.

If you learn to see these inner shapes—triads and seventh chords embedded within the parent harmony—you'll unlock a whole new palette for improvisation, composition, and arranging. Suddenly, instead of staring at a static "Cmaj7," you'll see multiple layers of C, Em, G, Bdim, Am, and Dm hiding inside. And instead of feeling stuck over a minor or dominant vamp, you'll discover rich opportunities for triad superimposition and voice-leading that can drastically improve your playing.

This article will explore that world in depth: starting with seventh chords as triad-plus-bass structures, moving into extended harmonies where multiple triads overlap, and finally broadening to practical strategies for improvisers, compers, and composers.

I. Seventh Chords as Triads Over Bass

Let's begin with the diatonic seventh chords of C major. If you take each four-note chord and look at the top three notes, you'll see a perfectly formed triad. That triad, when viewed "over" the bass, gives you a fresh way of naming the chord:

Cmaj7 (c e g b) = Em/C

Dm7 (d f a c) = F/D

Em7 (e g b d) = G/E

Fmaj7 (f a c e) = Am/F

G7 (g b d f) = Bdim/G

Am7 (a c e g) = C/A

Bm7b5 (b d f a) = Dm/B

The triads listed as the first part of each chord are circled in red below:

Cmaj7 = Em/B	Dm7 = F/D	Em7 = G/E	Fmaj7 = Am/F

G7 = Bdim/G	Am7 = C/A	Bm7b5 = Dm/B

This is already illuminating for many students. The fact that a 7th chord can be re-imagined as a triad sitting on top of a bass note is important because:

- Voice-leading becomes clearer. Instead of shifting all four notes, you can treat it as moving a triad shape while keeping the bass grounded.
- Improvisation gets easier. If you're soloing over Cmaj7, you can simply think "E minor triad" or even "E minor pentatonic" as one of your options.
- Arranging gains flexibility. A horn section might play the Em triad while the rhythm section outlines the bass C, creating depth without clutter.

This approach helps you see seventh chords not as single labels, but as combinations of smaller, more manageable pieces.

II. Extending Out to 9ths, 11ths, and 13ths

When you extend a chord, the hidden structures multiply. Let's take C major as our model. A full Cmaj13 chord is:

c e g b d f a

That's seven notes—the entire C major scale stacked in thirds. But look inside, and you'll find multiple triads hiding in plain sight:

C major (c e g)

E minor (e g b)

G major (g b d)

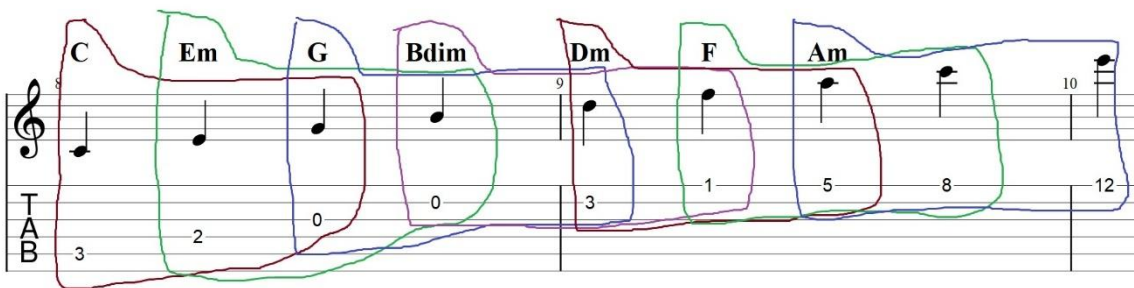
B diminished (b d f)

D minor (d f a)

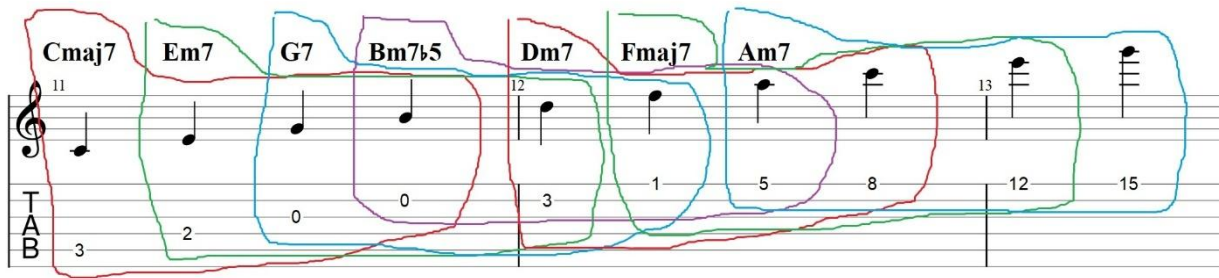
F major (f a c)

A minor (a c e)

That's every diatonic triad in C major, all contained within the single sonority of Cmaj13. Here is a color-coded diagram of each triad:



The same is true for seventh chords: Cmaj7, Em7, G7, Bm7b5, Dm7, Fmaj7, Am7 are all embedded in the structure.



There may be circumstances where when the I chord is a maj7, like it is above, a #11 might sound less dissonant than a regular 11. If that's the case, still using the example in C and in the same manner above, the C Lydian scale c, d, e, f#, g, a, b, c yields the triads C, Em, G, Bm, D, F#dim, Am and Cmaj7, Em7, Gmaj7, Bm7, D7, F#m7b5, Am7.

III. Voice-leading

Here's the part that really deepens the picture: these embedded triads are connected by simple one-note changes.

For example:

C major (c e g) → E minor (e g b) by lowering c to b.

E minor (e g b) → G major (g b d) by lowering e to d.

G major (g b d) → B diminished (b d f) by lowering g to f.

B diminished (b d f) → D minor (d f a) by lowering b to a.

D minor (d f a) → F major (f a c) by lowering d to c.

F major (f a c) → A minor (a c e) by lowering f to e.

A minor (a c e) → C major (c e g) by lowering a to g.

	C	Em	G	Bdim	Dm	F	Am	C
14								
15								
16								
17								
T	5	5	3	3	3	1	1	1
A	5	4	4	4	2	2	2	0
B	5	5	5	3	3	3	2	2

In other words, you can move through the entire chain of triads within Cmaj13 by changing just one note at a time. This isn't random—it's baked into the logic of tertian harmony (stacking in thirds).

For a player, this means that instead of jumping from one “block” chord to another, you can weave smooth, voice-led progressions that stay rooted in a single harmonic space. Improvisers can utilize an abundance of harmonic motifs. Composers can orchestrate gradual harmonic color shifts.

IV. Applying this Approach to Minor and Dominant Chords

So far, we've been looking at C major. But the same thinking applies to minor and dominant tonalities.

Here's that information in a clean, readable table format:

Parent Quality	Extended Chord	Embedded Triads	Embedded 7th Chords
C Major (Cmaj13)	c e g b d f a	C, Em, G, Bdim, Dm, F, Am	Cmaj7, Em7, G7, Bm7b5, Dm7, Fmaj7, Am7
C Minor (Cm13)	c eb g bb d f a	Cm, Eb, Gdim, Bb, Ddim, F, Adim	Cm7, Ebmaj7, Gm7b5, Bbmaj7, Dm7b5, F7, Am7b5
C Dominant (C13)	c e g bb d f a	C, Edim, Gm, Bb, Dm, F, Am	C7, Em7b5, Gm7, Bbmaj7, Dm7, Fmaj7, Am7

Notice a few things:

In major, the embedded triads are bright and consonant: plenty of major and minor triads. In minor, you get more diminished triads and half-diminished sevenths, reflecting the darker color. In dominant, you get the same structures as major, but with Bb instead of B. This small change introduces Gm and Fmaj7, which color the C7 in beautiful ways.

By stacking triads from within the chord, you create rich upper-structure voicings and melodic lines.

V. Triad Superimposition in Practice

Listen to how these triad chords sound over a C drone.

Cmaj13 (c e g b d f a)

scale tone	triad	intervals to the key
c	C	1, 3, 5
e	Em	3, 5, 7
g	G	5, 7, 9
b	Bdim	7, 9, 11
d	Dm	9, 11, 13
f	F	11, 13, 1
a	Am	13, 1, 3

Triad	Intervals (from C)
Em/C	5, 4, 5
G/C	3, 4, 5 (3)
Bdim/C	3, 4, 3
Dm/C	3, 2, 3 (3)
F/C	1, 2, 3
Am/C	1, 2, 2 (3)
C	1, 0, 2

Cmaj13 (c e g b d f a)

scale tone	triad	intervals to the key
c	C	1, 3, 5
e	Edim	3, 5, b7
g	Gm	5, b7, 9
bb	Bb	b7, 9, 11
d	Dm	9, 11, 13
f	F	11, 13, 1
a	Am	13, 1, 3

22 C Edim/C 23 Gm/C Bb/C 24 Dm/C F/C 25 Am/C C

T 5 5 3 3 3 1 1 1
A 3 5 3 3 2 2 2 0
B 3 5 (3) 3 (3) 3 (3) 2

Cmaj13 (c e g b d f a)

scale tone	triad	intervals to the key
c	Cm	1, b3, 5
eb	Eb	b3, 5, b7
g	Gm	5, b7, 9
bb	Bb	b7, 9, 11
d	Dm	9, 11, 13
f	F	11, 13, 1
a	Adim	13, 1, b3

26 Cm Eb/C 27 Gm/C Bb/C 28 Dm/C F/C 29 Adim/C Cm

T 4 4 3 3 3 1 1 1
A 3 3 5 3 2 2 2 0
B 3 5 (3) 3 (3) 3 (3) 1

The fun doesn't stop here. Just like triads, you can superimpose diatonic 7th chords over a parent harmony to create rich melodic and harmonic colors. This is particularly powerful for improvisation, comping, and arranging — because a single 7th chord shape can imply upper-structure tensions, modal colors, or voice-leading pathways without changing the root harmony. So try these over a C drone:

Seventh Chord Superimposition over Cmaj13 (c e g b d f a)

scale tone	triad	intervals to the key
c	Cmaj7	1, 3, 5, 7
e	Em7	3, 5, 7, 9
g	G7	5, 7, 9, 11
b	Bm7b5	7, 9, 11, 13
d	Dm7	9, 11, 13, 1
f	Fmaj7	11, 13, 1, 3
a	Am7	13, 1, 3, 5

Chord sequence: Cmaj7, Em7/C, G7/C, Bm7b5/C, Dm7/C, Fmaj7/C, Am7/C, Cmaj7.

Fingering (T, A, B):

- Cmaj7: T=7, A=5, B=3
- Em7/C: T=7, A=5, B=5
- G7/C: T=7, A=6, B=(3)
- Bm7b5/C: T=7, A=6, B=7
- Dm7/C: T=8, A=7, B=(3)
- Fmaj7/C: T=8, A=9, B=7
- Am7/C: T=8, A=9, B=(3)
- Cmaj7: T=8, A=9, B=9

Seventh Chord Superimposition over C13 (c e g bb d f a)

scale tone	triad	intervals to the key
c	C7	1, 3, 5, b7
e	Em7b5	3, 5, b7, 9
g	Gm7	5, b7, 9, 11
bb	Bbmaj7	b7, 9, 11, 13
d	Dm7	9, 11, 13, 1
f	Fmaj7	11, 13, 1, 3
a	Am7	13, 1, 3, 5

Chord sequence: C7, Em7b5/C, Gm7/C, Bbmaj7/C, Dm7/C, Fmaj7/C, Am7/C, C7.

Fingering (T, A, B):

- C7: T=6, A=5, B=3
- Em7b5/C: T=6, A=5, B=5
- Gm7/C: T=6, A=7, B=(3)
- Bbmaj7/C: T=6, A=6, B=7
- Dm7/C: T=8, A=7, B=(3)
- Fmaj7/C: T=8, A=9, B=7
- Am7/C: T=8, A=9, B=(3)
- C7: T=8, A=8, B=8

Seventh Chord Superimposition over Cm13 (c eb g bb d f a)

scale tone	triad	intervals to the key
c	Cm7	1, b3, 5, b7

eb	Ebmaj7	b3, 5, b7, 9
g	Gm7	5, b7, 9, 11
bb	Bbmaj7	b7, 9, 11, 13
d	Dm7	9, 11, 13, 1
f	F7	11, 13, 1, b3
a	Am7b5	13, 1, b3, 5

Chord sequence: Cm7, Ebmaj7/C, Gm7/C, Bbmaj7/C, Dm7/C, F7/C, Am7b5/C, Cm7

Fingerings (T, A, B strings):

- Cm7: T(6), A(4), B(3)
- Ebmaj7/C: T(6), A(4), B(5)
- Gm7/C: T(6), A(7), B(5)(3)
- Bbmaj7/C: T(6), A(6), B(7)
- Dm7/C: T(8), A(6), B(7)(3)
- F7/C: T(8), A(6), B(7)
- Am7b5/C: T(8), A(8), B(7)(3)
- Cm7: T(8), A(8), B(8)

Improvisers can think of any of these 7th chord shapes as upper-structure substitutions, giving immediate access to tensions (9, 11, 13) without complex scale thinking. Composers and arrangers can distribute these 7th chords across different instruments for layered, modern textures. Compers can move between these 7th chords to create fluid harmonic motion while staying over a static root. Just like the triad version, these chords are connected by smooth voice-leading, often moving by step or single-note shifts. Overall, understanding harmony this way creates a deep palette for both harmonic richness and melodic development — all derived from one parent chord. This is why jazz musicians talk so much about upper-structure triads—they're the most practical way to access rich extensions.

VI. Exercises to Master the Concept of Extended Harmony

1. Identify Embedded Triads

Take any major, minor, or dominant 13th chord (e.g., Abmaj13, E13, Bm13).

Write out all the triads in it, with roman numerals next to them. As we have seen, the chord Cmaj13 is:

Scale tone	Triad	Roman Numeral
c	C	I
d	Dm	II
e	Em	III
f	F	IV
g	G	V

a	Am	VI
b	Bdim	VII

2. Voice-Lead Through the Cycle

Start by playing the III triad over a I chord bass drone.

Now lower the root of the III triad by one diatonic scale degree. This gives you the next embedded triad in the cycle.

For example, in the key of C:

- * Start with Em (e–g–b).
- * Lower e → d, giving G major (g–b–d).
- * Lower g → f, giving B diminished (b–d–f).
- * Lower b → a, giving D minor (d–f–a).
- * Lower d → c, giving F major (f–a–c).
- * Lower f → e, giving A minor (a–c–e).
- * Lower a → g, giving C major (c–e–g).

The image shows a musical staff with a treble clef and a key signature of one flat (Bb). The staff contains seven triads, each with a label above it: Em/C, G/C, Bdim/C, Dm/C, F/C, Am/C, and C. The triads are connected by a series of curved lines, indicating voice-leading. Below the staff, there are three rows of fingering for the triads, labeled T, A, and B. The fingering for each triad is as follows:

Triad	T	A	B
Em/C	5	4	3
G/C	3	4	5
Bdim/C	3	4	(3)
Dm/C	3	4	5
F/C	1	2	(3)
Am/C	1	2	2
C	1	0	(3)

This creates the cycle:

III → V → VII → II → IV → VI → I

The beauty of this approach is that each new triad differs from the previous one by only a single note. This builds strong internal voice-leading and makes complex harmonic movement feel natural and connected.

3. Improvise Using Triads Only

Vamp on the chord you chose in Step 1. (For many players, it's even more effective to loop just the bass note.)

Improvise lines only using the triads you listed in Step 1. For example:

The musical notation consists of two systems. The first system contains measures 46 through 49. Measure 46 is labeled Em/C and shows a melody starting on G4 with fingerings 5, 4, 5, 4, 5 on the bass staff. Measure 47 is labeled G/C with a melody starting on A4 and fingerings 3, 5, 4 on the bass staff. Measure 48 is labeled Bdim/C with a melody starting on B4 and fingerings (4), 3, 3, 4, 3 on the bass staff. Measure 49 is labeled Dm/C with a melody starting on C5 and fingerings 2, 3, 2, 3, 2 on the bass staff. The second system contains measures 50 through 52. Measure 50 is labeled F/C with a melody starting on D4 and fingerings 1, 2, 3, 2, 3, 3 on the bass staff. Measure 51 is labeled Am/C with a melody starting on E4 and fingerings 2, 2, 1 on the bass staff. Measure 52 is labeled C with a melody starting on F4 and a single finger 0 on the bass staff.

In C major, for example, your melodic vocabulary would be limited to the Em, G, Bdim, Dm, F, Am, and C triads.

Optionally, you can alternate between linear playing (improvising within the scale) and vertical playing (using chord tones of the superimposed triads).

4. Comp with Triad Chains

Use three-note triads moving smoothly through the one-note difference cycle. Play slowly, focusing on voice-leading smoothness.

Record yourself and listen critically to how the color shifts with each triad, even though the root stays stable. This is one of the simplest and most effective ways to bring motion to static harmony.

5. Compose a Short Piece

Write an 8-bar melody where each measure emphasizes a different embedded triad within your chosen chord.

This exercise develops your ability to think compositionally with upper structures. The resulting melody will naturally imply harmonic movement without changing the underlying chord symbol.

6. Repeat with 7th Chords

Now repeat Steps 1–5, but with 7th chords instead of triads.

The main difference with 7th chords is that you'll raise the root by one diatonic scale degree to get to the next chord in the series (unlike with triads where we lowered it.)

For example, in C major:

Start with Em7 (e g b d) — the III chord of C.

Raise e → f, which gives G7 (g b d f), the V chord.

Raise g → a, which gives Bm7b5 (b d f a), the VII chord.

Raise b → c, which gives Dm7 (d f a c), the II chord.

Raise d → e, which gives Fmaj7 (f a c e), the IV chord.

Raise f → g, which gives Am7 (a c e g), the VI chord.

Raise a → b, which gives Cmaj7 (c e g b), the I chord.

Thus we get the same cycle as before: III → V → VII → II → IV → VI → I

Here's an example:

The musical notation shows a sequence of 7th chords in C major: Em7/C, G7/C, Bm7b5/C, Dm7/C, Fmaj7/C, Am7/C, and Cmaj7. The notation includes a treble clef, a key signature of one flat (Bb), and a sequence of notes and rests. Below the staff, there are fingerings for the left hand (T, A, B) and right hand (10, 7, 8, 9, 10, 7, 9, 7, 10, 10, 3, 7, 8, 10, 10, (10), 8, 10, 8, 10, 10). The sequence of chords is: Em7/C, G7/C, Bm7b5/C, Dm7/C, Fmaj7/C, Am7/C, and Cmaj7. The notation includes a treble clef, a key signature of one flat (Bb), and a sequence of notes and rests. Below the staff, there are fingerings for the left hand (T, A, B) and right hand (10, 7, 8, 9, 10, 7, 9, 7, 10, 10, 3, 7, 8, 10, 10, (10), 8, 10, 8, 10, 10).

This approach builds fluency with both triads and 7ths and creates an intuitive sense of harmonic contour over a static harmony.

Conclusion: Chords Are Ecosystems

Chords aren't rigid blocks—they're harmonic ecosystems. A Cmaj7 isn't just four notes; it's a cloud of interconnected triads and sevenths. Extending to 9, 11, and 13 multiplies the possibilities, and each triad connects seamlessly to the next through smooth voice-leading.

Whether you're improvising, comping, or composing, this layered perspective gives you tools to create motion, variety, and depth. A single chord becomes a landscape to explore.

About the author: Dennis Winge is head teacher at [Guitar Lessons Myrtle Beach](#) and has 12 albums out as a leader.