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The Jazz Theory Book by Mark Levine

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Metronome All Stars–1949, Billy Bauer (guitar), Eddie Safranski (bass), Charlie Parker (alto), Lennie Tristano (piano)	©Herman Leonard All Rights Reserved	i
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Author's Note

I was fortunate to have some great teachers. A New York jazz pianist, Joe Pace, introduced me to the beauty of the II-V-I progression. I spent two years studying with the great Jak[illegible] followed by a year with Hall Overton, who knew more about T[illegible] music[1] than anyone else at that time, and was a pr[illegible]acher. I spent a year or so studying with Herb Pome[illegible]reat jazz educators. I learned more in a single afte[illegible] is found in most jazz harmony books. Most o[illegible] is from the masters themselves, by transcribing[illegible] Every great jazz musician has gotten the best p[illegible] by transcribing. Learn how to do it early and sk[illegible]

ucky enough to work with, and learn from, W[illegible], Dave Liebman, Sonny Stitt, Milt Jackson, [illegible]der, Carmen McRae, Art Pepper, Charlie [illegible]tamaria, and Luis Gasca.

[illegible] may have about this book. P[illegible] Write [illegible], Chuck Sher:

[illegible]

[1] Hall helped Monk with the big band arrangements for Monk's 1959 album *At Town Hall,* Fantasy Records.

Acknowledgements

Although the author usually gets all the credit, books are a collaborative effort. In the case of this book, that's an understatement. Many friends and colleagues helped immensely on this project, and I'd like to thank each of them.

To Chuck Sher, my publisher, thanks for your constant support and encouragement from start to finish. To Gypsy Zaboroskie, layout and design editor, thanks for making the book look so beautiful and friendly, and for your consistent good humor and unflappability in the midst of calamities such as earthquakes and the baseball strike. To Deborah Craig, text editor, thanks for being flexible, nit-picky, and cheery, all at the same time. To Chuck Gee, music editor, thanks for making the conversion from DMCS to Finale easy as pie, and for being a second pair of eyes for me.

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Thanks to the photographers—Lee Tanner, Tom Copi, Herman Leonard, Bruce Polonksy, K. Gypsy Zaboroskie, David Belove, and Michael Handler—for your beautiful contributions. Thanks to Tom Madden, owner of *Jazz Quarter,* the hippest jazz record store in San Francisco, for your invaluable help. Thanks to Michael McIntosh, Harvey Wainapel, Bud Spangler, David Belove, Carol Bach-Y-Rita, Dave Matthews, Robbie Kwock, John Worley, George Hughes, and John Santos for help in tracking down elusive bits of discography.

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Thanks to my teachers—Joe Pace, Jaki Byard, Herb Pomeroy, and Hall Overton—for starting me down the right path.

And last, but far from least, thanks to Deborra and Si for putting up with me while I wrote the book.

Introduction

A great jazz solo consists of:

1% magic

99% stuff that is

Explainable
Analyzable
Categorizeable
Doable

This book is mostly about the 99% stuff.

There is no one single, all inclusive "jazz theory." In fact, that's why the subject is called jazz *theory* rather than jazz *truth*. The only truth is in the music itself. "Theory" is the little intellectual dance we do around the music, attempting to come up with rules so we can understand why Charlie Parker and John Coltrane sounded the way they did. There are almost as many "jazz theories" as there are jazz musicians.

Having said this, it's OK to come back to reality and state that there *is* a common thread of development in jazz theory, a thread that has evolved logically from the earliest days of jazz through Louis Armstrong, James P. Johnson, Duke Ellington, Art Tatum, Lester Young, Charlie Parker, Thelonious Monk, John Coltrane, Bobby Hutcherson, Wayne Shorter, McCoy Tyner, Joe Henderson, to Mulgrew Miller and beyond. All these musicians could have played with each other and understood one another, even though their terminology may have differed. Louis Armstrong recorded with Duke Ellington,[1] Duke Ellington recorded with John Coltrane,[2] and all three sounded as though they enjoyed the encounters.

Charlie Parker once said "learn the changes and then forget them." As you study jazz theory, be aware of what your ultimate goal is in terms of what he said: *to get beyond theory.*

When you're listening to a great solo, the player is *not* thinking "II-V-I," "blues lick," "AABA," "altered scale," and so forth. He or she has done that already, many years ago. Experienced musicians have internalized this information to the point that they no longer have to think about it very much, if at all. The great players have also learned what the chords and the scales *look and feel like* on their instrument. Be aware of what your eyes *see* and what your hands *feel* when you play. Do this just as much as you focus your mind on the mental stuff, and you'll get *beyond theory*—where you just flow with the music. Aim for that state of grace, when you no longer have to think about theory, and you'll find it much easier to tap into the magical 1%.

In order to reach this point of mastery, you'll have to think about—and practice—theory a great deal. That's the 99% part.

---

[1] Louis Armstrong and Duke Ellington, *The Great Reunion,* Vogue, 1961.
[2] *Duke Ellington and John Coltrane,* MCA/Impulse, 1962.

The Piano

Many of the examples in the book are written for piano. You don't need any "piano technique" to use this book. You just need to be able to read the notes. Because many people reading this book won't be pianists, many of the piano transcriptions have been simplified, and are marked as such. If a piano example looks too difficult for you to decipher, have your teacher or a piano-playing friend play it for you.

Unlike other instruments, the piano lets you "see" what you play, and that makes it easier to put all the pieces together. *Almost all the great jazz players, regardless of instrument, play some piano.* This includes Max Roach, Woody Shaw, Clifford Brown, Kenny Dorham, Joe Henderson, Art Blakey, Sonny Rollins, Hank Mobley, Benny Carter, Coleman Hawkins, Freddie Hubbard, Kenny Clarke, Dizzy Gillespie, Miles Davis, Philly Joe Jones, Carmen McRae, and Fats Navarro, just to name a few. Some of them played well enough to record on piano, including bassist Charles Mingus,[3] and drummers Jack DeJohnette[4] and Joe Chambers.[5]

How Good Do You Want To Be?

There are certain prerequisites for a becoming a good jazz musician. You must have:

Talent (ears, time, a sense of form)
Direction (exposure to the right music for you)
Education (teachers, mentors)
Ambition

Number 4—ambition—is perhaps the most important of all. I don't mean ambition in the sense of wanting to be a star, but in the sense of *having the will, desire, and stamina to practice*. If you don't have this quality, all the talent in the world means nothing.

As you go through this book, lots of questions will come to mind, and perhaps you'll have the good fortune to have a teacher or mentor that can answer them. A good thing to remember, however, is that *the answer to all your questions is in your living room.* Your CD or record collection contains the history, theory, and practice of jazz. Almost all the great jazz musicians of the modern era learned most of their "licks," and gained most of their theoretical knowledge, from listening, transcribing, and analyzing tunes and solos from records. Start learning how to transcribe now. It may seem difficult at first, but the more you do it, the easier it gets.

Good luck, and don't forget to practice today.

[3] Charles Mingus, *Mingus Plays Piano,* Mobile Fidelity, 1964.
[4] Jack DeJohnette, *The Piano Album,* Landmark, 1985.
[5] Joe Chambers and Larry Young, *Double Exposure,* Muse, 1977.

A Note on Terminology and Chord Symbols

Most working jazz musicians prefer easy-to-read shorthand symbols. Both G7alt and

(♭13)
(♯11)
(♯9)
G7(♭9)

mean the same thing. Which would you rather read?

For the beginner, jazz presents a bewildering array of chord symbols. You will soon find out that they are just different ways of writing the same few chords. There is no one single set of standard chord symbols. The lack of a universally agreed-upon set of symbols is not a bad thing at all. Jazz is a living, breathing, growing, constantly evolving art, and its changing terminology reflects this.

A C major 7th chord can be notated as Cmaj7, CM7, C6, C^{9}_{6}, or CΔ, and they all mean pretty much the same thing. Many jazz musicians just write C. In this book I'll write C major 7th as CΔ.

A D minor 7th chord can be notated as D-7, Dm7, or Dmi7. I like to use the minus sign, as in D-7.

The plus (+) symbol (C7+11) and the sharp (♯) symbol ($C7^{\sharp 11}$) both mean the same thing: Raise a note (the 11th, in this case) a half-step. I'll use the ♯ symbol in this book.

The flat (♭) symbol ($C7^{\flat 9}$) and the minus (-) sign (C7-9) both mean the same thing: Lower a note (the 9th, in this case) a half-step. I prefer the flat symbol.

The 4th and 11th are the same note in a chord. I like to use 4 on major and sus chords ($C\Delta^{\sharp 4}$, Csus4), and 11 on dominant and minor chords ($C7^{\sharp 11}$, C-11).

The 6th and 13th are the same note within a chord. Standard practice is to use 6 on major and minor chords (C6, C-6), and 13 on dominant chords ($C7^{\flat 13}$).

Many piano and guitar voicings for major 7th chords don't include the major 7th. You'll see an occasional "CΔ" chord in this book with no major 7th in the voicing shown.

I use abbreviated numbers—such as "3rd," "5th," "7th," and so on—when referring to *intervals and notes in a specific chord,* such as "the 5th of the G7 chord." I spell out the number as a word—such as "third," "fifth," "seventh"—when refering to anything else, such as "the fourth mode of C major," "the cycle of fifths," "the seventh note of the scale," and so on.

Jazz musicians use the terms "scale" and "mode" interchangeably, and I will do the same. I make a distinction when the mode is in direct reference to its parent scale, as in "the D Dorian mode of the C major scale."

All the examples in this book are written in concert key. B♭ and E♭ instruments, if you are playing along with the original recording, don't forget to transpose accordingly. Examples originally played by bass clef instruments (trombone and bass) are shown in the bass clef. A few piano examples have been transposed down an octave so you don't have to read too many ledger lines.

Glossary

Aeolian The sixth mode of the major scale, also known as the natural minor scale.

alteration (AKA altered note) The ♭9, ♯9, ♯11, ♭5, ♯5, ♭13 of a chord.

altered mode The seventh mode of the melodic minor scale.

"avoid" note A note from the scale of a chord that sounds dissonant when held against the chord. The term usually refers to the 4th of a major chord and the 11th of a dominant chord.

bag (AKA bag of tricks) A jazz musician's repertoire of licks, patterns, and so on, often used in proprietary form, as in "Jackie's bag."

ballad Slow tune.

bebop The revolutionary style of jazz that evolved in the early 1940s.

Bird Charlie Parker.

blowing choruses The choruses of a tune that are improvised.

break Breaks typically occur at the beginning of a solo. The soloist plays alone as the rest of the band lays out, usually for 2, 4, or 8 bars. One of the greatest is Lee Morgan's break at the beginning of his solo on John Coltrane's "Locomotion" on Coltrane's album *Blue Train*.

bridge The "B" section of a tune, usually on an AABA or ABA tune. Sometimes called the "channel."

cadenza An improvised rubato ending of indeterminate length, played by the soloist while the rhythm sections lays out.

changes The chords to a tune.

channel *See* bridge.

chart Arrangement, lead sheet.

chops Technique.

chorus Once through a tune.

circle of fourths (AKA cycle of fourths) A circular arrangement of all 12 notes of the chromatic scale. When viewed counterclockwise, each note is a 4th higher than the preceding note. When viewed clockwise, each note is a 4th lower than the preceding note. *See also* cycle of fifths.

clave (pronounced "clah-vay") A two-bar rhythmic pattern that almost all Afro-Cuban music is based upon.

common tones Notes that are found in the chords and/or scales of two or more consecutive chords.

cycle of fifths (AKA circle of fifths) A circular arrangement of all 12 notes of the chromatic scale. When viewed counterclockwise, each note is a 5th lower than the preceding note. When viewed clockwise, each note is a 5th higher than the preceding note. *See also* cycle of fourths.

deceptive cadence A V chord resolving someplace other than down a 5th.

diatonic Chords within a particular key. CΔ, D-7, Esus$^{♭9}$, FΔ$^{♯4}$, G7, and Gsus are diatonic to the key of C.

diminished scale A scale alternating half steps and whole steps (or vice versa).

Diz Dizzy Gillespie.

Dorian mode The second mode of the major scale; also the chord derived from that mode.

double diminished chord Two diminished 7th chords played at the same time by a pianist, an eight-note chord including all the notes of a diminished scale.

double time Change the tempo to one that's twice as fast, the changes also moving twice as fast.

double time feeling Change the tempo to one that is twice as fast, but with the changes still moving at the speed of the original tempo.

eights (or "trade eights") Two or more players, each in turn trading eight-bar improvisations, usually for one or more choruses after the regular solos.

ending The last part of a tune, often specially arranged.

enharmonic Two differently spelled notes that are the same, such as C♭ and B, D♯ and E♭, or F♯ and G♭.

extensions The 9th, 11th, and 13th (also known as the 6th) of a chord.

fake book A book of standards and jazz originals, usually consisting of just the melody and chord symbols, so-called because improvising used to be called "faking."

finger memory The internalized muscular memory of what a chord, lick, phrase, pattern, and so on, feels like (a term used mainly by pianists, but applicable to all instruments).

form *See* song form.

fours (or "trade fours") Two or more players, each in turn trading four-bar improvisations, usually for one or more choruses after the regular solos.

free (or "play free") Improvise, usually without chord changes or a pre-set form.

from the top Take the tune from the beginning.

funky Earthy, soulful, visceral, unintellectual.

gig A musical job, be it at a club, party, festival, or record date.

Great American Song Book, The The compositions of George Gershwin, Cole Porter, Irving Berlin, Duke Ellington, Billy Strayhorn, Jimmy Van Heusen, Jimmy McHugh, Hoagy Carmichael, and so on.

groove The "lock" between members of a rhythm section playing well together.

half-diminished (1) A minor 7th chord with a flat 5th; (2) the chord built off of the sixth mode of the melodic minor scale; (3) the chord built off of the seventh mode of the major scale.

head (1) The composed melody and changes of a tune; (2) a tune composed by a jazz musician based on the changes to a standard; (3) the first time through the melody of a tune, before the solos begin.

interlude A section of a tune, usually played between the head and the solos, or between soloists.

interval The space between two notes.

in the pocket When the music is rhythmically in a groove.

intro An introductory section before a tune is played, often improvised.

Ionian mode The first mode of the major scale.

jam session (also "to jam") Informal gathering of jazz musicians playing together.

kicks Specific rhythmic hits played by the rhythm section.

Latin jazz A fusion of jazz and Afro-Cuban music.

lay back Relax; play on the back side of the beat.

lay out Don't play.

lead sheet A sheet of music usually containing just the melody and the chord symbols of a tune.

left-hand voicings Rootless voicings for the left hand, originally developed by pianists Red Garland, Bill Evans, and Wynton Kelly.

lick An improvised phrase that has entered the everyday language of jazz, often used descriptively, as in "a Joe Henderson lick."

Locrian mode The seventh mode of the major scale.

Lydian augmented mode The third mode of the melodic minor scale; also the chord derived from that mode.

Lydian dominant mode The fourth mode of the melodic minor scale; also the chord derived from that mode.

Lydian mode The fourth mode of the major scale; also the chord derived from that mode.

minor major mode The first mode of the melodic minor scale; also the chord derived from that mode.

minor II-V-I A II-V-I progression in a minor key, as in Dø, G7alt, C-Δ.

Mixolydian mode The fifth mode of the major scale.

mode A seven-note scale created by starting on any of the seven notes of a major or melodic minor scale.

natural minor scale *See* Aeolian.

original A tune written by a member of the band, often part of a bandstand announcement, as in "we'd like to play an original tune by..."

out chorus (or) "out head" The last time through the melody of a tune.

outside Playing notes not in the changes (and assuming that they sound good, unlike "wrong notes").

parallelism Chords or chord voicings moving in parallel motion.

parent scale The scale from which a mode is derived.

pedal (or) pedal point A note, usually in the bass, which remains the same, over which a chord, or series of chords, is played.

Phrygian mode The third mode of the major scale; also the chord derived from that mode.

polychord Two or more chords played at the same time.

polytonality Playing in more than one key at the same time.

refrain Don't play (just kidding).

"Rhythm" changes Chord changes based on George Gershwin's tune "I've Got Rhythm."

riff Repeated horn figure, often played behind a solo.

"right on it" No intro; start playing right on the head.

rubato Playing out of tempo.

sequence A phrase, or motif, repeated at a different pitch. The repeated phrase doesn't necessarily have to have the exact same interval structure, but generally has the same shape as the original motif.

'shed *See* woodshed.

shout chorus A specially arranged chorus, usually played between the last solo and the out chorus.

sit in, sitting in When a musician who is not a member of the regular band joins the band to play.

slash chord (1) A triad played over a note in the bass other than the root; (2) a 7th chord played over a note in the bass not in the chord; (3) a triad played on top of another triad. *See also* polychord.

solo, soloing Improvise on the tune.

solos Improvised section of a tune.

song form The organization of letter names given to different sections of a tune (usually in eight-bar segments), as in "AABA," "ABC," and so forth.

standard A tune popular with jazz musicians, usually, but not always, composed by a non-jazz songwriter (George Gershwin, Cole Porter, and so on). Many of Duke Ellington and Billy Strayhorn's songs are also considered standards.

stop-time Usually occuring during a solo, the rhythm section plays only on the first beat of every two, or four, bars. Occasionally a stop-time figure will have two or more kicks. One of the greatest stop-time solos is by Sonny Rollins on Vincent Youmans' "I Know That You Know" on the Dizzy Gillespie-Sonny Stitt-Sonny Rollins album *Sonny Side Up.*

straight ahead Play with a swing feeling.

straight 8ths Play with a rhythmically even feeling, without swinging in the traditional sense. Most Latin music is played this way.

stroll A solo section, where on the soloist's cue, the pianist, or the entire rhythm section, lays out for awhile. *See* lay out.

substitute chord A chord that substitutes for the original chord.

sus chord A dominant 7th chord in which the 4th does not act like an "avoid" note.

sus$^{\flat 9}$ chord A sus chord derived from either the Phrygian mode of the major scale or the second mode of the melodic minor scale.

swing era Jazz of the 1930s.

tag An improvised section at the end of the out chorus, often repeated indefinitely.

take it out A signal from the band leader to play the out head.

tonic minor chord A minor chord not functioning as a II chord, but as a "minor I."

top The beginning of a tune.

train wreck When everything goes off track; someone forgets to take a repeat, or skips the bridge, or turns the time around, and so on.

'Trane John Coltrane.

tritone The interval composed of three whole steps, most significantly occuring between the 3rd and 7th of a dominant 7th chord.

tritone substitution A V chord substituting for another V chord a tritone away. Both chords share the same 3rd and 7th, which are also a tritone apart.

tritone substitution II-V A II-V progression substituting for a V chord a tritone away, or for the II-V progression a tritone away.

turnaround A chord progression occurring (1) at the end of a repeated section of a tune, leading back to the repeat; (2) at the end of the tune, leading back to the top.

up Fast tempo.

vamp (1) A rhythm section ostinato figure; (2) a short, repeated chord sequence.

"vamp 'til cue" Keep repeating a vamp until the cue to go on.

verse A specially composed introduction to a ballad, often played or sung rubato. The verse to Billy Strayhorn's "Lush Life" is a prime example.

voicing An arrangement of the notes of a chord, usually for piano or guitar, often in other than root position.

whole-tone scale A scale made up entirely of whole steps.

woodshed (also 'shed) To shut oneself up, away from the world, and practice long and hard, as in "going into the woodshed."

"you'll hear it" What the musician who called the tune sometimes says to another musician who's not sure of the changes.

PART I
THEORY: CHORDS AND SCALES

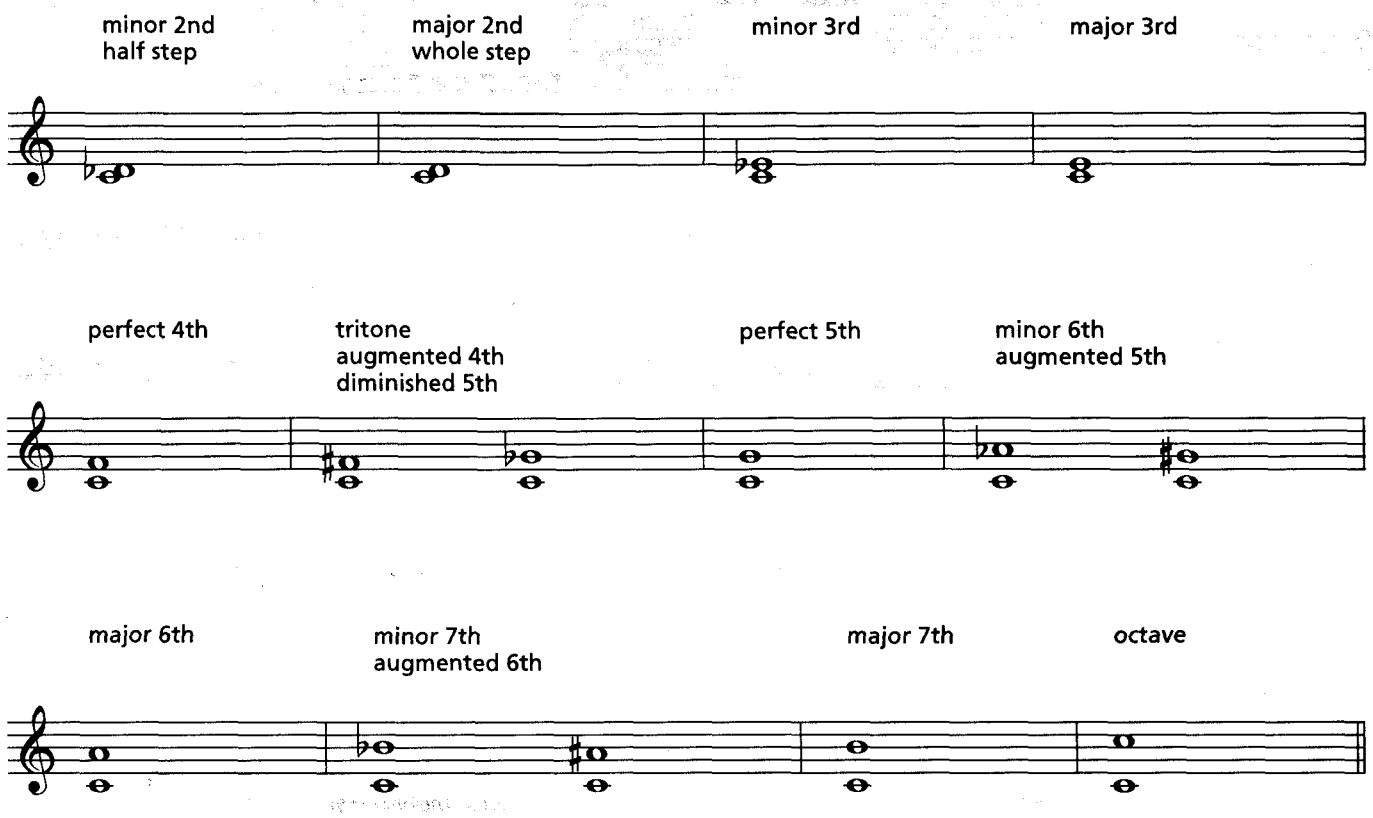
CHAPTER ONE
Basic Theory

- *Intervals*
- *Inverting Intervals*
- *Triads*

Intervals

As atoms are the building blocks of matter, intervals are the building blocks of melody and harmony. A good definition of an *interval* is "the space between two notes." **Figure 1-1** shows all the intervals from the smallest, the half step/minor 2nd, up to the octave, all based on middle C. The most commonly used term is shown above each interval; alternate terms are shown just below.

Figure 1-1

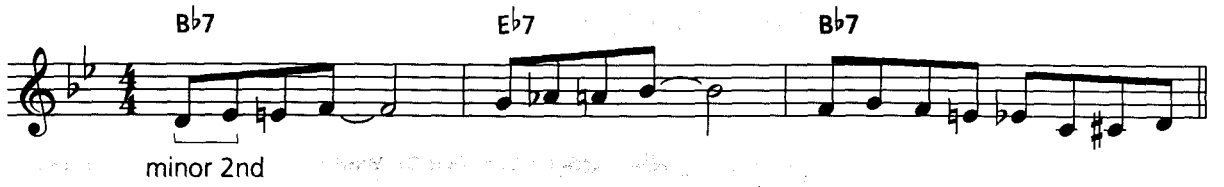


The table that follows lists all the intervals, both ascending and descending, as they occur in tunes from the standard jazz repertoire. Unless otherwise noted, the interval in question is the first two melody notes of the song. *Sing* each interval and then play it on your instrument. If you can sing an interval accurately, you'll find that the interval is easier to hear when you play it. Footnotes after each song title list a great recording of the tune—in many cases, the original recording.

Table of Intervals

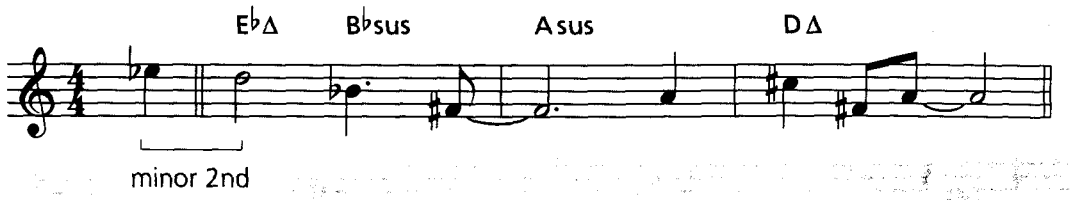
▲ *ascending minor 2nd*

Thelonious Monk's "Blue Monk"[1]



▼ *descending minor 2nd*

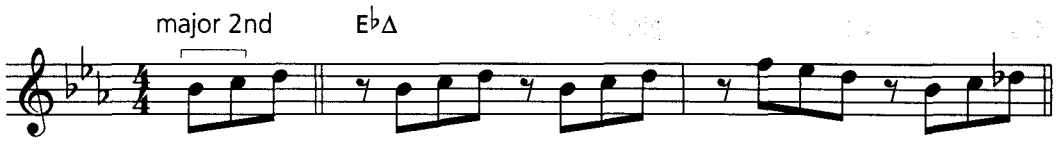
Cedar Walton's "Bolivia"[2]



[1] Thelonious Monk, *Thelonious In Action,* Fantasy, 1958.
[2] Cedar Walton, *Eastern Rebellion,* Impulse, 1975.

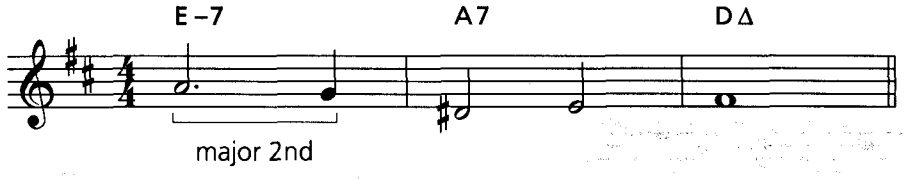
▲ *ascending major 2nd*

Miles Davis' "Four"[3]



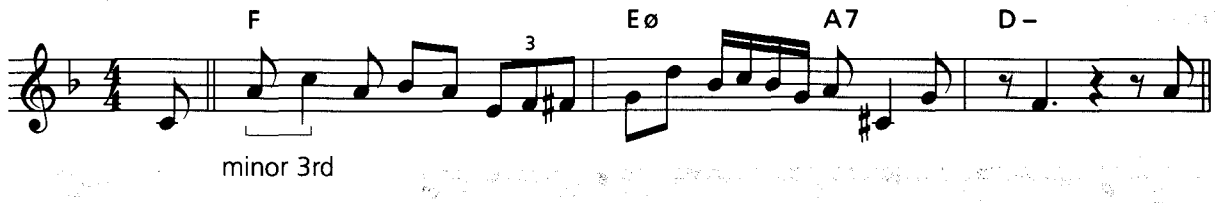
▼ *descending major 2nd*

Miles Davis' "Tune-Up"[4]



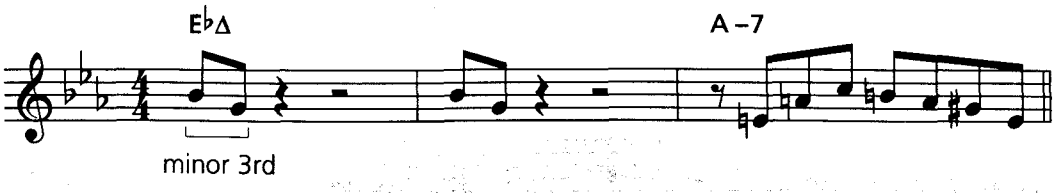
▲ *ascending minor 3rd*

Charlie Parker's "Confirmation"[5]



▼ *descending minor 3rd*

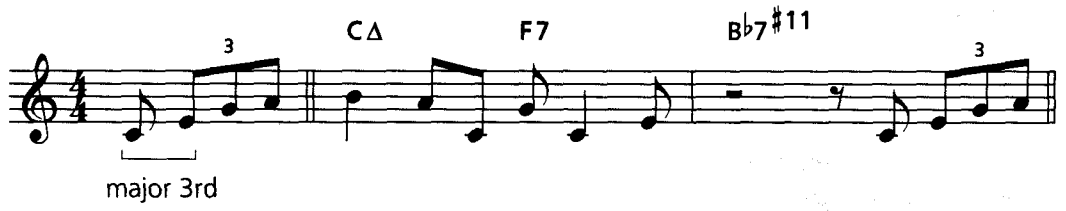
Dizzy Gillespie's "Groovin' High"[6]



[3] Miles Davis, *Workin'*, Prestige, 1956.
[4] Miles Davis, *Cookin'*, Prestige, 1956.
[5] Charlie Parker, *Bird At The Roost*, Savoy, 1949.
[6] *Ibid.*

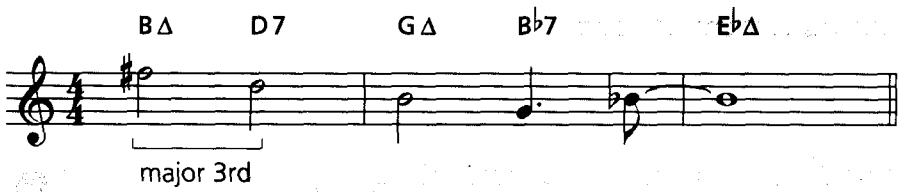
▲ *ascending major 3rd*

Thelonious Monk's "Monk's Dream"[7]



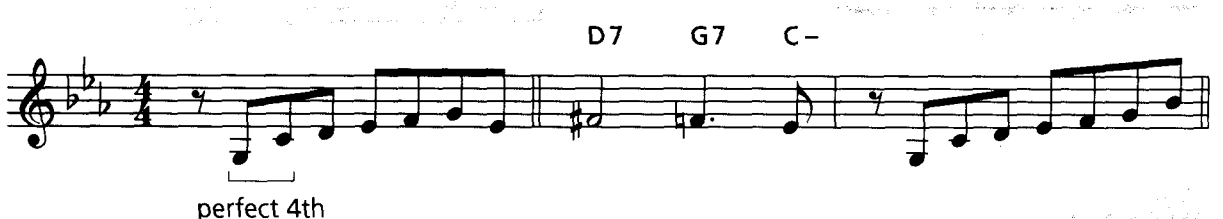
▼ *descending major 3rd*

John Coltrane's "Giant Steps"[8]



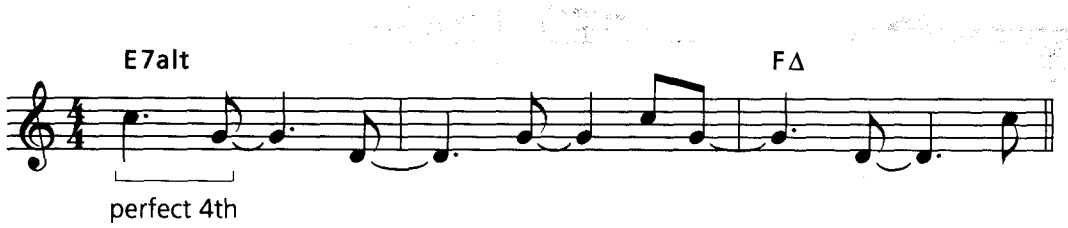
▲ *ascending perfect 4th*

Duke Jordan's "Jordu"[9]



▼ *descending perfect 4th*

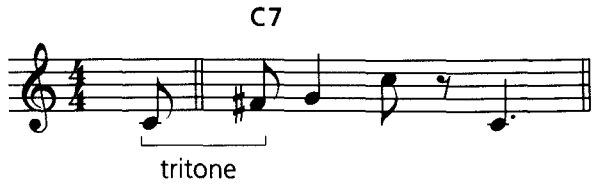
Wayne Shorter's "ESP"[10]



[7] Thelonious Monk, *Monk's Dream,* Columbia, 1962.
[8] John Coltrane, *Giant Steps,* Atlantic, 1959.
[9] Clifford Brown And Max Roach, *Jordu,* Emarcy, 1954.
[10] Miles Davis, *ESP,* Columbia, 1965.

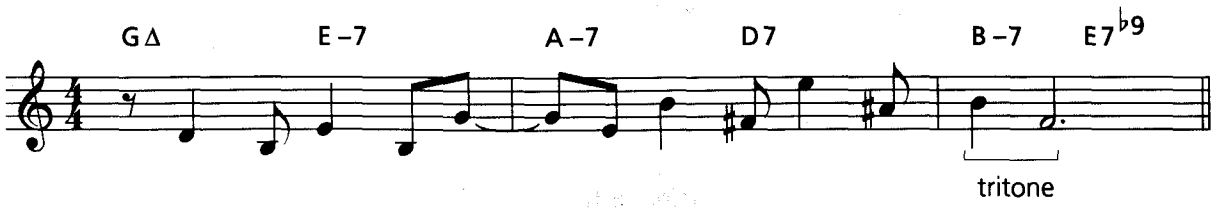
▲ *ascending tritone*

Joe Henderson's "Isotope"[11]



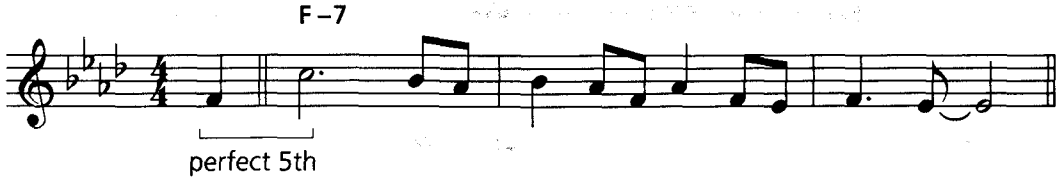
▼ *descending tritone*

Third bar of bridge of Duke Ellington's "Sophisticated Lady"[12]



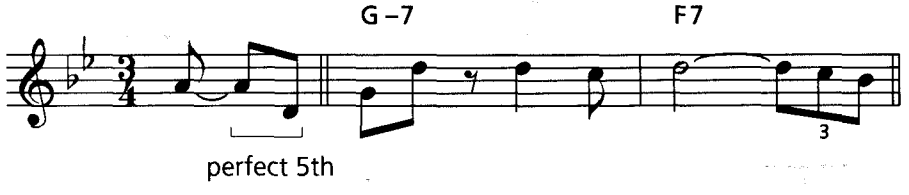
▲ *ascending perfect 5th*

Milt Jackson's "Bag's Groove"[13]



▼ *descending perfect 5th*

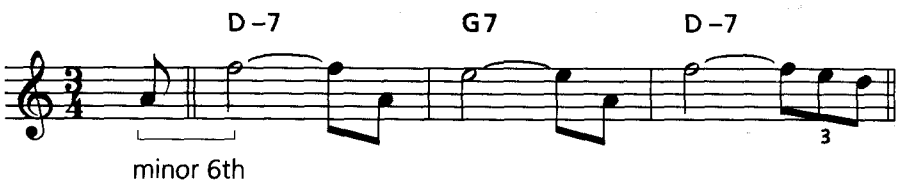
Woody Shaw's "Katrina Ballerina"[14]



[11] Joe Henderson, *Power To The People,* Milestone, 1969.
[12] Duke Ellington and Ray Brown, *This One's For Blanton,* Pablo, 1973.
[13] *Miles Davis And The Modern Jazz Giants,* Prestige, 1954.
[14] Woody Shaw, *United,* Columbia, 1981.

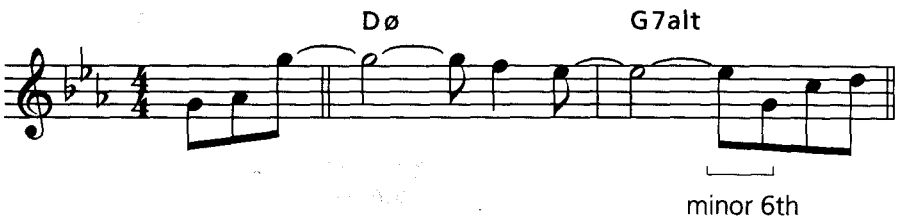
▲ *ascending minor 6th*

Woody Shaw's "In A Capricornian Way"[15]



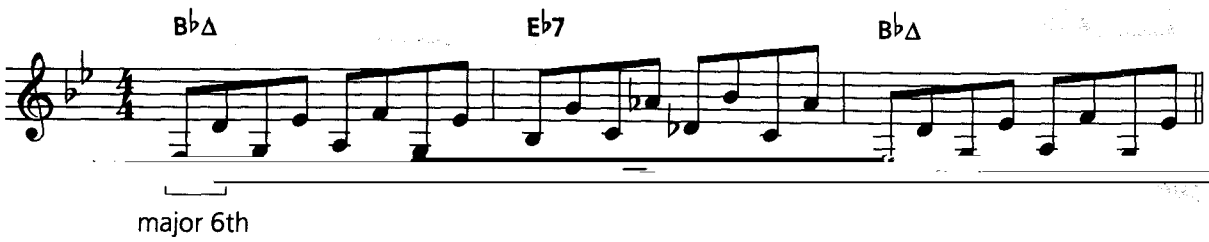
▼ *descending minor 6th*

Second bar of Joe Henderson's "Serenity"[16]



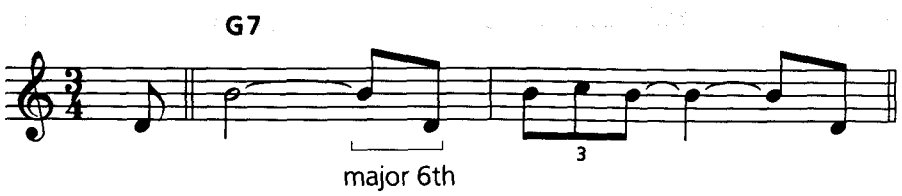
▲ *ascending major 6th*

Thelonious Monk's "Misterioso"[17]



▼ *descending major 6th*

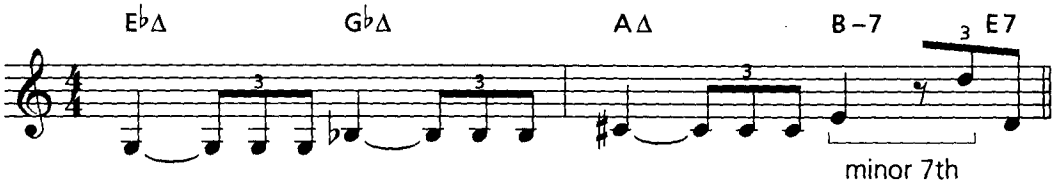
Miles Davis' "All Blues"[18]



[15] Woody Shaw, *Stepping Stones,* Columbia, 1978.
[16] Joe Henderson, *In'n Out,* Blue Note, 1964.
[17] Thelonious Monk, *Live At The Jazz Workshop,* Columbia, 1964.
[18] Miles Davis, *Kind Of Blue,* Columbia, 1959.

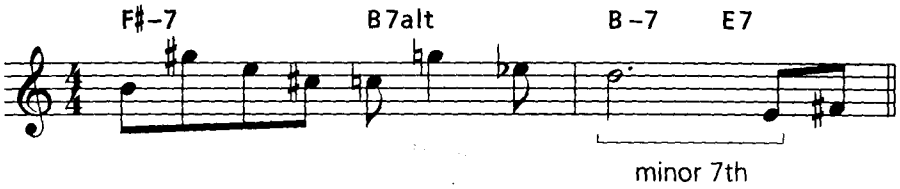
▲ *ascending minor 7th*

Last bar of bridge of McCoy Tyner's "Aisha"[19]



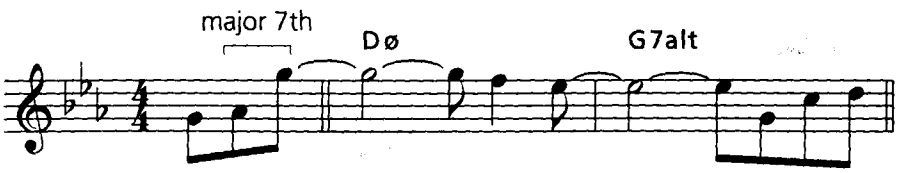
▼ *descending minor 7th*

Fourth bar of bridge of Billy Strayhorn's "Chelsea Bridge"20



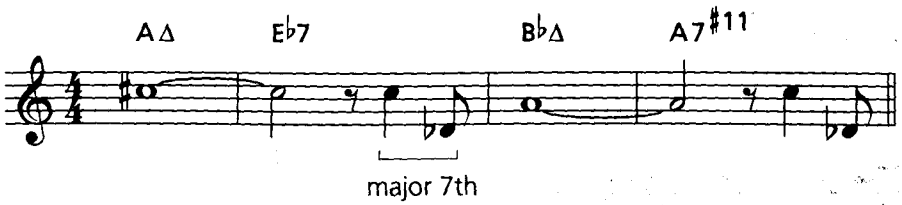
▲ *ascending major 7th*

Second and third notes of Joe Henderson's "Serenity"[21]



▼ *descending major 7th*

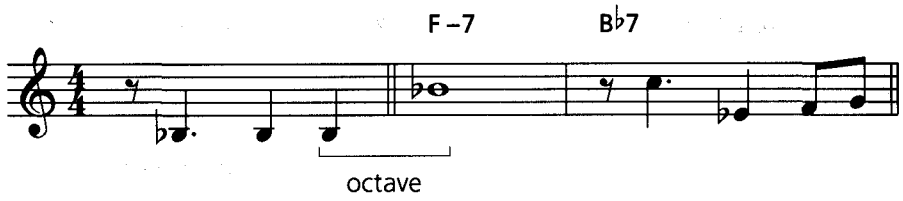
Wayne Shorter's "Lady Day"[22]



[19] John Coltrane *Olé*, Atlantic, 1961.
[20] Joe Henderson, *The Kicker*, Milestone, 1967.
[21] Joe Henderson, *In 'n Out*, Blue Note, 1964.
[22] Wayne Shorter, *The Soothsayer*, Blue Note, 1965.

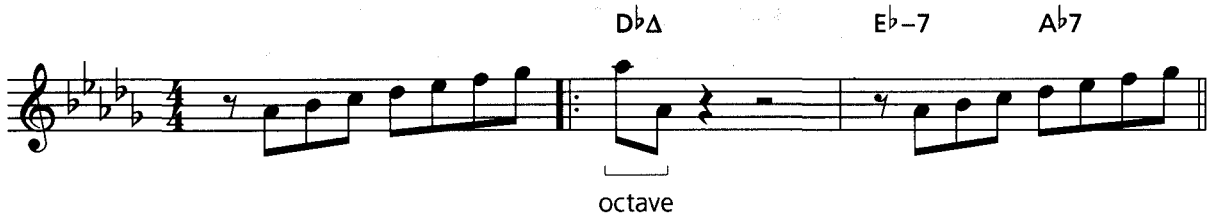
▲ *ascending octave*

Sam Jones' "Del Sasser"[23]



▼ *descending octave*

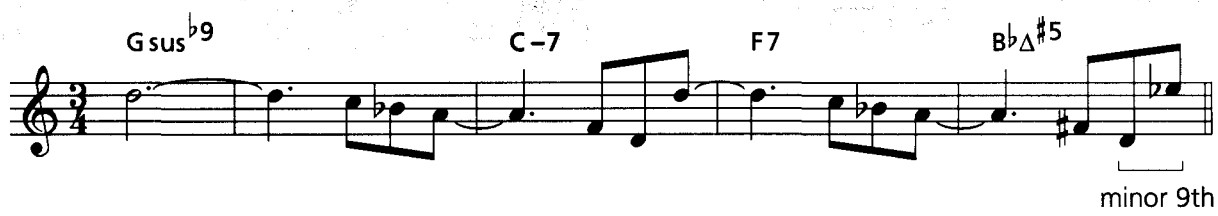
Freddie Hubbard's "Philly Mignon"[24]



Intervals of greater than an octave rarely occur in tunes, but here are a few examples:

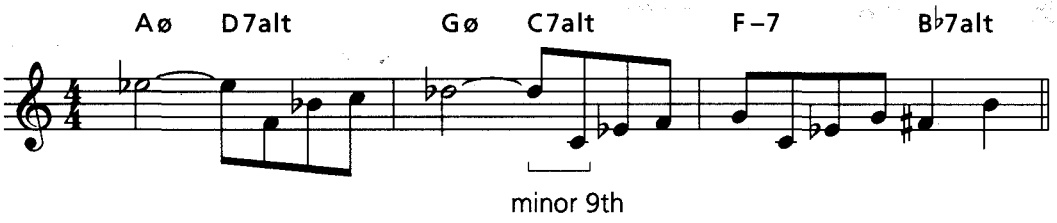
▲ *ascending minor 9th*

Bar 11 of bridge of Wayne Shorter's "Wild Flower"[25]



▼ *descending minor 9th*

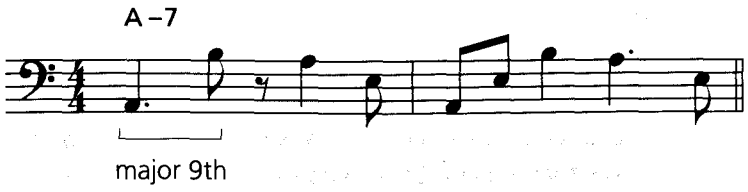
Bar 18 of Benny Golson's "I Remember Clifford"[26]



[23] Cannonball Adderly, *Them Dirty Blues,* Riverside, 1960.
[24] Freddie Hubbard, *Here To Stay,* Blue Note, 1962.
[25] Wayne Shorter, *Speak No Evil,* Blue Note, 1964.
[26] The Jazztet, *Meet The Jazztet,* Argo, 1960.

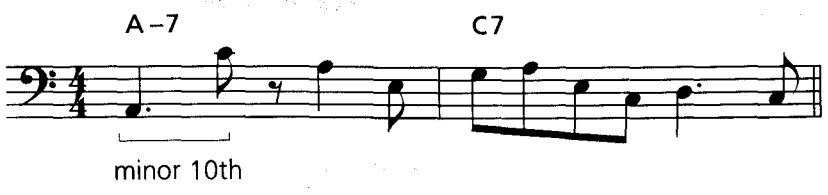
▲ *ascending major 9th*

Bass part, intro of Joe Henderson's "No Me Escueca"[27]



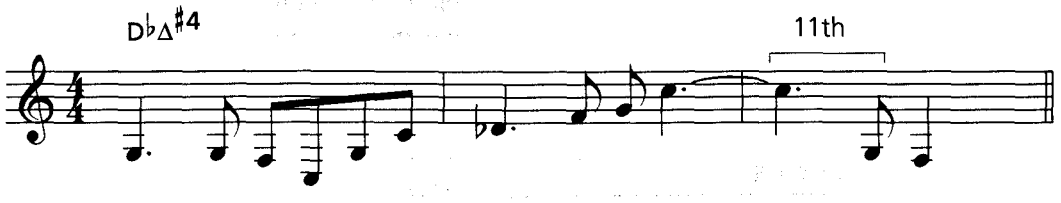
▲ *ascending minor 10th*

Bass part, fifth bar, intro of Joe Henderson's "No Me Escueca"[28]



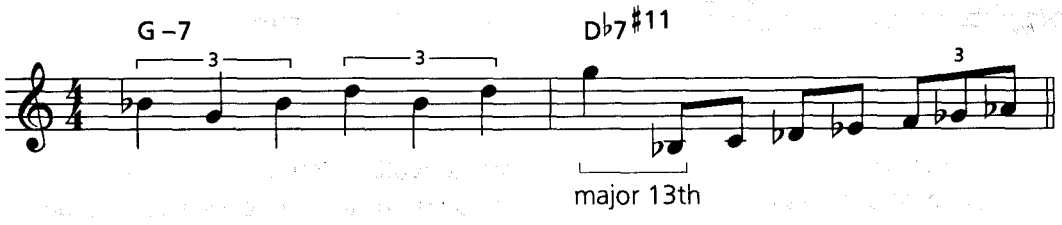
▼ *descending 11th*

Bar 15 of Joe Henderson's "Inner Urge"[29]



▼ *descending major 13th*

Bar 24 of Billy Strayhorn's "Chelsea Bridge"[30]



[27] Joe Henderson, *Power To The People,* Milestone, 1969.
[28] *Ibid.*
[29] Joe Henderson, *Inner Urge,* Blue Note, 1964.
[30] Joe Henderson, *The Kicker,* Milestone, 1967.

Inverting Intervals

An important skill all musicians must have, especially when transposing,[31] is the ability to *invert* intervals. If you have to transpose a tune "up a major 6th" on the spot, you'll probably find it easier to transpose it "down a minor 3rd," which is the same thing. A 3rd is a lot closer than a 6th. In other words, you need to know that a major 6th inverts to a minor 3rd. When you invert an interval, you take the bottom note and put it on top, or vice versa. The result is a new interval, and the rules for inverting intervals are simple.

When you invert an interval

- Major becomes minor
- Minor becomes major
- Perfect remains perfect
- Tritone remains tritone[32]

and the old and new intervals add up to nine.

Figure 1-2

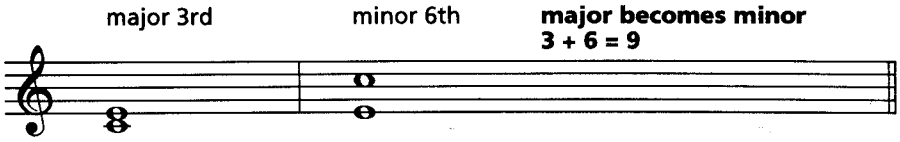


Figure 1-3

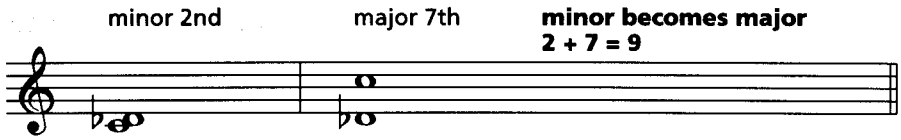
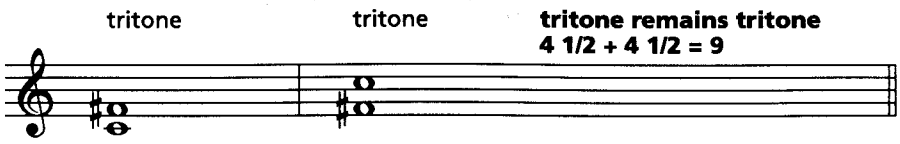


Figure 1-4

Figure 1-5



Look at **figure 1-2.** If you invert a major 3rd, C with E on top, it becomes E with C on top, a minor 6th. Major becomes minor, and three plus six add up to nine. In **figure 1-3**, a minor 2nd inverts to a major 7th. Minor becomes major, and two plus seven add up to nine. In **figure 1-4**, a perfect 4th becomes a perfect 5th. Perfect remains perfect, and four plus five equals nine. In **figure 1-5**, a tritone inverts to another tritone. Because a tritone is right between a 4th and a 5th, you could say that it is "four and a half," and four and a half plus four and a half equals nine.

To really internalize this information, and have the sound of all the intervals in your head, you should sing the intervals as part of your daily practice routine. You don't need your instrument to do this (unless you're a singer, of course), so you can practice in the shower, in your car, and

[31] Going from one key to another.

[32] And, if you use the alternate terms "augmented" and "diminished" as shown in **figure 1-1**, augmented becomes diminished, and diminished becomes augmented.

anywhere else you want. In addition, practice singing along with your favorite records—heads, melodies, solos, and so on, of standards, bebop, and other jazz tunes. As you do so, try to identify specific intervals between notes. This is all part of what's called *ear training*. If your school offers an ear training course, take it! There are also some good ear training tapes available.[33] You have to train your ears because creating a good solo consists largely of playing on your instrument what you "hear in your head."

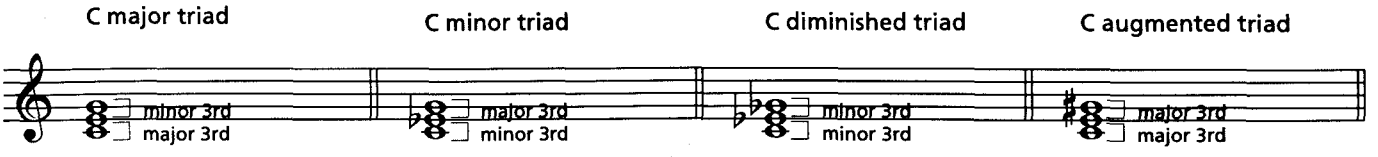
Triads

You can play intervals not only individually, but also in combinations. For example, stacking two 3rds on top of one another forms a triad. There are four possible combinations, each forming a different triad:

- A major 3rd with a minor 3rd on top forms a major triad.
- A minor 3rd with a major 3rd on top forms a minor triad.
- Two minor 3rds form a diminished triad.
- Two major 3rds form an augmented triad.

Figure 1-6 shows all four triads.

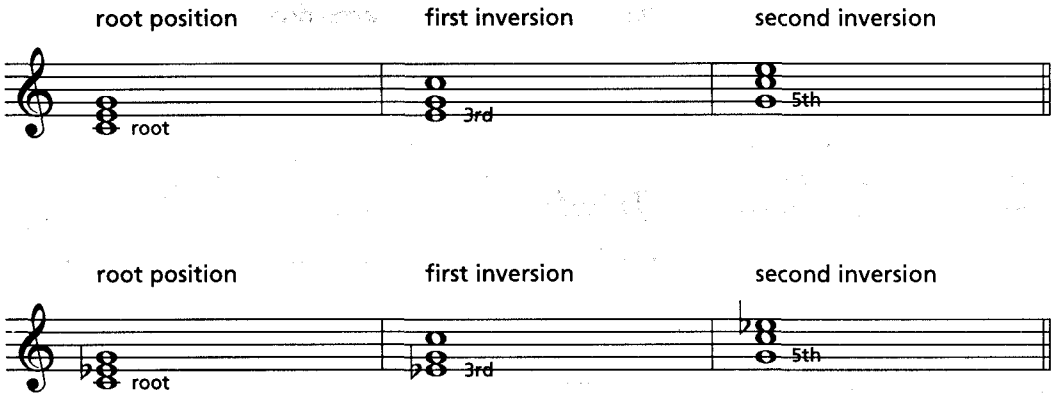
Figure 1-6



Play each triad on the piano. Listen and feel the different emotional effect of each triad. In music for TV, movies, and the theater, harmony is often used to enhance the emotional content of a scene. A major triad may sound happy, strong, or triumphant. A minor triad may sound sad, pensive, or tragic. A diminished triad often suggests tension or agitation. An augmented triad has a floating, misty quality, suggesting, among other things, enchantment—like Bambi emerging from the mist at dawn (seriously).

[33] Jamey Aebersold, *Jazz Ear Training.* Armen Donelian, *Training The Ear.* David Baker, *A New Approach To Ear Training*

Figure 1-7



Although these musical devices have all become clichés, they still work, otherwise composers, including jazz composers, wouldn't continue to use them. It's no accident that tunes such as Benny Golson's "I Remember Clifford,"[34] John Lewis' "Django,"[35] and Eden Ahbez' "Nature Boy"[36] are written in minor keys, or that Bix Beiderbeck's "In A Mist"[37] uses augmented chords. As you play, you elicit an emotional response in your listener, your fellow musicians, and yourself. Be aware of it.

Triads are often inverted. An *inversion* is a chord with a note other than the root on the bottom. **Figure 1-7** shows a C major and a C minor triad in their three possible positions:

- Root position, with the root on the bottom.
- First inversion, with the 3rd on the bottom.
- Second inversion, with the 5th on the bottom.

We're ready to move on to II-V-I, the basic chord progression in jazz.

[34] The Jazztet, *Meet The Jazztet,* Argo, 1960.
[35] Grant Green, *Idle Moments,* Blue Note, 1963.
[36] John Coltrane, *The John Coltrane Quartet Plays,* MCA/Impulse, 1965.
[37] Freddie Hubbard, *Sky Dive,* CTI, 1972.

Chapter Two
The Major Scale and the II-V-I Progression

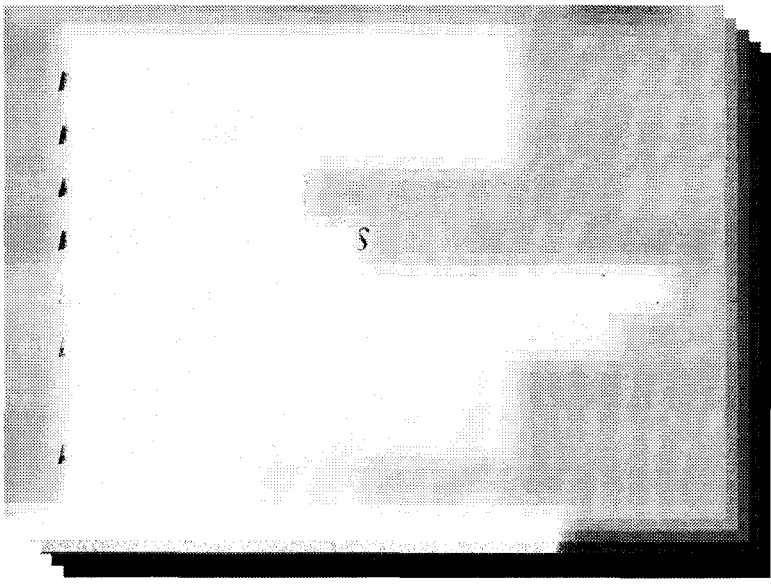


Figure 2-1

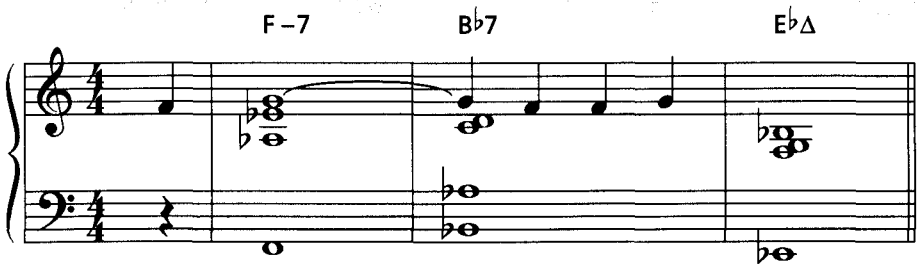


Figure 2-2

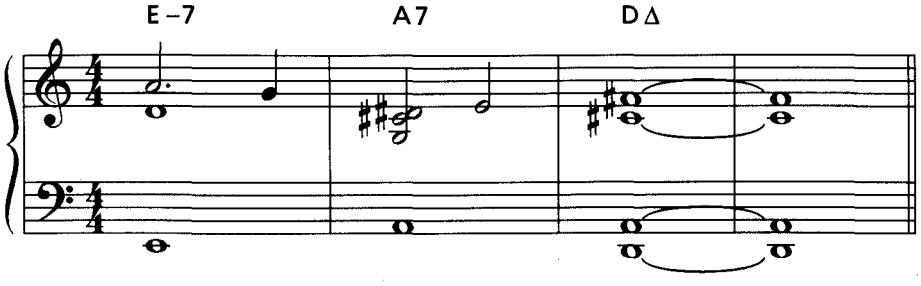
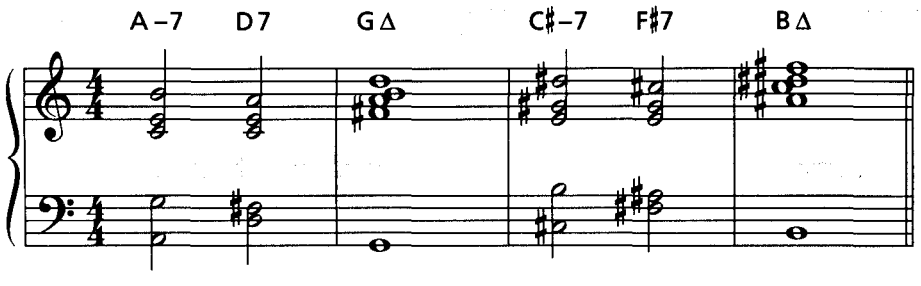


Figure 2-3



Play the music shown in the first three figures and listen to the sound of the II-V-I progression.[1] **Figure 2-1** is a II-V-I in the key of E♭ from Victor Young's "Stella By Starlight."[2] **Figure 2-2** is a II-V-I in the key of D from Miles Davis' "Tune Up."[3] **Figure 2-3** shows two II-V-I progressions from John Coltrane's "Giant Steps,"[4] the first in the key of G, the second in the key of B.

There are lots of chord progressions, but II-V-I is the most common chord progression jazz musicians play. The original source of the II, V, and I chords are the modes of the major scale.

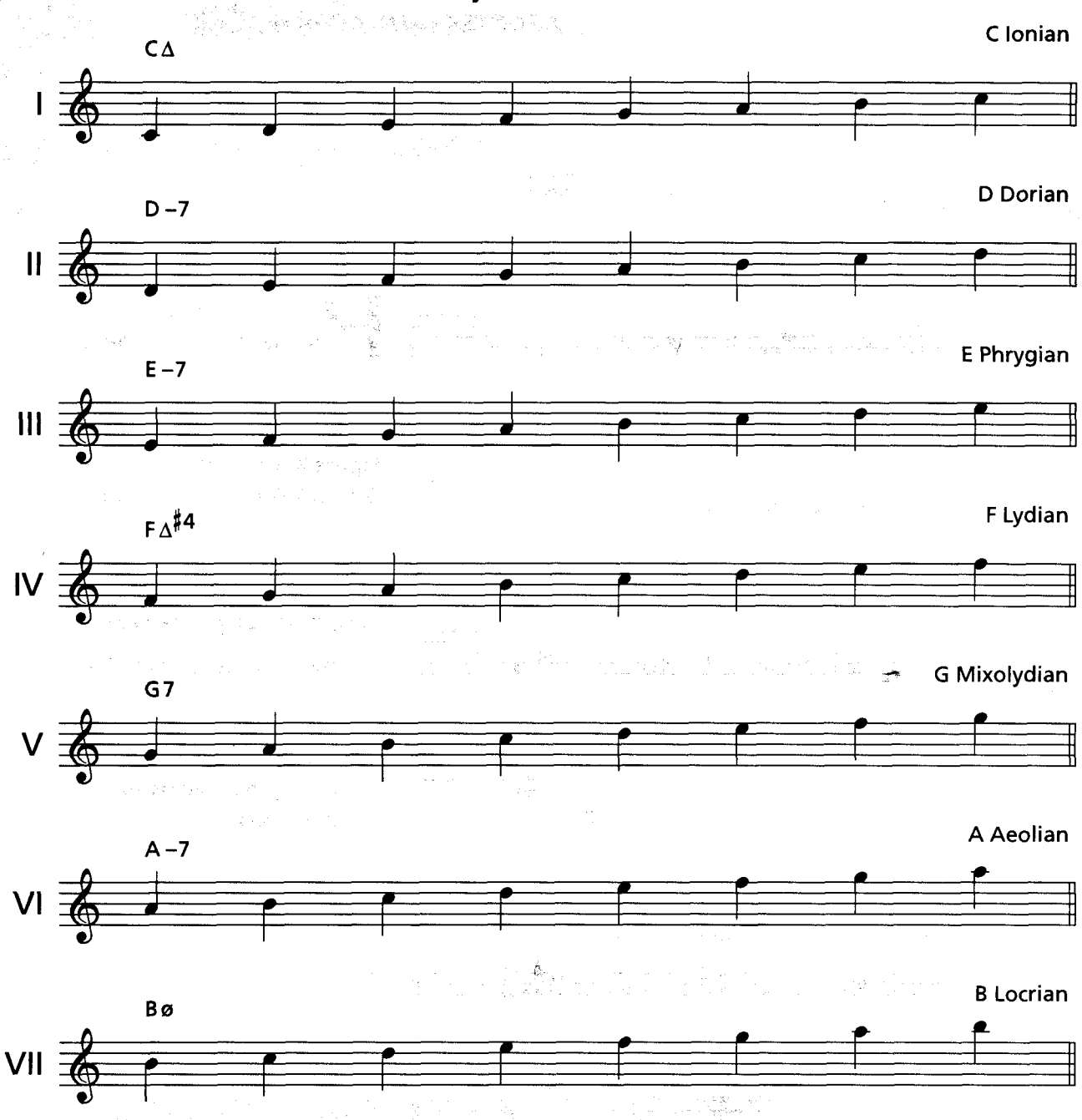
[1] Sometimes notated as ii-V7-I.
[2] Miles Davis, *The Complete 1964 Concert,* Columbia.
[3] Miles Davis, *Cookin',* Prestige, 1956.
[4] John Coltrane, *Giant Steps,* Atlantic, 1959.

Modes of the Major Scale

Figure 2-4 shows the C major scale and all of its *modes*. Think of modes this way: The C major scale has seven different notes, and you can play the scale starting on any one of its seven notes. This means that there are really seven different C major scales—one that starts on C, one on D, one on E, one on F, and so on through B. Each mode has a Greek name, shown to the right of the mode. The Roman

Figure 2-4

The C Major Scale and Its Modes



numerals I through VII shown to the left of each mode correspond to the modal name on the right—I is Ionian, II is Dorian, III is Phrygian, and so forth. *This is the same in every major key.*

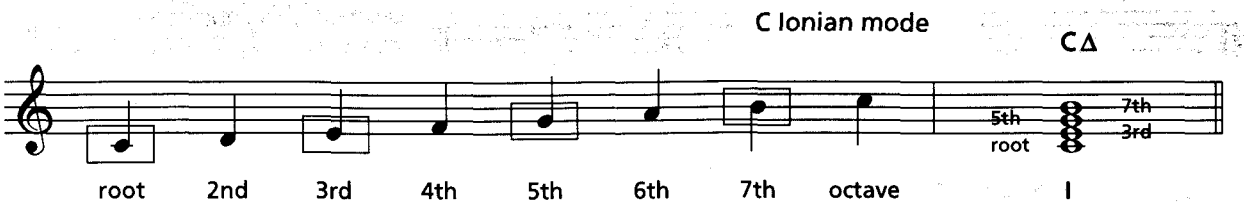
Greek modal names are not esoteric; they are everyday terms that jazz musicians use. For example, you might hear a conversation like this:

First musician: "What's the chord in the second bar?"
Second musician: "F Lydian."

The Ionian Mode and the Major 7th Chord

From the modes come *seventh chords.* You construct seventh chords by playing every other note of each mode, as shown in **figure 2-5**. "Every other note" will be the root, 3rd, 5th, and 7th of the resulting chord. These notes are called *chord tones,* because they define the quality—major, minor, dominant—of each seventh chord.

Figure 2-5



In the Ionian mode of the C major scale shown here, every other note has been boxed, the boxed notes forming the seventh chord shown on the right. The boxed notes are the first, third, fifth, and seventh notes of the mode, and are also the root, 3rd, 5th, and 7th of the chord.

Figure 2-6 shows a C major 7th chord. A common symbol for this chord is the triangle, as in CΔ.[5] This chord is called "major 7th" because of the intervalic relationships between the root of the chord and its 3rd and 7th. *Major 7th chords have a major 3rd, a perfect 5th, and a major 7th.* Because this chord is built off of the first mode, it is called a I chord.

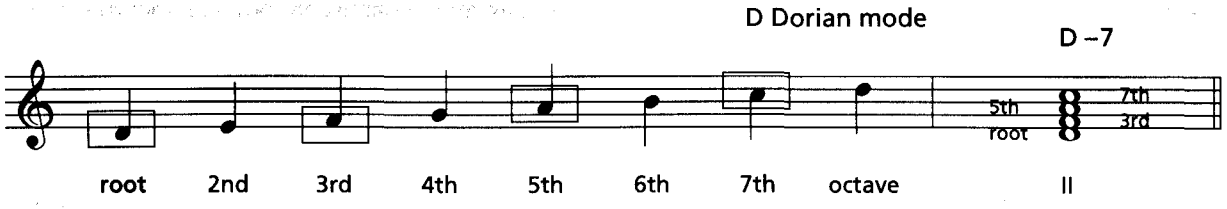
Figure 2-6

[5] Common alternate chord symbols are C, CΔ7, Cmaj7, and CM7. C6 and C^{9}_{6}, although slightly different, are used interchangeably with CΔ.

The Dorian Mode and the Minor 7th Chord

The second, or Dorian mode, of the C major scale runs from D to D, as shown in **figure 2-7**. The boxed

Figure 2-7



notes—the first, third, fifth, and seventh notes of this mode—again form a chord, in this case the D minor 7th chord shown on the right.

Figure 2-8

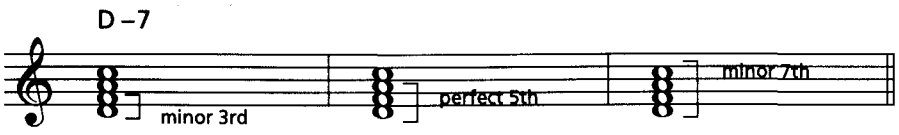


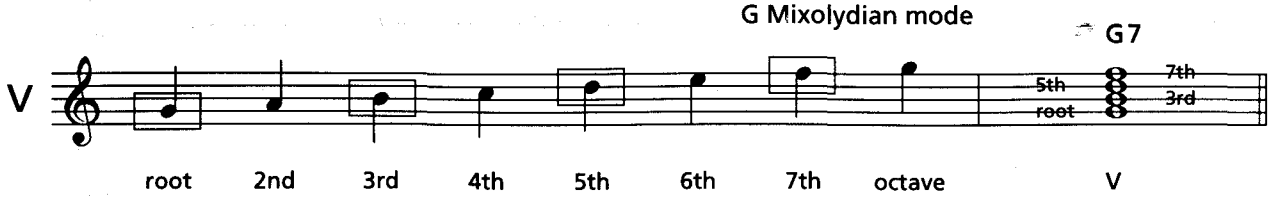
Figure 2-8 shows a D minor 7th chord. The most common symbol for a minor chord is the dash, so this chord is notated D-7.[6] This chord is called "minor 7th" because of the intervalic relationships between the root

of the chord and its 3rd and 7th: *Minor 7th chords have a minor 3rd, a perfect 5th, and a minor 7th.* Because this chord is built off of the second mode, it is called a II chord.

The Mixolydian Mode and the Dominant 7th Chord

Skip now to the fifth, or Mixolydian mode, which runs from G to G. **Figure 2-9** shows this mode with

Figure 2-9



the first, third, fifth, and seventh notes boxed to form G dominant 7th, the chord on the right. The name of this chord is usually shortened to "G seven," and is

Figure 2-10

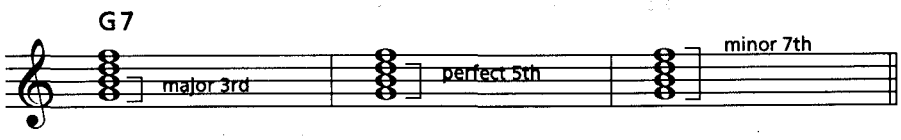


Figure 2-11

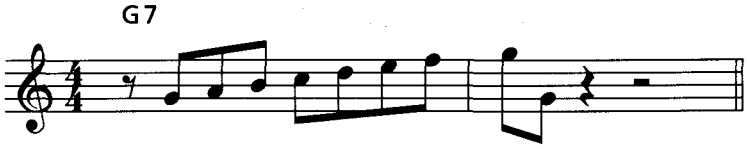
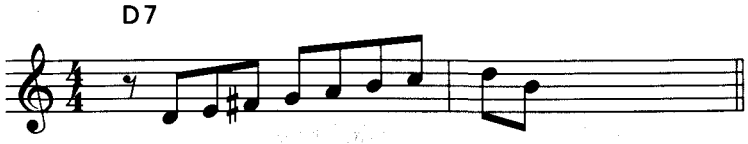


Figure 2-12



have a major 3rd, a perfect 5th, and a minor 7th, as shown in **figure 2-10**. Because this chord is built off of the fifth mode, it is called a V chord.

Figure 2-11 shows an example of the Mixolydian mode. The first eight notes of Freddie Hubbard's tune "Philly Mignon"[7] (named for drummer Philly Joe Jones) ascend the G Mixolydian scale.

The first eight notes of Sonny Rollins "Pent-Up House"[8] ascend the D Mixolydian scale, as shown in **figure 2-12**.

The I, II, and V chords—major 7th, minor 7th, and dominant 7th—are the three most commonly played chords in jazz. Since each chord has a perfect 5th (there are chords with a ♭5 or ♯5, which we'll soon get to), the 3rd and 7th are the variables. They determine whether the chord is major, minor, or dominant—that is, they determine what's called the *quality* of the chord. The following rules sum up the differences between the three chords:

- Major 7th chords have a major 3rd and a major 7th.[9]
- Minor 7th chords have a minor 3rd and a minor 7th.[10]
- Dominant 7th chords have a major 3rd and a minor 7th.

The II-V-I Progression

The I, II, and V chords often occur as a II-V-I *chord progression*, the most common chord progression played in jazz. The chords in the previous examples—D-7, G7, and CΔ—are the II-V-I progression in the key of C. Can you find II-V-I in the key of F? Here's how to do it: The second, fifth, and first notes of the F major scale are G, C, and F. The II chord is always a minor 7th chord, the V chord is always a dominant 7th chord, and the I chord is a major 7th chord. The II-V-I in the key of F is G-7, C7, FΔ. Think through the II-V-I in every key; you don't need your instrument to do this.

[7] Freddie Hubbard, *Here To Stay,* Blue Note, 1962.
[8] *Sonny Rollins Plus Four,* Prestige, 1956.
[9] Think "major-major-major."
[10] Think "minor-minor-minor."

Figure 2-13

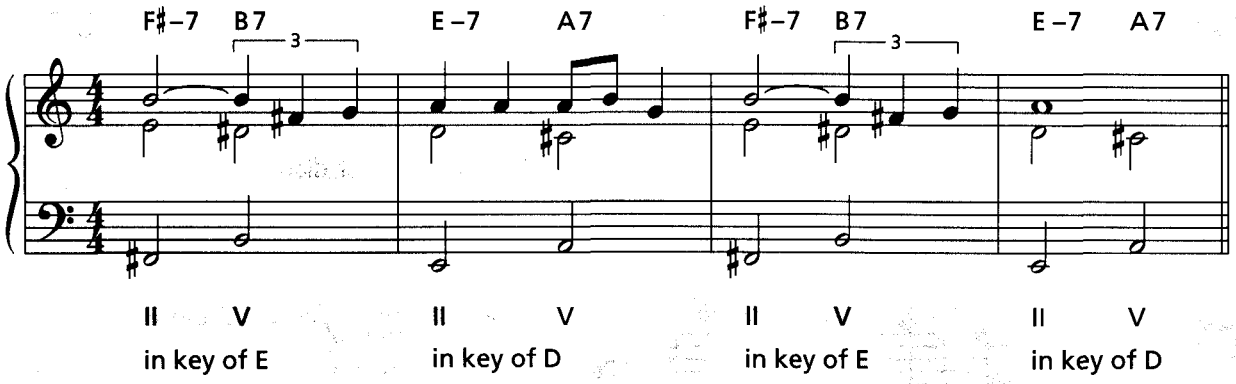
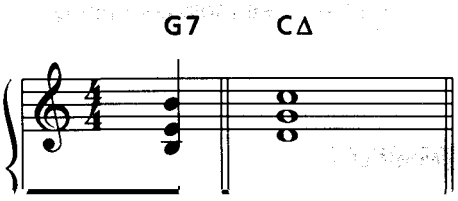


Figure 2-14



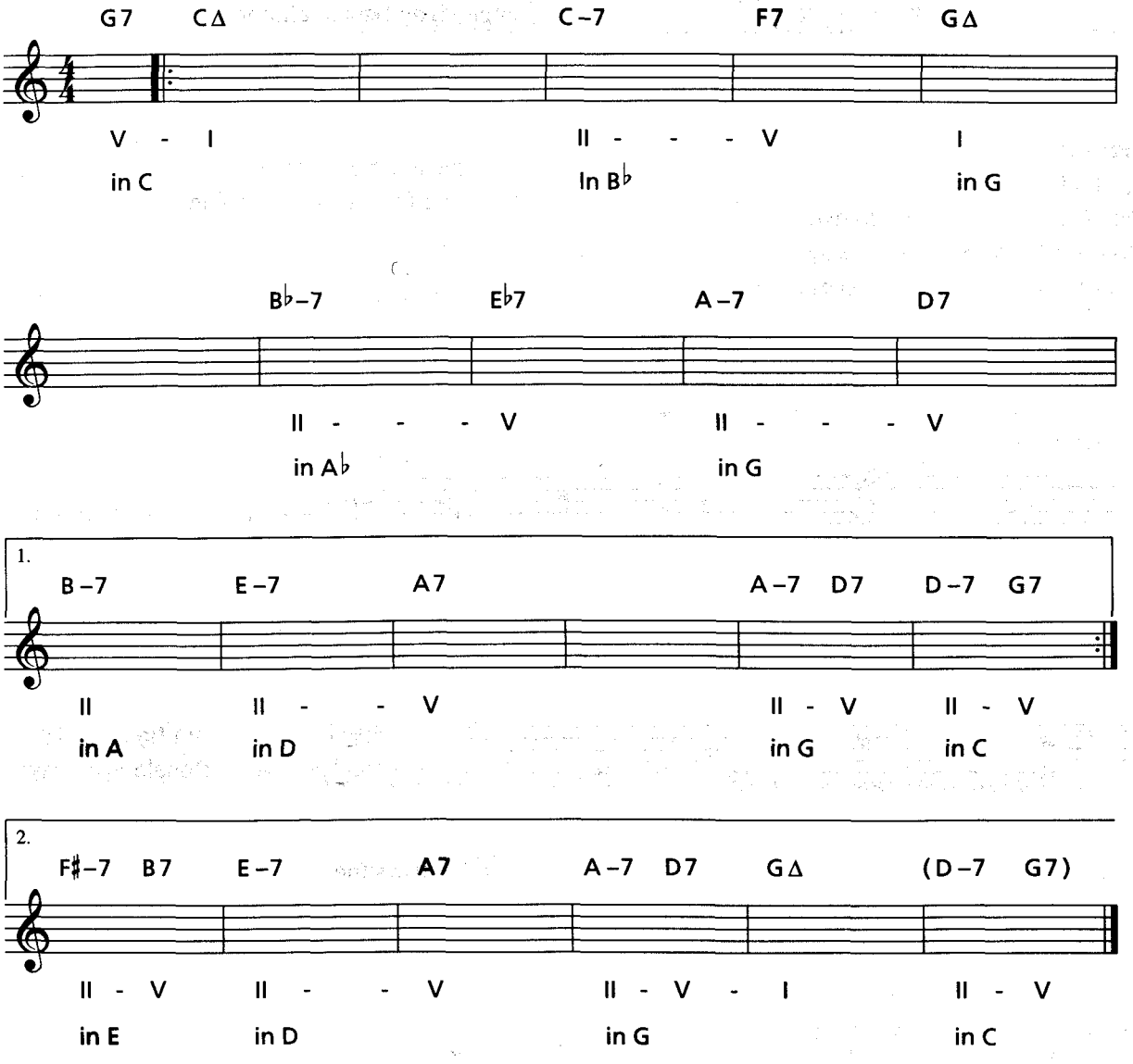
II-V doesn't have to end with I, as in the II-V changes in the first four bars of Richard Rodgers' "I Didn't Know What Time It Was" (**figure 2-13**).

And V-I doesn't have to be preceded by II, as in the V-I at the beginning of Bob Haggart's "What's New?" (**figure 2-14**). Also, II chords, V chords, and I chords often occur randomly, seemingly unconnected

You may see some chords with unfamiliar chord symbols—sus, ♭9, ♯11, ♯5, alt, ø, and so on. Not to worry, we'll get to them soon.

Figure 2-16 shows the changes to "Just Friends." Each chord has been analyzed to determine whether it is a II, V, or I chord. The figure also shows which key each chord is from. Notice how often "Just Friends" modulates from one key to another. The first two chords are a V-I in the key of C, followed immediately by a II-V in B♭. You play the two chords in parentheses in the last bar only when you're going back to the top and playing another chorus; they are called a *turnaround*. Along with the first chord back at the beginning of the tune they form another II-V-I.

Figure 2-16

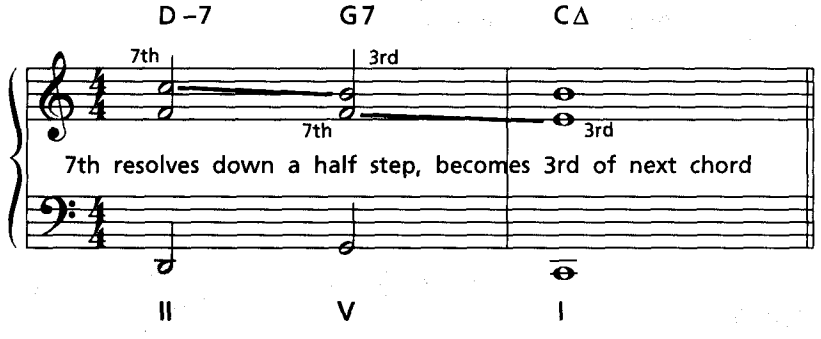


Other good tunes to analyze include "All The Things You Are," "Tune Up," "Soul Eyes," "I Thought About You," "Satin Doll," and "Perdido." Again, ignore any and all alterations to the chords that you see—♭9, ♯9, ♯11, ♭5, ø, ♭13, alt, and so forth. We'll get to these soon.

Voice Leading

In **figure 2-17**, notice that as you go from the II chord to the V chord to the I chord, *the 7th of each chord resolves down a half step and becomes the 3rd of the next chord.* This is basic *voice leading.* Voice leading is the direction a particular note wants to go. It's almost as if there is a gravitational or magnetic pull on the 7th, urging it to resolve down a half-step. If you are a horn player improvising behind another horn player who's playing the melody, playing the 7th and resolving it down a half step provides an instant background line for the soloist.

Figure 2-17



Play the music shown in **figure 2-18**, the third and fourth bars of Thelonious Monk's "'Round Midnight." Hear the 7th of each II chord resolve down a half step, becoming the 3rd of the V chord.

Figure 2-18

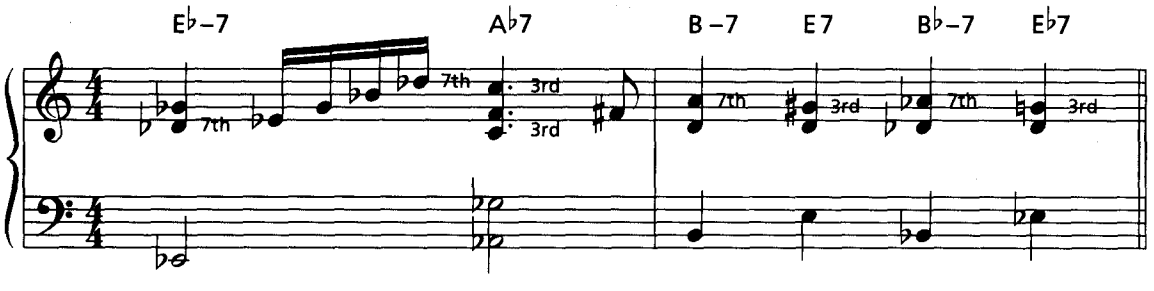
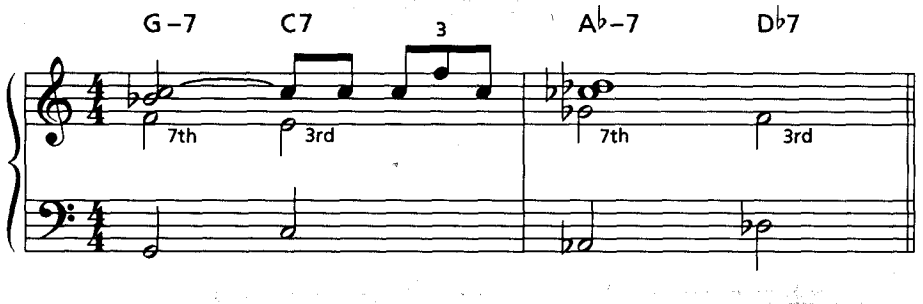


Figure 2-19



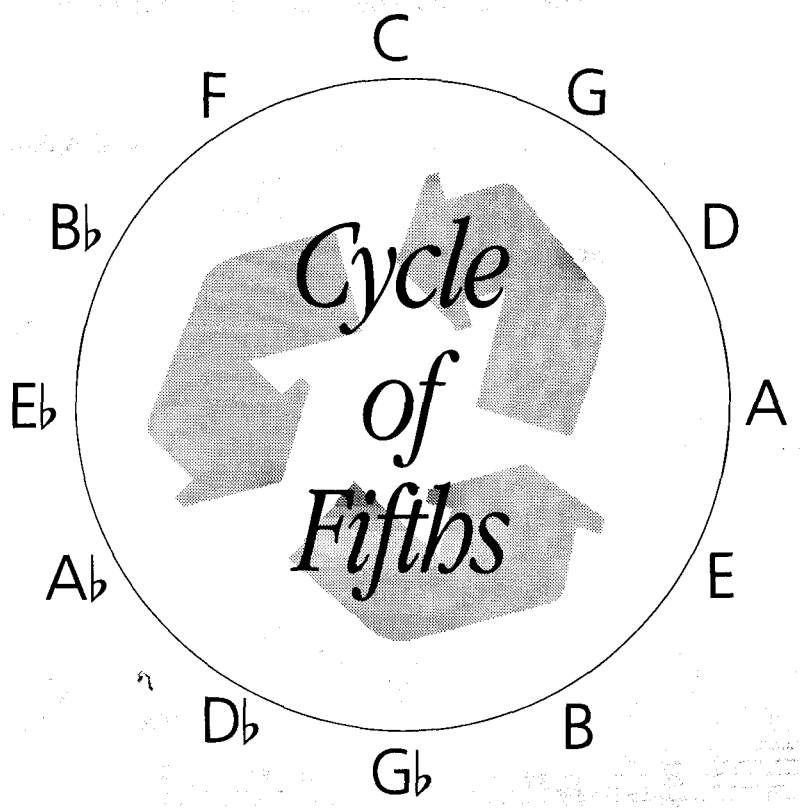
Play the music from **figure 2-19**. The top line is what Donald Byrd plays on two bars of II-V progressions on his tune "Low Life."[12] Jackie McLean plays the lower line, resolving the 7th of each II chord down a half-step to the 3rd of each V chord.

[12] Donald Byrd, *Fuego,* Blue Note, 1959.

The Cycle of Fifths

Go over the II-V-I progressions in every key and memorize them. When they learn something in every key, most jazz musicians use the *cycle of fifths,* as shown in **figure 2-20**.[13]

Figure 2-20

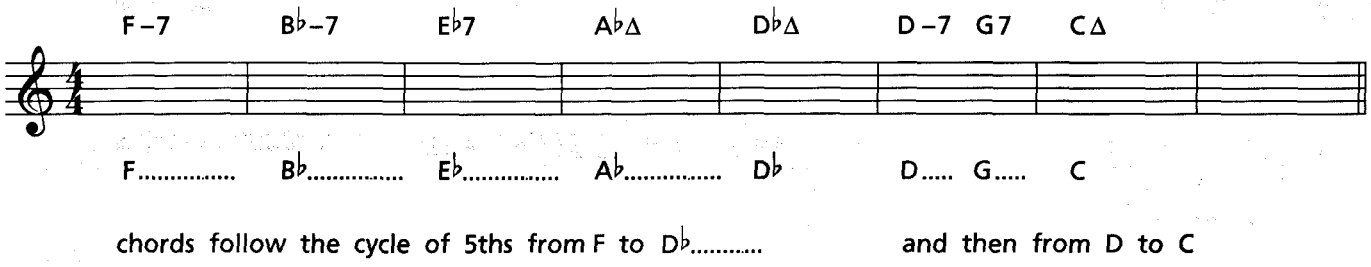


The cycle of fifths is an arrangement of all 12 notes of the chromatic scale, each note a 5th lower than the preceding one. As you go around the cycle, think of each note as representing a key, the key you're going to practice in next. Start with the key of C at the top of the circle, and move *counterclockwise* through the keys of F, B♭, E♭, and so on.[14]

You should use the cycle when you practice because it approximates real life. Most chord movement within tunes follows portions of the cycle. For instance, the roots of a II-V-I progression follow the cycle. In the key of C, the roots of the II-V-I (D-7, G7, CΔ) are D, G, and C, which follow each other counterclockwise around the cycle. In F, the roots of the II-V-I (G-7, C7, FΔ) are G, C, and F, and they, too, follow each other around the cycle.

Figure 2-21 shows the changes for the first few bars of Jerome Kern's "All The Things You Are." Notice how the roots of the chords form fragments from around the cycle of 5ths.

Figure 2-21



[13] The cycle of fifths is also know as "the circle of fourths."

[14] Classical musicians are often taught the cycle clockwise. Jazz musicians prefer using the cycle counterclockwise because the movement from note to note (C, F, B♭, and so on), follows the roots of the II-V-I progression (as in C-7, F7, B♭Δ).

Other Common Chord Progressions

Although II-V-I is the most common chord progression played by jazz musicians, there are several other commonly played progressions we need to examine.

V of V

"V of V" means a dominant chord resolving down a 5th to another dominant chord, as in C7, F7. Sometimes you will see several of these progressions in a row, following each other counterclockwise around the cycle of fifths. The quintessential example is the bridge of George Gershwin's "I've Got Rhythm," with four V chords in a row, each resolving down a 5th (**figure 2-22**). Notice how the roots of the chords go counterclockwise around the cycle: D, G, C, F.

Figure 2-22

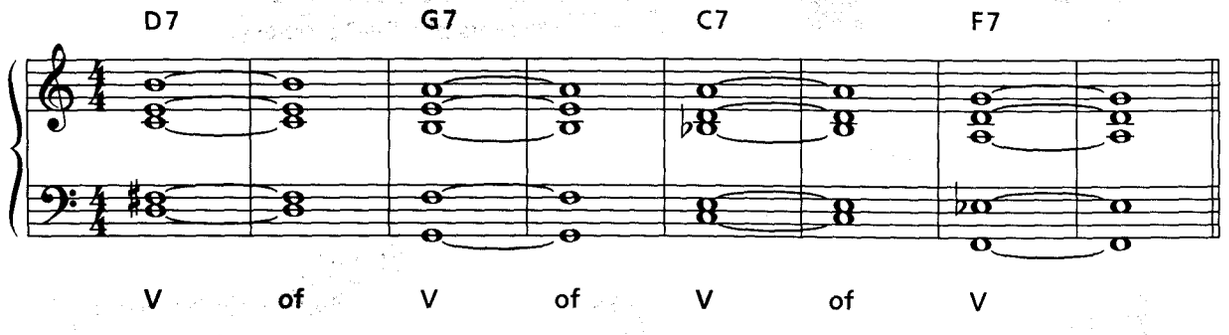
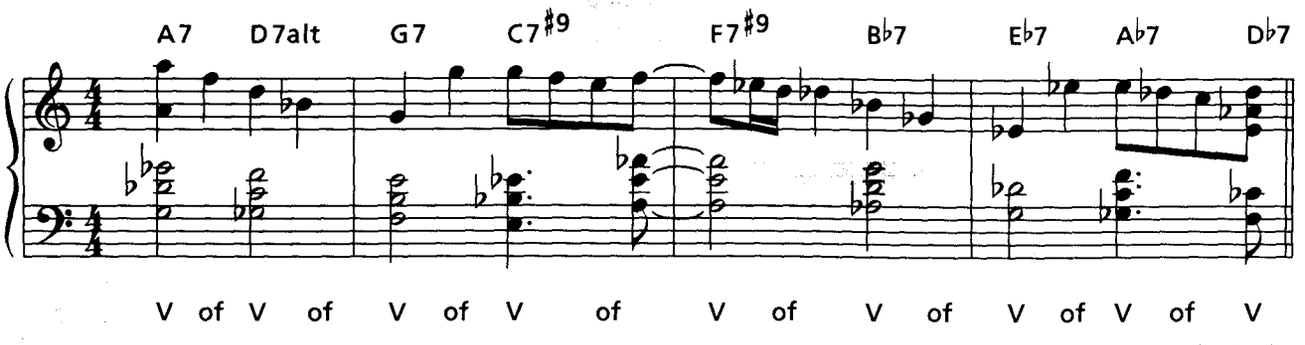


Figure 2-23



Play **figure 2-23** and hear how Cedar Walton played nine V of V chords around the cycle in the last few bars of his version of Albert Hague's "Young And Foolish."[15] The roots of all nine dominant 7th

[15] Transcribed from a clinic given by Cedar at Kimball's San Francisco nightclub in 1991.

chords—A, D, G, C, F, B♭, E♭, A♭, and D♭—follow each other counterclockwise around the cycle. Don't be confused by the lack of a root on the bottom of Cedar's chords—this is a good introduction to the "rootless" voicings that jazz pianists often play.

I-VI-II-V

One of the most common chord progressions in jazz is I-VI-II-V. The original first four chords of George Gershwin's "I've Got Rhythm" are a I-VI-II-V (C, A-7, D-7, G7), as shown in **figure 2-24**.[16] We haven't talked about the "VI" chord yet, so let's take a look at it. In the key of C, the sixth note is A. Playing the C major scale from A to A gives us the A Aeolian mode which is shown in **figure 2-25**. Putting a box around every other note gives us a chord with a root, minor 3rd, perfect 5th, and a minor 7th—an A minor 7th chord, the VI chord in the key of C.

Figure 2-24

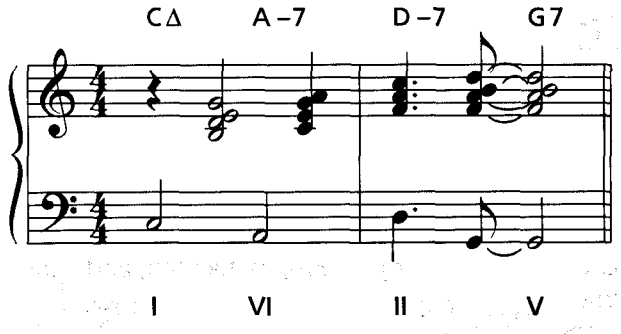
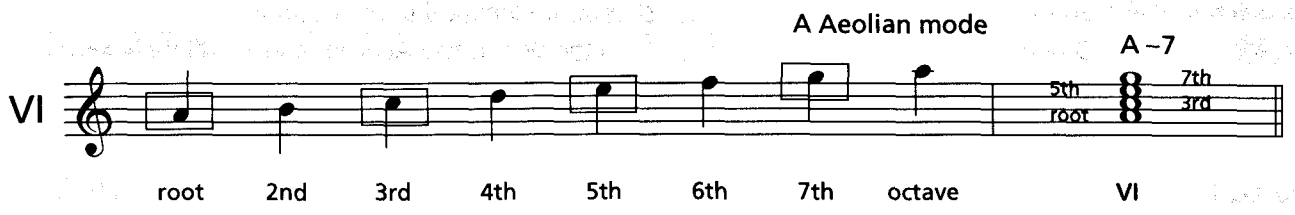
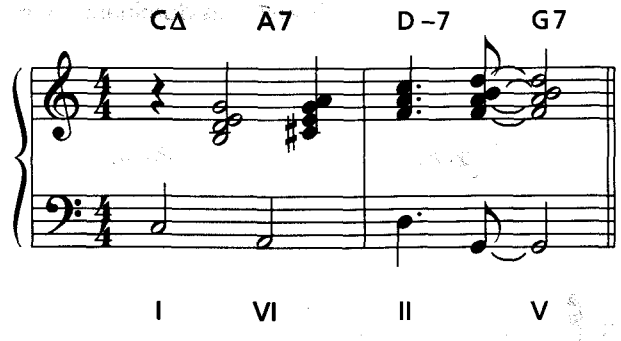


Figure 2-25



The VI chord derived from the Aeolian mode has a minor 3rd, a perfect 5th, and a minor 7th. Structurally, it is identical to the II chord derived from the Dorian mode—both are minor 7th chords. When we study all seven notes of each mode in Chapter 3, however, you will find a great difference between the Dorian and Aeolian chords.

Figure 2-26



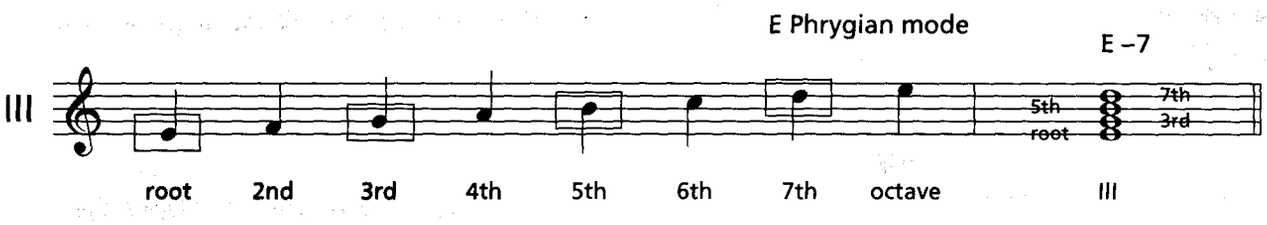
Today's players usually play a dominant 7th chord rather than a minor 7th chord as the VI chord in a I-VI-II-V. They would play I-VI-II-V in the key of C as CΔ, A7, D-7, G7 (**figure 2-26**). Playing A7 instead of A-7 gives the progression a stronger sense of resolution going to D-7, and there are far more opportunities to alter dominant 7th chords than there are to alter minor 7th chords.

[16] "I've Got Rhythm" is usually played in the key of B♭.

III-VI-II-V

A common variation of I-VI-II-V is III-VI-II-V, a chord progression often used in turnarounds. In the key of C this would be E-7, A-7, D-7, G7. We haven't looked at the third mode yet, the source of the III chord, so let's do so in **figure 2-27**.

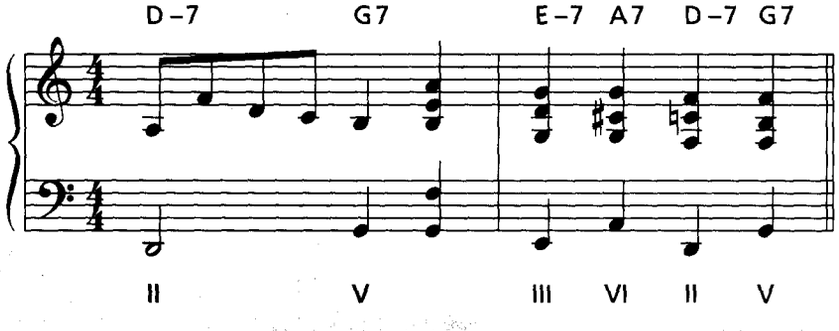
Figure 2-27



Putting a box around every other note gives us a chord with a root, minor 3rd, perfect 5th, and minor 7th; an E-7 chord, the III chord in the III-VI-II-V progression in the key of C.

The III chord derived from the Phrygian mode is structurally identical to the II and VI chords derived from the Dorian and Aeolian modes. All three appear to be minor 7th chords. When you study all seven notes of each mode in Chapter 3, however, you will find that the Phrygian mode is played most often on an entirely different chord—one that isn't even a minor 7th chord.

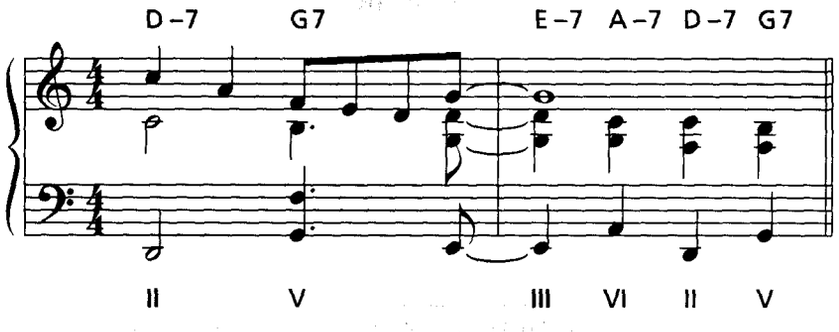
Figure 2-28



As in the I-VI-II-V progression, the VI chord in a III-VI-II-V is more often played as a dominant chord, as on bars 7 and 8 of Jimmy Van Heusen's "Polka Dots And Moonbeams" (**figure 2-28**).

You can also reharmonize all four chords of a III-VI-II-V as dominant chords. Kenny Barron does this at the end of the first eight bars of Jimmy McHugh's "On The Sunny Side Of The Street."[17] **Figure 2-29** shows the original seventh and

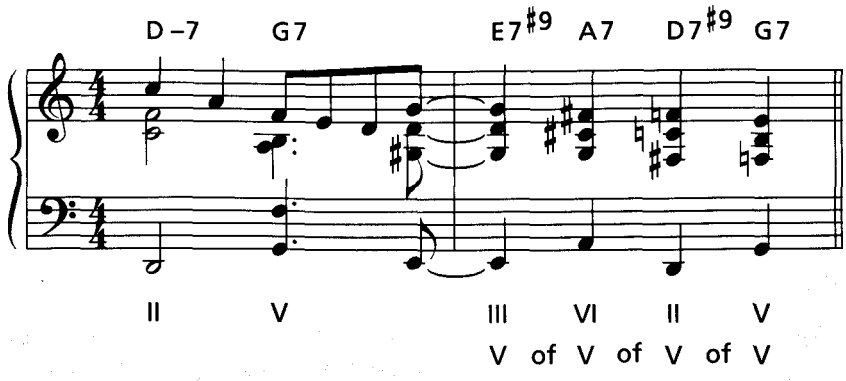
Figure 2-29



[17] Kenny Barron, *The Only One,* Reservoir, 1990.

Figure 2-30

Kenny Barron's piano voicings simplified

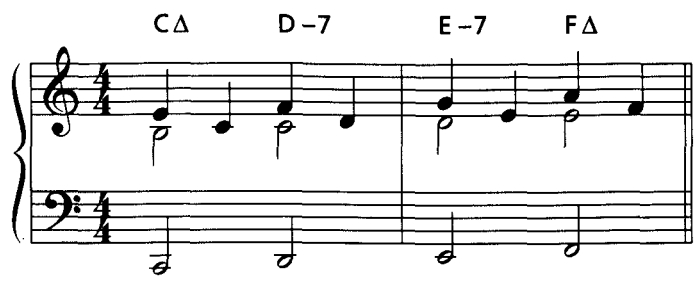


eighth bars. **Figure 2-30** shows Kenny's reharmonization, using four dominant chords in a row. Because each V chord resolves to a V chord a 5th below, this progression could also be called a "V of V of V of V," but that's a mouthful.

I-II-III-IV and the Lydian Mode

Playing the first four diatonic chords of a key is a common progression. Play **figure 2-31** and listen to two bars of Jerome Kern's "I'm Old Fashioned" as John Coltrane[18] played them, using a diatonic I-II-III-IV progression.

Figure 2-31



We haven't talked about the IV chord yet, so let's take a look at it. In the key of C, the fourth note is F. Playing a C major scale from F to F would gives us the F Lydian mode, which is shown in **figure 2-32**. Putting a box around every other note gives us a chord with a root, major 3rd, perfect 5th, and major 7th—an FΔ chord—the IV chord in C major, and the IV chord in the I-II-III-IV progression in "I'm Old Fashioned."

Figure 2-32

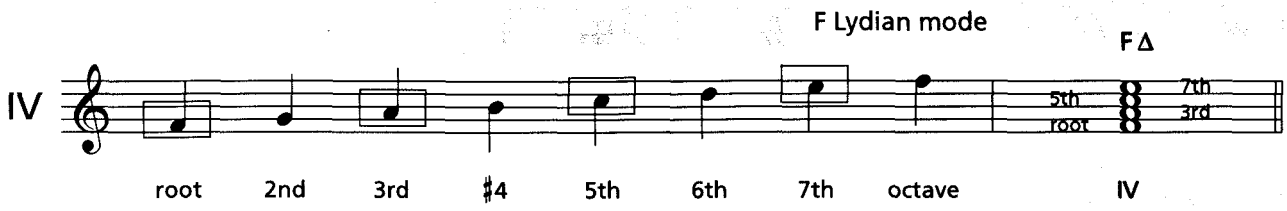
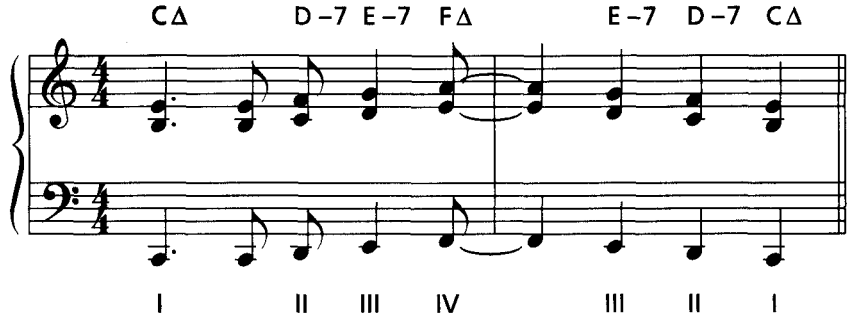


Figure 2-33



There is an altered note implied in the F Lydian mode: B, the raised 4th of an FΔ chord. Just take note of it for now, and we'll go into it in more depth in Chapter 3.

I-II-III-IV is often played by pianists and guitarists when a major 7th chord lasts two bars. The chord in the seventh and eighth bars of Jerome Kern's "All The Things You Are" is just CΔ. To provide some contrast and movement, you could ascend I-II-III-IV, and then turn around and descend III-II-I, as you'll hear when you play **figure 2-33**.

[18] John Coltrane, *Blue Train*, Blue Note, 1957.

Figure 2-34

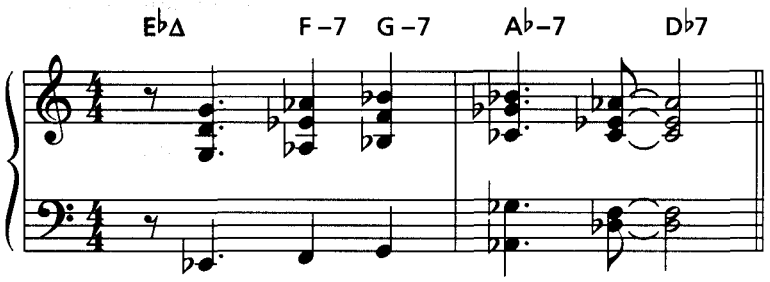


Figure 2-35

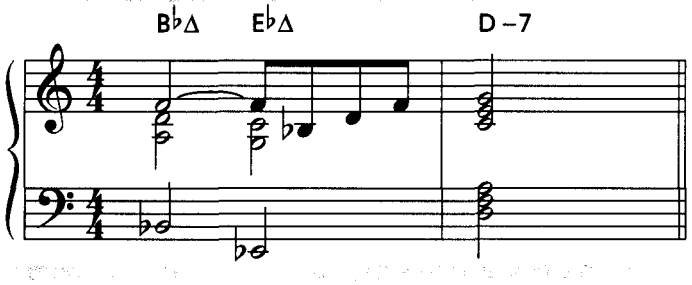


Figure 2-36

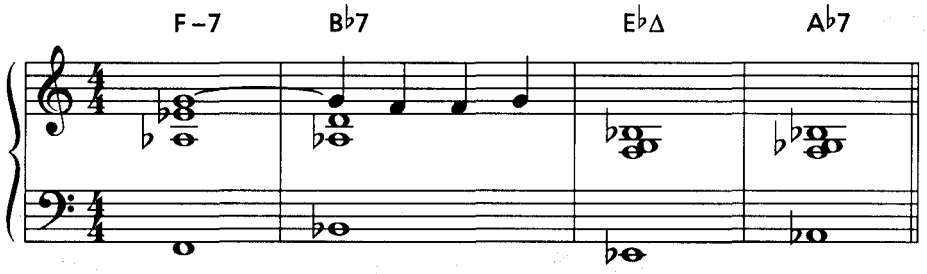
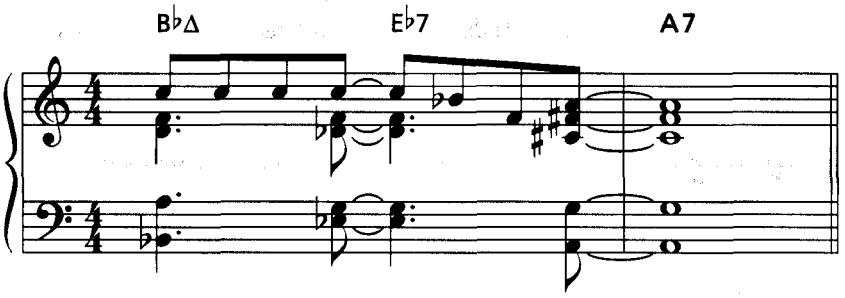


Figure 2-37



Play **figure 2-34** and you'll hear how Coltrane deceptively used a I-II-III-IV progression to modulate from E♭ into another key on "Moment's Notice."[19] The expected IV chord would be A♭Δ, but Coltrane played A♭-7 instead, resolving it to D♭7, the II-V in G♭.

I-IV

Major chords are often followed by chords a 4th up. Sometimes the chord a 4th up will be a major chord, as shown in **figure 2-35**, where Bobby Hutcherson follows B♭Δ with E♭Δ in the first bar of Victor Young's "My Foolish Heart."[20]

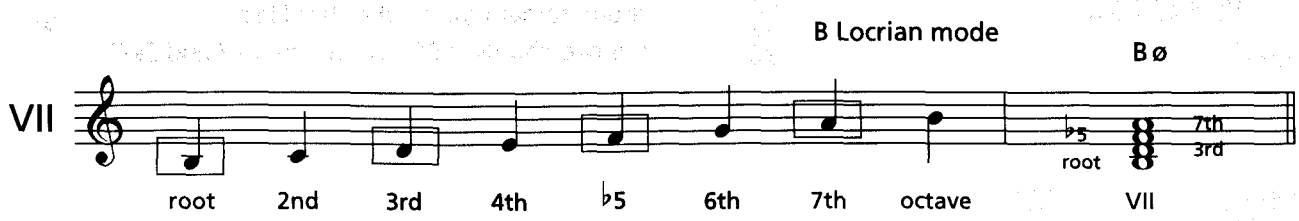
Sometimes the chord a 4th up following a major chord will be a dominant chord, as in bars 7 and 8 of "Stella By Starlight," where E♭Δ is followed by A♭7 (**figure 2-36**). There's another example in Willard Robison's "Old Folks," where B♭Δ is followed by E♭7 (**figure 2-37**).

[19] *Ibid.*
[20] Bobby Hutcherson, *Solo/Quartet,* Contemporary, 1981.

The Locrian Mode and the Half-Diminished Chord

There's one mode we haven't looked at yet: the seventh, or Locrian mode. **Figure 2-38** shows the B Locrian mode from the key of C. Putting a box around every other note gives us a chord unlike all the others we've checked out so far—a chord with a root, minor 3rd, *flatted 5th,* and minor 7th—a B-7♭5 chord, the VII chord in the key of C. The chords derived from the other six modes all had perfect 5ths, but a perfect 5th above B would be F♯, a note outside the key of C. Locrian is the only mode with a flatted 5th. B-7♭5 is a rather long chord symbol, and most musicians today notate it as Bø, or B *half-diminished.* "Half-diminished" means "a minor 7th chord with a flatted 5th." We'll explore the half-diminished chord more in Chapter 3.

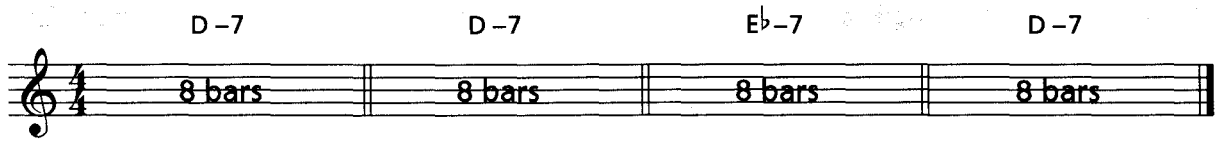
Figure 2-38



Modal Jazz

A good definition of *modal jazz* is "few chords, lots of space." The term came into use after the release of Miles Davis' album *Kind Of Blue* in 1959.[21] The quintessential modal tune from that album is "So What," a song with only two chords, the changes of which are shown in **figure 2-39**.

Figure 2-39



[21] Miles Davis, *Kind Of Blue,* Columbia, 1959.

Modal tunes provided much more space for improvising on each chord compared to previous jazz tunes and standards—up to 24 bars on D-7 in "So What," for example (from the last 8 bars through the first 16 bars). Because of this, it was natural for musicians to focus on the scale, or mode, of each chord, rather than on the chord itself. Thus, although the two chords in "So What" are D-7 and E♭-7, musicians are more apt to be thinking "D Dorian" and "E♭ Dorian" when improvising. Historically, this caused a seismic shift among jazz musicians, away from thinking vertically (the chord), and toward a more horizontal approach (the scale).

An earlier Miles Davis tune, "Milestones"[22] (1958), was based on just three chords. Other tunes that got players thinking about scales and modes, rather than chords, include John Coltrane's "Impressions,"[23] based on the changes to "So What," Coltrane's version of Richard Rodgers' "My Favorite Things,"[24] and Freddie Hubbard's "Little Sunflower."[25]

So far we've covered all of the major scale modes but only as a source of chords. We examined their chord tones only—roots, 3rds, 5ths, and 7ths. In the next Chapter you'll examine all seven notes of each mode, and discover how you use the modes to improvise over chords.

[22] Miles Davis, *Milestones,* Columbia, 1958.
[23] John Coltrane, *Impressions,* MCA/Impulse, 1961. The melody on the A section of "Impressions" is virtually identical to the "Pavanne" theme in the Second Movement of Morton Gould's "2nd American Symphonette," copyright 1938. Had Coltrane ever heard "Pavanne" before he wrote "Impressions"? Quite possibly, since "Pavanne" was very popular in the 1940s and 1950s, and was played a lot on the radio. Given Coltrane's artistic integrity, we can assume that his copying of "Pavanne" was done subconsciously.
[24] John Coltrane, *My Favorite Things,* Atlantic, 1960.
[25] Freddie Hubbard, *Backlash,* Atlantic, 1966.

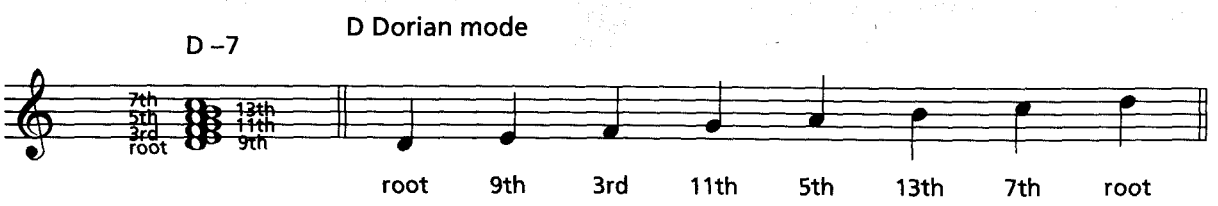
CHAPTER THREE
Chord/Scale Theory

- *Why Scales?*
- *Major Scale Harmony*
- *Melodic Minor Scale Ha*

series of 3rds. Because we learned the alphabet as A-B-C-D-E-F-G, and so on, it's not easy to think of every other letter of the alphabet, as in D-F-A-C-E-G-B. And because we learned numbers sequentially, as 1-2-3-4 and so forth, it's not easy to think of every other number, as in 1-3-5-7-9-11-13. Fortunately, it's easy enough to rearrange the notes so they are sequential.

Look back at **figure 3-1**. Take all seven notes and put them in the same octave, as shown in **figure 3-2**.

Figure 3-2



Arrange them in a scale, and you have the seven notes of the D Dorian scale, or mode, shown to the right. A scale is much easier to remember than a series of 3rds. *The reason jazz musicians think of scales, or modes, when they improvise, is because it's easier than thinking in terms of chords.*

The word "scales" has a negative connotation for many people, because it conjures up an image of drudgery—endlessly, and mindlessly, practicing many hours every day to "learn your scales." You'll certainly have to practice scales so you can use them when you improvise, but the best jazz musicians reach a point where they think of a scale, not as "do-re-mi-fa-sol," but rather as an *available pool of notes* to play on a given chord.

In addition, most beginning jazz musicians assume that, since there seem to be zillions of chords, there must be zillions of scales. *Wrong.* You can interpret almost all chord symbols using just these four scales:[2]

- The major scale
- The melodic minor scale
- The diminished scale
- The whole-tone scale

[2] There's also the blues scale, which is in a category by itself and will be covered in Chapter 10.

As you can see in **figure 3-2**, the notes in an extended D-7 chord are exactly the same as the notes in the D Dorian mode. Remember this, because although everybody uses the expression "play this scale on that chord" as if the scale and the chord were two different things, *the scale and the chord are two forms of the same thing*. Start thinking of chord symbols as scale symbols, or even better, as *chord/scale symbols*.

Since we're going to be thinking of scales and chords as two forms of the same thing, let's review the rules for the three basic chords: major 7th, minor 7th, and dominant 7th. The same rules will apply for most scales.

- The major 7th chord has a major 3rd and a major 7th.[3]
- The minor 7th chord has a minor 3rd and a minor 7th.[4]
- The dominant 7th chord has a major 3rd and a minor 7th.

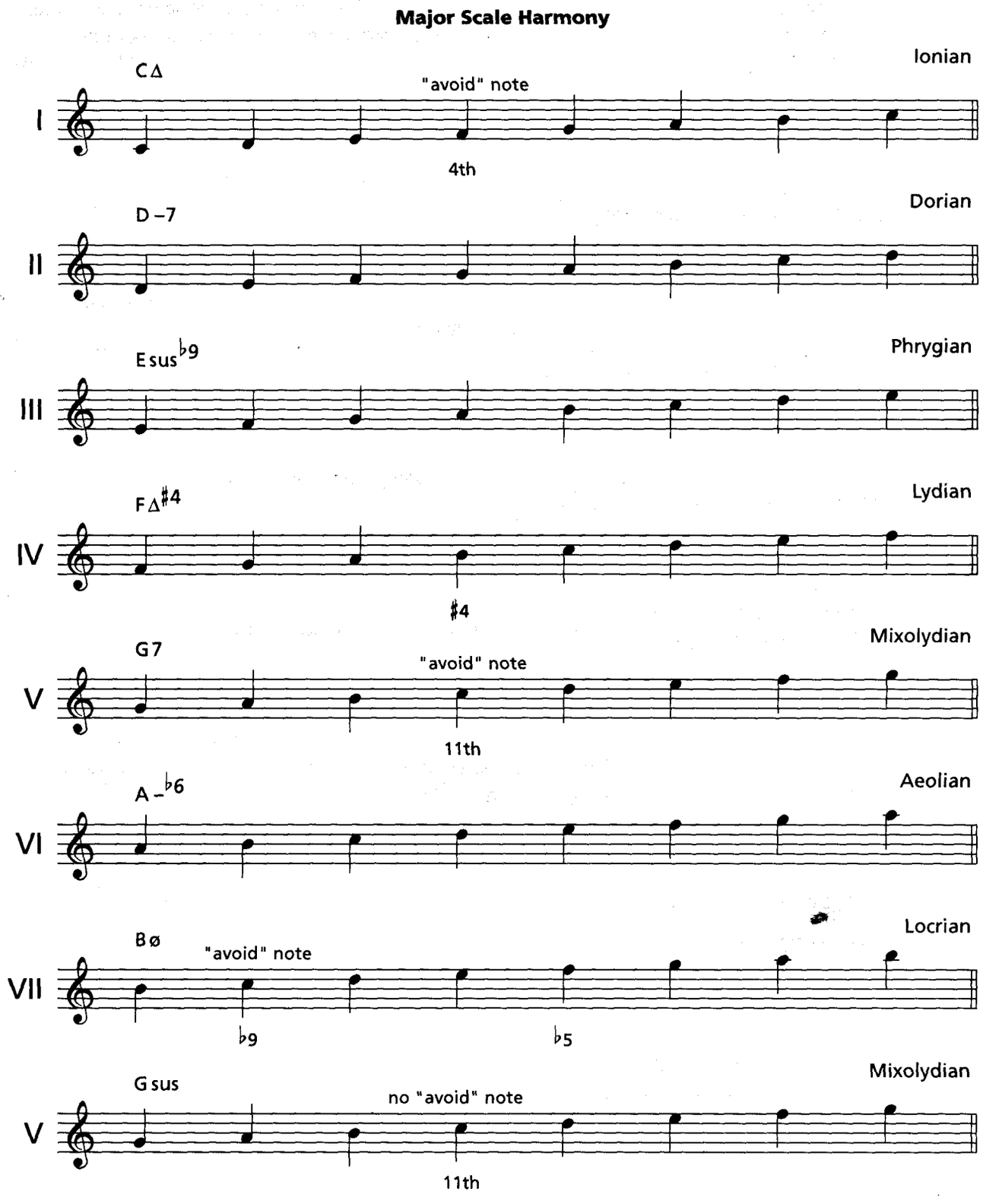
All three chords—major 7th, minor 7th, and dominant 7th—have a perfect 5th.

Major Scale Harmony

Because you can play more than one scale on a given chord, the scales presented here are in the category of "basic first choices." Different musicians may play different scales on the same chords. Charlie Parker and John Coltrane, two giants of jazz, played different scales on half-diminished chords. Keep an open mind—and open ears.

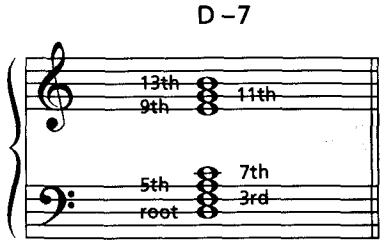
[3] Think "major-major-major."
[4] Think "minor-minor-minor."

Figure 3-3


Major Scale Harmony
Ionian
CΔ
"avoid" note
I
4th
Dorian
D –7
II
Phrygian
Esus♭9
III
Lydian
FΔ♯4
IV
♯4
Mixolydian
G7
"avoid" note
V
11th
Aeolian
A –♭6
VI
Locrian
Bø
"avoid" note
VII
♭9
♭5
Mixolydian
G sus
no "avoid" note
V
11th

Look at the Major Scale Harmony chart (**figure 3-3**). You learned about the major scale in Chapter 2, but only checked out the root, 3rd, 5th, and 7th of each mode to discover what chord is derived from that mode. In this chapter, you'll learn about all seven notes of each mode, this time from the point of view of improvisation as well as chord formation. In the process, you'll learn more chords played by jazz musicians. In addition, you'll learn how musicians use chord symbols not only to denote the chord to be played, but also to indicate what scale to play on that chord. Finally, you'll learn about *extensions* (9ths, 11ths, 13ths) and *alterations* (♭9, ♯9, ♯11, ♭5, ♭13).

Figure 3-4



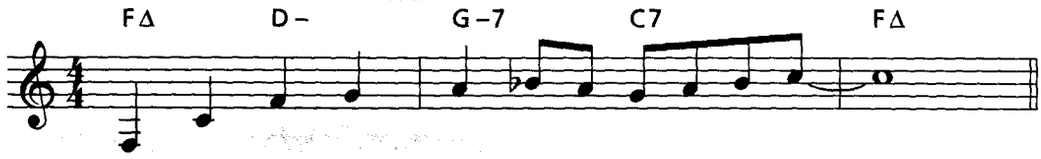
Extension numbers are always confusing at first. Look at **figure 3-4**, which shows a D-7 chord. E, the "9th" of the D-7 chord, is a 2nd above D, is it not? G, the "11th," is a 4th above D. And B, the "13th," is a 6th above D. Why not call E, G, and B the 2nd, 4th, and 6th? Because chords are usually built in 3rds, and to keep this continuity going, numbers bigger than "7" are needed. Here are a few simple rules to memorize:

- The 9th of a chord is the same note as the 2nd.
- The 11th of a chord is the same note as the 4th.
- The 13th of a chord is the same note as the 6th.

The Ionian Mode and the Major 7th Chord

Figure 3-3 shows the C major scale in all its modes, Ionian, Dorian, Phrygian, Lydian, and so on. Let's look at the first, or Ionian, mode, which goes with some kind of C chord. What kind of a 3rd and 7th does it have? Because it has a major 3rd and a major 7th, it's the mode for a CΔ chord.

Figure 3-5



The major scale can sound majestic, like Joe Henderson as he plays a F major scale lick on Lee Morgan's "Hocus Pocus"[5] (**figure 3-5**). It can sound playful, as Woody Shaw does playing the G major scale on Booker Ervin's "Lynn's Tune"[6] (**figure 3-6**). It can sound effusive, as Booker Ervin does playing the E♭ major scale on his cadenza on Charles Mingus' "Self-Portrait In Three Colors"[7] (**figure 3-7**).

Figure 3-6

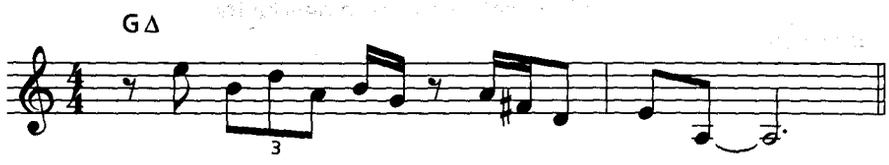
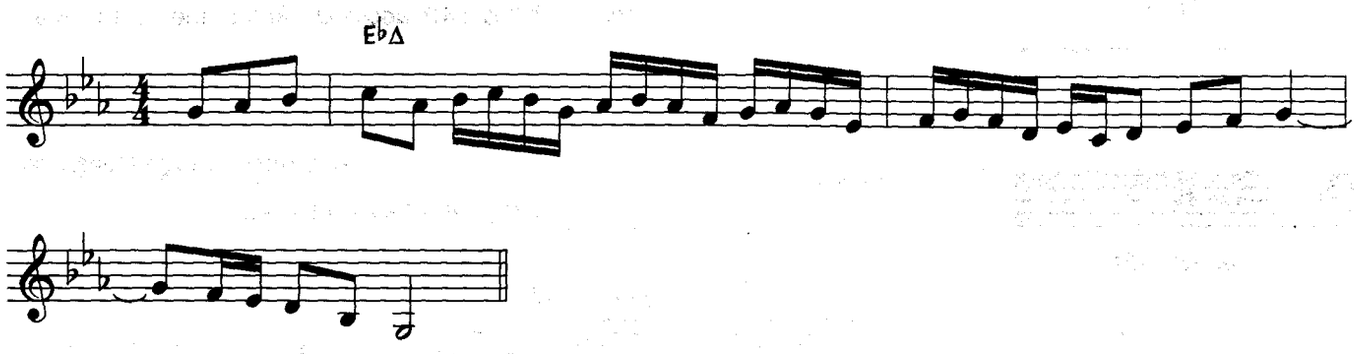


Figure 3-7



The Dorian Mode and the Minor 7th Chord

Now look at the second, or Dorian, mode in **figure 3-3**, which runs from D to D. It goes with some kind of D chord. Because it has a minor 3rd and a minor 7th, it's the mode for a D-7 chord.

The Mixolydian Mode and the Dominant 7th Chord

Skip now to the fifth, or Mixolydian, mode in **figure 3-3**, which runs from G to G. Because it has a major 3rd and a minor 7th, it's the mode for a G7 chord.

[5] Lee Morgan, *The Sidewinder,* Blue Note, 1963.
[6] Booker Ervin, *Back From The Gig*, Blue Note, 1968.
[7] Charles Mingus, *Mingus Ah Um,* Columbia, 1959.

To sum up, these are the modes to play over D-7, G7, CΔ, the II-V-I progression in the key of C:

- On a D-7 chord, play the D Dorian mode.
- On a G7 chord, play the G Mixolydian mode.
- On a CΔ chord, play the C Ionian mode.

At this point, the logical question is: Why bother with modes? Since D Dorian, G Mixolydian, and C Ionian are all just different forms of the C major scale, why not just think "play in C major," on D-7, G7, CΔ?

"Avoid" Notes

Good question. Go to a piano and play a root position CΔ chord with your left hand while playing the C major scale with your right hand, as shown in **figure 3-8**. There is a note in the scale that is much more dissonant than the other six notes. Play the same chord again with your left hand while you play the 4th, F, with your right hand. Hear the dissonance? This is a so-called "avoid" note. Play the chord again, this time playing a short run in the right hand with F in the middle of it, as shown in **figure 3-9**. The dissonance is hardly noticeable this time, because F is now a *passing note*, and is not struck or held against the chord. "Avoid note" is not a very good term, because it implies that you shouldn't play the note at all. A better name would be a "handle with care" note. Unfortunately, that's not as catchy, so I'll (reluctantly) stick with the term "avoid" note.

Figure 3-8

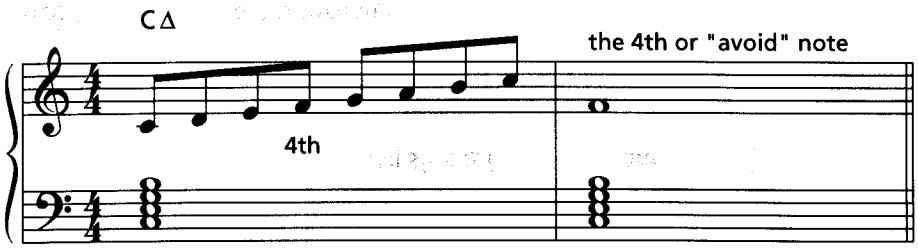


Figure 3-9

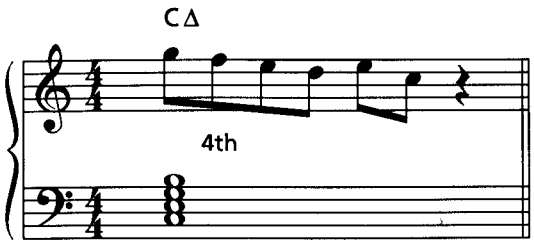


Figure 3-10

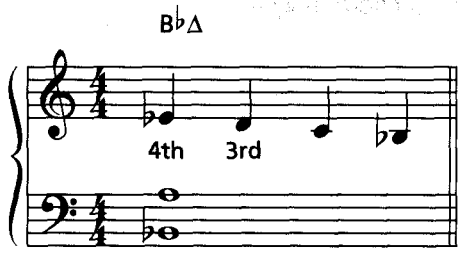
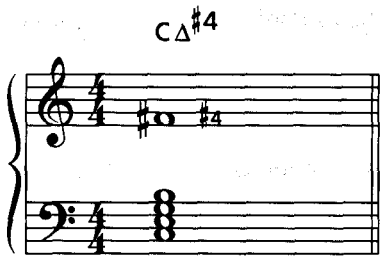


Figure 3-11



By the way, don't think of consonance as "good" and dissonance as "bad." Dissonance makes music interesting, providing tension, resolution, and energy. "The creative use of dissonance" might be a good way to describe the entire evolution of Western music.[8] The context often determines how much dissonance you play. The 4th on a major 7th chord is often played as a deliberate dissonance, usually resolving to the 3rd just below. The first note in the ninth bar of Victor Young's "Stella By Starlight" is E♭, the 4th of a B♭Δ chord, an "avoid" note. Play **figure 3-10**, and you'll hear this starkly dissonant E♭, the 4th, resolve immediately to D, the major 3rd of B♭Δ.

If you're playing an "outside," or free piece, or one where there is a long section of a major chord, the 4th might just be the most interesting note you could play.

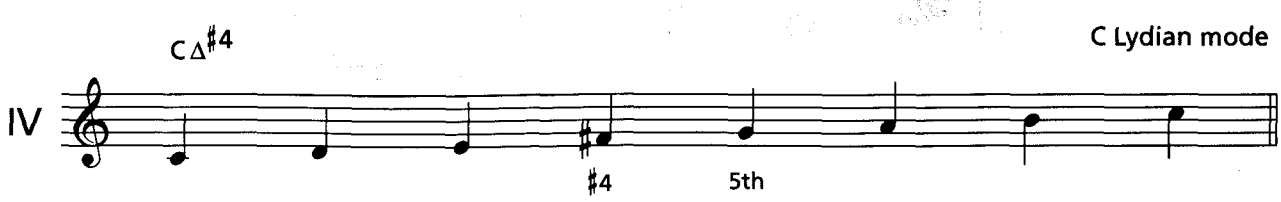
Before the bebop era, most jazz musicians played the 4th of a major chord as a passing note only. Charlie Parker, Bud Powell, Thelonious Monk, and other pioneers of bebop often *raised* the 4th, as shown in **figure 3-11**, in their improvising, chord voicings, and original tunes. It's hard to believe now, but the raised 4th was a very controversial note during the 1940s. People actually wrote letters to *Down Beat* magazine about it, saying things like "the beboppers are ruining our music" and "jazz is dead."[9]

[8] By "Western Music," I *don't* mean Country and Western music.

[9] Keep that in mind, if you're paying any attention to whatever controversy is going on in the jazz media at the moment as to "what is jazz?" Nobody gets to decide that, only the music itself, as it evolves. I like what J.J. Johnson said about Jazz in an interview in the October 1994 issue of The Jazz Educators Journal: "Jazz is unpredictable and it won't behave itself."

The raised 4th is notated here as ♯4, but many musicians call it ♯11 instead (remember, the 4th and the 11th are the same note). Until the 1960s, most musicians called it a ♭5, but as more and more jazz musicians started thinking of scales while improvising, the term ♭5 gave way to ♯4 or ♯11. As you can see in **figure 3-12**, the 4th of the C major scale has been raised, rather than the 5th lowered.

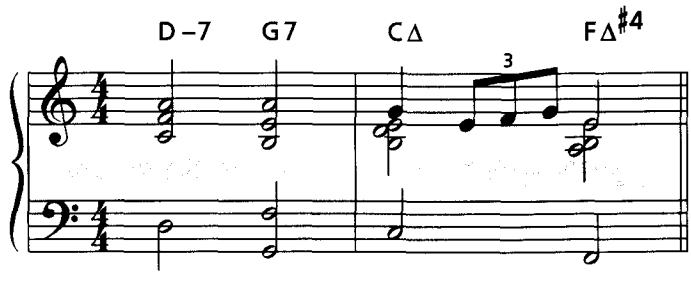
Figure 3-12



The Lydian Mode and the Major 7th♯4 Chord

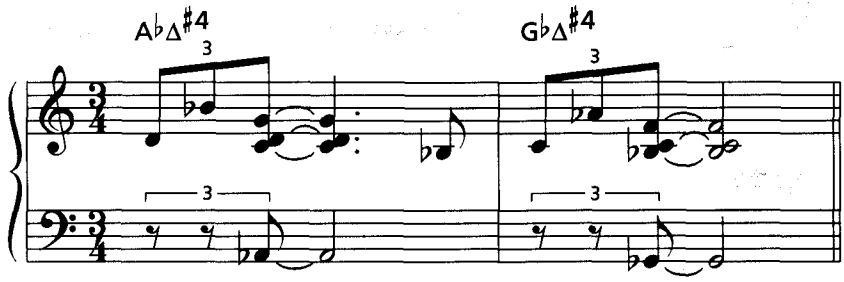
The new scale, or mode, shown in **figure 3-12** is the same as the G major scale, except that it starts on C, the fourth note of the G major scale. The mode starting on the fourth note of any major scale is called the *Lydian* mode, which makes this the C Lydian mode. Even though the chord symbol reads CΔ♯4, you're actually playing in the key of G. Learn to *think key, not chord* as much as possible.

Figure 3-13



You don't have to wait to see ♯4 in a chord symbol to play a raised 4th on a major 7th chord. You can play it on almost any major 7th chord. Well, almost. A Lydian chord would probably sound out of character on a pop tune. I almost said "on a Beatles tune," but Oliver Nelson used Lydian chords in his arrangement of John Lennon and Paul McCartney's "Yesterday."[10] One place to play a raised 4th on a major 7th chord (making it a Lydian chord) is when the major 7th chord is acting like a IV chord. If a II-V-I in C (D-7, G7, CΔ), is immediately followed by FΔ, the IV chord in C major, FΔ♯4 is probably going to sound good (**figure 3-13**). Your fake book may not show the ♯4, because it's optional.

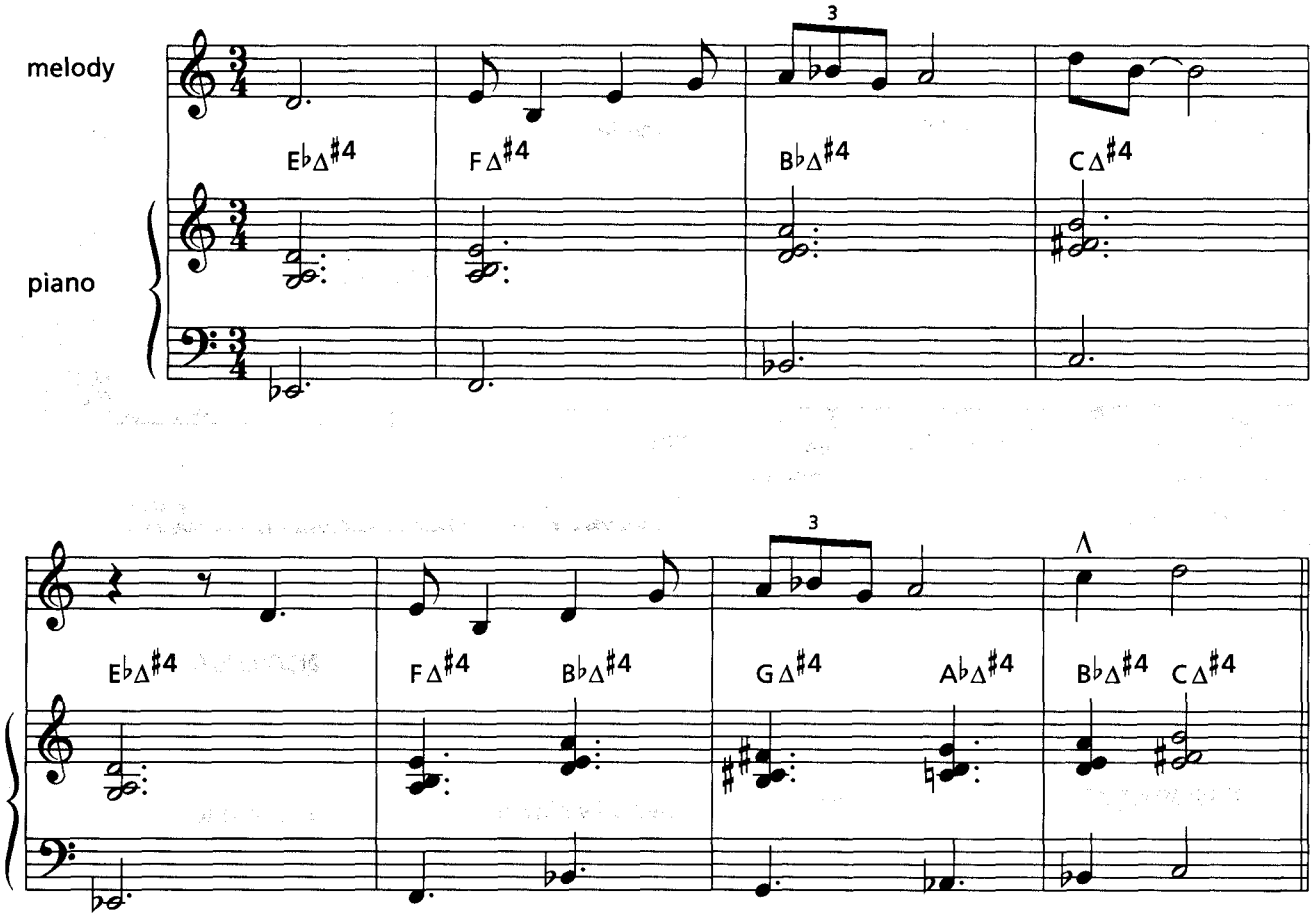
Figure 3-14



Play **figure 3-14**, from Woody Shaw's "Katrina Ballerina,"[11] and listen to Woody's use of Lydian chords.

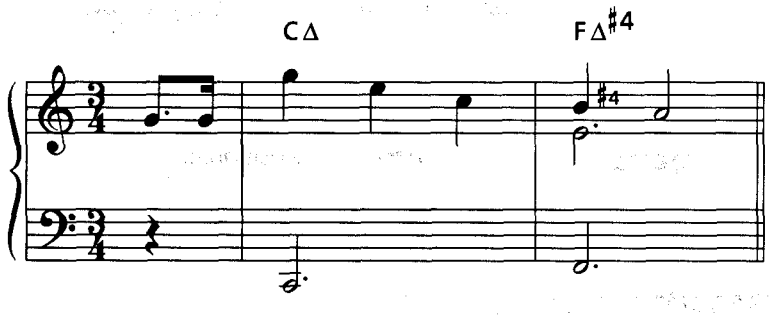
[10] Lee Morgan, *Delightfulee*, Blue Note, 1966.
[11] Woody Shaw, *United*, Columbia, 1981.

Figure 3-15



Take a look at **figure 3-15**, the last eight bars of Joe Henderson's "Black Narcissus."[12] All the chords in these 8 bars are major 7th♯4, or Lydian, chords. You'd need three hands to play this example, so ask a horn player to play Joe Henderson's melody line while you play the piano part.

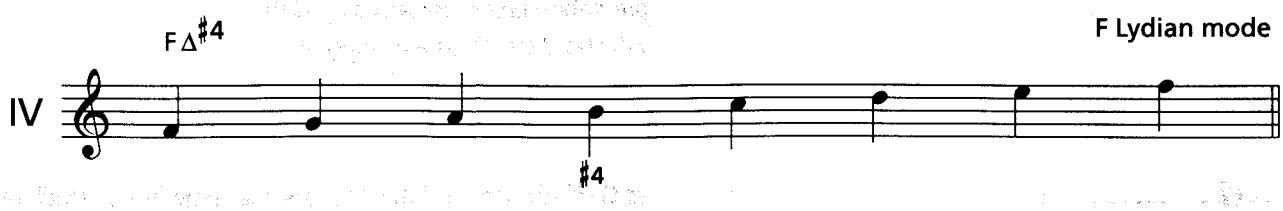
Figure 3-16



Jazz musicians usually think of Lydian chords as being very modern, but George Gershwin used a Lydian chord as the first chord in the bridge of "Someone To Watch Over Me," which was written in 1926. And the chord in the sixth bar of "Happy Birthday" (written in 1893) is a Lydian chord (**figure 3-16**).

[12] Joe Henderson, *Power To The People,* Milestone, 1969.

Figure 3-17



Look again at the fourth, or Lydian mode, in the major scale harmony chart (shown again here as **figure 3-17**). What kind of 3rd and 7th does it have? Because it has a major 3rd and a major 7th, it must go with an FΔ chord. If you saw the chord symbol FΔ, however, the first scale you would think of would be the F major scale. How does the F Lydian mode differ from the F major scale? Instead of a B♭, F Lydian has a B natural, or a raised 4th, so ♯4 has been added to the chord symbol.

Look again at the fifth, or Mixolydian mode (shown again here as **figure 3-18**). The Mixolydian mode is also known as the *dominant scale*. Play

Figure 3-18

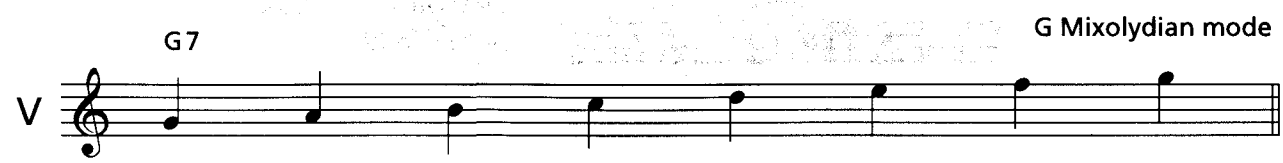
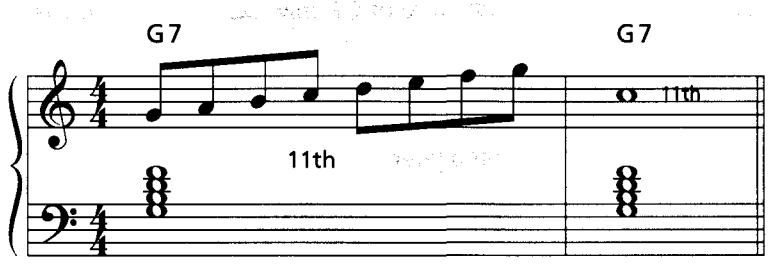


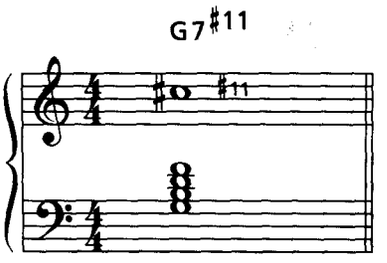
Figure 3-19



a root position G7 chord with your left hand while playing the G Mixolydian mode in your right hand, as shown in **figure 3-19**. There is another "avoid" note here, C, the fourth note of the mode. It's also called the 11th; remember, the 4th and the 11th are two names for the same note.

Play C with your right hand while playing G7 with your left hand, as shown in the second bar of **figure 3-19**. You'll hear the dissonance. Again, if you play C as a passing note, you'll hardly notice any dissonance. You'll hear it only if you hold C against a G7 chord. And don't forget that the context will decide whether or not you play C on a G7 chord. You might specifically want to play something dissonant, or you might want to play the 11th and then resolve it down a half step to the 3rd, as in the example from "Stella By Starlight." Remember not to think of dissonance as "bad." Dissonance is not a pejorative term; it's a musical device you can use when appropriate.

Figure 3-20



As with the "avoid" note on the I chord, most pre-bebop jazz musicians played the 4th on a dominant 7th chord strictly as a passing note. Bird, Bud, Monk, and other innovators of the bebop era often *raised* the 4th on a dominant chord, as in **figure 3-20**. The chord is notated here as G7♯11. Some musicians write this chord as G7♯4 (the 4th and the 11th are the same note). Until the 1960s it was usually called a ♭5. However, that term has slowly given way to ♯11 or ♯4. As you can see in **figure 3-21**, the fourth note of the mode has been raised, rather than the fifth note lowered.

Figure 3-21

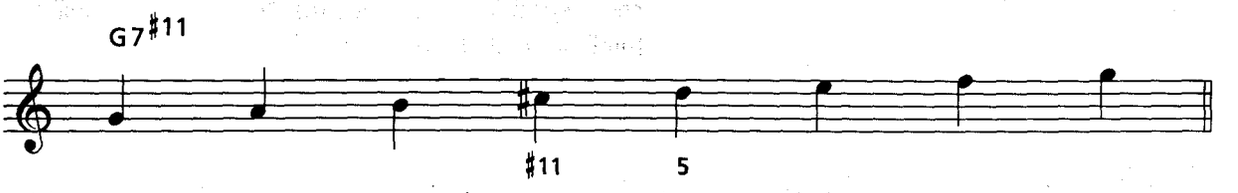
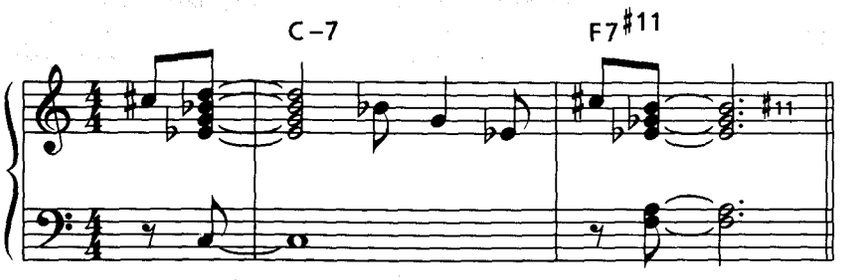


Figure 3-22



The early bebop masters raised the 4th on dominant 7th chords in their improvisations, their chord voicings, and their compositions. **Figure 3-22** shows Bud Powell's ♯11 on an F7 chord in his tune "Bouncin' With Bud."[13]

Note that this new scale is not derived from any major scale. It has one accidental, C♯, but there is no major scale with a key signature of C♯ only. At this point, we've left major scale harmony and moved on to another type of harmony based on an entirely different scale, the *melodic minor scale*. Melodic minor harmony will be covered later in this chapter.

[13] *The Amazing Bud Powell,* Blue Note, 1949.

Figure 3-23

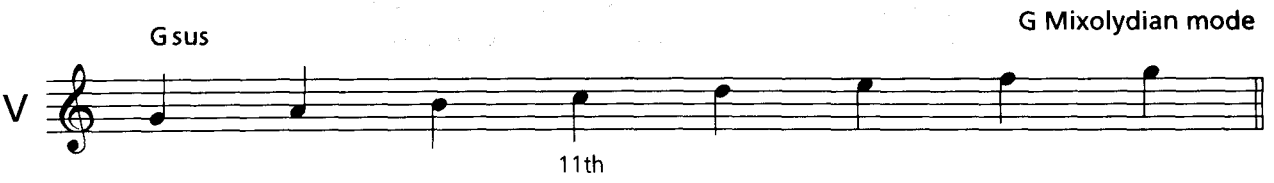


Figure 3-24

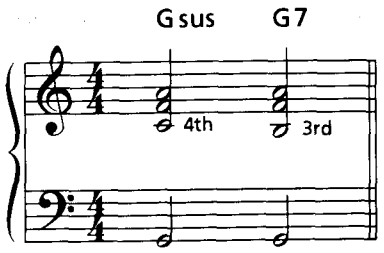


Figure 3-25

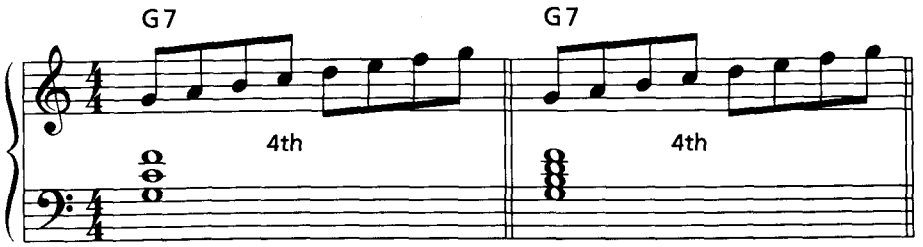
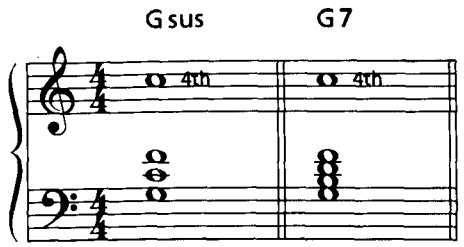


Figure 3-26



The Mixolydian Mode and the Sus Chord

Look at the last line of **figure 3-3**, shown again here as **figure 3-23**. The fifth, or Mixolydian, mode appears again here, but this time with a new chord symbol, Gsus. G Mixolydian is the scale, or mode, that is usually played over a Gsus chord. The difference between G7 and Gsus, the two chords that share the same G Mixolydian mode, is as follows: Pianists and guitarists voice sus chords so that the 4th doesn't sound like an "avoid" note. A good definition of a sus chord is "a V chord in which the 4th doesn't sound like an 'avoid' note."

The "sus" in the chord symbol refers to the *suspended 4th* of the chord, in this case the note C. In traditional harmony, the 4th of a sus chord usually resolves down a half step to become the 3rd of a dominant 7th chord (**figure 3-24**). In contemporary music, the 4th often doesn't resolve, which gives sus chords a floating quality.

On the piano, play the G Mixolydian mode first over the Gsus chord voicing in the left hand and then over a G7 chord (**figure 3-25**), and you'll hear the difference. Play the C by itself over each chord (**figure 3-26**), and the difference is more pronounced.

Figure 3-27

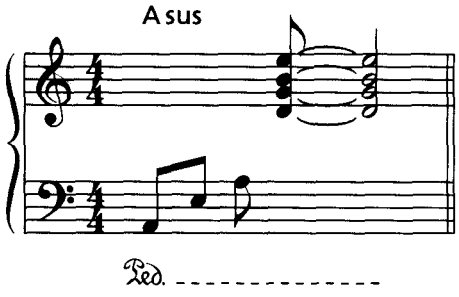


Figure 3-28

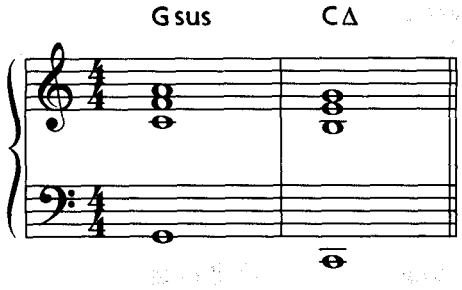


Figure 3-29

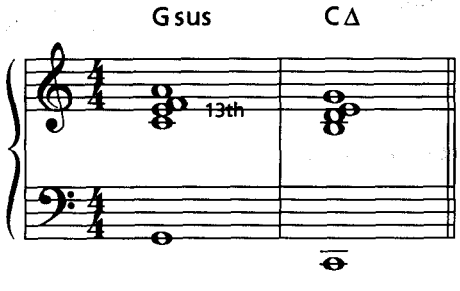
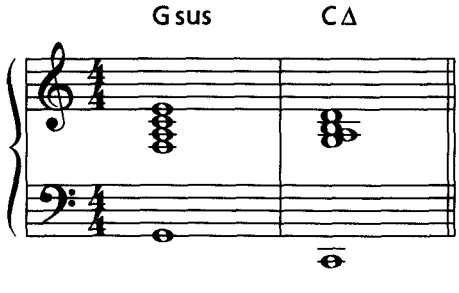


Figure 3-30



Sus chords have been an everyday sound in jazz only since the 1960s, although Duke Ellington and Art Tatum were playing them in the 1930s and 1940s. Play **figure 3-27** and you'll hear the Asus chord Tatum played on the intro to Jerome Kern's "Why Was I Born."[14]

This is not a piano book, but because students of all instruments constantly ask "how do you voice a sus chord?" I'll show you how. **Figure 3-28** shows a common Gsus voicing. This is a simple voicing; play the root (G) with your left hand while playing the major triad a whole step below the root (in this case F major) with your right hand. Note that the triad is in second inversion, meaning that the 5th of the triad (C) is on the bottom, instead of the root (F). Triads often sound strongest in second inversion. Note how smoothly this voicing resolves to the C Δ chord.

Play **figure 3-29** and listen to another common Gsus voicing resolving to C Δ. The notes in the Gsus chord are the same as they were in **figure 3-28**, except for the added "E," the 13th of Gsus. **Figure 3-30** shows the same four notes in the Gsus chord, but in a different inversion, resolving smoothly to C Δ. Gsus resolves just as smoothly to C Δ as G7 does. Sus chords function as V chords.

[14] Art Tatum, *Gene Norman Presents, Vol. I,* GNP Crescendo, early 1950s.

Figure 3-31

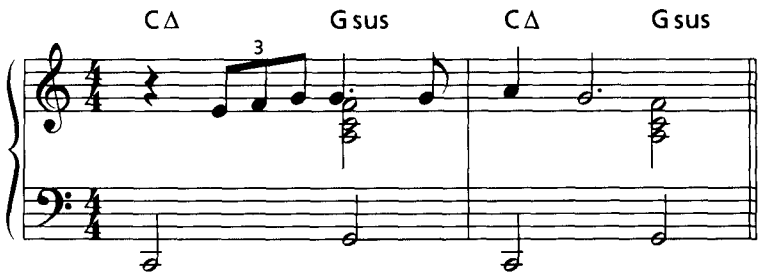


Figure 3-32

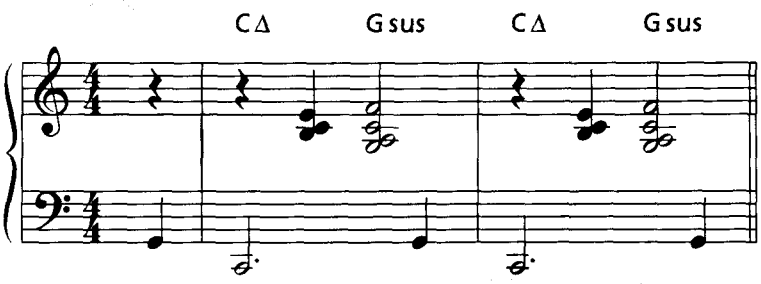


Figure 3-33

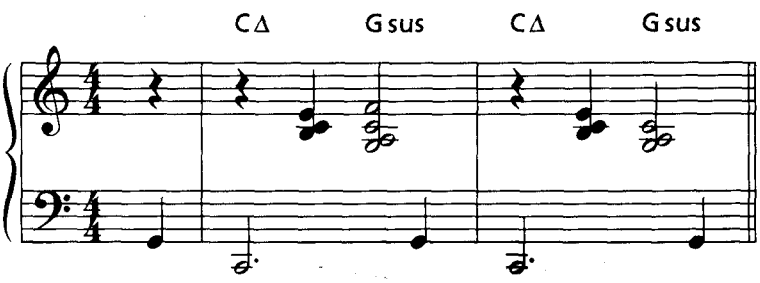
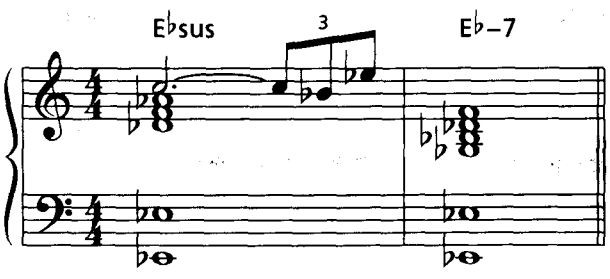


Figure 3-34



One of the first songwriters to use sus chords was Leonard Bernstein. His "Some Other Time," written in 1944, alternates major 7th and sus chords (**figure 3-31**). Bill Evans echoed this chord progression 25 years later, when he played virtually the same piano voicings both on his and Tony Bennett's recording of "Some Other Time"[15] (**figure 3-32**) and on his own "Peace Piece"[16] (**figure 3-33**), as well as on Miles Davis' "Flamenco Sketches."[17]

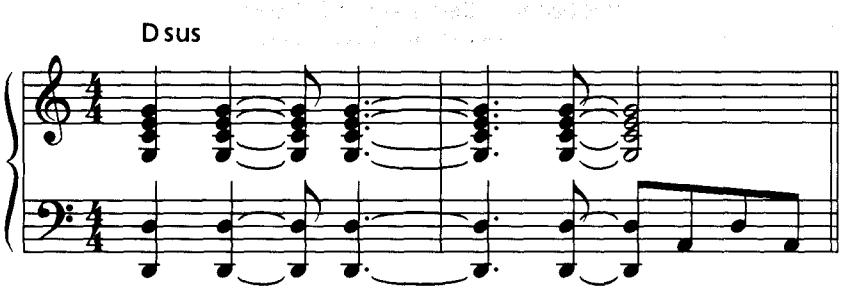
You might see this same Gsus chord notated as G7sus4, Gsus4, FΔ/G, F/G, or D-7/G. The last three variations are *slash chords*, the left part of the symbol indicating to a pianist what chord is to be played over the bass note indicated in the right part of the symbol. F/G describes exactly what's happening in **figure 3-28**: an F triad played over G. We'll cover slash chords thoroughly in Chapter 5.

D-7/G describes the *function* of the sus chord, because a sus chord is like a II-V progression contained in one chord. The II-V progression in the key of C is D-7, G7.

Two songs did a lot to popularize sus chords among jazz musicians: John Coltrane's "Naima,"[18] and Herbie Hancock's "Maiden Voyage."[19] Play **figure 3-34** and listen to the sound of the E♭sus chord in the first bar of "Naima." In addition, Coltrane used sus chords in his recording of Jerry Brainin's "The Night Has A Thousand Eyes."[20]

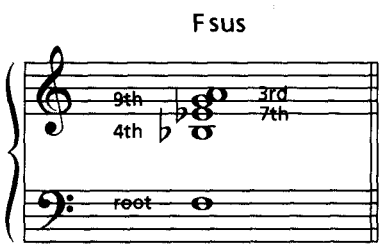
[15] *Bill Evans And Tony Bennett*, Fantasy, 1975. Bernstein's "Some Other Time" was obviously influenced by Eric Satie's "Gymnopédies."
[16] *Everybody Digs Bill Evans*, Fantasy, 1958.
[17] Miles Davis, *Kind Of Blue*. Columbia, 1959.
[18] John Coltrane, *Giant Steps*, Atlantic, 1959.
[19] Herbie Hancock, *Maiden Voyage*, Blue Note, 1965.
[20] John Coltrane, *Coltrane's Sound*, Atlantic, 1960.

Figure 3-35



"Maiden Voyage," recorded in 1965, was a revolutionary tune because it consisted almost entirely of sus chords. Herbie's vamp on the first two bars is shov in **figure 3-35**. The Dsus chord is voiced with a C major triad in the right hand, which is a whole step down from the root, D. One note in the triad has been doubled to strengthen the voicing.

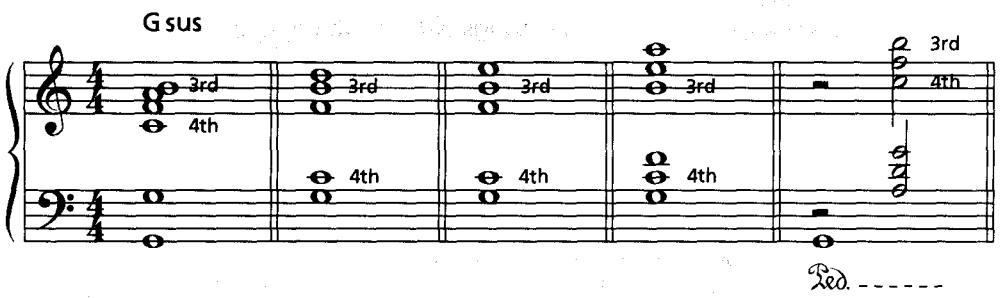
Figure 3-36



An earlier use of sus chords was Miles Davis' version of Dave Brubeck's "In Your Own Sweet Way."[21] Miles added an 8-bar interlude section, played on both the head and on the solos, which alternated A♭sus and A♭7♯11 chords. Miles' "Flamenco Sketches,"[22] recorded in 1959, uses sus and sus♭9 chords. We'll cover sus♭9 chords soon.

Other important tunes that helped introduce sus chords were Coltrane's "Mr. Day,"[23] a blues consisting mainly of sus chords, and Hank Mobley's "This I Dig Of You."[24]

Figure 3-37



A persistent myth is that "the 4th takes the place of the 3rd in a sus chord." This was true at one time, but in the 1960s, a growing acceptance of dissonance led pianists and guitarists to play sus voicings with both the 3rd and the 4th. Play **figure 3-3**6 and you'll hear the Fsus chord that Wynton Kelly plays at the beginning of Miles Davis' recording of "Someday My Prince Will Come," from Miles' 1961 album of the same name. Note that Wynton plays both the 3rd (A) and the 4th (B♭) in his voicing. Note also that Wynton pla the 3rd above the 4th. Jazz pianists often include the 3rd in sus chords, as you'll hear when you play the voicings shown in **figure 3-37**. Note that the 3rd is always above the 4th.

[21] Miles Davis, *Workin'*, Prestige, 1956.
[22] Miles Davis, *Kind Of Blue*, Columbia, 1959.
[23] John Coltrane, *Coltrane Plays The Blues*, Atlantic, 1960.
[24] Hank Mobley, *Soul Station*, Blue Note, 1960.

Figure 3-38

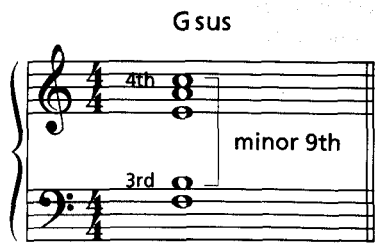


Figure 3-39

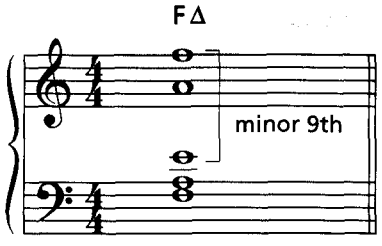
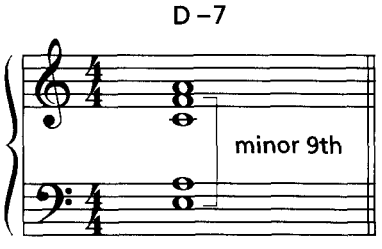


Figure 3-40



You could play the 4th above the 3rd, as in **figure 3-38**, but the result would be a much more dissonant chord. What makes this chord so dissonant is the interval between B and C—a minor 9th—"the last dissonant interval."

The entire history of Western music can be characterized as the gradual acceptance of dissonant intervals. In the Middle Ages, writing a tritone in a piece of Church music could get you excommunicated, or worse. Chords containing minor 2nds and major 7ths were relatively rare in classical music until the late nineteenth century. In jazz, these same two intervals were considered too dissonant until the 1930s. If you listen to records from that decade you'll hear lots of major 6th chords and very few major 7th chords. The major 7th chord made its first appearance in jazz with the music of Duke Ellington in the 1920s, but it wasn't commonly played until the 1940s.[25] The natural 9th of a half-diminished chord was considered a no-no until fairly recently. The minor 9th still sounds pretty dissonant to most ears, but is slowly evolving into a "consonant" interval.

Thelonious Monk was playing major 7th chords with the interval of a minor 9th (**figure 3-39**) in the 1940s, but Monk at that time was considered pretty "out," and although admired was rarely copied. Another chord with a minor 9th is the pretty voicing for a D-7 chord shown in **figure 3-40**. It has a minor 9th, between E in the bass clef, and F in the treble clef.

In a tune like "Maiden Voyage," where the harmony consists entirely of sus chords, there is always the danger that the harmony will become too static and the music will lose its momentum. In a case like this, you might want to use dissonance, and playing the 4th above the 3rd (creating a minor 9th) may not sound quite so harsh by the third or fourth chorus. Let your taste be your guide.

[25] Most tonic, or I, chords prior to the bebop era were played as major sixth chords, as in C6.

The Phrygian Mode and the Sus$^{\flat 9}$ Chord

Play **figure 3-41** and listen to the sound of Phrygi harmony. The figure shows the first few bars of Kenny Barron's "Golden Lotus."[26] The Dsus$^{\flat 9}$ chord is from the Phrygian, or third, mode of the key of B♭.

Figure 3-41

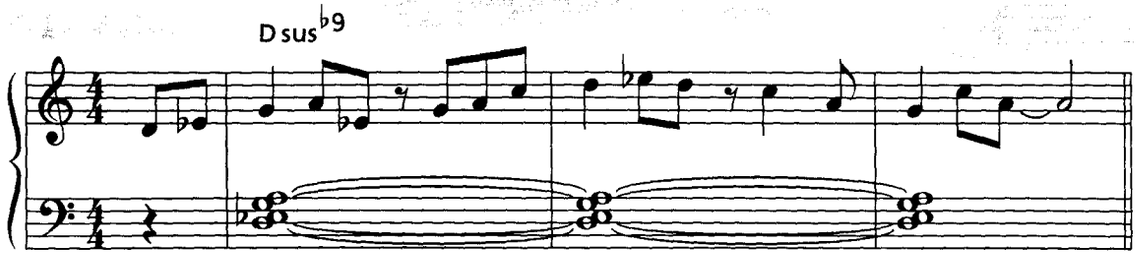


Figure 3-42

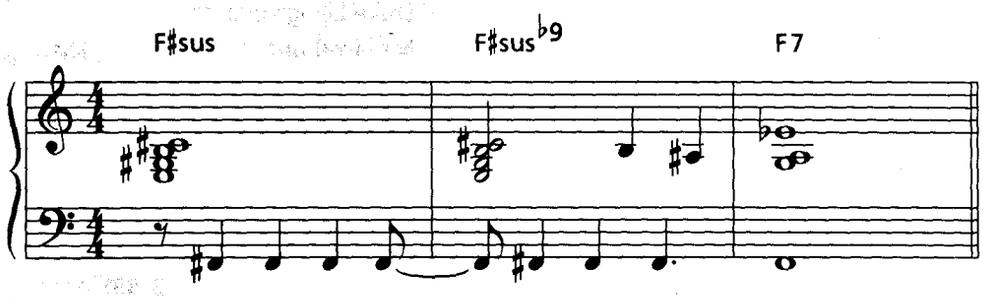
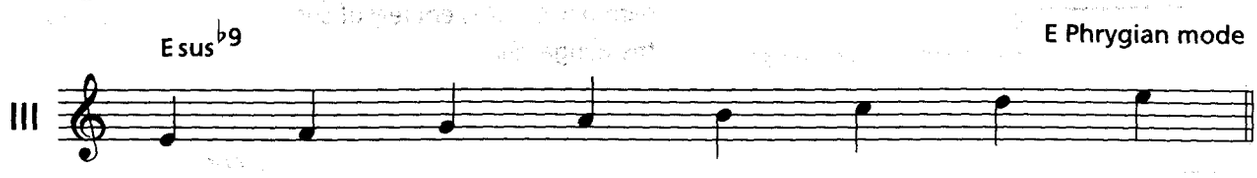


Figure 3-42 shows another example of Phrygia harmony. This music is from Kenny Dorham's beautiful ballad "La Mesha."[27] The F♯sus$^{\flat 9}$ chord is from the Phrygian, or third, mode of the key of D.

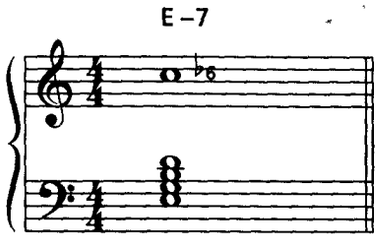
Look back at the third, or Phrygian, mode of C major (shown again here as **figure 3-43**), which runs from E to E. This mode and its chord are very deceptive. Because it has a minor 3rd and a minor 7th,

Figure 3-43



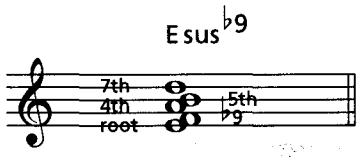
this mode appears as though it would be played over an E-7 chord. C, the ♭6 of E-7, sounds very dissonant against the chord, as you'll hear when you play **figure 3-44**. You usually play C on E-7 only in diatonic progressions such as III-VI-II-V (E-7, A-7, D-7, G7, in C major), where the C in the E-7 chord is played only as a passing note. The Phrygian mode is usually played, not over minor 7th chords, but over *sus$^{\flat 9}$ chords.*

Figure 3-44



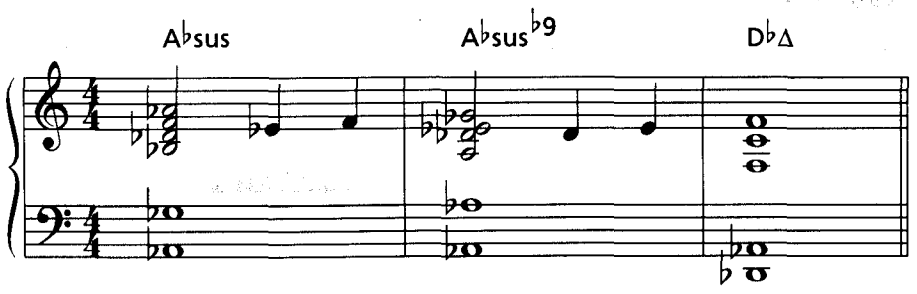
[26] Kenny Barron, *Golden Lotus*, Muse, 1980.
[27] Joe Henderson, *Page One*, Blue Note, 1963.

Figure 3-45



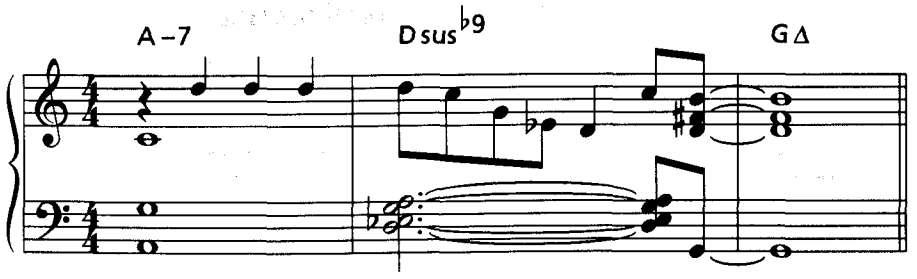
As you learned earlier when comparing II, V, and I chords, the most important notes in a chord, the ones that distinguish one chord from another, are usually the 3rd and 7th. The notes most often played on a sus♭9 chord, however, are the root, ♭9, 4th, 5th, and 7th—as in the Esus♭9 chord shown in **figure 3-45**.[28]

Figure 3-46



Sus♭9 chords are a relatively new sound in jazz harmony, introduced in the compositions of Kenny Dorham, John Coltrane, McCoy Tyner, and Wayne Shorter in the 1960s. As usual, Duke Ellington anticipated everyone else by several years. Play **figure 3-46**. This is from Duke's "Melancholia,"[29] recorded in 1953. The A♭sus♭9 chord is from the Phrygian mode of the E major scale.[30]

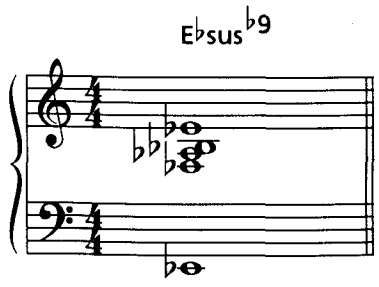
Figure 3-47



Play **figure 3-47**, and listen to the melodic sound of Phrygian harmony. Freddie Hubbard plays this line in his solo on "Dolphin Dance."[31] The Dsus♭9 chord is from the Phrygian mode of the B♭ major scale.

A beautiful example of Phrygian harmony is the E♭sus♭9 chord that McCoy Tyner improvises over during the intro to John Coltrane's "After The Rain"[32] (**figure 3-48**). Coltrane and McCoy also play Phrygian scales on sus♭9 chords on Coltrane's "Crescent."[33]

Figure 3-48



[28] These are also the five notes of the Japanese *In-sen* scale, which we'll explore in Chapter 9, "Pentatonic Scales."
[29] Duke Ellington, *Piano Reflections*, Capitol, 1953.
[30] Actually, the key is F♭—but nobody wants to think in a key with six flats and one double flat.
[31] Herbie Hancock, *Maiden Voyage*, Blue Note, 1965.
[32] John Coltrane, *Impressions*, MCA/Impulse, 1962.
[33] John Coltrane, *Crescent*, MCA/Impulse, 1964.

Figure 3-49

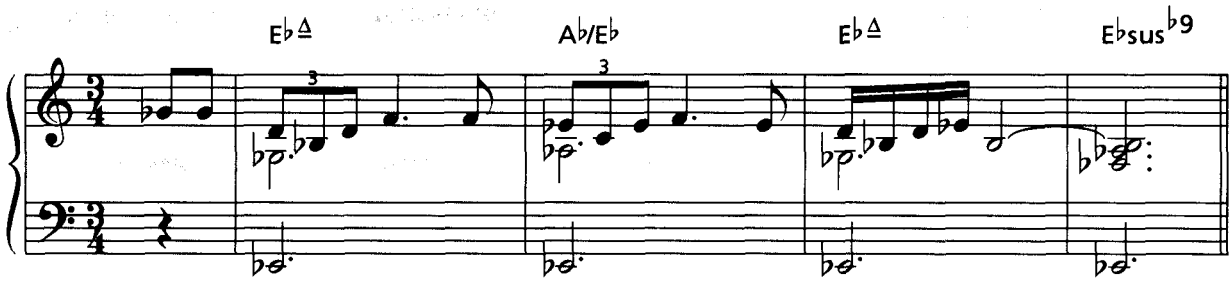
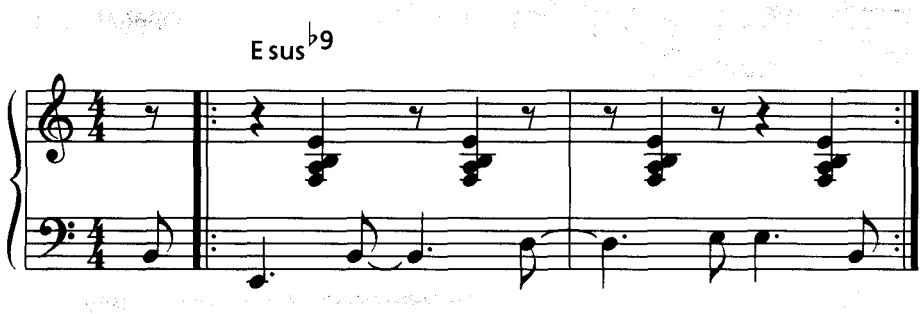
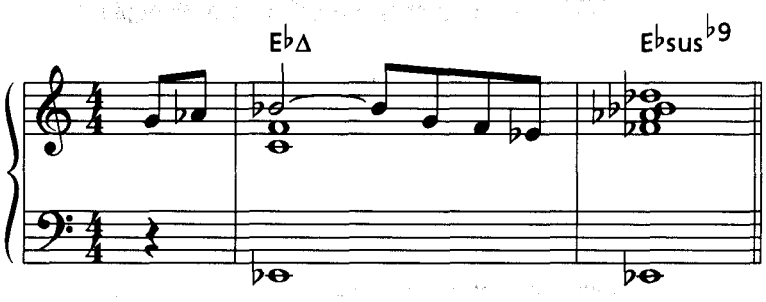


Figure 3-50



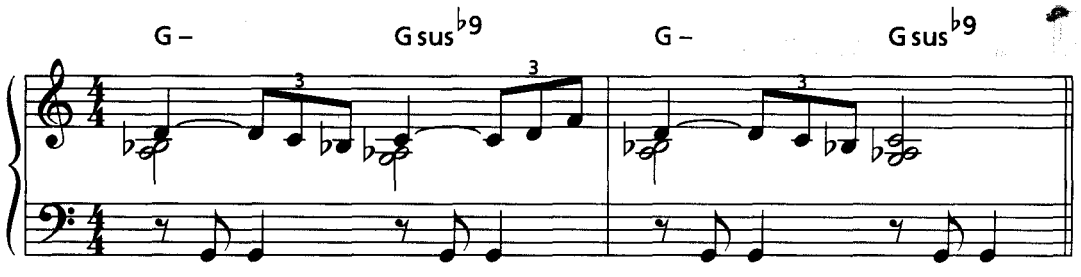
There are lots of other examples **Figure 3-49** shows the E♭sus♭9 chor from Wayne Shorter's haunting slow waltz "Penelope."[34] Kenny Barron's "Gichi"[35] has a long vamp on an Esus♭9 chord (**figure 3-50**). Wayne Shorter's beautiful ballad "Infant Eyes"[36] has an E♭sus♭9 chord (**figure 3-51**). McCoy Tyner's "Searc For Peace"[37] has Gsus♭9 chords on the bridge (**figure 3-52**).

Figure 3-51



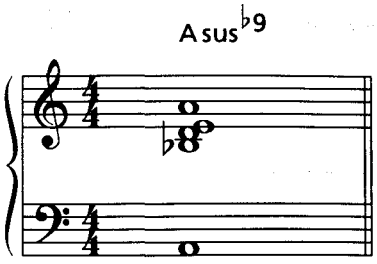
An early example of extended soloing on sus and sus♭9 chords was Wynton Kelly's playing on Fsus and Fsus♭9 chords on the intro, interludes, and ending of Miles Davis' recording of "Someday My Prince Will Come."[38]

Figure 3-52



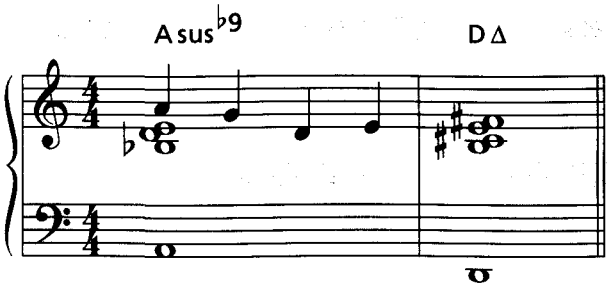
[34] Wayne Shorter, *Etcetera*, Blue Note, 1965.
[35] Booker Ervin, *Back From The Gig*, Blue Note, 1968.
[36] Wayne Shorter, *Speak No Evil*, Blue Note, 1964.
[37] McCoy Tyner, *The Real McCoy*, Blue Note, 1967.
[38] Miles Davis, *Someday My Prince Will Come*, Columbia, 1961.

Figure 3-53



Some bass players prefer tuning their instrument to an Asus$^{\flat 9}$ chord, the Phrygian chord from the key of F, rather than A, the traditional tuning note. Many a gig starts with the bassist saying to the pianist "give me an Asus$^{\flat 9}$ chord." **Figure 3-53** shows a typical "tuning note" piano voicing for an Asus$^{\flat 9}$ chord. Sus$^{\flat 9}$ chords, like other sus chords, usually function as V chords, and tend to want to resolve down a 5th. Listen to how smoothly Asus$^{\flat 9}$ resolves to DΔ in **figure 3-54**.

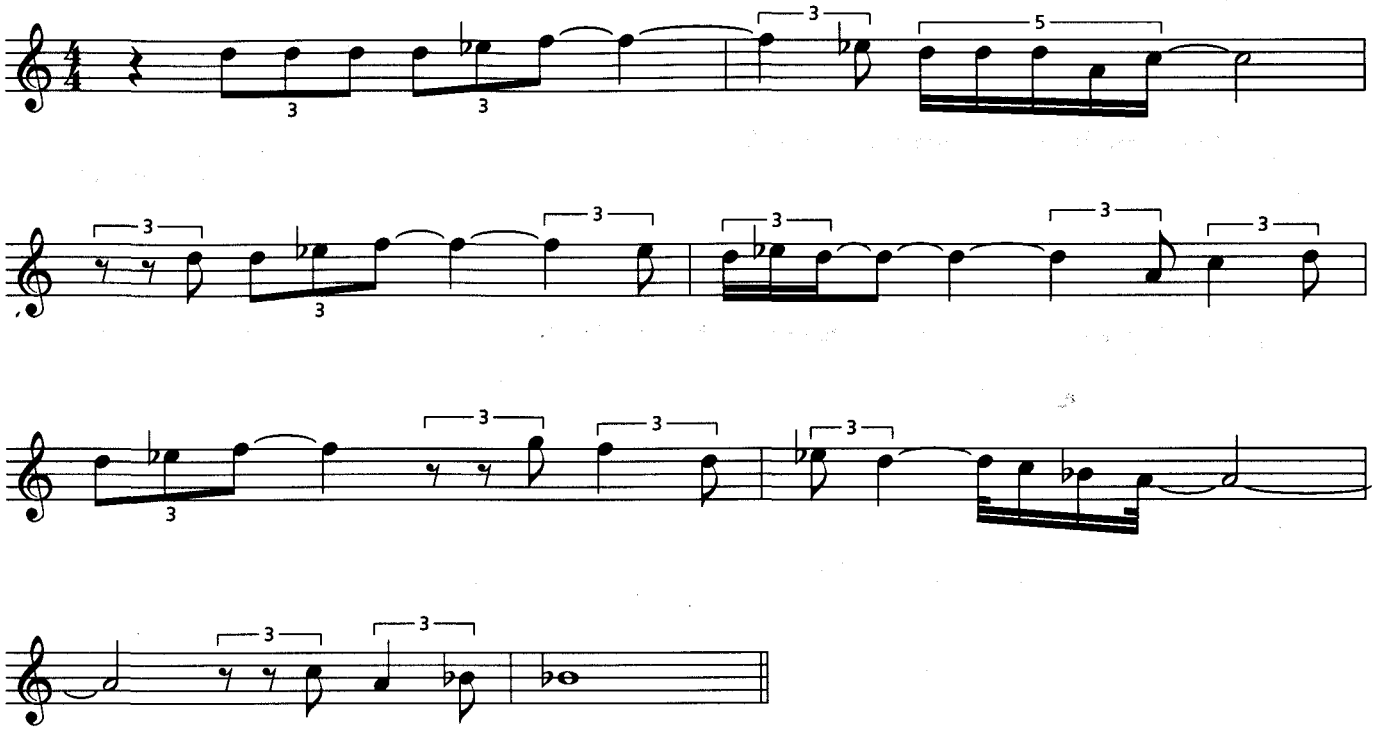
Figure 3-54



Miles Davis' "Flamenco Sketches"[39] has an eight-bar section over a D pedal-point. On his first chorus, Miles plays the D Phrygian mode over this section, as shown in **Figure 3-55**.

Sus$^{\flat 9}$ chords are often played in place of sus chords, dominant 7th chords, and II-V progressions. We'll get to this in Chapter 14, "Advanced Reharmonization." Also, a scale other than Phrygian is often played over sus$^{\flat 9}$ chords, as you'll learn in this chapter's section on melodic minor harmony.

Figure 3-55
rhythm approximate



[39] Miles Davis, *Kind Of Blue,* Columbia, 1959.

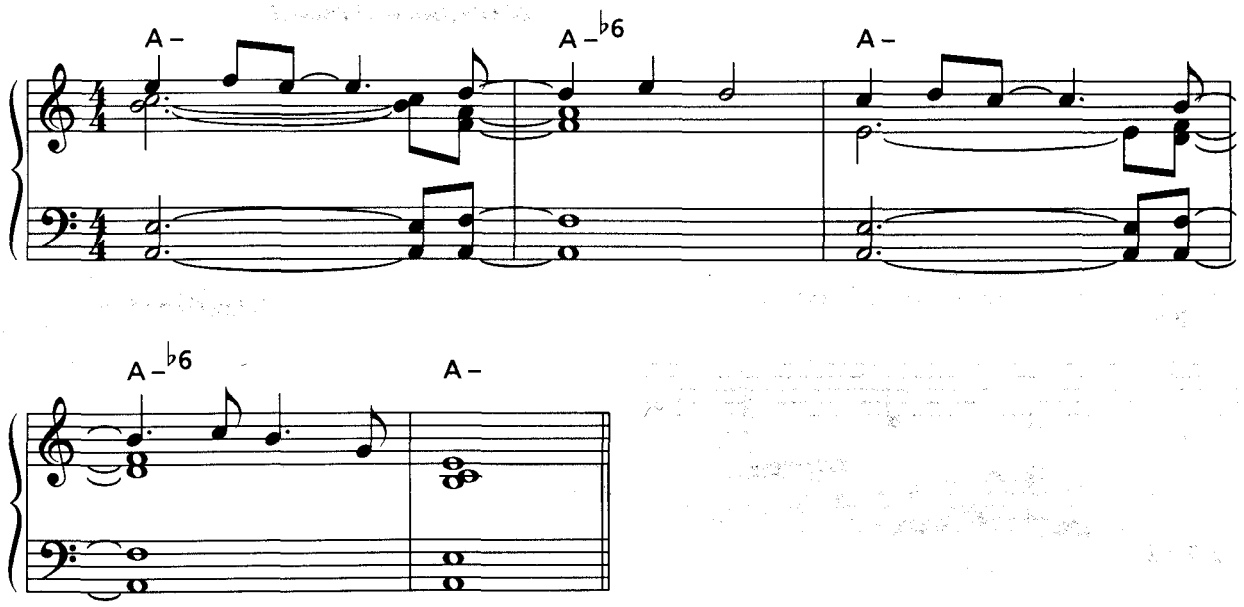
The Aeolian Mode

Aeolian is the sixth mode of the major scale. The Aeolian mode is often called the *natural minor scale.* Aeolian chords are rarely played. The bridge of Miles Davis' "Milestones,"[40] consists of a single chord: A Aeolian. Aeolian chords are rarely specifically called for, and there is some confusion over exactly what constitutes an Aeolian chord and when to play an Aeolian scale. Because the Aeolian mode is the sixth mode of the major scale, it is sometimes played over the VI chord in a I-VI-II-V progression (CΔ, A-7, D-7, G7) or a III-VI-II-V progression (E-7, A-7, D-7, G7). In practice, modern jazz musicians play the VI chord as a dominant chord (CΔ, *A7,* D-7, G7) most of the time.

One reason often given for playing the Aeolian mode on a VI chord is that it allows you to stay in the same key over all four chords of a I-VI-II-V. This is a lazy musician's approach, and lacks the melodic options provided by playing a dominant chord as the VI chord, with all of its possibilities (♭9, alt, ♯9, ♯11, and so on), instead of as a minor 7th chord.

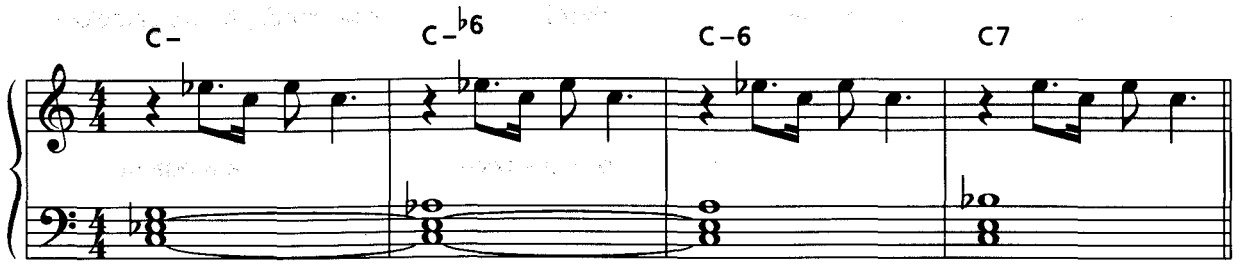
[40] Miles Davis, *Milestones,* Columbia, 1958.

Figure 3-56



When the 5th of a minor chord moves up chromatically to a ♭6, the resulting minor ♭6 chord is a very effective place to play the Aeolian mode. **Figure 3-56** shows how Kenny Barron uses this idea in the second and fourth bars of his tune "Sunshower."[41] Kenny's tune also sounds like a I-IV progression in a minor key, so it could alternately be notated A-, D-/A. Another place you could play Aeolian harmony is on the C-♭6 chord on the second bar of the bridge of Fats Waller's "Ain't Misbehavin'" (**figure 3-57**).

Figure 3-57



[41] Kenny Barron, *Maybeck Recital Hall Series,* Concord, 1990.

The Locrian Mode and the Half-Diminished Chord

Look at the seventh, or Locrian, mode in **figure 3-3**, shown again here as **figure 3-58**. This mode has a minor 3rd and a minor 7th, so it goes with a B-7 chord—with a difference. It also has a flatted 5th (F is a ♭5 above B). All the other major modes have a perfect 5th. The chord symbol for this mode is Bø, shorthand for B-7♭5, and called B half-diminished. *Half-diminished means a minor 7th chord with a flatted 5th.*

Figure 3-58

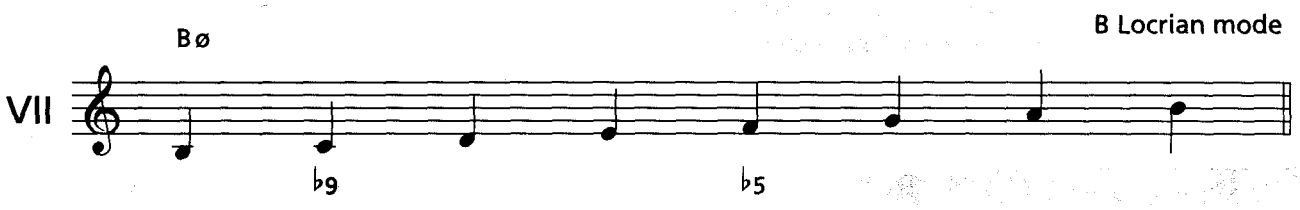
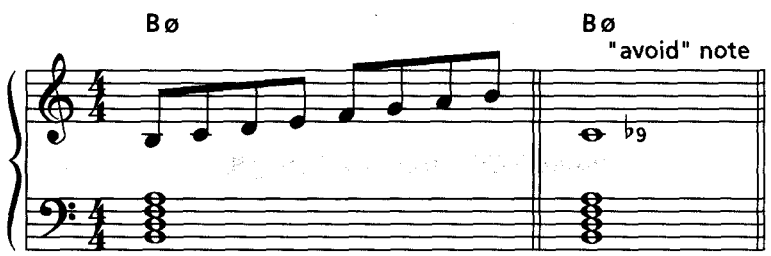


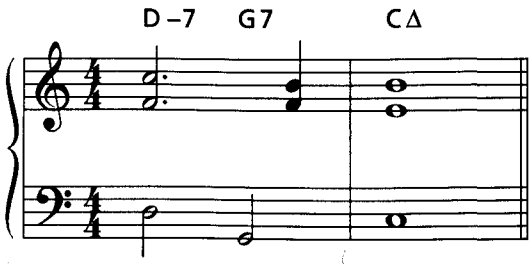
Figure 3-59



Play **figure 3-59**. Listen to the C, the second note in the mode, noting how dissonant it sounds over the Bø chord. C is the ♭9 of the chord. The ♭9 of a half-diminished chord is another "avoid" note. When the early bebop masters did think of a scale for a half-diminished chord, Locrian was their usual choice, although Bud Powell often played the harmonic minor scale on half-diminished chords. There is another mode, found in melodic minor harmony (covered in the next section of this chapter), that sounds good on half-diminished chords and has no "avoid" note. Some musicians play the Locrian mode, others the mode from melodic minor harmony on half-diminished chords. Many musicians play both, so you have a choice. For now, suspend judgement until we get to that other half-diminished mode.

To sum up the preceding: *All the chords from the key of C major—CΔ, D-7, Esus♭9, FΔ♯4, G7, Gsus, A-♭6, Bø—share the same C major scale.*

Figure 3-60



Mastering the II-V-I Progression

Because the II-V-I progression is so important, a good way to start out is by practicing the modes on those chords—Dorian, Mixolydian, and Ionian—in all keys. Then pick some easy tunes from your fake book, ones with simple chords (no altered notes such as ♭9, ♯11, ♭5, or "alt," yet), and play the appropriate mode over each chord. As an example, **figure 3-60** shows the first two bars of Sammy Cahn's "I Should Care."

Figure 3-61

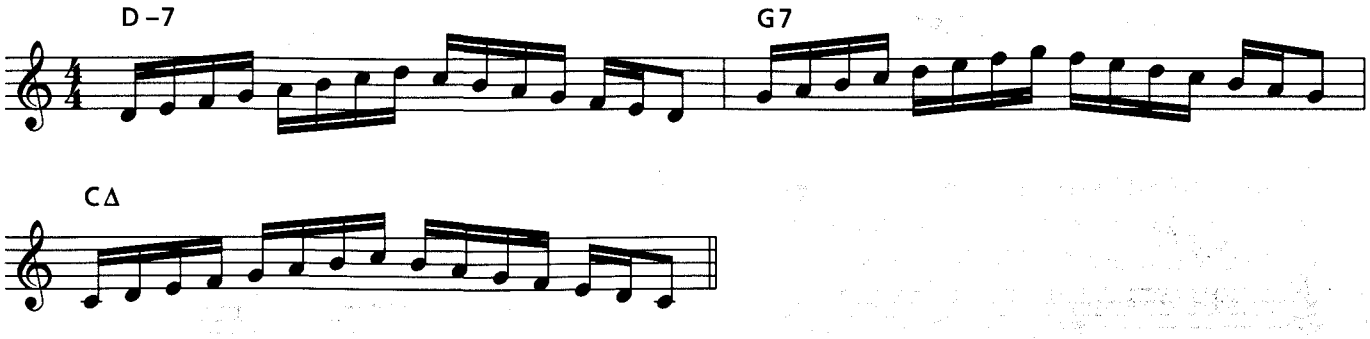
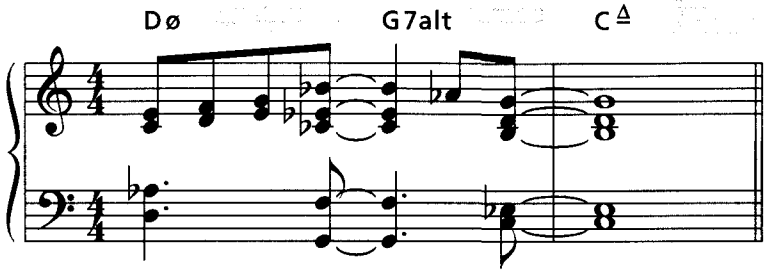


Figure 3-61 shows the modes to be practiced over the chords in those first two bars: Play the D Dorian mode, ascending and descending, over D-7; then play the G Mixolydian mode over G7; finally play the C Ionian mode over CΔ. Playing along with Aebersold records is also a good way to practice modes.[42]

It's time to move on to a type of harmony more exotic than anything the major scale has to offer, one that typifies the sound of modern jazz: the melodic minor scale.

Figure 3-62



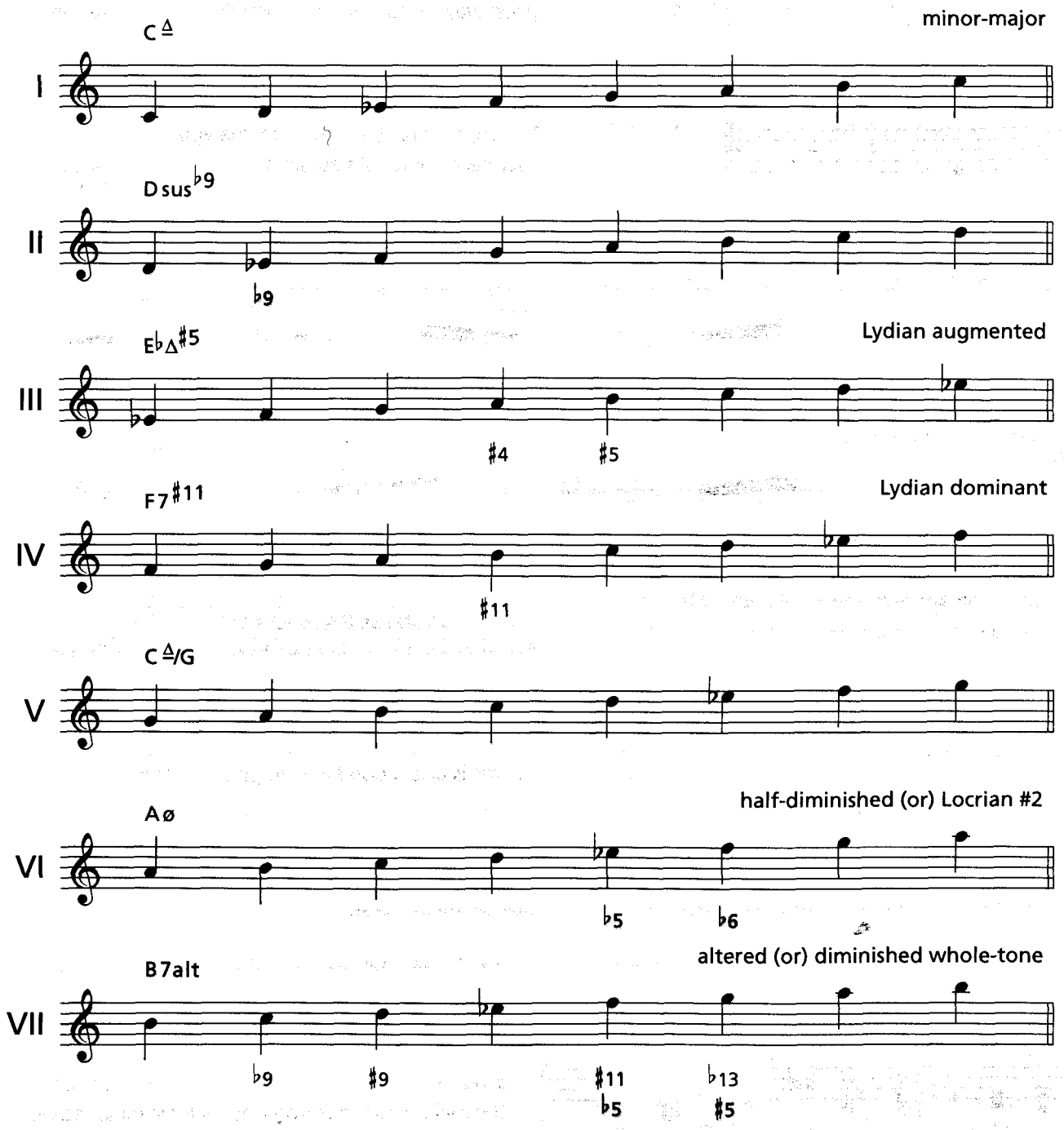
Melodic Minor Scale Harmony

Play the music in **figure 3-62** and listen to the sound of *melodic minor harmony.* This is a II-V-I progression, but each chord is derived, not from the major scale, but from the melodic minor scale.

[42] Jamey Aebersold, *Volume 3, The II-V7-I Progression.*

Figure 3-63

Melodic Minor Scale Harmony

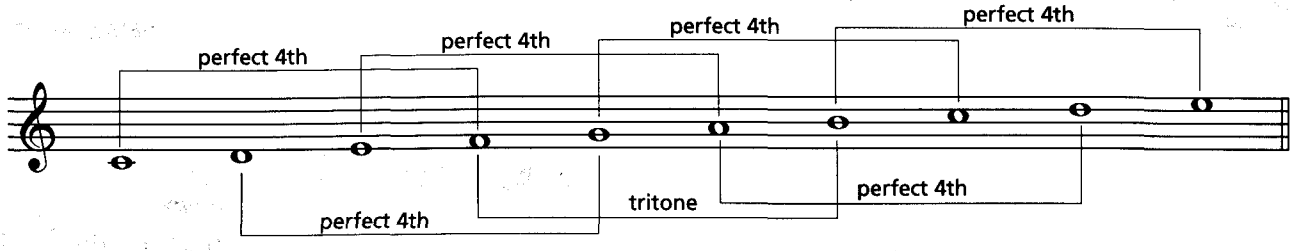


Look at **figure 3-63**, the chart called "Melodic Minor Scale Harmony." Like the major scale, the melodic minor scale is a seven-note scale and has seven modes (see the Roman numerals to the left of each mode). The only difference between the C melodic minor scale and the C major scale is that the melodic minor scale has an E♭, a minor 3rd. *That's the only difference between the major scale and the melodic minor scale—the melodic minor scale has a minor 3rd.*[43]

However, melodic minor harmony *sounds* completely different—much darker and more exotic—than major scale harmony. The melodic minor scale has greater melodic and intervalic possibilities than the major scale. Let's take a look at one reason why.

A *diatonic 4th* is the interval between every 4th note within a key. In the key of C major, the intervals between C and F, D and G, E and A, F and B, G and C, A and D, and B and E are all a diatonic 4th apart as shown in **figure 3-64**. Notice that I

Figure 3-64



didn't say *perfect* 4th. The major scale has two kinds of diatonic 4ths: perfect 4ths and an augmented 4th, or tritone. F to B is a tritone, not a perfect 4th, but F is a 4th from B *within the key.* Remember, diatonic means "within the key."

[43] In classical theory, there are two melodic minor scales, one played ascending and another played descending. Because the descending melodic minor scale is identical to the Aeolian mode of the major scale, jazz musicians think of the *ascending* scale as "the melodic minor scale."

Figure 3-65

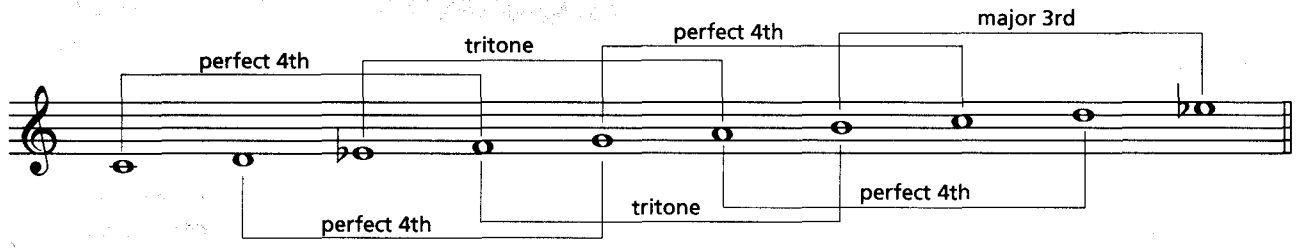
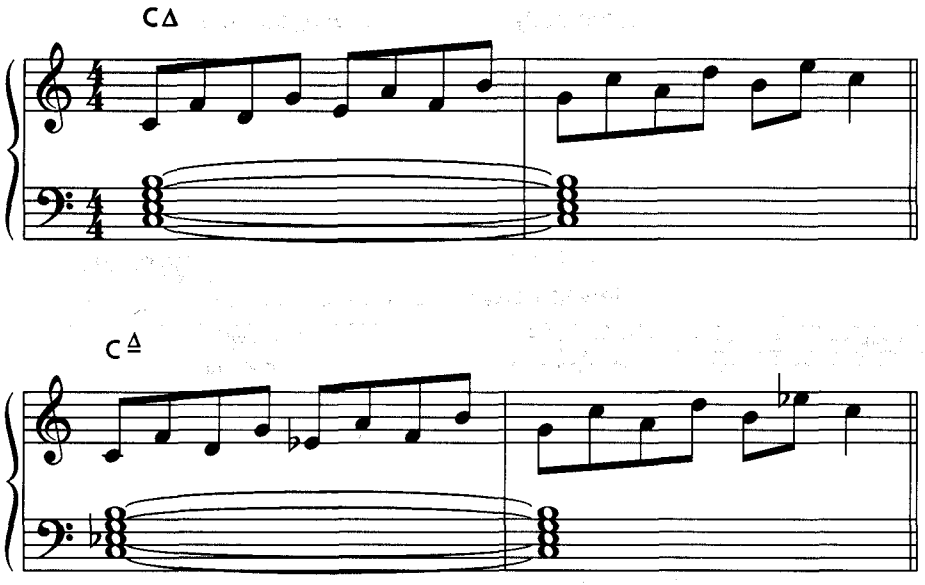


Figure 3-66



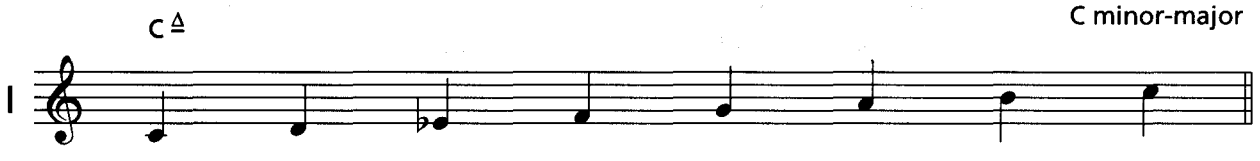
Melodic minor harmony has *three* kinds of 4ths: perfect 4ths, two tritones, *and a major 3rd.* Say what? How can a 3rd be a 4th? Look at **figure 3-65**. The last diatonic 4th shown, between B and E♭, sounds like a major 3rd, but diatonically ("within the key"), is a 4th.

Play and listen to the difference between the almost identical diatonic 4th pattern first on CΔ, an then on C-Δ, a melodic minor chor in **figure 3-66**. Do you hear how different melodic minor harmony sounds than major scale harmony?

The Minor-Major Chord

Look back at the melodic mino scale harmony chart again. The first mode, shown here as **figure 3-67**, goes with some kind of C chord, because it runs from C to C. It has a minor 3rd and a major 7th, hence the name *minor-major* chord. Two common chord symbols for a C minor-major chord are C-Δ, and C-♯7.[44]

Figure 3-67



Unlike a minor 7th chord, which functions as a II chord, a minor-major chord functions as a *minor I chord,* also called a *tonic minor chord.*

[44] Also C-maj7.

Play the music shown in **figure 3-68**, the first few bars of Gigi Gryce's "Minority."[45] The first chord is an F

Figure 3-68

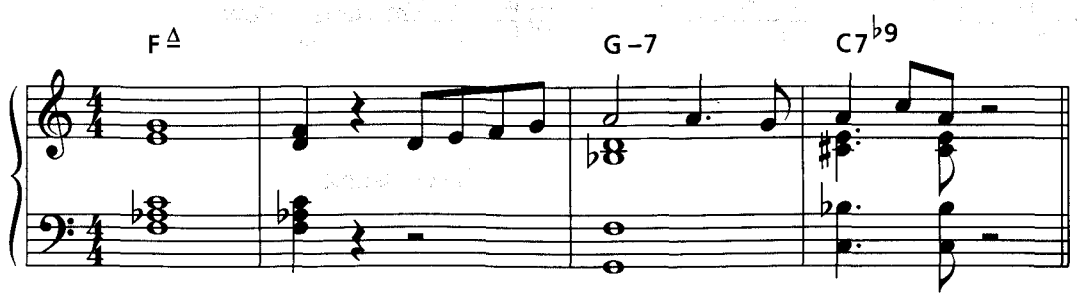


Figure 3-69

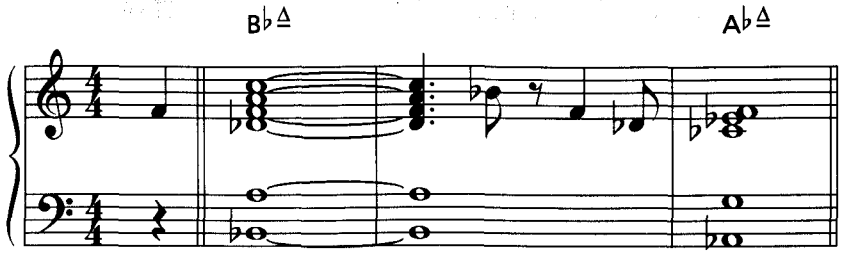
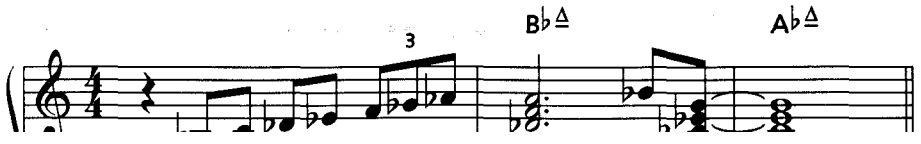


Figure 3-70



Play **figure 3-69**. The first chord in Horace Silver's "Nica's Dream"[46] is a B♭ minor-major chord (B♭-Δ) from the B♭ melodic minor scale. The second chord (A♭-Δ) is from the A♭ melodic minor scale. Play **figure 3-70**. The first two chords in Billy Strayhorn's "Chelsea Bridge"[47] are the minor-major chords B♭-Δ and A♭-Δ. Play **figure 3-71**. The first two chords of Wayne Shorter's "Dance Cadaverous"[48] are the minor-major chords B-Δ and C-Δ.

Figure 3-72

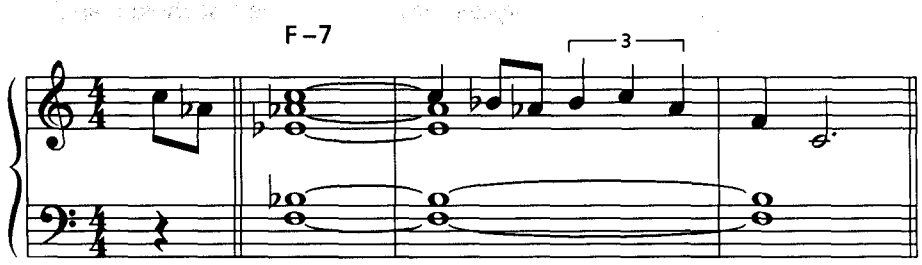
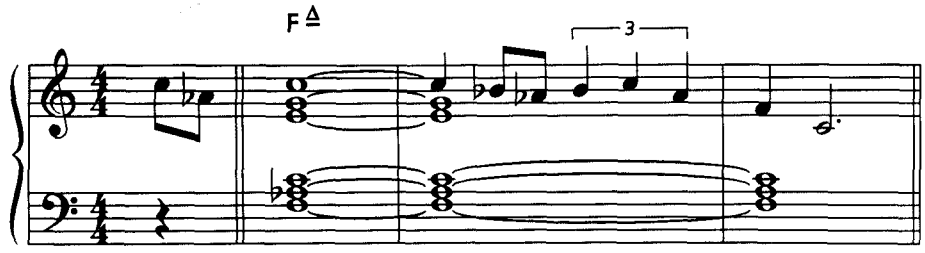


Figure 3-73



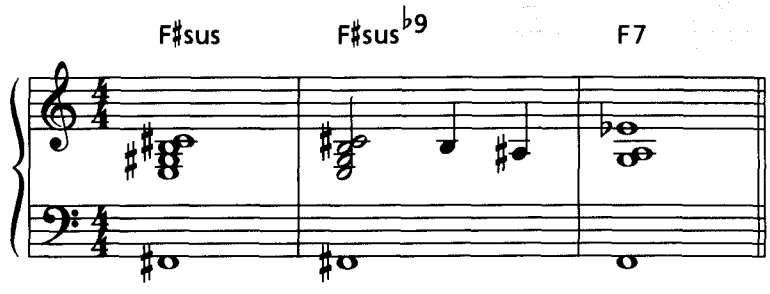
Minor-major chords are often played as a substitute for minor 7th chords. Play **figure 3-72**, the first few bars of George Gershwin's "Summertime." Now play **figure 3-73** and you'll hear the richer, darker flavor of a minor-major chord.

The clue for when you can do this is very simple: If a II chord is not part of a II-V progression, you can usually substitute a minor-major chord for a minor 7th chord. For example, if F-7 is not followed by B♭7, then you can usually substitute F-Δ for F-7. *The one exception is when the minor 7th is the melody note.* Keep in mind that you don't have to make this substitution. It just adds a different flavor. And make sure not to overdo it—use taste

When improvising on minor-major chords, you play the minor-major mode, the first mode of the melodic minor scale.

The Sus♭9 Chord

Figure 3-74



Play **figure 3-74** and listen again to the sound of the F♯sus♭9 chord from Kenny Dorham's beautiful ballad "La Mesha."[49]

When you improvise over sus♭9 chords, you have a choice of two different scales: the third, or Phrygian, mode of the major scale (which you learned about earlier in this chapter), or the second mode of the melodic minor scale.

[49] Joe Henderson, *Page One*, Blue Note, 1963.

Figure 3-75

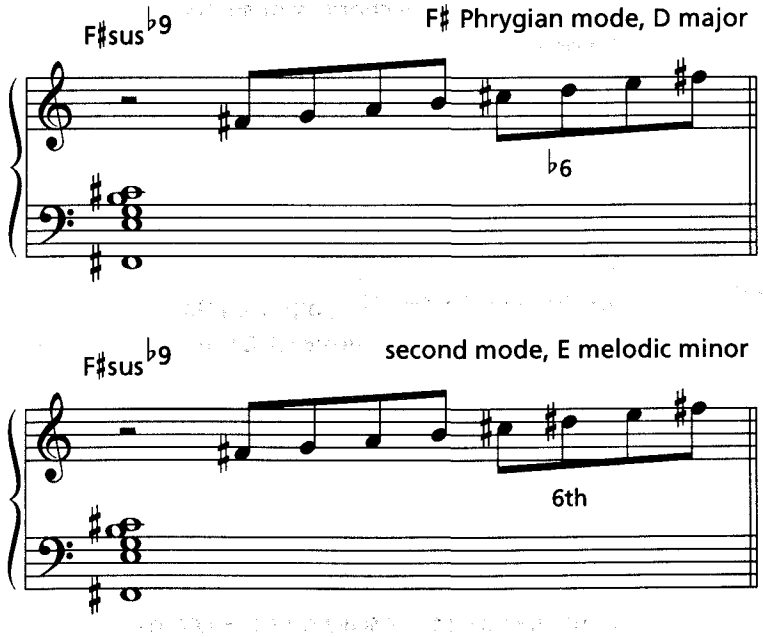


Figure 3-75 shows these two scales played over the F♯sus♭9 chord. Play the chord while holding down the sustain pedal[50] of the piano, and then play the first scale, the F♯ Phrygian mode (the third mode of D major). Now do the same with the next scale, the second mode of E melodic minor. The only difference between the two scales is that F♯ Phrygian has D, a flat 6th, and the melodic minor mode has D♯, a natural 6th. Listen to the difference one note makes. The D natural is much more dissonant.

Now let's look at the second mode from the melodic minor scale harmony chart, shown here as **figure 3-76**. This scale, which runs from D to D, has a minor 3rd and a minor 7th, suggesting that you would play it over a D-7 chord. The E♭ in the scale would be the ♭9 of the D-7 chord, however, and playing a ♭9

Figure 3-76

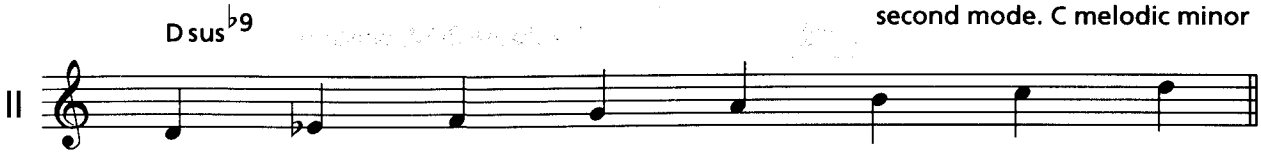
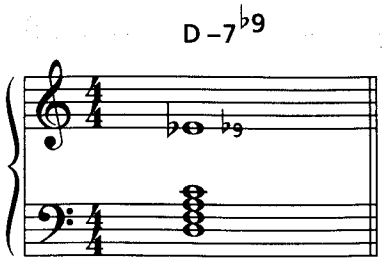


Figure 3-77



over a minor 7th chord sounds very dissonant (**figure 3-77**). The second mode is usually played not over minor 7th chords, but over sus♭9 chords.

[50] The pedal on the right.

Figure 3-78

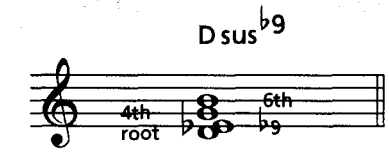


Figure 3-79

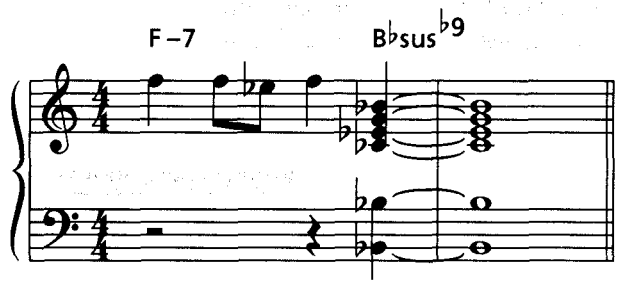


Figure 3-80

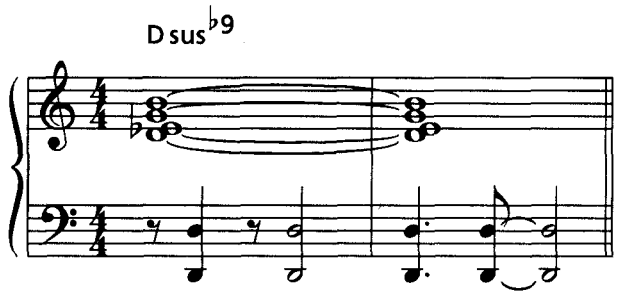


Figure 3-81

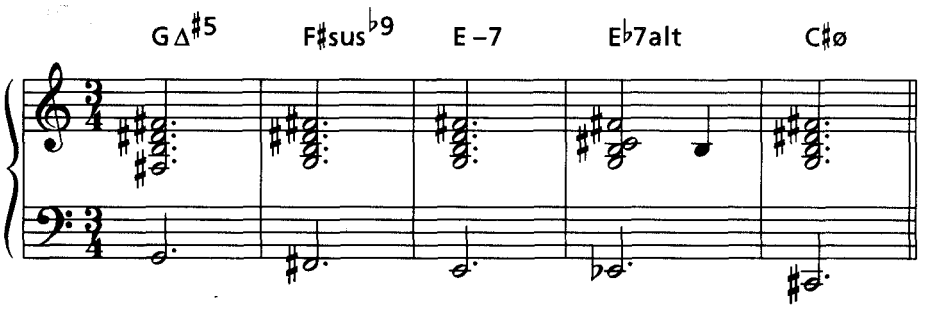
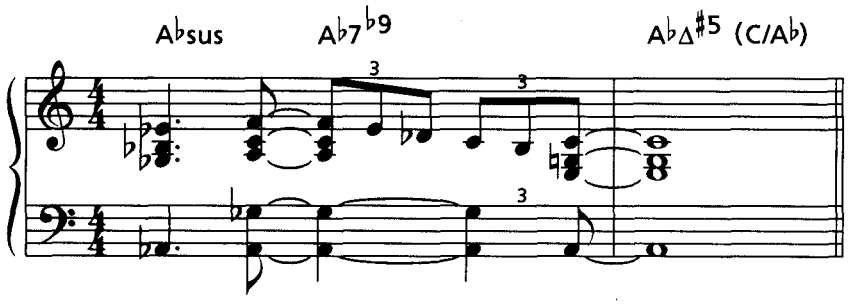


Figure 3-82



The most important notes in a chord, the ones that distinguish one chord from another, are often th 3rd or 7th. The most important notes of the melodic minor sus♭9 chord, however, are the root, ♭9, 4th, anc 6th—as in the Dsus♭9 chord shown in **figure 3-78**.[51] The following sus♭9 chord examples are voiced with this combination of notes. Play **figure 3-79**, and listen to Mulgrew Miller's B♭sus♭9 chord on Anthony Newley's "Who Can I Turn To."[52] Play **figure 3-80**, and listen to the Dsus♭9 chord from Dave Liebman's "Picadilly Lilly."[53] Play **figure 3-81**, five bars of Wayn Shorter's beautiful waltz, "Dance Cadaverous."[54] Listen to the F♯sus♭9 chord in the second bar, and the bass line descending an E melodic minor scale, from G to C♯. All of the chords except for the E-7 chord are derived from the E melodic minor scale.

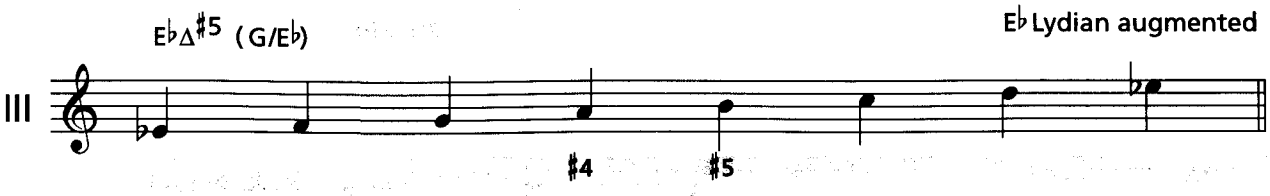
When improvising, you play the second mode of the melodic minor scale on sus♭9 chords.

The Lydian Augmented Chord

Play **figure 3-82**, which shows part of the bridge of Duke Pearson's "You Know I Care,"[55] and listen to the A♭Δ♯5 chord (which can also be notated as C/A♭). This is the sound of Lydian augmented harmony.

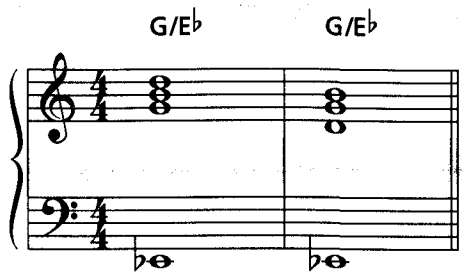
[51] These notes are also the "characteristic" notes of melodic minor harmony, which we'll explore later in the chapter.
[52] Mulgrew Miller, *Time And Again*, Landmark, 1991.
[53] Dave Liebman, *Pendulum*, Artists House, 1978.
[54] Wayne Shorter, *Speak No Evil*, Blue Note, 1964.
[55] Joe Henderson, *Inner Urge*, Blue Note, 1964.

Figure 3-83



Now consider the third mode from the melodic minor scale harmony chart, shown here as **figure 3-83.** This mode runs from E♭ to E♭ and goes with some kind of E♭ chord. Because it has a major 3rd and a major 7th, it suggests an E♭Δ chord. Normally, if you saw an E♭Δ chord symbol, you'd think of the E♭ major scale. How does this mode differ from E♭ major? It has both a raised 4th (A natural), and a raised 5th (B natural). The complete chord symbol would be E♭Δ♯4,♯5. Jazz musicians usually don't like complicated symbols, and the commonly used shorthand symbol for this chord is E♭Δ♯5.

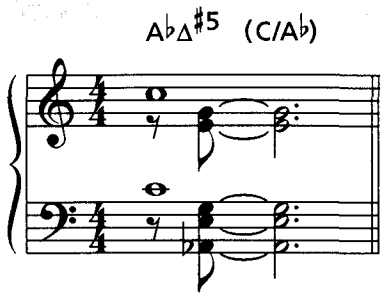
Figure 3-84



The 3rd, ♯5, and 7th of this E♭Δ♯5 chord form a G major triad, which explains why it is sometimes notated as a *slash chord,* in this case G/E♭, as shown in **figure 3-84**. We'll cover slash chords thoroughly in Chapter 5.

Play **figure 3-84** and listen to the difference between the two G/E♭ voicings. In the second bar, the G triad is played in second inversion. *Triads generally sound stronger when played in second inversion.*

Figure 3-85



The term for Δ♯5 chords and the third mode of the melodic minor scale is *Lydian augmented.* The term "Lydian augmented" is descriptive: Lydian is the term used with chords with a raised 4th, and augmented is the term used with chords with a raised 5th, as in an augmented triad.

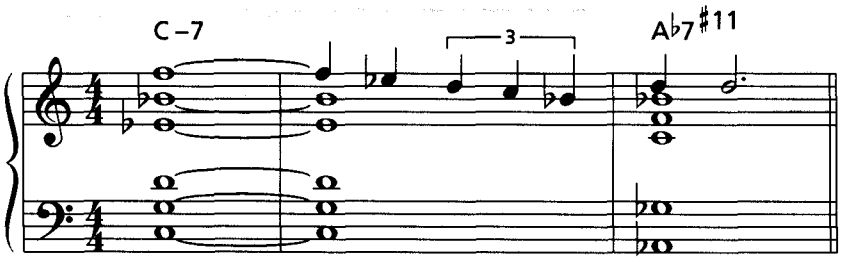
Jazz musicians didn't start playing Lydian augmented chords with any frequency until the 1960s, but Bud Powell played an A♭Δ♯5 chord in his great composition "Glass Enclosure,"[56] recorded in 1951 (**figure 3-85**).

When improvising, you play the Lydian augmented mode, the third mode of the melodic minor scale, on major 7th♯5 chords.

[56] *The Amazing Bud Powell, Vol. II,* Blue Note, 1951.

The Lydian Dominant Chord

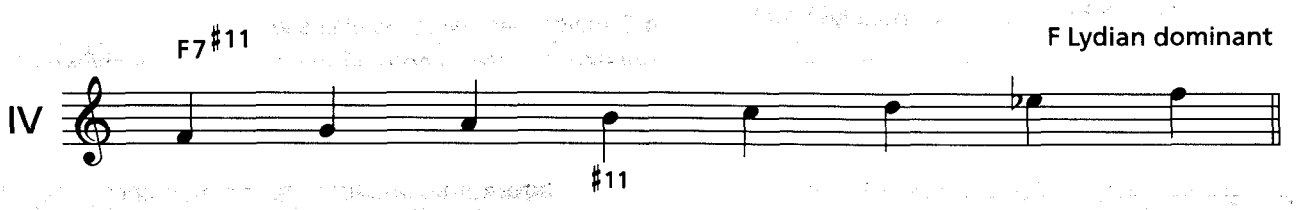
Figure 3-86



Play **figure 3-86** and listen to the sound of Lydian dominant harmony. These three bars, with the A♭7♯11 Lydian dominant chord in the third bar, are from Victor Young's "Stella By Starlight."

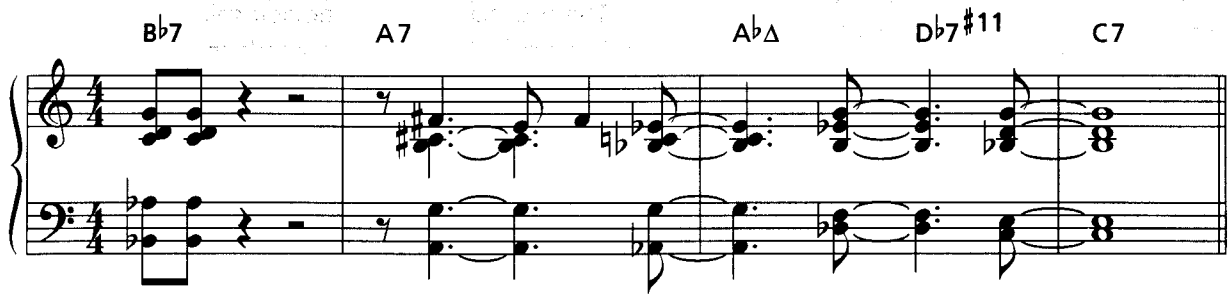
Now look at the fourth mode from the melodic minor scale harmony chart, shown here as **figure 3-87**. Because this mode runs from F to F, it goes with some kind of F chord. Because it has a major 3rd and a minor 7th, it appears to be a dominant 7th chord, suggesting a chord symbol of F7. If you saw an F7 chord symbol on a lead sheet, you would normally think of F Mixolydian, the fifth mode of the B♭ major scale. How does this mode differ from F Mixolydian? It has a B natural, a raised 11th, therefore ♯11 has been added to the chord symbol.

Figure 3-87



The name of this mode and its chord is *Lydian dominant*. Again, this is a descriptive term. Lydian refers to the chord's raised 11th. Dominant refers to its function (because it has a major 3rd and minor 7th)

Figure 3-88



Play **figure 3-88**, the first four bars of Tadd Dameron's "Our Delight,"[57] and listen to the D♭7♯11 Lydian dominant chord in the third bar. Play **figure 3-89**, from Horace Silver's "Nica's Dream."[58] Listen to the E♭7♯11 Lydian dominant chord. "Nica's Dream" is harmonically a very sophisticated tune. The E♭7♯11 chord is followed first by A♭sus♭9, then by C/D♭, a slash chord, and then by an Asus chord.

Figure 3-89

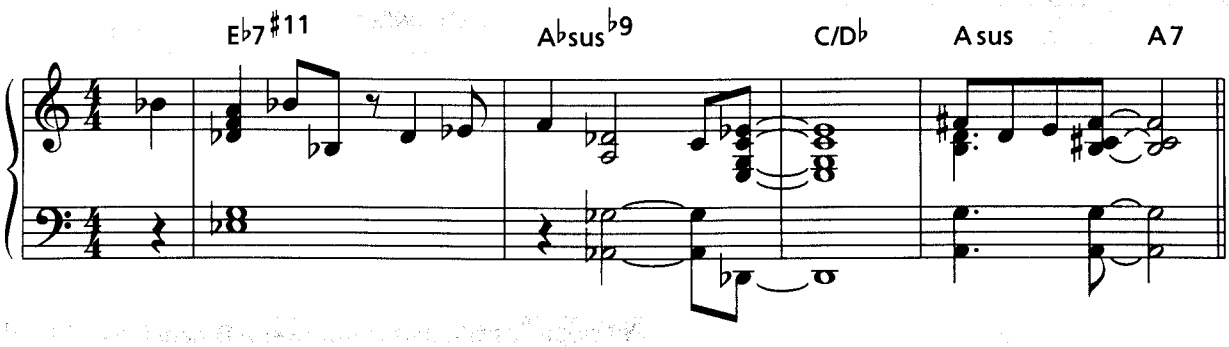
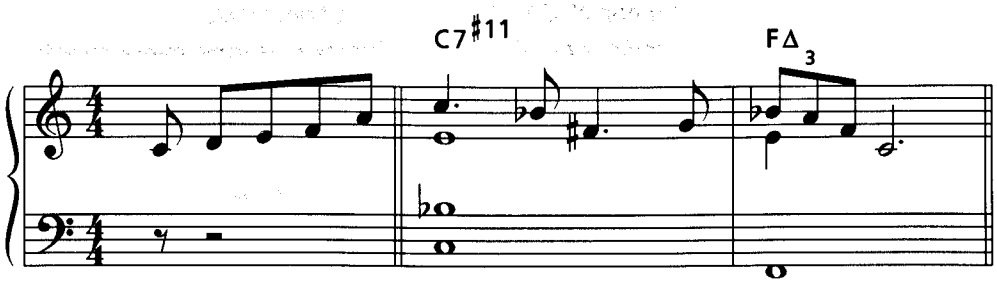


Figure 3-90



We usually think of the Lydian dominant chord as being "modern," but C7♯11 is the first chord in the verse of Richard Rodgers' "Little Girl Blue," which was written in 1935 (**figure 3-90**).

When improvising, you play the Lydian dominant mode, the fourth mode of the melodic minor scale, on dominant 7th♯11 chords.

[57] Sonny Stitt, *12!*, Muse, 1972.
[58] Art Blakey, *The Original Jazz Messengers*, Columbia, 1956.

The Fifth Mode of the Melodic Minor Scale

The fifth mode of the melodic minor scale is rarely played. Analyzing this mode in the tradition way demonstrates the limitations of traditional theory. **Figure 3-91** shows a G scale whose chord

Figure 3-91

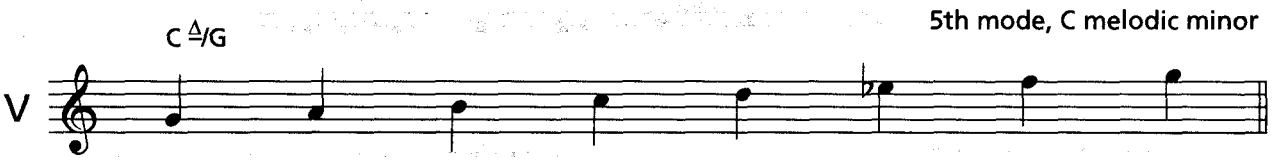


Figure 3-92

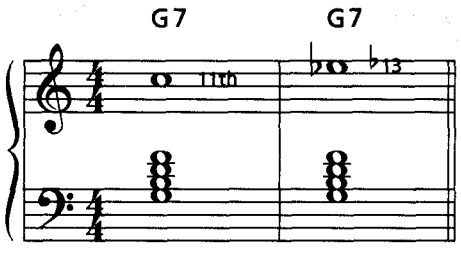
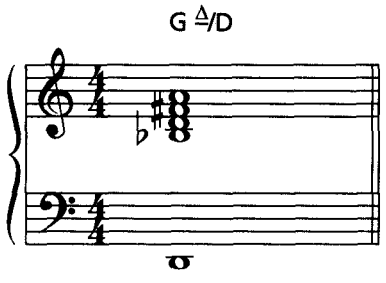


Figure 3-93



tones—G-B-D-F, the root, major 3rd, perfect 5th, and minor 7th—suggest a G7 chord. The E♭ in the scale would be the ♭13 of the chord, suggesting a chord symbol of G7♭13. This creates all sorts of problems, however. Both C and E♭—the 11th and ♭13—will sound like "avoid" notes if played against a G7 chord (**figure 3-92**). The truth is, this mode is seldom playe Most jazz musicians, when they see the chord symbol G7♭13, improvise either on the altered scale or the whole-tone scale—two scales we'll get to soon.

When a true fifth mode melodic minor chord is played, it is almost always a minor-major chord with the 5th in the bass (as in C-Δ/G). A good example is found on Wayne Shorter's "Penelope."[59] Herbie Hancock reharmonizes a D major chord on his solo on "Penelope" as G minor-major over a D pedal (G-Δ/D), as shown in **figure 3-93**. Because D is the 5th of G melodic minor, this creates a chord based on the fifth mode of G melodic minor. *Chords built off of the fifth mode of melodic minor function as tonic minor chords*

[59] Wayne Shorter, *Etcetera*, Blue Note, 1965.

Figure 3-94
McCoy Tyner's piano voicings simplified

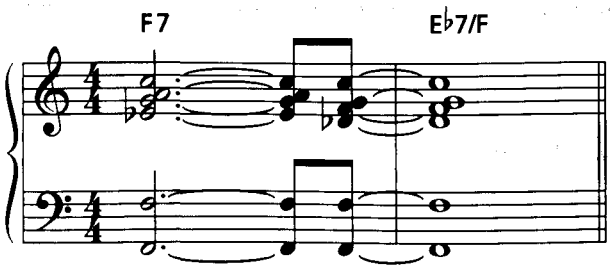


Figure 3-95

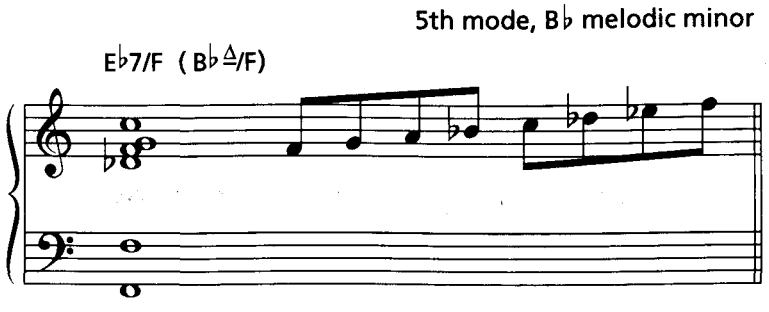


Figure 3-96
Kenny Barron's piano voicings simplified

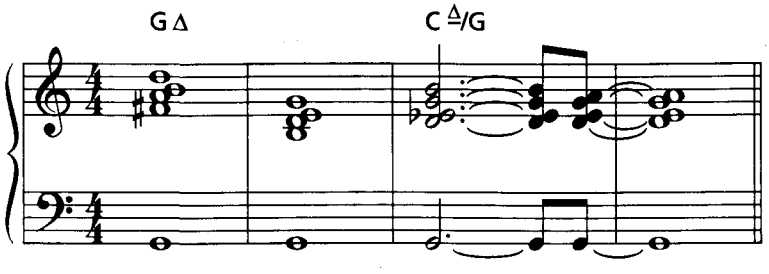
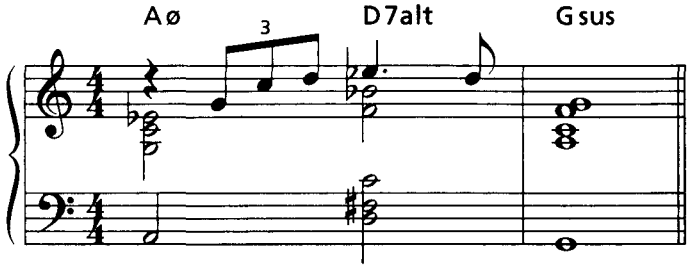


Figure 3-97



Through much of Bobby Hutcherson's great arrangement of Burton Lane's "Old Devil Moon,"[60] McCoy Tyner and Herbie Lewis play the vamp shown in **figure 3-94**. Bobby improvises mostly on the B♭ melodic minor scale over the E♭7/F chord (**figure 3-95**), creating a B♭-Δ/F chord—that is, a chord based on the fifth mode of B♭ melodic minor.

Kenny Barron's beautiful reharmonization of Richard Rodgers' "Spring Is Here" has a fifth mode melodic minor chord (**figure 3-96**). The complete version of Kenny's "Spring Is Here" is shown in Chapter 16.

Because it is so rarely played, the chord of the fifth mode of the melodic minor scale has no universally accepted chord symbol. In C melodic minor, notating it as a slash chord, C-Δ/G, is probably pretty safe.

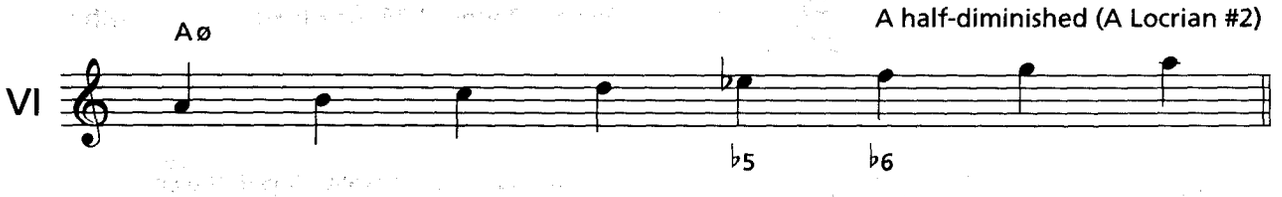
The Half-Diminished Chord

Play **figure 3-97** and listen to the sound of the half-diminished chord. Aø, from the sixth mode of C melodic minor, is the first chord of McCoy Tyner's "Search For Peace."[61]

[60] Bobby Hutcherson, *Solo/Quartet*, Fantasy, 1981.
[61] McCoy Tyner, *The Real McCoy*, Blue Note, 1967. This is one of the greatest recordings in the history of jazz.

Now let's look at the sixth mode from the melod minor scale harmony chart, shown here as **figure 3-** Because this mode runs from A to A, it goes with soı kind of A chord. Since it has a minor 3rd and a minc 7th, it appears to be a minor 7th chord, suggesting a chord symbol of A-7. If you saw an A-7 chord symb you would normally think of A Dorian, the second

Figure 3-98

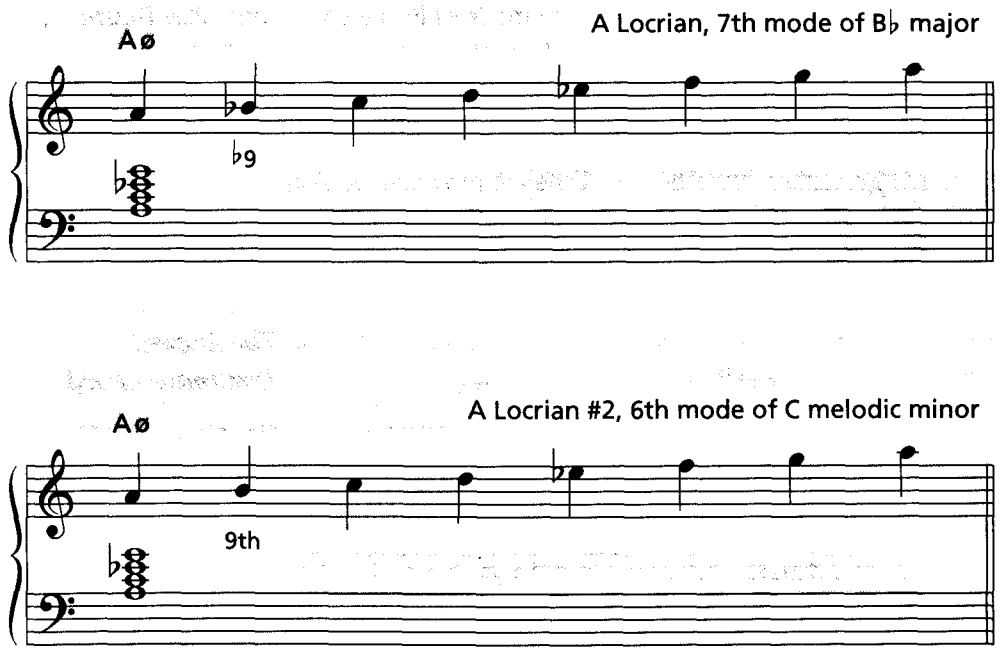


mode of the G major scale. The mode shown here is obviously not from G major, since it has an E♭ and an F, notes not found in the key of G. How does the sixt mode differ from A Dorian? It has a ♭5 (E♭), and a ♭6 (F). This suggests a chord symbol of A-7$^{♭5, ♭6}$.

But remember, most jazz musicians prefer to simplify complex chord symbols. The traditional symbol for this chord, omitting the ♭6, is A-7$^{♭5}$. Most musicians go even further, using the shorthand symbol Aø, or "A half-diminished."[62] The symbol A-7$^{♭5, ♭6}$ has seven "bits" of information for the left side of your brain to process. A-7$^{♭5}$ has five "bits." Aø has only two "bits." When you're playing a fast tune with lots of changes, short and simple chord symbols can make life much easier. *Because it has a minor 3rd and a minor 7th, the half-diminished chord functions as a II chord.*

[62] The origin of the term "half-diminished" is as follows: An A diminished 7th chord is made up of minor (also known as diminished) 3rds, spelled A, C, E♭, G♭. Because Aø has a G instead of a G♭, it is only "half" diminished.

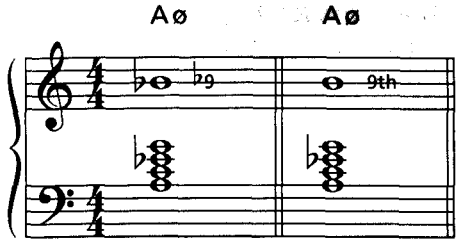
Figure 3-99



The half-diminished mode is often called the *Locrian #2* mode, because the only difference between it and the Locrian mode is the second note. The half-diminished mode has a natural 2nd (or 9th), unlike the Locrian mode, which has a flatted 2nd (or ♭9). **Figure 3-99** shows both the A Locrian mode and the A half-diminished mode. As you can see, the only difference between the two is a single note—B♭ in the Locrian mode, B natural in the half-diminished mode.

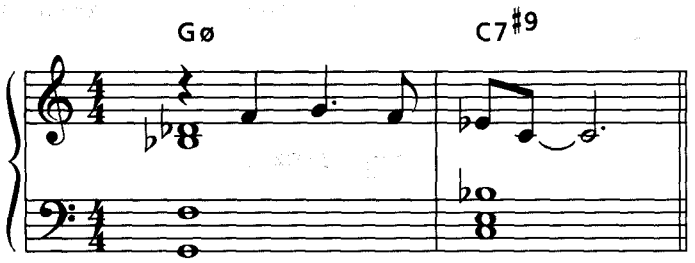
Play **figure 3-100**, and listen to the difference between a ♭9 and natural 9, played over a root position Aø chord. Hear the difference? Which do you like best? The B♭ sounds fine when played as a passing note, but is very dissonant when struck or held on the ø chord. It sounds like an "avoid" note. The B natural, on the other hand, is arguably the prettiest note you can play on an Aø chord.

Figure 3-100



Almost all of the early bebop musicians played the Locrian mode on half-diminished chords, and it is still the first choice of many musicians for minor 7th ♭5 chords. From the 1960s on, however, the trend has been toward playing the sixth mode of melodic minor on half-diminished chords. Many musicians play both. For example, on a minor III-VI-II-V (as in Eø, $A7^{\flat 9}$, Dø, G7alt), Freddie Hubbard likes to play Locrian on the Eø chord, while playing the half-diminished mode on the Dø chord.

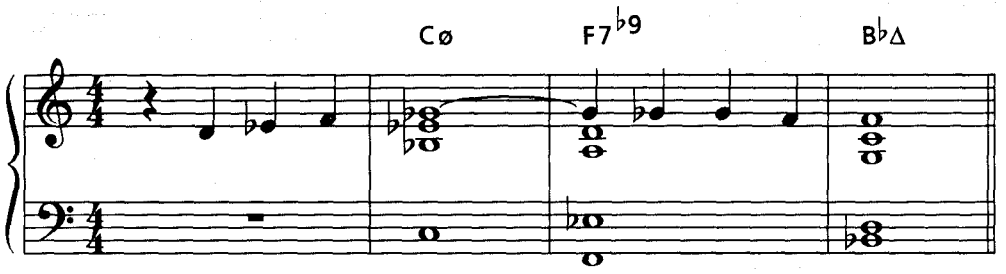
Figure 3-101



Play **figure 3-101**, the first two bars of Dizzy Gillespie's "Woody'n You." The Gø chord is from the sixth mode of B♭ melodic minor. Play **figure 3-102**, from Victor Young's "Stella By Starlight." The Cø chord is from the sixth mode of the E♭ melodic minor scale.

When improvising, you play the half-diminished mode, the sixth mode of the melodic minor scale, on minor 7th ♭5 chords.

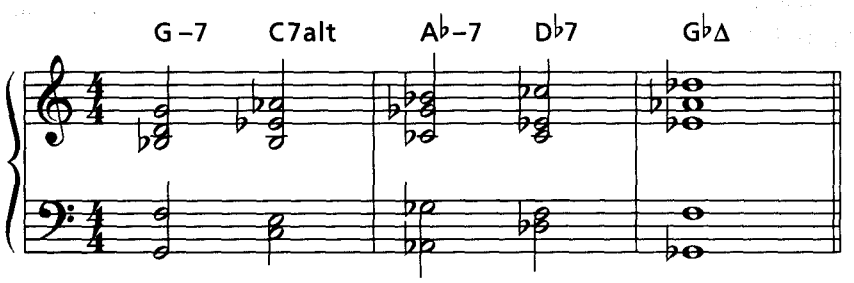
Figure 3-102



The Altered Dominant Chord

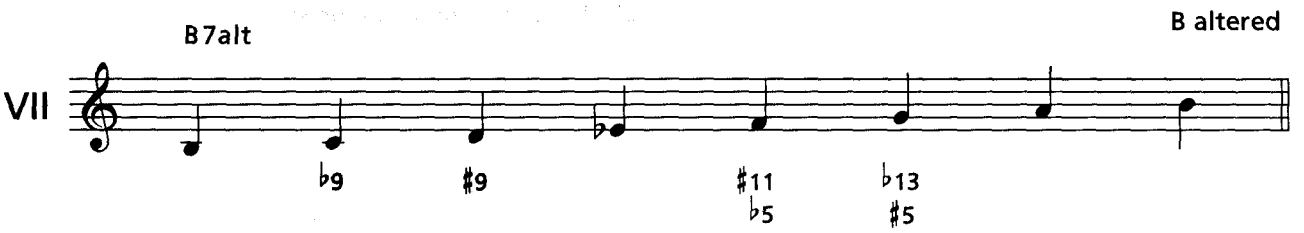
Play **figure 3-103** and listen to the sound of the altered dominant chord. This three bars is from John Coltrane's "Moment's Notice."[63] The C7alt chord is derived from the seventh mode of the D♭ melodic minor scale.

Figure 3-103



Now consider the seventh mode from the melodic minor scale harmony chart, shown here as **figure 3-104**.[64] Because this mode runs from B to B, it goes with some kind of B chord. It appears to have a minor 3rd (D), but notice that the note after D in the scale (E♭), is a *major* 3rd above B, the root. E♭ is an enharmonic spelling of D♯, the major 3rd above B. Chords usually don't have both a minor 3rd and a major 3rd. The true 3rd here is E♭, the major 3rd. The D is something else entirely, which we'll get to in a minute.

Figure 3-104

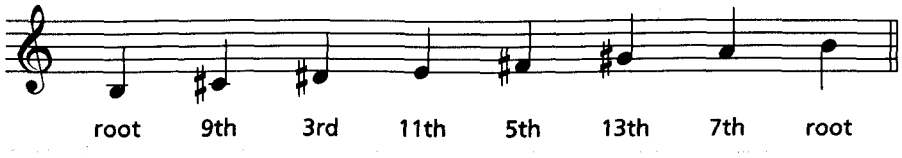


[63] John Coltrane, *Blue Train*, Blue Note, 1957.
[64] The altered mode is sometimes called the Super *Locrian*.

Along with a major 3rd, this mode has a minor 7th (A), so it must go with some kind of B7 chord. If you saw the chord symbol B7, you would normally think of the B Mixolydian mode, the fifth mode of the E major scale. Since the key signature for E major is four sharps, this mode obviously doesn't come from E major.

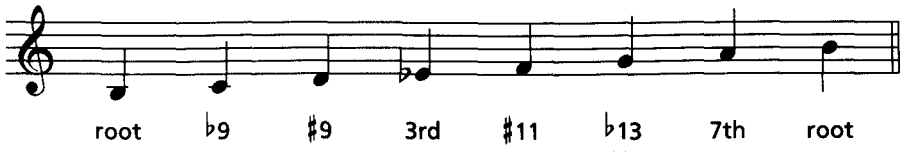
Figure 3-105

B Mixolydian, 5th mode of E major



B altered, 7th mode of C melodic minor

B7alt



Now look at **figure 3-105**, which compares the B Mixolydian mode of E major with the seventh mode of C melodic minor. Underneath each note is the note's position in a B7 chord. Where the B Mixolydian mode has a natural 9th, the B altered mode has both a ♭9 and a ♯9 (the note that looks like the minor 3rd). Where the B Mixolydian mode has a natural 11th, the B altered mode has a ♯11. The B Mixolydian mode has a natural 13th, the altered mode a ♭13. B Mixolydian has a 5th, B altered has no 5th. The complete chord symbol, reflecting all of these alterations, would be:

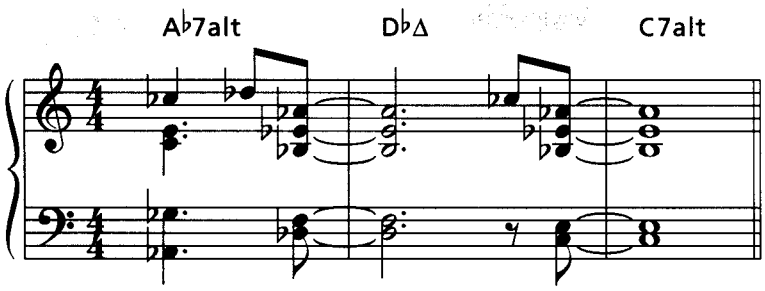
♭13
♯11
♯9
B7♭9

Can you imagine playing a fast tune and having to read this? Again, shorthand is called for, and the preferred chord symbol is B7alt. "Alt" stands for "altered," and is also the name of the mode.

This chord is called "altered" because, as a B7 chord, it has been altered in every possible way. The 9th has been both lowered and raised, the 11th has been raised (the 11th can't be lowered, because it would then become the major 3rd), and the 13th has been lowered (the 13th can't be raised, since it would then become the minor 7th). If you change B, the root, or E♭, the 3rd, or A, the 7th, you won't have a B7 chord any more. Within the confines of B7, the maximum number of alterations have been made.

Some musicians use the symbols ♭5 and ♯5 instead of ♯11 and ♭13. And some musicians call

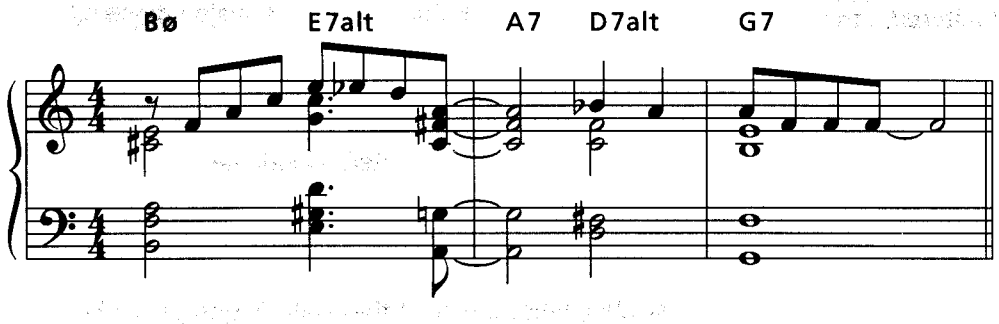
Figure 3-106



Play **figure 3-106**, from Benny Golson's "Stablemates." The A♭7alt chord is from the seventh mode of A melodic minor, and the C7alt chord comes from the seventh mode of D♭ melodic minor. Play **figure 3-107**, from Jimmy Van Heusen's "I Thought About You."[65] The E7alt chord is from F melodic minor, the D7alt chord from E♭ melodic minor.

When improvising, you play the altered mode, the seventh mode of the melodic minor scale, on altered dominant chords.

Figure 3-107



The Interchangeability of Melodic Minor Chords

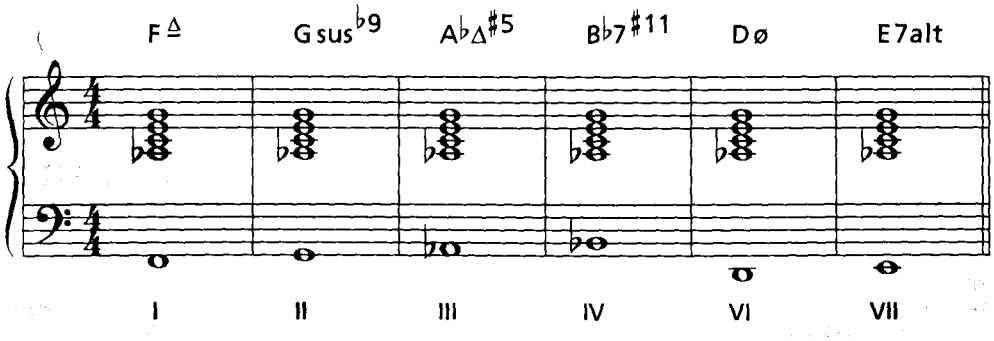
All seven of the chords we've examined from melodic minor harmony share the same melodic minor scale. This is similar to major scale harmony, where (in the key of C), CΔ, D-7, Esus$^{♭9}$, FΔ$^{♯4}$, G7, and Bø all share the same major scale.

However, there is a very big difference between major and melodic minor harmony. For the most part, there are no "avoid" notes in chords from melodic minor harmony. The lack of "avoid" notes means that almost everything in any melodic minor key is interchangeable with everything else in that key. Play a lick, pattern, phrase, chord voicing, motif, and so on, on C-Δ, and it will work as well on Dsus$^{♭9}$, E♭Δ$^{♯5}$, F7$^{♯11}$, Aø, and B7alt.

[65] Miles Davis, *Someday My Prince Will Come,* Columbia, 1961.

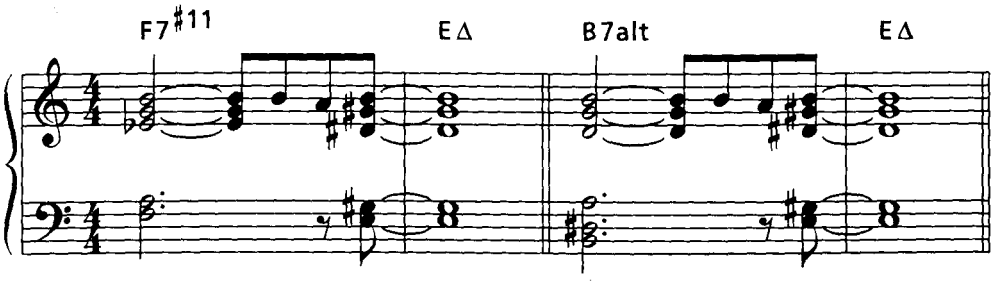
Figure 3-108 shows, in the first bar, a common left-hand piano voicing for an F-Δ chord. Play the voicing with your right hand while playing the root, F, with your left hand. Continue through the next fe bars, and you'll hear that the F-Δ voicing sounds just as good as Gsus$^{\flat 9}$, A$\flat\Delta^{\sharp 5}$, B$\flat 7^{\sharp 11}$, Dø, and E7alt. Th only real difference between these chords is the root and unless you're a bass player, or a pianist playing root position chords, *there is no difference between any o the chords.* All of the roots ir **figure 3-108** are also from th F melodic minor scale.

Figure 3-108



The same is true for licks and melodic phrases. Any idea you play on F-Δ will work with any other chord from F melodic minor.

Figure 3-109



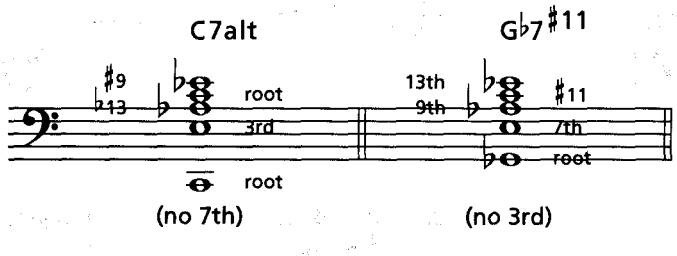
Did you notice that F7$^{\sharp 11}$ and B7alt are the only dominar 7th chords from C melodic minor? Note that the roots (F and B) are a tritone apart. *The two dominant 7th chords from melodic minor harmony are a tritone apart.* Because of the lack of "avoid" notes, F7$^{\sharp 11}$ and B7alt are essentially the same chord, and tend to resolve to the same chords, as you'll hear in **figure 3-109**. Both F7$^{\sharp 11}$ and B7alt resolve smoothly to E△. I'll explain more about this in Chapter 13, "Basic Reharmonization."

This interchangeability doesn't work in chords from the major scale. As an example, although both D-7 and C△ are from the key of C, a voicing for D-7

have much importance at all. Take another look at **figure 3-108**. The B♭7♯11 voicing has no 3rd (D). The E7alt voicing has no 7th (D). Pianists and guitarists regularly play these voicings, and I haven't heard anyone complain yet. Why does this work? Again, because there are no "avoid" notes in melodic minor harmony, the resulting interchangeability of all the chords means that you're playing the whole melodic minor "key" much more than any individual chord within it.

This is perhaps the most intriguing thing about melodic minor harmony, so let's go through it again. Take a look at the piano voicing shown (in the bass clef) in **figure 3-110**. Play the top four notes with your right hand, while playing the root with your left hand. The voicing lacks the 7th of the chord when played as C7alt, and lacks the 3rd of the chord when played as G♭7♯11. When you play melodic minor chords, because of the lack of "avoid" notes, you're really playing the entire key, not just the chord. *Think key, not chord.*

Figure 3-110



What this all means is that you need to learn the chords from each melodic minor tonality together, as a family. If you don't, you'll be unable to quickly scope out a chord progression such as D♯alt, C♯ø, GΔ♯5, A7♯11, F♯sus♭9, E-Δ. Wow! Is that a difficult set of changes? Not really. All of the chords are from E melodic minor—they're all the same chord. Remember, *think key, not chord.*

The Piano is a Color-Coded Instrument

Unlike other instruments, the piano is color-coded. Notes are either black or white. This can make learning melodic minor harmony easier. As an example, key signatures for pianists generally mean "play all the white notes except...."[66] The key signature for F major is one flat, B♭. In other words, when playing in F major, play all the white notes, except play B♭ instead of B natural.

[66] The exceptions are the keys of G♭, which has a C♭ (a white note); and F♯, which has an E♯ (a white note).

F♯7alt, B♭Δ♯5, and Eø may sound like unrelated chords, but they're not. They are all derived from G melodic minor (**figure 3-111**), the "key signature" of which is one flat (B♭) and one sharp (F♯). Isn't that a weird key signature? Perhaps, but its very strangeness makes all the chords from G melodic minor easy to remember: play all white notes except for B♭ and F♯. As another example, D melodic minor is all white notes except for C♯ (**figure 3-112**). Again, *think key, not chord.*

Figure 3-111

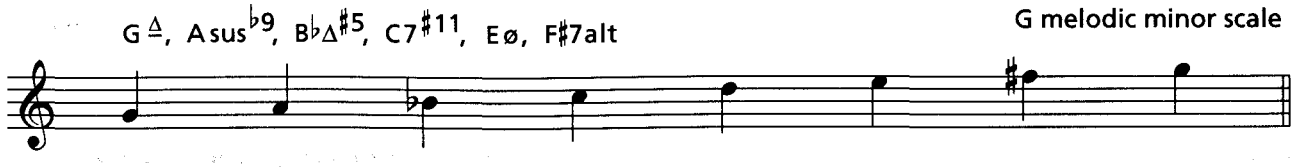
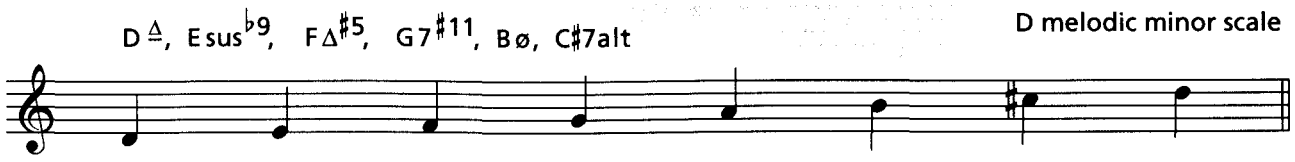


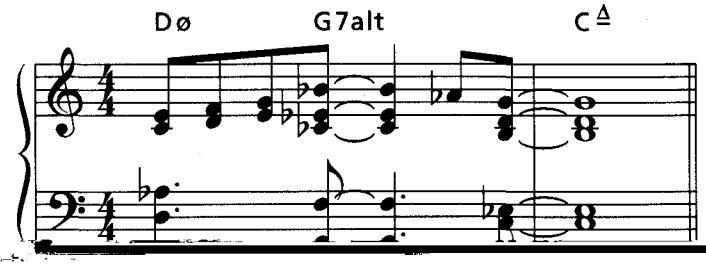
Figure 3-112



Jazz musicians don't write melodic minor key signatures out, but they often think in terms of them when improvising. Does anybody actually write melodic minor key signatures? Béla Bartók did, in his piano work Number 41, from *Mikrokosmos.*[67]

The Minor II-V-I and II-V Progressions

Figure 3-113

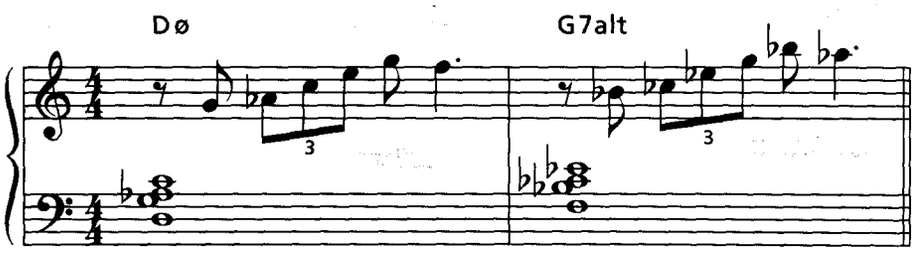


Play the music shown in **figure 3-113**, the example we started this section with. This chord progression is known as a *minor II-V-I*. Unlike the II-V-I in a major key (D-7, G7, CΔ, in the key of C major), a minor II-V-I usually consists of a half-diminished chord, an alt chord, and a minor-major chord (Dø, G7alt, C-Δ). And, unlike the major II-V-I, in which all three chords are derived from the same key (D-7, G7, and CΔ are

The notes played over the Dø chord are from F melodic minor, the notes played over the G7alt chord are from A♭ melodic minor, and the notes played over the C-Δ chord are from C melodic minor. Again, this is radically different from a II-V-I in a major key, where all three chords share the same scale.

Wouldn't it be great if there were a scale that worked over Dø, G7alt, C-Δ, a minor II-V-I? It would be, but there isn't one. The harmonic minor scale is often mentioned in theory books as being "a scale played over a minor II-V-I." If that were true, you'd hear the great players playing it a lot, but they don't. We'll show why, and also expand on the harmonic minor scale in Chapter 23.

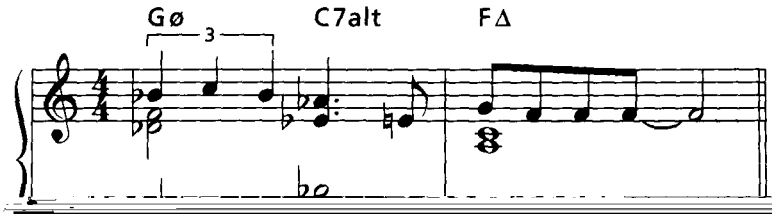
Figure 3-114



Play **figure 3-114**. This is a minor II-V, and if you listen carefully, you'll hear that both the Dø phrase in the treble clef and the chord voicing in the bass clef are repeated a minor 3rd up on the G7alt chord. A melodic figure repeated at a different pitch is called a *sequence*. Repeating a chord at a different pitch is called *parallelism*. Sequences and parallelism create structure in music, and structure makes you sound like as though know what you're doing. On a minor II-V, anything you play on the half-diminished chord can be played up a minor 3rd on the alt chord. This works because the two chords come from melodic minor keys a minor 3rd apart.

Dø is from F melodic minor, G7alt from A♭ melodic minor. A♭ melodic minor is a minor 3rd above F melodic minor. On one level, you're just playing Dø, G7alt. On a more harmonically sophisticated level—because there are no "avoid" notes and because of the resulting interchangeability of melodic minor chords—you're playing the "keys" of F melodic minor and A♭ melodic minor. Once again, *think key, not chord.* By the way, these are good piano voicings.

Figure 3-115



resolve to a minor chord. It can resolve beautifully to a major 7th chord as well. Bob Haggart's "What's New" has a Gø, C7alt, FΔ progression (**figure 3-115**), and the last II-V-I of Victor Young's "Stella By Starlight" is often played as Cø, F7alt, B♭Δ (**figure 3-116**)

Figure 3-116

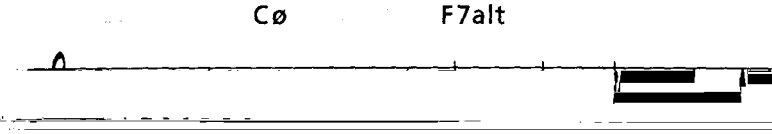


Figure 3-118

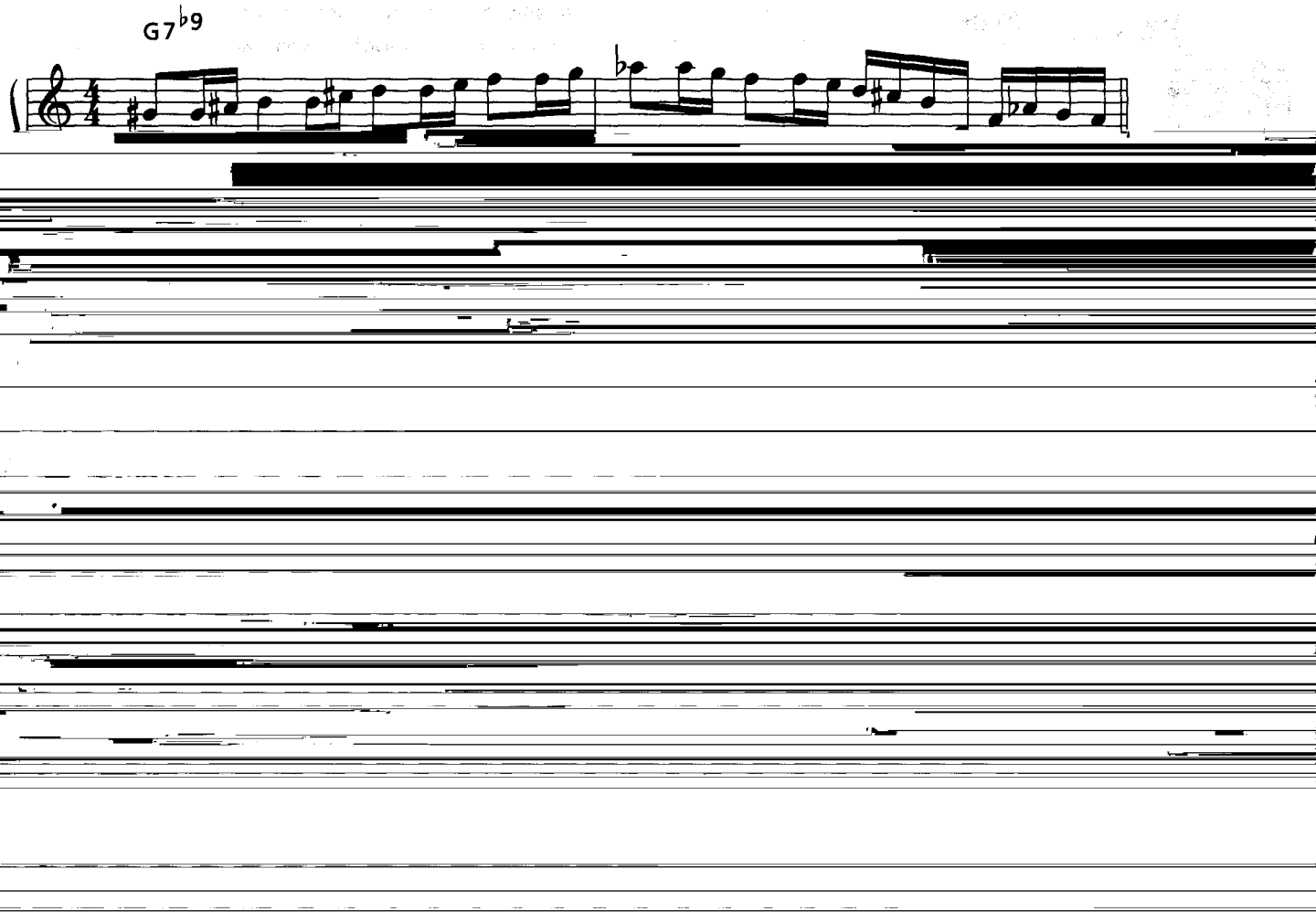
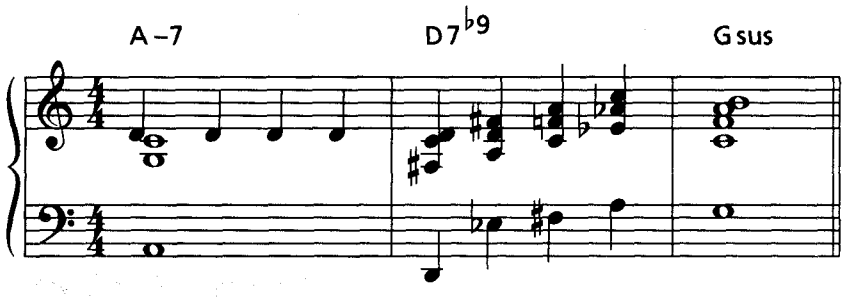


Figure 3-119



Diminished Scale Harmony

Play the music shown in **figure 3-118**, from Joe Henderson's solo on Duke Pearson's "Idle Moments."[69] This is the sound of *diminished scale harmony*. Play **figure 3-119**, bars 5-7 from Jimmy Van Heusen's "Here's That Rainy Day." The chords on beats 2, 3, and 4 in the D7♭9 bar are from diminished scale harmony.

What's a Diminished Scale?

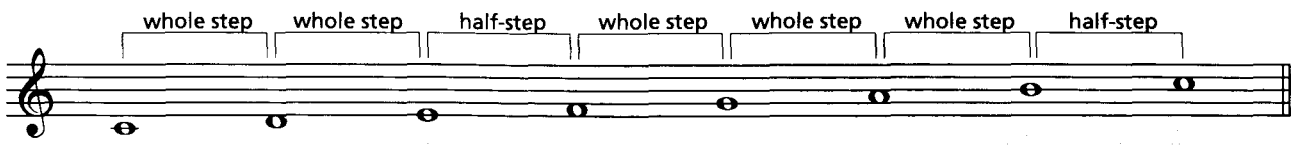
The diminished scale comes in two forms: One alternates half steps and whole steps, the other alternates whole steps and half steps. **Figure 3-120** shows the two diminished scales. The scale in the first bar alternates half steps and whole steps, the scale in the second bar alternates whole steps and half steps. Notice that both scales have exactly the same notes. *Every half-step/*

The diminished scale has two unique characteristics:

- Unlike the seven-note major and melodic minor scales, the diminished scale is an eight-note scale.
- Unlike the major and melodic minor scales, it is *symmetrical.* That is, its interval pattern is regular—in this case, alternating half steps and whole steps, or vice versa.

By contrast, the major and melodic minor scales are *asymmetrical.* For example, the steps in the major scale are whole step, whole step, half step, whole step, whole step, whole step, half step (**figure 3-121**), an asymmetrical pattern. The diminished scales shown in **figure 3-120** are symmetrical.

Figure 3-121

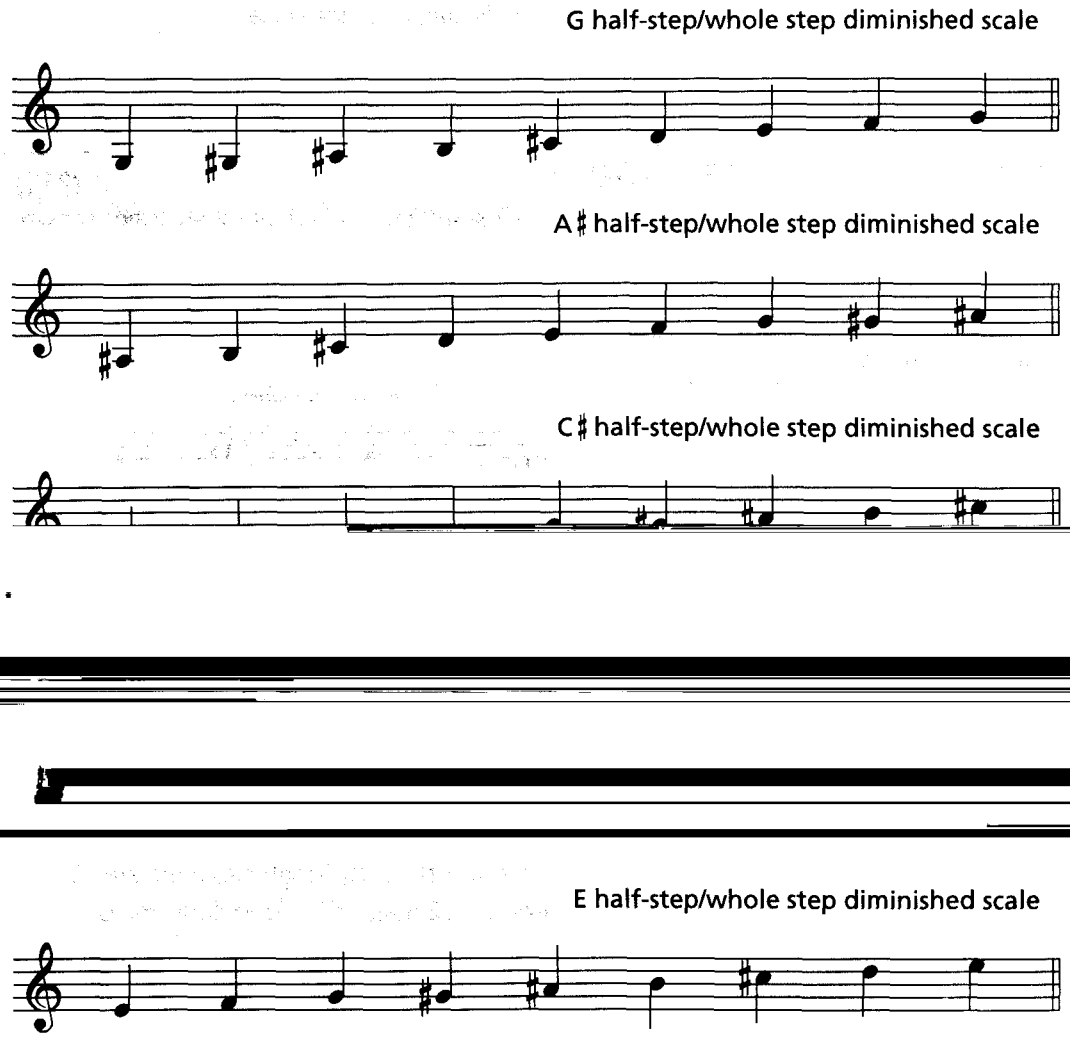


Whenever a scale is asymmetrical, there are 12 of them, like the 12 major and 12 melodic minor scales. When a scale is symmetrical, there are always fewer than 12 of them. For example, the chromatic scale is a symmetrical scale constructed entirely of half steps. How many different chromatic scales are there? Only one. A chromatic scale starting on any note has exactly the same notes as a chromatic scale starting on any other note. Because diminished scales are also symmetrical, there are less than 12 of them. How many are there?

Let's find out. Grab your instrument and play the diminished scale shown in the first bar of **figure 3-120**. Start on G and alternate half steps and whole steps. Go up one octave and then come down. Then play two octaves, up and down. Play the scale a few more times until you've memorized it. Now start a scale on A♯ and again alternate half steps and whole steps. This scale has the same notes as the G diminished

scale. Start on C♯—again, same notes. Start on E—again, same notes. The G, A♯, C♯, and E half-step/whole-step diminished scales are all exactly the same; they just start on different notes (**figure 3-122**). Note that the four starting notes of these scales—G, A♯, C♯, E—are a minor 3rd apart. That's the most important thing about diminished scale harmony. *Everything repeats at the interval of a minor 3rd.*

Figure 3-122



Because the G, A♯, C♯, and E diminished scales are the same, the A♭, B, D, and F diminished scales will also be the same, since they, too, are a minor 3rd apart. Ditto for the A, C, E♭, and F♯ diminished scales. In other words, *there are only three diminished scales:*

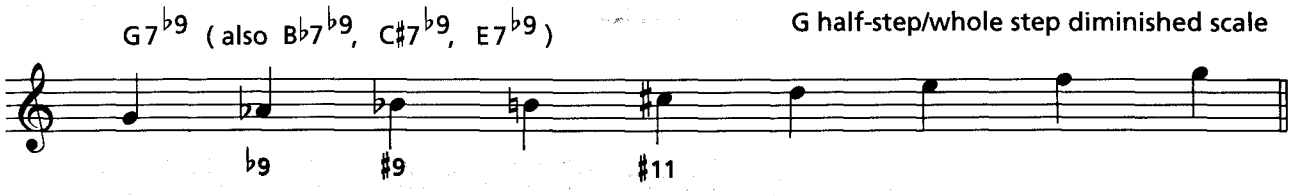
- The one that starts on G, A♯, C♯, or E
- The one that starts on A♭, B, D, or F
- The one that starts on A, C, E♭, or F♯

At first, this may set your head spinning, because it forces you to think in more than one tonality or "key" at a time. After you grasp the principal, you'll

The Half-Step/Whole-Step Diminished Scale and the V7♭9 Chord

The scale in the first bar of **figure 3-120** is shown here again as **figure 3-123**. This scale, running from G to G, goes with some kind of G chord. What kind of 3rd and 7th does it have? Although B♭ is a minor 3rd above G, the next note is B, a major 3rd above G. As you learned from the altered mode of the melodic minor scale, when a scale looks as though it has both a minor and a major 3rd, the "minor 3rd" is really a ♯9. Since the true 3rd is B, a major 3rd above G, and F is a minor 7th above G, this scale goes with some kind of G7 chord. What are the alterations? A♭ is the ♭9, B♭ the ♯9, C♯ the ♯11. The complete chord symbol would be G7♭9, ♯9, ♯11. Again, we need some shorthand. Most jazz musicians write this chord as G7♭9, although G7♯9 is occasionally used.

Figure 3-123



Like melodic minor harmony, diminished scale harmony has no "avoid" notes. As a result, everything harmonically contained within this scale is interchangeable: chords, voicings, licks, phrases, patterns, and so on. Since the G, B♭, C♯, and E diminished scales are identical, the G7♭9, B♭7♭9, C♯7♭9, and E7♭9 chords are largely interchangeable.

Play **figure 3-124**. Hear how the four-note motif repeats down in minor 3rds.[70] Look at the analysis of the motif in **figure 3-125**. *Remember, in diminished scale harmony, everything can be repeated at the interval of a minor 3rd.*

Figure 3-124

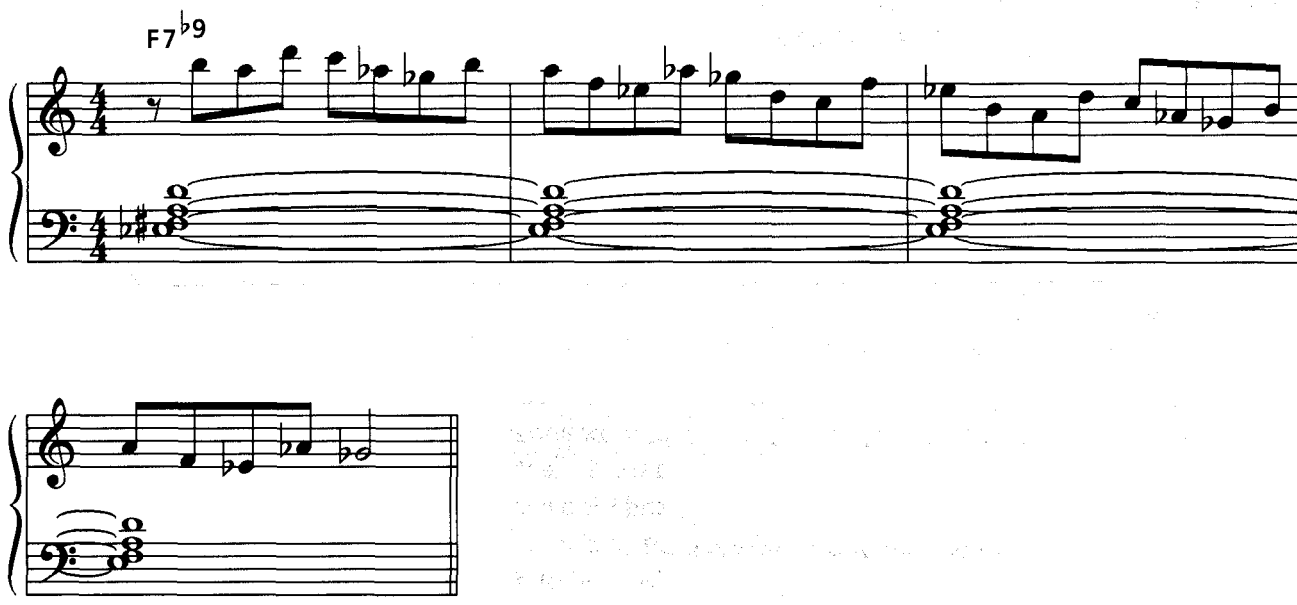
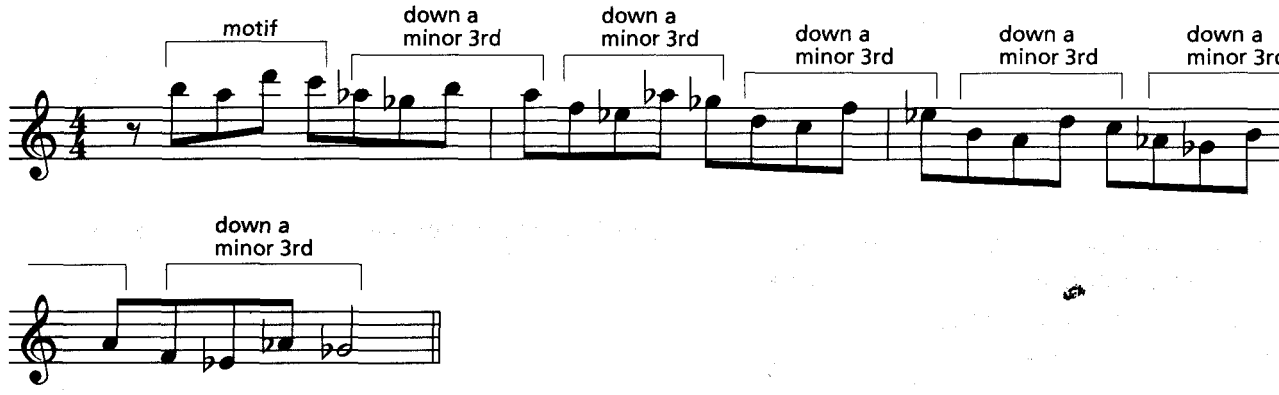


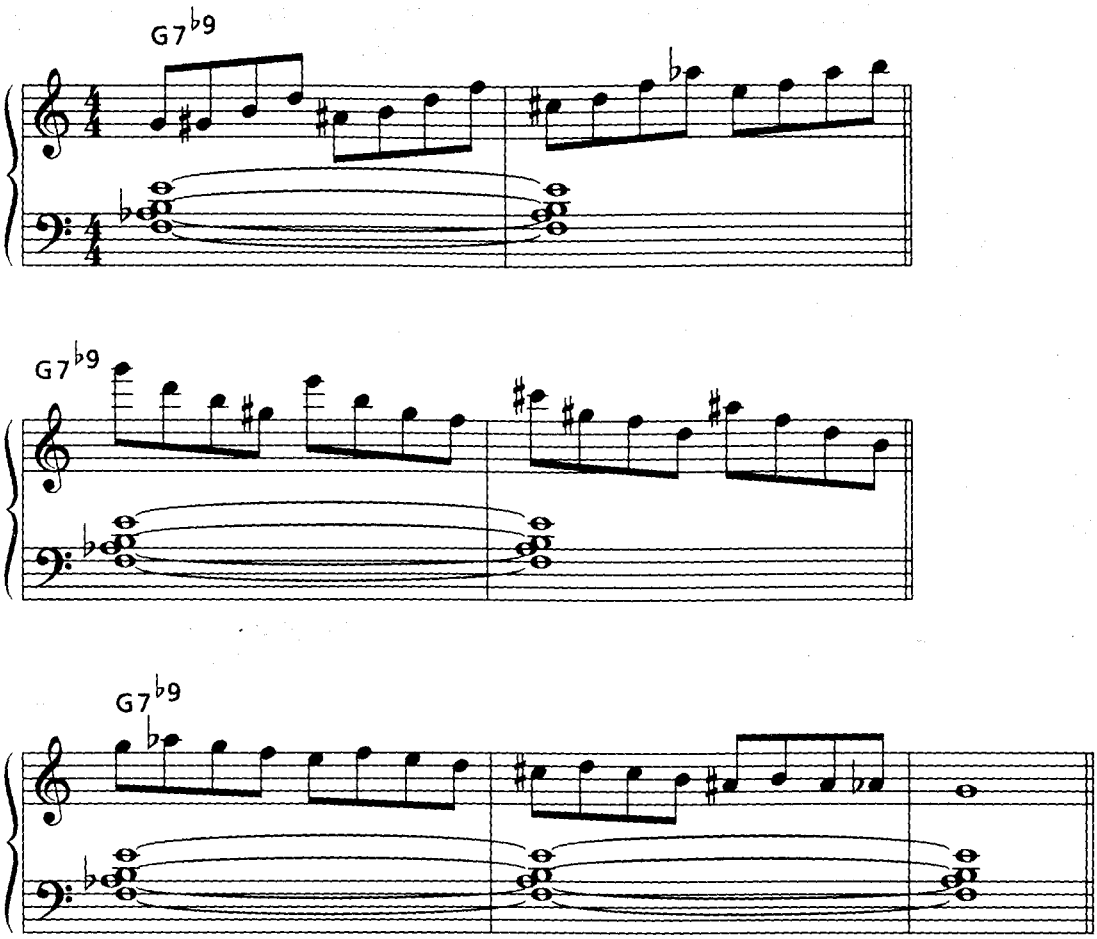
Figure 3-125



[70] The piano voicing in the left hand is a rootless voicing. That's why there's no F on the bottom.

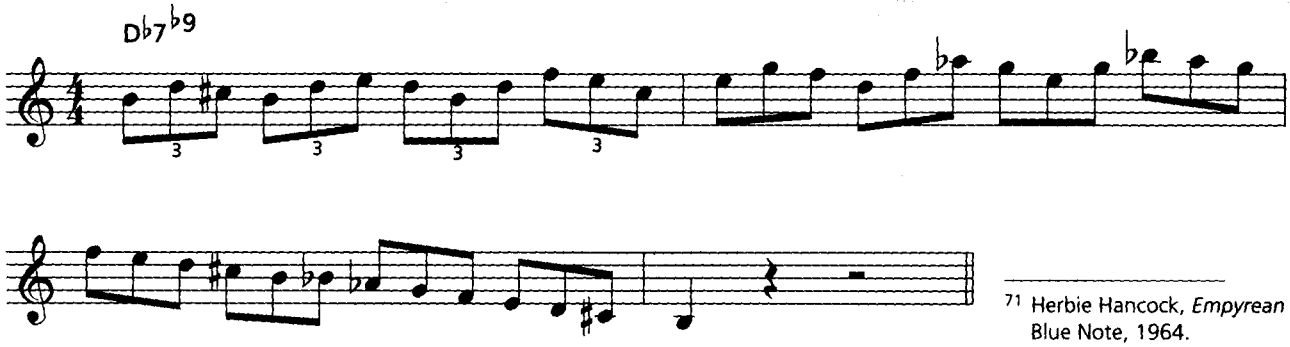
Figure 3-126 shows three more diminished licks. Each lick consists of a four-note phrase re either up or down a minor 3rd.

Figure 3-126



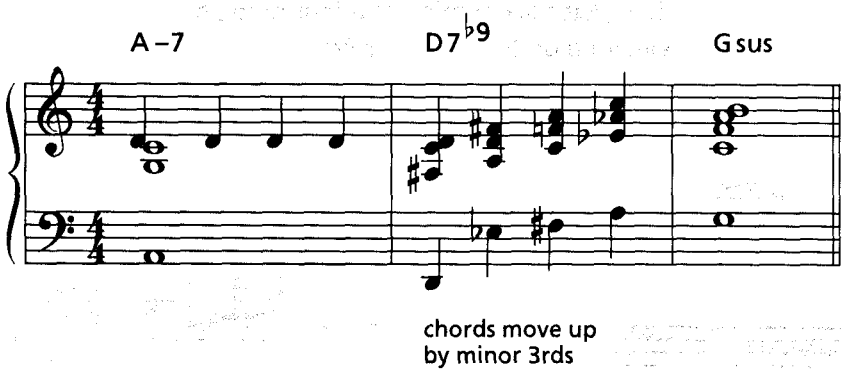
There are endless diminished scale "licks." Becaus their symmetry makes them so "perfect," these licks sometimes sound mechanical. Music, like life, needs a few jagged edges to be interesting. Play **figure 3-127** and listen to the diminished scale line Herbie Hancock plays on "Oliloqui Valley."[71] Notice the very slight intervalic variation between what Herbie plays in bars 1 and 2, before he descends the scale.

Figure 3-127



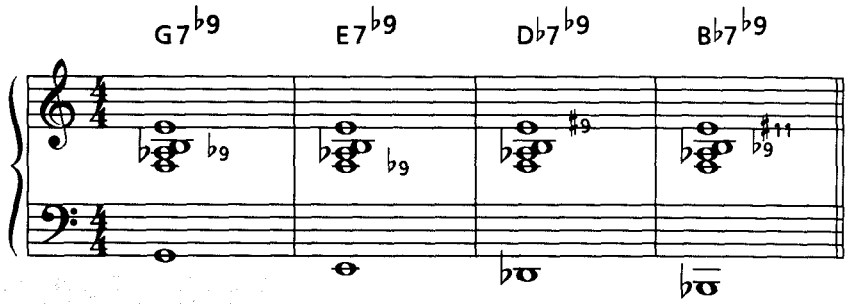
[71] Herbie Hancock, *Empyrean Isles*, Blue Note, 1964.

Figure 3-128



Just as you can repeat licks a minor 3rd away, you can also repeat chords a minor 3rd away. A few paragraphs back, we played **figure 3-119**, bars 5-7 from Jimmy Van Heusen's "Here's That Rainy Day." The same three bars is shown here again as **figure 3-128**. Note that the chord voicing on the second beat of the D7♭9 bar is repeated up a minor 3rd, and then up a minor 3rd again. As you can see, the chords are just following the melody—F♯, A, C—ascending in minor 3rds.

Figure 3-129

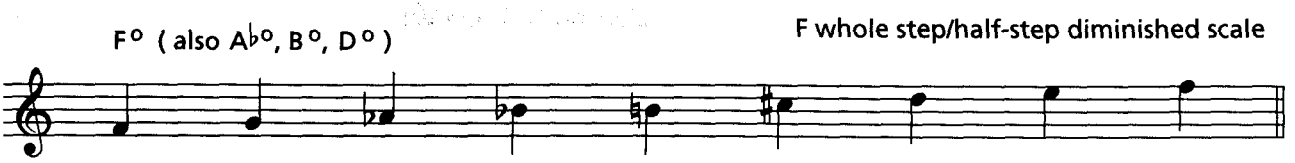


Play **figure 3-129** and you'll hear a single piano voicing (shown in the treble clef) sounding like four different V7♭9 chords, each a minor 3rd apart, as the root (in the bass clef) moves down in minor 3rds. Note that there is no ♭9 in the D♭7♭9 chord, and there's a ♯11 in the B♭7♭9 chord. Doesn't the chord symbol say "♭9?" Remember, ♭9 is just a shorthand symbol for all three alterations found in the scale—♭9, ♯9, and ♯11. The one single voicing shown works for four different V7♭9 chords—why? *Because there are no "avoid" notes in diminished scale harmony.*

The Whole-Step/Half-Step Diminished Scale and the Diminished Chord

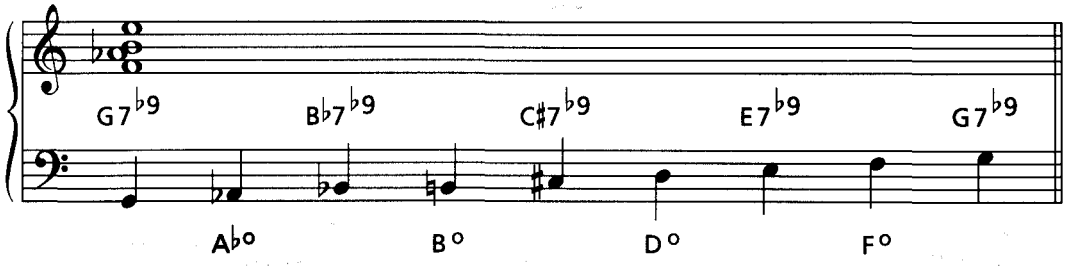
Figure 3-130 shows the whole-step/half-step diminished scale. You play this scale over *diminished 7th* chords. The usual chord symbol for a diminished 7th chord is the root of the chord, followed by a small circle. The symbol for an F diminished chord is F°.[72]

Figure 3-130



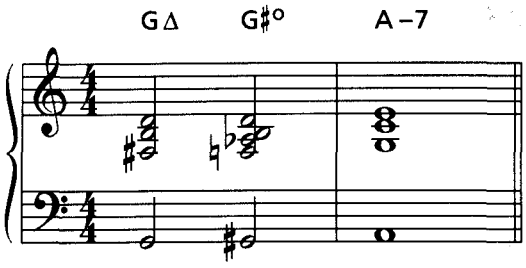
[72] Sometimes notated F°7.

Figure 3-131



Again, because of the lack of "avoid" notes in the diminished scale, everything repeats at the interval of a minor 3rd, so F° is interchangeable with A♭°, B°, and D°. **Figure 3-131** shows the same thing from a different angle: a diminished scale with the symbols of each of the eight chords built off the eight notes of the scale—four V7♭9 chords a minor 3rd apart, and four diminished chords a minor 3rd apart. The roots of all eight chords are shown in the bass clef, a voicing that works for all eight chords in the treble clef.

Figure 3-132

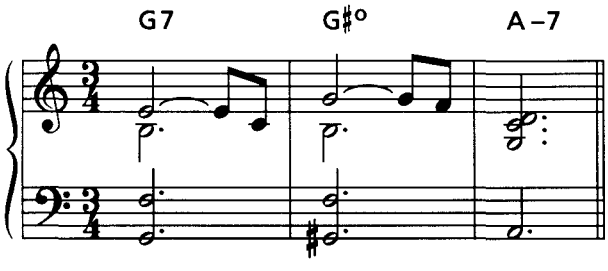


Diminished chords are usually played in place of V7♭9 chords to create a chromatic bass line. Play **figure 3-132**, three chords from the bridge of Duke Ellington's "Sophisticated Lady." Note the chromatic bass line in the roots of the chords—GΔ, G♯°, A-7.

Figure 3-133

In **figure 3-133**, you can see that the notes of the G♯° chord in "Sophisticated Lady" are the 3rd, 5th, 7th, and ♭9 of E7♭9. Normally, the dominant 7th chord preceding any A chord would be E7. The G♯° chord is E7♭9 without E, the root. G♯° is played as a substitute for E7♭9 in order to create a chromatic bass line, from G to G♯ to A.

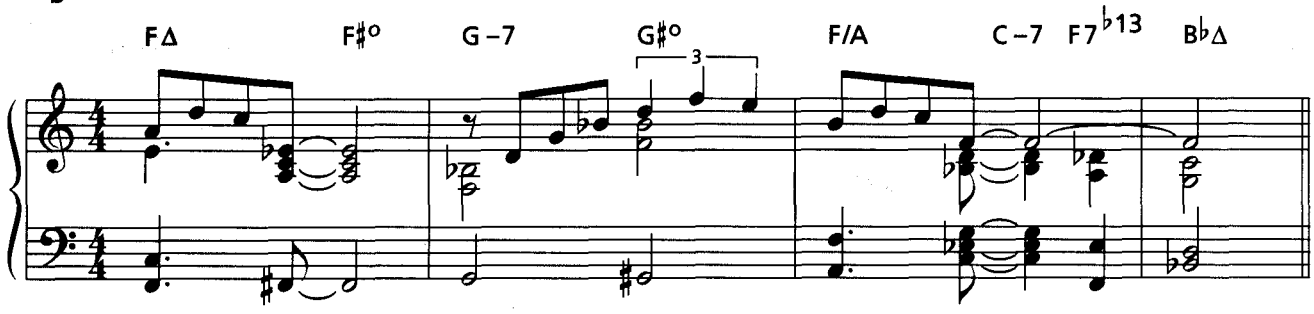
Figure 3-134



The same thing happens in Chick Corea's "Mirror, Mirror"[73] (**figure 3-134**). The G♯° chord is really E7♭9 without E, the root. In both "Sophisticated Lady" and "Mirror, Mirror," playing a diminished chord in place of a dominant 7th ♭9 chord produces a chromatic bass line. Whenever you come across a diminished chord in a tune, check to see if the root is part of a chromatic bass line. Then check whether it is equivalent to the dominant 7th ♭9 chord a 5th above whatever chord comes next. It usually is just that.

[73] Joe Henderson, *Mirror, Mirror,* Verve, 1980.

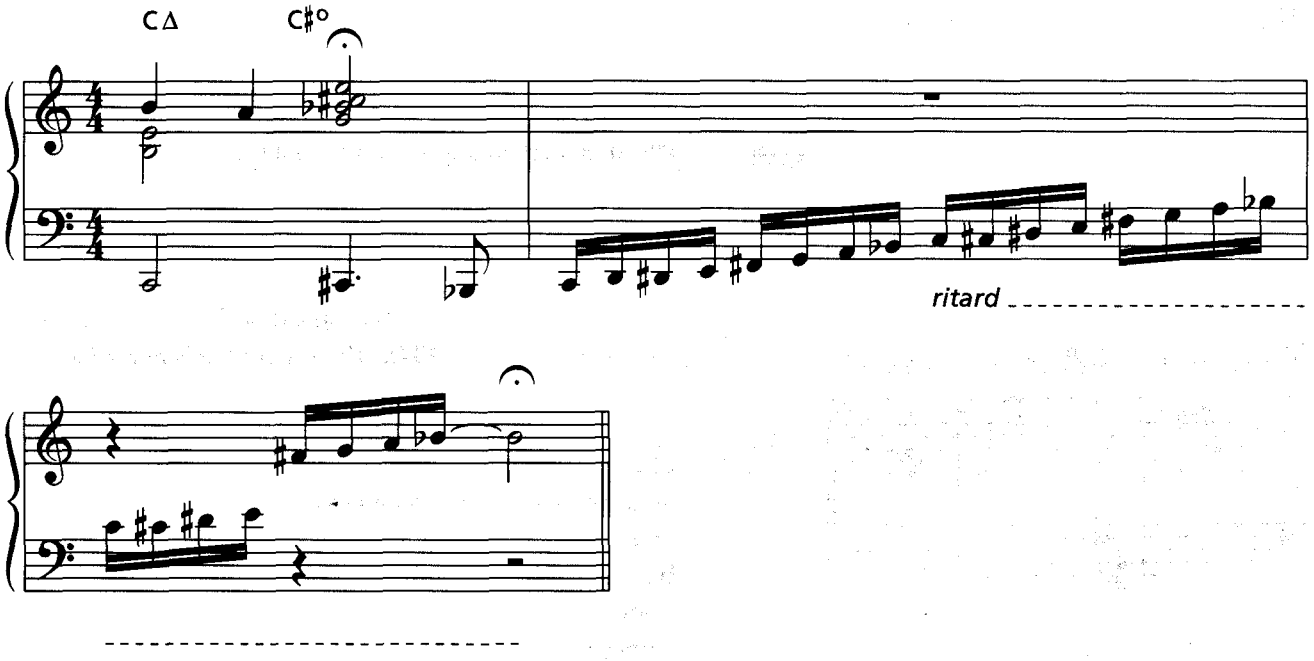
Figure 3-135



And the same thing happens in Ralph Rainger's "Easy Living." **Figure 3-135** shows the first four bar F♯° is a disguised D7♭9, and G♯° is a disguised E7♭9. Omitting the roots of the V7♭9 chords produces chromatic motion in the bass.

Early jazz musicians played the diminished scale solely on diminished chords. Play **figure 3-136**, and listen to what Art Tatum played on Mort Dixon and Harry Woods' "Just Like A Butterfly Caught In the Rain."[74] Following a C♯° chord, Tatum plays the firs three notes of the B♭ major scale, and then continue on with a D♯ half-step/whole-step diminished scale for almost three octaves.

Figure 3-136
Art Tatum's piano voicings simplified



[74] Art Tatum, *Pablo Solo Masterpieces,* Pablo, 1953. What a great title for a tune.

Figure 3-137

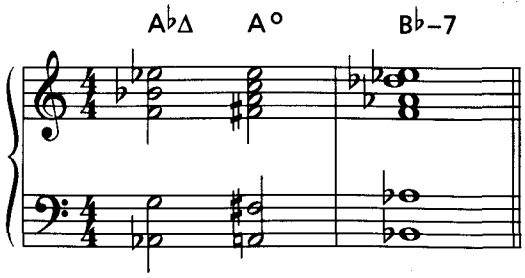


Figure 3-138

Kenny Barron's piano voicings simplified

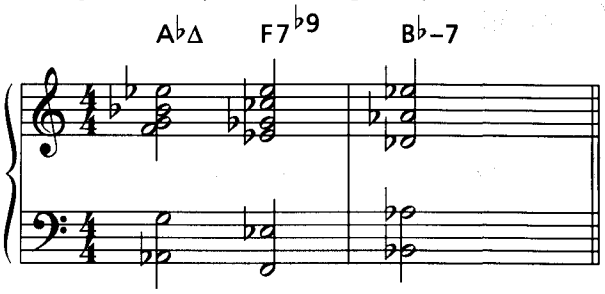
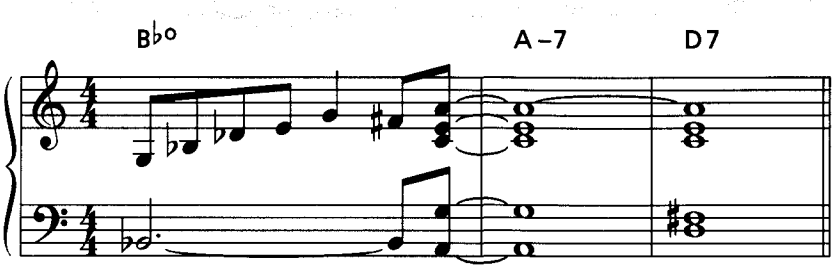


Figure 3-139



Beginning with the bebop era, jazz musicians began to replace diminished chords with V7♭9 chords. GΔ, G♯°, A-7 was replaced by GΔ, E7♭9, A-7. Few modern jazz musicians actually write diminished chords into their tunes anymore. When reading lead sheets of tunes from the 1940s and earlier, today's jazz musicians often substitute the V7♭9 chord for the diminished chord.

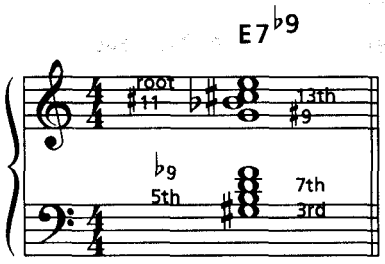
Kenny Barron does this on his version of Hoagy Carmichael's "Skylark."[75] **Figure 3-137** shows the original first two bars of the bridge of the tune, with the A° chord acting like an F7♭9 chord, providing chromatic bass motion between A♭Δ and B♭-7. **Figure 3-138** shows how Kenny plays F7♭9 in place of A°.[76]

Not all diminished chords are disguised V7♭9 chords of the following chord. Sometimes a diminished chord is a disguised V7♭9 of the chord *after* the next chord. The second chord in Antonio Carlos Jobim's "Wave" is B♭°. B♭° doesn't appear to be a disguised V7♭9 of A-7, the following chord. However, A-7 is followed by D7, and A-7, D7 is a II-V. B♭° is the disguised V (A7♭9) of the D7 chord, with A-7 inserted between the two chords to create a II-V (**figure 3-139**).

Every time you play something from diminished scale harmony, you're playing in four tonalities at the same time, all of them a minor 3rd apart. You can't always assume that the bass player will play the root of the chord, so what note the bassist plays underneath can affect the tonality. Because bass players often play tritone substitution,[77] and play passing notes as well as roots, the G7♭9 chord you think you're playing may end up sounding like B♭7♭9, D♭7♭9, E7♭9, F°, A♭°, B°, or D°, depending on what note the bassist plays underneath. Not to worry. When this happens, it won't make you sound bad, just different than what you may have expected.

[75] Kenny Barron, *Maybeck Recital Hall Series*, Concord Jazz, 1990.
[76] The C♭ in the voicing is the ♯11 of the chord. Remember, F7♭9 is a shorthand symbol. It also implies the ♯9 *and the ♯11*.
[77] We'll cover tritone substitution in Chapter 13, "Basic Reharmonization."

Figure 3-140

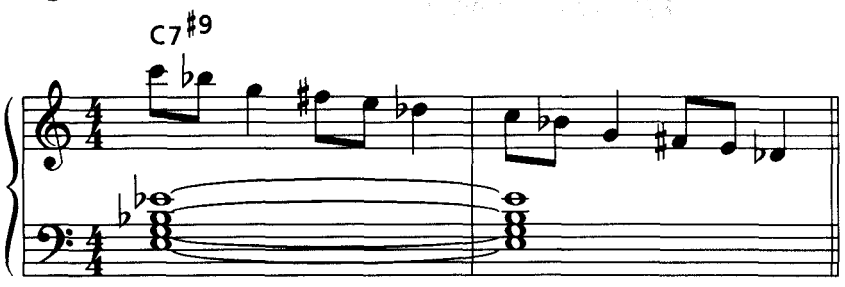


Because there are no "avoid" notes in the diminished scale, you can play all the notes at once as a chord. Play **figure 3-140** and hear Herbie Hancock play all eight notes of an E half-step, whole-step diminished scale as an E7♭9 voicing on "Dolphin Dance."[78] Because each hand is playing a diminished 7th chord (G° in the right hand, G♯° in the left hand), this voicing is called a *double diminished chord.*

Some Practice Tips

Play each diminished scale, both half-step/whole-step and whole-step/half-step, around the cycle of fifths As you play each scale, think of all the other chords that share that same scale. Make up some diminished scale phrases, using the "everything repeats at a minor 3rd" method. After you've done this for a while, invent some new phrases, trying *not* to repeat phrases a minor 3rd away. Also, try creating phrases repeating at the interval of two minor 3rds (a tritone), as in **figure 3-141**.

Figure 3-141



We've now completed three of the four scales from which most of the chords played by jazz musicians are derived. There's only one to go, and it's the simplest, and least played, of the four scales: the whole-tone scale.

[78] Herbie Hancock, *Maiden Voyage,* Blue Note, 1965.

Whole-Tone Scale Harmony

Play the music shown in **figure 3-142**, McCoy Tyner's intro on Wayne Shorter's "JuJu,"[79] and listen to the sound of *whole-tone scale harmony*. Play **figure 3-143**, from Freddie Hubbard's solo on Duke Pearson's "Gaslight,"[80] and listen to an example of improvising on the whole-tone scale.

Figure 3-142
McCoy Tyner's piano voicings simplified

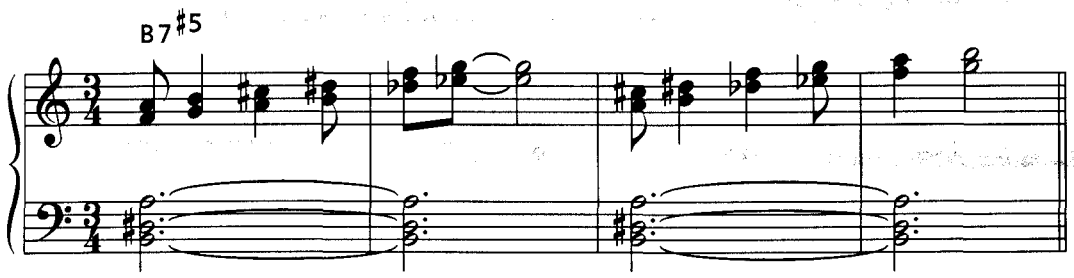
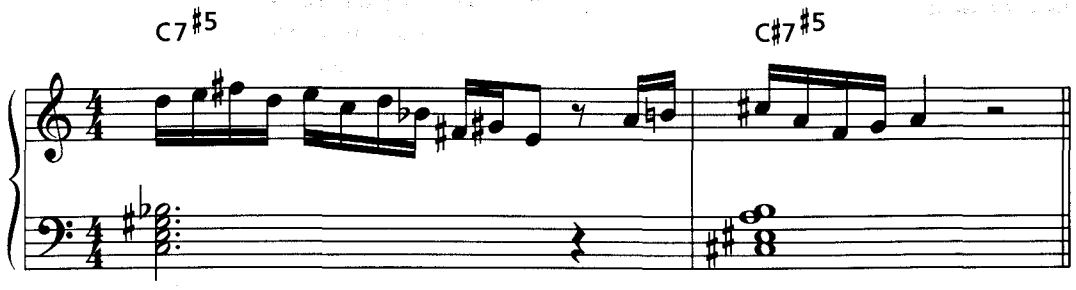


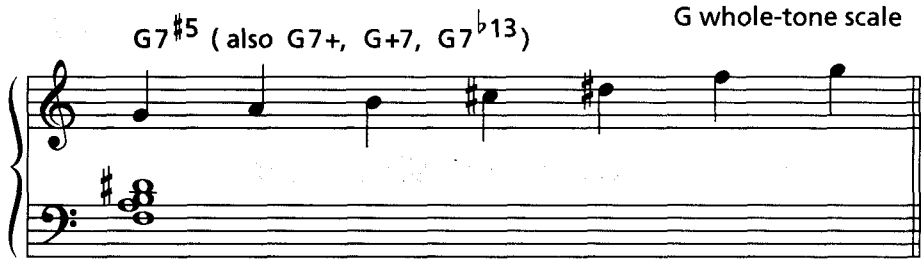
Figure 3-143



[79] Wayne Shorter, *JuJu*, Blue Note, 1964.
[80] Duke Pearson, *Sweet Honey Bee*, Blue Note, 1966.

Figure 3-144 shows the G whole-tone scale, running from G to G.[81] Look at the 3rd and 7th of the scale. Because this scale has a major 3rd and a minor 7th, it goes with a G7 chord. The alterations are C♯ (the ♯11) and D♯ (the ♯5). The complete chord symbol would be G7♯11, ♯5. The traditional shorthand for this chord is G7♯5, often written with a plus sign, as in G7+, and occasionally written as . G +7. G +7 may be confusing, because the + refers to the 5th, not shown in the chord symbol, and has nothing to do with the 7th. Because ♯5 and ♭13 are enharmonic, G7♯5 is sometimes notated G7♭13, which is kind of dangerous. To most musicians, ♭13 also implies ♭9 and ♯9—in other words, G7alt. To be safe, stick to G7♯5.

Figure 3-144



Because the whole-tone scale is symmetrical, consisting entirely of whole steps, you know that, as with the diminished scale, there are fewer than 12 of them. In fact, there are only two whole-tone scales. The G whole-tone scale shown in **figure 3-144** has exactly the same notes as the A, B, C♯, D♯, and F whole-tone scales. The A♭ whole-tone scale is the same as the B♭, C, D, E, and F♯ whole-tone scales. These notes are all a whole step apart from each other. The most important thing to know about whole-tone harmony is *everything can be repeated at the interval of a whole step.*

There are no "avoid" notes in whole-tone harmony, so everything is interchangeable within the harmony of a given scale. Anything you play on G7♯5 will sound good on A7♯5, B7♯5, C♯7♯5, D♯7♯5, and F7♯5.

[81] Note the rootless left-hand piano voicing in the bass clef.

Figure 3-145

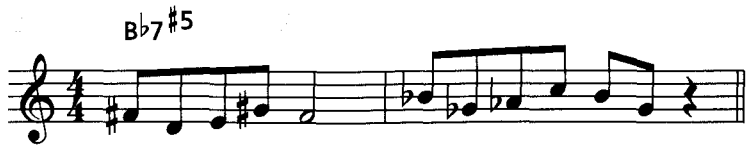
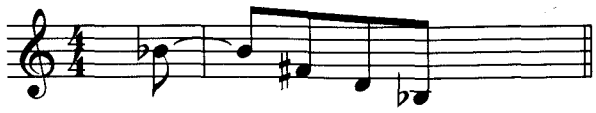


Figure 3-146



Of course, if you can repeat something a whole step away, you can also repeat something in multiples of whole steps. Two whole steps is a major 3rd, three whole steps is a tritone, four whole steps is an augmented 5th, and five whole steps a minor 7th. Play **figure 3-145**, from Jackie McLean's solo on Lee Morgan's "Our Man Higgins,"[82] an example of repeating a phrase at the interval of a major 3rd, which is two whole steps. The melody of John Coltrane's "One Down, One Up"[83] is based on descending major 3rds from the B♭ whole-tone scale (**figure 3-146**).

Whole-tone harmony can be very boring, so it's not played all that much. No matter how you rearrange the notes, there are no minor 2nds, minor 3rds, perfect 4ths, perfect 5ths, major 6ths, or major 7ths possible in whole-tone harmony. *Whole-tone harmony lacks half of the intervals that occur in Western music.* Because of this potential for boredom, whole-tone harmony is best played in short doses.

With the generous variety of chords available in the major, melodic minor, and diminished scales, you can convey a wide range of emotions. You can easily express happiness and calm (major 7th chords); triumph (major triads); darkness, sadness or mystery (almost anything from melodic minor harmony); tension (dominant 7th chords); extreme tension (diminished chords); and more. With the whole-tone scale, the emotional range is largely limited to enchantment, or as one musician not-so-cynically suggested, "Bambi emerging from the forest at dawn." The exception was when Thelonious Monk played the whole-tone scale. More on Monk in a bit. You could look through 100 tunes in a fake book and find only one or two with a whole-tone chord.

[82] Lee Morgan, *Cornbread*, Blue Note, 1965. Jackie McLean's first couple of choruses on "Our Man Higgins" is one of the best examples of whole-tone soloing ever recorded.

[83] John Coltrane, *New Thing At Newport*, Impulse, 1965.

Figure 3-147

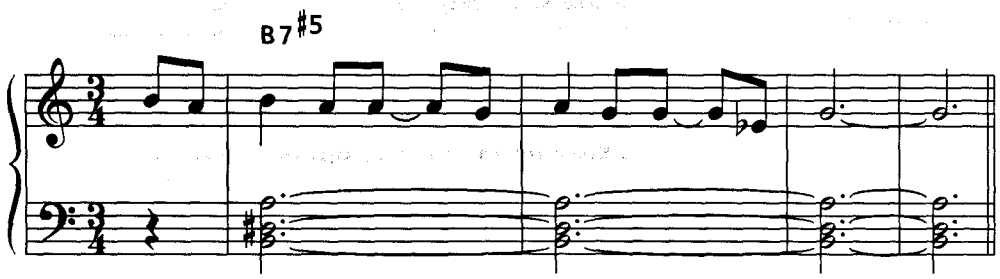
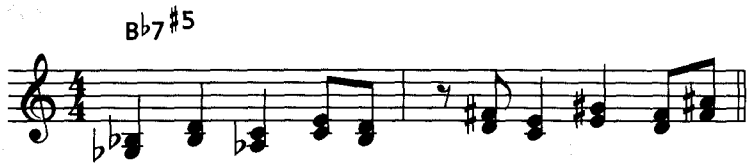


Figure 3-148



Because of this sameness of sound, tunes with mostly whole-tone harmony are rare. Good examples are the aforementioned "JuJu," (**figure 3-147** shows the first four bars), "One Down, One Up," "Our Man Higgins," (**figure 3-148** shows the first two bars), and Bix Beiderbeck's "In A Mist."[84]

Many jazz musicians will substitute an alt chord for a whole-tone chord. G7♯5 is often played on bar 17 of "Stella By Starlight," (**figure 3-149**), but many musicians prefer G7alt instead (**figure 3-150**). Bar 32 of "All The Things You Are" has a B7♯5 chord (**figure 3-151**), but most musicians prefer to play B7alt (**figure 3-152**).[85]

[84] Freddie Hubbard, *Sky Dive*, CTI, 1972.
[85] Some musicians play B° in bar 32 of "All The Things You Are."

Figure 3-149

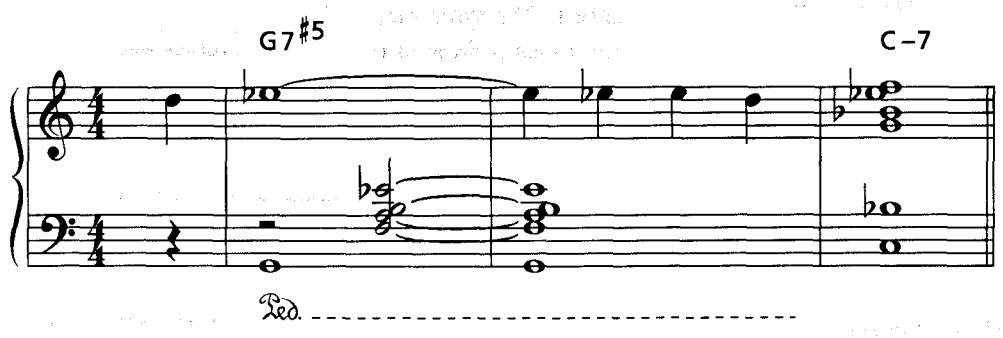


Figure 3-150

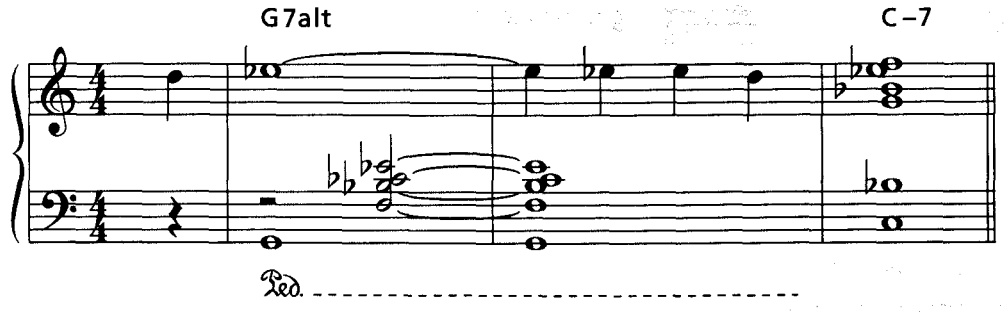


Figure 3-151

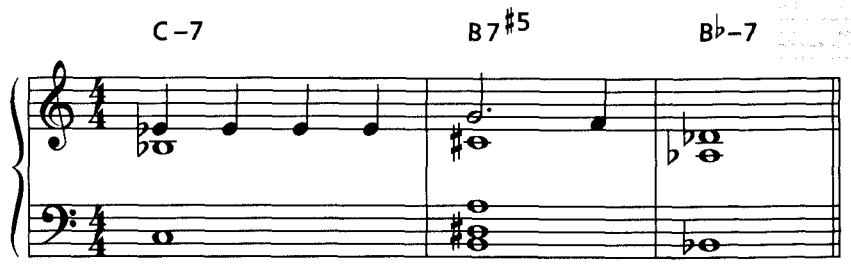


Figure 3-152

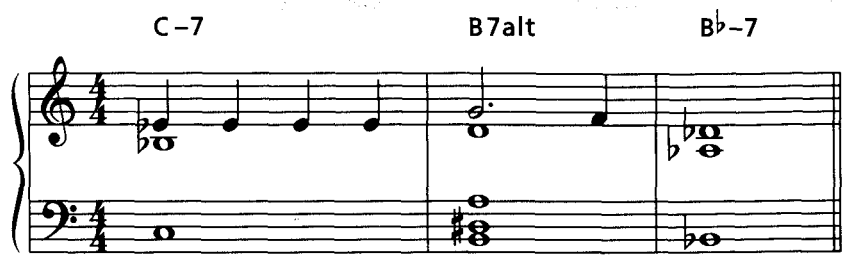


Figure 3-153

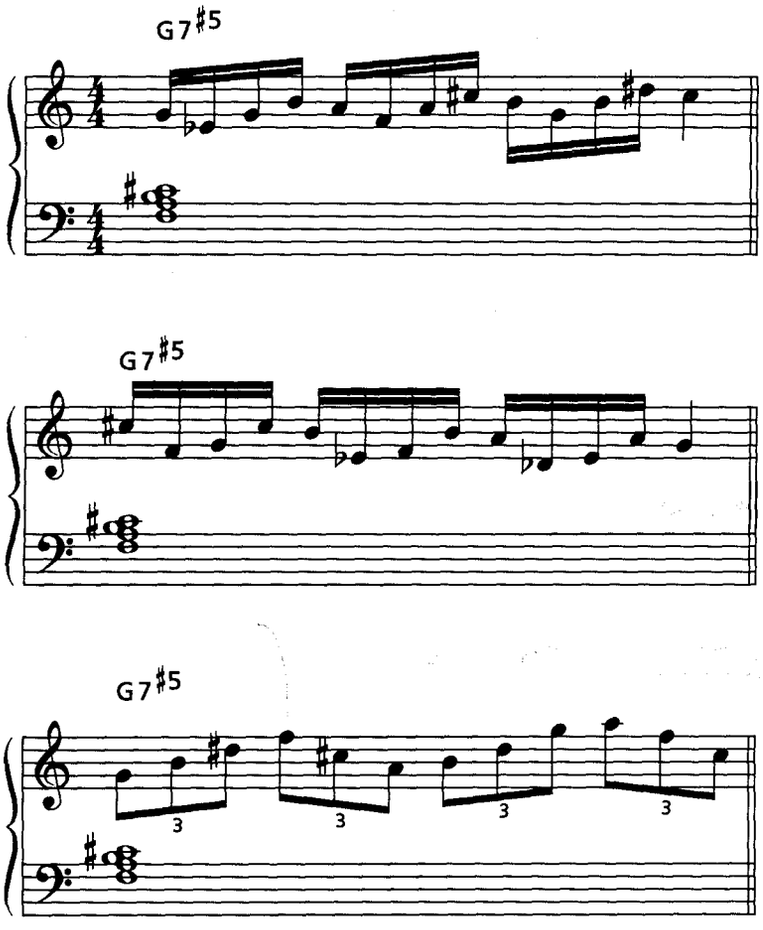


Figure 3-153 shows three "licks" on a G7♯5 chord. The symmetry and lack of intervalic variety can make it difficult to be original when playing on whole-tone chords. The most inventive improviser on whole-tone chords was Thelonious Monk. He could play patterns that would sound like clichés coming from anyone else. His solo on "Evidence"[86] is one of the best examples of soloing over whole-tone chords. Printing a whole-tone excerpt from one of Monk's recordings won't convey Monk's sound at all. His quirky and angular sense of time gave what can be a very boring type of harmony a tremendous feeling of energy. Go get the record and *listen.*

You've now learned about all four of the scales you'll need under your fingers to play over chord changes. The next question is how to practice them. And you don't just want to practice them, but to internalize them to the point where they become an available pool of notes, on which to improvise.

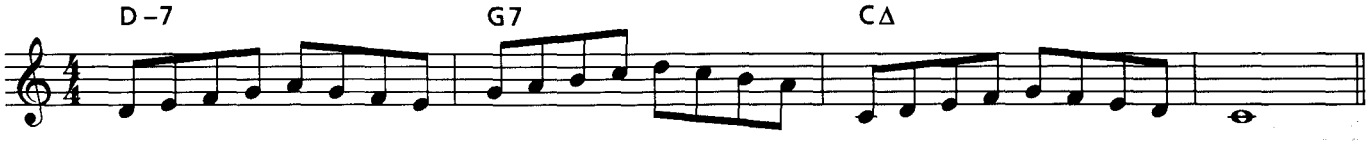
[86] Thelonious Monk, *Genius Of Modern Music,* Blue Note, 1947.

CHAPTER FOUR
How To Practice Scales

Now that you know your scales, how do you practice them? Mindlessly running up and down scales may be great for your technique, but it won't make you a better jazz musician. First of all, make this rule your credo: *Practice everything in every key.* There may not be many tunes written in D♭, G♭, or B, but II-V-I progressions in those keys are all over the place. And there are some great tunes in those so-called "hard" keys. Billy Strayhorn's "Lush Life"[1] is in D♭, as are Edgar Sampson's "Stompin' At The Savoy"[2] and Johnny Green's "Body And Soul."[3] Freddie Hubbard's version of Clare Fischer's "Pensativa"[4] and Joe Henderson's "Y Todavia La Quiero"[5] are in G♭, and Coltrane's "Giant Steps"[6] is in B.

The traditional classical method of practicing scales—running up and down one or more octaves—won't do much to improve your skills as an improviser. Because you're always starting on the root, reversing directions on the root, and ending on the root, you're using only a fraction of the possibilities inherent in each scale. Beginning jazz musicians often sound like the music shown in **figure 4-1** on their first attempt at playing a II-V-I, starting each scale on its root.

Figure 4-1



[1] *John Coltrane And Johnny Hartman,* MCA/Impulse, 1963.
[2] Art Tatum, *The Complete Pablo Solo Masterpieces,* Pablo, 1953.
[3] John Coltrane, *Coltrane's Sound,* Atlantic, 1960.
[4] Art Blakey, *Free For All,* Blue Note, 1964.
[5] Joe Henderson, *Relaxin' At Camarillo,* Contemporary, 1979.
[6] John Coltrane, *Giant Steps,* Atlantic, 1959.

This is OK for a start, but music doesn't always begin on the root of each chord. There is a better method of practicing scales, as shown in **Figure 4-2**. By going up the Ionian mode, down the Dorian, up the Phrygian, down the Lydian, and so on, you're starting on each note, reversing directions on each note, and ending on each note of the C major scale. This equalizes the importance of each note in every scale. This way, when you're taking a solo, your ear can choose what note to play, not your fingers gravitating straight to the root because of their memory of always starting there.[7]

Figure 4-2

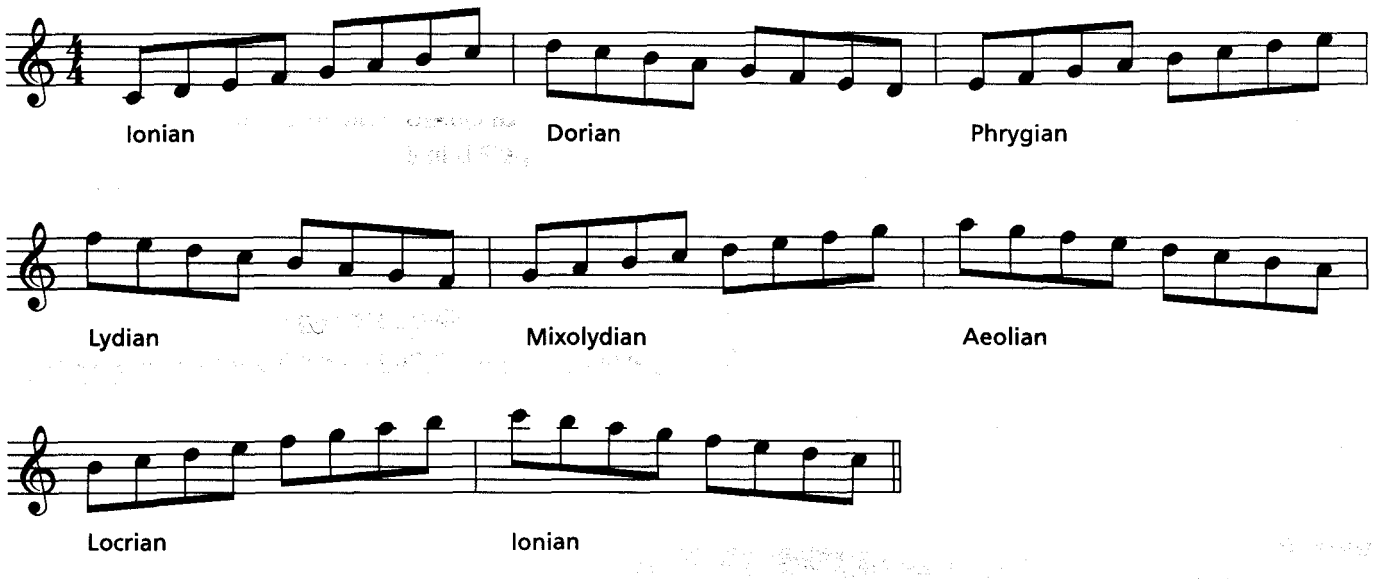
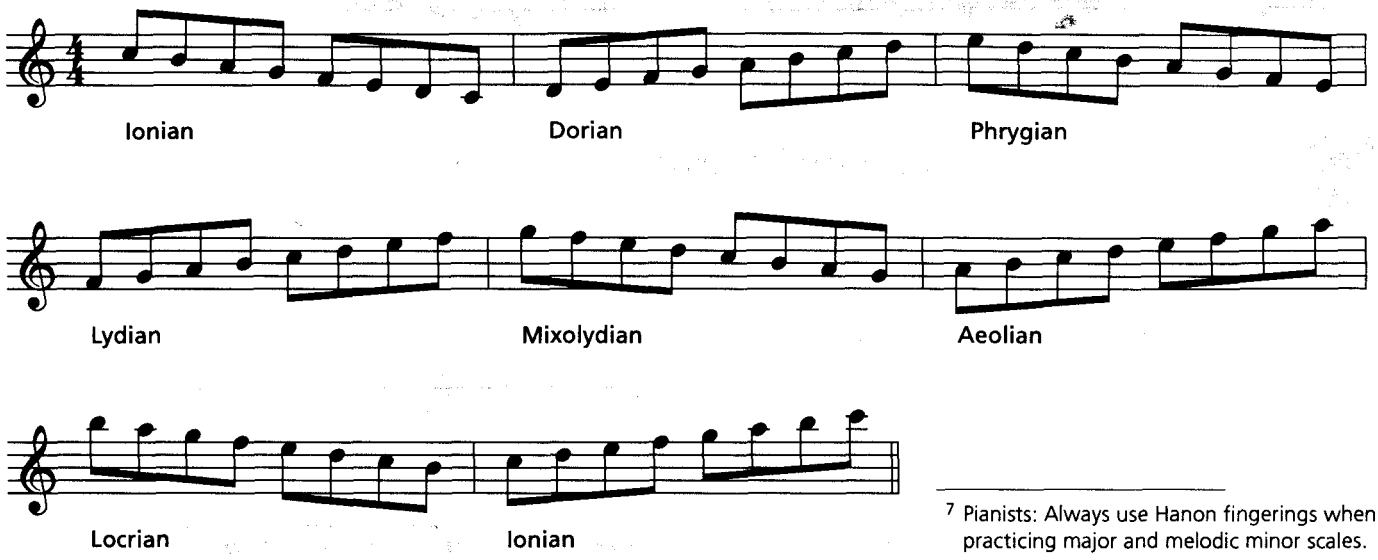


Figure 4-3



[7] Pianists: Always use Hanon fingerings when practicing major and melodic minor scales.

Figure 4-4

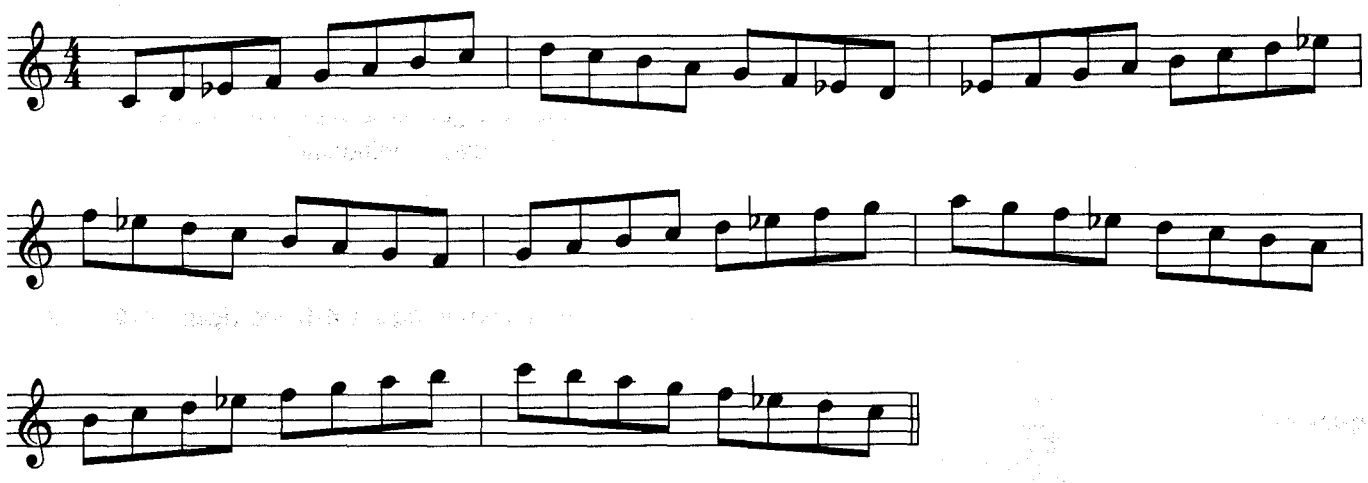
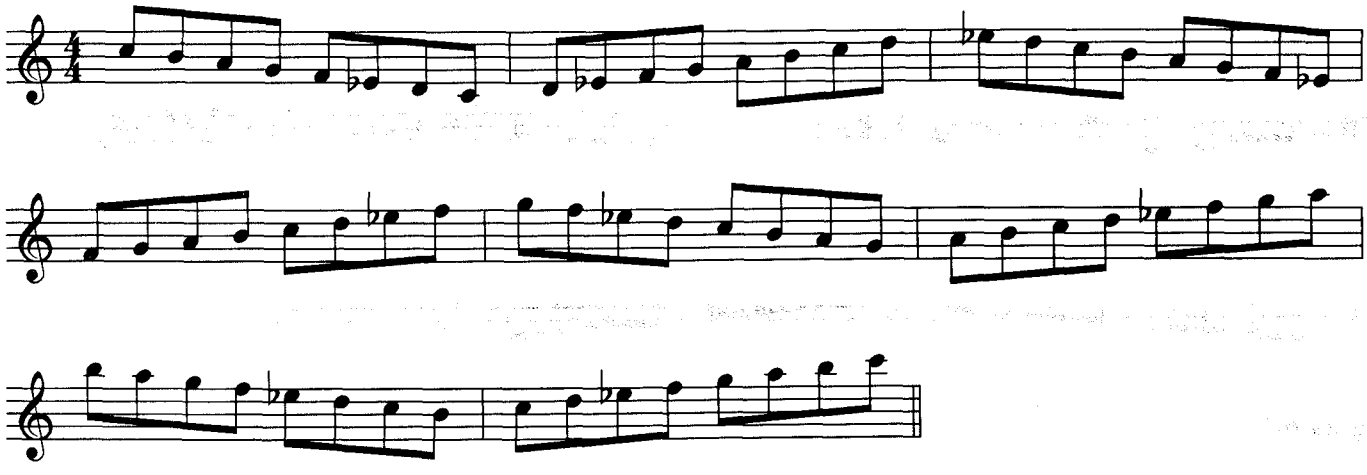
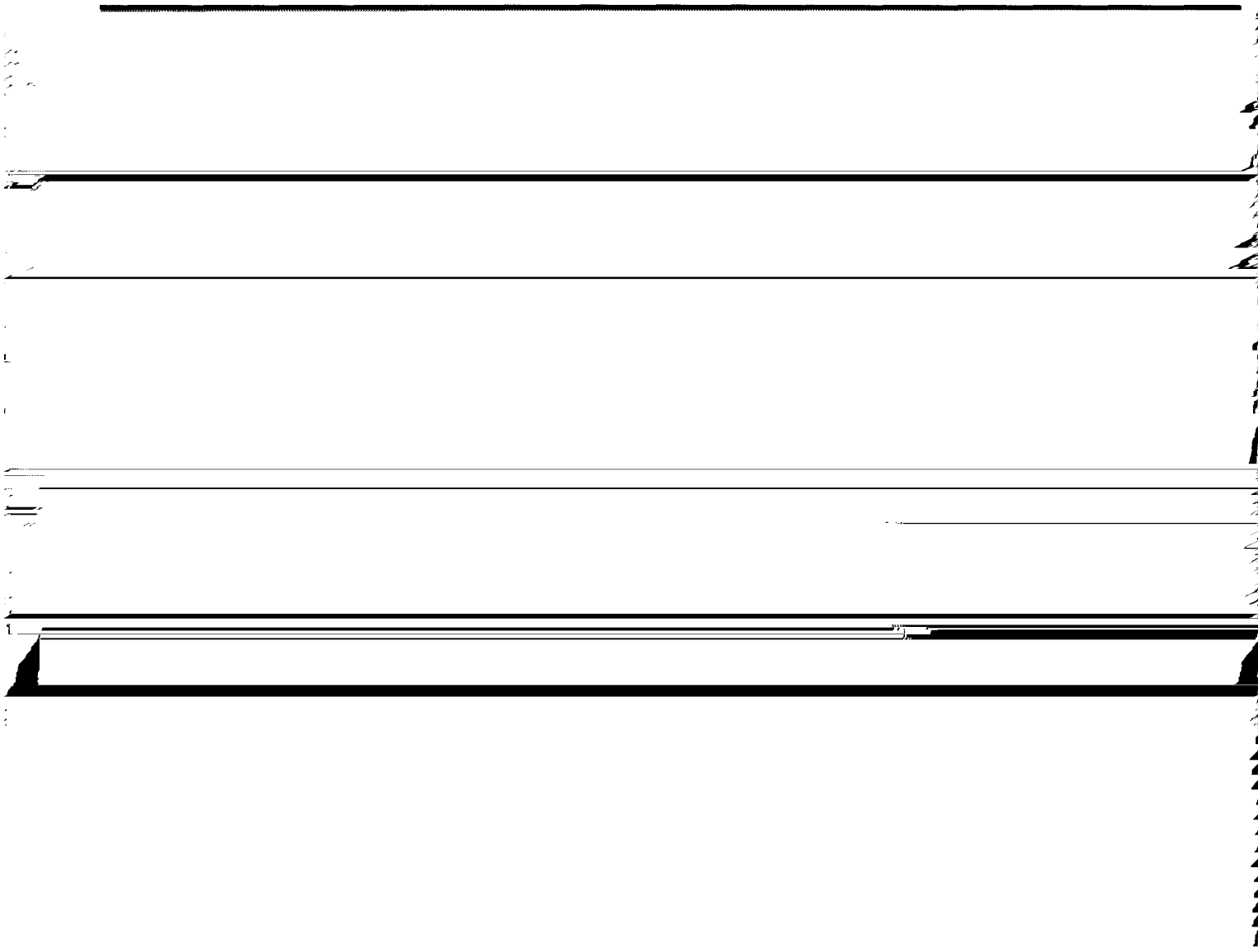


Figure 4-5



You've only covered half the possibilities, however. Reverse everything, as shown in **Figure 4-3**, going down the Ionian, up the Dorian, down the Phrygian, up the Lydian, and so on. Use the same patterns to practice melodic minor scales, as in the C melodic minor patterns shown in **figure 4-4** and **figure 4-5**.



If you practiced this exercise every day, you'd still be starting the C major scale on C every day. It helps to take this idea even further, starting the C major scale on C one day, D the next day, E the third day, and so on. If this seems like taking things to extremes, remember, the goal is to deprogram yourself from years of root-bias conditioning.

Practice patterns for the half-step/whole-step C diminished scale are shown in **figure 4-6** and **figure 4-7**. Similar patterns for the C whole-tone scale are shown in **figure 4-8** and **figure 4-9**.

Figure 4-6

Figure 4-8

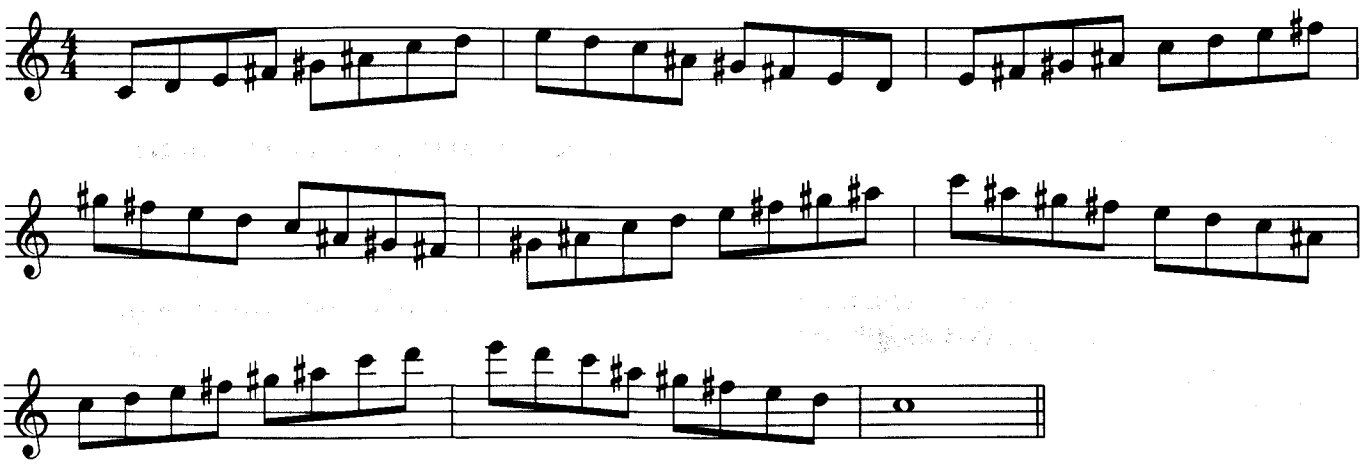


Figure 4-9

Should you write out these patterns in every key? I wouldn't. You'll just end up reading them; instead, your goal is to *internalize* them. You need to train your ear and your fingers, not just your eyes. Classical music is both ear and eye music. Jazz is almost entirely

[redacted]

have to read, when they've internalized everything so well that they no longer need music. As Bird said, "learn the changes, then forget them."

Remember your goal: to see, think, and play, scales as *an available pool of notes,* of which do-re-mi-fa-sol-la-ti-do is only one possible combination. Breaking up scales into groups of notes is an important path to this goal. All the following scale pattern examples are shown in the key of C major, but practice them in every key, and on all melodic minor, diminished, and whole-tone scales.

Figure 4-10

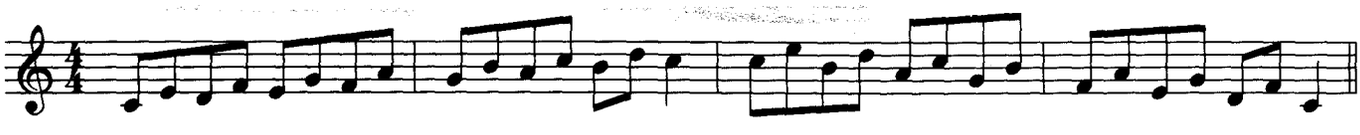


Figure 4-11

Figure 4-10 breaks down the C major scale into ascending 3rds. **Figure 4-11** breaks down the scale into descending 3rds. **Figure 4-12** shows a reverse pattern, alternating ascending and descending 3rds. **Figure 4-13** does just the opposite, alternating descending, and then ascending 3rds. Remember to practice these patterns starting on different notes.

The next few figures are shown ascending only, but practice each one in all of the variations just mentioned: ascending, descending, and reversing in both directions. **Figure 4-14** divides the scale into 4ths. **Figure 4-15** divides the scale into a four-note pattern. **Figure 4-16** has you dipping chromatically below each scale tone, and then going up a diatonic 3rd.

Figure 4-14

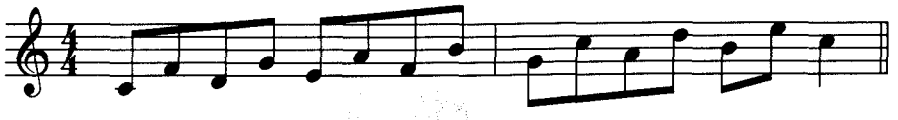


Figure 4-15

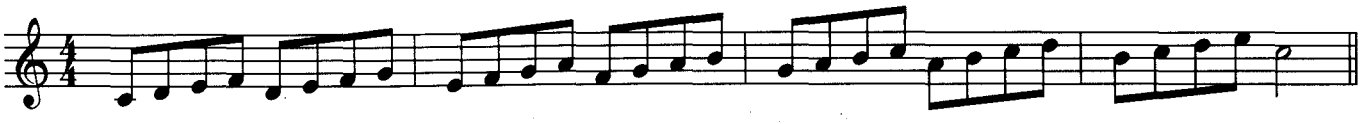
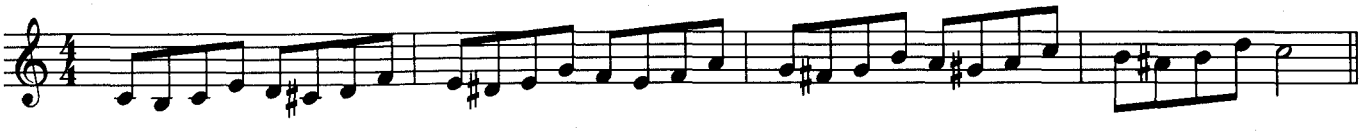


Figure 4-16



As you practice scales in this way, you'll want to invent your own patterns. There are a zillion ways of breaking up a scale to create patterns, but there's only one rule: If a new pattern sounds unmusical to you, *don't waste time practicing it.*

Remember, practice all scales and patterns both ascending and descending; on the major, melodic minor, diminished, and whole-tone scales and in all keys.

Slash Chords

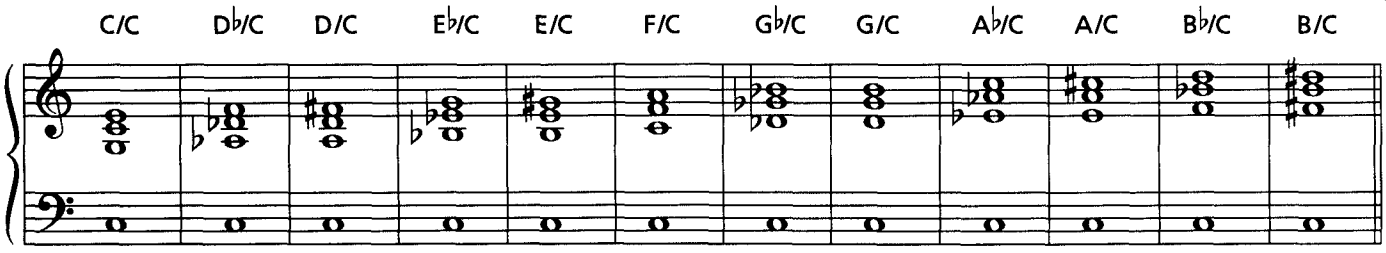
What are Slash Chords?

Play the music shown in **figure 5-1**. This is the sound of *slash chords*. The music is from Mulgrew Miller's arrangement of Burt Bacharach's "What The World Needs Now Is Love."[1] Mulgrew plays these slash chords to reharmonize the original chords, which are shown in **figure 5-2**. Slash chords are often used to reharmonize standards. Changing the harmony of standards in this way can make them sound fresh and new.

Figure 5-1

The simplest definition of a slash chord is "a triad over a bass note." Take a look at **figure 5-3**. It shows all 12 major triads you can play over a C pedal. Note that all the triads are shown in second inversion. Although triads can sound good in any inversion, all things being equal *triads sound strongest in second inversion.*

Figure 5-3



Play **figure 5-3** and listen to all 12 slash chords.

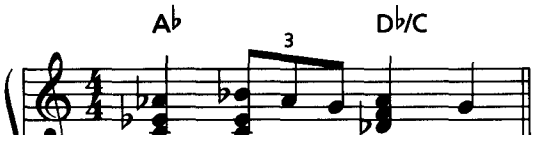
C/C Same triad as the root
D♭/C Triad a half step above the root
D/C Triad a whole step above the root
E♭/C Triad a minor 3rd above the root
E/C Triad a major 3rd above the root
F/C Triad a perfect 4th above the root
G♭/C Triad a tritone above the root
G/C Triad a perfect 5th above the root
A♭/C Triad a minor 6th above the root
A/C Triad a major 6th above the root
B♭/C Triad a whole step below the root
B/C Triad a half step below the root

Let's examine each one of these slash chords. In all cases, recorded examples have been transposed back to C to make comparison easy.

C/C is a pretty silly chord symbol, because it's just a C triad with C, the root, on the bottom. There's no reason to write it like this, and you'll never see it like this.

D♭/C, a triad a half step above the bass note, is a D♭Δ chord with the major 7th on the bottom. Play **figure 5-4** and hear Bud Powell play D♭/C briefly on

Figure 5-4



D♭/C is often played as one chord in a series of descending slash chords. **Figure 5-5** shows the changes for the first eight bars of Bronislau Kaper's "Green Dolphin Street," which has three chromatically descending slash chords in a row (E♭/C, D/C, and D♭/C). E♭/C would normally be written C-7 unless, as here, it is part of a series of slash chords.

Figure 5-5

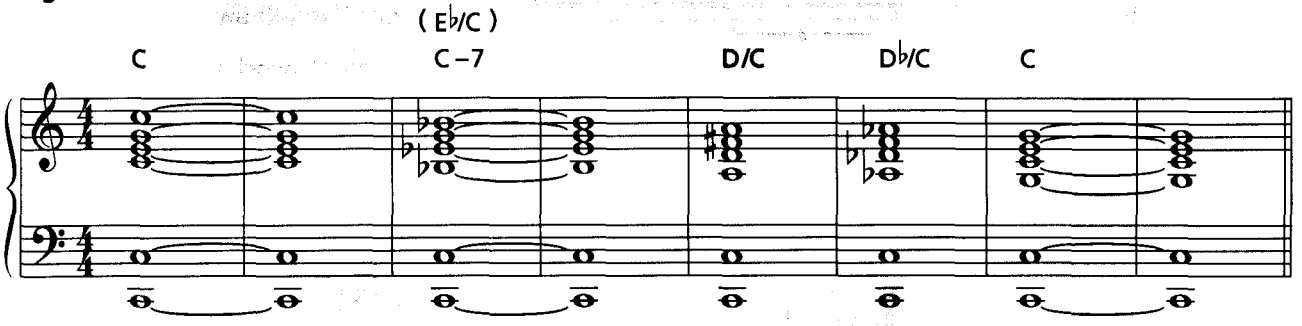
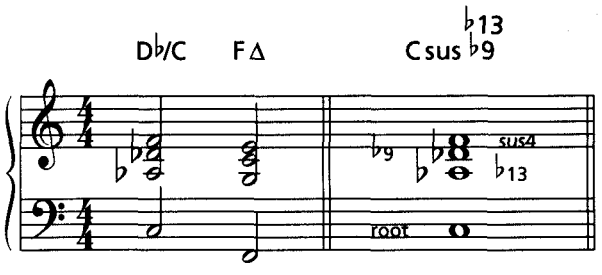


Figure 5-6

D♭/C also can function as a dominant 7th chord resolving to F major. Play **figure 5-6** and hear how D♭/C resolves to F∆. You could notate this chord as Csus♭9, ♭13 (see the last bar of the example), but that's not a commonly used chord symbol.



D/C, a triad a whole step above the bass note, sounds like a Lydian chord, or C∆♯4. Play **figure 5-7** and hear D/C, the first chord of Art Blakey's version of Hoagy Carmichael's "Skylark."[3] The second chord, B♭/C, is another slash chord, which we'll get to soon.

E♭/C is just a C-7 chord, and the only time you'll see it written is when the E♭ triad is part of a series of slash chords, as in the earlier example from "Green Dolphin Street."

Figure 5-7

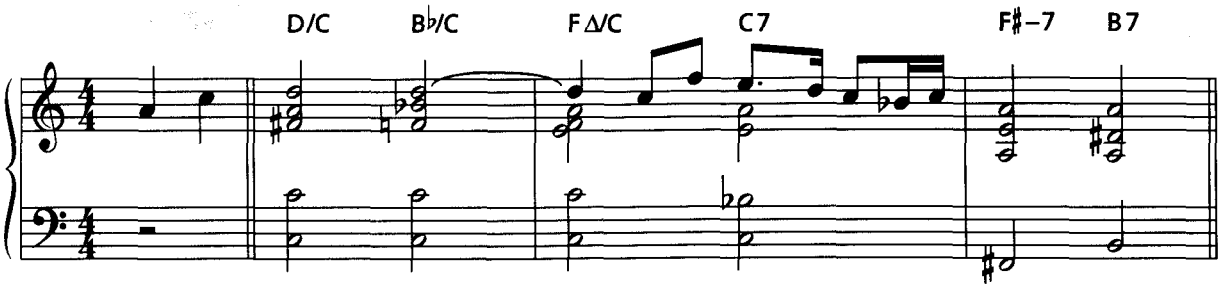
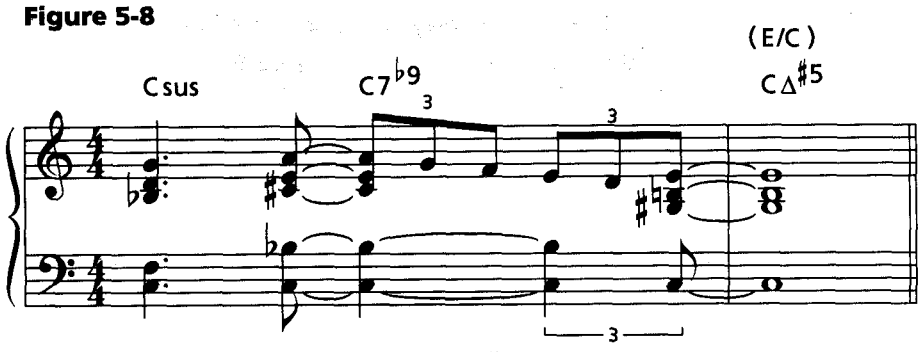
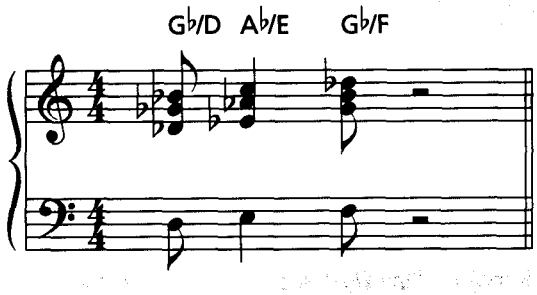


Figure 5-8



E/C, a triad a major 3rd above the bass note, is another way of notating C△♯5, the Lydian augmented chord, which you learned about in the Melodic Minor Scale Harmony section of Chapter 3. Play **figure 5-8**. The C△♯5 Lydian augmented chord is from the bridge of Duke Pearson's "You Know I Care."[4]

Figure 5-9



Herbie Hancock plays three slash chords in the second bar of Ron Carter's "Eighty-One"[5] (**figure 5-9**, shown in the original key). The first two, G♭/D and A♭/E, are alternate spellings of D△♯5 and E△♯5 (transposed to C, they are both E/C). The third slash chord, G♭/F, transposed to C, is D♭/C.

[4] Joe Henderson, *Inner Urge*, Blue Note, 1964.
[5] Miles Davis, *E.S.P.*, Columbia, 1965.

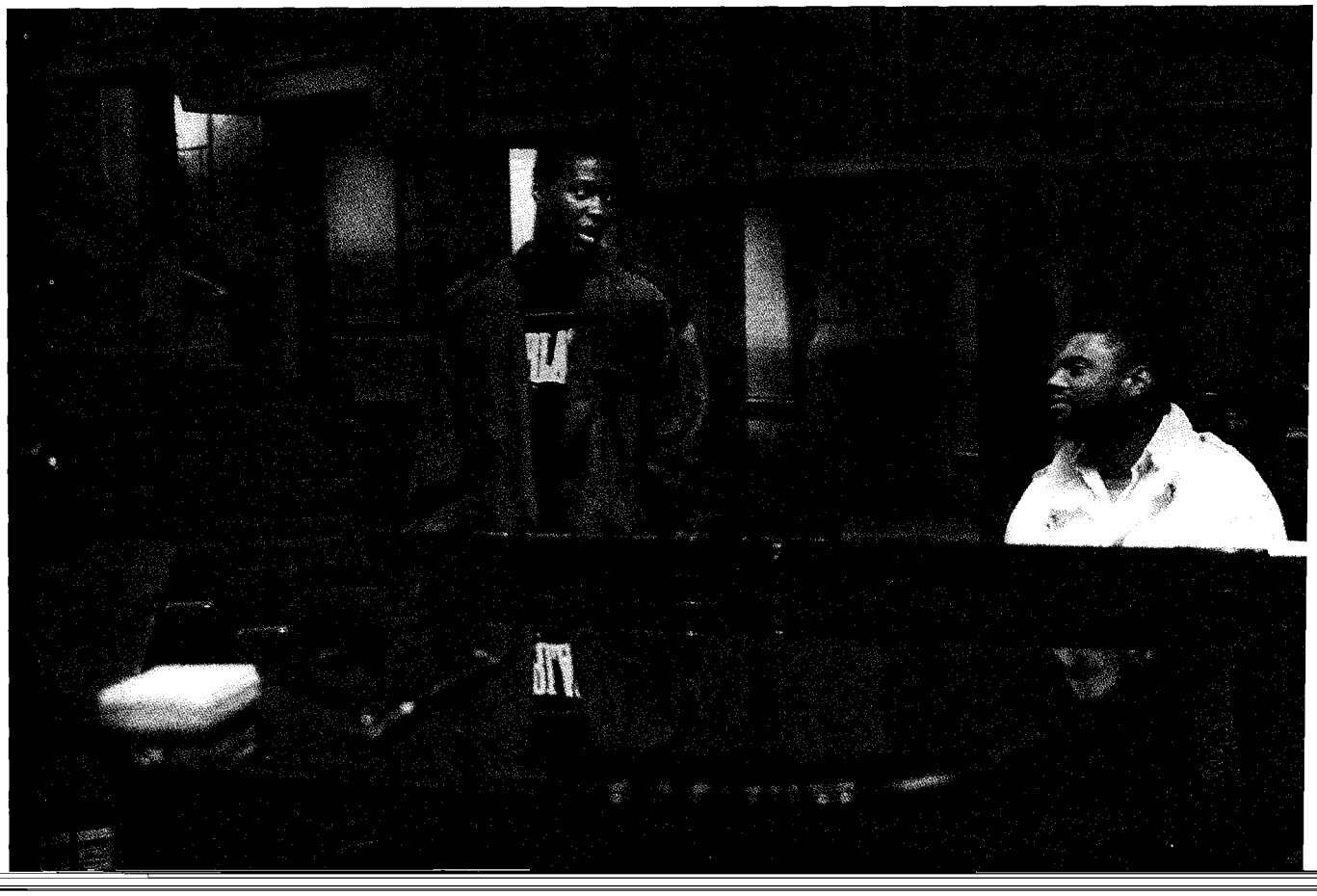
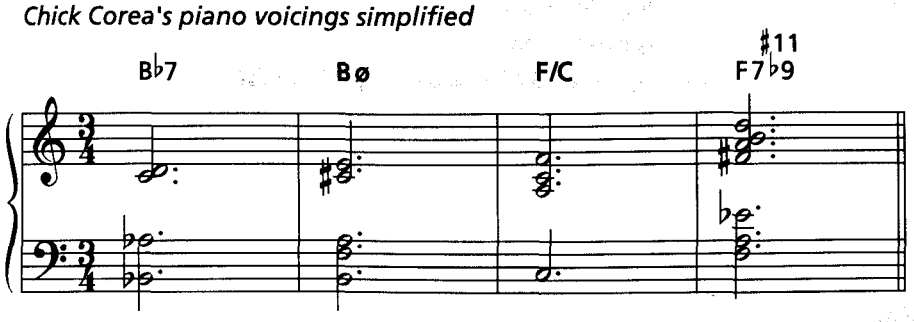
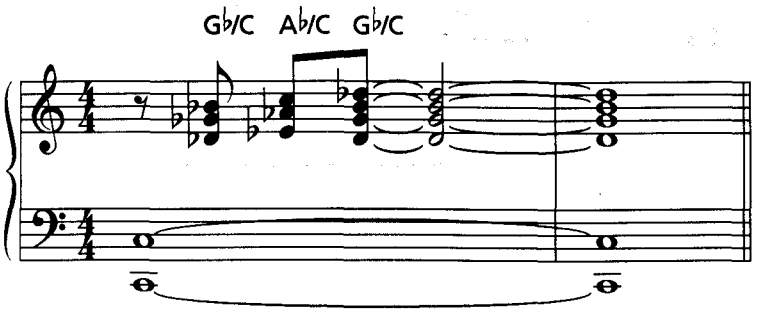


Figure 5-10
Chick Corea's piano voicings simplified



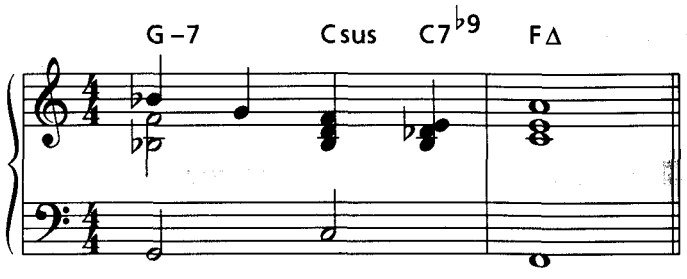
F/C is an F major triad in second inversion, with C, the 5th, as the bass note. Play **figure 5-10** and listen to Chick Corea play F/C on his tune "Mirror, Mirror."[6] Look at the previous two bars and you'll see why he opted for a slash chord here. F/C continues the chromatic bass line that started with the B♭7 chord, through B° to F/C.

Figure 5-11



Both G♭/C and A♭/C are shown in **figure 5-11**, played by Wynton Kelly on Miles Davis' "Put Your Little Foot Right Out."[7] G♭/C, the triad a tritone above the bass note, is often played in place of C7, and sounds like C7♭9, although it has no 3rd. A♭/C is the triad a minor 6th above the bass note. Playing G♭/C and A♭/C together implies C7alt. The D♭ and G♭ of the G♭ triad, and the E♭ and A♭ of the A♭ triad are the four alterations—♭9 (D♭), ♯11 (G♭), ♯9 (E♭), ♭13 (A♭)—found in a C7alt chord. There is another example of A♭/C from Bud Powell's "Glass Enclosure" shown later in this chapter.

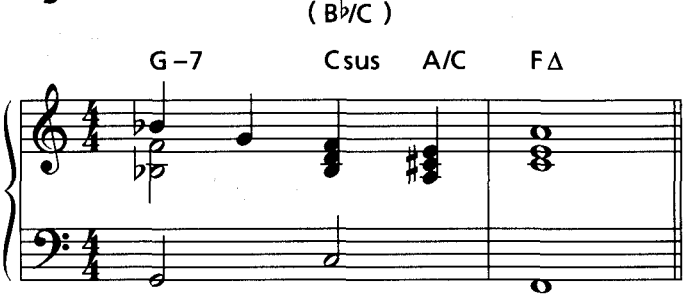
Figure 5-12



G/C, a triad a perfect 5th above the bass note, is seldom written, because it's the root, 5th, 7th, and 9th of a CΔ chord, and almost everybody writes it as CΔ.

A/C, a triad a major 6th above the bass note, is often used as a substitute for a C7♭9 chord. **Figure 5-12** shows two bars from Jimmy Van Heusen's "But Beautiful." Play **figure 5-13** and hear A/C take the place of C7♭9. There is another example of A/C from Bud Powell's "Glass Enclosure" shown later in this chapter.

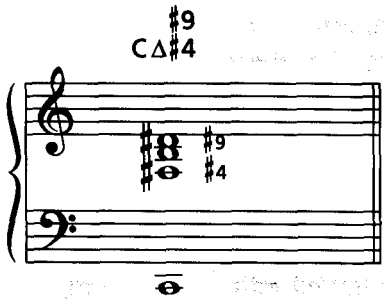
Figure 5-13



B♭/C, a triad a whole step below the bass note, is an alternate way to notate a Csus chord. B♭/C, notated as Csus, occurs in the previous example, **figure 5-13**, on the third beat of the first bar. There are lots more examples of sus chords in the section of Chapter 3, "Major Scale Harmony."

[6] Joe Henderson, *Mirror, Mirror,* Verve, 1980.
[7] Miles Davis, *In Person Saturday Night at The Blackhawk,* Columbia, 1961.

Figure 5-14



B/C, a triad a half step below the bass note, is a good example of why slash chord notation often is clearer than conventional notation. In conventional notation, B/C would be written C$\Delta^{\sharp 4,\sharp 9}$, which nobod wants to decipher (**figure 5-14**). Most musicians prefer B/C. This chord usually functions as a substitute for a I chord

Mulgrew Miller plays B/C on the verse to Vincent Youmans' "More Than You Know,"[8] as you can hear on **figure 5-15**. Kenny Barron plays B/C on the last A section of George Bassman's "I'm Gettin' Sentimental Over You,"[9] as you'll hea when you play **figure 5-16**. John Coltrane and McCoy Tyner play B/C on Harry Warren' "I Wish I Knew,"[10] as shown in **figure 5-17**. Note that in the preceding three examples, B/C was played right before a C major chor

Figure 5-15
Mulgrew Miller's piano voicings simplified

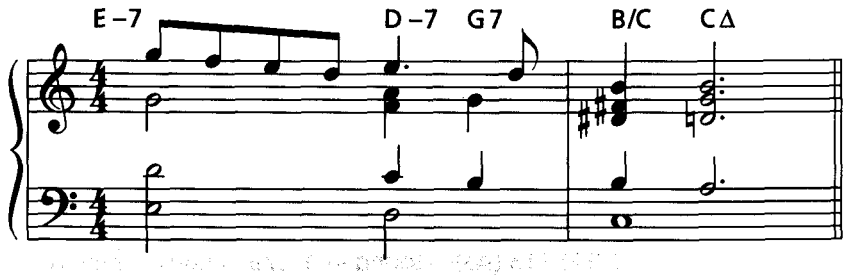


Figure 5-16
Kenny Barron's piano voicings simplified

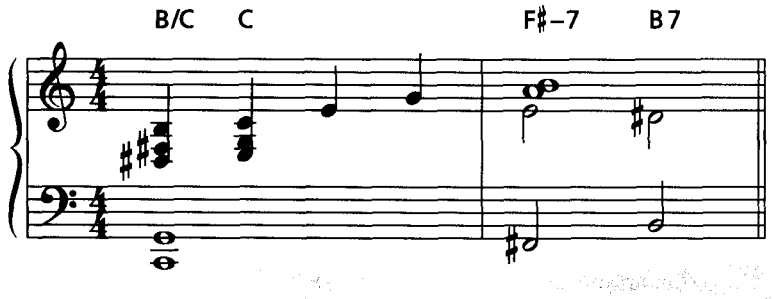
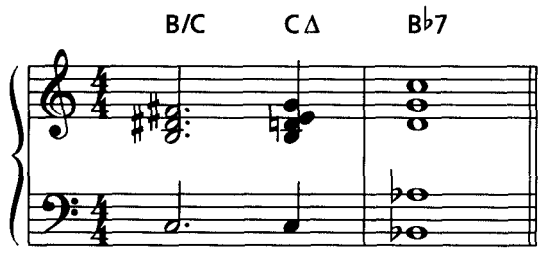
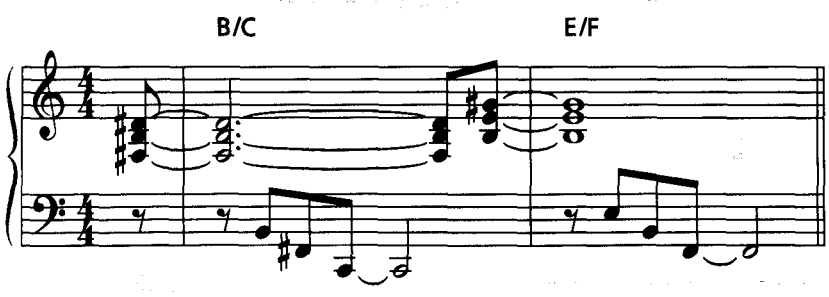


Figure 5-17
McCoy Tyner's piano voicings simplified



[8] Mulgrew Miller, *From Day To Day,* Landmark, 1990.
[9] Kenny Barron, *Live At Maybeck Recital Hall,* Concord Jazz, 1990.
[10] John Coltrane, *Ballads,* MCA/Impulse, 1961.

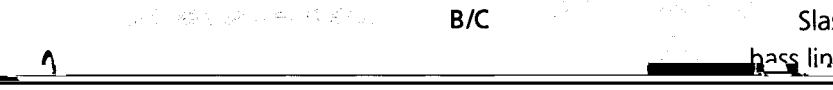
Figure 5-18



Donald Brown plays B/C, and then echoes it up a 4th with E/F on his composition "New York"[11] (**figure 5-18**).

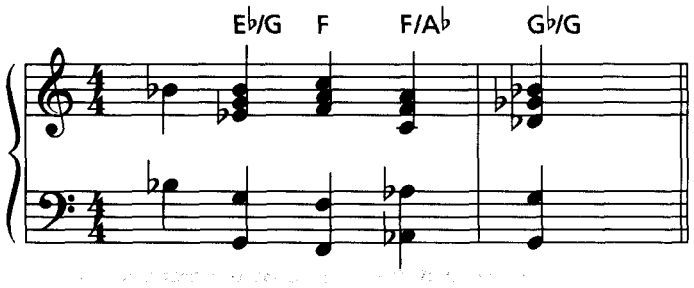
Finally, Miles Davis and Red Garland often played B/C as a reharmonization of the final chord in a tune, as you can hear when you play **figure 5-19**, the last chord of Miles' "Four."[12] Play **figure 5-20**, and you'll hear Red play B/C as the last chord on both his trio version of Frank Loesser's "If I Were A Bell"[13] and on Miles' version of the same tune.[14]

Figure 5-19



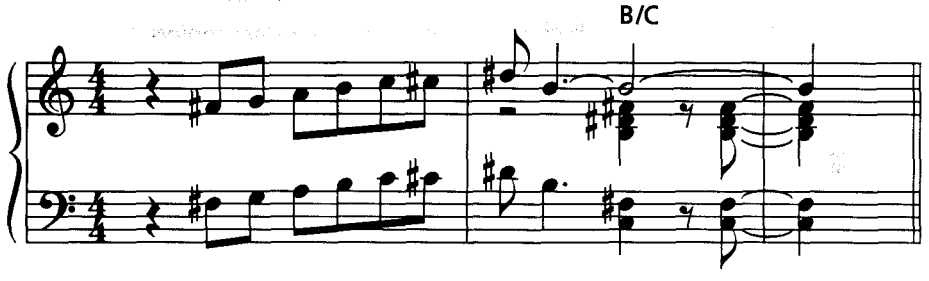
Slash chords often occur over descending bass lines. McCoy Tyner played three of them in

Figure 5-22



Bud Powell was the first jazz musician to play slash chords. Play **figure 5-22** and hear three examples from Bud's "Glass Enclosure."[16] Because this example has slash chords over two different roots, it has not been transposed back to C. E♭/G transposed back to C is A♭/C. F/A♭ transposed back to C is A/C. G♭/G transposed back to C is B/C. Later in "Glass Enclosure," Bud plays B/C again as you can hear in **figure 5-23**.[17]

Figure 5-23



Slash Chords and Scales

What scales go with each slash chord? Let's take a second look at all 12 slash chords and see what mode or scale—from major, melodic minor, or diminished scale harmony—sounds best with each slash chord. None of the slash chords go with whole-tone scale harmony, because the triads in all these slash chords are major triads, which don't exist in whole-tone scale harmony.

Most of the scales shown here are "C" scales. But since F/C is just an F major triad in second inversion, you should play an F major scale. And since A♭/C is an A♭ major triad in first inversion, you should play an A♭ major scale.

Slash chord	*Scale*
C/C[18]	C major and C Lydian
D♭/C	C Phrygian and C Locrian
D/C	C Lydian
E♭/C	C Dorian
E/C	C Lydian augmented
F/C	F major
G♭/C	C altered and C half-step/whole-step diminished
G/C	C major
A♭/C	A♭ major
A/C	C half-step/whole-step diminished
B♭/C	C Mixolydian
B/C	C whole-step/half-step diminished

[16] Bud Powell, *The Amazing Bud Powell, Vol. 2,* Blue Note, 1953.
[17] Bud also played E/C (D♭/F in the original key) on his haunting, dirge-like version of Richard Rodgers' "It Never Entered My Mind," *The Complete Bud Powell On Verve,* 1954.
[18] You can ignore C/C, because you'll never see it written as a chord symbol.