

# THE BEATO BOOK 4.0

A CREATIVE APPROACH TO MUSIC THEORY  
AND IMPROVISATION  
FOR GUITAR AND OTHER INSTRUMENTS

BY RICK BEATO

# THE BEATO BOOK

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This book is dedicated to my Mom and Dad.

Special thanks to my wife Nina and our three beautiful children Dylan, Lennon and Layla; my brothers and sisters Pat, Nancy, Mike, Lou, Ray and Jon; and my teachers and friends Steve Brown, Mick Goodrick, Glen Cummings, Paul Smith, Pat Ryan, Tom Wadsworth, Keith Williams and Ken Lanyon.

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Cover design by Michael Murray

I would also like to thank all of you out there that have supported me through this journey!

Rick

## Author's Note

I have spent many hours compiling this book in order to give my students a comprehensive reference source from which to draw. Since this book is not copy-protected it would be easy to make a photo copy of it for one of your friends. **Please don't.** I make a small living as a musician and am making even less from the sale of this book. I appeal to you as a fellow musician to respect the work of others, whether it's written material or recorded works. If one of your friends is interested in checking out the book, let them borrow it for a couple of days to get a feel for it. If they like it, encourage them to pick up a copy. When a book or recording is illegally copied, the publisher or record company has no way of monitoring interest in the project. This not only steals from the artist but may prevent them from having an opportunity to again express themselves in that medium. Good luck!

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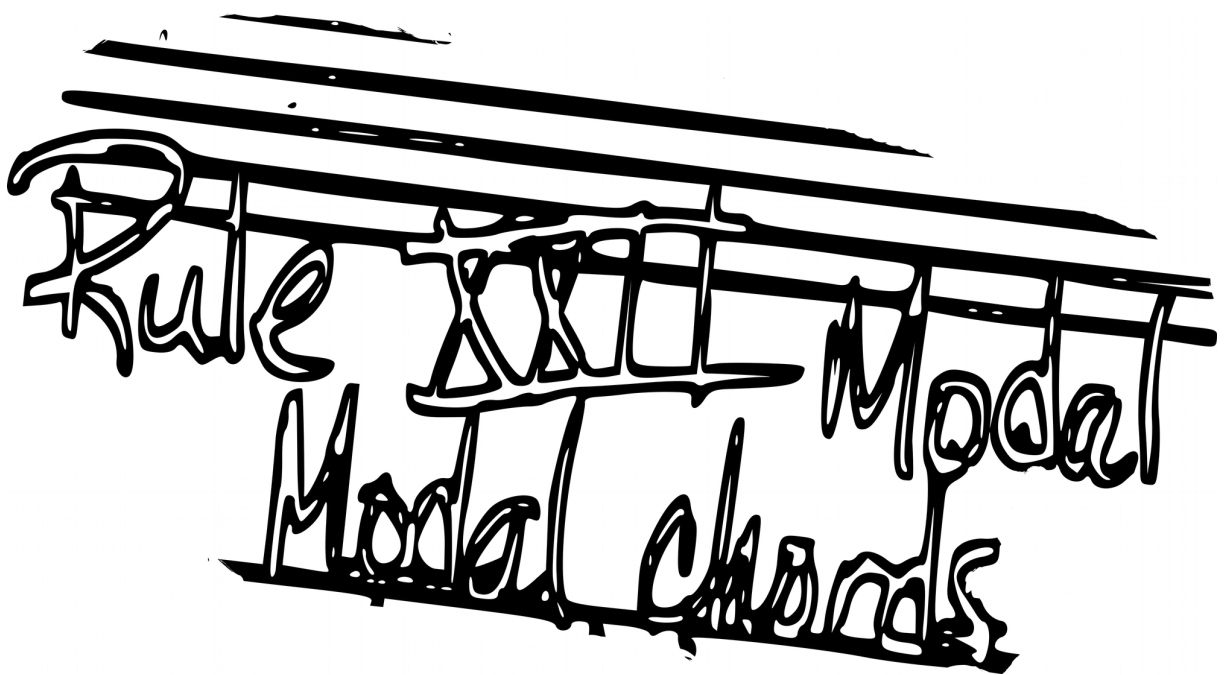
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# CHAPTER 1

## THEORY AND HARMONY



# Chapter 1: Theory and Harmony

A thorough understanding of intervals is of the utmost importance in studying all types of music, as intervals are the building blocks of polyphonic music.

Each interval has vastly different sound characteristics and must be committed to memory aurally and visually.

Intervals can be sounded together (harmonically) or sequentially (melodically).

There are twelve intervals in the space of an octave.

## Interval Names and Symbols

	Unison	m2	M2	m3	M3	P4	A4/d 5	P5	m6	M6	m7	M7	P8
$\frac{1}{2}$ steps	0	1	2	3	4	5	6	7	8	9	10	11	12

Key: m = minor  
M = Major  
A = Augmented  
d = diminished  
P = Perfect

### **Ex. 1**

$\frac{1}{2}$ steps	0	1	2	3	4	5	6	7	8	9	10	11
	Unison	m2	M2	m3	M3	P4	A4 / d5	P5	m6	M6	m7	M7

### Perfect

1st Unison

4th Fourths

5th Fifths

8th Octave

Augmented

Diminished

Major

Minor

### Imperfect

2nds Seconds

7ths Sevenths

3rds Thirds

6ths Sixths

Perfect Intervals: Octave, Unison, Fifth, Fourth

become augmented when enlarged by a half step

become diminished when reduced by a half step

Imperfect Intervals: Second, Seventh, Third, Sixth

1) Major Intervals

become augmented when enlarged by a half step

become minor when reduced by a half step

2) Minor Intervals

become major when enlarged by a half step

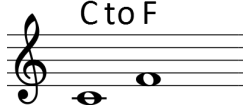
become diminished when reduced by a half step

## Naming Intervals

To precisely identify an interval, generic interval classification must be made based on the number of letter names spanned. For Example:

**Ex. 2**

C to F



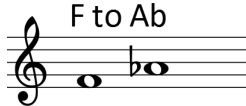
letter names			
C	D	E	F
1	2	3	4

a fourth = generic classification

4 letters spanned

**Ex. 3**

F to Ab



letter names		
F	G	A
1	2	3

a third = generic classification

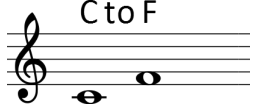
3 letters spanned

Once the generic classification has been determined, a more precise description (e.g., perfect, major, minor, diminished or augmented) can be made, based on the number of steps between the two pitches.



**Ex. 4**

C to F



C C# D D# E F    5 half steps = P4 perfect fourth

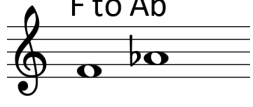
√ √ √ √ √

1 2 3 4 5

½ steps spanned

**Ex. 5**

F to Ab



F F# G Ab    3 half steps = m3 minor third

√ √ √

1 2 3

½ steps spanned

**Ex. 6**

Here are some more examples of intervals:

(D=Doubly)



P4    m7    M6    m2    DA 6    P5    d5    M3

### Enharmonic Intervals

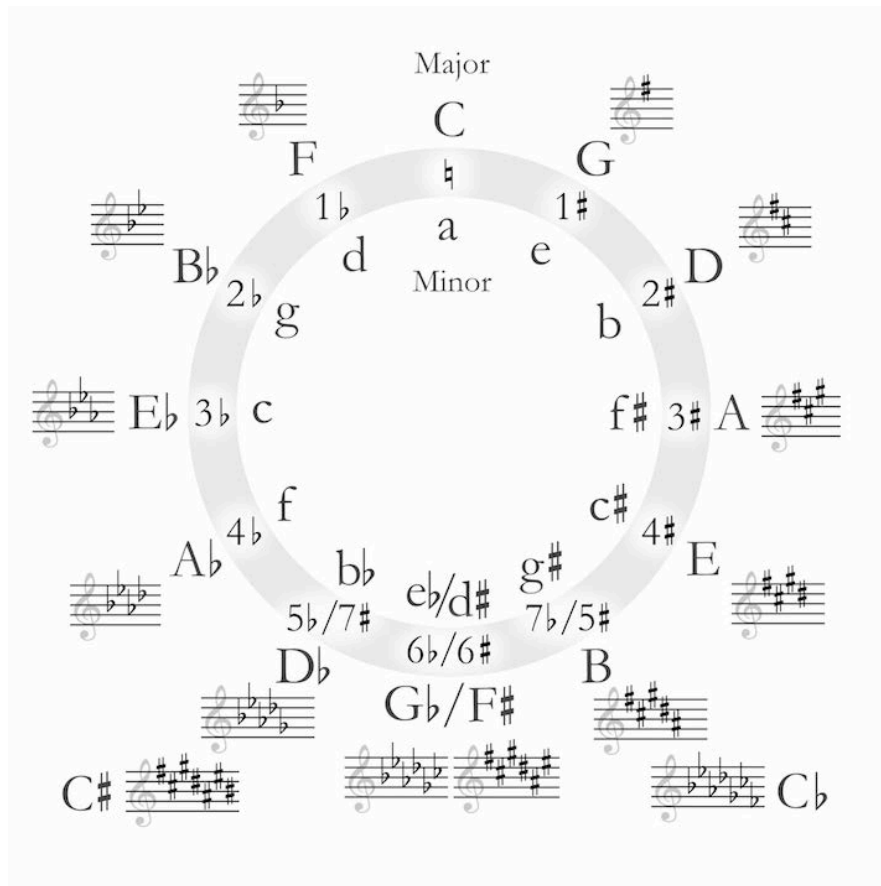
Interval types that contain an equivalent number of half steps but have different names (e.g., Augmented Second and Minor Third) are **enharmonically equivalent**. In other words, they are aurally identical but theoretically different.

### Interval Characteristics

In Western Music, the tonal relationships within the range of one octave have been reduced to twelve equal intervals, the twelve notes of which comprise the chromatic scale, through the system of equal temperament. A chart of intervals comprised in an octave is below:

Interval	Characteristic
m2	Sharp Dissonance
M2	Mild Dissonance
m3	Soft Consonance
M3	Soft Consonance
P4	Consonance or Dissonance
TT	Neutral or Restless
P5	Open Consonance
m6	Soft Consonance
M6	Soft Consonance
m7	Mild Dissonance
M7	Sharp Dissonance
P8	Open Consonance

# The Circle of Fifths



## Order of Flats

Number of Flats - 0 1 2 3 4 5 6 7  
Key - C F Bb Eb Ab Db Gb Cb

## Order of Sharps

Number of Sharps - 0 1 2 3 4 5 6 7  
Key - C G D A E B F# C#

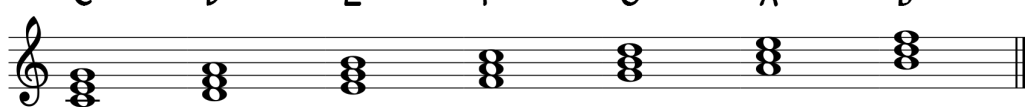
## Chords and Their Formulas

Though there are many systems from which to build chords, tertian (third intervals) harmony is the most common in western music.

The stacking of two third intervals produces triads, the fundamental structures in tertian harmony. If these triads originate from one particular key center (signature) they are called diatonic triads. Triads may be built on every note of a particular scale. A seven note scale yields the same number of diatonic triads, not including suspensions which we will discuss later.

### **Diatonic Triads in C major**

**Ex. 8**

	C	D-	E-	F	G	A-	B <sup>o</sup>
							
Roman Num.	I	ii	iii	IV	V	vi	vii <sup>o</sup>

#### Roman Numeral Symbols

upper case	=	major triad
lower case	=	minor triad
°	=	diminished
+	=	augmented


The Roman Numeral system employed has evolved for analysis of chord progressions and their relationship to a relative tonal center. Roman Numerals will be thoroughly discussed in an ensuing segment.

## Building Diatonic Triads

The four basic diatonic triad categories are: major, minor, diminished and augmented

### Interval Composition


**Ex. 9**



Interval composition for C major triad:

$\left. \begin{array}{l} \text{m3} \\ \text{M3} \end{array} \right\}$	=	C major	=	1	3	5
---	---	---------	---	---	---	---


**Ex. 10**



Interval composition for C minor triad:

$\left. \begin{array}{l} \text{M3} \\ \text{m3} \end{array} \right\}$	=	C minor	=	1	b3	5
---	---	---------	---	---	----	---


**Ex. 11**



Interval composition for C diminished triad:

$\left. \begin{array}{l} \text{m3} \\ \text{m3} \end{array} \right\}$	=	C dim	=	1	b3	b5
---	---	-------	---	---	----	----

**Ex. 12**



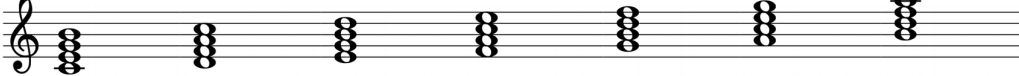
Interval composition for C augmented triad:


$\left. \begin{array}{l} \text{M3} \\ \text{M3} \end{array} \right\}$	=	C aug	=	1	3	#5
---	---	-------	---	---	---	----


## Building Diatonic Seventh Chords

Seventh Chords are composed of three thirds stacked vertically.

### **Ex. 13**

	<i>C<sup>MA7</sup></i>	<i>D-7</i>	<i>E-7</i>	<i>F<sup>MA7</sup></i>	<i>G7</i>	<i>A-7</i>	<i>B-7<sup>b5</sup></i>
C Major							
Roman Numeral	I <sup>MA7</sup>	ii <sup>7</sup>	iii <sup>7</sup>	IV <sup>MA7</sup>	V <sup>7</sup>	vi <sup>7</sup>	vii <sup>7b5</sup>

	<i>C<sup>-MA7</sup></i>	<i>D-7</i>	<i>E<sup>b</sup>+MA7</i>	<i>F7</i>	<i>G7</i>	<i>A-7<sup>b5</sup></i>	<i>B-7<sup>b5</sup></i>
C mel. minor							
Roman Numeral	i <sup>-MA7</sup>	ii <sup>7</sup>	bIII <sup>+MA7</sup>	IV <sup>7</sup>	V <sup>7</sup>	vi <sup>7b5</sup>	vii <sup>7b5</sup>

	<i>C<sup>-MA7</sup></i>	<i>D-7<sup>b5</sup></i>	<i>E<sup>b</sup>+MA7</i>	<i>F-7</i>	<i>G7</i>	<i>A<sup>b</sup>MA7</i>	<i>B<sup>o</sup>7</i>
C harm. minor							
Roman Numeral	i <sup>-MA7</sup>	ii <sup>7b5</sup>	bIII <sup>+MA7</sup>	iv <sup>-7</sup>	V <sup>7</sup>	bVi <sup>Ma7</sup>	vii <sup>o7</sup>

The following reference chart includes both triad and seventh chords from major, melodic minor and harmonic minor. Roman numeral description and modal scale relationships have been included for study. "C" tonalities have been used in all instances.

# Major Scale (Triads & Sevenths)

Ex. 14a

Triads

C

D-

E-

F

G

A-

B°

R.N.

I ii iii IV V vi- vii°

Ionian Dorian Phrygian Lydian Mixolydian Aeolian Locrian

Seventh

C<sub>MA</sub>7

D-7

E-7

F<sub>MA</sub>7

G7

A-7

B-7<sup>b5</sup>

R.N.

I<sup>MA7</sup> ii<sup>7</sup> iii<sup>7</sup> IV<sup>MA7</sup> V<sup>7</sup> vi<sup>7</sup> vii<sup>-7b5</sup>

Triads	maj	=	I, IV, V
	min	=	ii, iii, vi
	dim	=	vii°
Seventh	maj <sup>7</sup>	=	I <sup>maj7</sup> , IV <sup>maj7</sup>
	min <sup>7</sup>	=	ii <sup>7</sup> , iii <sup>7</sup> , vi <sup>7</sup>
	dom <sup>7</sup>	=	V <sup>7</sup>
	min <sup>7b5</sup>	=	vii <sup>7b5</sup>

## Natural Minor Scale

### Ex. 14b

	<b>C-</b>	<b>D<sup>o</sup></b>	<b>E<sup>b</sup></b>	<b>F-</b>	<b>G-</b>	<b>A<sup>b</sup></b>	<b>B<sup>b</sup></b>
Triads							
R.N.	i	ii <sup>o</sup>	III	iv	v-	VI	VII
	Aeolian	Locrian	Ionian	Dorian	Phrygian	Lydian	Mixolydian

	<b>C-7</b>	<b>D-7<sup>b5</sup></b>	<b>E<sup>b</sup>MA7</b>	<b>F-7</b>	<b>G-7</b>	<b>A<sup>b</sup>MA7</b>	<b>B<sup>b</sup>7</b>
Seventh							
R.N.	i <sup>7</sup>	ii <sup>7b5</sup>	III <sup>MA7</sup>	iv <sup>7</sup>	v <sup>7</sup>	VI <sup>MA7</sup>	VII <sup>7</sup>

Triads	maj	=	III, VI, VII
	min	=	i, iv, v
	dim	=	ii <sup>o</sup>
Seventh	maj <sup>7</sup>	=	III <sup>maj7</sup> , VI <sup>maj7</sup>
	min <sup>7</sup>	=	i <sup>7</sup> , iv <sup>7</sup> , v <sup>7</sup>
	dom <sup>7</sup>	=	VII <sup>7</sup>
	min <sup>7b5</sup>	=	ii <sup>7b5</sup>



## Melodic Minor Scale

### Ex. 15

**Triads**

	<b>C-</b>	<b>D-</b>	<b>E<sup>+</sup></b>	<b>F</b>	<b>G</b>	<b>A<sup>°</sup></b>	<b>B<sup>°</sup></b>
R.N.	i	ii <sup>-</sup>	III <sup>+</sup>	IV	V	vi <sup>°</sup>	vii <sup>°</sup>
	Melodic Minor	Dorian b2	Lydian augmented	Mixolydian #11 (Lydian b7)	Mixolydian b6	Locrian 2	Altered Dominant


**Seventh**


	<b>C-MA<sup>7</sup></b>	<b>D-7</b>	<b>E<sup>+</sup>MA<sup>7</sup></b>	<b>F<sup>7</sup></b>	<b>G<sup>7</sup></b>	<b>A-7<sup>b5</sup></b>	<b>B-7<sup>b5</sup></b>
R.N.	i MA <sup>7</sup>	ii <sup>7</sup>	III MA <sup>7</sup>	IV <sup>7</sup>	V <sup>7</sup>	vi <sup>7b5</sup>	vii <sup>7b5</sup>

Triads	maj	=	IV, V
	min	=	i, ii
	dim	=	vi <sup>°</sup> , vii <sup>°</sup>
	aug	=	III <sup>+</sup>
Seventh	min <sup>maj7</sup>	=	i <sup>maj7</sup>
	min <sup>7</sup>	=	ii
	dom <sup>7</sup>	=	IV <sup>7</sup> , V <sup>7</sup>
	min <sup>7b5</sup>	=	vi <sup>7b5</sup> , vii <sup>7b5</sup>
	aug <sup>maj7</sup>	=	III <sup>+maj7</sup>

## Harmonic Minor Scale

### Ex. 16

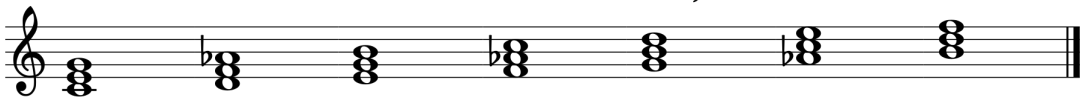

	C-	D <sup>o</sup>	E <sup>b+</sup>	F-	G	A <sup>b</sup>	B <sup>o</sup>
Triads							
R.N.	i-	ii <sup>o</sup>	III <sup>+</sup>	iv	V	VI	vii <sup>o</sup>
	Harmonic Minor	Locrian nat. 6	Ionian augmented	Dorian #4	Phrygian Major	Lydian #9	Altered Dominant bb7

	C- <sup>MA7</sup>	D-7 <sup>b5</sup>	E <sup>b+</sup> MA7	F-7	G7	A <sup>b</sup> MA7	B <sup>o</sup> 7
Seventh							
R.N.	i <sup>MA7</sup>	ii <sup>7b5</sup>	III <sup>+MA7</sup>	iv <sup>-7</sup>	V <sup>7</sup>	VI <sup>MA7</sup>	vii <sup>o7</sup>

Triads	maj	=	V, VI
	min	=	i, iv
	dim	=	ii <sup>o</sup> , vii <sup>o</sup>
	aug	=	III <sup>+</sup>
Seventh	maj <sup>7</sup>	=	VI <sup>maj7</sup>
	min <sup>maj7</sup>	=	i <sup>maj7</sup>
	min <sup>7</sup>	=	iv <sup>7</sup>
	dom <sup>7</sup>	=	V <sup>7</sup>
	min <sup>7b5</sup>	=	ii <sup>7b5</sup>
	aug <sup>maj7</sup>	=	III <sup>+maj7</sup>
	dim <sup>7</sup>	=	vii <sup>o7</sup>

## Harmonic Major Scale

### Ex. 17

	<b>C<sub>maj</sub></b>	<b>D<sup>o</sup></b>	<b>E<sup>-</sup></b>	<b>F<sup>-</sup></b>	<b>G<sub>maj</sub></b>	<b>A<sup>b+</sup></b>	<b>B<sup>o</sup></b>
Triads							
R.N.	I	ii <sup>o</sup>	iii	iv	V	VI <sup>+</sup>	vii <sup>o</sup>
	Harmonic Major (Ionian b6)	Dorian b5	Phrygian b4	Lydian b3 (Melodic Minor #4)	Mixolydian b2	Lydian Augmented #2	Locrian bb7
							
Seventh							
R.N.	I <sup>maj7</sup>	ii <sup>7b5</sup>	iii <sup>maj7</sup>	iv <sup>-maj7</sup>	V <sup>7</sup>	VI <sup>+maj7</sup>	vii <sup>o7</sup>

Triads	maj	=	I, V
	min	=	iii, iv
	dim	=	ii <sup>o</sup> , vii <sup>o</sup>
	aug	=	VI <sup>+</sup>
Seventh	maj <sup>7</sup>	=	I <sup>maj7</sup>
	min <sup>maj7</sup>	=	iv <sup>maj7</sup>
	min <sup>7</sup>	=	iii <sup>7</sup>
	dom <sup>7</sup>	=	V <sup>7</sup>
	min <sup>7b5</sup>	=	ii <sup>7b5</sup>
	aug <sup>maj7</sup>	=	VI <sup>+maj7</sup>
	dim <sup>7</sup>	=	vii <sup>o7</sup>

## Double Harmonic Major Scale

### Ex. 18

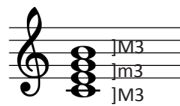
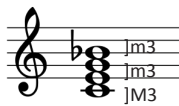



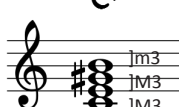




	<b>C<sup>maj</sup></b>	<b>D<sup>b</sup>maj</b>	<b>E<sup>-</sup></b>	<b>F<sup>-</sup></b>	<b>G<sup>maj</sup><sup>b5</sup></b>	<b>A<sup>b</sup>+</b>	<b>B<sup>sus</sup><sup>2b5</sup></b>
Triads							
R.N.	I	II	iii	iv	V <sup>b5</sup>	VI <sup>+</sup>	vii <sup>o</sup>
	Double Harmonic Major	Lydian #2 #6	Ultraphythgian	Hungarian Minor	Oriental	Ionian Augmented #2	Locrian bb3 bb7
	<b>C<sup>maj7</sup></b>	<b>D<sup>b</sup>maj7</b>	<b>E<sup>-</sup><sup>bb7</sup></b>	<b>F<sup>-</sup>maj7</b>	<b>G<sup>7</sup><sup>b5</sup></b>	<b>A<sup>b</sup>+maj7</b>	<b>D<sup>b</sup>7/B</b>
Seventh							
R.N.	I <sup>maj7</sup>	II <sup>maj7</sup>	iii <sup>bb7</sup>	iv <sup>-maj7</sup>	V <sup>7b5</sup>	VI <sup>+maj7</sup>	VII <sup>4/2</sup>

Triads	maj	=	I, II
	maj <sup>b5</sup>	=	V <sup>b5</sup>
	min	=	iii, iv
	dim	=	vii <sup>o</sup>
	aug	=	VI <sup>+</sup>
Seventh	maj <sup>7</sup>	=	I <sup>maj7</sup> , II <sup>maj7</sup>
	min <sup>maj7</sup>	=	iv <sup>maj7</sup>
	min <sup>bb7</sup>	=	iii <sup>bb7</sup>
	dom4/2	=	VII <sup>4/2</sup>
	dom <sup>7b5</sup>	=	V <sup>7b5</sup>
	aug <sup>maj7</sup>	=	VI <sup>+maj7</sup>

## More About Seventh Chords

In case you did not understand some of the seventh chords already presented, let's review some basic seventh chord formulas.

### Ex. 19

<p><b>C<math>_{Ma}7</math></b> =1 3 5 7</p> 	<p><b>C<math>^7</math></b> =1 3 5 b7</p> 
<p><b>C<math>^{-}7</math></b> =1 b3 5 b7</p> 	<p><b>C<math>^{-}7^{b5}</math></b> =1 b3 b5 b7</p> 
<p><b>C<math>^o7</math></b> =1 b3 b5 bb7</p> 	<p><b>C<math>^{+}Ma7</math></b> =1 3 #5 7</p> 
<p><b>C<math>^{-}Ma7</math></b> =1 b3 5 7</p> 	<p><b>C<math>^{+}7</math></b> =1 3 #5 b7</p> 
<p><b>C<math>^oMa7</math></b> =1 b3 b5 7</p> 	<p><b>C<math>^{-}7^{#5}</math></b> =1 b3 #5 b7</p> 

## Relative Major/Minor

Major and Minor scales are **Relative** when they share all seven pitches.

C Major...



...and it's relative minor, A Minor



Likewise, C Major is the relative major of A Minor.

## Parallel Major/Minor

Major and Minor scales are **Parallel** when they share the same Root.

C Major...

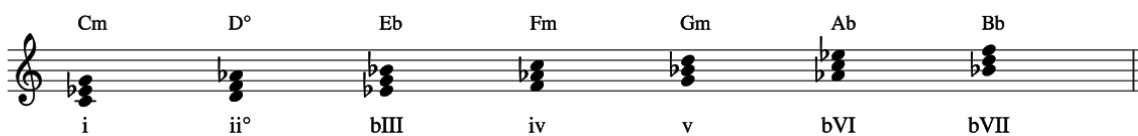
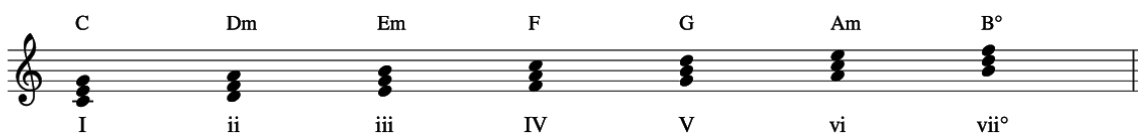


...and it's parallel minor, C Minor



Likewise, C Major is the parallel major of C Minor.

Diatonic Triads from C Major and C Minor



## Chords for Songwriters

An expanded harmonic vocabulary includes secondary dominants, and chords derived from parallel minor scales.

### Triads

Primary Chords	C I	Dm ii	Em iii	F IV	G V	Am vi	B° vii°
Sec. V		A V/ii	B V/iii	C V/IV	D V/V	E V/vi	
Sec. vii°		C#° vii°/ii	D#° vii°/iii	E° vii°/IV	F#° vii°/V	G#° vii°/vi	
Parallel Natural Minor	Cm i	D° ii°	Eb bIII	Fm iv	Gm v	Ab bVI	Bb bVII
Parallel Melodic Minor	Cm i	Dm ii	Eb+ bIII+	F IV	G V	A° vi°	B° vii°
Parallel Harmonic Minor	Cm i	D° ii°	Eb+ bIII+	Fm iv	G V	Ab bVI	B° vii°

### Sevenths

Primary Chords	C <sup>Maj7</sup> I <sup>Maj7</sup>	Dm <sup>7</sup> ii <sup>7</sup>	Em <sup>7</sup> iii <sup>7</sup>	F <sup>Maj7</sup> IV <sup>Maj7</sup>	G <sup>7</sup> V <sup>7</sup>	Am <sup>7</sup> vi <sup>7</sup>	B <sup>Ø7</sup> vii <sup>7b5</sup>
Sec. V <sup>7</sup>		A <sup>7</sup> V <sup>7</sup> /ii	B <sup>7</sup> V <sup>7</sup> /iii	C <sup>7</sup> V <sup>7</sup> /IV	D <sup>7</sup> V <sup>7</sup> /V	E <sup>7</sup> V <sup>7</sup> /vi	
Sec. vii <sup>Ø7</sup>		C# <sup>Ø7</sup> vii <sup>Ø7</sup> /ii	D# <sup>Ø7</sup> vii <sup>Ø7</sup> /iii	E <sup>Ø7</sup> vii <sup>Ø7</sup> /IV	F# <sup>Ø7</sup> vii <sup>Ø7</sup> /V	G# <sup>Ø7</sup> vii <sup>Ø7</sup> /vi	
Parallel Natural Minor	Cm <sup>7</sup> i <sup>7</sup>	D <sup>Ø7</sup> ii <sup>7b5</sup>	Eb <sup>Maj7</sup> bIII <sup>Maj7</sup>	Fm <sup>7</sup> iv <sup>7</sup>	Gm <sup>7</sup> v <sup>7</sup>	Ab <sup>Maj7</sup> bVI <sup>Maj7</sup>	Bb <sup>7</sup> bVII <sup>7</sup>
Parallel Melodic Minor	Cm <sup>Maj7</sup> i <sup>Maj7</sup>	Dm <sup>7</sup> ii <sup>7</sup>	Eb <sup>Maj7#5</sup> bIII <sup>Maj7#5</sup>	F <sup>7</sup> IV <sup>7</sup>	G <sup>7</sup> V <sup>7</sup>	A <sup>Ø7</sup> vi <sup>7b5</sup>	B <sup>Ø7</sup> vii <sup>7b5</sup>
Parallel Harmonic Minor	Cm <sup>Maj7</sup> i <sup>Maj7</sup>	D <sup>Ø7</sup> ii <sup>7b5</sup>	Eb <sup>Maj7#5</sup> bIII <sup>Maj7#5</sup>	Fm <sup>7</sup> iv <sup>7</sup>	G <sup>7</sup> V <sup>7</sup>	Ab <sup>Maj7</sup> bVI <sup>Maj7</sup>	B <sup>Ø7</sup> vii <sup>Ø7</sup>

## Summary of Chords from Major, Secondary Dominants, and Parallel Minor Scales

### Triads

Primary Chords	C I	Dm ii	Em iii	F IV	G V	Am vi	B° vii°
Sec. V		A V/ii	B V/iii		D V/V	E V/vi	
Sec. vii°		C#° vii°/ii	D#° vii°/iii	E° vii°/IV	F#° vii°/V	G#° vii°/vi	
Parallel Natural Minor	Cm i	D° ii°	Eb bIII	Fm iv	Gm v	Ab bVI	Bb bVII
Parallel Melodic Minor			Eb+ bIII+			A° vi°	

### Sevenths

Primary Chords	C <sup>Maj7</sup> I <sup>Maj7</sup>	Dm <sup>7</sup> ii <sup>7</sup>	Em <sup>7</sup> iii <sup>7</sup>	F <sup>Maj7</sup> IV <sup>Maj7</sup>	G <sup>7</sup> V <sup>7</sup>	Am <sup>7</sup> vi <sup>7</sup>	B <sup>Ø7</sup> vii <sup>7b5</sup>
Sec. V <sup>7</sup>		A <sup>7</sup> V <sup>7</sup> /ii	B <sup>7</sup> V <sup>7</sup> /iii	C <sup>7</sup> V <sup>7</sup> /IV	D <sup>7</sup> V <sup>7</sup> /V	E <sup>7</sup> V <sup>7</sup> /vi	
Sec. vii <sup>Ø7</sup>		C# <sup>Ø7</sup> vii <sup>Ø7</sup> /ii	D# <sup>Ø7</sup> vii <sup>Ø7</sup> /iii	E <sup>Ø7</sup> vii <sup>Ø7</sup> /IV	F# <sup>Ø7</sup> vii <sup>Ø7</sup> /V	G# <sup>Ø7</sup> vii <sup>Ø7</sup> /vi	
Parallel Natural Minor	Cm <sup>7</sup> i <sup>7</sup>	D <sup>Ø7</sup> ii <sup>7b5</sup>	Eb <sup>Maj7</sup> bIII <sup>Maj7</sup>	Fm <sup>7</sup> iv <sup>7</sup>	Gm <sup>7</sup> v <sup>7</sup>	Ab <sup>Maj7</sup> bVI <sup>Maj7</sup>	Bb <sup>7</sup> bVII <sup>7</sup>
Parallel Melodic Minor	Cm <sup>Maj7</sup> i <sup>Maj7</sup>	Dm <sup>7</sup> ii <sup>7</sup>	Eb <sup>Maj7#5</sup> bIII <sup>Maj7#5</sup>	F <sup>7</sup> IV <sup>7</sup>		A <sup>Ø7</sup> vi <sup>7b5</sup>	
Parallel Harmonic Minor							B <sup>Ø7</sup> vii <sup>Ø7</sup>



## Modal Mixture for Songwriters

There are 24 Major and Minor triads. These tables show how they each relate to C.

### Borrowed from C Major

Major Triad	Relative Minor	Roman Numerals
C	Am	I / vi
F	Dm	IV / ii
G	Em	V / iii

### Borrowed from C Minor

Major Triad	Relative Minor	Roman Numerals
E <sup>b</sup>	Cm	bIII / i
A <sup>b</sup>	Fm	bVI / iv
B <sup>b</sup>	Gm	bVII / v

### Borrowed from Parallel Modes

Major Triad	Relative Minor	Roman Numerals	Borrowed from Parallel ____
D <sup>b</sup>	B <sup>b</sup> m	bII / bvii	Phrygian
D	Bm	II / vii	Lydian
G <sup>b</sup>	E <sup>b</sup> m	bV / biii	Locrian

### Secondary V chords and their Relative Minors

Major Triad	Relative Minor	Roman Numerals	V/x
E	C <sup>#</sup> m / D <sup>b</sup> m	III / bii	V/vi
A	F <sup>#</sup> m / G <sup>b</sup> m	VI / bii	V/ii
B	G <sup>#</sup> m / A <sup>b</sup> m	VII / bvi	V/iii

## Basic Triads

Triads contain three different pitches. Basic Triads are built by stacking pairs of third intervals. The lowest pitch in one of these stacks is called the Root. The pitch a third above the Root is called the Third, and the pitch a fifth above the Root is called the Fifth.



Triad Type	Interval: Root and Third	Interval: Third and Fifth	Interval: Root and Fifth	Formula
Diminished, d, °	m3	m3	d5	1 b3 b5
Minor, m	m3	M3	P5	1 b3 5
Major, M	M3	m3	P5	1 3 5
Augmented, A, +	M3	M3	A5	1 3 #5

Inversions are generated by changing which pitch appears in the low voice. A triad is in first inversion when the Third is in the low voice. A triad is in second inversion when the Fifth is in the low voice. A consequence of inversion is that the various intervals between the three voices (Low, Middle, and High) change.



Triad Type	Inversion	Interval: Low and Middle	Interval: Middle and High	Interval: Low and High	Formula
Diminished	1st	m3	A4	M6	b3 b5 1
Diminished	2nd	A4	m3	M6	b5 1 b3
Minor	1st	M3	P4	M6	b3 5 1
Minor	2nd	P4	m3	m6	5 1 b3
Major	1st	m3	P4	m6	3 5 1
Major	2nd	P4	M3	M6	5 1 3

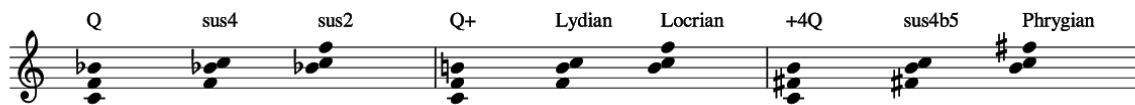
## Advanced Triads

Advanced Triads are built by stacking pairs of fourth intervals. These are called Quartal triads.



Triad Type	Interval: Low and Middle	Interval: Middle and High	Interval: Low and High
Q	P4	P4	m7
Q+	P4	A4	M7
+4Q	A4	P4	M7

Each inversion is treated as its own unique triad, and its lowest note is reinterpreted as a new Root.

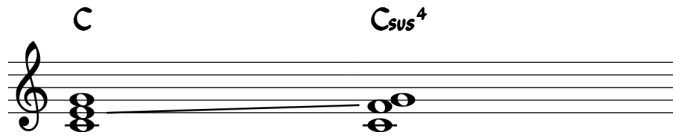


Triad Type	Inversion	Name	Formula	Interval: Low and Middle	Interval: Middle and High	Interval: Low and High
Q	1st	sus4	1 4 5	P4	M2	P5
Q	2nd	sus2	1 2 5	M2	P4	P5
Q+	1st	Lydian	1 #4 5	A4	m2	P5
Q+	2nd	Locrian	1 b2 b5	m2	P4	d5
+4Q	1st	sus4b5	1 4 b5	P4	m2	d5
+4Q	2nd	Phrygian	1 b2 5	m2	A4	P5

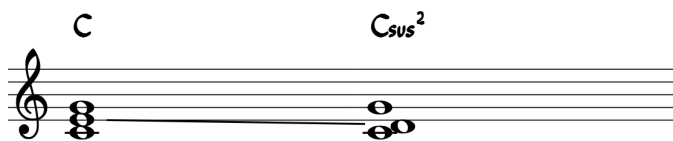
## Suspended Triads and Other Three Note Structures

Suspended triads are triads in which one member, usually the third, has been raised or lowered one scale step.

**Ex. 20a**



**Ex. 20b**



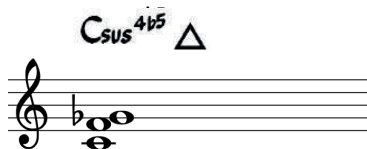
In example Ex. 20a the (E) moved one scale step (major scale) up to (F) creating a C suspended fourth triad. Example Ex. 20b the (E) moved down to a (D) creating a C suspended second triad. There are two other types of triads commonly used.

**Ex. 21**



The (E) of a C major triad is raised a whole step to (F#) to accommodate the #4 of a Lydian scale.

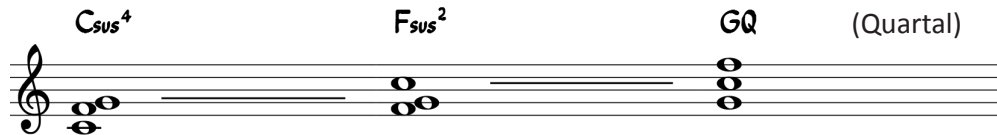
**Ex. 22**



The Sus4b5 triad is slightly different in that the fourth (F) is raised and the fifth (Gb) is flatted as in a Locrian scale.

In reality, certain suspensions such as sus2 or quartal voicing are simply inversions of sus4, Lydian or Locrian triads. It is because of their distinct sounds that I have chosen to name them in relation to their actual voicing.

**Ex. 23**



$F_{sus}^2$  is a 1<sup>st</sup> inversion of  $C_{sus}^4$

GQ is a 2<sup>nd</sup> inversion of  $C_{sus}^4$

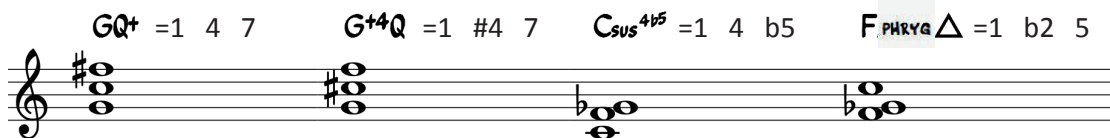
The Q (Quartal) represents a triad containing two perfect fourths.

**Ex. 24**      GQ = 1      4      b7



Here are some other symbols to know.

**Ex. 25**



## Chord Scales

### Major Scale Modes

Scale Degree	Mode	Relation to Major Scale							Most Common Use
I, I <sup>maj7</sup>	Ionian	1	2	3	4	5	6	7	Maj <sup>7</sup>
ii, ii <sup>7</sup>	Dorian	1	2	b3	4	5	6	b7	Min <sup>7 (nat.6)</sup>
iii, iii <sup>7</sup>	Phrygian	1	b2	b3	4	5	b6	b7	Min <sup>7</sup> , MajΔ/7
IV, IV <sup>maj7</sup>	Lydian	1	2	3	#4	5	6	7	Maj <sup>7(#11)</sup>
V, V <sup>7</sup>	Mixolydian	1	2	3	4	5	6	b7	Dom <sup>7</sup>
vi, vi <sup>7</sup>	Aeolian	1	2	b3	4	5	b6	b7	Min <sup>7(b6)</sup>
vii <sup>0</sup> , vii <sup>7b5</sup>	Locrian	1	b2	b3	4	b5	b6	b7	Min <sup>7b5</sup>

### Melodic Minor Modes

Scale Degree	Mode	Relation to Major Scale							Most Common Use
i, i <sup>maj7</sup>	Melodic Minor	1	2	b3	4	5	6	7	Min <sup>maj7</sup>
ii, ii <sup>7</sup>	Dorian b2	1	b2	b3	4	5	6	b7	Min <sup>7 sus4b9</sup>
bIII <sup>+</sup> , bIII <sup>+maj7</sup>	Lydian Aug.	1	2	3	#4	#5	6	7	Maj <sup>7#4#5</sup> , MajΔ/b6
IV, IV <sup>7</sup>	Mixolydian #11	1	2	3	#4	5	6	b7	Dom <sup>7b5</sup>
V, V <sup>7</sup>	Mixolydian b6	1	2	3	4	5	b6	b7	Dom <sup>7b6</sup>
vi <sup>0</sup> , vi <sup>7b5</sup>	Locrian Nat.9	1	2	b3	4	b5	b6	b7	Min <sup>9b6</sup>
vii <sup>0</sup> , vii <sup>7b5</sup>	Altered Dominant	1	b2	b3	b4	b5	b6	b7	Dom <sup>7b9,#9,b5,#5</sup>

## Harmonic Minor Modes

Scale Degree	Mode	Relation to Major Scale							Most Common Use
i, i <sup>maj7</sup>	Harmonic Minor	1	2	b3	4	5	b6	7	Min <sup>maj7</sup> , oΔ/b7
ii <sup>o</sup> , ii <sup>7b5</sup>	Locrian Nat.6	1	b2	b3	4	b5	6	b7	Min <sup>7b5</sup>
bIII <sup>+</sup> , bIII <sup>+maj7</sup>	Ionian Aug.	1	2	3	4	#5	6	7	Maj <sup>7sus4,#5</sup>
iv, iv <sup>7</sup>	Dorian #4	1	2	b3	#4	5	6	b7	Min <sup>7(#11)</sup>
V, V <sup>7</sup>	Phrygian Major	1	b2	3	4	5	b6	b7	Dom <sup>7sus4,b9,#5</sup>
Vi, Vi <sup>maj7</sup>	Lydian #9	1	#2	3	#4	5	6	7	Maj <sup>7#9,#11</sup> , MajΔ/b9
vii <sup>o</sup> , vii <sup>o7</sup>	Altered Dominant bb7	1	b2	b3	b4	b5	b6	bb7	Dim <sup>o7</sup>

## Miscellaneous Scales

Scale	Relation to Major Scale								Most Common Use
Tonic Diminished	1	2	b3	4	b5	b6	bb7	7	Dim <sup>7</sup> , MajΔ/b9
Dominant Diminished	1	b2	b3	b4	b5	5	6	b7	Dom <sup>13,b9,#9,b5</sup>
Whole Tone	1	2	3	#4	#5	b7	Dom <sup>7,#5,b5</sup>		
Augmented	1	#2	3	5	#5	7	AugΔ/7AugΔ		
Major Pentatonic	1	2	3	5	6	Maj <sup>(6,7)</sup>			
Minor Pentatonic	1	b3	4	5	b7	Min <sup>(7,11)</sup>			
Major Blues	1	2	b3	3	5	6	Dom <sup>7</sup> , Maj <sup>(6,7)</sup>		
Minor Blues	1	b3	4	b5	5	b7	Min <sup>7</sup> , Dom <sup>7#9</sup>		

## Chord Families and Their Scales

### Major<sup>7</sup> Type

Maj <sup>(7)</sup> Type	Relation to Major Scale							Characteristics
Ionian	1	2	3	4	5	6	7	sus4
Lydian	1	2	3	#4	5	6	7	#4 (#11)
Lydian aug	1	2	3	#4	#5	6	7	#4, #5
Ionian aug	1	2	3	4	#5	6	7	sus4, #5
Major Petatonic	1	2	3	5	6			no 4 or 7
Major Blues	1	2	b3	3	5	6	b3, no4 or7	
Augmented	1	b3	3	5	#5	7	b3, #5	

### Minor<sup>7</sup> Type

Min <sup>(7)</sup> Type	Relation to Major Scale							Characteristics	
Dorian	1	2	b3	4	5	6	b7	6	
Phrygian	1	b2	b3	4	5	b6	b7	b2, 5, b6	
Aeolian	1	2	b3	4	5	b6	b7	b6	
Melodic Minor	1	2	b3	4	5	6	7	6, 7	
Dorian b2	1	b2	b3	4	5	6	b7	b2, 6	
Harmonic Minor	1	2	b3	4	5	b6	7	b6, 7	
Dorian #4	1	2	b3	#4	5	6	b7	#4, 6	
Minor Pentatonic	1	b3		4		5	b7	4(11)	
Minor Blues	1	b3		4	#4		5	b7	4, #4 (11, #11)



## Minor<sup>7b5</sup> Type

Min <sup>(7b5)</sup> Type	Relation to Major Scale							Characteristics
Locrian	1	b2	b3	4	b5	b6	b7	b2, b5
Locrian nat2	1	2	b3	4	b5	b6	b7	2, b5
Locrian nat6	1	b2	b3	4	b5	6	b7	b2, b5, 6

## Dom<sup>7</sup> Type

Dom <sup>7</sup> Type	Relation to Major Scale								Characteristics
Mixolydian	1	2	3	4	5	6	b7	sus4, b7	
Mixolydian #11	1	2	3	#4	5	6	b7	#4 (b5), b7	
Mixolydian b6	1	2	3	4	5	b6	b7	sus4, b6 (#5), b7	
Altered Dominant	1	b2	b3	b4	b5	b6	b7	b9, #9, b5, #5	
Phrygian Major	1	b2	3	4	5	b6	b7	sus4, #5, 5	
Dominant Diminished	1	b2	b3	b4	b5	5	6	b7	b9, #9, b5, 5, 13
Whole Tone	1	2	3	#4	#5	b7		#4, #5	
Major Pentatonic	1	2	3	5	6			no 4 or b7	
Minor Pentatonic	1	b3	4	5	b7			#9, no b7	
Major Blues	1	2	b3	3	5	6		b3, no b7	
Minor Blues	1	b3	4	#4	5	b7		#9, sus4, b5	

## Diminished Type

Dim Type	Relation to Major Scale								Characteristics
Tonic Diminished	1	2	b3	4	b5	b6	bb7	7	9, 11, b13, 7
Altered Dominant bb7	1	b2	b3	b4	b5	b6	bb7		b9, 3, b13

## Augmented Type

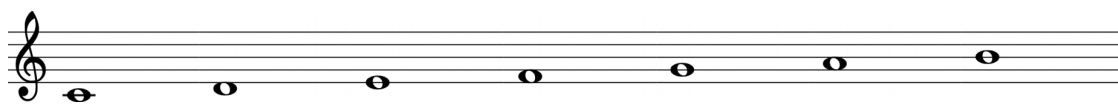
Aug Type	Relation to Major Scale						Characteristics
Whole Tone	1	2	3	#4	#5	b7	#4, #5
Augmented	1	#2	3	5	#5	7	#2, 5, #5, 7

## Scale Degree Names and Basic Progressions

Scale degree names are commonly used in traditional harmonic analysis. It would be a good idea to become familiar with these terms for future reference in this text.

### **Ex. 26**

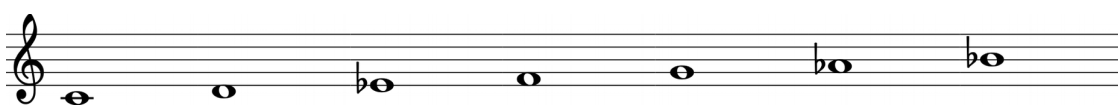
In C major

I	ii	iii	IV	V	vi	vii <sup>o</sup>
						
Tonic	Supertonic	Mediant	Subdominant	Dominant	Submediant	Leading Tone

These scale degree terms apply to all seven note scales with leading tones. In scales containing lowered seventh degrees, the Leading Tone is replaced by the Subtonic.

### **Ex. 27**

In C Aeolian

i	ii <sup>o</sup>	III	iv	v	VI	VII
						
Tonic	Supertonic	Mediant	Subdominant	Dominant	Submediant	Subtonic

## Basic Progressions

To better understand functional harmony, it should be divided into three basic subheadings from the terms above.

1. **Dominant Chords**: chords which contain the 5<sup>th</sup> and 7<sup>th</sup> degrees of the scale.  $V^7$ ,  $vii^{7b5}$ .

**Ex. 28**

Key of C  $G^7 = V^7$  in C

1 2 3 4 5 6 7 1 2 3 4

**Ex. 29**

Key of C  $B-7^{b5} = vii^{7b5}$  in C

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

Note: the 4<sup>th</sup> and 7<sup>th</sup> degrees are the least stable and therefore must be resolved.

2. **Pre-Dominant Chords**: chords which contain only 4<sup>th</sup> degree of the scale

**Ex. 30**

Key of C  $F_{MA}^7 = IV_{MA}^7$  in C

1 2 3 4 5 6 7 1 2 3

**Ex. 31**

Key of C  $D-7 = ii^{-7}$  in C

1 2 3 4 5 6 7 1 2

3. **Tonic Chords:** chords which do not contain the 4<sup>th</sup> degree of the scale

**Ex. 32**

Key of C  
C<sup>MA</sup>7 = I<sup>MA7</sup> in C

1 2 3 4 5 6 7 1 2

**Ex. 33**

Key of C  
E<sup>-7</sup> = iii<sup>-7</sup> in C

1 2 3 4 5 6 7 1 2

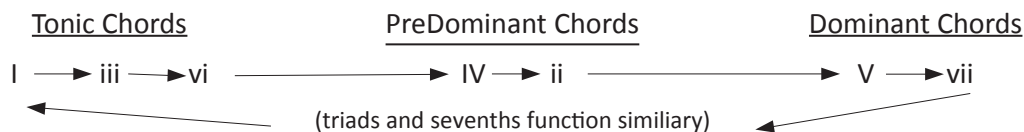
**Ex. 34**

Key of C  
A<sup>-7</sup> = vi<sup>7</sup> in C

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

Here is a clearer chart (major key).

**Ex. 35**



In traditional harmony, the strongest and most common cadence patterns move clockwise through each group.

**Ex. 36**

Example 36 shows a progression of chords in C major:

- Measure 1:** D<sup>-7</sup> (labeled above) / ii<sup>7</sup> (labeled below, with "(Pre Dom.)" underneath)
- Measure 2:** G<sup>7</sup> (labeled above) / V<sup>7</sup> (labeled below, with "(Dom.)" underneath)
- Measure 3:** C<sup>MA7</sup> (labeled above) / I<sup>MA7</sup> (labeled below, with "(Tonic)" underneath)

**Ex. 37**

Example 37 shows a sequence of chords in C major:

- Measure 1:** E<sup>-7</sup> (labeled above) / iii<sup>7</sup> (labeled below, with "(Tonic)" underneath)
- Measure 2:** A<sup>-7</sup> (labeled above) / vi<sup>7</sup> (labeled below, with "(Tonic)" underneath)
- Measure 3:** D<sup>-7</sup> (labeled above) / ii<sup>-7</sup> (labeled below, with "(Pre Dom.)" underneath)
- Measure 4:** G<sup>7</sup> (labeled above) / V<sup>7</sup> (labeled below, with "(Dom.)" underneath)
- Measure 5:** C<sup>MA7</sup> (labeled above) / I<sup>MA7</sup> (labeled below, with "(Tonic)" underneath)

In Ex. 35 there are two (or three if the progression is repeated) consecutive tonic chords. The particular sequence of chords within group should also be noted in Ex. 37 (I - iii - vi)

## More About Roman Numeral Analysis

Roman Numerals are commonly used to describe chords within the diatonic chord systems. Here are definitions of the two elements used in Roman Numeral Analysis.

Exact Distance: Distinctions between basic triads are indicated by the following symbols:

Uppercase Roman Numerals for Major

Lowercase Roman Numerals for minor

(<sup>o</sup>) and lower case Roman Numerals for diminished

(+) and upper case Roman Numerals for Augmented

Seventh chords use these symbols:

(Maj7) or (MA7) for chords containing a major seventh interval above the root and

(min7) indicating a minor seventh or (b7) interval above the root.

### **Secondary Dominant and Diminished Seventh:**


The terms Secondary Dominant and Secondary Diminished Seventh chords refer to chords outside the diatonic key which momentarily modulate to another key.

#### Secondary Dominant Chords:

Example 38 shows the Secondary Dominant chords from the key of C major.

#### **Ex. 38**

	I	ii	iii	IV	V	vi	vii <sup>o</sup>
Cmajor =	C	D-	E-	F	G	A-	B <sup>o</sup>
Sec. Dom.'s		A <sup>7</sup>	B <sup>7</sup>	C <sup>7</sup>	D <sup>7</sup>	E <sup>7</sup>	
		<u>V<sup>7</sup></u>	<u>V<sup>7</sup></u>	<u>V<sup>7</sup></u>	<u>V<sup>7</sup></u>	<u>V<sup>7</sup></u>	
		ii	iii	IV	V	vi	


  
not a stable enough resolution  
chord to have a Sec. Dom.

Basically, the Secondary Dom.<sup>7</sup> chord is the Dom.<sup>7</sup> chord in the key of the bottom Roman Numeral.

**Ex. 39**

**C<sup>MA7</sup>      A<sup>7</sup>      D<sup>-7</sup>      G<sup>7</sup>**

**I<sup>maj7</sup>      V<sup>7</sup>      ii      V<sup>7</sup>**

**ii Bottom Roman Numeral**

A<sup>7</sup> is the V<sup>7</sup> chord in the key of D minor. So in reality, D<sup>-7</sup> functions dually as the i<sup>7</sup> chord in D minor and as the ii<sup>7</sup> in major

Secondary Diminished Seventh Chords

Secondary Diminished Seventh Chords are leading tone seventh chords from the key of the denominator.

**Ex. 40**

**C<sup>MA7</sup>      C<sup>#o7</sup>      D<sup>-7</sup>      D<sup>#o7</sup>      E<sup>-7</sup>**

**I<sup>maj7</sup>      vii<sup>o7</sup>      ii      vii<sup>o7</sup>      iii**

**ii      iii**

The Secondary Diminished Seventh chords in the key of C are:

**Ex. 41**

	I	ii	iii	IV	V	vi	vii <sup>o</sup>
Cmajor =	C	D-	E-	F	G	A-	B <sup>o</sup>
Sec. Dim <sup>o7</sup>		C <sup>#o7</sup>	D <sup>#o7</sup>	E <sup>o7</sup>	F <sup>#o7</sup>	G <sup>#o7</sup>	
		<u>vii<sup>o7</sup></u>	<u>vii<sup>o7</sup></u>	<u>vii<sup>o7</sup></u>	<u>vii<sup>o7</sup></u>	<u>vii<sup>o7</sup></u>	
		ii	iii	VI	V	vi	

not a stable enough resolution chord to have a Sec. Dom.



## Cycle of Fifth and Backcycling

The terms Cycle of Fifths and Backcycling are frequently mentioned in jazz theory. Here are the definitions and examples of each.

### Cycle of Fifths

A progression that is most commonly associated with Dom7 chords (V7) whose roots move in descending fifths pattern.

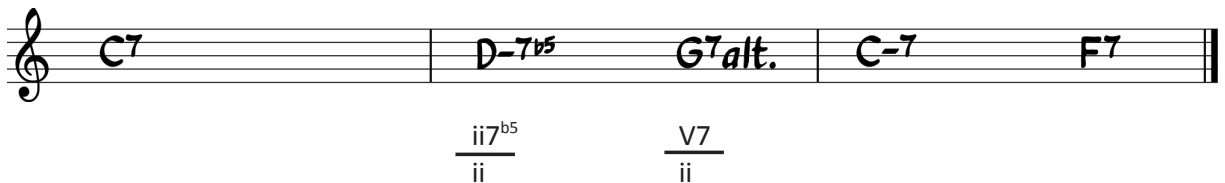
**Ex. 42**



### Back Cycling

Harmonic movement, usually from a minor key to the key center a fifth above.

**Ex. 43**



Back Cycles and the Cycle of Fifths are terms that are commonly used. Keep in mind, however, that both devices can be analyzed in other ways (secondary dominants).

## Roman Numeral Analysis and Chord Scale Choice

I have included two common harmonic progressions for purposes of Roman Numeral Analysis and Chord Scale Choice. The key centers are circled. Capital letters are Major keys and subscript letters are minor keys.

### Ex. 44a

<p><b>(Ab)</b></p> <p><b>F-7</b></p> <p><b>R.N.</b> vi<sup>7</sup></p> <p><b>C.S.</b> F aeolian</p>	<p><b>Bb-7</b></p> <p>ii<sup>7</sup></p> <p>Bb dorian</p>	<p><b>Eb7</b></p> <p>V<sup>7</sup></p> <p>Eb mixolydian</p>	<p><b>Ab<sub>MA</sub>7</b></p> <p>I<sub>MA</sub>7</p> <p>Ab ionian</p>
<p><b>Db<sub>MA</sub>7</b></p> <p>IV<sub>MA</sub>7</p> <p>Db lydian</p>	<p><b>(C)</b></p> <p><b>D-7</b></p> <p>ii<sup>7</sup></p> <p>D dorian</p>	<p><b>G7</b></p> <p>V<sup>7</sup></p> <p>G mixo.</p>	<p><b>C<sub>MA</sub>7</b></p> <p>I<sub>MA</sub>7</p> <p>C ionian</p>
<p><b>(Eb)</b></p> <p><b>C-7</b></p> <p>vi<sup>7</sup></p> <p>C aeolian</p>	<p><b>F-7</b></p> <p>ii<sup>7</sup></p> <p>F dorian</p>	<p><b>Bb7</b></p> <p>V<sup>7</sup></p> <p>Bb mixolydian</p>	<p><b>Eb<sub>MA</sub>7</b></p> <p>I<sub>MA</sub>7</p> <p>Eb ionian</p>
<p><b>Ab<sub>MA</sub>7</b></p> <p>IV<sub>MA</sub>7</p> <p>Ab lydian</p>	<p><b>(G)</b></p> <p><b>A-7</b></p> <p>ii<sup>7</sup></p> <p>A dorian</p>	<p><b>D7</b></p> <p>V<sup>7</sup></p> <p>D mixo.</p>	<p><b>G<sub>MA</sub>7</b></p> <p>I<sub>MA</sub>7</p> <p>G ionian</p>
<p><b>A-7</b></p> <p>ii<sup>7</sup></p> <p>A dorian</p>	<p><b>D7</b></p> <p>V<sup>7</sup></p> <p>D mixolydian</p>	<p><b>G<sub>MA</sub>7</b></p> <p>I<sub>MA</sub>7</p> <p>G ionian</p>	<p><b>B-7</b></p> <p>iii<sup>7</sup></p> <p>B phry.</p>
<p><b>(E)</b></p> <p><b>F#-7</b></p> <p>ii<sup>7</sup></p> <p>F# dorian</p>	<p><b>B7</b></p> <p>V<sup>7</sup></p> <p>B mixolydian</p>	<p><b>E<sub>MA</sub>7</b></p> <p>I<sub>MA</sub>7</p> <p>E ionian</p>	<p><b>(Ab)</b></p> <p><b>C7</b></p> <p>V<sup>7</sup></p> <p>vi C alt. scale</p>
<p><b>F-7</b></p> <p>vi<sup>7</sup></p> <p>F aeolian</p>	<p><b>Bb-7</b></p> <p>ii<sup>7</sup></p> <p>Bb dorian</p>	<p><b>Eb7</b></p> <p>V<sup>7</sup></p> <p>Eb mixolydian</p>	<p><b>Ab<sub>MA</sub>7</b></p> <p>I<sub>MA</sub>7</p> <p>Ab ionian</p>
<p><b>Db<sub>MA</sub>7</b></p> <p>IV<sub>MA</sub>7</p> <p>Db lydian</p>	<p><b>(B)</b></p> <p><b>C#-7</b></p> <p>ii<sup>7</sup></p> <p>C# dorian</p>	<p><b>F#7</b></p> <p>V<sup>7</sup></p> <p>F# mixo.</p>	<p><b>(Ab)</b></p> <p><b>C-7</b></p> <p>iii<sup>7</sup></p> <p>C phrygian</p>
<p><b>Bb-7</b></p> <p>ii<sup>7</sup></p> <p>Bb dorian</p>	<p><b>Eb7</b></p> <p>V<sup>7</sup></p> <p>Eb mixolydian</p>	<p><b>Ab<sub>MA</sub>7</b></p> <p>I<sub>MA</sub>7</p> <p>Ab ionian</p>	<p><b>(f)</b></p> <p><b>G-7b5</b></p> <p>ii<sup>7</sup>b5</p> <p>G loc. #6</p>
<p><b>Bb-7</b></p> <p>ii<sup>7</sup></p> <p>Bb dorian</p>	<p><b>Eb7</b></p> <p>V<sup>7</sup></p> <p>Eb mixolydian</p>	<p><b>Ab<sub>MA</sub>7</b></p> <p>I<sub>MA</sub>7</p> <p>Ab ionian</p>	<p><b>Calt.</b></p> <p>V<sup>7</sup> alt</p> <p>C phry. major</p>

Ex. 44b

**(d)** E-7<sup>b5</sup> A7<sup>alt</sup> **(Bb)** C-7 F7

ii7<sup>b5</sup> V7 ii7 V7

The scales you will provide

**(Eb)** F-7 Bb7 Eb<sup>MA</sup>7 **(Bb)** Ab7

ii7 V7 I<sup>MA</sup>7 bII7 Tritone sub.  
vi

Bb<sup>MA</sup>7 **(d)** E-7<sup>b5</sup> A7<sup>alt</sup> D-7 **(Ab)** Bb-7 Eb7

I<sup>MA</sup>7 (sub. for vi) ii7<sup>b5</sup> V7 i7 ii7 V7

**(F)** A-7 D7 G-7 C7 **(g)** A-7<sup>b5</sup> D7<sup>alt</sup>

iii7 V7 ii7 V7 ii7<sup>b5</sup> V7

**(c)** G7<sup>#5</sup> C-7

V7 i7

**(Bb)** Ab7 Bb<sup>MA</sup>7

bII7 vi I<sup>MA</sup>7

**(d)** E-7<sup>b5</sup> A7<sup>alt</sup> **(c)** D-7<sup>b5</sup> G7<sup>alt</sup>

ii7<sup>b5</sup> V7 ii7<sup>b5</sup> V7

**(Bb)** C-7(b5) E7<sup>alt</sup> Bb<sup>MA</sup>7

ii-7(b5) V7 I<sup>MA</sup>7

You may have noticed the Ab<sup>7</sup> as being bII. The reason for this is because it (Ab<sup>7</sup>) is a tritone substitute (to be explained later, so don't panic) for D<sup>7</sup> which is  $\frac{V^7}{vi}$  in Bb Major. bII<sup>7</sup> chords are interchangeable for V<sup>7</sup> chords when resolving to their respective Tonic Major or Minor Chords (we will discuss this later in the book).

## Basic Rules for Chord Substitutions

Following is a list of some basic rules for chord substitutions. The subsequent chapters contain additional rules to accommodate the flow of new material.

All chord substitutions may be broken down into three categories.

1. The bass note stays the same and the chord quality changes.

### **Ex. 45**

$$F^{\text{maj}7} \longrightarrow F^7$$

2. The bass note changes but the chord quality stays the same.

### **Ex. 46**

$$F^{7/\#5/b9/b5} \longrightarrow B^9$$

3. Complete chord replacement.

### **Ex. 47**

$$B^{\text{maj}7} \longrightarrow G^{\text{maj}7}$$

### Rule I:

For basic chords, any modal extension may be added.

### **Ex. 48**

1.  $G_-^7 \text{ (dor.)} = G_-^9 \longrightarrow G_-^{11} \longrightarrow G_-^{13}$
2.  $D^7 \text{ (mix.)} = D^9 \longrightarrow D^{11} \longrightarrow D^{13}$
3.  $Bb^{\text{maj}7} \text{ (lyd.)} = Bb^{\text{maj}9} \longrightarrow Bb^{\text{maj}7\#11} \longrightarrow Bb^{\text{maj}13}$

Any of these groups may also combine extensions such as  $\longrightarrow G_-^{9/11/13}$ .

### Rule II: Major Chords

Substitute Major chords own mediant or submediant chord.

### **Ex. 49**

$A^{\text{maj}7}$	sub.	$C\#_-^7 \text{ (mediant)}$		$C\#_-^7 = A^{\text{maj}9}$
		$F\#_-^7 \text{ (submediant)}$		$F\#_-^7 = A^6$

### Rule III: Minor Chords

Substitute Relative Major or Dominant Minor

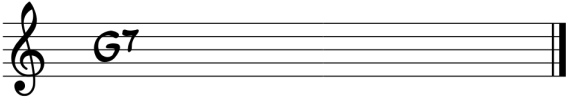
#### **Ex. 50**

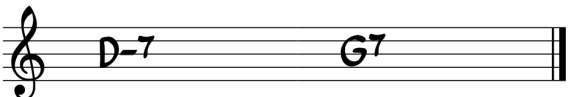
D <sup>-7</sup>	sub.	F <sup>maj7</sup> (relative major)	F <sup>maj7</sup>	= D <sup>-9</sup>
		A <sup>-7</sup> (dom. Minor)	A <sup>-7</sup>	= D <sup>-9/11</sup>

### Rule IV: Dom.<sup>7</sup> Chords (V<sup>7</sup>)

Substitute Dom. minor for Dom. major (must return to Dom. major). This is also called "twoing the five" because you are putting the ii<sup>7</sup> chord before the V<sup>7</sup>. This is one of the most common substitutions found in Jazz (Bebop).

#### **Ex. 51**

orig. 

sub 

Also reverse works:

#### **Ex. 52**

orig. 

sub 

or 


or 


or 


### **Rule V: All Chords**


Substitute any chord which has a root a tritone away from the original chord.

#### ***Ex. 53***

orig. 

sub 

or 


or 

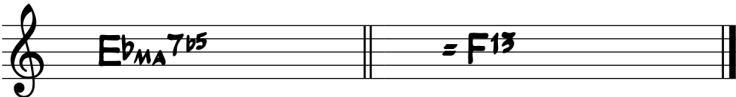
Or combine any lines but do not substitute for tonic chord (not yet!).


### **Rule VI: Dom<sup>7</sup> Chords (V<sup>7</sup>)**

Substitute maj<sup>7b5</sup> or maj<sup>7#5</sup> built on the subtonic (bvii) of the Dom. chord.

#### ***Ex. 54***

orig. 

sub 1 

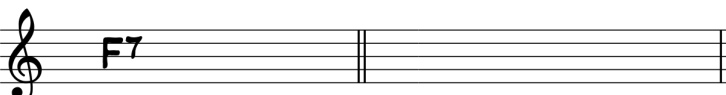
sub 2 


Both should be voiced in higher registers.

## Rule VII: Dom<sup>7</sup> Chords (V<sup>7</sup>)

Substitute min<sup>7b5</sup> chord built on the mediant of the Dom<sup>7</sup> chord.

### **Ex. 55**

orig. 


sub 


(Chord should also be voiced in a higher register)

## Rule VIII: Dom<sup>7</sup> Chords (V<sup>7</sup>)

Substitute Dim<sup>7</sup> chord built on bII of the Dom<sup>7</sup> chord.

### **Ex. 56**

orig. 

sub 

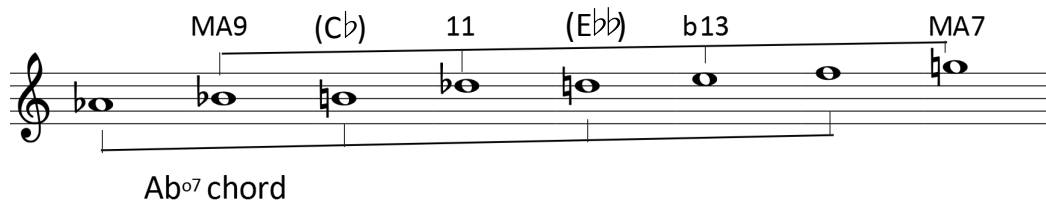
Also the other 3 symmetric dim<sup>7</sup> chords and their extensions

### **Ex. 57**

$$G^{7b9} = Ab^{o7}, B^{o7}, D^{o7}, F^{o7}$$

## Extensions of Dim7 Chords

### **Ex. 58** Ab<sup>o7</sup> (Tonic Diminished scale)



MA9 (Cb) 11 (Ebb) b13 MA7

Ab<sup>o7</sup> chord

**Ex. 59**

$A\flat^{\circ 7}$

1       $b3$        $b5$        $bb7$        $MA7$        $MA9$       11       $b13$

Extensions of  $Dim^7$  chord.  
(happens to be a  $Dim$  chord itself)

**Rule IX:**

$V^7$  chords may replace minors (secondary dominants) to set up a stronger harmonic cadence (tonicization).

**Ex. 60**

orig.  $I^{maj7}$   $vi^7$   $ii^7$   $V^7$

sub  $I^{maj7}$   $A^7$   $D-7$   $G^7$

$I^{maj7}$   $\frac{V^7}{ii}$   $ii^7$   $V^7$

**Rule X:  $Dom^7$  ( $V^7$ ) chords**

Altered ( $\#9$ ,  $b9$ ,  $\#5$ ,  $b5$ )  $Dom^7$  chords may follow unaltered chords when resolving to their tonic. The reverse is not true. When moving towards the tonic, you need to go from less tension to more tension.

**Ex. 61**

orig.  $A^7$   $A^{\#5\#9}$   $D_{MA}^7$

incorrect

no  $A^{\#5\#9}$   $A^7$   $D_{MA}^7$



## Rule XI: Dom7 (V7) Chords

Altered Dom7 chords can be used (even if not indicated) when the root of the chord is:

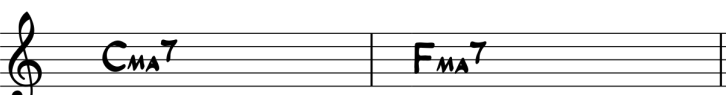
- |  |                    |                        |
|--|--------------------|------------------------|
| 1. a 4 <sup>th</sup> higher (5 <sup>th</sup> lower): | A <sup>7 alt</sup> | D <sup>maj7</sup>      |
| 2. ½ step lower                                      | A <sup>7 alt</sup> | A <sup>b maj7</sup>    |
| 3. a minor type with the same root                   | A <sup>7 alt</sup> | A <sup>-7</sup>        |
| 4. ½ step higher                                     | A <sup>7 alt</sup> | B <sup>b maj7</sup> In |


all other instances use Mixolydian or Mixolydian #11 scales.

## Rule XII:

- A) When a Maj or Min chord is followed by a Maj, Min or Dom<sup>7</sup> chord whose root is a 4<sup>th</sup> higher, you may insert a Dom<sup>7</sup> of the same root for half the duration.

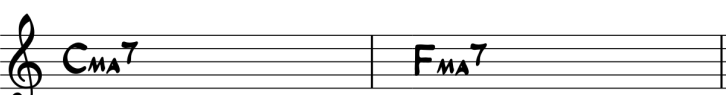
### **Ex. 62**


orig. 

sub. 

You may also insert the ii<sup>7</sup> chord of the V<sup>7</sup> sub


### **Ex. 63**

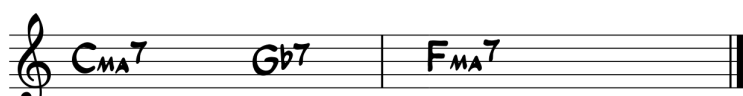
orig. 


sub 

B) You may also insert a Dom<sup>7</sup> chord a tritone away for the same duration.

**Ex. 64**

orig. 

sub 

or 

**Rule XIII**

A min<sup>6</sup> chord cannot be substituted for a min<sup>7</sup> (ii-function) unless an altered Dom<sup>7</sup> follows, thus increasing the harmonic tension of the progression.

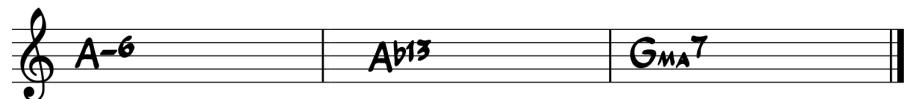
**Ex. 65**

wrong 

O.K. 

Or in combination with tritone substitution

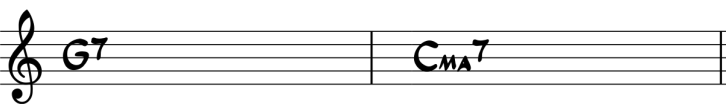

**Ex. 66**



### Rule XIV:



Min<sup>7b5</sup> chords may be inserted before Dom<sup>7</sup> (V<sup>7</sup>) chords in major or minor keys.

#### **Ex. 67a**

orig.    
sub 

or




#### **Ex. 67b**

orig.    
sub 

### Rule XV:

Dom<sup>11</sup> (V<sup>7</sup>) chords can function as dom<sup>7</sup>'s or min<sup>7</sup>'s (dorian/aeolian)

#### **Ex. 68**

 Key of E   
 Key of A   
 Key of b (Aeolian Function)

### Rule XVI:

A  $\text{bII}^{7\text{b}5}$  substitution for  $\text{V}^{7\text{alt}}$  works because they both share the same scale.

#### **Ex. 69**

Two musical staves in treble clef. The first staff shows a progression: D-7, G7#5#9, and CMA7. Below the staff is the text "G altered scale = Ab melodic minor". The second staff shows a progression: D-7, Db7b5, and CMA7. Below the staff is the text "Db mixo. #11 scale = Ab melodic minor".

### Rule XVII:

Secondary Dom<sup>7</sup> and Dim<sup>7</sup> chords may be inserted before their respective resolution chords.

Three musical staves in treble clef. The first staff is labeled "Ex. 70 orig." and shows a progression: CMA7, D-7, E-7, FMA7. The second staff is labeled "sub." and shows a progression: CMA7, A7, D-7, B7, E-7, FMA7. The third staff is labeled "or" and shows a progression: CMA7, C#o7, D-7, D#o7, E-7, FMA7.

### Rule XVIII:

It is common to insert two diatonic chords separated by a secondary dim<sup>7</sup> chord in places of little harmonic motion.

#### **Ex. 71**

Two musical staves in treble clef. The first staff is labeled "orig." and shows a progression: CMA7, followed by three measures with a slash and a dot (/:). The second staff is labeled "sub." and shows a progression: CMA7, D-7, D#o7, E-7. Below the staff, the chords are labeled with Roman numerals: Imaj7, ii7, Vii<sup>o</sup>7 / iii, and iii7.

### Rule XIX:

Maj<sup>7#5</sup> and Maj<sup>7b5</sup> chords can be subbed for any other chords from the same melodic minor scale.

**Ex. 72** Eb<sup>maj7#5</sup> for C<sup>-maj7</sup> (3, 5, 7, 9) of C<sup>-maj7</sup>  
Eb<sup>maj7b5</sup> for F<sup>13</sup> (b7, 9, 3, 13) of F<sup>13</sup>

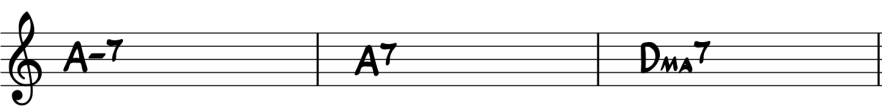
### Rule XX: Symetrical Scales


- A) Diminished chords repeat every min3<sup>rd</sup> (4 frets) interval. Therefore, any of the four in the cycle may be substituted for another.
- B) Augmented Chords repeat every maj3<sup>rd</sup> (5 frets) interval, so the same rule applies.

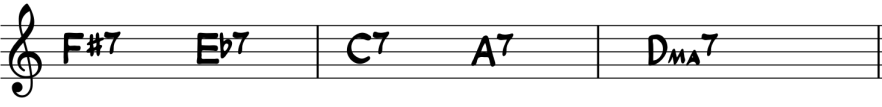
### Rule XXI: Dom<sup>7</sup> Chords (V<sup>7</sup>)


Dom<sup>7</sup> chords can be moved in min3<sup>rd</sup> cycles to intersect at cadence points.


#### Ex. 73

orig. 

sub. 1 

sub. 2 

sub. 3 

sub. 4 

## **Rule XXII: Modal Chords**

Modal Chords can be interchanged (Modal Mixture) as long as the basic integrity of the chord remains intact.

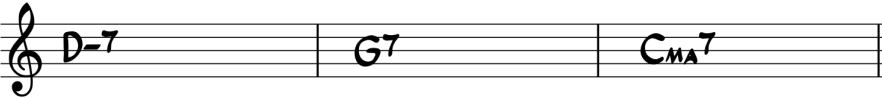
### ***Ex. 74***


G <sup>maj7</sup> (Ionian) orig.	G <sup>maj7/6/9</sup>
G <sup>maj7</sup> (Lydian) sub.	G <sup>maj7/#11</sup>
Bb <sup>-7</sup> (Dorian) orig.	Bb <sup>-6/9</sup>
Bb <sup>-7</sup> (Aeolian) sub.	Bb <sup>-7/b6</sup>


## **Rule XXIII:**

The cycle of 5<sup>th</sup>'s (descending) may be inserted for any length in a progression as long as the intersecting chord has either a V<sup>7</sup> or a bII<sup>7</sup> relationship to the resolution chord.

### ***Ex. 75***

orig. 

sub. 1 

sub. 2 

## Rule XXIV

Bitonal chords from the Dominant Diminished scale can be subbed for one another.

### Ex. 76

$G^{13/b9}$

$\frac{\text{Maj}\Delta}{\text{Bass}}$ sub	①	$\frac{G}{Ab}$	$\frac{Bb}{B}$	$\frac{Db}{D}$	$\frac{E}{F}$
	②	$\frac{Db}{G}$	$\frac{E}{Bb}$	$\frac{G}{Db}$	$\frac{Bb}{E}$
	③	$\frac{E}{G}$	$\frac{G}{Bb}$	$\frac{Bb}{Db}$	$\frac{Db}{Eb}$
	④	$\frac{Bb}{G}$	$\frac{Db}{Bb}$	$\frac{E}{Db}$	$\frac{G}{E}$

$\frac{\text{Min}\Delta}{\text{Bass}}$ sub	①	$\frac{G-}{Ab}$	$\frac{Bb-}{B}$	$\frac{Db-}{D}$	$\frac{E-}{F}$
	②	$\frac{Db-}{G}$	$\frac{E-}{Bb}$	$\frac{G-}{Db}$	$\frac{Bb-}{E}$
	③	$\frac{E-}{G}$	$\frac{G-}{Bb}$	$\frac{Bb-}{Db}$	$\frac{Db-}{Eb}$
	④	$\frac{Bb-}{G}$	$\frac{Db-}{Bb}$	$\frac{E-}{Db}$	$\frac{G-}{E}$

## Rule XXV:

- A) When in a  $\text{min } ii^{7b5} \quad V^7 \quad i^7$  progression, an altered Dom7 chord must be used.
- B) All secondary Dom<sup>7</sup> ( $V^7$ ) chords resolving to minor must have an altered  $V^7$  chord

### Ex. 77

$\text{I}^{\text{maj}7} \quad \frac{V^7}{ii} \quad ii^7 \quad V^7$

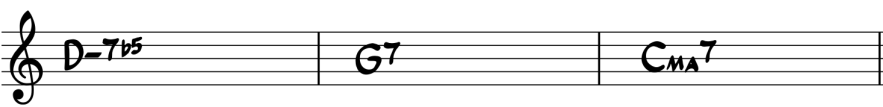
$Bb_{MA}^7 \quad G7^{\#5} \quad C-^7 \quad F^7$

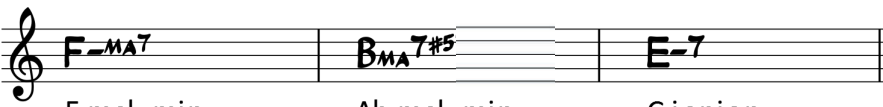
must be altered in some way  
because it's resolving to  $C-^7$

### Rule XXVI:

Any chord can be replaced by another chord from its family.

#### **Ex. 78**

orig. 


sub. 


scale: F mel. min      Ab mel. min      C ionian

### Rule XXVII

Dim<sup>7</sup> chords that resolve to min<sup>7</sup> chords one ½ step above can be replaced with a ii<sup>7b5</sup> V<sup>7alt</sup> progression from the key of the min<sup>7</sup> chord.

#### **Ex. 79**

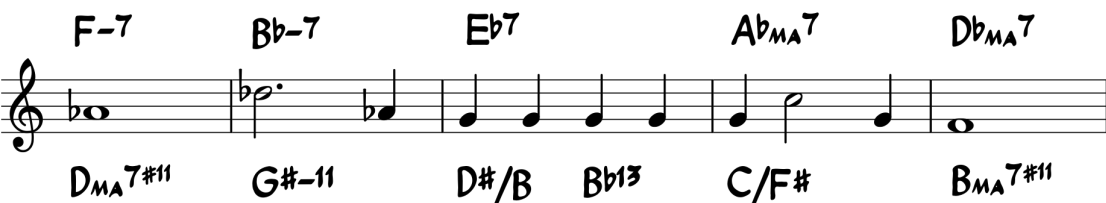
orig. 

sub. 

### Rule XXVIII:

Any chord whose chord scale contains the melody notes of a particular measure can be substituted.

#### **Ex. 80**





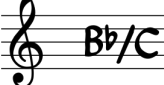



orig. 



### Rule XXIX

Triads and Sevenths (V<sup>7</sup>) over Dom or Tonic bass notes are very common.

#### **Ex. 81**


	I <sup>maj7</sup>	$\frac{V^7}{ii}$	ii	V <sup>7</sup>
orig.				
sub.				

## Triads Over Bass Notes

Triads over bass notes are used extensively in contemporary jazz and classical music. The triad can be of any quality (maj, min, dim, aug, sus, lyd or loc) and inversion.

### **Ex. 82a**

G	Triad
F#	Bass Note




G Triad

F# Bass Note

### **Ex. 82b**

A-	Triad
G#	Bass Note



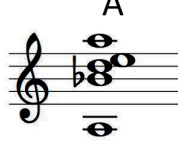
A- Triad 1<sup>st</sup> inversion

G# Bass Note

The seventh chord over a bass note looks like

this: **Ex. 83**

B <sup>b</sup> MA7b5
A



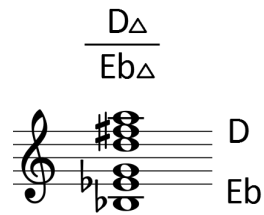
B<sup>b</sup>MA7b5

A Bass Note

The seventh chord may be in any inversion as well.

The polychord differs from the triad over bass note by the presence of a triad or seventh chord on both the top and bottom.

**Ex. 84a**



**Ex. 84b**

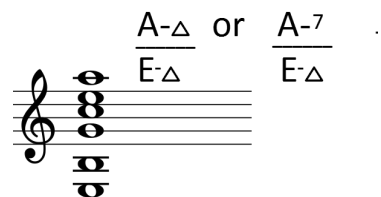


To indicate the presence of a triad, a Δ (triad) symbol should be used.

Seventh chords over triads or other seventh chords are impossible to sound simultaneously on the guitar because of the six string limit (on most guitars).

In some instances their effect can be achieved with a triad over triad or seventh chord over bass note.

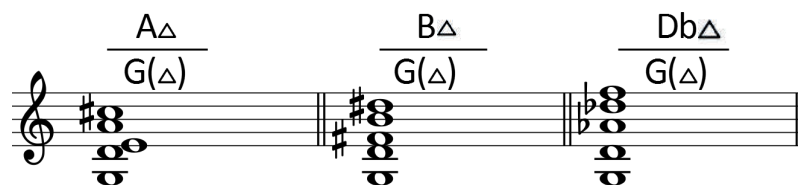
**Ex. 85**



The G of the E min chord dually functions as the third of Emin and the b7 of A-7.

Many times the root and fifth are sufficient in giving the sound of the bottom triad.

**Ex. 86**



## Triads and Seventh Chords Over Bass Notes and Polychords

Key of C: C triads over C bass notes not included, because they are simply triads. The last row of generic chord names will help you when encountering these same relationships in other keys.

Chord Name	Chord Type (Seventh or Mode)	Triad / Bass Interval Relationship	Scale(s)	Generic Chord Name or Interval above Top Triad
$\frac{Db}{C}$	$\frac{Db^{maj7}}{7}$ phrygian	b9, 11, b6	Phrygian Phrygian Major	$\frac{Maj\Delta}{Maj7}$
$\frac{Db-}{c}$	$\frac{Db-^{maj7}}{7}$ altered dominant	b9, 3, #5	Phrygian Major Altered Dominant	$\frac{Min\Delta}{Maj7}$
$\frac{Db^o}{C}$	$\frac{Db^{omaj7}}{7}$ dominant diminished	b9, 3, 5	Phrygian Major Dominant Diminished	$\frac{Dim\Delta}{Maj7}$
$\frac{Db^+}{C}$	$\frac{Db^{maj7\#5}}{7}$ dorian b2	b9, 11, 6	Dorian b2 Locrian nat 6	$\frac{Aug\Delta}{Maj7}$
$\frac{Db^{sus4}}{C}$	$\frac{Db^{maj7sus4}}{7}$ locrian or altered dom.	b9, b5, b6	Locrian Altered Dominant	$\frac{sus4\Delta}{Maj7}$
$\frac{Db^{lyd}}{C}$	$\frac{Db^{lydmaj7}}{7}$ phrygian	b9, 5, b6	Phrygian Phrygian Major	$\frac{Lyd.\Delta}{Maj7}$
$\frac{Db^{loc.}}{C}$	C Dom.Dim	b9, #11, 5		$\frac{Loc.\Delta}{Maj7}$
$\frac{D}{C}$	$\frac{D^7}{b7}$	9, #11, 13	Lydian (Augmented) Mixolydian #11 Dorian #9 Tonic Diminished	$\frac{Maj\Delta}{b7}$
$\frac{D-}{C}$	$\frac{D^{-7}}{b7}$	9, 11, 13	Ionian Dorian Mixolydian Meloidic Minor Ionian Augmented Tonic Diminished	$\frac{Min\Delta}{b7}$
$\frac{D^o}{C}$	$\frac{D^{-7b5}}{b7}$	9, 11, b6	Aeolian Mixolydian b6 Locrian nat 2 Harmonic Minor Tonic Diminished	$\frac{Dim\Delta}{b7}$
$\frac{D^+}{C}$	$C^{9/b5\ no3rd}$	9, #11, b7	Mixolydian #11 Dorian #4 Whole Tone	$\frac{Aug\Delta}{b7}$

Chord Name	Chord Type (Seventh or Mode)	Triad / Bass Interval Relationship	Scale(s)	Generic Chord Name or Interval above Top Triad
$\frac{D^{sus4}}{C}$	$C^{6/9}$ no 3rd	9, 5, 13	Ionian Dorian Lydian Mixolydian Melodic Minor Mixolydian #11 Dorian #4 Pentatonic (Major)	$\frac{sus4\Delta}{b7}$
$\frac{D^{lyd}}{C}$	$C^{6/9/\#11}$ no 3rd	9, #5, 13	Lydian Augmented Ionian Augmented	$\frac{Lyd.\Delta}{b7}$
$\frac{D^{loc.}}{C}$	$\frac{Ab^{maj7/b5}}{3^{rd}}$	9, 5, b6		$\frac{Majb5}{3^{rd}}$
$\frac{Eb}{C}$	$C^{-7}$	b3, 5, b7	All minor scales without $^{maj7}$	$\frac{Maj\Delta}{6}$
$\frac{Eb-}{C}$	$C^{-7b5}$	b3, b5, b7	Locrian Locrian nat 2 Locrian nat 6	$\frac{Min\Delta}{6}$
$\frac{Eb^o}{C}$	$C^o7$ $Dim^7$	b3, b5, bb7	Tonic Diminished (Altered Dom. bb7)	$Dim^7$
$\frac{Eb^+}{C}$	$C^{-maj7}$ $Min^{maj7}$	b3, 5, 7	Melodic Minor Harmonic Minor	$Min^{maj7}$
$\frac{Eb^{sus4}}{C}$	$C^{-7b6}$ aeolian	b3, b6, b7	Aeolian Altered Dominant	$Min^{7/b6/(#5)}$
$\frac{Eb^{lyd}}{C}$	$C^{-13}$ dorian	b3, 6, b7	Dorian Type Melodic Minor	$Min^{13}$
$\frac{Eb^{loc.}}{C}$	$C^{o/b13}$	b3, #5, 13	Tonic Diminished	$Dim^{b13}$
$\frac{E}{C}$	$C^{maj7/\#5}$ $Aug^{maj7}$	3, #5, 7	Lydian Augmented	$Maj^{7/\#5}$
$\frac{E-}{C}$	$C^{maj7}$ $Maj^7$	3, 5, 7	Ionian Lydian Major Pentatonic Major Blues	$Maj^7$
$\frac{E^o}{C}$	$C^7$ $Dom^7$	3, 5, b7	Mixolydian Mixolydian #11 Major Pentatonic Major Blues	$Dom^7$
$\frac{E^+}{C}$	$C^+$	1, 3, #5	Whole Tone	$Aug\Delta$

Chord Name	Chord Type (Seventh or Mode)	Triad / Bass Interval Relationship	Scale(s)	Generic Chord Name or Interval above Top Triad
$\frac{E^{sus4}}{C}$	$C^{maj7/6}$	3, 6, 7	Ionian Lydian Lydian Augmented	$Maj^{13}$
$\frac{E^{lyd}}{C}$	Twelve tone	3, b7, 7	Chromatic Scale	
$\frac{E^{loc.}}{C}$	$C^{13 \text{ (no 5)}}$	3, 6, b7	Mixolydian Mixolydian #11 Dominant Diminished	$Dom^{13}$
$\frac{F}{C}$	$\frac{F}{5^{th}}$	3, 5, 7	Major Type	$\frac{Maj\Delta}{P5}$
$\frac{F-}{C}$	$\frac{F-}{5^{th}}$ Dom Tonic	b3, 5	Minor Type	$\frac{Min\Delta}{P5}$
$\frac{F^o}{C}$	$C^{maj7/\#5/sus4}$	4, #5, 7	Aeolian Harmonic Minor	$\frac{Dim\Delta}{P5}$
$\frac{F^+}{C}$	$C^{dor/b2}$	4, 6, b9	Dorian b2 Phrygian Phrygian Major	$\frac{Aug\Delta}{P5}$
$\frac{F^{sus4}}{C}$	CQ	4, b7	Dorian Mixolydian	Quartal
$\frac{F^{lyd}}{C}$	CQ+	4, 7	Ionian	Q. Aug
$\frac{F^{loc.}}{C}$	$C^{loc}$	4, b5	Locrian	
$\frac{F\#}{C}$	$C^{7/b9/b5}$	b5, b7, b9	Dominant Diminished Altered Dominant	$Dom^{b9/b5}$
$\frac{F\#-}{C}$	$C^{13/b9/b5}$	b9, 13, b5	Dominant Diminished	$Dom^{13/b9/b5}$
$\frac{F\#^o}{C}$	$C^o$	1, b3, b5	Tonic Diminished	$Dim\Delta$
$\frac{F\#^+}{C}$	$C^{9/b5}$	b5, b7, 9	Whole Tone	$Dom^{9b5}$
$\frac{F\#^{sus4}}{C}$	Twelve tone	b5, 7, b9	Chromatic Scale	
$\frac{F\#^{lyd}}{C}$	$C^{7/b9/b5}$	b5, 1, b9	Dominant Diminished Altered Dominant	$Dom^{7/b9/b5}$
$\frac{F\#^{loc.}}{C}$	$C^{maj7/\#11}$	b5, 7, 1	Lydian Lydian Augmented	$Maj^{7/\#11}$

Chord Name	Chord Type (Seventh or Mode)	Triad / Bass Interval Relationship	Scale(s)	Generic Chord Name or Interval above Top Triad
$\frac{G}{C}$	C <sup>MA9 no5th</sup>	5, 7, 9	Ionian Lydian	Maj <sup>9 no 5th</sup>
$\frac{G-}{C}$	C <sup>9</sup>	5, b7, 9	Mixolydian Mixolydian #11	Dom <sup>9</sup>
$\frac{G^{\circ}}{C}$	C <sup>7/b9</sup>	5, b7, b9	Dominant Diminished	Dom <sup>7/b9</sup>
$\frac{G^{+}}{C}$	C <sup>-maj7</sup>	5, 7, b3	Melodic Minor Harmonic Minor	Min <sup>maj7</sup>
$\frac{G^{sus4}}{C}$	C <sup>sus2</sup>	5, 1, 2	Ionian Lydian	Sus2
$\frac{G^{lyd}}{C}$	Twelve tone	5, b9, 9	Chromatic Scale	
$\frac{G^{loc.}}{C}$	C <sup>7/b9</sup>	5, 1, b9	Dominant Diminished	Dom <sup>7/b9</sup>
$\frac{Ab}{C}$	C <sup>-b6</sup>	b6, 1, b3	Aeolian	Min <sup>7/b6</sup>
$\frac{Ab-}{C}$	C <sup>omaj7/b13</sup>	b13, 7, b3	Tonic Diminished	Dim <sup>maj7/b13</sup>
$\frac{Ab^{\circ}}{C}$	C <sup>omaj7/9/b13</sup>	b13, 7, 9	Tonic Diminished	Dim <sup>maj7/9/b13</sup>
$\frac{Ab^{+}}{C}$	C <sup>MA#5</sup>	#5, 1, 3	Whole Tone Lydian Augmented Ionian Augmented	Maj <sup>#5</sup>
$\frac{Ab^{sus4}}{C}$	C <sup>(7)/b9/#9/#5</sup>	#5, b9, #9	Altered Dominant	Dom <sup>7/#5/b9/#9</sup>
$\frac{Ab^{lyd}}{C}$	C <sup>-9/b6</sup>	b6, 9, b3	Aeolian	Min <sup>9/b6</sup>
$\frac{Ab^{loc.}}{C}$	Twelve tone	b6, b9, 9	Chromatic Scale	
$\frac{A}{C}$	C <sup>13/b9</sup>	13, b9, 3	Dominant Diminished	Dom <sup>13/b9</sup>
$\frac{A-}{C}$	C <sup>13</sup>	13, 1, 3	Mixolydian	Dom <sup>13</sup>
$\frac{A^{\circ}}{C}$	C <sup>o</sup>	1, b3, b5	Tonic Diminished	DimΔ
$\frac{A^{+}}{C}$	C <sup>13/sus4/b9</sup>	13, b9, 11	Dorian b2	(Min) Dom <sup>13/sus4/b9</sup>



Chord Name	Chord Type (Seventh or Mode)	Triad / Bass Interval Relationship	Scale(s)	Generic Chord Name or Interval above Top Triad
$\frac{A^{sus4}}{C}$	$C^{6/9}$	6, 9, 3	Ionian Lydian	$Maj^{6/9}$
$\frac{A^{lyd}}{C}$	$C^{13/\#9}$	13, #9, 3	Dominant Diminished	$Dom^{13/\#9}$
$\frac{A^{loc.}}{C}$	$C^{-6/9}$	6, 9, b3	Dorian Melodic Minor	$Min^{6/9}$
$\frac{Bb}{C}$	$C^{9/11}$	b7, 9, 11	Mixolydian	$Dom^{9/11}$
$\frac{Bb-}{C}$	$C^{7/sus4/b9}$	b7, b9, 11	Dorian b2 Phrygian Phrygian Major	$Dom^{7/sus4/b9}$
$\frac{Bb^o}{C}$	$C^{7b9}$	b7, b9, 3	Dominant Diminished	$Dom^{7/b9}$
$\frac{Bb^+}{C}$	$C^{9/b5}$	b7, 9, #11	Mixolydian #11 Whole Tone	$Dom^{9/b5}$
$\frac{Bb^{sus4}}{C}$	$C^{-11}$	b7, b3, 11	Dorian Phrygian Aeolian	$Min^{11}$
$\frac{Bb^{lyd}}{C}$	$C^{7/sus4/3}$	b7, 3, 4	Mixolydian	$Dom^{7/sus4/3}$
$\frac{Bb^{loc.}}{C}$	$C^{7/\#9}$	b7, #9, 3	Dominant Diminished Altered Dominant	$Dom^{7/\#9}$
$\frac{B}{C}$	$C^{maj7}$	7, b3, b5	Tonic Diminished	$Dim^{maj7}$ $\frac{Maj\Delta}{b9}$
$\frac{B-}{C}$	$C^{MA9/\#11}$	7, b3, b5	Lydian	$Maj^{9/\#11}$
$\frac{B^o}{C}$	$C^{maj7/9/sus4}$	7, 9, 11	Harmonic Minor	$\frac{Dim\Delta}{b9}$
$\frac{B^+}{C}$	$C^{-maj7}$	7, b3, 5	Melodic Minor Harmonic Minor	$Min^{maj7}$
$\frac{B^{sus4}}{C}$	$C^{maj7/\#11}$	7, 3, #11	Lydian Lydian Augmented	$Maj^{7/\#11}$
$\frac{B^{lyd}}{C}$	Chromatic scale	7, 11, #11	Chromatic Scale	
$\frac{B^{loc.}}{C}$	$C^{maj7/sus4}$	7, 3, 4	Ionian	$Maj^{7/sus4}$

**Ex. 87**

$$\frac{E}{C} = \frac{\text{Maj}\Delta}{b6} \quad (\text{min6 above E})$$

What we have is a major triad with its b6 in the bass. The b6 is in relation to the note E (above it). The interval on the bottom will always be that interval above the tonic of the triad (E in this case).

Now that you are thoroughly confused, let's look at it in a few more keys.

**Ex. 88**

$$\frac{E}{C} = \frac{\text{Maj}\Delta}{b6} \quad \text{Maj triad over its b6 in bass}$$

$$\frac{D}{Bb} = \frac{A}{F} = \frac{F\#}{D} = \frac{\text{Maj}\Delta}{b6}$$

These also all happen to be Maj<sup>7#5</sup> chords as we can see.

**Ex. 89**

$$\frac{E}{C} = \frac{E, G\#, B}{C} = \begin{matrix} C & E & G\# & E \\ 1 & 3 & \#5 & 7 \end{matrix} = C^{\text{maj}7\#5}$$

In many cases I have indicated a mode name in the Chord Type column. The chord example is named in two ways:

$$\frac{Db}{C} \text{ for}$$

1. as a Db<sup>maj7</sup> chord with C in the bass
2. as a C phrygian chord

Although I personally believe that all chords should be named in relation to their bass note (in the case of  $\frac{Db}{C}$  it is a type of a C chord, not a Db<sup>maj7</sup> chord in inversion) the other approach should also be recognized. The scales in the chord scale section are related to the bass note.

**Ex. 90**

$$\frac{Db}{C} = \begin{matrix} C \text{ phrygian} \\ C \text{ phrygian major} \end{matrix}$$

## Reharmonization and Chord Substitutions

Before going into some actual reharmonizations, let's briefly discuss a few traditional substitute patterns.

Throughout the course of Jazz history, certain compositions have produced a variety of harmonic substitute patterns. Works such as "Giant Steps", "Countdown", "Ladybird" and "Blues for Alice" are all tunes which contain such harmonic substitutes.

The terms "Countdown Changes" or "Bird Blues" are examples of Jazz lingo referring to specific substitute patterns in today's jazz scene. Let's examine some traditional substitute patterns.

### "Countdown Changes"

The tune "Countdown" by John Coltrane was first released on the album "Giant Steps" in 1959 on Atlantic SD-1311.

"Countdown" is based on the harmonic progression of a Miles Davis composition entitled "Tune Up". The basic principle of chord substitution is as follows:

#### Ex. 91

The diagram illustrates the "Countdown Changes" reharmonization of the "Tune Up" progression. It consists of two staves of music, each with four bars. The first staff, labeled "Tune Up", shows the original progression: D-7, G7, Cmaj7, and a fourth bar with a repeat sign. Above the staff, Roman numerals are provided: ii<sup>7</sup>, V<sup>7</sup>, I<sup>maj7</sup>. The second staff, labeled "Countdown", shows the reharmonized progression: D-7, Eb7, Abmaj7, B7, Emaj7, G7, Cmaj7, and a fourth bar with a repeat sign. Below the staff, Roman numerals are provided: ii<sup>7</sup>, bIII<sup>7</sup>, bVI<sup>maj7</sup>, VII<sup>7</sup>, III<sup>maj7</sup>, V<sup>7</sup>, I<sup>maj7</sup>. A horizontal arrow labeled "Depart" points from the first bar to the fifth bar, and another arrow labeled "Return" points from the fifth bar to the end of the staff.

Depart —————> Return

Roman Num.=    ii<sup>7</sup>    bIII<sup>7</sup>    bVI<sup>maj7</sup>    VII<sup>7</sup>    III<sup>maj7</sup>    V<sup>7</sup>    I<sup>maj7</sup>

This Progression may be inserted in any tune with a four bar ii-V<sup>7</sup>-I<sup>maj7</sup> progression regardless of what the rhythm section is playing under it.

## "Bird Blues"

A "Bird Blues" is a chord progression derived from the tune "Blues for Alice" by Charlie Parker. It is based on a twelve bar blues and uses a series of ii-V substitution.

### Ex. 92a

orig.

### Ex. 92b

sub.

## Advanced Reharmonizations

To demonstrate advanced reharmonizations, I have tried to incorporate as many substitution rules as possible.

Additional rules will be presented throughout this section in order to address the new harmonic situations encountered. The type of tunes used for reharmonization fall into the categories of Blues, Rhythm Changes and two "Standard" Jazz forms. Because of the high concentration of Blues-form tunes, I will begin with more of its variations.

### Blues

#### *F Blues Basic*

Three staves of musical notation in 4/4 time for F Blues Basic. The first staff contains F7, a repeat sign, a repeat sign, and a repeat sign. The second staff contains Bb7, a repeat sign, F7, and a repeat sign. The third staff contains G-7, C-7, F7 D7, and G-7 C7.

### Substitution Characteristics

#### *F Blues ①*

Three staves of musical notation in 4/4 time for F Blues ①. The first staff contains F7, Bb7 B°7, C-7, and F7. The second staff contains Bb7, Bb7 B°7, F7/C, and D7alt. The third staff contains G-7, C-7, F7 D7alt, and G-7 C7.

#### 1. Basic Bebop Blues

- B°7 in bar 2 is  $\frac{\text{vii}^{\circ 7}}{\text{ii}}$  going to the ii<sup>7</sup> chord (c-7) in next measure. Rule XVII
- B°7 in bar 5 is actually an F°7 resolving to  $\frac{\text{F}^7}{\text{C}}$ . This is a common delayed resolution technique and is used many times in ii – V<sup>7</sup> – I<sup>maj7</sup> for the first 2 beats (or bars) of the I<sup>maj7</sup> chord as demonstrated in this example.

**Ex. 93**

ii<sup>7</sup>                      V<sup>7</sup>                      i<sup>o</sup> maj<sup>7</sup>                      I maj<sup>7</sup>

G-7                      C7                      E/F = F oMA7                      F MA7

**F Blues ②**

Staff 1: F7                      Bb7 B o7                      C-7 F7                      F#-7 B7

Staff 2: Bb7                      Bb-7 Eb7                      F7/A                      D7alt

Staff 3: G-7 C7                      Db-7 Gb7                      F7 Ab7                      Db7 Gb7

2. The second Blues is still a Bebop type blues with a few modifications.

- F#-<sup>7</sup> to B<sup>7</sup> in bar 3 is a tritone substitution in the key of Bb with its ii<sup>7</sup> chord in front of it.

Rule XII part2

- Bb-<sup>7</sup> to Eb<sup>7</sup> in bar 6 is actually an Eb<sup>7</sup> to F<sup>7</sup> resolution with the supertonic chord (Bb-<sup>7</sup>) in front of the dominant. This brings up a new rule.

**Rule XXX: Dom<sup>7</sup> chords**

Dom<sup>7</sup> chords that resolve to Dom<sup>7</sup> or Maj<sup>7</sup> chord a whole step above.

**Ex. 94a**

Eb7(b<sup>9</sup>)                      F MA7 or F7 (F7/C)

	F mixolydian = Bb maj
Eb mix#11 = Bb melodic min	F ionian =
A alt. dom = Bb melodic min	D aeolian =
	D phrygian = Bb maj

F maj

A7alt                      D-7

**Ex. 94b**

Five musical staves showing chord progressions in treble clef. Each staff has two measures. The progressions are:

- Staff 1:  $A^7_{alt}$  to  $B^b_{MA}7$
- Staff 2:  $E^b7(b5)$  to  $B^b_{MA}7$
- Staff 3:  $A^7_{alt}$  to  $F_{MA}7$  or  $F7$
- Staff 4:  $E^b7$  to  $A-7$
- Staff 5:  $A^7_{alt}$  to  $A-7$

The main reason that these progressions work is because of the strong resolution tendencies of the Db, Bb and Eb ( $b7^{th}$ ,  $5^{th}$  and root) of the  $E^b7$

**Ex. 95a**

Musical staff for Ex. 95a showing a progression from  $E^b7$  to  $F^{maj7}$  to  $(F^7)$ . Fingerings are indicated:  $E^b7$  (b7: 5, 1; 5: 1),  $F^{maj7}$  (5: 6), and  $(F^7)$  (5: 7). Roman numerals  $bVII^7$ ,  $I^{maj7}$ , and  $(I^7)$  are shown below.

**Ex. 95b**

Musical staff for Ex. 95b showing a progression from  $E^b7$  to  $B^b_{maj7}$ . Fingerings are indicated:  $E^b7$  (b7: 5, 1; 5: 1) and  $B^b_{maj7}$  (9: 3, 7; 5: 3, 4). Roman numerals  $IV^7$  and  $I^{maj7}$  are shown below.

**Ex. 95c**

Musical staff for Ex. 95c showing a progression from  $E^b7$  to  $A-7$ . Fingerings are indicated:  $E^b7$  (9: 5, R; b7: 11) and  $A-7$  (5: 3, 11; 9: 9). A slur connects the 11 of  $E^b7$  to the 11 of  $A-7$ . Roman numerals  $E^b7$ ,  $A-7$ , and text "or the 9<sup>th</sup> of  $E^b7$  to 5<sup>th</sup> of  $A-7$ " are shown above.

### F Blues ③

Three staves of musical notation for F Blues. The first staff contains measures 1-4: F#7, B7, E7, A7, D7, G7, C7, F7. The second staff contains measures 5-8: Bb7, E7alt, F7, A-7b5, D7alt. The third staff contains measures 9-12: G-7, C7, A7alt, D7alt, G7alt, C7alt.

3. The third Blues begins on the bII<sup>7</sup> chord employing a cycle of 5<sup>th</sup> substitution (Rule XXIII) and is intersecting with the Bb<sup>7</sup> chord in bar 5.
  - E<sup>7alt</sup> is used in bar 6 as a tritone substitution for Bb<sup>7(b5)</sup>
  - the turnaround A<sup>7alt</sup> D<sup>7alt</sup> G<sup>7alt</sup> C<sup>7alt</sup> is a III<sup>7</sup> VI<sup>7</sup> II<sup>7</sup> V<sup>7</sup> Dom<sup>7</sup> cycle substitution for the usual I<sup>7</sup> VI<sup>7</sup> ii<sup>7</sup> V<sup>7</sup> progression.

### Rule XXXI

Dom<sup>7</sup> chords can replace either major or minors.

#### Ex. 96

Ex. 96 shows a chord substitution. The first staff contains C<sup>maj7</sup>, A<sup>7</sup>, D<sup>-7</sup>, G<sup>7</sup> with Roman numerals I<sup>maj7</sup>, VI<sup>7</sup>, ii<sup>7</sup>, V<sup>7</sup> below. The second staff contains C<sup>7</sup>, A<sup>7</sup>, D<sup>7</sup>, G<sup>7</sup> with Roman numerals I<sup>7</sup>, VI<sup>7</sup>, II<sup>7</sup>, V<sup>7</sup> below. An equals sign is between the two staves.



## Rule XXXI cont.

### Ex. 97

C<sub>MA</sub>7   A-7   D-7   G7  
 I<sup>maj7</sup>   vi<sup>7</sup>   ii<sup>7</sup>   V<sup>7</sup>  
 ↓ becomes ↓  
 E-7   A7   D-7   G7  
 iii<sup>7</sup>   VI<sup>7</sup>   ii<sup>7</sup>   V<sup>7</sup>  
 ↓ becomes ↓  
 E<sup>7alt</sup>   A<sup>7alt</sup>   D<sup>7alt</sup>   G<sup>7alt</sup>  
 III<sup>7</sup>   VI<sup>7</sup>   II<sup>7</sup>   V<sup>7</sup>

### F Blues ④

F<sub>MA</sub>7   E-7<sup>b5</sup>   A<sup>7alt</sup>   D-7   G7   C-7   F7  
 B<sup>b7</sup>   B<sup>b-7</sup>   E<sup>b7</sup>   A-7   D7   A<sup>b-7</sup>   D<sup>b7</sup>  
 G-7   C7   F7   D<sup>b7</sup>   A<sup>b7</sup>   E<sup>b7</sup>

4. Blues #4 is commonly called a "Parker (Bird) Blues" or "Altered Blues" as we discussed earlier.

The following turnaround is common in modern jazz.

### Ex. 98

F7   D<sup>b7</sup>   A<sup>b7</sup>   E<sup>b7</sup>  
 I<sup>7</sup>   bVI<sup>7</sup>   bIII<sup>7</sup>   bVII<sup>7</sup>

Any or all of the chords may be made maj<sup>7</sup> if desired.

# **F Blues ⑤**

4/4 F7 Eb7 D-7<sup>b5</sup> G7<sup>alt</sup> C-7 Eb7 Ab<sub>MA</sub>7 B7

Bb7 Eb7 A-7 D7 Bb-7 Eb7<sup>alt</sup>

Ab-7 Db7 F/C Db/C Ab<sup>sus4</sup>/C C7<sup>alt</sup>

5. Blues #5 uses some interesting devices beginning with the cadence:

## **Ex. 99**

F7 Eb7 D-7<sup>b5</sup> G7<sup>alt</sup> C-7

At first it looks deceiving but at a closer glance it makes more sense. The Eb<sup>7</sup> chord in bar one acts as a bII<sup>7</sup> tritone substitute to D-<sup>7b5</sup> (which is actually a substitute for Bb<sup>7(9)</sup> in bar [Rule VII]).

The D-<sup>7b5</sup> moves to G<sup>7alt</sup> and then to C-<sup>7</sup>, a substitute for F<sup>7</sup> (Rule IV). The next substitute is based on John Coltrane's "Countdown Substitutions" discussed earlier.

## **Ex. 100**

C-7 Eb7 Ab<sub>MA</sub>7 B7 Bb7

m3 Resolve m3 T.T. Sub. Resolve

## **Ex. 101**

F/C Db/C Ab<sup>sus4</sup>/C C7<sup>alt</sup>

This turnaround is a dominant pedal point that works on a modal modulation principle.

## F Blues ⑥

4/4 F *sus*<sup>4</sup> | A *add*<sup>6</sup> / F | E / F | G<sup>b</sup> / F | A<sup>b</sup> *sus*<sup>4</sup> / F | F *sus*<sup>4</sup> | F<sup>#</sup> <sub>MA</sub> 7<sup>#5</sup> | G-7<sup>b6</sup> B<sup>b</sup> / B F / C D<sup>b</sup> / C A<sup>b</sup> / C B<sup>b</sup> / C

6. Blues #6 uses a tonic pedal (bars 1-7) as well as a dominant pedal for the turnaround

### Ex. 102

F / C D<sup>b</sup> / C A<sup>b</sup> / C B<sup>b</sup> / C

You should play through every progression to gain an aural familiarity of each. The smart musician will learn how to combine the progressions in different ways. In addition he / she will create new reharmonizations based on the rules previously stated. Remember, all of the measures between different progressions are interchangeable, provided the bassline and voice leading are logical.

## Rhythm Changes

Rhythm Changes is a term coined for the chord progression of George Gershwin's "I Got Rhythm". The progression has provided a basis for many standard Bebop tunes. The most common harmonization of Rhythm Changes is:

### Ex. 103

**A**

**A**

**B**

**A**

As you probably have noticed, the I<sup>maj7</sup> VI<sup>7</sup> ii<sup>7</sup> V<sup>7</sup> and iii VI<sup>7</sup> ii<sup>7</sup> V<sup>7</sup> progressions comprise a large portion of this harmonic progression. That is why this progression is commonly referred to as a "Turnaround" progression. Here are some examples of substitute turnarounds which may be employed in the first four bars of any A section in Rhythm Changes.

**Ex. 104**

original	$B^b_{MA}7$	$G7$	$C-7$	$F7$	$B^b_{MA}7$	( $D-7$ )
①	$B^b_{MA}7$	$B^o7$	$C-7$	$C^{\#o7}$	$B^b_{MA}7$	( $D-7$ )
②	$D-7$	$G7$	$C-7$	$F7$	$B^b_{MA}7$	( $D-7$ )
③	$B^b_{MA}7$	$D^b7$	$G^b7$	$B7$	$B^b_{MA}7$	( $D-7$ )
④	$B^b_{MA}7$	$G^b7$	$D^b7$	$E^b7$	$B^b_{MA}7$	( $D-7$ )
⑤	$B^b_{MA}7$	$G^b7$	$D^b7$	$A^b7$	$B^b_{MA}7$	( $D-7$ )
⑥	$D7^{(alt)}$	$G7^{(alt)}$	$C7^{(alt)}$	$F7^{(alt)}$	$B^b_{MA}7$	( $D-7$ )
⑦	$B^b_{MA}7$	$D^b7$	$C7$	$B7$	$B^b_{MA}7$	( $D-7$ )
⑧	$D-7^{\#5}$	$B_{MA}7^{\#5}$	$FQ/G$	$F_{MA}^{\#5}$	$B^b_{MA}7$	( $D-7$ )
⑨	$B_{MA}7$	$D^b/G$	$E^b_{MA}7$	$A_{MA}7^{\#5}$	$B^b_{MA}7$	( $D-7$ )
⑩	$B^b_{MA}7$	$B^b/A^b$	$E^b/G$	$G^bo7$	$B^b/F$	
⑪	$B^b/A$	$A^bo7^{b13}$	$FQ/G$	$D/F$	$B^b/F$	
⑫	$B^b/F$	$B/F$	$B^b/F$	$A/F$	$B^b/F$	
⑬	$B^b/F$	$G^b/F$	$D^b_{sus^4}/F$	$F7_{alt}$	$B^b/F$	
⑭	$B^b/F$	$D^b/F$	$G^b/F$	$B/F$	$B^b/F$	
⑮	$B^b/F$	$G^b/F$	$D^b/F$	$E^b/F$	$B^b/F$	
⑯	$B^b$	$G/B^b$	$G-/B^b$	$F/B^b$	$B^b/F$	
⑰	$B^b$	$B/B^b$	$G^b/B^b$	$A^b/B^b$	$B^b/F$	
⑱	$CQ/D$	$AQ/B$	$F^{\#}Q/G^{\#}$	$E^bQ/F$	$B^b/F$	
⑲	$CQ/D$	$F^{\#}/G$	$E^b_{sus^4}/C$	$D^b_{sus^2}/F$	$B^b/F$	
⑳	$B^b/F$	$G/F$	$A/F$	$E/F$	$B^b/F$	

## Rule XXXII

When creating triad over bass note substitutes, pay particular attention to the movement and voiceleading of the upper triads. They should move in the strongest direction of resolution as if there were no bass note below.

### Ex. 105

B $\flat$ /F      D $\flat$ /F      G $\flat$ /F      B/F

m3      V      I(V)      I(V)

Db → Gb = V I  
Gb → B = V I  
strong cadence of upper triads

You should also keep in mind the relationship of the bass note to the chords and how they move in terms of cadential direction.

### Ex. 106a

B $\flat$       C $\sharp$ /G      A/C      B/F

B $\flat$       G $^{7/b5/b9}$       C $^{13/b9}$       F $^{7/b5/b9}$

I      VI $^7$       II $^7$       V $^7$

### Ex. 106b

B $\flat$ /F      D $\flat$ /F      G $\flat$ /F      B/F

B $\flat$       D $\flat$ <sup>1st inver.</sup>      G $\flat$ <sup>maj7</sup>      F $^{7/b5/b9}$

I      bIV      bVI      V $^7$

## The Bridge of Rhythm Changes

The Bridge of Rhythm Changes uses a simple four chord cycle pattern over eight measures.

### Ex. 107

Ex. 107 shows a four-chord cycle in treble clef. The first staff contains D7, a repeat sign, G7, and another repeat sign. The second staff contains C7, a repeat sign, F7, and another repeat sign.

Since there are many approaches to this progression, I have isolated a few of the most common.

### The ii<sup>7</sup> V<sup>7</sup> approach

#### Ex. 108a

Ex. 108a shows a ii<sup>7</sup> V<sup>7</sup> approach in treble clef. The first staff contains A-7, D7, D-7, and G7. The second staff contains G-7, C7, C-7, and F7.

also

#### Ex. 108b

Ex. 108b shows a ii<sup>7</sup> V<sup>7</sup> approach in treble clef. The first staff contains A-7, A-7 D7, G7, and D-7 G7. The second staff contains G-7 C7, C7, C-7 F7, and C-7 F7.

You may use any combination of ii<sup>7</sup> V<sup>7</sup> as long as the V<sup>7</sup> chord is returned to (Rule IV)

Next is an example which uses altered Dom<sup>7</sup> chords.

Ex. 109

Staff 1:  $D7_{alt}$  |  $\text{---}$  |  $G7$  |  $D-7$  |  $G7_{alt}$

Staff 2:  $C7(b5)$  |  $G-7$  |  $C7_{alt}$  |  $F7(b5)$  |  $F7_{alt}(\#5/\#9)$

Using Tritone Substitutions

Ex. 110

Staff 1:  $A-7$  |  $D7$  |  $A\flat-7$  |  $D\flat7$

Staff 2:  $G-7$  |  $C7$  |  $F\sharp-7$  |  $B7$

Using the Cycle

Ex. 111

starts in same place

Staff 1:  $D7$  |  $G7$  |  $C7$  |  $F7$  |  $B\flat7$  |  $E\flat7$  |  $A\flat7$  |  $D\flat7$

Staff 2:  $G\flat7$  |  $B7$  |  $E7$  |  $A7$  |  $D7$  |  $G7$  |  $C7$  |  $F7$

tritone away from C

finishes in correct spot

Any of these chords will also work.

Ex. 112

Chords	Mixolydian	Mixolydian #11	Altered Dominant
	$\underline{D^7}$	$\underline{D^{7b5}}$	$\underline{D^{7/\#5/b5/\#9/b9}}$
	$F\sharp-^{7b5}$	$A-^{maj7}$	$E\flat-^{maj7}$
	$A-^7$	$B-^{13b9}$	$F-^{13b9}$
	$C^{maj7}$	$C^{maj7\#5}$	$G\flat^{maj7\#5}$
		$E^{7b6}$	$A\flat^{7b5}$
		$F\sharp-^{9b5}$	$B\flat^{7b6}$
		$G\sharp^{7alt}$	$C-^{9b5}$



**Ex. 113**

<u>G<sup>7</sup></u>	<u>G<sup>7b5</sup></u>	<u>G<sup>7/#5/b5/#9/b9</sup></u>
B <sup>-7b5</sup>	D <sup>-maj7</sup>	A <sup>b-maj7</sup>
D <sup>-7</sup>	E <sup>-13b9</sup>	B <sup>b-13b9</sup>
F <sup>maj7</sup>	F <sup>maj7#5</sup>	C <sup>b-maj7#5</sup>
	A <sup>7b6</sup>	D <sup>b7b5</sup>
	B <sup>-9b5</sup>	E <sup>b7b6</sup>
	C <sup>#7alt</sup>	F <sup>-9b5</sup>

It's your job to figure out the substitute changes from the modal scales of both C<sup>7</sup> and F<sup>7</sup>.

**Using Triads Over Bass Notes**

**Ex. 114**

Ex. 114 displays two staves of musical notation, each containing four measures. The first staff starts with a treble clef and a key signature of one flat (Bb). The notes in the staves are as follows:

- Staff 1:
  - Measure 1: Ab/D
  - Measure 2: Bb<sup>sus4</sup>/D
  - Measure 3: E/G
  - Measure 4: A<sup>add9</sup>/G
- Staff 2:
  - Measure 1: F<sup>#</sup>/C
  - Measure 2: Ab<sup>sus4</sup>/C
  - Measure 3: C<sup>M7</sup>/F
  - Measure 4: F<sup>#sus4</sup>/F<sup>3</sup>

## Reharmonization of Standard Forms

### Reharmonization No.1

sub	F-7 <sup>b6</sup>	B <sup>b</sup> -7 <sup>b6</sup>	C/D <sup>b</sup>	G/E <sup>b</sup>	A <sup>b</sup> <sub>MA</sub> 7 <sup>#5</sup>
original	( F-7 )	( B <sup>b</sup> -7 )	( E <sup>b</sup> 7 )	( A <sup>b</sup> <sub>MA</sub> 7 )	
	D <sup>b</sup> /C	G7 <sub>sus</sub> <sup>4</sup>	G/A <sup>b</sup>	A <sub>sus</sub> <sup>4</sup> /A <sup>b</sup>	G <sub>sus</sub> <sup>4</sup> /E
	( D <sup>b</sup> <sub>MA</sub> 7 )	( D-7 )	( G7 )	( C <sub>MA</sub> 7 )	( C <sub>MA</sub> 7 )
	G-7 <sup>b6</sup>	F-7 <sup>b5</sup>	A <sup>b</sup> <sub>MA</sub> 7 <sup>b5</sup> /E <sup>b</sup>		A <sup>b</sup> °/E <sup>b</sup>
	( C-7 )	( F-7 )	( B <sup>b</sup> 7 )		( E <sup>b</sup> <sub>MA</sub> 7 )
	C-7 <sup>b6</sup>	A-11	F <sup>#</sup> <sub>MA</sub> 13	G <sub>MA</sub> 7	B <sup>b</sup> -7
	( A <sup>b</sup> <sub>MA</sub> 7 )	( A-7 )	( D7 <sup>alt</sup> )	( G <sub>MA</sub> 7 )	( B-7 )
	C/D	B/D	G <sub>MA</sub> 7 <sup>b5</sup>		G/C <sup>#</sup>
	( A-7 )	( D7 )	( G <sub>MA</sub> 7 )		( G <sub>MA</sub> 7 )
	F <sup>#</sup> -7 <sup>b6</sup>	F/B	B/A <sup>#</sup>	C7 <sup>alt</sup>	
	( F <sup>#</sup> -7 )	( B7 )	( E <sub>MA</sub> 7 )	( A <sup>b</sup> 7 <sup>#5</sup> )	
	F-13	B <sup>b</sup> -7 <sup>b6</sup>	G/E <sup>b</sup>	A <sup>b</sup> /G	
	( F-7 )	( B <sup>b</sup> -7 )	( E <sup>b</sup> 7 )	( A <sup>b</sup> <sub>MA</sub> 7 )	
	D <sup>b</sup> /C	B/C <sup>#</sup>	G-7 <sup>b6</sup>		G/A <sup>b</sup>
	( D <sup>b</sup> <sub>MA</sub> 7 )	( C <sup>#</sup> -7 )	( F <sup>#</sup> 7 )	( C-7 )	( B°7 )
	B <sup>b</sup> -11	D <sup>b</sup> /E <sup>b</sup>	G/E <sup>b</sup>	G <sup>b</sup> /A <sup>b</sup>	G-7 <sup>b5</sup>
	( B <sup>b</sup> -7 )	( E <sup>b</sup> 7 )	( A <sup>b</sup> <sub>MA</sub> 7 )	( G-7 <sup>b5</sup> )	( C7 <sup>alt</sup> )

# Reharmonization No.2

sub	$Bb_{MA}7^{\#5}$	$A7_{alt}$	$Eb_{MA}9$	$F_{sus}^4/A$
original	( $E-7^{b5}$ )	( $A7_{alt}$ )	( $C-7$ )	( $F7$ )
	$F-7$ $F^{\#7}$	$B_{MA}7$ $D7$ $G_{MA}7$	$Bb7$	$Eb_{MA}7$ $Ab7^{b5}$
	( $F-7$ )	( $Bb7$ )	( $Eb_{MA}7$ )	( $Ab7$ )
	$Eb/D$	$G-6$ $C7^{b9}$	$F_{MA}^{13}$	$Bb-7$ $Eb7$
	( $Bb_{MA}7$ )	( $E-7^{b5}$ $A7_{alt}$ )	( $D-7$ )	( $Bb-7$ $Eb7$ )
	$F^{odd9}/A$ $D7^{\#9}$	$G-7$	$G-7/C$ $Eb_{MA}7^{b5}$	$Ab^{13b5}$
	( $F_{MA}7$ $D7_{alt}$ )	( $G-7$ $C7$ )	( $A-7^{b5}$ )	( $D7_{alt}$ )
	$Db7^{b5}$	$B_{MA}7^{\#5}$	$Eb_{MA}9$	$G-7^{b6}$
	( $G7_{alt}$ )	∕	( $C-7$ )	∕
	$F^{\#}_{MA}7^{\#5}$		$F7_{sus}^4$	
	( $Ab7^{b5}$ )	∕	( $Bb_{MA}7$ )	∕
	$E-9/^{11}$	$C^{\#}_{MA}7^{b5}$	$D-11^{b5}$	$Ab-MA7$
	( $E-7^{b5}$ )	( $A7_{alt}$ )	( $D-7^{b5}$ )	( $G7_{alt}$ )
	$F^{\#}_{MA}7^{\#11}$ $F/F^{\#}$	$Bb/F$ $B/F$	$A/F$ $EQ/F^{\#}$	
	( $C-7^{b5}$ )	( $F7^{b9}$ )	( $Bb_{MA}7$ )	

## Common Tone Reharmonization

### Rule XXXII

Any melody note may be retained as a common tone (in any voice) for the purpose of reharmonization.

To demonstrate this, I have compiled a short list of possible harmonizations of the note C. Remember the note C may be in any voice.

### **Ex. 115**

**Root**

C

C	C-	C <sup>o</sup>	C <sup>+</sup>	C <sup>sus4</sup>	C <sup>lyd</sup>	C <sup>loc</sup>	C <sup>maj7</sup>	C <sup>-7</sup>	C <sup>7</sup>	C <sup>-maj7</sup>
C <sup>7(sus4)</sup>	C <sup>-7b5</sup>	C <sup>o7</sup>	C <sup>+7</sup>	C <sup>omaj7</sup>	C <sup>+maj7</sup>	C <sup>-7#5</sup>				
$\frac{C}{Db}$	$\frac{C}{D}$	$\frac{C}{Eb}$	$\frac{C}{E}$	$\frac{C}{F}$	$\frac{C}{F\#}$	$\frac{C}{G}$	$\frac{C}{Ab}$	$\frac{C}{A}$	$\frac{C}{Bb}$	$\frac{C}{B}$
$\frac{C-}{Db}$	$\frac{C-}{D}$	$\frac{C-}{Eb}$	$\frac{C-}{E}$	$\frac{C-}{F}$	$\frac{C-}{F\#}$	$\frac{C-}{G}$	$\frac{C-}{Ab}$	$\frac{C-}{A}$	$\frac{C-}{Bb}$	$\frac{C-}{B}$
$\frac{C^o}{Db}$	$\frac{C^o}{D}$	$\frac{C^o}{Eb}$	$\frac{C^o}{E}$	$\frac{C^o}{F}$	$\frac{C^o}{F\#}$	$\frac{C^o}{G}$	$\frac{C^o}{Ab}$	$\frac{C^o}{A}$	$\frac{C^o}{Bb}$	$\frac{C^o}{B}$
$\frac{C^+}{Db}$	$\frac{C^+}{D}$	$\frac{C^+}{Eb}$	$\frac{C^+}{E}$	$\frac{C^+}{F}$	$\frac{C^+}{F\#}$	$\frac{C^+}{G}$	$\frac{C^+}{Ab}$	$\frac{C^+}{A}$	$\frac{C^+}{Bb}$	$\frac{C^+}{B}$
$\frac{C^{sus4}}{Db}$	$\frac{C^{sus4}}{D}$	$\frac{C^{sus4}}{Eb}$	$\frac{C^{sus4}}{E}$	$\frac{C^{sus4}}{F}$	$\frac{C^{sus4}}{F\#}$	$\frac{C^{sus4}}{G}$	$\frac{C^{sus4}}{Ab}$	$\frac{C^{sus4}}{A}$	$\frac{C^{sus4}}{Bb}$	$\frac{C^{sus4}}{B}$
$\frac{C^{lyd}}{Db}$	$\frac{C^{lyd}}{D}$	$\frac{C^{lyd}}{Eb}$	$\frac{C^{lyd}}{E}$	$\frac{C^{lyd}}{F}$	$\frac{C^{lyd}}{F\#}$	$\frac{C^{lyd}}{G}$	$\frac{C^{lyd}}{Ab}$	$\frac{C^{lyd}}{A}$	$\frac{C^{lyd}}{Bb}$	$\frac{C^{lyd}}{B}$
$\frac{C^{loc}}{Db}$	$\frac{C^{loc}}{D}$	$\frac{C^{loc}}{Eb}$	$\frac{C^{loc}}{E}$	$\frac{C^{loc}}{F}$	$\frac{C^{loc}}{F\#}$	$\frac{C^{loc}}{G}$	$\frac{C^{loc}}{Ab}$	$\frac{C^{loc}}{A}$	$\frac{C^{loc}}{Bb}$	$\frac{C^{loc}}{B}$

Db

Db <sup>maj7</sup>	$\frac{C}{Db}$	$\frac{F}{Db}$	$\frac{Ab}{Db}$	$\frac{C-}{Db}$	$\frac{F-}{Db}$	$\frac{C^o}{Db}$	$\frac{C^+}{Db}$	$\frac{C^{sus4}}{Db}$	$\frac{C^{lyd}}{Db}$	$\frac{C^{loc}}{Db}$
$\frac{F^{sus4}}{Db}$	$\frac{G^{sus4}}{Db}$	$\frac{F^{lyd}}{Db}$	$\frac{F\#^{lyd}}{Db}$	$\frac{F\#^{loc}}{Db}$	$\frac{G^{loc}}{Db}$	$\frac{A^o}{Db}$	$\frac{F\#^o}{Db}$			

<b>D</b>	$D^7$	$D^{-7}$	$D^{-7b5}$	$D^{+7}$	$\frac{C}{D}$	$\frac{F}{D}$	$\frac{Ab}{D}$	$\frac{C-}{D}$	$\frac{F-}{D}$	$\frac{A-}{D}$	$\frac{C^\circ}{D}$
	$\frac{C^+}{D}$	$\frac{A^\circ}{D}$	$\frac{F\#^\circ}{D}$	$\frac{C^{sus4}}{D}$	$\frac{F^{sus4}}{D}$	$\frac{G^{sus4}}{D}$	$\frac{C^{lyd}}{D}$	$\frac{F^{lyd}}{D}$	$\frac{F\#^{lyd}}{D}$	$\frac{F\#^{loc}}{D}$	$\frac{G^{loc}}{D}$

<b>Eb</b>	$Eb^{MA13}$	$Eb^{-6}$	$Eb^{13}$	$\frac{C}{Eb}$	$\frac{F}{Eb}$	$\frac{Ab}{Eb}$	$Eb^{o7}$	$\frac{C-}{Eb}$	$\frac{F-}{Eb}$	$\frac{A-}{Eb}$	$\frac{C^\circ}{Eb}$
	$\frac{C^+}{Eb}$	$\frac{A^\circ}{Eb}$	$\frac{F\#^\circ}{Eb}$	$\frac{C^{sus4}}{Eb}$	$\frac{F^{sus4}}{Eb}$	$\frac{G^{sus4}}{Eb}$	$\frac{C^{lyd}}{Eb}$	$\frac{F^{lyd}}{Eb}$	$\frac{F\#^{lyd}}{Eb}$	$\frac{C^{loc}}{Eb}$	$\frac{F\#^{loc}}{Eb}$
	$\frac{G^{loc}}{Eb}$										

<b>E</b>	$E^{-7b6}$	$E^{7\#5}$	$\frac{C}{E}$	$\frac{F}{E}$	$\frac{Ab}{E}$	$\frac{C-}{E}$	$\frac{F-}{E}$	$\frac{A-}{E}$	$\frac{C^\circ}{E}$	$\frac{C^+}{E}$	$\frac{A^\circ}{E}$
	$\frac{F\#^\circ}{E}$	$\frac{C^{sus4}}{E}$	$\frac{F^{sus4}}{E}$	$\frac{G^{sus4}}{E}$	$\frac{C^{lyd}}{E}$	$\frac{F^{lyd}}{E}$	$\frac{F\#^{lyd}}{E}$	$\frac{C^{loc}}{E}$	$\frac{F\#^{loc}}{E}$	$\frac{G^{loc}}{E}$	

<b>F</b>	$F^{maj7}$	$F^{-7}$	$F^7$	$\frac{C}{F}$	$\frac{Ab}{F}$	$\frac{C-}{F}$	$\frac{A-}{F}$	$\frac{C^\circ}{F}$	$\frac{C^+}{F}$	$\frac{A^\circ}{F}$	$\frac{F\#^\circ}{F}$
	$\frac{C^{sus4}}{F}$	$F^{Sus4}$	$\frac{G^{sus4}}{F}$	$\frac{C^{lyd}}{F}$	$F^{lyd}$	$\frac{F\#^{lyd}}{F}$	$\frac{C^{loc}}{F}$	$\frac{F\#^{loc}}{F}$	$\frac{G^{loc}}{F}$		

<b>F#</b>	$F\#^{maj7\#11}$	$F\#^{-7b5}$	$F\#^{o7}$	$F\#^{7b5}$	$\frac{C}{F\#}$	$\frac{Ab}{F\#}$	$\frac{F}{F\#}$	$\frac{C-}{F\#}$	$\frac{A-}{F\#}$	$\frac{F-}{F\#}$	$\frac{A^\circ}{F\#}$
	$\frac{C^{sus4}}{F\#}$	$\frac{F^{sus4}}{F\#}$	$\frac{G^{sus4}}{F\#}$	$\frac{C^{lyd}}{F\#}$	$\frac{F^{lyd}}{F\#}$	$F\#^{lyd}$	$\frac{C^{loc}}{F\#}$	$\frac{G^{loc}}{F\#}$			

<b>G</b>	$G^{maj7sus4}$	$G^{-11}$	$G^{-11b5}$	$G^{7sus4}$	$\frac{C}{G}$	$\frac{Ab}{G}$	$\frac{F}{G}$	$\frac{C-}{G}$	$\frac{A-}{G}$	$\frac{F-}{G}$	$\frac{C^\circ}{G}$
	$\frac{A^\circ}{G}$	$\frac{F\#^\circ}{G}$	$\frac{C^+}{G}$	$\frac{C^{sus4}}{G}$	$\frac{F^{sus4}}{G}$	$G^{sus4}$	$\frac{C^{lyd}}{G}$	$\frac{F^{lyd}}{G}$	$\frac{F\#^{lyd}}{G}$	$\frac{C^{loc}}{G}$	$\frac{F\#^{loc}}{G}$

<b>Ab</b>	$Ab^{maj7}$	$Ab^{-7}$	$Ab^{+7}$	$\frac{C}{Ab}$	$\frac{F}{Ab}$	$\frac{C-}{Ab}$	$\frac{A-}{Ab}$	$\frac{C^\circ}{Ab}$	$\frac{A^\circ}{Ab}$	$\frac{F\#^\circ}{Ab}$	$\frac{C^+}{Ab}$
	$\frac{C^{sus4}}{Ab}$	$\frac{F^{sus4}}{Ab}$	$\frac{G^{sus4}}{Ab}$	$\frac{C^{lyd}}{Ab}$	$\frac{F^{lyd}}{Ab}$	$\frac{F\#^{lyd}}{Ab}$	$\frac{C^{loc}}{Ab}$	$\frac{F\#^{loc}}{Ab}$	$\frac{G^{loc}}{Ab}$		

<b>A</b>	$A^{-7}$	$A^{7\#9}$	$A^{o7}$	$A^{-7b5}$	$\frac{C}{A}$	$\frac{Ab}{A}$	$\frac{F}{A}$	$\frac{C-}{A}$	$\frac{C^+}{A}$	$\frac{C^{sus4}}{A}$	$\frac{F^{sus4}}{A}$
	$\frac{G^{sus4}}{A}$	$\frac{C^{lyd}}{A}$	$\frac{F^{lyd}}{A}$	$\frac{F\#^{lyd}}{A}$	$\frac{C^{loc}}{A}$	$\frac{F\#^{loc}}{A}$	$\frac{G^{loc}}{A}$				

<b>Bb</b>	<b>Bb<sup>MA9</sup></b>	<b>Bb<sup>-9</sup></b>	<b>Bb<sup>9</sup></b>	<b>Bb<sup>-9b5</sup></b>	<b>Bb<sup>o7</sup></b>	$\frac{\text{C}}{\text{Bb}}$	$\frac{\text{F}}{\text{Bb}}$	$\frac{\text{Ab}}{\text{Bb}}$	$\frac{\text{C-}}{\text{Bb}}$	$\frac{\text{A-}}{\text{Bb}}$	$\frac{\text{F-}}{\text{Bb}}$
	$\frac{\text{C}^{\circ}}{\text{Bb}}$	$\frac{\text{A}^{\circ}}{\text{Bb}}$	$\frac{\text{F}\#\circ}{\text{Bb}}$	$\frac{\text{C}^+}{\text{Bb}}$	$\frac{\text{C}^{\text{sus4}}}{\text{Bb}}$	$\frac{\text{F}^{\text{sus4}}}{\text{Bb}}$	$\frac{\text{G}^{\text{sus4}}}{\text{Bb}}$	$\frac{\text{C}^{\text{lyd}}}{\text{Bb}}$	$\frac{\text{F}^{\text{lyd}}}{\text{Bb}}$	$\frac{\text{F}\#\text{lyd}}{\text{Bb}}$	$\frac{\text{C}^{\text{loc}}}{\text{Bb}}$
	$\frac{\text{F}\#\text{loc}}{\text{Bb}}$	$\frac{\text{G}^{\text{loc}}}{\text{Bb}}$									

<b>B</b>	<b>B<sup>7b9</sup></b>	$\frac{\text{C}}{\text{B}}$	<b>B<sup>-7/b5/b9</sup></b>	$\frac{\text{F}}{\text{B}}$	$\frac{\text{Ab}}{\text{B}}$	$\frac{\text{A-}}{\text{B}}$	$\frac{\text{C-}}{\text{B}}$	$\frac{\text{F-}}{\text{B}}$	$\frac{\text{C}^{\circ}}{\text{B}}$	$\frac{\text{A}^{\circ}}{\text{B}}$	$\frac{\text{F}\#\circ}{\text{B}}$
	$\frac{\text{C}^+}{\text{B}}$	$\frac{\text{C}^{\text{sus4}}}{\text{B}}$	$\frac{\text{F}^{\text{sus4}}}{\text{B}}$	$\frac{\text{G}^{\text{sus4}}}{\text{B}}$	$\frac{\text{C}^{\text{lyd}}}{\text{B}}$	$\frac{\text{F}^{\text{lyd}}}{\text{B}}$	$\frac{\text{F}\#\text{lyd}}{\text{B}}$	$\frac{\text{C}^{\text{loc}}}{\text{B}}$	$\frac{\text{F}\#\text{loc}}{\text{B}}$	$\frac{\text{G}^{\text{loc}}}{\text{B}}$	

Remember, this is just a list of easily nameable chord voicings.

As you can see, it is mind-boggling how many there are. Try to experiment voicing each one of these chords with the note C on top. This will give you a greater understanding of voice leading and increase your chord vocabulary tenfold.

## Modal Harmony and Theory

I would like to begin this section on modal harmony and theory by recapping some points already covered.

1. In theory, any combination of modal tones over its tonic produces a modal voicing.

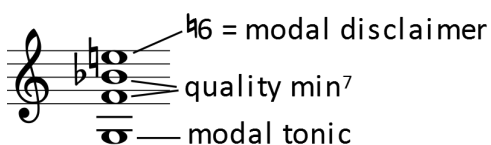
### **Ex. 116**

a.  = G dorian

b.  = C alt. dom.

2. The construction of a modal voicing is dependent on the presence of two factors:
  - a) A clear definition of the chord's quality (maj, min, etc.) including the seventh if desired.
  - b) Emphasis of one or more distinguishing chord tones.

### **Ex. 117**



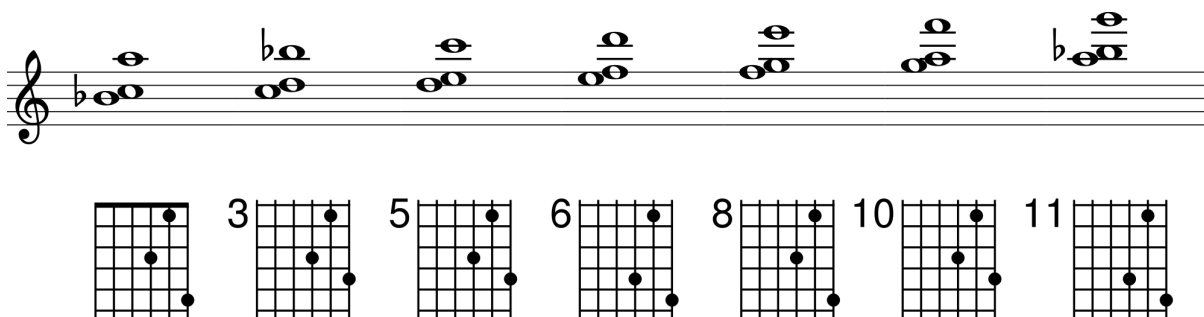
b6 = modal disclaimer

quality min7

modal tonic

3. For comping purposes voicing families should be learned horizontally on the fingerboard.

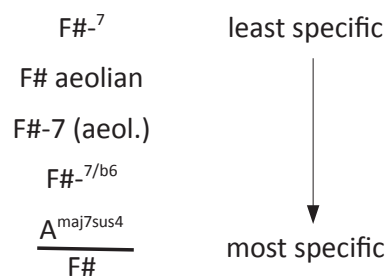
### **Ex. 118**



Each note of the voicing moves up the scale diatonically.

4. Labeling chords by mode is helpful to the improviser in that it provides the appropriate scale choice and a more descriptive harmonic interpretation.

**Ex. 119**



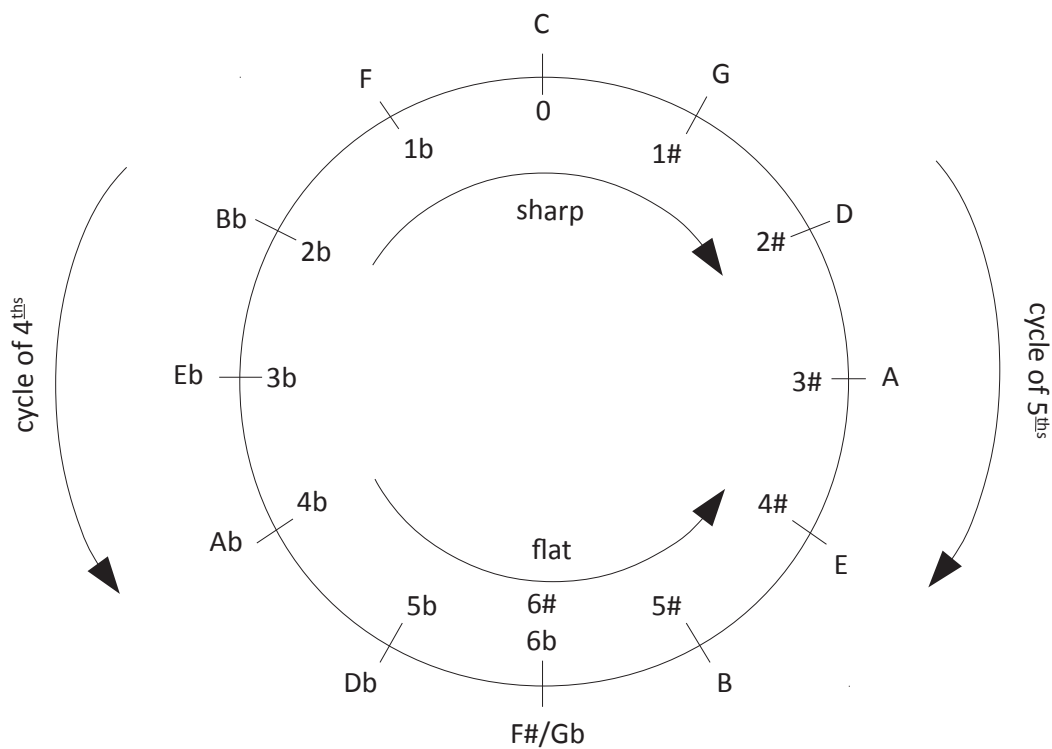


## Sharp and Flat Direction Modal Modulation

Sharp and flat direction modal modulations, also known as upwards (sharp) and downwards (flat), occur when moving directly from one modal center to another. It can be better understood by using this chart:

Modal modulations can be used in place of more common modulation devices such as secondary Dom<sup>7</sup>, secondary Dim<sup>7</sup> or chromatic mediant modulations.

### **Ex. 120**



### **Sharp direction / upward modulation:**

Moving modal center around the circle or adding sharps to naturals.

### **Flat direction / downward modulation:**

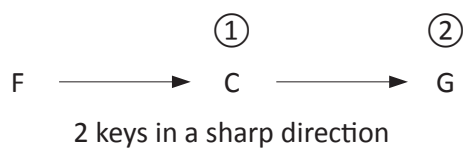
Moving modal center counterclockwise or adding flats to naturals.

## Upward Modulation

Ex. 121a

**B<sup>b</sup>/A** = A Phrygian      **G<sub>sus</sub><sup>4</sup>/E** = E Aeolian

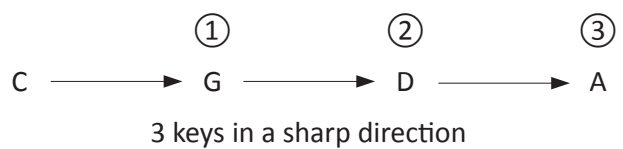
upward



Ex. 121b

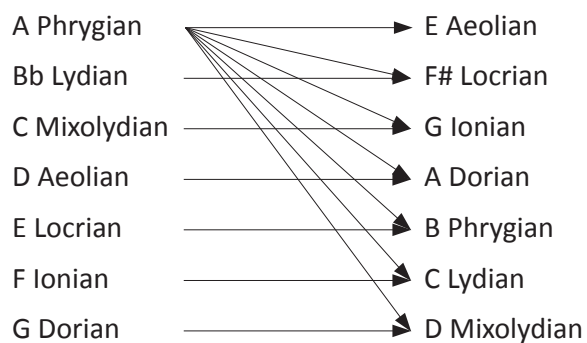
**GQ/A** = A Aeolian      **Dly $\Delta$**  = D Lydian

upward



Modulating from A Phrygian to E Aeolian (2 keys in a sharp direction) we can generate many more harmonic resolutions between the parent groups.

**Ex. 122**



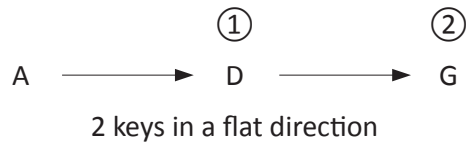
Also any combination of left to right movement as indicated from A Phrygian.

## Downward Modulations

### Ex. 123a

**EQ/F#** = F# Aeolian      **Clyd<sup>add9</sup>** = C Lydian

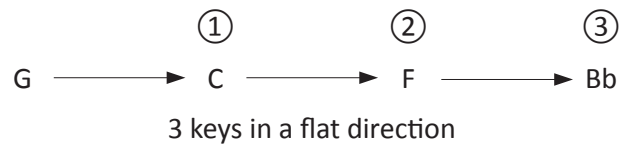
downward



### Ex. 123b

**A-13** = A Dorian      **E<sup>b</sup>/D** = D Phrygian

downward

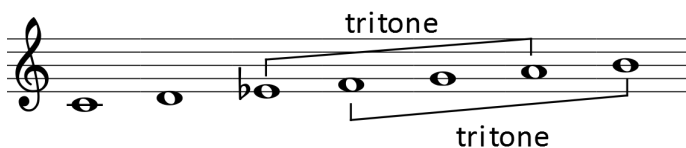


Before we go on, I want to remind you that these resolution tendencies are dependent on clear modal voicings.

Modal modulation between melodic minor scales tends to be more ambiguous than the major. This is caused by its inherent interval properties, chiefly the pair of tritones.

**Ex. 124**

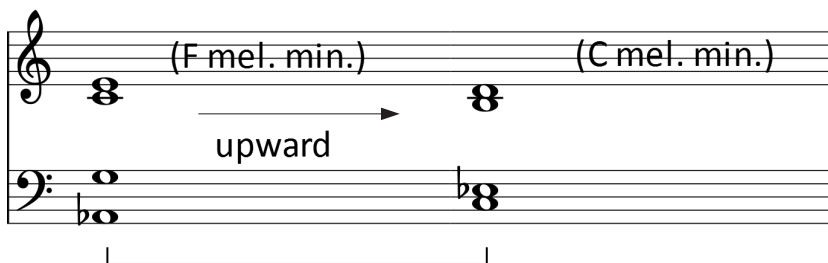
**C melodic minor**



**Sharp Direction (Melodic Minor)**

**Ex. 125**

**C/A<sup>b</sup>** = Ab lyd. aug.      **C-MA<sup>9</sup>** = C mel. min.

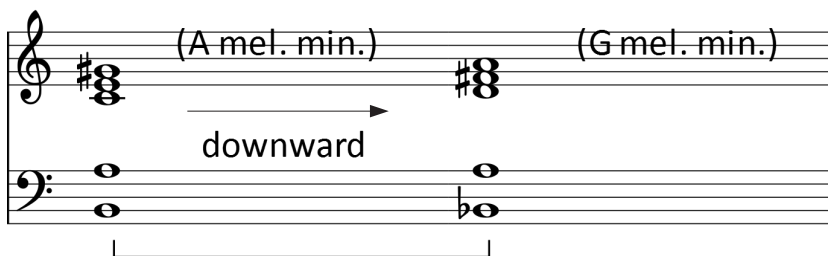


F mel. min. —————→ C mel. min. ①  
 1 key in a sharp direction

**Flat Direction (Melodic Minor)**

**Ex. 126**

**B dor. b2**      **D/B<sup>b</sup>** = Bb lyd. aug.





## Resolution Tendencies Between Modal Groups

Resolution tendencies between modal groups (major to melodic minor for example) do not fit into a standard formula. They are related to voice leading rather than the internal structure of the two parent scales. Try these on the piano.

### Ex. 129

(a.)                      (b.)                      (c.)

*B phry. maj.*    *E loc.*                      *D alt. dom.*    *G ael.*                      *A lyd. #9*                      *D loc.*

(d.)                      (e.)                      (f.)

*C# phry. maj.*    *B dor.*                      *A ion. aug.*    *G# loc.*                      *F# mel. min.*                      *E mix.*

## Voice Leading

Voice leading is the interval movement of like voices between two chords. Good voice leading involves either common tone or stepwise motion of the voices while following natural resolution tendencies.

**Ex. 130**

Smooth voice leading is difficult to achieve on the guitar because of the large number of left hand chord forms involved.

## Resolution

The term resolution implies a change from one chord to another. Half step resolution should be used whenever possible. Here is a chart of  $V^7$  to  $I^{maj7}$  resolutions.

**Ex. 131**

$V^7$	$I^{maj7}$
R	→ #5, #4, (6)
3	→ R, 6
5	→ R, 3
b7	→ 3, #4
9	→ #5, 7, (5)
11	→ 9, 7 both weak
13	→ 9, #4
b9	→ 5, 6
#9	→ 7, 6
b5	→ R, 9
#5	→ 9, 3



Here is a linear resolution example:

**Ex. 132a**

**G7<sup>b9</sup>** (Phry. maj.) **C<sub>M</sub>A7**

**Ex. 132b**

**G7<sup>alt</sup>** **C<sub>M</sub>A7**

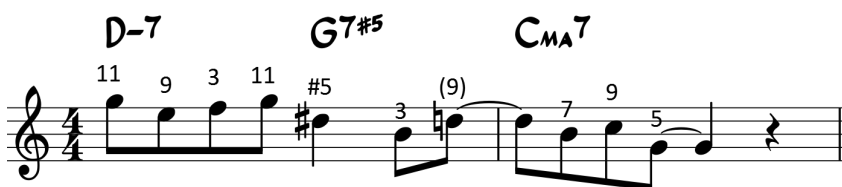
Harmonic resolution

**Ex. 133**

(a.) **G7<sup>#5b9</sup>** **C<sub>F</sub>** (b.) **G9<sup>#5</sup>** **C<sub>M</sub>A7<sup>#11#5</sup>**

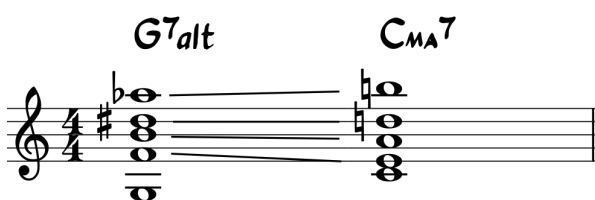
Resolution by skip is also effective when approached correctly.

**Ex. 134**



Harmonic resolution by skip

**Ex. 135**



## Mirror Modal Equivalents

Here is an ascending C Ionian scale. It is constructed out of a specific pattern of intervals.



A mirror image of the ascending C Ionian scale is created by constructing a descending scale from C using the same series of intervals. This mirror image is a descending C Phrygian scale.



This unique relationship makes Ionian and Phrygian **Mirror Modal Equivalents**.

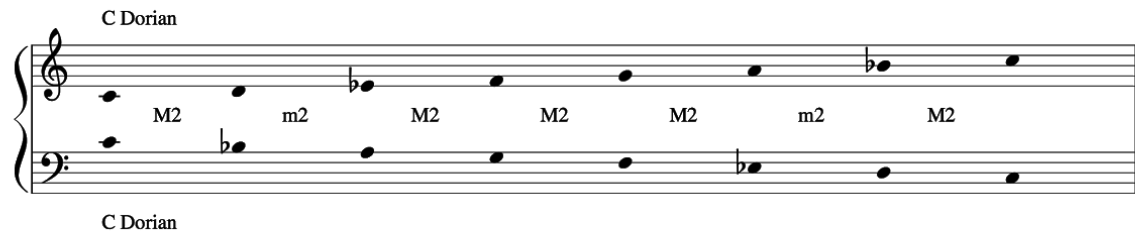
This process can be extended to every mode of the Major scale, resulting in three pairs of modes. They are:

Ionian - Phrygian

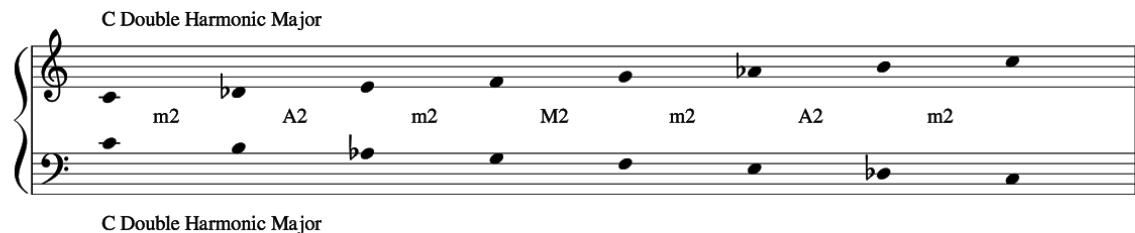
Lydian - Locrian

Mixolydian - Aeolian

The remaining mode, Dorian, is **reflective** because of its palindromic interval pattern. This causes Dorian to be its own Mirror Image when it is reflected.



Another example of a reflective scale is the Double Harmonic Major scale.



Here the seven modes of the Major scale are paired with their Mirror Modal Equivalent, and arranged in order of brightness. The ascending modes move from bright (Lydian) to dark (Dorian). The descending modes move from dark (Locrian) to bright (Dorian).

C Lydian

C Locrian

C Ionian

C Phrygian

C Mixolydian

C Aeolian

C Dorian

C Dorian

Bright → Dark

Lydian	Ionian	Mixolydian	Dorian
Locrian	Phrygian	Aeolian	Dorian

Dark → Bright

### **Melodic Minor: Mirror Modal Equivalents**

The modes of Melodic Minor also include three pairs of mirror modal equivalents, and one reflective mode.

Melodic Minor	Dorian b2
Lydian Augmented	Altered Dominant
Mixolydian #11	Locrian Natural 2
Mixolydian b6	Mixolydian b6

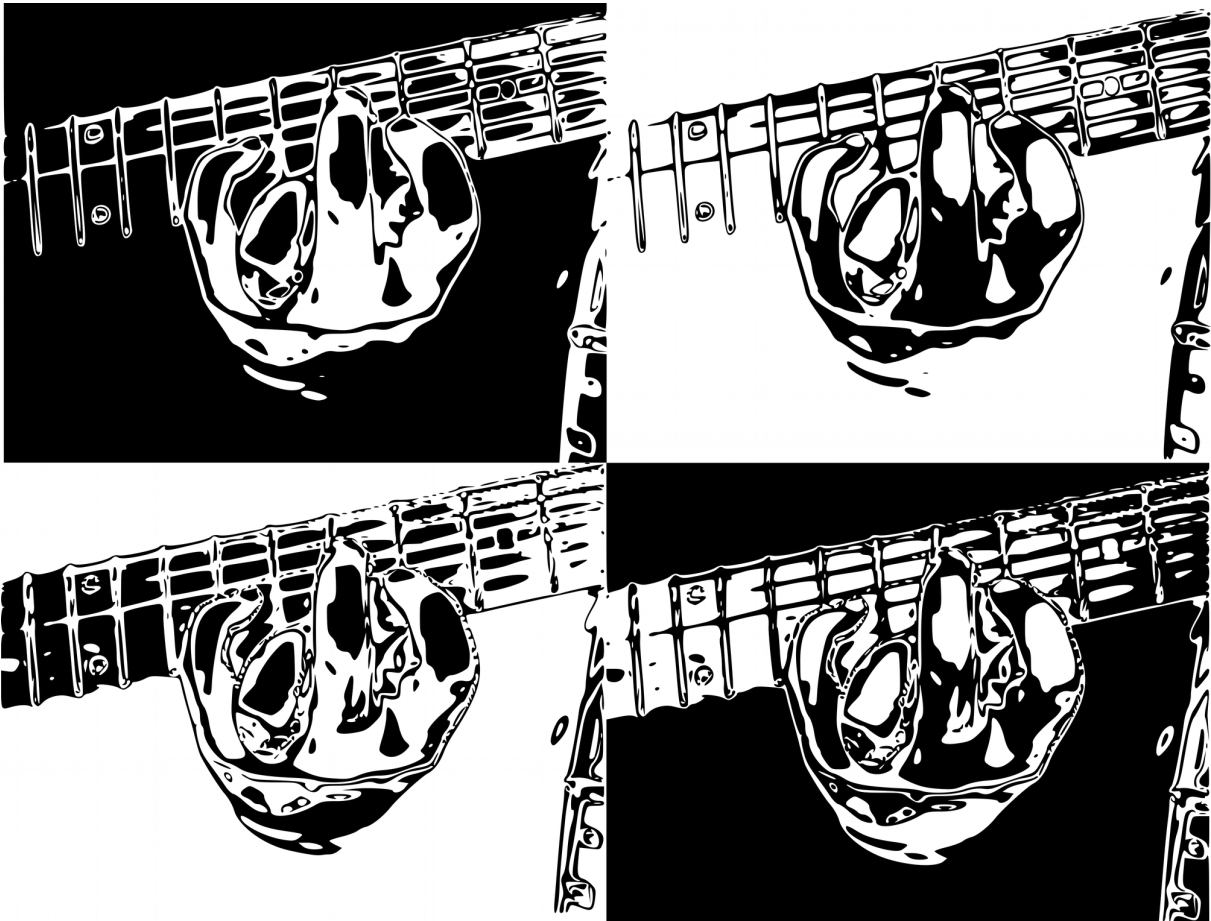
### **Harmonic Minor and Harmonic Major: Mirror Modal Equivalents**

The modes of Harmonic Minor transform into the modes of Harmonic Major when reflected, and vice-versa.

Harmonic Minor Modes	Harmonic Major Modes
Harmonic Minor	Mixolydian b2
Locrian Natural 6	Lydian b3 (Melodic Minor #4)
Ionian Augmented	Phrygian b4
Dorian #4	Dorian b5
Phrygian Major	Harmonic Major
Lydian #9	Locrian bb7
Altered Dominant bb7	Lydian Augmented #2

# CHAPTER 2

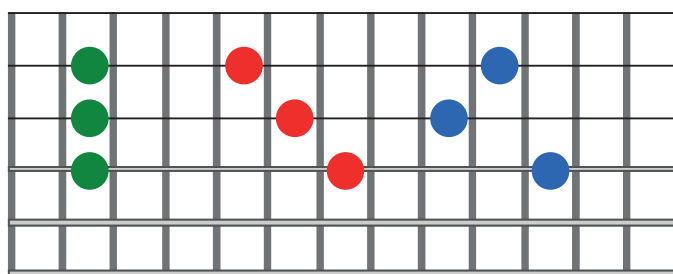
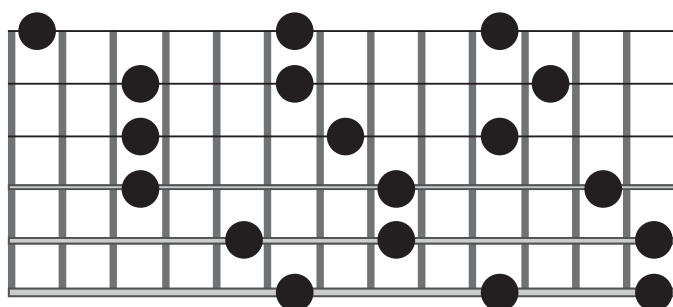
## CHORD FORMS



## Chapter 2: Chord Forms

### Triad (and Suspension) Chord Forms

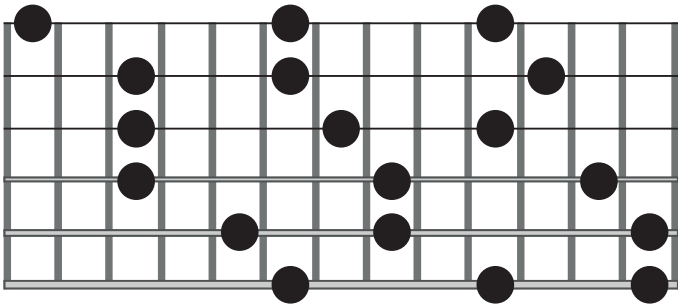
The diagrams of triadic shapes are intended for harmonic and melodic use. Practice moving horizontally and vertically between shapes. This will acclimate your left hand to the fret spacing of the individual shapes.



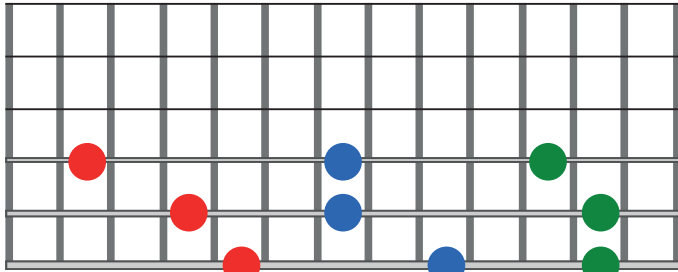
- : Root position
- : 1. Inversion
- : 2. Inversion

Major Triads

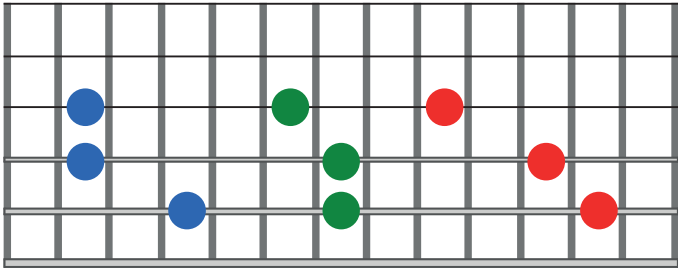
Major Triads



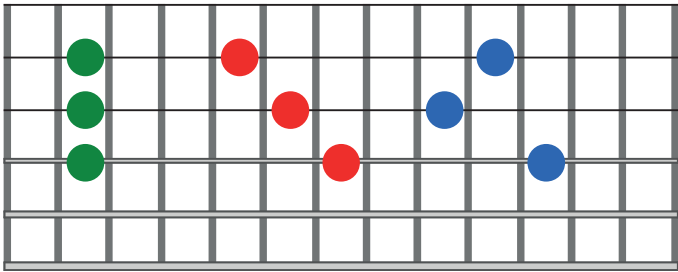
stringset E-A-D



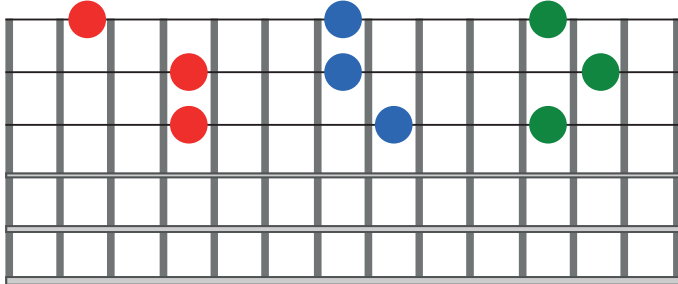
stringset A-D-G



stringset D-G-B



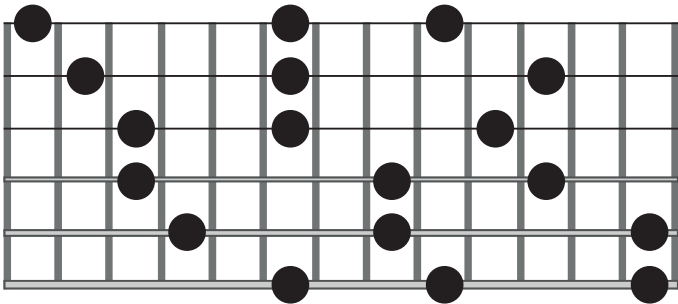
stringset G-B-E



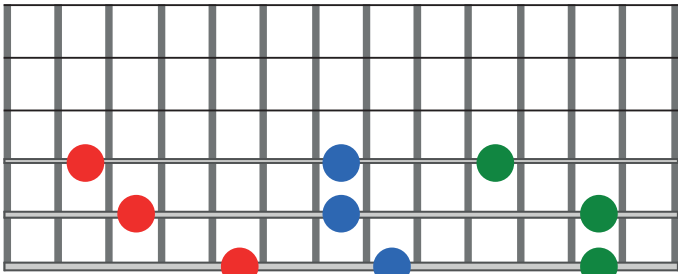


Minor Triads

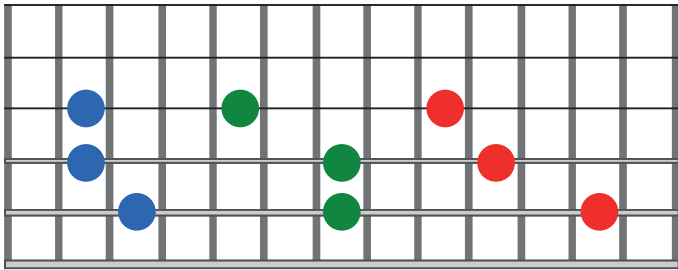
Minor Triads



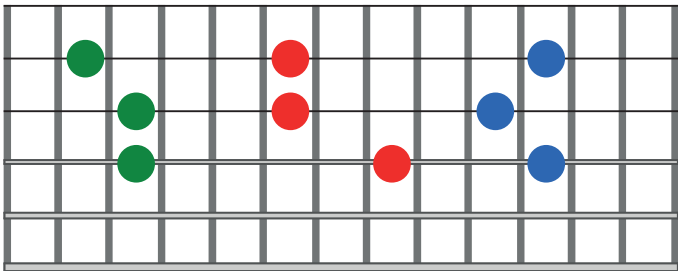
stringset E-A-D



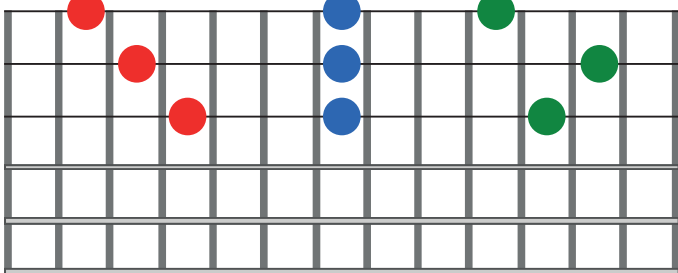
stringset A-D-G



stringset D-G-B

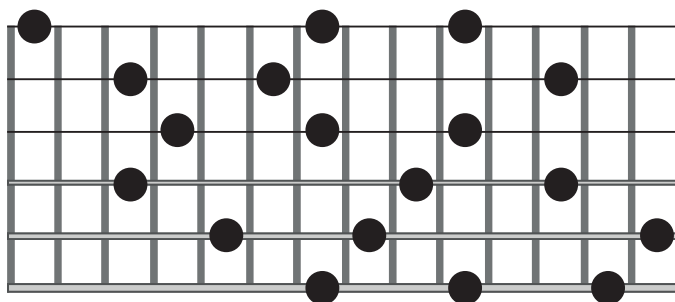


stringset G-B-E

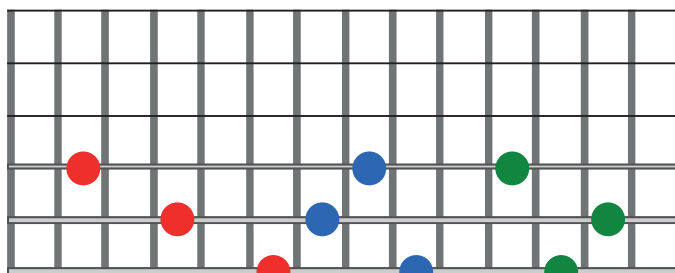


## Diminished Triads

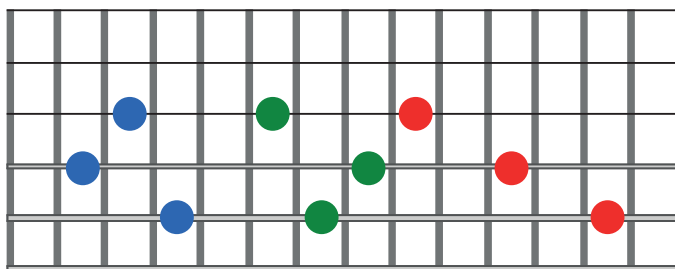
Diminished Triads



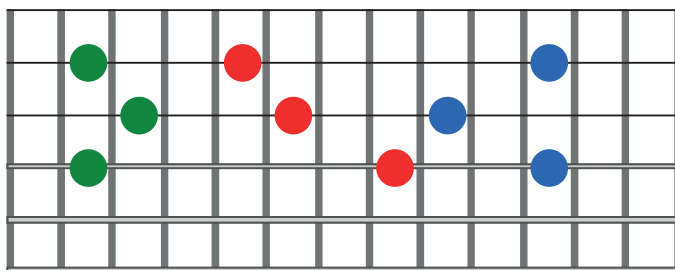
stringset E-A-D



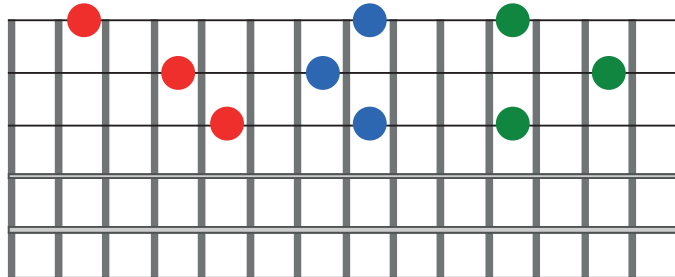
stringset A-D-G



stringset D-G-B

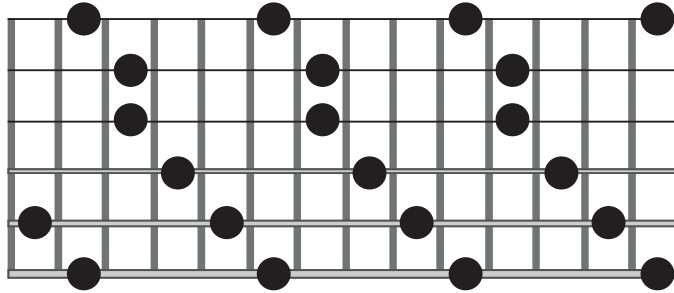


stringset G-B-E

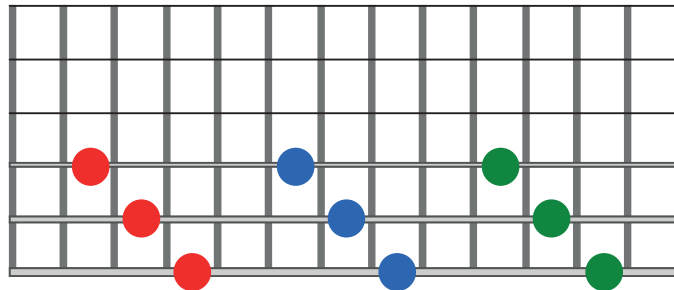


## Augmented Triads

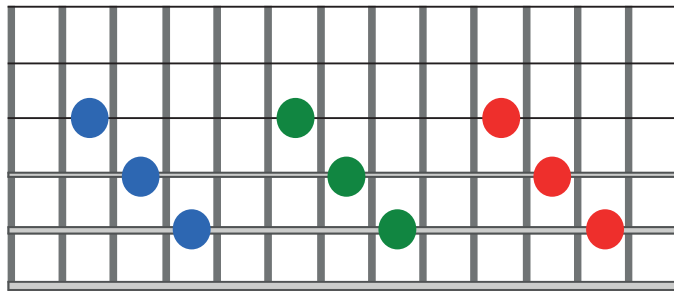
Augmented Triads



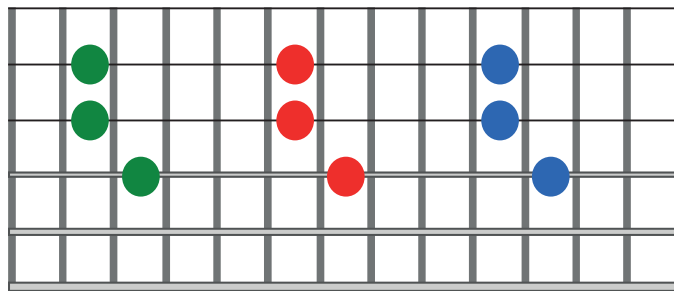
stringset E-A-D



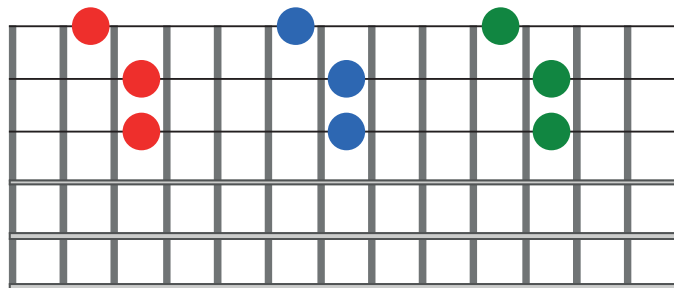
stringset A-D-G



stringset D-G-B

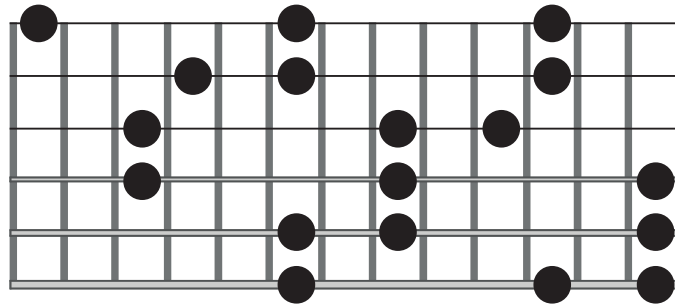


stringset G-B-E

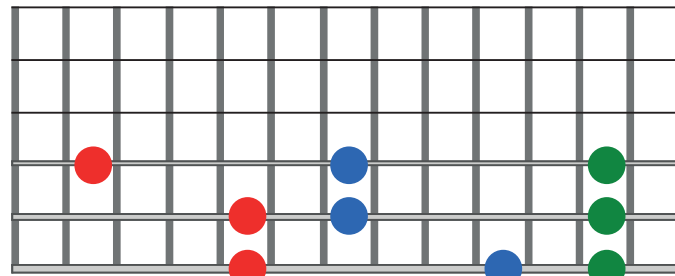


## Suspended Triads

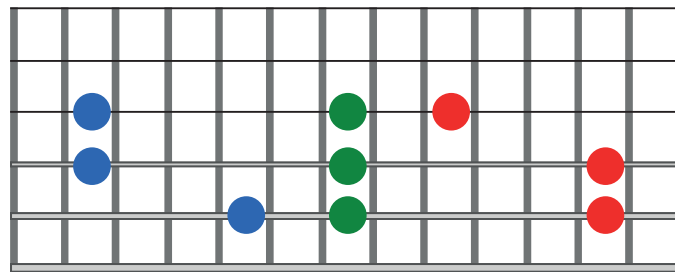
Suspended Triads



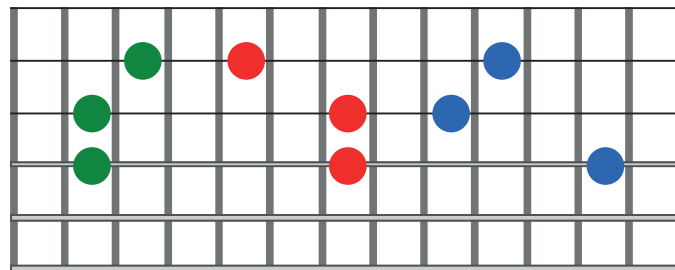
stringset E-A-D



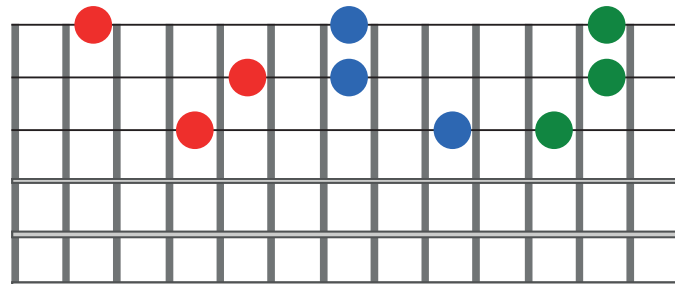
stringset A-D-G



stringset D-G-B

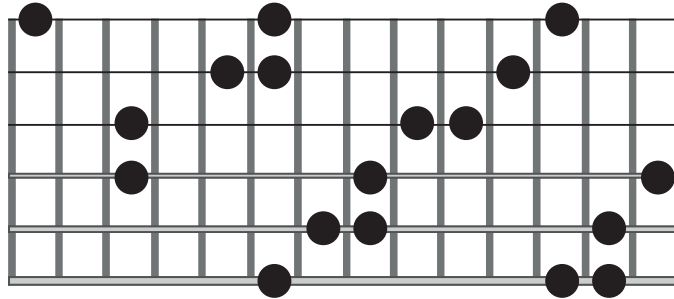


stringset G-B-E

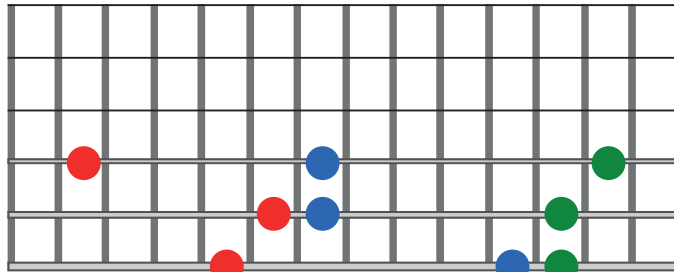


## Lydian Triads

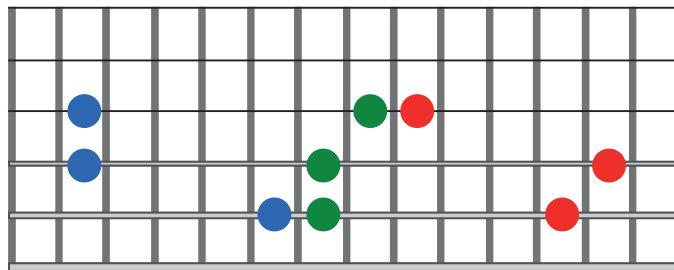
Lydian Triads



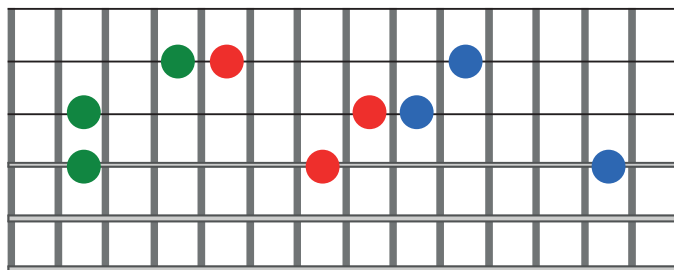
stringset E-A-D



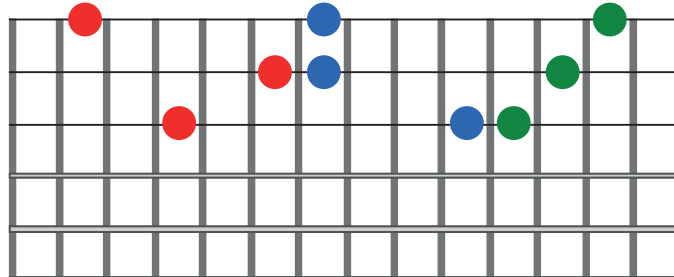
stringset A-D-G



stringset D-G-B

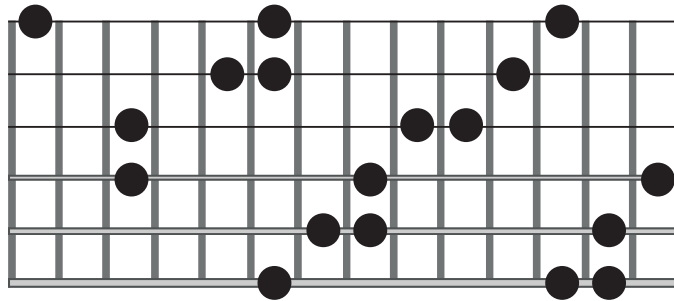


stringset G-B-E

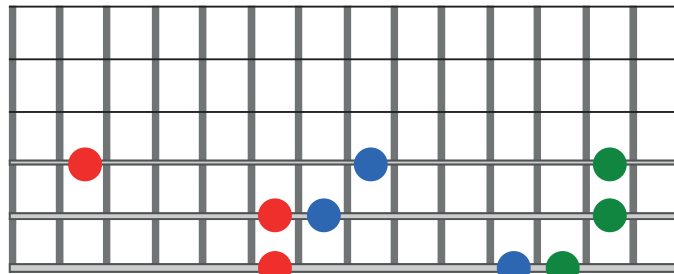


## Locrian Triads

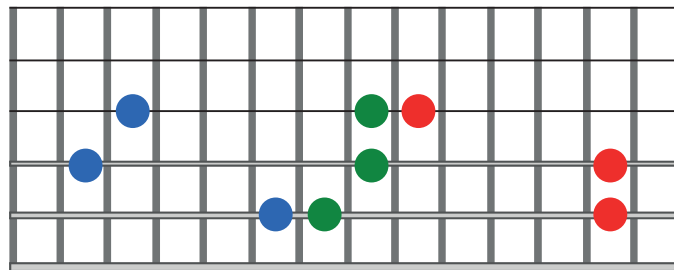
Locrian Triads



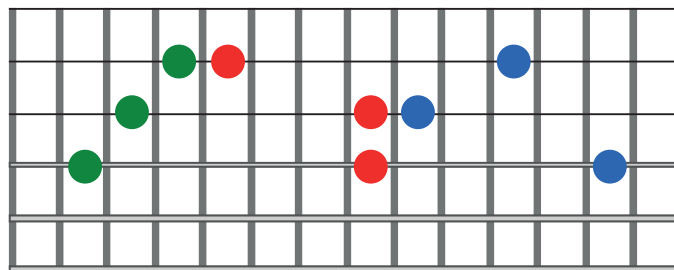
stringset E-A-D



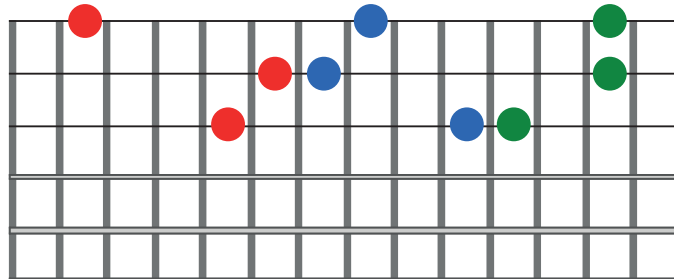
stringset A-D-G



stringset D-G-B



stringset G-B-E

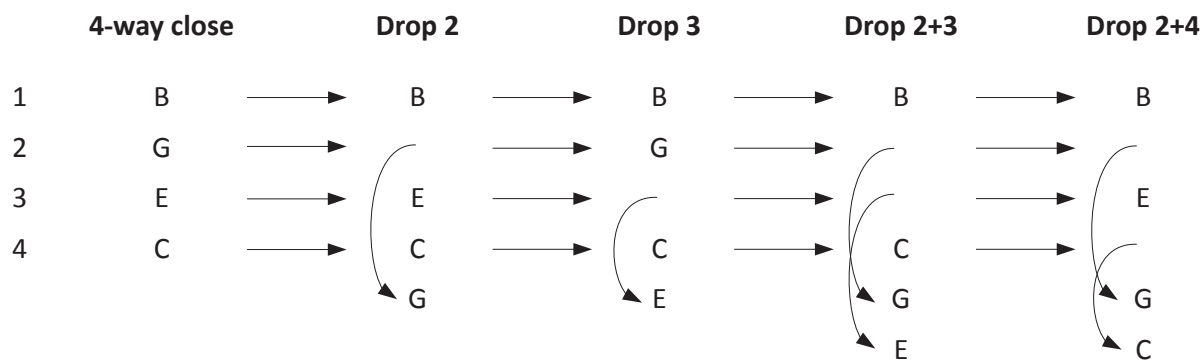


## Drop Voicings

Drop Voicings are commonly used on the guitar because its tuning does not permit easily reached 4-way close structures. A Drop voicing reorders the chord providing a more usable inversion.

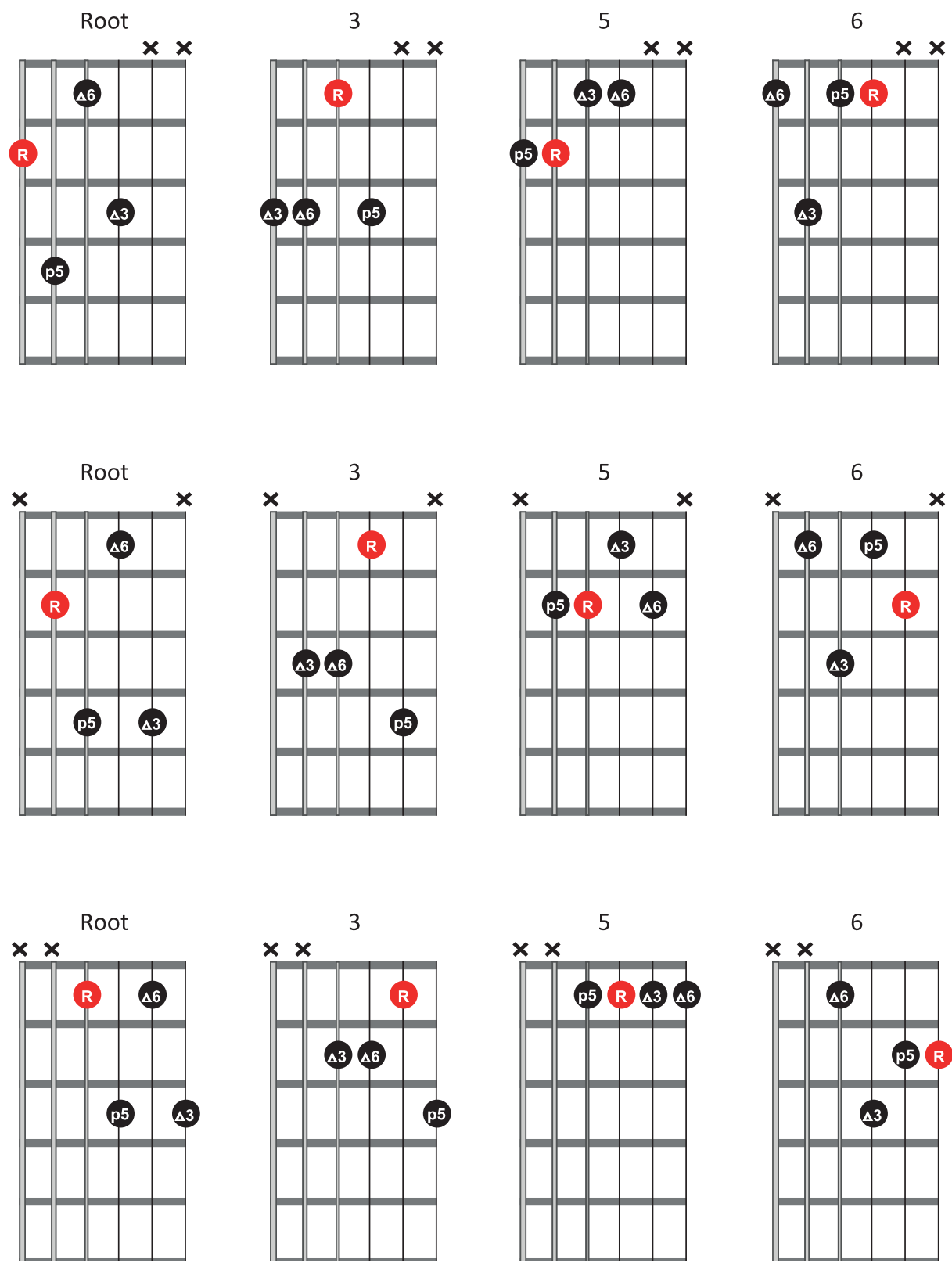
### Voicings of Cmaj<sup>7</sup>

#### **Ex. 136**



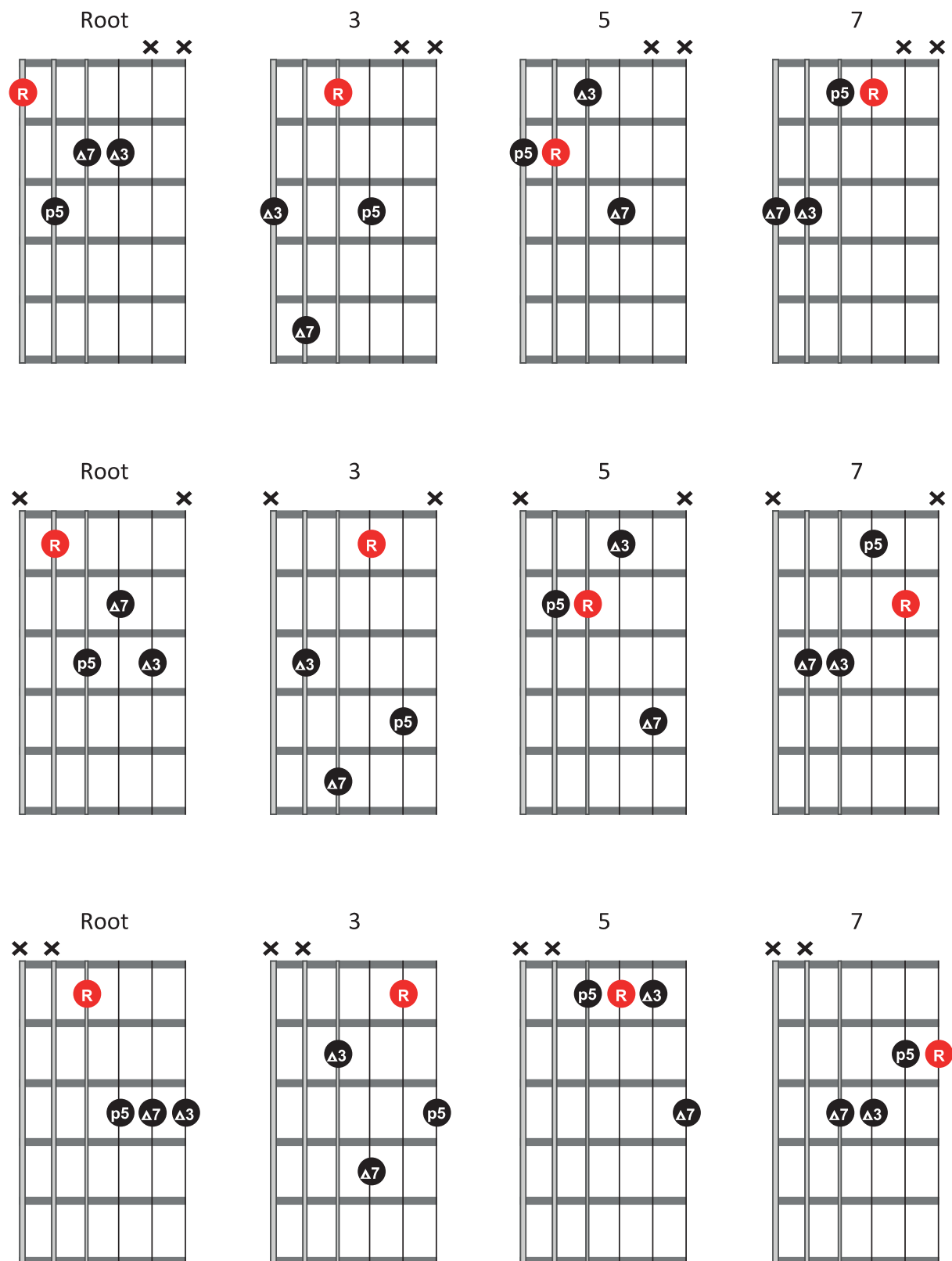
## Drop 2

*Maj*<sup>6</sup>

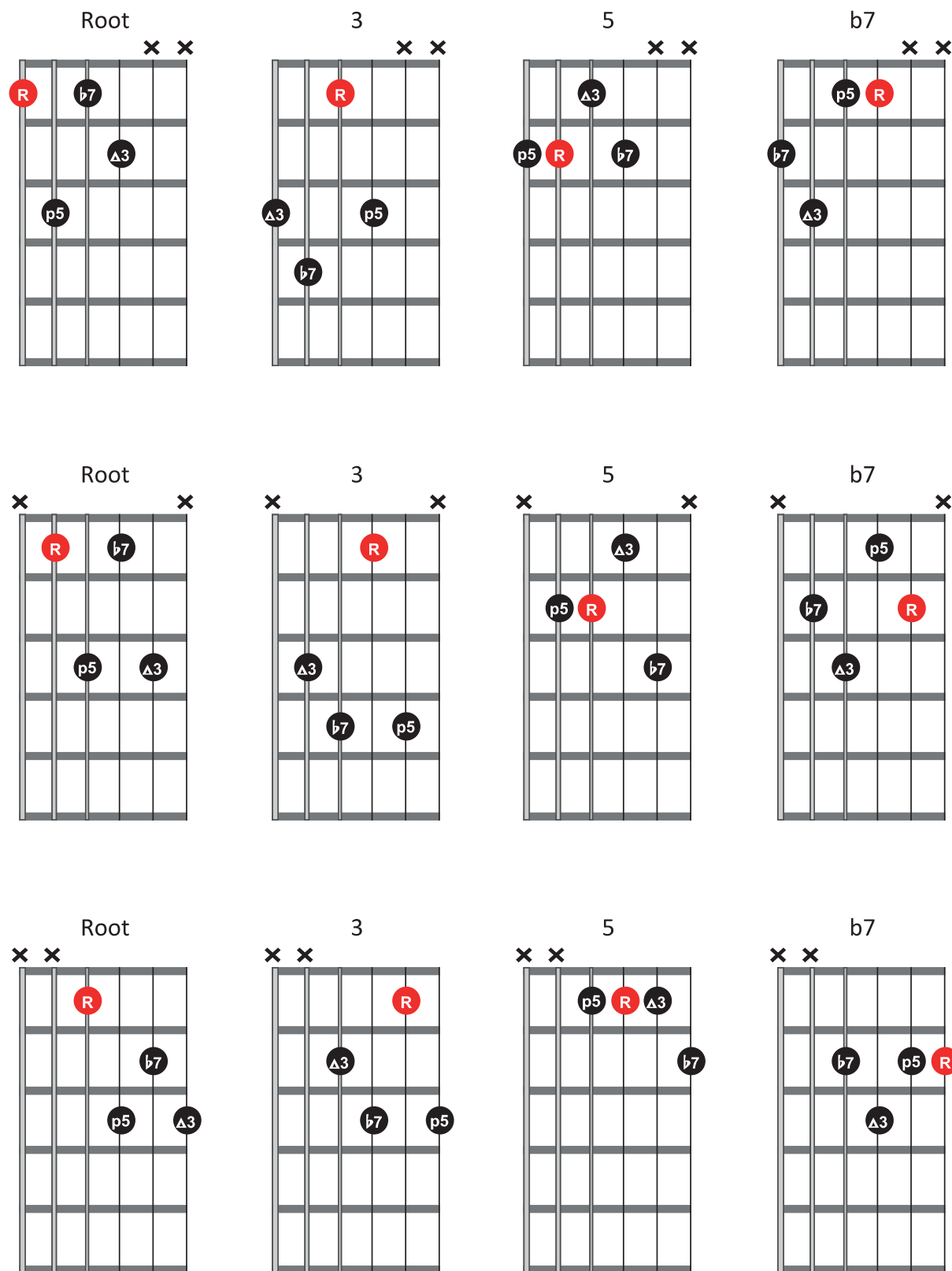




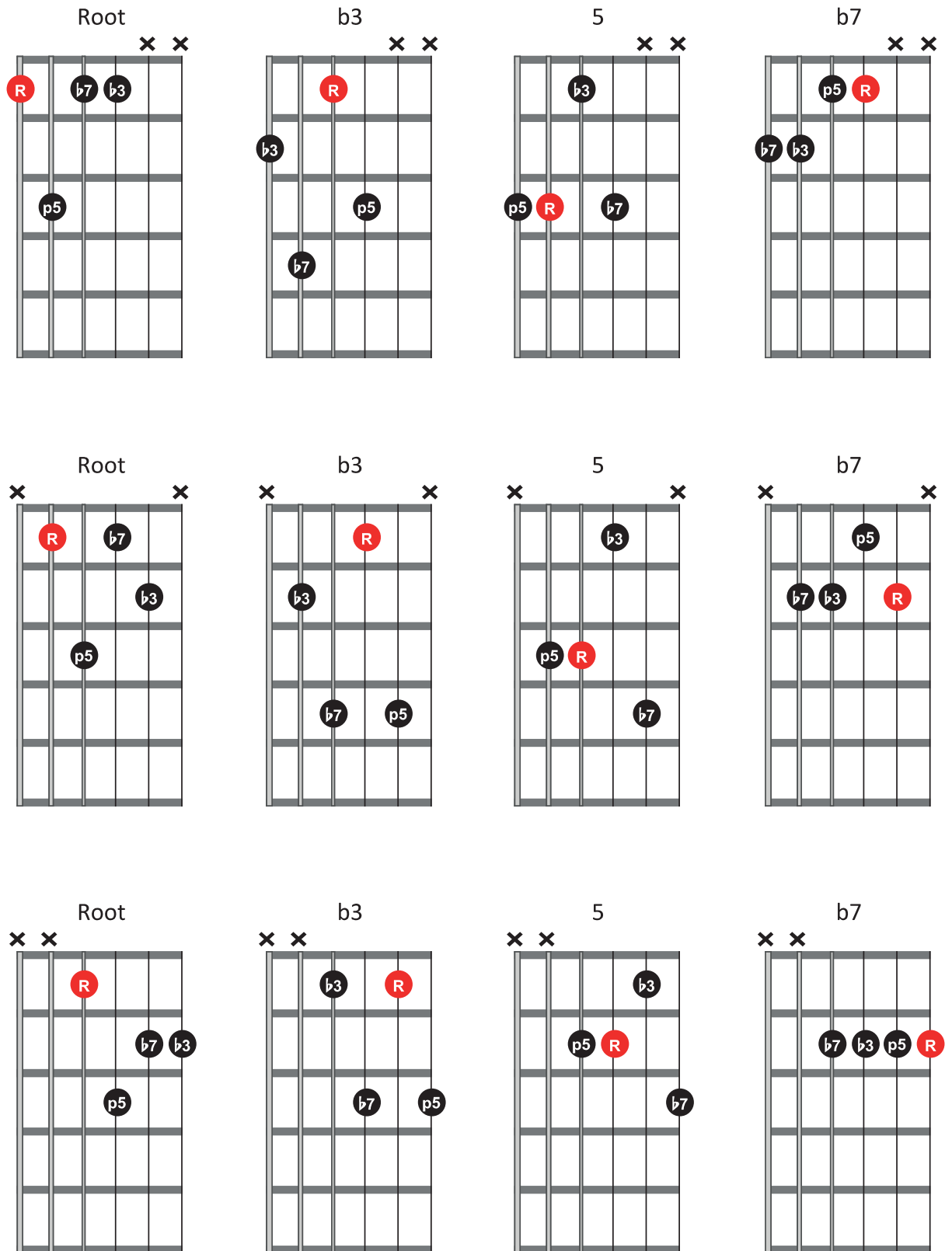
*Maj*<sup>7</sup>



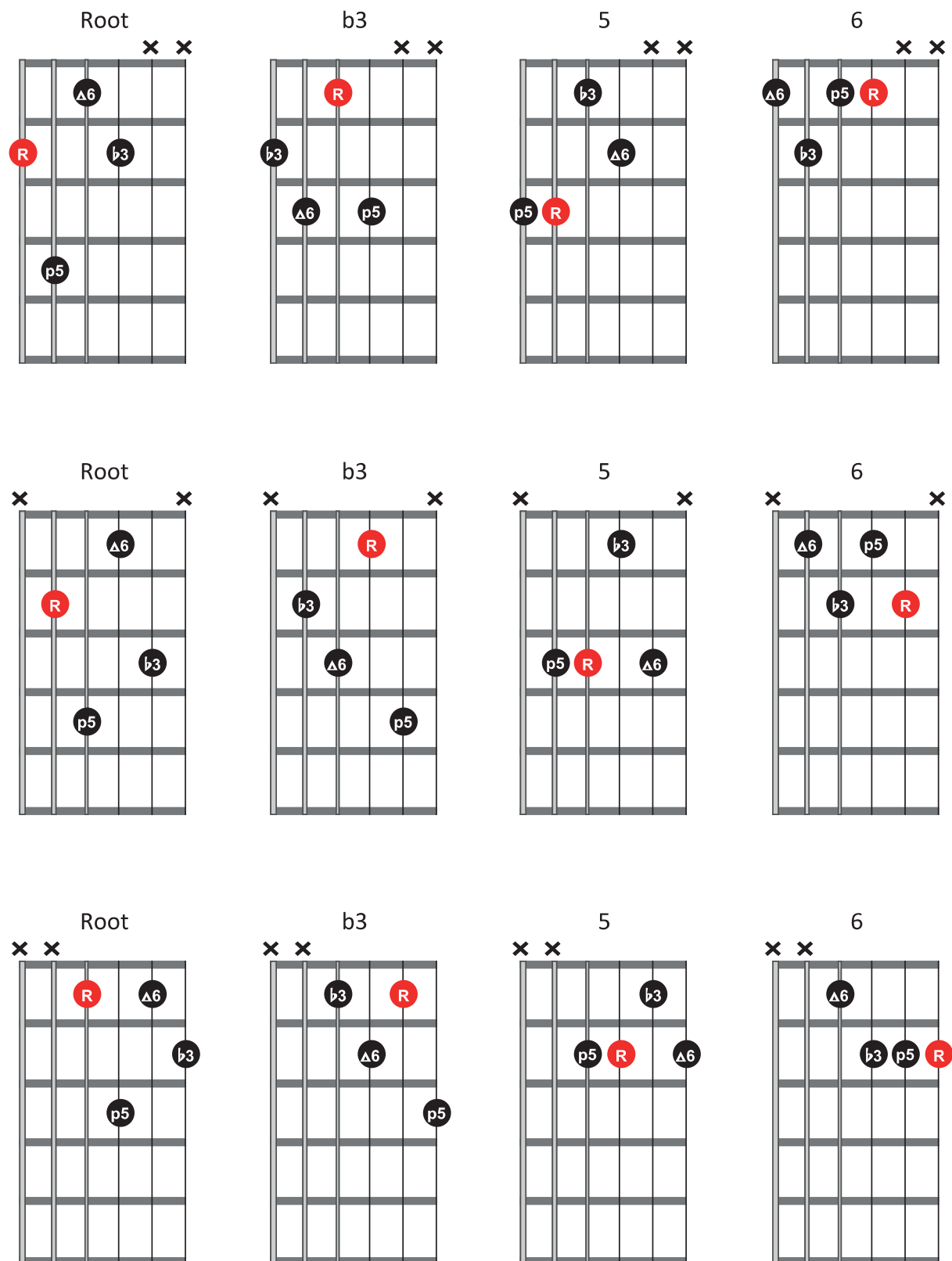
# Dom<sup>7</sup>

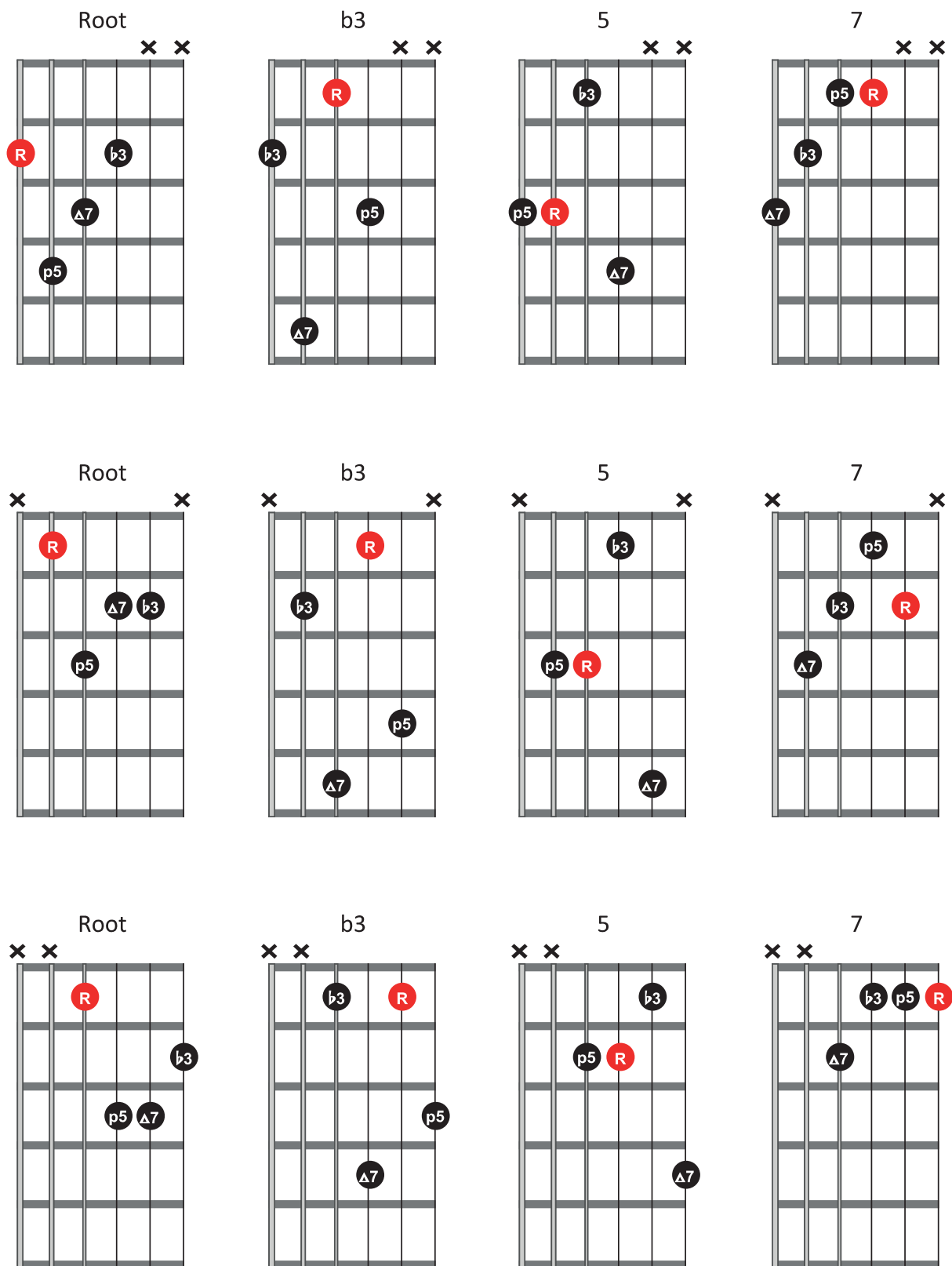


*Min*<sup>7</sup>

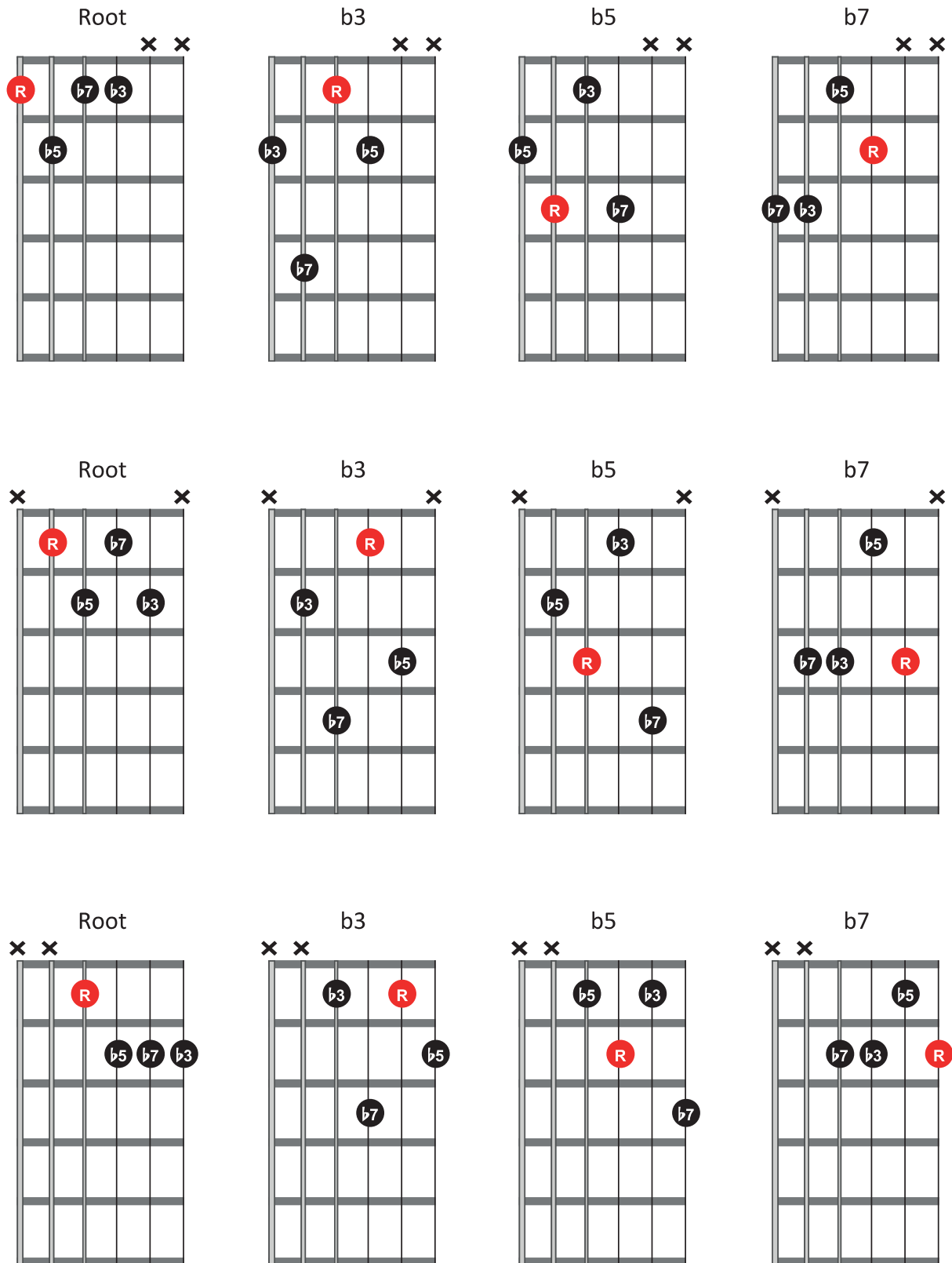


*Min*<sup>6</sup>

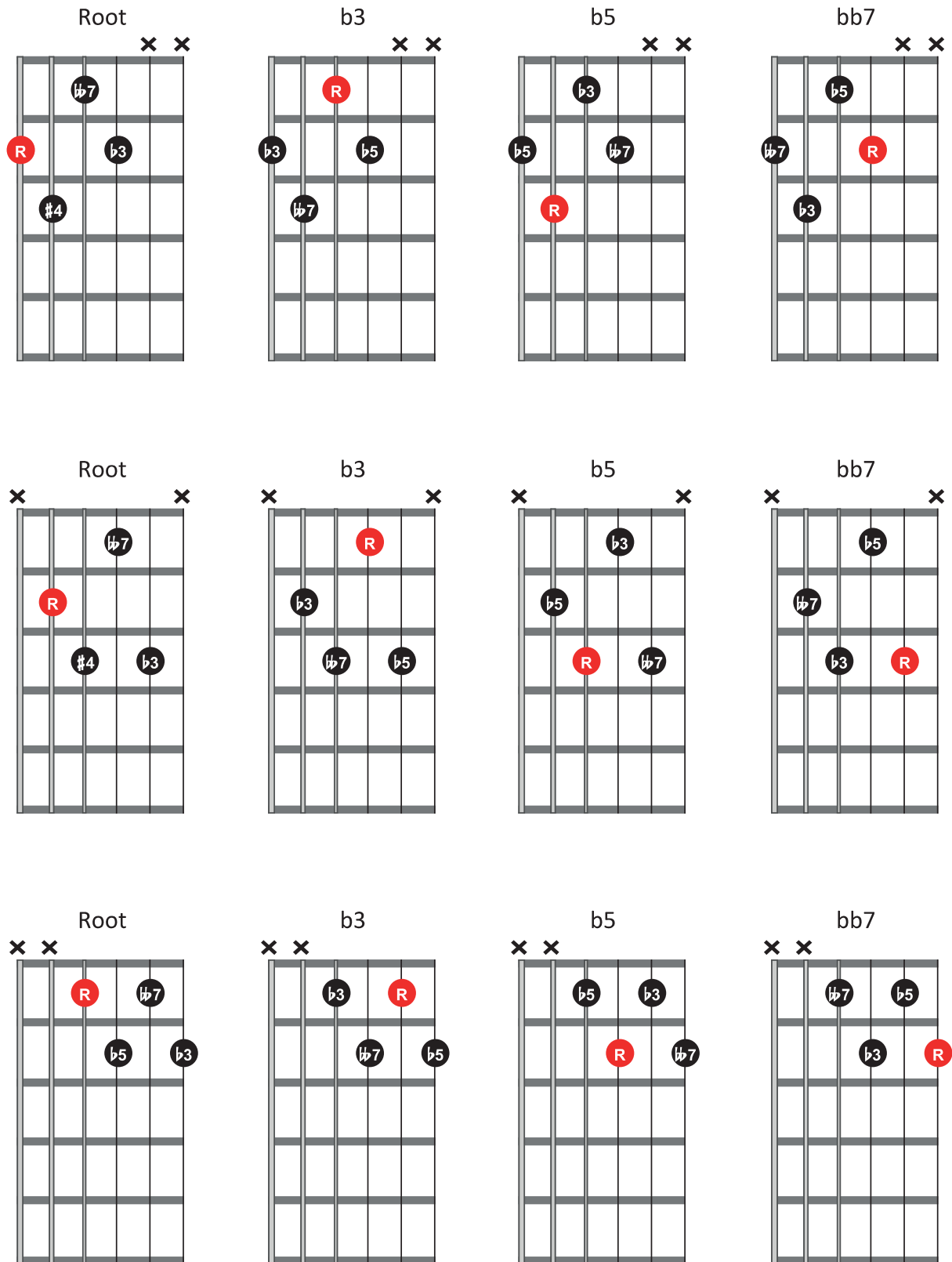


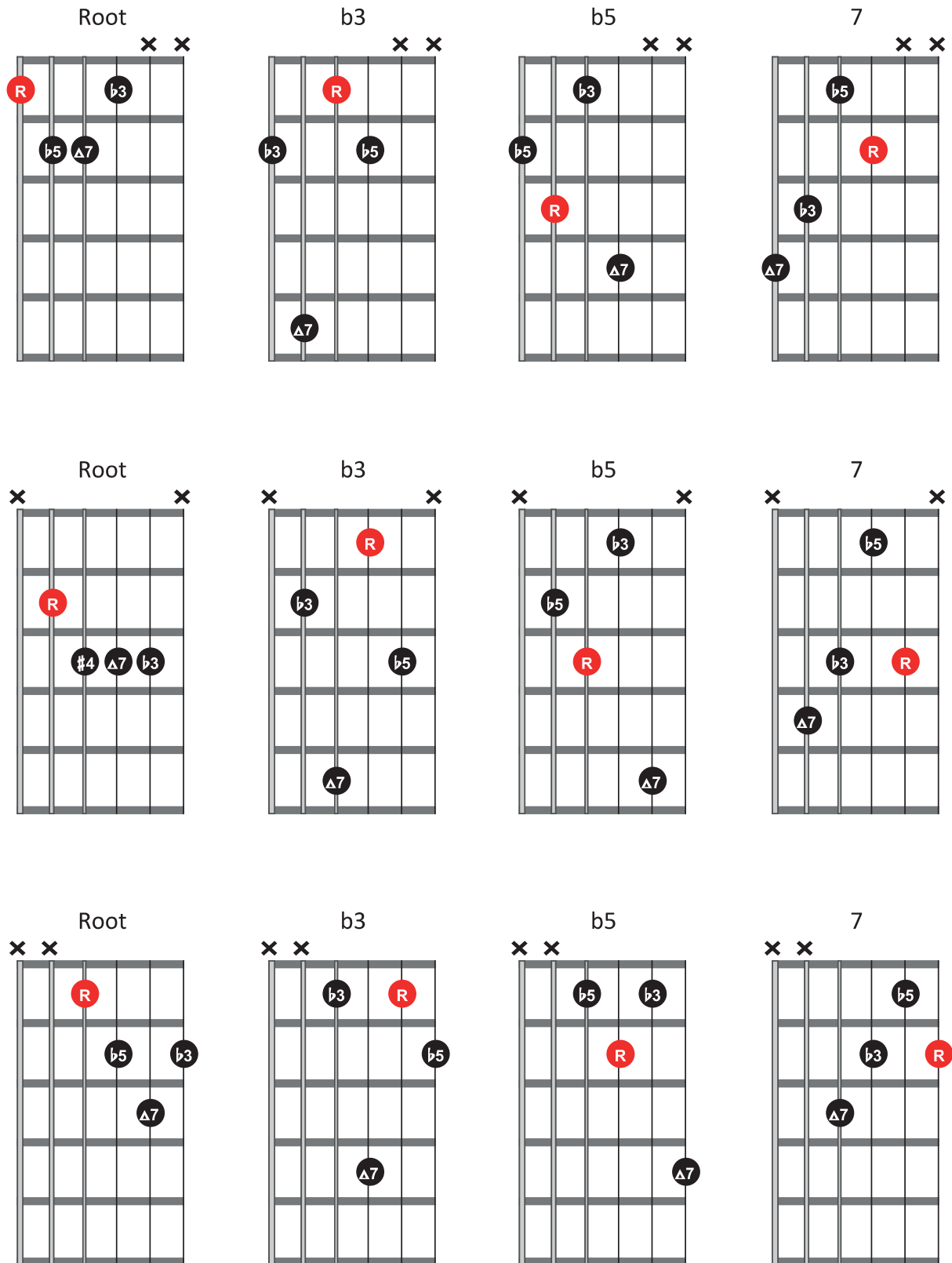


*Min*<sup>7b5</sup>



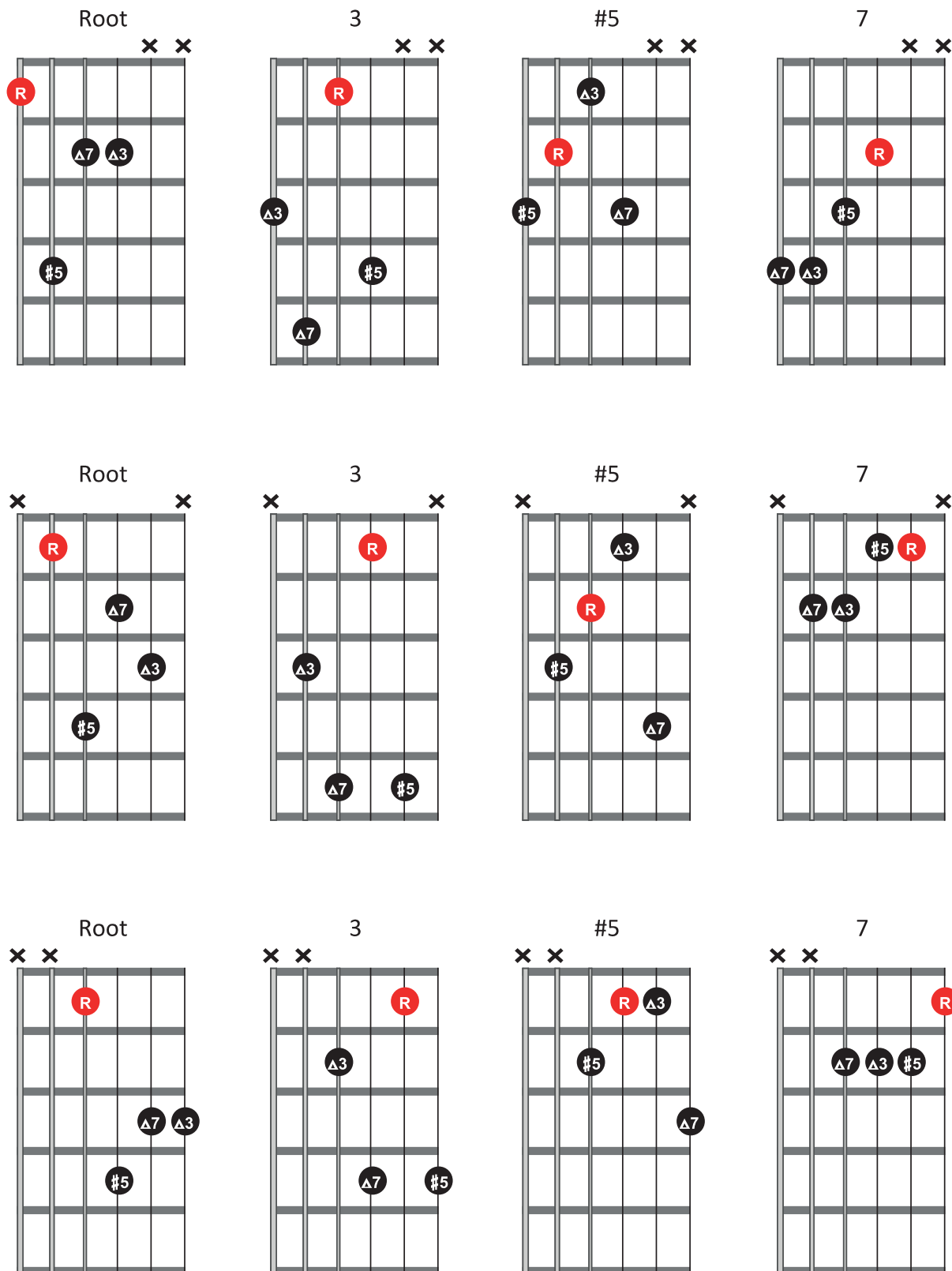
*Dim<sup>7</sup>*



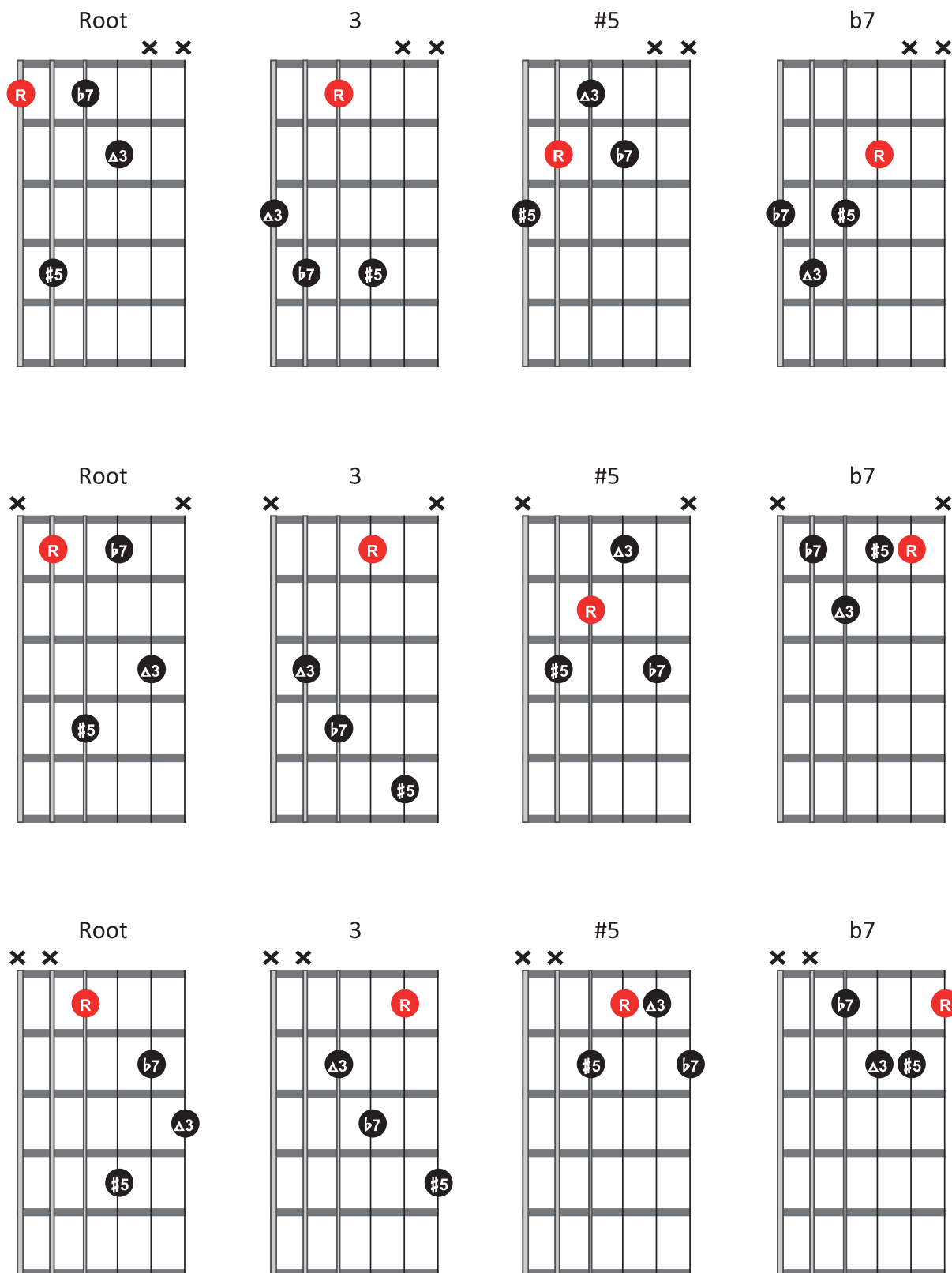




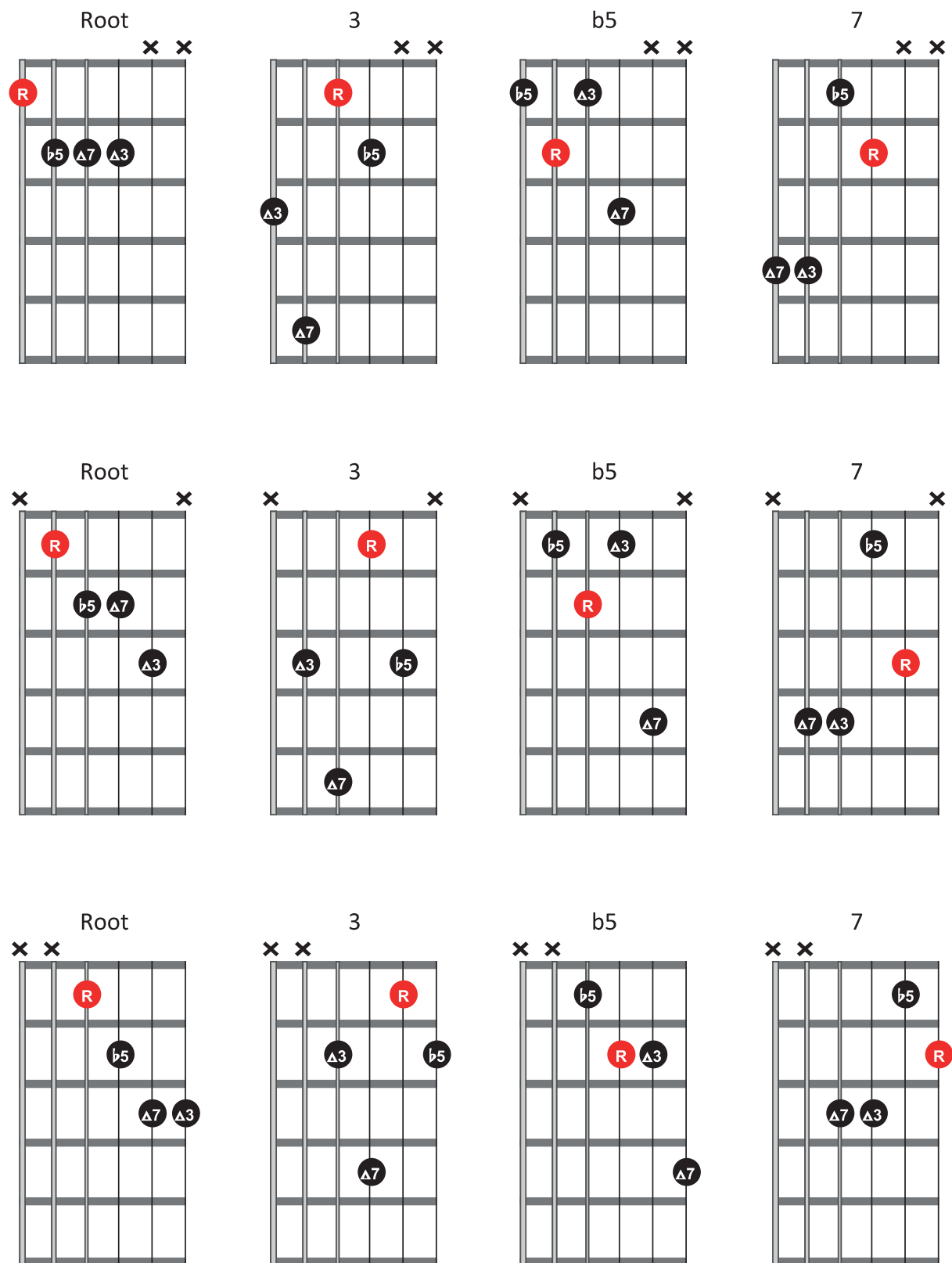
# Aug<sup>maj7</sup>



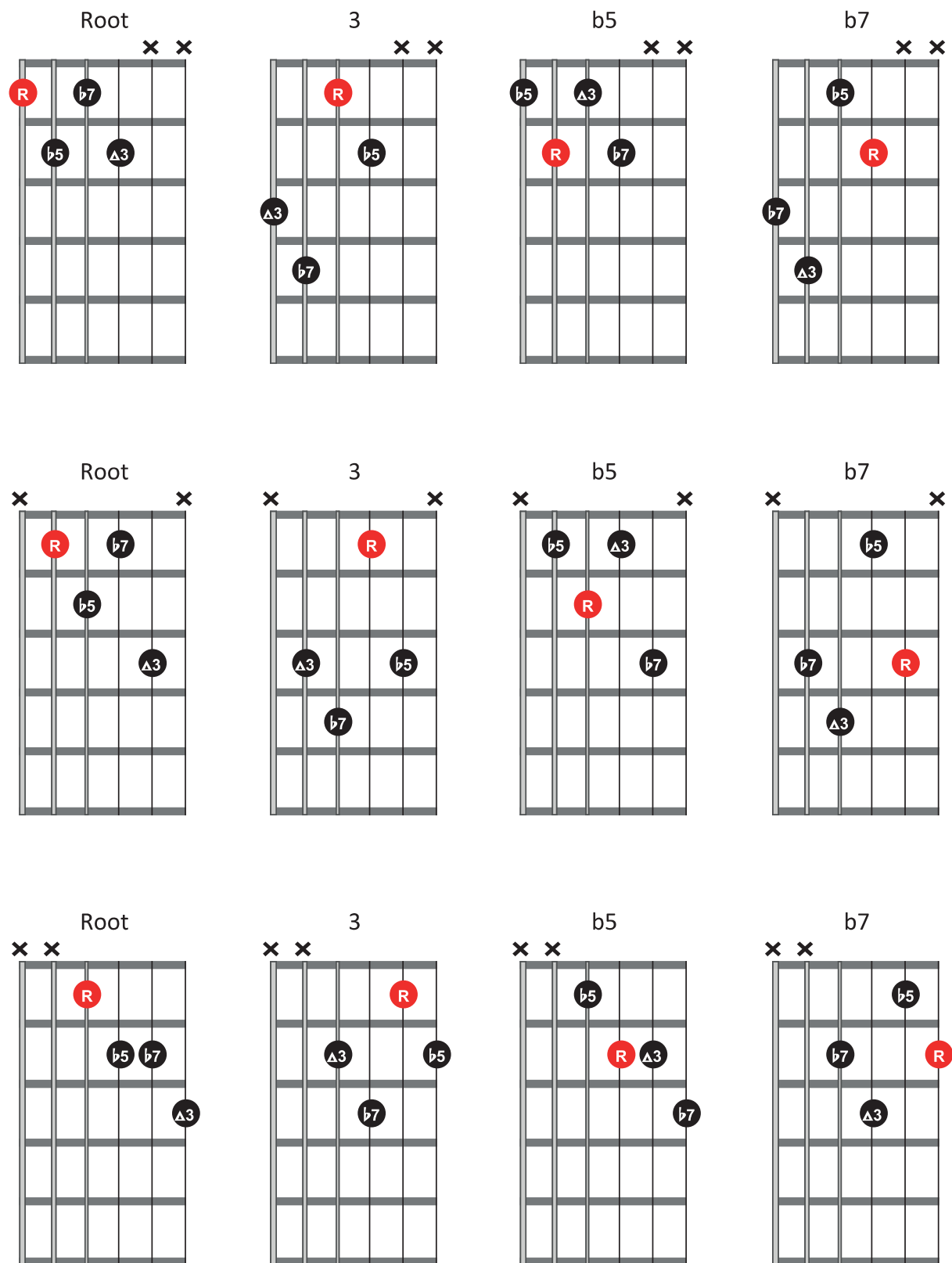
Aug<sup>7</sup>

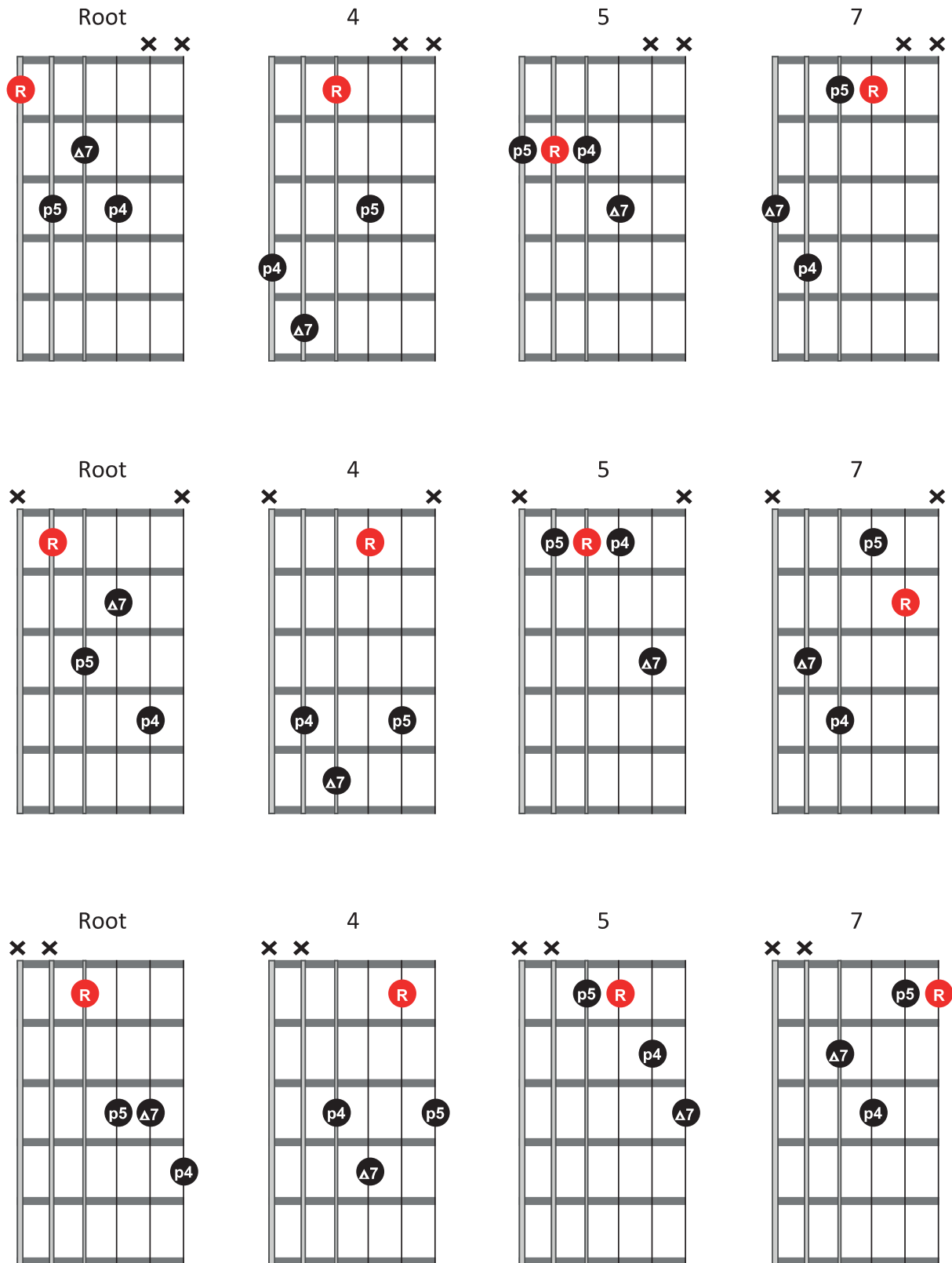


# Maj<sup>7b5</sup>

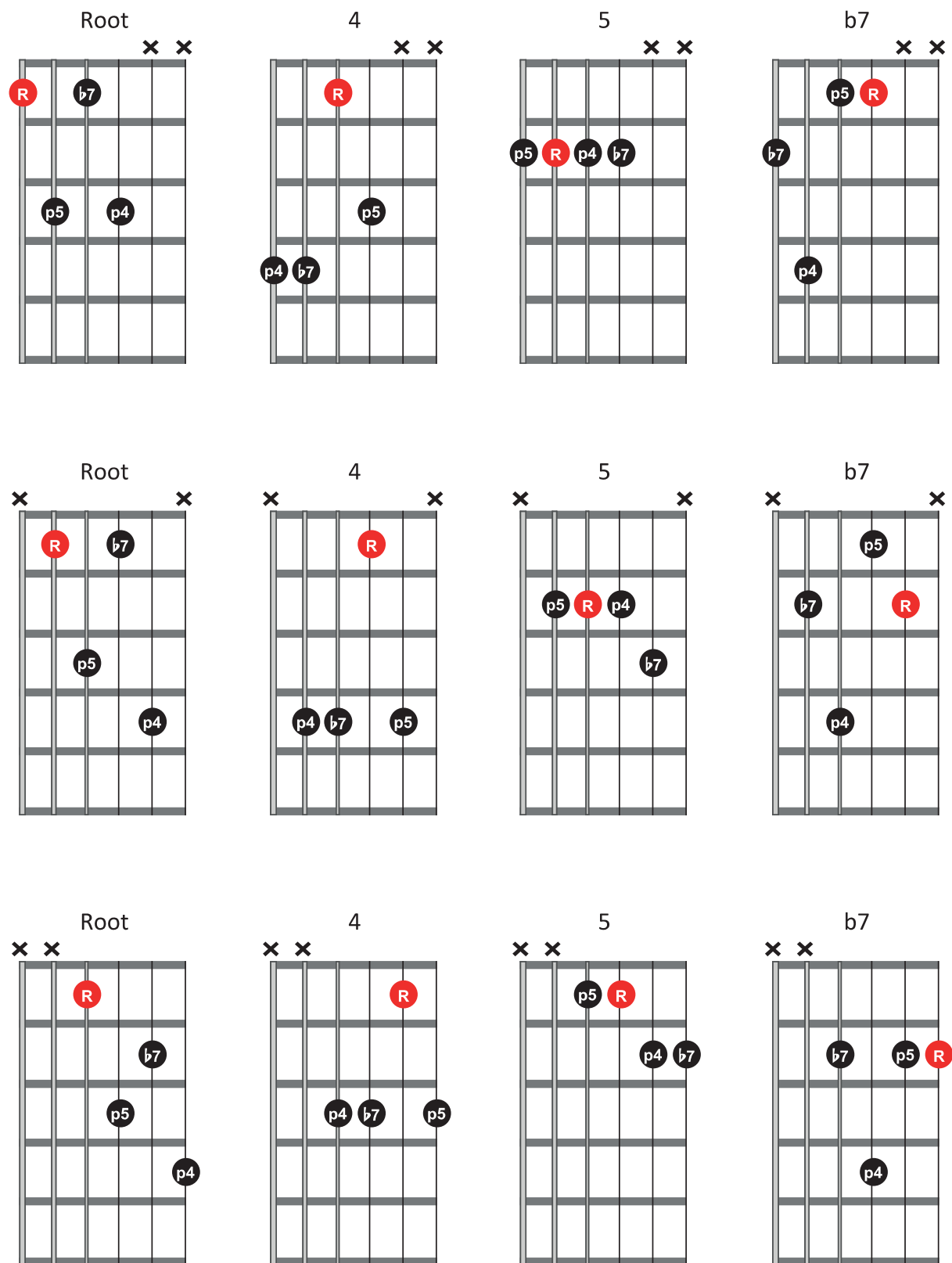


Dom<sup>7b5</sup>

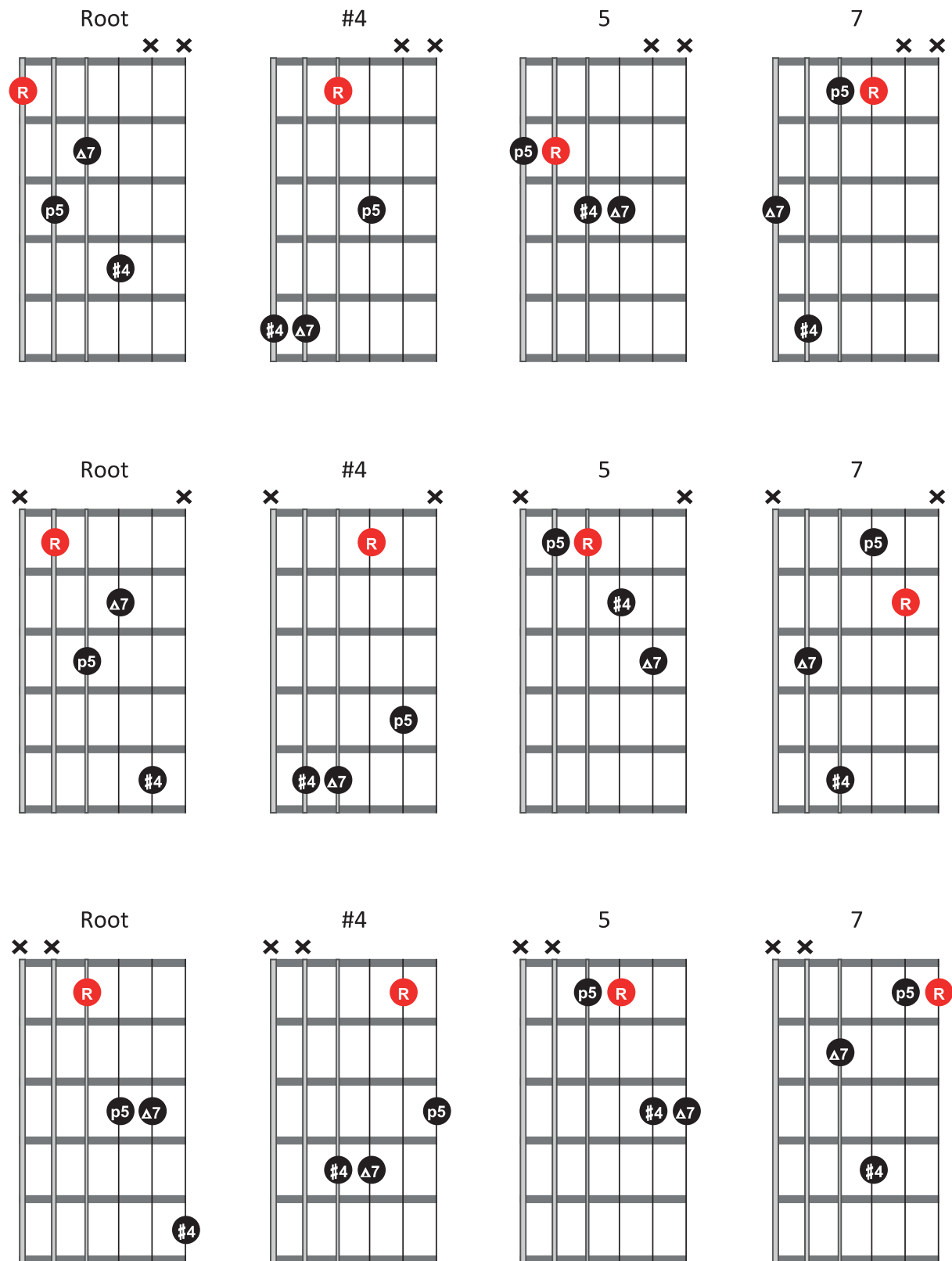




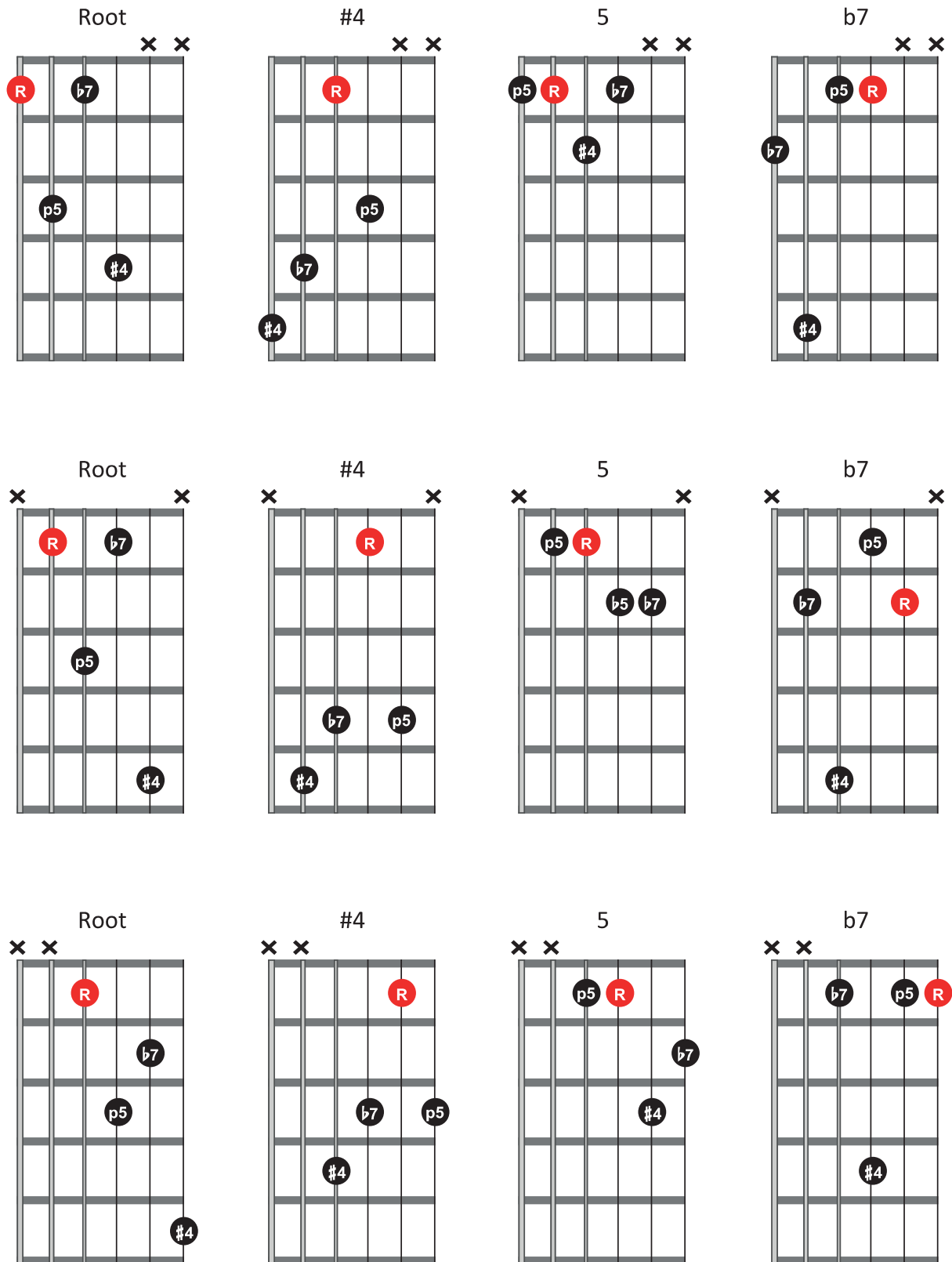
# Dom<sup>7sus4</sup>



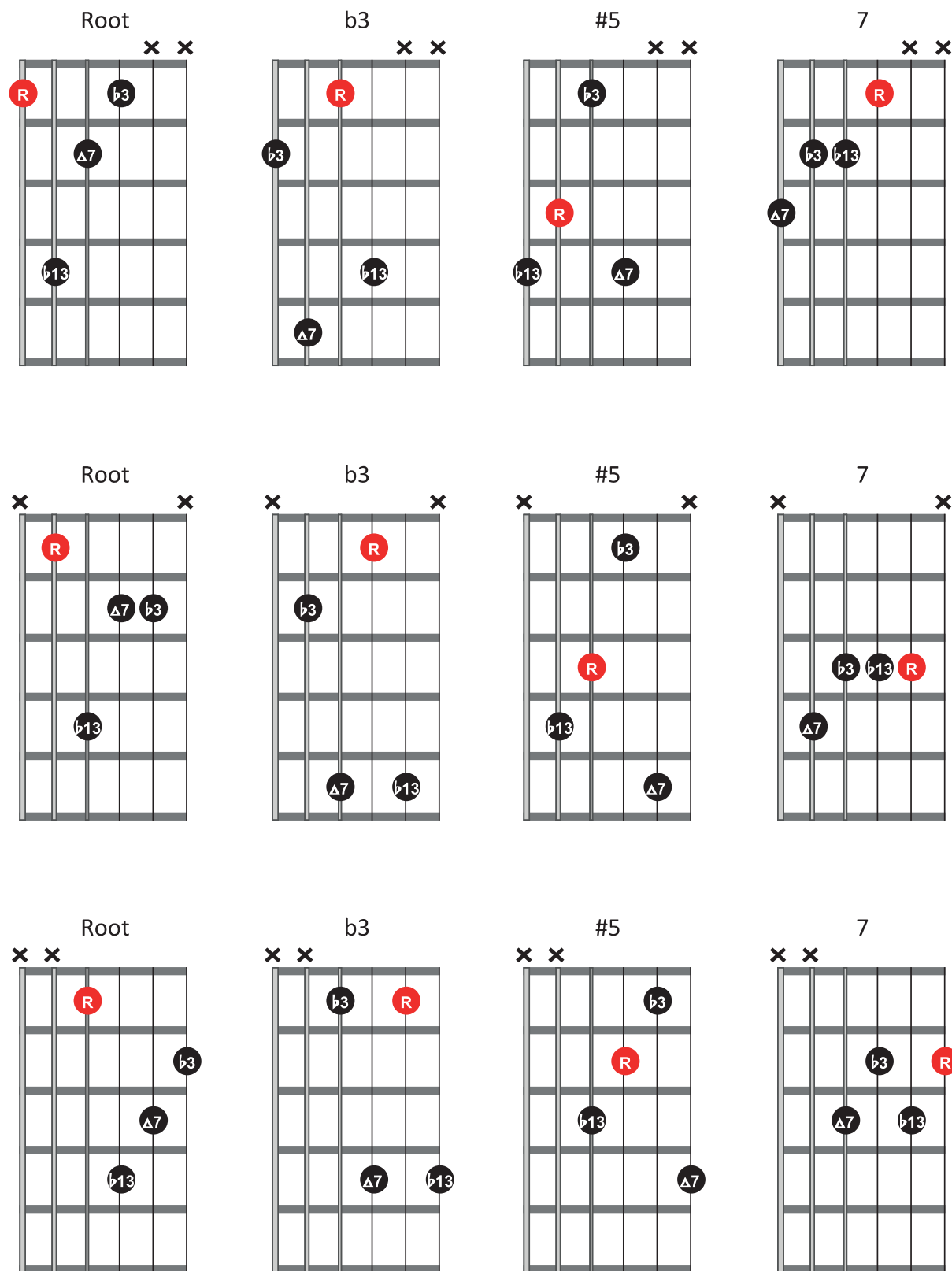
# *Lydian*<sup>maj7</sup>



# Lydian<sup>Dom7</sup>

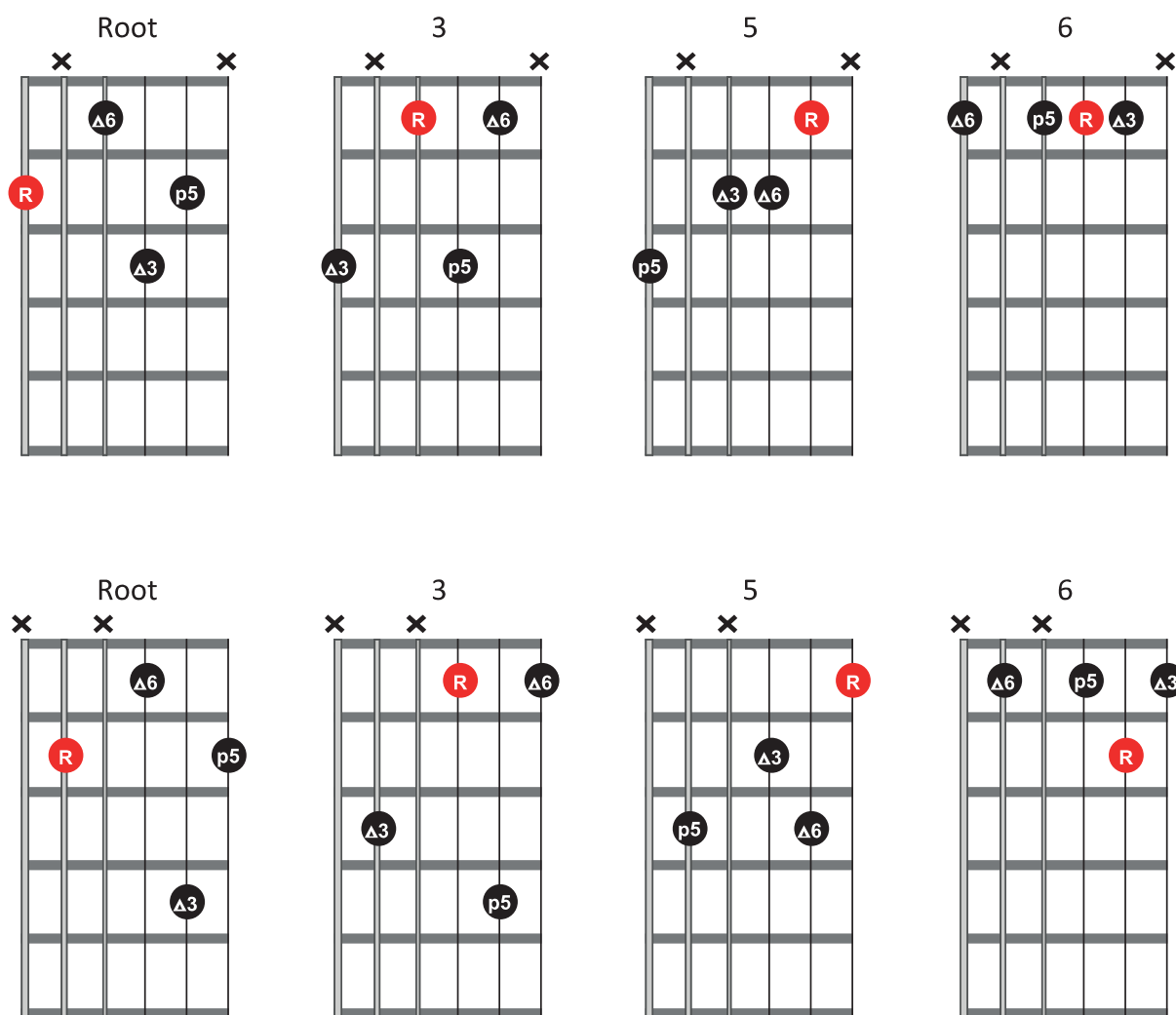




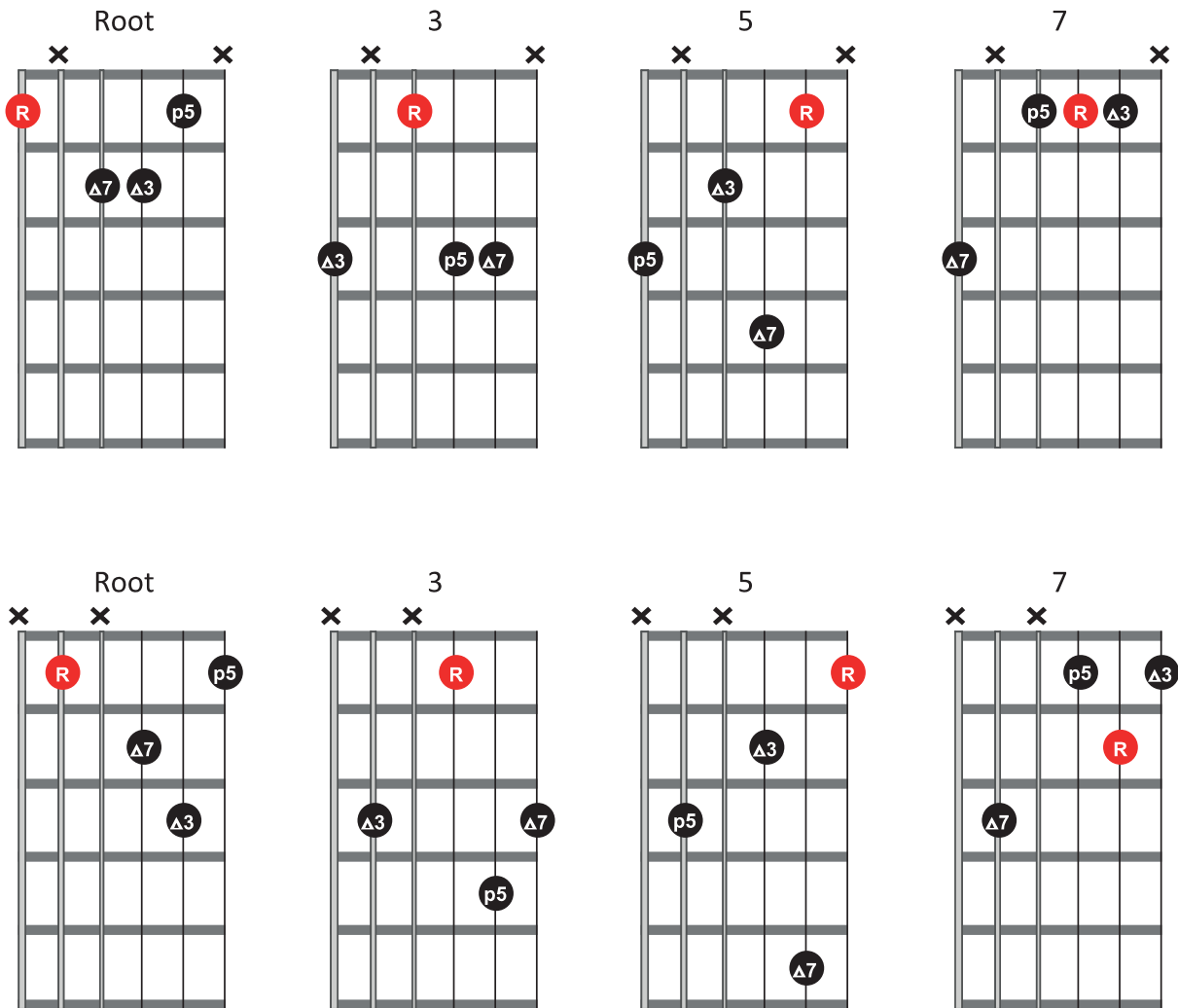


## Drop 3

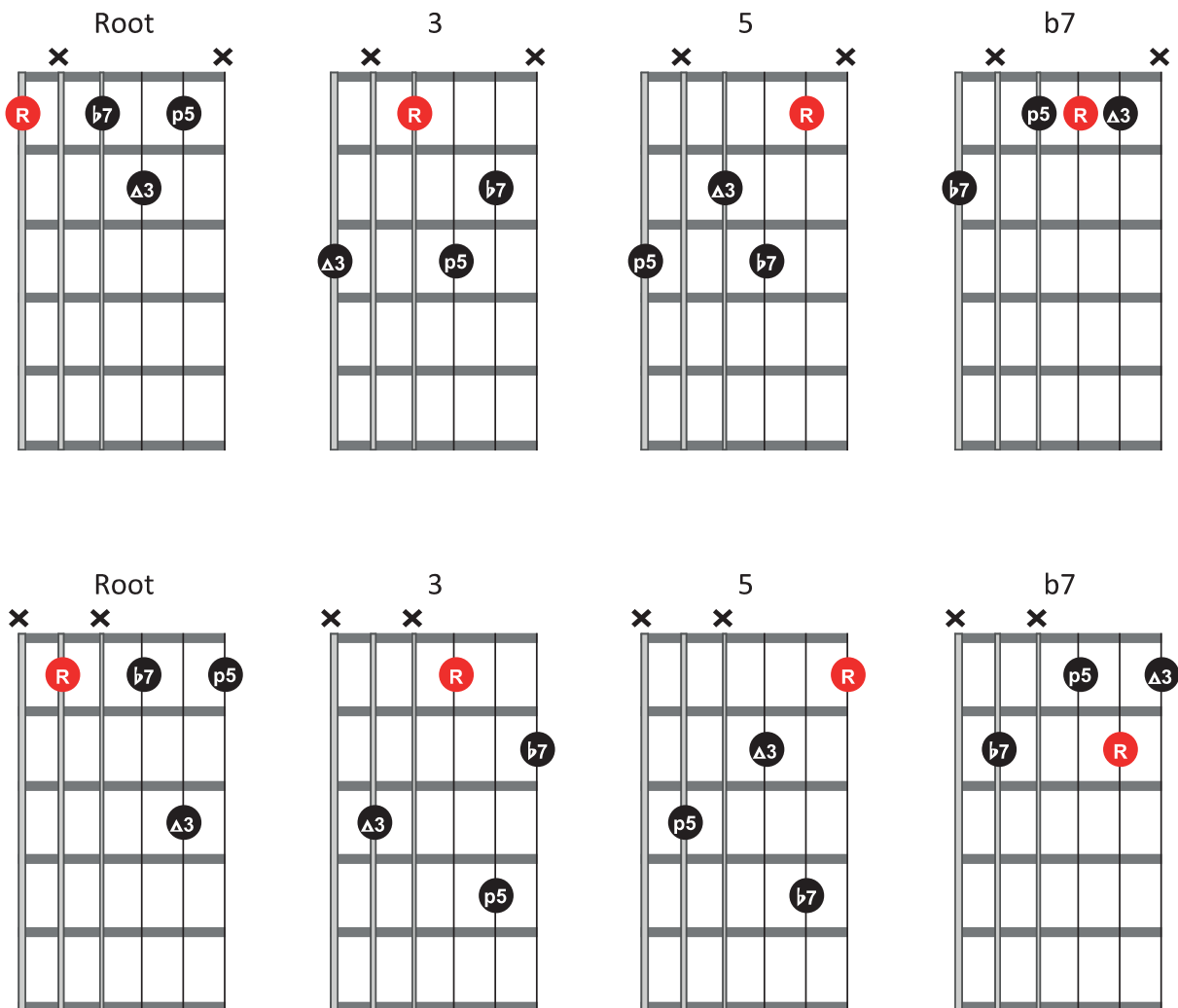
*Maj*<sup>6</sup>



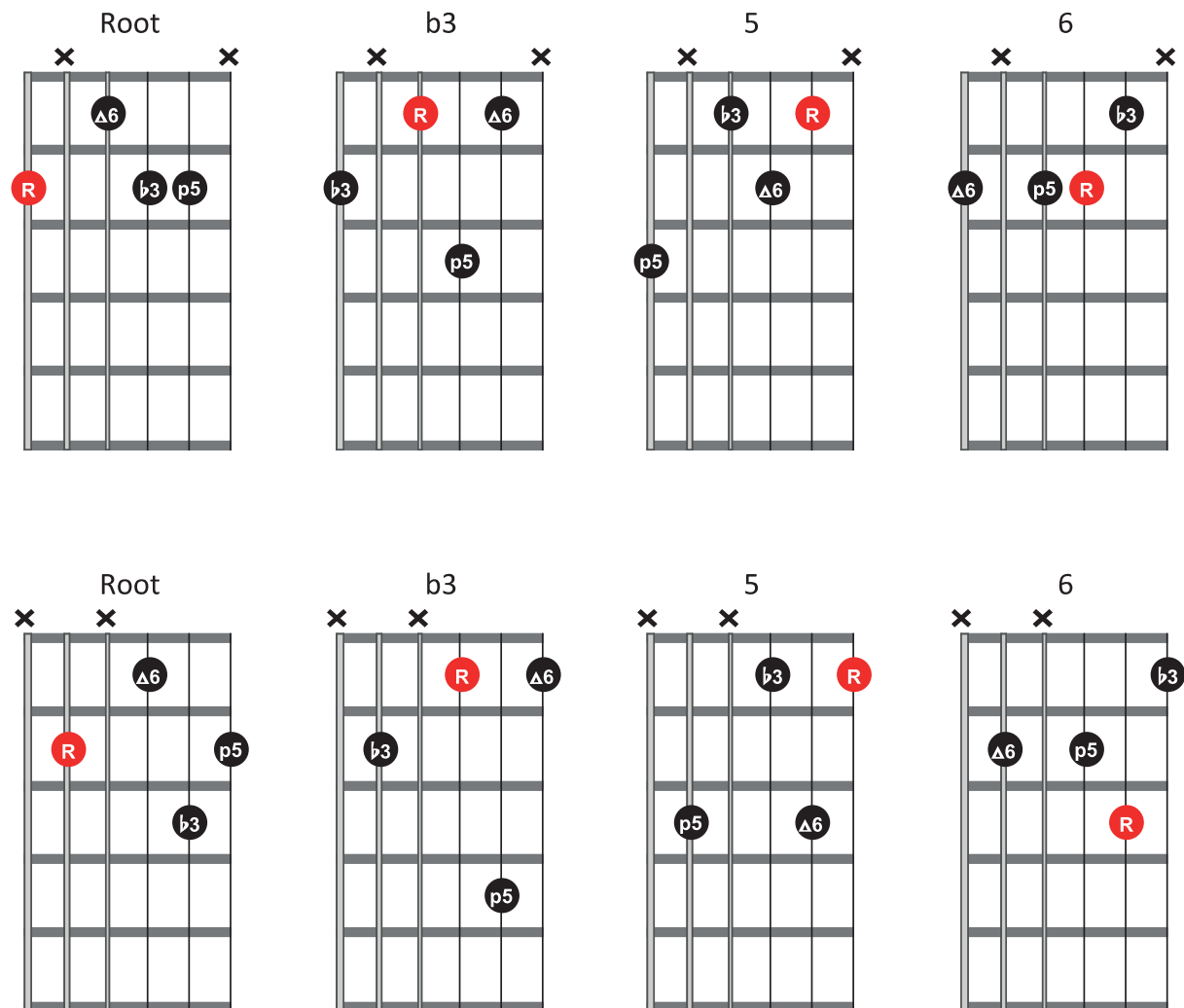
*Maj<sup>7</sup>*



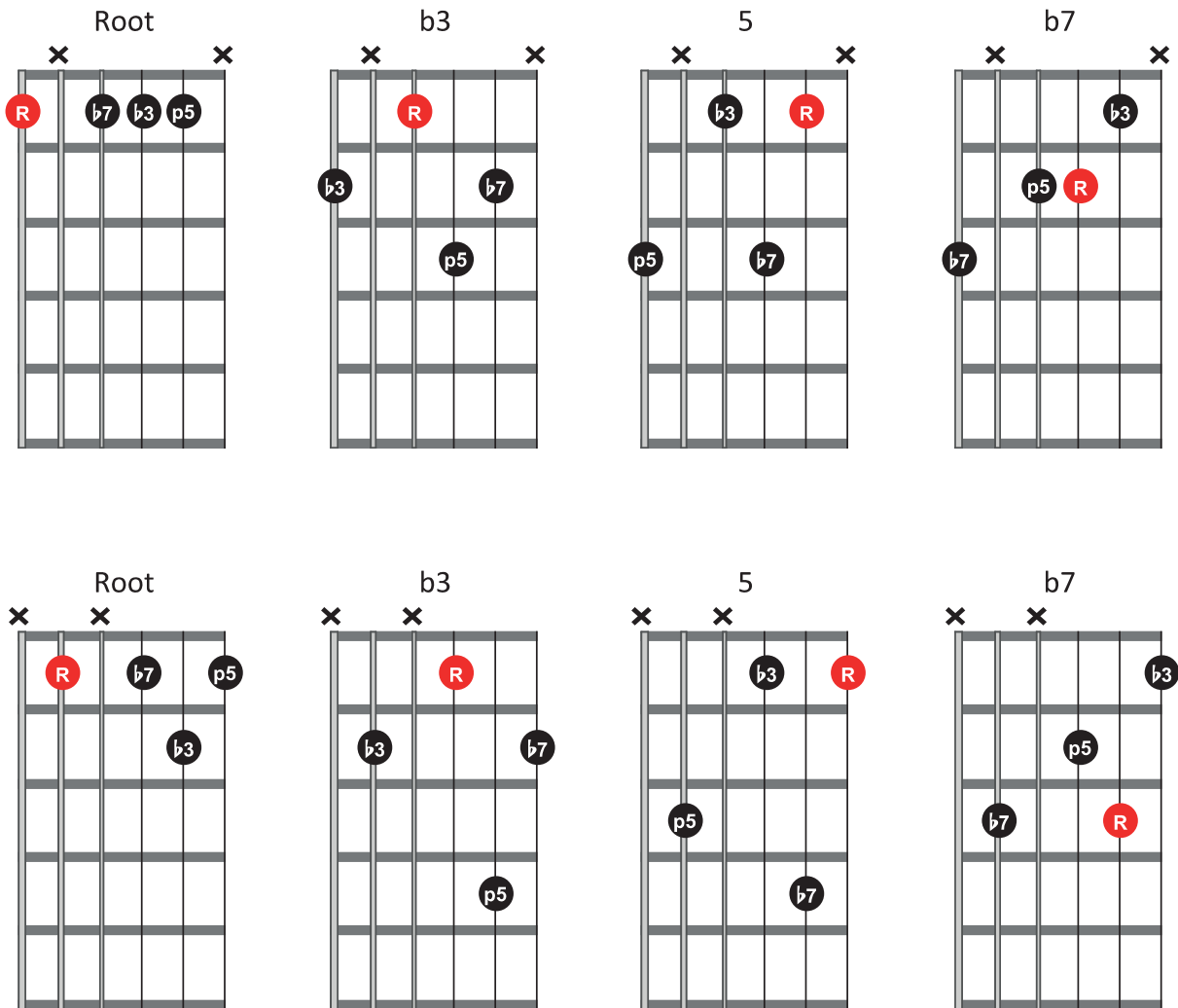
# Dom<sup>7</sup>

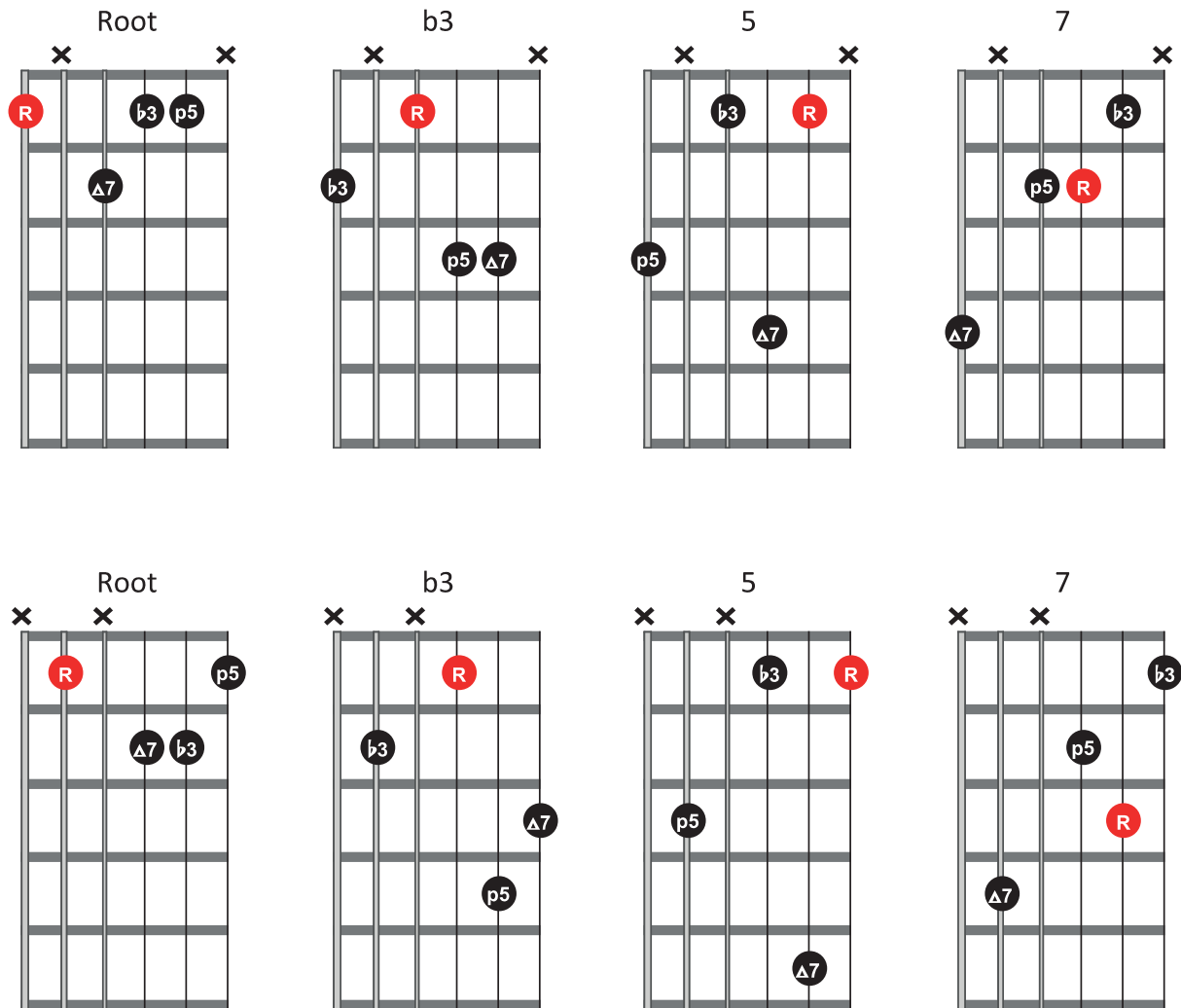


*Min*<sup>6</sup>

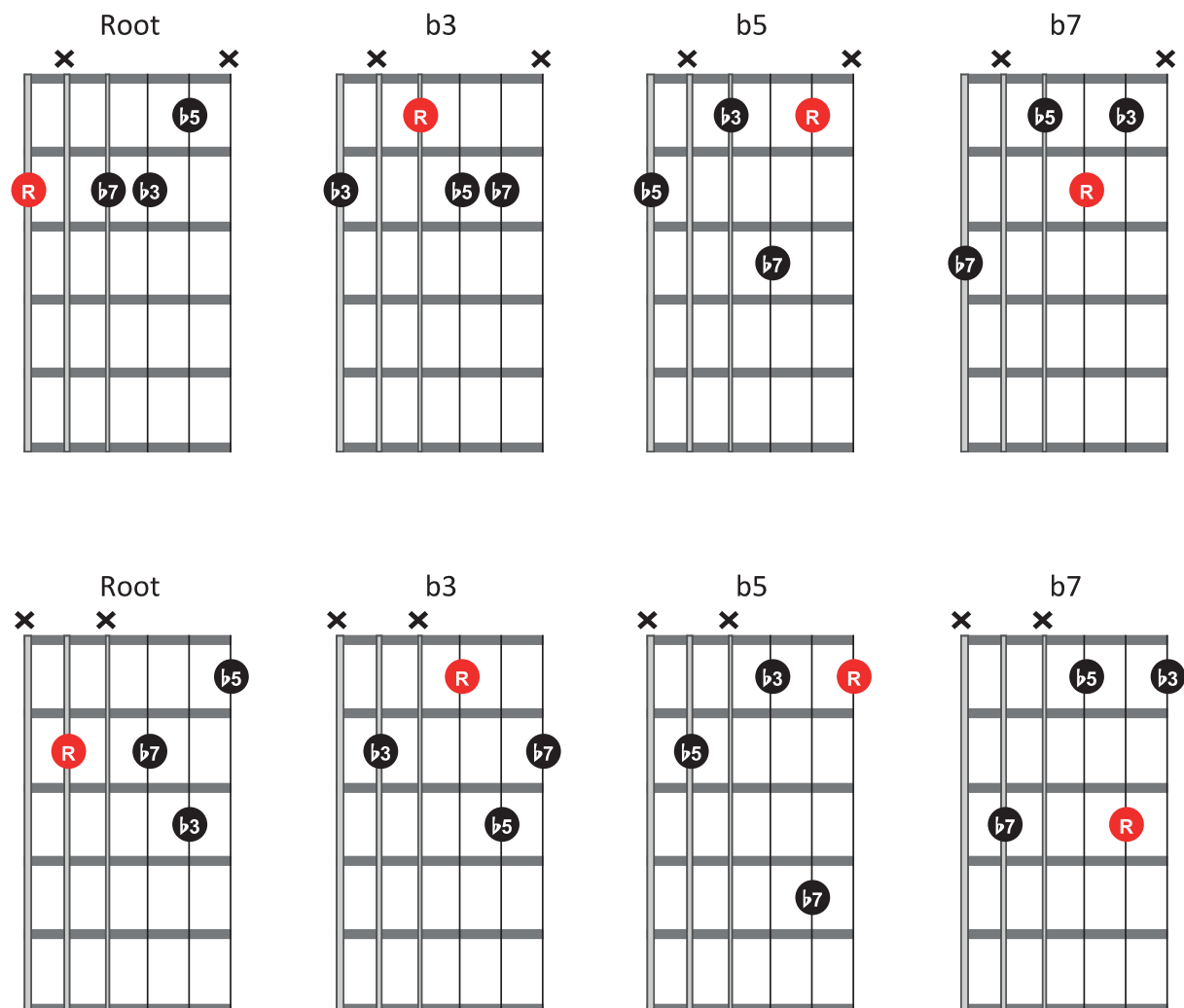


*Min*<sup>7</sup>



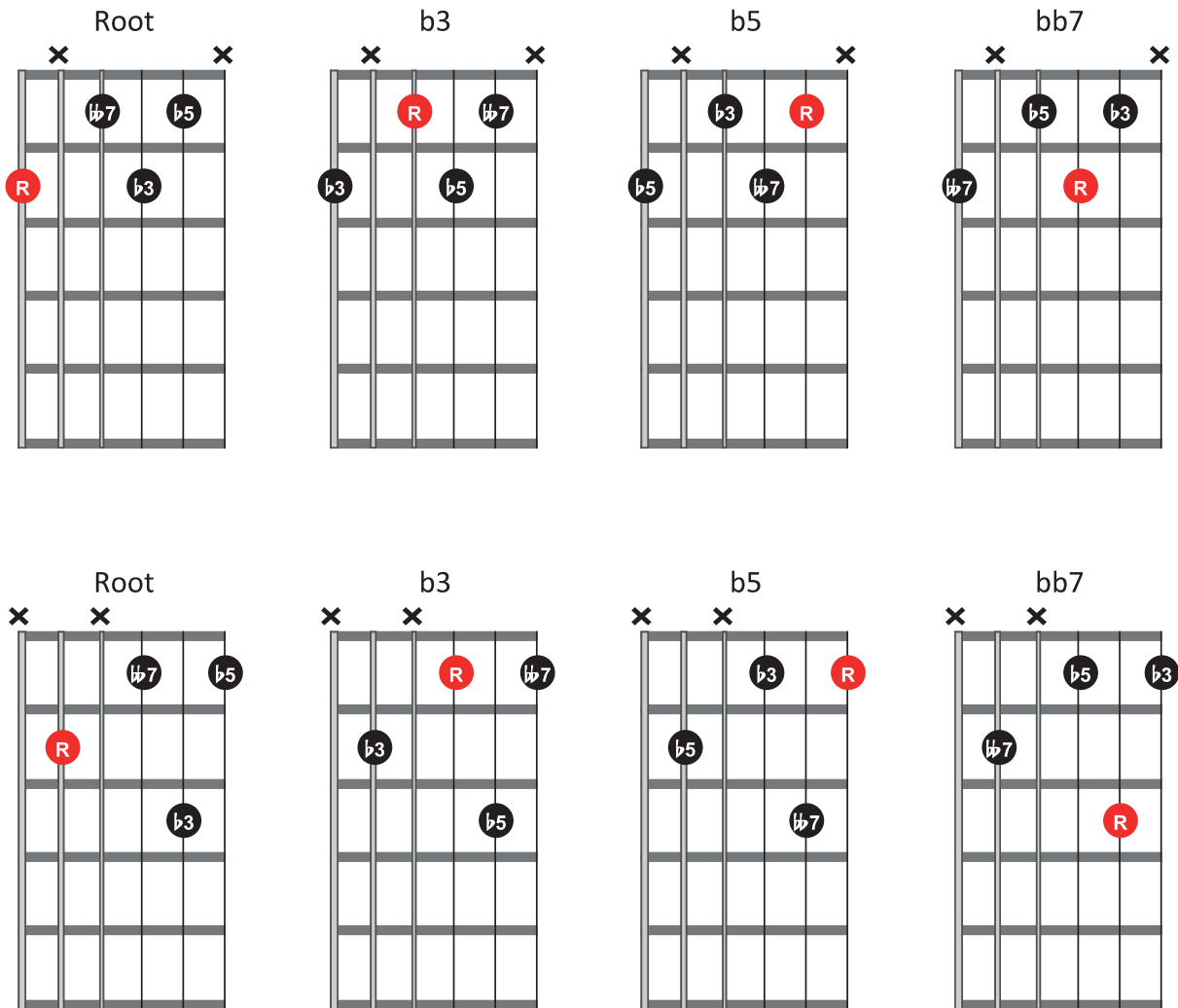


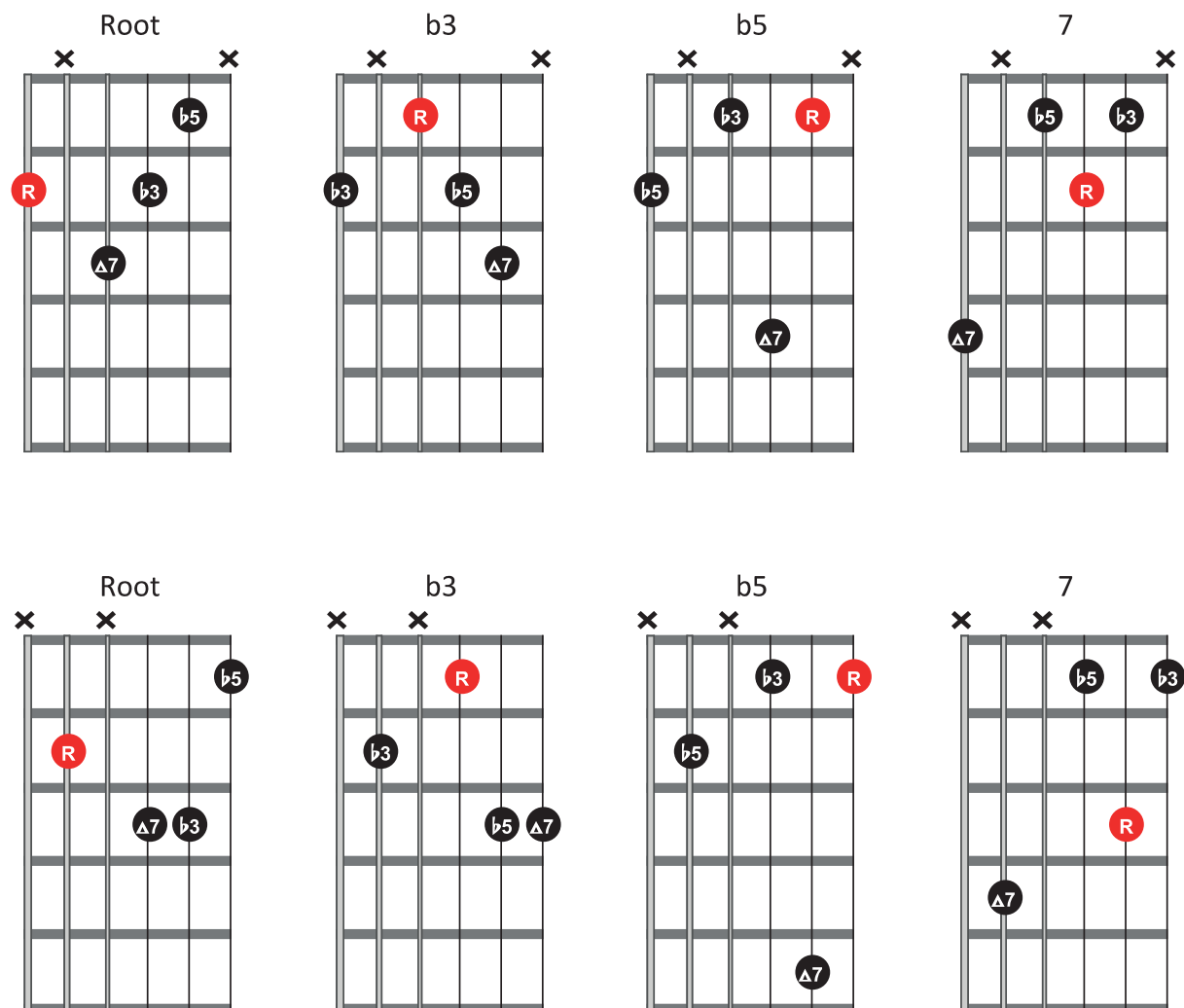
*Min*<sup>7b5</sup>



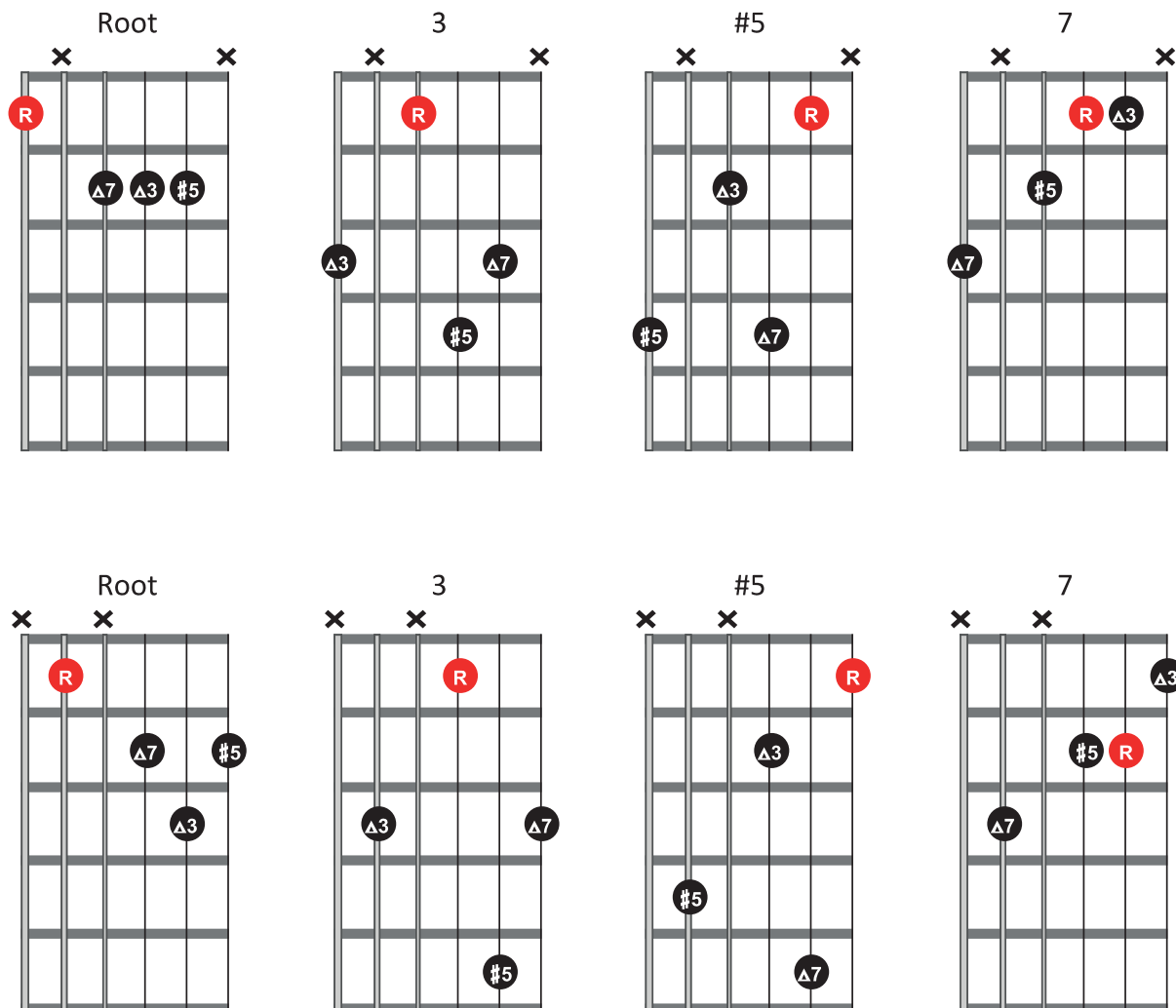


*Dim<sup>7</sup>*

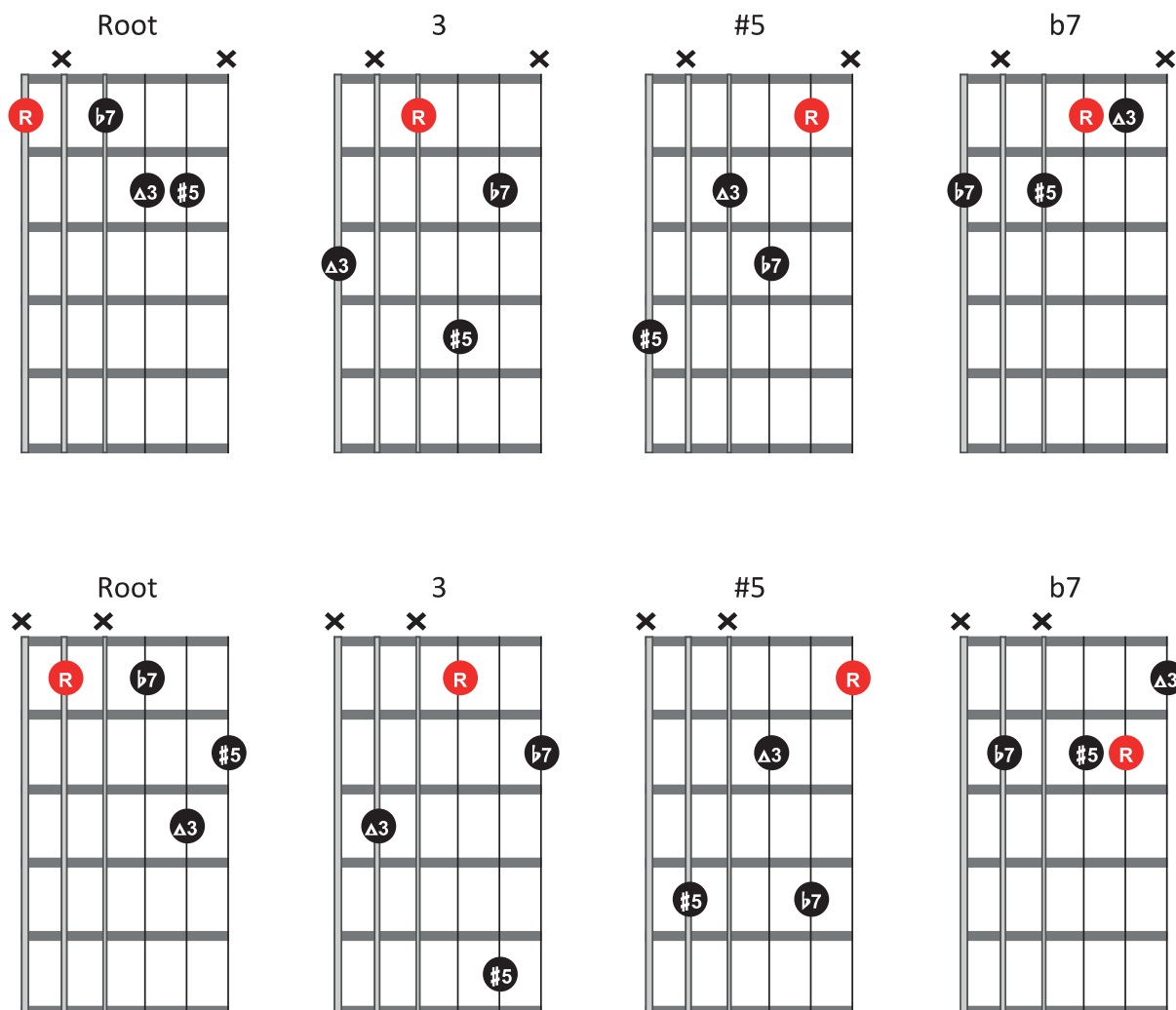




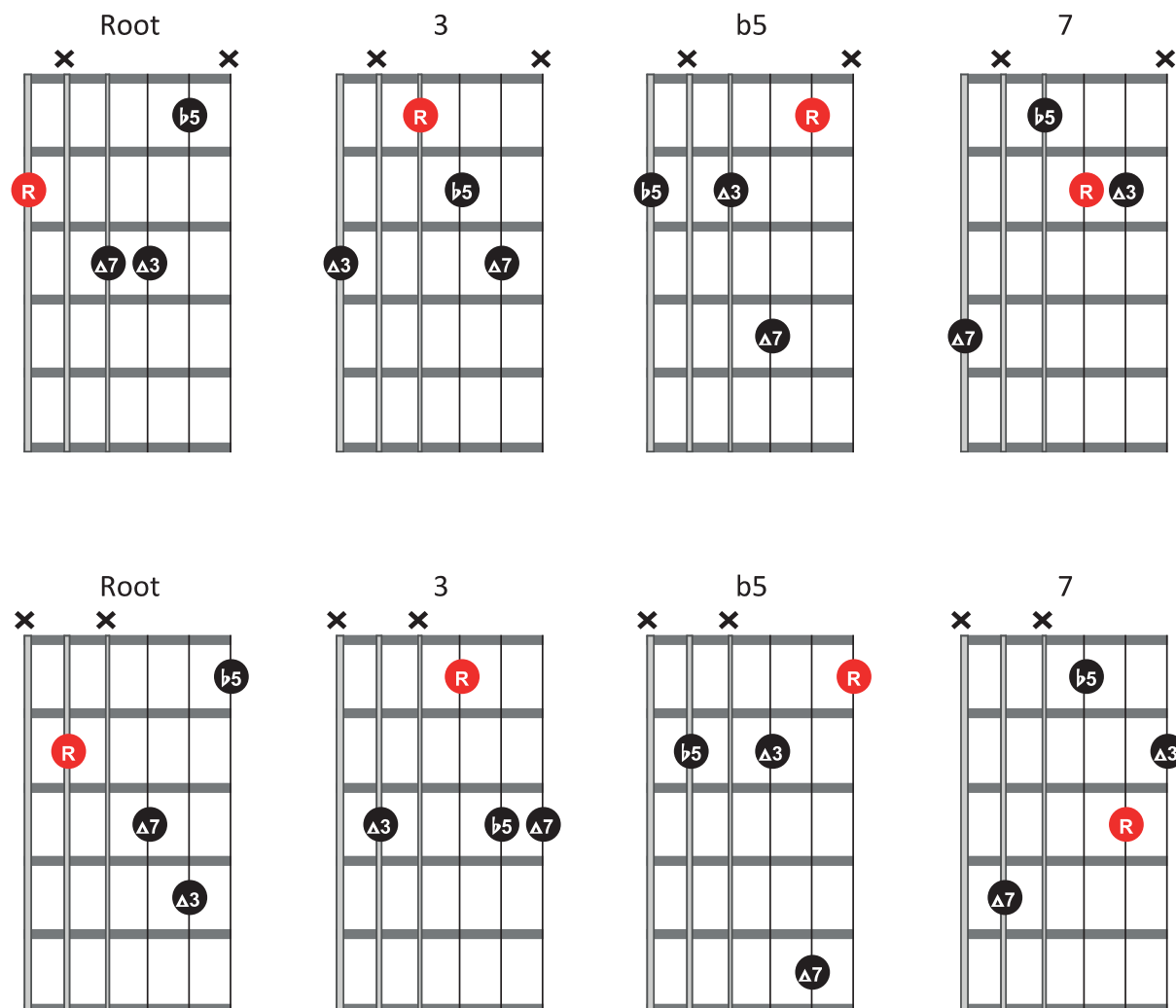
# Aug<sup>maj7</sup>



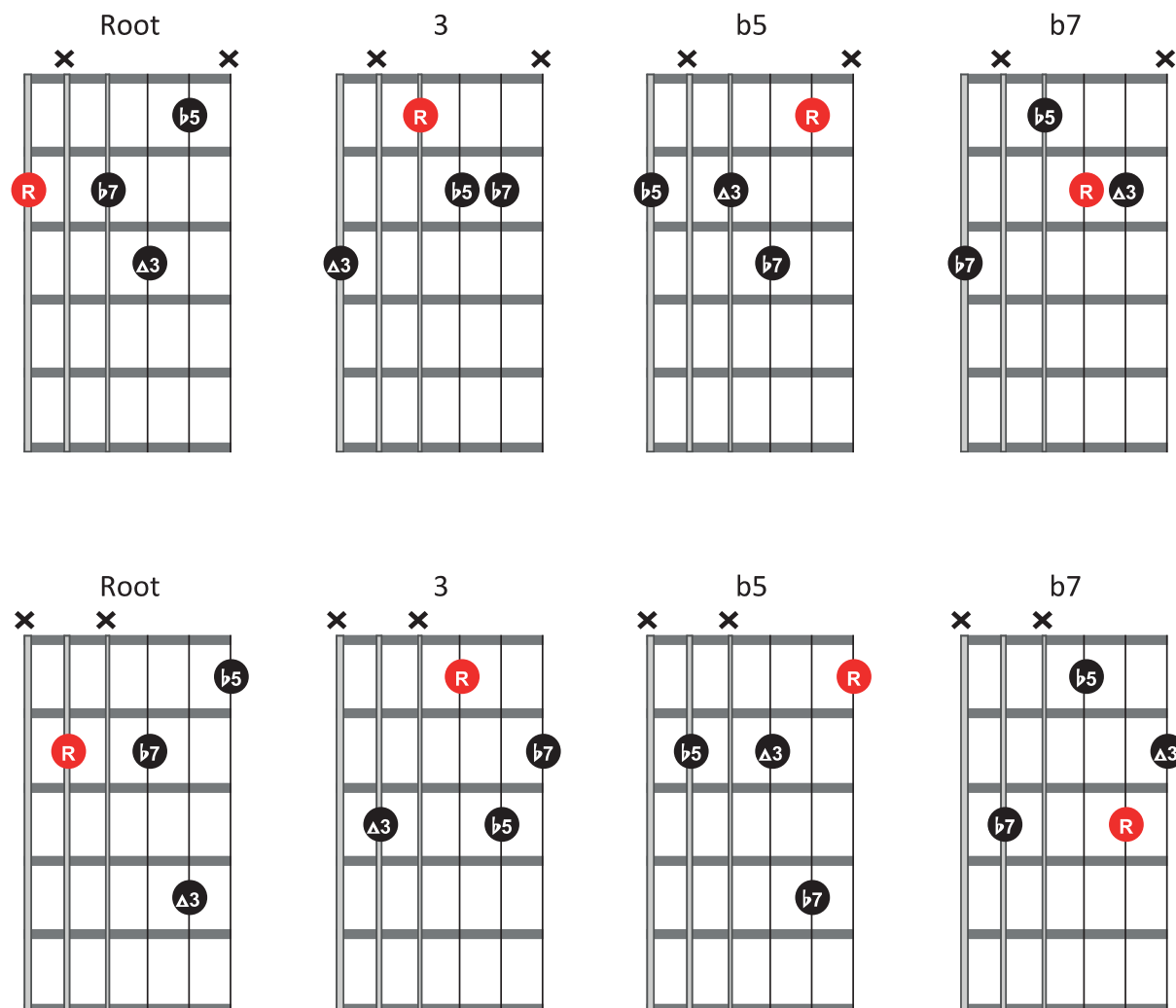
*Aug<sup>7</sup>*

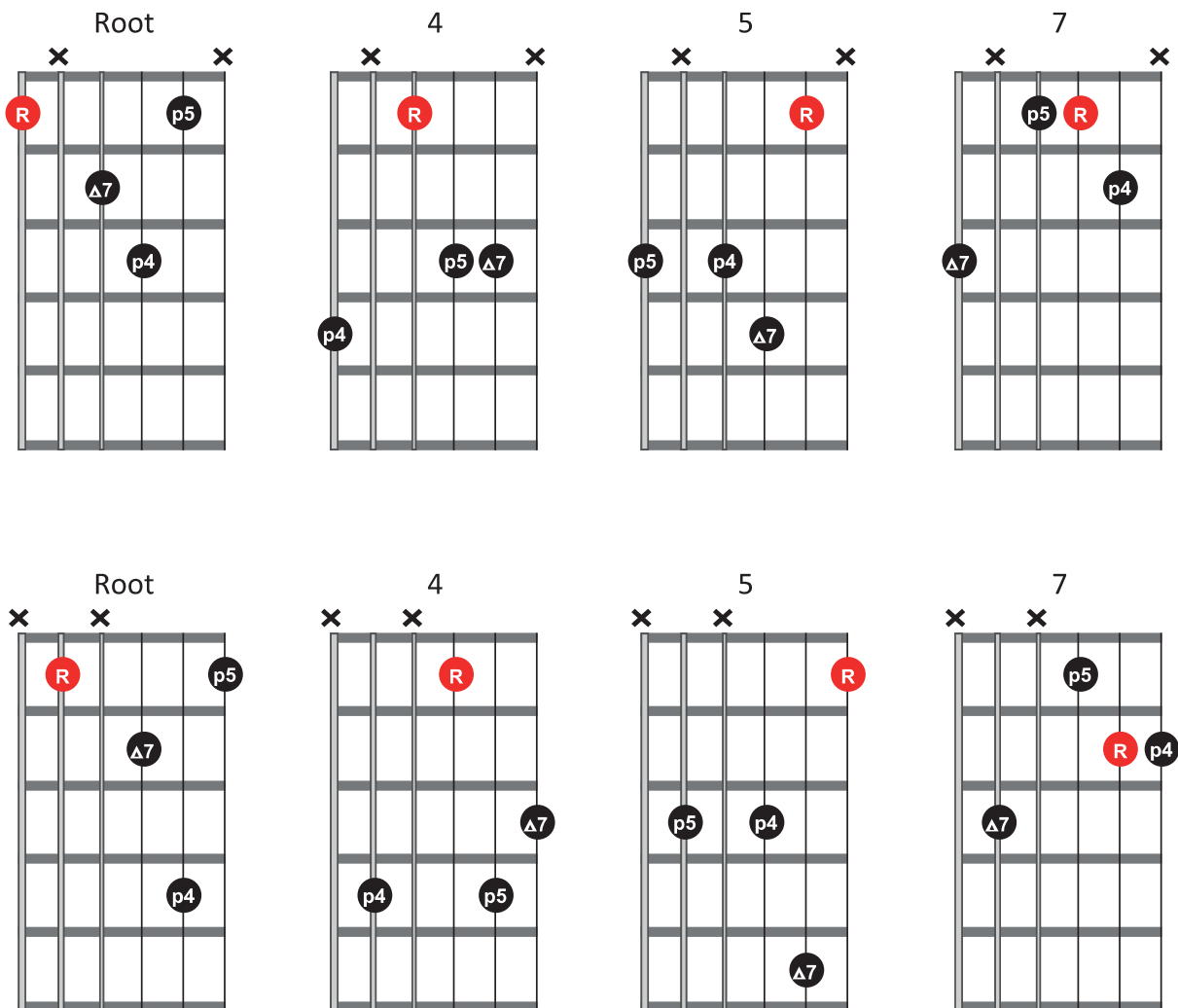


*Maj*<sup>7b5</sup>

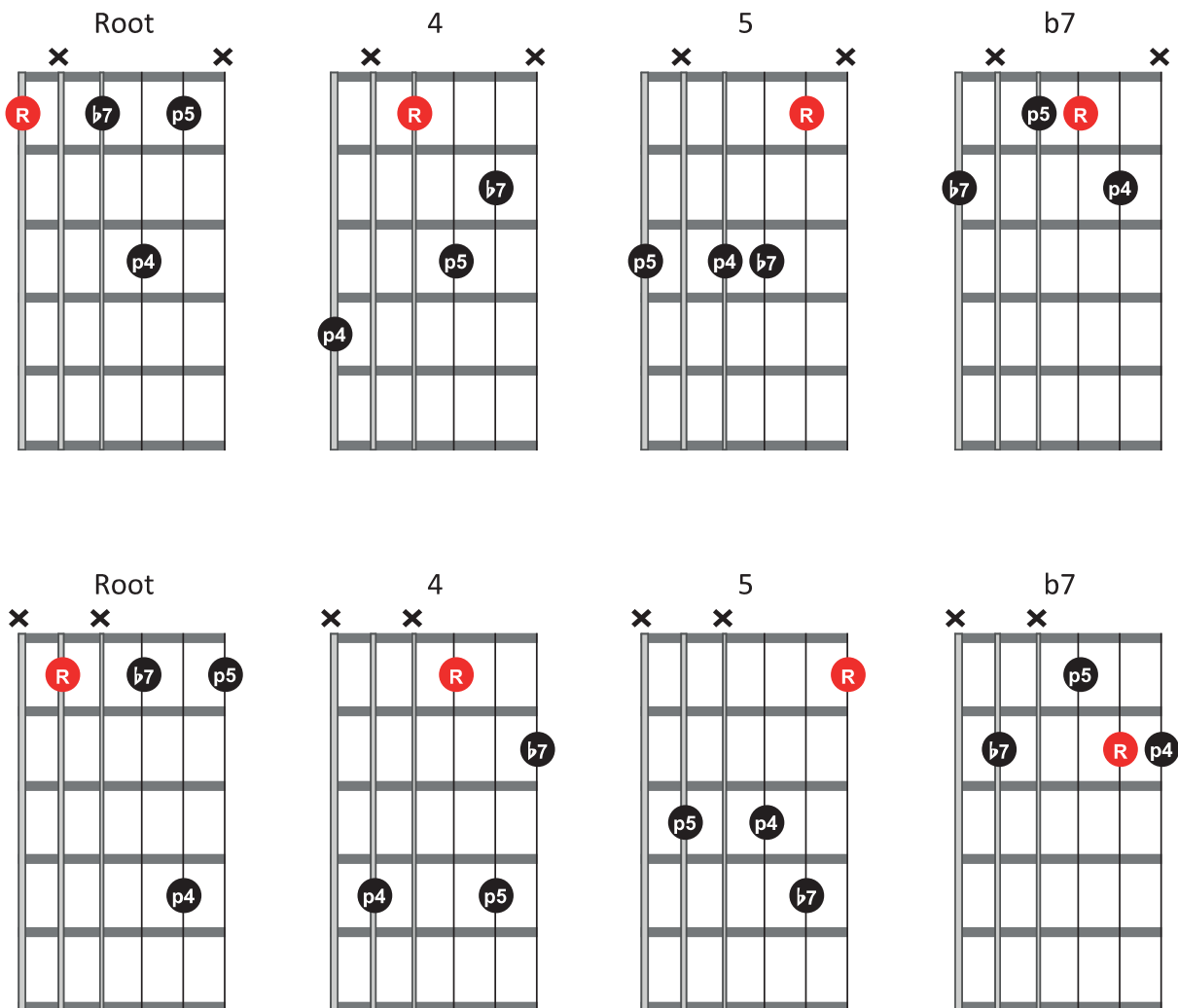


# Dom<sup>7b5</sup>



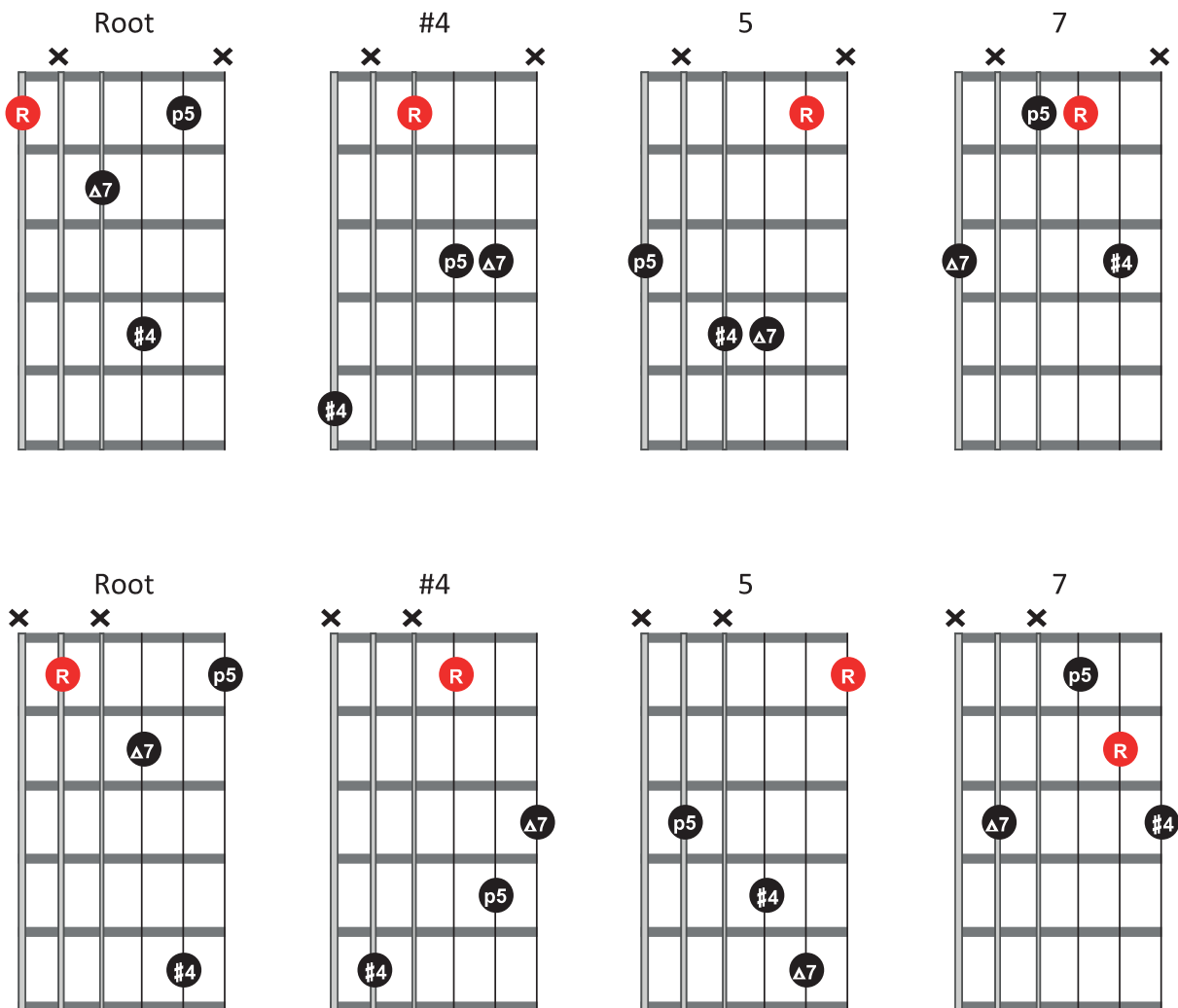


*Dom*<sup>7sus4</sup>

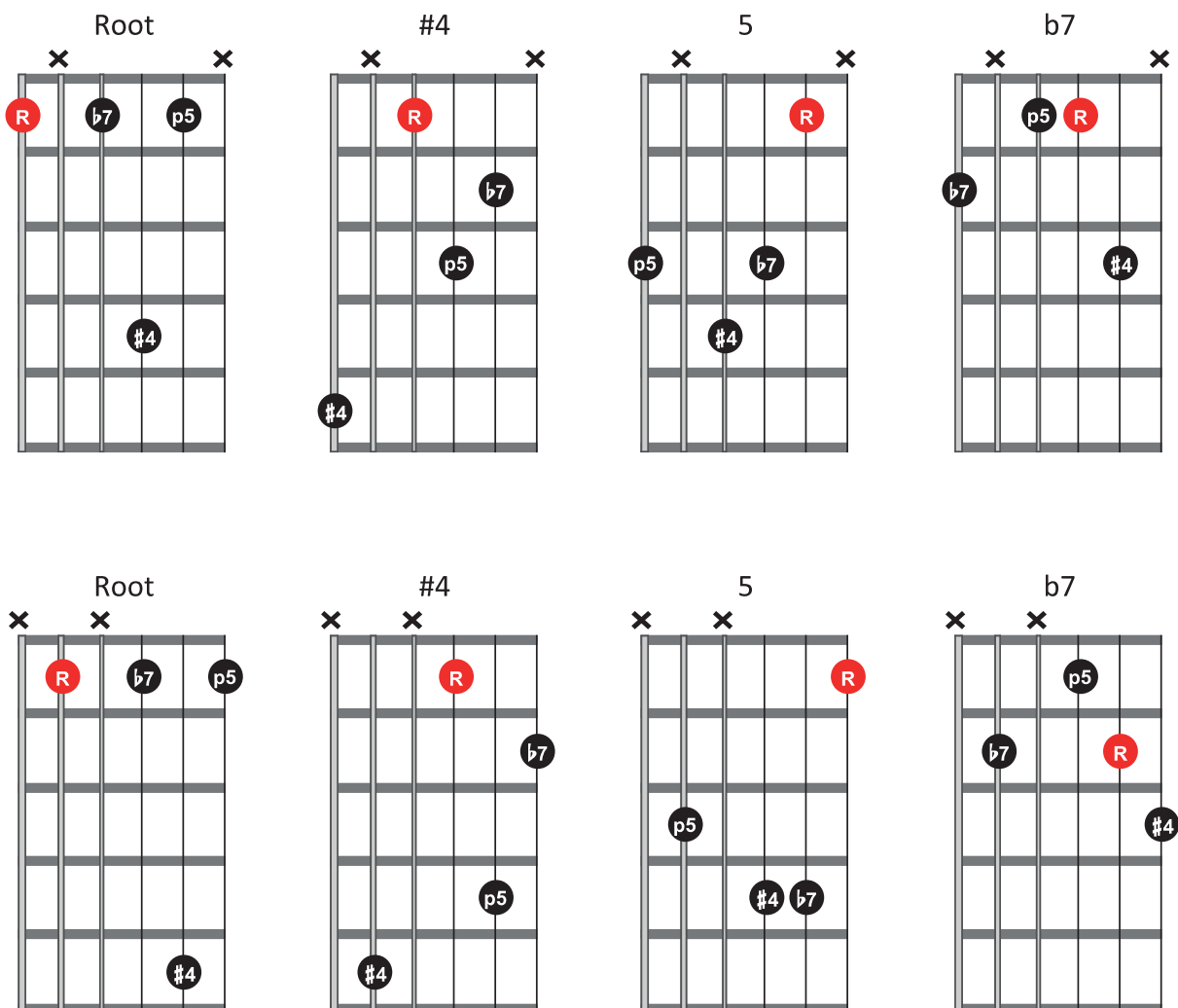


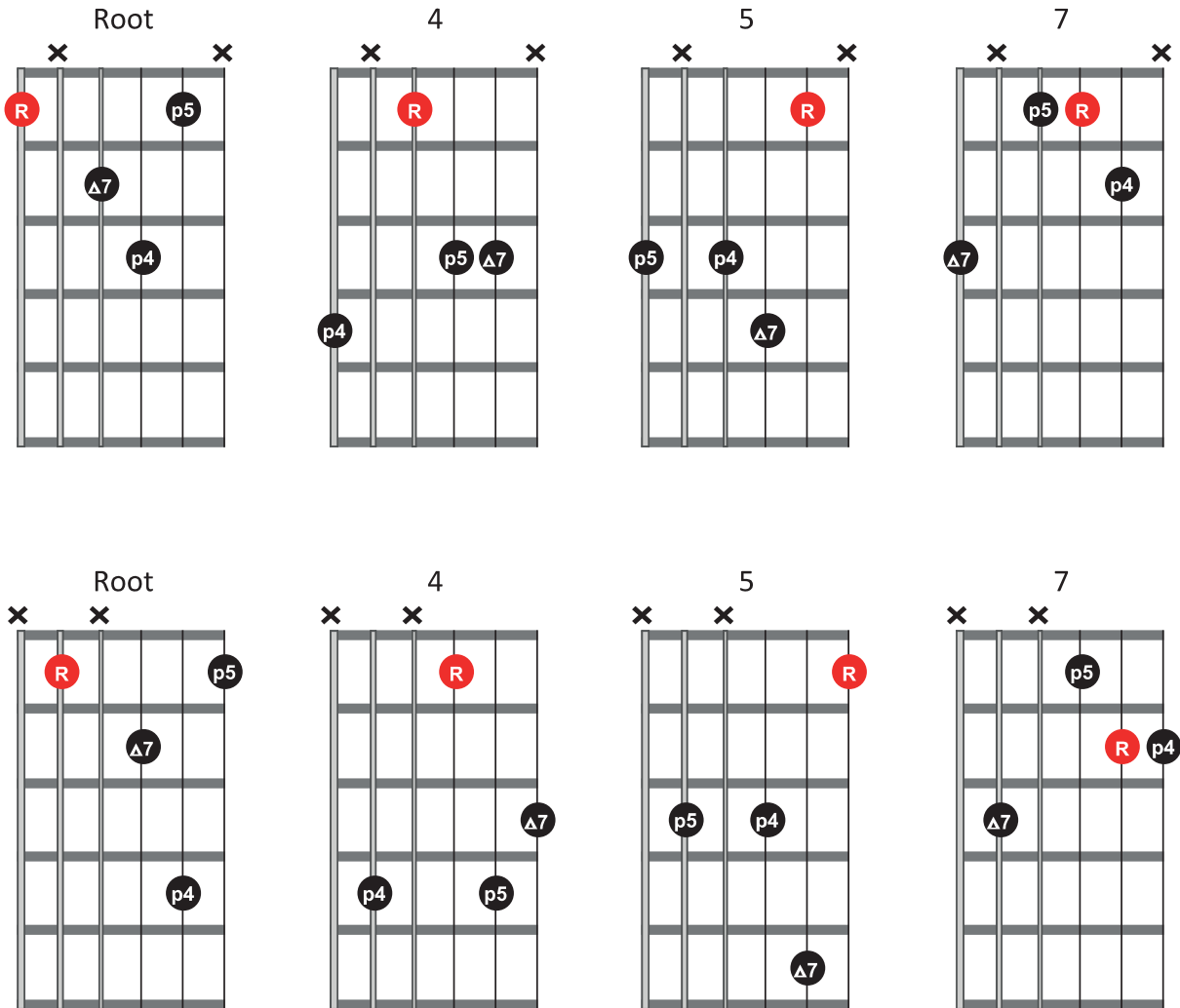


# *Lydian<sup>maj7</sup>*



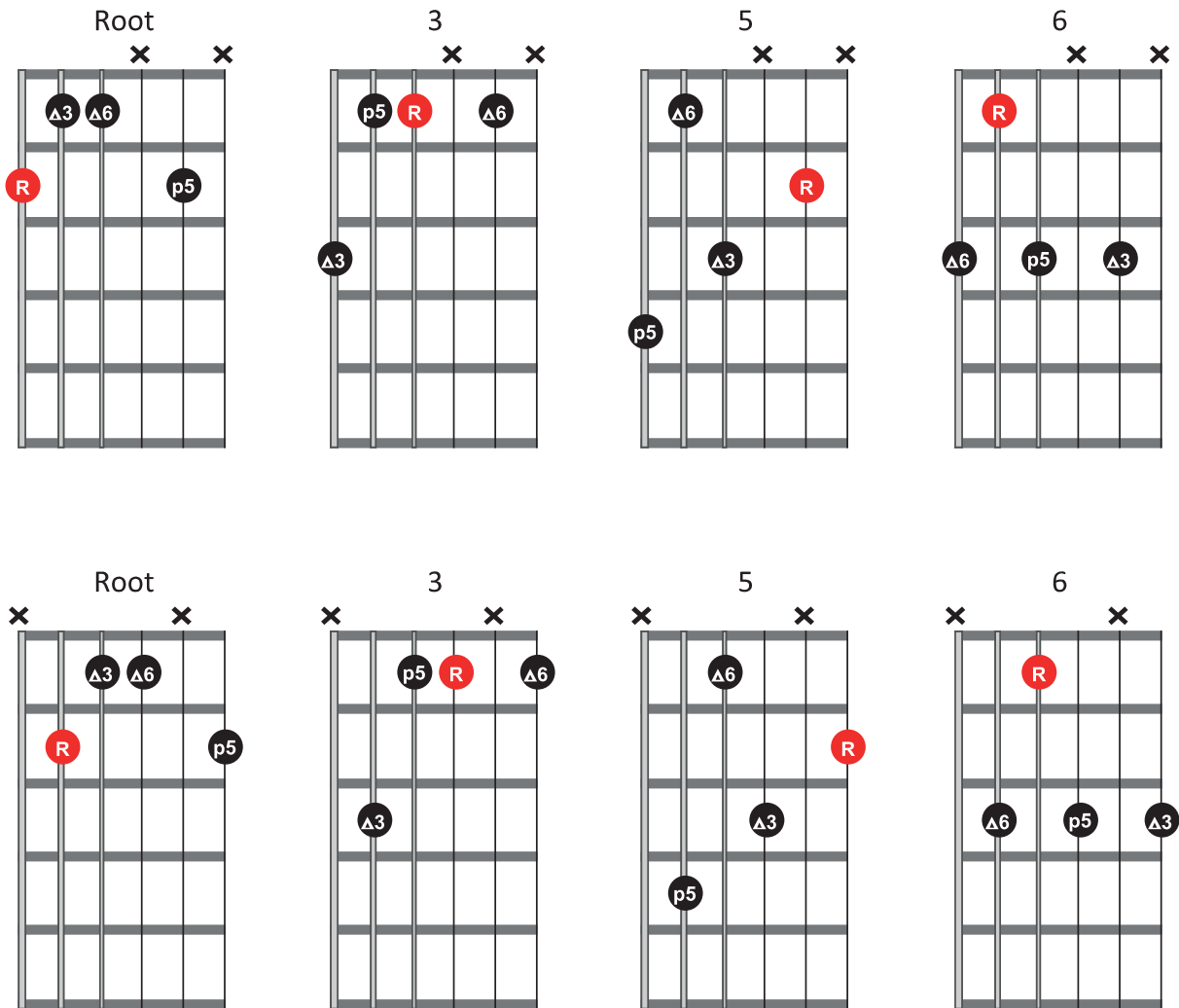
# *Lydian*<sup>Dom7</sup>



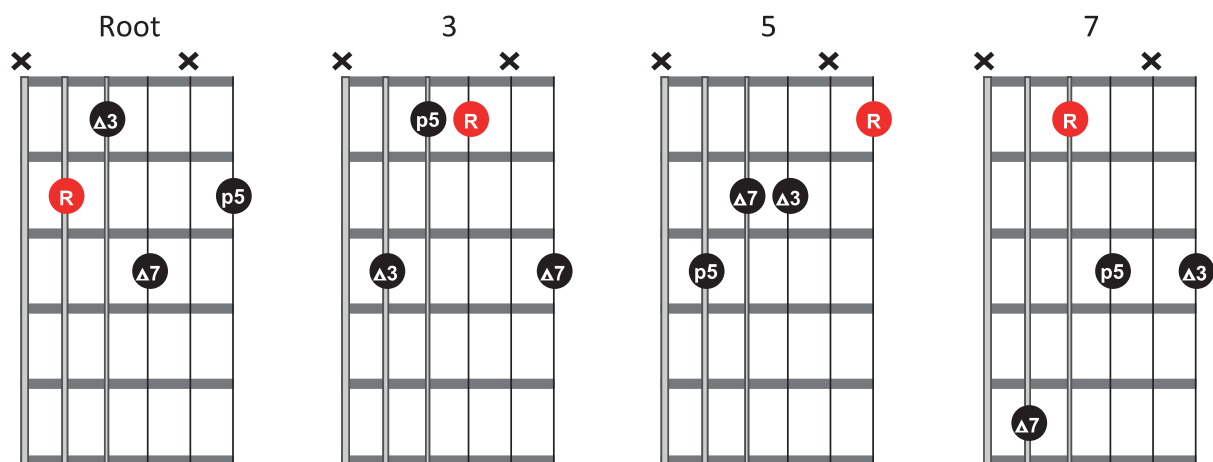
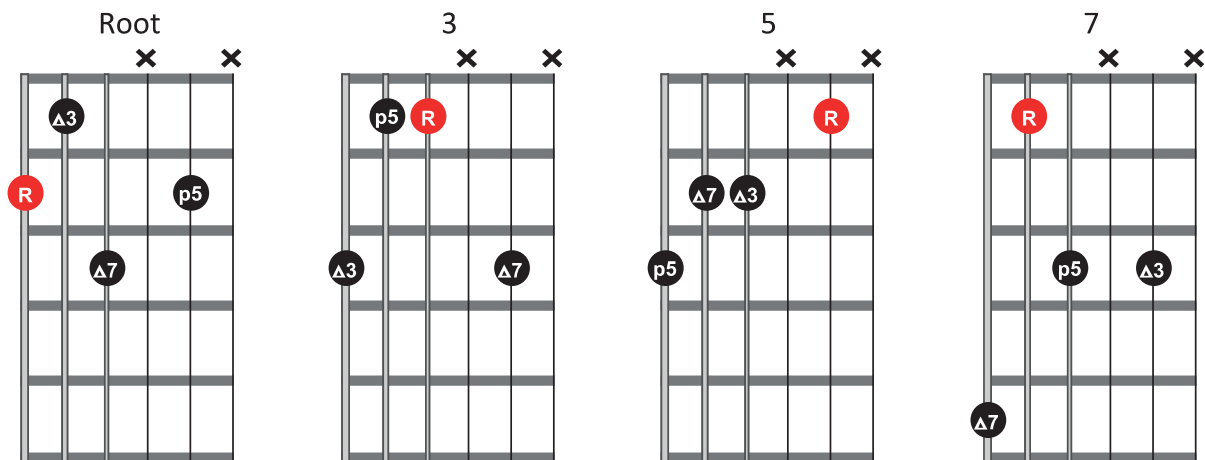


# Drop 2 + 3

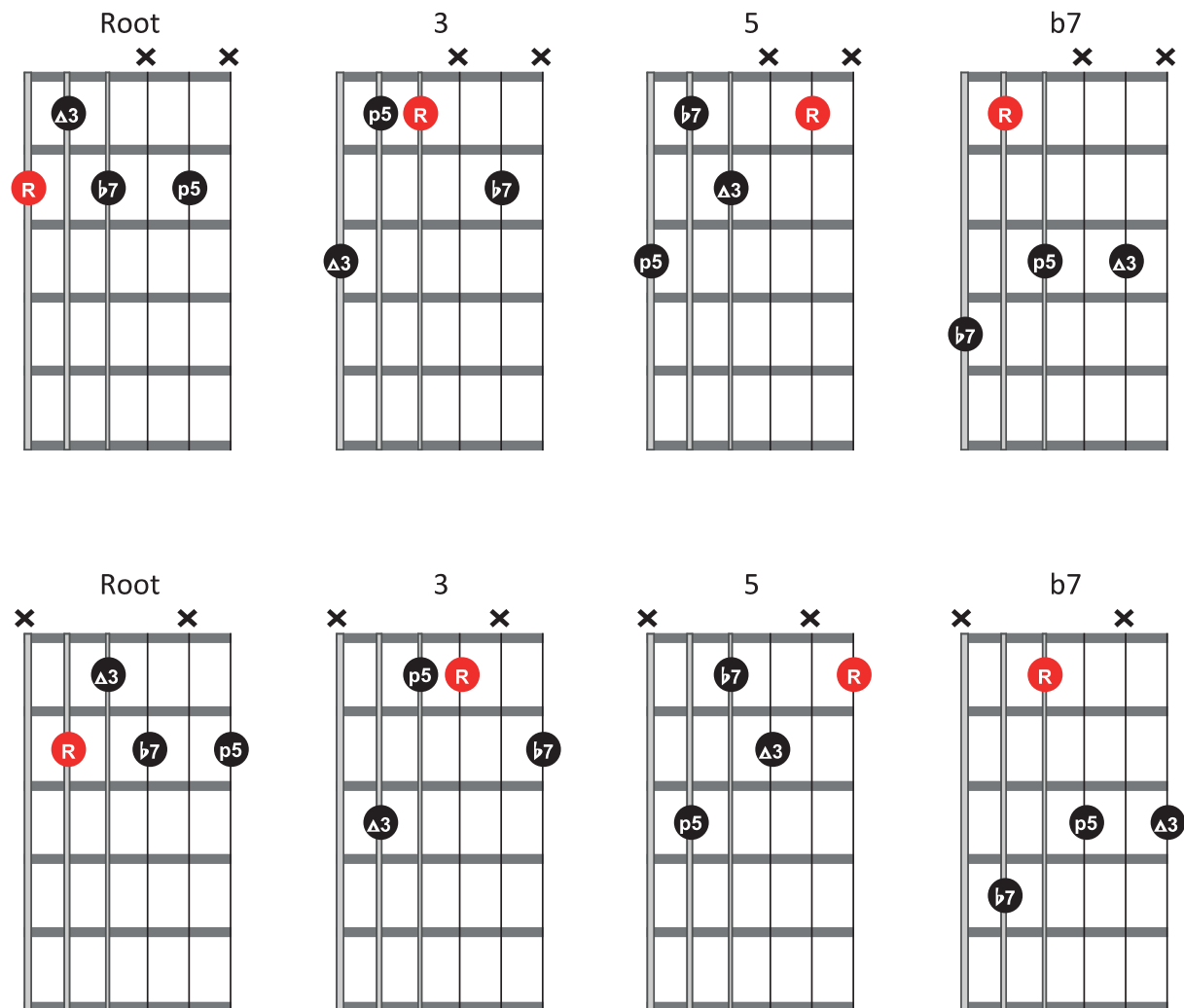
*Maj*<sup>6</sup>



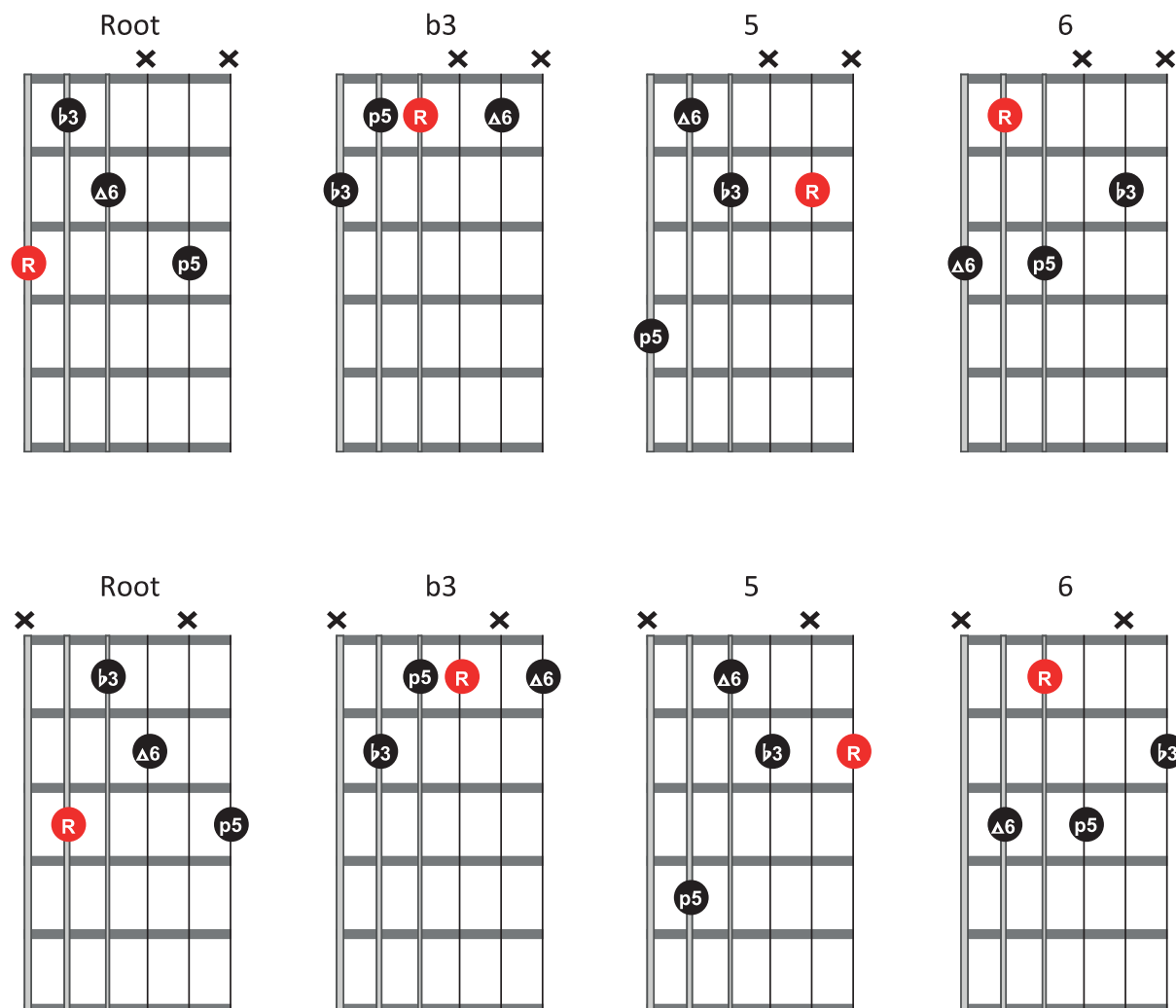
*Maj<sup>7</sup>*



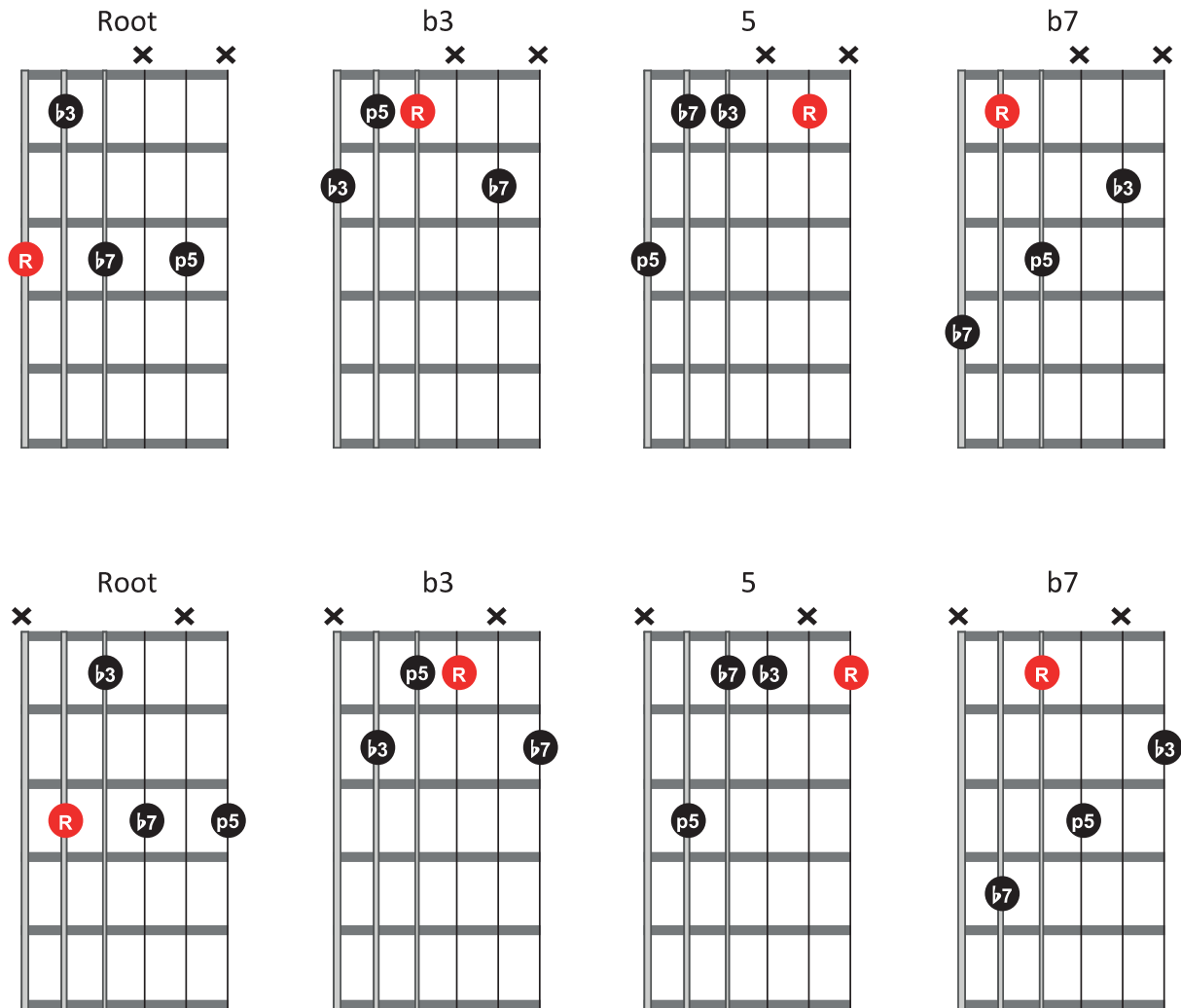
# Dom<sup>7</sup>



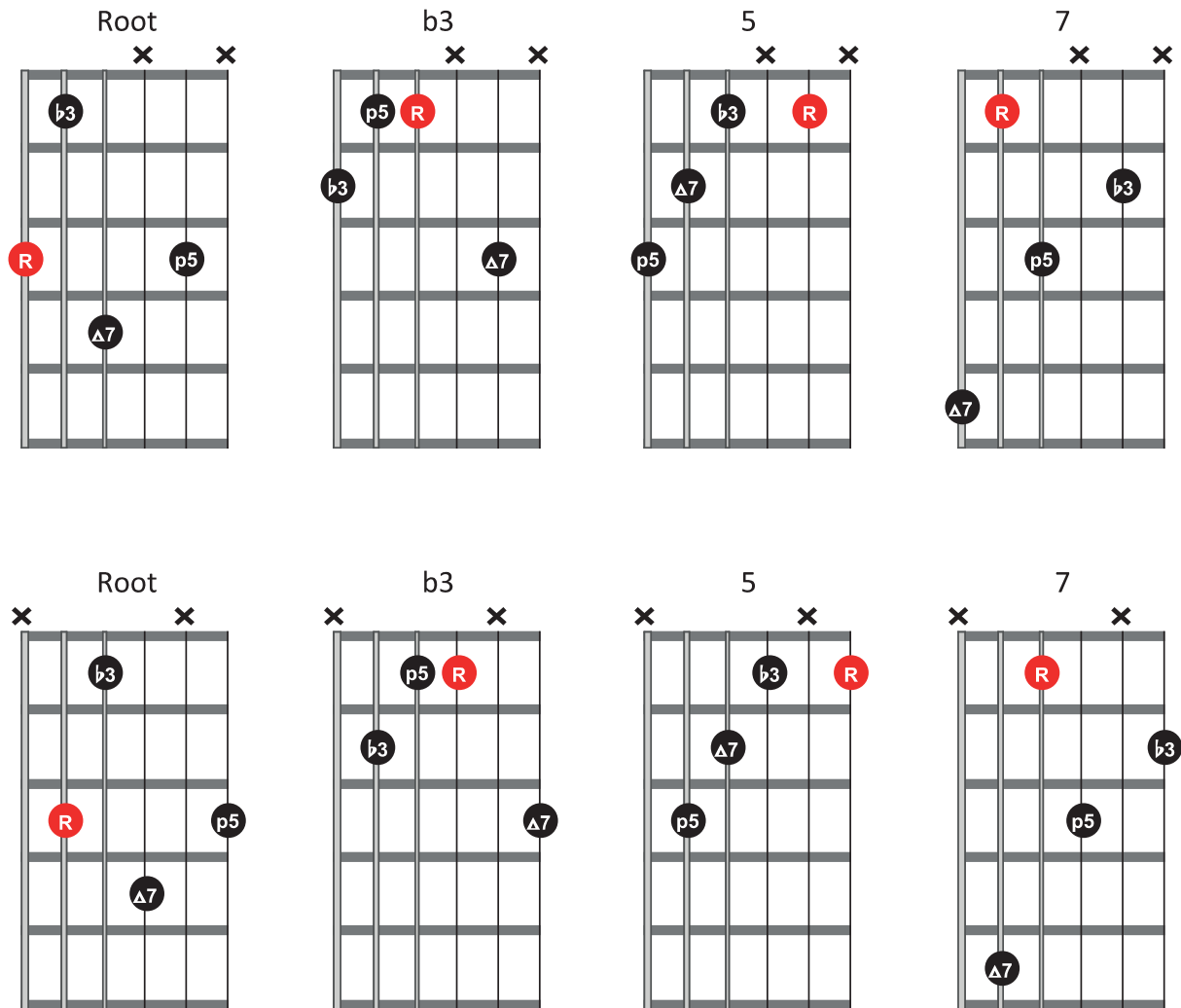
*Min*<sup>6</sup>



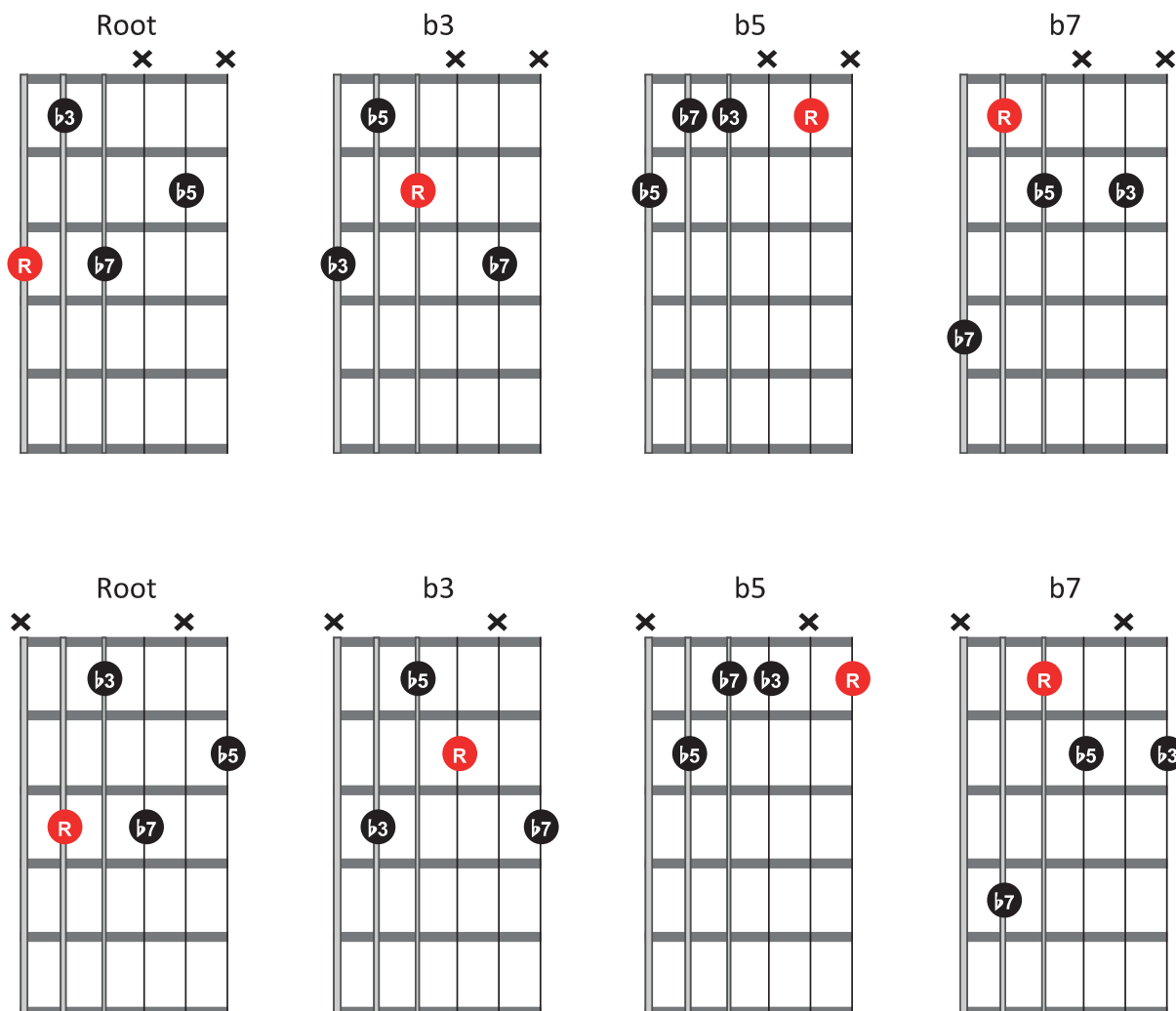
*Min*<sup>7</sup>



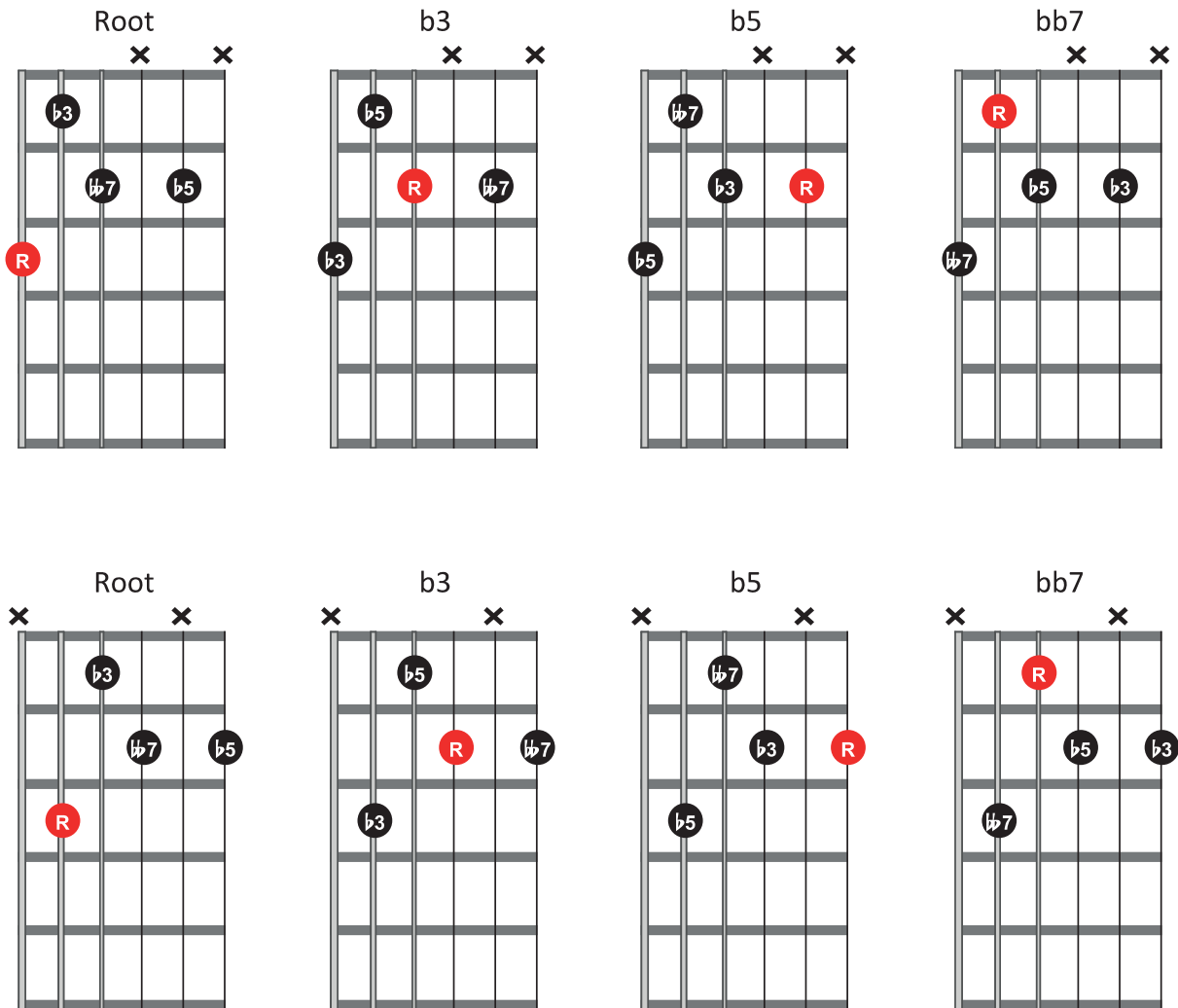


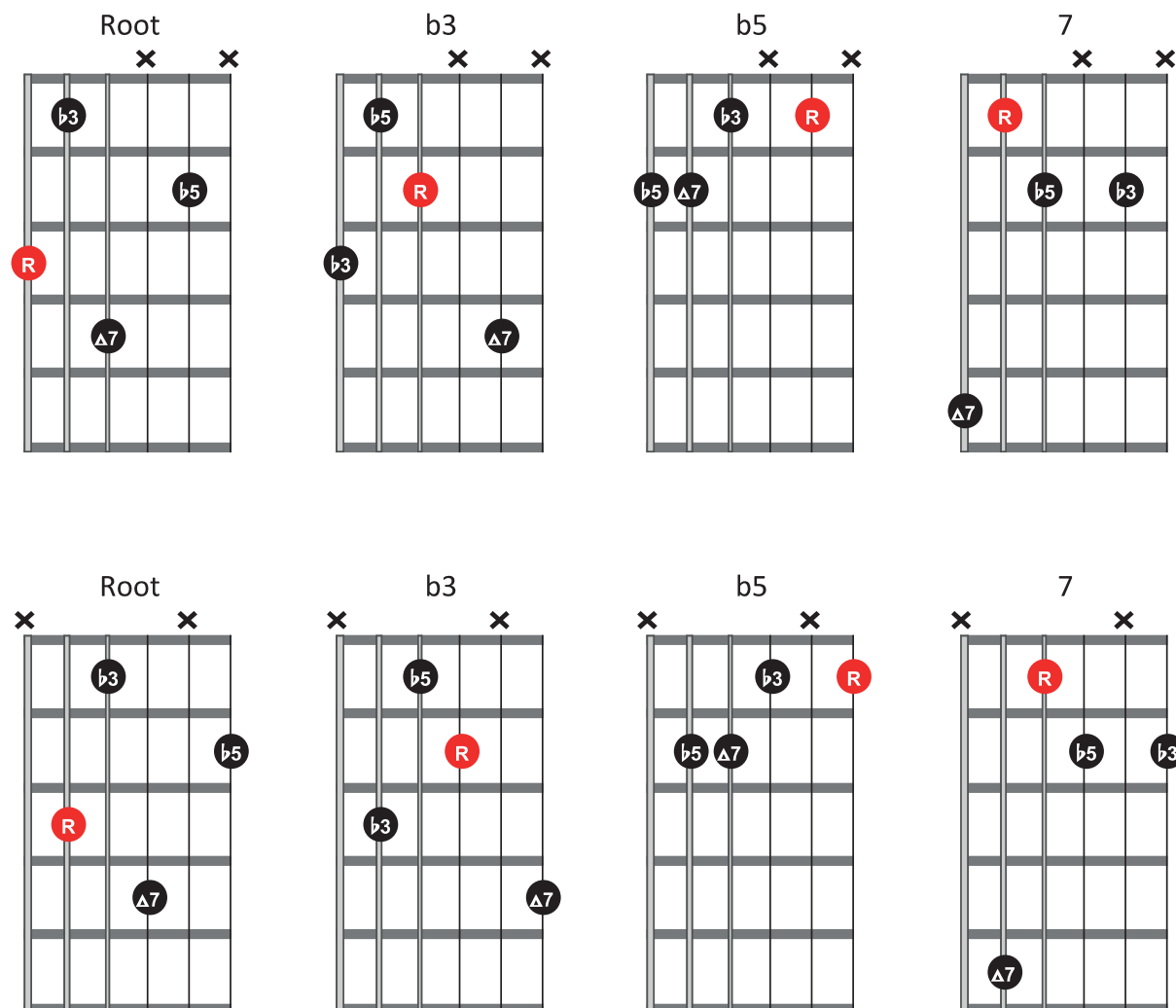


*Min*<sup>7b5</sup>

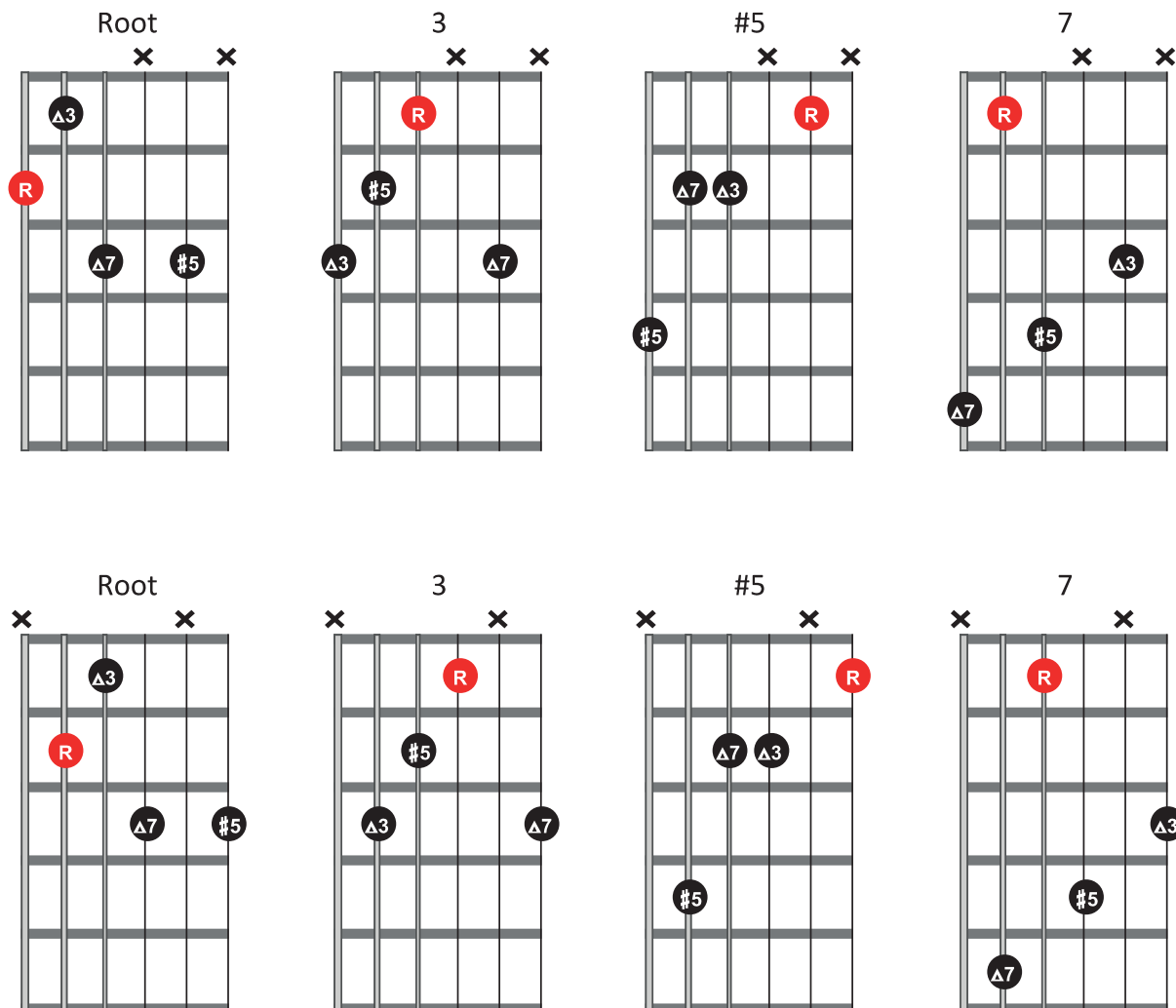


*Dim<sup>7</sup>*

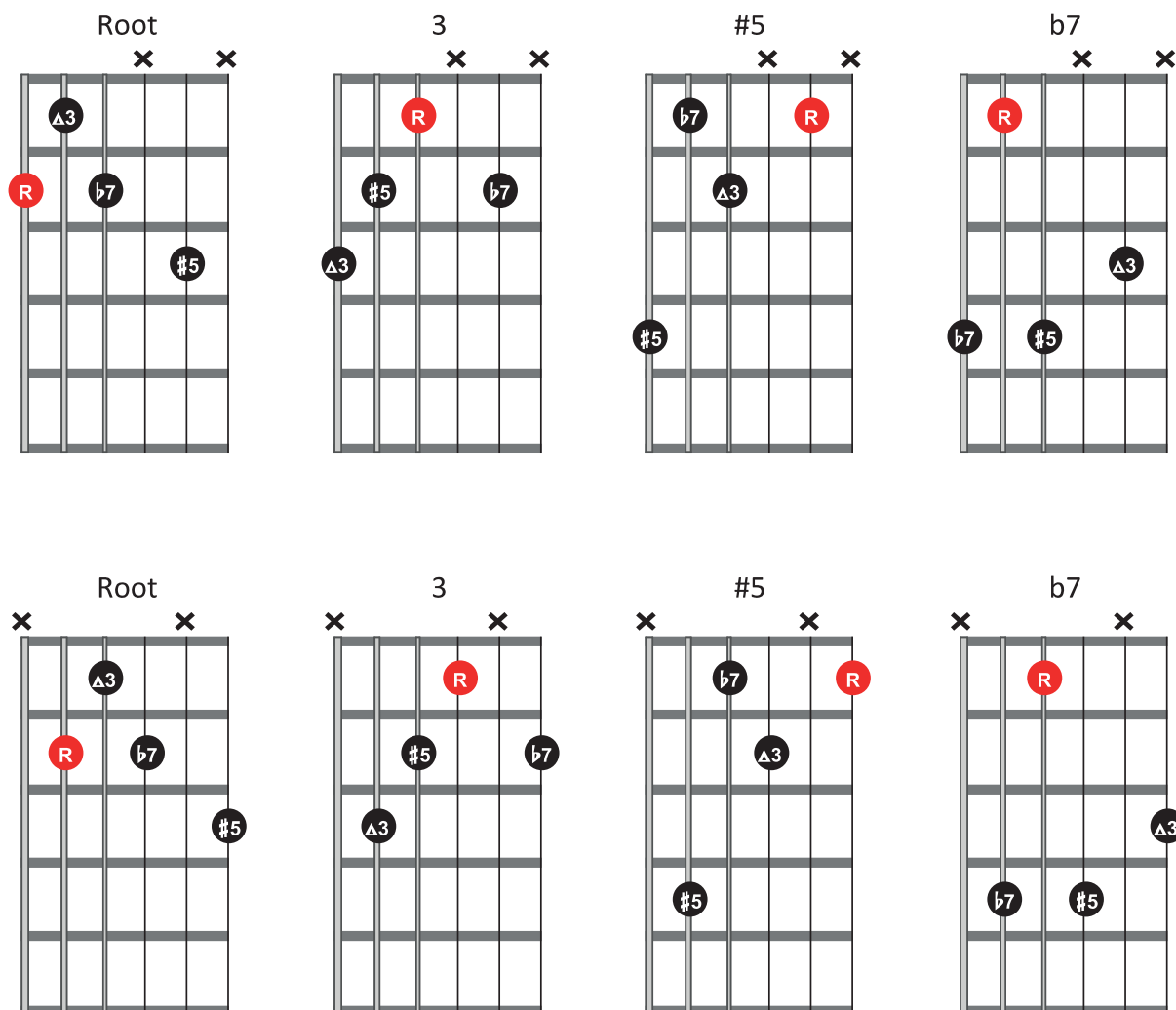




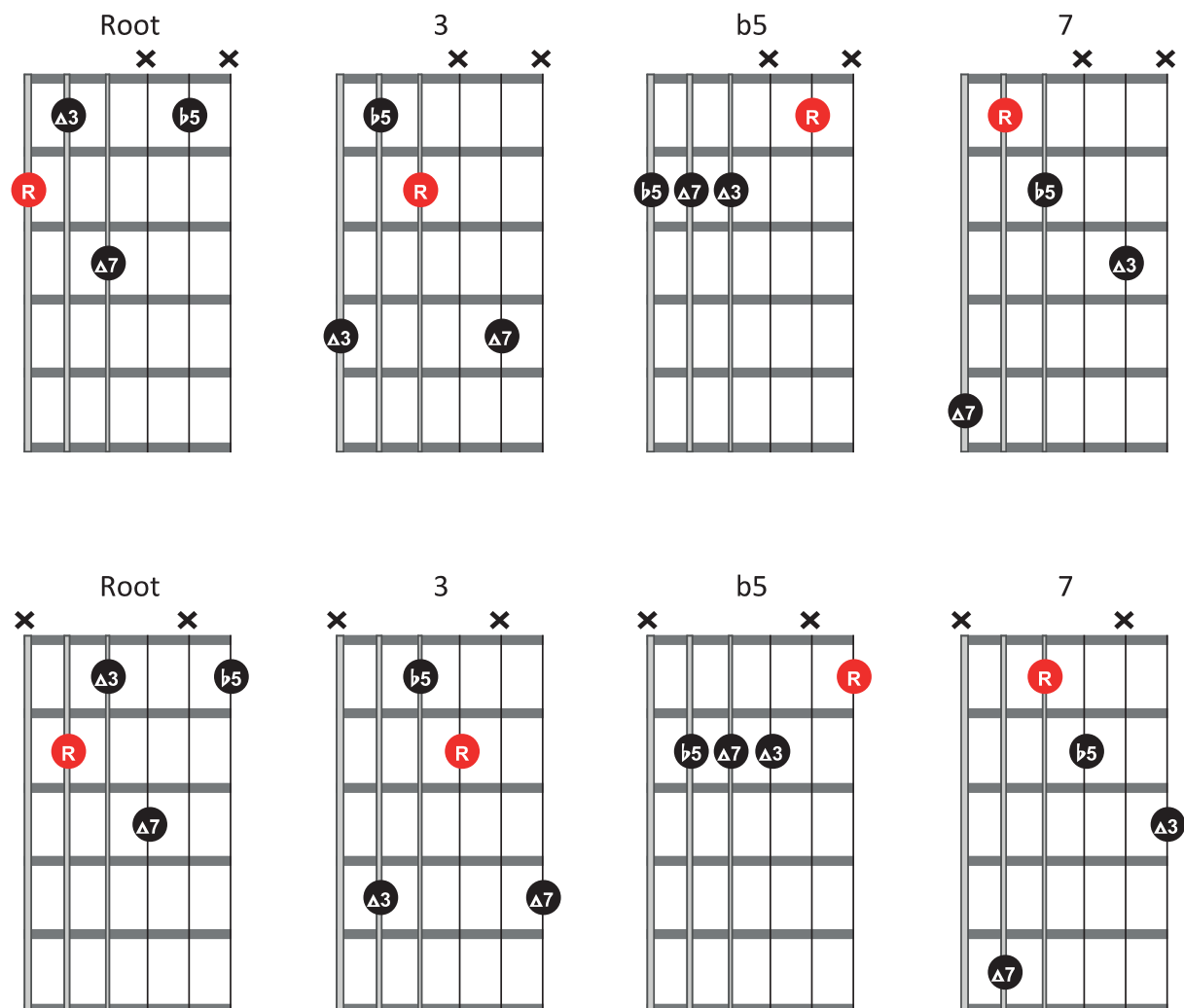
# Aug<sup>maj7</sup>



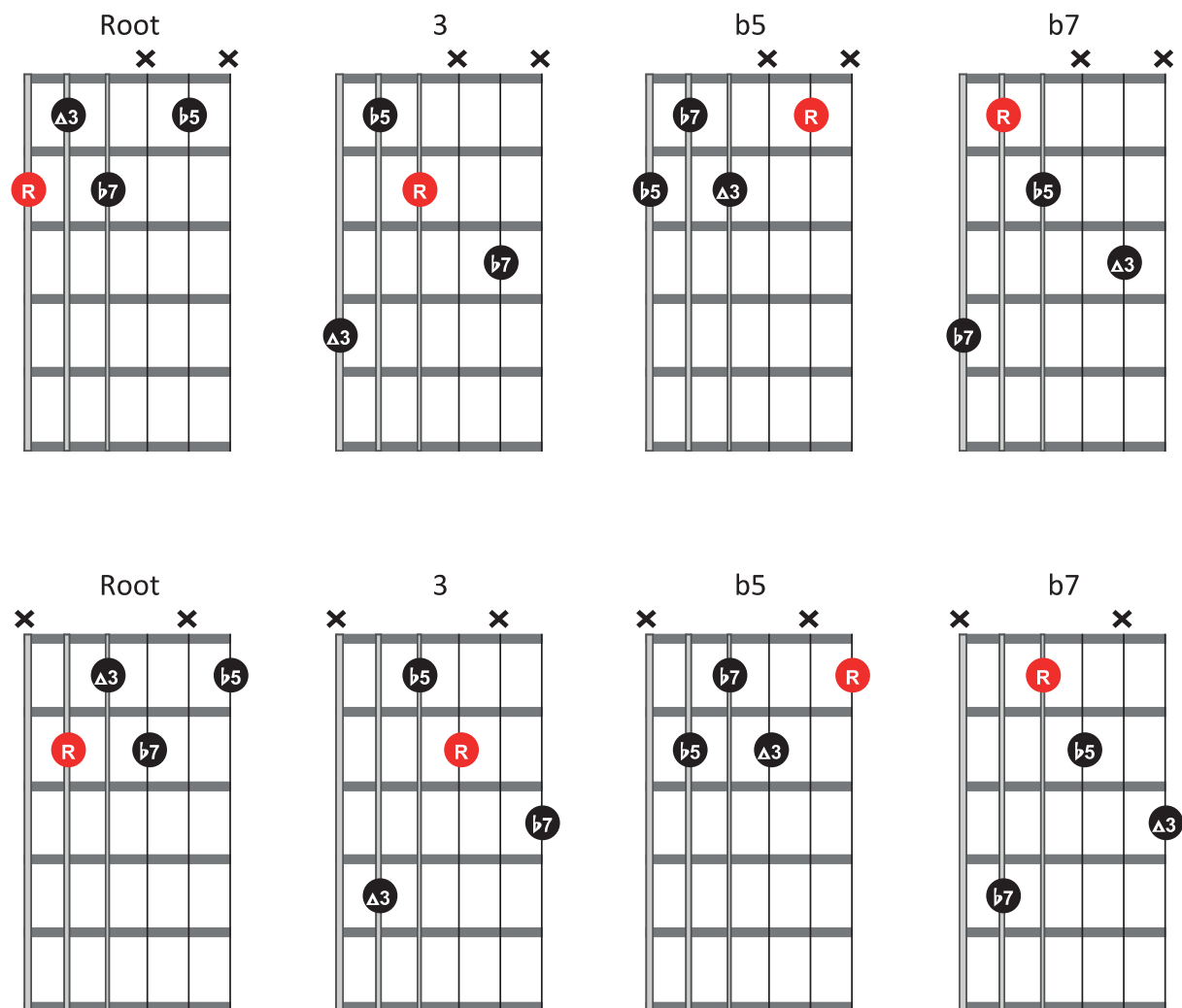
Aug<sup>7</sup>



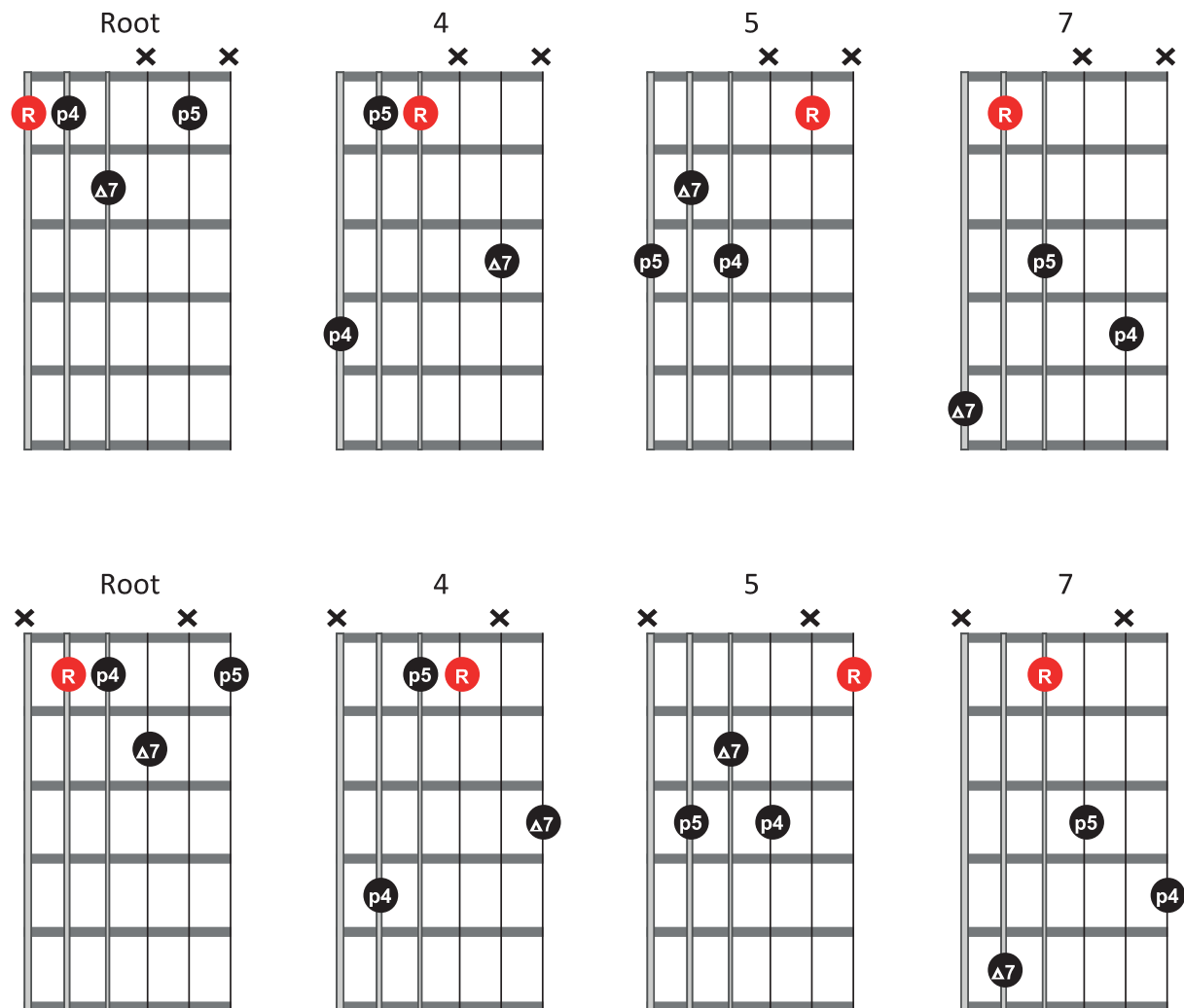
*Maj*<sup>7b5</sup>



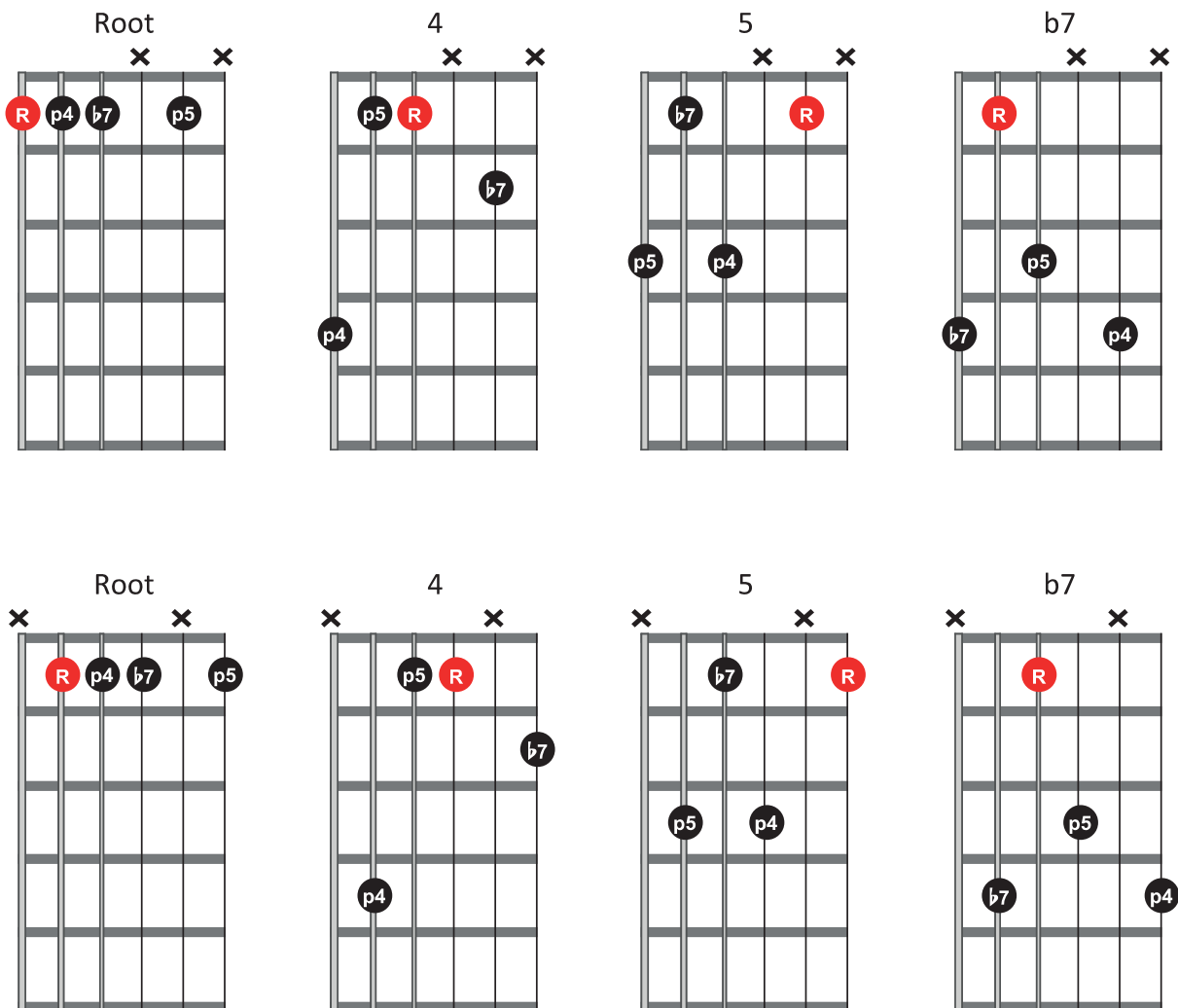
*Dom*<sup>7b5</sup>



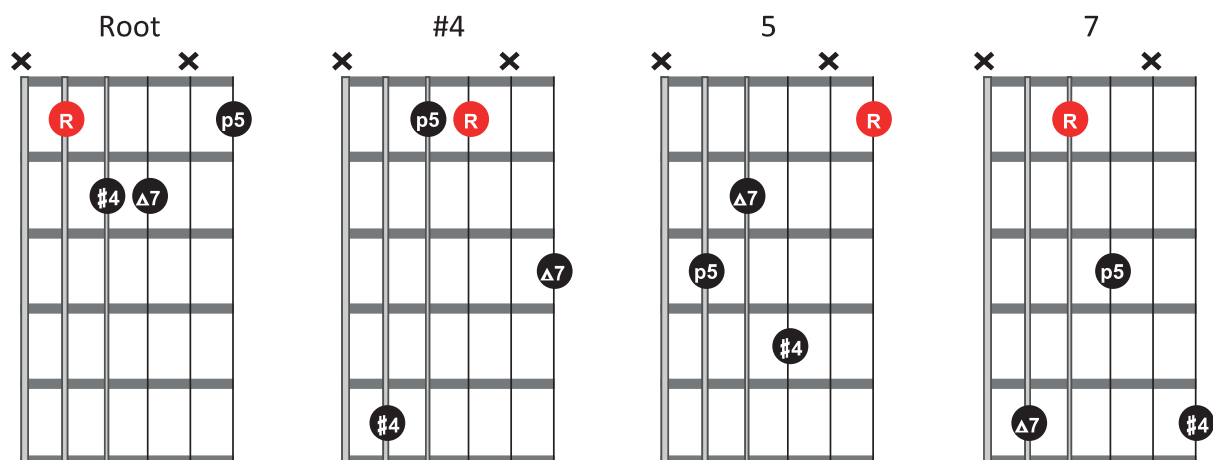
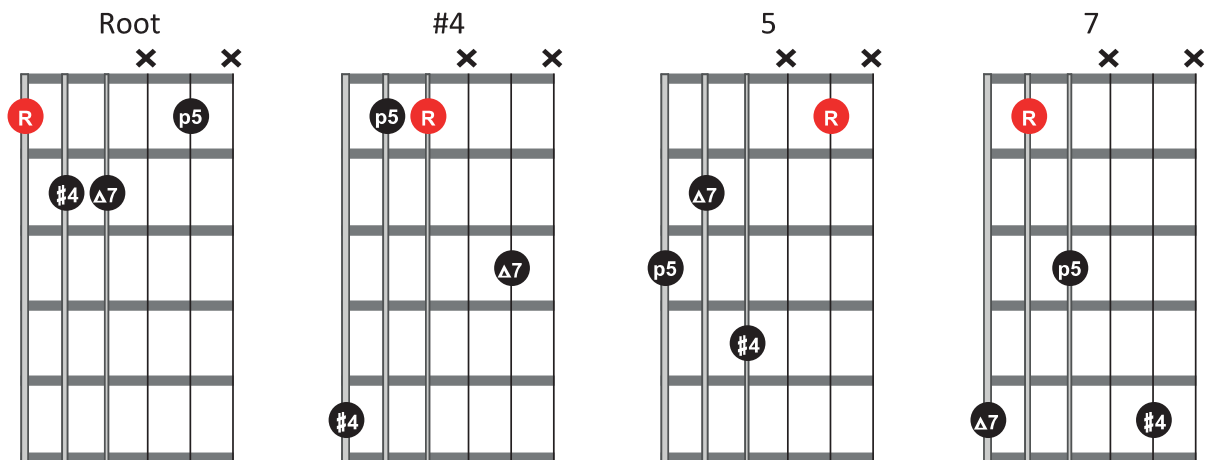




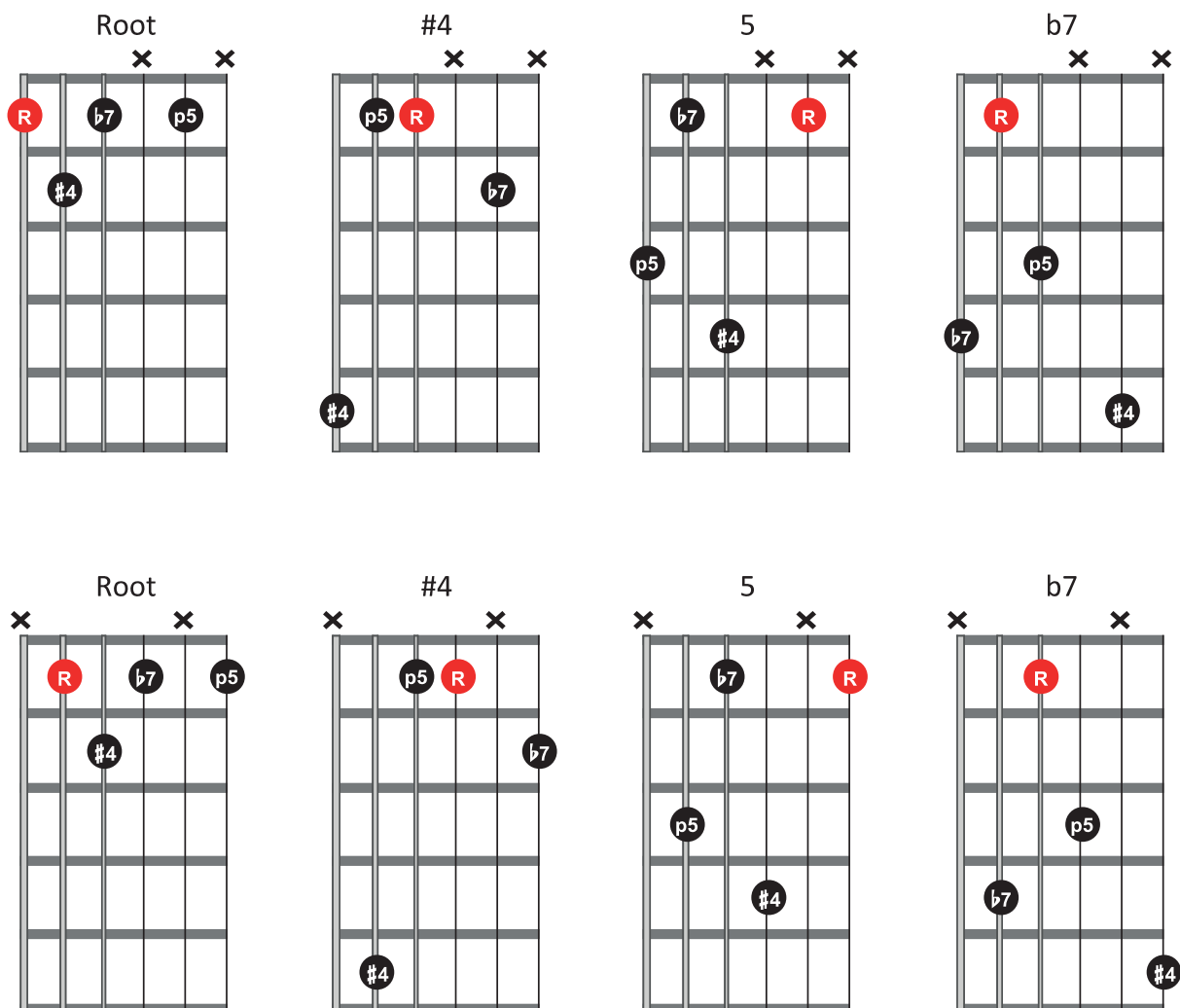
# Dom<sup>7sus4</sup>

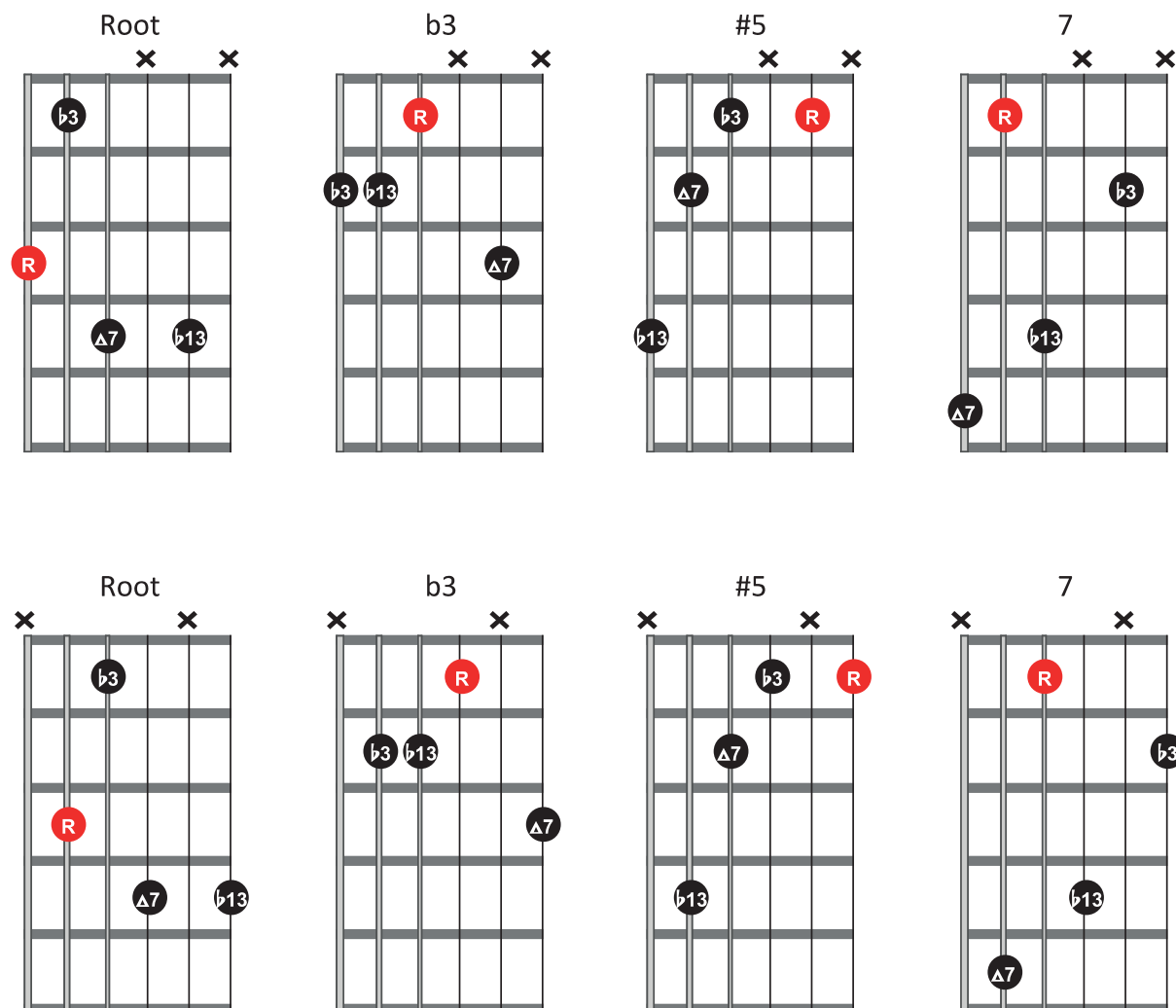


# *Lydian<sup>maj7</sup>*



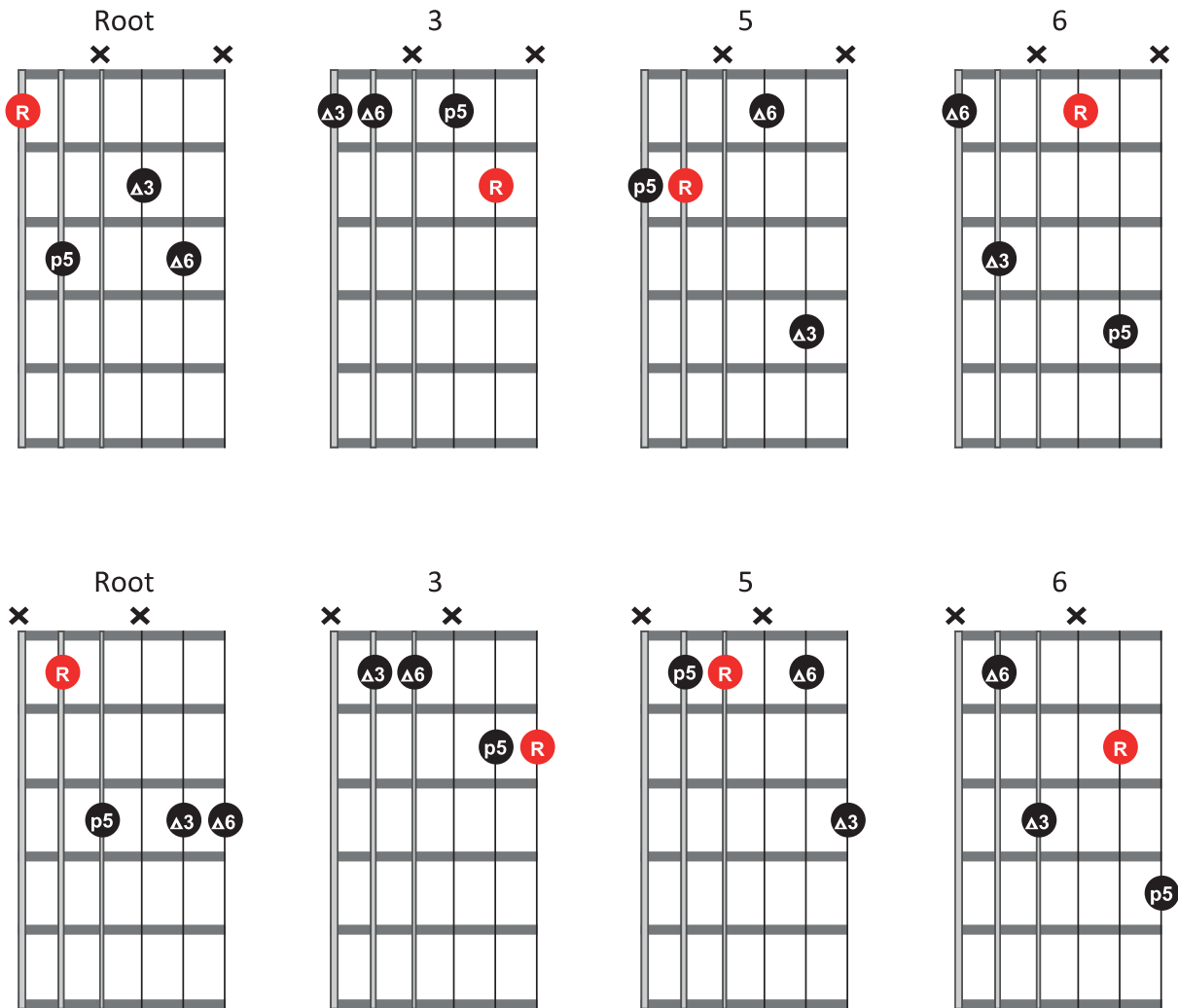
# *Lydian*<sup>Dom7</sup>



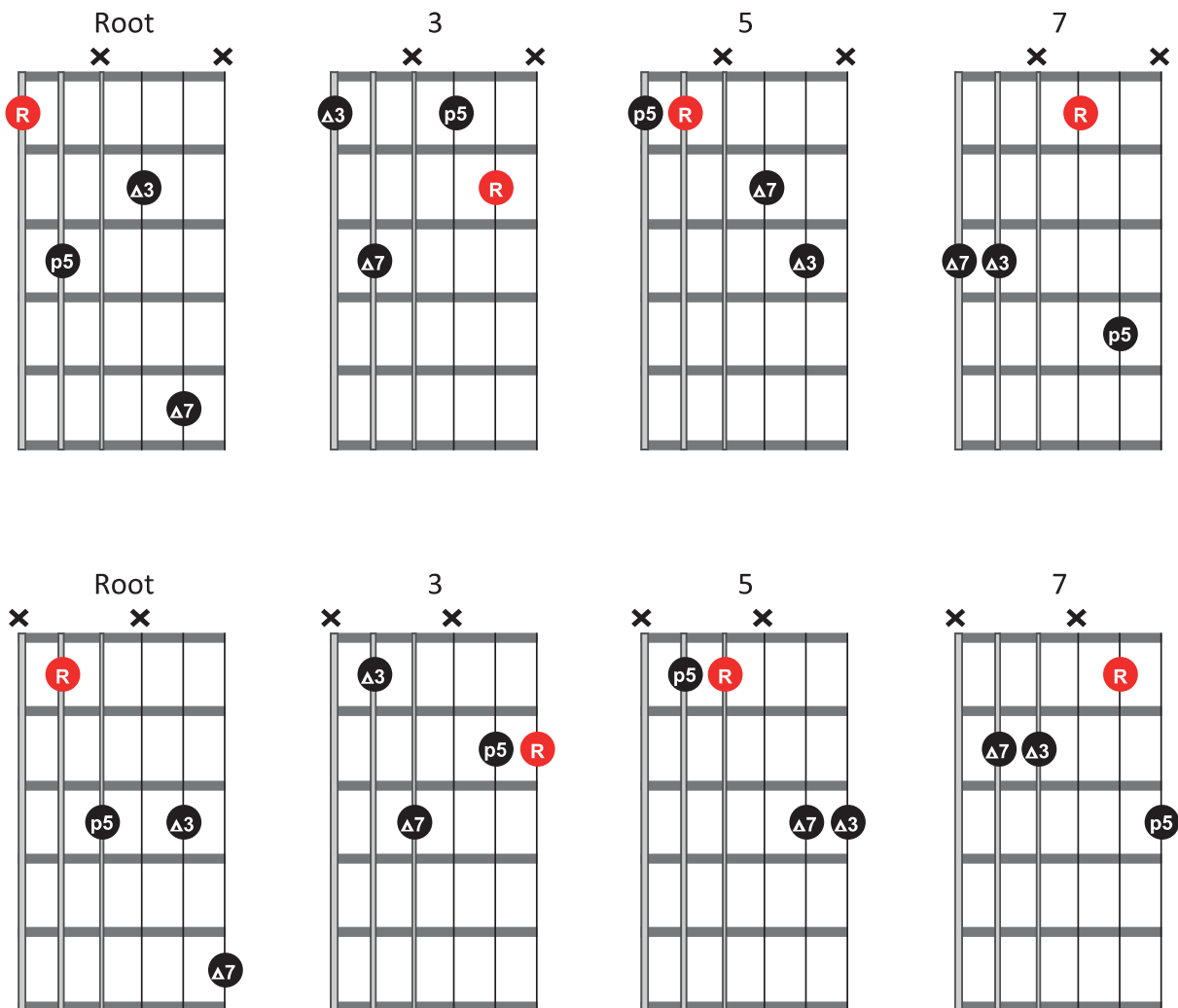


# Drop 2 + 4

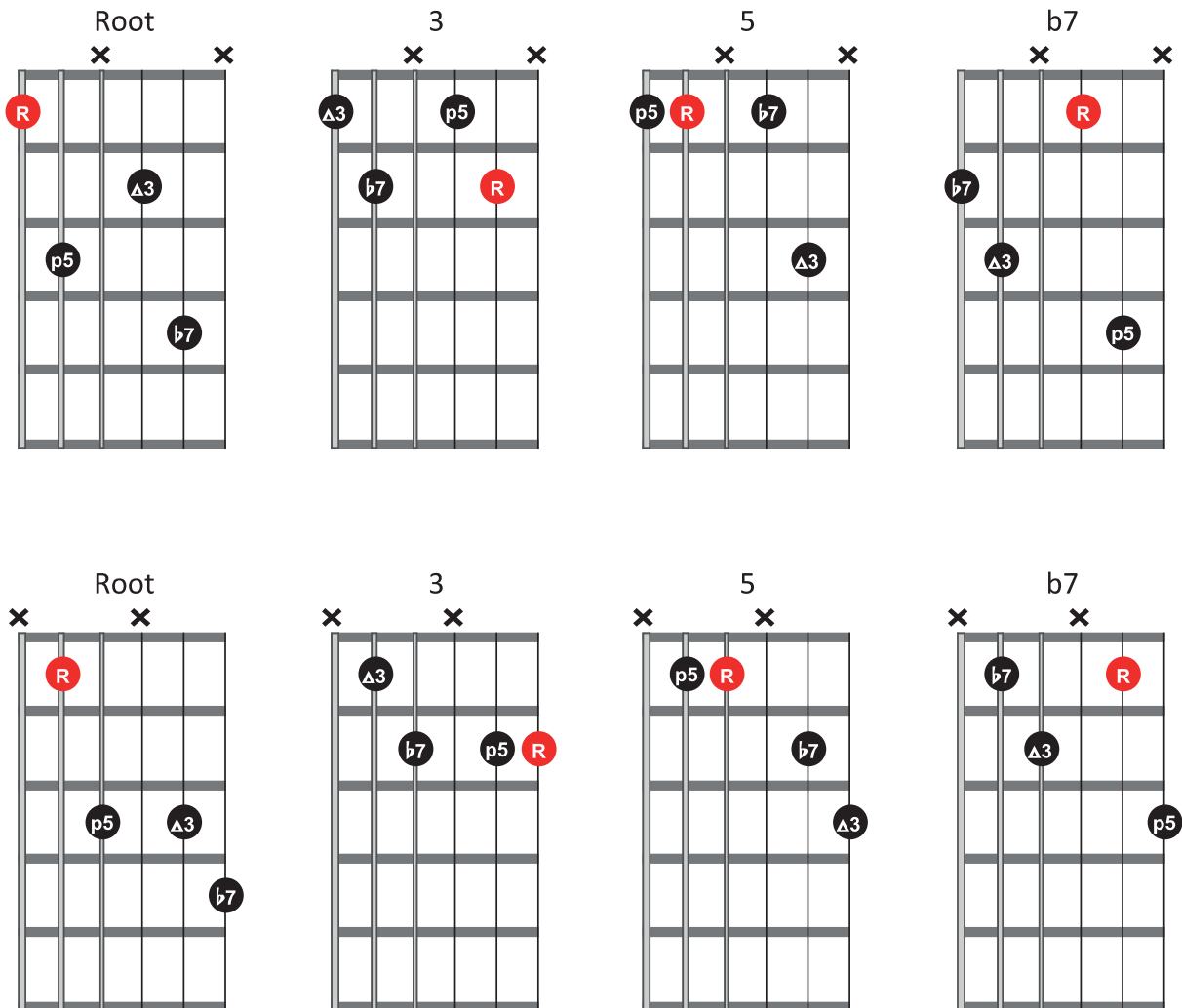
*Maj*<sup>6</sup>



*Maj*<sup>7</sup>

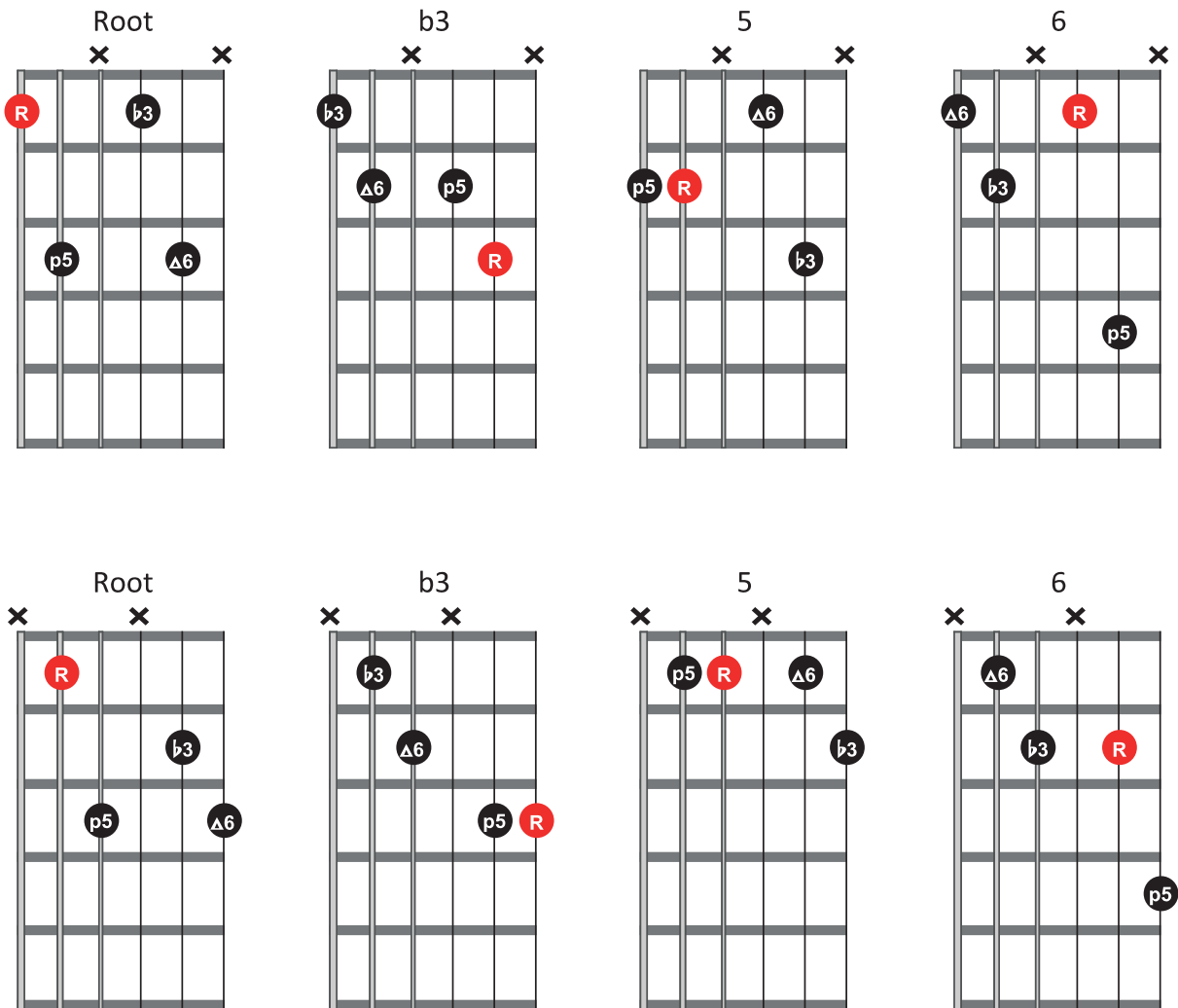


# Dom<sup>7</sup>

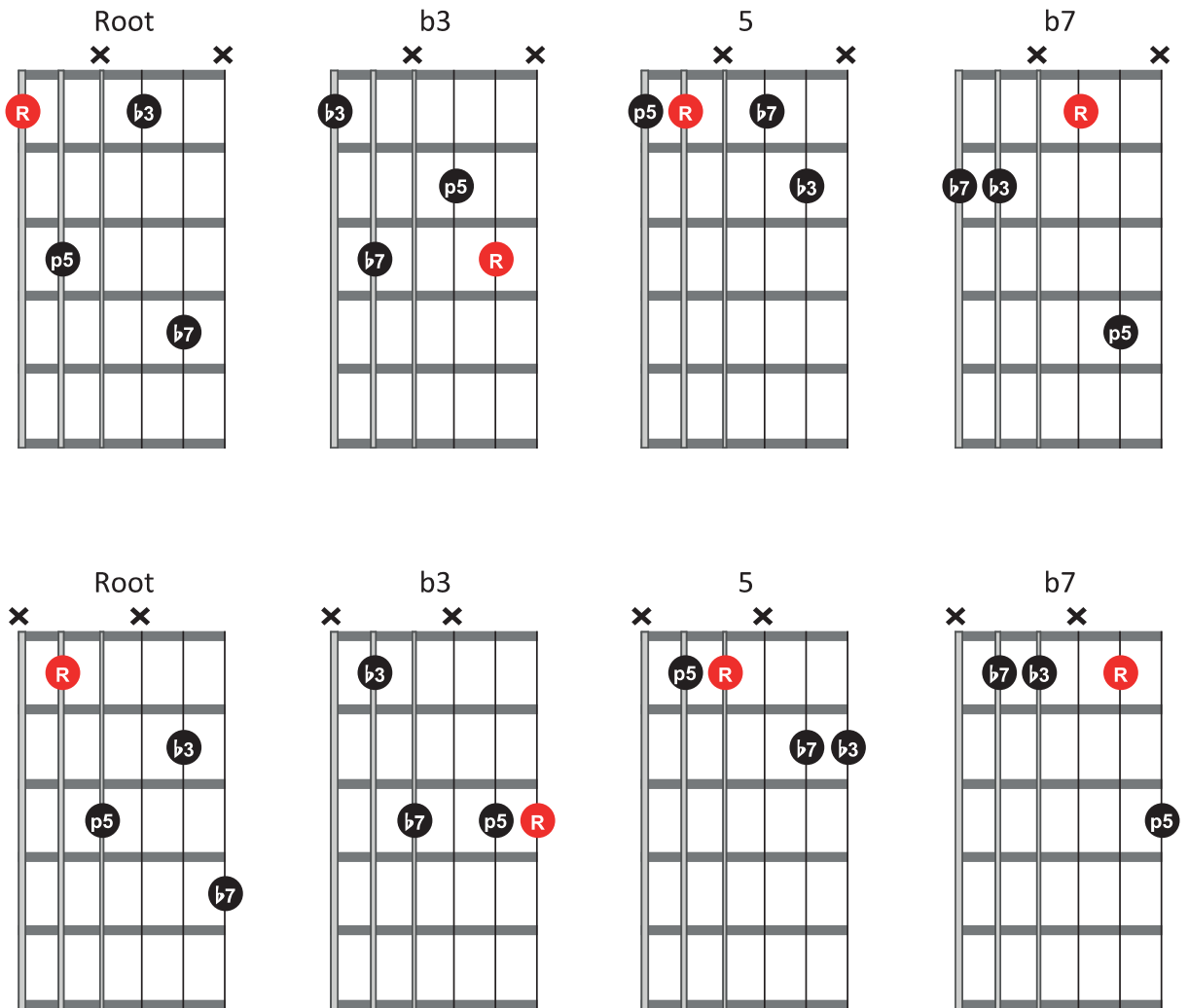


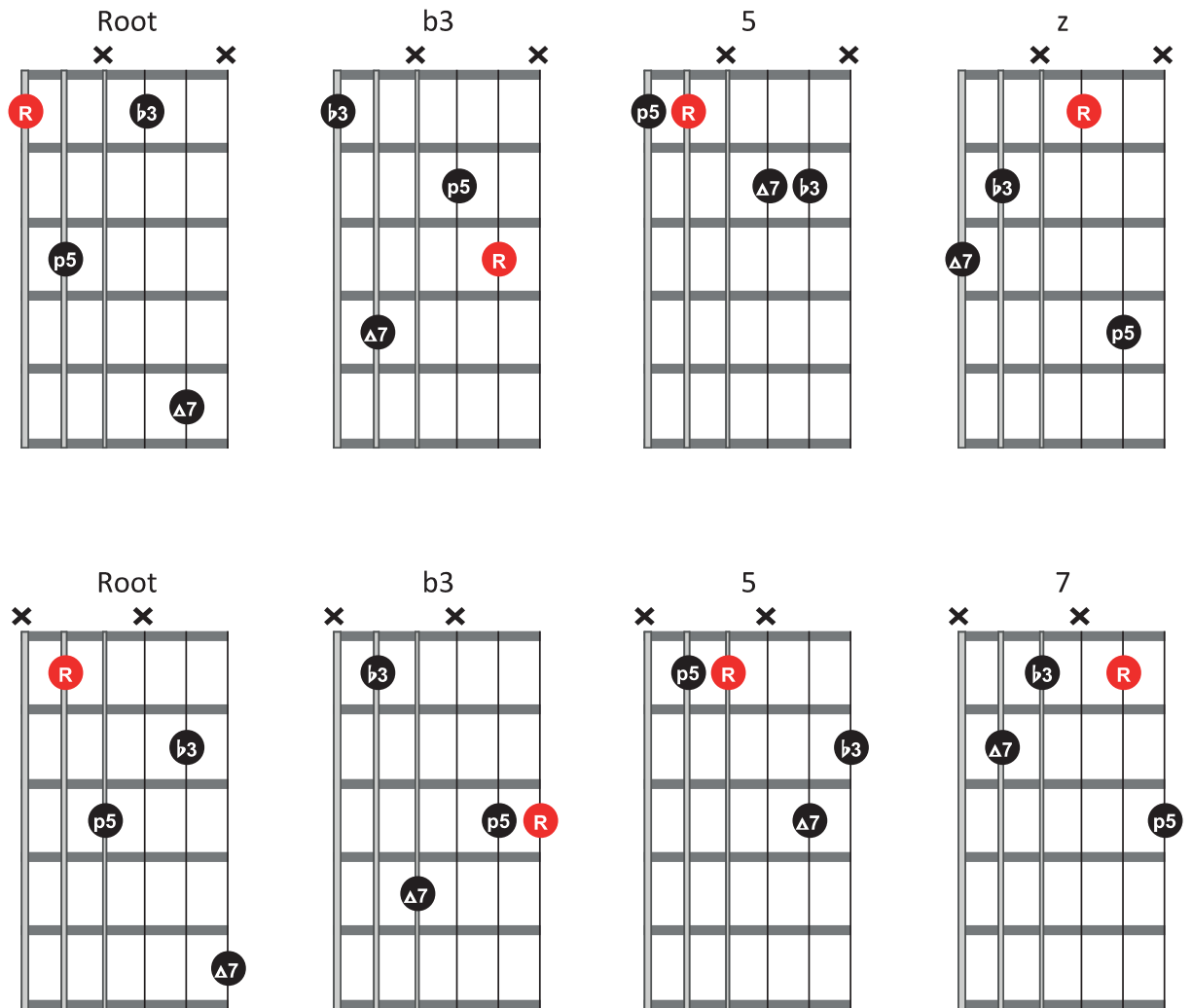


*Min*<sup>6</sup>

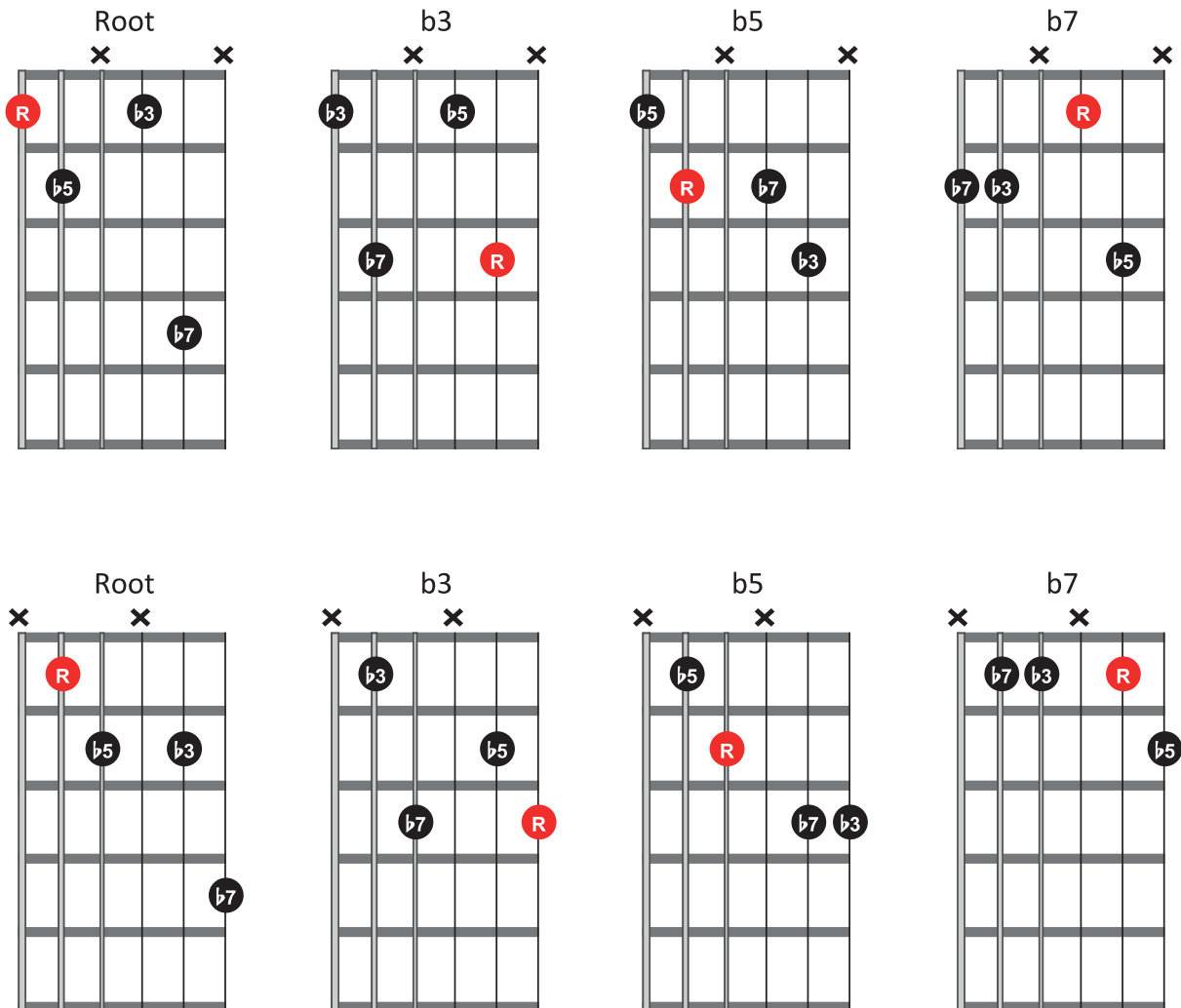


*Min*<sup>7</sup>

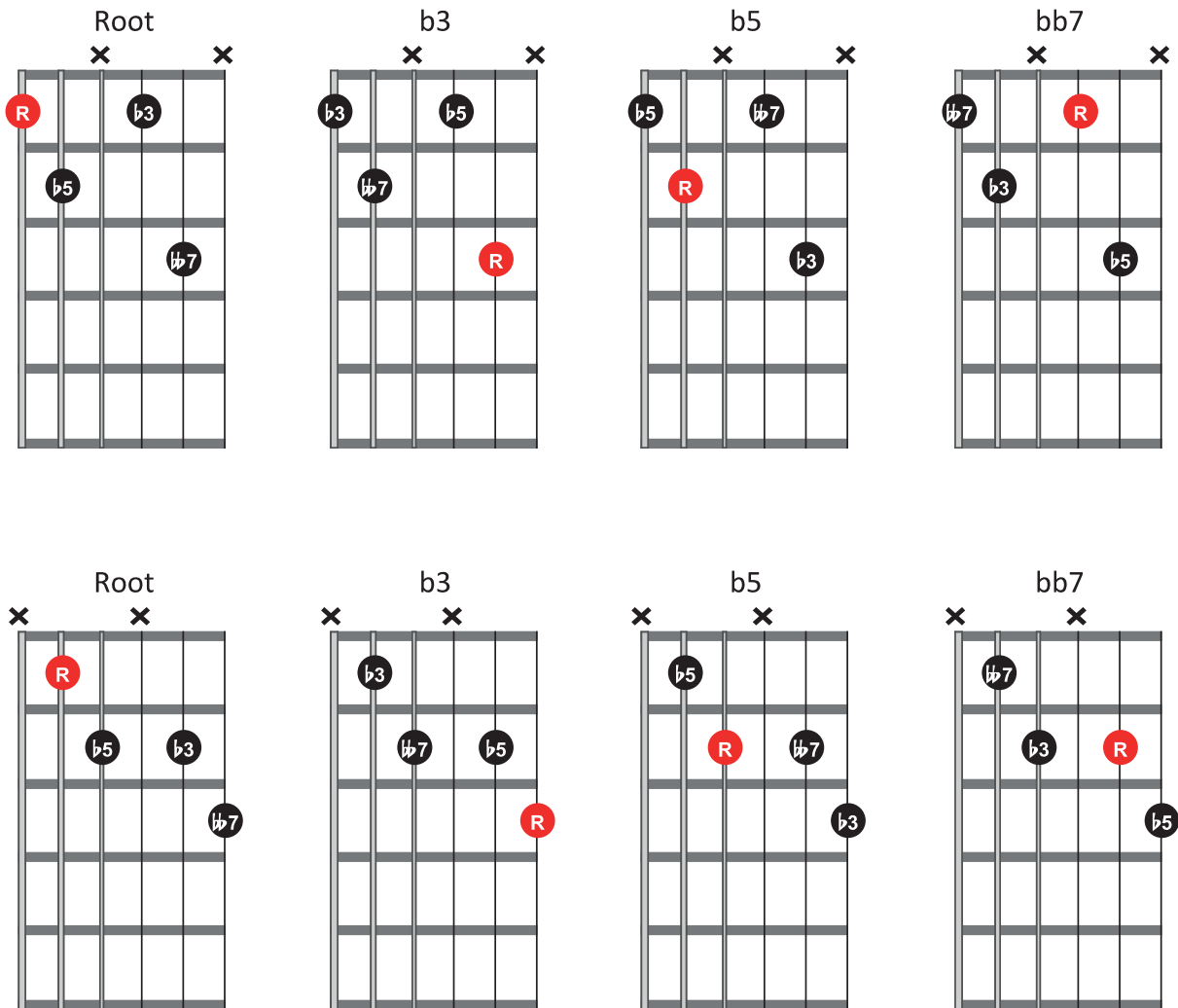


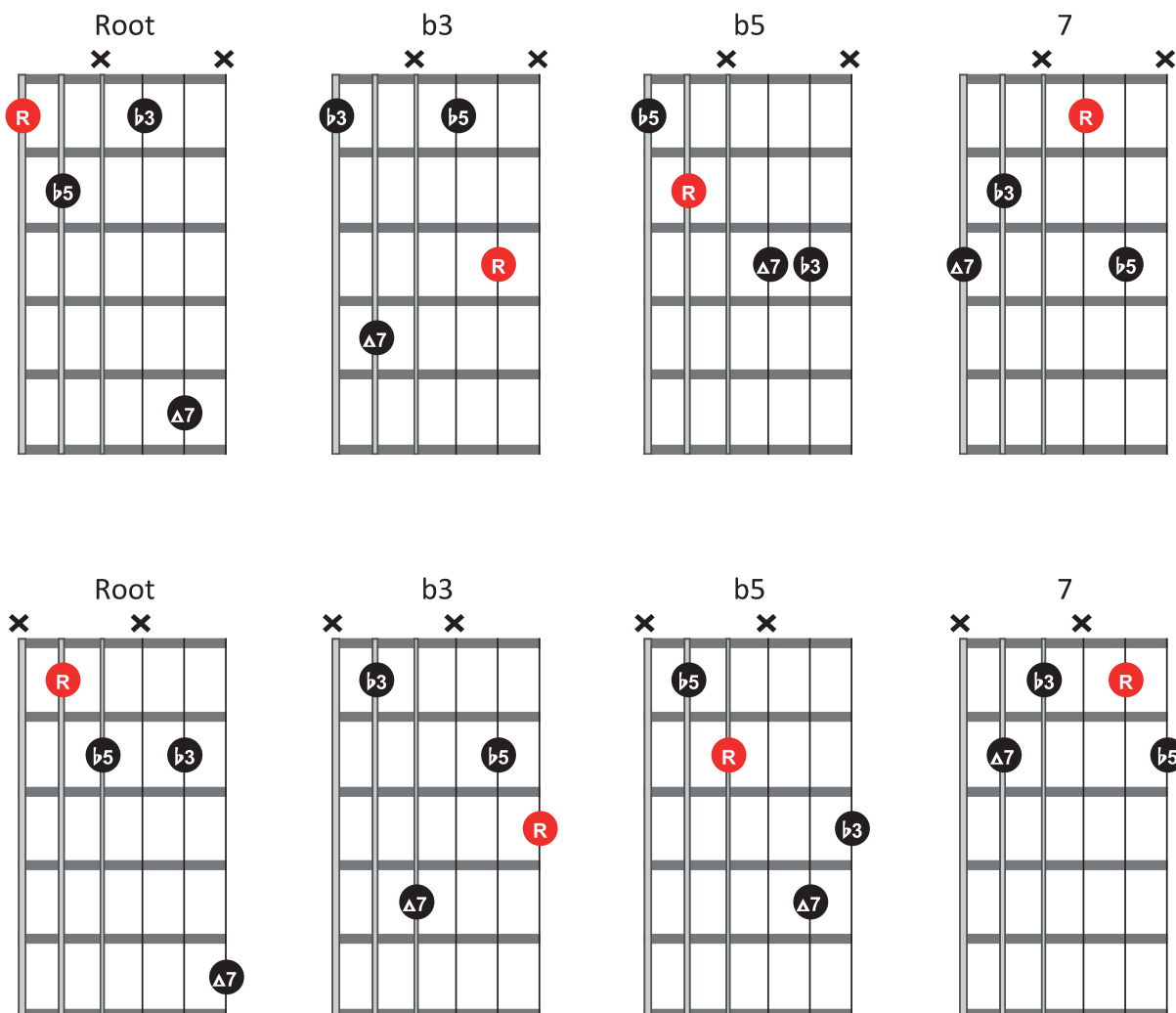


*Min*<sup>7b5</sup>

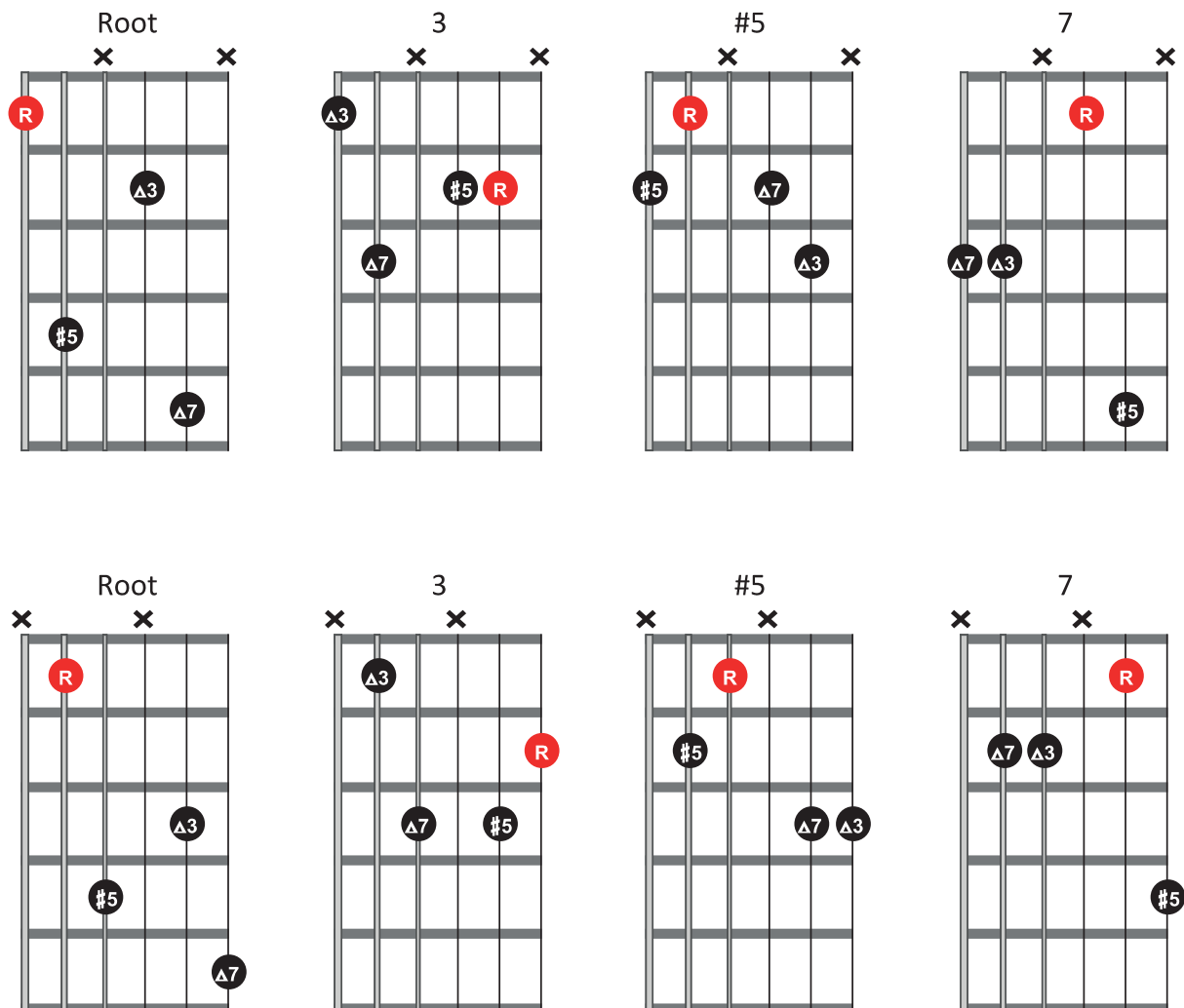


*Dim<sup>7</sup>*

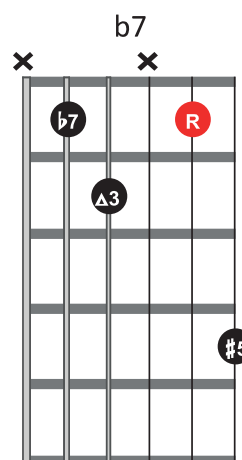
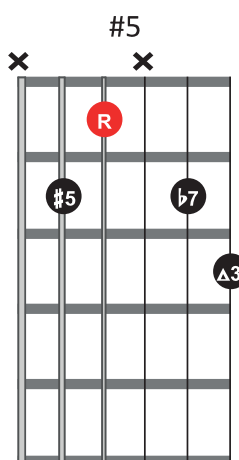
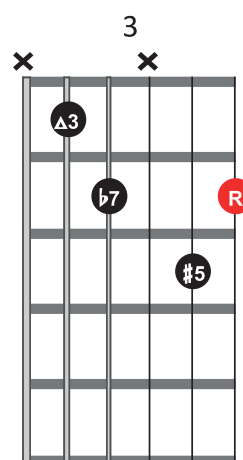
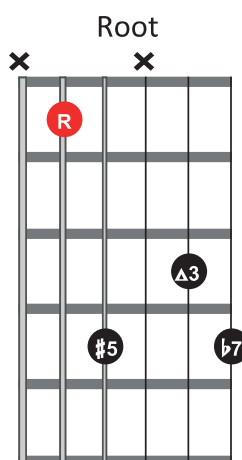
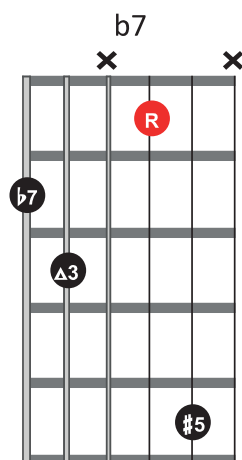
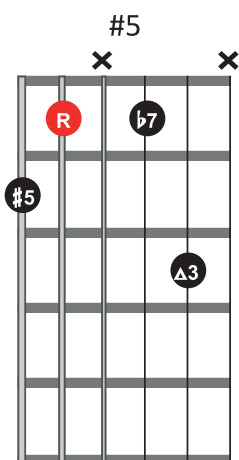
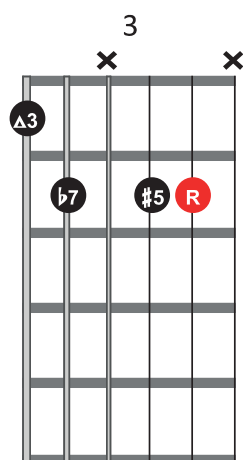
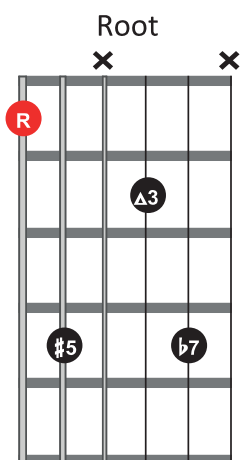




# Aug<sup>maj7</sup>

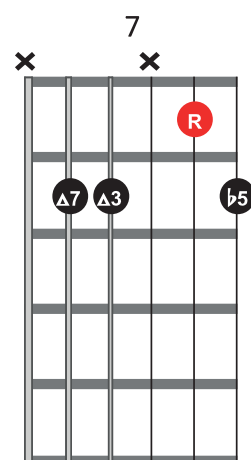
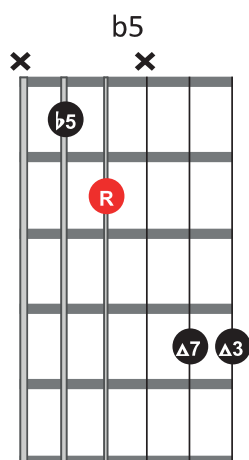
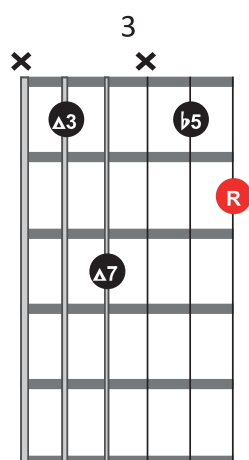
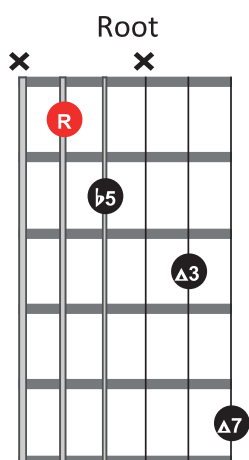
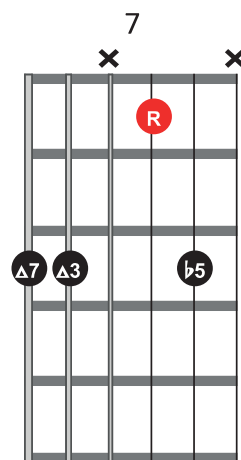
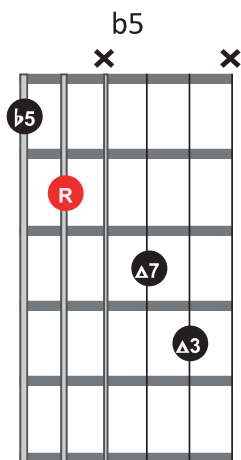
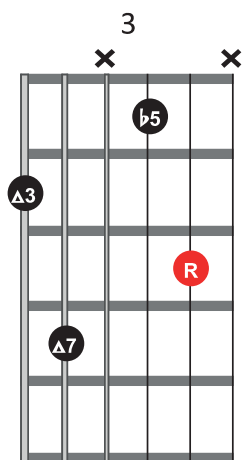
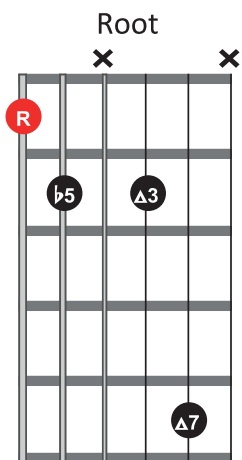


*Aug<sup>7</sup>*

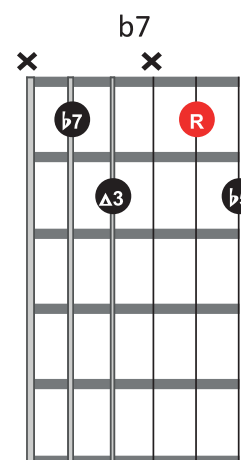
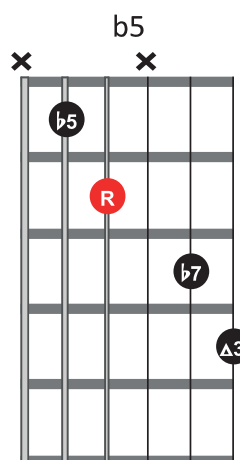
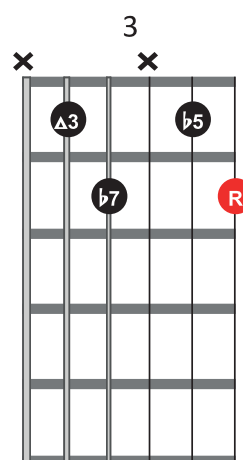
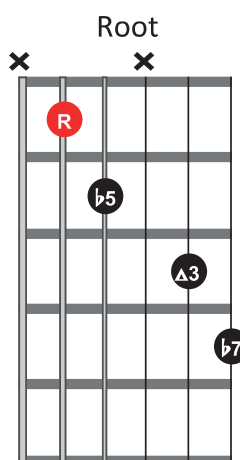
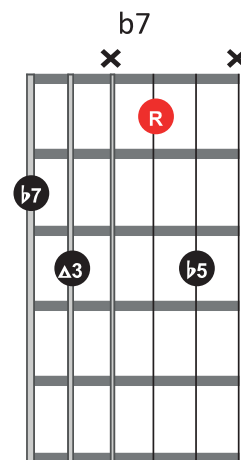
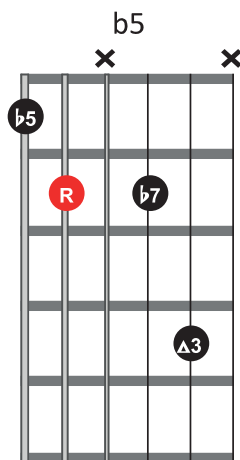
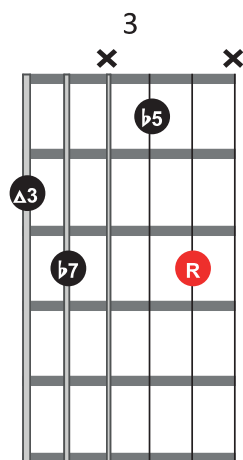
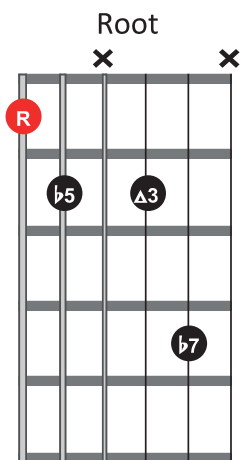


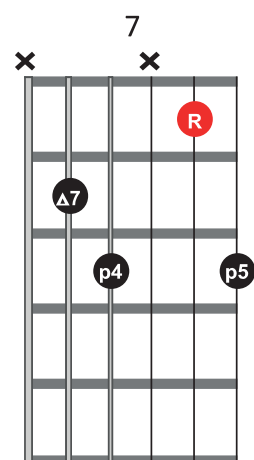
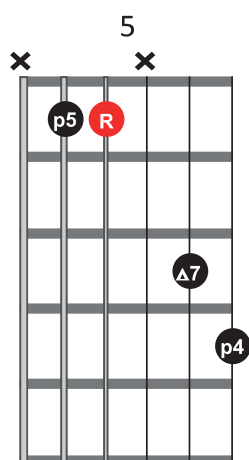
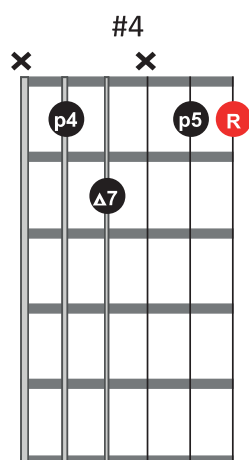
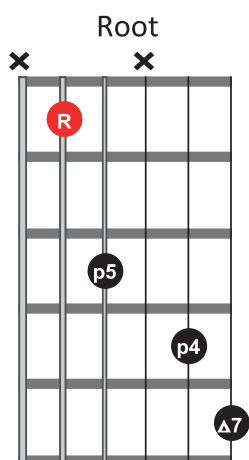
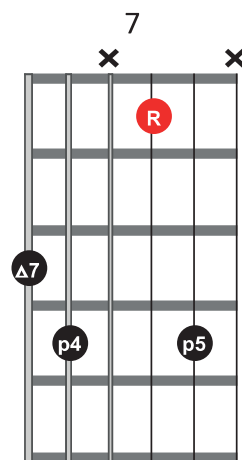
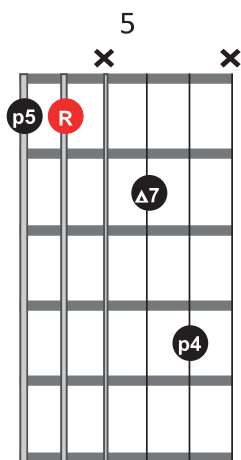
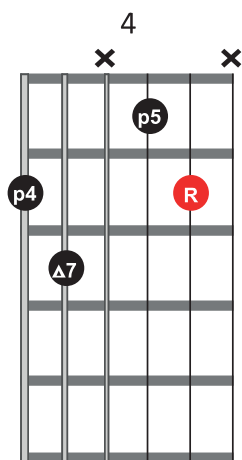
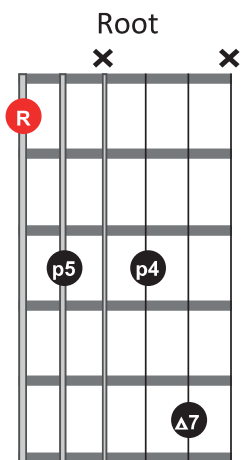


# *Maj<sup>7b5</sup>*

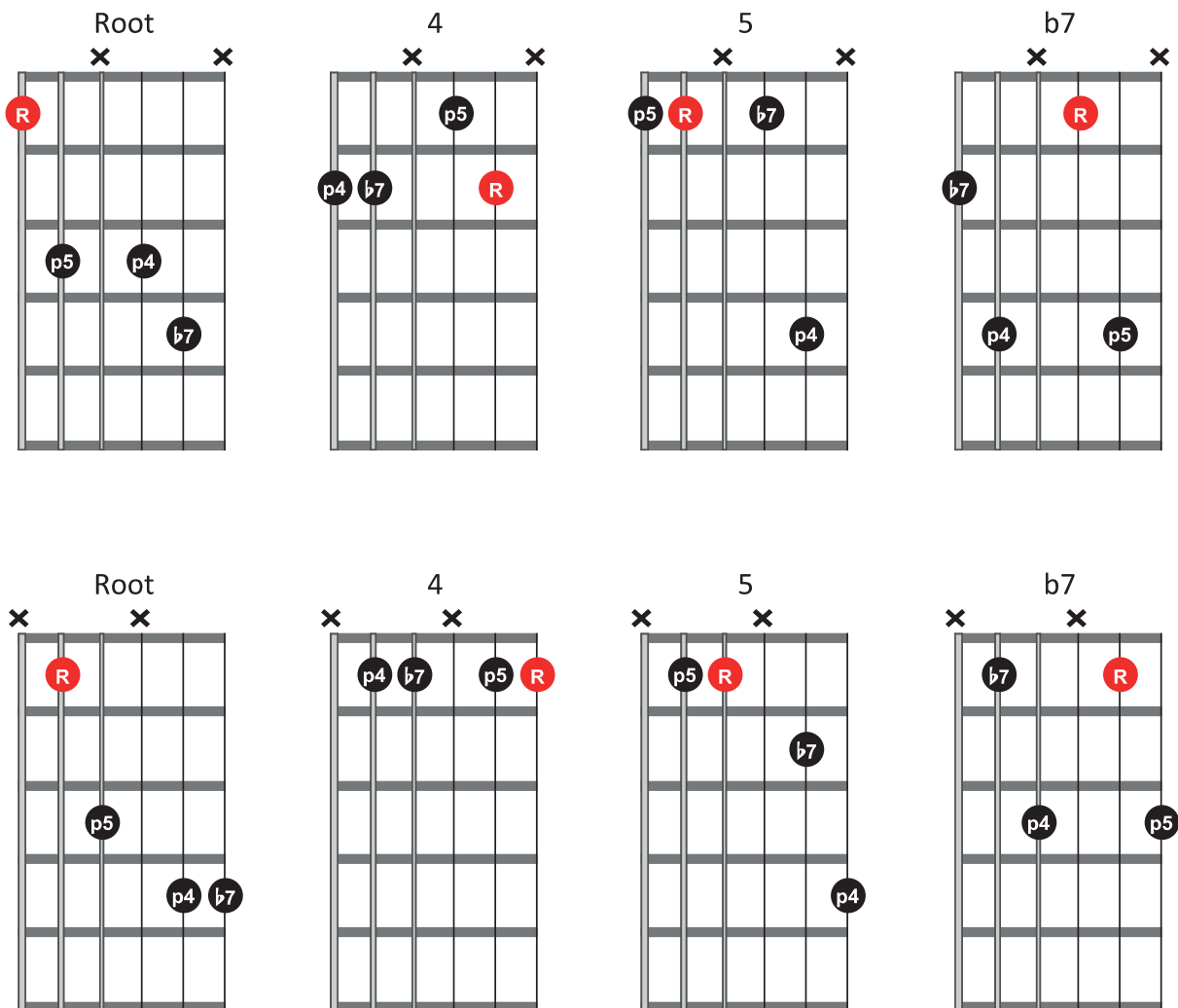


*Dom*<sup>7b5</sup>

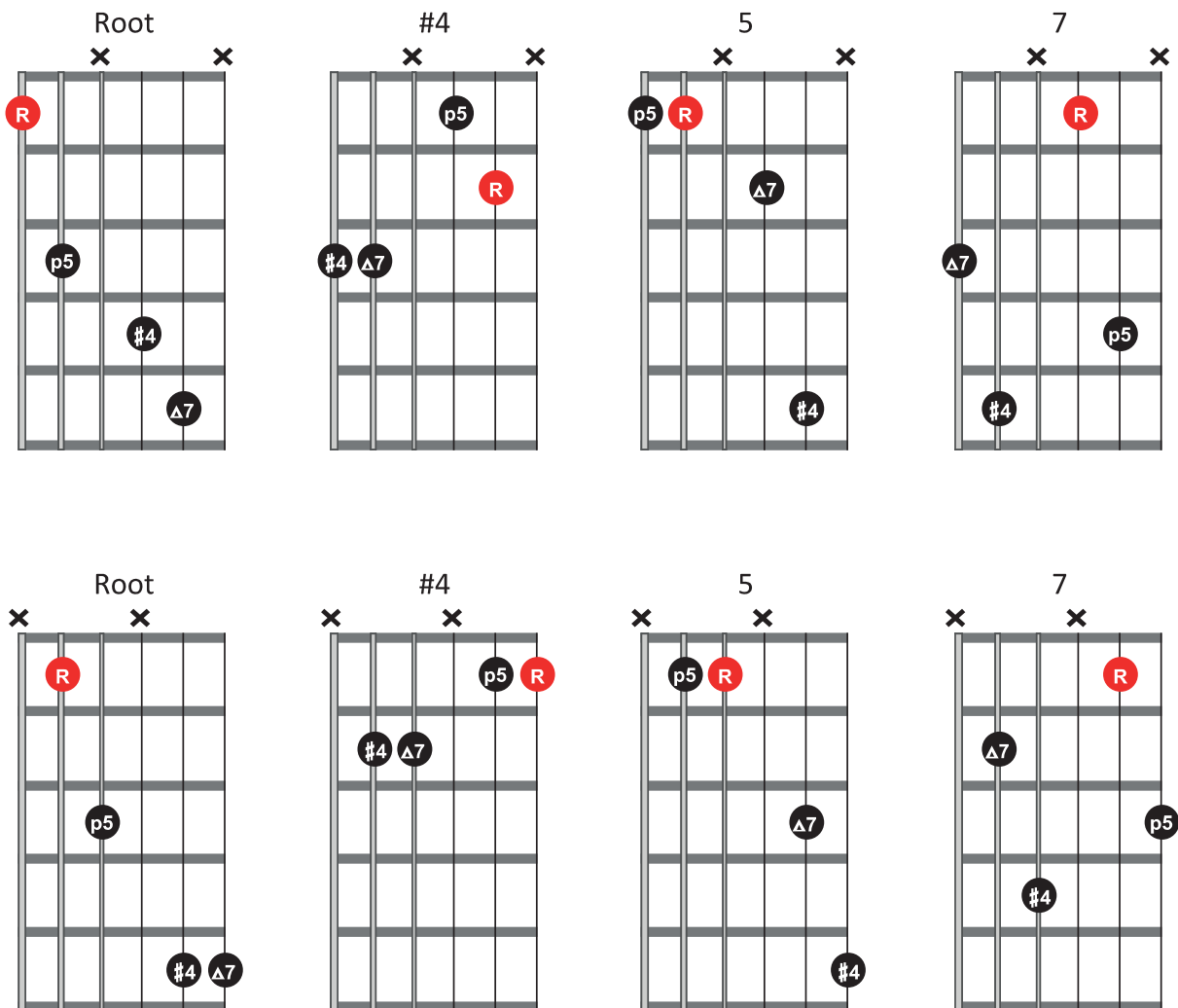




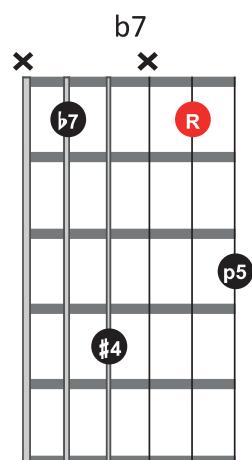
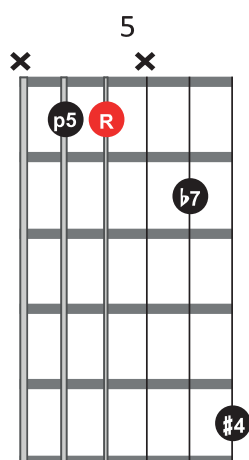
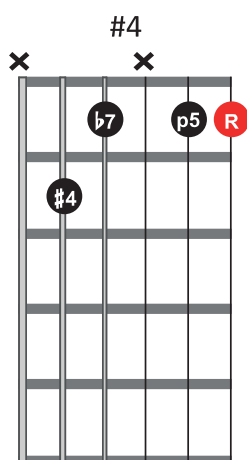
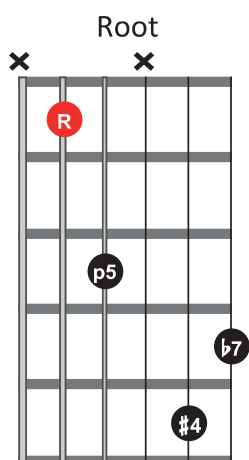
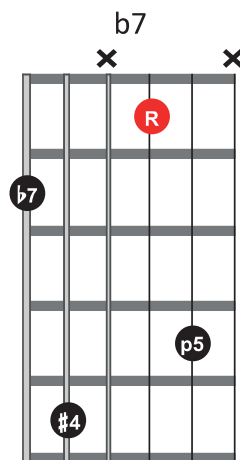
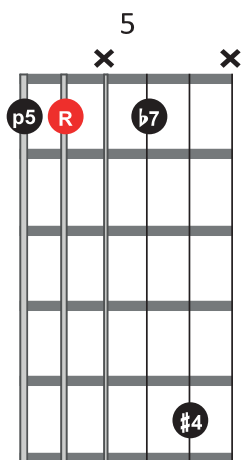
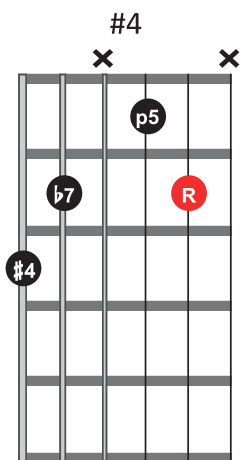
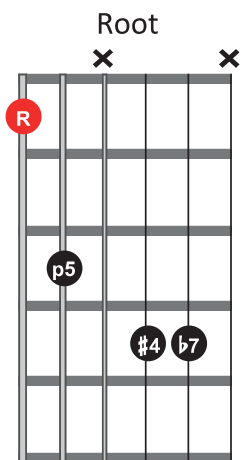
# Dom<sup>7sus4</sup>



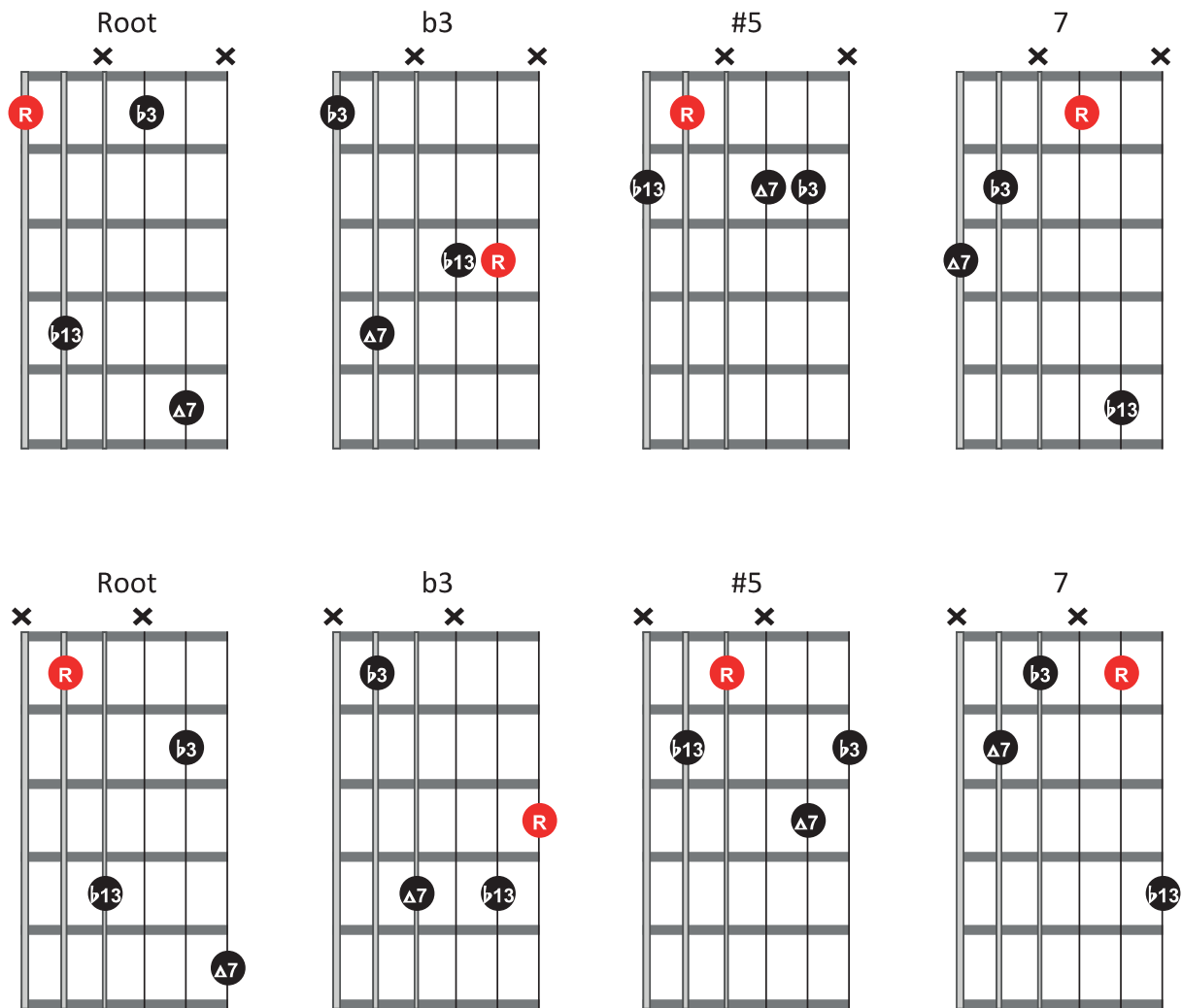
# *Lydian<sup>maj7</sup>*



# Lydian<sup>Dom7</sup>



*Dim*<sup>maj7b13</sup>

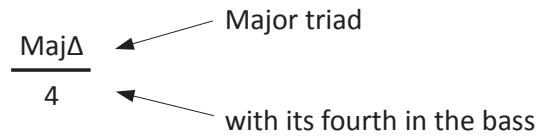


## Triads over Bass Notes

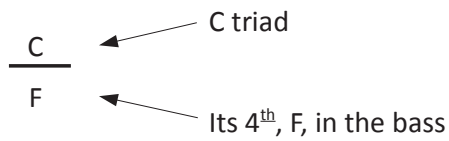
The subsequent chart contains six different forms of major, minor and suspended four triads over bass notes. I have included the bass note-to-triad relationship in addition to the common chord label.

### **Ex. 137**

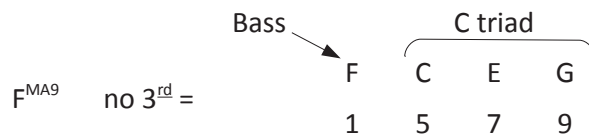
**a)**



**b)**



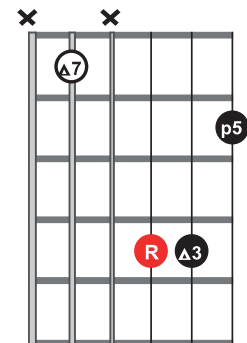
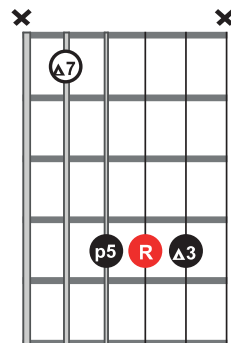
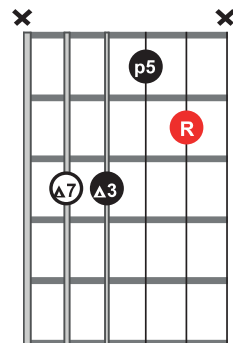
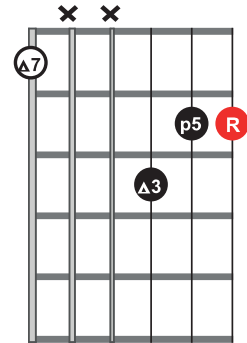
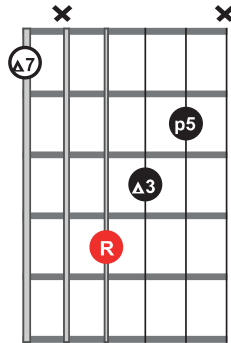
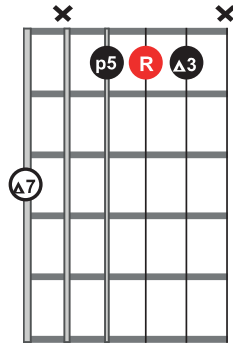
**c)** or



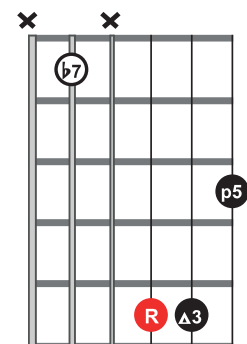
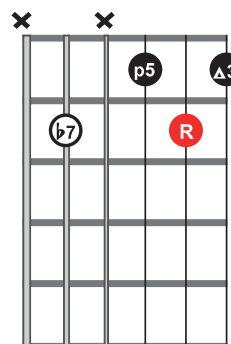
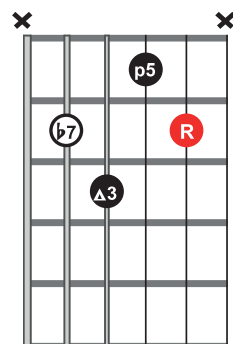
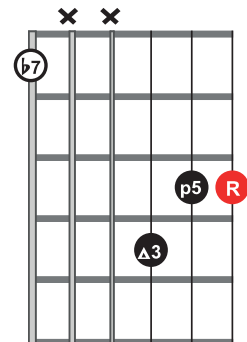
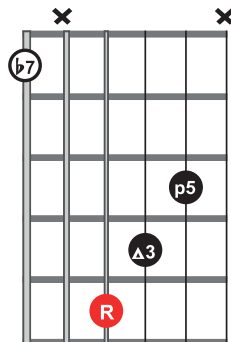
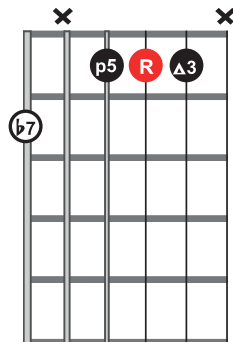


## Major Triads Bass Notes

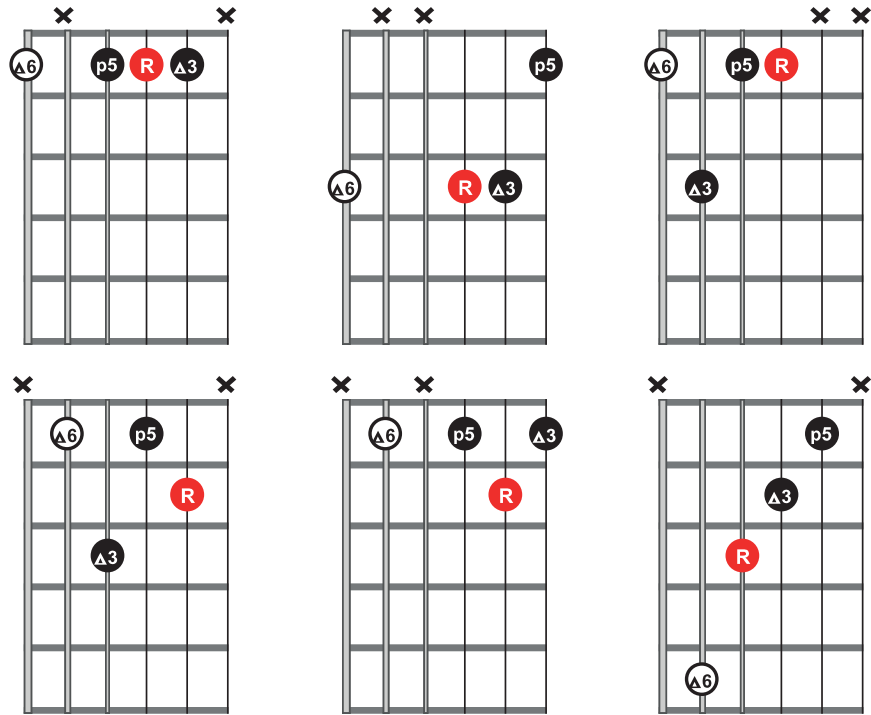
$$\frac{\text{Maj}\Delta}{7} = \text{Phrygian}$$



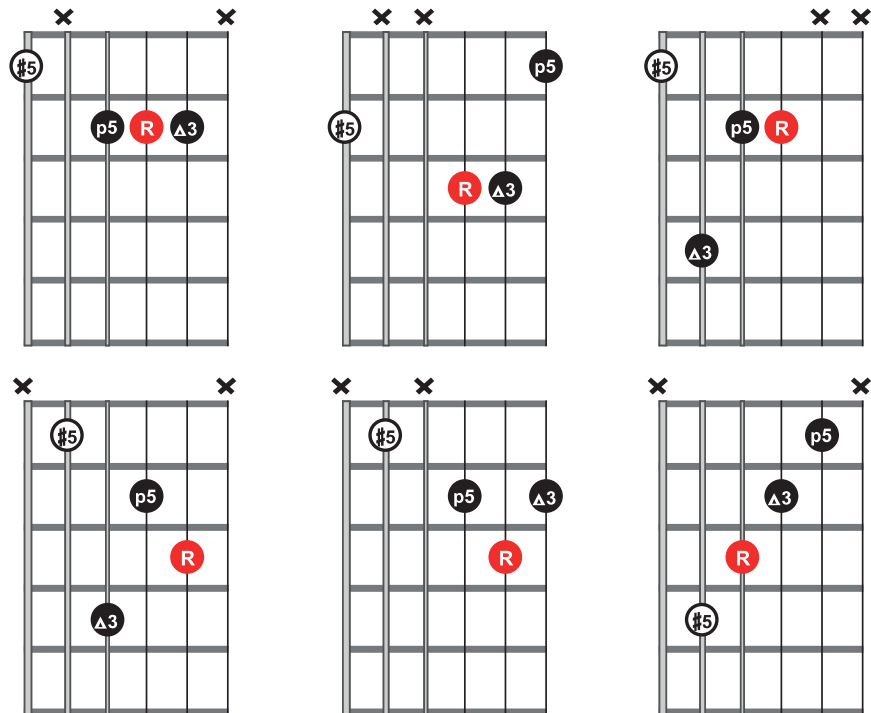
$$\frac{\text{Maj}\Delta}{b7} = \text{Dom } 2$$



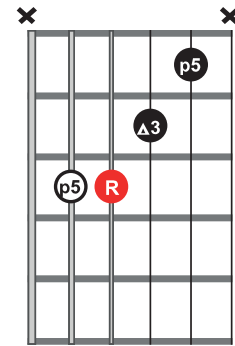
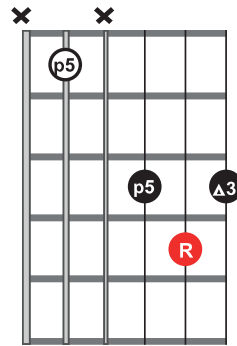
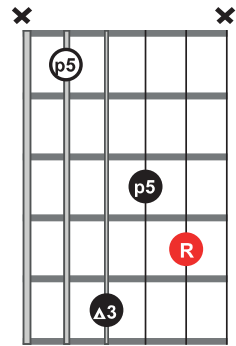
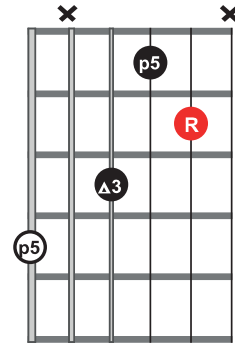
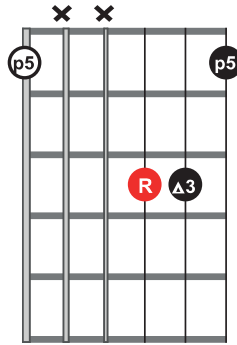
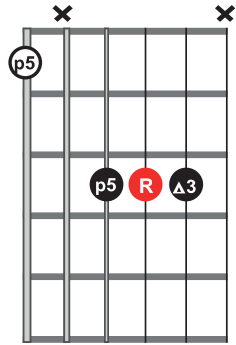
$$\frac{\text{Maj}\Delta}{6} = \text{Min}^7$$



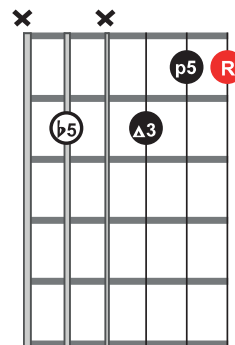
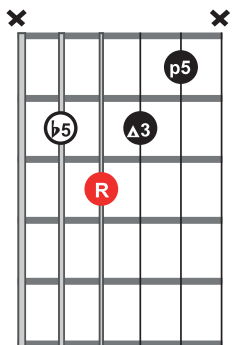
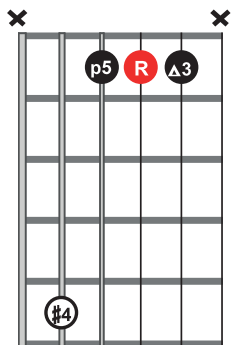
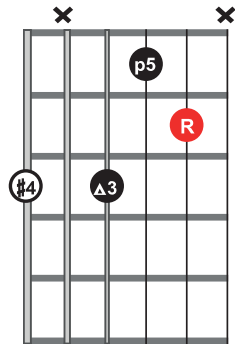
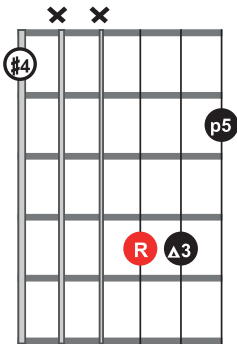
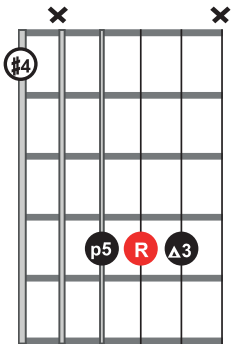
$$\frac{\text{Maj}\Delta}{\#5} = \text{Maj}^{7\#5}$$



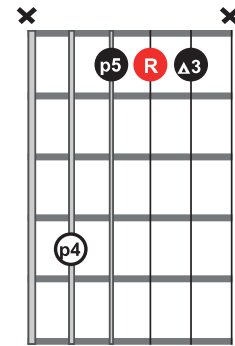
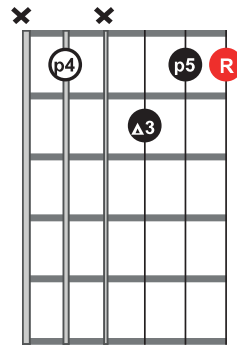
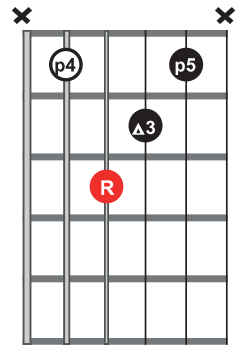
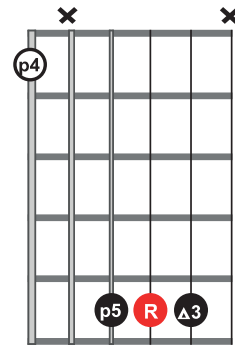
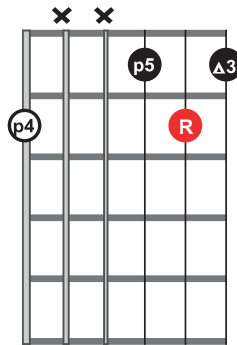
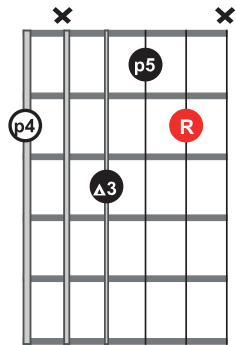
$$\frac{\text{Maj}\Delta}{5} = \text{Maj } \frac{6}{5}$$



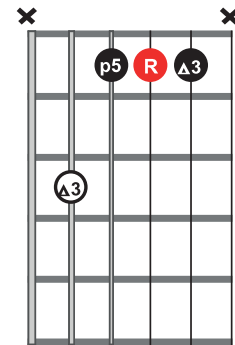
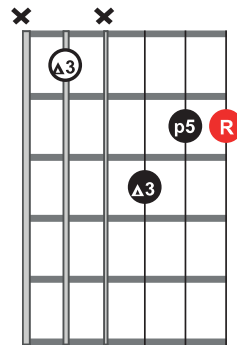
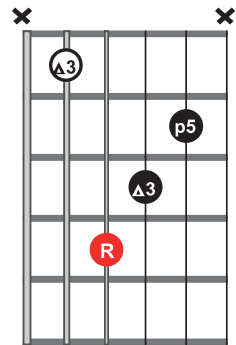
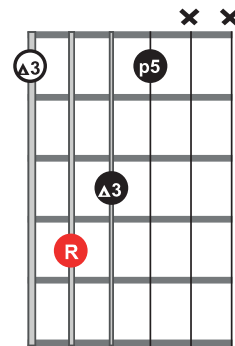
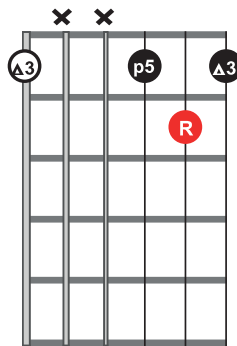
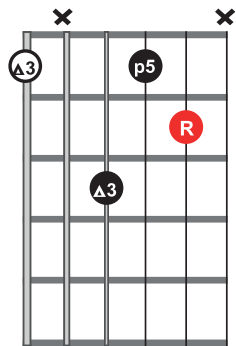
$$\frac{\text{Maj}\Delta}{\#4} = \text{Dom}^{7b9b5}$$



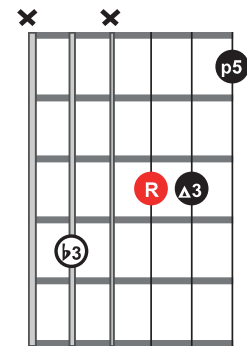
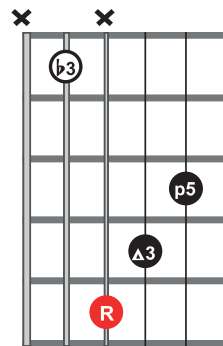
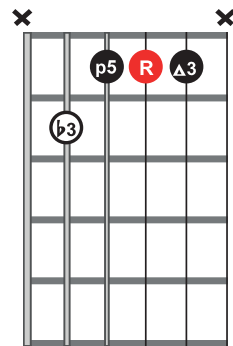
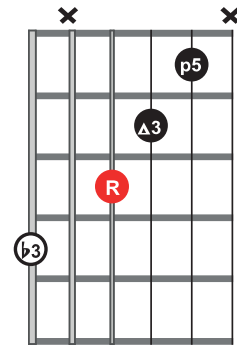
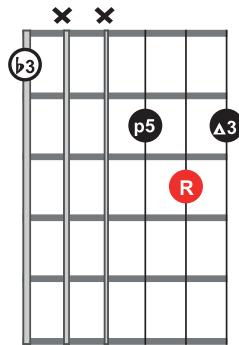
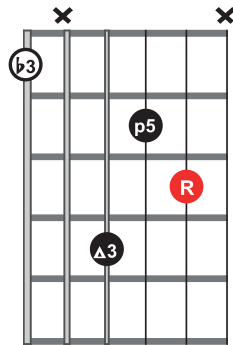
$$\frac{\text{Maj}\Delta}{4} = \text{Maj}^9 \text{ no } 3\text{rd}$$



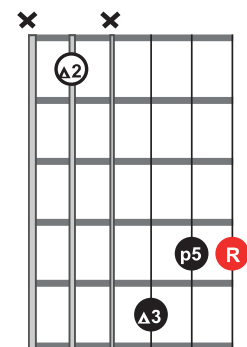
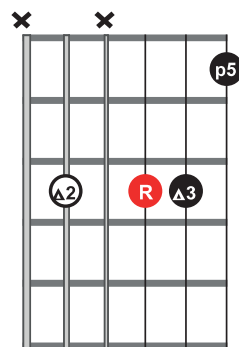
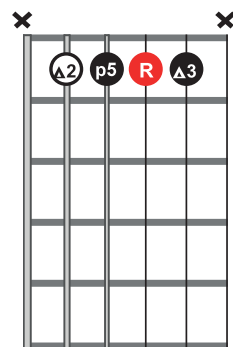
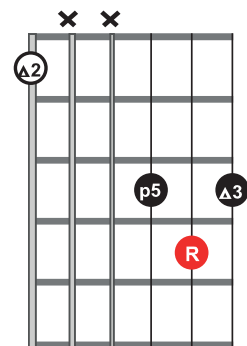
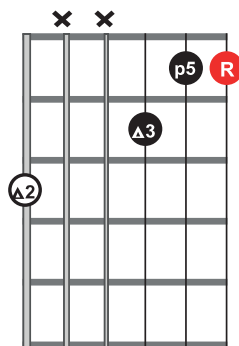
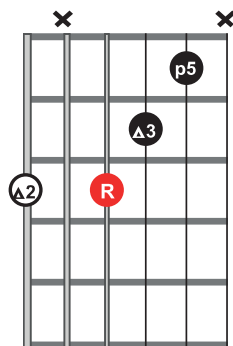
$$\frac{\text{Maj}\Delta}{3} = \text{Maj } 6$$



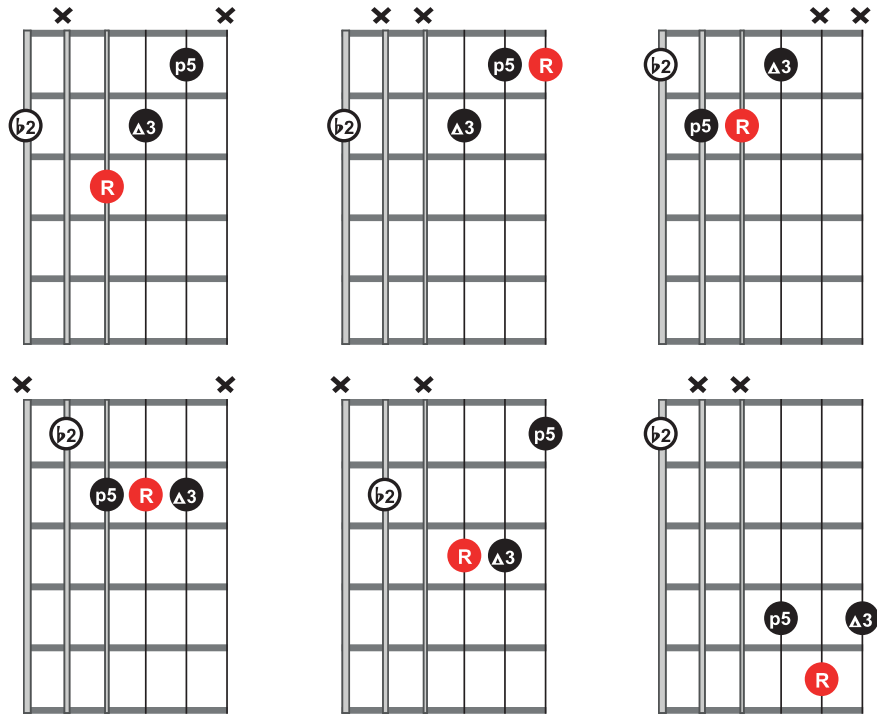
$$\frac{\text{Maj}\Delta}{b3} = \text{Dom}^{13b9 \text{ no } 7^{\text{th}}}$$



$$\frac{\text{Maj}\Delta}{9} = \text{Dom}^{11}$$

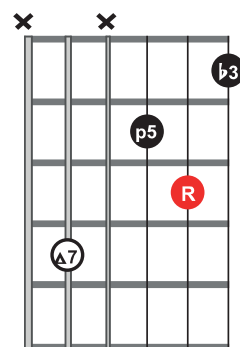
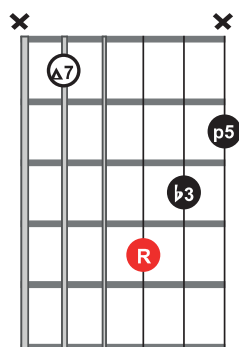
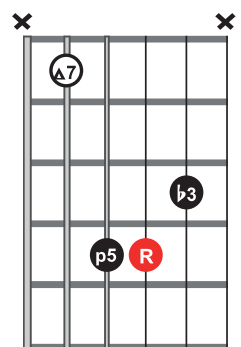
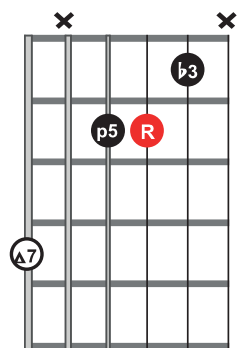
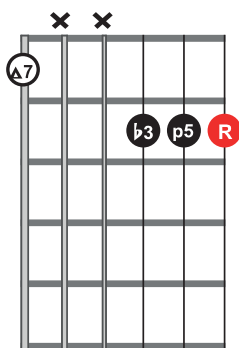
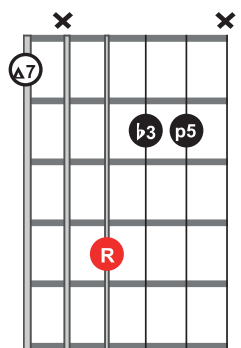


$$\frac{\text{Maj}\Delta}{b9} = \text{Dim}^{\text{maj}7}$$

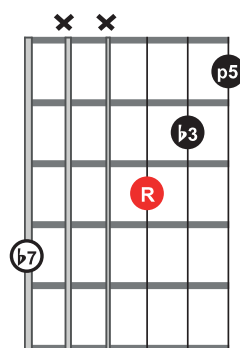
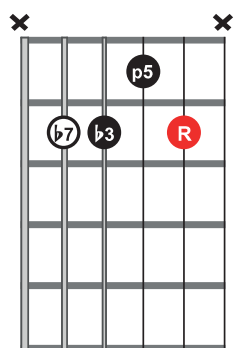
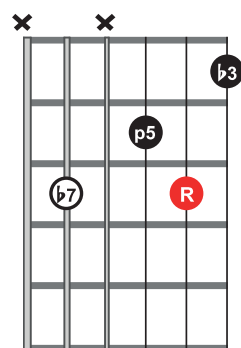
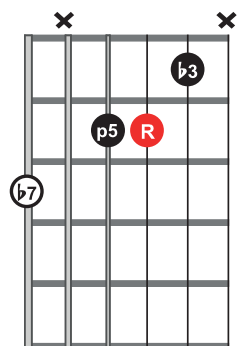
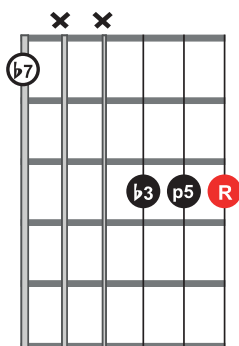
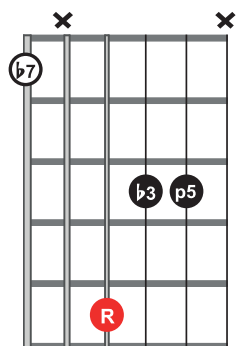


## Minor Triads Bass Notes

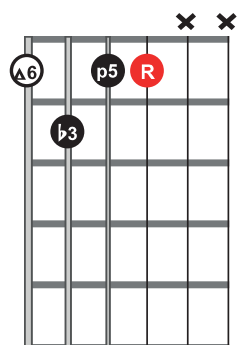
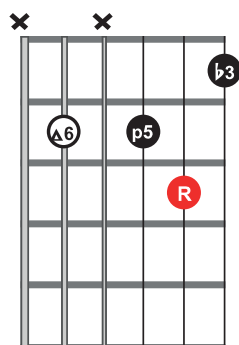
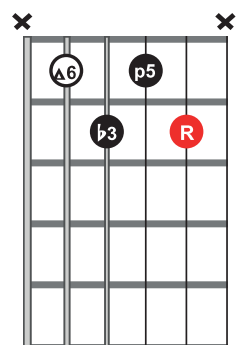
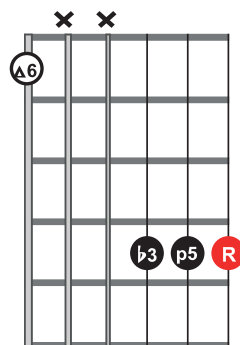
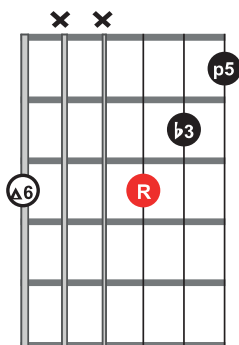
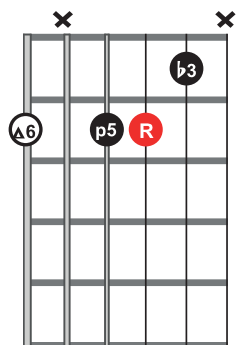
$$\frac{\text{Min}\Delta}{7} = \text{Dom}^{7/\#5/b9 \text{ no } 7}$$



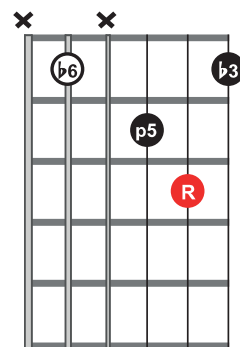
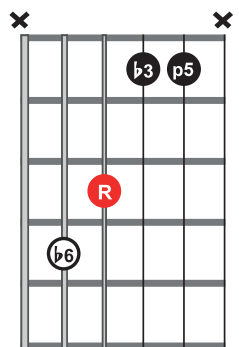
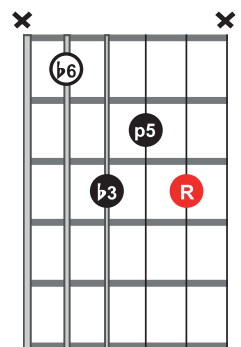
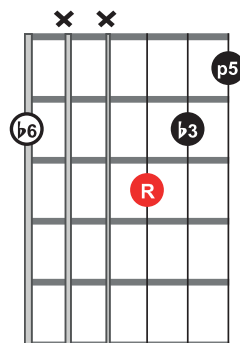
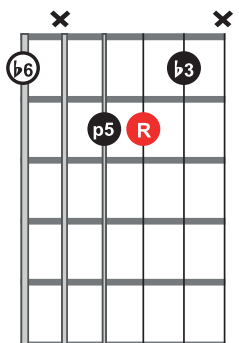
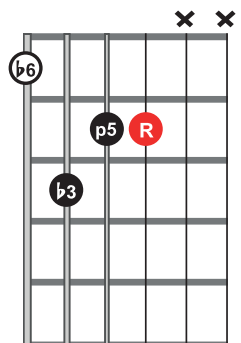
$$\frac{\text{Min}\Delta}{b7} = \frac{\text{Maj}^6}{5^{\text{th}}}$$



$$\frac{\text{Min}\Delta}{6} = \text{Min}^{7b5}$$

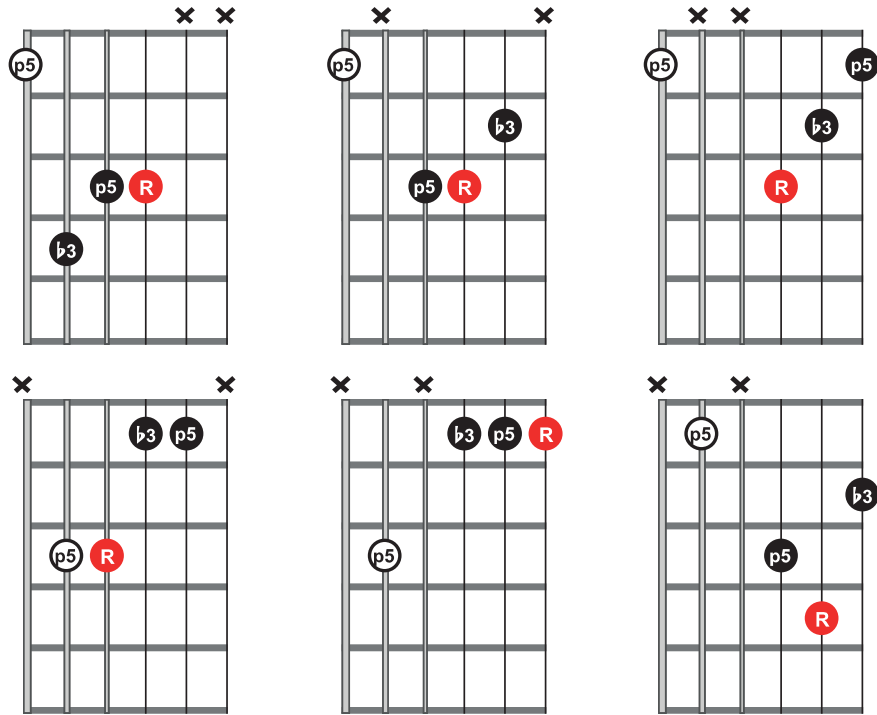


$$\frac{\text{Min}\Delta}{b6} = \text{Maj}^7$$

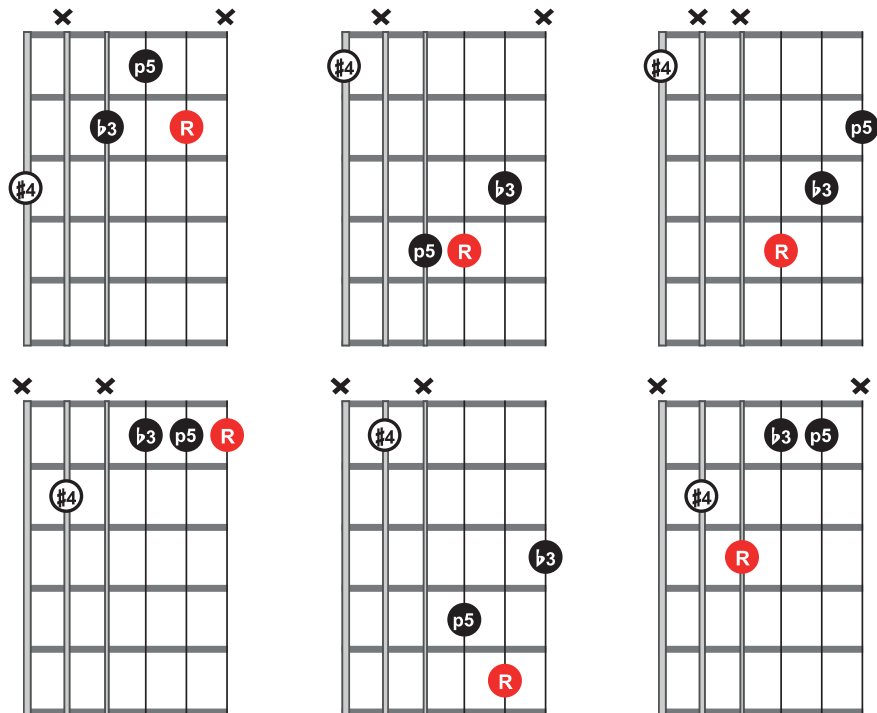




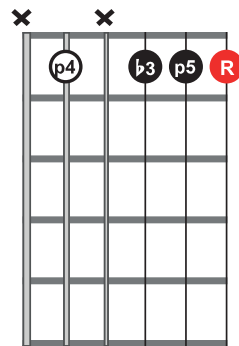
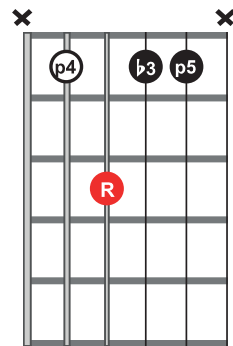
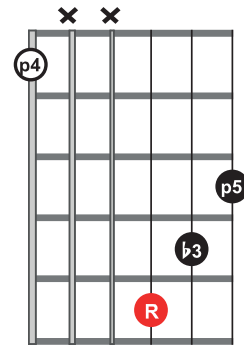
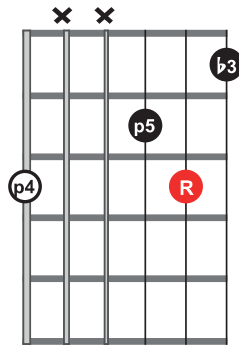
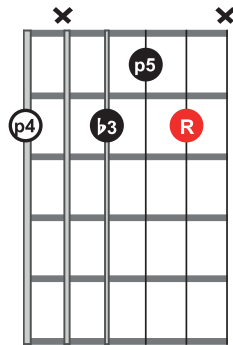
$$\frac{\text{Min}\Delta}{5} = \text{Min } \frac{6}{5}$$



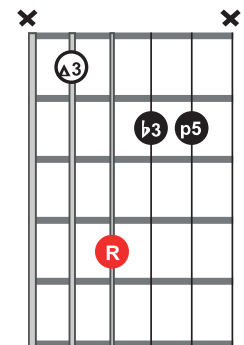
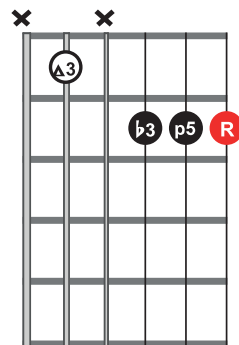
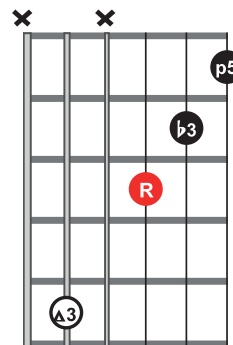
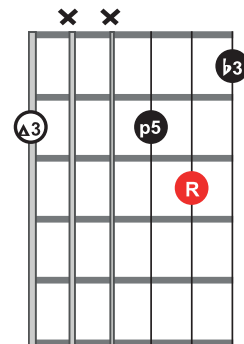
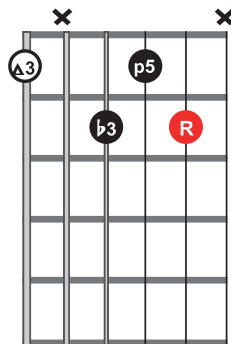
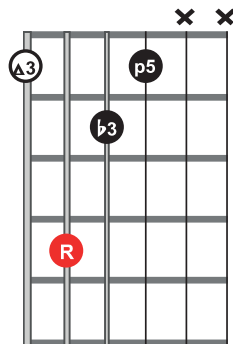
$$\frac{\text{Min}\Delta}{\#4} = \text{Dom } \frac{13/b9/b5 \text{ no } 3rd}{\#4}$$



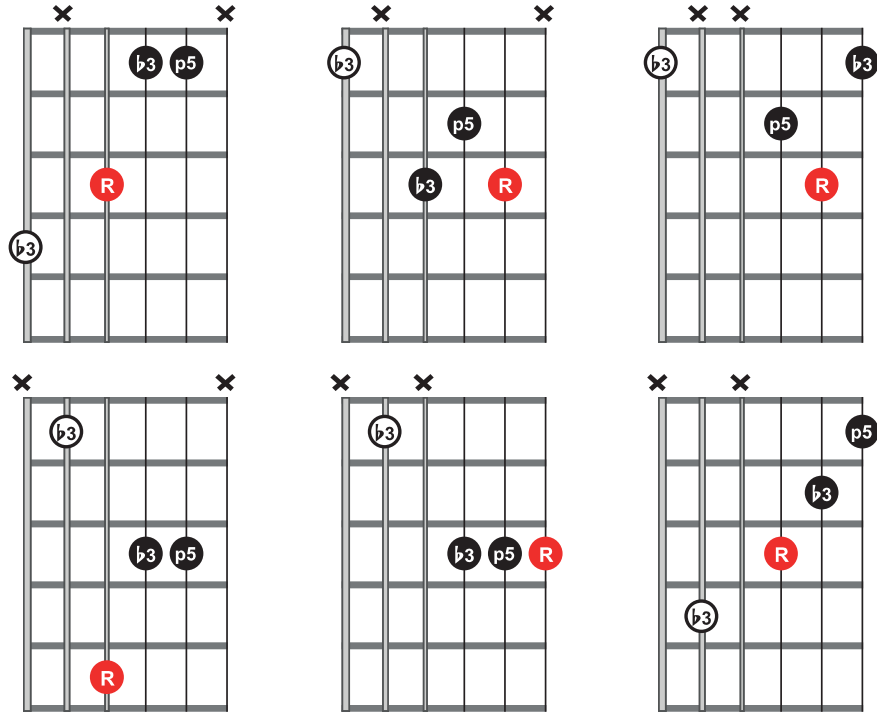
$$\frac{\text{Min}\Delta}{4} = \text{Dom}^{\text{9 no 3rd}}$$



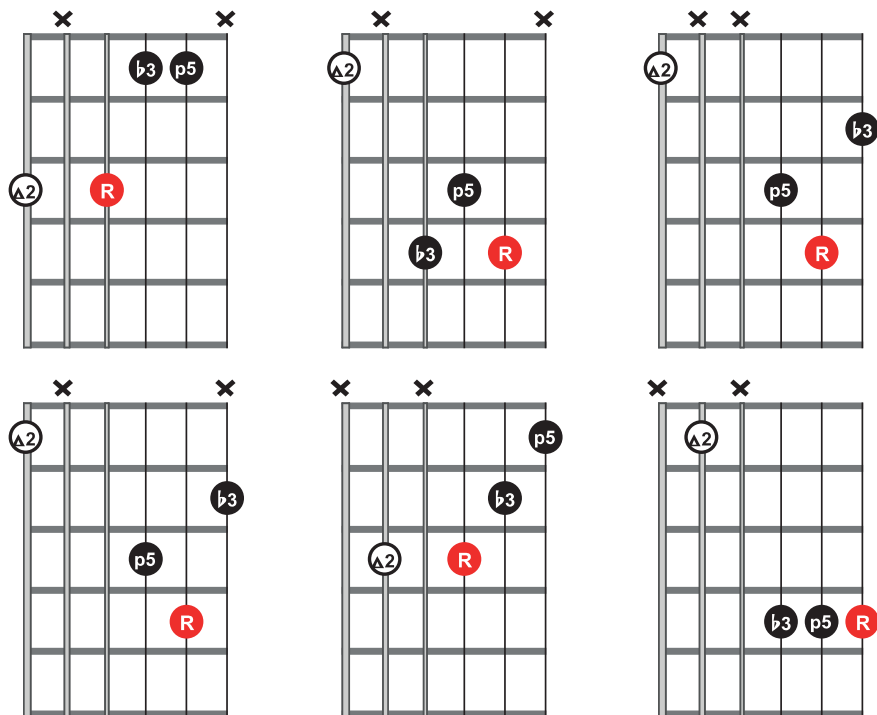
$$\frac{\text{Min}\Delta}{3} = \text{Dim}^{\text{maj7b13}}$$



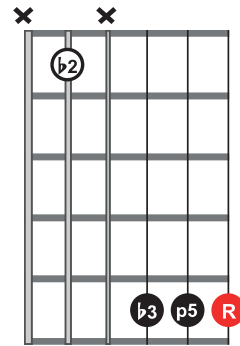
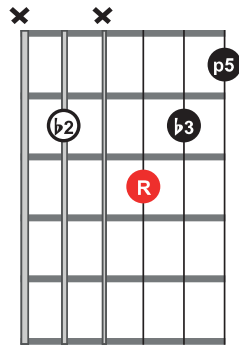
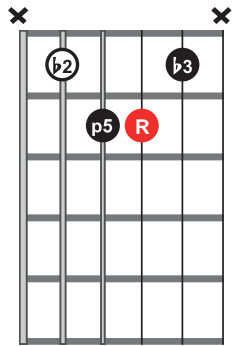
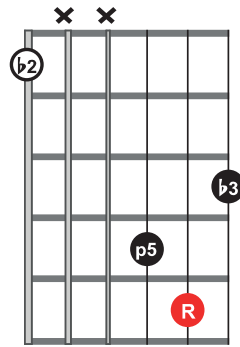
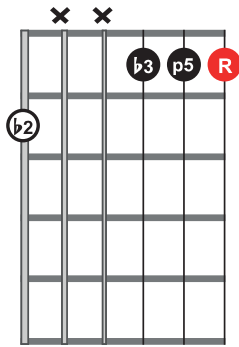
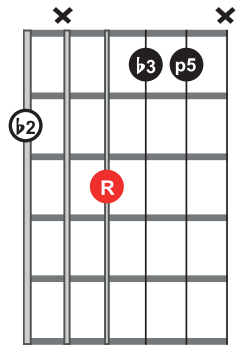
$$\frac{\text{Min}\Delta}{b3} = \text{Min } 6$$



$$\frac{\text{Min}\Delta}{9} = \text{Dom}^{11b9}$$



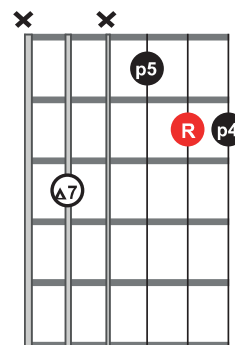
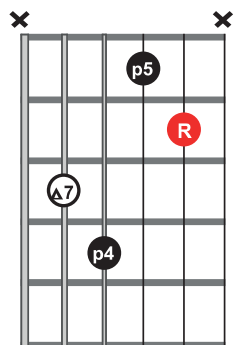
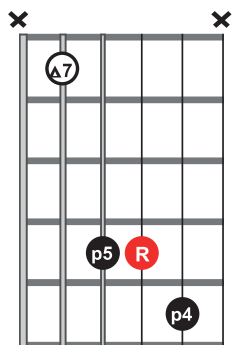
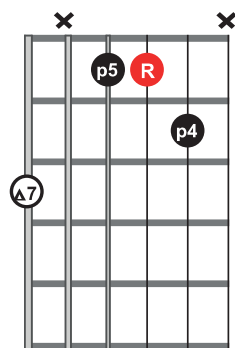
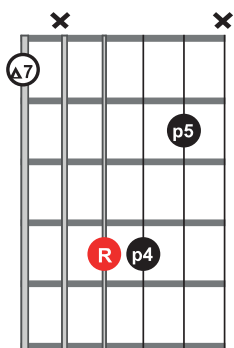
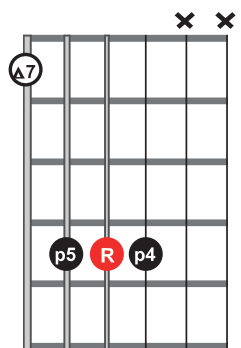
$$\frac{\text{Min}\Delta}{b_9} = \text{Dim}^{\text{maj}7}$$



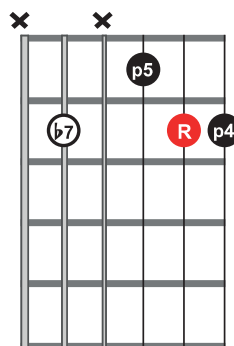
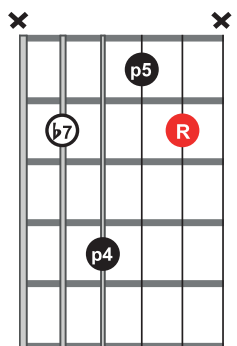
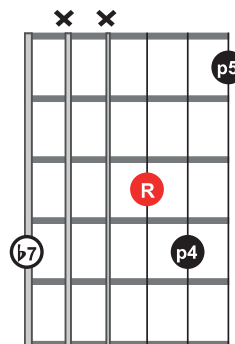
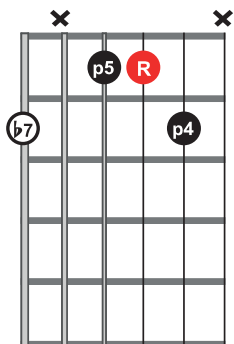
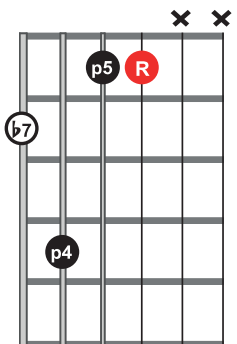
## Sus4 Triads

### Bass Notes

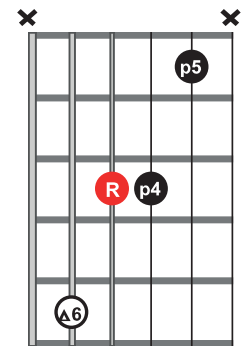
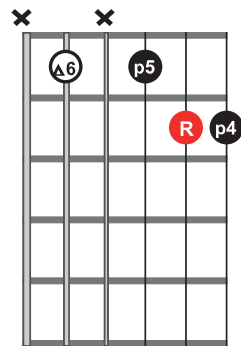
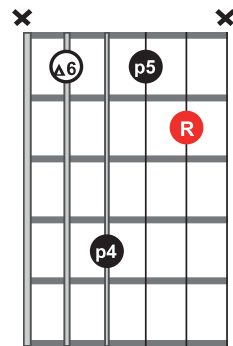
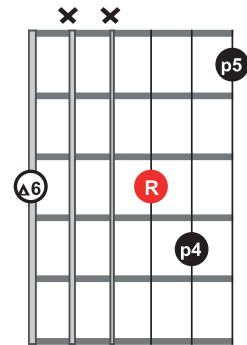
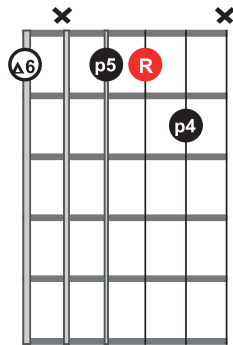
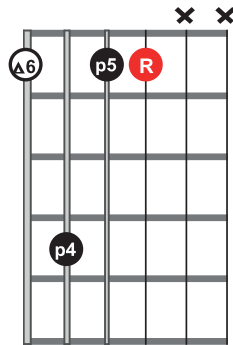
$$\frac{\text{Sus4}\Delta}{7} = \text{Dom}^{7/b9/b5/\#5}$$



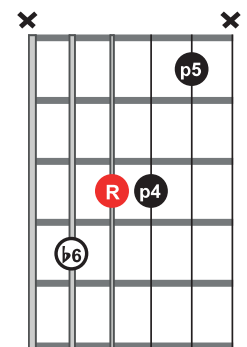
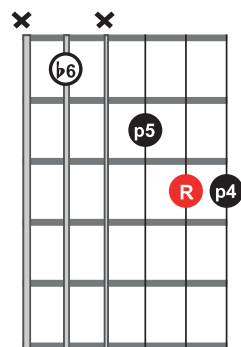
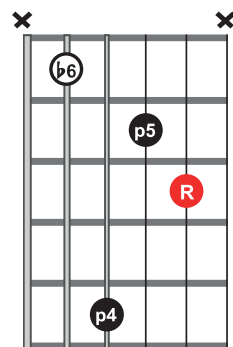
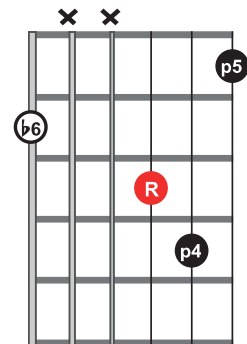
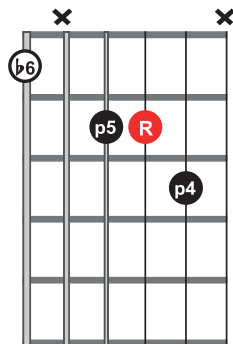
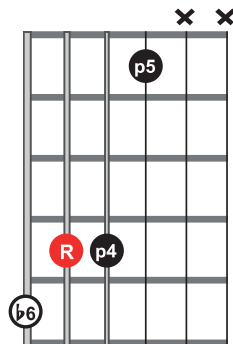
$$\frac{\text{Sus4}\Delta}{b7} = \text{Maj}^{69}$$



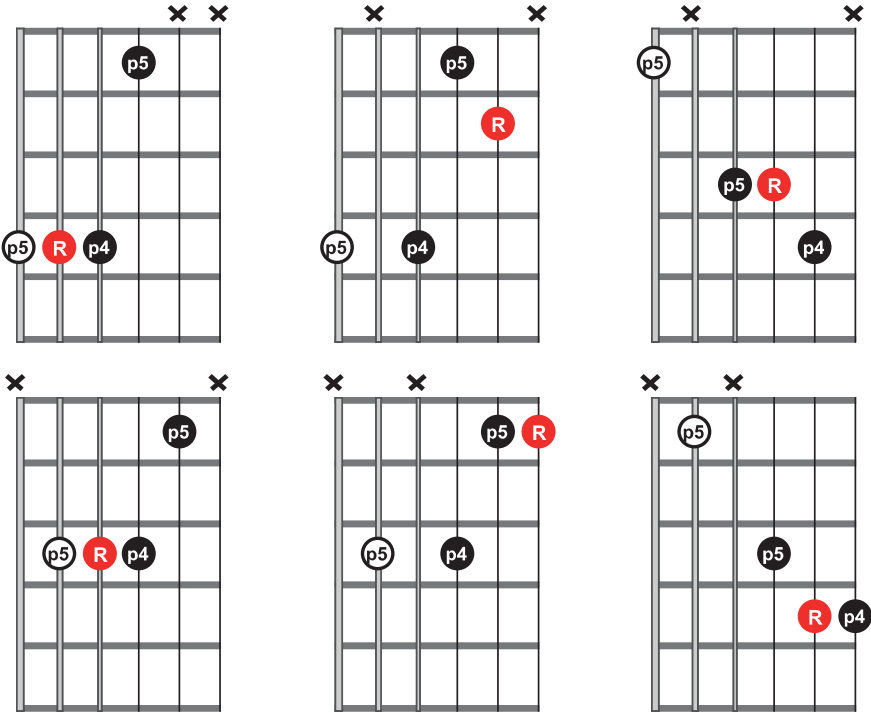
$$\frac{\text{Sus4}\Delta}{6} = \text{Min}^{7b6}$$



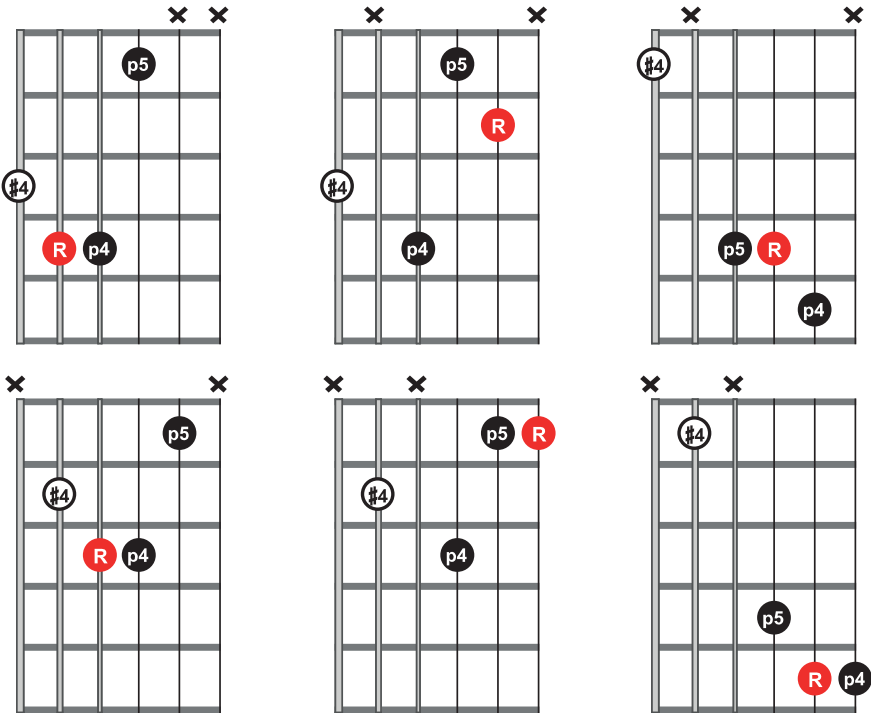
$$\frac{\text{Sus4}\Delta}{b6} = \text{Maj}^{13}$$



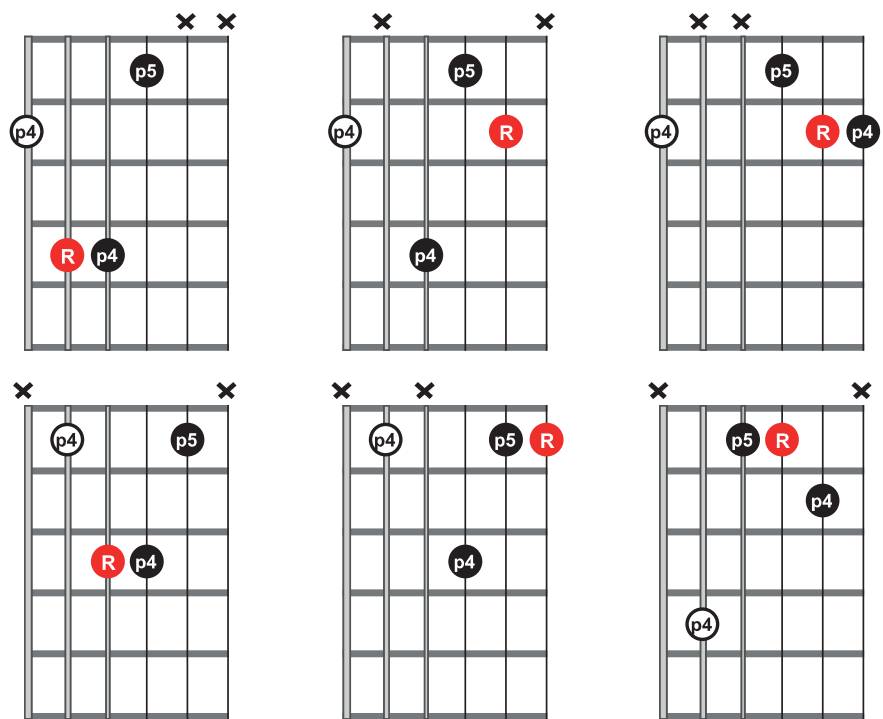
$$\frac{\text{Sus4}\Delta}{5} = \text{Dom}^{7\text{sus4}}$$



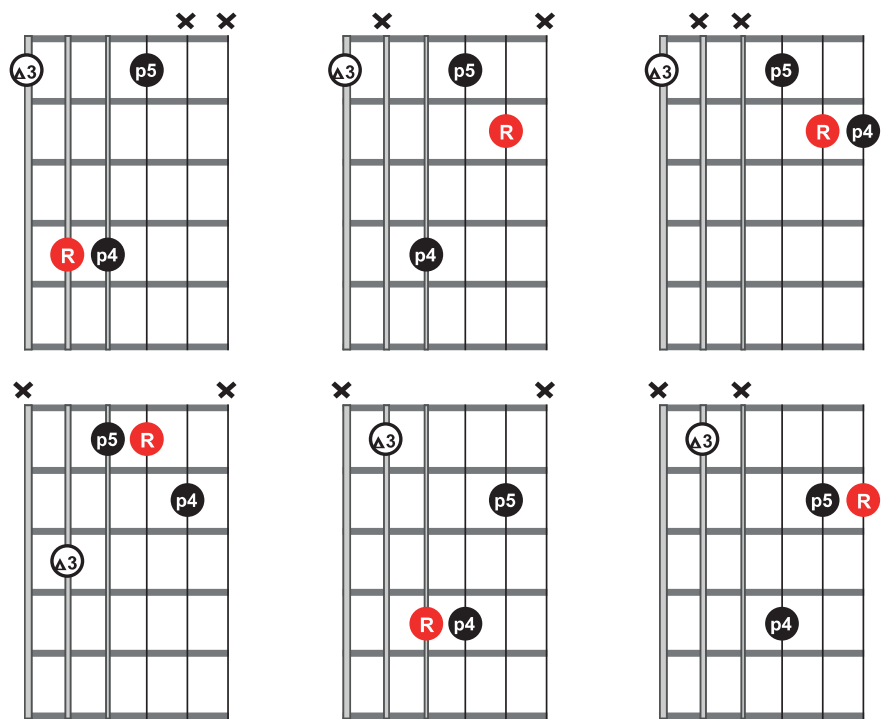
$$\frac{\text{Sus4}\Delta}{\#4} = \text{Twelve Tone}$$



$$\frac{\text{Sus4}\Delta}{4} = \text{Sus2}$$

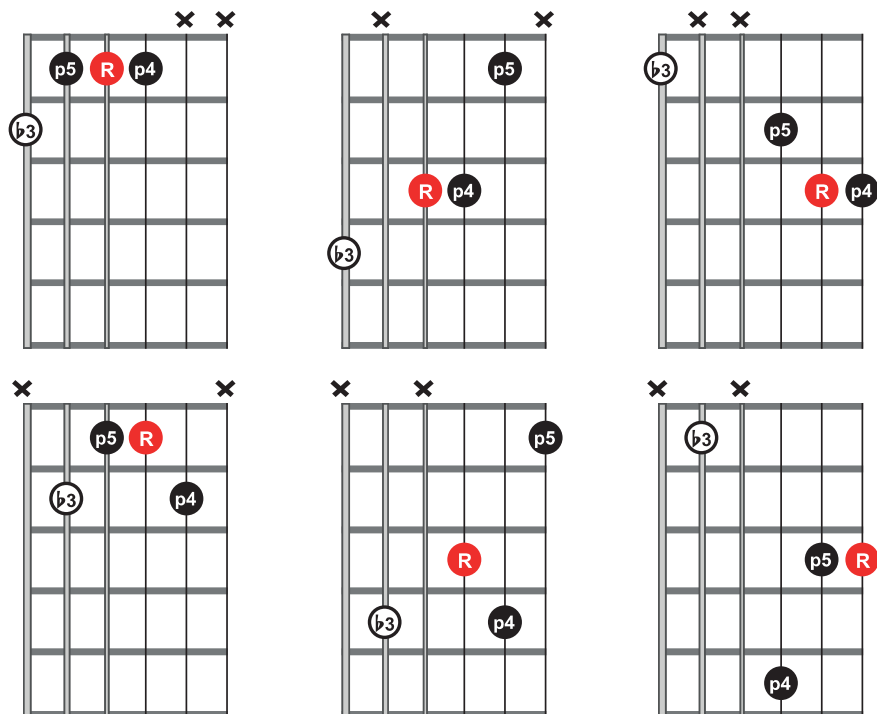


$$\frac{\text{Sus4}\Delta}{3} = \begin{matrix} \text{Dom}^{7/b9/b5/\#9} \\ \text{Min}^{7/b9b6} \end{matrix}$$

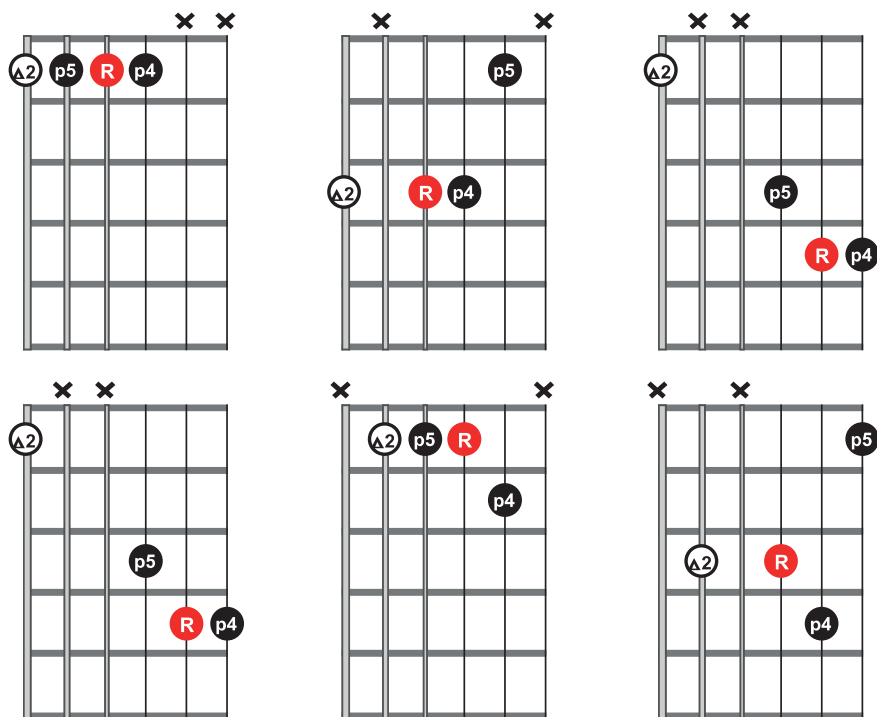




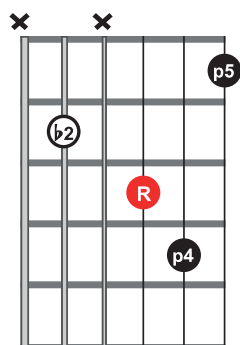
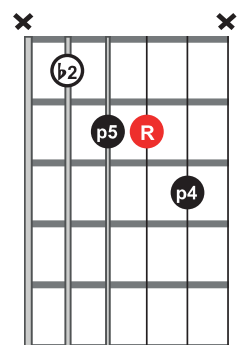
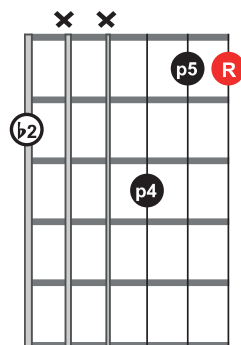
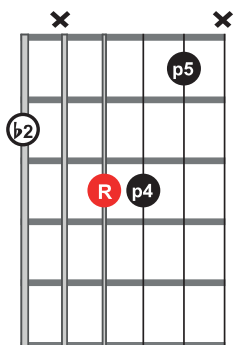
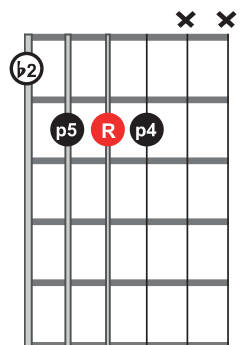
$$\frac{\text{Sus4}\Delta}{b3} = \text{Maj}^{69}$$



$$\frac{\text{Sus4}\Delta}{9} = \text{Min}^{11}$$



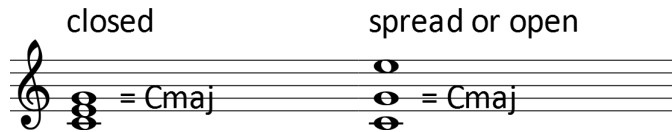
$$\frac{\text{Sus4}\Delta}{b9} = \text{Maj}^{7b5}$$



## Spread triads over bass notes

The term spread triad over bass note implies a triad in which the middle note has been raised an octave.

### **Ex. 138**



Whenever possible, the spread triads over bass notes have been reduced to seventh chord structures.

### **Ex. 139**

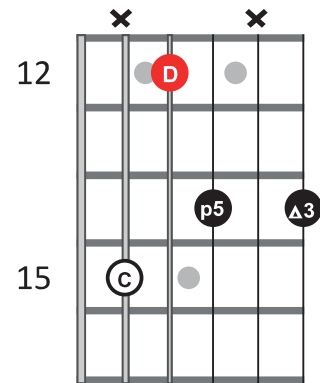
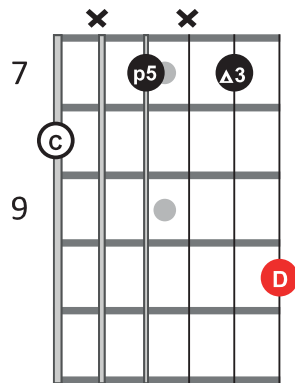
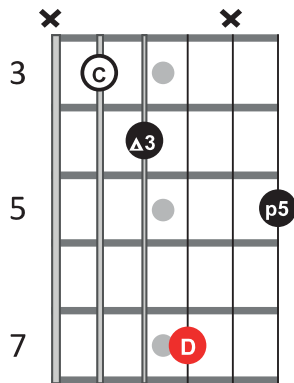
$$\frac{E}{C} = Cmaj^{7\#5} = C \quad \begin{array}{c} E \\ \overbrace{E \quad G\# \quad B} \\ 1 \quad 3 \quad \#5 \quad 7 \end{array}$$

Because  $\frac{C}{E}$  is a type of Cmajor chord it will be listed in the major chord category. The voicings labeled "Twelve Tone type" are derived from the chromatic scale. These only include chords with three consecutive chromatic tones as in:

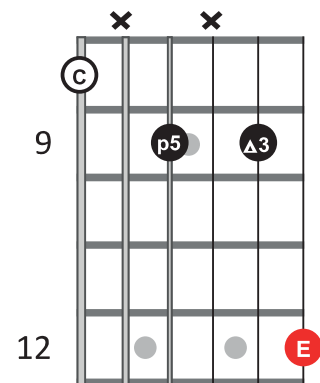
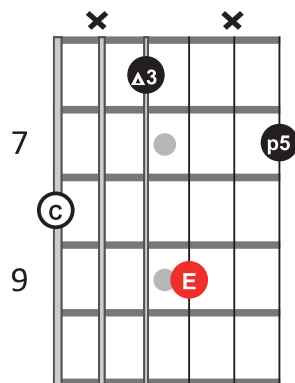
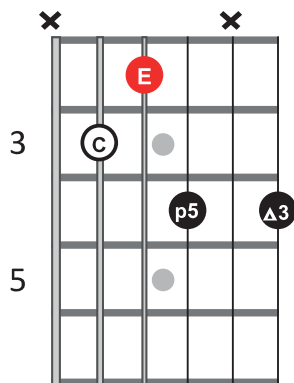
$$\frac{ELyd}{C} = C \quad \begin{array}{c} ELyd \\ \overbrace{E \quad A\# \quad B} \\ 3\frac{1}{2} \text{ step intervals} \end{array}$$

## Major Type Spread Triads Bass Notes (C)

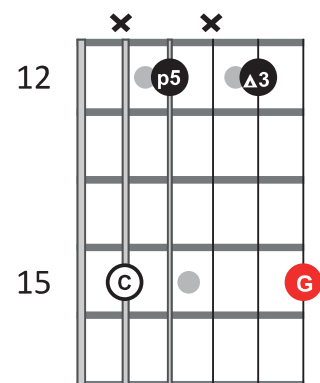
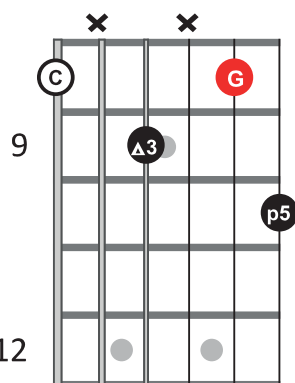
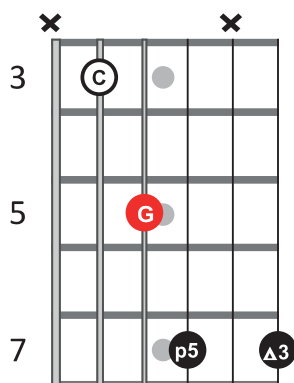
$\frac{D}{C}$



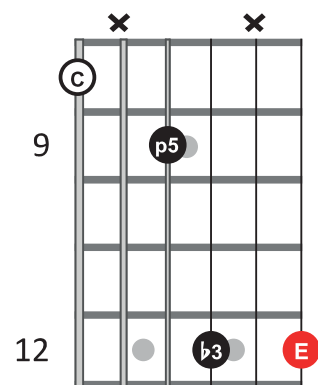
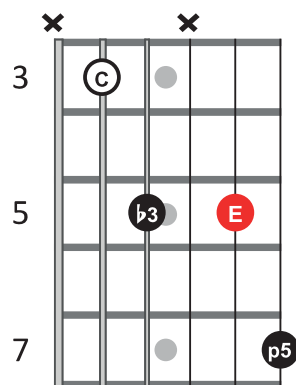
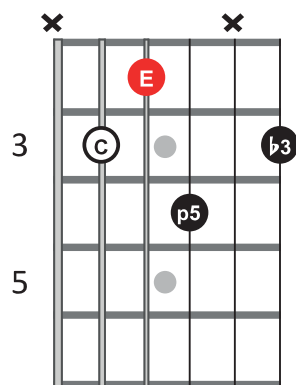
$\frac{E}{C}$



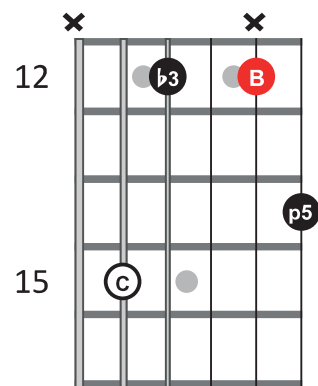
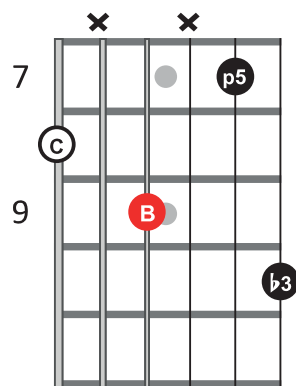
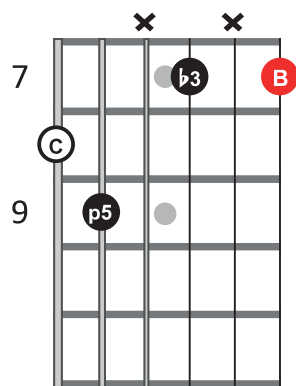
$\frac{G}{C}$



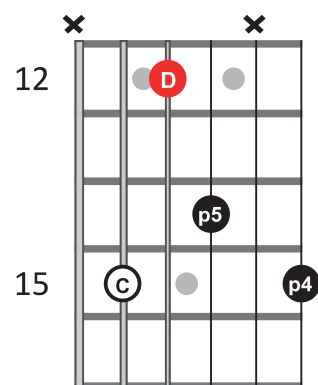
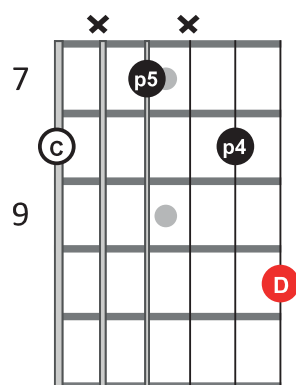
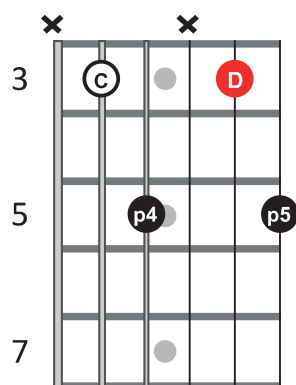
$$\frac{E-}{C}$$



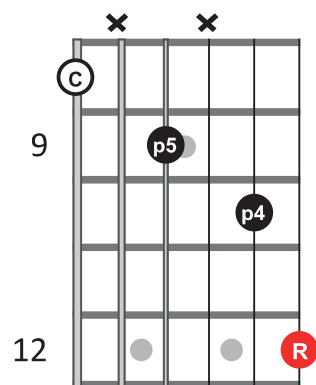
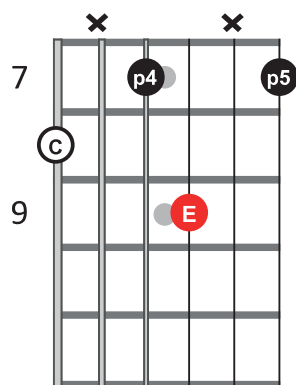
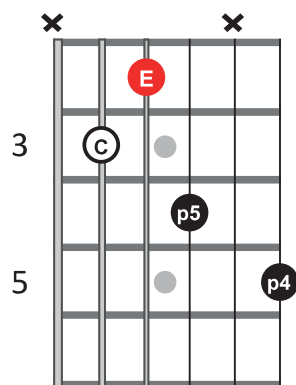
$$\frac{B-}{C}$$



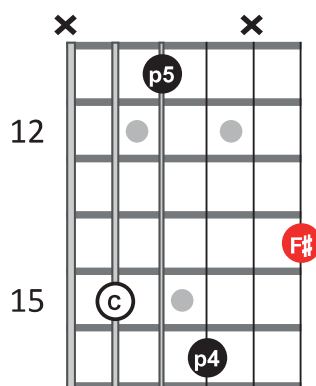
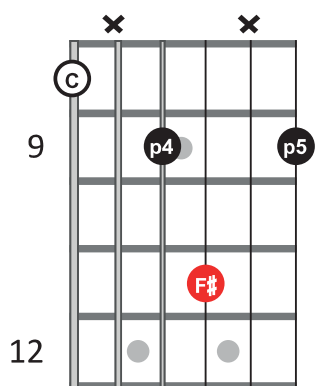
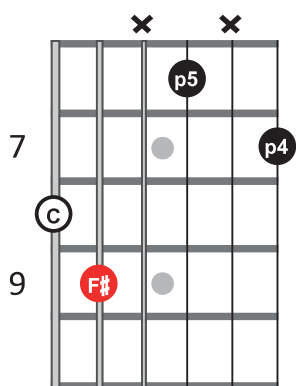
$$\frac{D^{sus4}}{C}$$



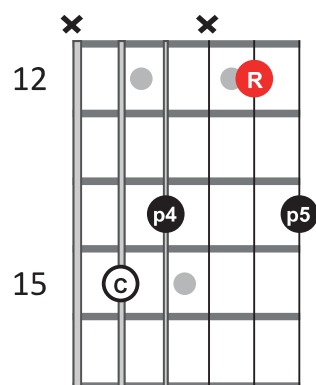
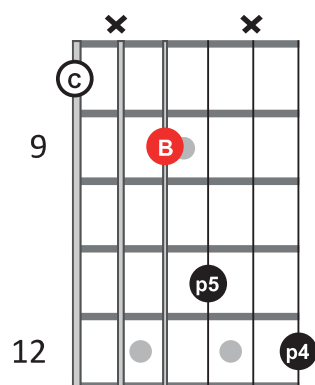
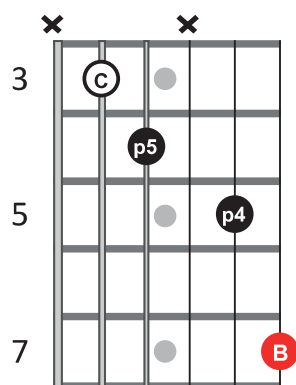
$$\frac{E^{sus4}}{C}$$



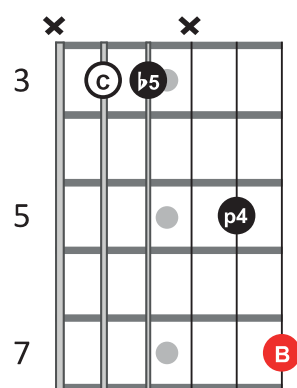
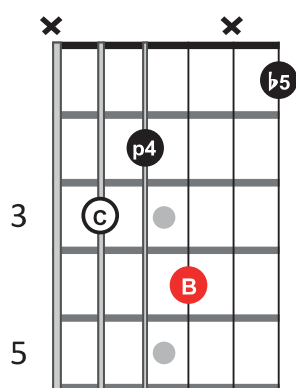
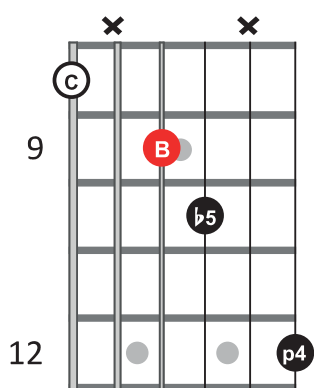
$$\frac{F\#^{sus4}}{C}$$



$$\frac{B^{sus4}}{C}$$

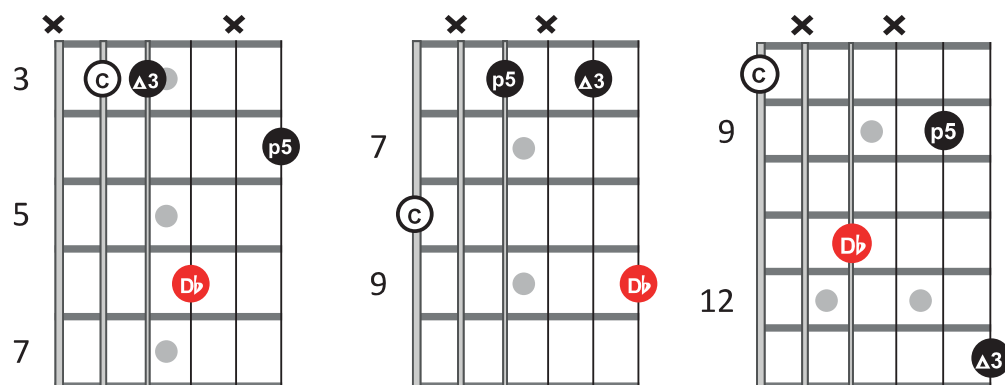


$$\frac{B^{loc}}{C}$$

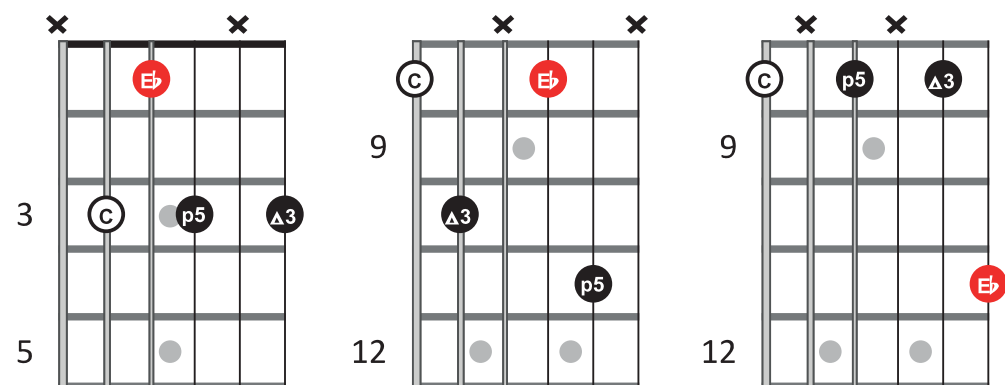


## Minor Type Spread Triads Bass Notes (C)

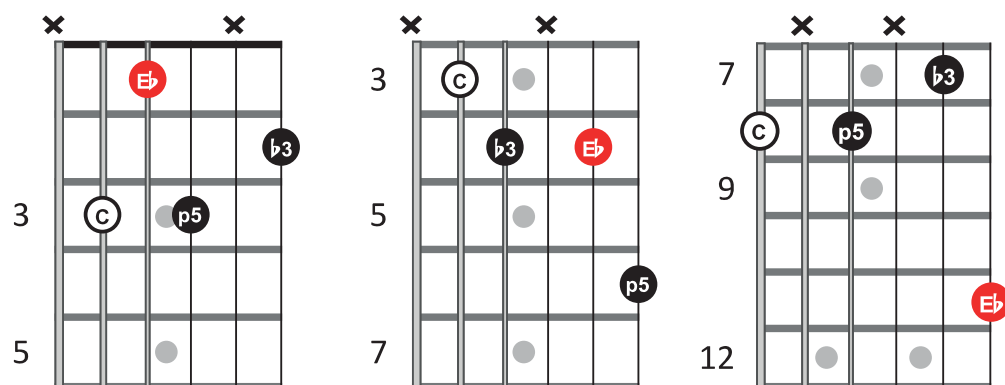
$\frac{D\flat}{C}$



$\frac{E\flat}{C}$

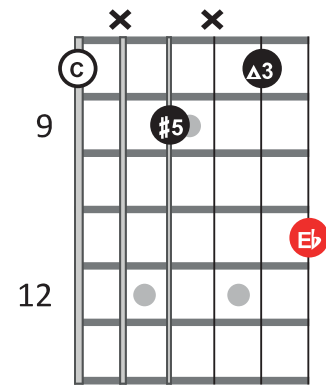
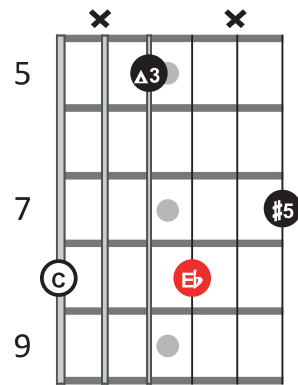
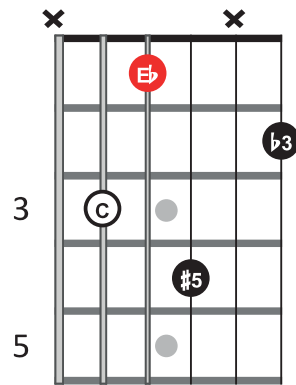


$\frac{E\flat-}{C}$

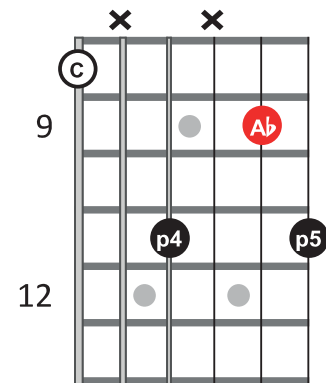
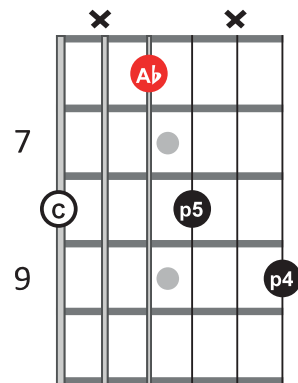
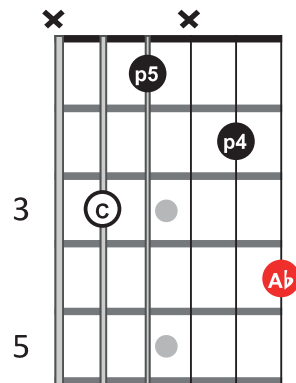




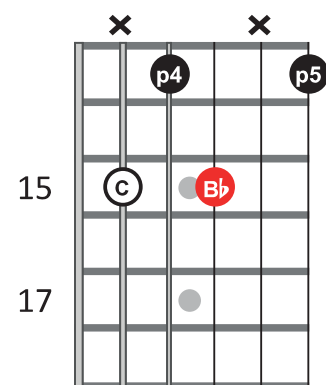
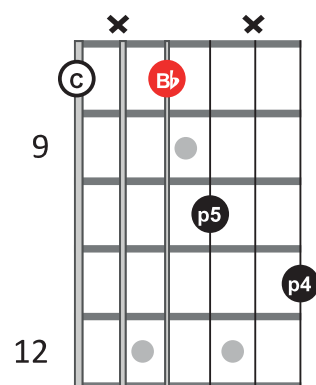
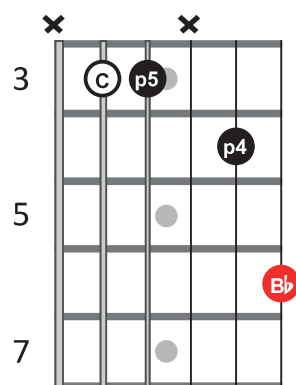
$$\frac{Eb+}{C}$$



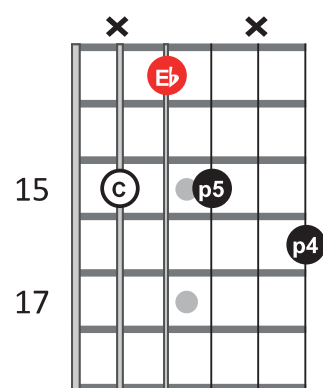
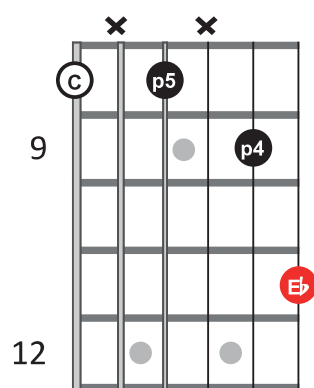
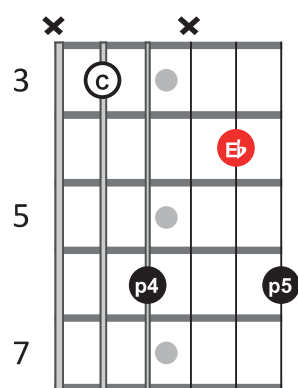
$$\frac{Ab^{sus4}}{C}$$



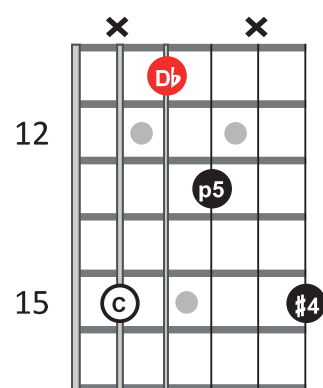
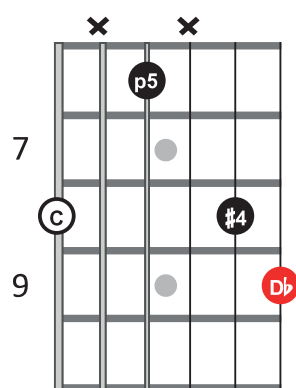
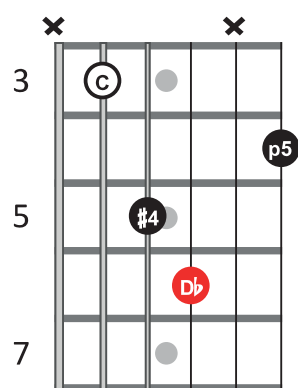
$$\frac{Bb^{sus4}}{C}$$



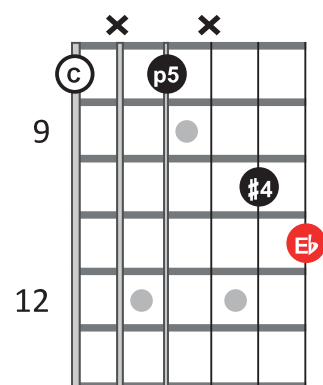
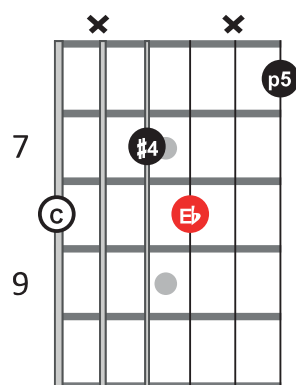
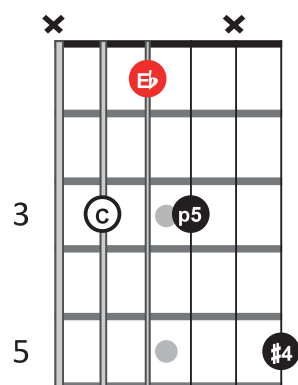
$$\frac{Eb^{sus4}}{C}$$



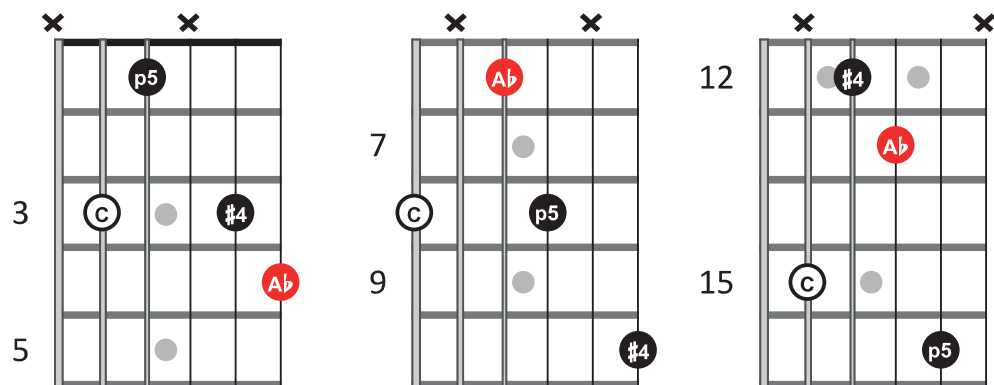
$$\frac{Db^{lyd}}{C}$$



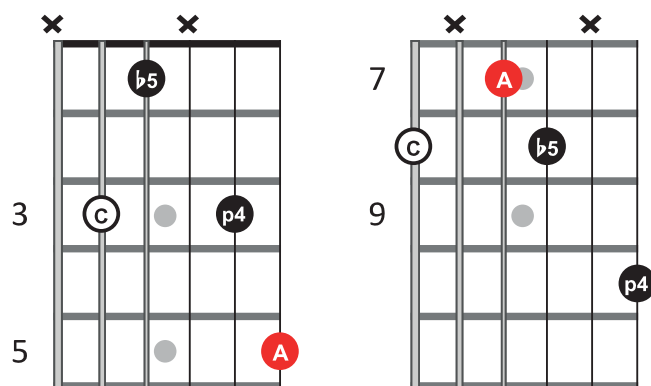
$$\frac{Eb^{lyd}}{C}$$



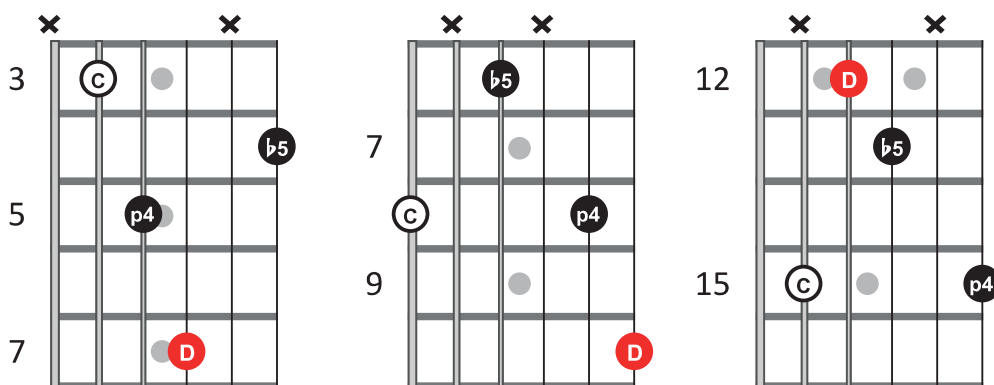
$$\frac{Ab^{lyd}}{C}$$



$$\frac{A^{loc}}{C}$$

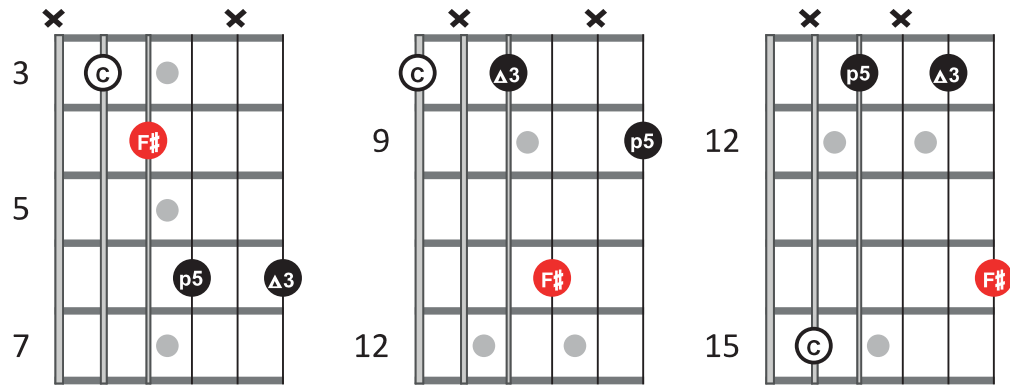


$$\frac{D^{loc}}{C}$$

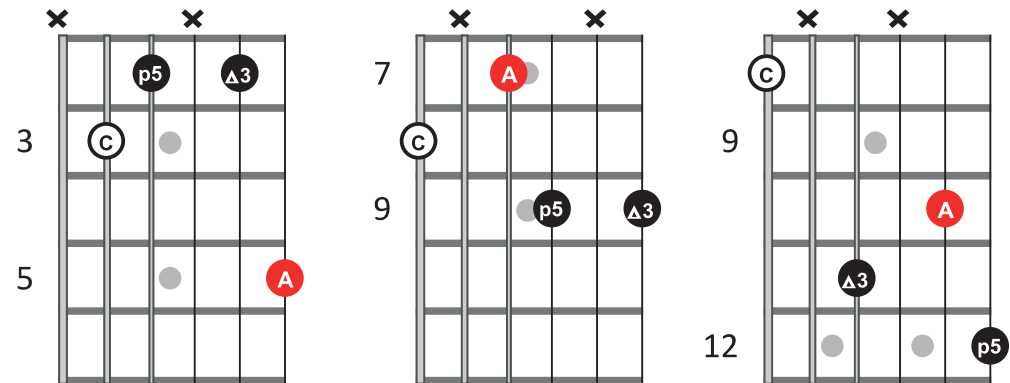


# Dom<sup>7</sup> Type Spread Triads Bass Notes (C)

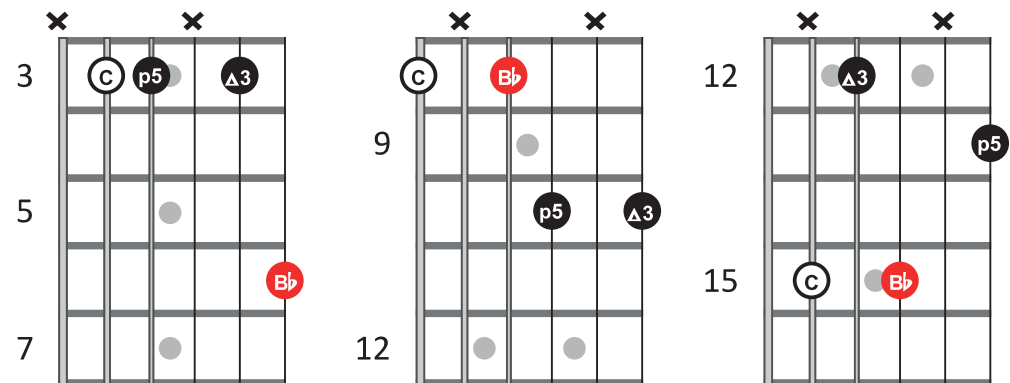
$\frac{F\#}{C}$



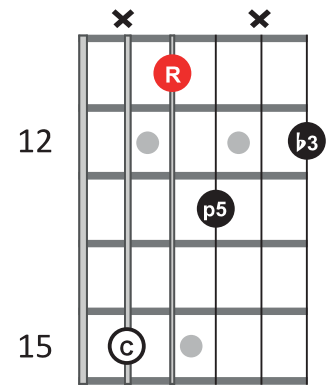
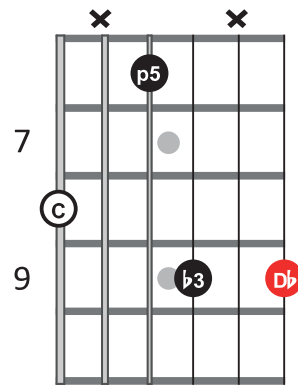
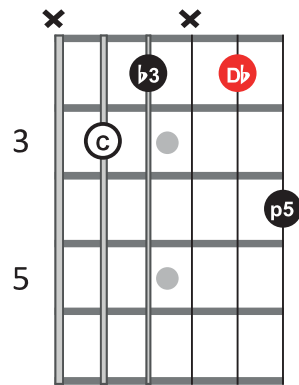
$\frac{A}{C}$



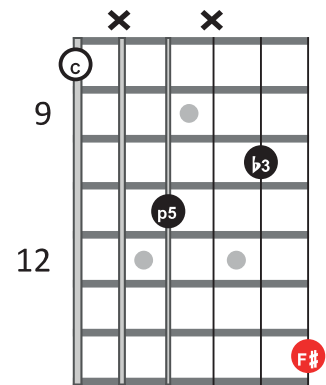
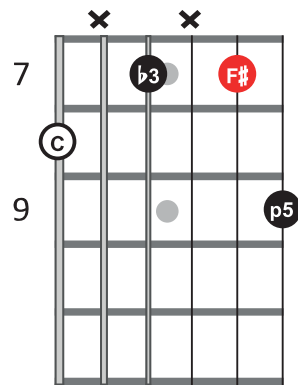
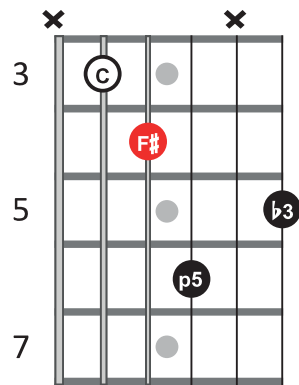
$\frac{Bb}{C}$



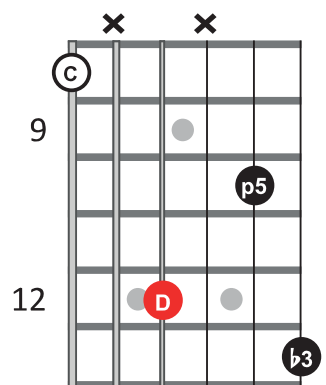
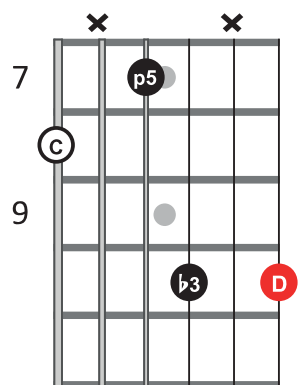
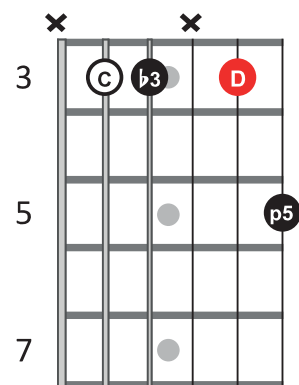
Db-  
C



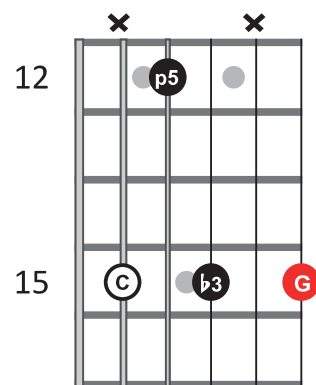
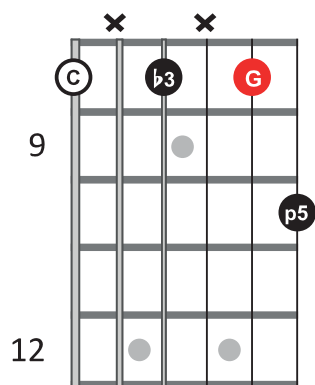
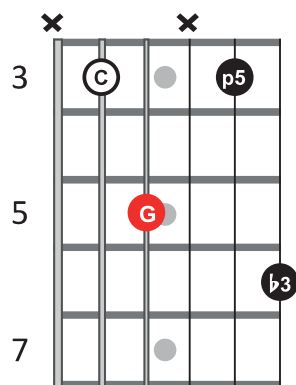
F#-  
C



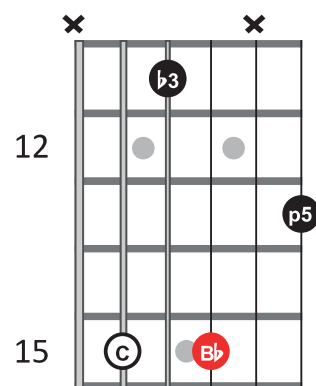
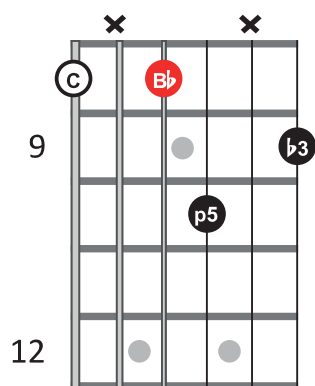
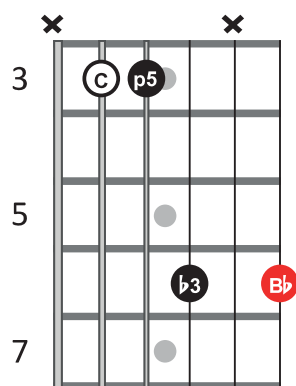
D-  
C



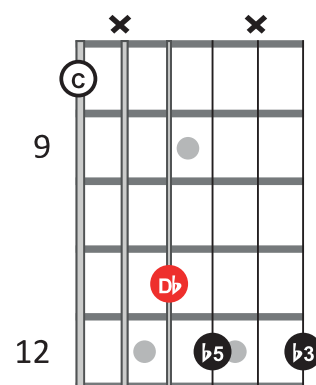
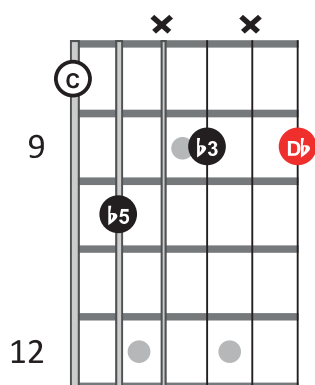
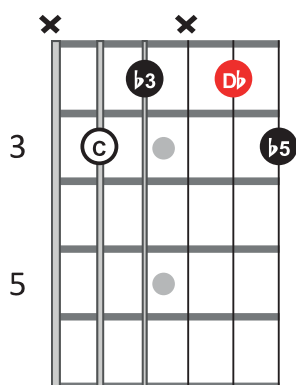
$$\frac{G-}{C}$$



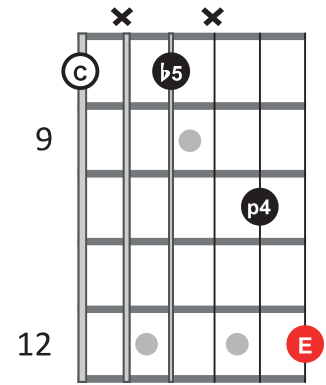
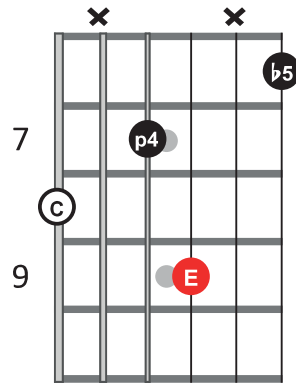
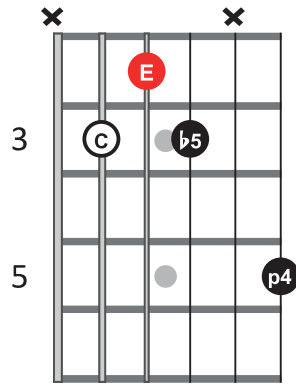
$$\frac{Bb-}{C}$$



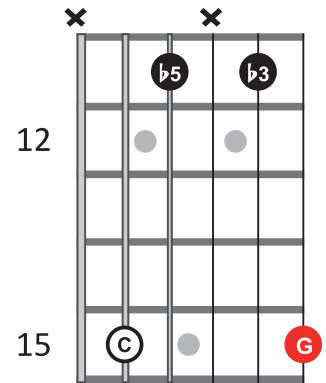
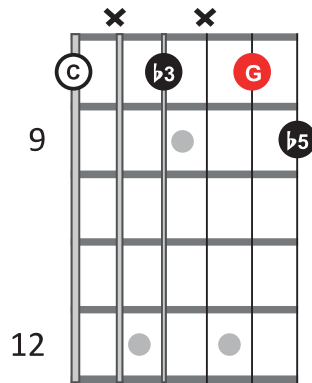
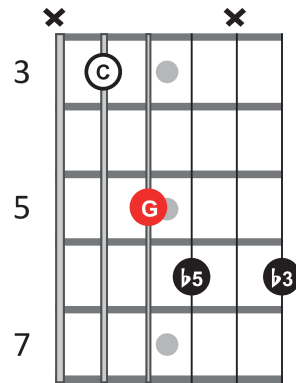
$$\frac{Db^{\circ}}{C}$$



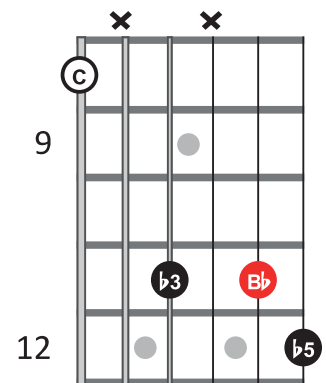
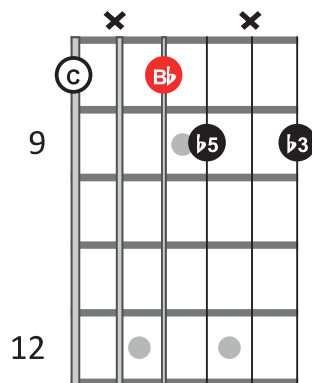
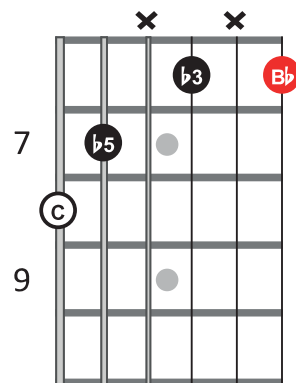
$$\frac{E^\circ}{C}$$



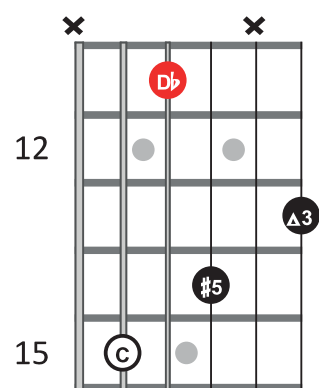
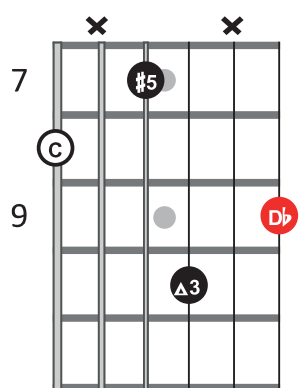
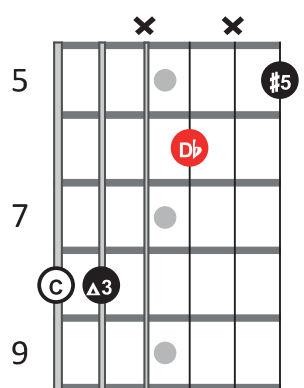
$$\frac{G^\circ}{C}$$



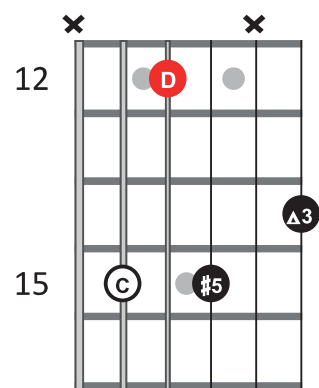
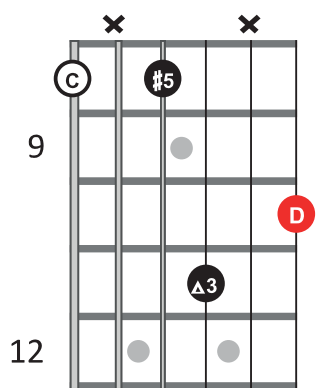
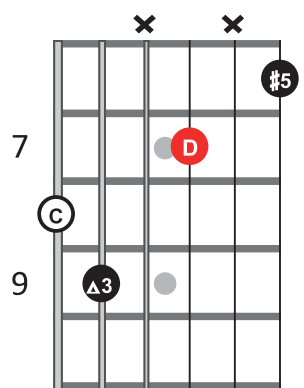
$$\frac{Bb^\circ}{C}$$



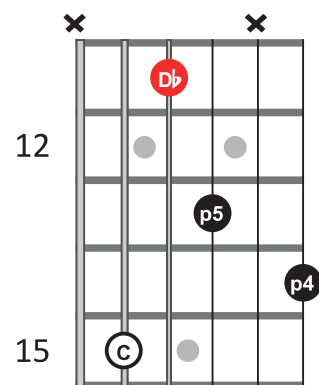
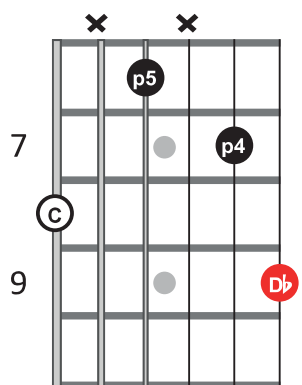
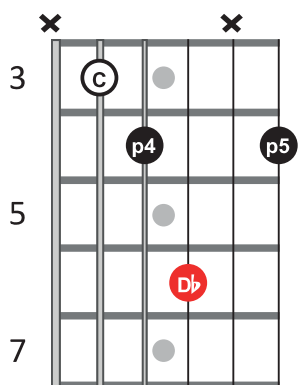
$$\frac{Db+}{C}$$



$$\frac{D+}{C}$$

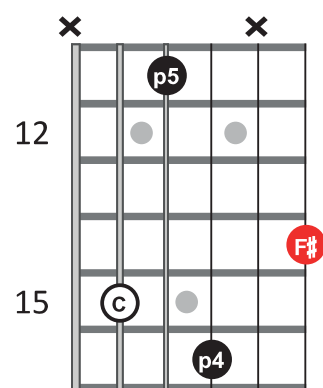
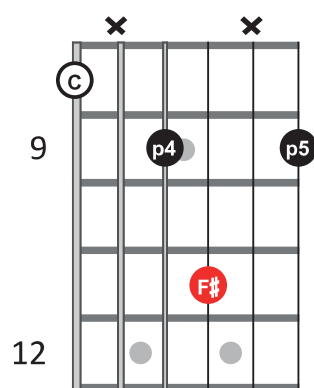
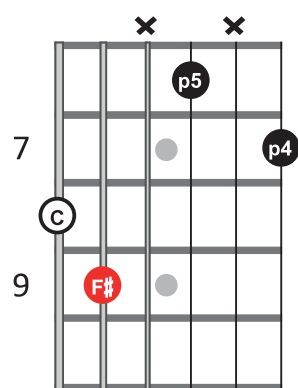


$$\frac{Db^{sus4}}{C}$$

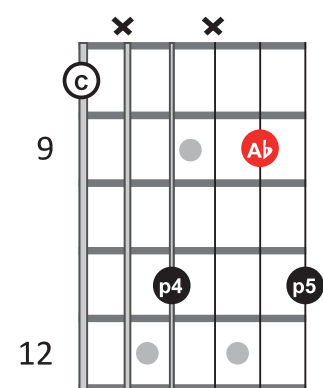
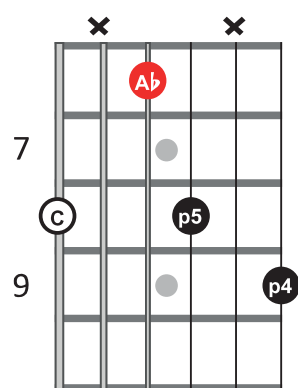
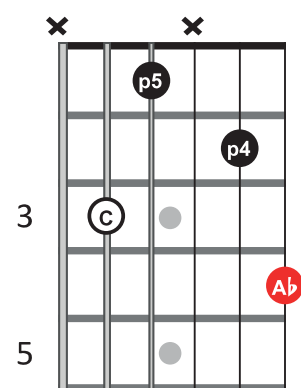




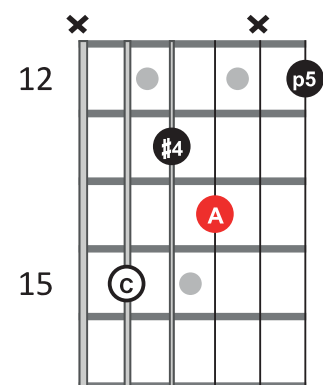
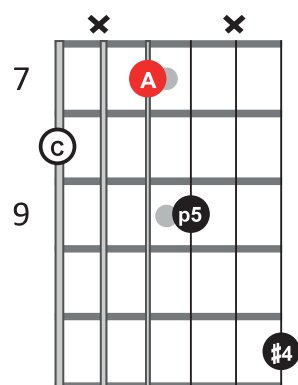
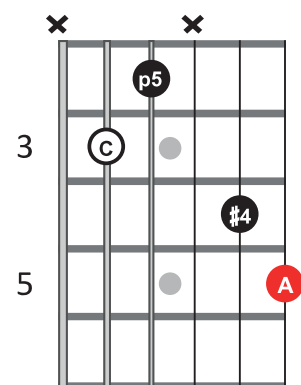
$$\frac{F\sharp^{sus4}}{C}$$



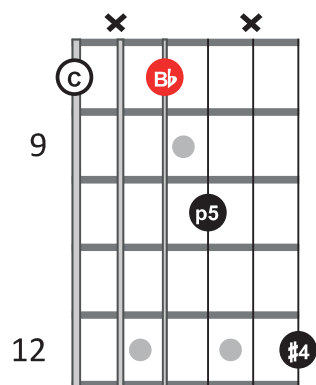
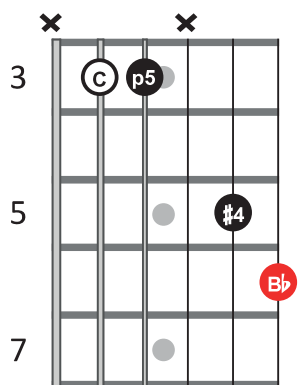
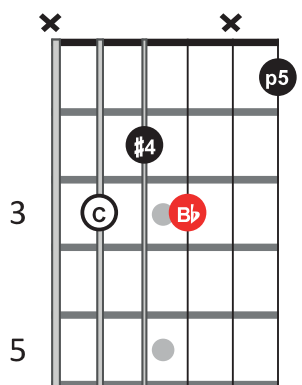
$$\frac{Ab^{sus4}}{C}$$



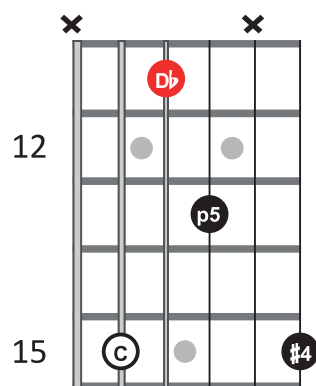
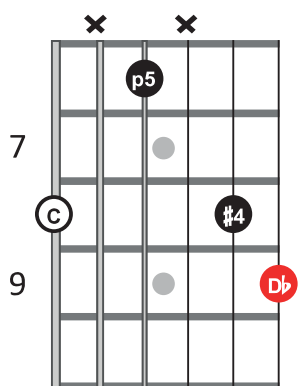
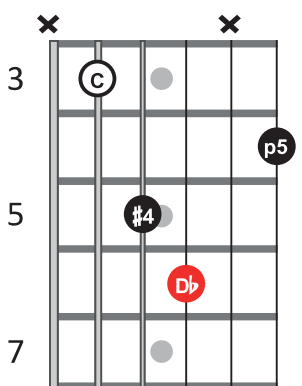
$$\frac{A^{lyd}}{C}$$



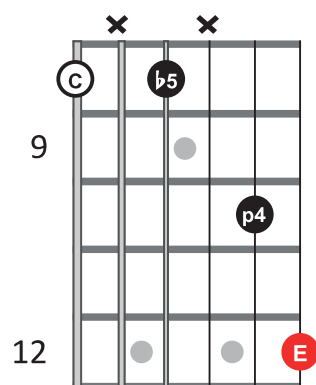
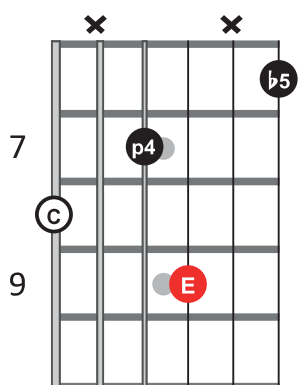
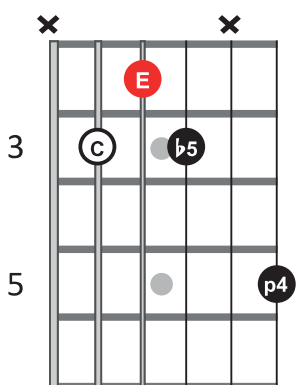
$$\frac{Bb^{lyd}}{C}$$



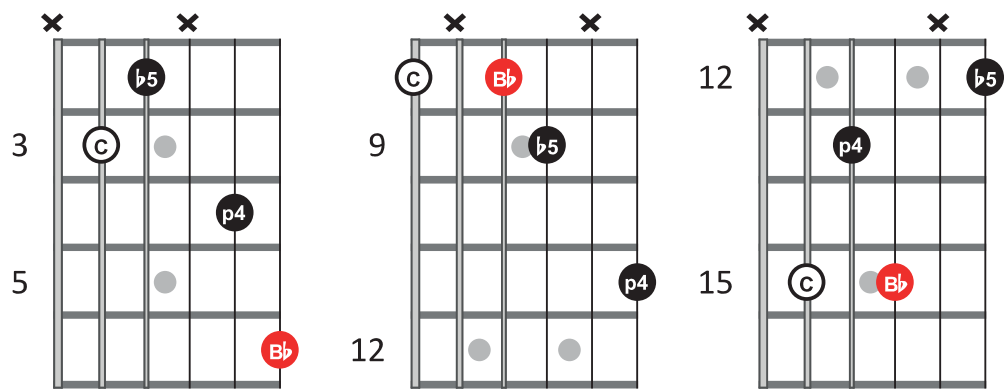
$$\frac{Db^{lyd}}{C}$$



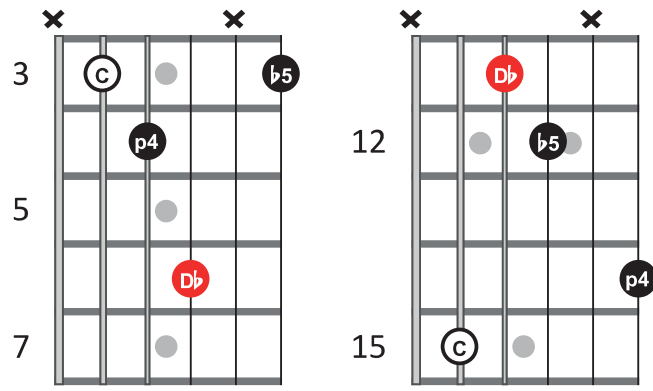
$$\frac{E^{loc}}{C}$$



$$\frac{Bb^{loc}}{C}$$

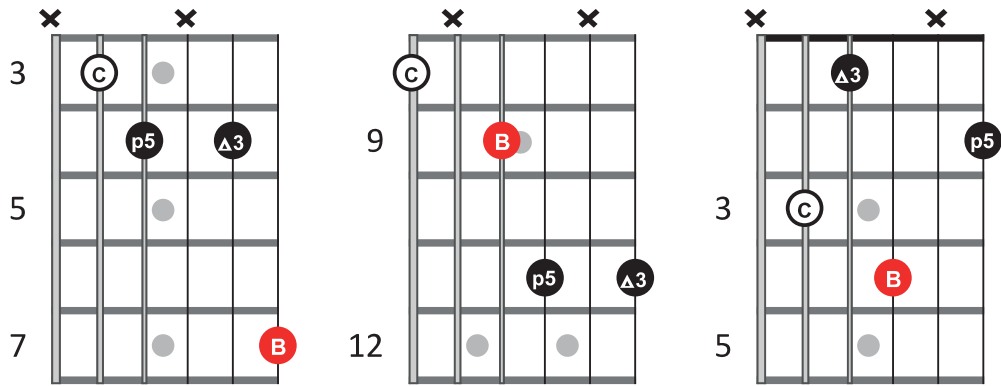


$$\frac{Db^{loc}}{C}$$

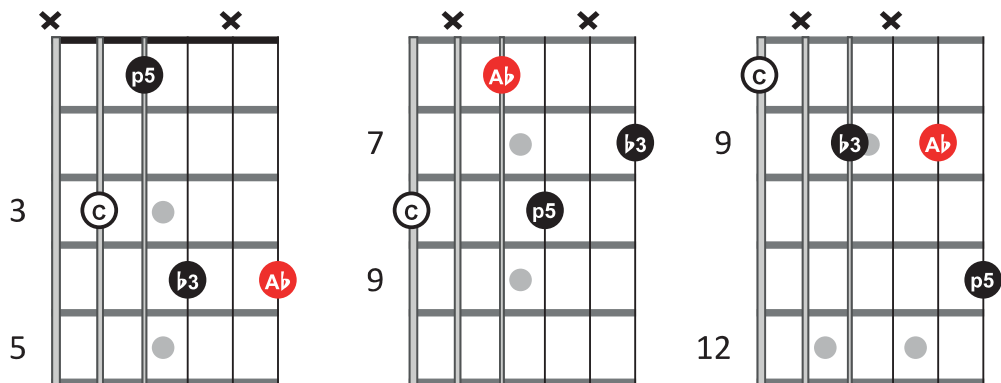


# Diminished Type Spread Triads Bass Notes (C)

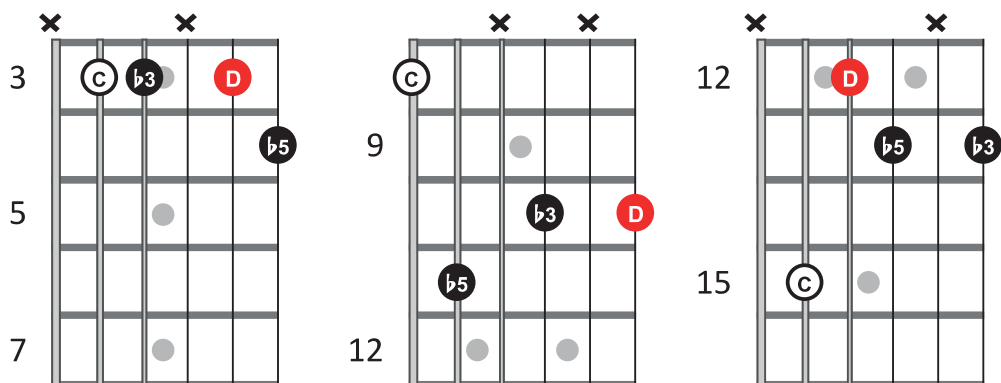
$\frac{B}{C}$



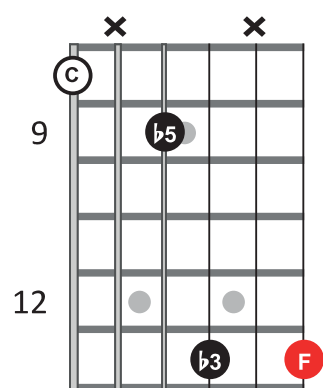
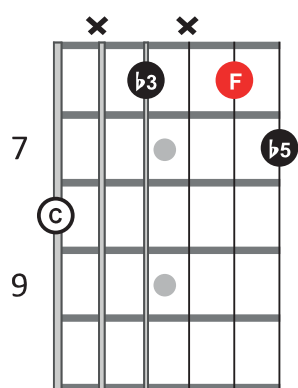
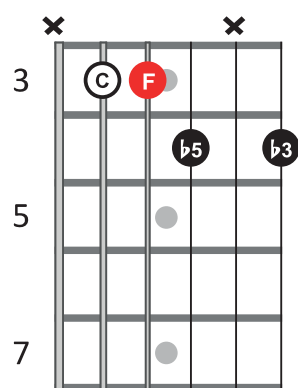
$\frac{Ab-}{C}$



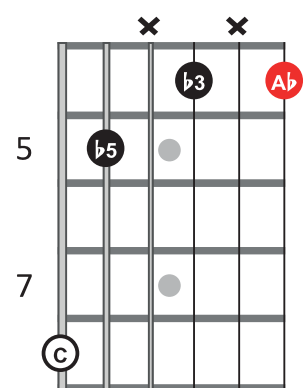
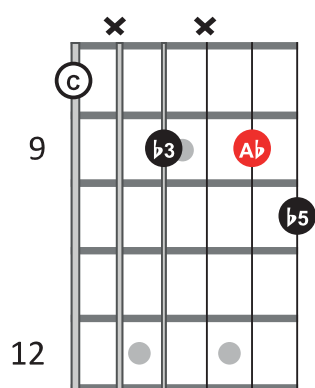
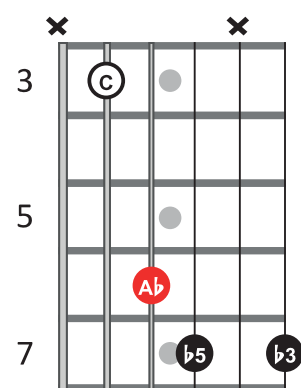
$\frac{D^{\circ}}{C}$



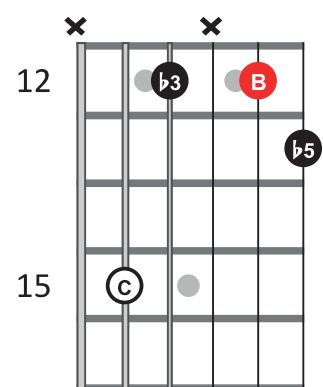
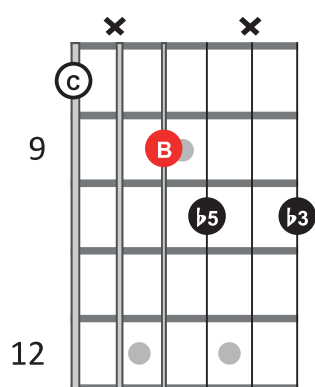
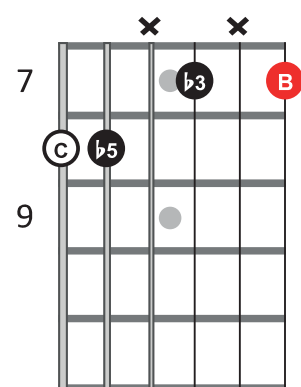
$$\frac{F^{\circ}}{C}$$



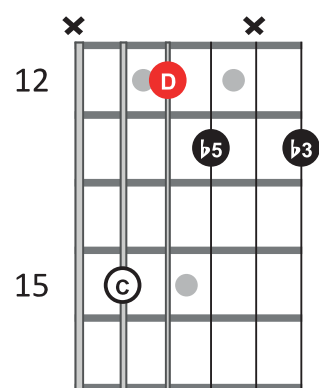
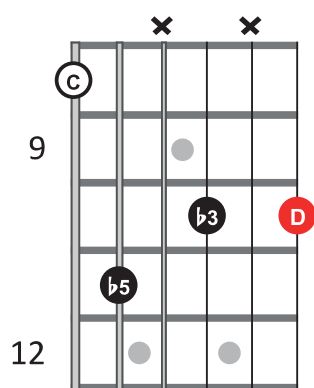
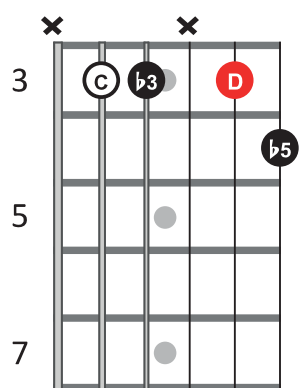
$$\frac{Ab^{\circ}}{C}$$



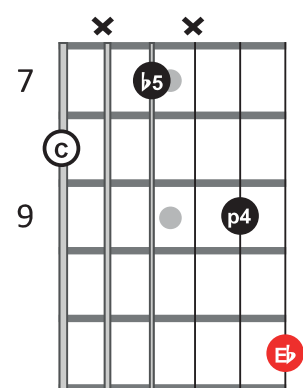
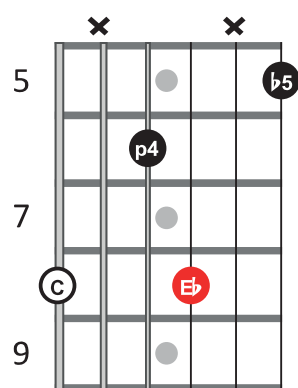
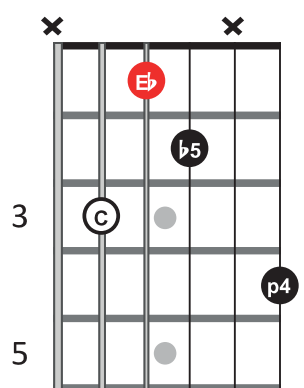
$$\frac{B^{\circ}}{C}$$



$$\frac{D^{\circ}}{C}$$

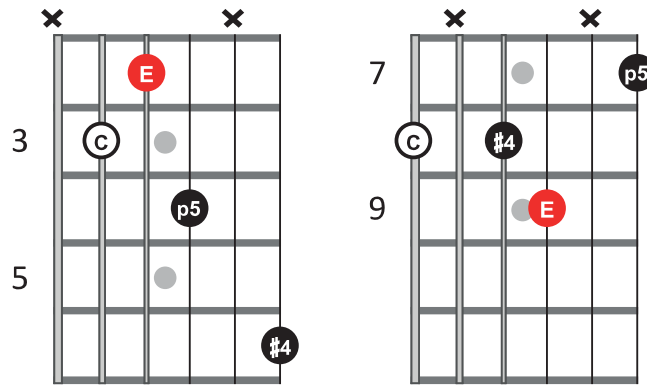


$$\frac{Eb^{loc}}{C}$$

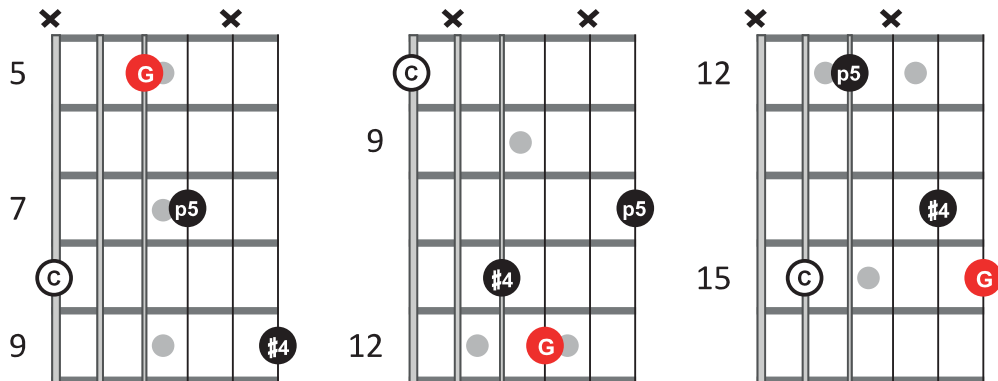


## Twelve Tone Type Spread Triads Bass Notes (C)

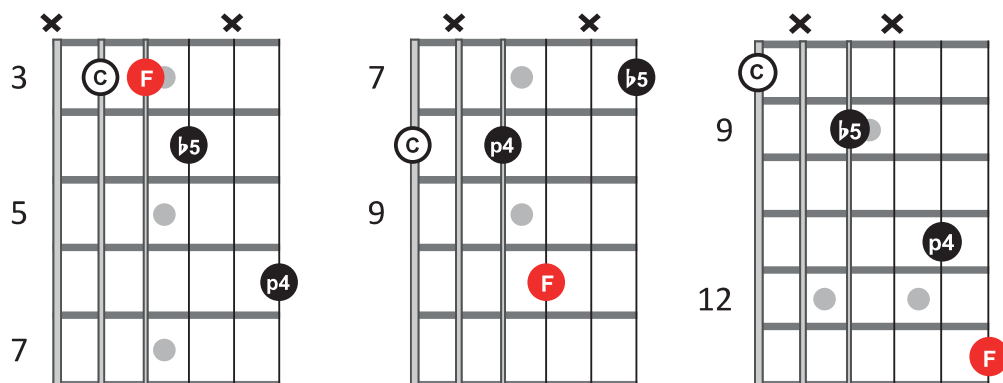
$$\frac{E^{lyd}}{C}$$



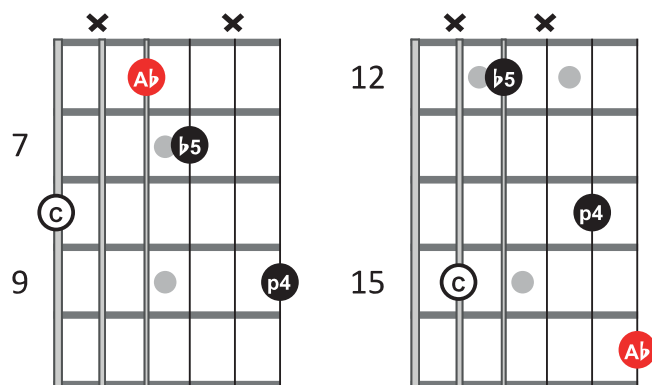
$$\frac{G^{lyd}}{C}$$



$$\frac{F^{loc}}{C}$$



$$\frac{Ab^{loc}}{c}$$





## Quartal Voicings

Quartal voicings are constructed by the superimposition of diatonic fourth intervals. The three part quartal voicing is most commonly used because it functions nicely in an upper-structure capacity. For this reason the (Q) nomenclature has been devised.

### Three Part Quartal Voicings

#### **Ex. 140**

Cmaj

The diagram shows a treble clef staff with a C major triad (C-E-G) and seven three-part quartal voicings. The voicings are labeled above the staff: CQ<sup>+4</sup>, DQ, EQ, F<sup>+4</sup>Q, GQ, AQ, and BQ. Each voicing consists of three notes stacked in fourths. The CQ<sup>+4</sup> voicing is C4, E4, G4. The DQ voicing is D4, F4, A4. The EQ voicing is E4, G4, B4. The F<sup>+4</sup>Q voicing is F4, A4, C5. The GQ voicing is G4, B4, D5. The AQ voicing is A4, C5, E5. The BQ voicing is B4, D5, F5.

#### **Ex. 141**

a) F<sup>+4</sup>Q =  $\begin{matrix} & +4 & & P4 \\ & \diagdown & \diagup & \\ F & & B & \\ & \diagup & \diagdown & \\ & & E & \end{matrix} \longrightarrow 1 \quad \#4 \quad 7$

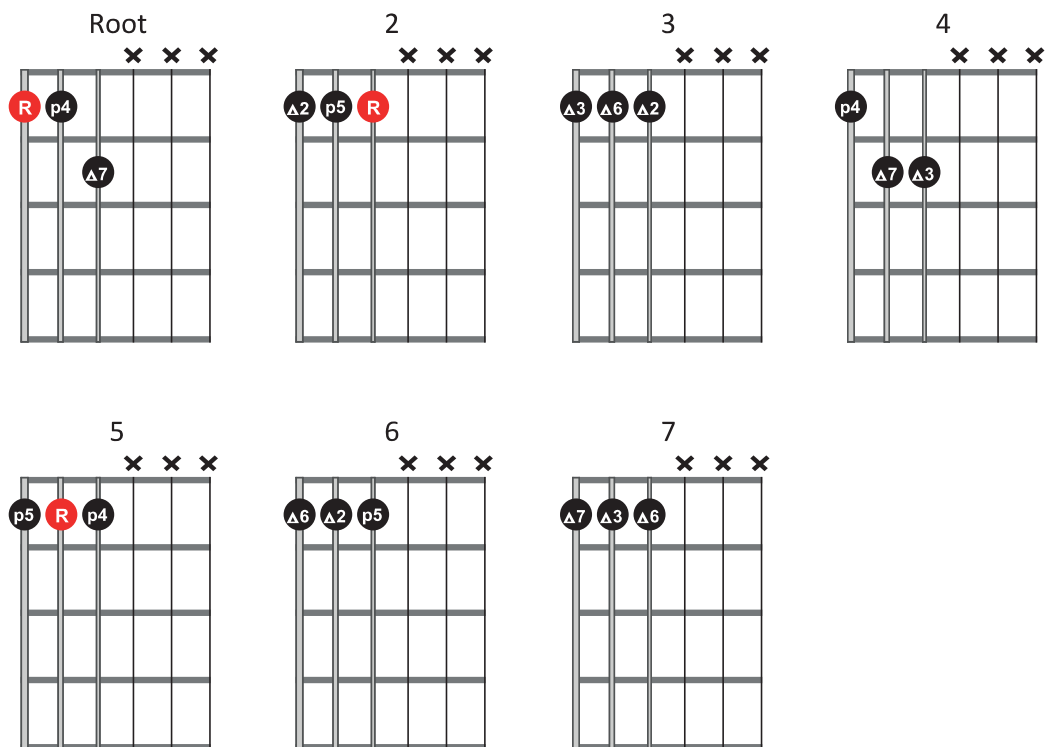
b) CQ<sup>+4</sup> =  $\begin{matrix} & P4 & & +4 \\ & \diagdown & \diagup & \\ C & & F & \\ & \diagup & \diagdown & \\ & & B & \end{matrix} \longrightarrow 1 \quad 4 \quad 7$

c) GQ =  $\begin{matrix} & P4 & & P4 \\ & \diagdown & \diagup & \\ G & & C & \\ & \diagup & \diagdown & \\ & & F & \end{matrix} \longrightarrow 1 \quad 4 \quad b7$

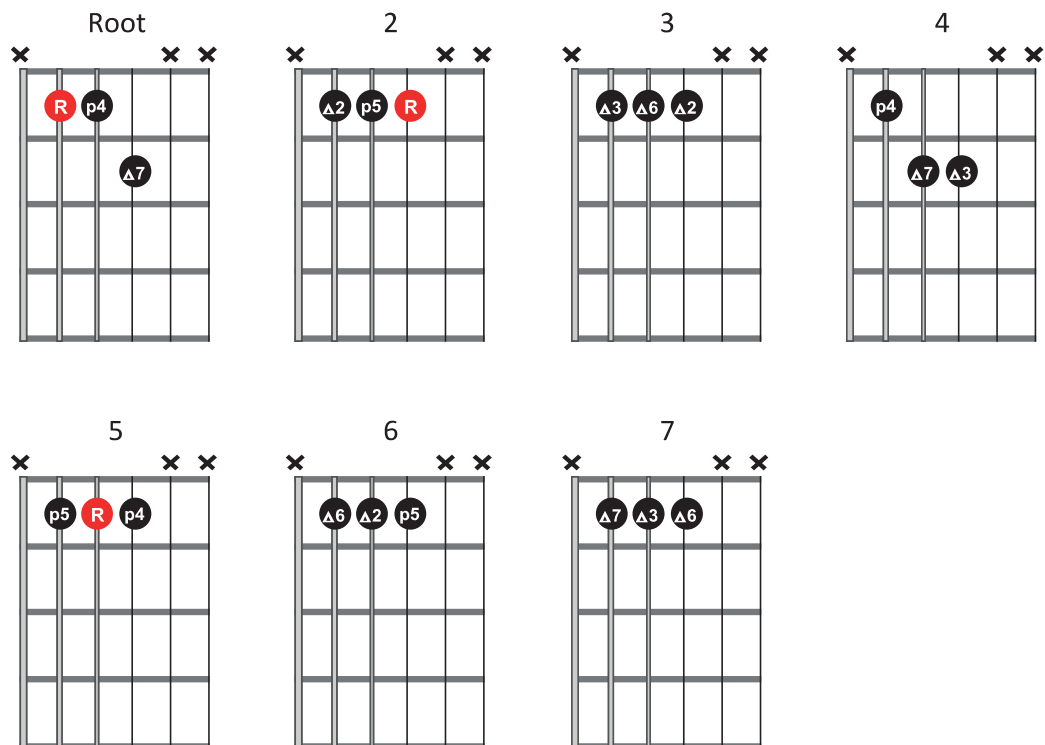
Four, Five, and Six-Part Quartal Voicings have not been specifically labeled.

## 3part-Quartal Voicings – Major Scale

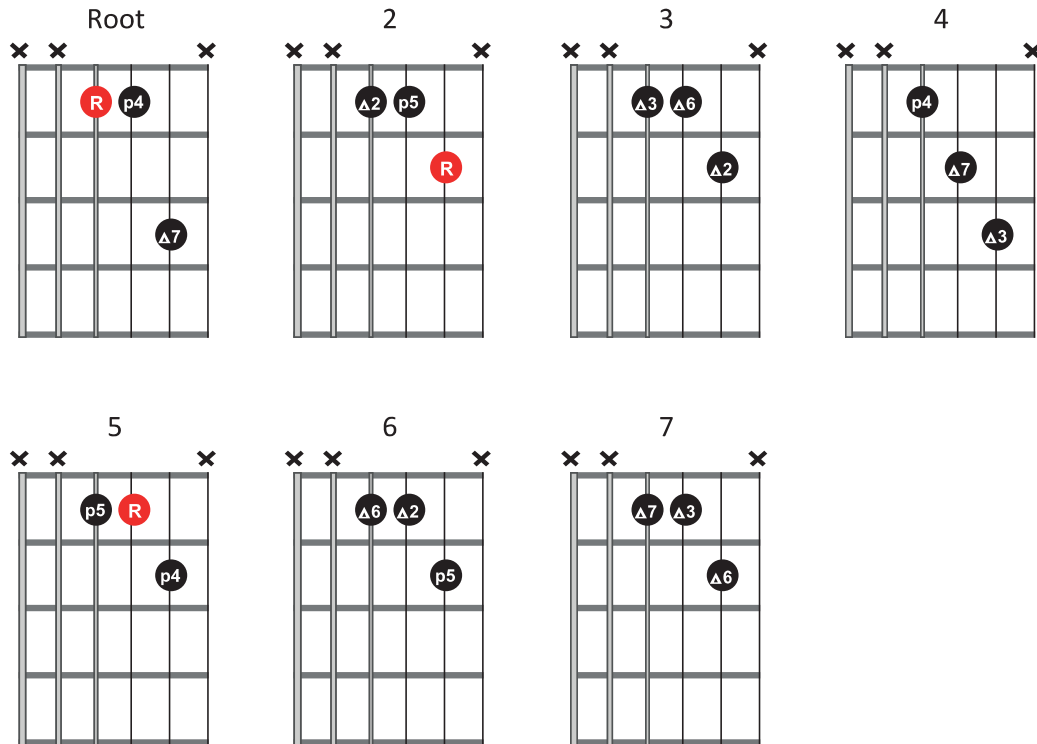
### Stringset E-A-D



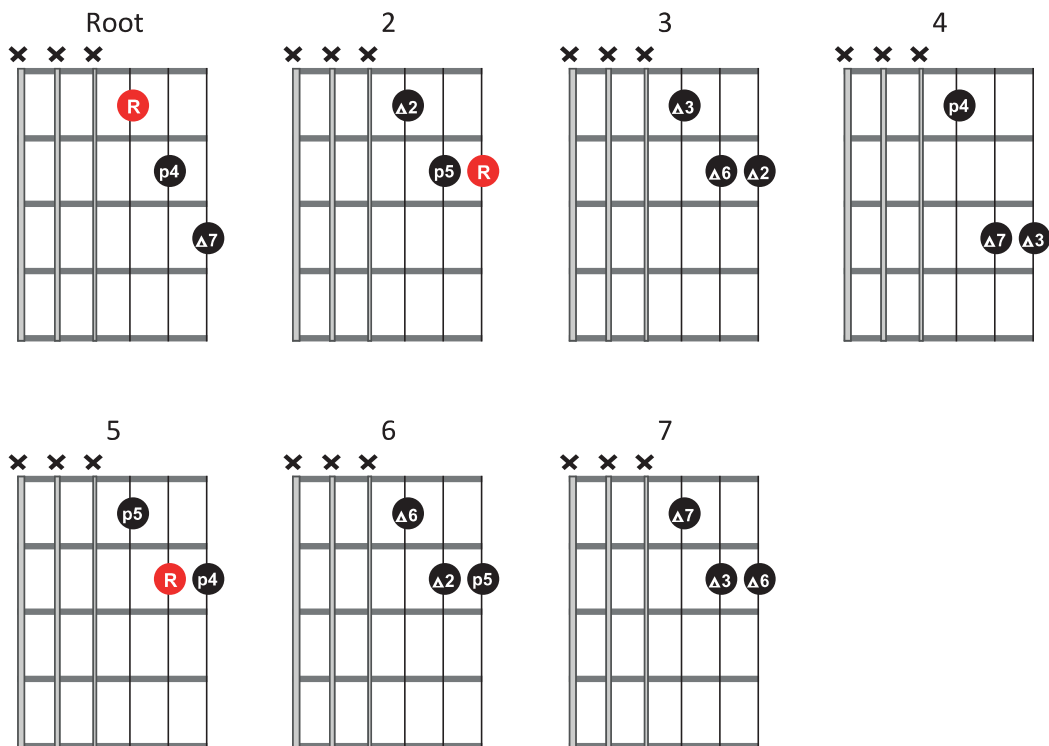
### Stringset A-D-G



## Stringset D-G-B

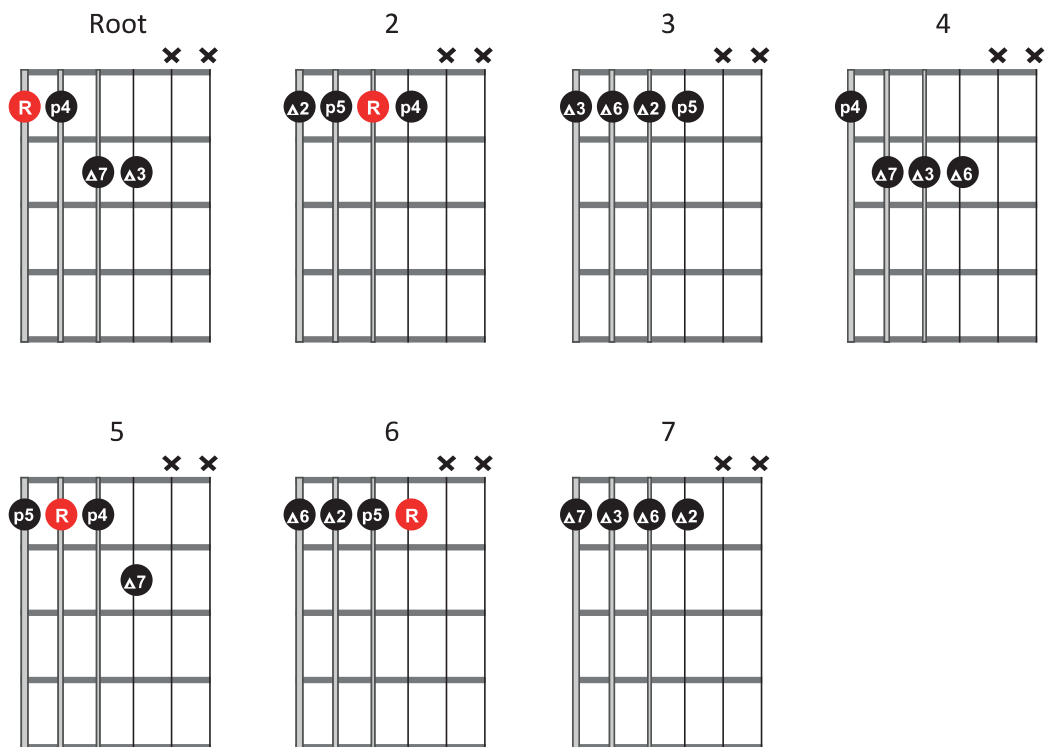


## Stringset G-B-E

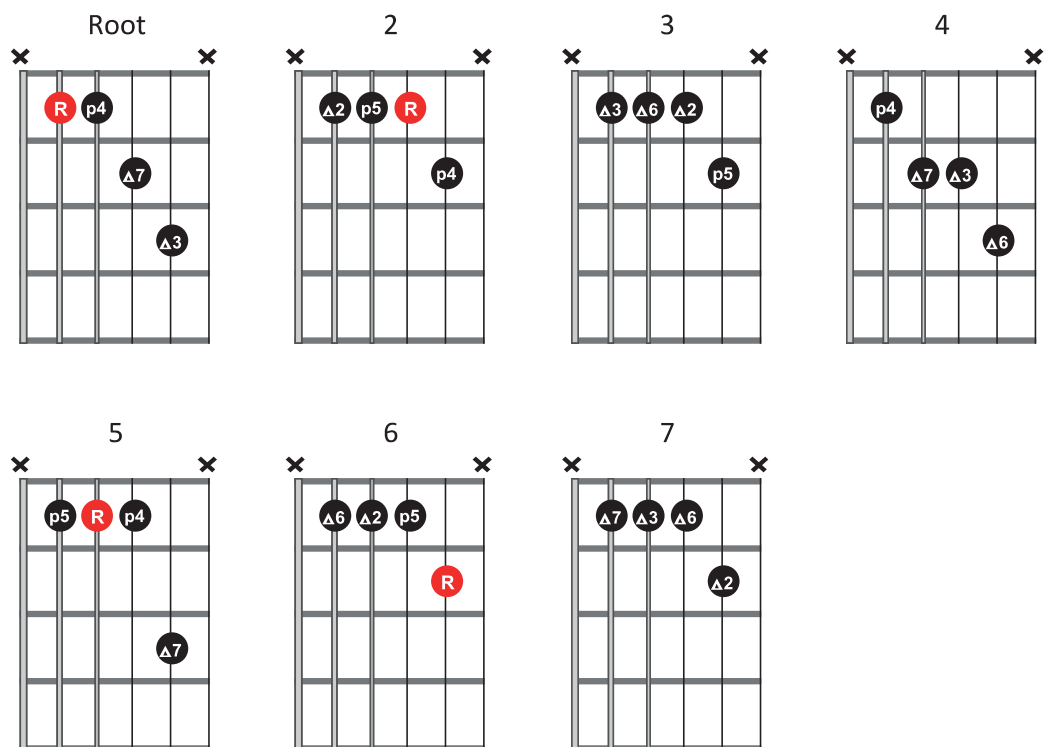


## 4part-Quartal Voicings – Major Scale

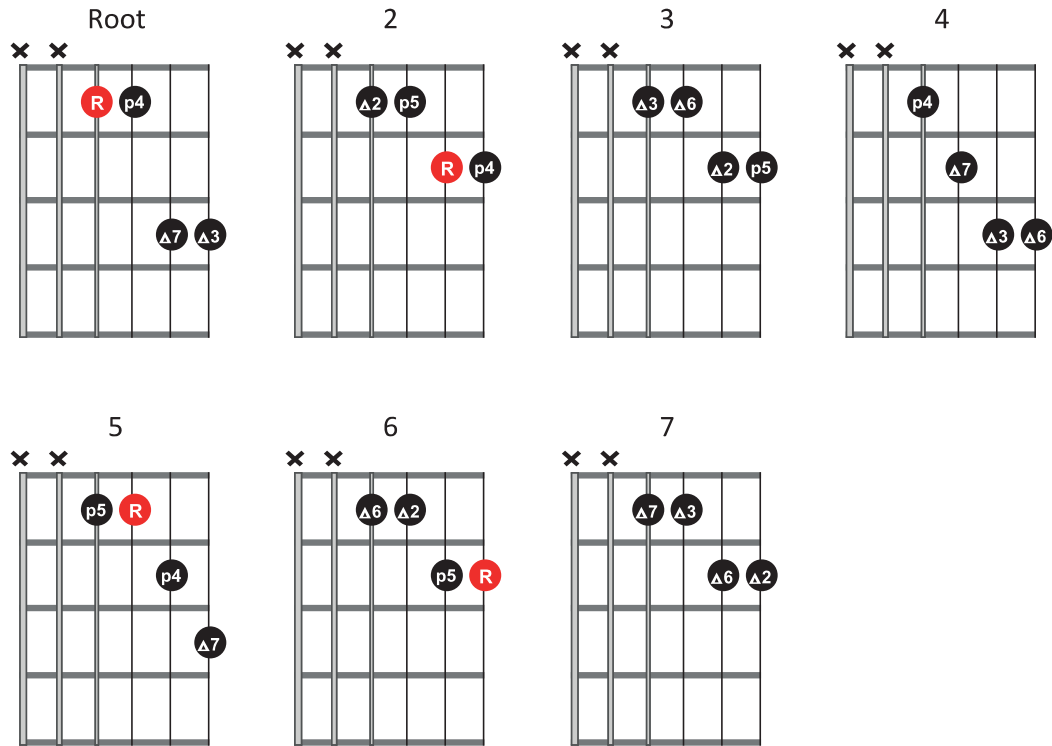
### Stringset E-A-D-G



### Stringset A-D-G-B

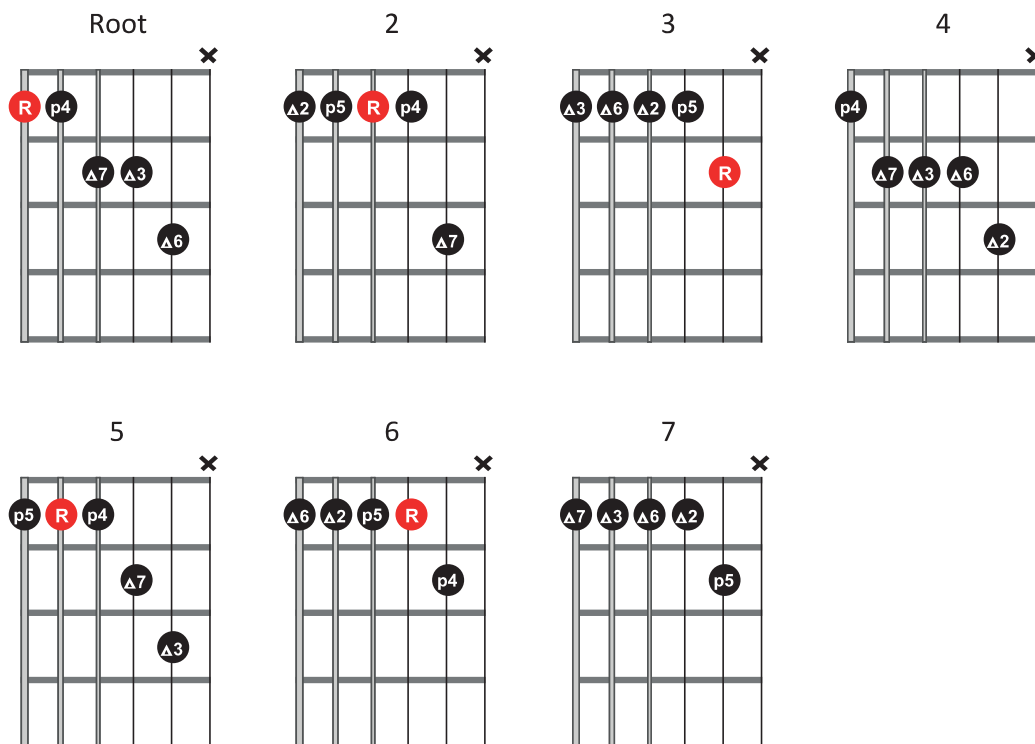


## Stringset D-G-B-E

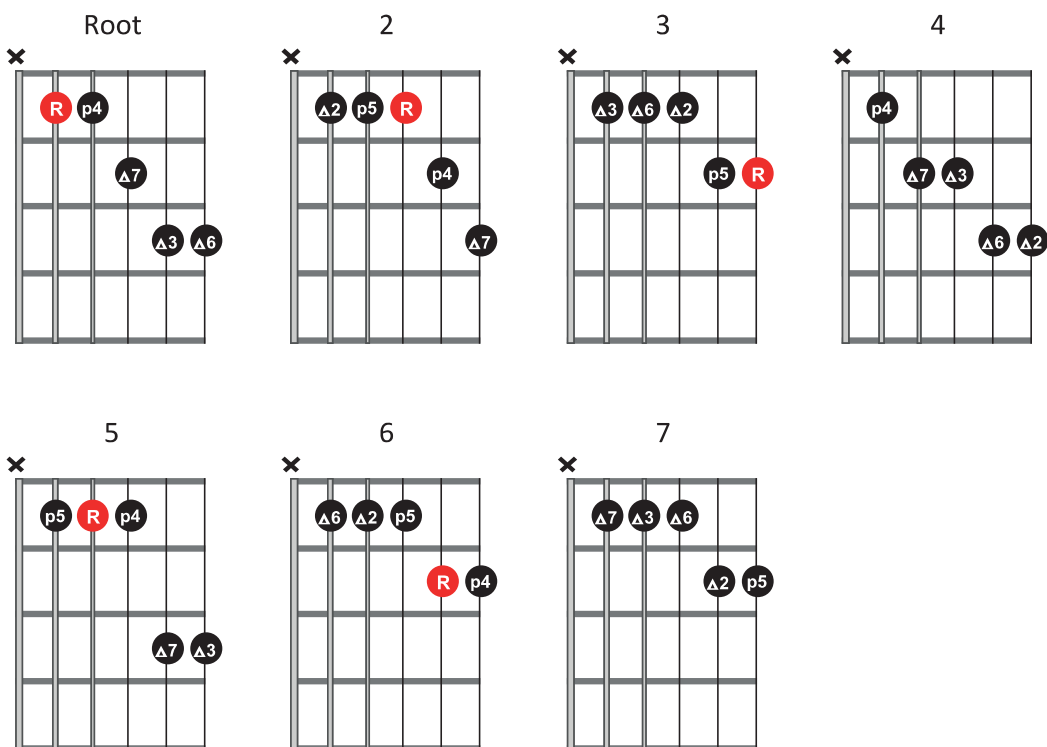


## 5part-Quartal Voicings – Major Scale

### Stringset E-A-D-G-B

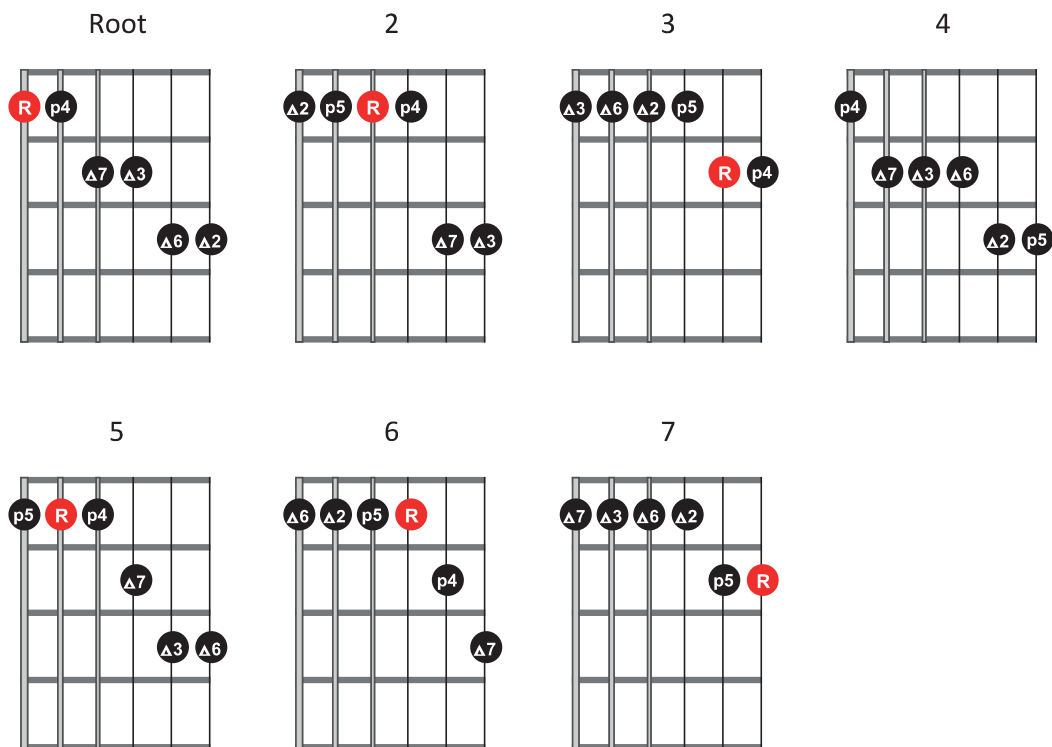


### Stringset A-D-G-B-E



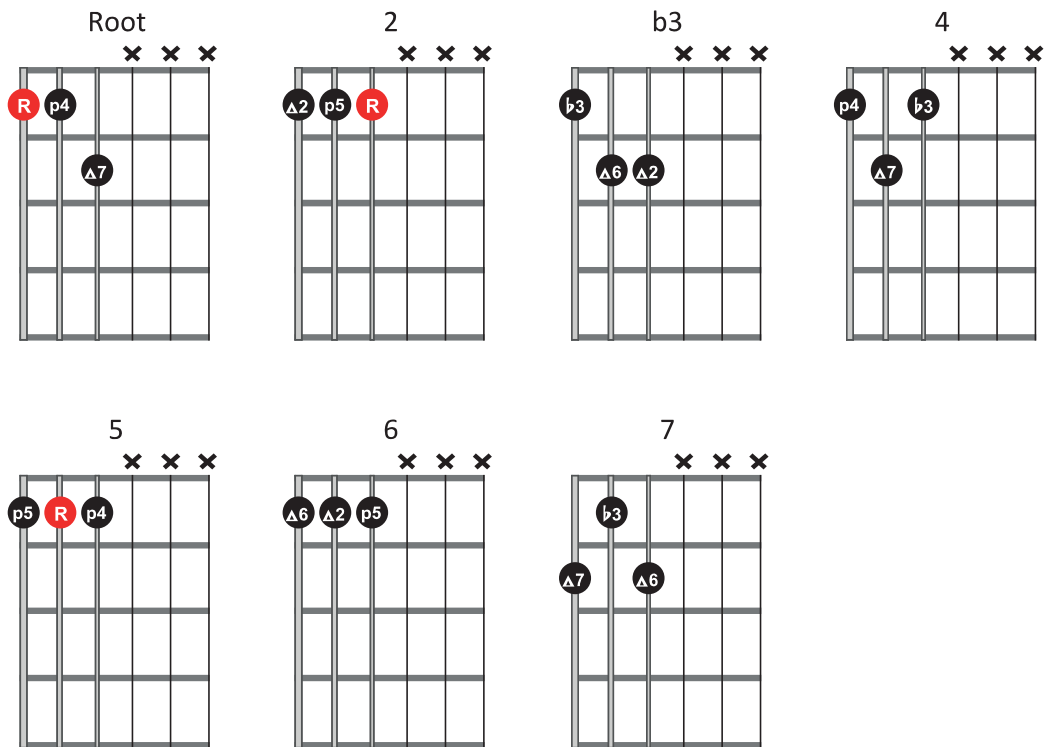
## 6part-Quartal Voicings – Major Scale

Stringset E-A-D-G-B-E

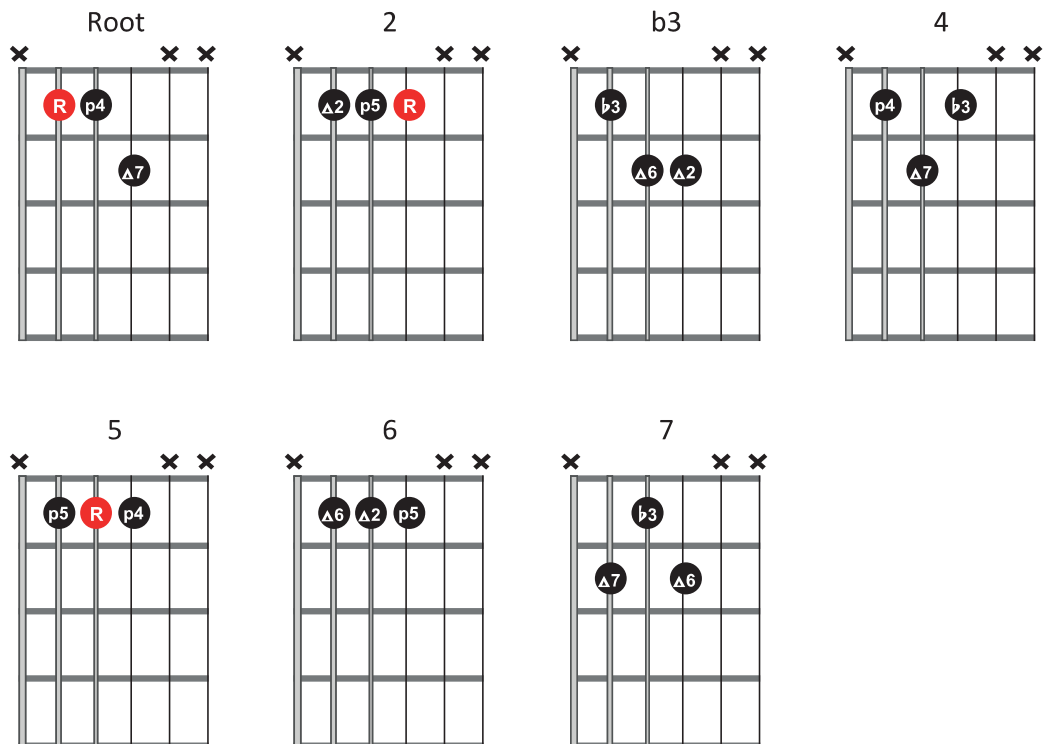


## 3part-Quartal Voicings – Melodic Minor

### Stringset E-A-D

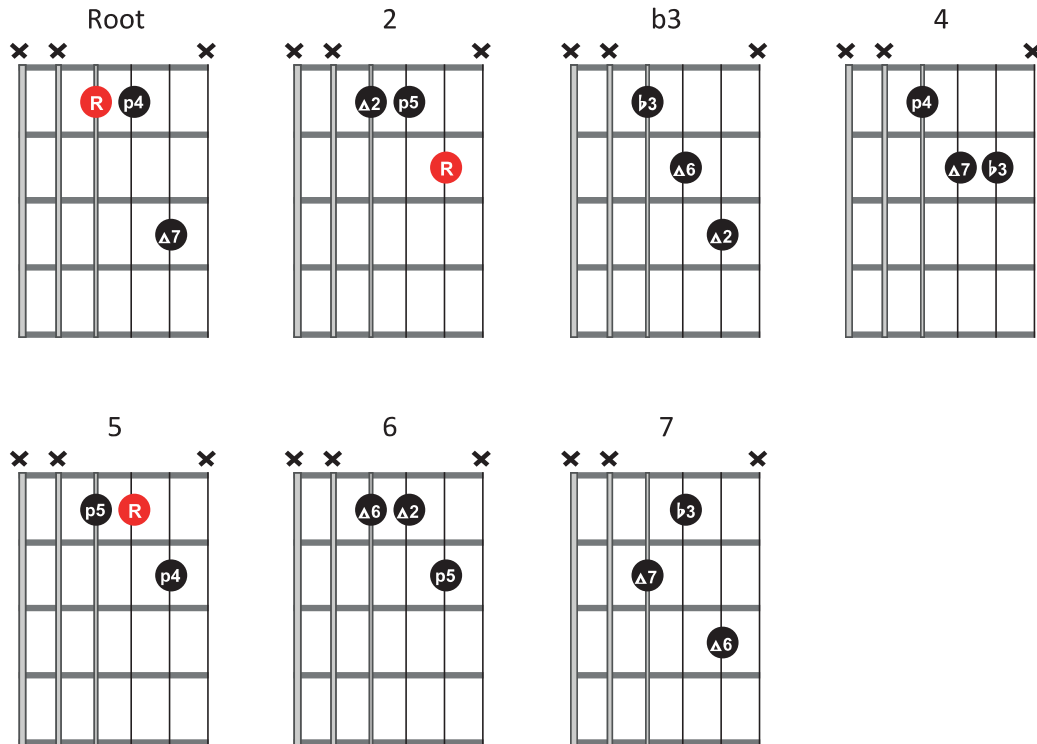


### Stringset A-D-G

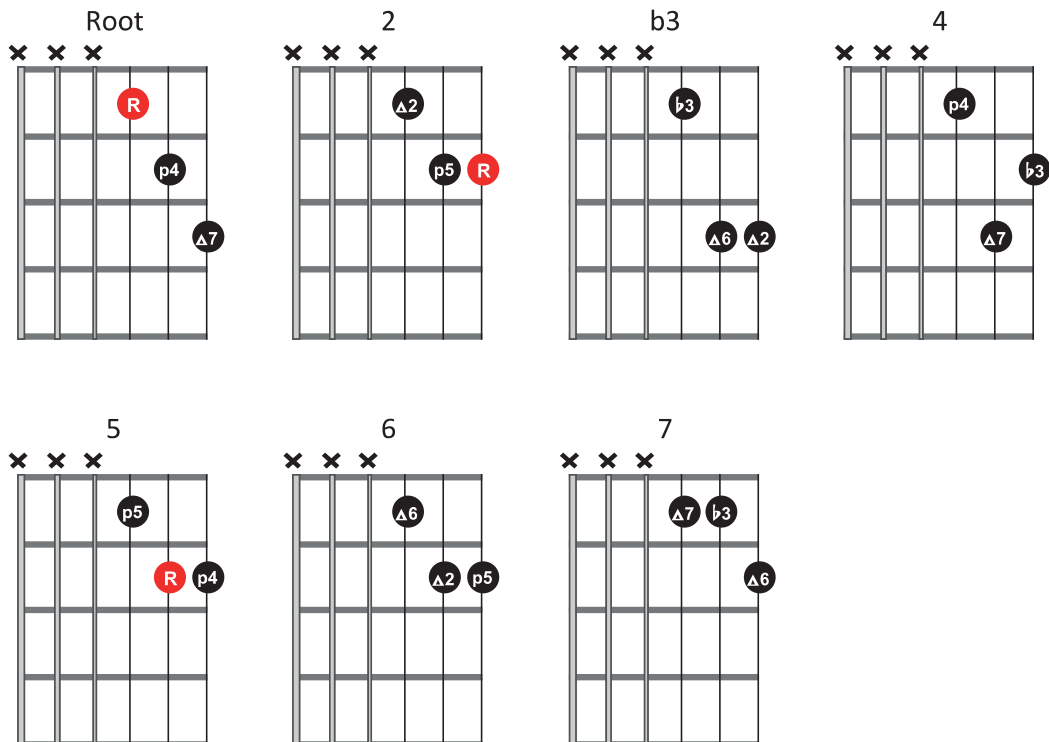




## Stringset D-G-B

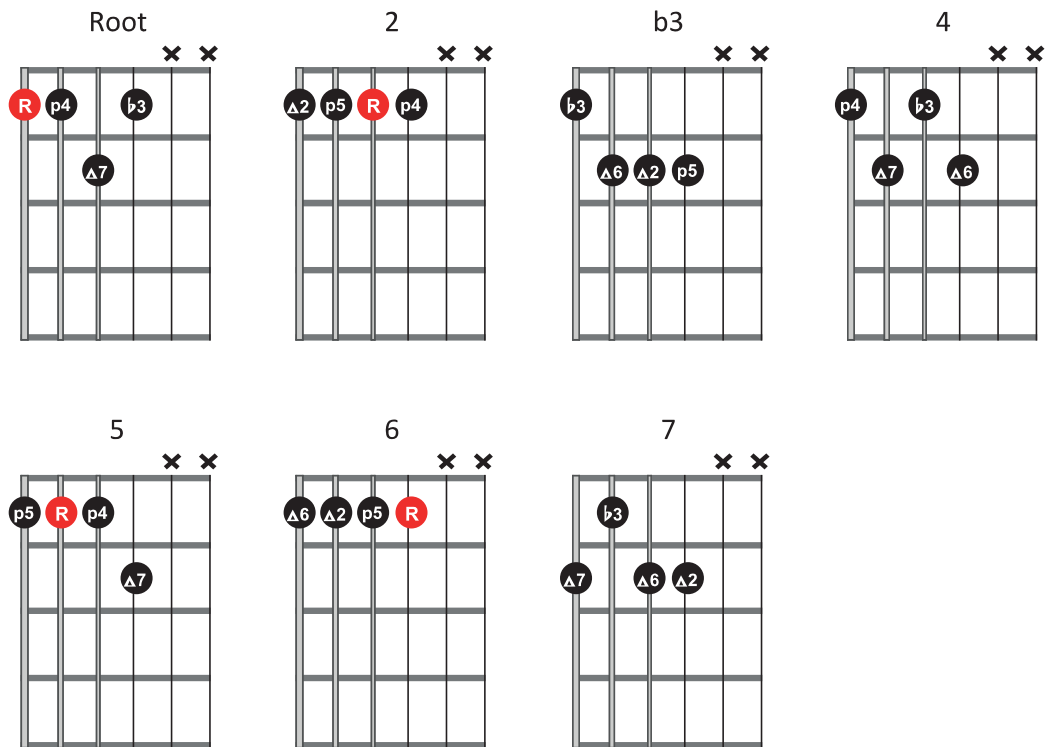


## Stringset G-B-E

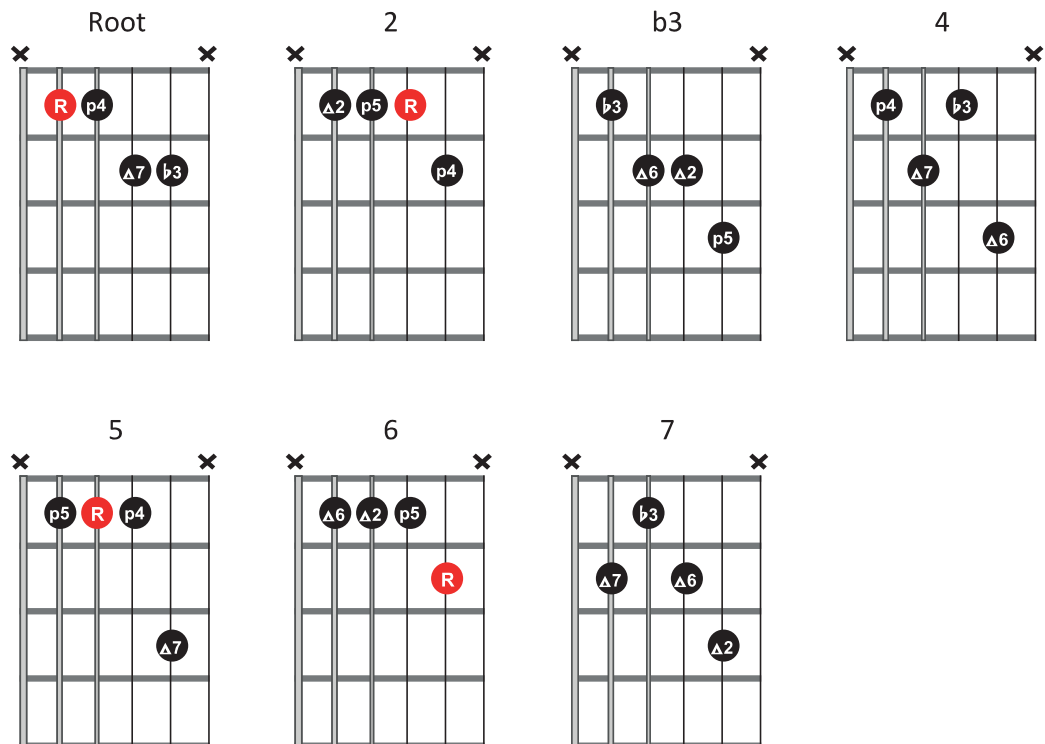


## 4part-Quartal Voicings – Melodic Minor

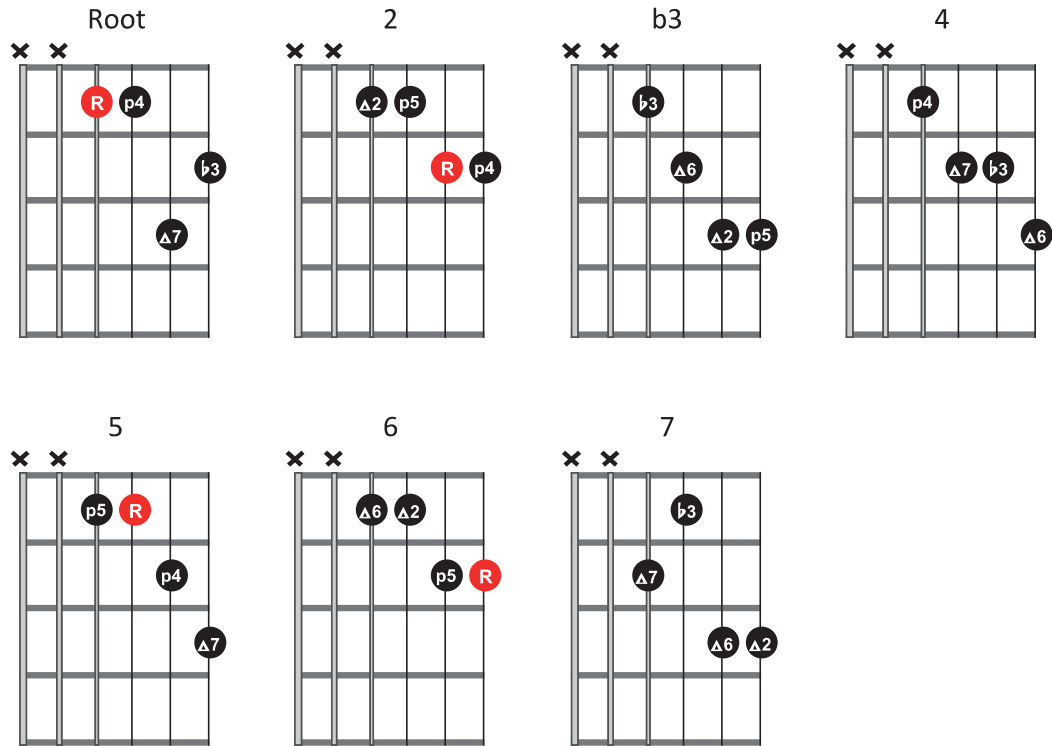
### Stringset E-A-D-G



### Stringset A-D-G-B

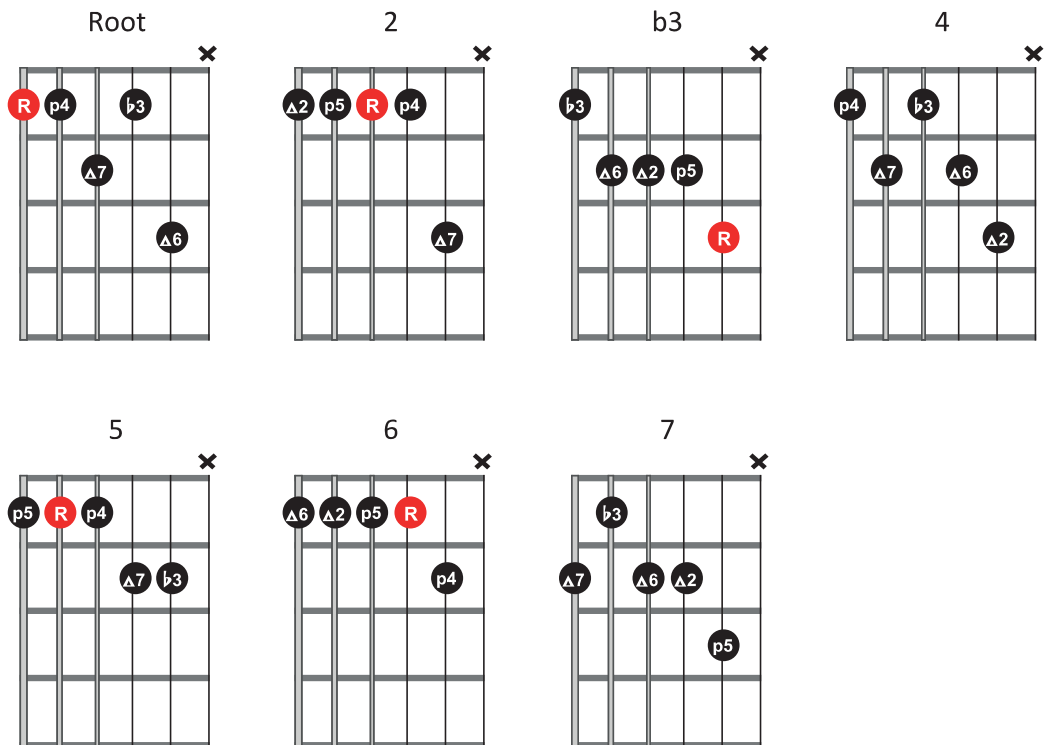


## Stringset D-G-B-E

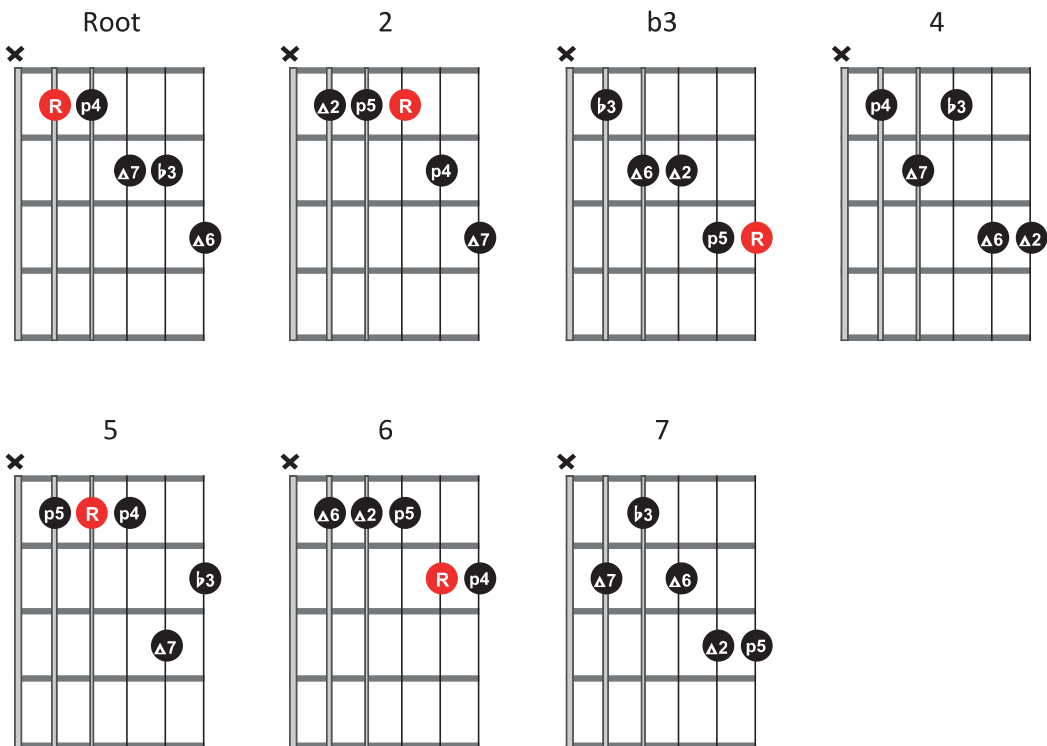


## 5part-Quartal Voicings – Melodic Minor

### Stringset E-A-D-G-B

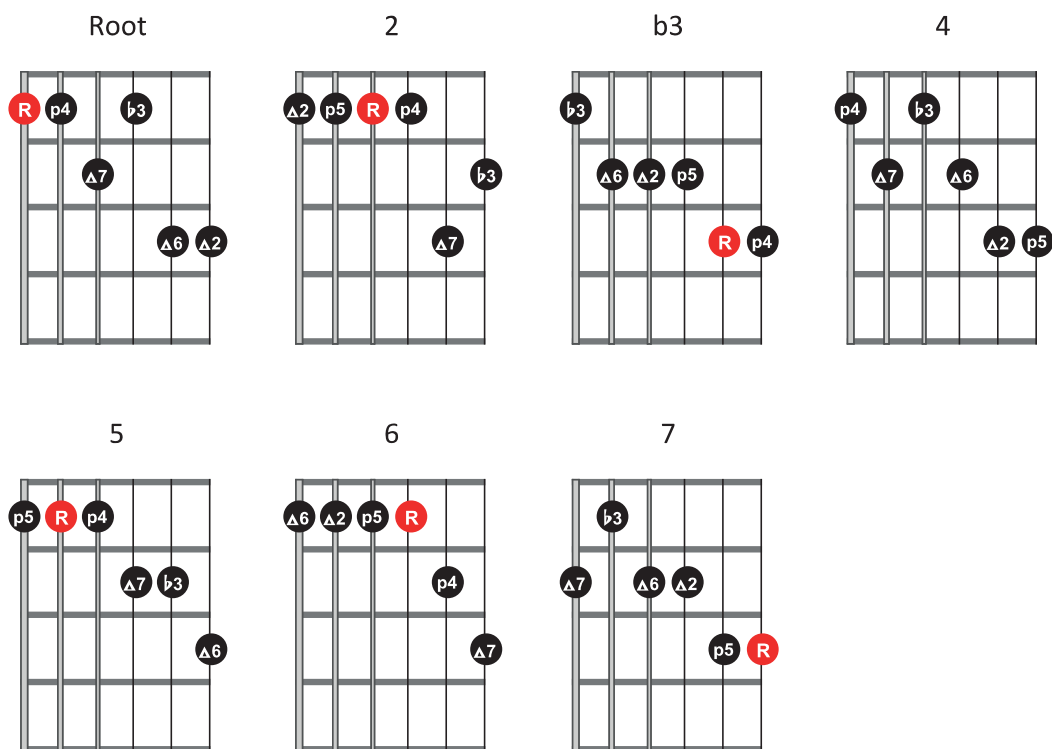


**Stringset A-D-G-B-E**



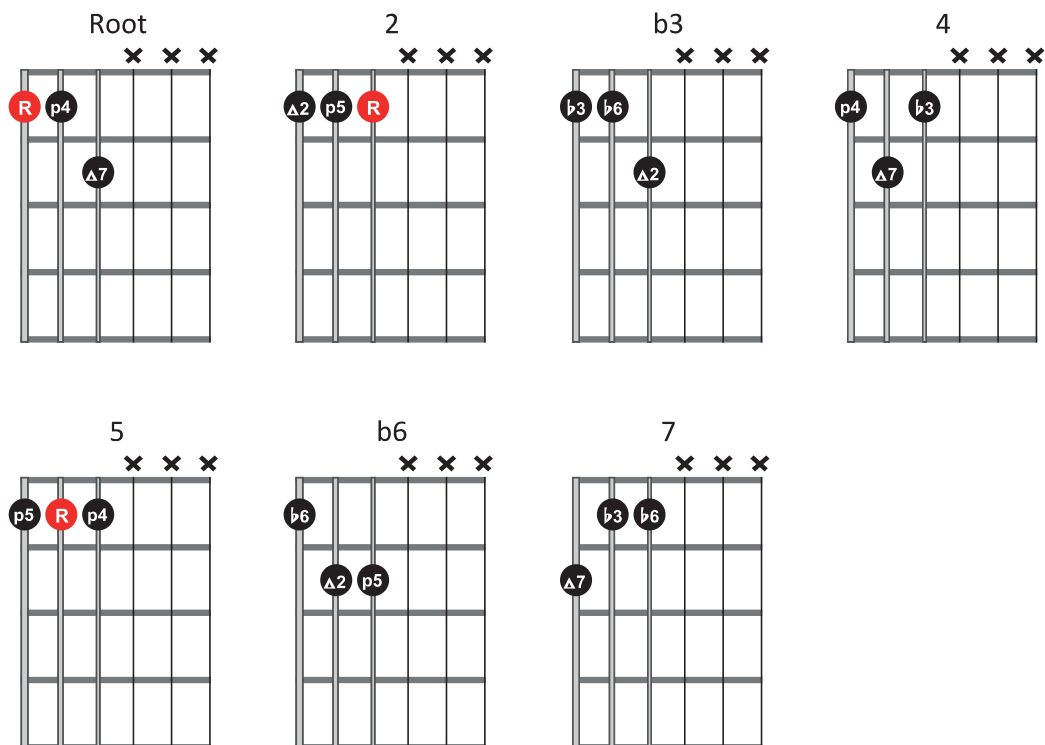
## 6part-Quartal Voicings – Melodic Minor

Stringset E-A-D-G-B-E

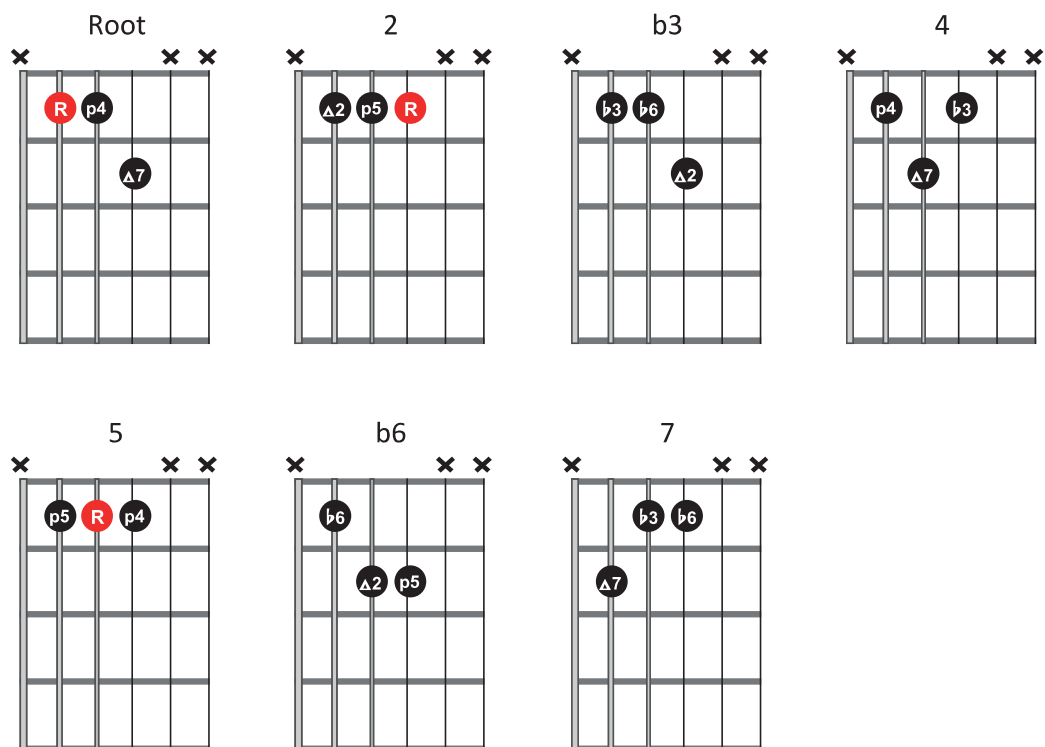


### 3part-Quartal Voicings – Harmonic Minor

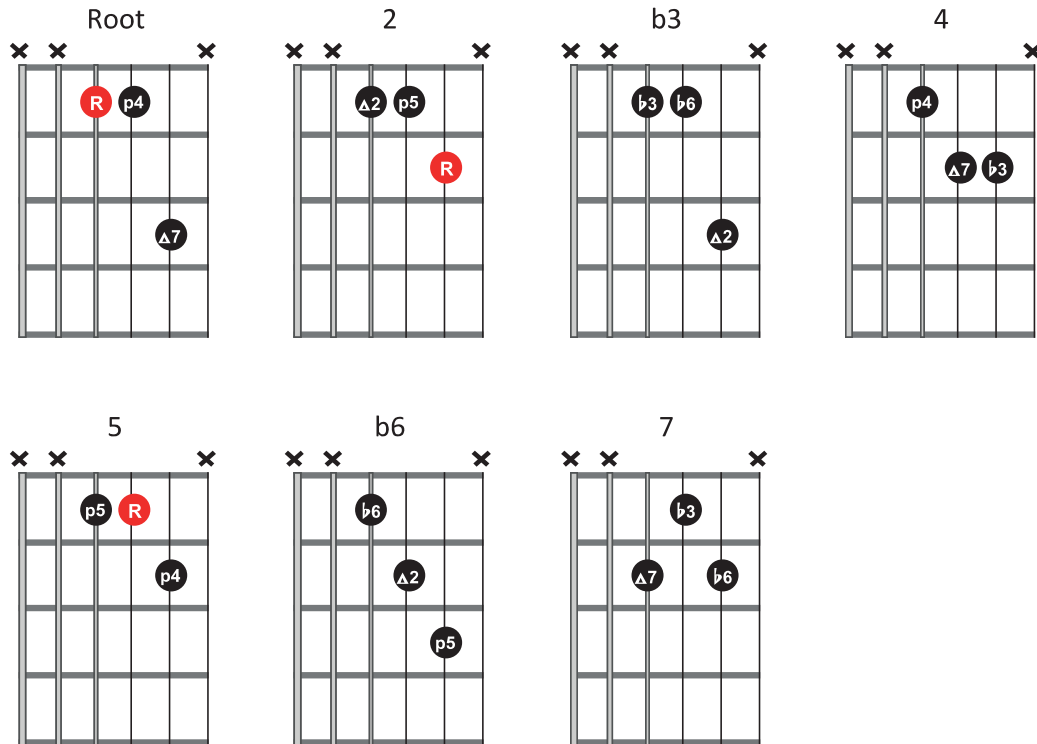
#### Stringset E-A-D



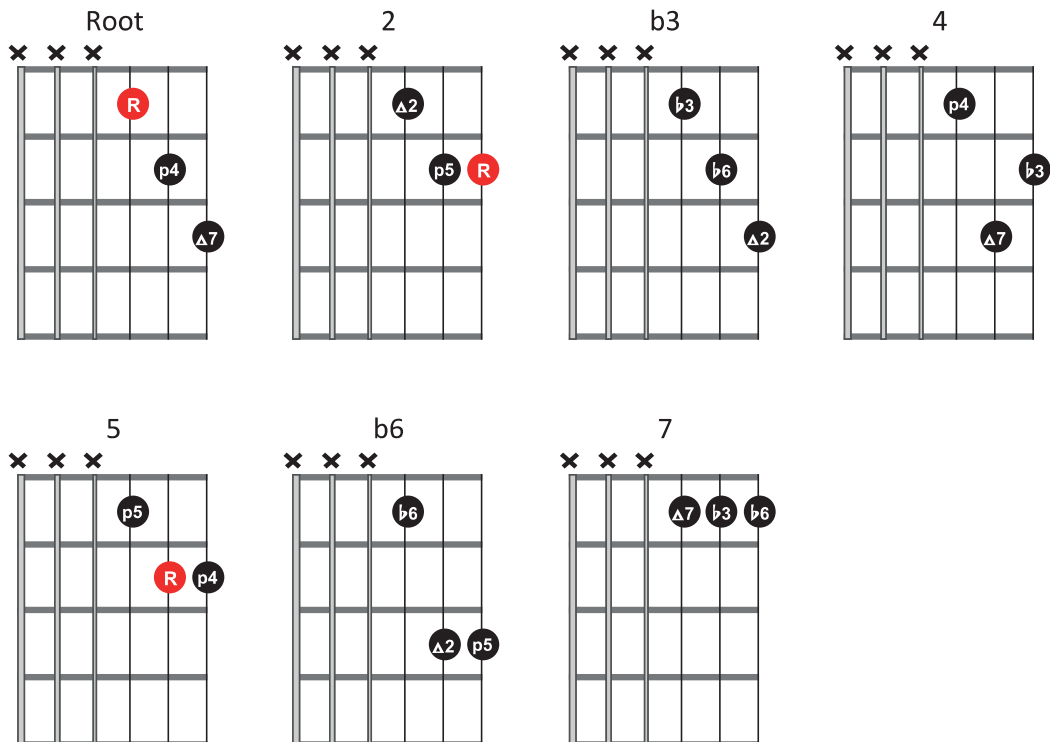
#### Stringset A-D-G



## Stringset D-G-B

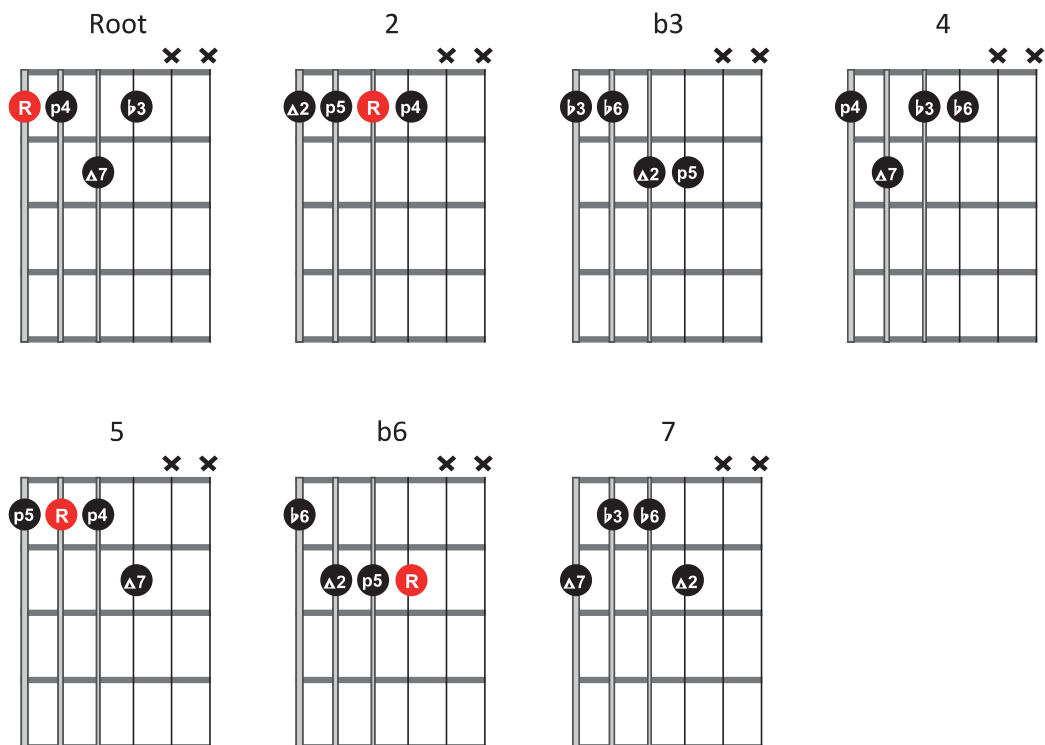


## Stringset G-B-E

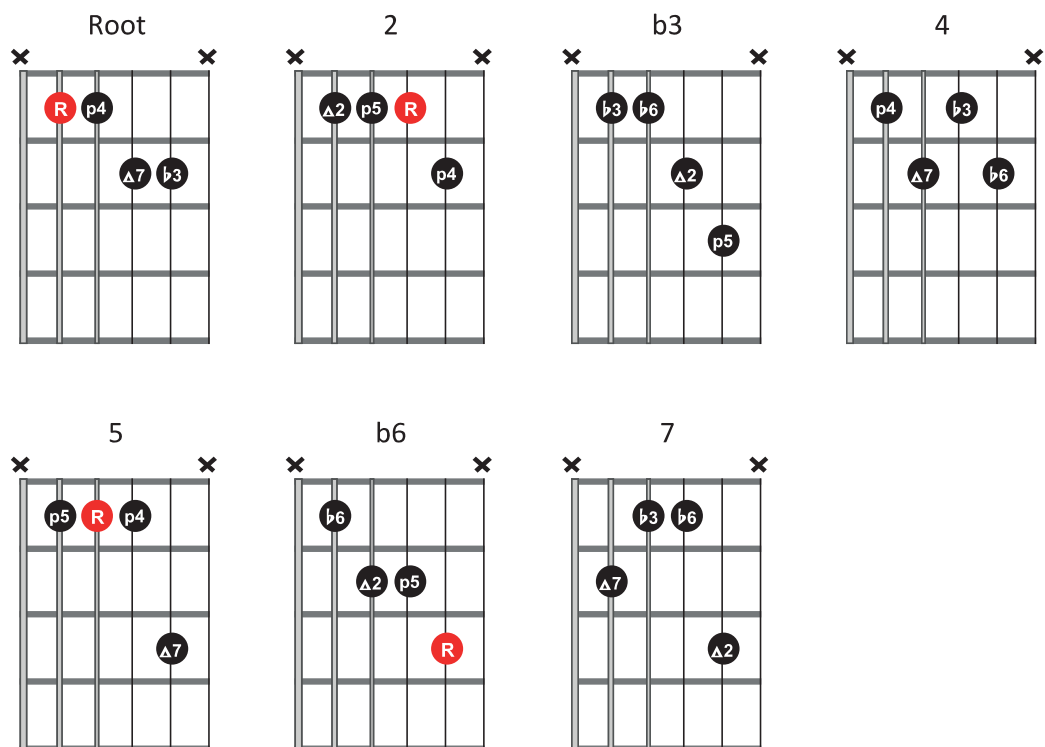


## 4part-Quartal Voicings – Harmonic Minor

### Stringset E-A-D-G

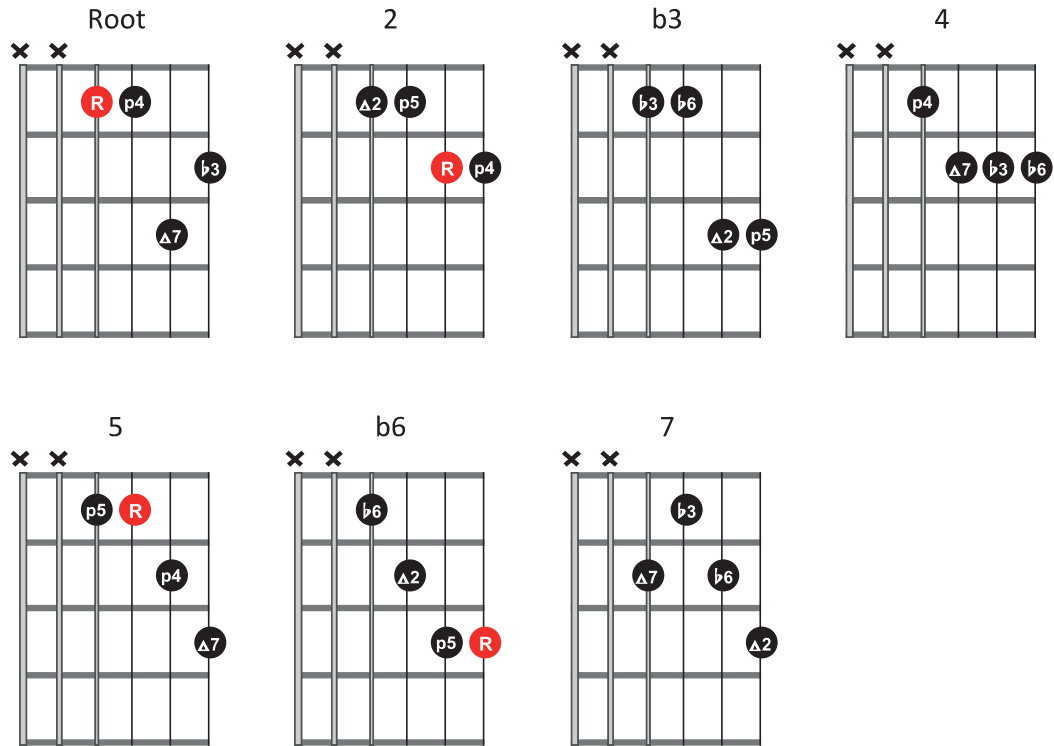


### Stringset A-D-G-B



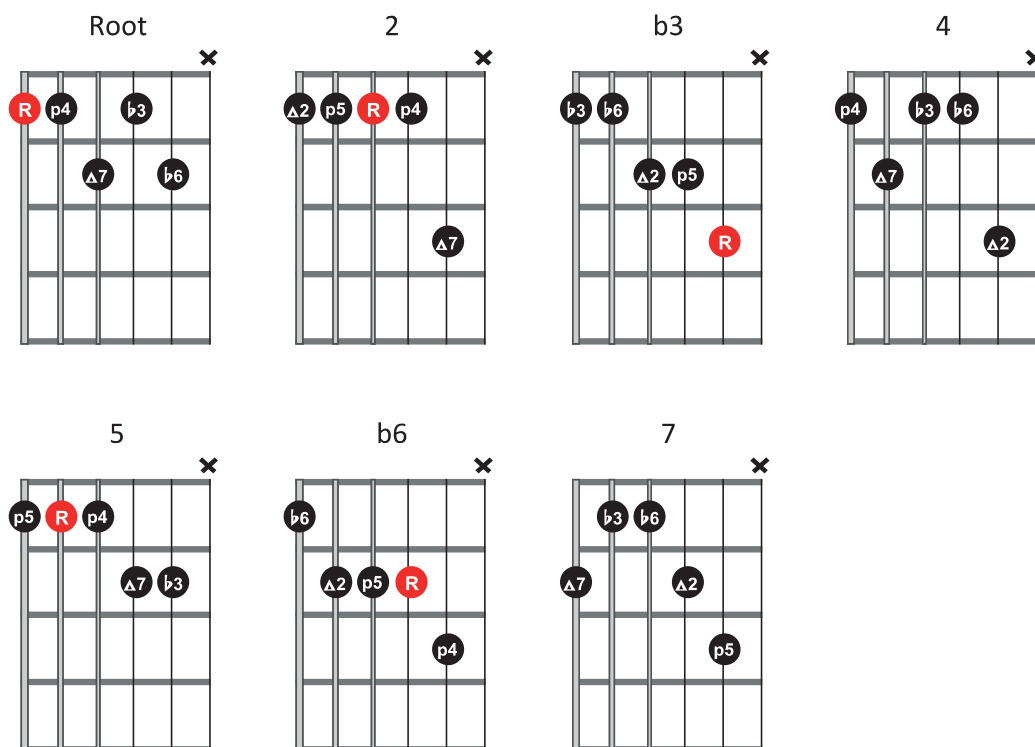


# Stringset D-G-B-E

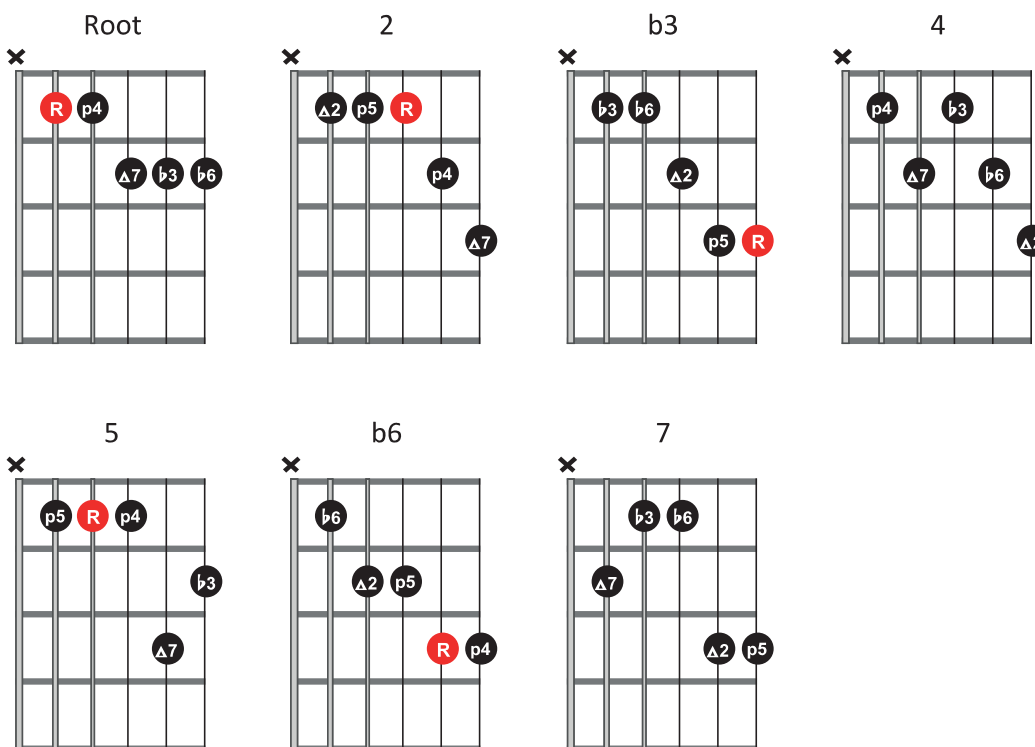


## 5part-Quartal Voicings – Harmonic Minor

### Stringset E-A-D-G-B

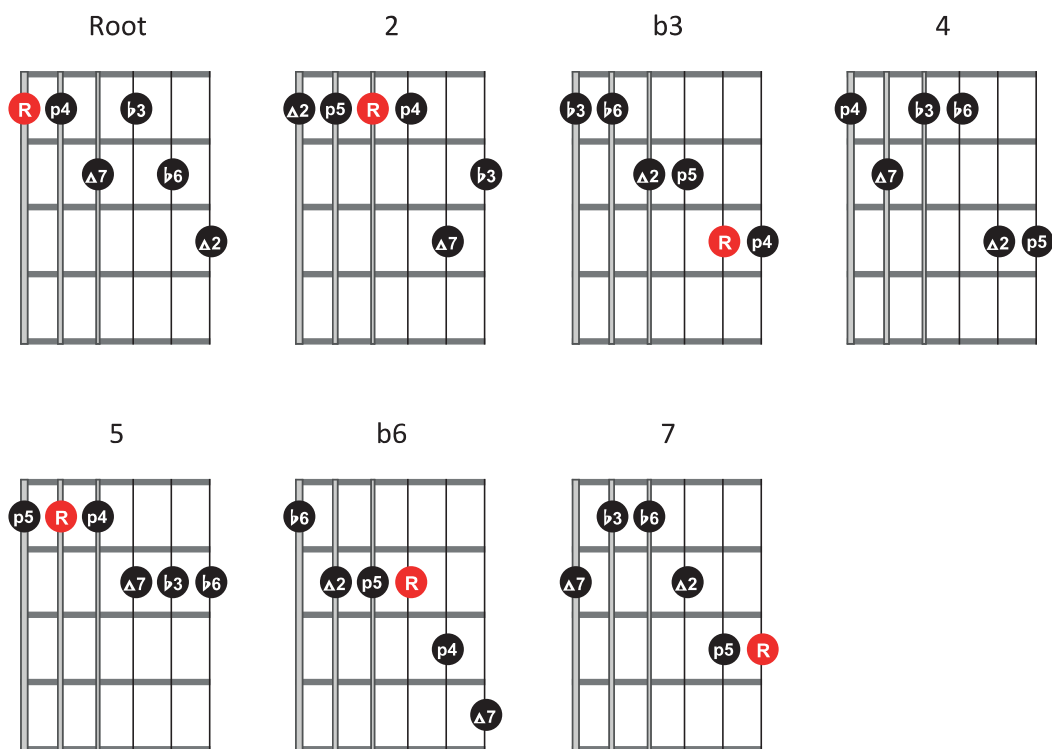


### Stringset A-D-G-B-E



## 6part-Quartal Voicings – Harmonic Minor

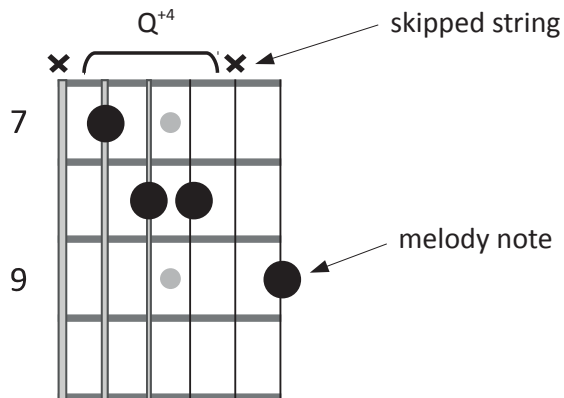
Stringset E-A-D-G-B-E



## Skipped String Voicings

Skipped string voicings are particularly useful on the guitar. They consist of a quartal type voicing on the E,A,D or A,D,G strings and a melody note two strings above.

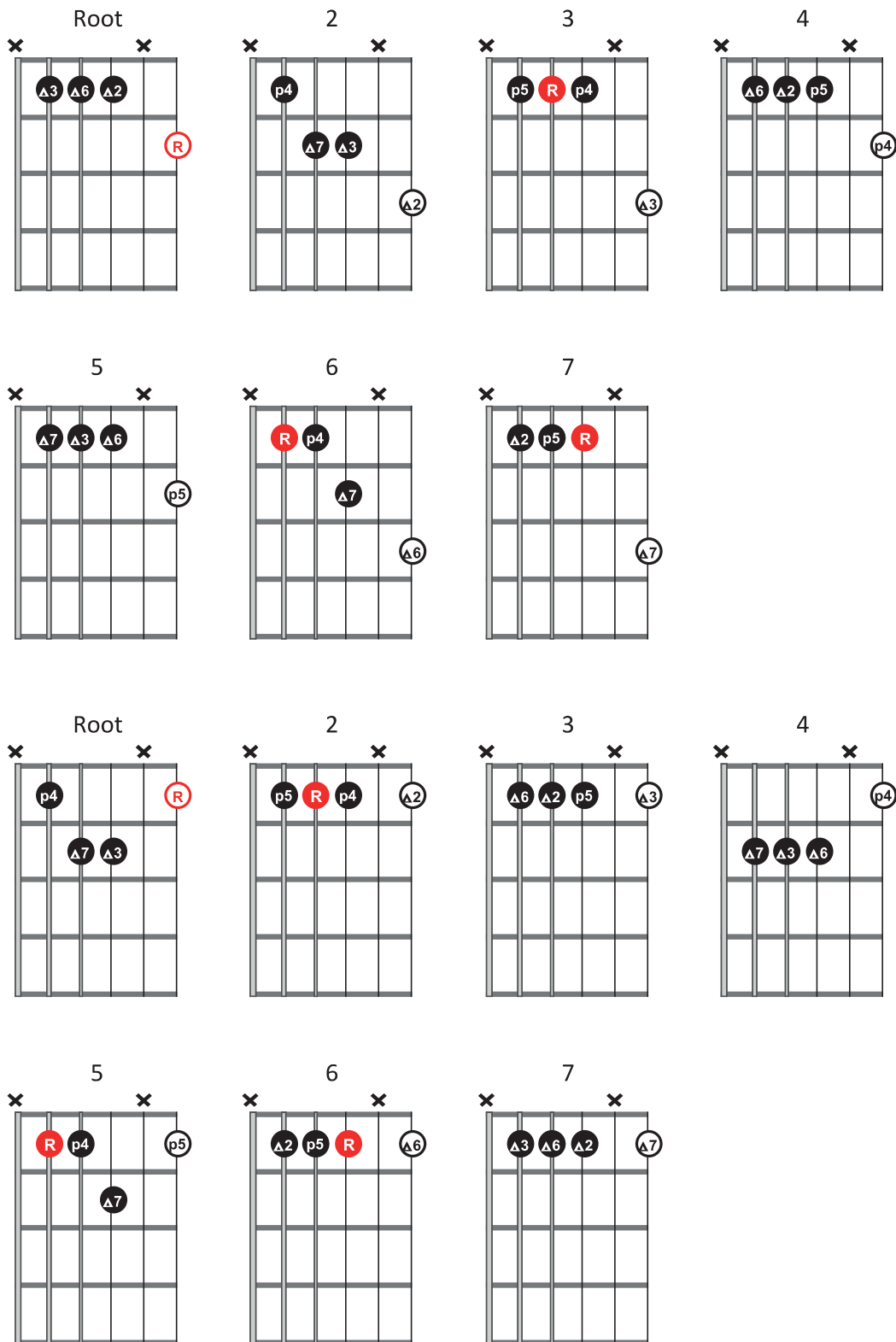
### **Ex. 142**



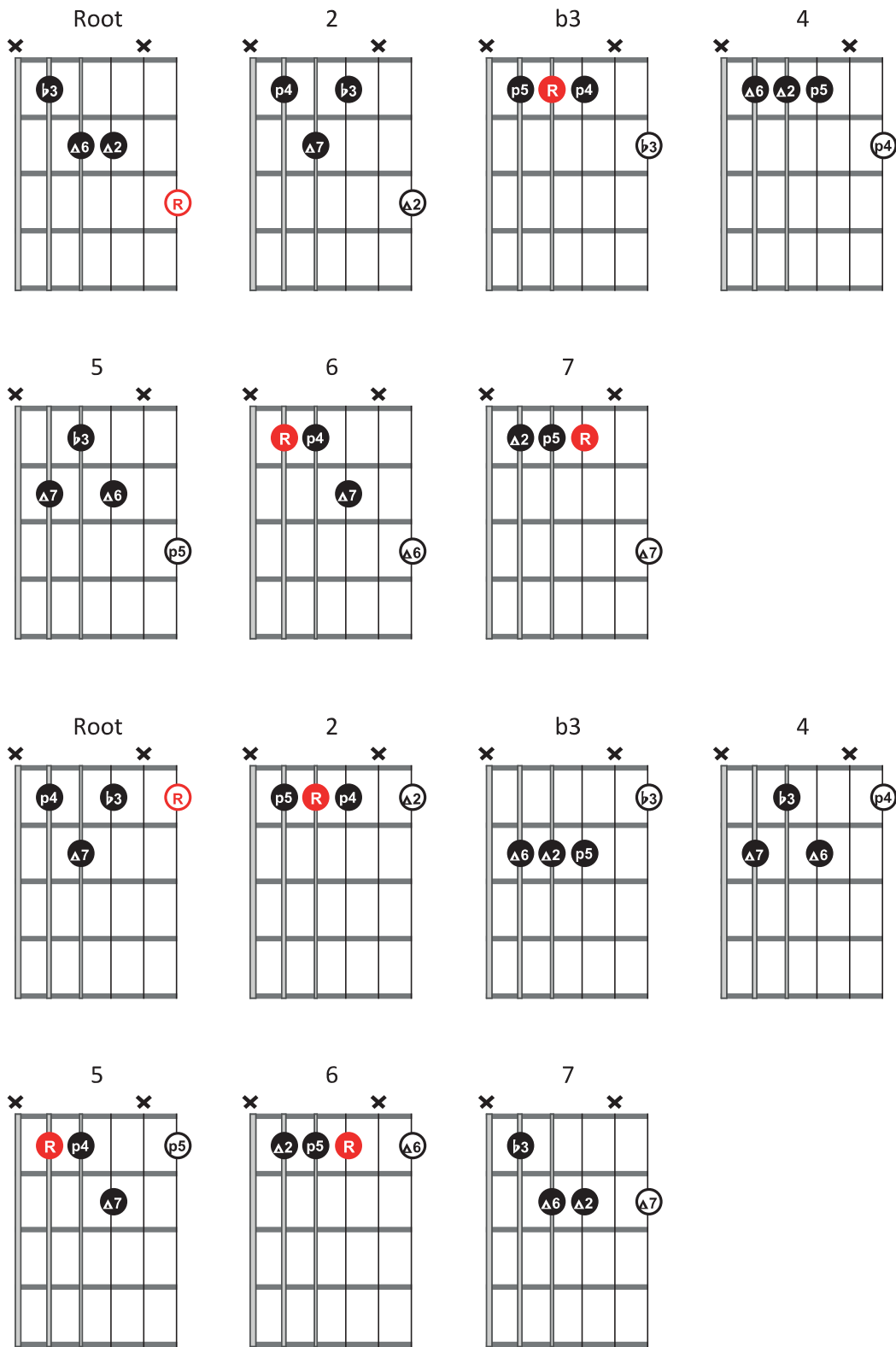
The voicing above is comprised of the notes E, Bb, Eb, Db. On its own this chord is incomplete but if played over certain bass notes it produces such chords as:  $F\sharp^{13}$ ,  $C^{7\sharp 9b9}$ ,  $E^{b7b9}$ ,  $A^{7b5b9}$ ,  $E^{MA\sharp 11\#5}$ ,  $G^{o7b13}$ .

Try to discover all the substitution possibilities of each form.

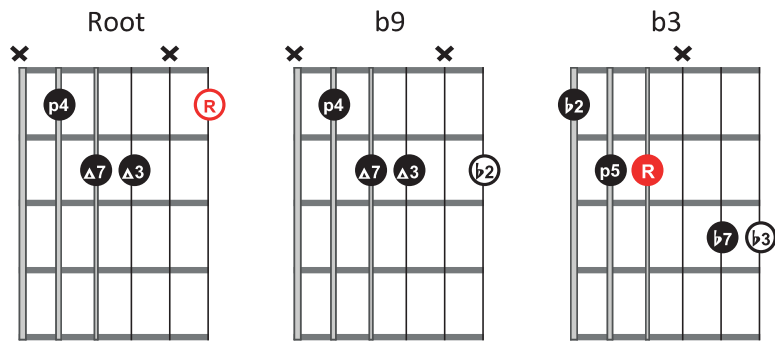
## Major Scale Skipped String Voicings



## Melodic Minor Scale Skipped String Voicings



## Dominant Diminished Skipped String Voicings



Here is an example of using skipped string quartal voicings in an F blues.

**Ex. 143**

The musical score for Ex. 143 is written in 4/4 time and consists of six staves. The key signature is one flat (Bb), and the tempo/style is indicated as 'F blues'. The score includes various musical notations such as triplets, eighth notes, and chords.

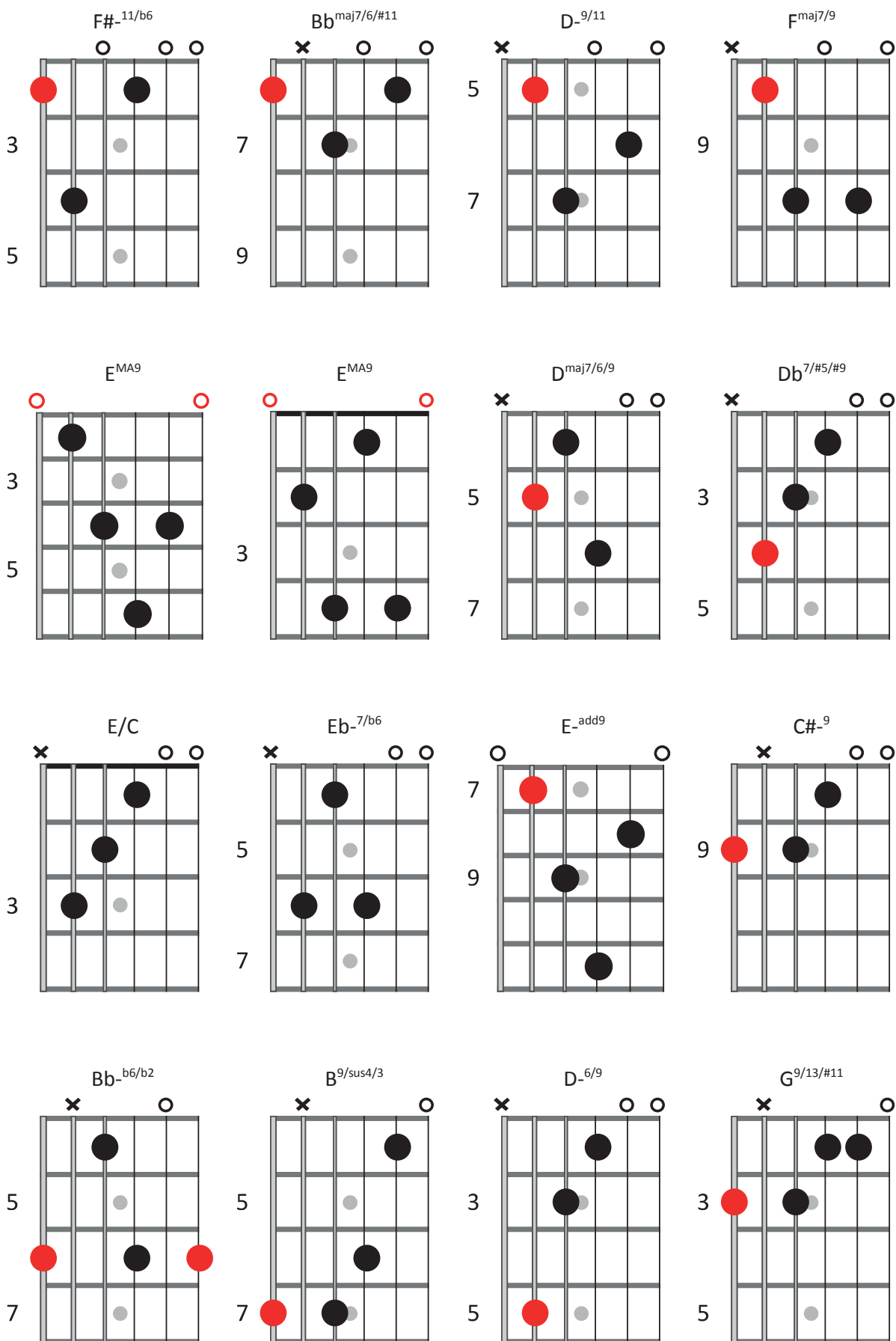
- Staff 1:** Starts with an F7 chord. The melodic line begins with a triplet of eighth notes (F, Ab, Bb) and continues with a series of eighth notes and triplets.
- Staff 2:** Continues the melodic line with triplet eighth notes and eighth notes.
- Staff 3:** Includes a 'loco' section with a Bb7 chord. The melodic line continues with triplet eighth notes and eighth notes.
- Staff 4:** Features a D7b9 chord and a G-7 chord. The melodic line continues with triplet eighth notes and eighth notes.
- Staff 5:** Includes a C7alt chord and a D7alt chord. The melodic line continues with triplet eighth notes and eighth notes.
- Staff 6:** Concludes with a G-7 chord, a C7 chord, and an F7 chord. The melodic line continues with triplet eighth notes and eighth notes.

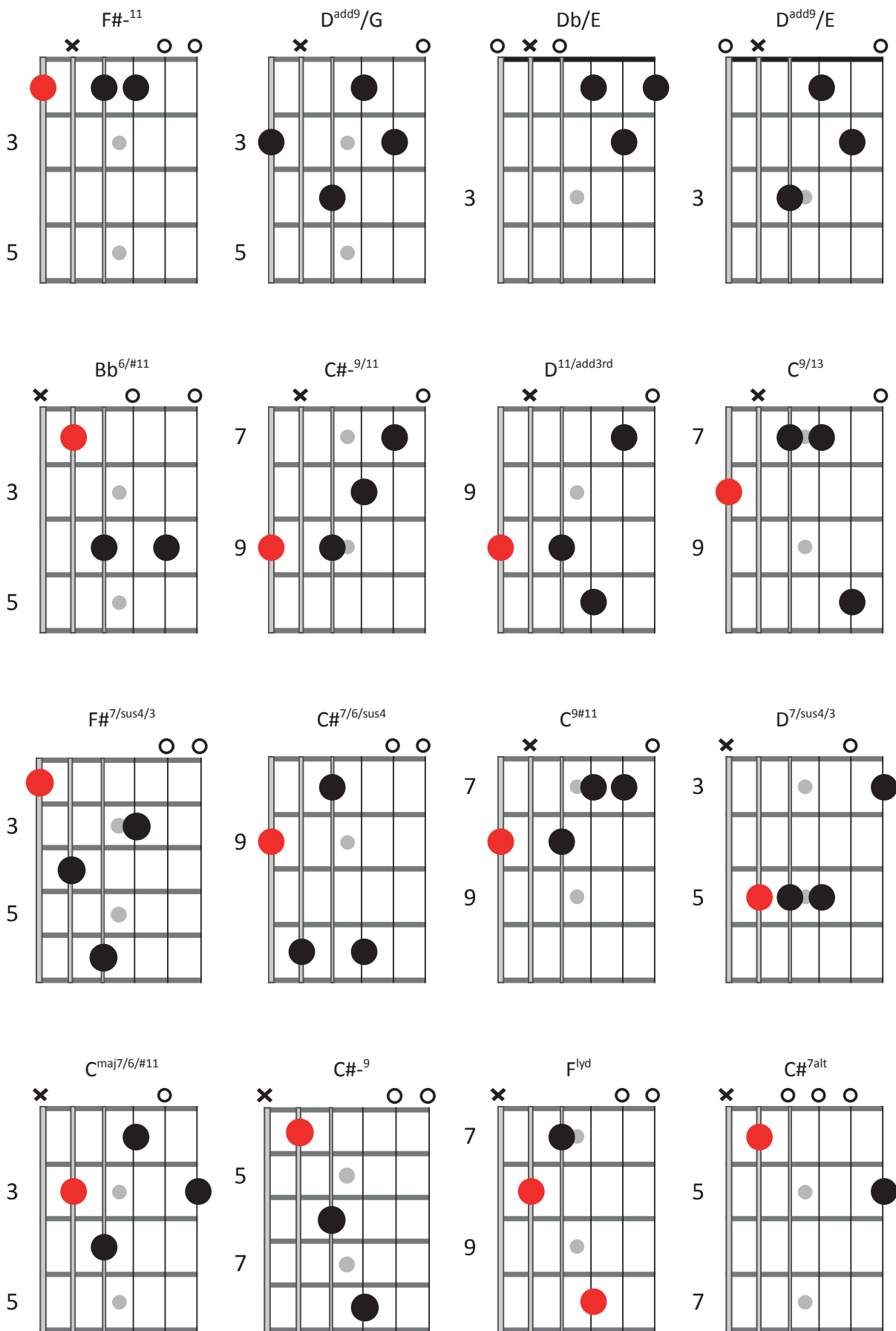


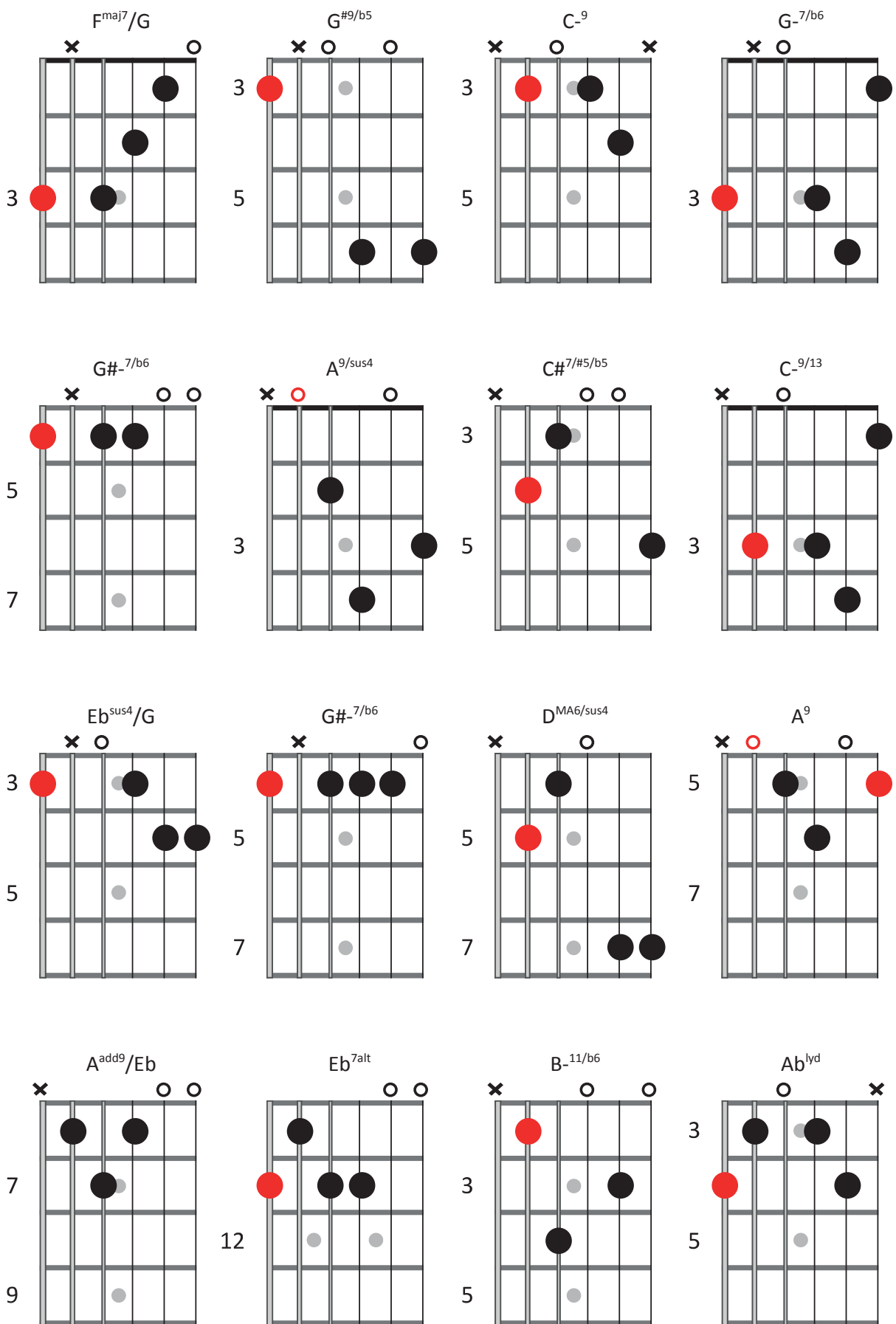
## Open String Voicings

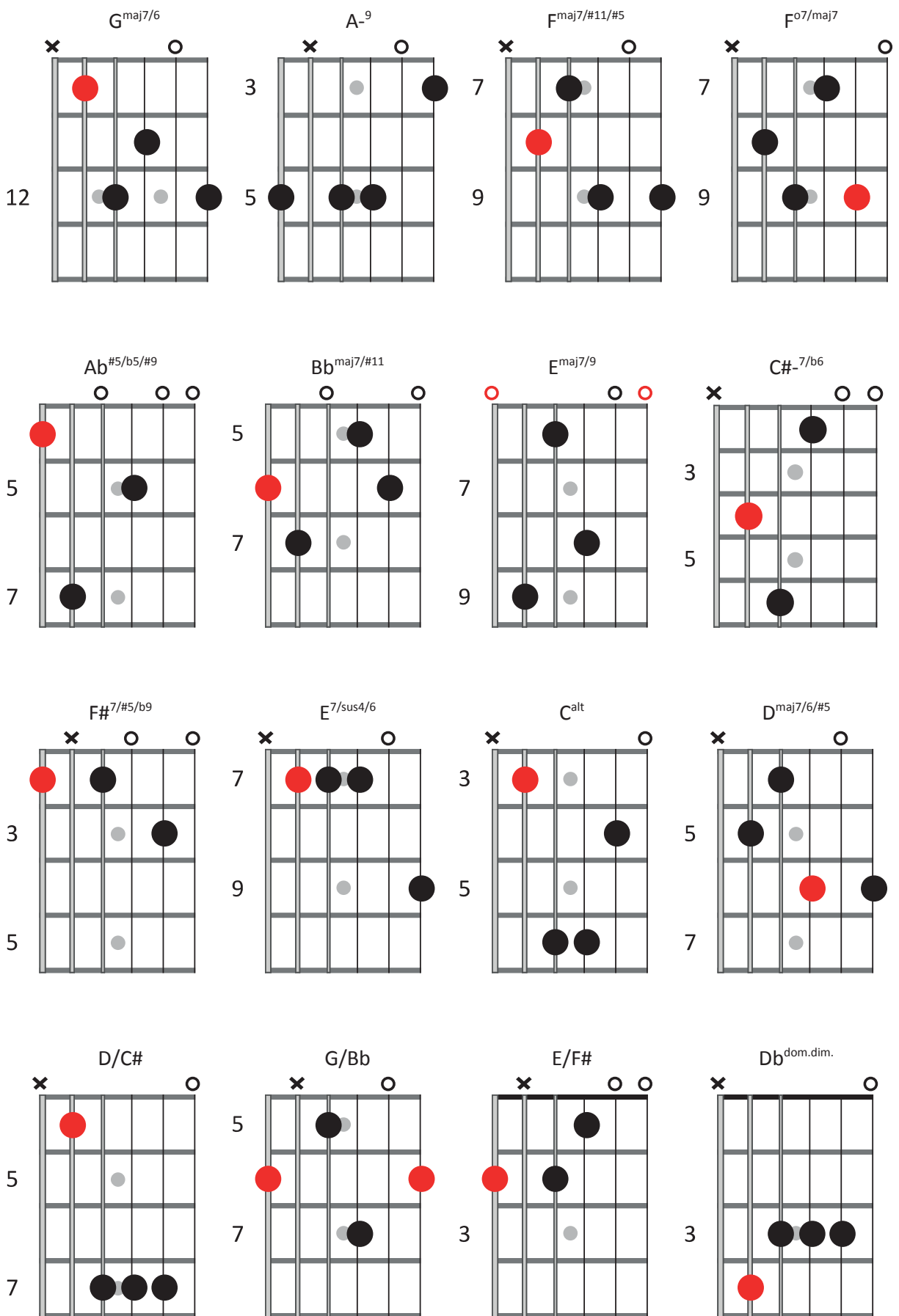
This section includes some of my favorite open string voicings. The open string(s) can occur as any member of the chord. Play through all the chords putting a check next to your favorites. It is also a good idea to organize the chords into progressions in order to remember them.

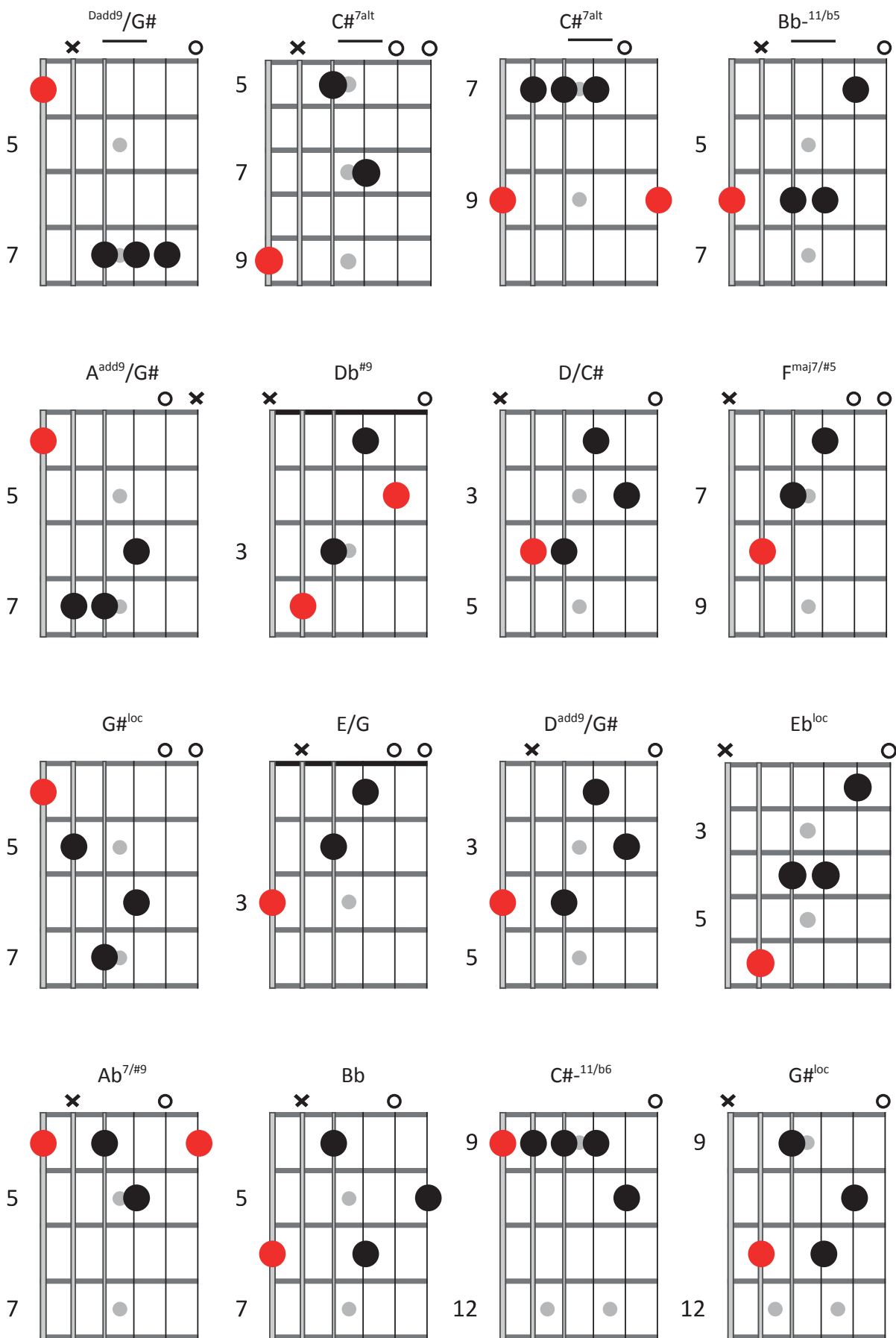
<p>D<sup>6/9/sus4</sup></p>	<p>A<sup>MA9/sus4</sup></p>	<p>F#<sup>sus4/3</sup></p>	<p>Ab<sup>-9</sup></p>
<p>F<sup>MA9</sup></p>	<p>C<sup>MA9/#4</sup></p>	<p>F#<sup>sus4/3</sup></p>	<p>G<sup>MA9/13/#4</sup></p>
<p>Ab<sup>-11/b6</sup></p>	<p>F#<sup>7/6/sus4</sup></p>	<p>F<sup>maj7/#11</sup></p>	<p>E<sup>sus4/add9</sup></p>

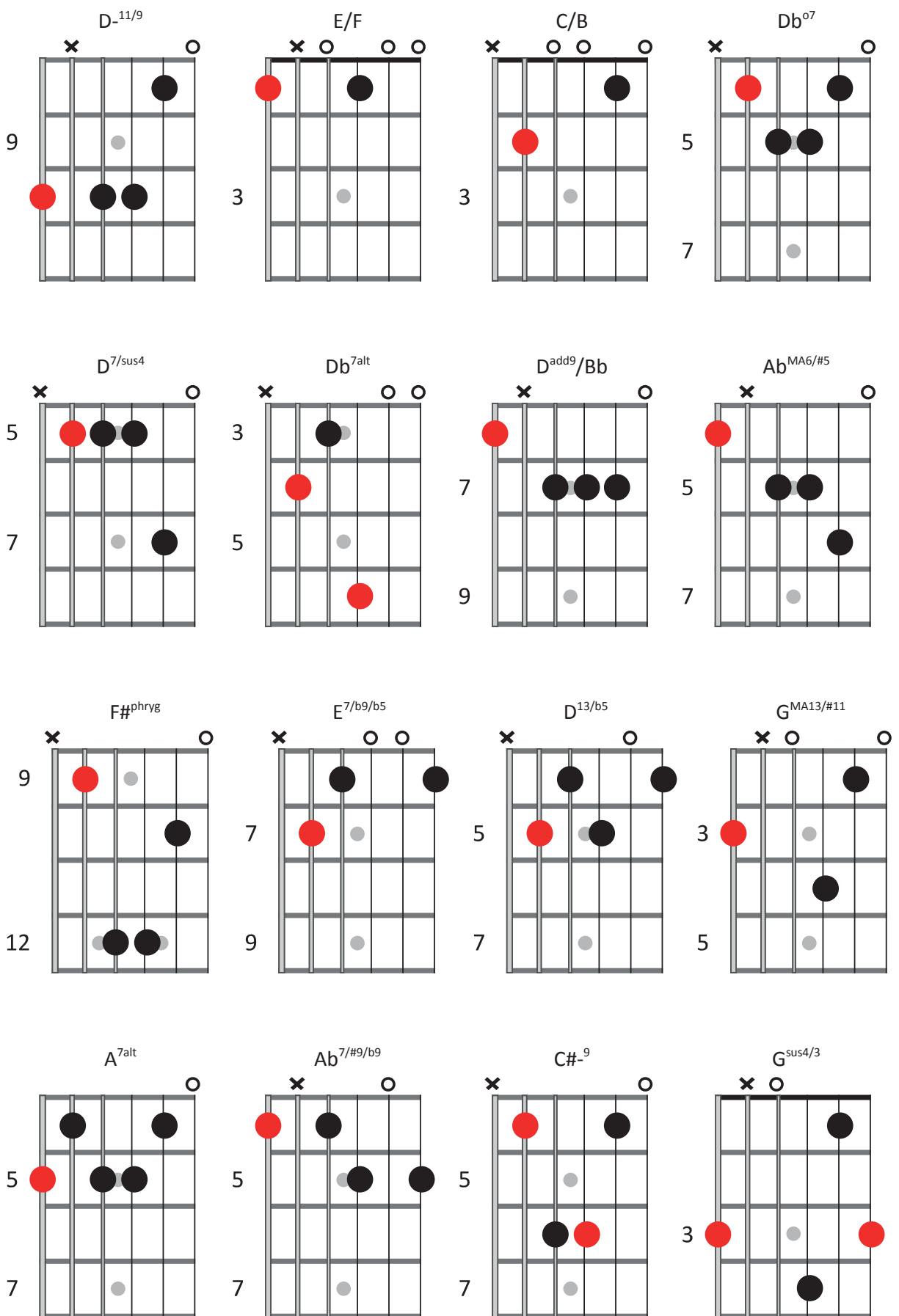


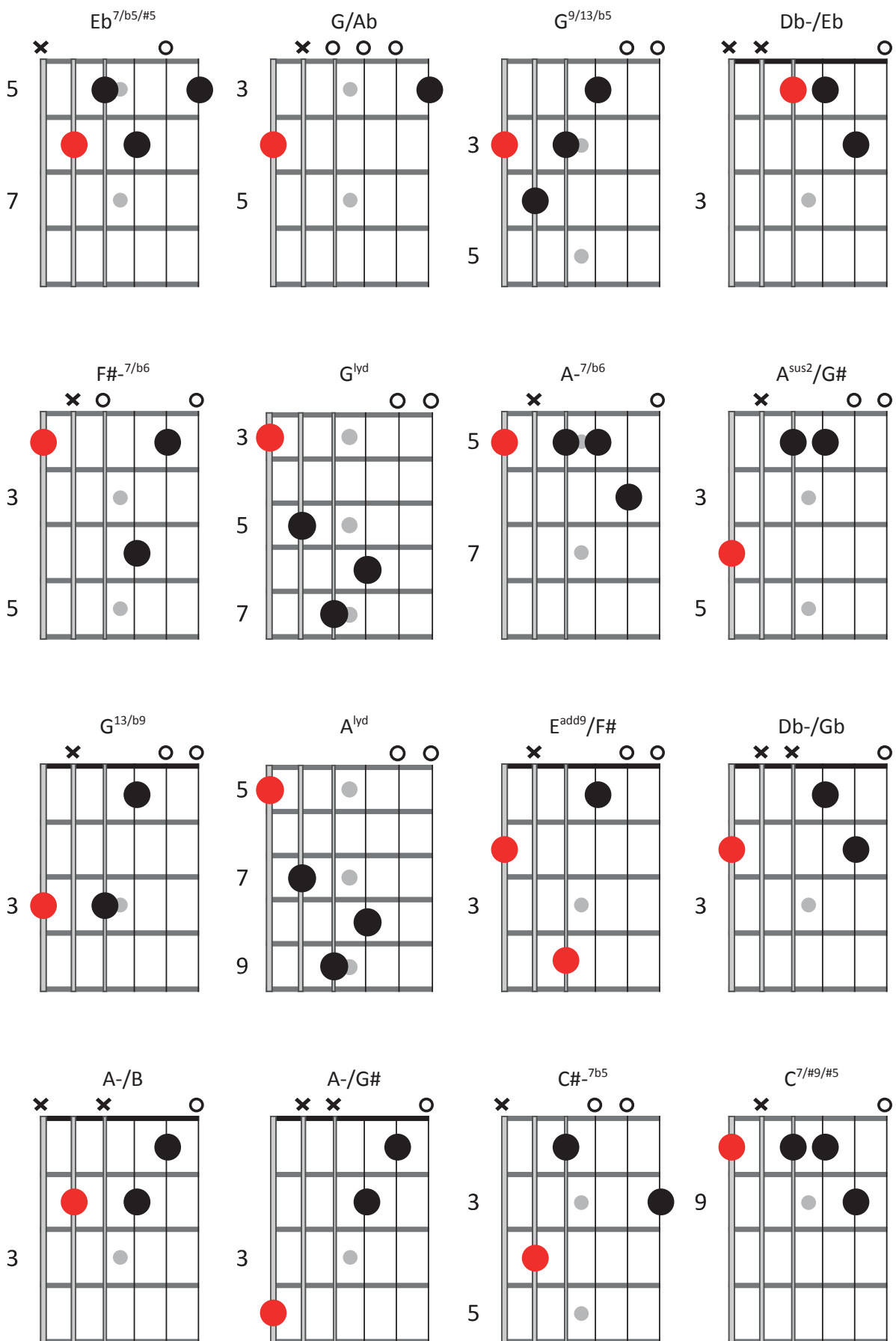




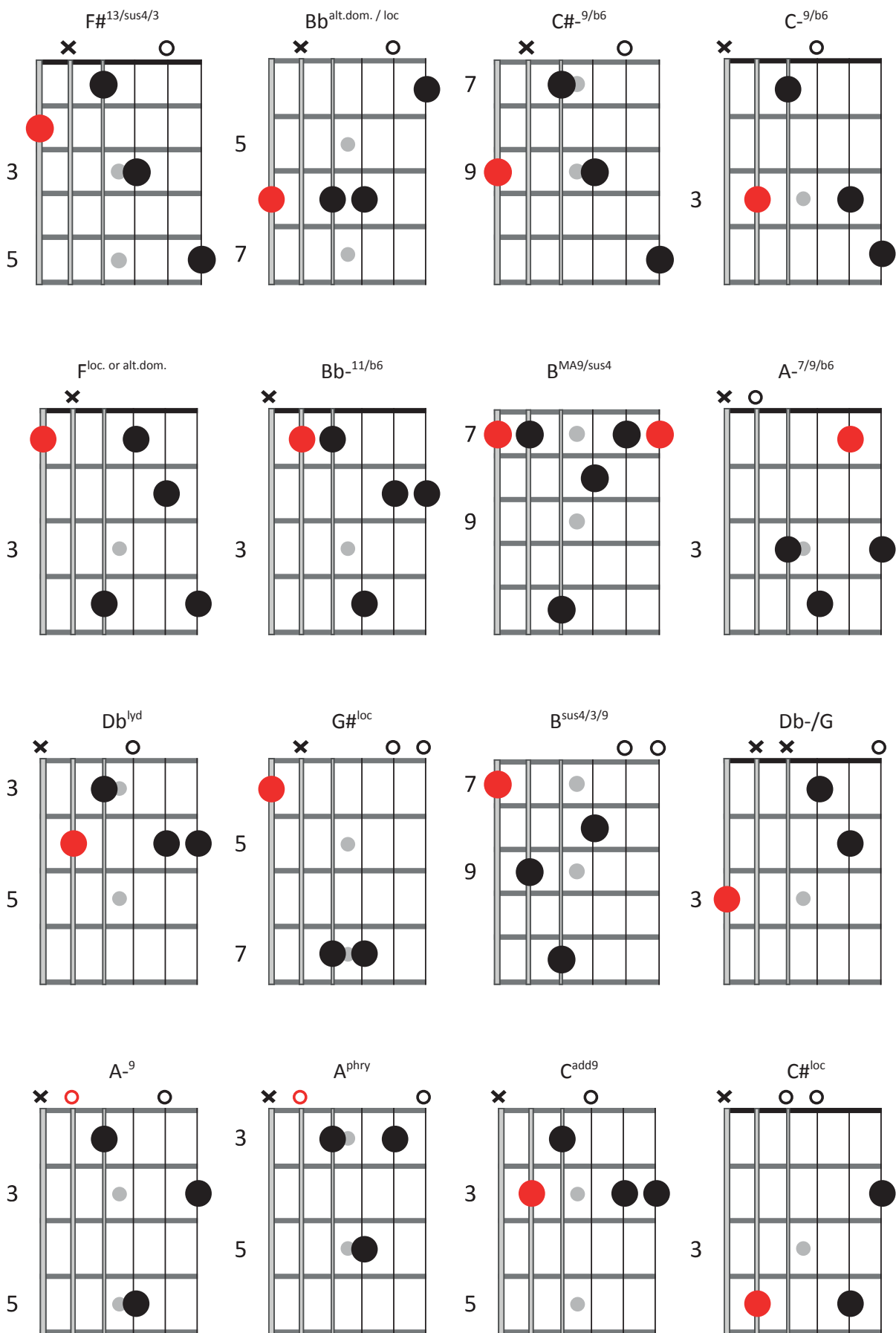


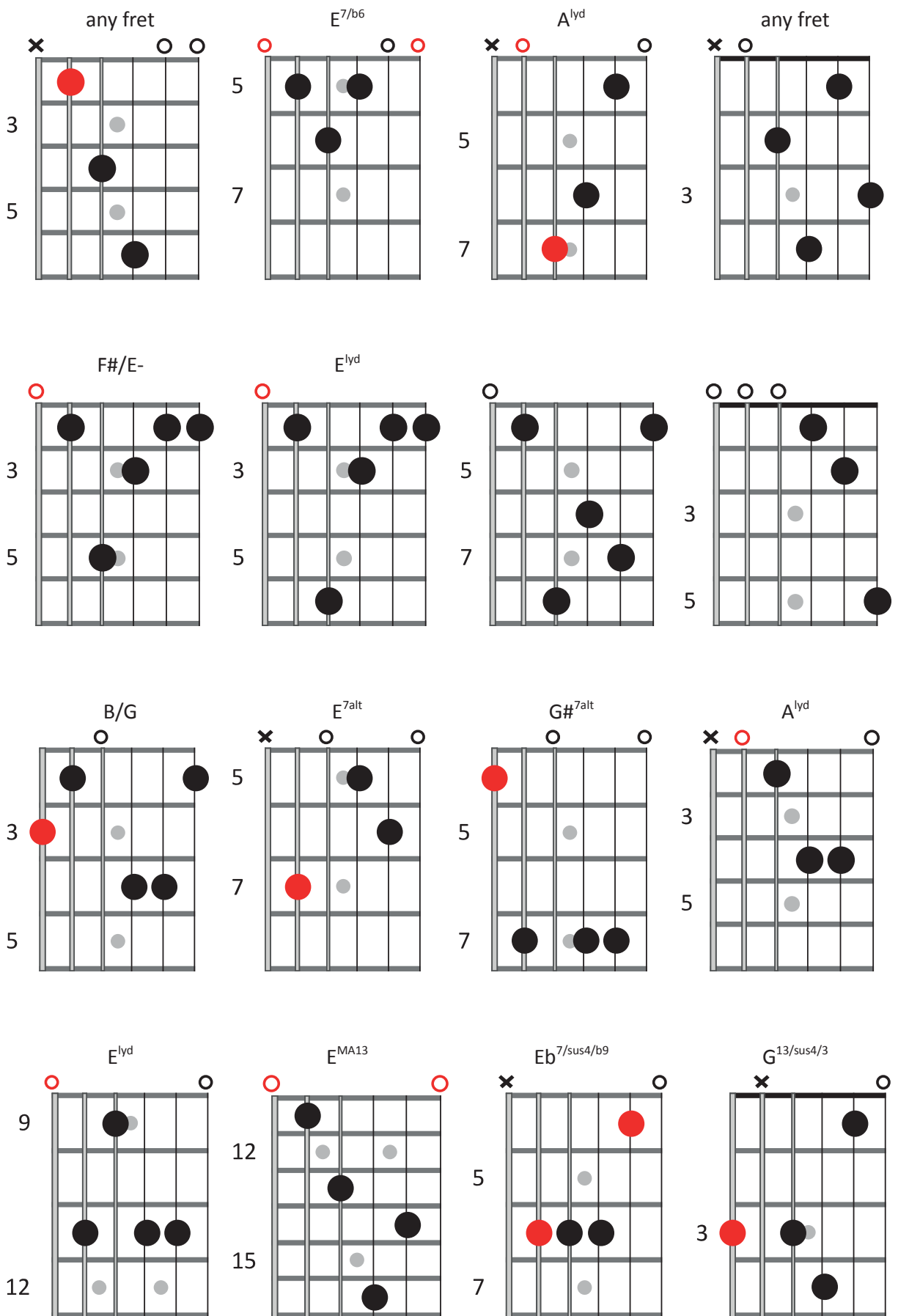


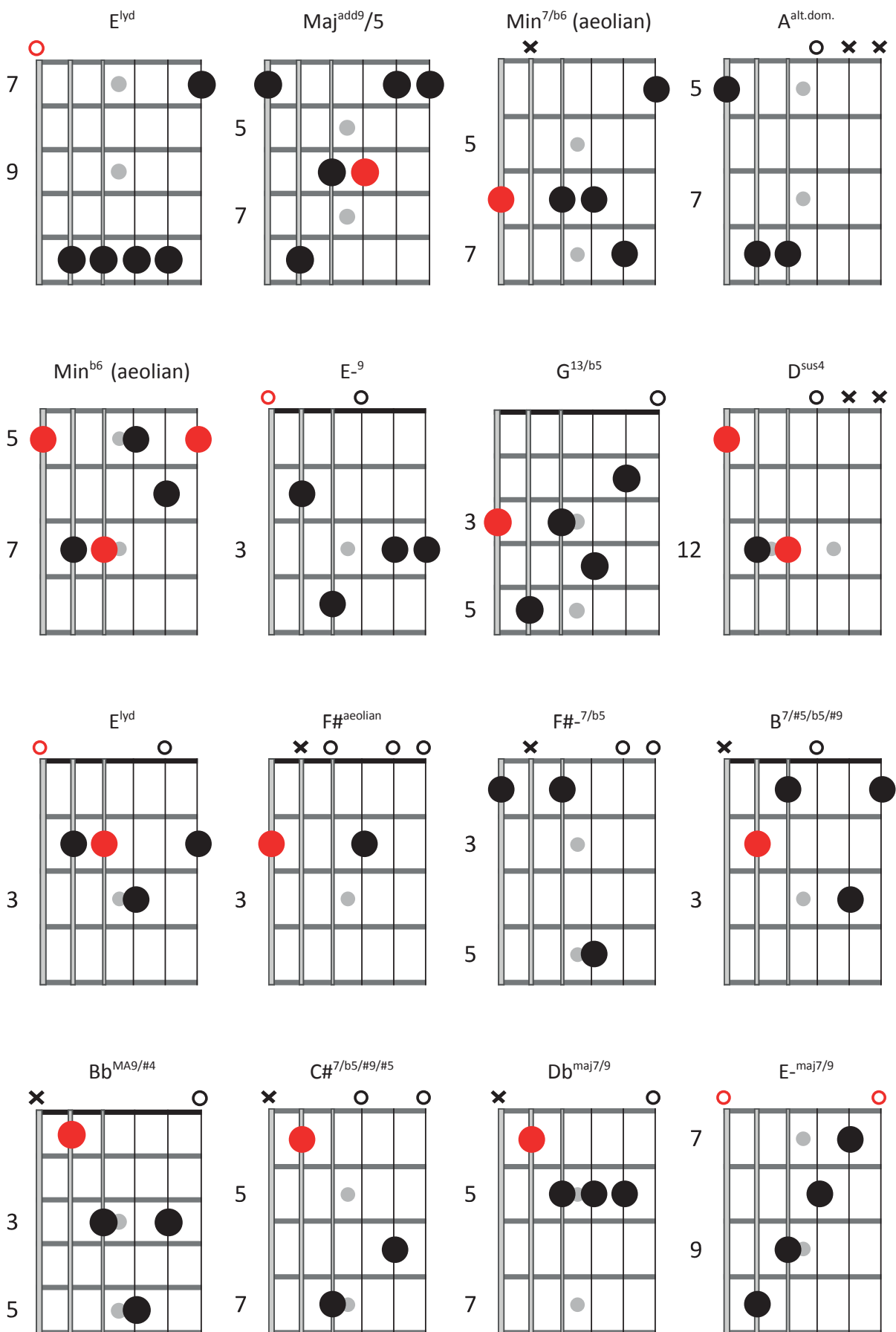






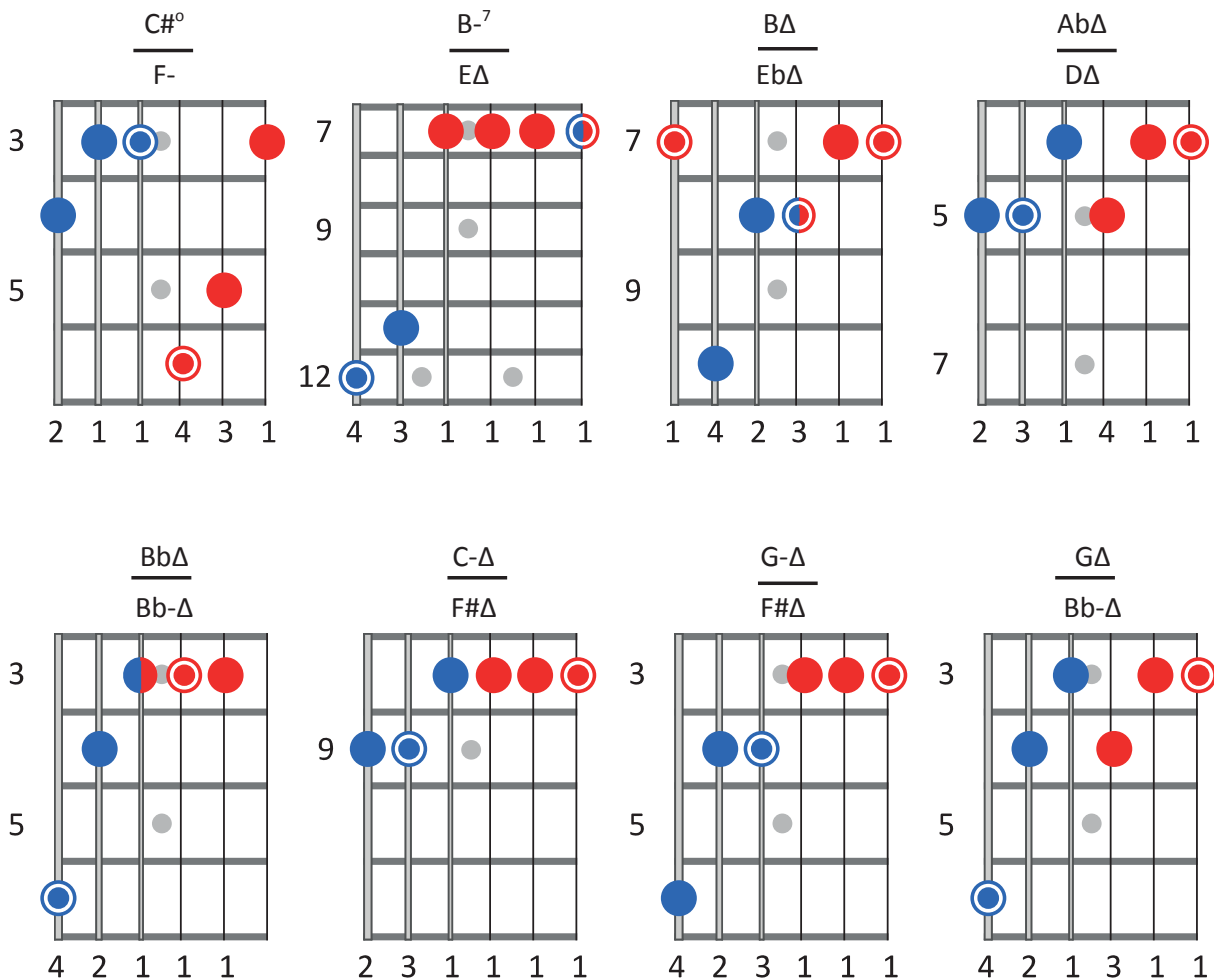


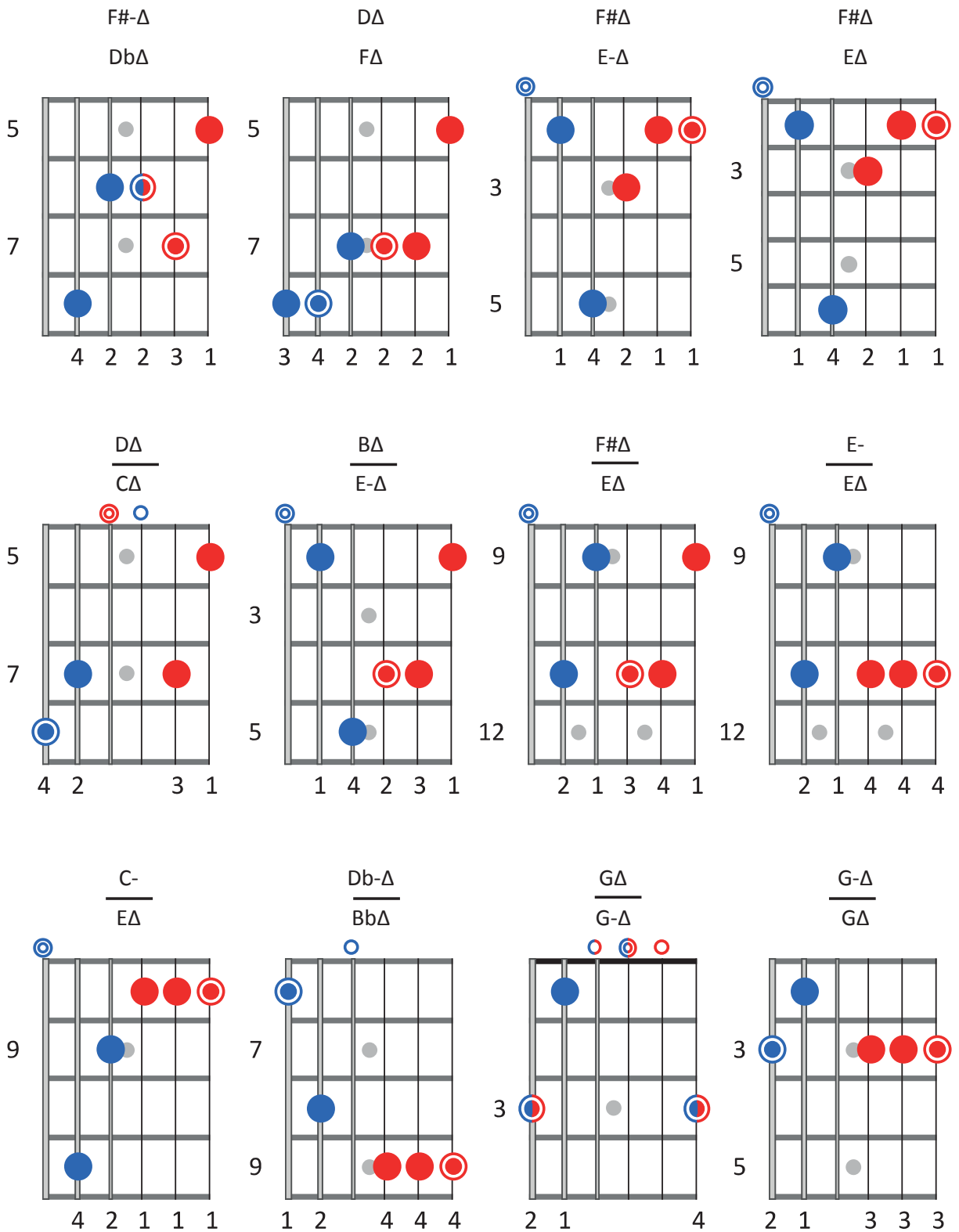


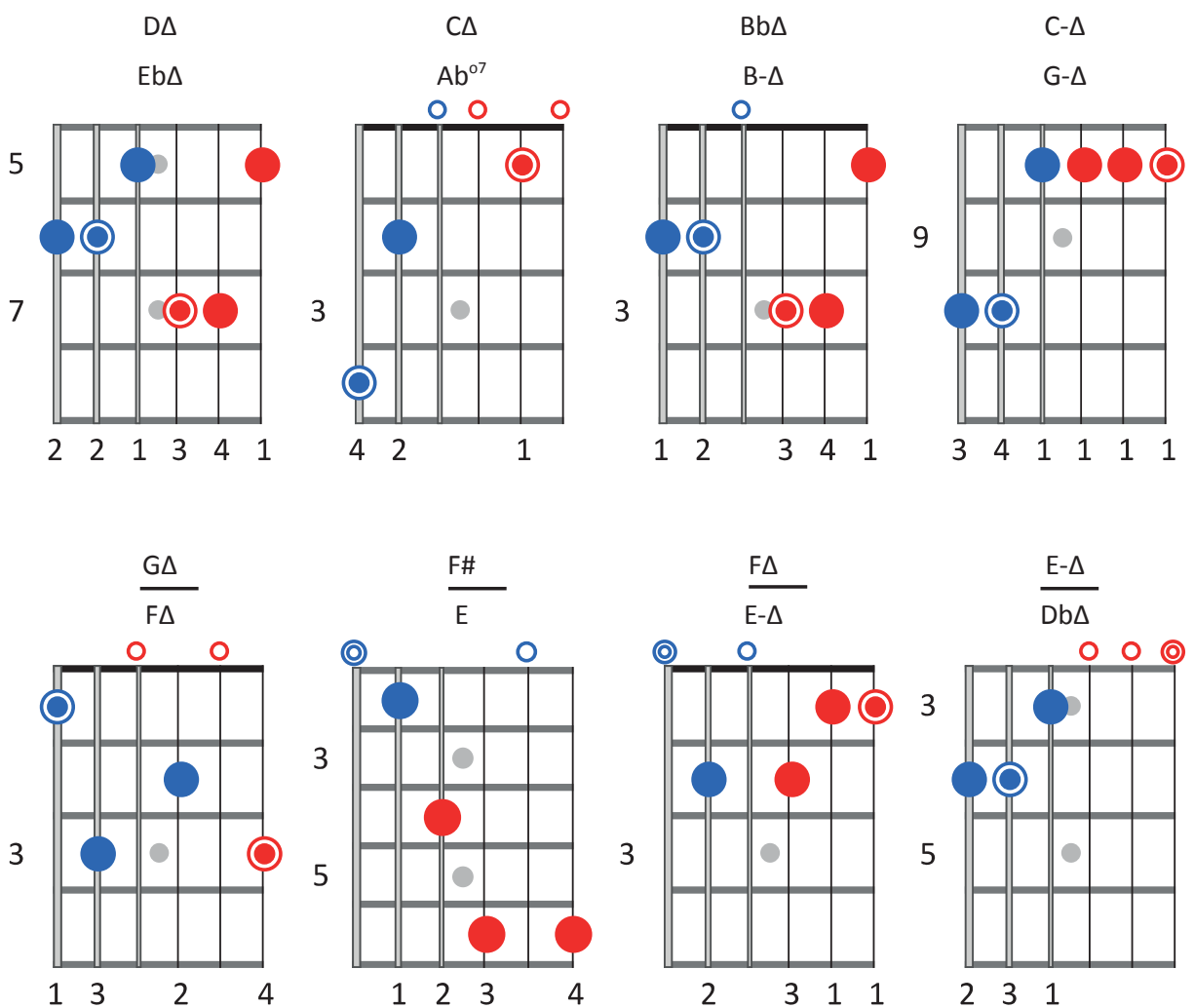


## Polychords (Triads over Triads)

The polychords in this section are moveable but have been specifically labeled for easier understanding. These kind of voicings work well for intros and endings where there is more harmonic freedom.







## Using Comping Voicings in New Ways

The comping voicings on the following page may be used in a variety of ways. To demonstrate, let's look at some possible substitutions for Eb<sup>7alt</sup>.

### **Ex. 144**

a)	Eb <sup>7/#5/#9</sup>	=	3	#5	b7	#9
			<b>G</b>	<b>B</b>	<b>C#</b>	<b>F#</b>
sub.	G <sup>maj7b5</sup>	=	1	3	b5	7
b)	Eb <sup>7/b9/#5</sup>	=	b9	3	#5	R
			<b>E</b>	<b>G</b>	<b>B</b>	<b>D#</b>
sub.			1	b3	5	7
c)	Eb <sup>7/b9/#5</sup>	=	b7	b9	3	#5
			<b>Db</b>	<b>Fb</b>	<b>Abb</b>	<b>Cb</b>
sub.	Db <sup>-7b5</sup>	=	1	b3	b5	b7

Any of these substitutions (and their inversions) will work in place of Eb<sup>7alt</sup>, because they all share the same parent melodic minor scale (E melodic minor).

Consult the substitution section for further applications.

## Constructing Chord Scales

Chord scales for comping and soloing may be constructed from upper-string voicings. For demonstration purposes let's use an F7 chord.

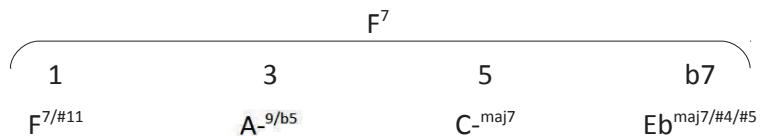
What I would first do is decide on an appropriate scale, in this case we'll use Fmix#11. Then, using the parent melodic minor scale, list all of the chords generated by the scale.

### Ex. 145

C<sup>-maj7</sup>      D<sup>7/sus4/b13</sup>      Eb<sup>maj7/#4/#5</sup>      F<sup>7/#11</sup>      G<sup>7/b13</sup>      A<sup>-9/b5</sup>      B<sup>7/#9/b9/#5/b5</sup>

Next I would isolate all of the chords whose root was a basic chord tone of F<sup>7</sup>.

### Ex. 146



Out of these chords I would pick two, in this case C<sup>-maj7</sup> and Eb<sup>maj7/#5/#4</sup>, on which the scale would be based. By alternating these chords and their inversions an Fmix#11 scale may be built in the top voice. This may be done by alternating voicings as seen here in Ex. 147.

### Ex. 147

F13

C<sup>-MA7</sup>

Eb<sup>MA7#4</sup>

C<sup>-MA7</sup>

C<sup>-MA7</sup>

Eb<sup>MA7#4</sup>

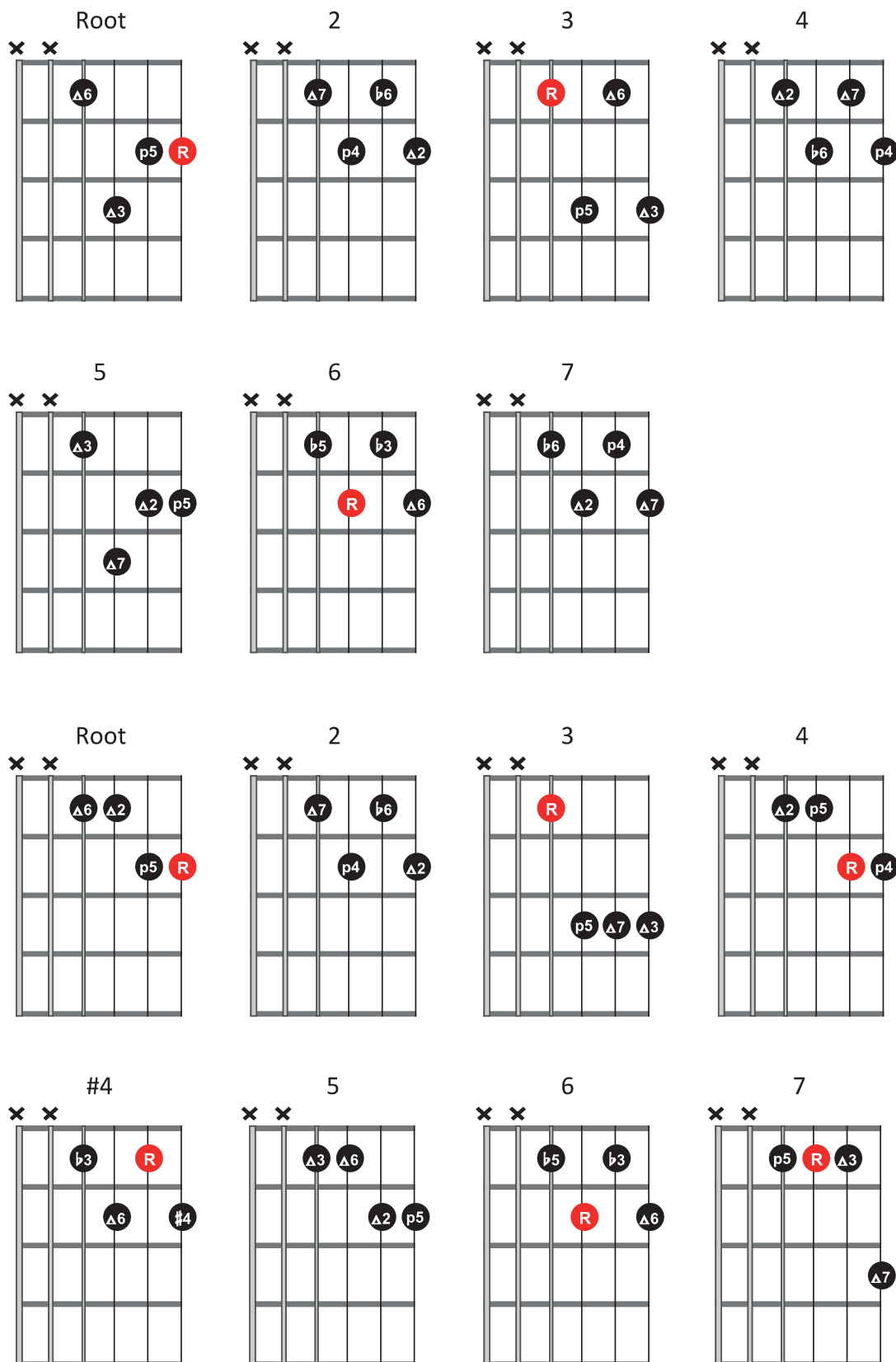
F9 (A-7b5)

Remember, you may mix together any of the drop voicing groups for these purposes.

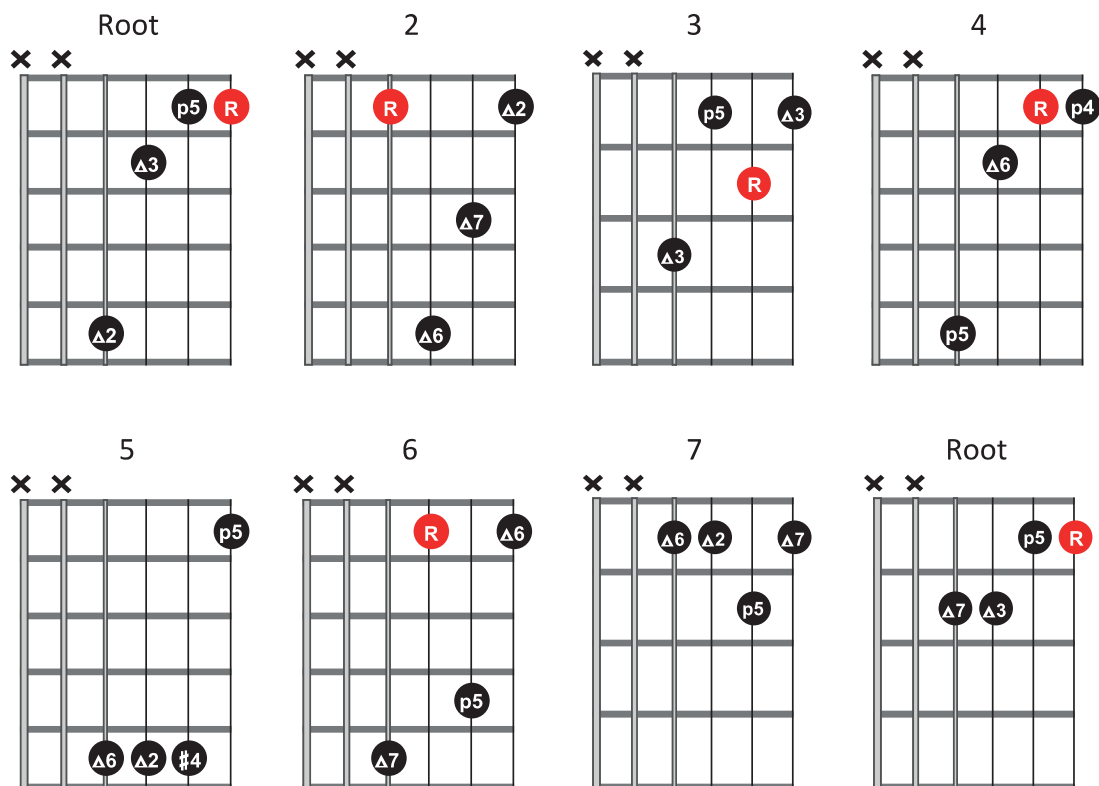


## Chordal Scales

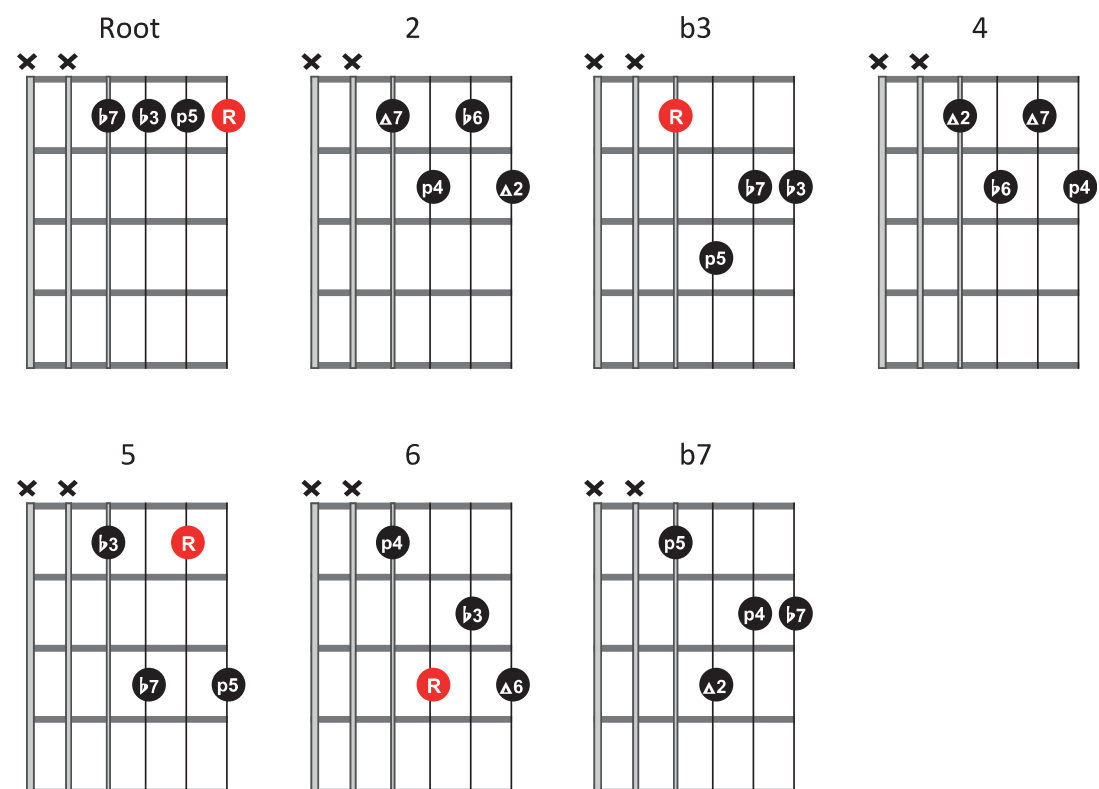
### Major Scale (Bebop)



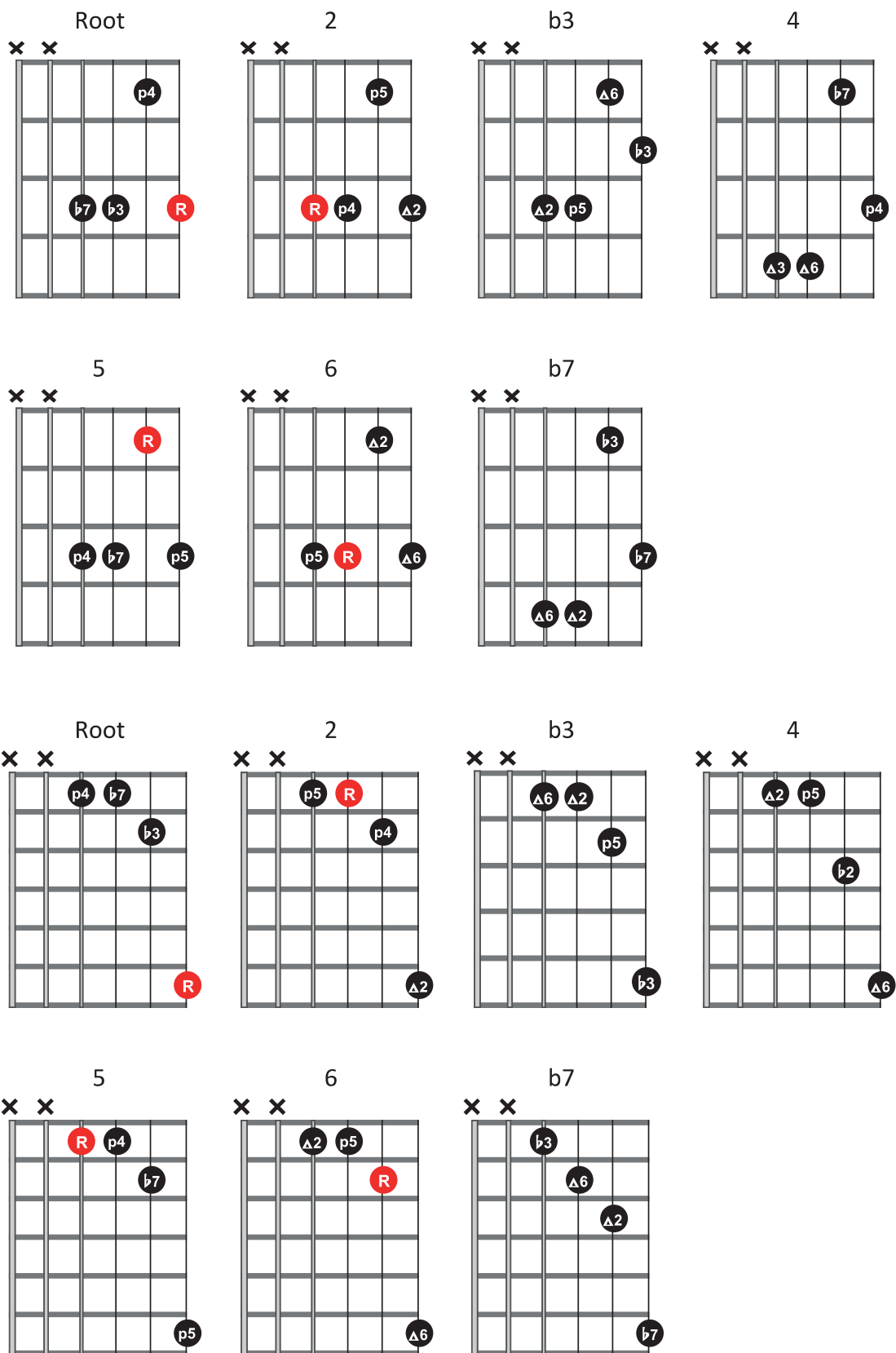
## Major Scale (modern)



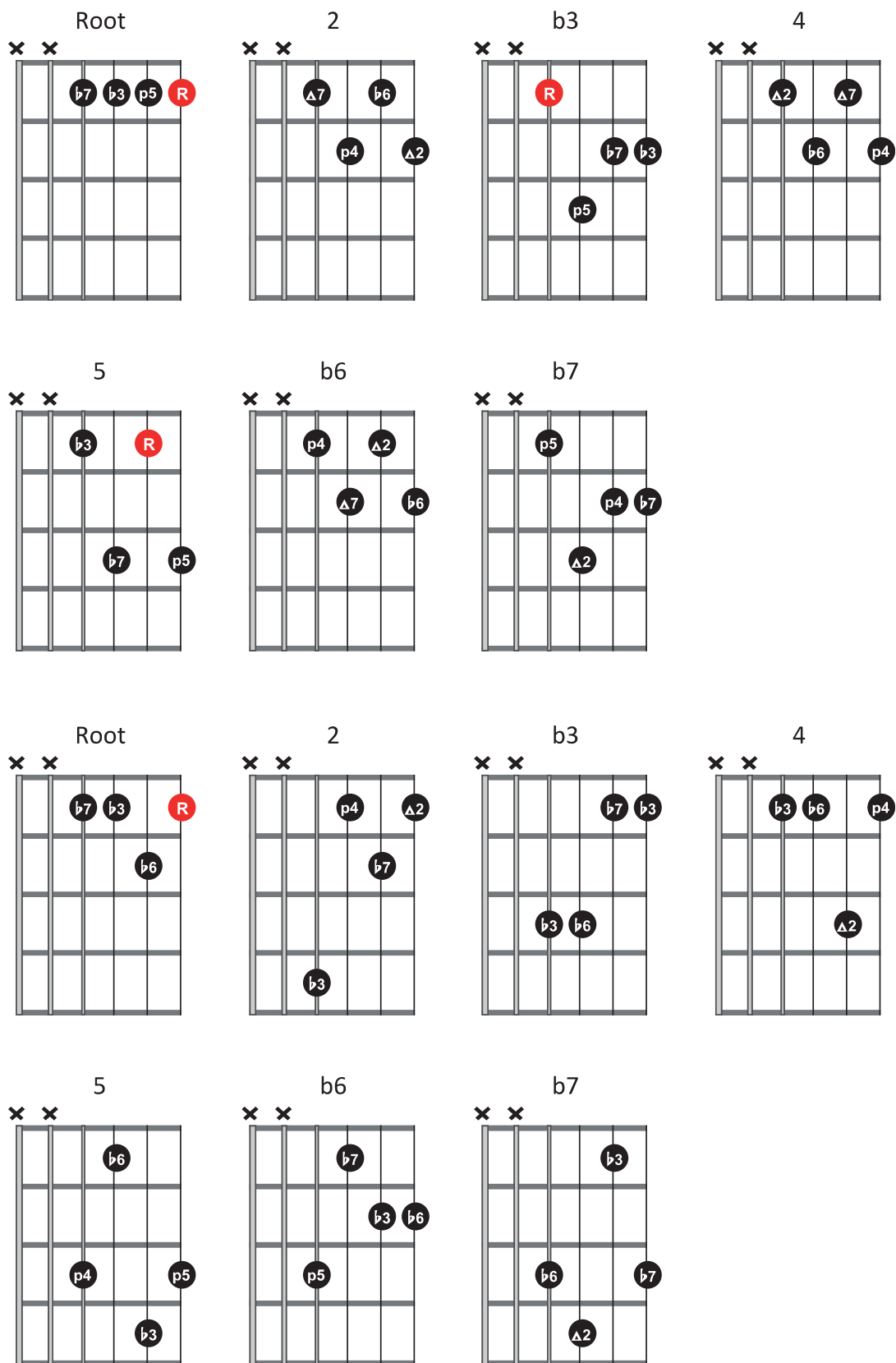
## Dorian/Minor (Bebop)

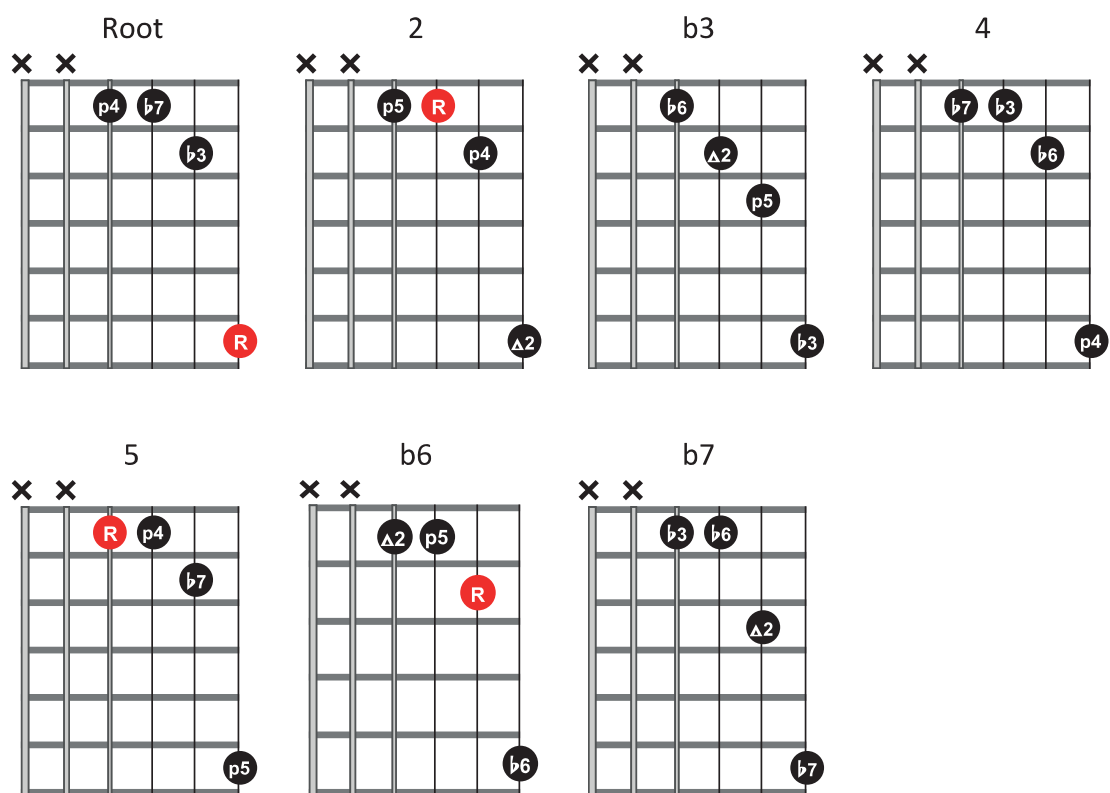


## Dorian/Minor (modern)

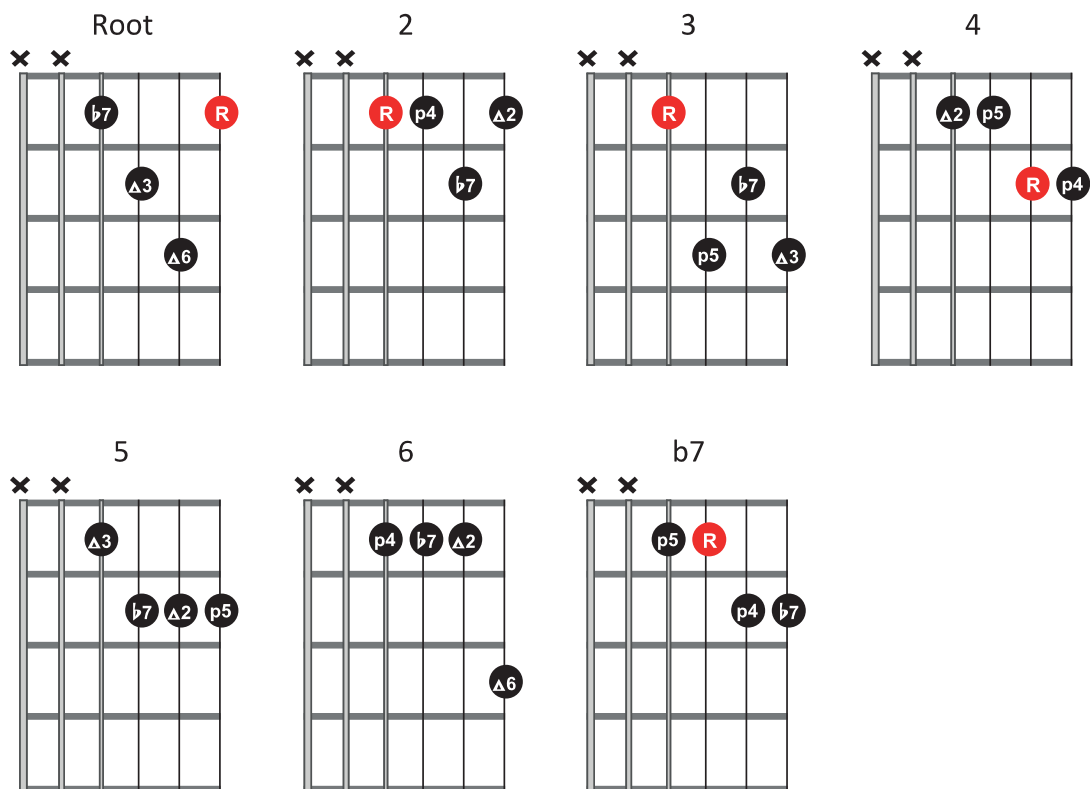


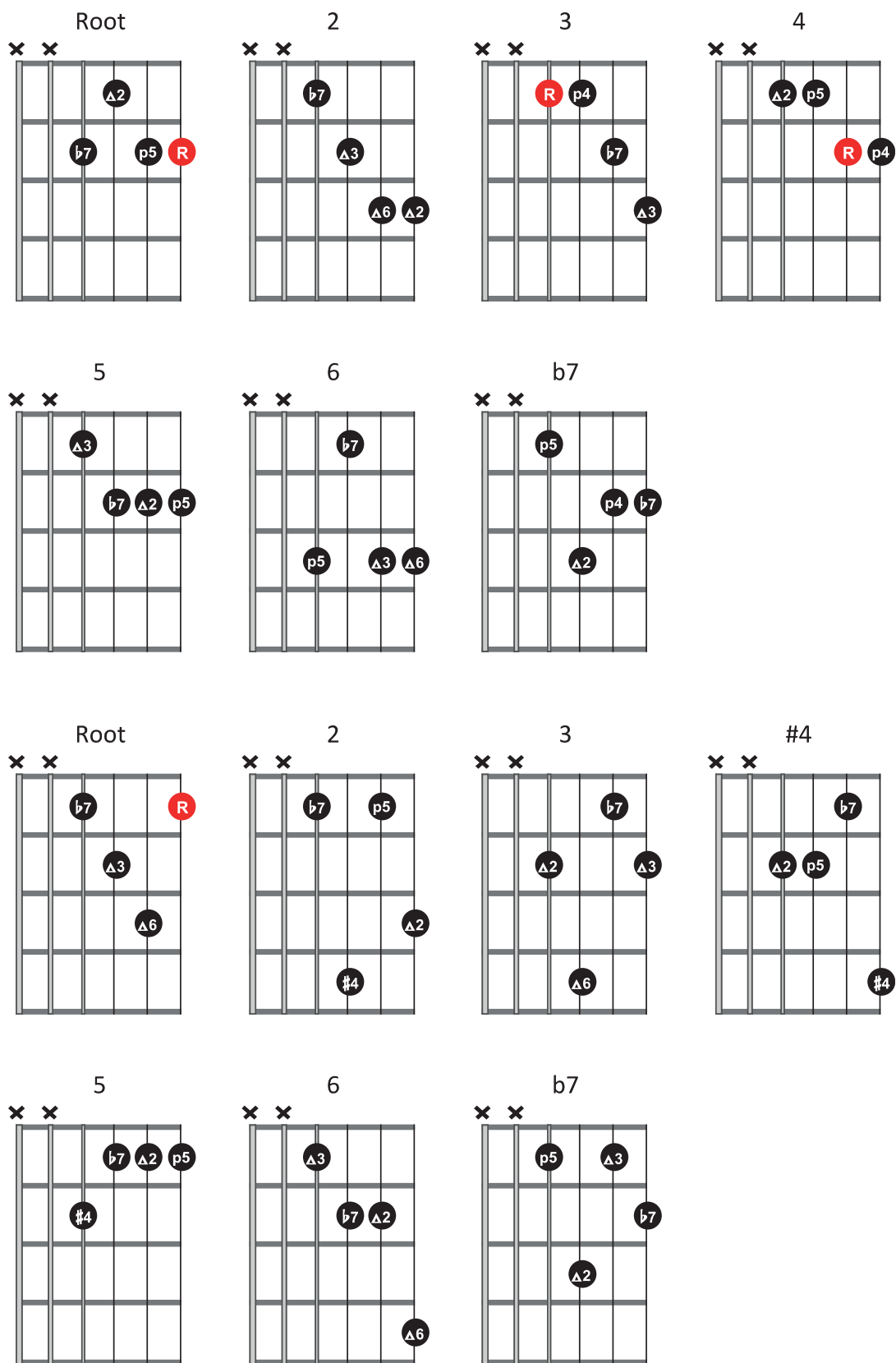
## Aeolian/Minor



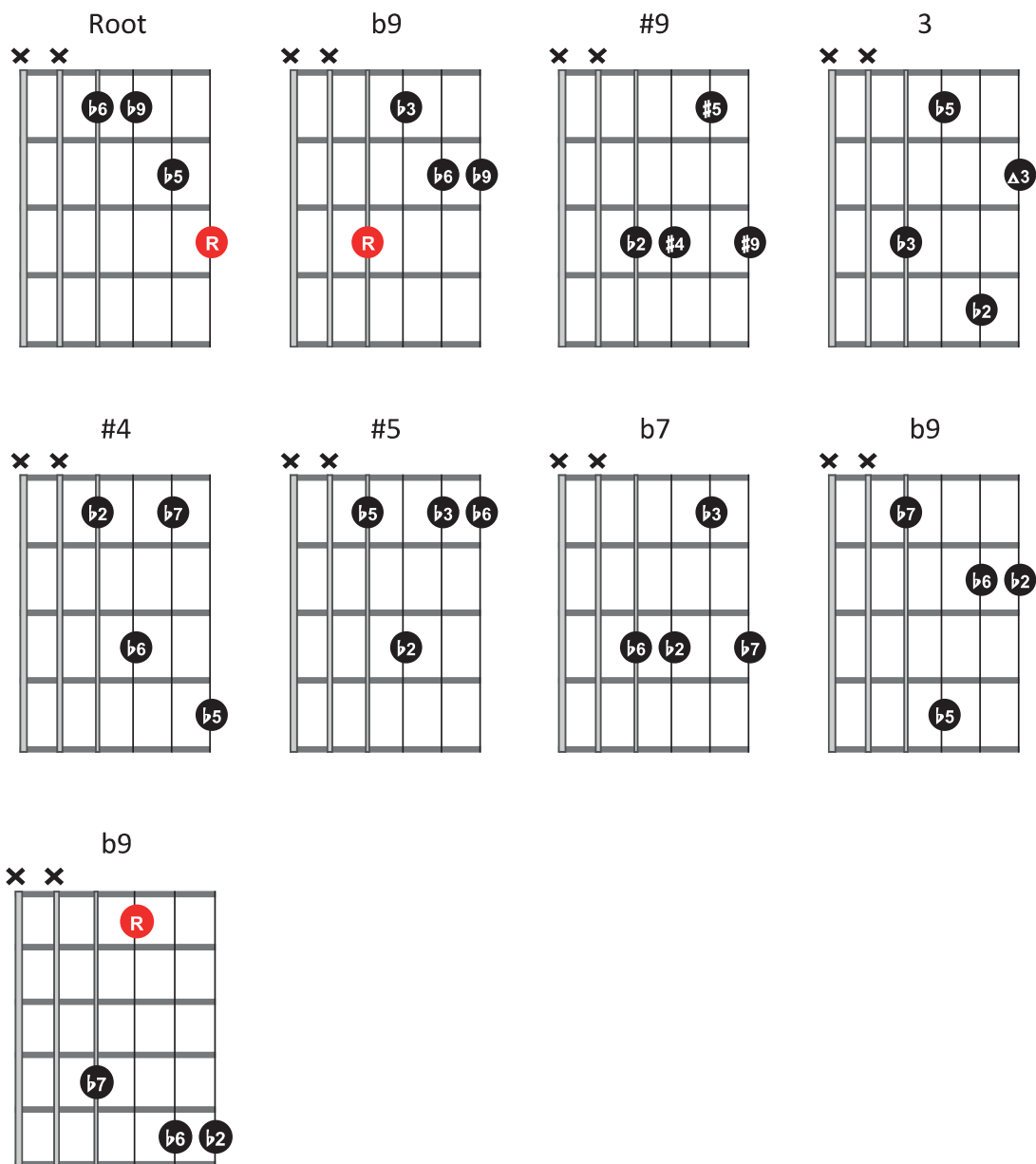


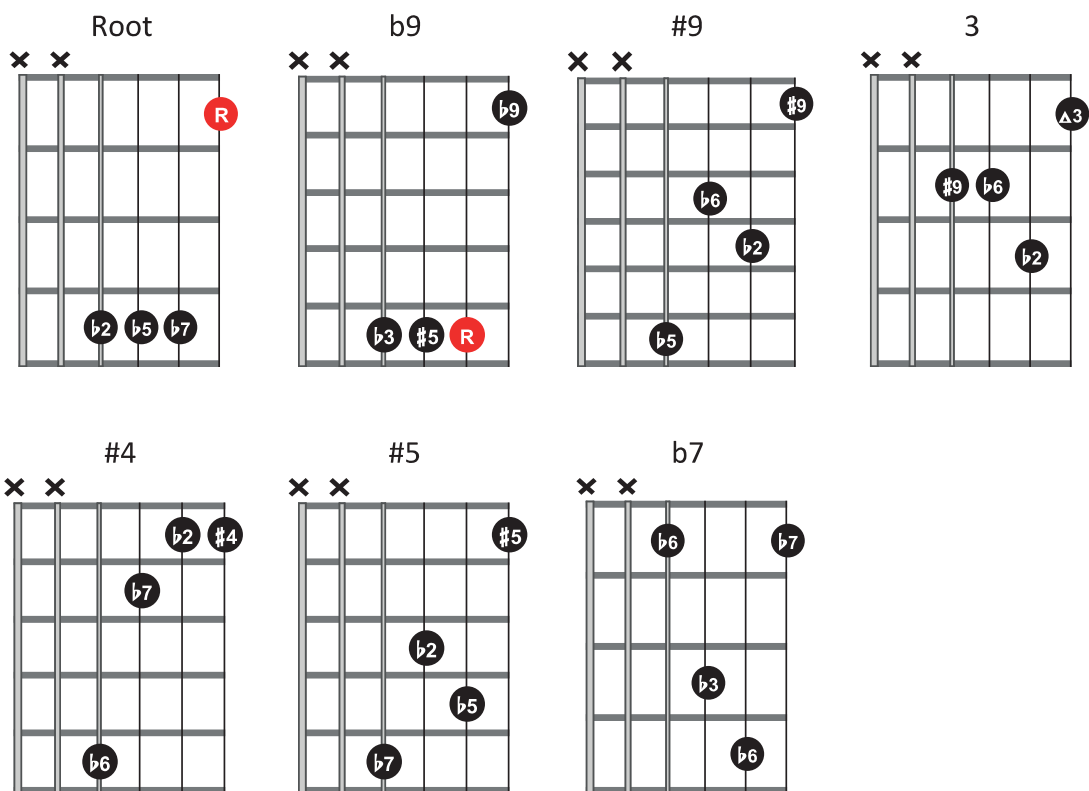
**Dom<sup>7</sup> (unaltered)**



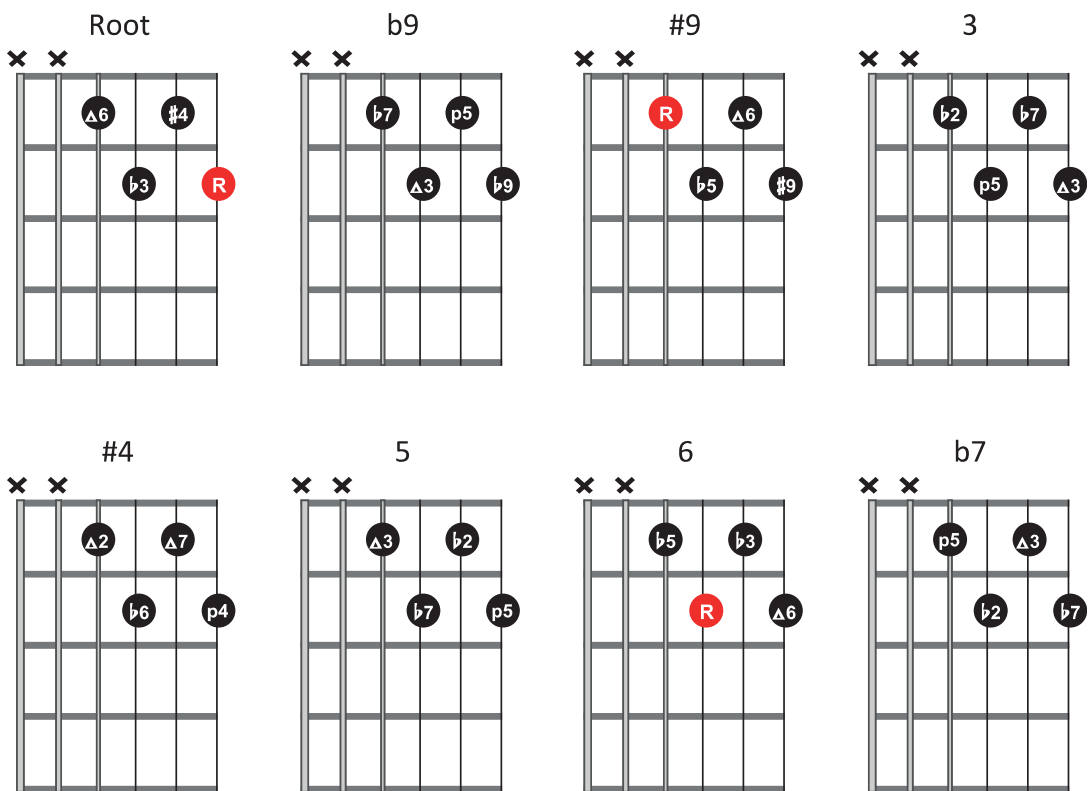


# Dom<sup>7</sup> (altered Dom)

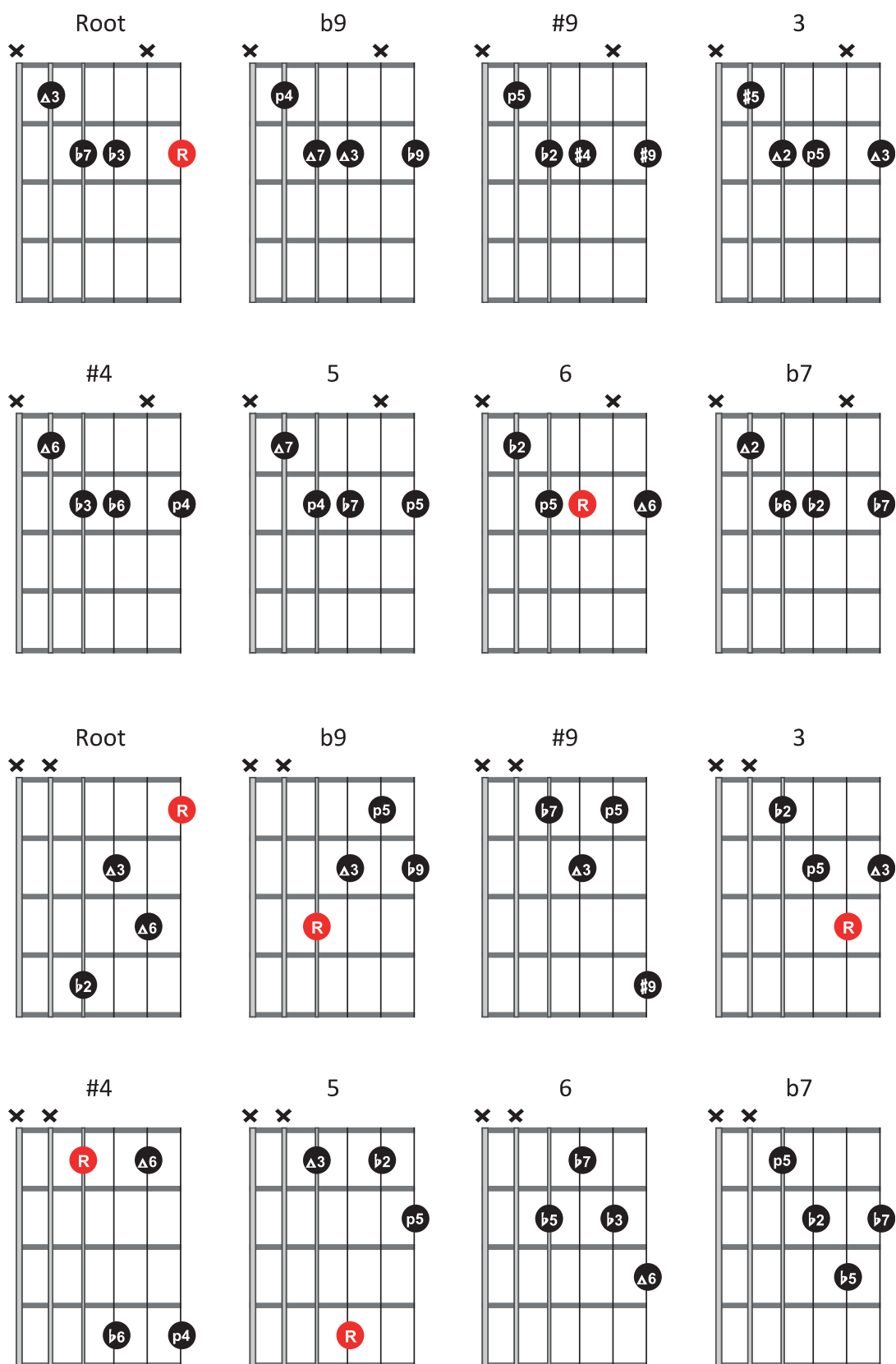




***Dom<sup>7</sup> (Dominant Dim)***



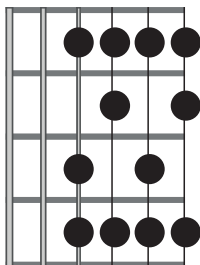




## Diminished Scale Voicings

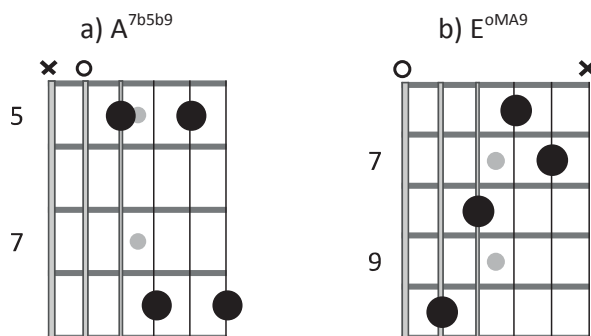
The accompanying diminished voicings can be used in tonic or dominant situations, depending on fret position. Most of the voicings are derived from this pattern.

### **Ex. 148**



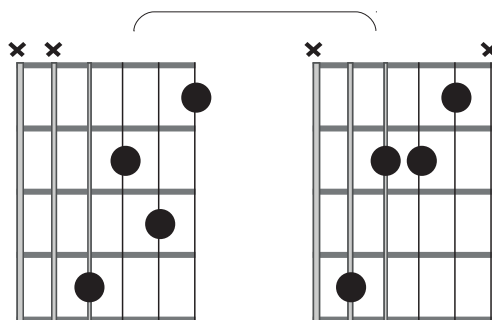
The open E and A strings work nicely as bass notes for these type voicings.

### **Ex. 149**



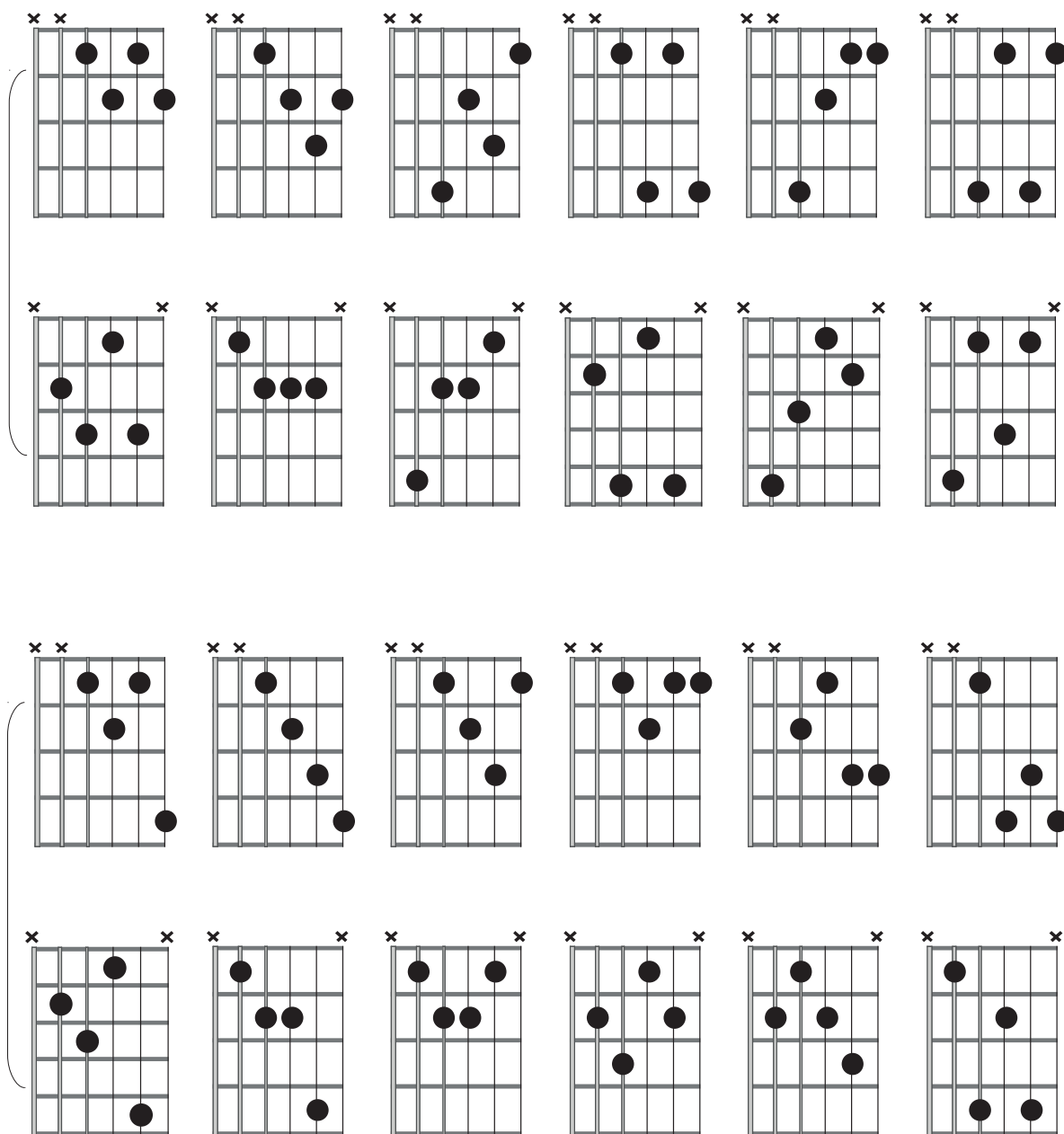
The voicings are grouped in pairs because they are the same shapes transposed.

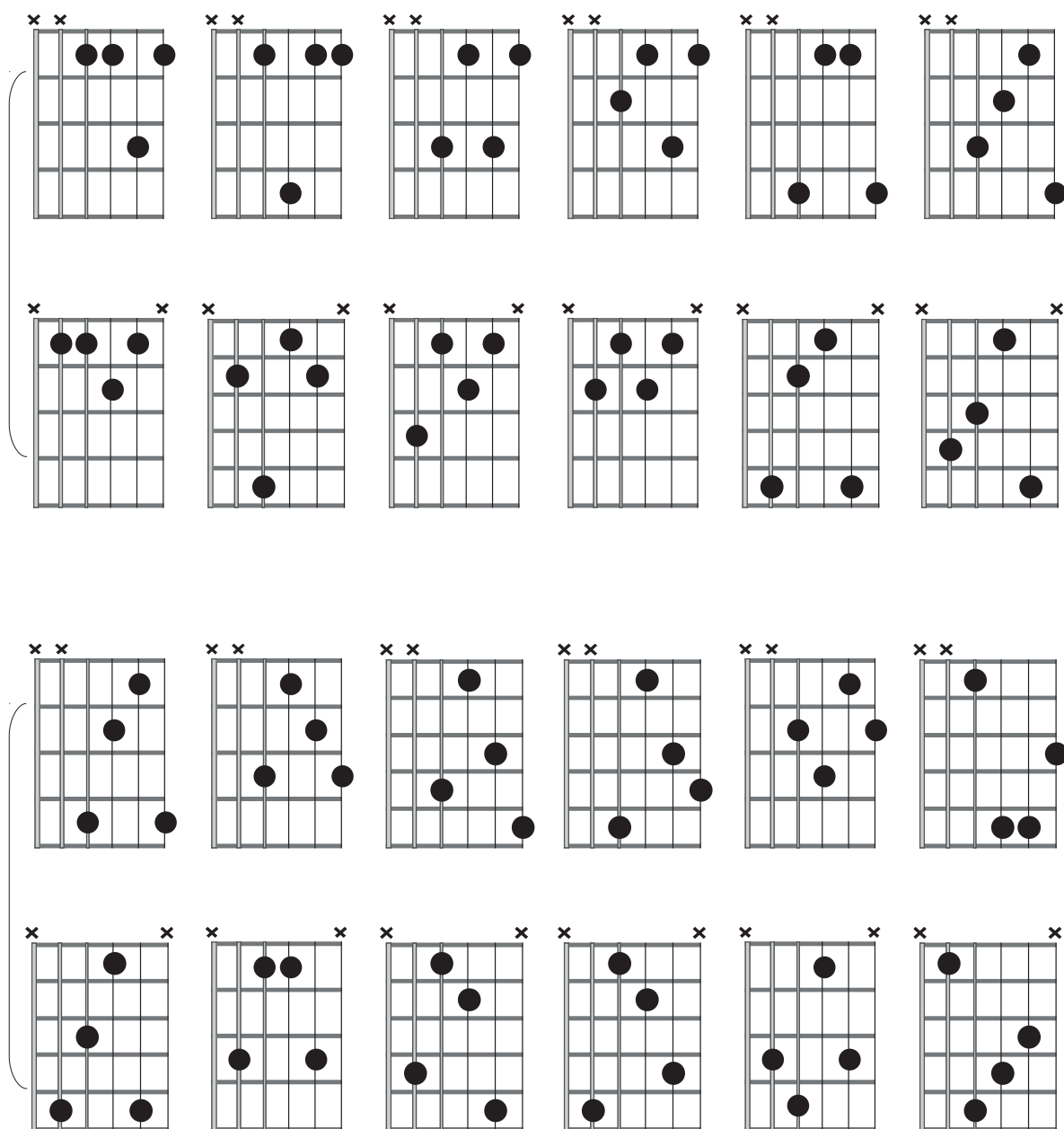
### **Ex. 150**

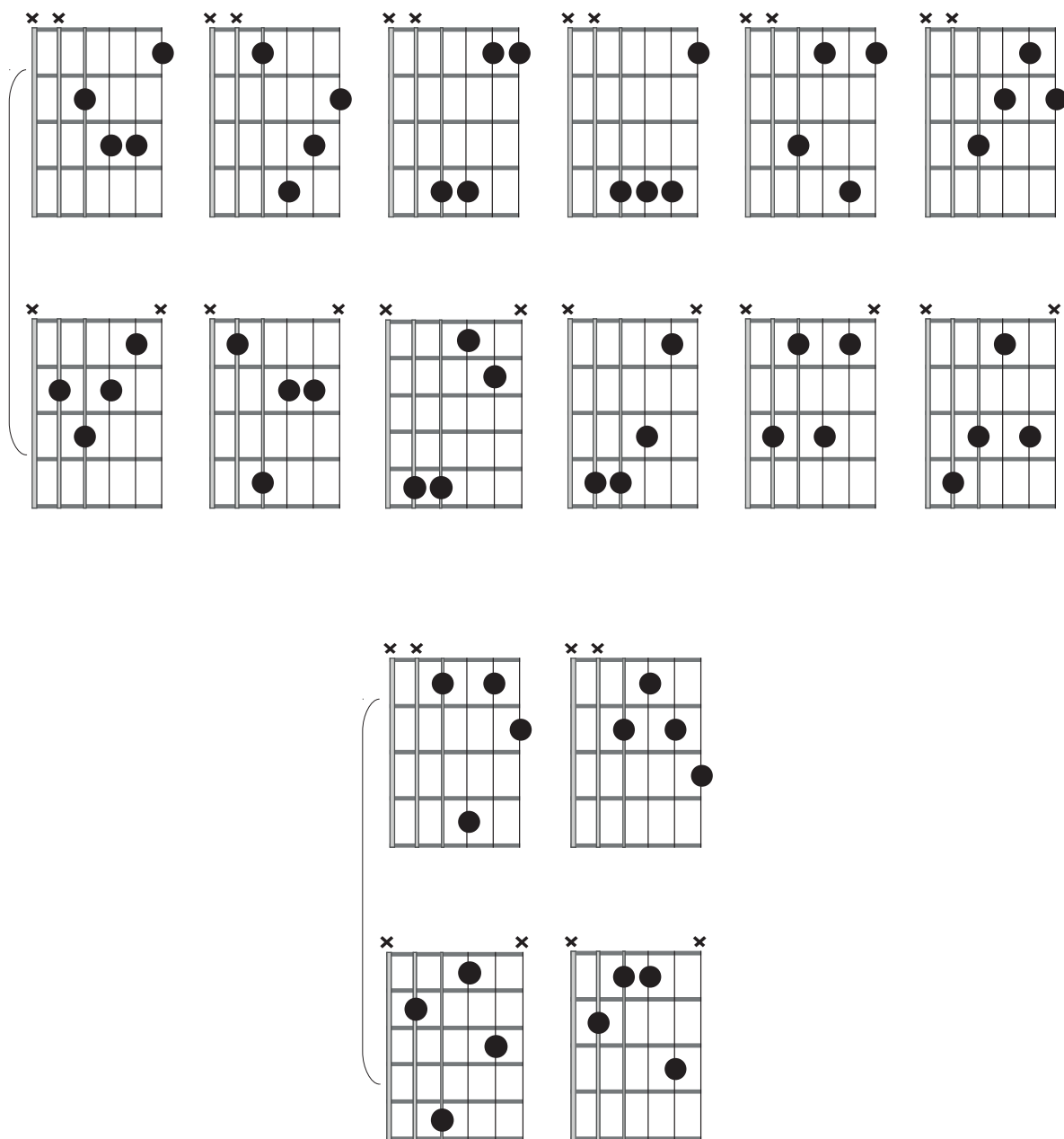


Remember, all of the voicings are moveable by minor thirds.

## Dim<sup>7</sup> Type Comping Voicings







## Stretch Voicings

For lack of a better term, the following harmonies are called stretch voicings. I recommend that you practice these voicings for no more than ten minutes at a time. This will prevent any left hand discomfort caused by the reaches involved. If you experience some pain it may simply be related to the stretching of the left hand muscles.

This pain, however, should diminish as your left hand muscles become more accustomed to the stretches.

I would also like to remind you that all of these voicings can be moved modally on the fingerboard.

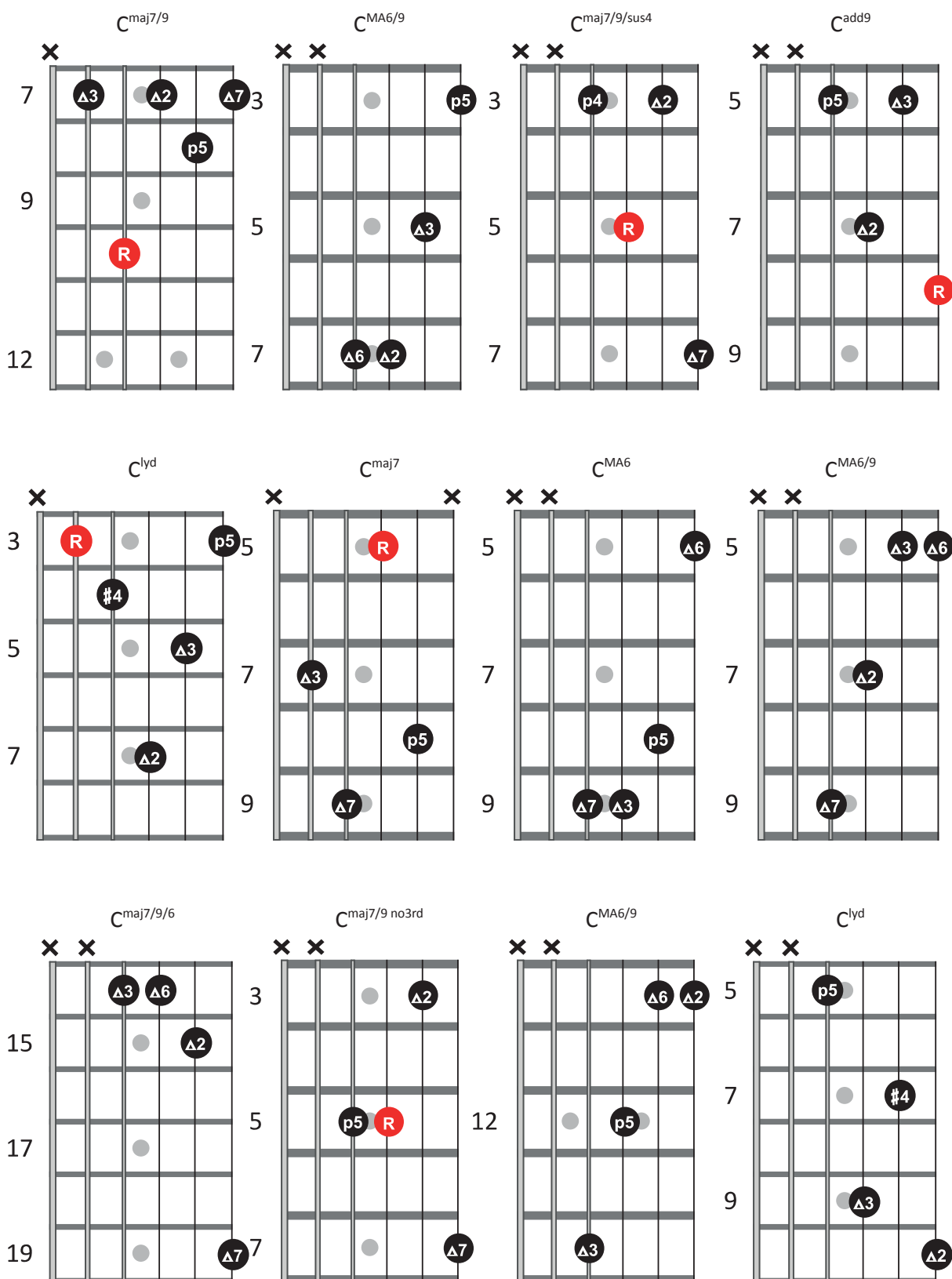
### **Ex. 151**

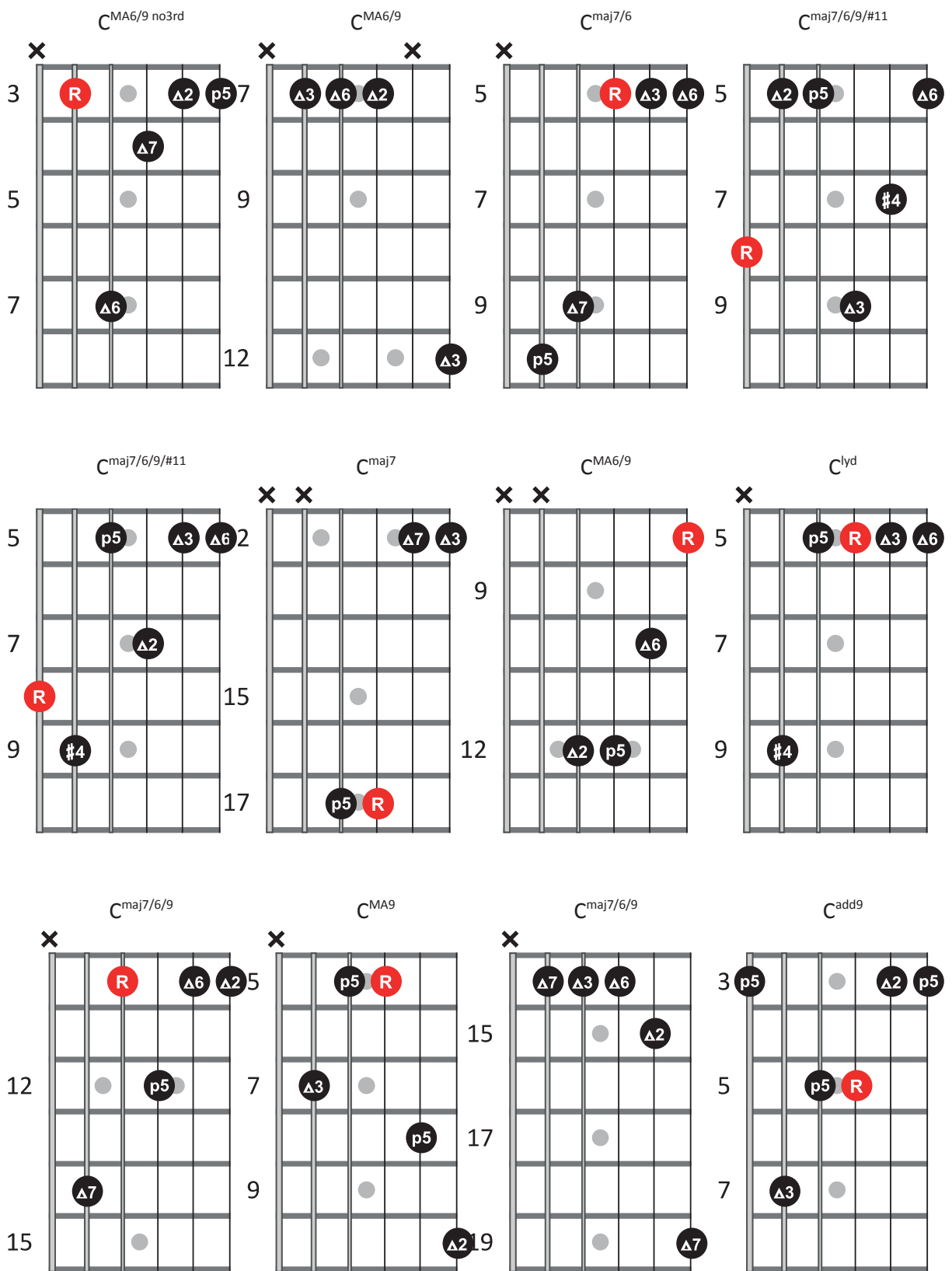
The diagram shows a musical staff with a treble clef. It contains seven triads, each consisting of three notes. The first triad is labeled 'original voicing from key of Cmajor' and consists of the notes C4, E4, and G4. A bracket below the staff, labeled 'Modal Movement in Cmajor', spans the remaining six triads. These triads are: 1) C4, E4, G4; 2) C4, E4, A4; 3) C4, E4, B4; 4) C4, E4, C5; 5) C4, E4, D5; 6) C4, E4, E5; and 7) C4, E4, F5. The notes are written on the staff lines, with some notes extending above the staff. The triads are arranged in a sequence that demonstrates the modal movement of the C major triad across the fingerboard.

original  
voicing  
from key of  
Cmajor

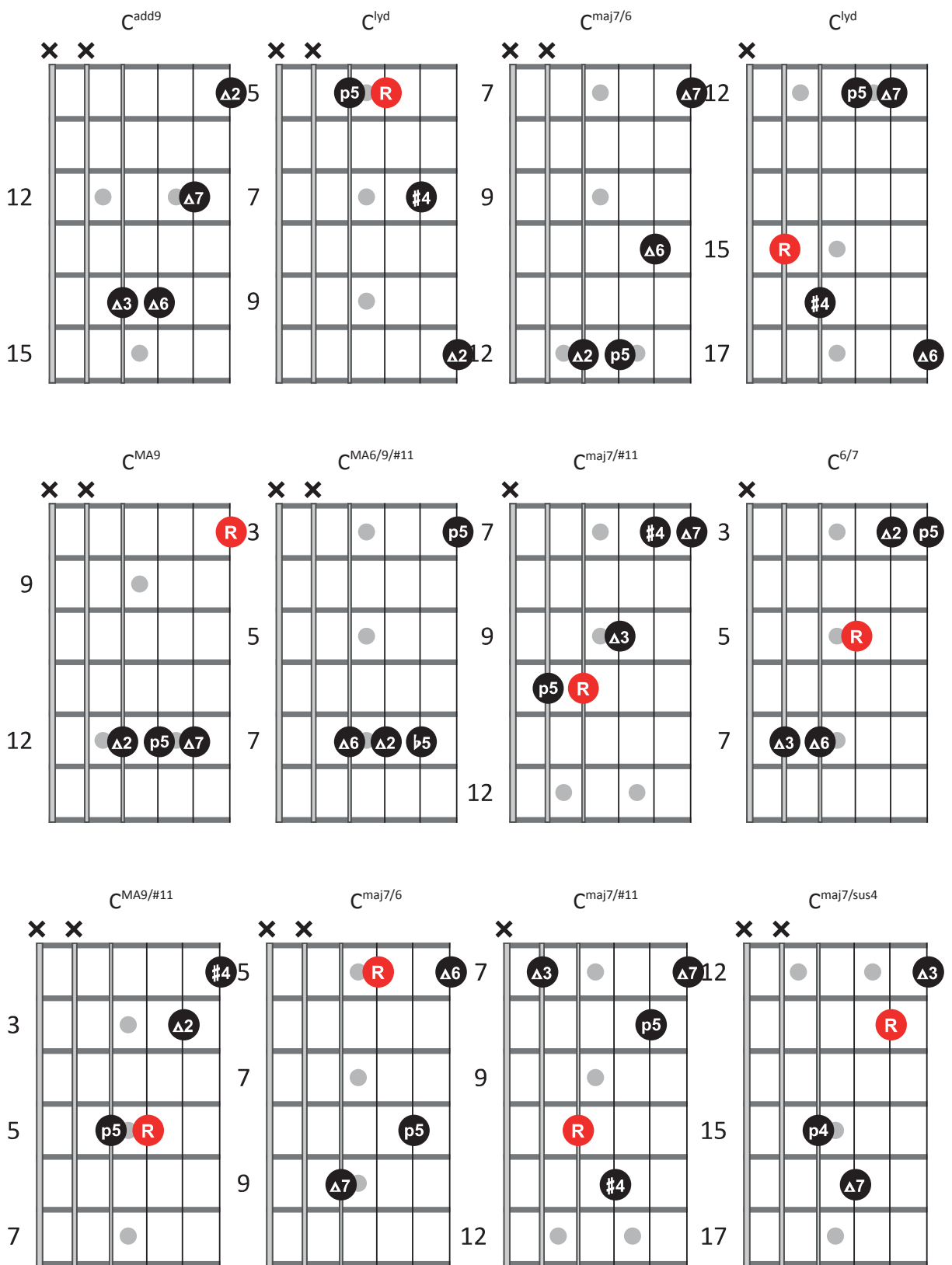
Modal Movement in Cmajor

## Stretch Voicings









## Chordal Lines (ii<sup>7</sup> V<sup>7</sup> I<sup>maj7</sup>)

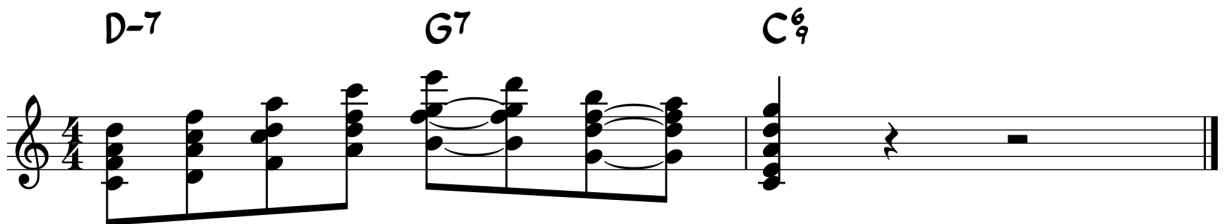
Here are some chordal lines for ii<sup>7</sup> V<sup>7</sup> I<sup>maj7</sup> progressions. I have used some single notes for variety.

Try transposing these to all twelve keys. Transposing helps you to better understand the variety of chord fingerings on different string groups.

After mastering these, work out some of your own for minor ii V's.

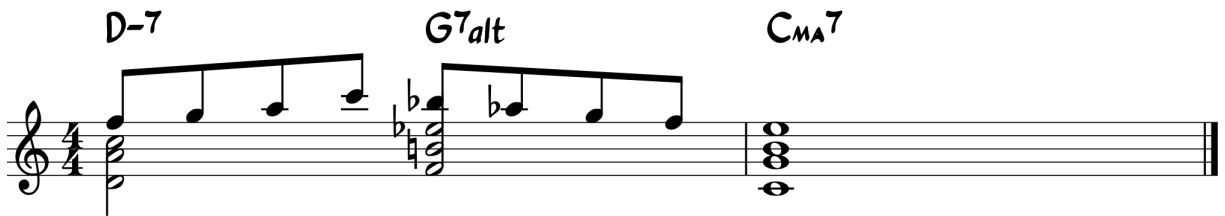
**Ex. 152a**

D-7                      G7                      C<sup>6</sup><sub>9</sub>



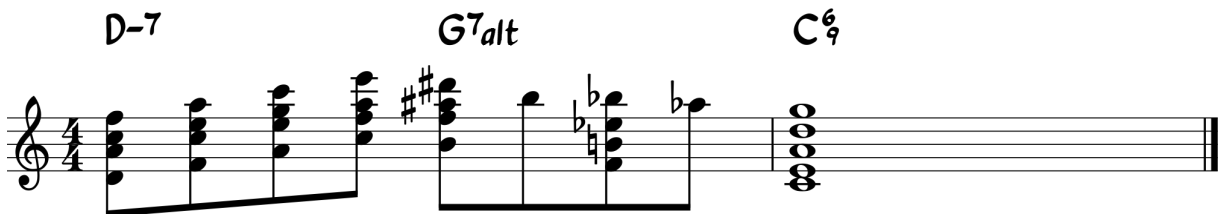
**Ex. 152b**

D-7                      G7<sup>alt</sup>                      C<sup>6</sup><sub>MA7</sub>



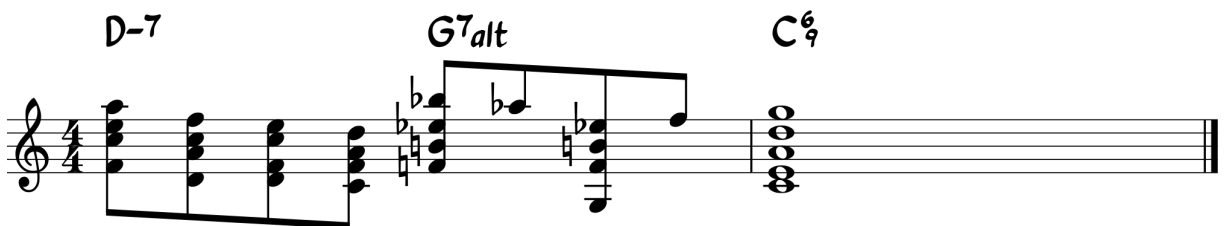
**Ex. 152c**

D-7                      G7<sup>alt</sup>                      C<sup>6</sup><sub>9</sub>



**Ex. 152d**

D-7                      G7<sup>alt</sup>                      C<sup>6</sup><sub>9</sub>



Ex. 152e

D-9                      G7<sup>b5</sup>(13)                      C<sup>6</sup><sub>9</sub>

Here are some examples of ii<sup>7</sup> V<sup>7</sup> I<sup>maj7</sup> chord lines in the key of Fmajor. The arrows are used to designate the use of the same voicing.

Ex. 153a

(D7<sup>b9</sup>)    (D7<sup>b9</sup>)                      (D7<sup>b9</sup>)                      (D7<sup>b9</sup>)                      single note

G-7 F#o7 G-7 A<sup>o7</sup> G-7 G-7 A<sup>o7</sup> G-7 G-7 F#o7 G-7 C7alt S.N. F<sub>MA</sub>7

Ex. 153b

(D7<sup>b9</sup>)

G-7 G-7 F#o7 G-7 C7<sup>b5</sup> (G-<sup>MA7</sup>) C7 F<sub>MA</sub>7

Ex. 153c

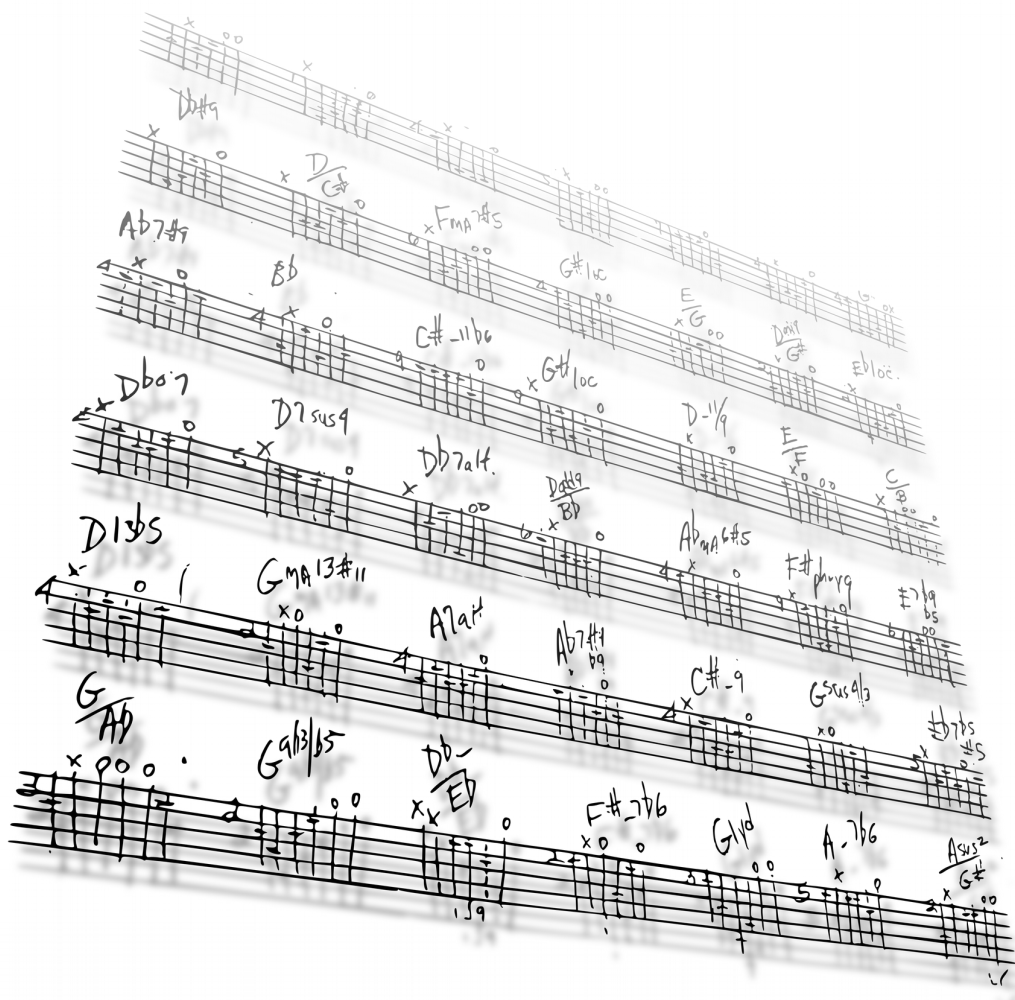
G-7                      C7alt                      Fmaj7

Ex. 153d

G-7                      C7alt                      F<sub>MA</sub>7

# CHAPTER 3

## SCALES + ARPEGGIOS



## Chapter 3

### Mode (Scale) Practice

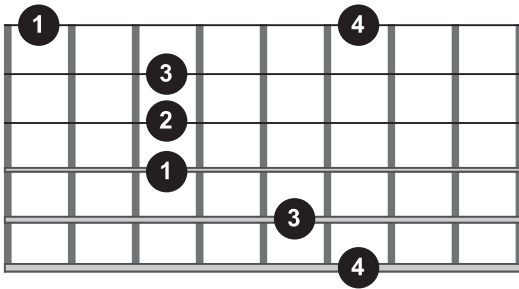
Modes should be practiced every day to warm-up the hands and develop fingerboard understanding. They should be practiced to a metronome in a variety of rhythms (eighths, quarters, eighth-note triplets, sixteenths, sixteenth-note triplets and dotted rhythms) paying particular attention to sound clarity.

Thorough knowledge of scale fingerings (two and three notes per string) will enable you to execute even the most difficult passages.

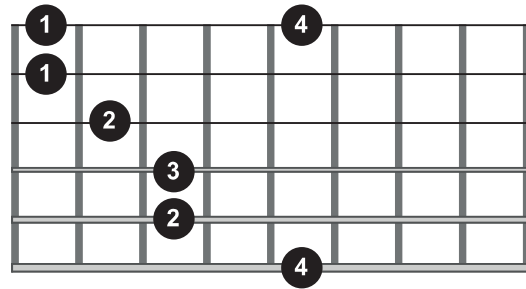
I would recommend practicing one scale group (major, melodic minor or harmonic minor) per day, isolating one mode for the purpose of interval studies. Practicing too many interval or arpeggio studies in one sitting will only add to your confusion.

## Triads

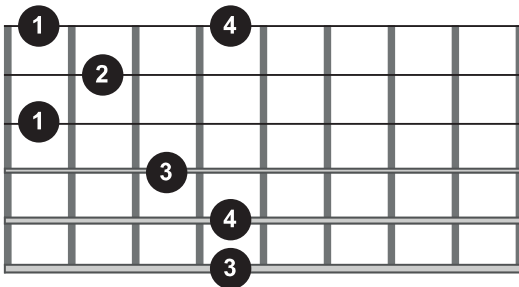
Major (Root Position)



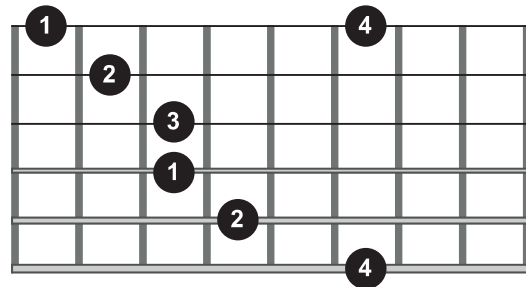
Major (3<sup>rd</sup> in Bass)



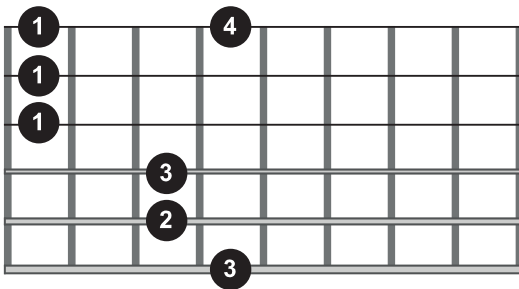
Major (5<sup>th</sup> in Bass)



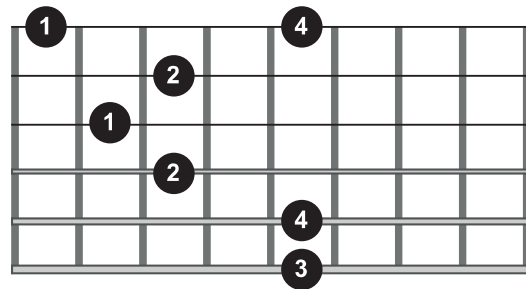
Minor (Root Position)



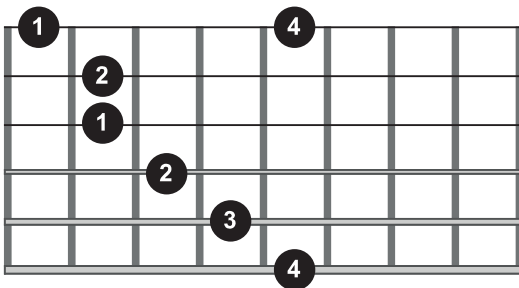
Minor (3<sup>rd</sup> in Bass)



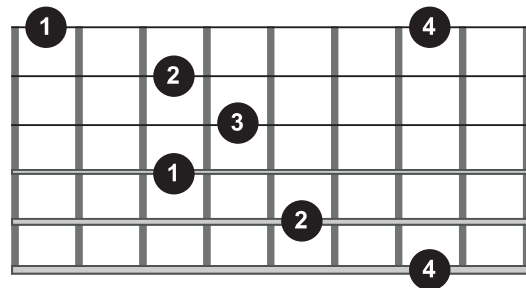
Minor (5<sup>th</sup> in Bass)



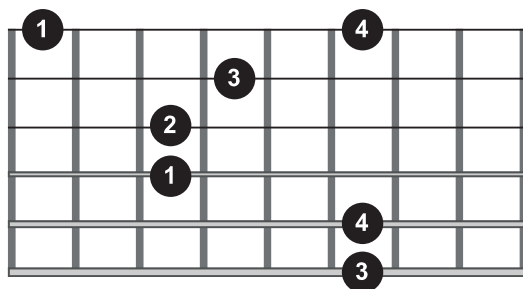
Augmented



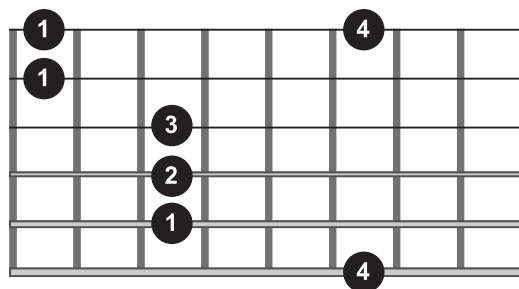
Diminished



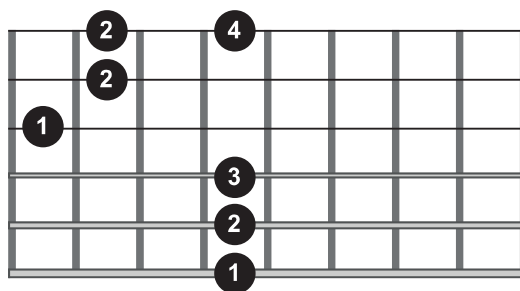
Sus<sup>4</sup>



Sus<sup>2</sup>

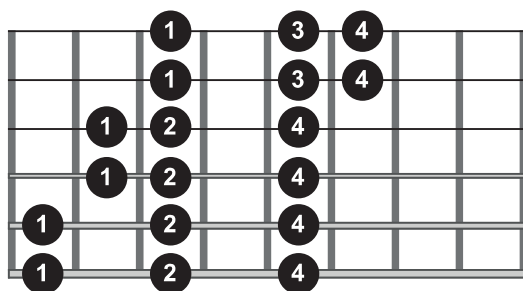


Quartal

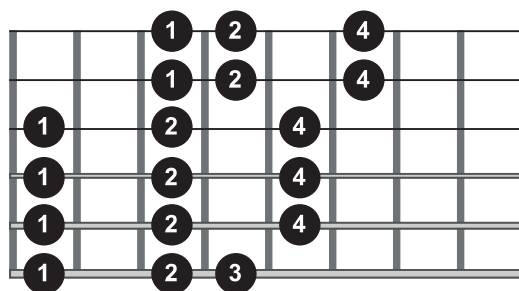


## Modes of the Major Scale

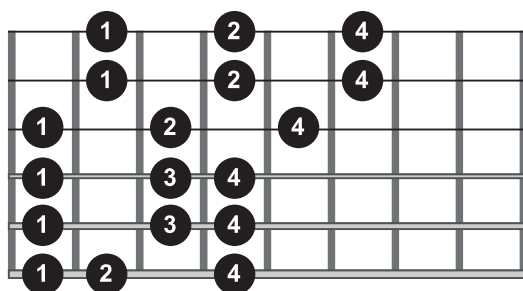
Ionian



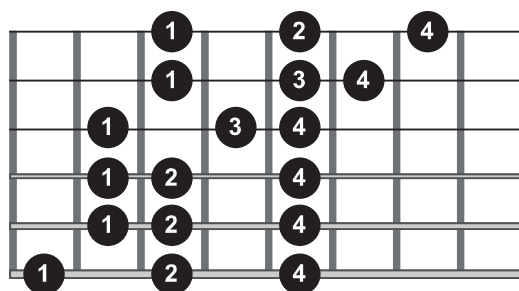
Dorian



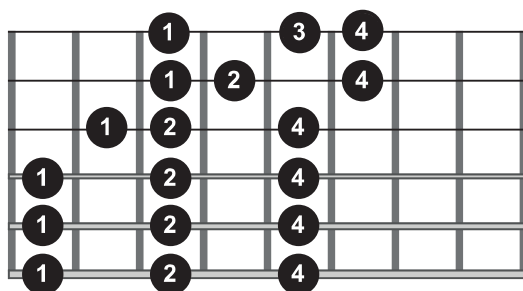
Phrygian



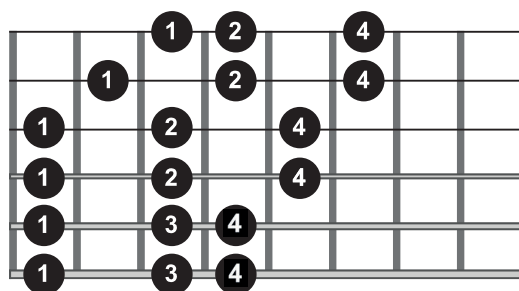
Lydian



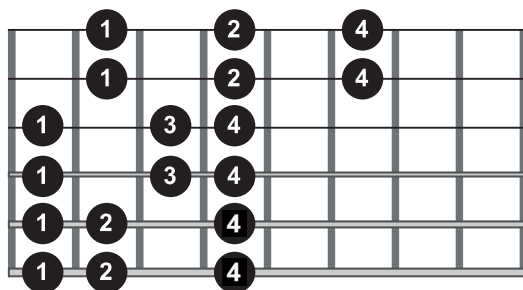
Mixolydian



Aeolian



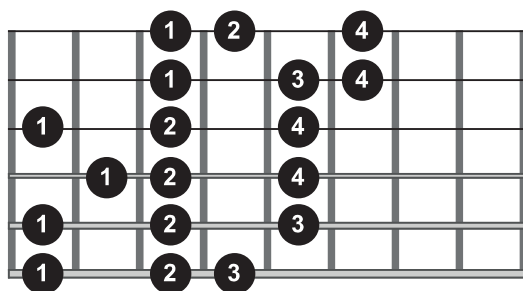
Locrian



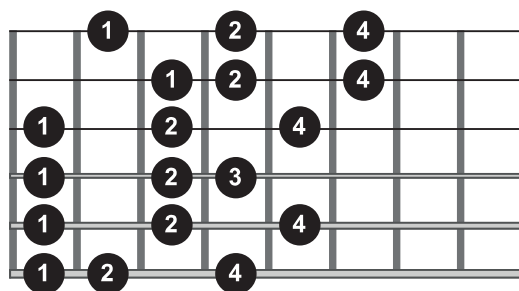


## Modes of the Melodic Minor Scale

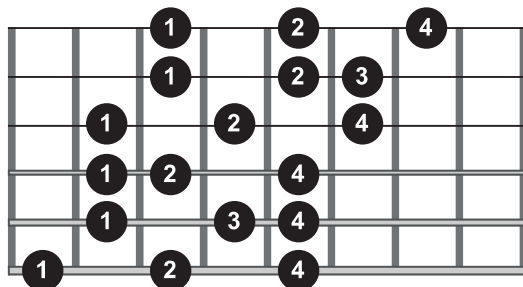
Melodic Minor



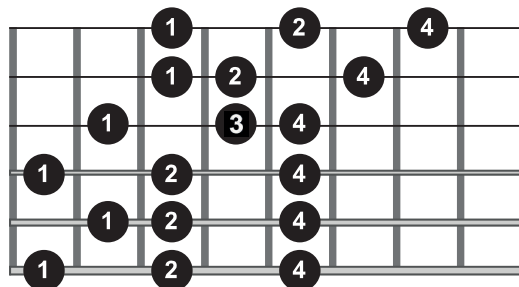
Dorian b2



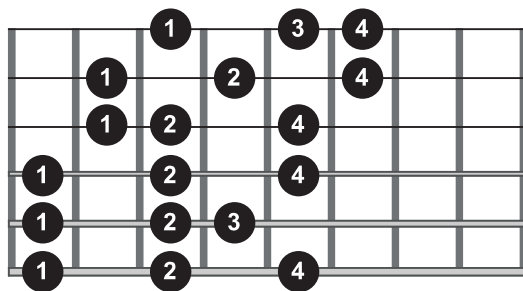
Lydian Augmented



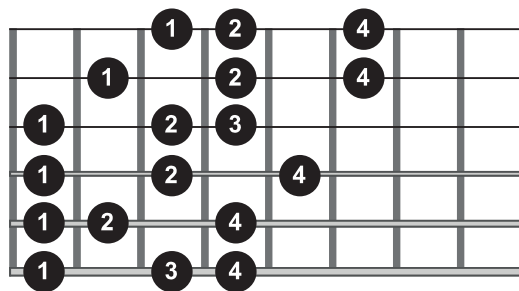
Mixolydian #11



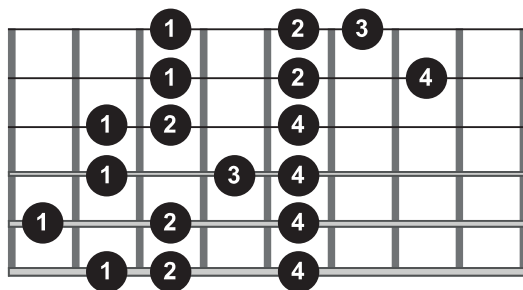
Mixolydian b6



Locrian nat.2

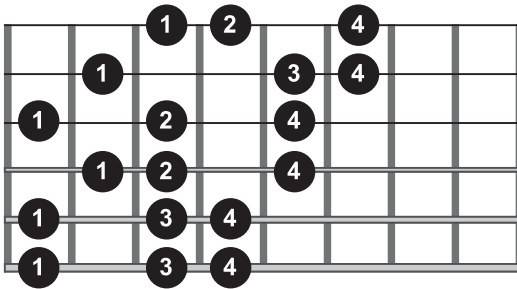


Altered Dominat

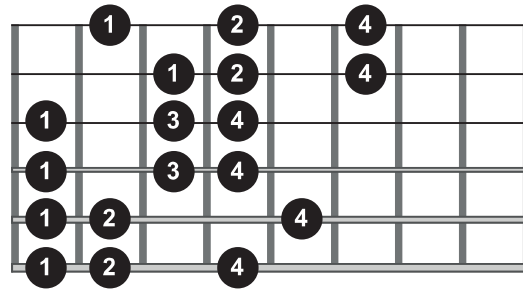


## Modes of the Harmonic Minor Scale

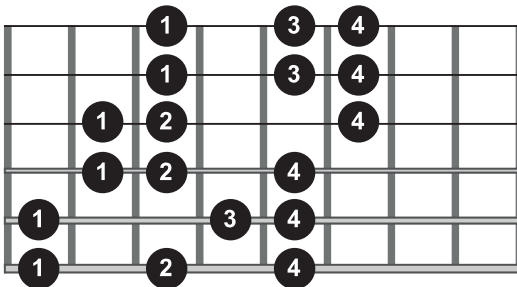
Harmonic Minor



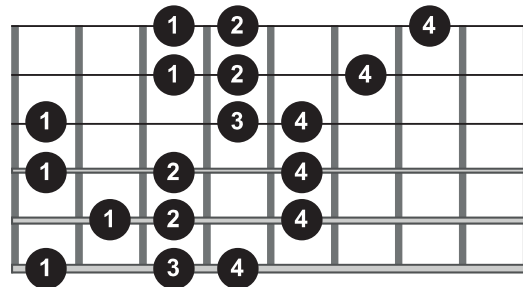
Locrian nat. 6



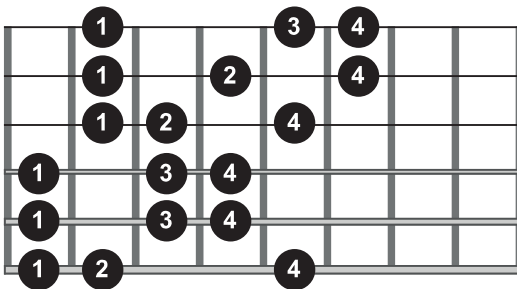
Ionian Augmented



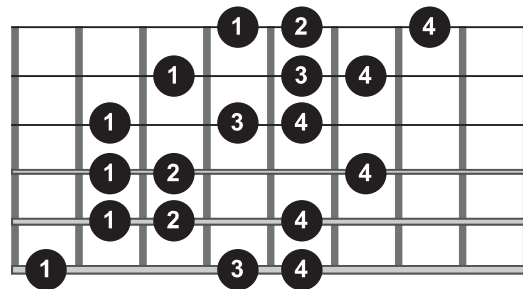
Dorian #4



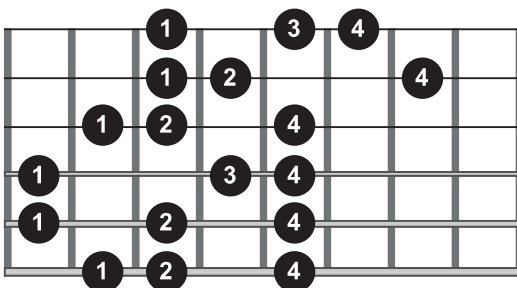
Phrygian Major



Lydian #9

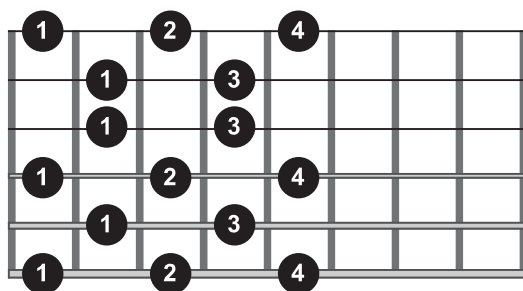


Altered Dominant bb7

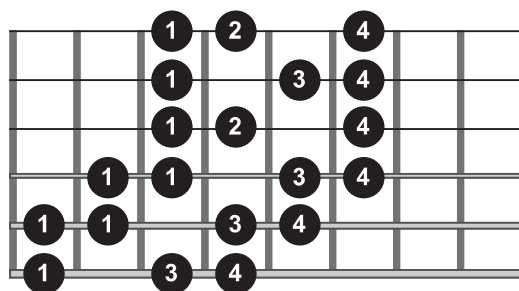


## Miscellaneous Scales

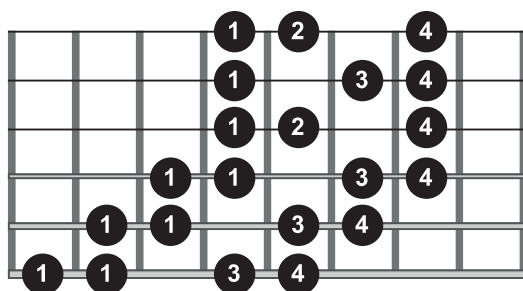
Whole Tone



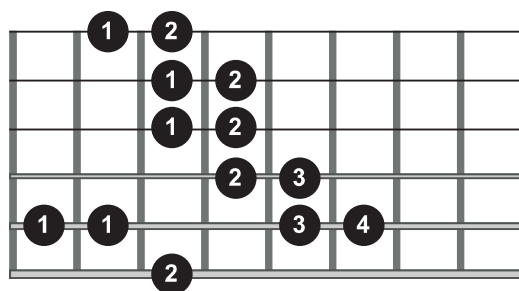
Tonic Diminished



Dominant Diminished



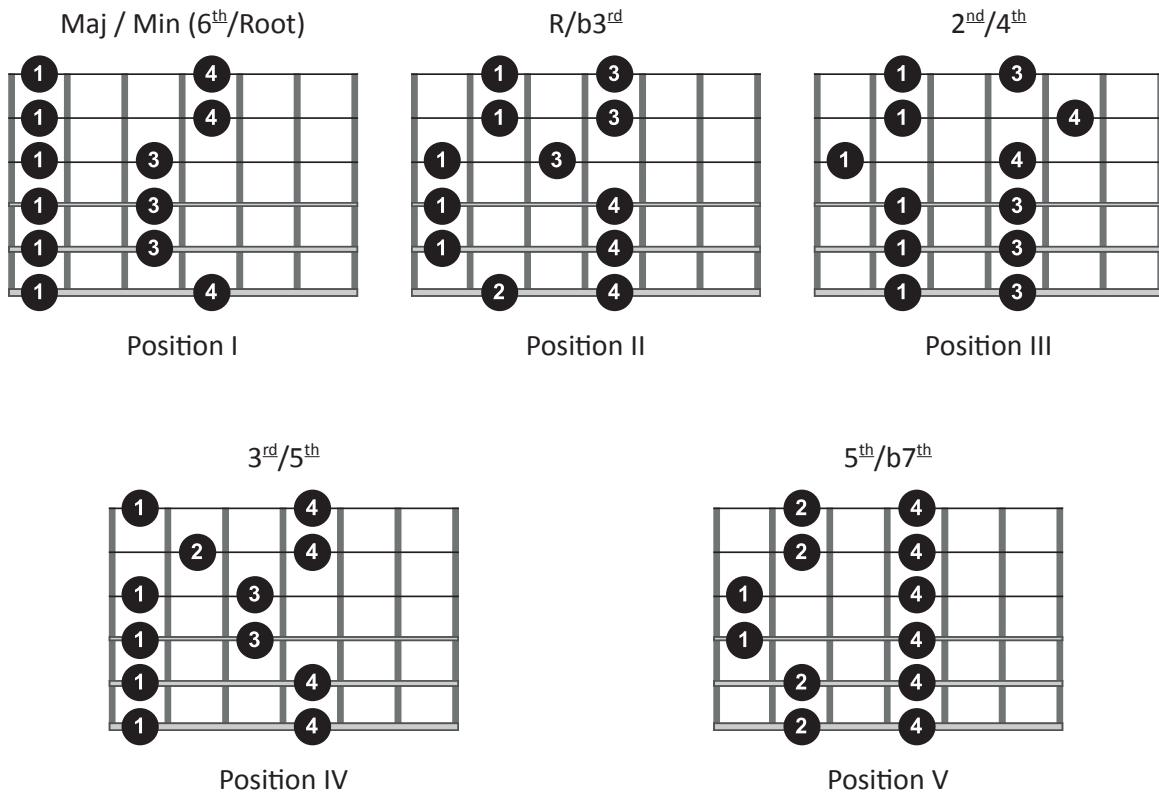
Augmented



## Blues and Pentatonic Scales

### *Pentatonic Scales:*

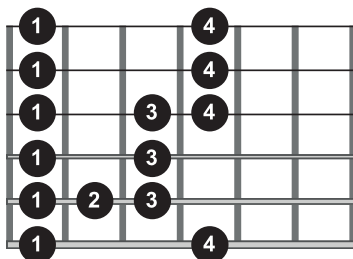
<b>Major:</b>	1	2	3	5	6
<b>Minor:</b>	1	b3	4	5	b7



## Blues Scales:

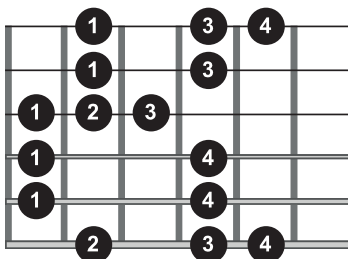
Major:	1	2	b3	3	5	6
Minor:	1	b3	4	#4	5	b7

Maj / Min (6<sup>th</sup>/Root)



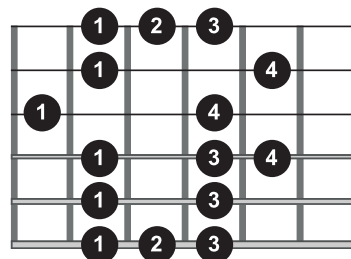
Position I

R/b3<sup>rd</sup>



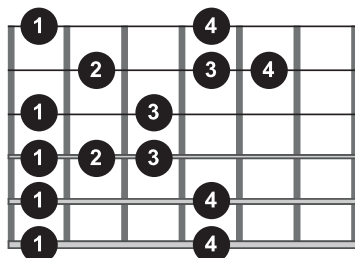
Position II

2<sup>nd</sup>/4<sup>th</sup>



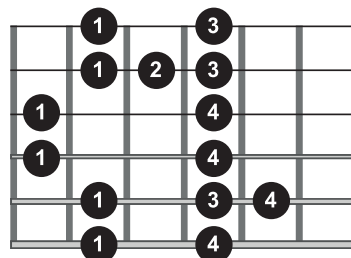
Position III

3<sup>rd</sup>/5<sup>th</sup>



Position IV

5<sup>th</sup>/b7<sup>th</sup>



Position V

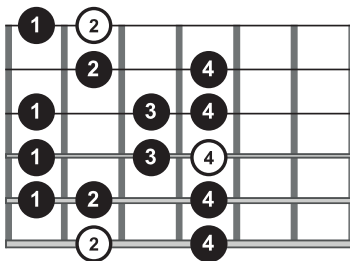
## Close Position Fingerings

Close position fingerings work on a one finger per fret principle. This allows the left hand to be in a compact position giving the fingers greater striking power.

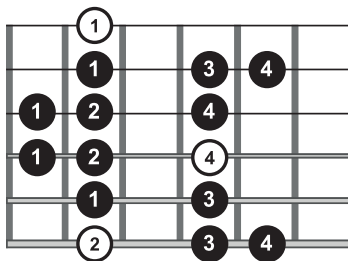
The added striking power creates a percussive attack aurally resembling a picked note. If you are already familiar with these fingerings move on to the two note per string scales.

### Major Scale

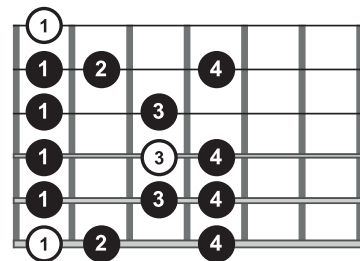
Ionian



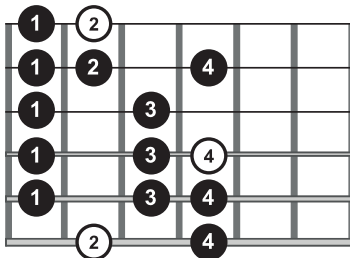
Dorian



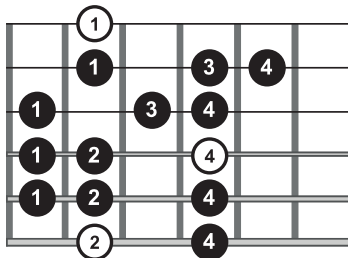
Phrygian



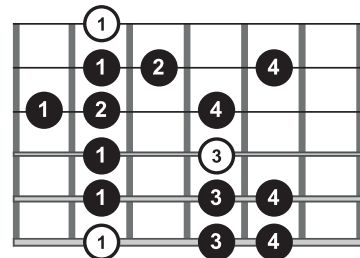
Lydian



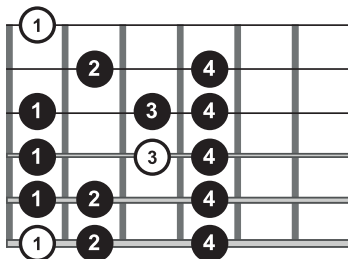
Mixolydian



Aeolian

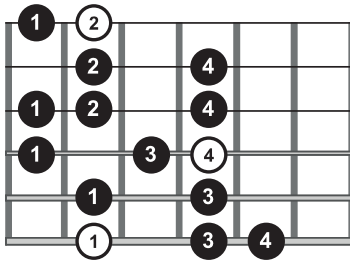


Locrian

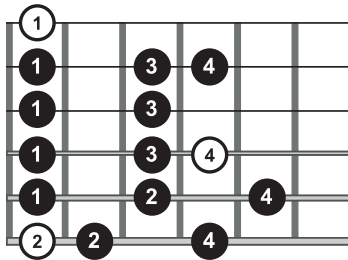


## Melodic Minor Scale

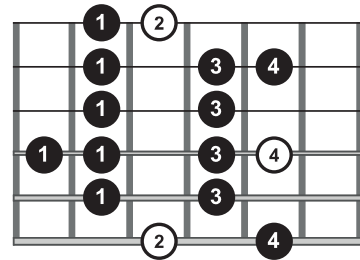
Melodic Minor



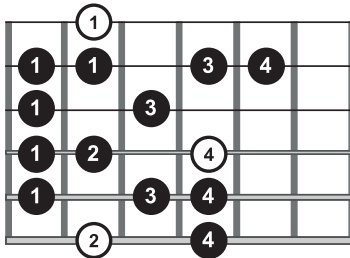
Dorian b2



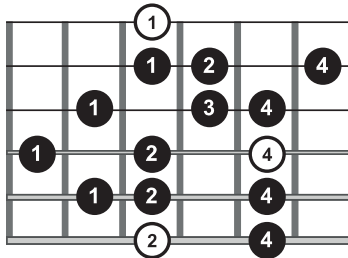
Lydian Augmented



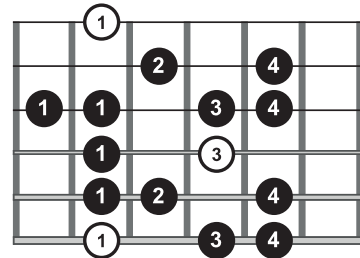
Mixolydian #11



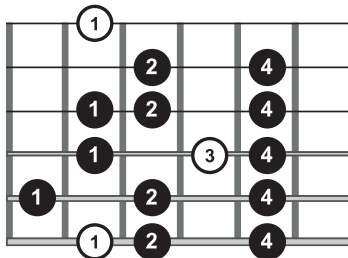
Mixolydian b6



Locrian nat.2

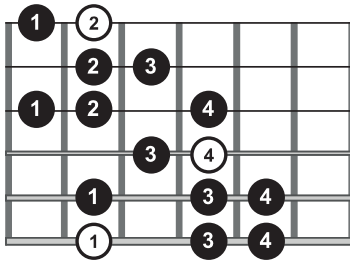


Altered Dominant

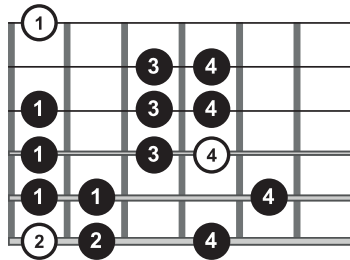


## Harmonic Minor Scale

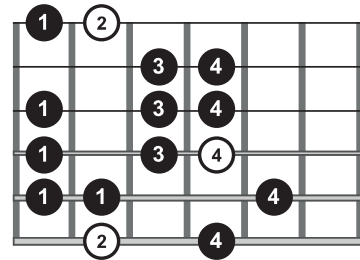
Harmonic Minor



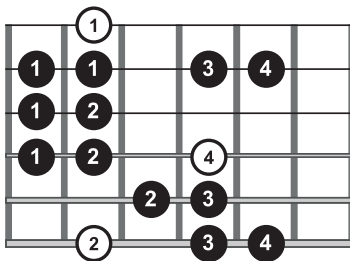
Locrian nat.6



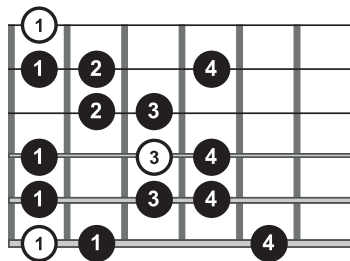
Ionian Augmented



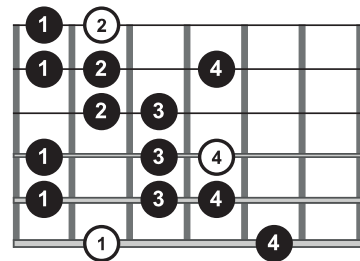
Dorian #4



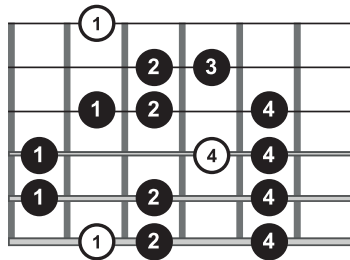
Phrygian Major



Lydian #9



Altered Dominant bb7





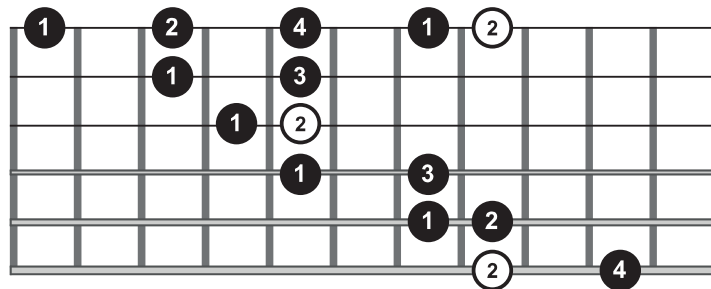
## Scales with two notes per string

When playing through the following scale examples you will discover that unlike most scales, these ascend in pitch while the left hand moves towards the nut (this is generally associated with a descent in pitch).

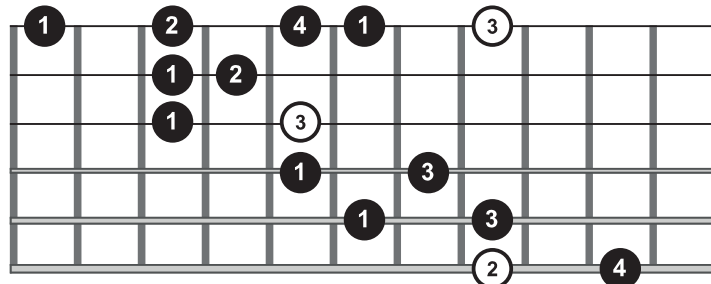
This unusual movement will open up your fingering possibilities and lead you in different directions while improvising. These fingerings work nicely if you slur on each string.

### Modes of the Major Scale

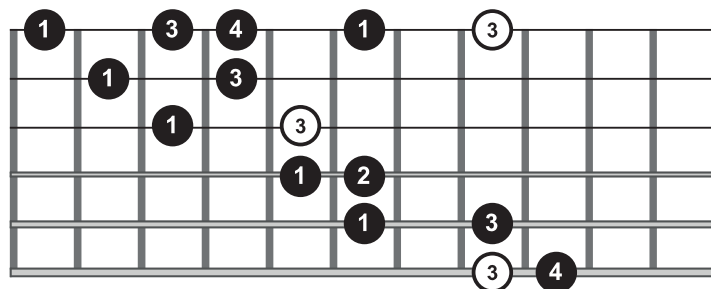
Ionian:



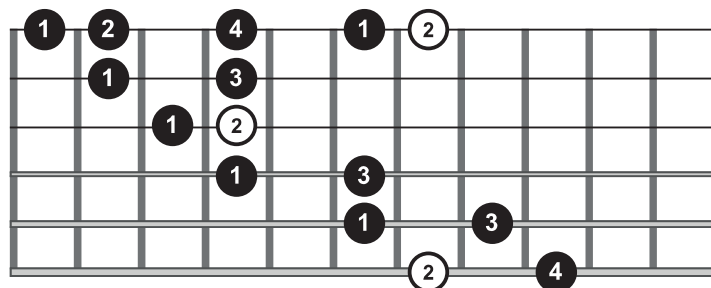
Dorian:



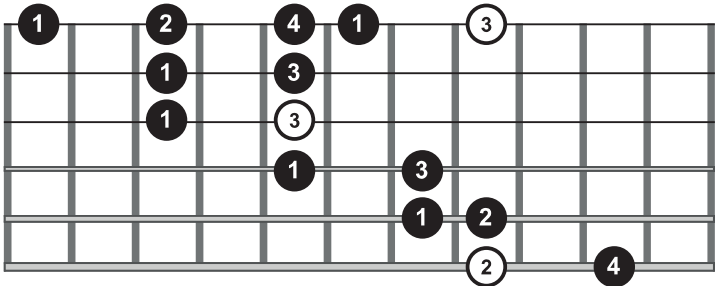
Phrygian:



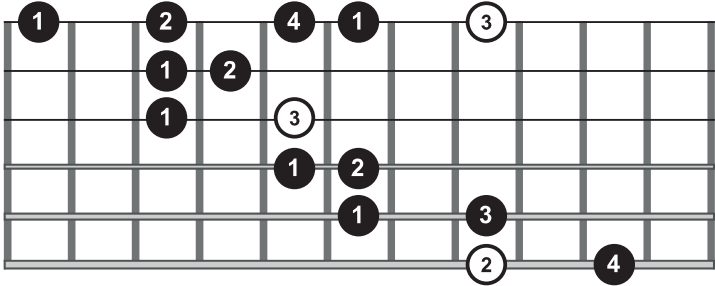
Lydian:



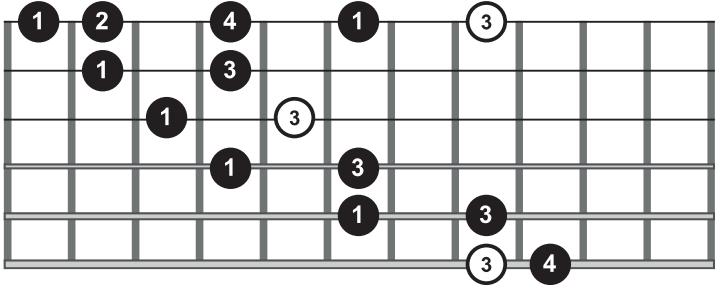
Mixolydian:



Aeolian:

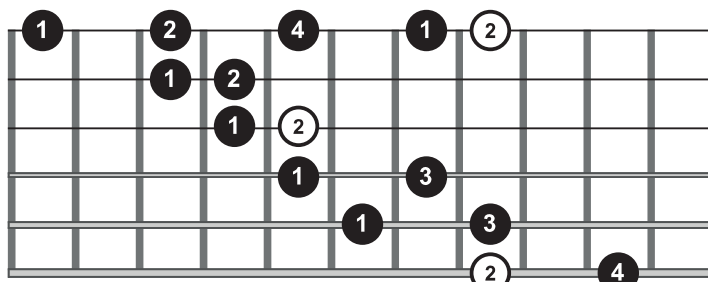


Locrian:

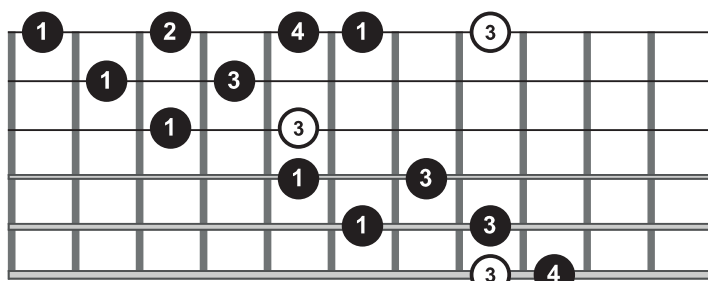


## Modes of the Melodic Minor Scale

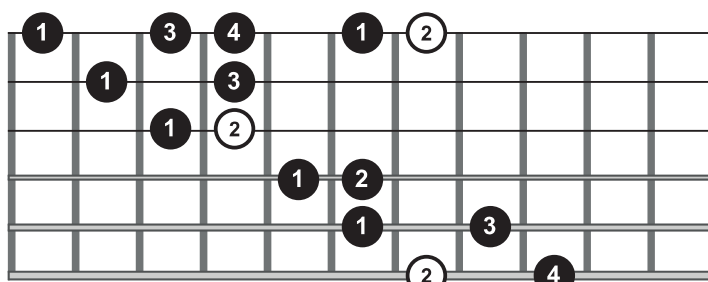
Melodic Minor:



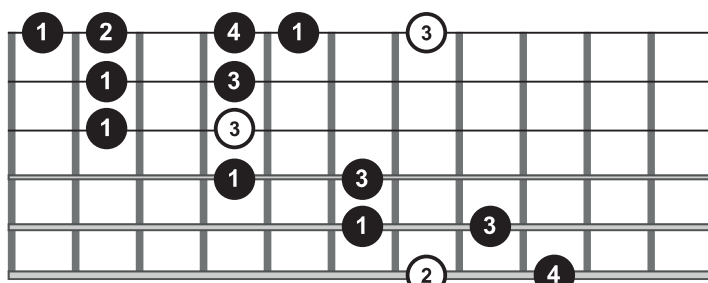
Dorian b2



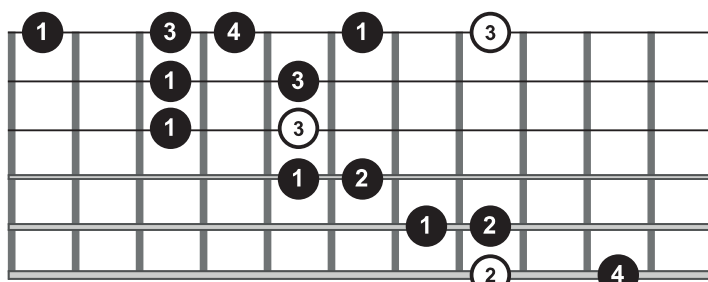
Lydian Augmented



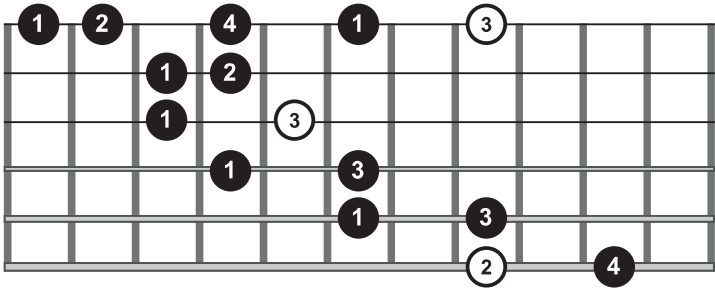
Mixolydian #11



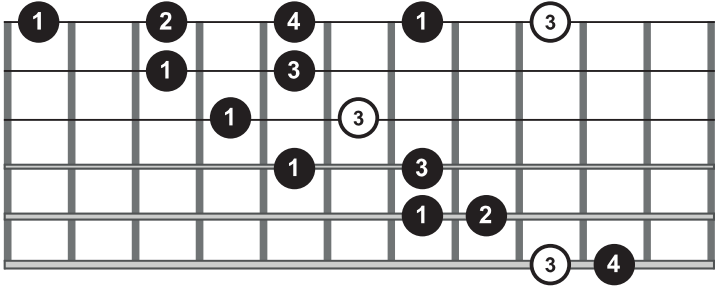
Mixolydian b6



Locrian nat.2

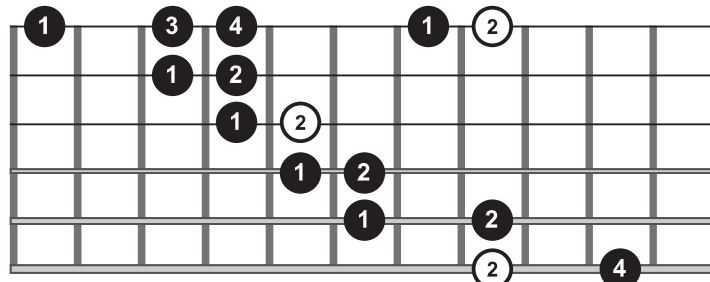


Altered Dominant

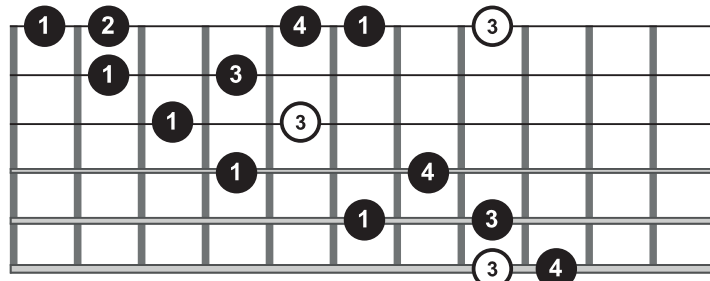


## Modes of the Harmonic Minor Scale

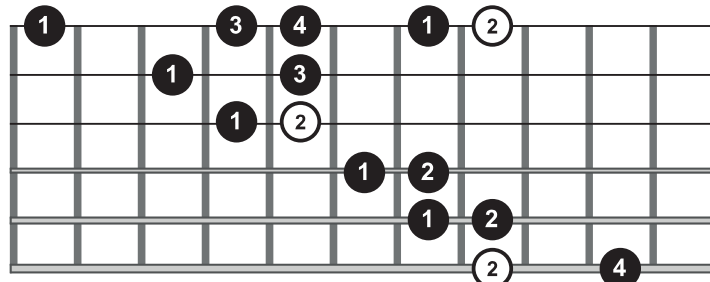
Harmonic Minor:



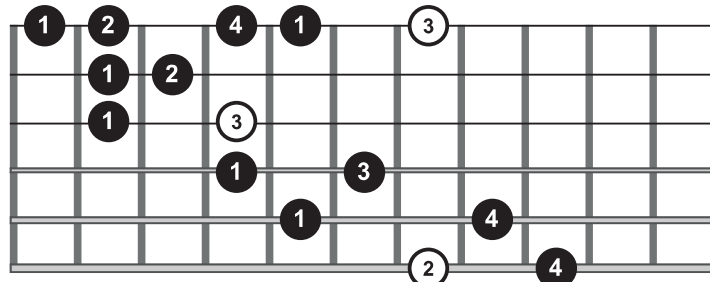
Locrian nat.6



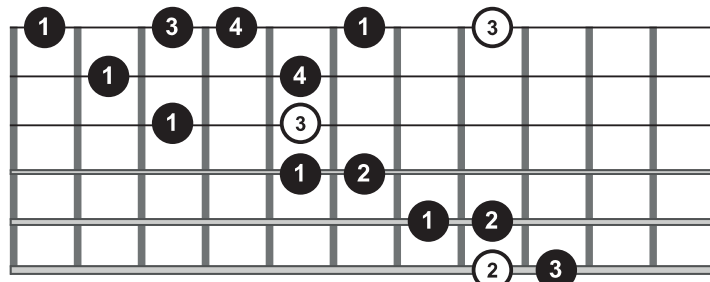
Ionian Augmented



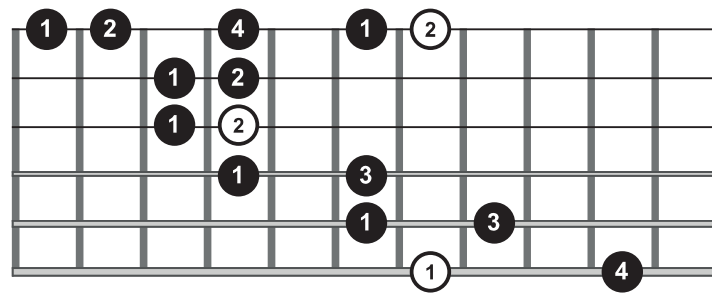
Dorian #4



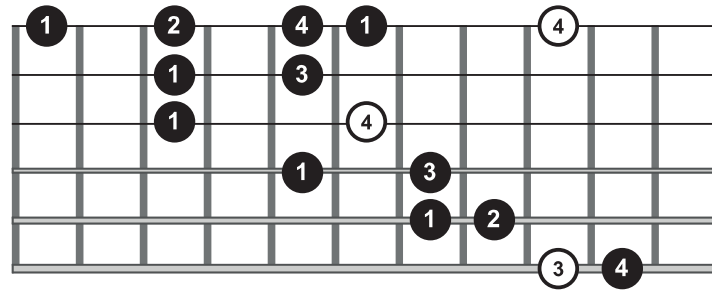
Phrygian Major



Lydian #9

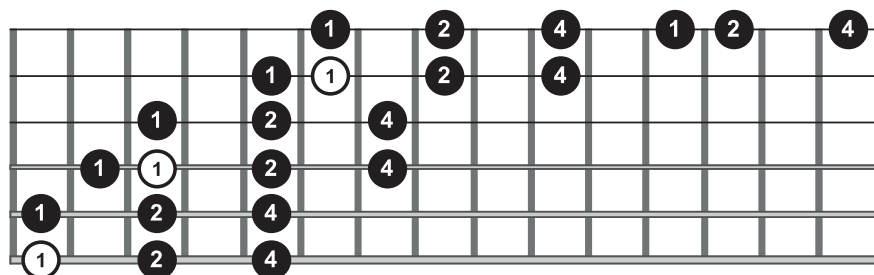


Altered Dominant bb7

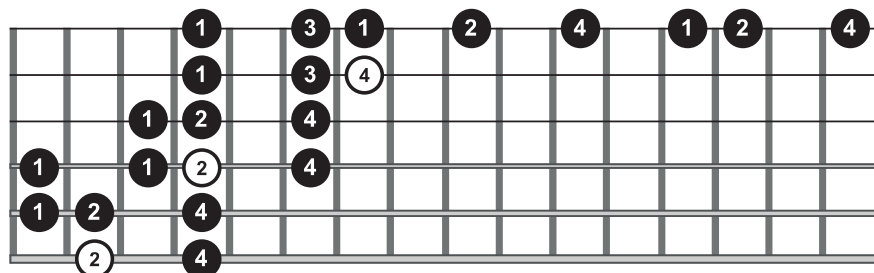


## Examples of Extended Range Scale Fingerings

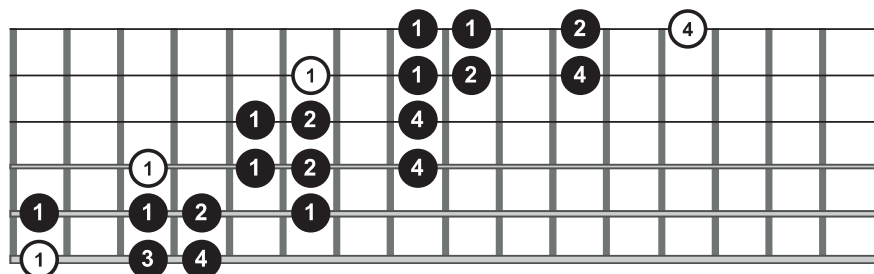
Major:



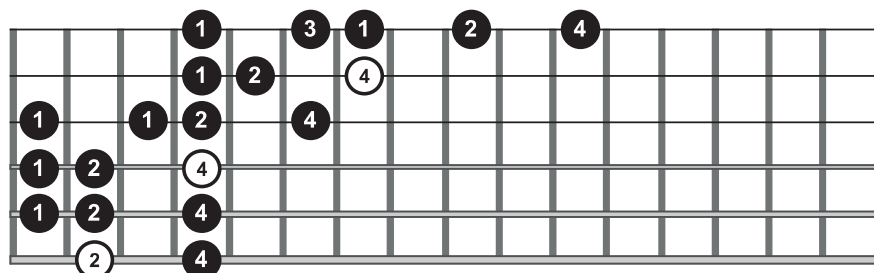
Major:



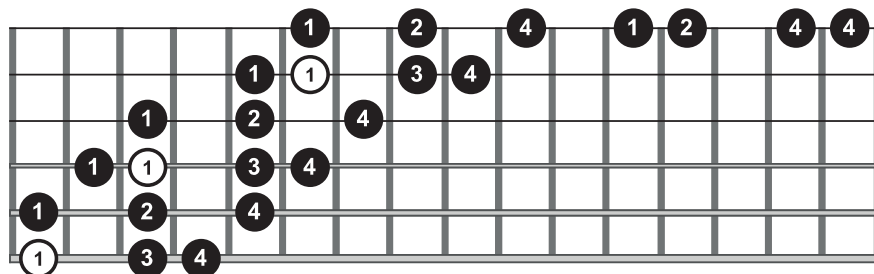
Aeolian:



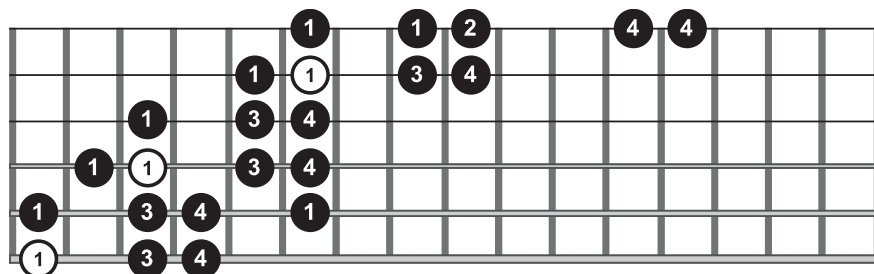
Mixolydian:



Melodic Minor:



Harmonic Minor:



## Diatonic Intervals

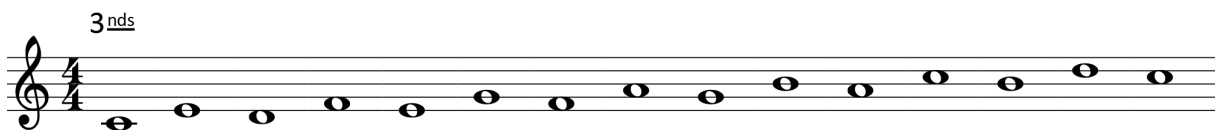
Practicing scales in diatonic interval combinations should be part of your daily practicing. It will help you develop both technical and improvisational skills as well as improving left and right hand coordination.

Here is a example of the diatonic intervals of a (C) major scale.

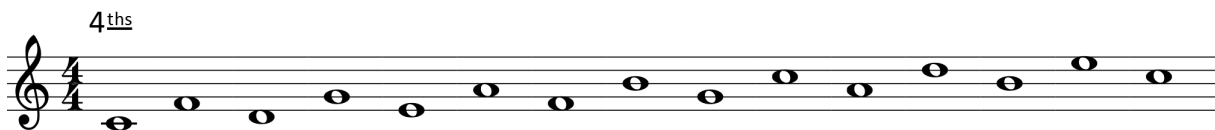
**Ex. 154a**



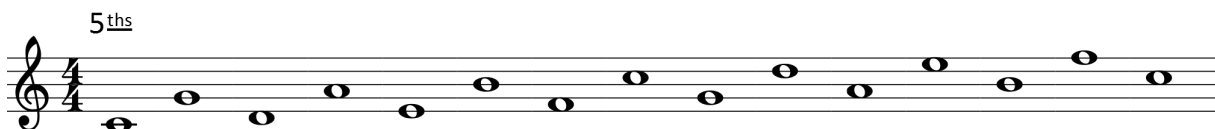
**Ex. 154b**



**Ex. 154c**



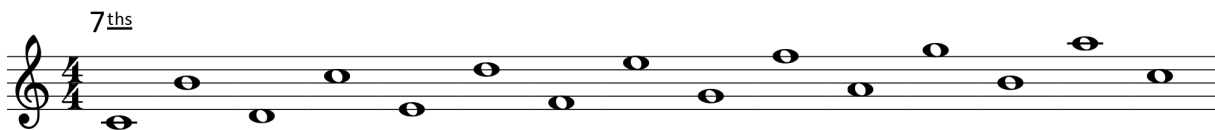
**Ex. 154d**



**Ex. 154e**



**Ex. 154f**



Also practice descending. Then practice all scales and modes in intervals including all auxiliary scales such as the diminished, augmented, whole-tone, pentatonics and Blues.



## Diatonic Arpeggios

In addition to intervals, all scales should be broken into both diatonic triads and seventh chords. I suggest practicing these within the close (2 note per string) and open (3 note per string) fingering systems.

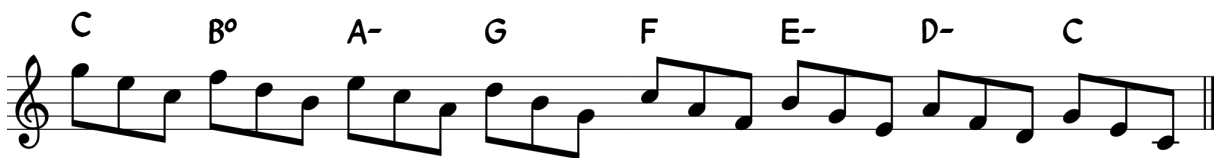
Here are a few practice examples.

### Triads (in C Major)

*Ex. 155a*



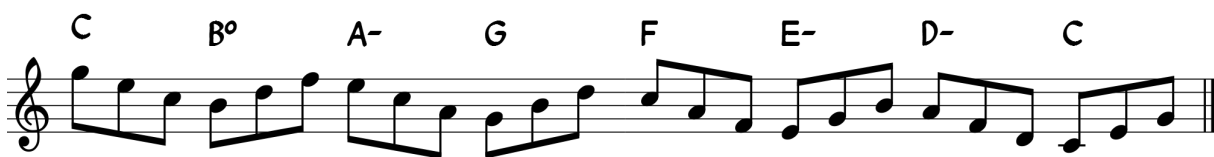
*Ex. 155b*



*Ex. 155c*



*Ex. 155d*



## Seventh Chords


*Ex. 156a*

C<sub>MA</sub>7 D-7 E-7 F<sub>MA</sub>7 G7 A-7 B-7<sup>b5</sup> C<sub>MA</sub>7




*Ex. 156b*

C<sub>MA</sub>7 B-7<sup>b5</sup> A-7 G7 F<sub>MA</sub>7 E-7 D-7 C<sub>MA</sub>7




*Ex. 156c*

C<sub>MA</sub>7 D-7 E-7 F<sub>MA</sub>7 G7 A-7 B-7<sup>b5</sup> C<sub>MA</sub>7



*Ex. 156d*

C<sub>MA</sub>7 B-7<sup>b5</sup> A-7 G7 F<sub>MA</sub>7 E-7 D-7 C<sub>MA</sub>7



Try to experiment with as many variations of note and chord order as possible.

## Triad Variation

*Ex. 157*


C D- E- F G A- B° C



## Seventh Chord Variation

*Ex. 158*

$C_{MA}^7$     $D-^7$     $E-^7$     $F_{MA}^7$     $G^7$     $A-^7$     $B-^7\flat^5$



# Spread Triad Arpeggios

Ascending & Descending

The image displays six staves of guitar music, each featuring a sequence of notes and corresponding guitar chord diagrams. The chords are arranged in ascending and descending patterns across the staves.

**Staff 1:** C, C/E, C/G, C, C/G, C/E, C

**Staff 2:** Cm, Cm/E $\flat$ , Cm/G, Cm, Cm/G, Cm/E $\flat$ , Cm

**Staff 3:** C $^\circ$ , C $^\circ$ /E $\flat$ , C $^\circ$ /G $\flat$ , C $^\circ$ , C $^\circ$ /G $\flat$ , C $^\circ$ /E $\flat$ , C $^\circ$

**Staff 4:** C+, C+/E, C+/G $\sharp$ , C+, C+/G $\sharp$ , C+/E, C+

**Staff 5:** Csus4, Csus4/F, Csus4/G, Csus4, Csus4/G, Csus4/F, Csus4

**Staff 6:** Clyd, Clyd/F $\sharp$ , Clyd/G, Clyd, Clyd/G, Clyd/F $\sharp$ , Clyd

## Seventh Chord Arpeggios

I have compiled this chart of seventh chord arpeggios by combining all of the possible chromatic alterations of the basic chord tones. the naming of arpeggios relates to the intervals above the root (see seventh chord formula chart).

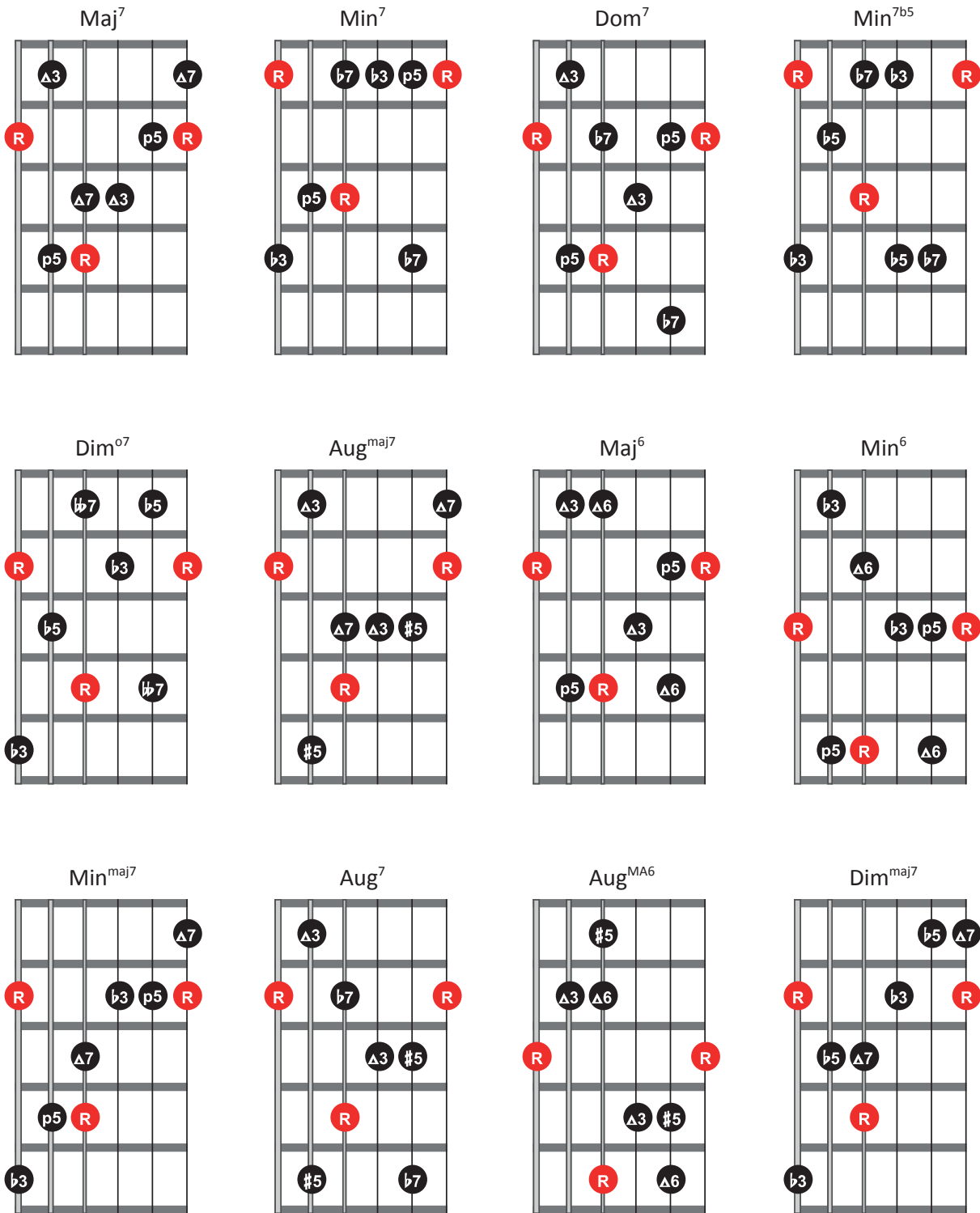
### Seventh Chord Formulas

Maj <sup>7</sup>	1	3	5	7	MajΔ <sup>add9</sup>	1	4	5	bb7
					5				
Dom <sup>7</sup>	1	3	5	b7	Maj <sup>7/b5/sus4</sup>	1	4	b5	7
Maj <sup>6</sup>	1	3	5	6 (bb7)	Dom <sup>7/b5/sus4</sup>	1	4	b5	b7
Aug <sup>maj7</sup>	1	3	#5	7	MajΔ <sup>b9</sup>	1	4	b5	bb7
					5				
Aug <sup>7</sup>	1	3	#5	b7	Maj <sup>7/sus4/#5</sup>	1	4	#5	7
Aug <sup>MA6</sup>	1	3	#5	6 (bb7)	MinΔ <sup>add9</sup>	1	4	#5	b7
					5				
Min <sup>maj7</sup>	1	b3	5	7	MajΔ <sup>#9</sup>	1	4	#5	bb7
					5				
Min <sup>7</sup>	1	b3	5	b7	Maj <sup>7/sus2</sup>	1	2	5	7
Min <sup>6</sup>	1	b3	5	6	Dom <sup>7/sus2</sup>	1	2	5	b7
Tonic Dim	1	b3	#5	7	Maj <sup>6/sus2</sup>	1	2	5	6 (bb7)
MajΔ <sup>add9</sup>	1	b3	#5	b7	Maj <sup>7/sus2/#5</sup>	1	2	#5	7
3									
Min <sup>6/#5</sup>	1	b3	#5	6 (bb7)	Dom <sup>7/sus2/#5</sup>	1	2	#5	b7
Maj <sup>7/b5</sup>	1	3	b5	7	Dim <sup>MA9/b13</sup>	1	2	#5	bb7
Dom <sup>7/b5</sup>	1	3	b5	b7	Maj <sup>7/b5/sus2</sup>	1	2	b5	7
∅ <sup>4</sup> <sub>3</sub>	1	3	b5	bb7	Dom <sup>7/b5/sus2</sup>	1	2	b5	b7
Dim <sup>maj7</sup>	1	b3	b5	7	Dom <sup>4</sup> <sub>2</sub>	1	2	b5	bb7 (6)
Min <sup>7/b5</sup>	1	b3	b5	b7	Maj <sup>7/bb5</sup>	1	3	4 (bb5)	7
Dim <sup>7</sup>	1	b3	b5	bb7	Dom <sup>7/bb5</sup>	1	3	4	b7
Maj <sup>7/sus4</sup>	1	4	5	7	Maj <sup>6/bb5</sup>	1	3	4	bb7
Dom <sup>7/sus4</sup>	1	4	5	b7	Min <sup>maj7/bb5</sup>	1	b3	4	7
Min <sup>7/bb5</sup>	1	b3	4	b7	Min <sup>6/bb5</sup>	1	b3	4	6 (bb7)
Maj <sup>7/sus2/bb5</sup>	1	2	4	7	Dom <sup>7/sus2/bb5</sup>	1	2	4	b7
Maj <sup>6/sus2/bb5</sup>	1	2	4	6 (bb7)					

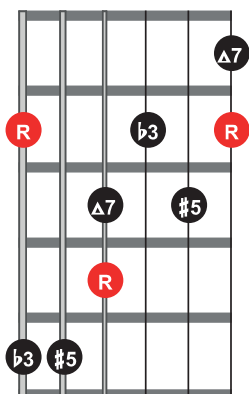
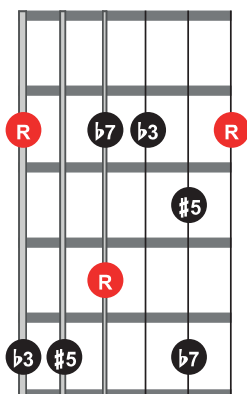
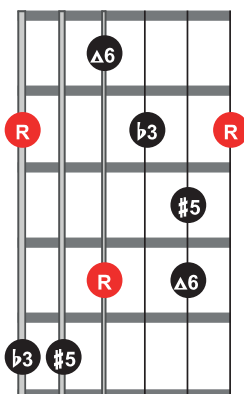
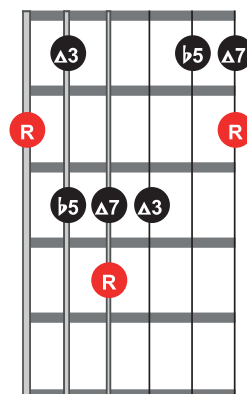
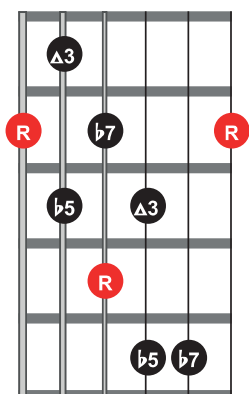
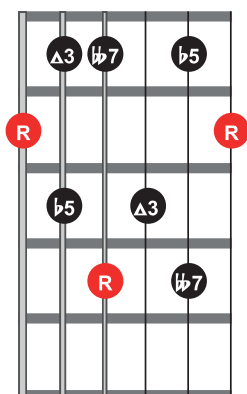
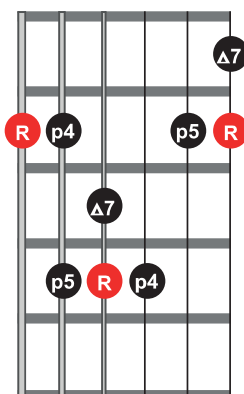
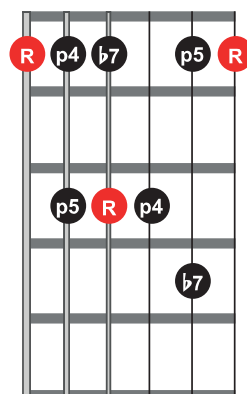
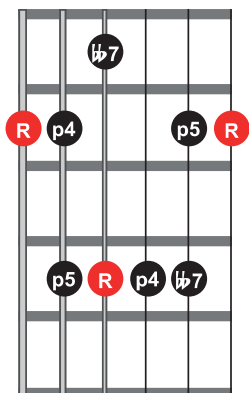
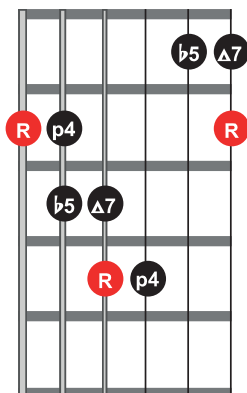
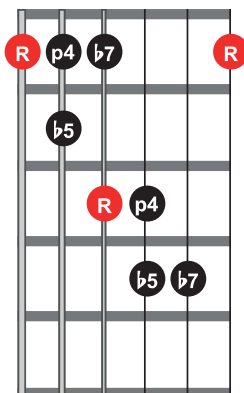
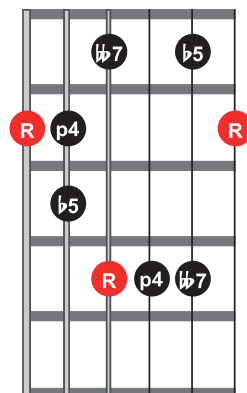
## Triads and Suspensions

Maj	1	3	5	#7 (8)	Phryg.Δ	1	b2	5	8
Min	1	b3	5	8	Loc.Δ	1	b2	b5	8
Dim	1	b3	b5	8	Lyd.Δ	1	#4	5	8
Aug	1	3	#5	8	MajΔ <sup>b5</sup>	1	3	#4	8
ΔSus <sup>4</sup> (no 5th)	1	3	4	8	Q <sup>+4</sup>	1	4	7	8
-ΔSus <sup>4</sup> (no 5th)	1	b3	4	8	Q	1	4	b7	8
Sus <sup>2</sup>	1	2	5	8	+4Q	1	#4	7	8
Sus <sup>2b5</sup>	1	2	b5	8	+4 <sup>d4</sup>	1	#4	b7	8
Sus <sup>2/4</sup> (no 5th)	1	2	4	8					
Sus <sup>2#5</sup>	1	2	#5	8					
Sus <sup>4</sup>	1	4	5	8					
Sus <sup>4b5</sup>	1	4	b5	8					
Sus <sup>4#5</sup>	1	4	#5	8					

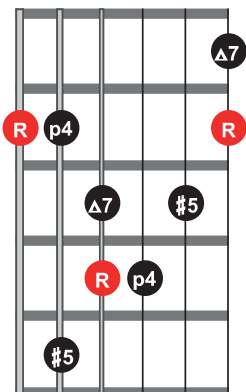
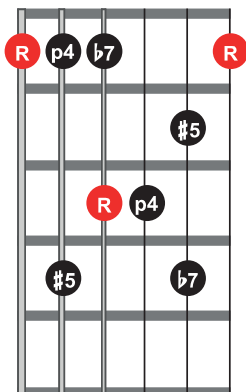
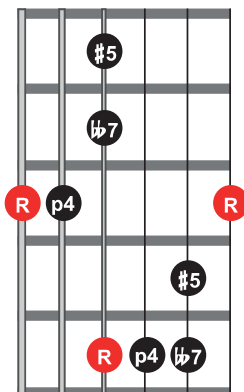
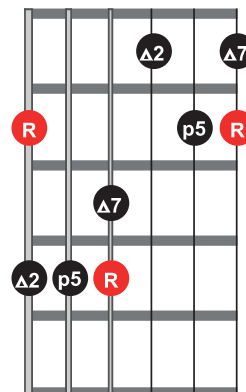
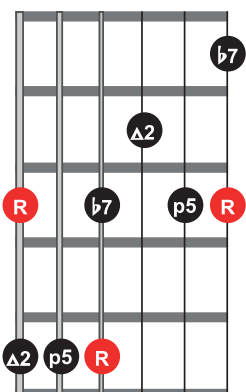
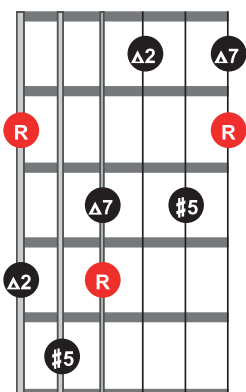
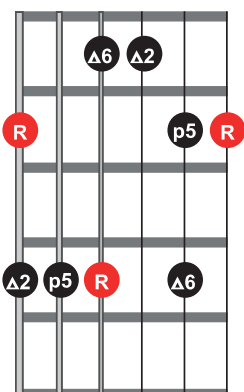
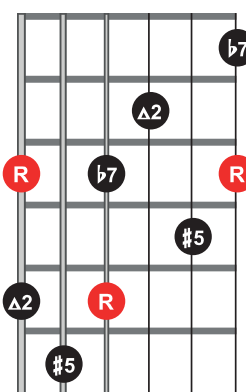
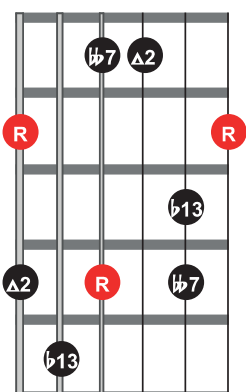
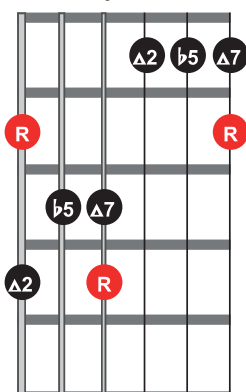
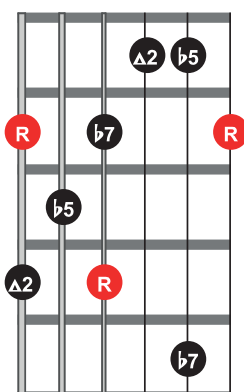
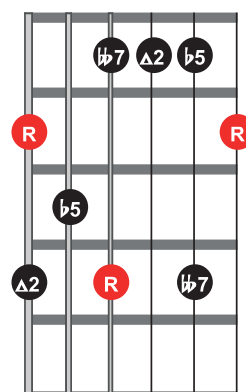
## Seventh Chord Arpeggios Root 6

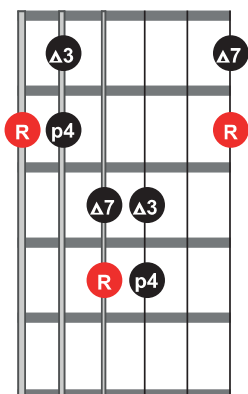
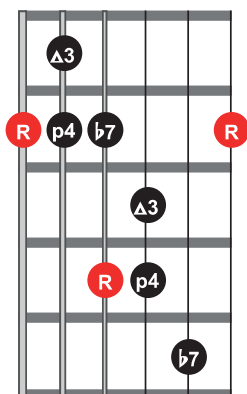
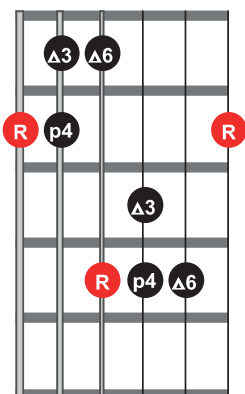
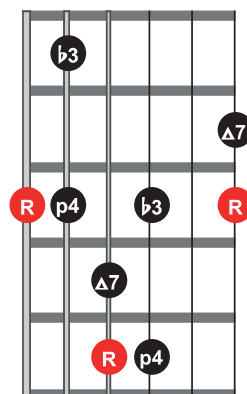
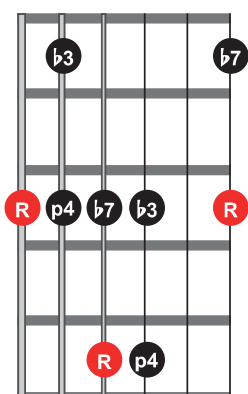
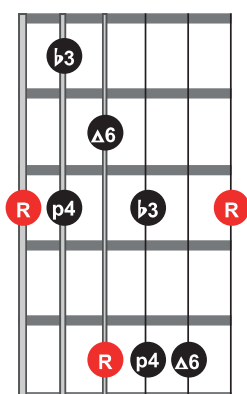
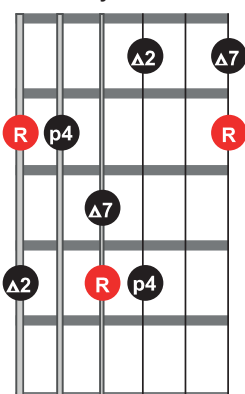
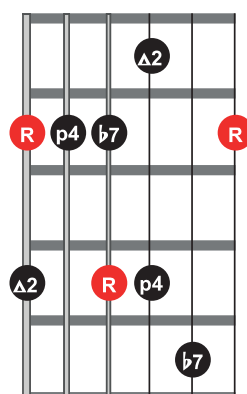
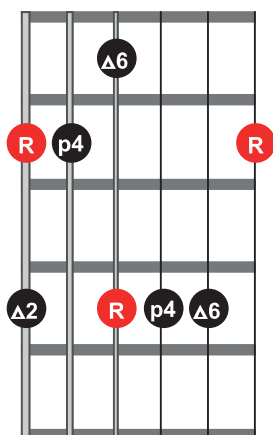


Tonic Dim

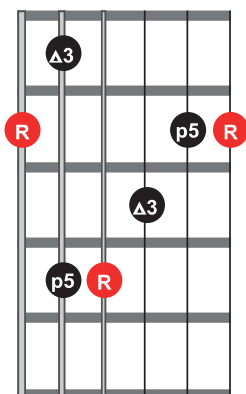
Maj $\Delta^{add9}/3^{rd}$ Min $^{6/\#5}$ Maj $^{7/b5}$ Dom $^{7/b5}$  $\emptyset^4_3$ Maj $^{7sus4}$ Dom $^{7sus4}$ Maj $\Delta^{add9}/5^{th}$ Maj $^{7/b5/sus4}$ Dom $^{7/b5/sus4}$ Maj $\Delta^{b9}/5^{th}$ 



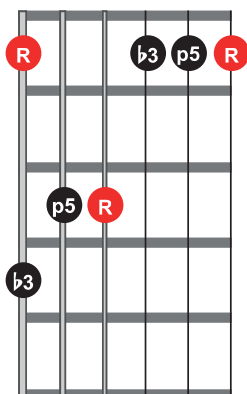
Maj<sup>7/sus4/#5</sup>Min $\Delta^{add9}/5^{th}$ Maj $\Delta^{add9}/5^{th}$ Maj<sup>7sus2</sup>Dom<sup>7sus2</sup>Maj<sup>7/sus2/#5</sup>Maj<sup>6/sus2</sup>Dom<sup>7/sus2/#5</sup>Dim<sup>o7/MA9/b13</sup>Maj<sup>7/b5/sus2</sup>Dom<sup>7/b5/sus2</sup>Dom<sup>4</sup><sub>2</sub>

Maj<sup>7/bb5</sup>Dom<sup>7/bb5</sup>Maj<sup>6/bb5</sup>Min<sup>maj7/bb5</sup>Min<sup>7/bb5</sup>Min<sup>6/bb5</sup>Maj<sup>7/sus2/bb5</sup>Dom<sup>7/sus2/bb5</sup>Maj<sup>6/sus2/bb5</sup>

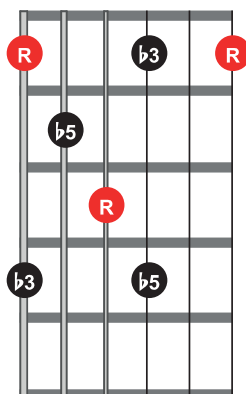
Maj



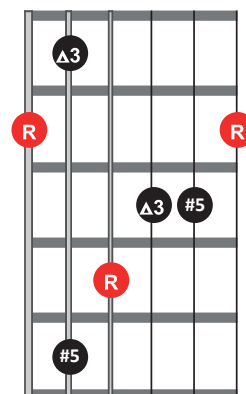
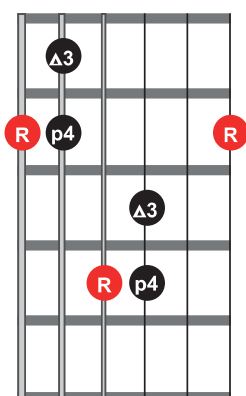
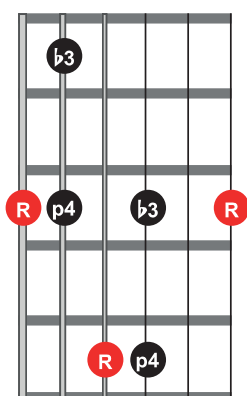
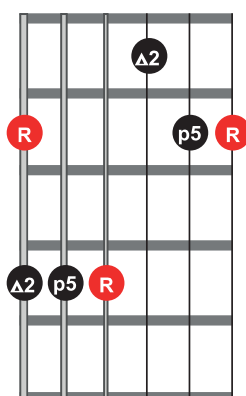
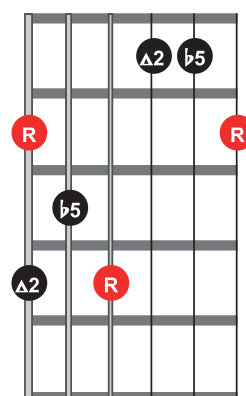
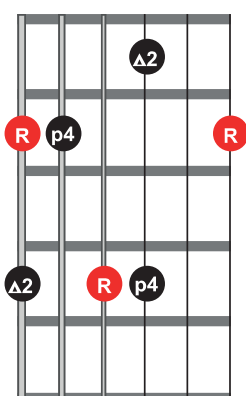
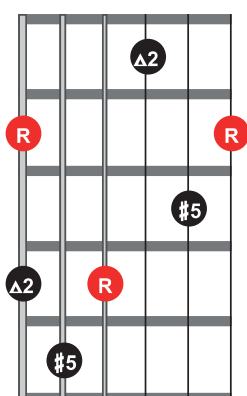
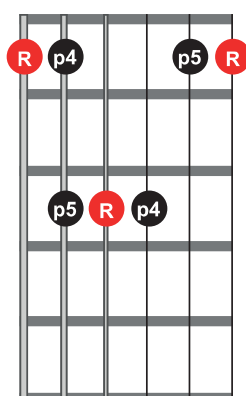
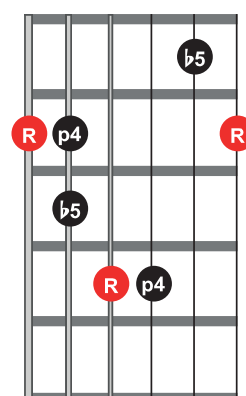
Min

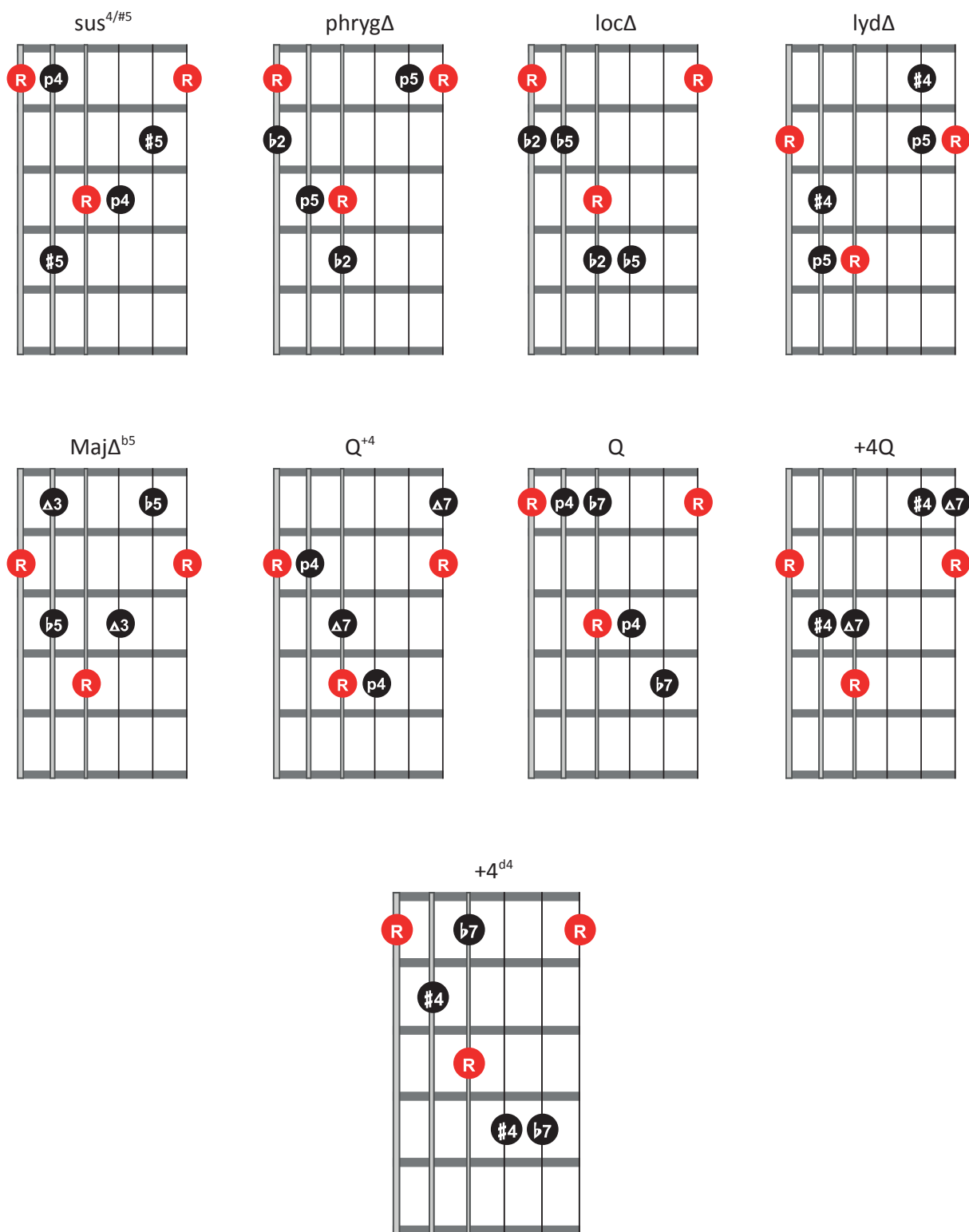


Dim

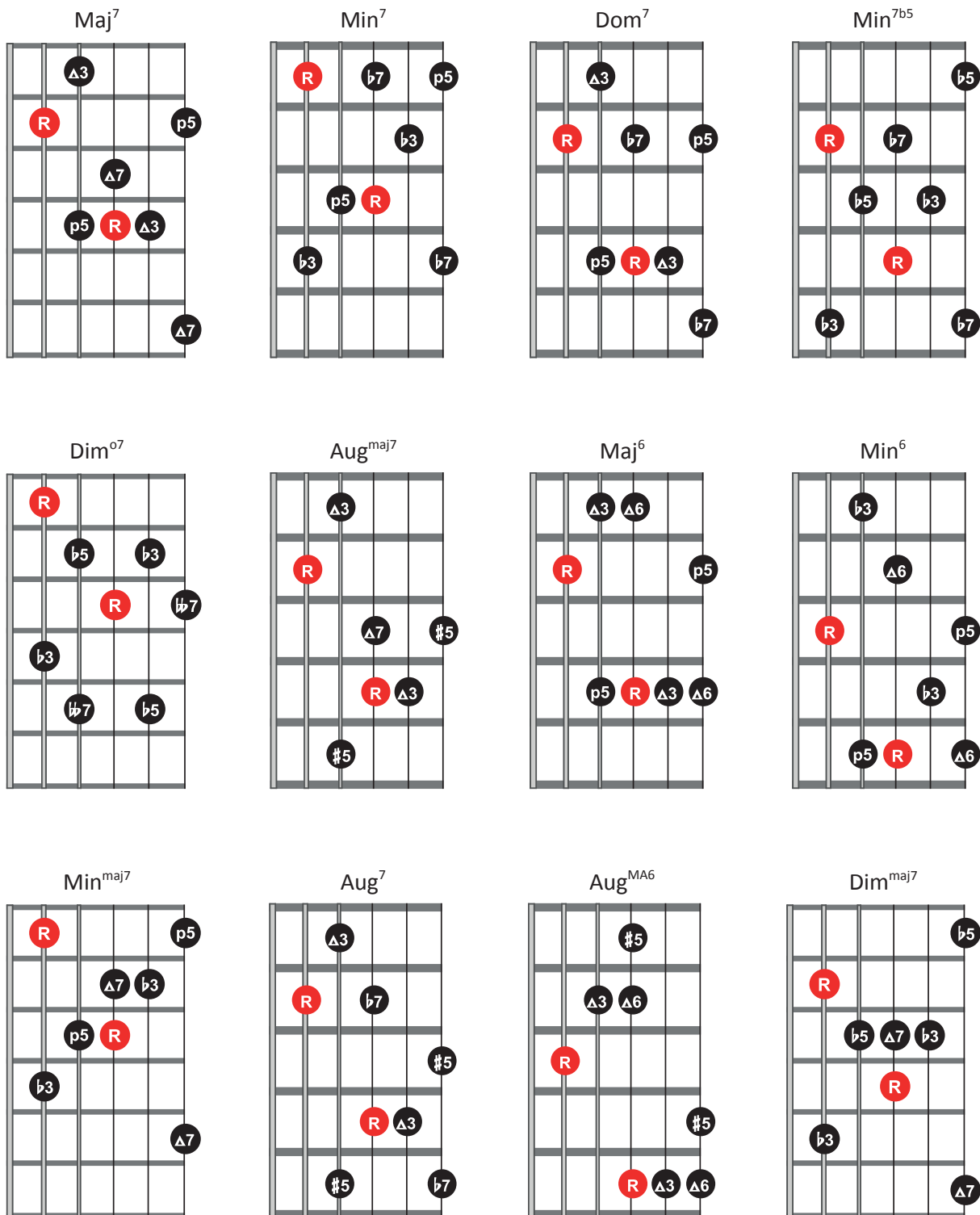


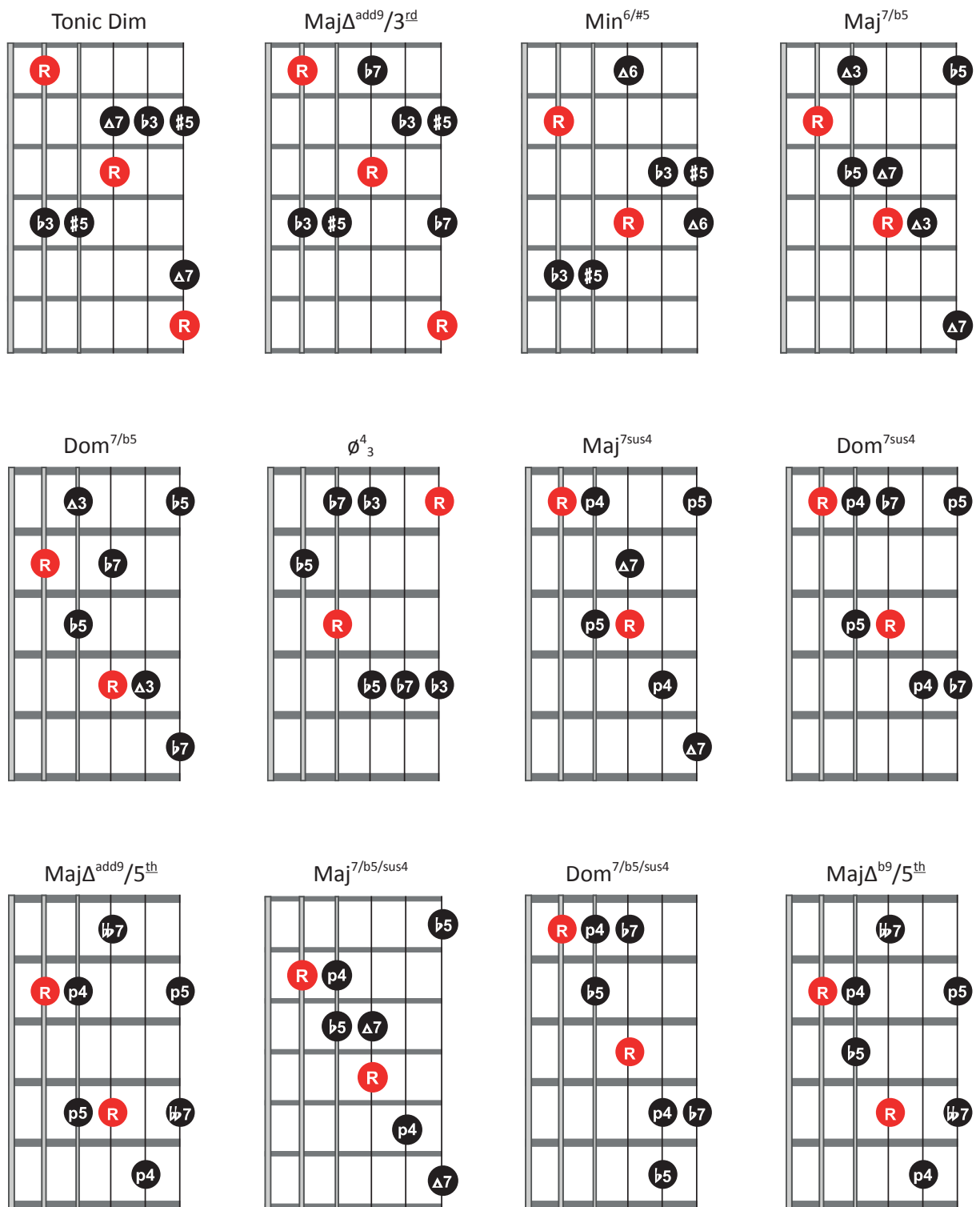
Aug

 $\Delta$ sus<sup>4</sup> no 5th-Δsus<sup>4</sup> no 5thsus<sup>2</sup>sus<sup>2/b5</sup>sus<sup>2/4</sup> no 5thsus<sup>2/#5</sup>sus<sup>4</sup>sus<sup>4/b5</sup>

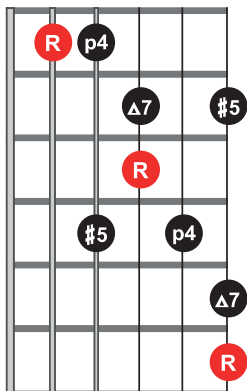


## Seventh Chord Arpeggios Root 5

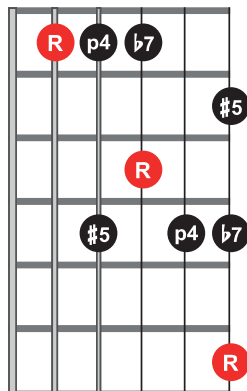




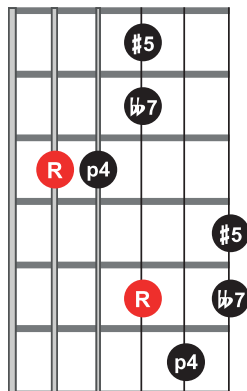
Maj<sup>9/sus4/#5</sup>



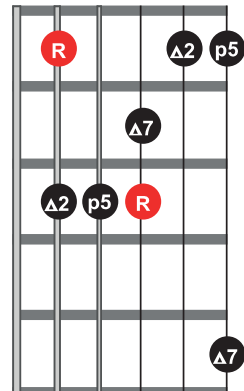
MinΔ<sup>add9/5<sup>th</sup></sup>



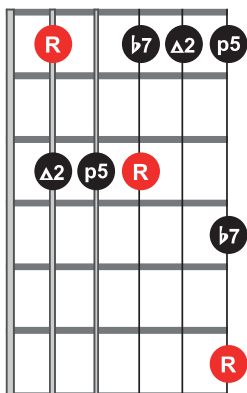
MajΔ<sup>#9/5<sup>th</sup></sup>



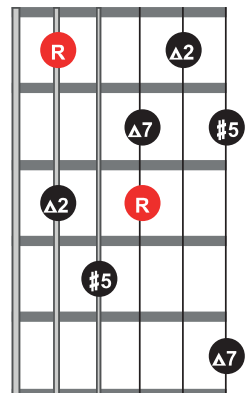
Maj<sup>7sus2</sup>



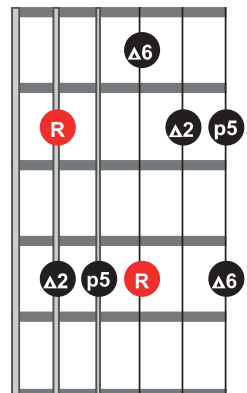
Dom<sup>7sus2</sup>



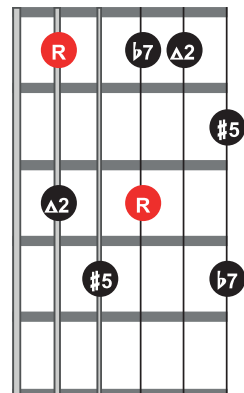
Maj<sup>7/sus2/#5</sup>



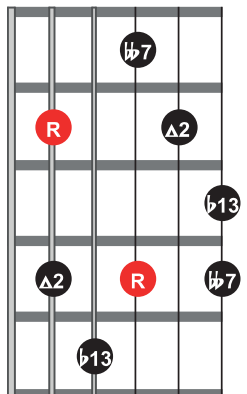
Maj<sup>6/sus2</sup>



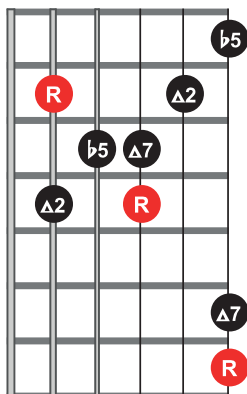
Dom<sup>7/sus2/#5</sup>



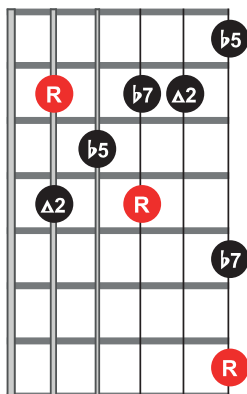
Dim<sup>o7/MA9/b13</sup>



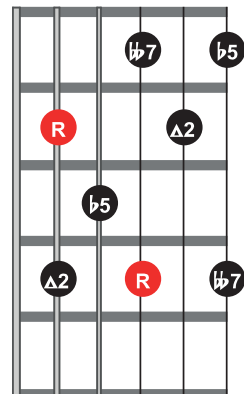
Maj<sup>7/b5/sus2</sup>

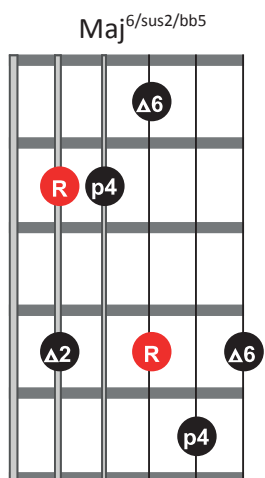
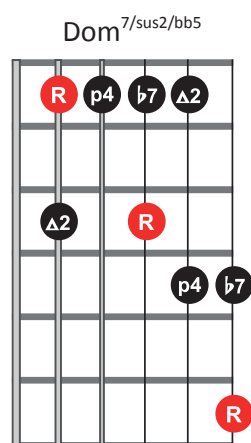
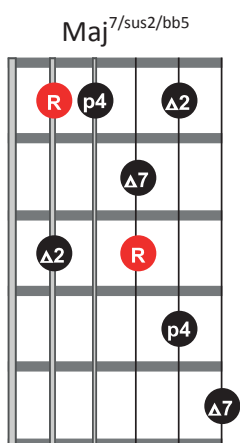
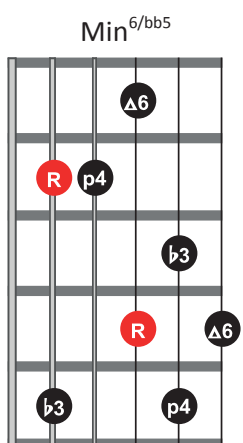
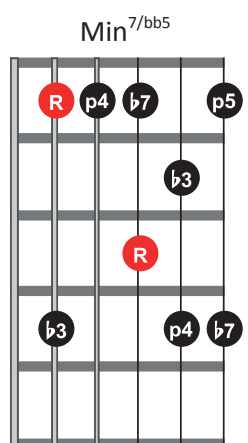
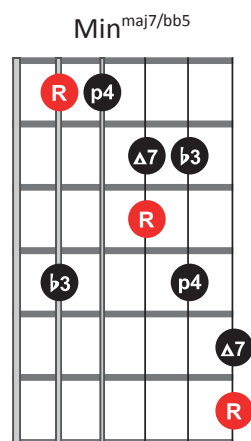
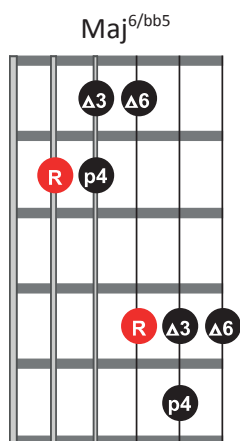
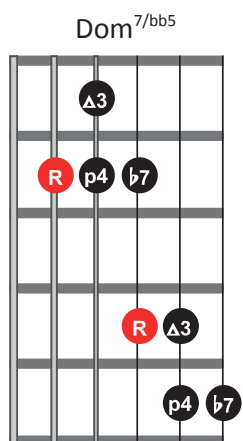
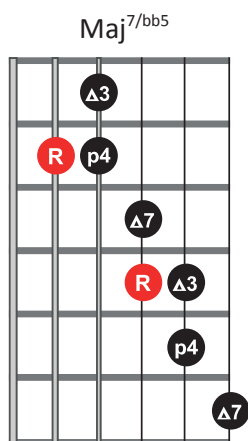


Dom<sup>7/b5/sus2</sup>



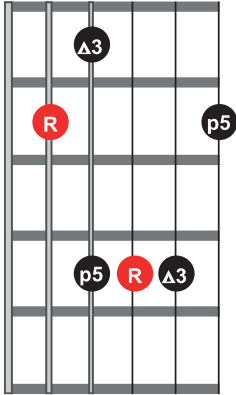
Dom<sup>4</sup><sub>2</sub>



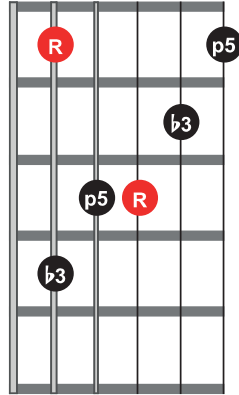




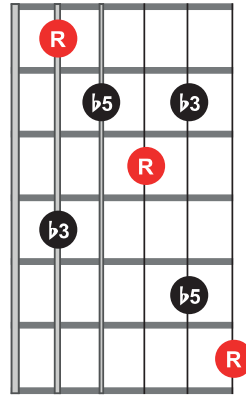
Maj



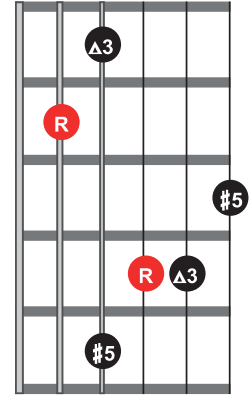
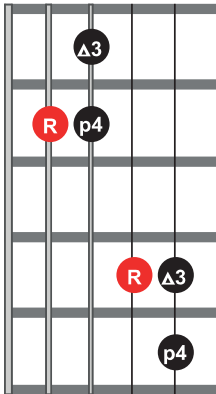
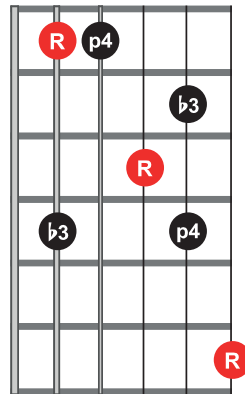
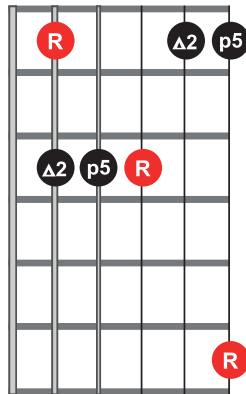
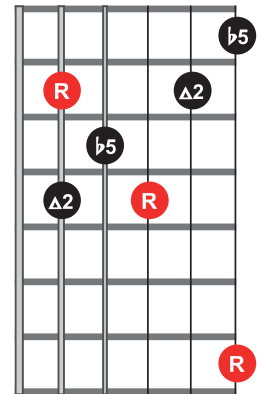
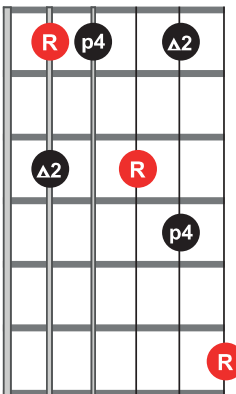
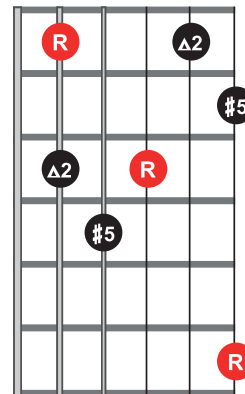
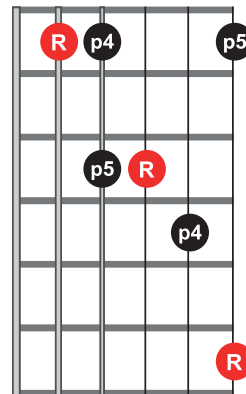
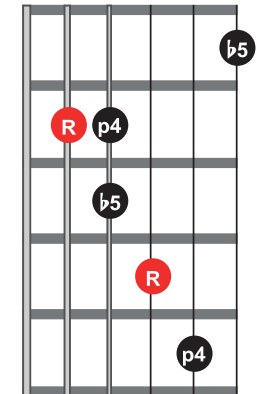
Min

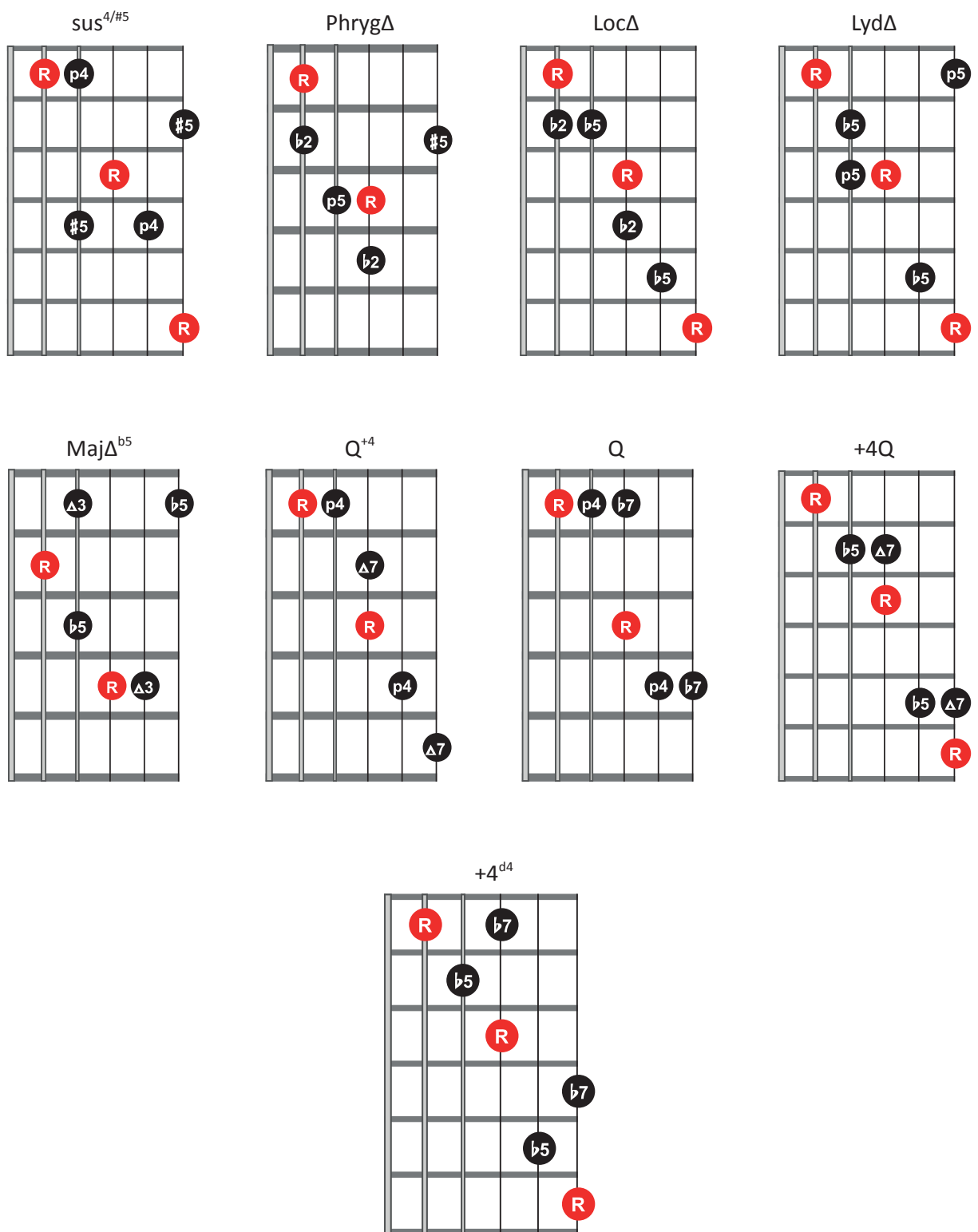


Dim



Aug

 $\Delta$ sus<sup>4</sup> no 5th-Δsus<sup>4</sup> no 5thsus<sup>2</sup>sus<sup>2/b5</sup>sus<sup>2/4</sup> no 5thsus<sup>2/#5</sup>sus<sup>4</sup>sus<sup>4/b5</sup>



## Bitonal Arpeggios

These particular bitonal arpeggios alternate between the bottom and top triads.

### **Ex. 159a**

C  
C-

C-

### **Ex. 159b**

B  
C

C

### **Ex. 159c**

F#  
C-

closest available chord tones

C-

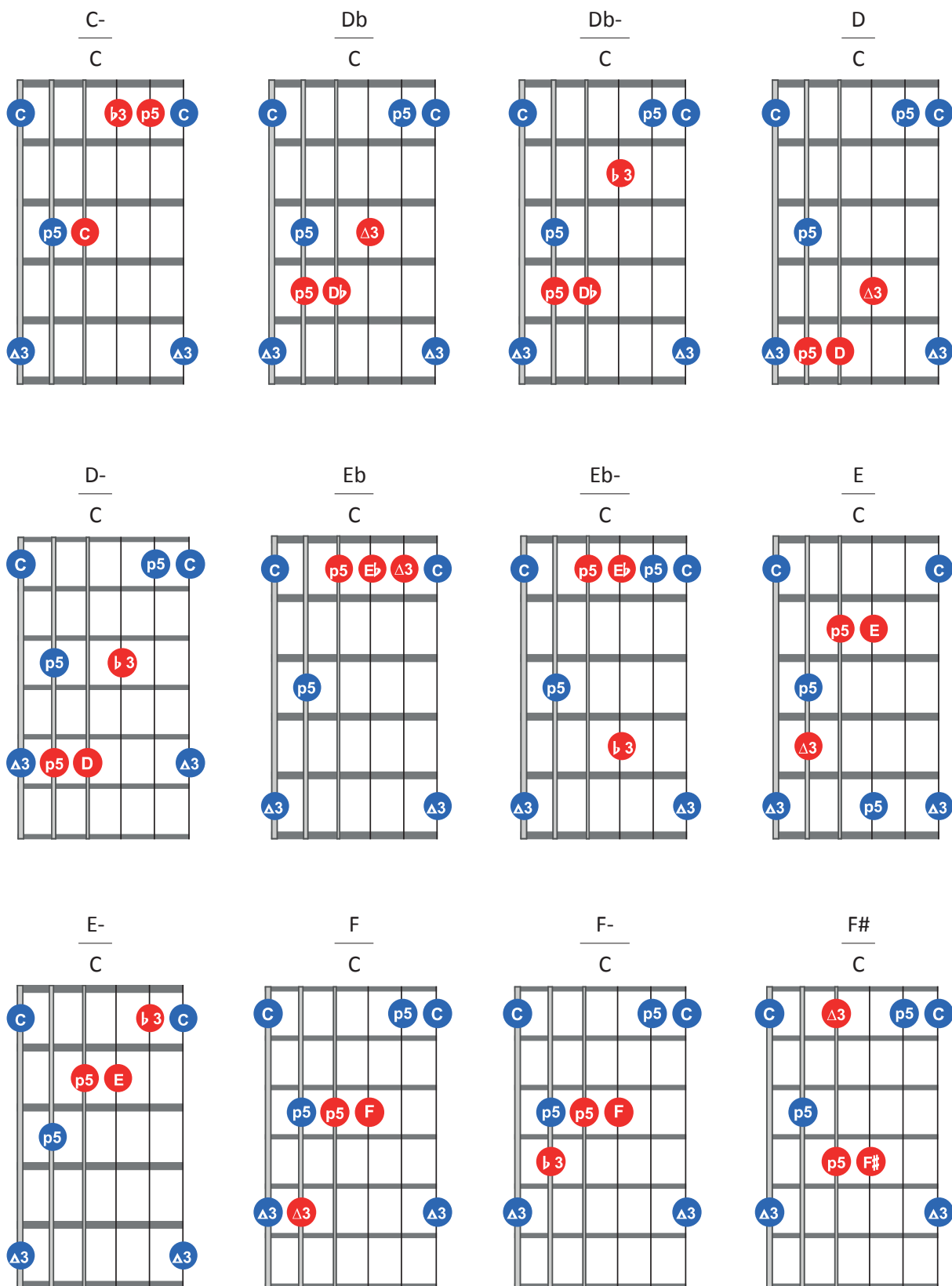
## Major and Minor Bitonal Arpeggios

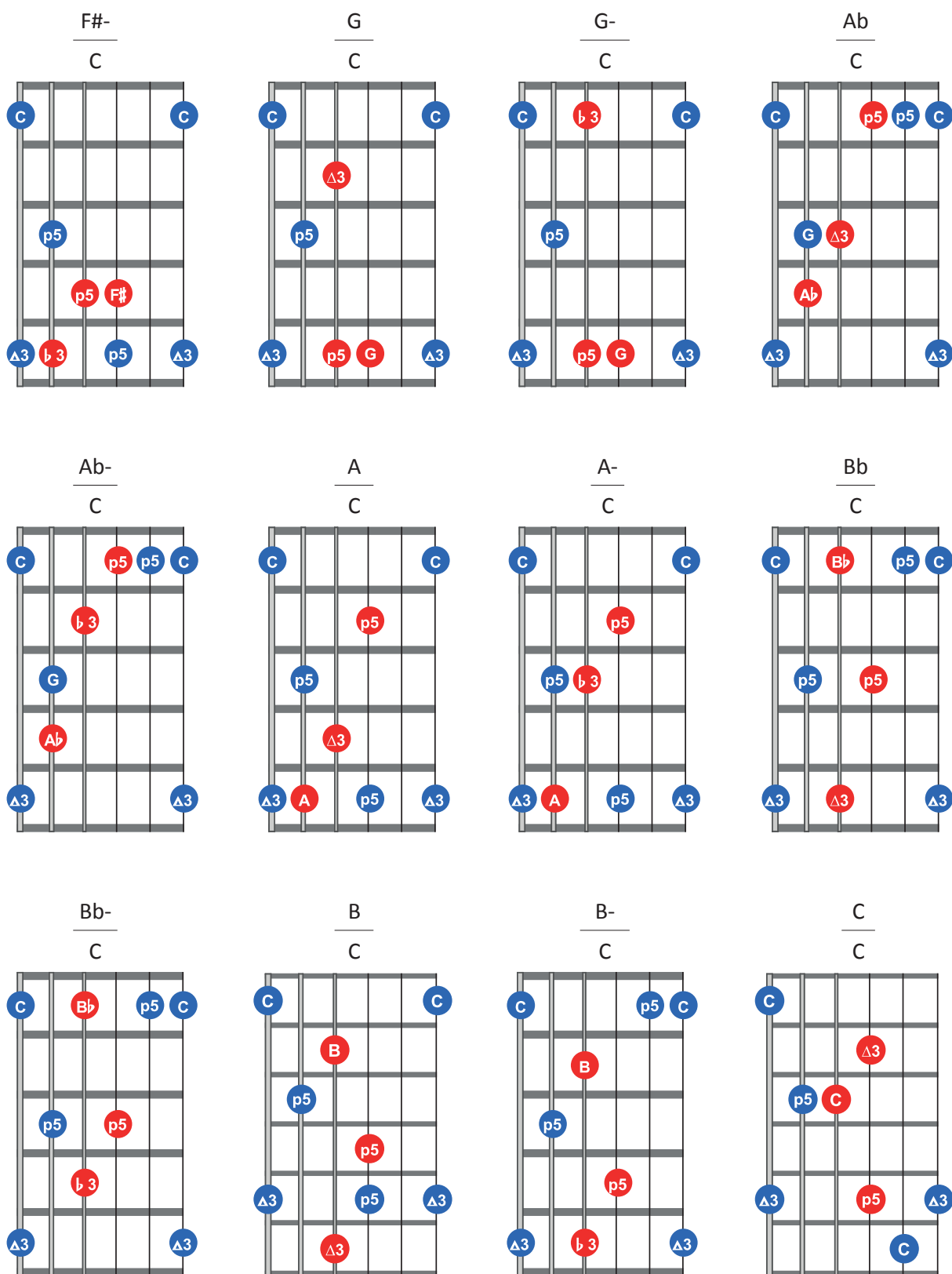
The charts include only major and minor triads over major, minor, diminished and augmented triads.

$\frac{C-}{C} = 1 \quad 3 \quad 5 \quad \#9$
$\frac{Db}{C} = 1 \quad 3 \quad 5 \quad b6 \quad b9 \quad 11$
$\frac{Db-}{C} = 1 \quad 3 \quad 5 \quad b6 \quad b9$
$\frac{D}{C} = 1 \quad 3 \quad 5 \quad 13 \quad 9 \quad \#11$
$\frac{D-}{C} = 1 \quad 3 \quad 5 \quad 6 \quad 9 \quad 11$
$\frac{Eb}{C} = 1 \quad 3 \quad 5 \quad b7 \quad \#9$
$\frac{Eb-}{C} = 1 \quad 3 \quad 5 \quad b7 \quad \#9 \quad \#11$
$\frac{E}{C} = 1 \quad 3 \quad 5 \quad \#5 \quad 7$
$\frac{E-}{C} = 1 \quad 3 \quad 5 \quad 7$
$\frac{F}{C} = 1 \quad 3 \quad 5 \quad 6 \quad 11$
$\frac{F-}{C} = 1 \quad 3 \quad 5 \quad b6 \quad 11$
$\frac{F\#}{C} = 1 \quad 3 \quad 5 \quad b7 \quad b9 \quad \#11$

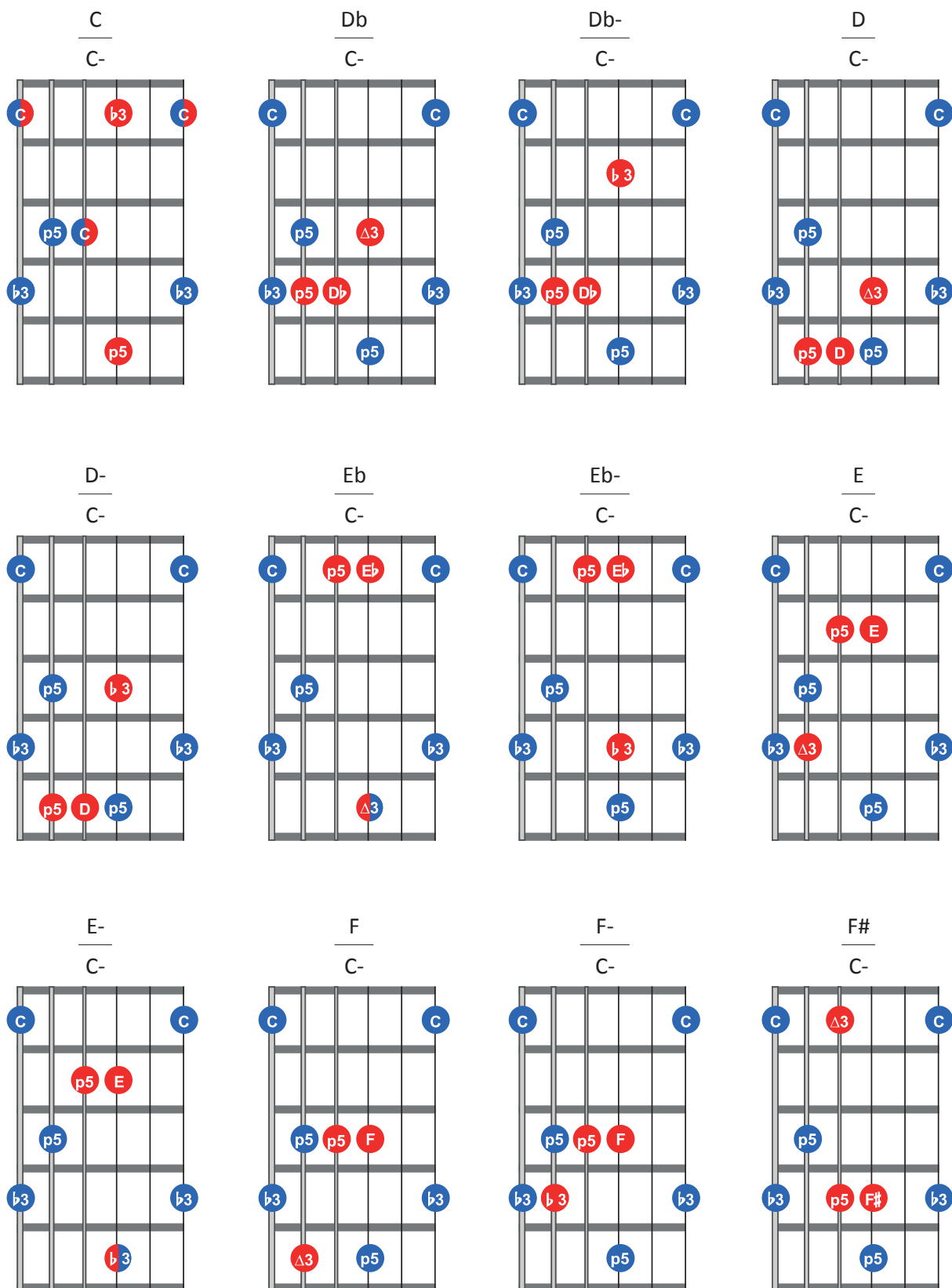
$\frac{F\#-}{C} = 1 \quad 3 \quad 5 \quad 13 \quad b9 \quad \#11$
$\frac{G}{C} = 1 \quad 3 \quad 5 \quad 7 \quad 9$
$\frac{G-}{C} = 1 \quad 3 \quad 5 \quad b7 \quad 9$
$\frac{Ab}{C} = 1 \quad 3 \quad 5 \quad \#5 \quad \#9$
$\frac{Ab-}{C} = 1 \quad 3 \quad 5 \quad \#5 \quad 7 \quad \#9$
$\frac{A}{C} = 1 \quad 3 \quad 5 \quad 6 \quad b9$
$\frac{A-}{C} = 1 \quad 3 \quad 5 \quad 6$
$\frac{Bb}{C} = 1 \quad 3 \quad 5 \quad b7 \quad 9 \quad 11$
$\frac{Bb-}{C} = 1 \quad 3 \quad 5 \quad b7 \quad b9 \quad sus4$
$\frac{B}{C} = 1 \quad 3 \quad 5 \quad 7 \quad \#9 \quad \#11$
$\frac{B-}{C} = 1 \quad 3 \quad 5 \quad 7 \quad 9 \quad \#11$

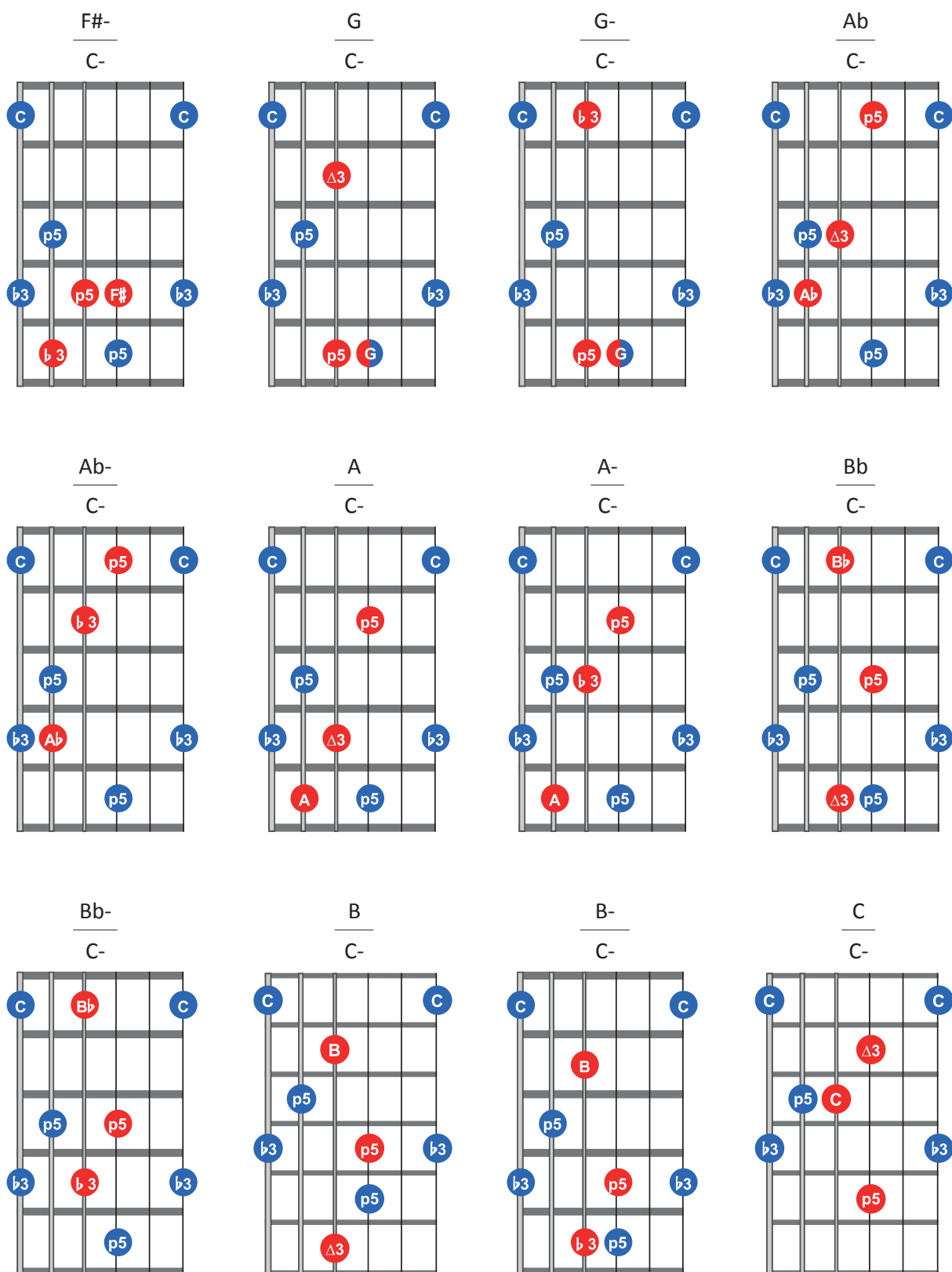
## Major Bitonal Arpeggios (over C at the 8<sup>th</sup> fret)





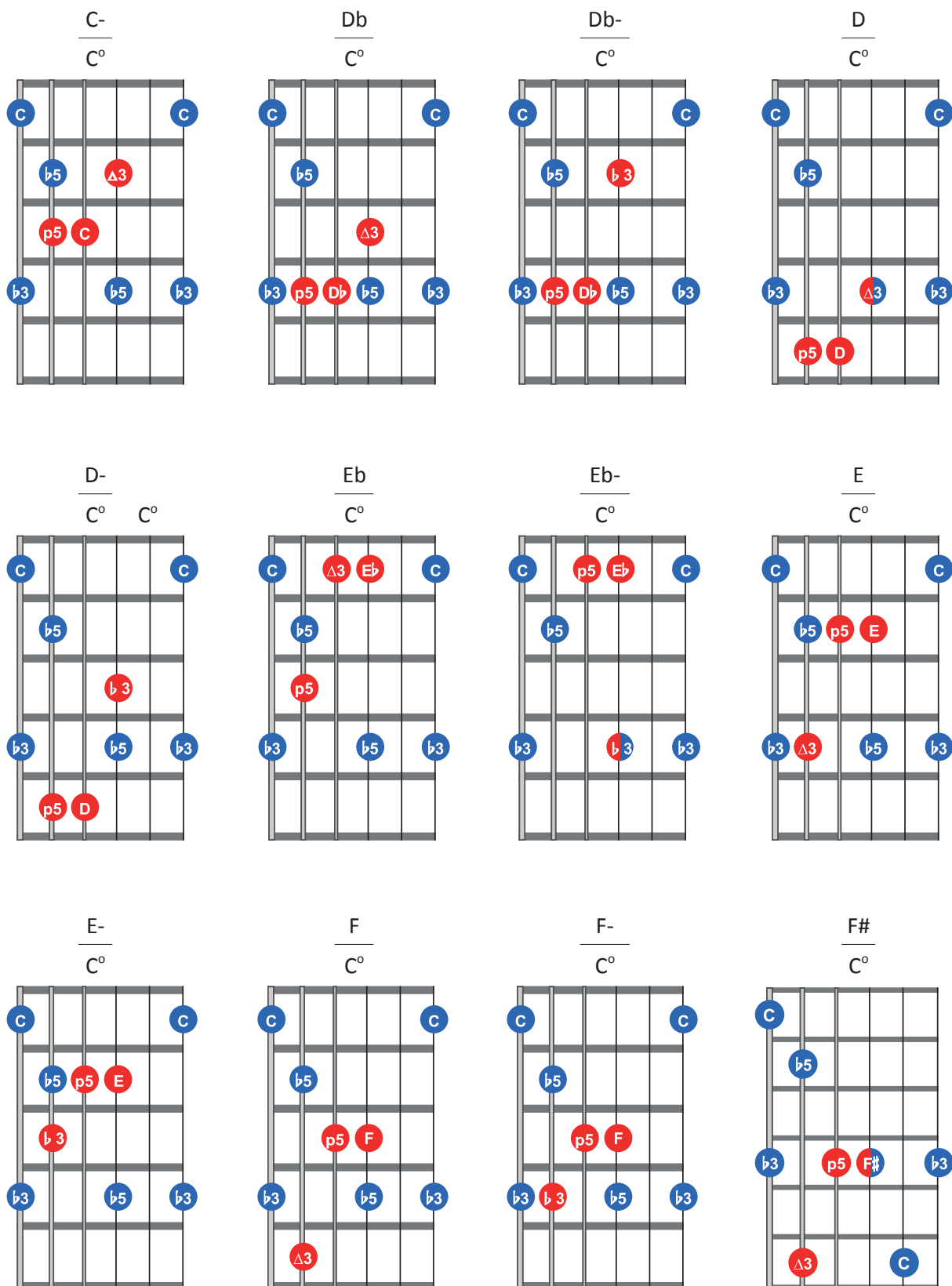
## Minor Bitonal Arpeggios (over C- at the 8<sup>th</sup> fret)

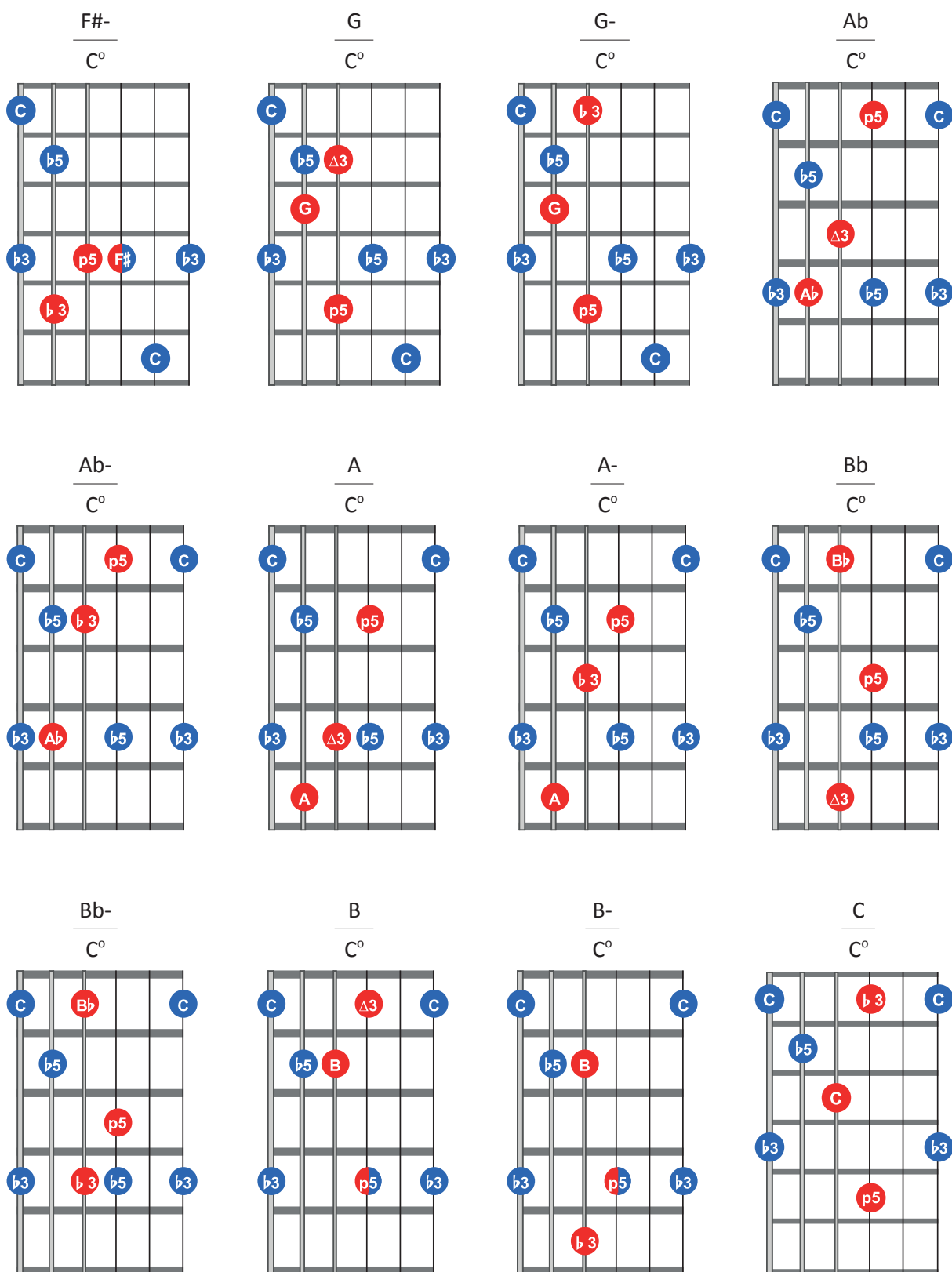




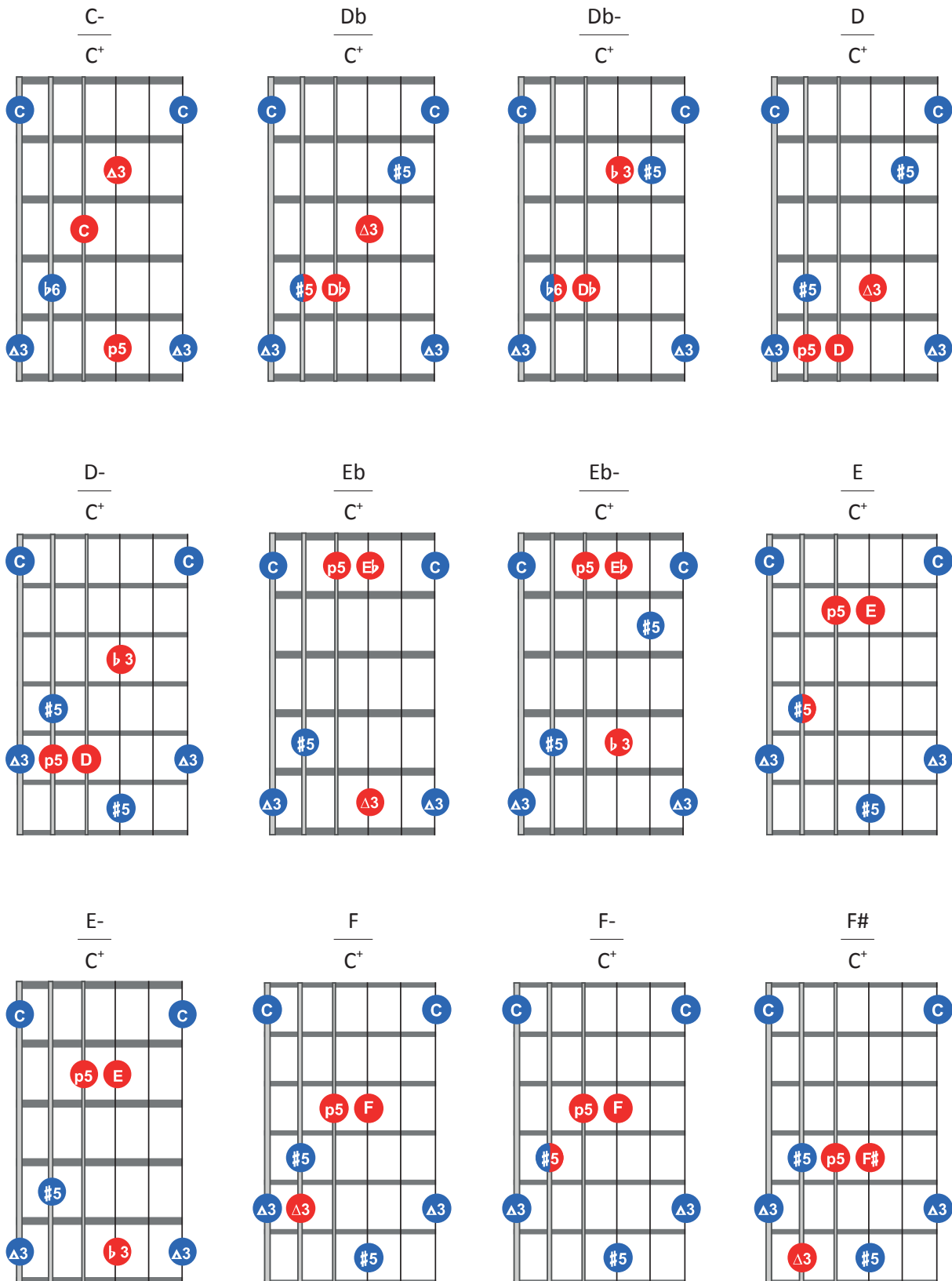


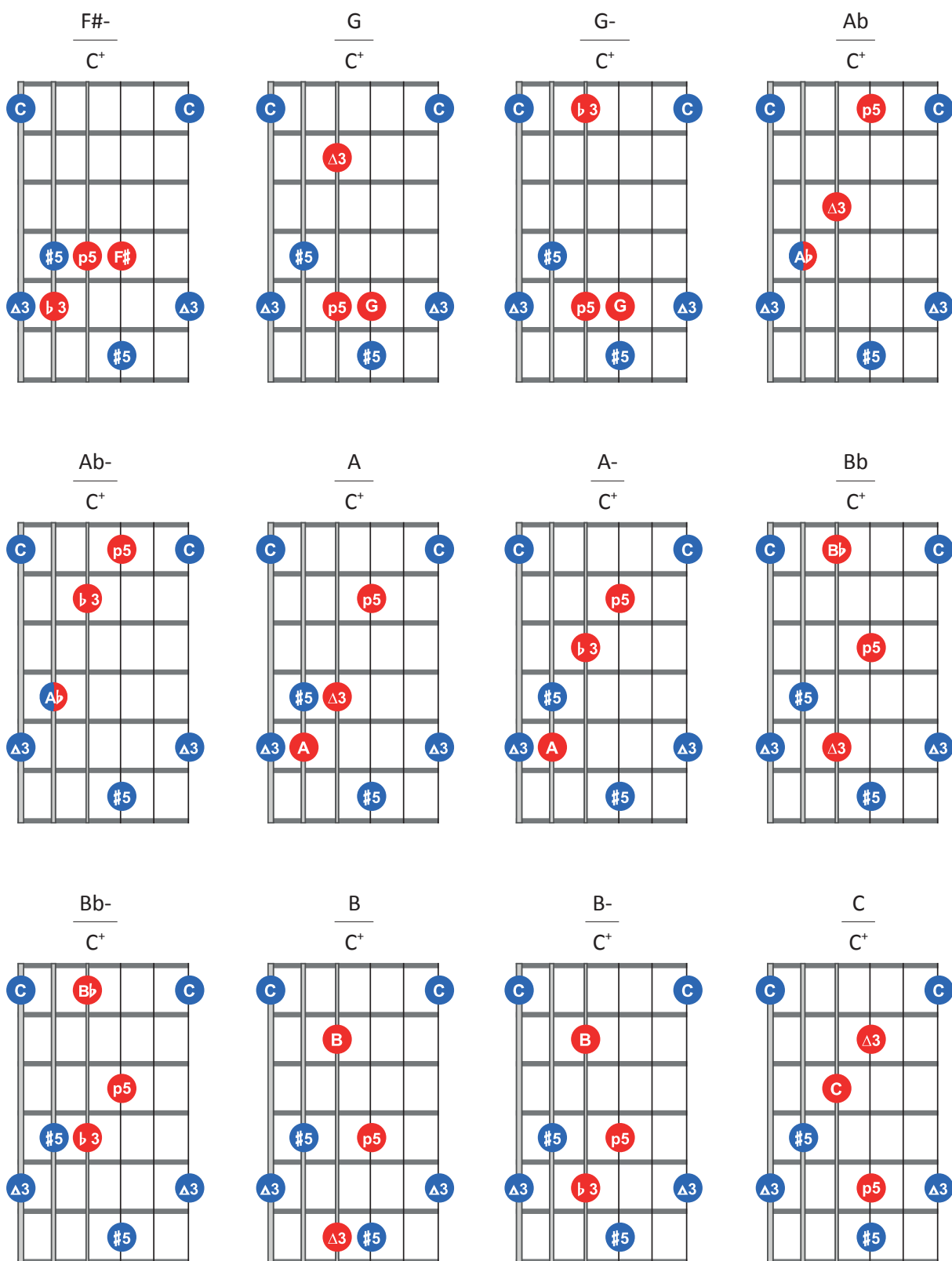
## Diminished Bitonal Arpeggios (over C° at the 8<sup>th</sup> fret)





## Augmented Bitonal Arpeggios (over C<sup>+</sup> at the 8<sup>th</sup> fret)


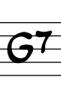





## More About Practicing Scales and Arpeggios

In order to maximize your practicing time, scales should be practiced in the combinations in which they fall in a particular chord progression.

### Ex. 160

	$ii^7$	$V^7$	$I^{MA7}$
			
Comb. 1	D-Dorian	G-Mixolydian	C-Ionian
Parent Scale	(C-Major)	(C-Major)	(C-Major)
Comb. 2	D-Dorian	G-Alt.Dom.	C-Lydian
Parent Scale	(C-Major)	(Ab-Mel. Min.)	(G-Major)


There are many combinations to choose from if you consider all the possible scale choices for each chord.

### Ex. 161

$ii^7$	$V^7$	$I^{maj7}$
Dorian	Mixolydian	Ionian
Melodic Minor	Mixolydian #11	Lydian
Aeolian	Whole Tone	Lydian Augmented
Phrygian	Dominant Diminished	Major Pentatonic
Minor Pentatonic	Altered Dominant	Major Pentatonic P5 ↑
Major Pentatonic M2↓	Major Pentatonic Tritone ↑↓	Major Pentatonic M2 ↑
Harmonic Minor	Phrygian Major	

After getting comfortable with the mode changes you should begin connecting them by diatonic interval patterns.

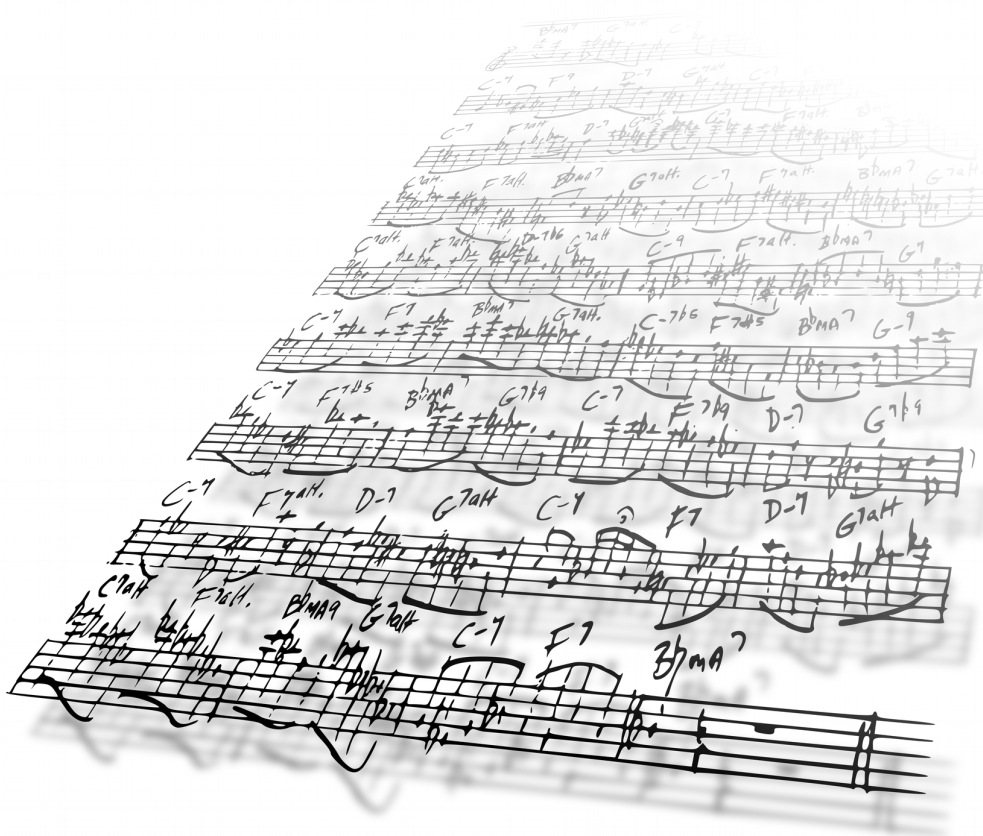
### Ex. 162

$D-7$ (Dorian)	$G7^{alt}$ (Alt. Dom.)	$CMA7^{\#11}$ (Lydian)
		

As you can see, the interval pattern continues on the closest available note of the next mode.

# CHAPTER 4

## LINEAR STUDIES



## Chapter 4: Linear Studies

### ii V I Progressions

The major (key) ii V I progression can fall into a number of different categories.

#### **Ex. 163**

- a)**
- |                   |                    |                   |
|-------------------|--------------------|-------------------|
| ii                | V <sup>7</sup>     | I <sup>maj7</sup> |
| Dmin <sup>7</sup> | G <sup>7(13)</sup> | C <sup>maj7</sup> |
- unaltered (basic)
- 
- b)**
- |                   |                      |                   |
|-------------------|----------------------|-------------------|
| ii <sup>7</sup>   | V <sup>7alt</sup>    | I <sup>maj7</sup> |
| Dmin <sup>7</sup> | G <sup>7/#5/b9</sup> | C <sup>maj7</sup> |
- with altered Dom. Chord
- 
- c)**
- |                 |                   |                    |
|-----------------|-------------------|--------------------|
| ii <sup>7</sup> | V <sup>7</sup>    | I <sup>7</sup>     |
| D- <sup>7</sup> | G <sup>7(9)</sup> | C <sup>7(13)</sup> |
- Dom.<sup>7</sup> tonic chord with unaltered V<sup>7</sup>
- 
- d)**
- |                 |                      |                      |
|-----------------|----------------------|----------------------|
| ii <sup>7</sup> | V <sup>7alt</sup>    | I <sup>7alt</sup>    |
| D- <sup>7</sup> | G <sup>7/#9/#5</sup> | C <sup>7/b9/b5</sup> |
- altered Dom.<sup>7</sup> tonic chord with altered V<sup>7</sup>
- 
- e)**
- |                    |                    |                         |
|--------------------|--------------------|-------------------------|
| ii <sup>7/b6</sup> | V <sup>7alt</sup>  | I <sup>maj7/#5</sup>    |
| D- <sup>7/b6</sup> | Ab <sup>sus4</sup> | C <sup>maj7/#4/#5</sup> |
|                    | <hr/> G            |                         |
- modal ii V I

The minor (key) ii V i Progression contains a half-diminished supertonic chord, an altered dominant seventh chord and a minor or minor-major seventh tonic chord.

**Ex. 164**

ii <sup>7b5</sup>	V <sup>7alt</sup>	I <sup>7 (maj7)</sup>
D <sup>-7b5</sup>	G <sup>7/#5/b9</sup>	C <sup>-7 (maj7)</sup>

The following examples are in two or four bar phrase lengths. The interval relationship of the melody notes to the chords should be analyzed as follows.

**Ex. 165**

**G<sup>-7</sup>**
**C<sup>7(#11)</sup>**
**F<sup>MA7</sup>**



# ii V's in One Measure

Ex. 166

Major keys

a)

Gm7 C7alt Fmaj7

5 6 7 4 5 5 8

b)

Gm7 C7alt Fmaj7

8 11 10 9 9 8 11 10

c)

Gm7 C7 Fmaj7

13 11 10 12 10 12 9 12 10

d)

Gm7 C7 Fmaj7

7 8 5 7 6 5 8 6 10 8

e)

Gm7 C7b9 Fmaj7

3 3 6 5 6 5 3 2

f)

Gm7 C7alt Fmaj7

10 7 8 11 9 10 9 8

**g)**

**Gm7** **C7b9** **Fmaj7**

TAB: 7 6 7 6 5 5 8 (8) 6 5

**h)**

**Gm7** **C7** **Fmaj7**

TAB: 7 5 8 5 6 8 5 7 4 (4)

**i)**

**Gm7** **C7b9** **Fmaj7**

TAB: 7 8 7 9 10 8 9 8 11 10

**j)** **Minor keys**

**Em7b5** **A7alt** **Dm7**

TAB: 5 8 7 5 6 8 5 6 7

**k)**

**Em7b5** **A7alt** **Dm9**

TAB: 7 8 8 10 10 8 10 11 12 (12)

**l)**

**Em7b5** **A7alt** **Dm9**

TAB: 3 3 2 5 2 3 2 5 5

m)

Em7♭5                      A7alt                      Dm9

Exercise m) consists of two measures. The first measure contains a melodic line with notes G4, A4, B4, C5, D5, E5, F#5, and G5, with a trill on G5. The fretboard diagram below shows the sequence of frets: 8, 6, 5, 7, 6, 5, 5, 8. The second measure contains a melodic line with notes G4, F#4, E4, D4, C4, and B3, with a trill on B3. The fretboard diagram shows the sequence of frets: 6, 5, 7, 4.

n)

Em7♭5                      A7alt                      Dm9

Exercise n) consists of two measures. The first measure contains a melodic line with notes G4, A4, B4, C5, D5, E5, F#5, and G5, with a trill on G5. The fretboard diagram below shows the sequence of frets: 5, 2, 3, 5, 2, 4, 5, 2. The second measure contains a melodic line with notes G4, F#4, E4, D4, C4, and B3, with a trill on B3. The fretboard diagram shows the sequence of frets: 3.

o)

Em7♭5                      A7alt                      Dm9

Exercise o) consists of two measures. The first measure contains a melodic line with notes G4, A4, B4, C5, D5, E5, F#5, and G5, with a trill on G5. The fretboard diagram below shows the sequence of frets: 8, (8), 5, 6, 6, 5, 7, 5, (5). The second measure contains a melodic line with notes G4, F#4, E4, D4, C4, and B3, with a trill on B3. The fretboard diagram shows the sequence of frets: 3.

p)

Em7♭5                      A7alt                      Dm9

Exercise p) consists of two measures. The first measure contains a melodic line with notes G4, A4, B4, C5, D5, E5, F#5, and G5, with a trill on G5. The fretboard diagram below shows the sequence of frets: 7, 8, 7, 5, 5, 5, 7, 8, 7, 8, 8, 7, 5, 8. The second measure contains a melodic line with notes G4, F#4, E4, D4, C4, and B3, with a trill on B3. The fretboard diagram shows the sequence of frets: 3.

q)

Em7♭5                      A7alt                      Dm11

Exercise q) consists of two measures. The first measure contains a melodic line with notes G4, A4, B4, C5, D5, E5, F#5, and G5, with a trill on G5. The fretboard diagram below shows the sequence of frets: 5, 2, 3, 2, 5, 3. The second measure contains a melodic line with notes G4, F#4, E4, D4, C4, and B3, with a trill on B3. The fretboard diagram shows the sequence of frets: (3).

r)

Em7♭5                      A7alt                      Dm11

Exercise r) consists of two measures. The first measure contains a melodic line with notes G4, A4, B4, C5, D5, E5, F#5, and G5, with a trill on G5. The fretboard diagram below shows the sequence of frets: 8, 7, 8, 5, 6, 4, 5, 8. The second measure contains a melodic line with notes G4, F#4, E4, D4, C4, and B3, with a trill on B3. The fretboard diagram shows the sequence of frets: (8).

# One Measure ii V I's in Major

Ex. 167

a)

Am7 D7

TAB

Gmaj7

TAB

b)

Am7 D7 Gmaj7

TAB

c)

Am7 D7 Gmaj7

TAB

d)

Am7 D7 Gmaj7

TAB

e)

**Am7**

Exercise e) is a single-measure piece in 4/4 time. The treble clef staff shows a melodic line starting on G4, moving up stepwise to A4, B4, C5, D5, E5, F#5, G5, then down stepwise to F#4, E4, D4, C4, B3, A3, G3. The bass clef staff shows a corresponding bass line starting on G2, moving up stepwise to A2, B2, C3, D3, E3, F#3, G3, then down stepwise to F#2, E2, D2, C2, B1, A1, G1. The piece is marked with a 'P' (Pizzicato) at the beginning of the second measure.

f)

**Am7 D7 Gmaj7**

Exercise f) is a single-measure piece in 3/4 time. The treble clef staff shows a melodic line starting on G4, moving up stepwise to A4, B4, C5, D5, E5, F#5, G5, then down stepwise to F#4, E4, D4, C4, B3, A3, G3. The bass clef staff shows a corresponding bass line starting on G2, moving up stepwise to A2, B2, C3, D3, E3, F#3, G3, then down stepwise to F#2, E2, D2, C2, B1, A1, G1. The piece is marked with a 'P' (Pizzicato) at the beginning of the second measure.

g)

**Am7 D7**

Exercise g) is a single-measure piece in 4/4 time. The treble clef staff shows a melodic line starting on G4, moving up stepwise to A4, B4, C5, D5, E5, F#5, G5, then down stepwise to F#4, E4, D4, C4, B3, A3, G3. The bass clef staff shows a corresponding bass line starting on G2, moving up stepwise to A2, B2, C3, D3, E3, F#3, G3, then down stepwise to F#2, E2, D2, C2, B1, A1, G1. The piece is marked with a 'P' (Pizzicato) at the beginning of the second measure.

h)

**Am7 D7**

Exercise h) is a single-measure piece in 4/4 time. The treble clef staff shows a melodic line starting on G4, moving up stepwise to A4, B4, C5, D5, E5, F#5, G5, then down stepwise to F#4, E4, D4, C4, B3, A3, G3. The bass clef staff shows a corresponding bass line starting on G2, moving up stepwise to A2, B2, C3, D3, E3, F#3, G3, then down stepwise to F#2, E2, D2, C2, B1, A1, G1. The piece is marked with a 'P' (Pizzicato) at the beginning of the second measure.

i)

**Cm7 F7alt Bmaj7**

Exercise i) is a single-measure piece in 4/4 time. The treble clef staff shows a melodic line starting on G4, moving up stepwise to A4, B4, C5, D5, E5, F#5, G5, then down stepwise to F#4, E4, D4, C4, B3, A3, G3. The bass clef staff shows a corresponding bass line starting on G2, moving up stepwise to A2, B2, C3, D3, E3, F#3, G3, then down stepwise to F#2, E2, D2, C2, B1, A1, G1. The piece is marked with a 'P' (Pizzicato) at the beginning of the second measure.

j)

**F#m7** **B7alt** **Emaj7**

TAB

2 4 6 4 5 4 7 5 4 7 7 7 8 5 5 6 8 8 6 5 5 4 7 7 9 8 9 7 6 7 11 (11)

k)

**Am7** **D7alt** **Gmaj7**

TAB

12 12 14 15 12 14 12 14 15 14 12 13 12 14 14 13 15 12 13 15 15 12 13 12 11 14 14 14 12 14 14 11 14

l)

**Bm7** **E7alt**

TAB

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

**Amaj7**

TAB

0 5 4 2 2 4 1 2 4 2 5 2 4 2 2 1 4 2

m)

**Gm7** **C7alt** **Fmaj7**

TAB

10 13 10 12 13 12 13 12 10 13 11 10 13 11 13 10 12 13 12 11 10 13 11 13 11 12 11 10 13 11 11 10 13 12

n)

**Gm7** **C7alt** **Fmaj7**

Exercise n) is a 12-measure piece in 4/4 time. The first staff shows a melodic line with slurs and slides (sl.) over the notes. The second staff shows the fretboard with fingerings: T (7-8), A (7-10), B (10-11) for Gm7; T (11-10), A (9-8), B (11-10) for C7alt; and T (7-9), A (9-11), B (11-13) for Fmaj7. The piece ends with a final measure on the B string (14).

o)

**Dm7** **G7alt** **Cmaj9**

Exercise o) is a 12-measure piece in 3/4 time. The first staff shows a melodic line with slurs and slides (sl.) over the notes. The second staff shows the fretboard with fingerings: T (12-10), A (10-8), B (8-12) for Dm7; T (11-9), A (9-7), B (11-10) for G7alt; and T (7-9), A (9-10), B (10-8) for Cmaj9. The piece ends with a final measure on the B string (10).

p)

**Dm7** **G7alt** **Cmaj7**

Exercise p) is a 12-measure piece in 4/4 time. The first staff shows a melodic line with slurs and slides (sl.) over the notes. The second staff shows the fretboard with fingerings: T (10-12), A (12-14), B (10-9) for Dm7; T (13-10), A (9-11), B (11-13) for G7alt; and T (12-9), A (9-7), B (12-8) for Cmaj7. The piece ends with a final measure on the B string (9).

q)

**Dm7** **G13b9** **Cmaj9**

Exercise q) is a 12-measure piece in 4/4 time. The first staff shows a melodic line with slurs and slides (sl.) over the notes. The second staff shows the fretboard with fingerings: T (12-10), A (10-9), B (12-11) for Dm7; T (11-9), A (9-7), B (11-10) for G13b9; and T (12-10), A (10-8), B (12-9) for Cmaj9. The piece ends with a final measure on the B string (7).

r)

**Dm7** **G7b9** **Cmaj7**

Exercise r) is a 12-measure piece in 4/4 time. The first staff shows a melodic line with slurs and slides (sl.) over the notes. The second staff shows the fretboard with fingerings: T (12-14), A (14-15), B (12-15) for Dm7; T (14-15), A (15-13), B (14-12) for G7b9; and T (12-15), A (15-12), B (12-10) for Cmaj7. The piece ends with a final measure on the B string (14).





# One Measure ii V I's in Minor

Ex. 168

a)

**Dm7 $\flat$ 5** **G7alt** **Cm7**

Handwritten notation for exercise a) in 4/4 time. The treble staff shows a melodic line with slurs and accents. The bass staff shows a fingered line with slurs and accents. The key signature has two flats (B-flat and E-flat).

b)

**Dm7 $\flat$ 5** **G7 $\flat$ 9** **Cm7**

Handwritten notation for exercise b) in 4/4 time. The treble staff shows a melodic line with slurs and accents. The bass staff shows a fingered line with slurs and accents. The key signature has two flats (B-flat and E-flat).

c)

**Dm7 $\flat$ 5** **G7alt** **Cm7**

Handwritten notation for exercise c) in 4/4 time. The treble staff shows a melodic line with slurs and accents. The bass staff shows a fingered line with slurs and accents. The key signature has two flats (B-flat and E-flat).

d)

**Dm7 $\flat$ 5** **G7alt** **Cm7**

Handwritten notation for exercise d) in 4/4 time. The treble staff shows a melodic line with slurs and accents. The bass staff shows a fingered line with slurs and accents. The key signature has two flats (B-flat and E-flat).

e)

**Dm7 $\flat$ 5** **G7alt** **Cm7**

Handwritten notation for exercise e) in 3/4 time. The treble staff shows a melodic line with slurs and accents. The bass staff shows a fingered line with slurs and accents. The key signature has two flats (B-flat and E-flat).

**f)**

**Dm7 $\flat$ 5** **G7alt** **Cm7**

T  
A  
B

**g)**

**Dm7 $\flat$ 5** **G7alt** **Cm7**

T  
A  
B

**h)**

**Dm7 $\flat$ 5** **G7alt** **Cm7**

T  
A  
B

**i)**

**Gm7 $\flat$ 5** **C7alt** **Fm7**

T  
A  
B

**j)**

**Gm7 $\flat$ 5** **C7alt** **Fm7**

T  
A  
B

k)

Gm7b5

C7alt

Fm7

Exercise k) is in 3/4 time. The treble clef staff shows a melodic line with slurs, triplets, and accents (p). The bass clef staff shows a fingered bass line with fret numbers (13, 11, 10, 10, 13, 10, 11, 11, 8, 9, 11, 8, 11, 9, 9, 8, 11, 8, 9, 10, 11, 8, 10, 11, 8). The exercise is divided into three measures corresponding to the chords Gm7b5, C7alt, and Fm7.

l)

Gm7b5

C7alt

Fm7

Exercise l) is in 3/4 time. The treble clef staff shows a melodic line with slurs, triplets, and accents (p). The bass clef staff shows a fingered bass line with fret numbers (10, 11, 10, 12, 13, 11, 11, 11, 9, 10, 9, 11, 11, 11, 10, 13, 10, 13, 11, 8, 8, 8, 5). The exercise is divided into three measures corresponding to the chords Gm7b5, C7alt, and Fm7.

m)

Gm7b5

C7alt

Fm7

Exercise m) is in 4/4 time. The treble clef staff shows a melodic line with slurs, triplets, and accents (p). The bass clef staff shows a fingered bass line with fret numbers (13, 11, 10, 11, 9, 13, 14, 14, 13, 16, 16, 16, 14, 12, 10, 10, 11, 13, 10). The exercise is divided into three measures corresponding to the chords Gm7b5, C7alt, and Fm7.

n)

Gm7b5

C7alt

Fm7

Exercise n) is in 3/4 time. The treble clef staff shows a melodic line with slurs, triplets, and accents (p). The bass clef staff shows a fingered bass line with fret numbers (11, 10, 10, 12, 12, 13, 11, 11, 13, 13, 14, 11, 11, 13, 13, 10, 11, 13). The exercise is divided into three measures corresponding to the chords Gm7b5, C7alt, and Fm7.

o)

Gm7b5

Exercise o) is in 4/4 time. The treble clef staff shows a melodic line with slurs, triplets, and accents (p). The bass clef staff shows a fingered bass line with fret numbers (16, 13, 16, 13, 16, 13, 15, 13, 15, 14, 15, 14, 17, 14, 17, 18, 17, 18, 14, 15, 15). The exercise is divided into three measures corresponding to the chords Gm7b5, C7alt, and Fm7.

C7alt

Fm7

The musical score consists of two staves. The top staff is a treble clef staff with a key signature of one flat (Bb). It contains a melodic line with several triplets (marked with a '3' and a bracket) and slurs. Dynamic markings include 'p' (piano) and 'sl.' (slur). The bottom staff is a guitar tablature staff with three lines labeled T, A, and B. It shows fret numbers for each string, with some numbers connected by lines indicating slides or bends. The tablature staff is divided into two measures by a vertical line.

Tablature staff (T, A, B):

Measure 1: T (16), A (17-13), B (14). T (14), A (15-11), B (12). T (13), A (13), B (13-10). T (11), A (11), B (11-8). T (11), A (9), B (9-11). T (11), A (11), B (11).

Measure 2: T (9), A (11), B (11). T (11), A (12), B (9).

## ii<sup>7</sup> V<sup>7</sup> I<sup>maj7</sup> substitute patterns

The substitutions presented in this section may be used over the major ii V<sup>7</sup> I<sup>maj7</sup> progression. I have indicated the root relationship of the first substitute chord to the supertonic chord to better facilitate the transposition of these progressions.

### **Ex. 169**

#### ii<sup>7</sup> V<sup>7</sup> I<sup>maj7</sup> Substitues

Interval Relation	D- <sup>7</sup>		G <sup>7</sup>		C <sup>maj7</sup>
R	D <sup>maj7</sup>	F <sup>7</sup>	Ab <sup>7</sup>	B <sup>7</sup>	C <sup>maj7</sup>
R	D <sup>maj7</sup>	F <sup>7</sup>	Bb <sup>maj7</sup>	Db <sup>7</sup>	C <sup>maj7</sup>
TT ⇕	Ab <sup>maj7</sup>	B <sup>7</sup>	E <sup>maj7</sup>	G <sup>7</sup>	C <sup>maj7</sup>
R	D- <sup>7</sup>	G <sup>7</sup>	Ab- <sup>7</sup>	Db <sup>7</sup>	C <sup>maj7</sup>
R	D- <sup>7</sup>		F- <sup>7</sup>		C <sup>maj7</sup> (E- <sup>7</sup> )
R	D- <sup>7</sup>		Db- <sup>7</sup>		C <sup>maj7</sup>
M2 ↑	E <sup>7</sup>	A <sup>7</sup>	D <sup>7</sup>	G <sup>7</sup>	C <sup>maj7</sup>
M3 ↓	Bb <sup>7</sup>	Eb <sup>7</sup>	Ab <sup>7</sup>	Db <sup>7</sup>	C <sup>maj7</sup>
TT ⇕	Ab- <sup>7</sup>	Eb- <sup>7</sup>	Bb- <sup>7</sup>	F- <sup>7</sup>	C <sup>maj7</sup>
M2 ↑	E- <sup>7</sup>	B- <sup>7</sup>	Gb- <sup>7</sup>	Db- <sup>7</sup>	C <sup>maj7</sup>
R	D- <sup>7</sup>	Eb <sup>7</sup>	Ab <sup>7</sup>	Db <sup>7</sup>	C <sup>maj7</sup>
M3 ↓	Bb <sup>7</sup>	Eb <sup>7</sup>	Ab <sup>7</sup>	G <sup>7</sup>	C <sup>maj7</sup>
m3 ↓	B- <sup>7</sup>	Gb <sup>7</sup>	Db- <sup>7</sup>	Ab- <sup>7</sup>	C <sup>maj7</sup>
M2 ↑	E- <sup>7</sup>	B- <sup>7</sup>	F#- <sup>7</sup>	C#- <sup>7</sup>	C <sup>maj7</sup>

# Examples off ii<sup>7</sup>-V<sup>7</sup>-I<sup>maj7</sup> Substitutions

Ex. 170

Original: (Dm7)

(G7)

(Cmaj7)

Dm7

A<sup>b</sup>7

D<sup>b</sup>7

Cmaj7

a)

b)

c)

## **Turnarounds**

The term turnaround commonly refers to a four chord progression found in the last two measures of most AABA and blues form tunes.

Its purpose is to relieve monotony and help to aurally define the form of a tune by creating strong harmonic motion which ultimately resolves to the tonic chord. The frequent use of turnarounds in the jazz idiom requires the improviser to have a large variety of harmonic and melodic variations from which to draw upon.

# I<sup>VI7</sup>/ii<sup>7</sup> V7 Exercise

Ex. 171

B<sup>b</sup>maj7 G7alt Cm7 F7<sup>b</sup>9 Dm7 G7<sup>b</sup>9 Cm7 F7

Dm7 G7alt Cm7 F7alt Dm7 G7<sup>#</sup>5 Cm7 F7alt

Dm7 G7alt Cm7 F7alt B<sup>b</sup>maj7 G7alt

C7alt F7alt B<sup>b</sup>maj7 G7alt Cm7 Cm7 B<sup>b</sup>maj7 G7alt

C7alt F7alt Dm7<sup>b</sup>6 G7alt Cm9 F7alt B<sup>b</sup>maj7 Gm7



**Cm7** **F7#5** **B $\flat$ maj7** **G7 $\flat$ 9** **Cm7 $\flat$ 5** **F7#5** **B $\flat$ maj7** **Gm7**

Musical notation for a guitar exercise in C minor. The exercise consists of eight measures, each with a specific chord indicated above the staff. The notation includes a treble clef staff with notes and accidentals, and a bass staff with fret numbers and fingerings (P, H).

The musical score is written on a grand staff with a treble clef and a bass clef. The top staff contains a melody line with notes and fingerings (p for palm mute). The bottom staff contains fret numbers for the bass string. The sequence of chords and fret numbers is as follows:

- Chord 1:** Cm7 (Fret 11, note Bb)
- Chord 2:** F7#5 (Fret 12, note C#)
- Chord 3:** Bbmaj7 (Fret 10, note Bb)
- Chord 4:** G7b9 (Fret 13, note Gb)
- Chord 5:** Cm7 (Fret 11, note Bb)
- Chord 6:** F7b9 (Fret 12, note Cb)
- Chord 7:** Dm7 (Fret 10, note Db)
- Chord 8:** G7b9 (Fret 13, note Gb)

The fret numbers for the bass string are: 11, 12, 13, 12, 11, 10, 13, 12, 10, 13, 11, 10, 13, 12, 10, 9, 12, 12.

**C7alt**      **F7alt**      **B♭maj9**      **G7alt**      **Cm7**      **F7**      **B♭maj7**

11 13 13 9 11 11 | 13 11 10 12 8 11 | 10 11 10 13 12 13 | 10 12 13

# Turnarounds Over Four Measures

Ex. 172a

**Fmaj7** **D7alt**

**Gm7** **C7alt** **Fmaj7**

**Fmaj7** **D7alt** **Gm7**

**C7alt** **Fmaj7**

**Fmaj7** **D7alt** **Gm7**

**C7alt** H H sl. **Fmaj7**

TAB: 8 — 5 — 7 — 4 — 6 — 7 — 6 — 4 — 3

**d)** **Amaj7** **F#7alt** **Bm7**

TAB: 11-12 — 9 — 11-12 — 9 — 11-12 — 9 — 10-12 — 9 — 10-12 — 10 — 11 — 8-10 — 11 — 8-11 — 10 — 8-7 — 9-7 — 8-7 — 10 — 9 — 7 — 6-9 — 10 — 7-9 — 10 — 9-10 — 12 — 9 — 10 — 11

**E7alt** P P sl. P **Amaj7**

TAB: 9 — 12 — 11 — 9 — 10 — 12 — 9 — 12 — 10 — 11 — 10 — 8 — 8 — 11 — 10 — 8 — 7

**e)** **Bbmaj7** **G7b9** **Cm7**

TAB: 7 — 8 — 7 — 10 — 10 — 11 — 10 — 13 — 11 — 12 — 13 — 10 — 8 — 9 — 8 — 11 — 10 — 13 — 12 — 10 — 11 — 13 — 10 — 11

**F7b9** H P P **Bbmaj7**

TAB: 12 — 14 — 11 — 12 — 11 — 13 — 11 — 14 — 10 — 12 — 10 — 13

**f)** **Bbmaj7** **G7b9** **Cm7**

TAB: 10 — 8 — 7 — 10 — 10 — 9 — 8 — 7 — 6 — 8 — 7 — 5 — 4 — 6 — 5 — 3 — 6 — 5 — 8 — 7 — 10 — 9 — 8 — 8

g) **Bbmaj7** **G7b9**

The exercise is in 2/4 time, then changes to 4/4. The first staff is a treble clef with notes and accidentals. The second staff is a TAB staff with fret numbers. Chords Bbmaj7 and G7b9 are indicated. Techniques like Harmonic (H) and Pinch (P) are marked.

10 12 10 | 11 13 10 11 13 11 10 13 | 12 13 10 11 12 13 9 10

The musical score is divided into three systems, each with a treble clef staff and a tablature staff below it.

- System 1:** The treble staff begins with a **Cm7** chord. The first measure contains a chromatic scale: C4 (fret 0), C#4 (fret 1), D4 (fret 2), D#4 (fret 3), E4 (fret 4), E#4 (fret 5), F4 (fret 6), F#4 (fret 7), G4 (fret 8), G#4 (fret 9), A4 (fret 10), A#4 (fret 11), B4 (fret 12), B#4 (fret 13), C5 (fret 14). The tablature staff shows the fret numbers 0 through 14.
- System 2:** The treble staff features an **F7b9** chord. The first measure contains a chromatic scale: F4 (fret 6), F#4 (fret 7), G4 (fret 8), G#4 (fret 9), A4 (fret 10), A#4 (fret 11), B4 (fret 12), B#4 (fret 13), C5 (fret 14), C#5 (fret 15), D5 (fret 16), D#5 (fret 17), E5 (fret 18), E#5 (fret 19), F5 (fret 20), F#5 (fret 21), G5 (fret 22), G#5 (fret 23), A5 (fret 24), A#5 (fret 25), B5 (fret 26), B#5 (fret 27), C6 (fret 28), C#6 (fret 29), D6 (fret 30), D#6 (fret 31), E6 (fret 32), E#6 (fret 33), F6 (fret 34), F#6 (fret 35), G6 (fret 36), G#6 (fret 37), A6 (fret 38), A#6 (fret 39), B6 (fret 40), B#6 (fret 41), C7 (fret 42), C#7 (fret 43), D7 (fret 44), D#7 (fret 45), E7 (fret 46), E#7 (fret 47), F7 (fret 48), F#7 (fret 49), G7 (fret 50), G#7 (fret 51), A7 (fret 52), A#7 (fret 53), B7 (fret 54), B#7 (fret 55), C8 (fret 56), C#8 (fret 57), D8 (fret 58), D#8 (fret 59), E8 (fret 60), E#8 (fret 61), F8 (fret 62), F#8 (fret 63), G8 (fret 64), G#8 (fret 65), A8 (fret 66), A#8 (fret 67), B8 (fret 68), B#8 (fret 69), C9 (fret 70), C#9 (fret 71), D9 (fret 72), D#9 (fret 73), E9 (fret 74), E#9 (fret 75), F9 (fret 76), F#9 (fret 77), G9 (fret 78), G#9 (fret 79), A9 (fret 80), A#9 (fret 81), B9 (fret 82), B#9 (fret 83), C10 (fret 84), C#10 (fret 85), D10 (fret 86), D#10 (fret 87), E10 (fret 88), E#10 (fret 89), F10 (fret 90), F#10 (fret 91), G10 (fret 92), G#10 (fret 93), A10 (fret 94), A#10 (fret 95), B10 (fret 96), B#10 (fret 97), C11 (fret 98), C#11 (fret 99), D11 (fret 100), D#11 (fret 101), E11 (fret 102), E#11 (fret 103), F11 (fret 104), F#11 (fret 105), G11 (fret 106), G#11 (fret 107), A11 (fret 108), A#11 (fret 109), B11 (fret 110), B#11 (fret 111), C12 (fret 112), C#12 (fret 113), D12 (fret 114), D#12 (fret 115), E12 (fret 116), E#12 (fret 117), F12 (fret 118), F#12 (fret 119), G12 (fret 120), G#12 (fret 121), A12 (fret 122), A#12 (fret 123), B12 (fret 124), B#12 (fret 125), C13 (fret 126), C#13 (fret 127), D13 (fret 128), D#13 (fret 129), E13 (fret 130), E#13 (fret 131), F13 (fret 132), F#13 (fret 133), G13 (fret 134), G#13 (fret 135), A13 (fret 136), A#13 (fret 137), B13 (fret 138), B#13 (fret 139), C14 (fret 140), C#14 (fret 141), D14 (fret 142), D#14 (fret 143), E14 (fret 144), E#14 (fret 145), F14 (fret 146), F#14 (fret 147), G14 (fret 148), G#14 (fret 149), A14 (fret 150), A#14 (fret 151), B14 (fret 152), B#14 (fret 153), C15 (fret 154), C#15 (fret 155), D15 (fret 156), D#15 (fret 157), E15 (fret 158), E#15 (fret 159), F15 (fret 160), F#15 (fret 161), G15 (fret 162), G#15 (fret 163), A15 (fret 164), A#15 (fret 165), B15 (fret 166), B#15 (fret 167), C16 (fret 168), C#16 (fret 169), D16 (fret 170), D#16 (fret 171), E16 (fret 172), E#16 (fret 173), F16 (fret 174), F#16 (fret 175), G16 (fret 176), G#16 (fret 177), A16 (fret 178), A#16 (fret 179), B16 (fret 180), B#16 (fret 181), C17 (fret 182), C#17 (fret 183), D17 (fret 184), D#17 (fret 185), E17 (fret 186), E#17 (fret 187), F17 (fret 188), F#17 (fret 189), G17 (fret 190), G#17 (fret 191), A17 (fret 192), A#17 (fret 193), B17 (fret 194), B#17 (fret 195), C18 (fret 196), C#18 (fret 197), D18 (fret 198), D#18 (fret 199), E18 (fret 200), E#18 (fret 201), F18 (fret 202), F#18 (fret 203), G18 (fret 204), G#18 (fret 205), A18 (fret 206), A#18 (fret 207), B18 (fret 208), B#18 (fret 209), C19 (fret 210), C#19 (fret 211), D19 (fret 212), D#19 (fret 213), E19 (fret 214), E#19 (fret 215), F19 (fret 216), F#19 (fret 217), G19 (fret 218), G#19 (fret 219), A19 (fret 220), A#19 (fret 221), B19 (fret 222), B#19 (fret 223), C20 (fret 224), C#20 (fret 225), D20 (fret 226), D#20 (fret 227), E20 (fret 228), E#20 (fret 229), F20 (fret 230), F#20 (fret 231), G20 (fret 232), G#20 (fret 233), A20 (fret 234), A#20 (fret 235), B20 (fret 236), B#20 (fret 237), C21 (fret 238), C#21 (fret 239), D21 (fret 240), D#21 (fret 241), E21 (fret 242), E#21 (fret 243), F21 (fret 244), F#21 (fret 245), G21 (fret 246), G#21 (fret 247), A21 (fret 248), A#21 (fret 249), B21 (fret 250), B#21 (fret 251), C22 (fret 252), C#22 (fret 253), D22 (fret 254), D#22 (fret 255), E22 (fret 256), E#22 (fret 257), F22 (fret 258), F#22 (fret 259), G22 (fret 260), G#22 (fret 261), A22 (fret 262), A#22 (fret 263), B22 (fret 264), B#22 (fret 265), C23 (fret 266), C#23 (fret 267), D23 (fret 268), D#23 (fret 269), E23 (fret 270), E#23 (fret 271), F23 (fret 272), F#23 (fret 273), G23 (fret 274), G#23 (fret 275), A23 (fret 276), A#23 (fret 277), B23 (fret 278), B#23 (fret 279), C24 (fret 280), C#24 (fret 281), D24 (fret 282), D#24 (fret 283), E24 (fret 284), E#24 (fret 285), F24 (fret 286), F#24 (fret 287), G24 (fret 288), G#24 (fret 289), A24 (fret 290), A#24 (fret 291), B24 (fret 292), B#24 (fret 293), C25 (fret 294), C#25 (fret 295), D25 (fret 296), D#25 (fret 297), E25 (fret 298), E#25 (fret 299), F25 (fret 300), F#25 (fret 301), G25 (fret 302), G#25 (fret 303), A25 (fret 304), A#25 (fret 305), B25 (fret 306), B#25 (fret 307), C26 (fret 308), C#26 (fret 309), D26 (fret 310), D#26 (fret 311), E26 (fret 312), E#26 (fret 313), F26 (fret 314), F#26 (fret 315), G26 (fret 316), G#26 (fret 317), A26 (fret 318), A#26 (fret 319), B26 (fret 320), B#26 (fret 321), C27 (fret 322), C#27 (fret 323), D27 (fret 324), D#27 (fret 325), E27 (fret 326), E#27 (fret 327), F27 (fret 328), F#27 (fret 329), G27 (fret 330), G#27 (fret 331), A27 (fret 332), A#27 (fret 333), B27 (fret 334), B#27 (fret 335), C28 (fret 336), C#28 (fret 337), D28 (fret 338), D#28 (fret 339), E28 (fret 340), E#28 (fret 341), F28 (fret 342), F#28 (fret 343), G28 (fret 344), G#28 (fret 345), A28 (fret 346), A#28 (fret 347), B28 (fret 348), B#28 (fret 349), C29 (fret 350), C#29 (fret 351), D29 (fret 352), D#29

h)

B $\flat$ maj7

G7 $\flat$ 9

10 12 10 11 10 13 12 11 10 13 12 10 9 12 10 13 10 11

**Cm7** **F7 $\flat$ 9**

12 13 10 11 12 13 14 13 11 12 11 13 12 10 13 12 13 12 10

## Turnaround Substitutions

The following examples demonstrate the use of triadic substitutions over to turnaround progression.  
Try to come up with your own lines based on these principles.

Additional substitutions can be found in the triadic superimposition chart later in this chapter.

Ex. 173

The Triads are labeled for analysis

**a)**

[ Fmaj7 ] [ Ab ] [ Db ] [ Gb ] Fmaj7(Am7)

D7alt

Gm7(G7)

C7alt

**b)**

[ F ] [ Ab ] [ Dbadd9 ] [ C7 ]

**c)**

[ F ] [ Ab ] [ Dbadd9 ] [ Eb7 ]

**d)**

[ Fadd9 ] [ Db ] [ Ab ] [ Fdim ]

**e)**

[ F ] [ Db ] [ Ab ] [ Bb ]

Example a) shows a progression of Fmaj7(Am7), D7alt, Gm7(G7), C7alt, and Fmaj7(Am7). The guitar staff uses frets 7, 5, 6, 5, 4, 5, 6, 6, 6, 4, 6, 7, 6, 8, and 7.

Example b) shows a progression of F, Ab, Dbadd9, and C7. The guitar staff uses frets 5, 8, 7, 5, 8, 6, 5, 4, 6, 4, 6, 4, 3, 5, 5, 3, and 2.

Example c) shows a progression of F, Ab, Dbadd9, and Eb7. The guitar staff uses frets 8, 10, 10, 8, 9, 8, 10, 11, 11, 8, 10, 9, 11, 8, 8, 11, and 10.

Example d) shows a progression of Fadd9, Db, Ab, and Fdim. The guitar staff uses frets 7, 10, 10, 8, 9, 11, 10, 9, 8, 10, 11, 10, 8, 8, 8, 8, and 6.

Example e) shows a progression of F, Db, Ab, and Bb. The guitar staff uses frets 5, 8, 7, 5, 6, 6, 6, 6, 4, 6, 5, 4, 6, 8, 7, 6, and 8.

## Cycle of Fifths

The term cycle of fifths or simply cycle describes the movement of dominant seventh chords with a descending fifth or ascending fourth root pattern. The cycle may be superimposed over any progression as long as the intersecting chord's root is a P5 or m2 above its resolution chord.

### **Ex. 174**

F#7   B7   E7   A7   D7   G7   C7   **F7**   intersecting chord

4/4

F7   B $\flat$ 7   F7   F7   B $\flat$ 7

Ex. 175

a)

TAB

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

b)

D $\flat$ 7 G $\flat$ 7 B7 E7 A7 D7

TAB

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

G7 C7 F7 B $\flat$ 7 E $\flat$ 7 A $\flat$ 7 etc.

TAB

4 7 5 8 7 5 5 8 7 5 8 6 5 8 8 6 5 8 6 9 8

c)

C7 F7 B $\flat$ 7 E $\flat$ 7 etc.

TAB

9 8 8 6 5 8 6 8 7 6 6 4 3 6 4 6

d)

A $\flat$ 7 D $\flat$ 7 F $\sharp$ 7 B7 E7 A7 etc.

TAB

5 4 4 7 6 6 4 7 6 7 6 9 8 7 7 10 9 9 7 10 9

## Cycle of Fifths Exercise

Here is an extended cycle of fifths exercise  
based on the shapes from the previous page.

**Ex. 176**

**System 1:** D7, G7, C7, F7

**System 2:** B $\flat$ 7, E $\flat$ 7, A $\flat$ 7, D $\flat$ 7

**System 3:** F $\sharp$ 7, B7, E7, A7

**Ex. 177** Try to break up the rhythm in different ways.

**a)** D7, G7, C7, F7, B $\flat$ 7, E $\flat$ 7

**b)** D7, G7, C7, F7, B $\flat$ 7, E $\flat$ 7

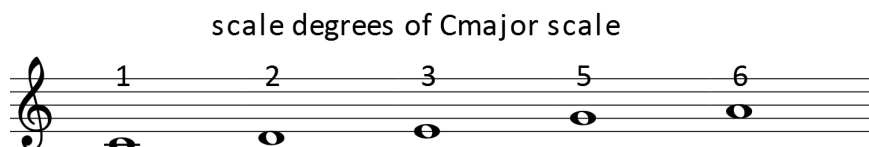
**c)** D7, G7, C7, F7, B $\flat$ 7, E $\flat$ 7



## Pentatonic Scales

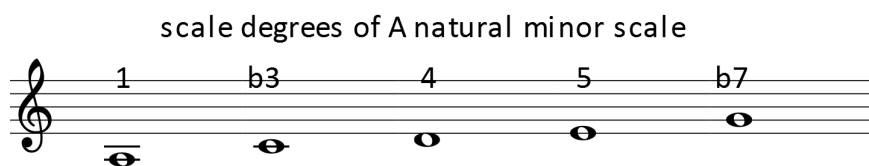
A pentatonic scale is simply a scale consisting of five notes. The two most common pentatonic scales are:

C major pentatonic:



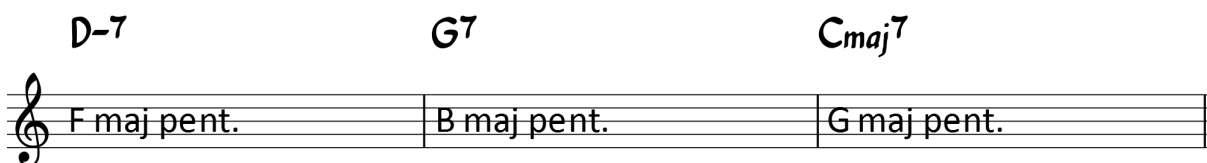
and

A minor pentatonic:

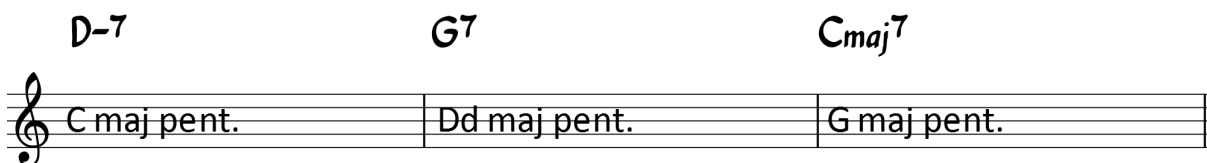


The following chart is of pentatonic scale usage over major<sup>7</sup>, min<sup>7</sup>, and Dom<sup>7</sup> chords. They should also be grouped into progressions and used over chord changes.

**Ex. 178a**



**Ex. 178b**



D-7	G7	Cmaj7
Bb maj pent.	G maj pent.	C maj pent.

D-7                      G7                      Cmaj7

G maj pent.

**Ex. 179**

D-7 G7alt  
 C Maj. Pent. ----- Db Maj. Pent. -----  
 Cmaj7 Cmaj7  
 D Maj Pent. -----

### Pentatonic Scales Over Maj<sup>(7)</sup> Chords

start major pentatonic on	chord tones					start minor pentatonic on	Maj / Min Ex. C <sup>maj7</sup>
1) Root of chord	1	2	3	5	6	6 <sup>th</sup> of chord	C/A-
2) 5 <sup>th</sup> of chord	5	6	7	9	3	3 <sup>rd</sup> of chord	G/E-
3) 9 <sup>th</sup> of chord	9	3	#11	6	7	7 <sup>th</sup> of chord	D/B-

### Pentatonic Scales Over Min<sup>(7)</sup> Chords

start major pentatonic on	chord tones					start minor pentatonic on	Maj / Min Ex. C <sup>-7</sup>
1) 3 <sup>rd</sup> of chord	b3	4	5	b7	1	Root of chord	Eb/C-
2) 4 <sup>th</sup> of chord	4	5	6	1	9	9 <sup>th</sup> of chord	F/D-
3) b6 <sup>th</sup> of chord	b6	b7	1	b3	4	4 <sup>th</sup> of chord	Ab/F-
4) b7 <sup>th</sup> of chord	b7	1	9	11	5	5 <sup>th</sup> of chord	Bb/G-

### Pentatonic Scales Over Dom<sup>7th</sup> Chords

start major pentatonic on	chord tones					start minor pentatonic on	Maj / Min Ex. C <sup>7</sup>
1) Root of chord	1	2	3	5	6	6 <sup>th</sup> of chord	C/A-
2) b3 <sup>rd</sup> of chord	1	#9	11	5	b7	Root of chord	Eb/C-
3) 3 <sup>rd</sup> of chord	b9	3	#11	#5	7	b9 <sup>th</sup> of chord	E/Db-
4) #4 <sup>th</sup> of chord	#11	#5	b7	b9	#9	#9 <sup>th</sup> of chord	F#/D#-
5) b7 <sup>th</sup> of chord	b7	1	9	11	5	5 <sup>th</sup> of chord	Bb/G-
6) 6 <sup>th</sup> of chord	13	7	b9	3	#11	#4 <sup>th</sup> of chord	A/F#-

## Or In Relation to One Pentatonic

C major Pentatonic		C	D	E	G	A	A minor pentatonic
Maj <sup>7</sup>	C <sup>maj7</sup>	1	2	3	5	6	
	F <sup>maj7</sup>	5	6	7	9	3	
	Bb <sup>maj7</sup>	9	3	#11	6	7	
Min <sup>7</sup>	A <sup>-7</sup>	b3	11	5	b7	1	
	D <sup>-7</sup>	b7	1	9	11	5	
	E <sup>-7b6</sup>	b6	b7	1	3	11	
Dom <sup>7</sup>	G <sup>-7</sup>	11	5	6	1	9	
	C <sup>7</sup>	1	9	3	5	13	
	A <sup>7</sup>	#9	11	5	b7	1	
	D <sup>7</sup>	b7	1	9	11	5	
	F# <sup>7 alt</sup>	#11	#5	b7	b9	#9	
	Ab <sup>7 alt</sup>	3	#11	#5	(7)	b9	
	Eb <sup>7 alt</sup>	13	7	b9	3	#11	

## Melodic Minor Pentatonics

By making a simple adjustment to the Major and Minor Pentatonics, we can create pentatonics from the Melodic Minor.

### Ex. 180a

C Major Pentatonic	C Major b6 Pentatonic
1      2      3      5      6	1      2      3      5      (b6)

### Ex. 180b

A Minor Pentatonic	A Minor b5 Pentatonic
1      b3      4      5      b7	1      b3      4      (b5)      b7

Other Melodic Minor Pentatonics can also be created with different combinations of 5 note patterns.

### Ex. 181a

B7#9#5 (B Altered Pentatonic)	D Minor 6(9) Pentatonic
1      #9      3      #5      b7	1      2      b3      5      6

### Ex. 181b

Bb Augmented Major Pentatonic	G Dorian b2 Pentatonic
1      3      #4      #5      7	1      b2      4      5      b7

## Triadic Superimposition

Triadic Superimposition is the melodic or harmonic stacking of triads over existing harmonies.

### **Ex. 182a**

Harmonic superimposition.

### **Ex. 182b**

Melodic superimposition.

The addition of lower chord members (3rds, 5ths, 7ths) in melodic and harmonic usage will keep the superimpositions from sounding detached from the harmony (though this may be desirable in a more modern context).

The triadic superimposition chart is broken down into the basic chord types  $\text{maj}^7$ ,  $\text{min}^7$  and  $\text{dom}^7$ , all with C as the tonic. I would suggest transposing these to different keys in order to create harmonic and melodic lines over common chord progressions.

Make a list of a few superimpositions over ii V I progressions and then try to improvise over one or more of the chords using triads.

**Ex. 182c**

	F <sup>-7</sup>	Bb <sup>7</sup>	Eb <sup>maj7</sup>
①	Ab triad	E triad	Csus <sup>4</sup>
②	F-	Bsus <sup>4</sup>	Dsus <sup>4</sup>
③	Absus <sup>4</sup> (aeolian)	G Triad	F triad

The Ab<sup>sus4</sup> triad used on the Fm<sup>7</sup> chord produces an aeolian sound where a dorian sound is normally heard. This type of interchange is called modal mixture (which will be discussed later in this chapter).

Check the scale derivation column to see if the chord function matches with the scale or not.

## Triadic Superimposition Chart (Maj<sup>7</sup>)

Chord	Superimposed Triad	Location from the root of the chord	Note functions of superimposition			Modal sound (scale derivation)
C <sup>maj7</sup>	C	Root	1	3	5	Ionian, Lydian
	C+	Root	1	3	#5	Lydian Aug. (Ionian Aug.)
	C <sup>sus4</sup>	Root	1	sus4	5	Ionian
	D	M2↑	9	#11	13	Lydian (Lydian Aug.)
	D <sup>o</sup>	M2↑	9	#11	#5	Lydian Aug.
	D <sup>sus4</sup>	M2↑	9	5	13	Ionian, Lydian
	E	M3↑	3	#5	7	Lydian Aug.
	E-	M3↑	3	5	7	Ionian, Lydian
	E+	M3↑	3	#5	1	Lydian Aug. (Ionian Aug.)
	E <sup>sus4</sup>	M3↑	3	13	7	Ionian, Lydian
	F	P4↑	sus4	13	1	Ionian
	F-	P4↑	sus4	#5	1	Ionian Aug.
	F <sup>o</sup>	P4↑	sus4	#5	7	Ionian Aug.
	F#-	+4↕	#11	13	b9	
	F# <sup>o</sup>	+4↕	#11	13	1	Lydian (Aug.)
	F# <sup>sus4</sup>	+4↕	#11	7	b9	
	G	P4↓ P5↑	5	7	9	Ionian, Lydian
	G <sup>sus4</sup>	P4↓ P5↑	5	1	9	Ionian, Lydian
	G#-	M3↓ m6↑	#5	7	#9	
	G# <sup>o</sup>	M3↓ m6↑	#5	7	9	Lydian Aug.
	A-	m3↓ M6↑	13	1	3	Ionian, Lydian
	A <sup>sus4</sup>	m3↓ M6↑	6	9	3	Ionian, Lydian
	B	m2↓ M7↑	7	#9	#11	Lydian #9
	B-	m2↓ M7↑	7	9	#11	Lydian
	B <sup>o</sup>	m2↓ M7↑	7	9	sus4	Ionian
	B <sup>loc</sup>	m2↓ M7↑	7	3	sus4	Ionian
	B <sup>sus4</sup>	m2↓ M7↑	7	3	#11	Lydian (Aug.)



## Triadic Superimposition Chart (Min<sup>7(b5)</sup>)

Chord	Superimposed Triad	Location from the root of the chord	Note functions of superimposition			Modal sound (scale derivation)
C <sup>-7(b5)</sup>	C-	Root	1	b3	5	Minor (all)
	C <sup>sus4</sup>	Root	1	4	#5	Minor (all except Locrian type)
	Db+	m2↑	b9	11	13	Dorian b2 (Dom <sup>7</sup> function)
	Db <sup>lyd</sup>	m2↑	b9	5	b6	Phrygian
	D-	M2↑	9	11	13	Dorian
	D <sup>+</sup>	M2↑	9	#11	b7	Dorian #4 (Dom <sup>7</sup> also)
	D <sup>o</sup>	M2↑	9	11	b6	Aeolian
	D <sup>sus4</sup>	M2↑	9	5	13	Dorian
	D <sup>loc</sup>	M2↑	9	5	b6	Aeolian
	Eb	m3↑	b3	5	b7	Minor (all without b5)
	Eb-	m3↑	b3	b5	b7	Locrian (all), Dorian #4
	Eb <sup>o</sup>	m3↑	b3	b5	13	Locrian nat.6, Dorian #4
	Eb <sup>+</sup>	m3↑	b3	5	7	Melodic + Harmonic Minor
	Eb <sup>sus4</sup>	m3↑	b3	b6	b7	Aeolian
	Eb <sup>lyd</sup>	m3↑	b3	13	b7	Dorian
	F	P4↑	11	13	1	Dorian
	F-	P4↑	11	b6	1	Aeolian, Phrygian
	F <sup>+</sup>	P4↑	11	13	b9	Dorian b2
	F <sup>o</sup>	P4↑	11	b6	7	Harmonic Minor
	F <sup>sus4</sup>	P4↑	11	b7	1	Minor (all without 7)
	F# <sup>o</sup>	+4↕	#4	13	1	Dorian #4, Locrian nat.6
	F# <sup>+</sup>	+4↕	b5	b7	9	Dorian #4, Locrian nat.2
	G	P4↓ P5↑	5	7	9	Melodic + Harmonic Minor
	G-	P4↓ P5↑	5	b7	9	Dorian, Aeolian
	G <sup>o</sup>	P4↓ P5↑	5	b7	b9	Phrygian
	G <sup>+</sup>	P4↓ P5↑	5	7	b3	Melodic + Harmonic Minor
	G <sup>sus4</sup>	P4↓ P5↑	5	1	9	Dorian, Aeolian
	An	M3↓ m6↑	b6	1	b3	Aeolian, (Phrygian)
	Ab-	M3↓ m6↑	b6	7	b3	Harmonic Minor
	Ab <sup>sus4</sup>	M3↓ m6↑	b6	b9	b3	Phrygian, Locrian
	Ab <sup>lyd</sup>	M3↓ m6↑	b6	9	b3	Aeolian

Chord	Superimposed Triad	Location from the root of the chord	Note functions of superimposition			Modal sound (scale derivation)
	A <sup>o</sup>	m3↓ M6↑	13	1	b3	Dorian
	A <sup>+</sup>	m3↓ M6↑	13	b9	11	Dorian b2
	A <sup>loc</sup>	m3↓ M6↑	13	9	b3	Dorian (#4)
	Bb	M2↓ m7↑	b7	9	11	Dorian, Aeolian
	Bb <sup>sus4</sup>	M2↓ m7↑	b7	b3	11	Dorian, Phrygian, Aeolian

## Triadic Superimposition Chart (Dom<sup>7</sup>)

Chord	Superimposed Triad	Location from the root of the chord	Note functions of superimposition			Modal Sound (scale derivation)
C <sup>7</sup>	C-	Root	1	3	5	Mixolydian
	C-	Root	1	#9	5	Dom.Dim.
	C <sup>o</sup>	Root	1	#9	#11	Dom.Dim., Alt.Dom.
	C <sup>+</sup>	Root	1	3	#5	Whole Tone, Alt.Dom.
	C <sup>sus4</sup>	Root	1	4	5	Mixolydian
	C <sup>lyd</sup>	Root	1	#4	5	Mixolydian #11, Dom.Dim.
	Db	m2↑	b9	11	#5	Phrygian (major)
	Db-	m2↑	b9	3	#5	Alt.Dom., Phrygian Major
	Db <sup>o</sup>	m2↑	b9	3	5	Dom.Dim.
	Db <sup>+</sup>	m2↑	b9	11	6	Dorian b2
	Db <sup>sus4</sup>	m2↑	b9	#11	#5	Alt.Dom.
	Db <sup>lyd</sup>	m2↑	b9	5	#5	Phrygian Major
	Db <sup>loc</sup>	m2↑	b9	#11	5	Dom.Dim.
	D	M2↑	9	#11	6	Mixolydian #11
	D-	M2↑	9	11	6	Mixolydian
	D <sup>o</sup>	M2↑	9	11	#5	Mixolydian b6
	D <sup>+</sup>	M2↑	9	#11	b7	Mixolydian #11, Whole Tone
	D <sup>sus4</sup>	M2↑	9	5	13	Mixolydian
	Eb	m3↑	#9	5	b7	Dom.Dim.
	Eb-	m3↑	#9	#11	b7	Dom.Dim., Alt.Dom.
	Eb <sup>o</sup>	m3↑	#9	#11	13	Dom.Dim.
	Eb <sup>sus4</sup>	m3↑	#9	#5	b7	Alt.Dom.
	E <sup>o</sup>	M3↑	3	5	b7	Mixolydian (#11)
	E <sup>+</sup>	M3↑	3	#5	1	Whole Tone, Alt.Dom.
	E <sup>loc</sup>	M3↑	3	13	b7	Mixolydian (#11)
	F	P4↑	11	6	1	Mixolydian
	F-	P4↑	11	#5	1	Phrygian major
	F <sup>+</sup>	P4↑	11	6	b9	Dorian b2 (Dom <sup>7</sup> function)
	F <sup>sus4</sup>	P4↑	11	b7	1	Mixolydian
	F#	+4↕	#11	b7	b9	Alt.Dom., Dom.Dim.
	F# <sup>o</sup>	+4↕	#11	6	1	Mixolydian #11

Chord	Superimposed Triad	Location from the root of the chord	Note functions of superimposition			Modal sound (scale derivation)
	F# <sup>+</sup>	+4↕	#11	b7	9	Mixolydian #11
	F# <sup>sus4</sup>	+4↕	#11	(7)	b9	Upper Extension
	G-	P4↓ P5↑	5	b7	9	Mixolydian
	G <sup>o</sup>	P4↓ P5↑	5	b7	b9	Dom.Dim., Phrygian Major
	Ab	M3↓ m6↑	#5	1	#9	Alt.Dom.
	Ab <sup>+</sup>	M3↓ m6↑	#5	1	3	Whole Tone, Alt.Dom.
	Ab <sup>sus4</sup>	M3↓ m6↑	#5	b9	#9	Alt.Dom.
	A	m3↓ M6↑	13	b9	3	Dom.Dim., Dorian b2
	A-	m3↓ M6↑	13	1	3	Mixolydian
	A <sup>o</sup>	m3↓ M6↑	13	1	#9	Dom.Dim.
	A <sup>+</sup>	m3↓ M6↑	13	b9	11	Dorian b2 (Dom <sup>7</sup> function)
	A <sup>sus4</sup>	m3↓ M6↑	13	9	3	Mixolydian
	A <sup>lyd</sup>	m3↓ M6↑	13	#9	3	Dom.Dim.
	Bb	M2↓ m7↑	b7	9	11	Mixolydian
	Bb-	M2↓ m7↑	b7	b9	11	Dorian b2, Phrygian Major
	Bb <sup>o</sup>	M2↓ m7↑	b7	b9	3	Dom.Dim., Alt.Dom.
	Bb <sup>+</sup>	M2↓ m7↑	b7	b9	#11	Dom.Dim., Alt.Dom.
	Bb <sup>lyd</sup>	M2↓ m7↑	b7	3	11	Mixolydian
	Bb <sup>loc</sup>	M2↓ m7↑	b7	#9	3	Dom.Dim., Alt.Dom.

# Triadic Improvisation

Ex. 183a

G7(b9)

4 3 3 4 6 6 7 8 8 7 6 9 7 8 6 6 6 9 9 10 11 11 9 10

G Db Eb E G Db E Bb G

Ex. 183b

G7(b9)

9 9 9 12 11 10 12 6 6 6 9 8 6 9 7 9 9 9 8 12 10 11 12 12 9 10 9 11

E Bb Db G E Bb G Db

Ex. 183c

G7alt

11 11 11 10 13 13 12 13 11 13 13 11 12 13 11 13 9 13 13 11 11 11 14 13 13 11 11 13

Db Eb Absus4 Ebadd9 Ebsus4 Absus4

Ex. 183d

G7alt

4 4 6 6 6 6 8 9 6 8 10 6 11 6 9 8 6

Absus4 Absus4 Bbsus4 Ebsus4

Ex. 183e This one uses some added note arpeggios.

G7alt

9 7 9 6 6 6 8 8 8 8 9 9 11 9 8 8 9 11 10 9 8 11 11 8 8 10 11

Abm Db Eb Dbadd9 Eb sus4 Eb\* Eb sus4 Dbadd9

## Seventh Chord Superimposition

Seventh chord superimposition works the same way as triadic superimposition.  
We are just stacking a seventh chord instead of triads.

### **Ex. 184a** Melodic usage

**Am7** **D7alt** **Gmaj7**

Em7 Cmaj7 Gbmaj7(b5)

### **Ex. 184b** Harmonic usage

**Am7** **D7alt** **Gmaj7**

Cmaj7 Am7 Cmaj7 Cmaj7 Ab7 Bbsus4(9) Cm7b5 Bm7

Once again, try to group these together in progressions to facilitate the contextual integration of this concept.

## Seventh Chord Superimposition Chart (Maj<sup>7</sup>)

Chord	Superimposed seventh chord	Location from the root of the chord	Note functions of superimposition				Modal sound (scale derivation)
C <sup>maj7</sup>	D <sup>6</sup>	M2 ↑	9	#11	13	7	Lydian
	D <sup>7</sup>	M2 ↑	9	#11	13	1	Lydian
	D <sup>7/sus4</sup>	M2 ↑	9	5	13	1	Ionian
	E <sup>-7</sup>	M3 ↑	3	5	7	9	Ionian
	E <sup>7/#5</sup>	M3 ↑	3	#5	1	9	Lydian
	E <sup>7/sus4</sup>	M3 ↑	3	13	7	9	Ionian
	F# <sup>-7b5</sup>	+4 ↕	#11	13	1	3	Lydian
	G <sup>6</sup>	P4 ↓ P5 ↑	5	7	9	3	Ionian
	G <sup>maj7</sup>	P4 ↓ P5 ↑	5	7	9	#11	Lydian
	G <sup>maj7/sus4</sup>	P4 ↓ P5 ↑	5	1	9	#11	Lydian
	G# <sup>-7b5</sup>	M3 ↓ m6 ↑	#5	7	9	#11	Lydian Augmented
	A <sup>-6</sup>	m3 ↓ M6 ↑	13	1	3	#11	Lydian
	A <sup>-7</sup>	m3 ↓ M6 ↑	13	1	3	5	Ionian
	A <sup>-maj7</sup>	m3 ↓ M6 ↑	13	1	3	#5	Lydian Augmented
	A <sup>maj7/sus4</sup>	m3 ↓ M6 ↑	13	9	3	#5	Lydian Augmented
	A <sup>7/sus4</sup>	m3 ↓ M6 ↑	13	9	3	5	Ionian
	B <sup>-6</sup>	m2 ↓ M7 ↑	7	9	#11	#5	Lydian Augmented
	B <sup>-7</sup>	m2 ↓ M7 ↑	7	9	#11	13	Lydian
	B <sup>7/sus4</sup>	m2 ↓ M7 ↑	7	3	#11	13	Lydian

## Seventh Chord Superimposition Chart (Min<sup>7</sup> (b5)(<sup>b</sup>7))

Chord	Superimposed seventh chord	Location from the root of the chord	Note functions of superimposition				Modal sound (scale derivation)
C <sup>-7</sup> (b5)( <sup>b</sup> 7)	C <sup>-6</sup>	Root	1	b3	5	6	Dorian Types
	C <sup>-maj7</sup>	Root	1	b3	5	7	Melodic + Harmonic Minor
	C <sup>-7b5</sup>	Root	1	b3	b5	b7	Locrian Types
	C <sup>7/sus4</sup>	Root	1	4	5	b7	Dorian, Aeolian, Phrygian
	C <sup>-maj7/#5</sup>	Root	1	b3	#5	7	Harmonic Minor
	C <sup>-7/#5</sup>	Root	1	b3	#5	b7	Aeolian, Phrygian
	D <sup>b</sup> <sup>maj7</sup>	m2↑	b2	11	b6	1	Phrygian
	D <sup>b</sup> <sup>maj7/b5</sup>	m2↑	b2	11	5	1	Phrygian
	D <sup>b</sup> <sup>maj7/#5</sup>	m2↑	b2	11	6	1	Dorian b2
	D <sup>b</sup> <sup>maj7/sus4</sup>	m2↑	b2	b5	b6	1	Locrian
	D <sup>b</sup> <sup>lyd/maj7</sup>	m2↑	b2	5	b6	1	Phrygian
	D <sup>-7</sup>	M2↑	9	11	6	1	Dorian
	D <sup>-7/b5</sup>	M2↑	9	11	b6	1	Aeolian
	D <sup>7/#5</sup>	M2↑	9	b5	b7	1	Locrian
	D <sup>7/b5</sup>	M2↑	9	b5	b6	1	Locrian nat.2
	E <sup>b</sup> <sup>MA6</sup>	m3↑	b3	5	b7	1	Dorian, Aeolian, Phrygian
	E <sup>b</sup> <sup>maj7</sup>	m3↑	b3	5	b7	9	Dorian, Aeolian
	E <sup>b</sup> <sup>7</sup>	m3↑	b3	5	b7	b2	Phrygian
	E <sup>b</sup> <sup>-7</sup>	m3↑	b3	b5	b7	b2	Locrian
	E <sup>b</sup> <sup>maj7/b5</sup>	m3↑	b3	5	6	9	Dorian
	E <sup>b</sup> <sup>maj7/#5</sup>	m3↑	b3	5	7	9	Melodic + Harmonic Minor
	E <sup>b</sup> <sup>lyd/maj7</sup>	m3↑	b3	6	b7	9	Dorian
	F <sup>MA6</sup>	P4↑	11	6	1	9	Dorian, Melodic Minor
	F <sup>-7</sup>	P4↑	11	b6	1	b3	Aeolian, Phrygian
	F <sup>-6</sup>	P4↑	11	b6	1	9	Aeolian
	F <sup>7/sus4</sup>	P4↑	11	b7	1	b3	Dorian, Aeolian, Phrygian
	F <sup>lyd/dom7</sup>	P4↑	11	7	1	b3	Melodic + Harmonic Minor
	F <sup>#</sup> <sup>MA6</sup>	+4↕	b5	b7	b2	b3	Locrian
	F <sup>#</sup> <sup>maj7</sup>	+4↕	b5	b7	b2	11	Locrian
	F <sup>#</sup> <sup>maj7/b5</sup>	+4↕	b5	b7	1	11	Locrian
	F <sup>#</sup> <sup>maj7/#5</sup>	+4↕	b5	b7	2	11	Locrian nat. 2



Chord	Superimposed seventh chord	Location from the root of the chord	Note functions of superimposition				Modal sound (scale derivation)
	F# <sup>lyd/maj7</sup>	+4↕	b5	1	b2	11	Locrian
	G <sup>7</sup>	P4↓ P5↑	5	7	2	11	Melodic + Harmonic Minor
	G- <sup>7</sup>	P4↓ P5↑	5	b7	2	11	Dorian, Aeolian
	G- <sup>7b5</sup>	P4↓ P5↑	5	b7	b2	11	Phrygian, Dorian b2
	G <sup>7/b5</sup>	P4↓ P5↑	5	7	2	11	Melodic + Harmonic Minor
	Ab <sup>MA6</sup>	M3↓ m6↑	b6	1	b3	11	Aeolian, Phrygian
	Ab <sup>maj7</sup>	M3↓ m6↑	b6	1	b3	5	Aeolian, Phrygian
	Ab <sup>7</sup>	M3↓ m6↑	b6	1	b3	b5	Locrian
	Ab <sup>7/b5</sup>	M3↓ m6↑	b6	1	2	b5	Locrian nat. 2
	Ab <sup>maj7/sus4</sup>	M3↓ m6↑	b6	b2	b3	5	Phrygian
	Ab <sup>lyd/maj7</sup>	M3↓ m6↑	b6	2	b3	5	Aeolian
	Ab <sup>lyd/dom7</sup>	M3↓ m6↑	b6	2	b3	b5	Dorian #4
	A- <sup>7/b5</sup>	m3↓ M6↑	6	1	b3	5	Dorian
	A <sup>7/sus4/b5</sup>	m3↓ M6↑	6	2	b3	5	Dorian
	Bb <sup>MA6</sup>	M2↓ m7↑	b7	2	11	5	Dorian, Aeolian
	Bb <sup>maj7</sup>	M2↓ m7↑	b7	2	11	6	Dorian
	Bb- <sup>7</sup>	M2↓ m7↑	b7	b2	11	b6	Phrygian
	Bb- <sup>6</sup>	M2↓ m7↑	b7	b2	11	5	Phrygian
	Bb <sup>7/#5</sup>	M2↓ m7↑	b7	2	b5	b6	Locrian nat. 2
	Bb <sup>maj7/sus4</sup>	M2↓ m7↑	b7	b3	11	6	Dorian
	Bb <sup>7/sus4</sup>	M2↓ m7↑	b7	b3	11	b6	Aeolian, Phrygian
	B <sup>7/#5</sup>	m2↓ M7↑	7	b3	5	6	Melodic Minor

## Seventh Chord Superimposition Chart (Dom<sup>7</sup>)

Chord	Superimposed seventh chord	Location from the root of the chord	Note functions of superimposition				Modal sound (scale derivation)
C <sup>7</sup>	C <sup>6</sup>	Root	1	3	5	6	Mixolydian
	C <sup>7</sup>	Root	1	3	5	b7	Mixolydian
	C <sup>+7</sup>	Root	1	3	#5	b7	Whole Tone, Alt. Dom.
	C <sup>7/b5</sup>	Root	1	3	b5	b7	Whole Tone, Alt. Dom., Mix.#11
	C <sup>7/sus4</sup>	Root	1	4	5	b7	Mixolydian
	C <sup>lyd/b7</sup>	Root	1	#4	5	b7	Mixolydian #11
	Db <sup>6</sup>	m2↑	b9	11	#5	b7	Phrygian Major
	Db <sup>maj7</sup>	m2↑	b9	11	#5	1	Phrygian Major
	Db <sup>-6</sup>	m2↑	b9	3	#5	b7	Alt. Dom., Phrygian Major
	Db <sup>-maj7</sup>	m2↑	b9	3	#5	1	Alt. Dom., Phrygian Major
	Db <sup>o7</sup>	m2↑	b9	3	5	b7	Dom. Dim.
	Db <sup>omaj7</sup>	m2↑	b9	3	5	1	Dom. Dim.
	Db <sup>maj7/b5</sup>	m2↑	b9	11	5	1	Phrygian Major
	Db <sup>maj7/sus4</sup>	m2↑	b9	b5	#5	1	Alt. Dom.,
	Db <sup>lyd/maj7</sup>	m2↑	b9	5	#5	1	Phrygian Major
	Db <sup>-maj7/#5</sup>	m2↑	b9	3	13	1	Dom. Dim.
	D <sup>7</sup>	M2↑	9	#11	13	1	Mixolydian #11
	D <sup>-7</sup>	M2↑	9	11	13	1	Mixolydian
	D <sup>7/#5</sup>	M2↑	9	#11	13	1	Mixolydian #11
	D <sup>7/b5</sup>	M2↑	9	#11	#5	1	Whole Tone
	D <sup>7/sus4</sup>	M2↑	9	5	13	1	Mixolydian
	Eb <sup>7</sup>	m3↑	#9	5	b7	b9	Dom. Dim.
	Eb <sup>-7</sup>	m3↑	#9	#11	b7	b9	Dom. Dim., Alt. Dom.,
	Eb <sup>-6</sup>	m3↑	#9	#11	b7	1	Dom. Dim., Alt. Dom.,
	Eb <sup>-7/b5</sup>	m3↑	#9	#11	13	b9	Dom. Dim.
	Eb <sup>7/b5</sup>	m3↑	#9	5	13	b9	Dom. Dim.
	Eb <sup>7/sus4</sup>	m3↑	#9	#5	b7	b9	Alt. Dom.
	Eb <sup>lyd/b7</sup>	m3↑	#9	13	b7	b9	Dom. Dim.
	E <sup>-7b5</sup>	M3↑	3	5	b7	9	Mixolydian
	E <sup>o7</sup>	M3↑	3	5	b7	b9	Dom. Dim

Chord	Superimposed seventh chord	Location from the root of the chord	Note functions of superimposition				Modal sound (scale derivation)
	E <sup>omaj7</sup>	M3↑	3	5	b7	#9	Dom. Dim
	E <sup>maj7/#5</sup>	M3↑	3	#5	1	#9	Alt. Dom.
	E <sup>maj7/b5</sup>	M3↑	3	#5	b7	#9	Alt. Dom.
	E <sup>7b5</sup>	M3↑	3	#5	b7	9	Whole Tone
	E <sup>-maj7/#5</sup>	M3↑	3	5	1	#9	Dom. Dim
	F <sup>maj7/sus4</sup>	P4↑	11	b7	1	3	Mixolydian
	F <sup>#6</sup>	+4↕	#11	b7	b9	#9	Dom. Dim, Alt. Dom.
	F <sup>#7</sup>	+4↕	#11	b7	b9	3	Dom. Dim, Alt. Dom.
	F <sup>#-7</sup>	+4↕	#11	13	b9	#9	Dom. Dim
	F <sup>#-6</sup>	+4↕	#11	13	b9	#9	Dom. Dim
	F <sup>#-7b5</sup>	+4↕	#11	13	1	3	Dom. Dim
	F <sup>#7#5</sup>	+4↕	#11	b7	4	3	Mix. #11, Whole Tone
	F <sup>#7b5</sup>	+4↕	#11	b7	1	3	Mix. #11, Whole Tone
	F <sup>#lydb7</sup>	+4↕	#11	1	b9	3	Dom. Dim, Alt. Dom.
	G <sup>-7</sup>	P4↓ P5↑	5	b7	9	11	Mixolydian
	G <sup>-6</sup>	P4↓ P5↑	5	b7	9	3	Mixolydian
	G <sup>-maj7</sup>	P4↓ P5↑	5	b7	9	#11	Mixolydian #11
	G <sup>-7b5</sup>	P4↓ P5↑	5	b7	b9	11	Phrygian Major
	G <sup>o7</sup>	P4↓ P5↑	5	b7	b9	3	Dom. Dim
	G <sup>omaj7</sup>	P4↓ P5↑	5	b7	b9	#11	Dom. Dim
	G <sup>maj7/sus4</sup>	P4↓ P5↑	5	1	9	#11	Mixolydian #11
	G <sup>7sus4</sup>	P4↓ P5↑	5	1	9	11	Mixolydian
	G <sup>-maj7/#5</sup>	P4↓ P5↑	5	b7	#9	#11	Dom. Dim
	Ab <sup>7</sup>	M3↓ m6↑	#5	1	#9	#11	Alt. Dom.
	Ab <sup>7#5</sup>	M3↓ m6↑	#5	1	3	#11	Whole Tone
	Ab <sup>7sus4</sup>	M3↓ m6↑	#5	b9	#9	#11	Alt. Dom.
	A <sup>6</sup>	m3↓ M6↑	13	b9	3	#11	Dom. Dim
	A <sup>7</sup>	m3↓ M6↑	13	b9	3	5	Dom. Dim
	A <sup>-7</sup>	m3↓ M6↑	13	1	3	5	Mixolydian
	A <sup>-6</sup>	m3↓ M6↑	13	1	3	#11	Mixolydian #11
	A <sup>-7b5</sup>	m3↓ M6↑	13	1	#9	5	Dom. Dim
	A <sup>7sus4</sup>	m3↓ M6↑	13	9	3	5	Mixolydian
	A <sup>lyd/b7</sup>	m3↓ M6↑	13	#9	3	5	Dom. Dim
	Bb <sup>6</sup>	M2↓ m7↑	b7	9	11	5	Mixolydian

Chord	Superimposed seventh chord	Location from the root of the chord	Note functions of superimposition				Modal sound (scale derivation)
	Bb <sup>maj7</sup>	M2↓ m7↑	b7	9	11	13	Mixolydian
	Bb <sup>-7</sup>	M2↓ m7↑	b7	b9	11	#5	Phrygian Major
	Bb <sup>-6</sup>	M2↓ m7↑	b7	b9	11	5	Phrygian Major
	Bb <sup>-7b5</sup>	M2↓ m7↑	b7	b9	3	#5	Alt. Dom.
	Bb <sup>o7</sup>	M2↓ m7↑	b7	b9	3	5	Dom. Dim
	Bb <sup>omaj7</sup>	M2↓ m7↑	b7	b9	3	13	Dom. Dim
	Bb <sup>maj7/#5</sup>	M2↓ m7↑	b7	9	#11	13	Mixolydian #11
	Bb <sup>7/#5</sup>	M2↓ m7↑	b7	9	#11	#5	Whole Tone
	Bb <sup>maj7/b5</sup>	M2↓ m7↑	b7	9	3	13	Mixolydian
	Bb <sup>7b5</sup>	M2↓ m7↑	b7	9	3	#5	Whole Tone
	Bb <sup>lyd/maj7</sup>	M2↓ m7↑	b7	3	11	13	Mixolydian
	Bb <sup>-maj7/#5</sup>	M2↓ m7↑	b7	b9	#11	13	Dom. Dim

### Also From The Dominant Diminished Scale

Chord	Superimposed seventh chord	Location from the root of the chord	Note functions of superimposition				Modal sound (scale derivation)
	C <sup>o7</sup>	Root	1	#9	b5	13	Dom. Dim
	Eb <sup>o7</sup>	m3↑	#9	b5	13	1	Dom. Dim
	F# <sup>o7</sup>	+4↕	b5	13	1	#9	Dom. Dim
	A <sup>o7</sup>	m3↓ M6↑	13	1	#9	b5	Dom. Dim

## Hybrid Arpeggios

Hybrid Arpeggios do not fall into triadic or seventh chord categories but contain pieces of each. Added note chords are types of hybrid arpeggios.

*Ex. 185a-c*

1      9      3      5 <b>Cadd9</b>	1      3      #11      5 <b>Cadd#11</b>	1      3      4      5 <b>Csus4(3)</b>
--	--	---

<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); margin-right: 5px;">T A B</div> <div style="flex-grow: 1;"> <div style="border-bottom: 1px solid black; height: 10px; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; height: 10px; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; height: 10px; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; height: 10px; margin-bottom: 2px;"></div> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <span>3</span><span>5</span><span>2</span><span>5</span> </div>	<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); margin-right: 5px;">T A B</div> <div style="flex-grow: 1;"> <div style="border-bottom: 1px solid black; height: 10px; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; height: 10px; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; height: 10px; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; height: 10px; margin-bottom: 2px;"></div> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <span>3</span><span>2</span><span>4</span><span>5</span> </div>	<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); margin-right: 5px;">T A B</div> <div style="flex-grow: 1;"> <div style="border-bottom: 1px solid black; height: 10px; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; height: 10px; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; height: 10px; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; height: 10px; margin-bottom: 2px;"></div> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <span>3</span><span>2</span><span>3</span><span>5</span> </div>
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This next chart contains several possible hybrid arpeggios over each of the four chord types.

## Hybrid Arpeggio Chart (Maj<sup>7</sup>)

Chord	Hybrid Structure	Note functions of superimposition				Modal sound (scale derivation)	
C <sup>maj7</sup>	C <sup>add9</sup>	1	9	3	5	Ionian, Lydian	
	G <sup>add9</sup>	5	6	7	9	Ionian, Lydian	
	D <sup>add9</sup>	9	3	#11	13	Lydian (Augmented)	
	E <sup>add9</sup>	3	#11	#5	7	Lydian Augmented	
	C <sup>add11</sup>	1	3	4	5	Ionian	
	D <sup>add11</sup>	9	#11	5	13	Lydian	
	E <sup>add11</sup>	3	#5	13	7	Lydian Augmented	
	G <sup>add11</sup>	5	7	1	9	Ionian, Lydian	
	C <sup>add#11</sup>	1	3	#11	5	Lydian	
	D <sup>add#11</sup>	9	#11	5	13	Lydian	
	C <sup>add9/11</sup>	1	9	3	11	5	Ionian
	G <sup>add9/11</sup>	3	13	7	1	9	Ionian, Lydian
	D <sup>add9/11</sup>	9	3	#11	5	13	Lydian
	C <sup>add9/#11</sup>	1	9	3	#11	5	Lydian
	D <sup>add9/#11</sup>	9	3	#11	5	13	Lydian
	A <sup>-add9</sup>	6	7	1	3	Ionian, Lydian	
	B <sup>-add11</sup>	7	9	3	#11	Lydian	
	E <sup>-add9</sup>	3	#11	5	7	Lydian	
	E <sup>-add9/11</sup>	3	#11	5	13	7	Lydian
	A <sup>-add9/11</sup>	6	7	1	9	3	Ionian, Lydian

## Hybrid Arpeggio Chart (Minor<sup>7</sup>)

Chord	Hybrid Structure	Note functions of superimposition				Modal sound (scale derivation)	
C <sup>-7</sup>	E <sup>b</sup> <sub>add9</sub>	b3	11	5	b7	Dorian, Aeolian, Phrygian	
	F <sup>add9</sup>	11	5	13	1	Dorian	
	G <sup>add9</sup>	5	13	7	9	Melodic Minor	
	B <sup>b</sup> <sub>add9</sub>	b7	1	9	11	Dorian, Aeolian	
	D <sup>b</sup> <sub>add9</sub>	b9	b3	11	b6	Phrygian	
	E <sup>b</sup> <sub>add11</sub>	b3	5	b6	b7	Aeolian	
	F <sup>add11</sup>	11	13	b7	1	Dorian	
	B <sup>b</sup> <sub>add11</sub>	b7	9	b3	11	Dorian, Aeolian	
	G <sup>add11</sup>	5	7	1	9	Melodic Minor	
	E <sup>b</sup> <sub>add#11</sub>	b3	5	13	b7	Dorian (b2)	
	F <sup>add#11</sup>	11	13	7	1	Melodic Minor	
	D <sup>b</sup> <sub>add#11</sub>	b9	11	5	b6	Phrygian	
	D <sup>b</sup> <sub>add9/#11</sub>	b9	b3	11	5	b6	Phrygian
	E <sup>b</sup> <sub>add9/#11</sub>	b3	11	5	13	b7	Dorian
	F <sup>add9/#11</sup>	11	5	13	7	1	Melodic Minor
	C <sup>-</sup> <sub>add9</sub>	1	9	b3	5	Dorian, Aeolian	
	G <sup>-</sup> <sub>add9</sub>	5	13	b7	9	Dorian	
	F <sup>-</sup> <sub>add9</sub>	11	5	b6	1	Aeolian	
	C <sup>-</sup> <sub>add9/11</sub>	1	9	b3	11	5	Dorian, Aeolian
	F <sup>-</sup> <sub>add9/11</sub>	11	5	b6	b7	1	Aeolian
	G <sup>-</sup> <sub>add9/11</sub>	5	13	b7	1	9	Dorian

## Hybrid Arpeggio Chart (Min<sup>7b5</sup>)

Chord	Hybrid Structure	Note functions of superimposition					Modal sound (scale derivation)
C <sup>-7b5</sup>	Eb <sup>-add9</sup>	b3	11	b5	b7		Locrian
	F <sup>#add9</sup>	b5	b6	b7	b9		Locrian
	F <sup>#add#11</sup>	b5	b7	1	b9		Locrian
	F <sup>#add9/#11</sup>	b5	b6	b7	1	b9	Locrian
	Ab <sup>add11</sup>	b6	1	b9	b3		Locrian
	Eb <sup>-add9/11</sup>	b3	11	b5	b6	b7	Locrian (nat. 2)
	Ab <sup>add9/11</sup>	b6	b7	1	b9	b3	Locrian



## Hybrid Arpeggio Chart (Dom<sup>7</sup>)

hord	Hybrid Structure	Note functions of superimposition					Modal sound (scale derivation)
C <sup>7</sup>	C <sup>add9</sup>	1	9	3	5		Mixolydian
	C <sup>add11</sup>	1	3	11	5		Mixolydian
	C <sup>add#11</sup>	1	3	#11	5		Mixolydian #11
	D <sup>add9</sup>	9	3	#11	13		Mixolydian #11
	D <sup>add11</sup>	9	3	#11	5	13	Mixolydian #11
	D <sup>add#11</sup>	9	#11	#5	13		Mixolydian b6
	F <sup>#add9</sup>	#11	#5	b7	b9		Altered Dominant
	F <sup>#add#11</sup>	#11	b7	1	b9		Altered Dominant
	G <sup>#add9</sup>	#5	b7	1	#9		Altered Dominant
	G <sup>#add11</sup>	#5	b9	1	#9		Altered Dominant
	A <sup>add#11</sup>	13	b9	ä9	3		Dominant Diminished
	Bb <sup>add9</sup>	b7	1	9	11		Mixolydian
	Bb <sup>add#11</sup>	b7	9	3	11		Mixolydian
	Db <sup>add9</sup>	b9	#9	3	#5		Altered Dominant
	G <sup>-add9</sup>	5	13	b7	9		Mixolydian
	C <sup>add9/11</sup>	1	9	3	11	5	Mixolydian
	C <sup>add9/#11</sup>	1	9	3	#11	5	Mixolydian #11
	Db <sup>add9/11</sup>	b9	#9	3	#11	#5	Altered Dominant
	D <sup>add9/11</sup>	9	3	#11	5	13	Mixolydian #11
	D <sup>add9/#11</sup>	9	3	#11	#5	13	Mixolydian b6
	F <sup>#add9/#11</sup>	#11	#5	b7	1	b9	Altered Dominant
	G <sup>-add9/11</sup>	5	13	b7	1	9	Mixolydian
	G <sup>#add9/11</sup>	#5	b7	1	b9	#9	Altered Dominant
	Bb <sup>add9/#11</sup>	b7	1	9	3	11	Mixolydian

## Playing Over Unusual Resolutions

### ① Dim7 chords resolving down by ½ step to minor

Tunes found in: All the Things You Are  
Wave  
Triste  
Night and Day  
Body and Soul  
Here's That Rainy Day

The resolution tendencies are as follows:

## Scales

**B<sup>07</sup>** (tonic dim.)



**B $\flat$ <sub>m</sub><sup>7</sup> (dorian)**



**Ex. 186a**

½ step resolutions

The image shows two musical staves. The top staff is for **B<sup>b</sup>7 (Tonic Dim.)** and the bottom staff is for **B<sup>b</sup>-7 (Dorian)**. Both staves show the notes of the chords: 1, 9, b3, 11, and b13. The notes are written on a five-line staff with a treble clef. The notes are: 1 (F), 9 (A), b3 (D), 11 (C), and b13 (E).

**Ex. 186b**

whole step resolution

Diagram illustrating the Bb7 chord voicing on a piano keyboard. The treble clef shows notes Bb, D, F, and Ab, labeled with chord symbols Bb7, b5, Maj7, b13, bb7, and Maj9. The bass clef shows notes Bb, D, F, and Ab, labeled with chord symbols Bb-7, 11, 5, 5, 1, Weak, and 11.

**Ex. 186c**

**Bdim7** 1/2 step resolution

Musical notation for Ex. 186c. The top staff is in 4/4 time, showing a melodic line with a half step (H) and a whole step (P) resolution. The bottom staff shows the fretboard with fingerings: 9, 6, 7, 8, 6, 9, 7, 10, 11. The final chord is Bbm7, indicated by a flat on the B and a natural on the m7.

**Ex. 186d**

**Bdim7** Whole step resolution

**Bbm7**

Musical notation for Ex. 186d. The top staff shows a melodic line with a whole step (H) resolution. The bottom staff shows the fretboard with fingerings: 3, 6, 4, 3, 5, 4, 3, 5, (5), 6, 6, 5, 8, 8. The final chord is Bbm7, indicated by a flat on the B and a natural on the m7.

## ② Dom7 chords resolving up by whole step

Tunes found in: Just Friends  
Yardbird Suite  
There Will Never Be Another You  
Donna Lee  
Cherokee  
Stella By Starlight

Scales

**E<sup>b</sup>7** (mixolydian #11)



**Fmaj7** (ionian, lydian)



### Ex. 187a

½ step resolutions

**E<sup>b</sup>7** 1 9 #11 5 13 b7

**Fmaj7** 13 7 7 11 #11 #11 #5 13

Weak

### Ex. 187b

whole step resolutions

**E<sup>b</sup>7** 1 9 3 #11 5 13 b7

**Fmaj7** 1 9 1 3 9 #11 5 13 #5

**Ex. 187c**

**Ex. 187d**

You will find the whole step resolutions are not as strong as half-step ones. The harmonic tendencies of Eb<sup>7</sup> to F<sup>maj7</sup> are the same for the chords.

**Ex. 188**

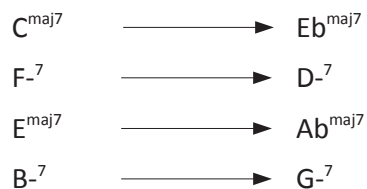
- |   |                   |   |                                     |
|---|-------------------|---|-------------------------------------|
| 1 | E <sup>b7</sup>   | → | F <sup>MAJ7</sup>                   |
| 2 | A <sup>7ALT</sup> | → | D <sup>m7</sup>                     |
| 3 | A <sup>7ALT</sup> | → | B <sup>bMAJ7</sup>                  |
| 4 | E <sup>b7</sup>   | → | B <sup>bMAJ7</sup>                  |
| 5 | A <sup>7ALT</sup> | → | F <sup>MAJ7</sup> OR F <sup>7</sup> |
| 6 | E <sup>b7</sup>   | → | A <sup>m7</sup>                     |
| 7 | A <sup>7ALT</sup> | → | A <sup>m7</sup>                     |

Further explanation of this concept can be found in the harmony chapter.

## Other Resolutions To Know

1. Third related chords (similar types)

### Ex. 189



2. ii V's moving up and down by half steps

### Ex. 190a

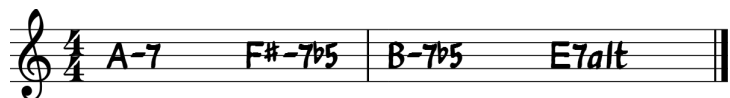


### Ex. 190b



3. i<sup>7</sup>    vi<sup>7b5</sup>    ii<sup>7b5</sup>    V<sup>7alt</sup>

### Ex. 191



Many of the other resolution possibilities are covered in the harmony chapter.

**Remember:** Try to take advantage of half step resolutions because they make the transitions much smoother.

## Melodic Ideas

A small collection of scale tones can bear a large amount of melodic material through the use of octave displacement.

A four note order such as G C D E can become this.

**Ex. 192 & 193**

Try this over C, Csus4, Bbmaj7, F#7alt, Em7b6. Odd number note ideas metrically overlap in the measure.

The image shows a musical exercise for guitar. The top staff is a treble clef with notes and slurs. The bottom staff is a guitar TAB with fret numbers and slurs. Brackets below the TAB indicate '5 Note Grouping'.

**Staff 1 (Treble Clef):**

- Measure 1: Notes G4, A4, B4, C5, D5. Slur from G4 to D5. Label 'H' above G4.
- Measure 2: Notes E5, F5, G5, A5, B5. Slur from E5 to B5. Label 'P' above E5.
- Measure 3: Notes C6, D6, E6, F6, G6. Slur from C6 to G6. Label 'P' above C6.
- Measure 4: Notes A6, B6, C7, D7, E7. Slur from A6 to E7. Label 'H' above A6.

**Staff 2 (Guitar TAB):**

- Measure 1: Frets 3, 4, 5, 7, 4. Slur from 3 to 4. Label 'H' below 3.
- Measure 2: Frets 5, 7, 4, 5, 3. Slur from 5 to 3. Label 'P' below 5.
- Measure 3: Frets 7, 5, 8, 7, 8. Slur from 7 to 8. Label 'P' below 7.
- Measure 4: Frets 5, 7, 8, 7, 8. Slur from 5 to 8. Label 'H' below 5.

**Brackets:**

- Bracket 1: Under frets 3, 4, 5, 7, 4. Label '5 Note Grouping'.
- Bracket 2: Under frets 5, 7, 4, 5, 3. Label '5 Note Grouping'.
- Bracket 3: Under frets 7, 5, 8, 7, 8. Label '5 Note Grouping'.

Try this over Em7b5, Cmaj7, F#7alt, D7#11

I have included some more examples like these from different scales.

**Ex. 194a**

Ex. 194a musical notation and guitar TAB. The melody is in 4/4 time, featuring slurs and accents (H, P). The TAB shows fret numbers and fingerings.

**Ex. 194b**

Ex. 194b musical notation and guitar TAB. The melody is in 4/4 time, featuring slurs and accents (H, P). The TAB shows fret numbers and fingerings.

**Ex. 194c**

Ex. 194c musical notation and guitar TAB. The melody is in 4/4 time, featuring slurs and accents (H, P). The TAB shows fret numbers and fingerings.

**Ex. 194d**

Ex. 194d musical notation and guitar TAB. The melody is in 4/4 time, featuring slurs and accents (H, P). The TAB shows fret numbers and fingerings.

**Ex. 194e**

Ex. 194e musical notation and guitar TAB. The melody is in 4/4 time, featuring slurs and accents (H, P). The TAB shows fret numbers and fingerings.

**Ex. 194f**

Ex. 194f musical notation and guitar TAB. The melody is in 4/4 time, featuring slurs and accents (H, P). The TAB shows fret numbers and fingerings.



*Ex. 194g*

The image displays a musical score for a guitar exercise, labeled "Ex. 194g". It consists of two staves. The top staff is a standard musical staff with a treble clef, showing a sequence of notes: G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4 (quarter), A4 (quarter), G4 (quarter), F#4 (quarter), E4 (half). The bottom staff is a guitar tablature staff with six lines, labeled T (Treble), A (Acoustic), and B (Bass) on the left. It contains four measures of fret numbers: Measure 1: 7, 8, 9, 10, 7, 7; Measure 2: 8, 7, 9, 10; Measure 3: 7, 8, 6, 9; Measure 4: 7, 9, 10. A bracket is placed under the first measure of the tablature staff.

# Major Scale Impressions

Ex. 195a

**C**

8-12-10-8 12-10-8 10 12-8 9 10-7 9 10-7 10-7 10-8 7 8-10 7 3 3-5 5 5-7 8 8

Ex. 195b

**B $\flat$**

10-7 8 10 8 10 8 10 11 8 10 10 11 10 10 10 8 10

8 10 12 8 10 12 10 12 8 10 10 8 8 10 8 10 12 8

Ex. 195c

**A $\flat$**

4 6 8 6 6 8 5 6 8 6 8 9 8 9 11 8 9 8

10 11 11 8 9 11 9 8 10 8 8 5 6 6 8 5 6 3 3

**Ex. 195d**

**F** H P P P P P

TAB 7 10 10 9 7 10 8 7 10 8 7 10 8 7 10 8

**Ex. 195e**

**D** P H P P P P P

TAB 11 10 11 10 14 12 14 10 12 11 14 12 11 12 14 11 12 14 14 12 10

**Ex. 195f**

**B** P P P P P P

TAB 7 6 9 6 7 6 7 9 9 9 7 9 8 9 9 9 8 9 8 9 7 9 6 7

**Ex. 195g**

**A** H H H H H H

TAB 7 6 7 9 6 9 6 9 7 6 7 9 10 9 7 11 9 9 11 12 12 14 16 12 14 12 10 14 11 13 14 11 14 12 12 9 11 7 7 5

**Ex. 195h**

**D<sup>b</sup>**

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

**Ex. 195i**

**E<sup>b</sup>**

11 10 | 12 10 | 13 11 | 12 10 | 13 12 | 10 8 | 7 5 | 6 5 | 8 6 | 8 6

**Ex. 195j**

**C**

15 | 13 15 | 12 15 | 15 | 13 12 | 13 | 15 | 13 | 12 15 | 12 13 | 12 | 12 15 | 13 15 | 12 15 | 14 13

**Ex. 195k**

**G**

2 | 2 | 4 | 2 | 4 | 5 | 3 | 2 | 5 | 2 | 4 | 4 | 5 | 5

**Ex. 195l**

**C**

2 5 4 3 5 6 | 4 6 5 5 7 8 | 8 7 7 9 10 | 7 10 9 9 10 12 | 9 12 10 10 12 13 | 13 12 12 14 15 | 12 15 14 14 16 17 | 10 12 12 14 15 | 13 15

**Ex. 195m**

**E**

T: 7 8 9 9 6 6 7 8 9 10 9 9 11 12 13 14 16 14 14  
 A: 7 7 8 9 9 6 6 7 8 9 10 9 9 11 12 13 14 16 14 14  
 B: 7 7 8 9 9 6 6 7 8 9 10 9 9 11 12 13 14 16 14 14

**Ex. 195n**

**G<sup>b</sup>**

T: 9 11 9 8 8 11 9 8 10 8 11 9 11 10 8 9 11 10 8 11 9 11 10 8 11 10  
 A: 9 11 9 8 8 11 9 8 10 8 11 9 11 10 8 9 11 10 8 11 9 11 10 8 11 10  
 B: 9 11 9 8 8 11 9 8 10 8 11 9 11 10 8 9 11 10 8 11 9 11 10 8 11 10

**Ex. 195o**

**A<sup>b</sup>**

T: 4 3 6 4 3 6 4 3 6 5 3 6 5 3 6 5 3 6 5 3 6 5 3 6 5 3 6 5  
 A: 4 3 6 4 3 6 4 3 6 5 3 6 5 3 6 5 3 6 5 3 6 5 3 6 5 3 6 5  
 B: 4 3 6 4 3 6 4 3 6 5 3 6 5 3 6 5 3 6 5 3 6 5 3 6 5 3 6 5

**Ex. 195p**

**F**

T: 12 15 13 12 15 14 12 14 12 13 15 14 12 15 13 12 13  
 A: 12 15 13 12 15 14 12 14 12 13 15 14 12 15 13 12 13  
 B: 12 15 13 12 15 14 12 14 12 13 15 14 12 15 13 12 13

**Ex. 195q**

**C**

T: 12 14 12 14 12 12 13 13 15 12 15 12 12 13  
 A: 12 14 12 14 12 12 13 13 15 12 15 12 12 13  
 B: 12 14 12 14 12 12 13 13 15 12 15 12 12 13

**Ex. 195r**

**F<sup>#</sup>**

T: 8 9 11 10 11 8 9 11 8 11 8 10 9 11 10 9 10 11  
 A: 8 9 11 10 11 8 9 11 8 11 8 10 9 11 10 9 10 11  
 B: 8 9 11 10 11 8 9 11 8 11 8 10 9 11 10 9 10 11

**Ex. 195s**

**E $\flat$**

6 8 8 5 6 8 7 8 5 7 8 5 6 8 5 6 8 5

**Ex. 195t**

**B**

7 6 7 9 6 7 6 7 9 6 8 6 8 9 6 8 7 8 9 7 9 9 6 9

## Modes: Linear Approach

The following line studies should be practiced in all keys and positions on the guitar. Each study concentrates on a particular mode and strives to bring out its own distinctive flavor.

This is done through the use of target notes and intervallic structures.

Since no harmonic analysis has been provided, it will be your job to look for harmonic structures such as broken intervals, diatonic triads and seventh chords.

### **Ex. 196**

[ F Lydian Major ] [ F ] [ Fadd9 ] [ D# Lydian + ] [ D7sus4 ] [ B +7 ] #9

**B7alt**

The musical notation for Ex. 196 is as follows:

**Top Staff (Treble Clef):**

- Measure 1: F4 (quarter), G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4 (quarter), A4 (quarter), G4 (quarter).
- Measure 2: F#4 (quarter), G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4 (quarter), A4 (quarter), G4 (quarter).
- Measure 3: F#4 (quarter), G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4 (quarter), A4 (quarter), G4 (quarter).
- Measure 4: F#4 (quarter), G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4 (quarter), A4 (quarter), G4 (quarter).
- Measure 5: F#4 (quarter), G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4 (quarter), A4 (quarter), G4 (quarter).
- Measure 6: F#4 (quarter), G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4 (quarter), A4 (quarter), G4 (quarter).
- Measure 7: F#4 (quarter), G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4 (quarter), A4 (quarter), G4 (quarter).
- Measure 8: F#4 (quarter), G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4 (quarter), A4 (quarter), G4 (quarter).

**Bottom Staff (Bass Clef):**

- Measure 1: D3 (quarter), C3 (quarter), B2 (quarter), A2 (quarter), G2 (quarter), F2 (quarter), E2 (quarter), D2 (quarter).
- Measure 2: D3 (quarter), C3 (quarter), B2 (quarter), A2 (quarter), G2 (quarter), F2 (quarter), E2 (quarter), D2 (quarter).
- Measure 3: D3 (quarter), C3 (quarter), B2 (quarter), A2 (quarter), G2 (quarter), F2 (quarter), E2 (quarter), D2 (quarter).
- Measure 4: D3 (quarter), C3 (quarter), B2 (quarter), A2 (quarter), G2 (quarter), F2 (quarter), E2 (quarter), D2 (quarter).
- Measure 5: D3 (quarter), C3 (quarter), B2 (quarter), A2 (quarter), G2 (quarter), F2 (quarter), E2 (quarter), D2 (quarter).
- Measure 6: D3 (quarter), C3 (quarter), B2 (quarter), A2 (quarter), G2 (quarter), F2 (quarter), E2 (quarter), D2 (quarter).
- Measure 7: D3 (quarter), C3 (quarter), B2 (quarter), A2 (quarter), G2 (quarter), F2 (quarter), E2 (quarter), D2 (quarter).
- Measure 8: D3 (quarter), C3 (quarter), B2 (quarter), A2 (quarter), G2 (quarter), F2 (quarter), E2 (quarter), D2 (quarter).

This can also be used over:

F7#11, Ebmaj7#5, Am9b5, Cmmaj7, D7/sus4/b9 (C melodic minor chords)

Before we go on I would like to make an important point regarding passing tones.

Because of the abundance of linear possibilities using only scale tones, I would encourage developing lines without passing tones so as to not cluster your playing with superfluous notes. This is why most of the examples contain only scale tones (a great starting place for developing these kinds of lines are the diatonic triads and seventh chords we covered in both chapters 1+3).

# Modal Lines (Major Scale)

## Ex. 197a

### C Ionian

10 12 12 9 10 12 12 10 12 9 10 12 12 10 12 10

## Ex. 197b

### A Lydian

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

## Ex. 197c

### G Dorian

8 6 8 5 7 5 8 5 6 5 7 5 7 5 8 6 8 5 7

## Ex. 197d

### C Phrygian

8 9 8 10 10 11 10 12 13 9 13 12 10 11 10 10 8 9 8 9 8 10

## Ex. 197e

### B $\flat$ Mixolydian

6 6 8 6 8 8 6 9 6 8 8 6 8 6 5



**Ex. 197f**

**E Aeolian**

7 9 10 9 9 11 9 10 10 12 12 14 15 12 14 15 14 12

**Ex. 197g**

**A Locrian**

7 6 5 7 7 5 7 7 8 5 10 8 6 5 8 4 5 8 5 4 7 5 5 8 5 6 5 6 5

**Ex. 197h**

**A Ionian**

9 12 12 9 9 12 10 10 12 9 10 10 11 9 9 12

**Ex. 197i**

**G Lydian**

7 8 7 10 9 7 8 7 10 8 7 9 11 9 10 10 9 12

**Ex. 197j**

**C Aeolian**

11 8 11 8 8 9 8 9 11 8 8 10 10 7 8 10 11 8

**Ex. 197k**  
D Mixolydian

10 10 12 10 12 11 12 13 10 12 12 10 12 12 9 11 9 12 12 10 12

**Ex. 197l**  
D Dorian

10 7 10 10 8 7 8 10 8 8 10 10 7 7 9 10 10

**Ex. 197m**  
G Phrygian

3 4 5 3 5 6 3 5 8 9 8 7 10 8 9 6 8 8 6

**Ex. 197n**  
E Aeolian

12 15 14 14 12 16 12 13 15 12 12 14 11 12 12 10 14

**Ex. 197o**  
A Dorian

8 10 7 8 7 10 8 7 10 9 7 8 7 9 9 7 7 7 10 8 7 9 7 10 9 10 7 9 10 7 10

**Ex. 197p**

**E Mixolydian**

Top staff: Melodic line in E Mixolydian. Notes: E4 (H), F#4 (H), G4 (H), A4 (H), B4 (H), A4 (H), G4 (H), F#4 (H), E4 (H), D4 (H), C#4 (H), B3 (H), A3 (H), G3 (H), F#3 (H), E3 (H). Triplets are marked over the first three notes of the first two measures. Slurs are present over the last two notes of the first measure and the last note of the second measure.

Bottom staff: Guitar fretboard (T, A, B strings). Fret numbers: T (11-14), A (12-11-11-12-11-14), B (15-12-14-15-12-15-14-11-13-12-12-14-15-14-17-14-13-14-15).

**Ex. 197q**

**F# Phrygian**

Top staff: Melodic line in F# Phrygian. Notes: F#4 (H), G#4 (H), A4 (H), B4 (H), C#5 (H), B4 (H), A4 (H), G#4 (H), F#4 (H), E4 (H), D4 (H), C#4 (H), B3 (H), A3 (H), G#3 (H), F#3 (H), E3 (H). Triplets are marked over the first three notes of the first two measures. Slurs are present over the last two notes of the first measure and the last note of the second measure.

Bottom staff: Guitar fretboard (T, A, B strings). Fret numbers: T (2-3), A (2-4-2-3-2-2-4-4-4-5), B (4-5-5-4-2-3-2-4-5-4-6-6).

Top staff: Melodic line in F# Phrygian. Notes: F#4 (H), G#4 (H), A4 (H), B4 (H), C#5 (H), B4 (H), A4 (H), G#4 (H), F#4 (H), E4 (H), D4 (H), C#4 (H), B3 (H), A3 (H), G#3 (H), F#3 (H), E3 (H). Triplets are marked over the first three notes of the first two measures. Slurs are present over the last two notes of the first measure and the last note of the second measure.

Bottom staff: Guitar fretboard (T, A, B strings). Fret numbers: T (7-8-7-7-8-10-8-11-12-11-8-10), A (10-10-9-10-12-10-9), B (10-10-9-10-12-10-9).

# Modal Lines (Melodic Minor)

## Ex. 198a

### D Melodic Minor

## Ex. 198b

### F Lydian Augmented

## Ex. 198c

### A Dorian b2

## Ex. 198d

### E Mixolydian #11

**Ex. 198e**

**B Locrian** ♭ 2

Staff notation for B Locrian scale, 2nd fret. The fretboard diagram shows fingerings (H, P) and string numbers (9, 10, 12, 14) for strings T, A, and B.

**Ex. 198f**

**C# Altered Dominant**

Staff notation for C# Altered Dominant scale. The fretboard diagram shows fingerings (H, P) and string numbers (9, 10, 12, 14) for strings T, A, and B.

**Ex. 198g**

**E♭ Melodic Minor**

Staff notation for E♭ Melodic Minor scale. The fretboard diagram shows fingerings (H, P) and string numbers (9, 10, 12, 14) for strings T, A, and B.

**Ex. 198h**

**C Lydian Augmented**

Staff notation for C Lydian Augmented scale. The fretboard diagram shows fingerings (H, P) and string numbers (9, 10, 12, 14) for strings T, A, and B.

**Ex. 198i**  
**G Altered Dominant**

Staff notation: G4, A4, Bb4, A4, G4, F#4, E4, D4, C#4, Bb4, A4, G4. Fingering: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12. Slurs and accents: P, H, sl., P, sl.

Tablature: T (15, 12, 13, 12, 10, 11), A (13, 11, 10, 11, 13, 10, 8, 9, 8, 11, 10, 8, 6), B (14, 13, 11, 10, 11, 13, 10, 8, 9, 8, 11, 10, 8, 6).

**Ex. 198j**

**F Dorian b2**

Staff notation: F4, G4, Ab4, G4, F4, E4, D4, C4, Bb4, A4, G4, F4. Fingering: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. Slurs and accents: H, sl., H, sl., H, sl., H, P, P.

Tablature: T (1, 2, 1, 3, 5, 3, 4, 3, 5, 7, 6, 7, 6, 8, 10, 8, 6, 7, 6), A (1, 2, 1, 3, 5, 3, 4, 3, 5, 7, 6, 7, 6, 8, 10, 8, 6, 7, 6), B (1, 2, 1, 3, 5, 3, 4, 3, 5, 7, 6, 7, 6, 8, 10, 8, 6, 7, 6).

**Ex. 198k**  
**E<sup>b</sup> Mixolydian #11**

Staff notation: Eb4, F4, G4, Ab4, G4, F4, E4, D4, C4, Bb4, A4, G4. Fingering: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13. Slurs and accents: H, H, H, P.

Tablature: T (11, 10, 13, 10, 11, 10, 10, 11, 13, 10, 10, 11, 13, 10, 12, 13, 11), A (11, 10, 13, 10, 11, 10, 10, 11, 13, 10, 10, 11, 13, 10, 12, 13, 11), B (11, 10, 13, 10, 11, 10, 10, 11, 13, 10, 10, 11, 13, 10, 12, 13, 11).

**Ex. 198l**  
**F# Locrian b2**

Staff notation: F#4, G4, Ab4, G4, F#4, E4, D4, C4, Bb4, A4, G4, F#4. Fingering: 9, 10, 12, 13, 9, 12, 10, 11, 9, 10, 12, 9, 11. Slurs and accents: P, P, P, P.

Tablature: T (13, 10, 12, 13, 9, 12, 10, 11, 9, 10, 12, 9, 11), A (13, 10, 12, 13, 9, 12, 10, 11, 9, 10, 12, 9, 11), B (13, 10, 12, 13, 9, 12, 10, 11, 9, 10, 12, 9, 11).

**Ex. 198m**  
**D Altered Dominant**

Staff notation: D4, E4, F#4, E4, D4, C#4, Bb4, A4, G4, F#4, E4, D4. Fingering: 4, 5, 6, 7, 8, 9, 10. Slurs and accents: P, P, H, H.

Tablature: T (5, 8, 5, 6, 8, 4, 8, 7, 8, 6, 6, 10), A (5, 8, 5, 6, 8, 4, 8, 7, 8, 6, 6, 10), B (5, 8, 5, 6, 8, 4, 8, 7, 8, 6, 6, 10).

**Ex. 198n**  
**E Melodic Minor**

**Ex. 198o**  
**A $\flat$  Lydian Augmented**

**Ex. 198p**  
**G Altered Dominant**

**Ex. 198q**  
**C Mixolydian #11**

# Blues Sounds

Ex. 199a

**A7**

Staff 1: H (half note), P (quarter note), H (half note), P (quarter note), H (half note), P (quarter note), H (half note), P (quarter note).  
 Staff 2: TAB 5 6 5 8 7 6 5 7 | 5 6 7 5 7 5 3 4 | 5

Ex. 199b

**G7**

Staff 1: H (half note), sl. (slide), P (quarter note), H (half note), P (quarter note), H (half note), P (quarter note).  
 Staff 2: TAB 3 6 3 6 7 6 3 6 | 3 6 5 3 5 3 4 | 5

Ex. 199c

**F7**

Staff 1: H (half note), P (quarter note), P (quarter note), H (half note), P (quarter note), P (quarter note), H (half note), P (quarter note).  
 Staff 2: TAB 6 7 5 7 8 5 7 6 | 5 8 5 6 7 5 8 6 | 9 6 10 9 6 8 5 | 6 10

Ex. 199d

Staff 1: H (half note), 3 (triple), P (quarter note), 3 (triple), P (quarter note), 3 (triple), P (quarter note), 3 (triple), P (quarter note), 3 (triple), P (quarter note).  
 Staff 2: TAB 4 5 4 6 | 7 6 4 6 4 4 6 4 | 6 4 6 5 4 7 4

Ex. 199e

**B7**

Staff 1: H (half note), H (half note), H (half note), H (half note), H (half note), H (half note).  
 Staff 2: TAB 9 7 9 | 7 7 9 7 8 9 7 8 | 7 7 8 7 10 8 7 10

Staff 1: H (half note), H (half note), H (half note), H (half note), H (half note), H (half note).  
 Staff 2: TAB 7 7 10 7 10 10 7 10 | 11 14 11 14 10 7 7 6 | 9 7 8 9



**Ex. 199f**

**C7<sub>H</sub>**

Handwritten notes above the staff: H, H, H, H, sl., P, P, P, H.

Fretboard diagram (T, A, B strings):

- T: 5, 8, 10, 8, 11, 12, 11, 8, 11
- A: 6, 7, 5, 7, 8, 7, 8
- B: 8, 9, 10, 8, 9, 10

**Ex. 199g**

**E $\flat$ 7**

Handwritten notes above the staff: 1/2, 1/2, 1/2.

Fretboard diagram (T, A, B strings):

- T: 8, 8, 6, 9, 6, 7, 6
- A: 6, 8, 6, 6, 4, 5
- B: 8, 8, 6, 9, 6, 7, 6

**Ex. 199h**

**B $\flat$ 7**

Handwritten notes above the staff: H, H, P, P, P, P, P, sl., P.

Fretboard diagram (T, A, B strings):

- T: 6, 7, 8, 6, 7, 8, 7, 8, 6, 9, 7, 8, 6, 8, 9, 10, 9
- A: 6, 7, 8, 6, 7, 8, 6, 7, 8, 9, 7, 8, 9, 7, 8, 9
- B: 6, 7, 8, 6, 7, 8, 6, 7, 8, 9, 7, 8, 9, 7, 8, 9

**Ex. 199i**

**A7**

Handwritten notes above the staff: H, P.

Fretboard diagram (T, A, B strings):

- T: 7, 5, 6, 7, 5, 6, 7, 8, 6, 7, 8, 9, 7, 8, 9, 7, 9
- A: 8, 9, 7, 8, 10, 7, 8, 10, 8, 9, 8
- B: 8, 9, 8

**Ex. 199j**

**D $\flat$ 7**

Handwritten notes above the staff: H, H, H, P, H, H, H, P.

Fretboard diagram (T, A, B strings):

- T: 4, 7, 6, 4, 6, 7, 3, 6, 4, 4, 6, 4
- A: 3, 6, 4, 6, 4, 4, 6, 6, 7, 4, 6, 6
- B: 4, 7, 6, 4, 6, 7, 3, 6, 4, 4, 6, 4

Musical score for guitar, consisting of a Treble (T) staff and a Bass (B) staff. The score is divided into two measures by a vertical bar line.

**Treble Staff (T):** The melody is written in a key with two flats (B-flat and E-flat). It features several triplet markings (indicated by a '3' under a bracket) and slurs. The notes are: B4, A4, G4 (first triplet); F#4, E4, D4 (second triplet); C4, B3, A3 (third triplet); G3, F3, E3 (fourth triplet); D3, C3, B2 (fifth triplet); A2, G2, F2 (sixth triplet). The piece concludes with a final note on E2.

**Bass Staff (B):** The bass line consists of a sequence of notes with specific fingerings: 4, 4, 7, 6, 4, 6, 5, 7, 5. There are slurs over the first three notes (4-4-7), the next three notes (6-4-6), and the final two notes (5-7). The piece concludes with a final note on 4.

Dynamics: The notation includes 'p' (piano) markings above the first triplet in the Treble staff and above the first triplet in the Bass staff.

# Diminished Sounds

Ex. 200a

**D<sup>b</sup>dim7**

9 8 11 9 8 11 8 9 11 9 8 11 10 8 9 11 8 9 11 9 8 11 9 11 8 9 8 11 9 8 11 8 10

Repeat down an octave

Ex. 200b

**F13(b9)**

8 7 8 10 8 7 8 8 7 8 9 6 7 6 7 7 6 7

Repeat down an octave

Ex. 200c

**Bdim7**

6 7 8 6 9 7 8 10 11 8 9 10 8 9 10 12 9 7 9 8 10

Ex. 200d

**G<sup>b</sup>7(b9)**

3 3 6 6 4 4 7 6 5 5 8 8 5 6 7 8

Ex. 200e

**E<sup>b</sup>dim7**

10 11 9 9 10 8 11 12 13 10 12 9 8 10 9 7 6

**Ex. 200f**

**E7(b9)**

**Ex. 200g**

**Gdim7**

**Ex. 200h**

**Bdim7**

**Ex. 200i**

**E7(#9)**

**Ex. 200j**

**Bdim7**

Musical notation for an exercise. The staff shows a sequence of notes with fingerings P, H, and slurs. The tablature below shows fret numbers: 14, 11, 14, 12, 13, 14, 9, 11, 8, 11, 11, 10, 8, 8, 8, 7.

**Ex. 200k**

A $\flat$ 7(b9)

Musical notation for Ex. 200k. The staff shows a sequence of notes with slurs. The tablature below shows fret numbers: 12, 11, 8, 9, 10, 10, 7, 7, 9, 9, 6, 6, 8, 8, 9, 9.

**Ex. 200l**

E $\flat$ dim7

Musical notation for Ex. 200l. The staff shows a sequence of notes. The tablature below shows fret numbers: 8, 6, 7, 9, 5, 8, 4, 6, 7, 5, 5, 8, 4, 6, 7, 5, 4.

**Ex. 200m**

F13(#9)

Musical notation for Ex. 200m. The staff shows a sequence of notes with fingerings H and slurs. The tablature below shows fret numbers: 1, 3, 4, 4, 1, 2, 3, 4, 5, 6, 3, 4, 4, 6, 7, 7.

**Ex. 200n**

Bdim7

Musical notation for Ex. 200n. The staff shows a sequence of notes with fingerings H and P. The tablature below shows fret numbers: 9, 11, 9, 8, 10, 7, 8, 9, 9, 11, 10, 12, 12, 9, 11, 10, 9, 11, 8, 8, 11, 9, 12, 10, 11, 9, 8, 7, 6.

**Ex. 200o**

A13(b9)

Musical notation for Ex. 200o. The staff shows a sequence of notes. The tablature below shows fret numbers: 6, 7, 9, 10, 7, 8, 8, 10, 10, 7, 9, 8, 8, 8, 10, 8, 11, 9, 7, 10, 8.

**Ex. 200p**

**Cdim7**

Ex. 200p is a guitar exercise for the Cdim7 chord. The top staff shows a melodic line with slurs, slurs, and accents. The bottom staff shows a guitar fretboard with fingerings for the T, A, and B strings.

**Ex. 200q**

**G7(b9)**

Ex. 200q is a guitar exercise for the G7(b9) chord. The top staff shows a melodic line with slurs, slurs, and accents. The bottom staff shows a guitar fretboard with fingerings for the T, A, and B strings.

# Whole Tone Lines

## Ex. 201a

D7(#5)

## Ex. 201b

B7(b5)

## Ex. 201c

C7(#5)

## Ex. 201d

F7(b5)

## Ex. 201e

F#7(#5)

**Ex. 201f**  
**C#7(b5)**

The musical score for Ex. 201f, C#7(b5), is presented in two staves. The top staff is in treble clef with a key signature of one sharp (F#). The bottom staff is in bass clef with a key signature of one sharp (F#). The score is divided into two measures by a double bar line.

**Measure 1:**

- Treble Staff:** Starts with a trill on F#4, followed by a grace note on G#4 and a trill on A4. This is followed by a trill on B4, a grace note on C#5, and a trill on D5. The measure ends with a trill on E5.
- Bass Staff:** Starts with a trill on G2, followed by a grace note on F#2 and a trill on E2. This is followed by a trill on D2, a grace note on C#2, and a trill on B1. The measure ends with a trill on A1.

**Measure 2:**

- Treble Staff:** Starts with a trill on F#4, followed by a grace note on G#4 and a trill on A4. This is followed by a trill on B4, a grace note on C#5, and a trill on D5. The measure ends with a trill on E5.
- Bass Staff:** Starts with a trill on G2, followed by a grace note on F#2 and a trill on E2. This is followed by a trill on D2, a grace note on C#2, and a trill on B1. The measure ends with a trill on A1.



## Modal Mixture

Modal Mixture is the combination of one or more modal scales over a given chord change.

Ex. 202

**B♭maj7**

B♭ pent.      B♭ ionian      B♭ lydian      B♭ lydian aug.

color tones

a) [ Pentatonic ] [ Ionian ] [ Lydian ] [ Lydian Augmented ]

**B♭maj7**

b)

c)

d)

The color tones are the most characteristic notes of the mode. I have used them as structural points from which to build my lines.

## Minor Sounds

### Ex. 203

[ Dorian ] [ Aeolian ] [ Phrygian ] [ Locrian ] [ Aeolian ]

Em7

Target Notes

## Dominant Sounds

### Ex. 204

[ F Pent. ] [ Mix. ] [ Mix. #11 ] [ Dom. Dim. ] [ Alt. Dom. ] [ Tonic Dim. ]

F7

Target Notes

## Using One Interval Set Over Many Chords

Many of the greatest players have been the ones who learned to incorporate a limited amount of melodic material into the most harmonic structures.

**Ex. 205a**  
**Esus<sup>4</sup>/<sub>3</sub>**

**Ex. 205b**  
**Esus<sup>4</sup>/<sub>3</sub>**

**Cmaj7sus4**

= Cmaj7sus4, D-7/13, F/E, G7sus4,  
A-7b6, B-7b5, Cmaj7, D7/sus4/b9,  
Ebmaj7/#5, F7b5, A-7b5/#9, B7alt

This particular Esus4/3 hybrid structure could be used over these chords.

E<sup>maj7</sup>, E<sup>sus4</sup>, F<sup>#-7/9</sup>, A/G<sup>#</sup>, A<sup>maj7</sup>, B<sup>7sus4</sup>, A/B, C<sup>#-7b6</sup>, D<sup>#-7b5</sup>, A<sup>-maj7</sup>, B<sup>7/sus4/b9</sup>, C<sup>maj7#5</sup>, D<sup>7b5</sup>, E<sup>7sus4</sup>, F<sup>#-9b5</sup>, G<sup>#7alt</sup>

Hybrid structures are useful in these instances because many can be found in more than one scale.

This concept can be similarly applied by transposing a particular interval structure over many chord changes

The interval structure used is comprised of a whole-step half-step alternation

--H-- = Half-Step  
--W-- = Whole-Step  
--m3-- = Minor Third

**Ex. 206a**

A7(#9) Ddim7

**Ex. 206b** For the sake of variety

Up 1 half-step

Because of its interval structure, this type of idea can function in a variety of ways

**Ex. 207a**

F7alt Bbmaj7

**Ex. 207b**

Bbm6 Am7

This example is over a standard progression

**Ex. 208**

**E<sup>ø</sup> A7alt Cm7 F7**

#9 b9 R b7 11 b3 9 1 b7 3 13 5 #11 3

**Fm7 Variation Bb7 Ebmaj7**

b3 3 9 1 b7 3 #9 b9 R b7 3

**Ab7 Bbmaj7 E<sup>ø</sup> A7alt Dm7**

R b7 13 5 3 3 b2 R b7 #9 b9 R b7 3

**B<sup>ø</sup> Bbm6 Am7 D7alt Variation Gm7 C7alt Variation**

4 3 2 R R 3 b9 R b7 3 b9 R b7 3 b9 R b7

**A<sup>ø</sup> D7alt G7(#9)**

sl. 3 b2 R b7 sl. P #11 3 #9 b9 5

Another great way to practice is to take a particular chord shape (triad, seventh chord, hybrid structure) and use it over as many chord changes as possible in a tune

Ex. 209

E<sup>o</sup>

B<sup>b</sup>add9

Cm<sup>7</sup>/<sub>9</sub>

G<sup>b</sup>7#5

3

5

5

3

3

3

5

7

5

5

5

5

7

9

7

7

7

7

2

4

2

2

2

2

## Outside Playing Over One Chord

Here are a few examples of outside playing approaches on one chord. You provide the analysis.

**Ex. 210a**

**Gm7**

**Ex. 210b**

**Dm7**

**Ex. 210c**

**F7**

**Ex. 210d**

**A♭maj7**

**Ex. 210e**  
**Fmaj7**

Staff notation for Ex. 210e, Fmaj7. The melody consists of eighth and quarter notes with slurs and accents. The tablature shows fingerings: 9-10-9-8-9-10-8, 8-10-11-9-10-11-8-9, 8-12-11-8-10-9-8-10, and 7-10.

**Ex. 210f**  
**C7**

Staff notation for Ex. 210f, C7. The melody features triplets and slurs. The tablature shows fingerings: 6-4-5-3-4-7-5-6-5-4-5, 7-7-4-6-7-5-8-5-0-4-4.

Continuation of Ex. 210f, C7. The tablature shows fingerings: 6-6-6-8-8-7-7-7-4-4-4-5-5-5-6-6-7-4-4-5.

**Ex. 210g**  
**A7**

Staff notation for Ex. 210g, A7. The melody includes slurs and accents. The tablature shows fingerings: 9-10-9-11-12-12-7, 8-9-10-10-11-9-8-8-9-9-10-11-10-10-11.

**Ex. 210h**  
**Bb7alt**

Staff notation for Ex. 210h, Bb7alt. The melody features slurs and accents. The tablature shows fingerings: 7-7-9-6-9-9-11-9-9, 8-9-8-6-9-9-7-6-9-7-7-9-9-6-7.

Continuation of Ex. 210h, Bb7alt. The tablature shows fingerings: 5-6-9-10-8-10-8-10-8-11-11-3-2-3, 3-5-5-2-3-3-1-1-0-3-3-1-4-3-2-1.



**Ex. 210i**

**Emaj7**

**Ex. 210j**

**E $\flat$ 7**

**Ex. 210k**

**G7**

## Chromaticism And Twelve-Tone Applications

Chromaticism and twelve-tone techniques are not commonly discussed in jazz improvisation books for reasons that are unclear to me. The use of chromaticism in jazz became popular during the bebop era through the use of approach notes and chromatic enclosure of chord tones.

**Ex. 211a**

**Gm7** **C7** **Fmaj7**

Handwritten notation for Ex. 211a. The melody is in G minor, featuring chromatic approach notes and triplets. The bass line is shown with fingerings. Chords Gm7, C7, and Fmaj7 are indicated above the staff.

**Ex. 211b**

**Bbm7**

Handwritten notation for Ex. 211b. The melody is in Bb minor, featuring chromatic approach notes. The bass line is shown with fingerings. The chord Bbm7 is indicated above the staff.

**Eb7** **Abmaj7**

Handwritten notation for Ex. 211c. The melody is in Eb major, featuring chromatic approach notes and slurs. The bass line is shown with fingerings. Chords Eb7 and Abmaj7 are indicated above the staff.

**Ex. 211c**

**D7**

Handwritten notation for Ex. 211c. The melody is in D major, featuring chromatic approach notes and slurs. The bass line is shown with fingerings. The chord D7 is indicated above the staff.

Chromaticism is best used when there is a target note, preferably a lower chord member, that falls on a strong beat.

Here are a few examples of common chromatic approach usage.

T = Target  
P.T. = Passing Tone

### Ex. 212a

**Cmaj7**

[ Approach Tones ] T [ Enclosure ] *sl.* T

T A B

9 10 9 12 12 11 10 9 12 10 12 8 9 12

### Ex. 212b

**Cmaj7** **Dm7** **G7**

P.T. H [ Enclosure ] H T H [ Enclosure ] *sl.* *sl.* P.T. T *sl.*

T A B

8 9 8 11 9 10 7 10 9 8 6 7 5 4 7 5 4 8 7 7 5

**Cmaj7**

Target [ Enclosure ] *sl.* T *sl.*

T A B

5 7 8 7 5 8 9 7 9 10 10

### Ex. 212c

The B natural is a target note from A# while also functioning as part of a diatonic enclosure idea.

**Dm7** **G7(b9#9)** **Cmaj7**

P.T. H T P.T. T P.T. H T P.T. [ Approach Tones ] P T [ Enclosure ] T

T A B

12 15 14 12 13 15 12 14 15 15 14 13 15 12 15 15 12 13 14

Chromatic usage in diatonic scale lines (without discussing enclosure) is usually best if confined to filling in whole steps with one chromatic passing tone. The bebop dominant scale is an example of this kind of idea.

**Ex. 213**

**D7 (D Bebop Dom)**

10 9 8 7 10 8 7 9 7 11 10 9 7 10 9 7 10

You might try the same thing with both major and minor type scales as long as the passing tone falls on a weak beat.

**Ex. 214**

**Am7**

Here is an example of an A-dorian line using passing tones.

12 11 10 13 12 11 10 13 12 10 11 10 12 12 10 11

12 11 10 9 9 13 12 9 10 8 9 7 10 6 9 6 7 9 10 9 8 10 7 9

10 7 9 8 6 7 10 9 8 7 11 10 8 7 9 7 11 10 9 8 7 7 5 7 4 5

An example of usage on a Dom<sup>7</sup> chord.

**Ex. 215a**

**C7**

5 6 5 8 5 7 5 4 7 8 5 8 7 5 7 8 5

**Ex. 215b**

or a Maj<sup>7</sup> chord

**Gmaj7**

7 9 7 8 7 10 9 8 7 10 9 10 7 9 10 7 9 7 10 7 10 9 8 10 7 10 14 13 12 11 10 13 12 11 10

**Gmaj9**

## Twelve Tone Triadic Formulas

Here are some formulas for creating twelve tone rows comprised of triadic groupings. This is an incomplete list but should provide the basis for creating your own rows.

Group					
<b>I</b>		Cm	Dm	E	F#
	Formula	Min M2↑	Min M2↑	Maj M2↑	Maj TT↕
<b>II</b>		C <sup>+</sup>	Dm	Eb <sup>+</sup>	F#
	Formula	Aug M2↑	Min m2↑	Aug M2↑	Maj TT↕
<b>III</b>		C <sup>+</sup>	Eb	F#m	B <sup>o</sup>
	Formula	Aug m3↑	Maj m3↑	Min P4↑	Dim m2↑
<b>IV</b>		C <sup>o</sup>	F <sup>o</sup>	Gm	A
	Formula	Dim P4↑	Dim M2↑	Min M2↑	Maj m3↑
<b>V</b>		C <sup>+</sup>	Db <sup>+</sup>	D <sup>+</sup>	Eb <sup>+</sup>
	Formula	Aug m2↑	Aug m2↑	Aug m2↑	Aug M6↑
<b>Vi</b>		C <sup>sus4</sup>	Db <sup>sus2</sup>	D	E <sup>lyd</sup>
	Formula	Sus4 m2↑	Sus2 m2↑	Maj M2↑	Lyd m6↑
<b>VII</b>		C <sup>sus4</sup>	D <sup>lyd</sup>	Bb <sup>o</sup>	B
	Formula	Sus4 M2↑	Lyd m6↑	Dim m2↑	Maj m2↑
<b>VIII</b>		C <sup>sus4</sup>	D <sup>+</sup>	G#m	A
	Formula	Sus4 M2↑	Aug TT↕	Min m2↑	Maj m3↑

I have given the interval relationships between triads to facilitate transposition. The formula can be started on any of the triads and continued around the loop. For example:

### Group III Formulas

①	Aug m3 ↑	Maj m3 ↑	Min P4 ↑	Dim m2 ↑
②	Dim m2 ↑	Aug m3 ↑	Maj m3 ↑	Min P4 ↑
③	Min P4 ↑	Dim m2 ↑	Aug m3 ↑	Maj m3 ↑
④	Maj m3 ↑	Min P4 ↑	Dim m2 ↑	Aug m3 ↑

In four different keys it might look like this.

①	C <sup>+</sup>	E <sup>b</sup>	F <sup>#</sup> m	B <sup>°</sup>
②	D <sup>b°</sup>	D <sup>+</sup>	F	A <sup>b</sup> m
③	E	G <sup>m</sup>	C <sup>°</sup>	D <sup>b+</sup>
④	A <sup>m</sup>	D <sup>°</sup>	E <sup>b+</sup>	F <sup>#</sup>

On the next page you will find a few lines that demonstrate this concept.

# Ex. 216a

Group I

Cm7

Chords: Cm, Dm, E, F#, H, Cm, Dm, E, F#, Cm

Tablature: T, A, B

# Ex. 216b

Group I

Cm7

Chords: Cm, Dm, E, F#, Cm, Dm, E, F#

Tablature: T, A, B

# Ex. 217 This one combines two groups as well as a transposed group.

Group III

Group I

Group III transposed

Chords: C7, C+, Eb, F#m, Bdim, Cm, Dm, E, F#, Gm, Cdim Db+

Tablature: T, A, B

Group IV transposed

Chords: E, G, Bbdim, Ebdim, Fm

Tablature: T, A, B

# Ex. 218

Resolution notes become members of other triads and a new row is continued.

Group VI

Group VII

Chords: Db7sus4, F lydian, Eb, Dsus2, C7sus4, D lydian, B, Bdim

Tablature: T, A, B

The line above might work over Db7sus4, C7alt, F7alt, G7alt etc.

Remember it is usually a good idea to connect the triads as smoothly as possible to create a more seamless effect.



## Twelve-Tone Formulas Using Seventh Chords

Twelve-tone rows can also be formed by combining three seventh chords. This is an example of a twelve tone row using seventh chords:

### Ex. 219

Row of 3 seventh chords

Try to come up with your own progressions and lines from this concept.

A few thoughts about triadic an seventh chord rows.

1. Because they are cycles (keep repeating) they can be continued and will keep producing twelve-tone rows.
2. In order to find chords that the rows sound best with, try to take advantage of the cyclical nature of the formulas. Begin and end on the same triads or seventh chords. In the example below, the row begins on an Eb- triad and uses Group III's formula we get C, Eb-, Ab°, A+, triads whose harmonic rhythm may be broken down like this:

### Ex. 220

This progression could be used over an Eb<sup>-7</sup> chord because of the beginning chord Eb- or on an F#<sup>7alt</sup> chord because the beginning chord Eb- produces an F#<sup>13</sup> chord and the departure chord to the next measure is a C major triad which produces an F#<sup>7/b5/b9</sup> chord.

**Ex. 221**

**F#7alt**  
**Ebm**     **Abo**     **A+**     **C**     **Bmaj7 (Min7)**

**F#13**     **F#7b5b9**

The outer chords are most important because they establish the tonality and then lead you to the next tonality.

## Non-Tertian Twelve-Tone Rows

Dodecaphonic rows can be constructed through interval systems. Grouping of thirds might look like this.

**Ex. 222**

As we can see in the previous example, the interval relationships are not always strict in nature (some may have extra intervals for linking purposes).

**Ex. 223**

Fourth based row

Fifth based row

Sixth based row

## Non-Systematic Row

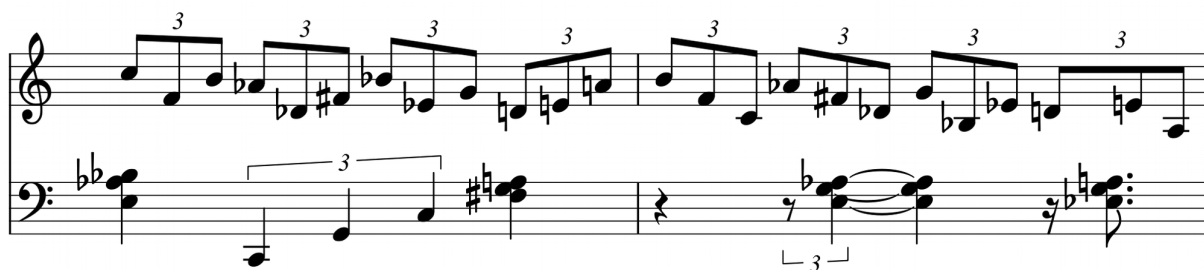
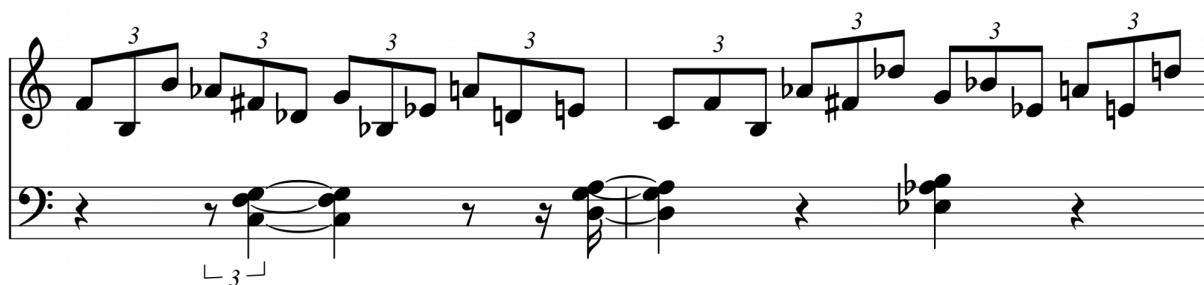
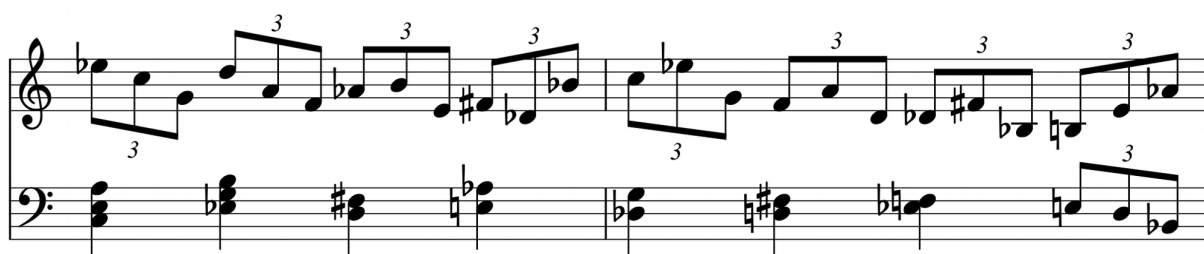
Non-Systematic Rows may use many interval combinations but should avoid any harmonic structures in order to maintain the equality of each note.

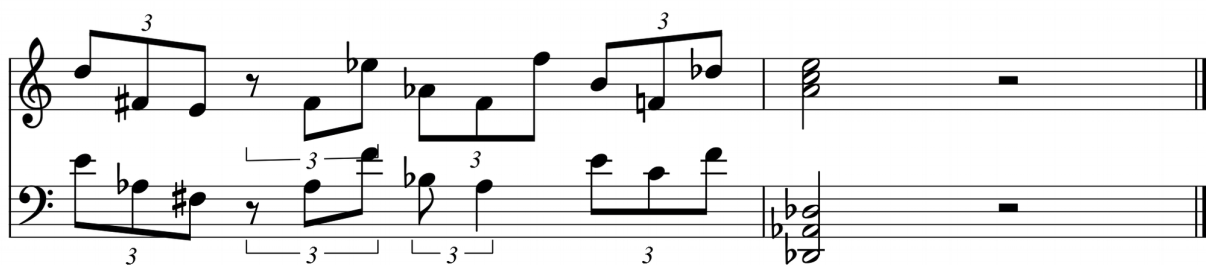
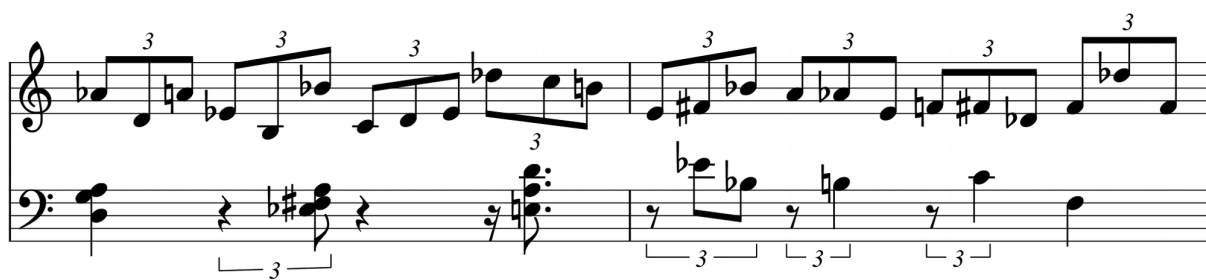
**Ex. 224**

Row 1 [ ] Row 2 [ ]

This type of line works equally well over free tunes and chords such as C7alt. Twelve-tone rows may be played in inversion (mirror of intervals), retrograde (backwards) and retrograde inversion (mirror of intervals and backwards).

## 12-Tone Triad Etude No.1

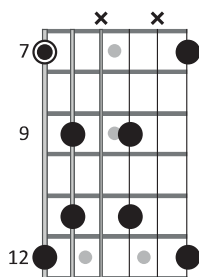




## Modal Shapes

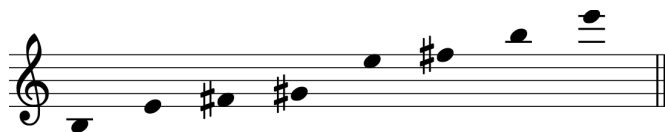
A modal shape is a fingerboard pattern whose intervals produce a modal or chordal sound.

### Ex. 225



This shape (Ex. 222) if played in an ascending manner would look like this:

### Ex. 226



These notes form an E<sup>add9</sup> hybrid structure which is derived from these scales: E-ianian, E-lydian, E-mixolydian, E-mixolydian b6 and E-mixolydian #11.

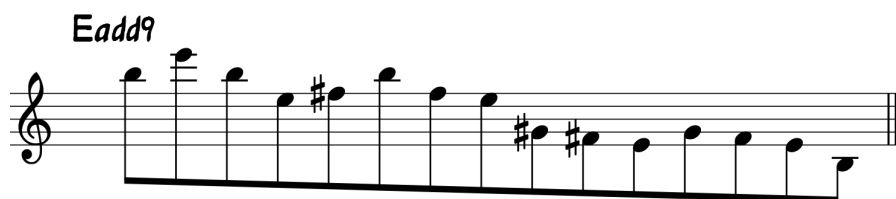
This shape may also be played over any chords derived from the parent scales B-melodic minor, E-major, B-major, A-major and A-melodic minor.

### Ex. 227

Bb<sup>7alt</sup>, E<sup>maj7</sup>, A<sup>maj7/#11</sup>, F#m<sup>11</sup>, E/F#, D/C#, E<sup>7sus4</sup>, D<sup>maj7/#11</sup>, C<sup>maj7#5</sup>, Am<sup>maj7</sup>, D<sup>7#11</sup>, etc.

Experiment playing the shapes in different interval combinations as well as combining them together to create longer lines.

### Ex. 228

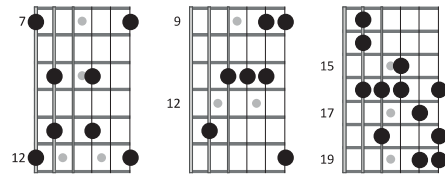


Ex. 229

Combination of two hybrid structures  
Eadd9 and F#add9 over Bb7alt.

8va

These are the three hybrid structures  
involved in this line.



Next is an example of a free line using harmonic shapes.

**Ex. 230**

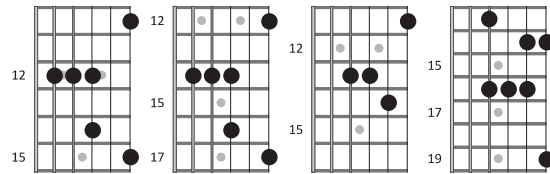
*8va*

T  
A  
B

*8va*

T  
A  
B

Shapes used:

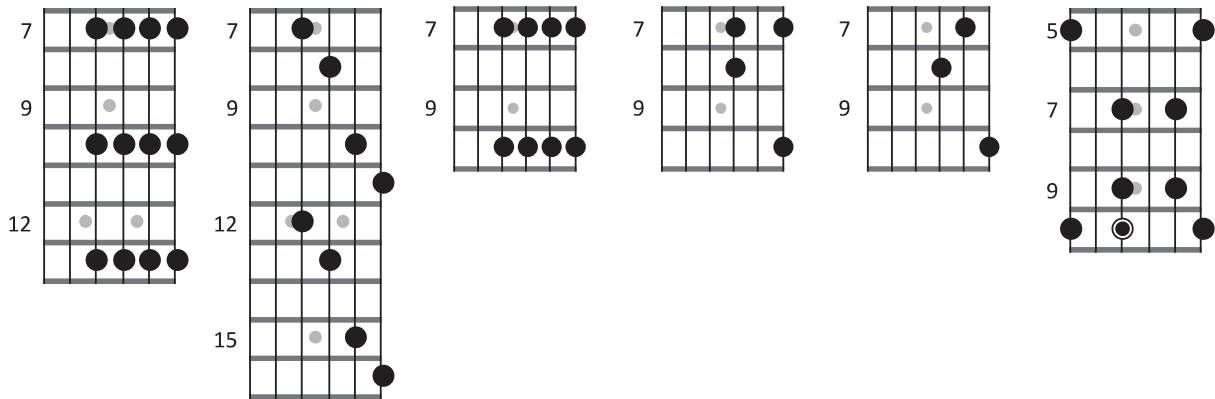




## Tonic and Dominant Diminished Scale Shapes

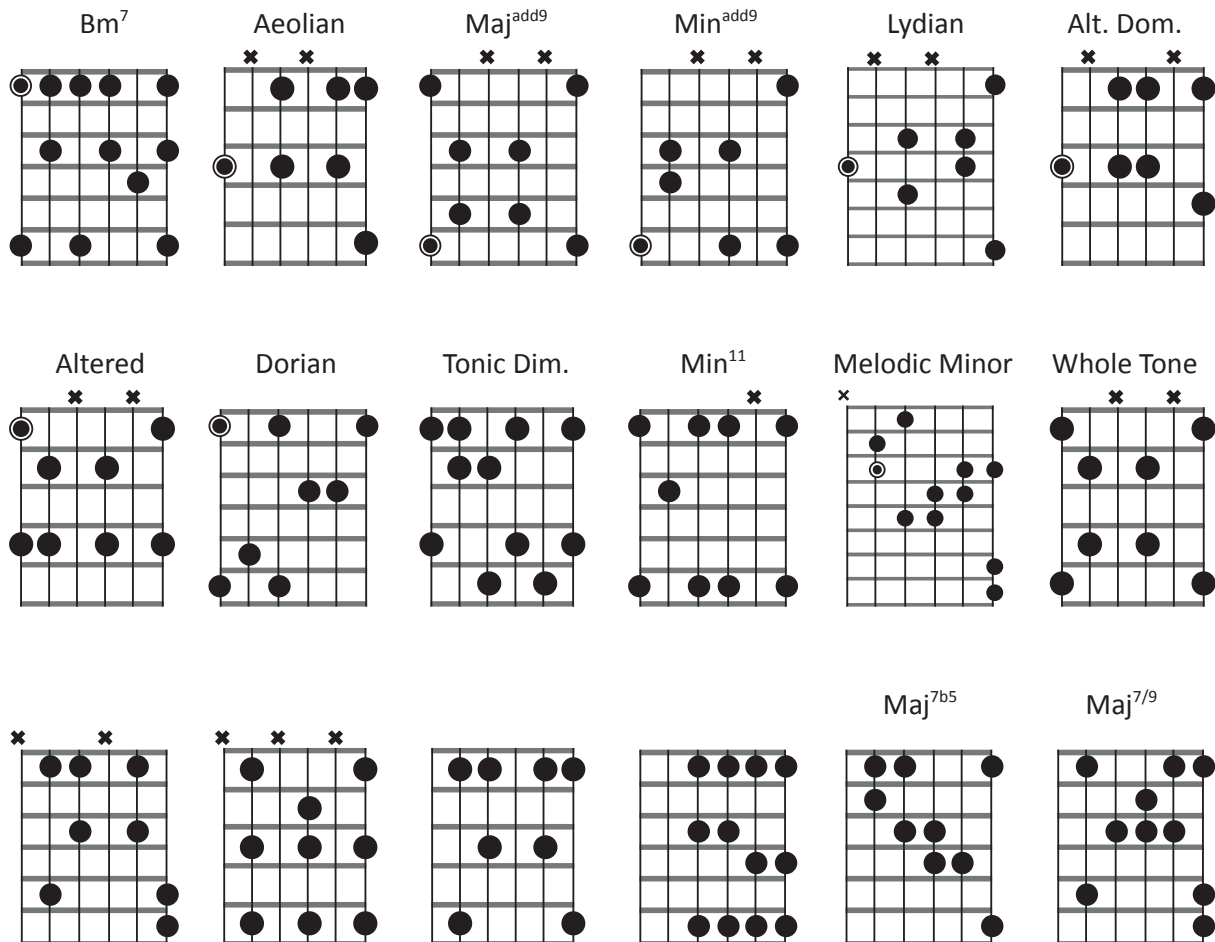
These shapes will work over the chords:  $F\sharp^{o7}$ ,  $A^{o7}$ ,  $C^{o7}$ ,  $E_b^{o7}$ ,  $F^{13b9}$ ,  $D^{13b9}$ ,  $B^{13b9}$ ,  $A_b^{13b9}$

### Ex. 231



Here are examples of some other shapes

### Ex. 232



## Unorthodox Left Hand Techniques

This section will deal with melodic patterns utilizing large intervals on one string. The execution of these lines will require an unusually large stretch of the left hand. Be careful not to over-practice these techniques because the wide hand stretches and may lead to injury if not approached with caution.

**Ex. 233a**

Ex. 233a is a musical exercise in 4/4 time. The treble staff shows a melodic line with notes G4, A4, B4, C5, D5, E5, F#5, G5, A5, B5, C6, D6, E6, F#6, G6, A6, B6, C7, D7, E7, F#7, G7, A7, B7, C8, D8, E8, F#8, G8, A8, B8, C9, D9, E9, F#9, G9, A9, B9, C10, D10, E10, F#10, G10, A10, B10, C11, D11, E11, F#11, G11, A11, B11, C12, D12, E12, F#12, G12, A12, B12, C13, D13, E13, F#13, G13, A13, B13, C14, D14, E14, F#14, G14, A14, B14, C15, D15, E15, F#15, G15, A15, B15, C16, D16, E16, F#16, G16, A16, B16, C17, D17, E17, F#17, G17, A17, B17, C18, D18, E18, F#18, G18, A18, B18, C19, D19, E19, F#19, G19, A19, B19, C20, D20, E20, F#20, G20, A20, B20, C21, D21, E21, F#21, G21, A21, B21, C22, D22, E22, F#22, G22, A22, B22, C23, D23, E23, F#23, G23, A23, B23, C24, D24, E24, F#24, G24, A24, B24, C25, D25, E25, F#25, G25, A25, B25, C26, D26, E26, F#26, G26, A26, B26, C27, D27, E27, F#27, G27, A27, B27, C28, D28, E28, F#28, G28, A28, B28, C29, D29, E29, F#29, G29, A29, B29, C30, D30, E30, F#30, G30, A30, B30, C31, D31, E31, F#31, G31, A31, B31, C32, D32, E32, F#32, G32, A32, B32, C33, D33, E33, F#33, G33, A33, B33, C34, D34, E34, F#34, G34, A34, B34, C35, D35, E35, F#35, G35, A35, B35, C36, D36, E36, F#36, G36, A36, B36, C37, D37, E37, F#37, G37, A37, B37, C38, D38, E38, F#38, G38, A38, B38, C39, D39, E39, F#39, G39, A39, B39, C40, D40, E40, F#40, G40, A40, B40, C41, D41, E41, F#41, G41, A41, B41, C42, D42, E42, F#42, G42, A42, B42, C43, D43, E43, F#43, G43, A43, B43, C44, D44, E44, F#44, G44, A44, B44, C45, D45, E45, F#45, G45, A45, B45, C46, D46, E46, F#46, G46, A46, B46, C47, D47, E47, F#47, G47, A47, B47, C48, D48, E48, F#48, G48, A48, B48, C49, D49, E49, F#49, G49, A49, B49, C50, D50, E50, F#50, G50, A50, B50, C51, D51, E51, F#51, G51, A51, B51, C52, D52, E52, F#52, G52, A52, B52, C53, D53, E53, F#53, G53, A53, B53, C54, D54, E54, F#54, G54, A54, B54, C55, D55, E55, F#55, G55, A55, B55, C56, D56, E56, F#56, G56, A56, B56, C57, D57, E57, F#57, G57, A57, B57, C58, D58, E58, F#58, G58, A58, B58, C59, D59, E59, F#59, G59, A59, B59, C60, D60, E60, F#60, G60, A60, B60, C61, D61, E61, F#61, G61, A61, B61, C62, D62, E62, F#62, G62, A62, B62, C63, D63, E63, F#63, G63, A63, B63, C64, D64, E64, F#64, G64, A64, B64, C65, D65, E65, F#65, G65, A65, B65, C66, D66, E66, F#66, G66, A66, B66, C67, D67, E67, F#67, G67, A67, B67, C68, D68, E68, F#68, G68, A68, B68, C69, D69, E69, F#69, G69, A69, B69, C70, D70, E70, F#70, G70, A70, B70, C71, D71, E71, F#71, G71, A71, B71, C72, D72, E72, F#72, G72, A72, B72, C73, D73, E73, F#73, G73, A73, B73, C74, D74, E74, F#74, G74, A74, B74, C75, D75, E75, F#75, G75, A75, B75, C76, D76, E76, F#76, G76, A76, B76, C77, D77, E77, F#77, G77, A77, B77, C78, D78, E78, F#78, G78, A78, B78, C79, D79, E79, F#79, G79, A79, B79, C80, D80, E80, F#80, G80, A80, B80, C81, D81, E81, F#81, G81, A81, B81, C82, D82, E82, F#82, G82, A82, B82, C83, D83, E83, F#83, G83, A83, B83, C84, D84, E84, F#84, G84, A84, B84, C85, D85, E85, F#85, G85, A85, B85, C86, D86, E86, F#86, G86, A86, B86, C87, D87, E87, 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A112, B112, C113, D113, E113, F#113, G113, A113, B113, C114, D114, E114, F#114, G114, A114, B114, C115, D115, E115, F#115, G115, A115, B115, C116, D116, E116, F#116, G116, A116, B116, C117, D117, E117, F#117, G117, A117, B117, C118, D118, E118, F#118, G118, A118, B118, C119, D119, E119, F#119, G119, A119, B119, C120, D120, E120, F#120, G120, A120, B120, C121, D121, E121, F#121, G121, A121, B121, C122, D122, E122, F#122, G122, A122, B122, C123, D123, E123, F#123, G123, A123, B123, C124, D124, E124, F#124, G124, A124, B124, C125, D125, E125, F#125, G125, A125, B125, C126, D126, E126, F#126, G126, A126, B126, C127, D127, E127, F#127, G127, A127, B127, C128, D128, E128, F#128, G128, A128, B128, C129, D129, E129, F#129, G129, A129, B129, C130, D130, E130, F#130, G130, A130, B130, C131, D131, E131, F#131, G131, A131, B131, C132, D132, E132, F#132, G132, A132, B132, C133, D133, E133, F#133, G133, A133, B133, C134, D134, E134, F#134, G134, A134, B134, C135, D135, E135, F#135, G135, A135, B135, C136, D136, E136, F#136, G136, A136, B136, C137, D137, E137, F#137, G137, A137, B137, C138, D138, E138, F#138, G138, A138, B138, C139, D139, E139, F#139, G139, A139, B139, C140, D140, E140, F#140, G140, A140, B140, C141, D141, E141, F#141, G141, A141, B141, C142, D142, E142, F#142, G142, A142, B142, C143, D143, E143, F#143, G143, A143, B143, C144, D144, E144, F#144, G144, A144, B144, C145, D145, E145, F#145, G145, A145, B145, C146, D146, E146, F#146, G146, A146, B146, C147, D147, E147, F#147, G147, A147, B147, C148, D148, E148, F#148, G148, A148, B148, C149, D149, E149, F#149, G149, A149, B149, C150, D150, E150, F#150, G150, A150, B150, C151, D151, E151, F#151, G151, A151, B151, C152, D152, E152, F#152, G152, A152, B152, C153, D153, E153, F#153, G153, A153, B153, C154, D154, E154, F#154, G154, A154, B154, C155, D155, E155, F#155, G155, A155, B155, C156, D156, E156, F#156, G156, A156, B156, C157, D157, E157, F#157, G157, A157, B157, C158, D158, E158, F#158, G158, A158, B158, C159, D159, E159, F#159, G159, A159, B159, C160, D160, E160, F#160, G160, A160, B160, C161, D161, E161, F#161, G161, A161, B161, C162, D162, E162, F#162, G162, A162, B162, C163, D163, E163, F#163, G163, A163, B163, C164, D164, E164, F#164, G164, A164, B164, C165, D165, E165, F#165, G165, A165, B165, C166, D166, E166, F#166, G166, A166, B166, C167, D167, E167, F#167, G167, A167, B167, C168, D168, E168, F#168, G168, A168, B168, C169, D169, E169, F#169, G169, A169, B169, C170, D170, E170, F#170, G170, A170, B170, C171, D171, E171, F#171, G171, A171, B171, C172, D172, E172, F#172, G172, A172, B172, C173, D173, E173, F#173, G173, A173, B173, C174, D174, E174, F#174, G174, A174, B174, C175, D175, E175, F#175, G175, A175, B175, C176, D176, E176, F#176, G176, A176, B176, C177, D177, E177, F#177, G177, A177, B177, C178, D178, E178, F#178, G178, A178, B178, C179, D179, E179, F#179, G179, A179, B179, C180, D180, E180, F#180, G180, A180, B180, C181, D181, E181, F#181, G181, A181, B181, C182, D182, E182, F#182, G182, A182, B182, C183, D183, E183, F#183, G183, A183, B183, C184, D184, E184, F#184, G184, A184, B184, C185, D185, E185, F#185, G185, A185, B185, C186, D186, E186, F#186, G186, A186, B186, C187, D187, E187, F#187, G187, A187, B187, C188, D188, E188, F#188, G188, A188, B188, C189, D189, E189, F#189, G189, A189, B189, C190, D190, E190, F#190, G190, A190, B190, C191, D191, E191, F#191, G191, A191, B191, C192, D192, E192, F#192, G192, A192, B192, C193, D193, E193, F#193, G193, A193, B193, C194, D194, E194, F#194, G194, A194, B194, C195, D195, E195, F#195, G195, A195, B195, C196, D196, E196, F#196, G196, A196, B196, C197, D197, E197, F#197, G197, A197, B197, C198, D198, E198, F#198, G198, A198, B198, C199, D199, E199, F#199, G199, A199, B199, C200, D200, E200, F#200, G200, A200, B200, C201, D201, E201, F#201, G201, A201, B201, C202, D202, E202, F#202, G202, A202, B202, C203, D203, E203, F#203, G203, A203, B203, C204, D204, E204, F#204, G204, A204, B204, C205, D205, E205, F#205, G205, A205, B205, C206, D206, E206, F#206, G206, A206, B206, C207, D207, E207, F#207, G207, A207, B207, C208, D208, E208, F#208, G208, A208, B208, C209, D209, E209, F#209, G209, A209, B209, C210, D210, E210, F#210, G210, A210, B210, C211, D211, E211, F#211, G211, A211, B211, C212, D212, E212, F#212, G212, A212, B212, C213, D213, E213, F#213, G213, A213, B213, C214, D214, E214, F#214, G214, A214, B214, C215, D215, E215, F#215, G215, A215, B215, C216, D216, E216, F#216, G216, A216, B216, C217, D217, E217, F#217, G217, A217, B217, C218, D218, E218, F#218, G218, A218, B218, C219, D219, E219, F#219, G219, A219, B219, C220, D220, E220, F#220, G220, A220, B220, C221, D221, E221, F#221, G221, A221, B221, C222, D222, E222, F#222, G222, A222, B222, C223, D223, E223, F#223, G223, A223, B223, C224, D224, E224, F#224, G224, A224, B224, C225, D225, E225, F#225, G225, A225, B225, C226, D226, E226, F#226, G226, A226, B226, C227, D227, E227, F#227, G227, A227, B227, C228, D228, E228, F#228, G228, A228, B228, C229, D229, E229, F#229, G229, A229, B229, C230, D230, E230, F#230, G230, A230, B230, C231, D231, E231, F#231, G231, A231, B231, C232, D232, E232, F#232, G232, A232, B232, C233, D233, E233, F#233, G233, A233, B233, C234, D234, E234, F#234, G234, A234, B234, C235, D235, E235, F#235, G235, A235, B235, C236, D236, E236, F#236, G236, A236, B236, C237, D237, E237, F#237, G237, A237, B237, C238, D238, E238, F#238, G238, A238, B238, C239, D239, E239, F#239, G239, A239, B239, C240, D240, E240, F#240, G240, A240, B240, C241, D241, E241, F#241, G241, A241, B241, C242, D242, E242, F#242, G242, A242, B242, C243, D243, E243, F#243, G243, A243, B243, C244, D244, E244, F#244, G244, A244, B244, C245, D245, E245, F#245, G245, A245, B245, C246, D246, E246, F#246, G246, A246, B246, C247, D247, E247, F#247, G247, A247, B247, C248, D248, E248, F#248, G248, A248, B248, C249, D249, E249, F#249, G249, A249, B249, C250, D250, E250, F#250, G250, A250, B250, C251, D251, E251, F#251, G251, A251, B251, C252, 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F#275, G275, A275, B275, C276, D276, E276, F#276, G276, A276, B276, C277, D277, E277, F#277, G277, A277, B277, C278, D278, E278, F#278, G278, A278, B278, C279, D279, E279, F#279, G279, A279, B279, C280, D280, E280, F#280, G280, A280, B280, C281, D281, E281, F#281, G281, A281, B281, C282, D282, E282, F#282, G282, A282, B282, C283, D283, E283, F#283, G283, A283, B283, C284, D284, E284, F#284, G284, A284, B284, C285, D285, E285, F#285, G285, A285, B285, C286, D286, E286, F#286, G286, A286, B286, C287, D287, E287, F#287, G287, A287, B287, C288, D288, E288, F#288, G288, A288, B288, C289, D289, E289, F#289, G289, A289, B289, C290, D290, E290, F#290, G290, A290, B290, C291, D291, E291, F#291, G291, A291, B291, C292, D292, E292, F#292, G292, A292, B292, C293, D293, E293, F#293, G293, A293, B293, C294, D294, E294, F#294, G294, A294, B294, C295, D295, E295, F#295, G295, A295, B295, C296, D296, E296, F#296, G296, A296, B296, C297, D297, E297, F#297, G297, A297, B297, C298, D298, E298, F#298, 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B321, C322, D322, E322, F#322, G322, A322, B322, C323, D323, E323, F#323, G323, A323, B323, C324, D324, E324, F#324, G324, A324, B324, C325, D325, E325, F#325, G325, A325, B325, C326, D326, E326, F#326, G326, A326, B326, C327, D327, E327, F#327, G327, A327, B327, C328, D328, E328, F#328, G328, A328, B328, C329, D329, E329, F#329, G329, A329, B329, C330, D330, E330, F#330, G330, A330, B330, C331, D331, E331, F#331, G331, A331, B331, C332, D332, E332, F#332, G332, A332, B332, C333, D333, E333, F#333, G333, A333, B333, C334, D334, E334, F#334, G334, A334, B334, C335, D335, E335, F#335, G335, A335, B335, C336, D336, E336, F#336, G336, A336, B336, C337, D337, E337, F#337, G337, A337, B337, C338, D338, E338, F#338, G338, A338, B338, C339, D339, E339, F#339, G339, A339, B339, C340, D340, E340, F#340, G340, A340, B340, C341, D341, E341, F#341, G341, A341, B341, C342, D342, E342, F#342, G342, A342, B342, C343, D343, E343, F#343, G343, A343, B343, C344, D344, E344, F#344, G344, A344, B344, C345, 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Sweep picking is an exciting technique because it enables the guitarist to execute ideas that are next to impossible with conventional alternate picking. The following ideas demonstrate some different arpeggio structures made possible through sweeping. Make sure to pay particular attention to the strokes indicated. Strict odd-even (odd number of notes on a string allow sweeping,

## Ex. 234a

even number allow direction change) sweep technique is not always followed. The position changes can be derived through stroke indications.

**Am7**

TAB: 12 12 9 10 10 7 8 10 9 12 12 12 10 10 10

## Ex. 234b

### Gm11

TAB: 8 5 5 5 3 3 6 6 5 8 8 8 6 8 10 7 8 8 10 10 9 7 8 8 10

## Ex. 234c

### C#7alt

TAB: 5 5 7 7 7 10 5 7 9 7 8 9 10 10 12 12 12 15 9 12 12 9 10 10 12

## Ex. 234d

### Bm7 or A/D

### C#m7b6

TAB: 9 10 10 10 9 11 9 12 9 11 12 12 9 12 9 10 12 12 9 12 9 10 12 12 9 12

## Ex. 234e

### Amaj7

TAB: 5 7 7 4 5 5 4 5 4 6 7 7 4 7 4 4 5 2 4 7 6 6 9 9

Ex. 234f

TAB

**Ex. 234f**  
Bm7 or E7sus4

TAB

**Ex. 234g**

Ex. 234g

TAB

TAB

**Ex. 234h**

F#m7

Ex. 234h

TAB

Ex. 234i

Treble staff: Melodic line with triplets and a slide (sl) at the end.

Guitar TAB: Fret numbers 16, 14, 13, 13, 12, 11, 12, 14, 14, 14, 16, 17, 14, 16, 18, 16, 17, 17, 19.

**Ex. 234i**

A7alt D $\flat$ maj7#5 B $\flat$ mmaj7 E $\flat$ 7#11

Treble staff: Melodic line with triplets and a slide (sl) at the end.

Guitar TAB: Fret numbers 1, 3, 5, 5, 4, 5, 6, 6, 9, 8, 8, 11, 6, 8, 10, 8, 10, 11, 10, 13, 15, 15, 18.

Treble staff: Melodic line with triplets and a slide (sl) at the end.

Guitar TAB: Fret numbers 13, 15, 17, 15, 16, 17, 18, 18, 17, 15, 16, 15, 13, 18, 17, 17, 15, 16, 15, 15, 13, 15.

**Ex. 234j**

E7#5

Treble staff: Melodic line with triplets and a slide (sl) at the end.

Guitar TAB: Fret numbers 12, 11, 10, 9, 9, 8, 10, 8, 9, 9, 10, 11, 12, 10, 9, 8, 7, 7, 6, 8, 6, 7, 7, 8, 9, 10.

Treble staff: Melodic line with triplets and a slide (sl) at the end.

Guitar TAB: Fret numbers 8, 7, 6, 5, 5, 4, 6, 4, 5, 5, 6, 7, 8, 6, 5, 4, 3, 3, 2, 4, 2, 3, 3, 4, 5, 6.

Make sure to practice the arpeggios in chapter three with the sweep articulations indicated. These will give you the technique and melodic material to develop your own sweep ideas.

## Pedal Point Soloing

Pedal point can be used in two different ways in soloing.

1. Lower pedal point – the pedal note occurs at the bottom of the melodic line

**Ex. 235**

[illegible]

2. Upper pedal point – the pedal point note occurs at the top of the melodic line.

### Ex. 236

Pedal Point

Try these few lines to get a feel for the use of this device.

**Ex. 237a**

**Cmaj7** **Dm7** **E $\flat$ dim7** **Em7**

9 9 12 10 10 10 10 10 10 10 11 11 10 12 10 10

**Ex. 237b**

**Cmaj7**  
8va

8 9 10 9 9 10 | 7 9 9 10 9 9 10 | 9 10 9 10 9 10 9 10 | 9 8 9 10 9 8 9 10

**Ex. 237c**

8va

Pedal Point

New Pedal

New Pedal

New Pedal

TAB

12

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

12 16 14 16 12 16 16

# A Ionian to A Mixolydian Study

Instagram (5/25/20)

B VII

9-10 7 7-12-7 9 12-7 12-7 9-7-9 7-12-9 9-7 12-7 12-7 9 12-9 7-12-9 7-12-9 7

5 7-9 7 7-9-12 9-11 9-11 9 14 9-11 14-9 11-9-11 9-11 9-14 12-14 12-17 12-14 17-12 14-12-14 12-14

Slower

12-17 12-14 17-12 14-12-14 12-14 12-14 12-14 14 14-12 14-11 12-14 11-14

Quick

12-14 11-14 15 12-14 15 12-15 14-11 14-12-14 11 14-12 12-14

# C Dorian Study

(Instagram 1/20/20)

## Accelerando

## Ritardando



## Instagram (10/3/19)

# C Mixolydian Study

Instagram (4/30/20)

Slowly Accelerate

Handwritten musical notation for the 'Slowly Accelerate' section. The notation includes a treble clef, 4/4 time signature, and a tempo marking of quarter note = 100. The melody starts with a half note, followed by eighth notes, and includes a half note with a 'P' (piano) marking. The key signature has one flat (Bb). The guitar tablature below shows fret numbers for the Treble (T) and Bass (B) staves, with fingerings (H) and a 'P' marking.

A Little Quicker

Handwritten musical notation for the 'A Little Quicker' section. The notation includes a treble clef, 7/4 time signature, and a 'Rit.' (ritardando) marking. The melody includes triplets of eighth notes and half notes. The key signature has one flat (Bb). The guitar tablature shows fret numbers and fingerings (H).

Quick Again

Handwritten musical notation for the 'Quick Again' section. The notation includes a treble clef, 7/4 time signature, and a 'P' (piano) marking. The melody includes eighth notes and quarter notes. The key signature has one flat (Bb). The guitar tablature shows fret numbers and fingerings (P).

Fast

Rit.

Gracefully

Handwritten musical notation for the final section, which includes 'Fast', 'Rit.', and 'Gracefully' markings. The notation includes a treble clef, 7/4 time signature, and a 'let ring' instruction. The melody includes eighth notes and quarter notes. The key signature has one flat (Bb). The guitar tablature shows fret numbers and fingerings (P).

# E Mixolydian Study

Instagram (11/23/19)

First system of musical notation for E Mixolydian Study. It consists of a treble clef staff with a 4/4 time signature, followed by a tablature staff with two lines labeled T and B. The treble staff contains a melodic line with notes, accidentals, and articulation marks (H, P, sl). The tablature staff contains fret numbers and slurs. The key signature has one sharp (F#).

Second system of musical notation for E Mixolydian Study. It consists of a treble clef staff with a 4/4 time signature, followed by a tablature staff with two lines labeled T and B. The treble staff contains a melodic line with notes, accidentals, and articulation marks (H, P, sl). The tablature staff contains fret numbers and slurs. The key signature has one sharp (F#).

Third system of musical notation for E Mixolydian Study. It consists of a treble clef staff with a 4/4 time signature, followed by a tablature staff with two lines labeled T and B. The treble staff contains a melodic line with notes, accidentals, and articulation marks (H, P, sl). The tablature staff contains fret numbers and slurs. The key signature has one sharp (F#).

## Ritardando

Fourth system of musical notation for E Mixolydian Study, marked **Ritardando**. It consists of a treble clef staff with a 4/4 time signature, followed by a tablature staff with two lines labeled T and B. The treble staff contains a melodic line with notes, accidentals, and articulation marks (H, P, sl). The tablature staff contains fret numbers and slurs. The key signature has one sharp (F#).

# D Bebop Dominant Study

Instagram (7/23/19)

D7 ①

① P H P P H ① P H ① P H H P 5-10-8-(8)-7 10-8-7 9-7 11-10-9 12-10

T 11 9 12 9 11 11 9 9 7 7-9 5-10-8-(8)-7 10-8-7 9-7 11-10-9 12-10

A 12 12 10 9 10 12 10 12 12 10 9 10 10 9 7 7-9 10 12 10 8 7 9 7 11 10 9 12 10

B 10 12 12 10 9 10 12 10 12 12 10 9 10 10 9 7 7-9 10 12 10 8 7 9 7 11 10 9 12 10

3 H 3 P H P P P H D7

H 12-17 14-12 15 12-11-12 14-12-10 13-10 12-11 12-10 12 10-12 9 12

T 12-14 15 14-12 15 12-11-12 14-12-10 13-10 12-11 12-10 12 10-12 9 12

A 12-14 15 14-12 15 12-11-12 14-12-10 13-10 12-11 12-10 12 10-12 9 12

B 9 12-10 12 14 12-14 15 14-12 15 12-11-12 14-12-10 13-10 12-11 12-10 12 10-12 9 12

Instagram (8/21/19)

Instagram (8/21/19)

[illegible]

# D Aeolian Study

Instagram (5/30/20)

**Andante**

The first system of the study is in 3/4 time, marked 'Andante'. It features a treble clef and a key signature of one flat (Bb). The melody is composed of half notes and quarter notes, starting on D4 and ending on D5. The bass line consists of a single half note D3. The guitar tablature shows the fretting for the melody on the top string (T) and the bass line on the bottom string (B).

**Slow and Steady**

**Accelerando**

The second system is in 4/4 time, marked 'Slow and Steady' and 'Accelerando'. The melody is composed of eighth and sixteenth notes, starting on D4 and ending on D5. The bass line consists of a single half note D3. The guitar tablature shows the fretting for the melody on the top string (T) and the bass line on the bottom string (B).

**Very Slow**

**Ritardando**

**Andante**

The third system is in 4/4 time, marked 'Very Slow', 'Ritardando', and 'Andante'. The melody is composed of eighth and sixteenth notes, starting on D4 and ending on D5. The bass line consists of a single half note D3. The guitar tablature shows the fretting for the melody on the top string (T) and the bass line on the bottom string (B).

**Quick**

**Ritard.**

The fourth system is in 2/4 time, marked 'Quick' and 'Ritard.'. The melody is composed of eighth and sixteenth notes, starting on D4 and ending on D5. The bass line consists of a single half note D3. The guitar tablature shows the fretting for the melody on the top string (T) and the bass line on the bottom string (B).

**Slow Ritard.**

**Steady**

**Ritard.**

**Sorrowful**

The fifth system is in 4/4 time, marked 'Slow Ritard.', 'Steady', 'Ritard.', and 'Sorrowful'. The melody is composed of eighth and sixteenth notes, starting on D4 and ending on D5. The bass line consists of a single half note D3. The guitar tablature shows the fretting for the melody on the top string (T) and the bass line on the bottom string (B).

# C Mixolydian #11 Study

[illegible]

The musical notation for the guitar solo in "Hotel California" is presented in two staves. The top staff is in treble clef, and the bottom staff is in bass clef. The key signature is one flat (Bb). The solo begins with a triplet of eighth notes (Bb, A, G) marked with 'H' and 'P' above and below. This is followed by a series of eighth and sixteenth notes, including a sharp sign (F#) and a half note (F). The solo concludes with a C7 chord. The bottom staff shows the fretting hand positions, with numbers 7, 8, 7, 10, 7, 9, 10, 7, 8 indicating the frets for each note.

# E Altered Dominant Study

Instagram (1/11/20)

The first system of musical notation is in 4/4 time. The treble clef staff contains a melodic line with various articulations: slurs, accents, and slurs. The bass clef staff contains a bass line with fingerings (5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15) and slurs. The system ends with a double bar line.

The second system of musical notation is in 4/4 time. The treble clef staff contains a melodic line with various articulations: slurs, accents, and slurs. The bass clef staff contains a bass line with fingerings (10, 11, 8, 10, 13, 10, 8, 11, 10, 8, 9, 10, 8, 11, 8, 9, 11, 8, 10, 12, 10, 8, 9, 8, 10, 11, 9, 8, 10, 9, 10, 8, 9, 10, 11, 10, 8) and slurs. The system ends with a double bar line.

The third system of musical notation is in 4/4 time. The treble clef staff contains a melodic line with various articulations: slurs, accents, and slurs. The bass clef staff contains a bass line with fingerings (7, 9, 7, 7, 5, 5, 7, 6, 8, 7, 8, 8, 10, 8, 10, 10, 11) and slurs. The system ends with a double bar line.

The fourth system of musical notation is in 4/4 time. The treble clef staff contains a melodic line with various articulations: slurs, accents, and slurs. The bass clef staff contains a bass line with fingerings (10, 12, 8, 13, 8, 13, 8, 12, 13, 8, 12, 9, 12, 8, 12, 10, 10, 12, 8, 13, 8, 13, 15, 12, 13) and slurs. The system ends with a double bar line.

The fifth system of musical notation is in 4/4 time. The treble clef staff contains a melodic line with various articulations: slurs, accents, and slurs. The bass clef staff contains a bass line with fingerings (15, 18, 16, 15, 18, 17, 17, 15, 13, 15, 12, 15, 12, 13, 15, 12, 14, 15, 12, 15, 13, 11, 15, 13, 12, (12), 6, 8, 10, 5, 8) and slurs. The system ends with a double bar line.



# Whole Tone Study

Instagram (11/1/19)

The first system of musical notation consists of a treble clef staff and a three-line tablature staff. The treble staff is in 4/4 time and contains a melodic line with various accidentals (sharps and naturals) and articulation marks (H for hammer-on, P for pull-off). The tablature staff shows fret numbers (11, 13, 9, 10, 11, 10, 8, 12, 10, 11, 8, 9, 10, 8, 9, 11, 7, 8, 9, 7, 8, 9, 6, 7, 5, 9, 8, 6, 7, 6) with slurs and ties indicating fingerings and phrasing.

The second system of musical notation continues the piece. It features a treble clef staff with a melodic line and a three-line tablature staff. The tablature staff includes fret numbers (10, 9, 7, 8, 7, 11, 10, 8, 9, 8, 8, 12, 10, 12, 10, 11, 10, 8, 10, 8, 8, 6, 8, 6, 7, 8, 6, 7, 8) and articulation marks (P for pull-off, H for hammer-on).

The third system of musical notation concludes the piece. It features a treble clef staff with a melodic line and a three-line tablature staff. The tablature staff includes fret numbers (5, 6, 7, 5, 6, 7, 4, 5, 3, 4, 4, 3, 4, 3, 3) and articulation marks (P for pull-off). The system ends with a double bar line and a final chord indicated by a treble clef staff with a sharp sign and a 3/4 time signature.

# E Augmented Scale Study

*mf*

12 11 12 10 11 9 10 9 13 9 12 13 9 10 9 13

12 13 9 12 13 9 12 13 11 12 13 11 16 12 15

15 11 12 13 12 9 8 9 8 10 9 10 8 10 9 11

10 11 9 11 12 8 11 5 5 6 7 0

5 5 6 7 0

Instagram (12/22/19)

# Ultra Mega Arpeggios

**Cmaj7**

*mf*

TAB: 8 9 10 7 10 9 12 9 10 12 9 10 12 13 12 15 12 13

**Cmin7**

TAB: 8 10 6 8 10 12 8 8 10 11 12 8 10 11 12 13 15 11 15 11 13

**C7(11)**

TAB: 8 10 7 8 10 10 8 12 9 10 11 12 9 10 11 12 13 11 15 12 13

**C9**

TAB: 8 10 7 8 10 8 7 8 9 7 8 9 6 8 10 6 8 9 6 8 9 7 8 9

TAB: 7 8 9 8 7 8 10 7 8 10 7 8 10

**Cmin7**

TAB: 8 10 6 8 10 7 8 10 7 8 10 12 8 11 12 10 11 13 12 11 13 15 11 13 15 11

C7

TAB

TAB

Cmaj7

TAB

TAB

C13b9

TAB

Cmin7 and Bbmaj

TAB

Cmin7, Bbmaj and Fadd9

TAB

Musical score for guitar, showing a melody in the treble clef and a corresponding fretboard diagram in the bass clef. The melody is in B-flat major and consists of 12 measures. The fretboard diagram shows fingerings for each note, with numbers 1-4 for fingers and 8-13 for barre positions. The diagram is divided into three measures corresponding to the melody.

**Measure 1:** F4 (1), G4 (2), A4 (3), Bb4 (4), C5 (1), Bb4 (2), A4 (3), G4 (4).  
**Measure 2:** F4 (1), G4 (2), A4 (3), Bb4 (4), C5 (1), Bb4 (2), A4 (3), G4 (4).  
**Measure 3:** F4 (1), G4 (2), A4 (3), Bb4 (4), C5 (1), Bb4 (2), A4 (3), G4 (4).

**Fretboard Diagram (Bass Clef):**  
 The diagram shows the fretboard with fingerings for each note. The first measure contains measures 1-4, the second measure contains measures 5-8, and the third measure contains measures 9-12. The diagram is divided into three measures corresponding to the melody.

**Measure 1 (Measures 1-4):** 10, 11, 13, 8, 10, 13, 8.  
**Measure 2 (Measures 5-8):** 10, 8, 10, 10, 7, 5, 8, 8.  
**Measure 3 (Measures 9-12):** (8).

# D Minor Improv

**Dm (add9)**

**G7/D**

Chord diagrams for Dm (add9) and G7/D. The top staff shows the chord structure in 4/4 time. The bottom staff shows the fretboard positions for guitar, with fingerings 13, 10, 9, 0 for Dm (add9) and 15, 12, 10, 0 for G7/D.

**Dm7 $\flat$ 6**

Scale run for Dm7 $\flat$ 6. The top staff shows the scale in 8/8 time. The bottom staff shows the fretboard positions for guitar, with fingerings 12, 13, 12, 14, 14, 12, 13, 12, 14, 14, 12, 13, 12, 13.

**B $\flat$ maj7/13**

Scale run for B $\flat$ maj7/13. The top staff shows the scale in 8/8 time. The bottom staff shows the fretboard positions for guitar, with fingerings 10, 12, 12, 10, 12, 10, 12, 10, 12, 12, 10, 12, 12, 10, 12.

**Fmaj7**

Scale run for Fmaj7. The top staff shows the scale in 8/8 time. The bottom staff shows the fretboard positions for guitar, with fingerings 8, 10, 10, 9, 10, 9, 10, 8, 10, 10, 9, 10, 10, 8, 10.

**A $\flat$ m7 $\flat$ 6**

Scale run for A $\flat$ m7 $\flat$ 6. The top staff shows the scale in 8/8 time. The bottom staff shows the fretboard positions for guitar, with fingerings 7, 8, 9, 7, 9, 7, 9, 8, 9, 9, 7, 9, 9, 7, 8.

# E7b9#5

Handwritten musical notation for E7b9#5 in 6/4 time. The staff shows a melodic line with slurs and accents. The tablature below shows fret numbers and fingerings.

Handwritten musical notation for E7b9#5 in 6/4 time. The staff shows a melodic line with slurs and accents. The tablature below shows fret numbers and fingerings.

# A7b9

Handwritten musical notation for A7b9 in 5/4 time. The staff shows a melodic line with slurs and accents. The tablature below shows fret numbers and fingerings.

Handwritten musical notation for A7b9 in 5/4 time. The staff shows a melodic line with slurs and accents. The tablature below shows fret numbers and fingerings.

# A7b9

## Ritardando

Handwritten musical notation for A7b9 in 4/4 time with a Ritardando marking. The staff shows a melodic line with slurs and accents. The tablature below shows fret numbers and fingerings.

Handwritten musical notation for A7b9 in 4/4 time with a Ritardando marking. The staff shows a melodic line with slurs and accents. The tablature below shows fret numbers and fingerings.

# Dm9

Handwritten musical notation for Dm9 in 4/4 time. The staff shows a melodic line with slurs and accents. The tablature below shows fret numbers and fingerings.

Handwritten musical notation for Dm9 in 4/4 time. The staff shows a melodic line with slurs and accents. The tablature below shows fret numbers and fingerings.



## Instagram (2/2/20)

**A Little Slower**

Handwritten musical notation for a piece in 7/8 time. The treble clef staff features a melodic line with slurs, accents (H), and a triplet of eighth notes. The bass clef staff features a bass line with slurs, accents (H), and a triplet of eighth notes. The piece concludes with a sl. (sforzando) marking.

**Tiny bit slower**

Handwritten musical notation for a piece in 4/4 time. The treble clef staff features a melodic line with slurs, accents (H), and a triplet of eighth notes. The bass clef staff features a bass line with slurs, accents (H), and a triplet of eighth notes. The piece concludes with a Ritardando marking.

**A Little Faster**

Handwritten musical notation for a piece in 16/16 time. The treble clef staff features a melodic line with slurs, accents (H), and a triplet of eighth notes. The bass clef staff features a bass line with slurs, accents (H), and a triplet of eighth notes. The piece concludes with a Ritardando marking.

# CHAPTER 5

## TECHNIQUE AND PRACTICE



## Chapter 5: Technique and Practice

### Bass Lines

A good place to begin talking about bass lines is in relation to the two most common harmonic rhythms in jazz.

1. 2 chords per bar
2. 1 chord per bar

When we have two chords per bar there are three basic types of lines to choose from:

#### Two Chords per Bar:

1. Roots followed by upper or lower diatonic neighbor.

D.N. = Diatonic Neighbor  
C.N. = Chromatic Neighbor  
I = Inversion

Ex. 238

**Cmaj7** D.N. **Am7** D.N. **Dm7** D.N. **G7** D.N.

TAB: 3 3 0 2 0 0 3 2

Ex. 239

2. Roots followed by chromatic neighbor.

**Cmaj7** C.N. **Am7** C.N. **Dm7** C.N. **G7** C.N.

TAB: 3 6 0 4 0 4 3 2

Ex. 240

3. Ascending or descending inverted movement.

**Bmaj7** **D7/A** **Gmaj7** **B7/F** **Ebmaj7**

TAB: 2 2 0 0 3 3 1 1

Ex. 241

4. Doubling the root on chromatic basslines.

**Bbmaj7** **Bdim7** **Cm7** **C#dim7** **Dm7**

TAB: 6 6 7 7 8 8 9 9

## One Chord per Bar:

1. Play the basic triad (in any inversion) on the first three beats and an upper or lower neighbor on the last.

### Ex. 242

[ Basic Triad ] N.T. [ Triad ] N.T.

A $\flat$ maj7

F7 $\flat$ 9

B $\flat$ 7

2. Four chords a P5<sup>th</sup> descending apart.

### Ex. 243

A. Scalar ascending (use appropriate modes)

Am7

N.T.

D7

N.T.

Gmaj7

N.T.

Cmaj7

On minor chords, neighbor tones fall on the 4<sup>th</sup> beat on Maj & Dom they fall on the 3<sup>rd</sup>.

### Ex. 244

B. Scalar descending (use appropriate modes)

Am7

D7

Gmaj7

Cmaj7

Note: there are no passing tones in Ex. 244 because there are five scale tones between chords.

### Ex. 245

3. Chromatic

A7

N.C.T.

N.C.T.

Am7

N.C.T.

N.C.T.

D7

N.C.T.

Gmaj7

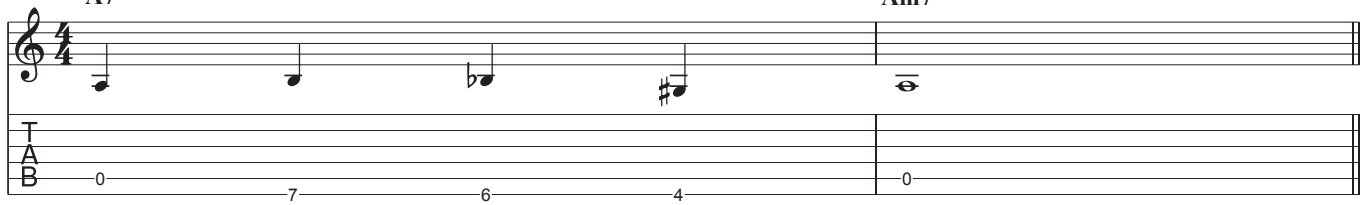
N.C.T. = Neighboring (Chromatic) Tones

Also Try:

**Ex. 246a**

**A7**

**Am7**



Ex. 246a is a musical exercise in 4/4 time. The first staff is a treble clef with a key signature of one sharp (F#). The first measure contains four eighth notes: A4, B4, C#5, and D5. The second measure contains a whole note chord, A4-B4-C#5-D5. The second staff is a bass clef with a key signature of one sharp (F#). The first measure contains four eighth notes: A2, B2, C#3, and D3. The second measure contains a whole note chord, A2-B2-C#3-D3.

**Ex. 246b**

**A7**

**Am7**

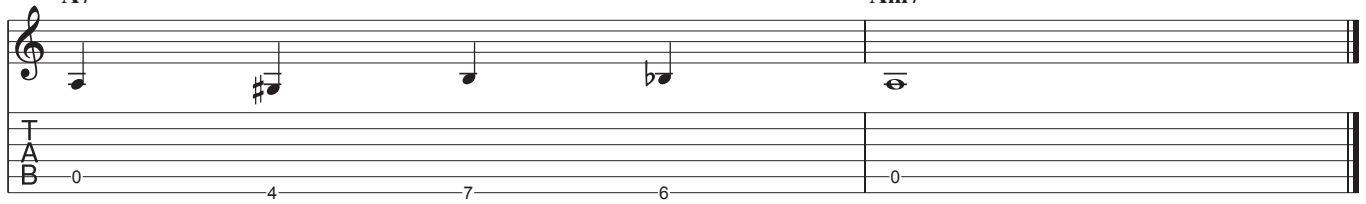


Ex. 246b is a musical exercise in 4/4 time. The first staff is a treble clef with a key signature of one sharp (F#). The first measure contains four eighth notes: A4, B4, C#5, and D5. The second measure contains a whole note chord, A4-B4-C#5-D5. The second staff is a bass clef with a key signature of one sharp (F#). The first measure contains four eighth notes: A2, B2, C#3, and D3. The second measure contains a whole note chord, A2-B2-C#3-D3.

**Ex. 246c**

**A7**

**Am7**



Ex. 246c is a musical exercise in 4/4 time. The first staff is a treble clef with a key signature of one sharp (F#). The first measure contains four eighth notes: A4, B4, C#5, and D5. The second measure contains a whole note chord, A4-B4-C#5-D5. The second staff is a bass clef with a key signature of one sharp (F#). The first measure contains four eighth notes: A2, B2, C#3, and D3. The second measure contains a whole note chord, A2-B2-C#3-D3.

There are many combinations of chromatic type lines. Use these as a point of departure.

## One Chord for Two Bars

In this instance we want to arrive on the fifth of A<sup>7</sup> at the beginning of the second measure.

**Ex. 247a**

A<sup>7</sup> 3 3 5th N.T. Am<sup>7</sup>

T  
A  
B

0 7 7 0 4 4 8 7 4 0 6 7

**Ex. 247b**

A<sup>7</sup> N.T. 5th Am<sup>7</sup>

T  
A  
B

0 4 4 3 2 0 4 2 0

The second example used the F# (13<sup>th</sup>) on the A<sup>7</sup> for the sake of variety.

**Ex. 248**

Open strings in bass lines can lead to more intervallic sounds.

E<sup>7</sup> tritone sub (Bb7) Amaj<sup>7</sup>

T  
A  
B

7 0 4 5 6 7 7 6 0

## Pedal Points

Pedal points are used in jazz to create excitement behind a solo. They many times provide a springboard to more chromatic type playing and can bring a solo or certain section of a tune to climax.

The most common type pedal points are:

### Tonic Pedals

#### Ex. 249

F Blues

**F7**

F Pedal - - - - -

5 **B $\flat$ 7** **F7** **A-7** **D7**

- - - - - Pedal Cont. - - - - - Walk

9 **G-7** **C7** **F7** **D7** **G-7** **C7**

### Dominant Pedals

#### Ex. 250

**A-7** **D7** **GMaj7** **GMaj7**

(Dominant Note)

D Pedal - - - - -



## Rhythm Changes

### Ex. 251

**B $\flat$ Maj7 G7 C-7 F7 D-7 G7 C-7 F7**

F Pedal -----

5 **F-7 B $\flat$ 7 E $\flat$ Maj7 E $\flat$ 7 B $\flat$ /F G7 C-7 F7**

----- E ----- F Pedal -----

↑ Break for the E $\flat$ 7 Chord

Pedals are best used

1. in even phase lengths (4,8,12,16 bars)
2. when a particular rhythmic pattern is used throughout.

### Ex. 252

#### Rhythm Changes

**B $\flat$ Maj7 G7 C-7 F7 D-7 G7 C-7 F7**

**Ex. 253a**

**Bbmaj7 G7alt Cm7 F7 Dm7 G7alt Cm7 F7**

TAB  
1 4 3 4 3 2 3 1 0 2 3 4 3 2 1 0

**Fm7 Bb7 Ebmaj7 Edim7 Bb/F G7alt Cm7 F7**

TAB  
1 3 1 0 1 1 2 2 3 4 0 4 3 2 3 2

**Bbmaj7 Bdim7 Cm7 C#dim7 Dm7 G7alt Cm7 F7**

TAB  
1 3 0 1 2 3 4 0 4 3 4 3 0 1 0

**Bb7 Ebmaj7 Edim7 Bb/F Cm7 F7 Bbmaj7**

TAB  
1 0 3 2 1 3 2 3 3 3 3 1 1 0 3 1

**Am7 D7 G7 Dm7 G7**

TAB  
0 2 3 4 0 2 0 4 3 2 2 1 0 2 3 4

**C7 Gm7 C7 F7**

TAB  
3 2 3 4 0 4 3 0 1 3 3 3 1 3 3 0

**Bbmaj7 Bb/Ab Eb/G Gbdim7 Bb/F Ebmaj7 Dm7 Cm7**

TAB  
1 1 4 4 3 3 2 2 1 1 1 1 0 4 3 2

**B $\flat$ 7**                      **E $\flat$ maj7**      **E $\dim$ 7**              **B $\flat$ maj7**      **Cm7**    **F7**      **B $\flat$ maj7**              **Cm7**    **F7**

T  
 A  
 B

1 — 3 — 0 — 1      1 — 0 — 1 — 2      3 — 3 — 3 — 3      1 — 2 — 3 — 1

**Ex. 253b**

**Bbmaj7 G7alt Cm7 F7**

**Dm7 G7alt Cm7 F7 Fm7 Bb7 Ebmaj7 Edim7**

**Bb/F G7alt Cm7 F7 Bbmaj7 Bdim7 Cm7 C#dim7**

**Dm7 G7alt Cm7 F7 Bb7 Ebmaj7 Edim7**

**Bb/F Cm7 F7 Bbmaj7 Am7 D7**

**G7 Dm7 G7 C7 Gm7 C7**

**F7 Bbmaj7 Bb/Ab Eb/G Gbdim7**

**Bb/F Ebmaj7 Dm7 Cm7 Bb7 Ebmaj7 Edim7**

**B♭maj7**                      **Cm7**                      **F7**                      **B♭maj7**                      **Cm7**                      **F7**

Musical notation for a bass line. The notation includes a bass staff with notes and a fretboard diagram below it showing fingerings (3, 3, 3, 3, 1, 2, 3, 1) and a T/B indicator.

When walking a bass line, chords can be interspersed to create a more complete harmonic backdrop (especially useful in solo & duo settings).

**Ex. 254a**

**B♭maj7   G7alt   Cm7   F7alt   Dm7   G7♭9   Cm7**

T 6 4 3 2 6 4 3  
A 7 4 3 2 5 5 4  
B 7 3 4 1 5 4 3

**Ex. 254b**

**B♭maj7   G7alt   Cm7   F7   Dm7   G7alt   Cm7**

T 5 4 4 2 4 7 4  
A 5 4 3 2 7 5 5  
B 4 2 2 1 6 5 4

Or combination

**Ex. 254c**

**B♭maj7   A♭7#5   G7alt   D♭m9   Cm7   F7**

T 5 4 3 3 3  
A 5 4 3 3 2  
B 4 2 1 1 1

**Dm7   A♭7#9   G7alt   C♯m7   Cm7   F7   B♭7**

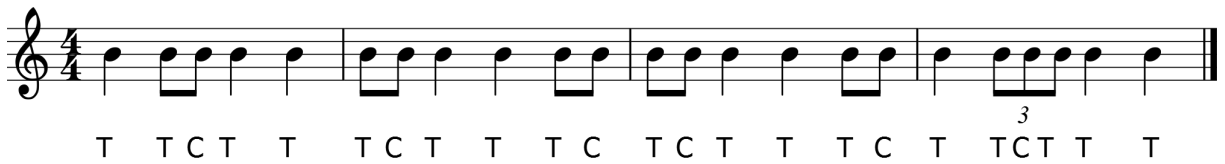
T 4 4 3 3 3  
A 7 5 4 4 4  
B 5 6 5 4 3 2 2

In the last example the patterns were alternated by measure.

## Bassline Comping Variations

### Ex. 255a

Rhythm Pattern No.1



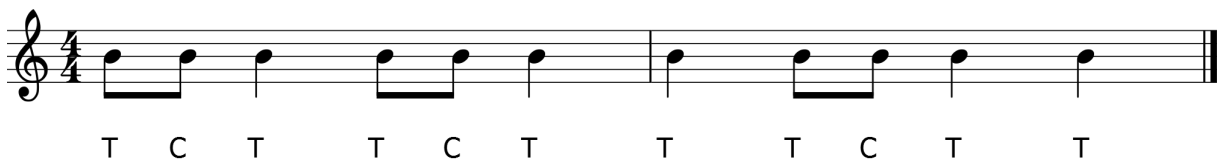
T= Thumb

C= Chord

Practice on one chord before moving on to progressions.

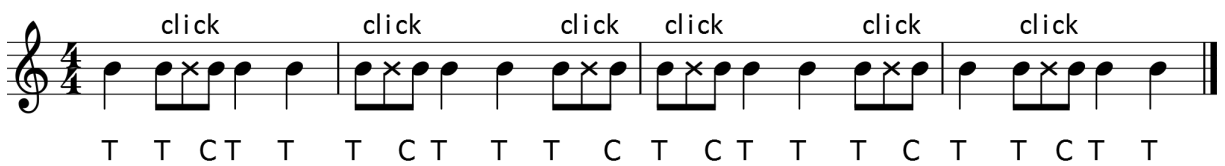
### Ex. 255b

Rhythm Pattern No.2



### Ex. 255c

Rhythm Pattern No.3



## Comping Rhythms

I have written some basic comping patterns over a thirty two bar form. Feel free to divide this into shorter phrases (four and eight bars) for your own use.

### **Ex. 256**

The musical notation for Ex. 256 is a 32-bar comping pattern in 4/4 time, written on a single staff. The pattern is as follows:

- Bar 1: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 2: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 3: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 4: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 5: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 6: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 7: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 8: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 9: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 10: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 11: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 12: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 13: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 14: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 15: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 16: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 17: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 18: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 19: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 20: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 21: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 22: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 23: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 24: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 25: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 26: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 27: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 28: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 29: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 30: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 31: Quarter note G4, quarter rest, quarter note G4, quarter rest.
- Bar 32: Quarter note G4, quarter rest, quarter note G4, quarter rest.



## **Solos Over Standard Forms**

I have included a few solos over standard chord progressions in order to incorporate some of the ideas that we have learned. Practice them slowly with the metronome on two and four to develop your swing feel. I also suggest doing your own harmonic analysis to study the devices used.

**Fm7** **Bbm7**

T A B

**E♭alt** **A♭maj7** **D♭maj7**

T A B

**Dm7** **G7b9** **Cmaj7**

T A B

**Cm7** **Fm7** **Bb9**

T A B

**E♭maj7** **A♭maj7** **Am7** **D7alt**

T A B

**Gmaj7** **Bm7** **E7alt** **Am7**

T A B

**D7alt** **Gmaj7**

Handwritten notation for D7alt and Gmaj7 chords. The top staff shows a treble clef with notes and accidentals. The bottom staff shows a guitar fretboard with strings T, A, and B, with fingerings and slurs.

**F#m7** **B7b9** **Emaj7**

Handwritten notation for F#m7, B7b9, and Emaj7 chords. The top staff shows a treble clef with notes and accidentals. The bottom staff shows a guitar fretboard with strings T, A, and B, with fingerings and slurs.

**C7alt** **Fm7** **Bbm7**

Handwritten notation for C7alt, Fm7, and Bbm7 chords. The top staff shows a treble clef with notes and accidentals. The bottom staff shows a guitar fretboard with strings T, A, and B, with fingerings and slurs.

**Ebb7b9** **Abmaj7** **Dbmaj7**

Handwritten notation for Ebb7b9, Abmaj7, and Dbmaj7 chords. The top staff shows a treble clef with notes and accidentals. The bottom staff shows a guitar fretboard with strings T, A, and B, with fingerings and slurs.

**Dbm7** **Cm7** **Bdim7**

Handwritten notation for Dbm7, Cm7, and Bdim7 chords. The top staff shows a treble clef with notes and accidentals. The bottom staff shows a guitar fretboard with strings T, A, and B, with fingerings and slurs.

**Bbm7** **E7alt** **Abmaj7**

9 10 8 8 8 10 8 11 12 12 10 9 11 9 12 12 9 8 11 10 8 8 10 8 8 10 8 10 11

**Gm7b5** **C7alt** **Fm7**

9 8 10 10 11 10 8 9 9 11 11 11 9 9 6 4 8 6 5 8 6

# Solo No. 2

**E<sup>ø</sup>** **A13(b9)** **Cm7**

Tablature for the first system:

String	Measure 1	Measure 2	Measure 3
T			
A	7	8	11
B	9	10	12

**F7(#5)** **Fm7** **Bb7(#5)(#9)**

Tablature for the second system:

String	Measure 1	Measure 2	Measure 3
T			
A	11	12	9
B	14	13	11

**Ebmaj7** **Ab7(b5)** **Bbmaj7**

Tablature for the third system:

String	Measure 1	Measure 2	Measure 3
T			
A	8	7	8
B	10	9	10

**E<sup>ø</sup>** **A7(#5)** **Dm7** **Dm7/C** **B<sup>ø</sup>** **Bbm6** **Am7** **D7(b9)**

Tablature for the fourth system:

String	Measure 1	Measure 2	Measure 3	Measure 4	Measure 5	Measure 6	Measure 7	Measure 8
T	7	9	10	9	6	9	7	5
A	10	10	10	10	7	8	6	5
B	11	11	11	11	8	8	8	12

**Gm7** **C7(b9)** **A<sup>ø</sup>** **D7(b9)**

Tablature for the fifth system:

String	Measure 1	Measure 2	Measure 3	Measure 4
T	10	10	11	11
A	12	12	12	12
B	13	13	13	13

**G7(#5)** **Cm7**

T  
A  
B

**A $\flat$ 7(b5)** **A/B $\flat$**

T  
A  
B

**B $\flat$ maj7** **E $\circ$**  **A7(#5)**

T  
A  
B

**D $\circ$**  **G13(b9)** **C $\circ$**

T  
A  
B

**F7(#5)** **B $\flat$ maj7**

T  
A  
B

# Solo No. 3

**Gmaj7** **Bb7** **Ebmaj7** **Abmaj7**

T  
A  
B

9 8 7 9 10 9 8 10 11 8 10 8 7 8 8 10 10 10 8 11 8 10 11 8 10 7

**Am7** **D7alt** **Gmaj7** **Dm7** **G7**

T  
A  
B

(7) 10 7 9 7 8 10 8 8 9 8 11 10 (10) 9 7 7 14 15 14 13 12 10 12 10

**Cm7** **F7** **Bbmaj7** **Ebmaj7**

T  
A  
B

11 12 13 12 10 13 10 13 12 11 12 13 11 10 11 12 10 12 9 12 10 8 8 10 12 11 10

**Am7** **D13(b9)** **Gmaj7** **Am7** **D7b9**

T  
A  
B

(10) 9 12 12 10 12 9 10 11 12 13 11 10 11 10 12 9 8 10 9 7 10 9 8 10 9 7 8 10 9 7

**Gmaj7** **Bb7** **Ebmaj7**

T  
A  
B

7 10 9 7 9 10 7 8 10 11 10 9 8 11 8 9 9 9 8 8 8 6 8 8 5 6 5 8 8

**A $\flat$ maj7** *sl.* **Am7** *H* **D7** *P*

TAB: 6 8 9 8 10 11 10 11 13 12 10 9 12 9 10 11 9 12 11 10 12 9 10

**Gmaj7** *H* **Dm7** *P* **G7** **Cmaj7** *H* *sl.* *H* *H* *sl.* *P*

TAB: (10) 9 10 9 7 7 6 9 8 6 8 5 6 5 7 7 9 8 6 6 8 5 6 7 5 7 9 7 9 10 7 9 8 7 6 10 7 10 9

**Am7** **D7 $\flat$ 9** *P* **Bm7** *P* **B $\flat$ dim7** *sl.* *sl.* *P* *P*

TAB: 8 9 10 7 9 7 10 8 8 7 10 9 (9) 7 9 9 9 7 8 9 12 10 11 9 12 10

**Am7** *P* **D7** *P* *sl.*

TAB: 9 10 9 12 11 12 10 12 9 10 8 6 6 8 7

**Gmaj7** **E7alt** **Am7** **D7 $\flat$ 9** **Gmaj7**

TAB: 10 10 11 9 14 12 12 12 13 13 13 12 12 10 9 8 7 6 5 6 10 10 9 9



# Blues

**C7 C7alt F7 F#dim7**

TAB: 13 14 12 14 || 13 10 11 10 9 9 8 11 10 10 9 8 10 12 9

**Gm7 C7alt F7**

TAB: 10 12 13 12 15 14 13 14 13 11 10 13 10 11 12 10 9 8 12 10 8 7

**F7 F#dim7 C7 A7alt**

TAB: 6 9 10 8 11 10 9 7 8 10 10 9 12 11 14 12 13 11 13 (13) 11 14 11 13

**Dm7 G7alt C7 A7alt**

TAB: 10 10 12 13 14 15 12 14 15 11 13 11 13 13 14 13 16 14 12 11 14 14

**Dm7 G7alt C7 F7 F#dim7**

TAB: 12 15 12 13 14 12 14 15 13 12 13 14 12 13 (13) 14 15 12 13 12 14 13

**Gm7 C7alt F7(#11)**

TAB: 12 13 12 15 12 11 12 10 9 9 11 11 9 9 6 5 8 5 7 10 7 8 10 11 8 10 11 13 11

[illegible]

**G7alt C7 A7alt**

9 sl. P P H P H H sl. P sl.

T 9 14 9

A 11 13 13 11 11 8 6 9 4 9

B 7 10 10 9 8 7 9 6 8 6 6 5 8

**Dm7** **G7alt** **C7**

T 8 5 6 9 6 8 8 6 6 6 8 6 6 8 5 7  
 A 7  
 B

### Rhythm Changes

**A**

**Fm7** **Bb7** **Ebmaj7** **Edim7** **Bb/F** **G7alt** **Cm7** **F7**

TAB

**A**

**Bbmaj7 G7b9 Cm7 F7 Dm7 G7alt Cm7 F7alt**

**TAB**

11-10 13-12 13-12-10 10 13-11-10 12-10 13 10-12 10-13 12-10 11 12 11-12 11 13 14

**B**

Am7 Am7 D7alt G7 Dm7 C7alt

P P sl. 3 sl. sl. sl.

T 12 12 14 14 13 11 12 11 10 14 13 12 12 14 12 11 10 9 8 9 10 8

A 14 15 14 10 12 12 15 14 12 10 10 12 10 8

B 15 15 12 12 13 12 15 14 12 13 10 8

**C7                      Gm7 D7 Gm7 C7      Cm7                      Cm7      F7alt**

Tablature for the first system, showing fret numbers and slurs. Chord changes are indicated above the staff.

**[A] Bbmaj7      G7alt      Cm7      F7alt      Dm7      G7      Cm7      F7**

Tablature for the second system, showing fret numbers and slurs. Chord changes are indicated above the staff.

**Fm7      Bb7      Ebmaj7      Edim7      Bb/F      Cm7      F7      Bbmaj7**

Tablature for the third system, showing fret numbers and slurs. Chord changes are indicated above the staff.

# Modern Approach To Rhythm Changes

**A**

**B♭maj7**

**G7alt**

**Cm7**

**F7alt**

**B♭maj7**

**G7alt**

**Cm7**

**Bmaj**

18-15 15-17-13 14-11 11 13-10 11-13-10 12 11-13 13-15 12-15 13-15 11-13 15-14 16-13 14

**Fm7**

**B♭7**

**E♭maj7**

**Edim7**

**Dm7**

**G7(b9)**

**Cm7**

**G7alt**

13-12 12-9 11 10 13 10 11 13-12 10 10 12 10-11 13 13-10 11-13 11-14 13-12 7 8

**B♭**

**G7(b9)**

**Cm7**

**F7**

**B♭maj7**

**G7(b9)**

**Cm7**

**F7**

10 11-10 9 10 11 11 11 9-13-14-11 12 12-13-10 12 12 9 9 10 11 12-12 14 14

**Fm7**

**B♭7**

**E♭maj7**

**Edim7**

**B♭maj7**

**Cm7**

**F7**

**B♭maj7**

11 11 13 8 8 7 8 8 8 8-7 8 9 8 9 11 8 9 8 9 6 8 9 7 6

**B**

**D7**

**G7**

14 13 14-10 13 12 12 14 17-14 16 17-16 15-17 14-16 14 14 14 12 14 14 12 12 12 14 14 12 11

**C7** *P* *P* *sl.* **F7** *sl.* *sl.* *sl.* *sl.*

T 10 12 8 10 7 9 7 10 7 10 7 8 6 8 1 1 3 3 3 5 5 3 4 3 4 5 6

**Bmaj7** **G7(b9)** **Cm7** **F7** **Dm7** **G7(b9)** **Cm7** **F7**

T 6 7 8 8 7 6 5 4 7 6 5 4 3 6 5 3 2 2 5 4 3 2 4 1

**Bb7** **Ebmaj7** **Ebm7** **Bbmaj7** **F7alt** **Bbmaj7**

T 6 9 10 8 9 8 11 11 12 13 15 12 16 15 14 17 13 10 11 10 9 7 7 8 6 8 7 5 8 8

## Practicing

Here are some important points for practicing:

- Use your time effectively (don't practice things that you already know).
- Divide your practice time by percentages:

1. Technique = 15%

2. Ear Training = 15%

3. Review = 35%

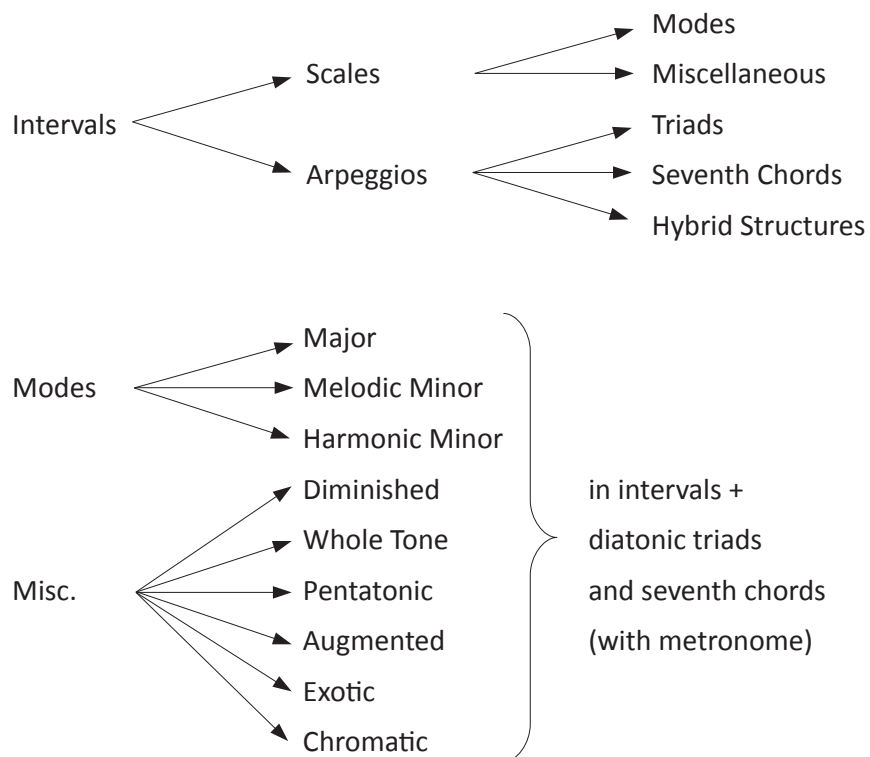
4. New Material = 35%

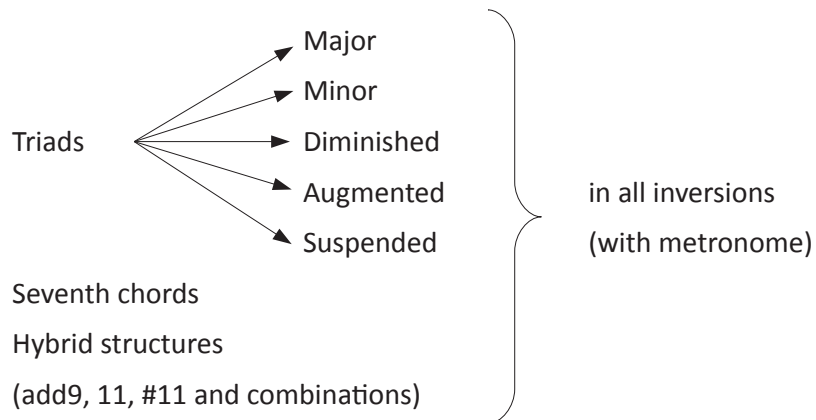
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100%

### Technique





### Left Hand

Finger independence drills (1,2,3,4, finger combinations)

1	2	3	4	2	3	4	1	3	4	1	2	4	1	2	3
1	2	4	3	2	3	1	4	3	4	1	2	4	1	3	2
1	3	2	4	2	1	3	4	3	2	1	4	4	2	3	1
1	3	4	2	2	1	4	3	3	2	4	1	4	2	1	3
1	4	3	2	2	4	3	1	3	1	2	4	4	3	1	2
1	4	2	3	22	4	1	3	3	1	4	2	4	3	2	1

### Right Hand

#### I. w/pick

1. Rhythms w/ alternate picking
2. sweep picking
3. cross string exercises

#### II. w/fingers

1. Arpeggios studies
2. MI alteration on scales
3. tremolo studies IMA

Technique should be broken down into old/new material.



## **Review Material**

- Consisting of things practiced in the past week
- Transcribed solos, new lines, voicings, tunes, compositions, etc.
- Keep a log to prevent the loss of previously learned material. Write down how, when and what was practiced using musical notation or chord diagrams when needed. Record any details such as fingerings and position changes

## **New Material**

- New fingerings, chord substitutions, lines, transcribed solos, chord voicings, new techniques, phrasing, sight reading, etc.
- This Book!

## **Ear Training**

- Transcribe solos
- Harmonic and melodic interval dictation (w/ a partner or tape)
- Melodic dictation
- Chord identification (EX. Maj<sup>7/#5</sup>)
- Mode identification (dorian, altered dominant for example)
- triad over bass note identification (Ex. Triad w/ b9 in the bass C/Db)
- Sight singing
- Play a note and sing an interval or scale above or below it
- Play three notes and identify intervals contained
- Play a chord and sing a line over it. Then write down the intervals you sang
- Try to write down harmonic progressions off recordings without your instrument (and with)
- Try to sing your favorite tunes in their original keys without your instrument and then check yourself to see if you are in the correct key
- Work on recognizing the exact pitch of a note (pitch color). You will find it easier on guitar than on a foreign instrument
- GOOD LUCK!



Rick Beato is a musician, teacher and father of three. He has a B.M. in Music Education and an M.M. in Jazz Performance from the New England Conservatory of Music. He is a record producer with numerous Platinum selling records and also co-wrote the RIAA certified Platinum selling song “Carolina” with Parmalee. In late 2013, “Carolina” climbed to Number One for 2 weeks on the Billboard Country Music Charts.

He is currently the co-founder of Intrvyl LLC a music education company which has developed The Beato Ear Training Program a relative pitch training platform for adults. In the past years he has grown his “Everything Music” Youtube Channel to 1.5 Million Subscribers and over 175 Million views.

[www.rickbeato.com](http://www.rickbeato.com)