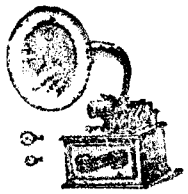

PATTERNS FOR JAZZ

by Jerry Coker

Jimmy Casale

Gary Campbell

Jerry Greene

STUDIO pr
publications
recordings

This text is lovingly dedicated to Jimmy Casale. His death, shortly before publication, is a loss made obvious by the excellence of his contribution to these studies. We are fortunate to have a portion of his talent and dedication captured here in permanent form.

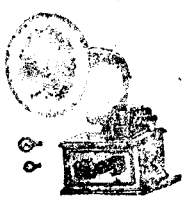

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TABLE OF CONTENTS

INTRODUCTION

Jazz improvisation is the spontaneous creation of music in the jazz style. Like traditional composition, jazz improvisation is a craft. It is a conditioning of the mind, body and spirit, brought about by the study of musical principles. This conditioning becomes a necessary prelude to the professional practice of the art, despite the implications of the word *spontaneous*. Just as spontaneity is combined with conditioning, so is the existing style of jazz combined with originality of expression. One is lost without the other, and so we seldom hear an improviser's solo that does not contain melodic fragments or patterns: from the melody of the tune used, from a fellow performer's solo, from an influential player of the time, from a different tune altogether, from material previously improvised, or from patterns (original or borrowed) currently studied in individual practice. Another obvious combination is creation and performance. The jazz improviser pre-hears in his mind the next musical event, and then has the added task of playing it cleanly and with feeling. This is the process of jazz improvisation.

There are habits involved with pre-hearing. Some are really habits of an aural nature (causing the improvisor to hear related musical events in a certain order more than once) and others are finger habits. In the latter, the player may decide to play something which is not necessarily pre-heard, but a pattern of notes that is *understood to work* (by cognizance of the theoretical reasons and/or by previous experience), or a sequence of notes that feels comfortable to the fingers and hands. Indeed the improviser may even be resorting to finger habits and aural habits at moments when he pre-hears nothing of interest.

The frequent mention of melodic fragments, patterns, and sequences of notes in the foregoing discussion, suggests the need for a collection of patterns to be practiced diligently by the serious student of jazz improvisation. Such a collection is *one* of the purposes of this book. The patterns are arranged in an order which we feel will best serve the student. In the first portion of the book we have stressed rudimentary exercises, rather than practical patterns, feeling that the student should first absorb the *foundations* for patterns, such as scales, modes, simple chords, and four basic kinds of chord movement: (1) cycle of fifths; (2) chromatic; (3) stepwise; and (4) in minor thirds. Usable patterns begin to occur after the initial exercises, moving into more complicated patterns, chords, and scales, and eventually progressing to interval studies and free-form patterns.

The authors feel that the practice of patterns has little value unless the student understands what musical situations befit the pattern. Used in the wrong place or the wrong key, the best patterns will fail, even in free-form jazz. We have therefore placed accompanying chord or scale symbols above each pattern. The observation of that symbol while practicing, then, becomes crucial to an understanding of how the pattern is used.

Most of the patterns contained herein are presented in eighth notes (the rhythmic level of most jazz improvisation), in a continuing fashion, without rhythmic variation, and without rhythmic phrase-endings. This was an arbitrary approach, so as not to dictate what the rhythms should be, nor to restrict them to a single rhythmic approach. When the practiced patterns are applied to an improvisation, it is expected that the rhythms would be loosened, so that the idea takes on a more lyrical, natural, and less mechanical feeling.

This book is meant to be played, rather than to be read in an armchair. To aid this approach we have inserted all theoretical information, condensed whenever possible, all along the way, so that the student may never need to leave the music stand. Terms and symbols in music often vary from text to text. We have tried to stand on the middle ground, using the most common and accurate terms and symbols we could find, inventing no new terminology. The smarter students will learn as many alternate terms and symbols as possible, making investigation into any method considerably easier.

This book can be used by players of any instrument. The clef sign and the octave used in presenting the patterns should not restrict, say, a trombone player from playing the method. In the jazz idiom the emphasis is on content and feeling, rather than on getting instrumentalists to sound like the instrument they play—or more accurately, the way in which the instrument has been handled by composers and arrangers. The patterns are flexible enough to be played in other octaves and by any instrument. It would be advisable to extend all patterns to the full range of your instrument, rather than to stop with perhaps only one octave, as it may appear in the written example.

No one person has priority on the major scale or the cycle of fifths. Everyone uses them freely without compunction. Similarly, because patterns are so flexible in expression, it is common practice to borrow large numbers of patterns from other sources (sometimes the source is unknown). Because of the building-block status of most patterns, much of the interest in a given solo is determined by the manner in which patterns are developed and woven together in sequences, or by the nonverbal feelings that affect the manner of phrasing. The identity of the patterns' source might mean very little, if anything. This book has borrowed patterns which may be familiar or unoriginal, but if we are to capture the essence of any musical style, originality should take a back seat, a lesson painfully learned by a number of early music theorists. When *a* source or *the* source is known, we have supplied the particulars in footnotes, so that investigation (through listening) can give the student insight into the potential of a given pattern, heard through the ears of an accomplished improviser.

The care and feeding of the ears cannot be overemphasized. If an improviser pre-hears an idea, he must know exactly where those pitches are on his instrument—a sort of instant music dictation—or he cannot successfully realize his pre-hearing. The *names* of the pitches may carry little importance at this rapid tempo of thinking and feeling, but the fingerings or positions need to correspond to the pre-heard pitches. Practicing patterns is one way to make such correlations. An unusual scale, for example, may be too new to be heard, but practicing patterns which use that scale unlocks the door to hearing it.

Our ears also assume the important function of deciding *what* will be pre-heard. That is, even before the ears are helping to decipher pre-heard pitches into fingerings, they are involved in the selection of what is pre-heard, sometimes a creation, always affected by taste or the lack of it, and very often working in conjunction with memory. Improvisers are highly spontaneous, so that the music they hear in their mind or in the mind's memory at the moment of creation (pre-hearing) has everything to do with the content of that next musical idea. Consequently, the student will want to imbue his memory with *choice* musical sounds. For this purpose, an essential discography is supplied in the appendix. It is not intended to be an historical discography, but a collection of some of the most significant records of today's jazz music, and meant to be listened to often and carefully.

The metronome markings can be applied as desired. The minimum tempo given should be achieved before going on to the next pattern, since the patterns increase progressively in difficulty. In many instances, it would be helpful to play the patterns *very* slowly at first, to aid in *hearing* the pattern, and then work up to at least the minimum tempo. The maximum tempo is given for the more ambitious students, and also to keep students from constantly reviewing the same patterns, even after they are well-absorbed, which could result in a discouraged look at the many patterns to follow.

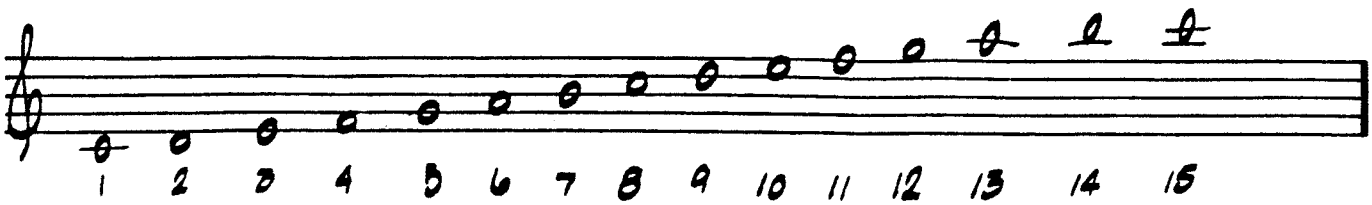
The instructions for transposition, sometimes even the completion of the pattern in the given key, must be followed to achieve adequate results. A pattern can be used in any key with any kind of chord, *if* you can transpose and sometimes adjust that pattern.

The thorough student will want to practice some of the more difficult patterns with various rhythms besides the usual eighth notes, such as dotted rhythms or swingy eighth notes (12/8 feeling). The articulation throughout the book is slurred except where marked, but the articulation could be changed like the rhythms, if by practicing the pattern different ways it is learned more completely.

No one knows what the future holds for jazz stylistically, and only the foolhardy would venture to guess. The only thing we can say for sure is that it *will* change, and on a continuing basis, too. Consequently the serious student of jazz improvisation will want to add continually to the patterns contained in this collection. Knowing the limitations of any collection to survive change, the authors would hope that this book will endure as an introduction to pattern-playing in jazz, and as a springboard for the development of other, still newer patterns, scales, and harmonies, as they present themselves.

THE AUTHORS

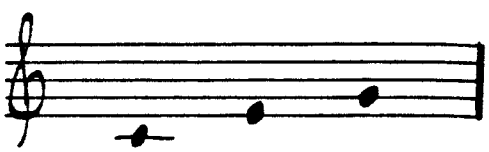
MAJOR CHORDS and MAJOR SCALES



The C Major scale is illustrated in two complete octaves. The numbers under each tone indicate the position of that tone in this scale. Note that beyond the first octave, tone #8, the tones have the same letter names and the numbers corresponding to these tones refer to the respective distances from the starting tone, #1.

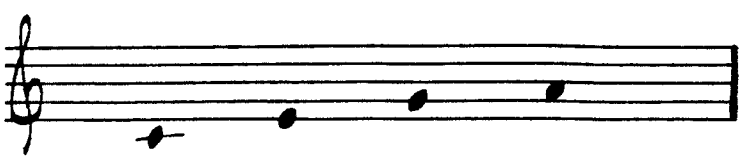
The following four chords, Major Triad, Major Sixth Chord, Major Seventh Chord and Major Ninth Chord, will be formed by applying a numerical formula to the C Major scale. The corresponding alphabetical symbols will also be indicated.

By extracting tones No. 1-3-5 from the C Major scale, we arrive at the notes forming the C Major Triad.[1]



Symbol: C

Tones No. 1-3-5-6 of the C Major scale form the C Major Sixth Chord.[2]



Symbol: CM6

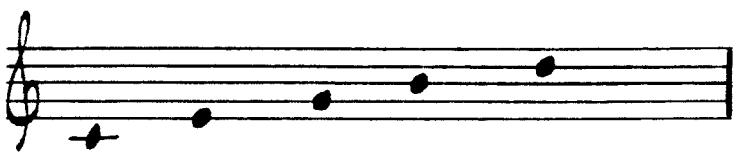
[1]A three note chord which measures five tones from the bottom to the top, counting the first tone as No. 1.

[2]A four note chord which measures six tones from the bottom to the top, counting the first tone as No. 1.

Tones #1-3-5-7 form the C Major Seventh Chord.[3]

Symbol: CM7

Tones #1-3-5-7-9 form the C Major Ninth Chord.[4]



Symbol: CM9

Alternate Symbol: 9
CM7

Alternate Symbol: (9)
CM7

[3]A four note chord which measures seven tones from the bottom to the top, counting the first tone as No. 1.

[4]A five note chord which measures nine tones from the bottom to the top, counting the first tone as No. 1.

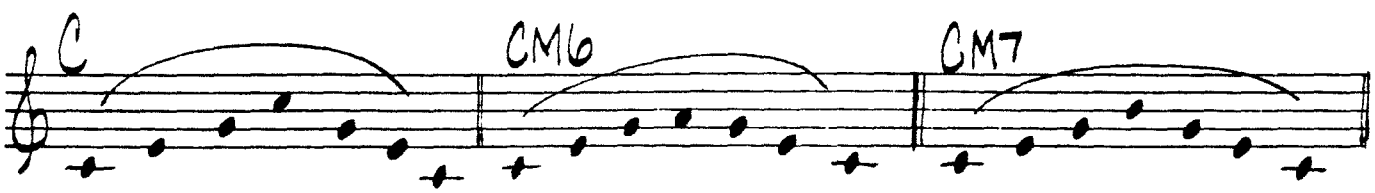
CHORD TONE CHART
BASED ON MAJOR SCALES OF CHORD ROOTS

13th Same As 6th	A	D	G	C	F	B♭	E♭	A♭	E	B	F♯	C♯	G♯	D♯	A♯
11th Same As 4th	F	B♭	E♭	A♭	D♭	G♭	C♭	F♭	C	G	D	A	E	B	F♯
9th Same As 2nd	D	G	C	F	B♭	E♭	A♭	D♭	A	E	B	F♯	C♯	G♯	D♯
7th	B	E	A	D	G	C	F	B♭	F♯	C♯	G♯	D♯	A♯	E♯	B♯
5th	G	C	F	B♭	E♭	A♭	D♭	G♭	D	A	E	B	F♯	C♯	G♯
3rd	E	A	D	G	C	F	B♭	E♭	B	F♯	C♯	G♯	D♯	A♯	E♯
1 (Root)	C	F	B♭	E♭	A♭	D♭	G♭	C♭	G	D	A	E	B	F♯	C♯

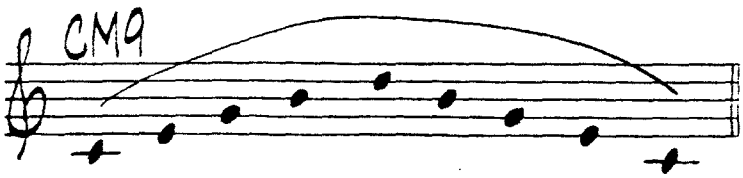
CHORD ROOTS

This chord tone chart organizes the tones of all Major scales in the order needed for the construction of Major chords. Reading up from the chord root C (also indicated as tone # 1), we see the tones: C-E-G-B-D-F-A, which are all the notes in the C Major scale. Note that the ninth, eleventh and thirteenth are also the second, fourth and sixth tones respectively, as they are the same letter names.

In preparation for the following exercises, be able to recite, write and play the following chords in every key: Major Triads, Major Sixth Chords, Major Seventh Chords and Major Ninth Chords. Use the following "routine form" for playing the chords. It does not require any specific rhythm, for chord tones, or tempo.

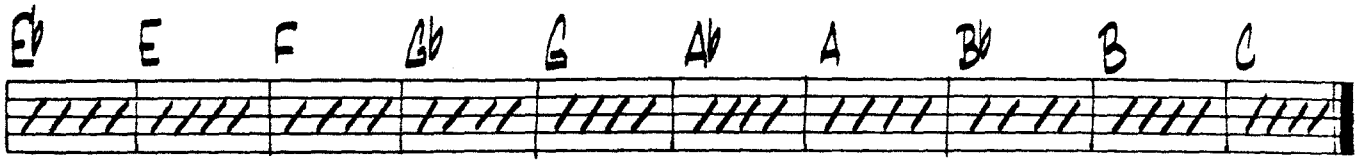


This note added to fill out the chord. It does not change the sound of the chord.



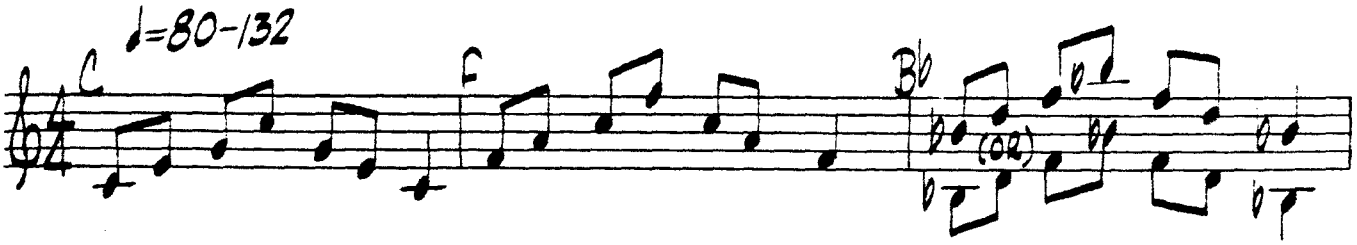
The following patterns begin with Major Triads. Note the alphabetical symbols and metronome markings. The vertical lines indicate the number of beats assigned to that chord.

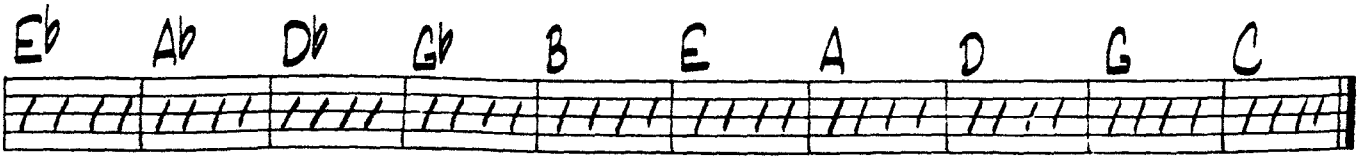
1



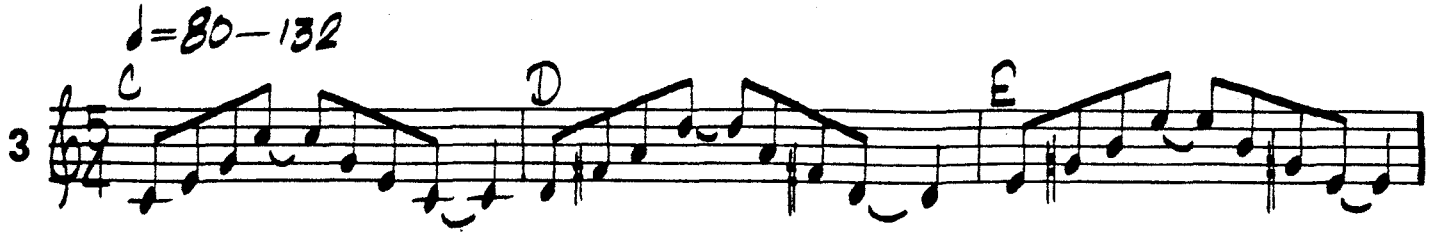
(continue same rhythm)

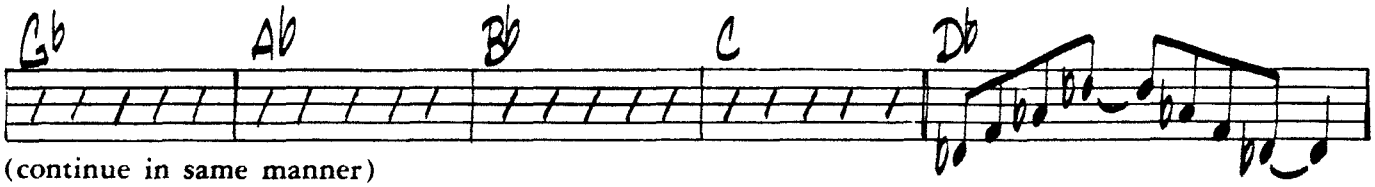
2





(same rhythm)





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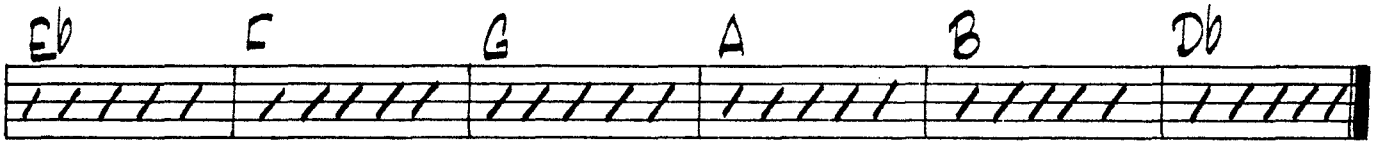

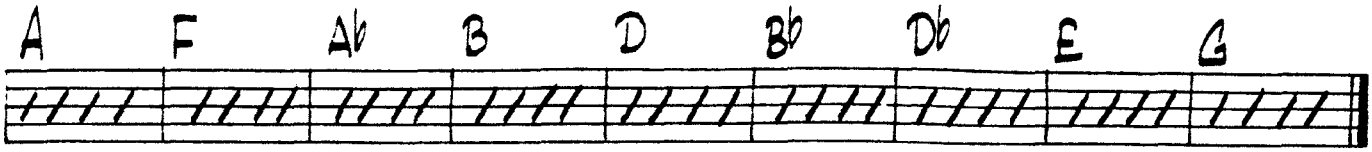

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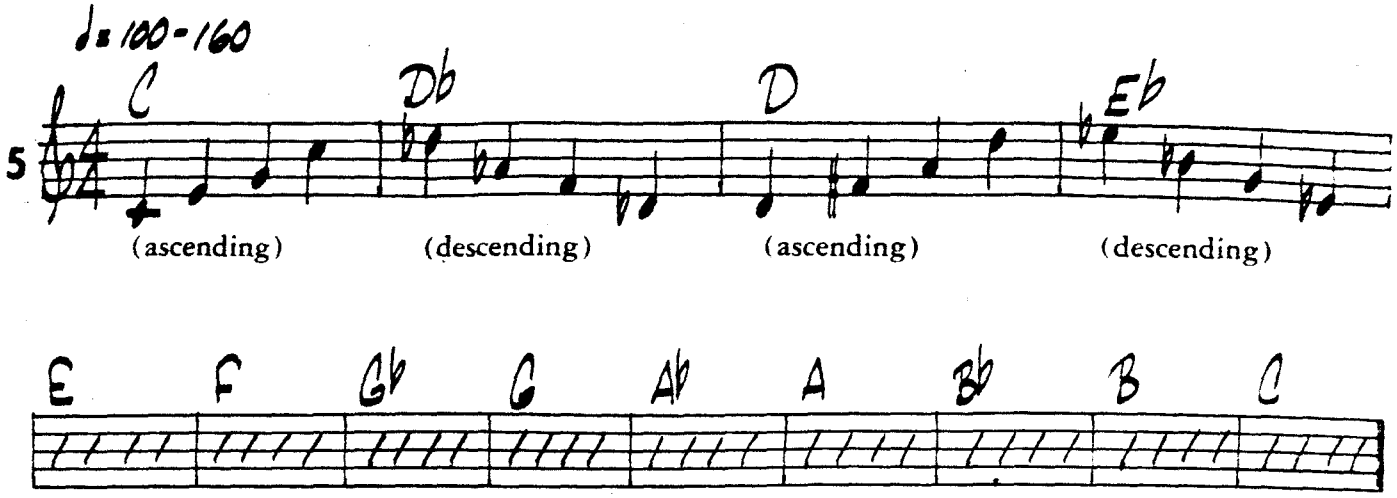
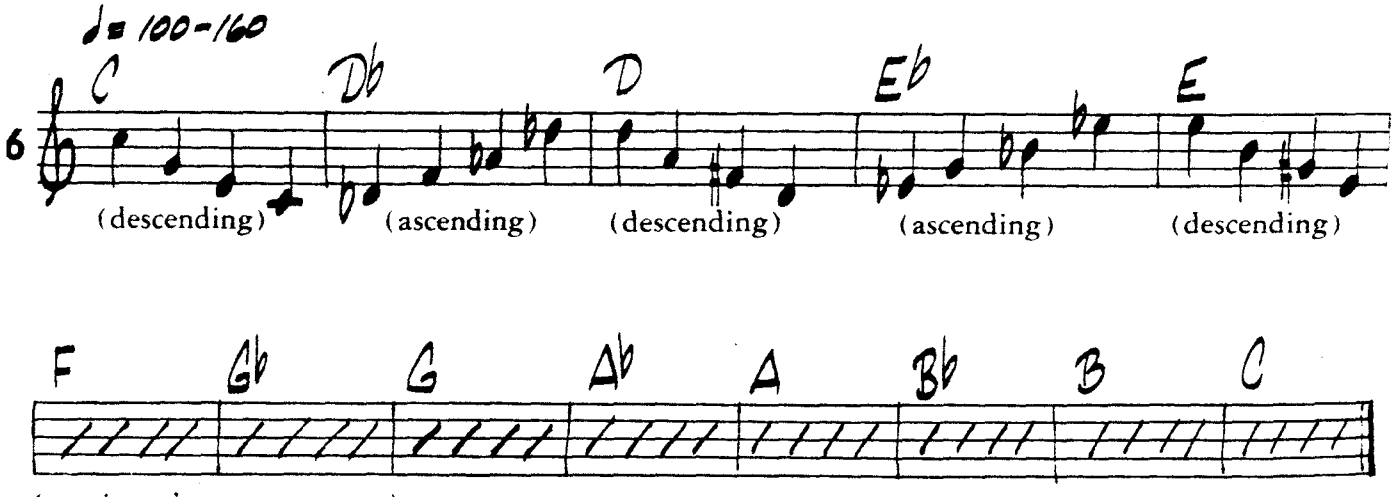


(continue in same manner)

Apply the same principle of alternating the *ascending* and *descending* forms to the chords in patterns No. 2, 3 and 4.



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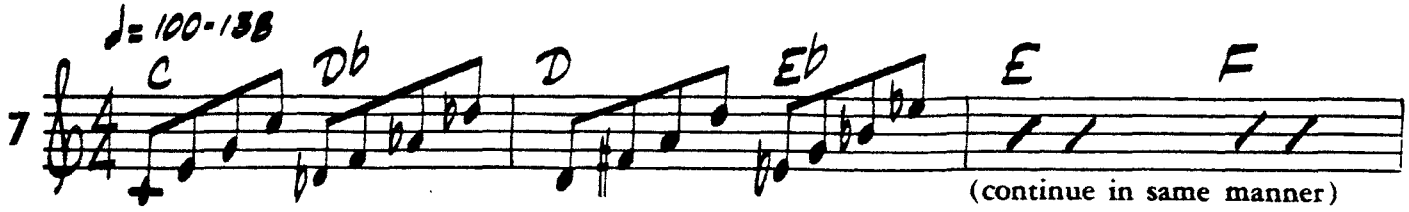
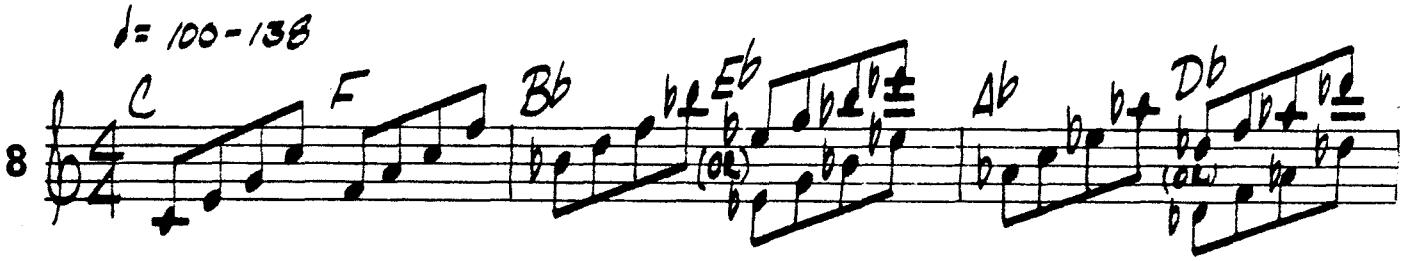
Apply the same principle of alternating the *descending* and *ascending* forms to the chords in patterns No. 2, 3 and 4.



Note: Each chord lasts two beats.



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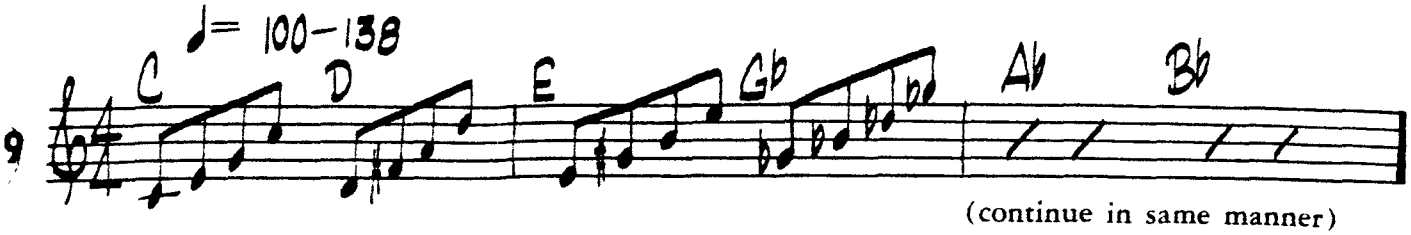

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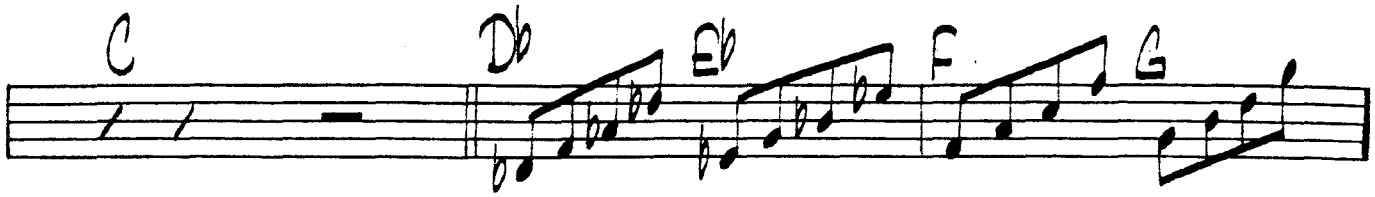

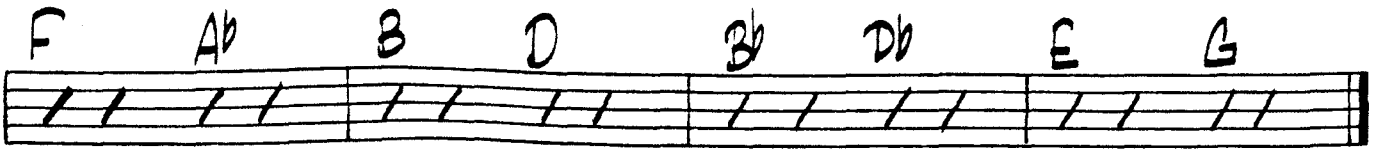

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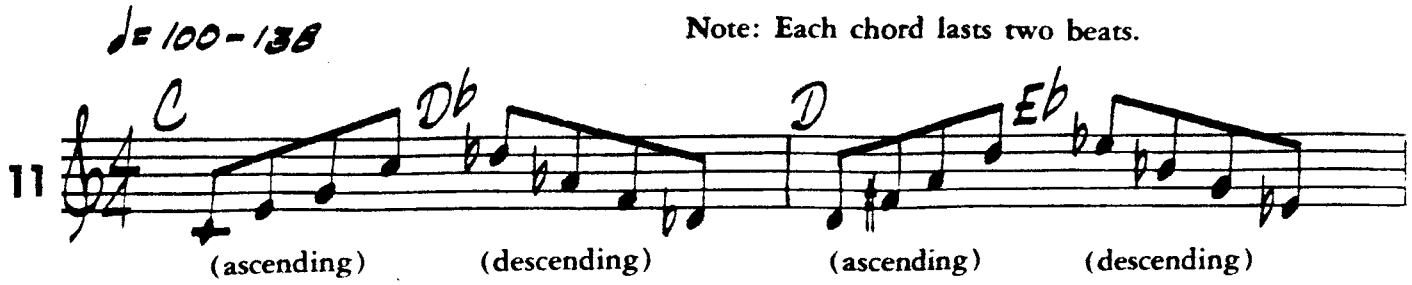

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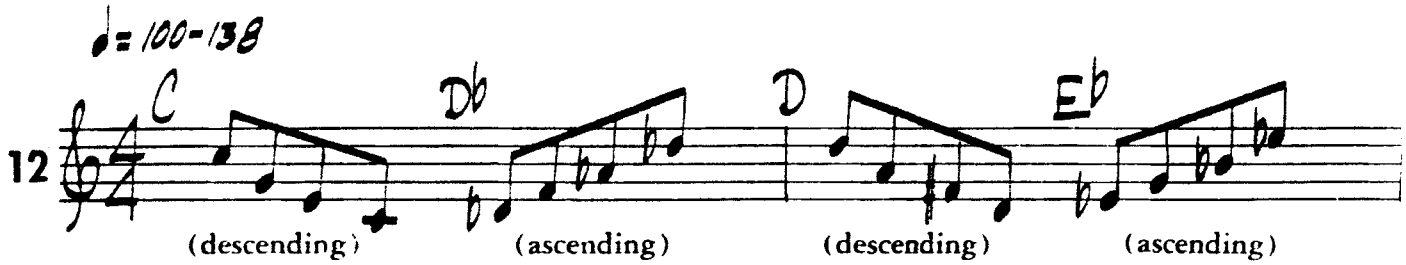
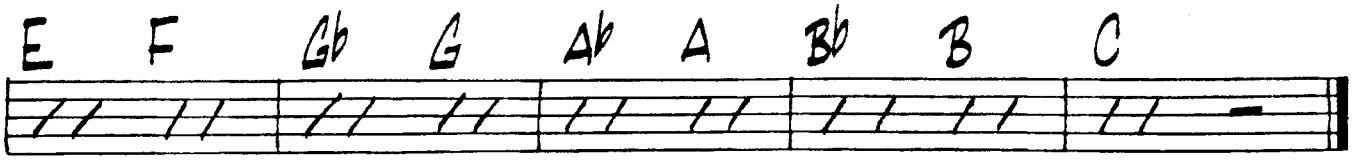
Apply the same principle of alternating the *ascending* and *descending* forms to the chords in patterns No. 8, 9 and 10.





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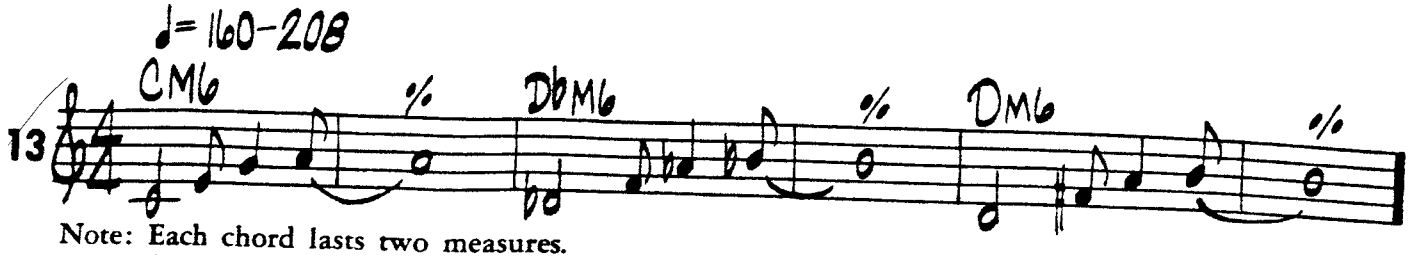
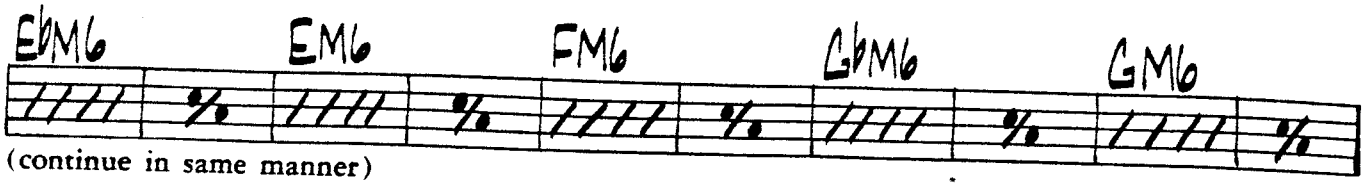
Apply the same principle of alternating the ***descending*** and ***ascending*** forms to the chords in patterns No. 8, 9 and 10.



Note: Each chord lasts two measures.



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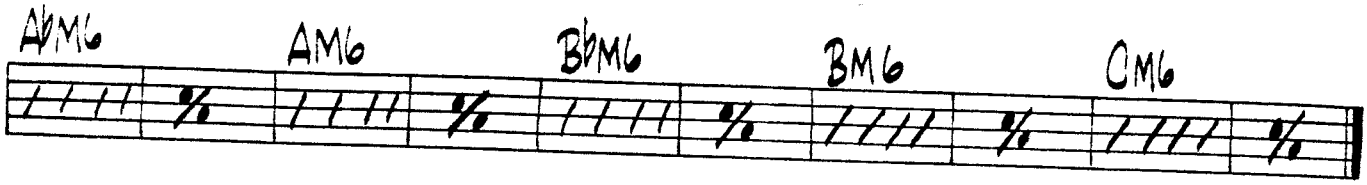

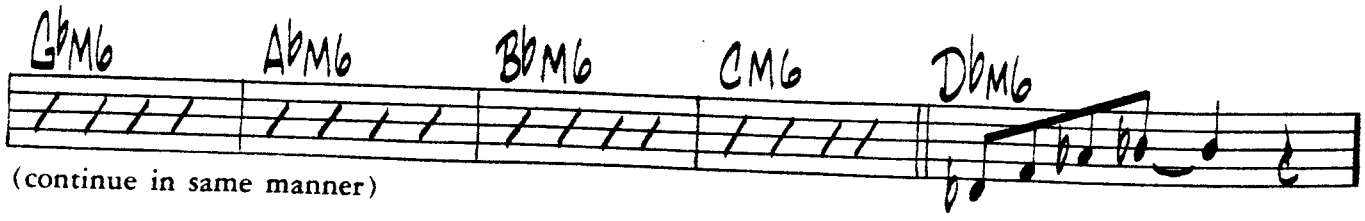

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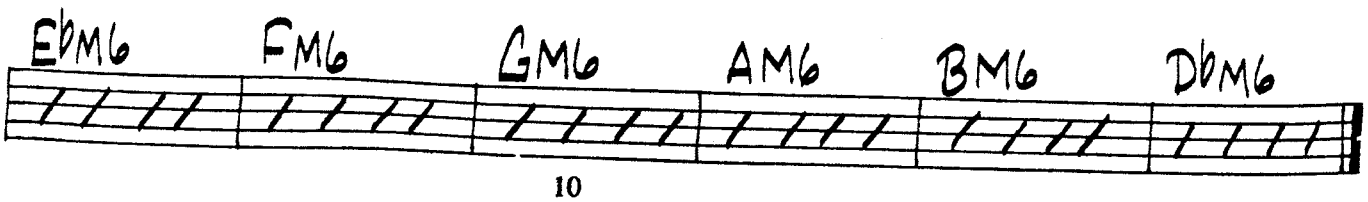

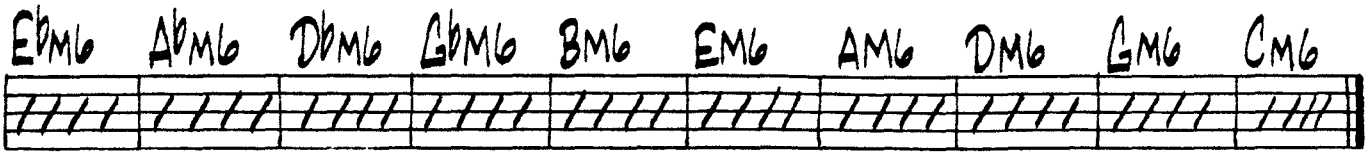

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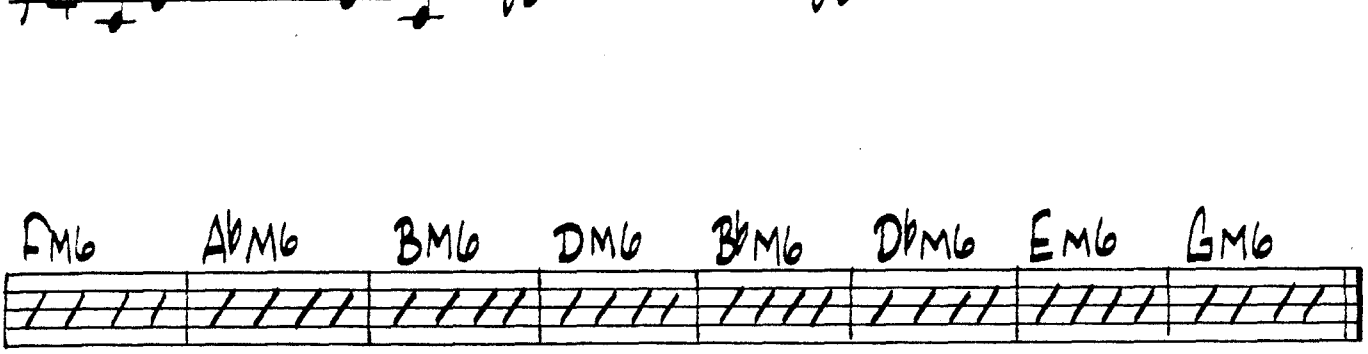

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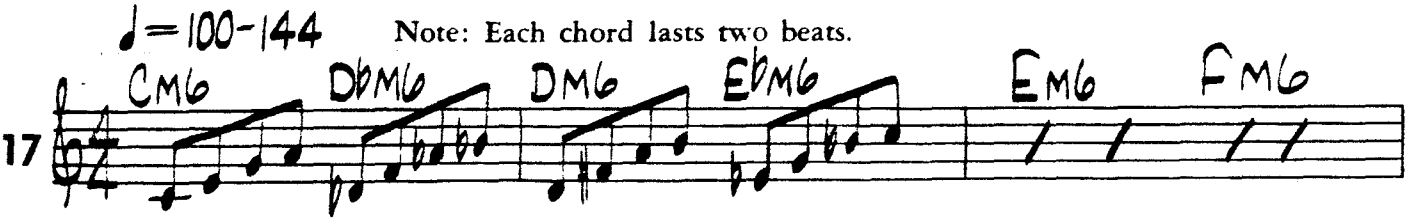

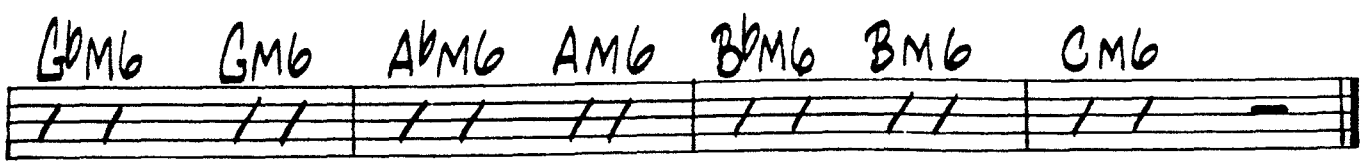

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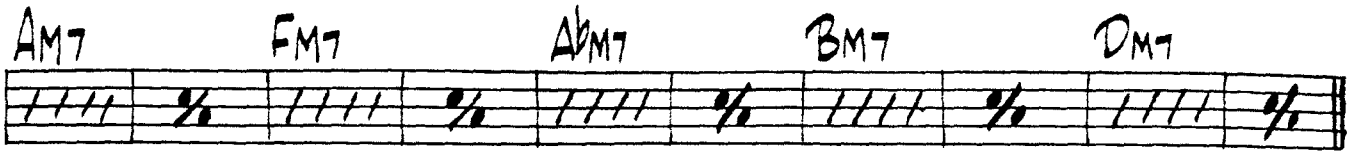
♩= 160-208

Note: Each chord lasts two measures.



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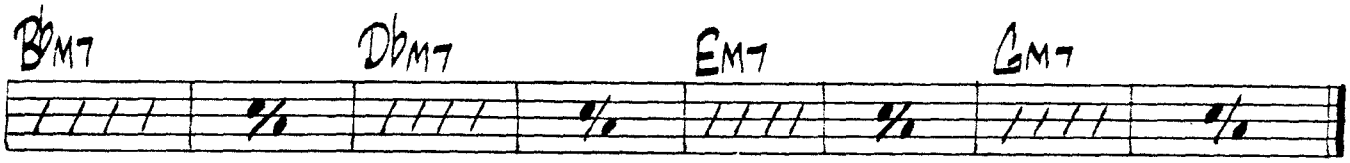
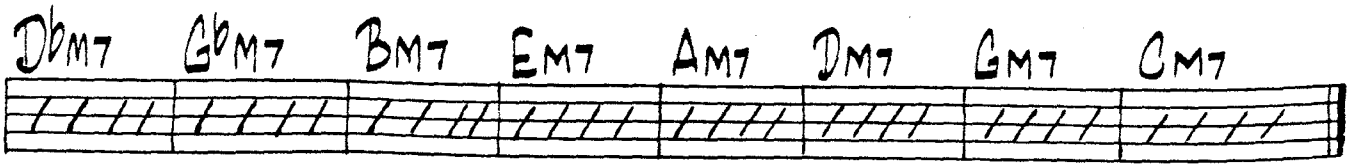
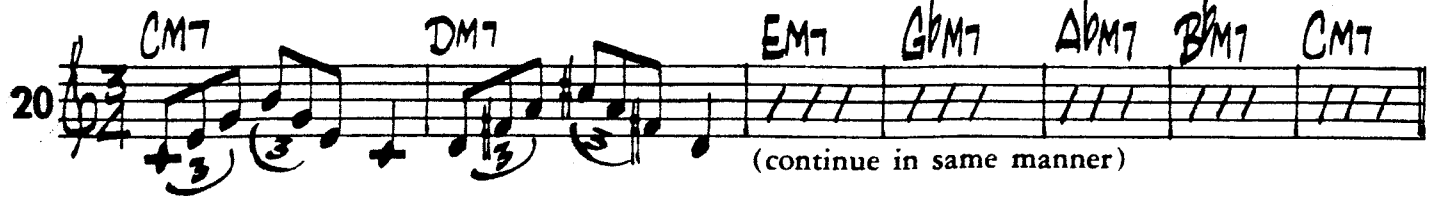


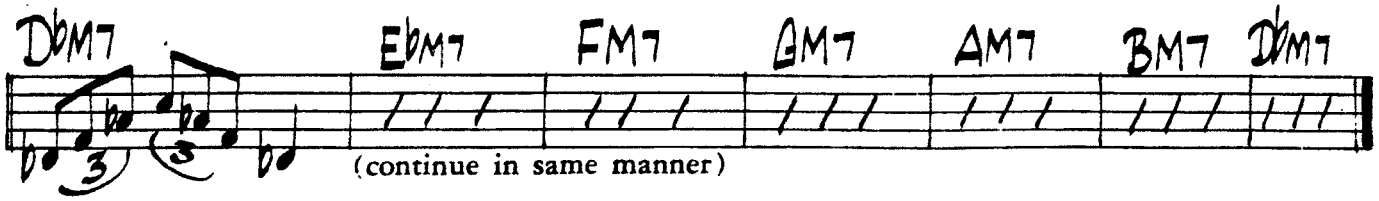
♩= 138-192

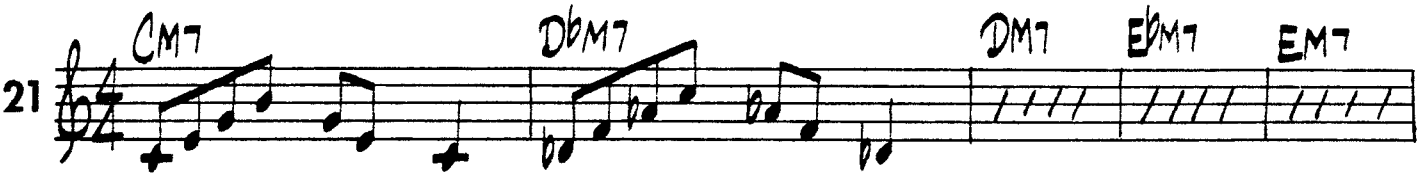


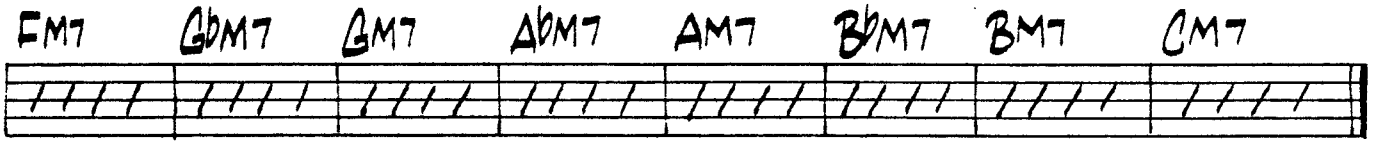
(continue in same manner)

♩=88-120 Note: Each chord lasts three beats.

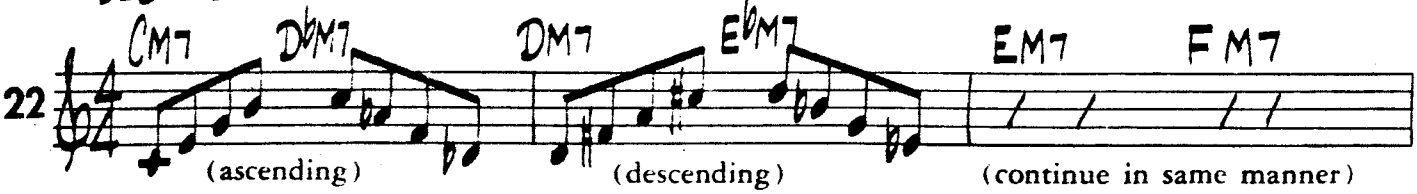


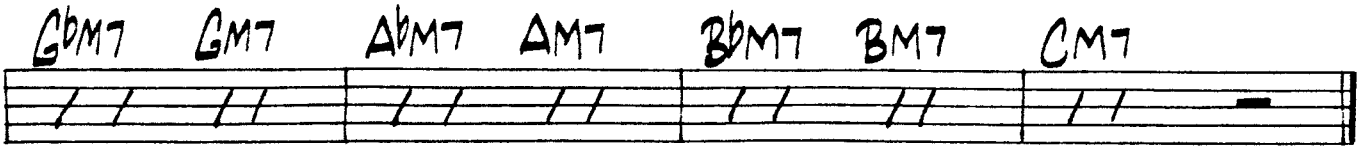






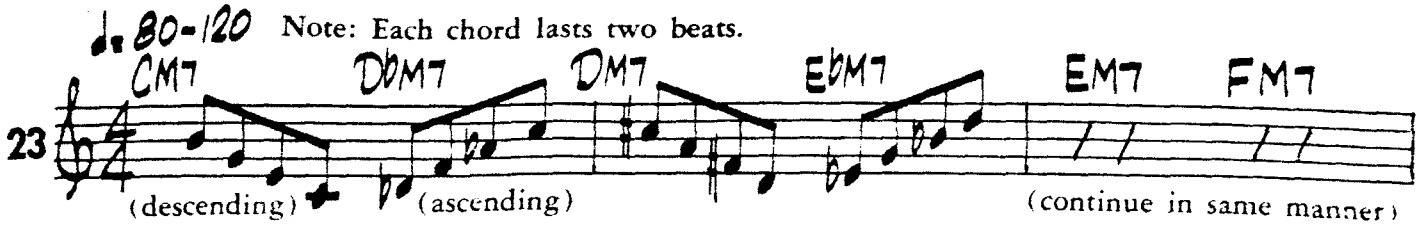
♩=80-120 Note: Each chord lasts two beats.





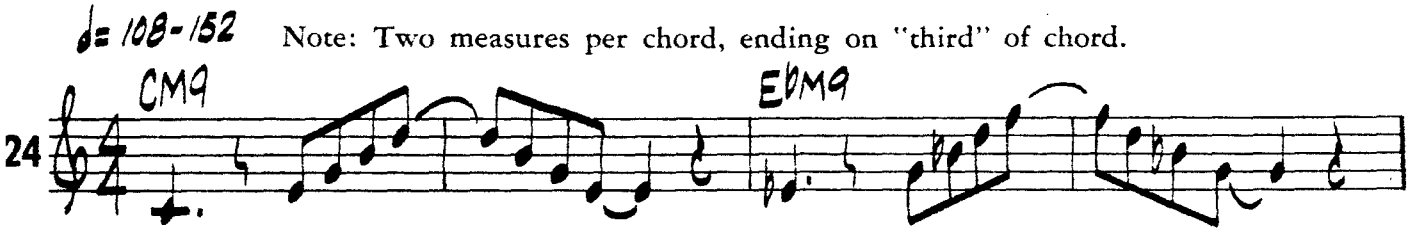
Apply the same principle of alternating the *ascending* and *descending* forms to the chords in patterns No. 18, 19 and 20.

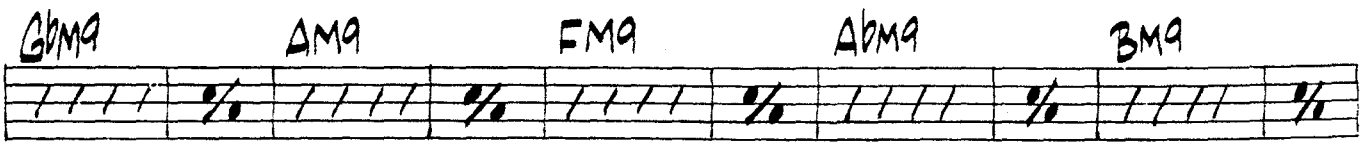
(Be sure to group chords so that *two* will be in each measure, giving each chord *two beats*—as in pattern No. 22.)



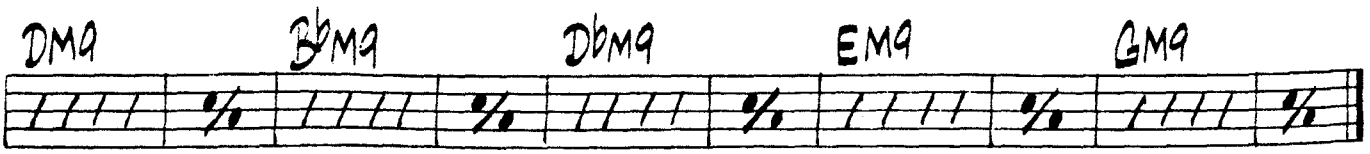
Apply the same principle of alternating the *descending* and *ascending* forms to the chords in patterns No. 18, 19 and 20.

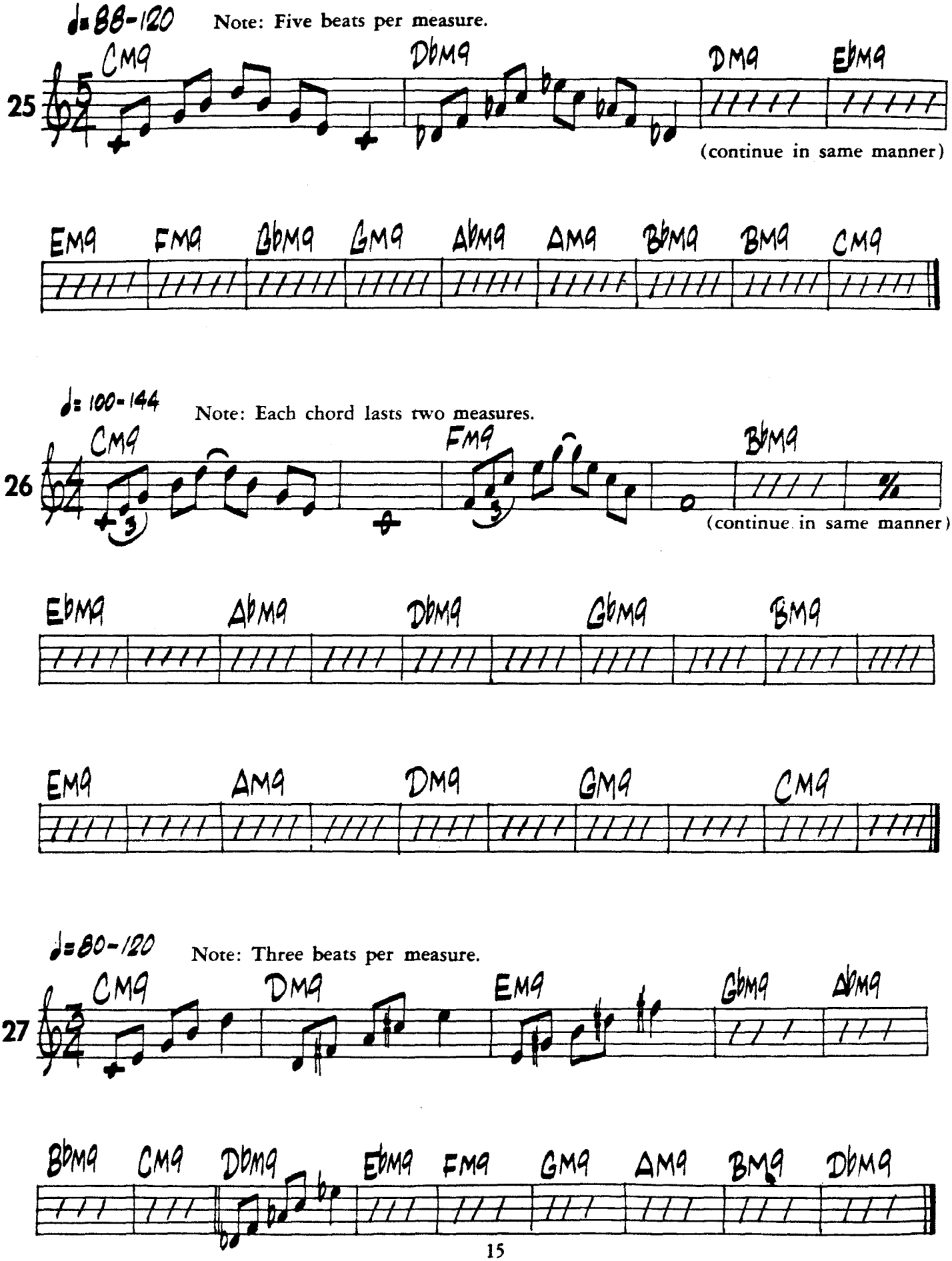
(Be sure to group chords so that there are *two* in each measure, giving each chord *two beats*, as in pattern No. 23.)

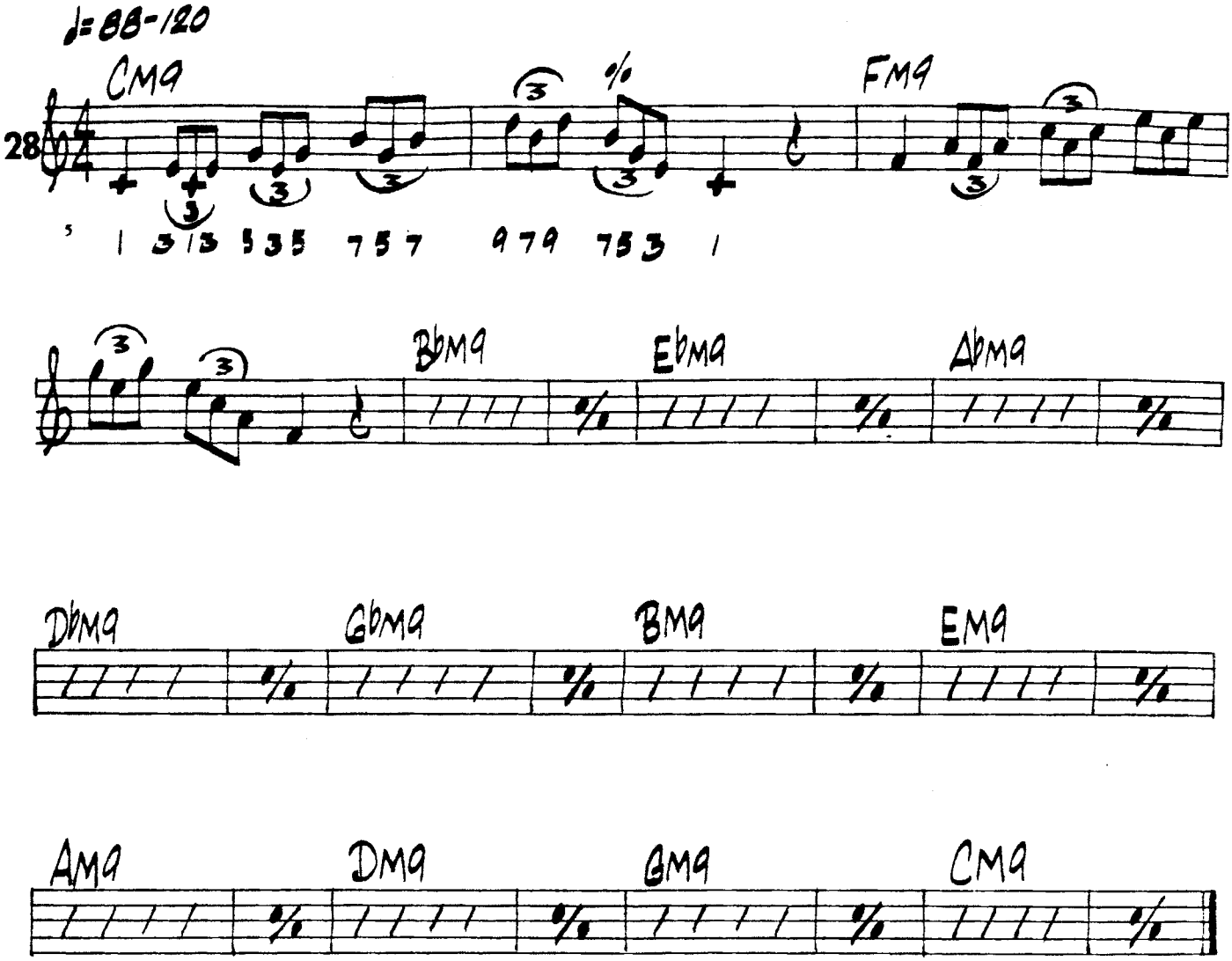




(continue in same manner)

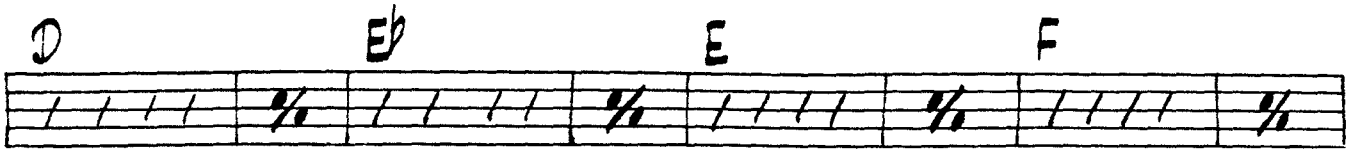



♩= 88-120
Note: Five beats per measure.
25
CMa
DbMa
DMa
EbMa
(continue in same manner)
EMa
FMa
GbMa
GMa
AbMa
AMa
BbMa
BMa
CMa
♩= 100-144
Note: Each chord lasts two measures.
26
CMa
FMa
BbMa
(continue in same manner)
EbMa
AbMa
DbMa
GbMa
BMa
EMa
AMa
DMa
GMa
CMa
♩= 80-120
Note: Three beats per measure.
27
CMa
DMa
EMa
GbMa
AbMa
BbMa
CMa
DbMa
EbMa
FMa
GMa
AMa
BMa
DbMa

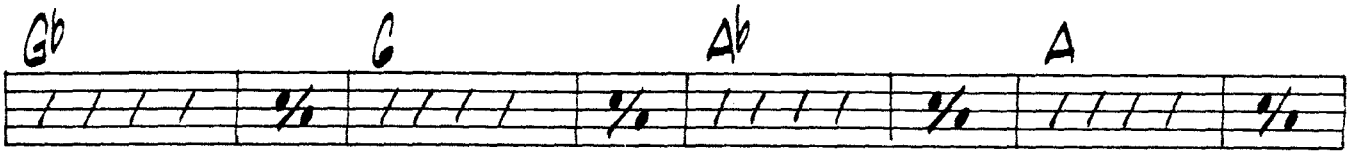


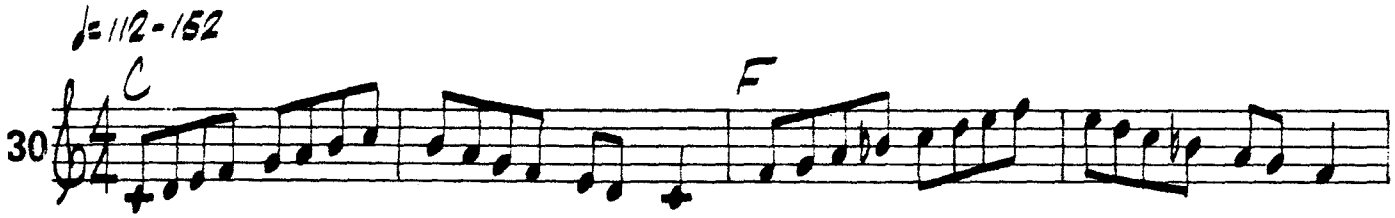
Up to this point, our main concern has been the exercising of the four related types of major *chords*, formed by extracting their respective tones from the major scale of the chord *root*. Now we will concern ourselves with various patterns on the *scale* (major) itself. You will notice that the chord symbols for the following patterns will be those of the major triad. However, the student must bear in mind that the major triad, M6, M7, and M9 chords all use the same basic scale: the major scale of the chord root. For example, a C, CM6, CM7, and CM9 will all share the C major scale. The use of the triad symbol in the following patterns is merely for convenience, since it would be impossible to determine exactly which chord is being used when the scale is common to all the chords mentioned.

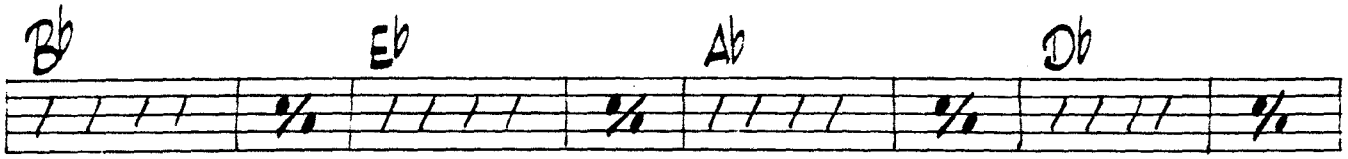
[5]David Baker, "Stratusphunk," on *Stratusphunk* (Riverside 341), George Russell Sextet. Baker's trombone solo illustrates not only pattern No. 28, but some of its permutations (remakings) as well. For example, this pattern may be altered to fit other types of chords, so that it would be possible to reconstruct the pattern on each note of a given scale (see Figure 24, p. 81) staying within the key signature throughout. It would also be possible, as Baker illustrates, to move the pattern chromatically, progressing up or down in half-steps, if the music is free enough to permit such movement.



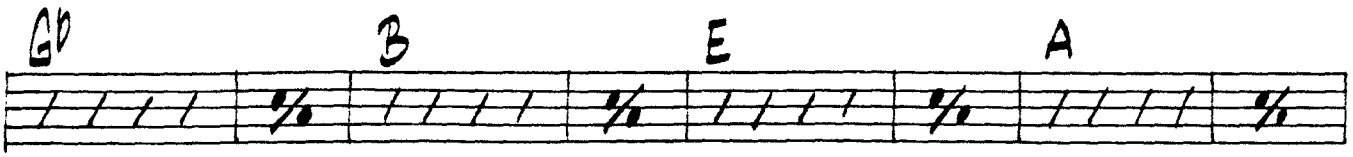
(continue in same manner)

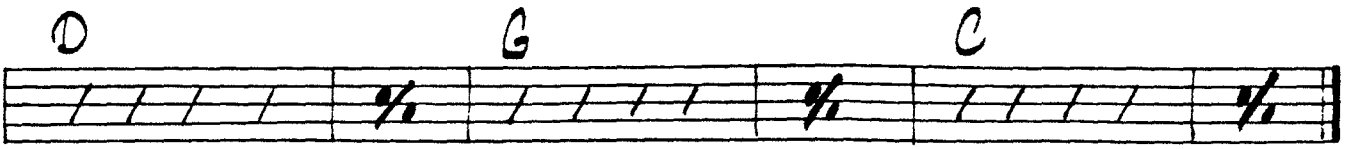


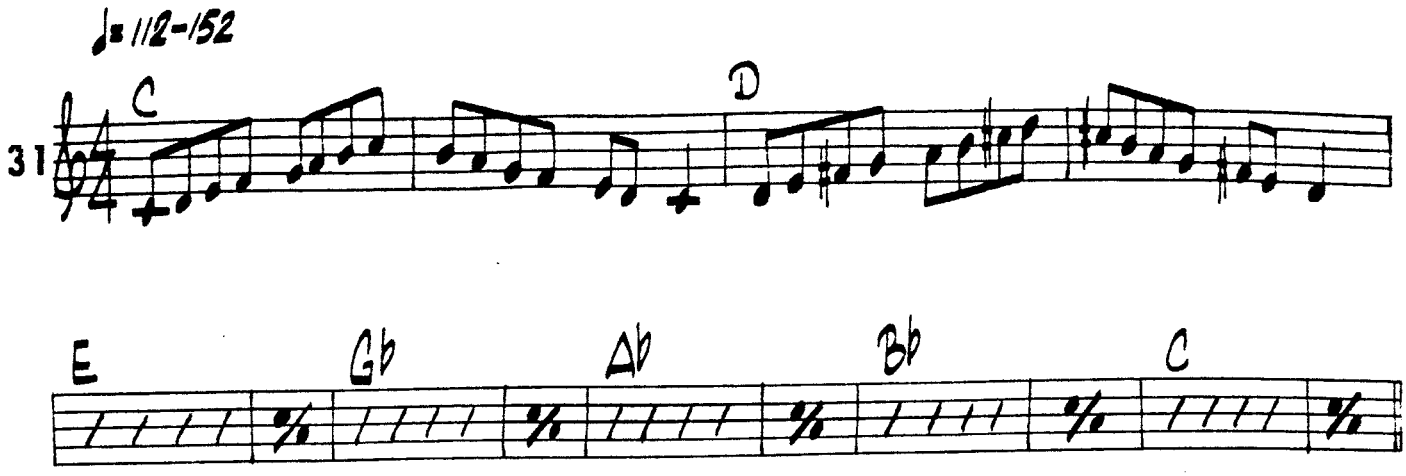




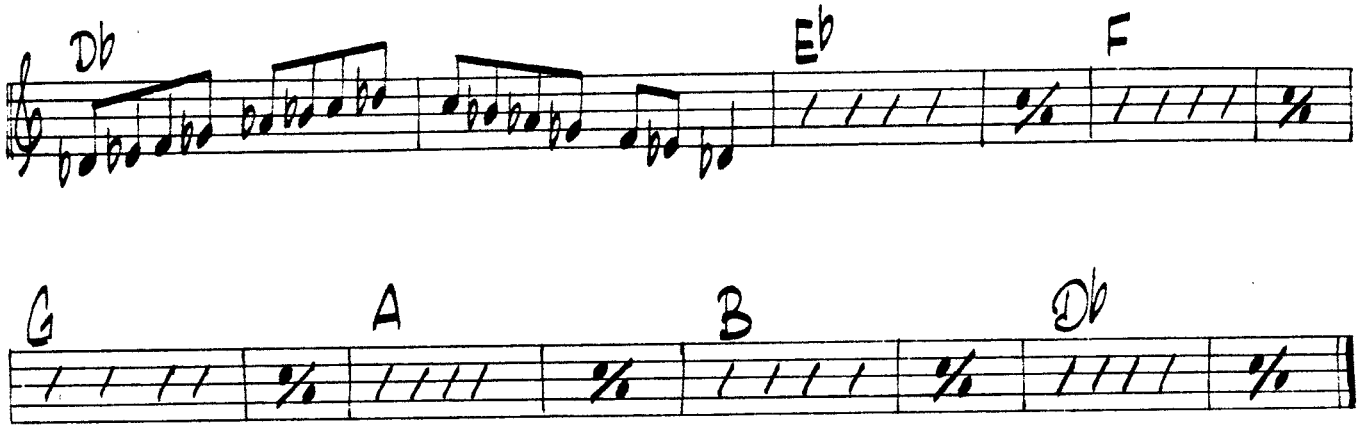
(continue in same manner)

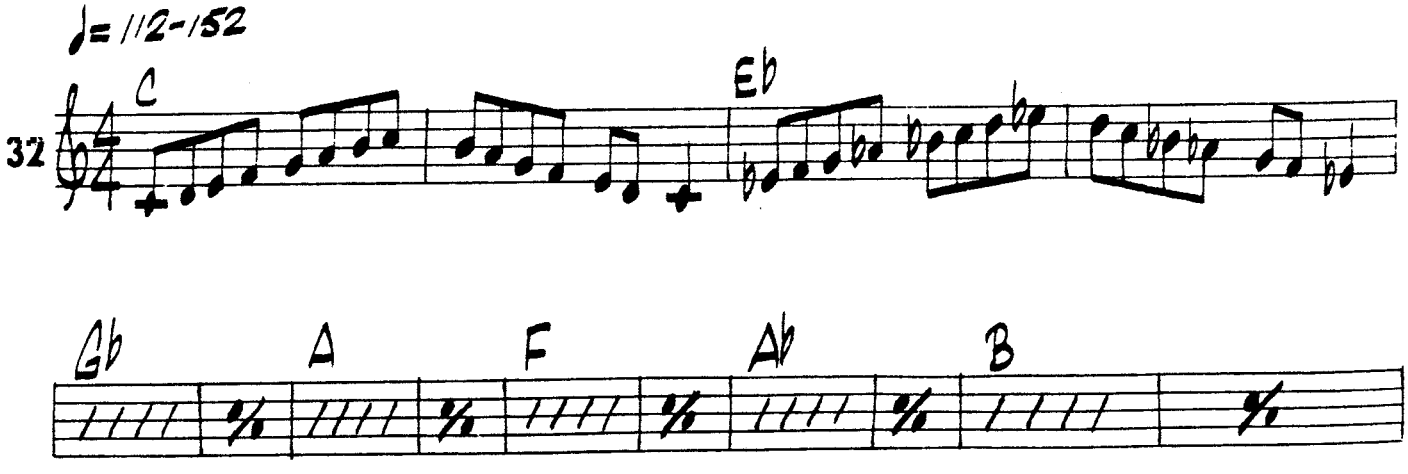






(continue in same manner)





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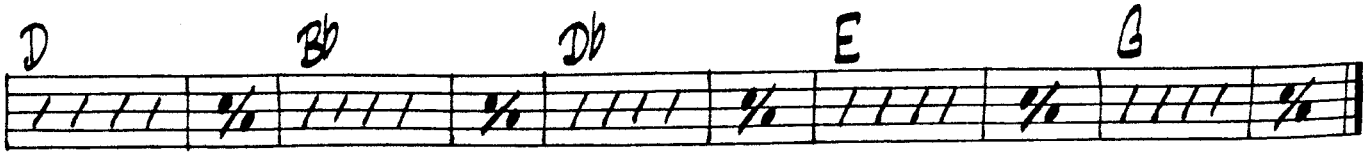
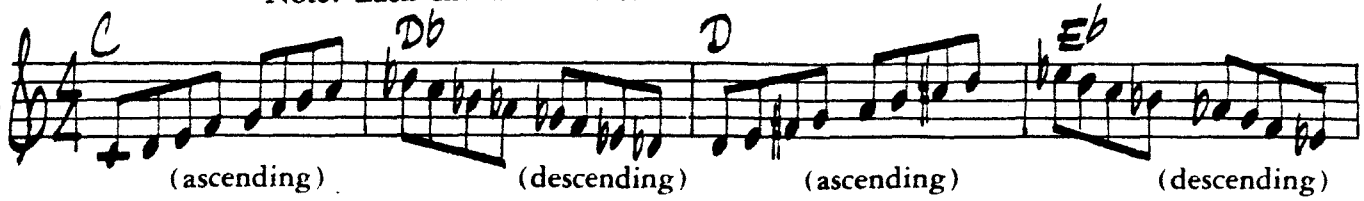
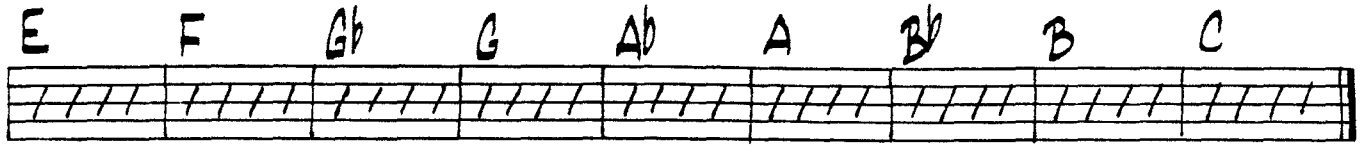


♩=96-138

Note: Each chord scale lasts one measure.

33

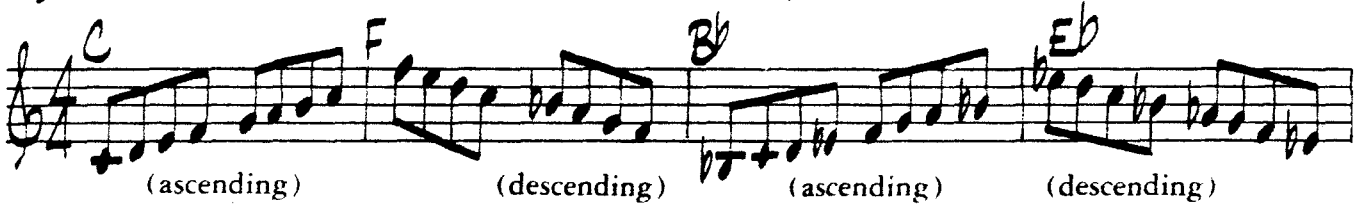


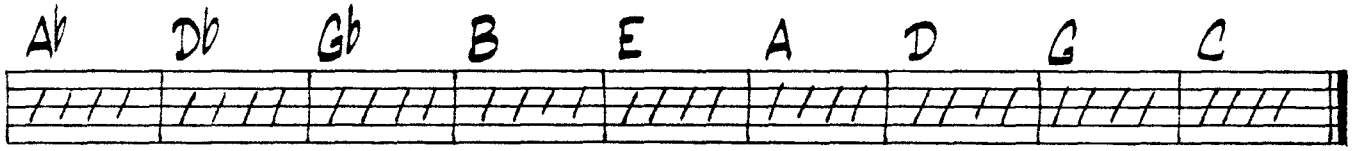


(continue in same manner)

♩=96-138

34

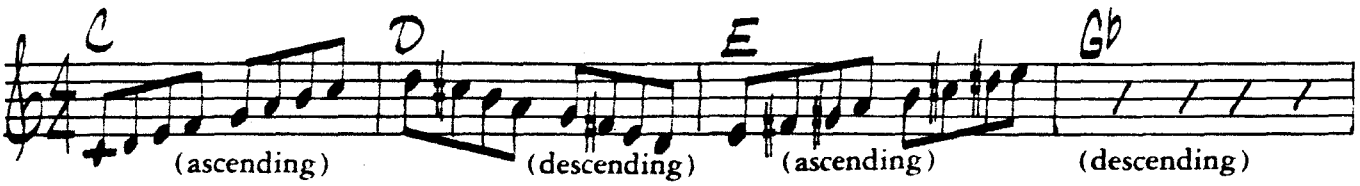


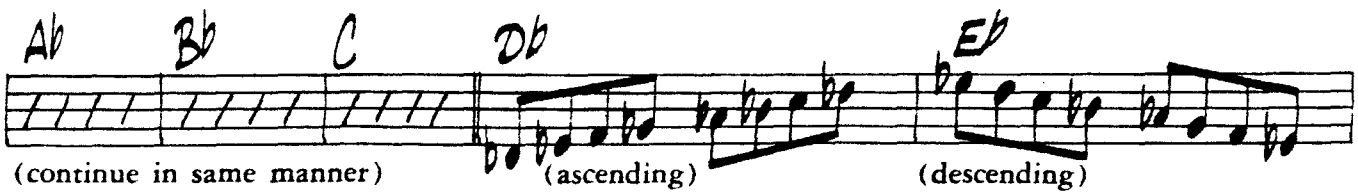


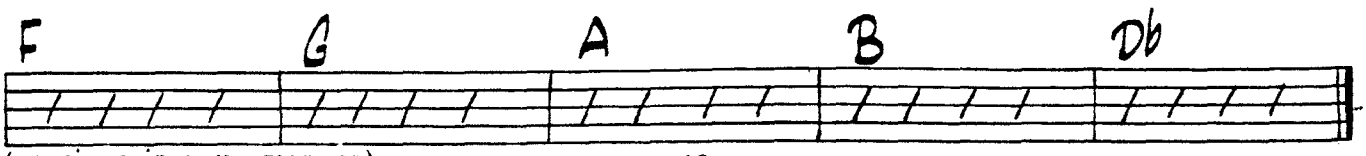
(continue in same manner)

♩=96-138

35







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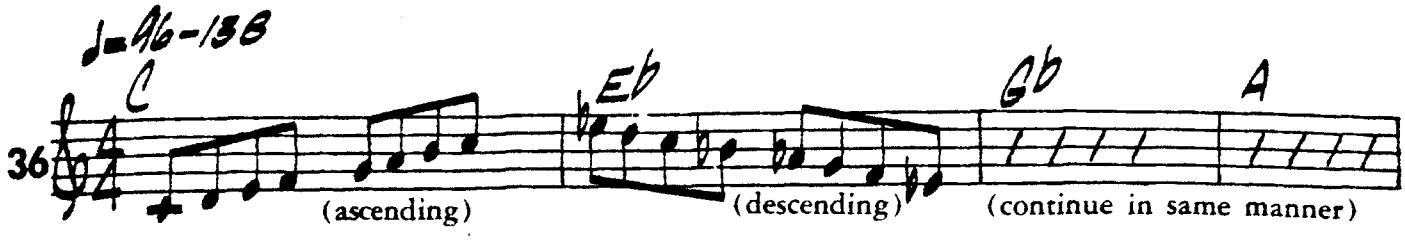
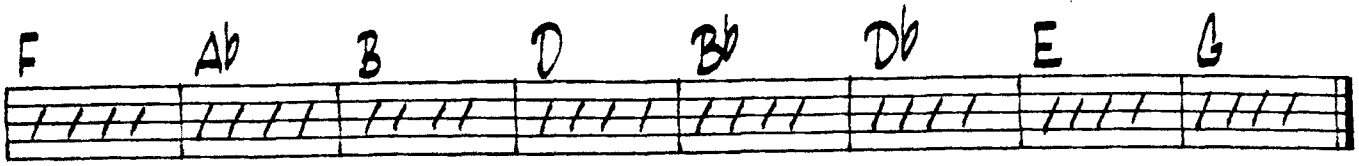
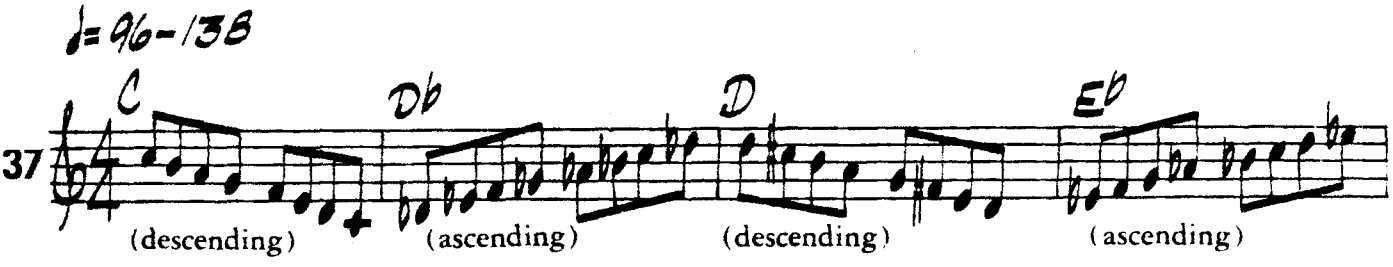
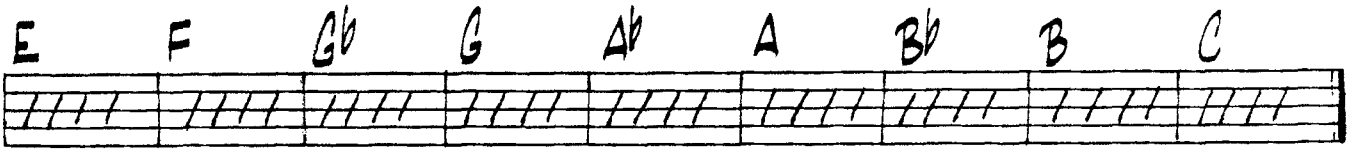
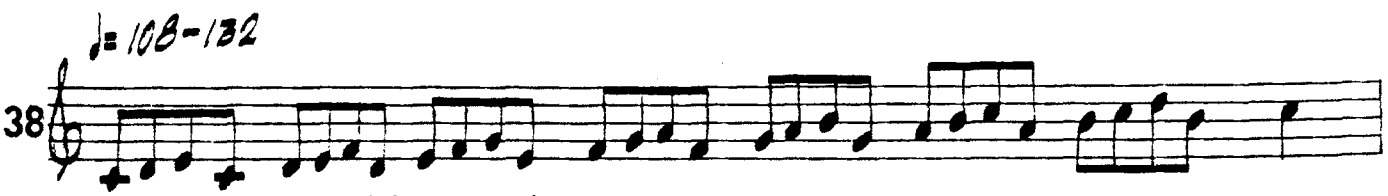




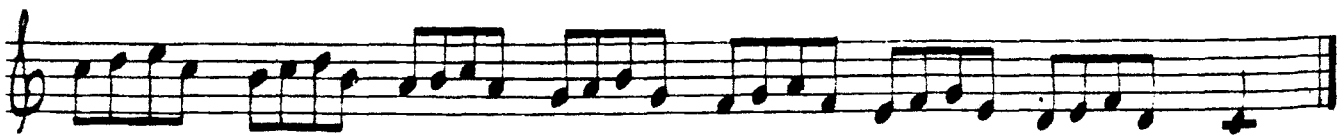




Apply the principle of alternating the *descending* and *ascending* forms of the chord scales to the chords in patterns No. 34, 35 and 36.

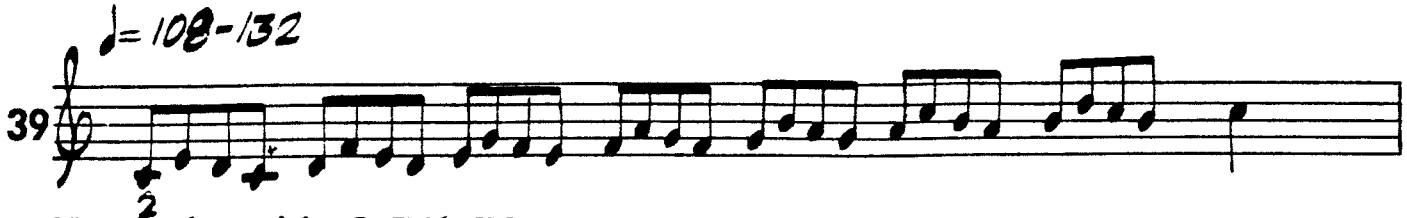


Note: To be used for C, CM6, CM7 or CM9.

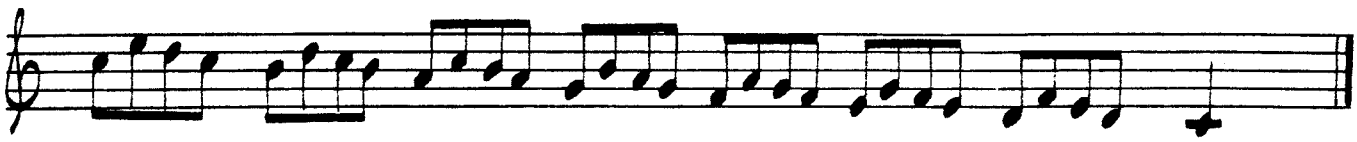


Transpose Pattern No. 38 in remaining eleven keys.

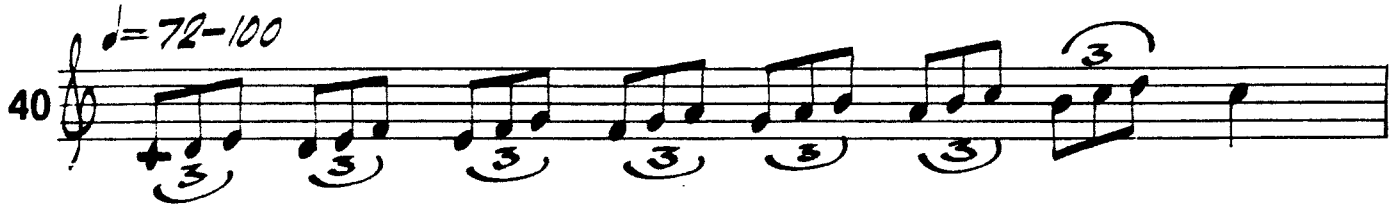
The remaining eleven keys referred to are: F, B♭, E♭, A♭, D♭, G♭, B, E, A, D and G.



Note: To be used for C, CM6, CM7 or CM9.

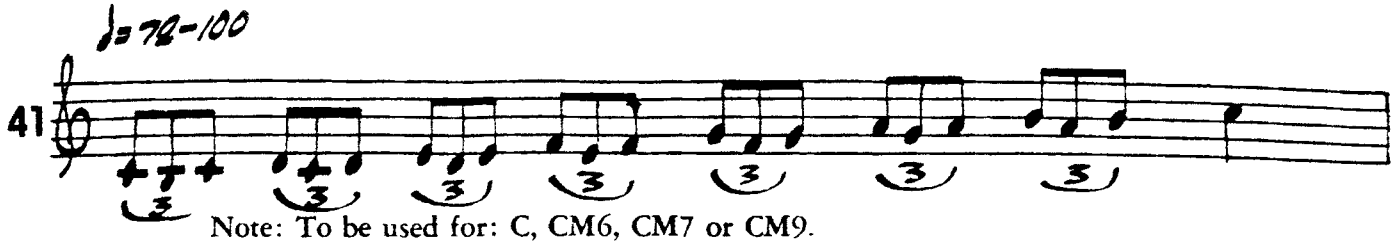


Practice in all keys.

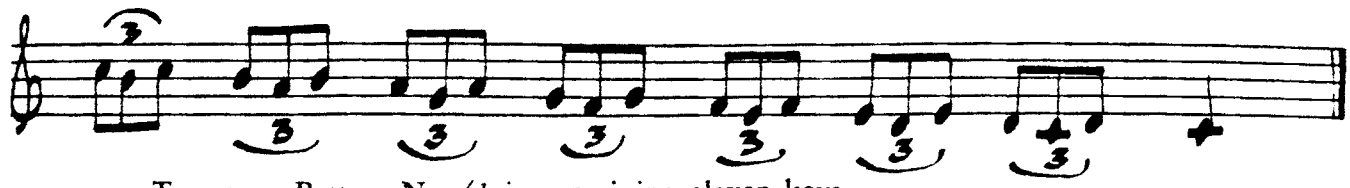


Note: To be used for C, CM6, CM7 or CM9.

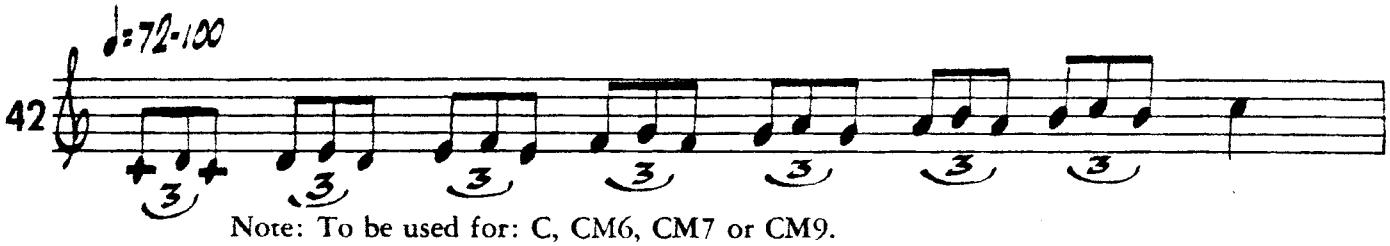
Practice in all keys.



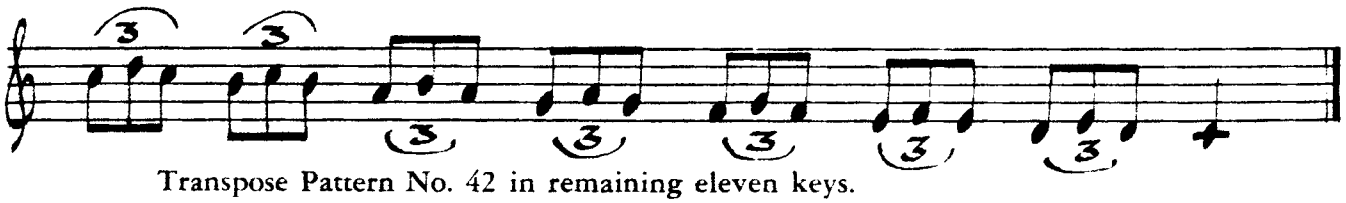
Note: To be used for: C, CM6, CM7 or CM9.



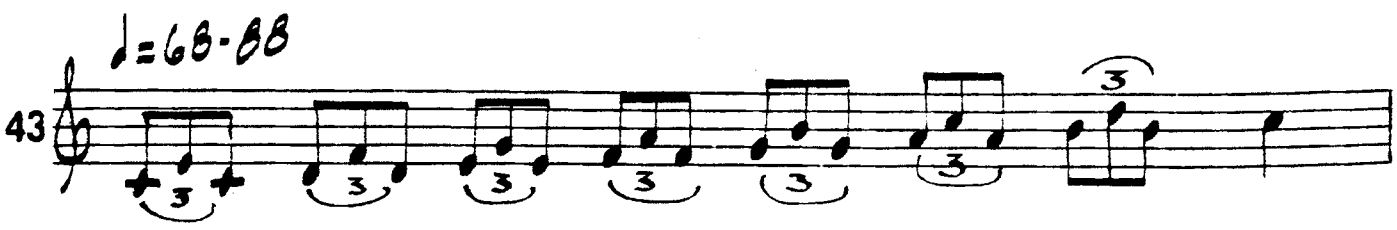
Transpose Pattern No. 41 in remaining eleven keys.



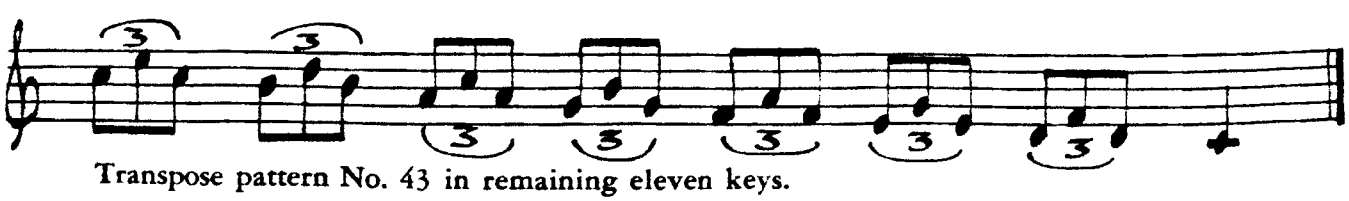
Note: To be used for: C, CM6, CM7 or CM9.



Transpose Pattern No. 42 in remaining eleven keys.

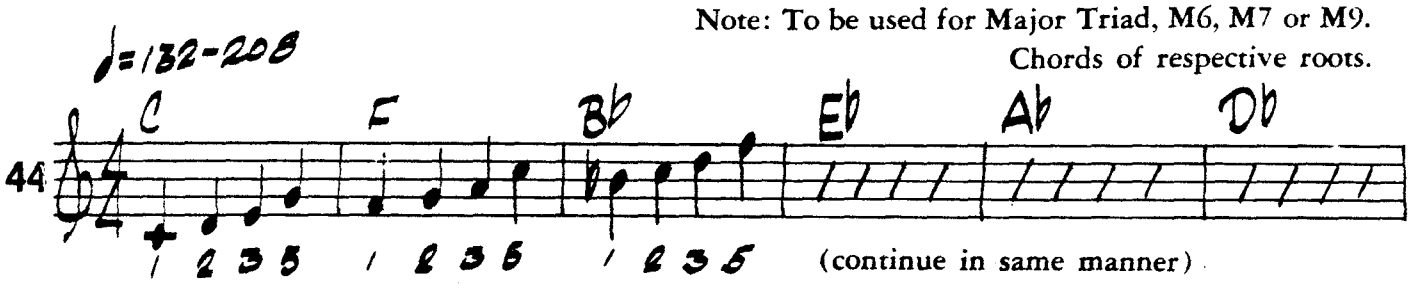


Note: To be used for: C, CM6, CM7 or CM9.

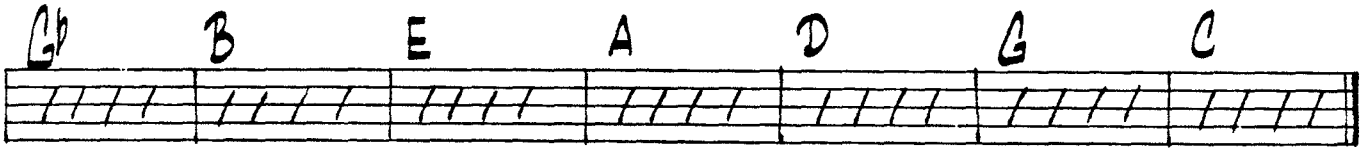


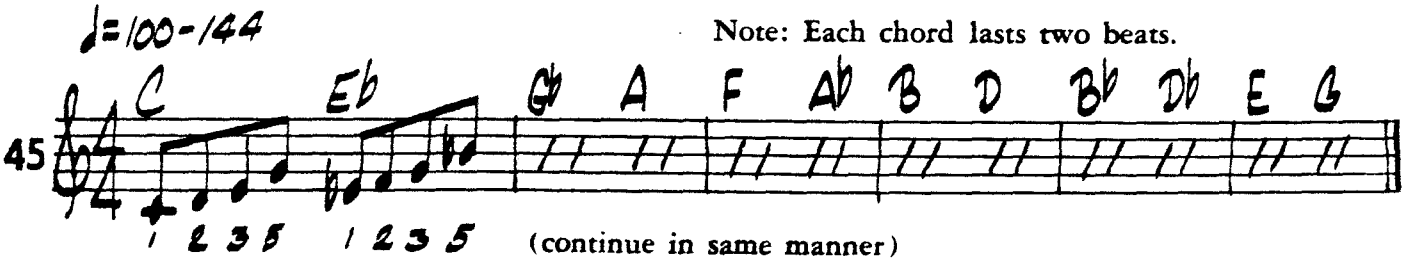
Transpose pattern No. 43 in remaining eleven keys.

Beginning with Pattern No. 44, the student would be wise to learn the chord-scale numbers given below each pattern and use them for quick, easy transposition. For example, the 1-2-3-5 pattern of No. 44 could be applied to any new chord root, since numbers only indicate pitch *relationships,* not the pitches themselves. Although each of these patterns will be practiced in the four established chord progressions (Nos. 44-47, for example), covering all keys, it would also be advisable to practice each of the patterns bearing numbers (i.e., 1-2-3-5) with a reasonable number of progressions from already existing tunes and jazz lines, available in fake books (collections of published tunes and their progressions), song books, sheet music, or (if they are available to the student) private collections of tunes, copied or transcribed from various written sources or records. In short, *any* of the patterns which follow, having the numbers (like 1-2-3-5) could be projected over any tune's entire length, *when* the *minor* forms of these patterns have been added to the following *major* forms, since nearly all chords contained in the tune's progression will have either a major triad on the bottom (i.e., 1-2-3-5) or a minor triad (i.e., 1-2-flat 3-5).



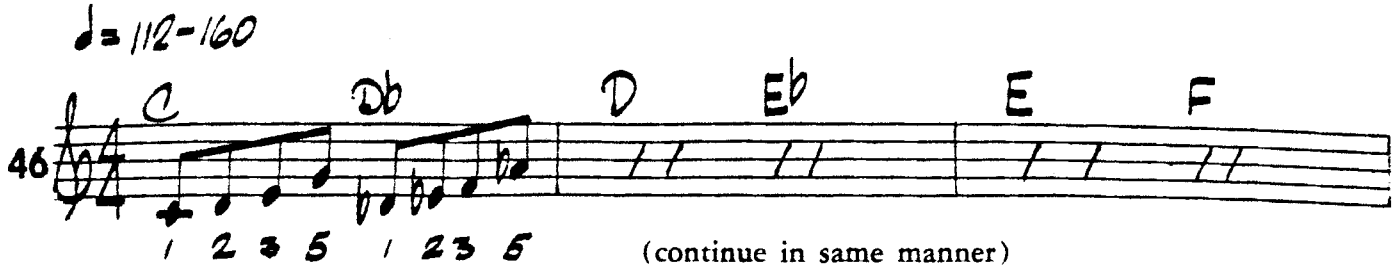
This pattern is made up of the first, second, third and fifth tones of the chord scale.



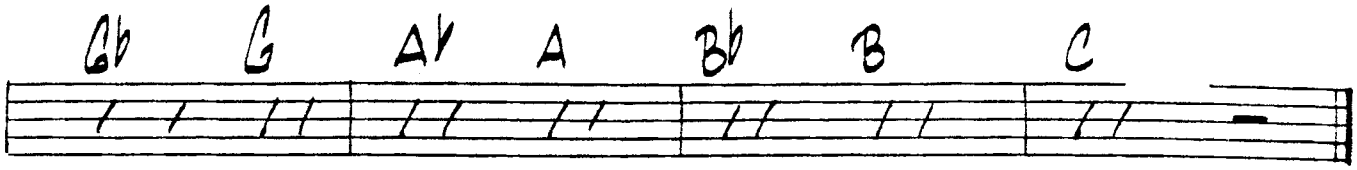


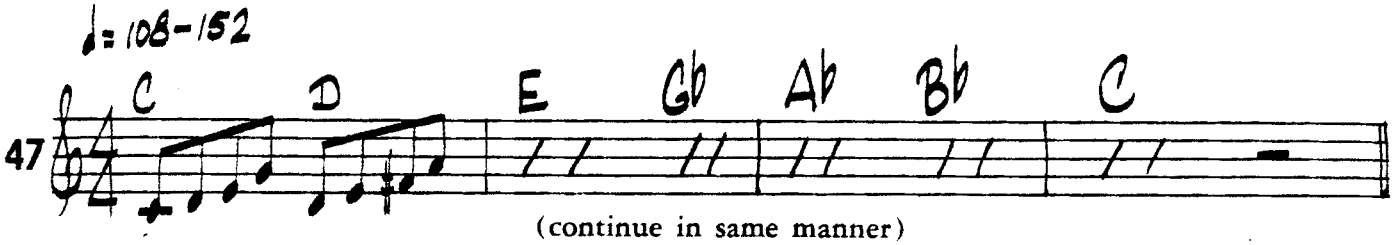
[6]See bridge section of Oliver Nelson's "Cascades," on *The Blues And The Abstract Truth* (Impulse S-5), Oliver Nelson Group. Also note Freddie Hubbard's last chorus on the same selection.

[7]John Coltrane, "Giant Steps" and other selections, on *Giant Steps* (Atlantic S-1311), John Coltrane Quartet.



(continue in same manner)





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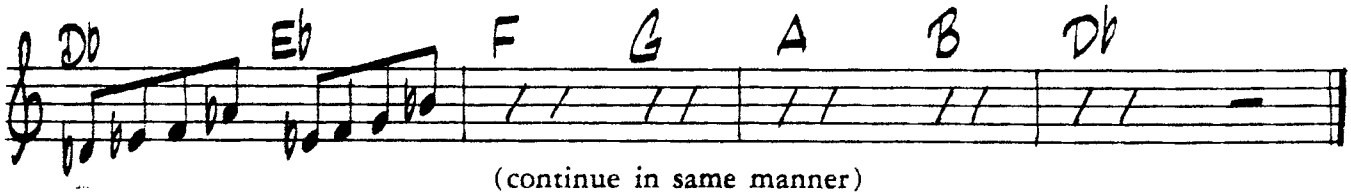

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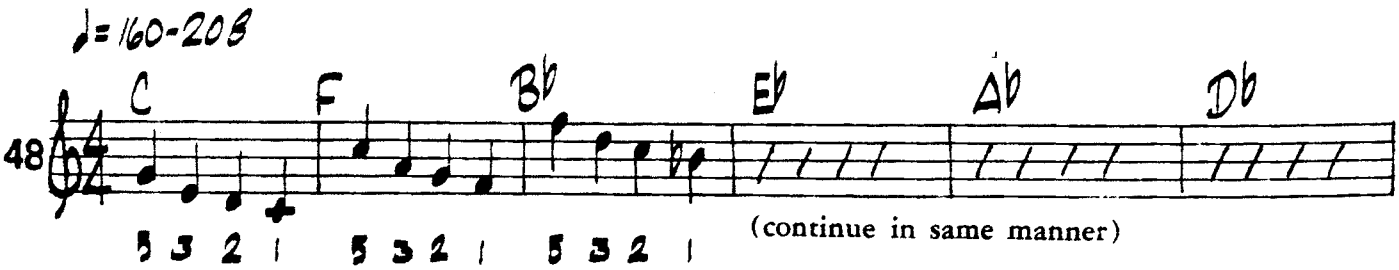
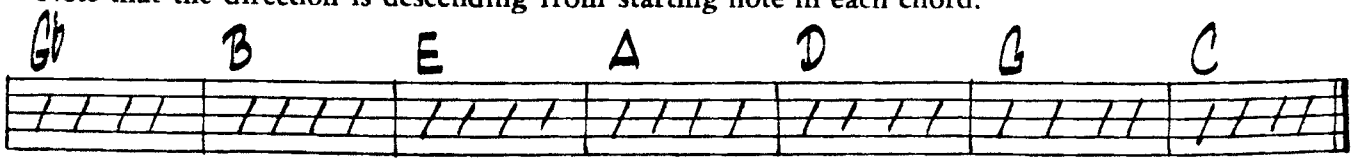
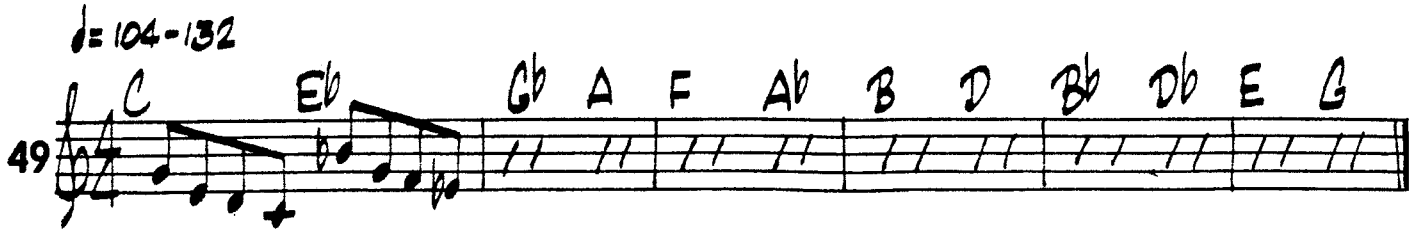


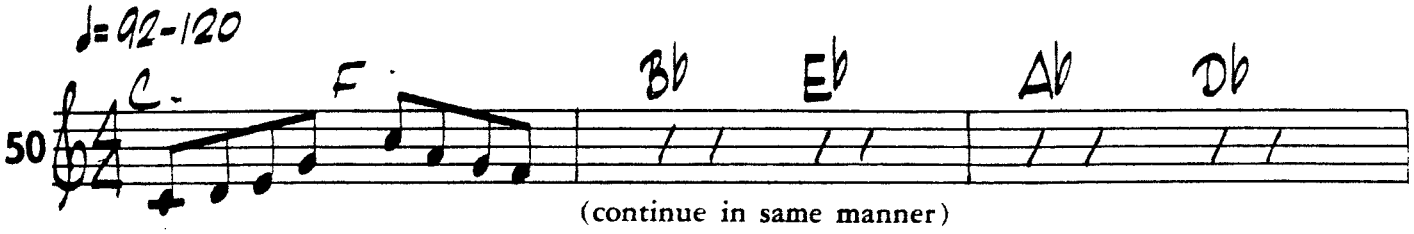
(continue in same manner)

This pattern is made up of the fifth, third, second and first tones of the chord scale. Note that the direction is descending from starting note in each chord.



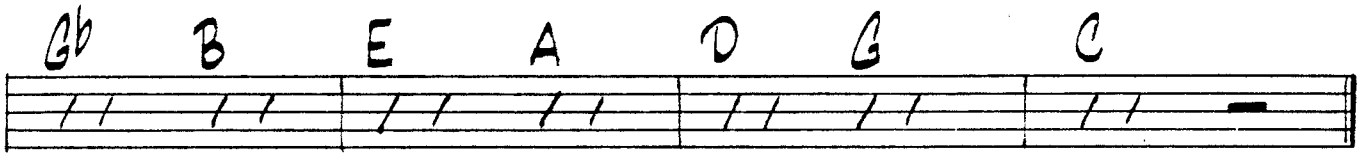


Apply chord scale fragment 5-3-2-1 to the chords in patterns No. 46 and 47.

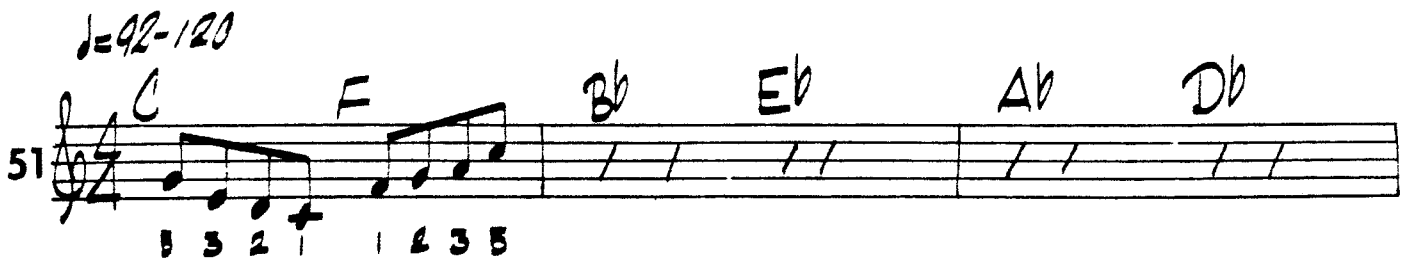


(continue in same manner)

Note: This pattern utilizes the alternating chord scale fragments 1-2-3-5 and 5-3-2-1.



Apply the same principle of alternating fragments 1-2-3-5 and 5-3-2-1 to the chords in patterns No. 45, 46 and 47.

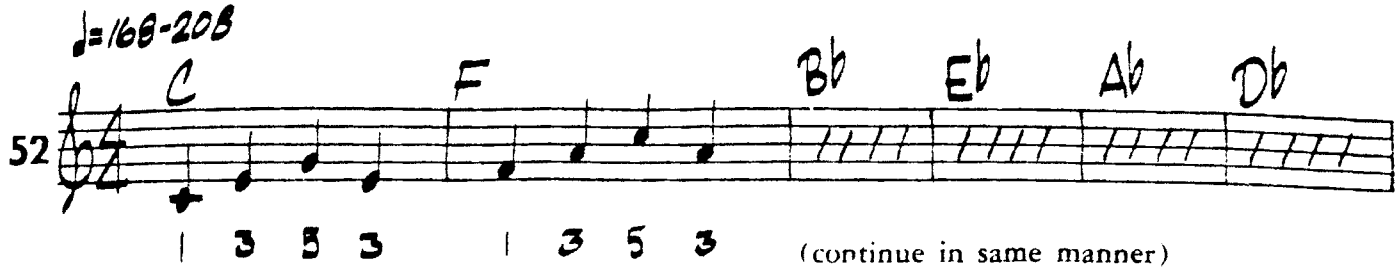


Note: This pattern utilizes the alternating chord scale fragments 5-3-2-1 and 1-2-3-5.

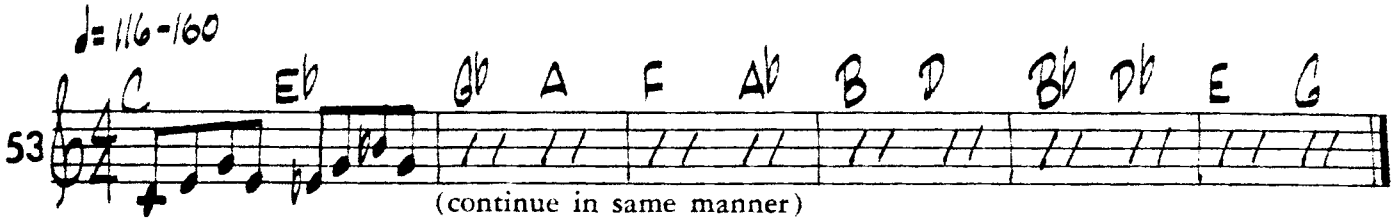
Apply the same principle of alternating fragments 5-3-2-1 and 1-2-3-5 to the chords in patterns No. 45, 46 and 47.

[8]John Coltrane, "Giant Steps," on *Giant Steps* (Atlantic S-1311), John Coltrane Quartet. This pattern may be used on any chord with a major third.

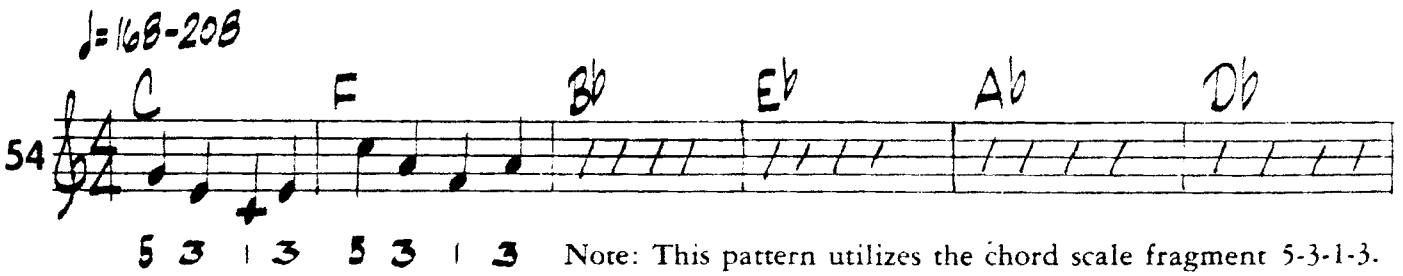
[9]Oliver Nelson, "Butch and Butch," on *The Blues And The Abstract Truth* (Impulse S-5), Oliver Nelson Group. This pattern is used on minor chords descending in whole steps.



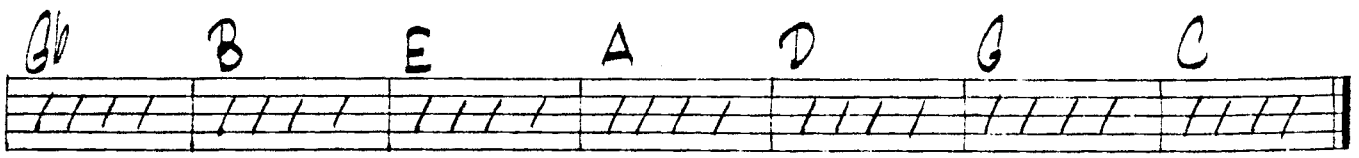
Note: This pattern utilizes the chord scale fragment 1-3-5-3.

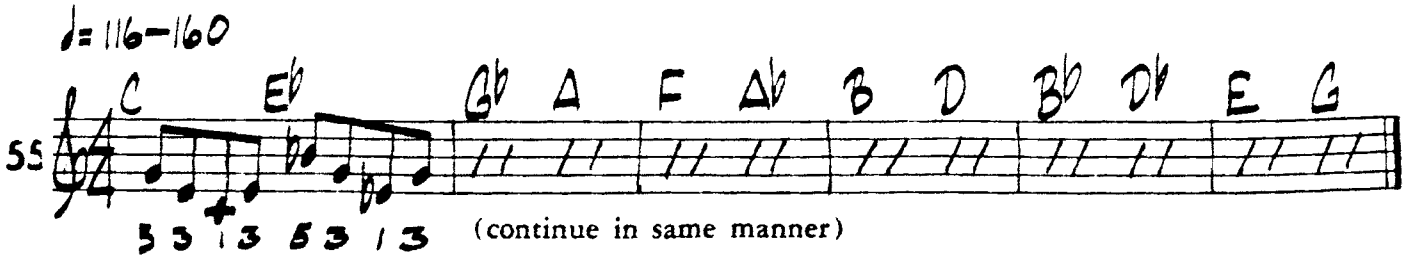


Apply the fragment 1-3-5-3 to the chords in patterns No. 46 and 47.

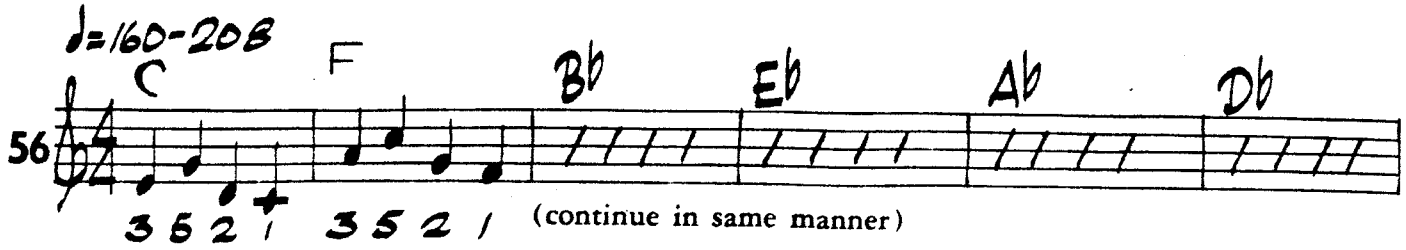


Note: This pattern utilizes the chord scale fragment 5-3-1-3.



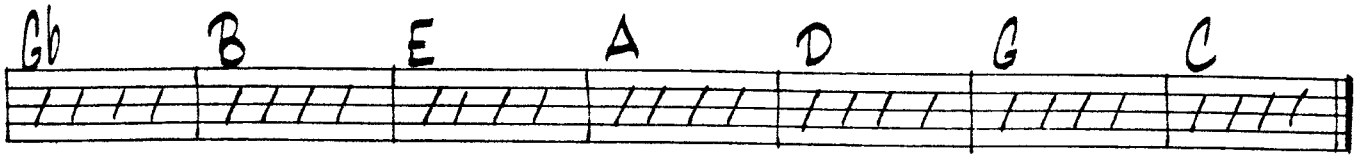


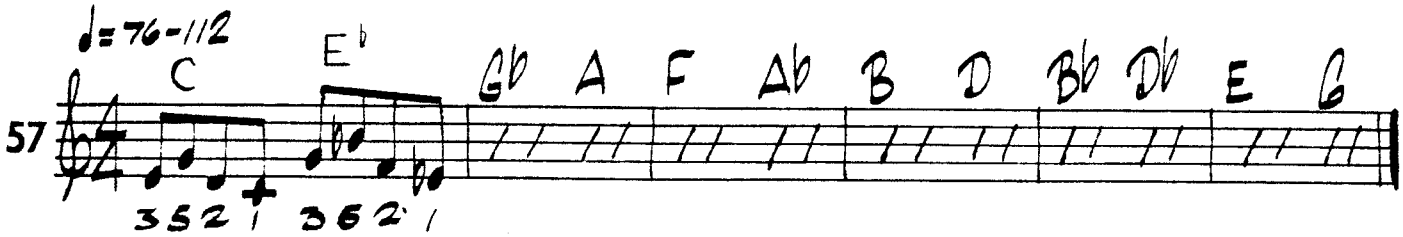
Apply the fragment 5-3-1-3 to the chords in patterns No. 46 and 47.



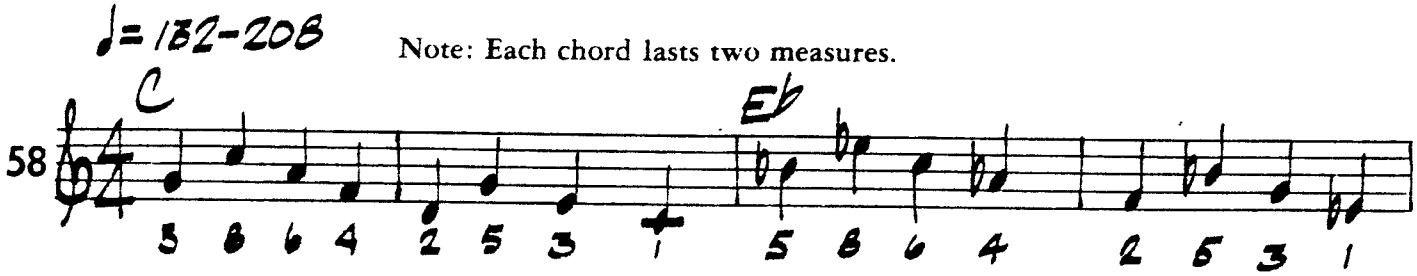
(continue in same manner)

Note: This pattern utilizes the chord scale fragment 3-5-2-1.

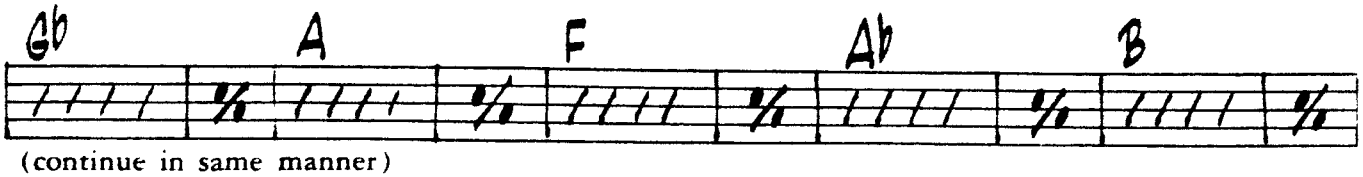




Apply the fragment 3-5-2-1 to the chords in patterns No. 46 and 47.

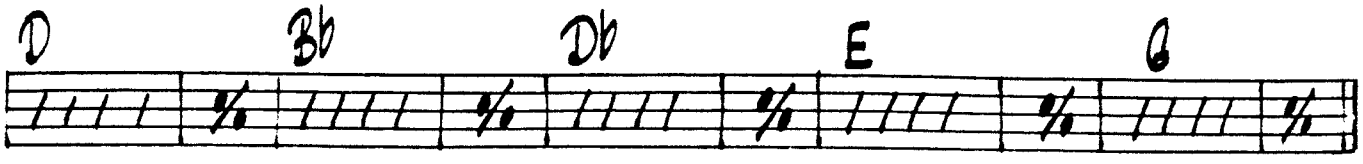


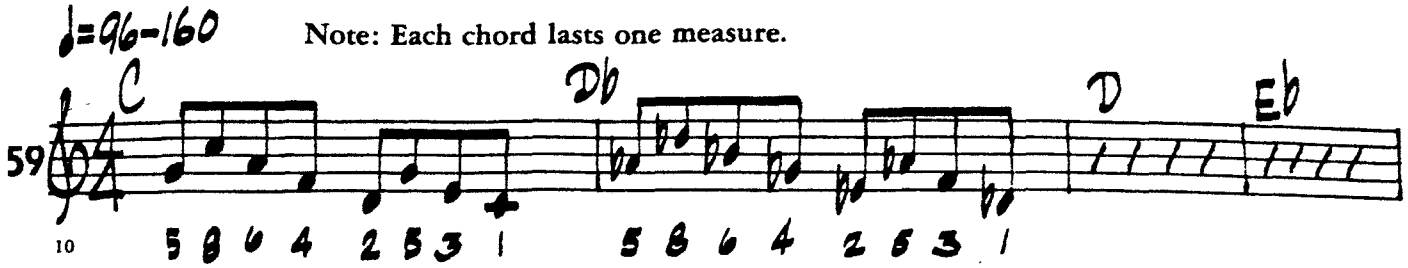
Note: Each chord lasts two measures.



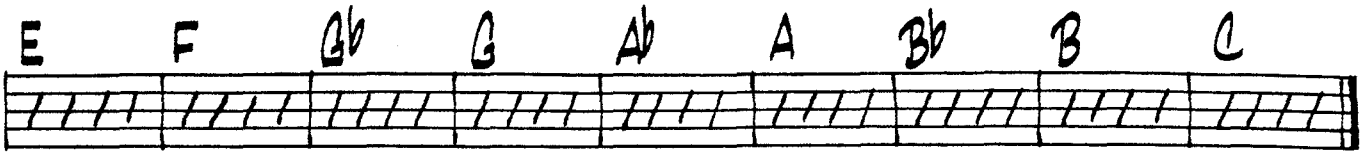
(continue in same manner)

This pattern utilizes two fragments (5-8-6-4 and 2-5-3-1) from the chord scale, which when played simultaneously will sound any of the major forms of the chords expressed (Triad, M6, M7 and M9).

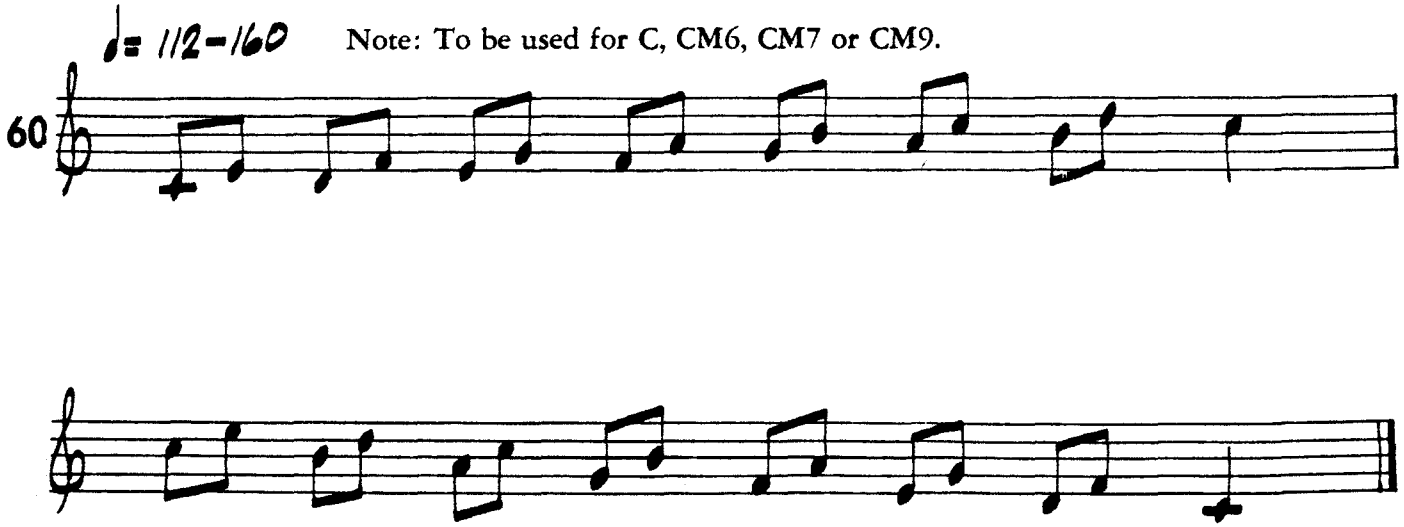




Apply the chord scale fragments shown in Pattern No. 66 to the chords in Patterns No. 34 and 35.

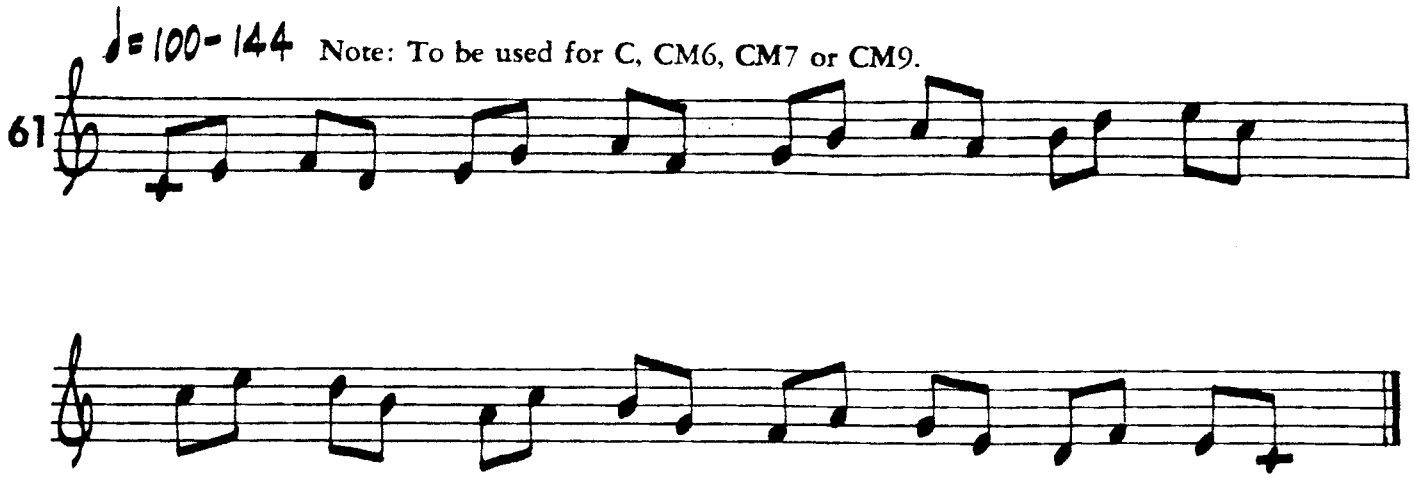


Patterns Nos. 60-67 project the practicing of scales by specific intervals, such as thirds, fourths, and fifths. Not all of the intervals will be *exactly* the same size. For example, No. 60 is made up of pairs of notes which form third intervals (i.e., C-E, D-F, etc.), yet C-E measures *four* semitones and D-F measures only *three* semitones. Each is a third interval, but C-E is a *major third* interval and D-F is a *minor third* interval. In order to eliminate confusion as to which third, fourth, or fifth interval is to be used, simply use *only* pitches from the major scale of the first note (chord root). In other words, when the patterns on thirds, fourths, and fifths are practiced in, say, the key of E-flat, no tones will appear which are not in the E-flat scale.

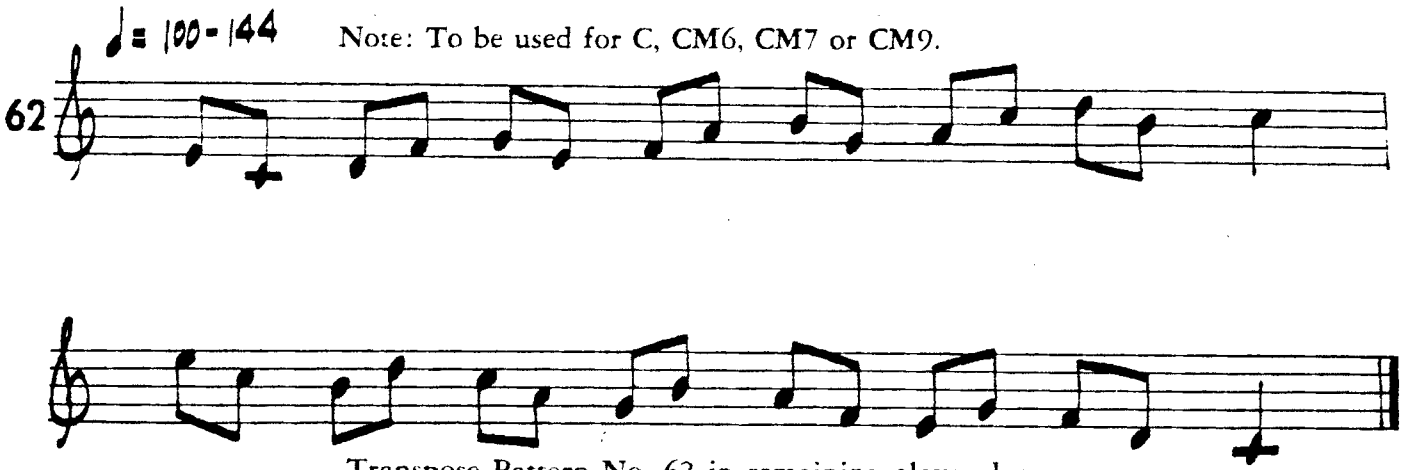


Transpose Pattern No. 60 in remaining eleven keys.

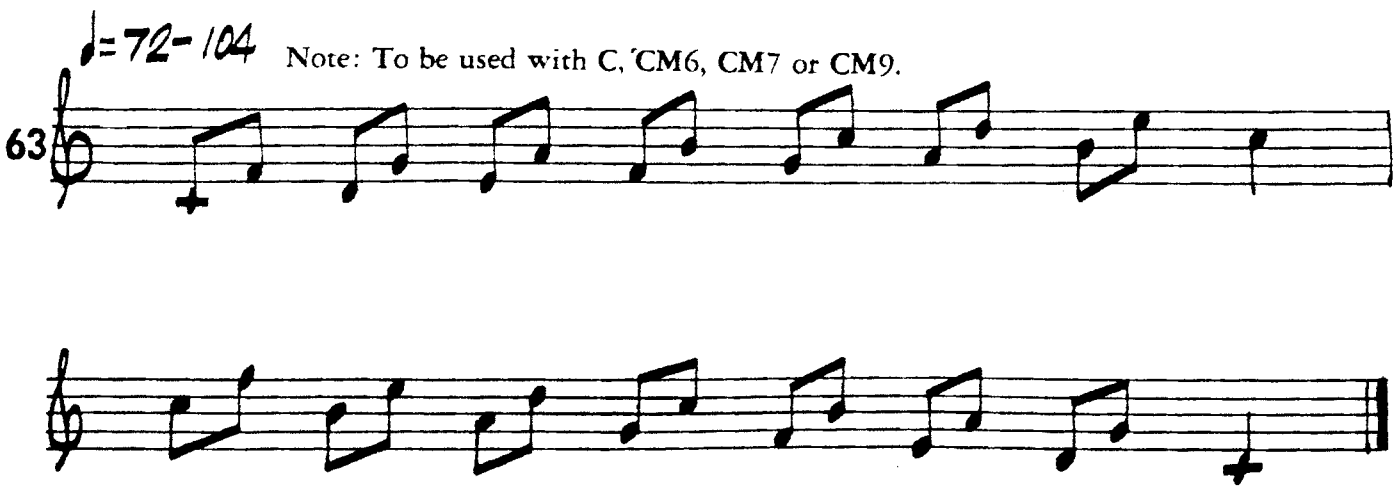
[10]Archie Shepp, on *Four For Trane* (Impulse S-71), Archic Shepp Group. Shepp makes use of this pattern throughout this recording.



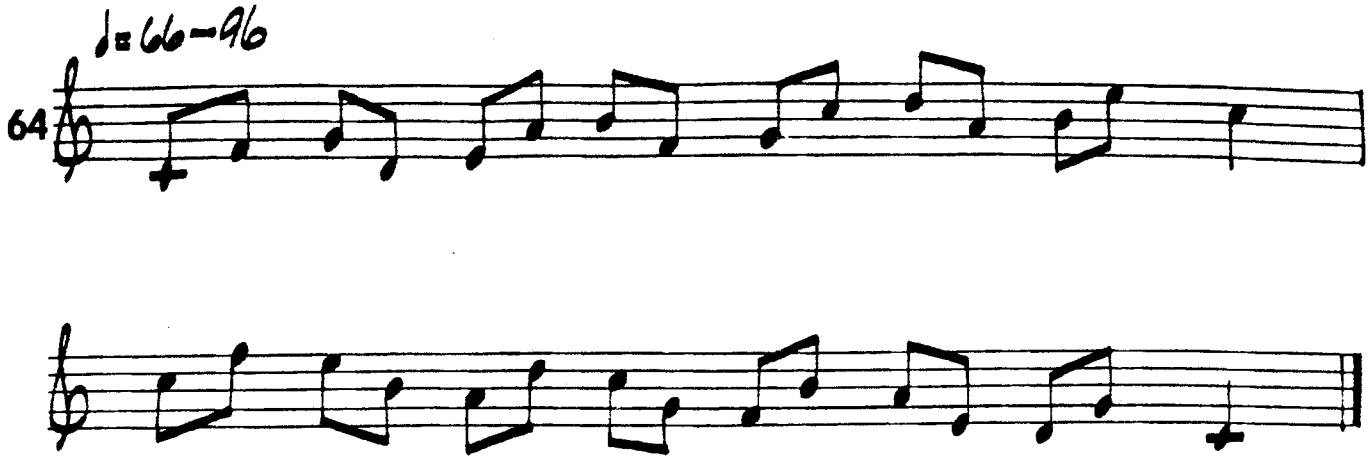
Transpose Pattern No. 61 in remaining eleven keys.



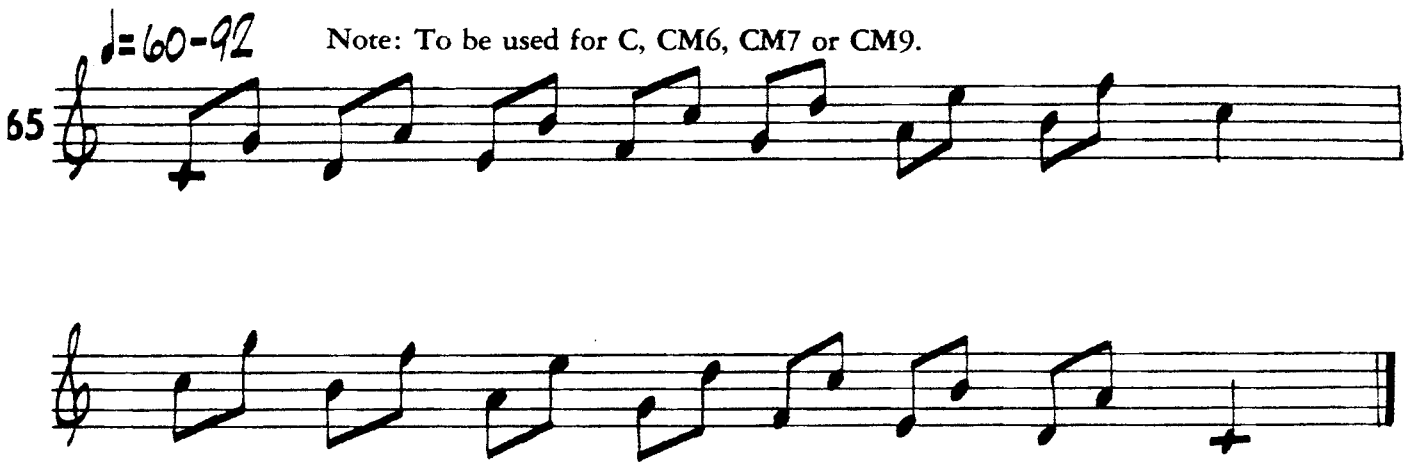
Transpose Pattern No. 62 in remaining eleven keys.



Transpose Pattern No. 63 in remaining eleven keys.

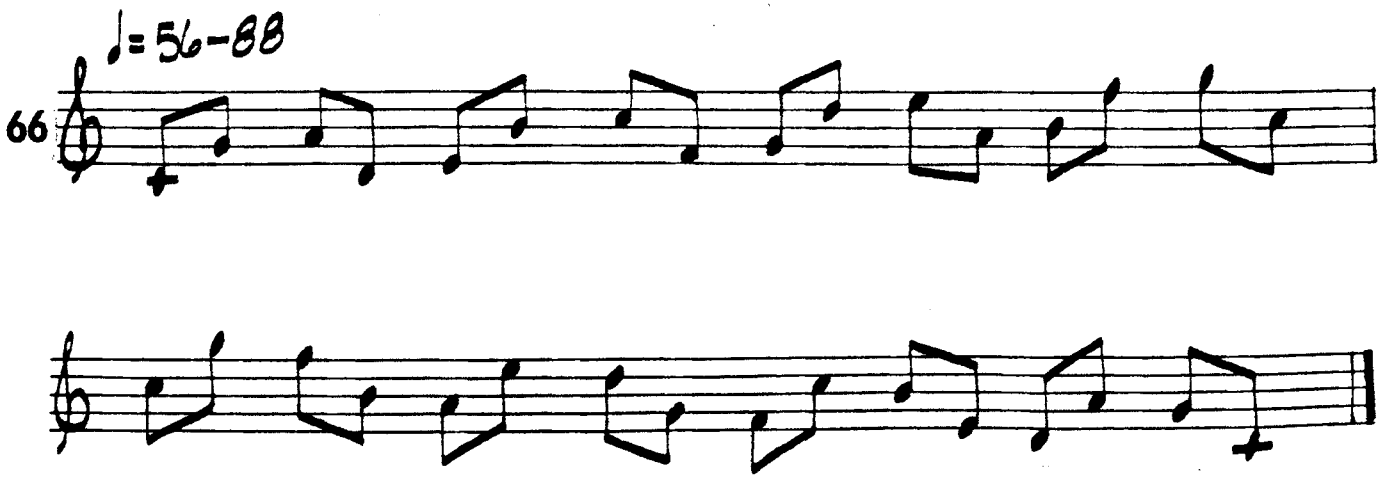


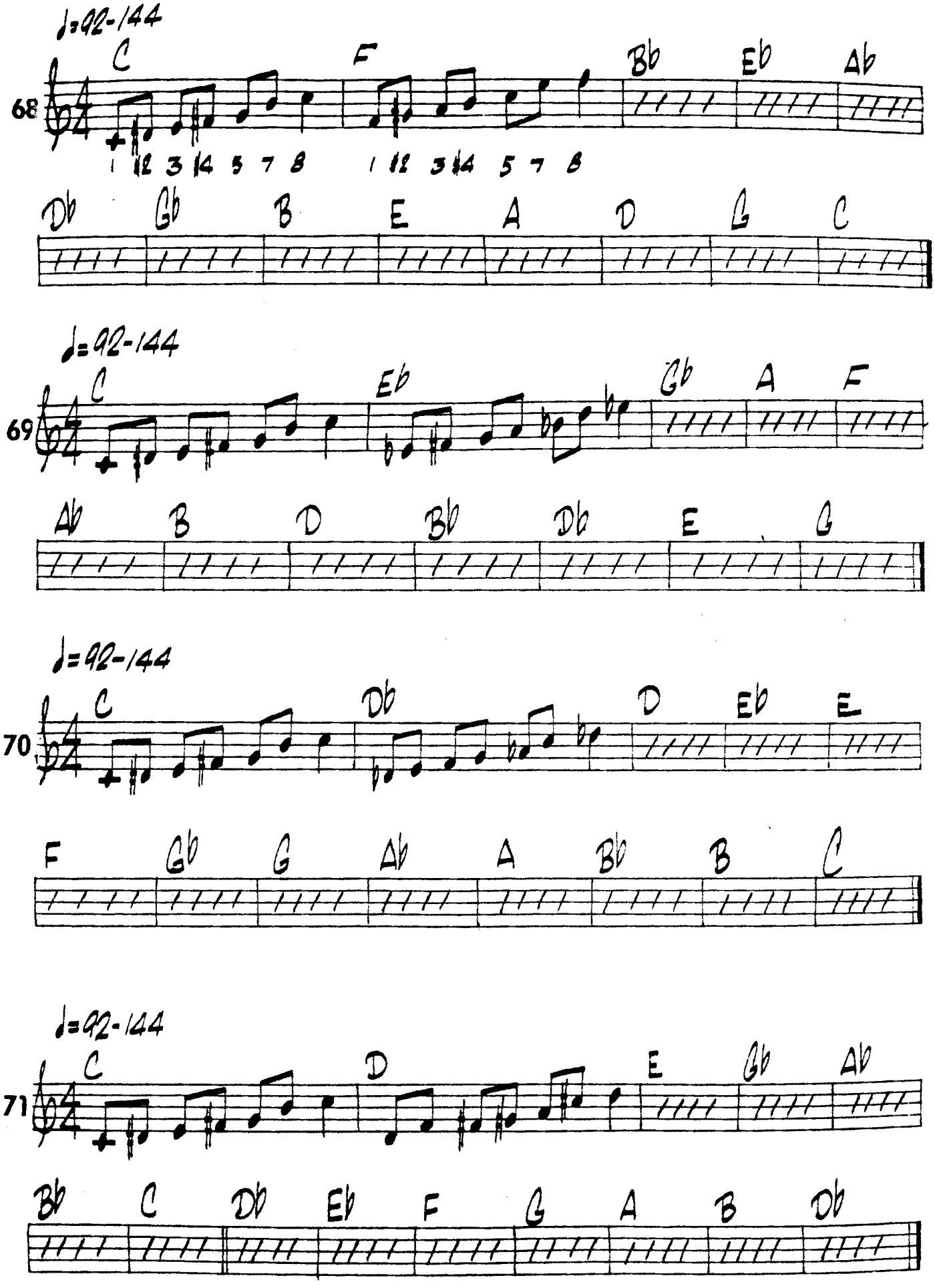
Transpose Pattern No. 64 in remaining eleven keys. .

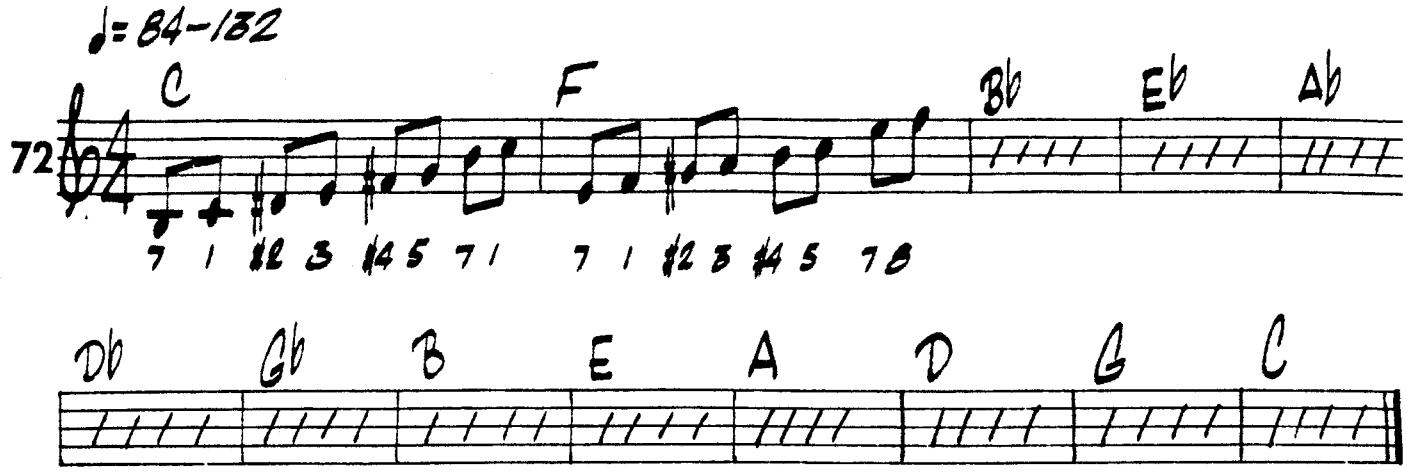


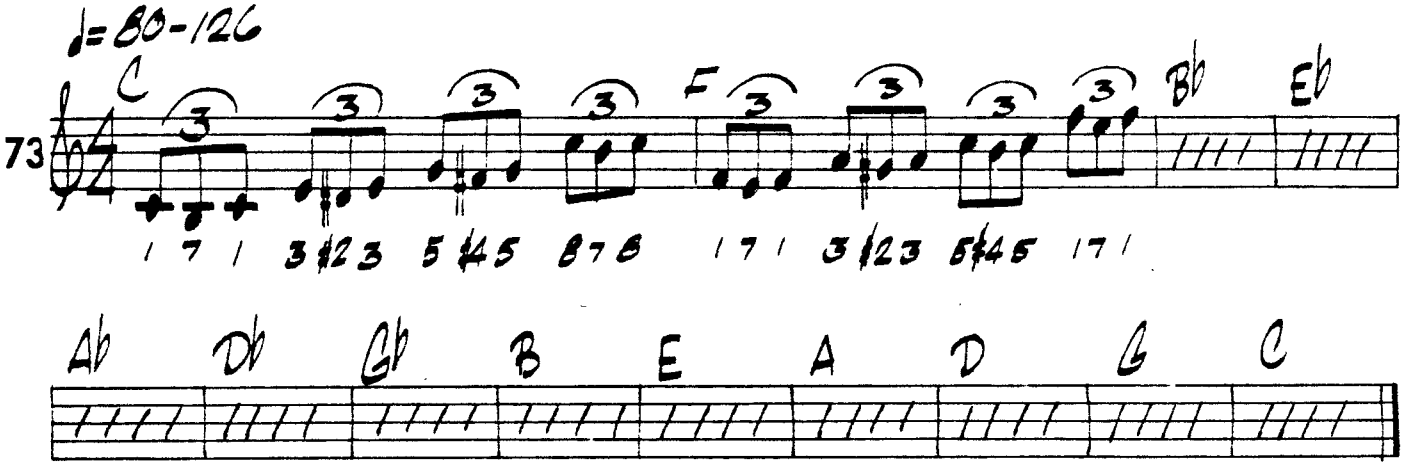
Note: To be used for C, CM6, CM7 or CM9.

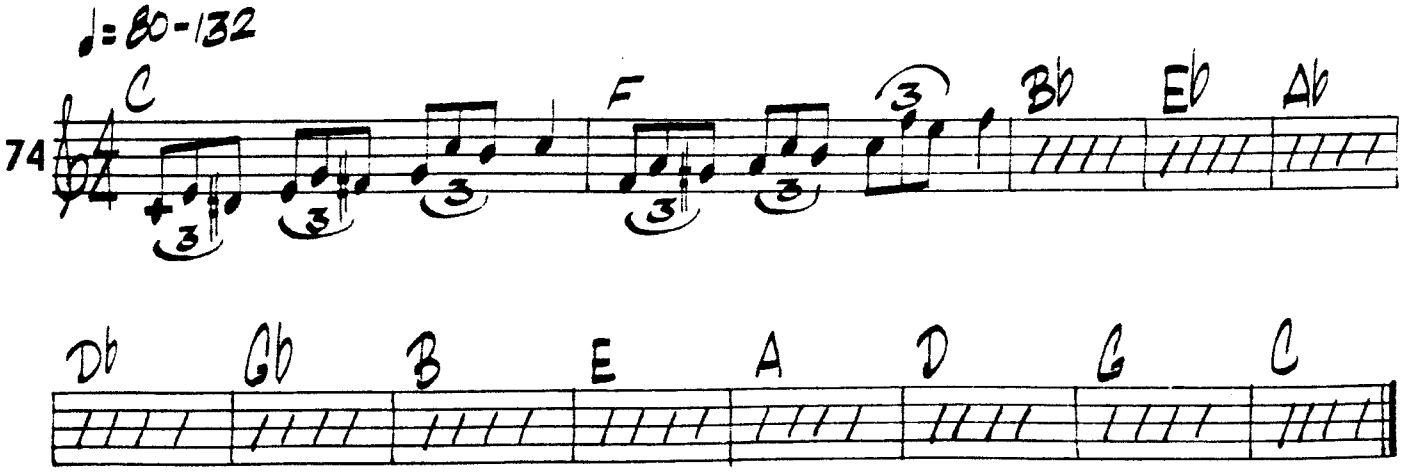
Transpose Pattern No. 65 in remaining eleven keys.

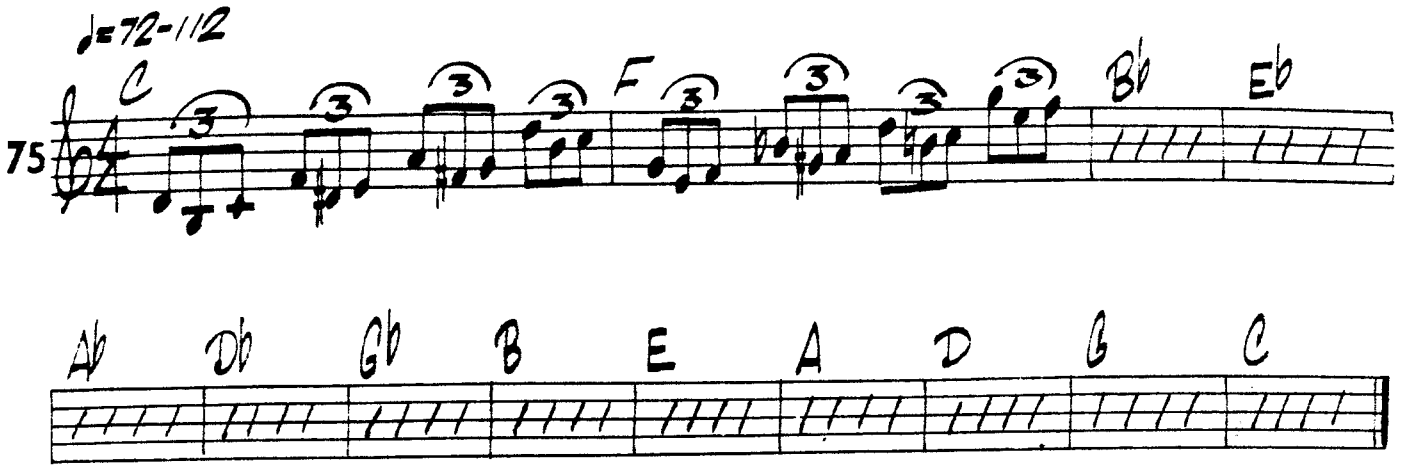


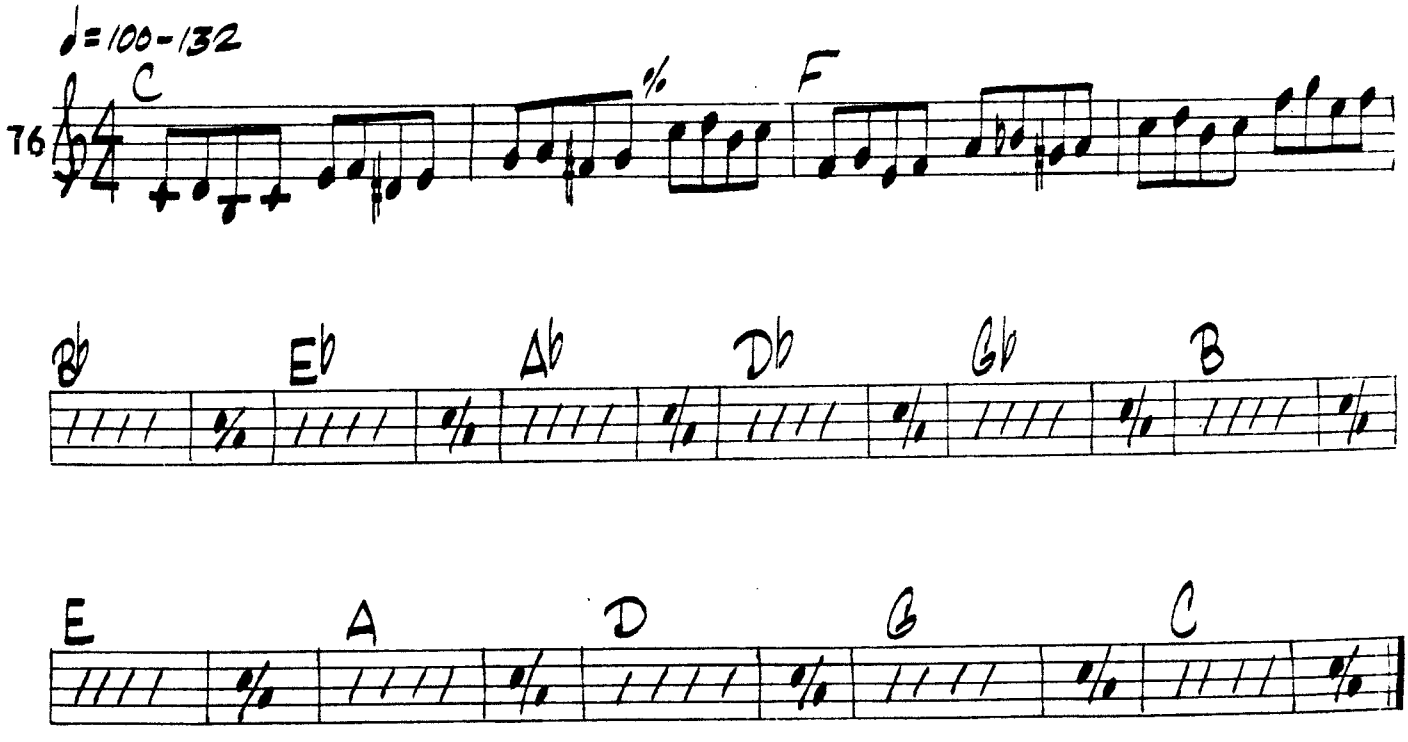

♩=92-144
68
C F Bb Eb Ab
1 12 3 14 5 7 8 1 12 3 14 5 7 8
Db Gb B E A D G C
♩=92-144
69
C Eb Gb A F
Ab B D Bb Db E G
♩=92-144
70
C Db D Eb E
F Gb G Ab A Bb B C
♩=92-144
71
C D E Gb Ab
Bb C Db Eb F G A B Db

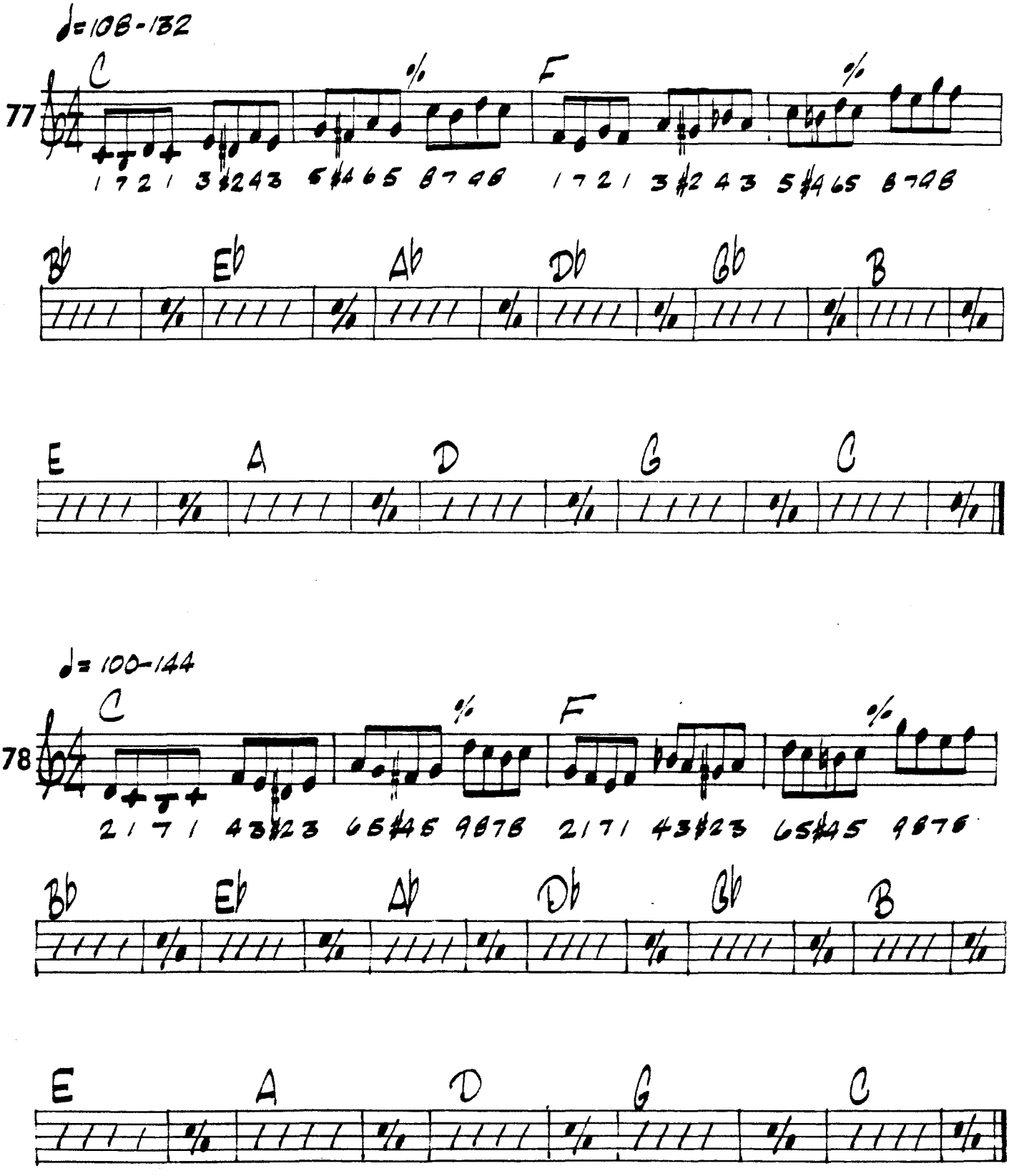

♩= 84-132
72
C
F
Bb
Eb
Ab
Db
Gb
B
E
A
D
G
C


♩= 80-126
73
C
F
Bb
Eb
Ab
Db
Gb
B
E
A
D
G
C


♩= 80-132
74
C
F
Bb
Eb
Ab
Db
Gb
B
E
A
D
G
C


♩=72-112
75
C
F
Bb
Eb
Ab
Db
Gb
B
E
A
D
G
C


♩=100-132
76
C
%
F
Bb
Eb
Ab
Db
Gb
B
E
A
D
G
C



[11]Oliver Nelson, "Cascades," on *The Blues And The Abstract Truth* (Impulse S-5), Oliver Nelson Group. The melody to "Cascades" is a descending version of Pattern No. 77 in a minor key.

[12]John Coltrane, Cadenza at the conclusion of "Giant Steps," on *Giant Steps* (Atlantic S-1311), John Coltrane Quartet. John Coltrane makes use of this arrangement of diatonic upper and lower neighbor tones but descending and in triplets.

[13]J. J. Johnson, "Mysterioso," on *J. J. In Person* (Columbia CL 1161), J. J. Johnson Quintet.

MAJOR SCALE-TONE TRIADS

Figure 1 illustrates the tones of the E Major scale.

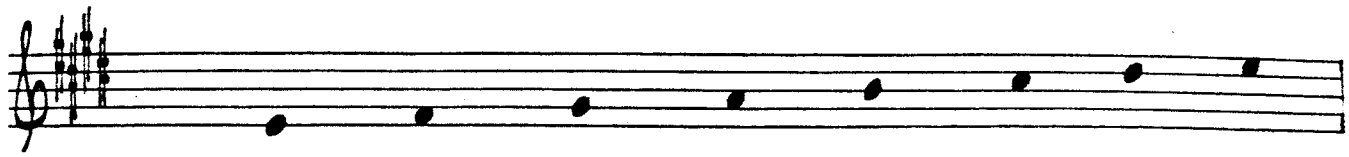


Fig. 1

We have previously used arabic numbers to indicate a specific *scale tone.* In figure 2, however, the roman numerals have been used to designate a chord (in this case, triads) that are constructed on the respective scale tones indicated by the roman numerals. Figure 3 spells out the specific tones of each triad belonging to the E Major scale:

Figure 2 illustrates the triads formed on each tone of the E Major scale. Note that when the first note of the *triad* is on a line, the remaining notes to that *triad* are also on consecutive lines; when the first note of the *triad* is on a space, the remaining notes are also on consecutive spaces.

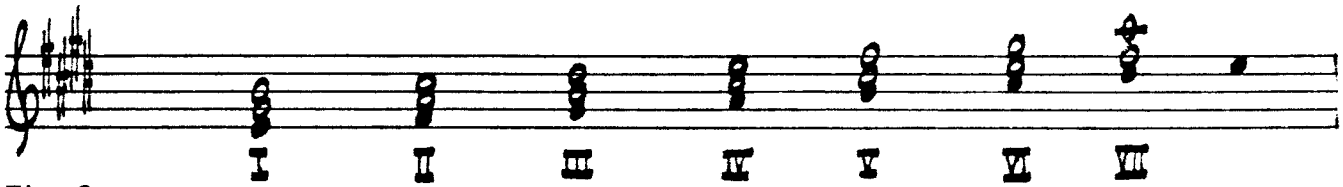


Fig. 2

Fig. 3

The I chord in the key of E Major contains the notes—E, G-Sharp, B.

The II chord in the key of E Major contains the notes—F-Sharp, A, C-Sharp.

The III chord in the key of E Major contains the notes—G-Sharp, B, D-Sharp.

The IV chord in the key of E Major contains the notes—A, C-Sharp, E.

The V chord in the key of E Major contains the notes—B, D-Sharp, F-Sharp.

The VI chord in the key of E Major contains the notes—C-Sharp, E, G-Sharp.

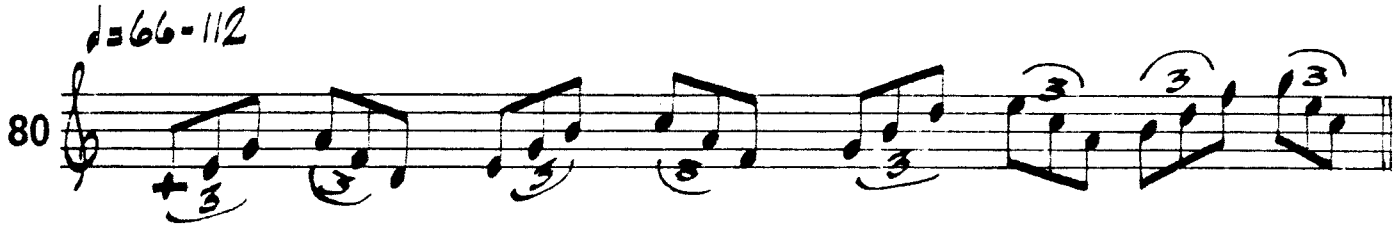
The VII chord in the key of E Major contains the notes—D-Sharp, F-Sharp, A.

We have shown that it is possible to construct a ***triad*** on each tone of the E Major scale. This same principle applys for ALL major scales. The student is advised to write out, in the manner illustrated in figure 2, the scale-tone triads for the remaining eleven major scales before attempting to deal with Patterns No. 79 to No. 82.

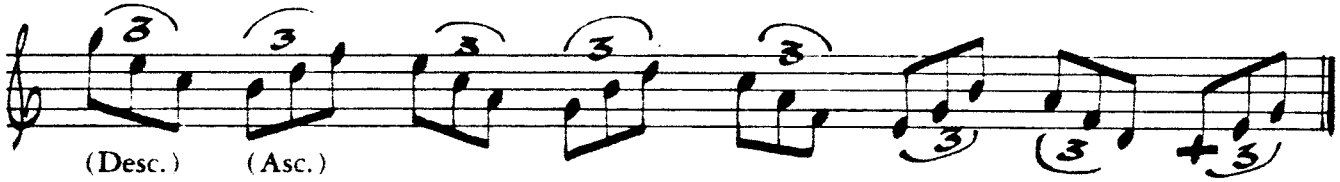
This pattern can be used for C, CM6, CM7 or CM9.

Practice Pattern No. 79 in all keys.

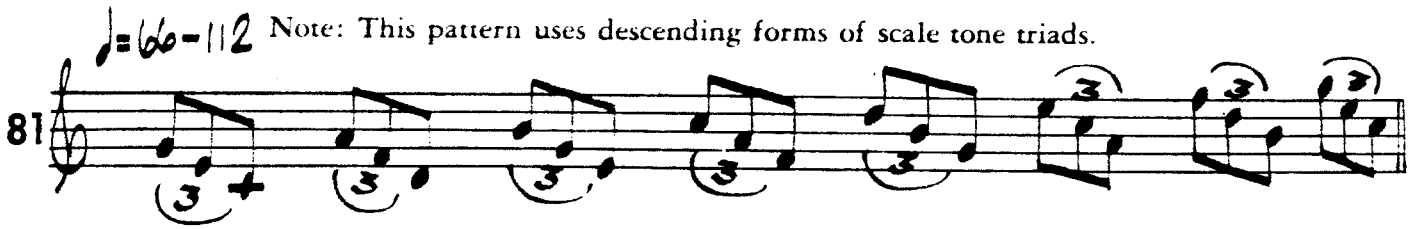
Note: This is an example of the use of alternating ascending and descending forms of the triads in the previous pattern.



This pattern can be used for C, CM6, CM7 or CM9.

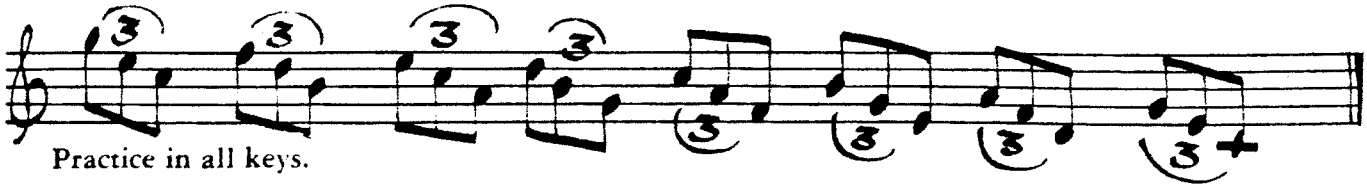


Practice Pattern No. 80 in all keys.



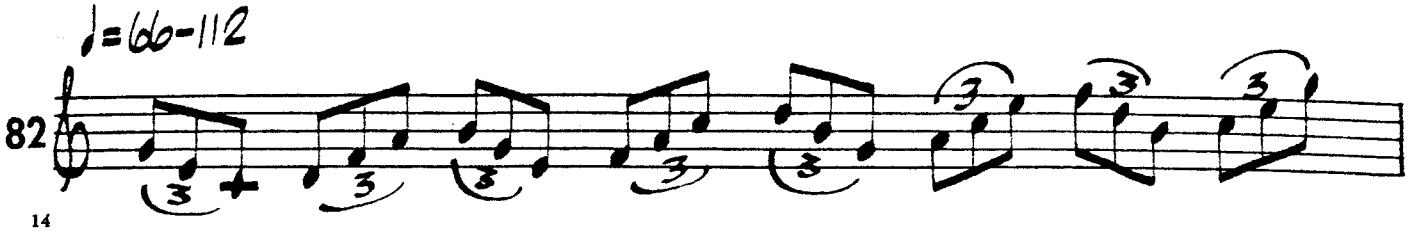
Note: This pattern uses descending forms of scale tone triads.

This pattern can be used for C, CM6, CM7 or CM9.



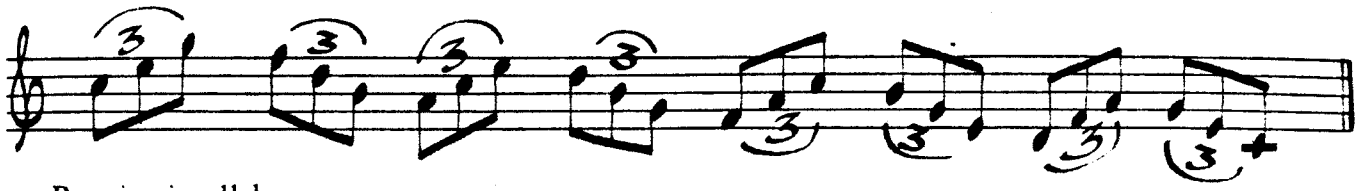
Practice in all keys.

Note: This is an example of the use of alternating ascending and descending forms of the triads in the previous pattern.



14

This pattern can be used for C, CM6, CM7 or CM9.



Practice in all keys.

SEVENTH CHORDS ON MAJOR SCALE TONES

It is possible to develop patterns for improvisation by using *seventh* chords built on each tone of a major scale. It is important to understand that at this point we are not using the term *seventh chord* to mean a specific type of seventh chord, but rather as a general term referring to a four-note chord which measures seven tones from bottom to top (counting the first tone as No. 1) and having the same *line to line* or *space to space* relationship previously explained for *scale tone triads*. Figure 4 illustrates once again the tones of the E Major scale.

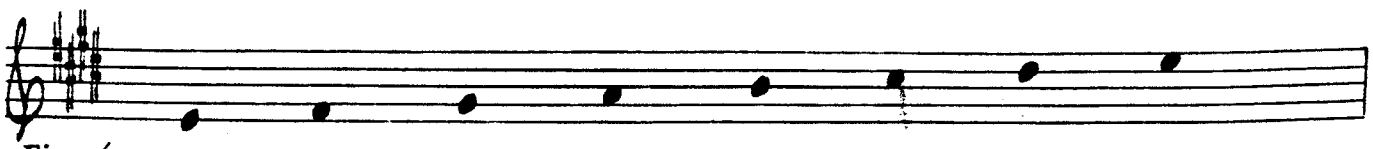


Fig. 4

[14]John Coltrane, "Milestones," on *Milestones* (Columbia CS 9428), Miles Davis Sextet.

Figure 5 illustrates the *seventh* chords formed on each tone of the E Major scale. Note that when the first note of the *seventh* chord is on a line, the remaining notes are on consecutive lines; when the first note of the *seventh* chord is on a space, the remaining notes are on consecutive spaces.

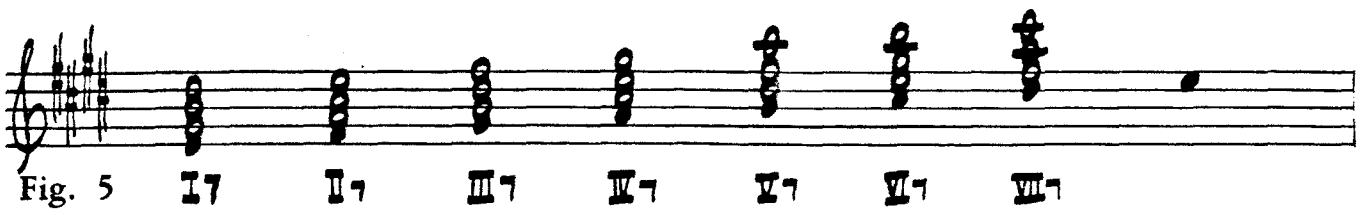


Fig. 5

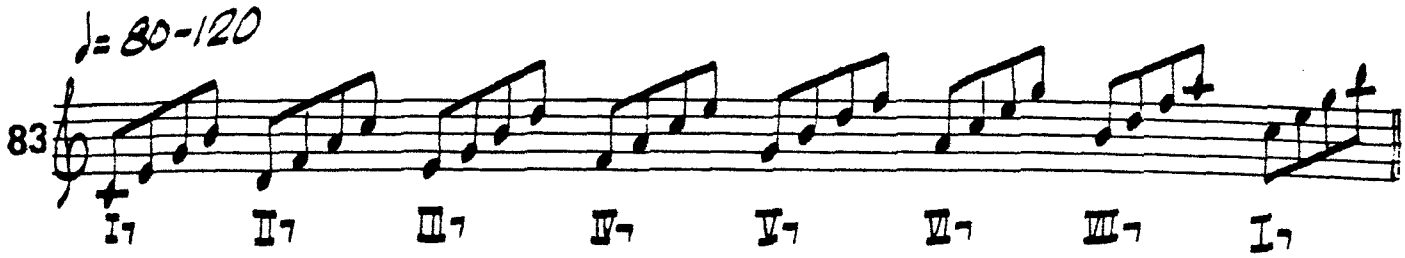
Note that the roman numerals are followed by the arabic number 7 which is only used to differentiate between the *scale tone triads* previously discussed and the *scale tone sevenths* presently being covered. (At a later point in the book we will be using a modified version of this roman numeral system to translate more completely chord types in any key.)

Figure 6 spells out the specific tones of each *seventh chord* belonging to the E major scale:

Fig. 6

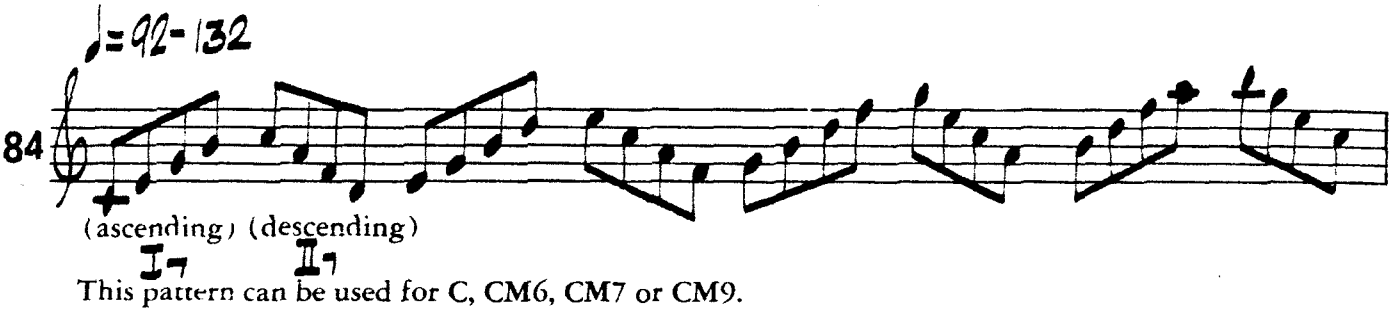
The I7 chord in the key of E major contains the notes—E, G-Sharp, B, D-Sharp.
The II7 chord in the key of E major contains the notes—F-Sharp, A, C-Sharp, E.
The III7 chord in the key of E major contains the notes—G-Sharp, B, D-Sharp, F-Sharp.
The IV7 chord in the key of E major contains the notes—A, C-Sharp, E, G-Sharp.
The V7 chord in the key of E major contains the notes—B, D-Sharp, F-Sharp, A.
The VI7 chord in the key of E major contains the notes—C-Sharp, E, G-Sharp, B.
The VII7 chord in the key of E major contains the notes—D-Sharp, F-Sharp, A, C-Sharp.

We have shown that it is possible to construct a *seventh* chord on each tone of the E major scale. This same principle applys to ALL major scales. The student is advised to write out the scale tone seventh chords, in the manner illustrated in figure 5, for the remaining eleven major scales before attempting to deal with Patterns No. 83 to No. 86.

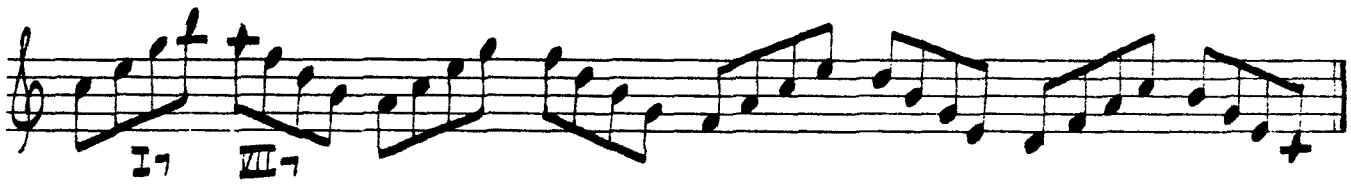


This pattern can be used for C, CM6, CM7 or CM9.

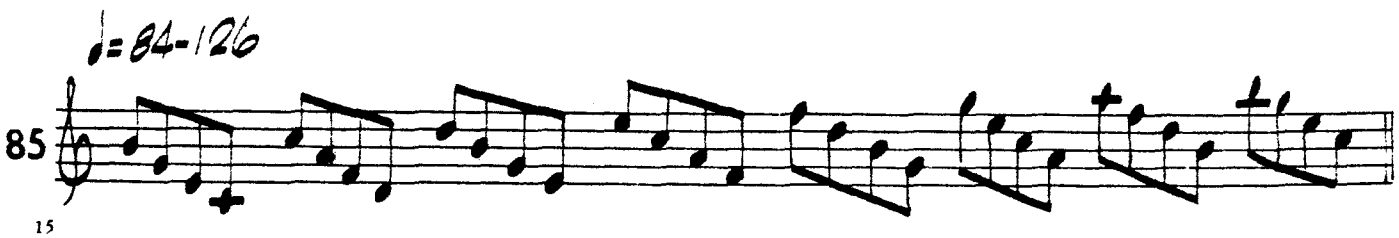
Practice in all keys.



This pattern can be used for C, CM6, CM7 or CM9.

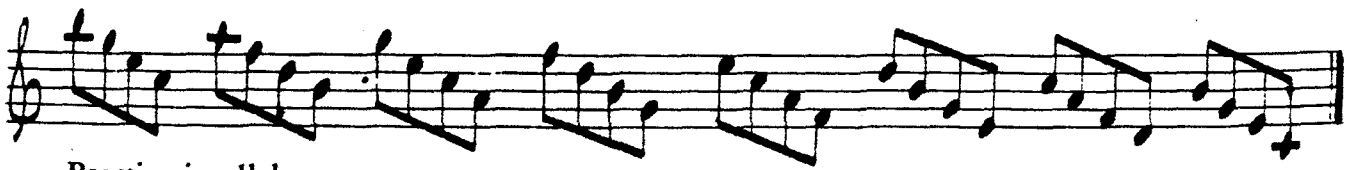


Practice in all keys.



15

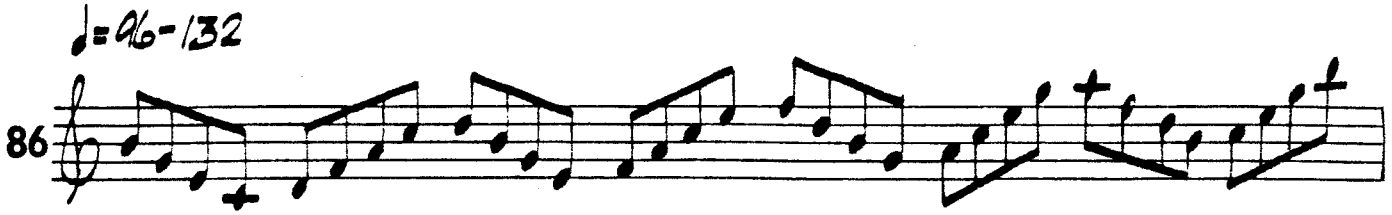
16 This pattern can be used for C, CM6, CM7 or CM9.



Practice in all keys.

[15]John Coltrane, "Straight No Chaser," on *Milestones* (Columbia CS 9428), Miles Davis Sextet.

[16]John Coltrane, "Time Was," on *First Trane* (Prestige 7609), John Coltrane Group.



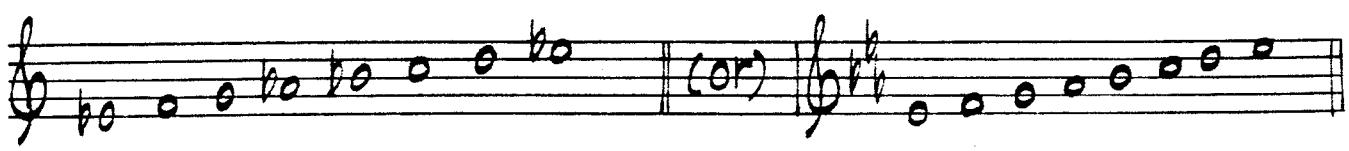
This pattern can be used for C, CM6, CM7 or CM9.

Practice in all keys.

MODES

A mode is the complete circulation of a (major) scale begun and completed on any one of its tones.[17] This definition implies the fact that a *mode* is a scale which has a specific relationship to a *key*. There are seven such modes used in improvisation: Ionian, Dorian, Phrygian, Lydian, Mixolydian, Aeolian and Locrian. The term Ionian mode and major scale are synonomous. For example: to play an Ionian mode on the note E-Flat means the same as playing the E-Flat major scale (See figure 7).

Fig. 7



E-Flat Ionian Mode

E-Flat Major Scale

[17]George Russell, *The Lydian Chromatic Concept* (New York: Concept Publishing Company, 1959). P. iv.

The *Dorian mode* is a scale which starts on the second tone of ANY MAJOR SCALE and continues in successive tones to the octave, applying the key signature of its *parent scale*[18]. For example: A Dorian mode built on the note F uses the Key signature of E-Flat major, because the note F is the second tone of the E-Flat major scale (See figure 8).

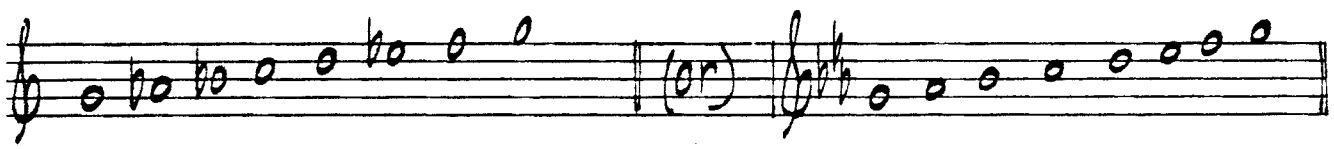
Fig. 8

"F" Dorian Mode

Dorian Mode in "Key" of E-Flat which starts on F.

The *phrygian mode* is a scale which starts on the third tone of ANY MAJOR SCALE and continues in successive tones to the octave, applying the key signature of its parent scale. For example: A phrygian mode on G uses the key signature of E-Flat major because the note G is the third tone of the E-Flat major scale (See figure 9).

Fig. 9

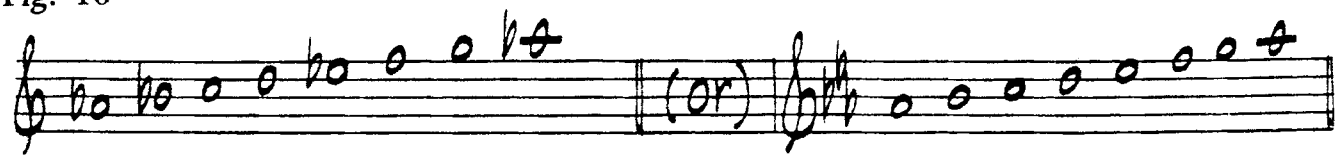


"G" Phrygian Mode

Phrygian Mode in the "Key" of E-Flat which starts on G.

The *lydian mode* is a scale which starts on the fourth tone of ANY MAJOR SCALE and continues in successive tones to the octave, applying the key signature of its parent scale. For example: A lydian mode on A-Flat uses the key signature of E-Flat major because the note A-Flat is the fourth tone in the E-Flat major scale (See figure 10).

Fig. 10



"A-Flat" Lydian Mode

Lydian Mode in "Key" of E-Flat which starts on A-Flat.

[18]Russell, p. 2.

The *mixolydian mode* is a scale which starts on the fifth tone of ANY MAJOR SCALE and continues in successive tones to the octave, applying the key signature of its parent scale. For example: A mixolydian mode on B-Flat uses the key signature of E-Flat major because the note B-Flat is the fifth tone in the E-Flat major scale (See figure 11).

Fig. 11

"B-Flat" Mixolydian Mode

Mixolydian Mode in "Key" of E-Flat which starts on B-Flat.

The *aeolian mode* is a scale which starts on the sixth tone of ANY MAJOR SCALE and continues in successive tones to the octave, applying the key signature of its parent scale. For example: An aeolian mode on C uses the key signature of E-Flat major because the note C is the sixth tone in the E-Flat major scale (See figure 12).

Fig. 12

"C" Aeolian Mode

Aeolian Mode in "Key" of E-Flat which starts on C.

The *locrian mode* is a scale which starts on the seventh tone of ANY MAJOR SCALE and continues in successive tones to the octave, applying the key signature of its parent scale. For example: A locrian mode on D uses the key signature of E-Flat major because the note D is the seventh tone in the E-Flat major scale (See figure 13).

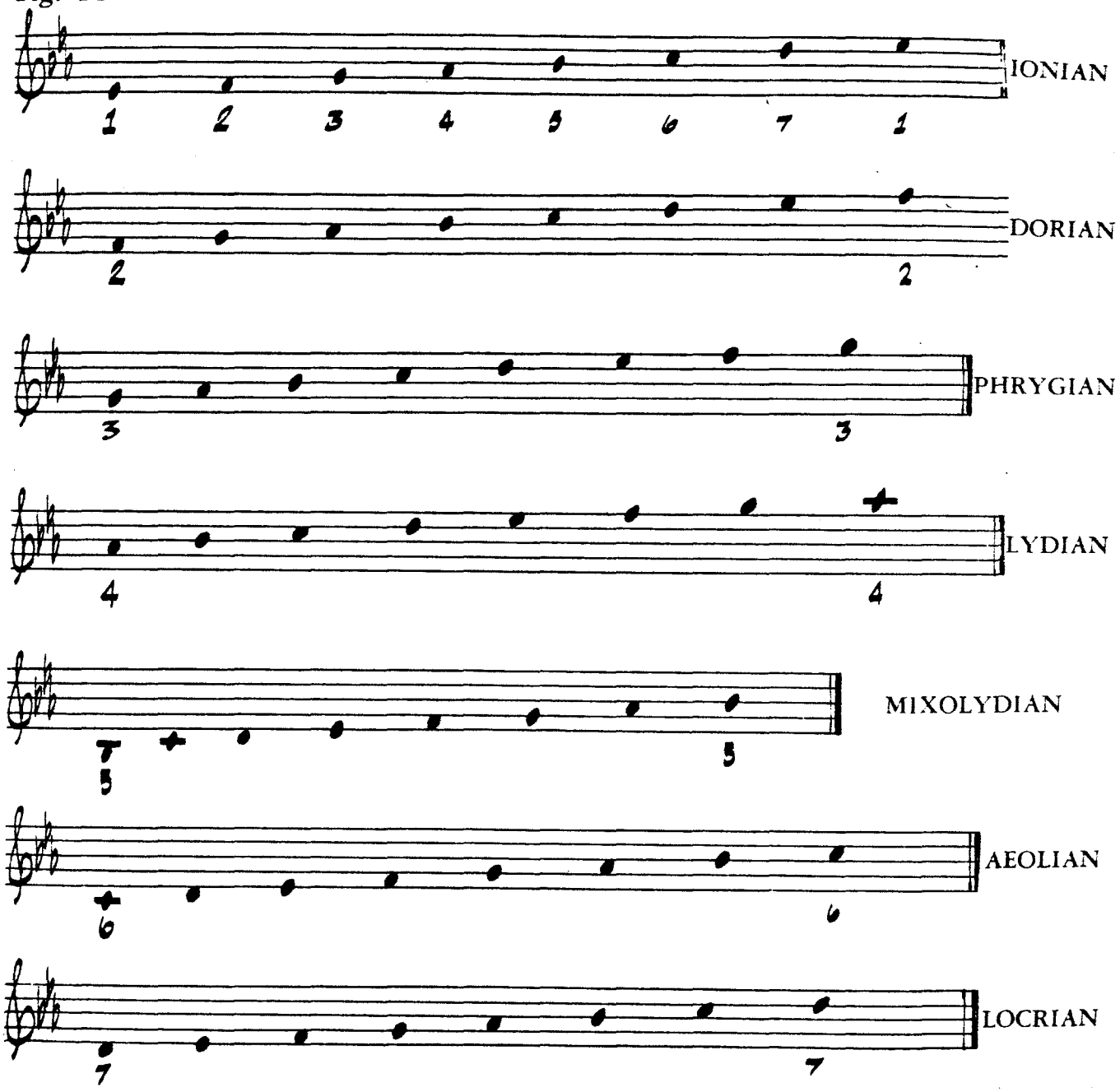
Fig. 13

"D" Locrian Mode

Locrian Mode in "Key" of E-Flat which starts on D.

It is important for the student to understand that the term *parent key* has been used for the purpose of establishing the accidentals belonging to the particular mode relating the mode to a specific key signature, rather than defining the construction of each mode by measuring the distances between each tone. With this parent key relationship, we establish a *family* of modes belonging to each major key. Thus, each major key contains a family of seven different modes. Figure 14 represents the key of E-Flat major, with its related modes.

Fig. 14



At this point it would be extremely advisable for the student to write out the family of modes belonging to every major key in the manner illustrated in figure 14. Be sure that you can recite the name of any mode along with its parent key and succession of notes, and play on your instrument before proceeding any further. There will be references to modes, in later pages, to establish the basic sound of certain types of chords, and to be used as supplementary material to some "basic" chord type scales.

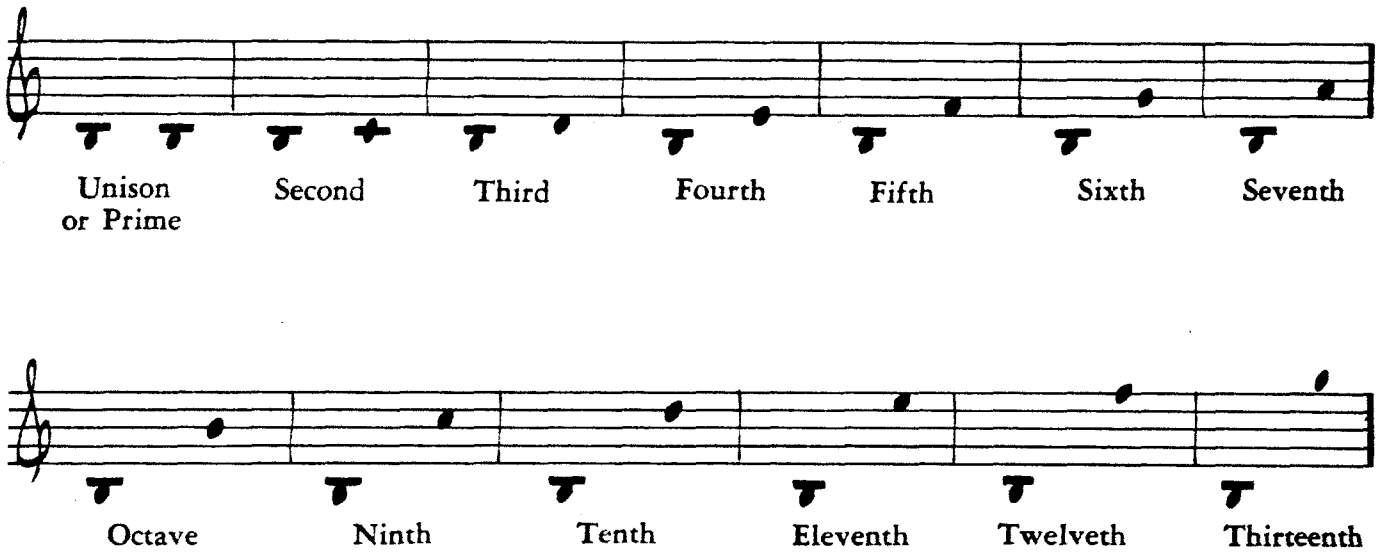
INTERVALS

It may be necessary, at times, to analyze chord movements and patterns, using ***interval*** terminology. With this in mind, the student should acquaint himself thoroughly with the following facts regarding ***intervals.***

There are several types of intervals. An interval is the measurement of the ***distance*** and ***quality*** between any two notes. Intervals are usually measured from the bottom note, upward.

The term ***distance*** refers to the exact number of "letter names" between the two notes of the interval in question (counting the first letter as No. 1). Examples of such ***distances*** are: unison or prime, second, third, fourth, fifth, sixth, seventh, octave (not ***eighth***), ninth, tenth, eleventh, twelveth, and thirteenth. Figure 15 illustrates these ***distances*** from the starting note "B":

Fig. 15



Intervals of an ***octave*** or less are called ***simple*** intervals. Intervals larger than an ***octave*** are called ***compound*** intervals.

The term ***quality*** refers to the exact number of ***whole*** and ***half*** steps existing between the two notes of the interval in question. Examples of terms relating to ***quality*** are: Major, Minor, Perfect, Augmented and Diminished. Therefore, all intervals can be named properly according to both ***distance*** and ***quality.***

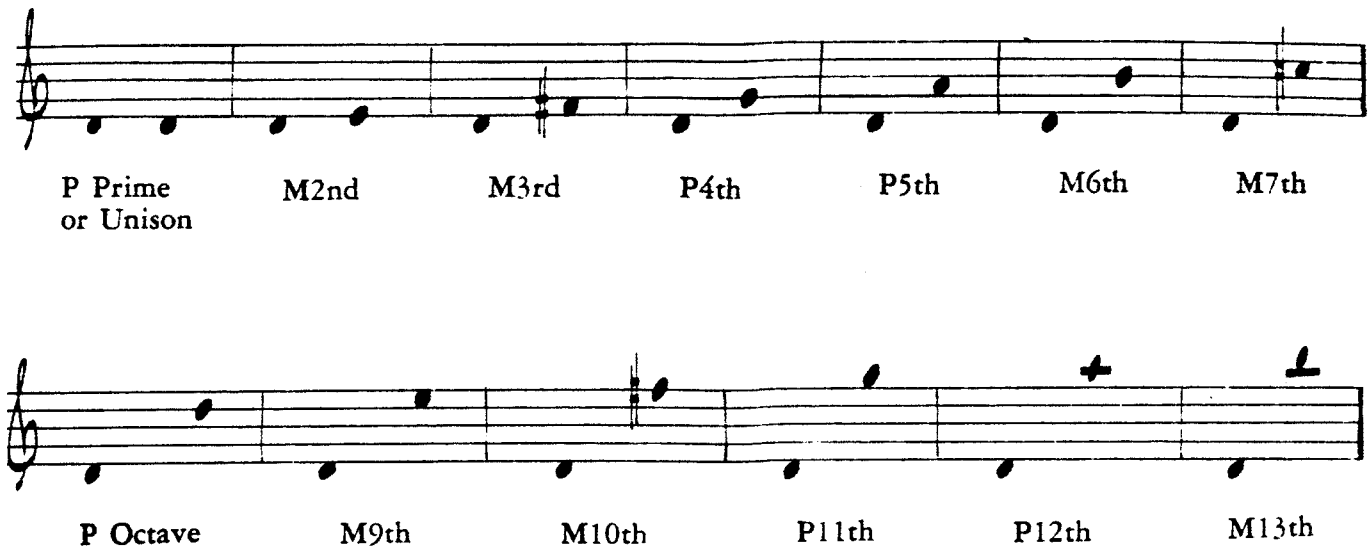
Definitions of specific types of intervals will be stated in terms of the relationship of the top note of the interval to the Major Scale of the bottom note.

"MAJOR" AND "PERFECT" INTERVALS

The *quality* of an interval is called MAJOR when the top note may be found within the Major scale of the bottom note. Symbol "M" is for Major interval.

The *quality* of an interval is called PERFECT when both notes of the interval are found in each others Major scale. Symbol "P" is for Perfect interval. Figure 16 illustrates the MAJOR and PERFECT intervals formed using the starting tone "D":

Fig. 16



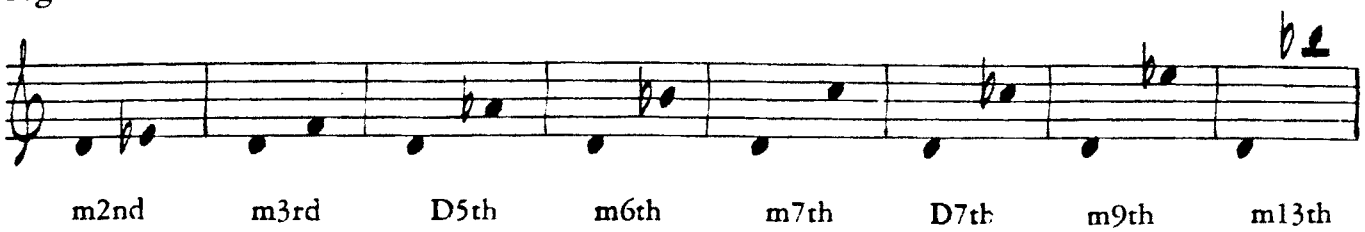
"MINOR" AND "DIMINISHED" INTERVALS

The *quality* of an interval is called MINOR if it is ½ step smaller than MAJOR. Symbol "m" is for MINOR interval.

The *quality* of an interval is called DIMINISHED if it is ½ step smaller than MINOR. Symbol "D" is for DIMINISHED interval.

All PERFECT intervals, when they are ½ step smaller, are called DIMINISHED. Figure 17 illustrates the more commonly used MINOR and DIMINISHED intervals (using the starting tone "D"):

Fig. 17



"AUGMENTED" INTERVALS

The *quality* of an interval which is ½ step larger than MAJOR or PERFECT is called AUGMENTED. Symbol "A" is for AUGMENTED intervals. The most common AUGMENTED intervals are the: AUGMENTED FOURTH, AUGMENTED FIFTH, AUGMENTED NINTH and AUGMENTED ELEVENTH. Figure 18 illustrates these intervals from the starting note "D":

Fig. 18

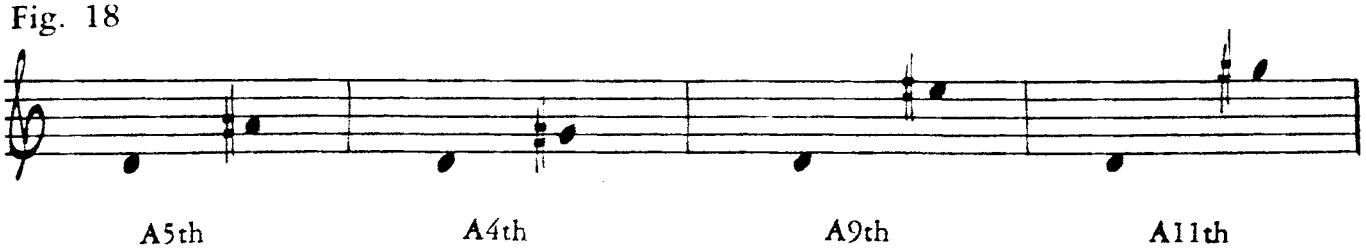
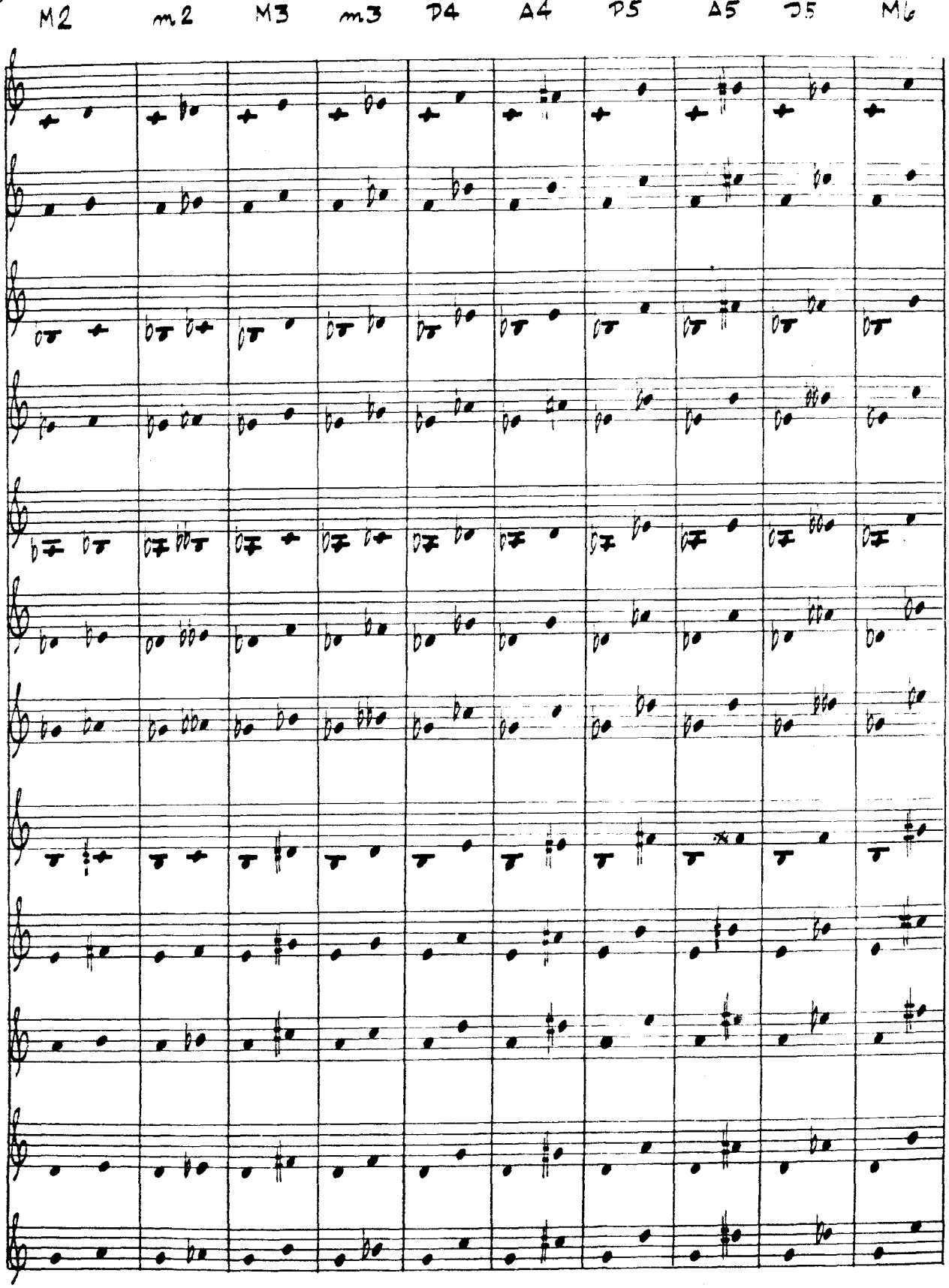


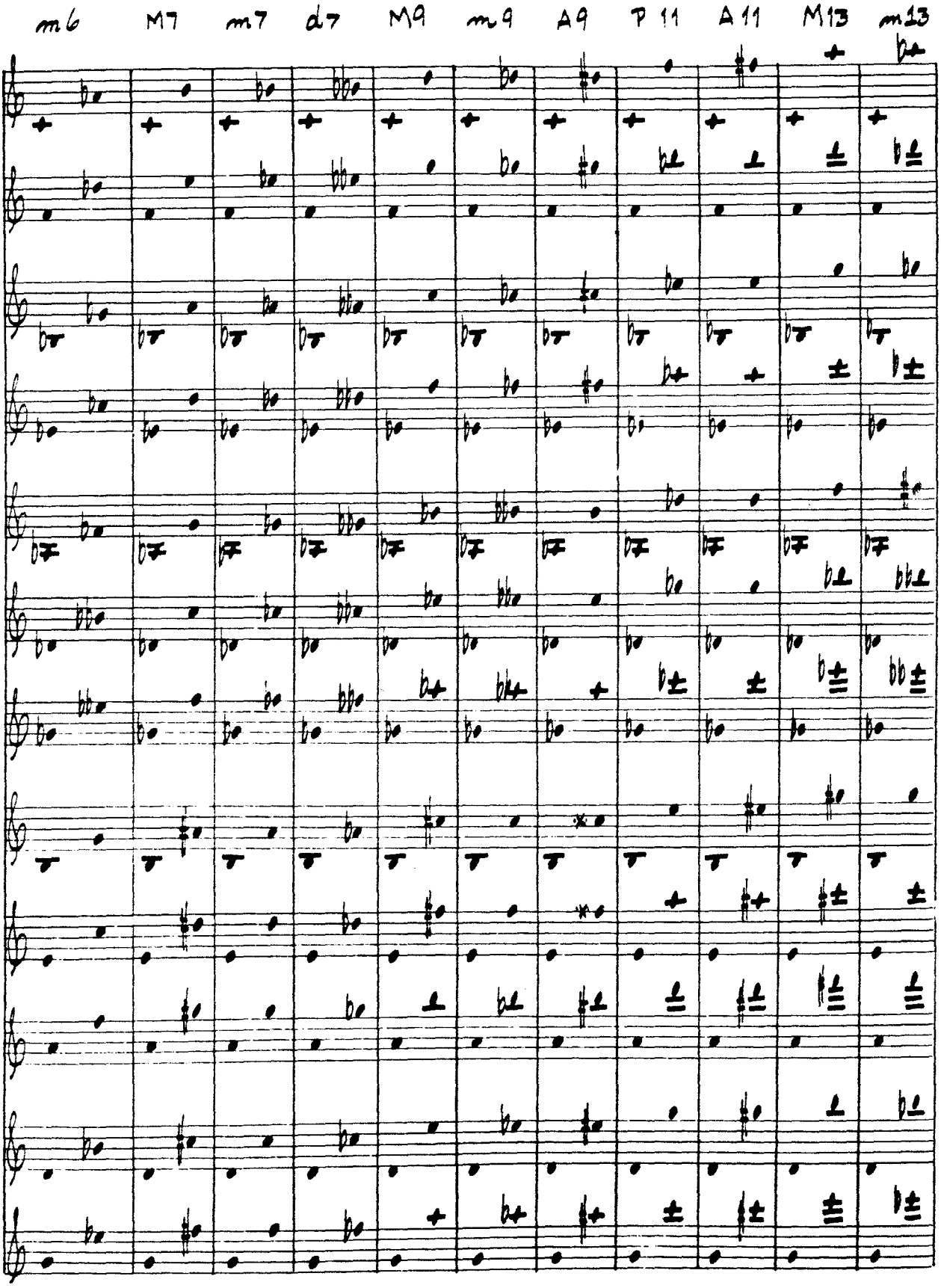
Figure 19 is a reference chart which illustrates the more commonly used intervals from various starting notes.

Figure 19 is a reference chart which illustrates the more commonly used intervals from various starting notes.

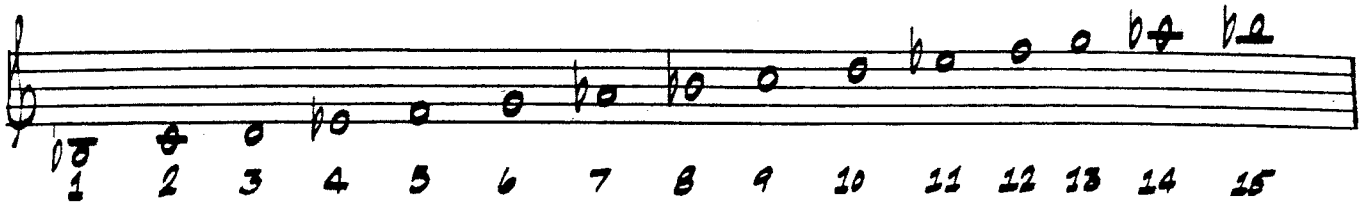
𝄪 —Double Sharp (Raises pitch 1 step)
𝄫 —Double Flat (Lowers pitch 1 step)

Fig. 19



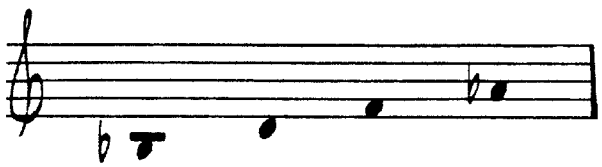

m6
M7
m7
d7
M9
m9
A9
P 11
A 11
M13
m13

DOMINANT CHORDS AND RESPECTIVE "SCALES"



The B-Flat mixolydian mode is illustrated in two octaves. The numbers under each tone indicate the position of that tone in this scale. Note that beyond the first octave, tone No. 8, the tones have the same letter names and the numbers corresponding to these tones refer to the respective distances from the starting tone, No. 1.

The following two chords, Dominant Seventh and Dominant Ninth Chord, will be formed by applying a numerical formula to the B-Flat Mixolydian mode. The corresponding alphabetical symbols will also be indicated.
By extracting tones No. 1-3-5-7 from the B-Flat Mixolydian mode, we arrive at the notes forming the B-Flat Dominant Seventh Chord (more commonly called the B-Flat Seventh Chord).



symbol: B♭ 7

Tones No. 1-3-5-7-9 of the B-Flat Mixolydian Mode form the B-Flat Dominant Ninth Chord (more commonly called the B-Flat Ninth Chord).

Symbol: B♭ $^{9}_{9}$

Alternate Symbol: B♭ 7

Alternate Symbol: B♭ $7^{(9)}$

The student must remember to relate each mixolydian mode to its *parent* key before attempting to apply the numerical formulas for the formation of dominant seventh and ninth chords and before attempting to play the "scale" (mixolydian mode) of the two chords just mentioned. Note that the same scale is used for dominant seventh and dominant ninth chords having the same root. Figure 20 is a chart which shows all dominant seventh chords and respective parent keys.

Fig. 20

CHORD	PARENT KEY	SCALE OF CHORD
C7	F Major	Mixolydian mode starting on C
F7	B♭ Major	Mixolydian mode starting on F
B♭ 7	E♭ Major	Mixolydian mode starting on B♭
E♭ 7	A♭ Major	Mixolydian mode starting on E♭
A♭ 7	D♭ Major	Mixolydian mode starting on A♭
D♭ 7 [19] / C♯ 7 [19]	G♭ Major [20] / F♯ Major [20]	Mixolydian mode starting on D♭ / Mixolydian mode starting on C♯
G♭ 7 [19] / F♯ 7 [19]	C♭ Major [20] / B Major [20]	Mixolydian mode starting on G♭ / Mixolydian mode starting on F♯
B7	E Major	Mixolydian mode starting on B
E7	A Major	Mixolydian mode starting on E
A7	D Major	Mixolydian mode starting on A
D7	G Major	Mixolydian mode starting on D
G7	C Major	Mixolydian mode starting on G

[19]Enharmonic Chords *sound* the *same*, but are spelled differently.

[20]Enharmonic Keys *sound* the *same*, but are spelled differently.

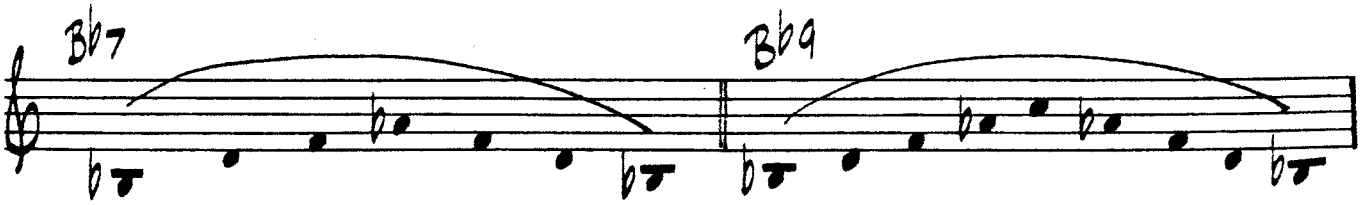
Figure 21 is a chord tone chart based on the *mixolydian* modes of chord roots.

Fig. 21

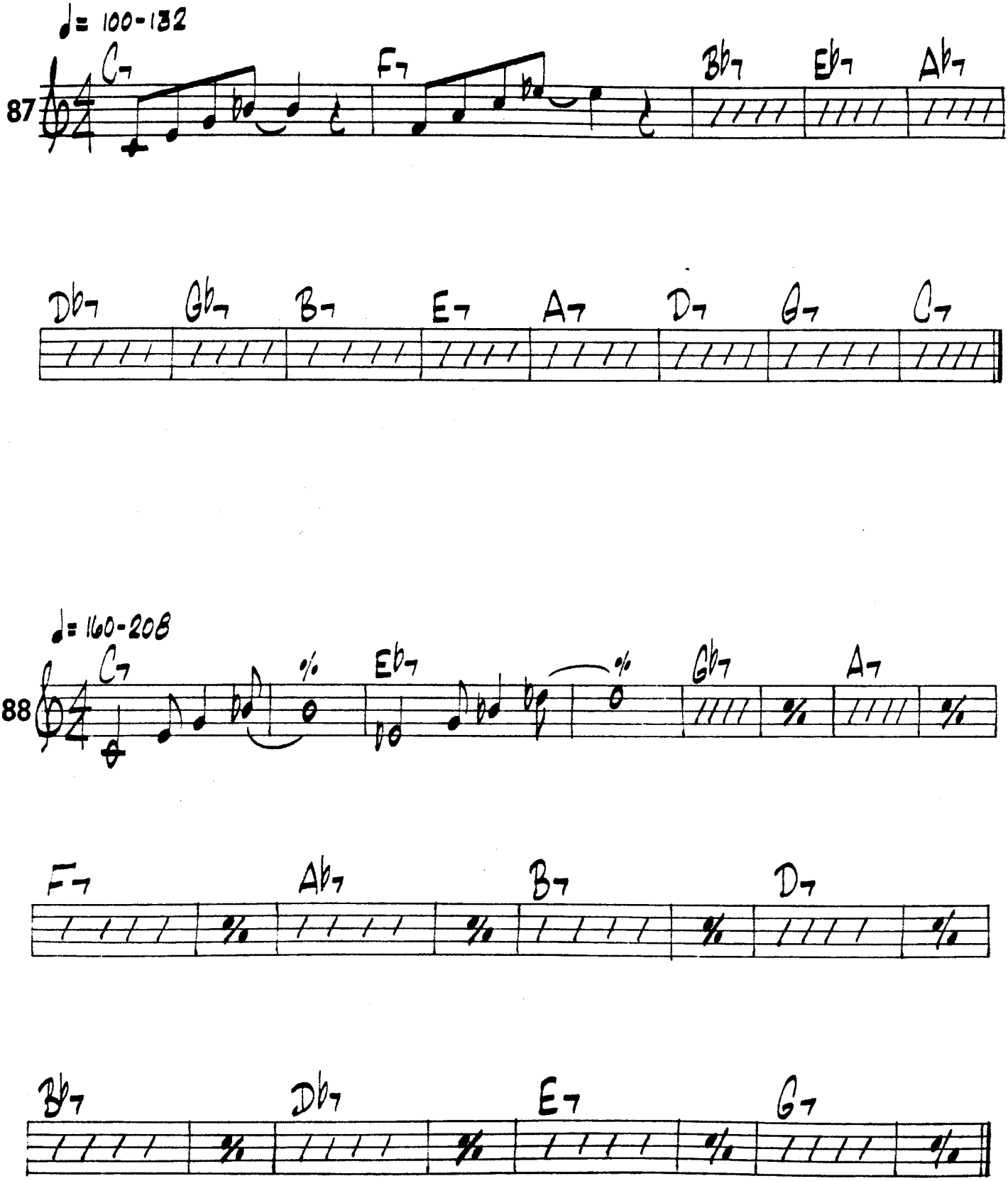
13th	A	D	G	C	F	B♭	E♭	G♯	C♯	F♯	B	E
11th	F	B♭	E♭	A♭	D♭	G♭	C♭	E	A	D	G	C
9th	D	G	C	F	B♭	E♭	A♭	C♯	F♯	B	E	A
7th	B♭	E♭	A♭	D♭	G♭	C♭	F♭	A	D	G	C	F
5th	G	C	F	B♭	E♭	A♭	D♭	F♯	B	E	A	D
3rd	E	A	D	G	C	F	B♭	D♯	G♯	C♯	F♯	B
1 (ROOT)	C	F	B♭	E♭	A♭	D♭	G♭	B	E	A	D	G

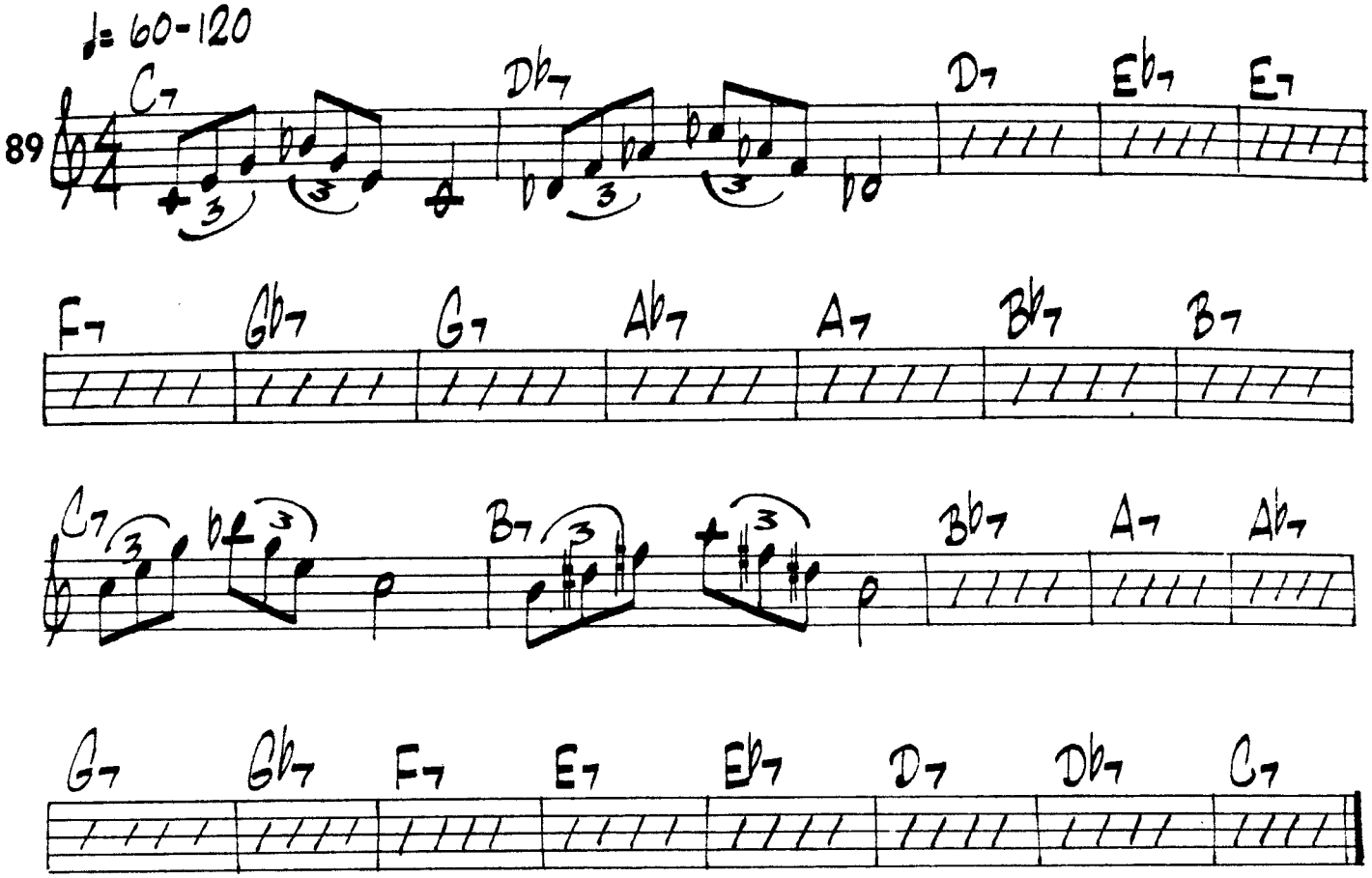
This chord tone chart organizes the tones of all Mixolydian Modes in the order needed for the construction of Dominant Seventh and Dominant Ninth Chords. Reading up from the chord root C (also indicated as tone No. 1), we see the tones: C, E, G, B-Flat, D, F, A, which are all the notes in the C Mixolydian Mode. Note that the ninth, eleventh, and thirteenth are also the second, fourth and sixth tones respectively, as they are the same letter names.
In preparation for the following patterns, be able to recite, write and play the following chords as they are extracted from every Mixolydian Mode: Dominant Seventh Chords and Dominant Ninth Chords. Use the illustrated *routine form* for playing chord tones. It does not require any specific rhythm or tempo.

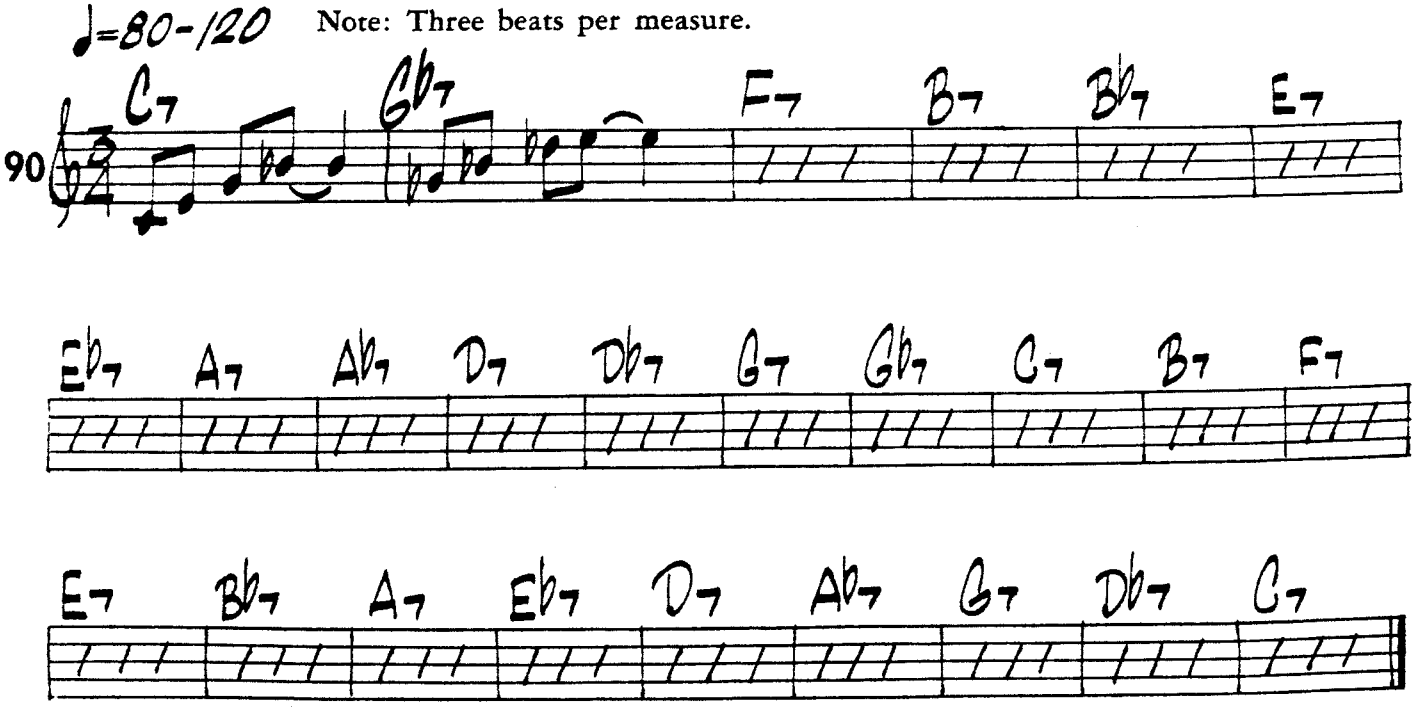
ROUTINE FORM

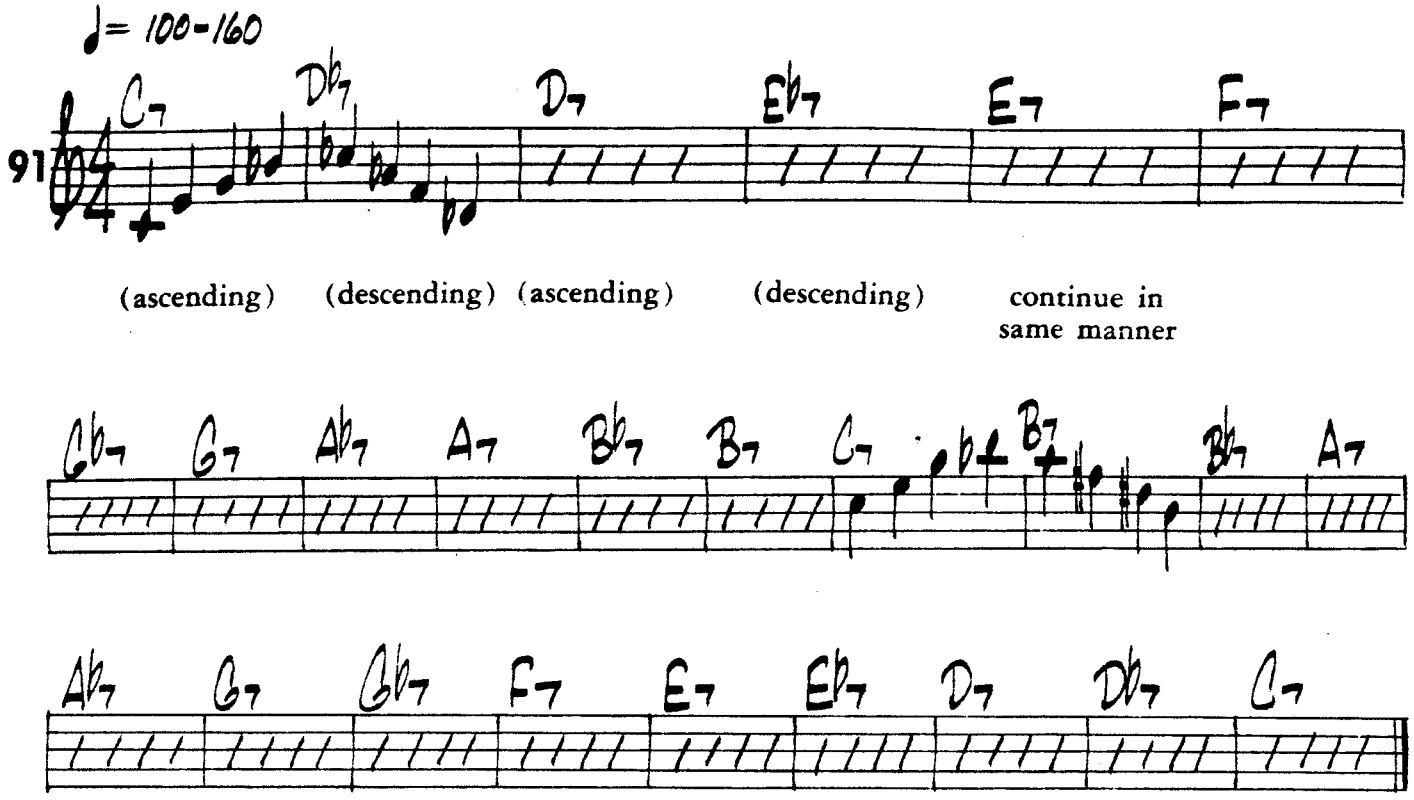


The following patterns begin with Dominant Seventh Chords. Note the alphabetical symbols and metronome markings.

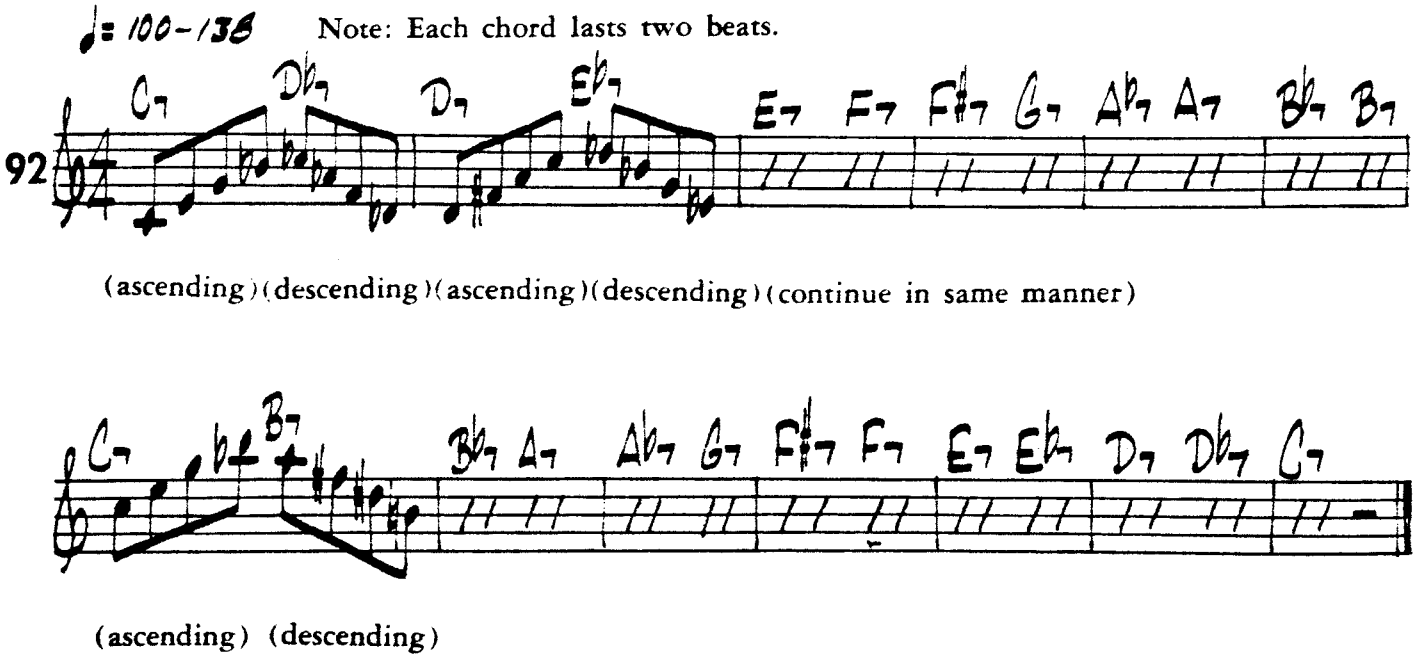

♩= 100-132
87
C-7
F-7
Bb-7
Eb-7
Ab-7
Db-7
Gb-7
B-7
E-7
A-7
D-7
G-7
C-7
♩= 160-208
88
C-7
%
Eb-7
%
Gb-7
A-7
F-7
Ab-7
B-7
D-7
Bb-7
Db-7
E-7
G-7


♩= 60-120
89
C7
Db7
D7
Eb7
E7
F7
Gb7
G7
Ab7
A7
Bb7
B7
C7
B7
Bb7
A7
Ab7
G7
Gb7
F7
E7
Eb7
D7
Db7
C7

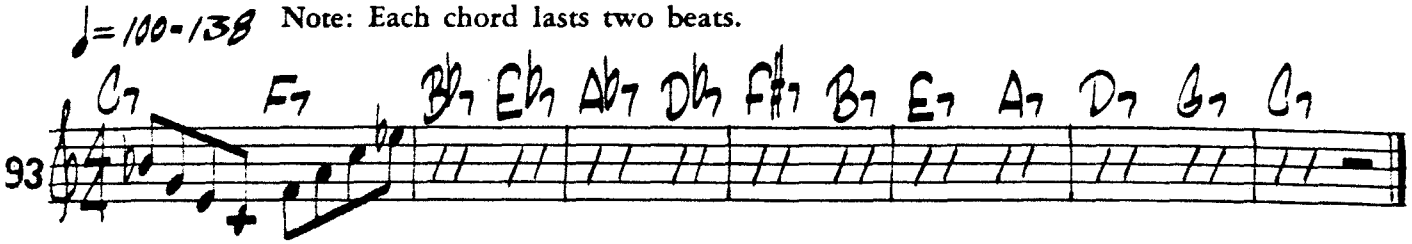

♩=80-120
Note: Three beats per measure.
90
C7
Gb7
F7
B7
Bb7
E7
Eb7
A7
Ab7
D7
Db7
G7
Gb7
C7
B7
F7
E7
Bb7
A7
Eb7
D7
Ab7
G7
Db7
C7



Practice Pattern No. 91 by reversing the chord tone direction: descending, ascending.

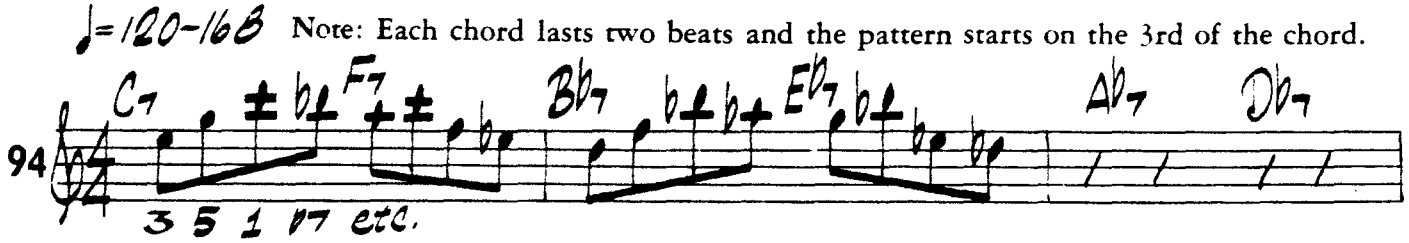


Practice Pattern No. 92 reversing direction of the chord tones: descending, ascending.

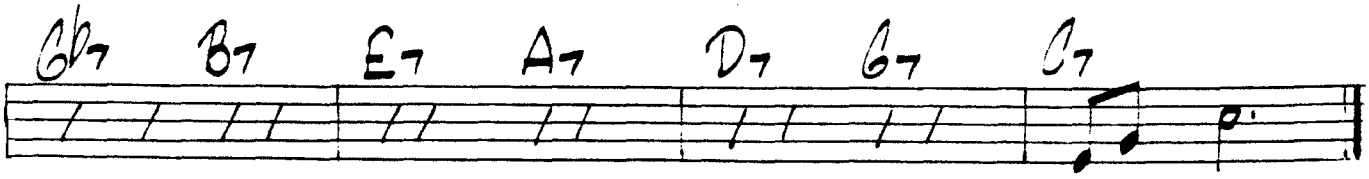


(descending) (ascending) (continue in same manner)

Practice Pattern No. 93 reversing the direction of chord tones: ascending, descending.

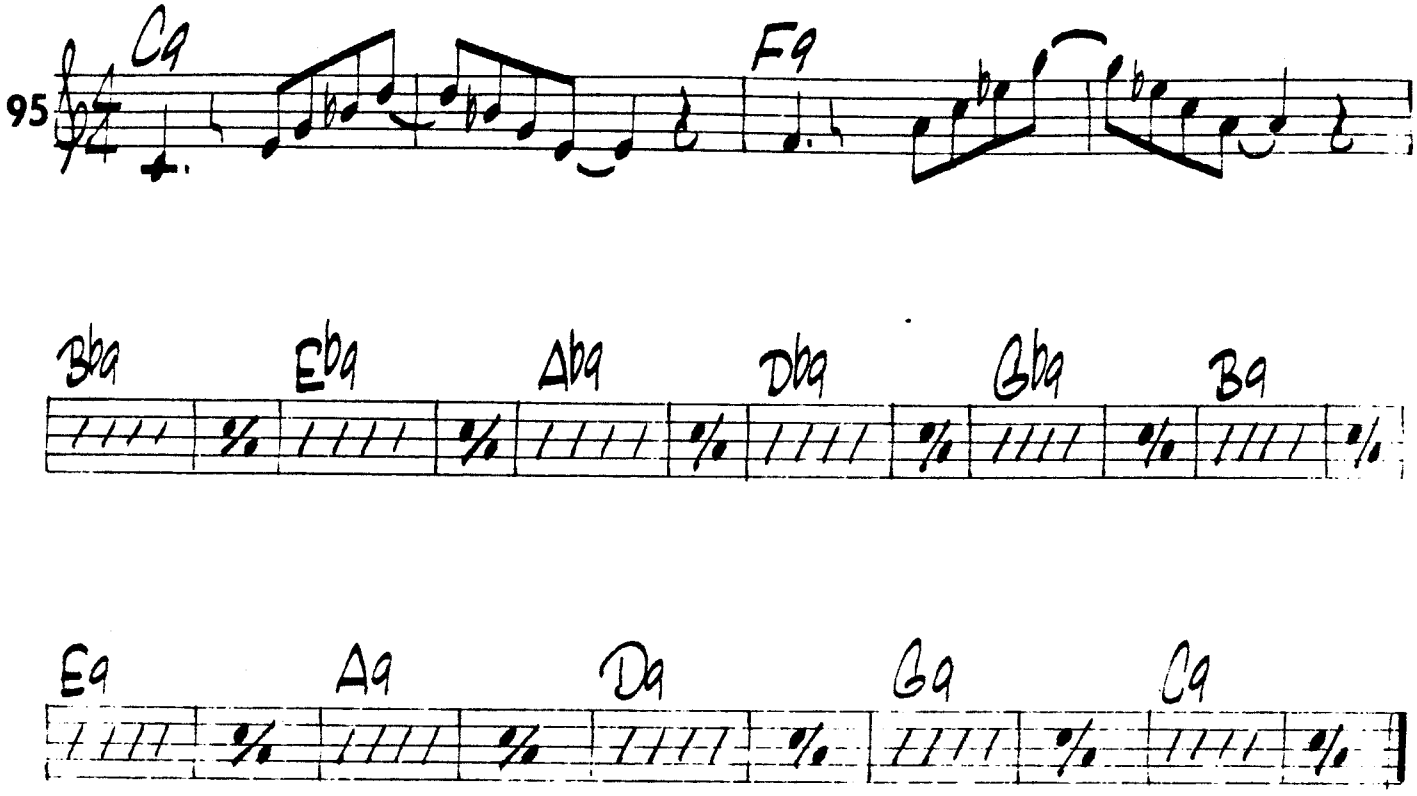


(Arabic numbers indicate the position of respective chord tones for use in this pattern.)

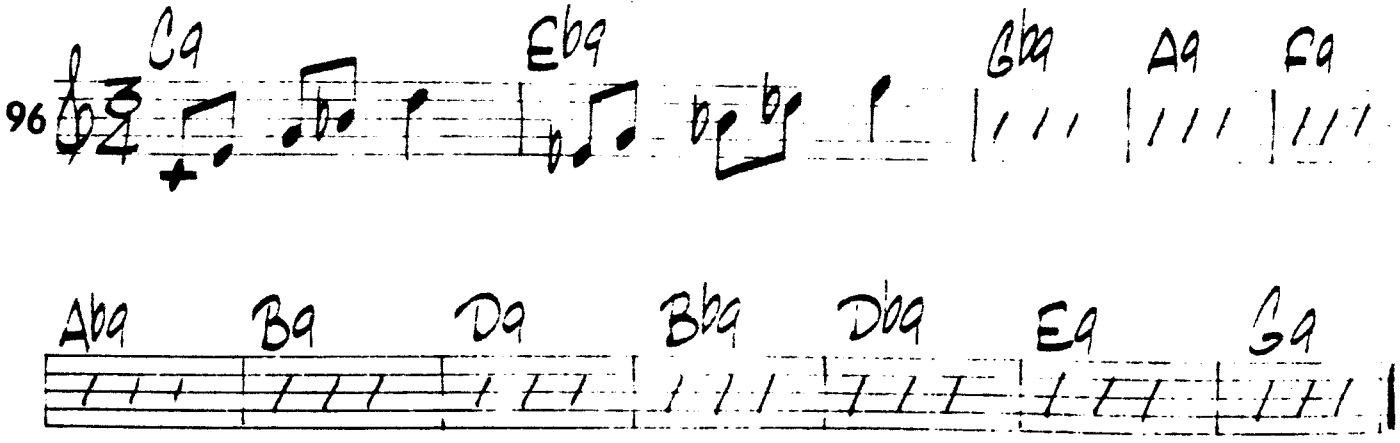


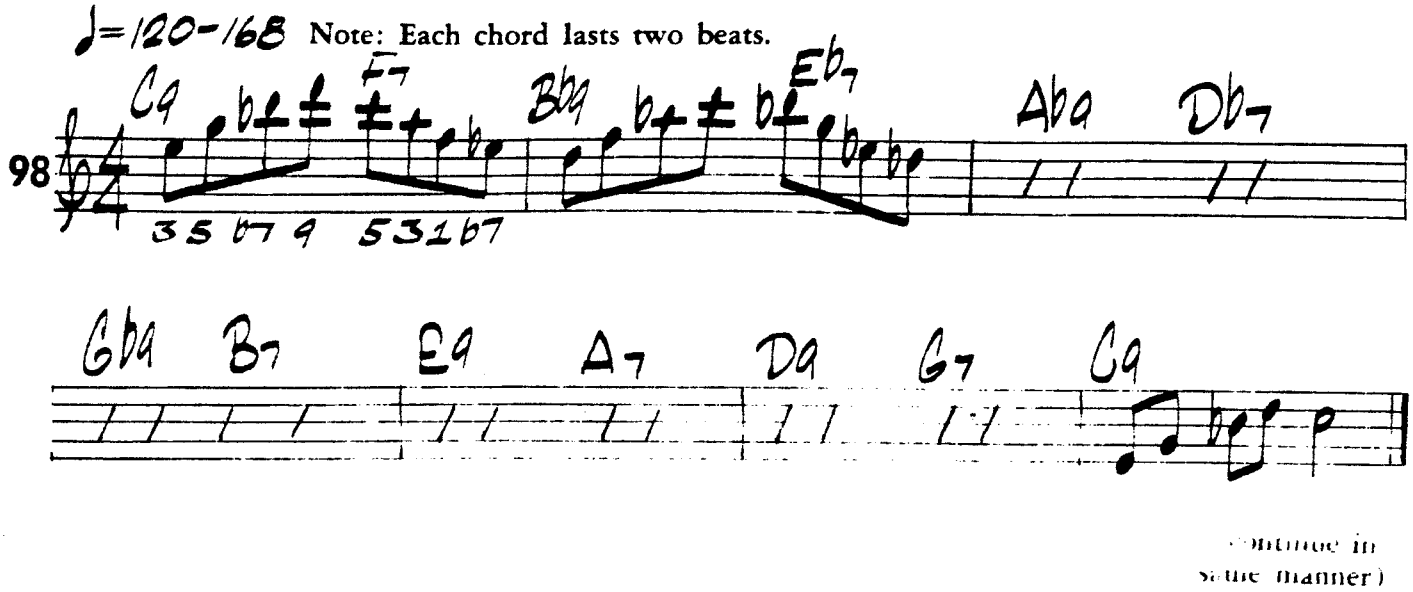
(continue in same manner)

♩=108-162 Note: Two measures per chord, ending on the *third* of the chord.



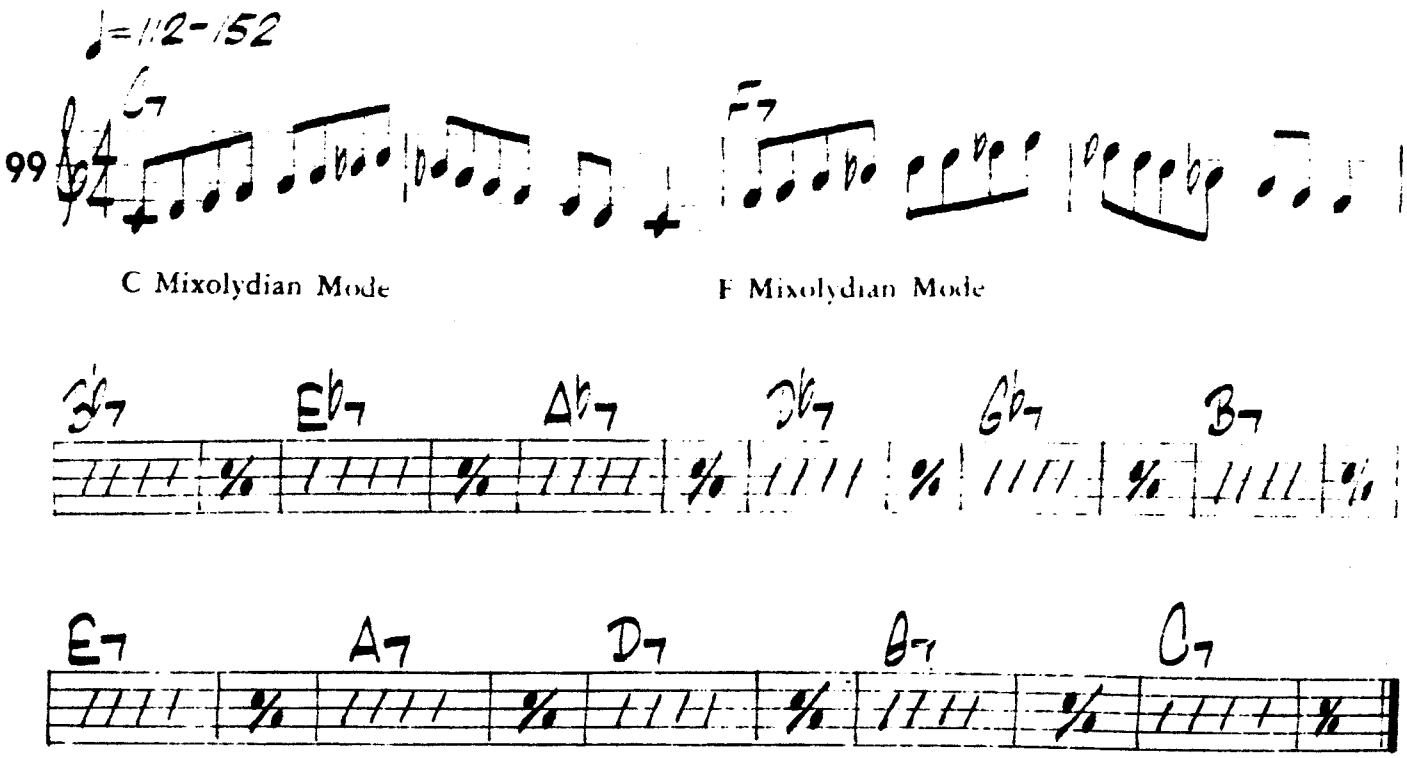
♩=80-120 Note: Three beats per chord.

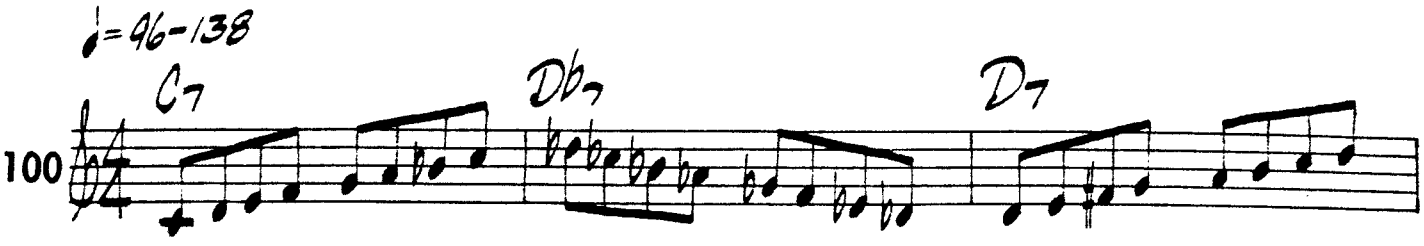




(Continue in
same manner)

We have been practicing patterns on the two types of dominant *chords*, formed by extracting their respective tones from the mixolydian mode of the chord root. Now we will concern ourselves with various patterns on the scale (mixolydian mode) of the chord. You will notice that the chord symbols for the following patterns will be those of the dominant seventh. However, the student must bear in mind that the dominant seventh and dominant ninth chords use the same basic scale, a mixolydian mode on the chord root. The use of the dominant seventh chord symbol in the following patterns is merely for convenience, since it would be impossible to determine exactly which chord is being used when the scale is common to both of the chords mentioned.

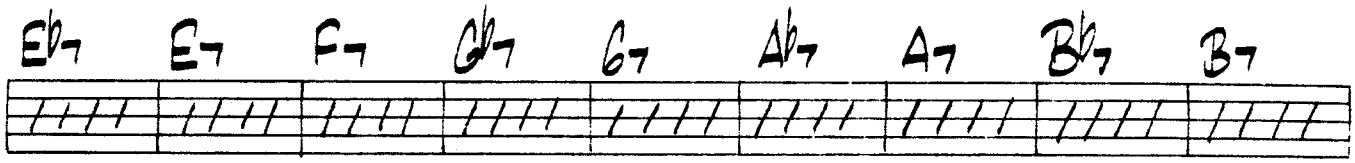




C Mixolydian (ascending)

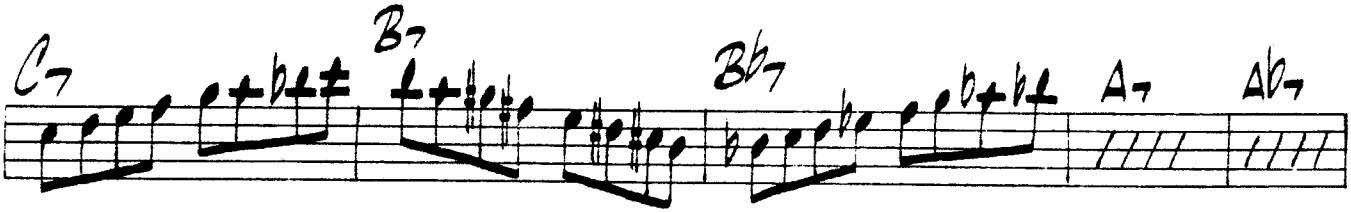
D-Flat Mixolydian (descending)

D Mixolydian (ascending)



E-Flat Mixolydian (descending)

(continue in same manner)

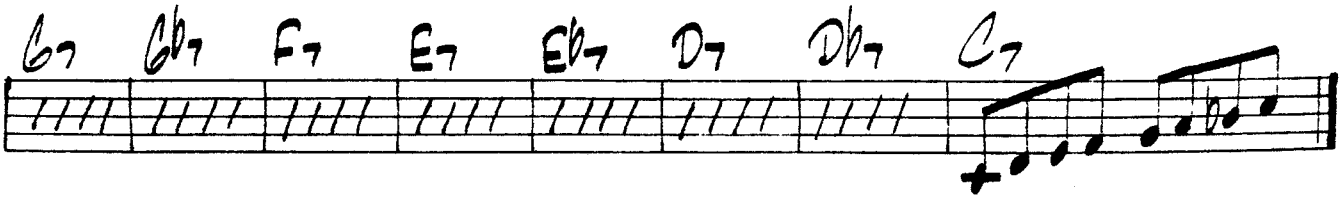


(ascending)

(descending)

(ascending)

(descending)



(continue in same manner)

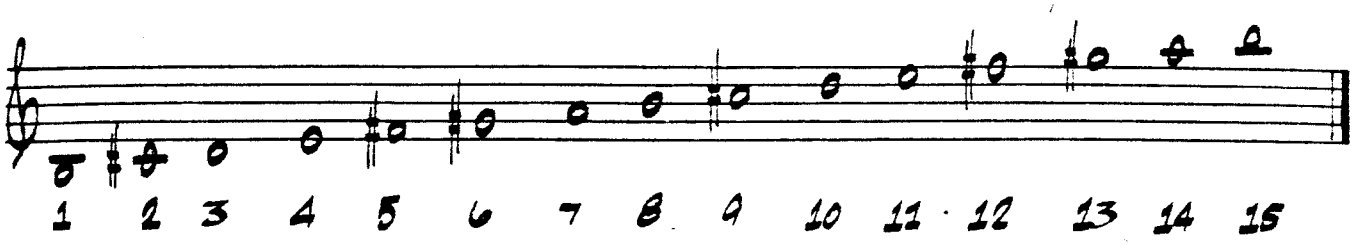
Practice Pattern No. 100 by reversing scale directions: i.e., descending, ascending.

There are several patterns in the *major chord* section that can also be used for dominant chords having the same roots. Some of these *major chord* patterns can be used without the student's having to change any of the pitches. The reason for this is due to the repetition of *like* tones in a Major scale and in a Mixolydian mode having the same starting tone. For example, the tones in a C Major scale are: C, D, E, F, G, A, B, C; the tones in a C Mixolydian mode are: C, D, E, F, G, A, B-Flat, C. The student should observe that the difference in the two scales lies between two tones: the B of the C Major scale and the B-Flat of the C Mixolydian mode. Consequently, any of the major chord patterns that do not use the note B can also be used for a dominant type chord which has the root of C. The following is a list of such patterns which fit the preceeding description: Patterns No. 44-59. The student should be sure that he recognizes the *double* value of these patterns and not hesitate to make a special effort to review them.

There are still more patterns in the *major chord* section that can be used for dominant chords having the same root, but some of the pitches will have to be altered. This can be done by using a mixolydian mode starting on the same tone as the illustrated major chord pattern. For example, pattern No. 60 is a major chord pattern based on the C Major scale. To use this pattern for a dominant chord having the root C, the student must use in place of the C Major scale a C Mixolydian mode. This will automatically provide the tone B-Flat, which is necessary for any dominant type chord having the root C. After having practiced Pattern No. 60 in this manner, the student can use it for a C7 or C9 chord. The student should then proceed, in the manner described, to transpose Pattern No. 60 using any remaining Mixolydian modes in preparation for the use of the same pattern on a dominant type chord with ANY starting tone as its root.

Patterns No. 61-67 and No. 79-86, located in the *major chord* section, can also be converted for use with dominant type chords having the *same* roots as the illustrated major patterns. Use the same technique as stated for the conversion of Pattern No. 60. Be sure to make all transpositions using the proper Mixolydian modes. By doing so, you will increase the number of usable patterns for dominant type chords.

MINOR CHORDS AND RESPECTIVE "SCALES"



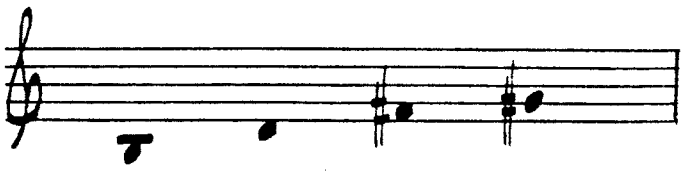
The B Dorian Mode is illustrated in two octaves. The numbers under each tone indicate the position of that tone in this scale. Note that beyond the first octave, tone No. 8, the tones have the same letter names and the numbers corresponding to these tones refer to the respective distances from the starting tone, No. 1.

The following four chords: Minor Triad, Minor Sixth Chord, Minor Seventh Chord and Minor Ninth Chord will be formed by applying a numerical formula to the B Dorian Mode. The corresponding alphabetical symbols will also be indicated.

By extracting the tones No. 1-3-5 from the B Dorian Mode, we arrive at the notes forming the B Minor Triad.

Symbol: Bm Alternate Symbol: B-

Tones No. 1-3-5-6 of the B Dorian Mode form the B Minor Sixth Chord.



Symbol: Bm6 Alternate Symbol: B-6

Tones No. 1-3-5-7 of the B Dorian Mode form the B Minor Seventh Chord.

Symbol: Bm7 Alternate Symbol: B-7

Tones No. 1-3-5-7-9 of the B Dorian Mode form the B Minor Ninth Chord.

Symbol: Bm9

Alternate Symbol: Bm^{9}_{7}

Alternate Symbol: $Bm^{(9)}_{7}$

Note that all four chords contain the same triad, B, D, F-Sharp; and *all* four chords *use* the *same* basic scale, the B Dorian Mode, to establish their sound.

The student must remember to relate each Dorian Mode to its *parent* key before attempting to apply the numerical formulas for the formation of the four types of *minor* chords and before attempting to play the scale (dorian mode) of these chords. Figure 22 is a chart which shows all minor seventh chords and respective parent keys.

Fig. 22

CHORD	PARENT KEY	SCALE OF CHORD
Cm7	B♭ Major	Dorian Mode starting on C
Fm7	E♭ Major	Dorian Mode starting on F
B♭m7	A♭ Major	Dorian Mode starting on B♭
E♭m7	D♭ Major	Dorian Mode starting on E♭
A♭m7	G♭ Major	Dorian Mode starting on A♭
D♭m7 C♯m7	C♭ Major B Major	Dorian Mode starting on D♭ Dorian Mode starting on C♯
F♯m7	E Major	Dorian Mode starting on F♯
Bm7	A Major	Dorian Mode starting on B
Em7	D Major	Dorian Mode starting on E
Am7	G Major	Dorian Mode starting on A
Dm7	C Major	Dorian Mode starting on D
Gm7	F Major	Dorian Mode starting on G

Fig. 23

Figure 23 is a chord tone chart based on the *dorian* modes of chord roots.

13th	A	D	G	C	F	B♭	D♯	G♯	C♯	F♯	B	E
11th	F	B♭	E♭	A♭	D♭	G♭	B	E	A	D	G	C
9th	D	G	C	F	B♭	E♭	G♯	C♯	F♯	B	E	A
7th	B♭	E♭	A♭	D♭	G♭	C♭	E	A	D	G	C	F
5th	G	C	F	B♭	E♭	A♭	C♯	F♯	B	E	A	D
3rd	E♭	A♭	D♭	G♭	C♭	F♭	A	D	G	C	F	B♭
1 (ROOT)	C	F	B♭	E♭	A♭	D♭	F♯	B	E	A	D	G

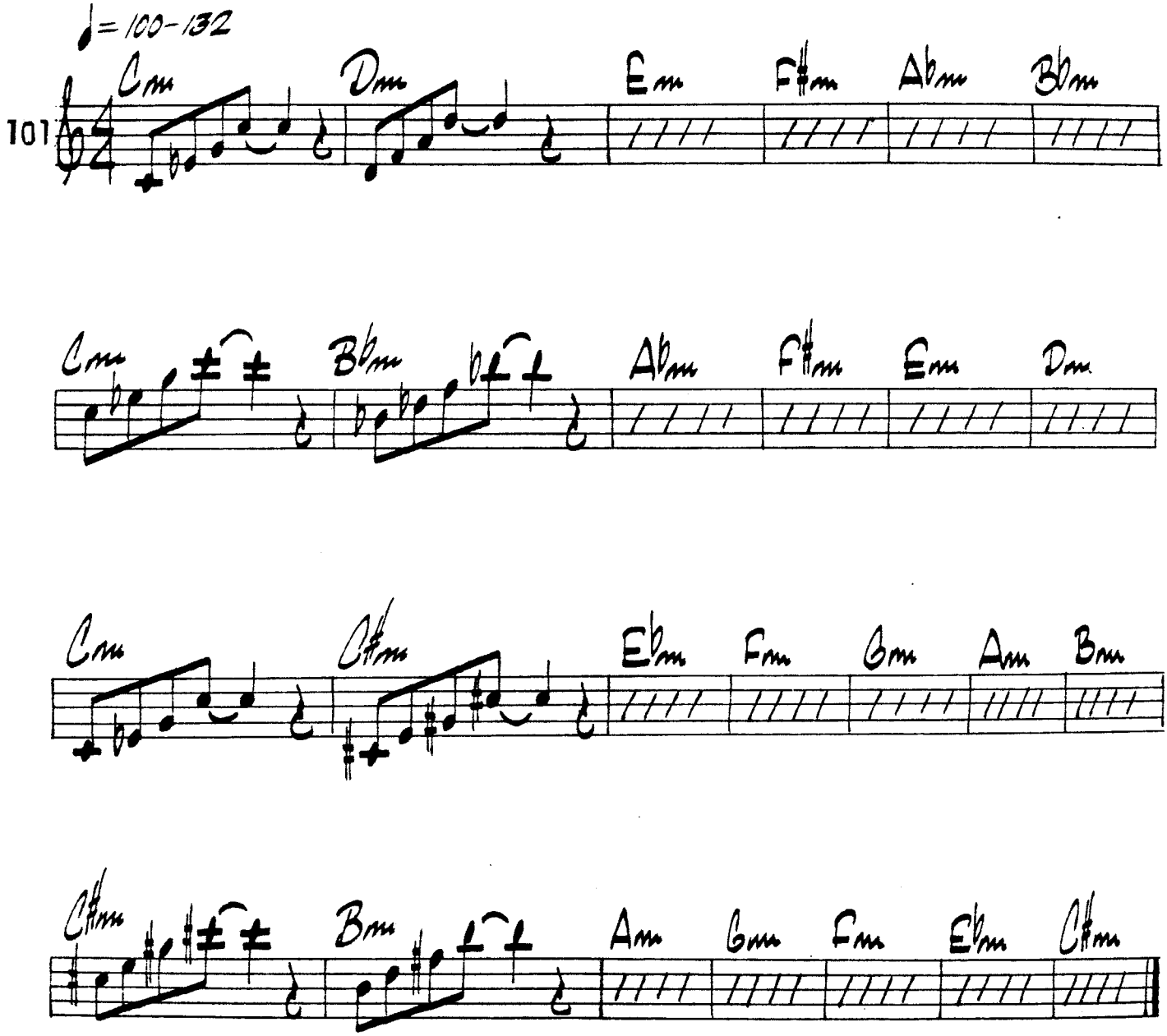
This chord tone chart organizes the tones of all Dorian Modes in the order needed for the construction of the four types of Minor Chords. Reading up from the chord root C (also indicated as tone No. 1), we see the tones C, E-Flat, G, B-Flat, D, F, A, which are all the notes in the C Dorian Mode. Note that the ninth, eleventh, and thirteenth are also the second, fourth and sixth tones respectively, as they are the same letter names.

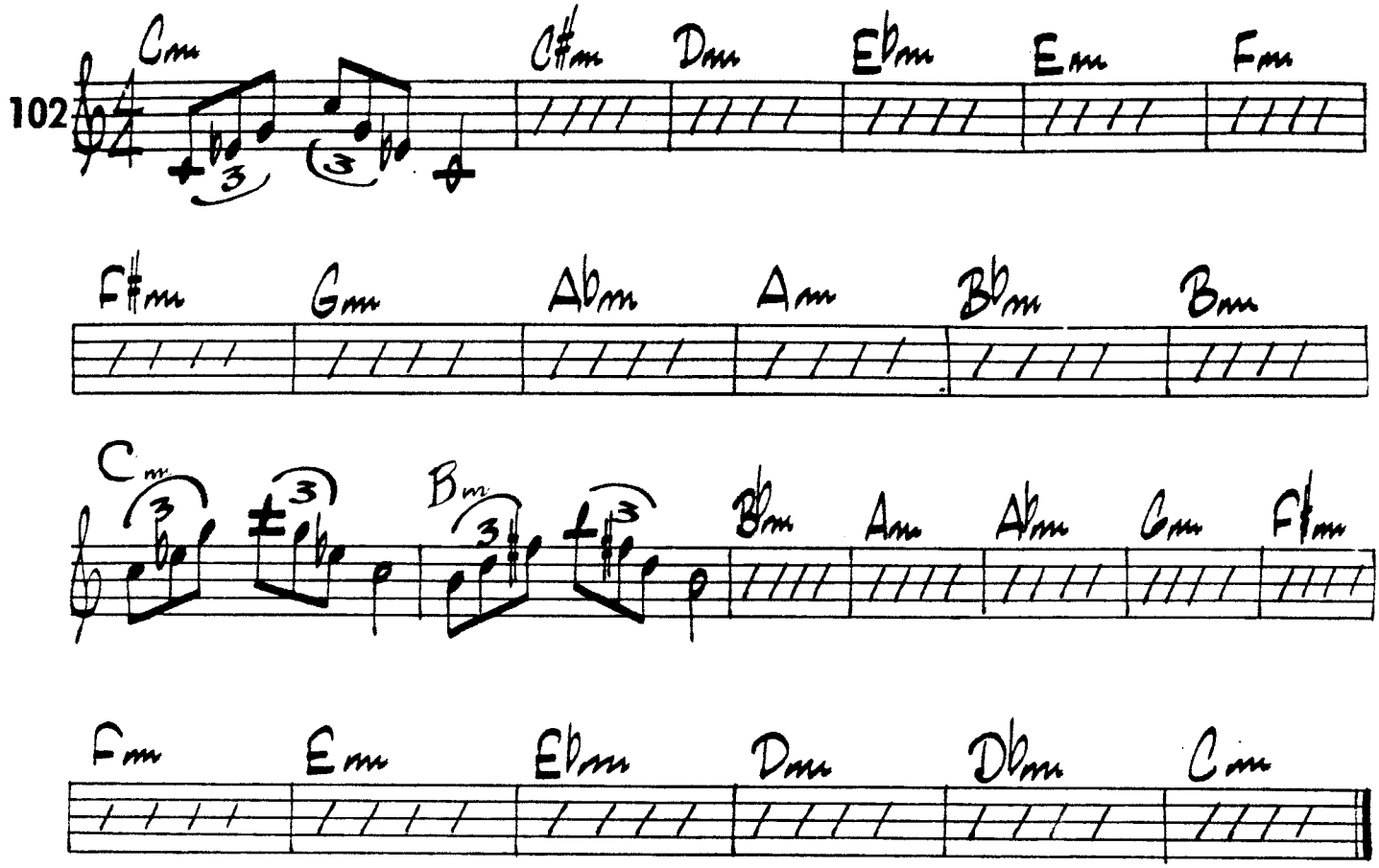
In preparation for the subsequent patterns, be able to recite, write and play the following chords as they are extracted from every Dorian Mode: Minor Triads, Minor Sixth Chords, Minor Seventh Chords and Minor Ninth Chords. Use the illustrated *routine form* for playing the chord tones. It does not require any specific rhythm or tempo.

ROUTINE FORM

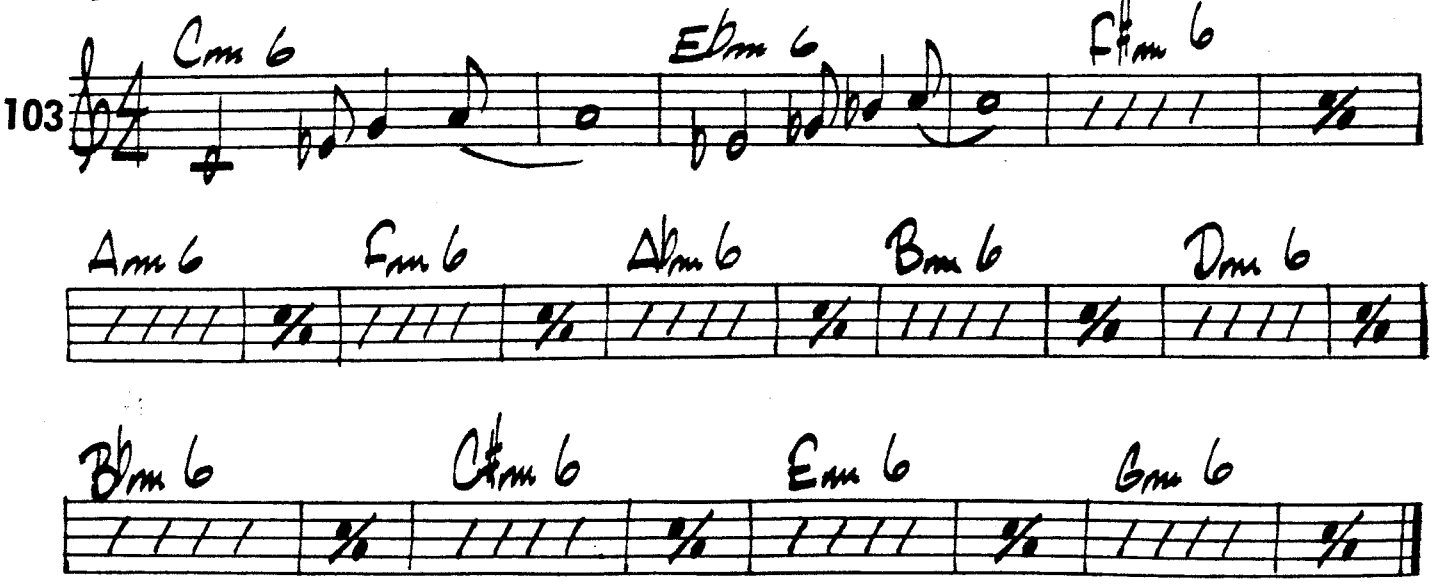
This note added to fill out the chord. It does not change the sound of the chord.

The following patterns begin with Minor Triads. Note the alphabetical symbols and the metronome markings.



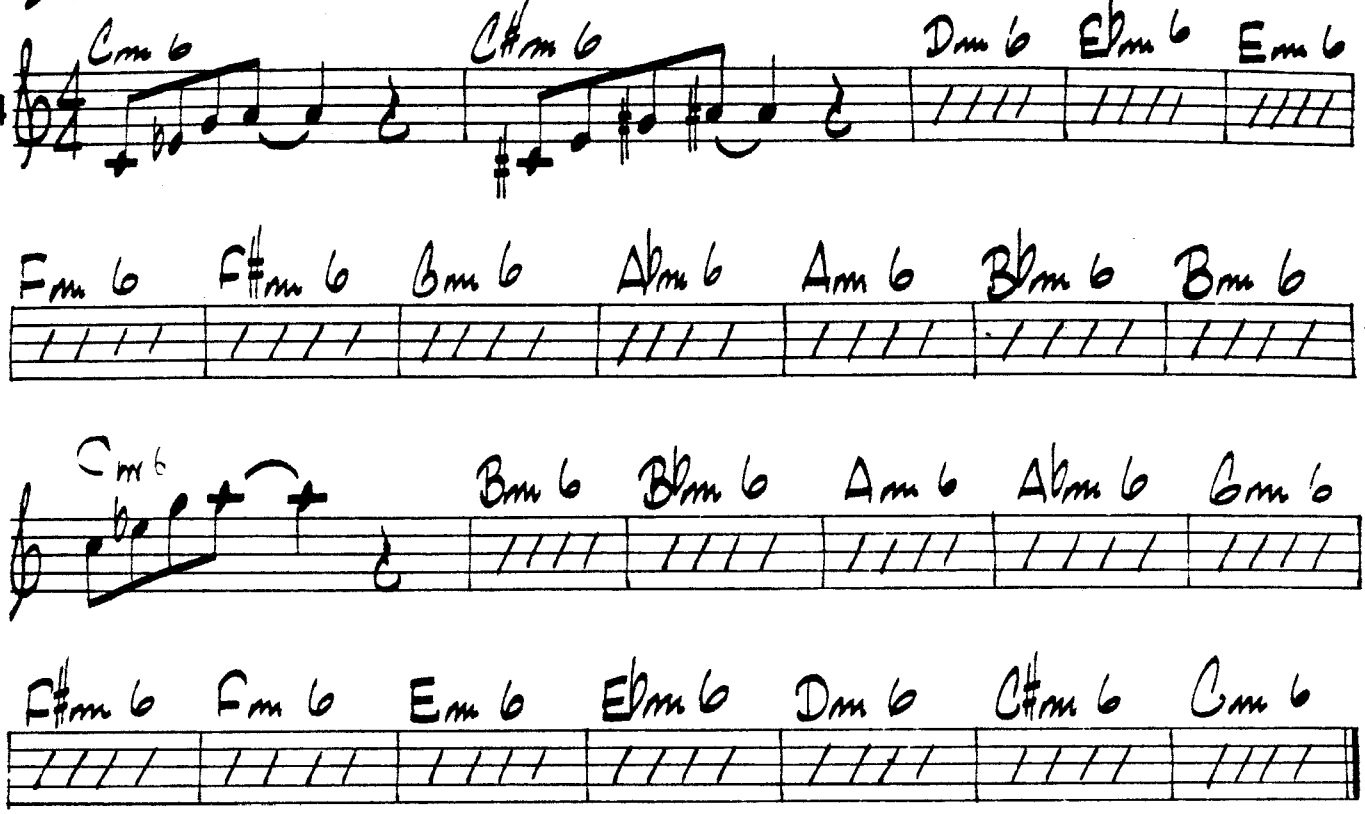


♩=160–208 Note: Each chord lasts two measures.



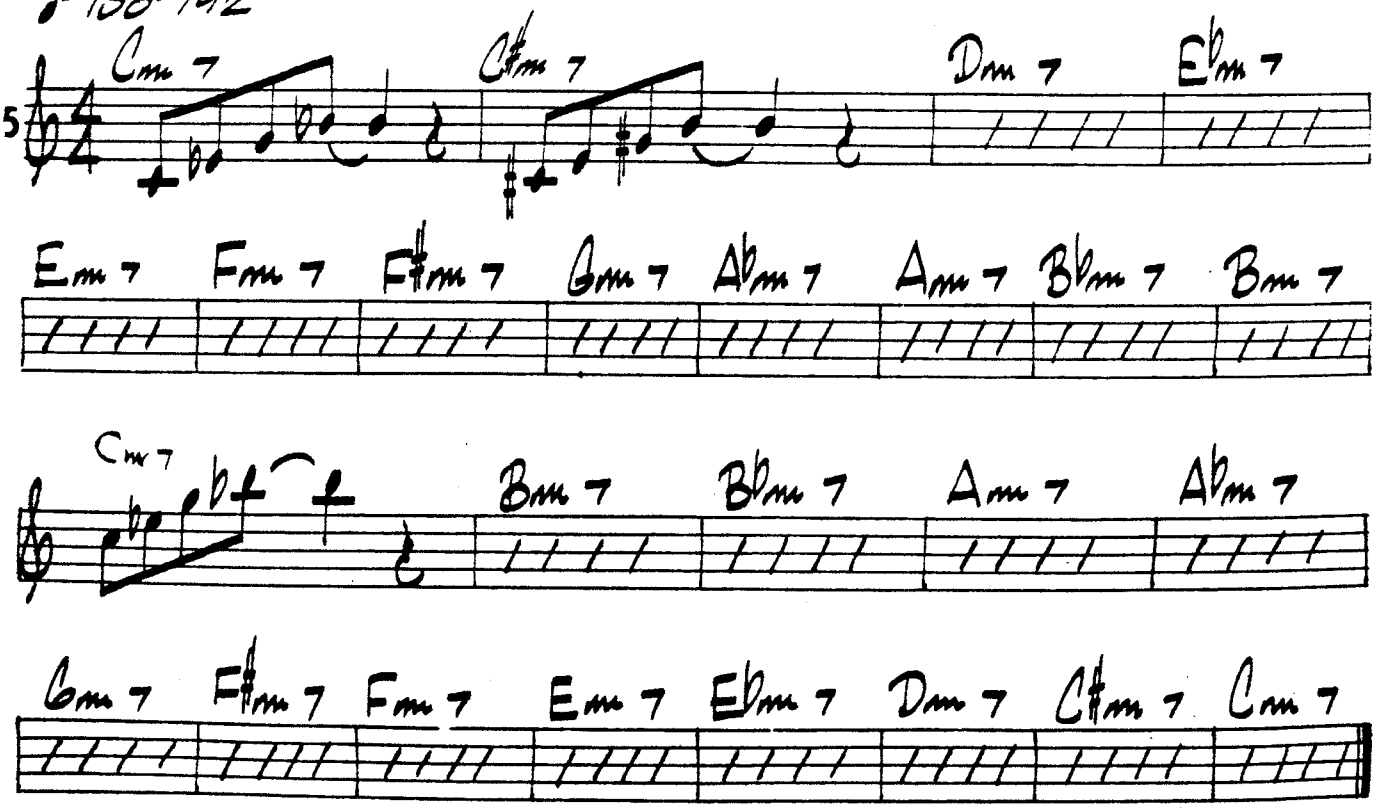
♩=152-208

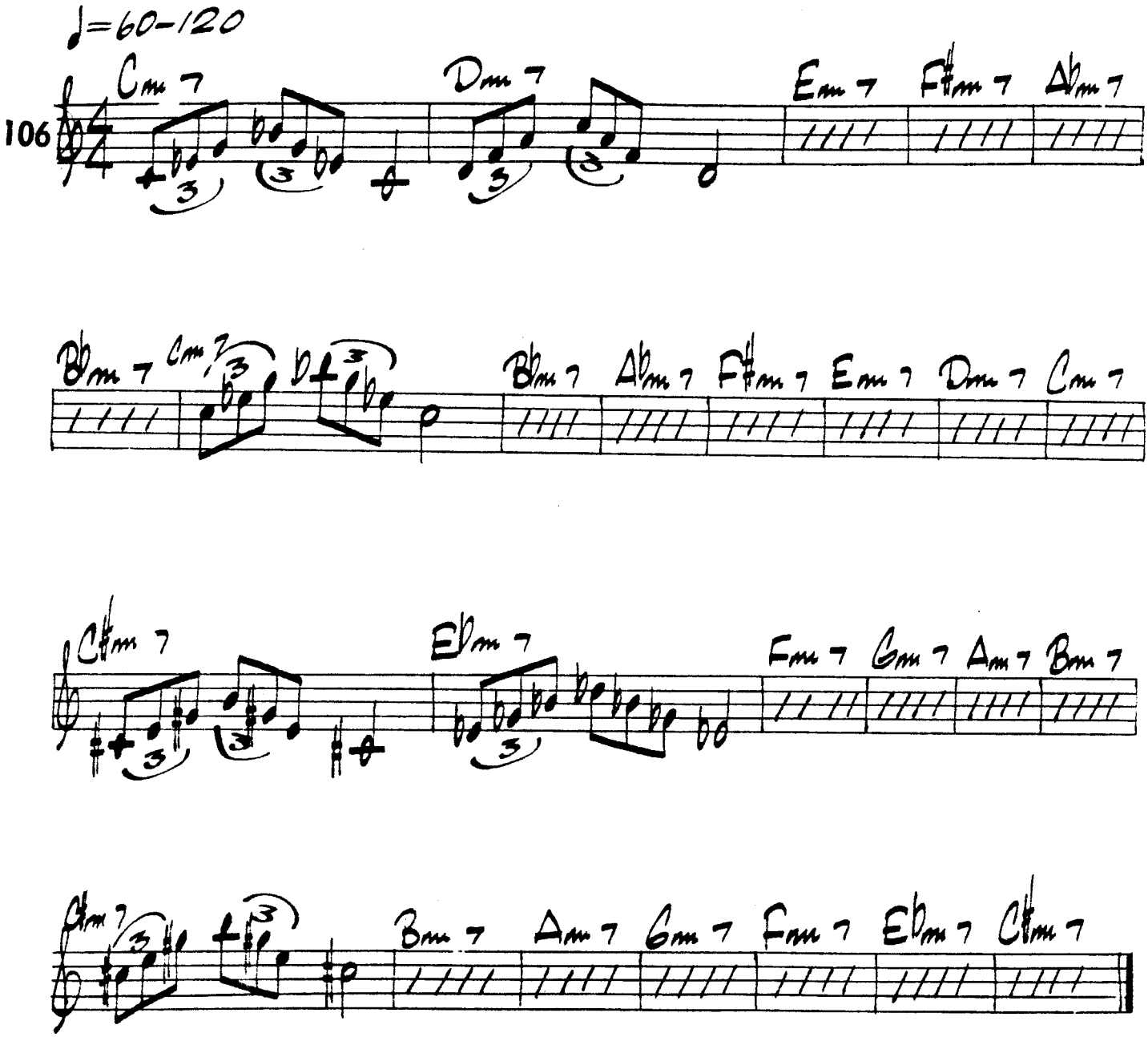
104



♩=138-192

105




♩=60-120
106
Cm7
Dm7
Em7
F♯m7
A♭m7
B♭m7
Cm7
B♭m7
A♭m7
F♯m7
Em7
Dm7
Cm7
C♯m7
E♭m7
Fm7
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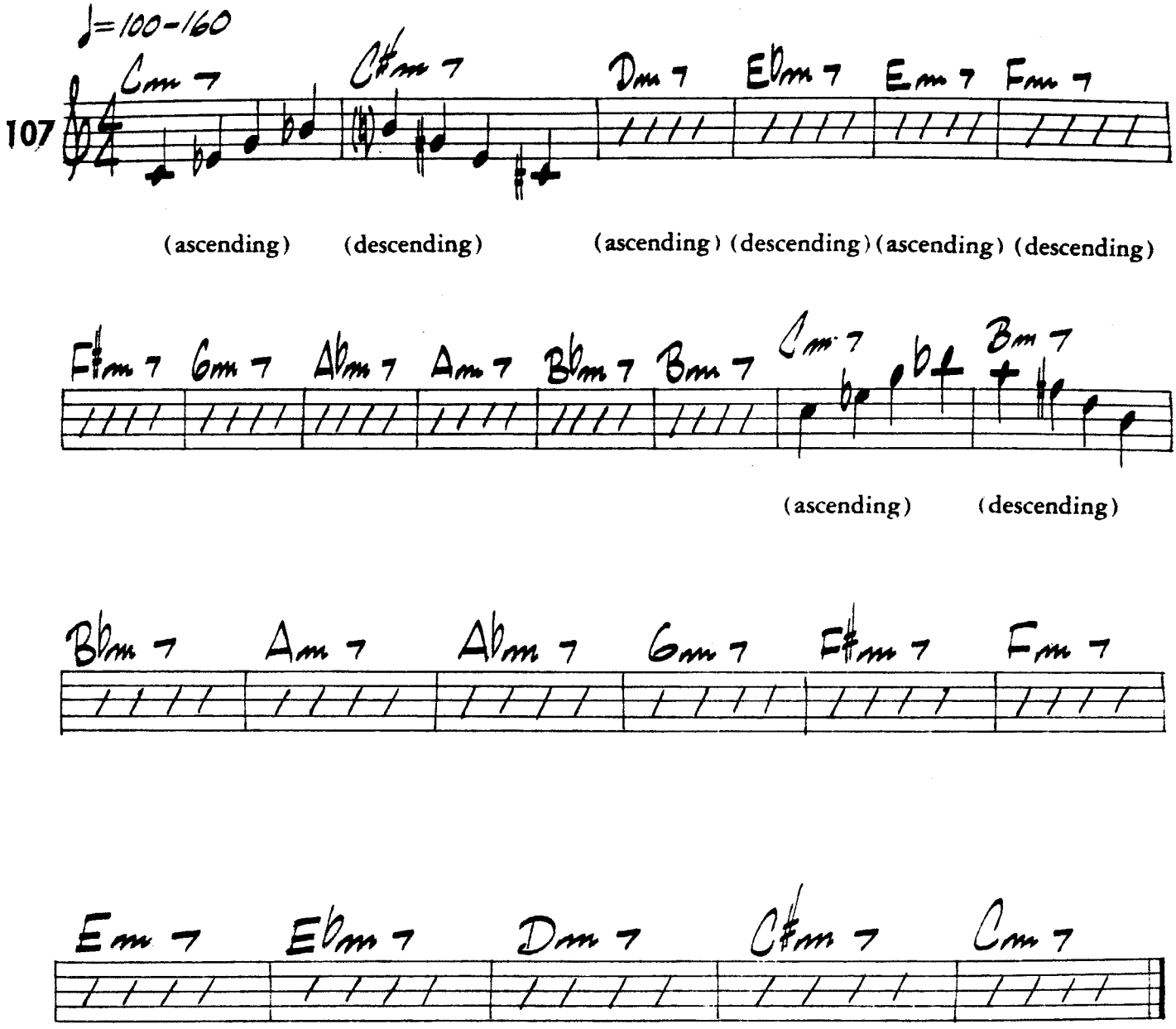
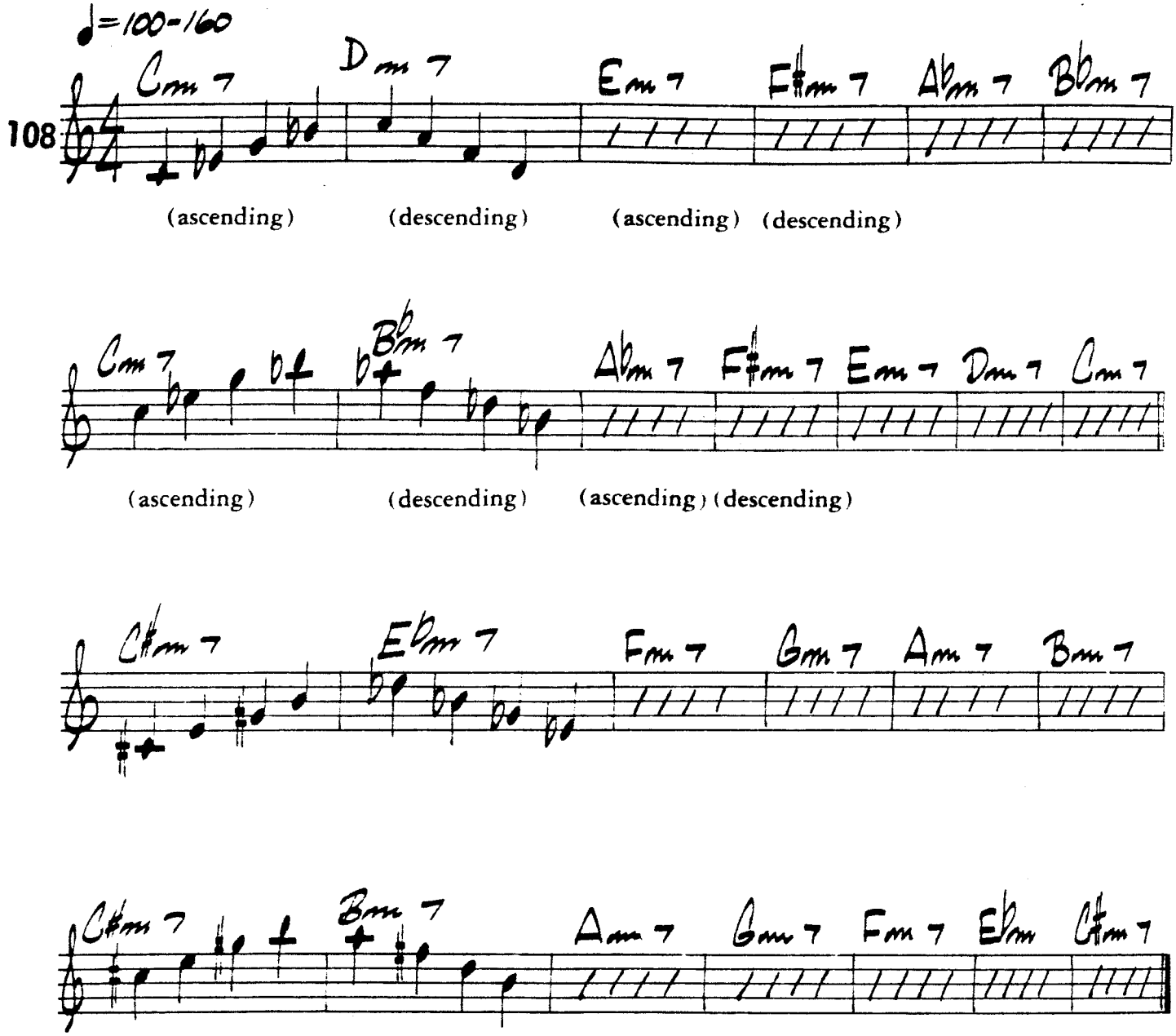
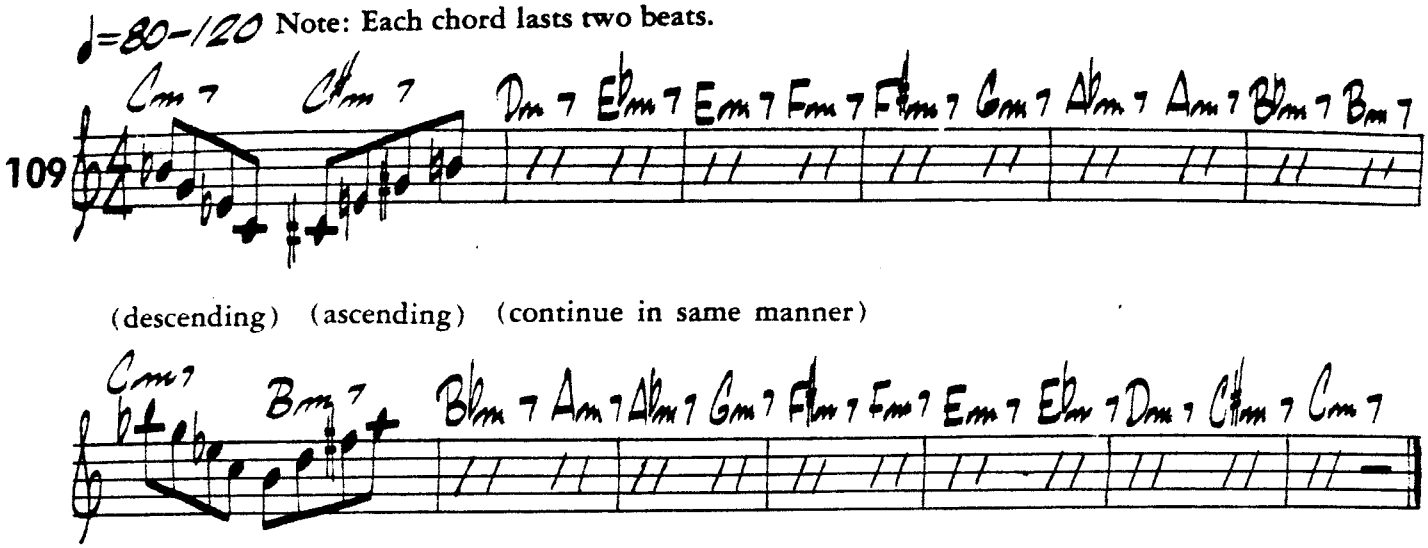
Bm7
Am7
Gm7
Fm7
E♭m7
C♯m7



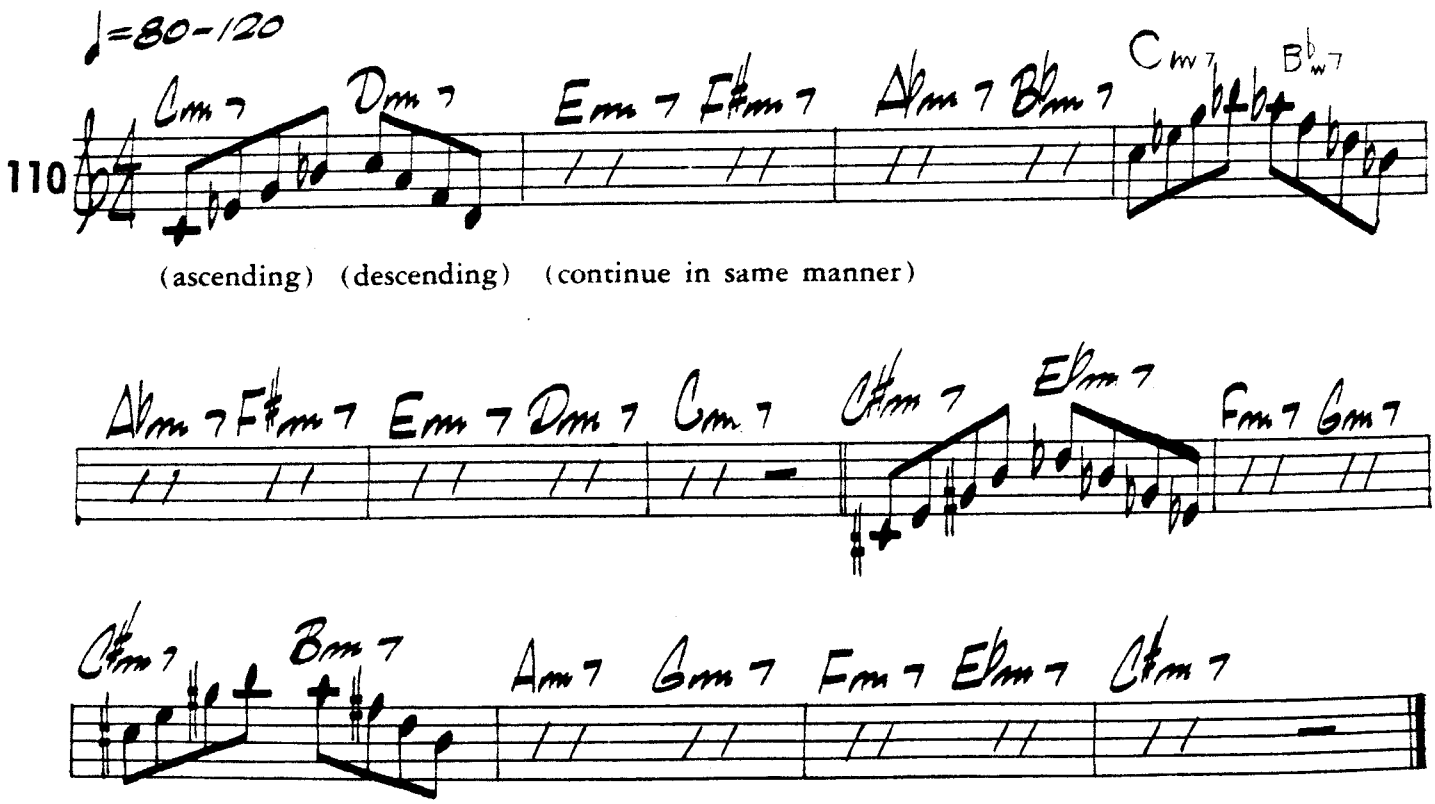
Practice Pattern No. 107 reversing direction of chord tones: descending, ascending, etc.



Practice Pattern No. 108 by reversing the direction of the chord tones: descending, ascending, etc.

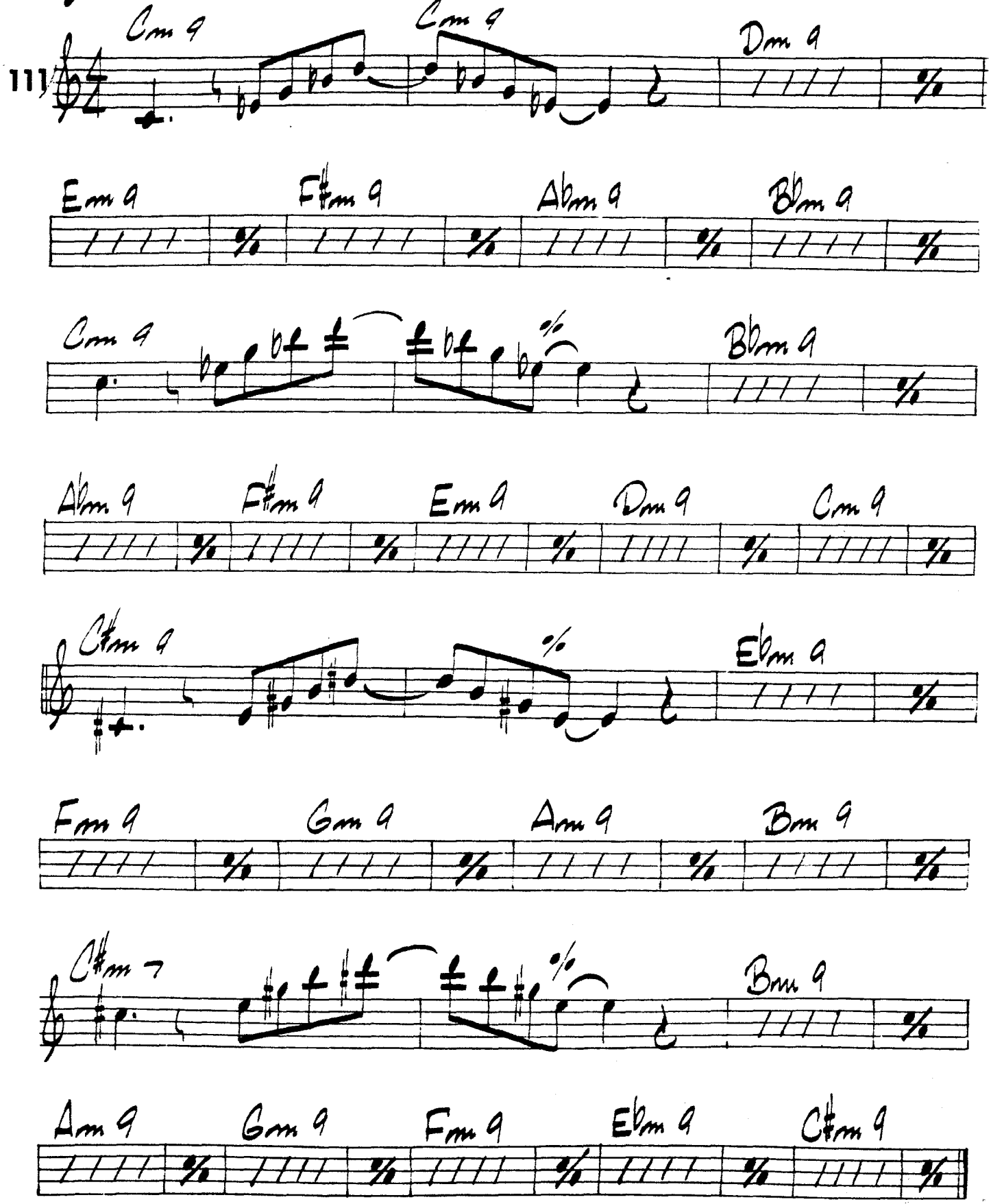


Practice Pattern No. 109 reversing the direction of the chord tones: ascending, descending, etc.



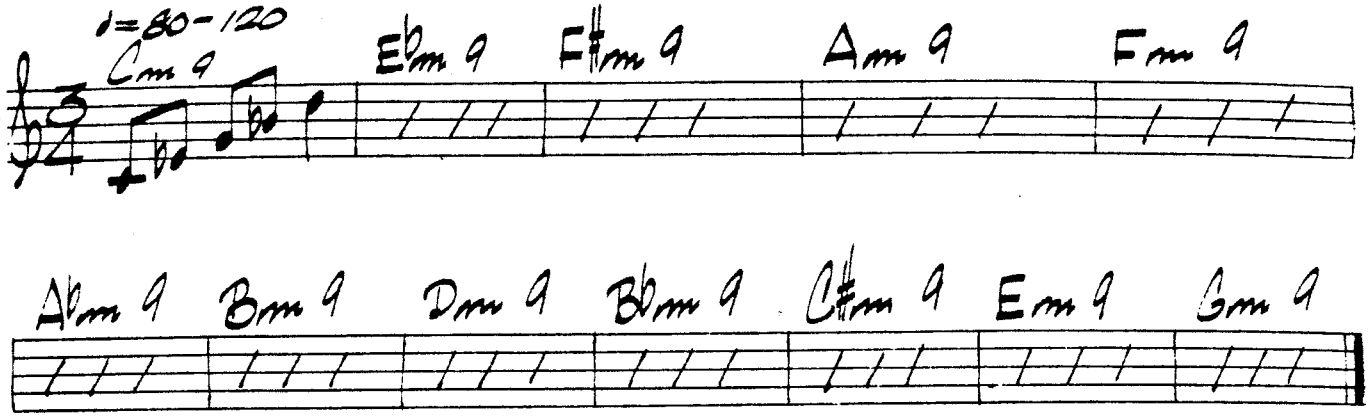
Practice Pattern No. 110 reversing the direction of the chord tones: descending, ascending, etc.

♩=108-162 Note: Each chord lasts two measures, ending on 3rd of the chord.



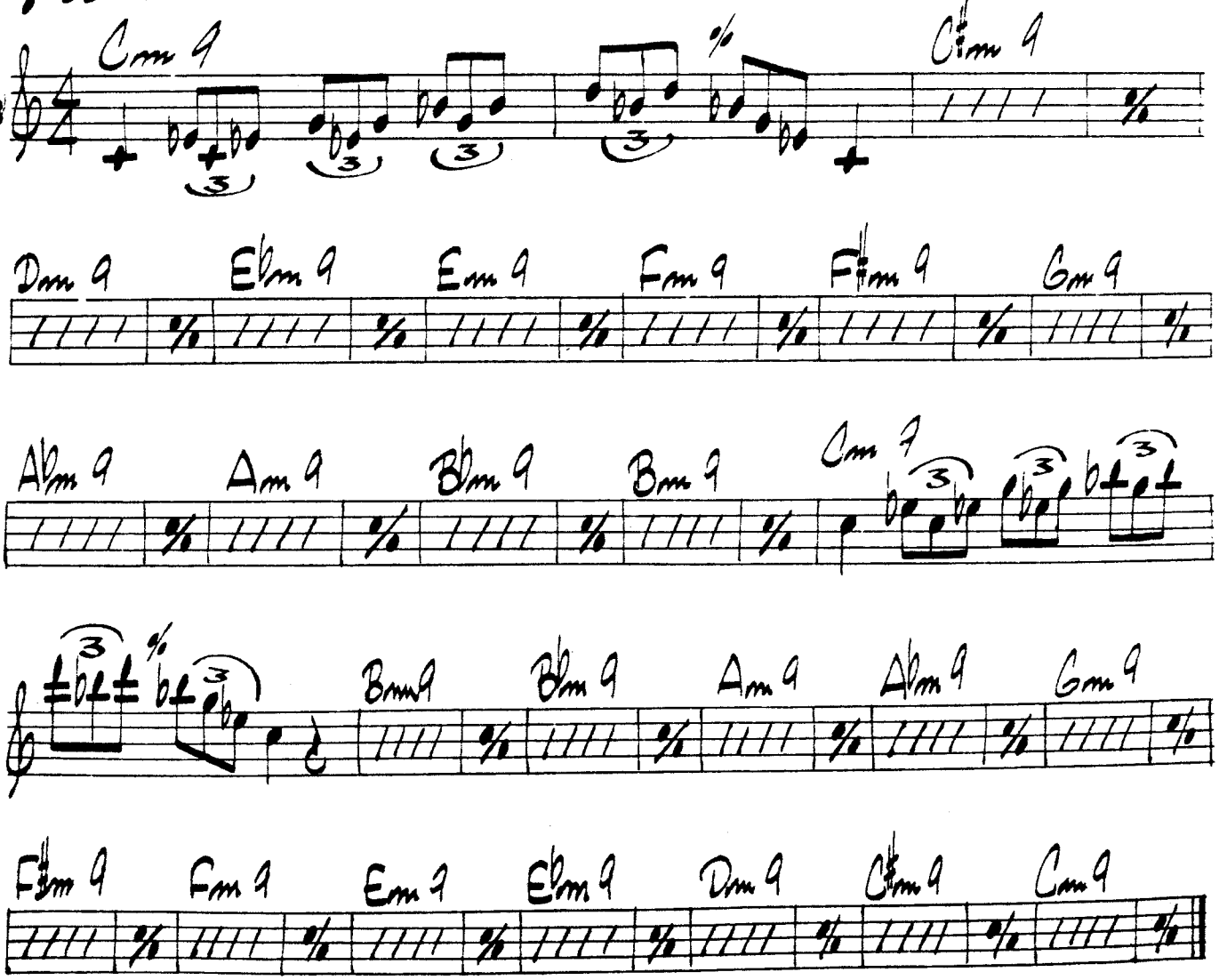
Note: Three beats per measure.

112

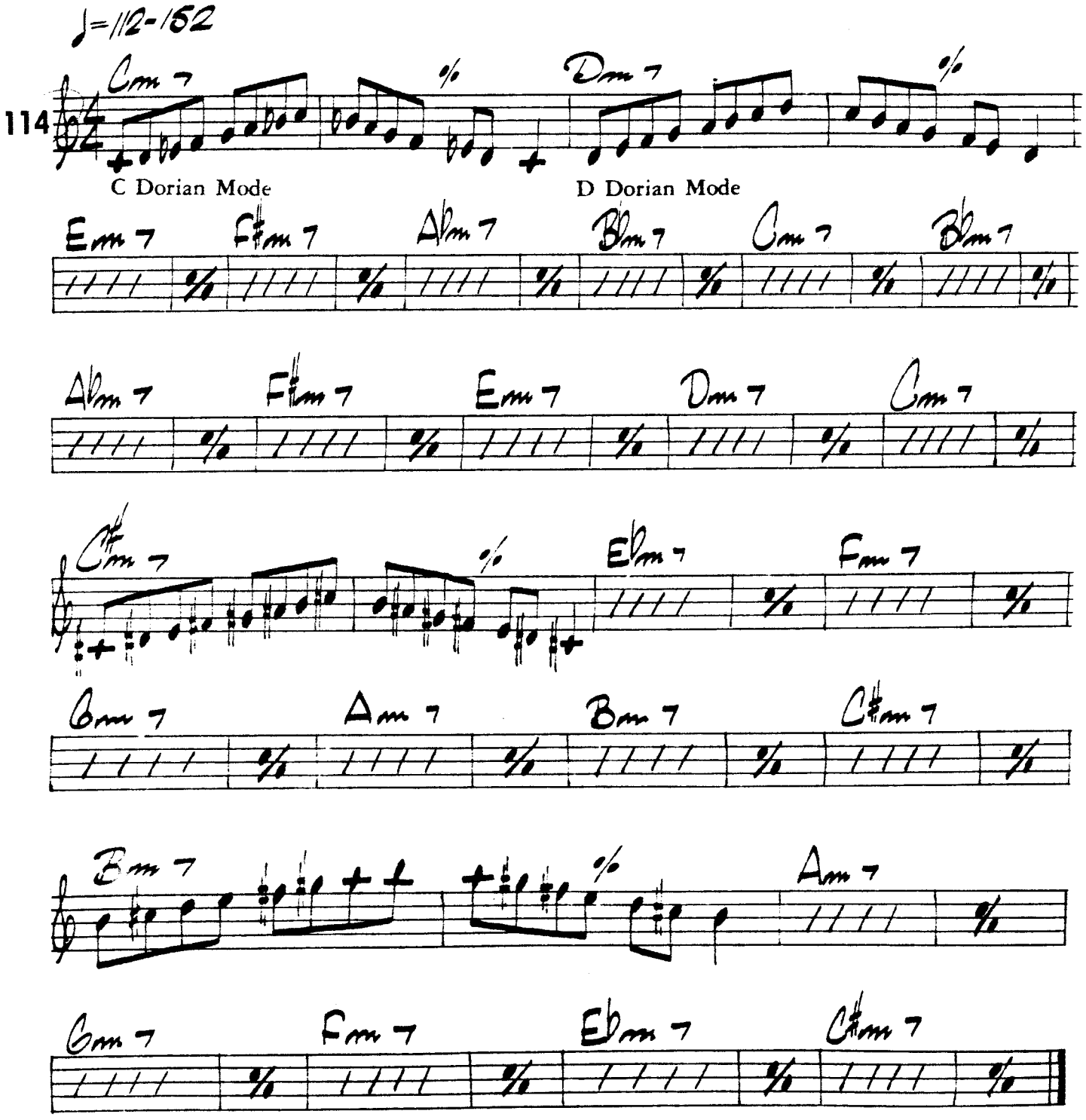


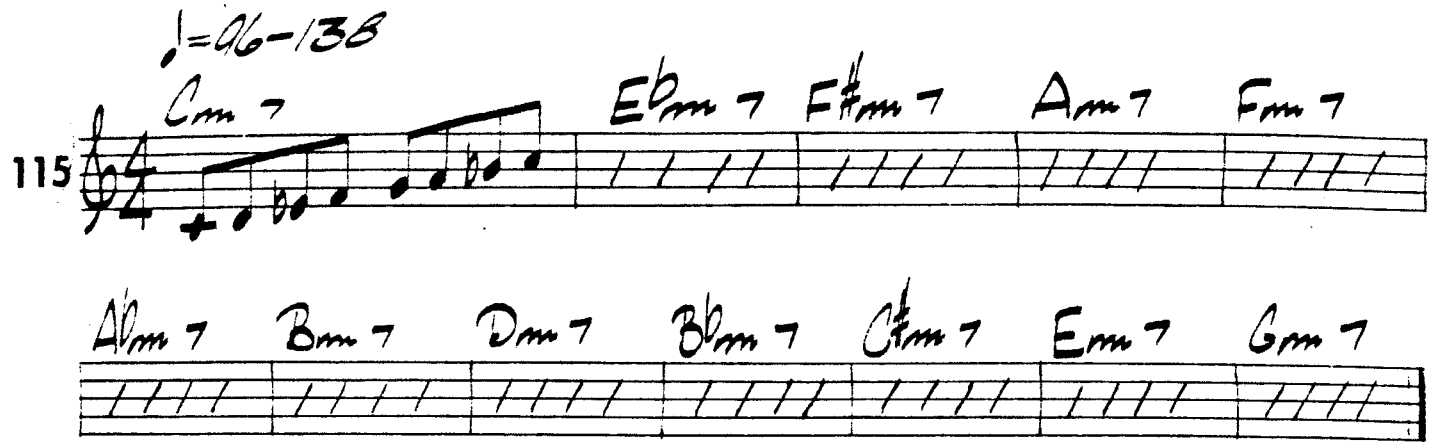
♩=88-120 Note: Each chord lasts two measures.

113

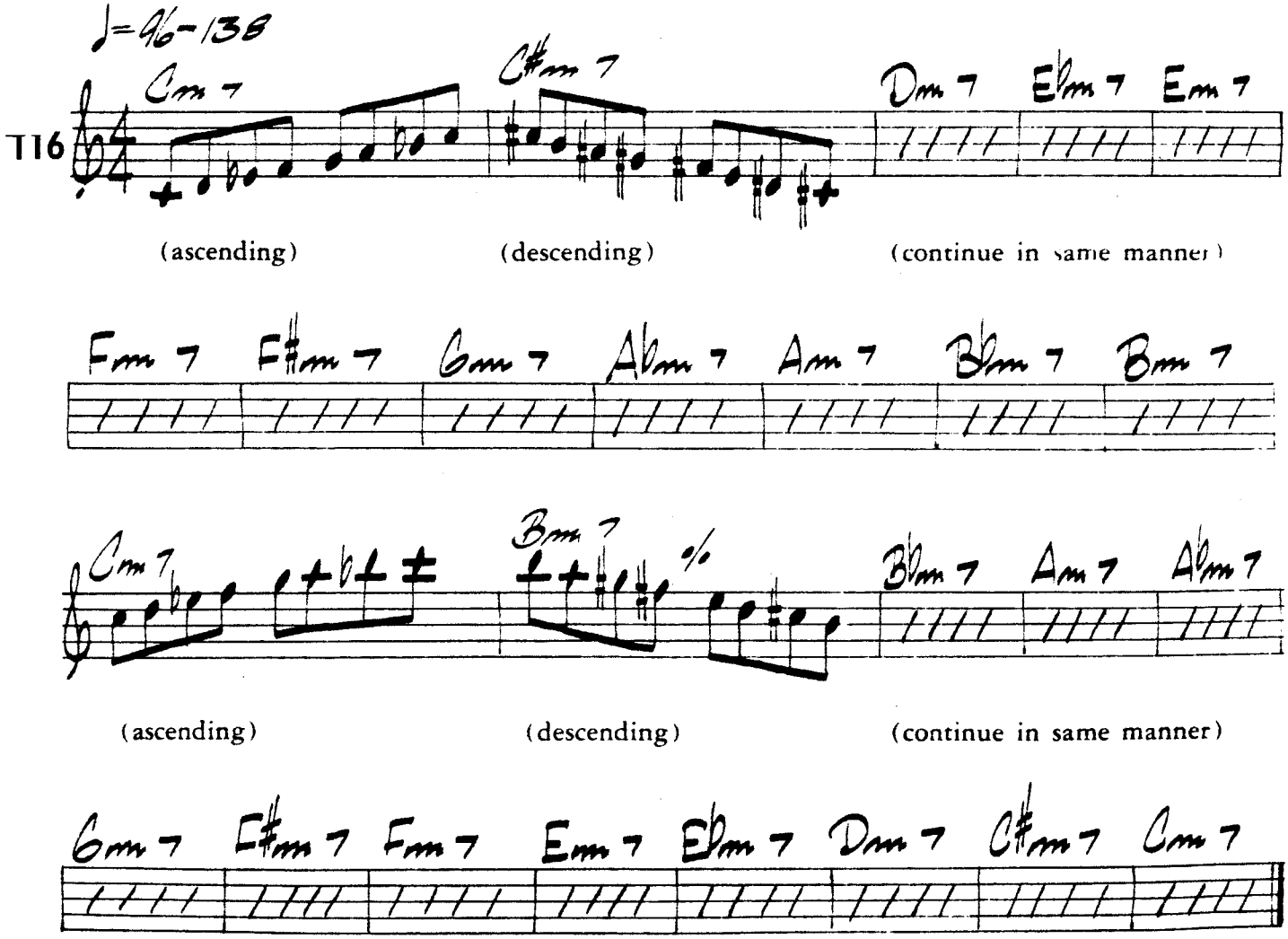


We have been practicing patterns on the four related types of minor *chords,* formed by extracting their respective tones from the dorian mode of the chord root. Now we will concern ourselves with various patterns on the scale (dorian mode) itself. You will notice that the chord symbols for the following patterns will be that of the minor seventh. However, the student must bear in mind that the minor triad, m6, m7 and m9 chords all use the same basic scale: a dorian mode on the chord root. For example, a Cm, Cm6, Cm7 and Cm9 will all share the C dorian mode. The use of the minor seventh chord symbol is merely for convenience, since it would be impossible to determine exactly which chord is being used when the scale is common to all chords mentioned.



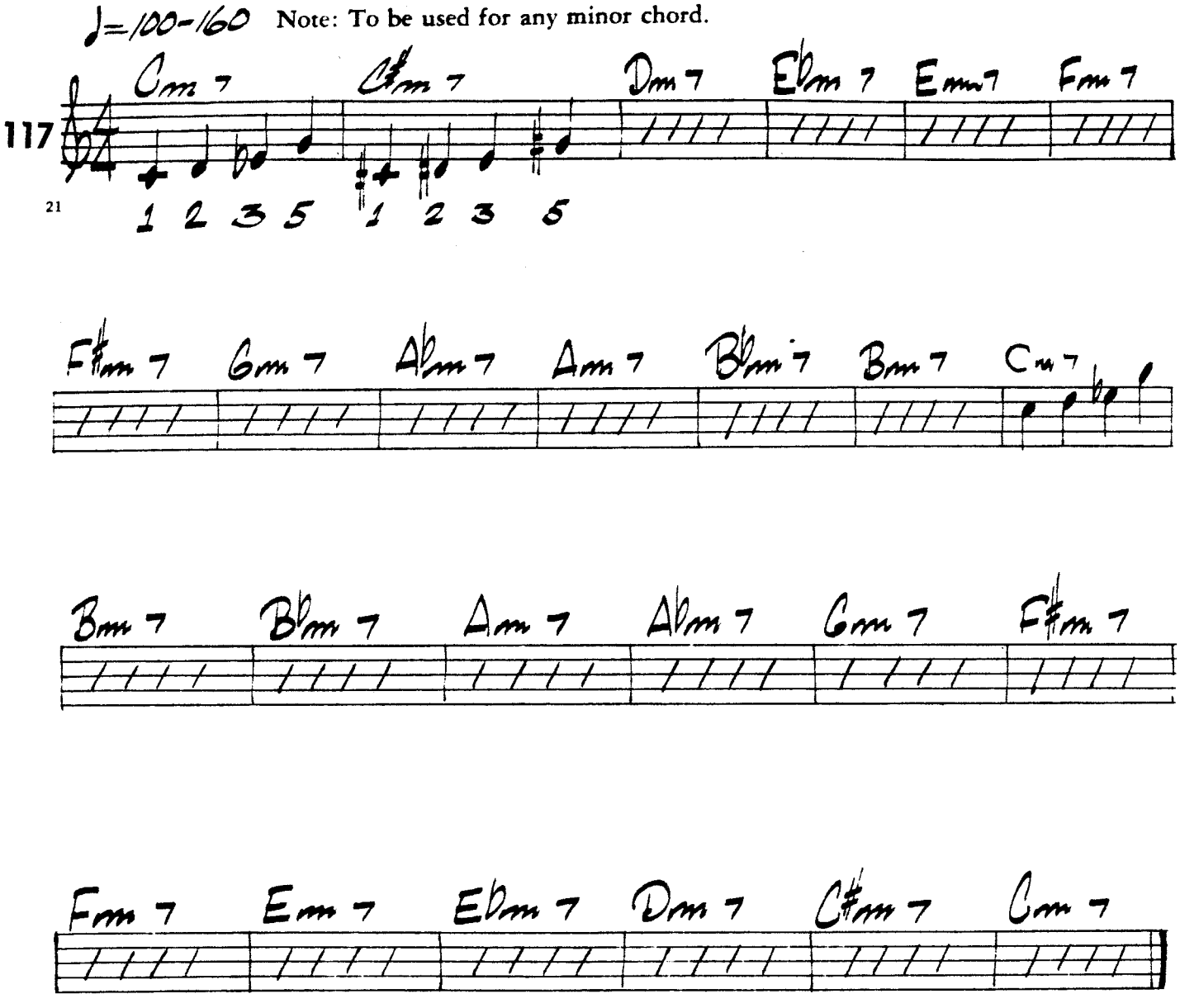


Practice Pattern No. 115 with all *descending* scales.



Practice Pattern No. 116 by reversing direction of scales: descending, ascending.

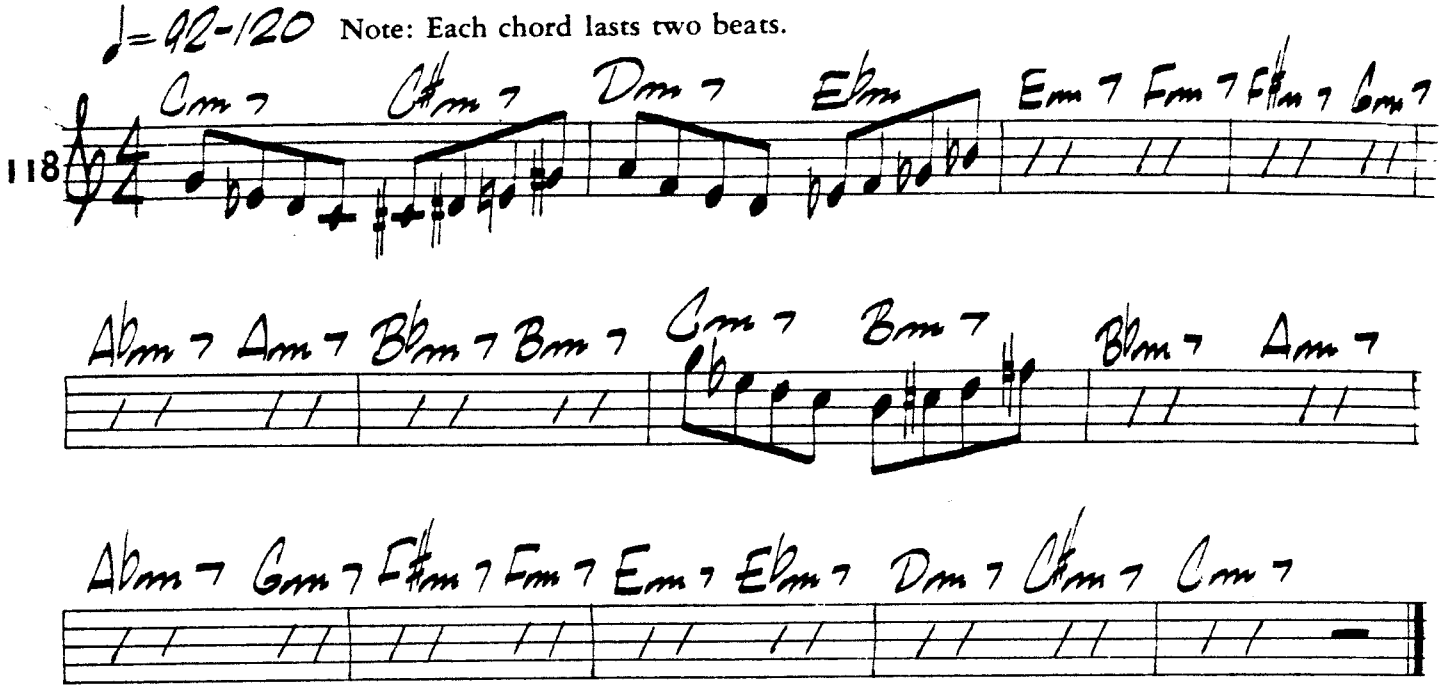
This pattern utilizes the fragment 1-2-3-5 from the respective chord scales.



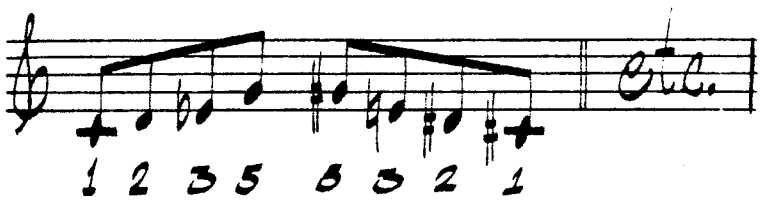
Apply the scale fragment 5-3-2-1 to the chords in Pattern No. 115, using quarter notes.

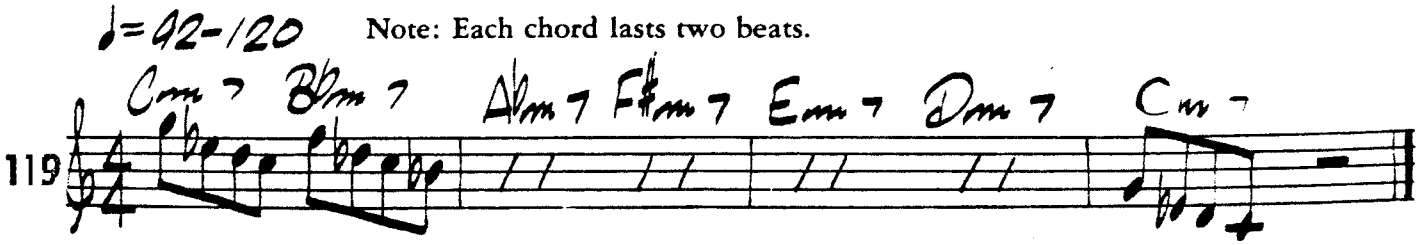
[21]John Coltrane, "Giant Steps," on *Giant Steps* (Atlantic S-1311), John Coltrane Quartet.

This pattern utilizes alternating fragments 5-3-2-1 and 1-2-3-5 from respective chord scales as illustrated.



Practice the chords in Pattern No. 118 by reversing the order of the fragments: 1-2-3-5, 5-3-2-1.



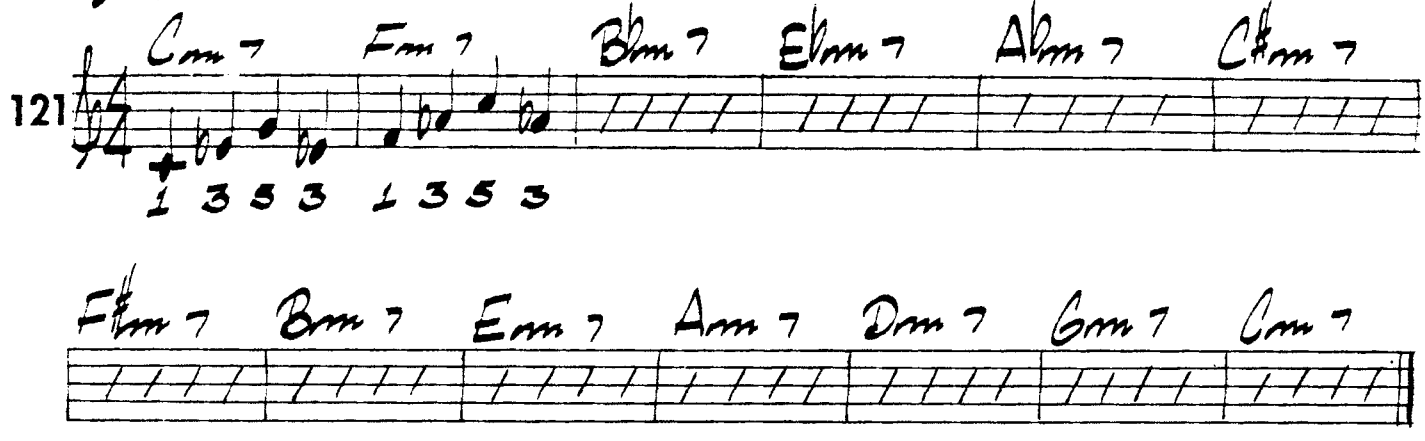


♩=92-120 Note: Each chord lasts two beats.

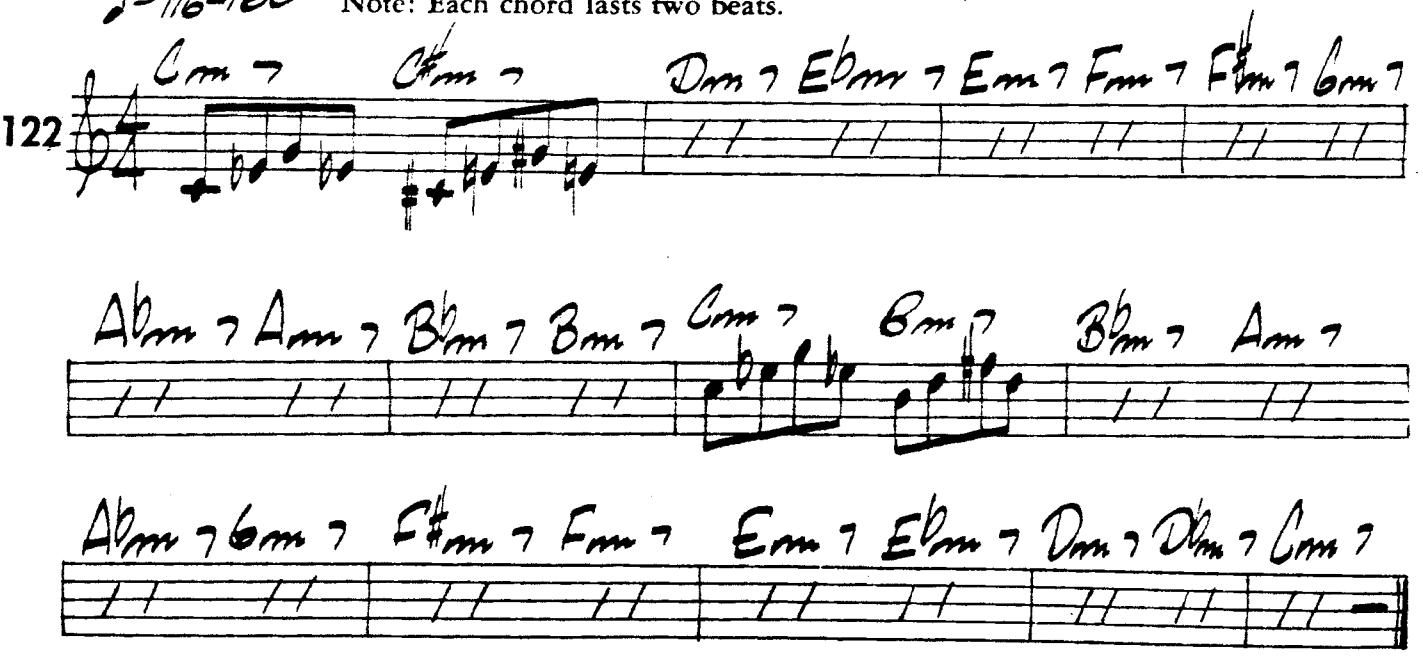
22

This pattern utilizes the fragment 1-3-5-3 from the respective chord scales.

♩=168-208 Note: Each chord lasts one measure.



♩=116-160 Note: Each chord lasts two beats.



[22]Oliver Nelson, "Butch and Butch," on *The Blues And The Abstract Truth* (Impulse S-5), Oliver Nelson Group.

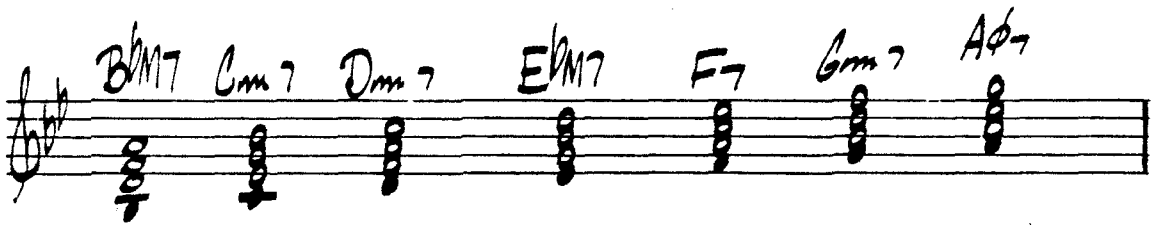
Pattern No. 60 was first introduced in the major chord section. We later converted this pattern for use with dominant type chords having the same root. It is possible to convert this pattern once again, for use with minor chords having the same root. To use this pattern for minor chords having the same root, the student must apply the C Dorian mode in place of the C Major scale (as illustrated in Pattern No. 60). This will automatically provide the tones E-Flat and B-Flat, which are necessary in playing scale-type patterns for any of the minor chords having the root C. After having practiced Pattern No. 60 using the C Dorian mode in place of the C Major scale, the student can use it for Cm, Cm6, Cm7 or Cm9. The student should then proceed, as described, to transpose Pattern No. 60 using any remaining dorian modes in preparation for the use of this same pattern on ANY minor type chord with ANY starting tone as its root.

Using the same technique as stated for the conversion of Pattern No. 60 to minor chords, the student can convert Patterns No. 61-67 and Patterns No. 79-86 for use with minor chords having the same root. Be sure to make all transpositions using the proper Dorian modes. In doing so, you will increase the number of usable patterns for minor chords.

HARMONIC FUNCTIONS OF MAJOR, DOMINANT AND MINOR SEVENTH CHORDS

In order to establish the *basic* functions of Major, Dominant and Minor Seventh chords we will refer, once again, to *seventh chords built on tones of a Major scale.* Figure 24 illustrates the *seventh chords* formed on the tones of the B-Flat Major Scale.

Fig. 24



IM7 IIm7 IIIm7 IVM7 V7 VIm7 VIIϕ 7

(half-diminished seventh)

The seventh chord that is formed on the VIIth scale tone is correctly labeled, although it has not been discussed at this point.

The detailed analysis of the seventh chords in figure 24 will produce the same results in ANY major key.

In the key of B-Flat Major, seventh chords formed on tones I and IV are Major Seventh chords. In the same key, seventh chords formed on tones II, III and VI are Minor Seventh chords. Seventh chords formed on tones V and VII are Dominant and Half-Diminished, respectively.

The use of the Roman Numeral system for the naming of chords which are formed in a particular *key* is not new. The manner in which it is used, however, (in figure 24) is often subject to much controversy by music theorists. The authors feel that the use of the Roman Numeral system as illustrated in figure 24 will suffice the needs of this book.

From the analysis of seventh chords in the key of B-flat Major we can conclude that:

1. Major Seventh Chords may belong to *two* possible keys: functioning as IM7 in one key and IVM7 in another.
2. Minor Seventh Chords may belong to *three* possible keys: functioning as IIm7 in one key, IIIm7 in another key, and VIm7 in another.
3. Dominant Seventh Chords may belong to ONE key: functioning as the V7.
4. Half-diminished Seventh Chords may belong to ONE key: functioning as the VIIo7.

These conclusions will ALWAYS be true in ANY *major* key.

The following illustration uses specific chord names to reinforce the above conclusions:

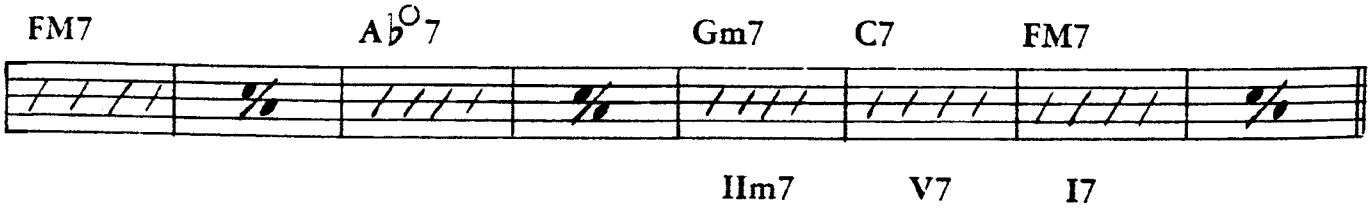
B-flat M7 could function as the IM7 in the key of B-flat Major, or as the IVM7 in the key of F Major.
Cm7 could function as IIm7 in B-flat Major, IIIm7 in A-flat Major, and VIm7 in E-flat Major,
Dm7 could function as IIm7 in C Major, IIIm7 in B-flat Major, and VIm7 in F Major.
E-flat M7 could function as IM7 in E-flat Major, and IVM7 in B-flat Major.
F7 functions ONLY as the V7 in B-flat Major.
Gm7 could function as IIm7 in F Major, IIIm7 in E-flat Major, and VIm7 in B-flat Major.
A Half-diminished 7 functions ONLY as the VII Half-diminished 7 in B-flat Major.

We can state in general terms that, in most instances, the M7 chord is likely to function as IM7 rather than IVM7. Also the m7 chord functions more commonly as a IIm7 than as a IIIm7 or VIm7. The student should note here that the *blanketing* of the functions of the M7 and the m7 chords is stated for the sole purpose of establishing the *most common functions* of these two types of seventh chords, and *not* to exclude the possibilities of their functioning as previously described.

If we were to examine any piece of *sheet music* to a standard or pop tune, it would probably contain alphabetical chord symbols just above the melody. If we check the very last chord, it will be a Major chord built on the same root as indicated by the *key signature* shown at the very beginning of the piece (assuming that the tune we are dealing with is written in a major key). Thus, this M7 (which could also be a M6 or M Triad, in which cases the *function* would be the same) is functioning as a IM7. If we would check the chords prior to this one, we would probably find (two or possibly four beats prior to the M7) a Dominant Seventh chord which would be a V7 chord of the same key. *Usually* there will be a m7 chord, just before the Dominant Seventh previously mentioned, which will belong to the same key as the V7 and IM7 previously mentioned, and it will function as a IIm7 in this key. In this manner we arrive at a *progression* of chords labeled: IIm7-V7-IM7.

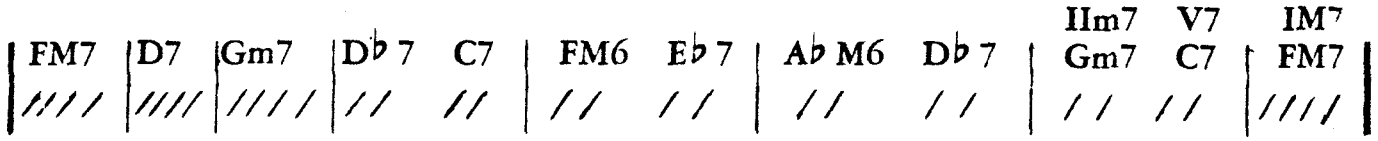
Figure 25 is an illustration of the last eight measures of a standard tune which is in the key of F Major. Note the last four measures.

Fig. 25



Although there may be exceptions, it is safe to conclude that *most* standard or pop tunes will end with a IIm7-V7-IM7 progression that may be four measures in length (as in fig. 25), or two measures in length, as in figure 26.

Fig. 26



The IIm7-V7-IM7 progression is important, therefore, because it establishes a specific *key*. Also, the scales of these three chords will share exactly the same *key signature*. In fig. 25, the Gm7 uses a Dorian Mode on the note G (which has the *parent* key of F Major); and the FM6 uses the F Major scale.[23]

It is not always necessary to wait until the end of a tune to find a IIm7-V7-IM7 progression. Frequently, tunes will modulate (change *keys*) several times before they actually are ended, even though there is not an actual change of key signature written for every time it happens. This constant modulation can be checked by first being able to recognize quickly successions of Minor Seventh and Dominant Seventh chords which exist in the relationship of IIm7-V7 to each other (that is, having a m7 followed immediately by a 7 chord both with the same *parent* key). Another way to check such modulations would be to recognize immediate successions of m7, 7 and M7 chords that form the IIm7-V7-IM7 progression which we have previously mentioned.

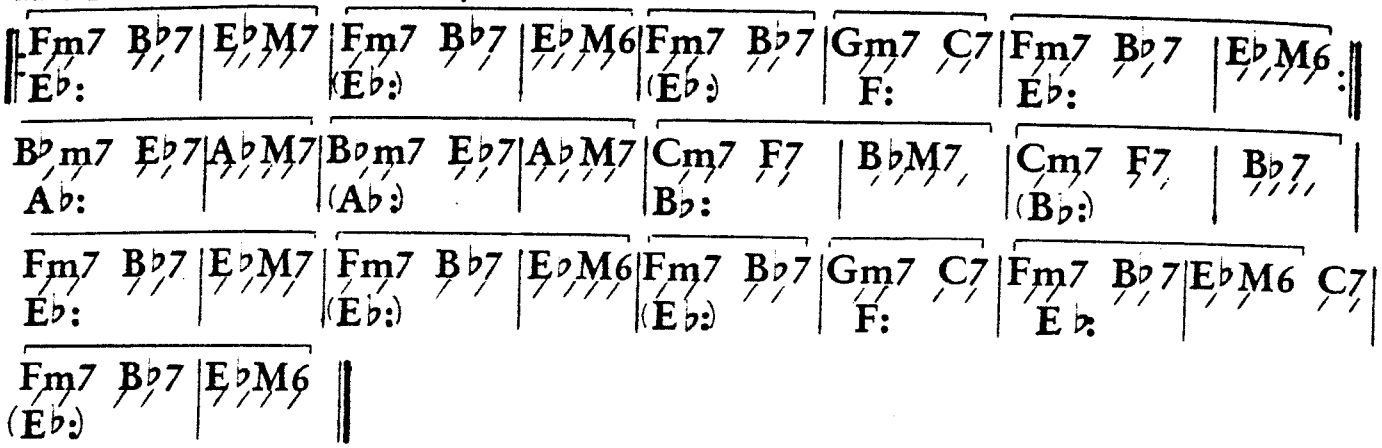
Figure 27 is a chart which will help the student recognize the IIm7-V7 and IIm7-V7-IM7 progressions as they are used in standard tunes. It is advisable to MEMORIZE the chart.

Fig. 27 (chart showing the IIm7, V7, and IM7 Chord in all Major keys)

In The Key of:	IIm7	V7	IM7
C Major	Dm7	G7	CM7
F Major	Gm7	C7	FM7
B♭ Major	Cm7	F7	B♭M7
E♭ Major	Fm7	B♭7	E♭M7
A♭ Major	B♭m7	E♭7	A♭M7
D♭ Major	E♭m7	A♭7	D♭M7
G♭ Major	A♭m7	D♭7	G♭M7
B Major	C♯m7	F♯7	BM7
E Major	F♯m7	B7	EM7
A Major	Bm7	E7	AM7
D Major	Em7	A7	DM7
G Major	Am7	D7	GM7

[23]An exhaustive study of the II-V progression appears in David Baker's book of patterns, *Developing Improvisational Facility—The II-V Progression* (Libertyville, Illinois: National Education Services, 1968).

The following is a standard chord progression. Note that all IIm7-V7 and IIm7-V7-IM7 occurrences have been bracketed and their keys indicated below them.

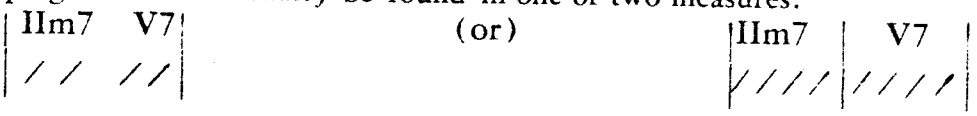


The sheet music to this particular tune is written in the key of E-flat Major. However, the illustrated chord progression points out *modulations* to four other keys, though the sheet music remains in the key signature of E-flat Major throughout. The ability of the student to recognize possible *modulations* is dependent upon the mastery of the chart shown in figure 27.

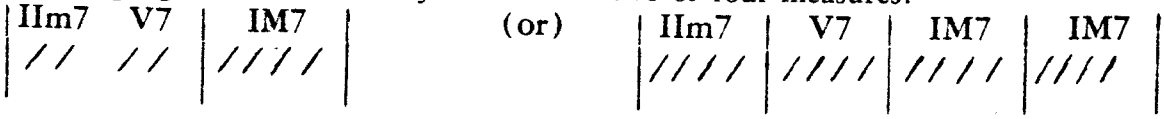
A musician who can read accurately in *groups* of notes, rather than just a few at a time, will develop good reading habits and greatly improve sight reading. In the same manner, an improviser who can read groups of chords that are related to each other, rather than improvising on one chord at a time, will also be developing good reading habits which consequently allow for more spontaneity in playing.

Because of the frequent occurrences of the IIm7-V7 and IIm7-V7-IM7 chord progressions, the next series of patterns will deal exclusively with this progression.

The IIm7-V7 progression will *usually* be found in one or two measures:

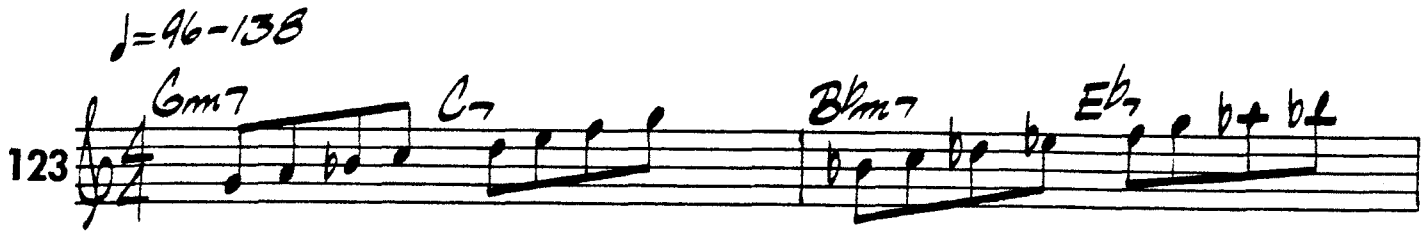


The IIm7-V7-IM7 progression will *usually* be found in two or four measures:

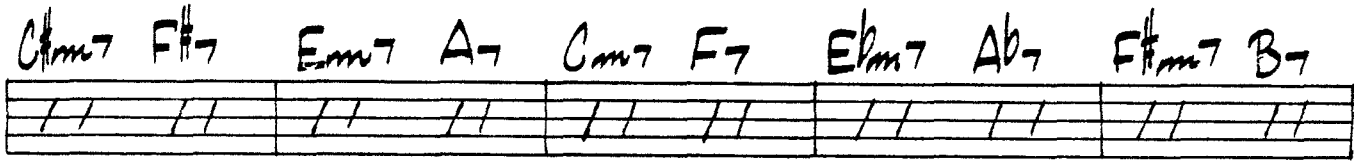


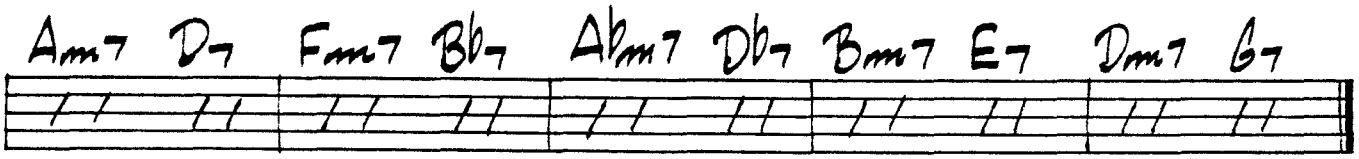
Patterns using IIm7-V7 Progression (one measure):

This pattern uses the scale of the m7 chord in one complete octave, in the ascending form.



(Continue in same manner)

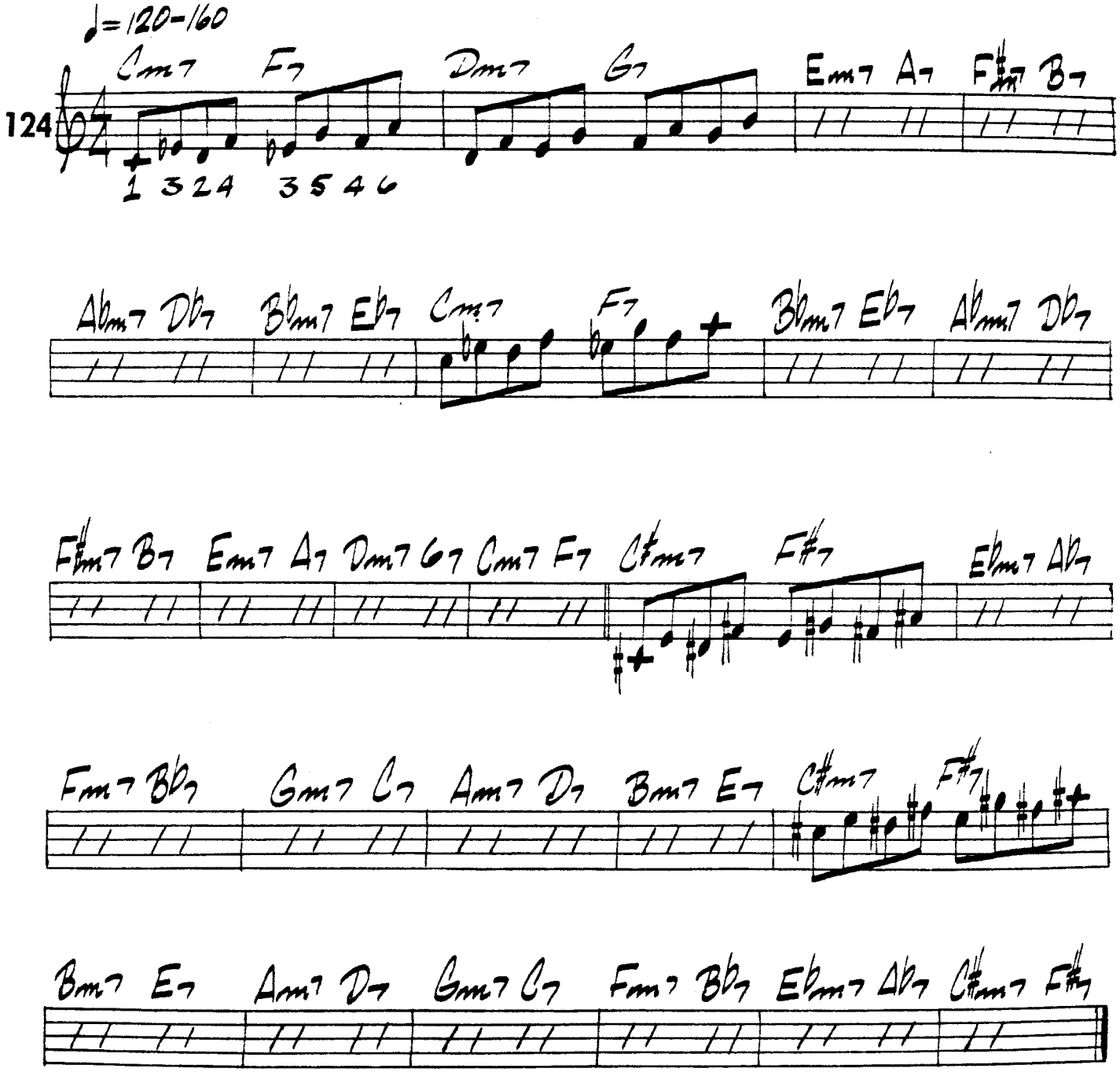




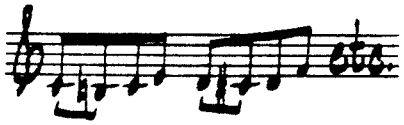
Practice Pattern No. 123, using *descending* forms of the illustrated scales throughout.

IIm7-V7 Progression (one measure):

This pattern is based on the m7th scale. Arabic numbers indicate the succession of tones, from the m7 scale, necessary to complete this pattern with remaining IIm7-V7 (one measure) progressions in all keys.

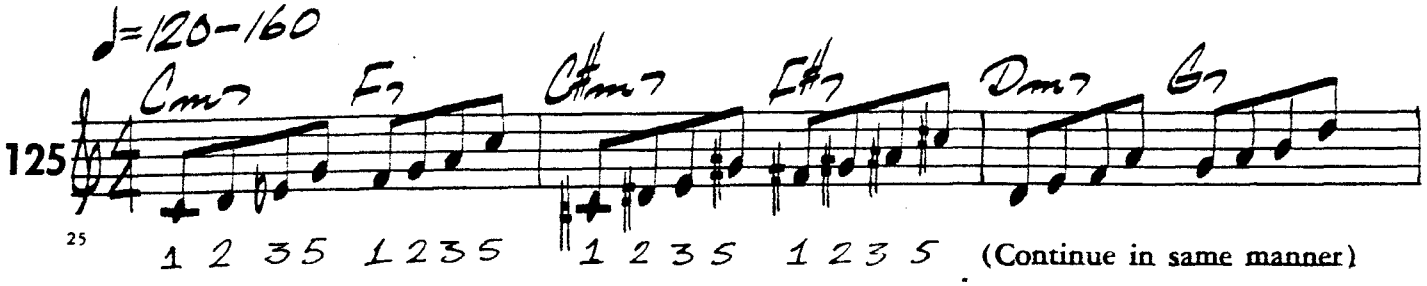


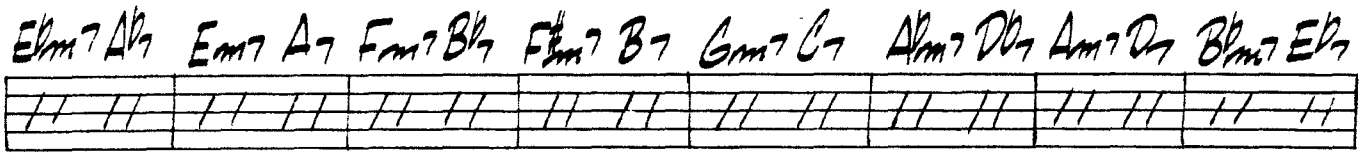
[24]On almost all albums prior to 1960, John Coltrane uses chromatic neighbor tones as embellishments on the lowest tones of a phrase.

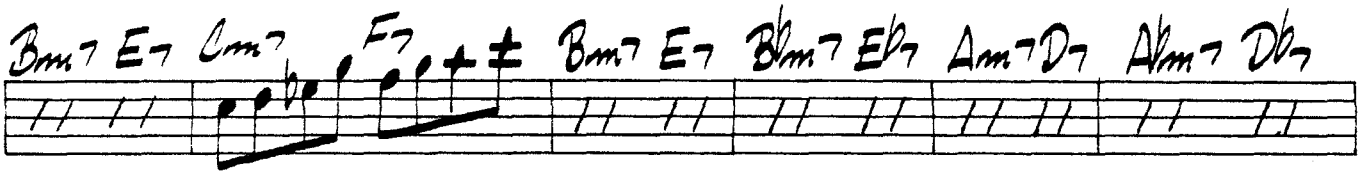


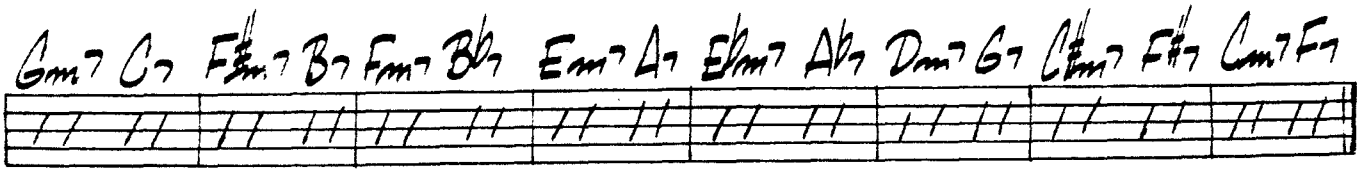
IIm7-V7 Progression (one measure):

This pattern is based on the fragments 1-2-3-5 of EACH chord scale.







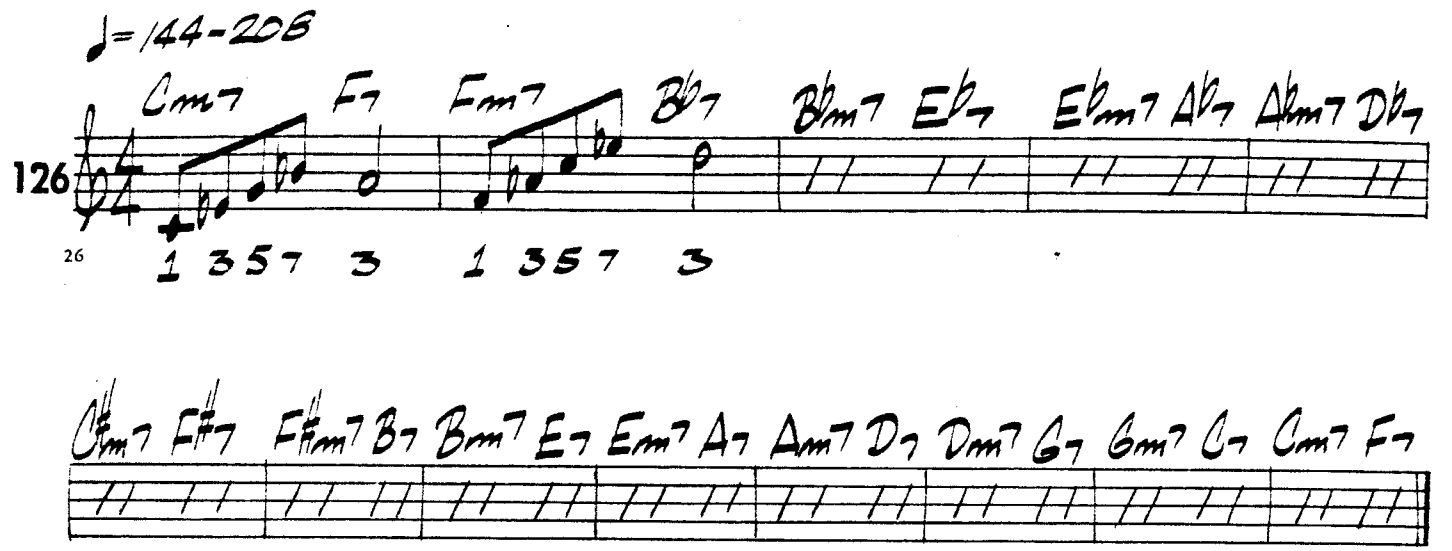


[25]John Coltrane, "Giant Steps," on *Giant Steps* (Atlantic S-1311), John Coltrane Quartet.

IIm7-V7-IM7 Progression (one measure):

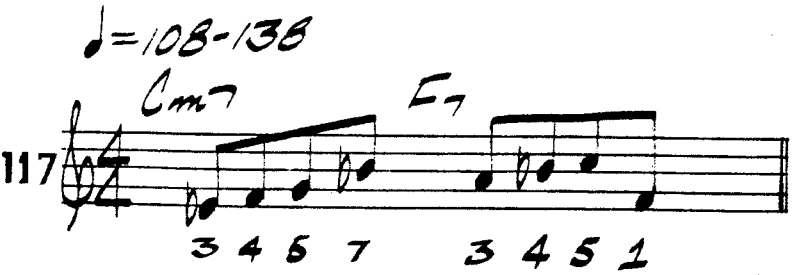
This pattern is based on chord tones of the respective chords shown. Arabic numbers indicate the succession of tones from each chord, necessary to complete this pattern in all keys.

IIm7-V7 Progression (one measure):



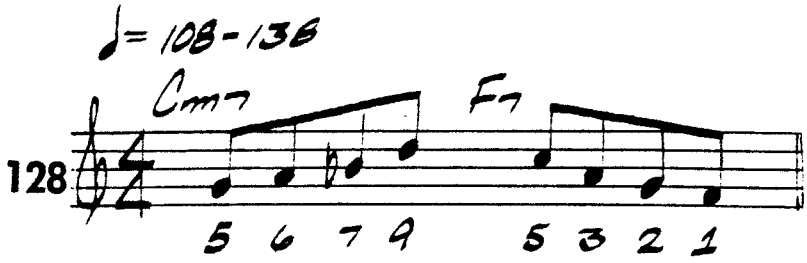
IIm7-V7 Progression (one measure):

This pattern is based on two sets of fragments which are to be extracted from the *scales* of the illustrated *chords*. The fragment 3-4-5-7 is to be extracted from the scale of the minor 7th chord, and the fragment 3-4-5-1 is to be extracted from the scale of the dominant seventh chord. Practice Pattern No. 127 with the *chords* in Patterns No. 123-126.

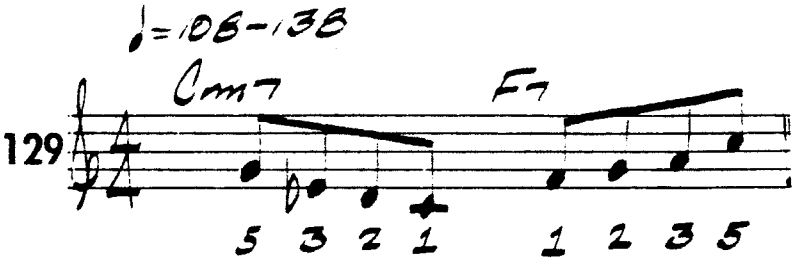


[26]See the Thelonius Monk composition "Round Midnight." This fragment occurs in the third and fifth measures of the tune.

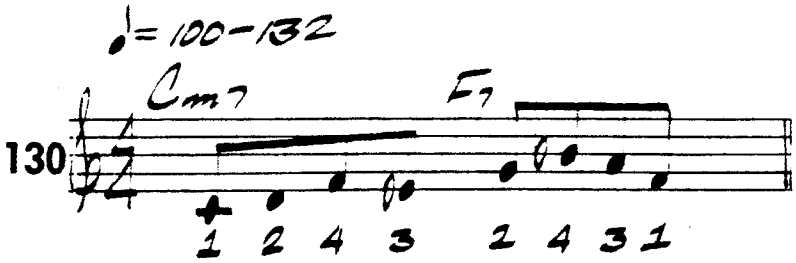
This pattern uses fragment 5-6-7-9 from the scale of the minor seventh chord, and fragment 5-3-2-1 from the scale of the dominant seventh chord. Practice Pattern No. 128 with the *chords* in Patterns No. 123-126.



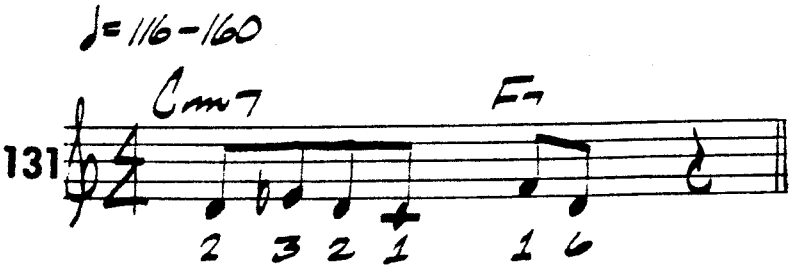
This pattern uses fragment 5-3-2-1 from the scale of the minor seventh chord, and fragment 1-2-3-5 from the scale of the dominant seventh chord. Practice Pattern No. 129 with the *chords* in Patterns No. 123-126.



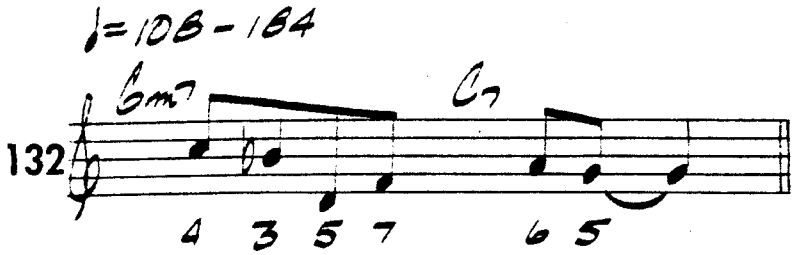
This pattern uses fragment 1-2-4-3 of the scale of the minor seventh chord, and fragment 2-4-3-1 from the scale of the dominant seventh chord. Practice Pattern No. 130 with the chords in Patterns No. 123-126.



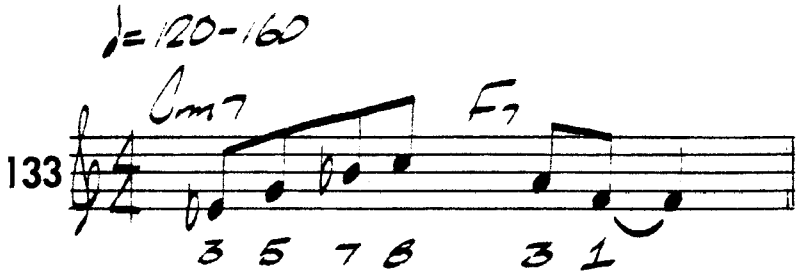
This pattern uses the fragment 2-3-2-1 from the scale of the minor seventh chord, and the fragment 1-6 from the scale of the dominant seventh chord. Practice Pattern No. 131 with the chords in Patterns No. 123-126.



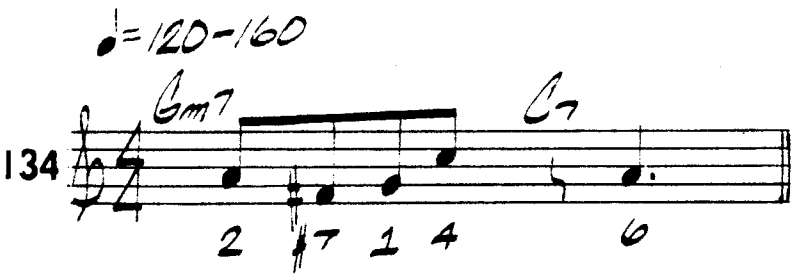
This pattern uses the fragment 4-3-5-7 (note the interval between tones 3 and 5) from the scale of the minor seventh chord, and fragment 6-5 from the scale of the dominant seventh chord. Practice Pattern No. 132 using the chords in Patterns No. 123-126.



This pattern uses fragment 3-5-7-8 from the scale of the minor seventh chord, and fragment 3-1 from the scale of the dominant seventh chord. Practice Pattern No. 133 using the chords in Patterns No. 123-126.

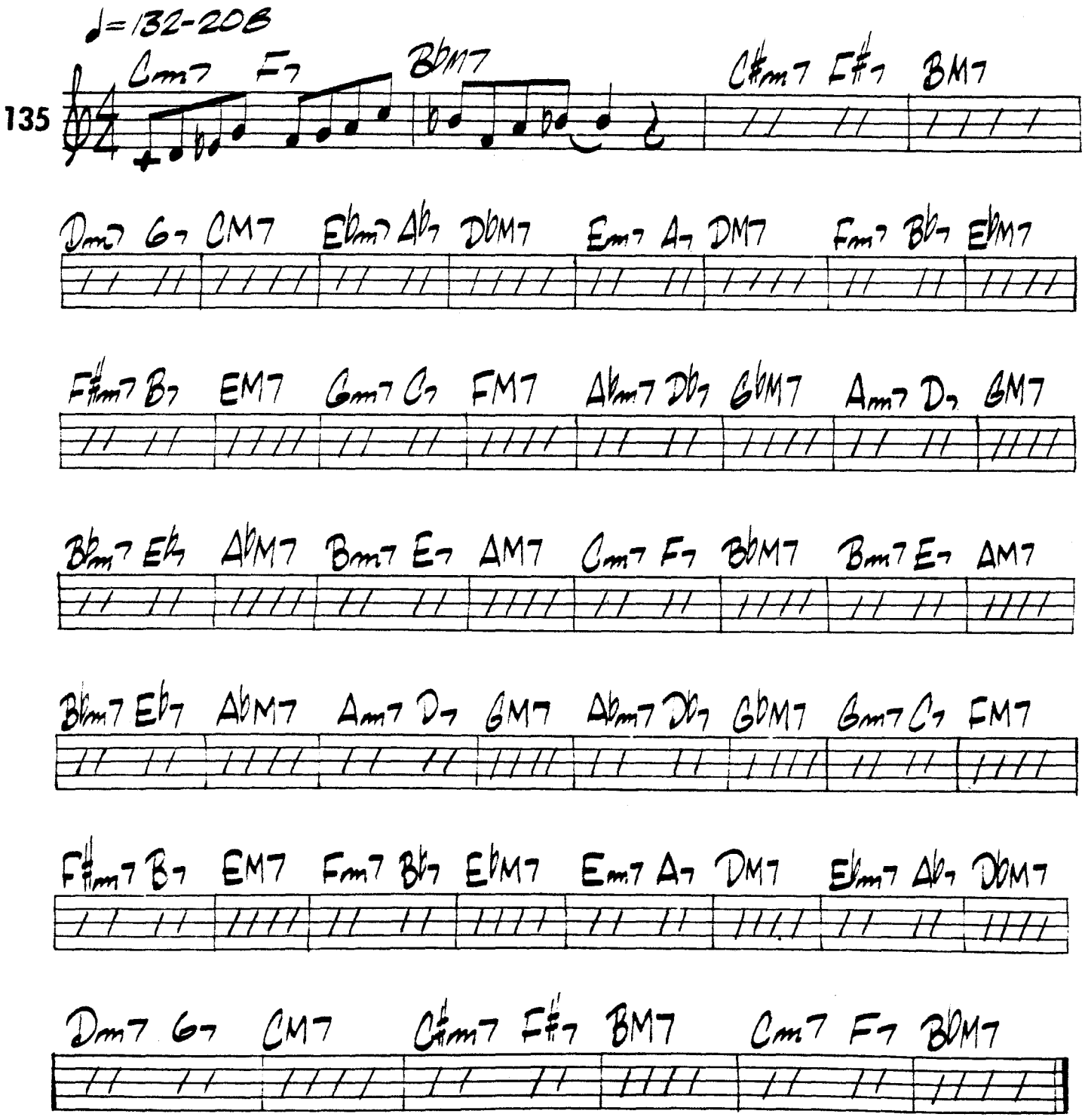


This pattern uses the fragment 2-sharp7-1-4 (note that the sharp 7 means to raise the 7th tone one half step) from the scale of the minor seventh chord, and tone 6 from the scale of the dominant seventh chord. Practice Pattern No. 134 using the chords in Patterns No. 123-126.
IIm7-V7 Progressions (one measure):

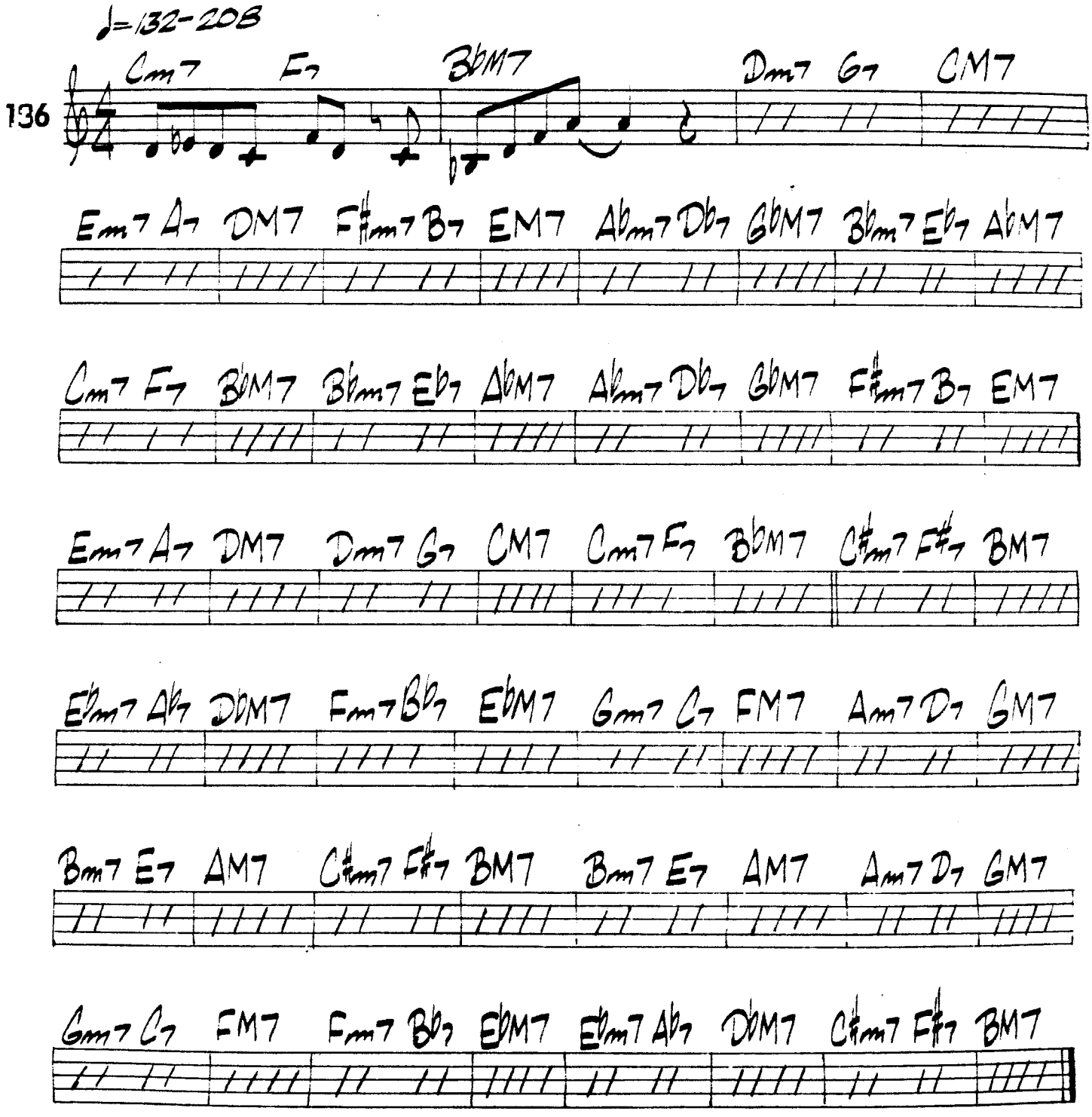


Patterns No. 135-138 will deal with the IIm7-V7-IM7 progression in two measures. Rather than introducing new patterns, we will use four of the patterns previously discussed with the IIm7-V7 progression and extend them to the IM7. The student can then apply any of the remaining IIm7-V7 (one measure) progressions to the chords in Patterns No. 135-138, and experiment with extending them to the IM7 chord.

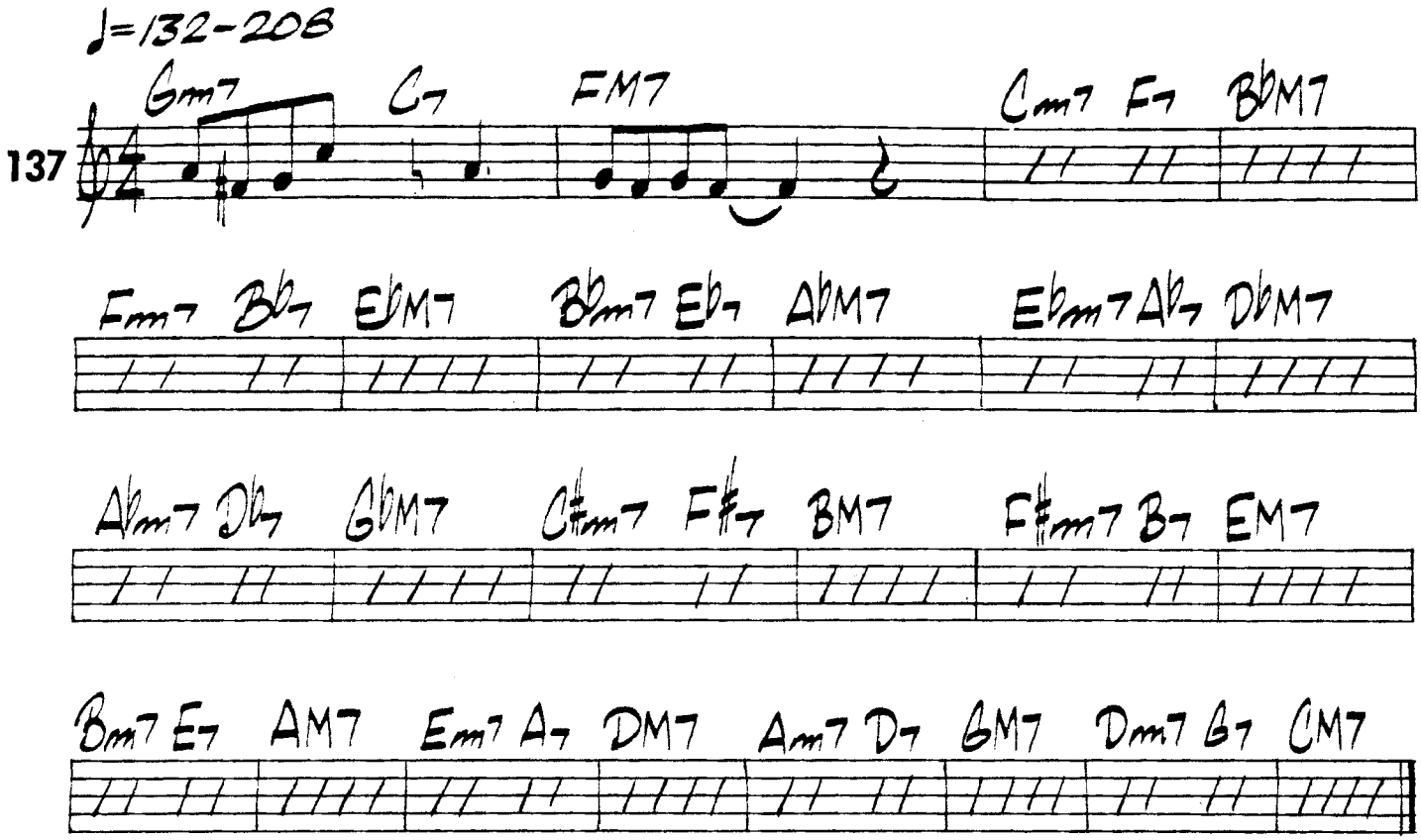
IIm7-V7-IM7 Progression (two measures):



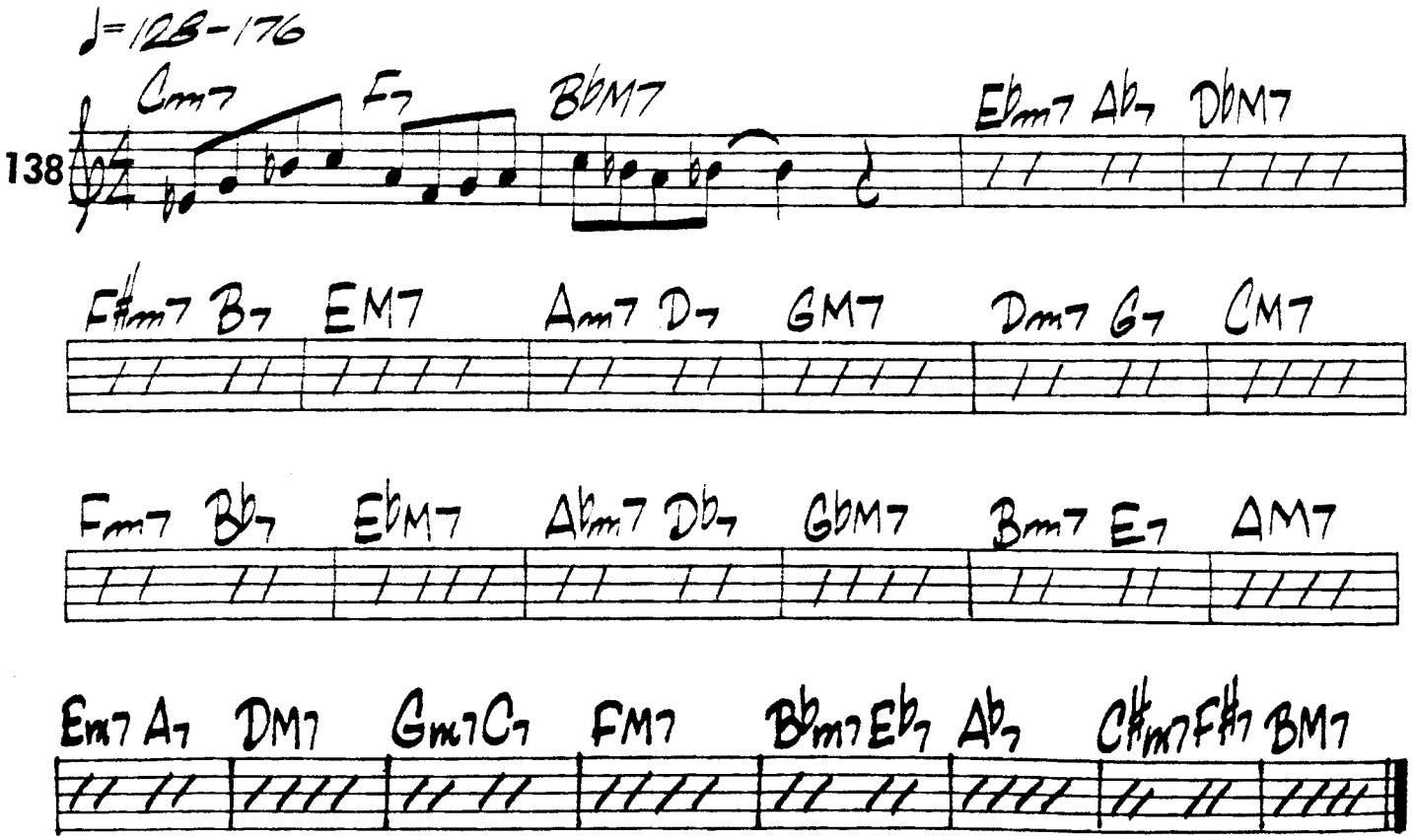
IIm7-V7-IM7 Progression (two measures):



IIm7-V7-IM7 Progression (two measures):

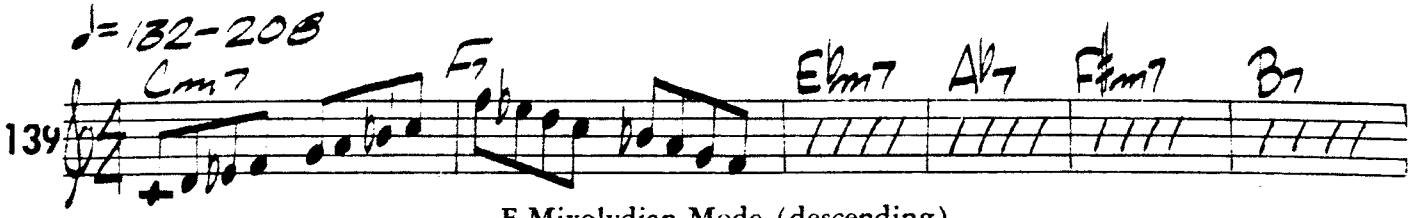


IIm7-V7-IM7 Progression (two measures):



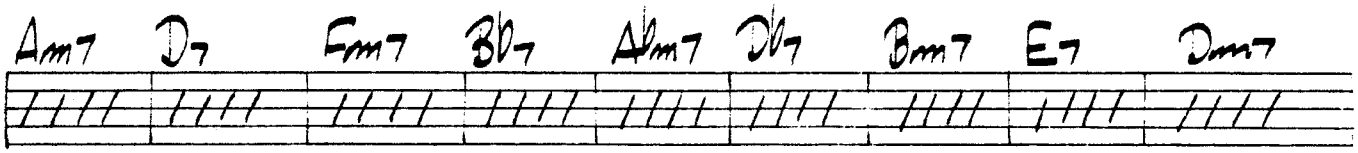
This pattern uses the scales of the illustrated chords, ascending the scale of the minor seventh chord and descending the scale of the dominant seventh chord.

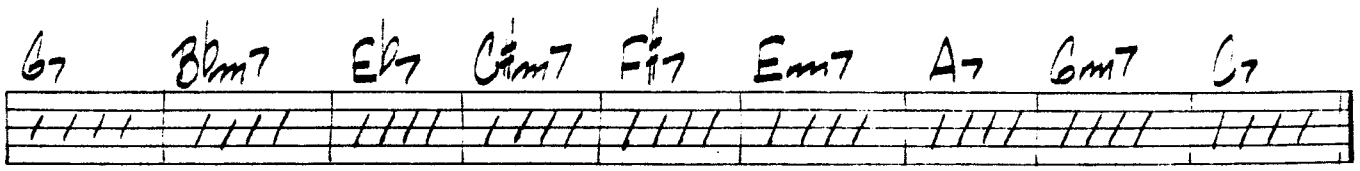
IIm7-V7 Progression (two measures):



C Dorian Mode (ascending)

F Mixolydian Mode (descending)



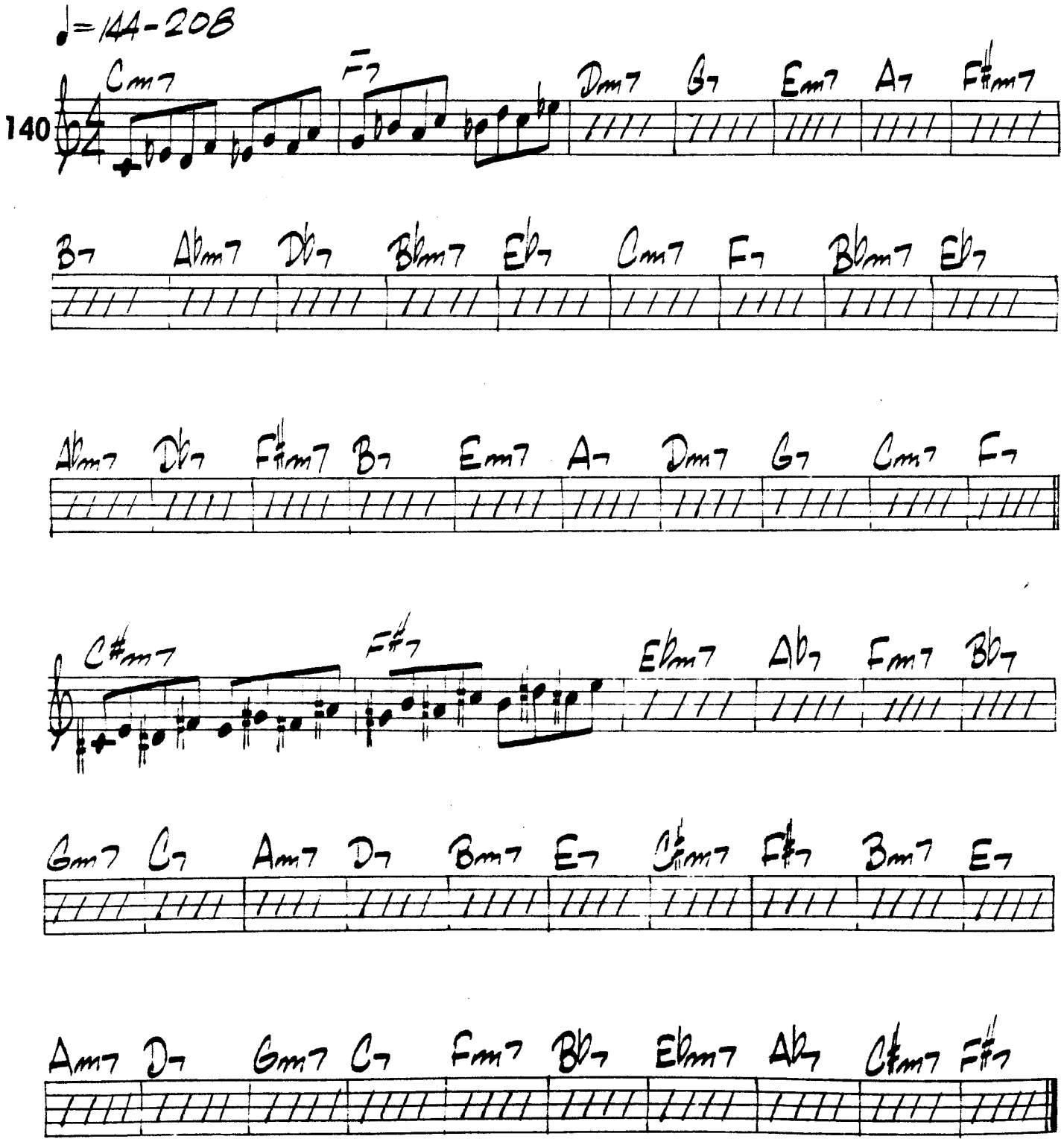


Practice Pattern No. 139 in the following manner:

Descending scale of m7 chord—ascending scale of the dominant 7 chord;
Ascending scale of m7 chord—ascending scale of the dominant 7 chord;
Descending scale of m7 chord—descending scale of the dominant 7 chord.

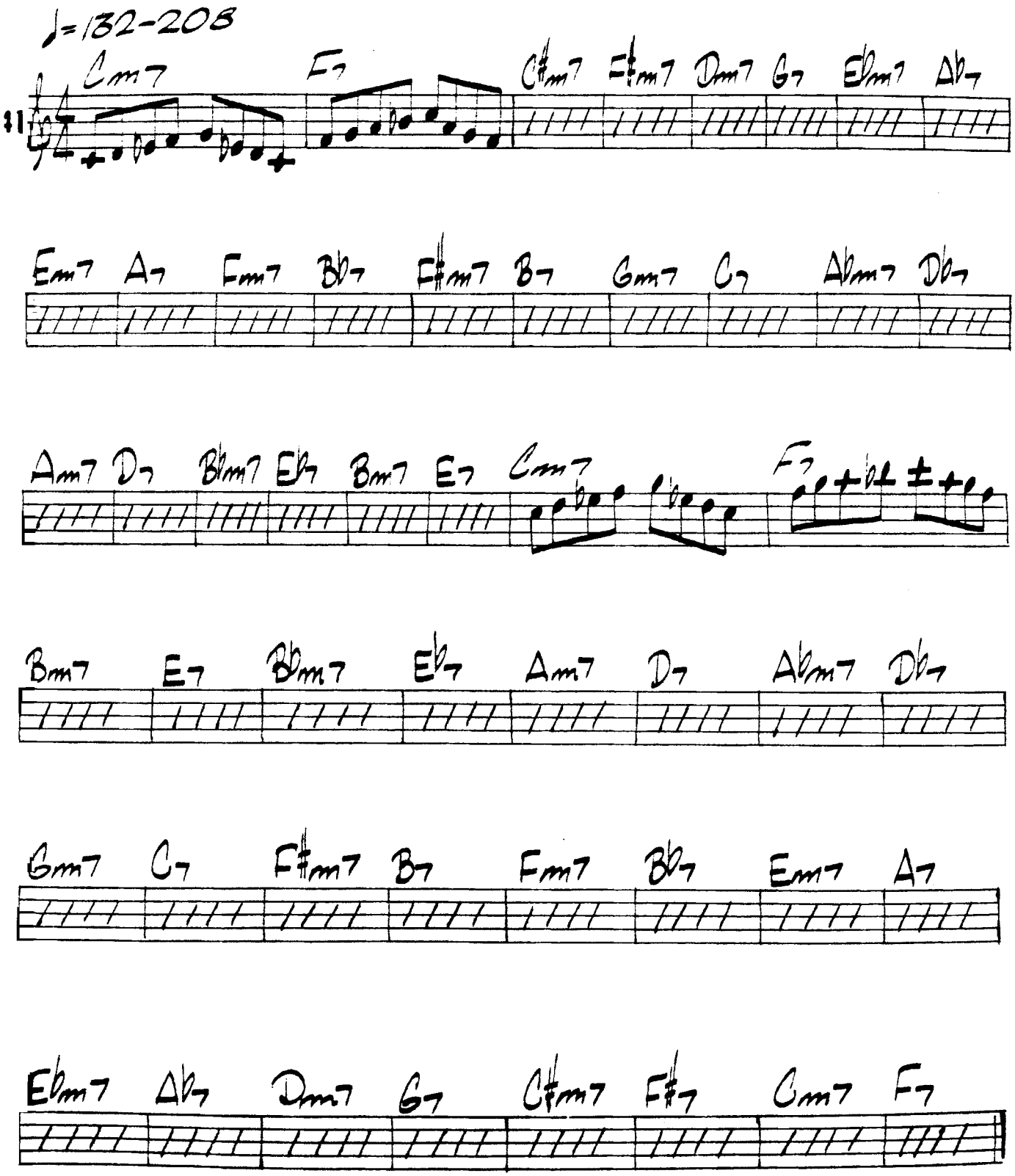
This pattern uses the scale of the minor seventh chord (in 3rds) which is continued for two measures, using eighth notes. In this manner, it ends on the seventh tone of the dominant seventh chord, as illustrated. The pattern fits both chords because they both have the same *parent* key. Consequently, the accidentals in their respective scales are the same. Also, the sequence of pitches in the measure containing the dominant seventh chord establishes the sonority of that chord.

IIm7-V7 Progression (two measures):



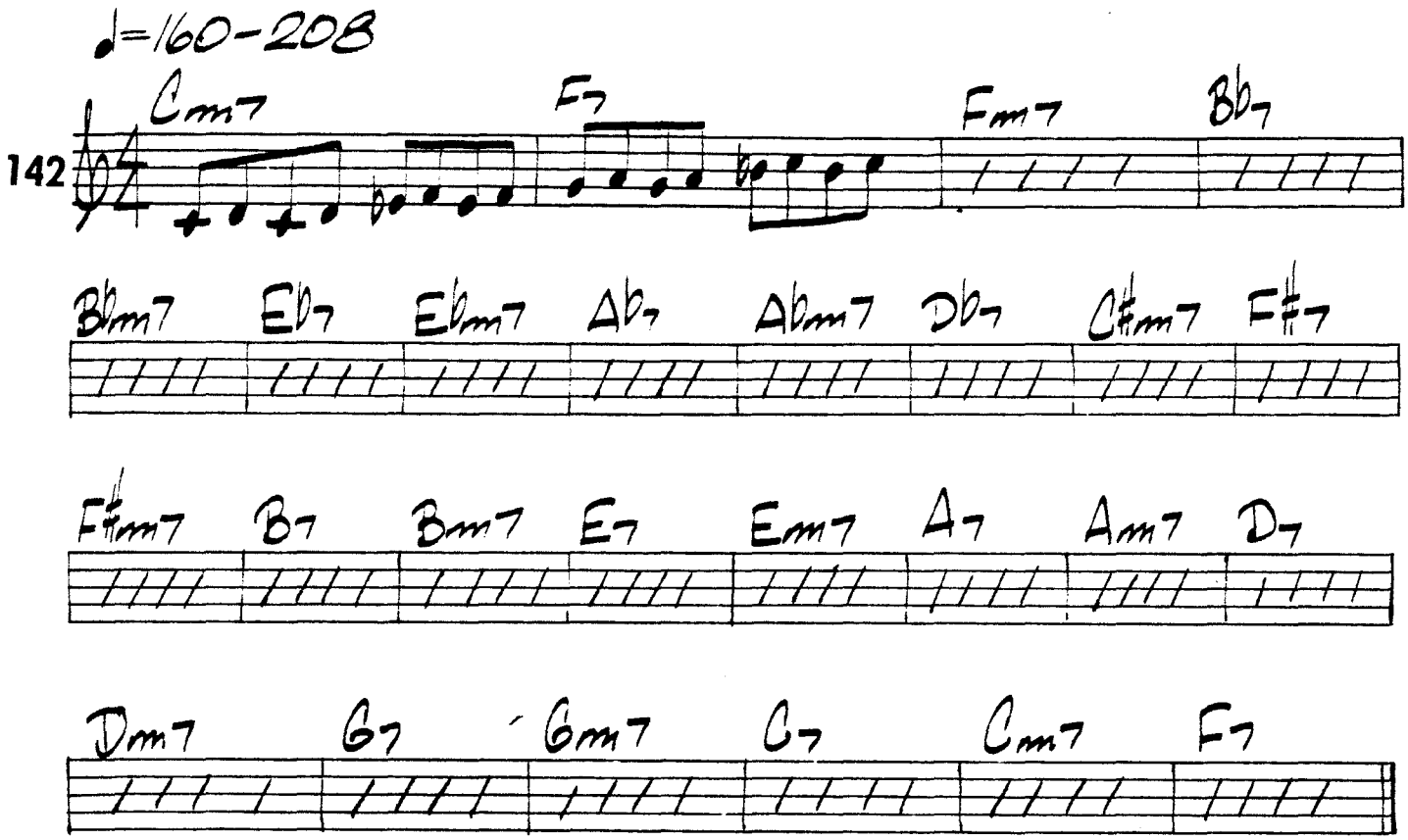
This pattern uses the fragments 1-2-3-4 5-3-2-1 from the scale of the minor seventh chord, and fragments 1-2-3-4 5-3-2-1 from the scale of the dominant seventh chord.

IIm7-V7 Progression (two measures):



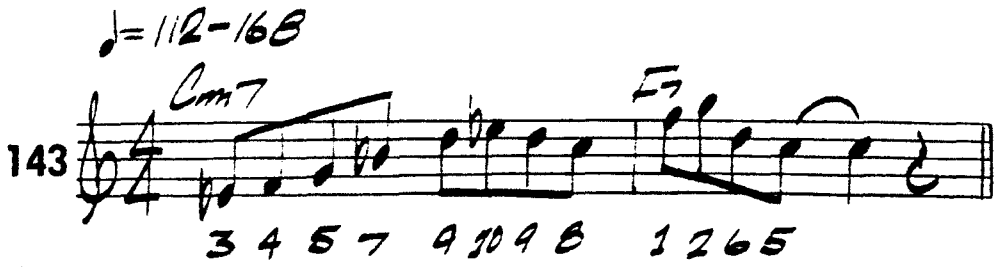
This pattern is based on the scale of the minor seventh chord. It is made up of repeated tones: 1-2-1-2 3-4-3-4 5-6-5-6 7-8-7-8 of the minor seventh chord. Used in this manner, these tones also fit the dominant seventh chord because both chords use the same "parent" scale.

IIm7-V7 Progression (two measures):



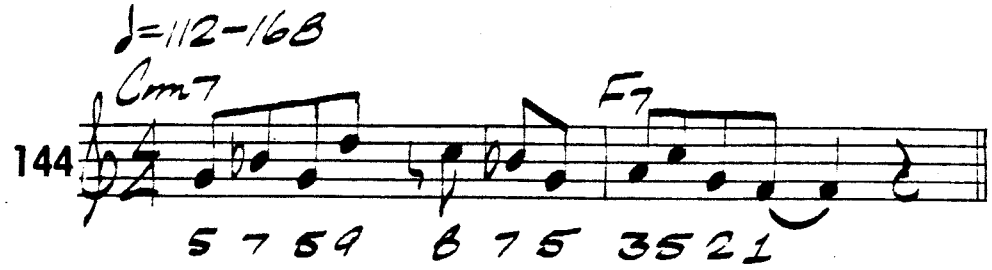
IIm7-V7 Progressions (two measures):

This pattern uses the fragments 3-4-5-7 9-10-9-8 from the scale of the minor seventh chord, and fragment 1-2-6-5 (note the interval between the tones 2 and 6) from the scale of the dominant seventh chord.

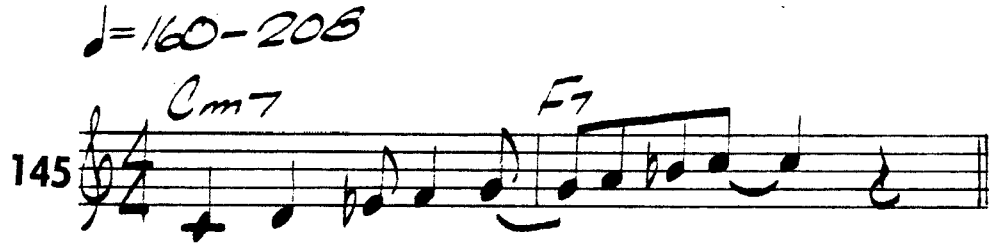


Practice Pattern No. 143 using the chords in Patterns No. 139-142.

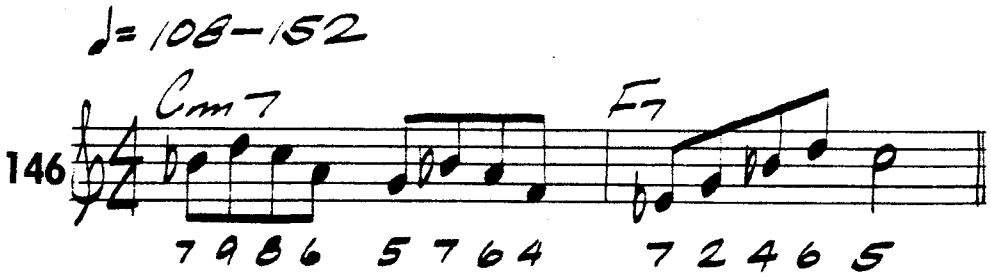
This pattern uses the fragments 5-7-5-9 8-7-5 from the scale of the minor seventh chord, and fragment 3-5-2-1 from the scale of the dominant seventh chord. Practice Pattern No. 144 using chords in Patterns No. 139-142.



This pattern is based on a rhythmical version (in two measures) of the scale of the minor seventh chord. In this manner it also sounds for the dominant seventh chord. Practice Pattern No. 145 using the chords in Patterns No. 139-142.

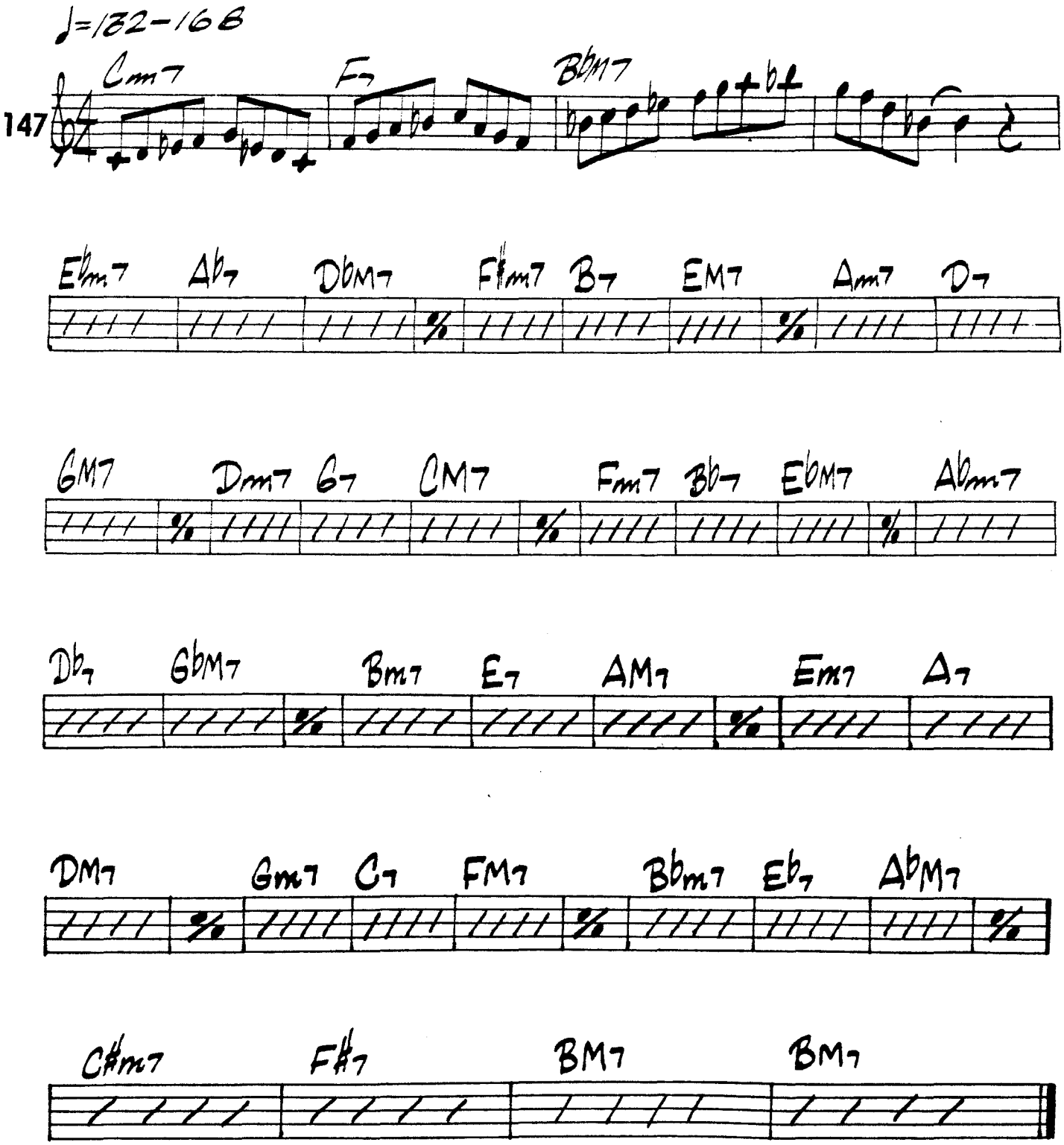


This pattern uses the fragment 7-9-8-6 5-7-6-4 from the scale of the minor seventh chord, and fragment 7-2-4-6-5 from the scale of the dominant seventh chord. Practice Pattern No. 146 using the chords in Patterns No. 139-142.

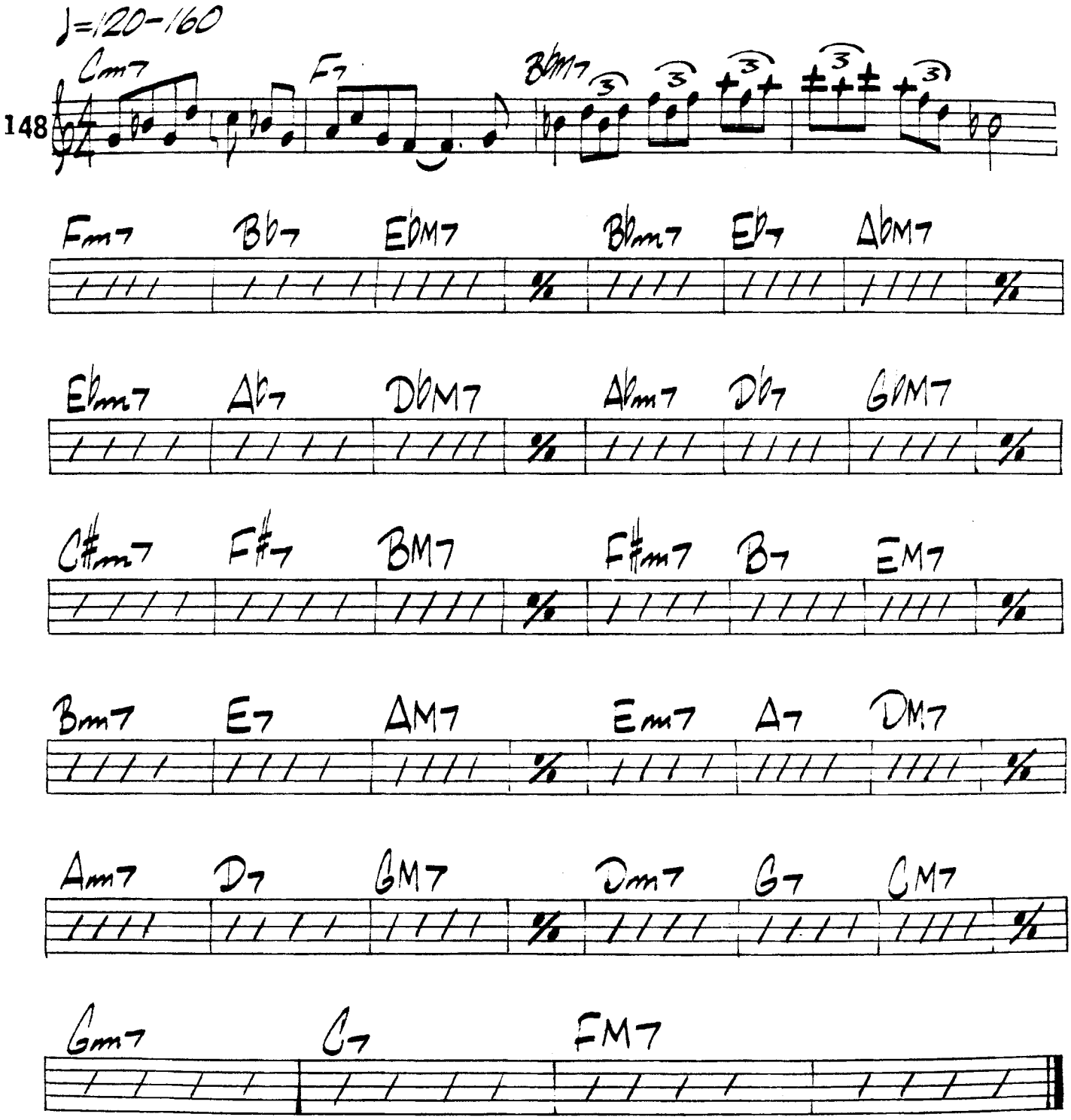


Patterns No. 147-148 will deal with the IIm7-V7-IM7 progression in four measures. Rather than introducing new patterns, we will use two of the patterns previously discussed with the IIm7-V7 progression (two measures) and extend them to the IM7. The student can then apply any of the remaining IIm7-V7 (two measures) progressions to the chords in Patterns No. 147 and 148 and experiment with extending them to the IM7 chord.

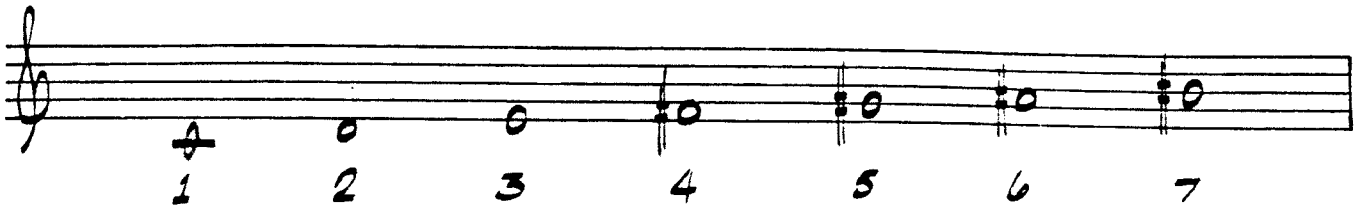
IIm7-V7-IM7 Progression (four measures):



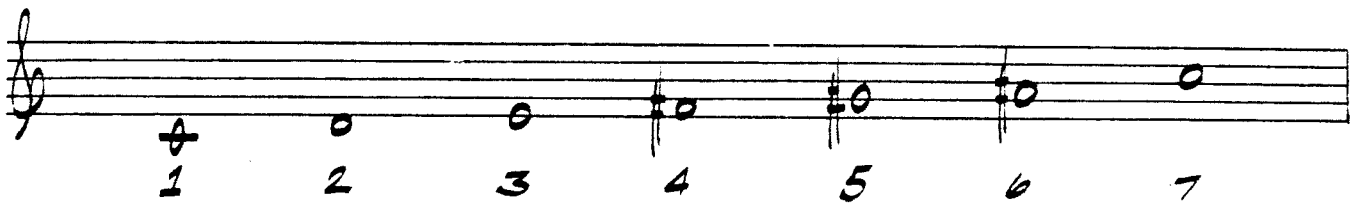
IIm7-V7-IM7 Progression (four measures):



AUGMENTED CHORDS AND RESPECTIVE SCALES



The C *whole tone* scale is illustrated in one octave. The numbers under each tone indicate the position of that tone *in this scale.* In all scales covered up to this point the distances between tones No. 1 and No. 8 were octaves. The student will notice, however, that in the illustrated C *whole tone* scale, the distance between tones No. 1 and No. 7 appears to be a seventh interval. Theoretically it is an *augmented* seventh interval which when spelled enharmonically becomes an octave. In order to present the C *whole tone* scale in a manner that the student will find less confusing to utilize, we will change the *spelling* to the following:



This will be the accepted spelling for the C *whole tone* scale and any other scale that will be derived from it.

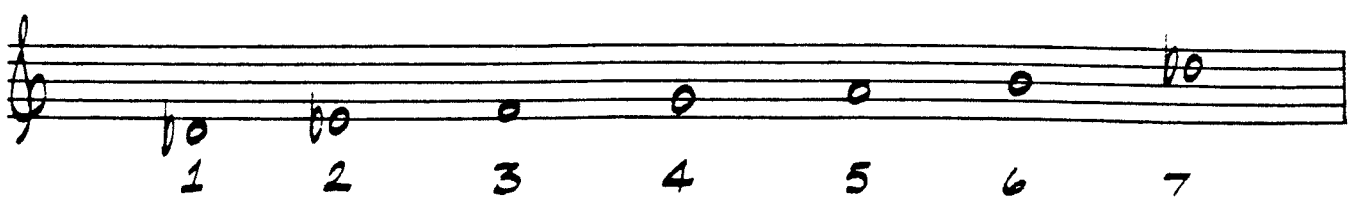
The *whole tone* scale has no relationship to *key.* It is unique because it contains a *whole* step between each note of the scale, and thus it is called a *whole tone* scale. In order to produce a whole tone scale from any tone, all that is necessary is to have a whole step between each note until we have reached the octave above the starting note (which will actually be tone No. 7 in the whole tone scale).

A whole tone scale built on the note D would look like this:

D	E	F♯	G♯	A♯	C	D
1	2	3	4	5	6	7

A careful examination of the C whole tone scale will show that the whole tone scale produced on the note D contains the same notes. In the same manner, whole tone scales produced from the starting notes E, F-sharp, G-sharp, A-sharp, will also contain the same tones with the sole exception of the starting tone. Thus the C whole tone scale is used to form five other *whole tone scales*, all having the same tones but with different starting pitches.

Now that we have established the starting notes and specific tones of six whole tone scales, we can do the same for the remaining six scales by starting on the note D-flat. The following example illustrates the D-flat *whole tone* scale:



The numbers under each tone indicate the position of that tone in this scale (note that tone No. 7 has been changed from a C-sharp to a D-flat in order that the student might be able to manipulate the tones easier). The D-flat scale whole tone will also produce five other whole tone scales with the starting pitches E-flat, F, G, A and B. These whole tone scales will contain the same tones as in the illustrated D-flat whole tone scale with the exception of the starting note.

Figure 28 illustrates the tones of all whole tone scales. This chart will be helpful to the student when applying the numerical formulas dealing with the formation of the Augmented Triad and the Augmented Seventh Chord.

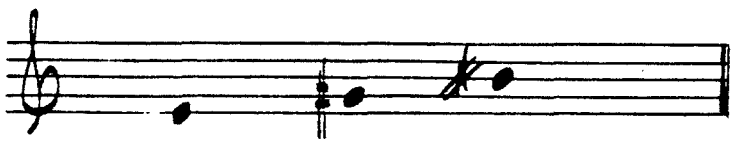
Fig. 28 (chart containing tones of all whole tone scales):

Tone No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
C	D	E	F♯	G♯	A♯	C
D	E	F♯	G♯	A♯	C	D
E	F♯	G♯	A♯	C	D	E
F♯	G♯	A♯	C	D	E	F♯
G♯	A♯	C	D	E	F♯	G♯
A♯	C	D	E	F♯	G♯	A♯
D♭	E♭	F	G	A	B	D♭
E♭	F	G	A	B	D♭	E♭
F	G	A	B	D♭	E♭	F
G	A	B	D♭	E♭	F	G
A	B	D♭	E♭	F	G	A
B	D♭	E♭	F	G	A	B

The use of enharmonic tones is justifiable whenever the student desires. The enharmonic tone does not change the *sound* of the tone but rather the spelling, which may allow the student to use the material related to *whole tone* scales. For reference, the enharmonic tones are: C-sharp and D-flat; D-sharp and E-flat; E-sharp and F; F-sharp and G-flat; G-sharp and A-flat; A-sharp and B-flat; B-sharp and C; F-flat and E; C-flat and B.

By extracting the tones No. 1-3-5 from any *whole tone* scale, we arrive at the Augmented Triad on that particular root. Figure 29 illustrates the tones of the E AUGMENTED TRIAD.

Fig. 29



Symbol: E+

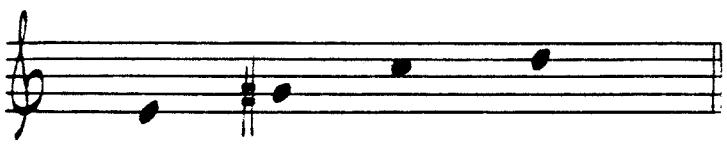
Earlier in the book we mentioned that a ***triad*** was a three ***note*** chord which ***measured*** five tones from bottom to top counting the first tone as No. 1.

The previous example, which illustrates the tones of the E Augmented Triad, would seem to contradict our earlier definition of a *triad.* If the student were to count the tones in the illustrated Augmented Triad, he would be correct in counting *six* tones. The reason for this is simple. The tones of all of the *whole tone* scales shown in figure 28 have been re-arranged to create the least possible difficulty for the student when playing these scales on his instrument. Enharmonic spellings were automatically included in this chart. Consequently, when applying the given formula for the extraction of Augmented Triads from their respective *whole tone* scales, we can arrive at a *triad* which actually measures six tones from the bottom to the top note, as in the case of the illustrated example. The correct *spelling* for the E Augmented Triad should be E-G-sharp-B-sharp. The B-sharp, however, was replaced with the enharmonic note C in the E whole tone scale. This is why the illustrated E Augmented Triad *appears* to have *six* tones from the root to the top tone, instead of *five.* This will happen several times as the student proceeds to extract other *augmented triads* from their respective whole tone scales. The student is cautioned *not* to be misled into thinking the augmented *triad* has *six* tones.

In the same manner, we have previously defined a *seventh* chord as a four note chord which measures *seven* tones from bottom to top, counting the bottom note as No. 1. When applying the formula for the extraction of *Augmented Seventh* chord tones from their respective *whole tone* scales, the student will probably come up with the notes C-E-G-sharp-A-Sharp, which represent the C Augmented Seventh Chord. If the student were to count the tones from C to A-sharp there would be *six.* The *correct* spelling for this chord is C-E-G-sharp-B-flat. The tone A-sharp is used in the scale tone chart (fig. 28) to show that there is a relationship to be observed in *other* whole tone scales that were derived from the C whole tone scale. Once again the student is cautioned *not* to be misled into thinking that any given Augmented Seventh chord contains *six* tones from bottom to top instead of *seven.*

By extracting tones No. 1-3-5-6 from a *whole tone* scale, we arrive at the Augmented Seventh chord on that particular root. Figure 30 illustrates the tones of the *E Augmented Seventh Chord:*

Fig. 30



Symbol: E+7

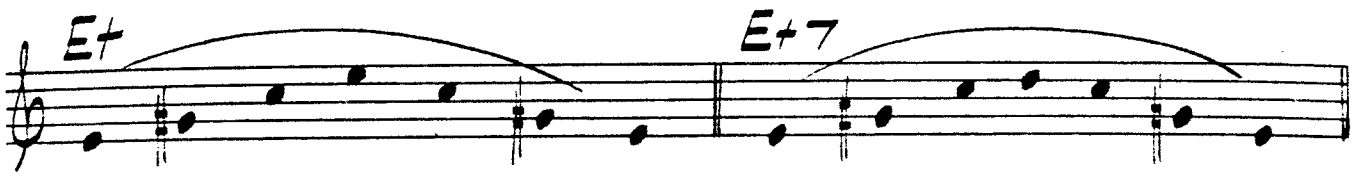
Alternate Symbol: E7 ($\sharp$5)

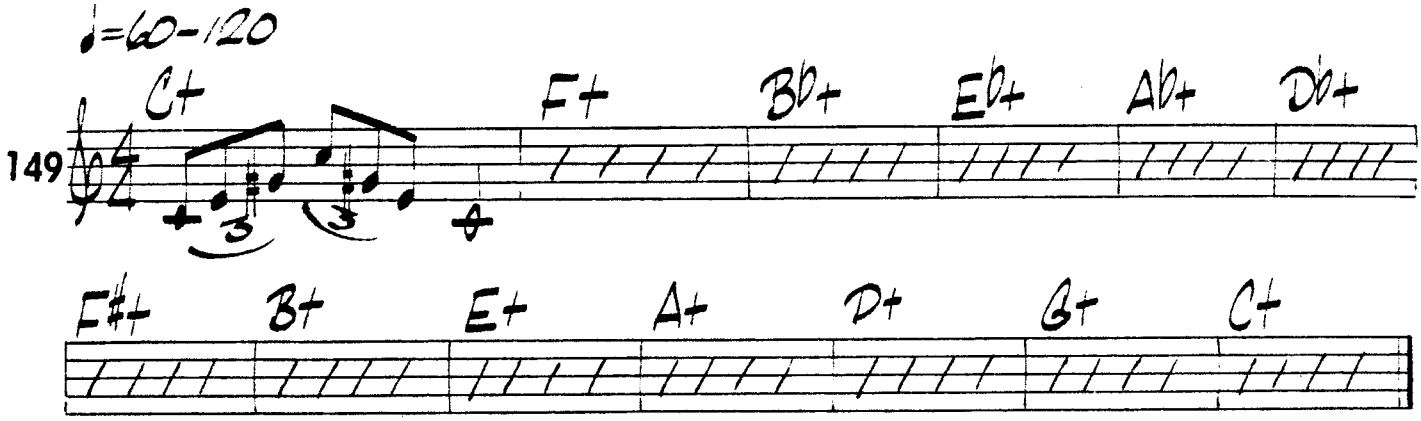
Alternate Symbol: E7 (+5)

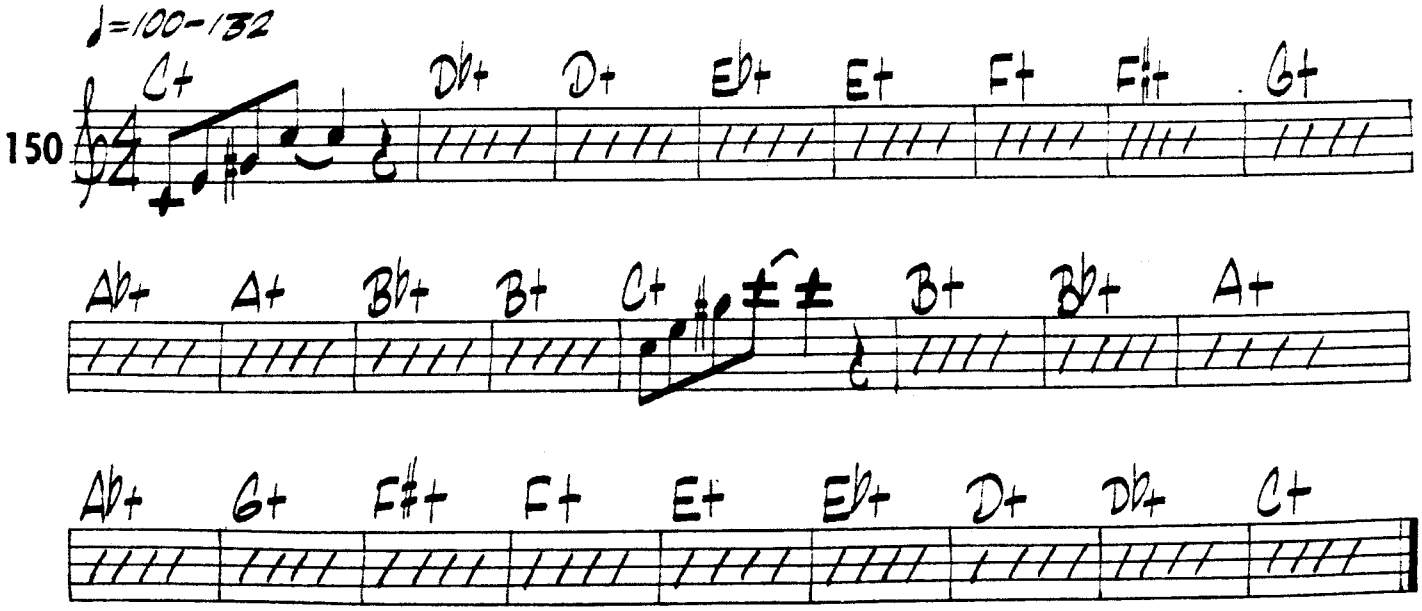
Alternate Symbol: E^{7}_{+5}

Note that both chords contain the same triad, E-G-sharp-C, and both chords use the same scale, the E whole tone scale, to establish their sound.

In preparation for the following patterns, be able to recite, write and play the following chords as they are extracted from their respective whole tone scales, Augmented Triads and Augmented Seventh Chords. Use the illustrated *routine form* for playing the chord tones, since it does not require any specific rhythm or tempo.

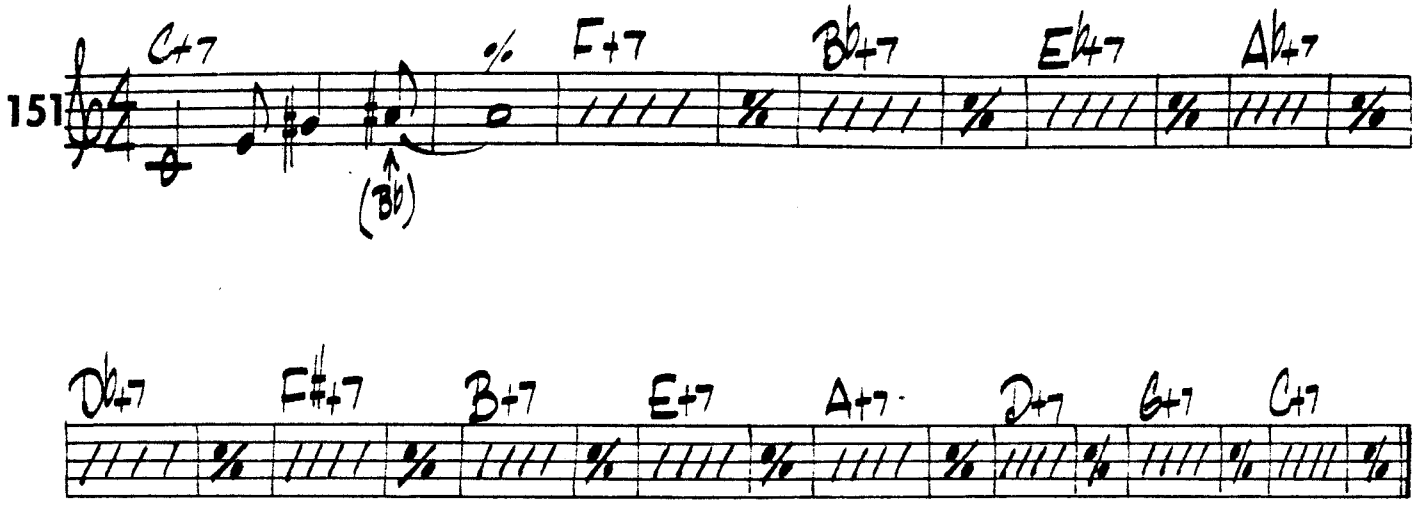

E+
E+7


♩=60-120
149
C+
F+
B♭+
E♭+
A♭+
D♭+
F♯+
B+
E+
A+
D+
G+
C+

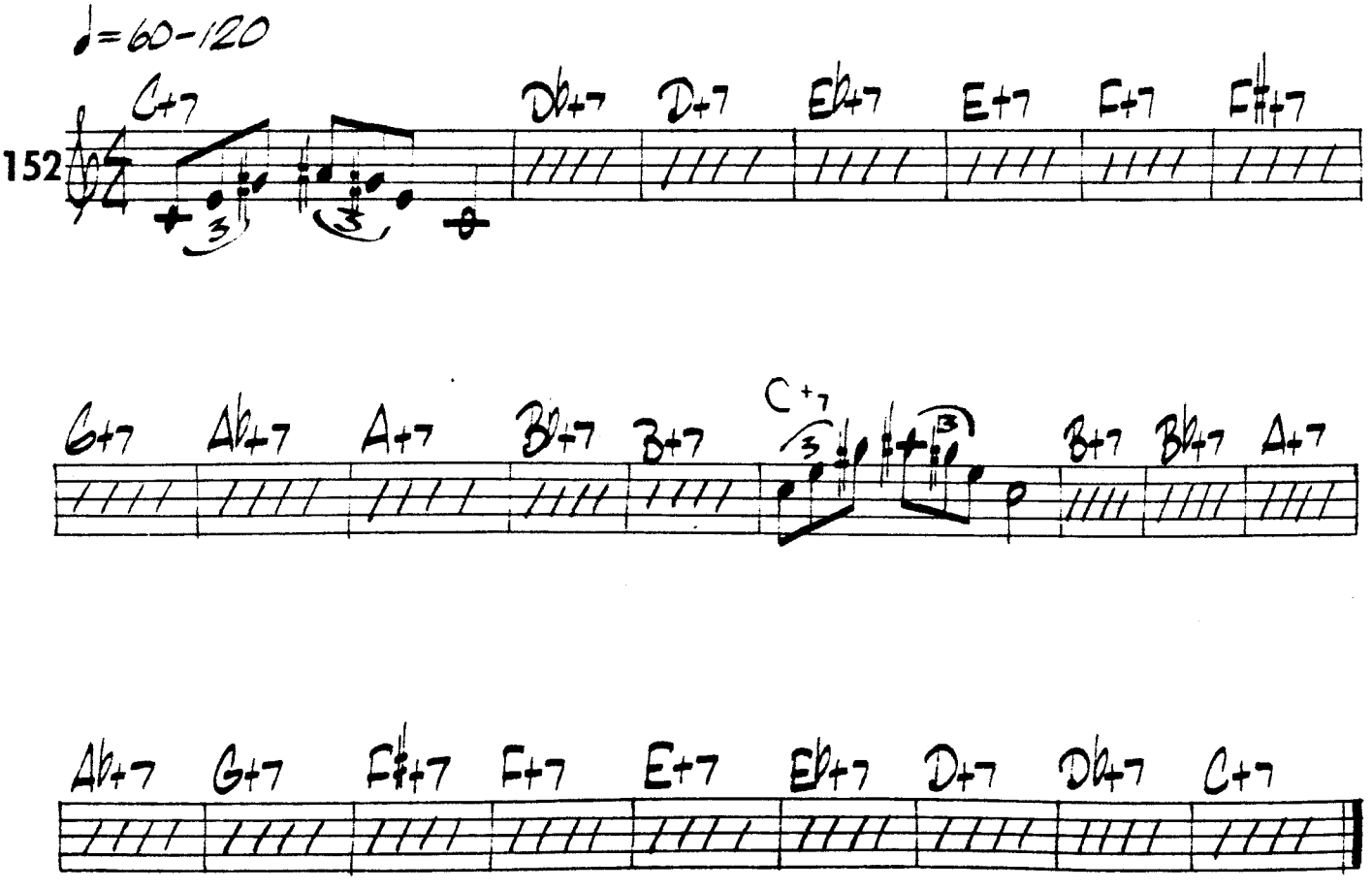

♩=100-132
150
C+
D♭+
D+
E♭+
E+
F+
F♯+
G+
A♭+
A+
B♭+
B+
C+
B+
B♭+
A+
A♭+
G+
F♯+
F+
E+
E♭+
D+
D♭+
C+

♩=160-208

Note: Each chord lasts for two measures.

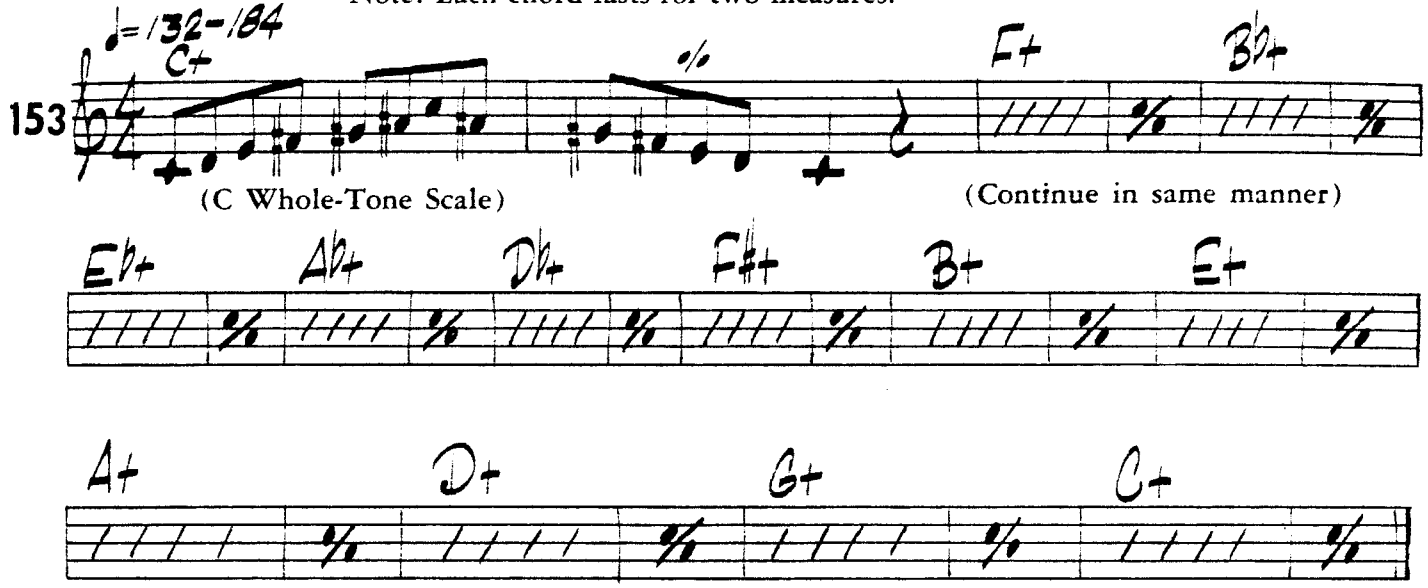


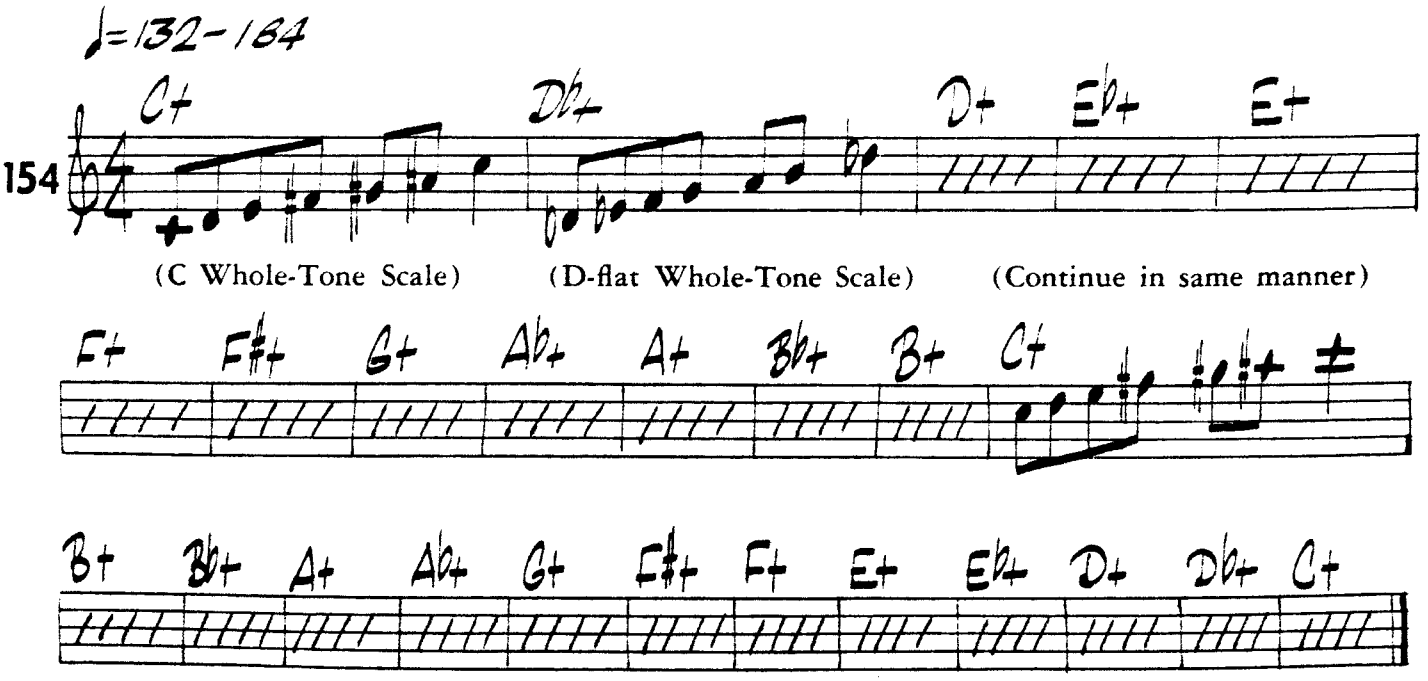
♩=60-120



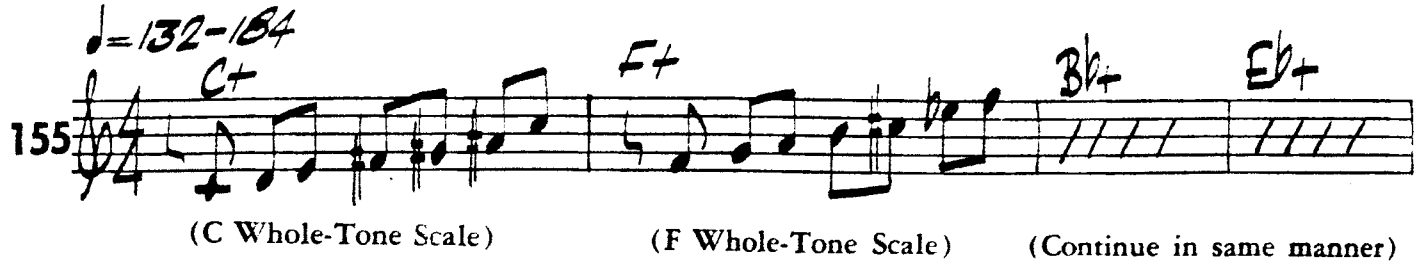
We have been practicing patterns on the two types of augmented *chords*, which were formed by extracting their respective tones from the whole-tone scale of the chord root. Now we will consider various patterns developed from the whole-tone scale of the chord. Notice that the chord symbols for the following patterns will be those of the Augmented Triad. However, the student must remember that the Augmented Triad and the Augmented Seventh Chord use the same scale: a whole tone scale on the chord root. The use of the Augmented Triad symbol in the following patterns is merely for convenience, since it would be impossible to determine exactly which chord is being used when the scale is common to both of the chords mentioned.

Note: Each chord lasts for two measures.

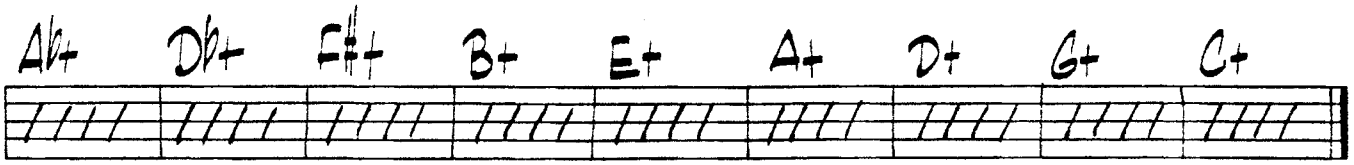


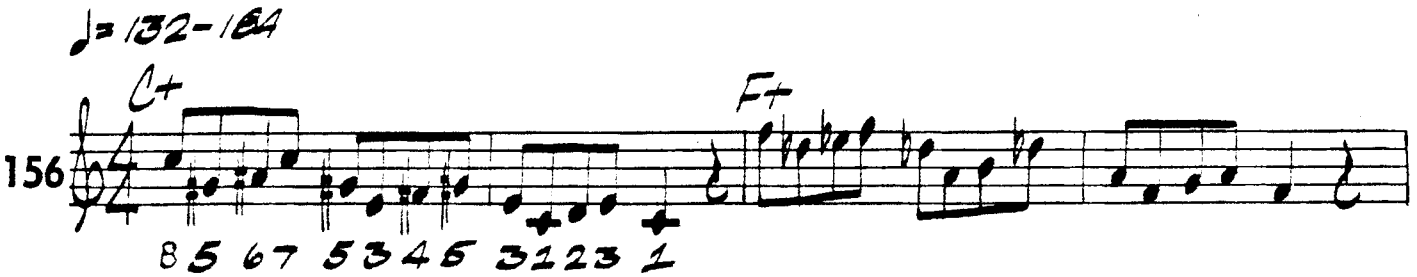


Note: Each chord lasts two measures.

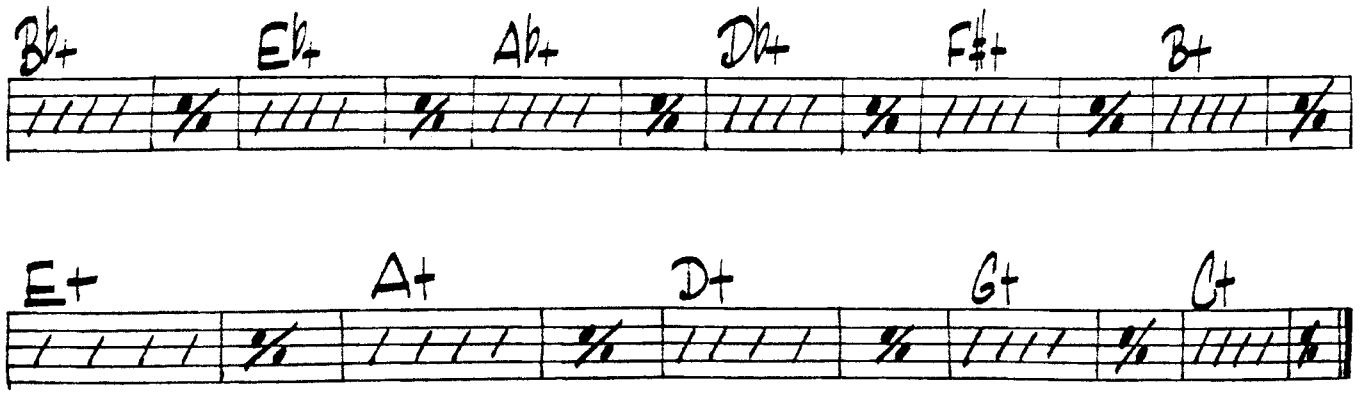


(C Whole-Tone Scale) (F Whole-Tone Scale) (Continue in same manner)

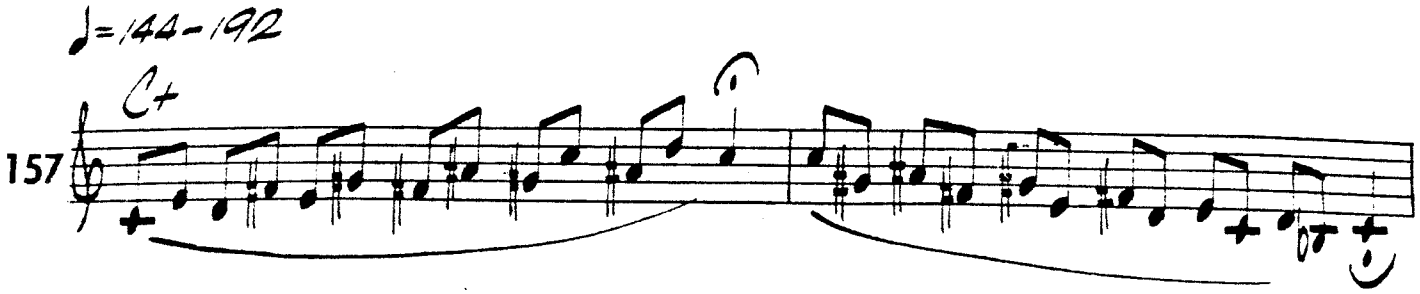




Arabic numbers indicate the succession of tones from the whole tone scale shown by the chord symbols. Refer to fig. 28 if necessary.

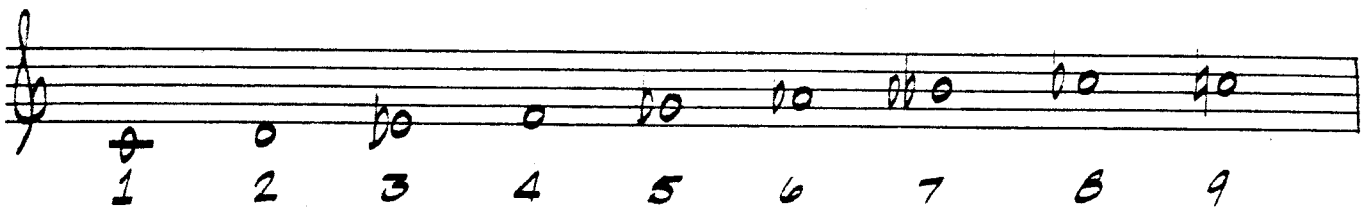


[27]David Young, "New Donna," on *Stratusphunk* (Riverside 341), George Russell Sextet. The order of the pitches in the example cited is the same as Pattern No. 156 except that Young starts on the second eighth note. The arabic numbers for this arrangement would read as follows: 5-6-7-5 3-4-5-3 etc.



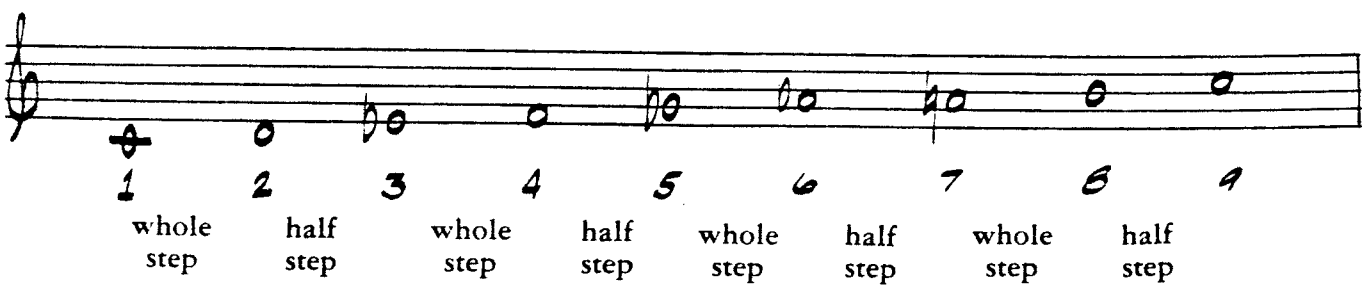
Practice Pattern No. 157 using EVERY starting tone on chart in fig. 28.

DIMINISHED CHORDS AND RESPECTIVE SCALES



The *C diminished* scale is illustrated in one octave. The number under each tone indicates the position of that tone *in this scale.* The numbers appear to indicate that the distance from the starting tone (C) to the last tone (C) is a *ninth.* This is misleading because we have learned that this distance is called an octave. However, due to the interval construction of the diminished scale, there are nine notes from the starting tone to the repetition of that tone in the next octave higher. The diminished scale has no specific relationship to a *key;* therefore, we must rely on an interval analysis for the purpose of establishing the successive tones of this scale from any starting tone. The interval analysis of the *diminished* scale is: whole step, half step, whole step, half step, whole step, half step, whole step and half step. Figure 31 illustrates the *C diminished* scale with the interval analysis included between the tones. Note the use of the enharmonic spelling for tone No. 7. Previously, tone No. 7 was labeled as B double-flat. The enharmonic spelling (A) was used for convenience and ease in reading. In future references to tones of any other diminished scales, this convenience factor, rather than the theoretically correct interval spelling, will be used.

Fig. 31



In order to produce a diminished scale from any tone, all that is necessary, then, is to have alternating intervals of *whole* and *half steps* until the starting tone has been repeated in the next octave higher, giving nine tones in all from bottom to top.

A diminished scale on the note D-flat would look like this:

D♭	E♭	E	F♯	G	A	B♭	C	D♭
whole step	half step	whole step	half step	whole step	half step	whole step	half step	

A diminished scale on the note D would look like this:

D	E	F	G	A♭	B♭	B	C♯	D
whole step	half step	whole step	half step	whole step	half step	whole step	half step	

A closer look at the tones of the C diminished scale will show that when using the tones E-flat, G-flat and A as starting points, the student is actually playing the same tones as he did when starting on C. The only difference is the starting pitch. Thus the C diminished scale will yield three other diminished scales: the E-flat diminished scale, the G-flat diminished scale and the A diminished scale.

Likewise, the D-flat and D diminished scales will also produce three other scales. The D-flat diminished scale will yield the E diminished scale, the G diminished scale, and the B-flat diminished scale. The D diminished scale will yield the F diminished scale, the A-flat diminished scale, and the B diminished scale.

Figure 32 illustrates the tones of all diminished scales. This chart will be helpful to the student when applying numerical formulas dealing with the formation of the Diminished Triad and Diminished Seventh Chord.

Fig. 32 (chart showing tones of all diminished scales)

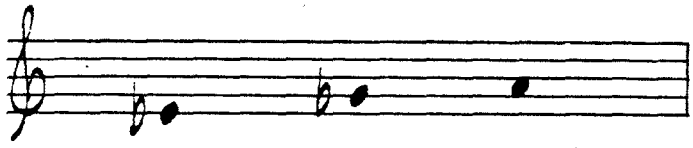
Tone No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9
C	D	E♭	F	G♭	A♭	A	B	C
E♭	F	G♭	A♭	A	B	C	D	E♭
G♭	A♭	A	B	C	D	E♭	F	G♭
A	B	C	D	E♭	F	G♭	A♭	A
D♭	E♭	E	F♯	G	A	B♭	C	D♭
E	F♯	G	A	B♭	C	D♭	E♭	E
G	A	B♭	C	D♭	E♭	E	F♯	G
B♭	C	D♭	E♭	E	F♯	G	A	B♭
D	E	F	G	A♭	B♭	B	C♯	D
F	G	A♭	B♭	B	C♯	D	E	F
A♭	B♭	B	C♯	D	E	F	G	A♭
B	C♯	D	E	F	G	A♭	B♭	B

The student is cautioned that when extracting tones belonging to Diminished Triads and Diminished Seventh Chords from the chart illustrated in figure 32, he will not always find a distance of *five* tones from the bottom to the top in Diminished Triads. Also, there will not always be a distance of *seven* tones, from bottom to top, in Diminished Sevenths. The presence of enharmonic spellings accounts for the seemingly inconsistent definitions of *triads* and *seventh chords* that were established in the earlier pages of this book.

By extracting tones No. 1-3-5 from any diminished scale, we arrive at the Diminished Triad on that particular root. Figure 33 illustrates the tones of the *E-flat Diminished Triad:*

Fig. 33

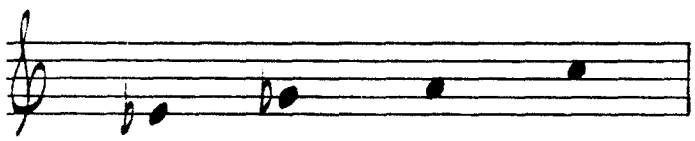
Symbol: E♭°



By extracting tones No. 1-3-5-7 from any diminished scale, we arrive at the Diminished Seventh Chord on that particular root. Figure 34 illustrates the tones of the E-flat Diminished Seventh Chord:

Fig. 34

Symbol: E♭°7



Note that both chords contain the same triad, E-flat-G-flat-A, and both chords use the same scale, the E-flat diminished scale, to establish their sound.

In preparation for the following patterns, be able to recite, write and play the following chords as they are extracted from their respective scales, Diminished Triads and Diminished Seventh Chords.

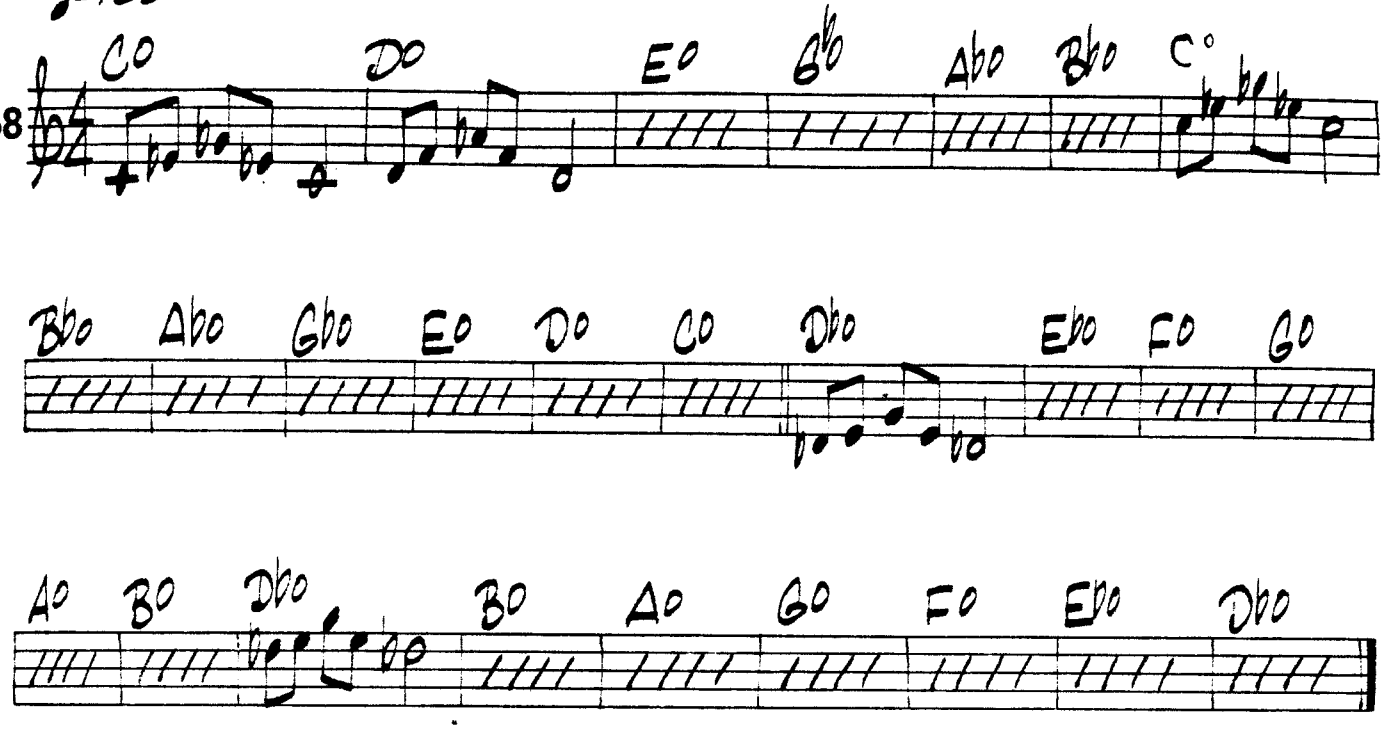
Use the illustrated *routine form* for playing the chord tones, since it does not require any specific rhythm or tempo.

ROUTINE FORM

The following patterns begin with Diminished Triads. Note the alphabetical symbols and metronome markings.

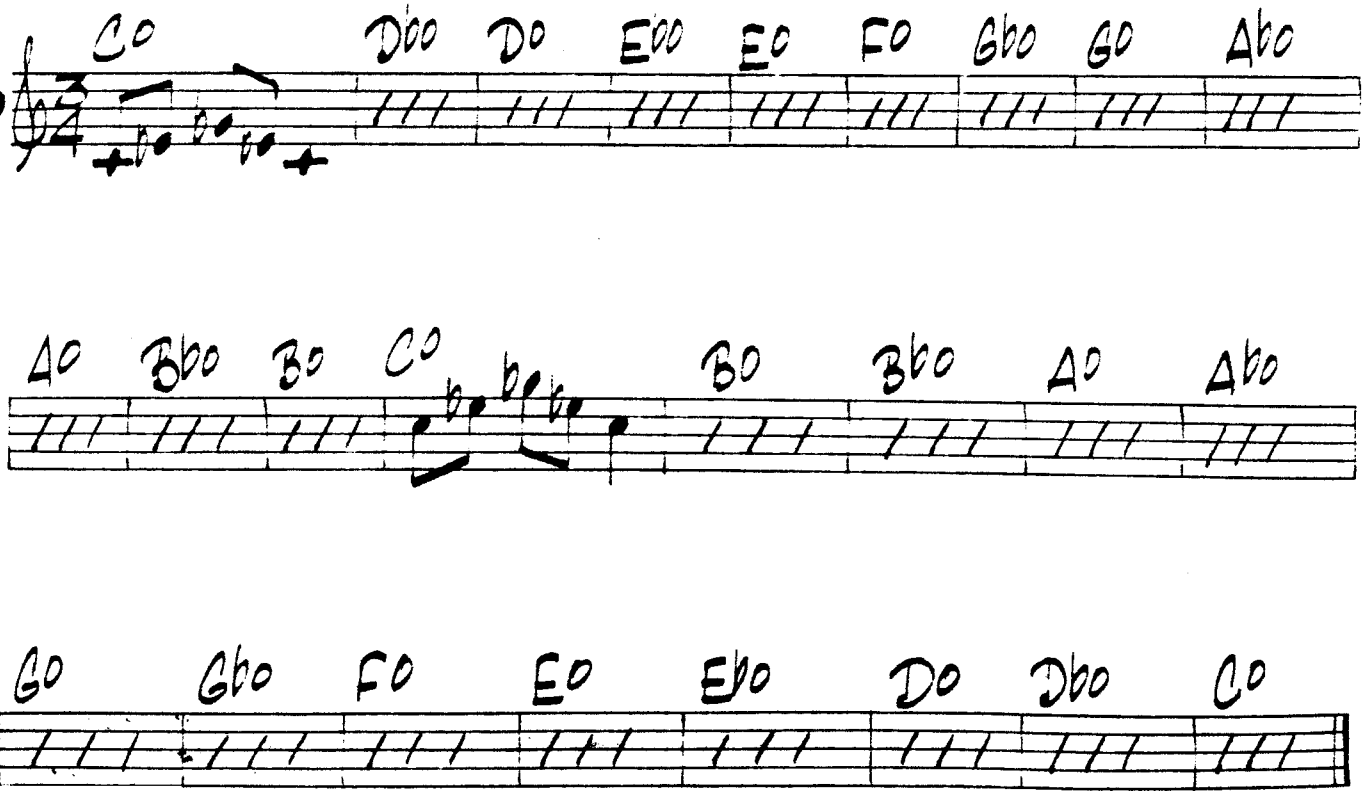
♩=138-208

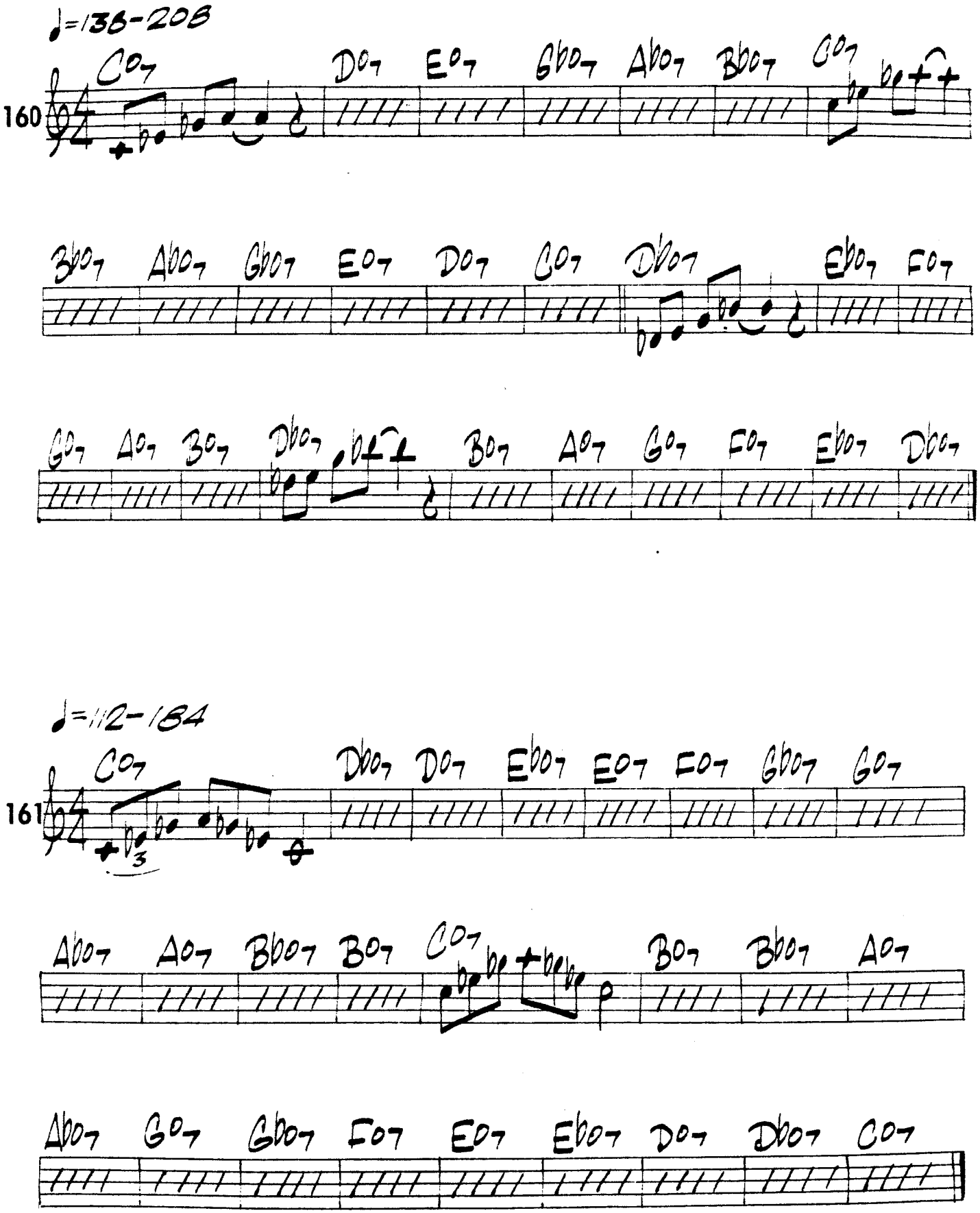
158



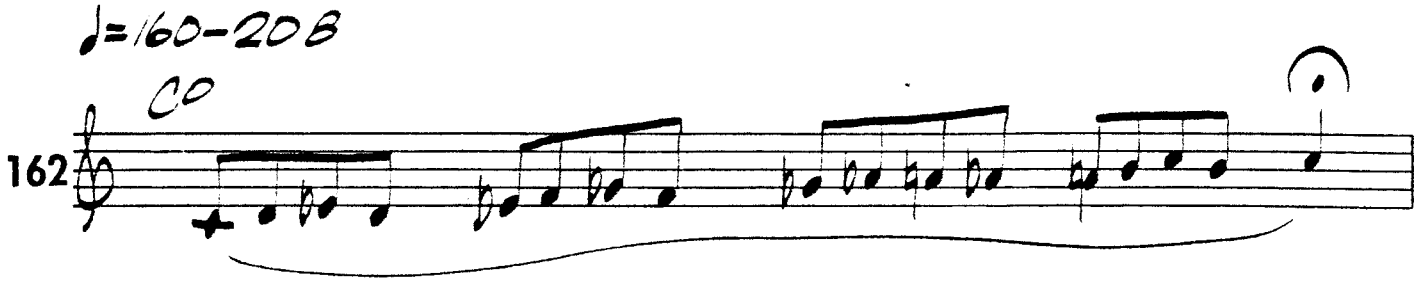
♩=138-208 Note: Three beats per measure.

159

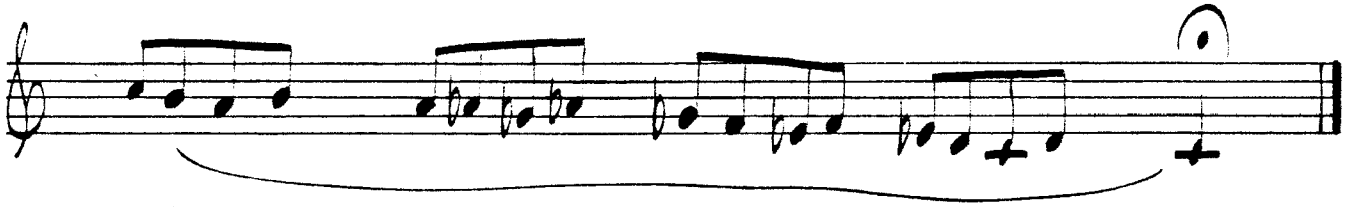


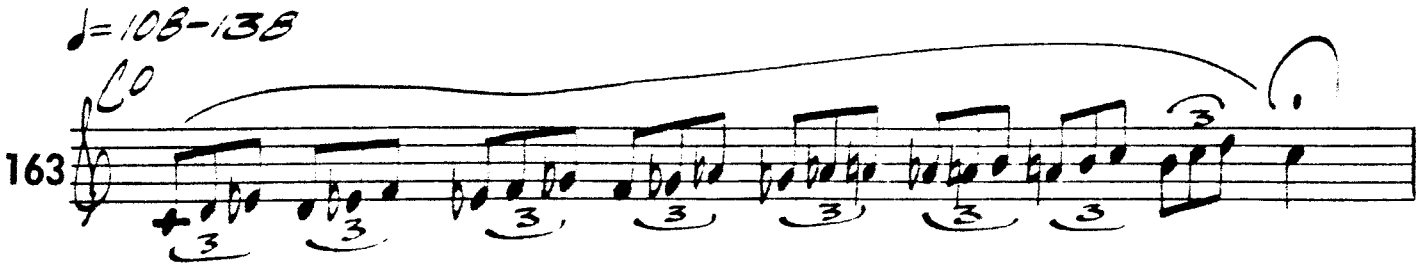

♩=136-208
160
C07 D07 E07 Gb07 Ab07 Bb07 C07
Bb07 Ab07 Gb07 E07 D07 C07 Db07 Eb07 F07
G07 A07 B07 Db07 B07 A07 G07 F07 Eb07 Db07
♩=112-184
161
C07 Db07 D07 Eb07 E07 F07 Gb07 G07
Ab07 A07 Bb07 B07 C07 B07 Bb07 A07
Ab07 G07 Gb07 F07 E07 Eb07 D07 Db07 C07

We have been practicing patterns on the two types of diminished *chords,* which were formed by extracting their respective tones from the diminished scale on the chord root. Now we will concern ourselves with various patterns on the diminished scale of the chord. Note that the chord symbols for the following patterns will be those of the diminished Triad. However, the student must bear in mind that the Diminished Triad and the Diminished Seventh Chord use the same scale: a diminished scale on the chord root. The use of the Diminished Triad symbol in the following patterns is merely for convenience, since it would be impossible to determine exactly which chord is being used when the scale is common to both of the chords mentioned.

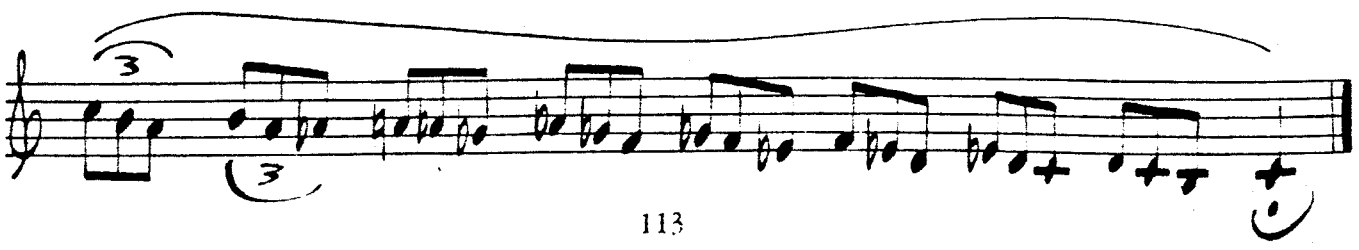


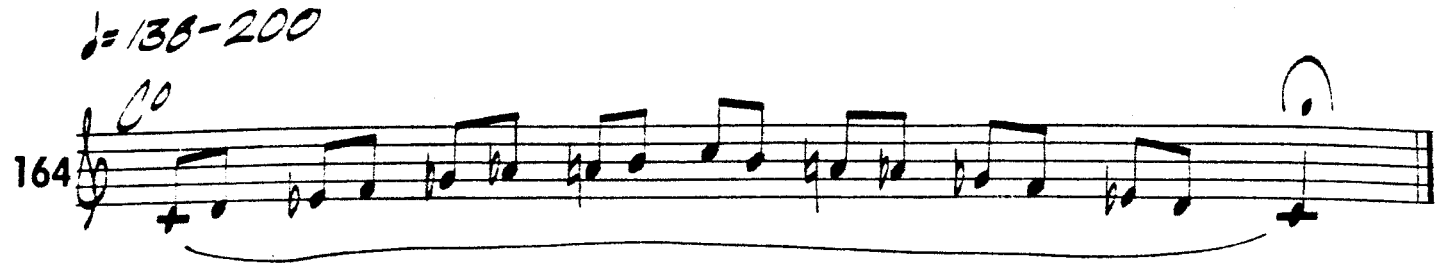
This pattern is based on the tones of the C Diminished Scale. Be sure to practice it using *EVERY* starting note illustrated on the chart in fig. 32.





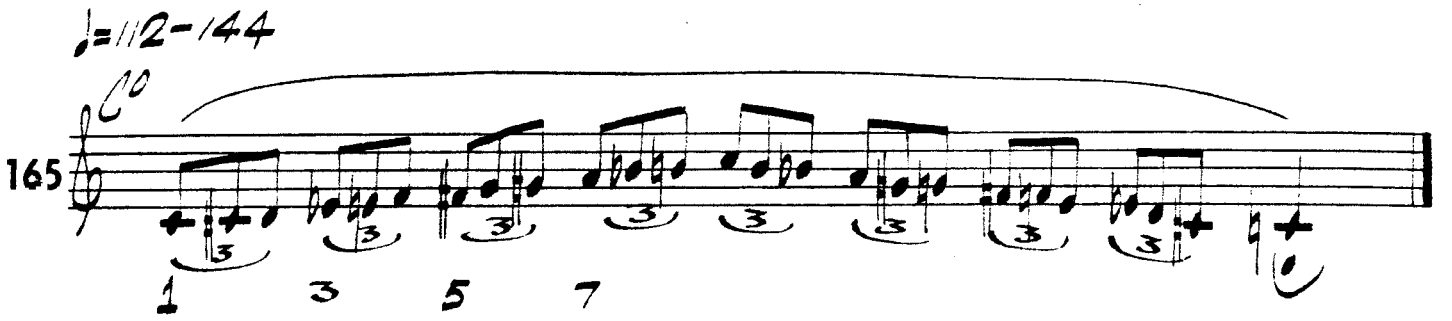
This pattern is based on the tones of the C Diminished Scale. Be sure to practice it using *EVERY* starting tone illustrated on the chart in fig. 32.





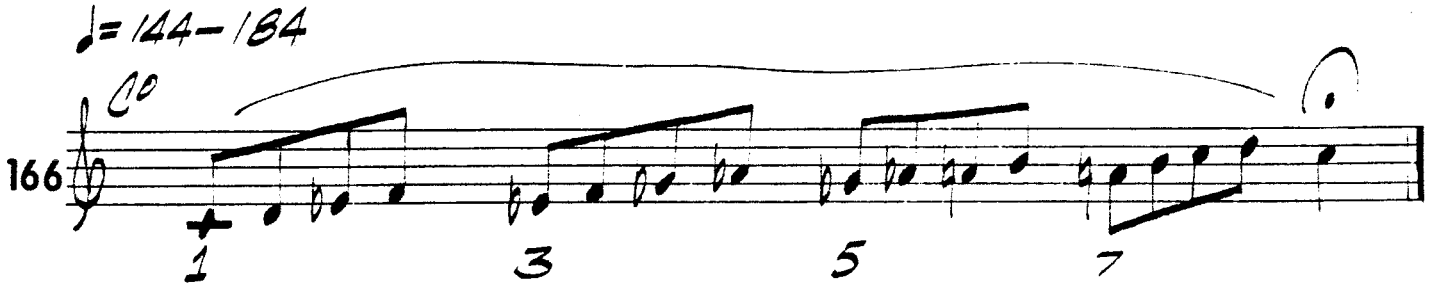
C Diminished Scale ascending and descending.

Practice Pattern No. 164 using *EVERY* starting tone illustrated on the chart in figure 32.



This pattern is based on the C *chromatic* scale. The arabic numbers indicate the tones of the C°7 chord. Note that the chord tones fall on the first tone of each eighth note triplet. In this manner the sonority produced is that of a diminished seventh chord (or even a diminished triad) having the root of the starting tone of the chromatic scale (in this case the C° or C°7).

Practice Pattern No. 165 using *EVERY* starting tone illustrated on the chart in figure 32.



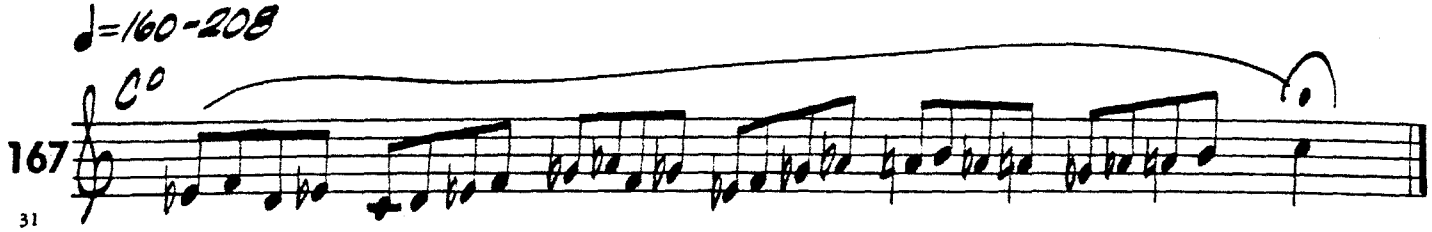
This pattern is based on the C Diminished Scale. The arabic numbers show that a chord tone is produced as the first tone of each *group* of four notes occurs. Note that the pattern starts on tone No. 1 and gradually ascends three more tones in the C Diminished Scale before *turning back* to the third tone, and so on.

Practice Pattern No. 166 using *EVERY* starting tone illustrated on the chart in figure 32.

[28]David Baker, "Honesty," on *Ezz-Thetics* (Riverside 375), George Russell Sextet.

[29]Charlie Mariano, "Deep River," on *Toshiko Mariano Quartet,* (Candid 8012), Toshiko Mariano Quartet.

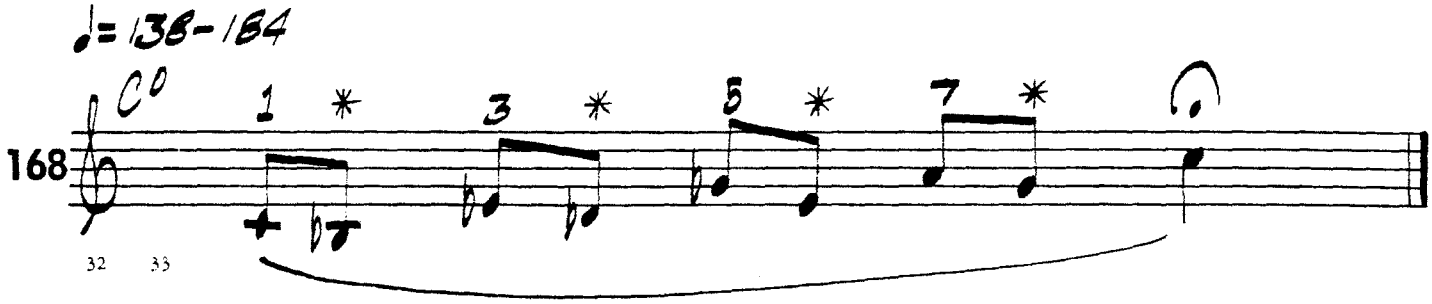
[30]David Young, "Kentucky Oysters," on *Stratusphunk* (Riverside 341), George Russell Sextet.



Note: This pattern starts on the third of the chord.

This pattern is based on the C Diminished Scale. It can be used for all Diminished chords having scales derived from the C Diminished Scale.

Practice Pattern No. 167 using *EVERY* starting note illustrated on the chart in figure 32.



This pattern uses the tones of C°7 chord (shown by arabic numbers) in addition to other tones which are located at an interval of one whole step down from the chord tones of the C°7 chord. These *other* tones (which are indicated by astericks) form another Diminished Seventh Chord whose root is one whole step lower than that of arabic number 1 in this pattern.

Practice Pattern No. 168 using *EVERY* starting tone illustrated on the chart in figure 32.

DOWNSTEP MODULATION

A chord progression is generally thought to be a succession of chords, often alternating between two types of chord structures, with the chord roots progressing, say, through the cycle of fifths or downward chromatically. For example:

C:	IIIm7	VI7	IIm7	V7		IIIm7	♭III7	IIm7	♭II7
	(Em7)	(A7)	(Dm7)	(G7)	OR:	(Em7)	(E♭7)	(Dm7)	(D♭7)

It is frequently the case, however, that the root will remain stationary through two or more chords, while the chord type on that same root will change. For example:

CM7 Cm7 F7 B♭M7 B♭m7 E♭7 A♭M7 OR: DM7 D7 GM7 G7 CM7

Such a permutation in chord type will usually cause a change in chord function as well, so that the preceding examples might be given as follows:

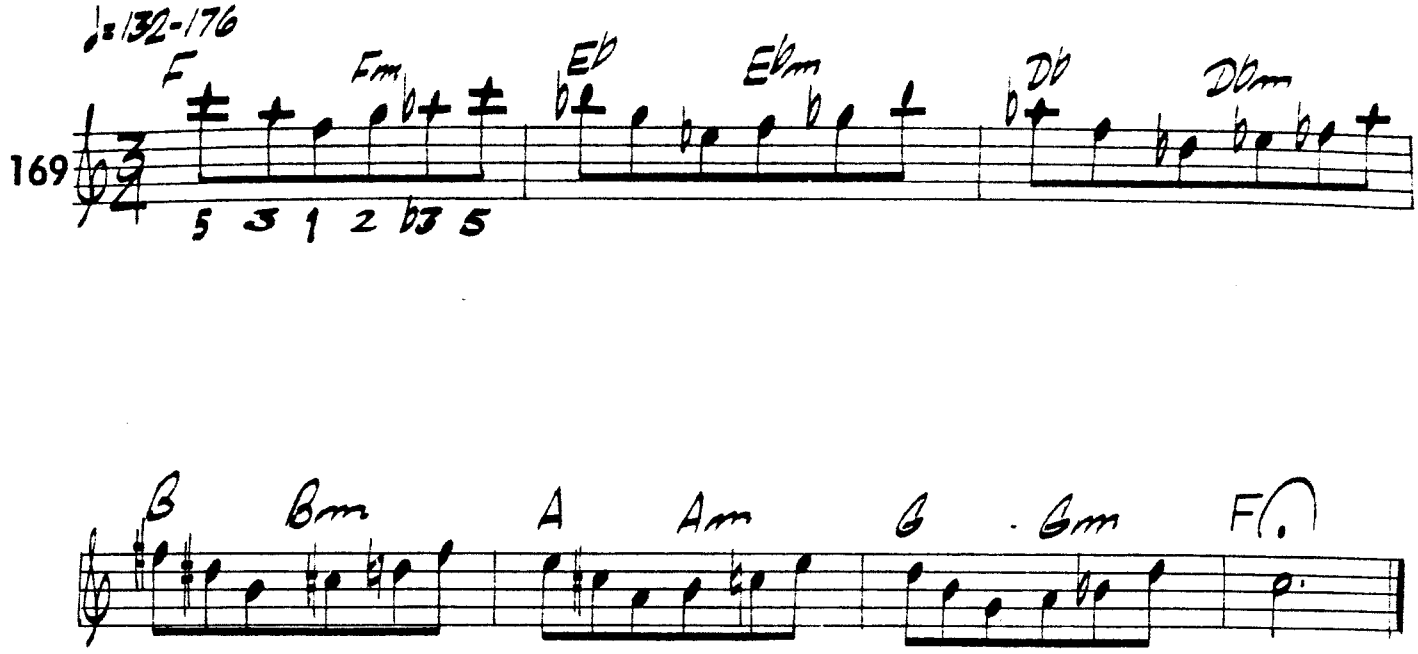
IM7	IIm7	V7	IM7	IIm7	V7	IM7	AND:	IM7	V7	IM7	V7	IM7
C:		B♭:			A♭:			D:		G:		C:

The following patterns will focus on permutations of this sort, where the root remains the same for two or more successive chords.

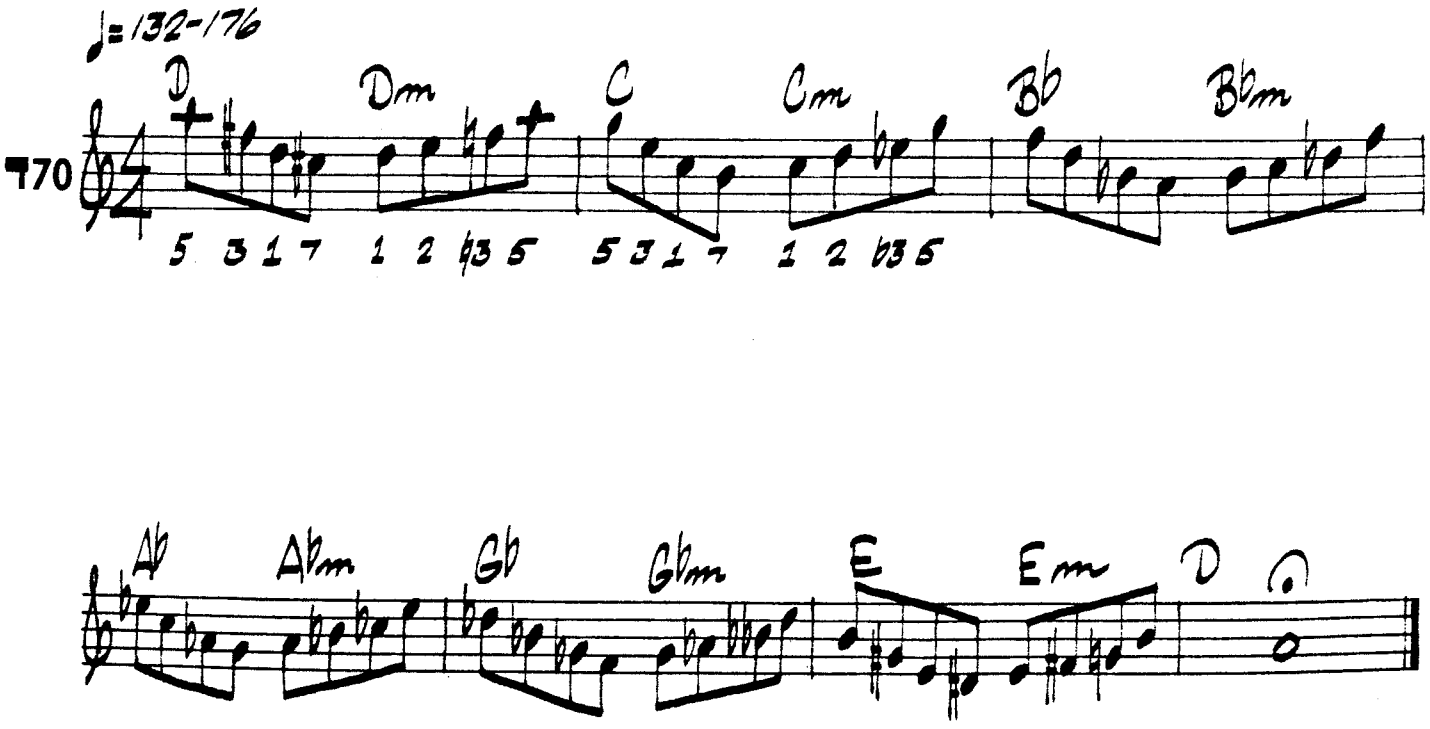
[31]Booker Ervin, "No Private Income Blues," on *Mingus In Wonderland* (United Artists 15005), Charles Mingus Group.

[32]David Baker, "Honesty," on *Ezz-Thetics* (Riverside 375), George Russell Sextet.

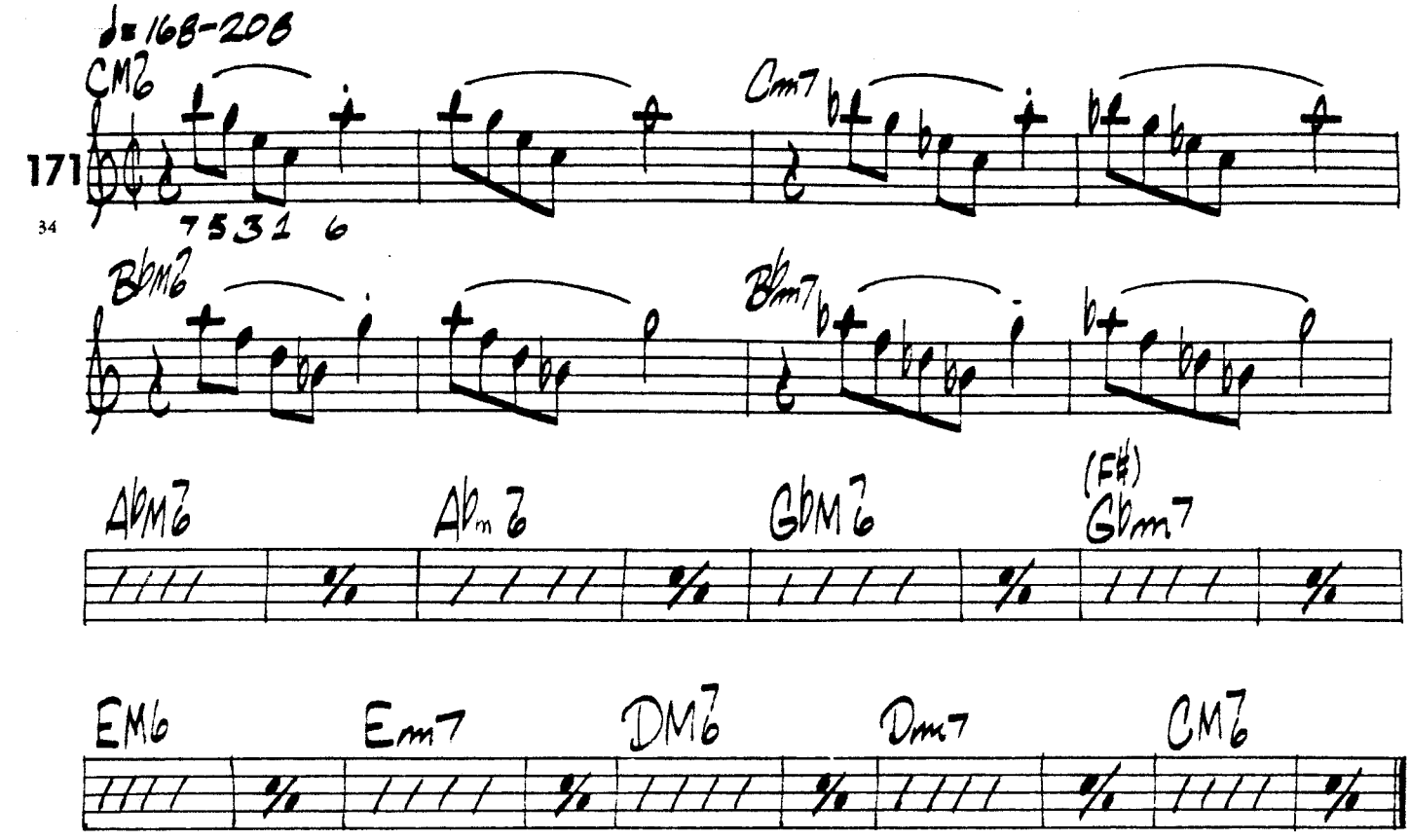
[33]Charlie Mariano, "Deep River," on *Toshiko Mariano Quartet* (Candid 8012), Toshiko Mariano Quartet.



Repeat Pattern No. 169 starting on an E chord (E, Em, D, Dm, etc.).

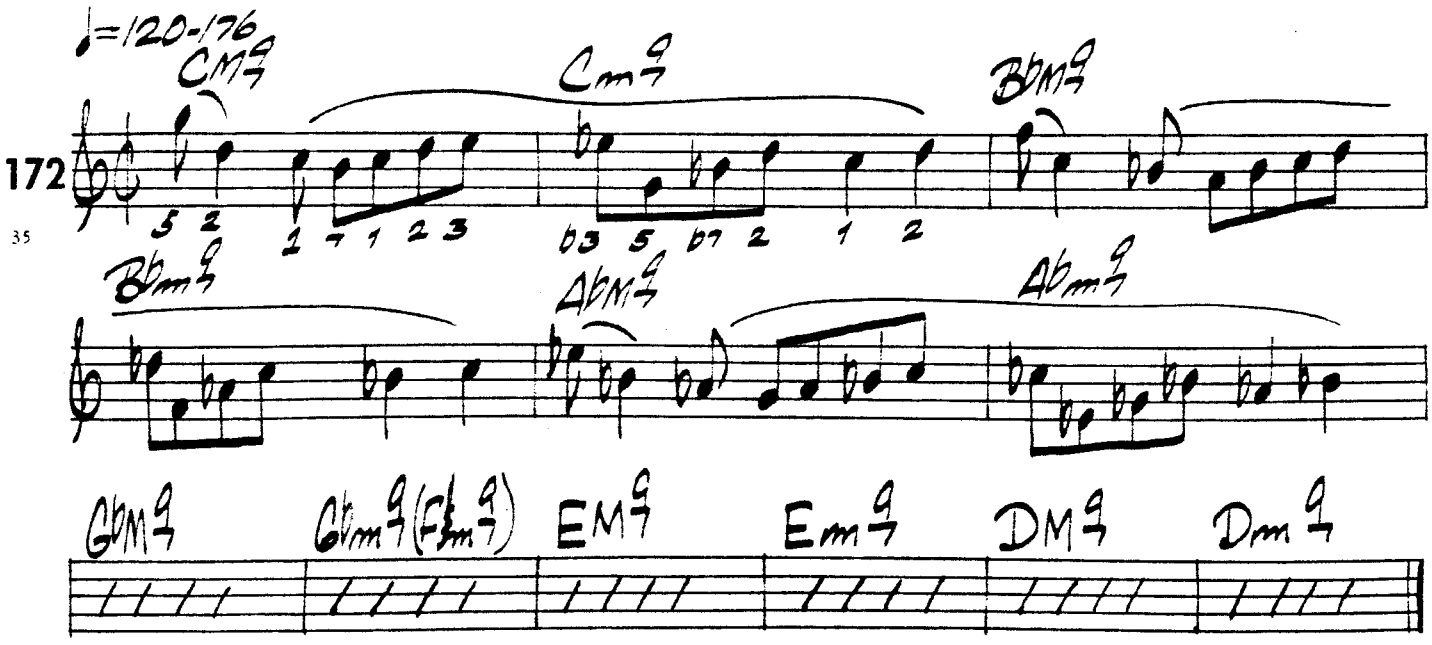


Repeat Pattern of No. 170, starting on an F chord.



7

Repeat Pattern of No. 171, starting on the GM6 chord.

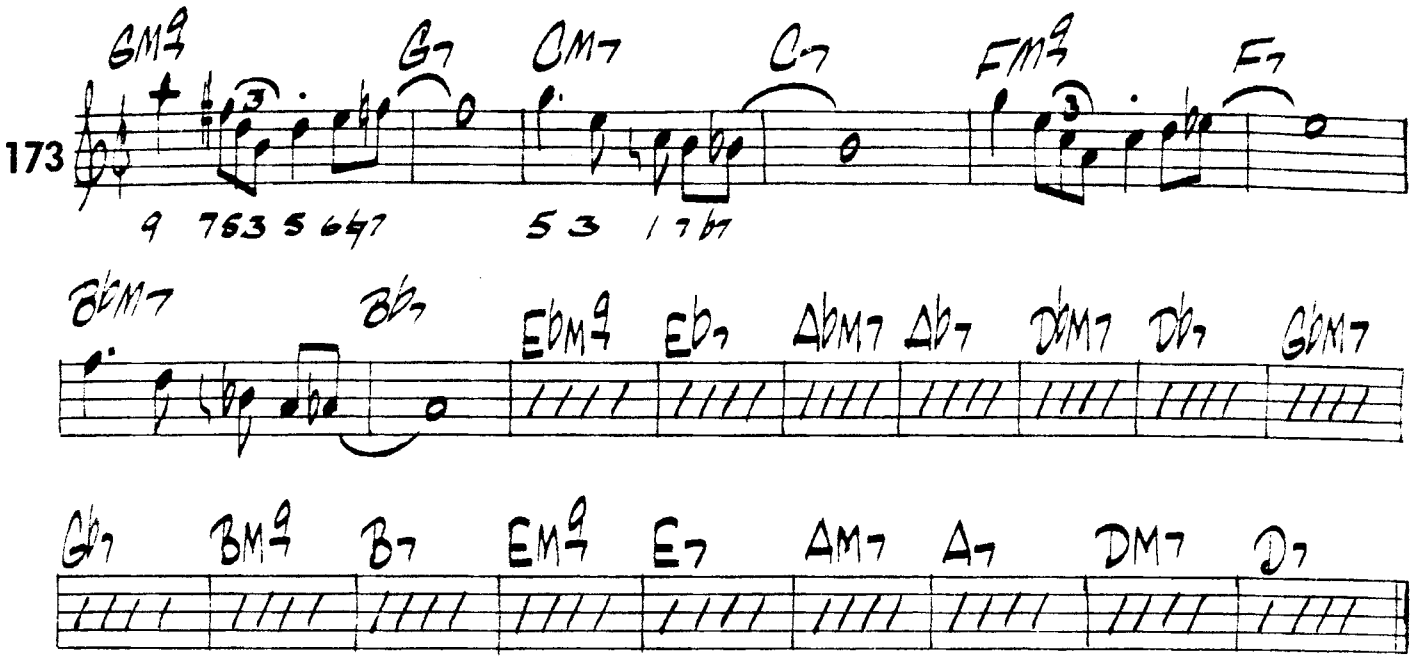


9

Repeat No .172, starting on the GM7 chord.

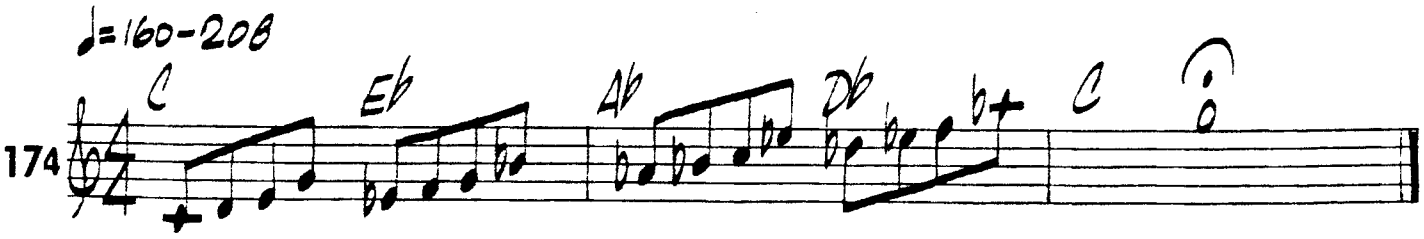
[34]See the Charlie Parker composition "Ko-Ko."

[35]See the J. J. Johnson composition "Afternoon In Paris."



TURNAROUNDS

Most tunes are divided into sections (i.e., A-A-B-A), each section being eight measures in length. At the end of each phrase or section, we often find two measures of a tonic (I) chord. This phrase-ending or harmonic cadence is frequently involved with the first or second ending, or in some cases a measure or two before the repeat sign. Because there *is* so often a tonic chord in the last two measures, and because the beginning of new sections (or repeats of previous sections) often *begins* with a tonic chord, a device is needed which would remove the excessive use of the tonic and at the same time give the phrase-endings a sense of direction, namely to return gracefully to the beginning of a repeated section. The device is called a turnaround or turnback[36] and replaces the last two measures of motionless tonic. There are many kinds of turnarounds, involving different harmonic formulas, although most will begin with a tonic chord (but only for about two beats) and will end with either a V7 chord (dominant) or a flat-II7 or flat-IIM7 (dominant substitute.)[37] The harmonic formula for Patterns No. 174-177 is a very common turnaround in the jazz idiom, appearing in countless jazz lines and in revised progressions of standard tunes.

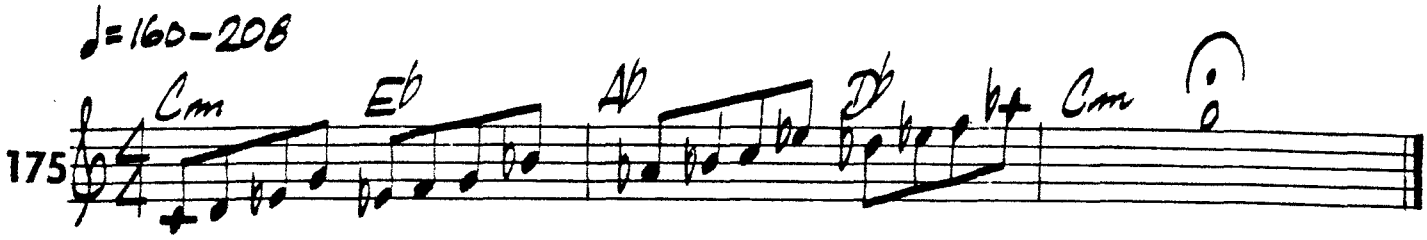


Transpose the above pattern to all twelve keys.

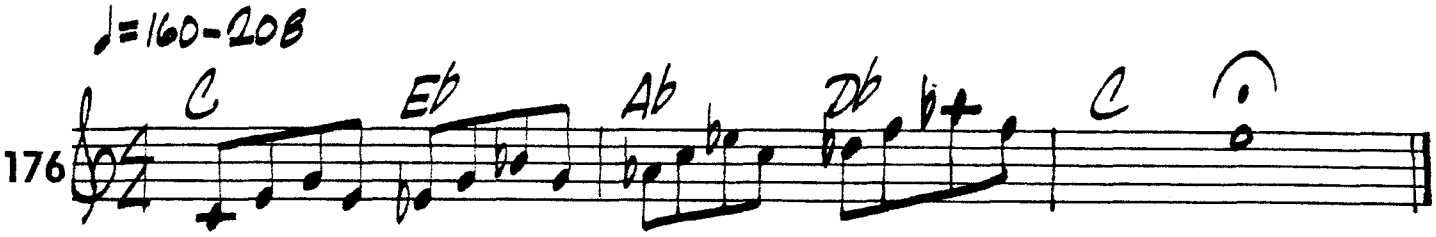
[36]David Baker, *Jazz Improvisation* (Chicago: Maher Publications, Division of John Maher Printing Company, 1969). Baker uses the alternate term ***turnback***. Chapter VIII of his book is devoted to a discussion of turnbacks.

[37]Coker, another source for turnarounds is appendix C.

[38]Examples of this turnaround can be found in these jazz lines: "Half-Nelson" by Miles Davis, "Ladybird" by Tadd Dameron and "Israel" by John Carisi.



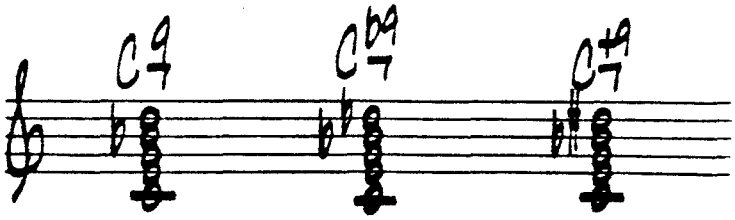
Transpose the above pattern to all twelve keys.



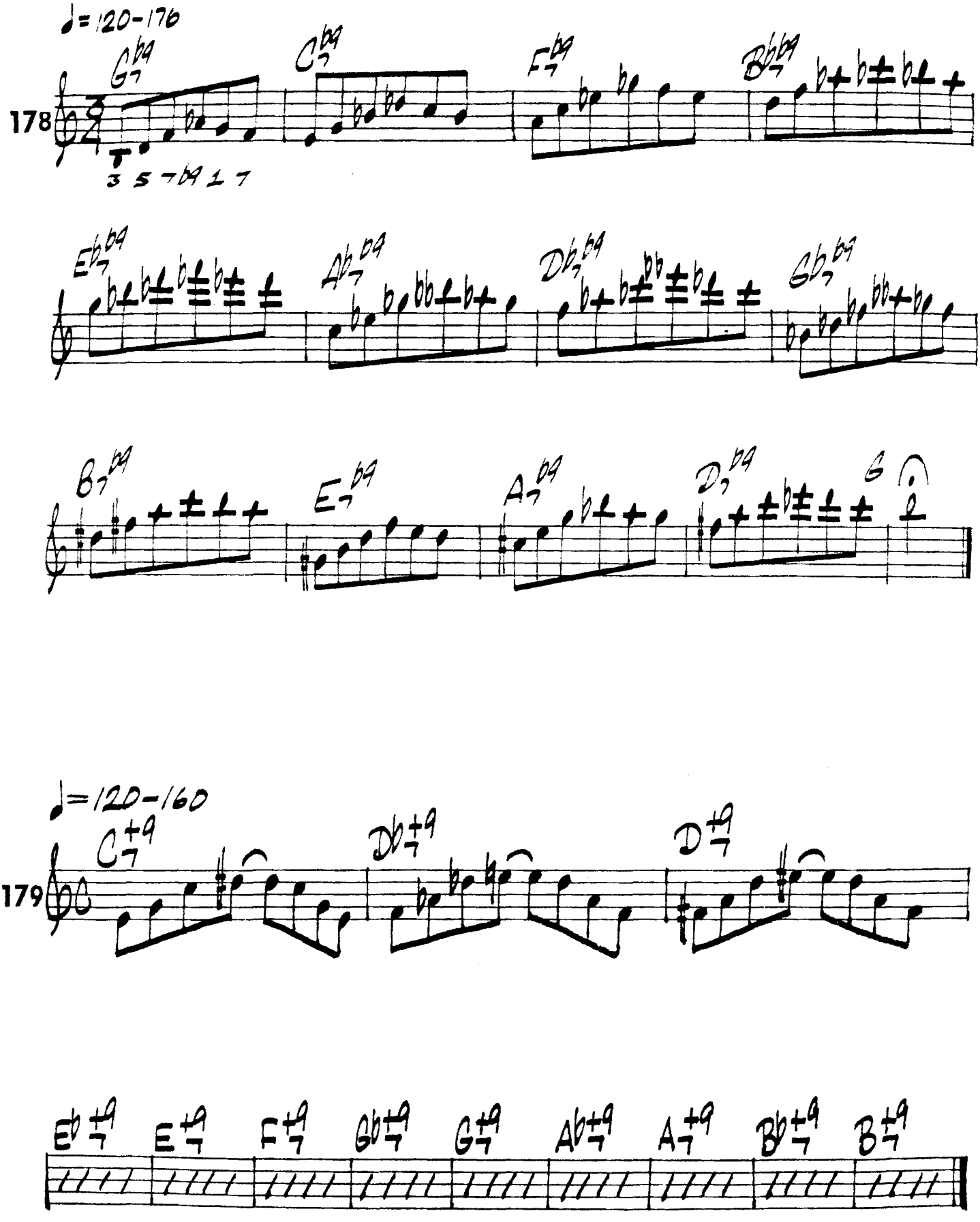
Transpose the above pattern to all twelve keys.

Transpose the above pattern to all twelve keys.

So far, the only type of ninth chord discussed has been the one in which the ninth was a major second above the octave, or a major ninth above the root (i.e., a C7 9). However, when the ninth is added to the dominant seventh chord (1-3-5-♭7), it can also be augmented (+9) or minor (flat-9 —sometimes referred to as a diminished ninth):



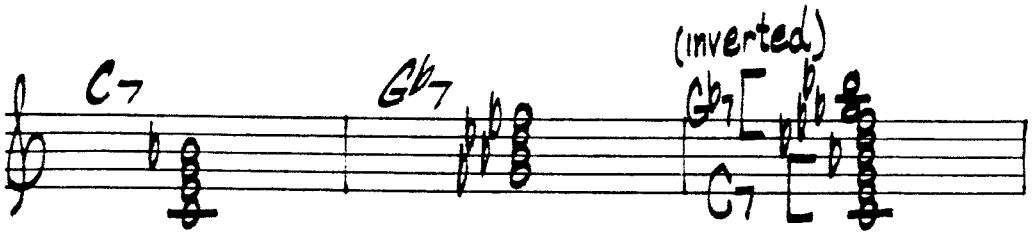
In any case the chord retains its dominant function as long as the third is major and the seventh is minor, regardless of the type of ninth used. Since the altered forms of the ninth are used with at least the same frequency as the major ninth, the following patterns are included to introduce the student to the appearance and sound of the diminished and augmented ninth chords.


♩= 120-176
178
3 5 ♭9 1 7
♩= 120-160
179

POLYCHORDS

Polychords[39] or bitonal triads[40] (alternate term) exist when two chords are used simultaneously. In the jazz idiom[41] the second chord, normally a triad, is added above the first chord, usually the given chord and nearly always some kind of seventh chord, providing a very colorful effect; yet, the added triad is chosen so as not to change the function of the bottom (given) chord. The proper choice of the added triad is achieved in one of two ways: either by using both the given chord and one of its substitutions; or by locating a second chord whose tones are made up of ninths, elevenths, or thirteenths of the given chord plus, perhaps, a tone or two from the given chord itself. It has already been stated that ninths may be major, minor, or augmented when applied to the dominant seventh. It is also true that the fifth of a dominant seventh may be unaltered (perfect), lowered (diminished), or raised (augmented), without changing the chord's function. The eleventh can be perfect or augmented, and the thirteenth is usually major, though in rare cases it can be lowered (minor thirteenth). With all these possibilities for the dominant seventh (other types of seventh chords also have some of these possibilities, though not as many), it is relatively easy to find tones which could make up a separate, *foreign* triad.

To illustrate both methods with a single example, let us suppose that the given chord is a C7, which usually functions as V7 in the key of F. A mere glimpse into the subject of chord substitution would tell us that a G-flat7 (flat-II7) is a very common substitution for C7 (V7). Now suppose that we use them *simultaneously* (say with a C7 on the bottom and the G-flat7 superimposed above it (their positions in this particular case *could* be reversed). The total effect would remain a dominant one, since all tones of the G-flat7 could be explained away as being members of a C7 with acceptable alterations and or added tones above the seventh of the chord. The root of the G-flat7 (G-flat) could be thought of as the lowered fifth of the C7 (*or* as the augmented eleventh, F-sharp). The third of the G-flat7 (B-flat) is the seventh of the C7, the fifth of the G-flat7 (D-flat) is the lowered ninth of the C7, and the seventh of the G-flat (F-flat or E) is the third of the C7. So the total effect would be that of a C7 with a flatted ninth and an augmented eleventh, a colorful chord, yet the ninth and eleventh are really quite common, whether a polychord is used or not.



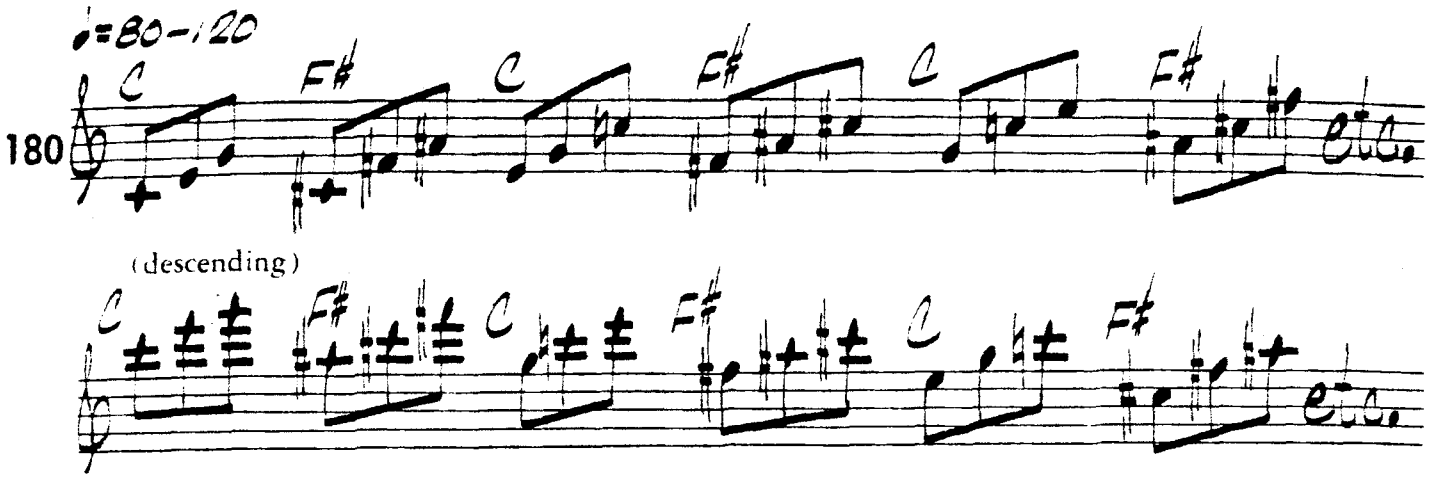
Many other possibilities for polychords exist for dominant seventh chords as well as other types of seventh chords.[42] Note that in the above example it was not really necessary to include the seventh of the G-flat chord and, as stated earlier, the added chord is more often a triad than a seventh chord. Beginning with Pattern No. 180, a large number of polychordal possibilities are investigated as well as methods for putting polychords together in patterns that will permit a non-keyboard instrument to sound two chords together by alternation. Patterns No. 180-197 should be transposed and practiced on the other five pairs (G, D-flat; D, A-flat; E-flat, A; E, B-flat; F, B).

[39]Coker, Chapter 10.

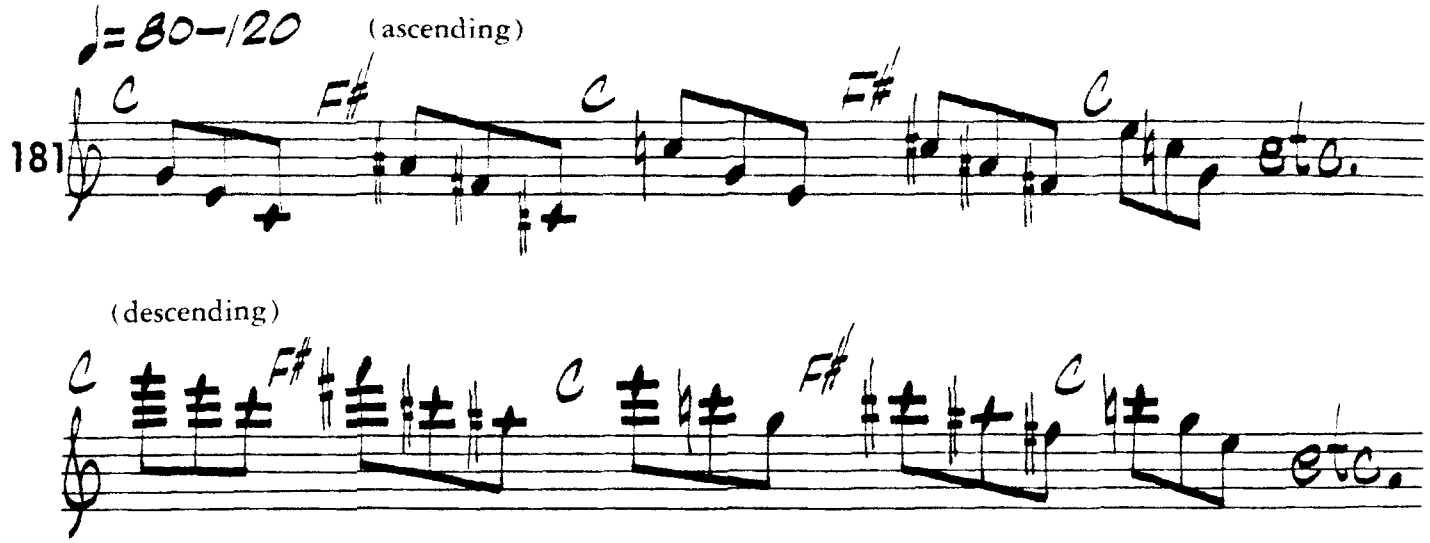
[40]Baker, *Jazz Improvisation.*

[41]The use of polychords in traditional music is quite different and generally freer, as exemplified in Igor Stravinsky's "Agon" ballet.

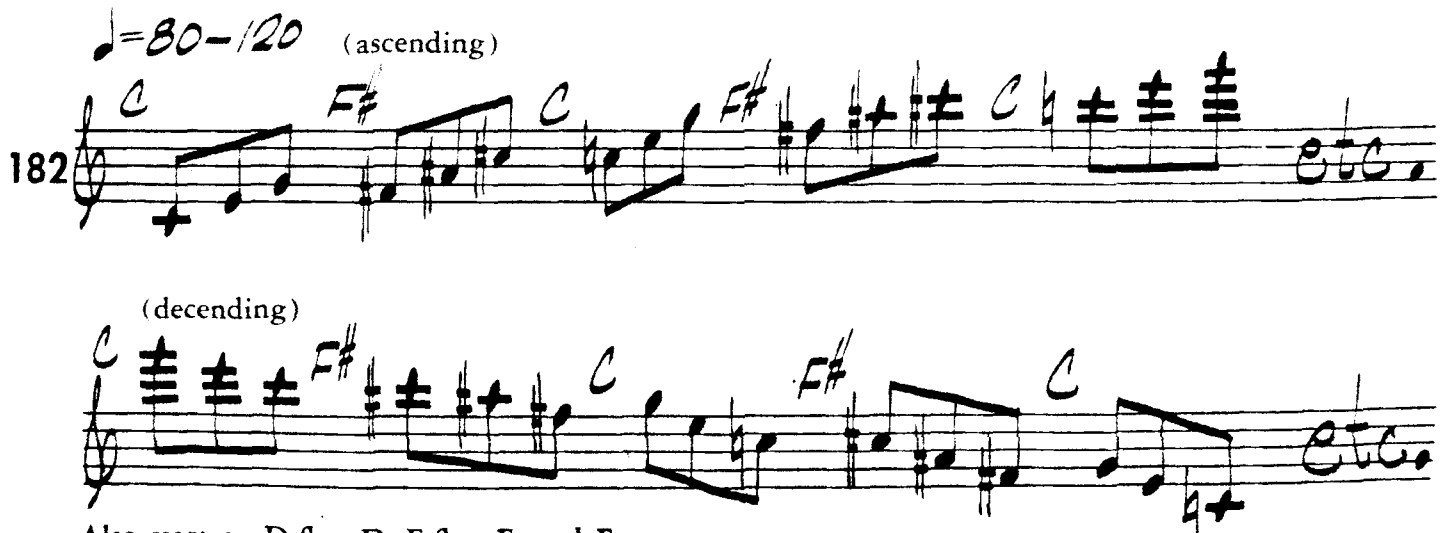
[42]Coker, p. 68. A complete listing of such possibilities can be found here.



Transpose this pattern to all other pairs (i.e., D-flat, G; D, A-flat; E-flat, A; E, B-flat; F, B; etc.)

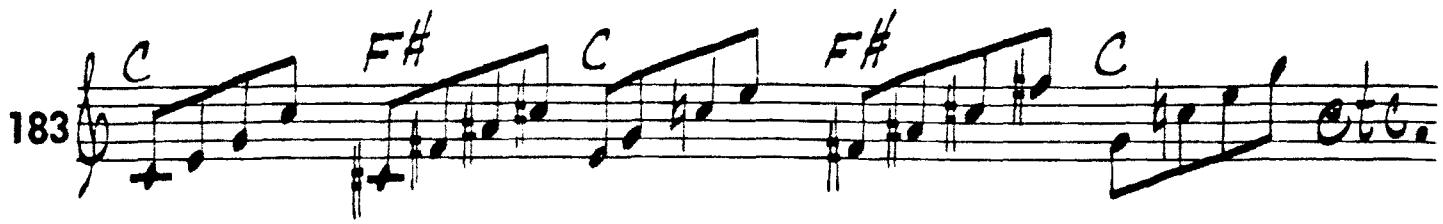


Transpose this pattern to all other pairs.

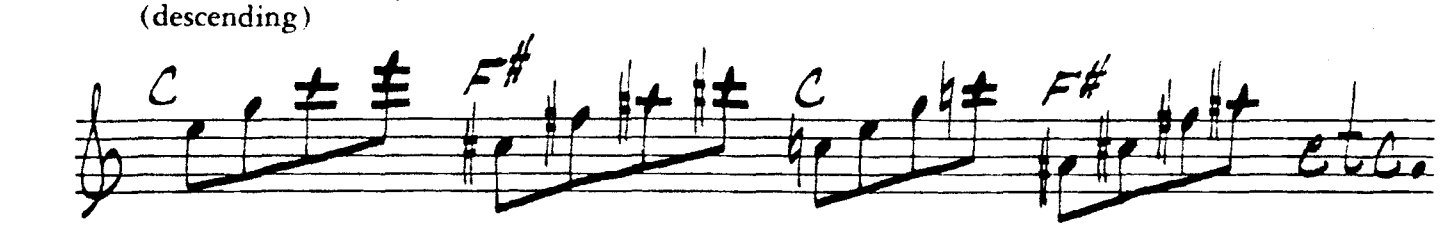


Also start on D-flat, D, E-flat, E, and F.

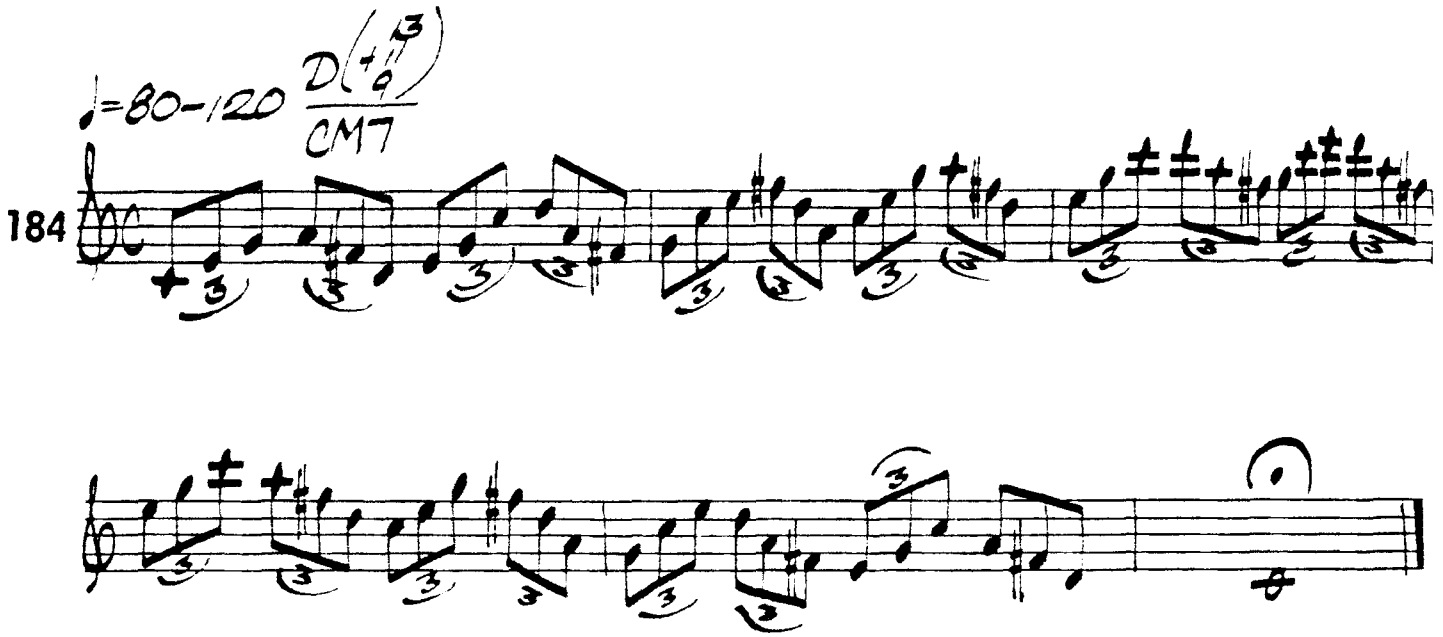
(ascending)



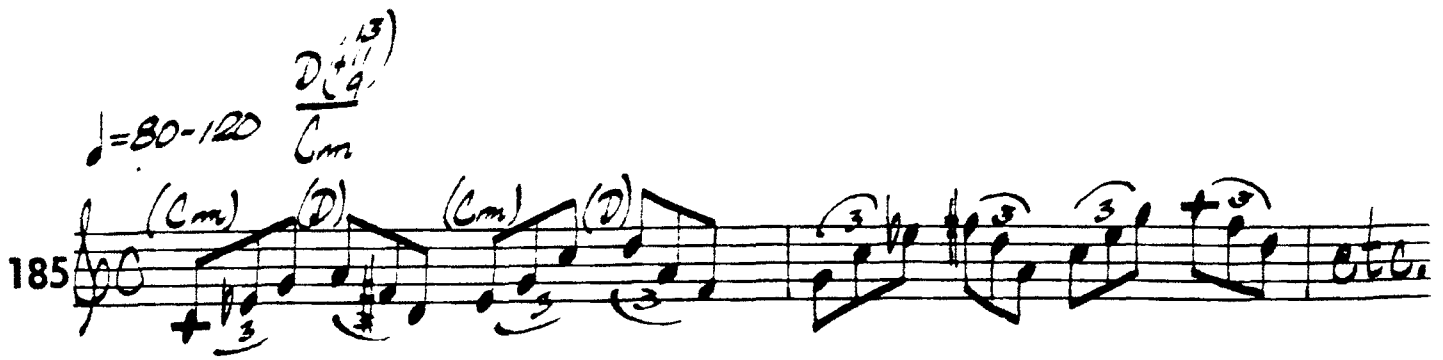
(descending)

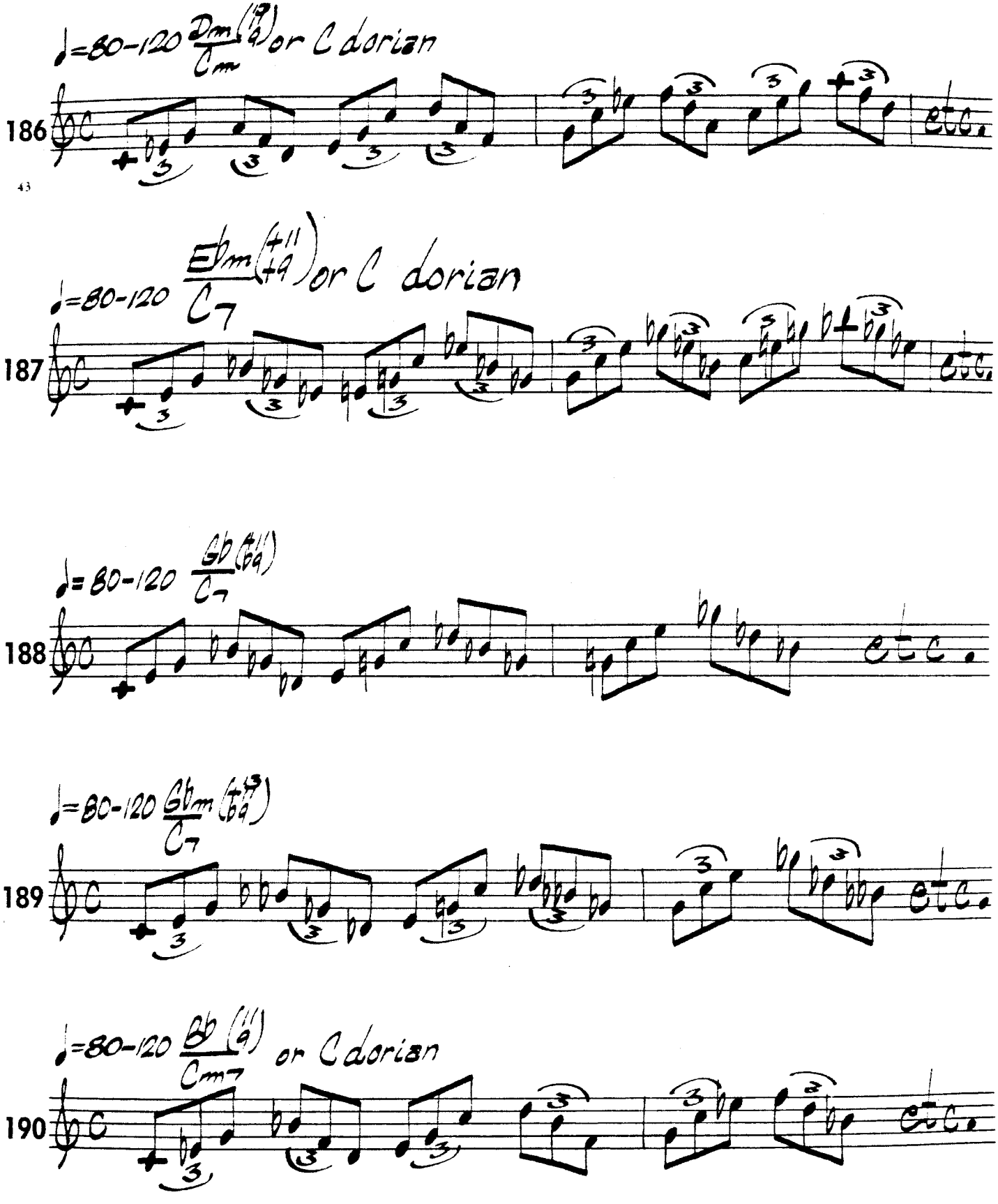


After playing on all other pairs, use the 4-note Pattern of No. 183 and apply the contours of No. 181 and No. 182.

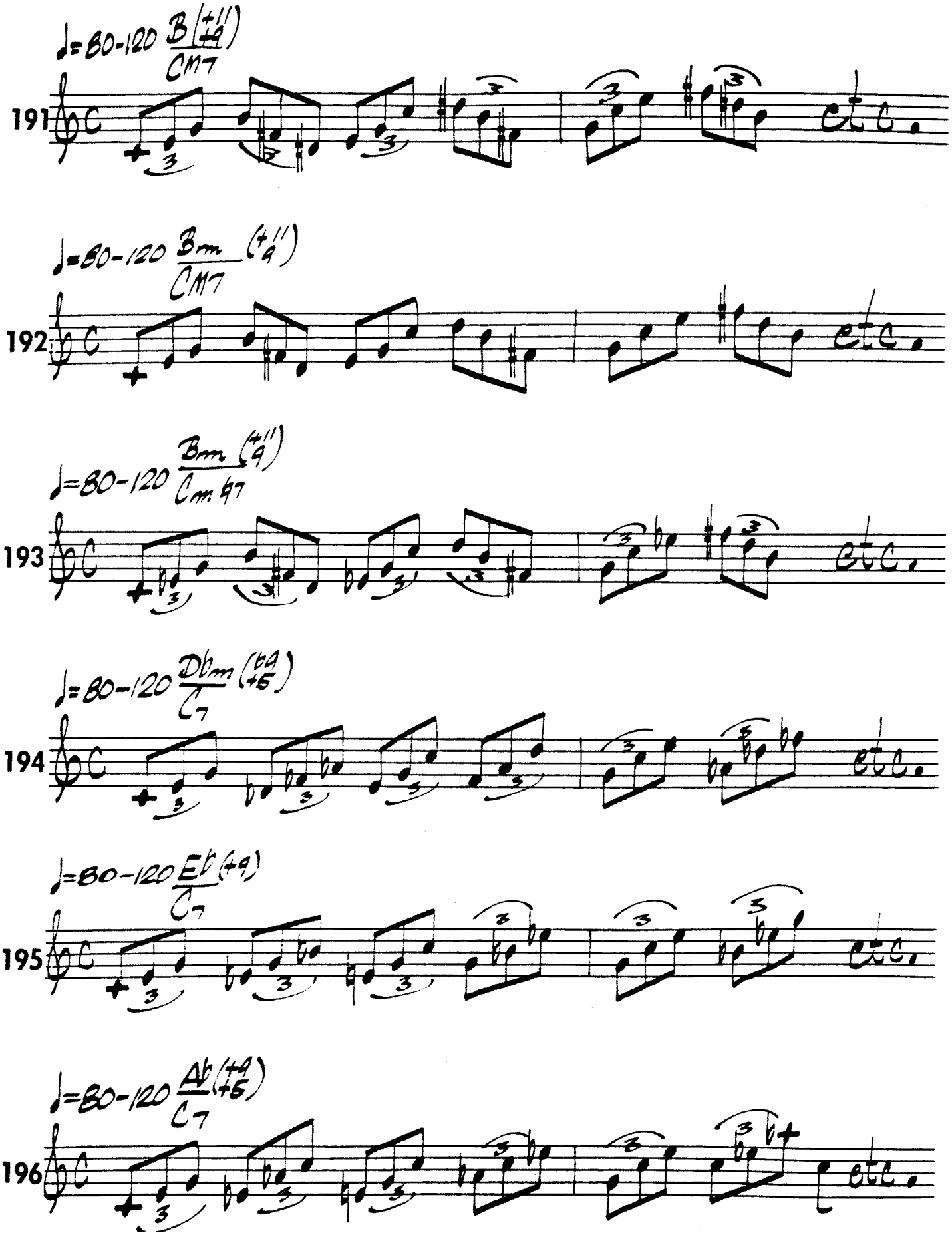


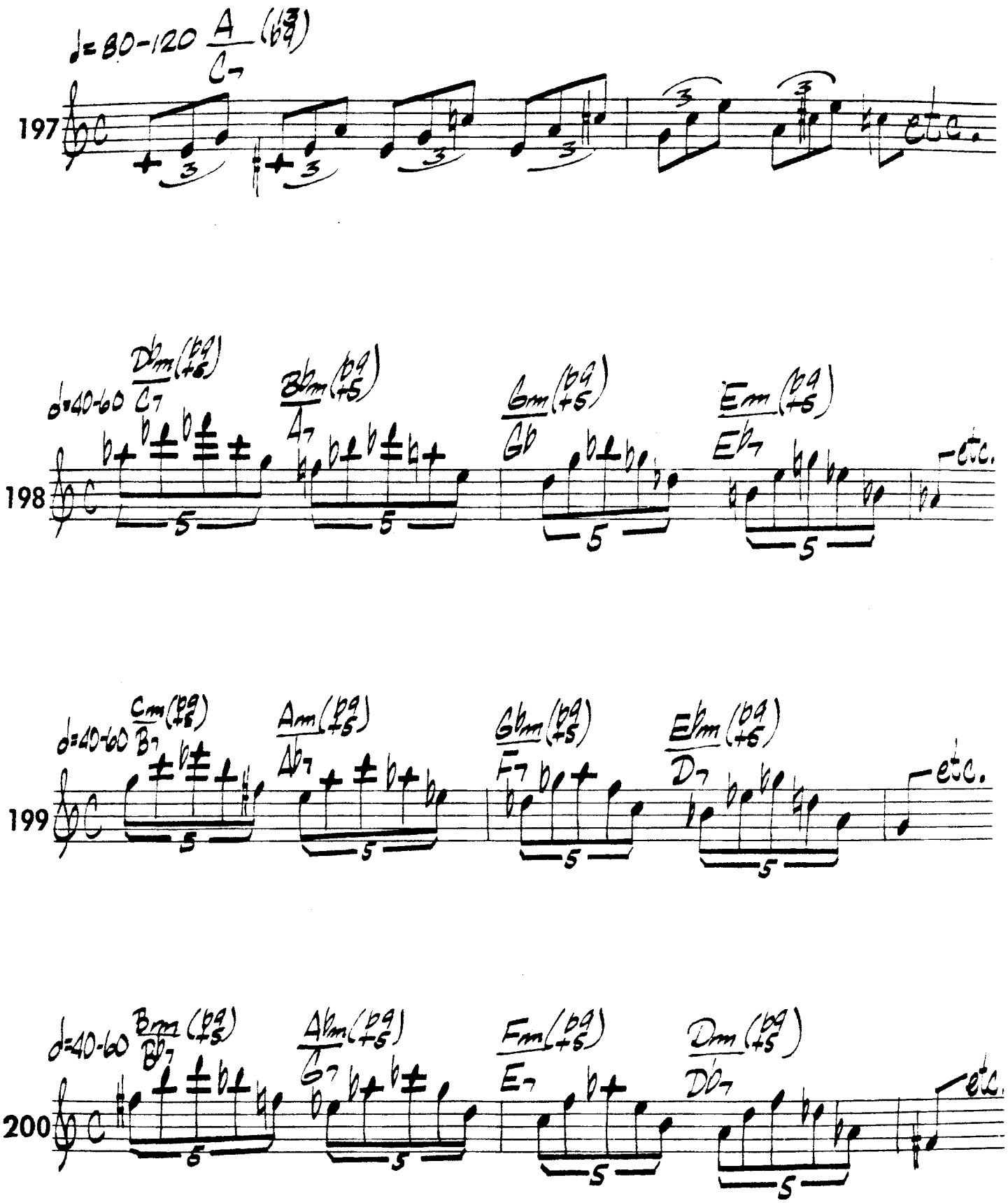
The above pattern, without changing any pitches, can also be used with a C7 (D/C7) chord.





[43]Oliver Nelson, "Stolen Moments," on *The Blues And The Abstract Truth* (Impulse S-5), Oliver Nelson Group. An example of the use of Pattern No. 186 may be heard in the second chorus of Nelson's Tenor solo.


♩=80-120 B(+11/+9) CM7
191
♩=80-120 Bm (+11/9) CM7
192
♩=80-120 Bm (+11/9) Cm7
193
♩=80-120 Dbm (b9/+5) C7
194
♩=80-120 Eb (+9) C7
195
♩=80-120 Ab (+9/+5) C7
196



[44]Clare Fischer, "Last Night When We Were Young," on *Cal Tjader Plays Harold Arlen* (Fantasy 3330), Cal Tjader Group, arrangements by Clare Fischer. Listen to the introduction on this selection.

Since there are numerous possibilities for polychords, and since there are also a number of substitutes possible for a given chord, it follows that a polychordal pattern could involve more than just two chords. Such a pattern is No. 201, using four different triads, all of which are related to each other by way of being substitutes for the other three chords of the group. Furthermore, the combined tones of the four triads do not change the function of the given chord with which they appear. More precisely, they *strengthen* that function (in this case, a dominant) by adding tones characteristic of the dominant. Suppose that Pattern No. 201 were applied to a given chord of C7. Reading the tones in the order shown in that pattern, and relating each tone to a C7, we see that they would function as follows:

tones	C	E	G	A♯ (B♭)	F♯	C♯ (D♭)	E♭ (D♯)	G	B♭	C♯ (D♭)	A	E
function	1	3	5	♭7	+11	♭9	+9	5	♭7	♭9	13	3

So in addition to supplying all the tones of the C7 (C-E-G-B-flat), the pattern also yields the color tones of flat-9, +9, +11, and 13. To the uninitiated, it would seem that there might be too many color tones; however, the experienced improviser or arranger knows that all four color tones are common to one another and can be used together to good effect.

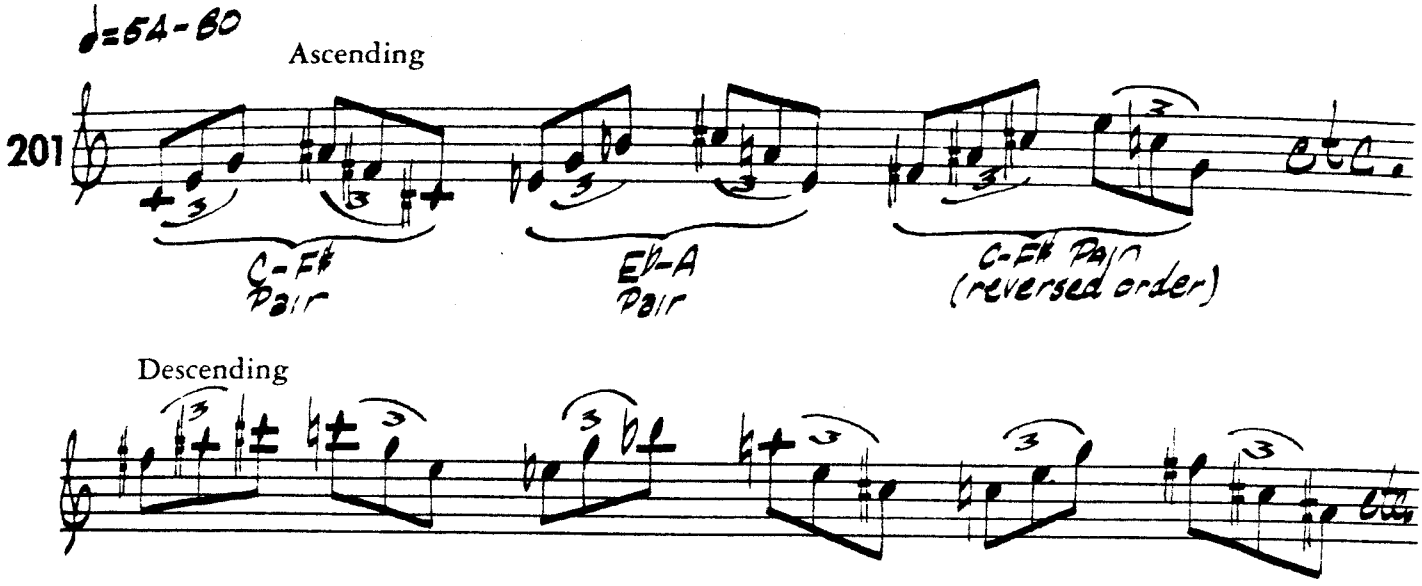
Notice that when the *roots* of the four chords are combined, they form a diminished seventh chord (C—E-flat—F-sharp or G-flat—A or B-flat), although their order is shuffled in the pattern (C—F-sharp—E-flat—A). Such an observation would indicate that chords whose roots are within the same diminished seventh chord are likely substitutes for each other. We had already observed earlier, in the discussion of polychords preceding Pattern No. 180, that chords located a diminished fifth apart, especially when they are dominant sevenths, will substitute for each other (i.e., C7 and F-sharp7). Now we see that halfway to each of the diminished fifth intervals (C up to F-sharp and F-sharp up to C) are two more substitute possibilities: E-flat between C and F-sharp, and A between F-sharp and C. Notice that the interval between E-flat and A is also a diminished fifth,[45] and that the interval between each of the tones of the diminished seventh chord is a minor third (or half of a diminished fifth). The symmetry of all this does not end here. Extracting the tones provided by the symmetrically-spaced chords of Pattern No. 201, we see that they form, when placed in a stepwise order, the (also symmetrical) diminished scale:

C♯		D♯		E		F♯		G		A		A♯		C		C♯
	whole step		half step		whole step		half step		whole step		half step		whole step		half step	

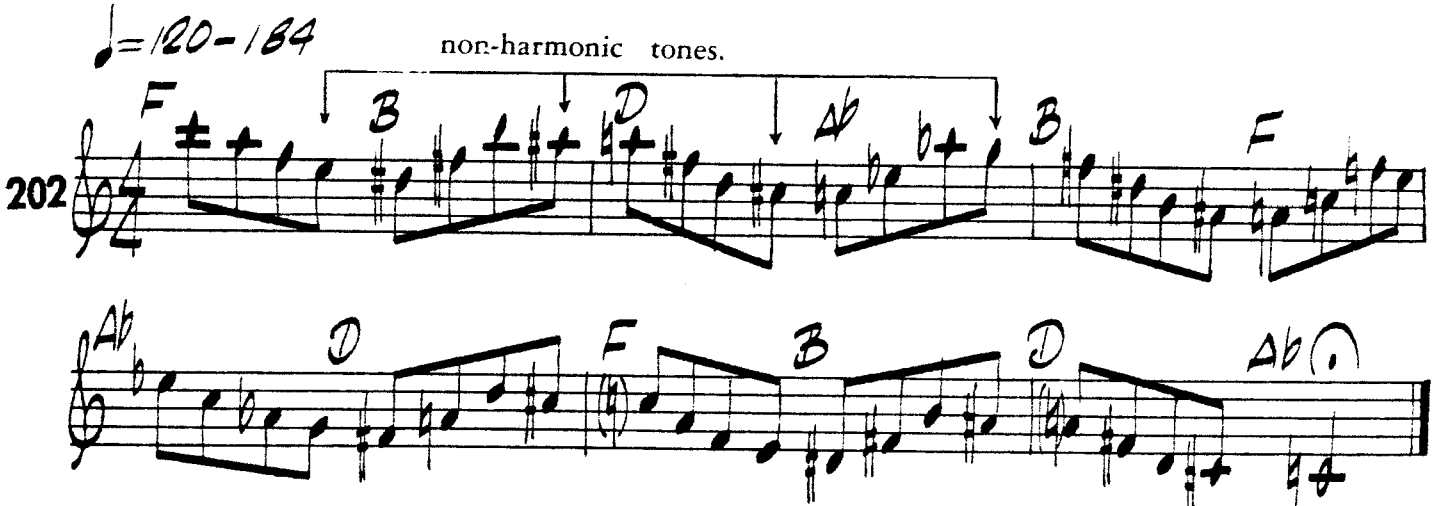
Furthermore, a diminished scale on C-sharp, E, G, or A will fit and enhance (because of the color tones provided) a C7, E-flat7, F-sharp7, or A7 chord.

Patterns No. 201-208 illustrate some of the ways in which four related chords can be played. The sum total of each chord is the diminished scale.

[45]The spelling used here often results in an augmented fourth rather than a diminished fifth although each spells an interval containing three whole steps. This interval is sometimes called a tritone.

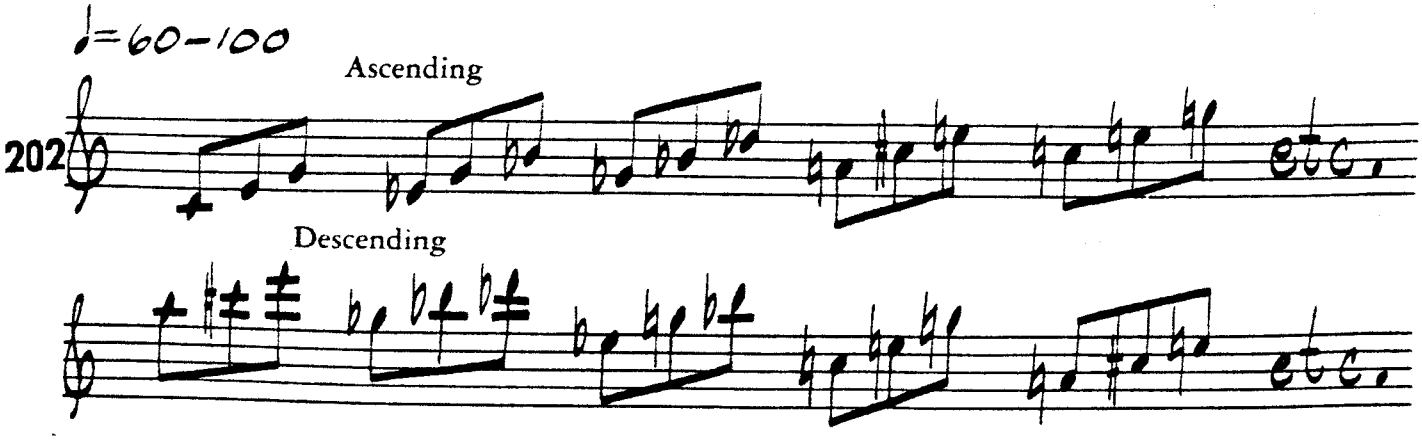


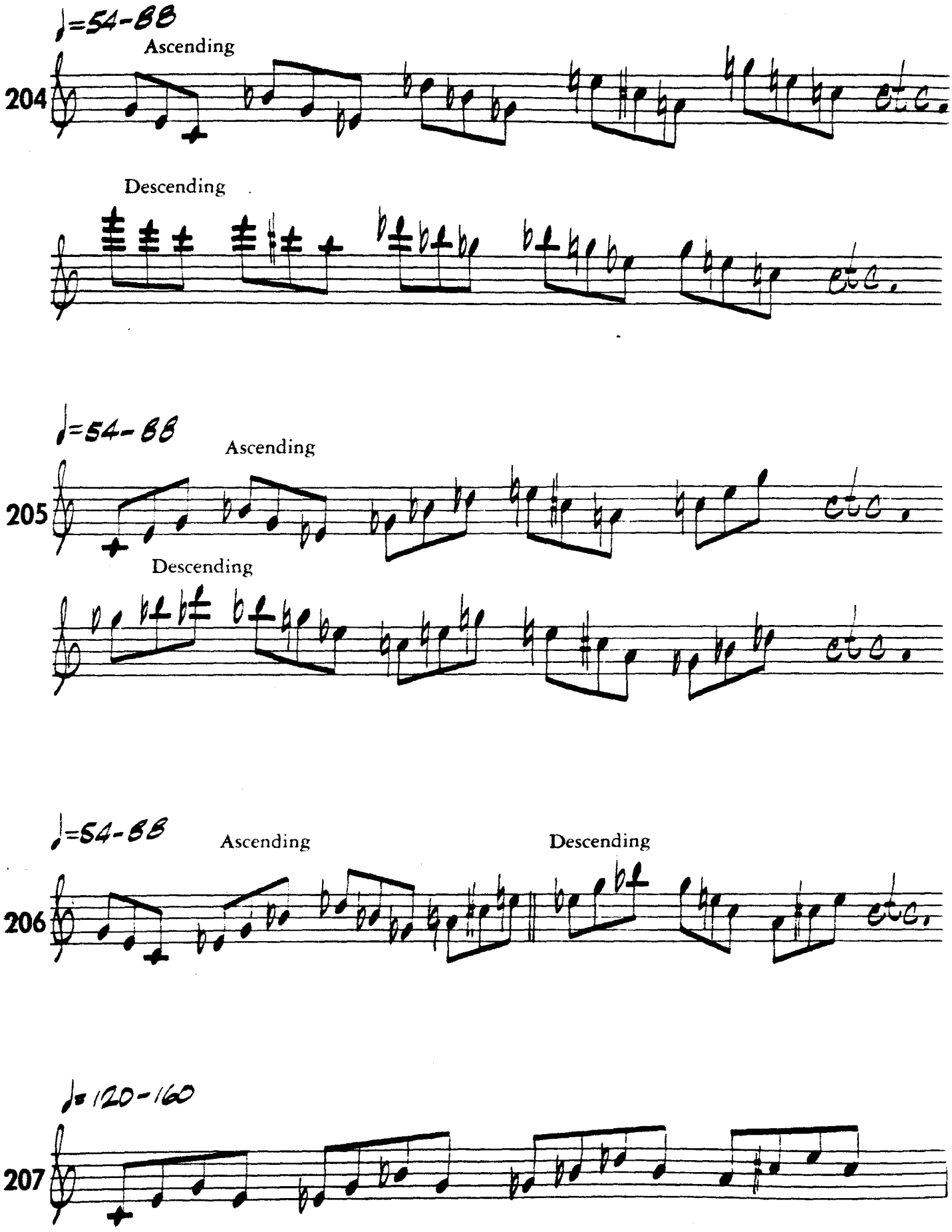
Repeat this pattern with other groups. (D-flat, G; E, B-flat) (D, A-flat; F, B-natural).

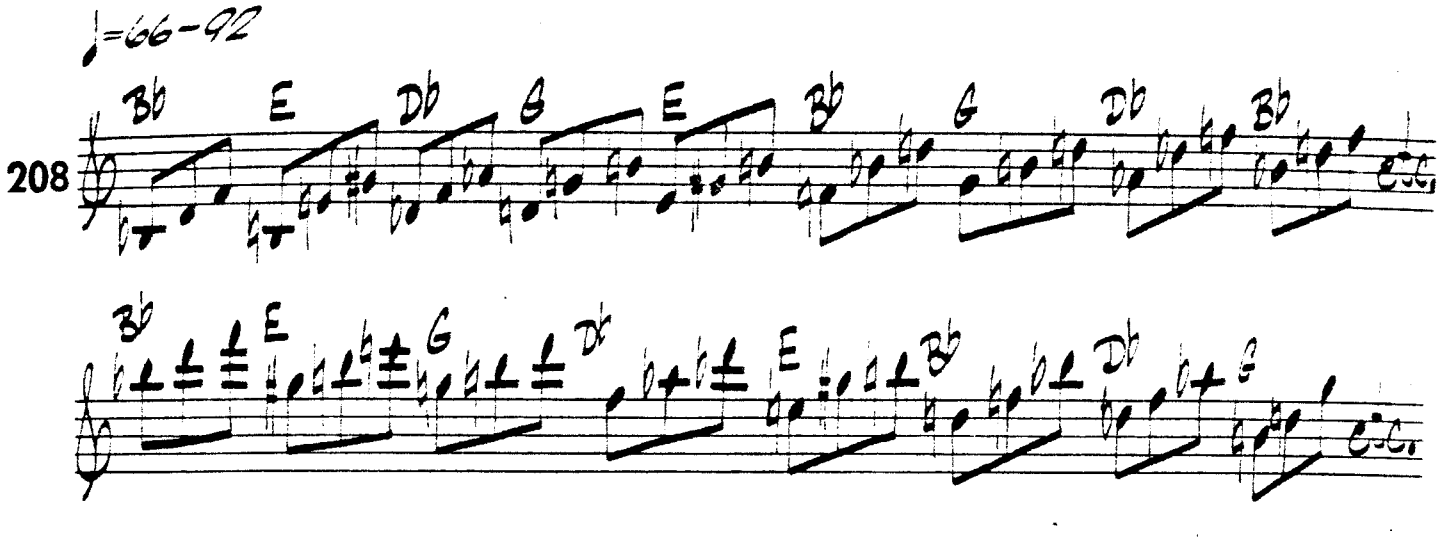


The above pattern can be applied to an F7, B7, D7, or A-flat7 chord—or it can be used as "free" material.

Transpose this pattern to start on B-natural and B-flat.




♩=54-88
Ascending
204
Descending
♩=54-88
Ascending
205
Descending
♩=54-88
Ascending
Descending
206
♩=120-160
207



Patterns No. 201, 203, 206, and 208 can also be played in eighth notes (rather than triplets) by adding one note to each chord, one octave above the starting pitch of that chord. Be sure to transpose Patterns No. 201-208 to two chromatically-adjacent keys.

Our first introduction to the diminished scale[16] (pattern No. 162) was somewhat perfunctory, because of the complexity of that scale's construction and its uses. It is a symmetrical scale of alternating whole steps and half steps. It contains *eight* letters in its spelling, instead of the usual seven found in major and minor scales. Since there are only seven letters to work with, one letter (arbitrarily chosen) will occur twice. In the discussion prior to Pattern No. 201, a C-sharp diminished scale was spelled which used both an A and an A-sharp. The added eighth tone owes its existence to the unusual number of half step intervals in the structuring of a diminished scale.
Also because its intervallic structure is symmetrical, there are (in sound) only three different diminished scales, chromatically adjacent (i.e., scales on C, C-sharp, and D). This means that a C, E-flat, G-flat, and A diminished scale will be the same in sound, a situation that does not exist in major and minor scales. We also find that each tone of the chromatic scale is used in two of the three diminished scales.

The peculiarities about the diminished scale continue when we consider its numerous applications in improvisation. It was designed to fit the diminished seventh chord, as shown in the discussion prior to Pattern No. 162. However, the scale also fits, in varying degrees of dissonance, the half-diminished seventh chord and all minor chords (m7, m6, etc.). In all of the preceding instances, the scale begins with a whole step, built on the root of the chord. Yet the most common use of the diminished scale in the jazz idiom is with the dominant seventh chord where, as illustrated in the discussion prior to Pattern No. 201, the scale adds the color tones of flat9, +9, +11, and 13, and where the root of the scale is a half-step above the root of the seventh chord (i.e., a C-sharp diminished scale is used with a C7). Another way to arrive at the latter use is to start the scale on the root of the seventh chord, but beginning with a half-step[17], resulting in the same tones arrived at by using the scale of one-half step up, beginning with a whole step.

Beginning with Pattern No. 216, a non-harmonic (non-chord) tone is added chromatically between pairs of tones from the scale—pairs which are normally a whole-step apart. The result is a chromatic scale, though the scale continues to sound like a diminished scale because of the placement of the non-harmonic tones. Consequently, the diminished scale also works very well as a scale to be used in "free" improvisation (improvisation without given chords or scales).

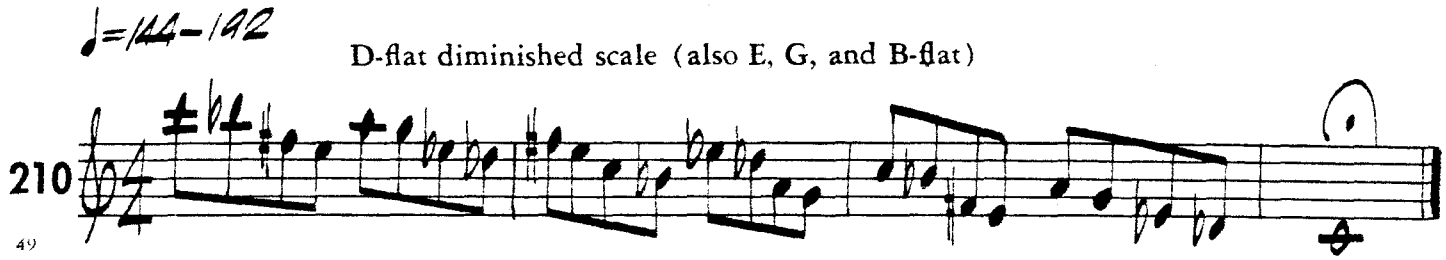
A scale having so many interesting uses deserves considerable attention, so Patterns No. 209-224 will focus on the diminished scale.

[16]For further reference on the diminished scale see Coker, Baker and Russell. Another excellent source is Nicolas Slonimsky, *Thesaurus of Scales and Melodic Patterns* (New York: Coleman-Ross Company Inc., 1947).

[17]This approach is used by Baker and Russell.

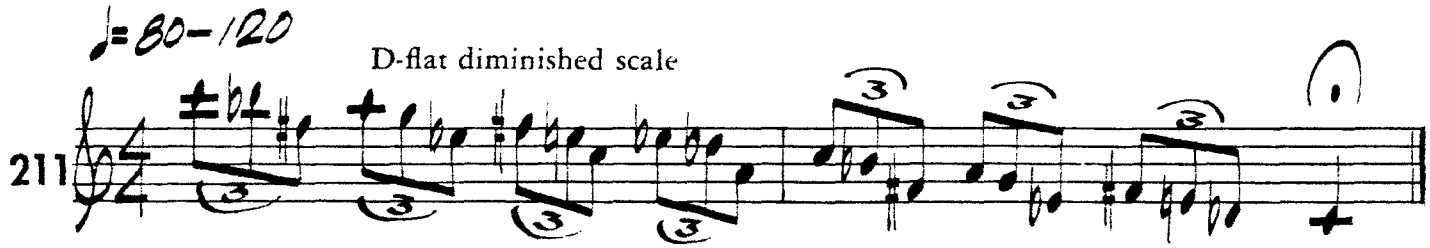
48

Repeat on D-flat and D.

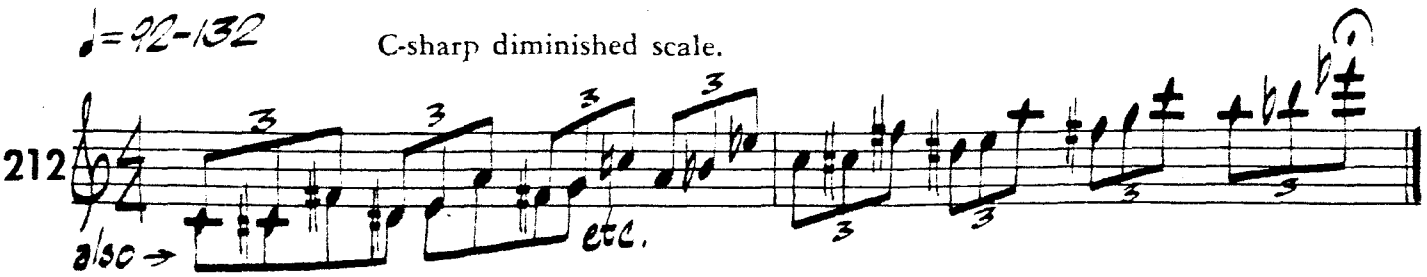


49

Repeat with the *starting pitches* of D-flat and D (not D-flat and D diminished scale).



Repeat with the starting pitches of D-flat and D.

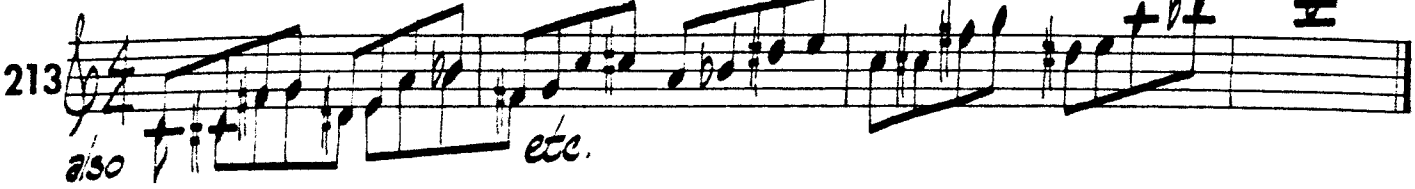


Repeat with the *starting pitch* of D-flat and D.

[48]Booker Ervin, "No Private Income Blues," on *Mingus In Wonderland* (United Artists 15005), Charles Mingus Group.

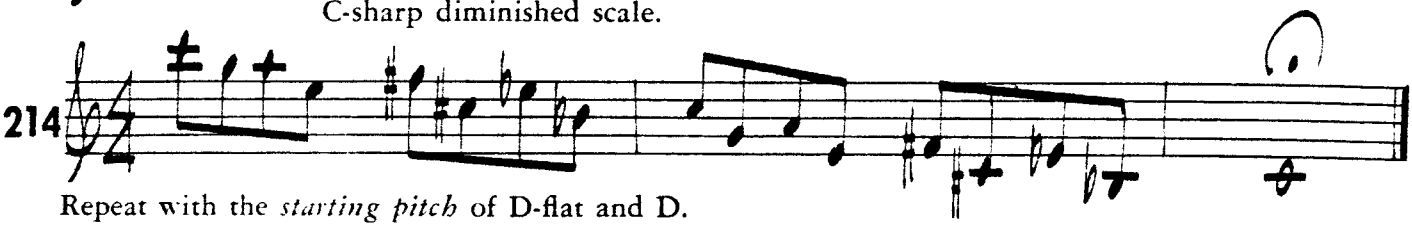
[49]John Coltrane, "Straight No Chaser", on *Milestones* (olumbia CS 9428), Miles Davis Sextet.

♩=120-168 C-sharp diminished scale.

213 

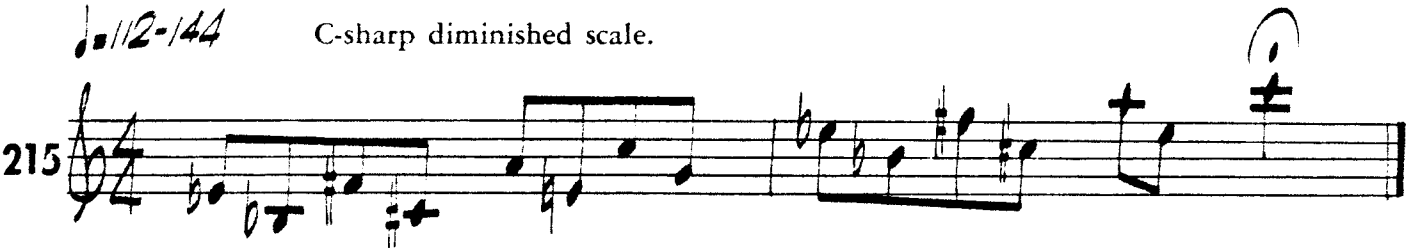
Repeat with the *starting pitch* of D-flat and D.

♩=120-160 C-sharp diminished scale.

214 

Repeat with the *starting pitch* of D-flat and D.

♩.=112-144 C-sharp diminished scale.

215 

Repeat with the *starting pitch* of D-flat and D.

D-flat diminished scale.
(non-harmonic tones)

♩=100-144

216 

Repeat on D-flat and D.

C-sharp diminished scale.

♩=88-120

217 

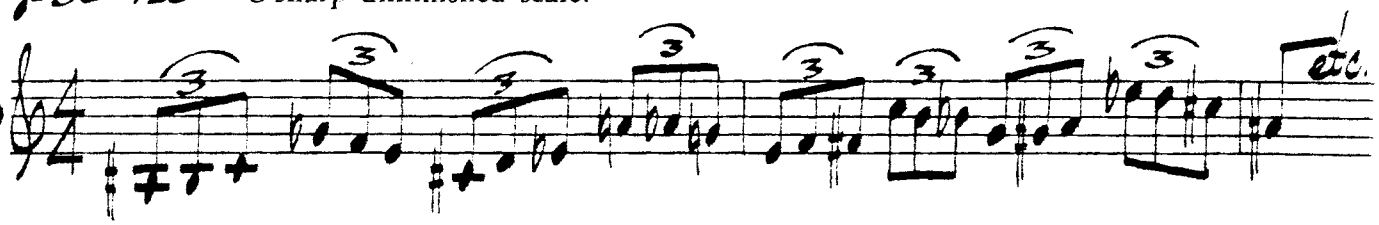
Repeat starting on B and C.

♩=100-144 C-sharp diminished scale.

218 

Repeat on D-flat and D.

♩=88-120 C-sharp diminished scale.

219 

Repeat on B and C.

♩=88-120 C-sharp diminished scale.

220 

Repeat on B-flat and B.

♩=92-132 C-sharp diminished scale.

221 

Repeat on D-flat and D.

♩=108-144 C-sharp diminished scale.

222 

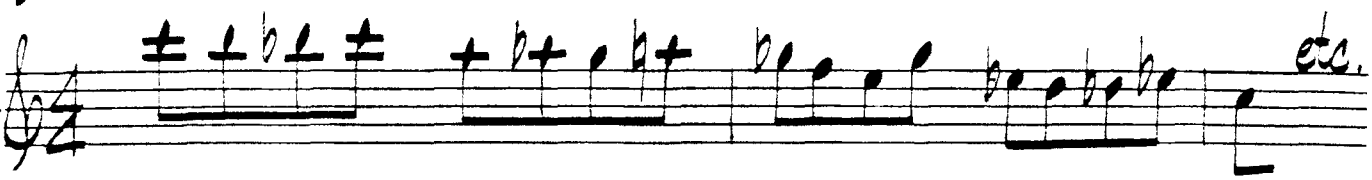
Repeat on B and C.

♩=120-152 C-sharp diminished scale.

223 

Repeat on B and C.

♩=162-208 D-flat diminished scale.

224 

Repeat on D-flat and D.

THE AUGMENTED SCALE

The augmented scale, like the diminished scale, is a symmetrical scale. This time the intervals alternate between half-steps and one and one-half steps (minor thirds or augmented seconds). On C the scale would be spelled C, D-sharp, E, G, A-flat, B, C. Note that there are, because of the wide augmented second intervals, only *six* tones in the scale. Although the foregoing scale on C begin on C, the scale is often handled melodically in improvisation so that it starts on the B (B, C, D-sharp, E, G, A-flat, etc.)

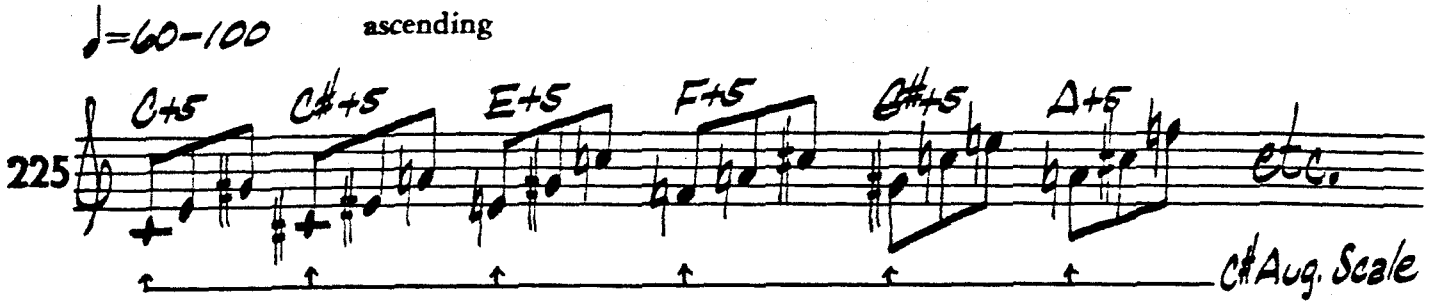
The augmented scale is not nearly so common as the diminished scale, nor can it aply to as many given situations. However, its use seems to be on the upswing, since it is a relatively new scale, and perhaps, like the diminished scale, it will enjoy more popularity in the future.
As its name implies, the augmented scale is derived from the use of augmented triads. If we examine the above spelling of the C augmented scale, we see that it contains two augmented triads, chromatically adjacent: B, D-sharp, G (or F double sharp) and C, E, A-flat (or G-sharp). Only four (chromatically adjacent) augmented scales exist.

In addition to fitting augmented triads, the augmented scale fits a rarely-used chord, the major seventh chord with an augmented fifth (M7+5)[50]. Again, since this chord is relatively new, like the scale, it could enjoy wider use in the future, because both the chord and the scale present interesting sounds that might prove attractive to the jazz improviser. With slightly less effect, the scale can be applied to the major seventh chord (M7). It also carries much potential for becoming a "free form" device, because of its mystical, keyless sound and its symmetry in construction.

Patterns No. 225-233 explore some of the possibilities for sounding the augmented scale.

[50]Clare Fischer, "Quiet Dawn," on *Extensions* (Pacific Jazz 77), Clare Fischer Orchestra. Listen for an extensive use of the augmented scale with M7 +5 chords. Also listen to the clarinets in the first movement of Bela Bartok's "Concerto For Orchestra."

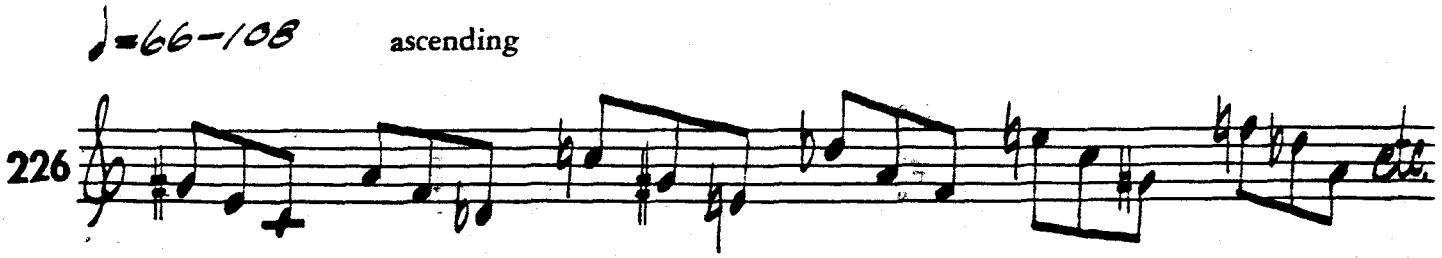
(C-sharp augmented scale)



descending

Also start on C-sharp, D, and D-sharp.

(D-flat augmented scale)



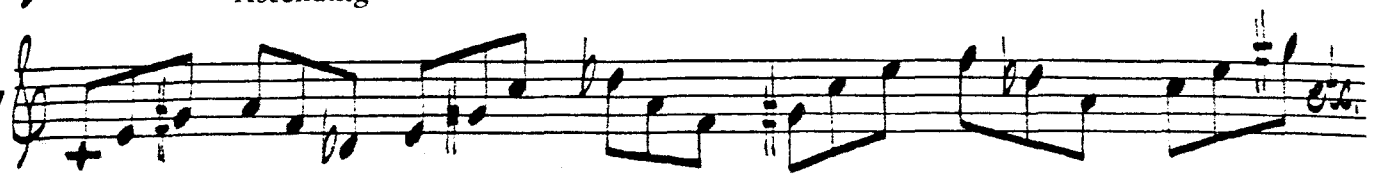
descending

Also start on A, A-sharp and B-natural.

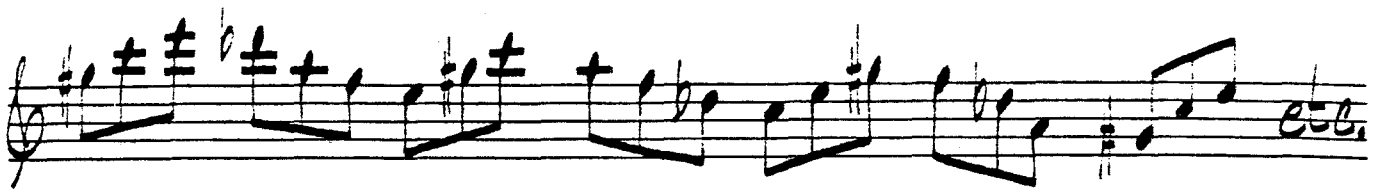
(D-flat augmented scale)

♩=66-112 Ascending

227



Descending



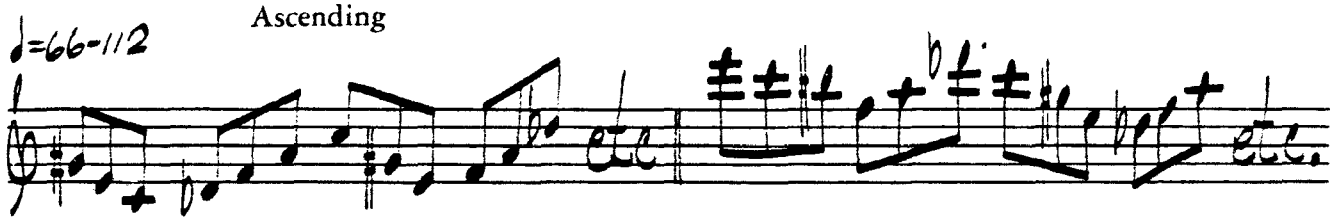
Also start on C-sharp, D and D-sharp.

(D-flat augmented scale)

Descending

♩=66-112 Ascending

228



Also start on C-sharp, D and D-sharp.

(D-flat augmented scale)

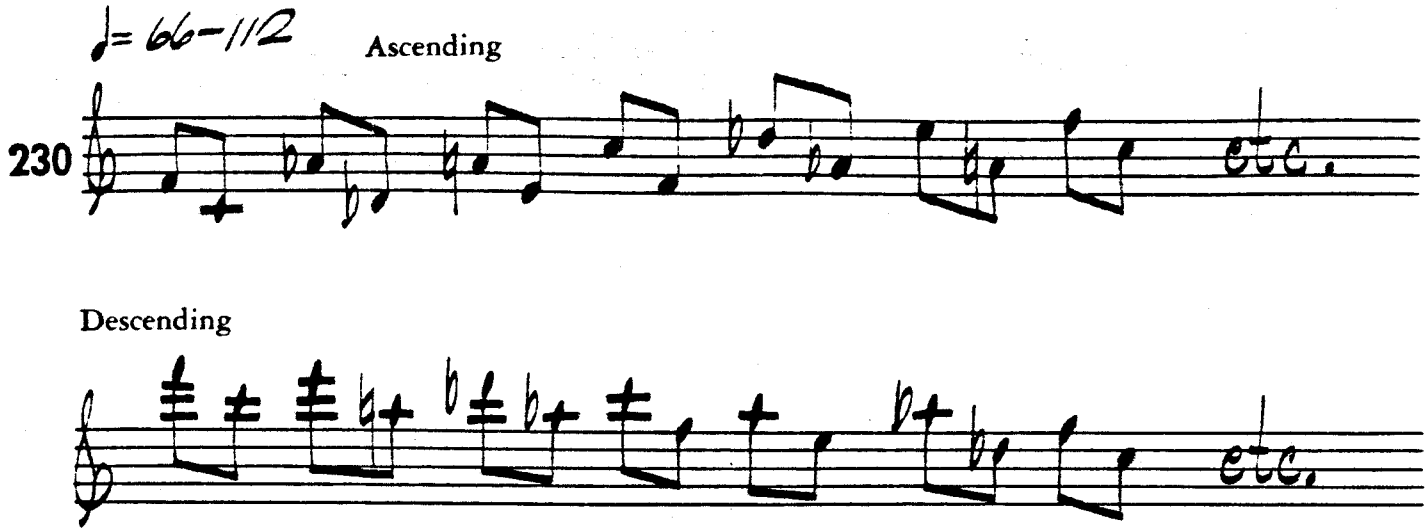
♩=66-112 Ascending

229

Descending

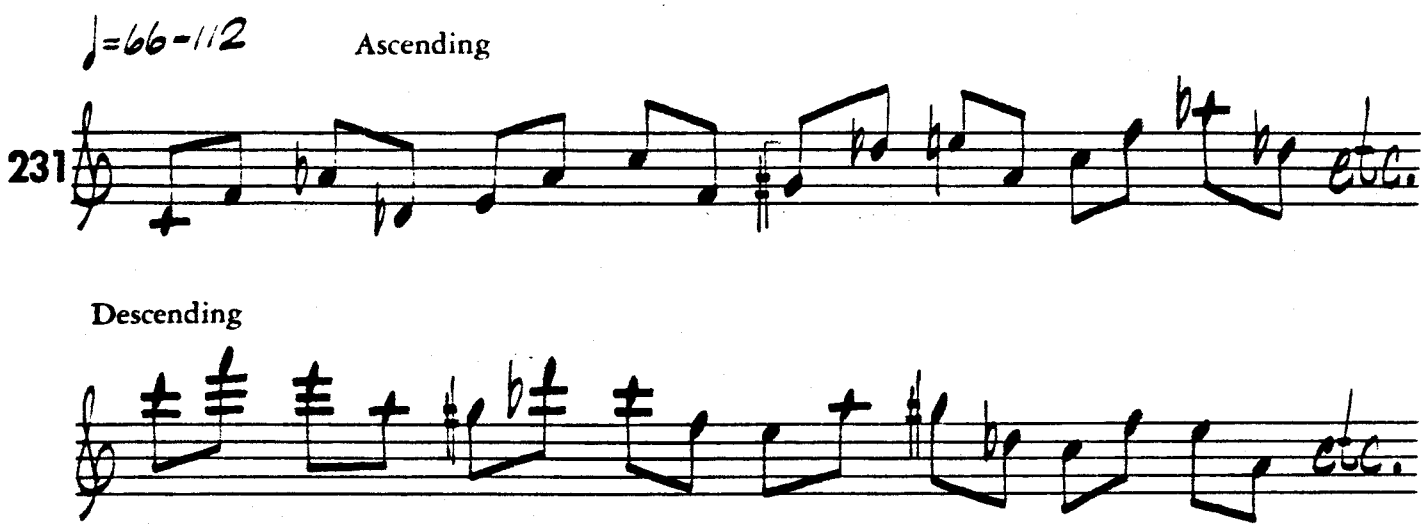
Also start on C-sharp, D and D-sharp.

(D-flat augmented scale)

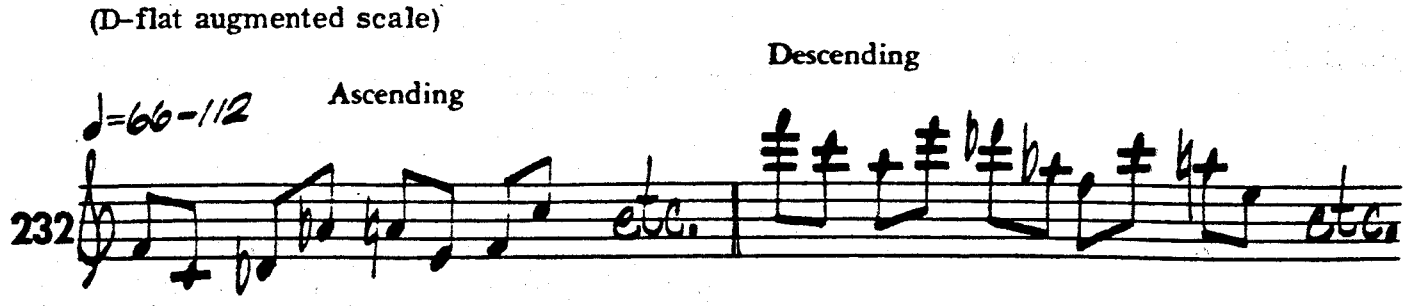


Also start on F-sharp, G, and G-sharp.

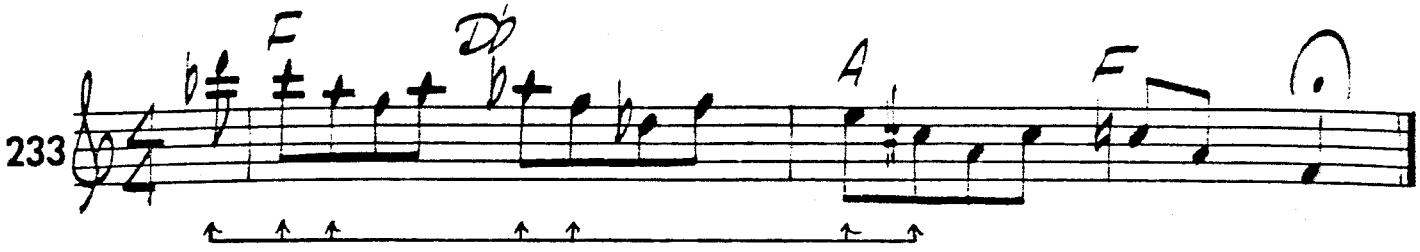
(D-flat augmented scale)



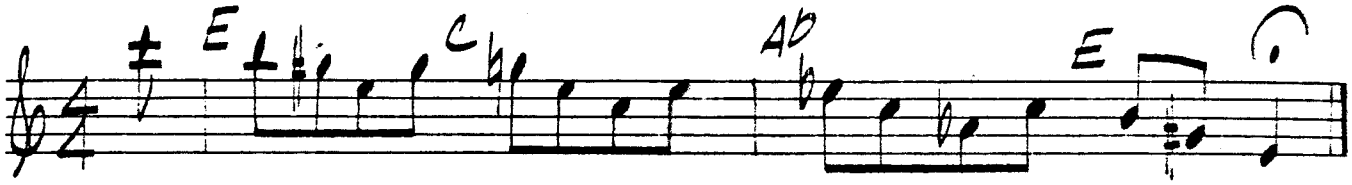
(D-flat augmented scale)

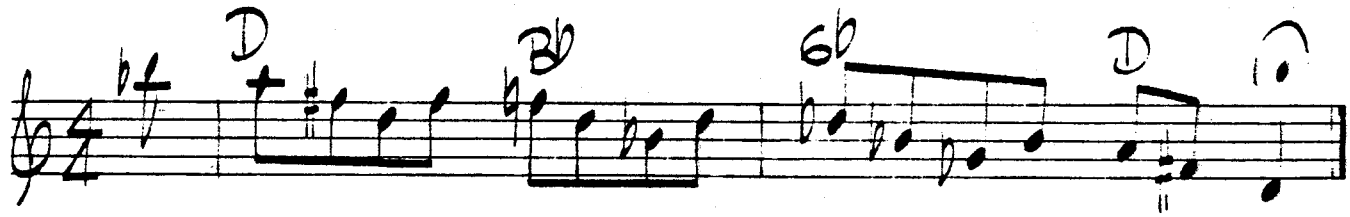


Also start pattern on C-sharp, D and D-sharp.



D-flat, F, A augmented scale.

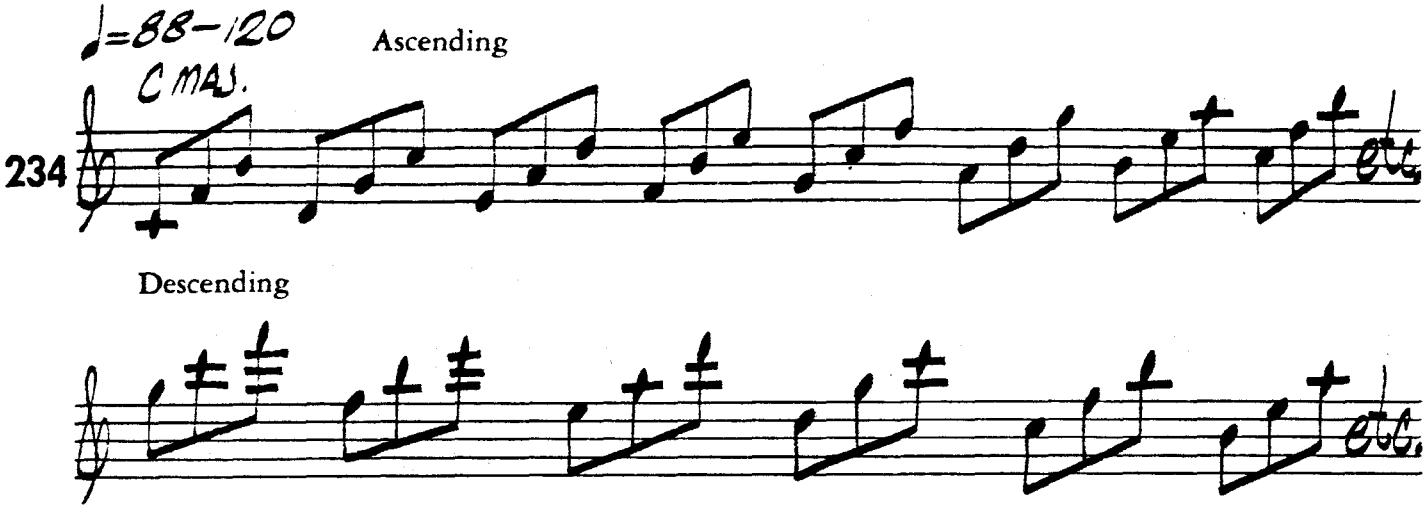




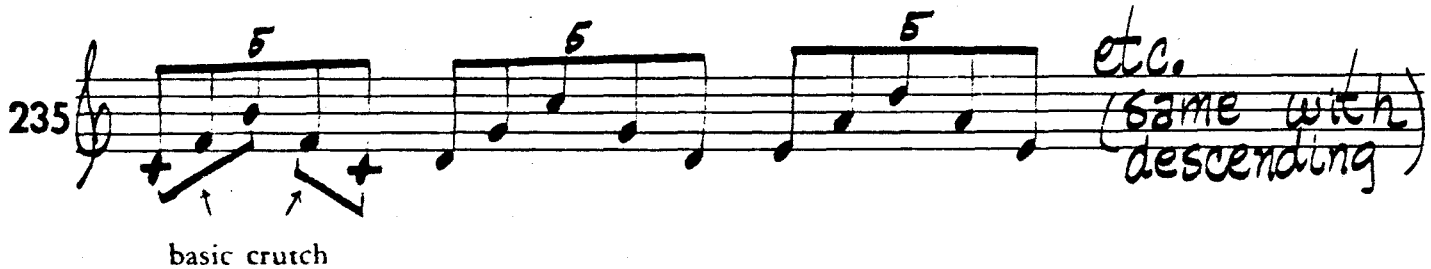
[51]Oliver Nelson, "Stolen Moments," on *The Blues And The Abstract Truth* (Impulse S-5), Oliver Nelson Group. Nelson makes use of this pattern in the last chorus of his tenor solo. Also see the bridge section (melody) of "Hoe Down" from the same album.

MAJOR SCALE IN FOURTHS

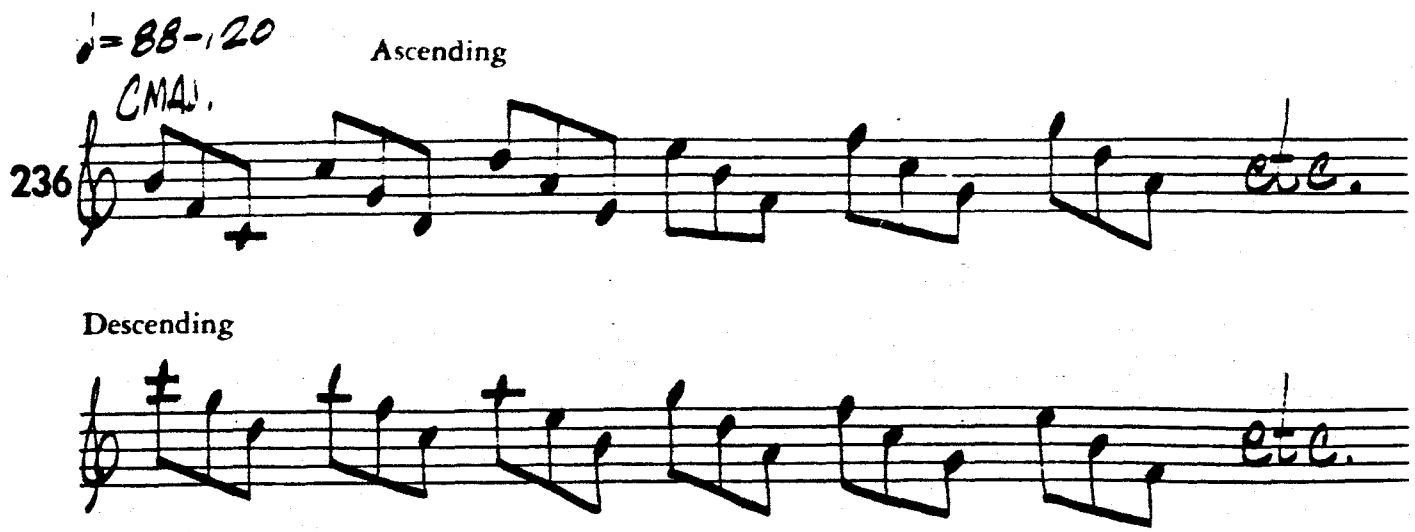
Fourth intervals have become extremely popular among improvisers, in recent years, both because the interval interests them and because fourths tend to break away from the sound and rigid function of thirds heard in ordinary ruminations on chords built in thirds. Successive *perfect* fourth intervals will be discussed later, as they are applied to "free form" improvisation. The following studies will help prepare the student to play *general* fourth intervals (sometimes perfect, sometimes augmented) as they are determined by the tones of major and minor scales.

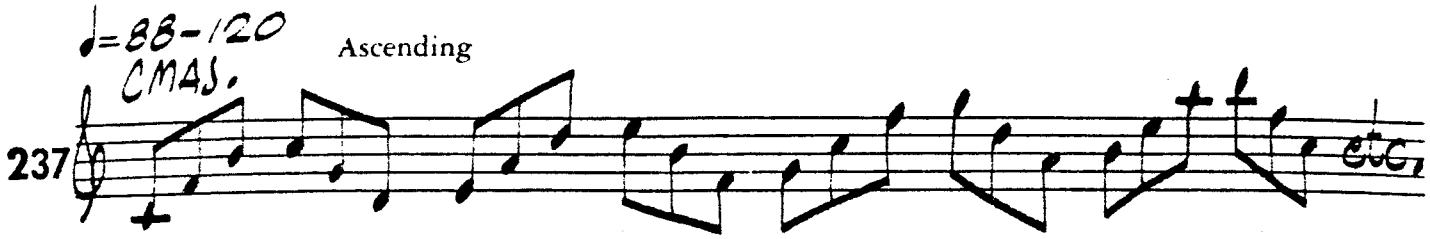


At first, it may be helpful to learn the pattern by practicing it in the following manner.

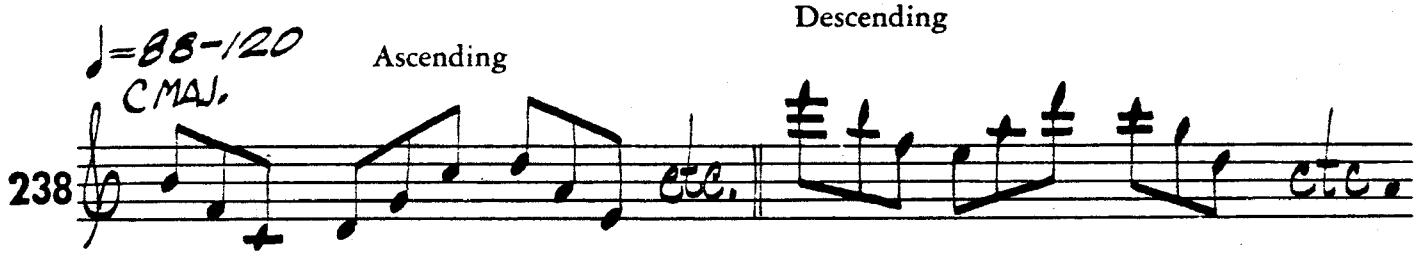


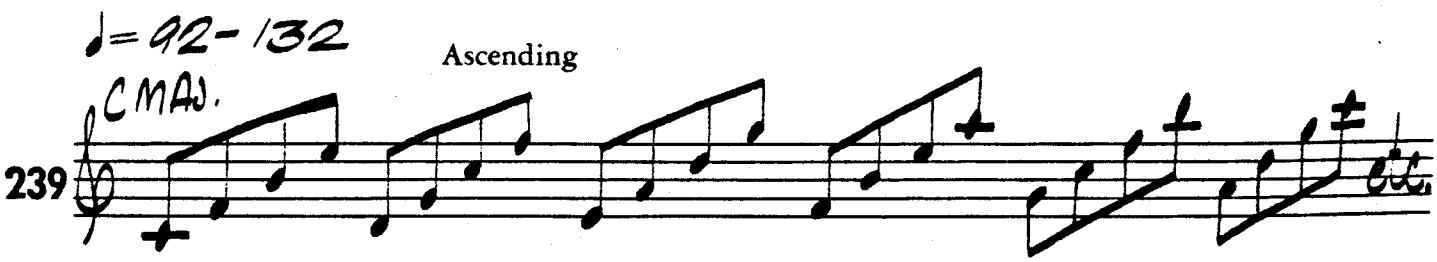
Play this in all keys. *Do the same for the succeeding patterns in this section.*



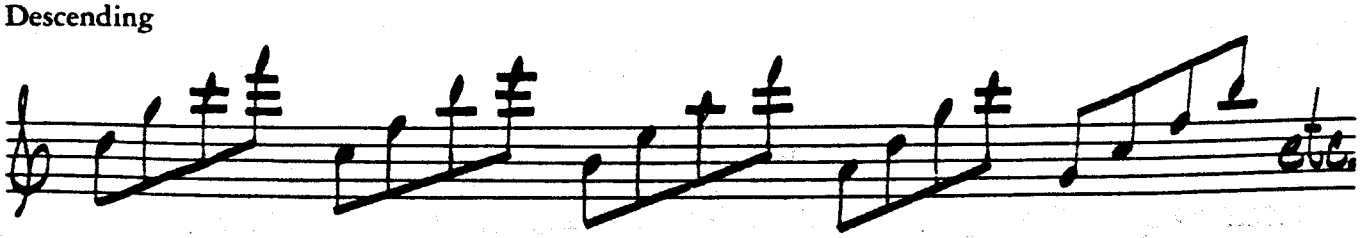


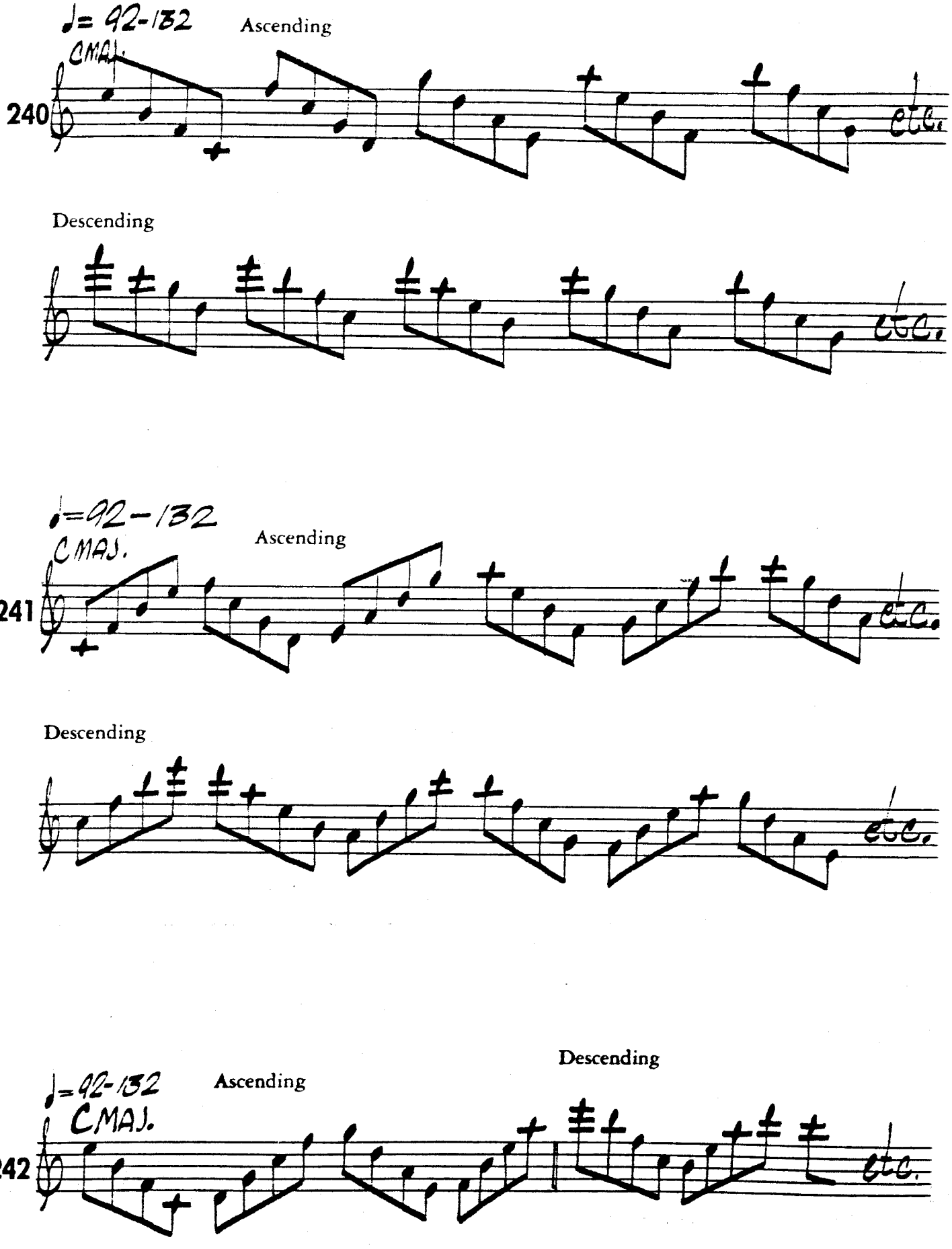
Descending

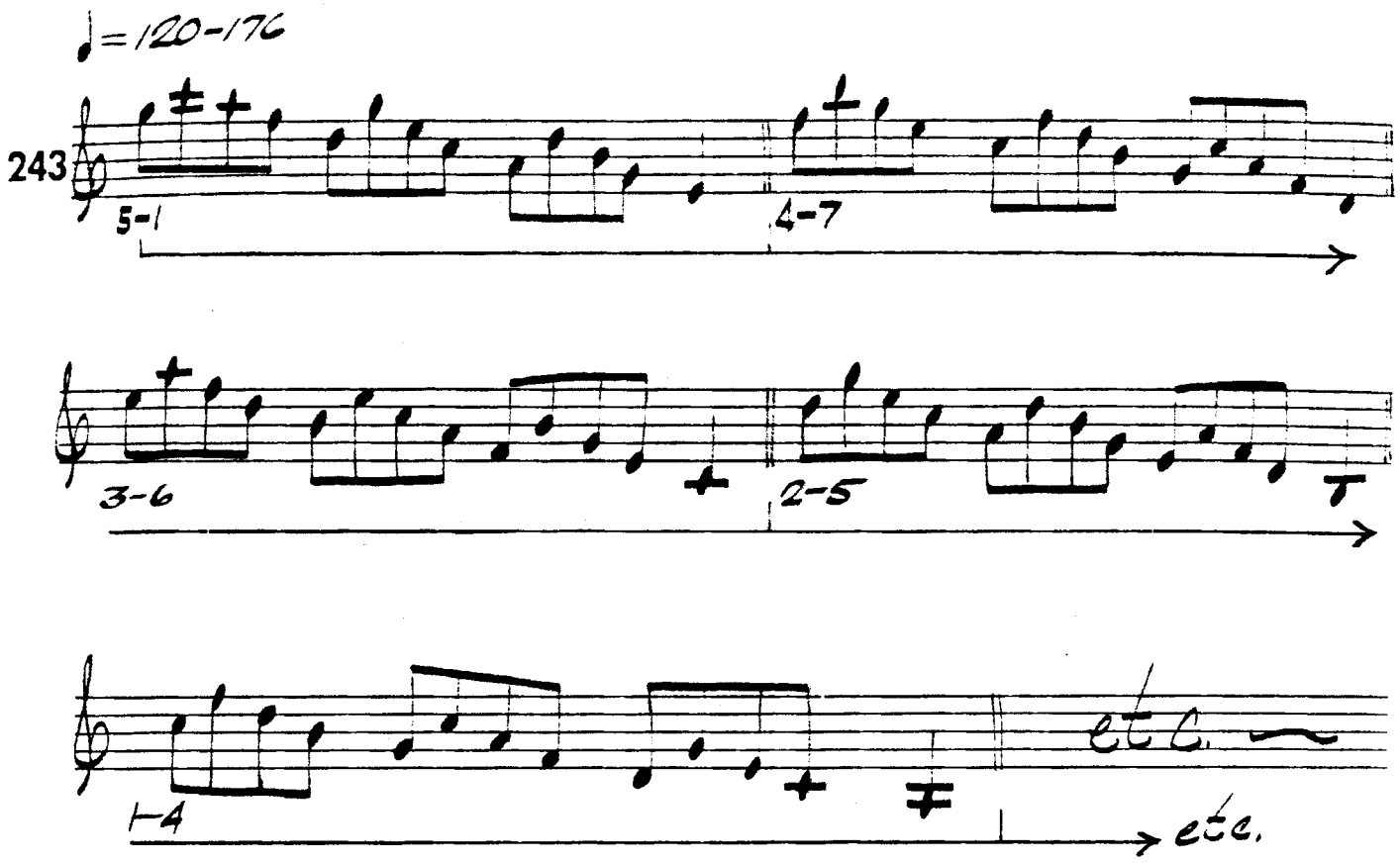




Descending

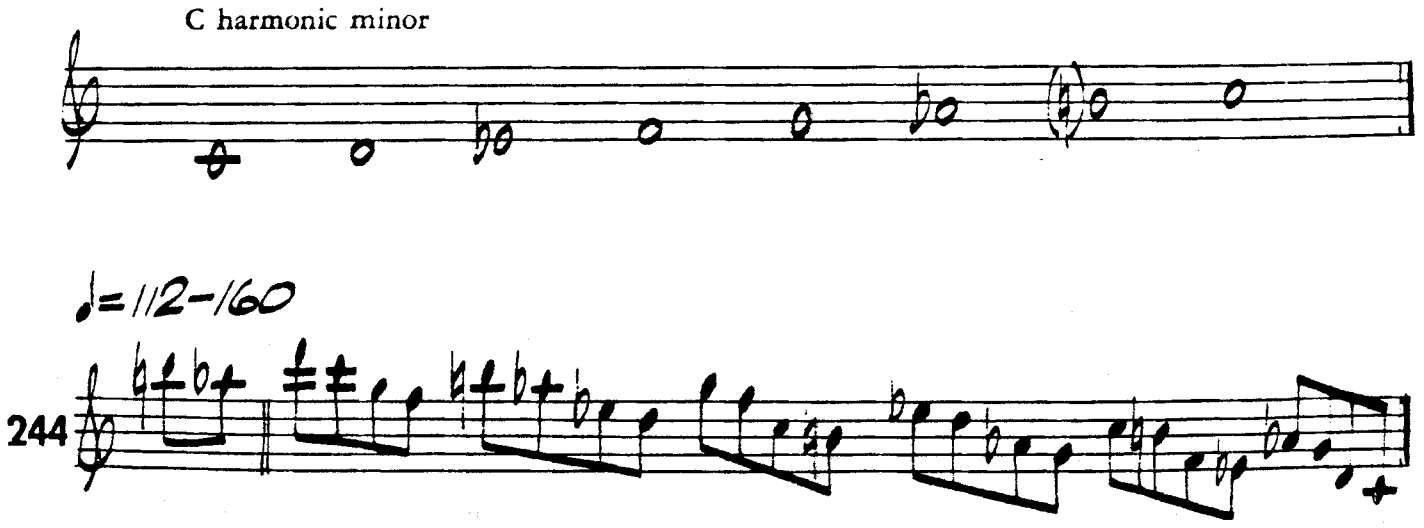



♩= 92-132
CMAJ.
Ascending
240
etc.
Descending
etc.
♩=92-132
CMAJ.
Ascending
241
etc.
Descending
etc.
♩=92-132
CMAJ.
Ascending
Descending
242
etc.

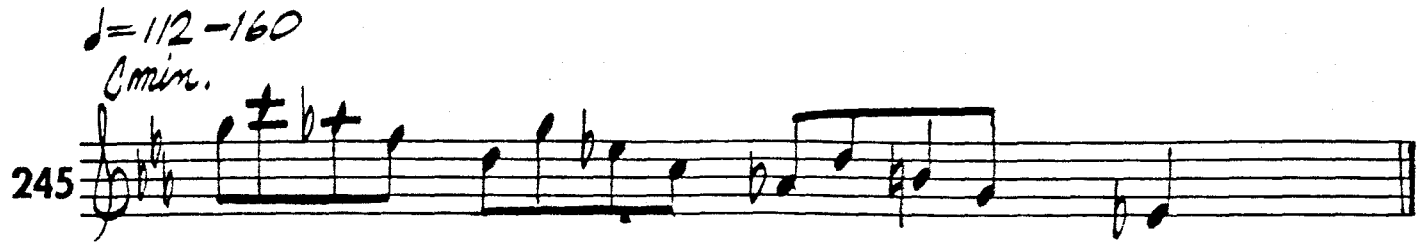


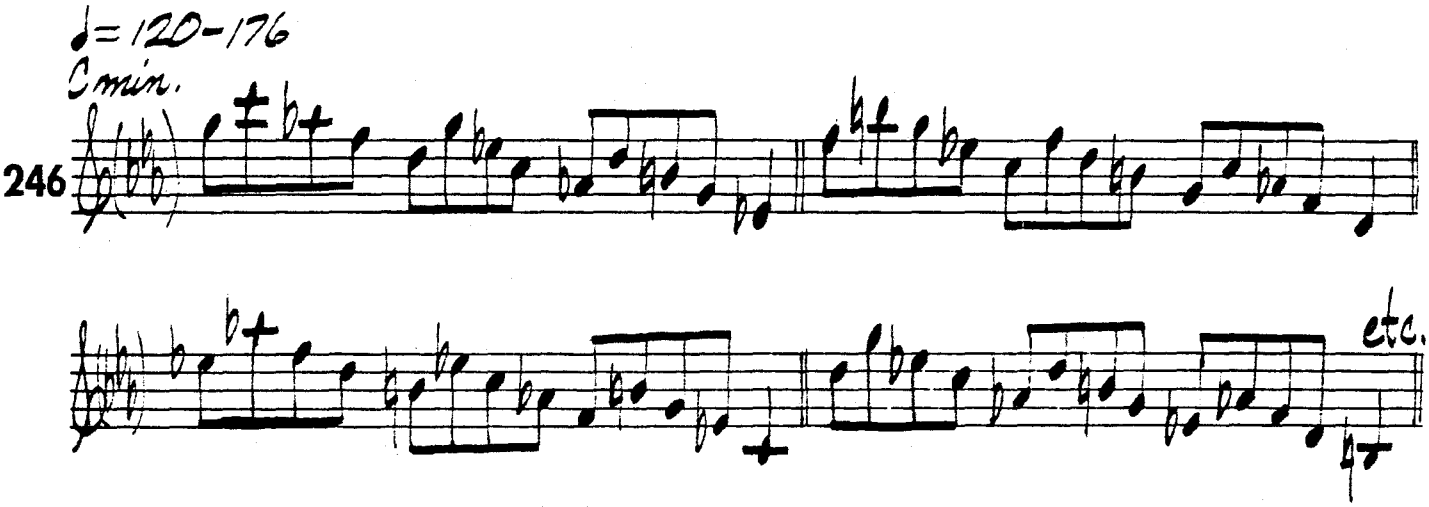
Play this in all keys.

ADAPTATION OF PREVIOUSLY-PRESENTED PATTERNS TO HARMONIC MINOR SCALE



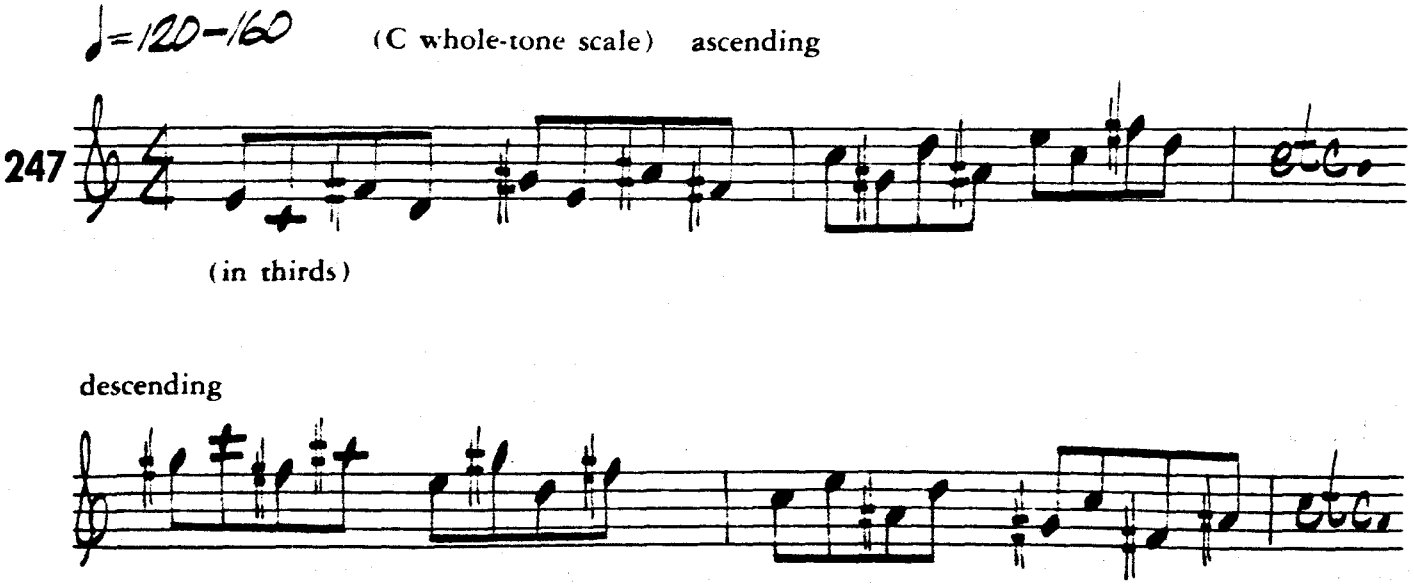
[52]Archie Shepp, *Four For Trane* (Impulse S-71), Archie Shepp Group.





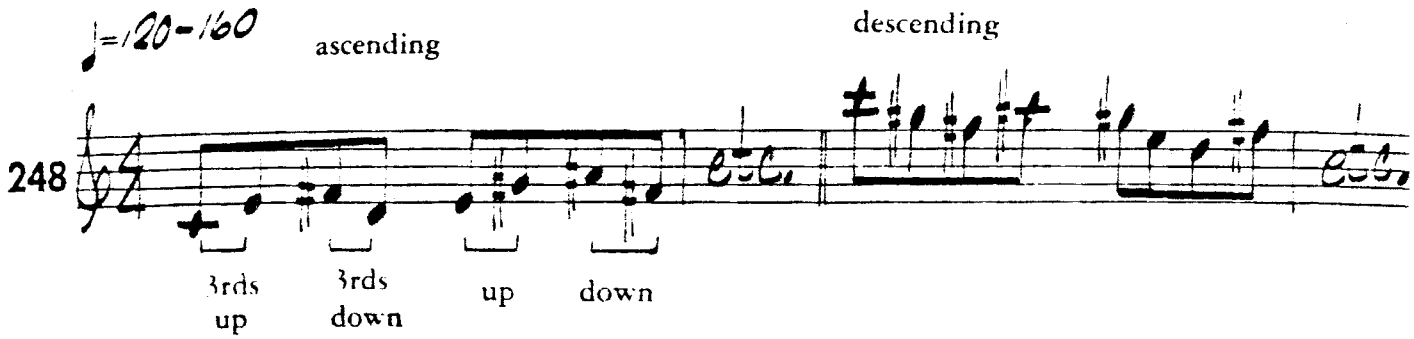
Play Patterns No. 244-246 in all keys.

Patterns No. 153-157 were devoted to an introduction to the whole-tone scale, which is still another symmetrical scale, as were the diminished and augmented scales. Its application, it will be remembered, was to augmented triads and the 7+5 chord. Patterns No. 247-250 merely develop some of the other possible settings of the scale in pattern form.



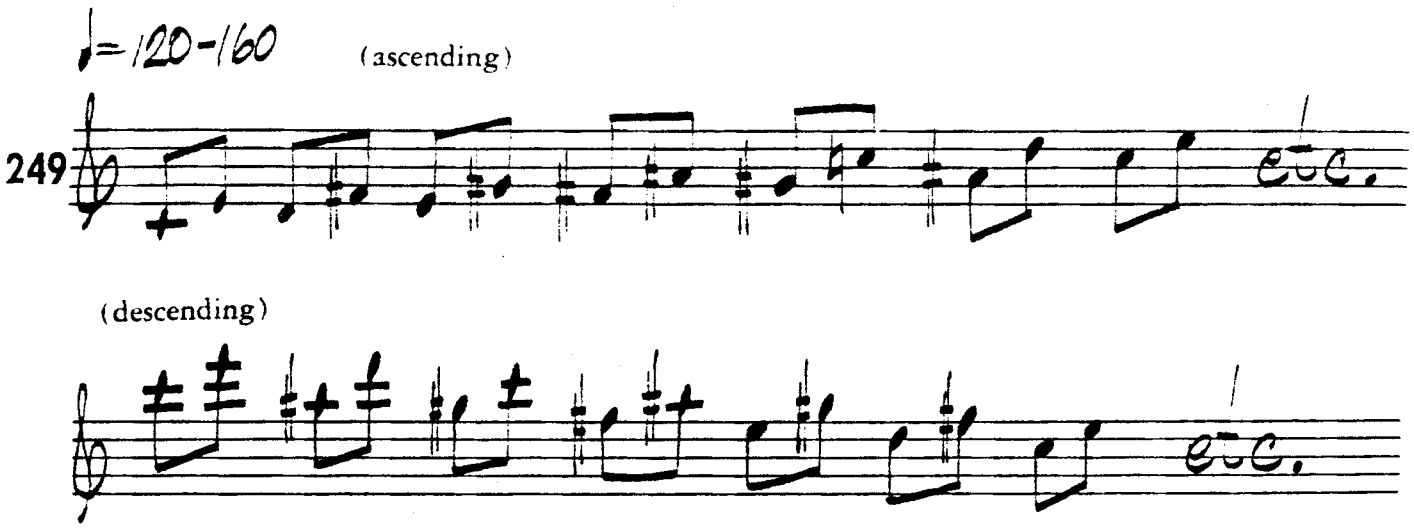
Repeat this one-half step higher (C-sharp—D-flat whole-tone scale).

(C Whole-Tone Scale)

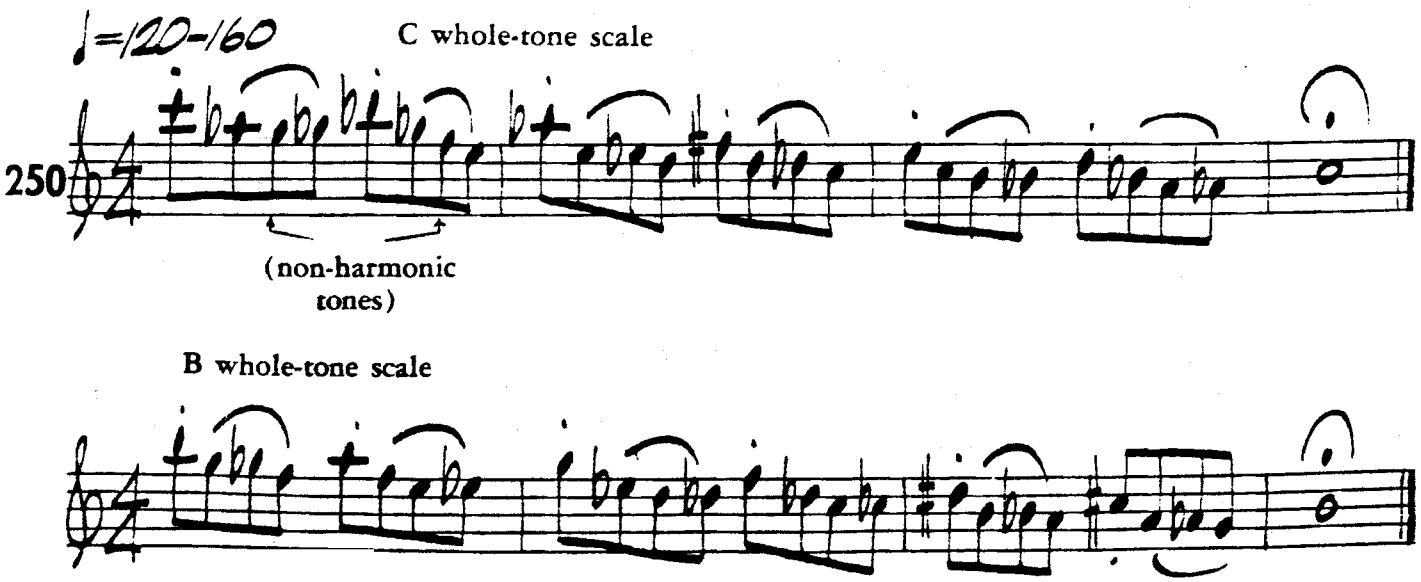


Play this on the C-sharp—D-flat whole-tone scale.

(C Whole-Tone Scale)



Also practice this pattern using the whole-tone scale starting on D-flat.



THE LYDIAN AUGMENTED SCALE[53]

While it is true that most of the basic chords can be accomodated by the major scale, modal scales derived from major scales, and minor scales, it is also true that the jazz idiom includes the consistent use of altered chords and chords embellished by various types of ninths, elevenths, and thirteenths. It has already become apparent that the diminished scale, the whole-tone scale, and the augmented scale are needed to accommodate some chords with such alterations and embellishments. The LYDIAN AUGMENTED SCALE is an extremely useful scale in this respect. It has two kinds of application to dominant seventh chords, one resulting in the addition of a flatted fifth (or augmented eleventh) and the other application supplying an augmented fifth, a flatted ninth, an augmented ninth, and an augmented eleventh. An explanation of the structure of the lydian augmented scale follows, as well as its application and a number of patterns to aid the student in absorbing the scale.[54]

LYDIAN AUGMENTED SCALE

W.T.[55] W.T. W.T. W.T. S.T.[55] W.T. S.T.

SCHEME: I II III ♯IV ♯V VI VII I

(Same as a major scale with a raised 4th and 5th step)

C lydian augmented scale

Function: Fits dominant 7th, lowered 5th ($^{7}_{\flat 5}$); or dominant 7th raised 5th, raised 9th, lowered 9th, augmented 11th $\left(\begin{matrix}+11\\ \flat 9\ +9\\ 7\\ +5\end{matrix}\right)$

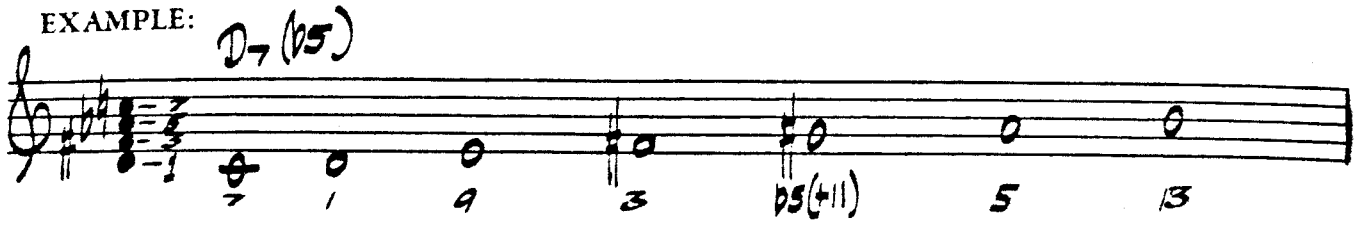
[53]The term "lydian augmented scale" as well as the scale itself owe their invention and application to George Russell. Russell's book, *The Lydian Chromatic Concept* (New York: Concept Publishing Company, 1959), is strongly recommended to the inquisitive student of jazz improvisation.

[54]Additional patterns on the lydian augmented scale may be found in David Baker's *Developing Improvisational Facility (Based on the Lydian Concept)* (Libertyville, Illinois: National Education Services, 1968).

[55]W. T. is an abbreviation for a whole tone or whole step. S. T. is an abbreviation for a semitone or half step.

In the case of the dominant 7th, flat 5th (♭5), the root of the *scale* is the *seventh* of the *chord.*

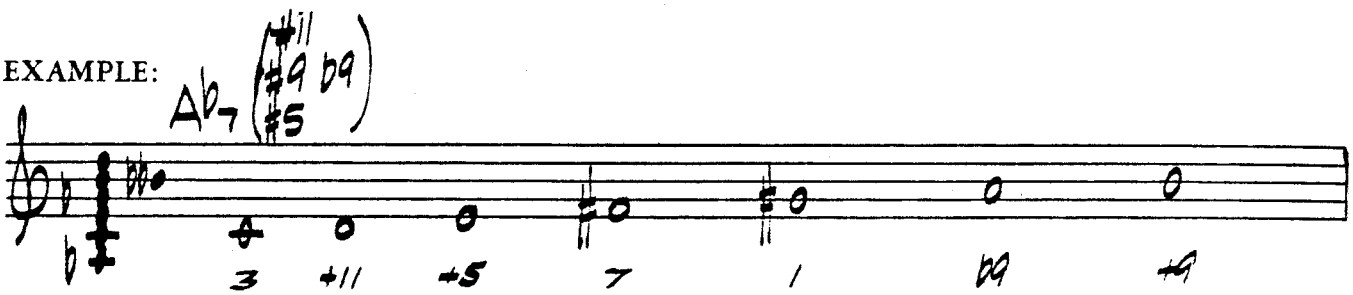
EXAMPLE:



C lydian augmented scale.

In the case of the dominant 7th, raised 5th, raised 9th, lowered 9th, and augmented 11th, the root of the scale is the *third* of the chord.

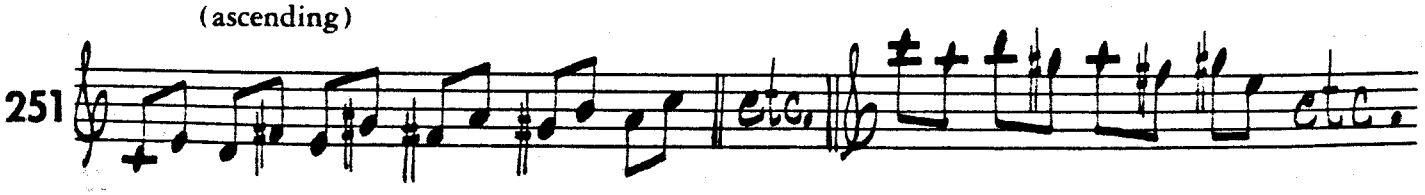
EXAMPLE:



There are *12* lydian augmented scales.

Learn all twelve scales by playing them over and over throughout the range of your instrument. Then learn them as you did the major scale (by playing them in thirds, etc.). Be sure to practice the scales in all twelve keys.

C lydian augmented scale (ascending) (descending)

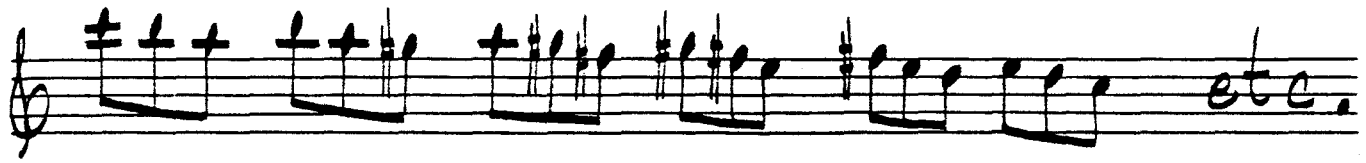


C lydian augmented scale

252

(ascending)

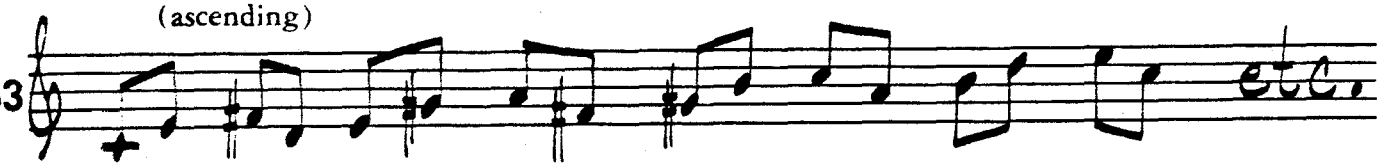
(descending)



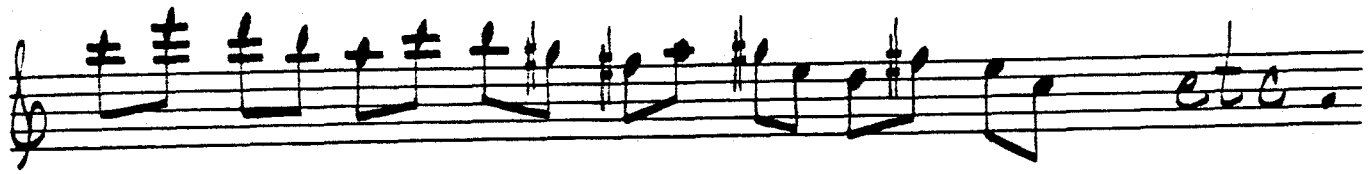
C lydian augmented scale

(ascending)

253



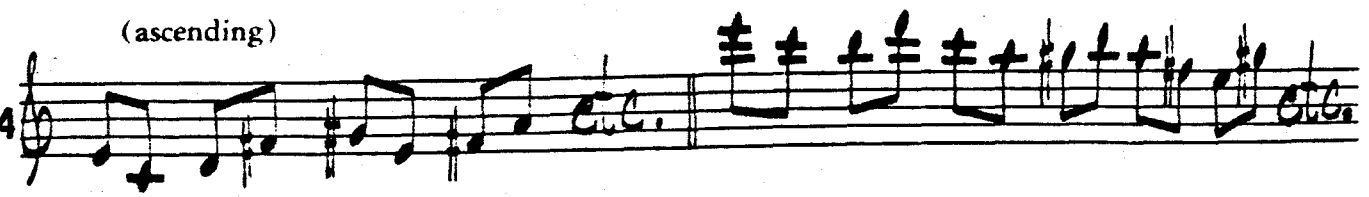
(descending)



(descending)

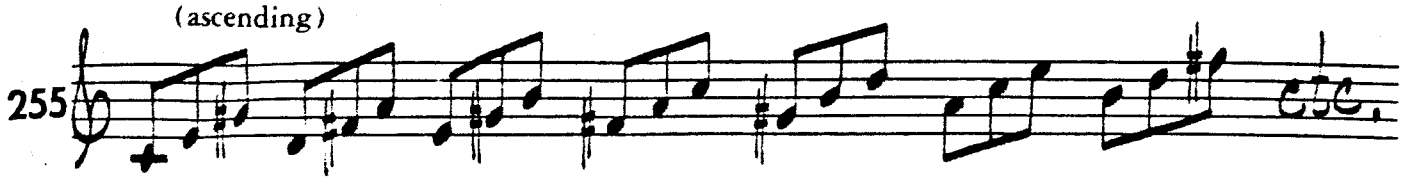
(ascending)

254

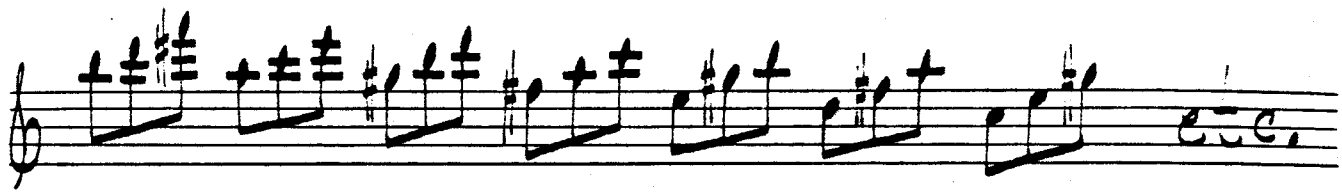


C lydian augmented scale
(ascending)

255

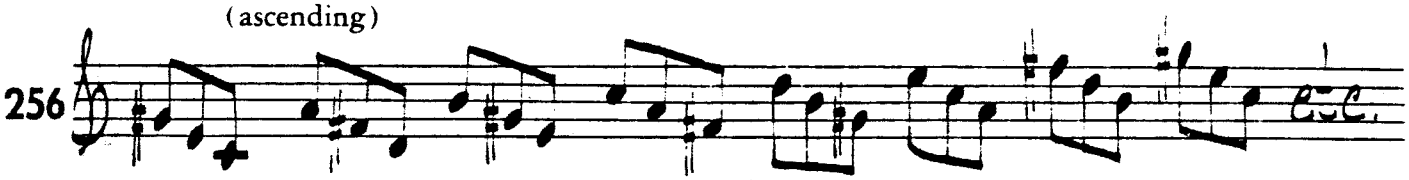


(descending)

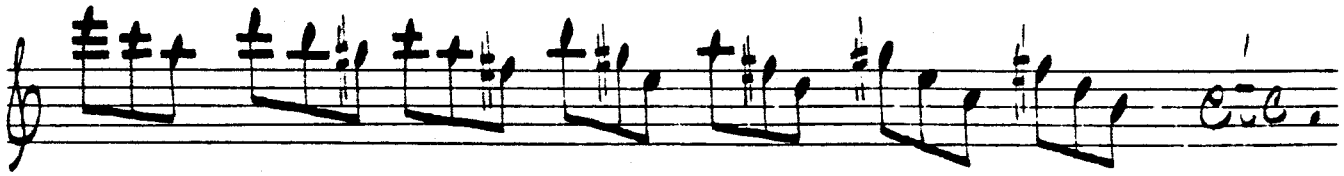


C lydian augmented scale
(ascending)

256

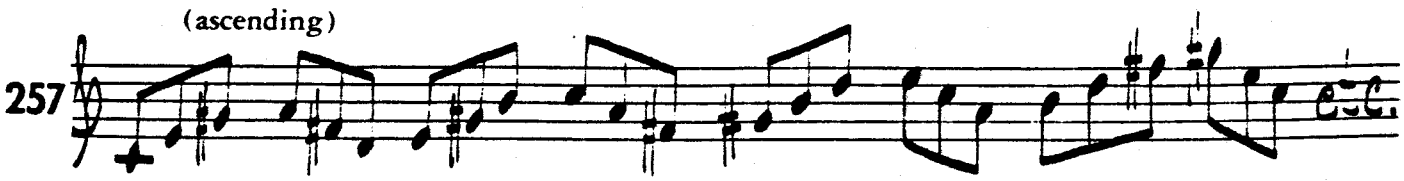


(descending)

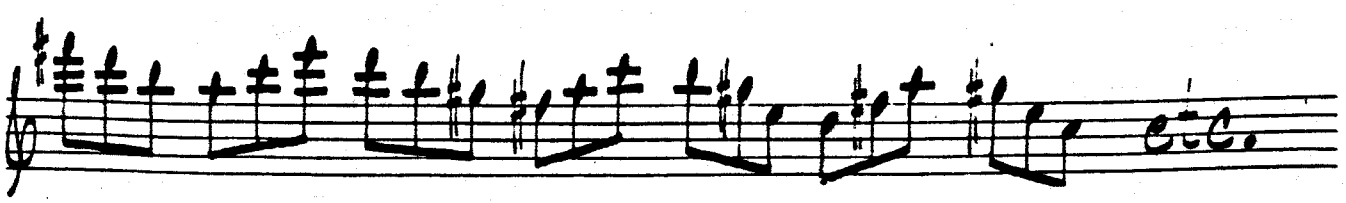


C lydian augmented scale
(ascending)

257



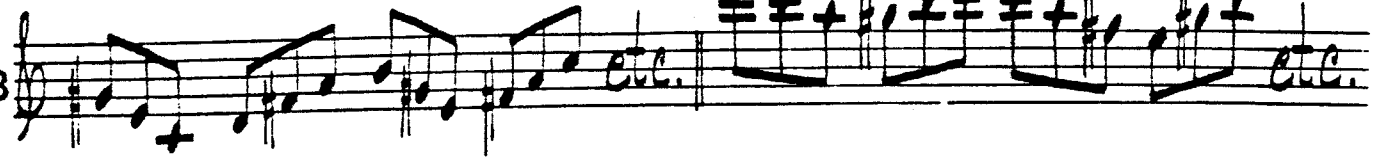
(descending)



(descending)

(ascending)

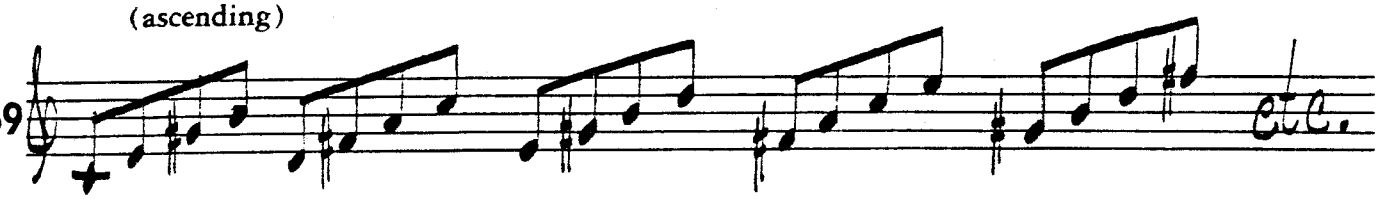
258



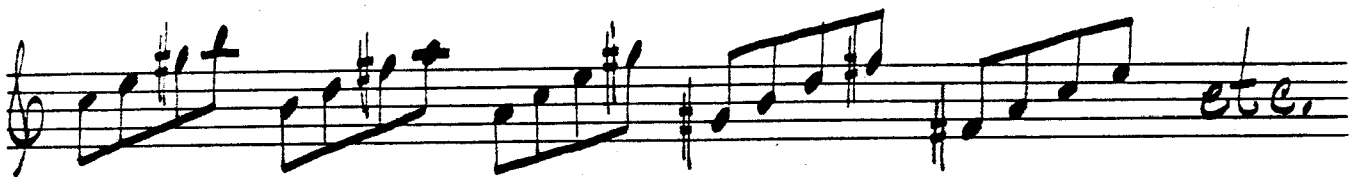
C lydian augmented scale

(ascending)

259



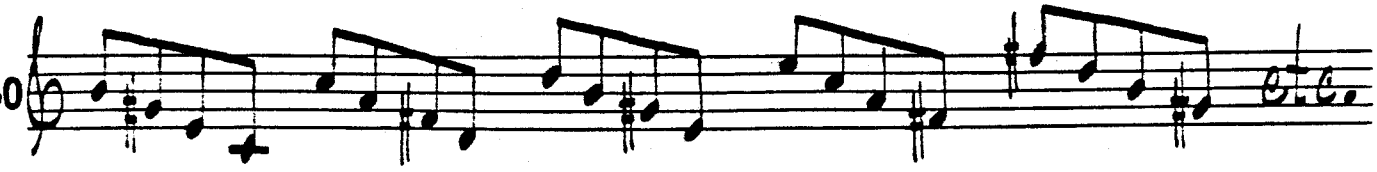
(descending)



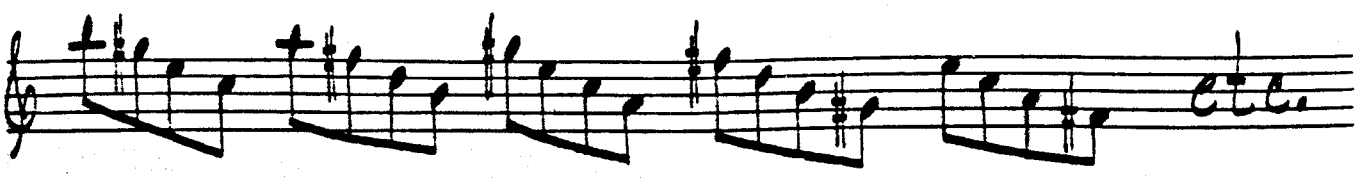
C lydian augmented scale

(ascending)

260



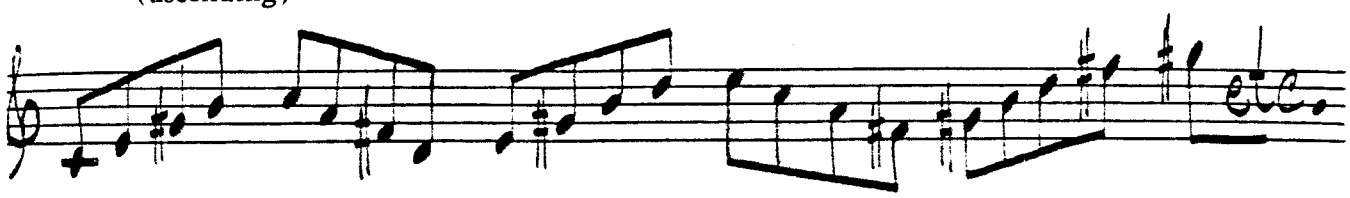
(descending)



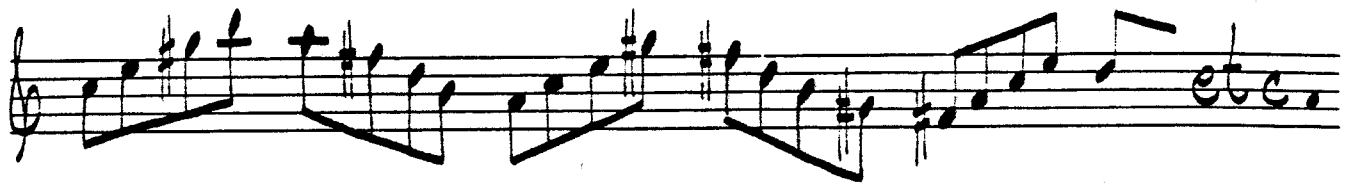
C lydian augmented scale

(ascending)

261



(descending)

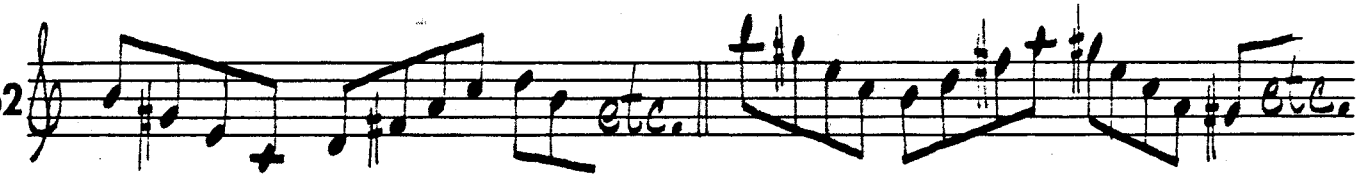


C lydian augmented scale

(ascending)

(descending)

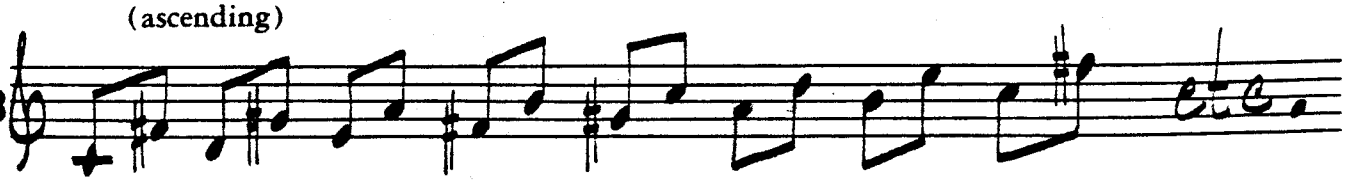
262



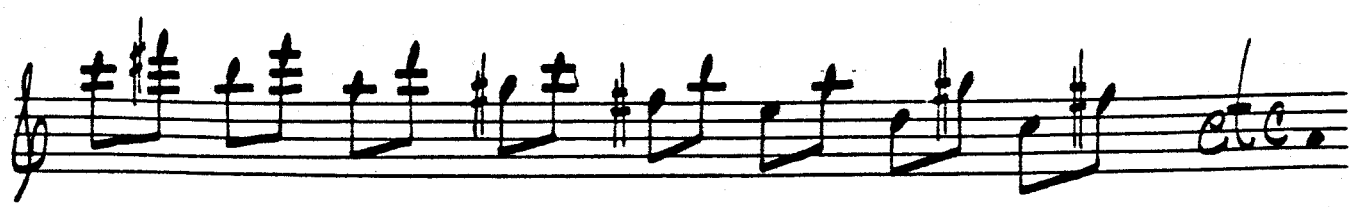
C lydian augmented scale

(ascending)

263

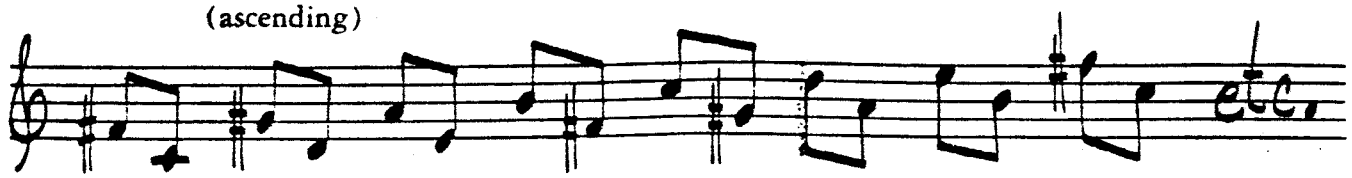


(descending)

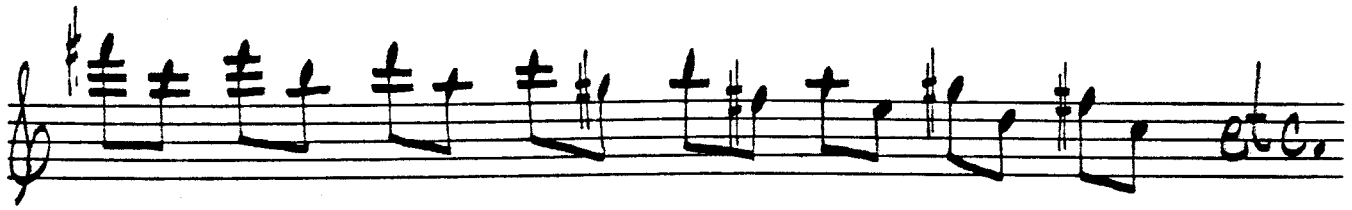


C lydian augmented scale
(ascending)

264

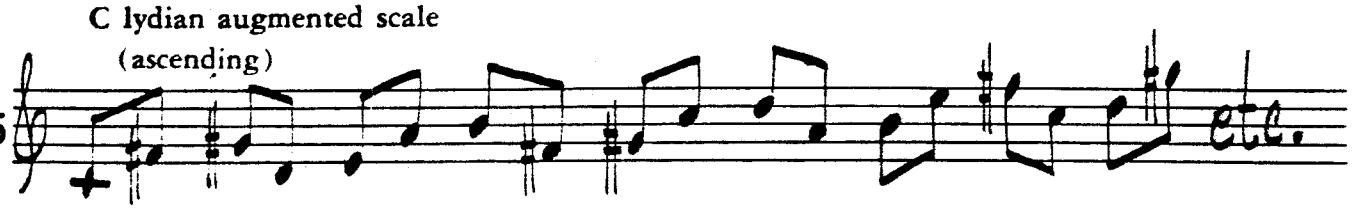


(descending)

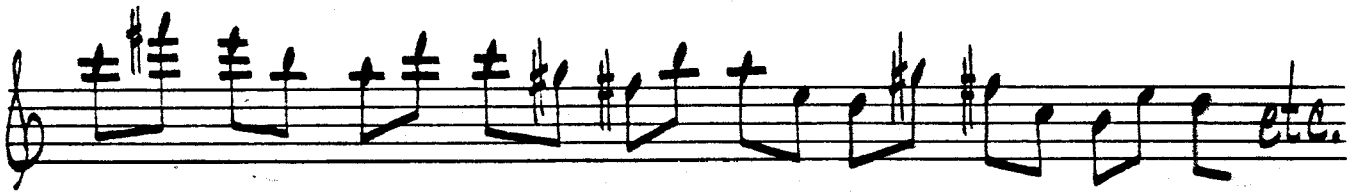


C lydian augmented scale
(ascending)

265



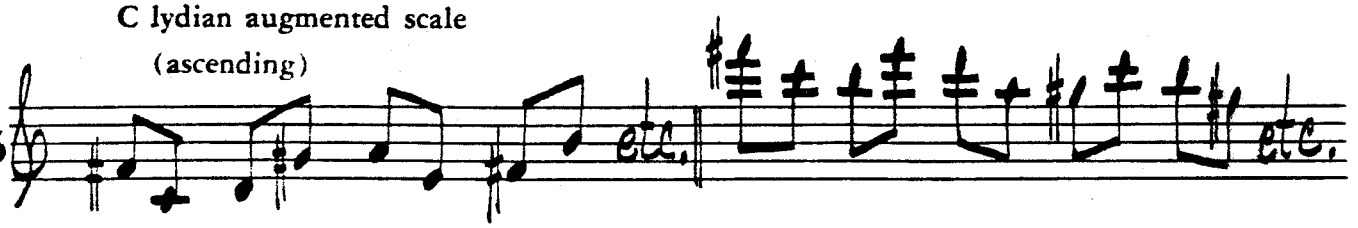
(descending)



(descending)

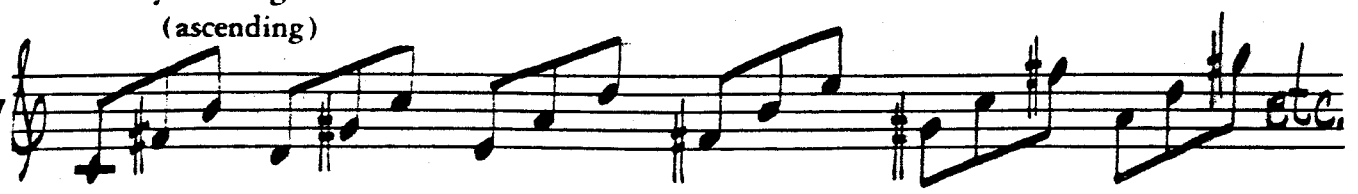
C lydian augmented scale
(ascending)

266



C lydian augmented scale
(ascending)

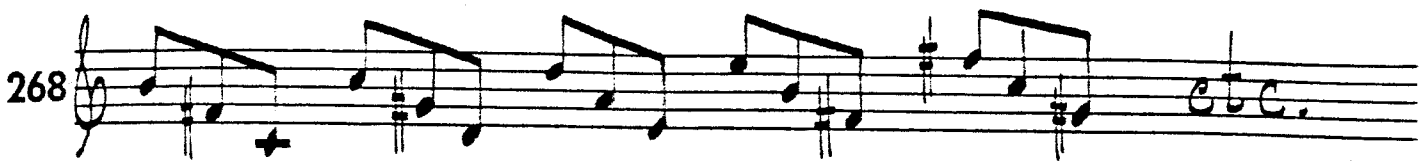
267



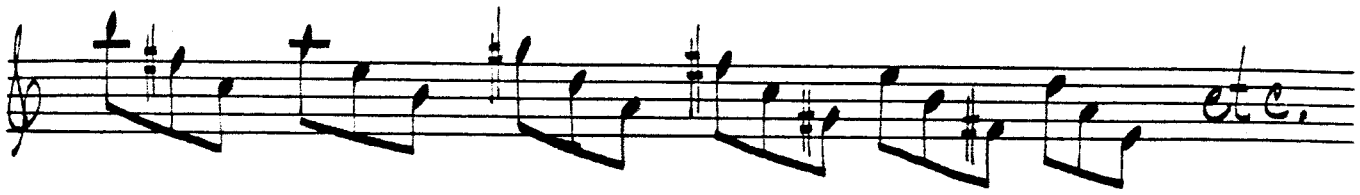
(descending)

C lydian augmented scale
(ascending)

268

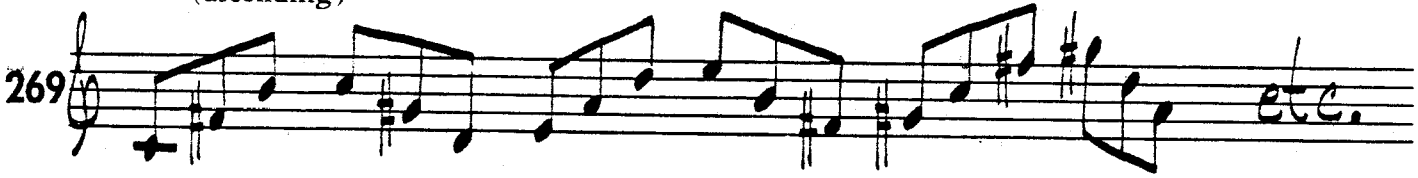


(descending)

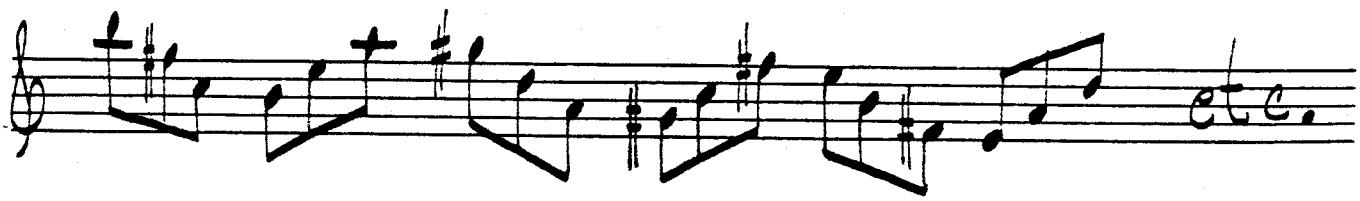


C lydian augmented scale
(ascending)

269



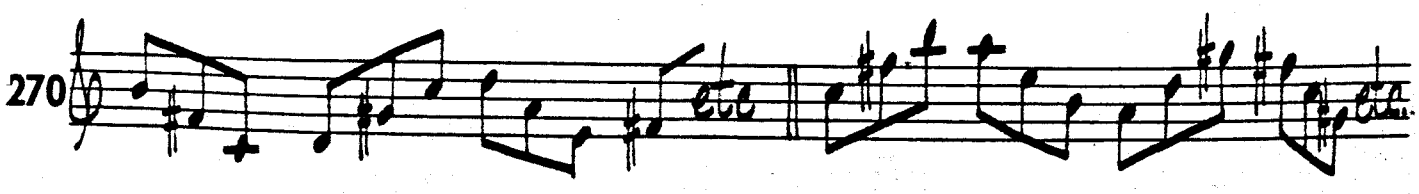
(descending)



(ascending)

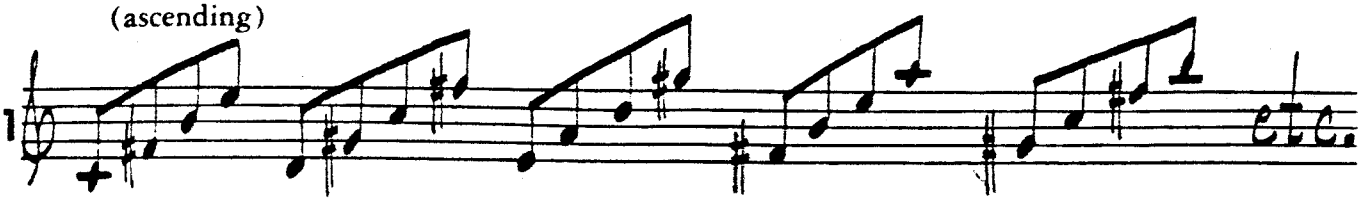
(descending)

270

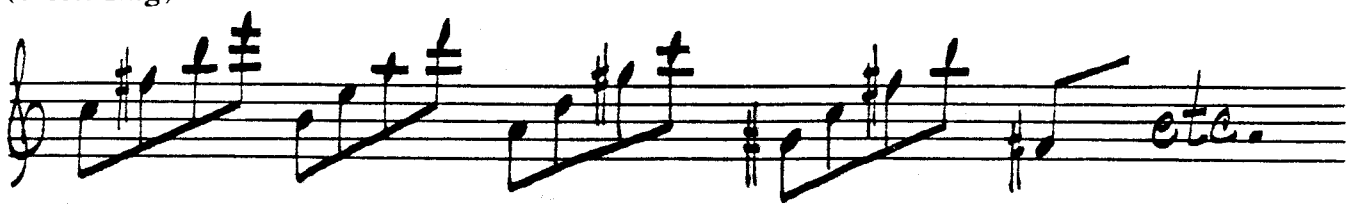


C lydian augmented scale
(ascending)

271

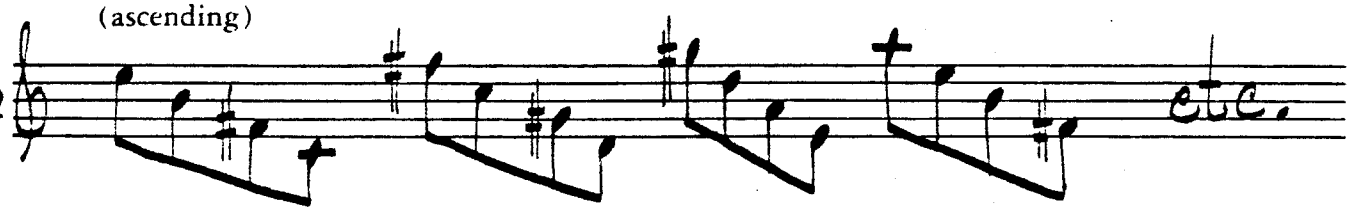


(descending)

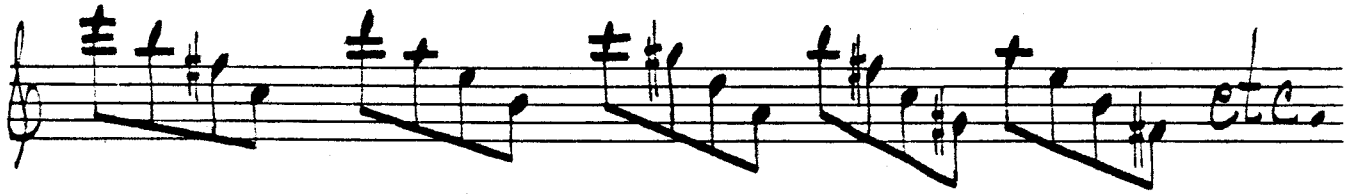


C lydian augmented scale
(ascending)

272

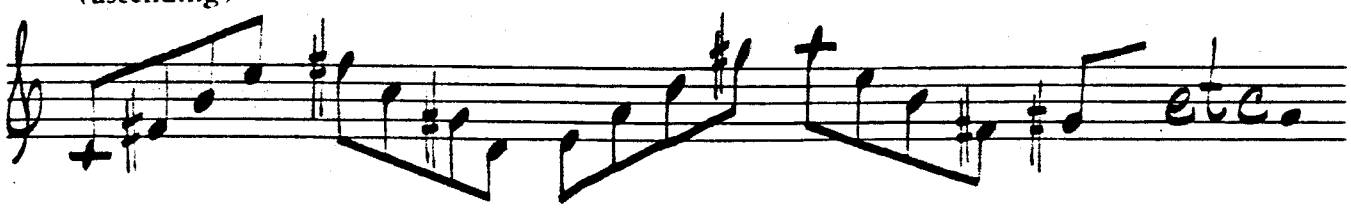


(descending)

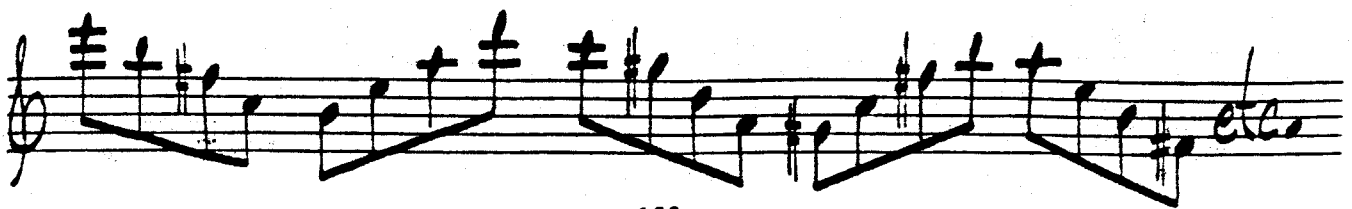


C lydian augmented
(ascending)

273



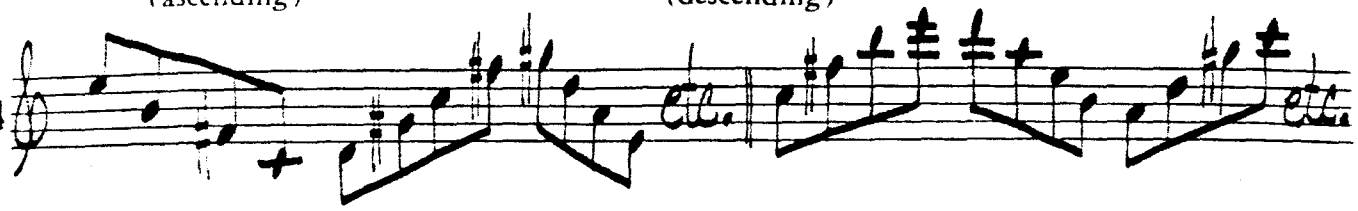
(descending)



C lydian augmented scale

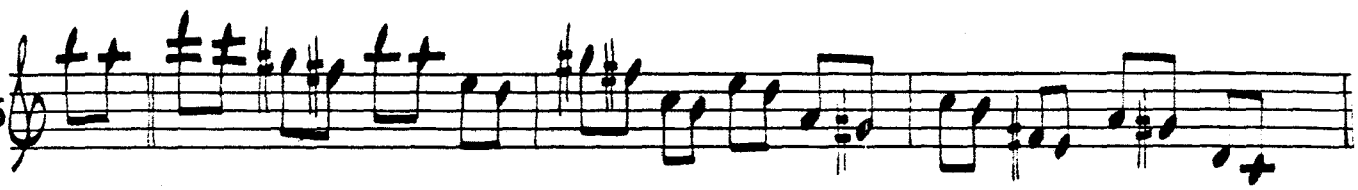
(ascending) (descending)

274



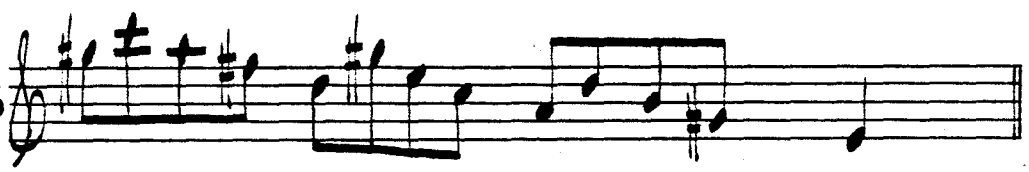
C lydian augmented

275



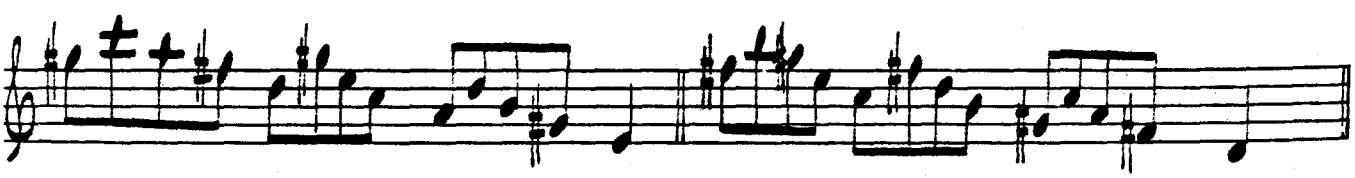
C lydian augmented

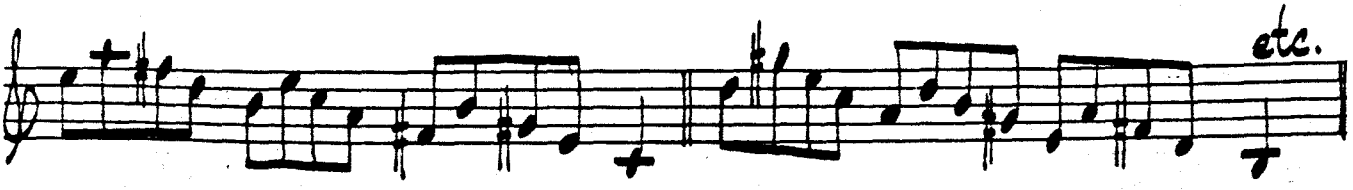
276



C lydian augmented

277

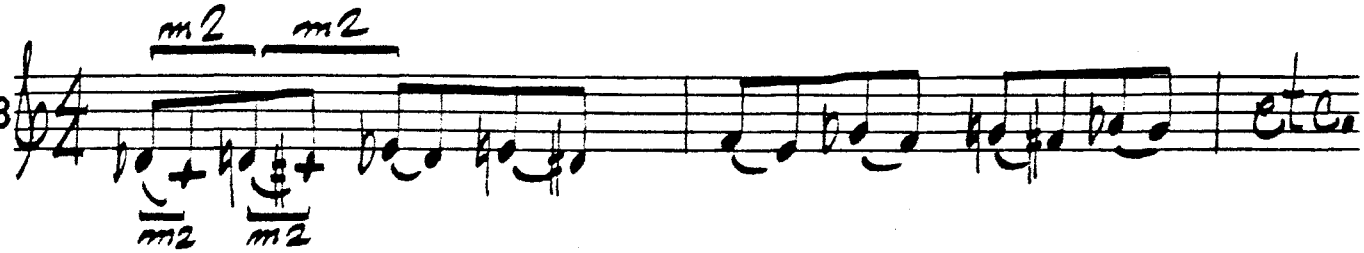




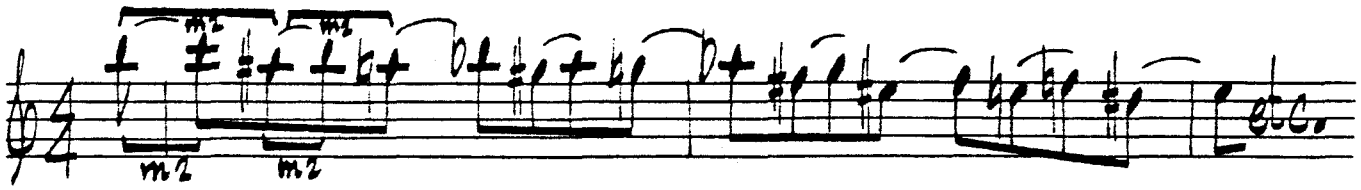
INTERVAL STUDIES

Minor seconds (half steps), progressing upward in pairs by minor seconds.

278



Minor seconds (half steps), progressing downward in pairs by minor seconds.

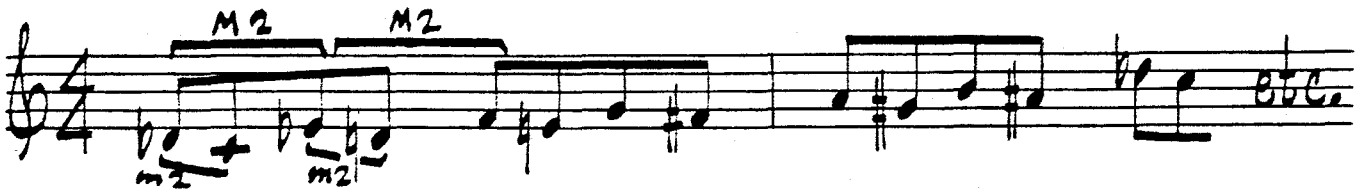


56

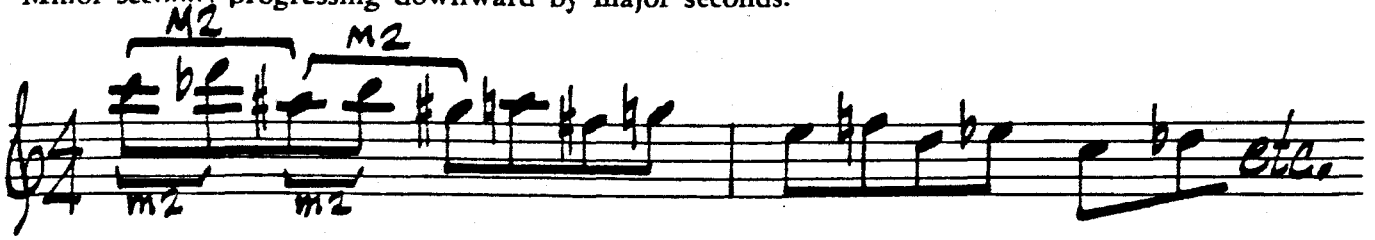
The resulting sonority is a chromatic scale.

Minor seconds progressing upward by major seconds.

279



Minor seconds progressing downward by major seconds.

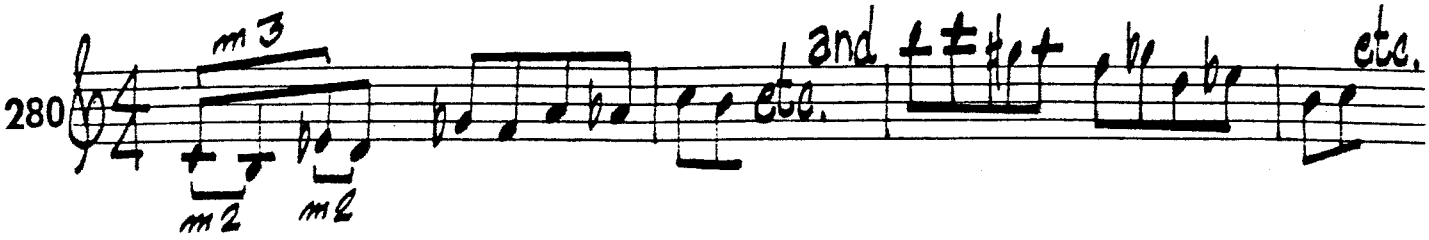


Transpose the above patterns so that the ascending form starts on C and the descending form starts on B.

The resulting sonority is a chromatic scale.

[56]Miles Davis, "Footprints," on *Miles Smiles* (Columbia 9401) Miles Davis Quintet.

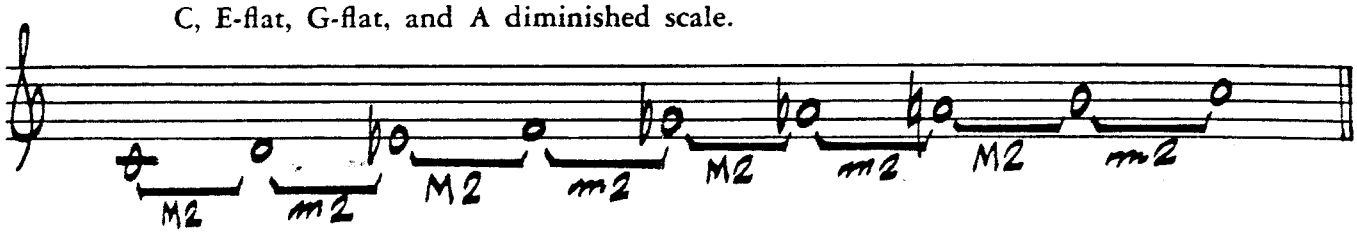
Minor seconds progressing by minor thirds.



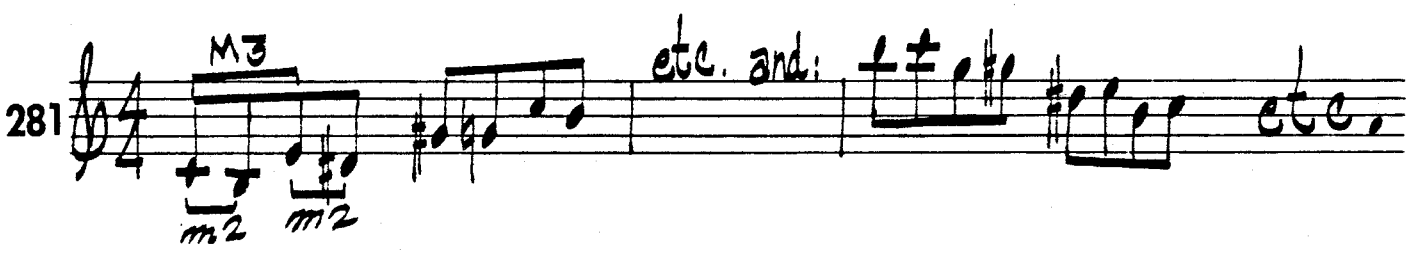
Transpose pattern to start on C-sharp and then again on D.

The resulting sonority is a diminished scale.

C, E-flat, G-flat, and A diminished scale.



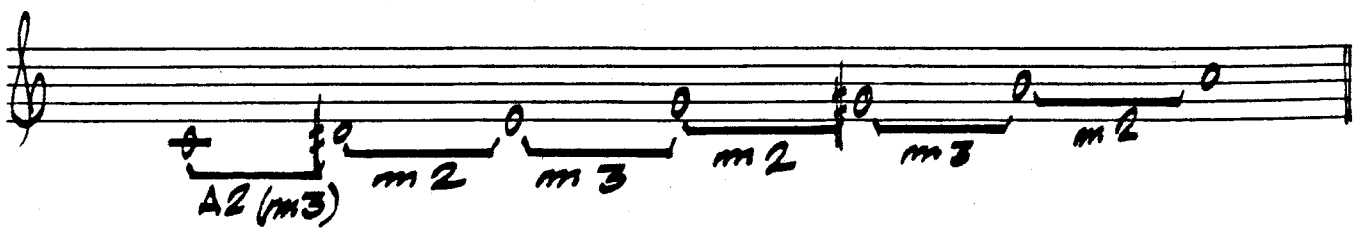
Minor seconds progressing by major thirds.



Transpose this pattern to start on C-sharp (D-flat), D, and E-flat.

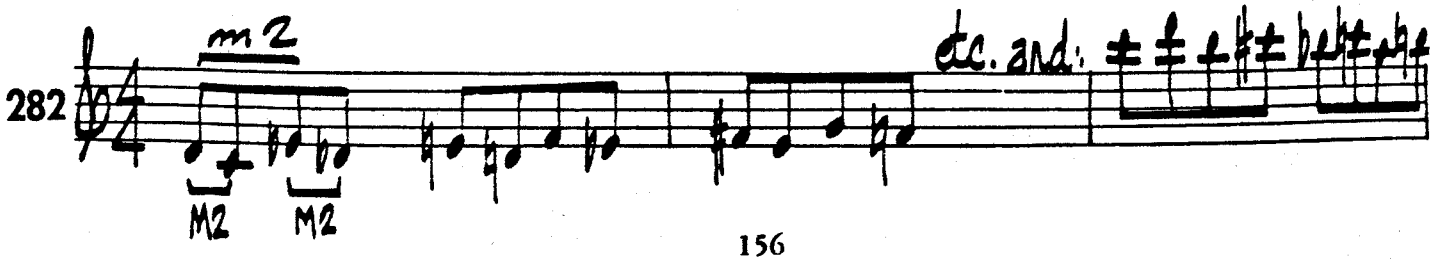
The resulting sonority is an augmented scale.

C, E, and G-sharp (A-flat) augmented scale.



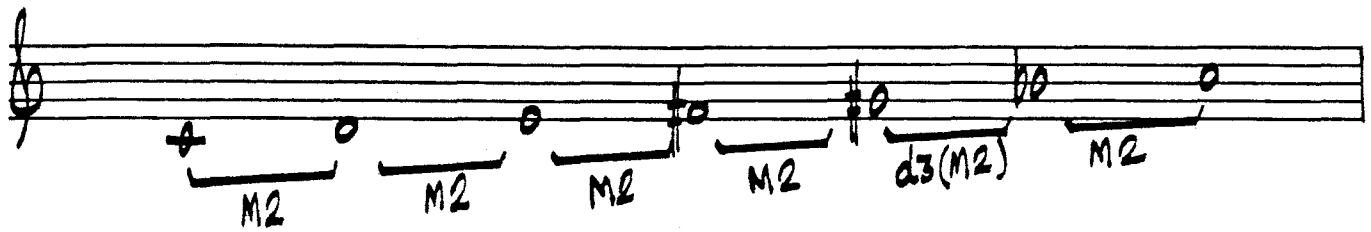
Major seconds progressing by minor seconds.

The resulting sonority is a chromatic scale.



Major seconds progressing by major seconds. Transpose this pattern to start on E-flat (D-sharp).

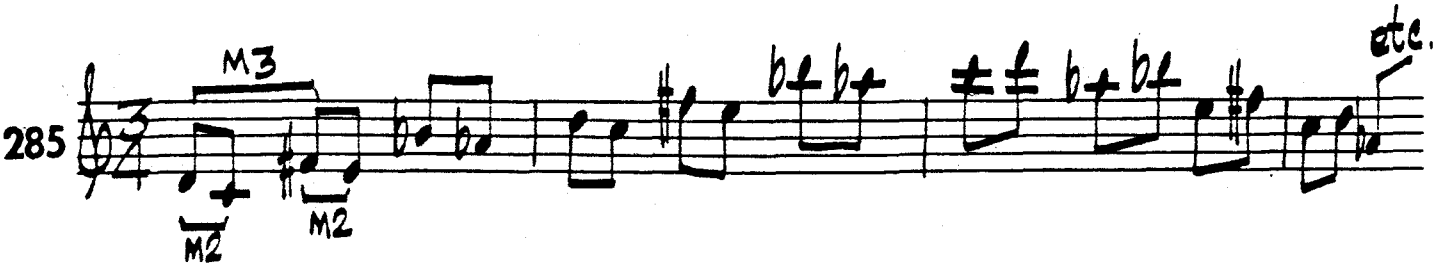
The resulting sonority is a whole tone scale. C, D, E, F-sharp, and B-flat whole tone scale.



Major seconds progressing by minor thirds. Transpose this pattern to start on E-flat, then E.

The resulting sonority is a diminished scale.

Major seconds progressing by major thirds. Transpose this pattern up a half step.

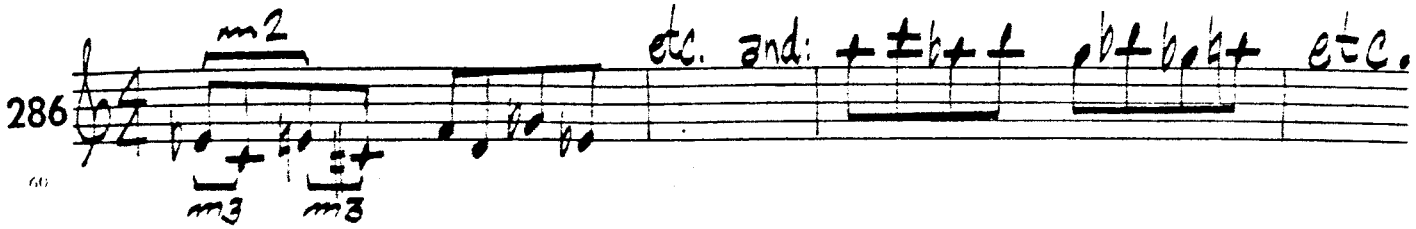


The resulting sonority is a whole-tone scale.

[57]David Baker, "Honesty," on *Ezz-Thetics* (Riverside 375), George Russell Sextet.

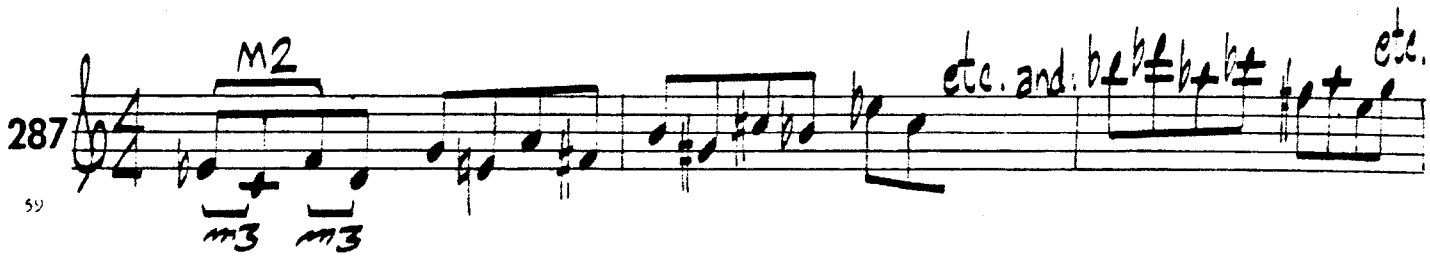
[58]David Young, "Stratusphunk," on *Stratusphunk* (Riverside 341), George Russell Sextet.

Minor thirds progressing by minor seconds.



The resulting sonority is a chromatic scale.

Minor thirds progressing by major seconds.

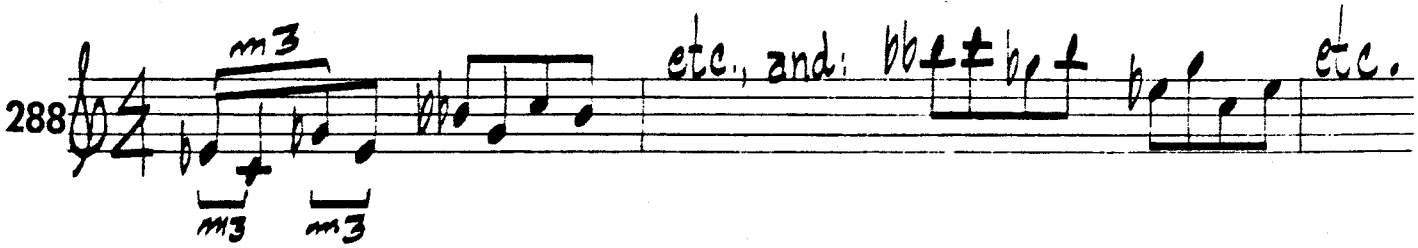


Transpose this pattern up a half step.

The resulting sonority is a chromatic scale.

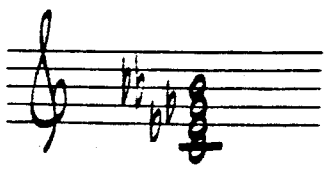
Minor thirds progressing by minor thirds.

Transpose this pattern to start on E-natural and F.



The resulting sonority is a diminished seventh chord.

C, E-flat, G-flat, and B-double flat (A) diminished seventh chord.[61]



[59]Freddie Hubbard, "Chaos," on *All Seeing Eye* (Blue Note 84219), Wayne Shorter Group. This pattern occurs in the opening phrase of Freddie Hubbard's trumpet solo. It is likely that Hubbard was attracted to the perfect fourth intervals that appear between each pair above, as between C-F, D-G, E-natural-A, etc.

[60]Bill Evans, "Oleo," on *Everybody Digs Bill Evans* (Riverside RLP 12-291), Bill Evans Trio. Listen to the trill on the top note.

[61]The spellings of each of these chords (C, E-flat, G-flat, B-double flat) will differ slightly, but only enharmonically i.e., A instead of B-double flat.

Minor thirds progressing by major thirds.

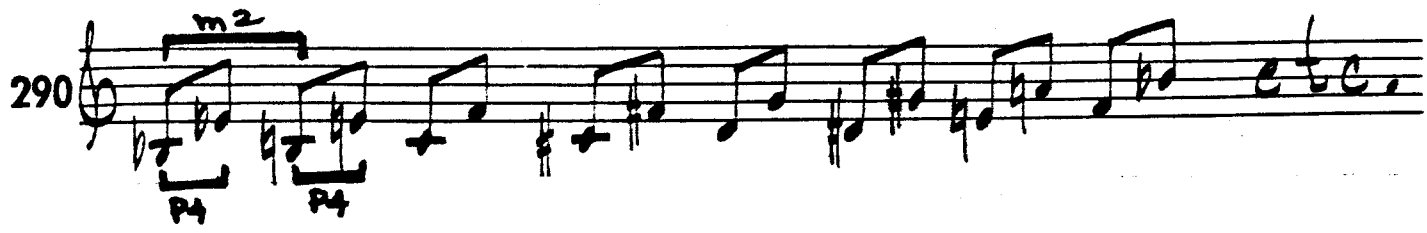
Transpose this pattern to start on E-natural, F, and G-flat.

The resulting sonority is an augmented scale.

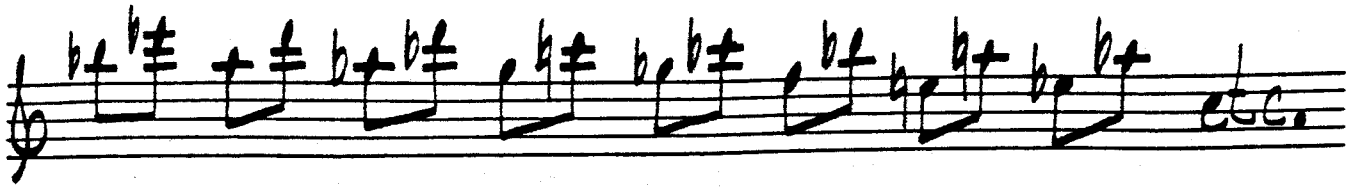
C, E, and G-sharp (A-flat) augmented scale.

Perfect fourths progressing by minor seconds.

(ascending)

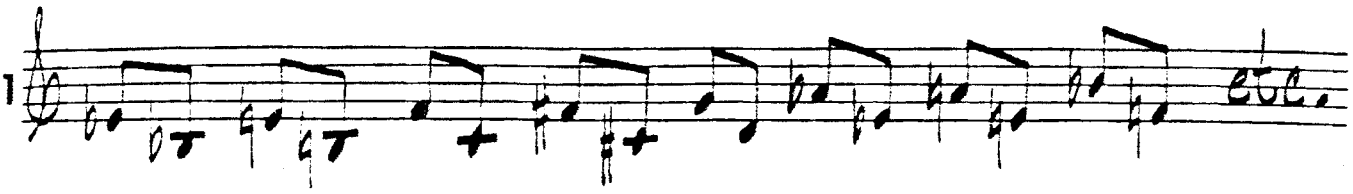


(descending)

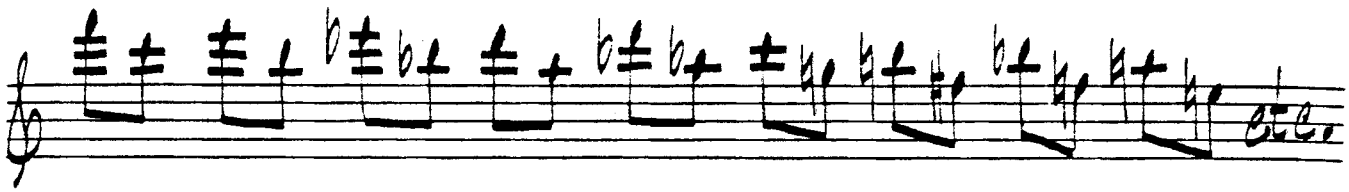


(ascending)

291

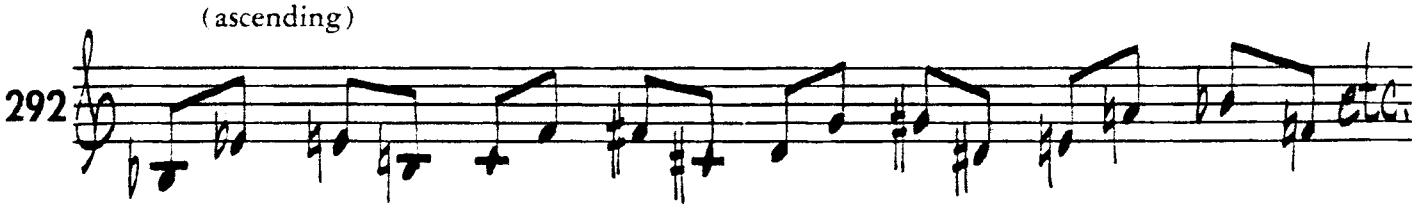


(descending)



(ascending)

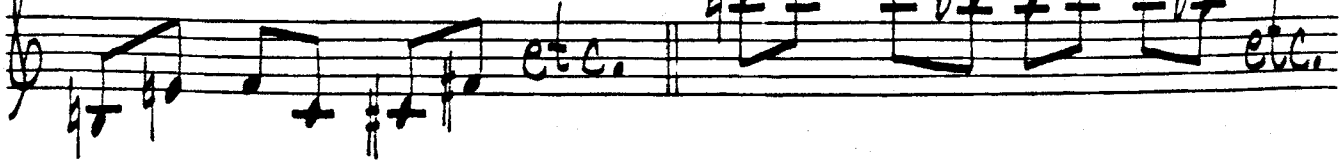
292



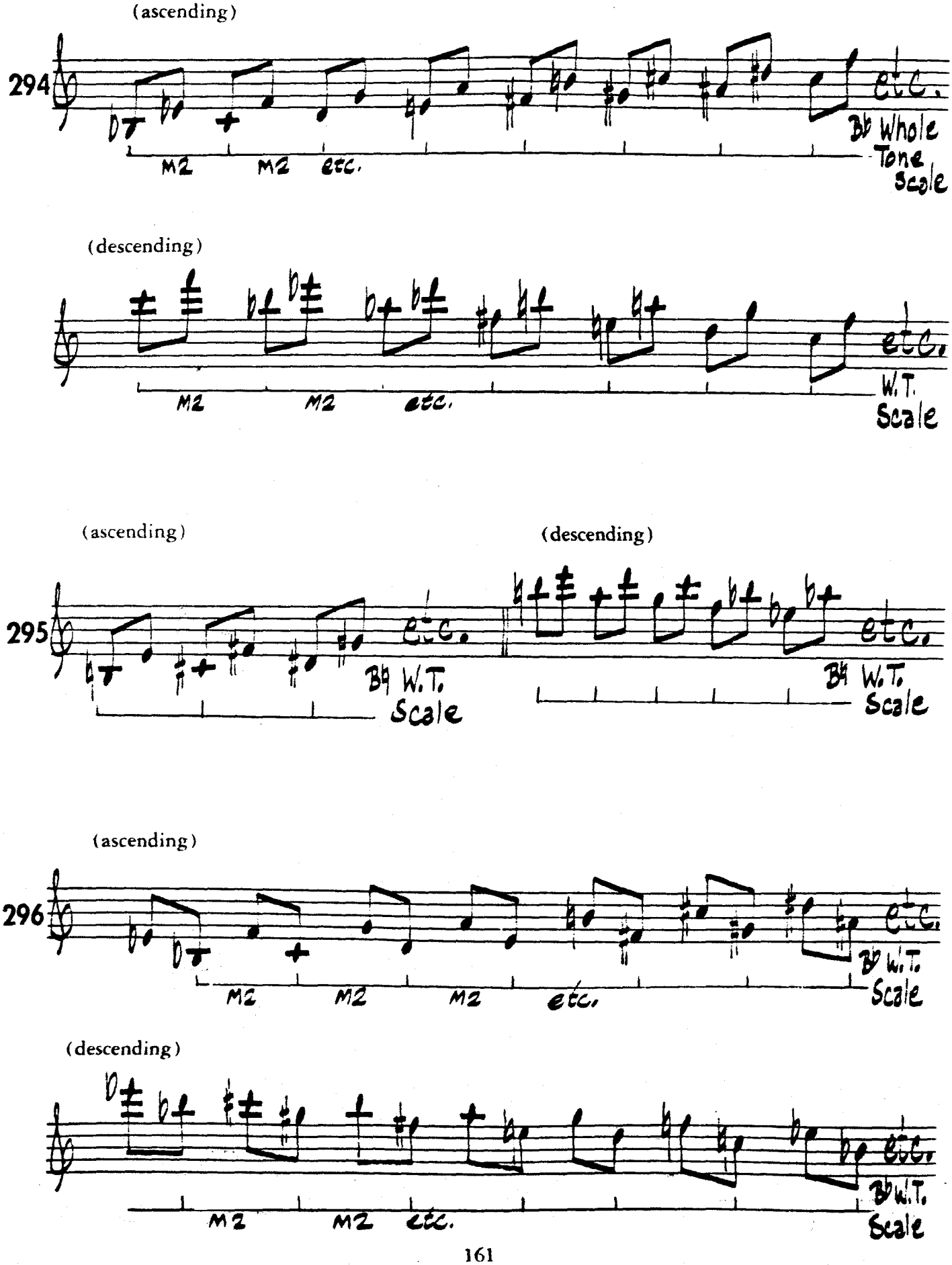
(descending)

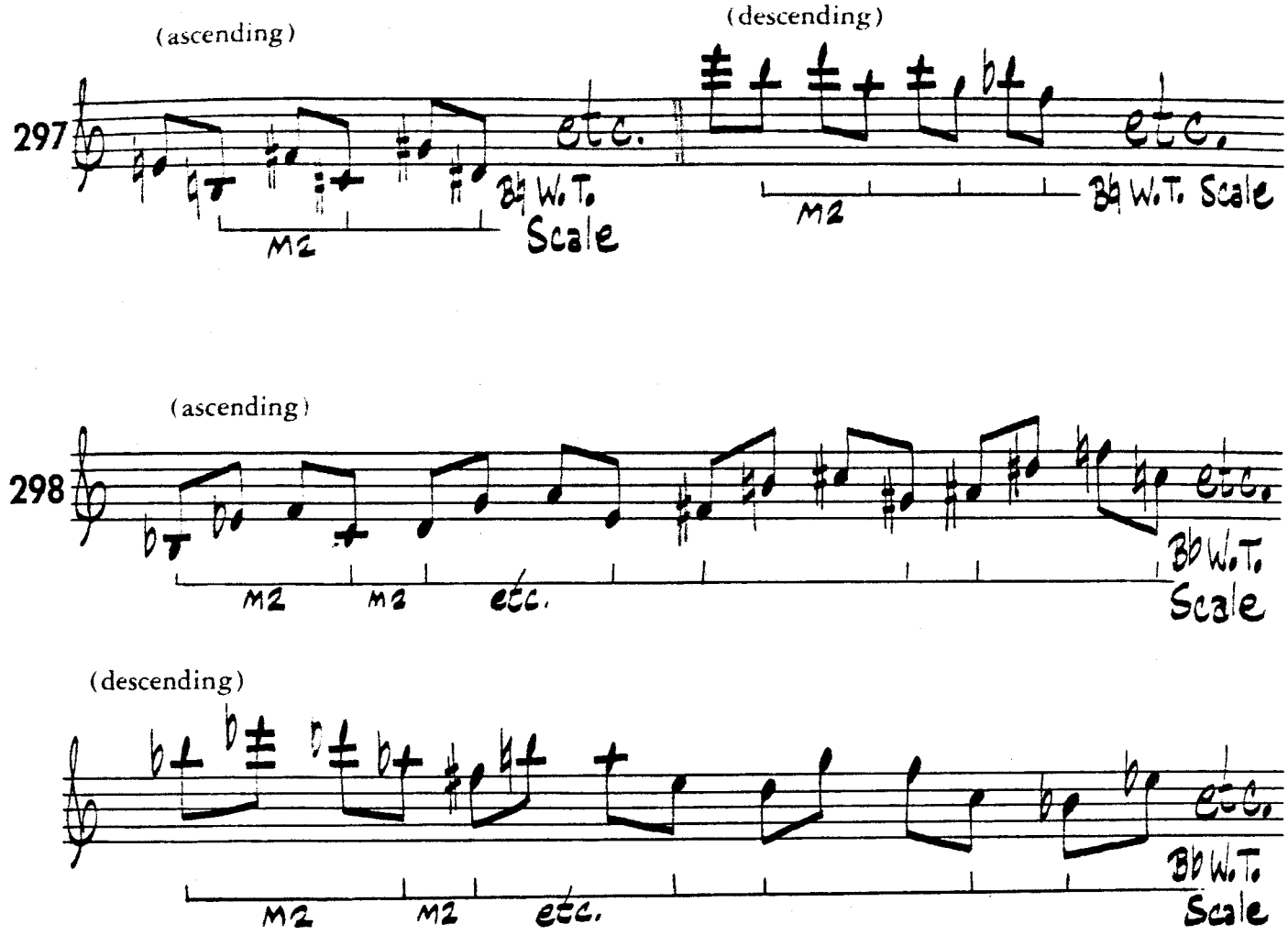
(ascending)

293

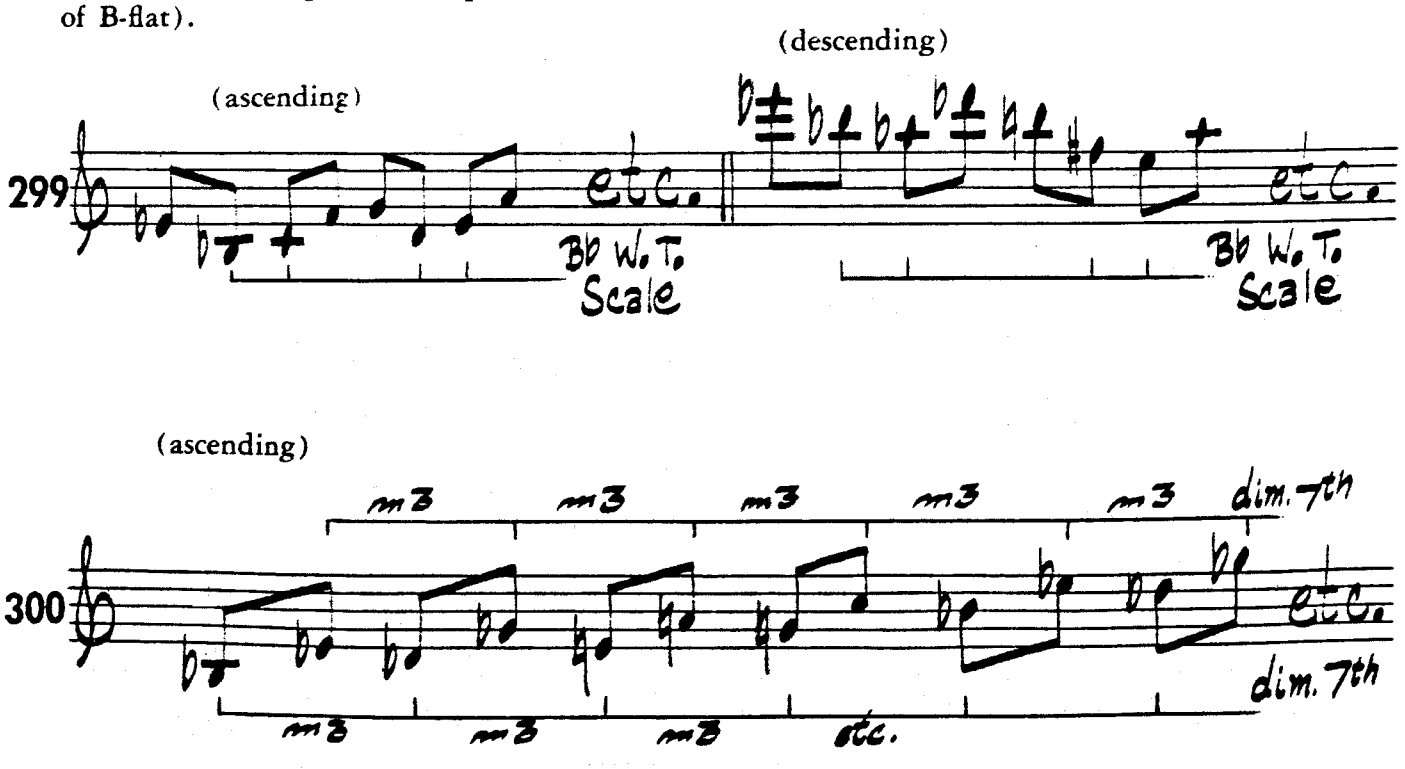


(descending)


(ascending)
294
M2 M2 etc.
etc.
B♭ Whole Tone Scale
(descending)
M2 M2 etc.
etc.
W.T. Scale
(ascending)
(descending)
295
etc.
B♭ W.T. Scale
etc.
B♭ W.T. Scale
(ascending)
296
M2 M2 M2 etc.
etc.
B♭ W.T. Scale
(descending)
M2 M2 etc.
etc.
B♭ W.T. Scale



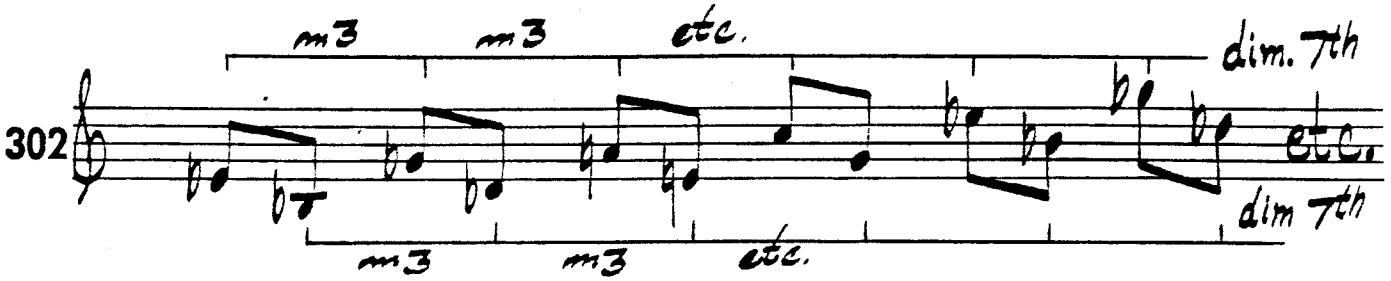
Practice the same pattern except start on B-natural and follow the whole-tone scale of B (instead of B-flat).



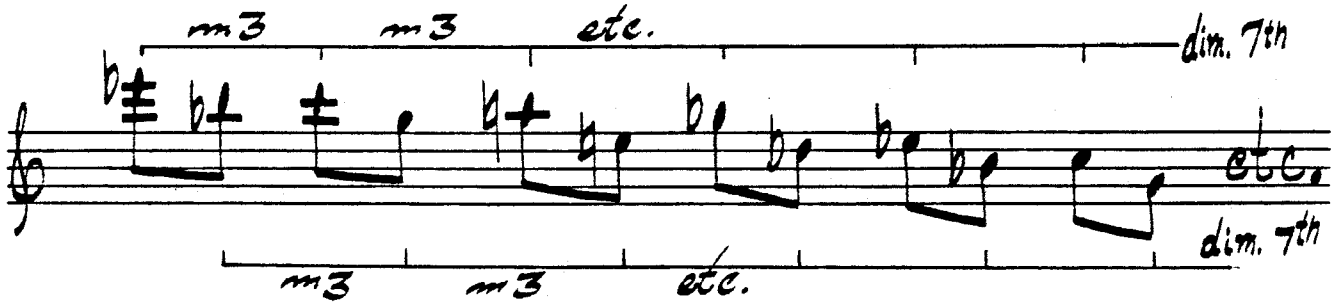
(descending)

Also start on B-natural and C and practice all of the pattern.

(ascending)

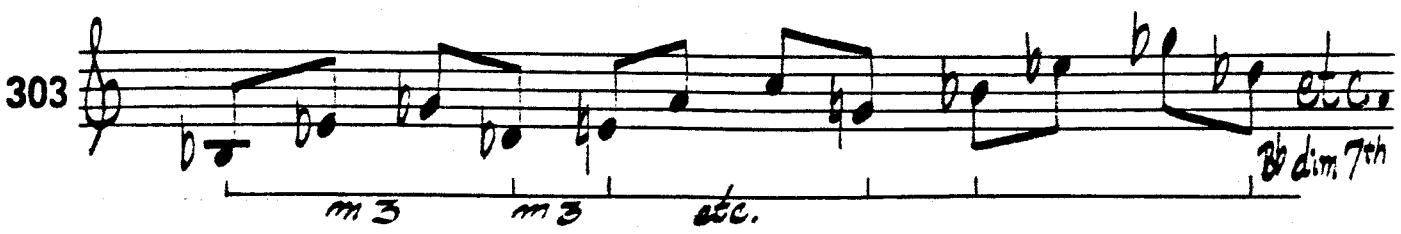


(descending)

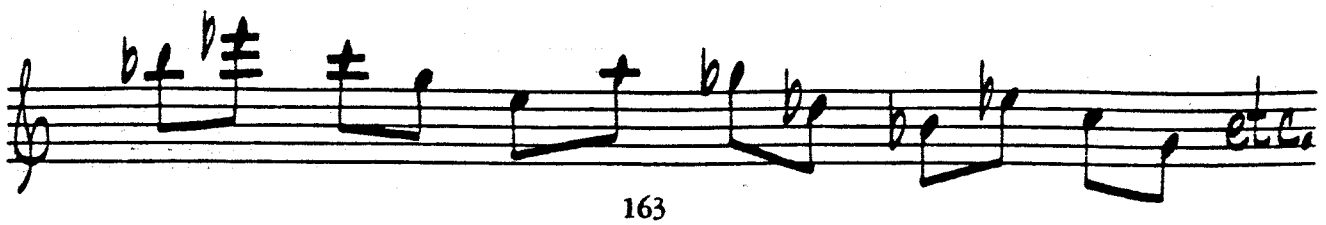


Also practice pattern starting on E-natural (B-natural to E-natural) and F (C to F).

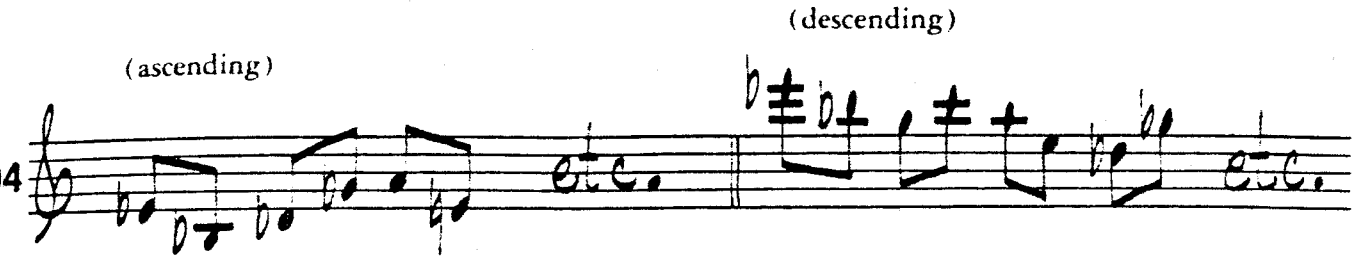
(ascending)



(descending)

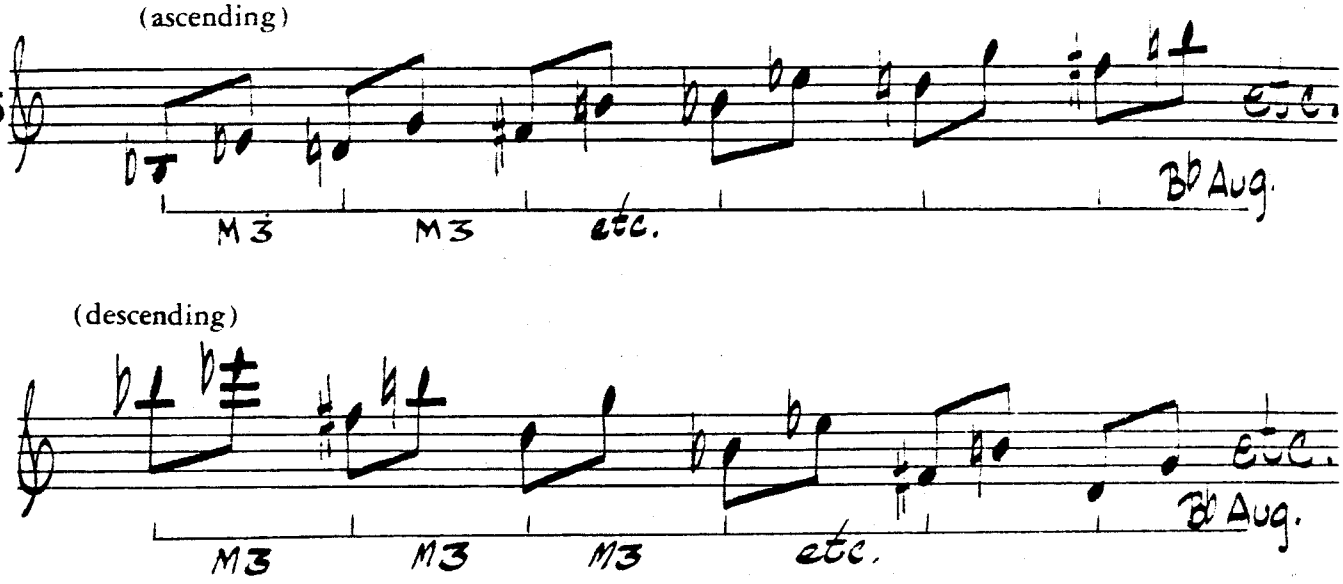


304



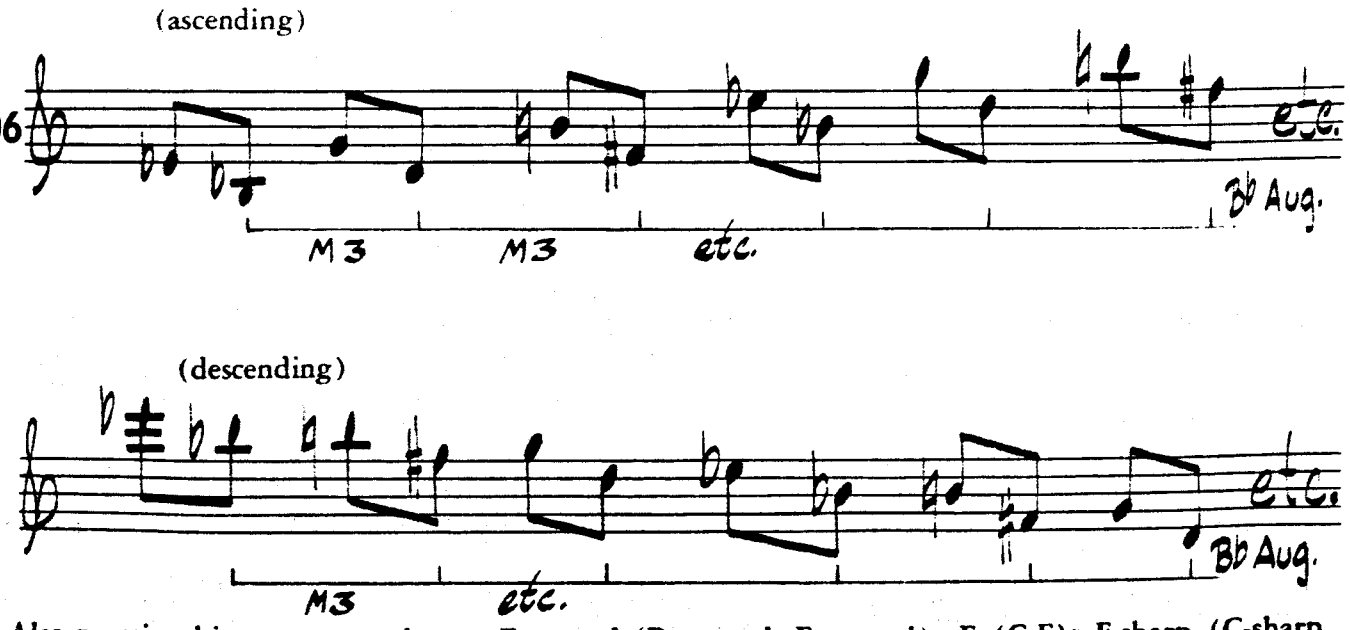
Practice this pattern starting on B-natural and C (B°7 and C°7).

305



Also practice this pattern starting on B-natural, C, and D-flat (B augmented, C augmented, and D-flat augmented).

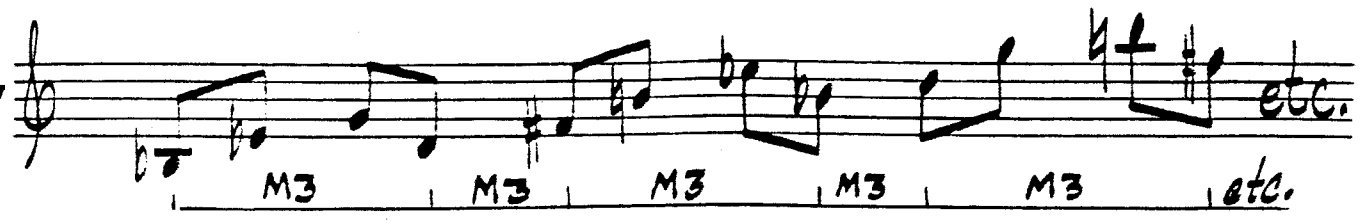
306



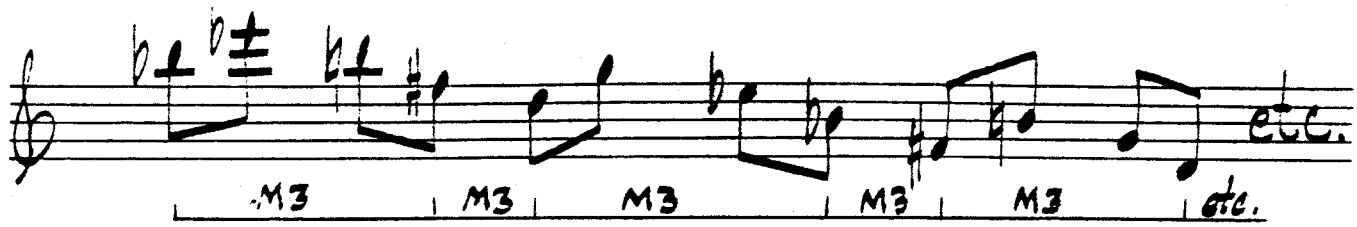
Also practice this pattern starting on E-natural (B-natural, E-natural); F (C-F); F-sharp (C-sharp, F-sharp)

(ascending)

307



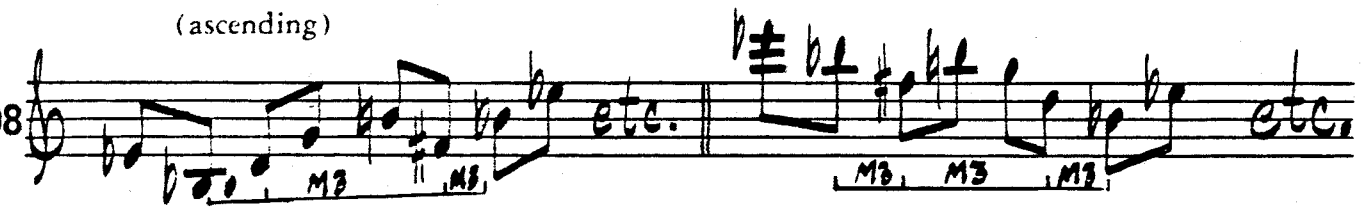
(descending)



(descending)

(ascending)

308



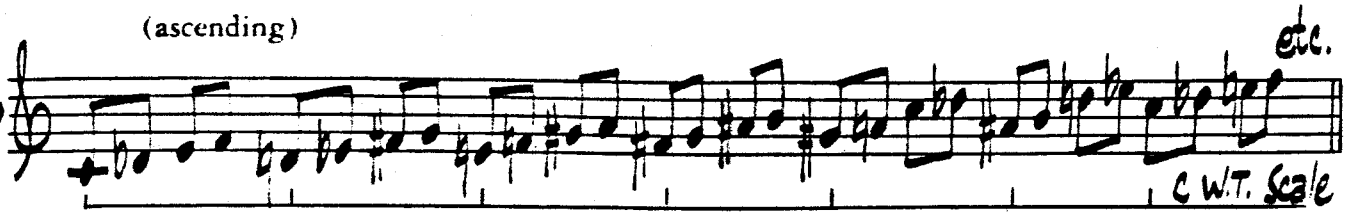
Also practice this pattern starting on B-natural, C, and D-flat.

The student should now review Pattern No. 290-308, adding an additional fourth interval to *each pair*, playing them in triplets. For example, No. 290 would now read: B-flat, E-flat, A-flat; B, E, A; C, F, B-flat; etc. Many interesting, useful combinations will result.

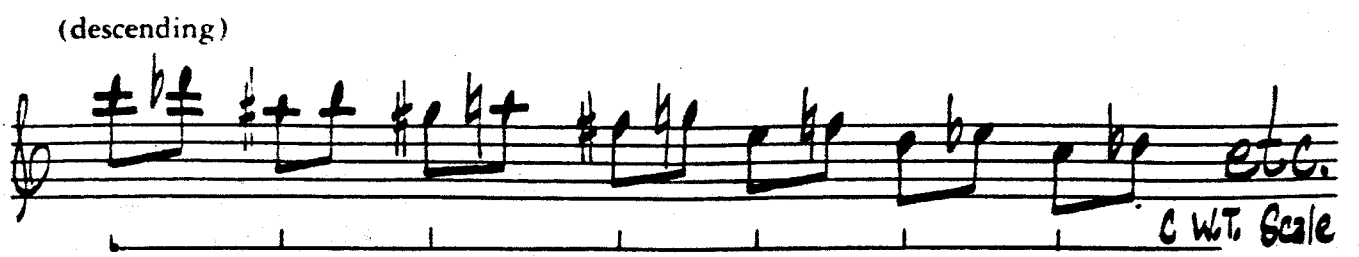
CHROMATIC SCALE

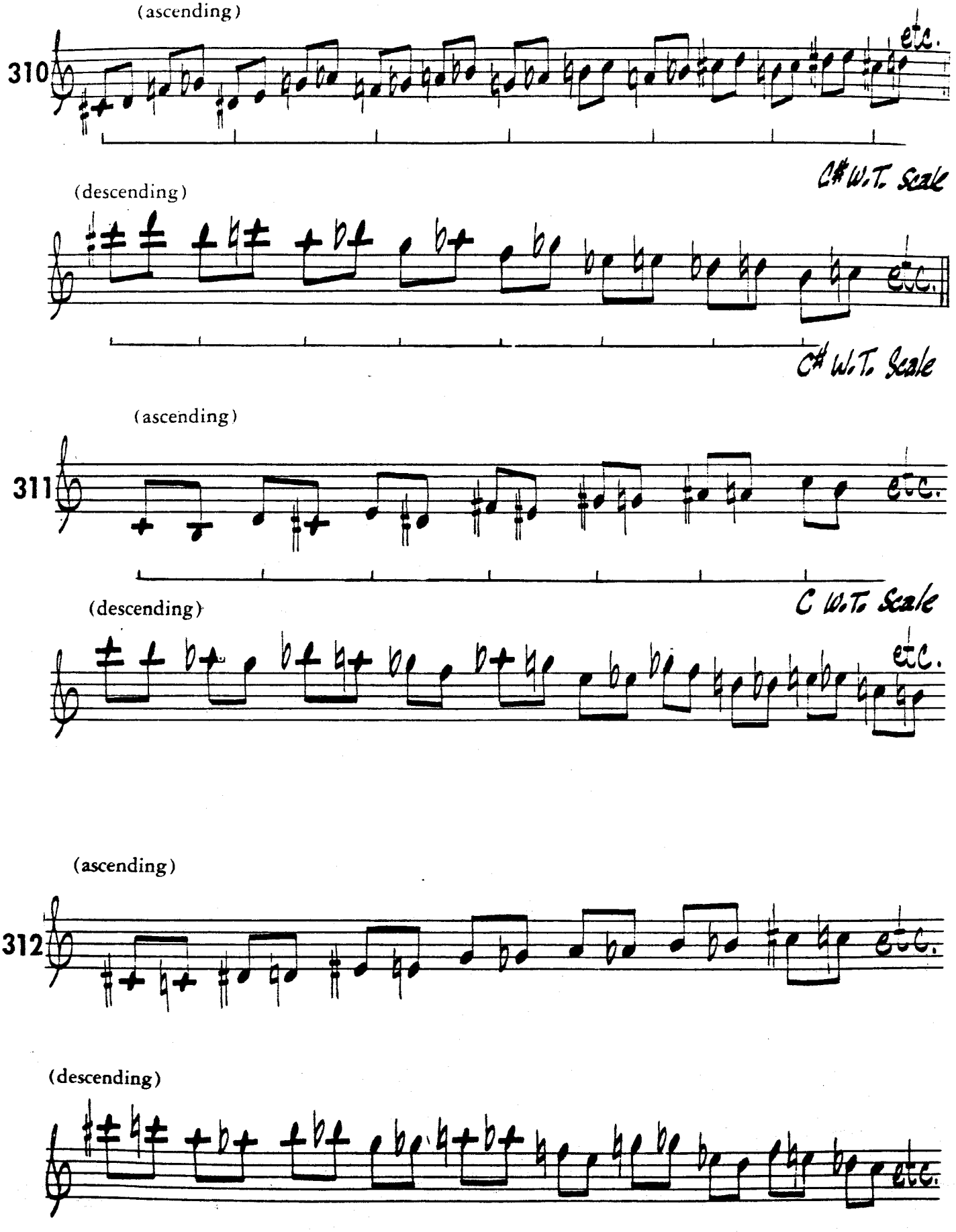
(ascending)

309



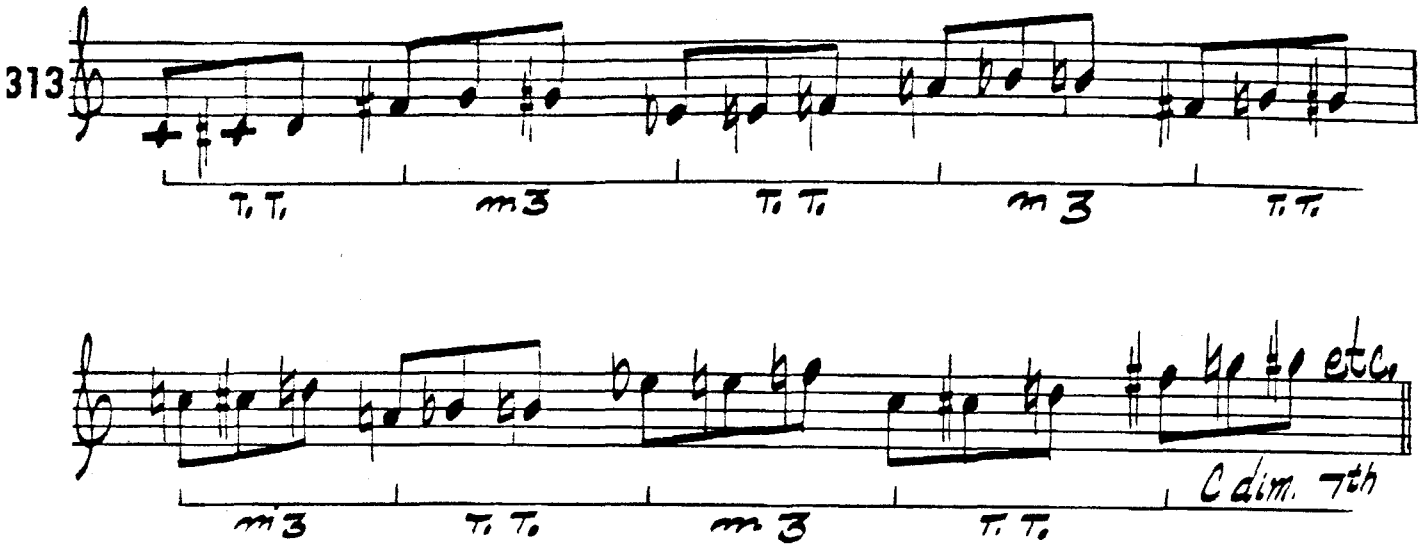
(descending)



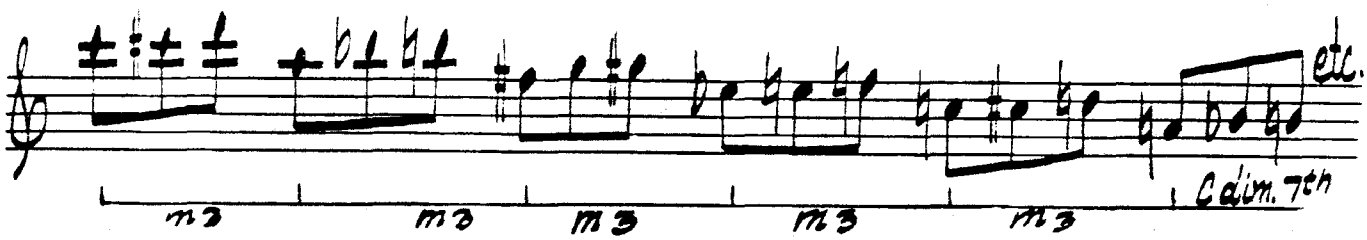

(ascending)
310
etc.
C# W.T. Scale
(descending)
etc.
C# W.T. Scale
(ascending)
311
etc.
C W.T. Scale
(descending)
etc.
(ascending)
312
etc.
(descending)
etc.

(ascending)

313



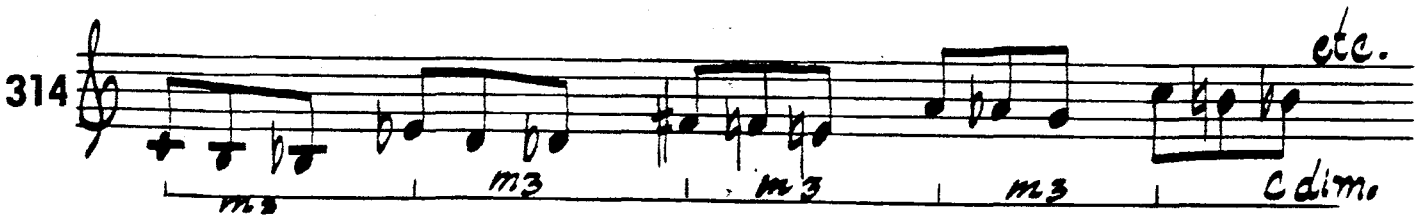
(descending)



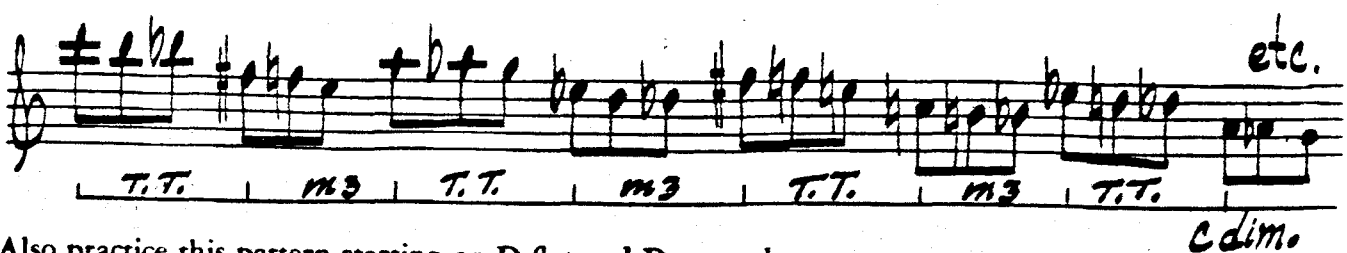
Also practice this pattern starting on D-flat and D-natural.

(ascending)

314



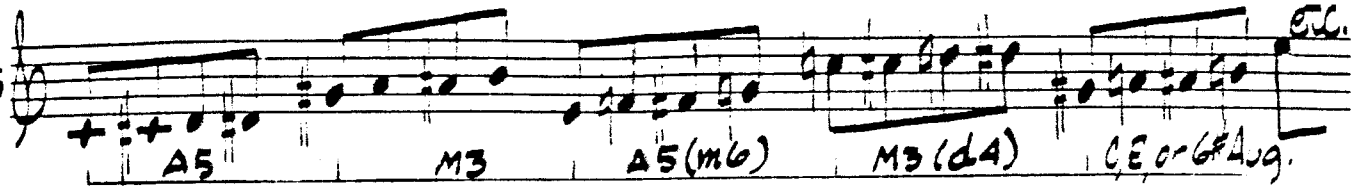
(descending)



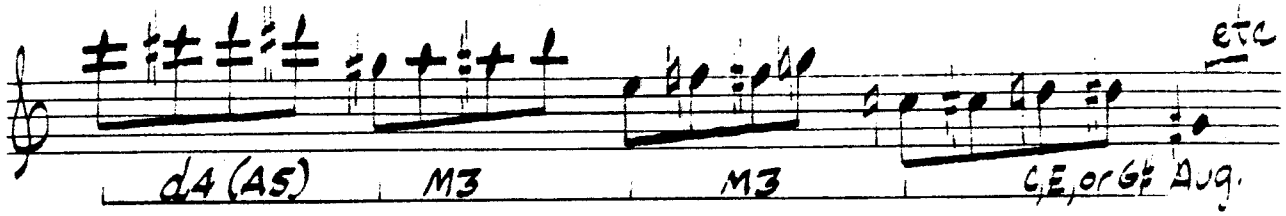
Also practice this pattern starting on D-flat and D-natural.

(ascending)

315



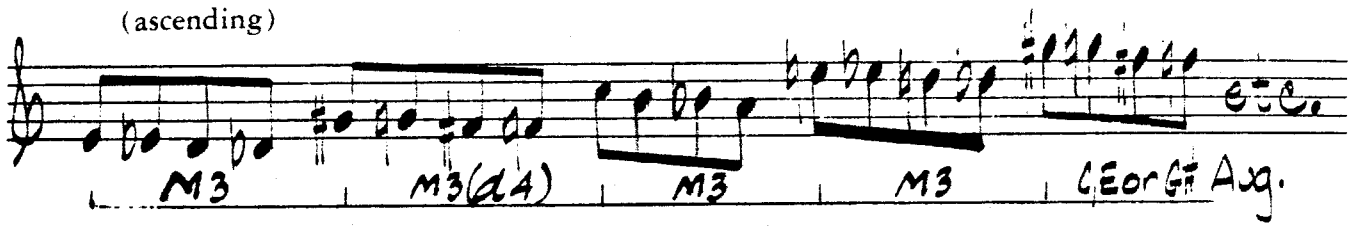
(descending)

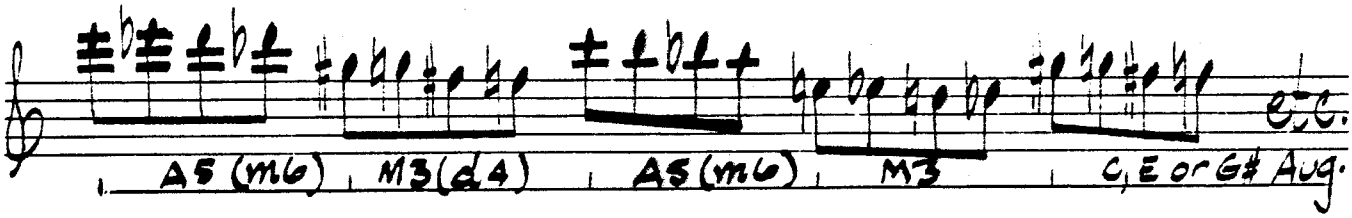


Also practice this pattern starting on D-flat, D-natural and E-flat.

(ascending)

316

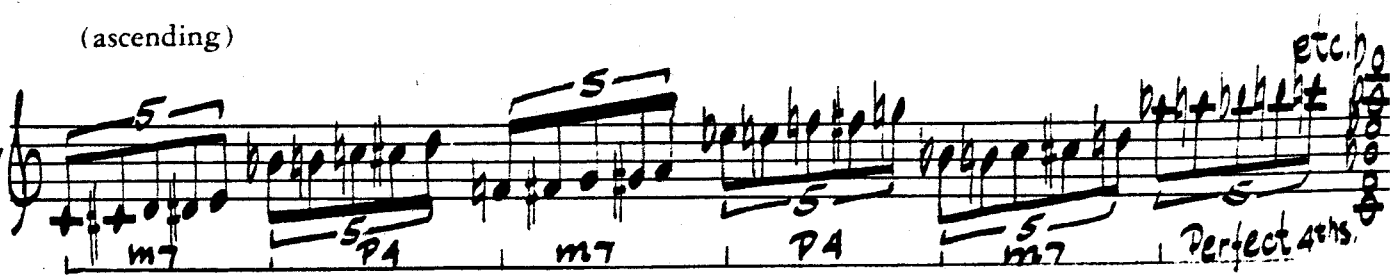




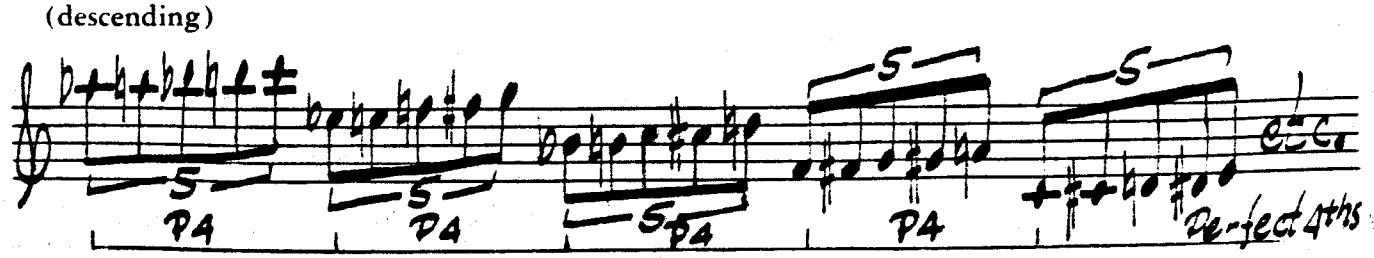
Also practice this pattern starting on F, F-sharp, and G.

(ascending)

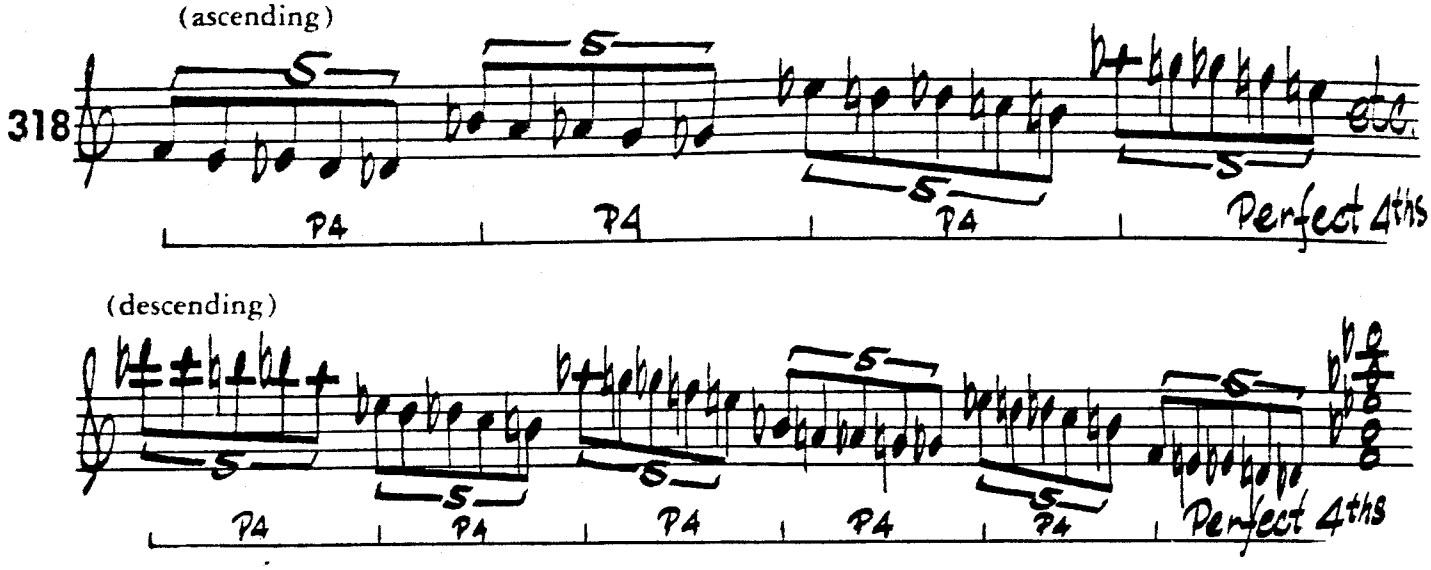
317



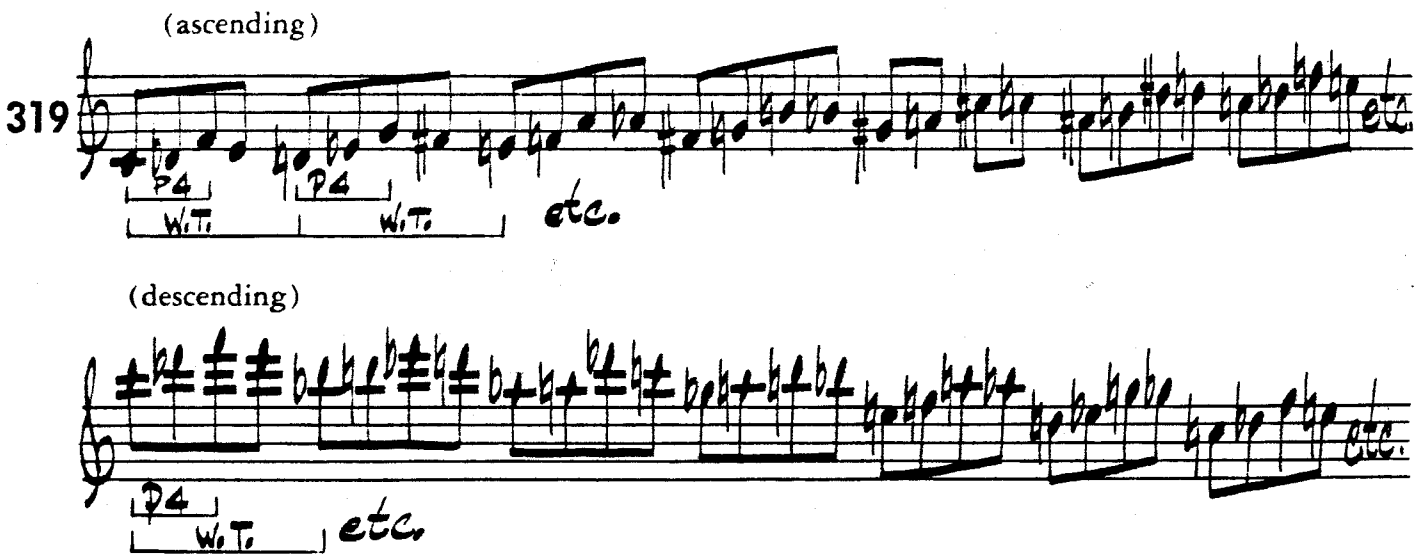
(descending)



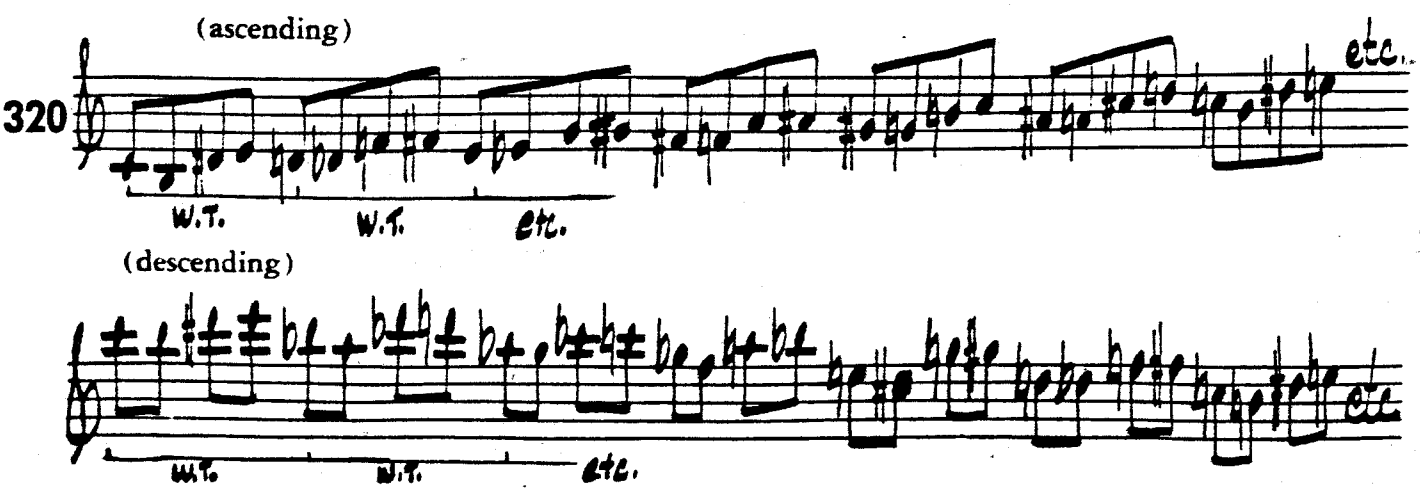
Also practice this pattern starting on C-sharp, D, D-sharp, and E.



Also practice this pattern starting on F-sharp, G, G-sharp and A.



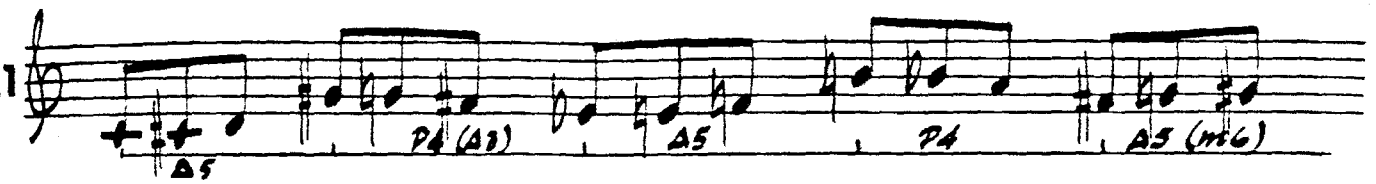
Also practice this pattern starting on C-sharp.

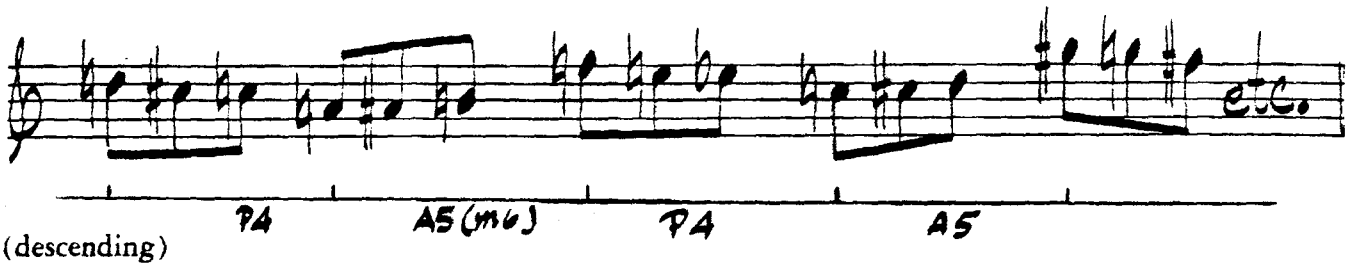


Also practice this pattern starting on C-sharp.

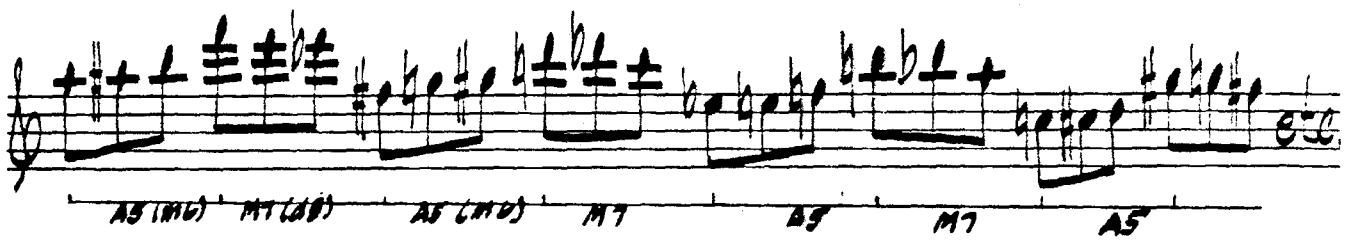
(ascending)

321





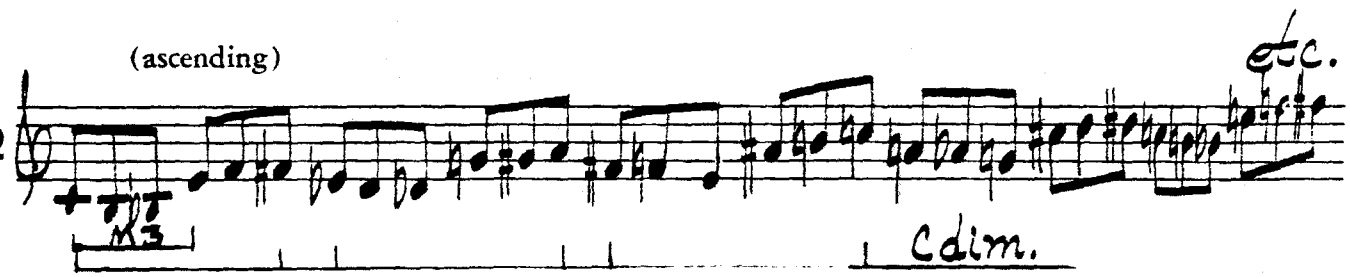
(descending)



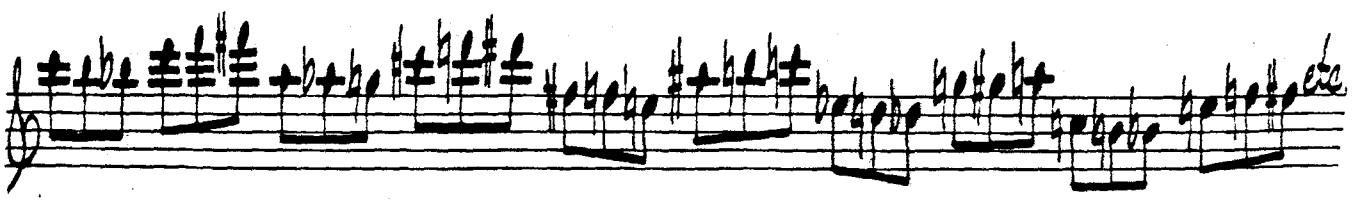
Also practice this pattern starting on C-sharp and D.

(ascending)

322



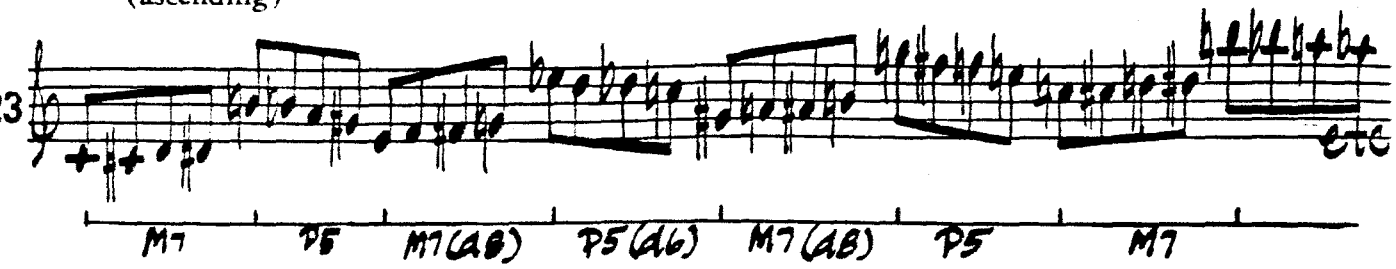
(descending)



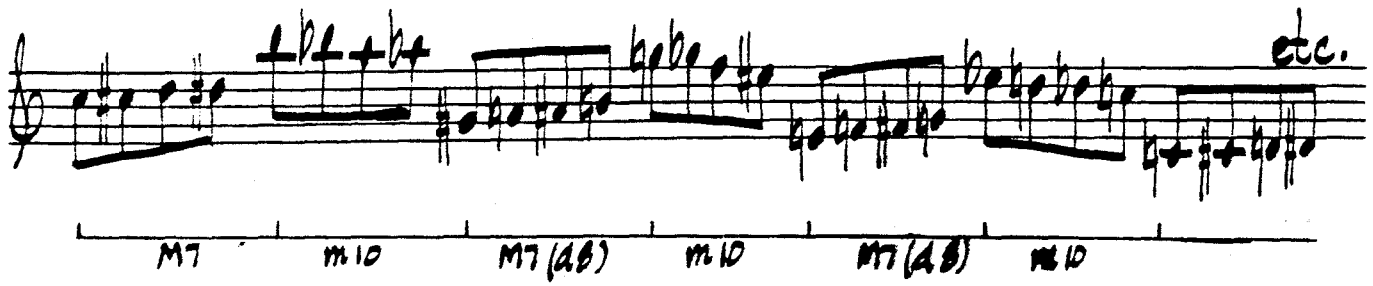
Also practice this pattern starting on C-sharp and D.

(ascending)

323



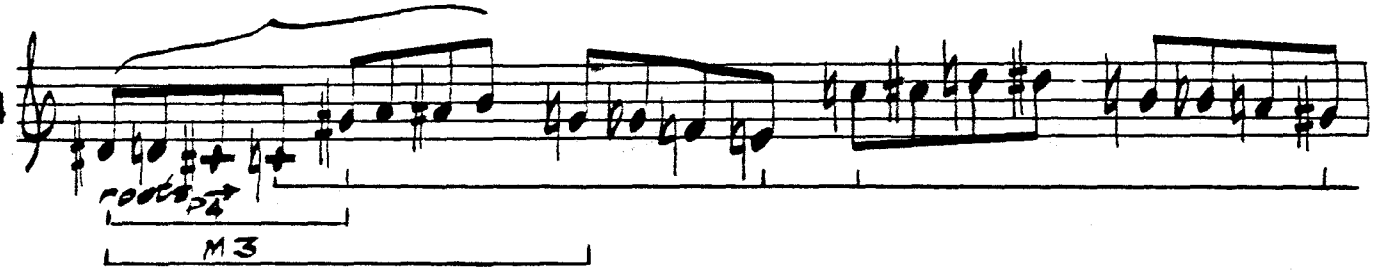
(descending)



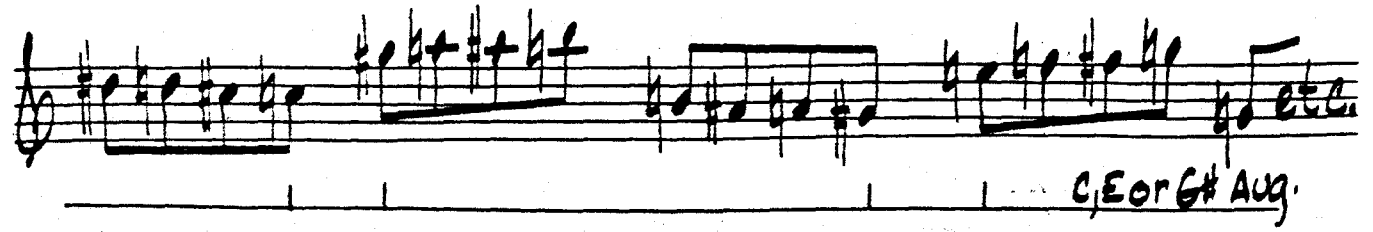
Also practice this pattern starting on C-sharp, D, and D-sharp.

(ascending)

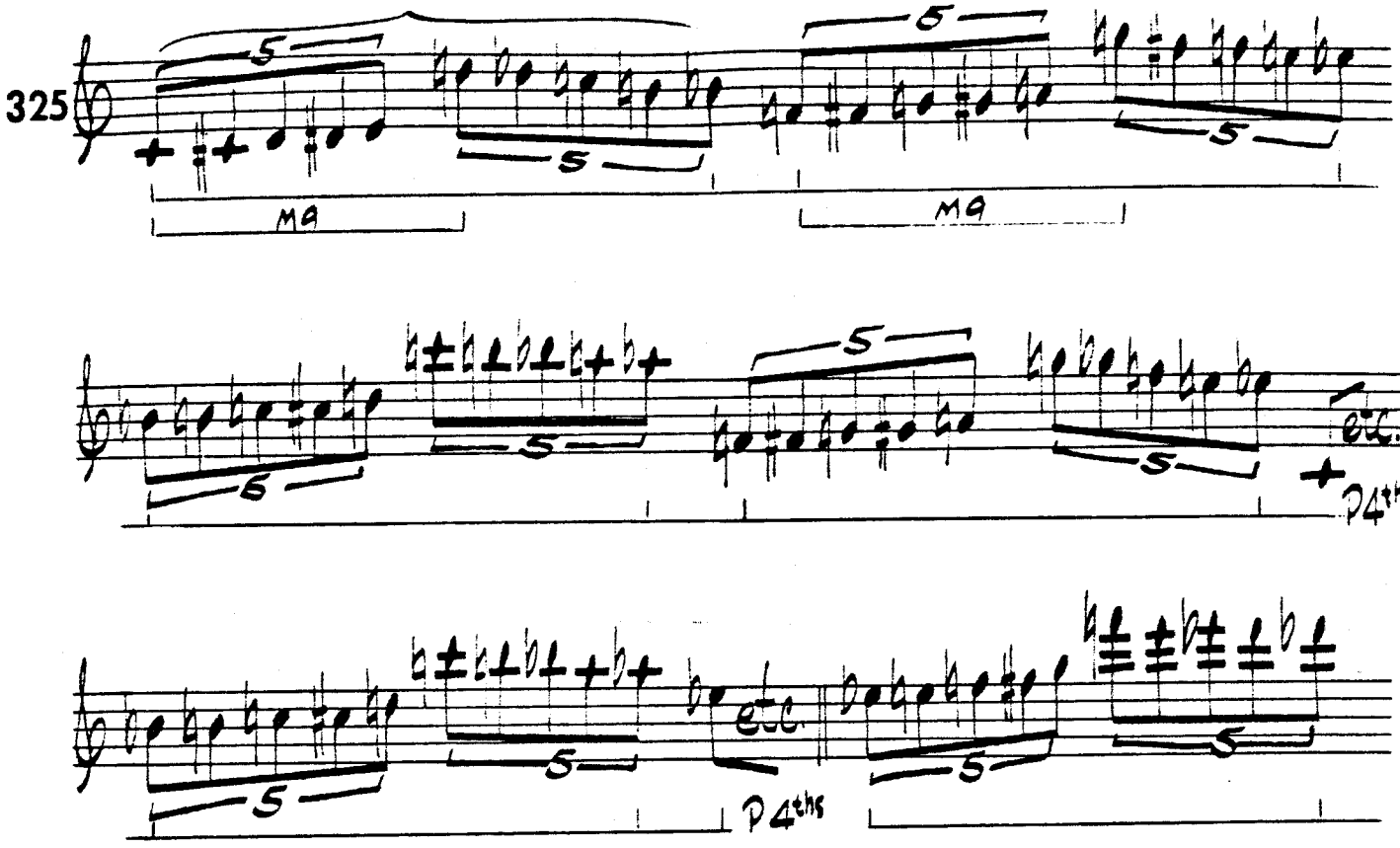
324



(descending)

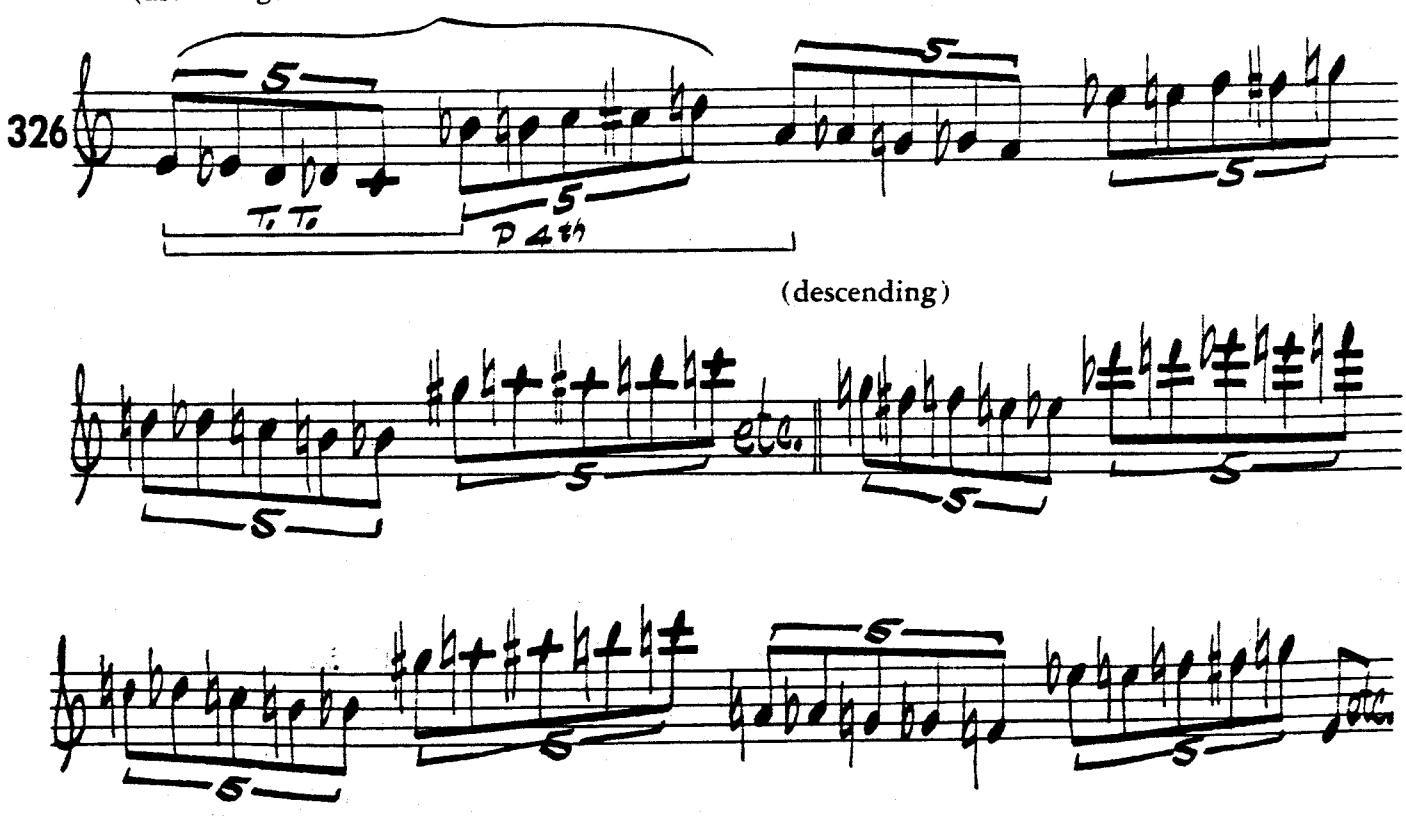


Also practice this pattern starting on E, F, and F-sharp.



Also practice this pattern starting on C-sharp, D, D-sharp, and E.

(ascending)



Also practice this pattern starting on F, F-sharp, G, and G-sharp.

AN ESSENTIAL DISCOGRAPHY

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Ornette Coleman, *This Is Our Music* (Contemporary SD 1343), Ornette Coleman.

John Coltrane, *A Love Supreme* (Impulse A-77), John Coltrane Quartet.

John Coltrane, *Giant Steps* (Atlantic 1311), John Coltrane Quartet.

John Coltrane, *Lush Life* (Prestige S-7581), John Coltrane Group.

Miles Davis, *E. S. P.* (Columbia CS-9150), Miles Davis Quintet.

Miles Davis, *In A Silent Way,* (Columbia CS-9875), Miles Davis Group.

Miles Davis, *Kinda' Blue* (Columbia CS-8153), Miles Davis Sextet.

Miles Davis, *Miles In Europe* (Columbia CS-8983), Miles Davis Quintet.

Miles Davis, *Miles Smiles* (Columbia CS-9401), Miles Davis Quintet.

Miles Davis, *Milestones* (Columbia CL-1193), Miles Davis Sextet.

Miles Davis, *Nefertiti* (Columbia CS-9594), Miles Davis Quintet.

Miles Davis, *'Round Midnight* (Columbia CL949), Miles Davis.

Bill Evans, *Everybody Digs Bill* Evans (Riverside RLP 12-291), Bill Evans Trio.

Herbie Hancock, *Maiden Voyage* (Blue Note 84195), Herbie Hancock Quintet.

Charles Lloyd, *Forest Flower* (Atlantic 1473), Charles Lloyd Quartet.

Wes Montgomery, *Wes Montgomery Trio* (Riverside 12-310), Wes Montgomery Trio.

Oliver Nelson, *Blues And The Abstract Truth* (Impulse A-5), Oliver Nelson Group.

Charles Parker, *Bird At St. Nick's* (Fantasy 6012), Charles Parker Group.

Charles Parker, *Now's The Time* (Verve MGV 8005), Charles Parker Group.

Sonny Rollins, *Saxophone Colossos* (Prestige 7079), Sonny Rollins Group.

George Russell, *Ezz-Thetics* (Riverside 375), George Russell Sextet.

George Russell, *George Russell At The Five Spot* (Decca DL9220), George Russell Sextet.

George Russell, *George Russell In Kansas City* (Decca DL4183), George Russell Sextet.

George Russell, *Stratusphunk* (Riverside 341), George Russell.

Wayne Shorter, *Adam's Apple* (Blue Note 84232), Wayne Shorter Group.

Wayne Shorter, *All Seeing Eye* (Blue Note 84219), Wayne Shorter Group.

Wayne Shorter, *Schizophrenia* (Blue Note 84297), Wayne Shorter.

Wayne Shorter, *Speak No Evil* (Blue Note 84194), Wayne Shorter Group.

Sonny Stitt, *Sonny Side Up* (Verve MGV 8262), Sonny Stitt Group.

McCoy Tyner, *The Real McCoy* (Blue Note 84264), McCoy Tyner Group.