

# A Guide To Change Running

## (A Quick Overview)

### Forward

“It’s just music, it’s playing clean and looking for the pretty notes”  
- Charlie Parker

Regardless of how it’s labeled: “Change Running”, “Running the Changes”, “Making The Changes”, “Making the Harmony”, or “Achieving Harmonic Clarity”: playing melodies that reflect or imply, the harmony (chords) of a song, remains a challenge for most developing jazz improvisers. Hundreds of books and articles have been written to help musicians meet that challenge and for better or worse, the harmonic aspects of jazz improvisation have dominated jazz pedagogy. Often the sheer number and variety of approaches can be very confusing to a young student. The goal of this booklet is to: 1) clarify the problem; 2) explain the various approaches commonly used in the past; 3) discuss those that are less effective and explain why; and 4) highlight those which are most effective and demonstrate their shared common principles.

This booklet will generally address harmonically oriented jazz improvisation. That is, jazz improvisation performed over changes (chords). Although exceptions exist, in general, modern jazz improvisations contain single note melodies performed with a rhythm section, which includes a chording instrument (piano or guitar). Jazz solos, in the prevailing style today, contain one of three melodic/harmonic events:

**Jazz line that is consonant** to the underlying harmony (“sounds like the changes”, “implies the changes”, “fits with the changes”, etc.).

**Jazz line that is dissonant** (“outside”) to the underlying harmony, produced when an improviser implies an alternate or substitute harmony (chords or modes).

**Jazz line that is dissonant** (“outside”) to the underlying harmony, produced when an improviser purposely avoids the consonant notes.

Although “inside” playing and “outside” improvisation may sound radically different, the ability to do both with accuracy and musicality requires a solid understanding of jazz harmony the skill to manipulate note choices in real time. While the gifted few may be able to play inside and outside at will, relying solely on keen aural awareness and musical intuition; most improvisers develop the necessary skill through a thorough study of harmony and diligent practice. Usually some basic mastery of “inside” playing precedes more advanced approaches.

“Doing the exact opposite is still imitation” – Miles Davis

As a foundation, an understanding of chord construction, chord function, scales, modes, and chord/scale relationships is crucial. This must happen at the intellectual, aural and kinesthetic levels. Developing the link between what we are thinking, what we are hearing, and what our body (fingers, embouchure, voice) is trying to execute should be the focus of our practice sessions, until everything is integrated. Only then can we truly express ourselves with a level of freedom.

# Change Running

## Nine Approaches to Change Running

- 1) **Scale/Mode Soloing** – using the notes of each mode to build melodies.
- 2) **Scale Bracketing (Harmonic Generalization)** – using one mode or scale over a group of chords.
- 3) **Melodic Paraphrase** – using the basic melody of a song as material but changing or reinventing it to make it “jazzy” and personal.
- 4) **Riff Quoting** – using short “borrowed” riffs from jazz repertoire and inserting them into jazz progressions.
- 5) **Phrase Quoting** – using “borrowed” phrases from jazz solos and assembling them over changes to produce jazz lines.
- 6) **Chord Tone Soloing** – using the basic tones of the chords to build jazz lines.
- 7) **Ornamenting the Melody of the 3<sup>rd</sup>** – emphasizing the 3rds of chords to build jazz lines.
- 8) **Ornamenting the 7 to 3 resolution** – emphasizing the strong resolving tendencies of the 7<sup>th</sup> of minor and dominant chords to build jazz lines.
- 9) **Bebop Scale Soloing** – adding extra notes to the basic seven note scales to build jazz lines.

This booklet will discuss each of the approaches above, highlighting both their strengths and their weaknesses. Spoiler Alert: the last five are the ones that will be the most helpful for the majority of students.

## Four Approaches That Don't Quite Get The Job Done

**1) Scale/Mode Soloing** – important for intellectual and technical development but less than helpful at times in producing characteristic jazz solos.

Being able to play or sing the modes of the major scale, harmonic minor scale, and melodic minor scale is an important step in the technical development of a jazz musician. Unfortunately, relying just on scales and modes may produce melodies that are technically correct but stylistically uncharacteristic. In a way, scales and modes are just the “alphabet” of jazz, not the “vocabulary”. In order to build characteristic jazz lines, students need to explore how the notes of the scales and modes are used in real solos; to find the “words” of jazz. The common practice of writing the scale/mode under the chord symbol in lead sheets may only make it harder to sound characteristic. By itself, scale/mode soloing will not lead to successful change running.

**2) Scale Bracketing** – Excellent in some harmonic situations, problematic in others.

In certain situations using one scale (or mode) over a group of changes can be successful. On modal tunes or tunes being treated modally, it can be an excellent approach. In particular, compositions based on one or two modes (“So What” for example) can be played successfully by bracketing one or two scales. Although **Scale Bracketing** may give some beginning improvisers a better understanding of how chords function together in keys, it can often lead to unintended dissonance in lines. Students who possess a keen aural awareness may be able to produce harmonically accurate melodies with this approach, but for the majority of developing improvisers, scale bracketing may prove less than helpful.

### 3) **Melodic Paraphrase** – A crucial skill for all improvisers.

Being able to reinvent or personalize parts of the basic melody of a song or common jazz phrases is an important step in developing a unique musical personality or artistic voice. Developing the skill to reinvent (make changes in) a melody during an improvisation can create spontaneity, variety, and excitement. Melodic paraphrase, along with riff playing where the chief staples of jazz soloing in the “swing era”, and they are often overlooked by beginners or teachers working with beginners. The concept is not complicated, but execution is more difficult than one might guess. Until it is second nature, melodic paraphrase should be an important part of the daily routine. It is best learned through trial and error in the practice room, jam session, or on the bandstand. Figuring out what doesn’t work is equally as important as figuring out what does work.

Most song melodies contain at least one or two tones that have harmonic significance (suggest a particular chord). Some contain many (“All The Thing You Are” for example). Mature improvisers exploit those notes when soloing. Doing so provides important melodic “reminders” which can help make the solo more understandable to the audiences and band members. Melody tones that do not belong to the basic key of a song (non-diatonic) become powerful harmonic events, hinting at chord movement that has move away from the home key. Mature improvisers seldom neglect “non-diatonic color tones”.

### 4) **Riff Quoting** – Must be used sparingly.

Short riffs primarily drawn from blues material are an important part of jazz soloing. Unfortunately they don’t really work as change running material. The performance context and the repertoire are important with regard to use of riffs. If overused, solos can sound simplistic, if underused solos can sound academic.

Each of the four approaches above may be helpful to some degree, but the next five have been, for many students, a much better path to creative, harmonically accurate, and characteristic solos.

## **The following pages contain five effective approaches that can be used to develop change-running skill.**

Note: there is a fair amount of overlap in these five techniques. This is actually good in the long run, as each new approach reinforces the basic skill. Having multiple conceptions all aimed at the same goal is always a better approach than being locked into one single viewpoint. With consistent practice and study, the process can become totally intuitive and almost second nature in the mature improviser.

## 5) Phrase Quoting

A quick fix, but ultimately not the final answer.

Prior to Jerry Coker's *Improvising Jazz* and George Russell's *Lydian Chromatic Method* most jazz method books consisted of collections of jazz phrases (composed or borrowed) that a player could memorize and then re-assemble to make new solos. One of the more famous method books was *Louis Armstrong 44 Trumpet solos and 125 Jazz Breaks*. Some players still learn to play this way and it is not an invalid approach. As a quick way to "sound authentic" it can be very helpful. Most young improvisers go through this stage, at some point near the beginning: collecting phrases that they admire and then using them in solos.

The tradition of imitation is a common thread in jazz history: Bird imitated Lester Young, Trane imitated Bird, Roy Eldridge imitated Coleman Hawkins, Dizzy Gillespie imitated Roy Eldridge, and on and on. If scale/mode soloing uses the "alphabet" of jazz, then phrase quoting uses the "sentences" of jazz. Visitors to a new country, dealing with a foreign language, must have a number of "survival phrases" like: "where is the men's room?" or "where is the train station?". Improvisers new to jazz must likewise develop a repertoire of "jazz survival phrases". The trick, is to remember, that **Phrase Quoting** is only a preliminary step. To make a mature and personal statement in jazz performance, improvisers must go beyond this first step and learn to "break down" the language, understand the grammar of jazz line, and get to the "word level" of this music. Failing that, their solos will sound stiff, predictable, and banal.

"I'd rather be an extension, than a retention". – Curtis Fuller

### **Suggested Activities For Phrase Quoting:**

- 1) Study solos by the great "change runners" in jazz. Bird (Charles Christopher Parker) is the one of the best sources to begin with since so many have emulated his approach. Transcribe solos or use other resources such as the *Charlie Parker Omnibook*. Listen carefully, then play along with the solos. Some find memorization a needed step.
- 2) Make a menu of common phrases (short – one bar phrases first) that have strong harmonic content (sound like the underlining chord) and begin transposing them to 12 keys. Write them down in a small notebook. You may, at first, need write them out in 12 keys (but only for a time). Work to get them into your ears, fingers, and voice (yes, all jazz musicians should be able to sing what they play). For singers, playing this material on a secondary instrument (like a keyboard) is highly recommended.
- 3) Construct written solos using phrases from your menu of licks. Leave space between the phrases at first. Later fill in the spaces between with connecting line (steps or skips).
- 4) Do the same as #3 but improvising solos.

## 6) Chord Tone Soloing

An effective and often overlooked approach.

The principles of **Chord Tone Soloing** are drawn from basic compositional practices that have been in use for centuries. Jazz solos from the bebop era (by players like Charlie Parker) contain a great deal of chord tone soloing. However, the ornate nature of bebop soloing sometimes disguises the more simple and basic chord tone soloing techniques that underpin it. Some find careful study of “prebop” solos, which are less ornamental, to be helpful in understanding the approach. Remember, Parker and many others from that era learned to play jazz in the late 1930s, during the swing era. Parker’s greatest influences are generally recognized as the great tenor players of his youth: Lester Young and Coleman Hawkins. There is also evidence that he admired and borrowed musically from the clarinetist Benny Goodman. In the “swing era”, solo material was drawn primarily from: 1) melodic paraphrase, 2) chord tone soloing, and 3) blues riffs. Young, Hawkins, and Goodman exploited all of those. Checking them out is time well spent.

### Chord Tone Soloing Explained

Lines produced in **Chord Tone Soloing** are not limited to chord tones but in generally exploit the root, 3<sup>rd</sup>, 5<sup>th</sup>, and 7<sup>th</sup> of the chord. The 6<sup>th</sup> is often considered a chord tone for chords which function as tonic I chords (both major and minor). 9ths (including b9 and +9) and 11ths are considered usable tension notes at times. Dissonant tensions are usually tones that lie ½ step above a chord tone, and the most common dissonant tensions are 4 and b6. When dominants resolve to tonics, flat nines and sharp nines are more commonly used than the natural 9<sup>th</sup> (this is often overlooked by young players).

Chord Type	Function	Chord Tones	Dissonant Tensions	Possible Usable Tensions
Major 7th	I	1, 3, 5, 7 (and 6)	4 (sometimes 1)	9
Minor 7th	I	1, b3, 5, 6, b7 or #7	b6	9, 11
Dominant	V7	1, 3, 5, 6, b7	4 and b6	9 (also b9 and +9)
Minor 7th	II	1, b3, 5, b7	6	9, 11
Ø7	II	1, b3, b5, b7	b9 and 6	9, 11

### Guidelines for Chord Tone Soloing


1. Whenever possible put chord tones on downbeats.
2. Avoid lines that “skip” from one non-chord tone to another (including the 11<sup>th</sup> and 13<sup>th</sup>).
3. At the point of chord change always connect by step or from chord tone to chord tone.
4. Stressed non-chord tones should resolve into chord tones (1,3,5, and 7)
5. Include the 3<sup>rd</sup> to ensure complete suggestion of the chord
6. Omit the root (or avoid stressing it) to avoid “heaviness”.
7. Use 8<sup>th</sup> note motion predominantly.
8. Add triplets for rhythmic interest (common on beats 2 and 4)
9. Use ornamentation to disguise the simple chord forms and maintain variety.

Dissonant tension notes and notes not in the chord/scale are often used, but they must be handled with care in order to maintain the sound of the basic chord and avoid dissonance.


**The Basic Chord Forms can be organized into five types:**

**Basic Chord Tone Forms on an FMaj7**


#1 Ascending Arpeggio




#2 Descending Arpeggio




#3 Ascending Inversion



Descending Inversion



#5 Scrambled Form



**Basic Chord Tone Form #1 – Ascending Arpeggio (1357, 3579)**

Variations of Form #1

F<sup>Maj7</sup> Triplet on beat 2      Omitting the Root      F<sup>Maj7</sup> Omitting the Root and triplet on beat 2

Common Ornaments of Form #1

Approach Tone to Root      Chromatic Approach to 3rd      Enclosure of Root      Enclosure of 3rd

**Basic Chord Form #2 – Descending Arpeggio (7351, 9735)**

Variation of Form #2      Common Ornaments of Form #2

F<sup>Maj7</sup> Triplet on beat 2      Chromatic Approach to 9th      Double Chromatic Approach to 7      Double Chromatic Approach to 9th

F<sup>Maj7</sup>      F<sup>Maj7</sup>      F<sup>Maj7</sup>      F<sup>Maj7</sup>

**Basic Chord Form #3 – Ascending Inversion (7135, 2357)** The Ascending inversion is basically the same as the ascending arpeggio with a diatonic approach tone added to the beginning.

**Basic Chord Form #4 – Descending Inversion (5317, 7352, 9754)**

Descending Inversion - Three Variations with common resolutions

F<sup>7</sup> From 5      F<sup>7</sup> From 7      F<sup>7</sup> From 9

**Basic Form #5 – Scrambled Forms**

Although there could be as many as 24 different ways to scramble a four-note chord, scrambled forms in bebop oriented lines are somewhat rare. Here are four that are fairly common.

F<sup>7</sup>      F<sup>7</sup>      F<sup>7</sup>      F<sup>7</sup>

4 3 5 4—      3 2 3 4—      5 3 7 1 6      2 3 4 1 2

**Suggested Activities for Chord Tone Soloing:**

- 1) Study solos by great change runners to discover the principles of chord tone soloing at work in real music.
- 2) Make a menu of basic chord tone soloing forms.
- 3) Practice the basic forms over common chord qualities.
- 4) Practice the basic forms over common progressions (start with blues and basic II V songs).
- 5) Compose and improvise solos using chord tone soloing ideas.

## 7) Ornamenting the Melody of the 3<sup>rd</sup>

(An easy way to build harmonic clarity.)

**For beginning and intermediate improvisers, the most useful note is the 3<sup>rd</sup> of the chord.**

The root of the chord provides the foundation of the harmony by notifying the listener as to the location of the chord. In jazz, roots are provided by the bass player. The soloist, by playing other notes (color notes) tells the listener the quality (or color) of the harmony. The 3<sup>rd</sup> of the chord is the strongest color tone. Although the 7<sup>th</sup> is often mentioned along with the 3<sup>rd</sup> as an important color tone, it's true strength is only revealed in relation to the 3<sup>rd</sup>. Play a progression at the keyboard with roots in the left hand and 3 and 7 in the right. Then play only roots and 7ths, then only roots and 3rds. I think you will agree that the most complete sound (with only two notes) is: roots and 3rds. Improvisers emphasize the 3<sup>rd</sup> (or any color tone) in one of five ways:

Certain notes can be made more prominent to the listener by:

1. Making them longer than other notes (not always practical in 8th note bebop).
2. Making them the first or last note of a phrase.
3. Making them the high or low note in a phrase.
4. Placing them on a strong downbeat (one, 2, 3 or 4 in common time).
5. Drawing attention to it through a dissonant ornament leading into it.

(Guidelines for Achieving Harmonic Clarity From Chapter 8 of *Building A Jazz Vocabulary*)

### Placing 3rds on Downbeats

In jazz, meter and harmony are “wedded” (closely related). Notes on the strong beats (beat one and three primarily, three and four secondarily) have a more harmonic significance than those on the upbeats (and of one, and of two, etc.). If the notes on strong beats are consonant, the line will sound like the changes (even if the upbeats are dissonant), if the notes on the strong beats are dissonant, the line will not sound like the changes (even if the upbeats are consonant). Even the strongest harmonically related line played out of sync with the pulse and meter may sound dissonant. “Right Notes” need to be played at the “Right Time” in order to sound “Right”. In more advanced playing the “right notes” may be dissonant, but the same principles of pulse and harmony being “wedded” remains. An accurate time feel is key in effective change running (but will be covered in another booklet).

### The Melody of the 3<sup>rd</sup> (my term)

The thirds of the chords of a progression make a slow moving melody: the **Melody of the 3<sup>rd</sup>**. Some tunes rely heavily on this melody. *All the Things You Are* by Jerome Kern is almost entirely composed of the 3rds of each chord. *How High the Moon* and *Autumn Leaves* both exploit the 3rds to a large degree. The Melody of the 3<sup>rd</sup>, by itself, is a bit too simple to be an effective jazz line so notes must be added around it (before it, and after it) to dress it up, or ornament it. Once a melody of the 3<sup>rd</sup> is in the memory, and a few ornaments are mastered, good strong jazz lines will emerge.

### The Strongest Ornaments: 4 to 3, and 2 to 3

In music the strongest melodic unit is the step, and the most powerful melodic resolution in music is by step (see *Hindemith Craft of Composition*). **The two most powerful resolutions into the 3<sup>rd</sup>, are from a step above or a step below;** and of the two the one from above has more strength. Often in jazz line, the step below the third is preceded by the note a step above. This is called a diatonic enclosure.

## There are only two kinds of thirds: Major and Minor

Major and Dominants (any kind) share the same type of third: **Major 3<sup>rd</sup>**.

Minors, Half-Diminished, Fully Diminished share the same type of third: **Minor 3<sup>rd</sup>**.

## There are two kinds of ornaments: Diatonic and Chromatic

Diatonic ornaments use notes from the scale or mode associated with the chord symbol. Chromatic ornaments use notes from the chromatic scale. Here is a table of the most common diatonic and chromatic ornaments.

**Basic Diatonic Ornaments Into 3rds (Major and Minor)**

Diatonic Ornaments Into Major 3rds

Diatonic Ornaments Into Minor 3rds

**Basic Chromatic Ornaments Into 3rds (Major and Minor)**

Chromatic Ornaments Into Major 3rds

Chromatic Ornaments Into Minor 3rds

### Suggested Activities:

- 1) Study solos by great change runners. Look for the thirds of each chord and notice how they are ornamented.
- 2) Practice the basic ornaments listed above over various progressions.
- 3) Compose and perform solos built first on the melody of the 3<sup>rd</sup> and strong ornamentation. Connect the ornaments and their thirds with good connecting melody.



## 8) Ornamenting the 7 to 3 Resolution

(The foundational melody in most change running on the II V Progression)

The II V I is extremely common in jazz since the bebop era. During that time, for a number of reasons, jazz musicians began to write new songs or adapt old ones which replaced dominant chords with II V progressions.

### The 7 to 3 is the main connecting melody in the II V I.

The example below shows a typical piano voicing of the II-V-I in the key of G Major. Other than the root motion the only other change in notes is that the 7 of II moves to 3 of V, then the 7 of V moves to 3 of I. The “7 to 3” resolution is the main connecting melody between the three chords.

The diagram shows piano voicings for three chords: A-7, D7, and GMaj7. The top staff shows the chord symbols and their voicings. The bottom staff shows the 7th of the previous chord moving to the 3rd of the next chord, labeled "7 to 3".

### Using the 7 to 3 Without Ornamentation

Even without ornamentation the 7 to 3 can sound very complete and melodically satisfying. The song “Tea For Two” uses 7 to 3 as its basic melodic motif. Often when the changes are quick a simple reinvention of the 7 to 3 is very effective.

The diagram shows the melody for “Tea For Two” in the key of D major. The top staff shows the melody with notes 7 and 3. The bottom staff shows the piano voicings for D-7 and G7.

### Ornamenting the 7 to 3 – “Three In/Two Out”

Using the 7 to 3 as a basic melody to which ornamentation can be added is very common in jazz “change running” since the 1940s. I suggest a simple method of ornamentation, which I call “**Three In/Two Out**”. It can be easily explained:

Think of the 7 to 3 as a “doorway” through which our melodies must pass if we want give the listener the complete sound of the II V.

The diagram shows the “Three In/Two Out” ornamentation. The top staff shows the melody with notes 7 and 3. The bottom staff shows the piano voicings for D-7 and G7.

There are three melodies over the II chord that all take us to the doorway (to the 7<sup>th</sup>).  
 First Way In - 1-3-5-7, (Root, 3<sup>rd</sup>, 5<sup>th</sup> and 7<sup>th</sup>s of the II Chord)  
 Second Way In - 3-2-1-7 (3<sup>rd</sup>, 2<sup>nd</sup>, Root, and 7<sup>th</sup> of the II Chord)  
 Third Way In - 5-3-1-7 (5<sup>th</sup>, 3<sup>rd</sup>, Root, and 7<sup>th</sup> of the II Chord)

Three musical staves showing different ways to enter the II chord (D-7 to G7). Each staff is labeled with 'D-7' and 'G7' above it. The first staff shows the 'First Way In' (1-3-5-7), the second shows the 'Second Way In' (3-2-1-7), and the third shows the 'Third Way In' (5-3-1-7).

There are two melodies over the V chord that each take us out of the doorway (from the 3<sup>rd</sup>).  
 First Way Out - 3-5-7-9 (3<sup>rd</sup>, 5<sup>th</sup>, 7<sup>th</sup>, and 9<sup>th</sup> of the V Chord)  
 Second Way Out - (3<sup>rd</sup>, 2<sup>nd</sup>, Root, and 7<sup>th</sup> of the V Chord)

Two musical staves showing different ways to exit the V chord (D-7 to G7 to CMaj7). Each staff is labeled with 'D-7', 'G7', and 'CMaj7' above it. The first staff shows the 'First Way Out' (3-5-7-9) and the second shows the 'Second Way Out' (3-2-1-7).

- 1) These melodies can be applied to II-Vs in Major and Minor keys (with some accidentals).
- 2) The 3 “Ins” can be combined with any of the two “outs” to make 6 “raw patterns”.

Six musical staves showing raw patterns combining 'ins' and 'outs'. Each staff is labeled with a pattern name in a box: '1In/1Out', '2In/1Out', '3In/1Out', '1In/2Out', '2In/2Out', and '3In/2Out'. The chords are labeled above each staff: D-7, G7, CMaj7, Dø7, G7b9, C-7.

- 3) The raw patterns can be ornamented and reinvented in a number of ways.
  - A) Notes can be added in front, in back, or in the middle of the raw patterns.
  - B) Octave displacement of parts of any pattern can be used to disguise the melody.
  - C) They can be played in any rhythmic sub-division that is appropriate to the music.
  - D) They may be truncated, with many notes left out.
  - E) Octave displacement is common to avoid extreme registers. The two most common ones are in the ways out. The last three notes of the 1st way out are often dropped down and the last three notes of the 2<sup>nd</sup> way out are played an octave higher.

A musical staff showing a combined raw pattern. The chords are labeled above: D-7, G7, CMaj7, D-7, G7, CMaj7. The melody consists of two phrases, each starting with a 'way in' and ending with a 'way out'.

To use “3in/2out” patterns artfully, students are advised to listen to and study “change running” types of solos. Try to identify how and when these melodies are being used. Remember they are often highly disguised (through the methods mentioned earlier) and you may not see or hear them right away. Look for the 7 to 3 melody first and then notice how it is ornamented. Often a Bird solo will have 20 or more per page.

**The 7 to 3 melody sounds well over both the II chord and the V chord.**

This is a very important thing to remember. Each of the patterns works equally well over an isolated II-7 or V7. Therefore they can be played anywhere during the duration of the II V7 progression.

Pattern works anywhere during the II-7 V7

Beginning

End

Middle

Be careful with the 2<sup>nd</sup> way out.

2nd Way Out can sound awkward if it resolves to 3 of IMaj7 to soon.

A common solution is to add a passing note so that the pattern lands on 7 of the V7.

Practice the raw patterns in all twelve keys before trying to “plug” them in on a tune. Try to master them in eighth notes at a fairly fast tempo so you are forced to think (and hear) them as a unit (a small complete sentence) not as separate notes. After some diligent practice you should begin to incorporate them into your lines without being too obvious. Study transcriptions for ideas on how to add ornamentation, displace them rhythmically, and truncate them. In songs with extended II V7s or extended dominants and dorian sounds you may find it easy to fire off two or three 7 to 3 sentences in a row.

**Some Things To Avoid: (Common Tendencies of Young Players)**

Don't overuse the same raw pattern beginning on beat one. Use rhythmic displacement to add variety. Don't play the same pattern over sequential II V7s. It is too obvious.

## 9) Bebop Scales (Finding and using the “Extra Notes”)

### Chromaticism in Music

American music in the middle of the 19<sup>th</sup> century was for the most part completely “diatonic”, that is it contained no “chromaticism”. Melodies during this era were generally built from seven note scales, however by the 1880’s and 1890’s American music, in particular march music and ragtime, began to incorporate melodic chromaticism. These extra “chromatic” notes were primarily “ornamental” and used as passing notes. Popular songs of the early 1900’s show similar melodic constructions. Jazz from the second and third decade of the 20<sup>th</sup> century is sprinkled liberally with “extra notes” both as passing chromaticism and as “blue notes”, but it is in the late 30’s and early 40’s (the bebop era) that they (passing chromatic notes) became a central element in jazz melody. For this reason they are often called “bebop scales”.

### Why Did Bebop Music Need Extra Notes?

The primary rhythmic unit in bebop soloing is 8<sup>th</sup> notes. Creating solos in 8<sup>th</sup> notes is difficult if you are only using seven note scales. Melodies can be awkward and “unbalanced”. Early beboppers such as Charlie Parker and Dizzy Gillespie drew heavily from swing players such as Lester Young and Roy Eldridge both of whom were masters at adding “extra notes”, however Bird (Charlie Parker) and Dizzy Gillespie (among others) took it quite a few steps further. Much later, jazz educators codified these melodic constructions and gave them the label: “bebop scales”. The work of David Baker and Barry Harris is the most significant in this area.

David Baker in his book *How To Play Bebop* identifies four bebop scales. They each have a distinct harmonic application and are built by adding one extra note to a basic mode of the major scale. The added note is underlined in the chart below.

Chord Type	Chord Symbol	Basic Mode Name	Bebop Scale Name	Bebop Scale (Notes)
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Major 7th	CMaj7	Ionian	Major Bebop	C D E F G <u>G#</u> A B C
Dominant 7th	C7	Mixolydian	Mixolydian Bebop	C D E F G A Bb <u>B</u> C
Minor 7th	C-7	Dorian	Dorian Bebop	C D Eb <u>E</u> F G A Bb C
Half-Diminished 7th	CØ7	Locrian	Locrian Bebop	C Db Eb F Gb <u>G</u> Ab Bb C

The image displays four pairs of musical staves, each representing a different bebop scale. The top staff of each pair shows the basic mode (Major, Mixolydian, Dorian, or Locrian) and the bottom staff shows the corresponding bebop scale, with the extra note underlined. The scales are: Major Bebop (C D E F G G# A B C), Mixolydian Bebop (C D E F G A Bb B C), Dorian Bebop (C D Eb E F G A Bb C), and Locrian Bebop (C Db Eb F Gb G Ab Bb C).

To make our work a bit easier it is useful to notice that three of the above scales are actually modes of each other. The Mixolydian, Dorian and Locrian bebop have the same combination of whole and half steps. There is a similar connection between their related chords. In the chart below there are three chords: C7, G-7, and E $\emptyset$ 7. If we think of C7 being a V7 chord then the G-7 is its related II-7 chord (a very common grouping in bebop jazz). And E $\emptyset$ 7 can be thought of as being the top part of a C9 chord.

The image shows three musical staves, each representing a different bebop scale. The first staff is labeled 'C7' and starts at measure 17. The second staff is labeled 'G-7' and starts at measure 19. The third staff is labeled 'E $\emptyset$ 7' and starts at measure 21. Each staff shows a sequence of notes in eighth notes, with some notes beamed together. The scales are: C7 (C4, D4, E4, F4, G4, A4, Bb4, C5), G-7 (G4, A4, Bb4, C5, D5, E5, F5, G5), and E $\emptyset$ 7 (E4, F4, G4, Ab4, Bb4, C5, D5, E5).

### Using The Scales In Solos

Like everything in jazz, bebop scales are best learned through modeling (listening and imitation). Practicing the raw scales is helpful, but drawing bebop scale vocabulary from solos will be more effective. Charlie Parker is considered one of the chief inventors of bebop and his solos are loaded with “bebop scale” melodies. Sonny Stitt, John Coltrane (in his early career), Miles Davis, Cannonball Adderley, Blue Mitchell, and Freddie Hubbard are also great resources.

### Some Helpful Hints About Bebop Scales

Bebop scales make it easier to build jazz lines which have rhythmic and harmonic stability. Remember these simple principles (from David Baker’s *How To Play Bebop*):

When bebop scale lines are started with a chord tone, on a downbeat (remember the 6<sup>th</sup> is a chord tone on the Major Bebop Scale) and played in eighth notes, chord tones will be maintained on downbeats, and the melodies produced will imply the underlying harmony.

The image shows a single musical staff with a treble clef and a common time signature. It illustrates a bebop scale line for C7. The line starts on a downbeat with a C4 note, followed by eighth notes: D4, E4, F4, G4, A4, Bb4, C5. There is a whole rest on the next downbeat, followed by another eighth-note sequence: G4, A4, Bb4, C5, D5, E5, F5, G5. The staff is labeled 'C7' at the beginning and 'C7' above the second measure.

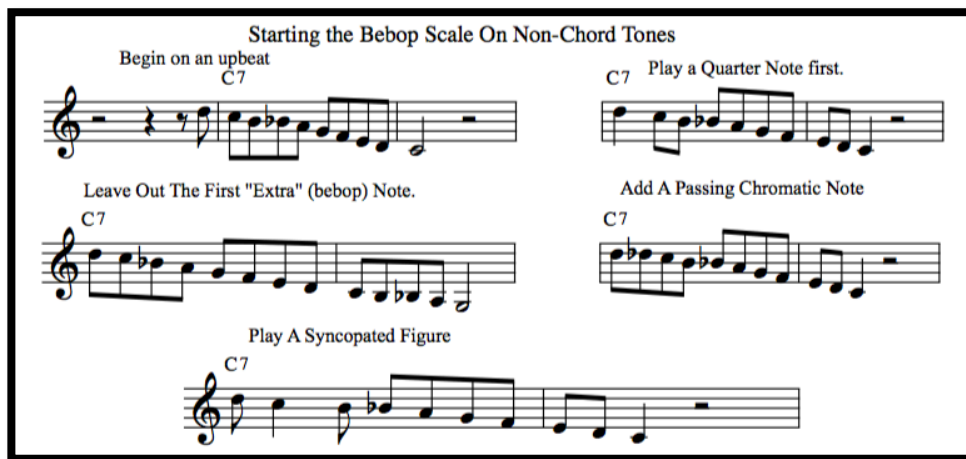
If the line starts on a chord tone, stays within the bebop scale, and remains in 8<sup>th</sup> notes, chord tones will be

maintained on downbeats. Regardless of any change of direction, chord tones will continue to land on strong beats (1, 2, 3, or 4 in 4/4) presenting a clear implication of the harmony.

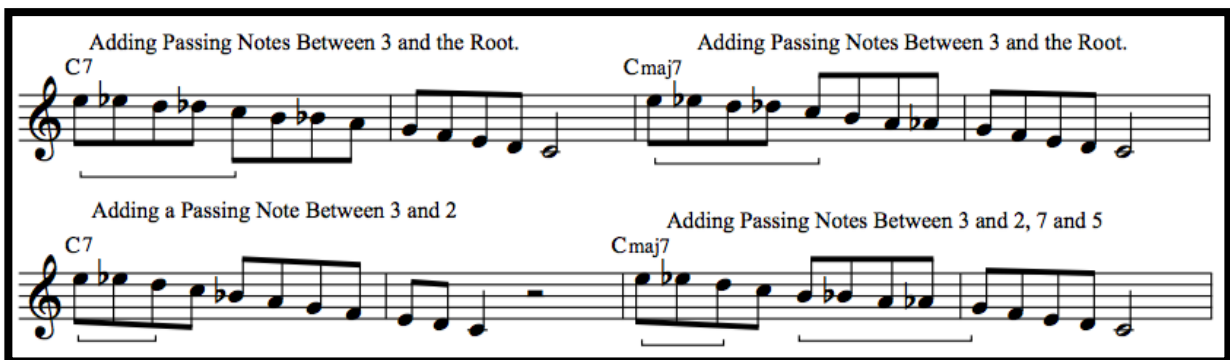


If the line needs to start on a non-chord tone, one of the following must happen to regain harmonic balance:

- 1 – the line can start on an upbeat (“and” of the beat).
- 2 – the line can start with a quarter note.
- 3 – the line can omit the extra bebop note (one time) to restore balance.
- 4 – the line can start with a syncopation
- 5 – the line can include one extra passing note to restore balance.



At times extra notes are added to the basic bebop scales. Barry Harris, in his video *The Barry Harris Workshop Video* presents many exercises that add additional chromatic passing notes between the 3<sup>rd</sup> and root, of both the Mixolydian Bebop Scale the Major Bebop Scale. Below are just a few of the common combinations.



## Getting Started With Bebop Scales

Before attempting to use bebop scales in solos, it is important to gain a certain amount of facility with the raw scales. Practice the scales up and down from each chord tone. (Building A Jazz Vocabulary has some excellent exercises on bebop scales).

It may be helpful to begin by playing just the spot in each scale that has the extra notes (87b7 for Mixolydian and 5#56 for Major). Try running down from the root on the Mixolydian and up from the 5<sup>th</sup> on Majors. Remember the Dorian and Mixolydian are modes of each other so you can take every II V7 and reduce it to a V7 chord. Below is an example of the work procedure over the changes to Ornithology (first 8 bars).

The image shows two staves of music for the first 8 bars of Ornithology. The first staff shows the chord changes: G Maj7, G-7, C7, F Maj7, F-7, and Bb7. The notes for each chord are written as whole notes. The second staff shows the bebop scale for each chord: G Maj7 (upward), G-7 (downward), F Maj7 (upward), and F-7 (downward). The notes are written as eighth notes, and the scales are connected by slurs. The Bb7 chord is not shown in the second staff.

Once you are comfortable with the basic notes of each scale work to turn it into music through rhythmic displacement, use of space and interesting phrasing.

## A Final Word

**“To improve is to change. To be perfect is to change often.” – Winston Churchill**

The techniques covered in the booklet represent common approaches that have worked well for many in the past. There are others, and to some degree each improviser finds his or her own way to understand and master the skill. Avoid being locked into one particular concept or technique. Winston Churchill said: “To improve is to change. To be perfect is to change often.” What worked well for you yesterday may not be what you need today.

Check out these other resources:

- Inside Improvisation Volume 3 “Jazz Line” by Jerry Bergonzi
- Inside Improvisation Volume 6 “Developing a Jazz Language” by Jerry Bergonzi
- How To Play Bebop by David Baker
- The Elements of the Jazz Language by Jerry Coker
- Magic Motives by Dan Haerle
- How to Practice by Jerry Coker
- Building A Jazz Vocabulary by Mike Steinel
- Aebersold Play Along Volume 3 by Jamey Aebersold