

Table of Contents

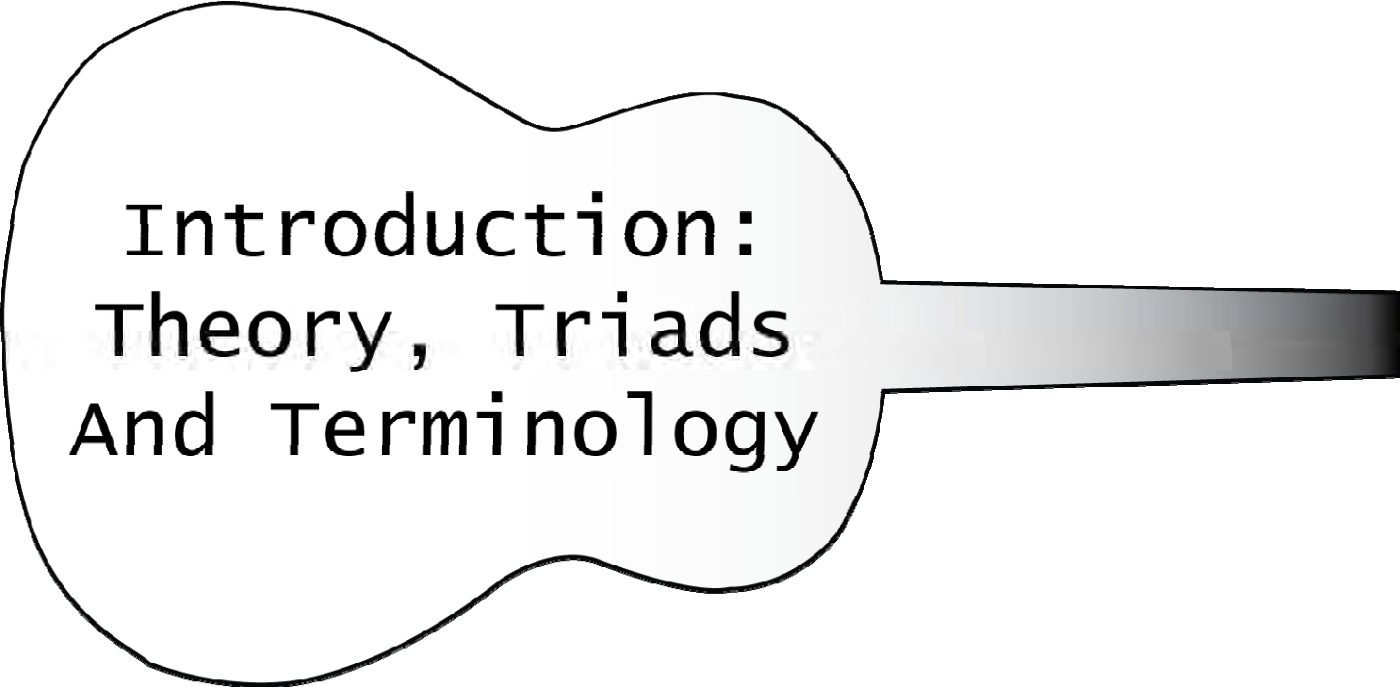
Introduction: Theory, Triads and Terminology	3
<i>Understand the building blocks of chords. Learn the often inconsistent jargon associated with playing “jazz” chords.</i>	
Section 1: Functional Literacy	17
<i>Start with the open position chords you learned when you first started; add some basic bar chords, a couple of major sevenths and a few diminished chords. Soon you can play most of the songs you’ve ever heard.</i>	
Section 2: The CAGED System	26
<i>The time honored approach to adding chords to your vocabulary: Learn how the C, A, G, E, and D chords combine to cover one octave on the guitar neck; build extensions on those chords and suddenly instead of two ways to play a given chord, you have 5.</i>	
Section 3: Building Chords on String Sets	47
<i>Look at the 6 stings of the guitar in groups of 4. Build basic chords on these 4-string groups and you go from 5 ways to play most chords to 16!</i>	
Interlude: Terminology; Drop 2 and Drop 3 Voicing	57
<i>More droppings? An explanation of some common terms.</i>	
Section 4: Seeing all the Possibilities	58
<i>Stop thinking like a guitar player and start thinking like a musician. Play some fairly sick versions of “House of the Rising Sun” to make my point.</i>	
Section 5: Reprise: More Fun With Triads	68
<i>What can I say? I have this thing for symmetry. End where we began but with a whole new set of tools to use.</i>	
Appendix: Photo-op Chords.....	74
<i>A must have for any guitarist who doesn’t want to be memorialized on film (or pixels) playing a simple E minor chord.</i>	

Foreword

First, this book is for everyone who has made it through the beginning phases of learning guitar. If you're ready to expand your chord vocabulary, this book is for you.

Second, this book is not meant to be worked through in a month or three. The material in each section should be learned and then incorporated into the guitarist's everyday playing before proceeding to the next section. If you're just starting out, work through the 'Functional Literacy' section and live with it for a while. Apply those new chords to songs you know. Learn some new songs you couldn't play before. When that material is easy for you, when you've internalized the ideas, then move on to the 'CAGED' chapter.

What I've tried to do in this slender volume is to chronicle the normal evolutionary cycle of guitarists who develop a truly deep understanding of harmony applied to the guitar fretboard. It's the path I went down over the course of many years. It's the same or very similar to the paths that many of my friends and colleagues have followed. And yet I've never seen the material presented in this fashion. Hopefully this will provide some markers on the trail for aspiring guitarists.



Introduction:
Theory, Triads
And Terminology

The Whole Chord Thing

Introduction

Shredders get all the attention. But even they know in their heart of hearts that real mastery of the instrument is shown through a clear understanding of chords and how they work on the guitar fretboard. Working through this book will allow you to accomplish two things: 1) you will acquire a firm grasp of chord theory along with the basic chord shapes to get you through most playing situations - whether you're playing in a 3-piece rock band or a 17-piece jazz ensemble; 2) you will acquire the tools to define your own 'chord voice'. Joe Pass played chords differently from Barney Kessel. Alan Holdsworth plays chords differently than Frank Gambale. If you really want to master the guitar, your chordal style needs to be as personal as your improvisation style.

In the introductory section of this book we'll look at the rules of music theory that govern chord building; we'll take a detailed look at triads; and we'll try to unravel the sometimes arcane and conflicting terminology that applies to chords.

Basic Theory

The space between two notes is called an *interval*. The smallest space you can have between two notes is a half-step, one fret on the guitar. I like to think about note relationships, and eventually chords, spatially. Start with the chart below listing the notes of a one-octave chromatic scale from C to C. Each box represents a single half-step.

C	C# Db	D	D# Eb	E	F	F# Gb	G	G# Ab	A	A# Bb	B	C
----------	------------------	----------	------------------	----------	----------	------------------	----------	------------------	----------	------------------	----------	----------

To understand the way we name the intervals we must first look at a major scale. Below we've removed the sharps and flats and we're left with the notes of a C major scale.

C		D		E	F		G		A		B	C
----------	--	----------	--	----------	----------	--	----------	--	----------	--	----------	----------

Intervals are named with numbers. If we want to know the interval between a C and an E, we simply count: C, D, E; 1, 2, 3; the interval is a *third*. How far is it between C and A? C, D, E, F, G, A; 1, 2, 3, 4, 5, 6; This interval is a *sixth*. What is the interval between D and F? It's another third. But notice it's farther from C to E than from D to F.

C		D		E		D		E	F
----------	--	----------	--	----------	--	----------	--	----------	----------

There are 4 half-steps between C and E and 3 half-steps between D and F. The larger interval is called a *major 3rd* and the smaller is a *minor 3rd*. The chart below shows the interval name and the associated number of half-steps between C and all the notes in the octave above C.

C	Db	D	Eb	E	F	Gb	G	Ab	A	Bb	B	C
0	1	2	3	4	5	6	7	8	9	10	11	12
unison	Minor 2nd	Major 2nd	Minor 3rd	Major 3rd	Perfect 4th	diminished 5th	Perfect 5th	Minor 6th	Major 6th	Minor 7th	Major 7th	Perfect octave

TMI Warning

If you get a good handle on the information so far, that's really most of what you need to understand how chords are built. *So.....*this next bit may come under the heading of too much information. If you begin to bog down in the rest of the material on intervals, don't worry. Skip it for now and come back to it after you've had a chance to digest for a while.

Notice that the sharps have been removed from the preceding chart. There are other considerations besides the number of half-steps when identifying intervals: C to D# is not the same as C to Eb. Yes, D# and Eb are the same pitch, *but* when identifying intervals you also have to consider the *letter names* of the notes. Count the letters from C to D# - it's still C, D; 1, 2 - a second of some kind even though it's a D#. We call that space an *augmented second*. The chart below uses the sharps and the alternate names of the intervals.

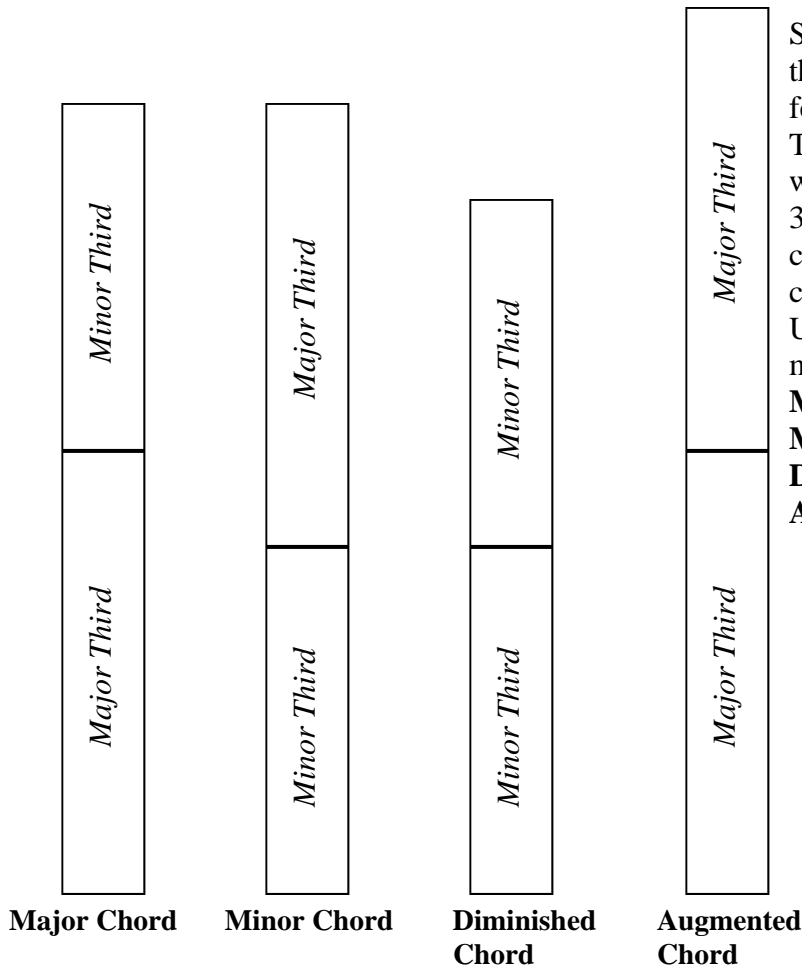
C	C#	D	D#	E	F	F#	G	G#	A	A#	B	C
0	1	2	3	4	5	6	7	8	9	10	11	12
unison	Aug-mented unison	Major 2nd	Aug 2nd	Major 3rd	Perfect 4th	Aug 4th	Perfect 5th	Aug 5th	Major 6th	Aug 6th	Major 7th	Perfect octave

So, you've got this interval thing covered, right. Not quite. There is one (only one, I promise) more thing to consider when naming intervals: mixed accidentals - the use of sharps in a flat key signature (or vice-versa). Consider the following:



The first note is an F sharp (note the key signature) and the second is an A flat. That's a distance of 2 half-steps, or one whole step. But, again, we have to consider the *letter names* of the notes, F and A. That's F, G, A; 1, 2, 3, so the interval has to be a kind of third. A major third is 4 half-steps, a minor third is 3 half-steps. This new beast is called a ***diminished third***. I tend to relate this stuff back to the intervals derived from the major scale. In the C major scale, C to A is a major sixth; C to A flat is a minor sixth. We can make that interval smaller (diminished, get it?) by either raising the the C to a C sharp or lowering the A flat to an A double-flat. Either case would be called a diminished sixth. Will you need to understand diminished intervals to complete your knowledge of chords? Not really - where it becomes relevant is in formal music theory study, generally within the first couple of college music theory. If that's not your path then consider it knowledge for knowledge's sake. Not a bad thing.

Using Intervals to Build Chords: Triads



Start with two basic rules: Chords are built in thirds; and chords must contain at least 3 different tones.

There are two types of thirds (that we deal with here), major 3rds (4 half-steps) and minor 3rds (3 half-steps). To the left are the possible combinations of thirds in simple 3-note chords, called *triads*.

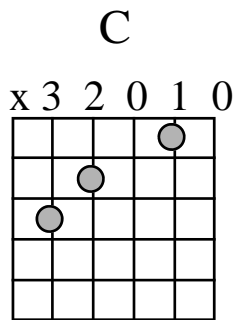
Using C as a starting point, the notes, and formulas for the chords are:

Major: C E G, Root 3 5

Minor: C E^b G, R b3 5

Diminished: C E^b G^b, R b3 b5

Augmented: C E G[#] R 3 #5



Let's actually look at the guitar (and the crowd cheers). If you're normal (not a given, knowing the types who seek out this kind of material), one of the first chords you learned was a C chord. This is not a triad. It is, however, built from a triad. We know from the chart above that the notes of a C major triad are C, E and G. In the simple, open C chord to the left, the notes, from 5th string to 1st, are C, E, G, C and E. We just double the C and E at the octave to give the chord more fullness. This is the same for most of the open chords we all learn when we start to play the guitar. A *Triad* is just the three notes, C, E and G in this case, with no doubles.

Below are three of the four possible triads that can be built from our basic open

The diagram shows three triad voicings for C major:

- Root position:** Notes C, E, G. Fretboard diagram shows dots on the 5th, 4th, and 3rd strings at the 3rd, 2nd, and 1st frets.
- 1st inversion:** Notes E, G, C. Fretboard diagram shows dots on the 4th, 3rd, and 2nd strings at the 2nd, 1st, and 3rd frets.
- 2nd inversion:** Notes G, C, E. Fretboard diagram shows dots on the 3rd, 2nd, and 1st strings at the 3rd, 2nd, and 1st frets.

Below the fretboard diagrams is a table of fingerings for the strings T, A, and B:

T		1	0
A	0	0	1
B	3	2	0

C chord. Notice that the notes are in their most compact form. These are called *closed voicings*, sometimes block voicings. If the root of the triad is in the bass (the lowest note), the triad is in *root position*; if the third is in the bass the triad is *1st inversion*; and if the fifth is in the bass the triad is in *2nd inversion*.

The image shows three musical staves in 4/4 time, each representing a different voicing of the C major triad. The first staff shows the root position (C-E-G). The second staff shows the 1st inversion (E-G-C). The third staff shows the 2nd inversion (G-C-E). Below each staff is a guitar fretboard diagram with dots indicating finger positions and 'x' marks for muted strings. At the bottom, a tablature section shows the string numbers for each voicing: Root (T:0, A:0, B:3), 1st Inversion (T:3, A:1, B:2), and 2nd Inversion (T:1, A:2, B:3).

If we take the middle note of each of the previous triads and raise it an octave, spreading the notes over a larger range, we get an *open voicing*. At left are the root position, 1st and 2nd inversion, open voicing triads that are most closely related in structure to the C chord.

Triads: What Good Are They?

Why should you invest your precious time in learning triads? Three practical and one intellectual reason: 1) there are some truly classic R&B rhythm guitar figures that are based on triads (as well as country and rock tunes); 2) complex chords can be broken into component triads and those triads can be used to create interesting rhythm guitar parts; 3) even though the purpose of this book is to learn chords, some very cool lead guitar ideas come from triads; and 4) learning and practicing triads will increase your understanding of how music theory works on the guitar fretboard.

Examples of triad use

The image shows a musical staff in 3/4 time with a key signature of one sharp (F#). The melody consists of arpeggiated triads over a constant pedal point D note. Four guitar fretboard diagrams are shown below the staff, corresponding to the four measures. The first diagram is for the I triad (D-F#-A), the second for the IV triad (F#-A-C), and the third and fourth for the V triad (A-C-D). A tablature section at the bottom shows the string numbers for each measure: Measure 1 (T:0, A:2, B:3), Measure 2 (T:0, A:4, B:3), Measure 3 (T:0, A:6, B:5), and Measure 4 (T:0, A:4, B:3).

This example simply takes the I, IV and V triads of the key and arpeggiates them over the pedal D.

The image shows a musical staff in 4/4 time with a key signature of two sharps (F# and C#). The piece is titled "SHUFFLE FEEL". The melody features a blues figure starting with a root A note, followed by a slide from an F# minor triad down to an E minor triad. Three guitar fretboard diagrams are shown below the staff, illustrating the triads and the slide. A tablature section at the bottom shows the string numbers for each measure: Measure 1 (T:7, A:6, B:7), Measure 2 (T:7, A:6, B:7), Measure 3 (T:7, A:5, B:5), and Measure 4 (T:7, A:5, B:5).

This is a common blues figure. After playing the root A note, the player slides an F# minor triad down a whole step to an E minor triad. The resulting harmonies are A6 sliding into an A9.

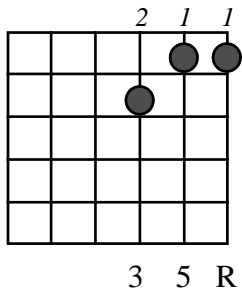
Learning Triads

We'll do three different triad exercises. The first will explore the possible closed voicing shapes. The second will take those shapes and move them through a harmonized scale. Finally, we'll move open position triads through a harmonized scale.

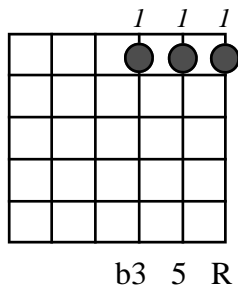
Part 1, Triad Shapes

Major	Minor	Diminished	Augmented
<p>1 3 2</p> <p>5 R 3</p>	<p>2 3 1</p> <p>5 R b3</p>	<p>1 3 1</p> <p>b5 R b3</p>	<p>2 3 1</p> <p>#5 R 3</p>
<p>3 1 2</p> <p>3 5 R</p>	<p>2 1 3</p> <p>b3 5 R</p>	<p>3 1 4</p> <p>b3 b5 R</p>	<p>2 1 1</p> <p>3 #5 R</p> <p>3 fr</p>
<p>4 3 1</p> <p>R 3 5</p>	<p>4 2 1</p> <p>R b3 b5</p>	<p>4 2 1</p> <p>R b3 b5</p>	<p>3 2 1</p> <p>R 3 #5</p> <p>3 fr</p>
<p>2 3 1</p> <p>5 R 3</p>	<p>3 4 1</p> <p>5 R b3</p>	<p>2 3 1</p> <p>b5 R b3</p>	<p>3 2 1</p> <p>#5 R 3</p> <p>4 fr</p>

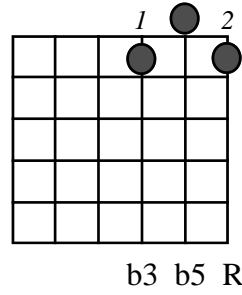
Major



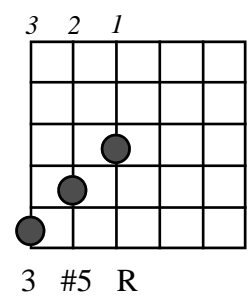
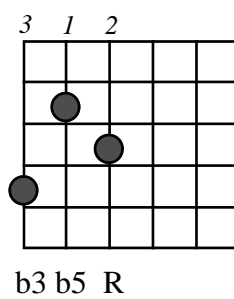
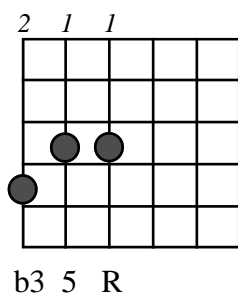
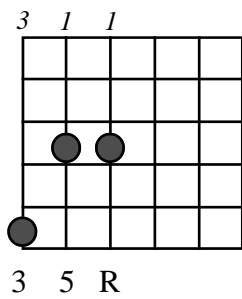
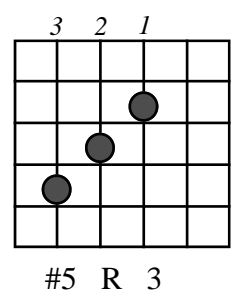
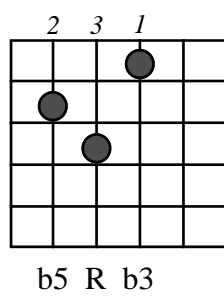
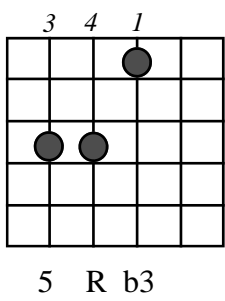
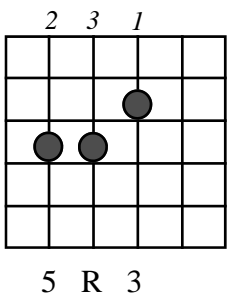
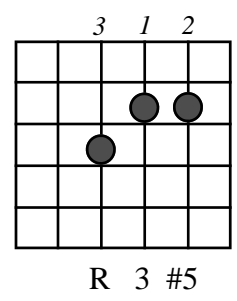
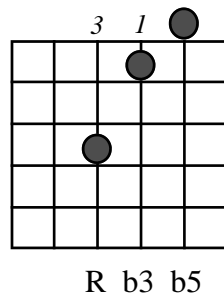
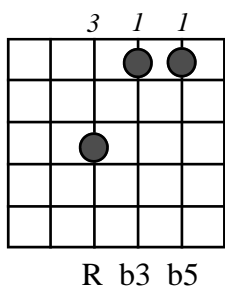
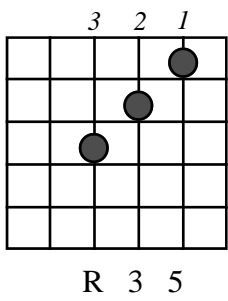
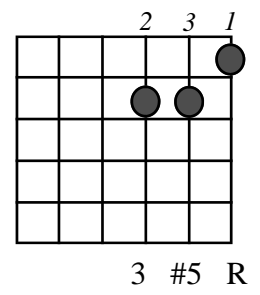
Minor



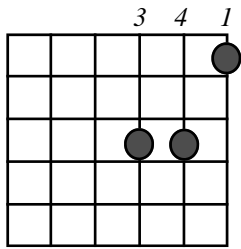
Diminished



Augmented

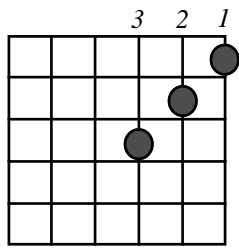


Major



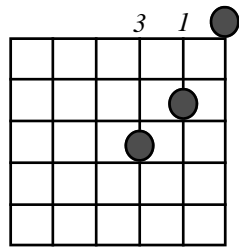
R 3 5

Minor



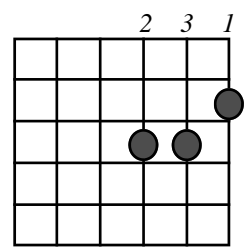
R b3 5

Diminished

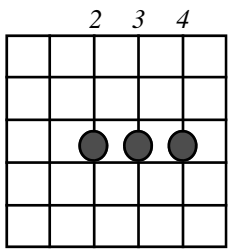


R b3 b5

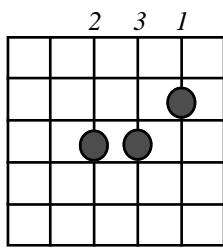
Augmented



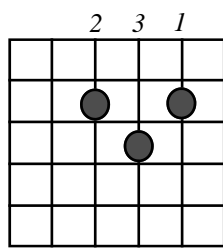
R 3 #5



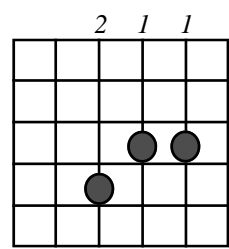
5 R 3



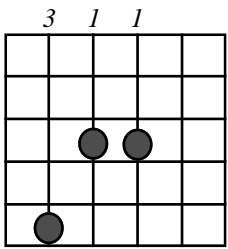
5 R b3



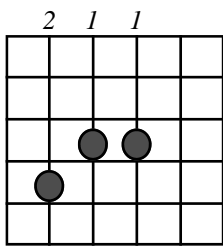
b5 R b3



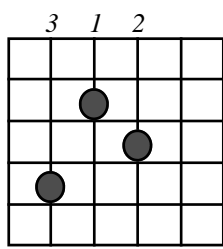
#5 R 3



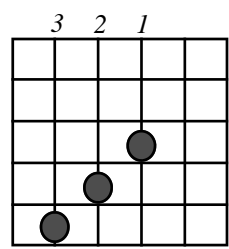
3 5 R



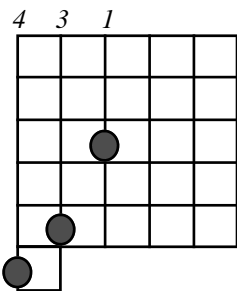
b3 5 R



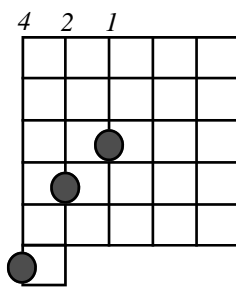
b3 b5 R



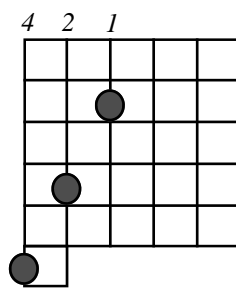
3 #5 R



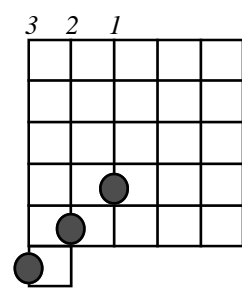
R 3 5



R b3 5



R b3 b5



R 3 #5

Part 2, Closed Voicing Triads Through a Major Scale

Second inversion

T	2	3	5	7	9	10	12	14
A	2	4	6	7	10	12	14	15
B			6	7	9	11	12	14

Root position

T	1	3	5	6	8	10	11	13
A	2	3	5	7	9	10	12	14
B	3	5	7	8	10	12	14	15

First inversion

T	0	2	4	5	7	9	11	12
A	0	2	4	5	7	9	10	12
B	2	3	5	7	9	10	12	14

Root position

T	0	2	4	5	7	9	10	12
A	2	3	5	7	9	10	12	14
B	3	5	7	8	10	12	14	15

I've given you one selection from each group of strings as an example. The wise student will work through all 12 keys, using each of the three triad shapes. The unwise student will skim over the material and think, "I've got this - no big deal". He will later flunk out of the second semester of music theory, ruining his GPA and any hopes of a college degree and end up as an assistant manager in a What-a-burger in North Dakota.

Part 3, Open Voicing Triads Through a Major Scale

For these examples I've fingered the triads more in the manner of a classical guitarist. The arpeggiation should be easily played with either the fingers or a pick.

Root position

The first system of notation shows the first four notes of the G major scale in root position. The guitar chord diagrams are: G (x00033), A (x02220), B (x2444), and C (x0003). The TAB below shows the strings T, A, B with fret numbers: 0 0 0 | 1 1 | 3 3 | 0 0.

The second system shows the next four notes: D (x0222), E (x2444), F# (4fr, x2444), and G (5fr, x2444). The TAB shows fret numbers: 2 2 2 | 0 3 0 3 0 | 4 5 5 5 | 5 7 7.

Second Inversion

The first system of notation shows the first four notes of the G major scale in second inversion. The guitar chord diagrams are: G (x0222), A (x2444), B (x0003), and C (x2444). The TAB shows fret numbers: 1 1 | 3 3 | 0 0 | 1 1.

The second system shows the next four notes: D (3fr, x0222), E (5fr, x2444), F# (7fr, x2444), and G (8fr, x0003). The TAB shows fret numbers: 3 3 | 5 5 | 7 7 | 8 8 8.

First Inversion

Beyond Triads: Theory and Naming Conventions For Extended Chords

You know what I'm talkin' 'bout; all that G13b9 and D7#9 kind of stuff. All of the ridiculously named, complex sounding chords start with a simple triad. Remember the basics: chords are built in thirds; there are two kinds of thirds, major and minor. As we stack another third on top of the triad (extending the chord to the seventh), we build new chords. Start with a major triad: If I add a major third on top of the G, the highest note in the C major triad, the notes of the chord are C, E G and

C Major 7 C7

B, a C major 7 chord (Root, 3, 5 and 7). If I add a minor third, that added note is a Bb, creating a Dominant 7 chord (Root, 3, 5 and b7). "What's this dominant thing," I hear you asking. "I don't

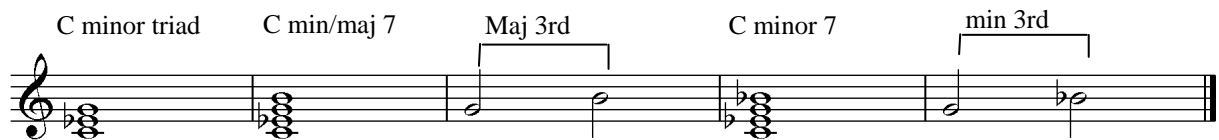
swing that way." No, no, no...not that kind of dominant. You went through the triad exercises, right? You played the chords built from the successive notes of a major scale, subsequently abbreviated, I, ii, iii, IV, V, vi, and vii°. In classic theory each of these chordal positions has a name: John, Paul, George...once again, forgive me. In order, the names are: I - Tonic; ii - Supertonic (let your imagination run wild); iii - Mediant; IV - Subdominant; **V - Dominant**; vi - Submediant; and vii° - Leading tone. Major triads are on the first (Tonic), fourth (Subdominant) and fifth (Dominant). Look at the key of C; on the Tonic, go a third above the 5 (G) and you get a B, an interval of a Major third. As we have already established, that is a C Major 7 chord. Look at the Subdominant, F. Again, go a third above its 5 (C) and you get an E, another major third, resulting in an F Major 7. On the fifth chord, a G, the Dominant, again go a third above its 5 (D) and you get an F, a minor third. Since this arrangement of thirds only occurs on the V chord, we use its classic title to describe the resulting chord - a dominant 7. **The thing to really remember is that dominant chords are built from a major triad with a b7. Natural 3 and flat 7 = dominant.**



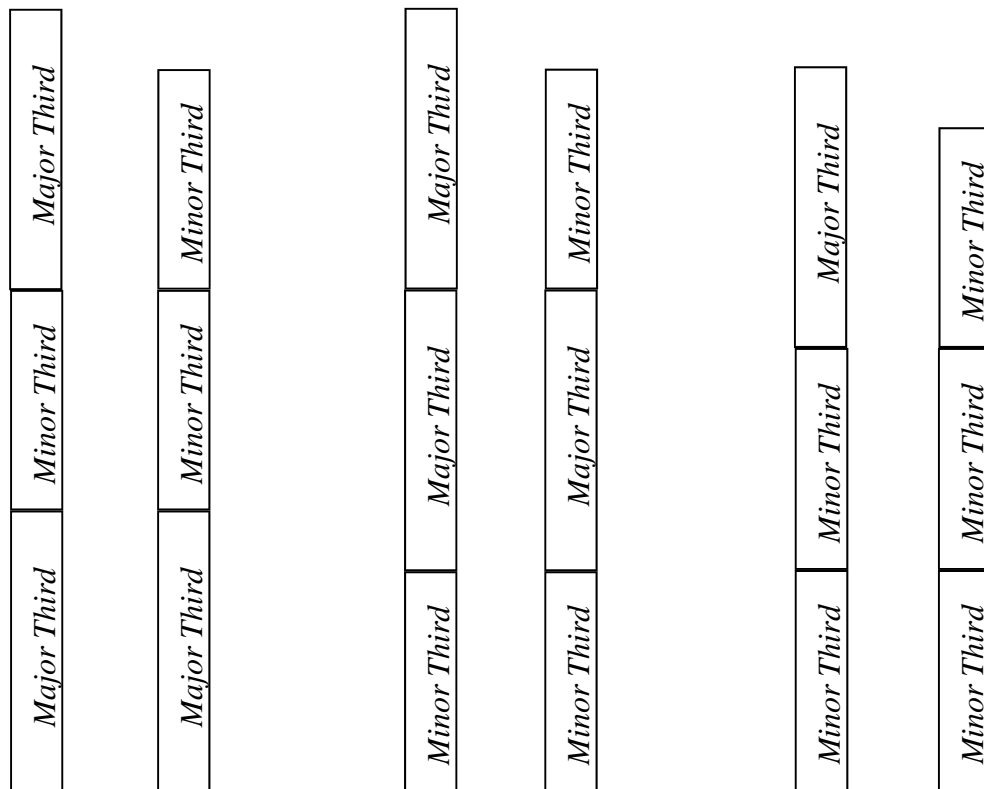
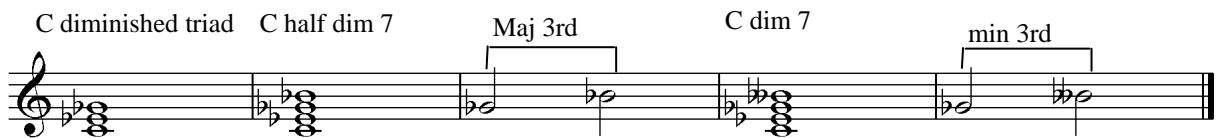
The tonic, I, C major 7 The Subdominant, IV, F major 7 The Dominant, V, G7

Now that you have a complete understanding of why the real name for a G7 is G dominant 7, you need to know that in real life no one says “dominant”. They just say “seven”. I don’t know why, but I can surmise (a fancy word for guess). You can see the need to differentiate between the two kinds of 7th chords built from a major triad. Their sound quality is as different as major and minor. Well, the word ‘major’ has two syllables, ‘dominant’ has three. Musicians being the taciturn, grouchy creatures they are (from too many years locked up in small rooms practicing scales), they decided to have the term ‘dominant’ be understood if a chord is named with just a number 7, 9, 11, or 13. When a chord is a ‘major’ 7, that will be spelled out in the name, with either the word ‘major’ or an abbreviation, ‘maj’, or some symbol that means ‘major’.

The same logic we used with a major triad applies to the minor and diminished triads as well. A minor triad with an added major 3rd becomes a minor/major 7, sometimes called a minor natural 7. A minor triad with an added minor 3rd becomes a minor 7.



A diminished triad with an added major 3rd becomes a *half-diminished* 7, also called a *minor seven flat* 5 (m7b5); add a minor third and you get a *diminished* 7.



Major 7 Dominant 7 Minor-natural 7 minor 7 half-diminished diminished

You might be beginning to get a little terrified of the growing complexity of all this as we keep adding more notes to the chords. Well, fear not. Now that you understand how the process works, I'll show you the shortcut that keeps musicians from losing their tentative grip on sanity. We reduce all this stuff to formulae (formulas, for those of you fortunate enough to have been educated after the collapse of proper English instruction). Everything is referenced to the **major** scale of the **root** note of the chord. Let's summarize what we've looked at so far:

- Major - 1, 3, 5
- Minor - 1, b3, 5
- Diminished - 1, b3, b5
- Augmented - 1, 3, #5
- Major 7 - 1, 3, 5, 7
- Dominant 7 - 1, 3, 5, b7
- Minor natural 7 - 1, b3, 5, 7
- Minor 7 - 1, b3, 5, b7
- Half diminished (minor 7 b5) - 1, b3, b5, b7
- Diminished 7 - 1, b3, b5, bb7

It seems daunting at first but it's easier than keeping track of all those thirds.

As we keep adding notes, we just build on the chords we've already established: a C9 is just a C7 with an added 9th; a C major 9 is a C major 7 with the 9th. There are some oddities we need to deal with. In theory, an 11th chord is a 9th with the 11th added. If all those notes are present in the chord it tends to be a bit dissonant so the 3rd is almost always omitted and often the 5th is left out as well. When we extend to the 13th, the 11th is usually omitted.

You wouldn't know it by what we've talked about so far but sometimes you'll see some even numbers as well. Major six chords are the major triad with the added 6th. (Students of theory will try to argue that the major 6 chord is really a minor 7th chord in first inversion. I usually listen to them politely and then tell them, yes, I would like fries with that.) Likewise a minor 6 is a minor triad with the added 6th. Suspensions

are notes placed in a chord that are meant to move, to "resolve". A suspended 4 chord replaces the third with the 4th, the 4th eventually moves down to the 3rd, *resolving* to a major chord.

You will see various uses of the number "2" in chord names; I've seen 'add 2', 'sus 2', or simply '2'. The 2 and sus 2 generally mean a major triad with the 2nd instead of the third: 1, 2, 5. An add 2 generally means a 2nd added to a major triad. This chord is more commonly called a Major add 9 (the 9th is the same note as the 2nd, an octave higher).

The other mildly anomalous chord name you will often encounter is the '5' chord. This is merely the designation currently used for power chords. A 5 chord is simply the root and the 5th with the root often doubled at the octave.

One final thing, before I present you with a chart summarizing all this very important info. There is no universally recognized standard for how chord names are to be abbreviated. I know that seems odd, but it's just a fact. There may be several symbols and abbreviations that are commonly used for a single chord. Consider the major 7 chord; it might be M7,

The image shows musical notation and guitar fretboard diagrams for four chords: Dsus4, D, Dsus2 or D2, and Dadd9 or Dadd2. Each chord is shown in a 4/4 time signature with a key signature of one sharp (F#). The notation includes a treble clef staff with the chord notes, a guitar fretboard diagram with fret numbers (0, 2, 3) and string indicators (T, A, B), and a bass clef staff showing the fret numbers for the strings.

- Dsus4**: Treble clef notes: D4, A4, B4. Fretboard: strings 2, 3, 4, 5, 6 are fretted at 2, 3, 3, 2, 0 respectively. Bass clef notes: D3, A3, B3.
- D**: Treble clef notes: D4, F#4, A4. Fretboard: strings 2, 3, 4, 5, 6 are fretted at 2, 3, 2, 2, 0 respectively. Bass clef notes: D3, A3, B3.
- Dsus2 or D2**: Treble clef notes: D4, A4, B4. Fretboard: strings 2, 3, 4, 5, 6 are fretted at 0, 2, 2, 2, 0 respectively. Bass clef notes: D3, A3, B3.
- Dadd9 or Dadd2**: Treble clef notes: D4, F#4, A4, D5. Fretboard: strings 2, 3, 4, 5, 6 are fretted at 2, 3, 2, 2, 0 respectively. Bass clef notes: D3, A3, B3.

maj7, major7, or Δ7. Trust me, you'll get used to it.

Chord	Formula	Symbol
Major	R 3 5	[none], M, maj
Minor	R b3 5	min, m, -
Diminished	R b3 b5	dim, o
Augmented	R 3 #5	Aug, +
Major 6	R 3 5 6	6, Maj 6
Minor 6	R b3 5 6	m6, min 6, -6
Suspended 4	R 4 5	sus 4
Suspended 2	R 2 5	sus 2, 2
Major 7	R 3 5 7	M7, Maj7, Δ7
Dominant 7	R 3 5 b7	7
Minor 7	R b3 5 b7	m7, min7, -7
Minor 7 flat 5 / Half diminished	R b3 b5 b7	m7b5, ø
Diminished 7	R b3 b5 bb7	dim 7, o7
Minor major 7 / Minor natural 7	R b3 5 7	min maj 7, m ^b 7, - ^b 7
Major 6 9	R 3 5 6 9	69, Maj6 add 9, 6 add 9
Major add 9	R 3 5 9	Add9, Maj add9
Dominant 9	R 3 5 b7 9	9
Minor 9	R b3 5 b7 9	m9, min9, -9
Dominant 11	R 3 5 b7 9 11 (usually omit 3)	11
Minor 11	R b3 5 b7 9 11	m11, min 11, -11
Dominant 13	R 3 5 b7 9 11 13 (usually omit 11)	13

In addition to the above you have to get used to alterations. If you've gotten this far the alterations are pretty easy. A Δ9#11 simply takes a major 9 chord and adds the sharpened 11. A 7b9#5 takes a dominant 7 chord and sharps the 5th and adds a flatted 9th. Pretty straightforward. Be aware that usually a '+' indicates the raised fifth, as in C+7, literally read as C augmented 7. That's a C7 chord with the 5th sharpened. The same chord can be written as C7#5. However, a C7+9, an abbreviation that is, thankfully, falling out of favor, means a C7 with a sharpened 9, better written as C7#9. Now let's get on to actually playing some chords.



Section 1:
Functional
Literacy

Functional Literacy

Not everyone wants or needs the chord knowledge of the late Ted Green. The vast majority of people who play guitar just want to be able to strum along with their favorite tunes and maybe throw in a lick or two. It would be great if maybe they could raise or lower the song's key to better fit their voice.

If that describes your aims on the guitar, this is the section for you.

Review, Basic Open Position Chords

C x 3 2 0 1 0 	C7 x 3 2 4 1 0 	CΔ7 x 3 2 0 0 0 	Cadd9 x 3 2 0 4 0 	D x x 0 1 3 2 	Dm x x 0 2 3 1
D7 x x 0 2 1 3 	D2 x x 0 1 3 0 	Dm7 x x 0 2 1 1 	DΔ7 x x 0 1 1 1 	E 0 2 3 1 0 0 	Em 0 2 3 0 0 0
E7 0 2 0 1 0 0 	Em7 0 2 0 0 0 0 	F/C x 3 4 2 1 1 	FΔ7/C x 3 4 2 1 0 	G 3 2 0 0 0 4 2 1 0 0 0 3	G7 3 2 0 0 0 1
GΔ7 3 x 0 0 0 1 	A x 0 2 3 4 0 x 0 1 2 3 0	Am x 0 2 3 1 0 	A7 x 0 2 0 3 0 	Am7 x 0 2 0 1 0 	AΔ7 x 0 2 1 3 0
A2 x 0 2 3 0 0 	B7 x 2 1 3 0 4 	Bm/D x x 0 3 2 1 	<p>When a note other than the root is the lowest note played, or bass note, it's indicated by placing a slash (/) after the name of the chord, followed by the bass note. This example would be read as "B minor with a D bass".</p>		

You should know most of the chords on the preceding page. Those you don't know are most likely only a note or two away from a chord you do know. If you know less than half of them, seriously consider doing some more beginning study before going too much further in this book.

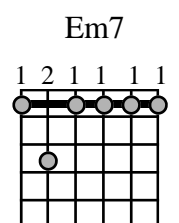
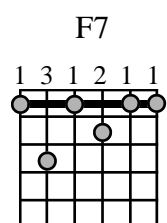
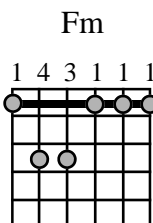
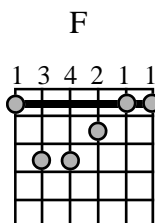
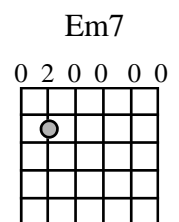
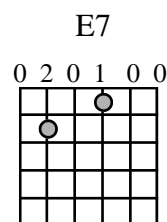
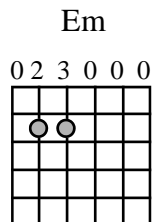
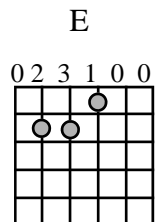
Let's start by organizing these chords in key groups. Remember on page 10 I talked about the placement of major, minor and dominant chords within a scale. (We're going to exclude the seventh chord of the scale and save it for a later section.) There are two keys where we can get all of the chords and several others where we can get most of them:

Key	I	ii	iii	IV	V	vi
C	C, CΔ7	Dm, Dm7	Em, Em7	F, FΔ7	G, G7	Am, Am7
D	D, DΔ7	Em, Em7	F#m	G, GΔ7	A, A7	Bm/D
E	E	F#m	G#m	A, AΔ7	B7	C#m
G	G, GΔ7	Am, Am7	Bm/D	C, CΔ7	D, D7	Em, Em7
A	A, AΔ7	Bm/D	C#m	D, DΔ7	E, E7	F#m
Em	Em			Am	B7	
Am	Am			Dm	E7	

The highlighted cells indicate chords that aren't on the preceding page but that we will add shortly. The chord sequence for minor scales is different from major so I omitted all but the primary chords for those keys. To start, just play up the scale, I through vi, in C and then G. Think of Dylan's "How Does it Feel"; that's the progression for the verse. Next just play through the I, IV and V in the various keys. Experiment with the major 7 chords, listen to the different sounds. Play I, vi, IV, V in C, D, and G.

Notice in all of the chords so far, no sharps or flats. The next step in developing your chord knowledge is to add some "bar" chords so you can play an F# minor, for example. And yes, they are called bar chords because they were first developed by tiny German troubadours (called mini-singers) as they moved from inn to inn, or staggered from bar to bar, as it were. No, really they were invented by rogue barristers... Not buying it? Okay, whenever we use one finger to cover more than one string, that's called a "bar". The traditional way to approach bar chords has been to base them on the 'E' and 'A' chords, so you have one group of chords that starts on the 6th string and another that starts on the 5th.

6th String Root Bar Chords



<p>A</p> <p>x 0 2 3 4 0</p>	<p>Am</p> <p>x 0 2 3 1 0</p>	<p>A7</p> <p>x 0 2 0 3 0</p>	<p>Am7</p> <p>x 0 2 0 1 0</p>
<p>Bb</p> <p>x 1 3 3 3 1</p>	<p>Bbm</p> <p>x 1 3 4 2 1</p>	<p>Bb7</p> <p>x 1 3 1 4 1</p>	<p>Bbm7</p> <p>x 1 3 1 2 1</p>

Note may be omitted, especially if using the 3rd finger bar.

The lovely thing about bar chords is, containing no open strings, they can be moved anywhere on the neck without affecting their color (major, minor, etc.) The eight chords presented here are in root position; the lowest note of the chord is the root, or the note that names the chord. So, take the Bbm chord and slide it up the neck until your first finger is on the fifth fret. What chord do you have? Well, the fifth fret of the fifth string is a 'D' note, and the color doesn't change so you have a D minor chord. The chart below may be useful in figuring out the names of the bar chords as you move around the neck.

5th String	A	A#/Bb	B	C	C#/Db	D	D#/Eb	E	F	F#/Gb	G	G#/Ab	A
Fret	Open	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
6th String	E	F	F#/Gb	G	G#/Ab	A	A#/Bb	B	C	C#/Db	D	D#/Eb	E

Let's start by finding the three chords we need to play the chords in the keys of D, E and A, on the preceding page: F#m, G#m and C#m.

<p>F#m</p> <p>1 4 3 1 1 1</p> <p>2nd fret</p>	<p>G#m</p> <p>1 4 3 1 1 1</p> <p>4th fret</p>	<p>C#m</p> <p>x 1 3 4 2 1</p> <p>4th fret</p>
--	--	--

First go back and just play the bar chords with the open chords you already know. Practice moving up and down your now-completed chord/key chart. Then try playing I vi ii V and I vi IV V through all the keys. As you start to get comfortable, move to the exercises below.

Semi Jazzy Blues in B flat

Chord diagrams for Bb7, Eb7, Bb7, Fm7, Bb7, Eb7. The first staff shows a 4-measure exercise in Bb major (Bb7, Eb7, Bb7, Fm7).

Chord diagrams for G7, Cm7, F7, Bb7, G7, Cm7, F7. The second staff shows a 4-measure exercise in Bb major (G7, Cm7, F7, Bb7).

Semi Jazzy Blues in E flat

Chord diagrams for Eb7, Ab7, Eb7, Bbm7, Eb7, Ab7. The first staff shows a 4-measure exercise in Eb major (Eb7, Ab7, Eb7, Bbm7).

Chord diagrams for Eb7, C7, Fm7, Bb7, Eb7, C7, Fm7, Bb7. The second staff shows a 4-measure exercise in Eb major (Eb7, C7, Fm7, Bb7).

Semi Jazzy Blues in E

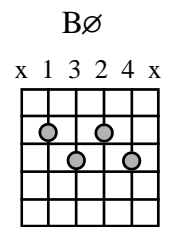
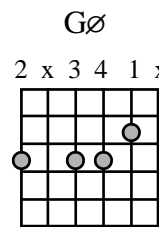
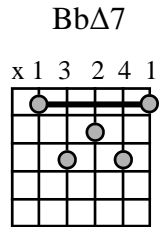
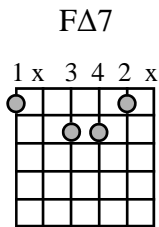
Chord diagrams for E7, A7, E7, Bm7, E7, A7. The first staff shows a 4-measure exercise in E major (E7, A7, E7, Bm7).

Chord diagrams for E7, C#7, F#m7, B7, E7, C#7, F#m7, B7. The second staff shows a 4-measure exercise in E major (E7, C#7, F#m7, B7).

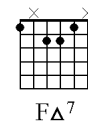
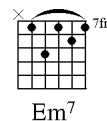
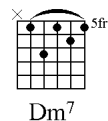
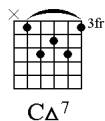
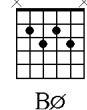
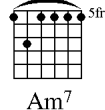
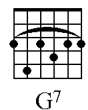
Let's add two new types of chords, the major seven and the half-diminished (minor seven flat five). Again, we'll learn two fingerings for each, one from the sixth string and one from the fifth. Notice on the two 6th string chords you have to mute the 5th string. To do this, simply let the finger on the 6th string lean and lightly touch the 5th string. Be careful to not use too much pressure and actually fret the string.

Major 7

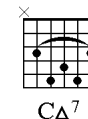
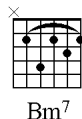
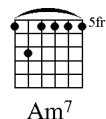
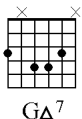
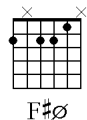
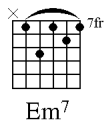
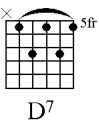
Half-Diminished (m7b5)



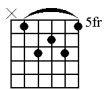
In a harmonized scale, major seven chords occur on the 1st (Tonic) and 4th (Sub-dominant) notes. The half-diminished chord occurs on the 7th (Leading tone). In the next set of exercises you'll start by just playing up a harmonized scale. Then you'll play a progression called the diatonic cycle of 4ths. The formula for those exercises is IV vii iii vi ii V I.

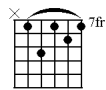
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5



DΔ⁷



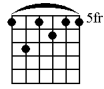
Em⁷



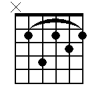
F#m⁷



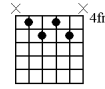
GΔ⁷



A⁷

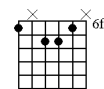


Bm⁷

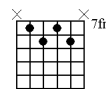


C#ø

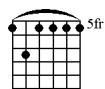
DΔ⁷



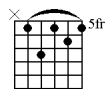
BbΔ⁷



Eø



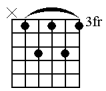
Am⁷



Dm⁷



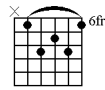
Gm⁷



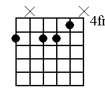
C⁷



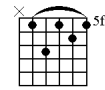
FΔ⁷



EbΔ⁷



Aø



Dm⁷



Gm⁷



Cm⁷



F⁷



BbΔ⁷



Ab Δ ⁷ D \emptyset Gm⁷ Cm⁷

5 Fm⁷ Bb⁷ Eb Δ ⁷

If you've ever watched an experienced (read 'old') jazz guitarist, you've probably noticed that they don't use a lot of full bar chords. There are two reasons for this: in most bar chords, at least the root note is doubled, sometimes the fifth as well. This creates a chord sound that is more idiomatic to rock, country or folk music. Jazz guitarists tend to strip those unnecessary notes from the chords resulting in a 'leaner' sound. The second reason is physical - bar chords put more strain on the hand. The old big band guitarists played acoustic arch-top guitars with heavy strings. Replacing bar chords with four-note, four-finger chords made getting through a three-hour gig a bit easier.

Seventh Chord Minor Seventh Chord Major Seventh Chord

1 3 1 2 1 1 1 x 2 4 3 x 1 3 1 1 1 1 2 x 3 3 3 x x 1 3 2 4 1 x 1 3 2 4 x

Minor Seventh Chord

x 1 3 1 2 1 x 1 x 2 4 3

Semi Jazzy Blues in B flat

Bb⁷ Eb⁷ Bb⁷ Fm⁷ Bb⁷ Eb⁷

7 Bb Δ ⁷ Cm⁷ Dm⁷ D \flat m⁷ Cm⁷ F⁷ Bb⁷ G⁷ Cm⁷ F⁷

We'll add three more chord shapes and that will finish the section on functional literacy. The diminished seven chord has one characteristic that takes a little while to grasp. Any note in the chord can be its root. Here's how it works: remember the structure of a diminished triad - min 3rd, min 3rd. The diminished 7 chord adds yet another min 3rd to the stack. Notice that when we go up another min 3rd from the seventh (the B double flat) we arrive at our starting point, an octave higher. So it doesn't matter where you start, the C, the E flat, the G flat or the B double flat, if you follow the pattern of minor 3rds, you get the same group of notes. So C dim7, Eb dim7, Gb dim 7 and A dim 7 are all the same chord. Here are the three most common fingerings for a dim 7. In the exercises that follow I treat them as if they are in root position (though as I've explained any note can be the root). This is the simplest way to start incorporating them into your playing.

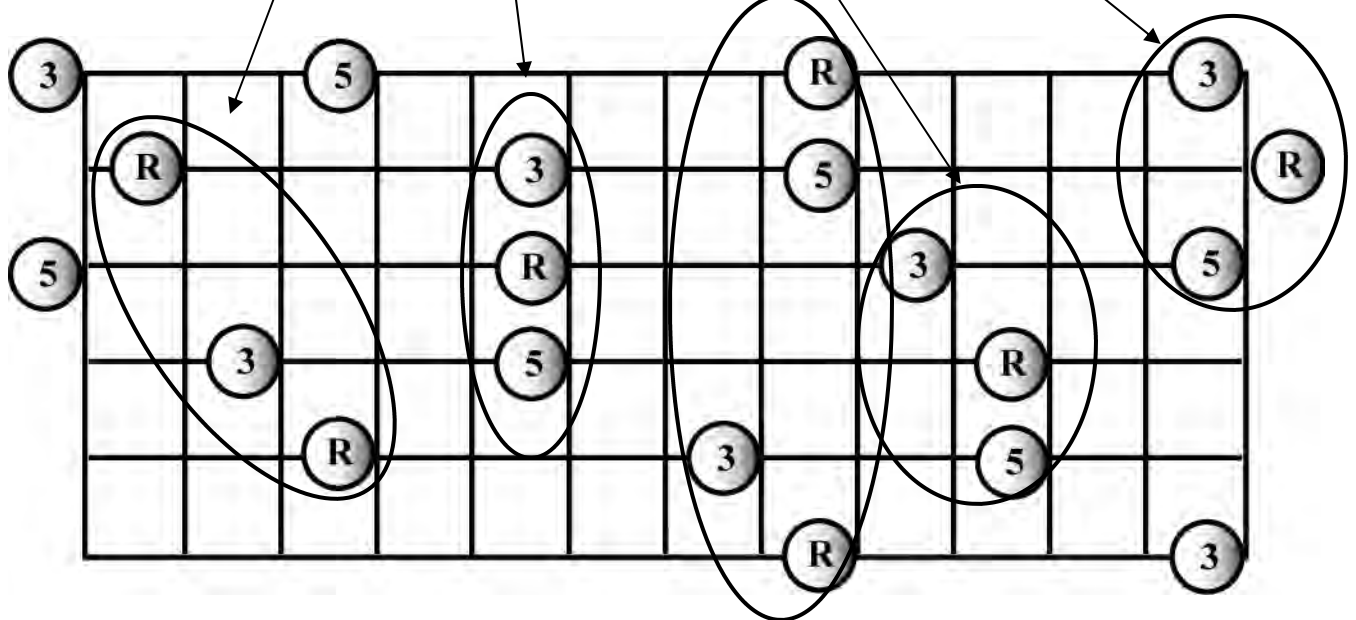
(the B double flat) we arrive at our starting point, an octave higher. So it doesn't matter where you start, the C, the E flat, the G flat or the B double flat,

Diminished Seventh Chords

Jazzier Blues in B flat

Swing #1

Section 2: The CAGED System



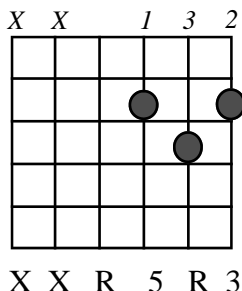
Expanding Your Horizons: The CAGED System

What is it with guitar types. First it's the "dominant" thing - now we're talking about cages. Well, not cages, 'CAGED', as in a C chord, an A chord, etc. We've already built some chords from A and E - two parts of the "caged" approach. In this section we'll provide a method for constructing extended chords and apply it to each of the C, A, G, E, and D chords.

The "Drop Root" System

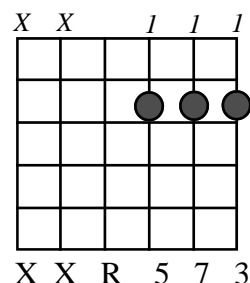
I first encountered this idea in the old Mickey Baker Jazz Guitar Method. Here's how it works. Most standard voicings for major chords include at least 2 root notes. If we take the highest of those and *drop* it (lower it) one half-step, that's the same as adding the seventh to the chord, producing a major seven chord. Drop it another half-step and you get a dominant seventh, and another will produce a major 6 chord.

Start with a D chord. Name each note as a degree of the D scale.



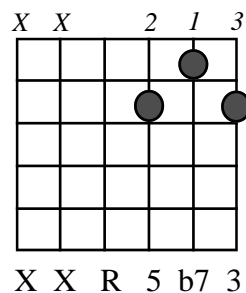
D Maj7

Remember that there is only a half step between the 7th and 8th notes of a major scale. So, if we lower the highest root note one fret, it's the same as adding a 7th to the chord. Root, 3rd, 5th and 7th combine to make a *major 7* chord.

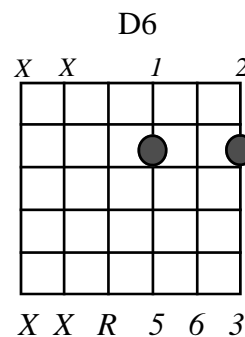


D7

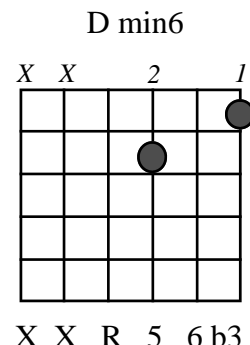
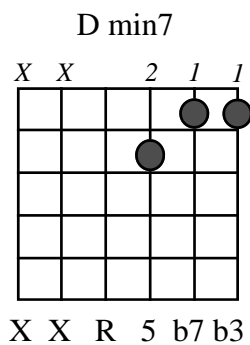
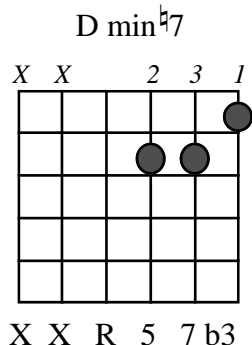
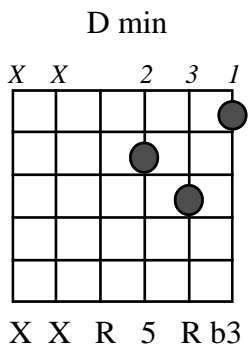
Lower the 7th another half step and the resulting chord is a *Dominant 7*, root, 3rd, 5th and b7.



Follow this logic and lower the b7 a half step and you've added the 6th to the chord. A **major 6** is composed of the root, 3rd, 5th and 6th.



In minor chords the 3rd is flatted (lowered a half step). If we lower the third in each of the chords on the previous page we get a **minor, min (maj7)**, sometimes called a **minor natural 7**, a **minor 7** and a **minor 6**.



The next step is to take this logic and apply it to the C A E and D chords. G presents some special circumstances and will be dealt with separately.

29 From the second row down, all chords are moveable. Name them by determining what the root note is (the 'R') and adding the color. So the first chord in the third row is a C#Maj7; move it up a fret and it's a DMaj7; and so on.

	<i>C shape</i>	<i>A shape</i>	<i>E shape</i>	<i>D shape (1st inversion)</i>
Open Major	X 3 2 0 1 0 R 3 5 R 3	X 0 2 3 4 0 R 5 R 3 5	0 2 3 1 0 0 R 5 R 3 5 R	2 X 0 3 4 X 3 R 5 R
Closed Major	X 4 3 1 2 1 R 3 5 R 3	1 3 3 3 R 5 R 3	1 3 4 2 1 1 R 5 R 3 5 R	2 X 1 3 4 X 3 R 5 R
Major 7	X 4 3 1 1 1 R 3 5 7 3	1 3 2 4 1 R 5 7 3 5	1 X 3 4 2 X R 7 3 5	2 X 1 3 4 X 3 R 5 7
Dominant 7	X 3 2 4 1 X R 3 b7 R	1 3 1 4 1 R 5 b7 3	1 X 2 4 3 X R 7 3 5	3 X 1 4 2 X 3 R 5 b7
Major 6	X 4 2 3 1 X R 3 6 R	X 2 3 1 4 X R 5 6 3	2 X 1 4 3 X R 6 3 5	3 X 1 4 1 X 3 R 5 6

	<i>C shape</i>	<i>A shape</i>	<i>E shape</i>	<i>D shape</i> <i>(1st inversion)</i>
Open minor	X 4 1 0 2 X R b3 5 R	X 0 2 3 1 0 R 5 R b3 5	0 2 3 0 0 0 R 5 R b3 5 R	1 X 0 3 4 X b3 R 5 R
Closed minor	X 4 2 1 3 X R b3 5 R	1 3 4 2 1 R 5 R b3 5	1 3 4 1 1 1 R 5 R b3 5 R	2 X 1 3 4 X b3 R 5 R
Minor maj 7	X 4 2 1 1 X R b3 5 7	1 4 2 3 R 5 7 b3	1 X 2 1 1 X R 7 b3 5	2 X 1 3 4 X b3 R 5 7
minor 7	X 3 1 4 1 X R b3 b7 R	1 3 1 2 1 R 5 b7 b3 5	2 X 3 3 3 X R 7 b3 5	2 X 1 4 3 X b3 R 5 b7
minor 6	X 3 1 2 1 X R b3 6 R	X 2 4 1 3 X R 5 6 b3	2 X 1 3 4 X R 6 b3 5	2 X 1 4 1 X b3 R 5 6

Notice that in the 'C' shape, between the major 7 and the dominant 7 the dropping note changes strings. This is done to avoid an awkward stretch (don't worry, awkward stretches await you in coming chapters). This eliminates the 5th from the dominant 7 and 6 chords but with the root doubled again, the chord stays full sounding.

We're going to start with some exercises that work common chord pairings - take these slow and get your fingers used to the movements. You will use these in many chord progressions.

Four guitar chord diagrams are shown in a row, each with an 'x' above the 6th string. The first diagram is labeled $G\Delta^7$ and the second is labeled G^6 . The third diagram is labeled $G\Delta^7$ and the fourth is labeled G^6 . Below the diagrams is a musical staff in G major (one sharp) with a treble clef. The staff contains two measures of music, each with a slash indicating a whole note chord.

Four guitar chord diagrams are shown in a row. The first diagram is labeled Am^7 with '5fr' above it. The second diagram is labeled Am^6 with '4fr' above it. The third diagram is labeled Am^7 with '5fr' above it. The fourth diagram is labeled Am^6 with '4fr' above it. Below the diagrams is a musical staff in A minor (no sharps or flats) with a treble clef. The staff contains two measures of music, each with a slash indicating a whole note chord.

Four guitar chord diagrams are shown in a row. The first diagram is labeled $C\Delta^7$. The second diagram is labeled C^6 . The third diagram is labeled $C\Delta^7$. The fourth diagram is labeled C^6 and has an 'o' above the 5th string. Below the diagrams is a musical staff in C major (no sharps or flats) with a treble clef. The staff contains two measures of music, each with a slash indicating a whole note chord.

Four guitar chord diagrams are shown in a row. The first diagram is labeled Dm^7 with '5fr' above it. The second diagram is labeled Dm^6 with '4fr' above it. The third diagram is labeled Dm^7 with '5fr' above it. The fourth diagram is labeled Dm^6 with '4fr' above it. Below the diagrams is a musical staff in D minor (two flats) with a treble clef. The staff contains two measures of music, each with a slash indicating a whole note chord.

Notice that the last two exercises offer alternative fingerings. In the first case, many students have difficulty with the first fingering for the C^6 - if that's you, just use the second fingering; the hand moves a bit more but many students still make the second change more smoothly. The last line offers two pairs for the same chord change.

The next group of exercises expand to four measures. Again, these are chord moves that will repeatedly show up in tunes.

Chord diagrams and staff for exercise 1:

- G⁶
- G⁷/B
- C⁶
- D⁷
- G⁶/B
- B^bo
- A^m7
- D⁷

Chord diagrams and staff for exercise 2:

- C⁶
- C⁷
- F^Δ7
- F[#]o
- C⁶/G
- A⁷
- D⁷
- G⁷

Chord diagrams and staff for exercise 3:

- D^m7
- G⁷
- C^Δ7
- C[#]o
- D^m7
- G⁷
- C^Δ7
- C⁶

Chord diagrams and staff for exercise 4:

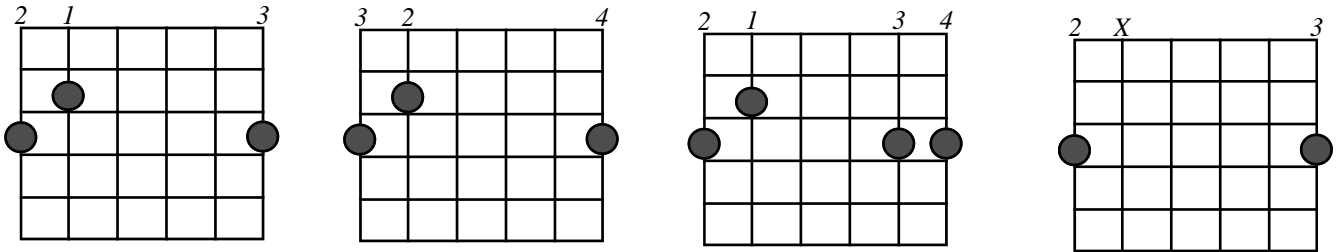
- A^m7
- D⁷
- G^Δ7
- G[#]o
- A^m7
- D⁷
- G^Δ7
- G⁶

Chord diagrams and staff for exercise 5:

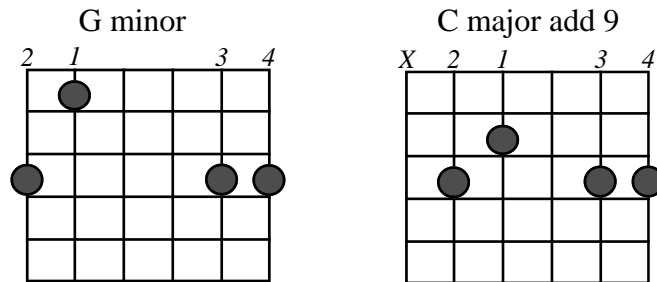
- G⁶
- G[#]o
- A^m7
- A[#]o
- G/B
- B^bm⁶
- A^m7
- D⁷

Chords from the 'G' shape

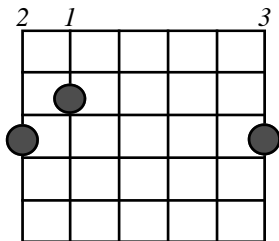
The open G chord presents problems to guitarists from the first. How do you finger it - with 1, 2 and 3 or 2, 3 and 4? Or do you try something different entirely? Here are some fingerings I've encountered for G in various methods.



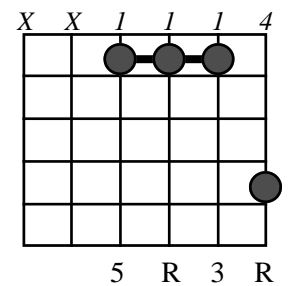
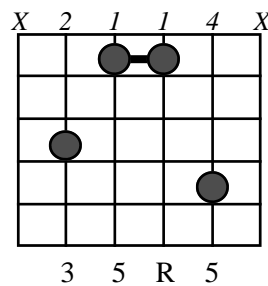
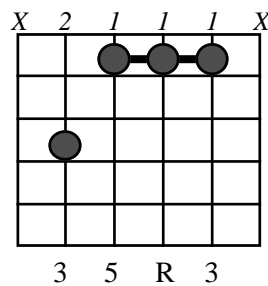
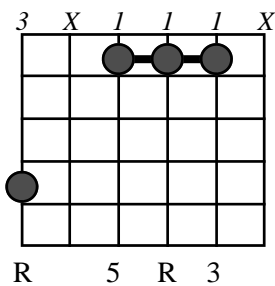
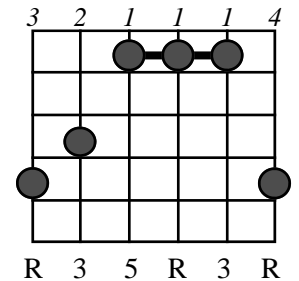
The third shape has the advantage of providing an open position Gm and a quick change to a Cadd9.



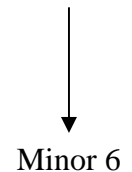
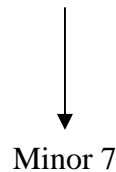
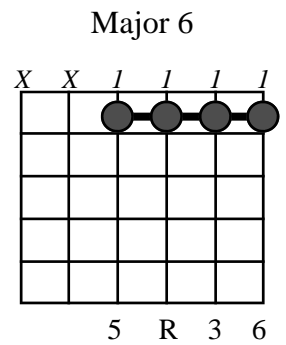
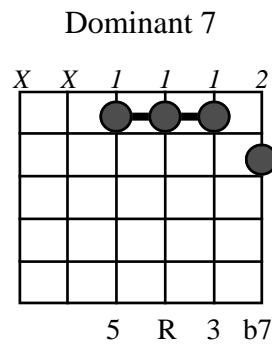
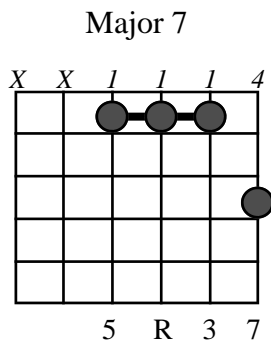
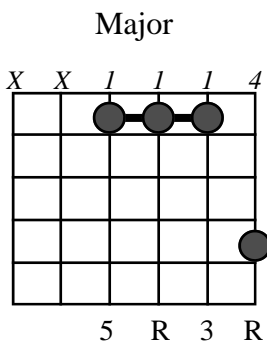
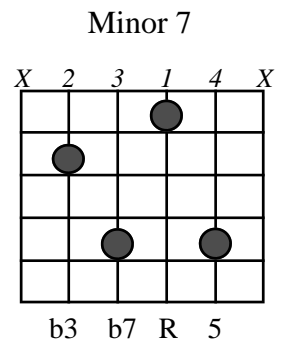
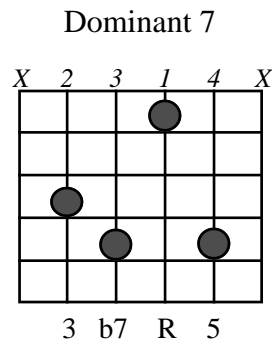
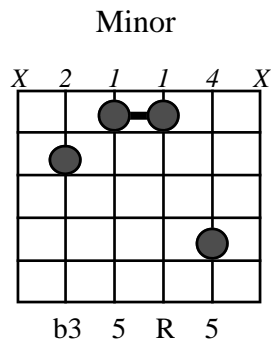
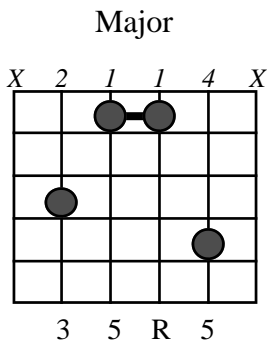
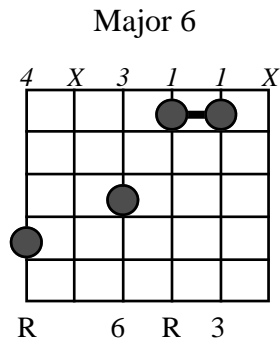
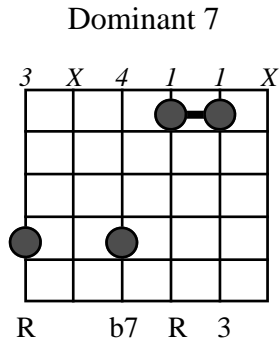
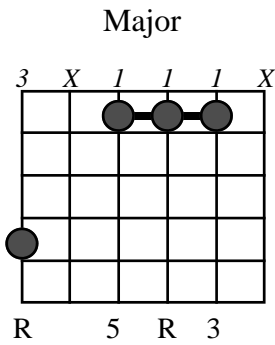
The difficulty in fitting the G chord into the logic we've constructed for the CAGED system arises from the multiple 'closed' fingerings that are built from the G shape.



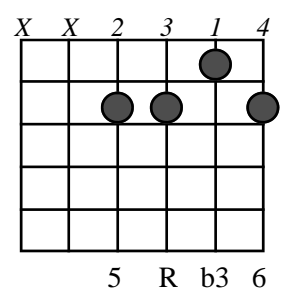
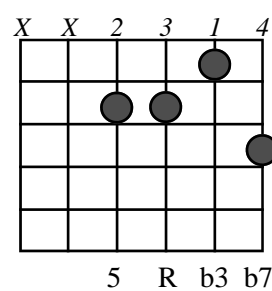
If we do the same thing to the G that we did to the C, A, E and D chords, we get the chord at left. I have occasionally encountered this fingering but it is not common. There are, however, four subsets from this fingering that are common and often used to build other chords.



Here are the 7ths, 6ths, etc., etc. built from our four variations of the G fingering.



These two chord shapes could just as easily be built from the 'A' shape. This same type of overlap occurs between the 'C' and the 'D' shapes.



Here are a few exercises that incorporate some of the 'G' shapes into some common chord progressions.

Semi Jazzy Blues in B flat (Revisited)

Extended Chords

As I discussed in the introduction, extended chords simply add one or two notes to chords you already know. C9, for example, is just a C7 chord with a ‘D’ note (the 9th note of a C scale) added to it.

<p>C7</p> <p>R 3 b7 R</p>	<p>C9</p> <p>R 3 b7 9 5</p>	<p>C7/E</p> <p>3 b7 R 5</p>	<p>C9/E</p> <p>3 b7 9 5 R</p>
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Before I start subjecting you to a deluge of chord forms, let’s discuss how these extended chords work. Generally, as a rhythm guitarist you have a certain latitude in the chords you choose to play. Chords are grouped in families, major, minor and dominant, and substitution within families is a common practice. So, revisit the earlier blues exercises and plug in the 9th chords (above) for the written 7th chords. As you’re exposed to new chord types, try using them in songs you play. Use 9ths, 11ths and 13ths for 7th chords; use minor 9ths and minor 11ths for minor or minor 7th chords; use major 9th and 69 (pronounced “six-nine”) chords for major 6th and major 7th chords. Sometimes an Am9 works great for an Am7, sometimes not. It’s literally up to you to decide. Keep in mind something else I mentioned in the introduction - it’s important to develop a chord style. As you experiment with different types of chords and different voicings for chords, some sounds will grab you and some won’t. As you incorporate the sounds that you like into your daily playing you are building your chord ‘voice’.

To start adding extended chords to your vocabulary I’m returning to the model used in the ‘Functional Literacy’ chapter: You’ll get two fingerings for each chord (to start) one from the 6th string and one from the 5th string. Let’s start with the two 9th chords we began with.

Standard Shuffle Blues in Bb

<p>Bb⁹</p>	<p>Eb⁹</p>	<p>Bb⁹</p>	<p>Eb⁹</p>
<p>7</p>	<p>F⁹</p>	<p>Eb⁹</p>	<p>Bb⁹</p>

Two things to notice: first, this is the first exercise in the book with a specific rhythm. It’s a very easy, and common, rhythm, strum on the one and the and of two. Second, notice on the Bb 9 the chord I have diagrammed is a Bb9/D. Inversions can almost always be used, even when they are not specifically called for.

Standard Shuffle Blues in Eb

Eb⁹ Ab⁹ Eb⁹ Ab⁹

7 Eb⁹ Bb⁹ Ab⁹ Eb⁹

More Extensions: Maj 9, min 9, min 11 and 13th

Major 9

1 X 2 3 1 4

R 7 3 5 9

Minor 9

X 2 1 3 4 X

R 3 7 9

Minor 9

2 X 3 3 3 4

R b7 b3 5 9

X 2 1 3 4 X

R b3 b7 9

Minor 11

2 X 3 4 1 X

R b7 b3 11

Minor 11

X 2 X 3 4 1

R b7 b3 11

13

1 X 2 3 4 X

R b7 3 13

X 2 1 3 3 4

R 3 b7 9 13

Sus4, 7sus4, and 11ths

We discussed suspensions in the first chapter of this book. A suspended 4 chord takes the 3rd of a major chord and raises it a half-step to the 4th. Generally this note 'resolves' by returning to the third. I give you a couple of sus 4 fingerings below. A 7sus4 applies the same logic to a dominant 7th chord. The 11th chord is often a very good substitute for the 7sus4. It resolves to a dominant 9th.

<p>Sus4 ——— Resolves to ———> Major</p>		<p>Sus4 ——— Resolves to ———> Major</p>	
R 5 R 4 5 R	R 5 R 3 5 R	R 5 R 4 5	R 5 R 3 5
<p>7Sus4 ——— Resolves to ———> 7</p>		<p>7Sus4 ——— Resolves to ———> 7</p>	
R 5 b7 4 5 R	R 5 b7 3 5 R	R 5 b7 4 5	R 5 b7 3 5
<p>11 ——— Resolves to ———> 9</p>		<p>11 ——— Resolves to ———> 9</p>	
R b7 9 11	R b7 9 3	R b7 9 11	R b7 9 3

Applying Chords to a I vi ii V Progression

The following chords illustrate a common trick to make chords flow from one to another gracefully, the use of a common tone in the upper voice. Play across each row, letting the chords ring for 2 or more beats.

I

C6

X 4 2 3 1 0

R 3 5 R 3

vi

Am7

2 X 3 4 X X

R 5 R 3 5

ii

Dm7

X 3 1 4 X X

R 5 R 3 5 R

V

G11

3 X 4 2 1 X

3 R 5 R

CΔ9

X 2 1 4 3 X

R 3 7 9

Am11

2 X 3 4 1 X

R b7 b3 11

Dm7

X 3 1 4 1 X

R b3 b7 R

G7

1 X 2 4 3 X

R b7 3 5

CΔ7

X 1 3 2 4 X

R 5 7 3

Am7

2 X 3 3 3 X

R b7 b3 5

Dm9

X 2 1 3 4 X

R b3 b7 9

G13

1 X 2 3 4 X

R b7 3 13

CΔ7

1 X 3 4 2 X

R 7 3 5

Am7

1 3 1 1 4 X

R 5 b7 b3 b7

Dm11

X 2 X 3 4 1

R b7 b3 11

G7

1 3 1 2 1 1

R 5 b7 3 5 R

Inversions and Alterations Within the CAGED Structures

You know what an inversion is - when the lowest note of chord is something other than the root. If you take music theory you'll learn a system of notating inversion using numbers that describe the interval structure in inverted chords: 6/3 for first inversion, 6/4 for second inversion. It's an old and useful system - just not for writing chord charts. With chords, when we want a note other than the root in the bass, we use the 'slash' form, C/G for example. This would be read, "C with a G bass." You will eventually get fast enough at all this to automatically know that G is the 5th of C so C/G is a second inversion. The slash notation has the advantage of including non-chordal tones. The old tune "Green Dolphin Street" moves a major triad against a static or 'pedal' bass note: A | C/A | B/A Bb/A | A |.

The 'D' shape (pages 29 & 30) and some of the 'G' shapes (page 33 & 34) are first inversion forms. Second inversion fingerings are easily constructed from the 'C', 'A', and 'E' shapes.

<p>Root Position</p> <p>R 3 5 R 3</p>	<p>2nd Inversion</p> <p>5 3 5 R 3</p>	<p>Root Position</p> <p>R 5 R 3</p>	<p>2nd Inversion</p> <p>5 5 R 3</p>
<p>Root Position</p> <p>R 5 R 3 5 R</p>		<p>2nd Inversion</p> <p>5 R 3 5 R</p>	

In addition to 1st and 2nd inversion chords, there are 3rd inversion forms. These place the 7th in the bass and can be easily constructed from the 'C' and 'G' shapes.

<p>Root Position</p> <p>R 3 5 R 3</p>	<p>3rd Inversion</p> <p>b7 5 R 3</p>	<p>Root Position</p> <p>R 5 R 3</p>	<p>3rd Inversion</p> <p>b7 5 R 3</p>
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Rhythm Changes in Bb

1 Bb^6 Gm^7 Cm^7 F^{13} Bb^6 Gm^7 Cm^7 F^9 Bb^6 Bb^9/D

6 Eb^6 E^{o7} Bb/F F^7 Bb^6 F^9 Bb^6 D^9 Em^7

11 F^{o7} $D/F^\#$ G^9 G^7/F Em^7 G^7/D C^7 C^7/Bb Am^7 C^9/G

16 F^7 Gm^7 $G^\#o7$ F^7/A Bb^6 Gm^7 Cm^7 F^{13} Bb^6 Gm^7

21 Cm^7 F^9 Bb^6 Bb^9/D Eb^6 E^{o7} Bb/F F^7 Bb^6

Rhythm Changes in F

1 F⁶ Dm⁷ Gm⁷ C⁹ F⁶ Dm⁷ Gm⁷ C¹³ F⁶ F⁷/A

6 B^b6 B^o7 F/C C⁷ 1. F⁶ C⁷ 2. F⁶ A⁷ Bm⁷

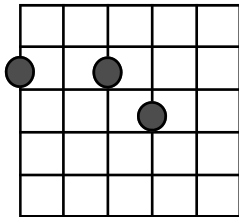
11 C^o7 A/C[#] D⁷ D⁷/C Bm⁷ D⁷/A G⁷ Am⁷ B^b0⁷ G⁷/B

16 C⁷ C⁷/B^b Am⁷ C⁷/G F⁶ Dm⁷ Gm⁷ C¹³ F⁶ Dm⁷

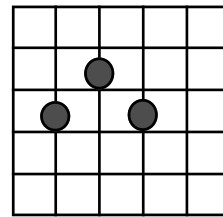
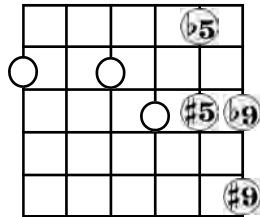
21 Gm⁷ C⁹ F⁶ F⁹/A B^b6 B^o7 F/C C⁷ F⁶

Altered Dominant Chords

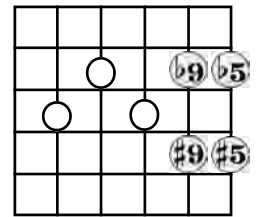
Any chord can have one or more of its tones raised or lowered, but it is much more common with dominant chords. When we talk of an altered dominant, we mean the root, third and flat-seven of a normal dominant seven chord with the addition of any of the following, a sharpened or flatted 5th or a sharpened or flatted ninth, G7b5 or D7#9 for example. The easiest way to deal with these chords is to build the part of the chords that doesn't change, R, 3 and b7, and then locate the positions of the altered tones relative to that structure.



R b7 3

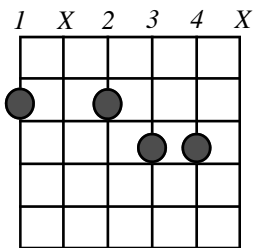


R 3 b7



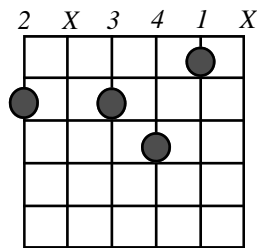
Most times, when a tune calls for an altered dominant, a 7b9 for example, other altered dominants will work as well. Instead of the 7b9 from the 6th string, I'll usually try a 7#5b9, because it's an easier fingering. If my ear tells me it works, fine, if not I go for the written chord. Below are some common altered dominant chords you should have readily under your fingers.

7#5



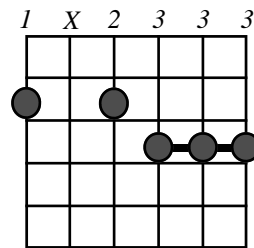
R b7 3 #5

7b5



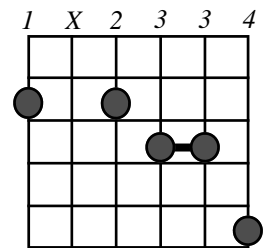
R b7 3 b5

7#5b9



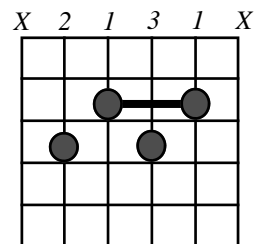
R b7 3 #5 b9

7#5#9



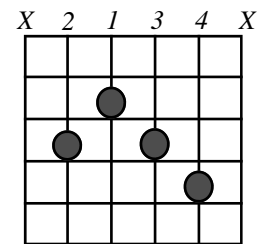
R b7 3 #5 #9

7b9



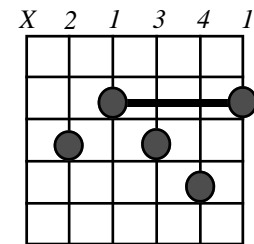
R 3 b7 b9

7#9



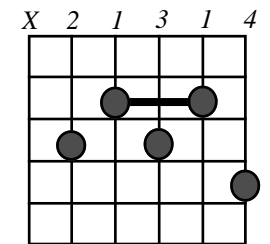
R 3 b7 #9

7b5#9



R 3 b7 #9 b5

7#5b9



R 3 b7 b9 #5

#11

Another common alteration you'll see is the #11. The astute observers among the readers will realize that the #11 is the same named pitch as the b5, however, a #11 implies the presence of a natural 5 in the chord. This is important from an improvisational perspective as well as a chordal one. Raised 11ths are also used on Major 7 type chords as well as dominants. You can substitute a 7b5 for a 7#11. Below are a few #11 voicings I use regularly.

<p>$\Delta 7\#11$</p>	<p>$\Delta 9\#11$</p>	<p>9#11</p>	<p>9#11</p>
----------------------------------	----------------------------------	-------------	-------------

69 and Add 9 chords

These are self-explanatory chords. A 69 (six-nine, please resist the all-too-easy sixty-nine jokes) is simply a major triad with the 6th and 9th tones added. They are interesting because the normal guitar voicing (R 3 6 9 5) results in a series of perfect 4ths in the upper structure. Add 9 chords add the 9th to a major or minor triad. These are some common fingerings.

I'll finish the section on the CAGED system with a long series of exercise based on the I vi ii V progression. These will feature common tones, diatonic and chromatic movement in the upper voice of the chords to provide continuity.

69

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<p>Maj add 9</p>	<p>Maj add 9</p>	<p>Min add 9</p>	<p>Min add 9</p>
------------------	------------------	------------------	------------------

The first exercises are in the key of C. The second page switches to the key of G. The first three lines utilize chromatic movement in the top voice of the chord. The final two use diatonic movement. Don't take the rhythm slashes literally - try strumming each chord just once and letting it ring for 2 or 4 beats. Practice each line separately.

C⁶ (x 4 2 3 1 x)
 A⁹ (3 x 4 2 1 x)
 Dm⁷ (x 3 1 4 1 x)
 Gaug⁷ (1 x 2 3 4 x)
 Cmaj⁷ (x x 2 1 4 3)

Cmaj⁹ (x 2 1 4 3 x)
 Am⁷b⁵ (2 x 3 4 1 x 4fr)
 Dm⁹ (x 2 1 3 4 x)
 G⁷/B (3 x 1 4 2 x)
 Cmaj⁹#¹¹ (x 2 1 4 3 1)

Cmaj¹³ (2 1 1 1 3 1 7fr)
 A⁷#⁵b⁹ (1 x 2 3 3 3 5fr)
 Dm⁹ (x 2 1 3 3 3)
 G⁷#⁵b⁹ (1 x 2 3 3 3 3fr)
 C⁶/⁹ (x 2 1 1 3 3)

C⁶ (x 4 2 3 1 x)
 Am¹¹ (2 x 3 4 1 x 3fr)
 Dm⁹ (x 2 1 3 4 x)
 G⁷/B (3 x 1 4 2 x 5fr)
 Cmaj⁷ (1 x 3 4 2 x 8fr)

Cmaj⁹ (x 2 1 4 3 x)
 Am⁷ (2 x 3 3 3 x 5fr)
 Dm⁷ (x 1 3 1 2 x 5fr)
 G¹³ (1 3 1 2 4 1)
 C⁶/⁹ (x 2 1 1 3 4)

1 **Gmaj⁷** 1 x 3 4 2 x

2 **Em⁷** 0 2 3 0 4 x

3 **Am¹¹** 2 x 3 4 1 x

4 **D⁷** x x x x x x

5 **Gmaj⁷** 1 x 3 4 2 x

6

6 **Gmaj⁷** 1 x 3 4 2 x

7 **Em⁷** x 3 1 4 1 x 5fr

8 **Am⁶** 1 2 3 1 4 x 5fr

9 **D¹¹** x 2 x 3 4 1 3fr

10 **Gmaj⁹** 1 x 2 3 1 4

11

11 **Gmaj⁷** x 4 3 1 1 1 7fr

12 **Em¹¹** x 2 x 3 4 1 5fr

13 **Am⁷** x 0 2 3 1 4

14 **D⁷/C** 2 x 1 1 1 x 7fr

15 **G⁶/B** 3 x 1 4 1 x 5fr

16

16 **Gmaj⁷** x 4 3 1 1 x 7fr

17 **E⁷b⁹** x 2 1 3 1 x 6fr

18 **Am⁷** 2 x 3 3 3 x 5fr

19 **D⁷b⁹** x 2 1 3 1 x 4fr

20 **Gmaj⁷** 1 x 3 4 2 x

21

21 **Gmaj⁷** 1 x 3 4 2 x

22 **Em(maj⁷)** x 4 2 1 1 x 4fr

23 **Am⁷** 2 x 3 3 3 x 5fr

24 **D⁷#⁹** x 2 1 3 4 x 4fr

25 **Gmaj¹³** 2 1 1 1 3 1

26

A stylized guitar body with a neck, rendered in a simple line-art style. The body is light gray with a black outline, and the neck is a darker gray. The text is centered within the body.

Section 3:
Building Chords
on String Sets

Building Chords on String Sets

You now have somewhere between 2 and 5 ways to play most chords that are thrown your way. Building chords on string sets will triple that. Here's the premise: We start with 4-note chords, 7ths and 6ths. Choose a group of 4 strings; 6, 4, 3, and 2; 5, 4, 3, and 2; 5, 3, 2, and 1; and 4, 3, 2, and 1. Structure the chords on the selected string group in each inversion. Here's a C7 as an example:

2nd Inversion	3rd Inversion	Root Position	1st Inversion
3 X 2 4 1 X	2 X 1 1 1 X	1 X 2 4 3 X	3 X 1 4 2 X
5 3 b7 R	b7 5 R 3	R b7 3 5	3 R 5 b7

From here, it's a simple matter to build the Maj 7, m7, m7b5, 6, and m6.

Major 7		Minor 7	
3 X 2 4 1 X	3 X 2 4 1 X	3 X 2 4 1 X	3 X 1 4 1 X
5 3 b7 R	5 3 7 R	5 3 b7 R	5 3 b7 R
Major 6		Minor 7	
3 X 2 4 1 X	4 X 2 3 1 X	3 X 1 4 1 X	2 X 1 4 1 X
5 3 b7 R	5 3 6 R	5 b3 b7 R	b5 3 b7 R
Major 6		Minor 6	
4 X 2 3 1 X	3 X 1 2 1 X		
5 3 6 R	5 b3 6 R		

On the next four pages I'll lay out the different chords on the string sets mentioned above. You'll notice some repetition of forms - A C6 contains the same notes as an Am7; A Cm6 contains the same notes as an Am7b5. I list them separately because the root notes occur in different places and that's the crucial thing for you to be able to use the chord correctly. Exercises will follow.

	2nd Inversion	3rd Inversion	Root Position	1st Inversion
Dom 7	<p>3 X 2 4 1 X</p> <p>5 3 b7 R</p>	<p>2 X 1 1 1 X</p> <p>b7 5 R 3</p>	<p>1 X 2 4 3 X</p> <p>R b7 3 5</p>	<p>3 X 1 4 2 X</p> <p>3 R 5 b7</p>
Major 7	<p>3 X 2 4 1 X</p> <p>5 3 7 R</p>	<p>3 X 1 1 1 X</p> <p>7 5 R 3</p>	<p>1 X 3 4 2 X</p> <p>R 7 3 5</p>	<p>2 X 1 3 4 X</p> <p>3 R 5 7</p>
Minor 7	<p>3 X 1 4 1 X</p> <p>5 b3 b7 R</p>	<p>4 X 2 3 1 X</p> <p>b7 5 R b3</p>	<p>2 X 3 3 3 X</p> <p>R b7 b3 5</p>	<p>2 X 1 4 3 X</p> <p>b3 R 5 b7</p>
m7b5	<p>2 X 1 4 1 X</p> <p>b5 b3 b7 R</p>	<p>3 X 1 2 1 X</p> <p>b7 b5 R b3</p>	<p>2 X 3 4 1 X</p> <p>R b7 b3 b5</p>	<p>2 X 1 3 4 X</p> <p>b3 R b5 b7</p>
Major 6	<p>4 X 2 3 1 X</p> <p>5 3 6 R</p>	<p>2 X 3 3 3 X</p> <p>6 5 R 3</p>	<p>2 X 1 4 3 X</p> <p>R 6 3 5</p>	<p>3 X 1 4 1 X</p> <p>3 R 5 6</p>
Minor 6	<p>3 X 1 2 1 X</p> <p>5 b3 b7 R</p>	<p>2 X 3 4 1 X</p> <p>6 5 R b3</p>	<p>2 X 1 3 4 X</p> <p>R 6 b3 5</p>	<p>2 X 1 4 1 X</p> <p>b3 R 5 6</p>

	Root Position	1st Inversion	2nd Inversion	3rd Inversion
Dom 7	<p>X 1 3 1 4 X</p> <p>R 5 b7 3</p>	<p>X 2 3 1 4 X</p> <p>3 b7 R 5</p>	<p>X 2 3 1 4 X</p> <p>5 R 3 b7</p>	<p>X 2 4 1 3 X</p> <p>b7 3 5 R</p>
Major 7	<p>X 1 3 2 4 X</p> <p>R 5 7 3</p>	<p>X 2 4 1 3 X</p> <p>3 7 R 5</p>	<p>X 2 3 1 4 X</p> <p>5 R 3 7</p>	<p>X 3 4 1 2 X</p> <p>7 3 5 R</p>
Minor 7	<p>X 1 3 1 2 X</p> <p>R 5 b7 b3</p>	<p>X 2 3 1 4 X</p> <p>b3 b7 R 5</p>	<p>X 2 3 1 4 X</p> <p>5 R b3 b7</p>	<p>X 2 3 1 4 X</p> <p>b7 b3 5 R</p>
m7b5	<p>X 1 3 2 4 X</p> <p>R b5 b7 b3</p>	<p>X 2 4 1 3 X</p> <p>b3 b7 R b5</p>	<p>X 2 3 1 4 X</p> <p>b5 R b3 b7</p>	<p>X 2 3 1 4 X</p> <p>b7 b3 b5 R</p>
Major 6	<p>X 2 3 1 4 X</p> <p>R 5 6 3</p>	<p>X 2 3 1 4 X</p> <p>3 6 R 5</p>	<p>X 2 3 1 4 X</p> <p>5 R 3 6</p>	<p>X 1 3 1 2 X</p> <p>6 3 5 R</p>
Minor 6	<p>X 2 4 1 3 X</p> <p>R 5 6 b3</p>	<p>X 2 3 1 4 X</p> <p>b3 6 R 5</p>	<p>X 2 3 1 4 X</p> <p>5 R b3 6</p>	<p>X 1 3 2 4 X</p> <p>6 b3 5 R</p>

	Root Position	1st Inversion	2nd Inversion	3rd Inversion
Dom 7	<p>X 1 X 1 4 1</p> <p>R b7 3 5</p>	<p>X 3 X 1 4 2</p> <p>3 R 5 b7</p>	<p>X 3 X 2 4 1</p> <p>5 3 b7 R</p>	<p>X 2 X 1 3 1</p> <p>b7 5 R 3</p>
Major 7	<p>X 1 X 2 4 1</p> <p>R 7 3 5</p>	<p>X 2 X 1 4 3</p> <p>3 R 5 7</p>	<p>X 3 X 2 4 1</p> <p>5 3 7 R</p>	<p>X 3 X 1 2 1</p> <p>7 5 R 3</p>
Minor 7	<p>X 1 X 2 4 3</p> <p>R b7 b3 5</p>	<p>X 2 X 1 4 3</p> <p>b3 R 5 b7</p>	<p>X 3 1 4 1</p> <p>5 b3 b7 R</p>	<p>X 3 X 2 4 1</p> <p>b7 5 R b3</p>
m7b5	<p>X 2 X 3 4 1</p> <p>R b7 b3 b5</p>	<p>X 2 X 1 4 3</p> <p>b3 R b5 b7</p>	<p>X 2 X 1 4 1</p> <p>b5 b3 b7 R</p>	<p>X 3 X 1 4 1</p> <p>b7 b5 R b3</p>
Major 6	<p>X 2 X 1 4 3</p> <p>R 6 3 5</p>	<p>X 3 X 1 4 1</p> <p>3 R 5 6</p>	<p>X 3 X 2 4 1</p> <p>5 3 6 R</p>	<p>X 1 X 2 4 3</p> <p>6 5 R 3</p>
Minor 6	<p>X 2 X 1 4 3</p> <p>R 6 b3 5</p>	<p>X 2 1 4 1</p> <p>b3 R 5 6</p>	<p>X 3 X 1 4 1</p> <p>5 b3 6 R</p>	<p>X 2 X 3 4 1</p> <p>6 5 R b3</p>

	1st Inversion	2nd Inversion	3rd Inversion	Root Position
Dom 7	<p>X X 2 3 1 4</p> <p>3 b7 R 5</p>	<p>X X 1 1 1 2</p> <p>5 R 3 b7</p>	<p>X X 1 2 1 1</p> <p>b7 3 5 R</p>	<p>X X 1 3 2 4</p> <p>R 5 b7 3</p>
Major 7	<p>X X 2 4 1 3</p> <p>3 7 R 5</p>	<p>X X 1 1 1 4</p> <p>5 R 3 7</p>	<p>X X 2 3 1 1</p> <p>7 3 5 R</p>	<p>X X 1 3 3 3</p> <p>R 5 7 3</p>
Minor 7	<p>X X 1 3 1 4</p> <p>b3 b7 R 5</p>	<p>X X 2 3 1 4</p> <p>5 R b3 b7</p>	<p>X X 1 1 1 1</p> <p>b7 b3 5 R</p>	<p>X X 1 4 2 3</p> <p>R 5 b7 b3</p>
m7b5	<p>X X 1 4 1 2</p> <p>b3 b7 R b5</p>	<p>X X 1 2 1 4</p> <p>b5 R b3 b7</p>	<p>X X 2 3 1 4</p> <p>b7 b3 b5 R</p>	<p>X X 1 3 3 3</p> <p>R b5 b7 b3</p>
Major 6	<p>X X 2 3 1 4</p> <p>3 6 R 5</p>	<p>X X 1 1 1 1</p> <p>5 R 3 6</p>	<p>X X 1 4 2 3</p> <p>6 3 5 R</p>	<p>X X 1 3 1 4</p> <p>R 5 6 3</p>
Minor 6	<p>X X 1 2 1 4</p> <p>b3 b7 R 5</p>	<p>x X 2 3 1 4</p> <p>5 R b3 6</p>	<p>X X 1 3 3 3</p> <p>6 b3 5 R</p>	<p>X X 1 3 1 2</p> <p>R 5 6 b3</p>

Okay, now that your head hurts, stop whining about never being able to learn all those chords and lets start learning all those chords! The best way to get these new fingerings incorporated is to apply them to tunes you already know. To force yourself to use the new inverted forms, try limiting the bass to these kinds of movement: static - no movement; step-wise - move up or down a scale; chromatic - up or down a half-step; fourths - up a fourth (down a fifth).

I'll give you a couple of examples using some generic chord progressions but the real work is up to you. Take songs that you are comfortable playing and make yourself uncomfortable. Put restrictions on the bass; put restrictions on the treble note. If you can't come up with a half-dozen ways to play it, you're not trying.

Another of my favorite games is to limit how much of the neck to use: pick a four or five-fret area of the neck and play a chord progression without moving outside of that area. Some progressions work easily, others require the use of many of the newer forms you've just been exposed to.

Blues in Bb

Bb ⁷	Bb ⁷ /Ab	Eb ⁷ /G	Eb ⁷ /Bb	Bb ⁷	Fm ⁷ /C	Bb ⁷ /D

5

Eb ⁹	E ^o	Bb ⁷ /F	G ⁷ /F

9

Cm ⁷ /Eb	F ⁷ /Eb	Bb ⁷ /D	Gm ⁷ /D	Cm ⁷	F ⁷ /C

Blues in F

F⁷/C B^b13 F⁷/A C^m7/G F13

5/4

B^b9 B^o F⁷/C D⁷/C

5

G^m7/D C⁷/E F⁹ D⁷/F[#] G^m7 C¹³

9

I vi ii V

C⁶/G A^m7 D^m7/A G⁷/B C[#]7

6/4

A^m/C D^m7 G⁷/D C[#]7/E A^m7/E

6

D^m/F G¹³/F C[#]7/G

11

3/4 Blues

G ^Δ 7	F [♯] 7/A	B ⁷ /A	Em ⁷ /B	A ⁷ /C [♯]

7

Dm ⁷	G ⁷	C ^Δ 7/E	Cm ⁷ /E ^b	F ⁷ /E ^b

13

B ^b Δ ⁷ /F	B ^b m ⁷ /F	E ^b 7/G	A ^b Δ ⁷

19

A [∅]	D ⁷ /A	Bm ⁷ /A	B ^b 7/A ^b	A ^m 7	D ⁷ /A

Latin Tune

Cm ⁷	Fm ⁷ /C	D [∅] /C

6

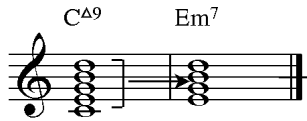
G ⁷ /B	Cm ⁷ /B ^b	E ^b m ⁷ /B ^b	A ^b 7

11

D ^b Δ ⁷ /A ^b	D [∅] /A ^b	G ⁷	Cm ⁷

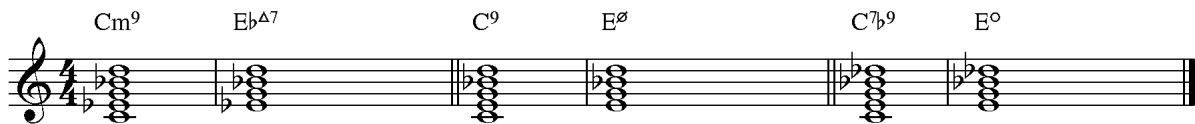
I could go on like this forever. But that's not the point. You need to go on like this forever. So...choose some tunes that you like. Dig in and start working through them. Every different starting chord creates new choices, new possibilities. Soon you'll find yourself finding patterns of chords that you like and you'll start using them naturally - you're on your way to finding that unique chord style.

The next section will help you incorporate extensions into the chords you've learned with the string sets. But here's another way to approach it:



If you look at the highest four notes of the C major 9, you see that it's the same notes as an E minor 7. So if you're playing in a group setting and the bass player plays 'C' and you play Em7, the resulting chord will be a Cmaj9. You can use this idea even if you're not in a group setting - just try to keep track of

the original harmony (Or not. Hell, some of my best arrangements get really far away from the original harmony.) Here's the quick and easy formula for this: For a major 9, play a minor 7th from the third; for a minor 9, play a major 7th from the third; and for a dominant 9, play a m7b5 from the third. For C major 9 play Em7; for C minor 9 play Ebmaj7; for C9 play Em7b5 (E half-diminished). Additionally, for a C7b9 play E dim7. And you know that E dim7 is the same as G, Bb, and Db diminished. Cool, eh?



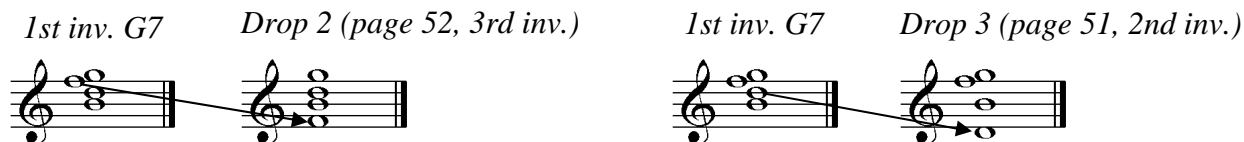
Interlude: Terminology **Drop 2 and Drop 3 Voicing**

If you study this stuff for a while you will encounter the terms “drop 2” or “drop 3” chords. These refer not just to guitar chords but are used by arrangers to describe certain voicings. It’s an extension of the idea we discussed in the section on triads: closed versus open voicings. In an open voiced triad the middle note is lowered or raised an octave. Well, we can have the same situation with 7th chords.

Here’s our old friend, the G7 chord (root position). This is a closed voicing made of stacked major and minor thirds. To open this voicing we could choose either the ‘D’ or the ‘B’ notes and lower it an octave. Since the ‘D’ is the second note down from the top, this is called a drop 2 chord. Similarly, the ‘B’ is the third note from the top, so when that note is lowered an octave the resulting voicing is called a drop 3.



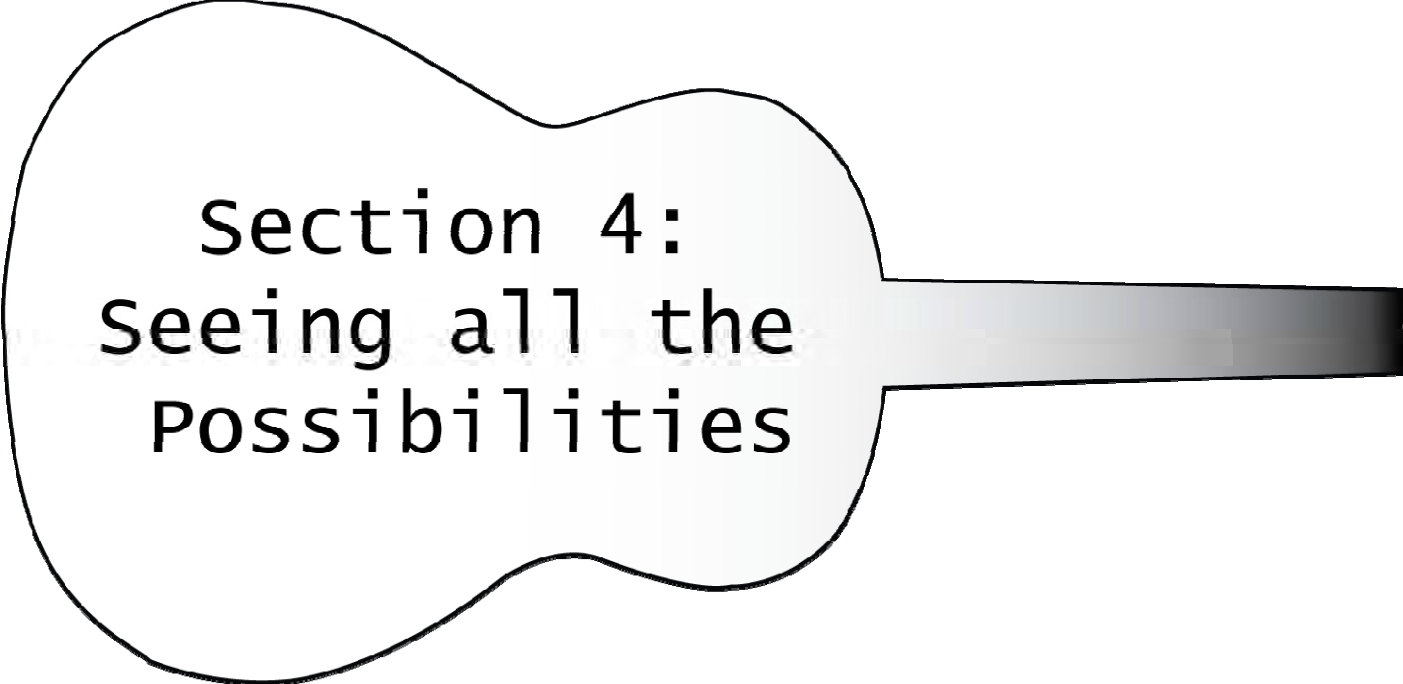
You already know both of these voicings; the drop 2 is the 2nd inversion on string set 5, 4, 3, 2. The drop 3 is the 1st inversion on string set 6, 4, 3, 2. So why am I cluttering your head with this stuff? Well, that’s why I’m calling this section an interlude. You need to know this so you can communicate with other musicians. The ‘drop’ terminology has become standard and if you extend the system enough you can label all the chords in the string sets section as one or the other. The key is to apply the process to the inverted forms.



So why didn’t I use this terminology when I presented the material? Simply put, I hate needless complexity. And frankly, thinking of a simple second inversion dominant 7 chord, voiced across the 6th, 4th, 3rd and 2nd strings, as a drop 3 voicing derived from a first inversion seems kinda silly. I understand the utility of the terminology in arranging - it makes perfect sense when describing how you voice a chord in a sax section - I question its usefulness in talking about guitar chords.

The easy way to keep the drop 2\3 thing straight, as applied to the chords in this section, is to remember the chords on contiguous strings (5, 4, 3, 2 and 4, 3, 2, 1) are drop 2 voicings. The ones that skip a string after the bass note (6, 4, 3, 2 and 5, 3, 2, 1) are drop 3 voicings.

And by the way - don’t confuse drop 2\3 with the “drop root” stuff we talked about in the CAGED section of this book. They are completely unrelated (except by the use of the word “drop”, which I have now typed so much that it has lost all meaning and become just another nonsensical Anglo-Saxon monosyllable. “Hey, drop you! What the drop?”)



Section 4:
Seeing all the
Possibilities

Seeing all the Possibilities

This idea comes to me from Gene Bertoni, one of the true harmonic wizards of guitar. Gene's arrangements are unique, harmonically complex and, most importantly, quite beautiful. This is a process that is deceptively simple, to the point I have to force many students to take it seriously. But even reluctant students admit the benefit of working through it.

What is "it"? Choose a chord type, major, minor or dominant. Choose a root. Go up each individual string and name each note that fits the desired harmony. Let's use E major for example.

Root 9th 3rd Sharp 11 5th 6th 7th Root

TAB 0 2 4 6 7 9 11 12

5th 6th 7th Root 9th 3rd Sharp 11 5th

TAB 0 2 4 5 7 9 11 12

3rd Sharp 11 7th Root 9th 3rd Sharp 11 5th

TAB 1 3 4 6 8 9 11 13

7th Root 9th 3rd Sharp 11 5th 6th 7th

TAB 1 2 4 6 8 9 11 13

Sharp 11 5th 6th 7th Root 9th 3rd Sharp 11

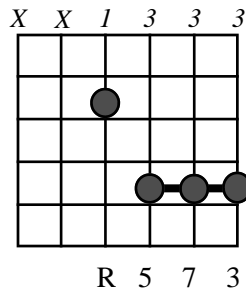
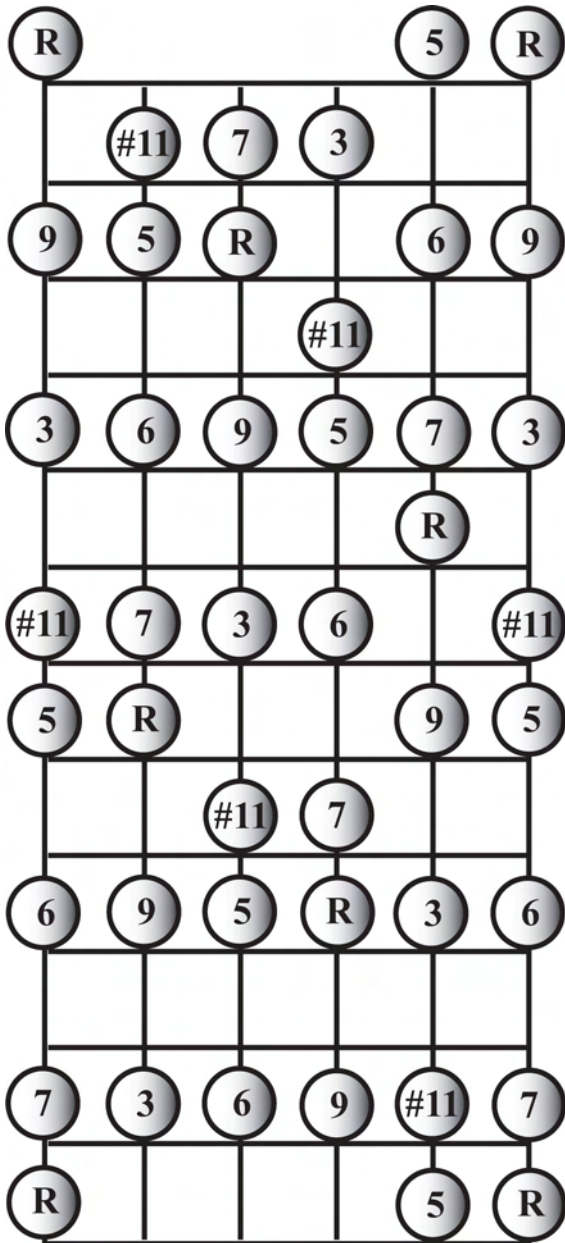
TAB 1 2 4 6 7 9 11 13

Root 9th 3rd Sharp 11 5th 6th 7th Root

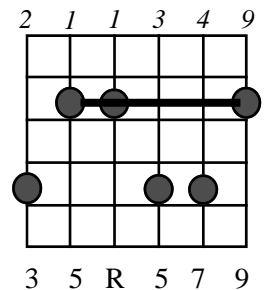
TAB 0 2 4 6 7 9 11 12

It's important to say the name aloud - it engages more of your concentration. Don't just do a couple of chords and think you've got it. Work around the cycle of 5ths. This should help you break out of the "box" that most guitarists put themselves in.

Here's another way to look at the information. Don't let the chart overwhelm you. One way to make sense of it is to find a familiar chord within it, locate other chordal tones near it and play with sounds you can make by adding different notes.



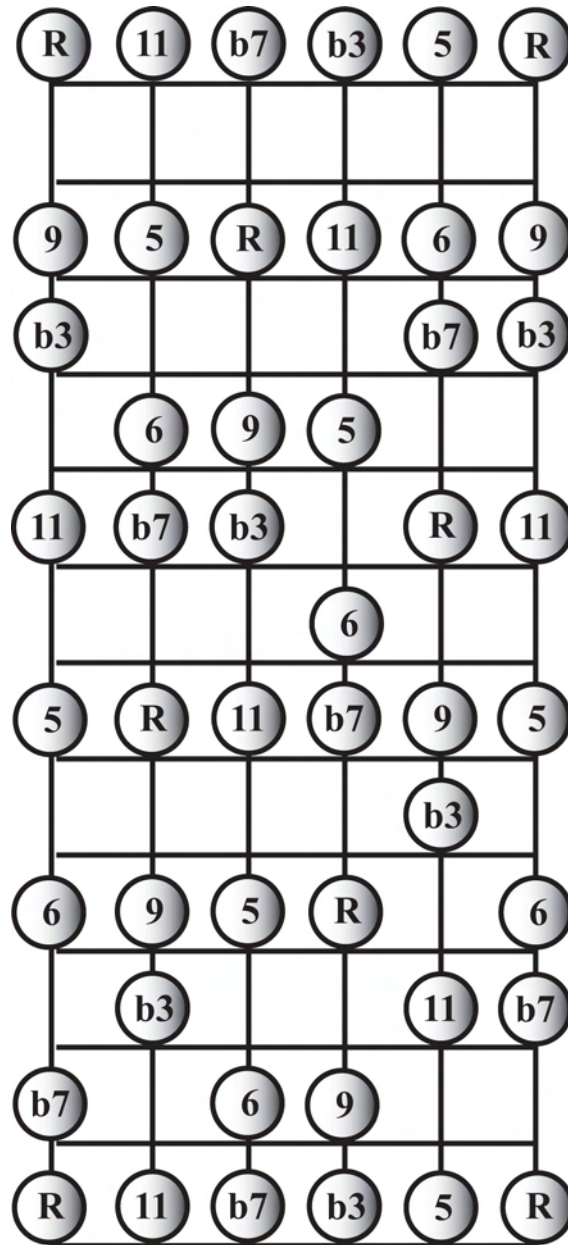
Note the proximity of other notes that you could use to alter the color of the chord.



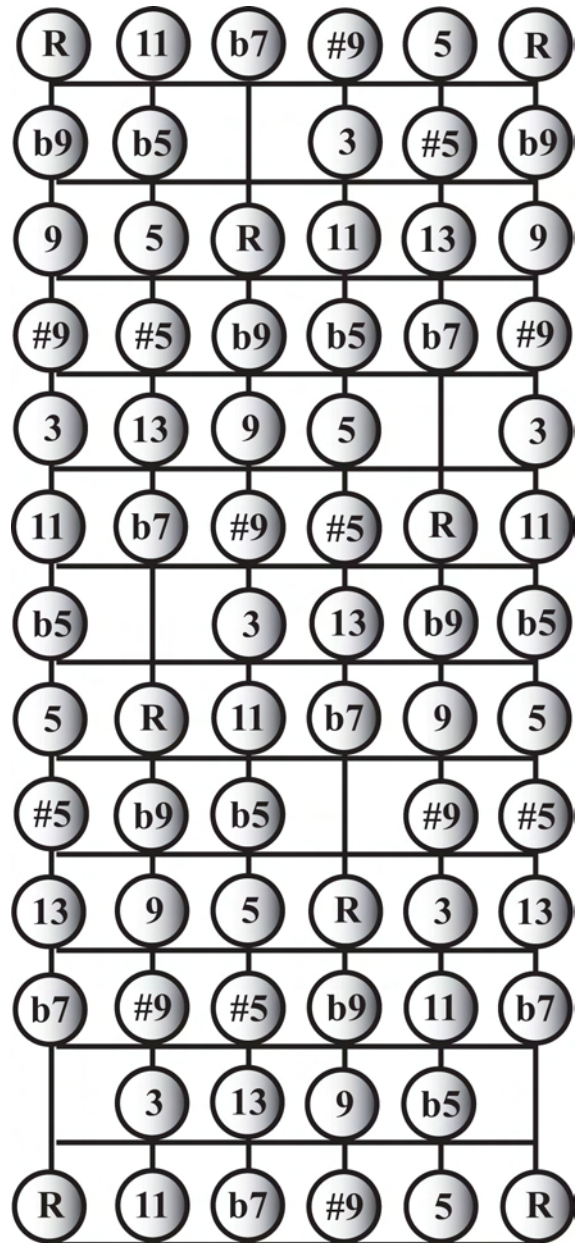
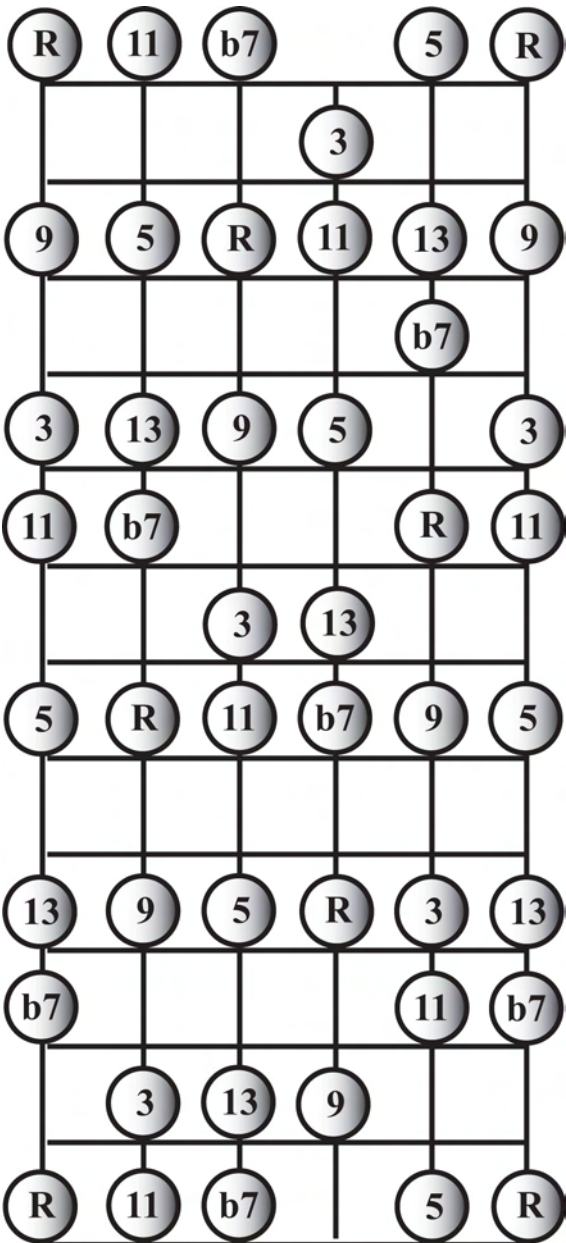
So the root position Emaj7 gets easily transformed to a 1st inversion Emaj9. These big, six-string chords are more typically used in solo or trio settings. They cover so much harmonic landscape that it's easy to create turf wars with piano players if you use them too much. And in a turf war with the pianist, the guitarist always loses: they have ten fingers and 7 1/3 octaves; we have four fingers and 3 1/2 to 4 octaves.

You need to explore the possibilities. Be curious; be adventurous. Some sounds you will love - some will leave you cold. That's the fun part of being at this point as a player: you know enough to really get creative. Look at the example below. This is an interesting alternative to hanging on to an Emaj7 for three measures.

We'll look at minors next. The notes will be Root, 9, b3, 11, 5, 6 and b7. For simplicity I'll keep the root as E.



If the diagram for the major chord scared you, this might send you running. On the left is a the layout for a dominant chord. On the right I include the altered tones. Cool, no?



I've worked with this stuff for decades and it runs more or less naturally through my head as I'm working through a chord progression. The operative work is "working": If I'm in an orchestra pit or on a stage reading a chart, I'm not consciously thinking about 'all the possibilities' - it's simply too much information to process on the fly in that setting. *You use these ideas when you practice and when you arrange.*

I've struggled with how to make exercises for this section and then it occurred to me. Why not merge this part with the planned section on arranging chord melodies. So, here we go. To avoid copyright issues I'll stick with the old public domain material. It's up to you to take these principles and apply them to the tunes of your choosing.

Chord Substitution/Chord Connection Rules

Many people use the term chord substitution to include the sorts of things we've done up to this point, i.e. extending chords to include the 7th, 9th, etc. I prefer to think of that as 'chord embellishment' or 'chord extension'. I reserve the term 'chord substitution' for those situations where I replace a chord with a chord built from a different root note. To those with the more structured background of, say, an orchestral player, the idea of a musician being able to just *change* what the composer wrote seems just this side of anarchy, but it's the basis for what jazz guitarists and piano do all the time. Before we delve into our arrangements lets make sure we know the basic rules:

Substitution

1. I and vi are interchangeable.
2. iii can be used for I
3. ii and V are interchangeable.
4. A dominant chord can be replaced by a Dim 7 chord built on its third.
5. When the melody allows, minor chords can sometimes be replaced by dominant chords. 7#9 chords often work in place of a minor chord.
6. Any chord can be replaced by a chord built on its tritone (b5).

These rules are based, in part, on the overlap between notes of the chords or overlap in their harmonic function.

Connection

1. Diminished chords connect chords separated by a whole step
2. Dominant chords connect chords separated by a perfect 4th.
3. Augmented chords connect chords separated by a perfect 4th.
4. Any chord can be moved into from a chord a half-step above or below.

The House of the Rising Sun

Anon./Arr. R. Wimer

Chords: $Bb7^b5$ Am^{11} $Eb7^{\#5\#9}$ $C69^{\#11}/E$ $C^{\#o}$ $D7^{\#5}/C$ $F^{\#o}$ F^{Δ}

Measure 1: $Bb7^b5$ (2 x 3 4 1 x) 5fr
 Measure 2: Am^{11} (x 0 2 3 1 4) 3fr
 Measure 3: $Eb7^{\#5\#9}$ (x 2 1 3 4 4) 5fr
 Measure 4: $C69^{\#11}/E$ (x 1 1 1 1 2) 7fr
 Measure 5: $C^{\#o}$ (x x 1 3 2 4) 11fr
 Measure 6: $D7^{\#5}/C$ (x x 1 2 3 1) 10fr
 Measure 7: $F^{\#o}$ (x 2 3 1 4 x) 8fr
 Measure 8: F^{Δ} (x 1 3 2 1 1) 8fr

Chords: Am^7 Am^{11}/G $C^{\Delta7\#11}$ $F^{\Delta9}$ $E7^b9$ Am^9

Measure 9: Am^7 (x x 3 1 4 1) 5fr
 Measure 10: Am^{11}/G (x x 3 2 1 4) 3fr
 Measure 11: $C^{\Delta7\#11}$ (x 1 2 3 4 1)
 Measure 12: $F^{\Delta9}$ (1 x 4 0 1 0)
 Measure 13: $E7^b9$ (0 2 3 1 4 0)
 Measure 14: Am^9 (x 0 4 1 3 1) 5fr

Chords: $C^{\Delta7}/G$ $D/F^{\#}$ $F^{\Delta7}$ Am $C^{\Delta7}/G$

Measure 13: $C^{\Delta7}/G$ (2 3 1 0 0 4)
 Measure 14: $D/F^{\#}$ (2 x 0 3 4 x)
 Measure 15: $F^{\Delta7}$ (1 x 3 4 1 x)
 Measure 16: Am (4 2 1 1 x x)
 Measure 17: $C^{\Delta7}/G$ (3 x 2 4 1 x)

Chords: $E(b^9)$ $E7^{\#5}/D$ A^5 $Asus^4$ minor

Measure 17: $E(b^9)$ (0 x 3 1 0 x)
 Measure 18: $E7^{\#5}/D$ (x x 0 1 2 0)
 Measure 19: A^5 (x 0 2 3 x x)
 Measure 20: $Asus^4$ (x 0 3 4 1 1) 5fr

Line 1: I chose **Bb^{7b5}** for two reasons: 1) it's the tritone substitutions for E7, the normal harmony for the pickup note; 2) it's a half step above the following chord, Am. The **Am¹¹** is a simple embellishment of the given Am; the **Eb^{7#5#9}** is a tritone sub for the Am and its bass note connects chromatically to the following first-inversion CΔ. The #5 is the melody note - the #9 provides a common tone to the following chord. The **C^{6#9#11}** is, admittedly, an unusual choice, but the tension it creates is immediately resolved on the second beat of the measure by the 9 and #11 moving step-wise to the 3 and 5. The **C#°** connects the C and the following D chord. **D^{7#5}/C** is a simple embellishment of the given D chord; the **F#°** follows the substitution rule allowing a dominant chord to be replaced by a diminished chord built on its third. **F^{Δ9}** is a simple extension of the given F chord.

Line 2: **Am⁷** and **Am¹¹/G** are extensions of the given Am chord. Notice that an context-free analysis of the **Am¹¹/G** would likely result in naming the chord a G major add 9. This is a good example of how looking at 'all the possibilities' can lead you in directions you might not otherwise consider. The **F^{Δ9}** in the following measure is a chromatic connecting chord into the following E. The other chords in this line are simple extensions/embellishments. The rest of the arrangement follows similarly.

Remember in the beginning of the book when I talked about developing your "chord voice"? Doing arrangements like this are one of the best ways to develop your individual style. Where I purposely tried to get harmonically 'dense' in this arrangement, the one that follows takes an entirely different approach to the same melody. Here, I'm dabbling in what's called 'reharmonizing'. When we reharmonize we throw out the given chords and look just at the melody. Choose chords that work well with the melody and see what happens!

The House of the Rising Sun??

Anon./Arr. R. Wimer

First system of musical notation for 'The House of the Rising Sun??'. It consists of a treble clef staff with a 3/4 time signature and a bass staff. The treble staff shows a melody line with notes corresponding to the chords. The bass staff shows the fret numbers for the strings (T, A, B). Above the treble staff, seven chords are indicated: F^{Δ7}, Em⁷, Dm⁷, G^{#7#5#9}, Gm⁷, Gm⁹/F, and C¹³. Below the treble staff, seven guitar chord diagrams are shown, each with a fingering pattern and a fret number (5fr, 7fr, 5fr, 10fr, 10fr, 7fr, 8fr). The bass staff shows fret numbers for the strings: T (0), A (5), B (8) for the first measure; T (7), A (7), B (7) for the second; T (8), A (5), B (5) for the third; T (12), A (12), B (10) for the fourth; T (10), A (11), B (12) for the fifth; T (10), A (7), B (8) for the sixth; and T (8), A (10), B (8) for the seventh.

Second system of musical notation for 'The House of the Rising Sun??'. It consists of a treble clef staff with a 3/4 time signature and a bass staff. The treble staff shows a melody line with notes corresponding to the chords. The bass staff shows the fret numbers for the strings (T, A, B). Above the treble staff, five chords are indicated: F^{Δ7}, Dm¹¹, Ab^{7#5}, Gm⁶, and C⁹. Below the treble staff, five guitar chord diagrams are shown, each with a fingering pattern and a fret number (5fr, 3fr, 4fr, 0). The bass staff shows fret numbers for the strings: T (5), A (5), B (8) for the first measure; T (5), A (5), B (5) for the second; T (3), A (5), B (4) for the third; T (5), A (3), B (2) for the fourth; and T (0), A (3), B (3) for the fifth.

Continued on next page

9 **F Δ 7** **Dm¹¹** **A \flat 7^{#5}** **Gm⁷** **C⁷**

13 **F Δ 7** **G⁹** **C⁷** **F Δ 7**

I've done two things here: first, I changed the key to F, without transposing the melody; second, I superimposed a standard I vi ii V progression on the tune. I like to use the I vi ii V for purposes like this but you can use other chord progressions. Choose something that has an internal logic to it (chromatic, cycle of fourths, etc.) and that can improve the chances of your reharmonization being musically viable. In the example below I use a chromatic approach.

The House of the Rising Sun??

Anon./Arr. R. Wimer

A^m **G[#]m⁷** **G¹¹** **F[#]°** **F⁶** **E^{sus}4** **E \flat 6** **D** **D \flat**

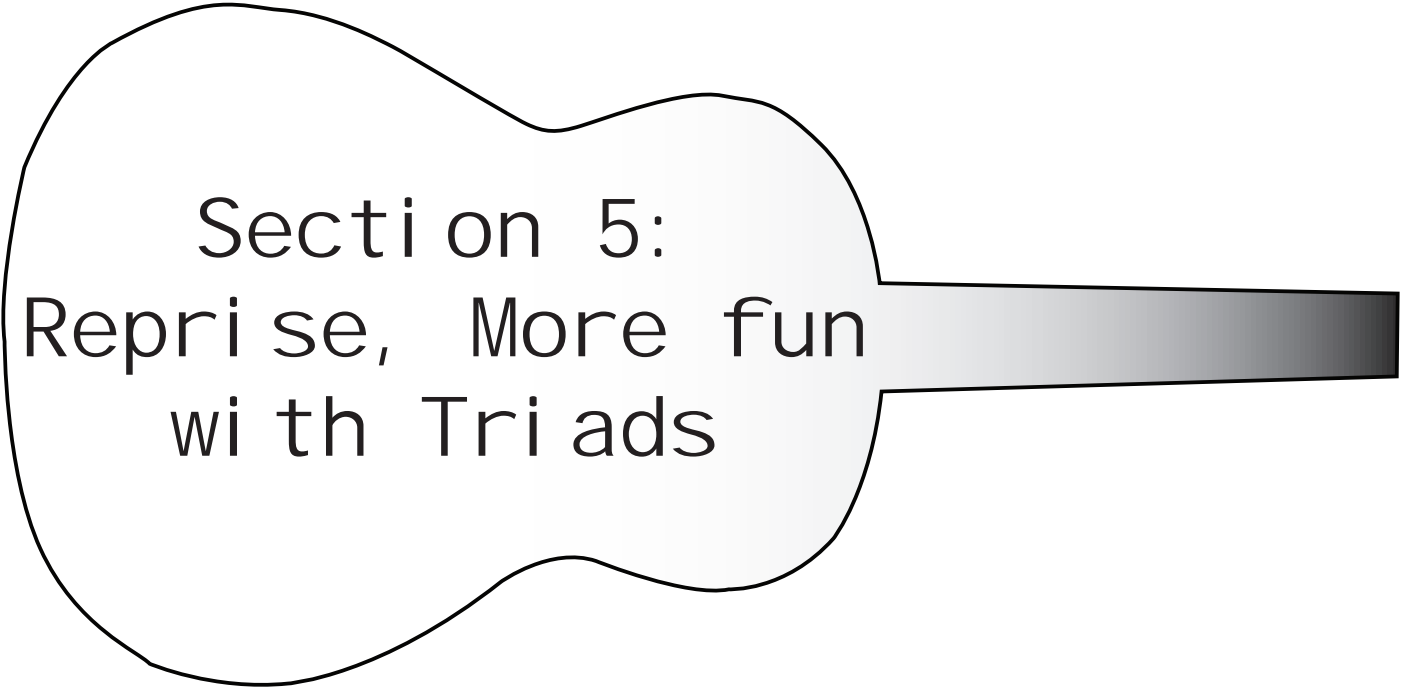
5 Am/C B Bb^Δ13 Am⁷ Ab⁷#5 G¹³ Gb⁷ F⁷ Eb⁹

9 Eb⁷b⁹ Dm⁷ Db⁷b⁹ C⁷ B⁷#9 Bb^Δ7 Am

13 F#m⁷ F^Δ7 EMaj⁹ Am

Get the idea? The more you play, the more you experiment, the more you stretch your ear and your imagination, the more your ‘chord voice’ matures and takes on an individual character. If you’ve made it to this point in the book and have a thorough understanding of the material presented you’re well down the road to having this thing whipped. Does that mean you know it all? Hardly! If you’re doing this right you’re on a lifetime journey of exploration. What you *have* done is acquire a good set of tools that will help you on this trip.

I’m going to close the book by returning to our first topic, triads. We’ll examine them again in light of some of the things we’ve learned.



Section 5:
Reprise, More fun
with Triads

Triads Again?

Triads can build the simplest sounding chords. Applied creatively, they can also create some of the most complex sounding harmonies. Let's start with the ubiquitous iii, vi (VI⁷), ii V.

Em⁷ A⁷ Dm⁷ G⁷

With a couple of minor alterations we can get this:

x 1 x 2 4 3 7fr x 0 1 2 4 3 5fr x 1 x 2 4 3 5fr T x 1 2 4 3

Em⁷ A^{13b9} Dm⁷ G^{13b9}

Notice the major triad moving chromatically through the top part of each chord. The progression could be re-written:

G/E F#/A F/D E/G

This could lead to something like this:

OXX XOX XXXO XXOO OOO

G/E F#/A F/D E/G C^{Δ7}

In a similar vein, anytime you want a nice, slightly different sounding V-I kind-of thing, use the root note of the V but place the major triad of its tritone sub above it, then resolve to I. So, for G⁷ to C, use Db/G to C.

3 x 4 0 0 x x 3 2 0 1 x 3 x 4 1 2 x x 2 1 4 3 x

G⁷ C Db/G C^{Δ9}

This next bit might appeal more to the budding composers in the readership but many of you will recognize the sounds and come to understand how some of those weird sounds you've heard originated.

Let's start with a simple A minor pentatonic scale:

Musical notation for the A minor pentatonic scale. The top staff shows the scale in treble clef: A2, C3, E3, G3, B3. The bottom staff shows the fretboard with fingerings: 5, 3, 5, 3, 1, 2.

Let's add a quarter note pedal A in the bass:

Musical notation for the A minor pentatonic scale with a quarter note pedal A in the bass. The top staff shows the scale in treble clef. The bottom staff shows the fretboard with fingerings: 5, 3, 5, 3, 1, 2, and a constant 0 in the bass line.

Now the fun begins: Pick a triad (any triad) and place it so that its highest note is on the 'A'. Then move the triad structure *in parallel* to the remaining notes in the scale.

Musical notation for the A minor pentatonic scale with a triad structure. The top staff shows the scale in treble clef. The bottom staff shows the fretboard with fingerings: 5, 3, 5, 3, 1, 2, and a constant 0 in the bass line. Triads are placed on the notes A, C, E, G, and B.

Let's try a different triad:

Musical notation for the A minor pentatonic scale with a different triad structure. The top staff shows the scale in treble clef. The bottom staff shows the fretboard with fingerings: 5, 3, 5, 3, 1, 2, and a constant 0 in the bass line. Triads are placed on the notes A, C, E, G, and B.

I cannot tell a lie (wait, that's a lie....OMG we must be caught in cliché syllogism!), the following example, which alternates between a major triad and a sus4 chord, is ripped off from something I heard long ago and can't remember the source; John McLaughlin perhaps? Pete Townsend? Lord knows, but it's cool.

So, we take two harmonically simple constructs, the pentatonic scale and a triad, and we combine them to make something that is anything but harmonically simple. And they're easy to play, too! Does it get any better than that?

I have purposely avoided talking about improvisation - that's a topic I'll cover in my next book, "The Whole Scale Thing", but triads can be used to help construct some very interesting and useful melodic ideas. Consider the lowly F minor triad:

Now, instead of playing the chord, arpeggiate it, something like this:

Okay, you say, but what's so cool about that. Like many things in improv, it all depends on what chord supports the line. In this case try an **E7#9/b9**. What?!! Think about it - the notes of an F minor triad are F, Ab (G#), and C (B#). Against an E chord, that's the b9, 3rd and #5. So, instead of a complex arpeggio or scale pattern, simply arpeggiate the little ol' F minor triad and you create one of those perplexing altered dominant sounds.

Here's another altered dominant idea; take a major triad and move it in minor thirds, from G to Bb to Db to E. If you analyze the triads against a G altered Dominant, the G is the R, 3 and 5 (obviously). The Bb becomes b7, #9 and 5; the Db yields another b7, a b9 and a #11 (b5); and, finally, the E contributes a 13, a b9 and a 3. This line has the added advantage for fingerstyle guitarist of being played with a p i m (thumb, index, middle) roll with the right hand.

G Bb Db E G

T
A
B

3 2 0 3 3 6 4 6 9 9 7 10 12

The Bb becomes b7, #9 and 5; the Db yields another b7, a b9 and a #11 (b5); and, finally, the E contributes a 13, a b9 and a 3. This line has the added advantage for fingerstyle guitarist of being played with a p i m (thumb, index, middle) roll with the right hand.

Gm Bbm Dbm Em Gm

T
A
B

3 1 0 8 8 6 9 9 9 9 8 7 8

Here's more of the same but this time using a minor triad. It doesn't dovetail as neatly into a given chord type but it sounds cool, especially if you play it *fast*! Try it over a Gm7. And remember, people who say playing fast isn't important are usually people who can't play fast.

Fm G#^o Fm E

T
A
B

2 3 1 1 6 4 10 9 8 7 9 9

Remember the Fm over the E7 thing from a page ago? Here's another application of that, this time adding a G# dim.

Hopefully this gives you the idea: One of the best ways to obtain very complex sounding melodic lines is to use simple harmonic material in innovative ways.

Triads also allow us an insight into the minds of pianists. When we grab a fingering on the guitar we want to name it. Take the A13b9 on page 69, for example. We see a chord. Many pianist see a *polychord*, a combination of chords with one in the left hand and one in the right. In this case a pianist might play an A7 in the left hand and an Gb in the right. They'd write this as: $\frac{Gb}{A7}$

The exercise on the next page is simpler than the previous example but illustrates the point very well. This is a "Carole King" kind of thing. A guitarist might have (correctly) named the E/A as an Amaj9, D/B as a Bm7 and the D/E as an E11 but the underlying harmony is more accurately reflected with the given chord names.

Diagram 1: Chord A (5fr)

Diagram 2: Chord E/A (4fr)

Diagram 3: Chord D/A

Diagram 4: Chord A

Diagram 5: Chord D/B

Diagram 6: Chord D/E

Diagram 7: Chord E (4fr)

Diagram 8: Chord A (5fr)

Diagram 9: Chord A

5

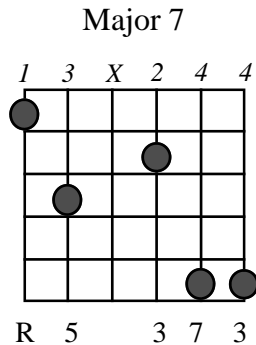
So, we end where we began, in a sense. Hopefully you've started to develop your own ideas about how you want your chords to sound. I hope you realize that if you're doing this right, as I've said before, you're not finished; it's a lifetime trip. Now you have some more skills that will make that trip more rewarding. Enjoy!

Appendix

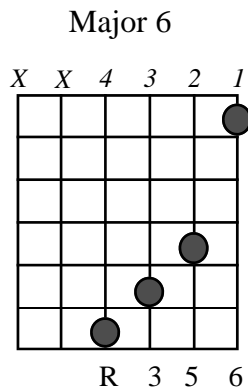
Photo-Op Chords

(or as we say in Oklahoma, Pitcher-takin' chords)

As you may have guessed by now, I'm really comfortable with the whole chord thing. (See where the title for the book came from?) And yet, time and again when someone snaps a shot of me playing, I'm holding a C chord, or I have one finger on the fretboard... completely unimpressive. That's why you need to learn a handful (no pun intended) of chords that demonstrate your command of the instrument; chords that, if you really used them all the time, would give you severe carpal tunnel disorder. When you spot a shutter-bug in the crowd, immediately switch to one of the knuckle-busters regardless of the disruptive affect on whatever you were playing. The musical discord is temporary... a picture of you playing some slacker chord is forever. Below are some suggestions along with photos and commentary.



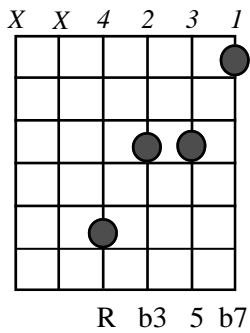
I first encountered this chord as the final chord in a Barney Kessel recording. It took me some time to figure out, as I recall. Almost every posed picture of me playing from age 16 to sometime in my twenties features this chord. As I got older I moved it further down the neck, starting at the 8th fret and eventually making it all the way to the first.



This unfriendly beast is the first chord of Johnny Smith's arrangement of "Moonlight in Vermont". Those of you unfamiliar with JS should seek out some recordings. He was one of the true masters of chord melody and could move between the most outrageous chord shapes with a smoothness that seemed superhuman.



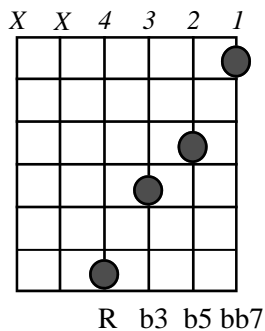
Minor 7



This is the 2nd chord of “Moonlight...” For fun try the preceding chord with the 1st finger on A (C6) and move to this chord with your first finger on G (Am7), making the change as legato as possible. Welcome to Johnny Smith World!



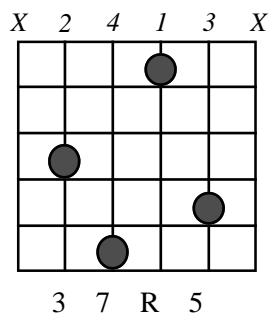
Diminished 7



This is a classic. I first encountered this diminished chord in a poster for Ovation guitars in the late 70s. Al Dimeola (pre-hair-plug) was the perpetrator of this finger buster.



Major 7



And, finally, the inspiration for this section: my student, Jake, sent me this picture taken at a recording session for his band. The casual use of the first inversion major 7 (page 50) along with the semi-goofy smile make this a perfect example to end our discussion of photo op chords.



Afterword

Nothing so amuses the aging guitar teacher as to have a student come for his first lesson and announce that, "I know all my chords." In almost 40 years of teaching guitar my reactions have evolved from curiosity, through incredulousness, sarcasm, torture, ennui, and, finally bemusement. As I stated in the early part of this book, guitarists have different needs for chords, depending on the genres of music they're interested in. A guitarist interested in playing chord melody arrangements of jazz standards has a much greater need for the later material in this book than the guitarist in a Norwegian death-metal band. But what I hope for all guitarists is the gift of curiosity: that as long as they play the guitar they will try to improve, try to find new information, new tricks, new sounds. May this slender volume be of help in that pursuit.

Be passionate in your work and in your searching.

-Ivan Pavlov



A 19th century painting depicting a fight between the fans of Ferdinando Carulli and those of Francesco Molino.

But don't be stupid about it.

-Randy Wimer