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Part 4 - Thinking Chords and Modes While Improvising

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Speed-Reading Pitch

A large, light gray graphic of the number 8 is centered behind the title. The number is composed of two overlapping circles, with the top circle slightly offset to the left and the bottom circle slightly offset to the right, creating a central gap.

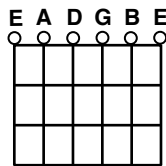
- **Strengthen Your Memory of Fretboard Note Names**
- **Using Multiple Perspectives to Read**
- **Choose a Scale Fingering**
- **Visualize the Written Scale**
- **Odd and Even Intervals on the Staff**
- **Visualize Intervals within a Fingering**

STRENGTHEN YOUR MEMORY OF FRETBOARD NOTE NAMES

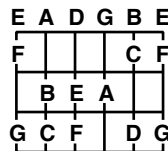
Open String Note Names

Use this memory device to memorize the open string note names: from sixth (largest string) to first string (smallest), the sequence created by the first letter of each word in this sentence below shows the open string note names.

Eat A Darn Good Breakfast Early



Open Position Natural Notes



open position natural notes on the three bass strings

A seven-letter alphabet is used in music, in a repeating cycle: A-B-C-D-E-F-G-A-B-C, etc. As you can see on the diagram above, the alphabetical pairs of letters A-B, C-D, F-G on the the same string each make a two -fret interval. The alphabetical pairs “B to C” and “E to F” are each a one fret interval. Where the musical alphabet starts over, G-A is an exception and is also a two-fret interval.

Since the sixth string open is “E” (fret zero), “F” would be one fret above it on the sixth string first fret. “G” would follow two frets above “F”, on the third fret. The fifth string open is “A” (fret zero). “B” would be two frets above it on the fifth string, second fret. “C” would follow one fret above “B” on the third fret. The fourth string open is “D” (fret zero). “E” would be two frets above it on the fourth string second fret. “F” would follow one fret above “E” on the third fret.

all open position natural notes

Starting with the sixth (largest) string, open “E”, ascend from the sixth string to the first (smallest) string, playing three notes on each string, except only two notes on the third string. After playing each open string, calculate the location of the next two letters, using the rule that each alphabetical pair is two frets apart, except the pairs B-C and E-F are one fret apart. Remember the exception: only play two

notes on the third string. You should have achieved the result shown below in standard music notation and tab.

The image shows a musical staff with a treble clef and a guitar tab below it. The staff contains a sequence of notes: E, F, G, A, B, C, D, E, F, G, A, B, C, D, E, F, G. The guitar tab is for the third string and shows the following fret numbers: 0 1 3 0 2 3 0 2 0 1 3 0 1 3.

A-B-C-D-E-F At the Fifth Position

As a group, the open position notes A-B-C on the fifth string and D-E-F on the fourth string duplicate on the sixth and fifth string at the fifth fret. See the diagrams to the right.

The first diagram shows fret 1 on the fifth and fourth strings. The fifth string has notes A (open) and D (fret 1). The fourth string has notes B (fret 1) and E (fret 1). The second diagram shows fret 5 on the sixth and fifth strings. The sixth string has notes A (fret 5) and D (fret 5). The fifth string has notes B (fret 5) and E (fret 5). The fourth string has notes C (fret 5) and F (fret 5).

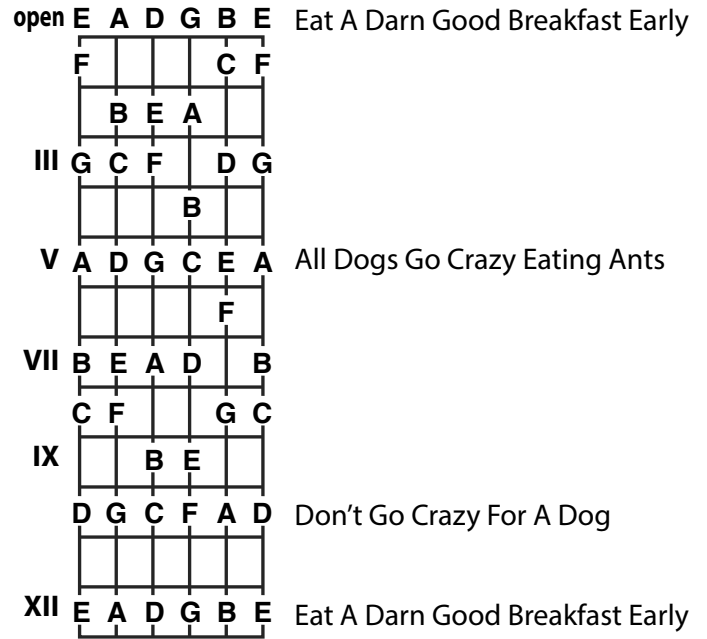
Natural Notes On The Two Bass Strings

Once you have memorized the open position note names on the two bass strings and “A-B-C-D-E-F” at the fifth position, all that remains is the tenth and twelfth frets. The twelfth fret note names are the same as each open string. The tenth fret on each string is one letter lower in the alphabet than the letter name for the twelfth fret.

The diagram shows the two bass strings (E and A) with natural notes at various frets. At fret 5, the E string has A and D, and the A string has B and E. At fret 10, the E string has D and G, and the A string has C and F. At fret 12, the E string has E and A, and the A string has F and C. The open strings are E and A.

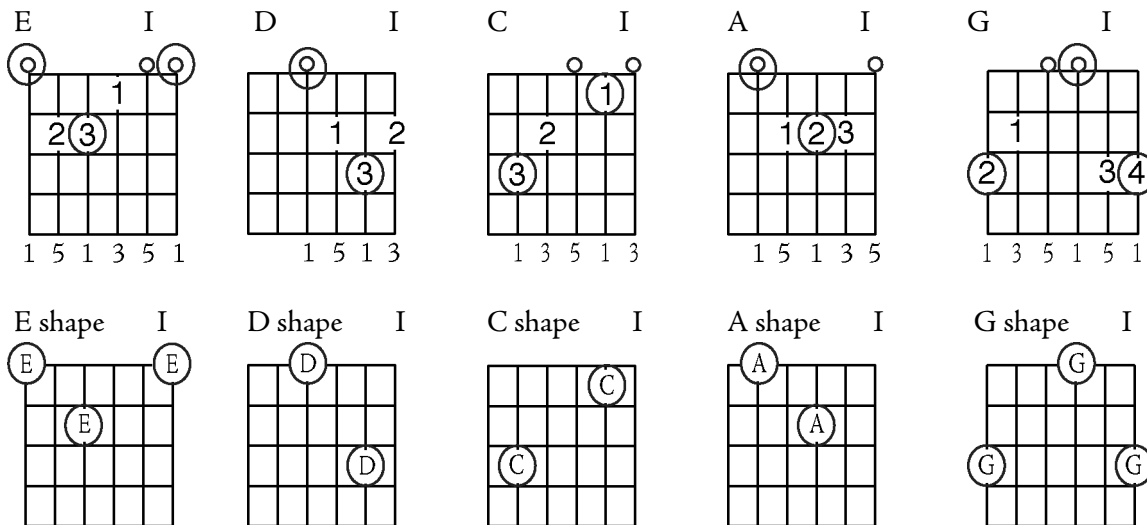
Frets with All Natural Notes

The open strings, fifth fret, tenth fret and twelfth fret have natural notes on every string. Next to the diagram at the right, sentences are shown to help memorize those notes. The set of first letters of each of the words names the natural notes from sixth (largest) string to first string.



Octaves

You can also find notes by referencing a note you know on one of the bass strings and locating its octave on a smaller string. The five octave shapes are shown in the second row below. The letters name the shape, but may be placed on any letter. The first row shows the origin of each octave shape in the roots of an open position chord. Explore the diagram above (Frets with All Natural Notes) to confirm that each note is related to others by octave shapes.



USING MULTIPLE PERSPECTIVES TO READ

Learning to read music notation with multiple perspectives will make you more capable. Being able to recognize letter names, intervals, patterns on scales, and so on can all make you a faster reader. Use your auditory memory of the melody (if any) to check the notes after you have used other criteria to decide where to play them. The perspectives include:

- Learn to identify intervals on the staff by [odd and even-numbered intervals](#), then specific intervals.
- Relate each note to scale tone “1” of the parent major scale (the major scale on which the melody is based). See [Key Scales/Key Scale, Chord Scale and Parent Scale](#).
- Identify consecutive scale tones, or sequences of every-other scale tone.
- In Note Sets, Structures and Design, study [Intervals and Formulas](#). Learn the unique interval fingerings: five unique octave fingerings; four unique fingerings for fourths and augmented fourths; eight unique fingerings for fifths and diminished fifths; six unique fingerings for major and minor thirds; six unique fingerings for major and minor sevenths.
- Relate each note in the piece of music to the next by interval.
- Practice visualizing on the staff, the parent major scale in intervals in this order: stepwise, octaves, fourths, fifths, thirds, sixths, then sevenths.
- Prepare to identify chord tones in the melody by learning [chord-naming conventions](#) and the theory of chord construction (see [All Scale-Tone Chords](#)).
- When the melody is played over a chord progression, learn many chord fingerings and a complete arpeggio for each chord in the fretboard area of the parent major scale. See [Triad Arpeggio Exercises/Triad Chord and Arpeggio Fingering](#) and see [Default Scales Chords and Arpeggios](#) (all of the sections with “Arpeggio” in the title).
- Learn melodic [theme and variation](#), so when it occurs in a melody you can learn to modify the fingering for one instance of a theme to another instance as directed by the melody.
- Learn the [chord serial number](#) system in [Chord Archetypes/1,512 Variations of a Tertian Quadrad/chord serial numbers](#), so you can quickly get the tones of a chord in mind.
- Learn principles of [voice leading](#), so you can predict the movement of voices in multi-voiced music.
- Learn the melodic and harmonic devices used in the piece of music, so you can predict melodic lines. See [Melodic Cells](#) and All the chapters in [Harmonic Improv](#) (Part 7 and Part 8).

Visualize every note you read: Read and play a phrase a few times until you memorize it. Focus on the mechanical event of fretting each note in sequence first, then the rhythm. Learn the melodic rhythm early enough that you don't memorize an incorrect rhythm. Look away from the sheet music. Re-play

the phrase and in the process visualize it written on the staff. Then visualize playing the written phrase without a guitar, without reading.

A phrase is usually about eight to twenty notes, separated by pauses. If there are no pauses, group the notes into phrases of 8 to 20 notes by bars or by the chord progression.

CHOOSE A SCALE FINGERING

Most musical parts can be related to one or more major scales. Since most of the notes of a each section of a piece of music you read musical part are usually contained in a single major scale, knowing the major scale fingering in the range of the musical part you are reading is very helpful.

For the major scale, there are three archetypal one-octave fingerings, seven in-position fingerings and seven three-note-per-string fingerings.

Three Archetypal One-Octave Major Scale Fingerings

All in-position and three-note-per-string major scale fingerings are based on these three. The three archetypes are shown below in the key of A major (with three sharps: F#, C# and G#), with the three orientations regarding which finger is on the low octave tone center ("A" in this case): index finger, middle finger and little finger. Get used to the idea of keys having flats or sharps. Most keys do have flats or sharps.

index finger middle finger little finger

fingers → 1 2 4 1 2 4 1 2 2 4 1 2 4 1 3 4 4 1 3 4 1 3 4 1

T
A
B

numbered major scale tones → 1 2 3 4 5 6 7 1 1 2 3 4 5 6 7 1 1 2 3 4 5 6 7 1

compensation for the flat-tuned first and second strings

The two smallest strings on the guitar are tuned relatively one fret lower than the other strings. Each string is a perfect fourth (equal to five frets, non-inclusively) higher in pitch than the next larger string, except the second string. The relationship between the third and second string is unique. They are tuned a major third (four frets, non-inclusively) apart.

The instances of each of the three archetypal octave fingerings are shown below, where they have been moved to different string sets. Notice the "skewing" of the pattern where notes on the first two strings are fretted relatively one fret higher to compensate for the fact that the first two strings are tuned one fret lower than the other strings.

index finger

fingers → 1 2 4 1 2 4 1 2 1 2 4 1 2 4 1 2 1 2 4 1 2 4 2 3 1 2 4 1 2 4 1 2

numbered major scale tones → 1 2 3 4 5 6 7 1 1 2 3 4 5 6 7 1 1 2 3 4 5 6 7 1 1 2 3 4 5 6 7 1

middle finger

fingers → 2 4 1 2 4 1 3 4 2 4 1 2 4 1 3 4 2 4 1 2 4 1 3 4 1 3 1 2 4 1 3 4

numbered major scale tones → 1 2 3 4 5 6 7 1 1 2 3 4 5 6 7 1 1 2 3 4 5 6 7 1 1 2 3 4 5 6 7 1

little finger

fingers → 4 1 3 4 1 3 4 1 4 1 3 4 1 3 1 2 4 1 3 4 2 4 1 2 3 1 2 3 1 2 4 1 3 1 2 4 1 3 4 4

numbered major scale tones → 1 2 3 4 5 6 7 1 1 2 3 4 5 6 7 1 1 2 3 4 5 6 7 1 1 2 3 4 5 6 7 1 1 2 3 4 5 6 7 1

the seventh note changed strings, compared to the first bar

the seventh note changed strings, compared to the previous bar

the eighth note must be played on the first string, since we've "run out" of strings

the seven in-position major scale fingering patterns for guitar

<i>fingering 1</i>	<i>fingering 2</i>	<i>fingering 3</i>	<i>fingering 4</i>	<i>fingering 5</i>	<i>fingering 6</i>	<i>fingering 7</i>
3-4 reaches	2 reaches	no reaches	2-3 reaches	4-5 reaches	one reach	no reaches

the seven in-position major scale fingering patterns for bass

<i>fingering 1</i>	<i>fingering 2</i>	<i>fingering 3</i>	<i>fingering 4</i>	<i>fingering 5</i>	<i>fingering 6</i>	<i>fingering 7</i>
2 reaches	3 reaches	1 reach	1 reach	3 reaches	2 reaches	no reaches

seven three-note-per-string major scale fingering patterns for guitar

These are often useful alternatives to the in-position fingerings for fast linear playing.

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Assess The Range and Choose a Fingering

assessing the range in a piece a music

Find the highest and lowest notes in a piece of music. They span the range. Define the location of the lowest note in relation to middle “C”. The choices include: in the octave below middle C”, “middle C” (itself), “in the first octave above middle C”, “in the second octave above middle C” and “in the third octave above middle C”. Then conceive the range from that note to the highest note. Is the span over an octave? Is the span over two octaves?

staff location terminology

Its good to have universally understood terms to describe the location of a note on the staff to others, or in thinking it to yourself. Use the terms on the staff below. Since they are the same for any clef, no clef sign was shown at the left of the staff below.

second ledger line below

first ledger line below

bottom line

second line from the bottom

middle line

second line from the top

top line

first ledger line above

second ledger line above

below the first ledger line (below the staff)

below the bottom line

bottom space

second space from the bottom

top space

above the top line

above the first ledger line (above the staff)

above the second ledger line above

treble clef note identification by octave

middle C

one octave above middle C

two octaves above middle C

three octaves above middle C

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

in the first octave below middle C

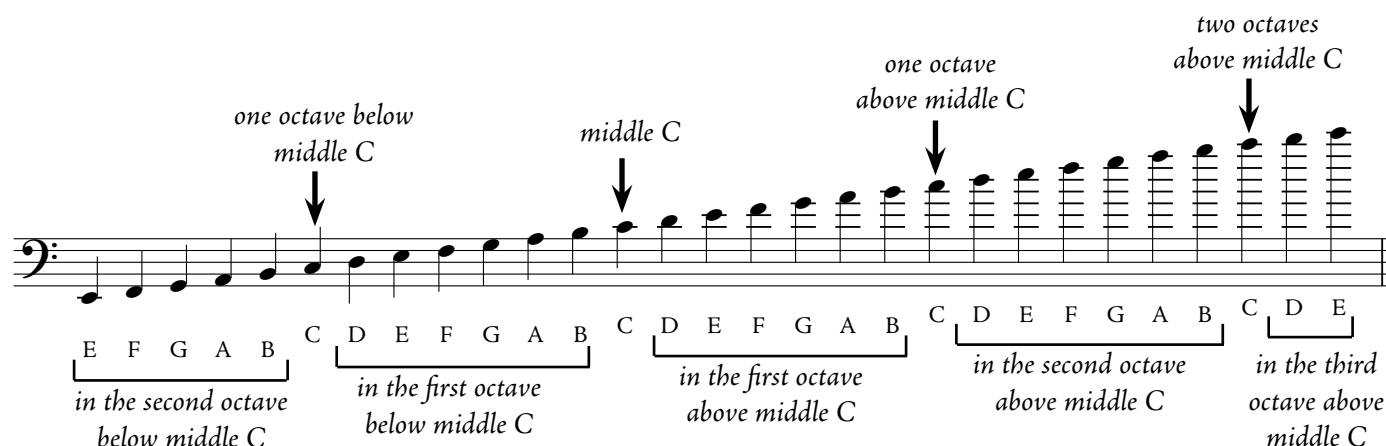
in the first octave above middle C

in the second octave above middle C

in the third octave above middle C

in the fourth octave above middle C

bass clef note identification by octave



determine the major scale on which the melody is based

At first, you can just use the major scale indicated by the key signature (see the separate chapter on key signatures). Once you are more advanced in music analysis, you can more discretely determine the relationship to major scales.

determine the major scale tone number for the lowest and highest note

Each note in the major scale can be given a number. The note that names the major scale is numbered “1”, the next note above it is numbered “2”, and so on, numbering the seven notes of the scale in ascending order. The eighth note can be numbered “1” again, since it would have the same letter name as “1”.

define the lower note and describe the relationship to the upper note

Define the lowest note in the piece of music in the terms shown above. Describe relationship of the highest note in the piece to the lowest note in the piece in terms of being in the same octave (before the same numbered tone reoccurs), in the first octave higher or in the second octave higher.

choose an easy major scale fingering (progressive order 7362154) that accommodates the necessary range...

Using the [Full-Fretboard Treble Clef Note Names](#) chart (or your memory of it), determine which major scale fingering(s) would accommodate that range and choose the fingering with the fewest reaches (and the most duplication of pattern on adjacent strings). There are enlarged view on the two pages following the main chart.

progressive order of major scale fingerings by comfort

Melodies are usually based on major scales, alterations of them or subsets of them. The most comfortable major scale fingerings are contained within a range of four consecutive frets. Fingerings that require

reaching to a fifth fret are less comfortable to play. It is also easier to fret a scale that has duplicate fingerings on adjacent strings, which requires less thought.

The easiest major scale fingerings are 3 and 7, since they have no “reaches”. Fingering 6 has one reach. Fingering 2 has two reaches. Fingering 1 has three or four reaches, depending on the option you take for the note on the third string with the little finger or on the second string with the index finger. Fingering 5 has four or five reaches (depending on the option). Fingering 4 has only two or three reaches (depending on the option you take), but requires more thought, since only one pair of adjacent strings have the same fingering pattern.

fingering 1 reach with index finger	fingering 2 reach with index finger	fingering 3 no reaches!	fingering 4 reach with index finger	fingering 5 reach with index finger	fingering 6 reach with little finger	fingering 7 no reaches!
1 4 | 5 1	2 5 1 4 6 2	3 6 2 5 7 3	4 | 1 4	5 1 4 | 2 5	6 2 5 1 3 6	7 3 6 2 | 7
7 3		4 | 1 4	7 3 6	7	4	1 4 | 5 1
2 5 1 4 6 2	3 6 2 5 7 3	7 3 6	5 1 4 | 2 5	6 2 5 1 3 6	7 3 6 2 | 7	7 3
	4 | 1 4	5 1 4 | 2 5	7	4	1 4 | 5 1	2 5 1 4 6 2
3 6 2 (5) 7 3	7 3 (6)	(7)	6 2 5 (1) 3 6	7 3 6 (2) 7	7 (3)	

The longer in-position major scale fingerings are not well-suited for scalar patterns, but are more useful in creating harmonic structures. In playing a scale where there are duplicate notes on strings two and three, play either note (not both).

override reach ability by other considerations

The considerations of fret space width, tone, frequent occurrence of a “reached” note or accessible arpeggios can override the choice of a major scale fingering by range.

Fret space width. Playing too high (toward the guitar body), where the fret spaces are very small, will be less comfortable. Likewise, playing too low on the fretboard (toward the head of the guitar), where the fret spaces are very large, will be less comfortable.

Tone. You may choose a position closer to the head of the guitar for more treble tone or closer to the body of the guitar for more bass tone. Subtle considerations of one or more notes being on a plain string for brighter tone or on a wrapped string for more bassy tone may come into play.

Frequent occurrence of one or more “reached” notes (those that are not within the comfortable range of four consecutive frets) may cause preference for another fingering without that issue.

Accessible arpeggios. Look for arpeggios that are structurally part of the melody and consider their ease of fingering as subsets of the major scale fingering you choose.

Full-Fretboard Treble Clef Note Names

	string 6	string 5	string 4	string 3	string 2	string 1
open	E	A	D	G	B	E
fret 1	F	A# Bb	D# Eb	G# Ab	C	F
fret 2	F# Gb	B	E	A	C# Db	F# Gb
fret 3	G	C	F	A# Bb	D	G
fret 4	G# Ab	C# Db	F# Gb	B	D# Eb	G# Ab
fret 5	A	D	G	C	E	A
fret 6	A# Bb	D# Eb	G# Ab	C# Db	F	A# Bb
fret 7	B	E	A	D	F# Gb	B
fret 8	C	F	A# Bb	D# Eb	G	C
fret 9	C# Db	F# Gb	B	E	G# Ab	C# Db
fret 10	D	G	C	F	A	D
fret 11	D# Eb	G# Ab	C# Db	F# Gb	A# Bb	D# Eb
fret 12	E	A	D	G	B	E
fret 13	F	A# Bb	D# Eb	G# Ab	C	F
fret 14	F# Gb	B	E	A	C# Db	F# Gb
fret 15	G	C	F	A# Bb	D	G
fret 16	G# Ab	C# Db	F# Gb	B	D# Eb	G# Ab
fret 17	A	D	G	C	E	A
fret 18	A# Bb	D# Eb	G# Ab	C# Db	F	A# Bb
fret 19	B	E	A	D	F# Gb	B
fret 20	C	F	A# Bb	D# Eb	G	C
fret 21	C# Db	F# Gb	B	E	G# Ab	C# Db
fret 22	D	G	C	F	A	D
fret 23	D# Eb	G# Ab	C# Db	F# Gb	A# Bb	D# Eb
fret 24	E	A	D	G	B	E

Treble Clef Note Names - "the Head End of the Fretboard"

	string 6	string 5	string 4	string 3	string 2	string 1
open	E	A	D	G	B	E
fret 1	F	A# Bb	D# Eb	G# Ab	C	F
fret 2	F# Gb	B	E	A	C# Db	F# Gb
fret 3	G	C	F	A# Bb	D	G
fret 4	G# Ab	C# Db	F# Gb	B	D# Eb	G# Ab
fret 5	A	D	G	C	E	A
fret 6	A# Bb	D# Eb	G# Ab	C# Db	F	A# Bb
fret 7	B	E	A	D	F# Gb	B
fret 8	C	F	A# Bb	D# Eb	G	C
fret 9	C# Db	F# Gb	B	E	G# Ab	C# Db
fret 10	D	G	C	F	A	D
fret 11	D# Eb	G# Ab	C# Db	F# Gb	A# Bb	D# Eb
fret 12	E	A	D	G	B	E
fret 13	F	A# Bb	D# Eb	G# Ab	C	F
fret 14	F# Gb	B	E	A	C# Db	F# Gb

Treble Clef Note Names - "the Body End of the Fretboard"

The chart displays the following note names for each fret:

- Fret 10: D, G, C, F, A, D
- Fret 11: D# Eb, G# Ab, C# Db, F# Gb, A# Bb, D# Eb
- Fret 12: E, A, D, G, B, E
- Fret 13: F, A# Bb, D# Eb, G# Ab, C, F
- Fret 14: F# Gb, B, E, A, C# Db, F# Gb (8va)
- Fret 15: G, C, F, A# Bb, D, G (8va)
- Fret 16: G# Ab, C# Db, F# Gb, B, D# Eb, G# Ab (8va)
- Fret 17: A, D, G, C, E, A (8va)
- Fret 18: A# Bb, D# Eb, G# Ab, C# Db, F, A# Bb (8va)
- Fret 19: B, E, A, D, F# Gb, B (8va)
- Fret 20: C, F, A# Bb, D# Eb, G, C (8va)
- Fret 21: C# Db, F# Gb, B, E, G# Ab, C# Db (8va)
- Fret 22: D, G, C, F, A, D (8va)
- Fret 23: D# Eb, G# Ab, C# Db, F# Gb, A# Bb, D# Eb (8va)
- Fret 24: E, A, D, G, B, E (8va)

Full Fretboard Bass Clef Note Names

	string 4	string 3	string 2	string 1
open	E	A	D	G
fret 1	F	A# Bb	D# Eb	G# Ab
fret 2	F# Gb	B	E	A
fret 3	G	C	F	F# Ab Bb
fret 4	G# Ab	C# Db	F# Gb	B
fret 5	A	D	G	C
fret 6	A# Bb	D# Eb	G# Ab	C# Db
fret 7	B	E	A	D
fret 8	C	F	A# Bb	D# Eb
fret 9	C# Db	F# Gb	B	E
fret 10	D	G	C	F
fret 11	D# Eb	G# Ab	C# Db	D# Eb
fret 12	E	A	D	G
fret 13	F	A# Bb	D# Eb	G# Ab
fret 14	F# Gb	B	E	A
fret 15	G	C	F	A# Bb
fret 16	G# Ab	C# Db	F# Gb	B
fret 17	A	D	G	C
fret 18	A# Bb	D# Eb	G# Ab	C# Db
fret 19	B	E	A	D
fret 20	C	F	A# Bb	D# Eb
fret 21	C# Db	F# Gb	B	E
fret 22	D	G	C	F
fret 23	D# Eb	G# Ab	C# Db	D# Eb
fret 24	E	A	D	G

Bass Clef Note Names - "the Head End of the Fretboard"

	string 4	string 3	string 2	string 1
open	E	A	D	G
fret 1	F	A# Bb	D# Eb	G# Ab
fret 2	F# Gb	B	E	A
fret 3	G	C	F	A# Bb
fret 4	G# Ab	C# Db	F# Gb	B
fret 5	A	D	G	C
fret 6	A# Bb	D# Eb	G# Ab	C# Db
fret 7	B	E	A	D
fret 8	C	F	A# Bb	D# Eb
fret 9	C# Db	F# Gb	B	E
fret 10	D	G	C	F
fret 11	D# Eb	G# Ab	C# Db	D# Eb
fret 12	E	A	D	G
fret 13	F	A# Bb	D# Eb	G# Ab

Bass Clef Note Names - "the Body End of the Fretboard"

Fret	String 1 (Left)	String 2	String 3	String 4 (Right)
fret 10	D	G	C	F
fret 11	D# Eb	G# Ab	C# Db	D# Eb
fret 12	E	A	D	G
fret 13	F	A# Bb	D# Eb	G# Ab
fret 14	F# Gb	B	E	A
fret 15	G	C	F	A# Bb (8va)
fret 16	G# Ab	C# Db	F# Gb	B (8va)
fret 17	A	D	G	C (8va)
fret 18	A# Bb	D# Eb	G# Ab	C# Db (8va)
fret 19	B	E	A	D (8va)
fret 20	C	F	A# Bb	D# Eb (8va)
fret 21	C# Db	F# Gb	B	E (8va)
fret 22	D	G	C	F (8va)
fret 23	D# Eb	G# Ab	C# Db	D# Eb (8va)
fret 24	E	A	D	G (8va)

VISUALIZE THE WRITTEN SCALE

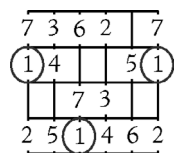
when reading music, stare at the sheet music, glance at the guitar

With each of the major scales written below, first practice playing the scale up and down while reading. Memorize the scale and play it without looking at the music notation. Practice this for each fingering of the C major scale below.

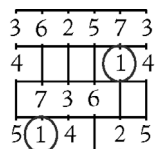
visualizing the C major scale

don't look at this page while visualizing, unless for one note to get oriented

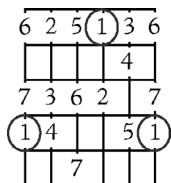
in-position fingering 7



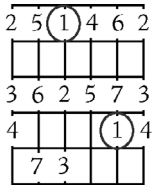
in-position fingering 3



in-position fingering 6



in-position fingering 2

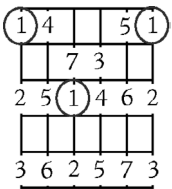


7

1 3 4 1 3 4 1 3 4 1 3 1 3 4 1 3 4 3 1 4 3 1 3 1 4 3 1 4 3 1 4 3

TAB: 10 12 13 10 12 14 10 12 10 12 13 10 12 13 12 10 12 10 9 12 10 9 12 10 13 12

in-position fingering 1

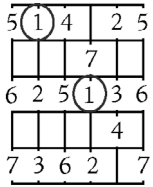


9

1 2 4 1 2 4 1 2 4 1 2 4 2 4 1 2 4 2 1 4 2 4 2 1 4 2 1 4 2 1 4 2

TAB: 8 10 12 8 10 12 9 10 12 9 10 12 10 12 8 10 12 10 8 12 10 8 10 9 12 10 9 12 10 8 12 10

in-position fingering 5

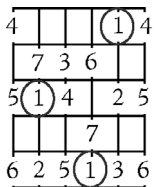


11

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

TAB: 3 5 7 3 5 7 3 5 7 4 5 7 5 6 3 5 7 5 3 6 5 7 5 4 7 5 3 7 5 3 7 5

in-position fingering 4



13

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

TAB: 1 3 5 2 3 5 2 3 5 2 4 5 3 5 1 3 5 3 1 5 3 5 4 2 5 3 2 5 3 2 5 3

ODD AND EVEN INTERVALS ON THE STAFF

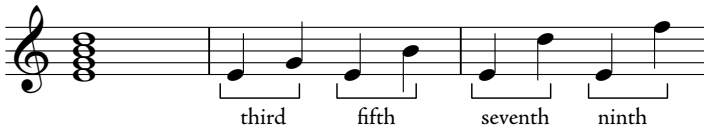
Recognizing intervals by their appearance on the staff is very helpful in speed reading, paired with your knowledge of fingered intervals on the fretboard. See Note Sets, Structures and Design/[Intervals and Formulas](#).

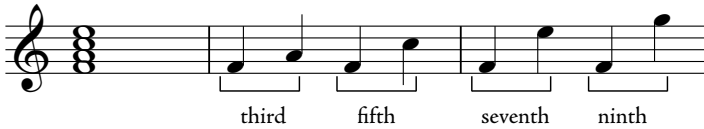
If the oval head of a note has a staff line (or ledger line) going through it horizontally, it is said to be on a line. If the oval head is between two staff lines (or ledger lines), it is said to be on a space. If a note is immediately above ("sitting on top of") a ledger line above the staff, it is on a space. If a note is immediately below ("hanging from") a ledger line drawn below the staff, it is on a space.

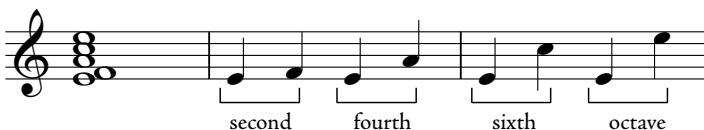
If two consecutive notes are both on the lines or both on the spaces, they are an odd-numbered interval. If one is on a line and one is on a space, they are an even-numbered interval. I refer to notes both on lines or both on spaces as being on the *same staff element*. When one is on a space and one on a line, they are on *different staff elements*.

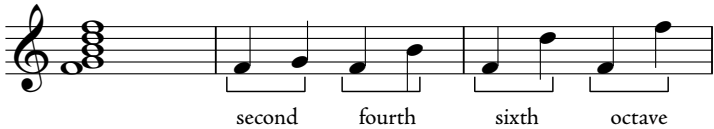
Once you have determined whether notes are odd-numbered or even-numbered intervals, it is easy to identify the interval at a glance. Odd-numbered intervals are thirds, fifths, sevenths or ninths. Think of them as small (thirds), medium (fifths), large (sevenths) or huge (ninths). Even-numbered intervals are seconds (small), fourths (medium), sixths (large) or octaves (huge).

judging intervals by size

odd-numbered intervals → 

odd-numbered intervals → 

even-numbered intervals → 

even-numbered intervals → 

odd-numbered and even-numbered intervals involving ledger lines

Ledger lines imply the same categories as staff lines. Imagine the ledger lines continuing above a note drawn on top of a ledger line or below a note drawn below a ledger line (such as the highest note and the lowest note in the example below). Then you'll be able to conceive such a note as "on a space".

odd-numbered intervals →

third fifth seventh ninth

odd-numbered intervals →

third fifth seventh ninth

even-numbered intervals →

second fourth sixth octave

be ready for change

The most common consecutive intervals are seconds (which make seven-tone scales like the major scale) and thirds (the default structure of chords). When reading a consecutive interval passage, be on the lookout for a change of interval, such as a change from seconds (stepwise) to a third, then a fourth. Changes of interval especially happen when going up and down the arpeggiated notes of a chord.

VISUALIZE INTERVALS WITHIN A FINGERING

Visualize each written note as you play each of the seven in-position octaves, fourths, fifths, sixths, then sevenths. Play each note of the scale in the two or three octaves in which it occurs. Play the scale in thirds, fourths, fifths and sixths. Fourth has the simplest structure to memorize, sixth the most difficult. Playing a scale in each of these intervals is described below.

playing scales in octaves

In each major scale fingering, play each numbered tone and its one or two reoccurrences in the next octave or two. Notes on the sixth string occur in two octaves higher (making three notes in all). In in-position major scale fingerings, notes on the sixth string are mirrored by notes on the first string two octaves higher with the same name on the same fret.

playing scales in fourths

In each major scale fingering, ascend scale tone numbers 1-4; 2-5; 3-6; 4-7; 5-1; 6-2; 7-3 (repeat). Then descend scale tone numbers 1-5; 7-4; 6-3; 5-2; 4-1; 3-7; 2-6; (repeat).

playing scales in fifths

In each major scale fingering, ascend scale tone numbers 1-5; 2-6; 3-7; 4-1; 5-2; 6-3; 7-4 (repeat). Then descend scale tone numbers 1-4; 7-3; 6-2; 5-1; 4-7; 3-6; 2-5; (repeat).

playing scales in thirds

In each major scale fingering, ascend scale tone numbers 1-3; 2-4; 3-5; 4-6; 5-7; 6-1; 7-2 (repeat). Then descend scale tone numbers 1-6; 7-5; 6-4; 5-3; 4-2; 3-1; 2-7; (repeat).

playing scales in sixths

In each major scale fingering, ascend scale tone numbers 1,6; 2,7; 3,1; 4,2; 5,3; 6,4; 7,5 (repeat). Then descend scale tone numbers 1,3; 7,2; 6,1; 5,7; 4,6; 3,5; 2,4 (repeat).

playing scales in sevenths

In each major scale fingering, ascend scale tone numbers 1-7; 2-1; 3-2; 4-4; 5-4; 6-5; 7-6; (repeat). Then descend scale tone numbers 1-2; 7-1; 6-7; 5-6; 4-5; 3-4; 2-3; (repeat).

Triad Arpeggio Exercises

- **Triad Chord and Arpeggio Fingering**
- **Day in The Life**
- **Black Magic Woman**
- **Friend of the Devil**
- **Let It Be**
- **Hotel California**
- **I Put a Spell on You**
- **The Way**
- **Sweeping Triad Arpeggios**

TRIAD CHORD AND ARPEGGIO FINGERING

In a Way, Triads Are the Tonal Basis of All Chords

Larger chords can be conceived more easily if you can see their triad subsets. It is very important to know triad structures. See [Triad Arcs](#), [EDCAGE Movable Triads and Arcs](#), [Building Triad Arcs](#), [The Major and Minor Chord Tone Arcs](#), [Core Melody/major and minor triad arcs](#), [Major Scale-Tone Triad Arcs](#), [Tonal Layers And Target Tones/triad arcs](#) and [Triads as a Harmonic or Melodic Basis](#), [Double Stops/Triad Arcs](#), [Major Scale-Tone Triads/Three-Note Triad Progression/Triad Arcs](#), [Pedal Point Progression/Modal Triad Improv and Cluster Playing](#).

major triad chords

<p>E form</p> <p>1 5 1 3 5 1</p>	<p>D form</p> <p>5 1 5 1 3</p>	<p>C form</p> <p>3 5 1 5 1</p>	<p>A form</p> <p>3 1 3 5 1 3</p>	<p>G form</p> <p>5 1 5 1 3 5</p>
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major triad arpeggios

<p>E form</p> <p>1 3 1 3 5 1</p>	<p>D form</p> <p>1 5 1 3 5 1</p>	<p>C form</p> <p>3 5 1 5 1 3</p>	<p>A form</p> <p>5 1 3 1 3 5</p>	<p>G form</p> <p>5 1 5 1 3 5</p>
----------------------------------	----------------------------------	----------------------------------	----------------------------------	----------------------------------

minor triad chords

<p>E form</p> <p>1 5 1 b3 5 1</p>	<p>D form</p> <p>5 1 5 1 b3</p>	<p>C form</p> <p>b3 5 1 5 1</p>	<p>A form</p> <p>b3 5 1 5</p>	<p>G form</p> <p>b3 5 1 5</p>
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minor triad arpeggios

<p>E form</p> <p>1 5 1 b3 5 1</p>	<p>D form</p> <p>b3 5 1 5 1 b3</p>	<p>C form</p> <p>b3 1 b3 5 1 b3</p>	<p>A form</p> <p>5 1 b3 1 b3 5</p>	<p>G form</p> <p>5 1 5 1 b3 5</p>
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DAY IN THE LIFE

Day in the Life "Ahh" Bridge Arpeggio Exercise - 1-2-3

rules of construction

In sixteenth notes, begin on the lowest chord tone and ascend three chord tones (including the first note), making the "1-2-3" fragment pattern. Play this pattern a total of five times, except change the last note to an eighth note. See [Fragment Patterns/1-2-3 With Anti-Metric Grouping](#).

The musical score is divided into three systems, each corresponding to a different chord: C, G, D, A, and E. Each system includes a treble clef staff with a key signature of one sharp (F#) and a 4/4 time signature. Below the treble staff are guitar TAB staves with fingering numbers (1-5) and a sequence of numbers indicating the order of notes to be played. The first system is for C and G chords, the second for D and A, and the third for E. The E system ends with a double bar line and a repeat sign.

System 1: C and G

Chord: C (C4, E4, G4) | Chord: G (B2, D3, F#3)

Fingering: 2 1 4 1 3 3 3 3 3 3 3 1 3 1 4 | 2 1 4 1 3 3 3 3 2 3 2 1 2 1 1

3

System 2: D and A

Chord: D (D4, F#4, A4) | Chord: A (C#3, E3, G#3)

Fingering: 1 4 4 4 4 3 4 2 1 3 1 2 1 2 1 | 4 3 1 3 1 1 1 1 1 1 1 4 1 4 4

5

System 3: E

Chord: E (E4, G#4, B4)

Fingering: 3 1 1 1 1 4 1 4 2 4 2 3 2 3 2 | 0

4

Day in the Life "Ahh" Bridge Arpeggio Exercise - 3-2-1

rules of construction

In sixteenth notes, begin on the highest chord tone and descend three chord tones (including the first note), making the "3-2-1" fragment pattern. Play this pattern a total of five times, except change the last note to an eighth note. See [Fragment Patterns/1-2-3 With Anti-Metric Grouping](#) (3-2-1 with anti-metric grouping is shown there as well).

The musical score is organized into three systems, each corresponding to a different chord: C, D, and E. Each system consists of a treble clef staff with a 4/4 time signature, a guitar TAB staff, and a sequence of fingering numbers. The C system starts with a C chord and a '3' above the first measure. The D system starts with a D chord and a '3' above the first measure. The E system starts with an E chord and a '5' above the first measure. The E system ends with a double bar line and a '0' below the staff.

System 1: C Chord

Treble Clef: C (3) 4 1 3 1 3 3 3 3 3 3 3 1 4 1 2 | G 1 1 2 1 2 3 2 3 3 3 3 1 4 1 2

TAB: 8 3 5 3 5 5 5 5 5 5 5 2 5 2 3 | 3 3 4 3 4 4 5 4 5 5 5 5 2 5 2 3

System 2: D Chord

Treble Clef: 3 D 4 1 2 1 2 1 2 1 3 1 3 4 3 4 4 | A 4 4 1 4 1 1 1 1 1 1 1 3 1 3 4

TAB: 5 2 3 2 3 3 2 3 2 4 2 4 4 5 4 5 | 5 5 2 5 2 2 2 2 2 2 2 4 2 4 5

System 3: E Chord

Treble Clef: 5 E 2 3 2 3 2 4 2 4 1 4 1 1 1 1 3 || 0

TAB: 4 5 4 5 4 6 4 6 2 6 2 2 2 2 3 || 0

Day in the Life "Ahh" Bridge Arpeggio Exercise - 1-2-3-4

rules of construction

In sixteenth notes, begin on the lowest chord tone and ascend four chord tones (including the first note), making the "1-2-3-4" fragment pattern. Play this pattern a total of four times for each chord, beginning on the lowest reachable (in position) chord tone for each chord. See [Fragment Patterns/1-2-3-4 With Anti-Metric Grouping](#),

The musical score is organized into three systems, each representing a different chord: C, D, and E. Each system consists of a treble clef staff with a 4/4 time signature, a bass staff with guitar tablature, and a row of numbers indicating fret positions for each note. The C system starts with a '3' above the first measure. The D system starts with a '3' above the first measure. The E system starts with a '5' above the first measure. The exercise concludes with a double bar line and a '0' on the bass staff.

Day in the Life "Ahh" Bridge Arpeggio Exercise - 4-3-2-1

rules of construction

In sixteenth notes, begin on one of the highest chord tones and descend four chord tones (including the first note), making the "4-3-2-1" fragment pattern. Play this pattern a total of four times for each chord. See [Fragment Patterns/1-2-3-4 With Anti-Metric Grouping \(4-3-2-1 with anti-metric grouping is shown there as well\)](#).

The musical score is divided into three systems, each representing a different chord: C, D, and E. Each system includes a treble clef staff with a 4/4 time signature, a guitar tablature staff, and a sequence of numbers indicating fret positions and fingerings. The C system starts with a C chord and a descending arpeggio pattern. The D system starts with a D chord and a descending arpeggio pattern. The E system starts with an E chord and a descending arpeggio pattern. The tablature staff shows the fret numbers for each note, and the numbers below the staff indicate the fingerings for each note.

System 1: C Chord

Notes: C4, E4, G4, B4, A4, G4, F4, E4, D4, C4

Fingerings: 1 3 3 3 3 3 3 1 3 3 1 2 4 1 2 2

Tablature: 3 5 5 5 5 2 5 5 2 3 5 2 3 3

System 2: D Chord

Notes: D4, F#4, A4, B4, A4, G#4, F#4, E4, D4, C#4

Fingerings: 4 1 2 1 1 2 1 3 2 1 3 4 1 2 3 4

Tablature: 5 2 3 2 3 2 3 2 4 2 4 2 4 5 5

System 3: E Chord

Notes: E4, G#4, B4, C#5, B4, A4, G#4, F#4, E4, D#4

Fingerings: 2 3 2 4 3 2 4 1 2 4 1 1 4 1 1 3

Tablature: 4 5 4 5 4 6 2 4 6 2 2 6 2 2 4

Day in the Life "Ahh" Bridge Arpeggio Exercise - 1-2-3-4, 4-3-2-1

rules of construction

Play all sixteenth notes (except the ending note in bar six). Ascend four instances of the 1-2-3-4 fragment pattern in each of the bars 1, 3 and 5. In bars 2 and 4, descend four instances of the 4-3-2-1 fragment pattern. See [Fragment Patterns/1-2-3-4 With Anti-Metric Grouping \(4-3-2-1 with anti-metric grouping is shown there as well\)](#).

1 C G

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

T 3 2 5 5 2 5 5 5 5 5 3 5 3 8 3 3 4 3 4 5 4 5 5 5 2 5 5 2 3

A

B 3 2 5 5 2 5 5 5 5 5 3 5 3 8 3 3 4 5 4 5 4 5 5 2 5 5 2 3

3 D A

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

T 2 5 5 4 5 5 4 2 4 2 3 2 5 5 2 2 5 2 2 2 2 2 2 2 2 4 2 4 5

A

B 2 5 5 4 5 5 4 2 4 2 3 2 5 5 2 2 5 2 2 2 2 2 2 2 2 4 2 4 5

5 E

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

T 4 2 2 6 2 2 6 4 2 6 4 5 6 4 5 4 0

A

B 4 2 2 6 2 2 6 4 2 6 4 5 6 4 5 4 0

Day in the Life "Ahh" Bridge Arpeggio Exercise - 4-3-2-1

rules of construction

Read and play the example first, then read the rules.

1. Use fretted notes only. Begin on the lowest octave root, unless there are two tones below it, in which case you should begin on the lowest tone.
2. Progress up the arpeggio to the highest tone in the position and back down to the lowest note in the position.
3. After reaching the lowest tone in the position, ascend the arpeggio until you complete sixteen notes. If the last note would end up on the third string, as it would have with the arpeggios for the "A" and "E" chords, change direction to stay in close range of the bass note for the next arpeggio.
4. In the "D" chord, the last note would have been "A", the same note that should start the "A" chord that follows. To avoid redundancy, change the last note to the next arpeggio tone above. The last note of the "D" chord was changed to the "D" note, rather than using the redundant "A" note.

C G

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

T
A
B 3 2 5 5 5 5 5 5 2 3 3 2 3 2 5 5 4 3 3 7 3 3 4 5 5 2 3 2

3 D A

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

T
A
B 2 5 5 4 2 3 2 5 2 3 2 4 5 5 2 5 5 4 2 2 2 5 5 2 2 2 4 5 4 2 4

5 E

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

T
A
B 4 2 2 6 4 5 4 5 4 6 2 2 4 2 2 2 0

Day in the Life "Ahh" Bridge - Arpeggios and Heptatonic Scales

Start each bar with the next lower chord tone in relation to the last note of the previous bar. On beat 1, ascend 1234 from a chord tone. On beat 2, ascend 1234 from the next higher chord tone, compared to beat 1. On beat 3, continue to the next higher chord tone in relation to the last note on beat 2 and descend the seven tone scale. Begin the fourth beat with a chord tone, skipping if necessary. Use the G major scale on the C chord, the D major on the G, D and A chords and the A major scale on E.

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

T
A
B 3 2 5 5 2 5 5 5 3 7 5 3 5 4 2 5 5 5 4 5 4 3 3 3 2 4 2 5 4 2 5

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

T
A
B 5 5 4 2 5 4 2 3 5 3 2 2 5 4 2 4 2 2 2 2 2 5 5 3 2 5 2 4 2 5 2 2 6 4 2 6 4 5 4 2 5 3 4 2 6 4

Keep the range of the starting notes in each bar close, avoiding skips. On beat 1, ascend the 123 arpeggio fragment pattern, which will take 9 notes by the first note of beat 3. Starting on that ninth note, begin a 31 (three one) fragment pattern, descending from each chord tone. Use the G major scale on the C chord, the D major on the G, D and A chords and the A major scale on E.

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

T
A
B 5 5 5 5 5 3 5 3 5 4 5 4 4 3 3 3 3 7 3 5 2 3 5 3 5 4 5 4 4 5 4 4 5 4 4 5 2 3 5 2 3

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

T
A
B 4 2 3 2 3 3 2 5 2 3 5 2 3 5 2 2 2 2 2 5 2 5 5 2 3 5 2 3 5 2 2 6 4 6 4 4 4 5 5 4 5 2 3 5 2 3 4

Keep the range of the starting notes in each bar close and in the upper octave, to fit the wide range of this design. Beginning on beat 1, descend the 321 fragment pattern three times, making 9 notes. Beginning with the ninth note, ascend the major scale with a pivot tone pattern that changes notes with the first and third notes on each beat. Use the G major scale on the C chord, the D major on the G, D and A chords and the A major scale on E.

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

T
A
B 8 3 3 5 5 5 5 5 2 5 4 5 5 3 3 4 4 4 5 5 2 5 4 5 5 3 4 4 5 5 5 5 5 5 5

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

T
A
B 2 3 2 2 2 4 4 5 2 5 4 5 5 5 5 2 5 2 2 2 2 2 4 2 5 2 2 4 5 4 1 4 1 2 2 4 2 1 2 2

Day In The Life "Ahh" Bridge Pivot Tone Arpeggio Exercise

1 C G

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

TAB: 3 3 7 3 5 3 3 3 3 5 3 7 3 | 3 3 7 3 5 3 3 3 3 5 3 7 3

3 D A

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

TAB: 5 5 4 5 5 5 5 5 5 5 4 5 | 5 5 4 5 5 5 5 5 5 5 4 5

5 E C

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

TAB: 2 2 6 2 4 2 2 2 2 4 2 6 2 | 5 5 5 5 5 5 5 2 5 5 5 3 3 3

7 G D

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

TAB: 3 3 7 3 3 3 3 3 3 3 3 | 3 3 5 3 2 3 2 3 3 3 3 3

TAB: 4 5 5 7 3 | 4 5 5 5

9 A E

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

TAB: 5 5 5 2 5 5 5 5 5 5 | 5 5 4 5 5 5 5 5 5 5

TAB: 2 2 4 5 4 | 4 6 2 2 4 0 4 0

Day In The Life "Ahh" Bridge Pivot Tone Scale Exercise

Scalar pivot tone with changing notes on the beat for one octave. Alternate up from a low pivot tone on one chord to down from a pivot tone on the next chord. Be aware of the consistent "anchored" finger for the pivot tone.

1

C G

3

D A E

"Encircling" scalar pivot tone with changing notes on the beat, using lower, upper then lower neighbors, making a "1171 21 71" fragment pattern. Begin with one chord tone as the pivot tone on the first beat, then begin the with the next lower chord tone as the pivot tone on the third beat. Be aware of the consistent "anchored" finger for each pivot tone.

11

C G

13

D A E

Arpeggiated pivot tone with changing notes on the beat, ascending on the first two beats. A four note cell begins on each of the third and fourth beats, with: chord tone, lower neighboring scale tone, return to the chord tone, down to next lower chord tone. Be aware of the consistent "anchored" finger for each pivot tone.

21

C G

23

D A E

Day in the Life - Double Stops

see the chapter [Double Stops](#)

C **G**

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

T
A
B

3 **D** **A**

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

T
A
B

5 **E**

1 1 2 3 1 2 4 2 1 1 2(or3) 4
 1 1 2 3 3 3 3 3 1 3 1 1

T
A
B

BLACK MAGIC WOMAN

Black Magic Woman Arpeggio Exercise - 4-3-2-1

Musical notation for measures 1-4. Chords: Dm, A.

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

Musical notation for measures 5-8. Chords: Dm, Gm.

10 5 6 7 5 6 7 7 | 6 7 7 7 7 8 5 | 10 6 8 7 8 7 8 | 8 7 8 5 7 8 5 5

Musical notation for measures 9-12. Chords: Dm, A, Dm.

10 5 6 7 5 6 7 7 | 5 6 7 6 7 7 4 | 10 5 6 7 5 6 7 7 | 6 7 7 7 7 8 5

Musical notation for measure 25. Chord: Dm.

8

Black Magic Woman Arpeggio Exercise - 1-2-3-4, 4-3-2-1

Dm **A**

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

T 5 6 7 6 7 7 6 5 6 7 6 7 7 8 5 4 7 7 4 7 7 5 5 6 7 6 7 7 4

A 5 8 7 8 7 7 6 5 6 7 7 7 8 5 4 7 7 4 7 7 5 5 6 7 6 7 7 4

B 5 8 7 8 7 7 6 5 6 7 7 7 8 5 4 7 7 4 7 7 5 5 6 7 6 7 7 4

5 **Dm** **Gm**

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

T 5 6 7 6 7 7 6 5 6 7 6 7 7 8 6 8 7 8 7 8 5

A 5 8 7 8 7 7 6 5 6 7 7 7 8 5 5 8 7 5 8 7 8 6 8 7 8 7 8 5

B 5 8 7 8 7 7 6 5 6 7 7 7 8 5 5 8 7 5 8 7 8 6 8 7 8 7 8 5

9 **Dm** **A** **Dm**

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

T 5 6 7 6 7 7 6 5 6 7 6 7 7 8 5 6 7 6 7 7 6 5 6 7 6 7 7 8

A 5 8 7 8 7 7 6 5 6 7 7 7 8 5 8 7 7 7 7 6 5 6 7 6 7 7 8

B 5 8 7 8 7 7 6 5 6 7 7 7 8 5 8 7 8 7 7 6 5 6 7 6 7 7 8

25 **Dm**

1

T

A

B 5

Black Magic Woman Arpeggio Exercise - 1-2-3

1 Dm A

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

TAB: 5 8 7 8 7 7 7 7 | 6 7 6 5 6 7 7 | 5 4 7 4 7 7 7 7 | 6 7 6 5 6 7 7 8

5 Dm Gm

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

TAB: 5 8 7 7 8 7 7 6 | 5 6 7 6 7 7 7 8 | 5 5 8 5 8 7 8 7 | 8 7 8 6 8 7 8 5

9 Dm A Dm

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

TAB: 5 8 7 7 7 7 7 | 5 6 5 5 5 6 7 7 | 5 8 7 8 7 7 7 7 | 6 7 6 5 6 7 7 8

25 Dm

1

TAB: 5

Black Magic Woman Arpeggio Exercise - 3-2-1

Musical notation for measures 1-4. Chords: Dm, A. Includes treble clef, 4/4 time signature, and guitar fretboard diagrams for strings T, A, and B.

Musical notation for measures 5-8. Chords: Dm, Gm. Includes treble clef and guitar fretboard diagrams for strings T, A, and B.

Musical notation for measures 9-12. Chords: Dm, A, Dm. Includes treble clef and guitar fretboard diagrams for strings T, A, and B.

Musical notation for measure 25. Chord: Dm. Includes treble clef and guitar fretboard diagrams for strings T, A, and B.

Black Magic Woman Arpeggio and Scale Exercise

rules of construction

Play through the exercise as you read the rules. Begin with the “D” note, the root of the Dm chord on the fifth string. For the remaining chords, start each bar with the next lower chord tone from the ending note of the previous bar that is low enough to fit the design that follows.

Ascend the first two sets of four eighth notes each with a 1-2-3-4 fragment pattern starting one chord tone higher. With the third set of four eighth notes, start one chord tone higher than the last note in the second set of four notes and descend the seven tone scale for eight notes.

1 Dm A

T
A
B

5 8 7 7 8 7 7 6 | 5 8 6 5 7 5 8 7 | 5 4 7 7 4 7 7 6 | 5 7 6 8 7 5 8 7

5 Dm Gm

T
A
B

5 8 7 7 8 7 7 6 | 5 8 6 5 7 5 8 7 | 5 5 8 7 5 8 7 8 | 6 5 8 6 7 5 8 7

9 Dm A Dm

T
A
B

5 8 7 7 8 7 7 6 | 5 7 6 8 7 5 8 7 | 5 8 7 7 8 7 7 6 | 5 8 6 5 7 5 8 7

25 Dm

T
A
B

5

Black Magic Woman Pivot Tone Arpeggio Exercise

Dm A

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

T
A
B 5 5 8 5 7 5 5 6 7 5 5 7 5 8 5 5 5 9 5 7 5 5 6 7 5 5 7 5 9 5

Dm Gm

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

T
A
B 5 5 8 5 7 5 5 6 7 5 5 7 5 8 5 5 5 5 8 5 5 8 7 5 5 5 5 5

9 Dm A Dm

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

T
A
B 5 5 8 5 7 5 5 6 7 5 5 7 5 4 5 5 5 8 5 7 5 5 6 7 5 5 7 5 8 5

25 Dm

1

T
A
B 5

Black Magic Woman Pivot Tone Scale Exercise 1

1 Dm A

TAB: 5 5 7 5 8 5 5 5 | 7 5 8 5 5 5 | 5 5 6 5 4 5 5 5 | 7 5 8 5 5 5

5 Dm Gm

TAB: 5 5 7 5 8 5 5 5 | 7 5 8 5 5 5 | 5 5 7 5 8 5 5 5 | 7 5 8 5 5 5

9 Dm A Dm

TAB: 5 5 7 5 8 5 5 5 | 5 5 6 5 4 5 5 5 | 5 5 7 5 8 5 5 5 | 7 5 8 5 5 5

25 Dm

TAB: 5

Black Magic Woman Pivot Tone Scale Exercise 2

1 Dm A

T
A
B

5 Dm Gm

T
A
B

9 Dm A Dm

T
A
B

25 Dm

T
A
B

Black Magic Woman Pivot Arpeggio and Pivot Scale Exercise 1

Musical notation for measures 1-4. Chords: Dm, A.

TAB: 10 5 6 5 6 7 6 7 | 7 7 8 7 5 7 7 7 | 9 5 5 5 5 6 5 6 | 7 7 8 7 6 7 7 7

Musical notation for measures 5-8. Chords: Dm, Gm.

TAB: 10 5 6 5 6 7 6 7 | 7 7 8 7 5 7 7 7 | 10 6 8 6 8 7 8 7 | 8 8 5 8 7 8 8 8

Musical notation for measures 9-12. Chords: Dm, A, Dm.

TAB: 10 5 6 5 6 7 6 7 | 7 7 8 7 6 7 7 7 | 10 5 6 5 6 7 6 7 | 7 7 8 7 5 7 7 7

Musical notation for measure 25. Chord: Dm.

TAB: 5

Black Magic Woman Pivot Arpeggio and Pivot Scale Exercise 2

1 Dm A

T
A
B

5 Dm Gm

T
A
B

9 Dm A Dm

T
A
B

25 Dm

T
A
B

Black Magic Woman Pivot Arpeggio - 1-3 Scale Exercise

1 Dm A

TAB: 5 8 7 8 7 7 7 7 | 6 7 5 5 7 8 5 7 | 5 4 7 7 4 7 7 6 | 5 7 6 8 7 5 8 7

5 Dm Gm

TAB: 5 8 7 7 8 7 7 6 | 5 8 6 5 7 5 8 7 | 5 5 8 7 5 8 7 8 | 6 5 8 6 7 5 8 7

9 Dm A Dm

TAB: 5 8 7 7 8 7 7 6 | 5 7 6 8 7 5 8 7 | 5 8 7 7 8 7 7 6 | 5 8 6 5 7 5 8 7

25 Dm

TAB: 5

FRIEND OF THE DEVIL

Friend of the Devil Arpeggio Scale Exercise 1-2-3-4, 4-3-2-1

G C

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

moving roll

T A B

5 D Am

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

T A B

9 D

4 3 1 1 3 1 1 1 1 1 1 4 1 1 4 4 4 1 1 1 1 1 1 3 1 1 3 4 1 1 1 3

T A B

11 G C

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

T A B

LET IT BE

Let It Be Arpeggio Exercise - 1-2-3-4, 4-3-2-1

1 C G Am F

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

T 8 8 12 8 8 7 10 7 8 12 8 10 8 13 8 10

A 9 9 9 7 8 9 10 9 10 10 10 10

B 10 9 9 9 10 9 10 10

5 C G F Em Dm C

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

T 8 8 12 8 8 7 10 7 8 8 8 9 6 7 8 12 8 8

A 9 9 9 9 10 10 8 9 6 7 9 8 8 9

B 10 9 10 10 10 8 9 7 10 9 8 8 9

17 Am G F C

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

T 8 12 8 10 7 10 7 8 8 13 8 10 8 12 8 8

A 9 10 9 9 7 8 9 10 10 10 10 9 8 8 8 9

B 10 9 9 9 10 9 10 10 10 10 10 9 8 8 8 9

21 C G F Em Dm C

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

T 8 8 12 8 8 7 10 7 8 8 8 9 6 7 8 12 8 8

A 9 9 9 9 10 10 8 9 6 7 9 8 8 8 9

B 10 9 10 10 10 8 9 7 10 9 8 8 8 9

HOTEL CALIFORNIA

Hotel California Arpeggio Exercise - 1-2-3-4-5-6-7-8, 4-3-2-1, 4-3-2-1

Bm F# A

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

T
A
B

4 E G D

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

T
A
B

7 Em F#

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

T
A
B

Hotel California Arpeggio Exercise - complex

This is a one-bar repeating pattern on arpeggios. There are four notes per beat. Start on a low note. Ascend six tones (inclusively). Descend two chord tones. Start the third beat up one chord tone from the last tone on the second beat and descend four chord tones. Start the fourth beat with the same note as the second note on the third beat, descend four notes inclusively.

Bm F# A

4 E G D

7 Em F#

Hotel California Pivot and Pivot Scale Exercise

Bm F# A

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

T
A
B

7 5 9 9 7 8 7 7 6 9 9 9 6 9 6 6 6 8 6 7 8 7 6 8 9 8 9 9 7 7 11 9 10 7 10 9 6 7 6 7 9 9 9 9

4 E G D

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

T
A
B

7 7 7 6 9 9 9 5 9 9 6 9 11 7 10 7 10 7 7 7 8 5 8 7 9 6 9 10 7 7 7 5 7 5 7 7 9 7 7 7 9 9 7 7

7 Em F#

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

T
A
B

7 7 7 10 7 7 9 9 8 10 8 9 9 11 9 10 6 9 6 9 9 8 9 6 7 8 7 6 8 9 8 9

17 G D Em Bm

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

T
A
B

7 10 7 7 7 7 5 8 7 6 9 10 5 9 5 7 5 5 7 7 7 5 7 5 7 7 9 7 7 9 9 7 7 9 9 8 10 8 9 9 11 9 10 7 7 7 10 7 7 9 9 8 10 8 9 9 11 9 10 7 5 9 7 7 7 7 8 7 7 6 9 9 9

21 G D Em F#

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

T
A
B

7 10 7 7 7 7 5 8 7 6 9 10 5 9 5 7 5 5 7 7 7 5 7 5 7 7 9 7 7 9 9 7 7 9 9 8 10 8 9 9 11 9 10 7 7 7 10 7 7 9 9 8 10 8 9 9 11 9 10 6 9 6 6 6 8 6 7 8 7 6 8 9 8 9

I PUT A SPELL ON YOU

I Put a Spell on You Full Range Arpeggio Exercise

Em Am Em

5 Am B

9 Em Am C

13 Em B Em Am Em

33 Em

THE WAY

The Way Arpeggio Exercise - 1-2-3-4, 4-3-2-1 (three times); 4-3-2-1, 4-3-2-1

1. **F#m** **Bm**

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

TAB: 4 2 2 2 5 2 2 | 7 6 7 5 9 5 7 6 | 9 7 7 7 10 7 7 | 7 7 7 7 9 7 9 9

5. **C#** **F#m**

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

TAB: 4 3 6 6 6 6 4 | 3 6 6 6 4 6 6 6 | 4 2 2 2 5 2 2 2 | 2 2 2 2 4 2 4 4

9. **F#** **Bm**

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

TAB: 4 3 2 2 6 2 2 | 6 7 6 9 6 7 6 | 9 7 7 7 10 7 7 | 7 7 7 7 9 7 9 9

13. **C#** **F#m** (1., 3.)

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

TAB: 4 3 6 6 6 6 4 | 3 6 6 6 4 6 6 6 | 4 2 2 2 5 2 2 2 | 2 2 2 2 4 2 4 4

31. **F#m** **E** (2.)

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

TAB: 4 2 2 2 5 2 2 2 | 4 5 4 6 5 4 6 7

Each 8: from root, 5 up, 3 down, succeeding beginning on near chord tone.

33 A E F#m C#

37 D A E

41 A E F#m C#

45 D A E C#

start 1 chord tone lower to prepare for return to beginning

jump to low octave for finality

4. F#m

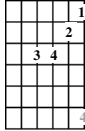
SWEEPING TRIAD ARPEGGIOS

Sweeping Arpeggio Exercise 1

Am XVII



Am XII



Am VIII



Am V



1

↑ ↓ ↓ ↓ ↑ ↑ ↑ ↓ ↓ ↓ ↑ ↑ ↑ ↓ ↓ ↓ ↑ ↑ ↑ ↓ ↓ ↓ ↑ ↑ ↑

T 19 17 17 17 20 17 17 17 14 14 13 12 17 12 13 14 | 10 9 10 8 12 8 10 9 7 5 5 5 8 5 5

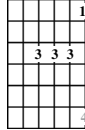
A 19 17 17 17 20 17 17 17 14 14 13 12 17 12 13 14 | 10 9 10 8 12 8 10 9 7 5 5 5 8 5 5

B 19 17 17 17 20 17 17 17 14 14 13 12 17 12 13 14 | 10 9 10 8 12 8 10 9 7 5 5 5 8 5 5

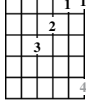
E IV



E VII



E XII



E XVI



3

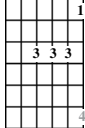
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T 6 4 5 4 7 4 5 4 9 9 7 12 7 9 9 | 14 13 12 12 16 12 12 13 18 16 17 16 19 16 17

A 6 4 5 4 7 4 5 4 9 9 7 12 7 9 9 | 14 13 12 12 16 12 12 13 18 16 17 16 19 16 17

B 6 4 5 4 7 4 5 4 9 9 7 12 7 9 9 | 14 13 12 12 16 12 12 13 18 16 17 16 19 16 17

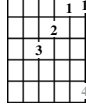
D XVII



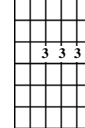
D XIV



D X



D V



5

↑ ↓ ↓ ↓ ↑ ↓ ↑ ↑ ↑ ↓ ↓ ↓ ↑ ↓ ↑ ↑ ↑ ↓ ↓ ↓ ↑ ↑ ↑

T 19 19 19 17 22 17 19 19 16 14 15 14 17 14 15 14 | 12 11 10 10 14 10 10 11 7 7 7 5 10 5 7

A 19 19 19 17 22 17 19 19 16 14 15 14 17 14 15 14 | 12 11 10 10 14 10 10 11 7 7 7 5 10 5 7

B 19 19 19 17 22 17 19 19 16 14 15 14 17 14 15 14 | 12 11 10 10 14 10 10 11 7 7 7 5 10 5 7

B dim.7 IV



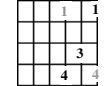
B dim.7 VII



B dim.7 X



B dim.7 XIII



Am

7

↑ ↓ ↓ ↓ ↑ ↓ ↑ ↑ ↓ ↑ ↓ ↓ ↑ ↓ ↑ ↑ ↓ ↓ ↓ ↑ ↑ ↑

T 4 7 6 4 7 4 6 4 7 10 9 7 10 7 9 7 | 10 13 12 10 13 10 12 10 13 16 15 13 16 18 19 16

A 4 7 6 4 7 4 6 4 7 10 9 7 10 7 9 7 | 10 13 12 10 13 10 12 10 13 16 15 13 16 18 19 16

B 4 7 6 4 7 4 6 4 7 10 9 7 10 7 9 7 | 10 13 12 10 13 10 12 10 13 16 15 13 16 18 19 16

Sweeping Arpeggio Exercise 2

Am XVII Am XII Am VIII Am V

1

E IV E VII E XII E XVI

5

D XVII D XIV D X D V

9

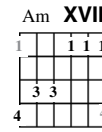
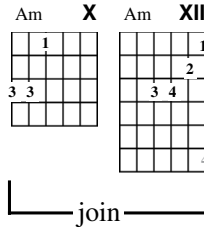
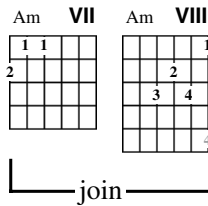
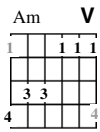
B dim.7 IV B dim.7 VII B dim.7 X B dim.7 XIII B dim.7 XVI

13

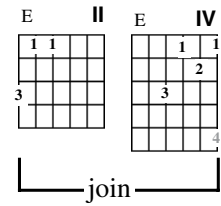
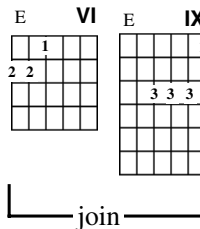
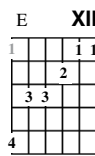
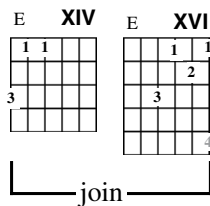
Am XVII Am XII Am VIII

17

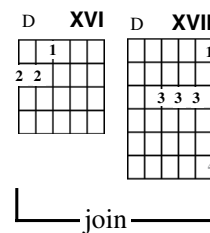
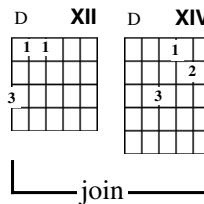
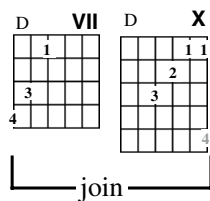
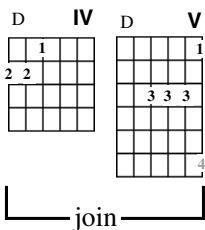
Sweeping Arpeggio Exercise 3



T 5 5 8 5 5 5 7 7 8 5 8 7 10 9 8 12 8 10 9 10 7 7 8 12 10 14 14 13 12 17 12 14 14 10 12 17 20 17 17 17 19 19 20 17



T 16 19 16 17 16 18 14 14 16 12 16 12 12 13 14 14 16 12 7 7 6 9 9 7 12 7 9 9 6 7 7 4 2 6 4 5 4 7 4 5 4 6 2 4 4



T 5 5 4 7 7 5 10 5 7 7 7 4 5 5 10 9 7 12 11 10 14 10 11 12 7 9 10 14 12 16 15 14 17 14 15 14 16 12 14 14 17 19 19 17 22 17 19 19 19 16 17 17

B dim.7 XIII

	1	1	1
1			
	2	2	
3	3	3	3
4			

B dim.7 X

	1	1	1
1			
	2	2	
3	3	3	3
4			

B dim.7 VII

	1	1	1
1			
	2	2	
3	3	3	3
4			

B dim.7 IV

	1	1	1
1			
	2	2	
3	3	3	3
4			

Musical notation for four B diminished 7th chords: XIII, X, VII, and IV. Each chord is shown with a treble clef staff, a guitar-style fretboard diagram, and a bass staff with fingerings.

Am V

1		1	1	1
3	3			
4				4

Musical notation for an Am V exercise. It features a treble clef staff with a melodic line, a guitar-style fretboard diagram, and a bass staff with fingerings.

Bold As Love Sweeping Arpeggio Exercise

A XII

1			1
	2	2	2
4			
			4

E XI

1			
			1 1
		2	
3	3		
			4

F#m IX

1			1
		2	
	3	4	
4			
			4

D IX

1			
			1 1
		2	
3	3		
			4

1

T 14 12 17 12 14 12 16 12 14 10 14 14 10 11 11 12
 A 14 14 14 14 14 14 13 13 14 14 10 11 11 12
 B 12 16 14 14 14 16 11 14 14 14 9 12 11 11 12 9 12 11 10 14 10 11 11 12

A XII

1			1
	2	2	2
4			
			4

E XI

1			
			1 1
		2	
3	3		
			4

5

T 12 17 12 14 12 16 12 14 12 17 12 14 12 16 12 12 13 14 14
 A 14 14 14 14 14 14 14 14 14 14 14 14 14 14 14 14 14 14
 B 12 16 14 14 16 12 16 14 14 16 11 14 13 12 13 14 14 11 14 14 13 12 13 14 14

F#m IX

1			1
		2	
	3	4	
4			
			4

D IX

1			
			1 1
		2	
3	3		
			4

G X

1			1
	2	2	2
4			
			4

7

T 10 14 14 14 10 14 14 10 11 11 10 14 14 10 11 11 12 12 12 10 15 10 12 12 12 14
 A 11
 B 9 12 11 11 12 10 14 14 12 9 12 11 11 10 14 14 10 11 11 12 12 10 14 12 12 12 14

A XII

1			1
	2	2	2
4			
			4

9

T 12 17 12 14 14 14 14 14 14 14 16 12
 A 14 14 14 14 14 14 14 14 14 14 14 14
 B 12 16 14 14 14 14 14 14 14 14 16 12

Emotive Qualities of Chords

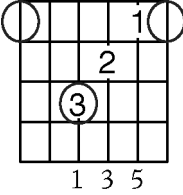
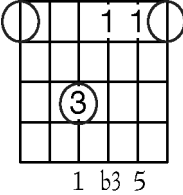
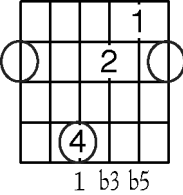
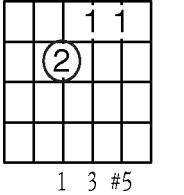
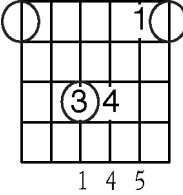
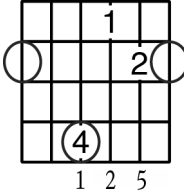
A large, light gray, stylized number '8' is centered in the background. The number has a thick outline and a white fill. The text 'Emotive Qualities of Chords' is overlaid on the top half of the number.

- **Triad Emotive Qualities**
- **Chord Qualities Expressed by Scales**
- **Summarizing Emotive Qualities in Chord Progression**
- **Chord Synonyms**

TRIAD EMOTIVE QUALITIES

Singular Triad Moods

Triads can be identified aurally by their emotive quality. Major chords sound happy, minor sad. Other factors can influence the mood and effect the emotive quality of a triad. A fast swing rhythm, for example, makes a song feel cheerful, even when used on a minor chord. A long, slow song featuring major chords, can sound a bit more somber than a fast song.

quality	major	minor	diminished	augmented	suspended fourth	suspended second
mood	happy	sad	depressed	tormented	heavenly	positive, other- worldly, modern
						
	1 3 5	1 b3 5	1 b3 b5	1 3 #5	1 4 5	1 2 5

Paired Triad Moods in Seventh Chords

quality	major 7	7 (dominant 7)	minor 7	m7b5	dim. 7 (°7)
combined triads	major + minor	major + diminished	minor + major	diminished + minor	dim. triad serial (repeating) pattern
mood	Romantic, leaning toward happy. A bright, open sound with two perfect fifths. Exotic dissonance when voicing 7 next to 1.	Aggressive, funky.	Romantic, leaning toward sad. Dark, open sounds with two perfect fifths.	Sad, but beautiful, synonym of minor sixth with the sixth as a bright color	Dark, open sound with two perfect fifths.
triad on root					
triad or cluster on third					
quadrad					
exotic voicing					

quality	m(ma7) (minor, major 7)	7 sus 4	major add 9	minor add 9	ma7sus4
combined triads	minor + augmented	suspended fourth + 1-2-4 cluster	major + 1-3-7 cluster	minor + 1-3-7 cluster	suspended + 1-2-b5 cluster
mood	Dark dilemma.	Aggressive, funky.	Bright, open sounds with three notes in stacked fifths.	Dark, exotic, Asian, with three notes in stacked fourths. Exotic dissonance when voicing 7 next to 1.	Heavenly and provocative.
triad on root	 1 b3 5	 1 4 5	 1 b3 5 2	 1 b3 5	 1 4 5
triad or cluster on third	 b3 5 7	 4 5 b7	 3 5 2	 b3 5 2	 4 5 7
quadrad	 1 b3 5 7	 1 4 5 b7	 1 3 5 2	 1 b3 5 2	 1 4 5 7
exotic voicing					

CHORD QUALITIES EXPRESSED BY SCALES

A melody made with an scale will primarily express the same emotive quality as the triad on which it is based. Other attributes to a piece of music can slant the emotive quality one way or another. Although a minor scale is sad, a lively rhythm, like an up-tempo swing can brighten the mood. A major key melody like Let It Be may be saddened by the slow “funeral march” tempo and the ambiguous temporary tone center moving from C major to A minor.

The table below shows common scales and the emotive qualities based on their tonic triads. A tonic triad is built with the first, third and fifth steps of the scale (technically a tonic tertian triad).

tonic triad	quality	scale examples	
<p>major</p> <p>1 3 5</p>	happy	<p>major scale (Ionian mode)</p>	<p>Mixolydian mode (scale)</p>
<p>minor</p> <p>1 b3 5</p>	sad	<p>Aeolian mode (scale)</p>	<p>harmonic minor scale</p>
<p>diminished</p> <p>1 b3 b5</p>	depressed	<p>Locrian mode (scale)</p>	<p>Aeolian flat five scale</p>
<p>augmented</p> <p>1 3 #5</p>	tormented	<p>whole tone scale</p>	<p>super Locrian scale (b6 proxies as #5)</p>

SUMMARIZING EMOTIVE QUALITIES IN CHORD PROGRESSION

Chord progression can be conceptually abbreviated. In improving over a four-chord progression like Am-G-F-G, one could improvise as if it were all an A minor chord. This would be treating the “G” chords as passing chords and treating the F as an Fma7, which includes the notes of Am. This same conception happens in every thing we listen to, without the listener necessarily realizing it.

In the [Substitution](#) chapter, in the sections [Abbreviate, Elaborate or Alter Chord Progression](#) and [Abbreviating Chord Pairs](#), you can learn how to abbreviate chord progression. Abbreviate a chord progression to a single chord and think of the emotive quality of that chord.

CHORD SYNONYMS

Synonyms are alternate names for chords that share the same notes. Am7 has the notes A-C-E-G. So does C6 (C-E-G-A). By thinking of the synonym for a chord, you can change the emotive quality. Pat Martino, for example, uses a “minor conversion” theory and thinks of all the minor synonyms for chords in a progression. Likewise, you could think of all the major synonyms. Study [Improv By Ear/Deciding How You Will Depict the Chords](#), [Chord-Naming Conventions/Chord Synonyms](#)

Recognizing Scale-Tone Chords

- **Devices Used to Recognize Scale Tone Chords**
- **Number Cycles**
- **Major Scale-Tone Chords**
- **Modal Major Scale-Tone Chords**
- **Major Sharp Five Scale-Tone Chords**
- **Melodic Minor Scale-Tone Chords**
- **Adding the 2, 4 and 6 to Seventh Chords**
- **Major and Minor II-V Cadences**
- **Scales for Altered Dominant Chords**
- **Scales for Diminished Chords**

DEVICES USED TO RECOGNIZE SCALE TONE CHORDS

Memorize Key Signatures

If you have key signatures memorized, you can recognize the parent scale used in a song, then contemplate the chords built with that parent scale (see [Key Scales](#)) and the pentatonic scale subsets (see [Scale-Tone Arpeggios and Pentatonics/Major Scale-Tone Pentatonic Scales](#)).

Memorizing Scale Tone Chords

By memorizing the chords constructed on common scales, you can recognize them when they occur in songs. It's especially useful to also memorize the sequence of chord roots in fourths, which is the most common order of chord roots in songs. See the following:

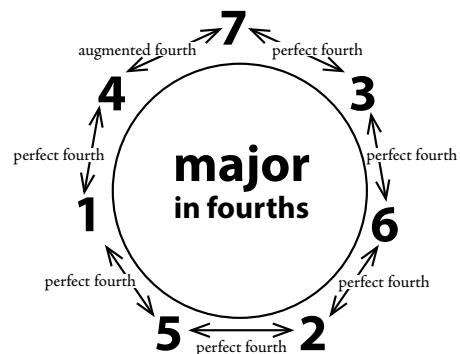
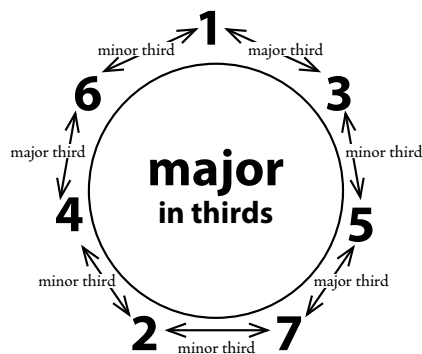
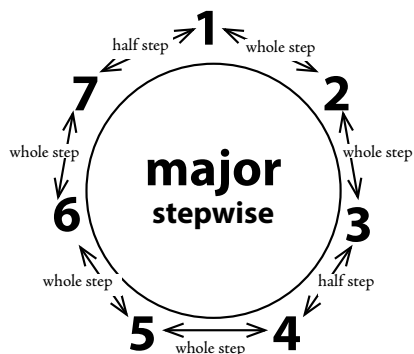
[Scale-Tone Arpeggios and Pentatonics/Major Scale-Tone Tertian Triad Arpeggios](#),
[Scale-Tone Arpeggios and Pentatonics/Major Scale-Tone Tertian Seventh Arpeggios](#),
[Scale-Tone Arpeggios and Pentatonics/Major Scale-Tone Tertian Ninth Arpeggios](#),
[Scale-Tone Arpeggios and Pentatonics/Major Scale-Tone Full-Tertian Arpeggios](#),
[Major Scale Tone Triads](#),
[Scale-Tone Seventh Chord Progression](#).

Memorizing II-V-I Cadences

The most common three chord cadence in jazz is II-V-I. It occurs on major or minor. See the section [Major and Minor II-V-I Cadences](#) and the chapter [Modal II-V-I Cadences](#).

NUMBER CYCLES

Memorize the three cycles in which chord roots can move: stepwise, thirds and fourths. Study all possible pairs of scale tone triads, looking for unique pairs and duplicate pairs.



MAJOR (IONIAN) SCALE-TONE CHORDS

chords with roots in stepwise order

scale tone	I	II	III	IV	V	VI	VII
triad (3-note)	major	minor	minor	major	major	minor	diminished
key tones	1-3-5	2-4-6	3-5-7	4-6-1	5-7-2	6-1-3	7-2-4
seventh (4-note)	ma7	m7	m7	ma7	7	m7	m7 \flat 5
key tones	1-3-5-7	2-4-6-1	3-5-7-2	4-6-1-3	5-7-2-4	6-1-3-5	7-2-4-6
ninth (5-note)	ma9	m9		ma9	9	m9	
key tones	1-3-5-7-2	2-4-6-1-3		4-6-1-3-5	5-7-2-4-6	6-1-3-5-7	
available others	2-(4)-6	2-4-6	b2-4-b6	2-#4-6	2-(4)-6	2-4- \flat 6	b2-4-b6

chords with roots in perfect fourth order

scale tone	VII	III	VI	II	V	I	IV
triad (3-note)	dim.	minor	minor	minor	major	major	major
seventh (4-note)	m7 \flat 5	m7	m7	m7	7	ma7	ma7
ninth (5-note)			m9	m9	9	ma9	ma9
available other tones	b2-4-b6	b2-4-b6	2-4-b6	2-4-6	2-(4)-6	2-(4)-6	2-#4-6

chords with roots in order of thirds

scale tone	I	III	V	VII	II	IV	VI
triad (3-note)	major	minor	major	dim.	minor	major	minor
seventh (4-note)	ma7	m7	7	m7 \flat 5	m7	ma7	m7
ninth (5-note)	ma9		9		m9	ma9	m9
available others	2-(4)-6	\flat 2-4- \flat 6	2-(4)-6	2-4-6	2-4-6	2- \sharp 4-6	\flat 2-4- \flat 6

Memorize the qualities of major scale-tone triads, seventh chords, and ultimately all major scale tone chords used in practice. Learn to interpret each chord in terms of both its formula numbering (based on a major scale on its root) and key-scale-tone numbering (in terms of the numbered tones of a major scale named after the key in which the chord occurs).

MODAL MAJOR SCALE TONE CHORDS

Major mode	I	II	III	IV	V	VI	VII
triad	major	minor	minor	major	major	minor	dimin.
seventh	ma7	m7	m7	ma7	7	m7	m7b5
7th parent tones	1-3-5-7	2-4-6-1	3-5-7-2	4-6-1-3	5-7-2-4	6-1-3-5	7-2-4-6
7th chord scale tones	1-3-5-7	1-b3-5-b7	1-b3-5-b7	1-3-5-7	1-3-5-b7	1-b3-5-b7	1-b3-b5-b7
chord scale added tones	2-4-6	2-4-6	b2-4-b6	2-#4-6	2-4-6	2-4-b6	b2-4-b6
M.S.T. mode	Ionian	Dorian	Phrygian	Lydian	Mixolydian	Aeolian	Locrian
Lydian S.T.	V	VI	VII	I	II	III	#IV
Mixolydian S.T.	IV	V	VI	bVII	I	II	III
Dorian S.T.	bVII	I	II	bIII	IV	V	VI
Aeolian S.T.	bIII	IV	V	bVI	bVII	I	II
Phrygian S.T.	bVI	bVII	I	bII	bIII	IV	V
Locrian S.T.	bII	bIII	IV	bV	bVI	bVII	I

modal scale tone thirds

On the following pages, notice that the scale tone thirds (s.t. thirds) are always the same series of numbers. They start with a scale tone number, proceed through the cycle of thirds with the appropriate altered numbers for the mode. For example, the second step of major (major is also called Ionian mode) has the scale tone thirds "2-4-6-1-3-5-7". The second step of Dorian has the scale tone thirds "2-4-6-1-b3-5-b7". The second step of Phrygian (b2) has the scale tone thirds "b2-4-b6-1-b3-5-b7". Without the flats, they each are "2-4-6-1-3-5-7".

modal scale tone perfect fourths

The tones of the major scale (Ionian mode) can be arranged in an order of perfect fourths by beginning with "7", creating the sequence "7-3-6-2-5-1-4". The interval from "4" to "7" is an augmented fourth. The last three numbers, "5-1-4" represent the roots of major triads. The three numbers before them, "3-6-2", represent the roots of minor triads.

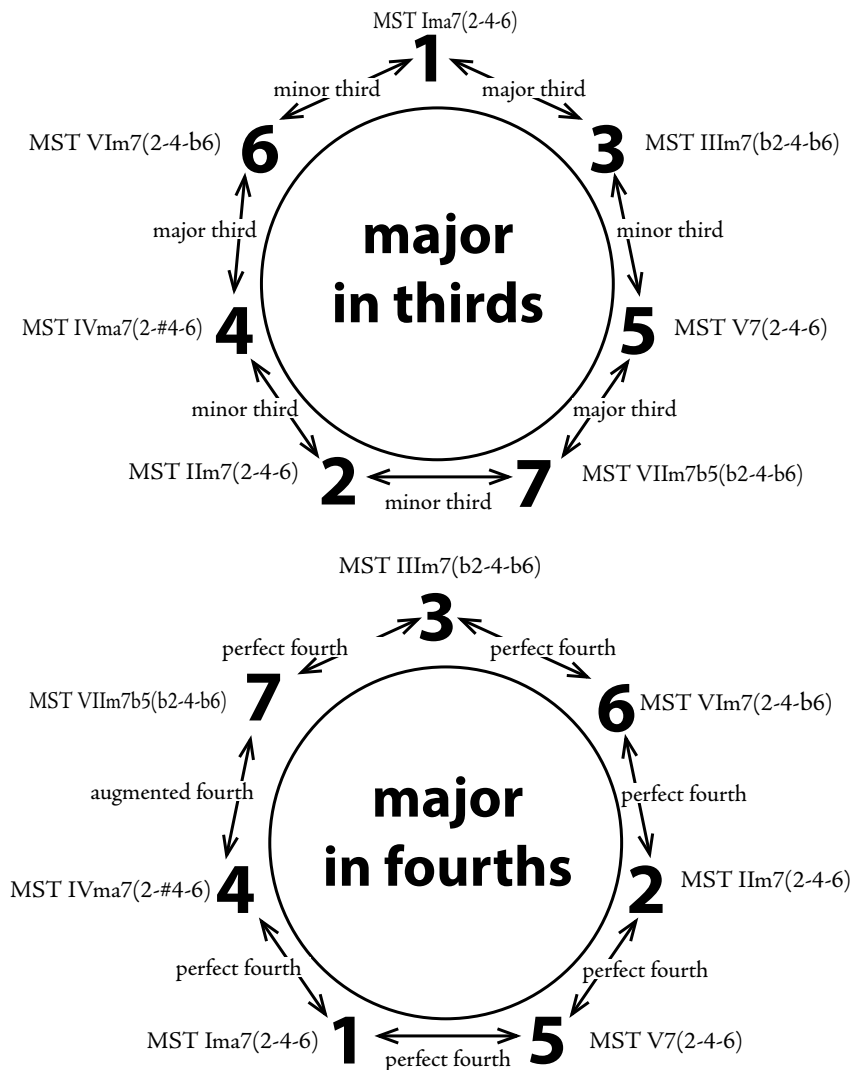
Memorize "7-3-6-2-5-1-4". Each mode uses the cycle "7-3-6-2-5-1-4-7-3-6-2-5-1-4, etc", beginning on a specific number and includes its specific alterations. This *perfect fourth series* for each mode must begin with the correct number, which is the root of the diminished triad. Use this formula to find that number: 8 (- mode number) = beginning of perfect fourths. For Mixolydian, which is mode V (5) of the major scale, subtract "5" from "8" and the perfect fourth series begins on III (3). For Dorian (major mode II), subtract "2" from "8" and the perfect fourth series starts on VI (6).

Get the number in mind that begins the perfect fourth series for each mode, then the numbers for the three minor chord roots that follow and the numbers for the major chord roots that follow.

On the table below, the major and minor triads are grouped together when the roots are in perfect fourths. The sequence of perfect fourths begins then with “7” the root of the only diminished triad, then proceeds through the roots of three minor chords “3-6-2” and three major chords “5-1-4”. In the other modes, this same order occurs, but with different numbers:

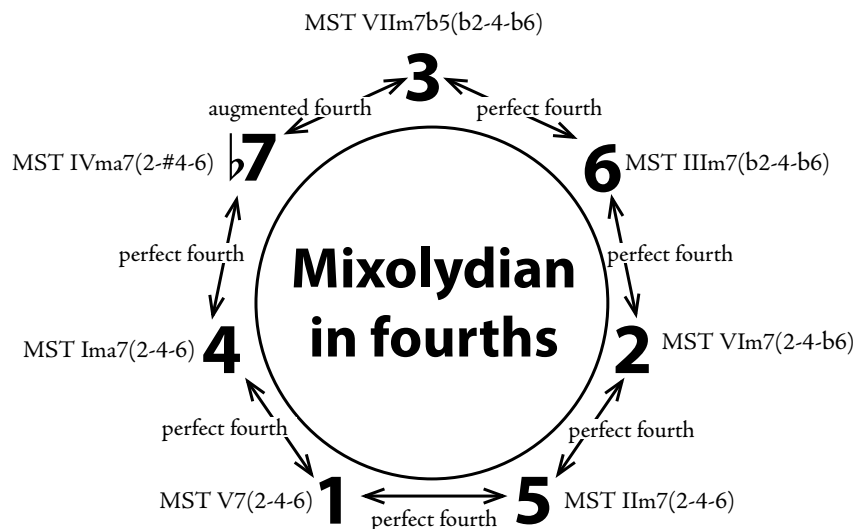
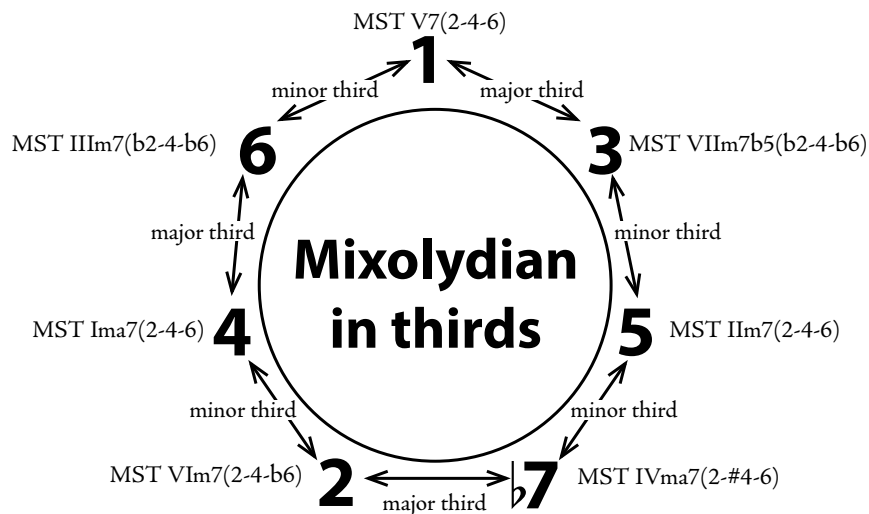
the perfect fourth series for each major scale mode

<u>triads</u>	<u>diminished</u>	<u>minor</u>	<u>minor</u>	<u>minor</u>	<u>major</u>	<u>major</u>	<u>major</u>
major	VII	III	VI	II	V	I	IV
Mixolydian	III	VI	II	V	I	IV	bVII
Dorian	VI	II	V	I	IV	bVII	bIII
Aeolian	II	V	I	IV	bVII	bIII	bVI
Phrygian	V	I	IV	bVII	bIII	bVI	bII
Locrian	I	IV	bVII	bIII	bVI	bII	bV
Lydian	#IV	VII	III	VI	II	V	I



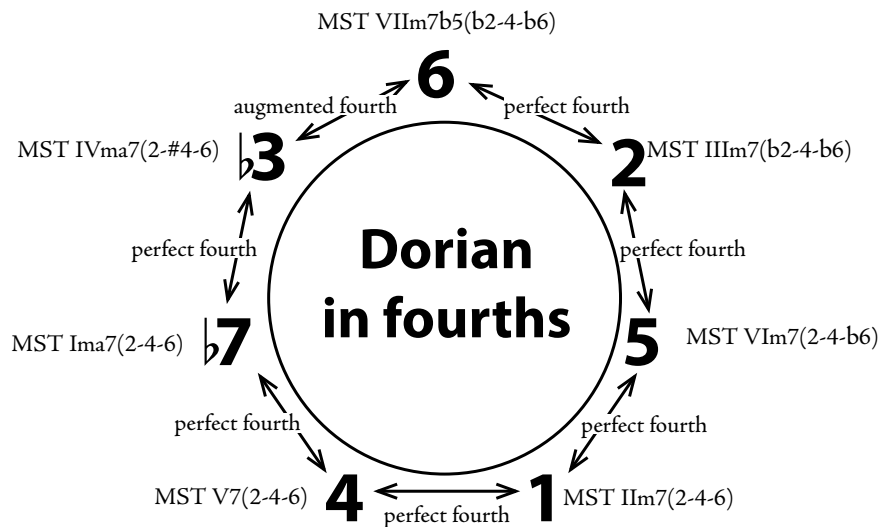
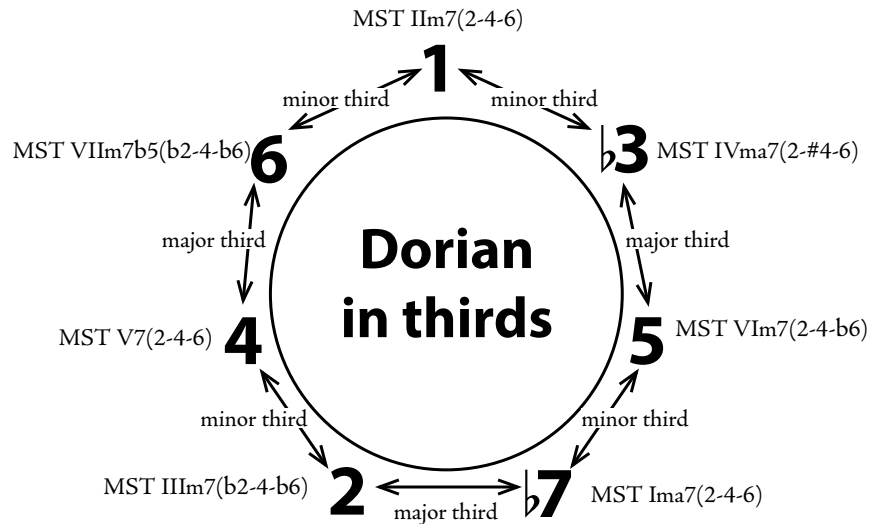
Mixolydian Scale Tone Chords

	I	II	III	IV	V	VI	♭VII
triad	major	minor	dimin.	major	minor	minor	major
G Mixolydian (G is 5 of C)	G	Am	B dim.	C	Dm	Em	F
seventh plus	7(2-4-6)	m7(2-4-♭6)	m7♭5 (♭2-4-♭6)	ma7 (2-4-6)	m7(2-4-6)	m7(♭2-4-♭6)	ma7(2-4-6)
s.t. thirds	1-3-5-♭7-2-4-6	2-4-6-1-3-5-♭7	3-5-♭7-2-4-6-1	4-6-1-3-5-♭7-2	5-♭7-2-4-6-1-3	6-1-3-5-♭7-2-4	♭7-2-4-6-1-3-5
major mode	V (G is V of C)	VI (Am is VI of C)	VII (B dim. is VII dim. of C)	I (C is I of C)	II (Dm is II of C)	III (Em is III of C)	IV (F is IV of C)



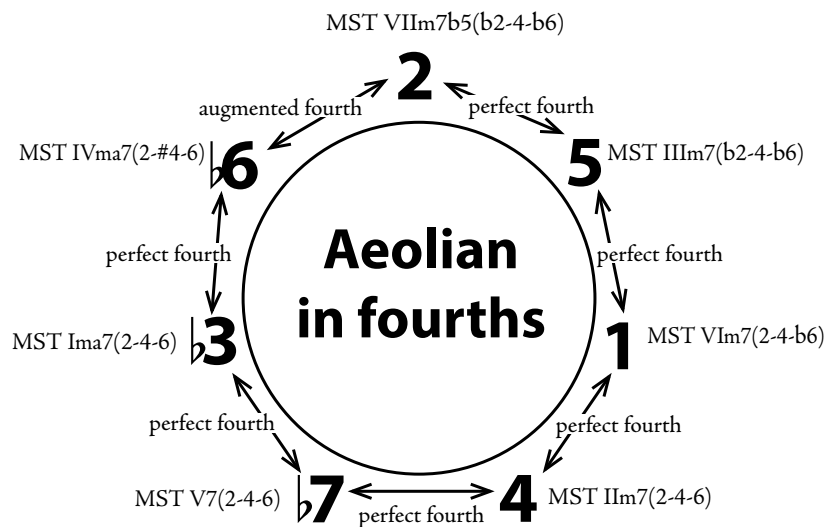
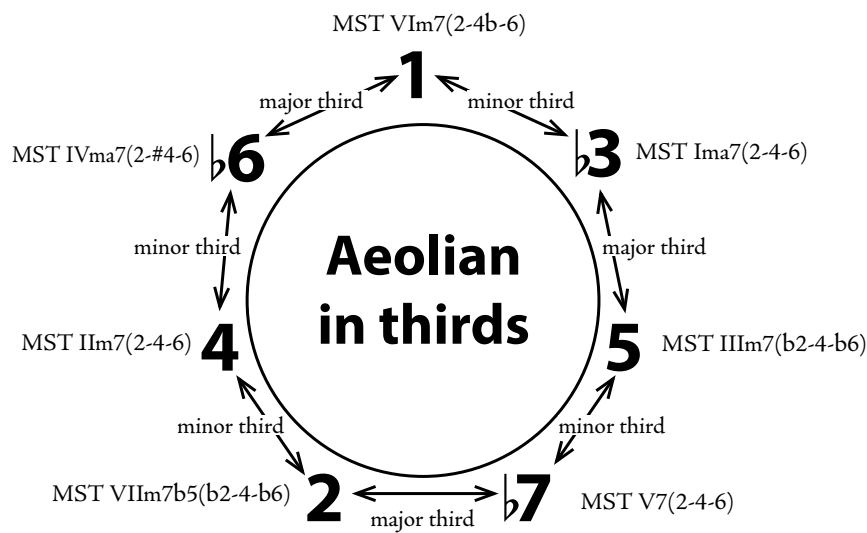
Dorian Scale Tone Chords

	I	II	\flat III	IV	V	VI	\flat VII
triad	minor	minor	major	major	minor	dimin.	major
D Dorian (D is 2 of C)	Dm	Em	F	G	Am	B dim.	C
seventh plus	m7(2-4-6)	m7(b2-4-b6)	ma7(2-4-6)	7(2-4-6)	m7(2-4-b6)	m7 \flat 5 (b2-4-b6)	m7 (2-4-6)
s.t. thirds	1-b3-5-b7-2-4-6	2-4-6-1-b3-5-b7	b3-5-b7-2-4-6-1	4-6-1-b3-5-b7-2	5-b7-2-4-6-1-b3	6-1-b3-5-b7-2-4	b7-2-4-6-1-b3-5
major mode	II	III	IV	V	VI	VII	I
major mode	(Dm is IIm of C)	(Em is IIIIm of C)	(F is IV of C)	(G is V of C)	(Am is VIIm of C)	(B dim. is VII dim. of C)	(C is I of C)



Aeolian Scale Tone Chords

	I	II	\flat III	IV	V	\flat VI	\flat VII
triad	minor	dimin.	major	minor	minor	major	major
A Aeolian (A is 6 of C)	Dm	Em	F	G	Am	B dim.	C
seventh plus	m7(2-4-b6)	m7b5 (b2-4-b6)	ma7 (2-4-6)	m7(2-4-6)	m7(b2-4-b6)	ma7(2-4-6)	7(2-4-6)
s.t. thirds	1-b3-5-b7-2-4-b6	2-4-b6-1-b3-5-b7	b3-5-b7-2-4-b6-1	4-b6-1-b3-5-b7-2	5-b7-2-4-b6-1-b3	b6-1-b3-5-b7-2-4	b7-2-4-b6-1-b3-5
major mode	VI (Am is VIm of C)	VII (B dim. is VII dim. of C)	I (C is I of C)	II (Dm is IIm of C)	III (Em is IIIIm of C)	IV (F is IV of C)	V (G is V of C)



MAJOR SHARP FIVE SCALE-TONE CHORDS

mode VI is harmonic minor

These harmonic minor scale-tone chords are a parallel structure of the major scale tone chords shown earlier with each chord altered where the sharp five is involved.

chords with roots in stepwise order

major #5 scale tone	I	II	III	IV	#V	VI	VII
harmonic min. tone	bIII	IV	V	bVI	VII	I	II
triad (3-note) key tones	augmented 1-3-#5	minor 2-4-6	major 3-#5-7	major 4-6-1	dimin. #5-7-2	minor 6-1-3	diminished 7-2-4
seventh (4-note) key tones	ma7#5 1-3-#5-7	m7 2-4-6-1	7 3-#5-7-2	ma7 4-6-1-3	dim.7 #5-7-2-4	m(ma7) 6-1-3-#5	m7b5 7-2-4-6
ninth (5-note) key tones	ma9#5 1-3-#5-7-2	m9 2-4-6-1-3	7b9 3-#5-7-2-4			m9(ma7) 6-1-3-#5-7	
available others	2-(4)-6	2-#4-6	b2-4-b6	#2-#4-6	b2-(b4)b6	2-4-b6	b2-4-6

chords with roots in perfect fourth order

scale tone	VII	III	VI	II	#V	I	IV
triad (3-note)	dim.	major	minor	minor	major	aug.	major
seventh (4-note)	m7b5	7	m(ma7)	m7	7	ma7#5	ma7
ninth (5-note)		7b9	m9(ma7)	m9	9	ma9#5	ma9
available others	b2-4-6	b2-4-b6	2-4-b6	2-#4-6	b2-(b4)-b6	2-(4)-6	#2-#4-6

MELODIC MINOR SCALE-TONE CHORDS

mode IV is Lydian dominant

mode VII is super locrian

mode VI is Aeolian flat five

These melodic minor scale-tone chords are a parallel structure of the major scale tone chords shown earlier with each chord altered where the flat three is involved.

chords with roots in stepwise order

scale tone	I	II	bIII	IV	V	VI	VII
triad (3-note)	minor	minor	augmented	major	major	diminished	diminished
key tones	1-b3-5	2-4-6	b3-5-7	4-6-1	5-7-2	6-1-b3	7-2-4
seventh (4-note)	min(ma7)	m7	ma7#5	7	7	m7b5	m7b5
key tones	1-b3-5-7	2-4-6-1	b3-5-7-2	4-6-1-b3	5-7-2-4	6-1-b3-5	7-2-4-6
ninth (5-note)	m9(ma7)		ma9#5	9	9	m9(ma7)	
key tones	1-3-#5-7-2			4-6-1-b3-5	5-7-2-4-6	6-1-b3-5-7	
available others	2-(4)-6	b2-4-6	2-#4-6	2-#4-6	2-4-b6	2-4-b6	b2-4-b6

chords with roots in perfect fourth order

scale tone	VII	bIII	VI	II	V	I	IV
triad (3-note)	dim.	augmented	diminished	minor	major	aug.	major
seventh (4-note)	m7b5	ma7#5	m7b5	m7	7	m(ma7)	7
ninth (5-note)		ma9#5			9	m9(ma7)	9
available others	b2-4-b6	2-#4-6	2-4-b6	b2-4-6	2-4-b6	2-(4)-6	2-#4-6

ADDING THE 2, 4 AND 6 TO SEVENTH CHORDS

This shows four-note seventh chords elaborated to larger chords by adding a “2”, “4” or “6” tone. Adding a “2” makes a ninth chord. Adding “2” and “4” makes an eleventh chord. Adding all three tones (“2”, “4” and “6”) makes a thirteenth chord. Not all versions of ninth chords, eleventh chords and thirteenth chords are acceptable to listeners. Various other combinations of “2”, “4” or “6” tones can be added. For all of these possibilities, see [All Scale-Tone Chords](#).

major scale	major Ima7 2-4-6 major (Ionian)	Dorian IIIm7 2-4-6 Dorian	Phrygian IIIIm7 b2-4-b6 Phrygian	Lydian IVma7 2-#4-6 Lydian	Mixolydian V7 2-4-6 Mixolydian	Aeolian VIIm7 2-4-b6 Aeolian	Locrian VIIIm7b5 b2-4-b6 Locrian
major sharp 5	Ima7#5	IIIm7	III7	IVma7	#Vdim7.	VIIm(ma7)	VIIIm7b5
harmonic minor	bIIIIma7#5 2-4-6 major #5	IVm7 2-#4-6 Dorian #4	V7 b2-4-b6 Phrygian dominant Phrygian major	bVIma7 #2-#4-6 Lydian #2	VII°7 b2-b4-b6 Mixo. #1	Im(ma7) 2-4-b6 harmonic minor Aeolian ma7	IIIm7b5 b2-4-6 Locrian #6
melodic minor	Im(ma7) 2-4-6 major b3	IIIm7 b2-4-6 Dorian b2	bIIIIma7#5 b2-4-b6 Phrygian b1	IV7 2-#4-6 Lydian b7	V7 2-4-6 Aeolian dominant Mixolydian b6	VIIm7b5 2-4-b6 Aeolian b5	VIIIm7b5 b2-b4-b6 super Locrian Locrian b4
harmonic major	Ima7 2-4-b6 major b6 (aug.)	IIIm7b5 2-4-6 Dorian b5 (m6b5 = °7)	III7 b2-#2-b6 super Phrygian Phrygian b4 (b4 = 3, aug.)	IVm7 2-#4-6 Lydian b3 (m6b5 = °7)	V7 b2-4-6 Mixo. b2	bVIIma7#5 #2-#4-6 Aeolian b1 (aug., °7)	VII°7 b2-4-b6 Locrian bb7 (°7)

Scales by Chord Type

<u>chord</u>	<u>2-4-6</u>	<u>2-4-b6</u>	<u>b2-4-b6</u>	<u>2-#4-6</u>	<u>b2-#2-#4</u>
ma7	major	major b6		Lydian	
7	Mixolydian	Aeolian dominant	Phrygian Major	Lydian b7	
		Mixolydian b6			
m7	Dorian	Aeolian	Phrygian	Dorian #4	
m7b5	Dorian b5	Aeolian b5	Locrian		
m(ma7)	melodic minor	harmonic minor			
dim. 7		Mixolydian #1			dim. half/whole

MAJOR AND MINOR II V I CADENCES

The classic major II-V-I cadence is IIm7-V7-Ima7 (Dm7-G7-Cma7), derived from major (Ionian) mode. The classic minor II-V-I cadence is IIm7 \flat 5-V7-Im7 (Bm7 \flat 5-E7-Am7), derived from a combination of Aeolian mode (on the sixth step of major) and of harmonic minor scale (on the sixth step of major sharp five scale).

Chords are usually voiced with approximately the same number of different notes. Triads have three different notes. Seventh chords have four different notes. Other chords have theoretically as many as seven different notes. Most chords are voiced with three to five different notes, often leaving some of the notes out that are implied by the chord name.

Complete ninth chords have five notes, complete eleventh chords six notes and complete thirteenth chords have seven notes in their complete form. Ninth, eleventh and thirteenth chords usually omit some notes in their voicing so they have four or five different notes. Add-tone chords that break the rule of chord construction in thirds, such as add six (1-3-5-6), add nine (1-3-5-9 <9= 2>), m7/11 (1- \flat 3-5-7-11 <11= 4>) and 9/6 (1-3-5- \flat 7-9-6 <9= 2 and 6=13>) also are usually voiced with three to five different notes.

Since chords usually progress with approximately the same number of notes, they can be thought of as a combination of melodies or *voices*. Chord *voicing* is the choice of notes for each chord that forms a somewhat predictable sequence of notes. The sequence of the lowest notes in a sequence of chords (a chord progression) usually forms a bass melody. The sequence of the highest notes in a sequence of chords usually forms a treble (soprano) melody. Less distinctly, the inner voices do the same. When a note in a voice (such as the bass or soprano) can stay the same, it usually does. Movement is usually preferred by smaller intervals, making the part easier to predict.

Variants of the Major II V I Cadence

Each chord in the cadence is described here with typical voicings. For a more complete list of possibilities, see the chapter in my Theory book called "All Scale Tone Chords".

major IIm7 V7 Ima7 basis

The basis of the major II-V-I cadence is part of the sequence of major scale tone chords with root movement in perfect fourths (7-3-6-2-5-1-4): IIm7-V7-Ima7 (Dm7-G7-Cma7).

IIm7

The II chord in the major II-V-I cadence can be minor or minor seventh with any or all of the tones "2", "4", and "6" added. Adding "2" makes IIm9. Adding "4" makes IIm7/11. Adding "2" "4", and "6" makes IIm13. See "Major Scale Tone Chords By Type", column II in [All Scale Tone Chords](#).

V7

The V chord in the major I-V-I cadence can be major or dominant seventh with any or all of the tones “2”, “4”, and “6” added. Adding “2” to V7 makes V9. Adding “6” to V7 makes V7/6 (V13 no ninth, no eleventh). Adding “2” and “6” to V7 makes V9/6. See “Major Scale Tone Chords By Type”, column V in [All Scale Tone Chords](#).

Ima7 or I6

The I chord in the major II-V-I cadence can be major or major seventh with either or both of the tones “2” and “6” added. Adding “2” to Ima7 makes Ima9. Adding “6” to Ima7 makes Ima7/6. The I major triad with “6” added is called I6. Adding “2” and “6” makes Ima9/6. See “Major Scale Tone Chords By Type”, column I in [All Scale Tone Chords](#).

Variants of the Minor II V I Cadence

Each chord in the IIIm7^b5 V7 Im cadence is described here with typical voicings. For a more complete list of possibilities, see the chapter called “All Scale Tone Chords”.

major VIIIm7^b5 III7 VIIm7 basis

The basis of the minor II V I cadence is part of the sequence of major scale tone chords with root movement in perfect fourths (7-3-6-2-5-1-4): VIIIm7^b5-IIIIm7-VIm7 (Bm7^b5-Em7-Am7), but with the IIIIm7 chord usually changed to III7 (VIIIm7^b5-III7-VIm7 or Bm7^b5-E7-Am7). During the III7 chord, the parent scale is major sharp five.

IIIm7^b5

The II chord in the minor II V I cadence is usually m7^b5.

V7 (optional b9, #9 and #5)

The V chord in the minor II V I cadence can be major or dominant seventh with any or all of the tones “b2”, “b3” (#2 = #9), and “#5” (= b6) added. Adding “b2” to V7 makes V7b9. Adding “b3” (= #9) to V7 makes V7#9. Replacing the fifth with a “#5” makes V7#5. Adding “#5” to V7 makes V7^b13. Possibilities include V7, V7#5, V7#9, V7b9, V7#5#9, V7#5b9, V7#5b9#9.

In terms of a scale on the key scale V chord root, this chord can combine Phrygian (1, b2, b3, 4, 5, b6, b7) and Phrygian major (1-b2-3-4-5-b6-b7).

See “Major Scale Tone Chords By Type”, column V and “Harmonic Minor Scale Tone Chords By Type”, column V in [All Scale Tone Chords](#).

Im or Im7 (rarely Im6)

The Im chord in the major II V I cadence can be minor or minor seventh with either or both of the tones “2” and “4” added. Occasionally, the Im chord is depicted as Im6, changing it from Aeolian mode to Dorian mode. *Summertime* by George Gershwin used a Im6 as the tonic chord (main chord of the key).

Adding “2” to Im7 makes Im9. Adding “4” to Im7 makes Im7/11. Occasionally, the I minor triad is used with “6” added, called Im6. Adding “2” and “6” makes Im9/6. See “[Major Scale Tone Chords by Type](#)”, column VI and (less often) column II in [All Scale Tone Chords](#).

SCALES FOR ALTERED DOMINANT CHORDS

- b5..... Mixolydian #4 (Lydian b7, mel. min. mode IV), using the #4 scale tone as a b5 chord tone
-#5..... Aeolian Dominant or Mixolydian b6 (melodic minor mode V), using the b6 scale tone as a #5 chord tone
- b5...#5..... whole tone scale (9b5#5)
-b9..... Phrygian Dominant or Phrygian Major (harmonic minor V), using the b6 scale tone as a #5 chord tone
-#9... Mixolydian in low range of pitch, Dorian in high range (b3 of Dorian serves as a #9)
-b9...#9... Diminished half/whole scale (13b9#9#11)
-#5...b9..... Phrygian Dominant or Phrygian Major (harmonic minor V), using the b6 scale tone as a #5 chord tone
- b5.....b9...#9... Diminished half/whole scale (13b9#9#11), using the #4 scale tone as a b5 chord tone
- b5...#5...b9...#9... super Locrian or Locrian b4 (melodic minor VII)

SCALES FOR DIMINISHED CHORDS

Modes II, IV, bVI and VII of harmonic minor (or of harmonic major).

Diminished. A diminished seventh arpeggio with a lower chromatic embellishment to each tone in ascending and upper chromatic embellishments in descending.

Modes

- **Chord Roots, Tone Centers, Keys and Chord Progression**
- **Discovering Major Scale Modes**
- **The Predominance of Major and Aeolian**
- **Key Scale, Parent Scale and Chord Scale**
- **Chords and Modes by Numbered Type**
- **Composing Triad Progression with Changing Mode**
- **Modes on I IV V Blues**
- **Modes on Jazz Blues (also called swing blues)**
- **The Expressive Use of Modes**
- **Modes of Four Heptatonic Scales**
- **Full-Fretboard Heptatonic Scale Diagrams**
- **Modal Major Scale Diagrams**
- **Using Exotic Modes in Jazz**

CHORD ROOTS, TONE CENTERS, KEYS AND CHORD PROGRESSION

What is a Chord Root?

A chord root is the lowest note you can imagine in the sound of a chord. It is the letter after which a chord is named. The letter name of a chord may be followed by a sharp or flat, such as G# or Gb. The sharp symbol indicates a note is played a half step (one fret) higher and a flat indicates it is played a half step lower.

Usually, the notes of a chord can be transposed by octaves to be arranged in consecutive thirds. When a chord is arranged entirely in thirds, the lowest note is usually the root. The first chord below has a "C" note in the bass. When the notes are arranged in thirds, which would be all notes on lines or all on spaces, "F" is the root.

Fma7 Fma7

The image shows two musical staves for the Fma7 chord in 4/4 time. The first staff is in treble clef and the second in bass clef. The first measure shows a chord with notes A, C, E, F, C in the treble clef and 5, 3, 3, 3 on the strings in the bass clef. The second measure shows a chord with notes C, E, F, C in the treble clef and 0, 2, 3 on the strings in the bass clef.

In some cases, the root is not the lowest note in a series of thirds. Sixth chords have their root as the second-to-lowest tone in a series of thirds. With sixth chords, the lowest root you can imagine may indicate a different root. In the example below, the lowest imaginable root for the D6 chord could be heard as "B", making the chord a Bm7.

Bm7 D6

The image shows two musical staves for Bm7 and D6 chords in 4/4 time. The first staff is in treble clef and the second in bass clef. The first measure shows a chord with notes F#, B, D, A in the treble clef and 5, 7, 9 on the strings in the bass clef. The second measure shows a chord with notes A, B, D, F# in the treble clef and 0, 2, 4, 5 on the strings in the bass clef.

What is a Tone Center?

A tone center is the root of the chord you would expect a piece to end on. You would expect a chord progression to end on a chord which gives a feeling of resolution. That chord would be the tonic chord, or main chord in the progression. If the tonic chord is Cm7, the tone center is “C.” If the tonic chord is “Eb7”, the tone center is “Eb.”

The tonic chord (or “main chord”) is the chord you would expect the piece of music to end on. It is the chord which sounds most resolved in a piece of music. A tonic chord is used to give the most final sound at the end of a piece.

I said “you would expect” the piece of music to end on the tonic chord in the previous paragraph, because although the listener expects a song to end on the tonic chord, it doesn’t have to. A song can end with a deceptive cadence (chord sequence) where the final chord is not the tonic chord. This type a ending is intended to “trick” the listener. Although a deceptive cadence does not produce as strong a feeling of resolution, it still can be stimulating. Likewise, songs often begin on the tonic chord, but they don’t have to.

Many recorded pieces of music have a “fade- out” ending. No distinct ending chord is played with a fade-out. I have always hated fade-out endings. I much prefer hearing the ending the band or artist would play in a live performance. The only exception would be where there is some point to fading out, such as the main character in the lyric is walking off into the woods or something of that nature.

The tonic chord can be established by a number of elements in the chord progression, including:

- ✦ Use a tonic chord built on the first step of historically established seven-tone (heptatonic) scale, such as major (Ionian, Dorian, Mixolydian, Aeolian or harmonic minor. The scales which are traditionally used more often produce a stronger tonality, because they are familiar to the listener.
 - a. The tonic chord usually has a strong tonality (is easy to establish as the main chord) in major, Dorian, Mixolydian or Aeolian mode (when major, Dorian, Mixolydian or Aeolian scales are used), in harmonic minor, or in Phrygian major mode (Phrygian scale with a major third).
 - b. The main chord has a passive tonality (somewhat difficult to establish as a main chord) in Phrygian or Lydian mode (when major scale tone three is used as a tone center for Phrygian mode or major scale tone four as a tone center for Lydian mode).
 - c. The main chord has a weak tonality (quite difficult to establish as the main chord) in Locrian mode (when Locrian scale is used).
- ✦ Use a harmonic cadence (chord progression of two or more chords) that is historically known, so the listener expects the tonic chord at the end of the cadence. Most cadences use a chord on the fifth of the intended tonic scale last before the resolution to the tonic chord.

The chord on the fifth of the scale of the intended tonic is commonly a dominant seventh type chord (or altered dominant seventh in jazz). In major mode (also called Ionian), the fifth step of the scale is called dominant, since it has a strong tendency to progress to the tonic (scale tone one). When the intended tonic is not the first step of the parent major scale, the seventh type chord on the fifth of the intended tonic is called a secondary dominant.

In jazz, a flat five substitute chord replaces the chord on the fifth with one a flat fifth above or below the root of the chord on the fifth of the tonic. The note a flat fifth above or below any given note is the same note. The flat five substitute becomes a chord built on the upper chromatic neighbor to the tonic, on the root up a half step (one fret) from the root of the intended tonic chord.

- ✦ Long duration or frequent occurrence of the intended tonic chord.
- ✦ **Scalar chord root movement.** A progression of chord roots up or down a scale to the root of the intended tonic chord.
- ✦ **Dissonance.** Preceding the intended tonic chord by one or more dissonant, tension-producing chords.
- ✦ **Low-pitched tonic root.** Use the root of the main chord in a low range of pitch.
- ✦ A **pedal point** or **common tone.** Use of the root of the intended tonic chord as a repeating note through a series of chords. A common tone is a note common to all of the chords and usually occurs with the same rhythm as the other chords. A a pedal tone is a common tone that occurs consistently in the bass, and takes on the character of an individual voice in the arrangement. An inverted pedal tone occurs in the highest voice.
- ✦ Ending or beginning a section with a chord, where sections are typically multiples of four measures. Ending with the desired tonic chord establishes stronger tonality than beginning with it.

Key

A song is said to be in a key named after the tone center. If the tone center is “A”, the song is said to be in the key of “A”. The key may be further qualified by the scale or mode type, such as “A” major, “A” minor or “A” Mixolydian.

The term “minor” is commonly used loosely in key names where the song may be in any mode which has a minor chord built on the tone center (e.g., Dorian Aeolian or harmonic minor). Likewise, the term major is sometimes used in reference to any mode which has a major chord built on the tone center (e.g., Ionian, Mixolydian, Lydian or Phrygian major).

In the example below, the Am chord sounds resolved at the end. The piece is in the key of A minor.

Musical notation for a piece in A minor. The top staff shows a melody in treble clef with a key signature of one sharp (F#) and a final chord labeled "Am". The bottom staff shows guitar fretboard diagrams for the strings T, A, and B.

Elsewhere, in the same piece of music, the section below appears. It has a sense of temporarily being in the key of E major. The specific scale it uses is E Mixolydian flat six (1, 2, 3, 4, 5, $\flat 6$, $\flat 7$), but the tonic chord is E, and the primary sound of the scale is E major. The E major chord sounds somewhat resolved at the end of the example, but you might get the sense that the melody is going back to the key of A minor afterward (play the example below, then the example above).

Musical notation for a piece in E major. The top staff shows a melody in treble clef with a key signature of one sharp (F#) and a final chord labeled "E". The bottom staff shows guitar fretboard diagrams for the strings T, A, and B.

Chord Progression

A chord progression is any sequence of chords. Typically, a chord progression is repeated during a piece of music. Each section of the piece of music (verse, chorus, etc.) may use a different chord progression. Chord progression can combine root movement up or down in stepwise, thirds or fourths order.

DISCOVERING MAJOR SCALE MODES

Playing the C major scale from scale tone “1” to “1” (C to C), in numeric and alphabetical order constitutes the C major scale, or using the Greek name, *C Ionian*. By playing a major scale up and down an octave in numerical and alphabetical order from any particular numbered tone (or lettered tone) to the next occurrence of the same note and back implies a *mode*.

The etymological origin of the word mode in English is the Greek word *modus*, which means *mood*. Each note in the major scale can be used as a tone center. The octave from each note up and down to its next occurrence and back produces a different scale, each scale with a different mood. So these scales are called modes. The seven modes of the major scale are shown below.

To further define the emotive character of each mode, consider an triad (three note chord) constructed on the note after which the mode is named and including two more notes in an every-other-note pattern. The qualities (major, minor or diminished) of the triads constructed on the seven steps of the major scale are shown in the right column below.

<u>mode name</u>	<u>generated from the C major scale</u>	<u>triad name</u>
I Ionian	C-D-E-F-G-A-B-C	C major
II Dorian	D-E-F-G-A-B-C-D	D minor
III Phrygian	E-F-G-A-B-C-D-E	E minor
IV Lydian	F-G-A-B-C-D-E-F	F major
V Mixolydian	G-A-B-C-D-E-F-G	G major
VI Aeolian (natural minor)	A-B-C-D-E-F-G-A	A minor
VII Locrian	B-C-D-E-F-G-A-B	B diminished

To discover the modes of the major scale, we will compare major scales named after each note of the C major scale to the C major scale starting on that note.

C major scale

C D E F G A B C D E F G A B C B A G F E D C B A G F E D C
 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 7 6 5 4 3 2 1 7 6 5 4 3 2 1

T
A
B
8 5 7 8 5 7 9 5 7 8 7 5 8 6 5 7 5 9 7 5 8 7 5 8

D Dorian: Mode II of C Major

Play the C major scale above from “D” to “D” (“2” to “2”) and back. This is the D Dorian mode. Next, play this D major scale:

D major scale

D E F# G A B C D C# B A G F# E D
1 2 3 4 5 6 7 1 7 6 5 4 3 2 1

T
A
B 5 7 9 5 7 9 6 | 7 6 9 7 5 9 7 | 5

D Dorian mode (b3, b7)

Notice that to make the D major scale the same as playing the C major scale from “D” to “D”, the third and seventh steps have to be lowered. So, Dorian mode, named after step two of a major scale has “b3” and “b7” in relation to a major scale on its tone center (a major scale named after step two of the parent major scale).

D E F G A B C D C B A G F E D
1 2 b3 4 5 6 b7 1 b7 6 5 4 b3 2 1

T
A
B 5 7 8 5 7 9 5 | 7 5 9 7 5 8 7 | 5

C major scale

C D E F G A B C D E F G A B C B A G F E D C B A G F E D C
1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 7 6 5 4 3 2 1 7 6 5 4 3 2 1

T
A
B 8 5 7 8 5 7 9 5 7 8 7 5 8 6 5 7 5 9 7 5 8 7 5 8

E Phrygian: mode III of C major

Play the C major scale above from “E” to “E” (“3” to “3”) and back. This is the E Phrygian mode. Next, play this E major scale:

E major scale

E F# G# A B C# D# E D# C# B A G# F# E
1 2 3 4 5 6 7 1 7 6 5 4 3 2 1

T
A
B 7 9 6 7 9 6 8 5 8 6 9 7 6 9 7

E Phrygian mode (b2, b3, b6, b7)

Notice that to make the E major scale the same as playing the C major scale from “E” to “E”, steps two, three, six and seven have to be lowered. So, Phrygian mode, named after step three of a major scale has “b2, b3, b6 and b7” in relation to a major scale on its tone center (a major scale named after step three of the parent major scale).

E F G A B C D E D C B A G F E
1 b2 b3 4 5 b6 b7 1 b7 b6 5 4 b3 b2 1

T
A
B 7 8 5 7 9 5 7 5 7 5 9 7 5 8 7

C major scale

C D E F G A B C D E F G A B C B A G F E D C B A G F E D C
1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 7 6 5 4 3 2 1 7 6 5 4 3 2 1

T
A
B 8 5 7 8 5 7 9 5 7 5 6 8 5 7 8 7 5 8 6 5 7 5 9 7 5 8 7 5 8

F Lydian: mode IV of C major

Play the C major scale above from “F” to “F” (“4” to “4”) and back. This is the F Lydian mode. Next, play this F major scale:

F major scale

F G A B \flat C D E F E D C B \flat A G F
1 2 3 4 5 6 7 1 7 6 5 4 3 2 1

T
A
B
8 5 7 8 5 7 5 6 5 7 5 8 7 5 8

F Lydian mode (#4)

Notice that to make the F major scale the same as playing the C major scale from “F” to “F”, step four needs to be raised. So, Lydian mode, named after step four of a major scale has “#4” in relation to a major scale on its tone center (a major scale named after step four of the parent major scale).

F G A B C D E F E D C B A G F
1 2 3 #4 5 6 7 1 7 6 5 #4 3 2 1

T
A
B
8 5 7 4 5 7 5 6 5 7 5 4 7 5 8

C major scale

C D E F G A B C D E F G A B C B A G F E D C B A G F E D C
1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 7 6 5 4 3 2 1 7 6 5 4 3 2 1

T
A
B
8 5 7 8 5 7 9 5 7 5 6 8 5 7 8 7 5 8 6 5 7 5 9 7 5 8 7 5 8

G Mixolydian: mode V of C major

Play the C major scale above from “G” to “G” (“5” to “5”) and back. This is the G Mixolydian mode. Next, play this G major scale:

G major scale

G A B C D E F# G F# E D C B A G
 1 2 3 4 5 6 7 1 7 6 5 4 3 2 1

T
A
B 5 7 9 5 7 5 7 8 7 5 7 5 9 7 5

G Mixolydian mode (b7)

Notice that to make the G major scale the same as playing the C major scale from “G” to “G”, step seven needs to be lowered. So, Mixolydian mode, named after step five of a major scale has “b7” (flat seven in relation to a major scale on its tone center (a major scale named after step five of the parent major scale).

G A B C D E F G F E D C B A G
 1 2 3 4 5 6 b7 1 b7 6 5 4 3 2 1

T
A
B 5 7 9 5 7 5 6 8 6 5 7 5 4 7 5

C major scale

C D E F G A B C D E F G A B C B A G F E D C B A G F E D C
 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 7 6 5 4 3 2 1 7 6 5 4 3 2 1

T
A
B 8 5 7 8 5 7 9 5 7 5 6 8 5 7 8 7 5 8 6 5 7 5 9 7 5 8 7 5 8

A Aeolian: mode VI of C major

Play the C major scale above from “A” to “A” (“6” to “6”) and back. This is the A Aeolian mode. Next, play this A major scale:

A major scale

A B C# D E F# G# A G# F# E D C# B A
1 2 3 4 5 6 7 1 7 6 5 4 3 2 1

T 5 9 7 5 7 6 9 7
A 7 9 6 7 5 7 9
B 7 9 6 7 5 7 9

A Aeolian mode (b3-b6-b7)

Notice that to make the A major scale the same as playing the C major scale from “A” to “A”, steps three, six and seven need to be lowered. So, Aeolian mode, named after step six of a major scale has “b3, b6, and b7” in relation to a major scale on its tone center (a major scale named after step six of the parent major scale).

A B C D E F G A G F E D C B A
1 2 b3 4 5 b6 b7 1 b7 b6 5 4 b3 2 1

T 5 8 6 5 7 5 9 7
A 7 9 5 7 5 6 8 8 6 5 7 5 9 7
B 7 9 5 7 5 6 8 8 6 5 7 5 9 7

C major scale

C D E F G A B C D E F G A B C B A G F E D C B A G F E D C
1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 7 6 5 4 3 2 1 7 6 5 4 3 2 1

T 5 7 5 6 8 5 7 8 7 5 8 6 5 7 5 9 7 5 8 7 5 8
A 5 7 5 6 8 5 7 8 7 5 8 6 5 7 5 9 7 5 8 7 5 8
B 8 5 7 8 5 7 9 5 7 5 6 8 5 7 8 7 5 8 7 5 8

B Locrian: Mode VII of C Major

Play the C major scale above from “B” to “B” (“7” to “7”) and back. This is the B Locrian mode. Next, play this B major scale:

B major scale

B Locrian mode (b2-b3-b5-b6-b7)

Notice that to make the B major scale the same as playing the C major scale from “B” to “B”, steps two, three, five, six and seven need to be lowered (all but one and four). So, Locrian mode, named after step six of a major scale has “b2, b3, b5, b6, and b7” in relation to a major scale on its tone center (a major scale named after step six of the parent major scale).

Modes in order of darkening moods:

#4	b7	b7-b3	b7-b3-b6	b7-b3-b6-b2	b7-b3-b6-b2-b5	
IV Lydian	I major	V Mixolydian	II Dorian	VI Aeolian	III Phrygian	VII Locrian
#4	b7	b3	b6	b2	b5	

Mixolydian through Locrian modes accumulate the flatted numbers 73625.

Altering the Major Scale To Make Modes Of Other Seven Tone Scales

Major #5 variations: major #5, Dorian #4, Phrygian major third, Lydian #2, Mixolydian “#1”, Aeolian natural 7 (harmonic minor), Lydian #6.

Melodic minor variations: major b3, Dorian b2, Phrygian “b1”, Lydian b7, Aeolian dominant (also called Aeolian major or Mixolydian b6), Aeolian b5, super Locrian (Locrian b4).

THE PREDOMINANCE OF MAJOR AND AEOLIAN

Since the beginning of the common practice period of European music in 1600, western music has predominantly used [the relative major and minor system](#). With the African-American influence in American music since 1900, Mixolydian and Dorian have come back into popularity. Mixolydian and Dorian were used off and on in the Middle East and Europe from around 500 BC until the common practice period. Mixolydian and Dorian were rarely used in the common practice period (1600 through 1900).

The predominance of major and Aeolian lingers. We still tend to imagine melodies in the key of the II minor chord of a major scale or in the key of the III minor chord of a major scale in Aeolian (the natural minor scale built on the sixth step of the major scale).

If you want to establish the Dorian mode as a key on the II minor chord of a major scale or to establish the Phrygian mode as a key on the III minor chord of a major scale, you have to go out of your way to make it really sound like that mode. Otherwise, our memories of thousands of songs in Aeolian mode will influence us to imagine the music in Aeolian mode.

The same is true of Lydian mode. If you don't go out of your way to establish Lydian as the mode, memories of thousands of songs in major mode (Ionian) will influence us to imagine the music in major mode.

As stated above, Mixolydian has been established by the African-American influence in American music and it can easily be established in blues, rock and jazz styles. Similarly, Dorian can be easily established in those genres as a minor key version to contrast a major key.

KEY SCALE, PARENT SCALE AND CHORD SCALE

Key Scale

Key scales are named after the tone center. They may vary by type when used in a particular piece of music, but would have a tone center in common. A melody in the key of C may use C major, C Mixolydian and C Dorian. All three of these scales share the tone center, "C", so they would be *key scales* for the key of "C".

Melody more often makes use of scales named after the key, rather than the chord. It is easier for the listener to follow a melody if it is all (or primarily) based on the tone center. A piece of music in the key of "E" with the chord progression Em7 A7 Cma7 B7 sus. 4 may use an E Dorian scale (E Dorian mode) during the Em7 and A7 chords and E Aeolian scale during the Cma7 and B7sus4 chords.

Parent Scale

A *parent scale* is a reference scale from which a scale or mode was derived. Most commonly, a major scale is used as a parent scale. Any of the modes of the major scale would refer to that major scale (which was their source) as their parent scale. Other parent scales are *major #5*, *major b3* and *major b6*, each of which have seven modes like the major scale and are simple modifications of the major scale.

C major scale uses the notes C, D, E, F, G, A, B and C. Modes are constructed on each of the tones of the C major scale. The [Discovering Major Scale Modes](#) section earlier in this chapter demonstrated modes of the C major scale. Those modes all have the C major scale as their parent scale.

In the example below, play the C major scale from the sixth string to the first string. It will be the parent major scale. Now play the notes from "D" to "D", followed by the D minor triad (three-note chord), to emphasize the chosen note as a focal point or main note. This establishes a new scale, "D Dorian".

Follow the same procedure with "E" to "E" for E Phrygian, "F" to "F" for F Lydian, and so on. You have now experienced all the modes of the C major parent scale.

C major parent scale

The image shows two musical examples. The first is the C major parent scale, written in 4/4 time on a treble clef staff. The notes are C4, D4, E4, F4, G4, A4, B4, C5. Below the staff are guitar strings T, A, B with fret numbers: T (open), A (5), B (8). The second example shows three modes: D Dorian mode on "2" of the parent C major scale (notes D, E, F, G, A, B, C, D), Dm triad (D, F, A), E Phrygian mode on "2" of the parent C major scale (notes E, F, G, A, B, C, D, E), and Em triad (E, G, B). The guitar string notation for the modes is: T (open), A (5), B (8) for D Dorian; T (open), A (5), B (8) for Dm; T (open), A (5), B (8) for E Phrygian; and T (open), A (5), B (8) for Em.

F Lydian mode on "4" of the parent C major scale F G Mixolydian mode on "5" of the parent C major scale G

A Aeolian mode on "6" of the parent C major scale Am B Locrian mode on "7" of the parent C major scale **Bdim.**

Chord Scale

When a scale is named after a chord root which is not the key, it is called a *chord scale*. Key scales keep the tone center as the object of the melody. As the melody progresses with key scales, the tone center is common to all of the scales and the melody weaves around and leads to the tone center. Chord scales tend to take the focus off of the tone center and can cause a loss of purpose in the melody.

When a chord has a long duration and its root is not the tone center, it can be treated as a temporary tone center. In this case, a chord scale can be used. The chord scale would usually include all of the notes of the chord, although it doesn't have to. In choosing a chord scale, first think of the triad part of the chord. Do the root, third and fifth of the chord make a major, minor, diminished or augmented triad? Or, is it a suspended chord with a fourth or second that replaces the third? What kind of seventh or sixth does the chord have (if any)?

In the example above, the chord progression Em7 A7 Cma7 B7sus4 was suggested, in the key of "E". A chord scale could be used for each chord. E Dorian scale during the Em7 chord, A Mixolydian during the A7, C Lydian scale during the Cma7 and B Phrygian major scale during the B7sus4.

E Dorian and A Mixolydian have the same notes. They are both derived from the D major scale. By thinking of them as "A" and "A" scales you would tend to shift the weight of the melody from "E" to "A", where it might be better to keep the focus of the melody on "E". C Lydian scale could be used during the Cma7 chord, but E Aeolian has the same notes and would keep the focus on the tone center ("E"). Likewise, B Phrygian major scale could be thought of as E harmonic minor.

This can all seem too complicated, but the point is to begin by thinking of a type of scale named after the key which has most or all of the notes of the current chord. If any of the notes of a key scale conflict with a chord, they can be de-emphasized. Conflict is not necessarily bad, though. Notes that have varying degrees of dissonance with a chord can be used effectively to create tension and release during the course of a melody.

CHORDS AND MODES BY NUMBERED TYPE


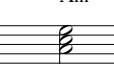
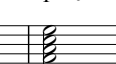
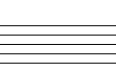

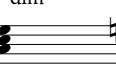
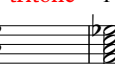
What's a V Type Chord?

A V type chord is one that uses the notes in itself, and in the music played during it from a seven-tone scale where the root of the chord is on the fifth step. A major chord may be a I type, IV type or V type, each using a different major scale. A minor chord may be a II type, a III type or a VI type, each using a different major scale.

In a blues in the key of C, the chords C7, F7 and G7 would be used. Each chord is a V type. C7 is on the fifth of an F major scale, F7 on the fifth of a Bb major scale and G7 on the fifth of a C major scale. Yet, you need to also be able to think in the key of "C", so you need to translate the numbered tones each one of those major scales where "C" is "1", which will cause flatted seven or flatted seven and flatted three. See Modes [On I IV V Blues](#).

Why Use a IV Chord as a "V Type"

If a song is in the key of C major and we're on "F", the IV chord, the default parent scale would be C major. To change the mood, change the "F" chord quality or setup a chord progression, we can change the scale during the F chord. With the original C major scale, Fmaj7 has happiness (the F major triad on the root) and sadness (the A minor triad on the third). To darken the F chord, we could use the Bb major scale, making the F as a V type with a darker mood. The V type has components of happiness (the F major triad on the root of F7), depression (the A diminished triad on the third of F7) and the angry tritone (the interval made with the A and Eb notes of F7).

F	Am	Fmaj7	F	F dim	F tritone	F7
						
major is happy	minor is sad	adds the happy F major and the sad Am minor to make the romantic happy/sad composite, Fmaj7	major is happy	diminished is very sad	tritone is angry	combines happy, very sad and angry to make the complex dominant seventh
T A B	5 7 8	5 7 8	5 7 8	4 5 7	5 7	4 5 7 8

Making a IV chord a V type is typical of blues and of bluesy jazz. Bluesy jazz songs with IV7 (where the IV chord is a V7 type) include Willow Weep for Me, Sonny Moon for Two, Tenor Madness, All Blues, One For My Baby or There Is No Greater Love.

Determining the Numbered Type for a Chord

In accompaniment and melody both, the notes used during a particular chord are generally taken from a particular heptatonic (seven-tone) scale, like major (most common) or harmonic minor. The seven-tone scale is chosen to produce a particular mood and genre. Making a I or IV chord a V type makes it darker and bluesy. Making a II or II chord a VI type makes it sound like the traditional minor key built on the sixth step of major scales.

If you are analyzing a piece of music as to the numbered types of chords, determine the seven-tone scale used for each chord. Then number the type after the numbered tone that the chord root in question occurs on. If you are in the key of C and an “F” major scale is being used during the Dm chord, you would determine that “D” is on the sixth step of F major and therefore the Dm chord is a VI type.

Changing Key Scale Types

It is very common in contemporary music that the key scale type changes. In a three-chord major blues, each chord is used as a “V type”, meaning each uses a scale where the chords root is on the fifth step of some major scale. To think in the overall key, you need to re-number each major scale with the one note that is the name of the key.

	type	chord scale	chord elaboration	key scale	parent scale	mood/genre
F	I type	F major	Fma7, Fma9	C Mixolydian	F major	blues, folk
G	II type	G Dorian	Gm7, Gm9	C Mixolydian	F major	darkening, blues
C7	V type	C Mixolydian	C7, C9, C13	C Mixolydian	F major	darkening, blues
F7	V type	F Mixolydian	F7, F9, F13	C Dorian	Bb major	darkening, blues
Dm	VI type	D Aeolian	Dm7, Dm9	C Mixolydian	F major	traditional minor
Dm	harmonic minor	D har. minor	Dm(ma7), Dm9(ma7)	C Mixolydian	F major	traditional minor

Modes by Numbered Type

Each major scale mode is built on a particular numbered tone of a major scale. To think major scale modes by numbered type, use the number of the scale step on which the mode was built. Why not use the mode name? You can, but using the number may allow you to think faster.

With modes of harmonic minor and melodic minor, specific names are better.

C major scale modes

C	Ionian	I type
D	Dorian	II type
E	Phrygian	III type
F	Lydian	IV type
G	Mixolydian	V type
A	Aeolian	VI type
B	Locrian	VII type

A harmonic minor

C	major sharp five
D	Dorian sharp two
E	Phrygian major
F	Lydian sharp two
G#	G Mixolydian sharp one
A	harmonic minor
B	Locrian

C melodic minor

C	melodic minor (major b3)
D	Dorian flat two
E \flat	E Phrygian flat one
F	Lydian dominant (b7)
G	Mixolydian flat six
A	Aeolian flat five
B	Super Locrian (b4)

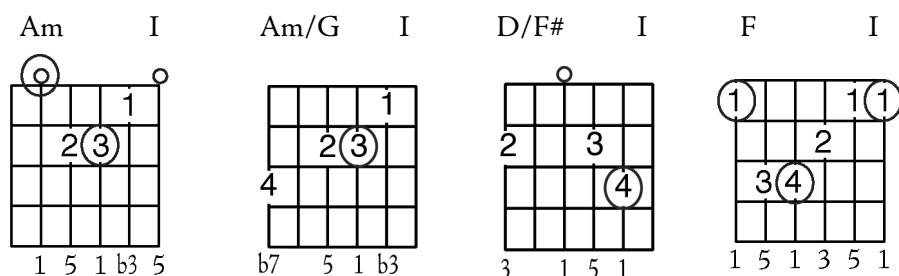
COMPOSING TRIAD PROGRESSION WITH CHANGING MODE

Notes That Change the Key Signature

Use consecutive chords that display the change in key signature when a chromatic voice is effective. Otherwise, disguise it by using avoiding use of the tone that is being altered chromatically (that is being changed chromatically with an accidental, but retaining the same letter or number).

Featuring a Chromatic Key Signature Change

For example, the A Dorian mode has F# as 6. In changing to A Aeolian, the F# which is 6 changes to F, which is b6. In *While My Guitar Gently Weeps*, this changing note is used to cause a chromatic bass part: note the chromatic sequence on the sixth string below (Am/G-D/F#-F). The D chord is in A Dorian with “6” while the F chord is A Aeolian with “b6”.



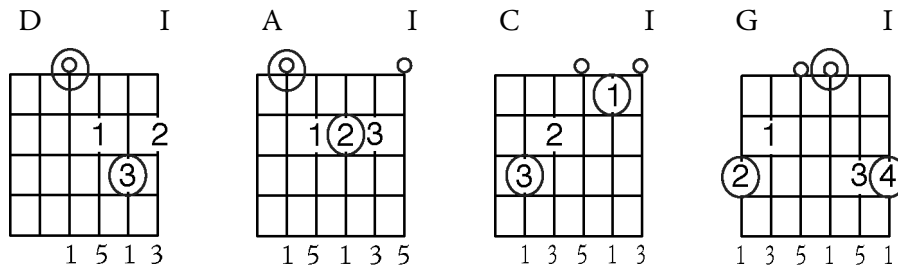
Disguising a Key Signature Change

More often, key signature changes are disguised, to surprise the listener with subtlety. So, consecutive chords that would show the change in key signature are avoided, such as one chord with “4” and the next with “#4”.

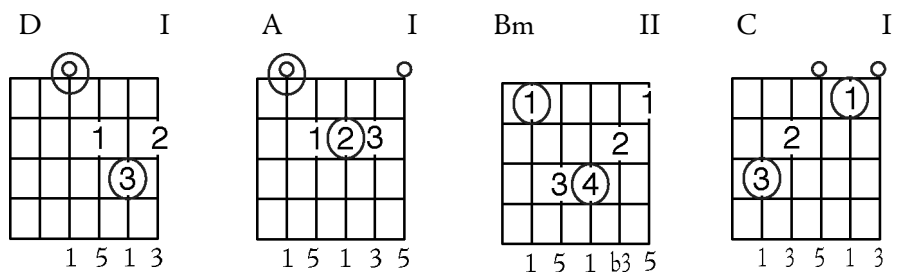
The details on consecutive chords to avoid can be memorized, but initially, be highly aware of the changing chromatic note in the key signature and don't use it in the next chord.

To disguise the key signature change, don't use a consecutive chords that have chromatically different versions of the same number and letter. The root of the next chord shouldn't be the note you're changing.

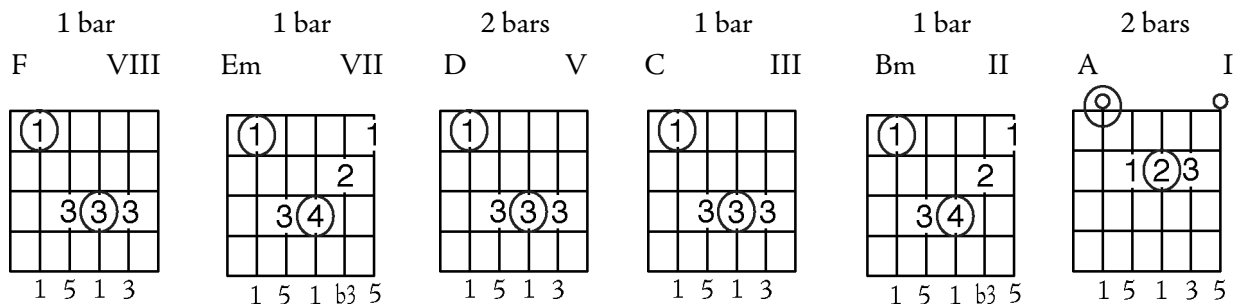
The “D-A-C-G” example below does not conceal the key signature change from D major to G major, with the C# note in the A chord and the C note in the C chord.



The “D-A-Bm-C” example below makes it less obvious that the C# note in the A chord has changed to the C note in the C chord.



Triad chord progressions up or down stepwise do not include a chromatic key signature change. In the following stepwise sequence of C, G and D major scale tone chords, changes are disguised.



track the numbered tone in triad construction

Each letter that you’re trying to avoid occurs in three triads. If you are aware of the parent scale number of the note you are avoiding, you can determine which chords it is “3”, for example, that would be in the I triad (1-3-5), the IIIIm triad (3-5-7) and the VIIm triad (6-1-3).

MODES ON I IV V BLUES

Predicting the Melody

The listener predicts the melody along with the composer or improviser, in that one should mainly compose or improvise what the listener expects. In doing that, the listener expects melodies to be based on a key, with various versions of scales named after the key.

To accommodate the various chords and moods that occur during a chord progression, a melody, commonly uses multiple scales. Every scale usually has the overall tone center (the tonic) in it.

The Common I IV V Blues Chord Progression

C7 (I7)	C7 (I7)	C7 (I7)	C7 (I7)
F7 (IV7)	F7 (IV7)	C7 (I7)	C7 (I7)
G7 (V7)	F7 (IV7)	C7 (I7)	G7 (V7)

Key Scale, Chord Scale and Parent Scale in Blues

For a I IV V blues in the key of C with C7, F7 and G7 chords, three or more scales that contain the note “C” can be used. The primary major scales that melody and accompaniment would be built from are C major, F major and Bb major. The necessary dominant seventh chord (C7, F7 and G7 are dominant sevenths) *only occurs on the fifth step of a major scale.*

chord scales

Key scales are more important perspectives than chord scales. Key scales are more complex, though and they are covered below after chord scales, which are conceptually more straight-forward. For chord scales, you make one modification to a major scale named after the chord.

Each of these seventh chords are constructed with tones 1, 3, 5 and b7 of a major scale named after the chord root. So, F7 uses 1-3-5-b7 or F-A-C-Eb of an F major scale. In each case, the default scale is Mixolydian named after the chord root. C uses C Mixolydian, F uses F Mixolydian and G uses G Mixolydian, all by default.

12 bar blues in C with chord scales

C7 (I7)	C7 (I7)	C7 (I7)	C7 (I7)
C Mixolydian			
F7 (IV7)	F7 (IV7)	C7 (I7)	C7 (I7)
F Mixolydian		C Mixolydian	
G7 (V7)	F7 (IV7)	C7 (I7)	G7 (V7)
G Mixolydian	F Mixolydian	C Mixolydian	G Mixolydian

C Mixolydian for C7

F major with focus on “C” by starting and ending on C (the key of our blues) with the focus on C, the fifth step of a major scale, this can be called “C Mixolydian”

tones in C 1 2 3 4 5 6 \flat 7 1 2 3 4 5 6 \flat 7 1 2 3 2 1 \flat 7 6 5 4 3 2 1 \flat 7 6 5 4 3 2 1

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

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

C major 6/9 pentatonic is a commonly-used subset of the C Mixolydian mode (scale)

tones in C 1 2 3 5 6 1 2 3 5 6 1 2 3 2 1 6 5 3 2 1 6 5 3 2 1

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

TAB: 8 10 7 10 7 10 7 9 8 10 8 10 12 10 10 10 8 9 7 10 7 10 7 10 7 10 8

C7/11 pentatonic is a commonly-used subset of the C Mixolydian scale. It is Cm7/11 pentatonic with a major third.

tones in C	1	b3	3	4	5	b7	1	b3	3	4	5	b7	1	b3	3	1	b7	5	4	b3	3	1	b7	5	4	b3	3	1
	1	1	1	1	3	1	3	2	3	1	4	1	4	4	1	4	1	3	1	2	3	1	3	1	1	2	3	

F Mixolydian for F7

Bb major with focus on “F” by starting and ending on F (the key of our blues) with the focus on F, the fifth step of a major scale, this can be called “F Mixolydian”

tones in Bb	5	6	7	1	2	3	4	5	4	3	2	1	7	6	5
tones in F	1	2	3	4	5	6	b7	1	b7	6	5	4	3	2	1
fingers	2	4	1	2	4	1	3	4	3	1	4	2	1	4	2

F Mixolydian extended range

tones in Bb	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	4	3	2	1	7	6	5	4	3	2	1	7	6	5	4	3	2	3	4	5
tones in F	1	2	3	4	5	6	b7	1	2	3	4	5	6	b7	1	b7	6	5	4	3	2	1	b7	6	5	4	3	2	1	b7	6	5	6	b7	1
fingers	2	4	1	2	4	1	2	4	1	3	4	1	1	2	4	2	1	1	4	3	1	4	2	1	4	2	1	4	2	1	4	2	4	1	2

G Mixolydian for C7

C major scale with focus on “G” by starting and ending on G with the focus on G, the fifth step of a major scale., called “G Mixolydian mode”.

tones in C	5	6	7	1	2	3	4	5	4	3	2	1	7	6	5
tones in G	1	2	3	4	5	6	b7	1	b7	6	5	4	3	2	1
fingers	4	1	3	4	1	3	4	2	4	3	1	4	3	1	4

T								8							
A		7	9	10	7	9	10		10	9	7		10	9	7
B	10														10

G Mixolydian extended range

tones in C	5	6	7	1	2	3	4	5	6	7	1	2	3	2	1	7	6	5	4	3	2	1	7	6	5	4	3	2	1	7	5
tones in G	1	2	3	4	5	6	b7	1	2	3	4	5	6	5	4	3	2	1	b7	6	5	4	3	2	1	b7	6	5	4	3	1
fingers	4	1	3	4	1	2	3	1	3	4	1	3	4	3	1	4	3	1	4	3	1	4	3	1	4	2	1	4	2	1	4

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

parent scales for I IV V blues

12 bar blues in C with chord scales and parent scales

chords	C7 (I7)	C7 (I7)	C7 (I7)	C7 (I7)
chord scales	C Mixolydian			
parent scales	F major			
chords	F7 (IV7)	F7 (IV7)	C7 (I7)	C7 (I7)
chord scales	F Mixolydian		C Mixolydian	
parent scales	Bb major		F major	
chords	G7 (V7)	F7 (IV7)	C7 (I7)	G7 (V7)
chord scales	G Mixolydian	F Mixolydian	C Mixolydian	G Mixolydian
parent scales	C major	Bb major	F major	C major

C major scale for two octaves and a third

tones in C 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 2 1 7 6 5 4 3 2 1 7 6 5 4 3 2 1

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

TAB: 8-10 7 8 10 7 9 10 8 10 12 8 10 12 10 8 12 10 8 10 9 7 10 9 7 10 8 7 10 8

F major scale for one octave

tones in F 1 2 3 4 5 6 7 1 7 6 5 4 3 2 1

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

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

F major scale with extended upper and lower range

tones in F 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 7 6 5 4 3 2 1 7 6 5 4 3 2 1 7 6 5 6 7 1
 2 4 1 2 4 1 2 3 1 3 4 1 1 3 4 3 1 1 4 3 1 3 2 1 4 2 1 4 2 1 4 2 4 1 2

T 8 10 11 8 10 12 13 12 10 8 11 10 8 10 9 7 10 8 7 10 8 7 10 8 10

A 7 8 10 7 9 10 8 10 11 11 10 8 10 9 7 10 8 7 10 8 7 10 8 10

B 8 10 7 8 10 8 10 11 10 8 10 9 7 10 8 7 10 8 7 10 8 10 7 8

Bb major scale for two octaves and a fourth

tones in Bb 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 4 3 2 1 7 6 5 4 3 2 1 7 6 5 4 3 2 1
 1 2 4 1 2 4 1 2 4 1 1 3 1 3 4 1 3 4 3 1 4 3 1 3 1 1 4 2 1 4 2 1 4 2 1

T 8 10 11 8 10 11 8 10 11 10 8 11 10 8 10 8 7 10 8 7 10 8 6 10 8 6

A 7 8 10 7 8 10 8 10 11 11 10 8 10 9 7 10 8 7 10 8 7 10 8 6 10 8 6

B 6 8 10 6 8 10 7 8 10 7 8 10 8 10 11 10 8 10 9 7 10 8 7 10 8 6 10 8 6

Parent scales show the notes used in a key scale or chord scale in the most familiar mode, the major scale. The notes of a major scale can be named after any one of the seven notes, as shown below.

Each of the seventh chords used in a I-IV-V blues (I7, IV7 and V7; C7-F7-G7 in the key of C) are constructed with tones 1, 3, 5 and b7 of a major scale named after the chord root. The seventh chord, used for every chord in this I IV V blues only occurs on the fifth step of a major scale, as shown in the bottom row of each table below.

modes of the C major parent scale

letter name	C	D	E	F	G	A	B
mode name	C Ionian or C major	D Dorian	E Phrygian	F Lydian	G Mixolydian	A Aeolian	B Locrian
scale-tone seventh	C major 7 (C-E-G-B)	D minor 7 (D-F-A-C)	E minor 7 (E-G-B-D)	F major 7 (F-A-C-E)	G7 (G-B-D-F)	A minor 7 (A-C-E-G)	Bm7b5 (B-D-F-A)

5, 7, 2, 4 of the C major scale makes G7 with G, B, D and F notes.. So does 1-3-5-b7 of the G major scale with notes G, B, D and F.

modes of the F major parent scale

letter name	F	G	A	Bb	C	D	E
mode name	F Ionian or F major	G Dorian	E Phrygian	Bb Lydian	C Mixolydian	D Aeolian	E Locrian
scale-tone seventh	F major 7 (F-A-C-E)	G minor 7 (G-Bb-D-F)	A minor 7 (A-C-E-G)	Bb major 7 (Bb-D-F-A)	C7 (C-E-G-Bb)	D minor 7 (D-F-A-C)	Em7b5 (E-G-Bb-D)

5, 7, 2, 4 of the F major scale makes C7 with C, E, G and Bb notes.. So does 1, 3, 5, b7 of the C major scale with notes C, E, G and Bb.

modes of the Bb major parent scale

letter name	Bb	C	D	Eb	F	G	A
mode name	Bb Ionian or Bb major	C Dorian	D Phrygian	Eb Lydian	F Mixolydian	G Aeolian	A Locrian
scale-tone seventh	Bb major 7 (Bb-D-F-A)	C minor 7 (C-Eb-G-Bb)	D minor 7 (D-F-A-C)	Eb major 7 (Eb-G-Bb-D)	F7 (FACEb)	G minor 7 (G-Bb-D-F)	Am7b5 (A-C-Eb-G)

5-7-2-4 of the Bb major scale makes F7 with C, E, G and Bb notes.. So does 1-3-5-b7 of the F major scale with notes C, E, G and Bb.

Therefore, using only the common major scales as a resource for notes, each seventh chord comes from a major scale where it is the fifth step of that major scale. So, for each chord (C7, F7 and G7), you need to figure out what major scale has the root of the chord on its fifth step.

key scales for I IV V blues

As stated at the beginning of this Modes On I-IV-V Blues section:

The listener predicts the melody along with the composer or improviser, in that one should mainly compose or improvise what the listener expects. In doing that, the listener expects melodies to be based on a key, with various versions of scales named after the key.

To determine the key scales, find the tone center (C) in each one of the parent scales and use the mode name associated with the scale step on which it occurs.

Putting the focus on “C” satisfies the listeners need for a uniform key. This focus will be done in melody with various devices to emphasize the note C or notes in some kind of C chord. Those melodic devices include:

- ✦ putting the tone center (C) or notes in a tonic chord (some kind of C chord) on the beat, especially the first beat and secondly the beat at a simple division of the bar like half way through on the third beat of four beats
- ✦ ending phrases with the tone center (C)
- ✦ playing the tone center (C) often in the melody
- ✦ a pivot point, where every second note or every third note is the tone center (C)
- ✦ emulating cadences that resolve to C, like emphasizing the notes of a G7 chord which leads to C, followed by emphasizing the notes of a C chord.
- ✦ playing familiar themes or “licks” that are aurally known to establish the tone center

To satisfy the listeners need for a uniform key by putting the focus on “C” in accompaniment (comping), harmonic devices include:

- ✦ frequent occurrence
- ✦ longer duration
- ✦ chord root (note after which a chord is named) movement up or down a scale to the tonic chord
- ✦ continual occurrence of the chord root of the tonic chord in the bass (even when the chord name is different, such as a G tonic chord combined with a C chord with a G bass)
- ✦ well-known chord sequences called cadences that we have known to establish a chord as a key

Sometimes there may ambiguously be two chords “fighting” for the sense of key, but usually one chord predominates as the tonic chord. Sometimes the ending does not sound final, and a piece may end with a deceptive cadence. In such a case, you are challenged to imagine what the ending chord should be to make the ending of the piece sound final and complete.

12 bar blues in C with chord scales, parent scales and key scales

chords	C7 (I7)	C7 (I7)	C7 (I7)	C7 (I7)
chord scales	C Mixolydian			
parent scales	F major			
key scales	C Mixolydian (same as chord scale)			
chords	F7 (IV7)	F7 (IV7)	C7 (I7)	C7 (I7)
chord scales	F Mixolydian		C Mixolydian	
parent scales	Bb major		F major	
key scales	C Dorian		C Mixolydian	
chords	G7 (V7)	F7 (IV7)	C7 (I7)	G7 (V7)
chord scales	G Mixolydian	F Mixolydian	C Mixolydian	G Mixolydian
parent scales	C major	Bb major	F major	C major
key scales	C major (same as parent scale)	C Dorian	C Mixolydian	C major

C Mixolydian for C7

F major with focus on “C” by starting and ending on C (the key of our blues) with the focus on C, the fifth step of a major scale, this can be called “C Mixolydian”

tones in C 1 2 3 4 5 6 b7 1 2 3 4 5 6 b7 1 2 3 2 1 b7 6 5 4 3 2 1 b7 6 5 4 3 2 1

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

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

C major 6/9 pentatonic is a commonly-used subset of the C Mixolydian mode (scale)

tones in C 1 2 3 5 6 1 2 3 5 6 1 2 3 2 1 6 5 3 2 1 6 5 3 2 1

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

TAB: 8 10 7 10 7 10 7 9 8 10 8 10 12 10 10 10 8 9 7 10 7 10 7 10 7 10 8

C7/11 pentatonic is a commonly-used subset of the C Mixolydian scale. It is Cm7/11 pentatonic with a major third.

tones in C 1 b3 3 4 5 b7 1 b3 3 4 5 b7 1 b3 3 1 b7 5 4 b3 3 1 b7 5 4 b3 3 1

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

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

C Dorian for F7

Bb major scale with focus on "C" by starting and ending on C (the key of our blues) with the focus on C, the second step of a major scale, this can be called "C Dorian".

tones in C 1 2 b3 4 5 6 b7 1 2 b3 4 5 6 b7 1 2 b3 2 1 b7 6 5 4 b3 2 1 b7 6 5 4 b3 2 1

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

TAB: 8 10 6 8 10 7 8 10 7 8 10 8 10 11 8 10 11 10 8 11 10 8 10 8 7 10 8 7 10 8 6 10 8

C minor 6/9 pentatonic is a commonly-used subset of the C Dorian mode (scale)

tones in C 1 2 b3 5 6 1 2 b3 5 6 1 2 b3 2 1 6 5 b3 2 1 6 5 b3 2 1

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

TAB: 8 10 6 10 7 10 7 8 8 10 8 10 11 10 8 10 8 8 7 10 7 10 6 10 8

C minor 7/11 pentatonic is a commonly-used subset of the C Dorian mode (scale)

tones in C 1 b3 4 5 b7 1 b3 4 5 b7 1 b3 1 b7 5 4 b3 1 b7 5 4 b3 1
 3 1 3 3 1 3 1 3 1 4 1 4 1 4 1 3 1 3 1 3 1 1 3
 T
 A 8 6 8 10 8 10 8 10 8 10 8 10 8 10 8 10 8 10 8 10 8 10 8
 B 8 6 8 10 8 10 8 10 8 10 8 10 8 10 8 10 8 10 8 10 8 10 8

C major for G7

C major scale for two octaves and a third

tones in C 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 2 1 7 6 5 4 3 2 1 7 6 5 4 3 2 1
 fingers 2 4 1 2 4 1 3 4 1 2 3 1 3 4 1 3 4 3 1 4 3 1 3 2 1 4 3 1 4 2 1 4 2
 T
 A 8 10 8 10 8 10 8 10 8 10 8 10 8 10 8 10 8 10 8 10 8 10 8 10 8 10 8 10 8 10 8
 B 8 10 7 8 10 7 9 10 7 9 10 8 10 12 10 8 12 10 8 12 10 8 10 9 7 10 9 7 10 8 7 10 8

C major 6/9 pentatonic is a commonly-used subset of the C major scale

tones in C 1 2 3 5 6 1 2 3 5 6 1 6 5 3 2 1 6 5 3 2 1
 fingers 2 4 1 4 1 4 1 2 1 3 1 3 1 2 1 4 1 4 1 4 2
 T
 A 8 10 7 10 7 9 8 10 8 10 8 9 7 10 7 10 7 10 8
 B 8 10 7 10 7 10 7 9 8 10 8 10 8 9 7 10 7 10 7 10 8

Darkening with Blue Notes

In blues-related styles, notes are often flatted to darken the mood, commonly flattening three, seven and five (b3, b7, b5). This Blues In C study will continue at the end of the next section, [The Expressive Use Of Modes](#). The sub-section is [Blues in C Darkened with Blue Notes](#).

Fingering

The most common area for improv (composing melody) in the key of C major (as in the blues in C we are considering) is seventh and eighth position. Those three scales are shown below in the seventh and eighth position area. Each major scale is shown first in its original state with the focus on major scale tone one, playing F for the F major scale and Bb to Bb for the Bb major scale. Afterward, each the F and Bb major scales are shown with the focus on the note “C”, which each of them include.

C major scale and subsets for Blues in C

C major scale for two octaves and a third

tones in C 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 2 1 7 6 5 4 3 2 1 7 6 5 4 3 2 1

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

T
A
B

8 10 7 8 10 7 9 10 7 9 10 8 10 12 8 10 12 10 8 10 9 7 10 9 7 10 8 7 10 8

C major 6/9 pentatonic is a commonly-used subset of the C major scale

tones in C 1 2 3 5 6 1 2 3 5 6 1 6 5 3 2 1 6 5 3 2 1

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

T
A
B

8 10 7 10 7 10 7 9 8 10 8 10 8 9 7 10 7 10 7 10 8

G Mixolydian mode (scale) for G7. C major scale with focus on “G” by starting and ending on G with the focus on G, the fifth step of a major scale.

tones in C 5 6 7 1 2 3 4 5 4 3 2 1 7 6 5

tones in G 1 2 3 4 5 6 b7 1 b7 6 5 4 3 2 1

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

T
A
B

10 7 9 10 7 9 10 8 10 9 7 10 9 7 10

C Mixolydian scale and subsets for Blues in C

F major scale for one octave

tones in F 1 2 3 4 5 6 7 1 7 6 5 4 3 2 1
 2 4 1 2 4 1 3 4 3 1 2 4 1 4 2

TAB 8 10 7 8 10 7 9 10 9 7 10 8 7 10 8

F major scale with extended upper and lower range

tones in F 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 7 6 5 4 3 2 1 7 6 5 4 3 2 1 7 6 5 6 7 1
 2 4 1 2 4 1 2 3 1 3 4 1 1 3 4 3 1 1 4 3 1 3 2 1 4 2 1 4 2 1 4 2 4 1 2

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

C Mixolydian

F major with focus on “C” by starting and ending on C (the key of our blues) with the focus on C, the fifth step of a major scale, this can be called “C Mixolydian”

tones in C 1 2 3 4 5 6 b7 1 2 3 4 5 6 b7 1 2 3 2 1 b7 6 5 4 3 2 1 b7 6 5 4 3 2 1
 2 4 1 2 4 1 2 4 1 2 3 1 3 4 1 3 4 3 1 4 3 1 3 2 1 4 2 1 4 2 1 4 2

TAB 8 10 7 8 10 7 8 10 7 9 10 8 10 11 8 10 12 10 8 11 10 8 10 9 7 10 8 7 10 8 7 10 8 10 8

C major 6/9 pentatonic is a commonly-used subset of the C Mixolydian mode (scale)

tones in C 1 2 3 5 6 1 2 3 5 6 1 2 3 2 1 6 5 3 2 1 6 5 3 2 1

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

TAB
8 10 7 10 7 10 7 9 8 10 8 10 12 10 10 10 8 9 7 10 7 10 7 10 8

C7/11 pentatonic is a commonly-used subset of the C Mixolydian scale. It is Cm7/11 pentatonic with a major third.

tones in C 1 b3 3 4 5 b7 1 b3 3 4 5 b7 1 b3 3 1 b7 5 4 b3 3 1 b7 5 4 b3 3 1

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

TAB
8 6 7 8 10 8 10 8 9 10 8 11 8 11 12 8 6 8 10 8 9 10 8 10 8 10 8 6 7 8

C Dorian scale and subsets for Blues in C

Bb major scale for two octaves and a fourth

tones in Bb 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 4 3 2 1 7 6 5 4 3 2 1 7 6 5 4 3 2 1

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

TAB
6 8 10 6 8 10 7 8 10 7 8 10 8 10 11 8 10 11 10 8 11 10 8 10 8 7 10 8 7 10 8 6 10 8 6

C Dorian

Bb major scale with focus on "C" by starting and ending on C (the key of our blues) with the focus on C, the second step of a major scale, this can be called "C Dorian".

tones in C 1 2 b3 4 5 6 b7 1 2 b3 4 5 6 b7 1 2 b3 2 1 b7 6 5 4 b3 2 1 b7 6 5 4 b3 2 1

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

TAB: 8 10 6 8 10 7 8 10 7 8 10 8 10 11 8 10 11 10 8 11 10 8 11 10 8 10 8 7 10 8 7 10 8 6 10 8

C minor 6/9 pentatonic is a commonly-used subset of the C Dorian mode (scale)

tones in C 1 2 b3 5 6 1 2 b3 5 6 1 2 b3 2 1 6 5 b3 2 1 6 5 b3 2 1

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

TAB: 8 10 6 10 7 10 7 8 8 10 8 10 11 10 8 10 8 8 7 10 7 10 6 10 8

C minor 7/11 pentatonic is a commonly-used subset of the C Dorian mode (scale)

tones in C 1 b3 4 5 b7 1 b3 4 5 b7 1 b3 1 b7 5 4 b3 1 b7 5 4 b3 1

3 1 3 3 1 3 1 3 1 4 1 4 1 4 1 3 1 3 1 3 1 1 3

TAB: 8 6 8 10 8 10 8 6 8 11 8 6 8 8 10 8 10 8 10 8 10 8 6 8

F Mixolydian

Bb major with focus on "F" by starting and ending on F (the key of our blues) with the focus on F, the fifth step of a major scale, this can be called "F Mixolydian"

tones in Bb	5	6	7	1	2	3	4	5	4	3	2	1	7	6	5
tones in F	1	2	3	4	5	6	b7	1	b7	6	5	4	3	2	1
fingers	2	4	1	2	4	1	3	4	3	1	4	2	1	4	2

T															
A															
B	8	10	7	8	10	7	8	10	8	7	10	8	7	10	8

F Mixolydian extended range

tones in Bb	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	4	3	2	1	7	6	5	4	3	2	1	7	6	5	4	3	2	3	4	5
tones in F	1	2	3	4	5	6	b7	1	2	3	4	5	6	b7	1	b7	6	5	4	3	2	1	b7	6	5	4	3	2	1	b7	6	5	6	b7	1
fingers	2	4	1	2	4	1	2	4	1	3	4	1	1	2	4	2	1	1	4	3	1	4	2	1	4	2	1	4	2	1	4	2	4	1	2

T									8	10	11	8	10	11	13	11	10	8	11	10	8																	
A																																						
B	8	10	7	8	10	7	8	10																														

MODES ON JAZZ BLUES

(also called swing blues)

study [modes on I IV V blues](#) first

The Jazz Blues Chord Progression

C7 (I7)	F7 (IV7)	C7 (I7)	C7 (I7)
F7 (IV7)	F#dim.7(#IVdim.7)	C7 (I7)	A7 (VI7)
Dm7 (IIIm7)	G7 (V7)	C7 (I7) A7(VI7)	Dm7 (IIIm7) G7(V7)

#IV Diminished Seventh

This common version of the jazz blues (swing blues) chord progression has a IV7 chord in bar 2. The later part of IV7 in bar six chord has a sharp root. The bass player doesn't necessarily need to play the root of the #IVdim.7 chord. It could be interpreted as IV7b9, since IV9b9 with no root *is* #IVdim7.

C7 (I7)	F7 (IV7)	C7 (I7)	C7 (I7)
F7 (IV7)	F7b9 (IV7b9)	C7 (I7)	A7 (VI7)
Dm7 (IIIm7)	G7 (V7)	C7 (I7) A7(VI7)	Dm7 (IIIm7) G7(V7)

The II-V Cadence

Instead of the V-IV cadence in bars nine and ten of the I-IV-V blues, the jazz blues uses IIIm7 V7. This typically suggests scales with brighter mood, like key major or key Mixolydian, since IIIm7-V7 is created directly from the major scale.

The VI-II-V-I Turnaround

To strengthen the II-V cadence, the jazz blues almost always (except for a few songs like Ray Charles' "It Should've Been Me") precedes the IIIm chord with a VI7. The VI7 is often treated as a V of a minor key, as if IIIm is Aeolian mode (or harmonic minor scale).

Typical Jazz Blues Chord Scales

C7 (I7)	F7 (IV7) F7b9(IV7b9)	C7 (I7)	C7 (I7)
C Mixolydian	F Mixolydian F Mixolydian b2	C Mixolydian	
F7 (IV7)	F7b9 (IV7b9)	C7 (I7)	A7 (VI7)
F Mixolydian	F Mixolydian b2	C Mixolydian	A Phrygian major
Dm7 (IIIm7)	G7 (V7)	C7 (I7) A7(VI7)	Dm7 (IIIm7) G7(V7)
C major		C major A Phry. major	D Dorian G Mixolydian

Mixolydian b2 as a chord scale for #IV diminished seventh

Mixolydian b2 is not a well-known scale, but in jazzy melody on a #IV diminished seventh, its notes are often used. If you are using IV Mixolydian (key scale Dorian) on a IV7 chord followed by a #IV diminished seventh or IV7b9 you will play the #4 tone of the key, which is the root of the #IVdim.7 and is the “b9” of the IV7b9. This would actually be using the chord scale IV (F) Mixolydian b2.

F Mixolydian b2 is an F major scale with b2 and b7. Here is an “evolution” of formulas from F major to F Mixolydian b2:

scale	formula	numbered and lettered scale tones.....							
F major scale	(all natural)	1	2	3	4	5	6	7	
		F	G	A	Bb	C	D	E	
F Mixolydian	b7	1	2	3	4	5	6	b7	
		F	G	A	Bb	C	D	Eb	
F Mixolydian b2	b2, b7	1	b2	3	4	5	6	b7	
		F	Gb	A	Bb	C	D	Eb	

The formula for F7b9 is 1-3-5-b7-b9. “b9” is the same as “b2”. “b9” implies “b2” should be voiced in the upper octave. As you can see by the table above, F Mixolydian b2 has all of the notes of F7b9.

Phrygian major as a chord scale for VI7

The VI7 chord will be treated as a V chord of the IIIm, as if the IIIm has a harmonic minor chord scale. The mode for the V chord in harmonic minor has the tones of a seventh chord: 1-3-5-b7. It also has the tones a half step above each note of its major triad basis (1-3-5): b2, 4 and 6 (which make a bII major triad in the key of the chord root).

We'll be using A Phrygian major as the chord scale for VI7. A Phrygian major is an A major scale with b2, b6 and b7. Here is an "evolution" of formulas from A major to A Phrygian major:

scale	formula	numbered and lettered scale tones.....							
A major scale	(all natural)	1	2	3	4	5	6	7	
		A	B	C#	D	E	F#	G#	
A Phrygian	b2, b3, b6, b7	1	2	b3	4	5	b6	b7	
		A	Bb	C	D	E	F	G	
A Phrygian major	b2, b6, b7	1	b2	3	4	5	6	b7	
		A	Bb	C#	D	E	F	G	

simple major modes as chord scales for IIm and V

At first, use the straightforward major modes for IIm and V: II Dorian for the II chord and V Mixolydian. Later, you can do more exotic things like playing a minor II V in their place, or additionally using a melodic minor-based flat five substitute for the V chord (bII7 instead of V7). See [Flat Five Substitute Chord Progression](#).

We'll be using D Dorian as the chord scale for IIm7 (Dm7). D Dorian is a D major scale with b3 and b7. Here is an "evolution" of formulas from D major to D Dorian:

scale	formula	numbered and lettered scale tones.....							
D major scale	(all natural)	1	2	3	4	5	6	7	
		D	E	F#	G	A	B	C#	
D Dorian	b3, b7	1	2	b3	4	5	b6	b7	
		D	E	F	G	A	B	C	

We'll be using G Mixolydian as the chord scale for V7 (G7). G Mixolydian is a G major scale with b7. Here is an "evolution" of formulas from G major to G Mixolydian:

scale	formula	numbered and lettered scale tones.....							
G major scale	(all natural)	1	2	3	4	5	6	7	
		G	A	B	C	D	E	F#	
G Mixolydian	b7	1	2	b3	4	5	b6	b7	
		G	A	B	C	D	E	F	

Jazz Blues Parent Scales

12 bar jazz blues in C with chord scales and parent scales

chords	C7 (I7)	F7 (I7)	C7 (I7)	
chord scales	C Mixolydian	F Mixolydian	C Mixolydian	
parent scales	F major	Bb major	F major	
chords	F7 (IV7)	F#dim7 (IV7)	C7 (I7)	A7 (VI7)
chord scales	F Mixolydian	F Mixolydian b2	C Mixolydian	A Phrygian major
parent scales	Bb major	Bb major b6	F major	F maj. sharp five
chords	Dm7 (IIIm7)	G7 (V7)	C7 (I7) A7 (IV7)	Dm7 (IIIm7) G7 (V7)
chord scales	D Dorian	G Mixolydian	C Mixo. A Phry. major	D Dorian G Mixo.
parent scales	C major	C major	F major F maj. #5	C major C major

Jazz Blues Key Scales

12 bar jazz blues in C with chord scales, parent scales and key scales

chords	C7 (I7)	F7 (I7)	C7 (I7)	
chord scales	C Mixolydian	F Mixolydian	C Mixolydian	
parent scales	F major	Bb major	F major	
key scales	C Mixolydian	C Dorian	C Mixolydian	
chords	F7 (IV7)	F#dim7 (IV7)	C7 (I7)	A7 (VI7)
chord scales	F Mixolydian	F# Mixolydian #1	C Mixolydian	A Phrygian major
parent scales	Bb major	Bb major #5	F major	F major sharp five
key scales	C Dorian	C Dorian #4	C Mixolydian	C# Mixolydian sharp one
chords	Dm7 (IIIm7)	G7 (V7)	C7 (I7) A7 (VI7)	Dm7 (IIIm7) G7 (V7)
chord scales	D Dorian	G Mixolydian	C Mixo. F Mixo.	D Dorian G Mixo.
parent scales	C major	C major	F major major Bb	C major C major
key scales	C major	C major	C Mixolydian Mixo. #1 C#	C major C major

review modes on I IV V blues

If necessary, review [parent scales for I IV V blues](#) before studying the parent scales for the other chords.

I Dorian sharp four for #IV diminished 7

The chord scale for #IV diminished 7 was IV Mixolydian sharp one major which is the mode on the fifth step of major sharp five. In the descending number pattern with the set of modes for major sharp five the modes would be:

mode: I maj #5 II Dorian #4 III Phry nat3 IV Lyd. #2 #V Mixo. #1 VI Aeo nat.7 VII Loc nat.6

mode: Bb maj #5 C Dorian #4 D Phry nat3 Eb Lyd. #2 F# Mixo. #1 G Aeo nat.7 A Loc nat.6

For melodic improv, recall blues melody for F7 and F Mixolydian and sharp the F notes. If you are building chords, recall F7 type chords (parts of F13) and sharp the F notes.

The mode on the sixth step of Bb major #5 is G harmonic minor (G Aeolian natural seven). Using this F# Mixolydian sharp one scale (G harmonic minor) can voice lead to the tones of the Gm triad, which is

the root, third and fifth of C9 (bar 7), giving the impression that you are progressing to Gm, but actually to Gm as part of C9.

I Mixolydian sharp one scale for VI7

The chord scale for VI7 was Phrygian major which is the mode on the third step of major sharp five. In the descending number pattern with the set of modes for major sharp five the modes would be:

mode:	I maj #5	II Dorian #4	III Phry nat3	IV Lyd. #2	#V Mixo. #1	VI Aeo nat.7	VII Loc nat.6
mode:	F maj #5	G Dorian #4	A Phry nat3	B Lyd. #2	C# Mixo. #1	D Aeo nat.7	E Loc nat.6

For melodic improv, recall blues melody for C7 and C Mixolydian and sharp the C notes. If you are building chords, recall C7 type chords (parts of F13) and sharp the C notes.

The mode on the sixth step of F major #5 is D harmonic minor (D Aeolian natural seven). Using this C# Mixolydian sharp one scale (D harmonic minor) can voice lead to the tones of the Dm triad.

THE EXPRESSIVE USE OF MODES

The Expressive Series of Major Scale Modes by Alteration

Moving to the right in the expressive series of substitute modes tends to produce brighter, happier moods. Moving left in the expressive series tends to produce darker, sadder moods. The expressive series may be used melodically or harmonically. Melodic applications (in soloing or composition) involve movement to the right or left in changing the mode to more closely resemble the notes in the accompanying chords (accommodating chords). When melodically substituting for expressive purposes, the expressive series is more often used in “darkening” the mood by moving to the left, adding flats to the mode formula (except in changing from Lydian to major, which removes a sharp). Occasionally, movement to the right in the expressive series is used by melodically substituting Lydian mode for major or Dorian mode for Aeolian.

Other movement to the right (brightening moods) is rare in melodic mode substitution.

Harmonic Applications

The chord progression or other form of accompaniment part may involve movement in both directions in the series, darkening or brightening the mood.

Melodic Use of the Expressive Series

accommodating chords.

When the mode you’re using now needs to accommodate more flats because of the upcoming chord(s) in the progression, move to the left in the expressive series from the present mode until you arrive at one which has the flats (in the scale formula) you need. When the present mode needs to accommodate more sharps (according to the upcoming chords), move to the right in the expressive series from the present mode until you get to one with the sharps (in the scale formula) you need.

Accommodating chords is not substituting modes, and is therefore not using the expressive series to alter the mood.

Substituting Modes For Expressive Purposes.

Bluesy substitutes. “Blues” is a feeling of melancholy, depression and despondency. Substituting to the left in the expressive series from major to Mixolydian or Dorian, or from Mixolydian to Dorian produces a bluesy mood or sound. If the present mode is major, you may substitute Mixolydian for a

bluesy sound or Dorian for a very bluesy sound. If the present mode is Mixolydian, you may substitute Dorian for a more bluesy sound.

Harmonic Use of the Expressive Series

The expressive series of substitute modes can be used with chord progressions (or other forms of accompaniment parts) and may involve movement in both directions in the series, darkening or brightening the mood.

use of the expressive series in composing and arranging.

Composed and arranged accompaniment parts can be more intricate, while comping (improvising) an accompaniment part is more dependent on the musical expression of the other players. Temporary change of

mode while using the same tone center may occur for as brief a time as a single beat or for an entire section of a song.

“comping” with the expressive series

In many situations, the accompanists have freedom of expression through changing modes also. They can alter part of the background to contrast against the rest of the band. One section can alter the arrangement by changing mode while the rest of the band remains in the mode originally intended.

Blues in C Darkened with Blue Notes

12 bar blues in C with chord scales, parent scales, key scales and blue scales

chords	C7 (I7)	C7 (I7)	C7 (I7)	C7 (I7)
chord scales	C Mixolydian (C major with b7)			
parent scales	F major			
key scales	C Mixolydian (same as chord scale)			
blue scales	C Dorian (flattening the third in addition to the seventh) with Bb major parent scale			
chords	F7 (IV7)	F7 (IV7)	C7 (I7)	C7 (I7)
chord scales	F Mixolydian		C Mixolydian	
parent scales	Bb major			
key scales	C Dorian (C major with b3, b7)			
blue scales	none		C Dorian with Bb parent scale	
chords	G7 (V7)	F7 (IV7)	C7 (I7)	G7 (V7)
chord scales	G Mixolydian	F Mixolydian	C Mixolydian	G Mixolydian
parent scales	C major	Bb major	F major	C major
key scales	C major (same as parent scale)	C Dorian (b3, b7)	C Mixolydian (b7)	C major
blue scales	C Mixolydian (same as F major parent)	none	C Dorian (same as Bb major parent)	C Mixolydian (same as F major parent)
very blue scale	C Dorian (same as Bb major parent)			C Dorian (same as Bb major parent)

darkening the I7 chord

Flat the third, changing C Mixolydian (with its C major 6/9 pentatonic subset) to C Dorian (with its Cm6/9 pentatonic subset and its Cm7/11 pentatonic subset). This makes the scale (or scales, including the pentatonic subsets) the same for I7 and IV7. Compared to a major scale, Dorian has flat three and flat seven.

If you also use the “very blue” option for the V7 chord, C Dorian (I Dorian), the scales are the same for the I, IV and V chords. This sets up the common situation of being able to play the Im7/11 pentatonic (Cm7/11 pentatonic) on all three of the chords (I7, IV7, and V7 or C7, F7, G7).

darkening the IV7 chord

Don't go there. If you were to flat the third of the IV chord by using a minor pentatonic chord scale (F minor pentatonic) or the F Dorian scale of which it is a subset, the key scale name of those same notes is C Aeolian, which has a flatted sixth. Flat six is associated with minor key jazz, middle eastern and Spanish music and draws too far away from what is usually thought of as major key blues (I IV V).

darkening the V7 chord

Flattening the seventh of the key and using I Mixolydian (C Mixolydian, with F major parent) darkens the V chord by making it sound minor. The chord scale name for the same notes is V Dorian (G Dorian, with F major parent). Compared to a major scale, Mixolydian has flat seven.

To darken even more, flat both the third and the seventh of the key with I Dorian (C Dorian, with Bb major parent) making the V chord sound minor and providing a note to make V augmented or V7#5. The chord scale name for the same notes is V Aeolian (G Aeolian, with Bb major parent).

MODES OF FOUR HEPTATONIC SCALES

Conceive each chord as a summary chord, using four heptatonic scales. The summary chord of each table summarizes the scale-tone for each mode of each scale, such as “I ma9/6#5” beginning the second row in in major #5. *Get to know them.* They are very useful in comping and arranging.

Odd numbers 7 through 13 immediately after the letter name of a chord imply a dominant seventh (b7), with two exceptions: major (ma, maj, Δ) before the odd number implies a natural seven and diminished (dim, °) implies double flat seven (=6)

Find the “sameness” of 4 heptatonic minor modes with a focus on their V chords:

- Vm7 (use on V7b9#9) of key Aeolian (V of target is Phrygian)
- V7b9(opt, #5) of key harmonic minor (V of target is Phrygian major). Aeolian’s bVII Mixolydian becomes VII Mixolydian #1.
- V7b9#9(opt.#5) of key Aeolian b1 (from major b6). Target is VI of major b6 scale. V of target is super Phrygian = Phrygian b4 (super Locrian with nat 5)
- V7b5#5b9#9 of key Phrygian b1 (melodic minor mode bIII) V of target is super Locrian

Major Scale Modes

scale tones →	I	II	III	IV	V	VI	VII
mode names →	Ionian	Dorian	Phrygian	Lydian	Mixolydian	Aeolian	Locrian
summary	I ma9/6	IIIm13	IIIIm7(/11)	IVma13#11	V9/6	VIIm11	VIIIm7b5(/11)
Ionian target	I of Ionian	2 of Ionian	3 of Ionian	4 of Ionian	5 of Ionian	6 of Ionian	7 of Ionian
Dorian target	b7 of Dorian	1 of Dorian	2 of Dorian	b3 of Dorian	4 of Dorian	5 of Dorian	6 of Dorian
Mixo. target	4 of Mixo.	5 of Mixo.	6 of Mixo.	b7 of Mixo.	1 of Mixo.	2 of Mixo.	3 of Mixo.
Aeol. target	b3 of Aeolian	4 of Aeolian	5 of Aeolian	b6 of Aeolian	b7 of Aeolian	1 Aeolian	2 of Aeolian

Major Sharp Five Modes

The most common use of this modal system is to build major sharp five on “b3” of a target chord root. The target is on VI (of major sharp five). The mode of the target chord can change to Mixolydian, Dorian, or any mode with a perfect fifth and flat seventh. Use a setup chord or cadence before the target as if the target will be Aeolian or harmonic minor. V of the target is III Phrygian major, with secondary root on third #V Mixolydian #1.

scale tones →	I	II	III	IV	#V	VI	VII
mode names →	major #5	Dorian #4	Phrygian major	Lydian #2	Mixo. #1	Aeolian nat.7	Locrian nat.6
C ma#5 chords	Cma9/6#5	Dm13#11 or Ddim7	E7b9(/11)b13	Fma7/6(#11) or Fdim7	G#dim7	Am9(ma7)	Bm7b5(/11) or VIIIdim7
VI har. m. chords	bIIIIma9	IVm13#11 or IVdim7	V7b9(/11)b13	bVIIma7/6(#11) or bVIIdim7	VIIIdim7	Im9(ma7)	IIm7b5(/11) or IIDim7
VI har. m. chords	bIIIIma9	IVm13#11 or IVdim7	V7b9(/11)b13	bVIIma7/6(#11) or bVIIdim7	VIIIdim7	Im9(ma7)	IIm7b5(/11) or IIDim7

Major b6 (Harmonic Major) Modes

Use for IIm9b5 V13b9 of target. Exclusively for major targets or relative major of targets.

scale tones →	I	II	III	IV	V	bVI	VII
mode names →	major b6	Dorian b5	Phrygian b4 super Phrygian	Lydian b3 Lydian diminished	Mixo. b2	Aeolian b1	Locrian bb7
I maj. b6 chords	Ima9	IIm13b5 or IIDim7	III7±9b13 or IIIIm7	IVm9(ma7)/6 or IVdim7	V13b9	VIma9/6±5#9 or VIdim7	VIIIdim7
C maj. b6 chords	Cma9	Dm13b5 or Ddim7	E7±9b13 or Em7	Fm9(ma7)/6 or Fdim7	G13b9	Ama9/6±5#9 or Adim7	Bdim7

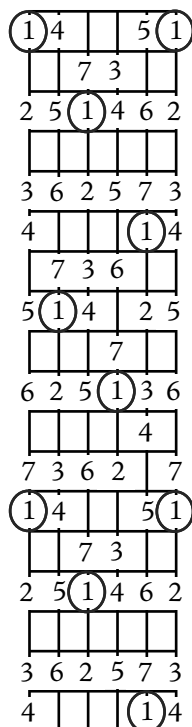
Melodic Minor Modes (Major b3)

Usually built on bVI of target, using mode IV13#11 on bII of target, VII7#9b9#5b5 on V of target.

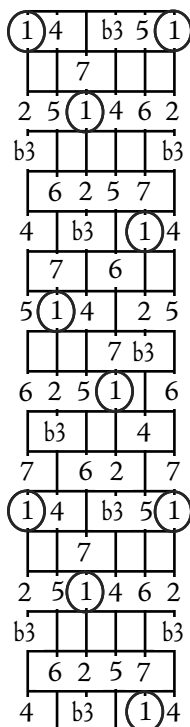
scale tones →	I	II	bIII	IV	V	VI	VII
mode names →	major b3	Dorian b2	Phrygian b1	Lydian b7	Mixo. b6 Aeolian major Aeolian dominant	Aeolian b5	Locrian b4 super Locrian
I mel. m. chords	Im9(ma7)/6	IIm13no9	bIIIIma9#5	IV13#11	V11b13	VIm7b5 (m11b5)	VII7#5b5#9b9
C mel. m. chords	Cm9(ma7)/6	Dm13no9	Ebma9#5	F13#11	G11b13	Am11b5	B7#5b5#9b9
bIII Phrygian	bVIIm13no11	bVIIIm13no9	bIma9#5	bII13#11	bIII11b13	IVm11b5	V7#5b5#9b9

FULL-FRETBOARD HEPTATONIC SCALE DIAGRAMS

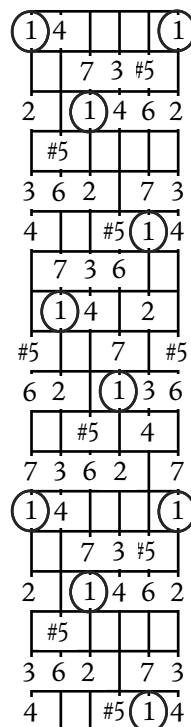
major scale



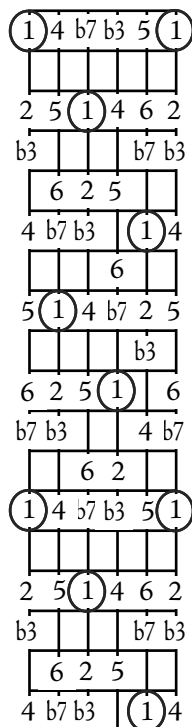
melodic minor



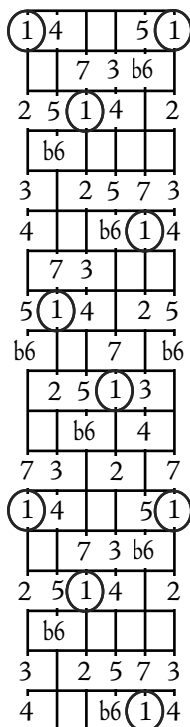
major sharp five



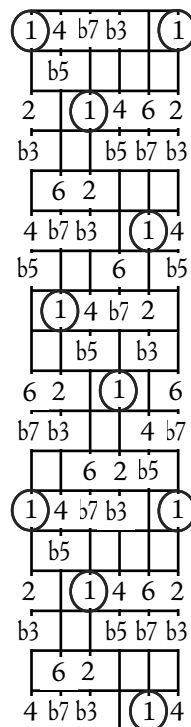
Dorian



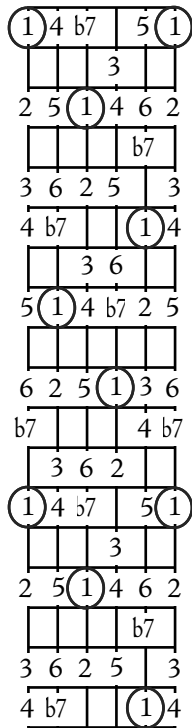
major flat six



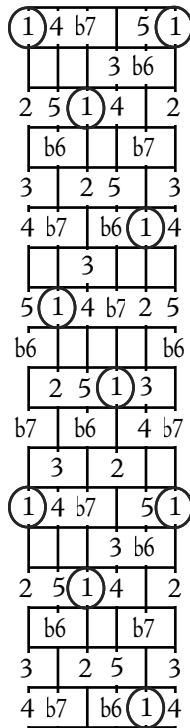
Dorian flat five



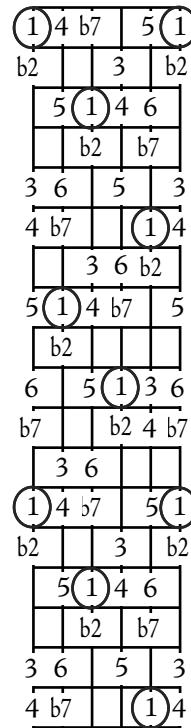
Mixolydian



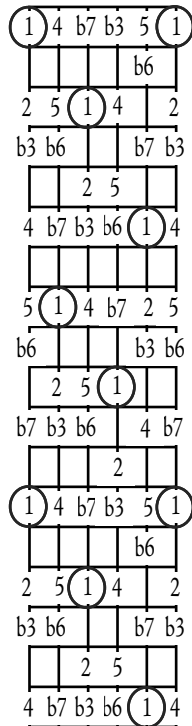
Mixolydian flat six



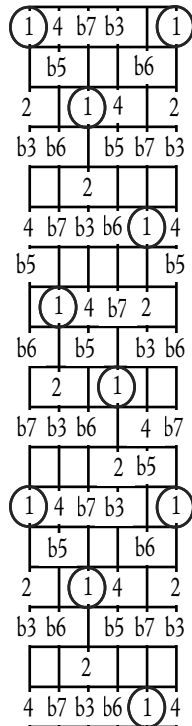
Mixolydian flat two



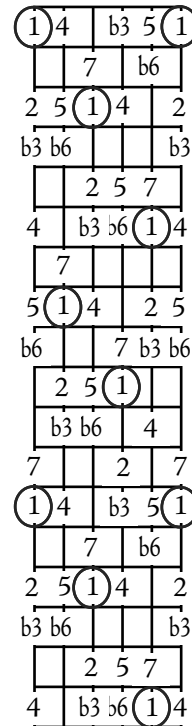
Aeolian



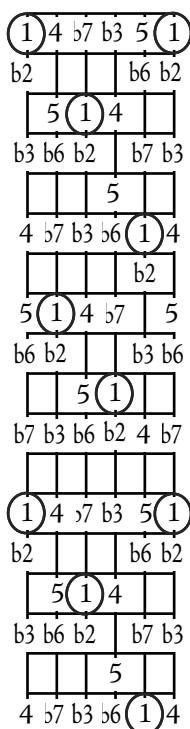
Aeolian flat five



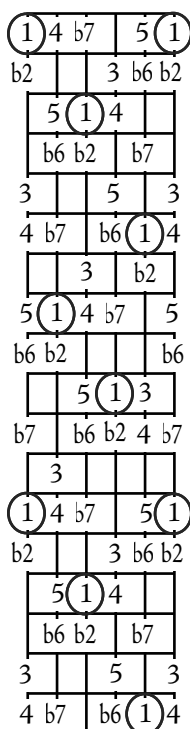
harmonic minor



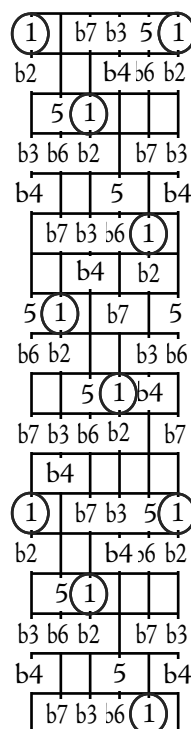
Phrygian



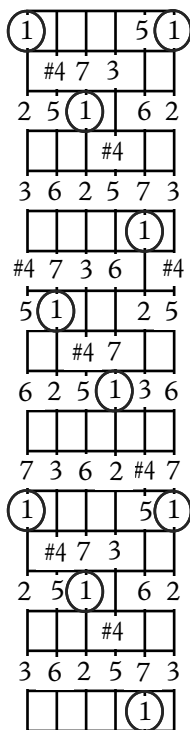
Phrygian major



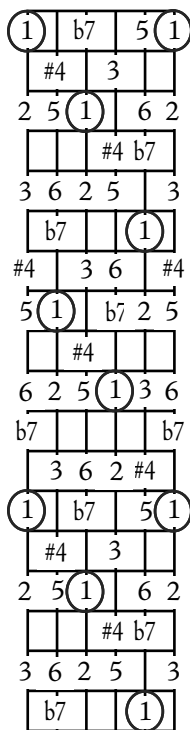
super Phrygian



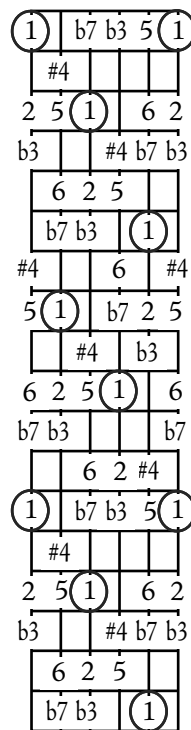
Lydian



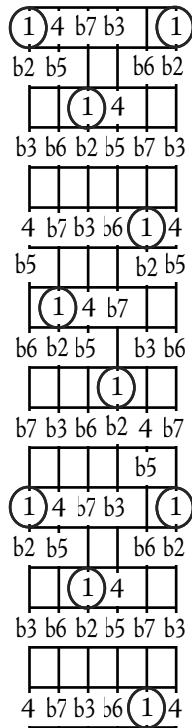
Lydian dominant



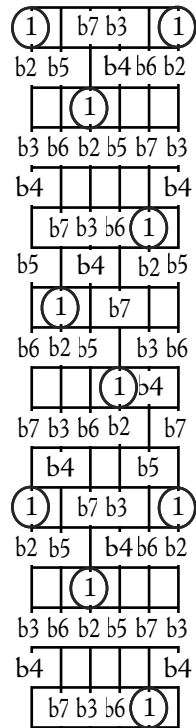
Lydian diminished



Locrian



super Locrian

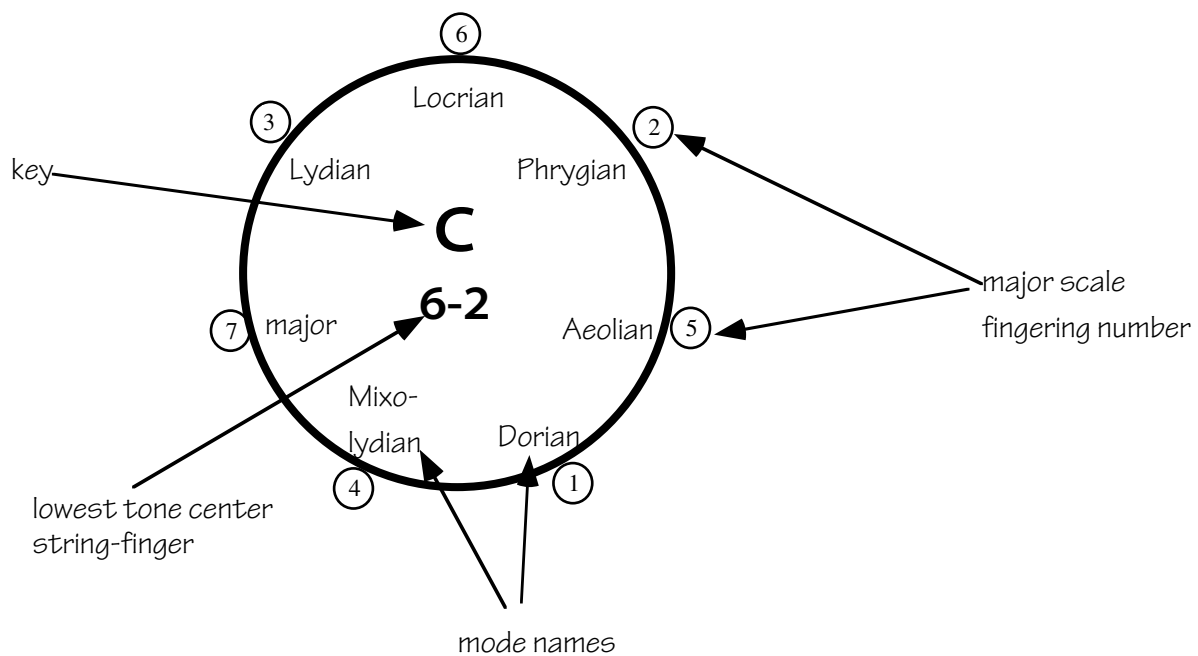


MODAL MAJOR SCALE DIAGRAMS

(shown "sideways" at the end of this chapter)

The Center Circle

The various parts of the center circle are labeled below, and will be described in the pages that follow. Key was defined earlier in this chapter.



Major Scale Fingering Numbers

I number major scale fingerings according to the number of lowest note fingered with the index finger on the sixth string. The fingering you have just made, is called major scale in-position fingering 6. Other fingerings called three-note-per-string major scale fingerings use slightly different rules regarding playing in position. The seven in-position fingerings are shown below. Scale tones are numbered. The scale tone numbers shown in parenthesis are options, where the same note can be fingered on the second string.

In-Position Fingerings

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

The in-position fingerings lend themselves to playing chord and arpeggio structures within the scale. Melody is largely an ornamentation of chord tones, so these fingerings work well to improvise. Three-note-per-string fingerings are better suited to playing scale runs, since picking can be the same for every string and the finger patterns are more repetitious and easier to recall. Here are the three-note-per-string major scale fingerings:

Three Note-Per-String Fingerings

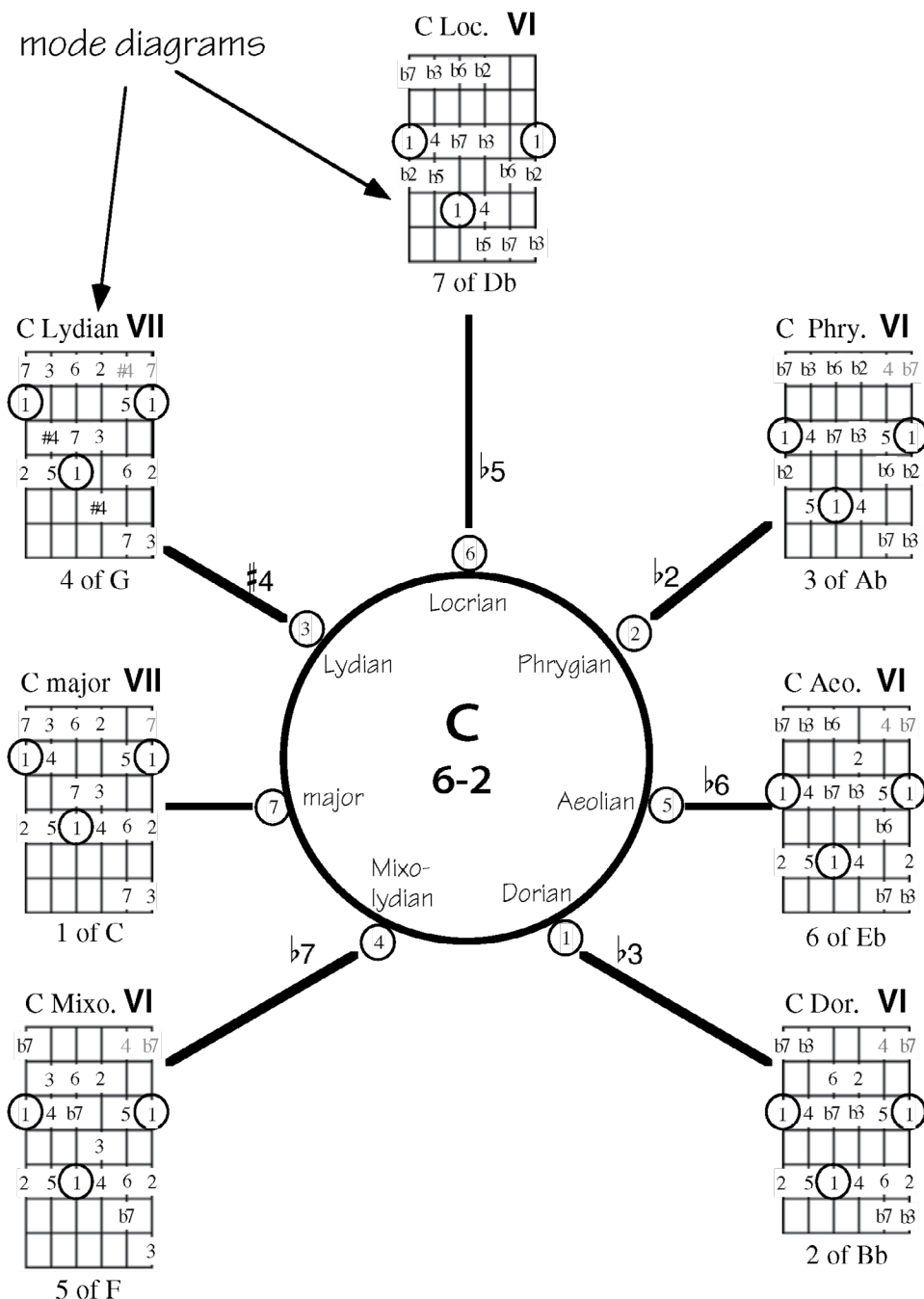
fingering 1/2	fingering 2/3	fingering 3/4	fingering 4/5	fingering 5/6	fingering 6/7	fingering 7/1

Three-note-per-string major scale fingerings shown above combine in-position fingerings, and are numbered accordingly. Fingering 1/2 combines in-position fingerings 1 and 2; fingering 2/3 combines in-position fingerings 2 and 3; and so on.

Mode Diagrams

Combined In-Position and Three Note Per String Fingerings

The seven mode diagrams connected to the circle by bold lines are the fingering diagrams for the modes. Each fingering diagram is a combination of an in-position and the three-note-per-string fingering. To play an in-position fingering, use the one or two greyed notes on the upper right of the diagram in place of the greyed notes on the lower right. The fretting finger numbers were shown earlier in the section on Major Scale Fingering Numbers.



Formula Numbers

The numbers within the mode diagrams represent the tones and altered tones of a major scale built on the tone center, in this case, on the C major scale. “b3” would represent “E \flat ”.

Abbreviated Formulas

Abbreviated versions of the mode formulas are shown alongside the bold lines that connect them to the center circle. Major is the “model” to which the modes are related, so it has no altered numbers. Lydian has a #4 and Mixolydian has a b7. The remaining modes “accumulate” flats in their formula, as demonstrated in the “altered tones in formula” column in the chart below. The abbreviation shows only the added flat for each mode in the counter-clockwise sequence around the center circle.

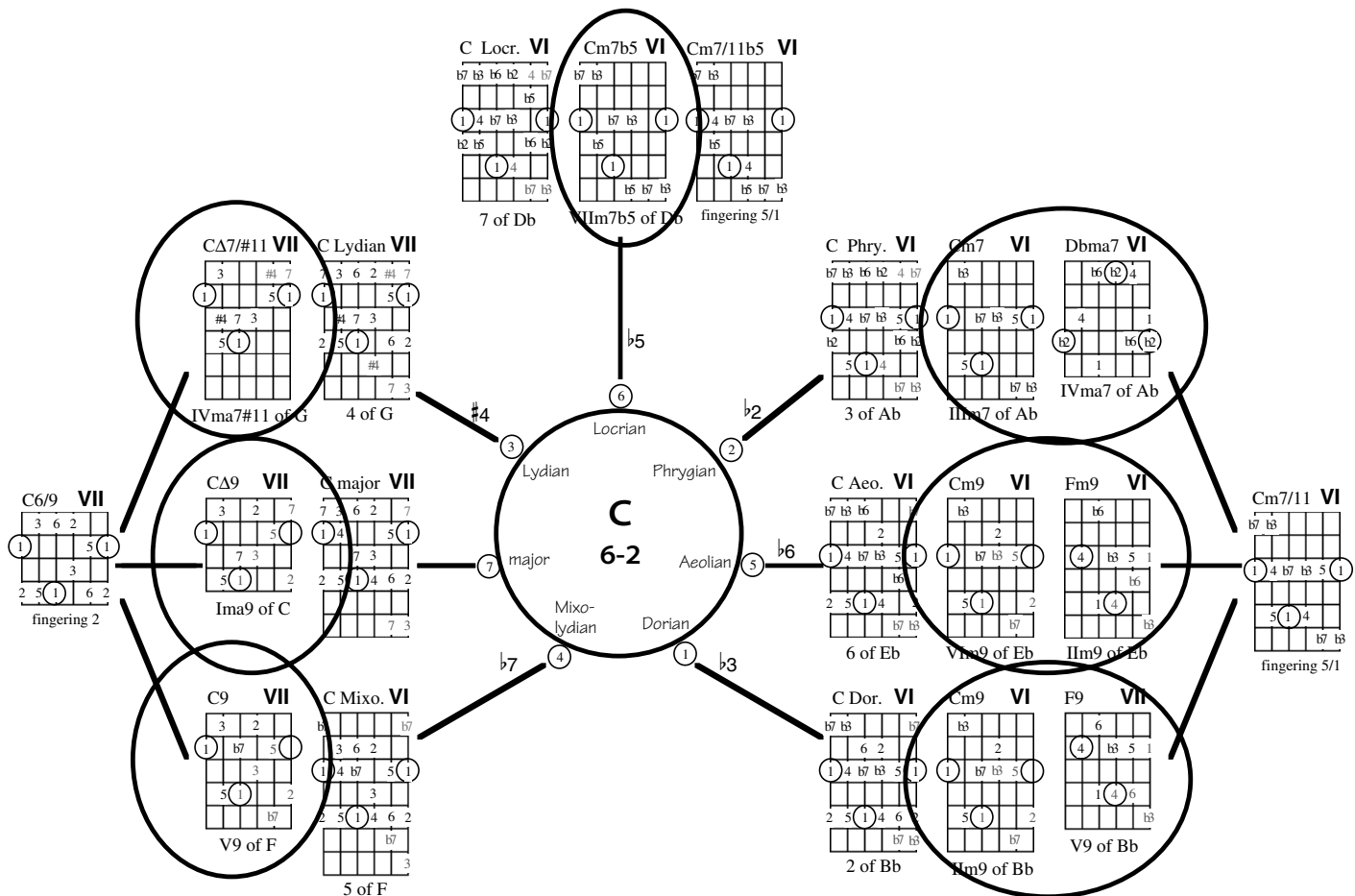
mode	formula	altered tones in formula	abbreviation
Mixolydian	1 2 3 4 5 6 b7	b7	b7
Dorian	1 2 b3 4 5 6 b7	b7 b3	b3
Aeolian	1 2 b3 4 5 b6 b7	b7 b3 b6	b6
Phrygian	1 b2 b3 4 5 b6 b7	b7 b3 b6 b2	b2
Locrian	1 b2 b3 4 b5 b6 b7	b7 b3 b6 b2 b5	b5

Finger Orientation

In the center circle, just below the key name, two numbers are shown, separated with a hyphen. The first number is the string of the lowest octave tone center and the second number is the finger which frets the lowest octave tone center. “6-2”, for example means sixth string, second finger is the location of the lowest octave tone center. This tone center is common to all of the diagrams in the set around the circle.

Subset Arpeggios

To familiarize you with the character of each mode, I have provided an arpeggio or two alongside each of the major scale modes. The arpeggios are subsets of each mode they represent.



Lydian mode subset arpeggios

Lydian and major mode share a major seventh chord (Cma7 in this case). The distinguishing note in Lydian mode is the #4. So, to express this, I suggest you play the ma7#11 arpeggio in the form of a pentatonic scale to capture the unique harmonic sound of the Lydian mode. Joe Satriani's *Flying In A Blue Dream* begins in C Lydian.

Ionian mode (major scale) subset arpeggios

Major mode is the "default" scale for a major seventh or major ninth chord. I used a major ninth to express a more colorful version of the major seventh arpeggio.

Mixolydian mode subset arpeggios

If a chord has a flatted seventh, you would typically use Mixolydian. I used a dominant ninth (abbreviated "9") to express a more colorful version of the dominant seventh arpeggio ("7").

Dorian mode subset arpeggios

If a chord has a third and a flatted seventh, you could use Dorian or Aeolian. A typical distinguishing chord is the IV chord, which is dominant seventh (“7”) or dominant ninth (“9”) in Dorian. In the key of “C”, the IV9 chord would be F9.

Aeolian mode subset arpeggios

A chord has a third and a flatted seventh, could use Dorian or Aeolian. A distinguishing chord is the IV chord, which is minor seventh (“m7”) or minor ninth (“m9”) in Aeolian. In the key of “C”, the IVm9 chord would be Fm9. Another distinguishing chord is the bVI chord, which would be an Ab or Abma7 in C Aeolian. Jimi Hendrix’s version of Bob Dylan’s *All Along The Watchtower* uses the C Aeolian chord progression Cm, Bb, Ab, Bb.

Phrygian mode subset arpeggios

This mode cannot produce a minor ninth, since its second tone is a $\flat 2$ (which would produce a $\flat 9$). So, the tonic chord arpeggio shown is Cm7. Cm7 and Dbma7 show the exotic Middle-Eastern harmonic sound of this mode. George Benson’s version of the Jefferson Airplane song *White Rabbit* used this mode.

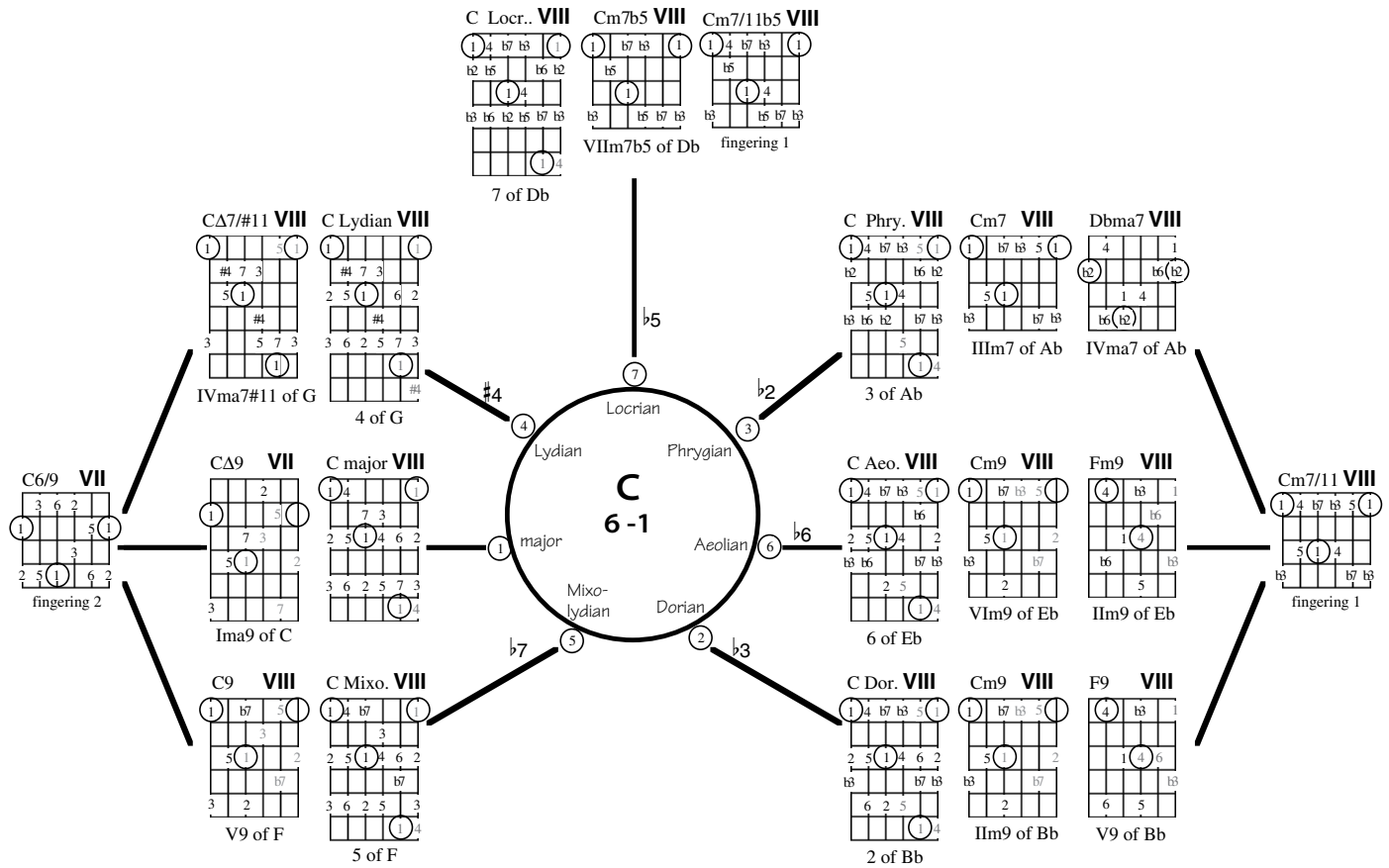
Locrian mode subset arpeggios

This is a very dark mode. The minor seventh flat five chord arpeggio is also called “half diminished”.

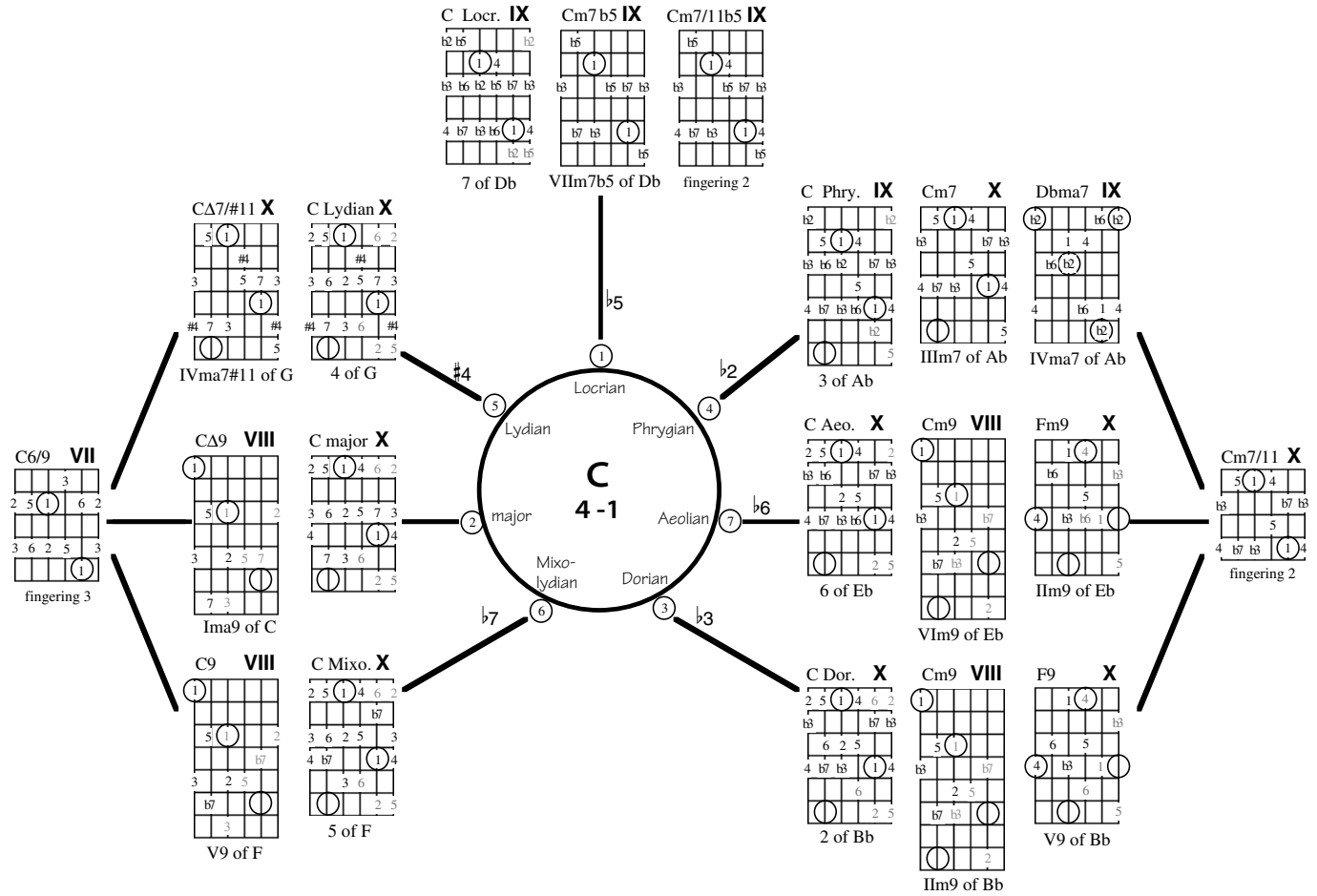
Subset Pentatonic Scales

On the far left of each modal major scale page, a major 6/9 pentatonic scale is shown. This major pentatonic is a subset common to Lydian, major and Mixolydian modes. There is a minor 7/11 pentatonic on the far right of each modal major scale diagram page. The minor 7/11 pentatonic is a subset of Dorian, Aeolian and Phrygian. Locrian’s subset minor 7/11 $\flat 5$ is unique to it (among the major scale modes).

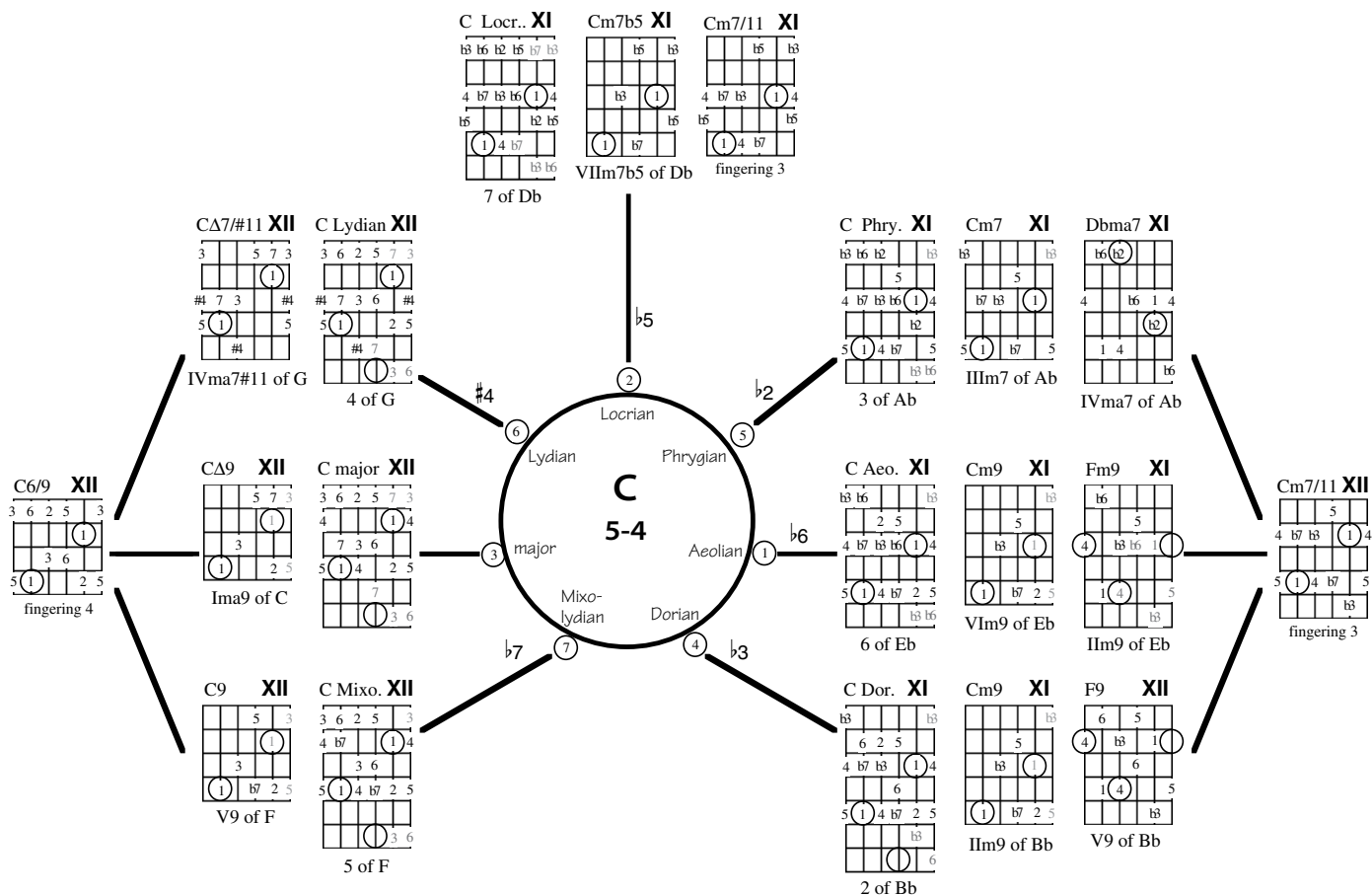
Major Scale Modes in C, Fingering 6-1



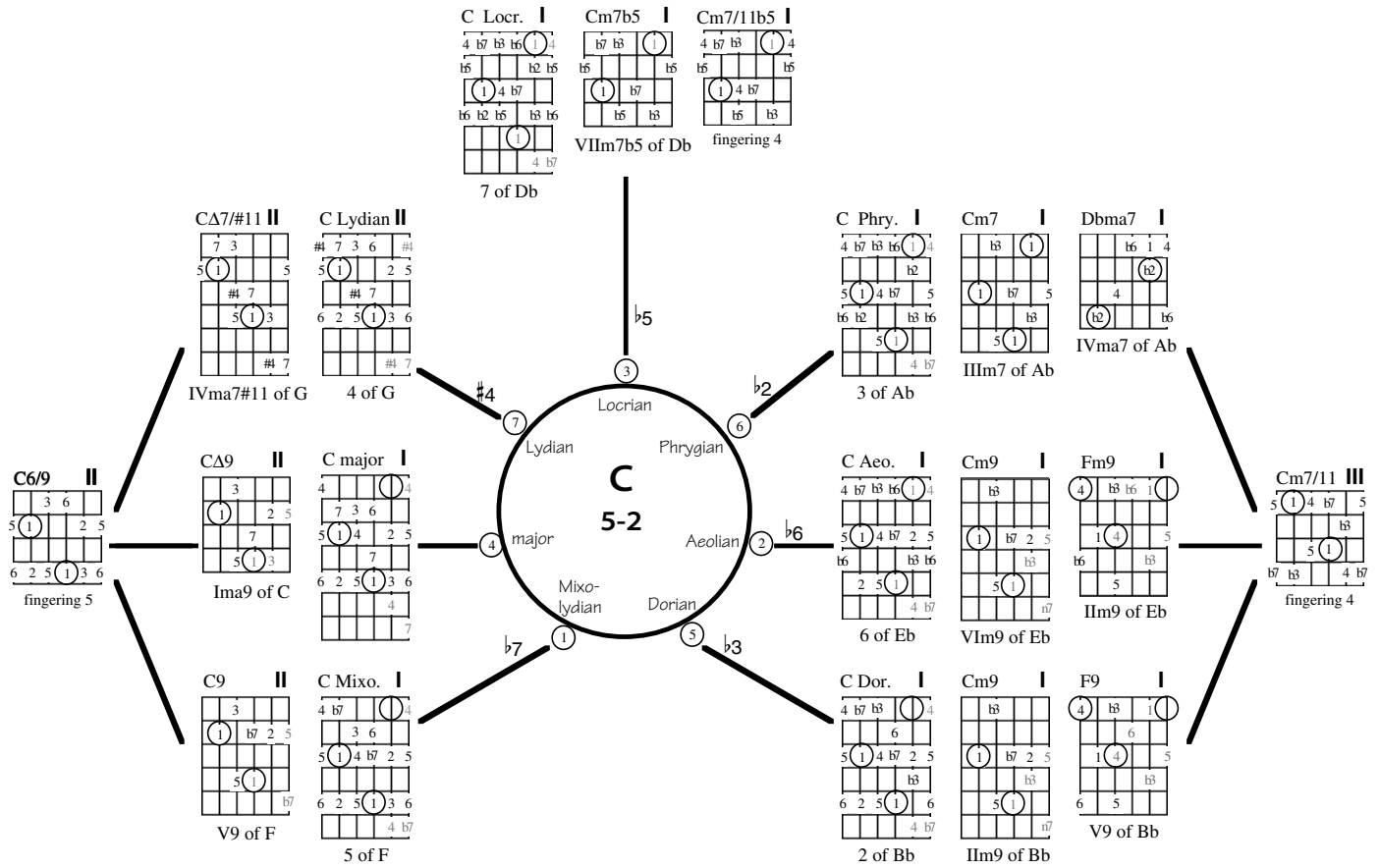
Major Scale Modes in C, Fingering 4-1



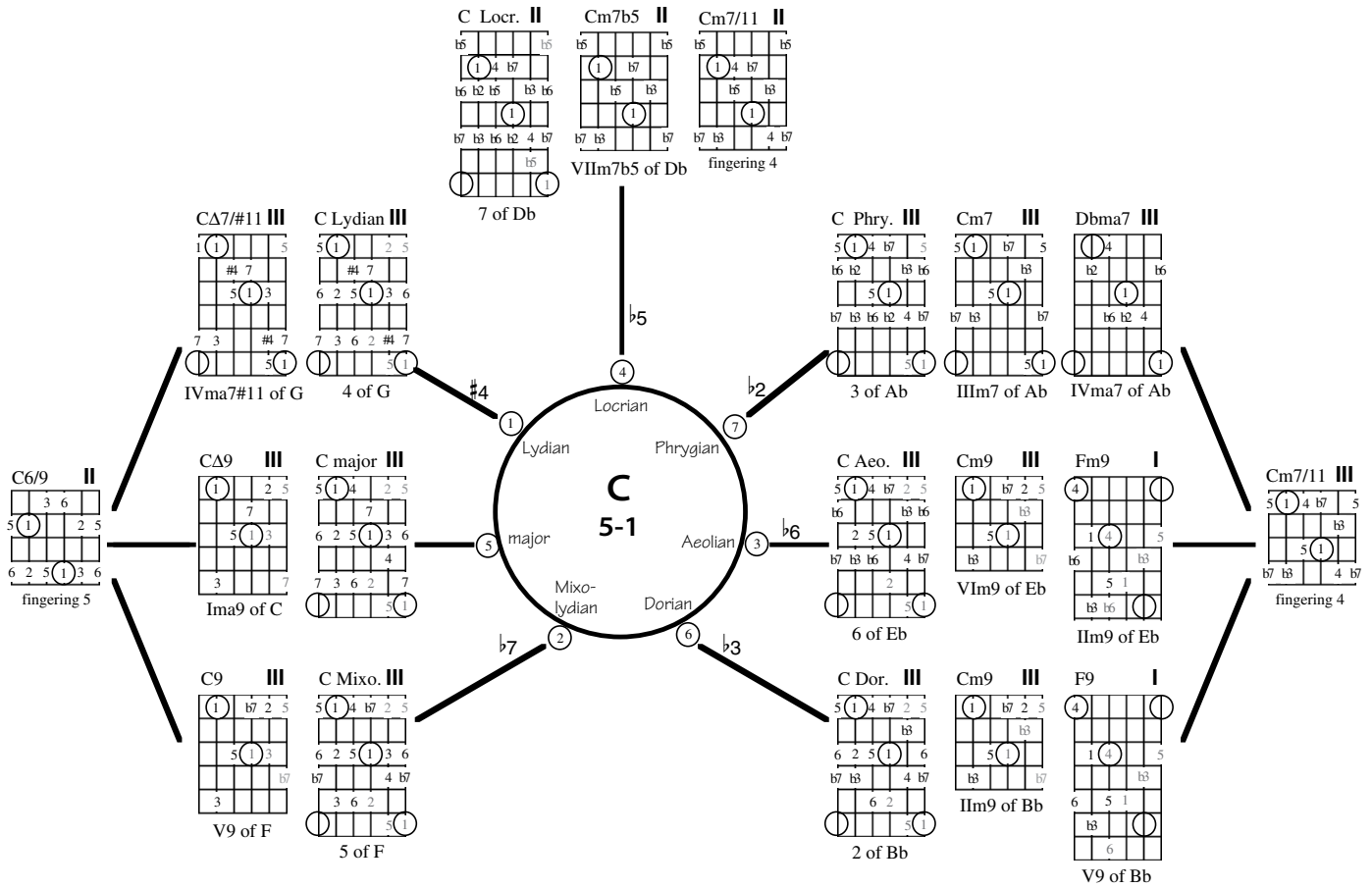
Major Scale Modes in C, Fingering 5-4



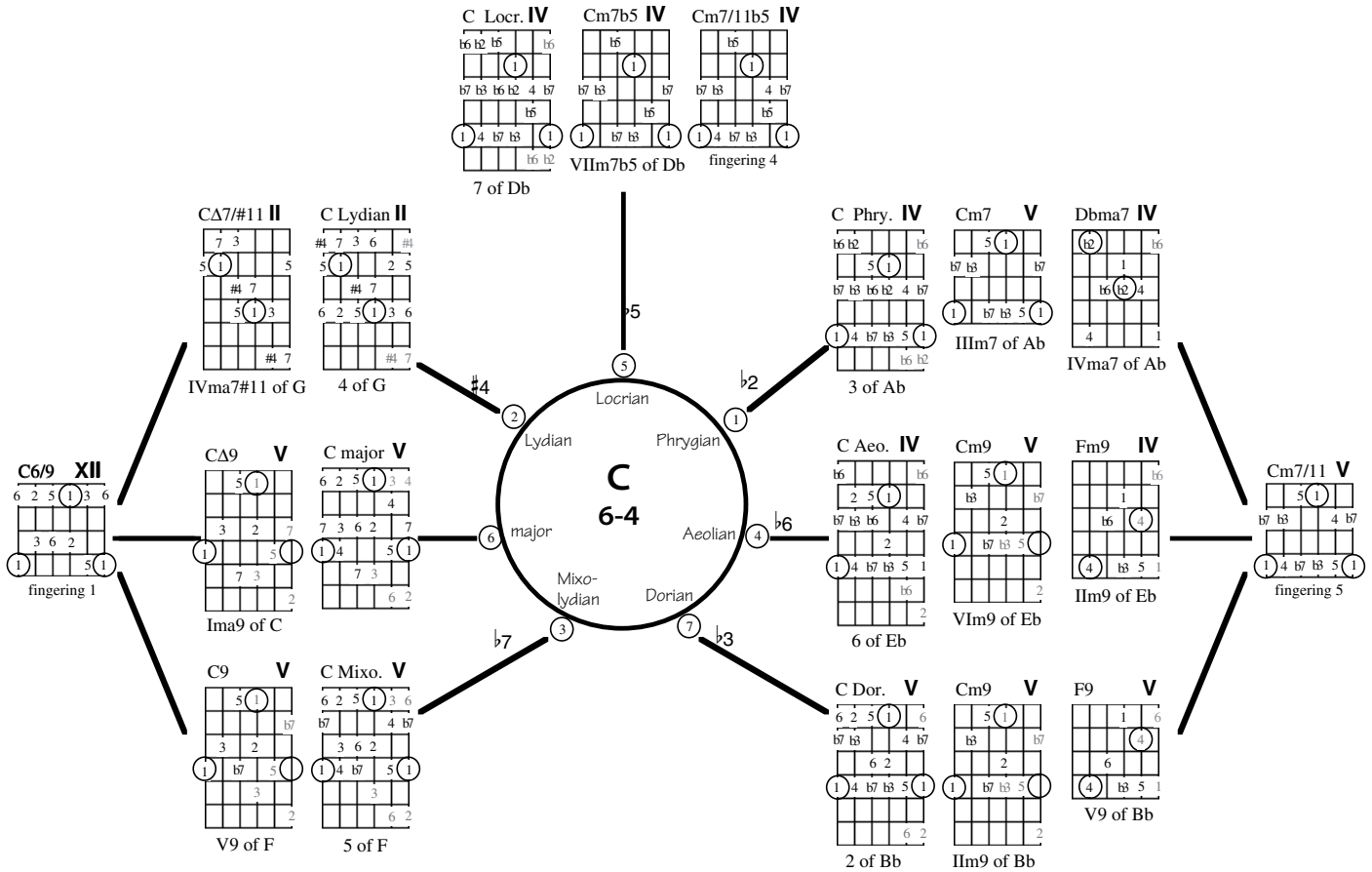
Major Scale Modes in C, Fingering 5-2



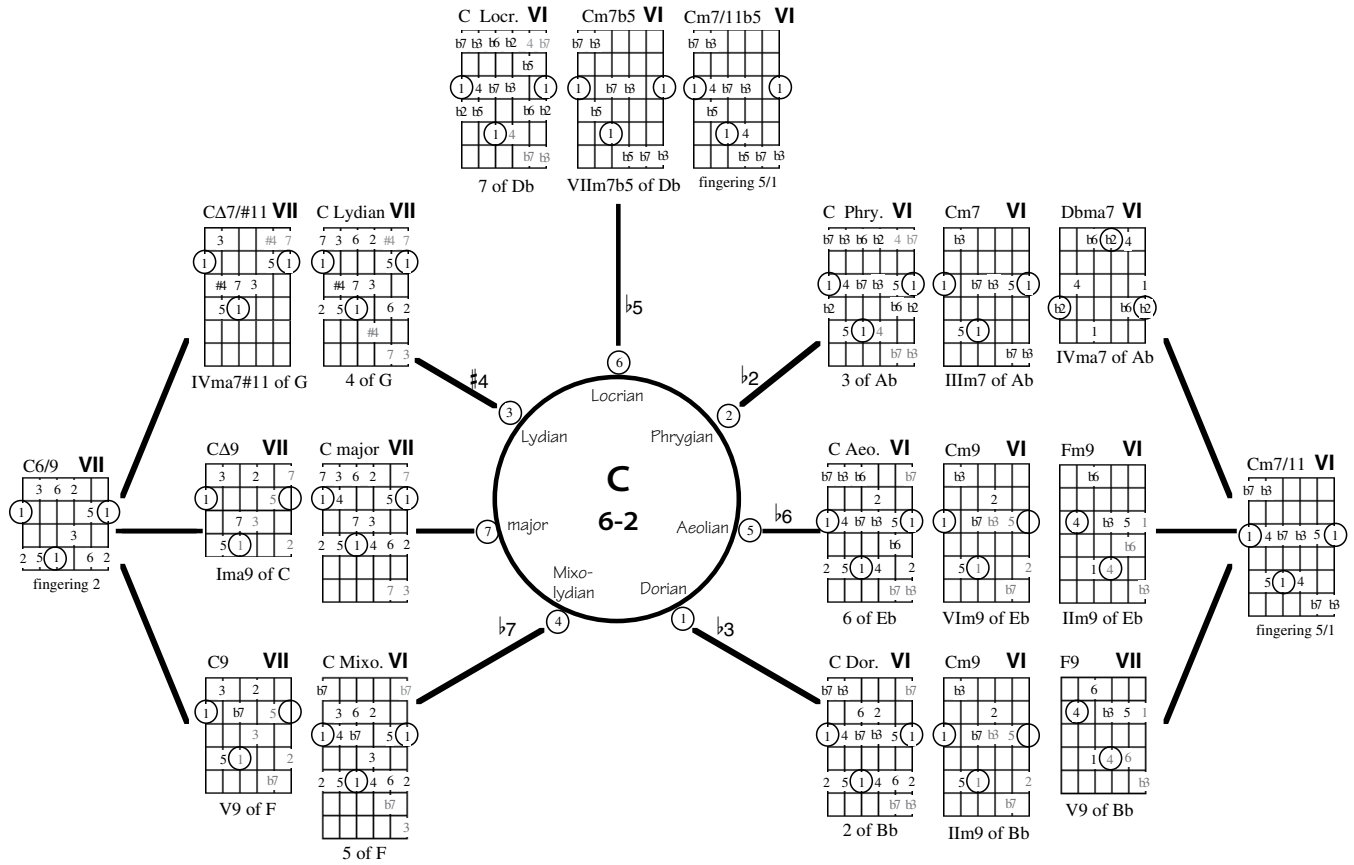
Major Scale Modes in C, Fingering 5-1



Major Scale Modes in C, Fingering 6-4



Major Scale Modes in C, Fingering 6-2



USING EXOTIC JAZZ MODES

Learn from Mr. P.C. to Play on Night in Tunisia

Mr. P.C. in Gm (not the original Cm). Generally, use G minor pentatonic and G Aeolian. G Aeolian is mode VI of Bb major.

On Eb7, use Bb major flat three, which is Bb melodic minor. Remember in the series of modes generated from an altered major scale like major flat three (melodic minor) or major sharp five (harmonic minor on its sixth) there is a descending number series of altered tones:

melodic minor (major b3) modes

I maj b3	II Dorian b2	bIII Phry b1	IV Lyd. b7	V Mixo. b6	VI Aeol b5	VII Loc b4 (super Locrian)
Bb	C	Db	Eb13#11	F	Gm7b5	A

harmonic minor (major sharp five, key on "VI") modes

I maj #5	II Dorian #4	III Phry nat3	IV Lyd. #2	#V Mixo. #1	VI Aeol nat.7	VII Loc nat.6
Bb	C	D	Eb	F#	G	A

Notice that mode IV of Bb melodic minor is Lydian b7 which has the summary chord Eb13#11. Thinking in the key of G, this is G Aeolian b5.

Mode III of Bb major sharp five (G harmonic minor) is D Phrygian major, with the summary chord D7b9b13 (#5).

So, experience improvising over Mr. P.C. in Gm and port what you learn from the Eb7 to D7, treating the D7 like

Dm7 (D Phrygian) to Night In Tunisia, where the Eb7 is D Phrygian flat one (Bb melodic minor) and Dm7 is D Phrygian (Bb major).

In the common tradition of improvising jazz melody, Dm7 can freely be played also as D Aeolian (F major scale) with the E natural note allowing a Dm9.

Key Scales

- **Key Scale, Chord Scale and Parent Scale**
- **Order of Melodic Importance**
- **Determining the Scale**
- **Seventh Chords in 28 Modes**
- **Largest Tertian Chords in 28 Modes**
- **Modal Key Scales**
- **Dominant and Diminished Connecting Chords**
- **Scale Fingerings**

KEY SCALE, CHORD SCALE AND PARENT SCALE

The key is named after the note that you expect to be the bass note of the ending chord. A key scale is the appropriate scale for the current chord group that is named after the key. Most tones in the chord group should be in the key scale.

A chord scale is the appropriate scale for the current chord, named after the chord root. All tones of the chord should be in the chord scale.

A parent scale is the major scale (or major sharp five, major b3 or major b6) which is the origin of a key scale or chord scale. A "I" chord (a "one chord") would always have the same chord scale and key scale. This allows you to think in the most familiar context for fingerings and structures like scale tone chords. See also [Key Signatures/the relative major and minor system](#), [Scales for Songs in All Keys/Parent Scale](#); [Introduction to Improvisation/Using Scales and Chords in Improv/Key Scales, Parent Scales and Chord Scales](#); [Modes/Key Scale, Parent Scale and Chord Scale/Parent Scale](#); [Modes/Modes on I-IV-V Blues/Key Scale, Chord Scale and Parent Scale in Blues](#); [Key Scales/Key Scale, Chord Scale and Parent Scale](#); [Substitution/Five Categories of Substitute Chords/Identify the Parent Major Scale](#).

The chord scales for groups of chords are commonly modes of the same parent scale.

Using the key scale concept retains your focus on the eventual target chord that the key is named after for both you and the listener. By continually thinking in terms of one major scale, you'll be able to more effectively retain the sense of key. The examples in this study are therefore shown in relation to the C major parent scale. The key is C major or A minor ("A" is relative minor or "C"). During the VII III VI part of the chord progression, the key is VI minor (A minor).

Scales are shown with formula numbers, which are scale tone numbers in relation to the major scale named after the tone center (in this case, "C"). Arpeggios and chord fingerings are shown with finger numbers on the grid, formula numbers below.

ORDER OF MELODIC IMPORTANCE

A song is a journey along a melodic path through periodic harmonic environments. The key is the root of the journey's harmonic essence, as in a pilgrimage to mecca.

As a musician, it is important to make sense to your audience. People can relate better to melody in a vocal context which implies that melody should be structured more in terms of key scale than chord scale.

order of melodic importance

Heinrich Schenker, probably the most notable music analyst of the twentieth century, developed a layered structural analysis of music now called Schenkerian analysis. When I first came across his work in the 1980's, I was thrilled, since it closely paralleled the way I thought about music. There is a fore-

ground, middle ground and background (or more layers could be conceived), where music is given an order of melodic importance.

In chordal music, such as American jazz and pop this order of melodic importance works like this: In the foreground, the primary chord tones are implied. In the middle ground, the subtle shades of the chords color are defined. In the background, the remaining scale tones function as neighboring tones. Further back, are the remaining chromatic tones. The definition of each layer is flexible and can be conceived in regards to key scales and chord scales.

importance of the middle ground

It is particularly effective to develop your ability to paint tonal color in the middle ground. This requires an extensive knowledge and technical facility with arpeggios and pentatonic scales. Pentatonic scales often get a bad reputation by jazz musicians because of their common use in blues and pop. However, if you look at them as versions of arpeggios and consider a great number of types, they are indispensable tools. Great players like Chick Corea, John McLaughlin and Herbie Hancock would agree with the appreciation for the value of a great variety of pentatonic scale types, I guarantee you.

In my Encyclopedia Of Licks that follows, there are twenty pentatonic scale types. Those types are based on two models: the triad plus four and seven; and the triad plus two and six.

establishing the key scale

Practice improvising or composing a melody with key scales and separately, practice making a melody with chord scales. Can you hear the compartmentalization caused by chord scales and the unity provided by key scales? Listen to great improvisers such as John Coltrane, Miles Davis, Chick Corea and George Benson with the key scale versus chord scale in mind.

When chords have many common tones, it is easier to establish a key scale melody. When chords do not have many common tones, such as Im7 to IIm7 or Im to V7b9, versions of the chords can be conceived that do cause common tones. On Im7 to IIm7, for example Im9 provides a "2" common to the IIm7 chord. Im7/11 provides a "4" common to the IIm7. IIm7/11 provides a "5" common to the Im7.

The most universal common tone is "5". It is in: I major, minor and dominant types (not those with #5 or b5); IIm7/11 or II7sus4; IIIIm7; IVm9 or IV9; all type of V; VIm7 or VI7.

"2" Is a good common tone. It's Ima9, Im9 and I9; II, all types; IIIIm7 or III7; IV6; V minor and dominant types (not #5 or b5); VIm7/11 or VI7sus4; VIIIm7b5 or VIIIm7.

In major key swing music, "6" is a good common tone: it is in I6 or Im6; IIm7 or II7; IIIIm7/11 or II7/111; IV major or dominant; V9 or Vm9; all types of VI; VIIIm7b5 and VIIIm7.

"4" can be a common tone to: IIm7; III7b9; all types of IV; V7 or Vm7; VIIIm7b5.

DETERMINING THE SCALE

Adding the 2, 4 and 6 to Seventh Chords

the most important modes are circled

major scale	major Ima7 2-4-6 (Ionian)	Dorian IIIm7 2-4-6	Phrygian IIIIm7 b2-4b6	Lydian IVma7 2-#4-6	Mixolydian V7 2-4-6	Aeolian VIIm7 2-4-b6	Locrian VIIIm7b5 b2-4b6
major sharp five	major #5 Ima7#5	Dorian #4 IIIm7	Phrygian ma3 III7	Lydian #2 IVma7	Mixo. #1 #Vdim7.	Aeolian ma7 VIIm(ma7)	Locrian b6 VIIIm7b5
harmonic minor	bIIIIma7#5 2-4-6	IVm7 2-#4-6	V7 b2-4-b6	bVIIma7 #2-#4-6	VII°7 b2-b4-b6	Im(ma7) 2-4,-b6	IIIm7b5 b2-4-6
major flat three melodic minor	major b3 Dorian b7 Im(ma7) 2-4-6	Dorian b2 Phrygian b6 IIIm7 b2-4-6	Phrygian b1 Lydian #5 bIIIIma7#5 2-4-b6	Lydian b7 Mixo. #4 IV7 2-#4-6	Mixo. b6 Aeolian n3 V7 2-4-6	Aeolian b5 Locrian n2 VIIm7b5 2-4-b6	Locrian b4 major #1 VIIIm7b5 b2-b4-b6
major flat six harmonic major	major b6 Ima7 2-4-b6 (aug.)	Dorian b5 IIIm7b5 2-4-6 (m6b5 = °7)	Phrygian b4 III7 b2-#2-b6 (b4 = 3, aug.)	Lydian b3 IVm7 2-#4-6 (m6b5 = °7)	Mixo. b2 V7 b2-4-6	Aeolian b1 bVIIma7#5 #2-#4-6 (aug. °7)	Locrian bb7 VII°7 b2-4-6 (°7)

Scale Determined by Seventh and 2, 4, 6

chord	2-4-6	2-4-b6	2-4-b6	2-#4-6	b2-4-6
ma7	major*	major b6		Lydian*	
7	Mixolydian*	Mixolydian b6	Phrygian dominant	Lydian b7	Mixo. b2
m7	Dorian*	Aeolian*	Phrygian*	Dorian #4	
m7b5	Dorian b5	Aeolian b5	Locrian*		
m(ma7)	melodic minor	harmonic minor			

* major scale modes may use quartal or quintal harmony

Scales for Altered Dominant Chords

- b5 Lydian dominant (Lydian b7, mel. min. mode IV), using the #4 scale tone as a b5 chord tone
-#5 Mixolydian b6 (melodic minor mode V), using the b6 scale tone as a #5 chord tone
- b5.#5 whole tone scale (9b5#5)
-b9 Phrygian dominant (harmonic minor V)
-#9.... Mixolydian in low range of pitch, Dorian in high range
-b9.#9.... Diminished half-whole scale (13 b9#9#11)
-#5.b9 Phrygian dominant (harmonic minor V), using the b6 scale tone as a #5 chord tone
- b5.....b9.#9.... Diminished half-whole scale (13b9#9#11), using the #4 scale tone as a b5 chord tone
- b5.#5.b9.#9.... Locrian b4 (melodic minor VII)

Scales for Diminished Chords

modes of harmonic minor or harmonic major

Modes II, IV, bVI and VII of harmonic minor or of harmonic major, (which is major flat six) can be used over diminished seventh chords.

The diminished seventh modes of harmonic minor are equivalent to major sharp five modes #V, VII, II and IV. The diminished seventh modes of harmonic major are bVI, VII, II and IV.

diminished half/whole scale

The harmonized version of this scale would make the chord I13b9#9#11 (C13b9#9#11) and can make two diminished chord sounds. Either Im6b5 (Cm6b5 is another name for C diminished seventh that implies the melodic use of the flatted third, flatted fifth and the sixth), or I7b9 no root (C7b9 no root equals Db dim7, E dim7, G dim7 and Bb dim7).

- ✦ The diminished scale could be conceived as a diminished seventh arpeggio with a lower chromatic embellishment to each tone to make a Im6b5 sound.
- ✦ The diminished scale could be conceived as a diminished seventh arpeggio a diminished seventh chord build on the tone a half step above the tone center of the diminished scale to make a I7b9 no root chord sound. This would be used where the diminished half/whole scale (C diminished half/whole scale) is a “V type” scale, where C diminished half/whole scale would be used as C13b9#9#11, a “V chord” in the key of “F”.

SEVENTH CHORDS IN 28 MODES

	1	b 2	2	b 3	3	4	#4/b5	5	#5/b6	6	b7	7
major scale	major Ima7		Dorian IIIm7		Phrygian IIIIm7	Lydian IVma7		Mixo. V7		Aeolian VIIm7		Locrian VIIIm7,5
Dorian	IIIm7		IIIIm7	IVma7		V7		VIIm7		VIIIm7,5	Ima7	
Phrygian	IIIIm7	IVma7		V7		VIIm7		VIIIm7,5	Ima7		IIIm7	
Lydian	IVma7		V7		VIIm7		VIIIm7,5	Ima7		IIIm7		IIIIm7
Mixolydian	V7		VIIm7		VIIIm7,5	Ima7		IIIm7		IIIIm7	IVma7	
Aeolian	VIIm7		VIIIm7,5	Ima7		IIIm7		IIIIm7	IVma7		V7	
Locrian	VIIIm7,5	Ima7		IIIm7		IIIIm7	IVma7		V7		VIIm7	
major # 5	1 maj. #5 Ima7#5	b 2	2 Dor.#4 IIIm7	b 3	3 Phy. #3 III7	4 Lyd.#2 IVma7	#4/b5	5	#5/b6 Mix.#1 #V°7	6 har.min. VIIm(ma7)	b7	7 Loc.#5 VIIIm7,5
Dorian #4	IIIm7		III7	IVma7			#V°7	VIIm(ma7)		VIIIm7,5	Ima7#5	
Phrygian maj	III7	IVma7			#V°7	VIIm(ma7)		VIIIm7,5	Ima7#5		IIIm7	
Lydian # 2	IVma7			#V°7	VIIm(ma7)		VIIIm7,5	Ima7#5		IIIm7		III7
Mixolydian # 1	#V°7	VIIm(ma7)		VIIIm7,5	Ima7#5		IIIm7		III7	IVma7		
Aeo. #7 (har. min.)	VIIm(ma7)		VIIIm7,5	Ima7#5		IIIm7		III7	IVma7			#V°7
Locrian	VIIIm7,5	Ima7#5		IIIm7		III7	IVma7			#V°7		VIIm(ma7)
melodic minor	1 major b3 Im(ma7)	b 2	2 Dorian b2 IIIm7	b 3	3 Phyg.b1 bIIIIma7#5	4 Lydian b7 IV7	#4/b5	5 Mixo. b6 V7	#5/b6	6 Aeo. b5 VIIm7,5	b7	7 Loc.b4 (maj.#1) VII7b5#5b9#9
Dorian b2	IIIm7	bIIIIma7#5		IV7		V7		VIIm7,5		VII7b5#5b9#9	Im(ma7)	
Phrygian b1	bIIIIma7#5		IV7		V7		VIIm7,5		VII7b5#5b9#9		Im(ma7)	IIIm7
Lydian b7	IV7		V7		VIIm7,5		VII7b5#5b9#9	Im(ma7)		IIIm7	bIIIIma7#5	
Aeolian dominant	V7		VIIm7,5		VII7b5#5b9#9	Im(ma7)		IIIm7	bIIIIma7#5		IV7	
Aeolian b5	VIIm7,5		VII7b5#5b9#9	Im(ma7)		IIIm7	bIIIIma7#5		IV7		V7	
super Locrian = major #1	VII7b5#5b9#9	Im(ma7)	VII7b5#5b9#9	IIIm7	bIIIIma7#5	bIIIIma7#5	IV7	IV7		V7		VIIm7,5
harmonic maj.	1 major b6 Ima7	b 2	2 Dorian b5 IIIm7,5	b 3	3 Phrygian b4 IIIIm7	4 Lydian 3 IVIm(ma7)	#4/b5	5 Mixo. 2 V7	#5/b6	6 Aeolian b1 bVIIma7#5	b7	7 Locrian bb7 VII°7
Dorian b5	IIIm7,5		IIIIm7	IVIm(ma7)		V7	bVIIma7#5			VII°7	Ima7	
Phrygian b4	III7	IVIm(ma7)		V7	bVIIma7#5			VII°7	Ima7		IIIIm7,5	
Lydian b3	IVIm(ma7)		V7	bVIIma7#5				VII°7	Ima7		IIIm7,5	IIIIm7
Mixolydian b2	V7	bVIIma7#5			VII°7	Ima7		IIIm7,5		IIIIm7	IVIm(ma7)	
Aeolian b1	bVIIma7#5			VII°7	Ima7		IIIIm7,5		IIIIm7	IVIm(ma7)		V7
Locrian bb7	VII°7	Ima7		IIIm7,5		IIIIm7	IVIm(ma7)		V7	bVIIma7#5		

LARGEST TERTIAN CHORDS IN 28 MODES

	1	b 2	2	b 3	3	4	#4/b5	5	#5/b6	6	b7	7
major scale	major Ima9/6		Dorian IIIm13		Phrygian IIIIm7/11	Lydian		Mixo. V13		Aeolian VIIm11		Locrian VIIIm7/11b5
Dorian	IIIm13		IIIIm7/11	IVma13#11		V13		VIIm11		VIIIm7/11b5	Ima9/6	
Phrygian	IIIIm7/11	IVma13#11		V13		VIIm11		VIIIm7/11b9	Ima9/6		IIIm13	
Lydian	IVma13#11		V13		VIIm11		VIIIm7/11b5	Ima7		IIIm13		IIIIm7/11
Mixolydian	V13		VIIm11		VIIIm7/11b5	Ima9/6		IIIm13		IIIIm7/11	IVma13#11	
Aeolian	VIIm11		VIIIm7/11b5	Ima9/6		IIIm13		IIIIm7/11	IVma13#11		V13	
Locrian	VIIIm7/11b5	Ima9/6		IIIm13		IIIIm7/11	IVma13#11		V13		VIIm7	
major #5	1 maj. #5 Ima9#5	b 2	2 Dor.#4 IIIm13 #11	b 3	3 Phy. n3 III7/11b9b13	4 Lyd.#2 IVma7/6/#11	#4/b5	5	#5/b6 Mix.#1 #V°7	6 har.min. VIIm9(ma7)	b7	7 Loc.n 6 VIIIm7/11b5
Dorian #4	IIIm13 #11		III7/11b9b13	IVma7/6/#11			#V°7	VIIm9(ma7)	VIIIm7/11b5		Ima9#5	
Phrygian b3	III7/11b9b13		IVma7/6/#11		#V°7	VIIm9(ma7)			VIIIm7/11b5	Ima9#5		IIIm13 #11
Lydian #2	IVma7/6/#11		#V°7	VIIm9(ma7)		VIIIm7/11b5	Ima9#5		IIIm13 #11		III7/11b9b13	
Mixolydian #1	#V°7	VIIm9(ma7)		VIIIm7/11b5	Ima9#5		IIIm13 #11		III7/11b9b13	IVma7/6/#11		
Aeo. b7 (har. min.)	VIIm9(ma7)		VIIIm7/11b5	Ima9#5		IIIm13 #11		III7/11b9b13	IVma7/6/#11			#V°7
Locrian b6	VIIIm7/11b5	Ima9#5		IIIm13 #11		III7/11b9b13	IVma7/6/#11		#V°7	VIIm9(ma7)		
melodic minor	1 major b3 Im9/6(ma7)	b 2	2 Dorian b2 IIIm13n9	b 3	3 Phyg. b1 bIIIIma9#5	4 Lydian b7 IV13#11	#4/b5	5 Mixo. b6 V11b13	#5/b6	6 Aeo. b5 VIIm11b5	b7	7 Loc. b4 VII7±5±9
Dorian b2	IIIm13n9	bIIIIma9#5		IV13#11		V11b13		VIIm11b5		VII7±5±9	Im9/6(ma7)	
Phrygian b1	bIIIIma9#5		IV13#11		V11b13		VIIm11b5		VII7±5±9	Im9/6(ma7)		IIIm13n9
Lydian b7	IV13#11		V11b13		VIIm11b5		VII7±5±9	Im9/6(ma7)		IIIm13n9	bIIIIma9#5	
Aeolian dominant	V11b13		VIIm11b5		VII7±5±9	Im9/6(ma7)		IIIm13n9	bIIIIma9#5		IV13#11	
Aeolian b5	VIIm11b5		VII7±5±9	Im9/6(ma7)		IIIm13n9	bIIIIma9#5		IV13#11		V11b13	
super Locrian	VII7±5±9	Im9/6(ma7)		IIIm13n9	bIIIIma9#5		IV13#11		V11b13		VIIm11b5	
harmonic maj.	1 major b6 Ima9b13	b 2	2 Dorian b5 IIIm13b5	b 3	3 Phrygian b4 III7±9b13	4 Lydian b3 IVm13(ma7)#11	#4/b5	5 Mixo. b2 V7	#5/b6	6 Aeolian b1 bVIIma7#5	b7	7 Locrian bb7 VII°7
Dorian b5	IIIm13b5		III7±9b13	IVm13(ma7)#11		V7	bVIIma7#5		VII°7		Ima9b13	
Phrygian b4	III7±9b13	IVm13(ma7)#11		V7		bbVIIma7#5		VII°7	Ima9b13		IIIm13b5	
Lydian b3	IVm13(ma7)#11			V7		bVIIma7#5		VII°7	Ima9b13		IIIm13b5	III7±9b13
Mixolydian b2	V7	bVIIma7#5			VII°7		Ima9b13		IIIm13b5		III7±9b13	IVm13(ma7)#11
Aeolian b1	bVIIma7#5			VII°7	Ima9b13			IIIm13b5		III7±9b13	IVm13(ma7)#11	
Locrian bb7	VII°7	Ima9b13		IIIm13b5		III7±9b13	IVm13(ma7)#11		V7		bVIIma7#5	

MODAL KEY SCALES

Key Scales of Major (Ionian) Mode

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
one				
I _{ma} 7 (2, 4, 6)	major	I major	I major	1 2 3 4 5 6 7
two				
II _m 7 (2, 4, 6)	Dorian	I major	I major	1 2 3 4 5 6 7
three				
III _m 7 (♭2, 4, ♭6)	Phrygian	I major	I major	1 2 3 4 5 6 7
four				
IV _{ma} 7 (2, #4, 6)	Lydian	I major	I major	1 2 3 4 5 6 7
five				
V7 (2, 4, 6)	Mixolydian	I major	I major	1 2 3 4 5 6 7
six				
VI _m 7 (2, 4, ♭6)	Aeolian	I major	I major	1 2 3 4 5 6 7
seven				
VII _m 7 _{♭5} (♭2, 4, ♭6)	Locrian	I major	I major	1 2 3 4 5 6 7

Key Scales of Dorian Mode

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
one				
I _m 7 (2, 4, 6)	Dorian	I Dorian	♭VII major	1 2 ♭3 4 5 6 ♭7
two				
II _m 7 (♭2, 4, ♭6)	Phrygian	I Dorian	♭VII major	1 2 ♭3 4 5 6 ♭7
flat three				
♭III _{ma} 7 (2, #4, 6)	Lydian	I Dorian	♭VII major	1 2 ♭3 4 5 6 ♭7
four				
IV7 (2, 4, 6)	Mixolydian	I Dorian	♭VII major	1 2 ♭3 4 5 6 ♭7
five				
V _m 7 (2, 4, ♭6)	Aeolian	I Dorian	♭VII major	1 2 ♭3 4 5 6 ♭7
six				
VI _m 7 _{♭5}	Locrian	I Dorian	♭VII major	1 2 ♭3 4 5 6 ♭7
flat seven				
♭VII _{ma} 7 (2, 4, 6)	major	I Dorian	♭VII major	1 2 ♭3 4 5 6 ♭7

Key Scales of Mixolydian Mode

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
one I7 (2,4,6)	Mixolydian	I Mixolydian	IV major	1 2 3 4 5 6 b7
two II m7 (2, 4, b6)	Aeolian	I Mixolydian	bVII major	1 2 3 4 5 6 b7
three III m7b5	Locreian	I Mixolydian	IV major	1 2 3 4 5 6 b7
four IV ma7 (2,4,6)	major	I Mixolydian	IV major	1 2 3 4 5 6 b7
five V m7 (2,4,6)	Dorian	I Mixolydian	IV major	1 2 3 4 5 6 b7
six VI m7 (b2, b6)	Phrygian	I Mixolydian	IV major	1 2 3 4 5 6 b7
flat seven bVII ma7 (2, #4, 6)	Lydian	I Mixolydian	IV major	1 2 3 4 5 6 b7

Key Scales of Aeolian Mode

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
one I m7 (2, 4, b6)	Aeolian	I Aeolian	bIII major	1 2 b3 4 5 b6 b7
two II m7b5	Locrian	I Aeolian	bIII major	1 2 b3 4 5 b6 b7
flat three bIII ma7	major	I Aeolian	bIII major	1 2 b3 4 5 b6 b7
four IV m7 (2, 4, 6)	Dorian	I Aeolian	bIII major	1 2 b3 4 5 b6 b7
five V m7 (b2,4,b6)	Phrygian	I Aeolian	bIII major	1 2 b3 4 5 b6 b7
flat six bVI ma7 (#4)	Lydian	I Aeolian	bIII major	1 2 b3 4 5 b6 b7
flat seven bVII7 (2, 4, 6)	Mixolydian	I Aeolian	bIII major	1 2 b3 4 5 b6 b7

Key Scales of All Major Scale Modes

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>						
one										
Ima7 (2,4,6)	major	I major	I major	1	2	3	4	5	6	7
Ima7 (2,#4,6)	Lydian	I Lydian	V major	1	2	3	#4	5	6	7
I7 (2,4,6)	Mixolydian	I Mixolydian	IV major	1	2	3	4	5	6	b7
Im7 (2,4,6)	<u>Dorian</u>	I Dorian	b VII major	1	2	b3	4	5	6	b7
Im7 (2,4,b6)	Aeolian	I Aeolian	b III major	1	2	b3	4	5	b6	b7
Im7 (b2,4,b6)	Phrygian	I Phrygian	b VI major	1	b2	b3	4	5	b6	b7
Im7b5 (b2,4,b6)	Locrian	I Locrian	b II major	1	b2	b3	4	b5	b6	b7
flat two										
bIIΔ7 (2,4,6)	major	I Locrian	b II major	1	b2	b3	4	b5	b6	b7
bIIΔ7 (2,#4,6)	Lydian	I Phrygian	b VI major	1	b2	b3	4	5	b6	b7
two										
II7 (2,4,6)	Mixolydian	I Lydian	V major	1	2	3	#4	5	6	7
IIm7 (2,4,6)	Dorian	I major	I major	1	2	3	4	5	6	7
IIm7 (2,4,b6)	Aeolian	I Mixolydian	b VII major	1	2	3	4	5	6	b7
IIm7 (b2,4,b6)	Phrygian	I Dorian	b VII major	1	2	b3	4	5	6	b7
IIm7b5	Locrian	I Aeolian	b III major	1	2	b3	4	5	b6	b7
flat three										
bIIIma7	major	I Aeolian	b III major	1	2	b3	4	5	b6	b7
bIIIma7 (2,#4,6)	Lydian	I Dorian	b VII major	1	2	b3	4	5	6	b7
bIII7	Mixolydian	I Phrygian	b VI major	1	b2	b3	4	5	b6	b7
bIIIIm7 (2,4,6)	Dorian	I Locrian	b II major	1	b2	b3	4	b5	b6	b7
three										
IIIIm7 (b2,4,b6)	Phrygian	I major	I major	1	2	3	4	5	6	7
IIIIm7 (2,4,b6)	Aeolian	I Lydian	V major	1	2	3	#4	5	6	7
IIIIm7b5	Locrian	I Mixolydian	IV major	1	2	3	4	5	6	b7
four										
IVma7 (2,#4,6)	Lydian	I major	I major	1	2	3	4	5	6	7
IVma7 (2,4,6)	major	I Mixolydian	IV major	1	2	3	4	5	6	b7
IV7 (2,4,6)	Mixolydian	I Dorian	b VII major	1	2	b3	4	5	6	b7
IVm7 (2,4,6)	Dorian	I Aeolian	b III major	1	2	b3	4	5	b6	b7
IVm7 (2,4,b6)	Aeolian	I Phrygian	b VI major	1	b2	b3	4	5	b6	b7
IVm7 (b2,4,b6)	Phrygian	I Locrian	b II major	1	b2	b3	4	b5	b6	b7

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
flat five				
bVma7 (2, #4, 6)	Lydian	I Locrian	bII major	1 b2 b3 4 b5 b6 b7
bVm7b5 (b2,4,b6)	Locrian	I Lydian	V major	1 2 3 #4 5 6 7
five				
Vma7 (2, 4, 6)	major	I Lydian	V major	1 2 3 #4 5 6 7
V7 (2, 4, 6)	Mixolydian	I major	I major	1 2 3 4 5 6 7
Vm7 (2, 4, 6)	Dorian	I Mixolydian	IV major	1 2 3 4 5 6 b7
Vm7 (2, 4, b6)	Aeolian	I Dorian	bVII major	1 2 b3 4 5 6 b7
Vm7 (b2, 4, b6)	Phrygian	I Aeolian	bIII major	1 2 b3 4 5 b6 b7
Vm7b5	Locrian	I Phrygian	bVI major	1 b2 b3 4 5 b6 b7
flat six				
bVIma7	major	I Phrygian	bVI major	1 b2 3 4 5 b6 b7
bVIma7 (#4)	Lydian	I Aeolian	bIII major	1 2 b3 4 5 b6 b7
bVI7 (2, 4, 6)	Mixolydian	I Locrian	bII major	1 b2 b3 4 b5 b6 b7
six				
VIm7 (2, 4, 6)	Dorian	I Lydian	V major	1 2 3 #4 5 6 7
VIm7 (2, 4, b6)	Aeolian	I major	I major	1 2 3 4 5 6 7
VIm7 (b2, b6)	Phrygian	I Mixolydian	IV major	1 2 3 4 5 6 b7
VIm7b5	Locrian	I Dorian	bVII major	1 2 b3 4 5 6 b7
flat seven				
bVIIma7 (2, 4, 6)	major	I Dorian	bVII major	1 2 b3 4 5 6 b7
bVIIma7 (2, #4, 6)	Lydian	I Mixolydian	IV major	1 2 3 4 5 6 b7
bVII7 (2, 4, 6)	Mixolydian	I Aeolian	bIII major	1 2 b3 4 5 b6 b7
bVIIm7 (2, 4, 6)	Dorian	I Phrygian	bVI major	1 b2 b3 4 5 b6 b7
bVIIm7 (2, 4, b6)	Aeolian	I Locrian	bII major	1 b2 b3 4 b5 b6 b7
seven				
VIIIm7 (b2, 4, b6)	Phrygian	I Lydian	V major	1 2 3 #4 5 6 7
VIIIm7b5 (b2, 4, b6)	Locrian	I major	I major	1 2 3 4 5 6 7

Key Scales of Harmonic Minor Modes

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
one				
I _{ma} 7#5 (2, 4, 6)	major #5	I major #5	I major #5	1 2 3 4 #5 6 7
I7 (b2, 4, b6)	Phrygian dominant	I Phrygian dominant	bVI major #5	1 b2 3 4 5 b6 b7
I _m (ma7) (2, 4, b6)	harmonic minor	I harmonic minor	bIII major #5	1 2 b3 4 5 b6 7
flat two				
bIIΔ7 (#2,#4,6)	Dorian #2	I Phrygian dominant	bVI major #5	1 b2 3 4 5 b6 b7
bII _{dim} 7 (ma7 #2, #4,6)	Lydian #4	I Phrygian dominant	bVI major #5	1 b2 3 4 5 b6 b7
two				
II _m 7 (b2, #4, b6)	Dorian #4	I major #5	I major #5	1 2 3 4 #5 6 7
II _m 7b5	Locrian nat. 4	I harmonic minor	bIII major #5	1 2 b3 4 5 b6 7
flat three				
bIII _{ma} 7#5 (2, 4, 6)	major #5	I harmonic minor	bIII major #5	1 2 b3 4 5 b6 7
three				
III7 (b2, 4, b6)	Phrygian dominant	I major #5	I major #5	1 2 3 4 #5 6 7
III _{dim} 7 (b2, b4, b6)	Mixolydian #1	I Phrygian dominant	bVI major #5	1 b2 3 4 5 b6 b7
four				
IV _{ma} 7 (#2, #4, 6)	Lydian #2	I major #5	I major #5	1 2 3 4 #5 6 7
IV _m 7 (2, #4, 6)	Dorian #4	I harmonic minor	bIII major #5	1 2 b3 4 5 b6 7
IV _m (ma7) (b2, 4, b6)	harmonic minor	I Phrygian dominant	bVI major #5	1 b2 3 4 5 b6 b7
flat five				
bV _m 7b5 (b2,4,6)	Locrian nat. 6	I Lydian #2	V major #5	1 #2 3 #4 5 6 7
five				
V7 (b2, 4, b6)	Phrygian dominant	I harmonic minor	bIII major #5	1 2 b3 4 5 b6 7
V _m 7b5 (n6)	Locrian nat. 6	I Phrygian dominant	bVI major #5	1 b2 3 4 5 b6 b7
V _{dim} 7 (m7b5 b2,4,n6)	Locrian nat. 6	I Phrygian dominant	bVI major #5	1 b2 3 4 5 b6 b7
flat six				
bVI _{ma} 7 (#2, #4, 6)	Lydian #2	I harmonic minor	bIII major #5	1 2 b3 4 5 b6 7
bVI _{dim} 7 (b2, b4, b6)	Mixolydian #1	I major #5	I major #5	1 2 3 4 #5 6 7
six				
VI7 (b2, 4, b6)	Phrygian dominant	I Mixolydian #1	IV major #5	#1 2 3 4 5 6 b7
VI _m (ma7) (2, 4, b6)	harmonic minor	I major #5	I major #5	1 2 3 4 #5 6 7
flat seven				
bVII _{dim} 7 (m7 2,#4,6)	Dorian #4	I Phrygian dominant	bVI major #5	1 b2 3 4 5 b6 b7

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
seven				
VII7 (b2, 4, b6)	Phrygian dominant	I Lydian #2	V major #5	1 #2 3 #4 5 6 7
VIIIm7b5 (b2, 4, 6)	Locrian nat. 6	I major #5	I major #5	1 2 3 4 #5 6 7
VIIIdim7 (b2, b4, b6)	Mixolydian #1	I harmonic minor	bIII major #5	1 2 b3 4 5 b6 7

Key Scales of Melodic Minor Modes

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
one				
I7b5#5b9#9	super Locrian	I super Locrian	bII melodic minor	1 b2 b3 b4 b5 b6 b7
Im(ma7) (2, 4, 6)	melodic minor	I melodic minor	I melodic minor	1 2 b3 4 5 6 7
Im7b5 (2, 4, b6)	Aeolian b5	I Aeolian b5	bIII melodic minor	1 2 b3 4 b5 b6 b7
flat two				
bII7 (2, #4, 6)	Lydian b7	I Phrygian b1	bVI melodic minor	b1 b2 b3 4 5 b6 b7
bII7b5 (bII7 2, #4, 6)	Lydian b7	I Phrygian b1	bVI melodic minor	b1 b2 b3 4 5 b6 b7
bII7b5#5b9#9	Super Locrian	I major #1	II melodic minor	#1 2 3 4 5 6 7
two				
II7b5#5b9#9	super Locrian	I Aeolian b5	bIII melodic minor	1 2 b3 4 b5 b6 b7
IIIm7 (b2, 4, 6)	Dorian b2	I melodic minor	I melodic minor	1 2 b3 4 5 6 7
flat three				
bIIIIma7#5 (2, #4, 6)	Phrygian b1	I melodic minor	I melodic minor	b1 b2 b3 4 5 b6 b7
bIII7 (2, #4, 6)	Lydian b7	I Dorian b2	bVII melodic minor	1 b2 b3 4 5 6 b7
bIIIIm(ma7) (2, 4, 6)	melodic minor	I Aeolian b5	bIII melodic minor	1 2 b3 4 b5 b6 b7
three				
III7b5#5b9#9	super Locrian	I Aeolian dominant	IV melodic minor	1 2 3 4 5 b6 b7
four				
IV7 (2, #4, 6)	Lydian b7	I melodic minor	I melodic minor	1 2 b3 4 5 6 7
IVm (ma7) (2, 4, 6)	melodic minor	I Aeolian dominant	IV melodic minor	1 2 3 4 5 b6 b7
IVdim7 (2, 4, b7)	Lydian b3	I major b6	I major b6	1 2 3 4 5 b6 7
flat five				
bV7 (2, #4, 6)	Lydian b7	I super Locrian	bII melodic minor	1 b2 b3 b4 b5 b6 b7
five				
V7 (2, 4, b6)	Aeolian dominant	I melodic minor	I melodic minor	1 2 b3 4 5 6 7
V7#5 (V7 2, 4, b6)	Aeolian dominant	I melodic minor	I melodic minor	1 2 b3 4 5 6 7
V7 (2, #4, 6)	Lydian b7	I major #I	II melodic minor	#1 2 3 4 5 6 7
V7b5#5b9#9	Locrian b4	I Phrygian b1	bVI melodic minor	b1 b2 b3 4 5 b6 b7

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
sharp five (flat six)				
bVI7 (2, #4, 6)	Lydian b7	I Aeolian b5	bIII melodic minor	1 2 b3 4 b5 b6 b7
six				
VI7 (2, 4, b6)	Aeolian dominant	I major #1	II melodic minor	#1 2 3 4 5 6 7
flat seven				
bVII7 (2, #4, 6)	Lydian b7	I Aeolian dominant	IV melodic minor	1 2 3 4 5 b6 b7

Key Scales of Major Flat Six Modes

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
two				
II dim7 (2, 4, b7)	Dorian b5	I major b6	I major b6	1 2 3 4 5 b6 7
four				
IV7b9#9b13 (b6)	Phrygian b4	I Locrian bb7	bII major b6	1 b2 b3 4 b5 b6 bb7
IVm (ma7) (2, #4, 6)	Lydian b3	I major b6	I major b6	1 2 3 4 5 b6 7
IV dim7 (m ma7 2, #4, 6)	Lydian b3	I major b6	I major b6	1 2 3 4 5 b6 7
five				
V7 (b2, 4, 6)	Mixolydian b2	I major b6	I major b6	1 2 3 4 5 b6 7
flat six				
bVI dim7 (ma7#5 #2, #4, 6)	Aeolian b1	I major b6	I major b6	1 2 3 4 5 b6 7
seven				
VII dim7 (b2, 4, b6)	Locrian bb7	I major b6	I major b6	1 2 3 4 5 b6 7

Whole Tone and Diminished Key Scales

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
one				
I7b5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
I7b5 (b2, #2, #4, 6)	dim. half/whole	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
I13 b9#9#11	dim. half/whole	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
I7#5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
I dim7 (2, 4, #5, 7)	dim. whole/half	I dim. whole/half	I dim. whole/half	1 2 b3 4 b5/#5 6 7

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
sharp one				
= flat two				
bII7b5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
bII7b5 (bIII3 b9#9#11)	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
bIII13b9#9#11	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
bII7#5 (bIII3 b9#9#11)	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
bII7#5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
bIIdim7 (2,4,#5,7)	dim. whole/half	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
two				
II7b5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
II7#5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
IIIdim7 (2,4,#5,7)	dim. whole/half	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
sharp two				
= flat three				
bIII7b5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
bIII7b5	dim. half/whole	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
bIII13 b9#9#11	dim. half/whole	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
bIII7#5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
bIIIdim7 (2,4,#5,7)	dim. half/whole	I dim. whole/half	I dim. whole/half	1 2 b3 4 b5/#5 6 7
three				
III7b5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
III7b5 (bIII3 b9#9#11)	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
III13b9#9#11	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
III7#5 (bIII3 b9#9#11)	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
III7#5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
IIIdim7 (2,4,#5,7)	dim. whole/half	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
four				
IV7b5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
IV7#5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
IVdim7 (2,4,#5,7)	dim. whole/half	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
flat five				
=sharp four				
bV7b5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
bV7b5	dim. half/whole	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
bV13 b9#9#11	dim. half/whole	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
bV7#5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
bVdim7 (2,4,#5,7)	dim. whole/half	I dim. whole/half	I dim. whole/half	1 2 b3 4 b5/#5 6 7

five

V7b5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
V7b5 (bIII3 b9#9#11)	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
V13b9#9#11	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
V7#5 (bIII3 b9#9#11)	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
V7b5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
Vdim7 (2,4,#5,7)	dim. whole/half	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7

sharp five**= flat six**

bVI7b5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
bVI7#5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
bVI dim7 (2,4,#5,7)	dim. whole/half	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7

six

VI7b5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
VI7b5	dim. half/whole	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
VI13 b9#9#11	dim. half/whole	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
VI7# (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
VI dim7 (2,4,#5,7)	dim. whole/half	I dim. whole/half	I dim. whole/half	1 2 b3 4 b5/#5 6 7

flat seven**= sharp six**

bVII7b5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
bVII7b5 (bIII3 b9#9#11)	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
bVII13b9#9#11	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
bVII7b5 (bIII3 b9#9#11)	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
bVII7#5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
bVII dim7 (2,4,#5,7)	dim. whole/half	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7

seven

VII7b5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
VII7#5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
VII dim7 (2,4,#5,7)	dim. whole/half	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7

Master Modal Key Scale List

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
one				
Ima7 (2, 4, 6)	major	I major	I major	1 2 3 4 5 6 7
Ima7 (2, #4, 6)	Lydian	I Lydian	V major	1 2 3 #4 5 6 7
Ima7#5 (2, 4, 6)	major #5	I major #5	I major #5	1 2 3 4 #5 6 7
I7 (2, 4, 6)	Mixolydian	I Mixolydian	IV major	1 2 3 4 5 6 b7
I7 (b2, 4, b6)	Phrygian dominant	I Phrygian dominant	bVI major #5	1 b2 3 4 5 b6 b7
I7b5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
I7b5 (b2, #2, #4, 6)	dim. half/whole	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
I13 b9#9#11	dim. half/whole	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
I7#5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
I7b5#5b9#9	super Locrian	I super Locrian	bII melodic minor	1 b2 b3 b4 b5 b6 b7
Im7 (2, 4, 6)	Dorian	I Dorian	bVII major	1 2 b3 4 5 6 b7
Im7 (2, 4, b6)	Aeolian	I Aeolian	bIII major	1 2 b3 4 5 b6 b7
Im7 (b2, 4, b6)	Phrygian	I Phrygian	bVI major	1 b2 b3 4 5 b6 b7
Im(ma7) (2, 4, b6)	harmonic minor	I harmonic minor	bIII major #5	1 2 b3 4 5 b6 7
Im(ma7) (2, 4, 6)	melodic minor	I melodic minor	I meloedic minor	1 2 b3 4 5 6 7
Im7b5 (b2, 4, b6)	Locrian	I Locrian	bII major	1 b2 b3 4 b5 b6 b7
Im7b5 (2, 4, b6)	Aeolian b5	I Aeolian b5	bIII melodic minor	1 2 b3 4 b5 b6 b7
Idim7 (2, 4, #5, 7)	dim. whole/half	I dim. whole/half	I dim. whole/half	1 2 b3 4 b5/#5 6 7
sharp one = flat two				
bIIΔ7 (2, 4, 6)	major	I Locrian	bII major	1 b2 b3 4 b5 b6 b7
bIIΔ7 (2, #4, 6)	Lydian	I Phrygian	bVI major	1 b2 b3 4 5 b6 b7
bIIΔ7 (#2, #4, 6)	Lydian #2	I Phrygian dominant	bVI major #5	1 b2 3 4 5 b6 b7
bII7 (2, #4, 6)	Lydian b7	I Phrygian b1	bVI melodic minor	b1 b2 b3 4 5 b6 b7
bII7b5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
bII7b5 (bII7 2, #4, 6)	Lydian b7	I Phrygian b1	bVI melodic minor	b1 b2 b3 4 5 b6 b7
bII7b5 (bIII3 b9#9#11)	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
bIII3b9#9#11	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
bII7#5 (bIII3 b9#9#11)	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
bII7#5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
bII7b5#5b9#9	super Locrian	I major #1	II melodic minor	#1 2 3 4 5 6 7
bIIIdim7 (2, 4, #5, 7)	dim. whole/half	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
bIIIdim7 (ma7 #2, #4, 6)	Lydian #4	I Phrygian dominant	bVI major #5	1 b2 3 4 5 b6 b7
two				
II7 (2, 4, 6)	Mixolydian	I Lydian	V major	1 2 3 #4 5 6 7
II7b5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
II7b5#5b9#9	super Locrian	I Aeolian b5	bIII melodic minor	1 2 b3 4 b5 b6 b7

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
II7#5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
IIm7 (2, 4, 6)	Dorian	I major	I major	1 2 b3 4 5 6 7
IIm7 (2, 4, b6)	Aeolian	I Mixolydian	bVII major	1 2 3 4 5 6 b7
IIm7 (b2, 4, b6)	Phrygian	I Dorian	bVII major	1 2 b3 4 5 6 b7
IIm7 (b2, #4, b6)	Dorian #4	I major #5	I major #5	1 2 3 4 #5 6 7
IIm7 (b2, 4, 6)	Dorian b2	I melodic minor	I melodic minor	1 2 b3 4 5 6 7
IIm(ma7) (2, 4, b6)	harmonic minor	I Mixolydian #1	II harmonic minor	#1 2 3 4 5 6 b7
IIm7b5	Locrian	I Aeolian	bIII major	1 2 b3 4 5 b6 b7
IIm7b5	Locrian nat.4	I harmonic minor	bIII major #5	1 2 b3 4 5 b6 7
II dim7 (2, 4, b7)	Dorian b5	I major b6	I major b6	1 2 3 4 5 b6 7
II dim7 (2, 4, #5, 7)	dim. whole/half	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
sharp two = flat three				
bIII ma7	major	I Aeolian	bIII major	1 2 b3 4 5 b6 b7
bIII ma7 (2, #4, 6)	Lydian	I Dorian	bVII major	1 2 b3 4 5 6 b7
bIII ma7#5 (2, 4, 6)	major #5	I harmonic minor	bIII major #5	1 2 b3 4 5 b6 7
bIII ma7#5 (2, #4, 6)	Phrygian b1	I melodic minor	I melodic minor	b1 b2 b3 4 5 b6 b7
bIII7	Mixolydian	I Phrygian	bVI major	1 b2 b3 4 5 b6 b7
bIII7 (2, #4, 6)	Lydian b7	I Dorian b2	bVII melodic minor	1 b2 b3 4 5 6 b7
bIII7b5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
bIII7b5	dim. half/whole	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
bIII13 b9#9#11	dim. half/whole	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
bIII7#5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
bIII m7 (2, 4, 6)	Dorian	I Locrian	bII major	1 b2 b3 4 b5 b6 b7
bIII m(ma7) (2, 4, 6)	melodic minor	I Aeolian b5	bIII melodic minor	1 2 b3 4 b5 b6 b7
bIII dim7 (2, 4, #5, 7)	dim. half/whole	I dim. whole/half	I dim. whole/half	1 2 b3 4 b5/#5 6 7

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
three				
III7 (b2, 4, b6)	Phrygian dominant	I major #5	I major #5	1 2 3 4 #5 6 7
III7 (b2, 4, 6)	Mixolydian b2	I major #1, #5	II melodic minor #4	#1 2 3 4 #5 6 7
III7b5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
III7b5 (bIII3 b9#9#11)	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
III13 b9#9#11	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
III7#5 (bIII3 b9#9#11)	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
III7#5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
III7b5#5b9#9	super Locrian	I Aeolian dominant	IV melodic minor	1 2 3 4 5 b6 b7
III m7 (b2, 4, b6)	Phrygian	I major	I major	1 2 3 4 5 6 7

IIIIm7 (2, 4, b6)	Aeolian	I Lydian	V major	1 2 3 #4 5 6 7
IIIIm7b5	Locreian	I Mixolydian	IV major	1 2 3 4 5 6 b7
IIIIdim7 (b2, b4, b6)	Mixolydian #1	I Phrygian dominant	bVI major #5	1 b2 3 4 5 b6 b7
IIIIdim7 (2, 4, #5, 7)	dim. whole/half	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7

chord **chord scale** **key scale** **parent scale** **key scale tones**

four

IVma7 (2, #4, 6)	Lydian	I major	I major	1 2 3 4 5 6 7
IVma7 (2, 4, 6)	major	I Mixolydian	IV major	1 2 3 4 5 6 b7
IVma7 (#2, #4, 6)	Lydian #2	I major #5	I major #5	1 2 3 4 #5 6 7
IV7 (2, 4, 6)	Mixolydian	I Dorian	bVII major	1 2 b3 4 5 6 b7
IV7 (2, #4, 6)	Lydian b7	I melodic minor	I melodic minor	1 2 b3 4 5 6 7
IV7b9#9b13 (b6)	super Phrygian	VII Locrian bb7	bVI major b6	1 2 3 4 5 b6 b7
IV7b5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
IV7#5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
IVm7 (2, 4, 6)	Dorian	I Aeolian	bIII major	1 2 b3 4 5 b6 b7
IVm7 (2, #4, 6)	Dorian #4	I harmonic minor	bIII major #5	1 2 b3 4 5 b6 7
IVm7 (2, 4, b6)	Aeolian	I Phrygian	bVI major	1 b2 b3 4 5 b6 b7
IVm7 (b2, 4, b6)	Phrygian	I Locrian	bII major	1 b2 b3 4 b5 b6 b7
IVm (ma7) (b2, 4, b6)	harmonic minor	I Phrygian dominant	bVI major #5	1 b2 3 4 5 b6 b7
IVm (ma7) (2, 4, 6)	melodic minor	I Aeolian dominant	IV melodic minor	1 2 3 4 5 b6 b7
IVm (ma7) (2, #4, 6)	Lydian b3	I major b6	I major b6	1 2 3 4 5 b6 b7
IVdim7 (2, 4, b7)	Lydian b3	I major b6	I major b6	1 2 3 4 5 b6 7
IVdim7 (2, 4, #5, 7)	dim. whole/half	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7

chord **chord scale** **key scale** **parent scale** **key scale tones**

sharp four = flat five

bVma7 (2, #4, 6)	Lydian	I Locrian	bII major	1 b2 b3 4 b5 b6 b7
bV7 (2, #4, 6)	Lydian b7	I super Locrian	bII melodic minor	1 b2 b3 b4 b5 b6 b7
bV7b5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
bV7b5	dim. half/whole	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
bV13 b9#9#11	dim. half/whole	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
bV7#5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
bVm7b5 (b2, 4, b6)	Locrian	I Lydian	V major	1 2 3 #4 5 6 7
bVm7b5 (b2, 4, 6)	Locrian nat. 6	I Lydian #2	V major #5	1 2 3 #4 5 6 7
bVdim7 (2, 4, #5, 7)	dim. whole/half	I dim. whole/half	I dim. whole/half	1 2 b3 4 b5/#5 6 7

chord **chord scale** **key scale** **parent scale** **key scale tones**

five

Vma7 (2, 4, 6)	major	I Lydian	V major	1 2 3 #4 5 6 7
V7 (2, 4, 6)	Mixolydian	I major	I major	1 2 3 4 5 6 7

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
V7 (b2,4,b6)	Phrygian dominant	I harmonic minor	bIII major #5	1 2 b3 4 5 b6 7
V7 (2,4,b6)	Aeolian dominant	I melodic minor	I melodic minor	1 2 b3 4 5 6 7
V7 (b2,4,6)	Mixolydian b2	I major b6	I major b6	1 2 3 4 5 b6 7
V7 (2,#4,6)	Lydian b7	I major #I	II melodic minor	#1 2 3 4 5 6 7
V7b5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
v7b5 (bIII3 b9#9#11)	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
V13b9#9#11	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
v7#5 (bIII3 b9#9#11)	dim. half/whole	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
V7b5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
V7#5 (V7 2,4,b6)	Aeolian dominant	I melodic minor	I melodic minor	1 2 b3 4 5 6 7
V7b5#5b9#9	super Locrian	I Phrygian b1	bVI melodic minor	b1 b2 b3 4 5 b6 b7
Vm7 (2,4,6)	Dorian	I Mixolydian	IV major	1 2 b3 4 5 6 b7
Vm7 (2,4,b6)	Aeolian	I Dorian	bVII major	1 2 b3 4 5 6 b7
Vm7 (b2,4,b6)	Phrygian	I Aeolian	bIII major	1 2 b3 4 5 b6 b7
Vm7b5	Locrian	I Phrygian	bVI major	1 b2 b3 4 5 b6 b7
Vm7b5 (n6)	Locrian nat. 6	I Phrygian dominant	bVI major #5	1 b2 3 4 5 b6 b7
Vdim7 (2,4,#5,7)	dim. whole/half	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
Vdim7 (m7b5 b2,4,6)	Locrian nat. 6	I Phrygian dominant	bVI major #5	1 b2 3 4 5 b6 b7

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
sharp five = flat six				
bVIma7	major	I Phrygian	bVI major	1 b2 b3 4 5 b6 b7
bVIma7 (#4)	Lydian	I Aeolian	bIII major	1 2 b3 4 5 b6 b7
bVIma7 (#2,#4,6)	Lydian #2	I harmonic minor	bIII major #5	1 2 b3 4 5 b6 7
bVI7 (2,4,6)	Mixolydian	I Locrian	bII major	1 b2 b3 4 b5 b6 b7
bVI7 (2,#4,6)	Lydian b7	I Aeolian b5	bIII melodic minor	1 2 b3 4 b5 b6 b7
bVI7b5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
bVI7#5 (9b5#5)	whole tone	I whole tone	I whole tone	1 2 3 b5 b6 b7
bVIdim7 (b2,b4,b6)	Mixolydian #1	I major #5	I major #5	1 2 3 4 #5 6 7
bVIdim7 (ma7#5 #2,#4,6)	Aeolian b1	I major b6	I major b6	1 2 3 4 5 b6 7
bVIdim7 (2,4,#5,7)	dim. whole/half	#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
six				
VI7 (2,4,b6)	Aeolian dominant	I major #1	II melodic minor	#1 2 3 4 5 6 7
VI7 (b2,4,b6)	Phrygian dominant	I Mixolydian #1	IV major #5	#1 2 3 4 5 6 b7
VI7b5 (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7
VI7b5	dim. half/whole	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
VI13 b9#9#11	dim. half/whole	I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
VI7# (9b5#5)	whole tone	#I whole tone	#I whole tone	#1 b3 4 5 6 7

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
VIm7 (2, 4, 6)	Dorian	I Lydian	V major	1 2 3 #4 5 6 7
VIm7 (2, 4, b6)	Aeolian	I major	I major	1 2 3 4 5 6 7
VIm7 (b2, b6)	Phrygian	I Mixolydian	IV major	1 2 3 4 5 6 b7
VIm (ma7) (2, 4, b6)	harmonic minor	I major #5	I major #5	1 2 3 4 #5 6 7
VIm7b5	Locrian	I Dorian	bVII major	1 2 b3 4 5 6 b7
VIdim7 (2, 4, #5, 7)	dim. whole/half	I dim. whole/half	I dim. whole/half	1 2 b3 4 b5/#5 6 7

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
sharp six = flat seven				
bVIIma7 (2, 4, 6) major		I Dorian	bVII major	1 2 b3 4 5 6 b7
bVIIma7 (2, #4, 6) Lydian		I Mixolydian	IV major	1 2 3 4 5 6 b7
bVII7 (2, 4, 6) Mixolydian		I Aeolian	bIII major	1 2 b3 4 5 b6 b7
bVII7 (2, #4, 6) Lydian b7		IAeolian dominant	IV melodic minor	1 2 3 4 5 b6 b7
bVII7b5 (9b5#5) whole tone		I whole tone	I whole tone	1 2 3 b5 b6 b7
bVII7b5 (bIII3 b9#9#11) dim. half/whole		#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
bVII13b9#9#11 dim. half/whole		#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
bVII7b5 (bIII3 b9#9#11) dim. half/whole		#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7
bVII7#5 (9b5#5) whole tone		I whole tone	I whole tone	1 2 3 b5 b6 b7
bVIIIm7 (2, 4, 6) Dorian		I Phrygian	bVI major	1 b2 b3 4 5 b6 b7
bVIIIm7 (2, 4, b6) Aeolian		I Locrian	bII major	1 b2 b3 4 b5 b6 b7
bVIIdim7 (2, 4, #5, 7) dim. whole/half		I dim. half/whole	I dim. half/whole	1 b2/#2 3 #4 5 6 b7
bVIIdim7 (m7 2, #4, 6) Dorian #4		I Phrygian dominant	bVI major #5	1 b2 3 4 5 b6 b7

<u>chord</u>	<u>chord scale</u>	<u>key scale</u>	<u>parent scale</u>	<u>key scale tones</u>
seven				
VII7 (b2, 4, b6) Phrygian dominant		I Lydian #2	V major #5	1 #2 3 #4 5 6 7
VII7b5 (9b5#5) whole tone		#I whole tone	#I whole tone	#1 b3 4 5 6 7
VII7#5 (9b5#5) whole tone		#I whole tone	#I whole tone	#1 b3 4 5 6 7
VIIIm7 (b2, 4, b6) Phrygian		I Lydian	V major	1 2 3 #4 5 6 7
VIIIm7b5 (b2, 4, b6) Locrian		I major	I major	1 2 3 4 5 6 7
VIIIm7b5 (b2, 4, 6) Locrian nat. 6		I major #5	I major #5	1 2 3 4 #5 6 7
VIIIdim7 (b2, b4, b6) Mixolydian #1		I harmonic minor	bIII major #5	1 2 b3 4 5 b6 7
VIIIdim7 (b2, 4, b6) Locrian bb7		I major b6	I major b6	1 2 3 4 5 b6 7
VIIIdim7 (2, 4, #5, 7) dim. whole/half		#I dim. half/whole	#I dim. half/whole	#1 2 3 4 5 b6 b7/7

DOMINANT AND DIMINISHED CONNECTING CHORDS

Mixolydian Chord Scale

<u>chord</u>	<u>progresses to</u>	<u>style</u>	<u>key scale</u>	<u>chord scale</u>
I7 (blue IV)	IV	Blues	Mixolydian (major b7)	Mixolydian (major b7)
II7	V	Jazz/Blues	Lydian (major #4)	Mixolydian (major b7)
IV7 (blue IV)	bVII	Jazz/Blues	Dorian	Mixolydian (major b7)
V7	I	general	major	Mixolydian (major b7)
#V7	II	general	Locrian	Mixolydian (major b7)
bVII7	bIII	general	Aeolian	Mixolydian (major b7)

Phrygian Dominant Chord Scale

<u>chord</u>	<u>progresses to</u>	<u>style</u>	<u>key scale</u>	<u>chord scale</u>
I7b9	IVm	Spanish	Phrygian dominant	Phrygian dominant
II7b9	Vm	Spanish	Dorian #4	Phrygian dominant
III7b9	VIIm	Spanish	major sharp five	Phrygian dominant
V7b9	Im	Spanish	harmonic minor	Phrygian dominant
VI7b9	IIIm	Spanish	Mixolydian #1	Phrygian dominant

Primary Dominant Chord Scales

(also see $13^{\flat 9 \# 11}$ in diminished chord scale below)

<u>chord</u>	<u>to</u>	<u>key scale</u>	<u>chord scale</u>
V13	I	major	V Mixolydian
V13#11 = bII7b5#5b9#9	I or Im	major sharp one = II melodic minor	V Lydian dominant = bII super Locrian
V7b5#5b9#9 = bII13#11	I or Im	Phrygian flat one = bVI melodic minor	V super Locrian = bII Lydian dominant
V7b9 (option #5)	Im (I)	harmonic minor	V Phrygian dominant = bIII major #5
V13b9#9#11 = bII13b9#9#11	I or Im	bII half/whole diminished	V half/whole dim. = bII half/whole dim.
V13 b5#5	I or Im	#1 whole tone	V whole tone
V11 b13 (rare)	I or Im	melodic minor (b3)	Aeolian dominant
V13 b9 (rare)	Im (I)	major b6	Mixolydian b2

V7 CHORD VERSIONS

	<u>b9</u>	<u>b9</u>	<u>#9</u>	<u>b9/#9</u>
$\sharp 5(\flat 6)$ chord scale	V Mixolydian	Mixolydian b2	V Dorian (add 2, no $\sharp 3$)*	
$\sharp 5(\flat 6)$ key scale	I major	major b6	I Mixolydian	
$\sharp 5(\flat 6)$ chord scale	V Mixolydian b2	V Phrygian dominant	V Aeolian (add 2, no $\sharp 3$)*	
$\sharp 5(\flat 6)$ key scale	I major b6	I har. min. = bIII maj. #5	I Dorian	
b5 (or #11) chord scale	V Lydian dominant*	V super Locrian	V half/whole dim.	V half/whole dim.
b5 (or #11) key scale	II melodic minor	bVI melodic minor	bII half/whole dim	bII half/whole dim
b5 (or #11) bII synonym	bII7b5	bII7#11	bII7/6b5 (bII13b5n9n11)	bII13#11 (no 9)
b5 (or #11) bII chord scale	bII super Locrian	bII Mix. #4 or h/w dim.	bII half/whole dim	bII half/whole dim
#5 (or b6) chord scale	V Mixo. b6 or whole tone	V Phrygian dominant	V super Locrian	V super Locrian
#5 (or b6) key scale	I melodic minor	I har. min. = bIII maj. #5	bVI melodic minor	bVI melodic minor
#5 (or b6) bII synonym	bII9b5#5 no root		bII9/6b5nr (bII13b5nrm11)	bII13#11 no root
#5 (or b6) bII chord scale	bII whole tone		bII Lydian dominant	bII Lydian dominant
b5/#5 chord scale	V whole tone	V super Locrian	V super Locrian	bII Lydian dominant
b5/#5 key scale	#I whole tone	bVI melodic minor	bVI melodic minor	bVI melodic minor
b5/#5 bII synonym	bII9b5#5	bII9/6b5nr (bII13b5nrm11)	bII13#11 no fifth	bII13#11
b5/#5 bII chord scale	bII whole tone	bVI Lydian dominant	bII Lydian dominant	bII Lydian dominant

* Mood darkening: major to Mixolydian, Mixolydian to Dorian, Dorian to Aeolian, Lydian dominant to Dorian #4. Lydian dominant = Lydian b7.

Secondary Dominant Chord Scales

(also see $13^{\flat 9\sharp 9\sharp 11}$ in diminished chord scale below)

<u>chord</u>	<u>to</u>	<u>key scale</u>	<u>chord scale</u>
VI 13	II	II major	VI Mixolydian
VI 7b5#5b9#9 = bIII13#11	II or IIIm	bVII melodic minor	VI super Locrian = bIII Lydian dominant
VI 13#11 = bIII7b5#5b9#9	II or IIIm	III melodic minor	VI Lydian dominant = bIII super Locrian
VI 7b9 (option #5)	IIIm (II)	Mixolydian #1 = II har. min.	VI Phrygian dominant
VI 13b9#9#11 = bIII13b9#9#11	II or IIIm	1 half/whole diminished	VI half/whole dim. = bIII half/whole dim.
VI 9 b13 (rare)	IIIm	major #1	VI Mixolydian b6
VI 13 b9 (rare)	IIIm (II)	II major b6	Mixolydian b2
VII 13	III	III major	VII Mixolydian
VII 7b5#5b9#9 = IV13#11	III or IIIIm	I melodic minor	VII super Locrian = IV Lydian dominant
VII13#11 = IV7b5#5b9#9	III or IIIIm	#IV melodic minor	VII Lydian dominant = IV super Locrian

<u>chord</u>	<u>to</u>	<u>key scale</u>	<u>chord scale</u>
VII 7b9 (option #5)	III _m (III)	II har. min.	VII Phrygian dominant
VII 13b9#9#11 = IV 13b9#9#11	III or III _m	VII whole/half dim.	VII half/whole dim. = IV half/whole dim.
VII 9 b13 (rare)	III _m	III melodic minor	VII Aeolian dominant
VI 13 b9 (rare)	III _m (III)	III major b6	VII Mixolydian b2
I13	IV	Mixolydian	I Mixolydian
I7b5#5b9#9 = bV13#11	IV or IV _m	Locrian flat four = bII melodic minor	I super Locrian = bV Lydian dominant
I13#11 = bV7b5#5b9#9	IV or IV _m	major sharp one = II melodic minor	I Lydian dominant = bV super Locrian
I7b9 (option #5)	IV _m (IV)	Phrygian dominant	I Phrygian dominant = bVI major #5
I13b9#9#11 = bV13b9#9#11	IV or IV _m	1 half/whole diminished	I whole/half dim. = bV half/whole dim.
I9 b13 (rare)	IV _m	Aeolian dominant	I Aeolian dominant
I 13 b9 (rare)	IV _m (IV)	IV major b6	I Mixolydian b2
III13	VI	II major	III Mixolydian
III7b5#5b9#9 = bV13#11	VI or VI _m	Aeolian dominant = V melodic minor	III super Locrian = bVII Lydian dominant
III13#11 = bV7b5#5b9#9	VI or VI _m	major sharp one = II melodic minor	III Lydian dominant = bVII super Locrian
III7b9 (option #5)	VI _m (VI)	Phrygian dominant	III Phrygian dominant = I major #5
III13b9#9#11 = bVII13b9#9#11	VI or VI _m	1 half/whole diminished	III whole/half dim. = bVII half/whole dim.
III9 b13 (rare)	VI _m	VI melodic minor	Aeolian dominant
III13 b9 (rare)	VI _m (VI)	VI major b6	Mixolydian b2

The Dual Use of Diminished Chord Scale

<u>13b9#9#11</u>	<u>dim. 7</u>	<u>progresses to</u>	<u>key scale</u>
I, bIII, bV, VI	#I, III, V, bVII	major or minor on II, IV, bVI, VII	half/whole diminished
#I, III, V, bVII	II, IV, bVI, VII	major or minor on I, bIII, bV, VI	#1 half/whole diminished
II, IV, bVI, VII	I, bIII, bV, VI	major or minor on #I, III, V, bVII	whole/half diminished

SCALE FINGERINGS

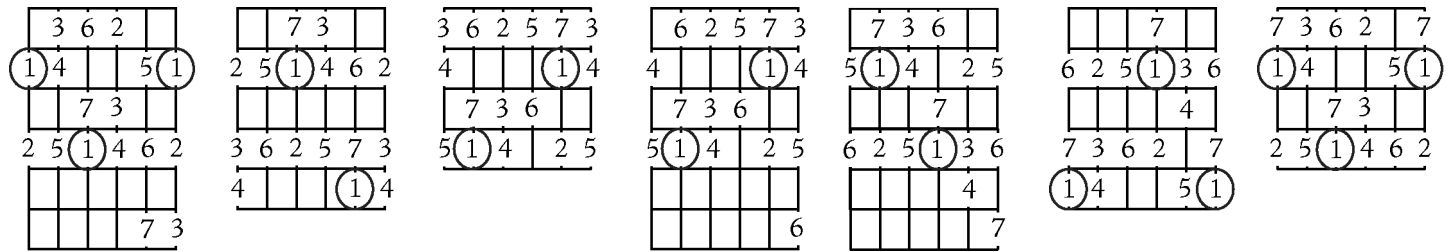
Primary Major Scale Fingerings

four fret major scale



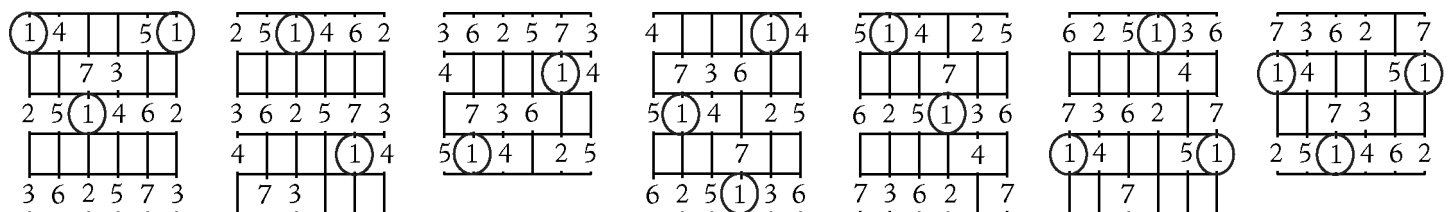
four-fret major scale, some five-fret on strings 1 and 2

These avoid the use of double whole steps on the larger strings, in the interest of speed when playing scalar passages.



in-position major scale

The longer in-position major scale fingerings are not well-suited for scalar patterns, but are more useful in creating harmonic structures. In playing a scale where there are duplicate notes on strings two and three, play either note (not both).



three-note-per-string major scale

These work well for fragment patterns and very fast linear playing. Four-note per string fingerings are faster, however.,

Seven fretboard diagrams illustrating three-note-per-string major scale fingerings. Each diagram shows a 4-string fretboard with fingerings (1-4) and arrows indicating the sequence of notes across strings.

Default Seven and Eight Tone Scale Fingerings

major scale

Seven fretboard diagrams illustrating default major scale fingerings. Each diagram shows a 4-string fretboard with fingerings (1-4) and arrows indicating the sequence of notes across strings.

major scale sharp five

Seven fretboard diagrams illustrating major scale sharp five fingerings. Each diagram shows a 4-string fretboard with fingerings (1-4) and arrows indicating the sequence of notes across strings. Includes additional diagrams for wide range and string-specific techniques.

or wide range (next page)

or wide range for strings 3-6

major scale flat three

Diagram showing seven fretboards for the major scale flat three. Each fretboard has a specific fingering pattern indicated by numbers 1-5 and accidentals (b3, b7). The patterns are as follows:

- Fretboard 1: 1-4, 7, 2-5, 1-4-6-2, b3, 6-2-5-7, b3, 1-4.
- Fretboard 2: 7, 2-5, 1-4-6-2, b3, 6-2-5-7, 4, b3, 1-4.
- Fretboard 3: b3, 6-2-5-7, 4, b3, 1-4, 5, 1-4, 2-5, 7, b3, 6.
- Fretboard 4: 4, b3, 1-4, 7, 6, 5, 1-4, 2-5, 7, b3, 6, 2-5, 1-4, 6, 7, 6, 2-5, 1-4, 6, 4, 7.
- Fretboard 5: 5, 1-4, 7, b3, 6, 2-5, 1-4, 6, b3, 4, 7, 6, 2-5, 7, 5, 1-4.
- Fretboard 6: 7, 6, 2-5, 1-4, 6, b3, 4, 7, 6, 2-5, 7, 1-4, b3, 5, 1-4, 2-5, 1-4, 6-2.
- Fretboard 7: b3, 7, 6, 2-5, 7, 1-4, b3, 5, 1-4, 2-5, 1-4, 6-2.

major scale flat six

Diagram showing seven fretboards for the major scale flat six. Each fretboard has a specific fingering pattern indicated by numbers 1-5 and accidentals (b6, b7). The patterns are as follows:

- Fretboard 1: 1-4, 7-3, 2-5, 1-4-2, b6, 3-2-5-7-3, 4, 7-3, 3-2-5-7-3, b6, 1-4, 3-2-5-7-3, b6, 1-4.
- Fretboard 2: 2-5, 1-4-2, b6, 3-2-5-7-3, 4, 7-3, b6, 1-4, 7-3.
- Fretboard 3: b6, 3-2-5-7-3, 4, b6, 1-4, 7-3, 5, 1-4, 2-5, b6, 7, b6, 2-5, 1-4, 3, 7-3, 2-5, 7, 1-4, 5, 1-4, 2-5, b6, 4, 7.
- Fretboard 4: 4, 7-3, 5, 1-4, 2-5, b6, 7, b6, 2-5, 1-4, 3, b6, 4, 7.
- Fretboard 5: 5, 1-4, 7, b6, 2-5, 1-4, 3, b6, 4, 7-3, 2-5, 7, 1-4, 5, 1-4.
- Fretboard 6: b6, 7, b6, 2-5, 1-4, 3, b6, 4, 7-3, 2-5, 7, 1-4, 5, 1-4.
- Fretboard 7: b6, 7-3, 2-5, 7, 1-4, 5, 1-4, 2-5, 7, 3, b6, 2-5, 1-4, 2.

Modal Fingering

major scale

Diagram showing seven fretboards for the major scale. Each fretboard has a specific fingering pattern indicated by numbers 1-5. The patterns are as follows:

- Fretboard 1: 1-4, 7-3, 2-5, 1-4-6-2, 3-6-2-5-7-3, 4, 7-3-6, 5, 1-4, 2-5, 6-2-5, 1-3-6, 7, 3-6-2-5, 7, 1-4, 5, 1-4.
- Fretboard 2: 2-5, 1-4-6-2, 3-6-2-5-7-3, 4, 7-3, 5, 1-4, 2-5, 6-2-5, 1-3-6, 7, 3-6-2-5, 7, 1-4, 5, 1-4.
- Fretboard 3: 4, 7-3-6, 5, 1-4, 2-5, 6-2-5, 1-3-6, 7, 3-6-2-5, 7, 1-4, 5, 1-4.
- Fretboard 4: 5, 1-4, 2-5, 6-2-5, 1-3-6, 7, 3-6-2-5, 7, 1-4, 5, 1-4.
- Fretboard 5: 6-2-5, 1-3-6, 7, 3-6-2-5, 7, 1-4, 5, 1-4.
- Fretboard 6: 7, 3-6-2-5, 7, 1-4, 5, 1-4.
- Fretboard 7: 7-3-6-2-5, 7, 1-4, 5, 1-4, 2-5, 1-4, 6-2.

Dorian

Diagram showing seven fretboards for the Dorian mode. Each fretboard has a specific fingering pattern indicated by numbers 1-5 and accidentals (b3, b7). The patterns are as follows:

- Fretboard 1: 1-4, b7, b3, 5, 1-4, 2-5, 1-4-6-2, b3, b7, b3, 4, b7, b3, 1-4, 6-2, 5, 1-4, b7, b3, 1-4, b7, b3, 5, 1-4, 2-5, 1-4, 6-2, b7, b3, 6.
- Fretboard 2: 2-5, 1-4-6-2, b3, b7, b3, 6-2-5, 4, b7, b3, 1-4, 5, 1-4, b7, 2-5, b3, 6, 2-5, 1-4, 6, 4, b7, 1-4, b7, b3, 5, 1-4, 2-5, 1-4, 6-2, b7, b3.
- Fretboard 3: b3, 6-2-5, 4, b7, b3, 1-4, 6, 5, 1-4, b7, 2-5, 6, 2-5, 1-4, 6, 4, b7, 1-4, b7, b3, 6, 2-5, 1-4, 6, 4, b7.
- Fretboard 4: 4, b7, b3, 1-4, 6, 5, 1-4, b7, 2-5, 6, 2-5, 1-4, 6, 4, b7, 1-4, b7, b3, 6, 2-5, 1-4, 6, 4, b7.
- Fretboard 5: 5, 1-4, b7, 2-5, 6, 2-5, 1-4, 6, b7, b3, 4, b7, 6, 2-5, 1-4, 6, 4, b7, 1-4, b7, b3, 6, 2-5, 1-4, 6, 4, b7.
- Fretboard 6: 6-2-5, 1-4, 6, b7, b3, 4, b7, 1-4, b7, b3, 5, 1-4, 2-5, 1-4, 6-2, b7, b3.
- Fretboard 7: b7, b3, 6-2, 5, 1-4, b7, b3, 5, 1-4, 2-5, 1-4, 6-2, b7, b3.

major scale sharp five

String 1: (1) 4 | | | (1)
 String 2: 7 3 #5 | | |
 String 3: 2 (1) 4 6 2 | | |
 String 4: #5 | | | |
 String 5: 3 6 2 7 3 | | |
 String 6: | | | (1) 4

String 1: 2 | (1) 4 6 2
 String 2: #5 | | | |
 String 3: 3 6 2 7 3
 String 4: 4 | | #5 (1) 4
 String 5: 7 3 | | | |
 String 6: (1) 4 2 | | | #5

String 1: 4 | | | (1)
 String 2: 7 3 6 | | |
 String 3: (1) 4 2 | | |
 String 4: #5 | | 7 | #5
 String 5: 6 2 (1) 3 6
 String 6: | | #5 4 | | 7

String 1: (1) 4 | | | |
 String 2: #5 | | 7 | #5
 String 3: 6 2 (1) 3 6
 String 4: | | #5 4 | | |
 String 5: 7 3 6 2 7
 String 6: (1) 4 | | | (1)

String 1: 7 3 6 2 7
 String 2: (1) 4 | | | (1)
 String 3: | | 7 3 #5 | | |
 String 4: 2 | (1) 4 6 2
 String 5: #5 | | | |
 String 6: | | | |
 or wide range for strings 3-6

String 1: | | | |
 String 2: 1 1 | (2) 2 2
 String 3: | 2 3 | | |
 String 4: 3 3 3 4 | 4 |
 String 5: (4) 4 | | | (4)
 String 6: | | | | 4

or wide range (next page)

melodic minor (major scale flat three)

String 1: (1) 4 | | | (1)
 String 2: 7 | | | |
 String 3: 2 5 (1) 4 6 2
 String 4: b3 | | | | b3
 String 5: 6 2 5 7 | | |
 String 6: b3 | | | (1) 4

String 1: 7 | | | |
 String 2: 2 5 (1) 4 6 2
 String 3: b3 | | | | b3
 String 4: 6 2 5 7 | | |
 String 5: 4 | b3 | (1) 4
 String 6: | | | |

String 1: b3 | | | |
 String 2: 6 2 5 7 | | |
 String 3: 4 | b3 | (1) 4
 String 4: 7 | 6 | | |
 String 5: 5 (1) 4 | 2 5
 String 6: | | 7 b3 | | 6

String 1: 4 | b3 | (1)
 String 2: 7 | 6 | | |
 String 3: 5 (1) 4 | 2 5
 String 4: 6 2 5 (1) 6
 String 5: | | | 4 | | 7
 String 6: | | | |

String 1: 5 (1) 4 | | | |
 String 2: | | 7 b3 | | |
 String 3: 6 2 5 (1) 6
 String 4: b3 | | 4 | | |
 String 5: 7 | 6 2 | 7
 String 6: (1) 4 | b3 5 (1)

String 1: | | | 7 | | |
 String 2: 6 2 5 (1) 6
 String 3: b3 | | 4 | | |
 String 4: 7 | 6 2 | 7
 String 5: (1) 4 | b3 5 (1)
 String 6: 2 5 (1) 4 6 2

String 1: b3 | | | |
 String 2: 7 | 6 2 | 7
 String 3: (1) 4 | b3 5 (1)
 String 4: | | 7 | | |
 String 5: 2 5 (1) 4 6 2
 String 6: | | | |

Phrygian Flat One

Locrian Flat Four

Major Scale Sharp One

String 1: (1) 4 | | | (1)
 String 2: #1 7 3 #1 | | |
 String 3: 2 5 (1) 4 6 2
 String 4: | | #1 | | |
 String 5: 3 6 2 5 7 3
 String 6: | | | (1) 4

String 1: 2 5 (1) 4 6 2
 String 2: | | #1 | | |
 String 3: 3 6 2 5 7 3
 String 4: 4 | | | (1) 4
 String 5: 7 3 | | #1 | |
 String 6: | | | |

String 1: | | #1 | | |
 String 2: 3 6 2 5 7 3
 String 3: 4 | | | (1) 4
 String 4: 7 3 6 #1 | | |
 String 5: 5 (1) 4 | 2 5
 String 6: 6 2 5 (1) 3 6

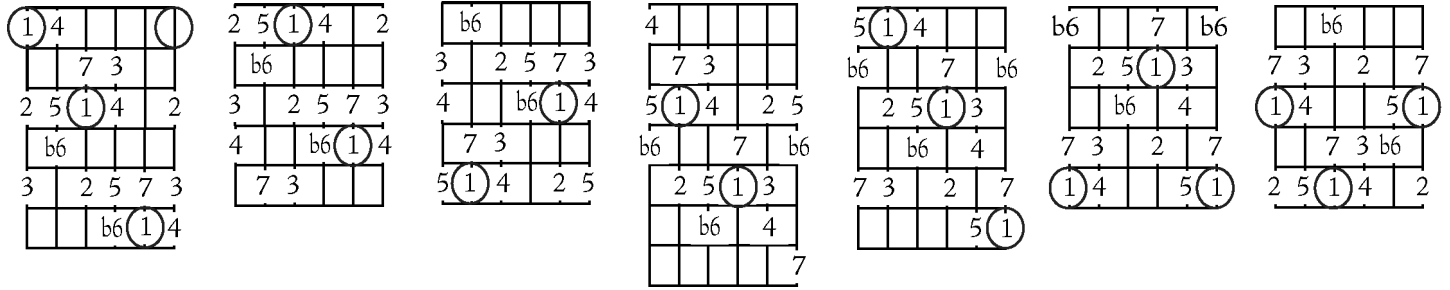
String 1: 4 | | | (1)
 String 2: 7 3 6 #1 | | |
 String 3: 5 (1) 4 | 2 5
 String 4: #1 7 | | |
 String 5: 6 2 5 (1) 3 6
 String 6: | | | 4 | | 7

String 1: 5 (1) 4 | | | |
 String 2: #1 7 | | |
 String 3: 6 2 5 (1) 3 6
 String 4: | | #1 4 | | |
 String 5: 7 3 6 2 | 7
 String 6: 7 3 6 2 | 7

String 1: 6 2 5 (1) 6
 String 2: | | #1 4 | | |
 String 3: 7 3 6 2 | 7
 String 4: (1) 4 | | 5 (1)
 String 5: #1 7 3 | #1 | |
 String 6: #1 7 3 | #1 | |

String 1: 7 3 6 2 7
 String 2: (1) 4 | | 5 (1)
 String 3: #1 7 3 | #1 | |
 String 4: 2 5 (1) 4 6 2
 String 5: | | #1 | | |
 String 6: | | | |

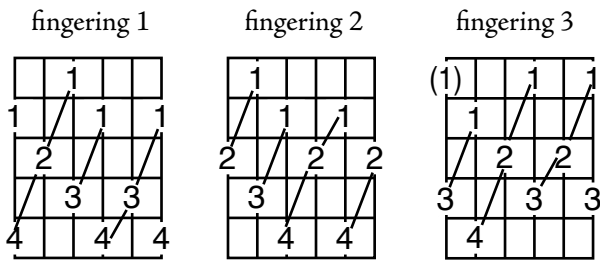
major scale flat six



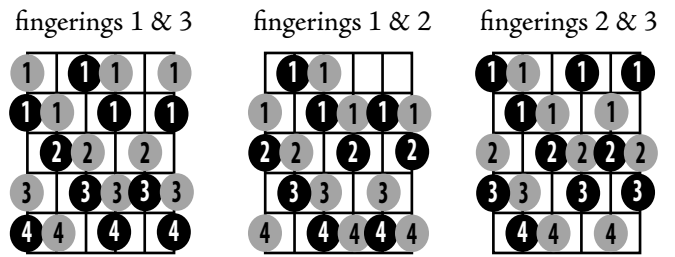
Diminished Scale Fingerings

the numbers on the diagrams below are finger numbers

diminished seventh arpeggio



diminished scale



Diminished scale can be thought of as a scalar version of a 13#11b9#9 chord, or as a diminished seventh arpeggio with a half step above each note or with a half step above each note. See [Default Scales, Chords And Arpeggios/Diminished Seventh Arpeggio and Diminished Scale](#).

Three Octave Seven Tone Scale Fingerings

major scale by scale tone number

index 15 (51)

index 26 (62)

index 37 (73)

index 51

index 62

index 73

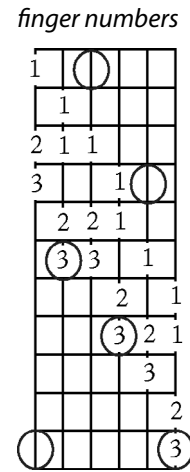
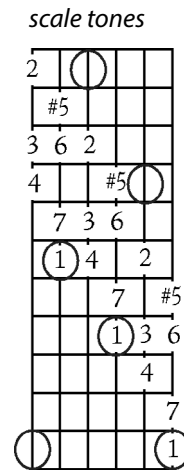
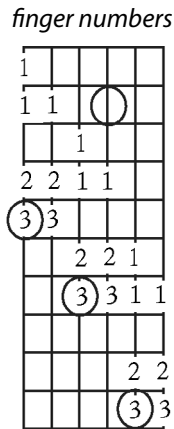
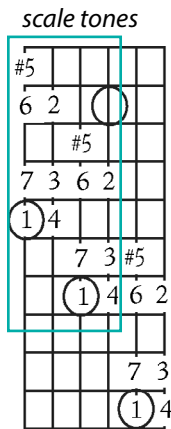
index 14

Seven guitar fretboard diagrams showing major scale fingerings by scale tone number. Each diagram is a 7x7 grid representing a fretboard. Fingerings are indicated by numbers 1-7 in circles. A light blue box highlights the first two frets of each diagram.

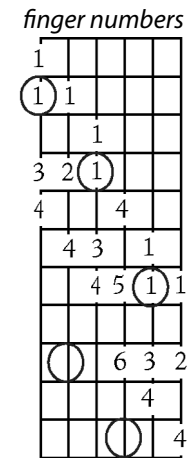
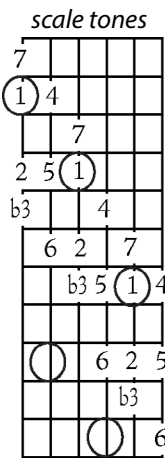
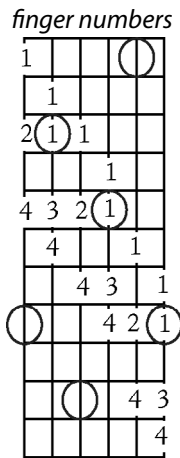
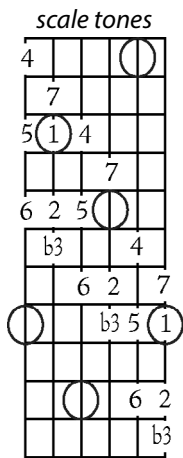
major scale by finger number

Seven guitar fretboard diagrams showing major scale fingerings by finger number. Each diagram is a 7x7 grid representing a fretboard. Fingerings are indicated by numbers 1-4 in circles. A light blue box highlights the first two frets of each diagram.

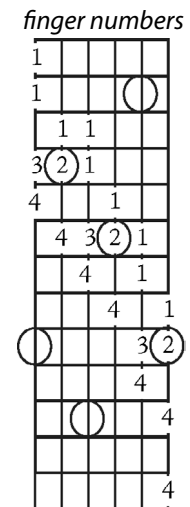
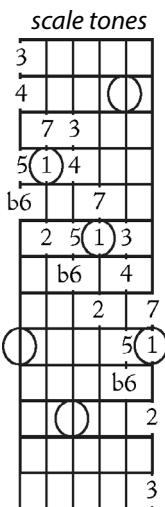
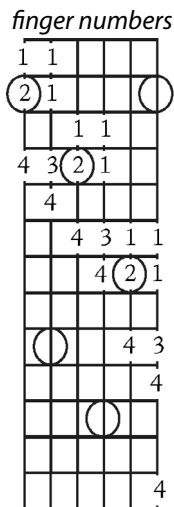
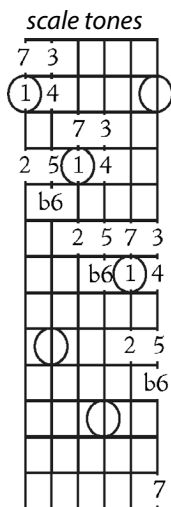
major sharp five (no fourth finger)



major flat three



major flat six



Chord-Naming Conventions

- **Chord Roots**
- **Triads**
- **Tertian Chords**
- **Add-Tone Chords**
- **Chord-Naming Rules by Chord Tone**
- **Essential and Inessential Tones**
- **Chord Formulas, Written and Spoken Forms**
- **Standard Chord Name Abbreviations**
- **Chord Synonyms**

CHORD ROOTS

Chord Roots by Letter Name

A chord root is the letter name for a chord. The letter may be followed by a flat or sharp which alters the letter. C13#11, for example has the root “C”. “Bb” (B flat) is the root of Bb13#11. When the letter name is not followed by any other characters (“Bb”, for example), the chord is major.

Chord Roots by Number

A chord root can also be expressed with a number, showing which numbered step of the key the chord root occurs on. See the chapter [Chord Progression By Number](#). The number may be preceded (not followed as in letter names) by a flat or sharp which alters the numbered step in the key on which the chord is built.. IV13#11, for example has the root on the fourth step of the key and its quality is “13#11”.

TRIADS

Triads are three-note chords. By default, they use every-other scale tone, each using some version of numbered tones “1”, “3” and “5”. Suspended triads are the exception, using “1-4-5” or “1-2-5”. Triad names imply numbered tones with a word:

<u>triad name</u>	<u>abbreviation</u>	<u>numbered tones of a major scale on the chord root</u>
major	(nothing)	1-3-5
minor	m or min.	1-b3-5
diminished	dim. or °	1-b3-b5
augmented	aug. or +	1-3-#5
suspended fourth	sus. 4 or sus.	1-4-5
suspended second	sus. 2	1-2-5

By default, chords are major. That is, when a chord name is shown as just the letter name (A, Bb, B, C, C#, etc.), the chord is major.

By default, suspended chords are suspended fourth. But it will be more universally understood if you write the name with the “4”: “sus4”.

Using the degree symbol ($^{\circ}$) for a diminished triad is risky, since the degree symbol is commonly used to represent a diminished seventh chord. So, when you write a diminished seventh chord, it will be more universally understood if you include the “7”: “ $\circ 7$ ”.

TERTIAN CHORDS

Tertian chords are those built in thirds, using the odd-number series “1-3-5-7-9-11-13”. They begin with “1” and may use any number of consecutive tones in the odd-number series.

<u>numbered tones</u>	<u>category</u>	<u>chord name</u>
1-3-5	triad	major, minor, diminished or augmented, depending on the versions of 3 and 5
1-3-5-7	quadrad	seventh
1-3-5-7-9	pentad	ninth
1-3-5-7-9-11	sextad	eleventh
1-3-5-7-9-11-13	septad	thirteenth

ADD-TONE CHORDS

Add-tone chords break the tertian series by adding a second, fourth or sixth where it is not a consecutive tones in the odd-number series. “1-3-5-7-9” is a tertian chord, but “1-3-5-9” is an add-tone chord, since it “skipped” the seventh in the odd-number series. “1-3-5-7-9-11” is a tertian chord with a continuous series of odd numbers, but “1-3-5-11” is an add-tone chord, since it “skipped” the seventh and ninth in the odd-number series.

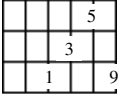
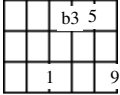
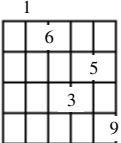
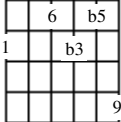
Sixth Chords (add six)

When the bass part or chord name indicates that the next-to-lowest tone in a series of thirds is the chord root, it is a sixth chord. The series of thirds would be conceived by arranging the chord tones in thirds. Sixth chords can also be names after the lowest tone in the series of thirds, which would make it some type of seventh chord.

<p>C6 IX</p> <table border="1" style="border-collapse: collapse; width: 40px; height: 40px;"> <tr><td></td><td>3</td><td></td></tr> <tr><td>5</td><td>1</td><td>6</td></tr> <tr><td></td><td></td><td></td></tr> </table>		3		5	1	6				<p>Am7 IX</p> <table border="1" style="border-collapse: collapse; width: 40px; height: 40px;"> <tr><td></td><td>5</td><td></td></tr> <tr><td>b7</td><td>b3</td><td>1</td></tr> <tr><td></td><td></td><td></td></tr> </table>		5		b7	b3	1				<p>Cm6 VIII</p> <table border="1" style="border-collapse: collapse; width: 40px; height: 40px;"> <tr><td></td><td>b3</td><td></td></tr> <tr><td>5</td><td>1</td><td>6</td></tr> <tr><td></td><td></td><td></td></tr> </table>		b3		5	1	6				<p>Am7b5 IX</p> <table border="1" style="border-collapse: collapse; width: 40px; height: 40px;"> <tr><td></td><td>b5</td><td></td></tr> <tr><td>b7</td><td>b3</td><td>1</td></tr> <tr><td></td><td></td><td></td></tr> </table>		b5		b7	b3	1			
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<p>C6 IX</p> <table border="1" style="border-collapse: collapse; width: 40px; height: 40px;"> <tr><td></td><td>E</td><td></td></tr> <tr><td>G</td><td>C</td><td>A</td></tr> <tr><td></td><td></td><td></td></tr> </table>		E		G	C	A				<p>Am7 IX</p> <table border="1" style="border-collapse: collapse; width: 40px; height: 40px;"> <tr><td></td><td>E</td><td></td></tr> <tr><td>G</td><td>C</td><td>A</td></tr> <tr><td></td><td></td><td></td></tr> </table>		E		G	C	A				<p>Cm6 VIII</p> <table border="1" style="border-collapse: collapse; width: 40px; height: 40px;"> <tr><td></td><td>E_b</td><td></td></tr> <tr><td>G</td><td>C</td><td>A</td></tr> <tr><td></td><td></td><td></td></tr> </table>		E _b		G	C	A				<p>Am7b5 IX</p> <table border="1" style="border-collapse: collapse; width: 40px; height: 40px;"> <tr><td></td><td>E_b</td><td></td></tr> <tr><td>G</td><td>C</td><td>A</td></tr> <tr><td></td><td></td><td></td></tr> </table>		E _b		G	C	A			
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thirds: A C E G		thirds: A C E _b G																																					

Add Nine Chords

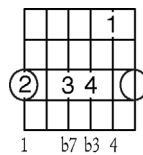
Ninths can be added to triads and to sixth chords. “/9” designates “add nine”. Adding a ninth to a seventh chord is called a ninth chord and is not considered an “add tone” chord, since it uses continuous odd numbers (1-3-5-7-9).

A/9 V	Am/9 V	A dim.7/9 IV	A dim.7/9 IV
			

Add Eleven Chords

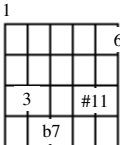
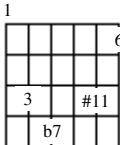
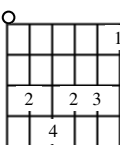
Elevenths can be added to chords. “/11” designates “add eleven”.

Am7/11 **III**



Multiple Added Tones

Usually, when you indicate multiple added tones in a chord name, the alternate name would be complicated also. The alternate name usually would have to specify missing tones.

E7/6/#11 IX	E13#11 n9 IX	E13#11 n9 IX
		
		fingers

CHORD-NAMING RULES BY CHORD TONE

Numbered Tones above Seven

Numbered tones above seven in chord names indicate the same numbered tone as a the number minus seven, but imply the note is in an upper range of pitch. An octave implies that the eighth note in the scale has the same name as the first. So 8 = 1. Likewise 9=2, 10 = 3, 11 = 4, 12 = 5 and 13 = 6. 15 = 8 = 1, where “15” (fifteen) implies the second octave. In standard music notation, a bracketed group of notes with “8va” inset within the bracket indicates the notes should be played an octave higher. A bracketed group of notes with “15ma” inset within the bracket indicates the notes should be played two octaves higher.

Thirds

By default, chords have a natural third. To have a flatted third (b3), minor, diminished or sharp nine must be specified. Chords with minor (“m”, “mi”, or “min”) immediately after the root always have a flatted third (b3). Diminished (“o” or dim.), diminished seventh (“o7”) and half diminished seventh (“ø” = m7b5) chords also have a flatted third (b3).

Dominant chords have a major third (♮3) and a flatted seventh (b7). A dominant chord with a sharp nine (#9), such as C7#9, has a synonym of a flatted third. The “#9” is equivalent to “#2” in the lower octave (see “Numbered Tones Above Seven”, above). “#2” is equivalent to “b3”, since it is the only note between major scale tones “2” and “3”.

Sevenths, Ninths, Elevenths, Thirteenth

When either of the numbers 7, 9, 11 or 13 are used *immediately* after the root, the chord has a flatted seventh (b7). 9, 11 or 13 are altered only if specified. Those numbers also imply *all odd-numbered tones* through that number. So an eleventh chord has 1, 3, 5, b7 (by default), 9 and 11 (though it is usually voiced without the third, unless it is a minor 11 with 1-b3-5-b7-9-11).

When the word “major” (“Δ”, or “M” or “ma”, or “maj”) is used immediately before either of the numbers 7, 9, 11 or 13, the chord has a major seventh (7 or ♮7).

When the word “diminished” (“o”, “dim.” or “dimin.”) is used immediately before the number or word seven, the chord has a double-flat seven.

“Half diminished” (“ø”) is used immediately before the number or word seven (“ø7”), the chord has a flat seven (along with a flat three and flat five).

Ninths, elevenths and thirteenth are altered only if specified. A chord with “9” in its name implies that it also has a seventh, unless it is an add-tone chord (below). A chord with “11” in its name implies that it also has a seventh and a ninth, unless it is an add-tone chord (below). A chord with “13” in its name implies that it also has a seventh, ninth and eleventh, unless it is an add-tone chord (below). Elevenths are usually omitted from thirteenth chords, especially those with a major third (♯3).

Numbers After the Letter Name

Any odd number immediately after the letter name of a chord (i.e. Bb9) implies all the odd numbers through that number. So Ab9 implies the numbers 1, 3, 5, 7 and 9 (with b7, as discussed above).

Additional numbers after that immediately after the letter name only imply the one number they indicate. So, in C13#11, the “13” is telling you to use all the odd numbers through thirteen (1-3-5-b7-9-11-13). The “#11” is telling you that the “11” (implied with “13” suggesting the series of odd numbers including “11” in the chord name) is sharp. In the C13#11 chord, there is only one version of “11”, the “#11”. Any number or numbers after the initial number after the letter name are there to modify the number rather than adding another version of it. A C7b13 chord would have five notes: 1, 3, 5, b7 and b13 (=♯5).

Altered Fifths

When chords have a flat five, “b5” (flat five) or “diminished”(“°”, “°7”, “ø”) occurs in the chord name. When chords have a sharp five, “#5” or “augmented” (aug., “+”) occurs in the chord name. Traditionally, “diminished”(“°”, “°7”, “ø”) occurs immediately after the root. “b13” suggests a “♯5” and “#5”, since “b13” = “b6”, which is the same tone as “#5”. “#11” suggests a “♯5” (natural five) and “b5,” since “#4” = “b5”.

Suspended Fourths and Suspended Seconds

Suspended chords replace the third with the indicated numbered tone. A suspended fourth chord replaces the third (3) with a fourth (4). Suspended second chords replace the third (3) with a second (2). When a chord name states suspended (“sus”) without a number, assume it is suspended fourth.

Double-Altered Fifths or Ninths

As a general rule, each numbered tone is only referred to once in a chord name. However, dominant chords (those with a natural third and flatted seventh) may have both flat five and sharp five. Dominant chords may also have both flat nine and sharp nine. The notations are as follows:

<i>chord name</i>	<i>abbreviation</i>	<i>abbreviation</i>
sharp five and flat five	#5b5	±5
sharp nine and flat nine	#9b9	±9
sharp five, flat five, sharp nine, flat nine	#5b5#9b9	±5±9

ESSENTIAL AND INESSENTIAL TONES

Since music relies heavily on the human imagination, all notes of a chord don't have to be included to suggest its sound. The essential notes most necessary to suggest a chord's sound are:

**“the third and the seventh (if part of the chord)
and any tone specified by the chord name”**

Roots are usually implied by the chord progression and can be omitted, especially in chords of four or more different notes (such as seventh or ninth chords). Many tones are implied by our familiarity with a chord and can be imagined when they are left out. These include unaltered fifths in any chord, ninths in eleventh chords, ninths or elevenths in thirteenth chords and any one of the tones in a diminished seventh chord.

Use your own discretion in preserving the emotive quality of a chord when you omit notes. In one arrangement, it may be fine to omit the ninth in a ninth chord and only play a seventh chord, while in another arrangement, the ninth may be essential in producing the mood or may be an important note in [voice leading](#). A note may be essential because it is a common tone with other chords, or where the series of notes created by the highest note (or lowest note) in each chord in a series of chords creates an ascending or descending scale.

CHORD FORMULAS, WRITTEN FORMS AND SPOKEN FORMS

<u>written</u>	<u>formula</u>	<u>spoken</u>	<u>other written forms</u>
(blank )	.....1-3-5,.....	major	.....ma, maj
m	.....1-b3-5,	minor	.....min.
dim.	.....1-b3-b5,.....	diminished.....	.....° (not good: also used for dim.7)
sus4	.....1-4-5,.....	suspended fourth	.....sus. (not good, nos-specific)
sus2	.....1-2-5,.....	suspended second	.....
ma7	.....1-3-5-7	major seventh	.....Δ, Δ7, maj7, M7
7	.....1-3-5-b7.....	dominant seventh	.....dom.7
m7	.....1-b3-5-b7	minor seventh	.....mi7, min.7, -7
m7b5	.....1-b3-b5-b7.....	minor seventh or half-diminished	.....mi7b5, min7b5, Ø7
dim.7	.....1-b3-b5-bb7 (= 6)	diminished seventh.....	.....°7, m6b5
ma7b5	.....1-3-b5-7.....	major seventh flat five.....	.....Δ7b5, maj7b5
ma7#5	.....1-3-#5-7.....	major seventh sharp five.....	.....Δ7#5, maj7#5
7b5	.....1-3-b5-b7	(dominant) seventh flat five.....	.....dom.7b5
7#5	.....1-3-#5-b7	(dominant) seventh sharp five.....	.....dom.7#5
6	.....1-3-5-6.....	(major) sixth.....	.....ma6, M6
m6	.....1-b3-5-6.....	minor sixth	.....mi6, min6
7sus4	.....1-4-5-b7.....	(dominant) seventh suspended fourth	.....dom.7sus4
9sus4	.....1-2-4-5-b7	(dominant) ninth suspended fourth.....	.....dom.9sus4
7sus2	.....1-2-5-b7	(dominant) seventh suspended second	.....dom.7sus4
m(ma7)	.....1-b3-5-7.....	minor, major seventh.....	.....m(♯7)

STANDARD CHORD NAME ABBREVIATIONS

Communication Probability

<u>chord name</u>	<u>SAFE</u>	<u>LOW RISK</u>	<u>HIGH RISK</u> (of miscommunication)
major	(blank after letter name)	ma, maj	Δ
minor	m	min	-
diminished triad	dim		◦
augmented triad	aug		+
major seventh	ma7	maj7	Δ7, 7-
dominant seventh	7	dom. 7	7
dominant seventh, sharp five	7#5	+7, aug7, 7(+5), 7+	
dominant seventh, flat five	7b5	+7, aug7	7(+5), 7+
minor seventh	m7	min7	-7
minor seventh, flat five	m7b5	min7b5	∅, ∅7
minor, major seventh	m(ma7)	m(ma7)	m(#7), m(7-), m(Δ7) min(#7), min(7-), min(Δ7)
diminished seventh	dim7	◦7	◦, dim.
major ninth	ma9	maj9	Δ9, ma7(9), Δ7(9), 9-
dominant ninth	9		7(9), dom.9
dominant seventh, sharp ninth	7#9		7+9, 7(b3)
dominant seventh, sharp eleventh	7#11		7+9, 7(b3)
minor ninth	m9	min9	-9, -7(add 9)
minor ninth, flat five	m9b5	min9b5	∅9
dominant seventh, sharp nine, flat thirteen	7#9b13		7+9-13
six nine	6/9	69	6(9)
seventh, suspended fourth	7sus4	7(sus4)	7(sus), 4
suspended second	sus2		2
add second	add 2		2
dominant seventh, no third	7no3	7n3	7(-3)

CHORD SYNONYMS

sevenths without a root

Cma7nr = Em
 C7nr = E diminished triad
 Cm7nr = Eb
 Cm7b5nr = Ebm
 Cdim7nr = Eb diminished triad

ninths without a root

Cma9nr = Em7
 C9nr = Em7b5 = Gm6 = Gb7#5b9
 Cm9nr = Ebma7

sixths

C6 = Am7 (C6nr = A7n3)
 Cm6 = Am7b5 (Cm6nr = A7b5n3)

flat five substitutes (see [Flat Five Substitute Chord Progression](#))

C7b5 = Gb7b5
 C9b5 = Gb7b5
 C7#5 = Gb9b5nr
 C9#5 = Gb9b5nr
 C7b9 = Gb7b9#11
 C7/6n5 = Gb7#5#9nr (= C13 n5, n9, n11)

serial patterns

C aug. = E aug. = G# aug.
 C dim7. = Eb dim.7 = Gb dim.7 = A dim.7
 C9b5#5 = C whole tone scale = D9b5#5 = E9b5#5 = Gb9b5#5 = Ab9b5#5 = Bb9b5#5
 C13b9#9#11 = C half/whole diminished scale = Eb13b9#9#11 = Gb13b9#9#11 = A13b9#9#11
 C whole tone scale = D9b5#5 = E9b5#5 = Gb9b5#5 = Ab9b5#5 = Bb9b5#5

All Scale-Tone Chords

- **Principles of Acceptable Dissonance**
- **Major Scale-Tone Chords**
- **Harmonic Minor Scale-Tone Chords**
- **Melodic Minor Scale-Tone Chords**

PRINCIPLES OF ACCEPTABLE DISSONANCE

Questions of Actual Dissonance and Mood

We decide whether a chord is acceptable or not according to the beating that physically occurs when notes are close together in pitch. *and* by mood and style.

major seventh and minor seventh chords are romantic by combining happy and sad

Major chords sound happy and minor chords sound sad. Like a romantic literary work or film, major seventh chords are romantic because the triad on their root is major (1-3-5) and the triad on their third is minor (3-5-7). Since the major triad occurs on the root, the major seventh has a happy basis and a minor undertone.

Minor seventh chords such as IIm7 with parent scale tones 2-4-6 and 1 are romantic also, but have a sad (minor, such as 2-4-6) basis with a happy undertone (major, such as 4-6-1). The IIm7 is constructed with tones 2-4-6-1 of its parent scale and the 2-4-6 part makes a II minor triad while the 4-6-1 part makes a IV major triad. See [Number And Letter Cycles](#) and [Basic Chord Construction](#).

dominant seventh chords are “bi-polar”, combining happy and depressed

Dominant seventh chords such as V7, with parent scale tones 5-7-2-4 are angry or funky in mood, since they combine drastically opposed moods: happy and oppressed. The triad on the root of a V7 chord is the happy major chord (5-7-2 of the parent), while the triad on the third of a V7 chord is oppressed (or depressed), being the diminished triad made with tones 7-2-4 of the parent scale. Its sort of a manic depressive or bi-polar combination of moods.

Specific Attributes

notes a half step apart are usually voiced in different octaves

Half steps in the same octave are very dissonant, but sometimes this is desirable, such as voicing the ninth and the flatted third of a minor ninth chord in the same octave.

critical dissonance, usually unacceptable

The third and fourth, even if in different octaves. The b6 and the 5, unless in different octaves on a dominant chord (with a n3 and b7).

controversial dissonance when voiced in the same octave

1 and b2 (=b9), 2 and b3, #9 (=#2) and 3, #4 (=#11) and 5, 5 and b13(=b6), #5 and 13(=6), 6 and b7, 7 and 1.

acceptable dissonance when voiced in different octaves

1 and b2 (=b9), 2 and b3, #9 (=#2) and 3, #4 (=#11) and 5, 5 and b13(=b6), #5 and 13(=6), 6 and b7, 7 and 1.

b9, #9 (“proxy”), and b13 (“proxy”) chord tones are only used on dominant chords

The hypothetical IIIIm9 and VIIImb5b9 ninth chords on steps III and VII are not acceptable, since they would have flat ninths. We only find flat ninths acceptable on dominant chords (chords with a major third and flatted seventh). Similarly, we only accept sharp nine and sharp five on dominant chords.

The name minor #5 is sometimes used, but is really a way to name a major triad on the note that is “#5”.

#9 is used to allow a flat three in a chord with a natural three, since #9 = b3. So, #9 could be called a “proxy” for b3.

b13 is used to allow a sharp five in a chord with a natural five, since b13 = b6 = #5. So, b13 could be called a “proxy” for #5.

b5, #5 “proxy” chord tones

#4 can be used as a proxy for b5. b6 can be used as a proxy for #5.

MAJOR SCALE TONE CHORDS

Major Scale Tone (MST) modes in terms of the seventh chord and remaining 2, 4, 6

Once you memorize the major scale tone seventh chord qualities the only remaining information you need to conceive all tones for construction of a chord on each scale step are the remaining 2, 4 and 6. The only mode that has #4 is Lydian. So, for most MST modes, the question is “what’s the 2 and 6”. modes III and VII are the only modes with b2. The major modes I, IV and V have a natural 6. Dorian also has natural 6 (the brightest mood of the minor modes). The other three modes have b6: VI Aeolian, III phrygian and VII Locrian.

Constructing Major Scale Tone Chords

I_{ma}7 (also available: 2-4-6)

The largest chord built in thirds is the I_{ma}9. The 11 (= 4) is dissonant against the 3 and the “3” is forms the primary character of the chord, so the 11 (4) is not used except in I sus. 4 chords.

II_m7 (also available: 2-4-6)

The largest chord built in thirds is the II_m13. A wide variety of chords is available.

III_m7 (also available: b2-4-b6)

The largest chord built in thirds is the III_m7. Phrygian mode (major scale mode III) has b2 and b6. b9 (= b2) is only usable on dominant chords, so you can only use the b2 if the chord is change to III7 (as opposed to III_m7) making a III7b9. When the III7 chord is used, the b6 is available to make III7#5.

IV_{ma}7 (also available: 2, #4, 6)

The largest chord built in thirds is the IV_{ma}13#11. Lydian mode (major scale mode IV) has #4. The #4 can be used as a proxy for b5 in IV_{ma}7b5, IV_{ma}9b5 or IV_{ma}9/6b5.

V7 (also available: 2-4-6)

The largest chord built in thirds is the V9. V13 is usually voiced without 11 (=4) is dissonant against the 3). So, without the 11, V13 is really V9/6 or V13 no 11. If the 11th is used, the third is usually omitted, which makes V13sus4. V11 is usually voiced without the third, and therefore could be called V9sus4.

VI_m7 (also available: 2-4-b6)

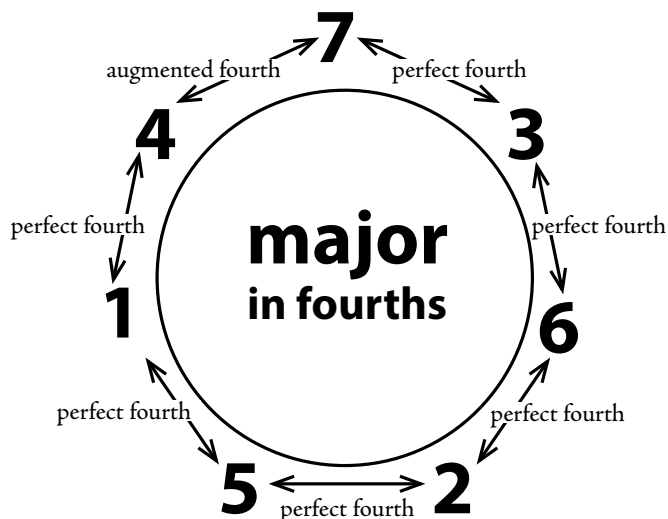
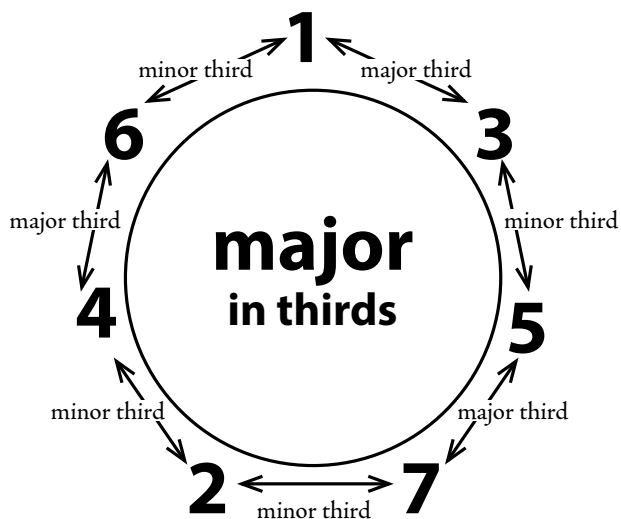
The largest chord built in thirds is the VI_m11. Aeolian mode (major scale mode VI) has b6, which equals b13. The flatted sixth cannot be used, since b6 (= b13) is only usable on dominant chords where it is a “proxy” for #5.

VII_m7b5 (also available: b2-4-b6)

The largest chord built in thirds is the Im7b5. Locrian mode (major scale mode VII) has b2, which equals b9. The flatted ninth cannot be used, since b9 is only usable on dominant chords.

Major Scale Tone Chords by Type

scale tone:	I	II	III	IV	V	VI	VII
M.S.T. mode.....	Ionian.....	Dorian.....	Phrygian.....	Lydian.....	Mixolydian.....	Aeolian.....	Locrian
Lydian.....	V.....	VI.....	VII.....	I.....	II.....	III.....	#IV
Mixolydian.....	IV.....	V.....	VI.....	bVII.....	I.....	II.....	III
Dorian.....	bVII.....	I.....	II.....	bIII.....	IV.....	V.....	VI
Aeolian.....	bIII.....	IV.....	V.....	bVI.....	bVII.....	I.....	II
Phrygian.....	bVI.....	bVII.....	I.....	bII.....	bIII.....	IV.....	V
Locrian.....	bII.....	bIII.....	IV.....	bV.....	bVI.....	bVII.....	I
triad.....	major.....	minor.....	minor.....	major.....	major.....	minor.....	diminished
seventh.....	ma7.....	m7.....	m7.....	ma7.....	7.....	m7.....	m7b5
ninth.....	ma9.....	m9.....	.....	ma9.....	9.....	m9.....	.....
eleventh.....	.....	m11.....	.....	ma9#11.....	.....	m11.....	.....
thirteenth.....	.....	m13.....	.....	ma13#11.....	.....	.....	.....
11no3(9sus4).....	.....	11no3.....	.....	11no3.....	11no3.....	.....	.....
13no11 (no3).....	ma13no11.....	m13no11.....	.....	ma13no11.....	13no11.....	.....	.....
7/6.....	ma7/6.....	m7/6.....	.....	ma7/6.....	7/6.....	.....	.....
sixth.....	6.....	m6.....	.....	6.....	6.....	.....	.....
add 9.....	add9.....	m add9.....	.....	add 9.....	add 9.....	m add 9.....	.....
6/9.....	6/9.....	m6/9.....	.....	6/9.....	6/9.....	.....	.....
7/11.....	.....	m7/11.....	m7/11.....	.....	.....	m7/11.....	(m7/11b5)
sus.4.....	sus.4.....	sus.4.....	sus.4.....	.....	sus.4.....	sus.4.....	.....
sus.2.....	sus.2.....	sus.2.....	.....	sus.2.....	sus.2.....	sus.2.....	.....
7 sus.4.....	(ma7sus.4).....	7sus.4.....	7sus.4.....	.....	7sus.4.....	7sus.4.....	.....
7 sus.2.....	ma7sus.2.....	7sus.2.....	.....	ma7sus.2.....	7sus.2.....	7sus.2.....	.....
9 no 3.....	ma9no3.....	9no3.....	.....	ma9no3.....	9no3.....	9no3.....	.....
9 sus.4.....	(ma7sus.4).....	9sus.4.....	.....	9sus.4.....	9sus.4.....	9sus.4.....	.....
13 sus.4 (13no3).....	.....	13sus.4.....	.....	13sus.4.....	.....	.....	.....
7/6 sus.4.....	.....	7/6sus.4.....	.....	7/6sus.4.....	.....	.....	.....
7/6 sus.2.....	.....	7/6sus.2.....	.....	7/6sus.2.....	.....	.....	.....



HARMONIC MINOR SCALE TONE CHORDS

Harmonic Minor Scale Tone modes in terms of the seventh chord and remaining 2, 4, 6.

Once you memorize the seventh chords and “remaining 2, 4, 6” for the major scale, you can put each mode through a conversion process to convert it to a harmonic minor scale tone mode.

<u>har.m.</u>	<u>maj. #5</u>	<u>altered tones</u>	<u>7th & 246</u>	<u>description</u>
I	VI	b3 b6	m(ma7) (24b6)	Aeolian natural 7 (major mode VI with n7)
II	VII	b2 b3 b5 b7	m7b5 (b246)	major #5 (major mode I with #5)
bIII	I	#5	ma7#5 (246)	
IV	II	b3 #4 b7	m7 (2#46)	Dorian #4 (major mode II with #4)
V	III	b2 b6 b7	7(b24b6)	Phrygian major (major mode III with n3)
bVI	IV	#2 #4	ma7(2#46)	Lydian #2 (major mode IV with #2)
VII	#V	b2 b3 b4 b5 b6 bb7	dim.7(b2b4b6)	Mixolydian #1 (major mode V with #1)

Constructing Harmonic Minor Scale-Tone Chords

Im(ma7) (also available: 2, 4, b6)

The largest chord built in thirds is Im9(ma7). b6 is not used in this chord, since too dissonant with “5”.

IIm7 b5 (also available: b2, 4, 6)

The largest usable chord built in thirds on scale tone two of harmonic minor is IIm7b5. “b2” is not used in this chord, since too dissonant with “1”. “b6” is also not used in this chord, since too dissonant with “5”. IIm7/11b5 is usable if “4” and “b5” are not voiced in the same octave.

bIIIma7#5 (also available: 2, 4, 6)

The largest chord built in thirds is IIIma9#5. “4” is not used in this chord, since too dissonant with “3”. “6” is not used in this chord, since too dissonant with “#5”.

IVm7 (also available: 2, #4, 6)

The largest chord built in thirds is IIm9. “#4” is not used with “n5” in this chord, but “#5” can be used as a “proxy” tone to represent “b5”. “6” can be combined with m7 to make m7/6 or with m9 to make m9/6.

V7 (also available: b2, 4, b6)

The largest chord built in thirds is V7b9. “4” is not used with “3” in this chord, but “4” can be used in a V7sus.4 chord. “b6” can be used to replace “5” as a “proxy” for #5, or “b6” can be used as a “proxy” for #5 so a chord can have “n5” and “#5” both, in effect.

bVIIma7 (also available: #2, #4, 6)

The largest chord built in thirds is bVIIma7. “6” can be used to make a sixth chord, or added to the IVma7 to make IVma7/6. “#2” is not used with “3” in this chord. “#4” can be used to replace “5” as a “proxy” for b5, or “#4” can be used as a “#11” in a IVma7#11 or IVma7/6/#11 chord.

VIIIdim7 (also available: b2, b4, b6)

The largest chord built in thirds is VIIIdim7.

Harmonic Minor Scale Tone Chords by Type

The types are shown in the far left column.

scale tone:	I	II	bIII	IV	V	VI	VII
mode.....	Aeolian $\flat 7$	Locrian $\flat 6$	major #5.....	Dorian #4.....	Phrygian $\flat 3$	Lydian #2.....	Mixo. #1
	harmonic minor				Phry. dominant		
formula	b3-b6	b2-b3-b5-b7	#5	b3-#4-b7	b2-b6-b7	#2-#4	b2-b3-b4-b5-b6- bb7
Locrian nat. 6	bVII	I	bII.....	bIII.....	IV	bV	VI
major #5	VI.....	VII.....	I.....	II.....	III.....	IV	#V
Dorian #4.....	V	VI.....	bVII	I	II	bIII	#IV
Phrygian nat. 3	IV	V	bVII	bVII	I	bII.....	III
Lydian b2	III	#IV	V	VI.....	VII.....	I	bII
Mixolydian #1	bII.....	bIII.....	bIV	bV	bVI	bbVII (=6)....	I
triad	minor	diminished	augmented	minor	maj. or aug.....	maj. or dim	dim. or aug.
seventh	min(ma7)	m7b5 or dim7 ..	ma7#5	m7 or dim7	7 or 7#5.....	maj7 or dim7..	dim
ninth	min9(ma7)	ma9#5	m9 or dim7/9	9, 9#5.....	m9b5	7 \pm 5 \pm 9	
sixth				m6	6		
add 9	m add9			m add 9			
6/9				m6/9			
7/11		m7/11b5		7/11	ma7#11		
sus.4	sus.4			sus.4			
sus.2	sus.2			sus.2			
7 sus.4	ma7sus4			7sus4			
7 sus.2	ma7sus.2			7sus2	7sus4		
9 no 3	ma9no3			9no3			

Melodic Minor Scale Tone Chords by Type

The types are shown in the far left column.

scale tone:	I	II	bIII	IV	V	VI	VII
mode.....	major b3	Dorian b2.....	Phrygian b1...	Lydian b7	Mixolydian b6..	Aeolian b5	Locrian b4
formula	b3	b2-b3-b7	#4-#5	Lydian dominant #4-b7	b6-b7	b3-b5-b6-b7	super Locrian b2-b3-b4-b5-b6-b7
Dorian b2.....	bVII	I.....	II.....	bIII.....	IV	V.....	VI
Phrygian b1	VI	VII	I.....	II.....	III	#IV.....	#V
Lydian dominant...	V.....	VI.....	VII.....	I	II	III	#IV
Mixolydian b6	IV.....	V	VI.....	bVII.....	I.....	II.....	III
Aeolian b5.....	bIII	IV.....	V.....	bVI	bVII	I	II
Locrian b4.....	bII	bIII	IV	bV	bVI	bVII	I
triad	minor	minor	augmented	major.....	maj., aug.	diminished....	maj., min., dim., aug.
seventh	min(ma7)	m7	ma7#5	7.....	7, 7#5.....	m7b5	7b5, 7#5, m7b5
ninth	min9(ma7)			9.....	9, 9#5.....	m9b5	7#5#9, 7#5b9, 7b5#9, 7b5b9
eleventh				9#11			
thirteenth				13#11			
11no3(9sus4)				11no3			
13no11 (no3)				ma13no11			
7/6	m(ma7)/6.....	m7/6.....		7/6	7/6.....		
sixth	m6	m6.....		6.....			
add 9.....	madd9.....			add 9	add 9.....		
6/9	m6/9			6/9			
7/11.....		m7/11				m7/11b5	
sus.4.....	sus.4	sus.4.....				sus.4.....	
sus.2.....	sus.2			sus.2	sus.2.....		
7 sus.4.....	(ma7sus.4).....	7sus.4.....				7sus.4	
7 sus.2.....	ma7sus.2.....			7sus.2.....	7sus.2.....		
9 no 3.....	ma9no3.....			9no3.....	9no3.....		
9 sus.4.....	(ma7sus.4).....					9sus.4	
13 sus.4 (13no3).....							
7/6 sus.4		7/6sus.4					
7/6 sus.2							

Substitution

A large, stylized graphic of the number '44' in a light gray color, positioned behind the main title 'Substitution'.

- **Abbreviate, Elaborate or Alter Chord Progressions**
- **Seven Categories of Substitute Chords**
 - **1. Shared Thirds: Secondary Roots**
 - **2. Darkening**
 - **3. Secondary Dominants**
 - **4. Interchangeable II and V**
 - **5. Flat Five Substitute**
 - **6. Hidden Roots**
 - **7. Tertiary Dominants**
- **The Order of Procedures**
- **Secondary Keys**
- **Abbreviating Chord Pairs with Roots in Fourths**

ABBREVIATE, ELABORATE OR ALTER CHORD PROGRESSIONS

Abbreviate the Chord Progression

When chords are changing too rapidly for the improviser and listener to comfortably interpret, you should consider substitutes that work for two or more consecutive chords, abbreviating the chord progression.

II V chord progression can be abbreviated all II or all V. See [Interchangeable II and V](#). This principle can be extended to any pair of scale tone chords with root movement in perfect fourths, as shown in [Abbreviating Chord Pairs](#).

Elaborate the Chord Progression

When chords are changing infrequently enough that the improviser and listener could comfortably interpret more frequent chord changes, you should consider substitutes that replace parts of a chords duration, elaborating the chord progression.

See the chapter [Abbreviating and Elaborating Chord Progression](#).

Alter the Modal Basis the Chord Progression

Each chord in a progression has potential substitute chords (or alternates) that include all or many of the same notes. Substitutes may contrast the mood of the original chord by lowering notes chromatically (by an interval of one fret) to darken or (more rarely) may raise notes chromatically (by an interval of one fret) to brighten the mood.

To darken or brighten the mood, change the mode (scale) on which the chords are based. Flat numbered tones to make to make the mood darker or more bluesy. Make numbered tones natural (such as changing b7 to 7) to brighten the mood.

In making a chord a secondary dominant, it is changed to a dominant seventh chord (if it is not already). This usually makes a Mixolydian dominant seventh to progress its root up a fourth to a major chord or a Phrygian major dominant seventh chord (Phrygian with a major third) to progress to a minor chord. See [Modes](#) and [Modes Of Four Heptatonic Scales](#).

SEVEN CATEGORIES OF SUBSTITUTE CHORDS

The Seven Categories of Substitute Chords

1. **Shared Thirds**
2. **Darkening Moods**
3. **Secondary Dominants**
4. **Interchangeable II and V**
5. **Flat Five Substitute**
6. **Hidden Roots**
7. **Tertiary Dominants**

Identify the Parent Major Scale

Beginning with major scale tone triad pairs, you can identify the parent major scale. Each chord uses some numbered tones of the parent scale. Once enough chord tones have been accumulated to account for each of the seven tones of a parent scale, it is defined.

In terms of the parent major scale, each triad has three consecutive numbers on the tertian cycle. A I major triad is 1-3-5. A IIm triad is 2-4-6, and so on.

Sometimes the parent scale is major sharp five. The system is the same as the parent major scale, but each chord that uses “#5” is changed in quality compared to that chord in an unaltered major scale.

Likewise, a parent major scale with a b3 is sometimes used, called melodic minor ascending form (commonly used the same in ascending or descending but in classical music ascended with b3 and descend with b3, b6 and b7).

In modal terms, the principle of identification is the same. Determine the formula for the mode, such as b3 and b7 for Dorian, then account for every numbered tone.

chord combinations that define a major scale:

Any scale tone seventh chord and a triad (or seventh chord) built on the next higher scale tone from the seventh's root.

Three (not two) scale-tone triads or seventh chords in perfect fourths.

Any stepwise pair of triads plus the tone a step below the root of the lower triad.

Any three triads in stepwise or fourth root movement.

unique major scale-tone pairs of triads

major chords with their roots a whole step apart are usually IV to V

minor chord with their roots a whole step apart are usually II_m to III_m

minor up a half step to major is usually III_m to IV major.

V₇ diminished up a half step to major is usually VII dim. to I major.

minor up a fourth to major is usually II_m V

major up an augmented fourth to diminished is IV VII_{dim}

Modal Chord Types

For any scale tone chord, you need to know its numbered type (I type, V type). See [Number And Letter Cycles](#).

For the I, IV and V chords this is the relative major and relative minor relationship. The traditional relative minor of I is VI_m. Modally, the same relationship occurs for IV type chords with a relative II_m and for V type chords with a relative III_m.

II_m has what could be called a “relative VII diminished”. The “relative diminished” of D_m is B diminished.

SHARED THIRDS: SECONDARY ROOTS

In many cases, a chord can be treated as a different chord which sounds similar but is rooted a chord tone other than the root of the original chord. Chords on secondary roots share the same parent scale as the original chord.

Chords used in jazz usually contain four or more notes and are, by default, built with every other note of a seven tone (heptatonic) scale (see [Number And Letter Cycles](#)). The same cycle of tones, numbered 135624613, etc., is used for any step of the scale to build a chord.

With seventh chords, using four notes in that cycle, a Ima7 chord is 1-3-5-7, a IIIm7 chord is 2-4-6-1, a IIIIm7 chord is 3-5-7-2, and so on.

Larger ninth chords use five notes in the cycle. Ima9 is 1-3-5-7-2, IIIm9 is 2-4-6-1-3, and so on. Ninth chords are only acceptable built on steps I, II, IV, V and VI of the major scale. Those on III and VII are currently considered to have an unacceptable dissonance. Eleventh chords have six notes, constructed in the same every other note pattern. All currently accepted chords can be studied in [All Scale Tone Chords](#).

Chords of four notes or more have subsets. A ninth chord built on step I is Ima9 and contains 1-3-5-7-2. 1-3-5 is a I major triad. 3-5-7 is a III minor triad. 5-7-2 is a V major triad.

Secondary Root on The Third

By using the chord type on the third of the original, you will add upper harmony. Whatever the numbered chord type of the original, the secondary root on the third is that two numbers higher in the seven tone cycle. For a five-type chord, (G on V of C major scale) the secondary root would be two scale tones higher and would be a seven-type chord (B diminished on VII of C major scale).

Scale-tone sevenths and ninths on the third of a Ima9 (IIIIm7), IIIm9 (IVma9), IVma9 (VIm9), V9 (VIIIm7b5), VIm9 (Ima9), III7b9 (#Vdim7).

Secondary Root on the Sixth

By using the chord type on the sixth of the original, you will cause the original chord to be a sixth. In each case, the chord is a triad with an added scale tone two steps down from the root. I6, for example is scale tones 1-3-5-6. On the sixth of that chord, a subset triad exists, which is 6-1-3 and is the same as a VIIm triad. Likewise, a VII diminished triad is built on the sixth of IIIm6, a IIIm on the sixth of IV6 and a IIIIm on the sixth of V6.

This only occurs with the original on steps I, II IV and V of the major scale, the only modes with a natural sixth. The other major scale modes have a flat six and flat six is not a currently acceptable chord

tone, with an “proxy” exception in jazz. In jazz, flat thirteen can be added to a chord name. Though the flat thirteen tone is the same as flat six, the function is to have the flat thirteen as a sharp five (not functionally as a flat six) along with a natural five.

Four major scale-tone seventh chords have a synonym down a minor third. They are: $I6 = VIIm7$, $IIIm6 = VIIIm7b5$, $IV6 = IIIm7$ and $V6 = IIIIm7$.

The most common applications are: use $VIIm9$ over $Ima7$, since $VIIm9 = Ima7/6$ and use $IIIm9$ over $IVma7$, since $IIIm9 = IVma7/6$.

Secondary Root on the Fifth

A secondary root on the fifth of the original adds higher harmony that the secondary root on the third. A triad as a secondary root on the fifth makes a ninth chord version of the original chord.

Playing a seventh chord on the fifth of the original chord can make the original sound like an eleventh. The following types work:

original chord type	type on fifth	eleventh version of original
IIIm type	VIIm type	IIIm11
IV type	I type	IVma9#11
V type	IIIm type	V11
VIIm type	IIIIm type	VIIm11
VIIIdim type	IV type	VIIIm11b5b9

Playing II over V could be thought of as playing on the fifth of the V chord. The first chord of a pair of chords with roots in fourths is often the upper part of a larger second chord:

IIIm9 as the upper tones of V13 in a IIIm7 V13 chord change (Mister Magic), since the IIIm7 is on the fifth of the V7.

VIIm9 as the upper tones of IIIm13 in a VIIm7 IIIm7 chord change (the first two chords of Blue Bossa, Footprints), since the VIIm7 is on the fifth of the IIIm7.

Ima9 as the upper tones of IVma13#11 in a Ima7 IVma7 chord change (Europa, All The Things You Are, Autumn Leaves, Mr. Magic), since the Ima7 is on the fifth of the IVma7.

Secondary Root On The Seventh

Rarely, a secondary root can occur on the seventh. It happens on a suspended thirteenth chord. Bb major seventh (Bb-D-F-A) is the upper part of a C13 sus. 4 chord (C-G-Bb-D-F-A).

DARKENING

Contrasting Moods

We can contrast moods by combining chord types. In blues, we commonly improvise on a major chord with minor content in the same key. Typically, we flat notes to darken moods. When the original mode is substituted with one that flats notes, the mood is darkened.

See [Modes](#), [The Expressive Use Of Modes](#).

Flattening the Seventh, Third or Fifth

We can darken a chord by substituting another chord and its respective mode with one that flats the seventh, third or fifth. If the original chord is a major type, we can flat the seventh and make it a dominant seventh type, based on Mixolydian (named after the chord root). If the original chord is a dominant seventh/Mixolydian, we can flat the third and make it a minor seventh type and Dorian. A minor seventh could be changed from Aeolian type (its mode has b7-b3-b6) or Phrygian type (its mode has b7-b3-b6) to m7b5/Locrian type with b7-b3-b6-b2-b5.

Changing the Key Scale Type

darkening the mood

b3 Dorian over Mixolydian (or over major)
 b7 Mixolydian over major
 b3 Phrygian over Phrygian major
 b7 Aeolian over harmonic minor
 b5 Locrian over Phrygian
 b5 Dorian b5 over Dorian
 b5 Aeolian b5 over Aeolian
 b7 Lydian b7 over Lydian
 b4 major over Lydian

brightening the mood

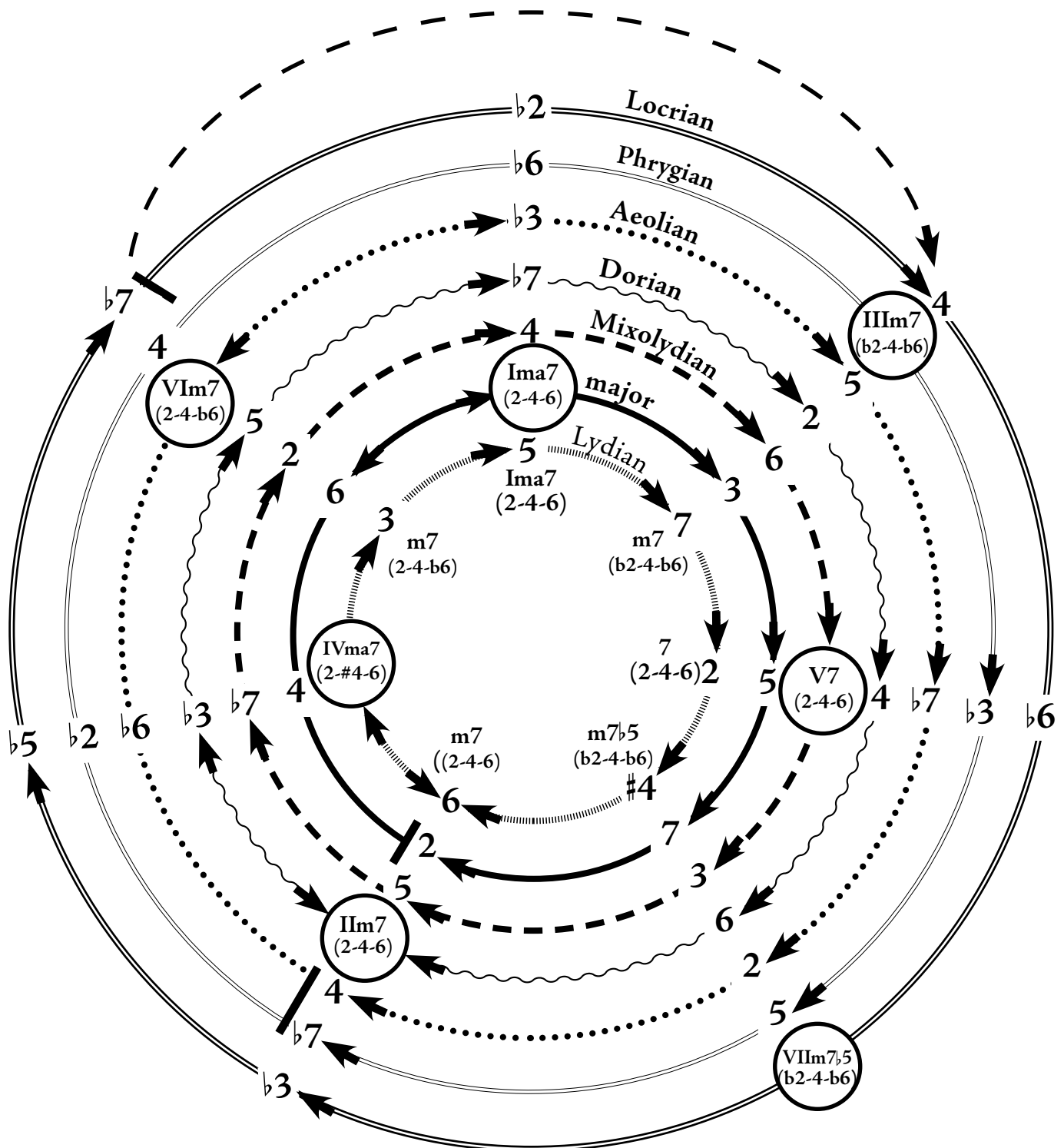
b7 harmonic minor over Aeolian (de-emphasize 7)
 #4 Lydian over major (de-emphasize 4 in accomp.)

Secondary Roots and Mood Alteration with the Tertian Cycle

We make use of the tertian cycle (cycle of thirds) that the chords are built from (by default) to find commonality (synonyms). Each substitute should be conceivable as some version of the chord it replaces, which could be named as a synonym. The note after which the substitute chord is named can be called a *secondary root*.

<u>original</u>	<u>dark original</u>	<u>on six</u>	<u>dark on six</u>	<u>on third</u>	<u>dark on third</u>	<u>fifth</u>	<u>dark on fifth</u>
Ima9	I9	VIm9 =Ima7/6		IIIIm7 =Ima9nr = V6	IIIIm7b5 =I9nr = Vm6	V6 =Ima9nr =IIIIm7	Vm6 =I9nr = IIIIm7b5
Idim7		bIIIIdim7		bVdim7		VIdim7	
IIm7 =IV6 =IVm6	IIm7b5 =IIm6 =VIIIm7b5	VIIIm7b5 =II°7=IV°7 =bVI°7	VIIIdim7 =IIm9nr	IVma7 =IIm9b5	IVm(ma7) = IIm11nrn3 = I6	VIm7	
III7b9	IIIIm7 =V6	IIdim7 =III7b9nr =IV°7=#V°7 =VII°7		#Vdim7 =IIIb9nr =II°7=IV°7 =VII°7		VIIIdim7 =III7b9nr =II°7 =IV°7 =#V°7	
IVma9	IV9 =Im6/11	IIm9 =IVma7/6		VIm7 =IVma9nr =I6	VIm7b5 =IV9nr =Im6	I6 =IVma9nr =VIm7	Im6 =IV9nr =VIm7b5
IV7				VIm7b5 =IV9nr =Im6		Im6 =IV9nr =VIm7b5	VII7b5 =IV7b5
IV9#11				VIm7b5 =IV9nr =Im6		VII7b5#5 =IV9b5	
IV13#11						VII7b5#5b9#9	
V7(9)	Vm7 =bVIIIm6	IIIIm7 =V6	IIIIm7b5 =Vm6	VIIIm7b5 =V9nr =IIm6	VIIIdim7 V7b9nr	IIm7 =V11nrn3	
V13b9#9#11		III13b9#9#11		bVII13b9#9#11		bII13b9#9#11	
VIm7 =I6	VIm7b5 =Im6			Ima7 =VIm9nr	Im(ma7) =VIm9b5	IIIIm7 =VIm11nr	bIIIIma7#5 VIm11b5nrn3
VIIIm7b5 =IIm6	VIIIdim7 =II°7=IV°7 =#V°7			IIm6 =VIIIm7b5	IIdim7 =IV°7=#V°7 =VII°7		

Modal Substitution Cycles



the most notable synonyms:

$VIm_{11} = Ima_9 / \text{add low } 6$

$IIm_{13} = IVma_{13} \#11$

$bII_{13} \#11 = V7b_5 \#5b_9 \#9$

SECONDARY DOMINANTS

Secondary dominants prepare a [target chord](#) by preceding it with the most expected [setup chord](#), the V chord of the target chord. See [Melodically Superimposed Cadences/Secondary Dominants](#).

INTERCHANGEABLE II AND V

Playing II over V could be thought of as playing on the fifth of the V chord. Playing V over II usually works better by playing a suspended version of the V (emphasize the fourth instead of the third).

Major IIm7 V7

IIm7 is the upper part of V11, rooted on the fifth of V11.

Im9 is the upper part of V13, rooted on the fifth of V13. $V13nr\ n3 = IIm9$.

Playing IIm7 over V7 makes the V7 sound suspended and sounds the upper part of V13.

Playing V7 over IIm7 sounds IIm6. $V9sus4 = IIm7/11$.

Minor IIm7b5 V7 (parent major scale VIIIm7b5 III7).

IIm7b5 = V7b9sus4nr, rooted on the fifth of V13. By playing IIm6b5 (= IIdim7) you sound V7b9.

Playing V7b9 over IIm7 sounds IIm6/11b5 (= IIdim7). $V7b9sus4 = IIm7/11b5$.

Phrygian b1. bII13#11 = V7b5b9#5#9

Think of the target chord as III of the parent scale during this bII V. The parent scale is melodic minor (major b3), which has Phrygian b1 on its b3. So, the target root is “3” in relation to the parent melodic minor, and is not in the melodic minor scale.

FLAT FIVE SUBSTITUTE

The flat five substitute, also called the *tritone* substitute is based on the synonym $bII7b5 = V7b5$ (Db7b5 has the same notes as G7b5). $bII7b5$ harmonic and melodic structures work on V7b5 (and vice versa) since they are synonyms. This can usually be based on the melodic minor pair IV13#11 and VII7b5#5b9#9. The IV13#11 acts as a $bII7$ type (optional b5) to progress down a half step. The VII7b5#5b9#9 acts as a V7b5 type to progress up a perfect fourth. See [Flat Five Substitute Chord Progression](#) and [Scale Ambiguity/Ambiguous Scales for Dominant Chords/VII super Locrian, IV Lydian dominant and the flat five substitute](#).

HIDDEN ROOTS

Sometimes the root a chord name indicates is not the actual root implied by the music. Experienced jazz improvisers, arrangers and composers know about these. The accompaniment commonly plays the chord as named, but the improvisers can treat the chord as if it has a different root. This is similar to [secondary roots](#), except the different root is created with an *added* chord tone, whereas in the case of secondary roots, an *existing* chord tone is used as an alternate root.

Minor Seventh: Major Ninth No Root

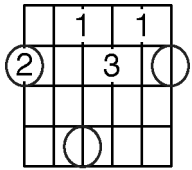
Dm7 in One Note Samba Is Bbma9 no root.

IIIIm7 in IIIIm7-VI7-IIIm7-V7 is Ima9 no root.

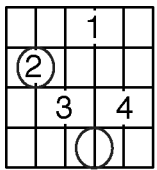
Diminished Seventh: 7b9 No Root

original dim. 7

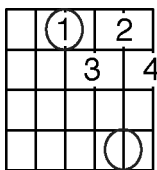
C#dim7 VIII



1 6 b3 b5



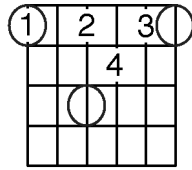
1 b5 6 b3



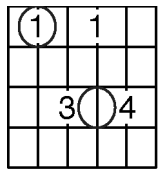
1 b5 6 b3

dominant 7 a half step below dim. 7ths root

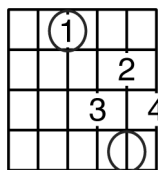
C7 VIII



1 b7 3 5



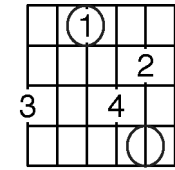
1 5 b7 3



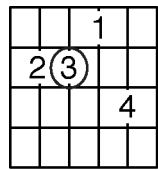
1 5 b7 3

dominant 7 a half step below dim. 7ths b3

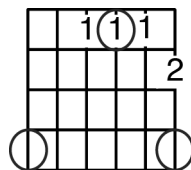
A7 VII



3 1 5 b7



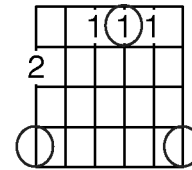
5 1 3 b7



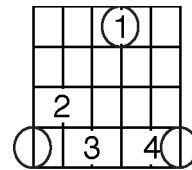
5 1 3 b7

dominant 7 a half step below dim. 7ths b5

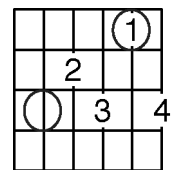
Eb7 XI



b7 5 1 3



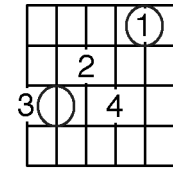
3 b7 1 5



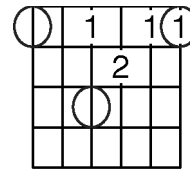
3 b7 1 5

dominant 7 a half step below dim. 7ths 6

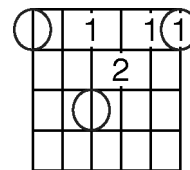
F#7 VII



5 3 b7 1



b7 3 5 1



b7 3 5 1

Any one of the seven chords above could be elaborated to seventh flat nine. By raising the root of any of those sevenths by a half step, a seven flat nine no root is made, which has the same notes as the diminished seventh shown at the far left.

reverse-constructing V7b9 no root

When you see a diminished seventh in a tune, see if there is a potential V7b9 root below one of its tones.

Determine what a V7b9 chord for the *next* chord after the diminished seventh chord would be. In Black Orpheus, the next chord after C#dim7 in bar eight is Dm in bar nine. The V7b9 chord in the key of D minor is A7b9. Then consider that 7b9 chord without a root, which is a diminished seventh chord named after either of its remaining notes (its, third, fifth, seventh and flatted ninth). A7b9 no root is a diminished seventh chord with the four synonym names C#dim7, Edim7, Gdim7 and Bbdim7. So the C#dim7 chord could be considered A7b9, no root.

In other songs, the diminished seventh may have a different purpose and is not a V7b9 no root and you won't find the diminished seventh as part of V7b9 of the next chord.

#IVdim7 in bar 6 of jazz blues is IV7b9

C#dim7 in bar 8 of Black Orpheus is A7b9 no root.

C#dim7 in bars 3-4 of How Insensitive is A7b9 no root

Bbdim7 in bar 2 of Wave is A13b9/Bb (D major b6)

Abdim7 in bar 2 of Corcovado is G13b9/Ab

Minor Sixth: Dominant Ninth No Root

Am6 in bar 1 of Corcovado is D9 no root. The A bass note begins a descending chromatic bass line (A-Ab-G).

TERTIARY DOMINANTS

THE ORDER OF PROCEDURES

1. Ignore brief unimportant chords when practical to do so.
2. Determine the parent scale for each group of chords.
3. Renumber parent scales as key scales (compare to a major scale on the tone center). See [Modes/Key Scale, Parent Scale and Chord Scale](#).
4. Determine the chord scales. Wherever possible, be able to name each as a key scale also.
5. Consider changing chord qualities and their respective key scale types for adjacent chords, preferring to minimize the number of key scale types. Look for and choose key scale types common to consecutive chords.
6. Determine the order of melodic importance (which tones are most important, next most, etc.).

SECONDARY KEYS

Extend Secondary Roots to Tone Centers

Using secondary tonics is an extension of secondary roots. In the order of melodic importance, the chord tones you play using secondary roots are of primary importance and are more strongly emphasized. Think of the three or four note chord built on the secondary root as the main tones. The remaining three or four notes of the mode (scale with specified tone center) in which the chord on the secondary root occurs.

Modal Scales on Secondary Roots Sound Polytonic

By using the appropriate mode on a secondary root, and playing melodic structures and designs in that mode, you tend to suggest a tone center on the secondary root, making the music sound polytonic (with multiple tone centers).

Learn The Modes of Harmonic Minor and Melodic Minor

harmonic minor

The modes of harmonic minor are the same as those on the major scale, but with the fifth sharp and with the tone center on the sixth step of the scale. Conceptually, this can be thought of as the scale *major sharp five*. Each mode of the major scale has one tone altered to produce the harmonic minor/major sharp five mode.

melodic minor

The modes of melodic minor are the same as those on the major scale, but with the third flat. Each mode of the major scale has one tone altered.

modes

Notice the descending sequence of altered tones in harmonic minor and melodic minor.

major scale	major (Ionian)	Dorian	Phrygian	Lydian	Mixolydian	Aeolian	Locrian
harmonic minor	major #5	Dorian #4	Phrygian n3	Lydian #2	Mixo. #1	Aeolian ♯7	Locrian #6
melodic minor	major b3	Dorian b2	Phrygian b1	Lydian b7	Mixo. b6	Aeolian b5	Locrian b4

determining secondary tonics

Like secondary roots, secondary tonics can occur on the third, fifth or sixth. Whatever tone of a heptatonic scale the original chord root occurs on, a secondary tonic on the third is up two scale tones, on the fifth up four scale tones and on the sixth, down two scale tones. The numbering “wraps around”, so a tonic near the end of the series of modes continues at the beginning, so the third of Aeolian is major and its fifth is Phrygian.

ABBREVIATING CHORD PAIRS WITH ROOTS IN FOURTHS

Root Movement up in Perfect Fourths

VIm7, Ima7, IIm7, IIIIm7 and V6 (not V7) types can each work on the next scale tone chord whose root is up a fourth. This works because, in each case the first chord is built on the fifth of the second chord. For example, Am7 is the fifth, flat seventh, ninth and eleventh of Em11. This creates the pairs:

VIm7 + IIm7

Ima7 + IVma7

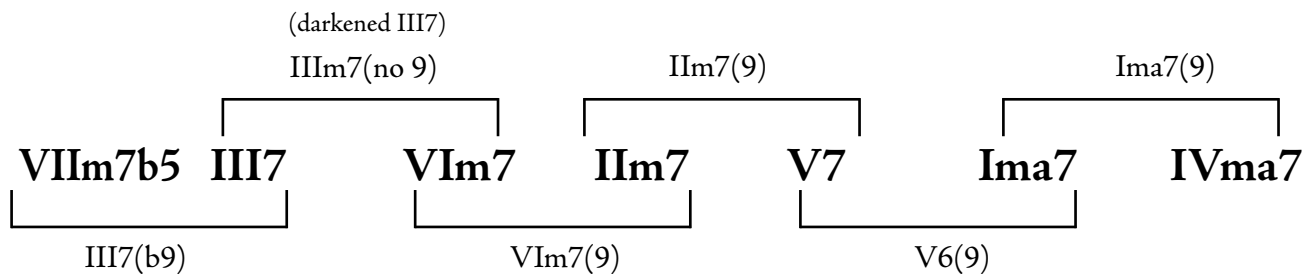
IIm7 + V7

IIIIm7 + VIm7

V6 + I (without ma7)

With the VIIIm7b5 III7 chord pair (III7, not IIIIm7), it works better to use the III7 over both chords. Doing so downplays the importance of the VIIIm7b5 and suggests that the III7 chord is primary and the VIIIm7b5 is incidental

If you were to use a VIIIm7b5 over a III7, it would attempt the chord sound III7b9sus4 (no root), which is not currently acceptable to most people.



See [Abbreviating and Elaborating Chord Progression](#) for an expanded view of the concept covered here in Abbreviating Chord Pairs.

Scale Ambiguity



- **Feeling First**
- **Ambiguous Scale Categories**
- **Flexible Scale-Chord Matching**
- **Ambiguous Scales For Major Chords**
- **Ambiguous Scales For Minor Chords**
- **Ambiguous Scales For Dominant Chords**
- **Improvising On Chick Corea's Spain Solo Section**

FEELING FIRST

Mood, Rhythmic Style, Story, Tone

In determining the relationships between scales and chords in your music, consider the components of feeling first. The mood, genre, rhythmic style, story and tone will point you in the right direction and are often more important than an exact match of the notes in the current chord and the current scale.

Mis-matching of chord and scale are very frequent in improvisational music. The players involved are not as concerned about the number theory of the music as they are the feeling of the music. The number theory is important, but it is driven by the feeling and can be quite complex. Justifying the various mis-matches of chord and scale according to the sensibilities established in the various styles and sub genres can be very detailed.

When chord progression or rhythm is mis-matched between the accompaniment and the composed or improvised melody, the melody needs to be stated very clearly. When Charlie Parker would play a different chord progression in his melody from the accompaniment, he would state the chord progression very clearly, usually by playing up or down the arpeggio for each chord (more often descending the arpeggios). When Pat Martino played sixteenth notes against a swing eighth accompaniment, as on *All Blues*, he played continuous sixteenths (as he too often does), allowing the listener to comprehend the three divisions per beat in the accompaniment (the first and third of three parts per beat makes regular swing eighths) and four divisions per beat in his improvised melody.

When scales are used ambiguously, they can provide different versions of each numbered scale tone, allowing a flat or natural six, a flat or natural third, and so on. This can give us more flexibility in color. Arnold Schoenberg's twelve tone row method of composition (also called serialism) advocated using all twelve notes equally as often in a composition, while not giving any one of them more strength, avoiding tonality. The emphasis of a particular note creates a tonal key and the lack of emphasis of a particular note is atonality (the absence of a key).

Personally, I can appreciate serialism in a film score or background music in a museum, but in playing music I prefer a key and don't like the game-like rule of *having* to use all twelve chromatic tones.

FLEXIBLE SCALE-CHORD MATCHING

In the older traditions, melody is made up with the same scales should that make up the chords in the accompaniment. In modern improvisation, the matching of a chord type (and mood suggested) by a single note melody and by the accompaniment behind it is flexible. It is typical in blues-based styles (rock, jazz, funk, reggae, etc.) that the composed or improvised melody darkens the mood by flattening thirds, fifths or sevenths. The accompaniment chords can also darken the mood by flattening thirds, fifths or sevenths.

If, for example, you are improvising a melody against a C chord with a sharp nine (sharp two) , such as C7#9, your melody could still use “nine” (two), as long as the mis-matched nine and flat nine are not played too prominently for too long a duration. The disagreement needs to be subtle, not “in your face”. The duration of mis-matched notes is an issue of time in seconds, not beats. Two beats at sixty beats a minute is two seconds, while two beats at 240 beats a minute is half of a second.

If three transcribers were given the notation to a sophisticated jazz improvised solo *without* the chord names, it is likely each of them would have a different take on what chords are suggested, yet all the interpretations of all three may be valid. If you then look at the chords actually used in the accompaniment, they are likely to be another version again. Furthermore, in each time the musicians play through the chord progression, the chords suggested by the improviser and the chords played by the accompanists are likely to differ. Even within the same section of the song, two musicians may play different, but compatible versions of the chords.

I’m calling the flexibility of scale-chord matching *ambiguity*. Each chord and scale has optional types within its category. The broadest categories are major, minor and dominant.

AMBIGUOUS SCALE CATEGORIES

General Chord Ambiguity

Smaller chords, such as triads, have more options of scale types. When using a seven-tone scale with triads you have many options for the remaining four tones of the scale.

In the [Modal Key Scales](#) section of the [Key Scales](#) chapter you'll find seventh chords listed in all the common modes with parenthesis after most of them, showing three optional added tones.

On the [Largest Tertian Chords In 28 Modes](#) table in the [Key Scales](#) chapter, each thirteenth chord has the same seven notes as the scale it is constructed from. You can use those thirteenth chords with the exactly matching scale from which each of them were made or choose options that change the mood, usually choosing an alternate mode with a flatted seventh, flatted third or flatted fifth (or combinations of them).

Target Chord Ambiguity

Tonality is a focal point on a particular note that is the implied bass note of the chord the listener would expect a piece of music to end on to sound complete. The implied ending chord is called the *tonic chord*. Music doesn't always end with a resolution to the implied tonality. It may end with a deceptive cadence, to intentionally leave the listener with a feeling of incompleteness.

A target chord is any chord that establishes a tonality, whether the tonality is for the entire section or for a part of it. Target chords are preceded with setup chords in the accompaniment or by setup chords implied by the melody. One or more setup chords may form a chord progression that strengthens the tonality of the target chord. The group of setup chords, together with the target chord are called a cadence. Cadences are usually auditorily familiar to the listener and recall similar situations in previously heard music where a tonality was established for a target chord.

Target chords can be major, minor or dominant types. See the chapters [Modes](#) and [Key Scales](#).

Major target chords are most commonly Ionian (major scale) or Mixolydian. Mixolydian is a dominant type. It was first used as a mode for the V chord, but in the last hundred years or so is used as a key major target chord type (I type) with the introduction of blues in popular music.

Minor target chords are traditionally Aeolian, but are commonly Dorian also.

Setup Chord Ambiguity

A setup chord leads to a target chord. Most commonly, the setup chord is a V chord, with its root on the fifth step of the key. We will look at eight types of V chords in this chapter. See [Ambiguous Scales For Dominant Chords](#). The eight types of V chords discussed here are Mixolydian, Lydian dominant (Mixolydian flat seven), Mixolydian flat six (Aeolian major), Phrygian major, Phrygian minor/major (Phrygian with both flat three and natural three), super Phrygian, super Locrian and half/whole diminished scale.

As stated in the beginning of this chapter, go by feeling first. Your sensibilities should tell you that moods match better when you stay the the same harmonic family. See [The Four Harmonic Families](#) in the chapter [Phrases Built With Core Melody, Cell Elaboration And Filler](#).

AMBIGUOUS SCALES FOR MAJOR CHORDS

Major Keys Are Commonly Ionian or Mixolydian

Most of the time, major target chords (major key chords) are Ionian (major scale) or Mixolydian (major scale with flat seven). However, there are many other options:

- modes I, IV and V of major scale
- modes II and IV of major sharp five (equivalent to V and bVI of harmonic minor)
- modes IV and IV of melodic minor
- modes I and V of harmonic major

See [Modes Of Four Heptatonic Scales](#) in the [Modes](#) chapter.

Darkening and Brightening

In the order from having a sharped fourth, to a natural fourth, to flattening the seventh and flattening the third, the mood can be darkened. Here are some examples, from bright to dark:

- #4 - Lydian and Lydian dominant are brighter (maybe a little blindingly) than Ionian (major scale)
- natural 4 - Ionian (major scale) is the most common major key scale chord
- natural 4, flat seven - Mixolydian provides the blues sound
- natural 4, flat seven, flat three - Dorian provides a very bluesy sound, usually as a brief alternative to Mixolydian during a major chord

Exotic Major Modes

- #4 - Lydian and Lydian dominant are brighter (maybe a little blindingly) than Ionian (major scale)
- b2-b6-b7 - Phrygian major sounds Spanish, flamenco, gypsy and north African
- b2-b3-natural 3-b7 - super Phrygian is a good-sounding exotic alternative to Phrygian major

AMBIGUOUS SCALES FOR MINOR CHORDS

Minor Keys Are Commonly Aeolian or Dorian

Most of the time, minor target chords (major key chords) are Aeolian (major scale with flat three, six and seven) or Dorian (major scale with flat three and seven). Aeolian is more common and has been established longer in music repertoire.

Dorian can be created by flattening the third and seventh of a major scale, or by establishing the tone center on the second step of a different major scale. D Dorian is a D major scale with flat three and flat seven. D major scale is D-E-F#-G-A-B-C#-D. With D major's third and seventh flat, it becomes D Dorian: D-E-F-G-A-B-C-D. The C major scale is C-D-E-F-G-A-B-C. Establishing the second step of a C major scale as a tone center by, for example, playing the C major scale from D to D also produces the D Dorian mode: D-E-F-G-A-B-C-D.

Aeolian can be created by flattening the third, sixth and seventh of a major scale, or by establishing the tone center on the sixth step of a different major scale. A Aeolian is an A major scale with flat three, flat six and flat seven. A major scale is A-B-C#-D-E-F#-G#-A. With A major's third, sixth and seventh flat, it becomes A Aeolian: A-B-C-D-E-F-G-A. The C major scale is C-D-E-F-G-A-B-C. Establishing the sixth step of a C major scale as a tone center by, for example, playing the C major scale from A to A also produces the A Aeolian mode: A-B-C-D-E-F-G-A.

See [Modes Of Four Heptatonic Scales](#) in the [Modes](#) chapter.

Harmonic Minor

Aeolian is often substituted by harmonic minor, which has flat three and six, but not flat seven. This change causes the chord built on the fifth step of the Aeolian mode to be major, rather than minor. The strongest two-chord progression that establishes a minor key (a two-chord cadence) is Vm(Gm) to Im (Cm), such as Gm to Cm in C minor. G major to Cm is even stronger, hence the name of the scale that produces it *harmonic minor* (harmonic refers to harmony or chords).

Darkening and Brightening

In the order from having the altered tones b7-b3 to b7-b3-b6, to b7-b3-b6-b2, the mood can be darkened. This uses the accumulating flatted tones 7, 3, 6, 2, which are in perfect fourths. Each tone b7 to b3 to b6 to b2 is a perfect fourth (an interval of five frets) from the next. Here are some examples, from bright to dark:

- b7-b3 is Dorian, with the brightest (happiest) mood of the minor modes
- b7-b3-b6 is Aeolian, major scale mode VI, the most traditional mode
- b7-b3-b6-b2 is Phrygian, major scale mode III, the darkest minor chord mode derived from the major scale

Exotic Minor Modes

- Melodic minor in classical music traditionally ascends as a major scale with a flat three (1-2-b3-4-5-6-7) and descends as Aeolian (1-b7-b6-b5-5-b3-2-1). It is used in Bach's Bouree in Em and in the Beatles song "Yesterday". In jazz, the melodic minor scale is usually used ascending and descending as a major scale with flat three.
- Dorian sharp four (1-2-b3-#4-5-6-b7) on the fourth step of harmonic minor can elaborate a diminished seventh sound on its tone center. See [Modes Of Four Heptatonic Scales](#) in the [Modes](#) chapter. Diminished seventh is 1-b3-b5-6 (bb7). Dorian sharp four has those tones by using its #4 as a b5, which is the same note.
- Dorian flat five (1-2-b3-4-b5-6-b7) can be used to darken Dorian, making it bluesy. It occurs on the second step of harmonic major (major flat six). See [Modes Of Four Heptatonic Scales](#). The basis of this mode is a diminished triad, since it has 1-b3-b5. Like Dorian sharp four, it can elaborate a diminished seventh sound on its tone center, but is darker, since Dorian flat five has no fifth.
- Aeolian flat five (1-2-b3-4-b5-b6-b7) can make Aeolian bluesy. It occurs on the sixth step of melodic minor. See [Modes Of Four Heptatonic Scales](#).
- Dorian flat two (1-b2-b3-4-5-6-b7) can make a I minor six chord in Dorian mode more exotic. It occurs on the second step of melodic minor. See [Modes Of Four Heptatonic Scales](#).
- Super Phrygian (1-b2-b3-b4-5-b6-b7) can establish a tone a half step above its flatted third as a "flat four", rather than the natural three usually implied by the flat four (flat four is the same note as natural three). Super Phrygian occurs on the third step of harmonic major. See [Modes Of Four Heptatonic Scales](#).

AMBIGUOUS SCALES FOR DOMINANT CHORDS

“Stand-Alone” Keys

Any of these scales can be used as a V type scale with a target “I” chord in mind or as a “stand-alone” scale where you are playing in the key of the chord root.

Dominant Chords Are “V Type”

In classical music theory, “dominant” refers to the fifth step of a major scale. The four-note chord on that step is a dominant seventh chord, with the formula from its root 1-3-5-b7. There are many variants of this dominant chord with alterations of the chord type and a chord with an alternate root called a flat five substitute (or tritone substitute). The flat five substitute uses an alternate root which is a flatted fifth from the V of the key. If the key is “C”, the fifth would be “G”. The flatted fifth of “G” is “Db”, which is bII of the target key chord, “C”.

The Lydian Family of V Type Scales

The Lydian family of scales includes the altered scales Lydian dominant, its flat five substitute, super Locrian and Dorian sharp four (Lydian dominant flat three). These scales can also be ambiguous combined with diminished half whole scale. Lydian dominant has sharp four and flat seven. It can be conceived as Lydian (sharp four) with a flat seven, or as Mixolydian (flat seven) with sharp four. Lydian dominant occurs on the fourth step of melodic minor. On the seventh step of melodic minor, super Locrian occurs, which is commonly used as a flat five substitute for Lydian dominant. See [Substitution/Flat Five Substitute](#).

The Phrygian Family of V Type Scales

The Phrygian family of scales includes Phrygian, Phrygian major, super Phrygian and the Phrygian minor/major hybrid. Phrygian (minor) has b2-b3-b6-b7. Phrygian major has b2-b6-b7 (natural three). Super Phrygian has b2-b3-b4 (same as natural three), flat six and flat seven. Like the Lydian dominant/diminished hybrid, the Phrygian major/minor hybrid uses Phrygian major in the low range of pitch with natural three and Phrygian minor (the original Phrygian mode) in the high range of pitch with flat three.

Compare Altered Dominants with Altered Ninths

Phrygian major

Phrygian major is a seven tone scale build on the third step of harmonic minor. Its formula is 1-b2-3-4-5-b6-b7. It is the common scale used in a minor key for the V7 chord. Its flat two can be used as a flat nine in a dominant seventh chord. Its flat six can be used as a sharp five in a chord.

Lowering both the 3 and 4 of super Locrian each a half step changes it to super Phrygian.

super Phrygian

Super Phrygian (my term) is a seven note scale built on the third step of harmonic minor (Aeolian natural seven). Its formula is 1-b2-b3-3 (b4)-5-b6-b7. The flat two can be used as a flat nine in a chord. Its flat three can be used as a sharp nine in a chord. Its flat six can be used as a sharped fifth in a chord.

It has a I minor *and* a bII minor chord, so there are tones a half step above its tonic I minor chord. It could be summarized as a I minor seventh chord with a half step above its root, flatted third and fifth.

Flattening the fifth of super Phrygian changes it to super Locrian. Raising both the b3 and b4 of super Phrygian each a half step changes it to Phrygian major. Adding four to super Phrygian changes it to Phrygian major/minor. Changing the five of super Phrygian to flat five changes it to super Locrian.

Phrygian major/minor

Its formula is 1-b2-b3-3-4-5-b6-b7. Phrygian major/minor can be used with Phrygian major (Phrygian dominant) in the low octave and Phrygian minor in the high octave. Its flat two is a b9 in a chord, its flat three a #9 and its flat six can be a sharp five in a chord.

Phrygian major/minor can also be used in it's combined form in the same octave, with precautions. Phrygian major/minor is an eight note scale that contains all the notes of Phrygian (b2, b3, b6, b7), but also has a major third (3), as in Phrygian major. Melodically, the scale would typically ascend or descend to "seven" without passing it. Phrygian major/minor uses Phrygian major (Phrygian dominant) in the low octave and Phrygian minor in the high octave.

Omitting the four changes Phrygian major/minor to super Phrygian.

super Locrian

Super Locrian (seven notes) is 1-b2-b3-3(b4)-b5-b6-b7. It could be called the "flat all" scale, since it has every numbered tone of a major scale flatted except "1". Super Locrian is built on the seventh step of melodic minor (major flat three). Making the five natural in super Locrian changes it to super Phrygian.

VII super Locrian , IV Lydian dominant and the flat five substitute

A harmonized scale is a chord that uses all of the notes of a scale, usually in thirds. Super Locrian is mode VII of melodic minor (major scale flat three). The harmonized scale for super Locrian is VII#5b5#9b9 (B7#5b5#9b9). Since it uses all seven steps of the scale, it has the same notes as mode IV of melodic minor, Lydian dominant. The harmonized scale for Lydian dominant is the chord 13#11.

The **flat five substitute** practice involves freely substituting parts of super Locrian VII#5b5#9b9 (B7#5b5#9b9) and Lydian dominant 13#11 (F13#11) for one another.

The target chord is III. Using the [Escherian type of deceptive cadence](#), the target III chord could be any chord with a perfect fifth. To illustrate this, practice using the super Locrian/Lydian dominant hybrid arpeggio on the [Scales for 7#5#9](#) page. It ascends from the bass with the root, third, sharpened fifth and flatted seventh of a dominant VII type chord (B7#5 in the key of C). The tone that is the flatted seventh then is treated as the third of IV13#11 and you ascend that arpeggio as far as range permits. Then you would resolve to a III chord (E), of whatever quality you need, as long as it has a perfect fifth.

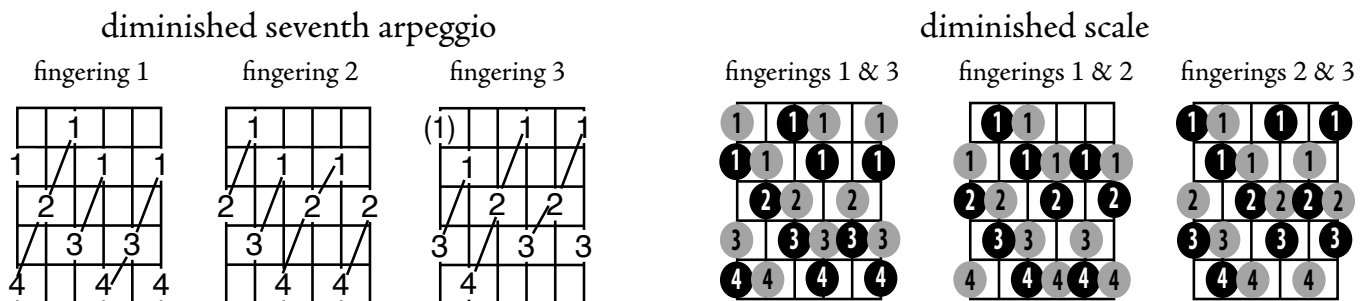
This shows the essence of the flat five substitute.

diminished half/whole scale and Mixolydian flat two

Both diminished half/whole scale and Mixolydian flat two have a natural six, unlike the Phrygian family and Locrian. Both are well-suited for 13b9 chords (usually voiced without an eleventh).

Diminished half-whole scale, an eight-note scale, is a couple of modifications away from Mixolydian (a major scale with a flatted seven). Lydian dominant scale is Mixolydian with a sharpened fourth (1-2-3-#4-5-b7). Taking that one modification farther, replace the “2” in Lydian dominant with both “b2” and “#2” and you have diminished half-whole scale.

the numbers on the diagrams below are finger numbers



Super Locrian has flat five and flat six (enharmonically the same as sharp five), while diminished half-whole scale has five and six. Diminished scale also has “#11” (#4) which can proxy (substitute for) as flat five. Use the range from three to flat seven in super Locrian for a wacky whole tone sound. Replacing the flat six in super Locrian with both five and six changes it to diminished half-whole scale. Conversely, replacing both the five and six of diminished half-whole scale with flat six, changes it to super Locrian.

Phrygian major, super Phrygian and super Locrian related to relative major

Consider the altered V chord (G7 altered) you are using as a V in a minor key (C minor). The relative major scale of the minor key (Eb major scale is the relative major of C minor) can be altered each of three different simple ways to produce V Phrygian major, V super Phrygian and V super Locrian.

- Sharp the five of the relative major scale (Eb) to produce V (G) Phrygian major (C minor target).
- Flat the six of the relative major scale (Eb) to produce V (G) super Phrygian (C minor target).

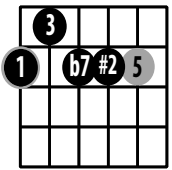
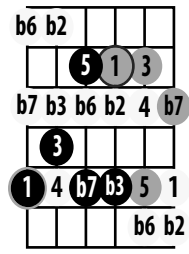
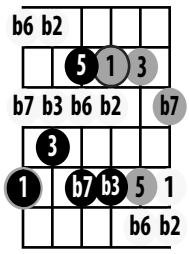
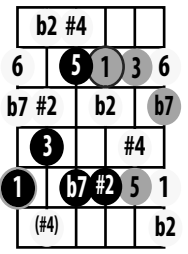
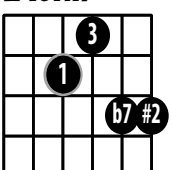
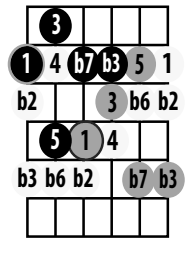
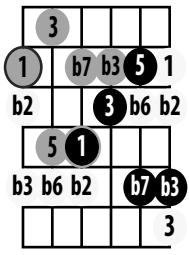
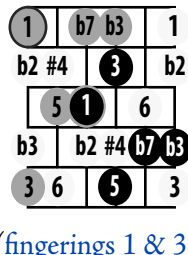
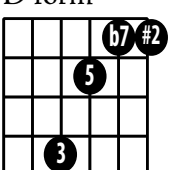
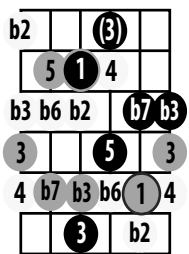
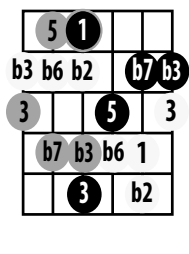
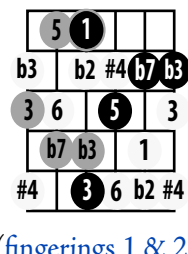
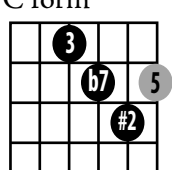
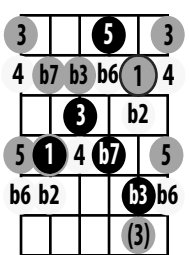
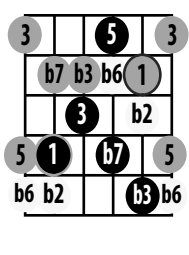
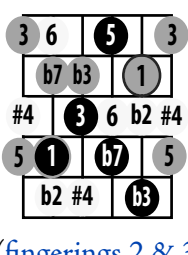
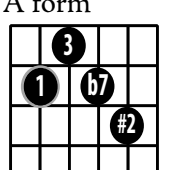
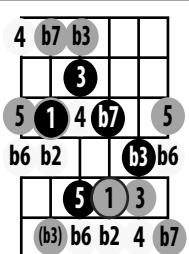
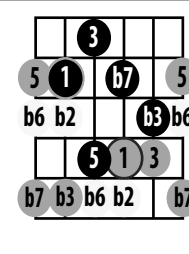
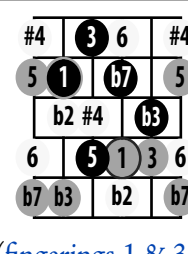
- Flat the six and the seven of the relative major scale (Eb) to produce V (G) super Locrian (C minor target).

comparing dominants with flat nine/sharp nine by number

numbered tone of the V chord →	1 (G)	b2 (Ab)	2 (A)	b3 (Bb)	3 (B)	4 (C)	#4/b5 (Db)	5 (D)	#5/b6 (Eb)	6 (E)	b7 (F)	7 (F#)
numbered tone of the I chord →	5 (G)	b6 (Ab)	6	b7 (Bb)	7	1 (C)	b2 (Db)	2 (D)	b3 (Eb)	3	4 (F)	b5
tone of bIII parent major →	3 (G)	4 (Ab)		5 (Bb)		6 (C)		7 (D)	1 (Eb)		2 (F)	
V Phrygian maj/min	1	b2		b3	3	4		5	b6		b7	
V Phrygian major (no b3)	1	b2			3	4		5	b6		b7	
V super Phrygian	1	b2		b3	3			5	b6		b7	
C super Locrian	1	b2		b3	3		#4		b6		b7	
V Mixolydian b2	1	b2			3	4		5		6	b7	
V dimin. half/whole	1	x		b3	3		#4	5		6	b7	

Scales for 7#9 (natural five)

Phrygian major/minor can be used with Phrygian major (Phrygian dominant) in the low octave and Phrygian minor in the high octave.

7#9 chord	Phrygian major/minor 1-b2-b3-3-4-5-b6-b7	Phrygian major 1-b2-3-4-5-b6-b7	super Phrygian 1-b2-b3-3-5-b6-b7 (b4 proxies as 3)	dim. half/whole 1-b2-b3-3-#4-5-6-b7
G form 		Phrygian major has no b3 to make a #9		
E form 				
D form 				
C form 				
A form 				

(fingerings 1 & 2)

(fingerings 1 & 3)

(fingerings 1 & 2)

(fingerings 2 & 3)

(fingerings 1 & 3)

Scales for 7#5#9

7#5#9
chord

Phrygian
major/minor

1-b2-b3-3-4-5-b6-b7

Phrygian
major

1-b2-3-4-5-b6-b7

super
Phrygian

1-b2-b3-3-5-b6-b7
(b4 proxies as 3)

super
Locrian

1-b2-b3-3-b5-b6-b7
(b6 proxies as #5)

super Locrian/
Lydian dominant

hybrid arpeggio

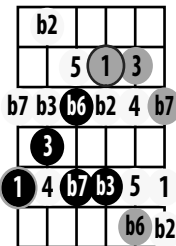
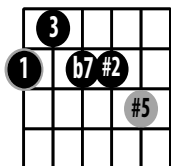
parent scale

VIIaug &

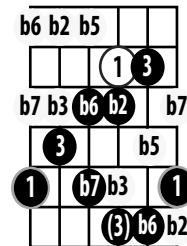
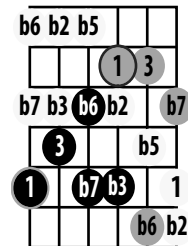
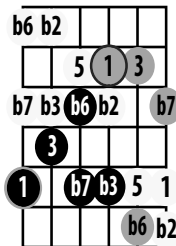
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1-b2-b3-3-b5-b6-b7

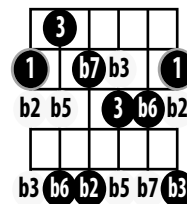
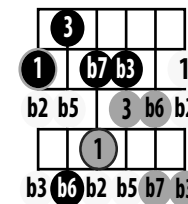
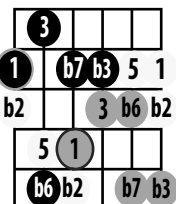
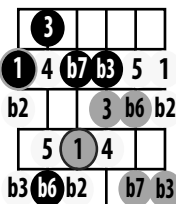
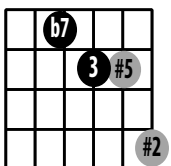
G form



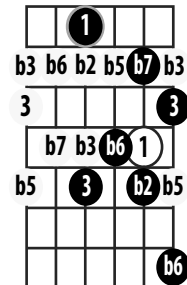
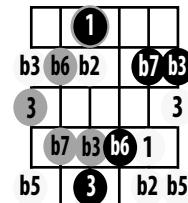
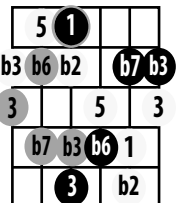
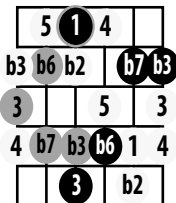
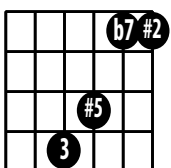
Phrygian major
has no b3 to
make a #9



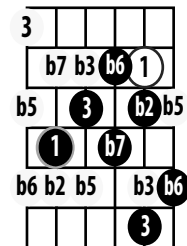
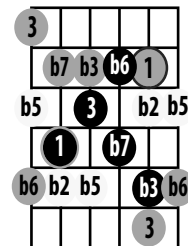
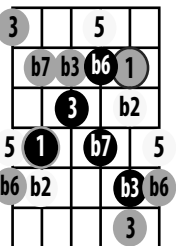
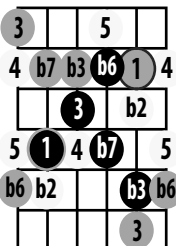
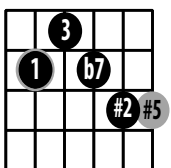
E form



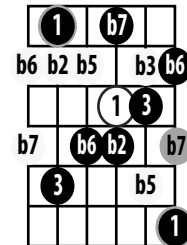
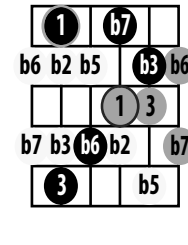
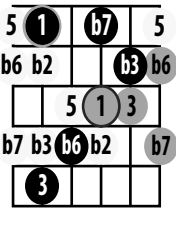
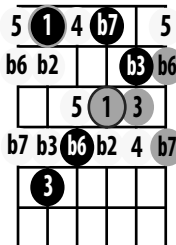
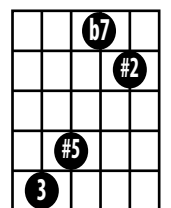
D form



C form



A Form



Scales for 7b9 (natural five)

7b9 chord

Phrygian major/minor
1-b2-b3-3-4-5-b6-b7

Phrygian major
1-b2-3-4-5-b6-b7

super Phrygian
1-b2-b3-3-5-b6-b7
(b4 proxies as 3)

Mixolydian flat two
1-b2-3-4-5-6-b7

dim. half/whole
1-b2-b3-3-#4-5-6-b7

G form

--	--	--	--	--	--

(fingering 1 & 2)

E form

--	--	--	--	--	--

(fingering 1 & 2)

D form

--	--	--	--	--	--

(fingering 1 & 2)

C form

--	--	--	--	--	--

(fingering 2 & 3)

A Form

--	--	--	--	--	--

(fingering 1 & 2)

Scales for 7#5b9

7#5#9
chord

Phrygian
major/minor

Phrygian
major

super
Phrygian

super
Locrian

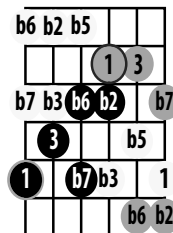
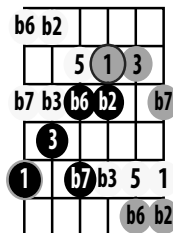
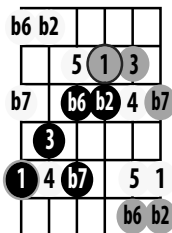
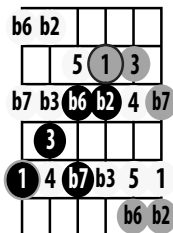
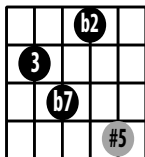
1-b2-b3-3-4-5-b6-b7

1-b2-3-4-5-b6-b7

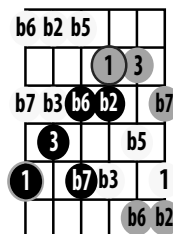
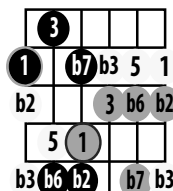
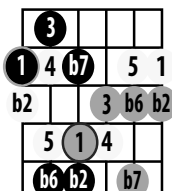
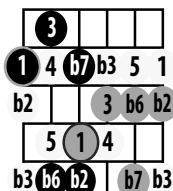
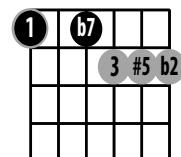
1-b2-b3-3-5-b6-b7
(b4 proxies as 3)

1-b2-b3-3-b5-b6-b7

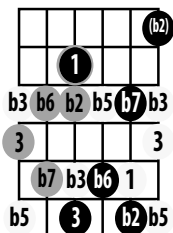
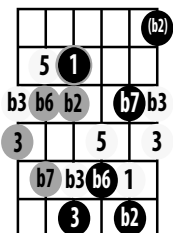
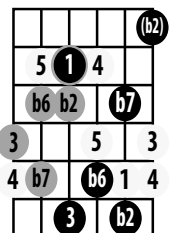
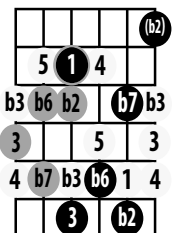
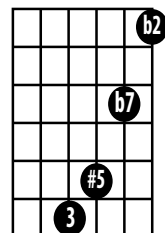
G form



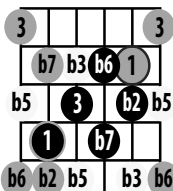
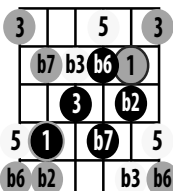
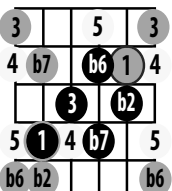
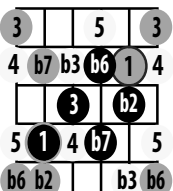
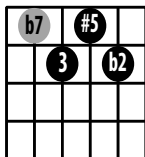
E form



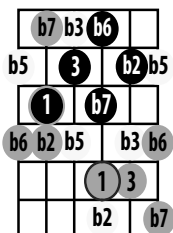
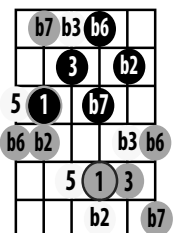
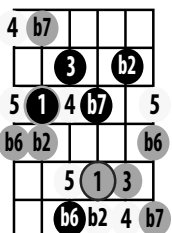
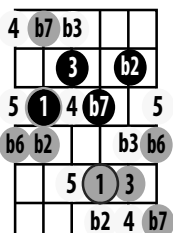
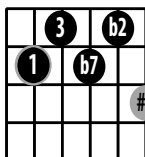
D form



C form



A Form



Scales for 7b5b9 and 7b5#9 (bottom of 7#5b9 page)

See [The Many Chords Of Diminished Half/Whole Scale](#).

Compare Altered Dominants with Natural Nine

Mixolydian has a flatted seventh. Lydian dominant (Mixolydian sharp four) has a flatted seventh and a sharped four. Mixolydian flat six is the mode on the fifth step of melodic minor. Dorian sharp four is harmonic minor mode IV.

The Lydian dominant/Dorian sharp four hybrid is especially effective using Dorian sharp four from one up to flat three and using Lydian dominant from one down to three.

numbered tone of the V chord →	1 (G)	b2 (Ab)	2 (A)	b3 (Bb)	3 (B)	4 (C)	#4/b5 (Db)	5 (D)	#5/b6 (Eb)	6 (E)	b7 (F)	7 (F#)
numbered tone of the I chord →	5 (G)		6 (A)	b7 (Bb)	7 (B)	1 (C)	#1 (C#)	2 (D)	b3 (Eb)	3 (E)	4 (F)	#4 (F#)
Mixolydian	1		2		3	4		5		6	b7	
Dorian	1		2	b3		4		5		6	b7	
Mixo./Dor. hybrid	1		2	b3	3	4		5		6	b7	
Lydian dominant (Mixolydian #4)	1		2		3		#4	5		6	b7	
Dorian #4 (harmonic minor IV)	1		2	b3			#4	5		6	b7	
Lydian dominant/ Dorian #4 hybrid	1		2	b3	3		#4	5		6	b7	
Mixolydian flat six (Aeolian major)	1		2		3	4		5	b6		b7	

Scales for 13 no 11 and 13#11

13 no 11
chord

Mixolydian

Lydian
dominant

13#11
chord

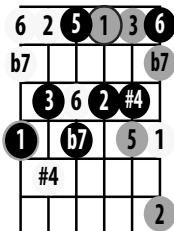
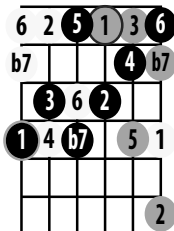
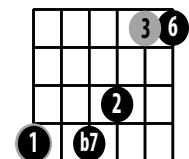
Lydian
dominant

1-2-3-3-4-5-6-b7

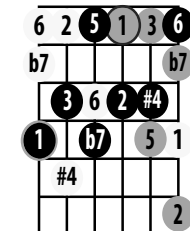
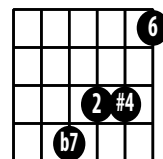
1-2-3-#4-5-6-b7

1-2-3-#4-5-6-b7

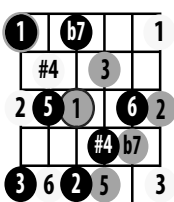
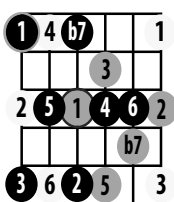
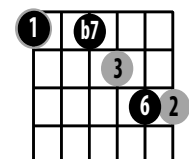
G form



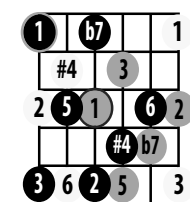
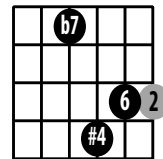
G form



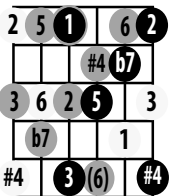
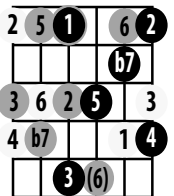
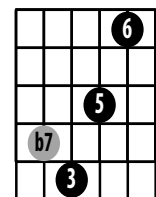
E form



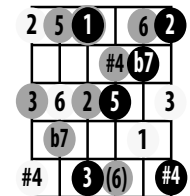
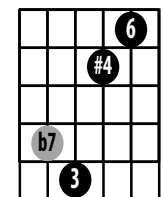
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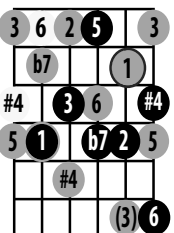
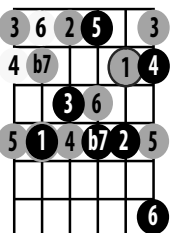
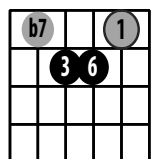
D form



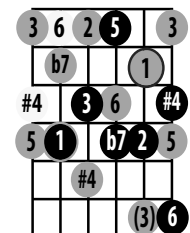
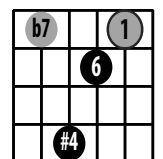
D form



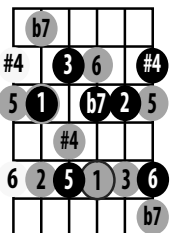
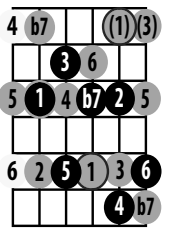
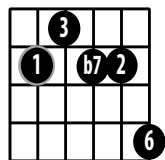
C form



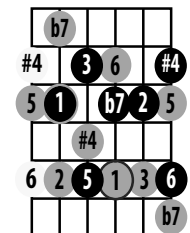
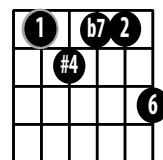
C form



A form



A form



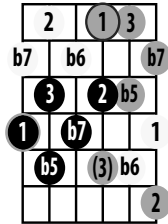
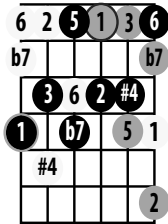
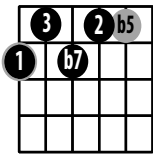
Scales for 9b5 (or 7b5 with nat. 9)

9b5 chord Lydian dominant whole tone scale
 1-2-3-#4-5-6-b7 1-2-3-b5-b6-b7

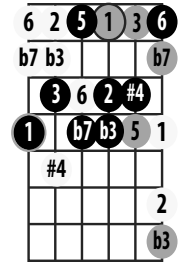
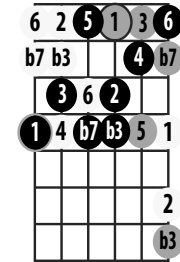
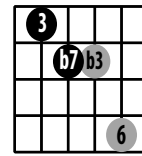
Scales for 13#9 (no 11)

13#9 chord Mixolydian Dor. hybrid Lydian dom./ Dor. #4 hybrid
 1-2-b3-3-4-5-6-b7 1-2-b3-3-#4-5-6-b7

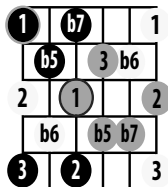
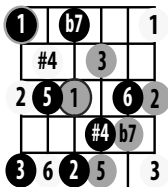
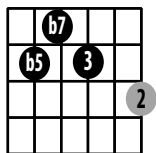
G form



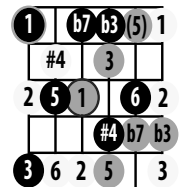
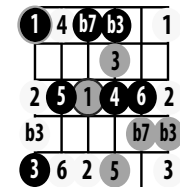
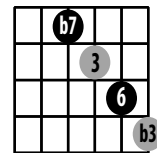
G form



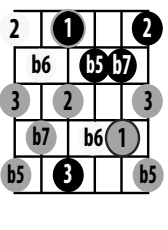
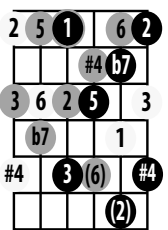
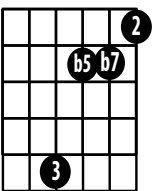
E form



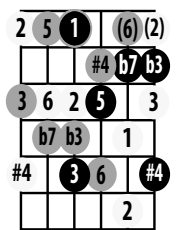
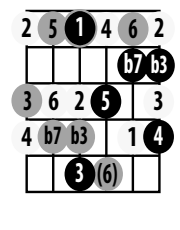
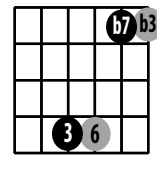
E form



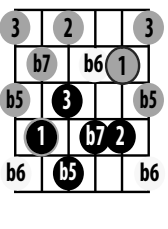
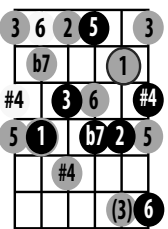
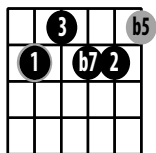
D form



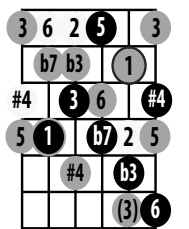
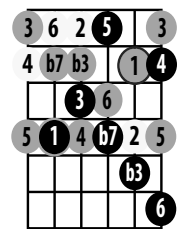
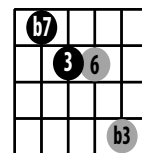
D form



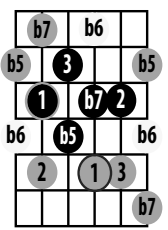
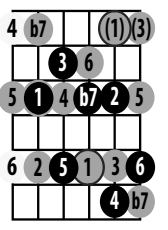
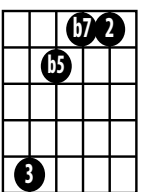
C form



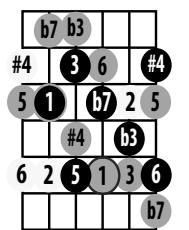
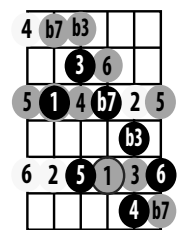
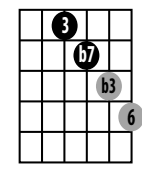
C form



A form



A form



see also [The Many Chords Of Diminished Half/ Chords Built With Diminished Half Whole Scale/13#9 chords on "1"](#)

Scales for 9#5

13#5
chord

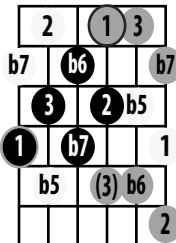
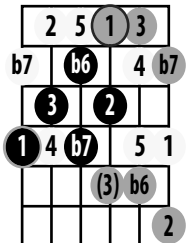
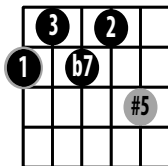
Mixolydian
flat six

whole tone
scale

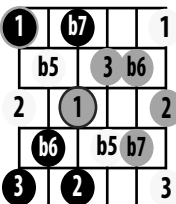
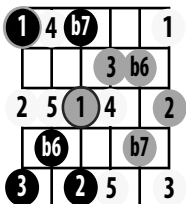
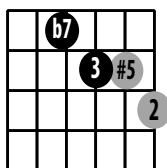
1-2-3-4-5-b6-b7

1-2-3-b5-b6-b7

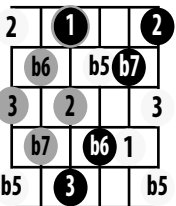
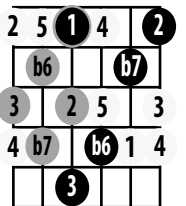
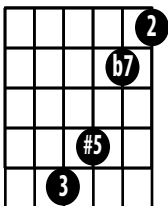
G form



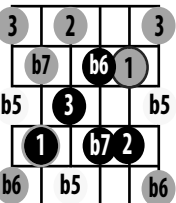
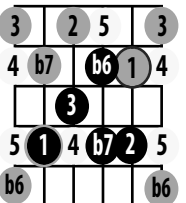
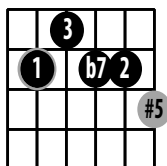
E form



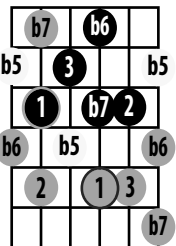
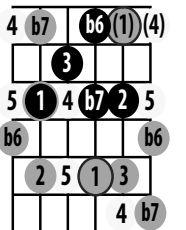
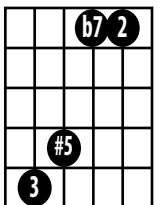
D form



C form



A form

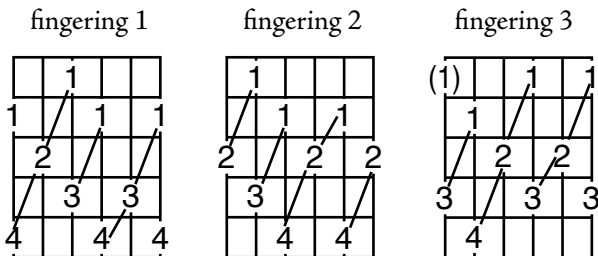


The Many Chords of Diminished Half/Whole Scale

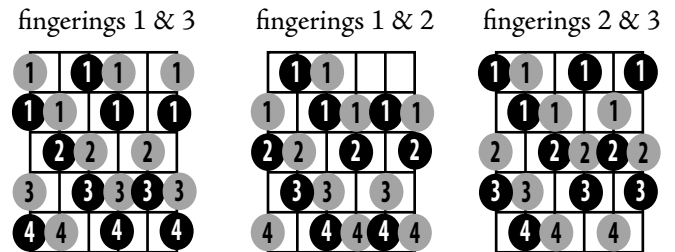
Fingering

the numbers on the diagrams below are finger numbers

diminished seventh arpeggio



diminished scale



The Harmonized Diminished Scale

The harmonized diminished half/whole scale is 13b9#9#11, meaning if you played all the notes at once, you would produce that chord. You can't play the entire chord on a six or seven string guitar, since it has eight notes.

The Diminished Scale is a Serial Pattern

The diminished scale constitutes two diminished seventh chords with their roots a half step apart, such as C dim 7 and Db dim 7. The notes of C dim7 can be spaced equally in minor thirds (three fret intervals). This divides the octave of twelve chromatic tones into four equal minor third intervals, so either of the four notes in C dim7 can be a root. Therefore, C dim7 has three chord synonyms: Eb dim7, F# dim7 (=Gb dim7) and A dim7.

The group of notes that are a half step above each tone in C dim7 make up Db dim7. As with any diminished seventh chord, the notes of Db dim7 can be spaced equally in minor thirds. This divides the octave of twelve chromatic tones into four equal minor third intervals, so either of the four notes in Db dim7 can be a root. Therefore, Db dim7 has three chord synonyms: E dim7, G dim7 and A dim7.

Since the diminished scale is a serial (repeating) pattern that produces the same relative notes every minor third, it can be named after any of the four notes within it that each ascend a half step to the next note. If you named the scale and its harmonized chord after "C", it would have the scale tone letter names C-Db-Eb-E-F#-G-A-Bb-C (1-b2-b3-3-#4-5-6-b7-1 in numbers) and would have the harmonized chord name C13b9#9#11. The same notes could be used to construct Eb13b9#9#11, F#13b9#9#11 (Gb13b9#9#11) or A13b9#9#11. In each case, alternate enharmonic names could be used to more accurately depict the 1-b2-b3-3-#4-5-6-b7-1 formula in relation to the major scale of the chord root

There are a great number of subset chords you can play on a six string guitar, that fall in two broad categories, 7b9 and m6b5. Minor sixth flat five is an alternate name for diminished seventh, a more relevant name in the manner we will use it.

the diminished seventh on b2, 3, 5, b7

The first category is based on 7b9, whose predominant is 7b9 no root, a diminished seventh chord that can be named after any note in the 7b9 chord except the root. The 7b9 chord on the tone center of the diminished scale has tones 1-3-5-b7-b2 (b2 is the same as b9), which can be reordered to 1-b2-3-5-b7. Without a root the remaining notes make a diminished seventh which can be named after the notes on b2, 3, 5 or b7 of the diminished scale. For a C diminished half whole scale, C7b9 can be built on its tone center, using a series of five notes in thirds. Without the C root, the remaining notes make Db dim7, E dim7, G dim7 or Bb dim7, which each have the same notes: E, G, Bb Db.

You can read about using the 7b9 chord in [Default Scales/Chords And Arpeggios/Arpeggios And Their Scales/Diminished Seventh Arpeggio And Diminished Scale/Using V Diminished Half/Whole Scale As V7b9](#).

the minor sixth flat five on the diminished half whole scales' tone center

Minor sixth flat five is another way to name diminished seventh. I prefer the m6b5 name to express the use of the flat third implied by "minor" and the flatted fifth and sixth expressed literally in the name. The Goodman/Christian melodic style described in [Default Scales/Chords And Arpeggios/Arpeggios And Their Scales/Diminished Seventh Arpeggio And Diminished Scale/Using I Diminished Half/Whole Scale As Goodman/Christian Im6b5](#).

Chords Built with Diminished Half Whole Scale

how to apply these chords

Each of these chords can be melodically elaborated with diminished half/whole scale on "1" in relation to the chord. Keep referring back to "[fingering](#)" at the beginning of this section. The abbreviations F1&2, F1&2 or F2&3 refer to the fingering names shown for diminished scale: "fingerings 1 & 3", "fingerings 1 & 2" and "fingerings 2 & 3".

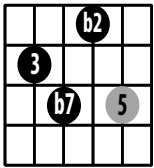
in this section, 1-b3-b5-6 are grey, b2-3-5-b7 are black

In this "Chord Built With Diminished Half Whole Scale" section, the tones of the Goodman/Christian m6b5 (diminished seventh, 1-b3-b5-6) are grey and the tones of the 7b9 no root chord (diminished seventh with b2-3-5-b7) are black.

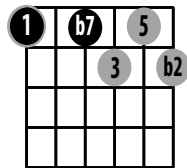
7b9 chords

“1”, needs to be on the lower-pitched tone of a half step pair

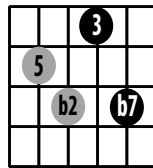
G form-F



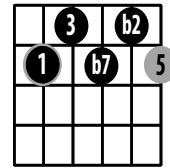
E form



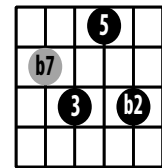
D form



C form



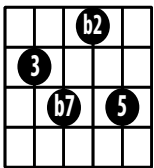
A form



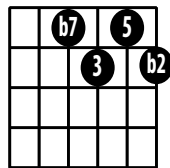
diminished seventh chords on b2, 3, 5 or b7

“b2, 3, 5 and b7”, all need to be on the upper-pitched tones (black) of half step pairs

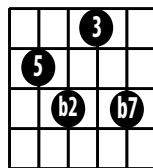
G form - F1&3



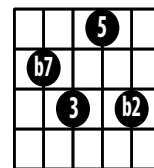
E form - F1&2



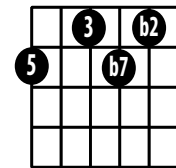
D form F1&3



C form F1&3



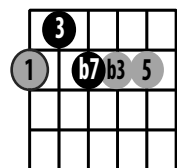
A form F1&2



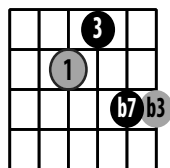
7#9 chords on “1”

“1”, needs to be on the lower-pitched tone (grey) of a half step pair. To use as a V type chord, “1” of the diminished half/whole scale needs to be “5” of the key (target).

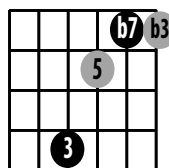
G form - F2&3



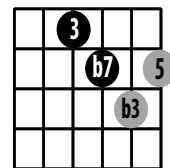
E form - F1&3



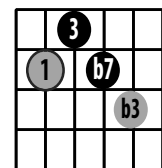
D form - F1&2



C form - F2&3



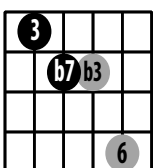
A form - F1&2



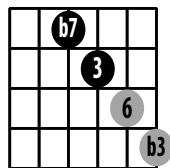
13#9 chords on “1”

“1”, needs to be on the lower-pitched tone (grey) of a half step pair. To use as a V type chord, “1” of the diminished half/whole scale needs to be “5” of the key (target).

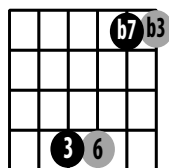
G form - F2&3



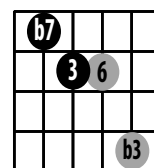
E form - F1&2



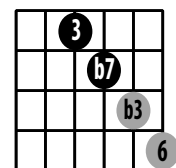
D form - F1&2



C form - F2&3



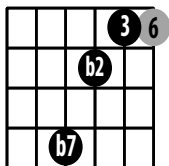
A form - F1&2



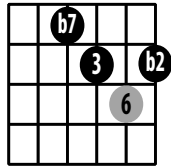
13b9 chords on "1"

"1", needs to be on the lower-pitched tone (grey) of a half step pair. To use as a V type chord, "1" of the diminished half/whole scale needs to be "5" of the key (target).

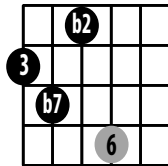
G form - F1&2



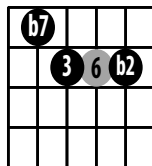
E form - F1&2



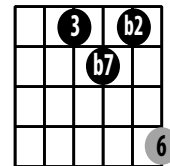
D form - F1&2



C form - F2&3



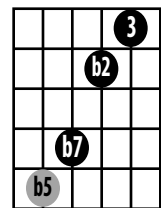
A form - F1&2



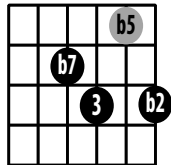
7b5#9 chords on "1"

"1", needs to be on the lower-pitched tone (grey) of a half step pair. To use as a V type chord, "1" of the diminished half/whole scale needs to be "5" of the key (target).

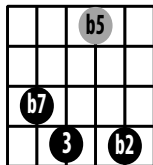
G form - F1&3



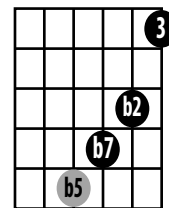
E form - F2&3



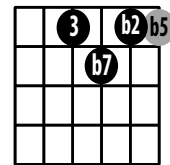
D form - F1&3



C form - F2&3



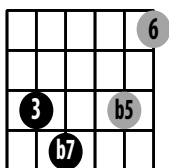
A form - F1&2



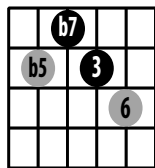
13#11 (no 9) chords on "1"

"1", needs to be on the lower-pitched tone (grey) of a half step pair. To use as a V type chord, "1" of the diminished half/whole scale needs to be "5" of the key (target). Note that b5 is equivalent to #11, and is a more appropriate numbering when there is no natural five, especially if the flat five is in the low range of pitch.

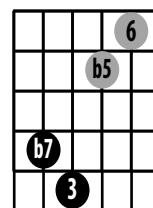
G form - F1&2



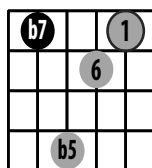
E form - F2&3



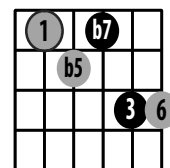
D form - F1&2



C form - F2&3



A form - F1&3



chords built with diminished half/whole scale

Chords built with diminished half whole scale include (all would have a "C" root for C diminished half/whole scale): major, minor, diminished, 7, 7b5, 7/#11, 7b5b9, 7b5#9, 7b9#11, 7#9#11, 7b5b9#9, 7b9#9#11, 13b9, 13#9, 13#11 (no 9).

Diminished Scale Fingering and Improv

In a diminished scale, learn to repeat groups of two to four notes (or more) with fixed intervals that are part of the diminished scale up or down in minor thirds and diminished fifths. Avoid repeating at intervals that would cause a redundancy where the last note of one group is the same as the first note of the next group.

Note that for each lower-pitched tone in a chromatic pair of notes in the diminished scale, there is a note a perfect fourth below it. Conversely, for each higher-pitched tone in chromatic pairs in the dim. scale, there is a note a perfect fourth above it.

There are only three diminished seventh chords: A-C-Eb-F#, B-DF-G# and E-G-Bb-C#. Due to the symmetrical structure of the diminished scale, once you determine whether a particular note is the upper or lower note in a chromatic pair, a melodic cell played in relation to it can be played with exactly the same relative intervals, “rubber stamped” in relation to any other note in the diminished seventh chord of which it is a part. Such melodic cells can be repeated up or down in minor thirds or in diminished fifths.

The notes of a diminished scale make the chord 13#11b9#9. The lower tone in a chromatic pair within the diminished scale is part of the diminished seventh named after the root of the 13#11b9#9 chord (C diminished seventh for C13#11b9#9). The upper tone in a chromatic pair within the diminished scale is part of the diminished seventh chord built on b2, 4, b6, or 7 of the 13#11b9#9 chord, which is 7b9 no root in relation to the C13b9#9 chord.

Learn to play both in-position diminished scale (three fingerings) and the four-note-per string fingering with the diagonal movement from string to string and one fret extra between the third and second string.

For fast sequences of pairs of fourths moving in diminished fifths on the three bass strings, use only the index and middle finger. Descend reaching a minor third (a three-fret interval inclusively) on the same string toward the head of the guitar with the index finger, followed by a perfect fourth to the same fret of the next larger string. Ascend reaching a minor third toward on the same string toward the body of the guitar, followed by a perfect fourth to the same fret of the next smaller string.

Make up cells with a combination of pairs of notes in fourths up or down in minor thirds, pairs of chromatic notes in diminished fifths or various four-note cells up or down in minor thirds or diminished fifths. Use one of the four notes in the cell as a point of reference and graphically track the set of first notes in minor thirds or diminished fifths. Learn the skewed pattern for minor thirds or diminished fifths that happens between the third and second string because of the change in tuning on those strings.

For memorized four-note cells, use a diminished scale fingering on the three small strings and descend in diminished fifths or minor thirds on the four bass strings (conceptual overlap) in relation to the first note of the four-note cell.

Ambiguously establish a blues style with both minor 7/#11 pentatonic (minor pentatonic with a sharp four) and major 6#9 pentatonic (major pentatonic with a sharp two used "on top" as a sharp nine.

fingering pairs of perfect fourths moving in minor thirds in-position

sixth string index finger

--	--	--	--	--	--	--	--	--

sixth string middle finger

--	--	--	--	--	--	--	--	--

sixth string ring finger

--	--	--	--	--	--	--	--	--

fingering pairs of diminished fifths moving in minor thirds

Cdim7

--	--	--	--	--	--	--	--	--

--	--	--	--	--	--	--	--	--

Db7b9 no root

XI	VIII	IX	XI	VIII	X	VII	IX	
VI	IX	VII	X	VIII	XI	IX	VIII	X

V Lydian Dominant and V Diminished Half/Whole Scale

Establish the ninth with Lydian Dominant, then transition to diminished half whole scale, replacing the ninth with both flat nine and sharp nine (b2, #2). The accompaniment may use alter ninths throughout, as long as the disagreement is not too prominent. This breaks a time-honored rule in jazz and blues where a chord's minor third in the accompaniment shouldn't be combined with a major third in the melody. Justify it by establishing the accompaniment chord darkening the chord sound, rather than the usual darkening in the melody.

Blues Ambiguity with Altered V Diminished Half/Whole

Let's break a rule. It's been established that when three are alternated in sequence, we should end on natural three. Paul McCartney successfully broke this rule in his outro solo on "Ticket To Ride". With all eighth or sixteenth notes, play the ascending sequence of notes "6-b7-3", followed by "b3" (#2 or sharp nine). It sounds sort of like a spy theme, like Mission Impossible or part of a James Bond score. Similarly, use diminished scale compositionally and get acquainted with its cool, odd sound.

IMPROVISING ON CHICK COREA'S SPAIN SOLO SECTION

The ingenious solo section chords in Chick Corea's *Spain* is a great chord progression with which to study altered dominant chords to build your ability to use them ambiguously. Here is the chord progression:

Gma7	Gma7	F#7	F#7	Em7	A7b9
Dma7	Gma7	C#7	F#7	Bm	B7

Use a Single Parent Major Scale as a Basis

Our primary task is going to be learning four scale types that each alter a note or two of the D major scale. G Lydian dominant is D major flat three. F# Phrygian major is D major sharp five and F# super Phrygian is D major flat six.

You will be managing a lot of scale fingerings, arpeggios and melodic ideas using them. Start practicing on one chord at a time, with a single scale and gradually learn to play on longer chord progressions with progressively more scales. Break the scales for V type chords into two categories: the [Lydian Family](#) and the [Phrygian family](#).

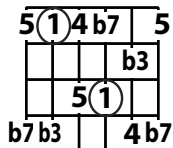
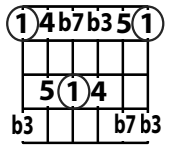
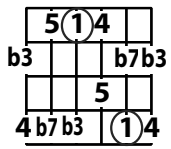
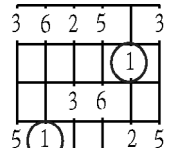
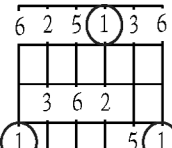
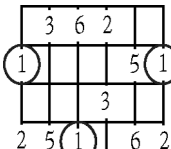
treat Dma7, Gma7, Em7 and Bm as D major scale-tone chords

On those chords, use the D major scale, but tend to establish Bm as the tonic chord. The progression is ambiguous, establishing the key of D in bar seven and its relative minor, the key of Bm in bar eleven.

use a pentatonic key scale basis in B Aeolian minor and D Ionian major

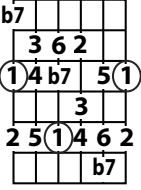
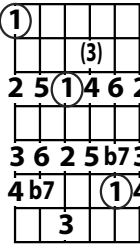
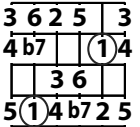
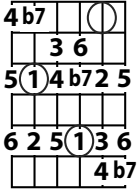
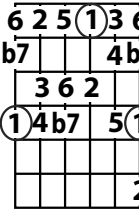
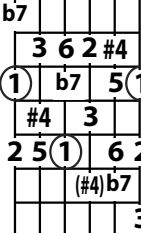
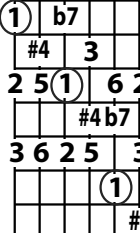
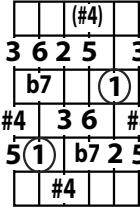

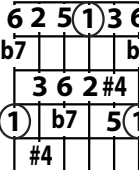
Using the We will be establishing the key as either mode VI of D major, which is B Aeolian or as mode I of D major, which is D Ionian (D major scale). You may know that there are three favored fingerings for the common major and minor pentatonic scales. Our use of the D major parent scale will use those three fingerings, as shown below (see Pentatonic Fingering/7 Pentatonic Scale Types By Octave Shape/ Learn These Six Pairs First).

Gma7 Gma7 F#7 F#7 Em7 A7b9
 Dma7 Gma7 C#7 F#7 Bm B7

B min. pent. II	B min. pent. VII	B min. pent. IX
		
D maj. pent. II	D maj. pent. VII	D maj. pent. IX
		

G Lydian Dominant During Gma7 in Bars Two and Seven

modify G Mixolydian to G Lydian dominant by sharpening its fourth

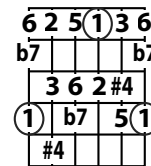
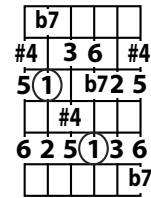
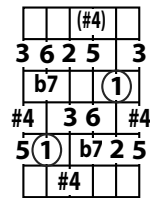
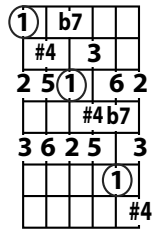
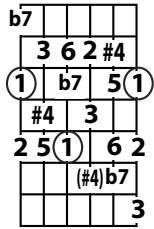
G Mixolydian I	G Mixolydian III	G Mixolydian VII	G Mixolydian VIII	G Mixolydian XII
				
G Lydian dominant I	G Lydian dominant III	G Lydian dominant VII	G Lydian dominant VIII	G Lydian dominant XII
				

G Lydian dominant fingerings

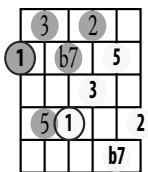
For use in bars two and seven. G Lydian dominant is G Mixolydian with sharp four, is D major flat three and is C# super Locrian (see [C# super Locrian, the flat five substitute of G Lydian dominant](#) below). Also improv with the ninth and thirteenth arpeggios as a basis of the scale.

Gma7 Gma7 F#7 F#7 Em7 A7b9
 Dma7 Gma7 C#7 F#7 Bm B7

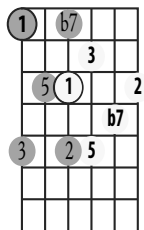
G Lydian dominant I G Lydian dominant III G Lydian dominant VII G Lydian dominant VIII G Lydian dominant XII



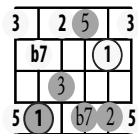
G9 II



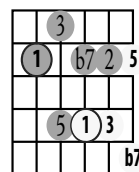
G9 II



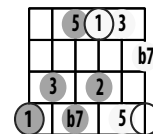
G9 VII



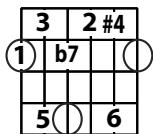
G9 IX



G9 XII



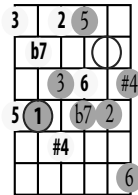
G13#11 II



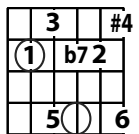
G13#11 III



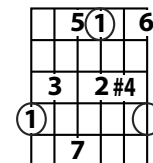
G13#11 VII



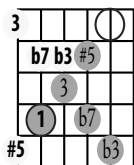
G13#11 IX



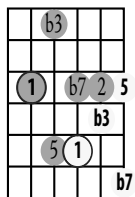
G13#11 XII



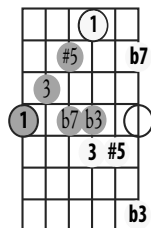
C#7#5#9 I



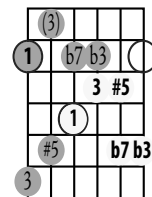
C#7#5#9 III



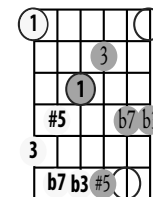
C#7#5#9 VI



C#7#5#9 VIII



C#7#5#9 VIII



Treatments Of The V chord (F#7) In Bars Three, Four and Ten

Gma7 Gma7 F#7 F#7 Em7 A7b9
 Dma7 Gma7 C#7 F#7 Bm B7

V Super Locrian and V diminished half whole featuring b5 of V (F#)

Super Locrian and diminished half-whole scale both contain flat five. These chords and arpeggios can be used during F#7 or C7 (each with optional altered tones) as a setup to a target chord with the root "B". The scale choices show ambiguities. The target chord could be B I type (Bma7, B6), B V type (B7, B9) or B VI type (Bm, Bm7).

root on V →	F#7b5 V	F#7b5 VII	F#7b5b9 VIII	F#7b5#9 VIII		F#7b5 XI	F#7b5 XIII
	 b7 3 b5 1	 3 b7 1 b5	 1 3 b7 b2 b5	 1 3 b7 #2 b5		 3 b7 1 b5	 b7 3 b5 1
flat five substitute for V (F#) is bII (C)	C7b5 V	C7b5 VII	C7#11 VIII	C13b5 VIII		C7b5 XI	C7b5 XIII
	 3 b7 1 b5	 b7 3 b5 1	 #4 b7 3 5 1	 b5 b7 3 6 1		 b7 3 b5 1	 3 b7 1 b5

V Diminished Half/Whole Scale featuring 6 (13) of V (F#)

root on V →	F#13b5 II	F#13#9 VIII		F#13 VII	F#13#9 XIII		F#13b5 VII
	 b5 b7 3 6	 3 b7 #2 6		 b7 3 6 2	 3 b7 #2 6		 b5 b7 3 6
flat five substitute for V (F#) is bII (C)	C7#9n5 II	C13#9 II		C7#5#9 VIII	C13#9 XIII		C7#9n5 VII
	 1 3 b7 #9	 b7 3 6 #2		 3 b7 #2 #5	 b7 3 6 #2		 1 3 b7 #2

V Phrygian minor/major and V diminished half whole featuring 5 of V (F#)

root on V →	F#7#9 V		F#7#9 VIII	F#7#9 VIII	F#7#9 IX		F#7#5#9 XIII
flat five substitute for V (F#) is bII (C)	C13b9 V		C13b9 VIII	C13b9 VIII	C13b9 IX		C13b9 XIII

V super Locrian and V Phrygian minor/major featuring #5 of V (F#)

root on V →	F#7#5#9 V	F#aug VII	F#(7)#9 VII	F#7#5#9 VIII	F#7#5b9 VIII	F#7#5#9 VIII	F(7)#5#9 X
flat five substitute for V (F#) is bII (C)	C13#11 V	C9b5 VII	C13b5 VIII	C13b5 VIII	C9b5 VIII	C#13#11 VIII	C13#11 X
root on V →		F#7#5#9 XIII	F#(7)#5#9 X	F#7#5#9 XIII			
flat five substitute for V (F#) is bII (C)		C13#9 XIII	C13#11 X	C13#11 XIII			

C# super Locrian, the flat five substitute of G Lydian dominant

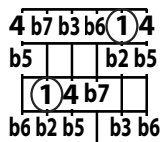
Gma7	Gma7	F#7	F#7	Em7	A7b9
Dma7	Gma7	C#7	F#7	Bm	B7

G7 is part of G Lydian dominant, the mode on the fourth step of D melodic minor (D major flat three). The seven-note thirteenth chord in G Lydian dominant is G13#11. The flat five substitute for G7 (G Lydian dominant) is C#7 altered (any combination of flat five, sharp five, flat nine and sharp nine, but no natural five nor natural nine). C#7 altered is part of super Locrian mode on the seventh step of D melodic minor (D major flat three).

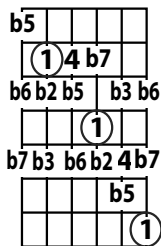
IV7 (G7, a Lydian dominant chord) is the flat two of a target III7 (F#7) major chord. The III7 (F#7) chord is in turn a V7 chord of a target VIIm (Bm) chord (B Aeolian). Jazz is full of unexpected twists and turns. The expected Bm target chord may turn out to be Bma7 or B7 (see [Escherian cadence](#)).

modify C# Locrian to C# super Locrian by flattening its fourth

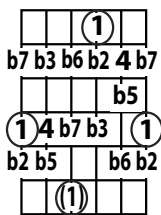
C# Locrian II



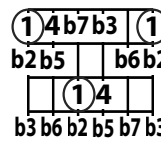
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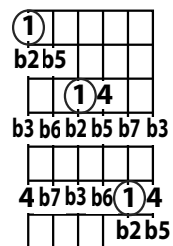
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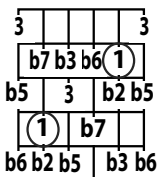
C# Locrian IX



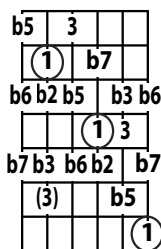
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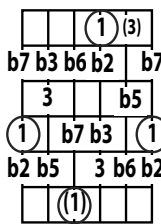
C# super Locrian I



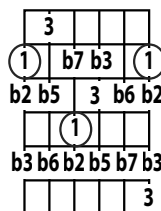
C# super Locrian III



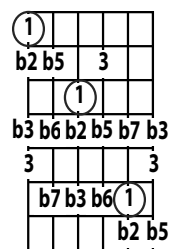
C# super Locrian VI



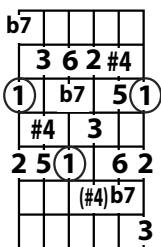
C# super Locrian VIII



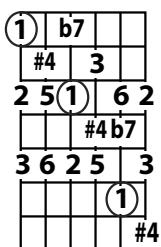
C# super Locrian IX



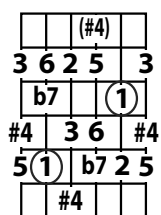
G Lydian dominant I



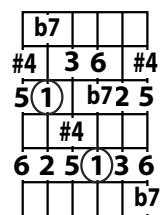
G Lydian dominant III



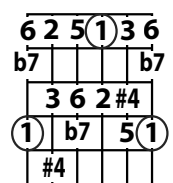
G Lydian dominant VII



G Lydian dominant VIII



G Lydian dominant XII

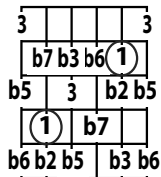


C# super Phrygian, an alternative to C# super Locrian

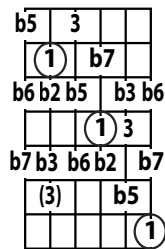
Super Locrian's formula is 1-b2-b3-b4(3)-b5-b6-7. Make super Locrian's fifth natural and you have super Phrygian, a very useful scale.

modify C# super Locrian to C# super Phrygian by making its fifth natural

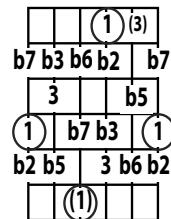
C# super Locrian I



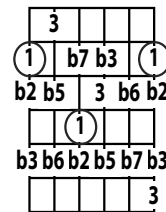
C# super Locrian III



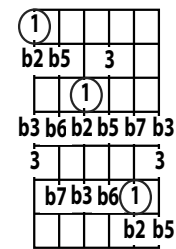
C# super Locrian VI



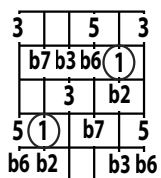
C# super Locrian VIII



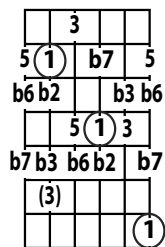
C# super Locrian IX



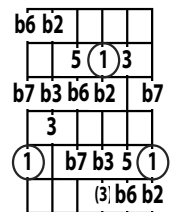
C# super Phrygian I



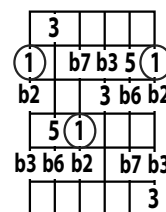
C# super Phrygian III



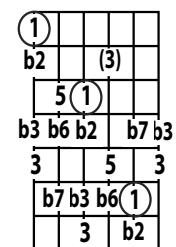
C# super Phrygian V



C# super Phrygian VIII



C# super Phrygian XII



Super Locrian modifies the Locrian mode by flattening its fourth. The flattened fourth proxies as a major third, providing a mode for a dominant seventh chord with *all* of the alterations used in dominant chords: flat five, sharp five (b6 of the scale), flat nine (b2 of the scale) and sharp nine (b3 of the scale). Super Phrygian is the same as super Locrian, except it has a natural fifth. Its altered tones are sharp five (b6 in a scale or b13 in a super Locrian chord name), flat nine and sharp nine.

Super Locrian could also be compared to Phrygian major with both its third and fourth descended a half step. Phrygian major has scale tones three and four, while super Phrygian has scale tones flat three and flat four, which usually would be used with flat three serving as sharp nine in the high range and flat four serving as natural three in the low range. Super Phrygian is a mode on the third step of harmonic major scale (major flat six scale).

Treat the B7 Chord in Bar Twelve as V of Em

By treating the B7 chord in bar twelve as a V of Em, an Escherian cadence is created, progressing to "Gma7" the relative major of E minor. See [Melodically Superimposed Cadences/Escherian cadence](#).

Modal II V I Cadences

- **Overview**
- **Building Turnarounds**
- **Favored Turnarounds**
- **Seven Modal Dominants**
- **Modal Dominant Improv Studies**
- **The Lydian Family**
- **Lydian Dominant as bII of I, IV or V**
- **Lydian Dominant as bII of V in a Minor Key**
- **Fingering Summary of Modal II-V-I Arpeggio Cadences**

OVERVIEW

II-V-I Cadences

II-V-I is the most common three-chord progression in jazz. It is well known in establishing a major key with major II-V-I cadences (IIIm6-V7-Ima) and establishing a minor key with minor II-V-I cadences (IIIm7b5-V7-Im). Melodically, there are subtle variants of both major II-V-I and minor II-V-I cadences. Variants include:

- different modes (see [Scale Ambiguity](#), [Seven Modal Dominants](#), and [Generic Sets of Numbers for Four Eighths or Sixteenths in Turnarounds](#) for example)
- use of a minor II-V cadence to a I major chord and key (see [Melodically Superimposed Cadences/Cadence Defined/Escherian cadence](#))
- using a flat five substitute for the V chord (see [Substitution/Flat Five Substitute](#))

In improvised melody, modes may be used that modify what is implied by the current chord progression to suggest different moods, typically darker and/or exotic moods. For example, the key may be A Aeolian, while the scale used is Phrygian, which introduces a dark and exotic flat two (“Bb” is flat two of “A”). Care should be taken to avoid striking conflicts between the mismatched tones of the superimposed scale and the tones of the chord progression. For example, the “Bb” note in A Phrygian would be better to use as a quick note in ornamentation against an A Aeolian chord progression, which may have sustained “B” notes a half step above the “Bb” tone. This concept of changing moods is covered in detail in [Scale Ambiguity](#), [Substitution](#) and in [Melodically Superimposed Cadences](#).

Modal Cadences

We need think of notes by number to think of things that we learn in one key and apply the thought to other keys. With modal cadences, any step of a major scale or other seven tone scale can be numbered as “1”, implying it is a key (or temporary key). See the [Modes](#) chapter. After numbering in relation to the related major scale, the chord built on the next higher scale tone would be its modal II chord and the chord built on a root four steps higher would be its modal V chord. For example, based on the C major scale, D minor on the second step could be a “I” chord, making E minor its “II chord” and A minor its “V chord. A major or dominant seventh would be a dominant V chord. See [Modes/Modes of Four Heptatonic Scales](#).

I Type Modes

I type modes imply the mode of the key (since the key is named after scale tone “1”). I is most commonly major (Ionian), Mixolydian, Dorian or Aeolian. Any mode of any of the four harmonizable seven-tone (heptatonic) scales (major, harmonic minor, melodic minor and major flat six) can be established as a key. After the four most common modes major, Dorian Mixolydian and Aeolian, other modes in

common use are harmonic minor, Phrygian major, melodic minor and Lydian dominant. See the Table of Common Modes below.

Table of I Type Modes

scale	largest usable chord	arpeggio	relation to major scale
major (Ionian)	ma9/6	ma13	major mode I
Dorian	m13	m13	major mode II
Phrygian	m7	m11b9	major mode III
Lydian	ma13#11	ma13#11	major mode IV
Mixolydian	13	13	major mode V
Aeolian	m11	m11	major mode VI
Locrian	m7b5	m11b5b9	major mode VII
harmonic minor	m9(ma7)	m9(ma7)	major mode VI #5, Aeolian nat. 7
Phrygian major	7b9	7b9	mode III nat. 3, harmonic minor mode V
melodic minor	m9(ma7)	m9(ma7)	major b3
Lydian dominant..			major mode IV b7, major mode
diminished half/whole (Im6b5 focus)	m6b5	m6b5	Lydian dominant with b2 and #2 , instead of 2

II Type Modes

In s II-V-I cadence, II may be Dorian, Aeolian, Phrygian or Locrian. As a chord, the flat six and flat nine are not used, but as an arpeggio flat six and flat nine can be used if not over emphasized. In arpeggio-based melody the flat six and flat nine tones usually act as neighbors or passing tones in relation to chord tones. By playing flat six and flat nine as part of the series of thirds in the parent scale, they sound harmonious. See the Table of II Type Modes below.

Table of II Type Modes

scale	largest usable chord	arpeggio	relation to major scale
Dorian	m13	m13	major mode II
Phrygian	m7	m11b9	major mode III
Aeolian	m11	m11	major mode VI
Locrian	m7b5	m11b5b9	major mode VII

V Type Modes

Including its altered chord versions, there are many types of V chords. Mixolydian, Lydian dominant, Mixolydian flat six, Phrygian major, super Phrygian, super Locrian and diminished half whole (eight tones with b2, b3, 3, #4, 5, 6, b7). See Substitution/[Flat Five Substitute](#). See the Table of V Type Modes below.

Table of V Type Modes

scale	largest usable chord	arpeggio	relation to major scale
Mixolydian	13	13	major mode V
Aeolian dominant	11	11	major mode V b6 melodic minor mode V
Lydian dominant	13#11	13#11	major mode IV b7, major mode
Phrygian dominant	7b9	7b9	mode III nat. 3, harmonic minor mode V
super Phrygian	7b9	7b9#9b13	major flat six mode III
super Locrian	7#5#9, 7#5b9	7#5b5#9b9	major flat six mode VII b4, mel. min. mode VII
diminished half/whole	13b9#9#11	13b9#9#11	Lydian dominant with b2 and #2, instead of 2

bII of I, the Flat Five Substitute of V (bV of V of I is b2)

Especially beginning with bebop around 1940, bII7 (bII^{13#11}) has been substituted for V. It is called a flat-five substitute because it is a flatted fifth from V (bII of the key is bV of V). It is also called a “tritone” substitute, since splitting the octave in half creates an interval of an octave with a diminished fifth exactly halfway between, involving making a relationship between three notes.

The chord synonyms (alternate names) for bII and V chords are shown below. They are all derived from bVI melodic minor in relation to the current key. bII and V progress to a key on I. For example, Db and G are the bII and V of I in the key of C. The bII chords (“Db”) originate on mode IV of bVI (“Ab”) melodic minor and the V chords (“G”) originate on the VII (“G”) of bVI (“Ab”) melodic minor.”

Table of bII and V Chord Synonyms

bII chord name	bII tones	V chord name	V tones
13#11	1-3-5-b7-2-#4-6	7b5#5b9#9	1-3-b5-#5-b7-b2-#2
9#11	1-3-5-b7-2-#4	7b5b9	1-3-b5-#5-b7-b2
7#11	1-3-5-b7-#4	7b5b9	1-3-b5-b7-b2
7	1-3-5-b7	7b5b9 no root	1-3-b5-b7-b2
7b5	1-3-b5-b7	7b5	1-3-b5-b7
13#11 no root, no fifth	3-b7-2-#4-6	7#5#9	1-3-#5-b7-#2
9#11 no root	3-5-b7-2-#4	7#5b9	1-3-#5-b7-b2
7#11 no fifth	1-3-5-b7-#4	7b5b9	1-3-b5-b7-b2
13#11 no5, n9	1-3-b7#4-6	7b5#9	1-3-b5-b7-#2

BUILDING TURNAROUNDS

What is a Turnaround?

Arpeggios are chords played one note at a time. Chord-based melodic improvisation in bebop and modern jazz is based on arpeggios. Traditional practice begins by ascending or descending one arpeggio, moving to the nearest note of the next arpeggio, and ascending or descending the next arpeggio. This usually starts by playing four eighth notes to each arpeggio, making two beats for each arpeggio.

From the last note of one arpeggio to the first note of the next, you usually have the option of going up or down in pitch to the nearest note of the next arpeggio. The logic of moving to the next tone is called **Voice Leading**. See the examples below.

The image shows two musical examples in 4/4 time, each consisting of a treble clef staff and a guitar TAB staff. The first example is labeled "voice-leading down to the next arpeggio" and shows a Cm7 arpeggio (notes: C, E♭, G, B♭) followed by an F7 arpeggio (notes: F, A, C, E♭). The TAB for Cm7 has frets 10, 8, 8, 11. The TAB for F7 has frets 11, 10. The second example is labeled "voice-leading up to the next arpeggio" and shows an F7 arpeggio followed by a Cm7 arpeggio. The TAB for F7 has frets 10, 8, 8, 11. The TAB for Cm7 has frets 11, 8.

Six Directional Types of Turnarounds

Turnarounds are traditionally linear, meaning each arpeggio is ascended or descended in order. Arpeggios are shown below, played in that manner. Turnarounds can also be played non-linearly, whimsically skipping around the tones of an arpeggio. This subject is explored again in *Harmonic Frameworks with Baroque-Bebop Ornamentation/Practice/Practice the Six Directional Types of Turnarounds*.

[click here to play a video of the examples below](#)

The image shows two musical examples in 4/4 time, each consisting of a treble clef staff and a guitar TAB staff. The first example is labeled "linear turnaround, up-down" and shows a Cm7 arpeggio (notes: C, E♭, G, B♭) followed by an F7 arpeggio (notes: F, A, C, E♭). The TAB for Cm7 has frets 5, 8, 8, 6. The TAB for F7 has frets 5, 6, 8, 5. The second example is labeled "linear turnaround, down-up" and shows an F7 arpeggio followed by a Cm7 arpeggio. The TAB for F7 has frets 6, 8, 8, 5. The TAB for Cm7 has frets 7, 5, 4, 6.

linear turnaround, up-up linear turnaround, down-down

5 Cm⁷ 6 F⁷ 7 Cm⁷ 8 F⁷

linear turnaround - up, continue up linear turnaround - down, continue down

9 Cm⁷ 10 F⁷ 11 Cm⁷ 12 F⁷

Harmonic Agreement by Rhythmic Level

The harmonic nature of what you play differs at different rhythmic levels. With longer the note durations, you have to play more in harmony with the chord. Longer note durations need to stay closer to the chord tones, playing them more often and emphasizing them more. Shorter note values can wander farther away from the chord tones, only emphasizing chord tones with their core melodic tones.

arpeggio-based melody at the eighth note level

Melody at the eighth note level can stay closer to the chord tones with a higher percentage of chord tones and with stronger emphasis of the chord tones by placing them on the beat, ending phrases with them and with whatever other devices you can use to draw attention to them.

Turnarounds are melodic sequences like the introduction to Mister Sandman that are solely arpeggios tones. They provide the safest way to show agreement with the current chord, by playing only tones of the current chord. Turnarounds are played on fairly short durations of a chord, most typically two beats, where four eighth notes are played during the two beats of each chord. The “[descend five and seven](#)” voice leading concept is useful in constructing arpeggio turnarounds by playing an arpeggio for one chord and descending its fifth and seventh to create the arpeggio for the next chord (whose root is up a perfect fourth from the root of the current chord). If you are moving to a secondary dominant, be sure to chromatically raise the appropriate note for its major third. Another important one-note change is the “[descend seven](#)” voice leading concept, which is useful to create a ninth chord version of the next chord with no root.

Harmonic scalar pulse is a melodic device which places the chord tones on the beat, making them more emphasized. It has been used by everyone from Bach to Charlie Parker. With harmonic scalar pulse, you basically stay within the range of a chord where it has been built with every other tone of a scale and go up and down the scale in that range with the chord tones on the beat and the non-chordal tones on the offbeat.

Make the Turnaround More Interesting with Simple Modification

[click here to play a video of the examples below](#)

ascend from the third instead of the root

It can sound too academic and exercise-like to ascend an arpeggio from the root. Ascend instead from the third. If you need a four-note arpeggio, ascend 3-5-7-9 (with any necessary alterations such as b7).

ascend from the root		ascend from the third instead	
Bm7(b5)	E7(b9)	Bm7(b5)	E7(b9)
2 Am		4 Am	

omit a note

Leaving the remaining notes in their place in time, omit one of the notes.

four-note E7b9 no root arpeggio			omit the first note		
5 Bm7(b5)	E7(b9)	6 Am	7 Bm7(b5)	E7(b9)	8 Am

omit the second note

9 Bm7(b5) E7(b9) 10 Am

omit the third note

11 Bm7(b5) E7(b9) 12 Am

omit the fourth note

13 Bm7(b5) E7(b9) 14 Am

15

precede the first note with a lower chromatic embellishment

Precede the first note with a note a half step below it in pitch (one fret lower), called a lower chromatic embellishment. These are commonly slid into the note they decorate and are fingered with the same finger that would have been used without the slide. They could also be slurred with a hammer-on.

precede the first note with a lower chromatic

15 Bm7(b5) E7(b9) 16 Am

insert a scale tone between two consecutive arpeggio tones

insert a scale tone (ST)

17 Bm7(b5) E7(b9) 18 Am

insert a scale tone (ST)

19 Bm7(b5) E7(b9) 20 Am

change the scale (or mode)

original turnaround with Aeolian mode changed turnaround with harmonic minor scale

21 Bm^{7(b5)} E^{7(b9)} 22 Am 23 Bm^{7(b5)} E^{7(b9)} 24 Am

T
A
B

change the rhythm

change the rhythm (originally the previous example)

25 Bm^{7(b5)} E^{7(b9)} 26 Am

T
A
B

add ornamentation

add ornamentation (originally the previous example)

27 Bm^{7(b5)} E^{7(b9)} 28 Am

T
A
B

Building Turnarounds With Major Scale Tone Arpeggios

first, build two-chord turnarounds in fourths

Precede any scale tone arpeggio with the scale-tone arpeggio down a perfect fourth and play a four note arpeggio of each. Voice-lead so the last note of the first chord moves to the nearest note of the next. In the example below, the chords and arpeggios are shown for the C major scale. Any chord can be established as a key, with the chord before it (on it's left below) making a cadence to it. The Bm7b5 chord can be preceded with Fma7. The arpeggios are shown in larger versions, but you can start with whatever version of 1-3-5-7 each arpeggio has as it is built with every-other note of a seven tone scale (see Scale-Tone Seventh Progression/[Constructing Scale-Tone Seventh Chords](#)). The sequence of chords in fourths is VII-III-VI-II-V-I-IV (B-E-A-D-G-C-F in the key of C).

The qualities of sevenths are listed for the key of C in the second row below (titled "chord" at the left). The qualities of larger chords are listed in the fourth row below, titled "arpeggio". The diagrams in the row below "arpeggio" are numbered in the key of the chord root. The tones on the diagrams in the row below "arpeggio and scale" are numbered in terms of the parent major scale, C major in this case.

E form parent major, fingering 7

The boxed area is the common modes. Grey columns show the best fingerings for improv.

scale tone ninth	VIIIm7b5b9	IIIIm7b9	III7b9	VIIm9	IIIm9	V9	IIma9	IVma9
chord	Bm7b5 VII	Em7 VII	E7 VII	Am7 IX	Dm7 VII	G7 VIII	Cma7 VIII	Fma7 VIII
arpeggio	Bm11b5b9 VII	Em11b9 VII	E7b9 VII	Am9 VII	Dm9 VII	G9 VII	Cma9 VII	Fma9 VII
arpeggio and parent scale	Bm11b5b9 and C major VII	Em711b9 and C major VII	E7b9 and C major #5 VII	Am9 and C major VII	Dm9 and C major VII	G9 and C major VII	Cma9 and C major VII	Fma9 and C major VII

D form parent major, fingering 2 (boxed area shows common modes, grey columns are best for improv)

ninth	VIIIm7b5b9	IIIIm7b9	IIIIm7b9	VIIm9	IIIm9	V9	IIma9	IVma9
chord	Bm7b5 X	Em7 IX	E7b9 XI	Am7 X	Dm7 X	G7 X	Cma7 X	Fma7 X
	1 b3 b5 b7	b3 b7 1 5	3 b7 b2 5	5 b3 b7 1	1 b7 b3 5	1 5 b7 3	1 5 7 3	5 1 3 7
arpeggio	Bm11b5b9 X	Em11b9 X	E7b9 IX	Am9 X	Dm9 X	G9 X	Cma9 X	Fma9 X
arpeggio and parent scale	Bm11b5b9 and C major VII	Em11b9 and C major X	E7b9 and C major #5 X	Am9 and C major X	Dm9 and C major X	G9 and C major X	Cma9 and C major X	Fma9 and C major X

C form parent major, fingering 3 (boxed area shows common modes, grey columns are best for improv)

ninth	VIIIm7b5b9	IIIIm11b9	IIIIm7b9	VIIm9	IIIm9	V9	IIma9	IVma9
chord	Bm7b5 XII	Em7 XII	E7 XII	Am7 XII	Dm7 XII	G7 XII	Cma7 XII	Fma7 XIII
	b5 b3 b7 1	1 5 b7 b3 5 1	1 5 b7 3 5 1	1 5 b7 b3 5	1 5 b7 b3	3 b7 1 5	1 3 5 7 3	1 7 3 5
arpeggio	Bm11b5b9 XII	Em11b9 XII	E7b9 XII	Am9 XII	Dm9 XII	G9 XII	Cma9 XII	Fma9 XII
arpeggio and parent scale	Bm11b5b9 and C major XII	Em11b9 and C major XII	E7b9 and C major #5 XII	Am9 and C major XII	Dm9 and C major XII	G9 and C major XII	Cma9 and C major XII	Fma9 and C major XII

A form parent major, fingering 4/5 (boxed area shows common modes, grey columns are best for improv)

ninth	VIIIm7b5b9	IIIIm11b9	III7b9	VIIm9	IIIm9	V9	IIma9	IVma9
chord	Bm7b5 II	Em7 II	E7b9 II	Am7 II	Dm7 II	G7 III	Cma7 III	Fma7 III
	1 b5 b7 b3	1 5 b7 b3	b2 5 b7 3	b3 b7 1 5	5 b3 b7 1	1 5 b7 3 5 1	1 5 7 3	1 5 7 3
arpeggio	Bm11b5b9 I	Em11b9 II	E7b9 II	Am9 II	Dm9 I	G9 II	Cma9 II	Fma9 I
arpeggio and parent scale	Bm11b5b9 and C major I	Em11b9 and C major II	E7b9 and C major #5 II	Am9 and C major II	Dm9 and C major I	G9 and C major II	Cma9 and C major II	Fma9 and C major I

G form parent major, fingering 6 (boxed area shows common modes, grey columns are best for improv)

ninth	VIIIm7b5b9	IIIIm11b9	III7b9	VIIm9	IIIm9	V9	IIma9	IVma9
chord	Bm7b5 VI	Em7 V	E7 V	Am7 V	Dm7 V	G7 V	Cma7 V	Fma7 V
	1 b7 b3 b5	1 3 b7 1	1 3 b7 1	1 5 b7 b3 5 1	1 5 b7 b3 5	1 5 b7 3	5 1 3 7	1 3 5 7 3
arpeggio	Bm11b5b9 V	Em11b9 V	E7b9 IV	Am9 V	Dm9 V	G9 V	Cma9 V	Fma9 V
arpeggio and parent scale	Bm11b5b9 and C major V	Em11b9 and C major IV	E7b9 and C major #5 IV	Am9 and C major V	Dm9 and C major V	G9 and C major V	Cma9 and C major V	Fma9 and C major V

The Traditional Major II-V-I Cadence

(IIm7-V7-Ima7 of its parent major scale)

In the key of C, three scale-tone seventh chords ascending in perfect fourths, ending on Cma7 are Dm7-G7-Cma7. Tones of the C major scale to make different versions of each chord. Cma9 (C-E-G-B-D) could be used instead of Cma7 (C-E-G-B). Dm11 (D-F-A-C-G) could be used instead of Dm7 (D-F-A-C). Start by studying just the seventh chords. See [Scale-Tone Seventh Progression/Constructing Scale-Tone Seventh Chords](#).

IIm7-V7-Ima7 chord and arpeggio example

scale tone chord	IIm7	V7	Ima7
chord name	Dm7 VII	G7 VIII	Cma7 VIII
arpeggio	Dm9 VII	G9 VII	Cma9 VII

arpeggio-based major II-V-I turnaround at the eighth note level

This worn-out turnaround sorely needs modification such as inverting it so it doesn't start on the root, leaving some notes out, changing the mode, ornamenting notes or change of rhythm such as pushes. See [Make the Turnaround More Interesting with Simple Modifications](#). Examples are shown below.

[Click this link to play a video of the examples below.](#)

worn-out turnaround

start on the third

Cmaj7 A7(b9) Dm7 G7 Cmaj7

1 2 3

T
A
B

omit the first note

Cmaj7 A7(b9) Dm7 G7 Cmaj7

1 2 3

T
A
B

add a lower chromatic

Cmaj7 A7(b9) Dm7 G7 Cmaj7

1 2 3

1 1 4 4 2 1 2 4 1 3

T
A
B

change the mode

Cmaj7 A7(b9) Dm7 G7 Cmaj7

4 1 2 3

C harmonic minor C major

T
A
B

worn-out turnaround

Cmaj7 A7(b9) Dm7 G7 Cmaj7

1 2 3

T
A
B

The Traditional Minor II-V-I Cadences

This cadence uses VIIIm7b5-III7-VIm7 of its parent major scale. III7 is a **secondary dominant** and targets VI minor.

VIIIm7b5-III7b9-Im7 chord and arpeggio example

scale tone chord chord name	Bm7b5 VI	E7 V	Am7 V
arpeggio	Bm11b5b9 V	E7b9 IV	Am9 V
arpeggio and parent scale	Bm11b5b9 and C major V	E7b9 and C major #5 IV	Am9 and C major V

arpeggio-based minor II-V-I turnaround at the eighth note level

This turnaround will go through each of the modifications covered earlier in [Make The Turnaround More Interesting with Simple Modifications](#).

[Click this link to play the examples below](#)

original turnaround

ascend from the third instead of the

2 Bm7(b5) E7(b9) 3 Am7

4 Bm7(b5) E7(b9) 5 Am7

T 7 10 10 9 10 7 9 7 7

A 9 7 10 10 9 10 7 9 7 7

B 9 7 10 10 8 7 9 10 7 10 7

omit a note precede the first note with a lower chromatic

insert a scale tone change the scale

change the rhythm add ornamentation

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Flat Five Substitute Cadences

See Lydian Dominant as bII of I, IV or V, Lydian Dominant as bII of V in a Minor Key, Substitution/
Flat Five Substitute.

FAVORED TURNAROUNDS

This section will show my favorite turnarounds, generally those most commonly in use. They show the six directional types of turnarounds shown earlier in this chapter: up/down, up/continue up, up/up, down/up, down/continue down and down/down. The tables below shows two or three chords of a turnaround. These are [modal cadences](#) and can be built on any step of a major scale or other seven tone scale.

Major Scale-Tone Seventh Arpeggios in Perfect Fourths

Seventh arpeggios are the backbone of turnarounds. In the following sections, you will practice building turnarounds by number. **Favored turnarounds in eighths and sixteenths** are largely built with seventh arpeggios and the 1-2-3-5 or 1-3-4-5 fragment patterns. Once you build a few of those turnarounds by number, start building your own with seventh arpeggios and with the 1-2-3-5 or 1-3-4-5 fragment pattern (also in reverse as 5-3-2-1 or 5-4-3-1). The fragment patterns can be build on any triad part of the arpeggio. **Favored turnarounds in triplets** largely use seventh arpeggios and chromatics. So, memorize all the seventh arpeggios below. See [Major Scale-Tone Seventh Arpeggios in Perfect Fourths](#) for common fingering. Also, see [Default Seventh Arpeggios](#) to memorize the seventh arpeggio fingerings.

form	VIIIm7b5	IIIm7	VIIm7	IIm7	V7	IIm7	IVma7
E form parent							
D form parent							
C form parent							
A form parent							
G form parent							

Major Scale-Tone Ninth and Eleventh Arpeggios in Perfect Fourths

form	VIIIm11b5b9	IIIIm11b9	VIIm9	IIIm9	V9	IIma9	IVma9
E form parent							
D form parent							
C form parent							
A form parent							
G form parent							

Building Your Own Turnarounds

why can't I just memorize a few turnarounds and be done with it?

You could, but that is likely to only get you through three or four songs. What are you going to use for turnarounds on additional songs and at additional performance? It's good to learn a few great examples of turnarounds, then begin to learn to build your own.

steps to building your own turnarounds

There are innumerable turnarounds and we can't practically memorize all of them. But we can develop a system to quickly conceive and build them while we're playing. We need to have many turnarounds memorized as models and know how to construct more.

1. Thoroughly learn the families of seventh arpeggios, each in five octave shapes.
2. Practice [Examples Of Basic Turnarounds In Seventh Arpeggios](#).
3. Learn at least major ninth, dominant ninth and minor ninth arpeggios in five octave shapes.
4. Memorize at least the minor eleventh arpeggios in five octave shapes.
5. Practice making up arpeggios with the generic number system on the following pages, so you can voice-lead arpeggios from one to another.
6. During the course of practicing the generic numbering system on the following pages, learn the rhythms with which they are played.

Examples of Basic Turnarounds in Seventh Arpeggios

Conceiving Turnarounds in Generic Numbers

Sets of four numbers are used in these tables to represent the turnaround. The numbers shown on these tables show the scale tone numbers for the chord scale you are using *generically*, without any flats or sharps. Each set can be adapted to the scale you are using for any particular chord by flattening or sharpening notes as the scale directs. For example, in using Aeolian mode on a minor seventh chord where the four-note set of numbers is 5-6-7-2 would be 5-b6-b7-2, since Aeolian has the numbered scale tones 1-2-b3-4-5-b6-b7.

avored rhythms for the first, middle and last chords in a cadence

I'm following the convention of using four notes on each chord as in traditional turnarounds. In a modal V-I cadence, the V chord is the first chord and the I is the last chord. In a II-V-I cadence, the II chord is the first chord, the V is the middle chord and the I is the last chord. Usually, rhythms for the first chord require the most attention. The middle chord (V) is "locked in" by the preceding chord (II), so the V chord is four notes of equal value. The four notes for the middle chord (V) can be varied by omitting the second, third or fourth notes and leaving the others at their original place in time. The last chord usually has a note on the beat (or a push), but is wide-open rhythmically, not even requiring four notes. It could use more or less than four notes.

extending the table of favored sets of four numbers

To extend the [table of favored sets of four numbers](#) to three or more chords, use the second chord as a "first chord". Identify the last chord tone in the second chord as a root (1), ninth (2), third (3), fifth (5) or seventh (7). Find the "first chord" row with that ending, re-purpose the original second chord as a "first chord" and use the new "chord with root up a perfect fourth" as the next chord. By repeating this process, you can build a continuous sequence of as many chords as you like with their roots ascending in perfect fourths.

avored rhythms for the first chord in a cadence

Using traditional sets of four notes per chord, these are the preferred rhythms that will assure emphasis of chord tones. Don't use the first note as a pickup when the second note is not a chord tone. If you do, you will be emphasizing a non-chordal tone.

Generic Sets of Numbers for Four Eighths or Sixteenths in Turnarounds

table of favored sets of four numbers for eighths or sixteenths (may be swung)

When a number set is both bold and underlined, it is a 1235 or 1345 fragment pattern. When a number set is both italic and underlined, it is a consecutive series of four scale tones. "T" represents a tie, where the last note of the first chord is tied to the first note of the next chord. So, when "T" begins a four-number set (i.e. "T5321"), it indicates that the first number (i.e. 5) was tied to (sustained from) the note preceding it.

Table Of Four-Number Patterns

	first chord	next chord (with its root up a fourth)		
last tone of first chord ↓	up	down	continue up	up
seventh	1357, <u>3457, 3567</u>	3175, 5317, <u>321Z</u> , <u>5321, 5431</u>	3579, <u>3457, 3567</u>	5713, <u>5672, 5712</u>
root	3571, 3451, <u>5671</u>	T5317, <u>T5321, T5431, 7653, 7543</u>	<u>T5671, T5672, T5712</u>	1357, <u>1235, 1345</u>
ninth	3572, <u>5672, 5712</u>	5317, <u>543Z</u> , <u>5321, 5431</u>	5713, <u>5672, 5712</u>	1357, <u>1235, 1345</u>
third	5713, <u>7123</u>	1753, <u>1765</u>	<u>1235, 1345</u>	3571, 3572, 3451, <u>3457, 3567</u>
fifth	7135, <u>1235, 1345</u>	1753, <u>1765</u> , 3175, <u>T2175, T2765</u>	<u>1235, 1345</u> , 1357	5713, <u>5672, 5712</u>
last tone of first chord ↓	down	up	continue down	down
root	7531, <u>5431, 5321</u>	T5713, <u>T5672, T5712</u>	5317, <u>5321, 5431</u>	<u>317Z</u> , <u>5321, 5431</u>
seventh	5317, <u>321Z</u>	3571, 3572, 3451, 3451	3175, 5317, <u>5321, 5431</u>	1753, 1543, 3175, <u>321Z</u> , 2753
fifth	3175, <u>2175, 2765</u>	3571, 3572, 3451, 1357, <u>1235, 1345</u>	1753, 1543, 3175, T2753	7531, <u>7543, 7653</u>
third	1753, 2753, <u>7653, 7543</u>	1357, <u>1235, 1345</u>	1753, <u>1765</u>	5317, <u>5321, 5431</u>

table of favored four-note rhythms for the first chord in a turnaround

The four-note set on the next chord can be all four notes or can omit the second, third or fourth note, without displacing the remaining notes in time. [click to play video](#)

Table Of First Chord Rhythms

	1	+	2	+	3	+	4	+		
eighths for V	1	+	2	+	3	+	4	+		
sixteenths for V	3	e	+	a	4	e	+	a		
eighths for II	3	+	4	+	1	+	2	+		
sixteenths for II	2	e	+	a	3	e	+	a	notation in eighths	notation in sixteenths
all four										
pickup to Creedence					*					
pickup to gallop					*					
push, 234										
last three offbeat										
pair, pickup to last beat							**			
all ands										
push, push, last pair										

*avoid this when the second note is a not a chord tone **don't use to begin a tie

Generic Sets of Numbers for Triplets in Turnarounds

table of favored sets of numbered scale tones for two beats of triplets

These exercises will combine triplet note patterns with triplet rhythms. Make turnarounds using the Table Of Numbered Note Patterns for Triplets and derive rhythms from both tables of triplet rhythms (the [Table of Triplet Rhythms for Any Chord](#) and [Table of Triplet Rhythms for the First Chord](#)). “C” represents a lower chromatic to the chord tone it precedes. “CC” is two consecutive lower chromatics below the chord tone it precedes. All of these that span triads (numbers 1 through 5) can be applied to secondary root triads. “cc” (lower case) is two consecutive chromatics *following* a chord tone.

Table of Numbered Note Patterns For Triplets

3-3 (3 notes, 3 notes)	1CC-345, 543-cc1, 123-CC5. 5cc-321, 54C-321, 75C-351, 1CC-357, 753-cc1, 13C-C57, 75c,c31, 3cc-175
1-34 (1 note, 3 notes)	use the four-number sets from the table of favored sets of four numbers for eighths and sixteenths
2-2 (2 notes, 2 notes)	use the four-number sets from the table of favored sets of four numbers for eighths and sixteenths
2-3 (2 notes, 3 notes)	1C-C35, 53-cc1, 13-CC5. 5c-c31. 1C-353, 54-C31, 1C-357, 75-C31, 12-C35, 12-345 54-321
3-2 (3 notes, 2 notes)	1CC-35, 54C-31, 13C-C5. 5cc-31. 1C3-53, 54C-31, 1C3-57, 75C-31, 3cc-17, 3cc-15

table of favored triplet rhythms for any chord in a II-V-I cadence [click to play video](#)

These are based on two triplets per chord, written here as two beats of eighth note triplets per chord. To count beats each divided into three equal parts, the traditional 1-trip-let, 2-trip-let, 3-trip-let, 4-trip-let is used, “1, 2, 3, and 4” number the beats in order, the “t” represents “trip” and the “l” represents “let”.

Table of Triplet Rhythms for Any Chord

a V chord from eighth note triplets starting on beat 3		3	t	l	4	t	l	
II chord or I chord eighth notes starting on beat 1		1	t	l	2	t	l	notation
3-3 (3 notes, 3 notes)	triplet, triplet							
	1-3 (1 note, 3 notes)							
1-3 (1 note, 3 notes)	“trip”, triplet							
	pickup to triplet							
	swing, swing							
2-2 (2 notes, 2 notes)	swing, Afro-Cuban							
	swing, waltz							
	Afro-Cuban, swing							
	Afro-Cuban, Afro-Cuban							
	Afro-Cuban, waltz							
	waltz, swing							
	waltz, Afro-Cuban							
	waltz, waltz							
	2-3 (2 notes, 3 notes)	swing, triplet						
Afro-Cuban, triplet								
waltz, triplet								
3-2 (3 notes, 2 notes)	triplet, swing							
	triplet, Afro-Cuban							
	triplet, waltz							

The rhythms in the table above could also be played as one beat with two sixteenth triplets (with different counting). The V chord in a II-V-I cadence cannot use the rhythms shown on the “[table of favored triplet rhythms for the first chord in a cadence](#)” below. The first chord in a II-V-I cadence is II and the first chord in a V-I cadence is “V”.

table of favored triplet rhythms for the first chord in a cadence [click to play video](#)

Table of Triplet Rhythms for the First Chord

		V chord starting on beat 3	2	t	1	3	t	1	4	t	1		
		II chord starting on beat 1 (V will follow on beat 3)	4	t	1	1	t	1	2	t	1	notation	
3-3 (3 notes, 3 notes)	pickup to swing, triplet												
	pickup to Afro-Cuban, triplet												
	push waltz, triplet												
2-2 (2 notes, 2 notes)	push, pickup to swing												
	push, pickup to Afro-Cuban												
	push, push waltz												
	push, "trip", swing												
	push, "trip", Afro-Cuban												
	push, "trip", waltz												
	pickup to beat, swing												
	pickup to beat, Afro-Cuban												
	pickup to beat, waltz												
2-3 (2 notes, 3 notes)	pickup to beat, triplet												
	push, "trip", triplet												
	push, pickup to triplet												
3-2 (3 notes, 2 notes)	pickup to swing, swing												
	pickup to swing, Afro-Cuban												
	pickup to swing, waltz												
	pickup to Afro-Cuban, swing												
	pickup to Afro-Cuban, Afro-Cuban												
	pickup to Afro-Cuban, waltz												
	push waltz, swing												
	push waltz, Afro-Cuban												
	push waltz, waltz												

Building Turnarounds with Generic Numbers and Favored Rhythms

Modal V-I Cadences (Cm7-F7 In “F” is a V-I Cadence)

first chord up

On the “[table of favored sets of four numbers for eighths or sixteenths](#)”, pick a four-number set in the “up” category on the upper left of the table represent the V chord (Cm7) in the “first chord” column, such as “3571”. For the I (F7) chord, choose one of the “next chord” options in the same row to the right from the categories “down”, “continue up” or up. In the “next chord” category, “up” should start with a note near the range of the first note (the “3” of “3571”, in this case). So, for example, choose 7653 in the next chord “down” category.

So, you are playing 3571 on the V chord (Cm7, thinking 3571 in the key of C), then 7653 on the I chord (F7, thinking 7653 in the key of F). Play the four notes for first chord (3571 of C) with a few of the rhythms from the table in the “[table of four-note rhythms for the first chord in a turnaround](#)”. In eighth notes, you would read the counting from the first row on the table, labeled “eighths for V”. In sixteenth notes, you would read the counting from the second row on the table, labeled “sixteenths for V”. For the next chord (7653 of F), play four eighths or four sixteenths, optionally omitting the second third or fourth notes, but leaving the remaining notes in their place in time.

first chord down

On the “[table of favored sets of four number for eighths or sixteenths](#)”, pick a four-number set in the “down” category on the upper left of the table represent the V chord (Cm7) in the “first chord” column, such as “5317”. For the I (F7) chord, choose one of the “next chord” options in the same row to the right from the categories “up”, “continue down” or down. In the “next chord” category, “down” should start with a note near the range of the first note (the “5” of “5317”, in this case). So, for example, choose 3451 in the next chord “down” category (3-4-5, then up to 1).

So, you are playing 5317 on the V chord (Cm7, thinking 5317 in the key of C), then 3451 on the I chord (F7, thinking 3451 in the key of F). Play the four notes for first chord (5317 of C) with a few of the rhythms from the table in “[table of four-note rhythms for the first chord in a turnaround](#)”. In eighth notes, you would read the counting from the first row on the table, labeled “eighths for V”. In sixteenth notes, you would read the counting from the second row on the table, labeled “sixteenths for V”. For the next chord (3451 of F), play four eighths or four sixteenths, optionally omitting the second third or fourth notes, but leaving the remaining notes in their place in time.

Favored Modal Turnaround Melodic Examples

superimposed cadences on F9 funk [click to play video](#)

♩ = 95

Swing Sixteenths

rhythm variations on example 1

F⁹ 2 3 4

Gm7 Cm7 F7 Gm7 Cm7 F7

5 8 7 6 8 5 8 5 7 8 6 8 5 8 7 6 8 5 8 5 7 8 6 8

5 6

Gm7 Cm7 F7 Gm7 Cm7 F7

5 8 7 6 8 5 8 5 7 8 6 8 5 8 7 6 8 5 8 5 7 8 6 8

9 10 11 12

Gm7 Cm7 F7 Gm7 Cm7 F7

5 8 7 6 8 5 8 5 7 8 6 8 5 8 7 6 8 5 8 5 7 8 6 8

13 14 15 16

Gm7 Cm7 F7 Gm7 Cm7 F7

5 8 7 6 8 5 8 5 7 8 6 8 5 8 7 6 8 5 8 5 7 8 6 8

rhythm variations on example 2

The score consists of four systems, each with a treble clef staff and a TAB staff. The key signature has two flats (Bb and Eb), and the time signature is 4/4. The music is divided into measures 17-20, 21-24, 25-28, and 29-32. Each system includes a treble clef staff with notes and rests, a chord progression below it, and a TAB staff with fret numbers.

System 1 (Measures 17-20):
 Treble clef: Measure 17 (F9), Measure 18 (Gm9 Cm7 F9), Measure 19 (Gm9 Cm7 F7), Measure 20 (Gm9 Cm7 F7).
 Chords: Gm9 Cm7 F9 | Gm9 Cm7 F7 | Gm9 Cm7 F7 | Gm9 Cm7 F7.
 TAB: Measure 17 (5 8), Measure 18 (5 8 7 6 8 5 | 8 5 7 8 6 8), Measure 19 (5 8 7 6 8 5 | 8 5 7 8 6 8), Measure 20 (5 8 7 6 8 5 | 8 5 7 8 6 8).

System 2 (Measures 21-24):
 Treble clef: Measure 21 (Gm9 Cm7 F7), Measure 22 (Gm9 Cm7 F7), Measure 23 (Gm9 Cm7 F7), Measure 24 (Gm9 Cm7 F7).
 Chords: Gm9 Cm7 F7 | Gm9 Cm7 F7 | Gm9 Cm7 F7 | Gm9 Cm7 F7.
 TAB: Measure 21 (5 8 7 6 8 | 8 5 7 8 6 8), Measure 22 (5 8 7 6 8 | 8 5 7 8 6 8), Measure 23 (5 8 7 6 8 | 8 5 7 8 6 8), Measure 24 (5 8 7 6 8 | 8 5 7 8 6 8).

System 3 (Measures 25-28):
 Treble clef: Measure 25 (Gm9 Cm7 F7), Measure 26 (Gm9 Cm7 F7), Measure 27 (Gm9 Cm7 F7), Measure 28 (Gm9 Cm7 F7).
 Chords: Gm9 Cm7 F7 | Gm9 Cm7 F7 | Gm9 Cm7 F7 | Gm9 Cm7 F7.
 TAB: Measure 25 (5 8 7 6 8 5 | 5 7 8 6 8), Measure 26 (5 8 7 6 8 5 | 5 7 8 6 8), Measure 27 (5 8 7 6 8 5 | 5 7 8 6 8), Measure 28 (5 8 7 6 8 5 | 5 7 8 6 8).

System 4 (Measures 29-32):
 Treble clef: Measure 29 (Gm9 Cm7 F7), Measure 30 (Gm9 Cm7 F7), Measure 31 (Gm9 Cm7 F7), Measure 32 (Gm9 Cm7 F7).
 Chords: Gm9 Cm7 F7 | Gm9 Cm7 F7 | Gm9 Cm7 F7 | Gm9 Cm7 F7.
 TAB: Measure 29 (5 8 7 6 8 5 | 8 7 8 6 8), Measure 30 (5 8 7 6 8 5 | 8 7 8 6 8), Measure 31 (5 8 7 6 8 5 | 8 7 8 6 8), Measure 32 (5 8 7 6 8 5 | 8 7 8 6 8).

SEVEN MODAL DOMINANTS

II-V-I Cadences Use Secondary Dominants

All II-V-I cadences use secondary dominants *except* the traditional major II-V-I, where the V dominant chord is part of the scale without modification. II-V-I cadences are all based on three chord roots ascending in perfect fourths, like “D” to “G” to “C”. The two classic “II-V-I” cadences are the “major II-V-I” and the “minor II-V-I”. The major II-V-I is literal, its “II-V-I” (Dm-G-C, in the key of C). V makes the strongest progression to the target “I”. Secondarily, II makes the strongest progression to V. In sequence, they make “II-V-I”.

The minor II-V-I is derived from the major scale. It uses chords with their roots ascending in fourths on scale tones VII, III and VI (B, E and A of the C major scale). In terms of the key of the target key A minor, “II” would be “B”, “V” would be “E” and “I” would be “A”. VIIIm7b5-IIIm7-VIm (Bm7b5-Em7-Am) in the parent major scale (C major) provides this progression. To strengthen the progression, the IIIIm7 (Em7) is changed to III7 (E7), a dominant seventh chord, mimicking the classic V7-I (G7-C) cadence in a major key. The tactic is to use E7 to A minor as you would use E7 to A major in the key of A.

The V Chord In Minor Mimics the V chord in major

Aeolian mode is converted to harmonic minor in order that the minor key V chord is major (1-3-5) or dominant seventh (1-3-6-b7). In A minor, the E minor chord on its fifth step is more often than not changed to E major or E7, making the stronger cadence from E(7) to Am, replacing the weaker Em(7) to Am.

Likewise with the other two common modes used as keys in the major scale, Dorian and Mixolydian, the V chord in each of those modes can be changes to major or dominant seventh to strengthen the progression. The scales in the key of each of the three types of V chords for Aeolian, Dorian and Mixolydian are named after the mode on each respective V chord, as shown below.

Dominant Chords Can Be Built on All Seven Steps of the Major Scale

In addition to the dominants used on steps III, VI, II and V, dominant chords can be built on I, IV and VII. I dominant seventh is the V of IVma7. IV dominant seventh is the flat V of VIIIm7b5, with root progression up and *augmented* fourth instead of the usual perfect fourth. Practice IV super Locrian to VIIIm7b5.

A seventh modal dominant type is Locrian dominant (using super Locrian), using (VII)B7#5b9 to (III)Em7. Rather than raising Locrian’s flat three to natural three, flat its fourth, so the parent scale is major flat three, commonly called melodic minor. This Locrian b4 scale is called super Locrian.

Secondary Dominants Defined

The tactic of changing the V chord of the target chord to dominant seventh can be used on any of the steps of the major scale, except the target chord VII^m7b5 (B^m7b5). Here are the authentic and secondary dominants for each of the steps of the major scale:

<u>authentic dominant (setup chord)</u>	<u>target chord</u>
V7 (G7)	I (C)
<u>secondary dominant (setup chord)</u>	<u>target chord</u>
VI7 (A7)	II ^m (D ^m)
VII7 (A7)	III ^m (E ^m)
I7 (C7)	IV (F)
II7 (D7)	V (G)
III7 (E7)	VI ^m (A ^m)

The root of VII^m7b5 (“B” is the root of B^m7b5) does not have a major scale tone a perfect fourth below it, but instead has an augmented fourth. #IV7 (F#7) could be used to progress to VII^m7b5 (B^m7b5). Or, VII^m7b5 (B^m7b5) can be changed to bVII major (Bb), then using IV7 (F7) to progress to it (F7 to Bb7).

See [Melodically Superimposed Cadences/Secondary Dominants](#), [Open Position Basslines/The Secondary Dominant Progression, Roots and Fifths in the Bass](#) and [Voice Leading/The Secondary Dominant Cycle](#).

Modal II-V-I Cadences

Preceding any of the secondary dominants with the chord whose root is down a perfect fourth, can produce various types of “II V” cadences. If the secondary dominant is “V”, the root down a perfect fourth from it is “II”. By then following through to the target I chord whose root is up a perfect fourth from the dominant V chord, a modal II-V-I cadence is produced.

II-V-I cadences are commonly used in the forms of major II^m7-V7-I (a major II-V-I cadence) and minor II^m7b5-V7-Im (an Aeolian II-V-I cadence) in popular music, especially jazz. The Dorian and Mixolydian II-V-I cadences are very useful also, though not explored as thoroughly as they could be. The four most common modal II-V-I cadences we’ll explore are shown below. The “modal II chord” is built on the second step of the scale of the target chord. The “modal V chord” is built on the fifth step of the scale of the target chord. In each case except the major II-V-I, the modal V chord is changed from its minor quality to a major quality and usually elaborated to a dominant seventh or larger chord. The “modal II chord” and the “modal V chord” below are numbered in terms of the parent major scale. Literal lettered examples in parenthesis use the C major parent scale.

changing modal II-V-I type with the same parent scale

A series of modal II-V-I cadences are commonly used with the same parent major scale, where the “V” of an Aeolian, Dorian or Mixolydian II-V-I is changed from minor 7 to dominant seventh, as a [secondary dominant](#). In this case, you can (1) think in the key scale (bold below) of the target chord throughout, (2) chromatically raise the one note where necessary to change a minor seventh to a seventh as a secondary dominant and (3) focus on the arpeggio for each chord within the key scale.

	<u>modal II chord</u>	<u>modal V chord</u>	<u>target chord</u>	<u>II-V-I type</u>	<u>numbered in mode</u>
	VIIIm7b5 (Bm7b5)	III7 (E7)	VIm (Am7)	Aeolian	IIIm7b5-V7-Im7
	C major	C major #5	C major		
→	A Aeolian	A harmonic minor	A Aeolian (key scale)		
	B Locrian	B Locrian			
	E Phrygian	E Phrygian major			
	IIIm7 (Em7)	VI7 (A7)	IIm7 (Dm7)	Dorian	IIm7-V7-Im7
	C major	C major #1	C major		
→	D Dorian	D melodic minor	D Dorian (key scale)		
	E Phrygian	E Phrygian natural 6			
	A Aeolian	A Aeolian dominant			
	VIm7 (Am7)	II7 (D7)	V7 (G7)	Mixolydian	IIm7-V7-I7
	C major	C Lydian (#4)	C major		
→	G Mixolydian	G major (Ionian)	G Mixolydian (key scale)		
	A Aeolian	A Dorian			
	D Dorian	D Mixolydian			
	IIm7 (Dm7)	V7 (G7)	Ima7 (Cma7)	major	IIm7-V7-Ima7
	D Dorian	G Mixolydian	C major		
→	C major	C major	C major (key scale)		

changing modal II-V-I types in the same key

For the purpose of Scalar Ambiguity, with darkening and brightening, you will also need to be able to play modal II-V-I cadences all the the same key. When you play them all in the same key, each of the four types you may choose from use a different parent major scale. This makes it more complicated, so practice jamming on one of the II-V-I cadences in a particular key at a time until you can freely change between the types.

thinking modal II-V-I cadences in different contexts

At times, you may find it useful to think in each of four different contexts for all three of the chords in the cadence: all in terms of (1) the parent scale, or (2) in terms of the mode of the II chord (where you usually need to raise a note chromatically for the V chord), or (3) in terms of the mode of the V chord (where you usually have to play one of its notes lower chromatically during the II chord), or (4) in terms of the mode of the I chord. Choose the context that is fastest and easiest to think in the situation. The “bullets will be flying”!.

II-V-I Turnarounds For All Seven Major Scale Tone Chords

target	VIm9	IIm9	V9	Ima9	IVma9	VIIIm11b5b9	IIIIm11b9
seventh tones of parent	6135	2461	5724	1357	4613	7246	3572
unaltered V of	IIIIm7 (m11b9)	VIm9	IIm9	V9	Ima9	IVma9	VIIIm7b5 (VIIIm11b5b9)
dominant V of	III7b9	VI9	II9	V9	I9	IV9	VII#5#9
altered parent scale	I major #5 or I major b6	I major #1*	I major #4	no change	I major b7	I major b3 (mel. min)	I major b3 (mel. min)
dominant V mode	III Phry. dom. or III super Phry.	VI Aeolian dominant	II Mixolydian (II mel. minor)	V Mixo.	I Mixo	IV Lydian dominant	VII super Locrian
unaltered II V of	VIIIm11b5b9-IIIIm11b9	IIIIm11b9-VIm9	VIm9-IIm9	IIm9-V9	V9-Ima9	Ima9-IVma9	IVma9-VIIIm11b5b9
II-dominant V of	VIIIm11b5b9-III7b9	IIIIm11b9-VI9	VIm9-II9	IIm9-V9	V9-I9	Ima7-IV9(13#11)	IVma9-VII#5#9

*I major #1 (=VII super Locrian) has the same notes as II Dorian natural 7 = II melodic minor.

employ simple modifications to turnarounds (sketching):

- Ascend from the third and tend to use the upper part of ninths
- Precede the first note with a lower chromatic embellishment
- Omit any of the four notes (in a four-note turnaround), leaving the others in their place in time. Go to Rhythmic Words and Comping/Four Pulse Rhythmic Words/Strumming Four-Pulse Rhythmic Words and use any of the rhythms that use seven notes.
- Omit two of the four notes. In strumming Four-Pulse Rhythmic Words and use any of the rhythms that use six notes. In playing a II-V with four-note arpeggios, choose the rhythm that has the omitted notes in the appropriate place. If the "II" has no omitted notes, use a rhythm that begins with four sixteenths. The examples are based on two sets of four sixteenths (or four eighths). Wherever you omit notes, use a rhythm that matches. In another sense, there are only 15 different rhythms made with four pulses. Learn them all at Rhythmic Words and Comping/ Four-Pulse Rhythmic Words/All Possible Four-Pulse Rhythmic Words.
- Change the melodic rhythm.

Avoid Conflicts Between The Current Chord and II-V-I Type

turnarounds are usually based on one parent scale

A cadence is often played in the form of a turnaround with the II-V part of the cadence played at the end of the chord preceding the target chord and the “I” part of the cadence played on the target chord.

The notes of a turnaround are usually tones of a single parent scale. If the V chord in the turnaround has been changed from a minor seventh to dominant seventh to create a secondary dominant, a note in the parent scale may be raised.

clashes

Clashes can occur when *flatted* versions of numbered notes (like flat three) are used in the turnaround during the chord preceding the target chord and *natural* versions of the same numbered tones (like natural three) are in the target chord. These clashes are mood mis-matches, where the accompaniment chord is dark-mooded and the turnaround arpeggio played over it is brighter in mood.

spot potential clashes by mood and mode and solve the problem

When the chord preceding the target chord sounds darker and/or bluesier, it is likely to have flatted versions of the same numbered tone. Use a darker, bluesier version of the turnaround that matches the chords. Here is an order of turnarounds from dark mood to bright mood:

dark - minor II-V-I turnaround (VII m 7b5-III7-V m 7 of the parent major scale)

medium dark - Dorian II-V-I turnaround (III m 7-VI7-II m 7 of the parent major scale)

medium bright - Mixolydian II-V-I turnaround (VI m 7-II m 7-V7 of the parent major scale)

bright - major II-V-I turnaround

In a traditional minor II-V-I cadence in the key of A minor, the chords are derived from C major parent scale tone chords VII m 7b5-III m 7-V m 7 (B m 7b5-E m 7-A m 7). The III m 7 is changed to III7, making the progression VII m 7b5-III7-V m 7 (B m 7b5-E7-A m 7). This makes the parent scale all C major, except C major sharp five during the III7 chord.

In a Dorian II-V-I cadence in the key of D minor, the chords are derived from C major parent scale tone chords III m 7-VI m 7-II m 7 (E m 7-A m 7-D m 7). The VI m 7 is changed to VI7, making the progression III m 7-VI7-II m 7 (E m 7-A7-D m 7). This makes the parent scale all C major, except C major sharp one during the VI7 chord.

In a Mixolydian II-V-I cadence in the key of D minor, the chords are derived from C major parent scale tone chords VI m 7-II m 7-V7 (A m 7-D m 7-G7). The II m 7 is changed to II7, making the progression

VIm7-II7-V7 (Am7-D7-G7). This makes the parent scale all C major, except C major sharp four (C Lydian) during the II7 chord.

spot potential clashes with key signatures and scale tone chords

In this order of major scale key signatures, the mood would get brighter from left to right if you used a single tone center through a number of key signatures. For example, the note “G” is in the major scales “Ab” through “D”.

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

If you cannot already, learn to recognize scale tone chord types by reading [Recognizing Scale Tone Chords](#). If you can recognize the scale tone on which each chord is likely to have been built you can then determine the parent scale.

You can consider the change of parent scale according to key signature. If the chord preceding the target chord uses a flatted numbered tones in relation to the parent scale of the target chord, consider a key signature to the left (in the series above) of the key signature for the parent scale.

changing parent scale produces an Escherian cadence

Changing parent scale during the chord preceding the target chord to avoid conflicts is usually a good thing. You can then change the parent scale type on the target chord and brighten the mood, producing an unexpected bright mood. This is a form of what I call an [Escherian cadence](#).

example on a G jazz blues progression

Improvising on a blues in G, for example, you may intend on playing a Mixolydian II-V-I turnaround that targets the G9 chord in bar seven. In doing this you would typically play the II-V part of the cadence in a turnaround at the end of bar six. Bar six is a C7 chord, which contains a “Bb” note. If you use a G Mixolydian II-V-I turnaround (VIm9-II9-V9 of the parent scale C major) with the chords Am9-D9-G9, the Am9 arpeggio includes the note “B”. That is likely going to be a problem. Solve the problem by using a G Dorian II-V and a G Mixolydian I. You might call this a “hybrid II-V-I” turnaround, since it started as G Dorian and ended as G Mixolydian.

[click to play video](#)

♩ = 120
Swing Eighths

conflict

C⁹ Am⁹ D⁹ G⁹ E^{7(b9)}
 VI^{m7} type II⁷ type V⁷ type

G Mixolydian II-V cadence target - G Mixolydian

T							
A	10	9	12	12	10	11	12
B					10		9

resolved

resolved

C⁹ Am^{7b9} D⁹ G⁹ E^{7(b9)}
 III^{m7} type VI⁷ type V⁷ type

G Dorian II-V cadence target - G Mixolydian

T							
A	10	9	12	11	10	11	12
B					10		9

The Dorian II-V-I Cadence: IIIIm7-VI7-IIIm7 of Parent

the VI7 is a secondary dominant and targets IIIm7

IIIIm7-VI7-IIIm7 chord and arpeggio example

scale tone chord	Em7 XII	A7 XII	Dm7 XII
chord name			
	1 b5 b7 b3 b7	1 5 b7 3 5	1 5 b7 b3
arpeggio	Em11b9 XII	A9 XII	Dm9 XII
arpeggio and parent scale	Em11b9 and C major XII	A9 and C major sharp one (D melodic minor) XII	Am9 and C major XII

arpeggio-based melody at the sixteenth note level

[click to play video](#)

Em¹¹ 2 A⁹ 3 Dm⁹ 4

Em7b9 A7 Dm9

D Dorian IIIIm7b9-V7-Im9 (IIIIm7b9-VI7-IIIm7 of parent)

T
A
B

12 12 15 14 14 14 15 14 13 12

The Mixolydian II-V-I Cadence: VIm7-II7-V7 of Parent

the II7 is a secondary dominant and targets V7

VIm7-II7-V7 chord and arpeggio example

scale tone chord	Am7 XII	D7 XII	G7 XII
chord name			
arpeggio	Am9 XII 	D9 XII 	G9 XII
arpeggio and parent scale	Am9 and C major XII 	D9 and C major #4 (C Lydian) XII 	G9 and C major XII

arpeggio-based melody at the sixteenth note level

[click to play video](#)

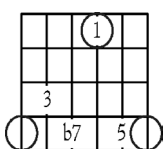
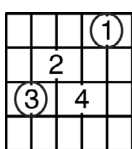
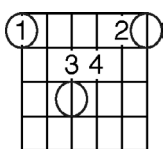
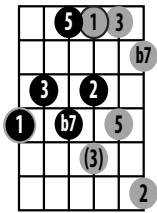
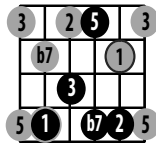
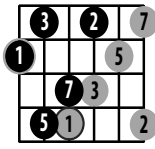
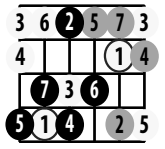
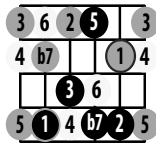
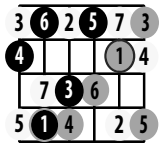
♩ = 170
Swing Eighths

G Mixolydian IIm9-V7-I9 (VIm9-II9-V7 of parent)

TAB: 7 6 5 8 5 12 | 7 5 | 4 5 3 5 6 7 5 | 7 8 5 7

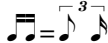
The Lydian II-V-I Cadence: V7-I7-IV7 of Parent

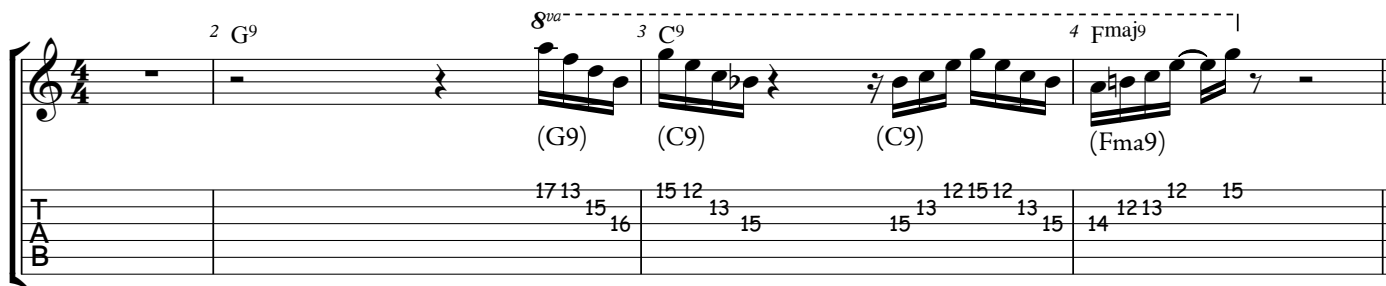
V7-I7-IVma7 chord and arpeggio example

scale tone chord chord name	G7 XII	C7 XII	Fma7 XIII
			
		1 3 b7 1	1 7 3 5
arpeggio	G9 XII	C9 XII	Fma9 XII
			
arpeggio and parent scale	G9 and C major XII	C9 and C major b7 (C Mixolydian) XII	Fma9 and C major XII
			

arpeggio-based melody at the sixteenth note level

[click to play video](#)

♩ = 80
Swing Sixteenths 



The Lydian Family

Lydian Dominant or Lydian as bII of Target

Super Locrian, the Flat Five Substitute of Lydian Dominant

See Substitution/[Flat Five Substitute](#)

Dorian Sharp Five

Dorian sharp four is equal to Lydian dominant with flat three. It is mode II of major sharp five and is mode IV of harmonic minor. Dorian sharp four can be used as a darkened version when Lydian dominant is a key scale. It can also be combined with Lydian dominant by generally ascending from flat three with Dorian sharp four and generally descending from one to natural three with Lydian dominant.

Lydian Diminished

With b3, #4 and b7, this is an interesting scale, exotic and middle-eastern sounding. It contains both minor (major seventh) and diminished seventh.

The Phrygian II-V-I Cadence: IVma7-VII7#5-IIIIm7 of Parent

IVma7-VII7#5-IIIIm7 chord and arpeggio example

scale tone chord chord name	Fma7 XIII	B7#5#9 XIII	Em7 XII
	1 7 3 5	1 3 b7 #2 #5	1 5 b7 b3 5 1
arpeggio	Fma9 XII	B7#5#9 XI	Em11b9 XII
arpeggio and parent scale	Fma9 and C major XII	B super Locrian C major b3 (C mel. minor) XII	Em11b9 and C major XII

arpeggio-based melody at the sixteenth note level

[click to play video](#)

♩ = 80
Swing Sixteenths

Phrygian Family of V Chords in II-V Cadences

T A R G E T ↓	Phrygian minor		Phrygian dominant		super Phrygian		target VI minor
	VII Locrian m11b5b9	III Phrygian m11b9	VII Locrian m11b5b9	III Phry. dom. 7b9	VII Locrian bb7 diminished 7	super Phrygian III7#5#9	VIm9 Aeolian
	VII of major	III of major	VII of major	III of major #5	VIII of major b6	III of major b6	VI Of Major
G f o r m							
E f o r m							
D f o r m							
C f o r m							
A f o r m							

The Locrian II-V-I Cadence: Ima7-IV7-VIIm7b5 of Parent

Ima7-IV7-VIIm7b5 chord and arpeggio example

scale tone chord chord name	Cma7 XIII	F9 XII	Bm7b5 XII
	1 3 5 7 3	3 b7 2 5 1	1 b5 b7 b3
arpeggio	Cma9 XII	F9 XII	Bm11b5b9 XII
arpeggio and parent scale	Cma9 and C major XII	F Lydian dominant C major b3 (C mel. minor) XII	Bm11b5b9 and C major XII

arpeggio-based melody at the sixteenth note level

[click to play video](#)

♩ = 80
Swing Sixteenths

T 12 12 12 12 15
A 12 12 14 14 15
B 15 12 14 12 14 12

Fingering II-V-I with Secondary Dominants in Seven Modes

numbered by parent scale

Each of the arpeggios and the scale to which they are elaborated is numbered below in terms of the parent scale. The octave shapes, such as “G form” are shown for the target. For target “2” (IIIm, Dm for example), note that “major sharp one” (C major sharp one) is the same as II melodic minor (D melodic minor).

	Aeolian II-V-I			Dorian II-V-I		
	using Phrygian dominant			using Aeolian dominant		
T A R G E T ↓	VII Locrian VIIIm11b5b9 7 of major	III Phr. dom. III7b9 III of major #5	VI Aeolian VIIm9 6 of major	III Phrygian IIIIm11b9 3 of major	VI Aeol. dom VI9 6 of major #1 (II mel. min.)	II Dorian IIIm9 2 of major
G f o r m						
E f o r m						
D f o r m						
C f o r m						
A f o r m						

Mixolydian II-V-I

using Mixolydian dominant

T A R G E T ↓ G f o r m E f o r m D f o r m C f o r m A f o r m	VI Aeolian VIm9 6 of major	II Mixolydian II9 2 of major #4 (Lydian)	V Mixolydian V9 6 of major

Ionian (major) II-V-I

using Mixolydian dominant

T A R G E T ↓ G f o r m E f o r m D f o r m C f o r m A f o r m	II Dorian IIIm9 2 of major	V Mixolydian V9 5 of major	I major Ima9 1 of major

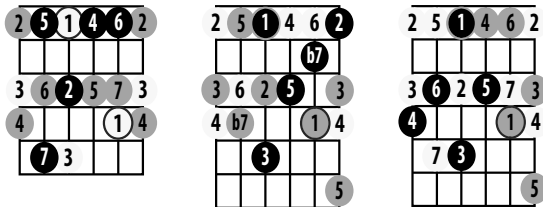
Lydian II-V-I

using Ionian dominant

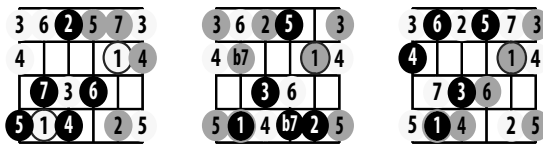
T
A
R
G
E
T
↓

V Mixolydian V9	I Ionian b7 (major b7) I9	IV Lydian IVma9
5 of major	I of major b7	4 of major

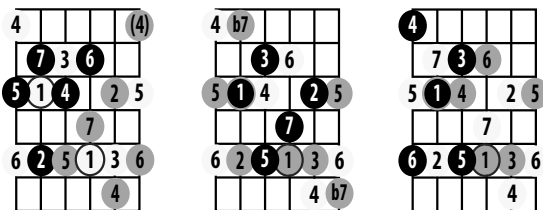
G
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m



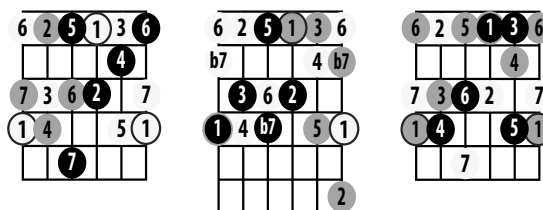
E
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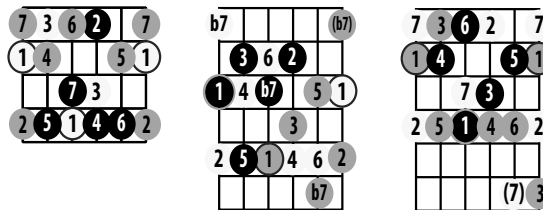
D
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r
m



C
f
o
r
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A
f
o
r
m



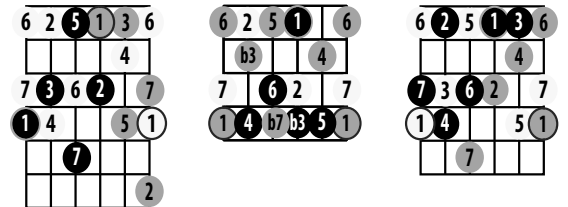
Locrian II-V-I

using Lydian dominant

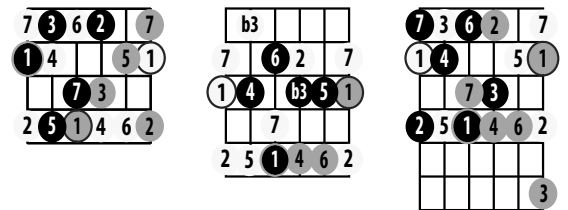
T
A
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I major Ima9	IV Lydian b7 IV9	VII Locrian VIIIm11b5b9
1 of major	4 of melodic minor	7 of major

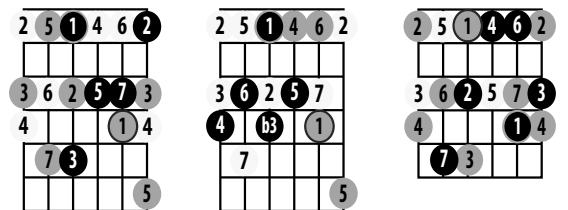
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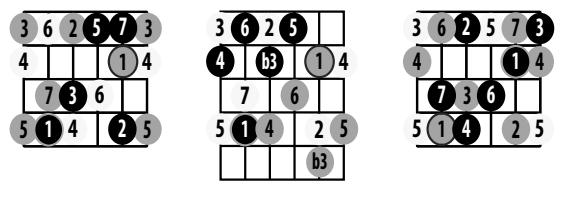
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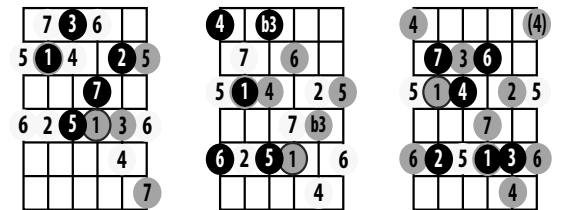
D
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C
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A
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Phrygian II-V-I

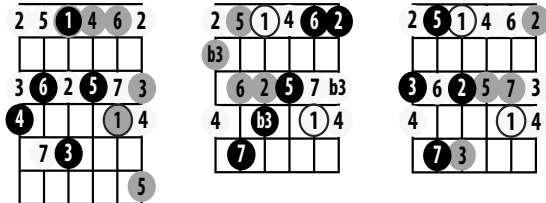
using super Locrian dominant

T
A
R
G
E
T
↓

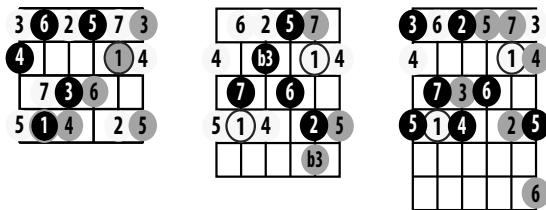
IV Lydian	VII super Locrian	III Phrygian
IVma9	VII7#5#9	IIIIm11b9

4 of major	7 of major b3 (7 of mel. min.)	3 of major
------------	-----------------------------------	------------

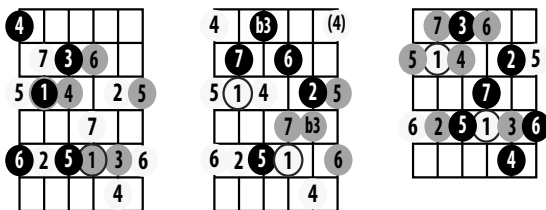
G
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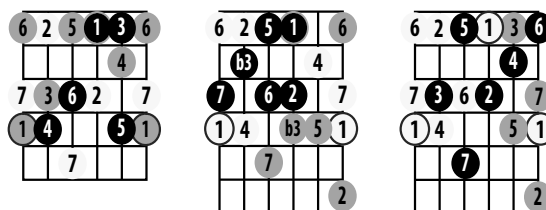
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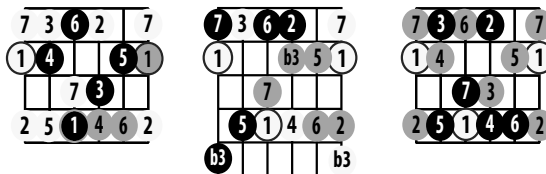
D
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C
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A
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Evolving Turnarounds to Sophisticated, Free-Form Melody

Turnarounds most typically represent chords that are played for two beats each with four eighth notes for each chord. These are important structures, but the listener can tire of them if they are not elaborated into more interesting melody.

In the early development of most jazz improvisers, they practice turnarounds, commonly on major II-V-I cadences, minor II-V-I cadences and other variants like I-VI-II-V, VI-II-V-I and III-VI-II-V. Most of these are chord progressions with roots moving in fourths, but many also involve flat five substitutes where IIIIm7-VIm7-IIIm7-V7-Ima7 becomes IIIIm7-bIII7-IIIm7-bII7-Ima7.

At some point in his development, it seems Charlie Parker found standardized ways to apply flurries of notes on arpeggio tones in turnarounds, making them much more exciting to listen to. Along with that, he incorporated scale passages and skips to break up the arpeggios. Most of what he developed as his fast sophisticated melody on cadences is still based on arpeggios. To see his framework, you have to look at the elements, like the ambiguous use of different type of modal II-V-I cadences, bebop ornamentation with upper and lower mordents, turns and inverted turns (I call them upper turns and lower turns to be more descriptive), skips and flurries of scale in place of the passage between two or more arpeggio tones.

Once you can easily play up and down the scale, changing the note if necessary to make the second chord dominant and have gotten started with turnarounds, work on these four types of fast decoration on a chord tone:

1. Play an upper or lower *mordent* (chord tone, neighbor, return to chord tone), or turn. An *upper turn* (traditionally called a “turn”) plays chord tone, upper neighbor, return to chord tone, lower neighbor, return to chord tone. A lower turn (traditionally called an inverted turn) plays chord tone, lower neighbor, return to chord tone, upper neighbor, return to chord tone.
2. Play a mordent or turn with scalar encircling: after the turn or mordent play the neighboring tone of the target triad tone for the next chord that is beyond the triad target tone, then play the target triad tone.
3. Play a mordent or turn with a skip to a neighbor of the target triad tone, then play the target triad tone. Skips should be less than an octave, usually a sixth or less.
4. Play a flurry of scalar tones beginning with a chord tone of the current chord and resolve to a note of the target triad. This may involve a few notes ascending or descending and may involve change of direction.

ornamentation at the eighth triplet, sixteenth and faster rhythmic levels

Flurries of ornamentation at the faster note levels can deviate more from the chord. This is common to baroque ornamentation and bebop ornamentation. The “fast” notes or flurries in bebop ornamentation, and other styles that use them is typically at least 500 notes per minute.

Flurries of notes occur in many styles and the same basic principles discussed here will apply to most. Quick licks in blues, blues rock guitar, the fast ornamentation in celtic music; the highly ornamented phases in Indian ragas; the flurries in flamenco melody on the guitar and voice; the blurs of notes in Michael Schenker’s blues rock playing Alan Holdsworth’s and Frank Gambale’s jazz rock playing and John Petrucci’s progressive rock playing in Dream Theater. The list goes on, and that’s just guitar. There’s Art Tatum and Chick Corea on keyboards and Charlie Parker and Chris Potter on sax.

flat nine, eleven and flat thirteen on minor chords

Some upper chord tones don’t sound well when sustained. Most notably, these include flat nine (flat two) and flat thirteen (flat six) on minor chords and elevenths on major seventh type chords.

At the faster rhythmic levels (eight note triplets, sixteenth notes and faster), tones of a chord that would not be acceptable as a sustained chord tone can be treated as chord tones if they are melodically resolved. A flat nine or a flat thirteen (flat six) is not acceptable on a minor chord.

In a sense these unacceptable chord tones can be treated as neighboring tones to the tones of the target chord to which they will resolve. For each of the four modal II-V-I cadences shown here on the following pages, I’ll show examples of this melodic tactic, inspired by bebop.

Changing Modal II-V-I Cadence Type between Chords

Using the [Scale Ambiguity](#) principle, the modal II-V-I type can be changed during a cadence. Usually such a change would involve a single changed note from the II to the V, either brightening by raising a note chromatically (b9 changed to 9, for example) or darkening (9 changed to b9, for example). The tendency is to darken by flattening a numbered tone if you’re going to a minor key on the target “I” or brighten by making a flattened numbered tone natural if you’re going to a major key on the target “I”.

It is common that more than one note is changed for the arpeggio and scale for the “I” chord when the target is “I” major (I major seventh), creating a surprisingly bright mood. The A section to How High the Moon is a good example of this. Notice that in bars eleven and twelve, G minor has been established as a temporary key, while the overall key is G major. The cadence at the end of bar twelve suggest going to G minor again, but surprisingly, bar thirteen is in G major. Along with the lyric “How High The Moon”, suggesting the bright, romantic moon, the G minor key has changed to the brighter G major key.

Gma7	Gma7	Gm7	C7
Fma7	Fma7	Fm7	Bb7
Ebma7	Ebma7	Am7b5	D7
Gma7	Am7 D7	Bm7 Bb7	Am7 Ab7

MODAL DOMINANT IMPROV STUDIES

Table of General Turnaround Studies

This will make use of chord roots progressing in perfect fourths, numerically VII-III-VI-II-V-I-IV-VII- etc. Play in a single position, starting with the E form area for tone “1” of the parent scale. Three of the numbers in the cycle create a modal II-V-I. If the target chord (key chord) is VI, VII-III-VI will make a “II-V-I” cadence in the key of VI, by renumbering it so “VI” becomes “I”.

After first experiencing the unaltered V of a particular target, the V may be altered to become a dominant seventh, except for target “I”, where it’s V chord is dominant without altering it.

For each target chord perform the six steps listed below, each with a live or recorded comping to play over. Start by basing the improv below on eighth notes at a moderate to fast tempo. You could also base your improv on sixteenth notes by halving the number of bars recommended below and using sixteenth notes instead of eighth notes, still playing them at the end of the setup chord.

1. In the position you intend on using for this series of six steps, play up and down the parent scale against an accompaniment of the target chord only (VI_m7, for example).
2. Play free improvisation on the “setup” chord (V of target) alone, without changing the parent scale.
3. Play free improvisation on the “target” chord alone.
4. In a repeating cycle, improvise on two bars of the setup chord (V of target) and two bars of the target chord, making a turnaround by playing four eighth notes of the setup chord at the end of its duration and four eighth notes at the beginning of the target chords duration. Tend to play throughout in the key of the target chord, except during the turnaround.
5. Create a II-V-I cadence, modally. If the target is a VI chord, use a VII chord as a II of VI and use a III chord as a V of VI. At first, don’t alter the parent major scale. Play over the same cycle as in step three (above) with two bar of setup chord and two bars of target chord, but make a three chord cadence by “back-cycling” in fourths to include a “II” chord before the “V” setup chord. During the second bar of the setup chord, play the four notes of the II chord followed by four notes of the V chord. In the first bar of the target chord, play four notes of its arpeggio or at least start with a tone of its triad and go into free improv during the target chord.
6. Play the II-V-I cadence as in step three, but change the V chord (setup chord) to dominant. II, III and VI minor chords are made dominant by raising their third from flat to natural. An unaltered IIm7 chord uses parent major scale tones 2-4-6-1, while its dominant version, IIm7, uses parent major scale tones 2-#4-6-1. Similarly, changing III_m7 to III7 sharps the five of the parent scale, or it can flat the six of the parent scale (making super Phrygian). Changing VI_m7 to VI7 sharps the one of the parent scale. Ima7 is changed to the dominant version I7 by flattening the seven of the parent scale. IV_ma7 is changed to the dominant version

IV7 by flattening the three of the parent scale. For VII^m7b5, flat the three of the parent scale to make VII7 with sharp or flat five, sharp or flat nine.

Here is a table showing these steps:

	III ^m 7	VI ^m 7	II ^m 7	V7	I ^m a7	IV ^m a7	VII ^m 7b5
V of target	VII ^m 7b5	III ^m 7	VI ^m 7	II ^m 7	V7	I ^m a7	IV ^m a7
dominant V7 of target	VII7±5±9	III7	VI7	II7	V7	I7	IV7
scale for dominant V7	VII super locrian	III Phrygian dominant or III super Phrygian	VI Aeolian dominant	II Mixolydian	V Mixolydian	I Mixolydian	IV Lydian dominant
V dominant of target scale named as parent scale	I melodic minor	I major sharp five or I major flat six	I major sharp one (same as II melodic minor)	I Lydian	I major	I Mixolydian	I melodic minor
II of target	IV ^m a7	VII ^m 7b5	III ^m 7	VI ^m 7	II ^m 7	V7	I ^m a7
II-V-I of target	IV-VII-III	VII-III-VI	III-VI-II	VI-II-V	II-V-I	V-I-IV	I-IV-VII

Using a flat five substitute, VII super Locrian as a V of III can be substituted with IV Lydian dominant, making the IV7 (IV13#11) a flat two of the target III. This is commonly done in jazz, beginning with bebop where the target “III” chord may be any quality with a fifth. So the target three may be a I type, V type, VI type or II type.

the master round

Play on two bars of each chord in the cycle VII^m7b5-III^m7-VI^m7-II^m7-V7-I^ma7-IV^ma7 (repeat). Use a moderate to fast tempo with an eighth note basis. Perform these three steps:

1. Play free improvisation on each chord, without modifying the parent major scale.
2. On beat three of the second bar of each chord, play a four-note arpeggio (or 1-2-3-5 or 1-3-4-5 on the triad on the root or third of the chord). This is the V of the next chord. On the first beat of the next chord, resolve to a triad tone of that next chord.
3. On beat one of the second bar of each chord, play a four-note arpeggio (or 1-2-3-5 or 1-3-4-5 based on the triad built on the root or on the triad built on the third of the chord) on the II chord of the next target chord. On beat three of the second bar of each chord, play a four-note arpeggio (or 1-2-3-5 or 1-3-4-5 on the triad on the root or third), making a V of the next chord.. On the first beat of the next chord, resolve to a triad tone of that next chord.
4. Repeat step three (above), but change the V chord to a dominant chord.

Table of Detailed Studies in Progressive Order

The studies shown in the following table, shown in the keys of C, F and Bb focuses on changes of key scale type and pentatonic subsets. The chords and scales below reference the key of “C” as an example, by showing the letter names of the scales and chords in parenthesis as they would occur in the key of “C”. The two primary goals are:

- **Learn the chord changes.** Get intimately familiar with each of the chord changes and the options for scales. Then you can summarize those ideas when playing on quick chord I-VI-II-V chord changes.
- **Bebop ornamentation.** Learn to play the end of one chord and the beginning of the next chord each in arpeggio tones to make a turnaround. Then use bebop ornamentation on one or more notes in the turnaround in these four categories:
 1. a mordent or a turn
 2. a mordent or a turn followed by scalar encircling
 3. a mordent or a turn followed by a skip on the current arpeggio, then a resolution to the nearest triad tone of the next chord
 4. flurries of notes around each of multiple arpeggio tones, usually consecutive, but skips are good, too

key of C

progression for study	I	VI	II	V	
I major version I _{ma} 7-VI7-II _m 7-V7 (C _{ma} 7-A7-D _m 7-G7)	first, play over the entire progression with I (C) major scale, then with I (C) major pentatonic scale				
	I (C) major scale I (C) major pentatonic				
	play over the entire progression with I (C) major scale and with I major pentatonic, but sharp "1" of each of them on the VI chord.				
	I (C) major scale I (C) major pentatonic	I (C) major scale #1 I (C) major pentatonic #1 = VI (A) 7/11 pentatonic	I (C) major scale I (C) major pentatonic		
	play on I and VI with I major and I major pentatonic, sharpening the "1" on the VI chord, but play through the II and V chords with II (D) Dorian and II (D) minor pentatonic				
	I (C) major scale I (C) major pentatonic	I (C) major scale #1 I (C) major pentatonic #1 (C#) = VI (A) 7/11 pentatonic	II (D) Dorian II (D) minor pentatonic		
I Mixolydian version I7-VI7-II _m 7-V7 (C7-A7-D _m 7-G7)	play over the I (C) Mixolydian version with I (C) Mixolydian, then with I (C) major pentatonic				
	I (C) Mixolydian I (C) major pentatonic				
	play over the entire progression with I (C) Mixolydian, and with I major pentatonic, but sharp "1" of each of them on the VI chord.				
	I (C) Mixolydian I (C) major pentatonic	I (C) Mixolydian #1 I (C) major pentatonic #1 = VI (A) 7/11 pentatonic	I (C) major pentatonic I (C) major pentatonic		
	play on I and VI with I (C) Mixolydian and I (C) major pentatonic, sharpening the "1" on the VI (A) chord, but play through the II _m (D _m) and V (G) chords with II (D) Aeolian and II (D) minor pentatonic				
	I (C) Mixolydian I (C) major pentatonic	I (C) Mixolydian #1 I (C) major pentatonic #1 (C#) = VI (A) 7/11 pentatonic	II (D) Aeolian II (D) minor pentatonic		
combined version	I (C) major scale I (C) major pentatonic	I (C) major scale #1 I (C) major pentatonic #1 = VI (A) 7/11 pentatonic	I (C) Mixolydian I (C) major pentatonic	I (C) major scale I (C) major pent.	
two-chord parts of I-VI-II-V	I	VI	II	V	
I _{ma} 7-V7, key of I major (C _{ma} 7-G7, key of C major)	I (C) major scale I (C) major pentatonic	skip these two chords, this row is for I _{ma} 7 and V7 only		II (D) Dorian II (D) min. pent.	
I _{ma} 9 _{nr} -VI7, key of I major (E _m 7-A7, key of C major)	I (C) major scale III (E) minor pentatonic	I (C) major scale #1 I (C) major pentatonic #1	skip these two chords, this row is for I _{ma} 9 _{nr} (E _m 7) and VI7 (A7) only		
VI7-II _m 7, key of II Dorian (A7-D _m 7, key of D Dorian)	skip this chord (VI7 II _m 7 only)	II (D) melodic minor VI (A) 7/11 pentatonic	II (D) Dorian II (D) minor pentatonic	skip this chord (VI7 II _m 7 only)	
VI7-II _m 7, key of II Aeolian (A7-D _m 7, key of D Aeolian)	skip this chord (VI7 II _m 7 only)	II (D) harmonic minor VI (A) 7/11 pentatonic	II (D) Aeolian II (D) minor pentatonic	skip this chord (VI7 II _m 7 only)	
II7-V7, key of II Aeol./Dor. (D7-G7, key of D Aeol./Dor.)	skip this chord (VI7 II _m 7 only)	skip this chord (VI7 II _m 7 only)	II (D) minor pentatonic II (D) Aeolian	II (D) Dorian II (D) min. pent.	

key of F

progression for study	I	VI	II	V
I major version Ima7-VI7-IIIm7-V7 (Fma7-D7-Gm7-C7)	first, play over the entire progression with I (F) major scale, then with I (F) major pentatonic scale			
	I (F) major scale I (F) major pentatonic			
	play over the entire progression with I (F) major scale and with I major pentatonic, but sharp "1" of each of them on the VI chord.			
	I (F) major scale I (F) major pentatonic	I (F) major scale #1 I (F) major pentatonic #1 = VI (D) 7/11 pentatonic	I (F) major scale I (F) major pentatonic	
	play on I and VI with I major and I major pentatonic, sharpening the "1" on the VI chord, but play through the II and V chords with II (G) Dorian and II (G) minor pentatonic			
I (F) major scale I (F) major pentatonic	I (F) major scale #1 I (F) major pentatonic #1 (C#) = VI (D) 7/11 pentatonic	II (G) Dorian II (G) minor pentatonic		
I Mixolydian version I7-VI7-IIIm7-V7 (F7-D7-Gm7-C7)	play over the I (F) Mixolydian version with I (F) Mixolydian, then with I (F) major pentatonic			
	I (F) Mixolydian I (F) major pentatonic			
	play over the entire progression with I (F) Mixolydian, and with I major pentatonic, but sharp "1" of each of them on the VI chord.			
	I (F) Mixolydian I (F) major pentatonic	I (F) Mixolydian #1 I (F) major pentatonic #1 = VI (D) 7/11 pentatonic	I (F) major pentatonic I (F) major pentatonic	
	play on I and VI with I (F) Mixolydian and I (F) major pentatonic, sharpening the "1" on the VI (D) chord, but play through the IIIm (Dm) and V (C) chords with II (G) Aeolian and II (G) minor pentatonic			
I (F) Mixolydian I (F) major pentatonic	I (F) Mixolydian #1 I (F) major pentatonic #1 (C#) = VI (D) 7/11 pentatonic	II (G) Aeolian II (G) minor pentatonic		
combined version	I (F) major scale I (F) major pentatonic	I (F) major scale #1 I (F) major pentatonic #1 = VI (D) 7/11 pentatonic	I (F) Mixolydian I (F) major pentatonic	I (F) major scale I (F) major pent.
two-chord parts of I-VI-II-V	I	VI	II	V
Ima7-V7, key of I major (Fma7-C7, key of F major)	I (F) major scale I (F) major pentatonic	skip these two chords, this row is for Ima7 and V7 only		II (G) Dorian II (G) min. pent.
Ima9nr-VI7, key of I major (Am7-D7, key of F major)	I (F) major scale III (A) minor pentatonic	I (F) major scale #1 I (F) major pentatonic #1	skip these two chords, this row is for Ima9nr (Am7) and VI7 (D7) only	
VI7-IIIm7, key of II Dorian (D7-Gm7, key of G Dorian)	skip this chord (VI7 IIm7 only)	II (G) melodic minor VI (D) 7/11 pentatonic	II (G) Dorian II (G) minor pentatonic	skip this chord (VI7 IIm7 only)
VI7-IIIm7, key of II Aeolian (D7-Gm7, key of G Aeolian)	skip this chord (VI7 IIm7 only)	II (G) harmonic minor VI (D) 7/11 pentatonic	II (G) Aeolian II (G) minor pentatonic	skip this chord (VI7 IIm7 only)
II7-V7, key of II Aeol./Dor. (G7-C7, key of G Aeol./Dor.)	skip this chord (VI7 IIm7 only)	skip this chord (VI7 IIm7 only)	II (G) minor pentatonic II (G) Aeolian	II (G) Dorian II (G) min. pent.

key of Bb

progression for study	I	VI	II	V
I major version Ima7-VI7-IIIm7-V7 (Bbma7-G7-Cm7-F7)	first, play over the entire progression with I (Bb) major scale, then with I (Bb) major pentatonic scale			
	I (Bb) major scale I (Bb) major pentatonic			
	play over the entire progression with I (Bb) major scale and with I major pentatonic, but sharp "1" of each of them on the VI chord.			
	I (Bb) major scale I (Bb) major pentatonic	I (Bb) major scale #1 I (Bb) major pentatonic #1 = VI (G) 7/11 pentatonic	I (Bb) major scale I (Bb) major pentatonic	
	play on I and VI with I major and I major pentatonic, sharpening the "1" on the VI chord, but play through the II and V chords with II (G) Dorian and II (G) minor pentatonic			
	I (Bb) major scale I (Bb) major pentatonic	I (Bb) major scale #1 I (Bb) major pentatonic #1 (C#) = VI (G) 7/11 pentatonic	II (C) Dorian II (C) minor pentatonic	
I Mixolydian version I7-VI7-IIIm7-V7 (Bb7-G7-Cm7-F7)	play over the I (Bb) Mixolydian version with I (Bb) Mixolydian, then with I (Bb) major pentatonic			
	I (Bb) Mixolydian I (Bb) major pentatonic			
	play over the entire progression with I (Bb) Mixolydian, and with I major pentatonic, but sharp "1" of each of them on the VI chord.			
	I (Bb) Mixolydian I (Bb) major pentatonic	I (Bb) Mixolydian #1 I (Bb) major pentatonic #1 = VI (G) 7/11 pentatonic	I (Bb) major pentatonic I (Bb) major pentatonic	
	play on I and VI with I (Bb) Mixolydian and I (Bb) major pentatonic, sharpening the "1" on the VI (G) chord, but play through the IIIm (Dm) and V (C) chords with II (G) Aeolian and II (G) minor pentatonic			
	I (Bb) Mixolydian I (Bb) major pentatonic	I (Bb) Mixolydian #1 I (Bb) major pentatonic #1 (C#) = VI (G) 7/11 pentatonic	II (C) Aeolian II (C) minor pentatonic	
combined version	I (Bb) major scale I (Bb) major pentatonic	I (Bb) major scale #1 I (Bb) major pentatonic #1 = VI (G) 7/11 pentatonic	I (Bb) Mixolydian I (Bb) major pentatonic	I (Bb) major scale I (Bb) major pent.
two-chord parts of I-VI-II-V	I	VI	II	V
Ima7-V7, key of I major (Bbma7-F7, key of Bb major)	I (Bb) major scale I (Bb) major pentatonic	skip these two chords, this row is for Ima7 and V7 only		II (G) Dorian II (G) min. pent.
Ima9nr-VI7, key of I major (Dm7-G7, key of Bb major)	I (Bb) major scale III (D) minor pentatonic	I (Bb) major scale #1 I (Bb) major pentatonic #1	skip these two chords, this row is for Ima9nr (Dm7) and VI7 (G7) only	
VI7-IIIm7, key of II Dorian (G7-Cm7, key of C Dorian)	skip this chord (VI7 IIm7 only)	II (C) melodic minor VI (G) 7/11 pentatonic	II (C) Dorian II (C) minor pentatonic	skip this chord (VI7 IIm7 only)
VI7-IIIm7, key of II Aeolian (G7-Cm7, key of C Aeolian)	skip this chord (VI7 IIm7 only)	II (C) harmonic minor VI (G) 7/11 pentatonic	II (C) Aeolian II (C) minor pentatonic	skip this chord (VI7 IIm7 only)
II7-V7, key of II Aeol./Dor. (C7-F7, key of C Aeol./Dor.)	skip this chord (VI7 IIm7 only)	skip this chord (VI7 IIm7 only)	II (C) minor pentatonic II (C) Aeolian	II (C) Dorian II (C) min. pent.

LYDIAN DOMINANT AS bII OF I, IV OR V

In beginning our study of modal II-V-I cadences, we're looking at a substitute progression for V-I (G7 C). We're using a *flat five substitute*, employing a chord that is a flat fifth of V, in place of V. So, bII to I (Db7 to C) is a substitute for V to I (G7 to C). The "I" chord may be minor or major; it may be any chord quality that includes an un-altered fifth. It is possible to resolve to I chords with an altered fifth but takes careful preparation to make it work.

Develop this first by playing improvisation (especially arpeggio-based) on the chord that precedes the I chord and play four consecutive notes of the bII^{13#11} arpeggio immediately before the I chord. Play the bII^{13#11} arpeggio tones as the last four eighth notes or the last four sixteenth notes in the bar.

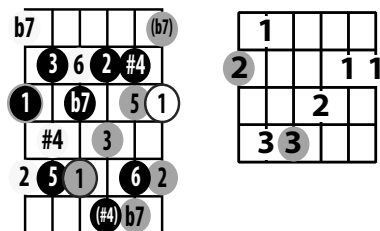
Voice-lead to the nearest triad tone of the I chord, its root, third or fifth. The more complex your improvisation, generally the more need there is for a straight-forward resolution, such as to the root triad. If you instead resolve to some other tone of the I chord, it will help to follow with another consecutive or two of the target I chord.

Starting our study with the bII^{13#11} to I is more colorful than V-I and is not *that* much more difficult.

bII^{13#11} to I major in E form, A form and C Form

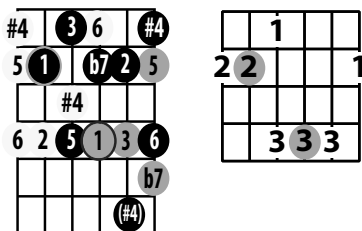
E form Bb major target

Bb^{13#11} V Bb major V



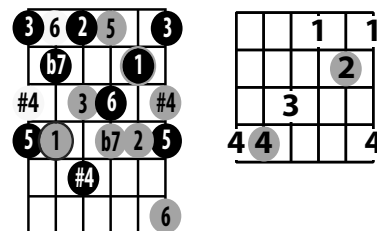
A form Eb major target

Eb^{13#11} VI Eb major V



C form F major target

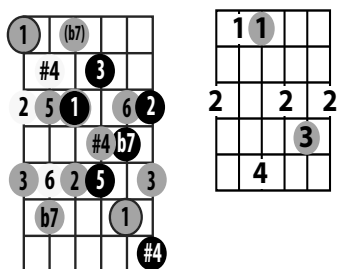
Gb^{13#11} VI F major V



bII^{13#11} to I major in D Form and G Form

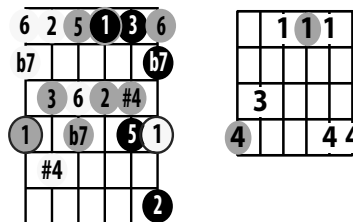
D form G major target

Ab^{13#11} IV G major IV



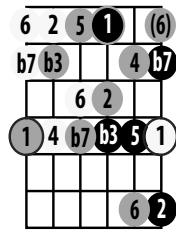
C major target

Db^{13#11} VI C major V

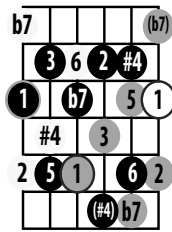


IIm13-bII13#11-Valt (flat five substitute)-I13

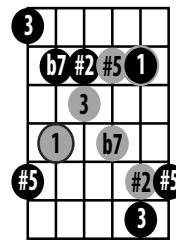
E form target G form IIm13, Dorian



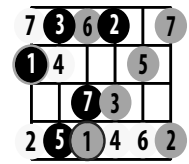
E form bII13#11, Lydian dom.



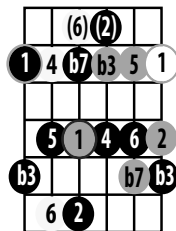
C form V7#5#9, super Locrian



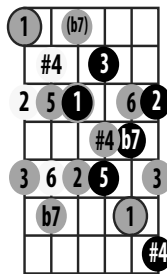
E form Ima9/6, major



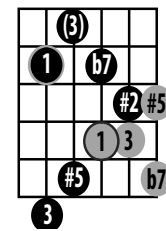
D form target E form IIm13, Dorian



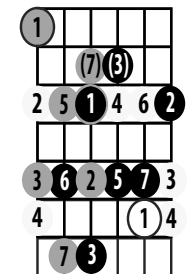
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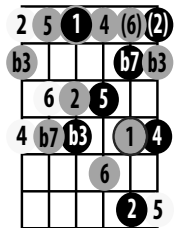
A form V7#5#9, super Locrian



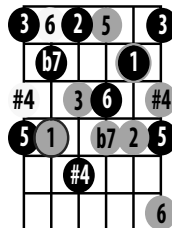
D form Ima9/6, major



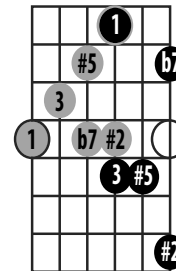
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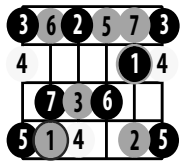
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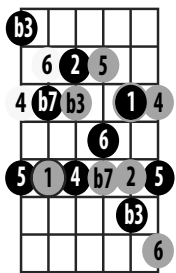
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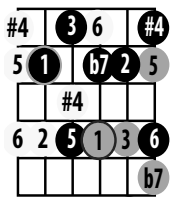
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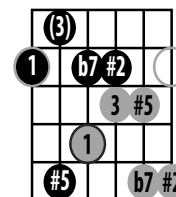
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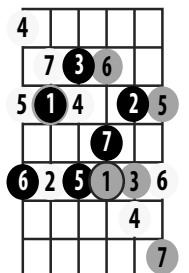
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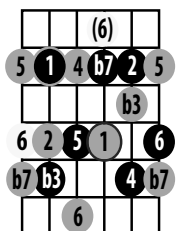
E form V7#5#9, super Locrian



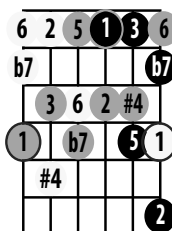
A form Ima9/6, major



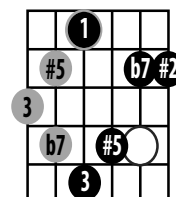
G form target A form IIm13, Dorian



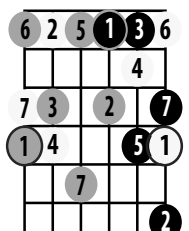
G form bII13#11, Lydian dom.



D form V7#5#9, super Locrian



G form Ima9/6, major



LYDIAN DOMINANT AS bII OF V IN A MINOR KEY

Am-Am-B \emptyset 7-E7 and Am-Am-F \flat 9-E7

<p>Am¹¹ V</p>	<table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">F Lydian dom. V</td> <td style="text-align: center;">F13#11 V</td> <td style="text-align: center;">B7#9#5 IV</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>	F Lydian dom. V	F13#11 V	B7#9#5 IV				<table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">E7b9 IV</td> <td style="text-align: center;">E7#9#5 V</td> </tr> <tr> <td></td> <td></td> </tr> </table>	E7b9 IV	E7#9#5 V		
F Lydian dom. V	F13#11 V	B7#9#5 IV										
E7b9 IV	E7#9#5 V											
<p>Am¹¹ V</p>	<table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">F Lydian dom. VI</td> <td style="text-align: center;">F13#11 VII</td> <td style="text-align: center;">B7#9#5 VI</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>	F Lydian dom. VI	F13#11 VII	B7#9#5 VI				<table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">E7b9 VI</td> <td style="text-align: center;">E7#9#5 VI</td> </tr> <tr> <td></td> <td></td> </tr> </table>	E7b9 VI	E7#9#5 VI		
F Lydian dom. VI	F13#11 VII	B7#9#5 VI										
E7b9 VI	E7#9#5 VI											
<p>Am¹¹ XII</p>	<table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">F Lydian dom. XI</td> <td style="text-align: center;">F13#11 XII</td> <td style="text-align: center;">B7#9#5 XI</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>	F Lydian dom. XI	F13#11 XII	B7#9#5 XI				<table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">E7b9 XI</td> <td style="text-align: center;">E7#9#5 XI</td> </tr> <tr> <td></td> <td></td> </tr> </table>	E7b9 XI	E7#9#5 XI		
F Lydian dom. XI	F13#11 XII	B7#9#5 XI										
E7b9 XI	E7#9#5 XI											

FINGERING SUMMARY OF MODAL II-V-I ARPEGGIO CADENCES

The next two pages show the types of II, V and I arpeggios all in one place. From left to right, the two pages show II types, V types, then I types.

On the first of those two pages, the four columns on the far left show the types of II chords, then bII13#11, followed by the diminished-sounding modes Phrygian major, super Phrygian and half/whole diminished.

On the second of those two facing pages, altered V chords and I chords are shown.

IIm13	IIm11b6	IIm11b9	IIm11b5b9	bII13#11	V7b9	V7b9	V13b9#9#11
Dorian	Aeolian	Phrygian	Locrian	Lydian dom.	Phryg. maj.	super Phrygian	h/w diminished

E form I

Bm13 (A major) IV	Bm11b13 (A Mix.) III	Bm11b9b13 (A Dor.) IV	Bm11b5b9b13 (A Ae.) IV	Bb Lyd. dom. V	E7b9 PM III	E7b9 SP III	E13b9#9#11 III
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D form I

Bm13 (A major) VI	Bm11b13 (A Mix.) VI	Bm11b9b13 (A Dor.) VII	Bm11b5b9b13 (A Ae.) VII	Bb Lyd. dom. VI	E7b9 V	E7b9 SP V	E13b9#9#11 VI
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C form I

Bm13 (A major) IX	Bm11b13 (A Mix.) IX	Bm11b9b13 (A Dor.) VIII	Bm11b5b9b13 (A Ae.) VIII	Bb Lyd. dom. X	E7b9 VIII	E7b9 SP VIII	E13b9#9#11 VIII
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A form I

Bm13 (A major) X	Bm11b13 (A Mix.) X	Bm11b9b13 (A Dor.) X	Bm11b5b9b13 (A Ae.) XII	Bb Lyd. dom. XII	E7b9 XI	E7b9 SP XI	E13b9#9#11 XI
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G form I

Bm13 (A major) I	Bm11b13 (A Mix.) II	Bm11b9b13 (A Dor.) II	Bm11b5b9b13 (A Ae.) I	Bb Lyd. dom. III	E7b9 I	E7b9 I	E13b9#9#11 I
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V7#5#9

V7b5#9

V7#5b9

V7b5b9

I_{ma}9/6

I¹³

Im¹³

Im¹¹

Ionian

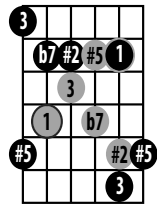
Mixolydian

Dorian

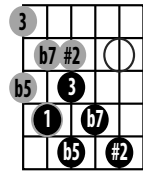
Aeolian

E form I

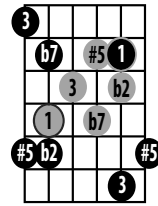
E7#5#9 IV



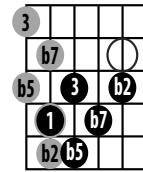
E7b5#9 IV



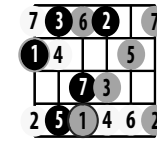
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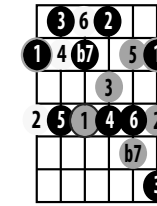
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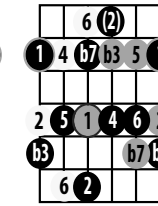
A_{ma}9/6 IV



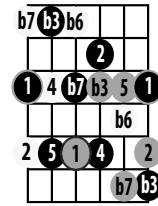
A¹³ IV



Am¹³ IV

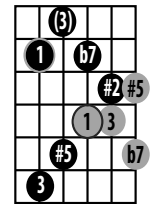


Am¹¹ III

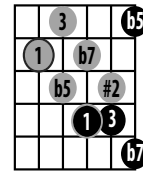


D form I

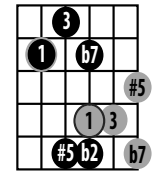
E7#5#9 VI



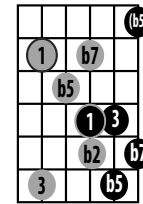
E7b5#9 VI



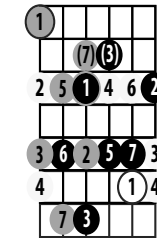
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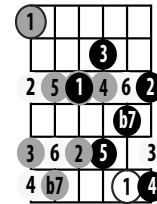
E7b5b9 VI



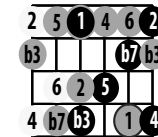
A_{ma}9/6 V



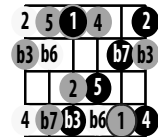
A¹³ V



Am¹³ VII

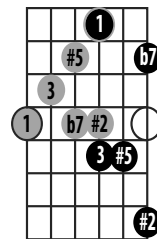


Am¹¹ VII

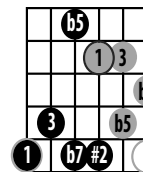


C form I

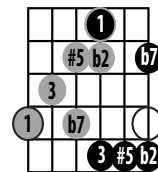
E7#5#9 IX



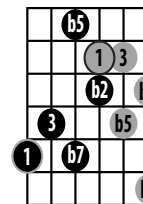
E7b5#9 IX



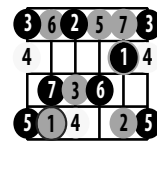
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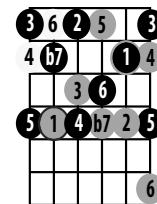
E7b5b9 VIII



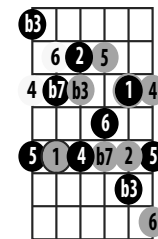
A_{ma}9/6 IX



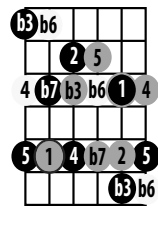
A¹³ IX



Am¹³ VIII

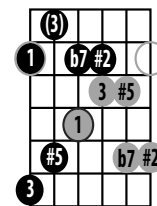


Am¹¹ VIII

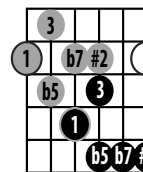


A form I

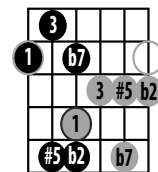
E7#5#9 XI



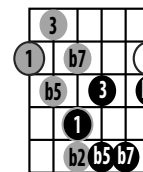
E7b5#9 XI



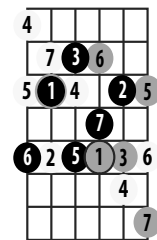
E7#5b9 XI



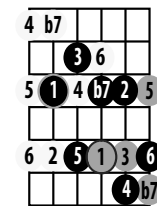
E7b5b9 XI



A_{ma}9/6 X



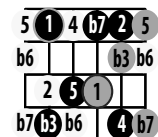
A¹³ X



Am¹³ XI

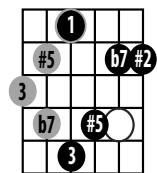


Am¹¹ XII

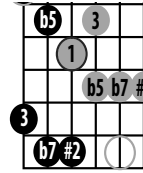


G form I

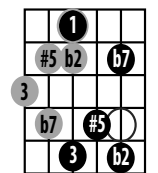
E7#5#9 II



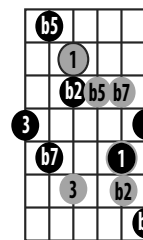
E7b5#9 I



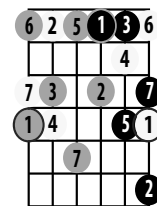
E7#5b9 II



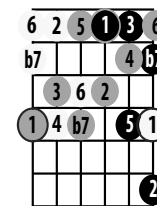
E7b5b9 I



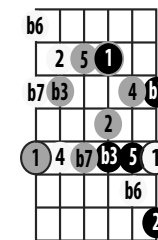
A_{ma}9/6 II



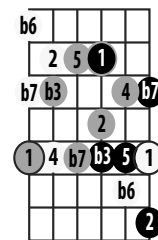
A¹³ II



Am¹³ I



Am¹¹ I



Improv Level 4: Arpeggios

- **Chord Tone Emphasis**
- **Establishing The Chord Progression In Time**
- **Melodically Superimposed Cadences**
- **Voice Leading**
- **Triad Arpeggio Solo Examples**
- **Seventh And Ninth Arpeggio Solo Examples**

CHORD TONE EMPHASIS

The primary objective is to emphasize chord tones on the accented parts of the bar, which are on the beat by default but may be established on other parts of the bar by accents that occur in the song. The melody should move by scale step, with two exceptions where you may skip within the range of a sixth: (1) within the tones of the current chord and (2) to a tone which is the upper or lower neighbor of the tone it precedes.

Preparation

Memorize arpeggios for the area first. Determine scales that could be used for each chord. It is preferable that sequences of chords share the same parent scale.

In-Position Arpeggios for the Chord Changes

Begin work on chord progressions of one or two chords per bar, as strict arpeggios are not so interesting when played for longer durations. First play in a strict vertical position (each of four consecutive frets are assigned fingers one through four, respectively and fingers one and four can reach one fret out-of-position). While this will not allow you to gravitate toward easier and more practical fingerings for some of the chords, it will greatly reduce the number of fingerings you will have to memorize to get started.

Ascend and descend arpeggios linearly. Whenever you reach the extent of the range, reverse direction. Play the chord changes for the song in eighth notes, triplets or sixteenth notes (whichever is appropriate). Look forward to Voice Leading for decision making in connecting arpeggios smoothly.

More advanced players may find it more productive to set this step aside, begin work with ninth arpeggios shown below, then return to work on the seventh arpeggios as they are often less interesting. Having spent some time with the ninth arpeggios, the sevenths would then be easier to work with (since they are the larger part of the ninth arpeggios).

Two Octave Ninth Arpeggios In Position

Ninth arpeggios can be ascended and descended much like the seventh arpeggios. When you ascend to ninth, you can take the option of descending to the root ("8", a scale step below the ninth) and begin ascending another octave from that root. For this purpose, practice ninth arpeggios in an overlapping fashion, as described below.

Two Octave Ninth Arpeggio Exercises. Choose a position and play ninth arpeggios for each chord in the song (unless restricted to a seventh chord by the chord type such as diminished seventh). Play an arpeggio for each chord in the chord progression once, to preview it.

When you can play two complete octaves of each ninth arpeggio in-position, ascend from the low octave root to the ninth, descend one scale step to the higher octave root and ascend the second octave of the ninth arpeggio. Range solutions:

- If you can't reach the low octave root, play that note up an octave.
- If you can't reach the high octave ninth, substitute the root for it.

Once you can play the chord progression in ninth arpeggios, begin to connect the chords with setup and target tones described below.

Study Subsets and Synonyms

With an awareness of the scale of which a chord is a part, you can determine subsets of the chord by thinking of any chord tone and recalling the scale tone chord of which that note would be the root.

- Seventh chords (two seventh subsets to each ninth chord).
- Triads (three subset triads to a ninth chord, two subsets to a seventh or sixth chord).
- Thirds (most chords are stacked major and minor thirds).

Common examples of chord synonyms are: $\text{IIIm7} = \text{IV } 6$, $\text{IIIIm7} = \text{V6}$, $\text{VIIm7} = \text{I6}$, $\text{VIIIm7b5} = \text{IIIm6}$.

Working Structures into Your Improvisation

Develop fingerings for arpeggio figures as shown below with two versions for the root on strings 6, 5, 4 and 3 (sometimes only one version on string 3). Practice each type of arpeggio figures for a few minutes, then spend about twice that much time improvising with the figure. Learn to creatively and abstractly modify the figures during your improvisation.

Target Tone and Setup Tone

For the purpose of connecting chords smoothly, we need to consider how the last note of the current chord leads to the first note of the chord that follows. The current chord is the *setup chord* and the next chord is the *target chord*.

The general use of setup tones and target tones, can be conceived as used in bass lines. Move toward any chord tone of the target chord at the end of the setup chord with a scale tone above or below a tone of the target chord; or with a note that is the fifth of the target chord *if* it moves to the root. Setup tones don't have to be tones of the setup chord, but it is preferable.

ESTABLISHING THE CHORD PROGRESSION IN TIME

The Rhythmic Pulse Concept

Improvisational music is stronger in rhythmic than in harmonic (chordal) content. An improviser generally conceives a rhythmic idea, then puts a harmonic or scalar structure onto the rhythm. A major part of your study in improvising with arpeggio structures should be done with regular pulse groups such as four sixteenth notes per beat. You will then creatively and abstractly modify these later.

Begin in Step Time

Before playing with a regular tempo, build melodic figures in step time, counting to yourself which part of the beat you are on and stopping wherever necessary to think. Gradually play more regularly, until you are playing at a slow but regular tempo. Then, gradually accelerate the tempo.

Progressive Examples to Work Out Setup and Target Tone in Step Time

It is best to begin your study by limiting the range to approximately an octave, preferably on the smallest four strings.

- ♦ Linear arpeggios, full range. Insert scale tones for the setup tone where necessary.
- ♦ Linear arpeggios, abbreviating the range with an early change of direction.
- ♦ Arpeggios with internal skips (current chord tones only).
- ♦ Arpeggios with passing tones. Use the passing tones on the unaccented part of the bar.
- ♦ Arpeggios with neighboring and passing tones. Use neighboring and passing tones on the unaccented part of the bar.

Move from Setup to Target Tone Stepwise, with at Least Two Exceptions:

- ♦ Where the setup tone is the fifth of the target chord, moving to the root of the target chord.
- ♦ Using a pentatonic upper or lower neighbor in the interval of a minor third.

If you play 9 (=2) on the beat, it should be followed by the appropriate 7 (b7), to communicate the ninth chord. It wouldn't hurt to throw in the fifth after the seventh, either.

Develop an awareness of upper and lower neighbors that can decorate each chord tone, which may form a note group of three or four notes that could be interpreted as part of many scales or arpeggios (including seven and five tone scales. Ultimately, you will develop a melodic sense of decorating chord tones that supersedes scales and arpeggios. Melodic phrases don't have to be interpreted only in terms of a "scale" or "arpeggio" from which the tones came.

MELODICALLY SUPERIMPOSED CADENCES

When a section of a piece has original chord changes with one or more chords per bar, play arpeggios to represent the original changes (such as parts of the last four bars of Billie's Bounce). Wherever a chord has a duration of over one bar, consider using melodically superimposed cadences. Cadences are also called *turnarounds*. Superimposed cadences are typically those with root movement in fourths, optionally with [flat five substitutes](#) for dominant seventh type chords. They can be practiced first in chords, then expressed with single-note melody. See [Melodically Superimposed Cadences](#), and [Level 4 Improv: Superimposed Cadence Examples](#).

Try to stay in the upper range, in lower positions play predominantly on the first four strings. During each arpeggio, when you run out of range, turn back and go the other direction. Don't play the highest or lowest note twice in succession. At the end of each arpeggio, move to a note in the next arpeggio up or down by scale step. Using stepwise voice movement from the last tone in one chord to the first in the next where possible. Insert a scale tone or chromatic where the last tone of one chord would redundantly be the same as the first note in the next chord.

For now, where the last note of the current chord is also in the next chord, you can progress to the next chord by a third (unless the common tone is a seventh of the next chord, where you can progress up to the root).

Improv on the tune in your existing style of improvisation. Add in one cadence, then another, etc.

MELODIC DEVICES

See the chapter, [Melodic Cells](#).

Resolved Beat and Unresolved Beat Figures

Resolved beat melodic figures are complete within the beat by ending the beat with a chord tone. They complete a chord sound within a beat.

Unresolved beat melodic figures end with a setup tone and are expected to resolve with a chord tone at the beginning of the next beat. Most of the melodic cells shown in [Melodic Cell Types](#) are unresolved beat figures.

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VOICE LEADING

See the chapter on [Voice Leading](#).

Strict Chord Tones As Setup and Target Tones

Target tones are the chord tones of the next chord. Setup tones are those of the current chord. The note that is played last during the current chord is called the setup tone. A setup tone can be a scale tone above or below the target chord tone, as long as the interval is a minor third (one and a half steps or three frets) or less. Once you play a tone of the current chord, you can always move to other tones of the same chord. This is generally where you have the most freedom in playing skips (intervals larger than a scale step). The interval of a minor third occurs in 6/9 type pentatonic scales between “6” and “1”, in minor pentatonic scales between “ $\flat 3$ ” and “1”. Minor thirds also occur on chords built in harmonic minor and harmonic major scales which contain a minor third interval between scale tones “ $\flat 6$ ” and “7”. It is very useful to look at the setup and target tones for a pair of chords as sets of tones. Typical voice leading is shown below:

Chord Root Movement In Fourths

The tones on the fifth, seventh and ninth of the current chord will function as upper or lower neighboring tones of the target chord.

The root of and third of the current chord can function as a setup tone to a target chord's root.

Stepwise And Chromatic Chord Root Movement

The root, third and fifth of the current chord up or down to a tone of the target chord, When a chord root descends stepwise, its seventh may be the same note as the root of the target chord, in which case you should usually avoid redundancy by replacing it with another tone that would lead better to the target chord. The replacement tone could be an upper neighbor or the fifth of the target chord (especially if it moves up a perfect fourth to the root of the target chord).

Introduction To Harmony

Music is an expression, a form of communication (therefore, a language). It embodies agreement and disagreement, order and chaos. I typically listen to the instrumental content in a song and am initially oblivious to the lyrical content. I am amazed at others who have memorized lyrics to hundreds of songs (my friend Jim knows a thousand). When I eventually pay attention to the lyrics, I recognize that if the song was well written, there are parallels in emotional and expressive content in the harmony, rhythm and lyric. For example, in analyzing the chord progression to a song, I notice a cadence (chord change) that changes the minor (sad) key to major (happy) progressively over two bars of music. Then I read the lyrics for that section of music and notice the same emotional content and expression in the lyrics as in the harmony and rhythm.

When each melody note is harmonized by another note, a secondary melody is created. Additional melodies could be added so that with each melody note, a chord of three or more notes occurs. Each melody is considered a part, voice, or melody line. Imagine connecting the note heads for each melody in an arrangement with a written line on the music notation (a note head is the oval part of a note written in standard music notation). The line would illustrate a melody line. Each melody line constitutes a voice. The term voice comes from vocal arrangements where each persons voice would proceed through a melody line and create a part of the arrangement.

Voice Leading

The logical movement for each note to the next for each voice in an arrangement is called voice leading. In studying the arrangement of chord tones of one chord moving to those of another, each note in a chord is called a *voice* and has a logical destination in the next chord. As a voice progresses through a number of chords, it creates a *voice path*. The study of the paths used by a number of voices is called *voice mapping*.

Harmonic Types Of Music

Monophonic music has a single melody line. *Homophonic music* has two or more melody lines, with all of the lines moving in parallel rhythmically, that is with no rhythmic individuality. Each part in homophonic music has the same number of notes as another part, each note occurring at the same time as a note in each of the other parts. *Polyphonic music* has rhythmic individuality for each of the parts, with some occurrences of a note in one part not accompanied by notes in all of the other parts.

Counterpoint is the study of note against note in a multi-voiced arrangement. The term comes from the Latin expression *punctus contra punctus*, which means point against point. Think of each note head in music notation as a point. The five species of counterpoint:

1. first species counterpoint: note against note.
2. second species counterpoint: two or three notes to one.

3. third species counterpoint: four or six notes to one.
4. fourth species counterpoint: two notes per melody note with syncopation.
5. fifth species (also called free or “florid” counterpoint): combination of the other species.

Major Scale-Tone Triad Voice Mapping

Since triads are very common and are subgroups of larger chords, it is very advantageous to know the nature of movement of their voices. The most useful voice movement is that where each voice moves to the closest available tone of the next chord. This conservative voice movement is easy for the ear to follow, whereas skips with intervals of a third or larger are generally harder to follow.

root moves up stepwise:all three tones ascend one scale step.

root moves down stepwise:all three tones descend one scale step.

root moves up a third: the root moves down a scale step and the third and the fifth stays the same.

root moves down a third:the fifth moves up a scale step and the root and the third stays the same.

root moves up a fourth:the third and the fifth move up a scale step and the root stays the same.

root moves down a fourth: ...the root and the third move down a scale step and the fifth stays the same.

Effective music has an interplay between predictability (comfort) and surprise (stimulation). Good improvisers can hear the chord quality another musician is suggesting (thinking). A great improviser can hear a repeating (looping) melody and play another melody with it, which creates a harmony for each note.

TRIAD ARPEGGIO SOLO EXAMPLES

Hotel California Style Solo with Triad Arpeggios - 144 BPM - [videotab](#)

1 Bm F#

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

10 (10) 7 10 7 9 10 9 7 7 9 9 10 7 6 9 9 8 6 7 9 9 7 9 (9)

5 A E

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

7 9 7 7 9/11 9 12 10 12 12 (12) 10 12 10 9 9 9 11 12 12 11 9 11 9

9 G D

2 1 2 1 2 3 1 3 3 3 1 3 1 2 1 3 2 3 1 2 3 1 1 2 3 2 1 3 1 2 1 2 1 3

11 (11) 10 11 10 11 12 10 12 12 9 11 9 10 9 11 12 14 11 10 11 12 11 9 9 11 9 11 9 12

13 Em F# Bm

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

12 12 12 14 (14) 12 12 14 14 14 14 14 12 14 12 14 16 12 15 14 14 17 (17) 14 16 14 15 16 16 13 14 13 13 16 14 13 14

SEVENTH AND NINTH ARPEGGIO SOLO EXAMPLES

Jazz Blues Pentatonic and Chromaticized Arpeggios Solo Example

Swing Eighthths

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

theme 1a
4 4 1 2 3 2 4 3 2 1 2 1 4 4 1 4 4 2 3 2 3 2 4 3 1 3 1

Theme and variation. Theme 1 is bars 1-3 is varied in bars 5-7, but retains its shape. It is modified in the first two bars of version 1a (bars 5-6) to accommodate the Eb7 chord that has a flatted third of the key and to emphasize triad tones of the Eb, which are 4, 6, 1 of the key. The note "G", for example on the end of the third beah in bar 5 is "6" of the key (Bb).

bar 0 (pickup)

Abma7, built on the next lower scale tone from Bb is a group of all the neighboring tones for the Bb triad that it precedes.

bar 1

Bb major pentatonic scale

bar 2. beats 1-2

Eb13 arpeggio with 3-note linear chromatics. This melodic device inserts two chromatic tones below each chord tone.

bar 2. beats 3-4 through bar 3

Bb major pentatonic with a C# lower chromatic embellishment to "D" the third of Bb.

bar 4

Bb major pentatonic with a C# lower chromatic embellishment to "D" the third of Bb, then chromatics from "D" (3 of Bb) to F (5 of Bb).

bar 5

Bbm6/9 pentatonic contrasts Bb major 6/9 pentatonic with skips, creating angular melody, like jazz saxophone.

bar 6

Descend Bbm7. Chromaticize from b7 (Ab) to F. Add scale tone 2 between b3 and 1, as in Bb Dorian.

bar 7: same as bar 3

Bb major pentatonic with a C# lower chromatic embellishment to "D" the third of Bb.

bar 8

hybrid C Aeolian and C harmonic minor descends 7, b7, b6, 5, etc.

the last three notes in bar 8 are G7 chord tones (3, 5 b7)

bar 9

Cm9 arpeggio, ascending to its ninth (D), the to its high-octave third (Eb).

bar 9

After ascending Cm9 arpeggio and ending on its flatted third, now we return to its ninth (D), which doubles as the thirteenth of F.

bar 10

To bring out the "heavenly" suspended quality, the melody descends from the thirteenth of F (D) to its eleventh, which sounds as a suspended fourth. The "D" at the end of the bar, anticipates the third of Bb.

31

root third fifth b7 9 11 13

F7

13 11 root nat.7 b7 4 3 of Bb

tones of F13

TAB

13 12 10 13 12 11 10

bar 10

Six is the classic bright-mooded coloring tone in swing music. It is driven home at the end.

33

Bb7

G7

root fifth sixth sixth sixth

tones numbered in the key of Bb

TAB

13 12 10 13 12 11 10

Jazz Blues Basic Arpeggios and Harmonic Minor Solo Example

Swing Eighths

B \flat 9 E \flat 9 B \flat 9

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

TAB: 8 7 6 9 9 6 8 9 6 9 6 9 8 6 8 6 5 8 5 6 8 5 4 6 5 8

5 E \flat 9 B \flat 9 G7(#9)

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

TAB: 6 5 8 6 9 8 6 5 9 8 6 5 8 8 9 8 6 5 7 8 7 5 6 4

9 C m 9 F7(b9) B \flat 9 G7(#9) C m 7 F7(b9)

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

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

bar 1 - B \flat 9

bar 2 - B \flat minor pentatonic, strategically placing b5 where it suggests #IVdim7

bar 3, beats 1-2 - darken with B \flat Dorian (b3)

bar 3, beats 3-4 - B \flat 9

13

b5 b3

TAB: 8 7 6 9 8 9 6 9 6 9 8 6 8 8 5 6 8 6 8 9 6 5 6 8 5 6

bar 4, beats 3-4 - Bb7
as a V of Eb7,
the IV chord
Bb7

bar 5, beats 1-3
- Eb9

bar 5, beat 3-bar 6, beat 2
3-note linear chromatics on Eb13
(two chromatic tones below each chord tone)

17

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

T
A
B

bar 7, beats 3-4
hybrid C Aeolian and C harmonic
minor descends 7, b7, b6, 5, etc.

bar 8 through bar 9, beats 3-4
C harmonic minor on G7, its V7 chord

22

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

T
A
B

bar 9, beats 2-4
Cm9 (with "D"
passing tone)

bar 10
1 2 3 5 fragment on F7b9, the
V7b9 of Bb harmonic minor

27

(stepwise, but intervals like 1 2 3 5 fragment) (stepwise, but intervals like 1 2 3 5 fragment)

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

T
A
B

bar 11 -
starting with Bb chord tone,
then hybrid C Aeolian and C harmonic minor on G7b9,
its V7b9 (b7 7 b7 b6 5)

bar 12 -
Bb Mixolydian with chromatics, emphasizing
Cm7 chord tones, then Bb major on F7 chord tones

32

2 1 4 3 1 3 2 1 4

T
A
B

Cantaloupe Island Style Arpeggio Theme And Variation Solo rhythm track

Fm7

TAB

5

TAB

D_b9(#11)

9

TAB

Dm11

13

TAB

Jazz Blues Pentatonic and Chromaticized Arpeggios Solo Example

Swing Eighthths

Chords: Bb7, Eb7, Bb7, Eb7, Bb7, G7, Cm7, F7, Bb7, G7, Cm7, F7

Theme 1: 1 4 3 1 2 3 1 2 2 4 3 2 4 1 2 3 4 4 1 4 4 2 3 2 1 1 2 3 4 2

Theme 1a: 4 4 1 2 3 2 4 3 2 1 2 1 4 4 1 4 4 2 3 2 3 2 4 3 1 3 1

Theme and variation. Theme 1 is bars 1-3 is varied in bars 5-7, but retains its shape. It is modified in the first two bars of version 1a (bars 5-6) to accommodate the Eb7 chord that has a flatted third of the key and to emphasize triad tones of the Eb, which are 4, 6, 1 of the key. The note "G", for example on the end of the third beah in bar 5 is "6" of the key (Bb).

bar 0 (pickup)

Abma7, built on the next lower scale tone from Bb is a group of all the neighboring tones for the Bb triad that it precedes.

bar 1

Bb major pentatonic scale

Chords: Abmaj7, Bb7, Bb7

bar 2, beats 1-2

Eb13 arpeggio with 3-note linear chromatics. This melodic device inserts two chromatic tones below each chord tone.

bar 2, beats 3-4 through bar 3

Bb major pentatonic with a C# lower chromatic embellishment to "D" the third of Bb.

bar 4

Bb major pentatonic with a C# lower chromatic embellishment to "D" the third of Bb, then chromatics from "D" (3 of Bb) to F (5 of Bb).

bar 5

Bbm6/9 pentatonic contrasts Bb major 6/9 pentatonic with skips, creating angular melody, like jazz saxophone.

bar 6

Descend Bbm7. Chromaticize from b7 (Ab) to F. Add scale tone 2 between b3 and 1, as in Bb Dorian.

bar 7: same as bar 3

Bb major pentatonic with a C# lower chromatic embellishment to "D" the third of Bb.

bar 8

hybrid C Aeolian and C harmonic minor descends 7, b7, b6, 5, etc.

the last three notes in bar 8 are G7 chord tones (3, 5 b7)

bar 9

Cm9 arpeggio, ascending to its ninth (D), the to its high-octave third (Eb).

bar 9

After ascending Cm9 arpeggio and ending on its flatted third, now we return to its ninth (D), which doubles as the thirteenth of F.

bar 10

To bring out the "heavenly" suspended quality, the melody descends from the thirteenth of F (D) to its eleventh, which sounds as a suspended fourth. The "D" at the end of the bar, anticipates the third of Bb.

31

root third fifth b7 9 11 13

F7

13 11 root nat.7 b7 4 3 of Bb

tones of F13

TAB

13 12 10 13 12 11 10

bar 10

Six is the classic bright-mooded coloring tone in swing music. It is driven home at the end.

33

Bb7

G7

root fifth sixth sixth sixth

tones numbered in the key of Bb

TAB

13 12 10 13 12 11 10

Jazz Blues Basic Arpeggios and Harmonic Minor Solo Example

Swing Eighths

Bb9 Eb9 Bb9

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

TAB: 8 7 6 9 9 6 8 9 6 9 6 9 8 6 8 6 5 8 6 8 5 4 6 5 8

5 Eb9 Bb9 G7(#9)

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

TAB: 6 5 8 6 9 8 6 5 9 8 6 5 8 8 9 8 6 5 7 8 7 5 6 4

9 Cm9 F7(b9) Bb9 G7(#9) Cm7 F7(b9)

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

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

bar 1 - Bb9

bar 2 - Bb minor pentatonic, strategically placing b5 where it suggests #IVdim7

bar 3, beats 1-2 - darken with Bb Dorian (b3)

bar 3, beats 3-4 - Bb9

13

b5 b3

TAB: 8 7 6 9 8 9 6 9 6 9 8 6 8 8 5 6 8 6 8 9 6 5 6 8 5 6

bar 4, beats 3-4 - Bb7
as a V of Eb7,
the IV chord
Bb7

bar 5, beats 1-3
- Eb9

bar 5, beat 3-bar 6, beat 2
3-note linear chromatics on Eb13
(two chromatic tones below each chord tone)

17

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

T
A
B

bar 7, beats 3-4
hybrid C Aeolian and C harmonic
minor descends 7, b7, b6, 5, etc.

bar 8 through bar 9, beats 3-4
C harmonic minor on G7, its V7 chord

22

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

T
A
B

bar 9, beats 2-4
Cm9 (with "D"
passing tone)

bar 10
1 2 3 5 fragment on F7b9, the
V7b9 of Bb harmonic minor

27

(stepwise, but intervals like 1 2 3 5 fragment) (stepwise, but intervals like 1 2 3 5 fragment)

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

T
A
B

bar 11 -
starting with Bb chord tone,
then hybrid C Aeolian and C harmonic minor on G7b9,
its V7b9 (b7 7 b7 b6 5)

bar 12 -
Bb Mixolydian with chromatics, emphasizing
Cm7 chord tones, then Bb major on F7 chord tones

32

2 1 4 3 1 3 2 1 4

T
A
B

All Blues Harmonic Minor and Melodic Minor Example solo rhythm track

Swing Eighths 

Musical notation for the first system, including a treble clef staff with a key signature of one sharp (F#) and a 6/4 time signature, and a guitar TAB staff with a 7th fret marker.

Musical notation for the second system, starting with a G7 chord. It includes a treble clef staff with a melodic line and a guitar TAB staff with fret numbers and fingering (4 1, 2 3 3, 3 1 3 4, 3 1, 1 4 3 1 1 2 4 1 4 1).

Musical notation for the third system, continuing the melodic line with a treble clef staff and a guitar TAB staff with fret numbers and fingering (1 3, 3, 1 3, 2 3 1 4 3 1 4 3 4, 4 1 2 3 4).

Musical notation for the fourth system, starting with a C9 chord. It includes a treble clef staff with a melodic line and a guitar TAB staff with fret numbers and fingering (1 1, 3 4 4, 1 3 1 3, 1 3 1 3, 3 3 3 1 3 1 1).

Musical notation for the fifth system, starting with a G7 chord. It includes a treble clef staff with a melodic line and a guitar TAB staff with fret numbers and fingering (2 2, 2, 2 1 2 2, 4 3 1, 1 3 1 3 3 3).

9 **D7(#9)** **Eb7(#9)** **D7(#9)**

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

TAB: 5 6 3 4 3 6 3 4 3 6 4 3 5 8 6 5

11 **G7**

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

TAB: 5 5 5 8 7 5 4 5 7 4 7 4 3 3 13 11 13 12 13 10

13 **G7** **(D7#5#9)**

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

TAB: 11 11 11 13 13 15 10 13 12 11 10 14 13 11 12 10

15

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

TAB: 12 10 12 11 10 11 10 12 10 13 14 13 11 12 10 12 15 18 17 18 15 15 16 16 18 15

17 **C9**

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

TAB: 9 12 14 14 15 14 12 12 12 18 17 18 17 15 15 18 18 15 17 18 15 15 16 16 18 17 18 17 15

19 G7

(D7#5#9) —

3 1 3 1 2 3 1 3 2 3 1 3 2 1 3 1 2 3

1 3 2 3 1 3 2 1 3 1 2 3

T 15 18 17 15 18 17 15 15 17 18

A 17 14 17 15 16 17 15 18 17 15 17 18

B 17 14 16 17 15 18 17 17 15 17 18

21 D7(#9) Eb7(#9) D7(#9)

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

10 14 15 15 14 15 14 15 17 18 17 14 14 11 14 15 14 17 14 15 14 16

T 15 18 17 15 18 17 15 15 17 18

A 17 14 17 15 16 17 15 18 17 15 17 18

B 17 14 16 17 15 18 17 17 15 17 18

23 G7

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

T 15 14 14 15 14

A 17 15 14 16 17 15 14 17 17

B 17 15 16 17 17 15

Cantaloupe Island Chromaticized Arpeggios Solo Example - solo

3

Fm⁹

3 full 3 1 3 1 2 1 1 3 1 1 1 1 3 1 3 1

TAB: 11 8 11 (11) 9 11 9 10 9 | 8 10 8 8 8 8 10 8 10 8

4

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

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

5

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

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

7

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

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

9

Db⁹(#11)

2 full 3 1 3 1 1 2 1 3 2 3 1 3 2 1

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

11

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

15 15 11 12 11 16 15 16 16 15 16 15 (15) (15) (15) 13 15 11 10 11

13

Dm¹¹

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

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

15

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

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

Cantaloupe Island Style Arpeggio Theme & Variation solo rhythm track

1 Fm7

TAB 13 11 10 13 12 10 11 13 13 15 13 11 13 11 13 13 15 11 15 16 15 11 18 15 15 13 16 13 16 13 11 15 13 13 13 12 11 12 13 10 10

5

TAB 13 10 11 8 10 8 8 10 8 10 8 10 9 8 11 13 13 11 13 17 16 15 17 15 16 18 15 18 15 15 18 16 15 18

9 Db9(#11)

TAB 19 16 16 18 18 15 13 14 13 11 11 9 9 12 8 9 8 9 11 8 8 11 9 8 10 8 11 8 10 8 11 10 8 6 4

13 Dm11

TAB 4 5 7 5 6 5 7 5 10 8 8 10 13 12 12 14 17 15 17 15 15 17 13 15 10 12 8 10 5 7 5 15 12 10 7 5 7 3 5 3 5 8 6