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# Part I

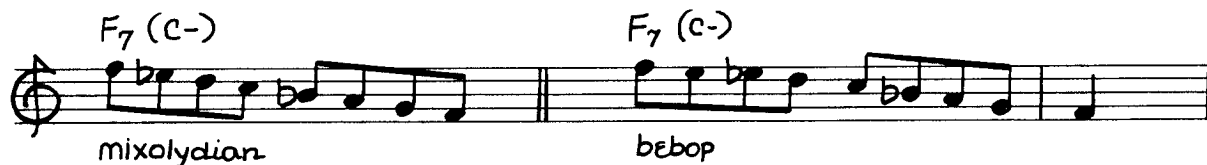
## THE BEBOP SCALES

From the early 1920s, jazz musicians attempted to make their improvised lines flow more smoothly by connecting scales and scale tones through the use of chromatic passing tones. In a detailed analysis of more than 500 solos by the acknowledged giants from Louis Armstrong through Lester Young and Coleman Hawkins, one is aware, first, of the increased use of scales (as opposed to arpeggios and chord outlines) and then the increasing use of chromaticism within these scales. An unusual fact about this increased chromaticism is that, despite the frequent re-occurrence of certain licks or patterns, no discernible design with regard to how the extra chromatic tones are added emerges. The overall impression is a somewhat arbitrary or random use of chromaticism.

When one listens to the great players from the distant and near past, one of the main things that tends to "date" their playing (aside from technological improvements in recording techniques, changes with regard to harmonic and rhythmic formulae, etc.) is this lack of unanimity with regard to the use of melodic chromaticism.

From his earliest recordings Charlie Parker can be observed groping for a method for making the modes of the major scale sound less awkward and for rendering them more conducive to swing and forward motion. Gradually, in a systematic and logical way, he began using certain scales with added chromatic tones. Dizzy, approaching the scales from an entirely different direction, began utilizing the same techniques for transforming them. These scales became the backbone of all jazz from bebop to modal music.

A study of a large number of representative solos from the bebop era yields a set of very complex governing rules that have now been internalized and are a part of the language of all good players in the bebop and post-bebop tradition. Very simply stated, the added chromatic tones make the scales "come out right." Play a descending mixolydian scale and then play the bebop version of the scale and see how much smoother the second scale moves.



There are a number of reasons why the second scale makes sense. First, in the second scale all of the chord tones are on down beats: and second, the tonic of the scale falls on beat one of each successive measure, and the fifth (C) falls on beat 3.

### THE BEBOP DOMINANT SCALE

This scale is spelled 1-2-3-4-5-6-b7- $\flat$ 7-1 and the rules governing its use are given with the dominant seventh chord as the point of reference. The scale is also used on the related minor seventh chord (II) and, under special conditions to be discussed later, on the related half-diminished seventh chord (VII), i.e. the following:

$$\left[ \begin{array}{l} G- \\ C_7 \\ E\phi \text{ (under special conditions)} \end{array} \right] = C-D-E-F-G-A-B\flat-B \mathbb{b} C$$

#### Rules

1. On a dominant seventh chord the scale is reckoned from the root of the chord, i.e.,  $C_7 = C$  dominant (bebop)
2. On a minor seventh chord the scale is reckoned from the root of the related dominant seventh chord, i.e.,  $G- = C$  dominant (bebop)



9. The line may also descend and then ascend in scalar fashion (example 1) or ascend and then descend in scalar fashion (example 2).



10. When the line starts on the 3rd, it may descend chromatically to the 6th, i.e., the following:

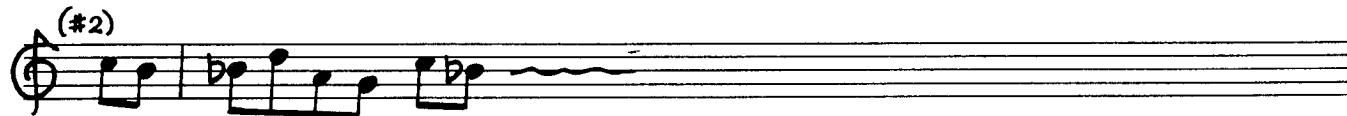
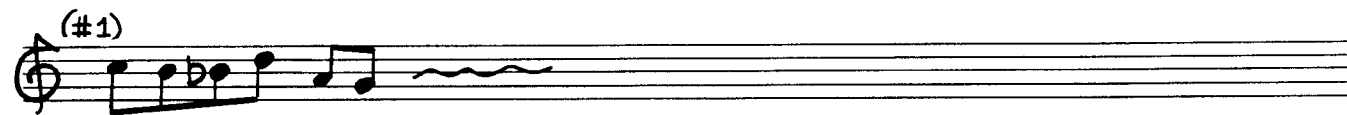


or ascend and then descend chromatically from the 3rd, i.e. the following:

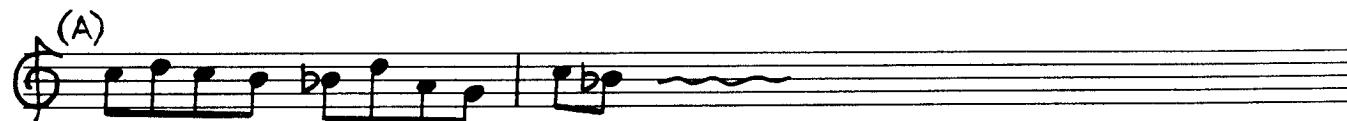


### Endings

The endings of phrases are very important, and two particular endings appear with great frequency:



More often than not, phrases end on the upbeat of beats one or three, as in the following examples:



The line should use whichever of the two endings make this possible. Eventually the player will make this choice intuitively.

Please note that in examples #2 and #A the extra half step between the tonic and the b7 has been omitted. The rule governing this situation is as follows: if the line is ending, use a whole step as in examples #2 and #A; if the line is to continue, use the half step as usual, as in the following example:



Practice the different endings starting on other chord tones, as in the following examples:



### Starting the Scale on Non-chord Tones

When starting the scale on a non-chord tone many options exist. Some of the most frequently used ones follow:

1. Use the scale without the extra half step, as in the following examples:



2. Use the scale without the extra half step until you reach the b7, at which time balance is restored and the previous rules are once more operative, as in the following examples:



3. Make the non-chord tone a quarter note, as in the following examples:

Two staves of musical notation in treble clef. The first staff contains two measures of music. The first measure has a quarter note G4, a quarter note A4, a quarter note B4, and a quarter note C5. The second measure has a quarter note B4, a quarter note A4, a quarter note G4, and a quarter note F4. Both measures have a boxed 'OR' label. The second staff contains two measures of music. The first measure has a quarter note G4, a quarter note A4, a quarter note B4, and a quarter note C5. The second measure has a quarter note B4, a quarter note A4, a quarter note G4, and a quarter note F4. The second staff ends with 'etc.'

4. Insert a half step before the first chord tone you come to, as in the following examples:

Three staves of musical notation in treble clef. The first staff contains two measures of music. The first measure has a quarter note G4, a quarter note A4, a quarter note B4, and a quarter note C5. The second measure has a quarter note B4, a quarter note A4, a quarter note G4, and a quarter note F4. Both measures have a boxed 'OR' label. The second staff contains two measures of music. The first measure has a quarter note G4, a quarter note A4, a quarter note B4, and a quarter note C5. The second measure has a quarter note B4, a quarter note A4, a quarter note G4, and a quarter note F4. The second staff ends with 'etc.'. The third staff contains two measures of music. The first measure has a quarter note G4, a quarter note A4, a quarter note B4, and a quarter note C5. The second measure has a quarter note B4, a quarter note A4, a quarter note G4, and a quarter note F4. The third staff ends with 'etc.'

5. Syncopate the first chord tone you come to, as in the following examples:

Two staves of musical notation in treble clef. The first staff contains two measures of music. The first measure has a quarter note G4, a quarter note A4, a quarter note B4, and a quarter note C5. The second measure has a quarter note B4, a quarter note A4, a quarter note G4, and a quarter note F4. Both measures have a boxed 'OR' label. The second staff contains two measures of music. The first measure has a quarter note G4, a quarter note A4, a quarter note B4, and a quarter note C5. The second measure has a quarter note B4, a quarter note A4, a quarter note G4, and a quarter note F4. The second staff ends with 'etc.'

6. From the b2, approach the tonic from a half step below, as in the following example:

One staff of musical notation in treble clef. The measure contains a quarter note G4, a quarter note A4, a quarter note B4, and a quarter note C5.

7. From the b3 approach the 3rd from a half step above, as in the following example:

One staff of musical notation in treble clef. The measure contains a quarter note G4, a quarter note A4, a quarter note B4, and a quarter note C5.

8. From the #4 descend chromatically to the 3rd, as in the following example:

One staff of musical notation in treble clef. The measure contains a quarter note G4, a quarter note A4, a quarter note B4, and a quarter note C5.



(G) D major or D minor **OR**

(H) F major or F minor      D major, D minor, or Bb major  
 or      Etc.

Examples A and B may be combined with examples C through H, as in the following example:

3. The bebop line may be extended through the use of what I shall hereafter refer to as deflection. When leaving the 5th of the scale, the line may be deflected in the manner of the following examples (make sure that when the line resumes its descent the 5th is on a down beat):

**Enclosure**

The bebop line may be extended by enclosing the root or the 5th of the chord. This is accomplished by delaying the arrival of the chord tone by inserting the notes one half step above and one half step below the tone in question, as in the following examples:





### Examples of Enclosure in Actual Compositions

1. "Anthropology": measure 1, measure 7
2. "Bebop": introduction, measures 8-9; measure 8; measure 16; measures 18-19; measures 22-23; measure 32
3. "Confirmation": measure 7
4. "Donna Lee": measures 4-5; measure 13
5. "Groovin' High": pick-ups and beat 1, measure 4, measures 8-9, measure 12
6. "Little Willie Leaps": measure 4
7. "Nica's Dream": introduction, interlude, and tag
8. "Night in Tunisia": measures 7-8, measures 15-16, measures 31-32
9. "Ornithology": measures 13-14, measures 15-16, measures 29-30
10. "Quicksilver": measure 2, measures 9-10, measures 11-12, measure 50, measures 57-58, measure 59, measures 61-62
11. "The Serpent's Tooth": measure 1, measure 8, measure 25
12. "Woody'n You": measures 6-7-8, measures 14-15-16, measures 30-31-32

### Achieving Variety with the Bebop Dominant Scales

1. Start the scale on something other than the first beat of the measure, as in the following examples:

Three musical staves illustrating different starting points for the bebop dominant scale. Each staff begins with a rest for a certain number of beats before the scale starts. The first staff starts on the second beat and ends with a boxed "OR". The second staff starts on the third beat and ends with a boxed "OR". The third staff starts on the fourth beat and ends with "etc.".

2. Vary the starting note (not just the tonic and not just chord tones), as in the following examples:

Four musical staves illustrating variations in the starting note of the bebop dominant scale. The first staff starts on the second degree (D) and ends with a boxed "OR". The second staff starts on the third degree (E) and ends with "etc." and a boxed "OR". The third staff starts on the fourth degree (F) and ends with a boxed "OR". The fourth staff starts on the fifth degree (G).

3. Vary the endings, as in the following examples:

Four musical staves in treble clef showing scale exercises with varied endings. Each staff begins with a scale starting on G4. The first staff shows two alternative endings, each marked with a box containing 'OR'. The second staff shows a scale with a sharp on F5 and a flat on E5, followed by a wavy line and a box with 'OR'. The third staff shows a scale with a flat on F5 and a sharp on E5, followed by a wavy line and a box with 'OR'. The fourth staff shows a scale with a flat on F5 and a sharp on E5, ending with a wavy line and the text 'etc.'.

4. Balance ascending and descending motion, as in the following example:

A single musical staff in treble clef showing a scale starting on G4. The ascending part consists of quarter notes: G4, A4, Bb4, C5, D5, E5, F5, G5. The descending part consists of quarter notes: G5, F5, E5, D5, C5, Bb4, A4, G4. The staff ends with the text 'etc.'.

5. Bury the scale within a line, as in the following examples:

Seven musical staves in treble clef showing scale exercises where the scale is 'buried' within a line. Each staff begins with a scale starting on G4. The first six staves show the scale with various accidentals and intervals, each ending with a box containing 'OR'. The seventh staff shows a scale with a flat on F5 and a sharp on E5, ending with a wavy line and the text 'etc.'.

6. Turns may be used on any chord tone, as in the following examples:

Four musical staves in treble clef showing bebop scale variations. Each staff begins with a melodic line and ends with a boxed "OR" label. The first staff has a slur over the first four notes. The second staff has a slur over the first six notes. The third and fourth staves have slurs over the first eight notes. The notes in all staves are: G4, A4, Bb4, A4, G4, F4, E4, D4, C4.

7. Join bebop scales to other bebop scales, as in the following examples:

Three musical staves in treble clef showing joined bebop scales. The first staff has three measures with notes G4, A4, Bb4, A4, G4, F4, E4, D4, C4, Bb4, A4, G4, F4, E4, D4, C4, Bb4, A4, G4, F4, E4, D4, C4. Chord labels above are G-, C7, and Bb-. The second staff has three measures with notes Bb4, A4, G4, F4, E4, D4, C4, Bb4, A4, G4, F4, E4, D4, C4, Bb4, A4, G4, F4, E4, D4, C4, Bb4, A4, G4, F4, E4, D4, C4. Chord labels above are Eb7, Eb-, and a boxed "OR". The third staff has three measures with notes G4, A4, Bb4, A4, G4, F4, E4, D4, C4, Bb4, A4, G4, F4, E4, D4, C4, Bb4, A4, G4, F4, E4, D4, C4, Bb4, A4, G4, F4, E4, D4, C4. Chord labels above are G-, C7 b9, and Eb7. Below the staff are two more staves with notes Bb4, A4, G4, F4, E4, D4, C4, Bb4, A4, G4, F4, E4, D4, C4, Bb4, A4, G4, F4, E4, D4, C4, Bb4, A4, G4, F4, E4, D4, C4. Chord labels above are Ab7 and D7.

8. Join the bebop scales to other scale types, as in the following examples:

The first example is labeled "diminished" and shows a bebop dominant scale (C7 bebop) followed by a diminished scale (C7b9) and another bebop dominant scale. A box labeled "OR" is at the end.

The second example is labeled "diminished/whole tone" and shows a bebop dominant scale followed by a diminished/whole tone scale (C7b9/WT) and another bebop dominant scale. A box labeled "OR" is at the end.

The third example is labeled "whole tone" and shows a bebop dominant scale followed by a whole tone scale (C7b9/WT) and another bebop dominant scale.

9. Use various delays, as in the following examples:

The first example shows a bebop dominant scale with a delay on the 7th degree (Bb) and a box labeled "OR".

The second example shows a bebop dominant scale with a delay on the 7th degree (Bb) and the word "Etc." at the end.

10. Use extensions.

11. Use double time.

### Using the Bebop Dominant Scale Over a Half-diminished Chord

When the half-diminished chord is treated as a minor seventh (II), then all of the aforementioned rules are operative, as exemplified here:

The notation shows a Gø chord with a note (Bb) and a C7 chord with a note (Bb). The text says ": use rules for C<sub>7</sub>".

However, if the half-diminished chord is perceived as part of a II V<sub>7</sub> VII situation (i.e., G- C<sub>7</sub> Eø A<sub>7</sub> D- as in "Back Home Again in Indiana," "Whisper Not," etc.), then observe the following rule: treat the ø (VII) as the related II V progression, as in the following example:

The notation shows a progression of chords: G- (with notes G, A, B, C), C<sub>7</sub> (with notes C, D, E, F), Eø (with notes E, F, G, A), A<sub>7</sub> (with notes A, B, C, D), and D- (with notes D, E, F, G). The notes are written on a staff.

### THE BEBOP MAJOR SCALE

The rationale for the use of the bebop major scale is the same as that for the use of the bebop dominant scale. This scale is spelled 1-2-3-4-5-#5-6-7-8 and is used over any major type chord.

## Rules

1. The scale usually moves in basic eighth note patterns and usually descends.
2. In pure form the scale invariably starts on a down beat.
3. In pure form the scale starts on a chord tone. For the purposes of the use of this scale the chord tones are 1, 3, 5, and 6 (not 7), as in the following example:

Handwritten musical notation showing four examples of scales starting on chord tones of a C major chord. The first two examples are on a single staff, and the last two are on a second staff. The notes are: *from the 1* (C, D, E, F, G, A, B, A, G, F, E, D, C), *from the 3* (E, F, G, A, B, A, G, F, E, D, C, B, A), *from the 5* (G, A, B, A, G, F, E, D, C, B, A, G, F), and *from the 6* (F, G, A, B, A, G, F, E, D, C, B, A, G). Each scale is written in eighth notes over two measures.

4. As long as the scale starts on a chord tone, the line may ascend and/or descend in scalar fashion, as in the following examples:

Handwritten musical notation showing two examples of scales starting on chord tones. The first example starts on the 1st (C) and shows an ascending scale followed by a descending scale, with a boxed "OR" between them. The second example starts on the 3rd (E) and shows a descending scale followed by an ascending scale, also with a boxed "OR" between them. The word "Etc." is written at the end of the second staff.

5. When the scale starts on the 9th, descend chromatically to the major 7th, then observe the basic rule, as in the following examples:

Handwritten musical notation showing three examples of scales starting on the 9th of a chord. The first two examples start on Bb and descend chromatically to A, then continue with an eighth-note scale. Each example has a boxed "OR" at the end. The third example starts on Bb and descends chromatically to A, then continues with an eighth-note scale, ending with "Etc."

6. When the scale starts on the major 7th, descend chromatically to the 5th of the chord, as in the following examples:

Handwritten musical notation showing one example of a scale starting on the major 7th. It starts on Bb and descends chromatically to G, then continues with an eighth-note scale. A boxed "OR" and "Etc." are at the end.

7. When starting on a non-chord tone move by step, half step, or skip until a chord tone (1, 3, 5, or 6) occurs on a down beat.
8. When the solo line starts on a non-chord tone or when the line has a chord tone on an upbeat, insert a half step just before a chord tone to restore balance to the line, as in the following examples:

Four musical staves illustrating examples for rule 8. Each staff shows a melodic line starting on a non-chord tone and moving to a chord tone. The first three staves end with a boxed 'OR' indicating an alternative phrasing. The fourth staff ends with 'Etc.'

9. For variety, approach the chord tone which initiates the line by a half step above and a half step below (enclosure), as in the following examples:

Three musical staves illustrating examples for rule 9. Each staff shows a melodic line with an enclosure (half step above and half step below) before a chord tone. The first two staves end with a boxed 'OR' indicating an alternative phrasing. The third staff ends with 'Etc.'

### Achieving Variety with the Bebop Major Scale

1. Start the scale on something other than the first beat of the measure.
2. Vary the starting note (not just the tonic and not just chord tones).
3. Balance ascending and descending motion.
4. Bury the scale within less obvious lines.
5. Turns may be used on any chord tone, as in the following examples:

Two musical staves illustrating examples for rule 5. Each staff shows a melodic line with a turn on a chord tone. Both staves end with a boxed 'OR' indicating an alternative phrasing.

Three musical staves in treble clef showing bebop scale exercises. The first two staves end with a box containing the word "OR". The third staff ends with "Etc.".

**Internalizing the Bebop Scales: Some Exercises**

1. Broken 3rds.

A. When ascending or descending resume the diatonic line from a chord tone on a down beat. (This rule maintains whether starting from a chord tone or a non-chord tone.)

Five musical staves labeled (A) through (E) showing broken 3rds exercises. Each staff ends with "Etc.".

B. In broken lines the extra half step is usually omitted, i.e. the following example:

Musical staff labeled C7 showing a broken line exercise with a circled (b) indicating an omitted half step.

2. To resume the diatonic line from a non-chord tone, use one of the rules governing non-chord tones, i.e. the following examples:

A. Omit the half step.

Musical staff labeled (A) and C7 showing an exercise where a half step is omitted.



B. Use a quarter note on the non-chord tone.

(B)

C. Syncopate the next chord tone.

(c)

D. Add an extra half step before the next chord tone.

D)

\*\*In short, get to a chord tone on a down beat as soon as possible.

3. Broken triads.

A. Resume the diatonic line with a chord tone, as in the following examples:

C7

B. If the line is resumed with a non-chord tone, use one of the rules for dealing with non-chord tones, as in the following examples:

C7

4. Broken chords.

A. Resume the diatonic line with a chord tone, as in the following examples:



B. If the line resumes from a non-chord tone, use one of the rules governing non-chord tones, as in the following examples:







7. Triplets. If the scale is to function normally, make the middle note of the triplet the chord tone (and when going to the tonic, start on the major 7th), as in the following examples:

8. Triplets. When starting the triplet on a chord tone, use one of the rules for non-chord tones, as in the following examples:

**Tonic**

- A. Enclosure (extra half step)

(A)

- B. Non-chord tone as a quarter note

(B)

- C. Chord tone syncopated

(C)

- D. Extra half step omitted

(D)

**3rd**

- E. Extra half step

(E)

F. Non-chord tone as a quarter note

(F)

G. Chord tone syncopated

(G)

H. Extra half step omitted

(H)

5th

I. Extra half step

(I)

J. Non-chord tone as a quarter note

(J)

K. Chord tone syncopated

(K)

L. Extra half step omitted

(L)

7th (This is the only exception of the chord tone in the middle.)  
 M. Extra half step

M)

N. Non-chord tone as a quarter note

N)

O. Chord tone syncopated

O)

P. Extra half step omitted

P)

Although less frequently used, the above rules maintain for ascending triplet figures, as in the following examples (starting on a non-chord tone):

9. In a string of triplets the last triplet determines the rule, as in the following examples:

**starting on a non-chord tone**

Q)

R)

## More Exercises for Internalizing the Bebop Scales

1. Bebop scales (dominant). Play into the sound of the chord as quickly as possible. Use the cycle, with each chord lasting two measures.
  - A. From the tonic of the chord
  - B. From other predetermined chord tones (3, 5, b7)
  - C. From predetermined non-chord tones
  - D. All scales from a single predetermined starting tone, as in the following example using C:

(\* indicates a non-chord tone)

- E. Start each successive scale from the next highest chord tone in rotation, as in the following example:

- F. Start each successive scale from the next highest or lowest chromatic tone, as in the following examples:



G. Choose starting tones randomly.

H. Playing a continuous line, move into each new chord by conjunct motion (by half step or whole step), as in the following example:

Exercise H shows a continuous line of eighth notes across three staves. The first staff starts with a C7 chord and moves to F7. The second staff continues from F7 to Bb7. The third staff continues from Bb7 to Eb7 and ends with "Etc.".

2. Bebop scales (dominant). Repeat all exercises from #1 (A-H). Use changes that move at the rate of one per measure, as in the following:

Exercise 2 shows four measures of rests on a single staff. Above the first three measures are the chords C7, F7, and Bb7. Above the fourth measure is "Etc.".

3. Playing by EAR realize random 7th and minor 7th chords using the bebop scales from a single starting tone, as in the following example using C:

Exercise 3 shows four staves of bebop scales starting from C7. The first staff moves to Ab7. The second staff moves to E7. The third staff moves to F7 and then F#-(B7). The fourth staff moves to D7 and ends with "Etc.".

Using starting notes chosen randomly, play the preceding exercise. As preparation, practice the following exercise, leaving a measure to listen to each new chord before playing.

**LISTEN**  $A\flat_7$  **PLAY**

Musical notation for  $A\flat_7$  chord and bebop major scale exercise. The first staff shows a whole note chord  $A\flat_7$  with a circled 'L' and a 'LISTEN' box. The second staff shows the 'PLAY' section with a bebop major scale starting on  $A\flat$  (notes:  $A\flat, B\flat, C, D, E\flat, F, G, A\flat$ ).

**LISTEN**  $F_7$  **PLAY** Etc.

Musical notation for  $F_7$  chord and bebop major scale exercise. The first staff shows a whole note chord  $F_7$  with a circled 'L' and a 'LISTEN' box. The second staff shows the 'PLAY' section with a bebop major scale starting on  $F$  (notes:  $F, G, A, B\flat, C, D, E, F$ ), followed by 'Etc.'

4. Using the instructions for #1, 2, and 3, play exercises using the bebop major scale, as in the following example using C as the starting tone:

$C\Delta$   $F\Delta$

$B\flat\Delta$  Etc.

Musical notation for bebop major scale exercises starting on C. The first staff shows a scale starting on  $C$  (notes:  $C, D, E, F, G, A, B, C$ ) with a circled 'L' and  $C\Delta$  above it. The second staff shows a scale starting on  $F$  (notes:  $F, G, A, B, C, D, E, F$ ) with a circled 'L' and  $F\Delta$  above it. The third staff shows a scale starting on  $B\flat$  (notes:  $B\flat, C, D, E, F, G, A, B\flat$ ) with a circled 'L' and  $B\flat\Delta$  above it, followed by 'Etc.'

5. Using the instructions for #1, 2, and 3, play exercises mixing major and dominant bebop scales, as in the following example using E as the starting tone:

$C_7$   $F\Delta$

$B\flat\Delta$  Etc.

Musical notation for exercises mixing major and dominant bebop scales starting on E. The first staff shows a dominant bebop scale starting on  $E$  (notes:  $E, F, G, A, B, C, D, E, F\flat, G$ ) with a circled 'L' and  $C_7$  above it. The second staff shows a major bebop scale starting on  $F$  (notes:  $F, G, A, B, C, D, E, F, G, A, B, C$ ) with a circled 'L' and  $F\Delta$  above it. The third staff shows a major bebop scale starting on  $B\flat$  (notes:  $B\flat, C, D, E, F, G, A, B\flat, C, D, E, F$ ) with a circled 'L' and  $B\flat\Delta$  above it, followed by 'Etc.'

6. Spins from a chord tone. (Spins are scalar ascending figures.)

3 note spins:

Diagram illustrating 3-note spins. Four boxes are shown on a staff, each containing three notes. The first box contains  $C, D, E$ . The second box contains  $B\flat, C, D$ . The third box contains  $A, B, C$ . The fourth box contains  $G, A, B$ . Arrows indicate the direction of the spin from the first note to the second, and from the second to the third.

(1)

Musical notation for 3-note spin exercise (1). The scale starts on  $C$  and includes the spin  $C, D, E$  (circled). The notes are  $C, D, E, F, G, A, B, C, D, E, F, G, A, B, C$ .

(2) Etc.

Musical notation for 3-note spin exercise (2). The scale starts on  $F$  and includes the spin  $F, G, A$  (circled). The notes are  $F, G, A, B, C, D, E, F, G, A, B, C, D, E, F$ , followed by 'Etc.'

4 note spins:

(1) Musical staff in treble clef showing a sequence of four notes: G4, A4, B4, C5. The first two notes are quarter notes, and the last two are eighth notes. The notes are connected by stems. The exercise is labeled (1).

Musical staff in treble clef showing a sequence of four notes: G4, A4, B4, C5. The notes are connected by stems. This is the second variation of the 4 note spins exercise.

(2) Musical staff in treble clef showing a sequence of four notes: G4, A4, B4, C5. The notes are connected by stems. The exercise is labeled (2).

5 note spins:

Musical staff in treble clef showing a sequence of five notes: G4, A4, B4, C5, D5. The notes are connected by stems. This is the 5 note spins exercise.

6 note spins:

(1) Musical staff in treble clef showing a sequence of six notes: G4, A4, B4, C5, D5, E5. The notes are connected by stems. The exercise is labeled (1).

(2) Musical staff in treble clef showing a sequence of six notes: G4, A4, B4, C5, D5, E5. The notes are connected by stems. The exercise is labeled (2).

7. Spins from non-chord tones.

(1) Musical staff in treble clef showing a sequence of seven notes: G4, A4, B4, C5, D5, E5, F#5. The notes are connected by stems. A  $C_7$  chord symbol is written above the first note. The exercise is labeled (1).

(2) Musical staff in treble clef showing a sequence of seven notes: G4, A4, B4, C5, D5, E5, F#5. The notes are connected by stems. The exercise is labeled (2).

(3) Musical staff in treble clef showing a sequence of seven notes: G4, A4, B4, C5, D5, E5, F#5. The notes are connected by stems. A box containing the word "OR" is placed between the fifth and sixth notes. The exercise is labeled (3).

(4) Musical staff in treble clef showing a sequence of seven notes: G4, A4, B4, C5, D5, E5, F#5. The notes are connected by stems. The exercise is labeled (4).



## Some Examples of Embellishment with Ascending Scales

(1) 

(2) 

(3) 

### An Example of a Bebop Solo Using Bebop Scales, Enclosure, Embellishment, Etc.

Because of copyright restrictions it is not possible to print Clifford Brown's solo on "Confirmation," but by numbering the four choruses of the solo (A), (B), (C), and (D), examples of these devices will be indicated. This solo can be found on the album *A Night At Birdland: Blue Note 1522*; published transcriptions can be found in *28 Modern Jazz Trumpet Solos* by Ken Slone and *The Jazz Style of Clifford Brown* by David Baker.

#### Bebop Scales

- (A) measures 8, 11-12, 12-13, 17-18, 26, 29-30, and 30-31
- (B) measures 4-5, 6, 7, 11-13, 15, 17, 22, and 27
- (C) measures 3, 6, and 18-19
- (D) measures 3, 6-7, and 11-12

#### Enclosures

- (A) measures 2, 3-4, 22, 29, and 31
- (B) measures 7, 9-10, and 25-26
- (C) measures 16-17, 28, and 30
- (D) measures 8-9, 9-10, 16, and 18-19

#### Other Embellishments

- (A) measures 6, 15, and 27-28

#### A Perpetual Motion Exercise

This exercise is designed to help a player develop a sense of line. The pattern may be used whenever a set of changes (II V<sub>7</sub> or V<sub>7</sub>) move around the key circle at the rate of two measures apiece, as in the following examples:

##### 1. Blues

$$\left| F_7 \right| F_7 \left[ \left| C^- \right| F_7 \right| Bb \right]$$

(A) 

2. Bridge of "I Got Rhythm"

(A-) D<sub>7</sub>
(D-) G<sub>7</sub>
(G-) C<sub>7</sub>
(C-) F<sub>7</sub>

|| — 2 — |
| — 2 — |
| — 2 — |
| — 2 — ||

(B)

Musical notation for the bridge of "I Got Rhythm" in G major. It consists of three staves of music. The first staff starts with a D<sub>7</sub> chord and ends with a G<sub>7</sub> chord. The second staff starts with a C<sub>7</sub> chord. The third staff starts with an F<sub>7</sub> chord. The melody is written in treble clef with a key signature of one sharp (F#).

3. "Donna Lee"

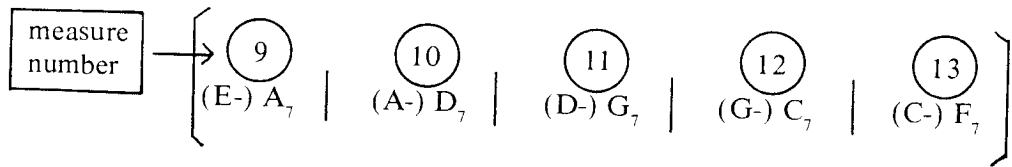
|| Ab Gb<sub>7</sub> |
F<sub>7</sub> |
(F-) Bb<sub>7</sub> |
(Bb-) Eb<sub>7</sub> |
(Eb-) Ab<sub>7</sub> |
) Db

| — 2 — |
| — 2 — |
| — 2 — |

(C)

Musical notation for "Donna Lee" in D minor. It consists of three staves of music. The first staff has chords Ab, Gb<sub>7</sub>, F<sub>7</sub>, and Bb<sub>7</sub> (F-). The second staff has Eb<sub>7</sub> (Bb-) and (Ab<sub>7</sub>). The third staff has Eb-, Ab<sub>7</sub>, and Db. The melody is written in treble clef with a key signature of two flats (Bb, Eb).

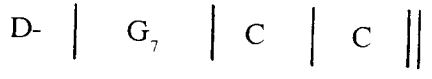
4. "Yesterdays"



Double-time the line.

(D) Musical notation for exercise (D) showing a double-time line. The melody consists of eighth notes. Chords are indicated above the staff: A<sub>7</sub> (measures 1-2), D<sub>7</sub> (measures 3-4), and G<sub>7</sub> (measures 5-6). The line ends with "etc.".

5. The pattern may be treated as a II V<sub>7</sub> I pattern (incomplete).



(E) Musical notation for exercise (E) showing a double-time line. The melody consists of eighth notes. Chords are indicated above the staff: D- (measures 1-2), G<sub>7</sub>(b<sub>9</sub>) (measures 3-4), and C (measures 5-6). The line ends with "etc.".

The perpetual motion exercise. Start on any II chord and play back to the point of origination.

The musical score consists of eight staves of music in 4/4 time. Each staff contains a sequence of chords and corresponding melodic lines. The chords are: G-, C7 b9, C-, F7 b9, F-, Bb7 b9, Bb-, Eb7 b9, Eb-, Ab7 b9, Ab-, Db7 b9, Db-, Gb7 b9, F#-, B7 b9, B-, E7 b9, E-, A7 b9, A-, D7 b9, D-, and G7 b9. The melodic lines are composed of eighth and quarter notes, often with ties, and are written in a style that suggests a continuous, flowing motion. The key signature is one flat (Bb), and the time signature is 4/4.



Perpetual motion exercise #2.

The musical score consists of 12 staves of music, each containing a continuous melodic line. The time signature changes frequently, alternating between 4/4, 5/4, and 4/5. Chord changes are indicated by labels above the staves: G-C7, C-F7, F-Bb7, Bb-Eb7, Eb-Ab7, Ab-Db7, Db-Gb7, F#-B7, and B-E7. The notation includes various rhythmic values such as eighth and sixteenth notes, and rests. The overall style is that of a technical exercise for a single melodic instrument.

**Jazz Calisthenics**

All of these exercises fit over these chords: G-, C<sub>7</sub>, E $\phi$

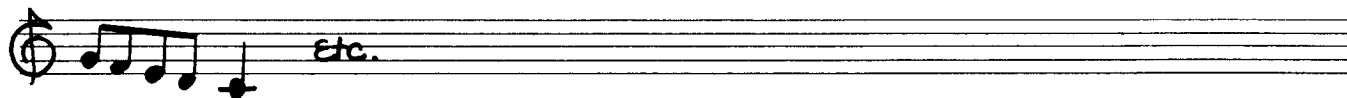
Each of the following exercises takes four forms:

Practice the four forms from the 3rd of the chord, as in the following examples:

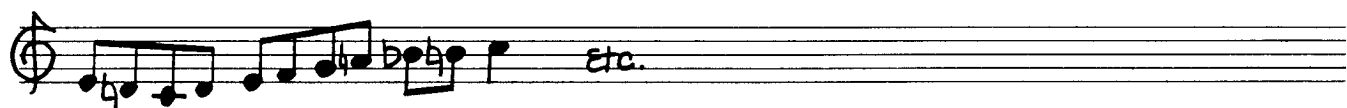


Some possible continuations using enclosure.

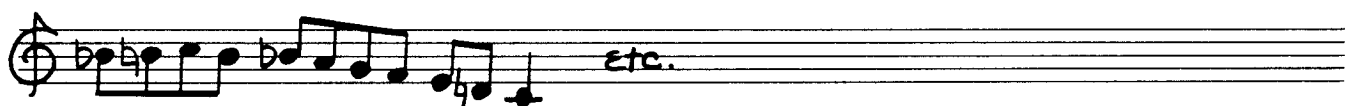
(1) 

 Etc.

(2) 

 Etc.

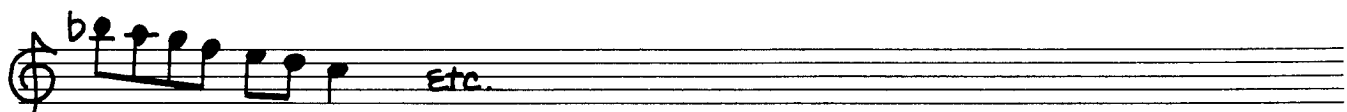
(3) 

 Etc.

(4) 

 Etc.

(5) 

 Etc.

(6) 

 Etc.



*Continuations with various endings.*

(1)

# BEBOP SOLO

( ) = indication of enclosure

[ ] = indication of bebop scale

The musical score consists of 12 staves of music in 4/4 time. The key signature has one flat (Bb). The score includes the following elements:

- Staff 1:** Chords Eb, Eb, A-.
- Staff 2:** Chords D7, Eb, Eb.
- Staff 3:** Chords G-, C7, C-.
- Staff 4:** Chords F7, F-, Bb7. Includes a triplet of eighth notes.
- Staff 5:** Chords G-, C7, F-. Includes a triplet of eighth notes.
- Staff 6:** Chords Bb7, Eb, Eb.
- Staff 7:** Chords A-, D7 (tritone substitution), Eb.
- Staff 8:** Chords Eb, G-, C7.
- Staff 9:** Chords C-, F7, F-.
- Staff 10:** Chords Bb7, F-, Bb7, Ab-, Db7.
- Staff 11:** Chords Eb, Gb, B, E7, Eb.

Additional markings include slurs, accents (>), and various rhythmic notations.

This page of musical notation is arranged in ten systems, each consisting of two staves. The notation includes various chords and melodic lines. The chords are labeled as follows:

- System 1: Eb, A-, D7
- System 2: Eb, Eb, G-
- System 3: C7, C-, F7
- System 4: F-, Bb7, G-
- System 5: C7, F-, Bb7 #9 #5
- System 6: Eb, Eb, A-
- System 7: D7, Eb, Eb
- System 8: G-, C7, C-
- System 9: F7, F-, Bb7
- System 10: F-, Bb7, Ab-, Db7, Eb, Gb

The notation also includes melodic lines with various rhythmic values, including eighth and sixteenth notes, and rests. Some notes are marked with a 'y' symbol, possibly indicating a grace note or a specific articulation. There are also some triplets indicated by a '3' over a group of notes.



# Part II

## OTHER SCALES AND THEIR USE

The following syllabus is based on information gleaned from the study of performance practices of the major jazz figures from bebop forward.

# SCALE SYLLABUS

## Relationship Of Chords To Scales

### Major Family

Chord Type (I)	Scale Form
Major — 1 3 5 7 9 . . . . .	Major 1 2 3 4 5 6 7 8
Major (#4) 1 3 5 7 9 #11 . . . . .	Lydian 1 2 3 #4 5 6 7 8
Major (#4 #5) 1 3 #5 7 9 #11 . . . . .	Lydian Augmented 1 2 3 #4 #5 6 7 8
Major (b6 #9) 1 3 5 7 9 11 13 . . . . .	Augmented 1 #2 3 5 b6 7 1
Major 1 3 5 7 9 . . . . .	diminished 1 b2 b3 b4 #4 5 6 b7 8
Major 1 3 5 7 9 . . . . .	Harmonic Major 1 2 3 4 5 b6 7 8
Major 1 3 5 7 9 . . . . .	blues 1 b3 b4 #4 5 b7 8
Major 1 3 5 7 9 . . . . .	minor pentatonic 1 b3 4 5 b7 8
Major 1 3 5 7 9 . . . . .	Major pentatonic 1 2 3 5 6 8

### minor Family

Chord Type	Scale Form	
minor, tonic (I) Function . . . . .	Dorian 1 2 b3 4 5 6 b7 8	
	Natural minor 1 2 b3 4 5 b6 b7 8	
	Phrygian 1 b2 b3 4 5 b6 b7 8	
	Ascending Melodic minor 1 2 b3 4 5 6 7 8	
	Harmonic minor 1 2 b3 4 5 b6 7 8	
	minor pentatonic 1 b3 4 5 b7 8	
	Blues 1 b3 #4 5 b7 8	
	minor 7th (II) Function . . . . .	Dorian 1 2 b3 4 5 6 b7 9
		Ascending melodic minor 1 2 b3 4 5 6 7 8
		Harmonic minor 1 2 b3 4 5 b6 7 1
minor Pentatonic 1 b3 4 5 b7 8		
Blues 1 b3 3 4 #4 5 7 8		
diminished (start with whole step) 1 2 b3 4 #4 #5 6 7 8		

## Dominant Family

Chord Type	Scale Form
Dominant 7th unaltered 1 3 5 b7 9	Mixolydian 1 2 3 4 5 6 b7 8 Lydian Dominant 1 2 3 #4 5 6 b7 8 Major Pentatonic 1 2 3 5 6 8 minor Pentatonic 1 b3 4 5 b7 8 Blues 1 b3 #3 4 #4 5 b7 8
Dominant 7th #11 1 3 5 b7 9 #11	Lydian dominant 1 2 3 #4 5 6 b7 8
Dominant 7th b5, #5 or both 1 3 b5 b7 1 3 #5 b7 1 3 (b5 #5) b7	Whole Tone 1 2 3 #4 #5 #6

Chord Type	Scale Form
Dominant 7th (b9) 1 3 5 b7 b9	Diminished 1 b2 b3 #3 #4 5 6 b7 8
Dominant 7th #9 1 3 5 b7 #9	Diminished 1 b2 b3 #3 #4 5 b7 8 Diminished whole tone 1 b2 b3 #3 #4 #5 #6 8 Dorian 1 2 b3 4 5 6 b7 8 Blues 1 b3 #3 4 #4 5 b7 8 minor pentatonic 1 b3 4 5 b7 8
Dominant 7th b9 and #9	diminished 1 b2 b3 #3 #4 5 6 b7 8 diminished whole tone 1 b2 b3 #3 #4 #5 #6 8 minor pentatonic 1 b3 4 5 b7 8 Blues 1 b3 #3 4 #4 5 b7 8
Dominant 7th b5 and b9	diminished 1 b2 b3 #3 #4 5 6 b7 8 diminished whole tone 1 b2 b3 #3 #4 #5 #6 8 minor pentatonic 1 b3 4 5 b7 8 Blues 1 b3 #3 4 #4 5 b7 8
Dominant 7th b5 and b9 1 3 b5 b7 b9 #5 and #9 1 3 #5 b7 #9 b5 and #9 1 3 b5 b7 #9 #5 and b9 1 3 #5 b7 b9 (and/combinations)	diminished scale 1 b2 b3 #3 #4 5 6 b7 8 minor pentatonic 1 b3 4 5 b7 8 Blues 1 b3 #3 4 #4 5 b7 8

# Half-diminished chords

Chord Type	Scale Form
(half-diminished 7th (ø7) or	Locrian 1 b2 b3 4 b5 b6 b7 8 Locrian #2 — 1 2 b3 4 b5 b6 b7 8
minor 7th (b5) 1 b3 b5 b7	diminished (start with whole step) 1 2 b3 4 #4 #5 6 7 8 blues 1 b3 b3 4 #4 5 b7 8

## diminished chords

diminished 7th (o7) 1 b3 b5 6	diminished scale (start with whole step) 1 2 b3 4 #4 #5 6 7 8
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For specific information about the use of these scales I recommend any good improvisation method or scale book, i.e., *Jazz Improvisation* by David Baker, *The Complete Method for Improvisation* by Jerry Coker, *The Lydian Concept* by George Russell, *A New Approach To Ear Training for the Jazz Musician* by David Baker, *Scales for Jazz Improvisation* by Dan Haerle, etc.

For all serious players the best method for learning the correct use of the scales is through the study of recordings by the jazz giants. One method of pursuing this information is to isolate situations in various tunes that logically suggest a particular scale, as in the following examples:

**TAKE THE "A" TRAIN**

C D7#5 D- G7 C

suggests a whole tone scale

**CARAVAN**

C7 b9 Gø C7 b9 F-

suggests a diminished scale

**NICA'S DREAM**

Bb-Δ Ab-Δ Bb-Δ

suggests the use of ascending melodic minor scales

**DEWEY SQUARE**

Eb Ab-Db7 G- C7 F7 #11 Bb7 G- C7 F- Bb7

suggests a lydian dominant scale

Observe how established players play over those changes. It is advisable to transcribe those patterns and commit them to memory for future use. To locate those places in tunes (and what specific tunes), search various fake books, sheet music, play-along booklets, etc.

The following public domain patterns for whole tone and diminished scales were gleaned from various solos by the established giants. Study, learn, and use the patterns in your playing and personalize them. Once the player understands the technique, the process should then be used to build a vocabulary based on the other scales.

## 20 PUBLIC DOMAIN WHOLE-TONE PATTERNS

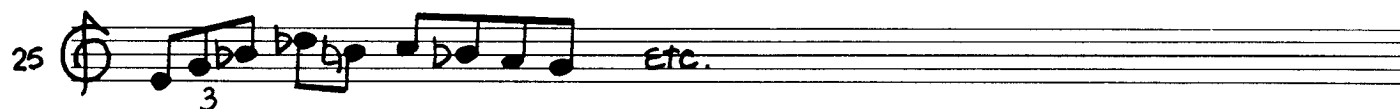
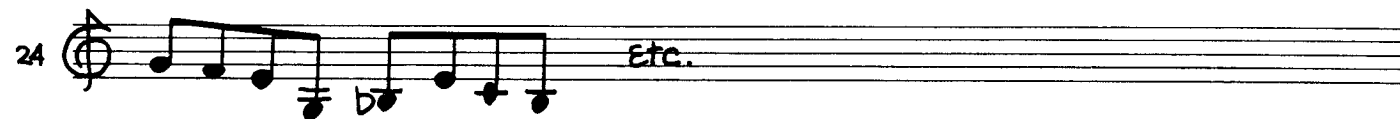
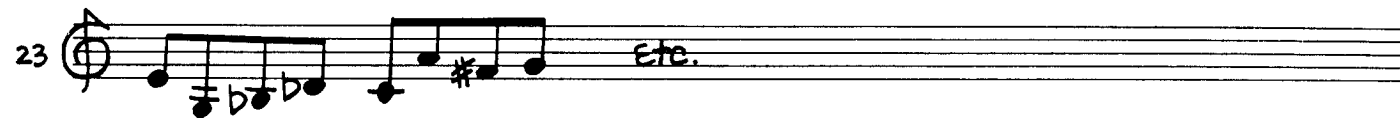
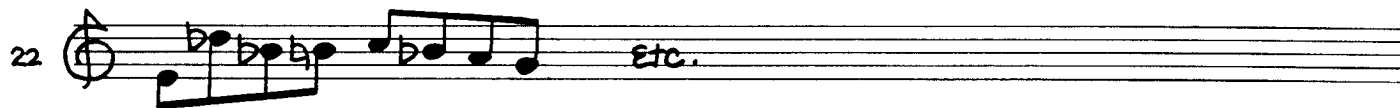
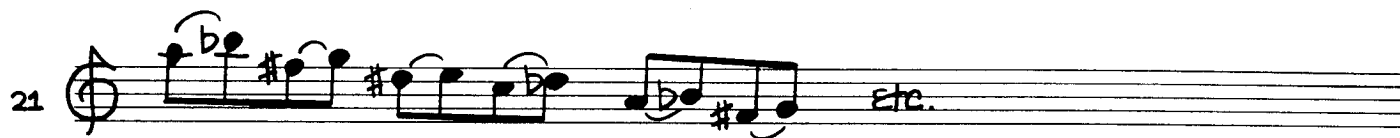
The image displays 20 musical patterns for whole-tone and diminished scales, organized into five groups of four staves each. Each group is numbered 1 through 5 on the left. The notation is in treble clef and includes various accidentals (sharps, flats, naturals) and note values (quarter, eighth, and sixteenth notes). The patterns are as follows:

- Group 1:** Four staves of music, each starting with a treble clef and a common time signature. The notes are:  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ ;  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ ;  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ ;  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ .
- Group 2:** Four staves of music, each starting with a treble clef and a common time signature. The notes are:  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ ;  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ ;  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ ;  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ .
- Group 3:** Four staves of music, each starting with a treble clef and a common time signature. The notes are:  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ ;  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ ;  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ ;  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ .
- Group 4:** Four staves of music, each starting with a treble clef and a common time signature. The notes are:  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ ;  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ ;  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ ;  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ .
- Group 5:** Four staves of music, each starting with a treble clef and a common time signature. The notes are:  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ ;  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ ;  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ ;  $C_4, D_4, E_4, F_4, G_4, A_4, B_4, C_5$ .









The reader may wish to practice the exercises in this book with the Jamey Aebersold jazz play-along records, particularly the following:

- Volume 3: The II V<sub>7</sub> Progression
- Volume 6: All Bird
- Volume 16: Turnarounds, Cycles & II/V<sub>7</sub>s
- Volume 21: Gettin' It Together
- Volume 24: Major & Minor