



IMPROVISING Jazz Sax.

by Charley Gerard.

Everything you need to know to play in the styles of master sax players like Charlie Parker ... John Coltrane ... Johnny Hodges and others. Plus professional insights into chords, blues, special effects and much more.

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Amsco Publications
New York/London/Sydney/Cologne

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Preface

Improvisation has a long history in music. The Baroque (seventeenth century to eighteenth century) keyboard player was expected to improvise an accompaniment. Bach, Beethoven, and other great composers were renowned improvisers, and in fact many of their compositions were based on their improvisatory flights. Today improvisation is an important aspect of jazz, rock, Indian music, and some contemporary classical music.

Improvisation is a mixture of theoretical knowledge and intuition. Intuitive skills are developed by improvising constantly. Soloing with a band gives you an awareness of group dynamics, and soloing by yourself gives you the freedom to explore new ideas. The improviser must be highly confident because once the music has been produced it is impossible to edit it. Frequently an improviser plays a note or phrase he didn't mean to. These unintended notes must be added to the flow of ideas, and may often enrich the solo. Since improvisation is a kind of instantaneous composition, all of the phrases must form a logical whole. The notes, motifs, rhythms, and chords must come almost by themselves. There is little or no time for evaluation during an improvisation. Theoretical understanding develops by studying chords, scales, phrasing, the different types of improvisation, and all the other aspects of jazz. A jazz saxophonist should know the work of Johnny Hodges, Charlie Parker, John Coltrane, and all the other great saxophonists.

Since improvisation is by definition "of the moment," the role of records in learning jazz is especially important. The ability to transcribe jazz tunes and solos is essential since jazz material is not readily available. Besides supplying you with material, this will also improve your ear. You transcribe from records by playing what you hear note by note, checking it for accuracy with the record, and then writing it down. The most ideal situation is to tape the selection at a high speed on a reel-to-reel tape recorder. The music can be played at either the speed it was taped or a slower speed. Each slower speed will bring the music down one octave further. If the only tape recorder available is a cassette player, one still has the ability to turn on, off, and rewind, although one can't play at a slower speed. If you don't have access to a tape recorder, play the record at 16 instead of 33 r.p.m.'s; this brings the music down almost an octave.

This book has been written for an intermediate level saxophonist who has had little or no experience improvising jazz. I believe it has much in it to interest an advanced player as well, and it can easily be adapted to flute, clarinet, and other treble instruments. Creativity and personal expression are stressed from the beginning since they are essential elements of improvisation. At first the saxophonist is restricted to a few notes. Eventually an extensive range of possibilities is supplied. Examples from master saxophonists—with their own phrasing—are given throughout the text.

Introduction to Chords

Jazz improvisations are often based on the chord structure of a tune. The chords are called chord changes. The traditional jazz format consists of a tune played once or twice followed by an improvisation on the chord changes and a repeat of the tune. Each cycle that the changes are played is called a chorus.

Standard chords are based on piled-up thirds. The space between any two notes is called an interval, and the interval between every other note in a minor or major scale is a third. Putting three or more consecutive thirds from any point in the scale together will produce a standard chord.*

C Major

C D E F G A B C

C Natural Minor

C D Eb F G Ab Bb C

The simplest chord is composed of a root (the first note), a third, and a fifth (five notes from the root). This is called a triad, and there are four types:

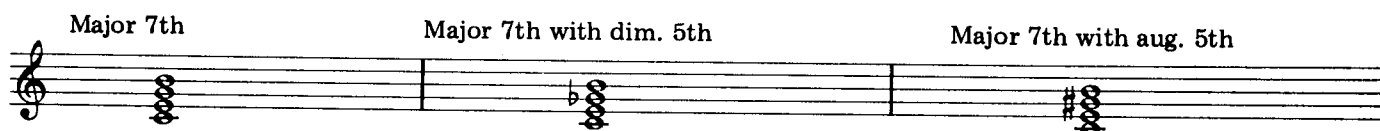
Diminished Minor Major Augmented

A chord with four piled-up thirds is called a seventh chord. There are ten types:

Diminished 7th Half Diminished 7th Minor 7th Minor triad with Major 7th

Dominant 7th Dominant 7th diminished 5th Dom. 7th with augmented 5th

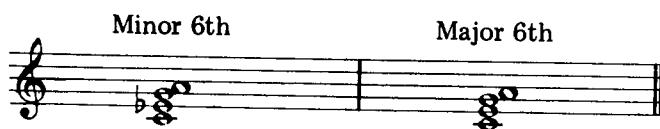
* All examples in this chapter are in C.



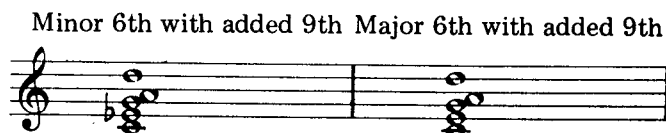
Composers before the middle of the nineteenth century rarely used any chords besides triads and a few seventh chords. Jazz musicians before the thirties rarely used any other chords either. A ninth is composed of five notes; an eleventh, of six notes; and a thirteenth, of seven notes. The tones of these chords can be diminished—lowered a half-tone, or augmented—raised a half-tone. The third of an unaltered eleventh chord is usually omitted. The unaltered eleventh is usually omitted from a thirteenth chord.

The notes of a chord can appear in different ways. When the root (which gives the chord its name) is in the bass—the lowest tone—the chord is in root position. When the third is in the bass it is in first inversion, and when the fifth is in the bass it is in second inversion and so on.

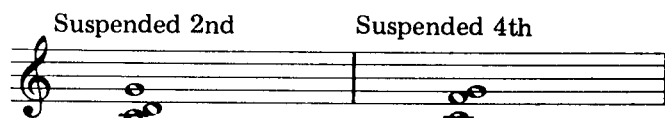
A few standard chords do not consist entirely of piled-up thirds. These include sixth chords, sixth chords with an added ninth, and suspended chords. A sixth chord is a triad with a sixth added. There are two of them:



A C minor sixth is the first inversion of an A half-diminished seventh chord, and a C major sixth is the first inversion of an A minor seventh chord. Here are the two sixth chords with added ninths:



In a suspended chord a major second or perfect fourth replaces the third of a major or minor triad:



Chord Symbols

Major: Ma, M, Δ , no symbol used
 Minor: mi, m, —
 Augmented: aug, +
 Diminished 7th: dim7, $^{\circ}$
 Diminished interval: dim, —
 Major 7th: Ma7, M7, Δ 7
 Dominant 7th: 7
 Minor 7th: mi7, m7, —7
 Half-diminished 7th: m7—5, m7dim5, \flat
 Extended chords: one example—C7($\begin{smallmatrix} +11 \\ 9 \end{smallmatrix}$) is a C dominant 7th with a 9th and augmented 11th added.
 Suspended: sus

Introduction to Improvisation Using the Blues

The blues is a classic American form. The twelve-bar blues varies greatly in harmonic sophistication from Muddy Waters and Elvis Presley to Charlie Parker and George Russell. The following is an easy twelve-bar blues followed by a written improvisation. All of this

is followed by your own improvisation, and ends with a repetition of the tune. When soloing, use only the root of each chord, as is done in the written improvisation. Try to be inventive with the limited choice of notes. Also try to maintain the tempo and meter.

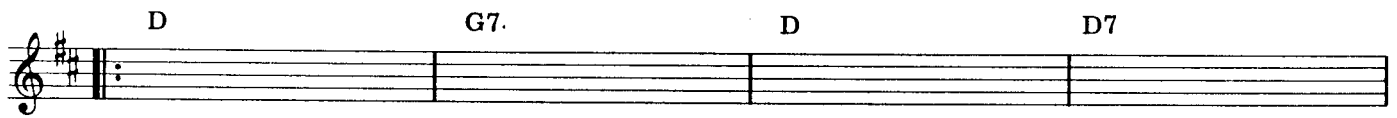
Blues in D

Not too fast

The musical score is written in treble clef with a key signature of two sharps (D major) and a 4/4 time signature. It consists of a 12-bar blues introduction and a solo section. The 12-bar blues is divided into three 4-bar phrases. The first phrase has chords D, G7, D, and D7. The second phrase has chords G7, G7, D, and D. The third phrase has chords A7, G7, D, and D. The solo section is marked '1st Chorus of Solo' and consists of two 4-bar phrases. The first phrase has chords D, D, G7, and D. The second phrase has chords G7, G7, D, and D. The score includes various musical notations such as slurs, ties, and repeat signs.

Your improvisation

D G7 D D7



G7 G7 D D



A7 G7 D D



D G7 D D7



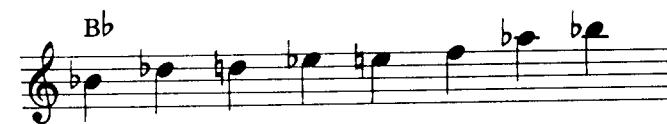
G7 G7 D D



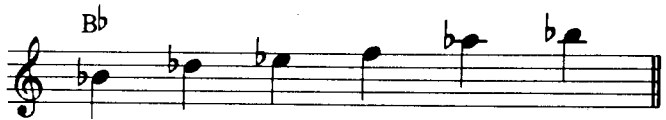
A7 G7 D D



Another way to improvise on blues changes is to restrict yourself to the notes of the blues scale:



You can restrict yourself to the notes of the pentatonic scale as well, since all five notes in this scale are to be found in the blues scale:



In this next blues my improvisation is based first on the blues scale on G (1st chorus), and then on the pentatonic scale on G (2nd chorus). Do the same in your improvisation. Groups of two eighth notes should be played unevenly, with the first eighth note longer than the second. In jazz, eighth notes are often played in this fashion.

First Blues

Slow blues feeling

Chords: G7, C7, G7, G7, C7, C7, G7, G7, D7, C7, G7, G7

1st chorus

Chords: G7, C7, G7, G7, C7, G7, G7, D7, C7, G7, G7

2nd chorus

Chords: C7, G7

G7 C7 C7 G7 G7

A musical staff in G major with a treble clef. It contains five measures of music. The first measure has a G7 chord and notes G4, A4, B4, A4, G4. The second measure has a C7 chord and notes G4, A4, B4, A4, G4. The third measure has a C7 chord and notes G4, A4, B4, A4, G4. The fourth measure has a G7 chord and notes G4, A4, B4, A4, G4. The fifth measure has a G7 chord and notes G4, A4, B4, A4, G4.

D7 C7 G7 G7

A musical staff in G major with a treble clef. It contains four measures of music. The first measure has a D7 chord and notes G4, A4, B4, A4, G4. The second measure has a C7 chord and notes G4, A4, B4, A4, G4. The third measure has a G7 chord and notes G4, A4, B4, A4, G4. The fourth measure has a G7 chord and notes G4, A4, B4, A4, G4.

Your improvisation

G7 C7 G7 G7

An empty musical staff in G major with a treble clef. Above the staff are four measures, each with a chord label: G7, C7, G7, and G7.

C7 C7 G7 G7

An empty musical staff in G major with a treble clef. Above the staff are four measures, each with a chord label: C7, C7, G7, and G7.

D7 C7 G7 G7

An empty musical staff in G major with a treble clef. Above the staff are four measures, each with a chord label: D7, C7, G7, and G7.

G7 C7 G7 G7

A musical staff in G major with a treble clef. It contains four measures of music. The first measure has a G7 chord and notes G4, A4, B4, A4, G4. The second measure has a C7 chord and notes G4, A4, B4, A4, G4. The third measure has a G7 chord and notes G4, A4, B4, A4, G4. The fourth measure has a G7 chord and notes G4, A4, B4, A4, G4.

C7 C7 G7 G7

A musical staff in G major with a treble clef. It contains four measures of music. The first measure has a C7 chord and notes G4, A4, B4, A4, G4. The second measure has a C7 chord and notes G4, A4, B4, A4, G4. The third measure has a G7 chord and notes G4, A4, B4, A4, G4. The fourth measure has a G7 chord and notes G4, A4, B4, A4, G4.

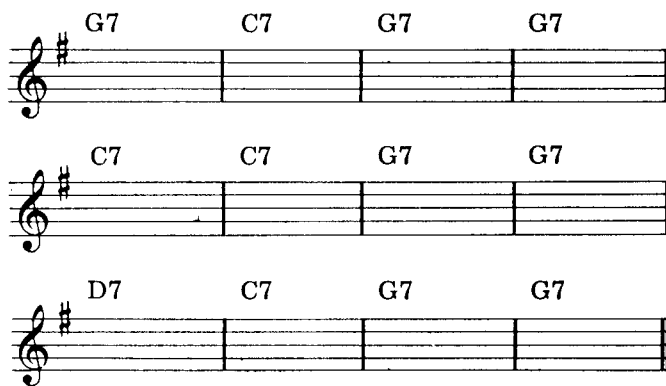
D7 C7 G7 G7

A musical staff in G major with a treble clef. It contains four measures of music. The first measure has a D7 chord and notes G4, A4, B4, A4, G4. The second measure has a C7 chord and notes G4, A4, B4, A4, G4. The third measure has a G7 chord and notes G4, A4, B4, A4, G4. The fourth measure has a G7 chord and notes G4, A4, B4, A4, G4.

In a totally chordal improvisation each note is related to the chord with which it is played. In other words, where there is a Dm7 the main notes are D, F, A, and C, and all non-chord notes must resolve to them. Here is a Dm7 passage of John Coltrane's where all but three notes are chord tones. The chord tones are circled.



Now play the following set of blues changes using only chord tones. With G7 you can play G, B, D, or F. You can play C, E, G, or Bb with C7; and with D7, D, F#, A, or C.



Some non-chord tones should now be introduced into your solos. Non-chord tones can provide a flowing interconnection between chord tones. Here are some types used in jazz, followed by examples in C major.

- 1) A passing tone is a note between two chord tones.
- 2) A neighbor note is a note one step above or below a chord tone which returns immediately to the same tone.
- 3) Upper and lower neighbor notes can be played in succession. This is a very common device in jazz.
- 4) The interval of a downward third can be bridged by a nota cambiata, in which a passing tone skips down a third and then comes up to its destination.
- 5) The chromatic scale can be used between chord tones.
- 6) Notes a semitone lower than the chord tones can be used before them.



Now return to the blues changes just given to utilize some of these devices in your solo. Here are the passing, neighbor and chord tones for each chord:

- G7: G, A, B, C, D, E, or F
- C7: C, D, E, F, G, A, or B \flat
- D7: D, E, F \sharp , G, A, B, or C

Perhaps the main difference between most blues and modern jazz blues is the frequent use of the IIm7V7 progression. This is the single most common progression in jazz. The Roman numerals refer to scale steps. There are names for all the scale steps, but the four below should be memorized as they are the most important:

Tonic	Subdominant	Dominant	Leading Tone
C	D	E	F
I	II	III	IV
G	A	B	C
V	VI	VII	VIII

The IIm7-V7 progression often leads to a chord on the tonic. When it doesn't, it still strongly suggests the tonic key. The notes that can be played with a IIm7-V7 progression or a V7 are in the tonic key.

Progression	Tonic
Cm7 to F7	B \flat
C \sharp m7 to F \sharp 7	B
Dm7 to G7	C
E \flat m7 to A \flat 7	D \flat
Em7 to A7	D
Fm7 to B \flat 7	E \flat
F \sharp m7 to B7	E
Gm7 to C7	F
A \flat m7 to D \flat 7	G \flat
Am7 to D7	G
B \flat m7 to E \flat 7	A \flat
Bm7 to E7	A

In the following blues changes, a one-measure IIm7-V7 progression occurs three times and a two-measure IIm7-V7 progression occurs once. The correct major scale for each chord is placed above it. The notes in parentheses are the accidentals that occur in that scale. Although all the notes in the scale can be used (as well as all the chromatic notes in between), try to stress the chord tones.

The musical notation consists of three staves, each with a treble clef and a 4/4 time signature. Each staff is divided into four measures by vertical bar lines. Above each measure, the chord names and their constituent notes are listed. The first staff shows a progression of C Major (C), C Major (Dm7, G7), C Major (C), and F Major (B \flat) (Gm7, C7). The second staff shows B \flat Major (B \flat , E \flat) (F7), B \flat Major (B \flat , E \flat) (F7), C Major (C), and D Major (F \sharp , C \sharp) (Em7, A7). The third staff shows C Major (Dm7), C Major (G7), C Major (C), and C Major (C).

In the second and sixth measures of many blues pieces, there is a diminished seventh chord. This type of chord is built on four successive minor thirds that divide the octave into four equal parts. Diminished seventh chords whose roots are a minor third, diminished fifth or diminished seventh apart contain the same tones.

I II III IV
(contains the same tones as I)

Diminished chords are used in the next blues.

The two most basic approaches to playing chord changes are vertical and horizontal. Vertical signifies that most of the chords are arpeggiated; horizontal, that an emphasis is placed on melodic line. Tenor saxophonist Coleman Hawkins is regarded as the first exponent of vertical playing; tenor saxophonist Lester Young, of horizontal playing. The next set of blues changes is followed by a written improvisation. The first chorus is a vertical approach; the second, a horizontal approach.

Vertical-Horizontal

Not too fast

C6 F7 F#° C6 Gm7 C7

F7 F#° C6 Em7 A7

Dm7 G7 C6 Dm7 G7

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1st chorus (Vertical)

Musical notation for the first chorus (vertical) in treble clef. The melody consists of eighth and quarter notes with various accidentals. Chord symbols are placed above the staff: C6, F7, F#° (F# with a degree symbol), C6, Gm7, C7, F7, F#° (F# with a degree symbol), C6, Em7, A7, Dm7, G7, C6, Dm6, G7. There are two triplet markings (indicated by a '3' below the notes) on the first and fifth measures of the third line.

2nd chorus (Horizontal)

Musical notation for the second chorus (horizontal) in treble clef. The melody consists of quarter and eighth notes with various accidentals. Chord symbols are placed above the staff: C6, F7, F#° (F# with a degree symbol), C6, Gm7, C7, F7, F#° (F# with a degree symbol), C6, Em7, A7, Dm7, G7, C6, (C6). There are two triplet markings (indicated by a '3' below the notes) on the fourth and sixth measures of the first line.

The diminished or octatonic scale is composed of whole steps alternating with half steps. There are three possible diminished scales:



can be played with B^b°, C[♯]°, E° or G°



can be played with B°, D°, F° or Ab°



can be played with C°, Eb°, F[♯]° or A°

The following two blues solos resemble two by Charlie Parker. They illustrate material covered in this chapter: improvising with chord tones and non-chord tones, with the blues scale, with IIm7-V7 progressions, and with the diminished seventh chord. Studying and memorizing solos is a tried and proven method for learning jazz. Thousands of saxophonists, clarinetists, flutists, pianists, trumpeters, trombonists, and bassists have memorized Charlie Parker solos. He was a brilliant alto saxophonist with a virtuoso technique, a vivid imagination, and a thorough knowledge of chords. He is the father of the modern jazz saxophone, and influenced all the great sax players who came after him.

In this solo, there are notes in parentheses called ghost or ghosted notes. They are semi-audible tones usually played on the after beat of a two eighth-note group. They are produced by pressing down the reed, which deadens the tone. A line going down from a note at an angle is a fall-off. This effect can be produced by the lips or by a quick downward glissando. Unlike many saxophonists who use a more even-noted approach—especially those who play with a rock beat—the rhythms are not exact. Slight ritards and accelerandi are used frequently. There are several gradations of note attack and dynamics, and the articulation is totally unpredictable and varied.



Charlie Parker

Charlie Parker No. 1

Uptempo

1st chorus

DM7 Em7 A7 DM7

Am7 D7 G7 G7 G#dim7

DM7 F#m7 B7 Em7

2nd chorus

A7 DM7 Em7 A7 DM7

Em7 A7 DM7 Am7 D7

G7 slight delay G7 G#dim7 DM7 F#m7 B7

Em7 A7

DM7 Em7 A7 D

Charlie Parker No. 2

Uptempo

1st chorus

fall behind the beat

2nd chorus

3rd chorus

G7 DM7 F#m7 B7

Em7 A7 D7 Em7 A7

4th chorus

D7 D7 D7

D7 G7 G7 DM7

F#m7 B7 Em7 A7

[or: Fm7 Bb7]

5th chorus

D7 Em7 A7 D7 D7

D7 D7 G7

G7 DM7 B7 Em7

A7 D Em7 A7 D

Pop Tunes, Turnbacks, and Substitutions

Jazz musicians have always improvised on pop tunes and many jazz compositions are based on pop chord changes. The most common structures are AABA and ABAB. "I Got Rhythm" is an example of an AABA tune, and "How High the Moon" is an ABAB tune. A and B are two different phrases, each usually eight measures long, and many tunes are thirty-two measures in length. The last eight-measure phrase of some tunes is altered and extended by a few measures. "All the Things You Are" is one which is thirty-six measures long. The B of an AABA structure is called the bridge or release. One common bridge is the cycle of fifths bridge, also called the "I Got Rhythm" bridge. It starts a major third above the tonic key, which is usually B \flat concert, and makes a cycle of dominant seventh chords. Each new chord is a fifth lower than the one before. The cycle continues until it returns to the tonic key.

Key of C

E \flat saxes E7 E7 A7 A7 D7 D7 G7 G7

Key of G

E \flat saxes B7 B7 E7 E7 A7 A7 D7 D7

Every dominant seventh chord can be preceded by a minor seventh chord a fifth higher. I prefer this substitute version for the cycle of fifths bridge:

Key of C

B \flat saxes Bm7 E7 A7 A7 Am7 D7 Dm7 G7

Key of G

E \flat saxes F \sharp m7 B7 E7 E7 Em7 A7 Am7 D7

On the next page is a thirty-two measure tune with a cycle of fifths bridge. Although it starts on a Dm7, it is in the key of C. After playing the tune, improvise on the changes and then repeat the tune. The cycle of fifths bridge takes a long time to master. Don't be thrown by your mistakes. Accept them gracefully. Sometimes they are more interesting than the notes that you intended!



Coleman Hawkins

Bridging the Gap

Medium swing tempo

The musical score is written in 4/4 time and consists of several systems of music. The first system starts with a treble clef and a 4/4 time signature. The tempo is marked 'Medium swing tempo'. The first line of music has four measures with chords: Dm7, Eb° (E-flat degree), Em7, and A7 9. The second system has two first endings. The first ending starts with Dm7 and contains five measures with chords: Dm7, G7, CM7, Em7, and A7-9. The second ending starts with Dm7 and contains four measures with chords: G7, CM7, and C6. The third system is labeled 'Bridge' and contains four measures with chords: Bm7, E7, A7, and A7. The fourth system contains five measures with chords: Am7, D7, Dm7, G7+5 (with a triplet of eighth notes), and G7+5. The fifth system contains four measures with chords: Dm7, Eb° (E-flat degree), Em7, and A7-9. The sixth system contains five measures with chords: Dm7, Dm7, G7, C6, and C6 (with a triplet of eighth notes).

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When the choruses of a tune are repeated, a turnback is used. This is a connecting chord progression that leads back to the start of a tune. A turnback is indicated by chords in parentheses placed above the chords they replace:

(Dm7 G7)
| C |

Since most pop tunes are not published for jazz musicians, turnbacks usually must be added. The last chord of a turnback is the dominant seventh (or dominant seventh substitute) of the first chord of the tune. These turnbacks are used for tunes beginning and ending on the identical major chord:

[I or IIIm7 VI7-9 | IIIm7 V7]

[IIIm7 IIIbm7 | IIIm7 V7]

[I IIIb7 | VIb IIb7]

Now return to the tune just given and improvise a few choruses using this turnback in the last measure: Em7 A7.

Substitutions and harmonic alterations make pop tunes harmonically sophisticated. Notes can be added to many of the chords. A major sixth, seventh, and/or ninth can be added to a major chord. A ninth and even an eleventh can be added to minor seventh chords and half-diminished seventh chords. Altered and unaltered ninths, elevenths, and thirteenths can be added to dominant seventh chords. The fifth can be altered as well. A dominant seventh chord with a diminished ninth and/or a diminished thirteenth is particularly effective before a minor chord a fifth below. A dominant seventh chord with a ninth and an augmented eleventh is particularly effective before a major seventh chord a fourth below. The lowest tones of extended chords are omitted for melodic flexibility. When playing thirteenth chords, chords whose roots are the seventh are substituted. In the following chart of thirteenth chords the tenth (a third plus an octave) is used where the eleventh is not given. The tones of a chord are given in ascending order where symbols are not applicable. Transposing these substitutions will teach you how to play thirteenth chords in all keys.

$C7 \left(\begin{smallmatrix} -13 \\ 9 \end{smallmatrix} \right): B\flat \not{7}$

$C7 \left(\begin{smallmatrix} 13 \\ 9 \end{smallmatrix} \right): B\flat \text{ dim with } Ma7$

$C7 \left(\begin{smallmatrix} -13 \\ 11 \\ -9 \end{smallmatrix} \right): B\flat m7$

$C7 \left(\begin{smallmatrix} 13 \\ 11 \\ -9 \end{smallmatrix} \right): B \cdot m \text{ with } Ma7$

$C7 \left(\begin{smallmatrix} -13 \\ +11 \\ -9 \end{smallmatrix} \right): B\flat, D\flat, G\flat, A$

$C7 \left(\begin{smallmatrix} 13 \\ +11 \\ -9 \end{smallmatrix} \right): B\flat, D\flat, G\flat, A$

$C7 \left(\begin{smallmatrix} -13 \\ 9 \end{smallmatrix} \right): B\flat 7-5$

$C7 \left(\begin{smallmatrix} 13 \\ 9 \end{smallmatrix} \right): B\flat Ma7-5$

$C7 \left(\begin{smallmatrix} -13 \\ 11 \\ 9 \end{smallmatrix} \right): B\flat 7$

$C7 \left(\begin{smallmatrix} 13 \\ 11 \\ 9 \end{smallmatrix} \right): B\flat Ma7$

$C7 \left(\begin{smallmatrix} -13 \\ +11 \\ 9 \end{smallmatrix} \right): B\flat 7+5$

$C7 \left(\begin{smallmatrix} 13 \\ +11 \\ 9 \end{smallmatrix} \right): B\flat Ma7+5$

Any dominant seventh chord can be preceded by a minor seventh chord a fourth below it. In other words, V7 becomes IIIm7-V7. This is called a IIIm7 substitution. A dominant seventh chord leading to a tonic can be replaced by a seventh chord a tritone—a diminished fifth—lower, which is called a tritone substitution. A diminished seventh chord preceding a minor seventh chord a semi-tone lower can be replaced by a minor seventh chord on the same root. This chord can then be followed by a dominant seventh chord a fifth down. For example, E \flat dim7 going to Dm7 can be replaced by E \flat m7 or E \flat m7 A \flat 7. The fifth of a major seventh at the end of a tune can be diminished. CMa7 at the end of a tune, for instance, can be replaced by CMa7-5. Quartal harmony, the use of chords built in fourths, introduces other substitutions. Minor seventh chords can be replaced by a three- or four-note chord built in perfect fourths from the root. Minor and major sixth chords can be replaced by a three- to five-note chord whose first three tones are, in ascending order, the third, sixth, and ninth. In a Gm6 chord, for example, these notes are B \flat , E, and A. Dominant seventh chords can be replaced by a three- to six-note chord whose first three tones are, in ascending order, the seventh, tenth, and thirteenth. In a G7 chord these notes are F, B, and E.

The first study that follows illustrates different forms of extended dominant sevenths. Two forms of symbols are used for each chord. The slash chord Gm7/C means Gm7 suspended over the tone C. The second study is based on chords built in perfect fourths.

Extended dominant seventh chords

C7-9 or G ^o /C	C7 (¹¹ ₉) or G ^o 7/C	C11 or G-7/C
C7 (⁺¹¹ ₉) or Gm+7/C	C#7-9 or G# ^o /C#	C#7 (¹¹ ₉) or G# ^o 7/C#
C#11 or G#-7/C#	C#7 (⁺¹¹ ₉) or G#m+7/C#	D7-9 or A ^o /D
D7 (¹¹ ₉) or A ^o 7/D	D11 or A-7/D	D7 (⁺¹¹ ₉) or Am+7/D
Eb7-9 or Bb ^o /Eb	Eb7 (¹¹ ₉) or Bb ^o 7/Eb	Eb11 or Bb-7/Eb
Eb7 (⁺¹¹ ₉) or Bbm+7/Eb	E7-9 or B ^o /E	E7 (¹¹ ₉) or B ^o 7/E
E11 or B-7/E	E7 (⁺¹¹ ₉) or Bm+7/E	F7-9 or C ^o /F
F7 (¹¹ ₉) or C ^o 7/F	F11 or C-7/F	F7 (⁺¹¹ ₉) or Cm+7/F

F#7-9 or C# ^o /F#	F#7 (¹¹ / ₉) or C# ^o 7/F#	F#11 or C#-7/F#
F#7 (+ ¹¹ / ₉) or C#m+7/F#	G7-9 or D ^o /G	G7 (¹¹ / ₉) or D ^o 7/G
G11 or D-7/G	G7 (+ ¹¹ / ₉) or Dm+7/G	Ab7-9 or Eb ^o /Ab
Ab7 (¹¹ / ₉) or Eb ^o 7/Ab	Ab11 or Eb-7/Ab	Ab7 (+ ¹¹ / ₉) or Ebm+7/Ab
A7-9 or E ^o /A	A7 (¹¹ / ₉) or E ^o 7/A	A11 or E-7/A
A7 (+ ¹¹ / ₉) or Em+7/A	Bb7-9 or F ^o /Bb	Bb7 (¹¹ / ₉) or F ^o 7/Bb
Bb11 or F-7/Bb	Bb7 (+ ¹¹ / ₉) or Fm+7/Bb	B7-9 or F# ^o /B
B7 (¹¹ / ₉) or F# ^o 7/B	B11 or F#-7/B	B7 (+ ¹¹ / ₉) or F#m+7/B

Perfect fourths

mp

poco rit. a tempo

mp mf p

mp p mf

mp

cresc. poco a poco

f ff

The musical score consists of ten staves of music in 4/4 time. The key signature has one flat (B-flat). The piece is titled 'Perfect fourths'. The first staff begins with a mezzo-piano (*mp*) dynamic. The second staff includes a tempo change from *poco rit.* to *a tempo*. The third staff features dynamics of *mp*, *mf*, and *p*, with triplets indicated by a '3' over the notes. The fourth staff continues with *mp*, *p*, and *mf* dynamics, also including triplets. The fifth staff starts with *mp*. The sixth staff has accents (>) over the first few notes. The seventh staff includes triplets. The eighth staff features a crescendo (*cresc.*) and a *poco a poco* dynamic marking. The ninth and tenth staves reach a fortissimo (*ff*) dynamic, with triplets and accents throughout.

The next solo transcription is adapted from alto saxophonist Johnny Hodges. It is based on a sixteen-measure standard. Hodges was an early jazz sax great, one of the most influential of the thirties. Other great saxophonists active at that time were Benny Carter (alto), Sidney Bechet (soprano), Coleman Hawkins (tenor), and Lester Young (tenor). Hodges appeared with Duke Ellington for forty-one years, and Ellington featured him on many ballads. Among the most characteristic features of his playing was his very full sound. He frequently used lip slurs and glissandi. His up-tempo playing possessed a spirited, blues-influenced quality.



Johnny Hodges

In the following transcription, a line going up to a note denotes a scoop which is produced by a lip slur, a glide produced mainly by the lips. The symbol (∪) is a bend, which is a lip slur that dips down from a pitch and then returns to it.

Johnny Hodges

Slow bluesy feel

mp

A

G#m7 C#7

pitch begins F#7 on G#

F#7 B7 Bm7 E7

C#m7 C° Bm7 E7 on F# A

pitch begins on G#

G#m7 C#7 F#7 F#7

slightly behind the beat

B7 Bm7 E7 A

mp

2nd chorus

A Bm7E7 A G#m7 C#7

f *mf*

vibrato

F#7 F#7 B7 B7

mf *mp* *mf*

slight pause

Bm7 E7 C#m7 C° Bm7 E7

mf *mp*

very raw

A G#m7 C#7 F#7

mf *mp*

vibrato

F#7 B7 Bm7 E7

mf

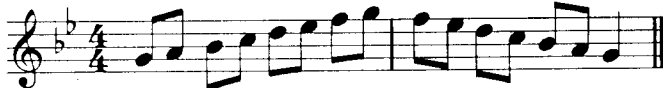
A A A

mp

Modal or Scalar Improvisation

Jazz musicians since the late fifties have been interested in this type of improvisation. Instead of emphasizing the notes of a chord as in chordal improvisation, the soloist restricts himself to the notes in a particular scale. The harmonies of a modal tune change very little or not at all in order that the soloist may use one scale for at least a couple of measures. Many modal tunes are based on chords built on fourths. Any scale which relates to the given chords can be used. I will use a Gm7 as an example. The following scales can be used:

G natural minor



G harmonic minor



G melodic minor



G Dorian scale



G minor pentatonic



D minor pentatonic



G added pentatonic



G pelog scale



D pelog scale



whole-tone scale



G blues scale



Kumoi scales



These scales emphasize at least two notes of the G minor triad. But it is not essential to remain in and around G minor. In any solo in which the harmonic structure is limited, it is always possible to leave the chords behind for a while and then return to them. This is called playing out of the changes.

Here is a G minor modal tune. Play it, improvise on G minor, and repeat the tune:

Modal Man

Up tempo

strong triplet feeling

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The next solo transcription is adapted from John Coltrane, who was one of the most brilliant of jazz musicians, and a master of modal playing. Tenor and soprano saxophonist Coltrane achieved prominence in the fifties as a member of the Miles Davis Quintet and of various Thelonious Monk groups, and in addition as the leader of his own groups in the sixties until his untimely death in 1967. Coltrane has impressed listeners with his passionate sincerity and vast skill, and his music reflects the serious attitude he had towards his work. Coltrane had completely mastered all types of jazz improvisation, and was a major influence in every one.

The following solo was performed on soprano. The symbol (↑) over a note indicates a microtone (less than a semi-tone) higher. In the fourth measure of the seventh line is a note between A and B \flat . This is the fingering:

- B key
- A key
- G key
- F key
- E key
- D key

During the sixties Coltrane used many sounds other than those produced by standard saxophone technique. He was one of the first saxophonists to use multiphonics, the simultaneous sounding of two or more notes on a wind instrument.

John Coltrane

Fast

G minor throughout

Musical score for John Coltrane's piece, marked "Fast" and "G minor throughout". The score is written in 3/4 time and consists of eight staves of music. The key signature is G minor (two flats). The music features complex melodic lines with many sixteenth notes and various ornaments and phrasing. The score includes several triplet markings.



Rock and jazz saxophonists often take modal solos entirely based on the blues scale. Here is an example like one by a James Brown tenor saxophonist. Eighth notes are played evenly with a rock or Latin beat.

A Rock Modal Solo

Lively rock tempo

D minor throughout

The musical score consists of six staves of music in 4/4 time, all in D minor. The tempo is marked as 'Lively rock tempo'. The key signature is one flat (Bb). The music is primarily composed of eighth notes, often beamed in groups of four. The first staff begins with a quarter rest followed by eighth notes. The second staff continues the eighth-note pattern. The third staff features a 'vibrato' instruction over a pair of eighth notes. The fourth and fifth staves show more complex rhythmic patterns with eighth notes and some quarter notes. The sixth staff concludes the solo with eighth notes and quarter notes.

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Free Jazz

When Ornette Coleman came to New York in 1959 he brought with him a new type of music. The musicians in his band improvised without chord changes. The soloists and the accompanying bassist were free to choose any notes that tied together. They didn't want to restrict themselves to notes related to a series of chord changes. Since their music wasn't based on a predetermined cyclically repeated structure, many elements strongly associated with jazz were eliminated. Alto saxophonist Ornette Coleman, pianist Cecil Taylor, and tenor saxophonists John Coltrane and Albert Ayler experimented with harmony, melody, and rhythm to an extent never before heard in jazz.

Free sax solos often contain many standard jazz elements including lip slurs, patterns, unevenly-accented eighth notes, arpeggiated chords, and the common jazz phrasing I call reverse slurring—



Any melodic ideas can actually be used, whether derived from jazz or not. The vocabulary of many free jazz saxophonists contains numerous sounds not produced by standard saxophone technique. These include microtones, multiphonics, and shrieking sounds.

In free jazz the harmony is not predetermined, although in some performances the musicians begin their solo in the same key as the written tune. Ornette Coleman modulates into recognizable keys. John Coltrane often based his free solos on the whole-tone, pentatonic, and other scales. Where non-traditional sounds are used extensively, solos are not related to chords or scales.

Rhythm in free jazz is based on pulse or is entirely free. Rhythm based on pulse may or may not be metrically organized. If it is based on meter ($\frac{4}{4}$, $\frac{3}{4}$ etc.), the meter is usually not strictly adhered to. Sax solos in free time may bear a resemblance to solos in fixed time. Although the accompaniment may be totally free, there may be elements in the solo which resemble half notes, quarter notes, eighth notes, and any other rhythmic values. On the other hand, the solo may be totally arhythmic and made up of sheets of sound, a term invented by jazz critic Ira Gitler.

The next solo resembles one by Ornette Coleman that he played as part of a larger solo. The melodic, harmonic, and rhythmic elements are very effective, and it could easily be harmonized.



Ornette Coleman with bassist David Izenzon

The solo begins in $E\flat$ major and modulates through a succession of keys. This solo is primarily in C major from measure sixteen until four measures before the end. Coleman was performing on a plastic alto saxophone at the time, but he replaced it with a metal one later in his career.

Ornette Coleman

Lonely feeling $\text{♩} = 120$

The musical score for "Lonely feeling" by Ornette Coleman is presented in a single system of eight staves. The piece is in 4/4 time with a tempo of 120 beats per minute. The key signature is one flat (B-flat). The notation is written in treble clef and includes various rhythmic values such as eighth and sixteenth notes, as well as rests. There are several triplet markings (indicated by a '3' over a group of notes) and slurs throughout the piece. The music is characterized by its complex, non-linear harmonic structure and rhythmic patterns, typical of Coleman's avant-garde style. The score includes various accidentals, including naturals, sharps, and flats, and dynamic markings such as accents and slurs.

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Patterns

Practicing patterns—which are also called riffs—is the best way to learn to play chord changes. Not only does the player familiarize himself with new ideas for his solos, but he develops the facility to solo in all keys. It also helps him to master the ability to transpose at sight, which is a useful tool for saxophonists, who often have to transpose concert instrument parts. Transposing a motif is an excellent idea for improvisation and composition.

I have written each pattern that follows in the lowest possible saxophone range. After playing them as

written, transpose them a semi-tone higher and continue to do so until they are too high to be played. Analyzing the intervallic structure will make transposition easier. For example, the first IIm7-V7 pattern consists of the first, second, third, and fifth scale steps of B \flat minor followed by the first, second, third, and fifth scale steps of E \flat major.

Use these patterns in your practice solos. A two-measure pattern played twice as fast as it is written can be played with a one-measure progression.

IIm7V7 patterns

Pattern no. 3 is adapted from Charlie Parker.

B \flat m7 Eb7

slow Fm7 B \flat 7 Eb

slow B \flat m7 Eb7 Ab

Bm7 E7

I have written out all the transpositions for the next pattern, as well as for some others, because of their complexity.

Slur throughout

Bm7 E7 A

Cm7 F7 B \flat

C \sharp m7 F \sharp 7 B

Dm7 G7 C

E \flat m7 A \flat 7 D \flat

Em7 A7 D

Fm7 Bb7 Eb

F#m7 B7 E

Gm7 C7 F

G#m7 C#7 F#

Fm7 Bb7 Eb

Fm7 Bb7 Eb

Bm7 E7

The next pattern is transposed in a cycle of downward fifths. The articulation throughout follows that in measure 1.

Hm7-V7 Dm7 G7 Cm7 F7 Bbm7 Eb7 Abm7 Db7

F#m7 B7 Em7 A7 Ebm7 A7 Dbm7 Gb7

Bm7 E7 Am7 D7 Gm7 C7 Fm7 Bb7

Major patterns

F#7

Bb

Bb

F#

Bb

B

Gb F Eb D Db

Same articulation throughout

C B Bb A Ab G Gb F

E Eb D Db C B Bb

Minor patterns

The first three patterns are adapted from John Coltrane.

B \flat m7

B \flat m7

E \flat m7

B \flat m7

B \flat m7

B \flat m7

Dm7 C \sharp m7 Cm7 Bm7 B \flat m7 * Am7 G \sharp m7 Gm7

F \sharp m7 Fm7 Em7 E \flat m7 Dm7 C \sharp m7 Cm7 Bm7

B \flat m7 Am7 G \sharp m7 Gm7 F \sharp m7 Fm7 Em7 E \flat m7

* Same articulation throughout

The next pattern is adapted from trumpeter
Dizzy Gillespie.

Dm7 C#m7 Cm7 Bm7 *

Bbm7 Am7 G#m7 Gm7

F#m7 Fm7 Em7 Ebm7

Dm7 C#m7 Cm7 Bm7

Bbm7 Am7 G#m7 Gm7

F#m7 Fm7 Em7 Ebm7

*Same articulation throughout

Blues Scale patterns



The next pattern is adapted from flutist Hubert Laws.



Cycle of Downward Fifths patterns

Legato

Major

The first cycle of downward fifths patterns in Major mode is shown across four staves. The notes are: C, F, Bb, Eb, Ab, Db, Gb, B, E, A, D, G, C. The notes are written in a descending sequence on a treble clef staff in 4/4 time, with a key signature of one sharp (F#). The notes are grouped into pairs of eighth notes, and the sequence ends with a double bar line.

Legato

Major

The second cycle of downward fifths patterns in Major mode is shown across five staves. The notes are: C, F, Bb, Eb, Ab, Db, Gb, B, E, A, D, G, C, F, Bb, Eb, Ab, Db, Gb, B, E, A, D, G, C, F, Bb, Eb. The notes are written in a descending sequence on a treble clef staff in 4/4 time, with a key signature of one sharp (F#). The notes are grouped into pairs of eighth notes, and the sequence ends with a double bar line.

Ab Db Gb B E A# D G

C F Bb Eb Ab Db Gb B

E A D G C

Major

C F Bb Eb Ab Db Gb B

E A D G Cm Fm Bbm Ebm

Abm Dbm F#m Bm7 Em Am Dm Gm

Major

C F Bb Eb

Ab Db F# B

E A D G

*Same articulation throughout

Minor

Chord progression for the Minor section:

- Staff 1: Cm, Fm, Bb m, Eb m
- Staff 2: Ab m, Db m, F# m, Bm
- Staff 3: Em, Am, Dm, Gm

Major

Chord progression for the Major section:

- Staff 1: C, F, Bb, Eb, Ab, Db, Gb, B
- Staff 2: E, A, D, G, Minor Cm, Fm, Bb m, Eb m
- Staff 3: Ab m, Db m, F# m, Bm, Em, Am, Dm, Gm

Major

Chord progression for the second Major section:

- Staff 1: C, F, Bb, Eb, Ab, Db, Gb, B
- Staff 2: E, A, D, G, C, F, Bb, Eb
- Staff 3: Ab, Db, G, B, E, A, D, G

*Same articulation throughout

Minor

Cm Fm Bb m Eb m Ab m Db m F#m Bm

Em Am Dm Gm Cm Fm Bb m Eb m

Ab m Db m F#m Bm Em Am Dm Gm

Major

C F Bb Eb Ab Db Gb B

E A D G Cm Fm Bb m Eb m

Ab m Db m F#m Bm Em Am Dm Gm

Major

C F Bb

Eb Ab

Db Gb B

* Same articulation throughout

E A

D G

Cm Fm Bbm

Ebm Abm

Dbm

F#m Bm

Em

Am Dm

Gm

Scales

Improvisation is based on scales as well as chords. In chapter 2, I showed how the blues scale and the pentatonic scale can be used with the blues. In the same chapter I also introduced the diminished scale. The chapter on modal or scalar improvisation concentrated on many different scales which are playable with Gm7. The next chapter contains scale studies based on the scales you have learned so far, and adds new ones. I have placed chords above each study so that you can adapt the scales to your own solos. Practicing these studies with different metronome settings and different articulation will develop speed and improve tonguing. Each study can be totally slurred or broken up into a series of slurs, totally tongued, or played with a combination of slurring and tonguing.



Paul Desmond

Blues Scale Study #1

Cm, Eb, F7

Gm, Bb, C7

Dm, F, G7

Am, C, D7

Em, G, A7

Bm,D,E7



F#m,A,B7



C#m,E,F#7



Ab m,B,Db 7



Ebm,Gb,Ab 7



Bbm,Db,Eb 7



Fm,Ab,Bb 7



Blues Scale Study #2

Cm7, Eb 7, F7
mp 3 3 6 6 6 6 3

Gm7, Bb, C7
mp * 3 3 6 6 6 6 3

Dm7, F, G7
 3 3 6 6 6 6 3

Am7, C, D7
 3 3 6 6 6 6 3

Em7, G, A7
 3 3 6 6 6 6 3

Bm7, D, E7
 3 3 6 6 6 6 3

F#m7, A, B7
 3 3 6 6 6 6 3

G#m7, E, F# 7
 3 3 6 6 6 6 3

G#m7, B, C# 7
 3 3 6 6 6 6 3

The sheet music consists of ten staves, each representing a different blues scale. Each staff begins with a key signature and chord progression label. The first staff includes dynamics (*mp*, *f*, *dim.*) and articulation marks (>). The music is written in 4/4 time and features a consistent rhythmic pattern of eighth notes. The first two measures of each staff are marked with a '3' (triplets), and the final two measures are also marked with a '3'. The remaining four measures of each staff are marked with a '6' (sixteenth notes).

* Same dynamics for each two measure phrase

E \flat m7, G \flat , A \flat 7

Musical notation for the Eb m7, G \flat , A \flat 7 scale study. The scale is written in a single line on a treble clef staff. It begins with a triplet of eighth notes (E \flat , G \flat , A \flat) and continues with a series of eighth notes, including sixteenth-note pairs and triplets. The key signature has three flats (B \flat , E \flat , A \flat).

B \flat m7, D \flat , E \flat 7

Musical notation for the B \flat m7, D \flat , E \flat 7 scale study. The scale is written in a single line on a treble clef staff. It begins with a triplet of eighth notes (B \flat , D \flat , E \flat) and continues with a series of eighth notes, including sixteenth-note pairs and triplets. The key signature has four flats (B \flat , E \flat , A \flat , D \flat).

Fm7, A \flat , B \flat 7

Musical notation for the Fm7, A \flat , B \flat 7 scale study. The scale is written in a single line on a treble clef staff. It begins with a triplet of eighth notes (F, A \flat , B \flat) and continues with a series of eighth notes, including sixteenth-note pairs and triplets. The key signature has two flats (B \flat , E \flat).

Whole-Tone Scale Studies

Whole-tone scales can be played with dominant seventh chords with raised or lowered fifths based on any note of the scale. There are two whole-tone scales.

Musical notation for the first whole-tone scale, written in 4/4 time on a treble clef staff. The scale consists of eight notes: C, D, E, F, G, A, B, C. The key signature has no sharps or flats.

Musical notation for the second whole-tone scale, written in 4/4 time on a treble clef staff. The scale consists of eight notes: C, D, E, F, G, A, B, C. The key signature has one sharp (F#).

Musical notation for the third whole-tone scale, written in 4/4 time on a treble clef staff. The scale consists of eight notes: C, D, E, F, G, A, B, C. The key signature has two sharps (F#, C#).

Musical notation for the fourth whole-tone scale, written in 4/4 time on a treble clef staff. The scale consists of eight notes: C, D, E, F, G, A, B, C. The key signature has three sharps (F#, C#, G#).

The image displays eight staves of musical notation. The first four staves are in treble clef with a key signature of two flats (B-flat and E-flat). The fifth staff is in treble clef with a key signature of one flat (F-flat). The sixth, seventh, and eighth staves are in 4/4 time signature with a key signature of one flat (F-flat). The notation includes various note values, rests, and dynamic markings.

Diminished or Octatonic Scale Studies

There are three diminished scales. Each consists of eight notes, and the half and whole steps alternate. The first transposition of each exercise can be played with B \flat o7, D \flat o7, Eo7, Go7, C7, E \flat 7, G \flat 7, or A7. The chords for the second transposition are a half-tone, and those for the third transposition a whole-tone, above the first one.

1st transposition



2nd transposition



3rd transposition



Legato





Legato



This page of musical notation consists of ten staves of music, all written in treble clef and 4/4 time. The key signature is one flat (B-flat). The notation includes a variety of rhythmic patterns and melodic lines. The first staff begins with a series of eighth notes, followed by a half note. The second staff features a more complex melodic line with many slurs and ties. The third and fourth staves continue with similar melodic development. The fifth staff introduces a triplet of eighth notes. The sixth and seventh staves show further melodic elaboration. The eighth staff contains another triplet of eighth notes. The ninth and tenth staves conclude the piece with final melodic phrases and rests. The notation is dense and detailed, with many accidentals and slurs throughout.

Pentatonic Scale Study #1

Cm7, Db Maj. 7-5, Eb, F7

Fm7, Gb Maj. 7-5, Ab, Bb 7

Bb m7, BMaj. 7-5, Db, Eb 7

Eb m7, EMaj. 7-5, Gb, Ab 7

Ab m, AMaj. 7-5, B, Db 7

C#m7, DMaj. 7-5, E, F# 7

F#m7, GMaj. 7-5, A, B7

Bm7, CMaj. 7-5, D, E7

Em7, FMaj.7-5, G, A7



Am7, BbMaj.7-5, C, D7



Dm7, EbMaj.7-5, F, G7



Gm7, AbMaj.7-5, Bb, C7



Pentatonic Scale Study #2

Cm7, DbMaj.7-5, Eb, F7



Gm7, Ab Maj. 7-5, Bb ,C7

The first system of music consists of three staves. The top staff begins with a treble clef and a key signature of one flat (Bb). It contains a melodic line with eighth and sixteenth notes, including a flat sign (b) under a note. The middle and bottom staves contain accompaniment with similar rhythmic patterns and some flat signs.

Dm7, Eb Maj. 7-5, F, G7

The second system of music consists of two staves. The top staff begins with a treble clef and a key signature of two flats (Bb, Eb). It contains a melodic line with eighth and sixteenth notes. The bottom staff contains accompaniment with similar rhythmic patterns.

Am7, Bb Maj. 7-5, C, D7

The third system of music consists of three staves. The top staff begins with a treble clef and a key signature of two flats (Bb, Eb). It contains a melodic line with eighth and sixteenth notes. The middle and bottom staves contain accompaniment with similar rhythmic patterns.

Em7, FMaj. 7-5, G, A7

The fourth system of music consists of two staves. The top staff begins with a treble clef and a key signature of one flat (Bb). It contains a melodic line with eighth and sixteenth notes. The bottom staff contains accompaniment with similar rhythmic patterns.



Bm7, CMaj.7-5, D, E7



F#m7, GMaj.7-5, A, B7



C#m7, DMaj. 7-5, E, F#7



G#m7, AMaj. 7-5, B, C#7

Three staves of musical notation in treble clef. The first staff contains a melodic line with eighth and sixteenth notes, featuring sharps for F# and C#. The second and third staves provide harmonic accompaniment with chords and moving lines, also using sharps for F# and C#.

Ebm7, EMaj. 7-5, Gb, Ab 7

Three staves of musical notation in treble clef. The first staff begins with a whole rest followed by a melodic line with flats for Bb and F. The second and third staves provide harmonic accompaniment with chords and moving lines, also using flats for Bb and F.

Bbm7, BMaj. 7-5, Db, Eb 7

Three staves of musical notation in treble clef. The first staff begins with a whole rest followed by a melodic line with flats for Bb and F. The second and third staves provide harmonic accompaniment with chords and moving lines, also using flats for Bb and F.

Fm7, Gb Maj. 7-5, Ab, Bb 7

Three staves of musical notation in treble clef, 4/4 time. The first staff contains the first four measures of the scale. The second staff contains the next four measures. The third staff contains the final four measures, ending with a double bar line. The scale is written in a descending sequence of eighth notes.

Pentatonic Scale Study #3

Cm7, C7

Three staves of musical notation in treble clef, 4/4 time. The first staff contains the first four measures of the scale. The second staff contains the next four measures. The third staff contains the final four measures, ending with a double bar line. The scale is written in a descending sequence of eighth notes.

Gm7, G7

Two staves of musical notation in treble clef, 4/4 time. The first staff contains the first four measures of the scale. The second staff contains the next four measures, ending with a double bar line. The scale is written in a descending sequence of eighth notes.

Dm7,D7



Am7,A7



Em7,E7



Bm7,B7



F#m7, F#7

C#m7, C#7

G#m7, G#7

Ebm7, Eb7



Bb m7, Bb 7



Fm7, F7



Dominant Seventh Pentatonic Scale Study

Same articulation throughout

Same dynamics throughout

C7

G7

D7

A7

E7

B7

F#7

Db7

Detailed description: The image shows a musical score for a 'Dominant Seventh Pentatonic Scale Study' in 2/4 time. It consists of ten staves, each representing a different dominant seventh chord. The chords are: C7, G7, D7, A7, E7, B7, F#7, and Db7. The first staff (C7) includes a triplet of eighth notes and a slur over a group of notes. The second staff (G7) has a double bar line and the instruction 'Same dynamics throughout'. The remaining staves (D7, A7, E7, B7, F#7, and Db7) continue the scale study with various articulations and dynamics. The Db7 staff is the only one with a key signature change to one flat.

Ab7

Eb7

Bb7

F7

Kumoi Scale Study

Abm6, BMaj. 7-5, Db13

Am6, CMaj. 7-5, D13

Bbm6, DbMaj. 7-5, Eb13

Bm6, DMaj. 7-5, E13

Cm6, EbMaj. 7-5, F13

C#m6, EMaj. 7-5, F#13

Dm6, FMaj. 7-5, G13

Ebm6, GbMaj. 7-5, Ab13

Em6, GMaj. 7-5, A13

Fm6, Ab Maj. 7-5, Bb 7



F#m6, AMaj. 7-5, B13



Gm6, Bb Maj. 7-5, C13



Pelag Scale Study

Fm, Ab Maj. 7, Cm, Db Maj. 7-5



Cm, Eb Maj. 7, Gm, Ab Maj. 7-5



Gm, Bb Maj. 7, Dm, Eb Maj. 7-5



Dm, FMaj. 7, Am, Bb Maj. 7-5



Am, CMaj. 7, Em, FMaj. 7-5



Em, GMaj. 7, Bm, CMaj. 7-5



Bm7, DMaj. 7, F#m, GMaj. 7-5



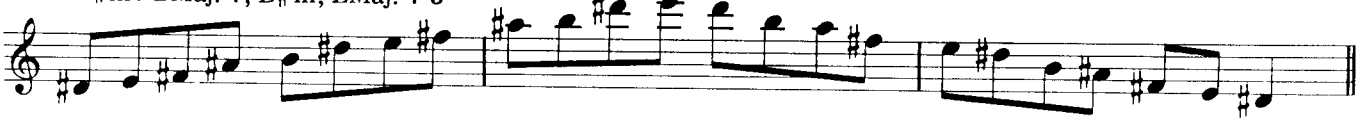
F#m, AMaj. 7, C#m, DMaj. 7-5



C#m, EMaj.7, G#m, AMaj.7-5



G#m7 BMaj. 7, D#m, EMaj. 7-5



Eb m7, F#Maj. 7, Bb m7, BMaj. 7-5



Bb m, Db Maj. 7, Fm, Gb Maj. 7-5



Major 7th

Musical notation for Major 7th chord progression. The first staff shows a sequence of chords: Bb7, Eb7, Ab7, and Db7, each with a descending eighth-note scale. The second staff shows the same sequence with a descending eighth-note scale. Both staves end with "etc." and a double bar line.

Major 7th with Diminished 5th

Musical notation for Major 7th with Diminished 5th chord progression. The first staff shows a sequence of chords: Bb7b5, Eb7b5, Ab7b5, and Db7b5, each with a descending eighth-note scale. The second staff shows the same sequence with a descending eighth-note scale. Both staves end with "etc." and a double bar line.

Major 7th with Augmented 5th

Musical notation for Major 7th with Augmented 5th chord progression. The first staff shows a sequence of chords: Bb7#5, Eb7#5, Ab7#5, and Db7#5, each with a descending eighth-note scale. The second staff shows the same sequence with a descending eighth-note scale. Both staves end with "etc." and a double bar line.

Augmented

Musical notation for Augmented chord progression. The first staff shows a sequence of chords: Bb7+, Eb7+, Ab7+, and Db7+, each with a descending eighth-note scale. The second staff shows the same sequence with a descending eighth-note scale. Both staves end with "etc." and a double bar line.

Suspended 2

Musical notation for Suspended 2 chord progression. The first staff shows a sequence of chords: Bb7(9), Eb7(9), Ab7(9), and Db7(9), each with a descending eighth-note scale. The second staff shows the same sequence with a descending eighth-note scale. Both staves end with "etc." and a double bar line.

Suspended 4

Musical notation for Suspended 4 chord progression. The first staff shows a sequence of chords: Bb7(9), Eb7(9), Ab7(9), and Db7(9), each with a descending eighth-note scale. The second staff shows the same sequence with a descending eighth-note scale. Both staves end with "etc." and a double bar line.

Perfect 4th Triad

Musical notation for Perfect 4th Triad chord progression. The first staff shows a sequence of chords: Bb7(9), Eb7(9), Ab7(9), and Db7(9), each with a descending eighth-note scale. The second staff shows the same sequence with a descending eighth-note scale. Both staves end with "etc." and a double bar line.

Perfect 4th + Major 7th

Musical notation for Perfect 4th + Major 7th chord progression. The first staff shows a sequence of chords: Bb7(9), Eb7(9), Ab7(9), and Db7(9), each with a descending eighth-note scale. The second staff shows the same sequence with a descending eighth-note scale. Both staves end with "etc." and a double bar line.

Augmented 4th + Major 7th

Musical notation for Augmented 4th + Major 7th chord progression. The first staff shows a sequence of chords: Bb7(9), Eb7(9), Ab7(9), and Db7(9), each with a descending eighth-note scale. The second staff shows the same sequence with a descending eighth-note scale. Both staves end with "etc." and a double bar line.

Multiphonics, Microtones, and Other Effects

Multiphonics are simultaneously produced sounds played on a wind instrument. Multiphonic production varies from player to player because of differences in instruments, mouthpieces, reeds, embouchures and breathing. The best way I have found to get them is by using a tight embouchure, and aiming for the top note of the chord. This is a list of the ones I use, with their approximate pitches:

- 1) The "Ugly Sound": Finger low C. Lift up the F key (first finger, right hand).
- 2) B \flat chord: Finger low B \flat . Add the octave key.
- 3) B chord: Finger low B. Add the octave key.
- 4) C chord: Finger low C. Add the octave key.
- 5) D \flat , D, and E \flat chords: Follow the same procedure as above.



John Coltrane

The Ugly Sound	B \flat chord	B chord	C chord	D \flat chord	D chord	E \flat chord

Microtones are the pitches between semi-tones. The symbols (↑) and (↓) indicate respectively a microtone higher, and a microtone lower.

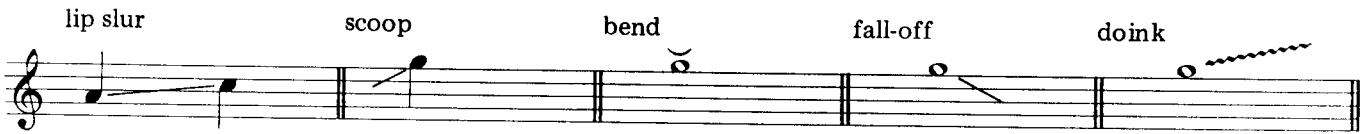
- 1) Finger middle D. Lift up the G key (third finger, left hand). Most effective when contrasted with regular A.
- 2) Finger low C. Add the octave key, and lift up the F key (first finger, right hand). Most effective when contrasted with regular G.
- 3) Same fingering as above, but slightly loosen your embouchure. Most effective when contrasted with regular E.
- 4) Finger low G. Add the middle trill key on the right side. When contrasted with the G below, produces a European police siren sound.

5) The harmonics an octave, a twelfth, two octaves, and two octaves plus a major third above low B \flat , B, and C are all microtones higher than the correctly fingered tones. They are produced by adding the octave key, using a tight embouchure, and overblowing.



Another interesting effect with low B \flat , B, and C results when you remove the thumb from the thumbrest and quickly rub it over each of the three right trill keys from top to bottom. Trills of all sorts offer a wide variety of effects.

Produced mainly by the lips, a lip slur is a glide between two notes which may be as close as a semi-tone or as far apart as two octaves. A scoop is a short lip slur going up to a note; and a bend is a slow lip slur which dips down from a note and then returns to it. A fall-off is a glissando and/or lip slur going down from a note; and a doink is one going up from a note.



Flutter tonguing is produced by rolling the tongue and saying "drrr." A growl-tone is made by growling at the back of the throat. Another interesting effect similar to the growl-tone comes out of singing into the sax while you are playing.

A ghost or ghosted note is produced by playing a note while the reed is pressed down, allowing only a semi-audible tone to be heard. It is usually on the after beat of two eighth notes, and is indicated by parentheses around the note(s) to be ghosted.

For high notes—notes in the altissimo range—I would suggest the fingerings listed in *Jazz Styles and Analysis for Alto Sax* by Harry Miedema (Downbeat Publications).

There are several unorthodox ways of playing the saxophone that are worth exploring. A brass mouthpiece can be used instead of a sax mouthpiece. Scotch tape can be fitted over the holes to produce a buzzing, kazoo-like sound. You can make a sound without the mouthpiece by fitting your lips around the neck and blowing into it. You can also play without the neck. Most mouthpieces can be fitted directly into the main section of the saxophone, and can be kept steady with a piece of thick paper. This produces a range of sounds totally unlike those made when the sax is played in the usual manner.

More Tunes

Ten is a ten-measure blues.

Ten

Uptempo

Musical score for "Ten" in 4/4 time, featuring a ten-measure blues structure. The score consists of three staves of music. The first staff contains the first four measures, with chords G7, C7, C#o, G7, Ab m7, and Db7. The second staff contains the next four measures, with chords C7, C#o, and G7. The third staff contains the final two measures, with chords Eb m7, Ab 7-5, Cm7, F7, and G7. The melody is written in treble clef with a key signature of one sharp (F#).

Riding the Rails

Rock feel

Musical score for "Riding the Rails" in 4/4 time, featuring a rock feel. The score consists of four staves of music. The first staff contains the first four measures, with chords Dm7, G7, Dm7, and G7. The second staff contains the next four measures, with chords Dm7, G7, Dm7, and Dm7. The third staff contains the next four measures, with chords G7, G7, Dm7, and Dm7. The fourth staff contains the final four measures, with chords G7, Dm7, and Dm7. The melody is written in treble clef with a key signature of two flats (Bb).

The changes in the next tune are all chords built in fourths. An M7+4 chord consists of an augmented fourth plus a perfect fourth. The span of this chord is a major seventh. A P4 is a chord built on perfect fourths.

The Modal Mix

Modal

The musical notation consists of four staves of music in 4/4 time, each with a treble clef. The notes are as follows:

- Staff 1:** Labeled "Modal". Chords: CM7+4, BP4, CM7+4, BP4. Notes: C4, E4, G4, B4, C5, D5, E5, F5, G5, A5, B5, C6.
- Staff 2:** Chords: CM7+4, BP4, CM7+4, BP4. Notes: C4, E4, G4, B4, C5, D5, E5, F5, G5, A5, B5, C6.
- Staff 3:** Chords: BbM7+4, AP4, BbM7+4, AP4. Notes: Bb3, D4, F4, Ab4, Bb4, C5, D5, E5, F5, G5, Ab5, Bb5, C6.
- Staff 4:** Chords: DP4, EP4, FM7+4, GP4. Notes: D4, F4, Ab4, Bb4, C5, D5, E5, F5, G5, Ab5, Bb5, C6.

Triplet markings (3) are present under the first three notes of the first four notes in each staff.

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The next tune is in $\frac{7}{4}$. As you can see from the placement of the chords, each measure is divided into four beats plus three beats. Dave Brubeck, Paul Desmond, Max Roach, Don Ellis, and John McLaughlin are some jazz musicians who have explored additive meters. Be careful to keep your solo within the rhythm.

Four Plus Three

Not too fast

Am7 F7 Am7 D7

Gm7 Eb7 Gm7 C7

F7+9 Bb13 F7+9 Bb13

F7+9 Bb13 F7 E7

Chord Chart

Root	Major	Minor	Augmented	Diminished	Sixth	Minor Sixth	Seventh	Minor Seventh	Major Seventh	Sus 4
C	C	Cm	C+	Co	C6	Minor Sixth Cm6	C7	Minor Seventh Cm7	Major Seventh CM7	Sus 4 Csus4
Db (C#)	Db	Dbm	Db+	Db ^o	Db6	Dbm6	Db7	Dbm7	DbM7	Db sus 4
D	D	Dm	D+	Do	D6	Dm6	D7	Dm7	DM7	Dsus 4
Eb (D#)	Eb	Ebm	Eb+	Eb ^o	Eb6	Ebm6	Eb7	Ebm7	EbM7	Eb sus 4
E	E	Em	E+	E ^o	E6	Em6	E7	Em7	EM7	Esus 4
F	F	Fm	F+	F ^o	F6	Fm6	F7	Fm7	FM7	F sus 4
Gb (F#)	F#	F#m	F#+	F# ^o	F#6	F#m6	F#7	F#m7	F#M7	F# sus 4
G	G	Gm	G+	Go	G6	Gm6	G7	Gm7	GM7	Gsus 4
Ab (G#)	Ab	Abm	Ab+	Ab ^o	Ab6	Abm6	Ab7	Abm7	AbM7	Ab sus 4
A	A	Am	A+	A ^o	A6	Am6	A7	Am7	AM7	Asus 4
Bb (A#)	Bb	Bbm	Bb+	Bb ^o	Bb6	Bbm6	Bb7	Bbm7	BbM7	Bb sus 4
B	B	Bm	B+	B ^o	B6	Bm6	B7	Bm7	BM7	Bsus 4