Theory 2

From *Fundamentals of Jazz Improvisation: What Everybody Thinks You Already Know*

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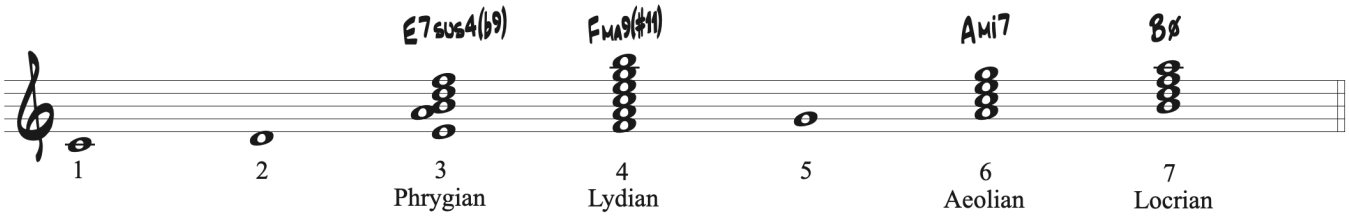
More Modes

Major, *Dorian*, and *Mixolydian* modes have been examined in Chapter 4. There are many additional chord qualities used in jazz improvisation, arranging, and composition. Other modes of the major scale, modes of the harmonic minor, and modes of the ascending melodic minor help us find pitch collections that represent specific altered sounds. Modes do not always represent chord qualities in a directly logical manner. Their identification helps us proceed from the familiar to the unfamiliar. For instance, if one has learned patterns and developed muscle memory with major scales, the same patterns and muscle memory facilitate *Dorian* and *Mixolydian* (minor and dominant). One works for three. The same is true for modes (scales) based on other foundational scale types. As in the examples illustrated for major, Dorian, and Mixolydian, the following modes can be transposed to any key.

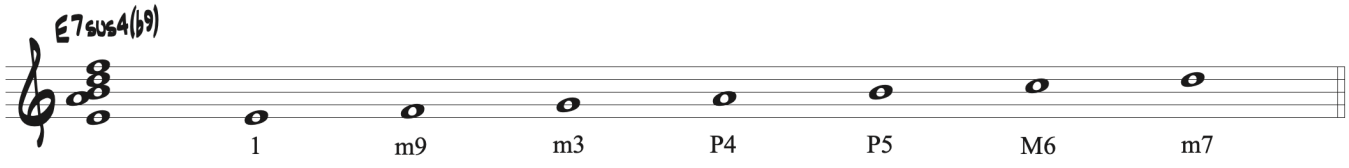
From the Major Scale

As in the Major (Ionian, 1st), Dorian (2nd), and Mixolydian (5th) modes/scales previously studied (Chapter 4), tertian harmonies built on other degrees of the major scale generate different chord qualities. Likewise, stepwise sequences of notes starting on different degrees of the major scale generate additional modes/scales. We will now examine Phrygian 3rd), Lydian (4th), Aeolian (6th), and Locrian (7th).



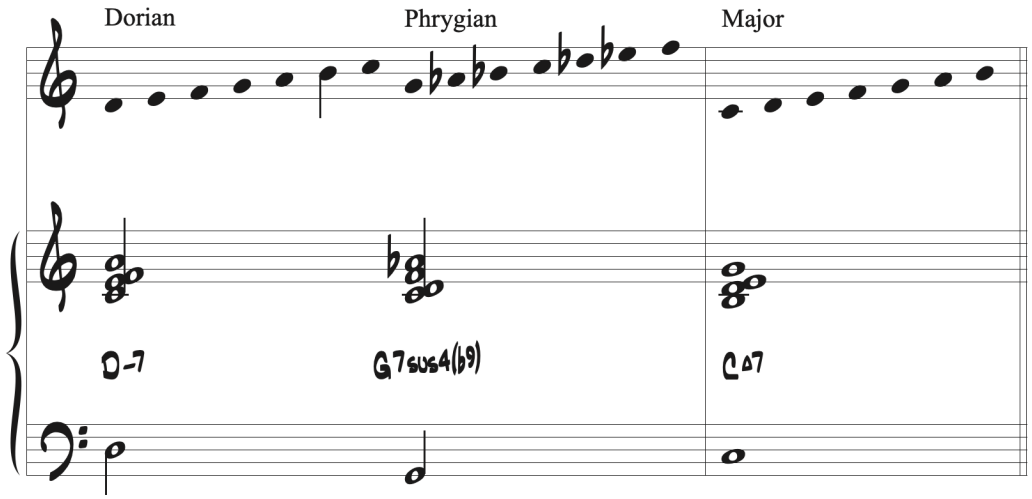
Phrygian

The chord built on the third scale degree is adjusted due to the flat-9 interval between the root and the 9th. In major and minor chords, this interval is often considered undesirable, since it adds tension to a sound that is usually *at rest*. Dominant chords can manage the flat-9 because they inherently contain a tritone and are considered *active*—they already have dissonance and tension. For the chord built on the third degree of the major scale, the fourth note up from the root of the chord is usually substituted for the third. Without the major or minor quality, the flat-9 is acceptable. Both the chord and the scale are called *Phrygian*.

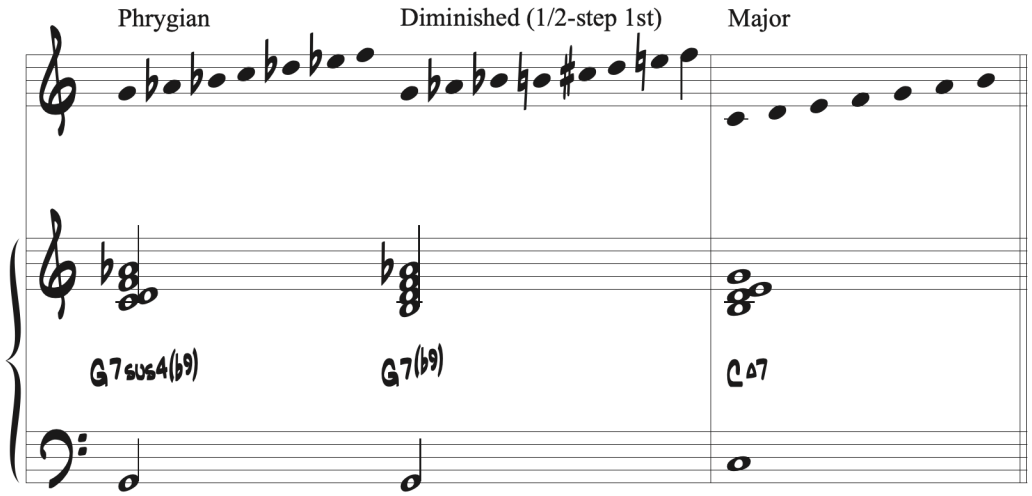


The Phrygian chord serve a dominant function. In a ii V^7 I situation, the Phrygian chord can replace either the ii or the V^7 or both. It can also be inserted between the ii and the V^7.

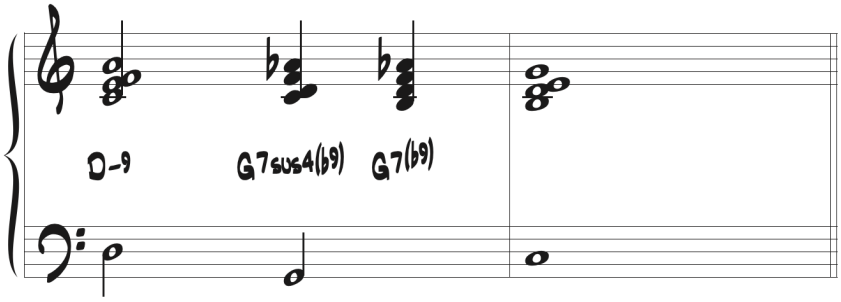
Substitution for V^7



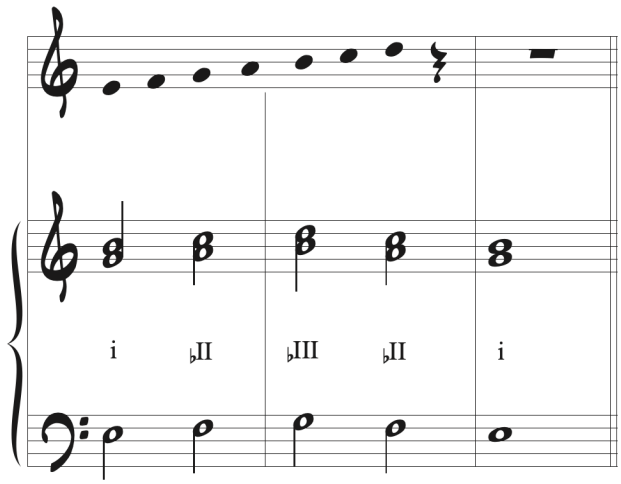
Substitution for ii



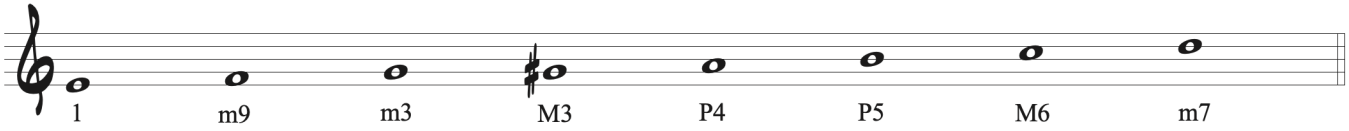
Passing chord



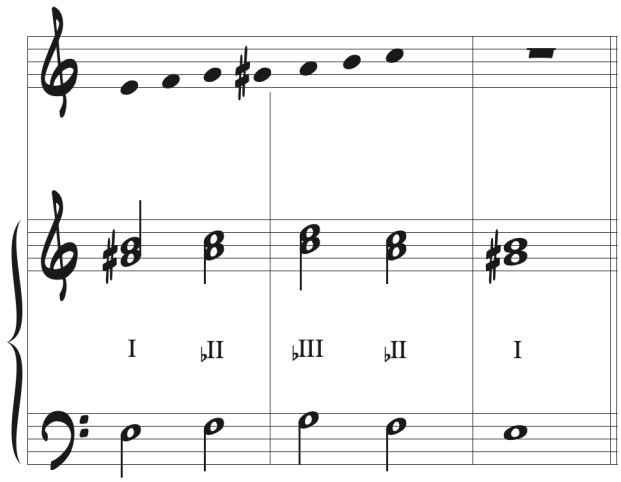
Blanketing i ♭II ♭III ♭II



Shortly, we will look at the Phrygian Dominant scale, which is the 5th mode of the Harmonic Minor scale. The difference between the Phrygian and Phrygian Dominant scales is the third—Phrygian has a minor third and Phrigain Dominant has a major third. When these are combined, a scale with both a major and a minor third is created called the Spanish Phrygian. This scale can be played on the same progression (i ♭II ♭III ♭II), but now we use a major tonic: I ♭II ♭III ♭II. If this scale is used as the source for the construction of harmonies—building chords from each scale degree, as we have done with major—some unique and interesting compositional possibilities arise.



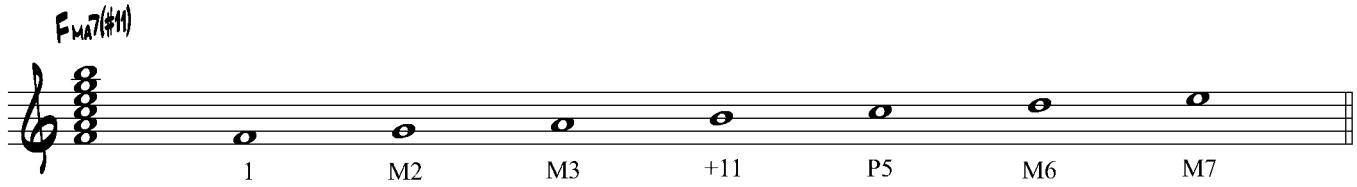
This scale can be played on the same progression (i ♭II ♭III ♭II), but now we use a major tonic: I ♭II ♭III ♭II. If this scale is used as the source for the construction of harmonies—building chords from each scale degree, as we have done with major—some unique and interesting compositional possibilities arise.



Lydian

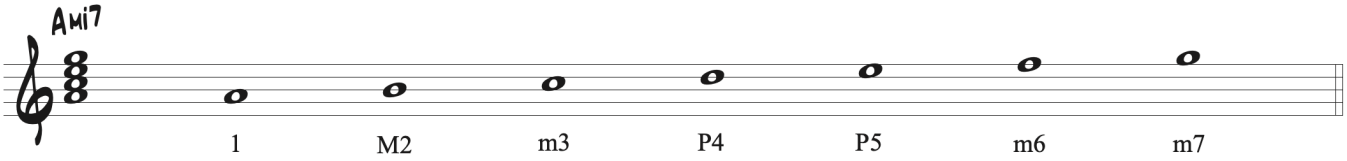
The chord built on the fourth scale degree, when extended beyond the 9th, is major sharp-11. The mode/scale is labeled *Lydian* and serves as tonic or for other major chord quality purposes. As

we've talked about the concept of *avoid notes*, those that produce an interval a minor 9th above a chord tone, we understand that some players choose to avoid the fourth scale degree in a major key, which is a minor 9th (melodically the same as a minor 2nd) above the major third. The sharp-11 in the chord is the same as the raised fourth, which eliminates the *avoid* note and creates a unique color. The Lydian pitch collection/tone spectrum can be superimposed on any major chord, creating a contemporary sound. As an aside, in some older contexts, such as swing era music, it might sound out of place.



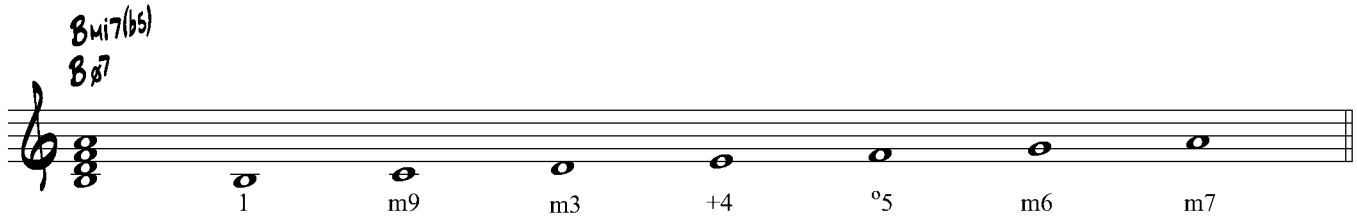
Aeolian

This scale is the same as natural minor. It is the source of our minor key signature, regardless of the minor tonic harmonic quality. In jazz, it can be used as the melodic source material for the tonic minor chord, but the sixth scale degree, being a minor2nd/minor 9th away from a chord tone (the fifth), is some times avoided as a sustained note and only used in passing. In some tonic-based progressions, such as I vi ii V or iii vi ii V, it is the scale of choice, since it carries the same pitches as tonic or mediant, super tonic, and dominant.



Locrian

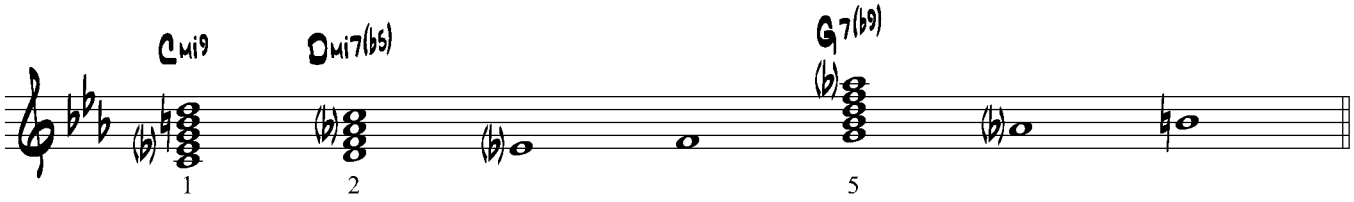
The chord built on the seventh scale degree of a major scale is half-diminished. The mode/scale stepwise from seventh to seventh is *Locrian*. The scale can provide melodic marterial for half-diminished chords. More will be discussed regarding the Locrian scale in the "Modal Borrowing" section to below.



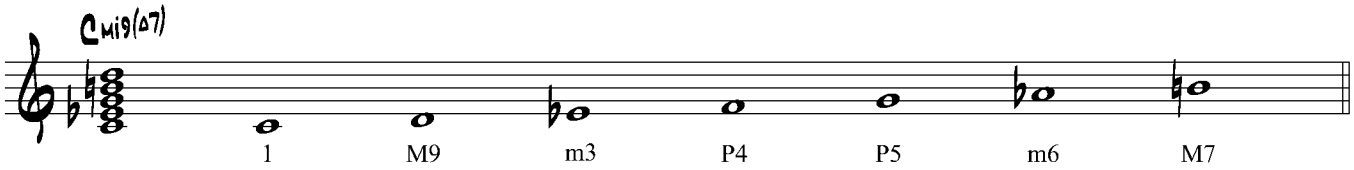
Harmonic Minor

Similar to the use of Dorian and Mixolydian in a major ii V^7 I progression, the 2nd and 5th modes of *harmonic minor* can be used on a minor ii^{ø} $V^{7(♭9)}$ i progression. Harmonic minor can also serve as melodic material for the minor tonic—either with a flat-7 or a major 7. Use of the major 7th scale degree on a minor tonic with a flat-7 must be done judiciously, usually only in passing or resolved to tonic after a sustain.

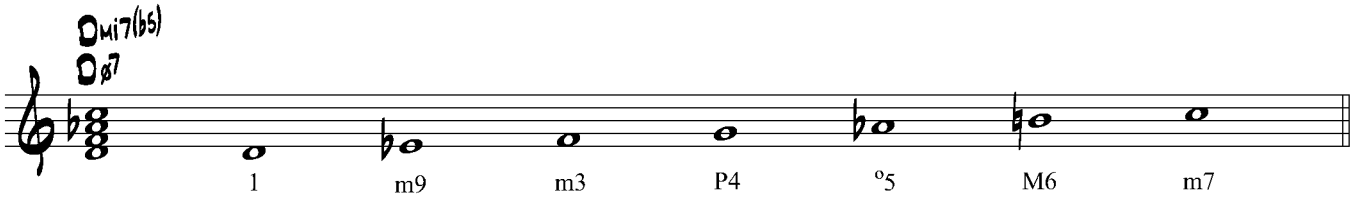
As compared to the Dorian minor, harmonic minor carries a flat-6 scale degree, which some players consider an avoid note if sustained but recognize it as a strong resolution to the fifth. As compared to the natural minor scale, harmonic minor carries a raised seventh. Its classical derivation arises from the addition of the leading tone in minor keys.



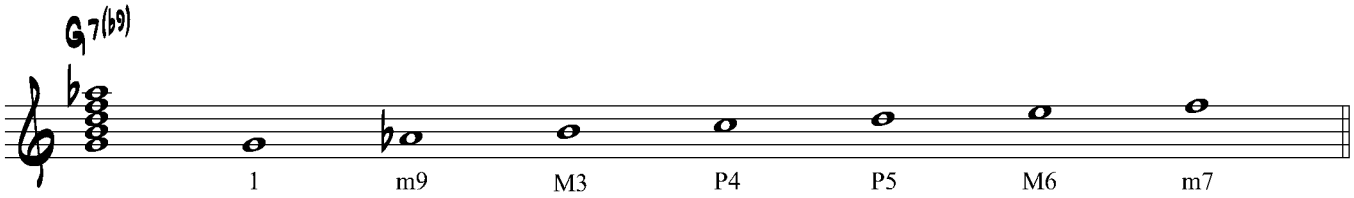
Harmonic minor



2nd Mode of the Harmonic Minor, possible use on supertonic (iiø):



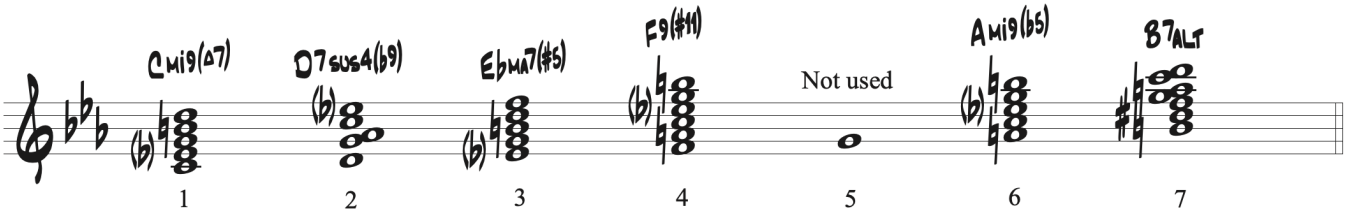
5th Mode of the Harmonic Minor (Phrygian Dominant), possible use on dominant, V7(♭9):



The 5th mode of harmonic minor is also known as the Phrygian dominant scale. As compared to the Phrygian mode, Phrygian dominant has a major 3rd in lieu of the Phrygian's minor 3rd.

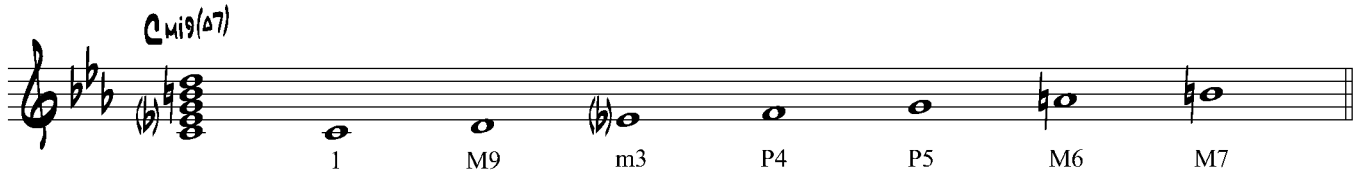
Ascending Melodic Minor

Several modes of the *ascending melodic minor* are useful in realizing altered chords.



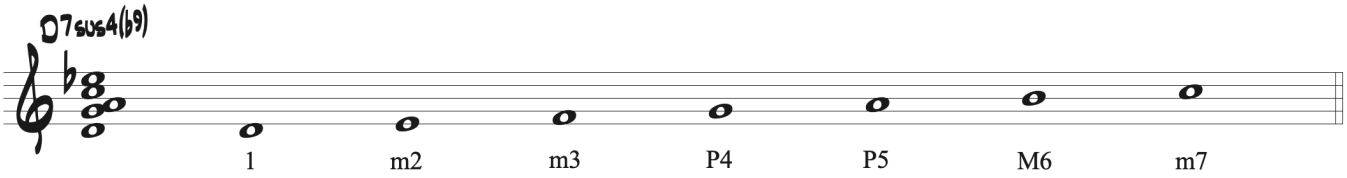
Mode 1—Ascending Melodic Minor

Use: on minor/major 7 chords, -$^{(\Delta 7)}$, often serving as tonic



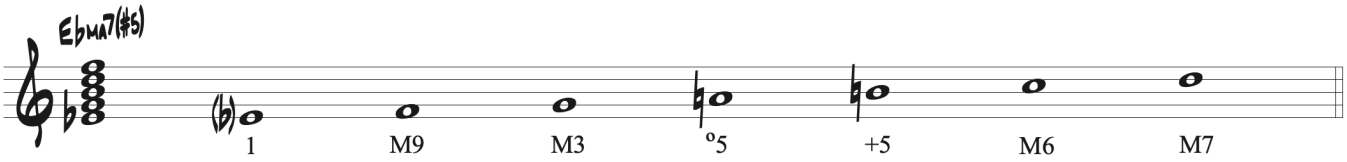
2nd Mode—Dorian Flat-2

Use: on Phrygian chords, sus$^{7(\flat 9)}$, similar to Phrygian except Dorian flat-2 contains a major sixth



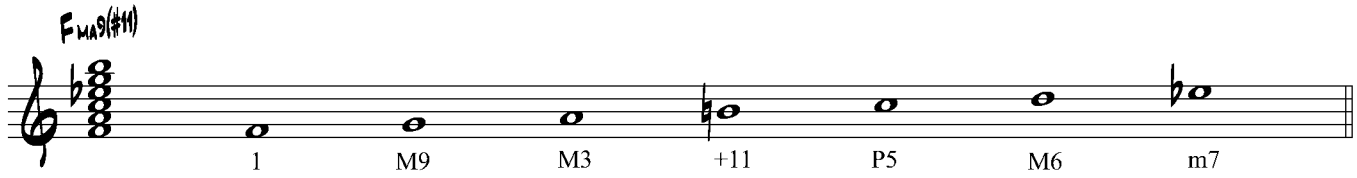
3rd Mode, Lydian Augmented

Use: on major sharp-5 or flat-5 chords, $\Delta^{7(\sharp 5)}$, can be superimposed over an unaltered major 7 harmony for color



4th Mode, Lydian Dominant

Use on dominant sharp-11, V$^{7(\sharp 11)}$

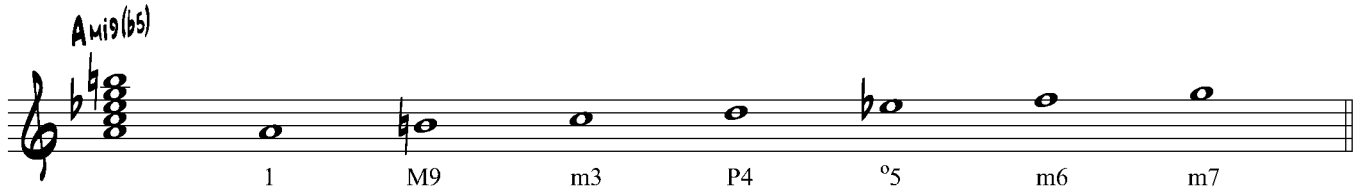


5th Mode

No useful application

6th Mode, Locrian Sharp-2

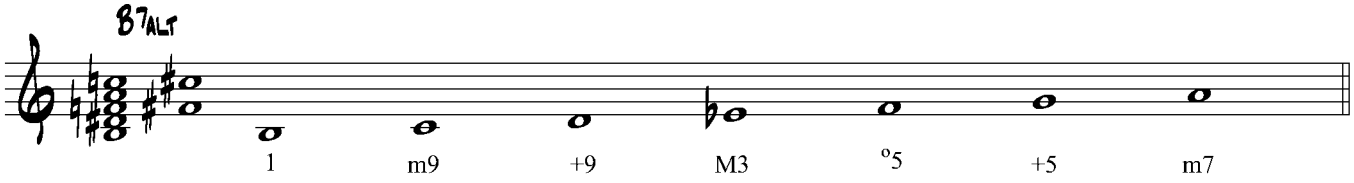
Use: on half-diminished major 9, iiø$^{(\Delta 9)}$:



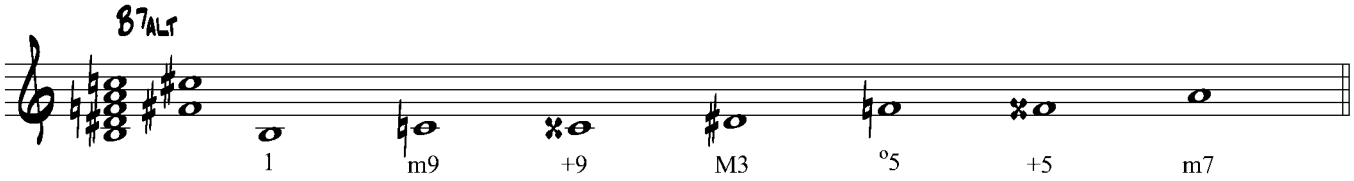
7th Mode, Super Locrian, Diminished Whole-Tone, or The Altered Scale

Use: on dominant chords with any combination of altered 5^{ths} and 9^{ths}: V^{7}alt

The term *Super Locrian* comes from its placement as the 7th mode of the ascending melodic minor scale. The Locrian scale is the 7th mode of major, thus the *super* distinguisher. Notice that the altered scale and the Super Locrian scale carry the same pitches enharmonically.

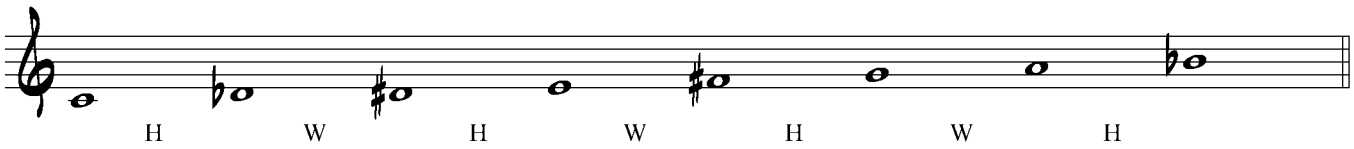


The Altered Scale

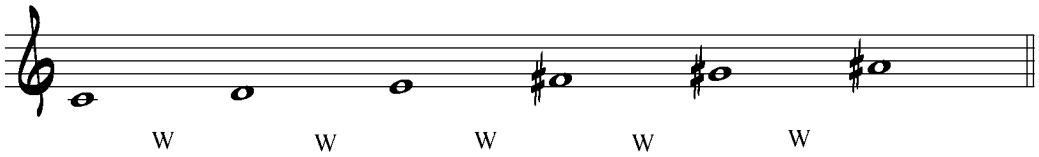


Diminished whole-tone terminology comes from the scale's combination of diminished scale (half-step first version) and whole-tone scale properties. The first part of the scale proceeds: half-step, whole-step, half, whole to the flat-5 (sharp-11).

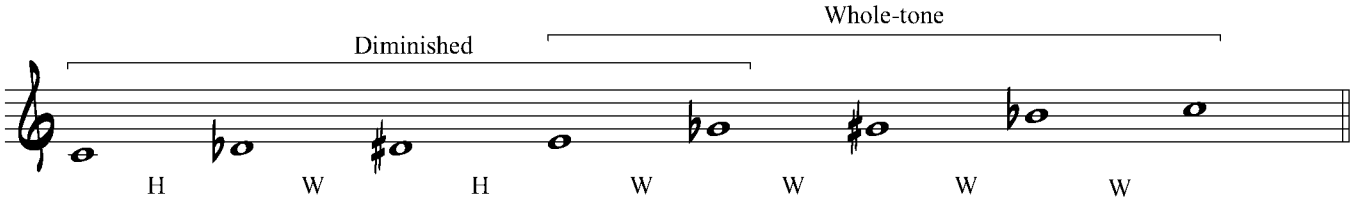
Diminished Scale (half-step first)



Whole-tone Scale



The next part overlaps starting on the 3rd and proceeds by whole-step to the octave. Alterations of both the 9th and the 5th are included.

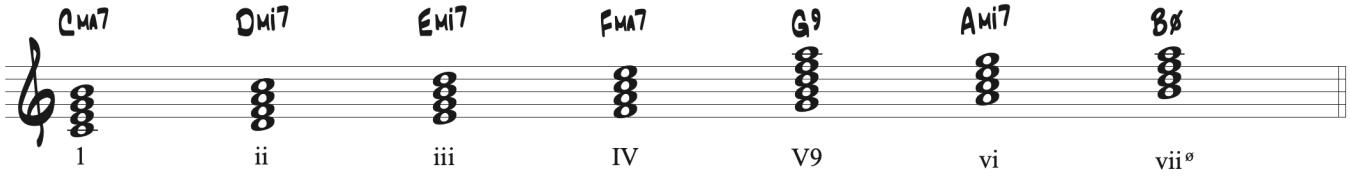


Modal Borrowing

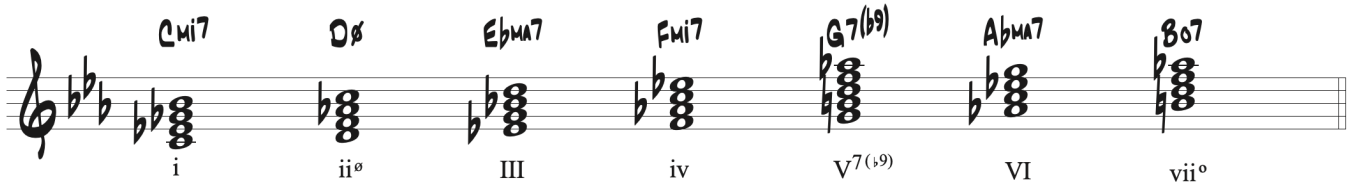
Some of the "altered chords" used in jazz while in both major and minor modes are derived from *modal borrowing*, rather than actual altering. This concept involves the use of chord qualities indicative of one mode (major or minor) while in another. For example, the dominant chord in major (G^7 in the key C major) naturally contains the leading tone (B♮). This tone is necessary for the dominant's *active* quality and its function to resolve to tonic. In the minor mode, dominant does not contain the leading tone (it has B♭ rather than B♮ in the key of C minor). In minor, the leading tone is *borrowed* from major in order for the dominant to function.

In other situations, chord qualities are *borrowed* not for the necessity of function but for the quality of sound. The half-diminished sound is vii^{ø} in major but ii^{ø} in minor. The 9th in the major mode is major while the 9th in minor is minor. Thus, the ii V^7 progression in major is minor/minor (ii^7) and major/minor (V^7) while in minor the normal, unaltered qualities are half-diminished (ii^{ø}) and major/minor flat-9 (given the borrowed leading tone). If we are in the major mode, the qualities normal to minor can be *borrowed*, creating an "altered" progression: ii^{ø} $V^{7(♭9)}$ I. Because half-diminished is a function of vii^{ø} in major, it is often written as $_{min}7^{(♭5)}$ to show a function of supertonic (ii).

Major Mode Chord Qualities

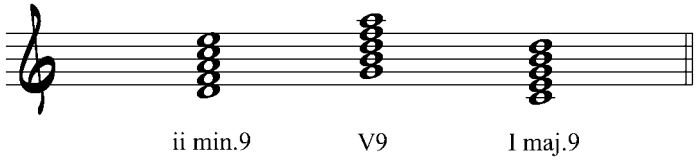


Minor Mode Chord Qualities



ii V^7 I in Major

Qualities that occur normally from key signature are: ii = minor/minor = 7, major 9; V = major/major 7, major 9; I = major/major 7, major 9.



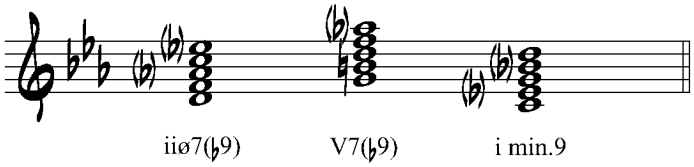
ii^{ø} $V^{7(@9)}$ i in Minor

Qualities that occur normally from the key signature are: ii = half-diminished 7, minor 9; V = minor/minor 7, minor 9; I = minor/minor 7, major 9.

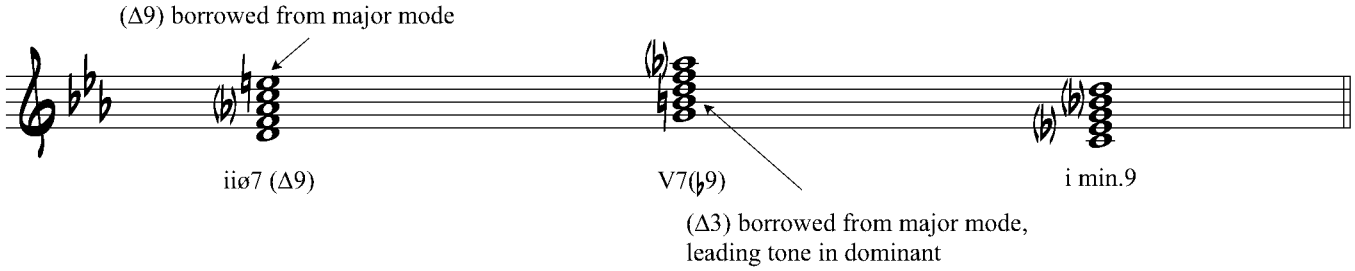
The minor 9 on supertonic is not common. Use of the half-diminished without the 9th or use of the major 9 borrowed from the major mode is preferred.

The dominant chord without alteration does not contain the leading tone. Use of the major 3rd (leading tone) borrowed from the major mode is considered normal to the minor mode.

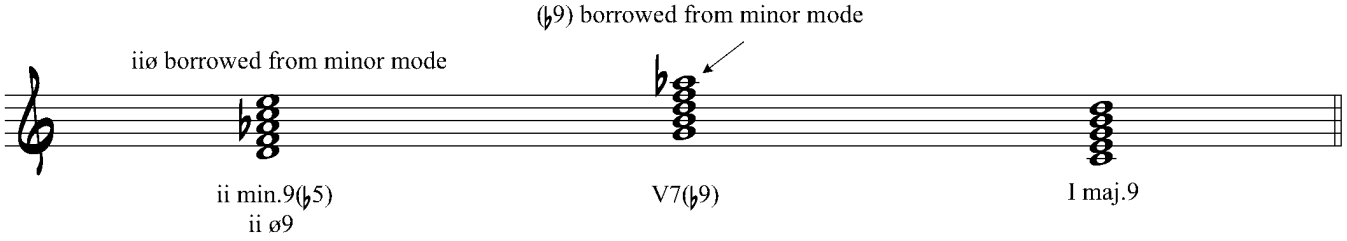
Tonic sometimes contains a major 7th in lieu of the minor 7th, but it is not a common assumption.



Minor (Major Borrowing)

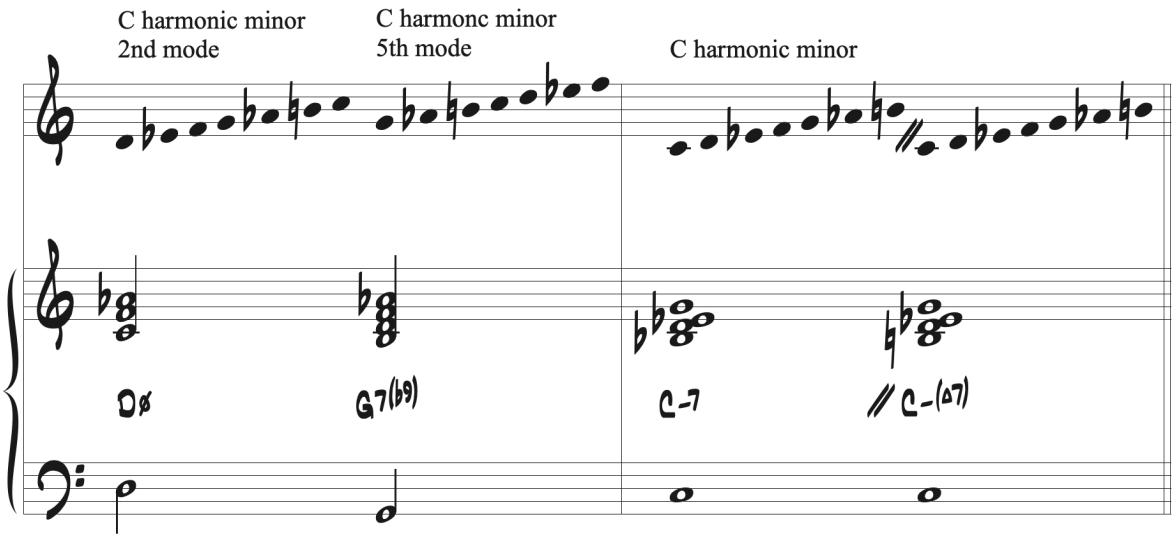


Major (Minor Borrowing)



Minor iiø V7(♭9) i #1: blanketing

The harmonic minor scale based on tonic can be used on all chords of the progression. *Mode* terminology (not the diatonic classical modes of major and minor that we have been usinc) can be applied when scale choices start on different degrees than tonic. For example, when one plays the harmonic minor scale starting on the second scale degree, it is referred to as the *2nd mode of the harmonic minor*. This applies to supertonic in the iiø V7(♭9) i progression. Likewise, the *5th mode of the harmonic minor* (sometimes called *Spanish Phrygian*) applies to V7(♭9). The harmonic minor starting on tonic includes the major 7th and can be superimposed on i melodically, usually in passing, even if the minor 7th is in the chord (chording instruments will not play both).



Minor iiø V7(♭9)i #2: scale specific

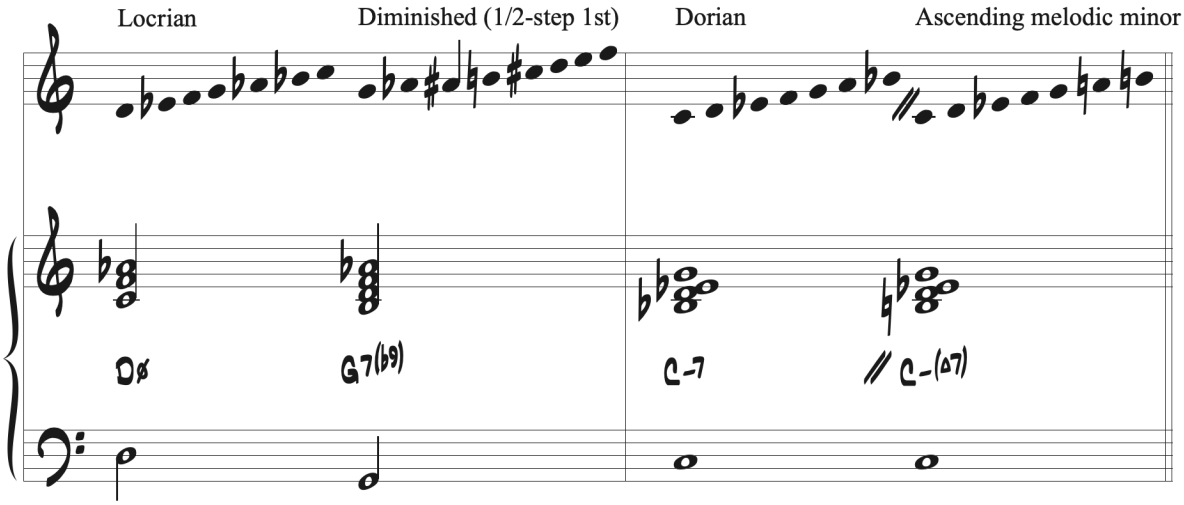
Note choices more specific to the chords include *Locrian* and *Locrian Sharp-2* on iiø, diminished half-step first (octatonic) on V7(♭9), and Dorian, harmonic, or ascending melodic minor on i, depending on which 7th is in the harmony or how the improviser uses the 7th melodically.

Locrian includes the minor 9th, which works well melodically but isn't often sustained. Locrian sharp-2 works well when the major 9th is included with the iiø and sometimes when iiø is borrowed in a major key. The minor 9th of iiø is the same pitch as the minor 3rd of tonic when in the minor mode. The major 9 of iiø is the same pitch as the major 3rd of tonic when in the major mode.

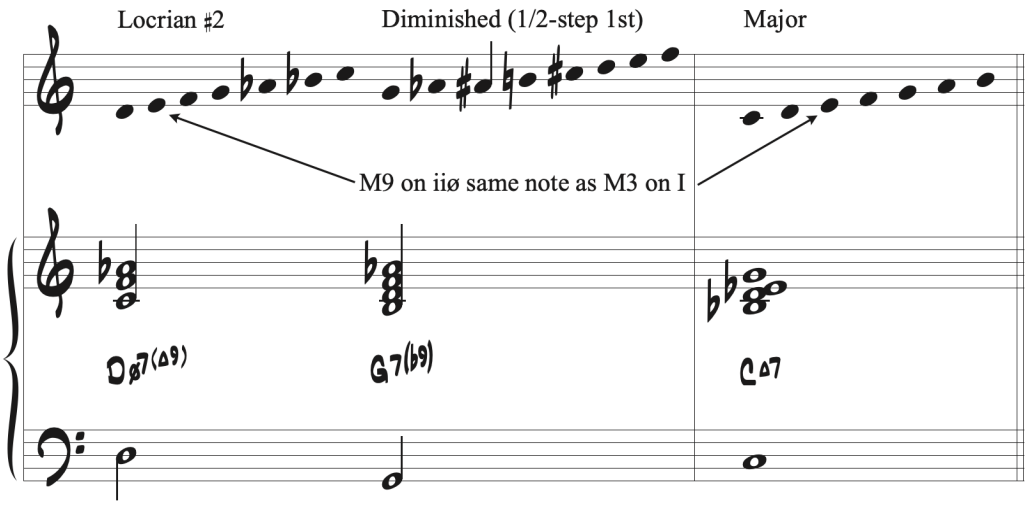
The diminished scale is a sequence of whole-steps and half-steps. If the tonic of the dominant chord is followed by a half-step rather than a whole-step, the notes will be: flat-9, followed by sharp-9, major 3, sharp-11, the perfect 5th, major 6, and minor 7.

Harmonic minor can be played melodically on either minor/major 7 or minor/minor 7. Dorian is used when i is minor/minor7.

Locrian, Locrian sharp-2, and diminished half-step first (octatonic) will be explained in more detail in their respective sections of this text.



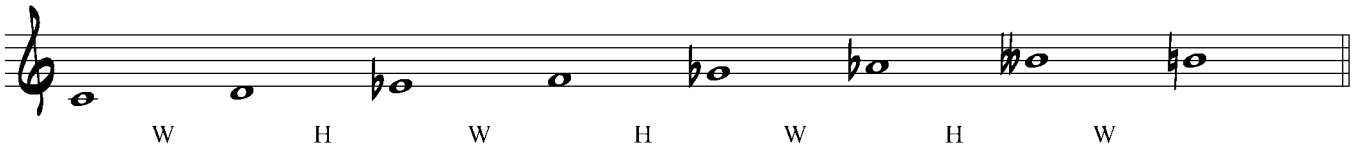
Major iiø V7(♭9) I option


Locrian #2
Diminished (1/2-step 1st)
Major
M9 on iiø same note as M3 on I
Dø7(Δ9)
G7(♭9)
CΔ7

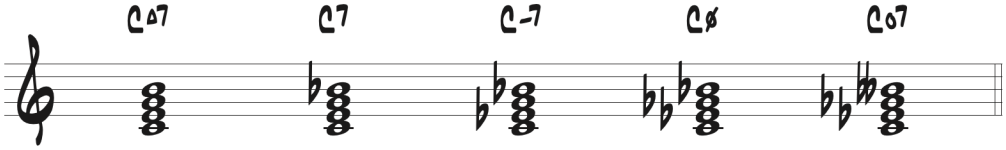
The Diminished Scale

On Diminished Chords

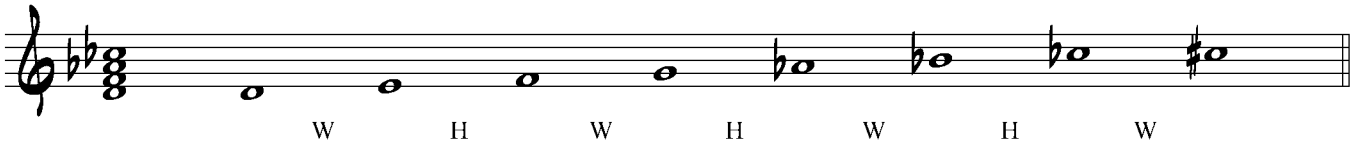
The *diminished* scale is a symmetrical scale of limited transposition. It proceeds whole-step (W), half-step (H), W, H, W, H, W. Bartok called this eight-note scale *octatonic*. It is commonly called the diminished scale, perhaps, because every other note, no matter which pitch one starts on, makes a diminished 7 chord.



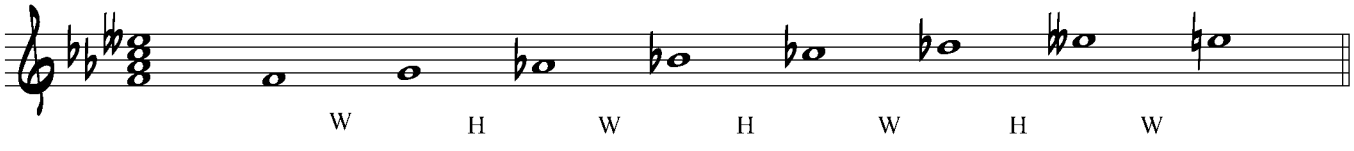
The chord name is derived from the manipulation of tertian harmony and defining diminish to mean "make smaller"—in this case, intervals. Starting with a major/major 7 chord, if we lower the 7th, we have a major/minor 7 chord. Lowering the 3rd makes a minor/minor 7 chord. Lowering the 5th turns it into a half-diminished chord; and lastly, loering the 7th again makes a fully diminished 7 chord.



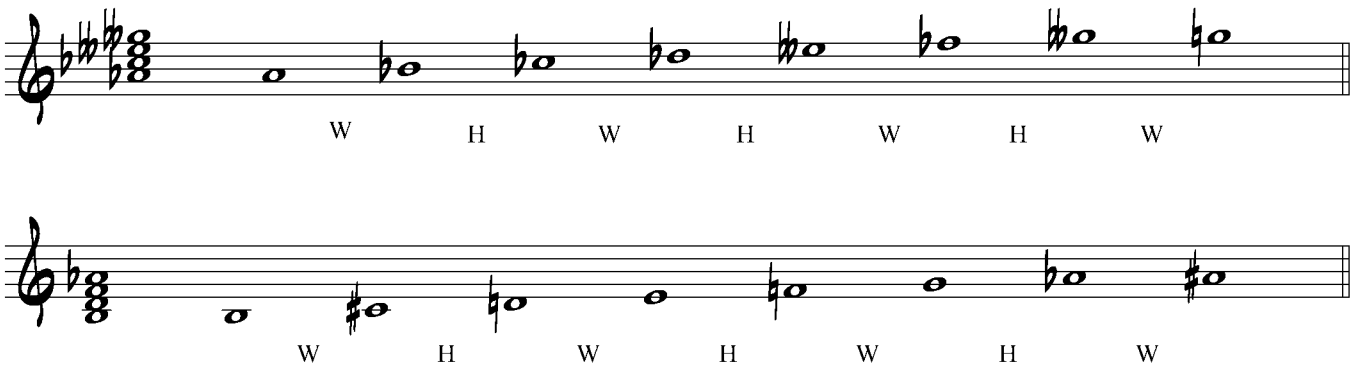
This configuration can only be transposed three times—there are only three diminished scales. Any of the diminished chord tones (one, flat-3, flat-5, diminished 7) can be the starting note for a diminished scale or root of a diminished 7 chord. For example, a diminished chord on D is: D, F, A♭, and C♭. The scale tones on D are: D, E, F, G, A♭, B♭, C♭, C♯, and D.



Applied to an F diminished chord (F, A♭, C♭, E♭♭), one can start on F and proceed: F, G, A♭, B♭, C♭, D♭, E♭♭, E, and F.

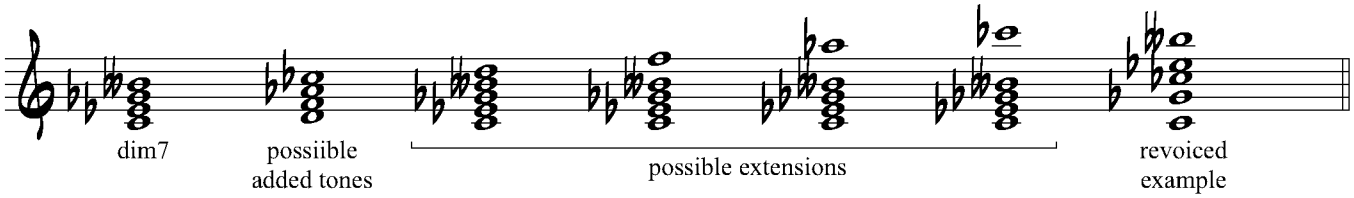


The pitches of the scale are the same enharmonically. This applies to A♭ and C♭ (B) diminished chords as well.

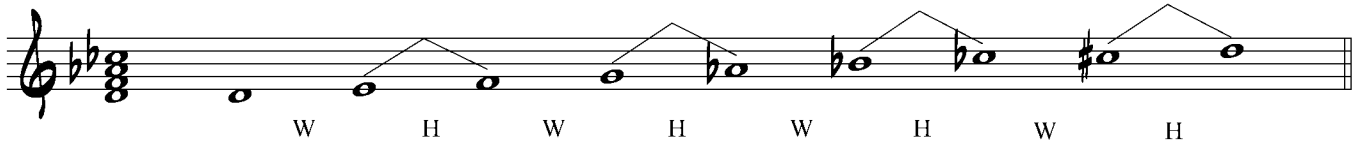


Thus, the D, F, A♭, and C♭ (B) diminished scales constitute one of the three diminished scales. The same process applies to C, E♭, G♭ (F♯) and B♭♭ (A) as a group sharing one diminished scale and to E, G, B♭, and D♭ (C♯).

Extensions on diminished chords can be achieved by adding any note that is a whole-step above a chord tone. These tones will create color without undue dissonance or modification to the diminished sound.

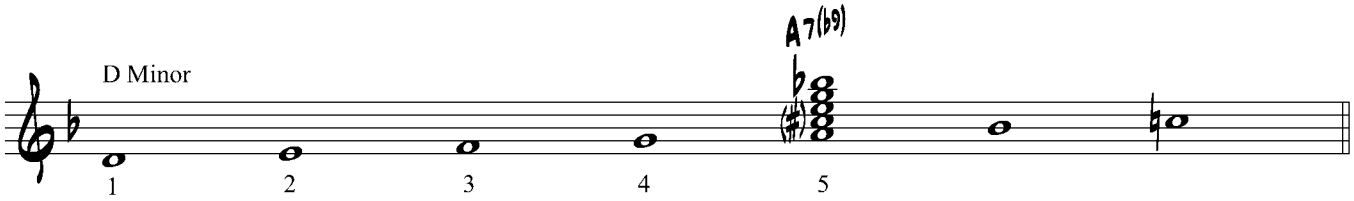


Every other note is a leading tone to a chord tone providing forward motion.

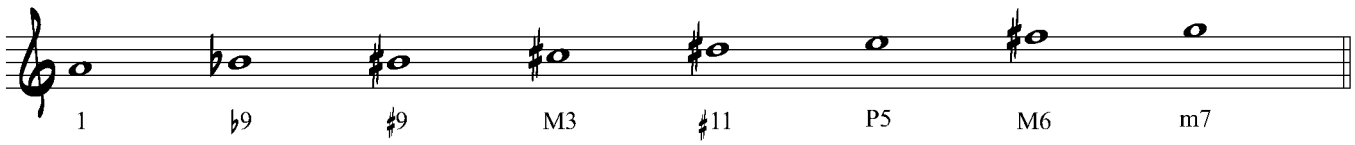


On Dominant Flat-9 Chords

Dominant flat-9 chords are a natural product of the minor mode. In D minor, the key signature has one flat. If one stacks thirds starting on the 5th scale degree (A) the tones are A, C♯, E, G, and B♭. (Remember, the 3rd of a dominant chord always contains the leading tone whether it is in the minor or major mode.) Notice that the 9th is flatted when compared to the 9th in the major mode. Also notice that the intervals in the chord from the Major third to the flat-9 spell a fully diminished 9 chord: C♯, E, G, and A♭.



A scale that represents the sound of the dominant flat-9 chord well is the diminished starting with a half-step instead of a whole-step (as is correct for a diminished chord).



This scale is successful in depicting the sound of both flat-9 and sharp-9 chords with no alterations of the 5th. There is also a sharp-11. This is not the flat-5 due to the fact that the scale includes the perfect 5th. Lining up with the 3rd – flat-9 diminished chord, the scale moves from the 3rd degree/3rd chord tone up a whole-step, just as it would if one were applying it to a diminished chord.

There are at least four reasons for the prevalence of the $V^{7(\flat 9)}$ chord/scale in jazz improvisation.

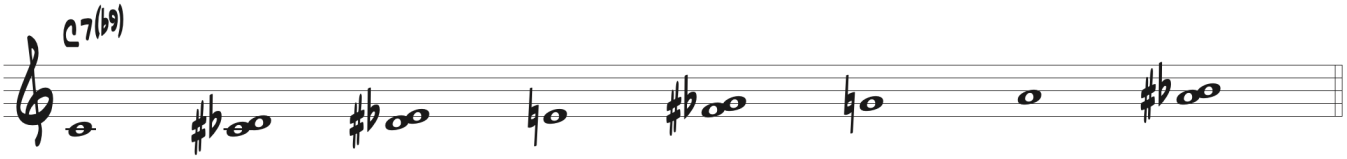
1. It sounds cool. For more than half a century, jazz musicians have been improvising with the diminished (half-step first) or octatonic scale. No matter the order of notes, when played in a jazz style this scale continues to sound contemporary.
2. There are only three transpositions of the scale, making one scale successful in four keys.
3. It is a symmetrical scale. Symmetrical scales lend themselves to pattern work.
4. The diminished scale can be used on at least three chord qualities: dominant flat-9, dominant sharp-9, and diminished.

Practice

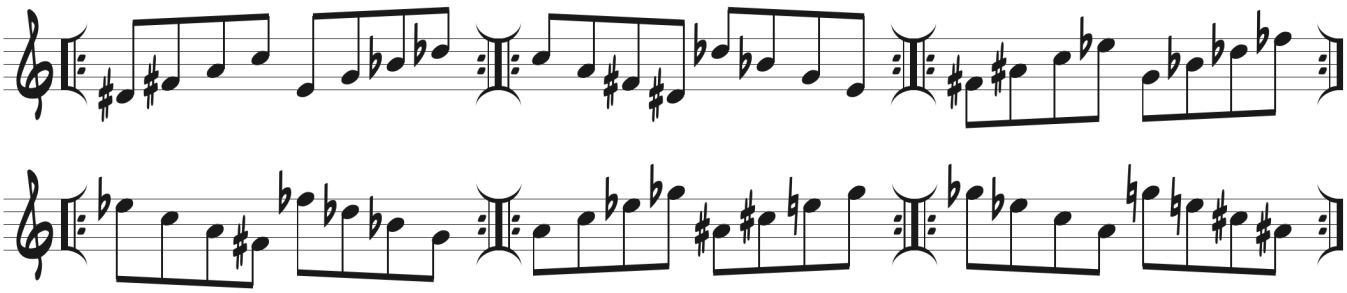
One of the reasons mentioned above for the popularity of this scale in jazz is its symmetrical nature, which lends itself to pattern work that is successful in solo improvisation. These patterns help our practice and eventual internalization of the diminished scale and arpeggios.

In Chapter 12, we talk about *triad pairs*. This technique can be applied to the diminished scale, but with seventh chords instead of triads; diminished triads will make the solo sound somewhat avant garde, which is great if that's the intent. Here we will use $C^{\circ 7}$ and $D\sharp^{\circ 7}$ to be applied to $C^{7(\flat 9)}$. Work the pair ascending, descending, inverted, and mixed. An example of the concept in context is given.

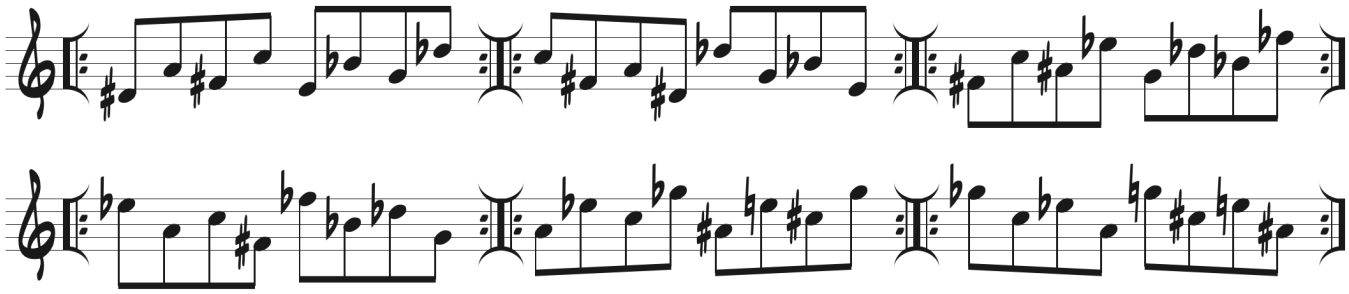
Source



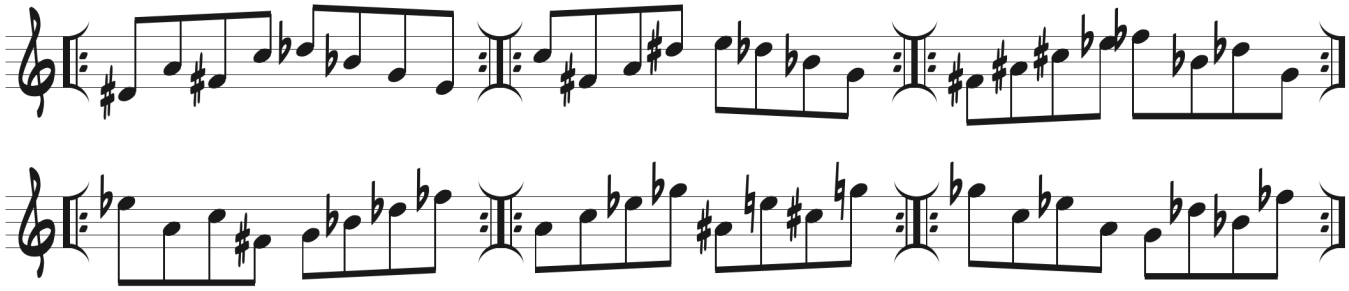
Arpeggio Pairs—Ascending, Descending, Inversion



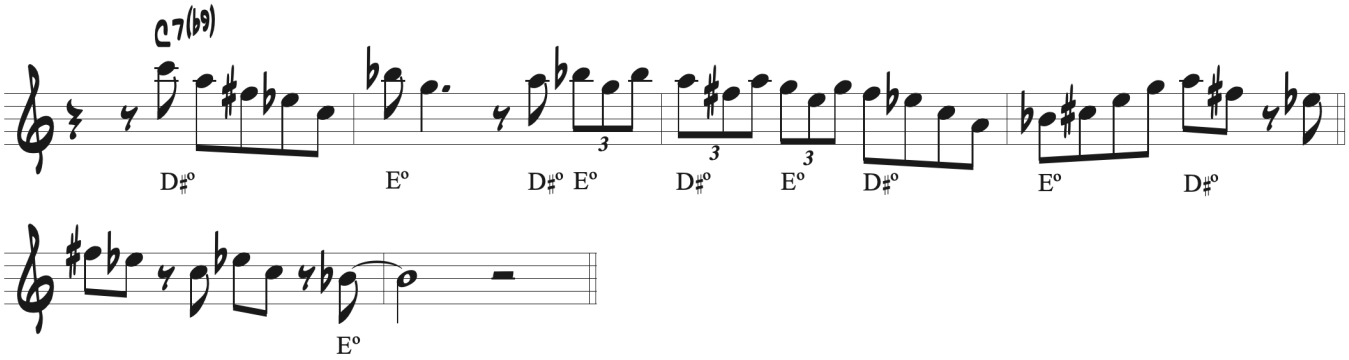
Broken Chord



Mixed

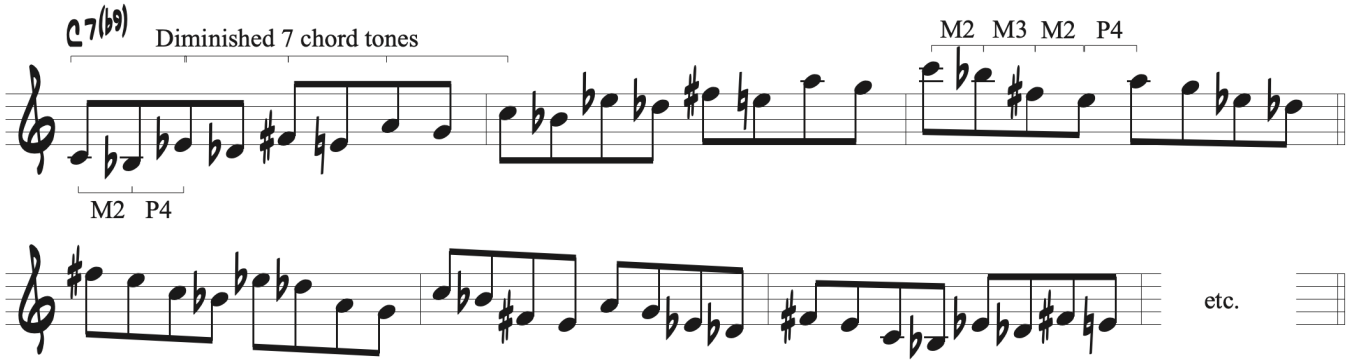


In Context Example

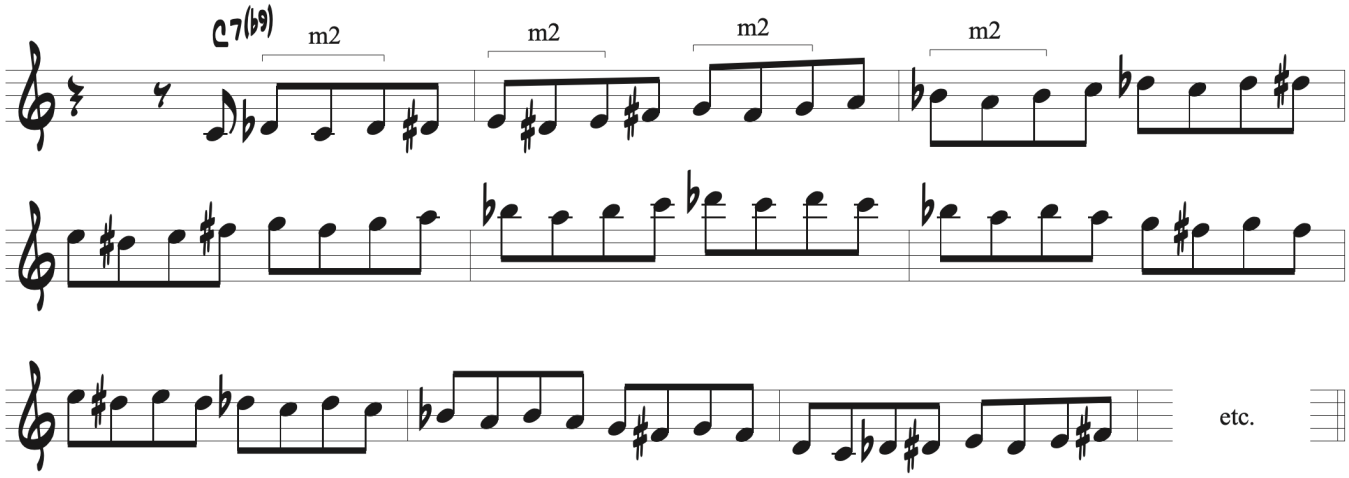


There are additional structural components of the diminished scale that can be formed into successful melodic structures: the major second, minor second, major third, and perfect fourth.

Major 2nd, Perfect 4th



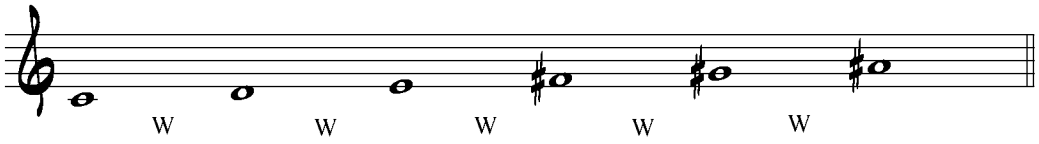
Minor 2nd


C7(b9)
m2
m2
m2
m2
etc.

The Whole-Tone Scale

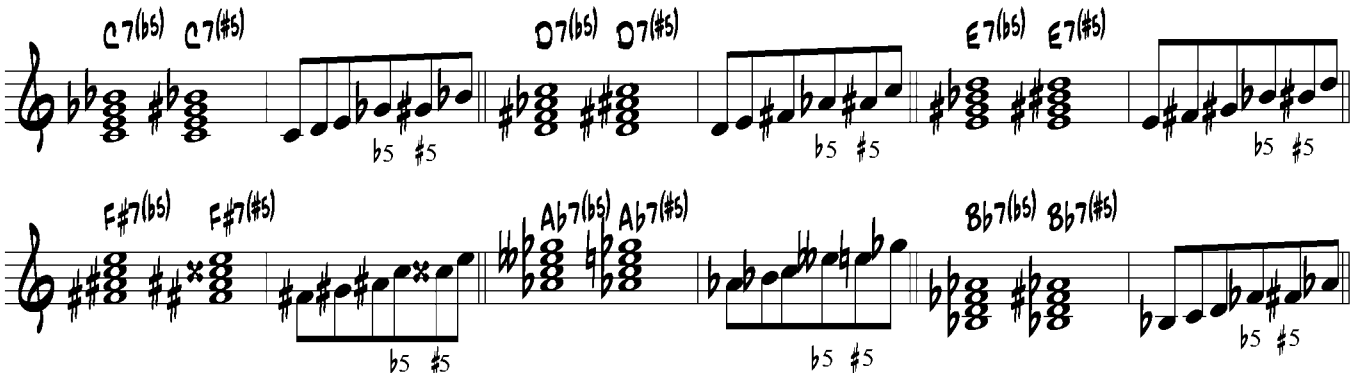
On Dominant Altered 5th

One of the most common scales associated with alterations of the 5th on dominant chords is the Whole-tone scale. This includes flat-5 and sharp-5 with no alteration of the 9th.



The Whole-tone scale is a symmetrical scale with limited transposition; meaning, there are only two Whole-tone scales. Due to its division into major seconds with no half-steps or augmented intervals, there is no strong pull or motion to any particular note.

The following example shows the flat-5 and sharp-5 chords based on each scale degree of a Whole-tone Scale. The related scale follows the chords and is written with the theoretically correct spelling. There are six scale examples representing a single Whole-tone scale starting on each of its six scale degrees.



The same can be done for the "other" Whole-tone scale starting on C-sharp, E-flat, F, G, A, and B.

Pentatonics 2

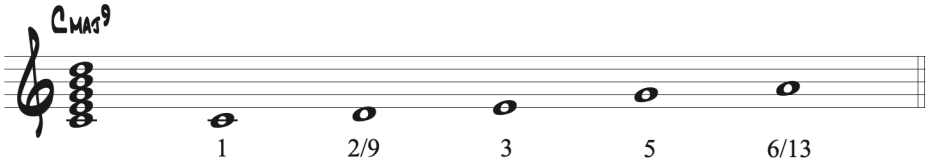
WE have looked at pentatonics on a basic level, using them for major, dominant, minor, and sus chordsfor their most consonant sounds. Now we will examine more colorful placements.

Consonance to Color

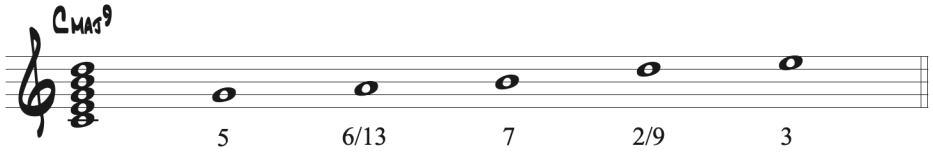
Looking at consonance to colorful, notes might progress like this for major—1 5 7 9 13 ♯11 ♯5. Using this criteria, pentatonics for major might look like this.

Major

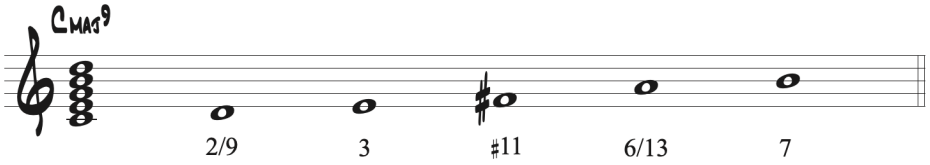
C major pentatonic



G major pentatonic



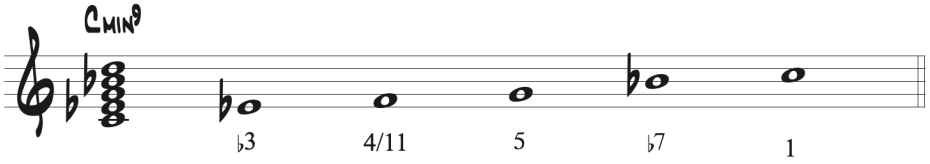
D major pentatonic



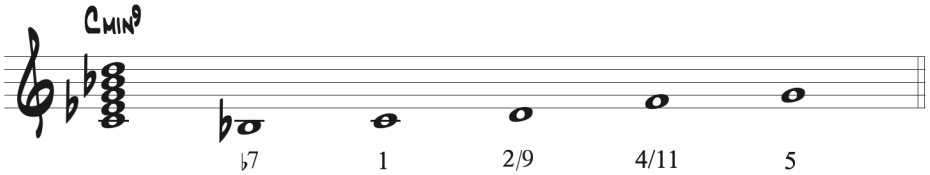
Minor

For minor, consonance to colorfull might look like this—1 5 3 @7 9 11 13 7

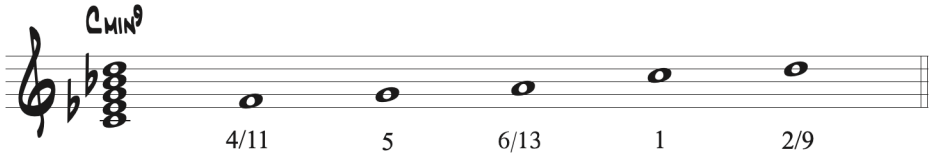
E♭ major pentatonic (C minor)



B♭ major pentatonic



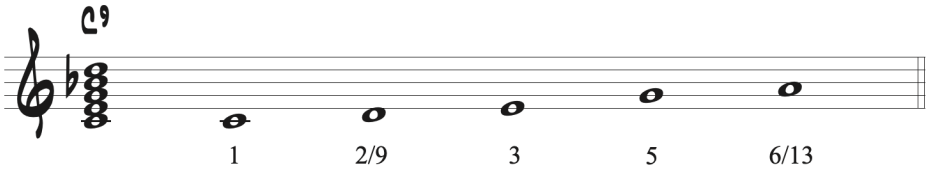
F major pentatonic



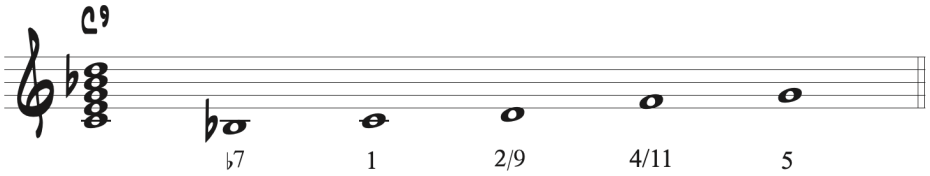
Dominant

Consonant to colorful for dominant might be—1 5 3 @7 9 13 #11 altered 5ths and 9ths.

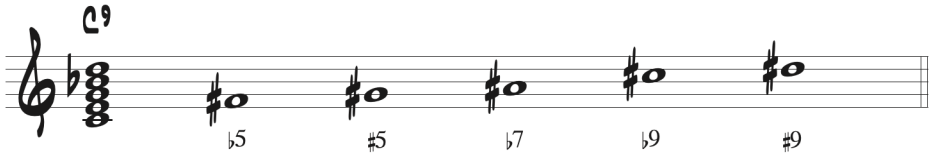
C major pentatonic



B♭ major pentatonic



F♯ major pentatonic (altered 5ths and 9ths)



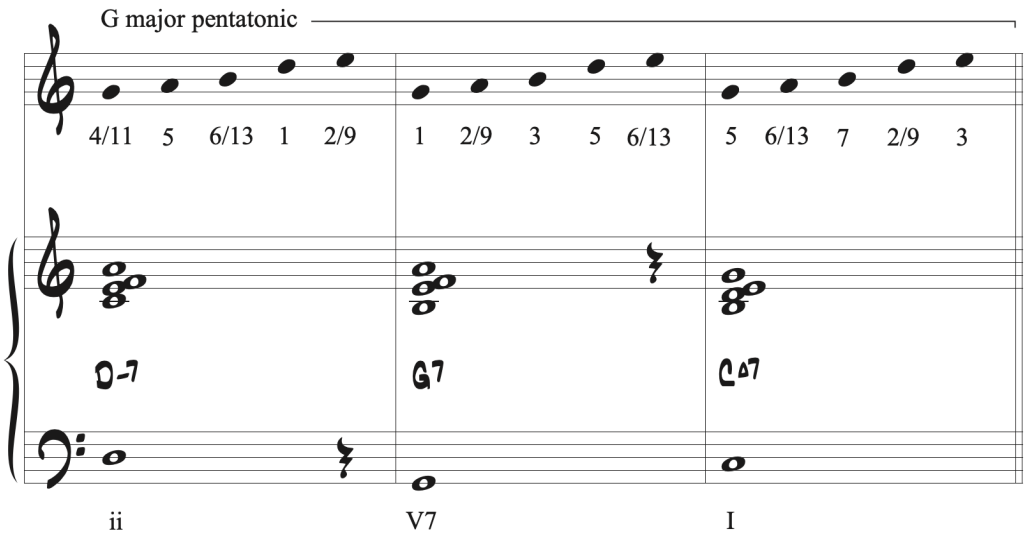
Over a Progression

There are two considertions for applying pentatonics over a chord progression—blakenting and chord specific.

Blanketing

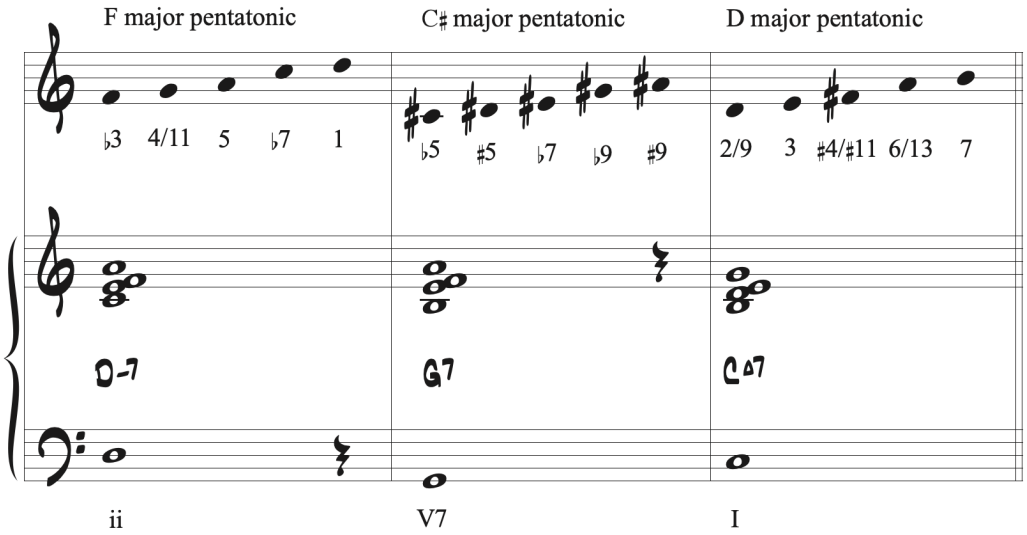
To cover a sequence of chords with a single pentatonic requires one to find a pentatonic that will work reasonably well over each chord in the sequence. There are instances where the chosen pentatonic may not be ideal for all chords in the sequence, but the melodic strength of the pentatonic carries the motion regardless.

Blanketing over an unaltered ii V7 I is successful with the major pentatonic starting on the fifth degree of I (in C: G A B D E).



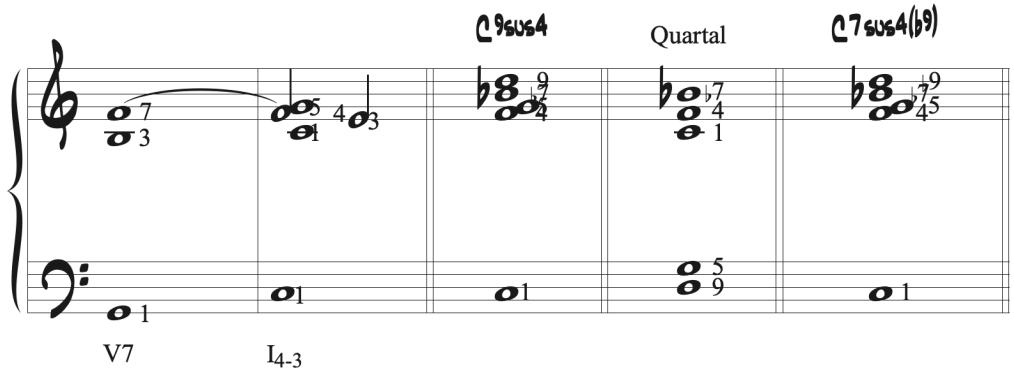
Chord Specific

Here we are using colorful options that are specific to each chord—major pentatonic starting on the 4th for minor, starting on ♭5 (enharmonic). for dominant, and on 2 for major.

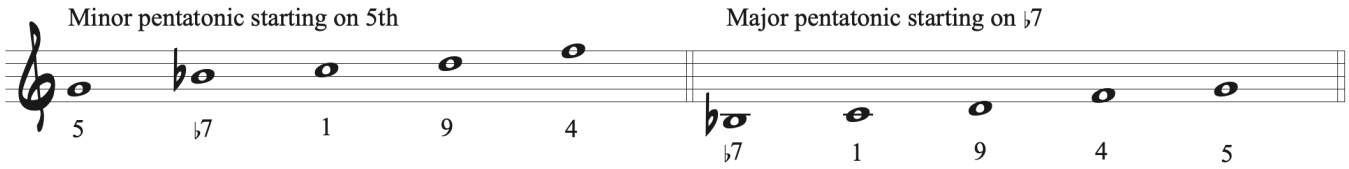


Sus Chords

The *sus* chord originates in the early years of our common practice period of classical music(Baroque, Classic—Bach, Mozart). It appears at cadence points where the 7th of a dominant chord is suspended into the tonic chord becoming the 4th, then resolves down to the tonic chord's 3rd. For example, in the key of C major, G is the dominant with F being its 7th. When F is suspended over the tonic C, it becomes the 4th of C, which resolves down to E. In jazz, we isolate the sound of the 4th over the root of a chord as use it for its own quality, most often with a flat- 7 and sometimes a major 9. When the notes of the 9sus4 chord are stacked downward from the flat-7, we find a quartal harmony. For more color, we can alter the 9th by lowering it a half-step—called the Phrygian chord (as we learned from studying the Phrygian mode. Functionally, it can stand alone or be used in a dominant role.

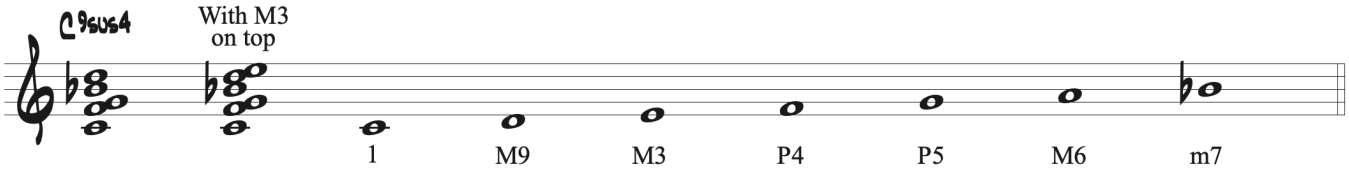


The purest scale-based set of notes to play on a sus4 chord is the pentatonic, either the minor starting on the 5th or the major starting on the flat-7 (they are the same).

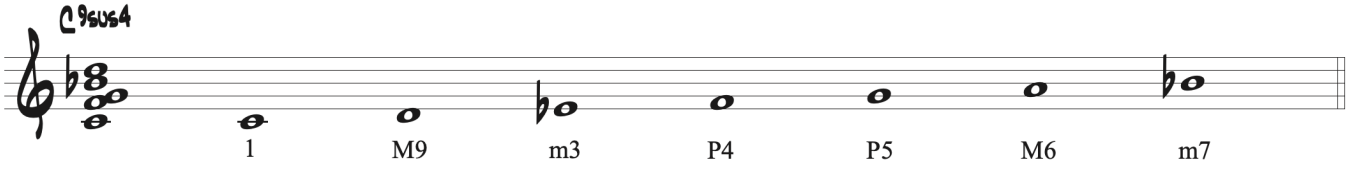


Because we have moved the 3rd to the 4th (4th in lieu of the 3rd), we have created some flexibility between the root and the 4th. Both the Mixolydian and Dorian scale notes work. In fact, the major 3rd can be added to the harmony, usually on top.

Mixolydian

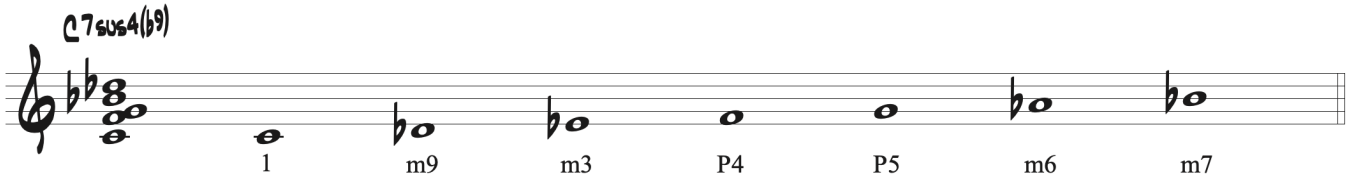


Dorian

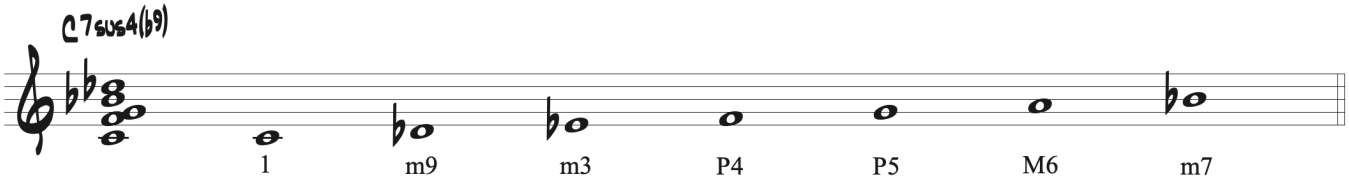


When considering the flat-9, whether as the Phrygian chord that includes the flat-9, or as an imposition by the soloist, more possibilities are presented to us—Phrygian, Dorian ♭2, and 5th mode of harmonic minor.

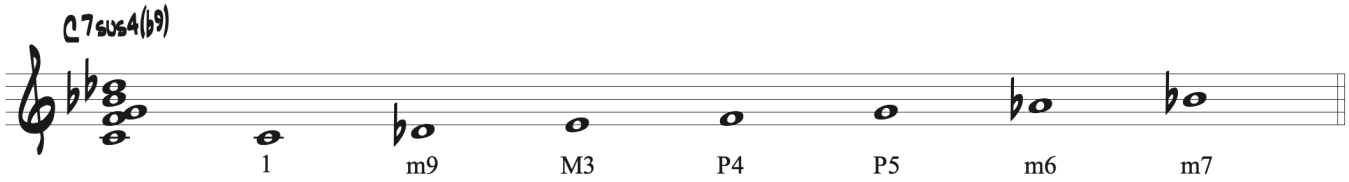
The Phrygian is a minor scale with a flat-9 and a flat-6.



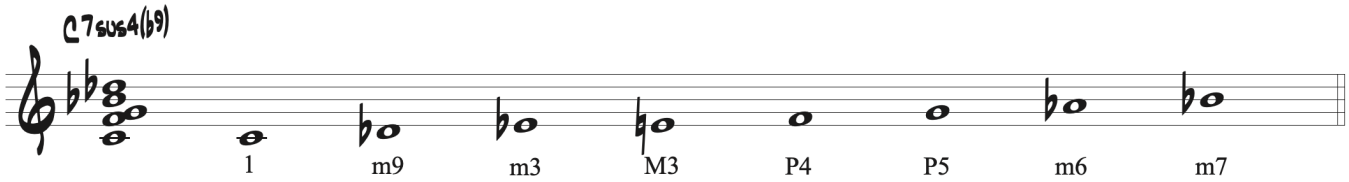
Dorian ♭2 is the same as Phrygian except the 6th is major.



The 5th mode of harmonic minor, raises the 3rd, as compared to the Phrygian.

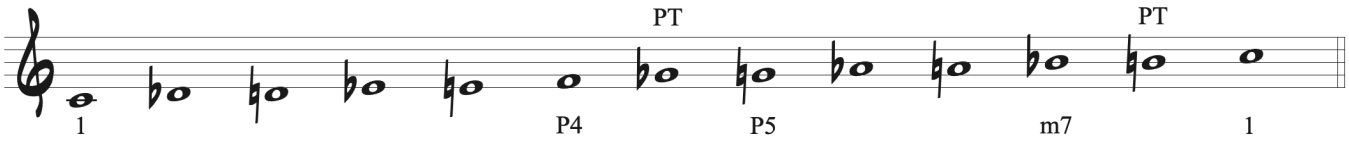


If we experiment with using both the major and minor 3rd while in a Phrygian mindset, we get a collection of pitches (or tone spectrum) labeled the Spanish Phrygian.



When using the possibilities from all of these color combinations simultaneously, we almost have a chromatic scale. Notice that our primary flexibility is between the root and the perfect 4th, and between the perfect 5th and the flat-7. In jazz composition, we are cautioned to avoid the interval of the flat-9 above a chord tone, which also applies to held notes in improvisation. On the sus4 chord, this includes the 4th and the flat-7 only. One might think to avoid the minor 9 above the root, but because we have eliminated considerations of the major 3rd consonance stability, which is disrupted by the minor-9th, this particular minor 9 above a chord tone (the root) is acceptable. The sus4 chord is between the consonant/at rest major tonic and the active dominant with its tritone major 3rd to flat-7 interval. Adding the flat-9 to the 7sus4 increases its level of *active*.

To include the two missing notes of the chromatic scale, we can consider the bebop principle we saw in Chapter 4's "Chromaticism" section and place a half-step between the root and the flat-7, and between the 5th and the 4th as passing tones.



Making all of these notes work depends greatly on the soloist's *good taste*, meaning experience through transcription, tune learning, much performance with respectable players, and time. Knowing the sounds of each of these scales as note collections that create a color, as well as knowing the sounds of pitches applied individually, allows musically successful, and almost unlimited, options.

Scale

Write all scales up to the 9th and down.
Do not use key signatures.
Include accidentals ascending and descending.

Modes

Write scales starting on the degree appropriate to the chord.
Ascending on iiø and V7(flat-9).
Ascending and descending on tonic.

Chords

Appropriate chord and arpeggios will be covered in another section.

Patterns

A pattern exercise will be required in a subsequent section.

Scale

Write all scales up to the 9th and down.
Do not use key signatures.
Include accidentals ascending and descending.

Arpeggio

Write all arpeggios up to the 9th and down.
Do not use key signatures.
Include accidentals ascending and descending.

Chords

Write chord voicings as in the example given.
Keep voicings centered around middle C.
Play all chords on the piano, listen, become familiar with the sound of the jazz voicing.
Play the companion scale, arpeggio, and pattern.

Patterns

Several examples are given with the chord most appropriate to the pattern included.
Find two patterns that are specific to the quality (dominant flat-9). Sources might include a transcription, a jazz improvisation textbook, Aebersold play-a-long series, a book on jazz patterns such as Jerry Coker's *Pattern for Jazz*, a reputable professional.
Include the appropriate chord symbol and pattern source.

Add patterns to the log to increase vocabulary.

Scale

Write all scales up to the 9th and down.
Do not use key signatures.
Include accidentals ascending and descending.

Arpeggio

Write all arpeggios up to the 9th and down.
Do not use key signatures.
Include accidentals ascending and descending.

Chords

Write chord voicings as in the example given.
Keep voicings centered around middle C.
Play all chords on the piano, listen, become familiar with the sound of the jazz voicing.
Play the companion scale, arpeggio, and pattern.

Patterns

There is no pattern assignment for this concept.

Chord Progressions

Write chord voicings as in the example given.
Keep voicings centered around middle C.
Play all chords on the piano, listen, become familiar with the sound of the jazz voicing.

Pattern Creation

Five altered progressions are indicated.
Determine which mode/scale best fits the chord.
Compose a melody/improvisation/pattern.

Scale

Write all scales up to the 9th and down.
Do not use key signatures.
Include accidentals ascending and descending.

Arpeggio

Write all arpeggios up to the 9th and down.
Do not use key signatures.
Include accidentals ascending and descending.

Chords

Write chord voicings as in the example given.
Keep voicings centered around middle C.
Play all chords on the piano, listen, become familiar with the sound of the jazz voicing.
Play the companion scale, arpeggio, and pattern.

Patterns

No pattern exercises are given due to the fact that they are the same as the patterns applied to the Dominant Altered 9 worksheets.

Scale

Write all scales up to the 9th and down.
Do not use key signatures.
Include accidentals ascending and descending.

Arpeggio

Arpeggios in this exercise are all dominant sharp-5. Dominant flat-5 could have been applied to demonstrate the principle.

Write all arpeggios up to the 9th and down.
Do not use key signatures.
Include accidentals ascending and descending.

Chords

Chords in this exercise are all dominant sharp-5. Dominant flat-5 could have been applied to demonstrate the principle.

Write chord voicings as in the example given.
Keep voicings centered around middle C.
Play all chords on the piano, listen, become familiar with the sound of the jazz voicing.
Play the companion scale, arpeggio, and pattern.

Patterns

Several examples are given with the chord most appropriate to the pattern included.

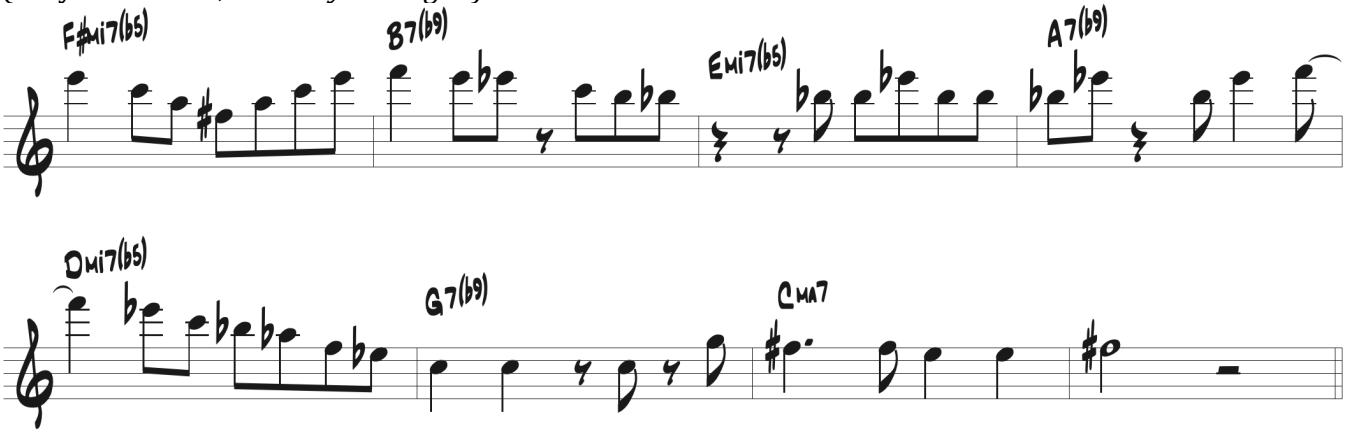
Find two patterns that are specific to the quality (major). Sources might include a transcription, a jazz improvisation textbook, Aebersold play-a-long series, a book on jazz patterns such as Jerry Coker's *Pattern for Jazz*, a reputable professional.

Include the appropriate chord symbol and pattern source.

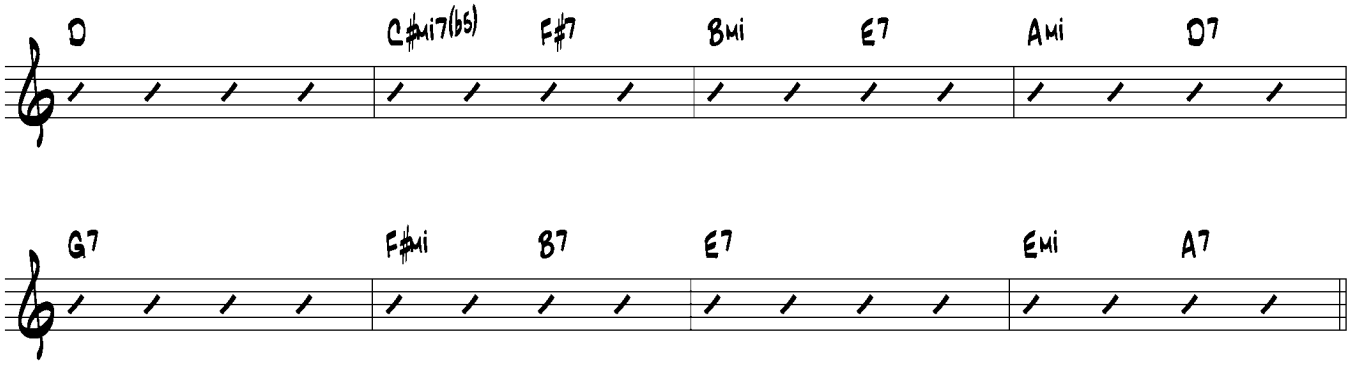
Add patterns to the log to increase vocabulary.

Analysis and Application (treble)

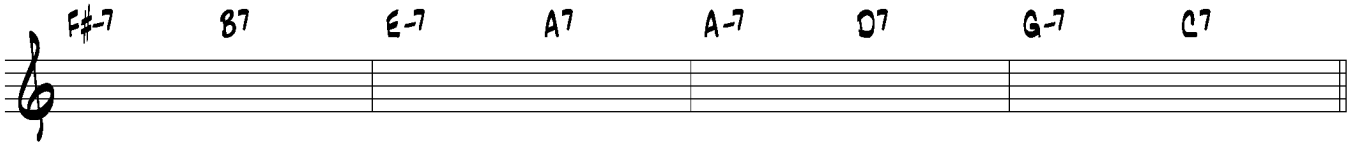
Exercise 1: Write scale degree digits below notes according to the chord to which they belong. (Wayne Shorter, *Stella by Starlight*).



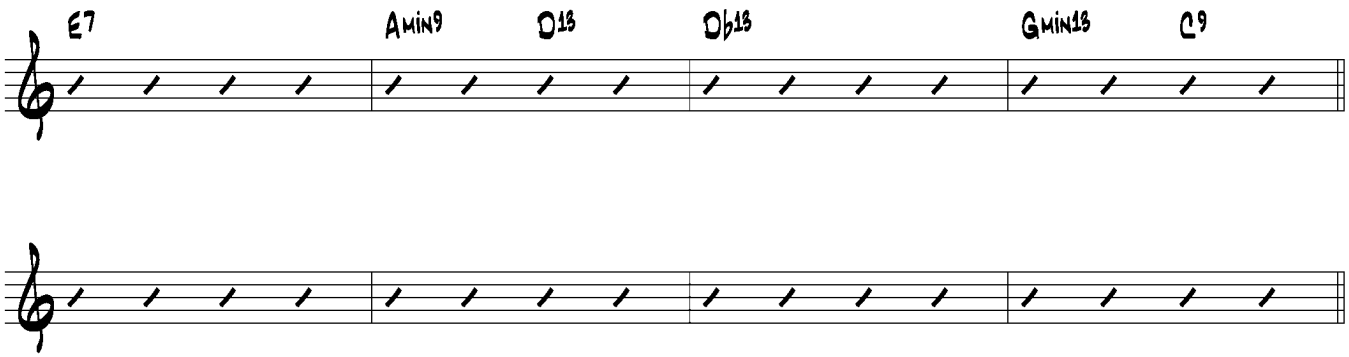
Exercise 2: For each ii V progression indicate the tonicized key by writing the assumed tonic under the applicable measure.



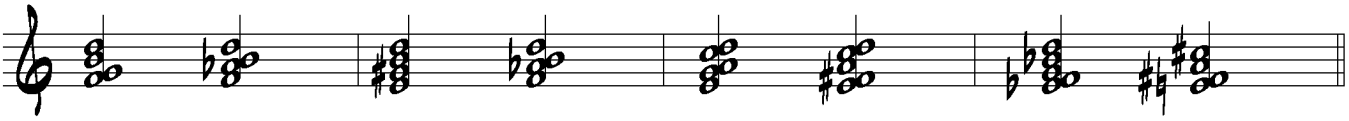
Exercise 3: Notate the guide tones.



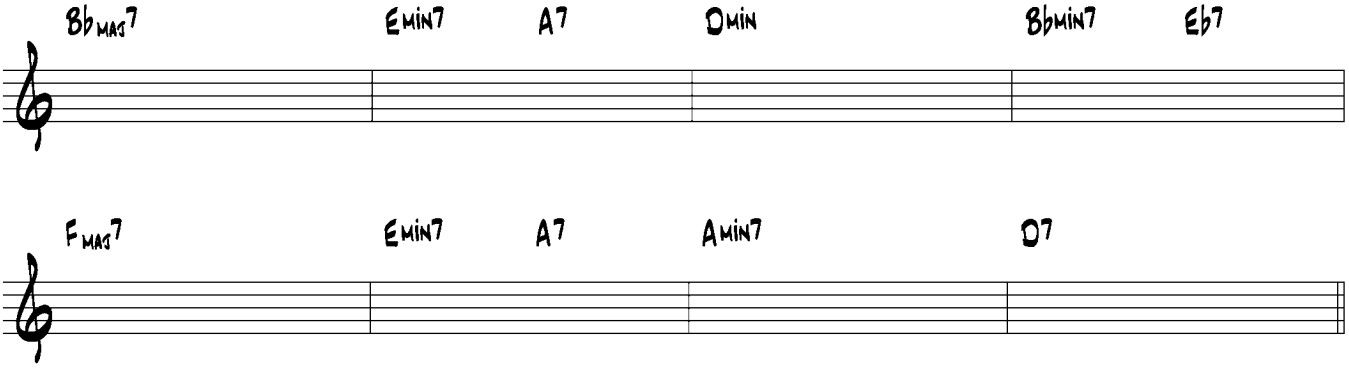
Exercise 4: On the second staff, substitute V for ii V and ii V for V.



Exercise 5: Identify the ii V measure.



Exercise 6: Compose an improvised solo over the following progression.



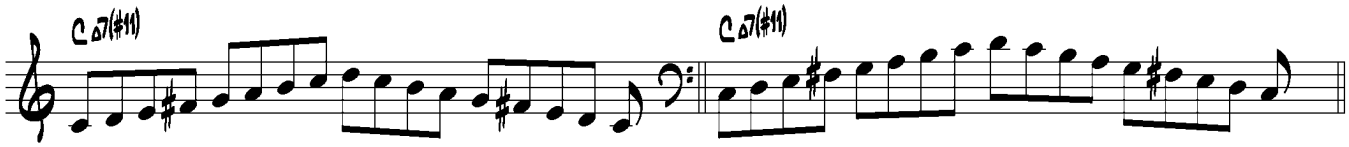
Worksheet Packet #1: Major Concepts

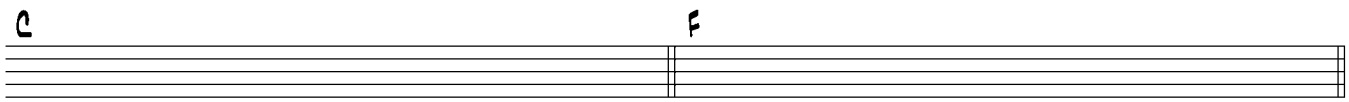
Review: Chapter 4, Worksheet Packet 1: Major; Chapter 4, Worksheet Packet 5: Chromaticism
Also applicable: Worksheet Pakcet : Pentatonics

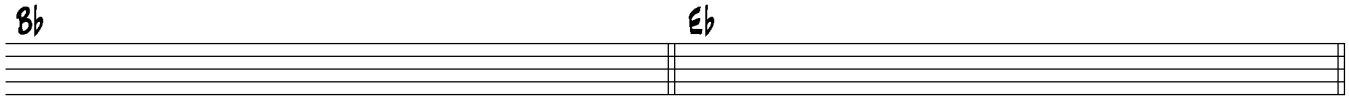
Major Sharp-11

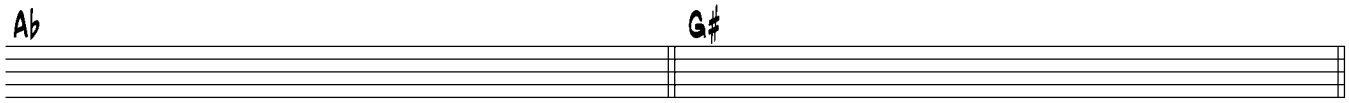
Scale: Lydian

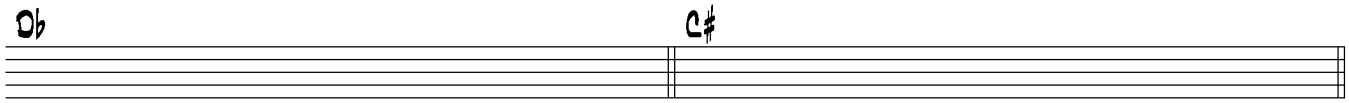
Example

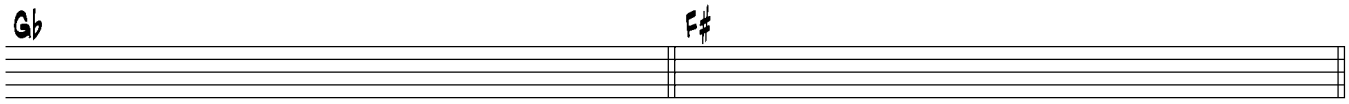


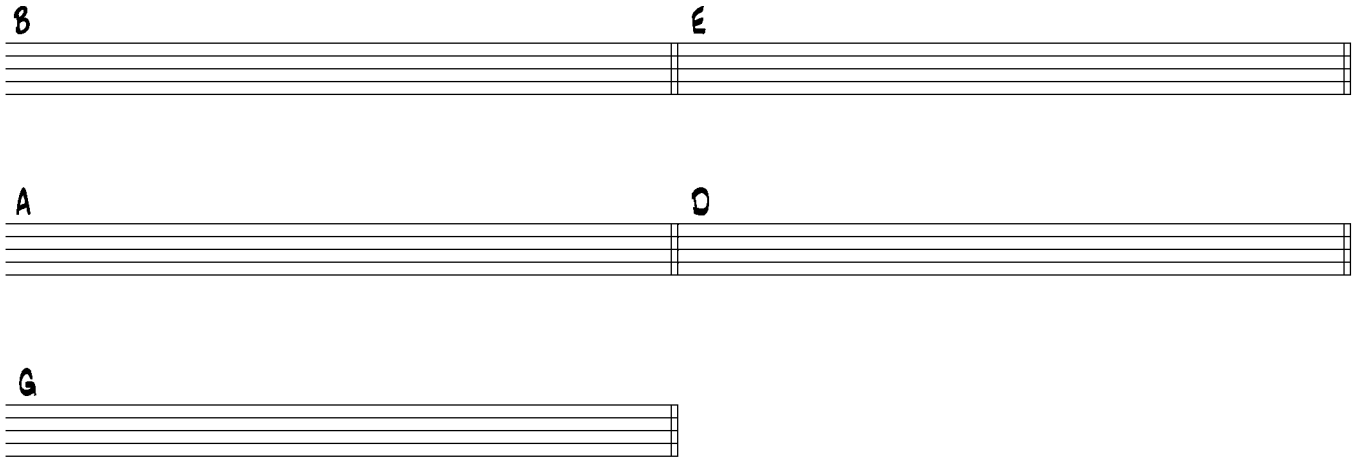






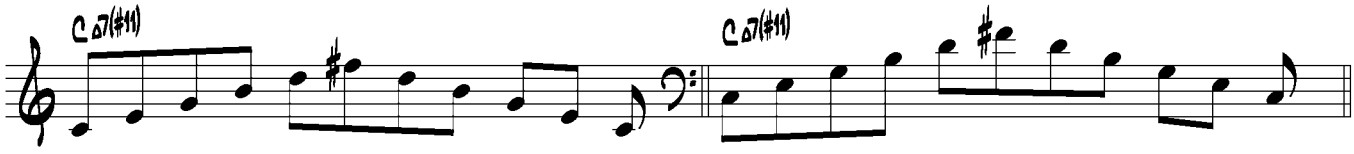




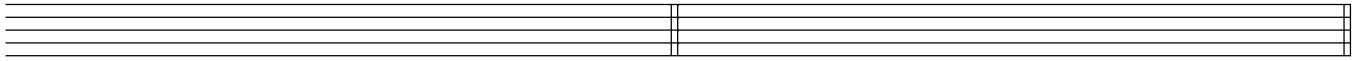

B
E
A
D
G

Arpeggio: Major Sharp-11

Example

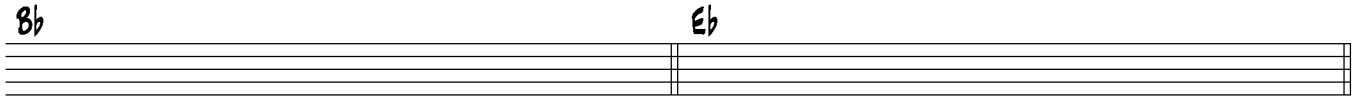


C



F

B♭

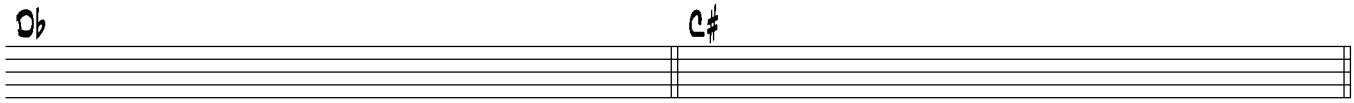


E♭

A♭

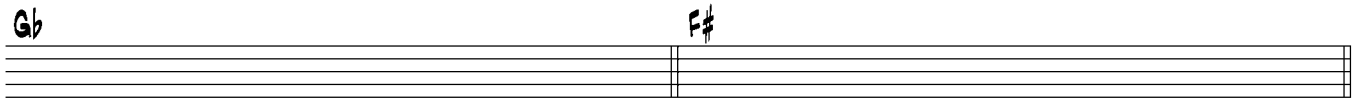
G♯

D♭



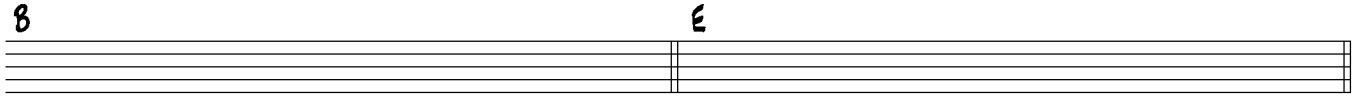
C♯

G♭



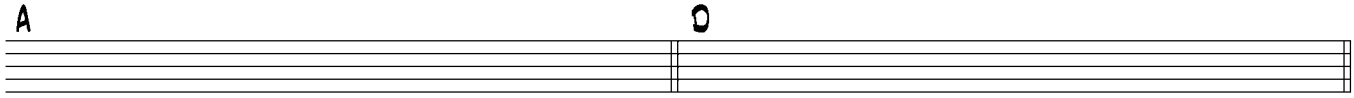
F♯

B



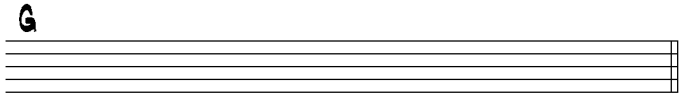
E

A

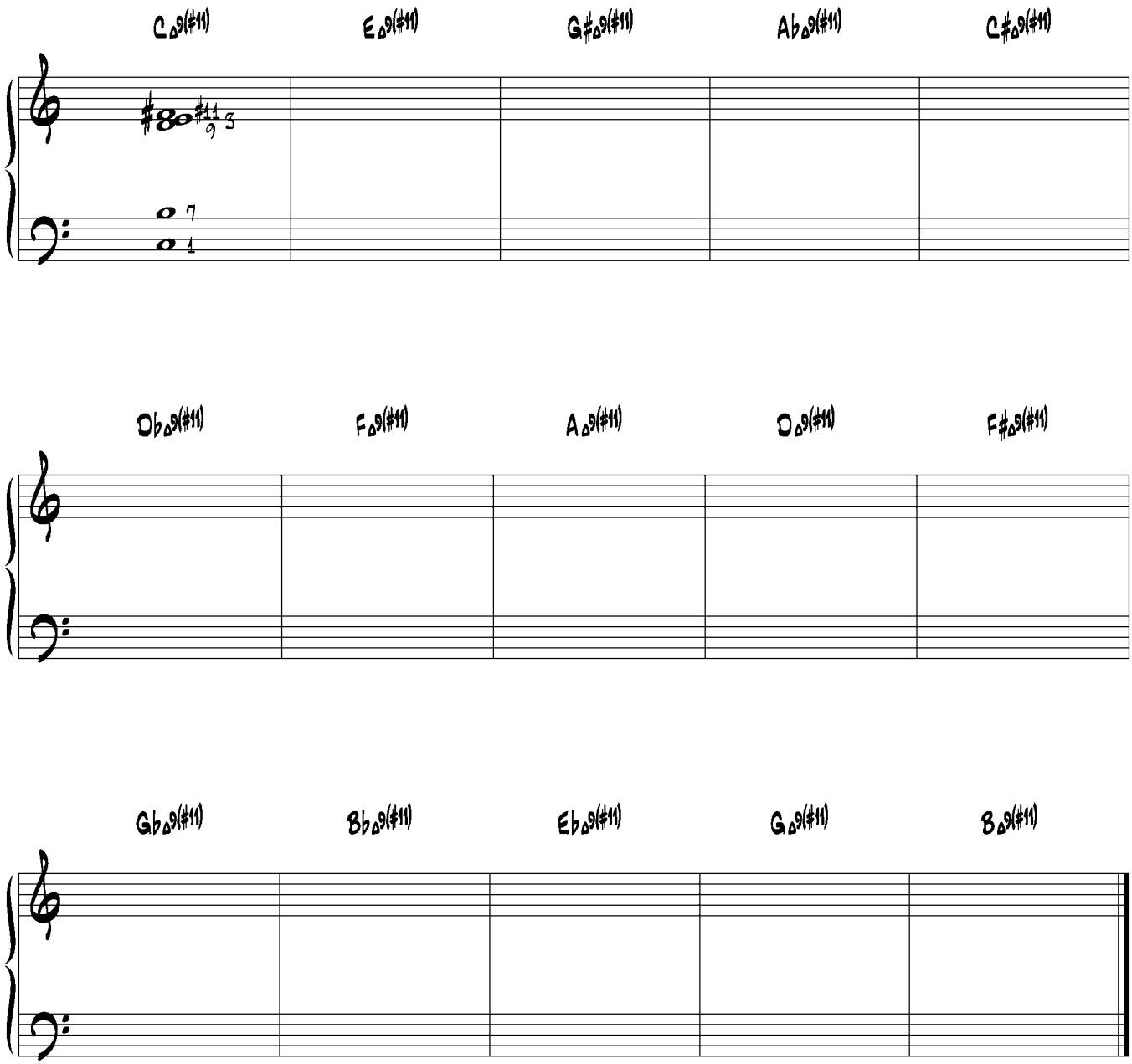


D

G



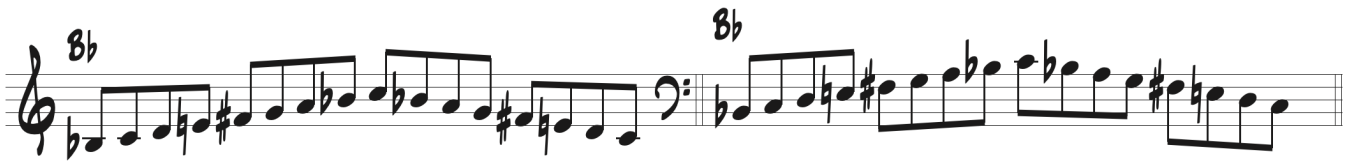
Chord: Major Sharp-11

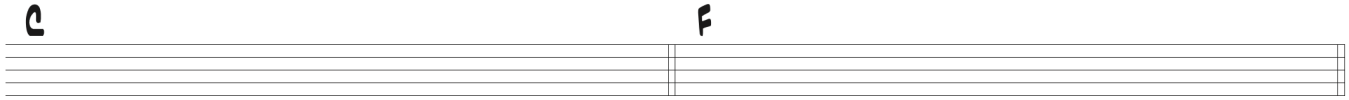


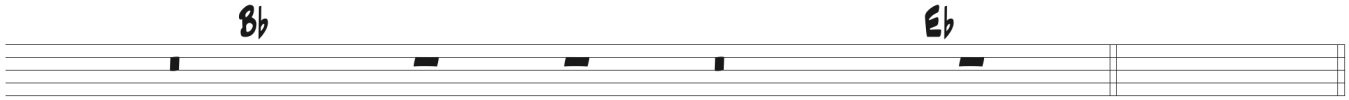
Major Augmented

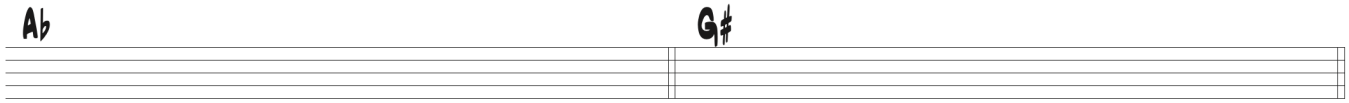
Scale: Lydian Augmented

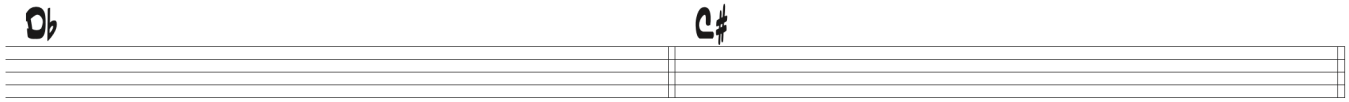
Example

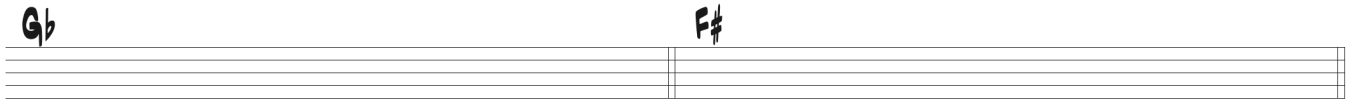


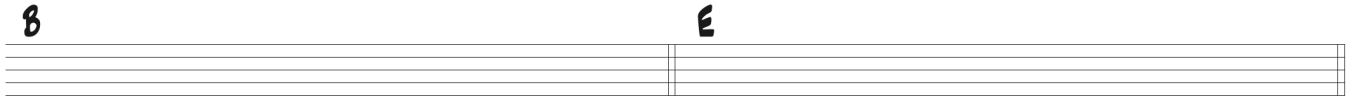


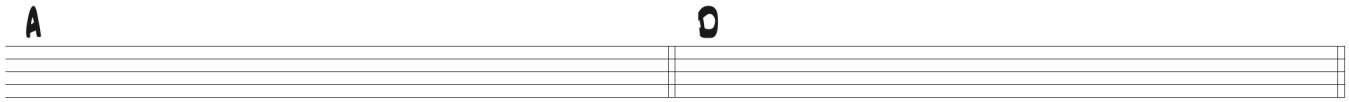


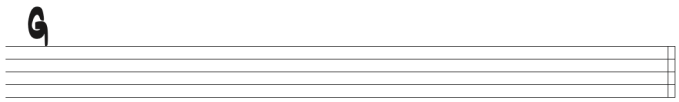






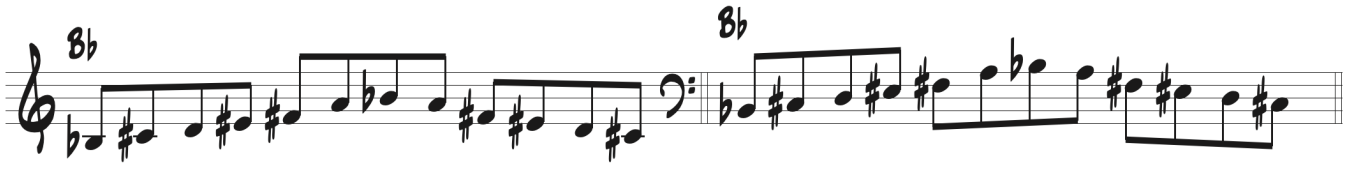


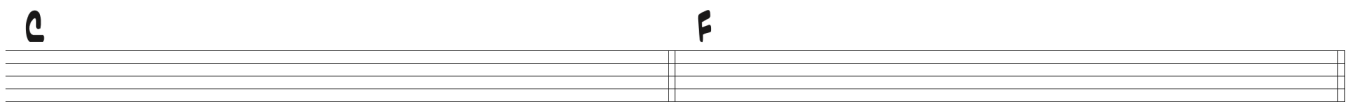


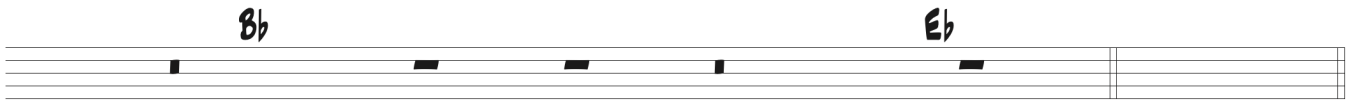


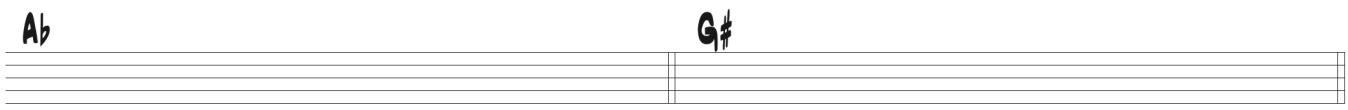
Scale: Augmented

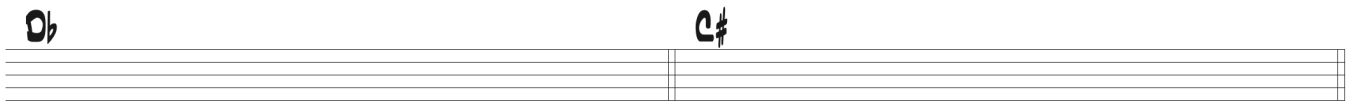
Example

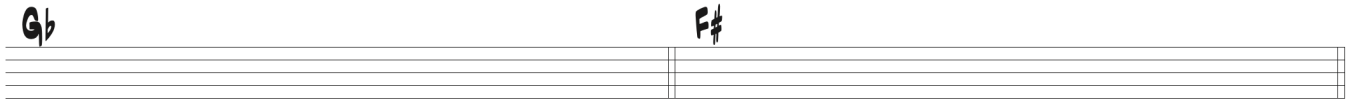


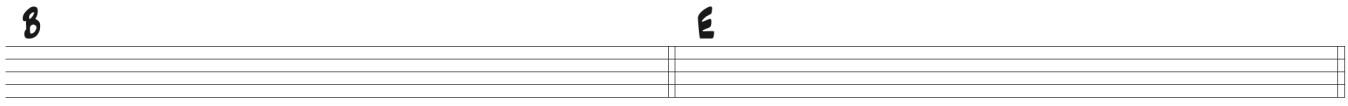


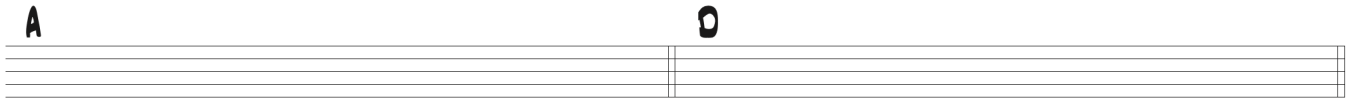


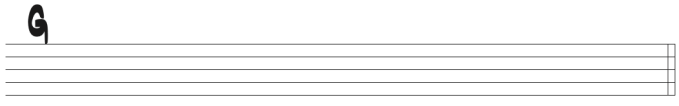






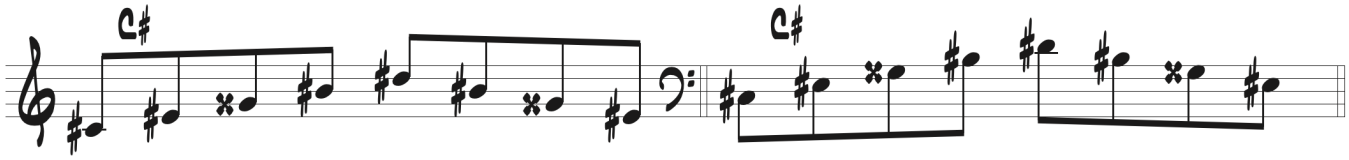






Arpeggio

Example



C

F

B♭

E♭

A♭

G♯

D♭

C♯

G♭

F♯

B

E

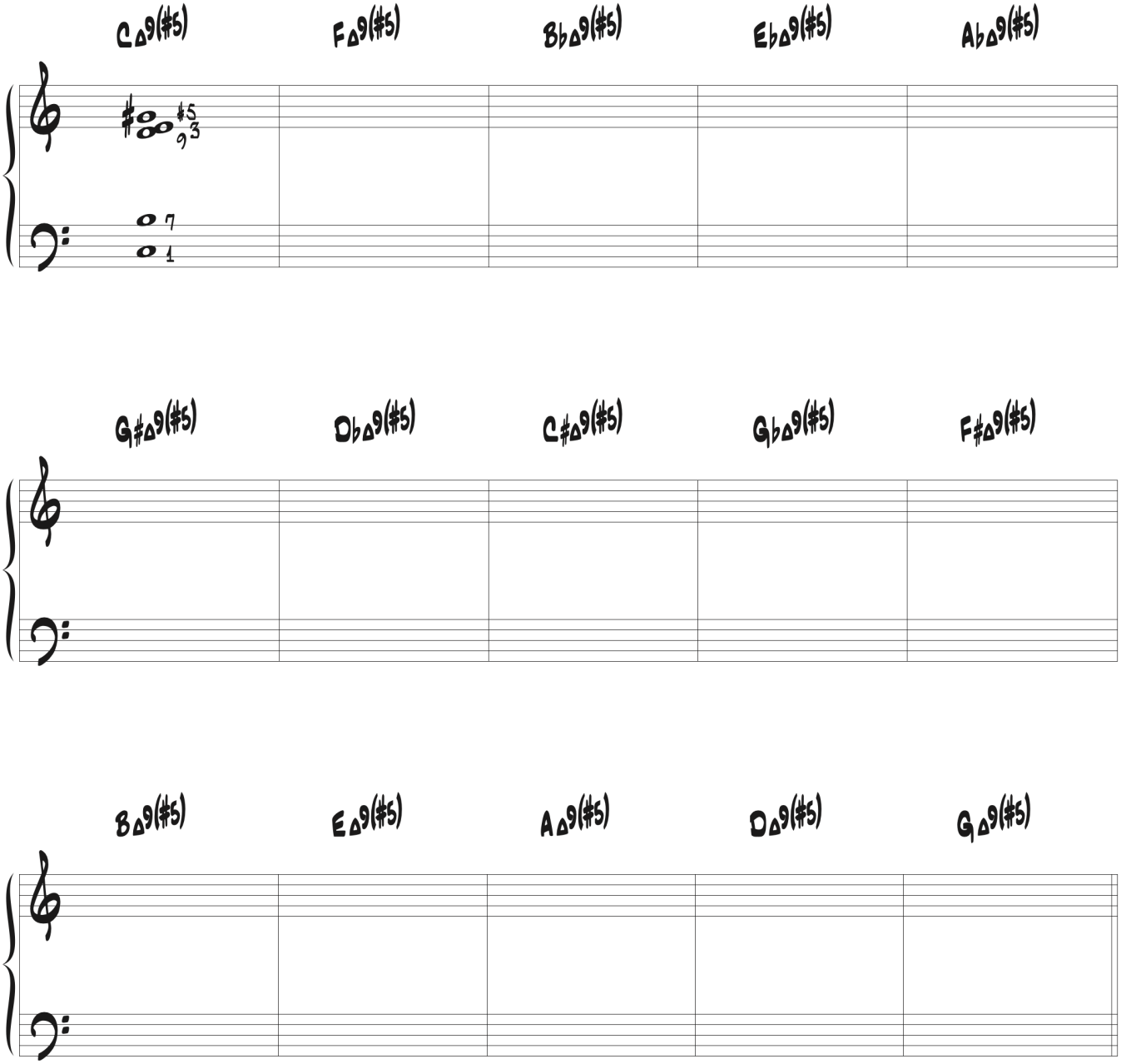
A

D

G

Chord

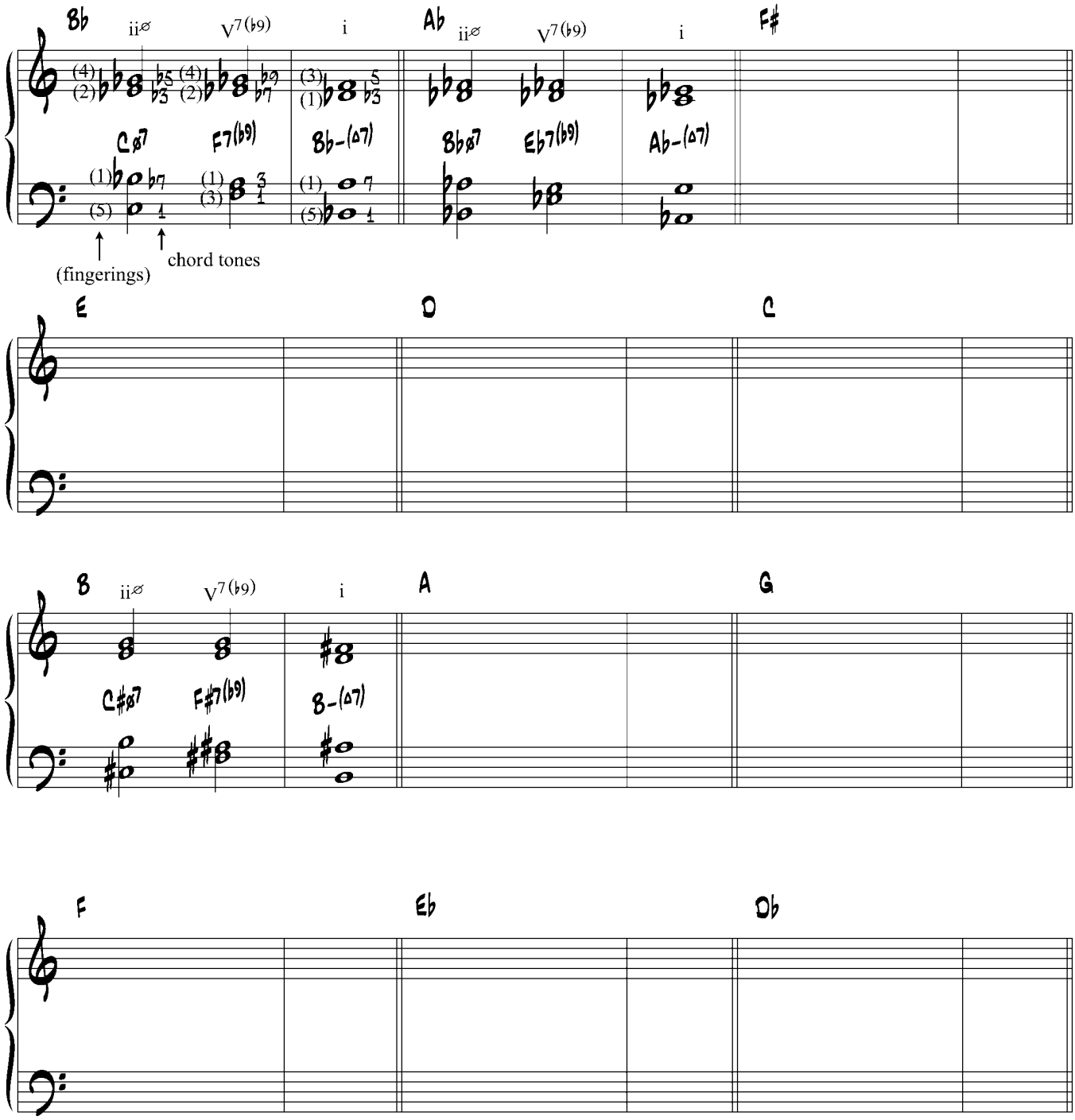
Example



Worksheet Packet #2: ii^{ø} V$^{7(♭9)}$ i$^{(Δ7)}$

Progression

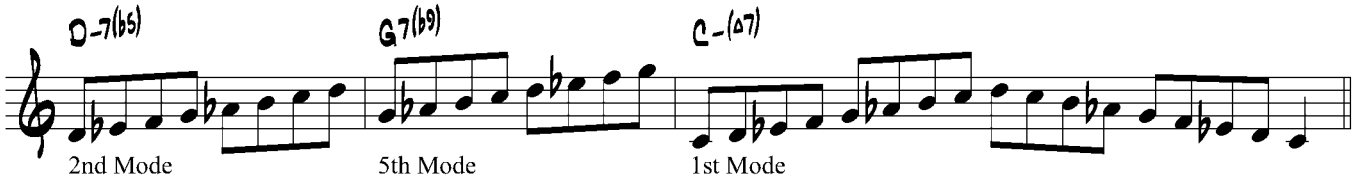
Example



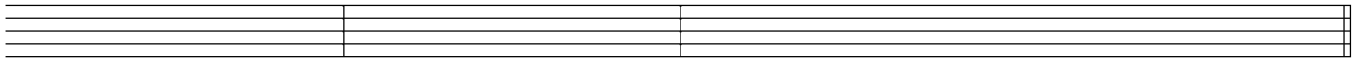
Harmonic Minor

Modes

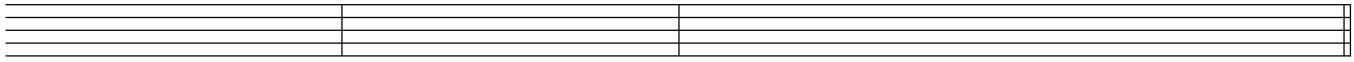
Example



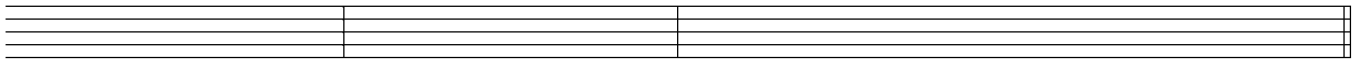
C-7(b5) F7(b9) Bb-(Δ7)



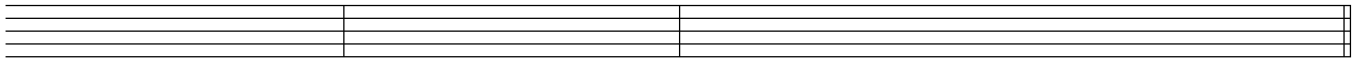
Bb-7(b5) Eb7(b9) Ab-(Δ7)



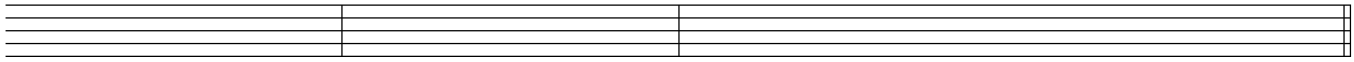
Ab-7(b5) Db7(b9) Gb-(Δ7)



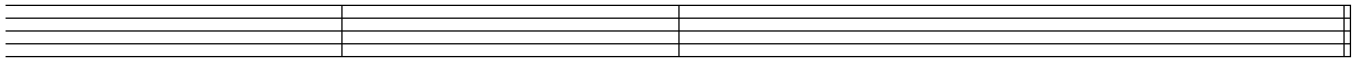
G#-7(b5) C#7(b9) F#-(Δ7)



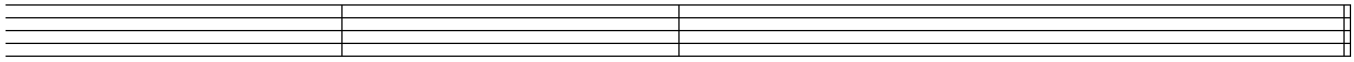
F#-7(b5) B7(b9) E-(Δ7)



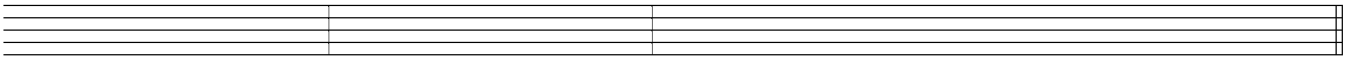
E-7(b5) A7(b9) D-(Δ7)



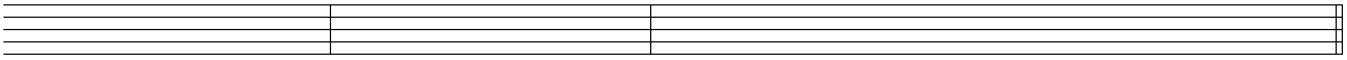
D-7(b5) G7(b9) C-(Δ7)



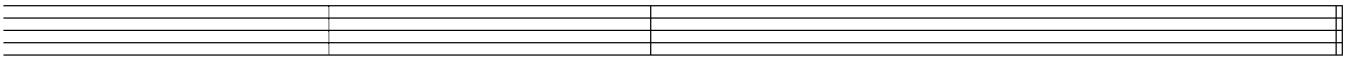
C#-7(b5) F#7(b9) B-(Δ7)



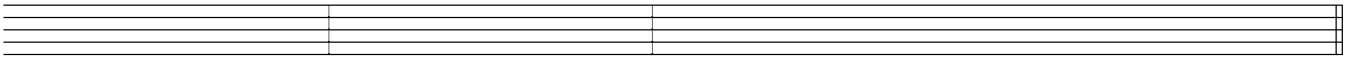
B-7(b5) E7(b9) A-(Δ7)



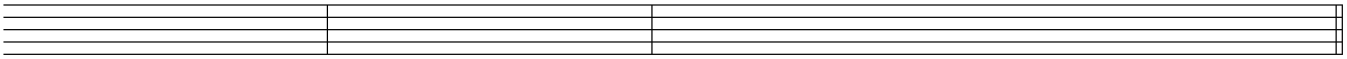
A-7(b5) D7(b9) G-(Δ7)



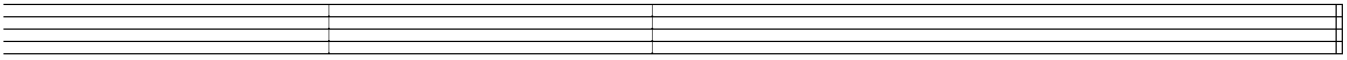
G-7(b5) C7(b9) F-(Δ7)



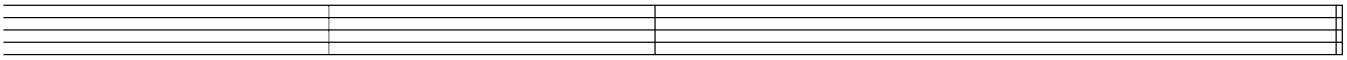
F-7(b5) Bb7(b9) Eb-(Δ7)



Eb-7(b5) Ab7(b9) Db-(Δ7)



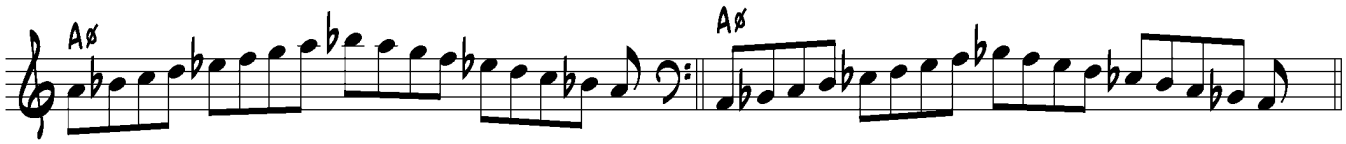
D#-7(b5) G#7(b9) C#-(Δ7)

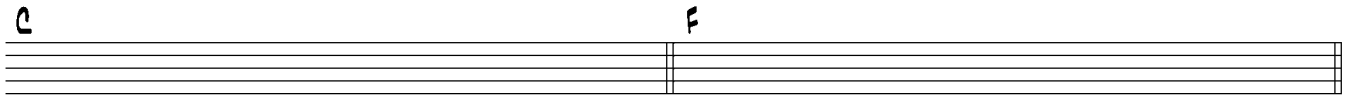


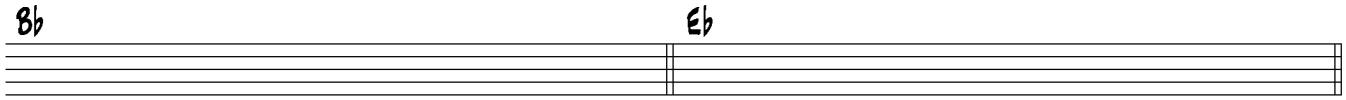
Half Diminished

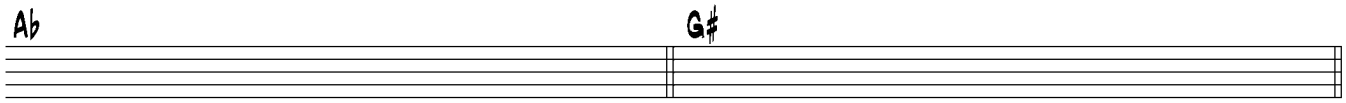
Scale: Locrian or 2nd Mode of Natural Minor

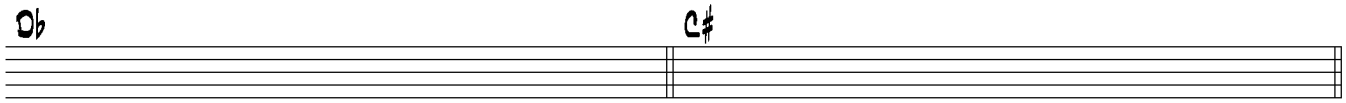
Example

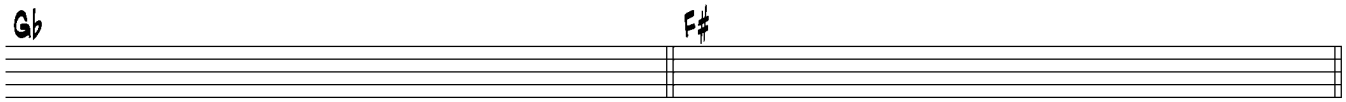


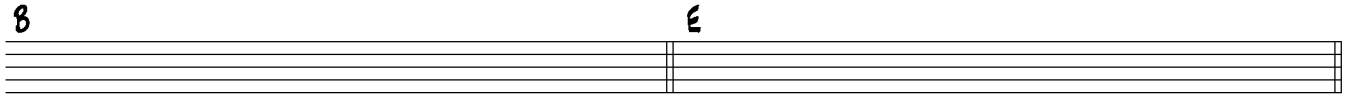


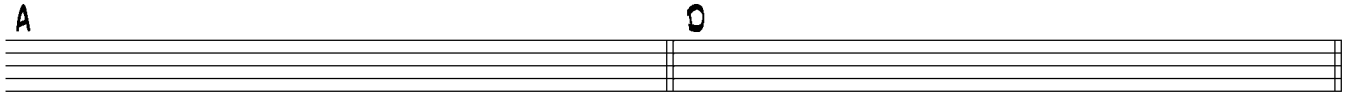


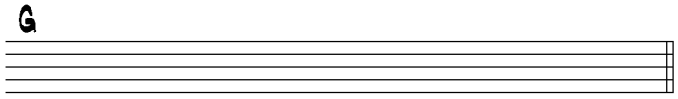






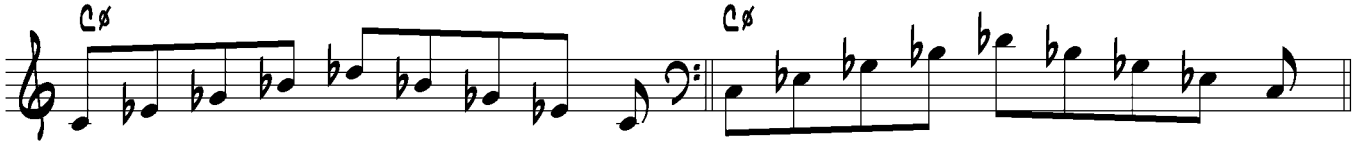






Arpeggio

Example



C F

Bb Eb

Ab G♯

Db C♯

Gb F♯

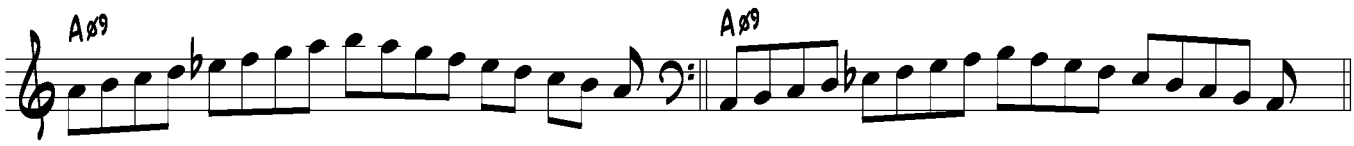
B E

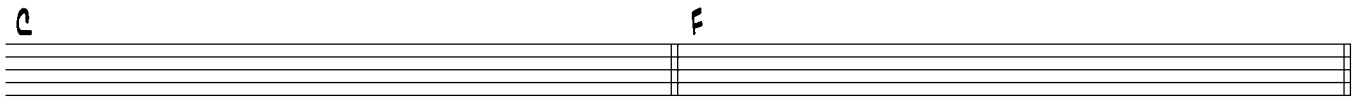
A D

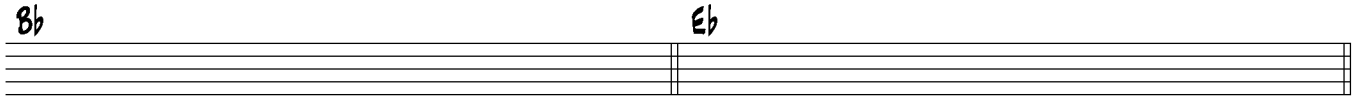
G

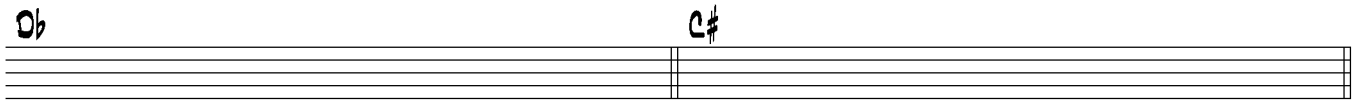
Scale: Locrian Sharp-2 (6th Mode of Ascending Melodic Minor)

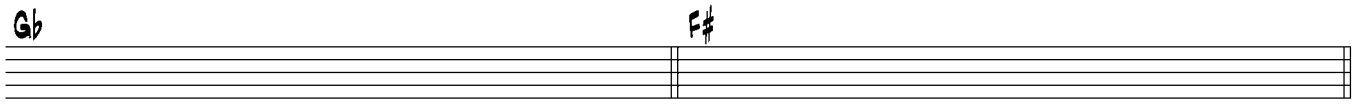
Example

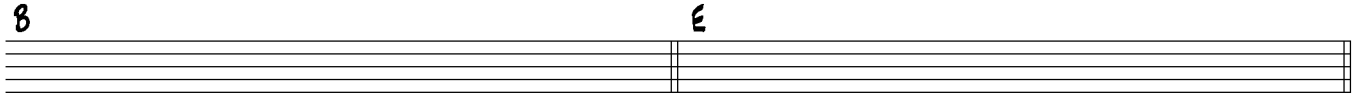


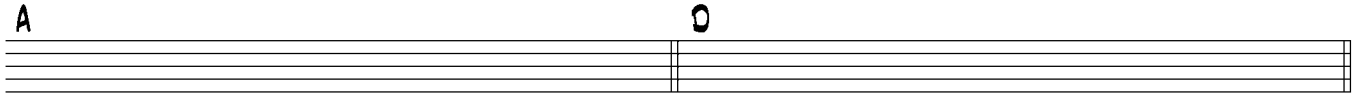


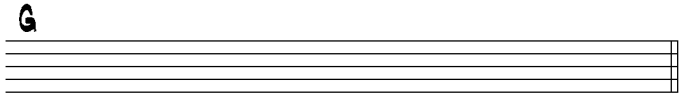






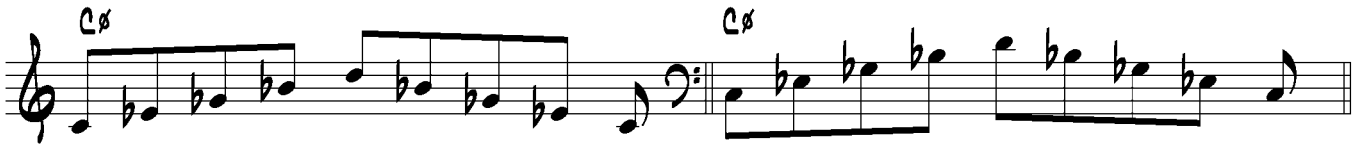






Arpeggio: Half-diminished Major 9

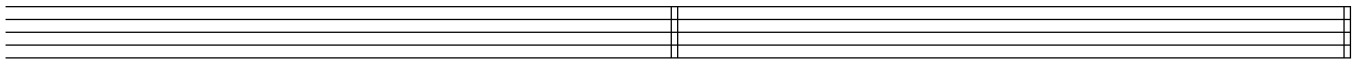
Example



C

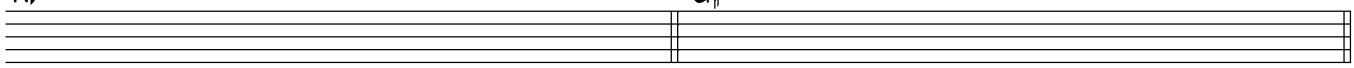
F

Bb



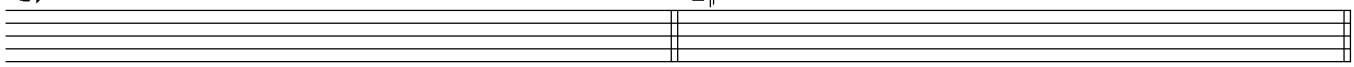
Eb

Ab



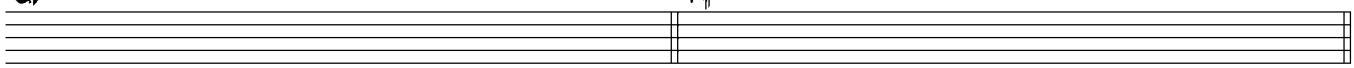
G♯

Db



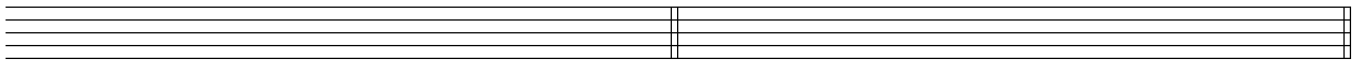
C♯

Gb



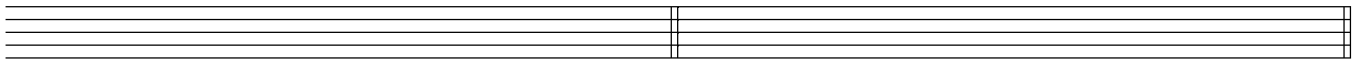
F♯

B



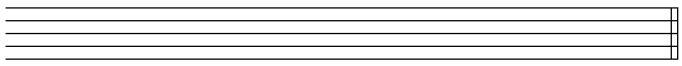
E

A



D

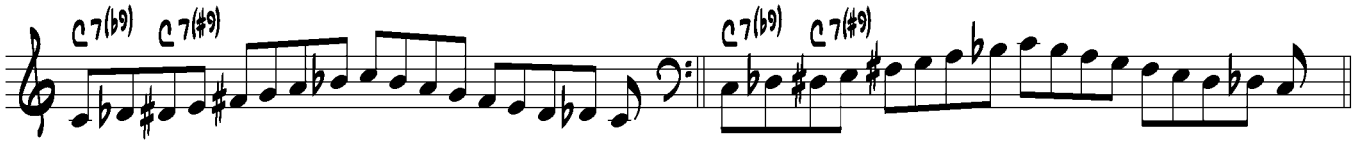
G



Dominant Flat-9

Scale: Diminished Half-Step 1st

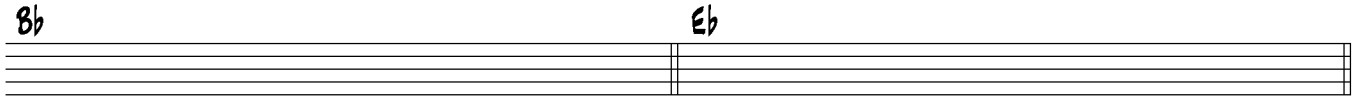
Example



C

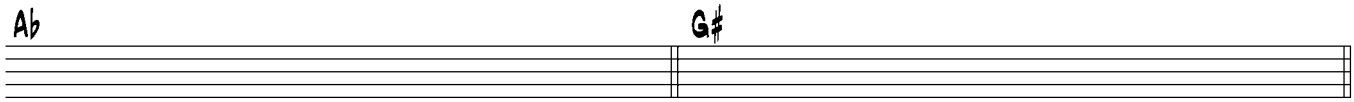
F

Bb



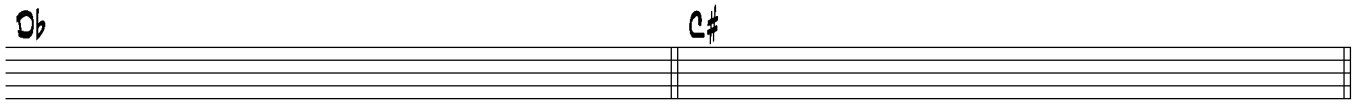
Eb

Ab



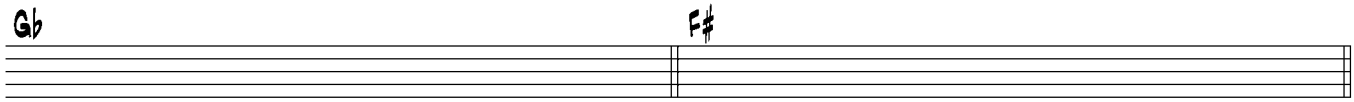
G#

Db



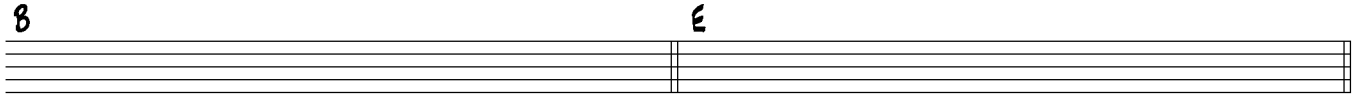
C#

Gb



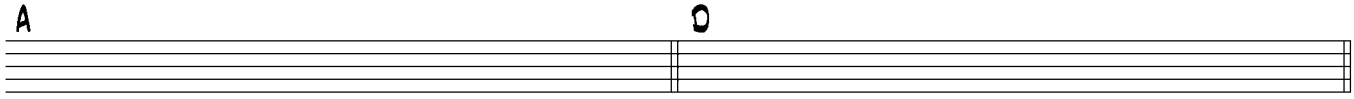
F#

B



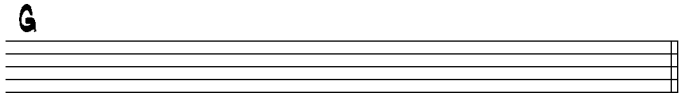
E

A



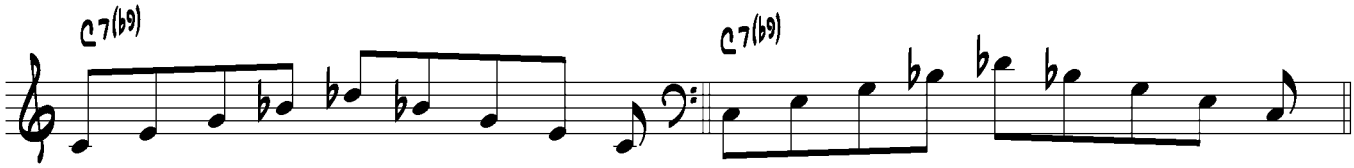
D

G

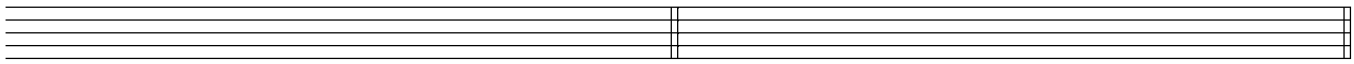


Arpeggio: Dominant Flat-9

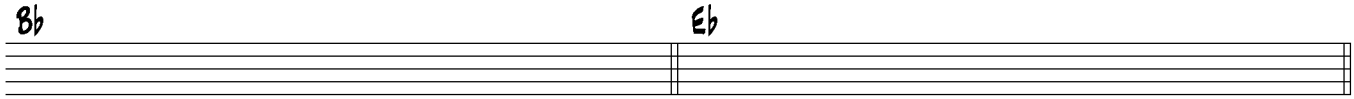
Example



C

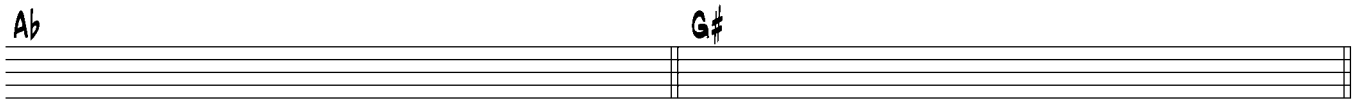


F



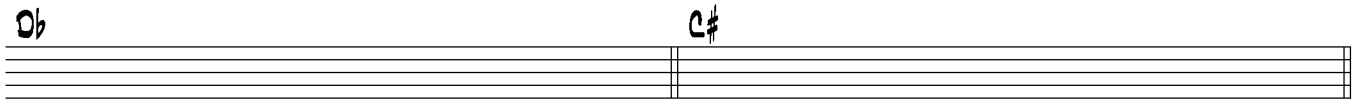
Bb

Eb



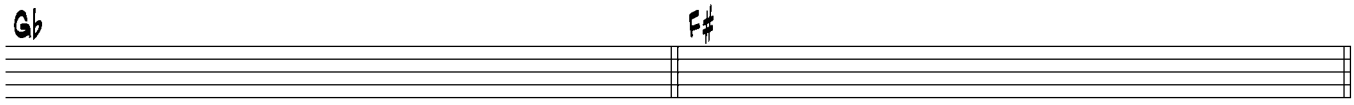
Ab

G#



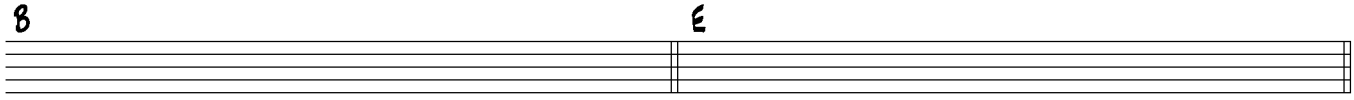
Db

C#



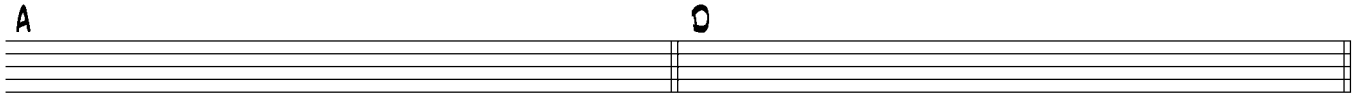
Gb

F#



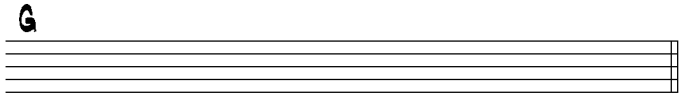
B

E



A

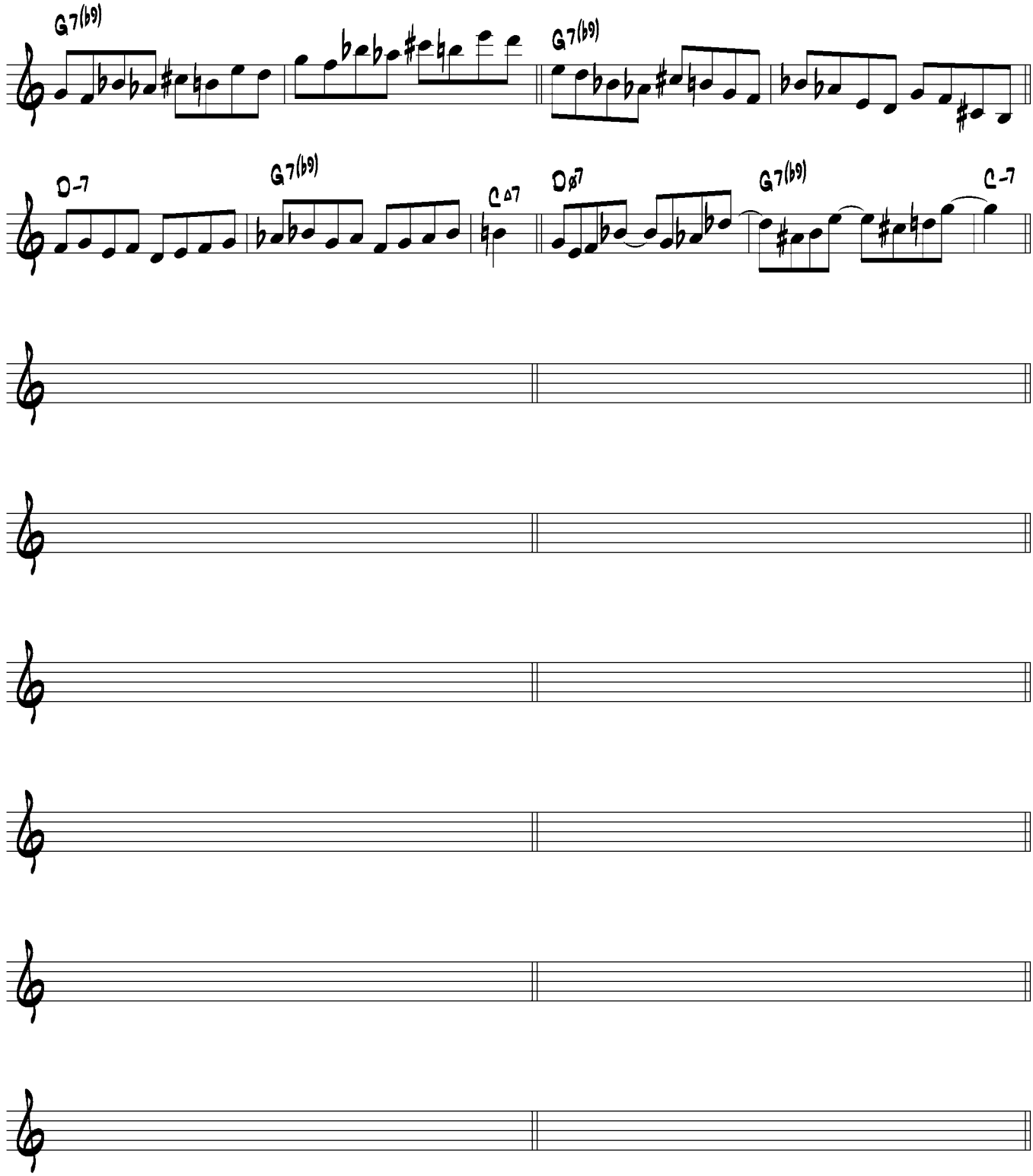
D



G

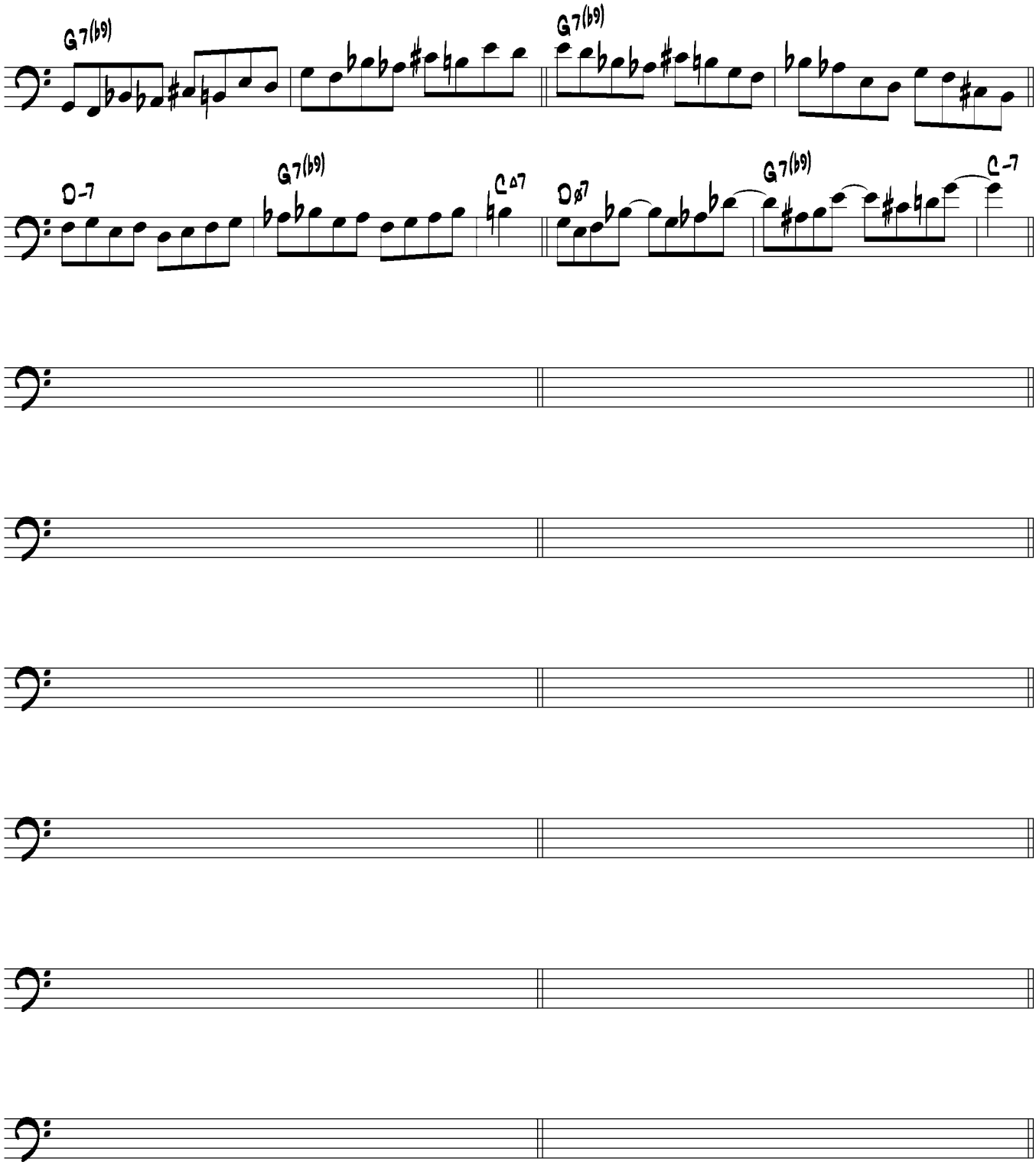
Patterns (treble)

Examples



Patterns (bass)

Examples

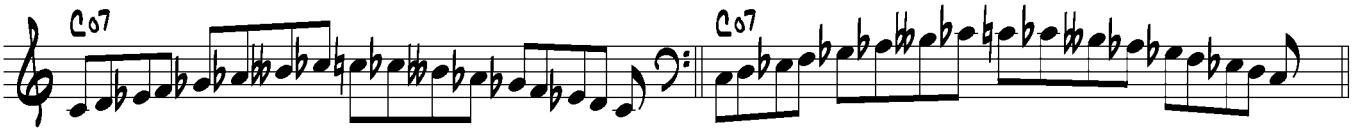


Worksheet Packet #3: More Dominant Concepts

Diminished

Scale: Diminished Whole-Step 1st

Example



C

F

Bb

Eb

Ab

G#

Db

C#

Gb

F#

B

E

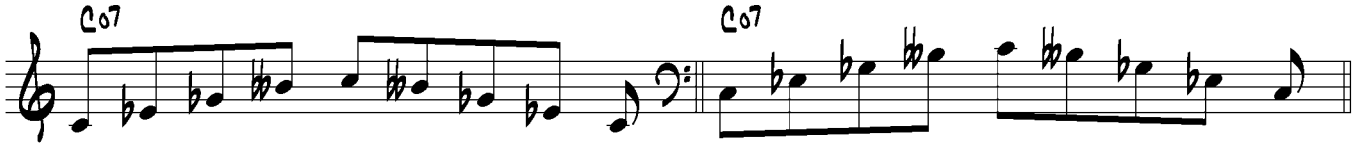
A

D

G

Arpeggio

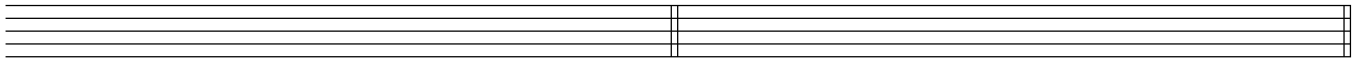
Example



C

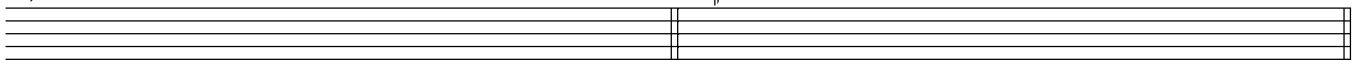
F

Bb



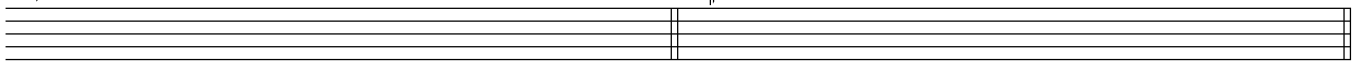
Eb

Ab



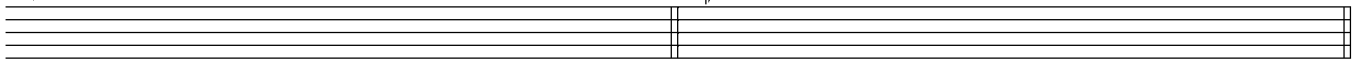
G#

Db



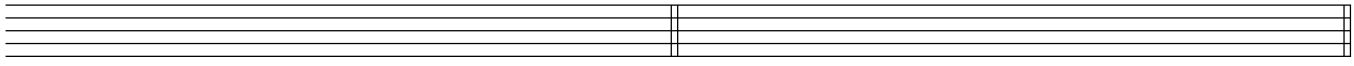
C#

Gb



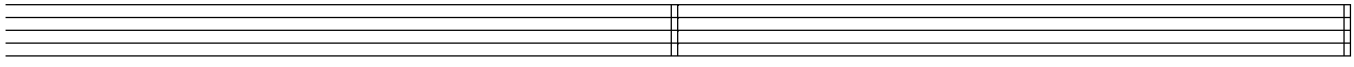
F#

B



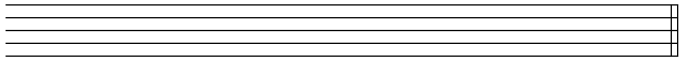
E

A



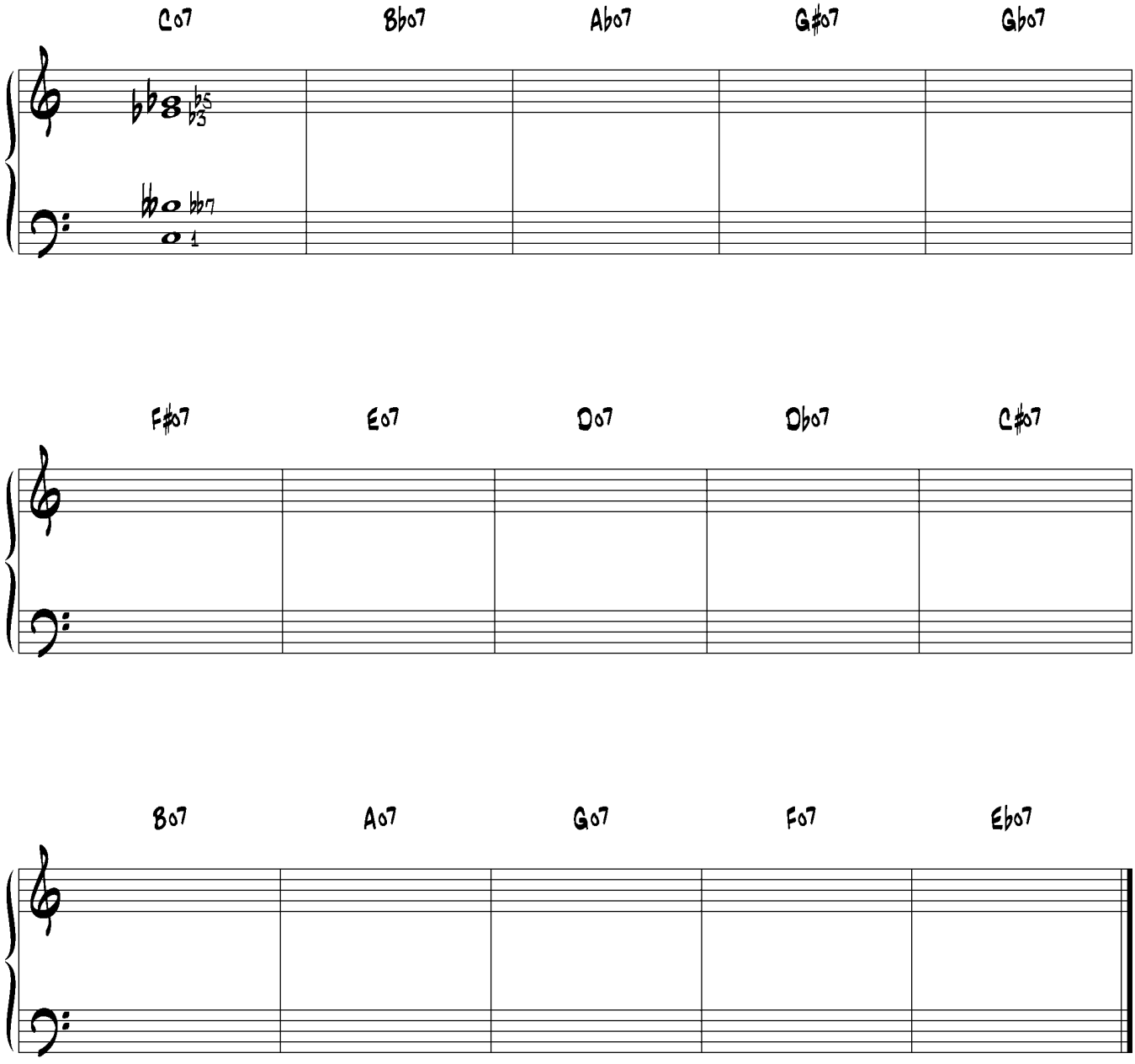
D

G



Chord

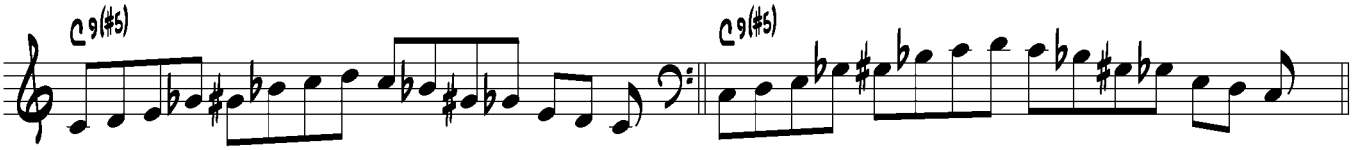
Example

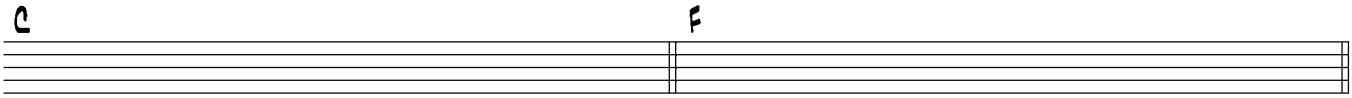


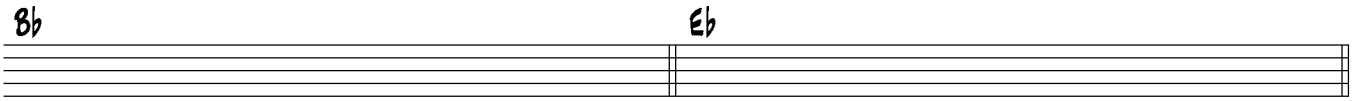
Dominant Altered 5th

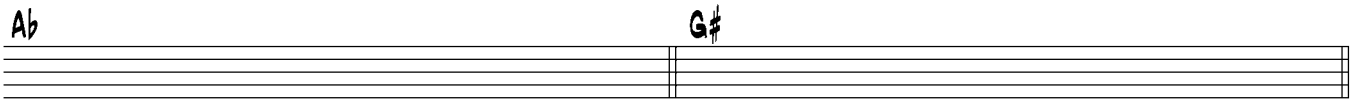
Scale: Whole Tone

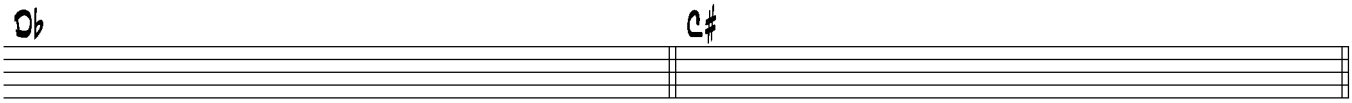
Example

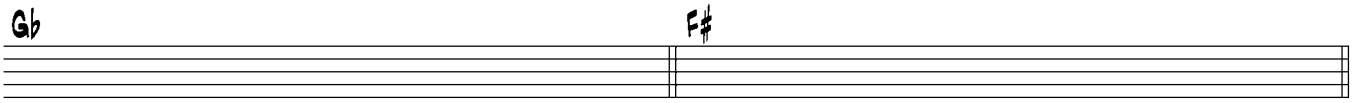


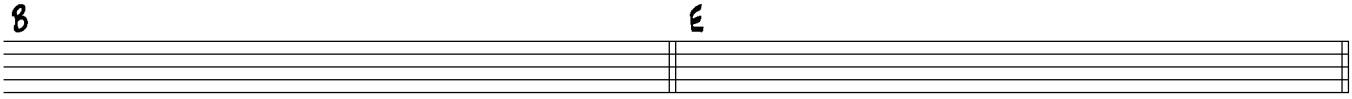


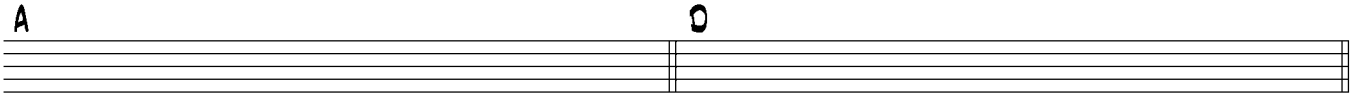


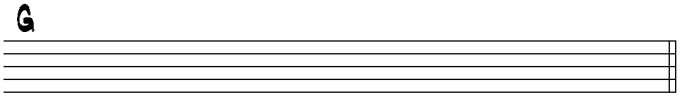






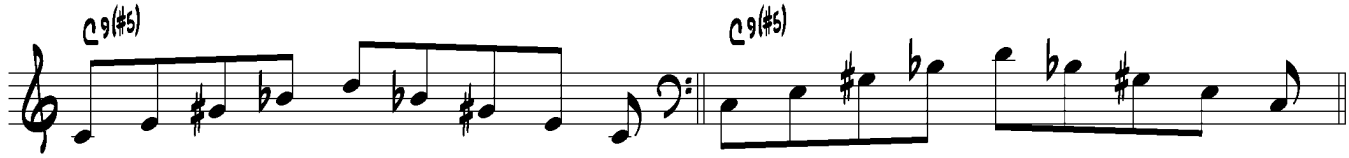






Arpeggio

Example



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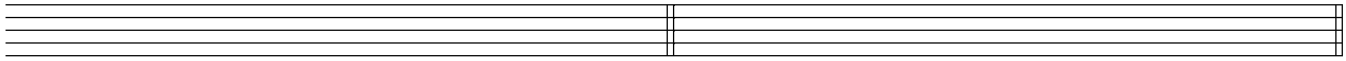
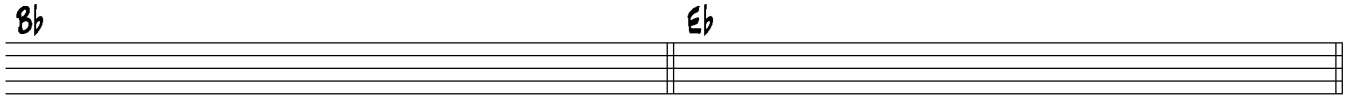
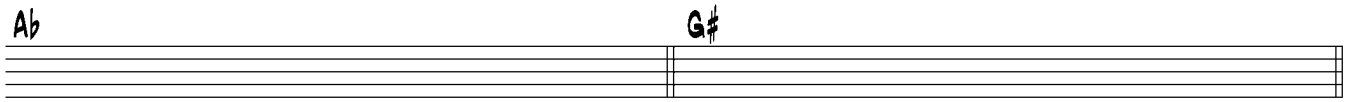


F



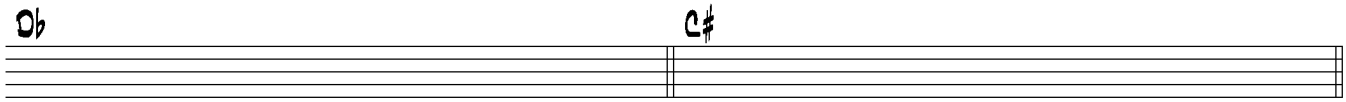
Bb

Eb



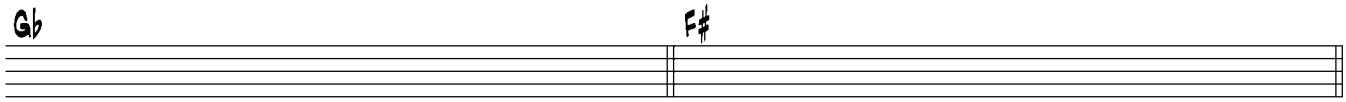
Ab

G♯



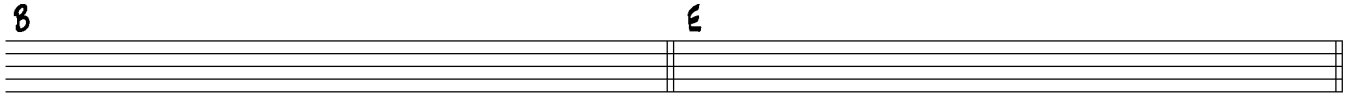
Db

C♯



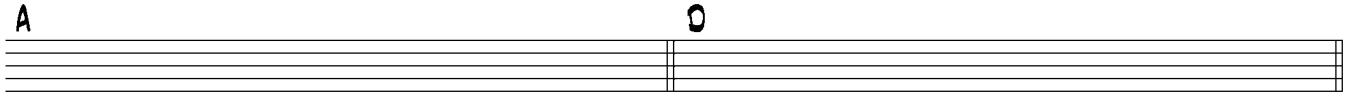
Gb

F♯



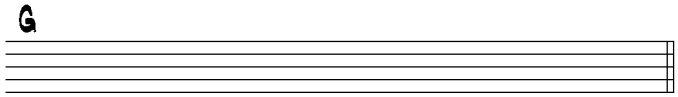
B

E



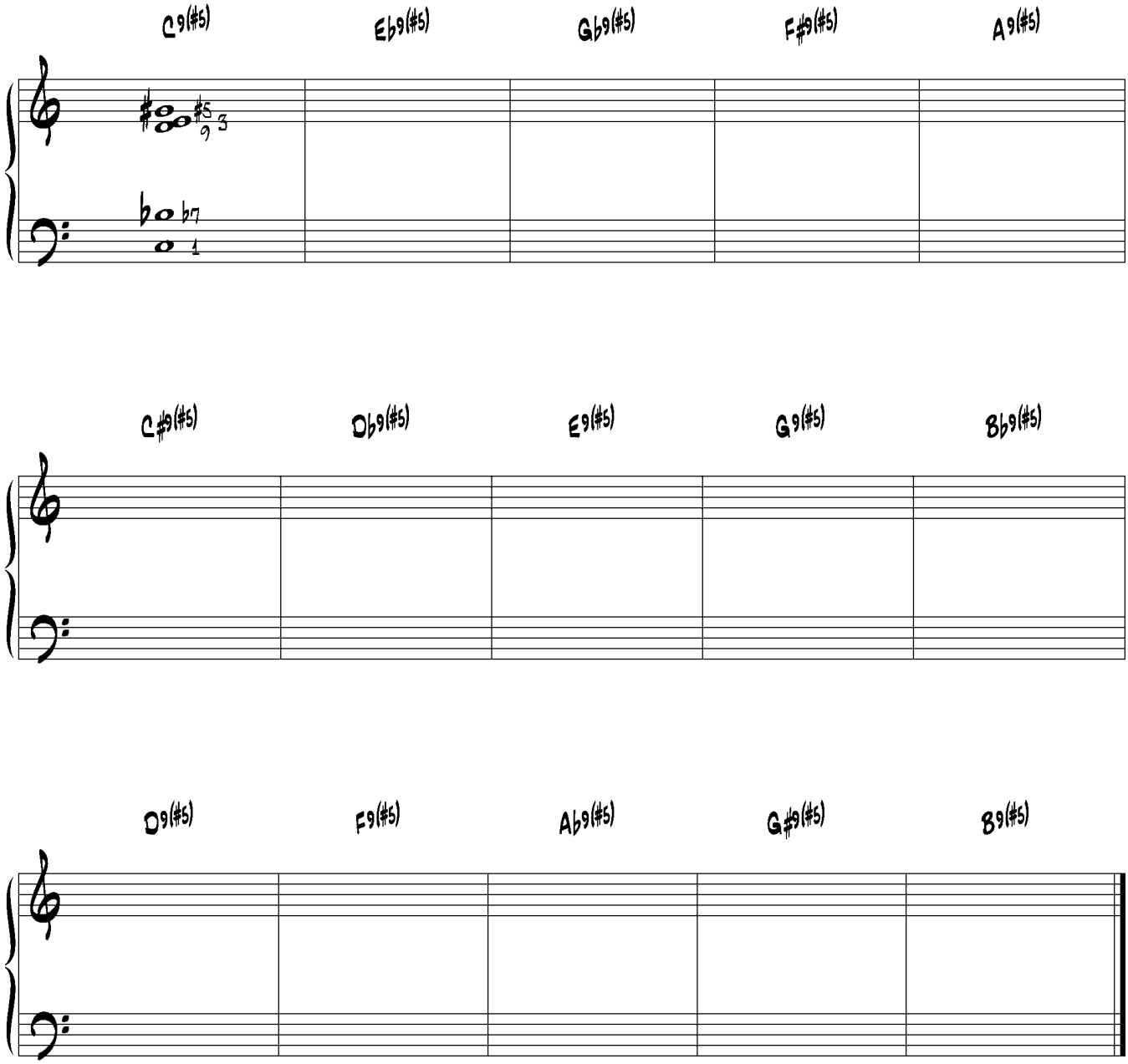
A

D



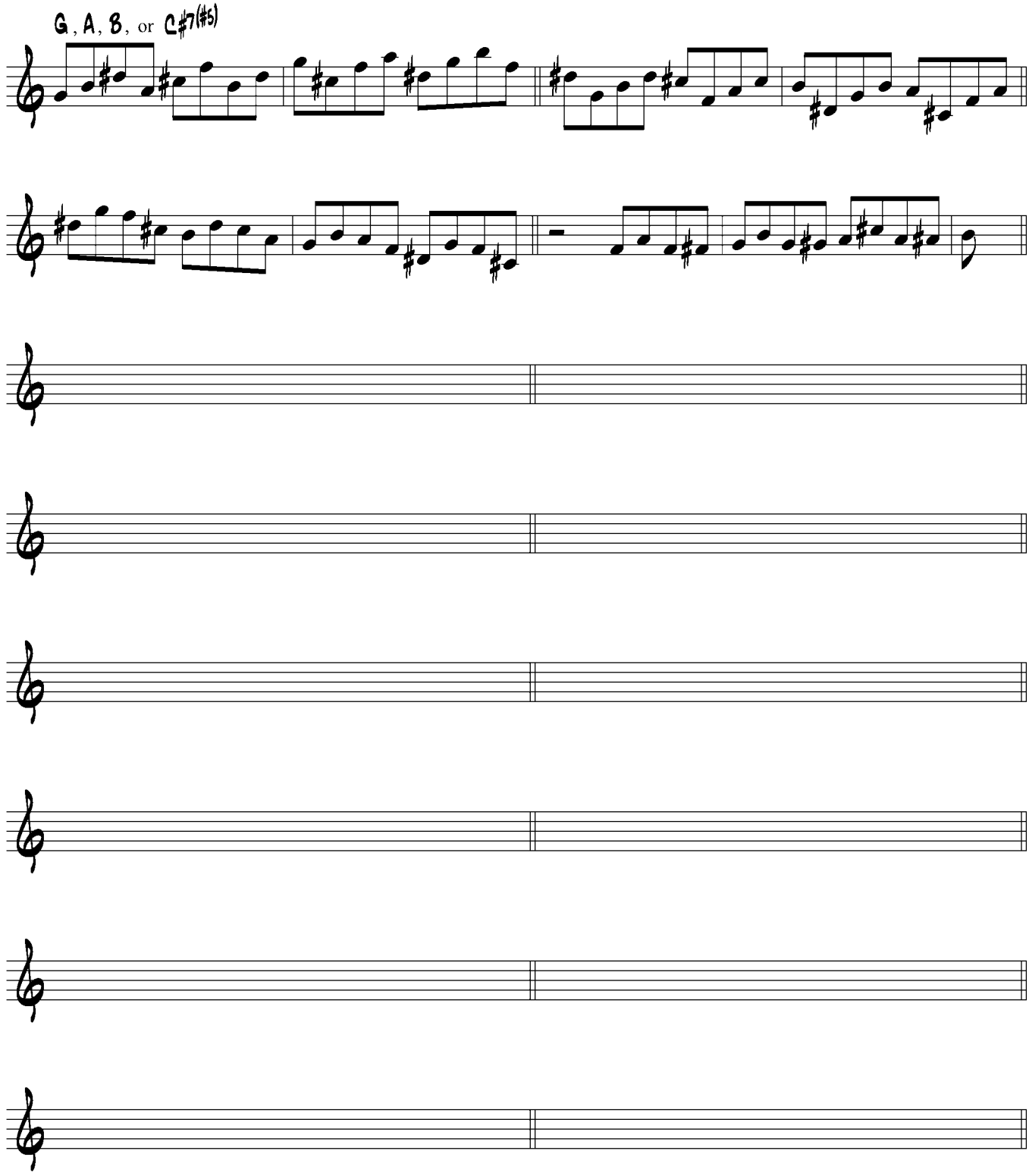
G

Chord


C9(#5)
Eb9(#5)
Gb9(#5)
F#9(#5)
A9(#5)
C#9(#5)
Db9(#5)
E9(#5)
G9(#5)
Bb9(#5)
D9(#5)
F9(#5)
Ab9(#5)
G#9(#5)
B9(#5)

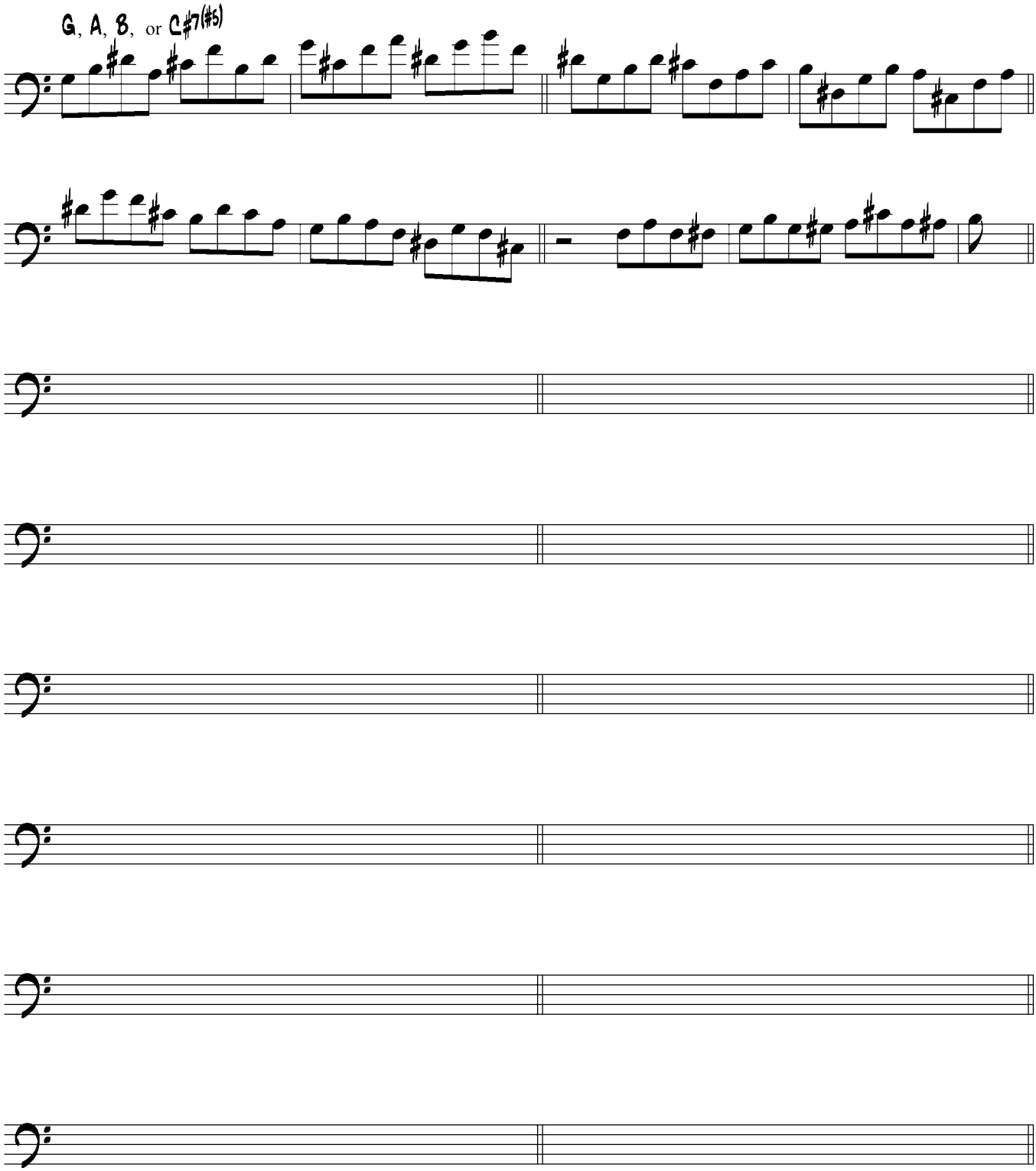
Patterns (treble)

Examples



Patterns (bass)

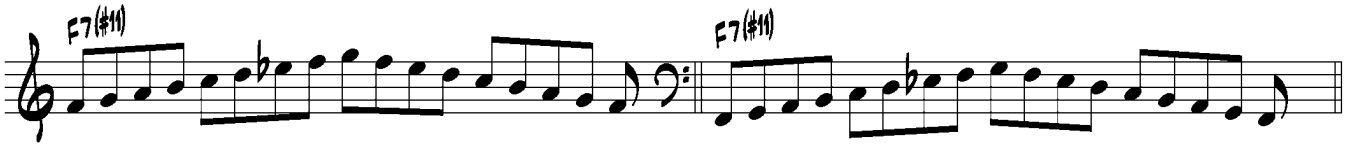
Examples



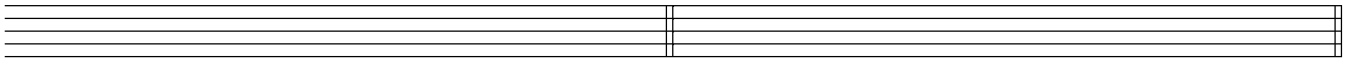
Dominant Sharp-11

Scale: Lydian Dominant

Example

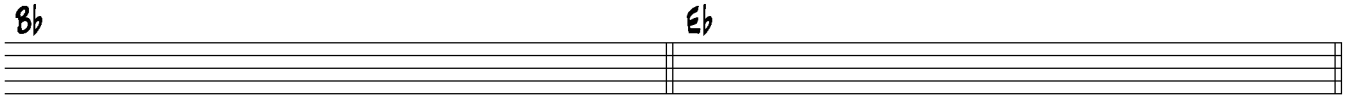


C



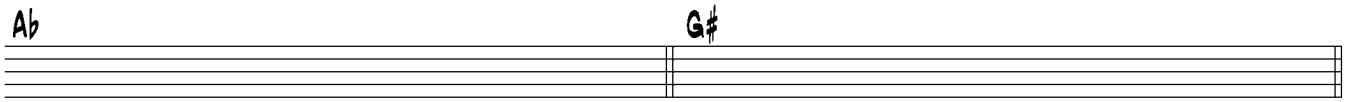
F

Bb



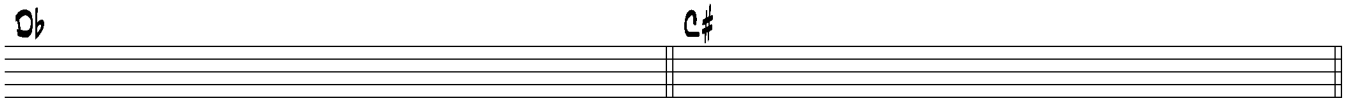
Eb

Ab



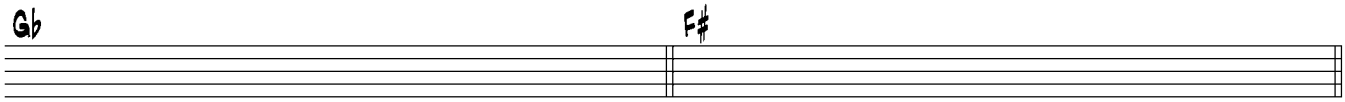
G♯

Db



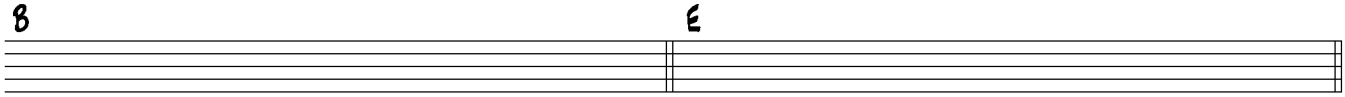
C♯

Gb



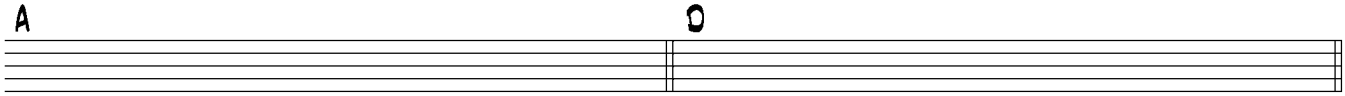
F♯

B



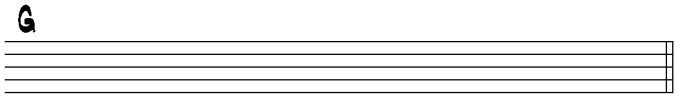
E

A



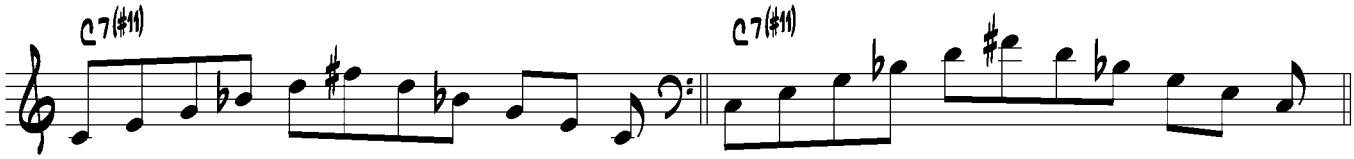
D

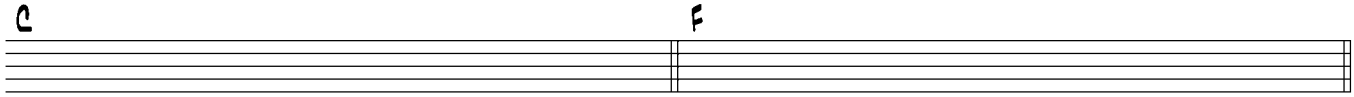
G

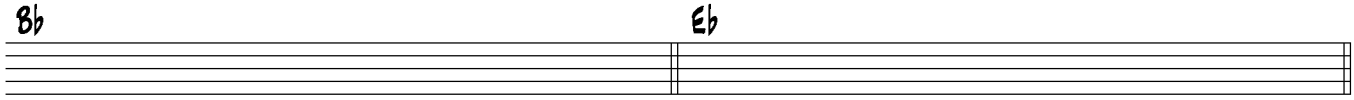


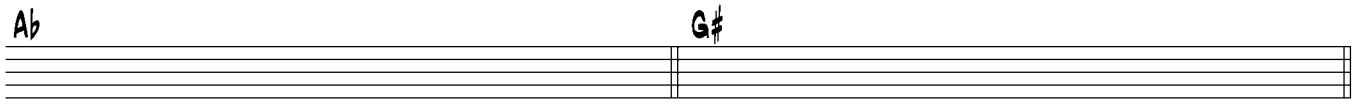
Arpeggio

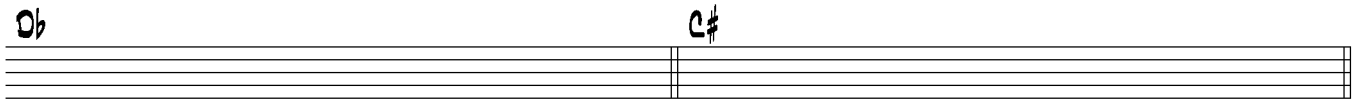
Example

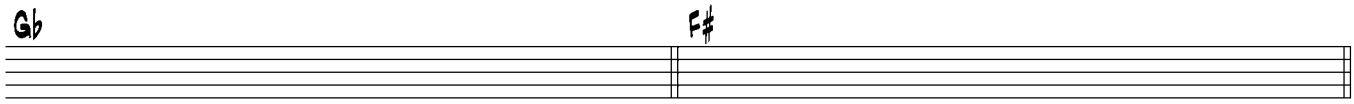


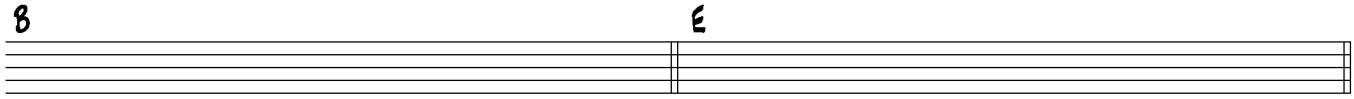


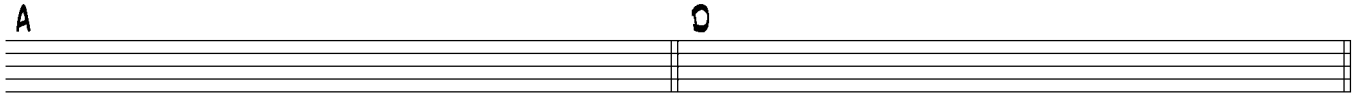


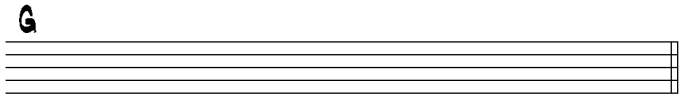




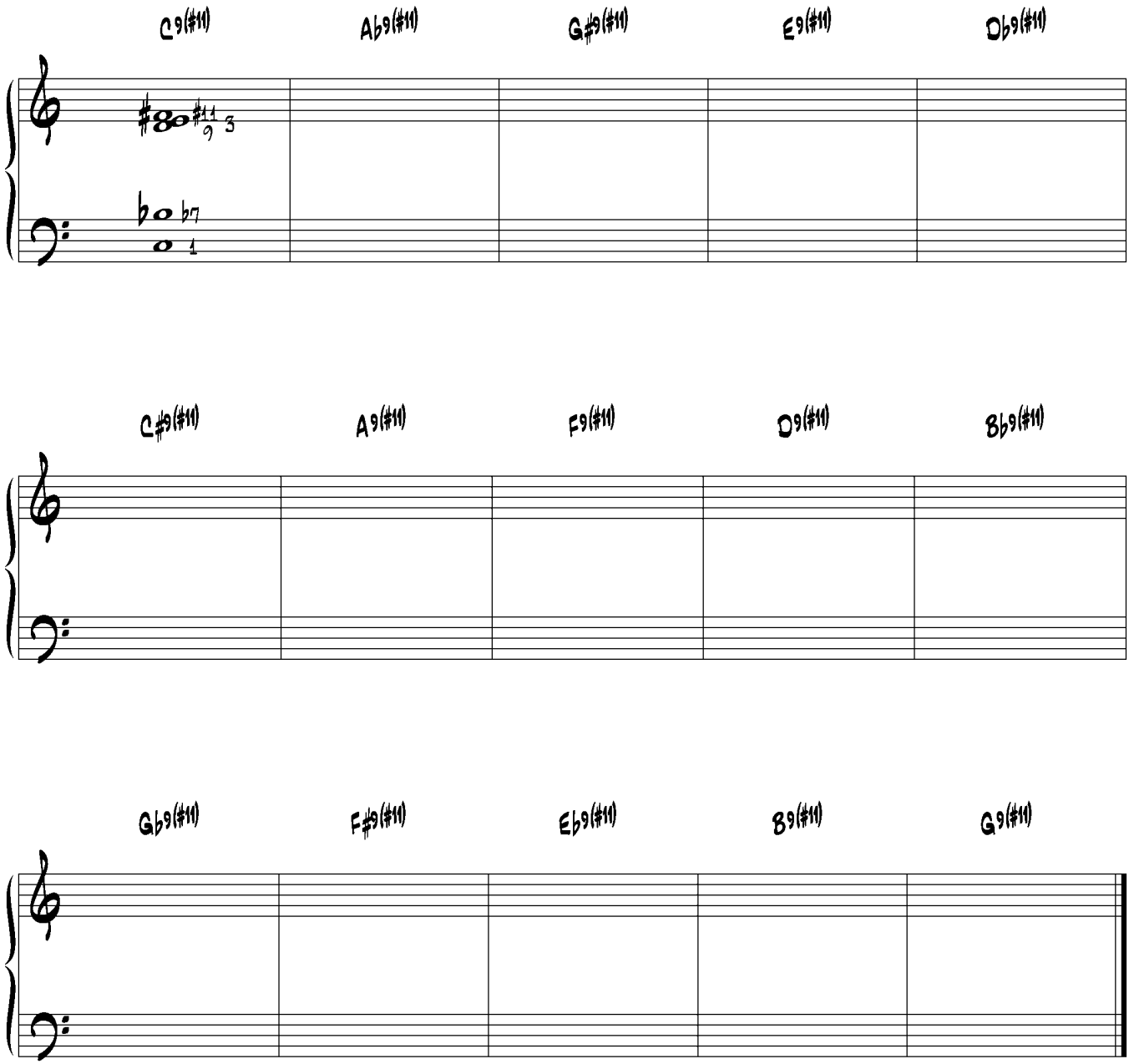








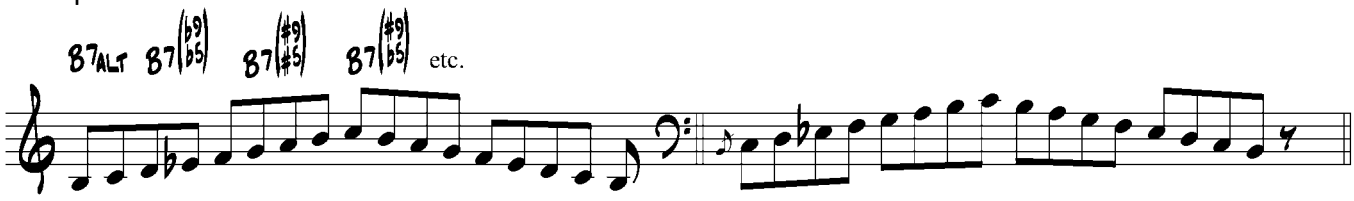
Chord

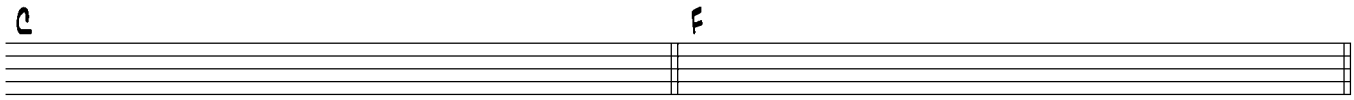

C9(#11)
Ab9(#11)
G#9(#11)
E9(#11)
Db9(#11)
C#9(#11)
A9(#11)
F9(#11)
D9(#11)
Bb9(#11)
Gb9(#11)
F#9(#11)
Eb9(#11)
B9(#11)
G9(#11)

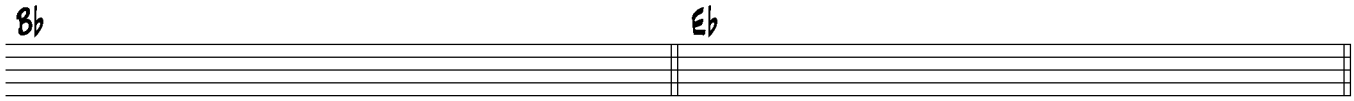
Dominant: Altered 5th and 9th

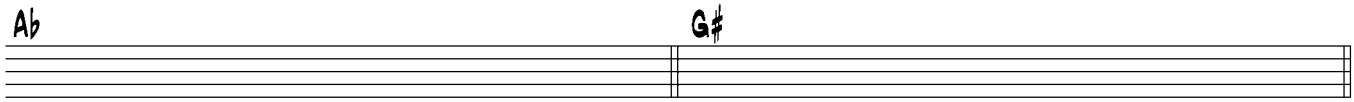
Scale: The Altered Scale (Diminished/Whole-Tone, Superlocrian)

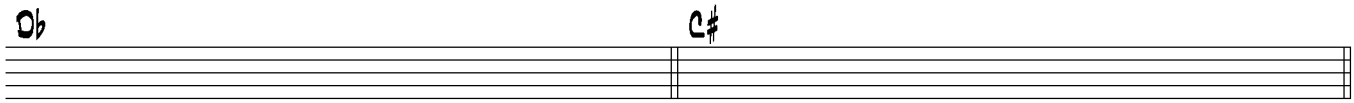
Example

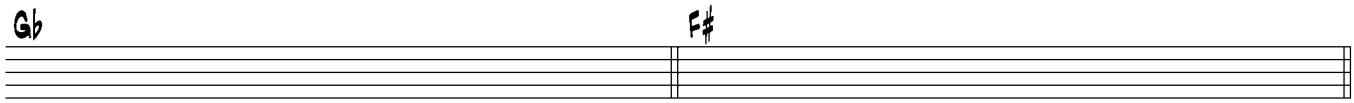


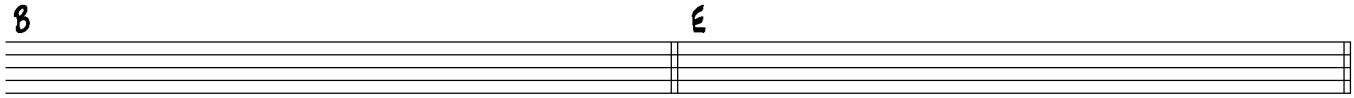


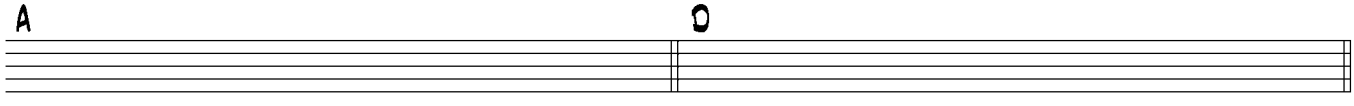


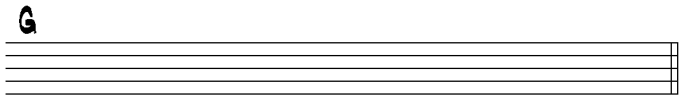






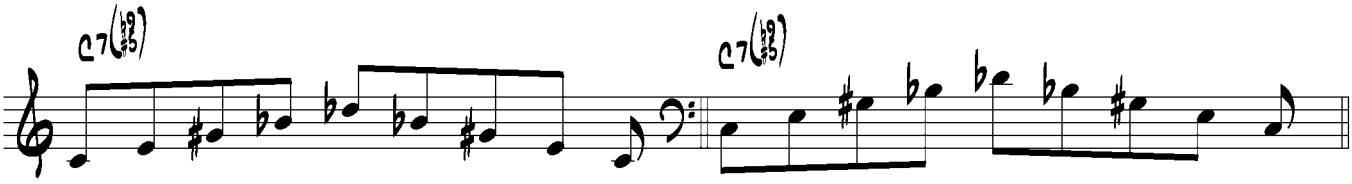




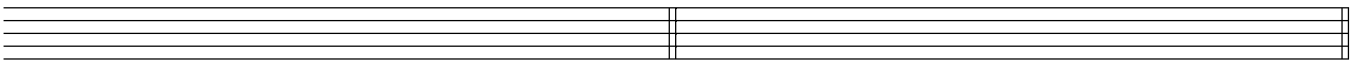


Arpeggio

Example:

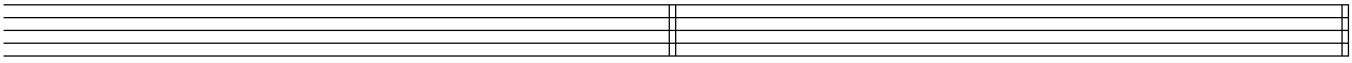


C



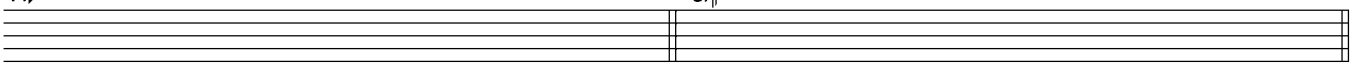
F

Bb



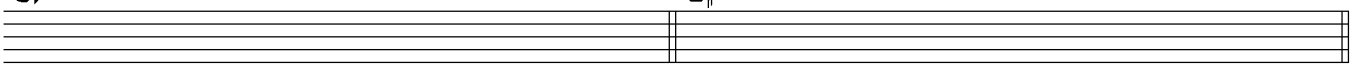
Eb

Ab



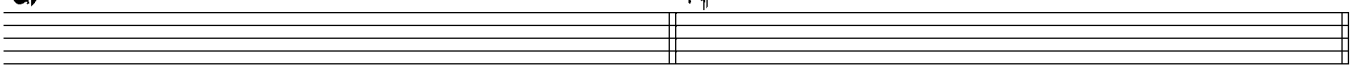
G#

Db



C#

Gb

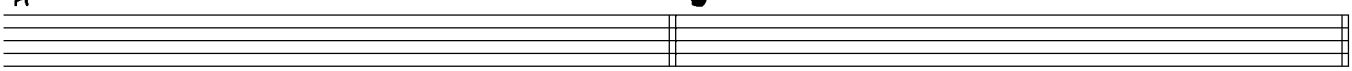


F#

B

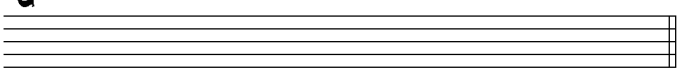
E

A

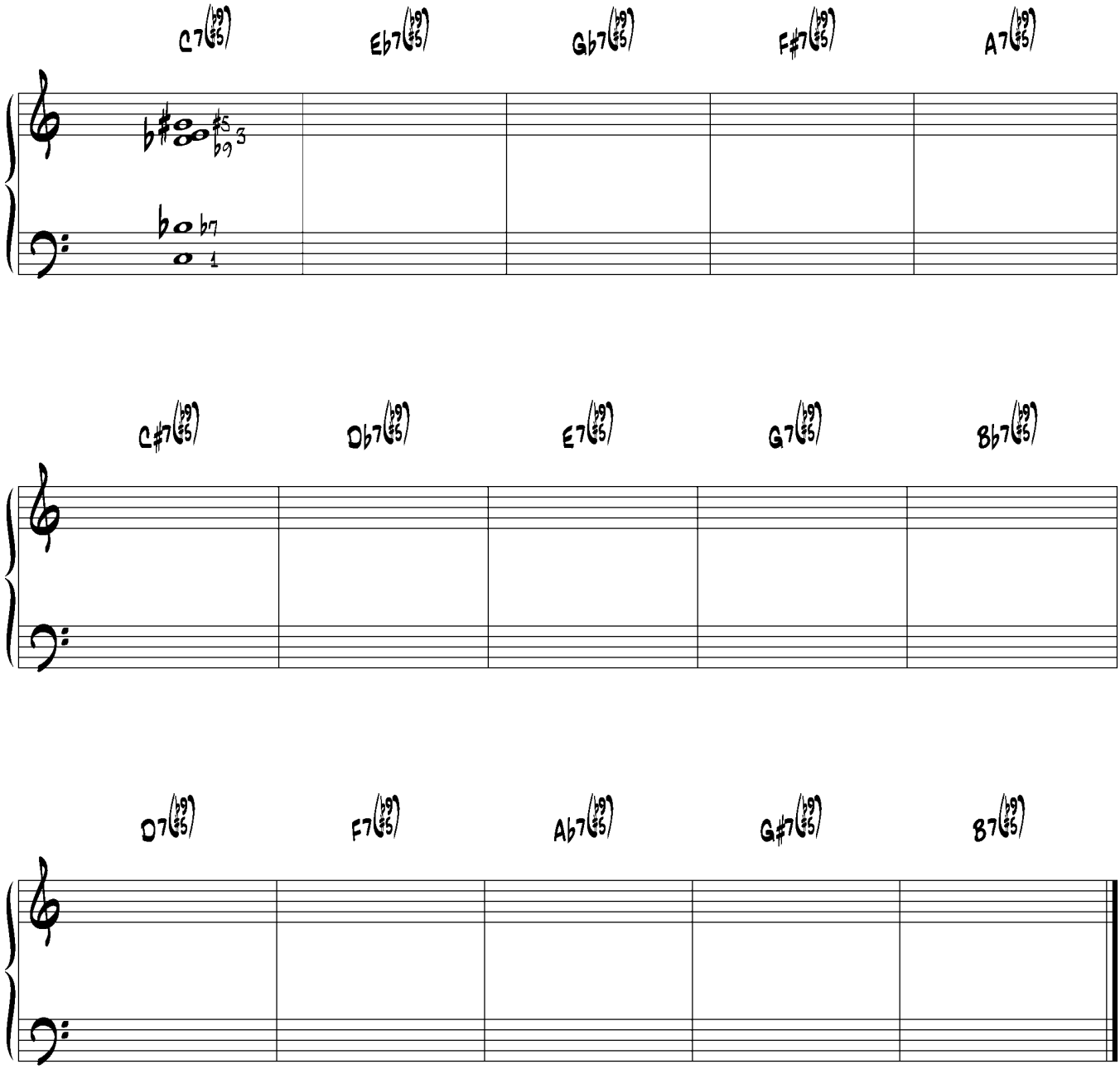


D

G

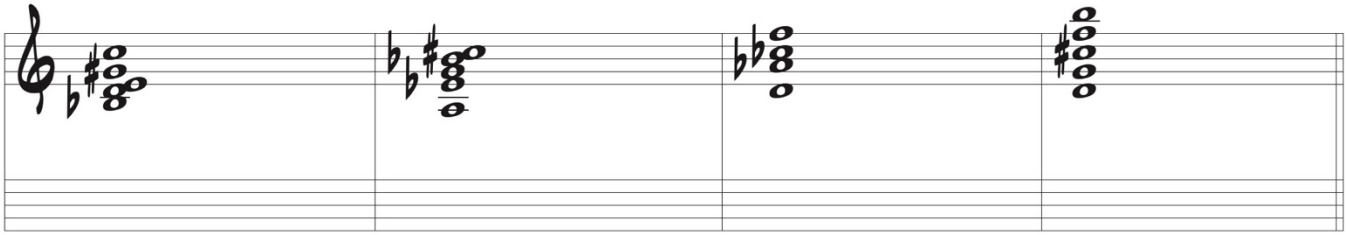


Chord

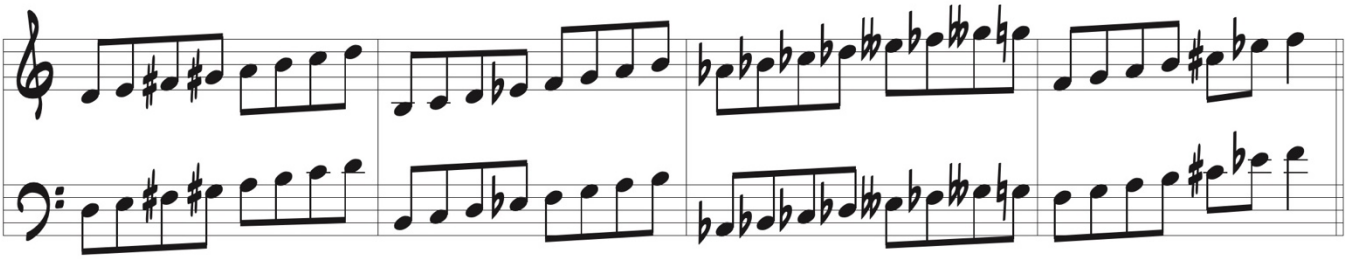

C7(b9 #5)
Eb7(b9 #5)
Gb7(b9 #5)
F#7(b9 #5)
A7(b9 #5)
C#7(b9 #5)
Db7(b9 #5)
E7(b9 #5)
G7(b9 #5)
Bb7(b9 #5)
D7(b9 #5)
F7(b9 #5)
Ab7(b9 #5)
G#7(b9 #5)
B7(b9 #5)

Analysis and Application

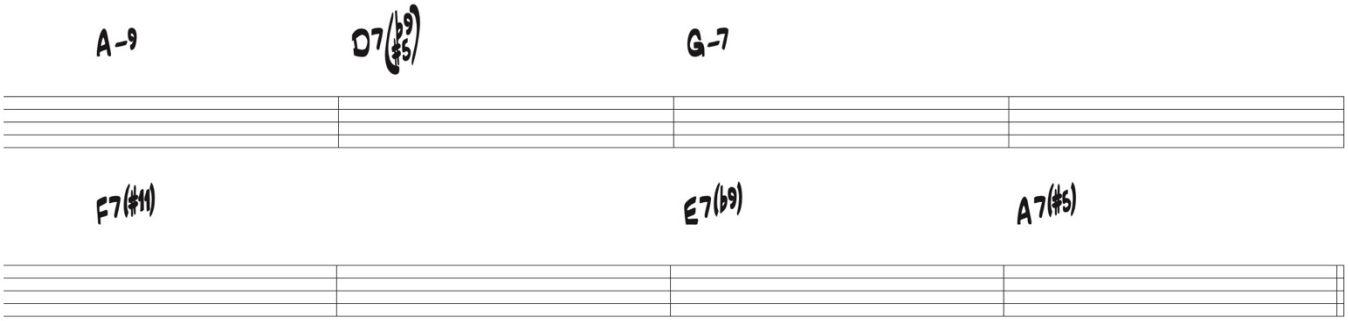
Supply chord symbols and write scales most appropriate to the sound of the notated harmonies.



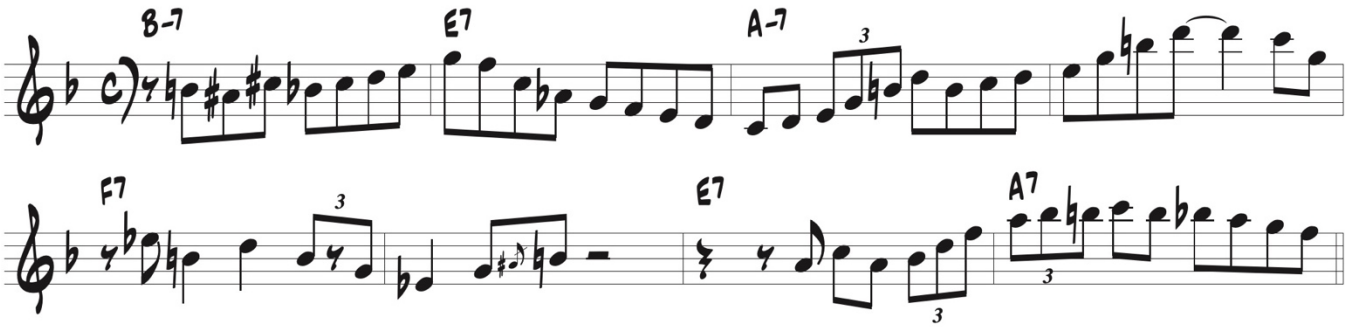
Provide a chord symbol for the following scales (bass clef or treble, not both).



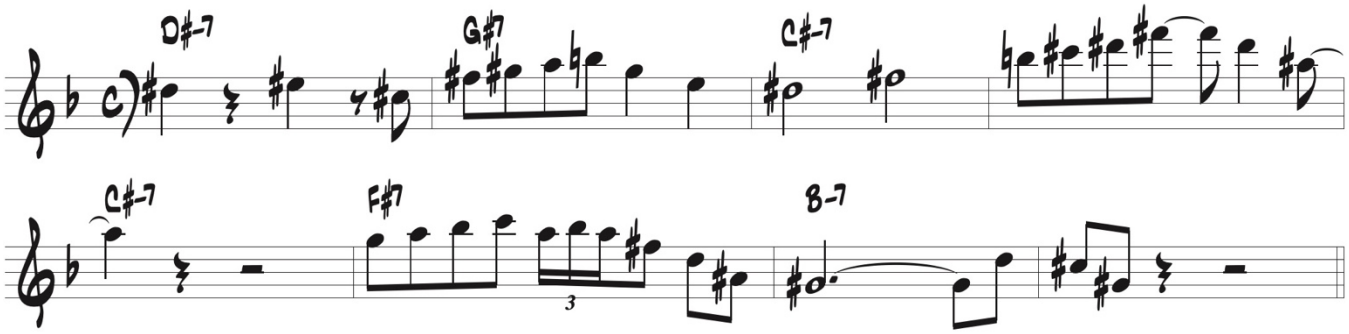
Write the scale that sounds the most like the chords below. Include either a bass clef or a treble clef sign.



Indicate scale digits with alterations where necessary to the solo below according to the chord symbols provided. (Tom Harrell, *Invitation*, m. 25-32)

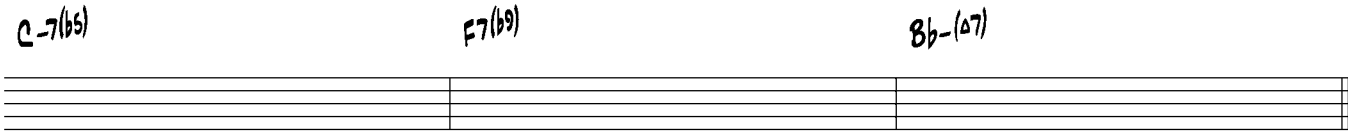


Indicate scale digits with alterations where necessary to the solo below according to the chord symbols provided. (Bob Mintzer, *Invitation*, m. 25-32)

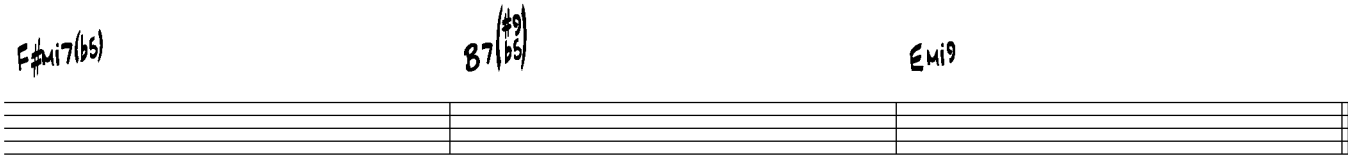


Compose solo lines for the following progressions.

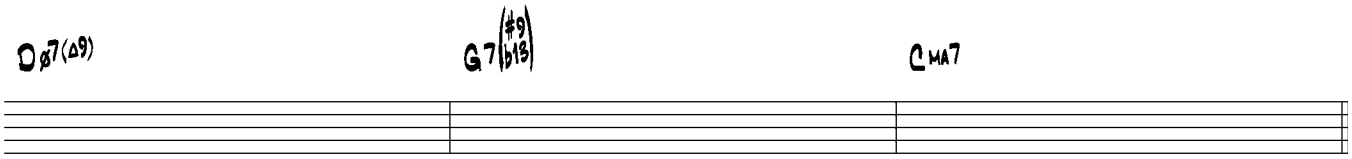
Progression 1



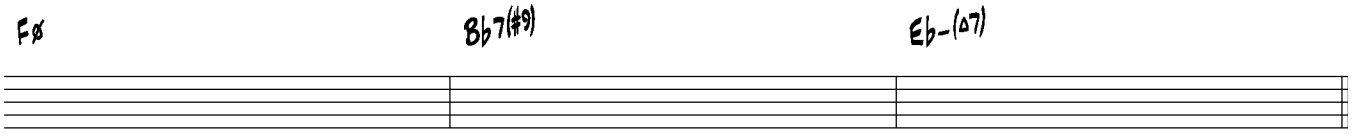
Progression 2



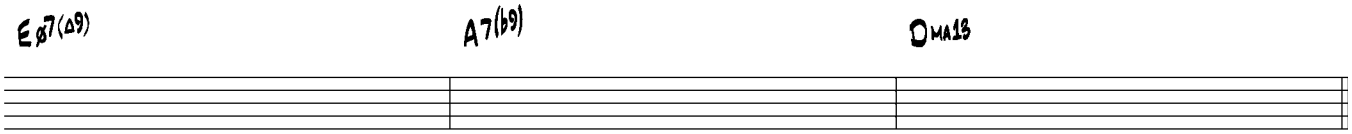
Progression 3



Progression 4



Progression 5



Worksheet Packet #16: Sus 4 Concepts

Voicing: Gsus4 = FΔ triad over G (D is dropped); or D-7 over G, move D to the top
In ii V7 I: can replace ii or V or both; can be intermediary between ii and V (in C: D-7/G to G7 = D F A C, move C and A to B and G)
Can add Δ3 to sus4 chord, usually above the 4;
Sus chords are quartal
Voicing for Gsus4: LH G, RH Ab C D G (Phrygian); or Ab C E G (AMM version)
Pentatonics
Dorian
Mixolydian
Phrygian
Minor patterns on the 5th

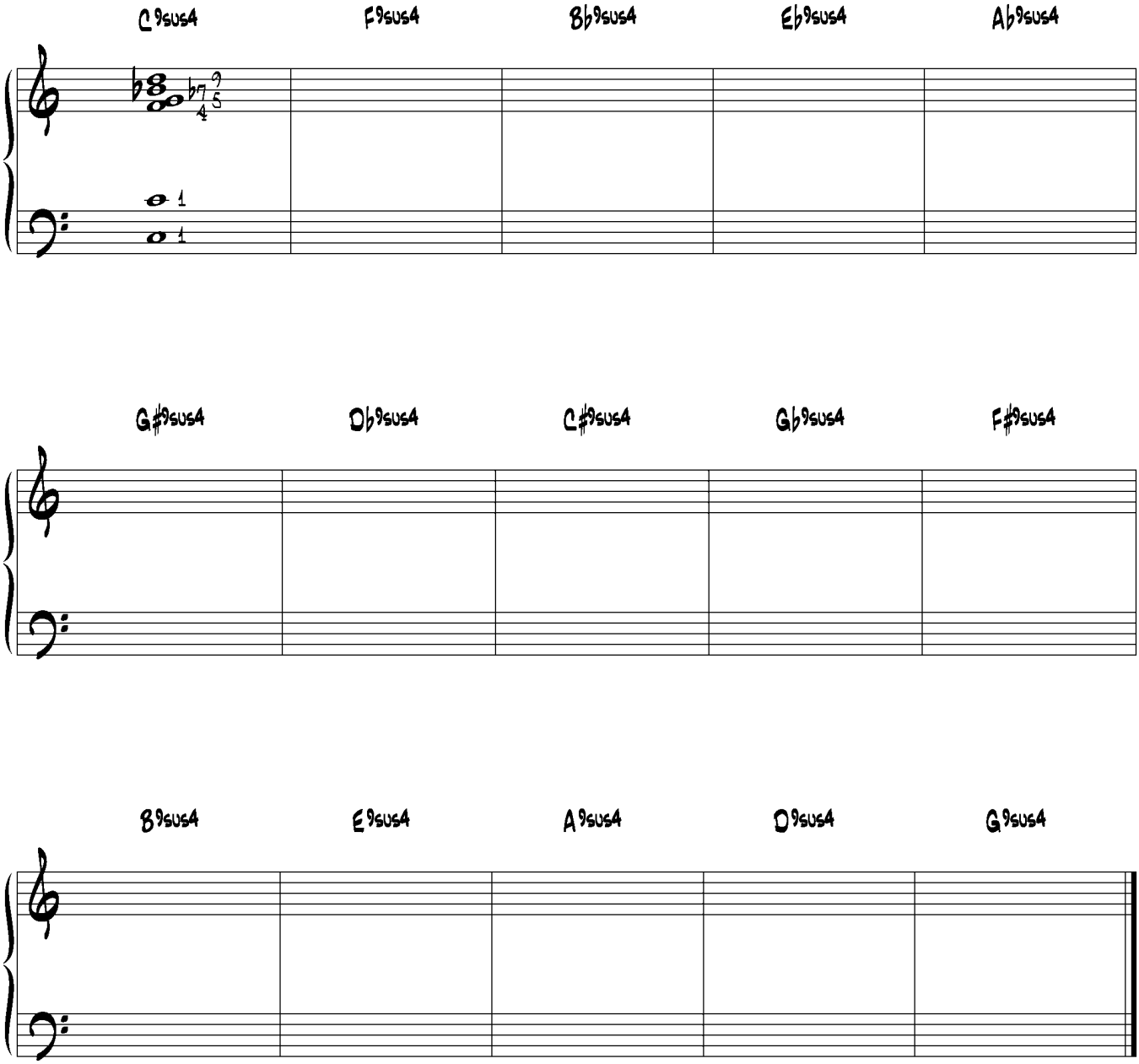
Worksheet Packet #17: Pentatonics 2

<u>Additional topics</u>

Cell patterns (Corey)
7 Steps to heaven (Jigs wiggum/Brent)
Coker (16 elements of an improvised solo)

<u>Triad Pairs</u>
On C minor: C- and D-; Eb + F; F + G; C- + D; F- + G; C- + Bb-; C- + Db; C- + Bb
On major CΔ: D + E-;
On dominant C7: Db- + Eb-;

Sus4 Chord


C9sus4
F9sus4
Bb9sus4
Eb9sus4
Ab9sus4
G#9sus4
Db9sus4
C#9sus4
Gb9sus4
F#9sus4
B9sus4
E9sus4
A9sus4
D9sus4
G9sus4