

When in doubt about the variations in altered minor scales, think of where the chords are progressing. Below are three versions of a Cm7-5 chord scale (note key signatures):

to F7 to Bbm
to F7 and Bbm
to F7 and Bb(major)

Line 1 uses the Bbm harmonic minor scale. Line 2 uses the natural minor scale (same as Db major). In each of these two lines, the F7 chord might be played as F7+5-9.

Line 3 uses the Bb major scale, but G is flattened to conform to the chord sound. The F7 chord might be played as F13-9.

In the following study, line 1 uses Bb natural minor scale, moving into F7+5±9 and Bbm.

The "D" note in line 2 may be played as Db (Bb harmonic minor scale) or as D \natural , going into F7 and Bb major.

Start and end these studies on different notes or beats for variety. Here are five variations on the same phrase:

WHOLE TONE SCALES

Whole tone scales may be played over any $\#5$ or $\flat 5$ chord. Analyze the "C" whole tone scale below:

chord tone: 1 7 $\#5$ -5 3 2 1

C9-5 C7-5 C7+5

That scale fits C7+5, C7-5, C+ or C9±5 chords. When the $\#9$ and $\flat 9$ are used in combinations with whole tone passages, they fit ALL the "C7" chords: C7+5-9, C13-5-9, C7+5+9, etc.

C7+5+9

)

Combinations: C7±5±9

C 7+5+9
(-5-9)

etc.

etc.

) The next four examples fit G+, G7+5, G7-5 or basically any "G7" chord:

etc.

etc.

etc.

Whole tones move chromatically through dominant passages:

The image shows four staves of musical notation, each consisting of five horizontal lines. The first three staves begin with a treble clef, while the fourth begins with a bass clef. The first staff starts with a G+ chord, followed by C+, F+, and Bb+. The second staff starts with a G+ chord, followed by C+, F+, and Bb+. The third staff starts with a G+ chord, followed by C+, F+, Bb+, and Eb+. The fourth staff starts with a G+ chord, followed by C+, F+, and Bb+. Each staff concludes with the word "etc." indicating a repeating pattern.

WHOLE TONE BLUES

The image displays a series of musical staves. The first staff is in G major (G7) and features eighth-note patterns with grace notes. The second staff is in C major (C7) and also features eighth-note patterns with grace notes. The third staff is in G major (G7) and continues the eighth-note patterns. The fourth staff is in C major (C7) and contains blank measures for improvisation. The fifth staff is in G major (G7) and shows a continuation of the eighth-note patterns. The sixth staff is in C major (C7) and contains blank measures for improvisation. The seventh staff is in G major (G) and shows a continuation of the eighth-note patterns.

Improvise some whole tone combinations in the blank measures, above.

CHORD RESOLUTIONS

Here are four studies showing the resolution of G7 into C (or C7). Line 4 can go to Cm if the last note is changed to Eb. Lines 1 and 3 could also stay in G7. Try to play the chords with the melody, to help your ear.

The image shows four lines of handwritten musical notation on a single staff. The notation consists of eighth and sixteenth notes. The first line has circled numbers 1, 2, 3, and 4 above it. The second line has circled numbers 1 and 2 above it. The third line has circled numbers 1 and 2 above it. The fourth line has circled number 1 above it. The staff begins with a treble clef and a key signature of one sharp (F#). The notation represents a progression from G7 to Cm7/F7.

G7 to Cm7/F7

"LEAD-IN" NOTES

In the transition from one chord scale to another, there is a "lead-in" note which signals the point of departure from the preceding chord, and implies the sound of the chord to follow.

In each of these examples, the "lead-in" is the first note in the second measure:

The image shows four examples of lead-in notes for chord transitions, each with a title below the staff:

- G to Eb**: The first measure shows a lead-in note (G) followed by a scale. The second measure starts with a Bb note, labeled "F#-Bb fret". The chords are G7, F#mi7, Bb7, and Eb.
- G7 to Ab**: The first measure shows a lead-in note (G) followed by a scale. The second measure starts with a Bb note, labeled "Bb mi7 Eb 7 Ab".
- G7 to Ab**: The first measure shows a lead-in note (G) followed by a scale. The second measure starts with a Bb note, labeled "Bb mi7 Eb 7 Ab".
- G7 to Gb**: The first measure shows a lead-in note (G) followed by a scale. The second measure starts with a Bb note, labeled "Ab mi7 Db 7 Gb".

See what you can do by changing one or two notes:

G7 to G_b



G7 to D_b



G7 to B_b7



Flat B, E and A in the first measure (above) for Fm7 to B_b7



G7 to B_b7 (End on different chord tones for B_b7-9, etc.)



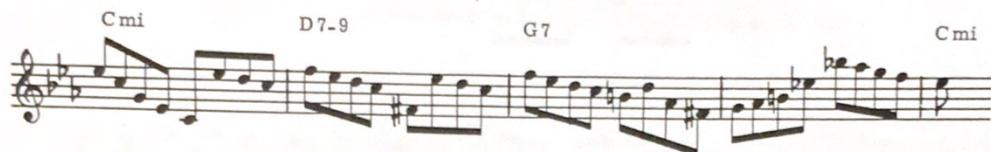
G7 to B_b7 (Try using B_b, E_b, A_b in the first measure for Fm7 to B_b7)



G7(-9) to Cm



This same phrase appears in the 3rd and 4th measures, below:



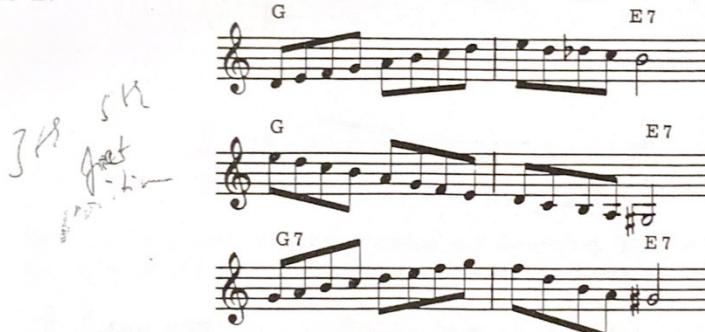
D7 to G

A mi7 D7

G



G to E7



Extend these into longer lines! The last example (above) begins this next extension:



The same (or similar) phrase may be repeated through the chord changes:

Repeating musical phrase through chord changes. The top line shows a repeating pattern of G7, C7, F7, Bb7, and Eb7, followed by 'etc.'. The bottom line shows a repeating pattern of G7, C7, F7, Bb7, Eb7, Ab7, and Db7, followed by 'etc.'

G7 C7 F7 B_b7 E_b7 etc.

G7 C7 F7 B_b7 E_b7 etc.

G7 to C or Cm

G7

C C m_i

DIMINISHED CHORDS

E°

F°

Here are five practice patterns, ascending and descending. The first two use only the tones of the diminished seventh chord. The last three involve "slurs" into those tones from a half-step away:

1

2

3

4

5

DIMINISHED SUBSTITUTES

A musical score for 'The Star-Spangled Banner' in A-flat major (Ab). The key signature has one flat, and the time signature is common time (indicated by 'C'). The score consists of two staves of music. The first staff begins with a treble clef, a 'B-flat' key signature, and a 'C' time signature. The second staff begins with a bass clef, a 'B-flat' key signature, and a 'C' time signature. The lyrics 'O say can you see' are written below the notes.

Notice the similarity between G7-9 and Ab°. Every 7-9 chord is (with root omitted) equivalent to a diminished chord one half-step higher. That is, diminished-sounding scales may be applied to 7-9 chords, and vice-versa.

Below is a common chord pattern, using 7-9 substitutes for the diminished chord. Note use of #5 in those chords.

G G[#] A mi7 D7 G
 G ma7 (+5) E 7-9 A mi7 D13-9 G ma7
 G 6 (1) E 7+5+9 (-5) A mi9 (1) D 7+9 (-4) G 6
 G ma7 E 7-9+5 (-5) A mi7 D13-9 G ma9
 G ma7 E 7-9+5 (-5) A mi7 D 7-5+9 G ma7

Three more variations on the same pattern (G to G \sharp \circ to Am7 to D7). Note the use of A7+9 for Am7:

Handwritten musical score showing three staves of 16th-note patterns. The first staff starts with G major, followed by E7+5+9 (-9), A7+5+9 (-9), and D7+5+9 (-9). The second staff continues the pattern. The third staff concludes the section.

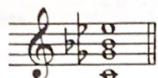
Some 16th-note variations on the first two measures:

Handwritten musical score showing five staves of 16th-note variations on the first two measures. The staves are labeled with measure numbers and chords: G, G \sharp \circ , A mi7, A mi7, and A mi7. The variations include various patterns like 1234124412 and 231434134114.

In this study, E7 becomes Bm7-5/E7-9. This gets pretty far away from the original "diminished" sound, but may be used with discretion:

The handwritten musical score consists of three staves of piano music. The top staff starts with a G major chord (G, B, D) in common time. The middle staff begins with a G major chord and includes handwritten fingerings such as 1234-4, 13-3, and 2. The bottom staff starts with a G major chord and includes handwritten fingerings like 32, 21, 21, 21, 43, 12, 12, and 4772. The progression continues through Bm7-5, E7-9(5), A minor 7th, and D13-9, ending with A minor 7th-5 and D7+5-9.

CHORDAL THINKING



The chord shown above is Cm7-5. It is also Ebm6 or Ab9 with root omitted.

When playing a line against that chord you can THINK in Cm:

A musical score showing a C major 7th chord (Cm7-5) followed by a melodic line. The melody consists of eighth-note patterns: a descending eighth-note line, a sixteenth-note pattern starting with a B, and a descending eighth-note line.

or think in Ab: (note key signature)

A musical score showing an Ab9 chord followed by a melodic line. The melody consists of eighth-note patterns: a descending eighth-note line, a sixteenth-note pattern starting with a B, and a descending eighth-note line.

or in Ebm:

A musical score showing an Eb major 6th chord (Ebm6) followed by a melodic line. The melody consists of eighth-note patterns: a descending eighth-note line, a sixteenth-note pattern starting with a B, and a descending eighth-note line.

Depending upon where the chord is progressing, you can THINK in terms of what is most familiar to you. Resolve Cm7-5 to F7-9/Bbm. Resolve Ab9 to Db, and Ebm6 to Ab7/Db.

Here is a line "translated" from thinking in G to thinking in D_b. In this particular example, thinking in D_b results in fewer accidentals, but that should not be your ONLY consideration. Think in terms of LOGICAL chord sequences: G7-5 to C, D_b7-5 to G_b.

Some G7 lines. These fit G7+, G7-5, G7+5-9, etc. "Translate" each from G to D_b.

) Extend this chord scale:

to this:

Two more examples. Try to play a chord with the melody, to help your ear, and resolve into an appropriate chord: G to C, D_b to G_b.

IMPROVISING

One way to develop improvisational skills is to take any common chord pattern and isolate it for study. Each of the following studies shows a chord pattern in the top line. Below it are some improvisations which fit the pattern.

When you've finished these, write out any chord sequence that seems to you a "common" pattern; then improvise.

The score consists of ten staves of handwritten musical notation. Above the first staff, there is a diagram showing a sequence of chords: A mi7 → D7 → G mi7 → D7 → F. The subsequent staves show various melodic lines with specific chords labeled below each measure. The chords include A mi, D7, G mi, (+7), G mi7, C7-9, F ma9, A mi7-5, D7(+5-9), G mi7-5, D♭9, C+, F, A mi9, D13, D+, G mi, G mi7, G mi7-5, C7, F6, A mi7-5, D13-9, G mi9, G 7-5(+9), and C7-9 loco. The notation includes various note heads, stems, and rests, with some measures featuring three-note chords indicated by a brace and three dots above them.

$\overline{D} \rightarrow D$ - dur $\overline{D} \rightarrow G$ - dur $\overline{D} \rightarrow C$ - dur

$A7$ $D7$ $G7$

$\textcircled{1}$ $\overline{C7}$ F

$A13$ $A\text{mi}6$ $D7$ $G7+9$
 (-9)

$C7$ F

$E\text{mi}$ $E\text{mi}7$ $A7$ $A\text{mi}$ $D\text{mi}9$ $G7$

$C7(-5-9)$ F

G $E\text{mi}$ $A\text{mi}$ $D7$ G

$G\text{ma}7$ $E\text{mi}9$ $A\text{mi}7$ $A\text{mi}9$ $D13$ $G\text{ma}7(6)$

The next study fits the pattern: G to Em to Am to D7 (one bar each). No chord symbols appear because you are to make your own analysis.

A musical score consisting of eight staves of sixteenth-note patterns. The key signature is G major (one sharp). The first staff begins with 'G' and 'G etc.' followed by a measure of sixteenth-note patterns. The second staff begins with 'E mi' followed by a measure of sixteenth-note patterns. The third staff begins with 'A mi' followed by a measure of sixteenth-note patterns. The fourth staff begins with 'D7' followed by a measure of sixteenth-note patterns. The remaining four staves continue the sixteenth-note patterns without explicit chord labels.

A musical score consisting of five staves of sixteenth-note patterns. The key signature is G major (one sharp). The patterns continue from the previous page, starting with a measure of sixteenth-note patterns on the first staff. The second staff continues with sixteenth-note patterns. The third staff continues with sixteenth-note patterns. The fourth staff continues with sixteenth-note patterns. The fifth staff concludes with a final measure of sixteenth-note patterns.

BLUES

These solos are in straight 8th-notes. By eliminating rhythmic variety, you force the ear into building better melodies. 8th-note studies also tend to avoid the practice of playing memorized licks.

Chord symbols are for your analysis, not necessarily for accompaniment.

Chord progression: C7, +5 F7, C°, C, C9, G mi9, C7, F7, C7, +5-5, A7-9, D mi9, G13, 1C7, A7, D mi7, G13, G7+, 2C7, +5 F7, +9 C°, C.

Chord progression: C7, 9, 13, F9, D7-9, G mi7, C9, G mi9, C7-5, C7-5-9, F7, D7, G mi7, C7, G mi7-5, C7-9, A7, 13, +5, D mi9, G7-9, 1E7+5+9, A7+5-9, D9, D♭13, 2C7, C13.

Sheet music for a jazz solo in 16th-notes. The chords are labeled above the staff:

- C7-5
- C7
- F9-5
- F7
- C7
- C13 -5 +9 -9
- F9 +5
- F7 D7 +5 -5 Gm ill C C+ Bb mi6
- A mi D7 Ab mi Db 7
- C ma9 A 7+5+9 (-9) D mi9 G 7+5-9
- G 7+5-9 G 7-5

This one is in 16th-notes. It gives you more to play on each chord:

Sheet music for a jazz solo in 16th-notes, continuing from the previous page. The chords are labeled above the staff:

- G mi7
- C7
- G mi7
- C7
- F
- C mi9
- C mi7
- F9
- G 7-5
- C
- C13-9 C7+9 (-9)
- C7-5
- F7
- G 7+5 (-5) +9 (-9)
- C
- A 7+5+9 (-9)
- D mi A 7-5 D mi +7 D mi7 D mi7-5 Ab 7+ G 7+
- C7 E b13 Ab 7 D b 9

MINOR BLUES

Chord symbols are for analysis, not accompaniment:

A musical score for piano featuring three staves of music. The top staff starts with a C minor chord (C mi) followed by a G7 chord. The middle staff starts with an F minor chord (F mi) followed by a G7+9 (-9) chord. The bottom staff starts with an A-flat 9th chord (Ab 9), followed by a 13-5 chord, a G7+9 (-9) chord, a C minor chord (C mi), a D7-9 chord, and a G7-9 chord.

A musical score for piano featuring three staves of music. The top staff starts with a C minor chord (C mi) followed by a G7+5+9 chord. The middle staff starts with an F minor chord (F mi), followed by a D minor 7-5 chord (D mi7-5), then a C minor chord (C mi), and finally a D7-9 chord. The bottom staff starts with a G7(+5-9) chord, followed by a C minor chord (C mi) with a bass note of 6, then a 7, followed by an A flat 7(13) chord, a G7 chord, a D7-9 chord, and a G7-5-9 chord.

The musical score consists of three staves of music. The top staff starts with a C major chord (C mi) followed by a D minor 7th chord (D mi7), a G dominant 7th chord (G 7-9), another C major chord (C mi), and finally a C dominant 7th chord (C 7-9). The middle staff begins with an F major chord (F mi), followed by an F minor 9th chord (F mi9), a G dominant 7th chord with a ninth (G 7+9 (-9)), and a C major chord (C mi). The bottom staff concludes with a D minor 7th chord (D mi7-5), a D dominant 7th chord (D 7-9), a G dominant 7th chord (G 7-9), a C major chord (C mi), and a G dominant 7th chord (G 7+).

C mi D mi7-5 G 7-9 C mi D 7-9 G 7+

F mi C 7-9 F mi G 7+5 C mi G 7-9 C mi

D 7-9 G 7 G 7-9 C mi D mi7-5 G 7+5 (-5)

C mi D mi7-5 G 7+ C mi C 7-5

F mi(+7) D mi7-5 G 7+5 C mi

D 7-9 G 7+ C mi D mi7-5 G 7-9

MODERN BLUES

The chords shown below represent one version of blues changes.

= α^+ $\overline{\gamma}^2$
 $(\beta^2 \gamma^2)$ $(=\sqrt{\beta^2})$ $\overline{\gamma}$

Basic:
 $\overline{\gamma}$ F E mi7 A 7 D mi7 G 7 C mi7 F 7

A	F	E mi7 A 7	D mi7 G 7
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Optional:
F ma7 E mi9 A 7+9 D mi7 G 13 C mi7 F 7+9

B	F ma7	E mi9 A 7+9	D mi7 G 13
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Optional:
F ma7 F 6/9 E mi9 A 13 E b 9-5 D mi9 G 13 D b 9-5 C m11 F 13 B 9-5

C	F ma7 F 6/9	E mi9 A 13 E b 9-5	D mi9 G 13 D b 9-5
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Bb	Bb mi7	A mi7	D 7
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Bb ma7 Bb mi7 E b 9 A mi7 D 7+9

Bb	Bb mi7	E b 13	D 7-9
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Bb ma9 Bb mi7 E b 13 A mi7 D 7-9

G mi7	C 7	F	D mi7
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G mi9 C 13 F ma7 D 7+9 G mi9 C 7+9

G 13	D b 9+5	C 13	A 7+9
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C 7-9 D 13 G 7+9 C 13

There are many possible variations. The chord symbols in the studies are to help your analysis of the melodic lines, but they'll give an approximation of the proper accompaniment.

These are designed to be played consecutively, so the final measure in each chorus may contain the "pickups" for the following chorus.

The image shows three staves of musical notation for a single instrument, likely piano or guitar. Each staff begins with a treble clef and a key signature of one sharp (F#). The notation consists of eighth and sixteenth note patterns. Above each staff, a series of chord symbols are listed, which serve as harmonic guides for the melodic line. The first staff includes chords F ma7, E mill, A 7+5+9 (-9), D mi9, G13, C mi7, F13 (-5), Bb ma7, Bb mi7, A mi7 (F), Ab mi7, Db 7, G mi7, C7, (-9), F ma7, D 7+5, G mi7, and C 7+9 (-9). The second staff includes F ma7, A 7+9 (-9), D mi, G7, C mi, F7, Bb ma7, Bb mi7, Eb 9, Ab ma7, Ab mi7, Db 7, G mi7, C7, C 7+9, C7, F, G mi7, C7, and F. The third staff includes F ma7, E mi7-5, A 7-9, D mi7, Db mi7, C mi7, F7(+5), Bb ma7, Bb mi7, Eb 7, F ma7, D 7-9+5 (-5), G mi7, Gb 7(-5), F, D 7+9 (-9), G mi7, and C7(+5).

F ma7 E mi7 A 7-9 D mi7 G 7 C mi7 F13

 Bb ma7 Bb mi7 A mi7 D 7 Ab mi7 Db 7

 C 7 (-9) F ma7 D 7-9 G mi7 C 7

F E mi7 A 7 D mi9 G 7 C mi7 F13

 Bb ma7 Bb 6 Bb mi7 A mi9 (-9) Ab mi7

 G mi G mi7 C+ F (Ami7) D 7+9 G mi7 (G7) C 7+

F ma7- E mi A 7-9⁺⁵ D mi7 G 7

 C mi7 F 7+5 Bb ma7 Bb 6 Bb mi(+7) Bb mi7

 A mi7 D 7 Ab mi7 Db 7 G mi7

 G mi9 C 7(+5) F 6 (D mi) G mi7 C13

F E mi7-5 A 7(13) D mi7 G 7(13) C mi7 F 7
 Bb (F 7) Bb Bb mi7 A mi9 D 13 Ab mi7(11)
 G mi (+7) (7) C 7(-9) F D 7+9 (-9) G mi7 C 7

F E mi7 A 7 D mi7 G 7 C mi7 F 7+9
 Bb C mi7 C#^o Bb 6 Bb mi7 (11) (9) Eb 7 (13)
 Ami7 Ab mi7 C 7 C13 C 7+9 (+5)
 G mi7 D 7-9 G mi9 G mi7-5 C 7-9
 F Ami9 Bb ma7 Bb 6

F E mi7 A 7 D mi G 7
 C mi7 F 7-5+9 (-9) Bb ma7 Bb 6
 Bb ma7 Eb 7 Ami7 C 7-9 F D 7-9 G mi7 C 7
 Ab mi7 Ab mi9 G mi7

F A 7-5 A 7+5 D mi7 G7 C mi7 F7
 Bb Bb mi (+7) A mi7
 Ab mi6 G mi7 C13 G mi ll(9) C7
 F ma7 D 7-9 G mi7 C7

F A 7+9 (-9) (+5) D mi9 G7 +5 13
 C mi7 F7 Bb ma7 Eb 9-5
 Ami7 Ab mi7 Db 9 G mi7 C13
 G mi ll C13 F Bb F
 fine

Improvise in the blank measures:

F A7-9 (+5) Dmi G7-5
Cmi F9 Bb Cmi7 F7-9
Bb mi(+7) Eb7 Ami7 D7 (Ab7)
Gmi7 C7 F (C7)

Modern blues are also played against this chord pattern. Use chord embellishment, substitution, etc.

F E mi7 A7 D mi7 G7 C mi7 F7
Bb Bb mi7 Eb7 Ab Ab mi7 Db7
Gb Gmi7 C7 F Ab(7) Db(7) Gb(7)