

Xploring Triads



on Guitar

By J. Versluis

An indispensable reference guide when practicing basic harmony on guitar

Exploring Triads on Guitar

By Jeroen Versluis

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Foreword

One of the most underestimated and neglected parts of guitar playing is the study and use of triads. While they form the basis of any harmony, many guitar teachers and students seem to skip this topic for an in depth study. They often dive directly into the more advanced topics of harmony, because they have learned to “understand” the simple theory behind triads. They know how to construct them, which is pretty simple indeed, so why bother spending much time on such an easy topic? Well, here is why...

Believe me, after studying triads for one year, you have only scratched the surface. Although having a good understanding of what triads are, might sound and feel as a legitimate reason to continue to a more advanced topic, I strongly advice you to keep your patience. There is a whole new world to explore that can only be discovered if you actually start practicing to play (with) triads. It can be so beautiful and so much fun too. A decent knowledge of triads, like how they are spread all over the fret-board in multiple shapes, and how they work together, is essential for anyone who wants to create beautiful harmonic improvisations. They form the key to voice leading and harmonising melodies in many different ways. Also many famous guitar solo's make use of triads as well.

This book will show you a treasure that is hidden in plain sight, all of the time. Now that it has your attention, I hope you too will start seeing the beauty of it. Enjoy the reading and the practice time!

Kind regards,
Jeroen

Chapter 1 - Basic chords

Constructing triads

Distance		1		1	$\frac{1}{2}$		1		1		1	$\frac{1}{2}$	
Scale	c		d		e	f		g		a		b	c
Major 7 th	1				3			5				7	
Minor 7 th			2			b3				5			b7

This book does not discuss the theory behind triads and how triads can be build upon scales. I presume you already know this. If the above schema looks like 'abracadabra' to you, please get yourself a crash course on basic music theory first. Dr. Google is your friend here...

The major scale and its modes do provide us with only 4 chord types:

Maj 7	1	3	5	7
Dom 7	1	3	5	b7
Min 7	1	b3	5	b7
Min 7 b5	1	b3	b5	b7

Please note, that the numbers above, are relative to the root of the chord, not to the root of the scale or mode.

My rule of thumb, that I've gracefully borrowed from one of my musical heroes, is to "always practice the minimum" (Bill Evans). It doesn't mean that you do not need to practice a lot... What it does mean, is that the things you practice should be stupid simple. Therefor, the triads in this chapter will not include the 7th. This leaves us with only three types of diatonic triads in their most basic and simple form:

- 1) **major**
- 2) **minor**
- 3) **diminished**

Major chords: (1 3 5) (maj7, dom7)									
Scale degrees	1	2	3	4	5	6	7	1	2
Note names	c	d	e	f	g	a	b	c	d
Relative chord tones	1		3		5				
			1		3		5		
				1		3		5	

Minor chords: (1 b3 5) (min7)									
Scale degrees	1	2	3	4	5	6	7	1	2
Note names	c	d	e	f	g	a	b	c	d
Relative chord tones		1		b3		5			
			1	b3		5			
					1	b3		5	

Diminished chords: (1 b3 b5) (min7b5)									
Scale degrees	1	2	3	4	5	6	7	1	2
Note names	c	d	e	f	g	a	b	c	d
Relative chord tones						1	b3		b5

Although it might sound weird at the moment, I promise you that these three simple chord structures are more than enough to keep you busy for a very long time. Not only because there are many voicings available, but also because it is so much fun to just play triads. Specially the open voiced ones, since they sound really nice and they seem to automatically 'force' your ears to into the art of voice leading.

Focus on the melody / top notes!

On the next pages you will find many different chord diagrams. If you flip through these pages for the first time, just to get an overview, the number of diagrams might be a little intimidating. Please, do not worry and let them not overwhelm you. That is actually the worst thing that can happen to you right now. I actually wrote this book to prevent you from getting this reaction. When I once started to explore triads, I did not have this book available and indeed got stressed out because of the numerous possibilities. What I did, was spend many, many hours on finding a way to organize the way triads appear on the fret-board. Finally, I got it down and I believe this was the most natural way to order, memorize and to practice them. Because the top note stays the same, your brain gets only the smallest piece of information to process. You only have to focus on two changing notes now, instead of three. It is also good, because you will learn to see and hear the top note as the melody note. Learning chords this way, will also help you a lot in harmonising any melody in different ways.

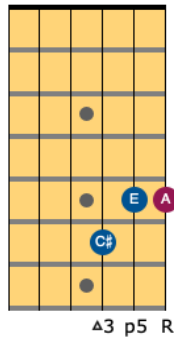
Remark: On the following next pages, you'll find multiple diagrams, showing you how to play each chord type in three inversions, using both the closed and open voicing. To present the concept as clear as possible, I have to start at the beginning of the guitar neck for each inversion with its specific top note. However, this is not possible if I use just a single chord as an example, since each adjacent inversion lies further on the neck. (If you don't know what I mean, I encourage you to check it out for yourself!) So, in order to make the diagrams easy to read, I had to use three different chords instead (A, F, D) So, there is no musical thought behind the combination of these chords. They just happen to be a good choice for illustration purposes only.

Major triads

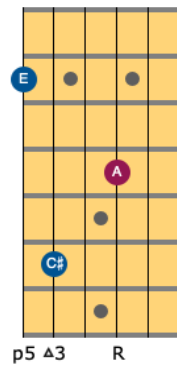
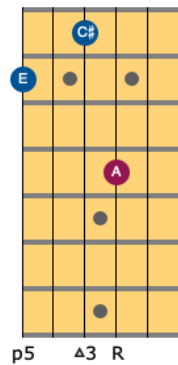
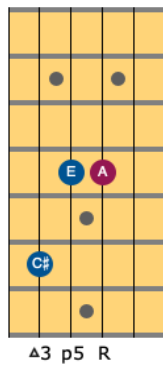
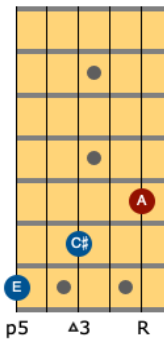
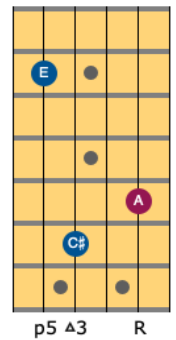
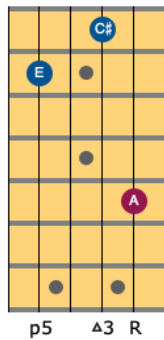
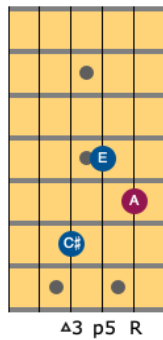
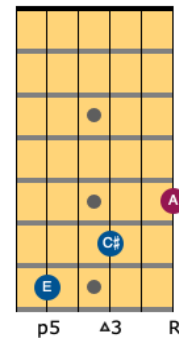
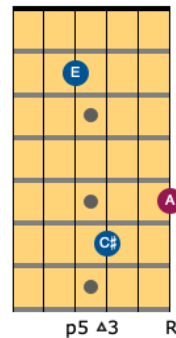
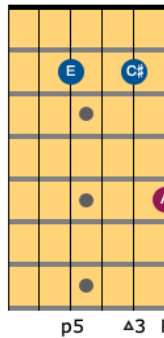
root on top

Major triads with the **root as melody/top** note on string 1, 2 & 3

Closed voicing
(1st inversion)

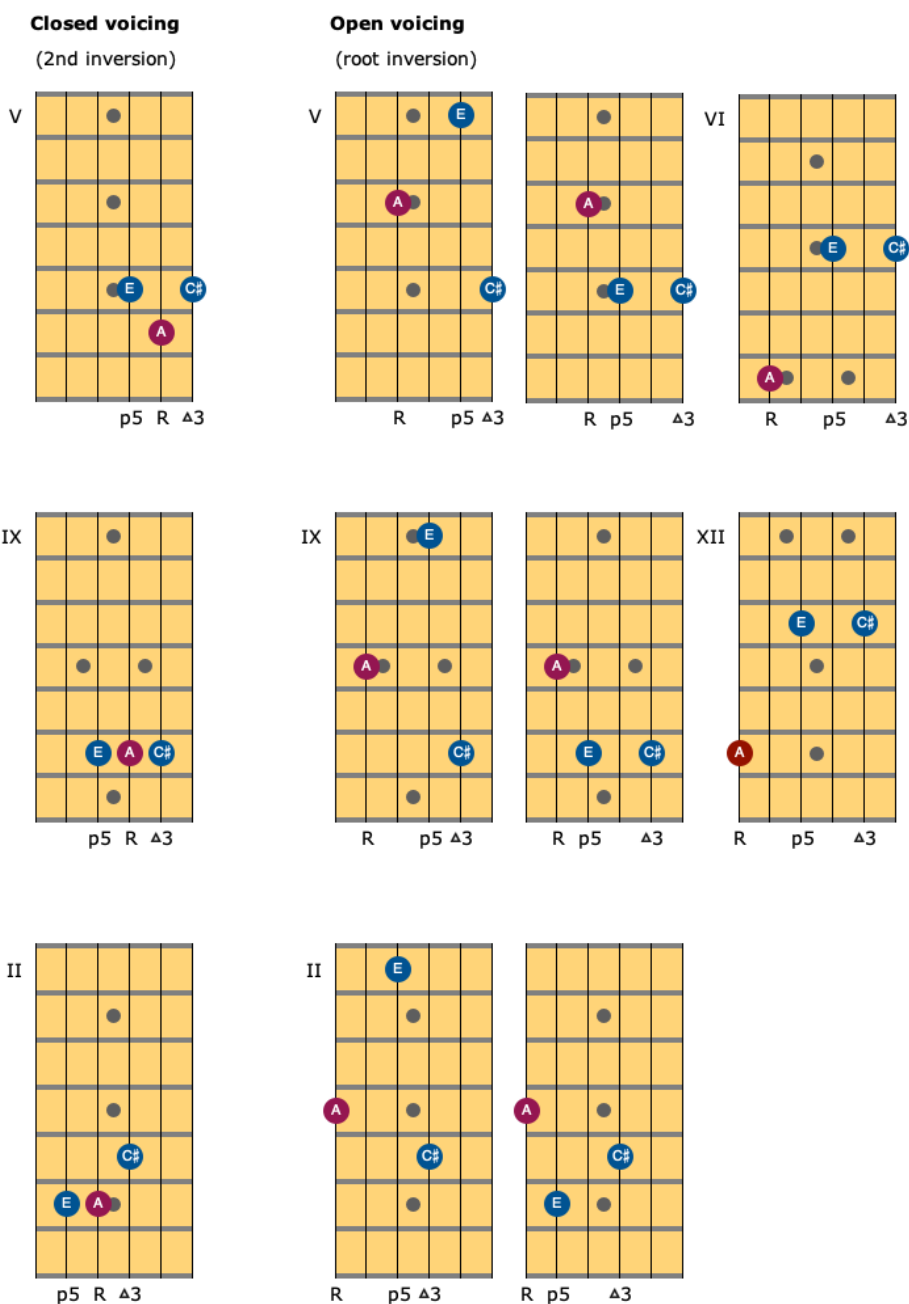


Open voicing
(2nd inversion)



3rd on top

Major triads with the 3rd as **melody/top note** on string 1, 2 & 3



5th on top

Major triads with the 5th as **melody/top note** on string 1, 2 & 3

Closed voicing
(root inversion)

VIII

R Δ3 p5

Open voicing
(1st inversion)

VIII

Δ3 R p5

R Δ3 p5

Δ3 R p5

Δ3 R p5

X

Δ3 R p5

R Δ3 p5

Δ3 R p5

Δ3 R p5

III

Δ3 R p5

VII

R Δ3 p5

VII

Δ3 R p5

Δ3 R p5

Harmonising a major scale with major triads only

A cool thing to explore, is how you can harmonize the major scale with only major triads. What is nice about this exploration, is that the options are limited. Normally, there are countless ways to harmonize a major scale (or any melody note in general). However, in this case there are only three options for each scale degree. The melody note can only be the root, the 3rd, or the 5th of a major chord. And each option uses a different inversion. As an example, lets use the C major scale and see what happens...

C Major scale
(harmonised with major chords only)

The diagram shows the C Major scale harmonized with major triads. The scale is written in 4/4 time. The notes are grouped into triads, and the corresponding guitar fretboard diagrams and tablature are provided for each triad. The triads are: C/E (I), A♭/E♭ (bVI), F (IV), D/F♯ (II), B♭/F (bVII), G (V), E/G♯ (III), C/G (I), A (VI), F/A (IV), D♭/A♭ (bII), B♭ (bVII), G/B (V), E♭/B♭ (bIII), C (I), A/C♯ (VI), F/C (IV), D (II), B/D♯ (VII), G/D (V), and E (III).

If it is still not entirely clear to you, where the notes in this example come from, please have a look at only the top notes. The top notes of each adjacent bar are raised with just a single step. Together they form the major scale. The 1st note of the C major scale is 'c'. The note 'c' is the:

- root of the C major chord, which is the 1 chord ('I') of the scale.
- 5th of the F major chord, which is the 4 chord ('IV') of the scale.
- 3rd of the A♭ major chord, which is the b6 chord ('(bVI)') of the scale or "Chromatic mediant"*.

This concept is applied to all other top notes as well. Get the picture now?

** Although this chord does not really fit into the scale naturally, it can be used and sounds really nice. Many people will describe this sound as “majestic”.*

Explanation of the notation:

Between the stave and the tab notation you’ll find a Roman numeral for each chord. The notation of chords as Roman numerals is quite common. The number symbolises the scale degree on which the chord is constructed. For major chords we use capitals, and minor chords are written as lower case. In the example above, the chords that fall outside of the scale, are surrounded by brackets just for clarity.

C major scale: c d e f g a b
Diatonic chords: I ii iii IV V vi vii°
(of the major scale)

Inversions can be referred to, or notated in different ways:

1) **The classical way**, which originates from the “**Figured bass**” notation system, uses the following abbreviations:

	is short for	root inversion*
6	is short for	1st inversion
6/4	is short	2nd inversion

** The root inversion simply has no symbol.*

The numbers correspond to the intervals above the lowest chord tone. The root inversion has a 3rd and a 5th above the bottom note. It was conventional to not mention these specific intervals. The 1st inversion has a 3rd and a 6th above the lowest note. Again, the 3rd is not mentioned by convention, so only

the 6th is written down. The 2nd inversion has a 4th and a 6th, and is thus written as 6/4.

Therefore, the first bar of our example could be written as follows:

- 1 as root = I 6
- 1 as 3rd = bVI 6/4
- 1 as 5th = IV

2) **The modern way**, which is commonly used in Pop and Jazz music, is to use “**Slash chords**”. A slash chord is simply the chord name, followed by a “/” (the slash) and the name of the bass note. In our example you can find slash chords above the chord diagrams.

What can you learn from the previous example?

When you leave out all of the non-diatonic chords, you are left with the following options:

C Major scale
(harmonised with diatonic major chords only)

The diagram shows the C Major scale harmonized with diatonic major chords. The scale is written in 4/4 time. The chords are: C/E (I), F (IV), G (V), C/G (I), F/A (IV), G/B (V), C (I), F/C (IV), and G/D (V). Each chord is accompanied by a guitar diagram and a TAB line.

Chord	Scale Degree	Root	3rd	5th	7th
C/E	I	C	E	G	
F	IV	F	A	C	
G	V	G	B	D	
C/G	I	C	E	G	
F/A	IV	F	A	C	
G/B	V	G	B	D	
C	I	C	E	G	
F/C	IV	F	A	C	
G/D	V	G	B	D	

The rule is fairly simple:

1: I or IV | 2: V | 3: I | 4: IV | 5: V or I | 6: IV | 7: V

The bold numbers are the scale degrees of the major scale. The Roman numerals are the diatonic major chords that can be used to harmonise a particular scale degree.

This is very valuable information, and also easy to remember. Take your time to practice it. Sing a simple melody or song and try to harmonise it instantly. By doing this, you are simultaneously practicing your awareness of pitch, scale degrees and harmony. For each melody note, you must know exactly what scale degree it is. Only then, you will be able to apply the above rule, and put the right chords underneath. When you start practicing for the first time, this will certainly take a large amount of your brainpower. That is totally normal. But after doing this for some time, you'll notice that you do not need to think about it so much anymore. The thinking shifts gradually to feeling and intuition. Remember, this is exactly what practicing is all about. In the first place, music theory is just a tool that can help you to better understand the things you hear or (would) like to play. Once you understand something, it will be much easier to apply it in many different situations. It becomes easier to make connections and associations in your head between the things you can already play and the new stuff you are practicing. It also becomes easy to create your own exercises to target specific parts of your playing and techniques. You will practice more efficiently and develop yourself much faster than before. The following example shows how the rule is applied to harmonise a melody everybody knows: "**Happy birthday!**" Only major chords are used to accompany the melody notes. Also notice that it isn't necessary to put a chord underneath every note of the melody.

Happy birthday

Once you get this sequence into your fingers and ears, you can start to vary a bit. Start with some simple variations. Just change a single chord with a non-diatonic version from our harmonised scale like in the following examples:

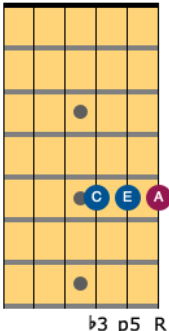
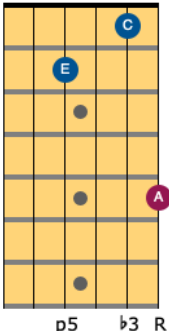
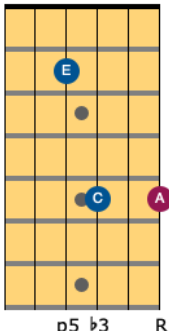
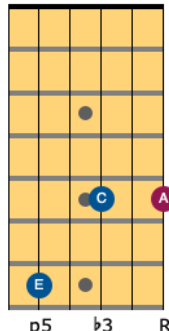
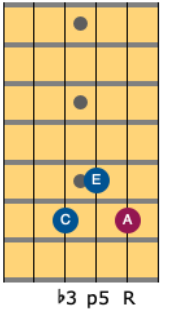
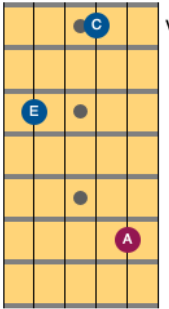
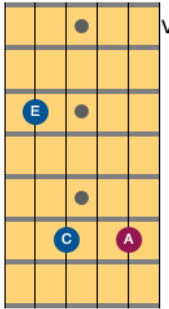
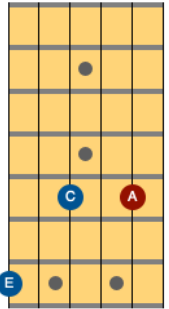
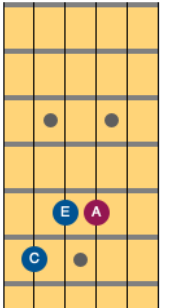
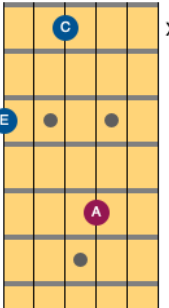
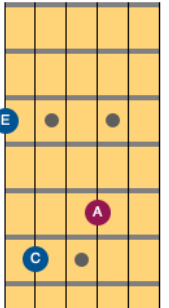
- The V-chord (G) is replaced by a $bVII$ -chord (Bb).
- The I chord (C) is replaced by a III -chord (E), followed by a VI -chord (A).

Later on you can do more advanced harmonisations, but remember that you will learn the most if you change only 1 or 2 things from something that you are already familiar with. If you change too much at once, you will most likely forget everything you practice. This would make the effort you've put into it completely worthless. Only practice the easy stuff!

Minor triads

root on top

Minor triads with the **root as melody/top note** on string 1, 2 & 3

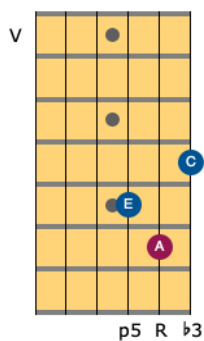
Closed voicing (1st inversion)		Open voicing (2nd inversion)			
					
					
					

3rd on top

Minor triads with the 3rd as melody/top note on string 1, 2 & 3

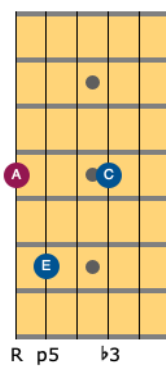
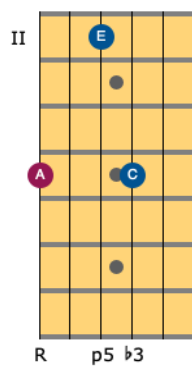
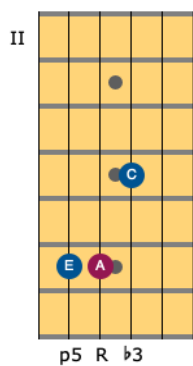
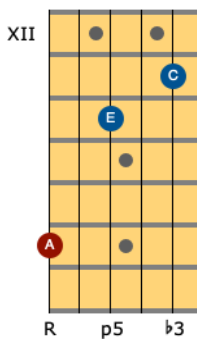
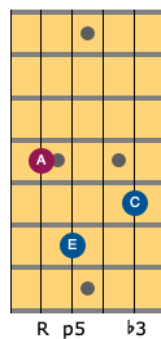
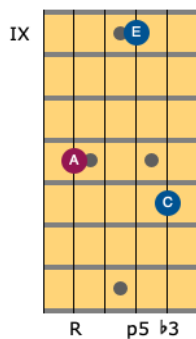
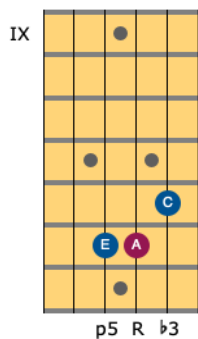
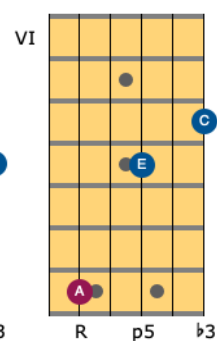
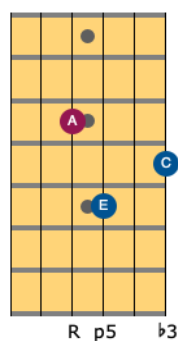
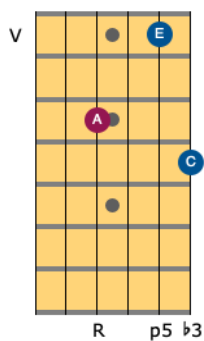
Closed voicing

(2nd inversion)



Open voicing

(root inversion)



5th on top

Minor triads with the 5th as melody/top note on string 1, 2 & 3

Closed voicing
(root inversion)

VIII

R b3 p5

Open voicing
(1st inversion)

VIII

b3 R p5

X

b3 R p5

R b3 p5

b3 R p5

b3 R p5

III

b3 R p5

VII

R b3 p5

VII

b3 R p5

b3 R p5

Harmonising a major scale with minor chords only

Instead of using major chords*, the C major scale in the example below, is now harmonised with just minor chords only. For each bar the melody (or scale tone) is harmonised as respectively being the root, third and fifth of a minor chord.

* "Harmonising a major scale with major triads only" shows a more detailed explanation about the concepts and notations that are being used in the examples below.

C Major scale
(harmonised with minor chords only)

The following table summarizes the chords and scale tones for each measure in the C Major scale harmonized with minor chords only:

Measure	Chord	Scale Tone
1	Cm/E \flat	(i)
2	Am/E	vi
3	Fm	(iv)
4	Dm/F	ii
5	Bm/F \sharp	(vii)
6	Gm	(v)
7	Em/G	iii
8	C \sharp m/G \sharp	(\sharp i)
9	Am	vi
10	Fm/A \flat	(iv)
11	Dm/A	ii
12	B \flat m	(bvii)
13	Gm/B \flat	(v)
14	Em/B	iii
15	Cm	(i)
16	Am/C	vi
17	F \sharp m/C \sharp	(\sharp iv)
18	Dm	ii
19	Bm/D	(vii)
20	G \sharp m/D \sharp	(\sharp v)
21	Em	iii

When you leave out all of the non-diatonic chords, you are left with the following options:

C Major scale

(harmonised with diatonic minor chords only)

The diagram shows the C Major scale harmonized with diatonic minor chords. The first system covers measures 1 through 4, and the second system covers measures 5 through 7. Each measure includes a guitar fretboard diagram, a musical staff with a treble clef, and a guitar tablature line. The chords used are Am/E, Dm/F, Em/G, Am, Em/B, Am/C, Dm, and Em.

Measure	Chord	Scale Degree	Tab 1	Tab 2	Tab 3
1	Am/E	vi	1	2	
2	Dm/F	ii	3	2	3
3	Em/G	iii	0	0	0
4	Am	vi	0	1	2
5	Em/B	iii	3	5	4
6	Am/C	vi	5	5	5
7	Dm	ii	5	6	7
8	Em	iii	7	8	9

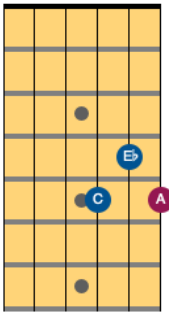
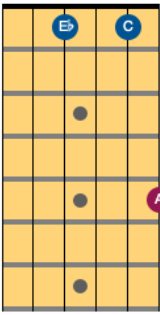

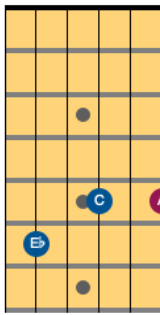
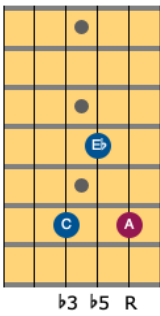
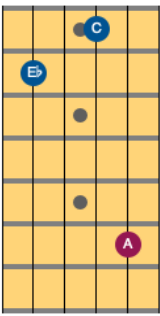
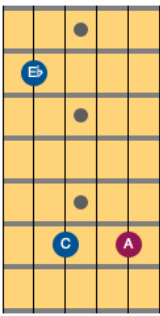

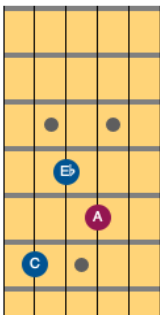
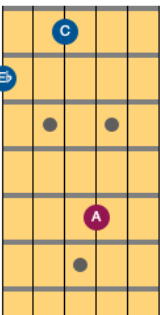
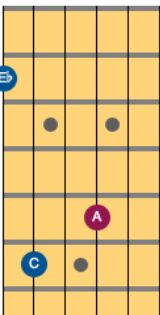
The rule for minor chords is:

1: vi | 2: ii | 3: iii or vi | 4: ii | 5: iii | 6: vi or ii | 7: iii

Diminished triads

root on top

Diminished triads with the **root as melody/top note** on string 1, 2 & 3

	Closed voicing (1st inversion)	Open voicing (2nd inversion)		
				
V				
X				

3rd on top

Diminished triads with the 3rd as melody/top note on string 1, 2 & 3

Closed voicing
(2nd inversion)

IV

b5 R b3

Open voicing
(root inversion)

IV

R b5 b3

VI

R b5 b3

VIII

b5 R b3

VIII

R b5 b3

XII

R b5 b3

b5 R b3

R b5 b3

R b5 b3

5th on top

Diminished triads with the 5th as melody/top note on string 1, 2 & 3

Closed voicing
(root inversion)

VIII

R b3 b5

Open voicing
(1st inversion)

VIII

b3 R b5

X

b3 R b5

R b3 b5

b3 R b5

b3 R b5

III

b3 R b5

VII

R b3 b5

VII

b3 R b5

b3 R b5

Putting it all together

Here is an etude that combines several shapes of the three chord types that we have seen so far. It demonstrates how you can use them in very a musical way. Although you'll only hear three notes simultaneously at most, the sound will still be full, warm and rich. The arrangement uses only triads with an open voicing to create some 'air'...

Air on the G String

(Excerpt - in triads)

Music by J.S. Bach

guit.

D

F#m/C#

Bm

D/A

G

E/G#

A

A/G

F#dim

Am/E

B/D#

B

The musical score is presented in four systems, each containing a treble clef staff with a key signature of two sharps (F# and C#) and a 4/4 time signature. Below each staff are three lines representing guitar strings: Treble (T), Middle (A), and Bass (B). Fingerings are indicated by numbers 1-4 on the staff and numbers 0-10 on the string lines. Chord diagrams are provided for measures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12. The chords are: D (measure 1), F#m/C# (measure 2), Bm (measure 3), D/A (measure 4), G (measure 5), E/G# (measure 6), A (measure 7), A/G (measure 8), F#dim (measure 9), Am/E (measure 10), B/D# (measure 11), and B (measure 12). The score demonstrates how these triads are voiced on the guitar strings to create a full, warm sound.

Em **G/D** **A/C#**

13 14 15

T 8 8 8 8 9 9 9 9

A 9 9 9 9 7 7 7 7

B 7 7 10 10 9 9 9 9

A **D** **F#m/C#**

16 17 18

T 6 6 7 7 7 7

A 7 7 7 7 4 4

B 5 5 5 5 4 4

Bm **D/A** **E/G#** **E(no5)** **A** **D**

19 20 21

T 3 3 4 2 2 2

A 4 4 2 1 2 2

B 2 0 4 0 5 5

C#m(no5)/E **E** **A5**

22 23

T 2 0 2

A 2 1 2

B 0 0 0

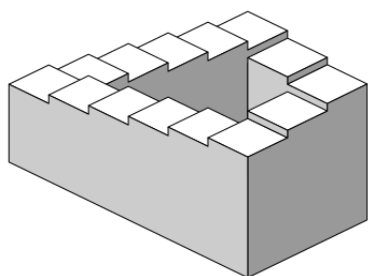
Chapter 2 - 7th chords

In the previous chapter we have explored how to play the most basic triads with just the root, 3rd and 5th note of any chord. Now it is time to add the 7th note as well. However, with the addition of just one extra note, we will get many more options to play a single chord. This is because an extra inversion becomes possible:



Organisation is crucial

Since the number of chord possibilities keeps growing, it also becomes more and more important to find ways for yourself to organize them. A logical organisation of chords is the only way to keep an overview, which is required to define a good strategy to practice and memorize all the material.



As you may have found out by yourself already, is that organising chords can be a real challenge. Chords (and music in general) can be organised in many different ways. In the previous chapter, the triads were organised by

their top notes, but that was just one option. Although I did it on purpose, I also could have organised them by fret-board position, string-groups or by inversions, etc. My point is that I want to challenge you to find different ways for yourself in reorganising the chords you already know and to go over them again and again by looking at them from different perspectives. Each time you look at them in a different context than before, you're insight into the material will increase drastically.

When I was younger, I primarily identified any chord by its bottom note. The bottom notes were my only reference. That is perfectly fine in terms of muscle memory, since your fingers only need to memorize a shape on the fret-board. Your fingers are dumb and don't bother about any logic. In terms of musicianship it is a rather poor way of having your chords memorised. As a musician you should be more concerned about musical logic than about the chord shapes. You must learn to trust your fingers in knowing the chord shapes, so you can provide them with the logic as you direct them to pick the right shapes at the right moment. When you play music, you are focused on the melody most of the time. When you play any harmony, you're attention will automatically be attracted to the top notes, even if you resist. Therefore it definitely makes sense to learn chords from their top notes as well. Specially for those who'd like to play solo guitar or "chord-melody".

Common 7th chord shapes

The next 4 pages show multiple ways to play the following chord types:

1. **Major seven:** 1 3 5 7
2. **Minor seven:** 1 b3 5 b7
3. **Dominant seven:** 1 3 5 b7
4. **Half diminished:** 1 b3 b5 b7 (aka “minor seven flat five”)

Please, take a minute to have a quick look at them. Notice how the chords are organised. The first page has the bottom notes on the 6th string. The second page has the bottom notes on the 5th string and the third pages has them on the 4th. Finally, the fourth and last page are using the exact same type of voicing as the first page, but now with the bottom note on the 5th string. Again, this is just one way of looking at these chords. Can you see other ways in which you organize these chords? For example, what would the sheet look like if you had to group the chords by their top notes? Or what would happen if you play through the sheet vertically instead of horizontally? You’ll get this little chord progression:

Gmaj7	Am7	D7	F#m7b5	
I	ii	V	vii	

Try to figure out which voicings are located close to each other on the fret-board. Often these are the chords that blend naturally into each other in terms of sound and fingering. Take notes of every discovery you make. Specially of those things that sound best to your ears. These are the things you will remember very easily and what's even more important, these are the sounds that will finally make you recognisable as a guitar player. They’ll form the basis of your personal sound, which is based on your ears preferences.

Bottom note on the 6th string

guit.

	G^{Δ}	G^{Δ}/B	G^{Δ}/D	$G/F^{\#}$
Diagram				
Musical Notation				
TAB	3 4 4 3	7 7 5 7	8 11 9 10	12 12 12 14

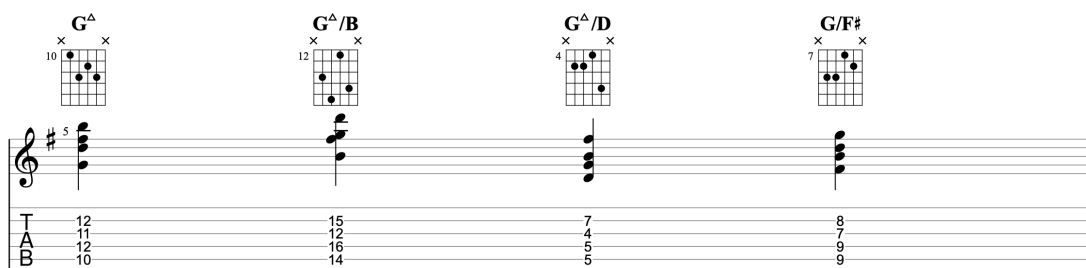
	$A\text{m}7$	$A\text{m}7/C$	$A\text{m}7/E$	$A\text{m}7/G$
Diagram				
Musical Notation				
TAB	5 5 5 5	8 9 7 8	10 12 10 12	1 2 2 3

	$D7$	$D7/F^{\#}$	$D7/A$	D/C
Diagram				
Musical Notation				
TAB	10 11 10 10	13 14 12 14	3 5 4 5	7 7 7 8

	$F^{\#o}$	$F^{\#o}/A$	$F^{\#o}/C$	$F^{\#o}/E$
Diagram				
Musical Notation				
TAB	1 2 2 2	5 5 4 5	7 9 7 8	10 11 10 12

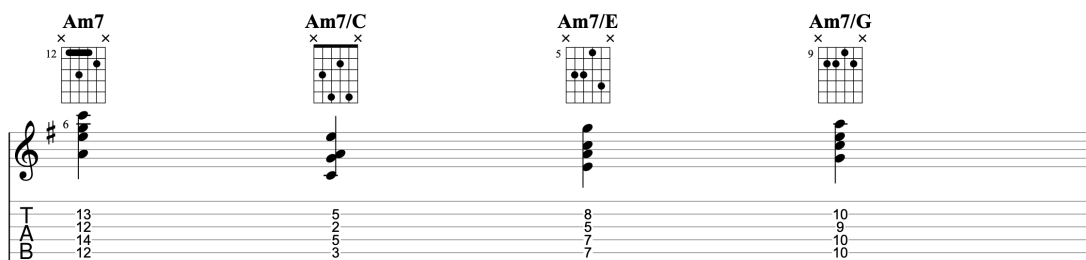
Bottom note on the 5th string

G^Δ **G^Δ/B** **G^Δ/D** **G/F#**



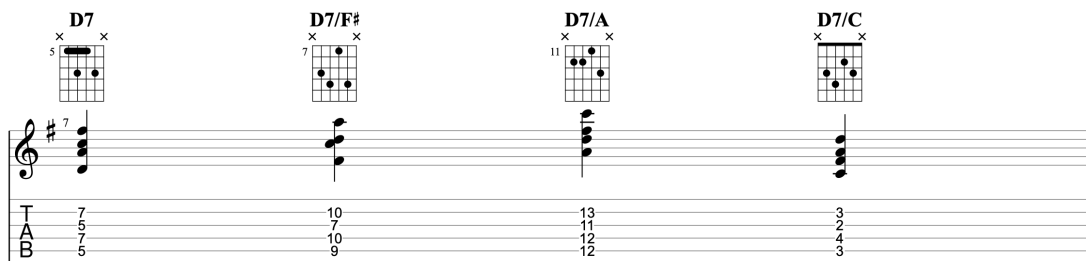
T	12	15	7	8
A	11	12	4	7
B	10	16	5	9

Am7 **Am7/C** **Am7/E** **Am7/G**



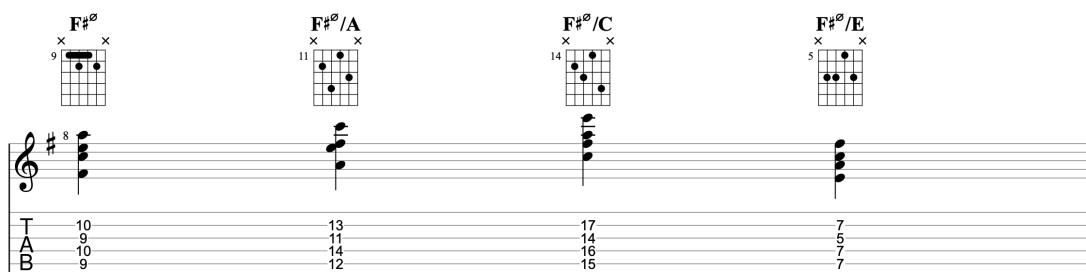
T	13	5	8	10
A	12	2	5	9
B	14	5	7	10

D7 **D7/F#** **D7/A** **D7/C**







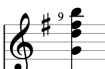



T	7	10	13	3
A	5	7	11	2
B	5	9	12	3





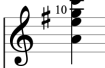



F#^Δ **F#^Δ/A** **F#^Δ/C** **F#^Δ/E**















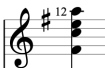



T	10	13	17	7
A	9	11	14	5
B	10	14	16	7

Bottom note on the 4th string

G^Δ	G^Δ/B	G^Δ/D	G/F#
			
			
TAB	TAB	TAB	TAB
7 7 7 5	10 8 11 9	14 12 12 12	3 3 4 4

Am7	Am7/C	Am7/E	Am7/G
			
			
TAB	TAB	TAB	TAB
8 8 9 7	12 10 12 10	3 2 2 2	5 5 5 5

D7	D7/F#	D7/A	D7/C
			
			
TAB	TAB	TAB	TAB
14 13 14 12	5 3 5 4	8 7 7 7	10 10 11 10

F#^Δ	F#^Δ/A	F#^Δ/C	F#^Δ/E
			
			
TAB	TAB	TAB	TAB
5 5 5 4	8 7 5 7	12 10 11 10	2 1 2 2

Bottom note on the 5th string

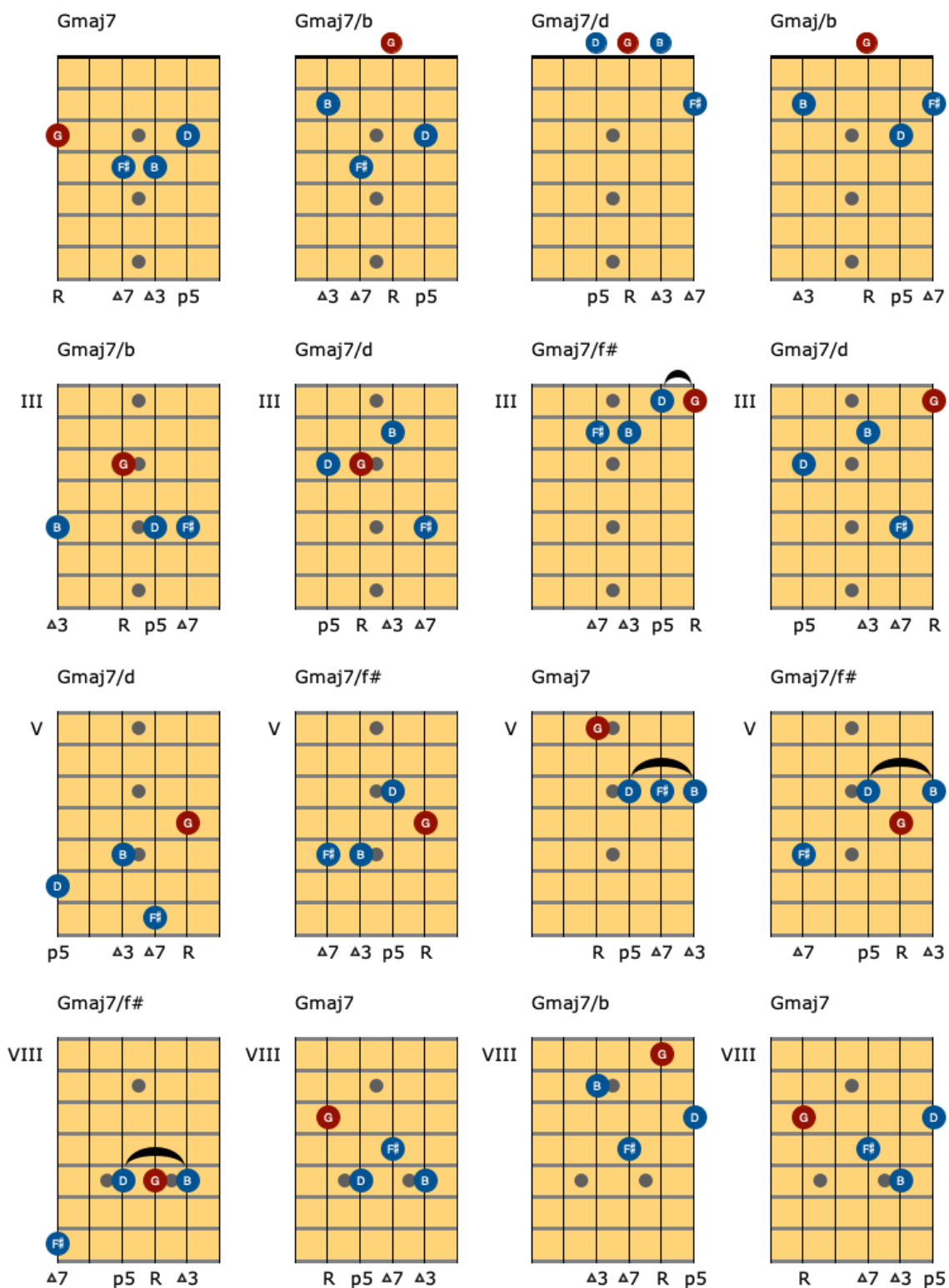
G^Δ	G^Δ/B	G^Δ/D	G/F#
T 10	14	3	7
A 12	15	7	8
B 11	12	4	7
B 10	14	5	9

Am7	Am7/C	Am7/E	Am7/G
T 12	3	5	8
A 13	5	8	10
B 12	2	5	9
B 12	3	7	10

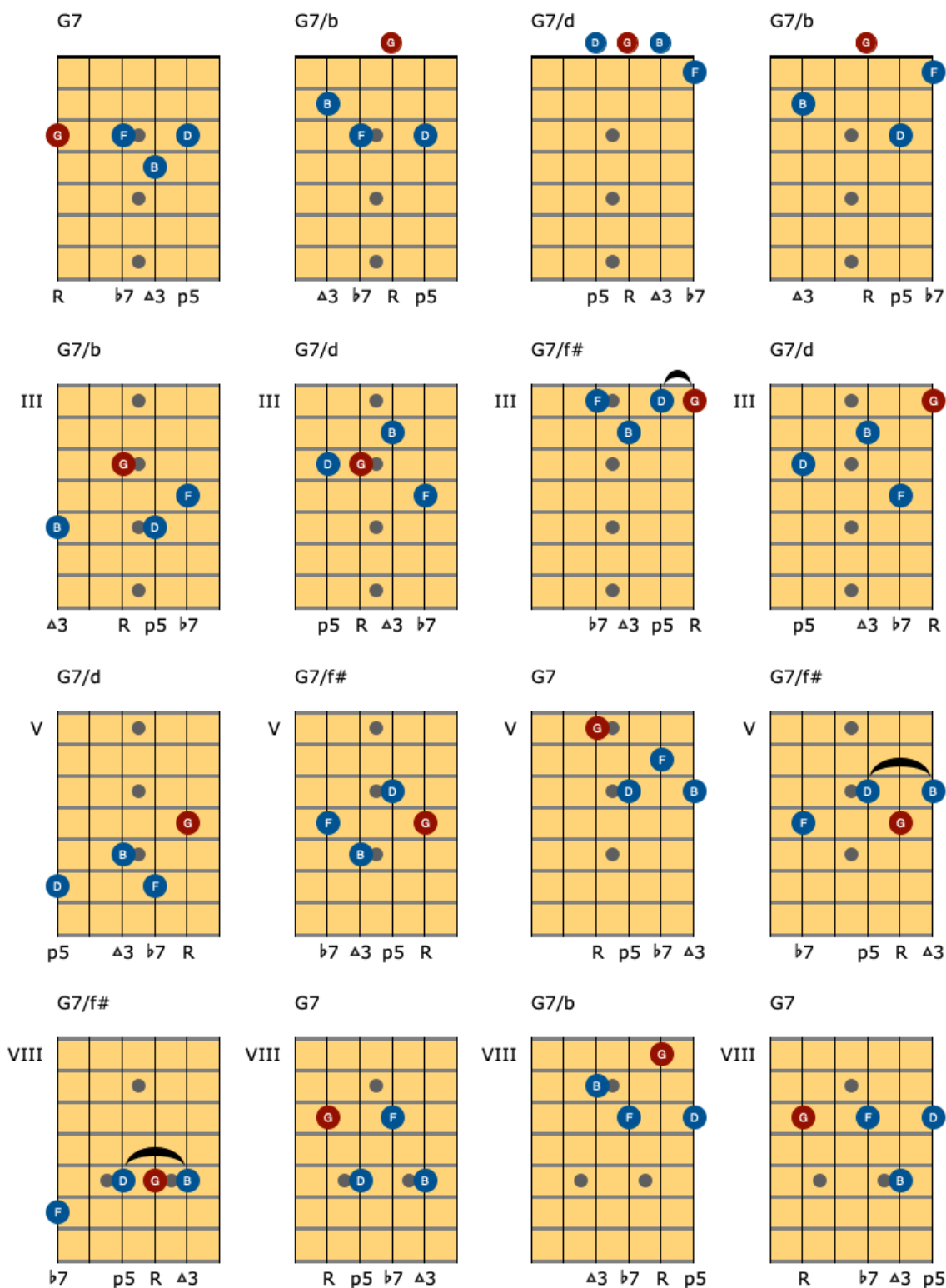
D7	D7/F#	D7/A	D7/C
T 5	8	10	2
A 5	10	13	3
B 5	7	11	2
B 5	9	12	3

F#^Δ	F#^Δ/A	F#^Δ/C	F#^Δ/E
T 8	12	14	5
A 10	13	17	7
B 9	11	14	5
B 9	12	15	7

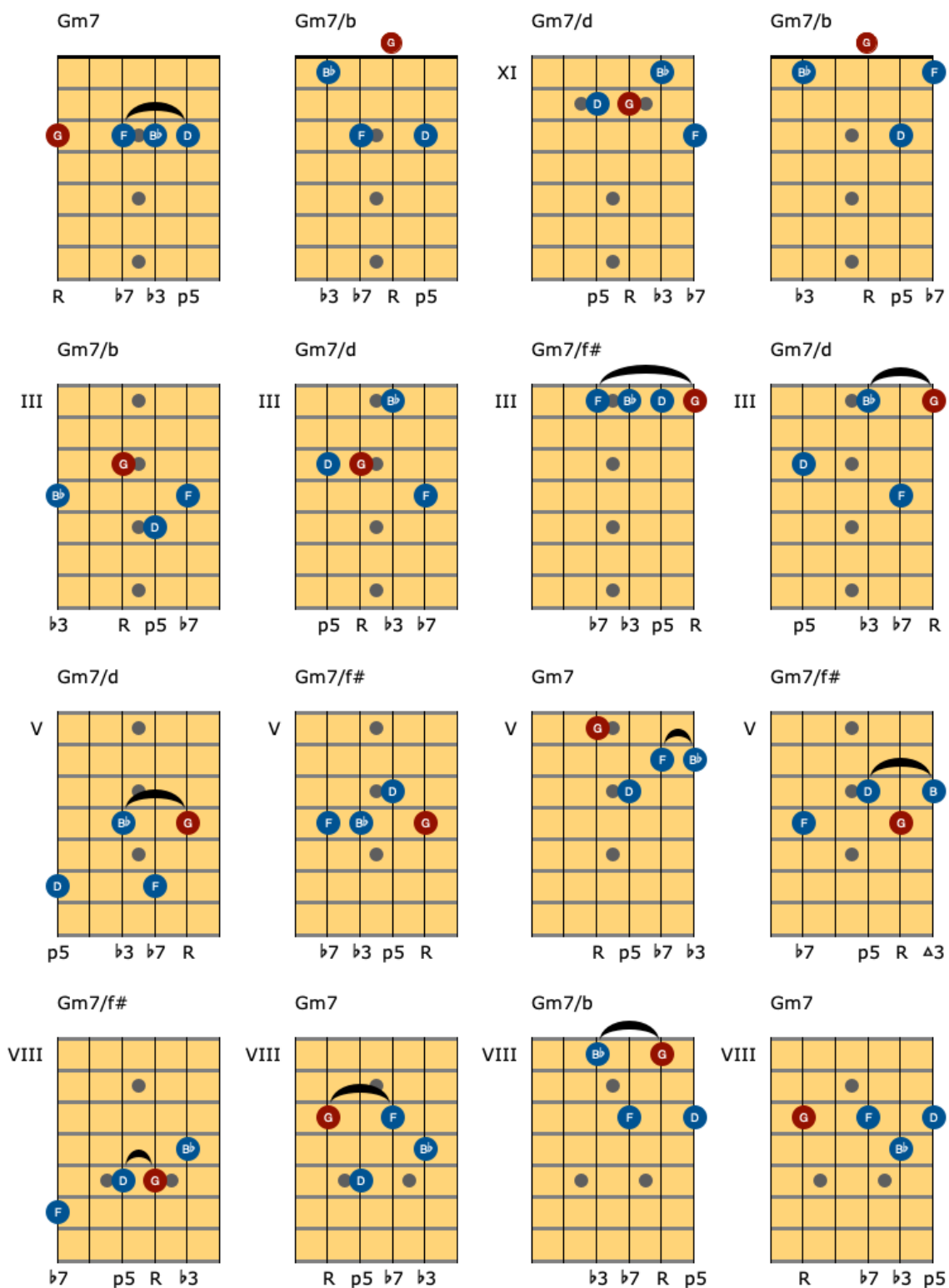
Major seven chords on four string sets



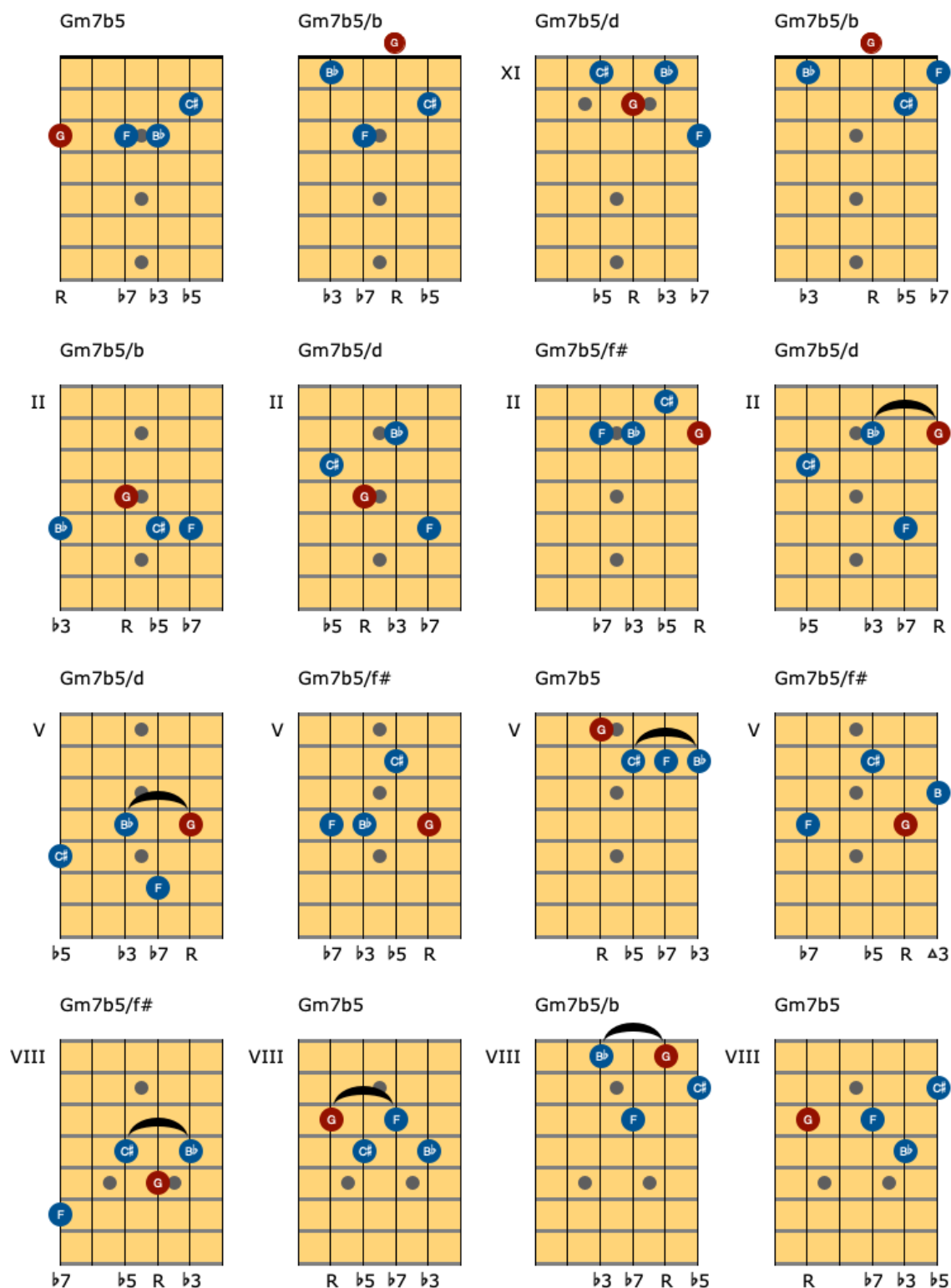
Dominant seven chords on four string sets



Minor seven chords on four string sets



Half diminished chords on four string sets



7th chord triads - closed voicing

Now that we know how to play each different type of four-note seventh chords in 16 ways, we are prepared to make the next step: **7th chord triads**. Because a **triad is a 3-note chord**, we have to leave out one note for each triad. This has two major consequences:

- a) most chord shapes become a lot easier to play
- b) the number of available shapes is doubled ($16 * 2 = 32$)

With 7th chord triads, each inversion has two possible configurations in terms of included notes. Since we are now going to focus on closed voiced triads, the order in which the notes are placed, is fixed: 1-3-5-7

However, since were talking about 7th chord triads the 7th note must be included, which means that 1-3-5 is not an option. Instead we must use 1-3-7. This leaves us with the following possibilities for each inversion:

	possibility 1	possibility 2
root inv.	1 3 7	1 5 7
1st inv.	3 5 7	3 7 1
2nd inv.	5 7 1	5 7 3
3rd inv.	7 1 3	7 3 5

The result of this exploration and how it translates to the neck of your guitar is demonstrated later on. But I think you'll agree that at this point the number of new chord shapes that are available to be memorised tends to become a bit overwhelming. Therefore, it is best to search for a logical way by which you can breakdown the total amount of new material into smaller pieces. My strategy to do this, is by making use of **string groups** and to identify **primary shapes**. Both concepts are explained below.

String groups

A string group (*from now on abbreviated to: SG*). Is an important and very handy concept that allows you to talk about multiple strings with just one

word. A string group can have multiple configurations, like:

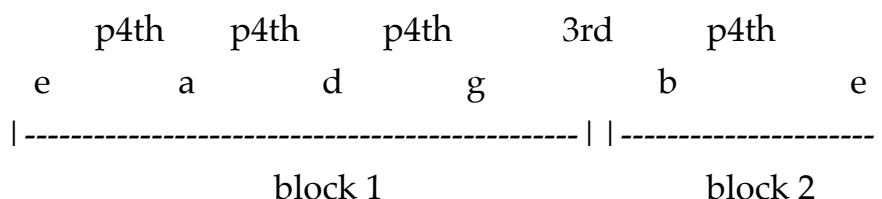
SG1(e-a) or SG1(e-d) or SG1(d-g-b-e)

When using string groups it is important to always be clear about which strings are in your groups. For close voiced triads it is very simple. The only options available, are:

SG1(e-a-d) SG2(a-d-g) SG3(d-g-b) SG4(g-b-e)

String blocks

When you look at the guitar in concert tuning, there are two “blocks” of strings.

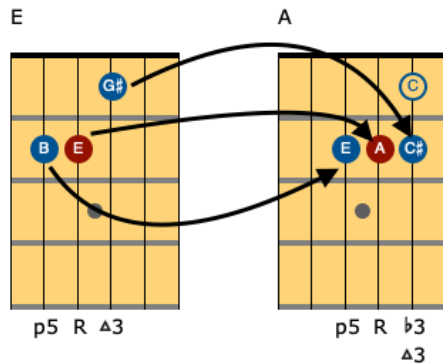


If you look at this in terms of pitch, you can visualize it like this:

e a d g b e

Block 2	o o	(- ½ step)
Block 1	o o o o . .	

In other words, block 2 sounds a half step too low in comparison to block 1. This means that whenever you have a chord shape that fits entirely into block 1, and you want to move it up, so that it falls into both block 1 & 2, you’ll need to compensate the pitch of the notes in block 2 by raising them with a half step. The following example illustrates this phenomenon.



If you'd just copy the shape of the E chord from SG2 and paste it onto SG3, it doesn't become an A major chord. It becomes an A minor instead, because the 3rd of the A chord now falls into string block 2. This means the 3rd of the new major chord shape, will sound a half step too low. To compensate this, you'll need to raise the 3rd with a half step, so the note 'c' becomes a 'c#' which is the 3rd of A major.

Primary and derived chord shapes

One day I decided to raise block 1 as the standard (since it has the most strings), and have started to refer to the chord shapes that fit entirely into this block as "**primary shapes**". Chords that fall into both blocks I have called "**derived shapes**". So in the above diagrams, the E-chord uses the primary shape for a closed voiced second inversion triad, since it completely fits into block 1. And the A-chord uses its derived shape since it falls into both block 1 & 2. As you can see, the top note of the A-chord is raised with a half step to compensate the lower tuning of the 'b' and 'e' string.

Major 7th triads - Primary shapes

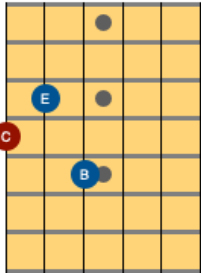

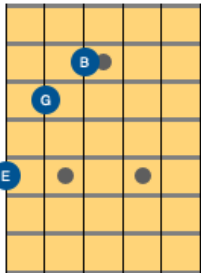
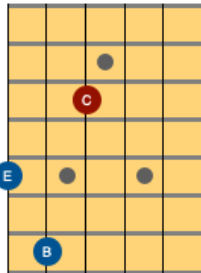
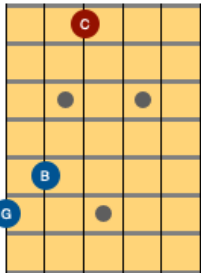
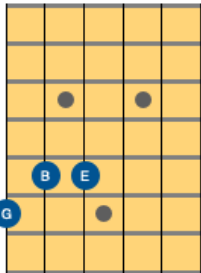
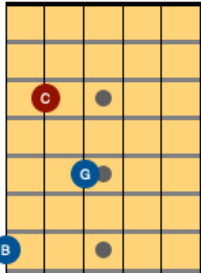
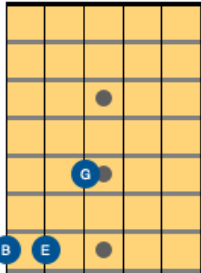
The next page shows all primary shapes for a major seven triad. Notice how a minor triad from chapter one, can now appear as a major seven chord triad. This is, because a Cmaj7 chord is basically an E minor chord with a 'c' in the bass.

<u>c</u>	d	e	f	g	a	b	c
1	3	5	7				
			—		—		
	1	b3	5				

Cmaj7

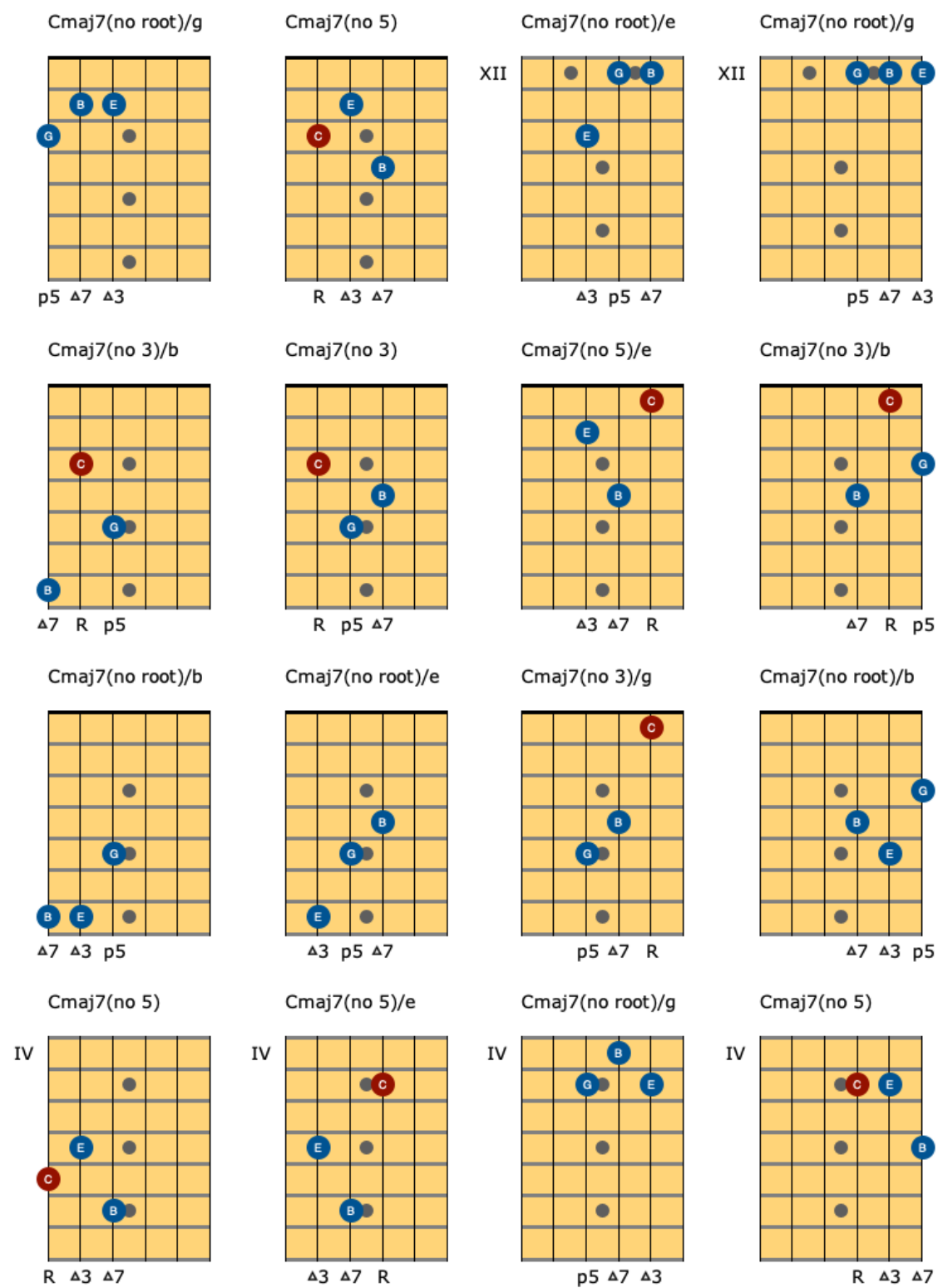
Em or Cmaj7(no root)

When you start practicing the inversions on your instrument, try to focus on small groups of shapes. E.g. a single inversion over multiple string sets or all inversions on a single string set, etc. Limit the possibilities, and keep things extremely simple.

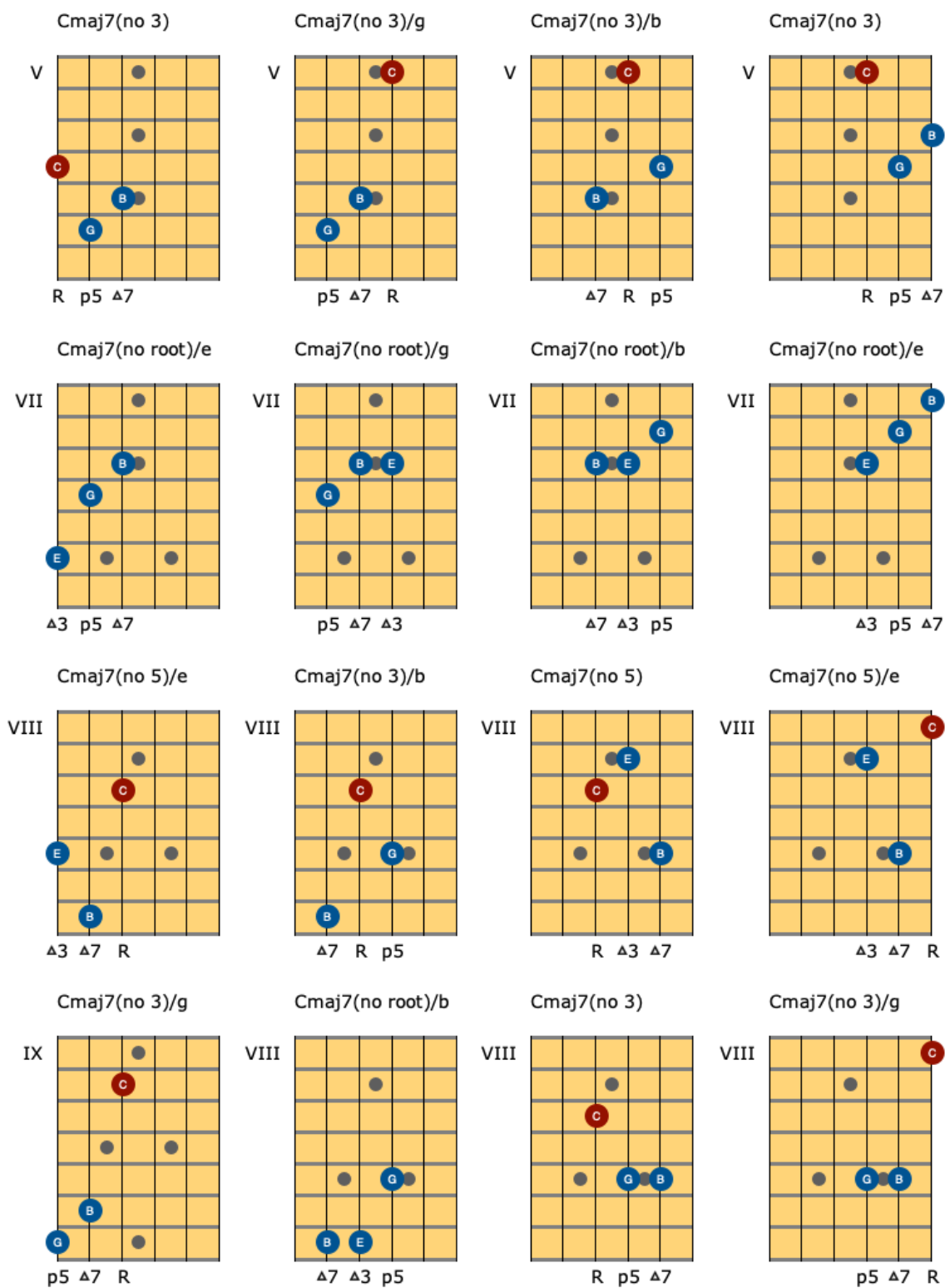
Root inversion		Cmaj7(no 5)	Cmaj7(no 3)
	V	 R Δ3 Δ7	 R p5 Δ7
1st inversion		Cmaj7(no root)/e	Cmaj7(no 5)/e
	VIII	 Δ3 p5 Δ7	 Δ3 Δ7 R
2nd inversion		Cmaj7(no 3)/g	Cmaj7(no root)/g
	X	 p5 Δ7 R	 p5 Δ7 Δ3
3rd inversion		Cmaj7(no 3)/b	Cmaj7(no root)/b
		 Δ7 R p5	 Δ7 Δ3 p5

Major 7th triads - all string sets

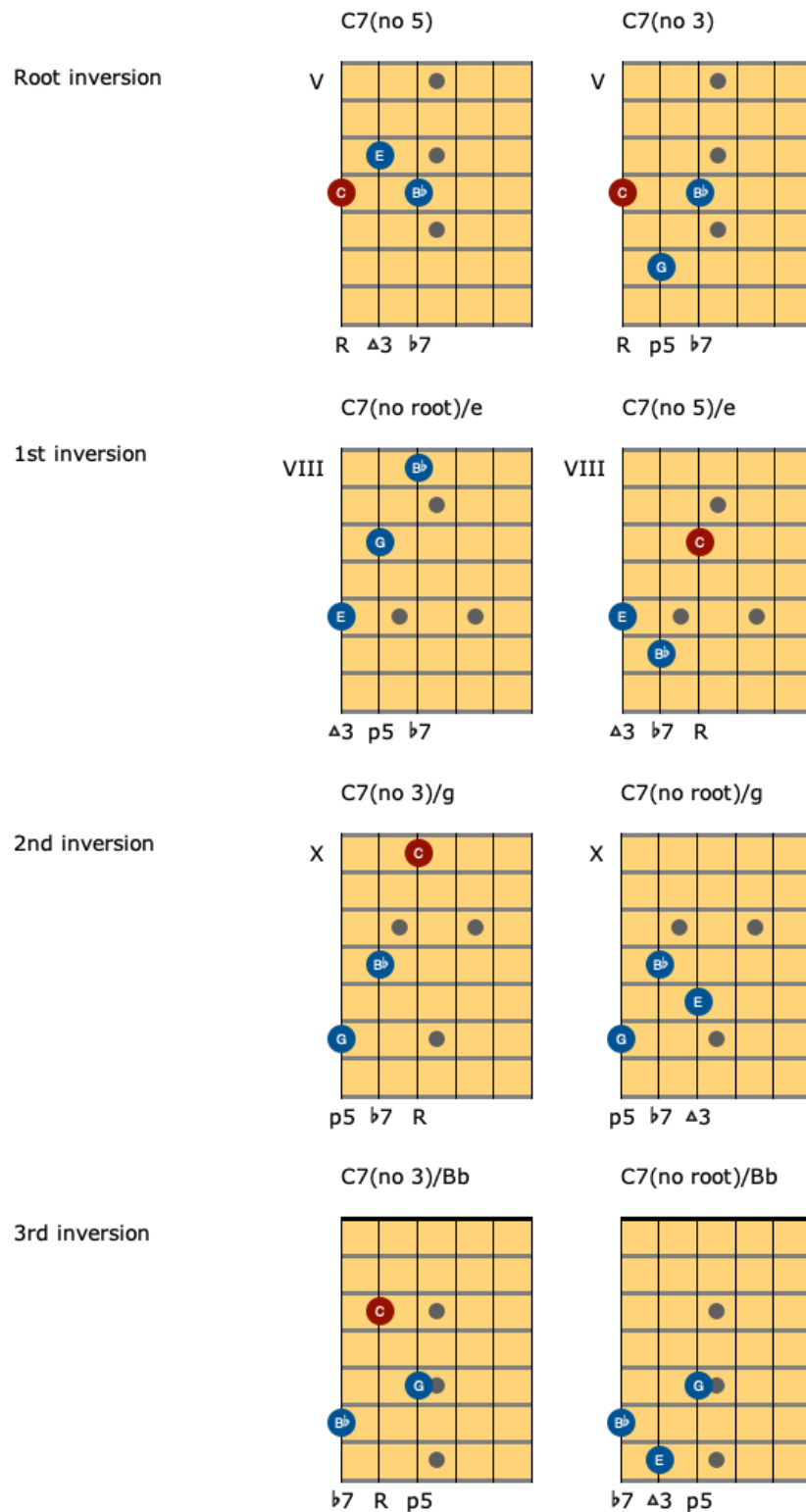
These voicings have a very distinguishable sound and are very useful in Jazz comping. When you listen to **Jim Hall**, you will hear these sounds very often. A good example is the song "**Bossa Antigua**" from Paul Desmond's album "Bossa Antigua". Paul's sax is mixed entirely onto one side and Jim Hall entirely onto the other. This is great since it allows you to mute Paul completely, so you'll hear Jim even better. (Sorry Paul...)



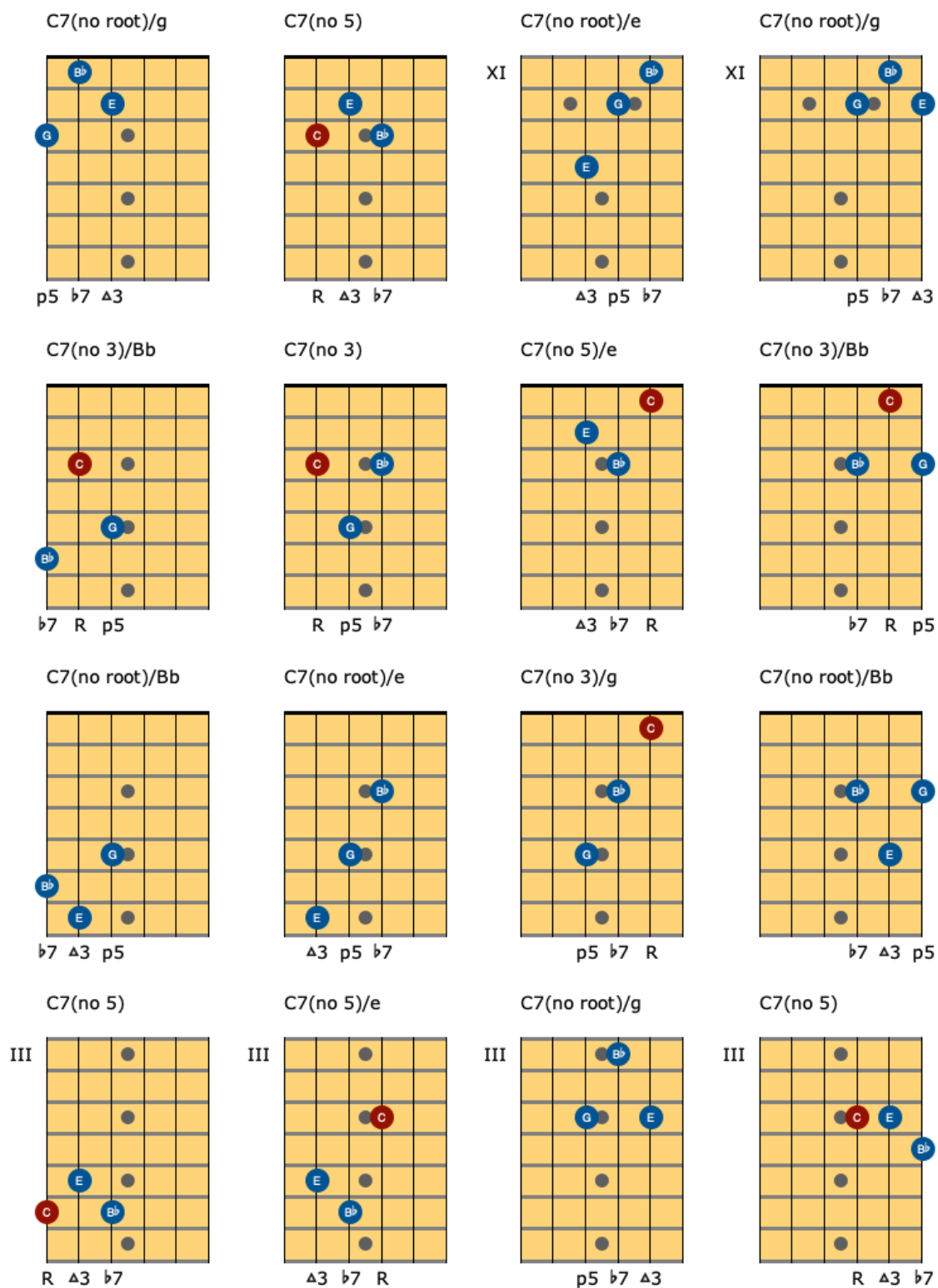
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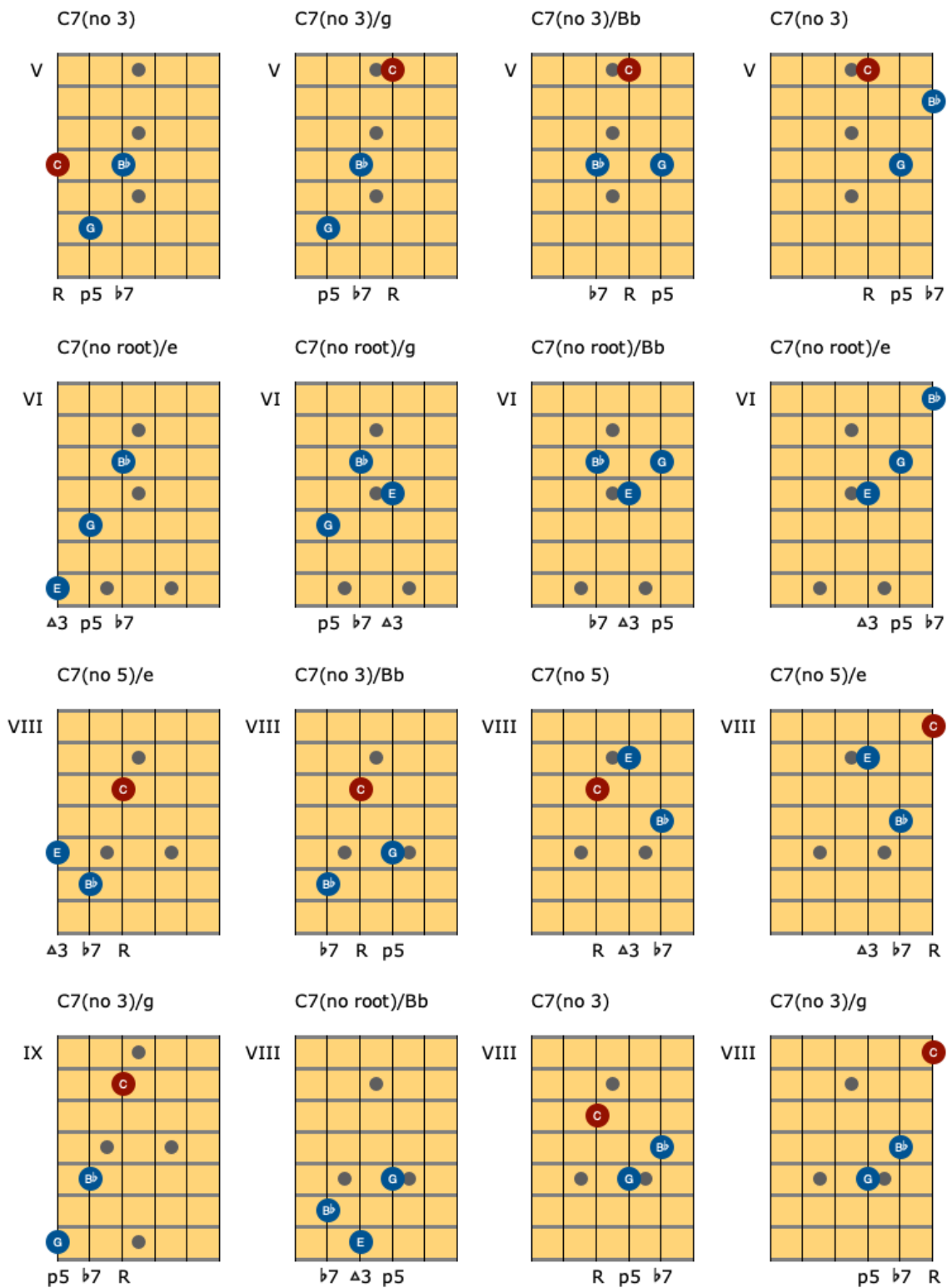
Dominant 7th triads - Primary shapes



Dominant 7th triads - all string sets



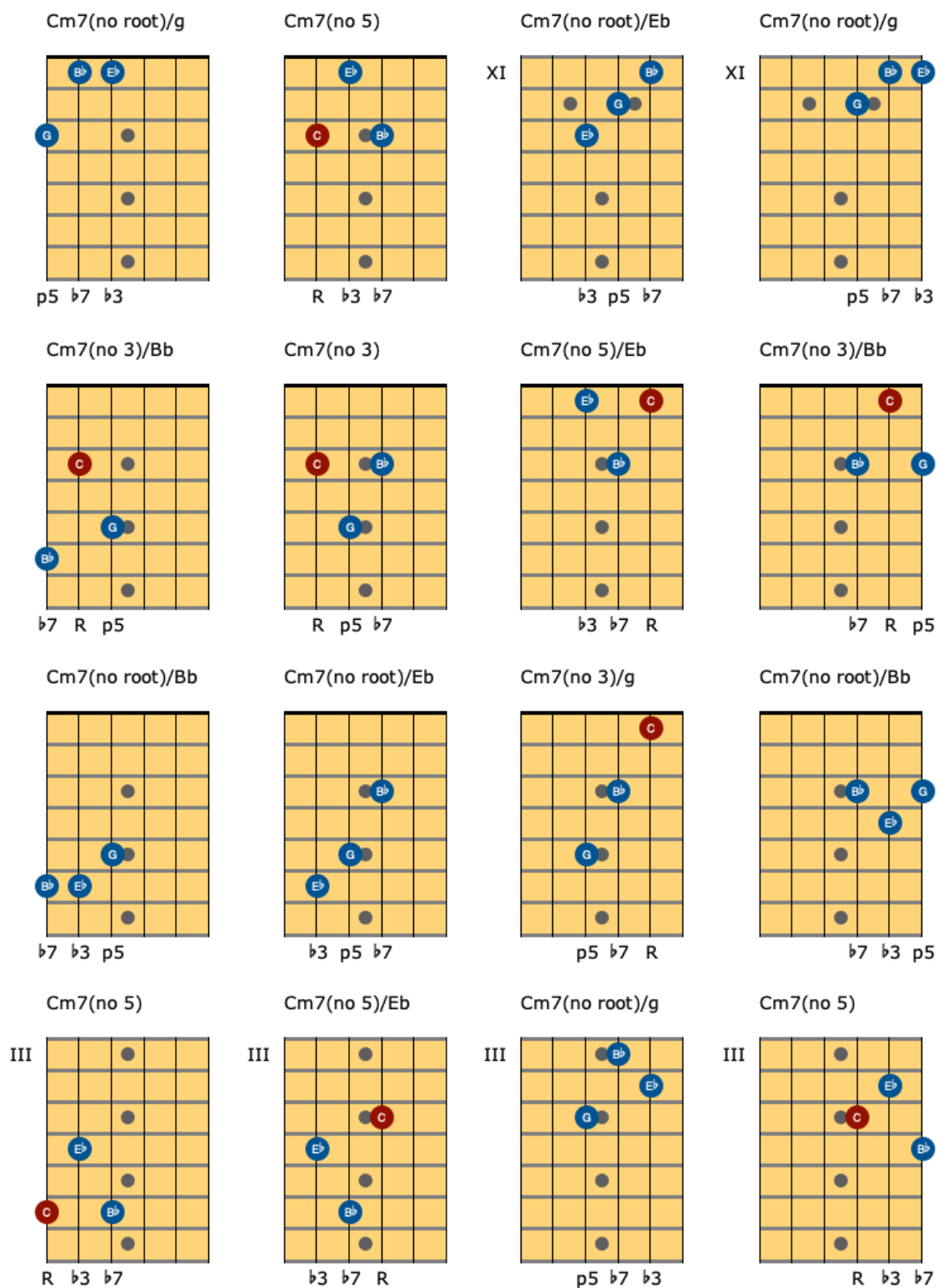
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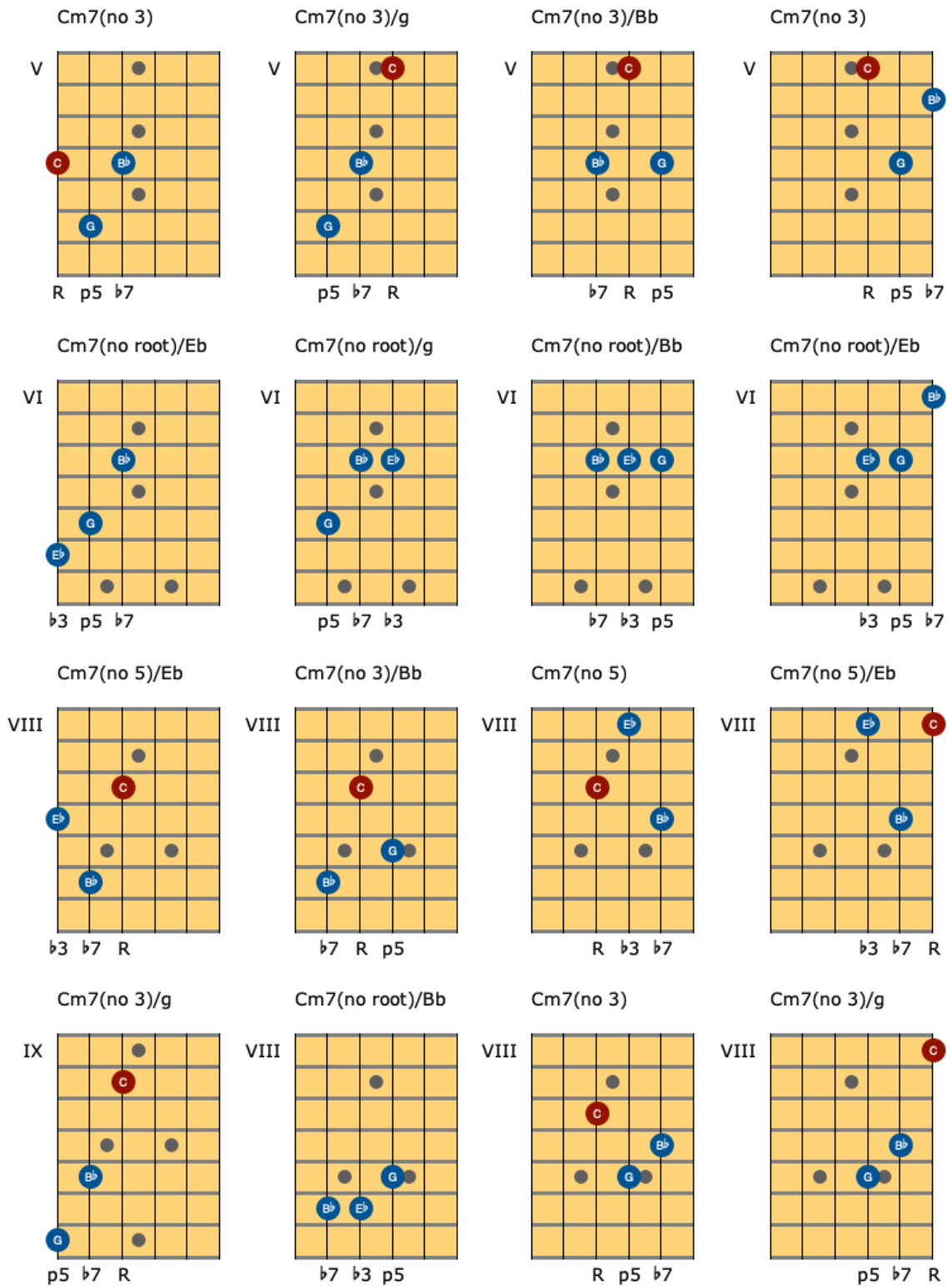
Minor 7th triads - Primary shapes

Root inversion		Cm7(no 5)	Cm7(no 3)
	V		
		R b3 b7	R p5 b7
1st inversion		Cm7(no root)/Eb	Cm7(no 5)/Eb
	VIII		
		b3 p5 b7	b3 b7 R
2nd inversion		Cm7(no 3)/g	Cm7(no root)/g
	X		
		p5 b7 R	p5 b7 b3
3rd inversion		Cm7(no 3)/Bb	Cm7(no root)/Bb
		b7 R p5	b7 b3 p5

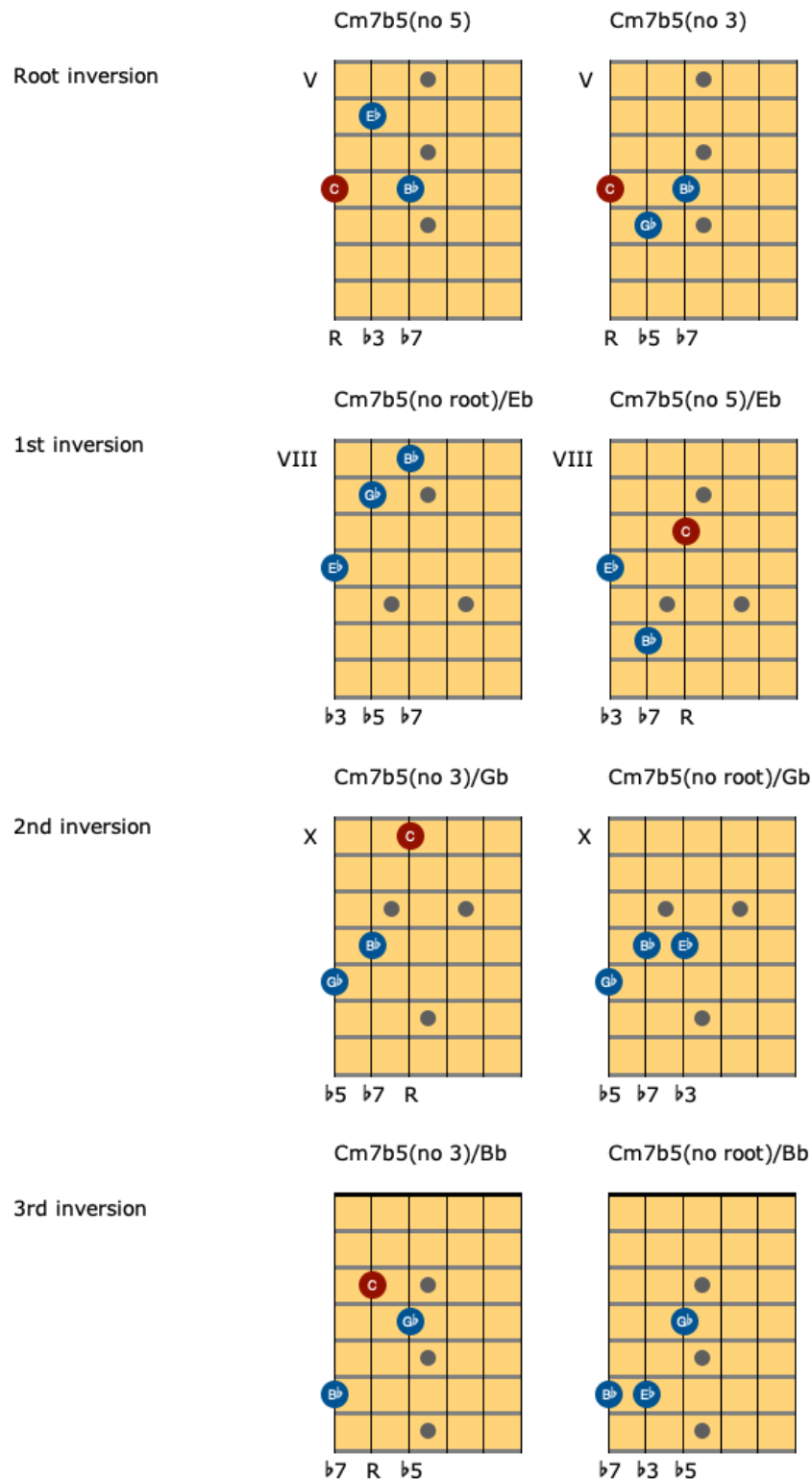
Minor 7th triads - all string sets



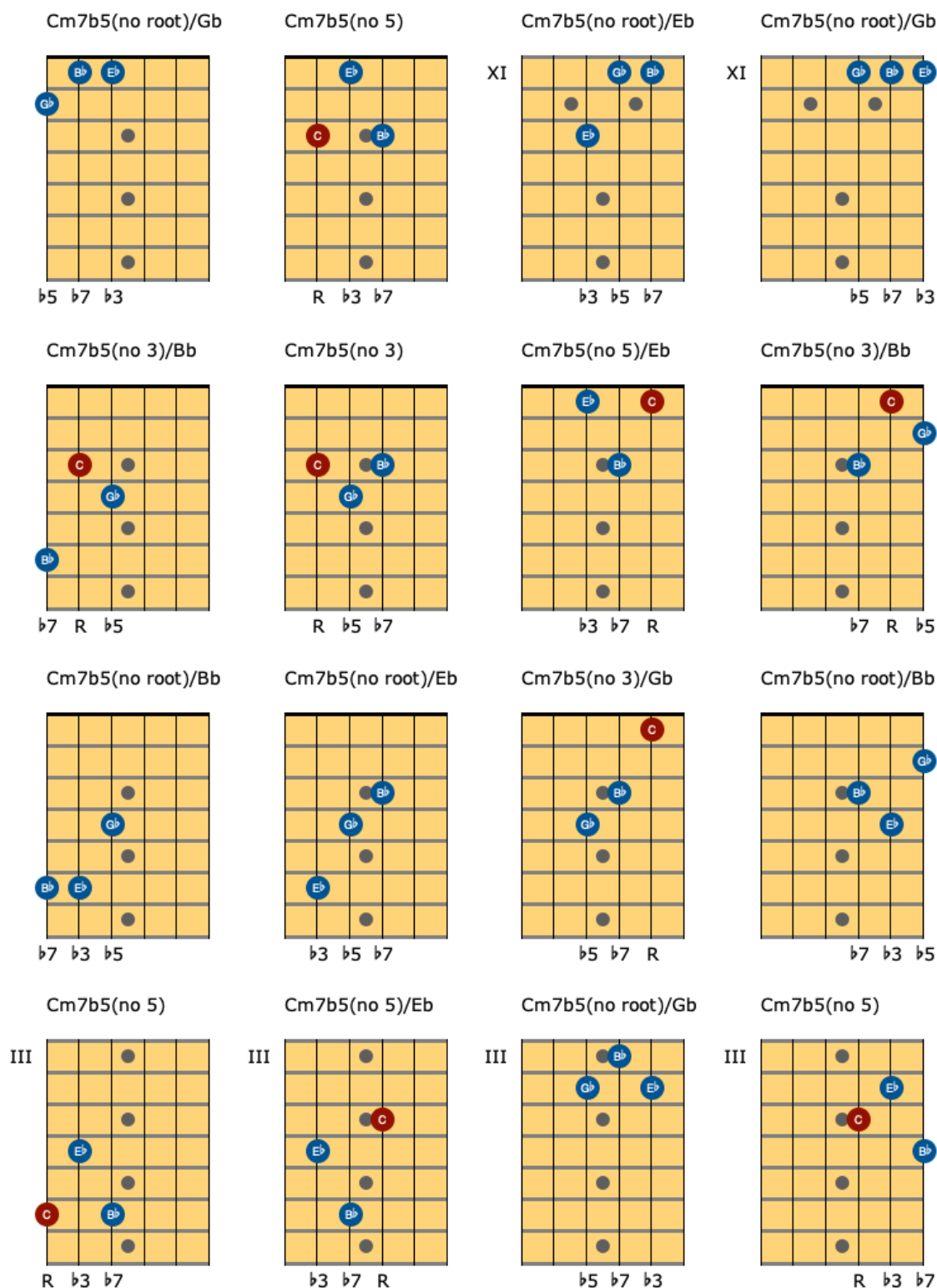
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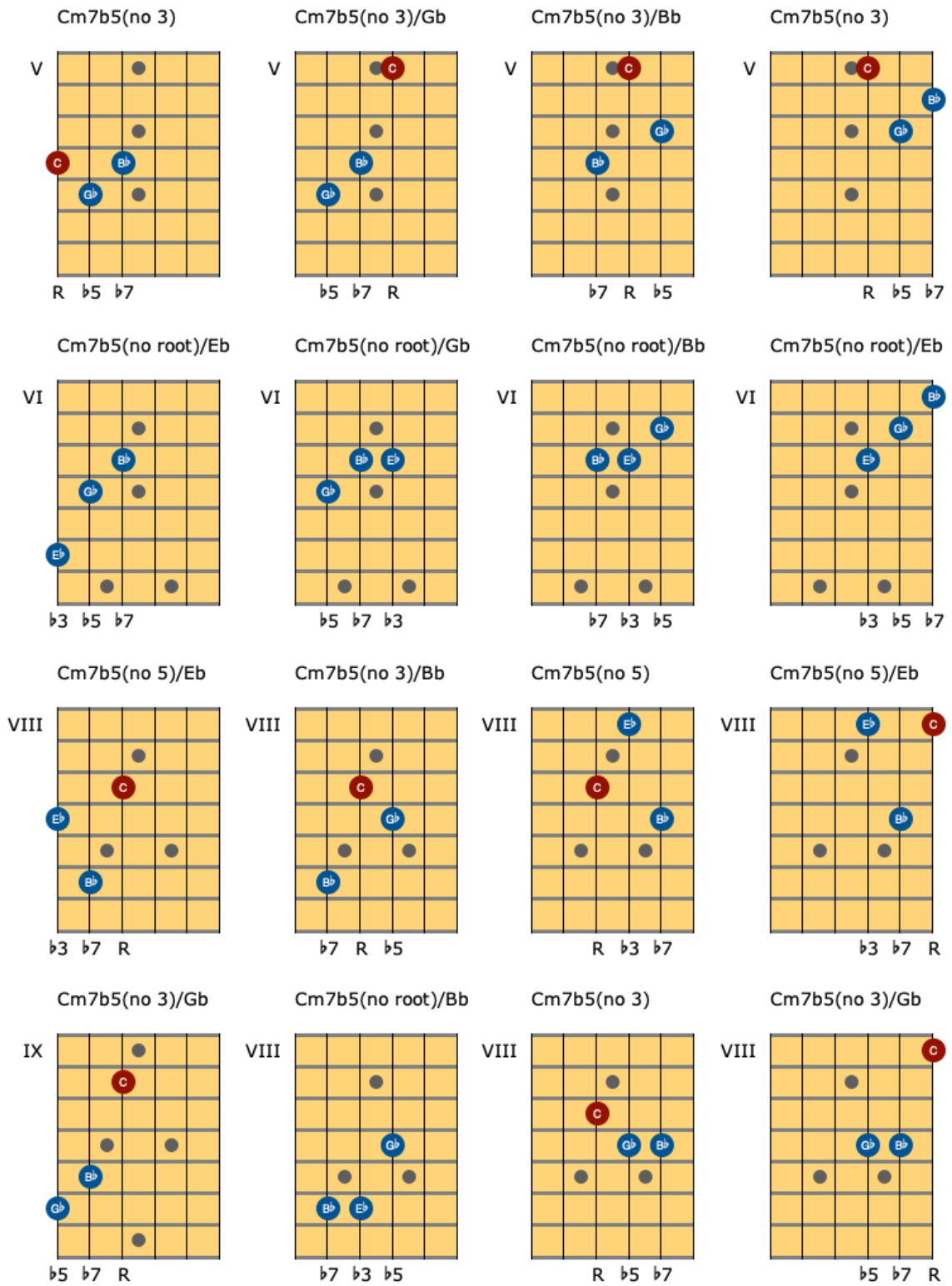
Half diminished triads - Primary shapes



Half diminished triads - all string sets



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Chapter 3 - Movement

Chord transitions

Two extremes

When going from one chord to another, you have many options to choose from in terms of voicing. But in general, there are only two extreme options and every other option lies somewhere in between.

1. You can make the chords sound contrasting to each other and create a rather **harsh** sounding transition. This effect can be accomplished by emphasising the differences between the chords, or using parallel motion for example.
2. You can make the transition as **smooth** as possible, in terms of sound and physical movement. To do so, you'll need to emphasise the similarities between the chords. If both chords share one or more notes, you do not need to change them and you can just let them continue to sound. Only change those notes that do not fit into the new chord. And if you do need to change any note(s), then minimise the distance between the original note(s) and its successor(s).

Interchangeable triads

This chapter is all about the second option; making transitions as smooth and easy as possible. In general we tend to create music that sounds nice to our ears. Using harsh sounding transitions only, would sound very annoying. I believe it is better to use harsh sounding chord changes as an effect to create tension. This tickles the listeners ears and attracts their attention. It creates the urge for a resolution. This makes the smooth transitions even sound more beautiful.

The image below shows all the 7th chords that can be created with the major scale. The colours are used to highlight the overlap of notes among different chords. As you can see, a single triad can appear in multiple 7th chords. In other words, a single triad does have multiple functions. It all depends on the context in which it is played. If the bass player plays the note 'c', and I play 'c-e-g', you will hear a C chord. But, as soon as the bass player changes the 'c' to an 'a', you'll experience my C triad as an Am7 without the root note 'a'. Although I do not play the root note, it is still there because of the bass player playing it for me. The bass always 'gives' the tonality to a chord.

	root	3 rd	5 th	7 th
I	1	3	5	7
ii	2	4	6	1
iii	3	5	7	2
IV	4	6	1	3
V	5	7	2	4
vi	6	1	3	5
viib5	7	2	4	6
I	1	3	5	7
ii	2	4	6	1
iii	3	5	7	2
IV	4	6	1	3
V	5	7	2	4
vi	6	1	3	5
viib5	7	2	4	6

	no 7 th	no root
1 3 5	I	vi
2 4 6	ii	viib5
3 5 7	iii	I
4 6 1	IV	ii
5 7 2	V	iii
6 1 3	vi	Vi
7 2 4	viib5	V

Just a few simple rules

Just a few simple rules

So the easiest way to change a chord, is to not change it at all. Just let the bass player do the work for you. Of course this is only possible in a very limited number of situations. More often, you do have to change notes. To prepare yourself for these situations, there are a few simple rules that you might want to know about. These rules can be used to practice smooth chord transitions on your instrument, regardless of the voicing.

1 step down

Move a chord 1 step down

Raising the root, 3rd and 5th 1 step, lowers the entire chord 1 diatonic step.

I	<u>1</u>	3	5	7
viib5	2	4	6	<u>7</u>
ii	<u>2</u>	4	6	1
I	3	5	7	<u>1</u>
iii	<u>3</u>	5	7	2
ii	4	6	1	<u>2</u>
IV	<u>4</u>	6	1	3
iii	5	7	2	<u>3</u>
V	<u>5</u>	7	2	4
IV	6	1	3	<u>4</u>
vi	<u>6</u>	1	3	5
V	7	2	4	<u>5</u>
viib5	<u>7</u>	2	4	6
vi	1	3	5	<u>6</u>

Useful observations:

- When the root, 3rd and 5th of a chord are raised a single step, the
 - 7th becomes the new root.
 - the raised root becomes the 3rd.
 - the raised 3rd becomes the 5th.
 - the raised 5th becomes the 7th.
- 1 Step down equals 6 steps up.
- The neighbour downstairs only shares a single note; your 7th is his root.

2 steps down

Move a chord 2 steps down

Lowering the 7th note by 1 (diatonic) step, lowers the entire chord 2 (diatonic) steps.

I	<u>1</u>	3	5	7
vi	1	3	5	<u>6</u>
ii	<u>2</u>	4	6	1
viib5	2	4	6	<u>7</u>
iii	<u>3</u>	5	7	2
I	3	5	7	<u>1</u>
IV	<u>4</u>	6	1	3
ii	4	6	1	<u>2</u>
V	<u>5</u>	7	2	4
iii	5	7	2	<u>3</u>
vi	<u>6</u>	1	3	5
IV	6	1	3	<u>4</u>
viib5	<u>7</u>	2	4	6
V	7	2	4	<u>5</u>

Useful observations:

- When the 7th of a chord is lowered a single step, it becomes the root of the new chord.
 - The root becomes the 3rd.
 - The 3rd becomes the 5th.
 - The 5th becomes the 7th.
- 2 Steps down equals 5 steps up.

3 steps down

Move a chord 3 steps down

Raising both the root and 3rd 1 step, lowers the entire chord 3 diatonic steps.

I	<u>1</u>	3	5	7
V	2	4	<u>5</u>	7
ii	<u>2</u>	4	6	1
vi	3	5	<u>6</u>	1
iii	<u>3</u>	5	7	2
vii ^b 5	4	6	<u>7</u>	2
IV	<u>4</u>	6	1	3
I	5	7	<u>1</u>	3
V	<u>5</u>	7	2	4
ii	6	1	<u>2</u>	4
vi	<u>6</u>	1	3	5
iii	7	2	<u>3</u>	5
vii ^b 5	<u>7</u>	2	4	6
IV	1	3	<u>4</u>	6

Although the sound goes 'up', its easier in my head to lower a chord 3 steps down instead of raising it 4 steps, because the distance is smaller and easier to visualise.

Useful observations:

- When the root and 3rd of a chord are raised a single step, the
 - 5th becomes the new root.
 - root becomes the 5th.
 - 3rd becomes the 7th.
 - 7th becomes the 3rd.
- 3 Steps down equals 4 steps up.

1 step up

Move a chord 1 step up

Lowering the 3rd, 5th and 7th note 1 step, raises the entire chord a single diatonic step.

I	<u>1</u>	3	5	7
ii	1	<u>2</u>	4	6
iii	<u>2</u>	4	6	1
IV	2	<u>3</u>	5	7
v	<u>3</u>	5	7	2
VI	3	<u>4</u>	6	1
vii ^b	<u>4</u>	6	1	3
viii ^b	4	<u>5</u>	7	2
I	<u>5</u>	7	2	4
II	5	<u>6</u>	1	3
III	<u>6</u>	1	3	5
IV	6	<u>7</u>	2	4
V	<u>7</u>	2	4	6
VI	7	<u>1</u>	3	5

Useful observations:

- When the 3rd, 5th & 7th note are raised a single step, the
 - lowered 3rd becomes the new root
 - lowered 5th becomes the 3rd.
 - lowered 7th becomes the 5th.
 - root becomes the 7th.
- 1 Step up equals 6 steps down.
- The neighbour upstairs only shares a single note; your root is his 7th.

2 steps up

Move a chord 2 steps up

Raising the root 1 step, raises the entire chord 2 diatonic steps.

I	<u>1</u>	3	5	7
iii	2	<u>3</u>	5	7
ii	<u>2</u>	4	6	1
IV	3	<u>4</u>	6	1
iii	<u>3</u>	5	7	2
V	4	<u>5</u>	7	2
IV	<u>4</u>	6	1	3
vi	5	<u>6</u>	1	3
V	<u>5</u>	7	2	4
viib5	6	<u>7</u>	2	4
vi	<u>6</u>	1	3	5
I	7	<u>1</u>	3	5
viib5	<u>7</u>	2	4	6
ii	1	<u>2</u>	4	6

Useful observations:

- When the root is raised a single step, the
 - 3rd becomes the new root
 - root becomes the 7th.
 - 5th becomes the 3rd.
 - 7th becomes the 5th.
- 2 Steps up equals 5 steps down.

3 steps up

Move a chord 3 steps up

Lowering the 5th & 7th note 1 step, raises the entire chord 3 diatonic steps.

I	<u>1</u>	3	5	7
IV	1	3	<u>4</u>	6
ii	<u>2</u>	4	6	1
V	2	4	<u>5</u>	7
iii	<u>3</u>	5	7	2
vi	3	5	<u>6</u>	1
IV	<u>4</u>	6	1	3
viib5	4	6	<u>7</u>	2
V	<u>5</u>	7	2	4
I	5	7	<u>1</u>	3
vi	<u>6</u>	1	3	5
ii	6	1	<u>2</u>	4
viib5	<u>7</u>	2	4	6
iii	7	2	<u>3</u>	5

Useful observations:

- When both the 5th & 7th are raised a single step, the
 - lowered 5th becomes the new root
 - lowered 7th becomes the 3rd.
 - root becomes the 5th.
 - 3rd becomes the 7th.
- 3 Steps up equals 4 steps down.

Practicing tips

Cyclic practising

Pick a transition rule you'd like to practice and any 7th chord from a certain key as a starting point. In this example I choose the rule that lowers a chord 3 steps, and start with the 1 chord from the key of C major, which is Cmaj7. To lower the Cmaj7 3 steps down (or 4 steps up) to a G7, I have to both raise the root and 3rd with one step. Now, I will do the same for the G7 chord. Raise the root (g to a) and the 3rd (b to c) and my G7 does become a Dm7. Do this again for the Dm7 and keep repeating this until you are back to Cmaj7 again. Once you get the hang of it, you can switch to a different voicing and repeat this process.

Example cycles

Example 1
3 steps down (raising root & 3rd)

T	5	6	6	8	8	10	10	12
A	4	4	5	7	7	9	9	9
B	3	5	5	7	7	8	8	10

Same transition, started from another voicing

T	8	8	10	10	12	12	13	13
A	7	7	7	9	9	10	10	12
B	9	8	8	10	10	12	12	14

Example 2
3 steps up (lowering 5th & 7th)

T	6	6	5	5	3	3	13	13
A	5	4	5	5	3	2	12	10
B	5	5	3	3	2	2	14	12

Practice with a song as vehicle

Pick any (preferably simple) song you like and play the first chord. What is the next chord? Is there a rule you can apply to move from the first chord to the second? Do it and repeat this for each following chord of the song.

When you made it though the entire song, repeat it until you can play the song easily with these chords. Then start over with another voicing for the first chord and repeat this form of practicing.

summary

You now know that all diatonic 7th chords have at least 1 note in common. In the worst case scenario you'll need to change as much as 3 notes, to make it until the next diatonic chord. These scenario's are always your direct neighbours, upstairs and downstairs.

	3 steps down	2 steps down	1 step down	Home	1 step up	2 steps up	3 steps up
Action:	Raise 1,3	Lower 7	Raise 1,3,5		Lower 3,5,7	Raise 1	Lower 5,7
Result:	V	vi	vii	I	ii	iii	IV
Chord tones:	2,4,5,7	1,3,5,6	2,4,6,7	1,3,5,7	1,2,4,6	2,3,5,7	1,3,4,6

Chapter 4 - Secondary dominants

Secondary dominants

Secondary dominants (or borrowed dominants) are dominant chords that lead to any other chord than the tonic. In C major, the dominant chord is G7 (V), since it leads you back to the tonic which is Cmaj7 (I). Now for example, if you want to go from Cmaj7 (or any other chord you like) to Am (vi), you can play a secondary dominant right before the Am. Because a dominant 7 chord creates so much tension, the listener will feel that it needs to resolve. And the important thing to understand as a musician, is that everybody instinctively feels what this resolution must sound like. All dominant chords have only one specific note that will be experienced as their perfect resolution. So if you pick the right dominant chord, you can direct the listeners ears anywhere you like. If I am playing in the key of C major, and I play a C chord followed by an E7 [III], my ears are pulled towards the note "a". And since I am still in the key of C major, your ears would expect to hear an A minor chord which is diatonically correct. However, I can also choose to fool the listeners ears by playing an A major chord. This does not meet the expectation, but will still be accepted as a surprising resolution. Since you did resolve to the note "a", but in an unexpected way that will grab the listeners attention for sure.

Root inversion

[illegible]

First inversion

guit.

C **A7** **Dm** **G7** **C** **B7** **Em** **G7** **C** **C7** **F** **G7**

12 xx x 12 xx x 14 xx x 12 xx x 12 xx x 12 xx x 12 xx x 12 xx x 12 xx x 11 xx x 13 xx x 12 xx x

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

I (VI) ii V I (VII) iii V I (I) IV V

TAB 12 14 12 15 12 12 14 15 12 12 13 12 12 15 13 12 14 15 12 13 14 16 15 12 14 15

C **D7** **G** **G7** **C** **E7** **Am** **G7** **C** **Bdim** **C**

12 xx x 11 xx x 12 xx x 10 xx x 12 xx x 12 xx x 13 xx x 12 xx x 12 xx x 10 xx x 12 xx x

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

I (II) V V I (III) vi V I vii or (V) I

TAB 13 12 12 12 13 12 13 12 13 12 14 15 13 12 14 12 13 10 12 14 13 12 12 14

Second inversion

guit.

C **A7** **Dm** **G7** **C** **B7** **Em** **G7** **C** **C7** **F** **G7**

1 1 1 5 6 7 4 2 3 1 1 1 4 1 1 2 3 1 1 1 3 1 4 5 3 1 2 5 1 3 2

I (VI) ii V I (VII) iii V I (I) IV V

5 5 5 6 7 6 4 5 5 4 7 5 3 4 5 5 3 5 7 6 7 5

C **D7** **G** **G7** **C** **E7** **Am** **G7** **C** **Bdim** **C**

4 1 1 1 2 3 1 3 2 1 1 2 1 5 1 1 5 3 1 1 1 1 2 1 1 1 1

I (II) V V I (III) vi V I vii or (V) I

5 3 3 3 5 7 6 5 7 3 3 5 3 5 3 3 5 5

The same thing from the 1st inversion of a C major chord