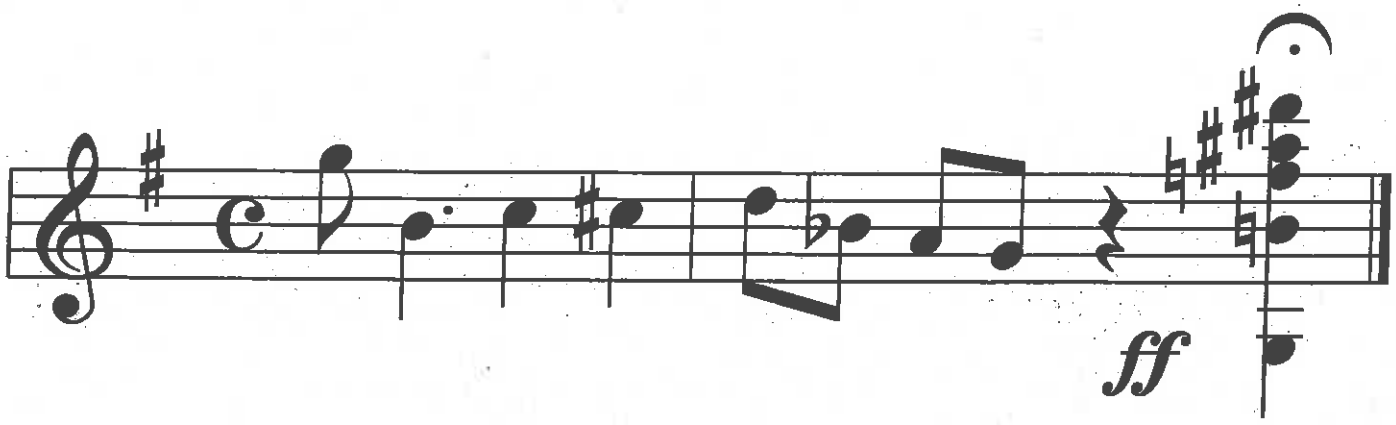
concert edition



TONAL RESOURCES
FOR THE
CREATIVE MUSICIAN

BY
JOE CRAIG

TONAL RESOURCES

FOR THE

CREATIVE MUSICIAN ©

BY

JOE CRAIG

JOE CRAIG
PO 202254
ANCHORAGE, ALASKA
99520

OTHER WORKS BY THIS AUTHOR:

TEACHING GUIDE for Tonal Resources for the Creative Musician. Guideline for use of this text for music educators. The Tonal Resources for the Creative Musician text is available as a coordinated series for concert, "Eb" and "Bb" instruments, bass clef and guitar.

ESSENTIALS OF MODERN GUITAR © Outlines the progressive "evolution" of fundamental musical sounds and colors into the modern improvisers language from the theoretical and physical planes for guitar, 175 pages.

CHORD MELODY GUIDE / JAZZ PERFORMANCE SERIES © Musical arrangements of Jazz "standards". Measure by measure melodic and harmonic analysis. Supplemental text for both the Tonal Resources for the Creative Musician and Essentials of Modern Guitar texts, 100 pages.

TONAL RESOURCES
FOR THE
CREATIVE MUSICIAN ©
BY
JOE CRAIG

FOR "CONCERT" INSTRUMENTS. THE MUSICAL EXAMPLES IN THIS TEXT ARE CONCERT PITCH. THIS PRESENTATION ALLOWS FOR THIS CONCERT EDITION TO BE USED IN CONJUNCTION WITH THE "TONAL RESOURCES" "Bb", "Eb", BASS CLEF EDITIONS AND ESSENTIALS OF MODERN GUITAR.

TABLE OF CONTENTS **TONAL RESOURCES FOR THE CREATIVE MUSICIAN**
"C" / TREBLE CLEFF EDITION

INTRODUCTION: The intent of the following material is to provide the fundamental musical information to better equip musicians wanting to expand their musical knowledge and horizons and begin their study in the "art" of musical improvisation. Used in the modern sense, the term "improvisation" generally applies to jazz and other forms of contemporary music i.e., rock, blues, new-age etc. I must insert a brief historical note concerning European "classical" music. Before the age of jazz and its later evolution's, almost all performing musicians were improvisers. Cadenza's and such were incorporated by composers but not written out, the realization of which being left up to the artist to "improvise" within the emotional context created by the composer. Historical documentation reveals that many of our current day classical heroes were also the best improvisers of their day; Beethoven, Liszt, and Paganini are just a few. The point is that in all forms of musical expressions, both past and present, improvisation has played a vital role in musical development over the centuries, both in performance as well as a source for new musical ideas. The following material is presented to help the beginning improviser develop and internalize the necessary tools and resources essential to the "art" musical of improvisation.

At the beginning of any such endeavor such as this, the student may feel overwhelmed by the volume of information to be absorbed. Suffice to say that as the material is digested a broader view of the whole becomes apparent and the "distant shore" is a lot closer than when first viewed. Our western system of tonality contains only twelve major scales, which form the basis of this book. As one gradually assimilates the information within, it becomes readily apparent that the limitations if any, lie within the artist. It's the *artist* that takes the same resources available to everyone and organizes these elements to personify and enshrine their concept of the human spirit, in all its forms and environments. The resources are finite, how the individual artist utilizes these resources is potentially infinite, as varied as the personalities and faces we meet on any given day. It's up to the individual. This book could be used in conjunction with a "knowledgeable musical resource", i.e. your public school or private music instructor A "knowledgeable musical resource" could also take the form of other music books i.e., dictionaries, music history books and music theory books. With very few exceptions, clarifying information could be obtained from your local library, musical friends, etc. By actively researching those "few exceptions", *new resources for musical information* will be discovered. The symbol (gl) refers the reader to the glossary section to help with potentially unfamiliar terms.

All aspects of "life" are to a greater or lessor degree governed by the concept of tension and release. As we mature in our spirituality, we hopefully develop greater abilities to control the "how and when" of this tension and release. The development of this ability can become a great source of joy in our lives. Our music is the aural art that personifies this ability. All art strives to achieve this balance of tension and release. The work of successful practitioners of this ability have filled the world with their work, creating physical manifestations of the spiritual, emotional and physical challenges of the human sphere of consciousness. The dual nature of interpretation, i.e. "at least two sides to every coin", shows that although the fundamental physical similarities shared by each of us contain common elements, our interpretative responses can be as varied as the people and personalities we meet on any given day. This dual nature can be applied to our musical system of organization in that although the same musical components are available to everyone, each of us can potentially create our own unique combinations that personalize our emotional and artistic statements, each being unique unto themselves. This is the goal. This goal is achieved by the thorough internalization of the musical language available to us and creating our "art" from this internalized vocabulary. This text breaks down this vocabulary into the musical component parts of tension and release, this being contained within Two / Five / One harmonic cell. The three parts to this group each contain different degrees or abilities in creating a sense of tension or resolution, learning to control these degrees and abilities is the task at hand. Theoretical discussion of a given topic tends to fragment the "whole", causing the topic under scrutiny to lose its "essence".

Tonal Resources for the Creative Musician presents these fragments in an interactive workbook format, provides the theoretical derivation of these components and suggests possible artistic usage of these elements. The recombining of these fragmented elements into an artistic whole becomes the responsibility of the reader of this text. Talk with any person whose abilities and achievements in any discipline you admire and sincerely ask them how the got to that level of understanding and execution. Answer, by doing it. One must take on the responsibilities for their development themselves, however they see fit, utilizing such resources as this text for new information, expanding existing ideas and creating new potential avenues for thought. The way to learn is to do. For musicians this becomes a beautiful "row to hoe", with the rewards to you the player and your listeners being well worth the effort. There's no right or wrong way to use this book. It's usage depends on the artist's needs. Originally written as a "high school beginning improvisers workbook", the scope was enlarged so that all players at whatever level may benefit from the ideas contained within. All musical symbols and notation follow general usage. Due to space limitations in publishing this work, just the treble clef is used for the musical examples. Executing these examples down one octave in many instances will provide a richer sonority.

ACKNOWLEDGMENTS:
This work evolves from the musical and artistic principals passed along to me by Dr. James B. Miller, formerly of Plattsburgh, New York. With these principals, a love of music and its structures developed into what has become a true love of the "art of improvised music." This art form has provided the challenge that demands the thorough *internalization* of the musical language by the artist. This text attempts to illuminate the necessary resources towards achieving that goal. Special thanks to Paul Asbell, composer and guitarist of Burlington, Vermont whose intuitive ability to explain complex musical ideas in coherent terms in an amazingly short period of time, is truly a sign of genius. Special thanks to Portland, Oregon guitarist John Stowell, who passed along his knowledge so freely and provided a thoroughly "modern" perspective. Thanks to guitarist Ted Greene of Los Angeles, California, whose books have provided a tremendous resource for me and whose recorded music personifies the energy, passion and intellect I hoped to contain in this writing. A "global" thank you to all of the players whose recorded music has been the source of great joy and inspiration. Thanks to Dr. George Belden of Anchorage, Alaska whose patience was never exhausted when addressing and lucidly answering my "wandering" questions and whose overall knowledge of the "art" of music instruction has been invaluable. Thanks to Dr. Robert Hanek of Anchorage, Alaska for his contributions and excellent suggestions. Thanks to Bob Sunda and Greg Holloway whose musical abilities, intellect and integrity are the source of great inspiration. Thanks to Chris Collins, for providing a working "laboratory" to experiment and search the tonal universe. Thanks to Bob Parsons, for his artistic contributions and ability to listen, reshape, and suggest. Special thanks to John Damberg, performing artist, composer and educator, who read my manuscript for this work, made many helpful suggestions and helped shape its final format. Thanks to Tom Bargelski, Bryon Dickerson, Randy Scherer and Dirk Westfall for their contributions. Posthumous thanks to Wendy Williamson, of Anchorage, Alaska whose performances brought tears to my eyes and reconfirmed the passion to be sought within "improvised" music. Thanks to all the people at "TimeFrame" of Anchorage Alaska, for all their expert assistance. Special thanks to my family for their continuous love and support. This entire effort by me I dedicate to the loving memory of my parents, Peter and Mary Craig, whose love, patience and principles will always guide my life. Any and all comments / suggestions by readers are welcomed by the author. To contact the author please write:

JOE CRAIG PRODUCTIONS, INC. ©
P O 202254
ANCHORAGE, ALASKA 99520

Within the context of logical thought and application, a common denominator may exist that provides a starting point to build from as well as a reference point to refer back upon that simplifies and organizes complex structures into a readily digestible and usable form. The common denominator for improvisation in this text is the major scale. This familiar scale with its inherent sounds, prolations and variations, forms the basis of Western harmony, (gl.) and is the source from which most improvised music is created. For those familiar with the structure of the major scale, you may want to move directly to the work pages provided. Those unfamiliar with this scale and its construction should thoroughly digest the brief concepts and explanations that follow.

The "Equal Tempered System of Western Music" provides twelve (12) starting points for the major scale. Each of these twelve (12) reference points denote tonal centers or keys from which Western music is created and derived. A consistent formula for construction is used to create the major scale on all twelve reference points. Our formula consists of musical half steps, as denoted in this text by the fraction (1/2), and whole steps, denoted by the number (1). In linear form, our consistent formula for the twelve major scales is:

Whole Step	W. S.	Half Step	W. S.	W. S.	W. S.	H. S.
1	1	1/2	1	1	1	1/2

Let's create the major scale starting on the pitch and letter name "C". Thus:

1	1	1/2	1	1	1	1/2
C	D	E	F	G	A	B	C

Notice the half steps between the pitches "E" and "F" and "B" and "C"? This situation physically corresponds to the absence of a black key between these pitches on the piano. The natural half step between the pitches "E" and "F" and the natural half step between "B" and "C" are integral components of the structure of the twelve tone system of tonal organization.

Let's create a major scale one whole step up from "C" natural. Our starting pitch will be "D" natural. Applying our formula we create: "D" our root (gl), up a whole step to "E", up a whole step to "F#", half step to "G", whole step to "A", whole step to "B", whole step to "C#", half step to "D", our root which is one octave (gl) above our starting pitch. Written out in linear fashion, using our formula, we arrive at:

1	1	1/2	1	1	1	1/2
D	E	F#	G	A	B	C#	D

To facilitate the discussion of the major scale without letter names, "theorists" use numbers to denote scale degrees. This is simply done as follows. Using the above D major scale for example we create the following chart.

D	E	F#	G	A	B	C#	D
1	2	3	4	5	6	7	8

D	E	F#	G	A	B	C#	D
1	2	3	4	5	6	7	8

Thus, in the key of D major, "D" is the first scale degree, "E" is termed the second, "F#" is termed the third scale degree of the D major scale and so forth, (ha, ha) sorry! Number eight, which is also the letter name "D", is one octave (gl) higher than our starting point. So, basically the same intervallic formula for all twelve major scales / keys, the accidentals (gl) i.e., sharps as in the case of "D" major and flats, soon to be encountered, are just used to facilitate the proper intervallic distance as demanded by the major scale "formula.". This numerical application to the major scales is very common and is the first step into the world of the "numerical perspective" of the Equal Tempered system. The ultimate goal of this numerical perspective is to view "musical gravity" and it's components in terms of their numerical equivalent. Thus, once this ability to convert from letter name to appropriate number is locked in, the numeric theoretical principles applied to one key apply to all twelve (12) keys, it is just the letter names and actual pitches that change. Each of the twelve (12) keys provide a different "hue" and "intensity" of the major scale "color." "Sharp" keys, i.e. keys containing sharps are said to be "brighter" than "flat" keys, i.e. keys containing flats in their key signatures (gl). See cycle of fifths. Perhaps this explains why certain melodies sound best in a particular key, or why certain key centers are paired together for their contrasting colors. W. Strayhorn's "Lush Life" comes to mind. See supplementary text. As the need arises, we will discuss and utilize this concept.

Using this information, go on to the worksheets provided that will help you spell out and construct all twelve major scales. Remember that when spelling out scales, use each letter name only once, excepting the octave (gl) of course, use only sharps (#) or flats (b) exclusively to obtain the correct intervallic distance. Check your entries with the answer key located in the back of this text. Review the practice guide located after the worksheets and begin implementing the ideas into your practice schedule.

MAJOR SCALE EXERCISES

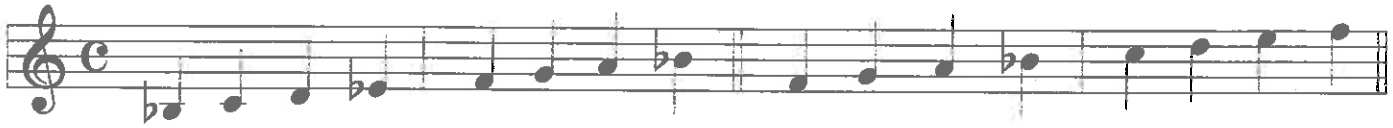
	1	1	1/2	1	1	1	1/2	
C Major	___	___	___	___	___	___	___	___
G	___	___	___	___	___	___	___	___
D	___	___	___	___	___	___	___	___
A	___	___	___	___	___	___	___	___
E	___	___	___	___	___	___	___	___
B	___	___	___	___	___	___	___	___
Gb	___	___	___	___	___	___	___	___
Db	___	___	___	___	___	___	___	___
Ab	___	___	___	___	___	___	___	___
Eb	___	___	___	___	___	___	___	___
Bb	___	___	___	___	___	___	___	___
F	___	___	___	___	___	___	___	___

Exercises: Write out the twelve major scales on the manuscript provided at the close of this text.

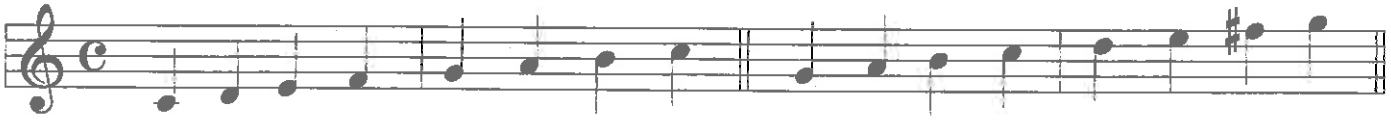
The following musical examples present the twelve major scales. Key signatures (gl) are not used in the following examples so that each of the pitch entries is readily identifiable. We'll format the twelve major key signatures in the Cycle of Fifths exercise which immediately follows. Examples below are formatted for class instruction with concert and transposing instruments combined. Begin learning these groupings both cognitively and on your instrument.

THE TWELVE MAJOR SCALES OF THE EQUAL TEMPERED SYSTEM

1) "Bb" major **2) "F" major**



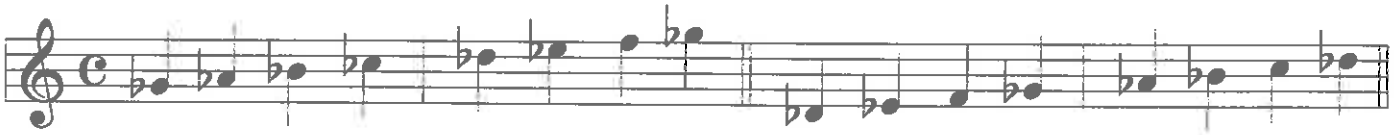
3) "C" major **4) "G" major**



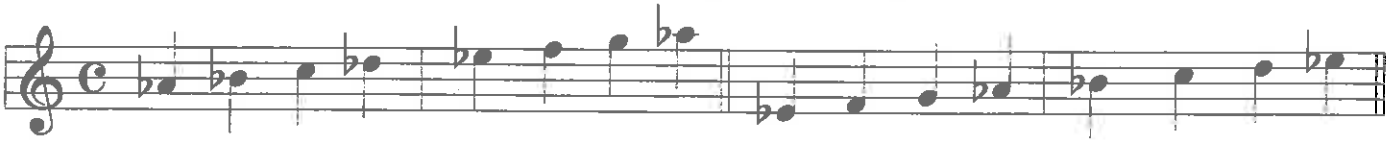
5) "D" major **6) "A" major**

7) "E" major **8) "B" major**

9) "Gb" major **10) "Db" major**

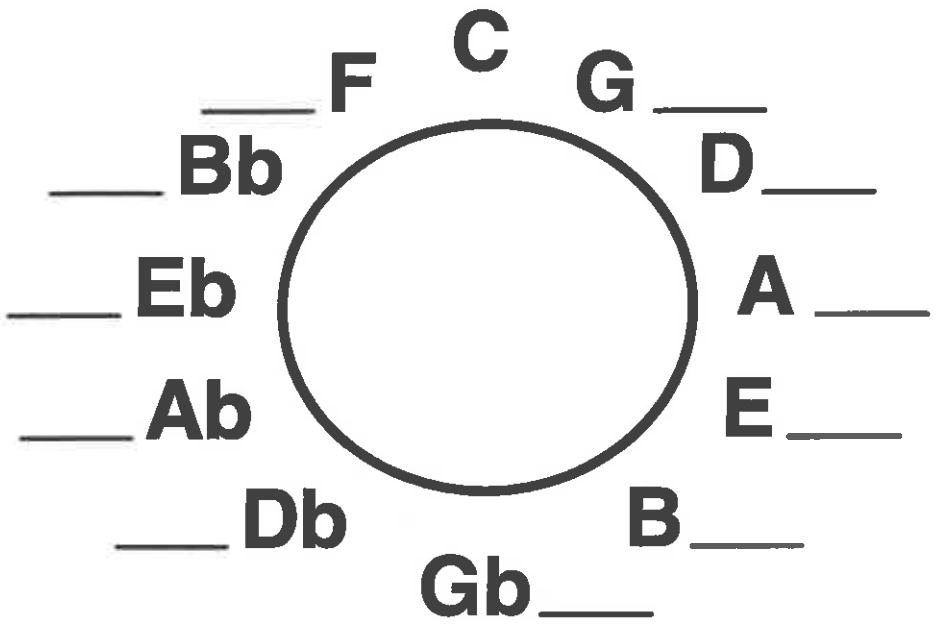


11) "Ab" major **12) "Eb" major**

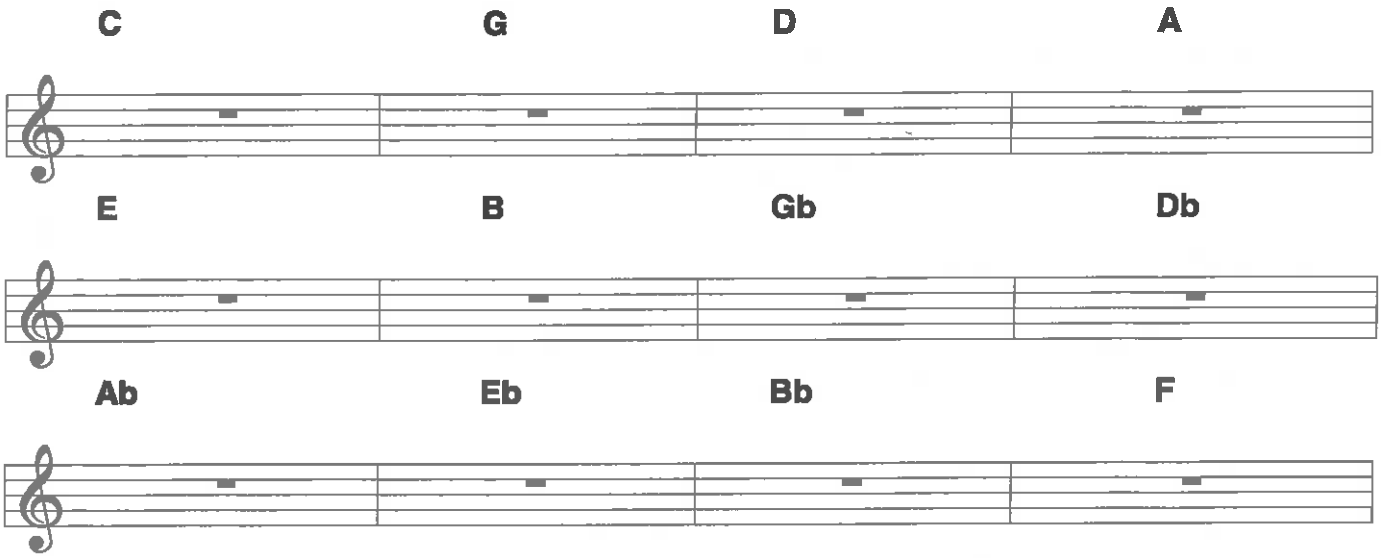


KEY SIGNATURES / DIAGRAM OF CYCLE OF FIFTHS Key signatures aid in determining the tonal center of a piece of music. The signature is usually found at the beginning of the written music and eliminates the need to continually notate that accidental (gl) found diatonically (gl) within the key of the musical piece. Example for "Eb" major.

The following cycle is arranged in perfect fifths moving clockwise, perfect fourths moving counterclockwise, both are very common root (gl) motions in the Equal Tempered System. Music and mathematics share common elements, look for the symmetry as you complete the following exercise. Distance between tonal centers is easily measured in this charting. For now, complete this chart by writing in the number of sharps or flats found within each of the twelve keys. Check your entries with the major scale spelling chart on page 3.



Complete the following exercise by simply applying the proper number of sharps or flats for each of the twelve major key centers on the treble staff provided below.

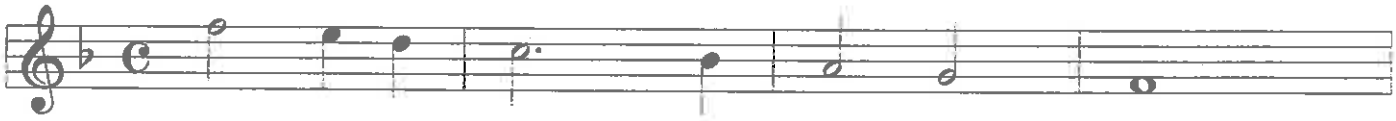


Authors note: the key such as "Ab" major has an "enharmonic" (gl) equivalent, it's name is "G#" major. For ease in writing music, the choice between using either the flat or sharp key is usually determined by which has the *least* number of accidentals (gl). Explore.

Questions: On which scale degree is the new accidental added when moving to the right? To the left? Always try to look for consistent patterns in your theory studies.

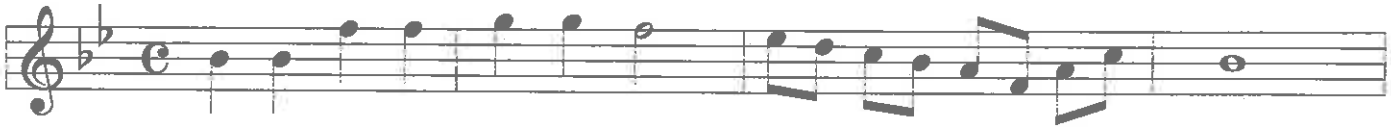
MUSICAL EXAMPLES: The vast majority of the melodies created over the past four centuries find their basis in this major scale grouping or its relative minor (discussion of which follows shortly). It is up to the artist to take these common elements and create new combinations of pitches, rhythm, dynamics etc., that personifies their artistic statement. Play through the following melodies which are based on the major scale, examples in various keys.

1) In "F" major, perhaps this is the start of it all, bring joy to you're world through music.

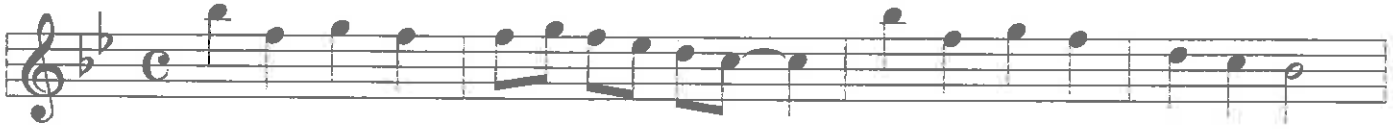


2) In "F", sort of cliché.

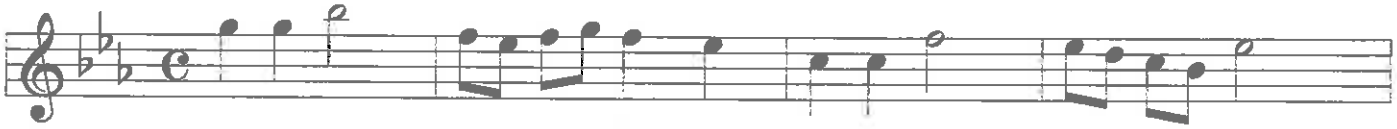
3) In "Bb", brighten up your universe.



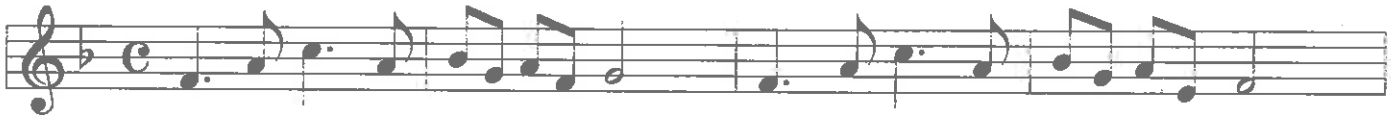
4) In "Bb", with a bit of the "sing song" possible cannon (gl) type groove.



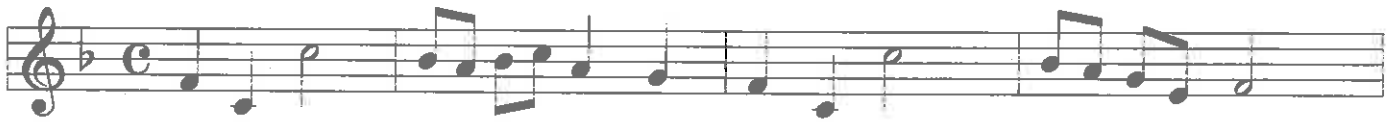
5) Simple diatonic (gl) idea in the key of "Eb" major.



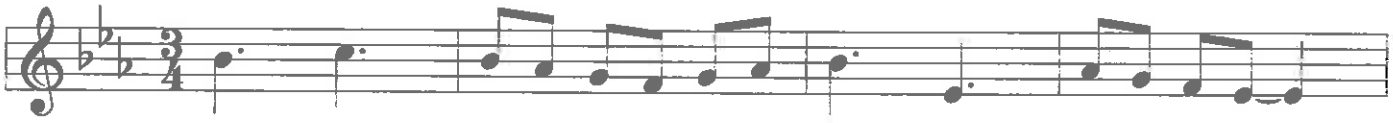
6) Simple diatonic idea in the key of "F" major.



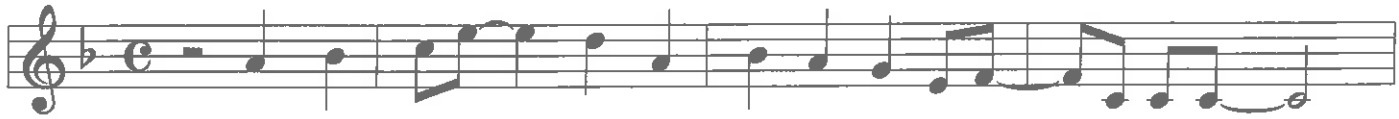
7) Simple diatonic idea in the key of "F" major.



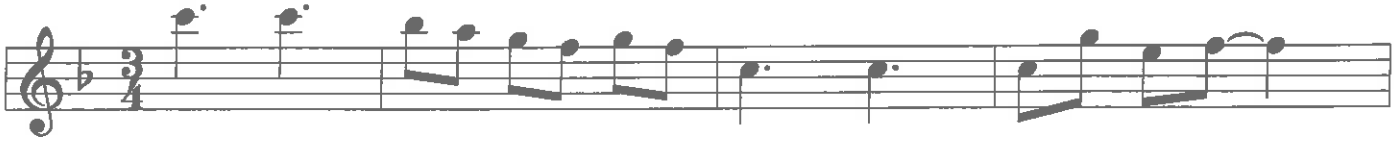
8) Sort of a kinder's theme in "Eb" major.



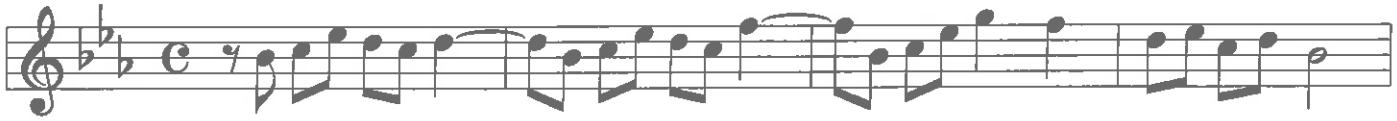
9) In "F" major, medium swing (gl).



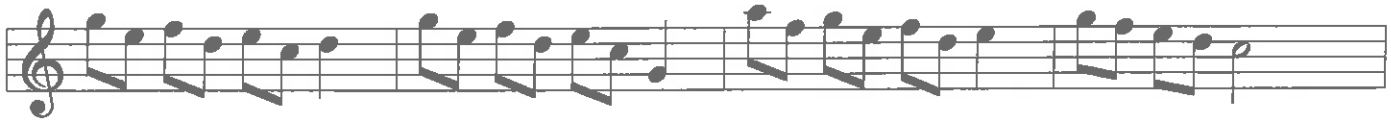
10) In "F" major, with a "lilt."



11) In "Eb", in a ballad feel.



12) In "C", simple idea in descending diatonic thirds.



Discussion

1) Discuss the ramifications of approximately three hundred years of musical evolution created within the Equal Tempered System whose basis is the major / relative minor scale.
2) Depending on the level of your students, discuss the "malleability" of this system of music in terms of various musical styles from a contemporary as well as a historical perspective.
3) If appropriate, have students research the "coming together" of this musical system from a historical and geographical perspective.
4) Encourage students to bring in examples of the music that they are listening to and analyze it for use of the major scale group.
5) If applicable, discuss the idea that so many of the simple and everyday melodies that we've heard since childhood are derived from the pitches and intervals of the major scale. Have students "reminisce" about the first melodies they learned as children and write them out in standard notation. The first five musical examples for ideas created with the major scale reflect this potential reality.

Exercises:

1) Thoroughly familiarize yourself with the twelve major scales, both cognitively and by actual performance.
2) Create and write out your own melodies using the major scale, then transpose (gl) these melodies to each of the other eleven keys without writing them out (if possible).
3) In the supplemental text, begin going over "Spring Can Really Hang You Up The Most", learning, memorizing and analyzing the melody for its motifs, intervals and structure.

Listening:

1) If working with young beginners, try simple children's songs.
2) If working with young adults, Judy Garlands version of Harold Arlen's "Somewhere over the Rainbow" from the "Wizard of OZ" might be a good place to start.
3) For the initiated, Pat Metheny's "Airstream" from the "American Garage" project.

MUSICAL INTERVALS Musical intervals are basically derived from the overtone series (gl.). Most theory texts concerning music contain full or partial sections dealing solely with intervals. For our purposes here, the following material will focus on the aspects of intervals that directly relate to the material presented in this text. *A more thorough study of musical intervals including their vocalization is recommended to the student.* What we are trying to develop here is a "musical phraseology" to ease communication of musical sounds and concepts. Using our "C" major scale and corresponding numbers by scale degree, the following chart illuminates and names the necessary intervals most commonly encountered.

C	D	E	F	G	A	B	C
1	2	3	4	5	6	7	8

Diatonic distances:

C up to D	=	Major second
C up to E	=	Major third
C up to F	=	Perfect fourth
C up to G	=	Perfect fifth
C up to A	=	Major sixth
C up to B	=	Major seventh
C up to C	=	Perfect eighth or octave

Some essential variations:

C up to Db	=	Minor second
C up to Eb	=	Minor third
C up to F#	=	Augmented fourth / Diminished fifth
C up to G#	=	Augmented fifth
C up to Bb	=	Minor seventh

The melodic interval ideas presented here all move ascendingly, i.e. "C" up to "D", "C" up to "E", etc. What about descending intervals, i.e. "C" down to "B", "C" down to "A", etc.? The musical term to apply in this situation is invert (gl). Let's "invert" some intervals and see what happens.

Inverting intervals:

C up to D	=	Major second	C up to F	=	Perfect fourth
C down to D	=	Minor seventh	C down to F	=	Perfect fifth
C up to E	=	Major third	C up to G	=	Perfect fifth
C down to E	=	Minor sixth	C down to G	=	Perfect fourth

Those with an eye for detail will notice that major intervals invert to minor and vice versa. "Perfect" intervals remain perfect. Numerically inverted intervals when combined add up to the number nine.

Discussion: Where do the intervallic breakdowns come from. Why are some intervals "perfect" while others are "major", "minor", "augmented" and "diminished"? Discuss and define these terms in relation to actual usage. Discuss the naturally occurring "overtone series" in relation to various intervals. Discuss the idea of identifying intervals from our everyday life. Touch-tone phones, doorbells etc. Try to initiate the curiosity to be able to identify the actual pitch of such sounds relative to the 440 "A." This becomes an invaluable ability for the advanced Jazz musician. Here's a worksheet to help become fluent with musical intervals. We'll modulate (gl) to "Eb" major:

Eb	F	G	Ab	Bb	C	D	Eb
1	2	3	4	5	6	7	8

1a)	Eb up to Bb	=	Perfect fifth	4b)	Eb down to Ab = _____
1b)	Eb down to Bb	=	Perfect fourth	5a)	Eb up to F = _____
2a)	Eb up to G	=	_____	5b)	Eb down to F = _____
2b)	Eb down to G	=	_____	6a)	Eb up to C = _____
3a)	Eb up to D	=	_____	6b)	Eb down to C = _____
3b)	Eb down to D	=	_____	7a)	Eb up to A = _____
4a)	Eb up to Ab	=	_____	7b)	Eb down to A = _____

Common phraseology among musicians regarding intervals includes the naming of an interval by it's function within a key or tonal center. This was referred to back in the discussion about major scales. The following exercise will help to build this ability. Check your entries in the answer key.

1)	G to B	major third	10)	Ab to G	_____
2)	A to Eb	_____	11)	Db to E	_____
3)	Bb to F	_____	12)	B to A	_____
4)	Db to C	_____	13)	A to D#	_____
5)	B to E	_____	14)	E to C	_____
6)	Ab to F	_____	15)	A to F#	_____
7)	Eb to C	_____	16)	C to G#	_____
8)	F to Db	_____	17)	D to Eb	_____
9)	C# to B	_____	18)	Bb to Db	_____

Exercises:

1) Once the above charts are completed, write out each interval, play each interval on your instrument, then vocalize the pitches keeping in mind its numerical label.
2) Using the format of the charts above, proceed as in exercise #1 but reverse the intervals.
3) Create a chart or make notes on the existing charts that will define the above intervals in terms of whole steps and half steps.
4) Begin to associate the various intervals with familiar melodies that you already know, such as the perfect fourth interval starting "Here Comes the Bride."
5) Create and write out two or four bar musical phrases utilizing the various intervals. Manuscript is provided in the back of this text.
6) Obtain a more thorough discussion of intervals from a supplemental text. See bibliography for possible selections

Transposition:

Not all musical instruments are created the same in regards to pitch. Some are said to be "concert" or "C", some in "Bb", others in "Eb." Numerous variations exist. "Transposition" involves rewriting a piece of music so that it sounds at the proper pitch level in relation to concert pitch. Concert pitch is based upon the tone "A", measured at 440 cycles per second, which is located below middle "C" on a well tuned piano. Many of the stringed instruments in common use today are said to be "concert pitch", these would include piano, the violin family, guitar etc. "Concert" instruments are said to be "non-transposing." Wind instruments are so named by their fundamental pitch, which is achieved by depressing all of their keys. The brass and woodwinds families are for the most part "transposing" instruments, (the flute is concert pitch), thus their written parts are "transposed" to compensate for their different fundamental note in relation to concert pitch. "Bb" instruments such as "Bb" trumpet, tenor and soprano saxophones, "Bb" clarinet need to be written up the interval of a whole step, ("Bb" up to "C"), so that their executed pitch levels jive with concert instruments. "Eb" instruments such as alto and bari saxophones are written up or transposed up the interval of a major sixth, ("Eb" up to "C"), to sound at the correct pitch level as concert pitch instruments. The inverse of these transposing intervals also achieves the same desired results, i.e., "Bb" down to "C", a minor seventh and "Eb" down to "C", the interval of a minor third. The ability to of a player to transpose while reading standard musical notation into different keys becomes a long term goal that truly manifests the ability to think and hear the music being performed in terms of the actual intervallic distances of the "art" being created. This transposing ability is a very advanced musical skill, accurate transposing of musical lines in real time situations is a skill worth attaining, potentially affording a certain "relativity" and "global" view in regards to creating your "art" in the Equal Tempered System of Tonal Organization (gl). Explore.

PRACTICE FORMAT FOR SCALES / INTERVAL STUDIES WITH THE MAJOR SCALES

1) Learn and memorize to spell out all twelve major keys rapidly.

2) Learn, memorize and develop the ability to perform all twelve major scales, in as many octaves as possible, on your chosen instrument. Write out the twelve major scales in standard musical notation to facilitate your learning process and to familiarize yourself with standard notation, if necessary. Manuscript is provided in the back of this text.

3) Begin the interval studies and apply these "treatments" to the twelve major scales.

4) Apply the "intervallic treatments" to the major pentatonic scales as well.

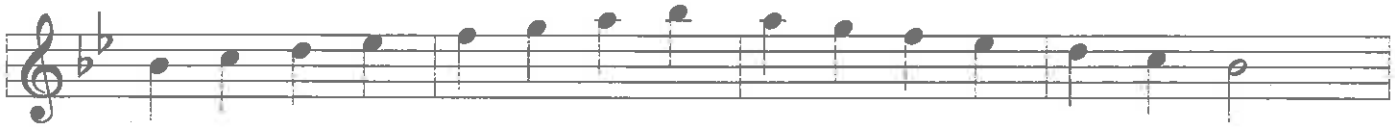
5) Use the above exercises to learn the letter names of all the pitches on your instrument.

6) The "gist" of the presentation of the major scales in these pages is to provide a learning format that will attempt to thoroughly exhaust all diatonic possibilities, in each of the twelve (12) keys, throughout the entire range of your instrument. These scales form the basis to "execute any and all melodic possibilities" from any pitch on the instrument. That is our goal. Later in this program we'll add the arpeggiated approach to harmony, in a similar format to the interval studies to complete this approach to the musical resources.

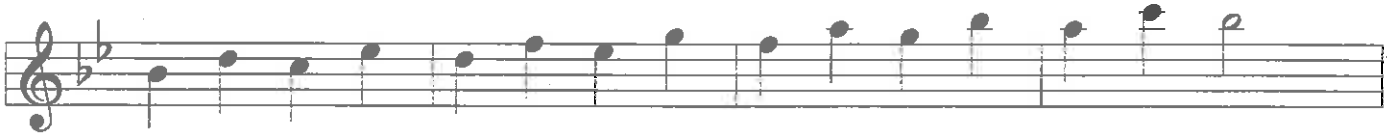
The following exercises are written out in standard musical notation to facilitate learning but once learned, should be committed to memory. As the term implies, improvisation is to improvise, actual performance done in this idiom is not written out. The examples here are in "F" major. Eventually all twelve major keys should be mastered following these guidelines. Overall, there's a tremendous amount of "shedding" (gl) to be done with the interval studies. The following musical ideas are just a sketch of the possibilities By following the above guidelines, this material is broken down into digestible units. The following examples / exercises will greatly facilitate learning your instrument as well as providing lots of *musical* ideas. All of the following exercises are purely diatonic. Try to expand these exercises over the full range of your chosen instrument. Write out the extended exercise if necessary. Manuscript is provided in the back of this text. Authors Note: I've been playing these exercises on and off for fifteen years. They're a good way to "warm up", learn your chosen instrument and potentially become invaluable to the improvising musician. Patience and discipline are the key words when approaching these studies. Entire texts are devoted to this area of music, explore.

INTERVAL STUDIES EXAMPLES:

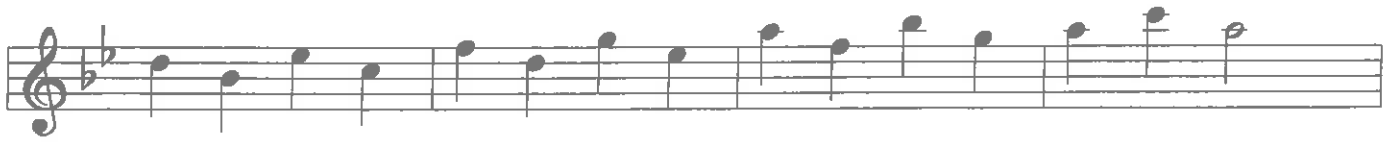
1) Diatonic major scale in major and minor seconds.



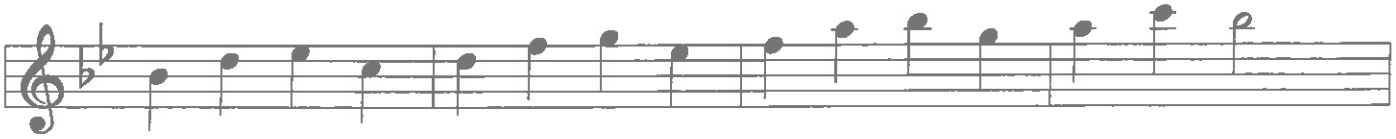
2) Ascending in thirds



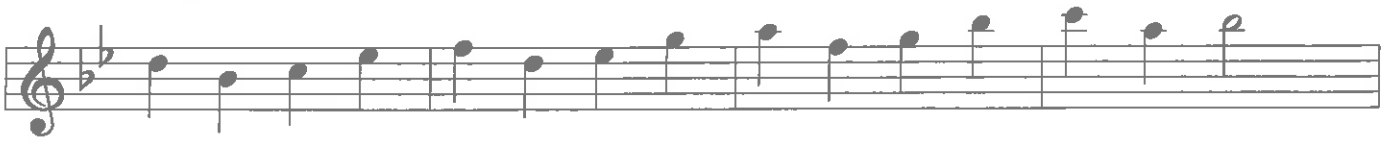
3) Descending thirds moving up stepwise.



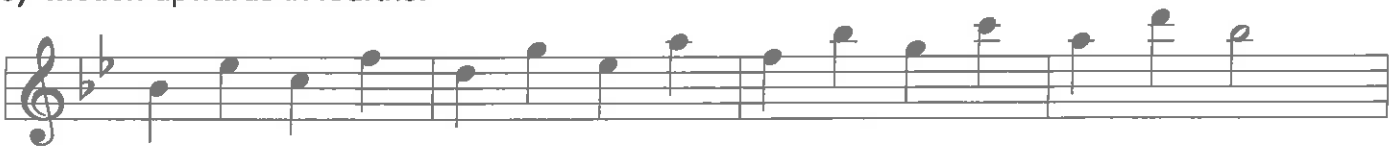
4) Alternating upward and downward thirds



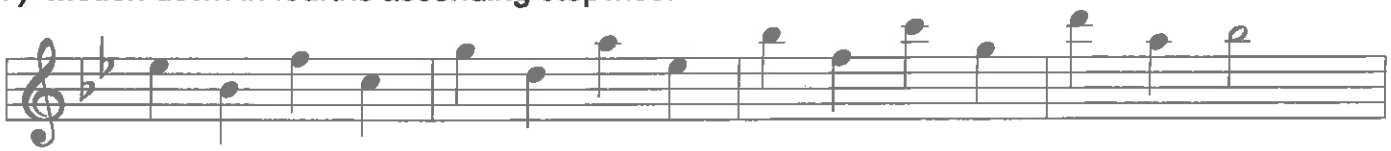
5) Alternating downward and upward thirds and stepwise motion.



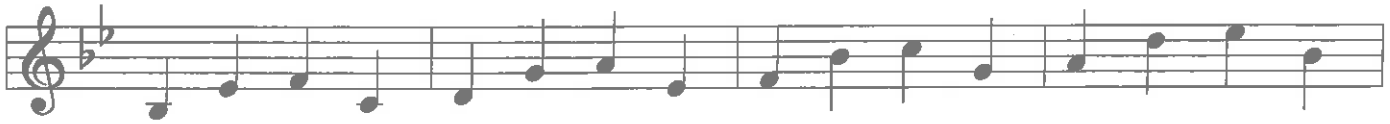
6) Motion upwards in fourths.



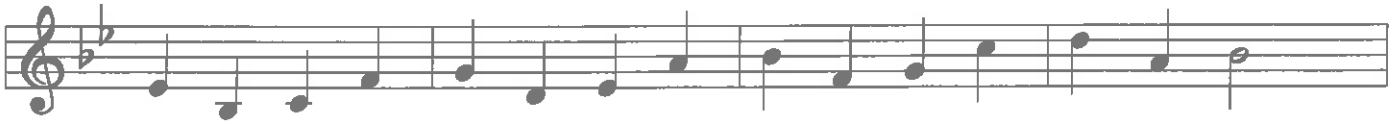
7) Motion down in fourths ascending stepwise.



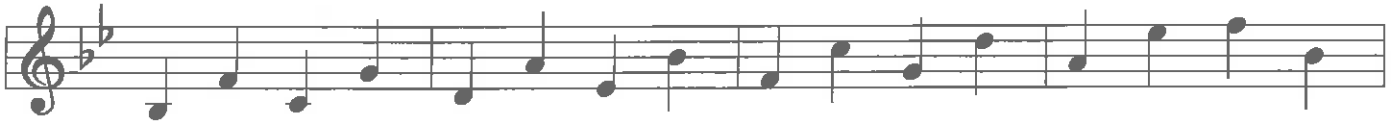
8) Up a fourth then up stepwise followed by motion down a fourth.



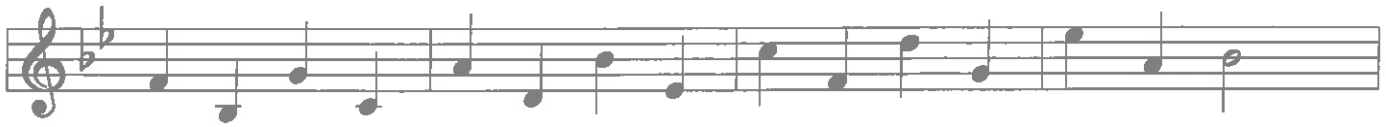
9) Basically the reverse of the preceding example.



10) Diatonic motion upwards in fifths.

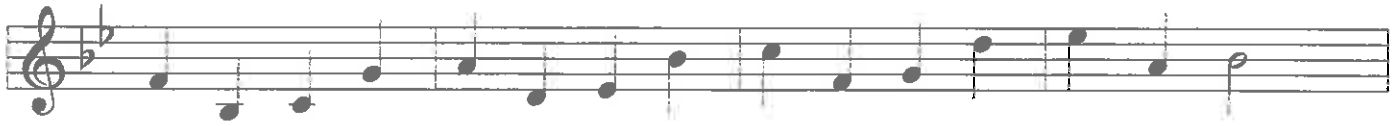


11) Diatonic motion downward in fifths.

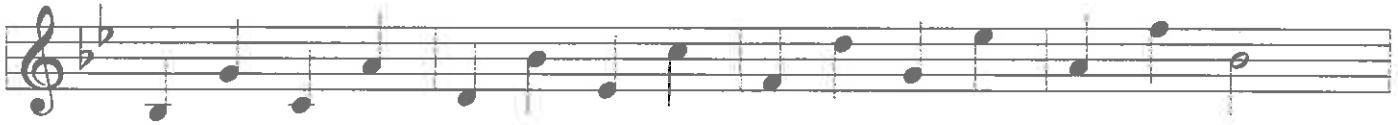


12) By fifth then stepwise.

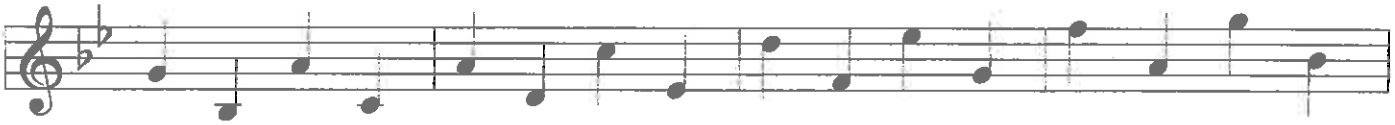
13) Reverse of above lick (gl).



14) Motion upward in diatonic sixths.

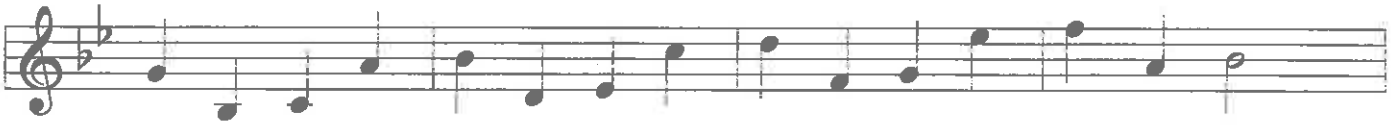


15) Downward motion in sixths.

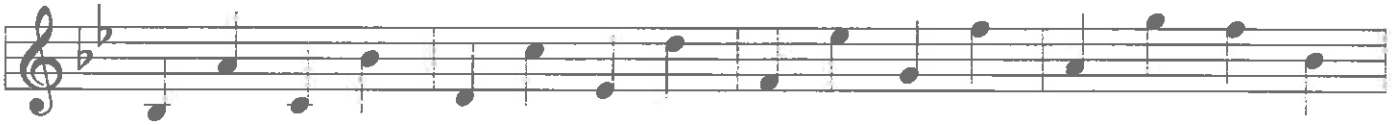


16) Upward by sixth then by step.

17) Reprolation (gl) of above idea.

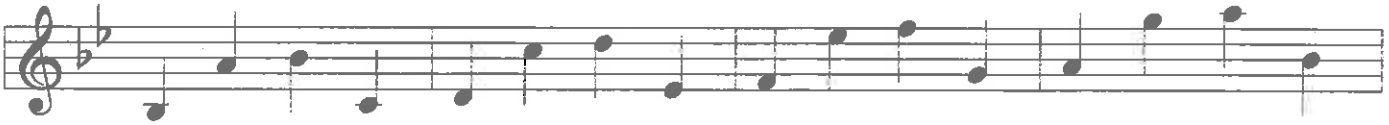


18) Moving in sevenths.

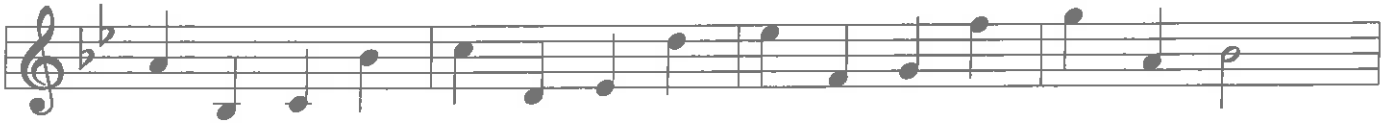


19) Motion downward in sevenths.

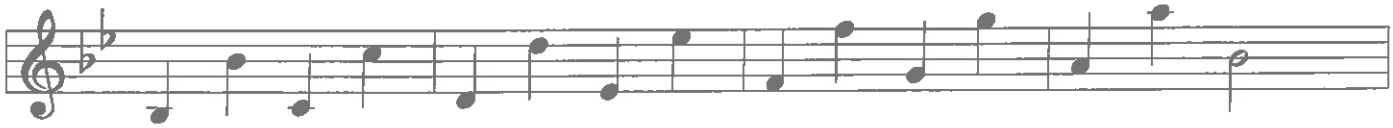
20) Motion by seventh then by step.



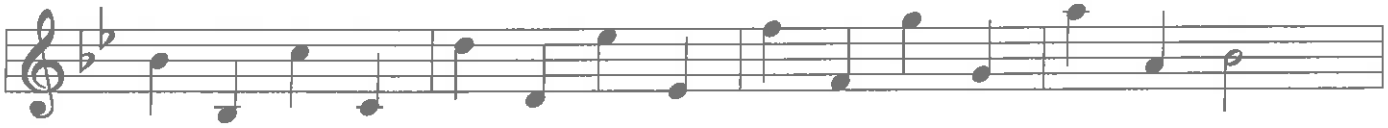
21) Retrograde inversion (gl) of the above lick.



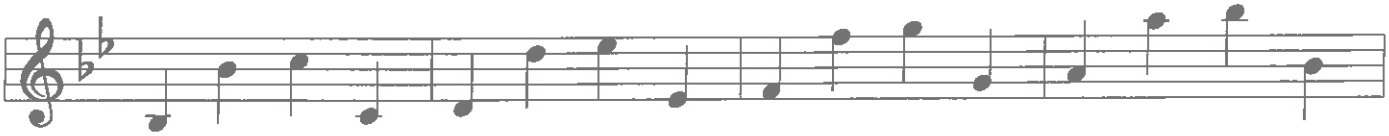
22) Octave (gl) motion.



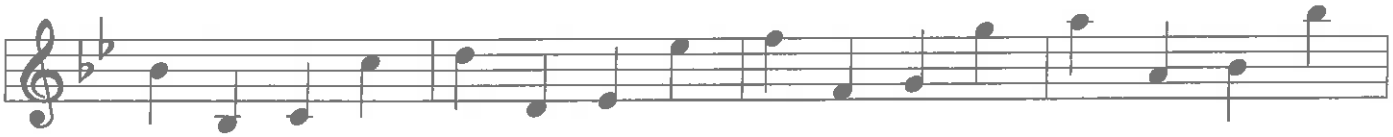
23) Octave motion downward.



24) By octave then step.



25) Reprolation of above idea.



Discussion topic:
Is it possible that there is a *finite* amount of melodic material to be thoroughly digested for the improvising artist? I use the term finite thinking along the lines of number of keys, types of scales etc. within the "western" (gl) system. Is it in the *recombination or prolation (gl)* of existing elements creating new "versions" that the reality of "infinite" possibilities becomes manifest? Is it up to us as artists to acquire what tools are necessary to express our ideas? Artistic growth potentially comes about as our presentation of our artistic / emotional statements demands greater resources or additional tools to fine tune our ability to express our maturing artistic statement.

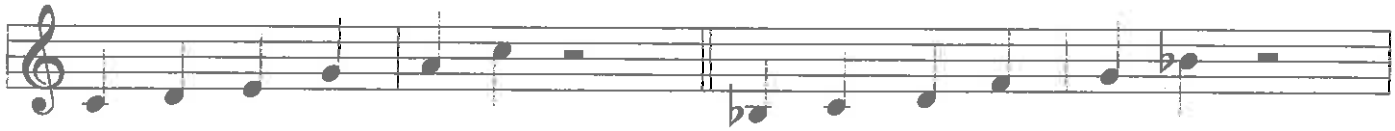
work space / notes

MAJOR PENTATONIC SCALE

An essential variation created from the major scale is termed the "Pentatonic" (gl) scale (historically speaking it was the major scale group evolving after the pentatonic group). It is created by using the first, second, third, fifth, and sixth degrees of the major scale. Create this scale and explore this beautiful color. This grouping tends to have an "Oriental" flavor. It will become an essential color on your musical palette. These pentatonic colors are also *extensively* used in Rock and Roll, Pop, Blues and other styles of music. Here is the "C" major Pentatonic scale.

1	2	3	5	6	8
C	D	E	G	A	C

Transposed for group performance.



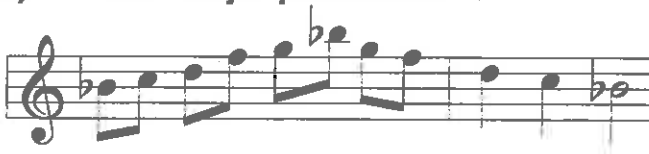
Pentatonic written exercises: Spell the following Pentatonic scales.

Bb						F					
C						G					
D						A					
E						B					
Gb						Db					
Ab						Eb					

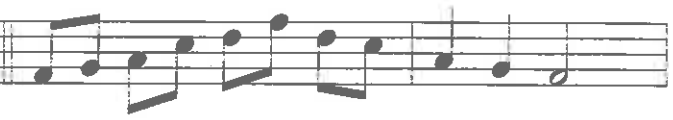
Exercise: Write out the pentatonic scales on the manuscript provided at the close of this text.

MAJOR PENTATONIC SCALES: Arranged by key for group performance.

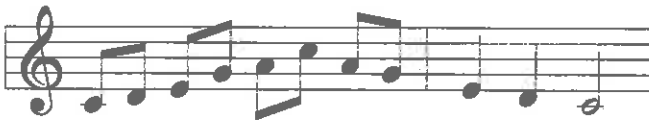
1) "Bb" major pentatonic



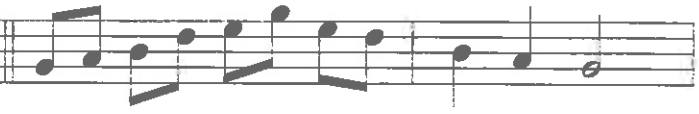
2) "F" major pentatonic



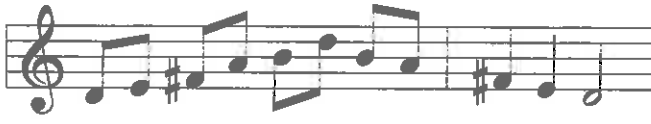
3) "C" major pentatonic



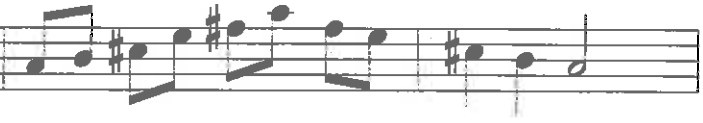
4) "G" major pentatonic



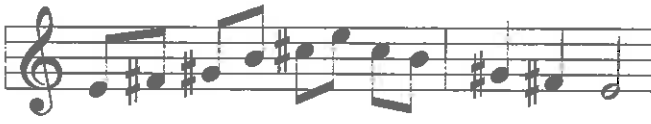
5) "D" major pentatonic



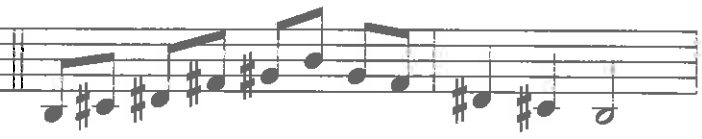
6) "A" major pentatonic



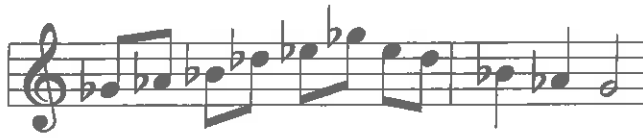
7) "E" major pentatonic



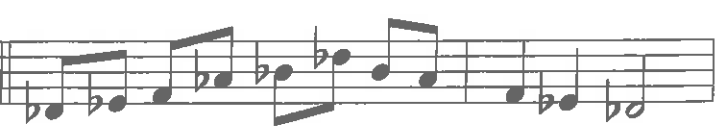
8) "B" major pentatonic



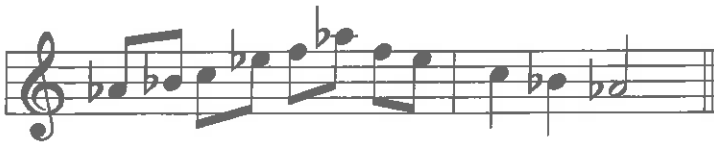
9) "Gb" major pentatonic



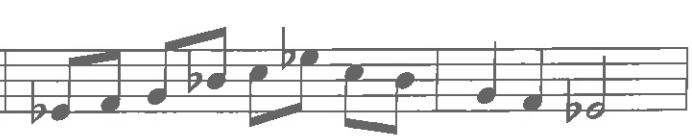
10) "Db" major pentatonic



11) "Ab" major pentatonic

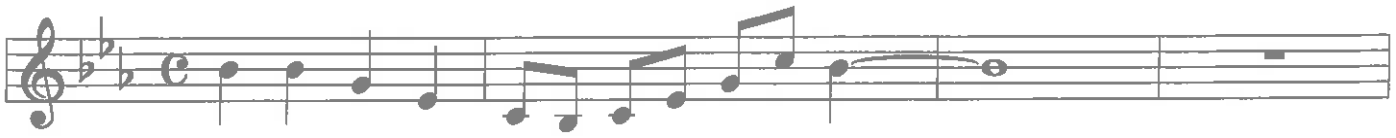


12) "Eb" major pentatonic

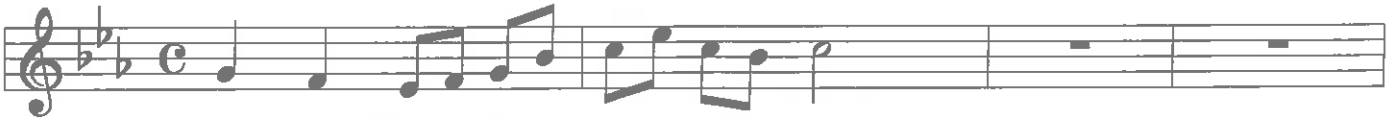


Examples of melodies created with the major pentatonic scale.

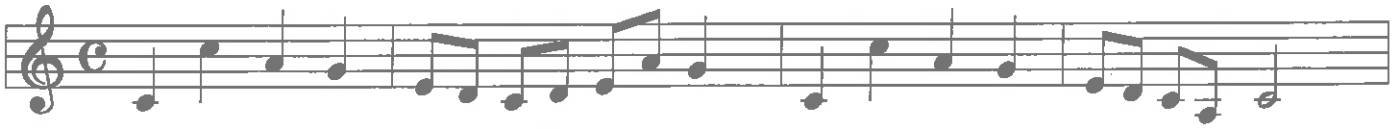
1) In "Eb" major.



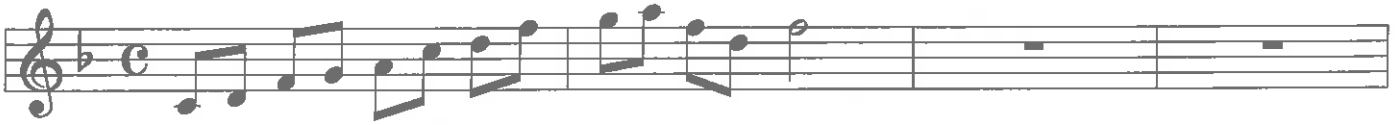
2) In "Ab" major.



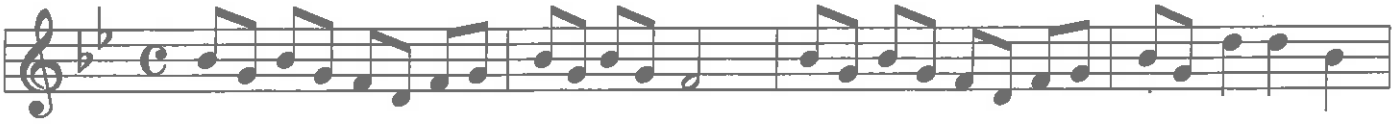
3) In "C" major.



4) In "F" major.



5) In "Bb" major.



Discussion:

1) Discuss the various stylistic usage of the major pentatonic scale in contemporary music. Encourage students to bring in examples of the music they are listening to and after selecting examples, analyze the musical content for use of the pentatonic scale.

2) Discuss the artistic / cultural qualities associated with the pentatonic scale. Encourage students to research this group of pitch's ancient origins.

Exercises: Follow the same practice format as outlined with the major scale grouping of pitches, see page 8.

The critical difference between what is termed the major and minor colors is found on the third (3rd) scale degree above the root (gl). For example:

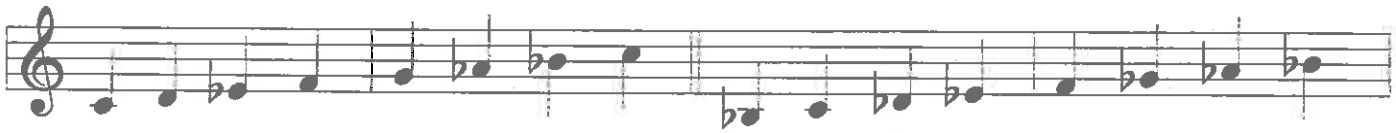
	1	2	**3**	4	5	6	7	8
C major	C	D	**E**	F	G	A	B	C
C minor	C	D	**Eb**	F	G	A	B	C

Observe that the 3rd scale degree of the major scale is lowered one half step. Play the major 3rd interval (gl) between "C" and "E" and the minor 3rd interval between "C" and "Eb" on your instrument and or at the piano. The minor third has a more sorrowful, bluesier quality. *Learn to recognize and differentiate these two colors.* These two contrasting colors along with the "tritone", discussed in the next chapter, form the basis of the different colors found in Western (gl) music. The authors theoretical approach is to view the major scale group as being the foundation of this tonal system. With this perspective, the various minor scales become variations of the major scales intervallic formula. Traditionally, theorists discuss the "minor" scale in three forms.

1) Natural Minor - the natural minor scale is basically a major scale with the third, six and seventh degrees lowered one half step. Thus:

	1	2	3	4	5	6	7	8
C major	C	D	E	F	G	A	B	C
C natural minor	C	D	Eb	F	G	Ab	Bb	C

"C" natural minor scale Transposed to "Bb" for group performance



What major scale group contains identical pitches and key signature to the "C" natural minor scale? Three flats puts us in the key of "Eb" major. This "natural" minor scale is also termed the "relative" minor scale. This "relative" or "natural" minor scale contains the same pitches as its relative major scale. This relative major scale is found starting from the third degree of the minor scale. Thus:

	1	2	**3**	4	5	6	7	8
C natural minor	C	D	Eb	F	G	Ab	Bb	C
Eb major	Eb	F	G	Ab	Bb	C	D	Eb

Reversing polarity, on what scale degree of the major scale group do we locate it's "relative" minor?

	1	2	3	4	5	**6**	7	8
Eb major	Eb	F	G	Ab	Bb	C	D	Eb
C natural minor	C	D	Eb	F	G	Ab	Bb	C

The natural minor scale is located starting on the *sixth degree of the major scale* and consists of entirely the same pitches and key signature. Each of the twelve major scales and keys has a "relative minor", or, each of the twelve natural minor scales or keys has a "relative major." I view this from the perspective of the major scale being the "parent" scale. One is simply known as the "relative" of the other. This is a very cool and integral part of the Equal Tempered System.

Complete the following chart pairing up each of the twelve major keys with its relative minor. Check your entries in the answer key.

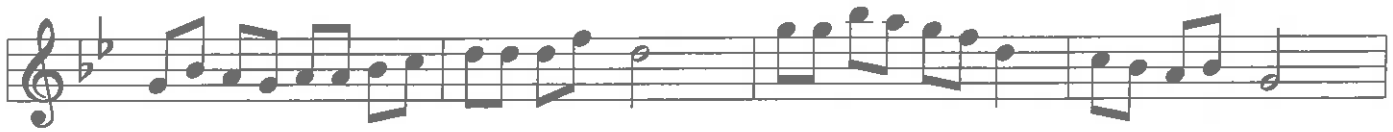
Major key	relative minor	Major key	relative minor	Major key	relative minor
C	_____	E	_____	Ab	_____
G	_____	B	_____	Eb	_____
D	_____	Gb	_____	Bb	_____
A	_____	Db	_____	F	_____

Spell out the natural / relative minor scales from the following pitches. Hint: The natural minor is derived starting from the sixth degree of the major scale. Write out the natural minor scale in all twelve keys on the manuscript provided in the back of this text..

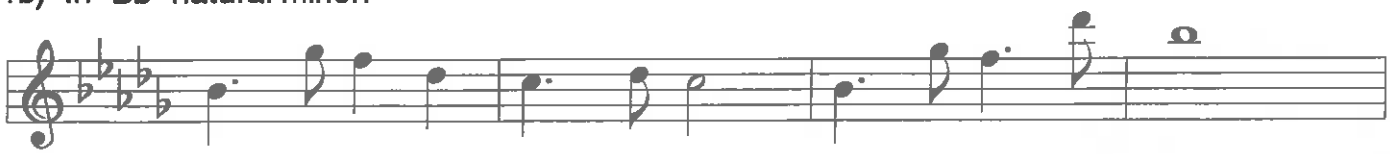
A	Natural Minor	___	___	___	___	___	___	___	___
Bb	Natural Minor	___	___	___	___	___	___	___	___
B	Natural Minor	___	___	___	___	___	___	___	___
C	Natural Minor	___	___	___	___	___	___	___	___
C#	Natural Minor	___	___	___	___	___	___	___	___
D	Natural Minor	___	___	___	___	___	___	___	___
Eb	Natural Minor	___	___	___	___	___	___	___	___
E	Natural Minor	___	___	___	___	___	___	___	___
F	Natural Minor	___	___	___	___	___	___	___	___
F#	Natural Minor	___	___	___	___	___	___	___	___
G	Natural Minor	___	___	___	___	___	___	___	___
Ab	Natural Minor	___	___	___	___	___	___	___	___

The natural minor scale, as previously discussed, is perhaps most easily derived from its relative major scale. It is all a matter of aural perspective based on the intervallic formula of the sequence of pitches that is executed. Thus, if you have thoroughly shedded the twelve major scales, these minor scales are already under your fingers. The relative minor scales contain the same pitches as their relative major scales. The relative minor scale is found on the sixth degree of the major scale, which could also be referred to as the "Aeolian" mode (see next section on modes).Musical examples utilizing the natural / relative minor scale.

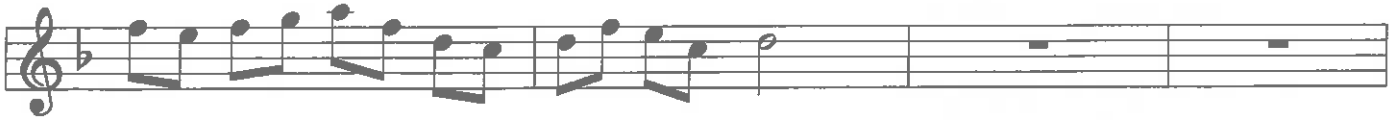
1a) In "G" natural minor.



1b) In "Bb" natural minor.



1c) In "D" natural minor, the resolution of the last pitches helps to define the minor tonality.

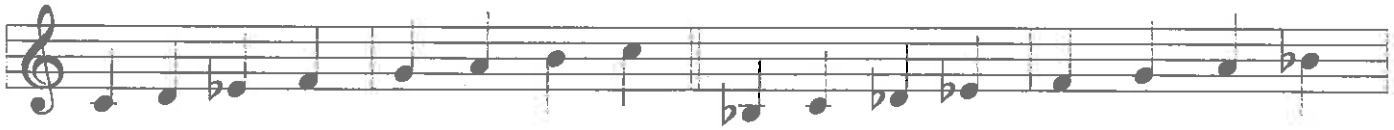


2) **Melodic Minor** - is perhaps best described as a regular major scale with the third scale degree lowered a half step. Traditionally, the melodic minor scale has two forms, one for ascending, one for descending. For contemporary uses, we use our original definition for both ascending and descending melodic situations. This consistent scale shape in both its ascending and descending forms is sometimes known as the "Jazz" melodic minor scale. If curiosity persists about the "one scale with two forms", most music theory texts at your local library will provide the necessary information. The melodic minor is cool in that the artistic elements provided by this group of pitches includes the minor tonality coupled with the "leading tone" (7th degree) normally associated with the major tonality, which creates a greater sense of "finality" to the resolution of melodic ideas as well as to the harmonic or chordal possibilities (the dominant becomes a major triad). In chapter 3, the melodic minor group of pitches is utilized as a substitute scale choice over some rather dense dominant chord configurations creating some wonderful tensions and surprising resolutions. Begin to get comfortable with this groups sound and color now and reap the rewards down the road!

	1	2	3	4	5	6	7	8
C major	C	D	E	F	G	A	B	C
C melodic minor	C	D	Eb	F	G	A	B	C

"C" melodic minor scale

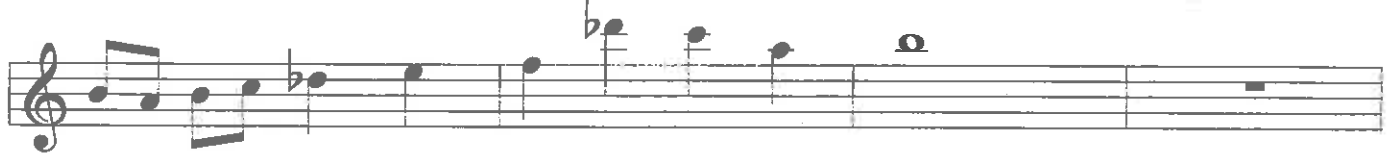
Transposed to "Bb" for group performance



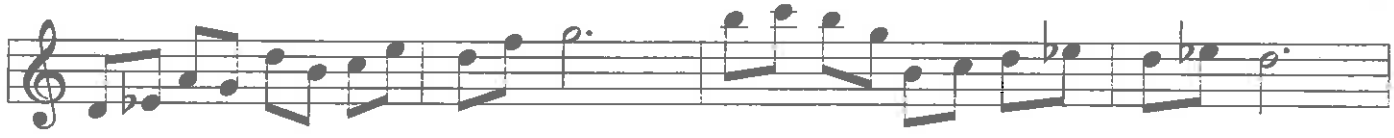
Spell out the Jazz melodic minor scale from the following pitches. Write out the melodic minor scale in all twelve keys in the back of this text.

C Melodic Minor
D Melodic Minor
E Melodic Minor
F Melodic Minor
G Melodic Minor
A Melodic Minor
B Melodic Minor
Db Melodic Minor
Eb Melodic Minor
Gb Melodic Minor
Ab Melodic Minor
Bb Melodic Minor

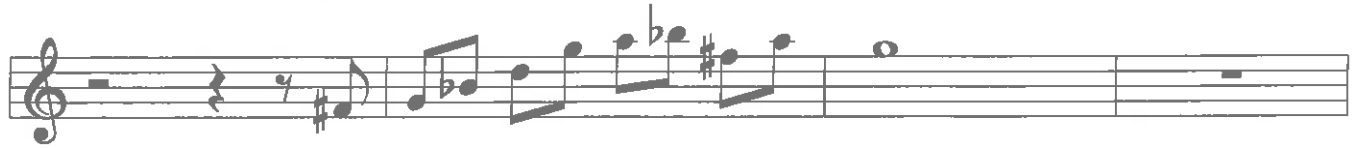
2a) Musical idea using "Bb" melodic minor.



2b) Musical idea using "C" melodic minor.



2c) Musical idea using "G" melodic minor.

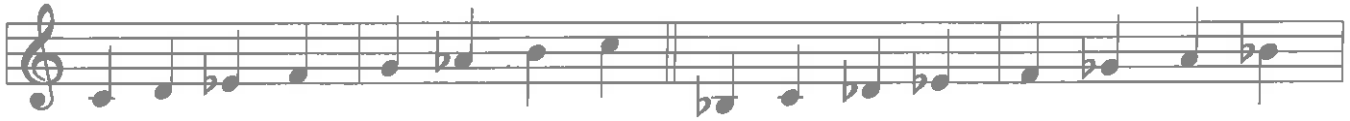


3) **Harmonic Minor** -perhaps best derived from the major scale with alterations which lower the third (3) and sixth (6) scale degrees one half step. The half step intervals created by this grouping between Two and Three, Five and Six and Seven and Eight create some interesting possibilities.

	1	2	3	4	5	6	7	8
Major	C	D	E	F	G	A	B	C
H. Minor	C	D	Eb	F	G	Ab	B	C

"C" harmonic minor scale

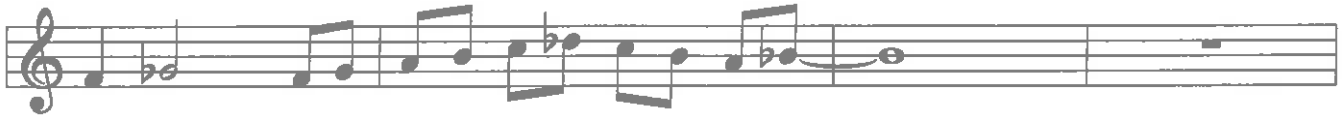
Transposed to "Bb" for group performance



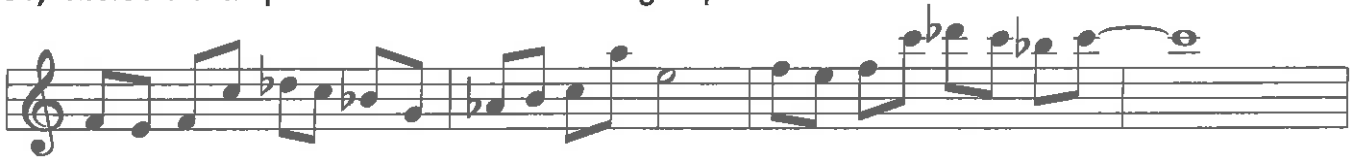
Spell out the **harmonic minor scale** from the following pitches. Hint: The harmonic minor scale form lowers the 3rd and 6th degree one-half step of the major scale with the same root (gl) note.

Eb Harmonic Minor ___ ___ ___ ___ ___ ___ ___ ___
Ab Harmonic Minor ___ ___ ___ ___ ___ ___ ___ ___
Db Harmonic Minor ___ ___ ___ ___ ___ ___ ___ ___
Gb Harmonic Minor ___ ___ ___ ___ ___ ___ ___ ___
B Harmonic Minor ___ ___ ___ ___ ___ ___ ___ ___
E Harmonic Minor ___ ___ ___ ___ ___ ___ ___ ___
A Harmonic Minor ___ ___ ___ ___ ___ ___ ___ ___
D Harmonic Minor ___ ___ ___ ___ ___ ___ ___ ___
G Harmonic Minor ___ ___ ___ ___ ___ ___ ___ ___
C Harmonic Minor ___ ___ ___ ___ ___ ___ ___ ___
F Harmonic Minor ___ ___ ___ ___ ___ ___ ___ ___
Bb Harmonic Minor ___ ___ ___ ___ ___ ___ ___ ___

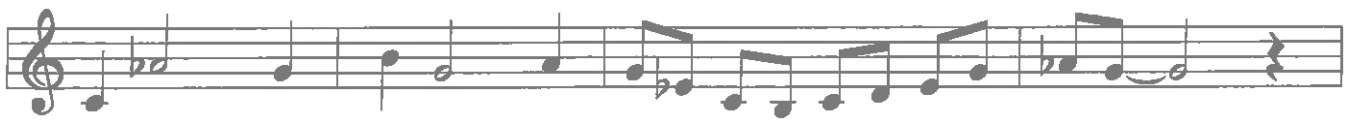
3a) Melodic example of the harmonic minor group in "Bb."



3b) Melodic example of the harmonic minor group in "F."



3c) Melodic example of the harmonic minor group in "C."

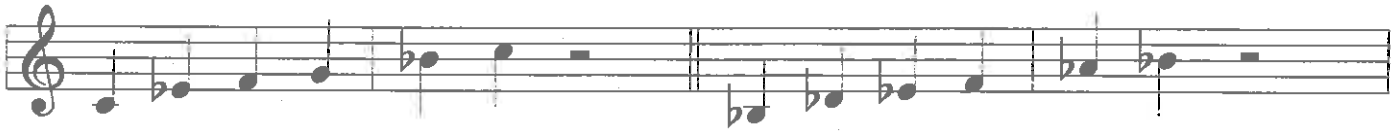


4) **Minor pentatonic scale -** is a variation of the natural minor scale. As the name implies, the pentatonic scale is comprised of five notes. Deriving directly from the natural minor scale, the minor pentatonic scale is comprised of the first, third, fourth, fifth and seventh degrees of the natural minor scale. This is an ancient grouping of pitches. Melodies have been created with this group for a long, long time. Notated example of "C" pentatonic minor follows the chart.

	1	2	3	4	5	6	7	8
Nat. Minor	C	D	Eb	F	G	Ab	Bb	C
Pent. Minor	C		Eb	F	G		Bb	C

"C" pentatonic minor scale

Transposed to "Bb" for group performance



Here is a worksheet to spell out the minor pentatonic scale in all twelve keys, write out the pentatonic minor scale in all twelve keys in the back of this text.

C Pent. Mnr. _ _ _ _ _

G Pent. Mnr. _ _ _ _ _

D Pent. Mnr. _ _ _ _ _

A Pent. Mnr. _ _ _ _ _

E Pent. Mnr. _ _ _ _ _

B Pent. Mnr. _ _ _ _ _

Gb Pent. Mnr. _ _ _ _ _

Db Pent. Mnr. _ _ _ _ _

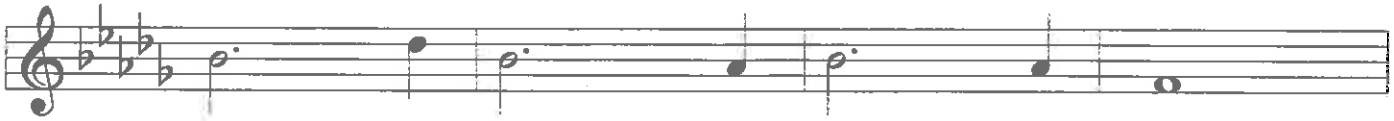
Ab Pent. Mnr. _ _ _ _ _

Eb Pent. Mnr. _ _ _ _ _

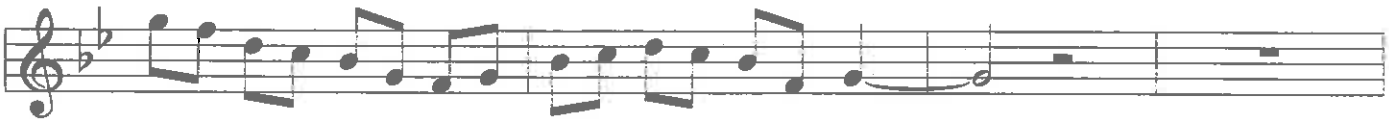
Bb Pent. Mnr. _ _ _ _ _

F Pent. Mnr. _ _ _ _ _

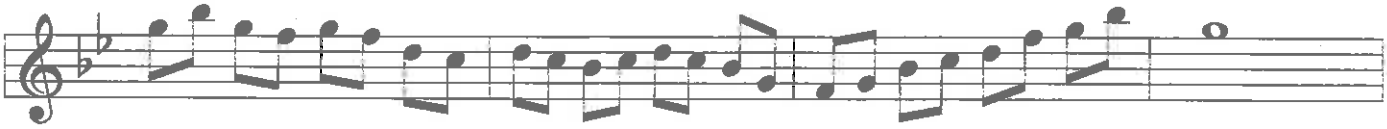
4a) Melodic idea using the minor pentatonic group of pitches in "Bb."



4b) Melodic idea using the minor pentatonic group of pitches in "G."



4c) Melodic idea using the minor pentatonic group of pitches in "G."



Discussion: Initiate discussion concerning each of the four types of minor scales in terms of the "colors" they invoke. Comparing how a painter uses color to how a musicians "color" resources are the various types of scales. Perhaps a similar approach for what geographical or cultural elements are brought forth from the four different groups of minor scales.

1) Discuss the harmonic aspects created by the different groupings of the minor scales.

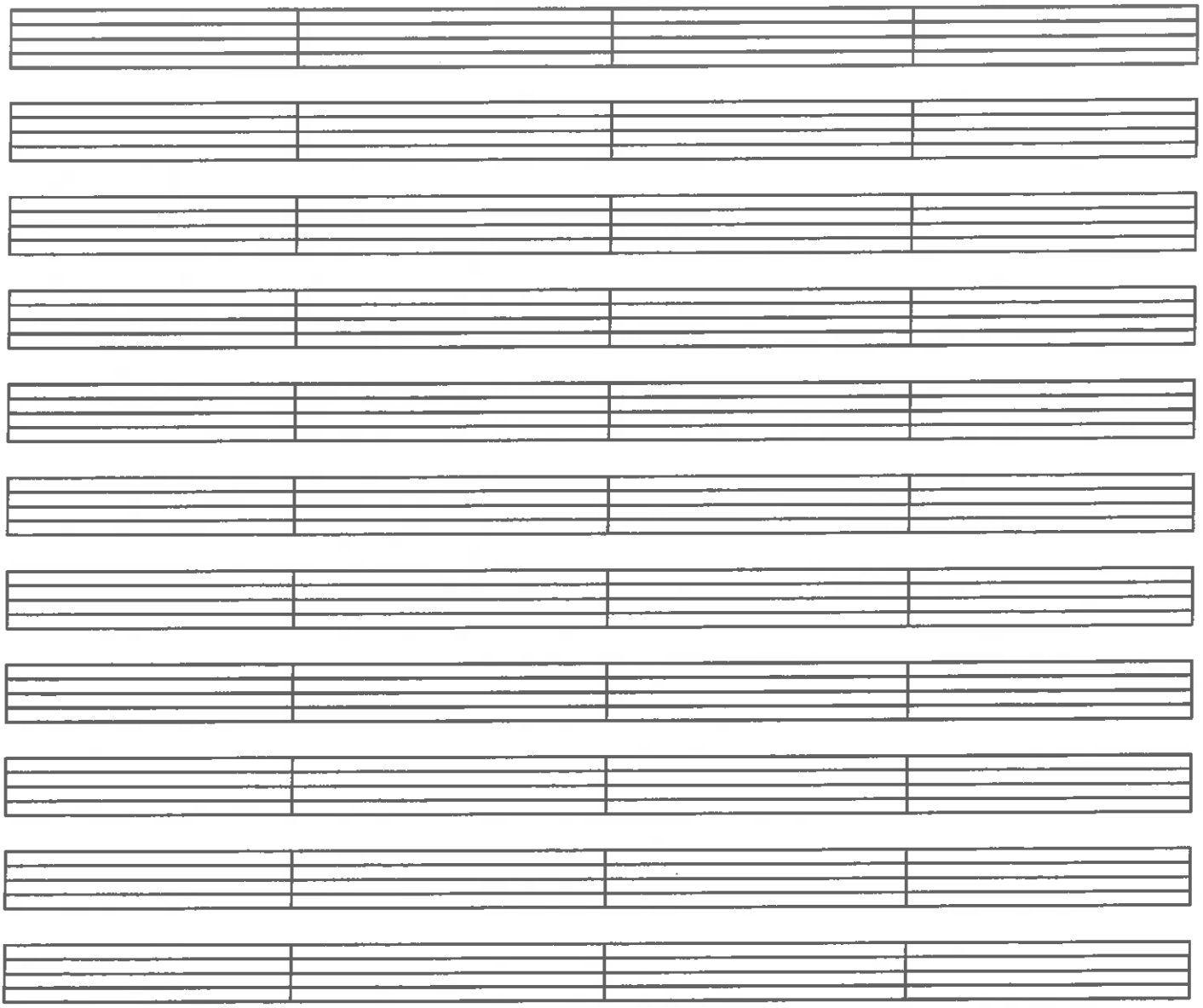
Exercise:

1) On the manuscript provided below, create two or four bar, (or longer), melodic phrases for each of the four minor scales.
2) Begin a melodic analysis of "Greensleeves" in the supplementary text.

Listening:

1) L. Von Beethoven's Fifth Symphony might be an appropriate place to start.
2) G. Gershwin's "Summertime" provides a good minor to relative major vehicle.
3) Pat Metheny's "Are You Going With Me" is a very passionate piece in the minor tonality.

Create melodic ideas using various minor scales for future expansion into "original" compositions.



The next section of this program deals with the "modes" (gl). *These scales are essential to the improvising artist and are exclusively derived from the major scales.* Upon each scale degree of the major scale a different mode is built. Using "C" major for our demonstrative purpose, the following system to locate and spell the modes evolves. Internalize the following concepts, the essential scale groupings are already in place in the form of the twelve major scales.

Scale Degree	Roman Numeral	"C" major scale	Mode
1	I	C	Ionian
2	ii	D	Dorian
3	iii	E	Phrygian
4	IV	F	Lydian
5	V	G	Mixolydian
6	vi	A	Aeolian
7	vii	B	Locrian

Thus, if one thinks of the pitches of the major scale from "C" to "C", one (1) through eight (8), this group of notes and its resulting sound is the "C" major scale, which can also identified as the "Ionian" mode built on the pitch "C." If one thinks of "D" up to "D", using only the notes of the "C" major scale, this group of notes and its resulting sound and color when played on your instrument is known as the "Dorian" mode. Each mode has a color and character of it's own. Experiment by playing on your instrument the notes of the "C" major scale from "C" to "C", "D" to "D", "E" to "E", etc., noting the tonal differences and character of each mode. The color, character, and structure of each mode is determined by the sequence of whole steps and half steps in relation to your starting pitch. Remember our scale formula for the major scales? The key to understanding the construction of the modes evolves from the ability to aurally and physically perceive this sequential formula from seven distinct starting points. The roman numerals in the above chart are either upper and lower case. An upper case roman numeral denotes major sounding scales built upon that scale degree, a lower case symbol denotes minor sounding scales. Using the above chart as a guide, fill in the following information to identify the diatonic (gl) modes and its tonality (major or minor) in the key of "C" major. Check your entries from the chart above.

PITCHES				MODE	TONALITY
C	to	C	=	_____	_____
D	to	D	=	_____	_____
_____	to	_____	=	PHRYGIAN	_____
_____	to	_____	=	LYDIAN	_____
G	to	G	=	_____	_____
A	to	A	=	_____	_____
_____	to	_____	=	LOCRIAN	_____

Let's now explore the Dorian formula in relation to it's Ionian / major scale formula basis. Using "C" Ionian / major for our example, our formula and pitches become our original set of whole steps (1) and half steps (1/2) and the letter names "C", "D", "E", "F", "G", "A", "B", and "C". In chart form, we have:

1	1	1/2	1	1	1	1/2	
C	D	E	F	G	A	B	C

Now the Dorian mode:

1	1/2	1	1	1	1/2	1	
D	E	F	G	A	B	C	D

The discerning eye will note that our formula for our Dorian mode corresponds to our Ionian formula with the exception that our first whole step interval is omitted and replaced at the end. Let's examine our Phrygian formula and pitches in relation to "C" major:

1/2	1	1	1	1/2	1	1	
E	F	G	A	B	C	D	E

The Phrygian formula now displaces the initial two whole steps and begins with a half step. Remaining consistent with our major scale formula, the two whole steps are now found at the end of the Phrygian formula. Beginning to see this light?! Explore the formulas for the remaining four (4) modes on your own.

As the "theorist" you must choose a method of understanding the modes. Both methods are described. The first method is the one I prefer, the concept evolved by "crunching" down the information provided on the mode formula chart. The second method involves the need to memorize seven (7) distinct formulas. When improvising, the ongoing thought process is often times more directed by emotion rather than logic. The idea here is to practice or woodshed (gl) "logic" and perform "emotion" etc.. Experience has shown this improviser that when a desired color, produced through executing a prolation (gl) of a particular mode is needed, reference back to the major scale that contains that mode and the desired pitches is easier than trying to build that mode from its proper intervallic formula.

For example, given the chord change "A-7", the author's system of thought allows the improviser to utilize the:

G	major scale	=	A Dorian
F	major scale	=	A Phrygian
C	major scale	=	A Aeolian
Bb	major scale	=	A Locrian

for organizing choices for groups of notes to create melodic ideas over the chord change "A-7." It works for me. For you as an artist, look at the resources available and arrange them so that they're easily accessed. Gradually you'll evolve your own systems and style. At this juncture, please complete the following exercises to build your cognitive strength regarding the modes.

work space / notes

Spell the following modes in the key of "A" major:

A Ionian ___ ___ ___ ___ ___ ___ ___ ___
B Dorian ___ ___ ___ ___ ___ ___ ___ ___
C# Phrygian ___ ___ ___ ___ ___ ___ ___ ___
D Lydian ___ ___ ___ ___ ___ ___ ___ ___
E Mixolydian ___ ___ ___ ___ ___ ___ ___ ___
F# Aeolian ___ ___ ___ ___ ___ ___ ___ ___
G# Locrian ___ ___ ___ ___ ___ ___ ___ ___

Spell the following modes in various keys. Hint: Thinking of the major key from which each mode is derived will facilitate the exercise. Example, "A" Lydian, the "Lydian" scale is derived from the fourth scale degree of any major scale. "A" is the fourth scale degree of "E" major. Thus, apply the key signature of "E" major or think "E" major from "A" to "A". Therefore: "A" Lydian

is spelt: A B C# D# E F# G# A

G Dorian
is spelt: ___ ___ ___ ___ ___ ___ ___ ___

A Mixolydian
is spelt: ___ ___ ___ ___ ___ ___ ___ ___

C Phrygian
is spelt: ___ ___ ___ ___ ___ ___ ___ ___

D Ionian
is spelt: ___ ___ ___ ___ ___ ___ ___ ___

Bb Aeolian
is spelt: ___ ___ ___ ___ ___ ___ ___ ___

F# Locrian
is spelt: ___ ___ ___ ___ ___ ___ ___ ___

G Lydian
is spelt: ___ ___ ___ ___ ___ ___ ___ ___

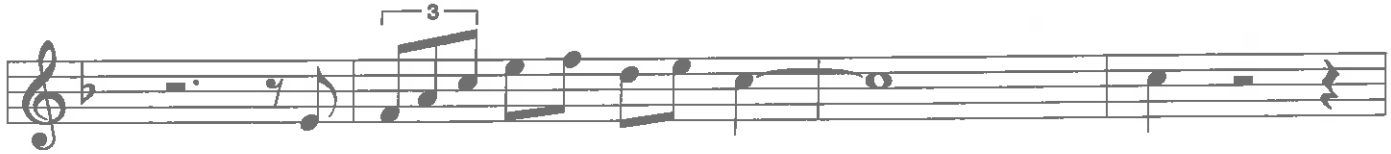
Eb Phrygian
is spelt: ___ ___ ___ ___ ___ ___ ___ ___

B Dorian
is spelt: ___ ___ ___ ___ ___ ___ ___ ___

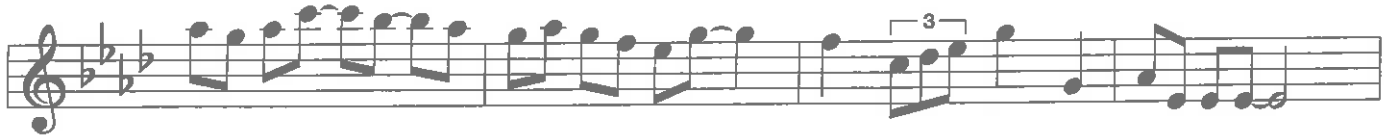
Each of the seven modes has a distinct color and character of it's own. Research into the evolution of our present system of musical organization will reveal many new interesting aspects of the modes not discussed in this text, geography is one that comes to mind, being outside the scope of our present considerations. The following profiles of each of the seven modes are very general. I've included these profiles to help players begin to categorize modal elements, provide potential opportunities for use and to encourage curiosity for further modal and historical research. Play through the musical examples for each of the seven modes and begin to absorb and get a feel for its color. All examples are based on the key of "C" major.

1) **Ionian** mode: In reality, our present day major scale, the Ionian mode has provided the materials for the majority musical composition created within the "Equal Tempered System" over the last three and a half centuries. Pretty cool, huh? This "Equal Tempered System", no matter how we shake it down, is a very beautiful thing.

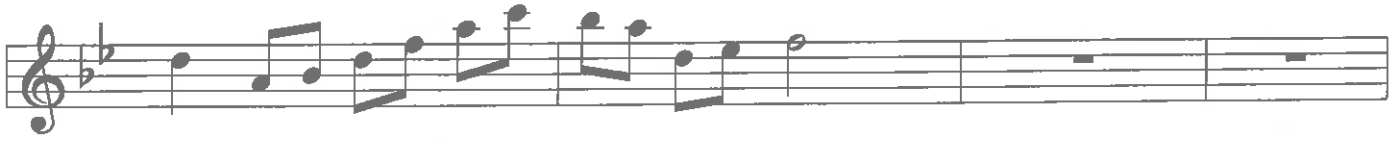
1a) Common arpeggio (gl) figure.



1b) With a bit of a "swing" feel.

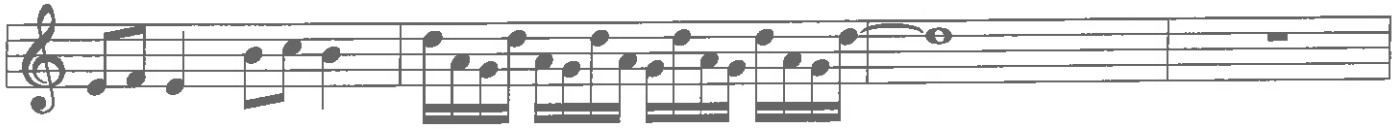


1c) Combining scalar and arpeggio ideas.



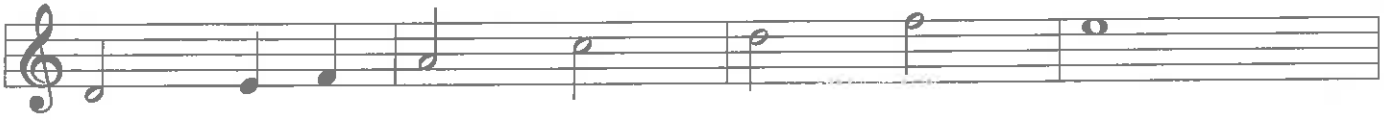
2) **Dorian** mode: Essentially a minor mode or scale, the Dorian sound and color is "ancient" and has yet again helped to create a recent "movement" during the 1960's, Miles Davis's "So What" and John Coltrane's "Impressions" come to mind. Explore.

2a) Two different ideas.



2b) Somewhat rock or "fusionesque.'

2c) In a "modal" tone.

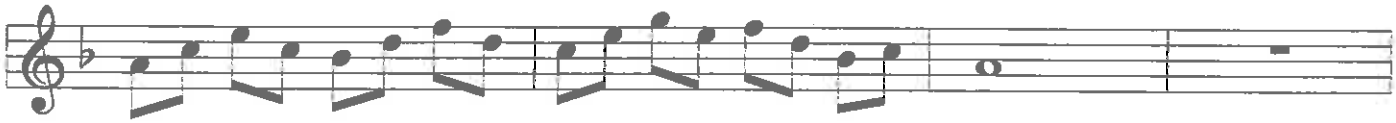


Balance the following musical equation: D Dorian = F Lydian = _____ Major Scale?

Explore and experiment

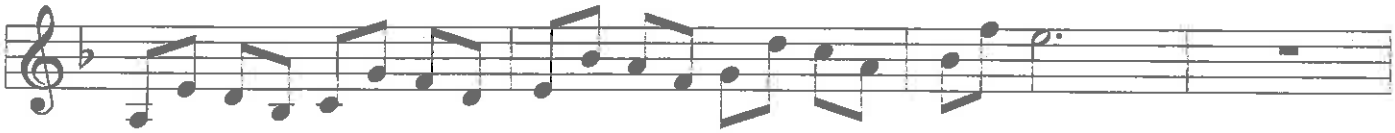
3) **Phrygian** mode: Basically a minor scale, the strongest tendency for this group is to create the "Spanish" atmosphere. "Ole."!

3a) Outlining triads.



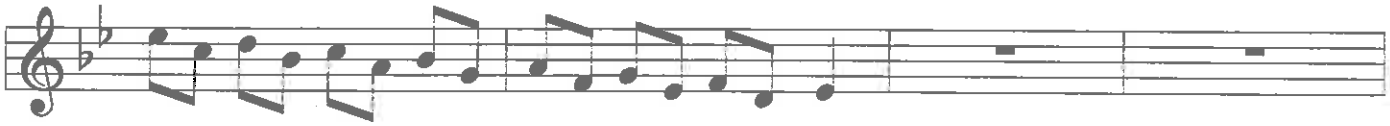
3b) A half step extravaganza.

3c) Prolation (gl) of modal eighth note idea.

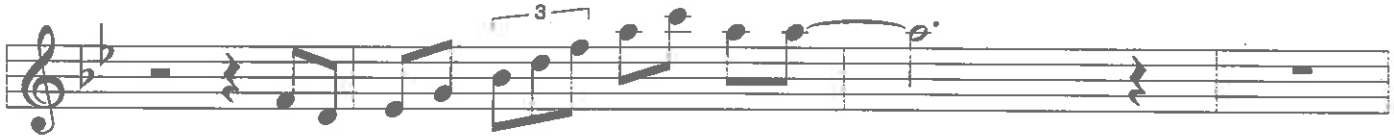


4) **Lydian** mode: Essentially a major scale with the fourth degree raised a half step which adds a bit of "whole tone" color and tonal gravitational ambiguity in regards to key center. One common use of the Lydian scale is as a scale choice or group of notes for creating melodies over "dominant seventh" chord type harmony, building our mode from the flat seventh of whatever dominant chord is being employed. Another is to use the Lydian group over the Two minor seventh chord. Also, the raised fourth degree diatonically creates a "Five 7 of Five 7" situation, with the Two chord evolving from a minor seventh chord type to a dominant seventh chord type, when the tonic major scale is changed. See chapter 3 for a more comprehensive discussion of these and other possible uses for the Lydian scale. Explore.

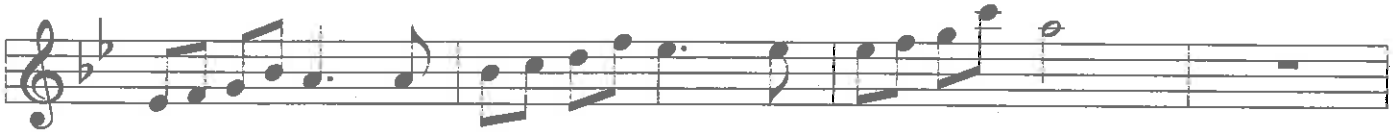
4a) Simple idea in thirds, descending.



4b) Basically an extended arpeggio.



4c) Moving an idea upward.



"If opportunity doesn't knock, build a door." Milton Berle

5) **Mixolydian** mode: Basically a major scale with a "lowered" seventh, creating the absence of the "leading tone" (gl) found in our Ionian mode or major scale. This grouping of pitches is used to recreate early American music of the Appalachian mountain region. Tunes like "Old Joe Clark" come to mind. Some of America's early immigrants came over from the British Isles and settled in this Appalachian region and they definitely brought their axes with them! The most common use of this Mixolydian group is to create melodies over dominant type chords, due to the "tritone" (gl) between the third and the seventh of this chord, see chapter 2.

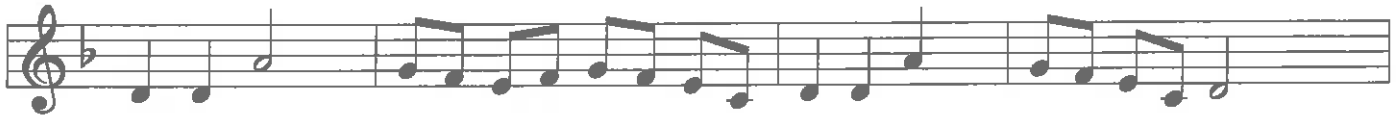
5a) Very simple, a descending almost "bluesy" color.

5b) Bass line type feel to this line, a bit rock and roll perhaps.

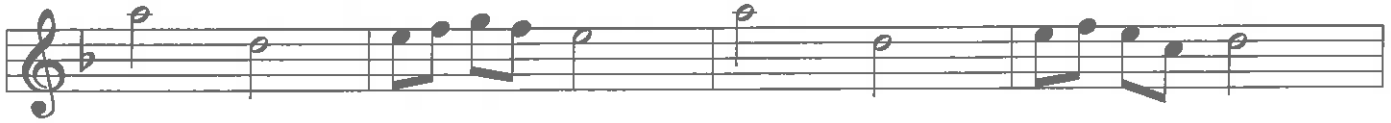
5c) Triads moving back and forth by whole step. Very common.

6) **Aeolian** mode: Basically a minor scale, commonly referred to as the "relative" minor, the Aeolian mode shares the same key signature as it's relative major, i.e. "A" minor and "C" major. G. Gershwin's composition "Summertime" utilizes this pairing of tonal centers. The half step between the fifth and sixth degree of this group can create some interesting melodies. Also the dominant is a minor triad. Explore.

6a) A bit of "call and response."



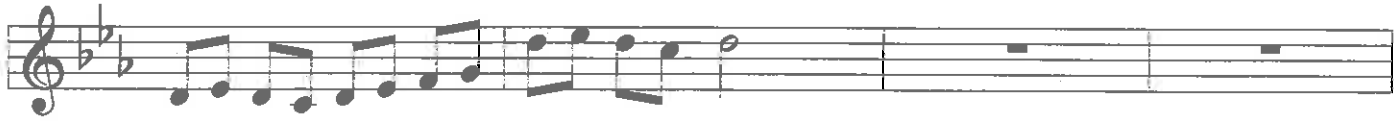
6b) Sort of a children's melody, although in the minor color.



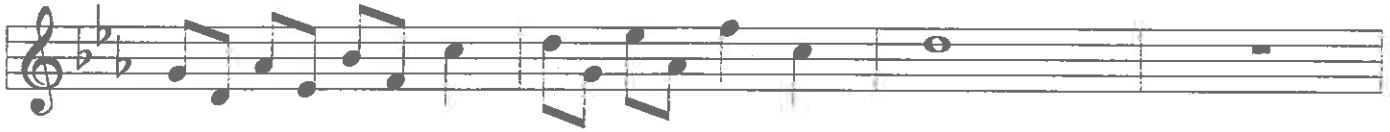
6c) Perhaps a bit "notey", even eighths for a "Latin" feel.

7) **Locrian** mode: Possibly created by "theorists" to fill the "gap" in their major scale, (research the "Church" modes), the Locrian mode's use as the foundation scale for compositions is somewhat diminished by the absence of a perfect fifth above the fundamental (gl). Modern day usage includes this modes ability to generate melodic ideas over the "half diminished chord", see chapter 3, which along with the Locrian mode is diatonically (gl) created from the seventh scale degree of the major scale. I like to use this color to create tension over the minor seventh chord type i.e. (ii-7), especially due to the location of the half steps found between two and three and six and seven when analyzed against the two minor seven chord (ii-7). Explore.

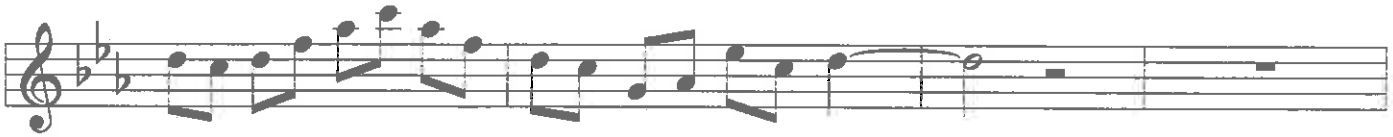
7a) Basically diatonic, stepwise motion.



7b) Intervals of fourths, ascending step wise.



7c) A real mutt, arpeggiated stepwise motion.



Other concepts / ideas / food for thought:

"Hypo" or "Plagel" modes view the modes from a fourth below to a fifth above using the same letter names as their "regular" counterpart, i.e. "Hypo-Ionian" is: "G", "A", "B", "C", "D", "E", "F", "G", etc. Experiment. Other systems of modal groupings and combinations have evolved as the "artists" needs have expanded. What is presented here is again a broad "overview" to provide elemental modal concepts, possible applications and to generate curiosity and questions to be researched.

All of the preceding ideas are generated from the major scale / Ionian group of pitches. The possibility exists of course to create similar modes from other types of scales. The non-diatonic minor scales discussed in the previous section might be a good starting point for this "modal" venture. The natural minor produces identical results as the major scale. Melodic minor creates some interesting variations with its minor third. The harmonic minor with its lowered third and sixth degree creates some interesting modes. For example, thinking "C" harmonic minor, here is it's Mixolydian mode.

Transposed for group performance

Interesting eh? Try creating lines from this group of pitches, say over a "G" 7b9 color. Take the initiative on your own to create and figure out other possibilities with the above ideas. As always, explore and experiment.

Discussion:

1) Here again, discussion and or assignment of research reports concerning the historical evolution of the Equal Tempered System helps to give perspective about the Modes.
2) The religious aspects could also be included in this discussion.
3) Perhaps a discussion about the pros and cons concerning the "derivation" of the modes from the major scale as presented in this text would be appropriate.
4) Discussion concerning the role of the modes in capturing certain "cultural" or "ethnic" qualities in musical composition might be appropriate.

Listening: Suggested listening for each of the seven modes.

1) Ionian:	"Christmas Song" by Mel Tourme.
2) Dorian :	"Impressions" by John Coltrane. "So What" by Miles Davis.
3) Phrygian:	"Sketches of Spain" by Gil Evans featuring Miles Davis.
4) Lydian:	"Lydian Lullaby" by George Russell.
5) Mixolydian:	"Breezin" as recorded by guitarist George Benson. "Old Joe Clark", traditional Appalachian melody.
6) Aeolian:	"My Funny Valentine" by R. Rodgers and L. Hart.
7) Locrian:	no suggestions as of this writing.

Exercises: For each of the seven modes, create a four bar "theme" capturing its unique character. Later we'll develop these into longer, original compositions.

Ionian

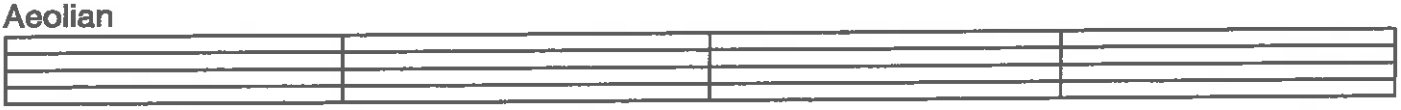
Dorian

Phrygian

Lydian

Mixolydian

Aeolian



Locrian

The "polar" opposite to the major scale is the diminished scale. I refer to this group of pitches as polar to the major scale due to the major scales ability to generate and establish a "gravitational musical tonal environment", i.e. "tonic" (gl), while the diminished scales can destroy established tonal centers and obscure tonal direction. This is a "laboratory" type explanation, for in actual practice while the above statement is basically true, the diminished scale is often times used to create strong tonal *direction* (see chapter 3, dominant harmony). The diminished scale is *not* diatonic, it is a "hybrid." It's musical formula in terms of whole steps is as follows. Note: watch for "enharmonic" (gl) equivalents and key signatures.

1 1/2 1 1/2 1 1/2 1 1/2

Filling in letter names starting with "C" we arrive at:

1	1/2	1	1/2	1	1/2	1	1/2
C	D	Eb	F	Gb	Ab	A	B	C

Let's discern the two fully diminished arpeggios (gl) contained within this "C" fully diminished scale. To do this we simply skip every other note. Thus, our fully diminished scale:

C D Eb F Gb Ab A B C

Provides our first fully diminished arpeggio.

C Eb Gb A

The musically discerning eye will notice the consistent construction formula for our fully diminished seventh arpeggio as being consecutive minor thirds.

"C" up a minor 3rd to "Eb", up a minor 3rd to "Gb", up a minor 3rd to "A".

Let's look at the remaining letter names of our fully diminished 7th scale and look for a consistent pattern. Our remaining letter names (tones) spell our second fully diminished arpeggio derived from our fully diminished scale built on "C." Thus:

D F Ab B

Thus, our fully diminished seventh scale could be said to be constructed of two fully diminished seventh arpeggios. Want to guess what the interval between each pitch is of this arpeggio? Again the minor third. What would happen if we rearranged our original formula for the fully diminished scale to read its opposite ?

1/2 1 1/2 1 1/2 1 1/2 1

Let's fill in letter names starting with "C" and find out:

1/2	1	1/2	1	1/2	1	1/2	1
C	Db	Eb	E	(F#)Gb	G	A	Bb	C

Let's reduce this scale to its two component arpeggios, achieved by skipping every other note in our scale. We arrive at:

1) C Eb Gb A

2) Db E G Bb

Again, our overall construction interval is the minor third. Watch this. Let's combine our three (3) different fully Dim. 7 arpeggios created by using the diminished scale formula and its opposite . We'll use a basic addition format to arrive at our goal:

C Eb Gb A

Db E G Bb

\+ D F Ab B

= C Db D Eb E F Gb G Ab A Bb B

Look familiar? This group of letter names (pitches) is known musically as the "chromatic scale"(gl), i.e. consecutive half steps. It could be said to be compromised of three fully diminished seventh arpeggios (among other things). More on this topic later in a few pages and later in chapter 3, dominant harmony. For now, enjoy the beautiful symmetry and answer the following questions concerning the fully diminished scale formulas and diminished arpeggios and begin to get the following diminished color under you fingers.

1) In terms of whole steps and half steps, what are the two scale formulas ?

1a) ___ ___ ___ ___ ___ ___ ___ ___

1b) ___ ___ ___ ___ ___ ___ ___ ___

2) Spell the three diminished seventh arpeggios, they are:

2a) C _____ _____ _____

2b) Db _____ _____ _____

2c) D _____ _____ _____

3) Combining the three (3) arpeggios, we arrive at what musical scale ?

_____scale.

4) The interval used in constructing the fully diminished 7th arpeggios is the

_____third.

5) Spell out the three fully diminished scales from the following roots, write the scales out on the manuscript provided in the back of this text:

1 1/2 1 1/2 1 1/2 1 1/2

5a) Co = ___ ___ ___ ___ ___ ___ ___ ___ ___

5b) Db o = ___ ___ ___ ___ ___ ___ ___ ___ ___

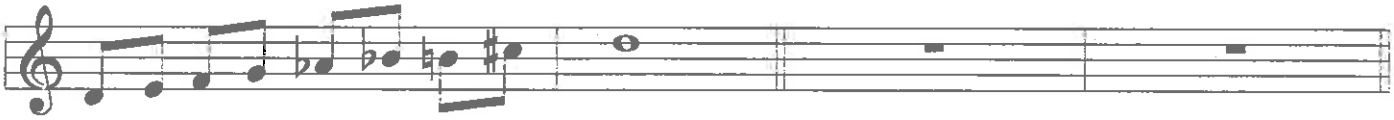
5c) Do = ___ ___ ___ ___ ___ ___ ___ ___ ___

6) Here are the above three diminished scales written out for treble clef, formatted for group performance.

6a) "C" diminished:

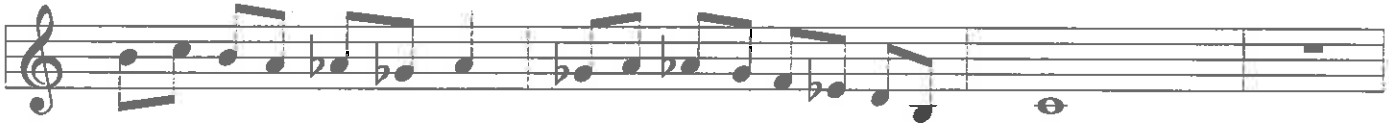
6b) "Db" diminished:

6c) "D" diminished:



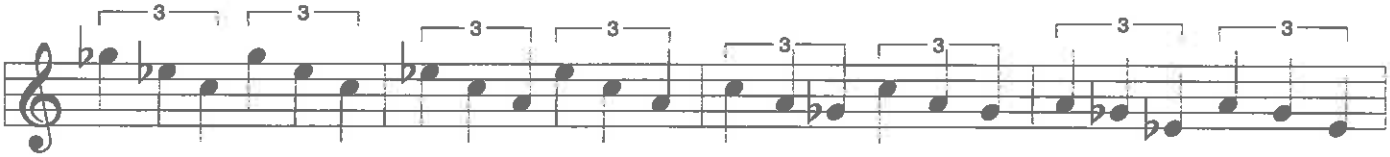
7) Here are four melodic examples using the diminished scale.

7a) Melodic idea with sort of a resolving nature.

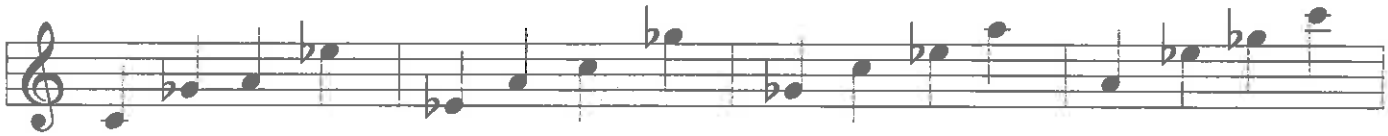


7b) A bit primitive, but relatively common.

7c) Melodic idea leaning towards a "classical" approach.



7d) Melodic intervallic prolation of the diminished arpeggio moving up in minor thirds.



Look to the Tonal Convergence Chart / melodic examples and the Jazz Lines sections for numerous examples of melodic ideas employing the diminished scale's scale sound and color.

"Obstacles are things a person sees when they take their eyes off their goal." E. Joseph Cossman

WHOLE TONE SCALE

By constructing a scale using only whole steps we arrive at a beautiful and distinct musical color.

Our formula: *whole steps only:*

1 1 1 1 1 1

Adding letter names starting with "C":

1 1 1 1 1 1

C D E F# G# A# C

Look familiar? This group is known musically as the whole tone scale. Let's build the arpeggios, again by skipping every other note in the scale.

C E G# and D F# A#

What interval is used to build these two triads? Right, the major third. These triads are known musically as augmented major triads (gl.). Let's repeat the process using "Db" as our starting pitch. Our formula:

1 1 1 1 1 1

Db Eb F G A B Db

Now the two arpeggios are spelt.

Db F A and Eb G B

Again, these two "triads" created are known musically as augmented major triads. Let's combine both augmented scales and see what happens. Any guesses? Here goes:

C D E F# G# A#

\+ Db Eb F G A B

= C Db D Eb E F F# G G# A A# B

Look familiar? It's musical name again is the chromatic scale. Do all roads lead to the chromatic "Rome?" For now, please answer the following questions provided, do take time to experiment with these "augmented" colors on your instrument. Like the fully diminished 7th, the augmented sounds are very unique, and as such, are easily recognizable once the ear has them "locked" in. Look to section C for musical concepts utilizing the ""whole tone"" shapes and colors.

1) Spell the "whole tone" scale from the following roots (gl), write them out in the back of this text.

	1	1	1	1	1	
C	___	___	___	___	___	___
F	___	___	___	___	___	___
Bb	___	___	___	___	___	___
Eb	___	___	___	___	___	___
Ab	___	___	___	___	___	___
Db	___	___	___	___	___	___

	1	1	1	1	1	
Gb	___	___	___	___	___	___
B	___	___	___	___	___	___
E	___	___	___	___	___	___
A	___	___	___	___	___	___
D	___	___	___	___	___	___
G	___	___	___	___	___	___

2) What interval is used to construct augmented major triads? _____ interval.

3) Spell the augmented triads built on the following roots. Authors note: we are getting a bit ahead of ourselves with this "harmony" exercise, but give it a try just for fun.

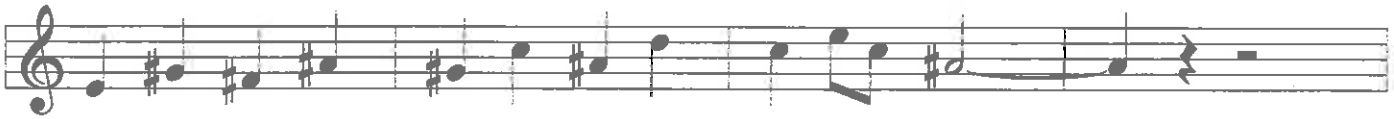
C	_____	_____	_____	F#	_____	_____	_____
Db	_____	_____	_____	G	_____	_____	_____
D	_____	_____	_____	G#	_____	_____	_____
Eb	_____	_____	_____	A	_____	_____	_____
E	_____	_____	_____	Bb	_____	_____	_____
F	_____	_____	_____	B	_____	_____	_____

4) The _____ scale is created by combining the "C" and "Db" whole tone scales.

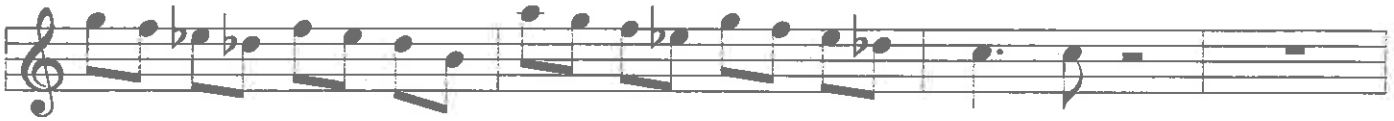
5) Here is the "C" augmented scale, formatted for group performance.

6) Here is the "Db" augmented scale, formatted for group performance.

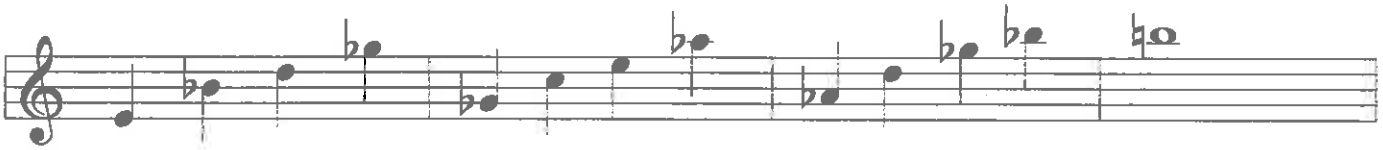
7) Four melodic lines utilizing the whole tone color, various intervals and prolations.
7a) Sequencing the whole tone color.



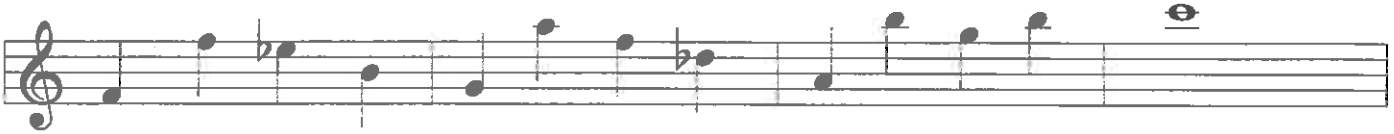
7b) Dominant whole tone to tonic.



7c) Somewhat "outside" (gl), wider intervals.



7d) Dominant whole tone to tonic.



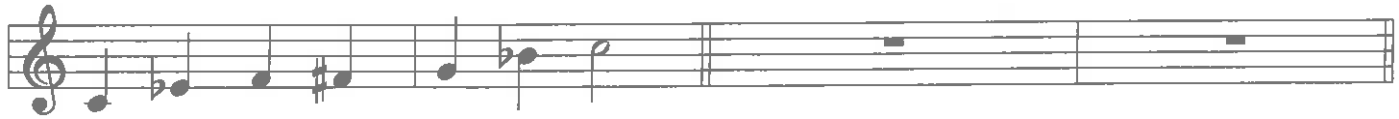
Look to the Tonal Convergence Chart / melodic examples and the Jazz Lines sections for numerous examples of melodic ideas employing the whole tone scale's scale sound and color.

BLUES SCALE

Essentially a minor scale, the Blues scale has been the source of countless melodies and even more countless improvised lines in the stylistic worlds of Jazz, Blues and Rock and Roll. The "sorrowful" quality generally associated with minor keys is enhanced by the inclusion of the tritone (gl). The character sounds created by this group of pitches is unmistakable, once the ear has the Blues color locked in. Thinking from "C" as the root, the intervallic formula for the Blues scale is:

minor 3rd	whole step	half step	half step	minor third	whole step
C	**Eb**	**F**	**F#**	**G**	**Bb**	**C**

Here is the above grouping in standard notation, "C" blues, formatted for group performance.

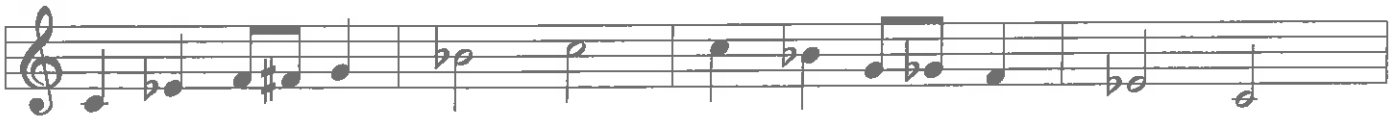


There are "endless" alterations to this group, adding pitches, bending pitches, various doubling of pitches are all very common when performing in the Blues genre. For now, complete the academic chart spelling out the Blues scale in all twelve keys, write the scales out in the back of this text. Look to further discussion, additional musical examples and suggestions for listening later in this text (chapter 5) under the index heading Blues.

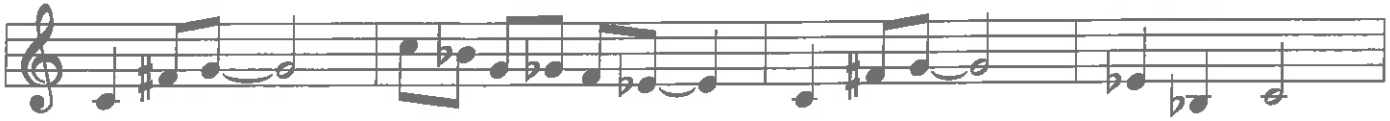
C							Gb						
G							Db						
D							Ab						
A							Eb						
E							Bb						
B							F						

1) Examples of Blues melodic ideas in "C" Blues.

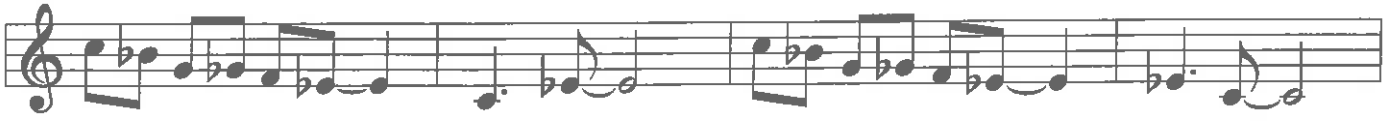
1a) Simple blues idea up and down the scale.



1b) Elementary "call and response".



1c) Development of previous phrase.

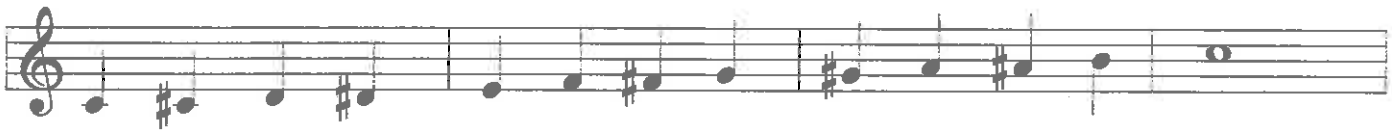


Discussion: Begin a historical "evolution" of the Blues. Assign research reports on various Blues "legends."

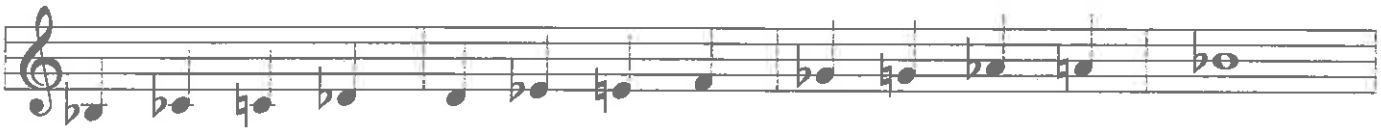
Listening: Begin a historical survey of the Blues music. Begin listening for the Blues form. Choose various "styles" and compare.

CHROMATIC SCALE

The chromatic scale could be said to be the "granddaddy" of all the scales found within the Equal Tempered System of Tonal Organization (gl). Built using the half step only, the series of pitches that emerges contains of all of the "legitimate" pitches found within our musical system. With this in mind, the idea emerges that *"particular groups of pitches that are potentially labeled as a type of scale in a particular key, all emerge and are derived from the one chromatic scale."* Example of a one octave (gl) ascending chromatic scale from the root "C." Play this on your instrument.



The next example is transposed down a whole step and respelt enharmonically.



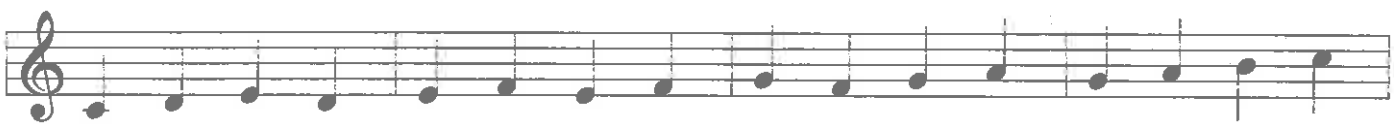
The chromatic scale is an integral part of "advanced" Jazz lines. Try inserting "bits" of this scale into your present musical ideas. I like to describe its color as "cascading", when used in a descending fashion and "blurred" when used ascendingly. Try approaching pitches or chords from a half step above or below. Try "surrounding" melody pitches with pitches a half step above and below. Try a similar approach with chords. *The ability to sing the chromatic scale confidently and accurately is a sure sign that one's "ears" are getting bigger.* Work to obtain this ability. Look to the Jazz lines section for melodic ideas utilizing this chromatic grouping.

PROLATIONS / SEQUENCE

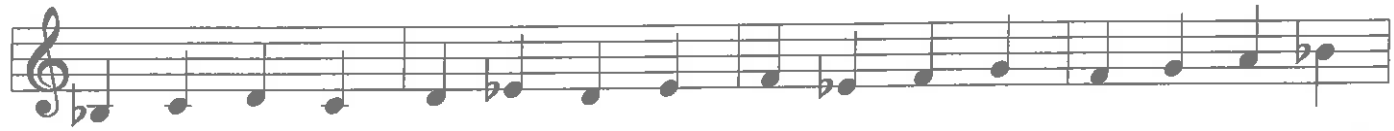
The following explanation and examples are included here to bring to light one "essential" of creating "personalized melodic line." If, as stated in the introduction, the same musical resources are available to everyone, why does each of us create such differing musical ideas? One major factor in this differentiation is how each of us "prolates" and "sequences" our melodic resources. Entire texts are devoted to these "treatments" of the "raw" melodic resources, i.e. scales etc. Look to the bibliography section for possible texts to augment your library.

To "prolate" musically is to basically create a melodic idea, i.e. "cell", and "expand and extend" it's dimensions. The term "sequence" is used here as elsewhere, as an "order of successive events", which in our case are "musical events." Please execute the following musical examples on your chosen instrument. Although some of the following musical ideas are somewhat elementary, the concept of prolation is *"totally essential."* These simple ideas begin the journey. For example, in "C" major, lets prolate the first three notes diatonically through the sequence created by an ascending major scale. With the appropriate letter names / scale degrees chart thus:

C	D	E	F	G	A	B	C	
1	2	3	4	5	6	7	8	
	C D E	D E F	E F G	F G A	etc.			
	1 2 3	2 3 4	3 4 5	4 5 6				

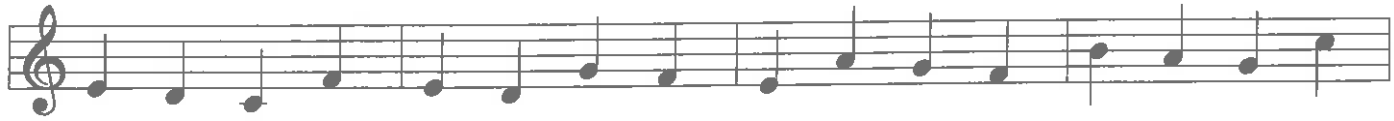


Transposed down a whole step for group performance.

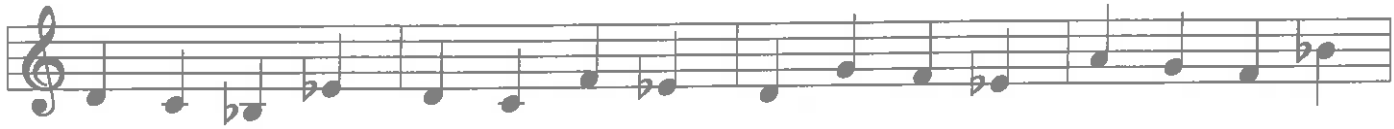


1) Let's reverse or "invert" (gl) our prolation using our same diatonic major scale sequence. Thus:

E	D	C	F	E	D	G	F	E	A	G	F, etc.
3	2	1	4	3	2	5	4	3	6	F	4

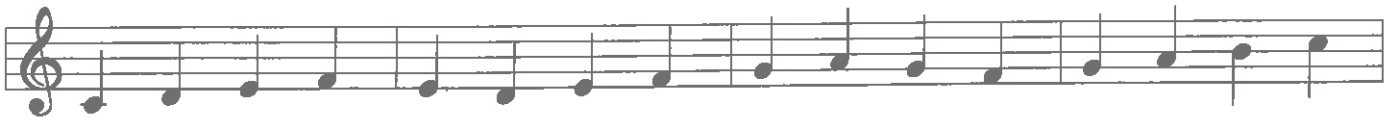


Transposed down a whole step for group performance.

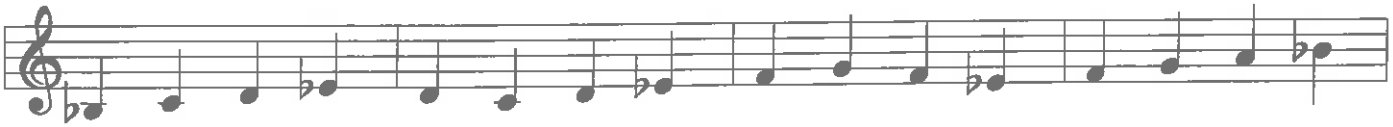


2) Let's combine the two above patterns using the same sequence.

C	D	E	F	E	D	E	F	G	A	G	F etc.
1	2	3	4	3	2	3	4	5	6	5	4

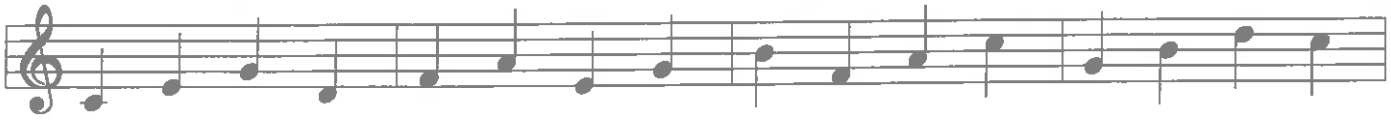


Transposed down a whole step for group performance.

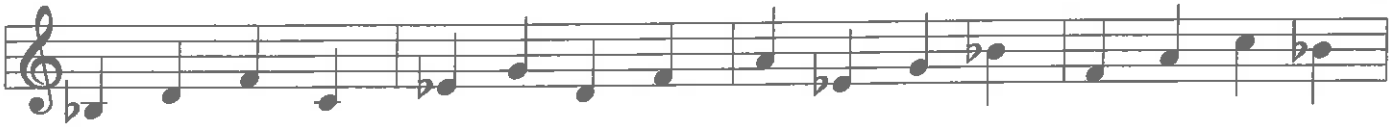


3) Let's use a different prolation for our "cell", using our same ascending major scale sequence.

C	E	G	D	F	A	E	G	B	F	A	C etc.
1	3	5	2	4	6	3	5	7	4	6	8

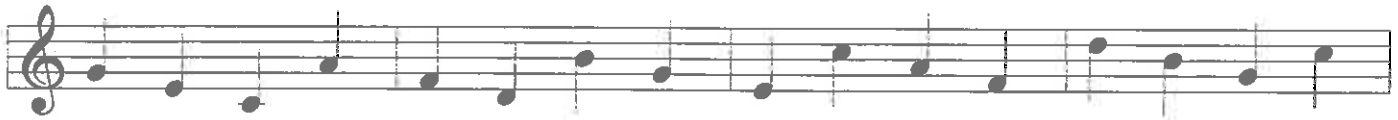


Transposed down a whole step for group performance.

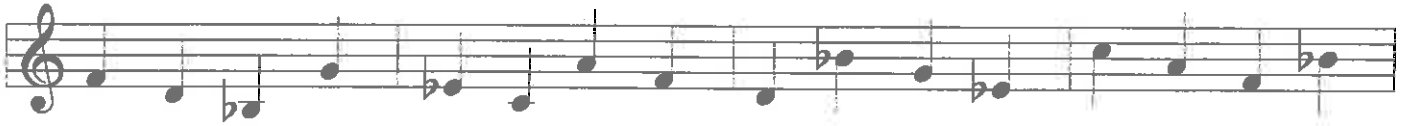


4) Let's reverse or invert our "cell" using the same diatonic sequence.

G E C A F D B G E C A F etc.
5 3 1 6 4 2 7 5 3 8 6 4



Transposed down a whole step for group performance.

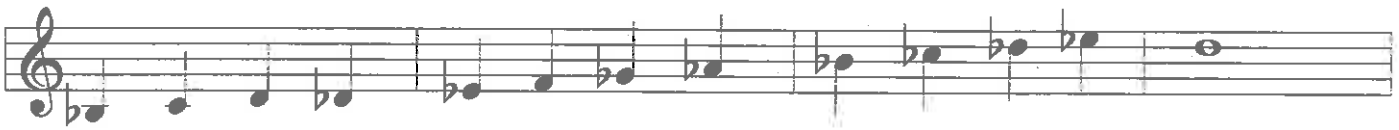


Beginning to see the possibilities? All of the interval studies back in chapter 1 are basically different "intervallic prolations" of the basic major scale.

5) Lets change our sequence to a cyclical major key sequence. For example, "C" to "Eb" to "Ab" to "Db." Lets use our first "cell" and prolate it through the above sequence. Numerical equivalents are based upon each of the four keys. Thus:

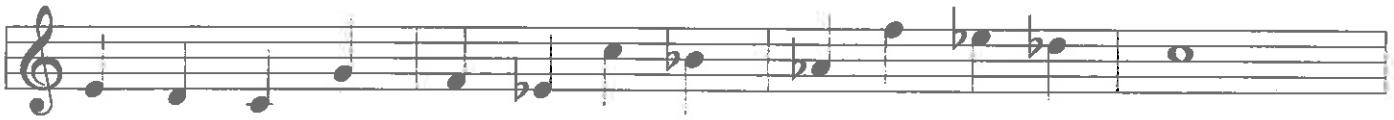
C D E Eb F G Ab Bb C Db Eb F etc.
1 2 3 1 2 3 1 2 3 1 2 3

Transposed down a whole step for group performance.

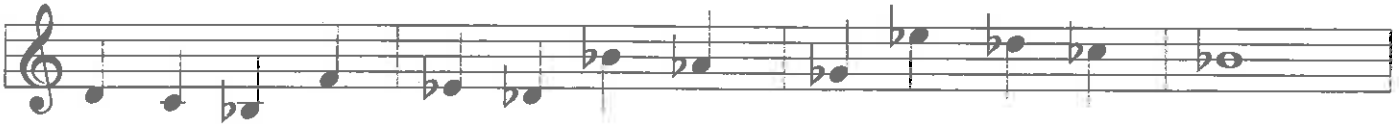


6) Let's invert the above prolation.

E D C G F Eb C Bb Ab F Eb Db etc.
3 2 1 3 2 1 3 2 1 3 2 1

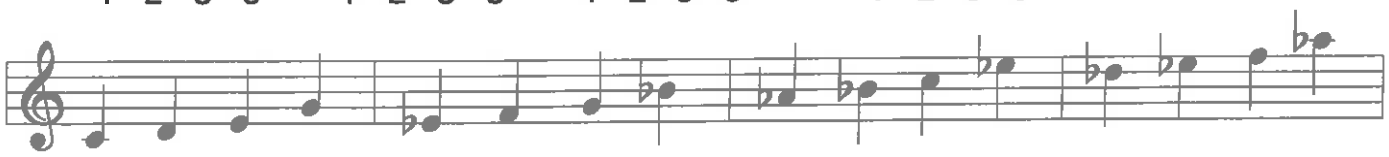


Transposed down a whole step for group performance.

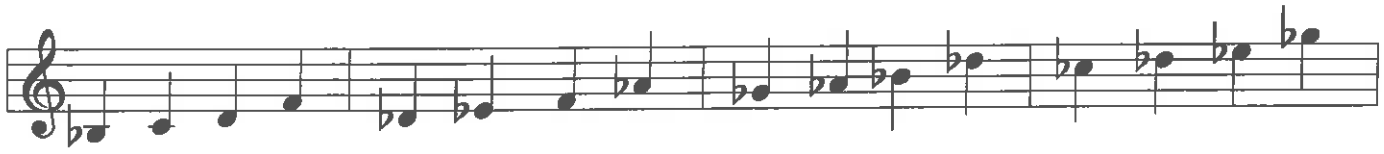


7) Let's move to a four note "cell" using a similar sequence.

C D E G Eb F G Bb Ab Bb C Eb Db Eb F Ab etc.
1 2 3 5 1 2 3 5 1 2 3 5 1 2 3 5

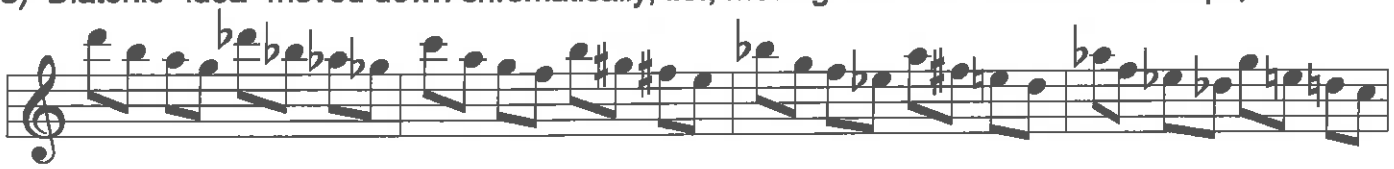


Transposed down a whole step for group performance.

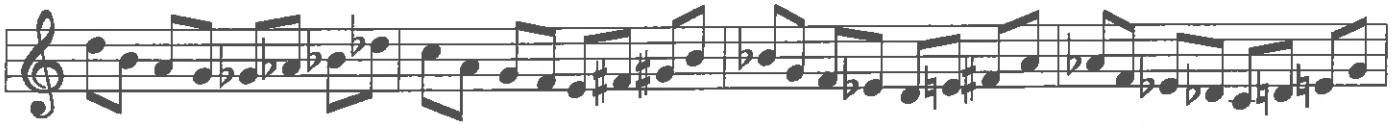


The possibilities are wonderfully "endless", again it is up to the individual to recombine existing elements into new configurations that personify their artistic statement. One potential "hazard" with prolating is to become redundant. *Let your own artistic taste and integrity be the guide.* One rule of thumb is to repeat a phrase or sequence three times, then move on.
Discussion: One excellent source for melodic sequence is found within music of the Baroque period. Which historically dates from roughly 1600 to 1750 AD. Composers such as J.S. Bach, D. Scarlatti, G.F. Handel and A. Vivaldi wrote vast amounts of musical compositions which in many instances employs melodic and harmonic sequencing that is truly remarkable. Check it out.
The following examples will prolate a melodic "cell" through a number of different types of sequences, each of which is identified and labeled. These sequential "treatments" are relatively common in the improvising musical language and are included here to broaden one's perspective. For diatonic intervallic ideas, see also Interval Studies Chart, chapter 1.

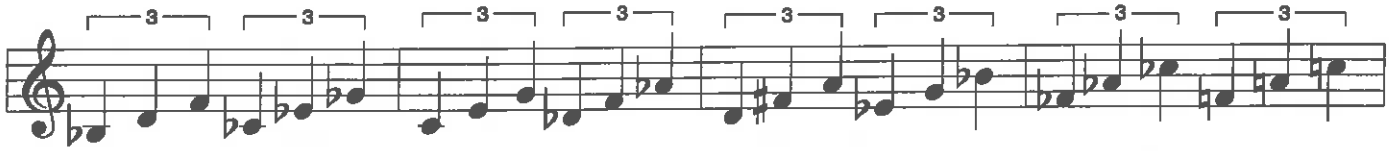
8) Diatonic "idea" moved down chromatically, i.e., moving one "lick" down in half steps;



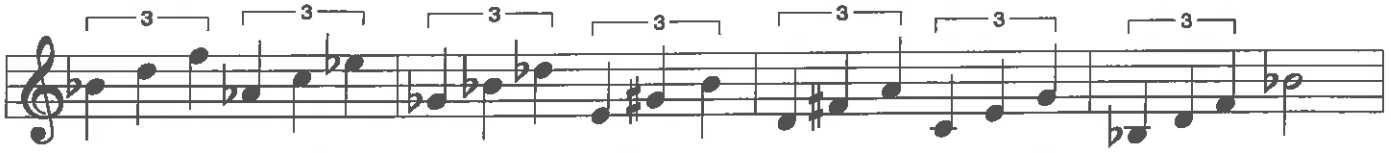
9) Inverting the second occurrence of the above idea and moving it down chromatically;



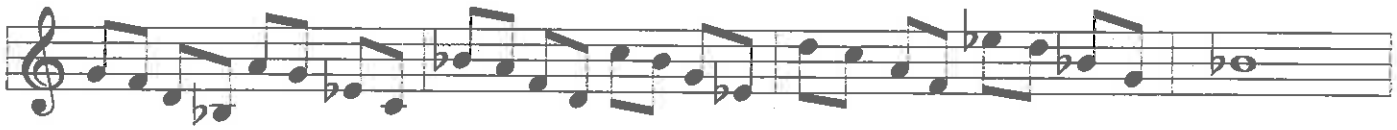
10) Major triads ascending chromatically, i.e., moving one shape up in half steps;



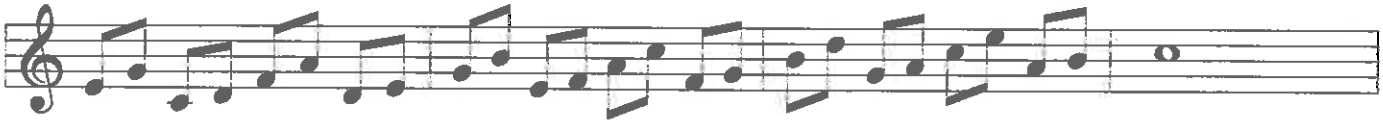
11) Major triads down in whole steps, i.e., moving one shape down in whole steps;



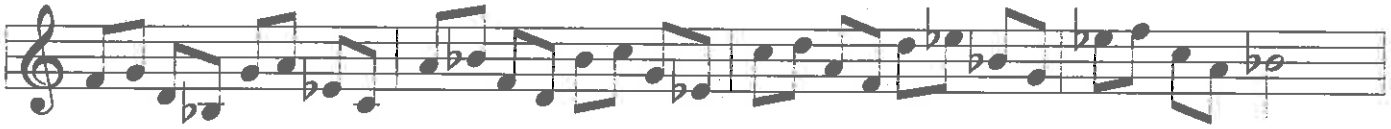
12) Diatonic idea generated through various scale degrees;



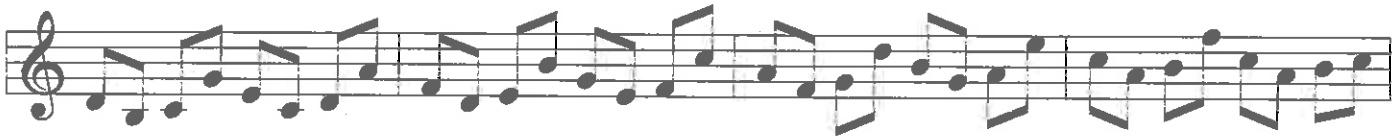
13) Diatonic idea generated through various scale degrees;



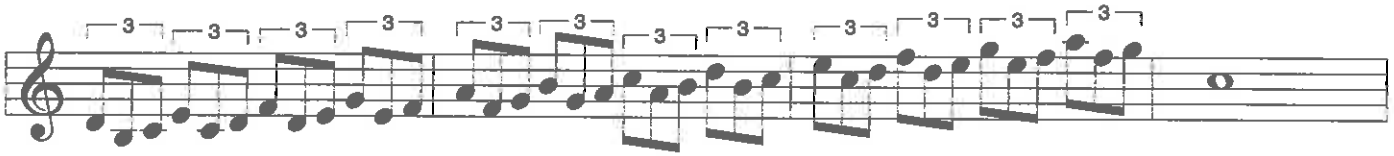
14) Diatonic idea generated through various scale degrees;



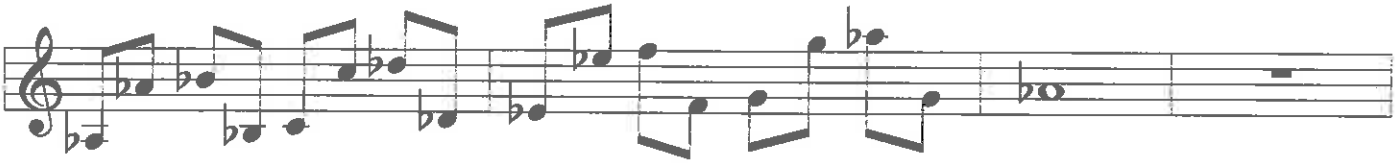
15) Diatonic idea generated through various scale degrees;



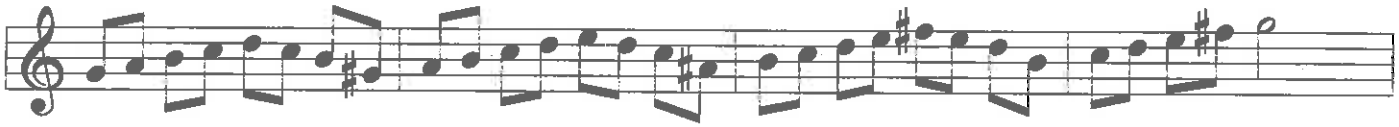
16) Diatonic idea generated through various scale degrees;



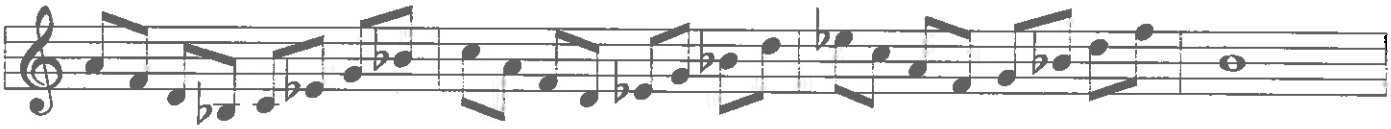
17) Diatonic idea generated through various scale degrees;



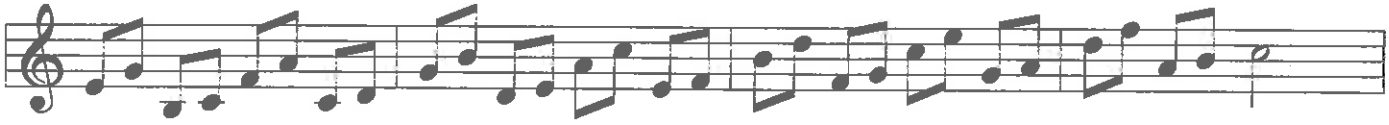
18) Diatonic idea generated through various scale degrees with half step lead in (gl);



19) Diatonic arpeggiated (gl) idea generated through various scale degrees;



20) Reprolation of previous musical idea;



Discussion: Discuss the concept of prolation from an artistic perspective. Illuminate the potential "building block" abilities of prolations in regard to the composing of musical compositions as well as in "building" their solos.

Exercises:

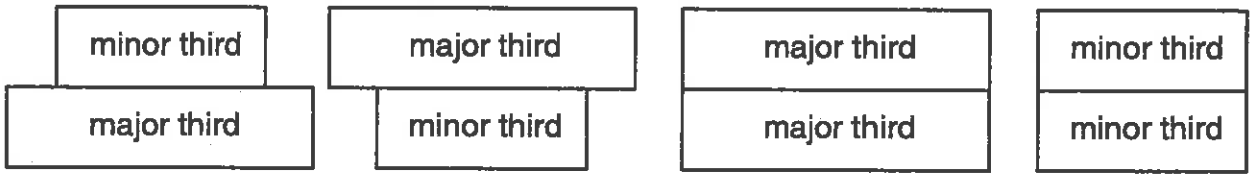
1) Have students analyze the above musical examples for the specific intervallic prolation employed.
2) Encourage students to create different prolations vocally as well as in performing on their instruments. Have students write their prolations out in standard musical notation. Manuscript is provided in the back of this text.
3) On the following manuscript provided, have students write a standard thirty two bar form composition developing one musical motif (gl) using prolation. For example, each of the "A" sections could be a different prolation of one idea. The "B" section could be in a different key featuring yet another prolation of the original idea. Perhaps use a melodic idea created in the minor scales and modes sections.

Listening:

1) "High Fly" by Randy Weston as performed by Dexter Gordon on his "Gotham City" release.
2) "My One and Only Love" by Wood / Mellon as recorded by Johnny Hartman with the John Coltrane Quartet on the "Ballads" release.
3) The bridge (gl) in Paul Desmond's "Take Five."
4) Select music from the Baroque period (1600-1750) and analyze and identify sequences and prolations.

Now that we've developed a resource for melodic or horizontal musical ideas, the next area to explore is the harmonic or vertical resource which is used to support and clarify melodic direction and intent. Diatonic harmony (gl) is derived directly from whatever melodic resource, i.e., scale, we choose. At this juncture we will concern ourselves again with the major scale. Once these harmonies are firmly established we'll gradually alter various aspects of our diatonic chords to create sounds and colors essential to the improvising musician's musical palette. Many approaches to learning harmony are available to us. The following program was developed by myself after a distressing bout while analyzing a "Bach chorale" and an illuminating conversation with a friend Larry Tutt, a tremendous Be-Bop (gl) alto saxophonist. The beauty is definitely in its simplicity. Please keep in mind that all aspects to be discussed, rules and processes that evolve, apply to *all* twelve major scales, as well as the other types of scales addressed previously. We're basically talking "tertian"(gl) harmony here, or more commonly referred to as chords built in thirds.

Basic three note chords or triads, derived from the major scale, are constructed with the intervals (gl) of the major and minor third, (please see the discussion of musical intervals on page 36 if you are unfamiliar with these terms). There are four basic possibilities for constructing three note chords (triads) with these two musical elements. These four different configurations form the basic triads to expand from into the upper structure (gl). They are the major, minor, augmented and diminished triads (chords). Using simple rectangles to illustrate the major and minor third, lets illustrate the building of these essential harmonic components of the Western System of Tonal Organization.



The addition of the Seventh chord tone to these four triads opens the way to discuss chord "type." This is done extensively in the section titled Chord Function and Families, which follows on page 48. The following brief discussion concerns itself with developing the ability to "spell" chords. This process should be accompanied with learning *all* the letters names of the pitches on your instrument. *The ability to "spell" any chord quickly and accurately is totally essential to any serious musician. Develop this ability so thoroughly that it becomes second nature, period!* Let's start simply by spelling out the notes of the "C" major scale:

C D E F G A B C

Now let's add a numeric value to each pitch. These numbers, one (1) through eight (8) are known as scale degrees, thus:

C	D	E	F	G	A	B	C
1	2	3	4	5	6	7	8

Again, the first scale degree in the key of "C" major is one (1), "D" is two (2) etc. Now let's re-spell our "C" major scale in thirds. This is achieved by skipping every other note and creates what is known as an "arpeggio" (gl).

C E G B D F A C

Now we'll apply numerical values to each pitch of our arpeggio:

C	E	G	B	D	F	A	C
1	3	5	7	9	11	13	15

Let's combine our "C" major scale with our "C" major arpeggio, including numerical values, into a type of chart that will help to graphically illustrate the process involved in spelling chords.

1	2	3	4	5	6	7	8
C	D	E	F	G	A	B	C

C	E	G	B	D	F	A	C
1	3	5	7	9	11	13	15

Chord progressions (gl), are created by composers to provide a "vehicle" to carry and support melodic ideas. A very simple and common chord progression, which has supported countless melodies over the centuries is termed the One (I), Four (IV) and Five (V). Notice that we've introduced Roman numerals to help clarify scale degrees. The following chart shows how they are used. The use of Roman numerals is standard practice among musical "theorists." Remember onwards that upper case Roman numerals denote scale degrees upon which major scales and major chords are diatonically derived, lower case are minor. Thus: the complete chart.

I	ii	iii	IV	V	vi	vii	VIII	Roman numbers
C	D	E	F	G	A	B	C	C major scale
1	2	3	4	5	6	7	8	scale degrees
C	E	G	B	D	F	A	C	C chord scale
1	3	5	7	9	11	13	15	chord degrees

Let's spell the triads, (three note chords), of our "I", "IV", and "V" chord progression.
Roman numeral number one (I) denotes the chord built on the first degree. This becomes the root (gl) of our "I", tonic(gl) or One chord. Find Roman numeral one in the chart and it's corresponding letter of the melodic scale. Thus the root of our One chord is "C." Locate "C" on the chord scale / arpeggio, there's a number one under it. Reading to the right of our chord scale we find the third of the one chord. The letter name is "E." The same applies to identifying the fifth of our triad built on the first degree of the "C" major scale. Reading across to the right of our chord scale, we find the letter "G", above the number five (5). Thus, our one chord (I) in the key of "C" major is spelt "C", "E", and "G." Locate and play these notes on your instrument as well as at the piano.

Now let's spell the triad built upon the fourth scale degree, known as the Four (IV) chord. Find the fourth scale degree of our "C" major scale. This is the root of our Four chord. Its letter name is "F." Find "F" in the chord scale. Reading to the right we see the letters "A" and "C" immediately following after "F." Thus, "F", "A", and "C" are the root, third and fifth of the triad built on the fourth scale degree of the "C" major scale. What you're actually doing mentally is to "slide" the numerical values under our chord scale positioning the number one (1), underneath the letter "F." Thus, one (1), three (3), and five (5) correctly correspond to the letter names "F", "A", and "C." Let's move onto the Five (V) chord in the key of "C" major. Locate the fifth scale degree of our major scale built on "C." You'll find the fifth scale degree to be the letter "G." Move down to the chord scale and locate the letter "G." This will be our root. Mentally "sliding" our chord scale numbers and reading to the right, we see the letters "B" and "D", immediately following the letter "G." Thus, "G" is our root (gl), "B" is the third (3), "D" is the fifth (5), of our three note triad built on the fifth scale degree of our "C" major scale. To review, let's spell out the triads for the One, Four, and Five chords in the key of "C" major.

One (I)	=	C, E, and G
Four (IV)	=	F, A, and C
Five (V)	=	G, B, and D

Points to consider while spelling diatonic triads:

1) That our melodic and chord scales contain the same letter names or pitches, see chart above.

2) That the mental ability to "slide" the numerical values of our chord scale to position the number one (1) under the letter name of the root of the chord to be spelled will greatly facilitate your learning and memorizing this material.

3) Explore the intervals used to create this simple musical structure, i.e. the triad that forms the basis for so much good music!

4) Melodically speaking, every renowned improvising musician has used the three notes of the triad in various configurations as a basis for melodic ideas. For example, new melodic and harmonic ground was broken by John Coltrane with his historic writing and recording of "Giant Steps", Atlantic Records, which could be said to be based on a particular cycling of major triads. All "Jazz" musicians are encouraged to seek out and absorb "Tranes" intellect and energy in this recording as he deftly weaves simple triads into complex levels of improvisation.

5) The triad and it's extensions could be grouped with various musical styles. Folk music generally employs simple triads. Rock and Blues generally rely heavily on triads oftentimes with the addition of the seventh, usually the b7, i.e. blue "seventh." Jazz artists utilize the entire spectrum of color through use of triads, their upper extensions and the full range of potential modulations and substitutions provided by the provided by the Equal Tempered System of Tonal Organization. Explore and experiment !

Let's spell all eight diatonic triads in the key of "C" major:

I	ii	iii	IV	V	vi	vii	VIII
C	D	E	F	G	A	B	C
1	2	3	4	5	6	7	8
C	E	G	B	D	F	A	C
1	3	5	7	9	11	13	15

C	(major)	=	C, E, and G
D	(minor)	=	D, F, and A
E	(minor)	=	E, G, and B
F	(major)	=	F, A, and C
G	(major)	=	G, B, and D
A	(minor)	=	A, C, and E
B	(dimin.)	=	B, D, and F
C	(major)	=	C, E, and G

Note: although the triad built on the seventh degree is a minor chord, it's fifth is altered down a half step becoming diminished. A fuller explanation of this situation is found in section F.

You may be beginning to wonder about the seven (7), nine (9), eleven (11), and thirteen (13) and fifteen (15) as a part of our numerical values of our chord scale. These chord scale degrees are essential to the improvising musical artist and will be fully discussed in the following pages.

Complete the following exercises using a piano if possible to build cognitive strength for spelling diatonic triads in all twelve keys. *Execute the triads at the piano for each key* as you proceed.

	1	2	3	4	5	6	7	8
	C	D	E	F	G	A	B	C
	C	E	G	B	D	F	A	C
	1	3	5	7	9	11	13	15

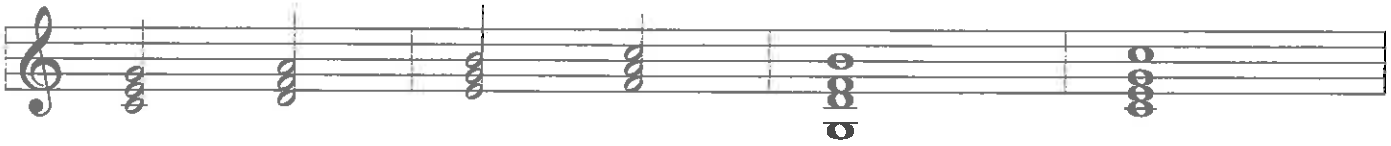
Key of "C" major:	C	Major	___	___	___	G	Major	___	___	___
	D	Minor	___	___	___	A	Minor	___	___	___
	E	Minor	___	___	___	B	Dimin.	___	___	___
	F	Major	___	___	___					
Key of "F" major:	F	Major	___	___	___	C	Major	___	___	___
	G	Minor	___	___	___	D	Minor	___	___	___
	A	Minor	___	___	___	E	Dimin.	___	___	___
	Bb	Major	___	___	___					
Key of "Bb" major:	Bb	Major	___	___	___	F	Major	___	___	___
	C	Minor	___	___	___	G	Minor	___	___	___
	D	Minor	___	___	___	A	Dimin.	___	___	___
	Eb	Major	___	___	___					
Key of "Eb" major:	Eb	Major	___	___	___	Bb	Major	___	___	___
	F	Minor	___	___	___	C	Minor	___	___	___
	G	Minor	___	___	___	D	Dimin.	___	___	___
	Ab	Major	___	___	___					
Key of "Ab" major:	Ab	Major	___	___	___	Eb	Major	___	___	___
	Bb	Minor	___	___	___	F	Minor	___	___	___
	C	Minor	___	___	___	G	Dimin.	___	___	___
	Db	Major	___	___	___					
Key of "Db" major:	Db	Major	___	___	___	Ab	Major	___	___	___
	Eb	Minor	___	___	___	Bb	Minor	___	___	___
	F	Minor	___	___	___	C	Dimin.	___	___	___
	Gb	Major	___	___	___					
Key of "Gb" major:	Gb	Major	___	___	___	Db	Major	___	___	___
	Ab	Minor	___	___	___	Eb	Minor	___	___	___
	Bb	Minor	___	___	___	F	Dimin.	___	___	___
	Cb	Major	___	___	___					
Key of "B" major:	B	Major	___	___	___	F#	Major	___	___	___
	C#	Minor	___	___	___	G#	Minor	___	___	___
	D#	Minor	___	___	___	A#	Dimin.	___	___	___
	E	Major	___	___	___					
Key of "E" major:	E	Major	___	___	___	B	Major	___	___	___
	F#	Minor	___	___	___	C#	Minor	___	___	___
	G#	Minor	___	___	___	D#	Dimin.	___	___	___
	A	Major	___	___	___					

Key of "A" major:	A Major	___	___	___	E Major	___	___	___
	B Minor	___	___	___	F# Minor	___	___	___
	C# Minor	___	___	___	G# Dimin.	___	___	___
	D Major	___	___	___				
Key of "D" major:	D Major	___	___	___	A Major	___	___	___
	E Minor	___	___	___	B Minor	___	___	___
	F# Minor	___	___	___	C# Dimin.	___	___	___
	G Major	___	___	___				
Key of "G" major:	G Major	___	___	___	D Major	___	___	___
	A Minor	___	___	___	E Minor	___	___	___
	B Minor	___	___	___	F# Dimin.	___	___	___
	C Major	___	___	___				

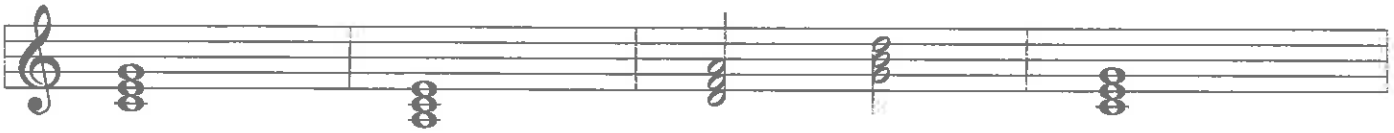
COMMON CHORD PROGRESSIONS: The chord progressions listed below are essential in developing the ability to hear harmonic "direction." These simple progressions have supported countless melodies and lyrics over the centuries. The use of Roman numerals eases transposition to all twelve keys, the numerals corresponding to scale degrees. By learning to hear and identify chord changes by their numerical equivalent within a given key, the transposition to the other keys is greatly facilitated. Only the treble clef will be used in the examples throughout this text. When executing musical examples at the piano, play the lower pitches with the left hand if necessary.

1a) One to Four to Five to One.

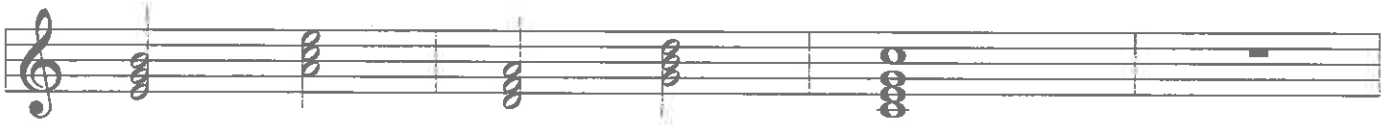
1b) One to Two to Three to Four to Five to One.



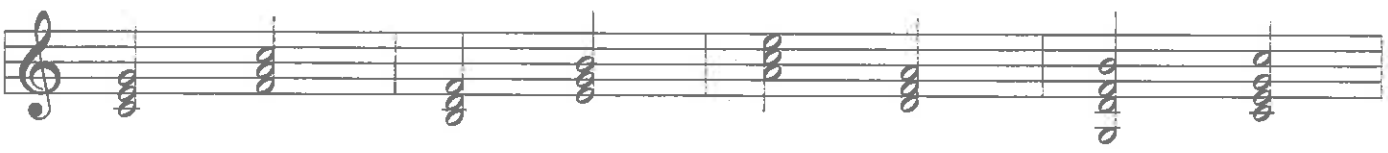
1c) One to Six to Two to Five to One.



1d) Three to Six to Two to Five to One.



1e) One to Four to Seven to Three to Six to Two to Five to One.



INVERSIONS Triads such as "C" major, spelt C, E, G, can be found in what musicians call different "inversions"(gl). This juxtaposition of the triad is intellectually a very simple process and the rules and terms basically apply to any triad. With three note chords there are basically two "inversions", each denoted by a different name. The previous exercises spelling out the seven diatonic triads in the twelve keys found all of the chords in what is termed "root"(gl) position. Thus, a "C" major triad in "root" position finds the letter name "C" as the lowest pitch of the chord, thus,

fifth	G		third	E
third	E	or	fifth	G
root	C		root	C

The "C" triad in "**first inversion**" would find the third of the chord ("E") as the lowest pitch.

C		G	generated notated	I	or	"C" / "E"
G	or	C	as	6		
E		E		3		

"**Second inversion**" finds the fifth of the triad ("G") in the bass, i.e. the lowest pitch in the chord.

E		C	generated notated	I	or	"C" / "G"
C	or	E	as	6		
G		G		4		

"**Third inversion**" would find the seventh of the chord in the bass, "**fourth inversion**" would have the ninth of the chord in the bass etc. Each of the "voicings" have different musical timbres (gl) although their musical function is essentially the same. Use of the different inversions smooth out more advanced chord progressions and provide yet another "variety" of possible choices. Obviously root position triads have a firmer sense of tonal centering, first inversion is a bit of a "softer" tonic quality, while second inversion adds a bit of brightness and fullness to root position chords. Third inversion "obscures" the "tonal" intent. A fourth inversion situation is common with triads, i.e., try using a "Ab" triad over a "Bb" bass. The above "characterizations of inversions" is how I hear and describe these possible voicings. Each player must examine the possibilities and decide on their appropriate usage and characterization themselves. Actual use of inversions requires good "ear strength." Start with root position chords and thoroughly lock in their harmonic and cadential (gl) motion. As one evolves artistically, use of first, second, third inversion chords will gradually become essential in their art. Let this process "organically" happen. Listening, exploring and experimentation are the three key activities into incorporating the different colored "hues" provided by inversions into your artistic musical expressions. A bit of advice when using and identifying inversions, as my college professor Doctor Miller used to say,

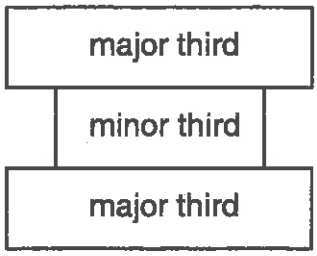
*"if you **think** from the actual root of the chord, you'll never get lost."*

Discussion: Discuss the importance of thoroughly learning the material in this section for the improvising musician.

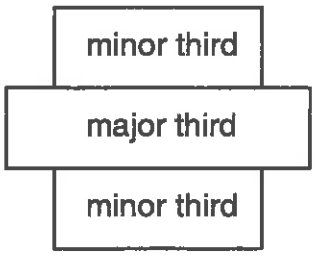
Exercises: Harmonize the musical examples on pages 6 and 7.

The next section of this program begins to collate the previous information provided, directing the thought process to think in terms of a working approach to creating melodies over a particular group of chord changes. The vast majority of chords within the tonal universe can be categorized by their particular sound and function. As analysts, we may choose to view individual chords as a member of one of three families. They are the Tonic (I), Two chord (ii), and Dominant families (V) (gl). The remainder of this section will address each of these three chord families individually, provide worksheets for exercising our new knowledge and lay the ground work for developing a melodic palette of colors to be used at the artist's discretion. *All chords from this point on will include their diatonic seventh, so necessary for grouping a particular harmony into one of the three families.* We'll also begin to incorporate the upper structure (gl) values, i.e.,9,11,13 and 15. When first attempting to build larger chord structures utilizing upper structure components, always try to physically and / or intellectually include all or as many of the pitches below that level chosen to balance your sonority and thinking. The chords built on the Third, Fourth, Sixth and Seventh degree of the diatonic major scale are also included at the end of this discussion to round out our discussion of diatonic chord function.

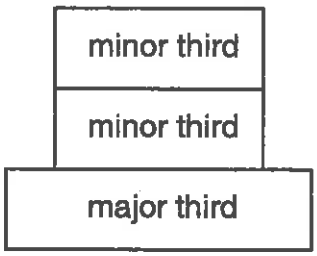
Let's start the discussion of the "families" of harmony by viewing the three groups in terms of their intervallic building components. As with the discussion of triads in the preceding section, the following illustration illuminates the essential building blocks of each of the three chord "types."



Major seventh
I maj 7



Minor seventh
ii min 7



Dominant seventh
V 7

As we can see by the above illustration, our essential components are again the major and minor third. Some aspects worth noting

1) That in the upper part of the major seventh chord is a minor triad. In "C" major the tonic major seventh is spelt: "C", "E", "G", "B." Thus the minor triad is an "E" minor triad spelt "E", "G", "B." The recognition of the minor triad in the upper part of the tonic major seventh potentially creates a "building block within a building block" so to speak. As we advance into more extended tonic sonorities, the component triads in the upper structure (gl) become new tools for the creating of melodic and harmonic ideas.
2) That in the upper part of the Two minor seventh chord we find a major triad. The Two minor seventh is spelt: "D", "F", "A", "C." Thus the major triad in the upper part is an "F" major triad spelt: "F", "A", "C." As with the tonic sonority, this major triad in the upper part of the minor seventh chord will become a useful tool. It also raises the question of why using Two instead of Four?
3) That in the upper part of the dominant seventh chord we find a diminished triad. The dominant is spelt: "G", "B", "D", "F." Our diminished chord is: "B", "D", and "F." *This diminished triad contains the tritone interval, which forms the basis of the dominant coloring.* The upper part of the dominant family of chords will eventually provide an inexhaustible reservoir for melodic and harmonic possibilities to the improvising artist. With this in mind, let's discuss each of the three chord type families individually.

TONIC HARMONY

The tonic family of chords is simply a group of chords or voicings (gl) that provide the stability necessary to establish a particular key as the overall or temporary tonal center of a musical expression. Tonic type chords are built on the first scale degree of the sequence or group of pitches that establish the key of the music we're performing. Let's refer back to the "C" major scale and its arpeggio. We'll linearly illustrate this scale and arpeggio as previously done.

1	2	3	4	5	6	7	8
C	D	E	F	G	A	B	C
C	E	G	B	D	F(#)	A	C
1	3	5	7	9	#11	13	15

The essential part of tonic harmony that structurally provides the quality of sound associated with the tonic family are the third degree of the chord and the seventh degree. Let's spell out a "C" major seventh chord, i.e., the tonic triad with it's diatonic seventh:

1	3	5	7
C	E	G	B

The third "E" is a major third above "C". The seventh of our chord "B", is a major seventh above our root, "C". Find and create this sequence on your instrument and begin to get a feel for its relative stability and warm sonority. Let's expand and create other colors of Tonic type chords by moving into the upper structure of our arpeggio.

1	3	5	7	9	#11	13	15
C	E	G	B	D	F#	A	C#

A beautiful tonic color is the "C" major 7 add 9 (C major 9). A bit more adventuresome color is the "C" major 9 # 11. Extending our search we can now include the thirteenth, "A", which when combined with our triad, "C", "E", "G", the major 7 "B", the major 9 "D" and #11 "F#", produces a sound which is broad but restive. Experiment with these sounds on your instrument as well as at the piano. Use the sustain pedal to help you build these wonderful tonic colors. Three important points to consider.

1) That the arrangement of pitches, i.e. "voicing" (gl) of your chords are basically left to the artist's discretion unless otherwise directed. Refer to the "tonic" voicings which follow for shapes to help you get started.

2) That the eleventh (11th) scale degree of our tonic family is raised a half step to avoid the tonal conflict which would be created if the natural eleventh, "F", was used simultaneously with the major 3rd of "C" major, "E". Experiment with both the natural eleven, "F", and the sharp eleventh (F#) and let your ears be the guide.

3) The sharp fifteenth, which in the above case is "C#", is the next "correct" pitch in the arpeggio and sounds wonderful as the closing phrase of an arrangement, see arpeggio shape below. For further discussion and extensions of this arpeggio see "Overtone Series Experiment."

4) Stacking fourths above the root, i.e. C, E, A, D, G, or C, A, D, G, C, etc. produces some beautiful colors. Chords built thus are referred to as "quartile harmony" (gl) and are discussed later in this section. Tonic chords built in fourths are also included in the following group of shapes. Complete the worksheet spelling out some of the various tonic sonorities available to the creative musician. Begin to play these arpeggios (gl) on your instrument. Build the scale / chord model for each key to facilitate the spelling of these tonic function chords.

1a) C major 7
1b) Db major 9
1c) D major 7 6/9
1d) Eb major 7
1e) E major 7b5
1f) F major 9
1g) Gb major 7
1h) G major 7 / 13
1i) Ab major 7
1j) A major 9 / 13
1k) Bbmajor 9 #11
1l) B major 7

Below are some Tonic voicings and arpeggios based on the above ideas. All of the following shapes will function well in a Tonic or Four chord (IV maj 7) capacity. Although we'll use the key of "C" major as the root pitch for all of the examples which follow, the labels identifying each of the voicings substitute the upper case number one (I) for the letter "C", creating a more "chord type" approach. Revoice (gl) the pitches as you see fit, i.e., experiment. Omission of the root from the following voicings create simple but essential "inversions", potentially very essential if there is a bass player on the gig. Begin transposing the colors which work for you to the other eleven keys. Perhaps take a comfortable shape and move it up and down chromatically, maintaining the proper intervals and keeping track of the tonal center. For the Tonic arpeggios, only two arpeggio shapes are shown below. The first encompasses the major seventh color. The second shape extends up through the sharp fifteenth, perhaps the full "practical" range of the tonic grouping (for starters anyway). Do prolate these shapes to suit your needs. For your chosen instrument, research and obtain a "method" book that will contain numerous scalar and arpeggiated exercises. Look to the individual instruments section in the back of this text for a listing of supplemental books.

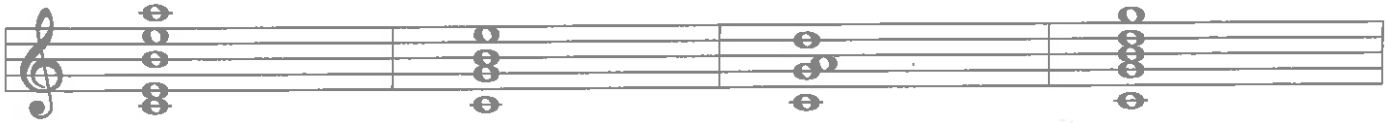
Discussion: Discuss the "relative" stability of various tonic sonorities and their artistic implications as the tonic colors evolve from simple triadic, major sixth and major seventh sounds into the potentially denser colors created by extending the tonic arpeggio. Look at the relationships between various styles of music and what configurations of tonic sonorities they generally employ.
Exercises: Eventually execution of the following voicings in all twelve keys. Write out the voicings as needed. Begin transposing the major seventh arpeggio shape to the other eleven keys, gradually increase the tonal range of this arpeggio to include more of the upper structure (gl) components. Try taking one voicing and moving it up and down chromatically. This becomes an essential component in the execution of the "half step lead in" (gl).
Listening: So much to choose from in regards to tonic harmony in the major key environment. What might be of concern here is the development of the recognition and ability to hear the resolution of particular chords as well as the initial realization of the motion to and from tonal centers. It all depends on the level and abilities of the reader. Although perhaps a bit unorthodox, the authors recommendation in this area of study would be to encourage students to "actively" listen to the music they love best and perhaps aspire to perform, and begin to listen for the elements that we are discussing at this juncture, i.e., chord function and families. I sometimes listen to the "oldies" station while driving in my "71" V.W. bus, they seem to go together. Anyway, the lyrics, melodies and harmonies are generally pretty distinct, making the harmonic motion readily identifiable. I also love to sing, and although I sing terribly, it sure is a lot of fun and good for my soul. So, I try to combine the best of both, aurally analyze the chord progression while trying to sing the melodies with my own interpretation, check it out for your own tastes in music. The classical station is also a good source for a "real time" (gl) analytical listening situation.

Starting out with blocks of tonic harmony in root position in "C" major.

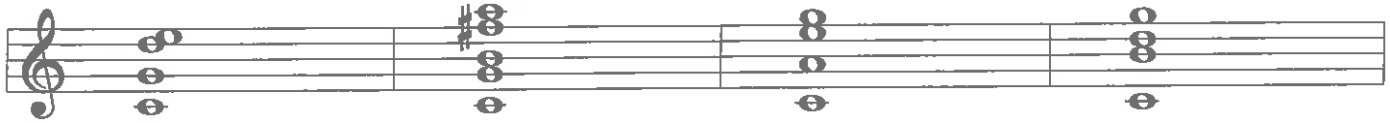
I maj 7 | I maj 9 | I maj 9 #11 | I maj 9 #11 13

I maj 9 # 11 # 15 | I maj 6 9 # 11 | I maj 6 / 9 | I maj 9

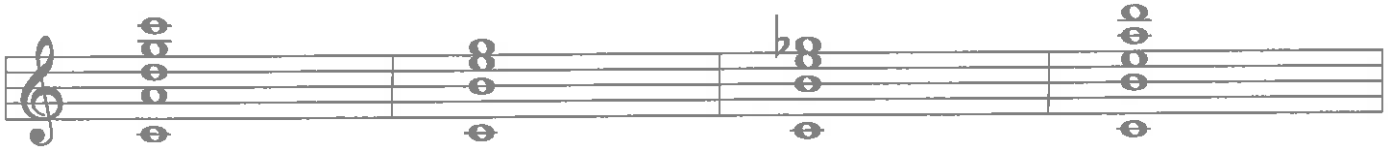
I maj 7 13 | I maj 7 | I maj 6 / 9 | I maj 9



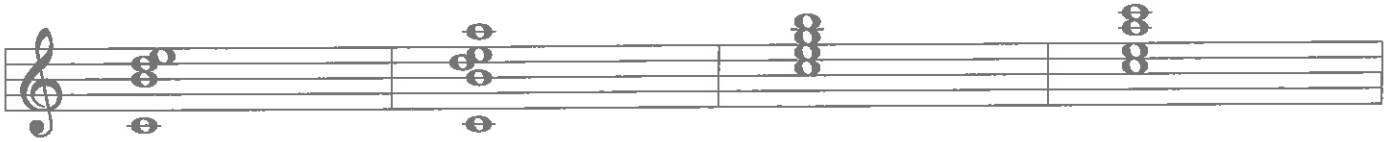
I maj 9 | I maj 9 #11 | I maj 6 | I maj 9



I 6 / 9 | I maj 7 | I maj 7 b5 | I maj 7 6 / 9

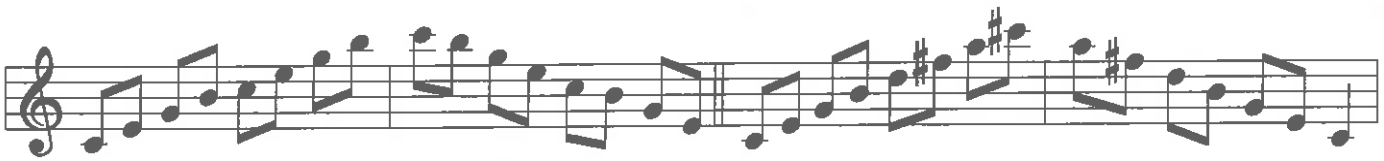


I maj 9 | I maj 9 13 | I maj 7 | I maj 6



I maj 7 | I maj 7 #11 | I 6 / 9 / III (E) | I maj 7 6 / 9 / III

Tonic arpeggios:



THE TWO CHORD: Let's move onto the Two (ii-7) chord family. Essentially a minor triad, the Two chord is built from the second scale degree of our tonic scale. So for our purposes, the tonic of "C" major. Again our chart:

1	2	3	4	5	6	7	8
C	D	E	F	G	A	B	C
C	E	G	B	D	F	A	C
1	3	5	7	9	11	13	15

The discerning eye will immediately notice that we're using our diatonic "F" natural again. Let's see why. Our Two chord is built on the second scale degree of our chosen scale, in this case "C" major. Let's spell the Two minor seventh chord:

1	3	5	7
D	F	A	C

The essential intervallic components of our Two chord family is the use of the minor third "F" above the root, as well as the minor seventh, b7, "C" above our root "D". Extending into the upper structure we arrive at:

D	F	A	C	E	G	B
1	b3	5	b7	9	11	13

The sonority of the minor triad dictates the use of the natural eleven, "G", due to the potential conflict with the third "F" natural, one of the three "pillars" of the simple triad. Experiment at the piano using both the "G" natural and "G#." Let your ear be the guide. Complete the following exercises spelling some of the various "colors" available within the Two chord family.

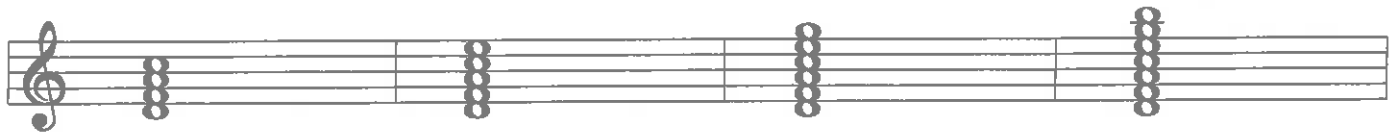
2a) D minor 7	___	___	___	___	___	___	___
2b) Eb minor 7b5	___	___	___	___	___	___	___
2c) E minor 6	___	___	___	___	___	___	___
2d) F minor 9 13	___	___	___	___	___	___	___
2e) F# minor 6/9	___	___	___	___	___	___	___
2f) G minor 11	___	___	___	___	___	___	___
2g) Ab minor maj 7	___	___	___	___	___	___	___
2h) A minor 7b5	___	___	___	___	___	___	___
2i) Bb minor 7	___	___	___	___	___	___	___
2j) B minor 9	___	___	___	___	___	___	___
2k) C minor 9 13	___	___	___	___	___	___	___

Historically, the Two chord configuration, with it's minor triad, functions in basically two fashions. One use is as the overall tonic of a musical composition which is based in the minor color. Next, the Two minor seventh chord functions as a passing chord to Three (iii) or as the first component of the "tension / release cell", the Two / Five / One chord progression. Functioning as a preliminary to the dominant, the Two chord moves to the tritone containing Five chord, which then resolves toward the tonic. The following shapes are presented as members of the Two chord "family." What other scale degrees generate the basic minor triad? Will these voicings apply?

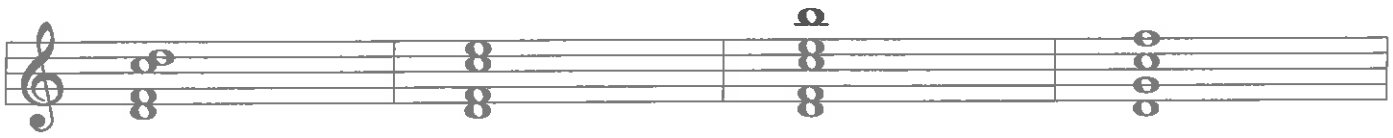
Discussion: Begin to examine the Two / Five / One cell. Begin to discuss the concept of chord "type" in relation to the three basic harmonic types, i.e., tonic (I), minor seventh (ii min 7) and dominant (V7). Discuss the tonic minor key "environment" in contrast to the tonic major.
Listening: Lots to choose from in the minor tonic sonority, T. Monk's "Round About Midnight" comes to mind. Note relationship between the Two and Six chords.

Here are Two chord voicings and arpeggios based on the above concepts. We'll substitute ii for the root "D" for our examples. These shapes will also function as the Three and Six chords.

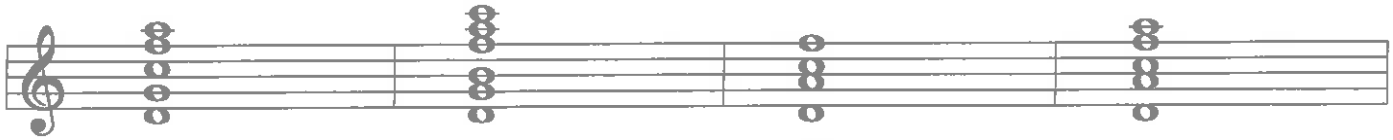
ii min 7 ii min 9 ii min 11 ii min 11 13



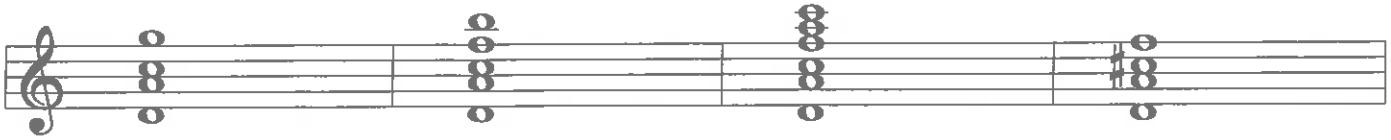
ii min 7 ii min 9 ii min 9 13 ii min 11



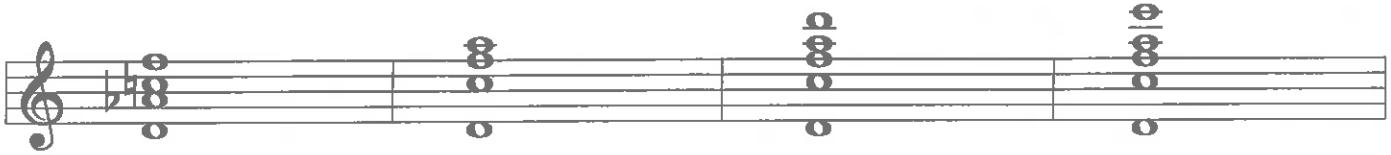
ii min 11 ii min 11 13 ii min 7 ii min 7



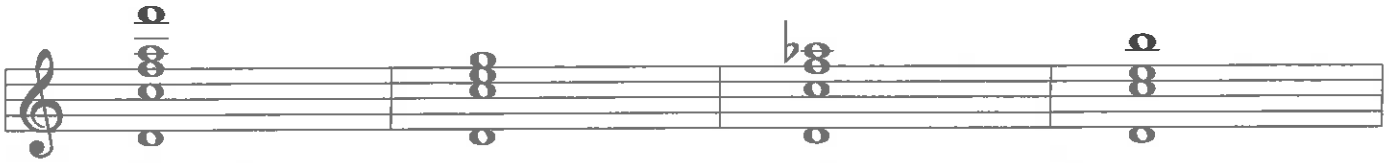
ii min 11 ii min 7 13 ii min 7 ii min / maj 7



ii min 7 b5 ii min 7 ii min 7 ii min 9

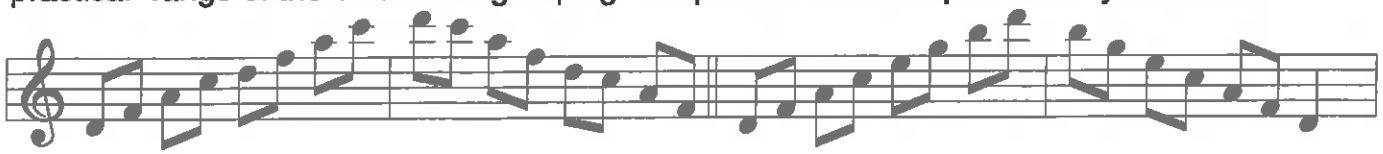


ii min 7 ii min 9 11 ii min 7 b5 ii min 9 13



ii min / maj 7 ii min 9 / maj 7 ii min 9 ii min 9

Two chord arpeggios: Only two arpeggio shapes are shown below. The first encompasses the minor seventh color. The second shape extends up through the fifteenth, perhaps the full "practical" range of the Two chord grouping. Do prolate these shapes to suit your needs.



THE DOMINANT CHORD

The last "family" to look at is our dominant seventh tonality. This family is of a resolving nature usually preceded by some type of Two minor seven or Four chord and resolving to a "tonic" type structure. *It's upon the shoulders of the dominant seventh family that much of the dissonance and created tension in Western tonality is found.* Alterations of the component parts of dominant seventh chords are as varied as the players who use them. Of the three families of chord types, dominant seventh chords are the most widely altered and substituted for, potentially becoming a inexhaustible resource. Right now, we follow our present line of presentation for the dominant chord. We'll follow later with a more in depth analysis of the dominant seventh as well as derive various substitutions (gl) and their inherent linear counterparts. Thus our chart for "C" major:

1	2	3	4	5	6	7	8
C	D	E	F	G	A	B	C
C	E	G	B	D	F	A	C
1	3	5	7	9	11	13	15

Dominant seventh chords are built on the fifth scale degree of our major scale. Find the fifth scale degree, this will be our root of the dominant seventh.

G	B	D	F	A	C(#)	E
1	3	5	7	9	#11	13

The two key structural components of the dominant seventh family are the same as for the tonic and Two chord families, namely the third of the chord, which is the interval of a major 3rd and the seventh, which in a dominant seventh chord spans the interval of a *minor seventh*. The dominant seventh group provides a different sort of challenge than the task presented with tonic or Two chord harmony for the improvising musician. Melodic ideas that are termed "inside" and "outside" tonality (gl), are most easily applied and understood in relation to the dominant seventh family, due to this group of chords ability to create tension. Artistically, we want to create tension and release it. This tension and release is tonally achieved primarily by use of dominant seventh sounding chords (V7) and their resolution to tonic sounding chords. The tension inherent in dominant seventh chords is basically centered around the "tritone" (gl) interval created between the third of the chord and the seventh. Thus in the key of "C" major, the dominant seventh chord is spelt:

1	3	5	b7
G	B	D	F

The tritone interval (augmented fourth / diminished fifth) is created between the "B" natural and "F" natural. One consonant resolution of this tritone interval in the key of "C" major could be:

B	resolves to	C
F	resolves to	E

Please, play this on your instrument, if possible, or at the piano. This tonal concept and the resulting sounds are very important.

Notice that the eleventh (11th) of our dominant seventh is raised a half step. This conforms with the rule stated with tonic type chords that when the third employed in the triad is a major third, the eleventh chord degree is raised a half step to avoid the tonal conflict between the third degree of the chord and the diatonic eleventh, i.e., "B" and "C", which combines to create the interval of a minor ninth. Experiment by playing the full dominant 7 arpeggio, comparing the natural eleven in this case "C", and the raised eleventh "C#". Let your ear be the guide.

A special case outside of this logic must be illustrated. A beautiful and common sound is known as the "G7" suspended fourth, generally identified by the symbol "G7 sus4." Let's compare the "G7" sus4 to our generic "G7":

		1	3	5	b7
G7	spelt	G	B	D	F
G7 sus4	spelt	G	C	D	F

The only difference, as you see, is that the third of the chord is raised one half (1/2) step up to "C", the diatonic fourth scale degree from "G." Many musical situations use the "G"7 sus4 followed by "G"7. One possible "realization"(gl).

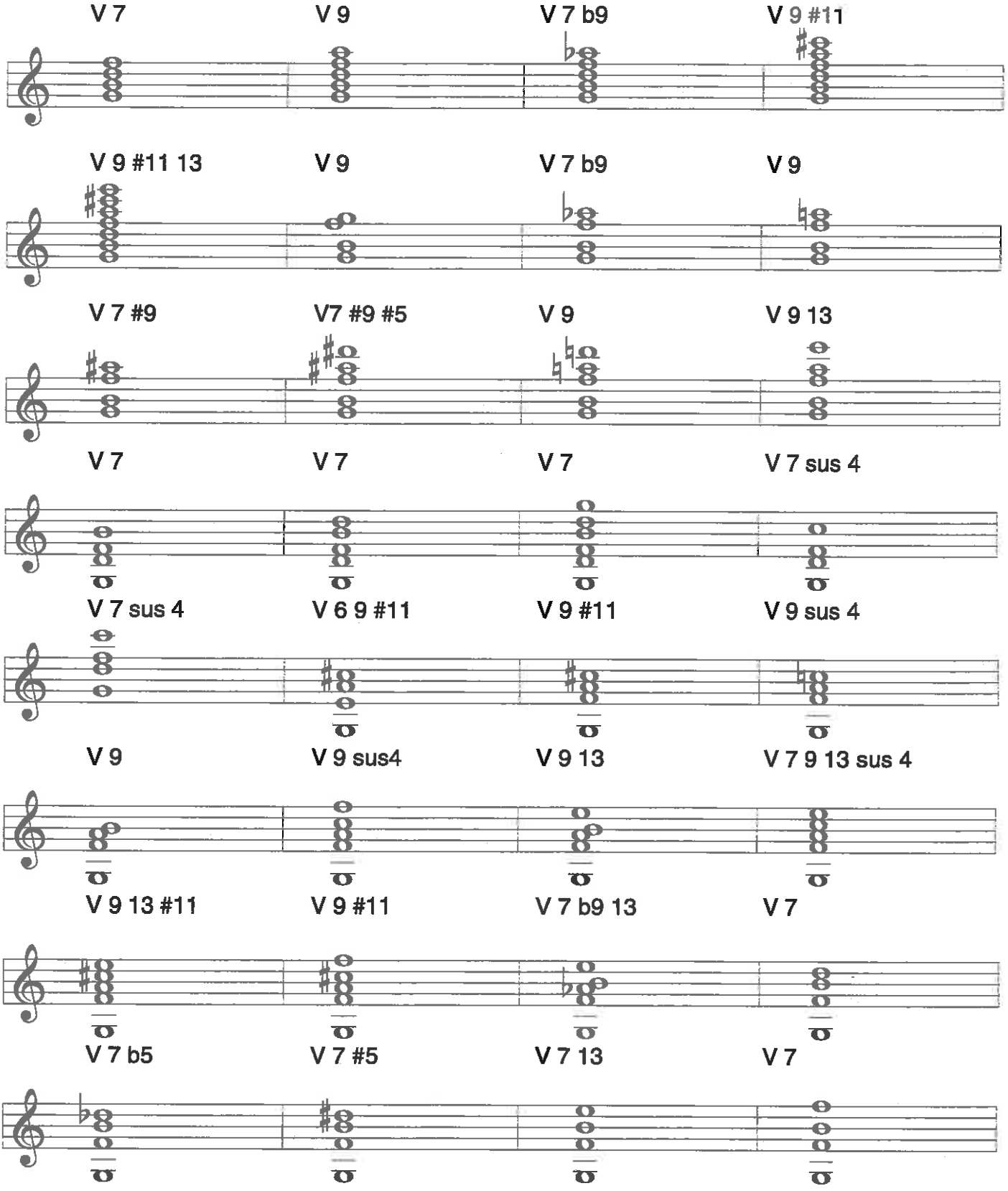
Thus: G7 sus4 to G7 to C major 7

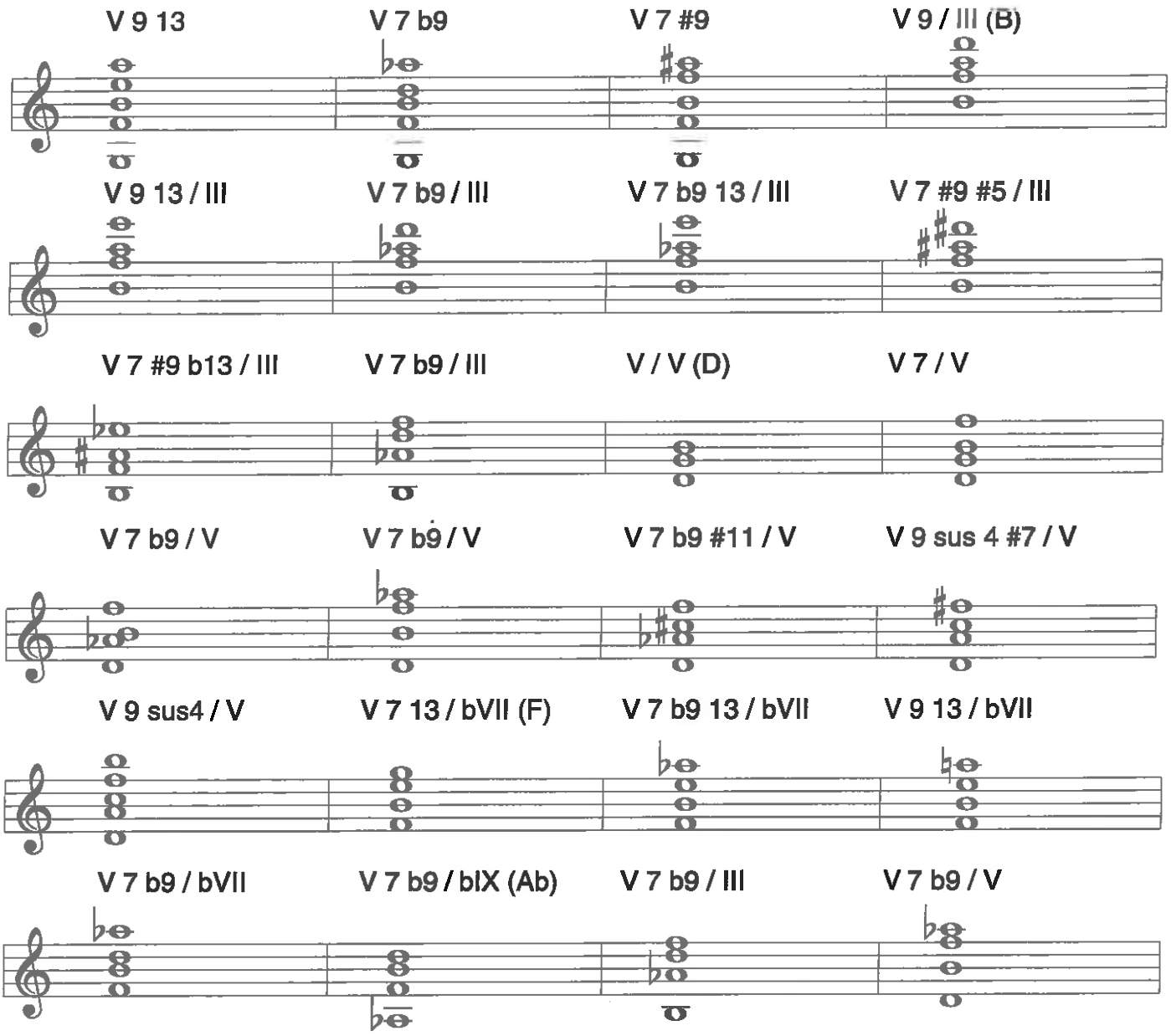
Play this at the piano and discover the suspended fourth's beautiful color. The suspended fourth is named to illuminate its transitory nature in resolving to the third of the chord. This "four to three" suspension is also common with the "tonic" chord type. Explore and experiment. Complete the following worksheet, spelling dominant seventh chords and their alterations. Create the visual scale / arpeggio format for each key to facilitate learning and completion of this exercise. Check your entries in the answer key.

3a) G7	___	___	___	___	___	___	___
3b) Ab 7#9	___	___	___	___	___	___	___
3c) A 7b5	___	___	___	___	___	___	___
3d) Bb 7 13	___	___	___	___	___	___	___
3e) B 7b9	___	___	___	___	___	___	___
3f) C 913	___	___	___	___	___	___	___
3g) Db 7sus4	___	___	___	___	___	___	___
3h) D 7b9	___	___	___	___	___	___	___
3i) Eb 7b5	___	___	___	___	___	___	___
3j) E 7#9	___	___	___	___	___	___	___
3k) F 9	___	___	___	___	___	___	___
3l) F# 7b9	___	___	___	___	___	___	___
3m) G 79#11	___	___	___	___	___	___	___

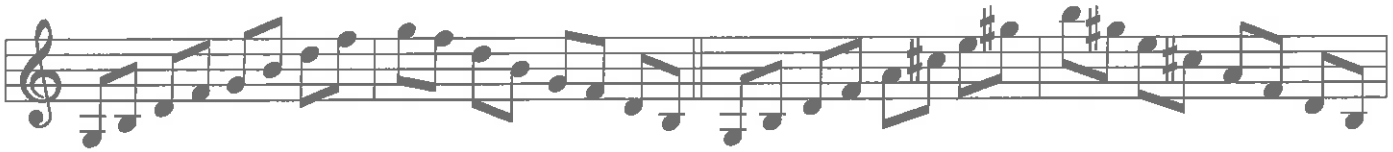
Functionally, as it's name implies, the "dominant" (V7) chord commands the motion towards the tonic. Modulation (gl) is most often and easily achieved by the sounding of this chord type. Due to the "encapsulated" tritone of the dominant seventh and the fully diminished chord in the upper structure of the dominant seventh flat nine, (V 7b9), the dominant chord is very malleable, potentially providing a whole "world" of possible alterations, extensions and substitutions (gl). Extensive discussion and examples of these possibilities follow throughout the rest of this text. The "Blues" form, which in simple realizations (gl) relies almost exclusively on the dominant family of sounds, finds it's tonal environment centered around the dominant. Again, the all important tritone interval contained within the dominant chord creates the overall feel. See "Blues" section.

Here are some Dominant voicings and arpeggios based on the above ideas. We'll substitute V for the root "G" for our examples. Inversions initially retain their proper letter name. Many of these shapes will work well in "Blues" applications.





Dominant arpeggios:



Discussion: Examine the above shapes for implied direction in regard to resolving to either the major or minor tonality. Let *your* ear be the guide. Make a listing of the two groups. Examine these grouped configurations for common elements.

Exercises: Begin transposition to the other eleven keys. Move one shape in the chromatic or planing (plane-ing) (gl) approach to develop the "half step lead in" technique. Begin analyzation of "Lush Life" by W. Strayhorn for dominant harmony in the supplemental text. In "C" major, execute the "C" tonic arpeggio, alter this tonic color to dominant "C" 7, execute this arpeggio. Resolve this to it's appropriate tonic arpeggio, "F" major. Reshape this tonic color to dominant and resolve etc. Add the appropriate Two chord arpeggio once comfortable with tonic and dominant colors.

Listening: T. Monks "Straight No Chaser" from the album "Milestones", recorded by the Miles Davis Sextet.

The following ideas and concepts are included to round out the basic *functioning* of the seven diatonic chords. The best source for chord utilization is the *music you love to listen too and play.*

The **Three chord (iii-7)** is basically the exact same intervallic structure as the Two chord. Among theorists it is known as the "mediant" (gl). The melodic and chordal shapes presented with the Two chord voicings apply to the Three chord also. It's function can be viewed as "transitory", generally being a passing chord (gl) between musical destinations. One deviation from this similarity with Two concerns the ninth (9th) chord degree above the root. Thinking of "E" as the root, the Three chord in the key of "C" major, the diatonic pitches of the "C" major scale create the following arpeggio built from Three.

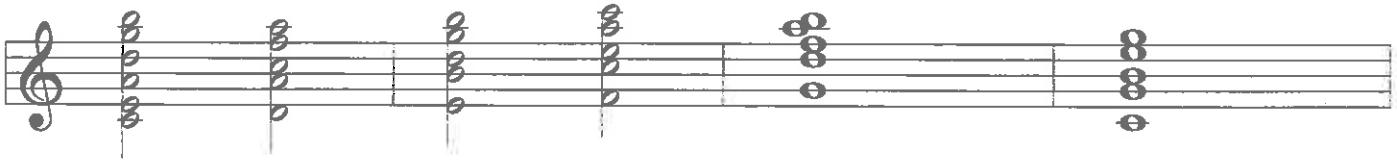
1	2	3	4	5	6	7	8
C	D	E	F	G	A	B	C
1	3	5	7	9	11	13	15
E	G	B	D	F	A	C	E

Common performance practice when the "E" min 9 chord symbol is encountered is to raise the ninth degree up a half step from "F" natural to "F#." Thus:

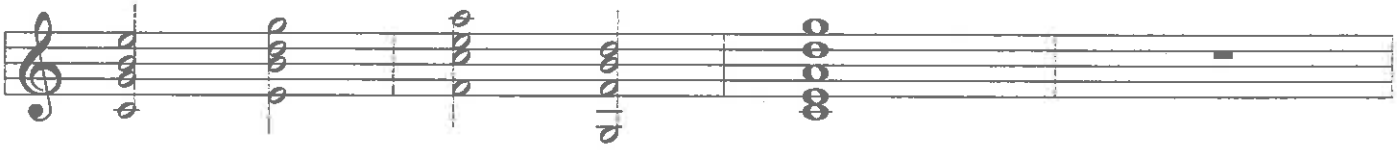
"E" minor nine (E min 9) is spelt: E G B D F#

This creates some potential questions and discussion for the inquiring theorist. Such as: Doesn't the presence of the "F#" put us in the key of "G" major? The "F#" allows for the building of the "D" dominant seventh chord as well as being the "leading tone" (gl) in the key of "G" major. Isn't the key signature for "E" minor one sharp, namely "F#", the relative minor of "G" major? By raising the ninth degree a half step we avoid the potential minor ninth interval between the root "E" and the diatonic ninth "F." Try both situations and let your ear be the guide. We encountered a similar situation with this pitch, "F", when thinking of tonic harmony and it's eleventh. Common practice is to raise the "F" to "F#", in this case to avoid the minor ninth interval between the third of the chord and it's eleventh. Here are some common voicings and progressions that incorporate the Three chord in common musical situations, examples in "C" major (Δ).

1a) I Δ 7 ii min 7 iii min 7 IV Δ 7 V 9 I Δ 7



1b) I Δ 7 iii min 7 IV Δ 7 V 7 I Δ 6/9

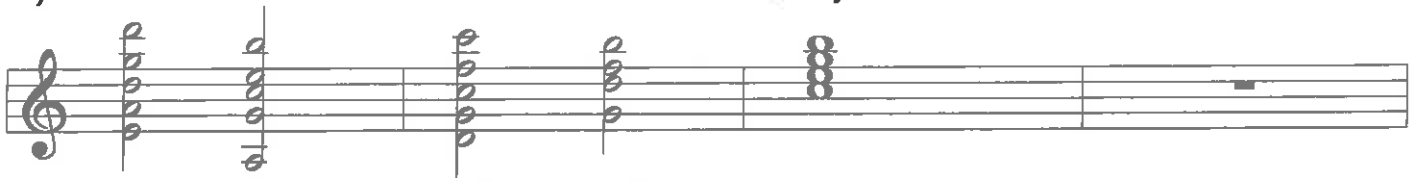


1c) I Δ 7 IV Δ 7 iii min 7 ii min 7 I Δ 7

1d) iii min 7 vi min 7 ii min 7 V 7/13 I Δ 7

This last progression is very important. There are lots of ways to view, alter and use this harmonic movement. Viewed diatonically, this progression is a very common turnaround (gl) to the Tonic. This grouping of chords will also work well as an introduction to many musical compositions. Here are a few examples for the Three, Six, Two, Five chord progression.

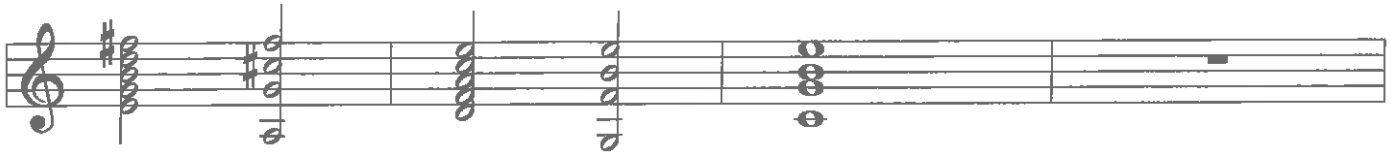
2a) iii min 7 vi min 9 ii min 7 V 7 I maj 7



2b) iii min 9 vi min 7 ii minor 9 V 7/13 I maj 7

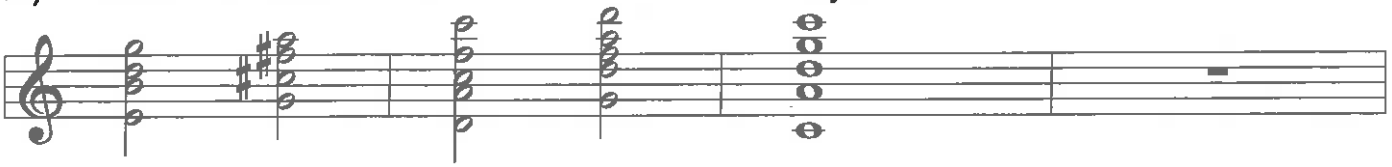
By making the Six chord in the above progression a dominant type as opposed to a Two chord type, we "double up" our basic "Two-Five" cell. Thus all of the Two and Five chord shape groupings can be mixed and matched into various Three, Six, Two, Five configurations. Here are a few examples of the above concept. Explore and experiment.

3a) iii min 9 VI 7/13 ii minor 9 V 7/13 I maj 7



3b) iii min 7 VI 9 ii min 7 V 9 I maj 7

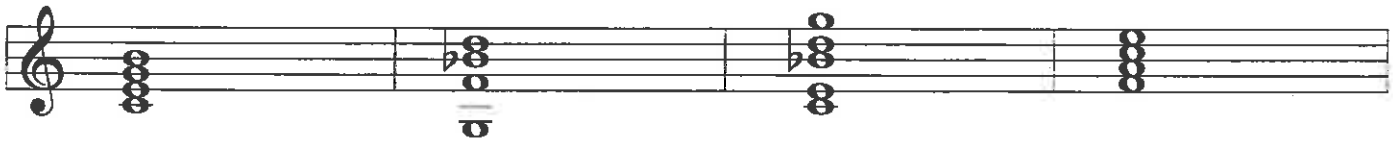
3c) iii min 7 VI 13/bVII ii min 7 V 9 I maj 6/9



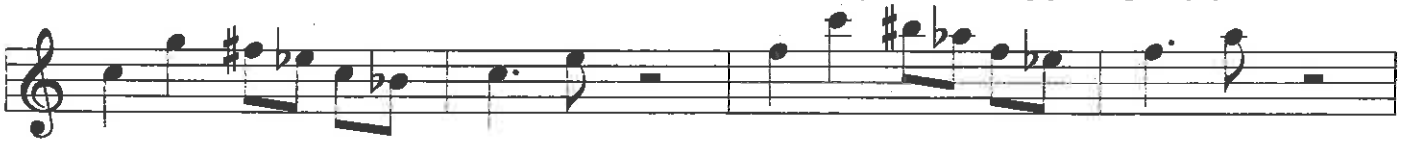
Look to the chapter 5 for additional Three / Six / Two / Five possibilities.

The **Four chord (IV7)** is intervalically identical to the One chord or tonic harmony in both major and natural minor keys. Thus all of the preceding and following concepts that apply to One apply to Four. Referred to as the "subdominant", one essential function of the Four chord is basically centered around providing a musical "respite" within a diatonic chord progression that is not the overall tonic, i.e. the "One" chord of the music being performed. Thus, utilizing the Four chord in the above concept may find the harmonic progression modulating (gl) from One to Four, which provides a "restive" sound which in many cases supports a similar melodic line found in relation to the melodic line created over the Tonic (now moved up a perfect fourth), example in "C" major. This harmonic motion is a *very* common musical situation.

4) "C" maj 7 "G" min 7 "C" 9 "F" maj 7

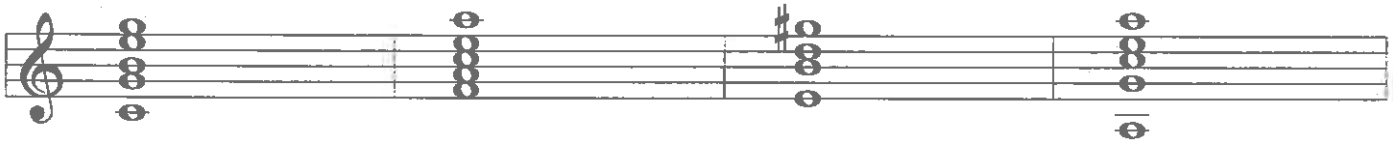


4a) Many Blues melodies follow the above format, which many times is a literal repetition of the original melodic idea either moved up a perfect fourth or exactly as the original musical statement. Example. This idea is written in "concert" pitch, transpose (gl) accordingly for group performance.



The **Six chord (vi-7)** is structurally identical to the Two chord, thus all melodic and harmonic principles of the Two chord apply to Six. Referred to as the "submediant" among theorists, it's use, like the Three chord, is generally transitory. A relatively common musical situation found in many tunes written in a major key, is to modulate (gl) from One (I major 7) to Six (vi minor 7), it's "relative" minor (gl). Example in "C" major, note the presence of the leading tone (gl) "G#" in the "E 7" chord resolving by half step up to the new tonic "A." This "G#" is temporarily "borrowed" from the "A" melodic minor scale.

5) "C" maj 7 "F" maj 7 "E" 7 "A" min 7



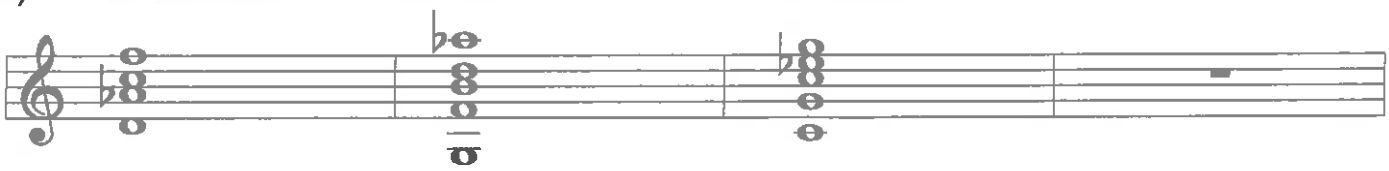
The reverse of the above musical situation is also common in musical compositions written in a minor key where the chord progression (gl) will modulate from the tonic minor key to it's relative major. Also, an all too common situation with the Six chord is to move from Four (IV) to Five (V) to Six (vi), known as a "deceptive" cadence, or Six (vi) to Five (V) to Four (IV) to Five (V) to Six (vi) using simple triads, as in "All Along the Watchtower" by Bob Dylan, check it out. When the overall tonality of a piece of music is based in a minor key, the Six chord becomes the tonic or One. Given the "variations" of possible minor scales, i.e., natural melodic, harmonic, pentatonic, altered modal and other configurations, there is a wide range of harmonic possibilities. Over the years of learning new tunes, the writing of original compositions and listening, listening, listening, many new possibilities concerning the harmonic motion within the minor tonality emerge. As always, explore and experiment.

The **Seven chord (vii-7)**, also referred to as the "supertonic" chord, is similar to the Two, Three and Six chords but **differs** in that the chord built upon the seventh scale degree is referred to as the "half diminished" chord (gl). This term implies that the minor triad used to construct this chord is altered by *lowering the fifth* of the triad *a half step*, creating a *diminished triad.* Added to this triad is a minor seventh. It's most common usage is as a altered Two chord followed by a Five chord, i.e. dominant chord, with a flatted ninth. This pairing of chords generally resolving to a minor key. This chord progression is a common variation of the basic Two-Five, with the b5 and b9 being the same pitch, regardless of the tonic key. In "C minor",

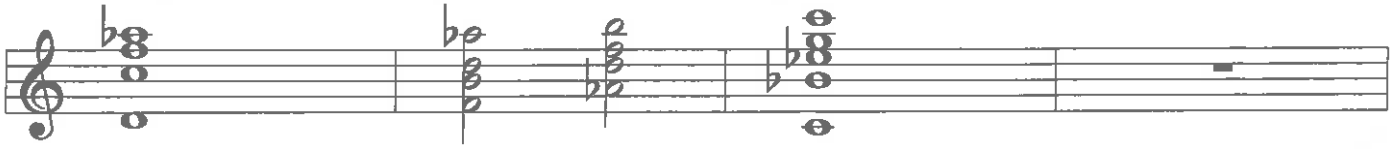
Chord symbol	D minor 7b 5	G 7 b9	C minor
Spelt	D,F,Ab,C	G,B,D,F,Ab	C,Eb,G

Example:

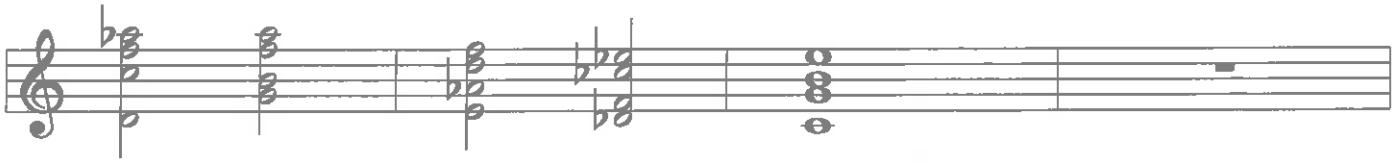
6) "D" min 7b5 "G" 7b9 "C" minor



6a) Moving dominant chord up a minor third, resolving to minor tonality.



6b) Moving the V 7b9 down in parallel minor thirds, resolve to major tonality.



Look to the Tonal Convergence Chart, chapter 4, for more voicings of this *essential* component.

Melodically, some possible scale choices: i.e. groups of notes to create melodic ideas from when presented with the above harmonic situation.

1) The Lydian scale built on the flat five (b5) of the two chord, i.e. "Ab" Lydian for "D" min 7b5.

2) The major scale that "Ab" Lydian is derived from i.e. "Eb" major.

3) The use of "Eb" major, the "relative" major to C minor, is in this case is an excellent choice.

Note: realize that the third of the dominant chord is "B" natural in the above examples, theoretically derived from the "C" melodic minor scale.

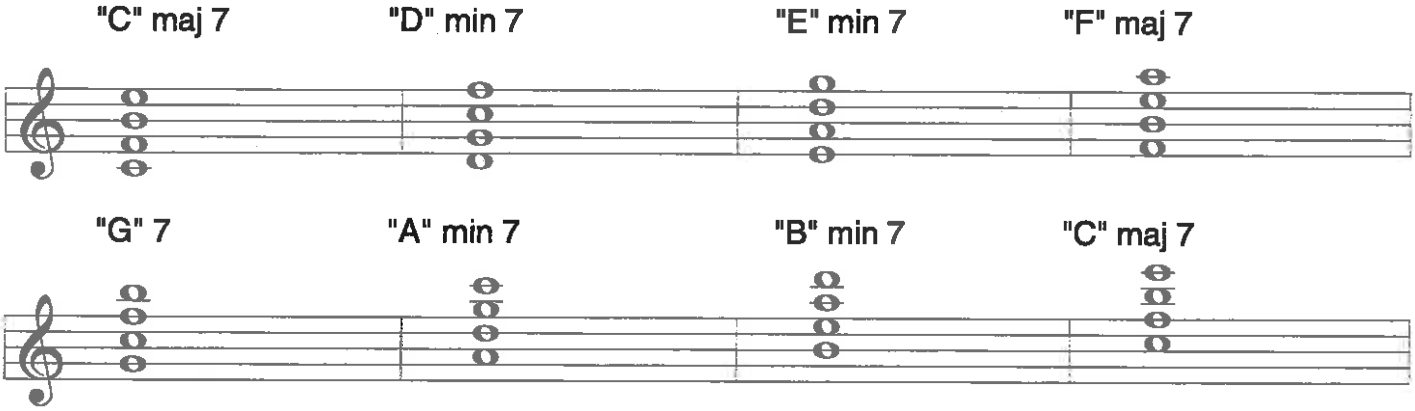
4) The diminished scale from the root of the two half diminished chord, which also could work over the V7b9 dominant chord, i.e. a "D" diminished scale for the above "D" min 7b5 to "G" 7b9 situation. The minor seven flat five to dominant seventh flat nine is also associated with major tonics, i.e. "C major", it is commonly used in both musical situations. Look to the Two-Five-One melodic ideas following the Tonal Convergence chart and the Jazz lines discussion in chapter 4 for additional melodic and harmonic ideas concerning the "minor seventh flat-five to dominant seventh flat nine."

VOICINGS IN DIATONIC FOURTHS

The following theoretical principles and resulting shapes create what I like to refer to as a more "modern" sound and coloring. In theory, what we are doing is to simply build chords using diatonic pitches stacked in perfect and augmented fourths, as opposed to major and minor thirds as in the preceding pages. In practice and application, these sounds are a bit "unusual" first off and do take some experimentation to integrate into our musical palette. They are included in this text to provide yet another alternative for creating different degrees of "stability", "disguising" or the "potential obscuring" of tonal direction and intent. I've found that in "modal" tunes in a minor key, i.e. Miles Davis' "So What" and John Coltrane's' "Impressions", these voicings in fourths create some interesting alternatives and possibilities when the written harmony is simply a single Two minor seven chord for extended lengths of musical time and the melody is of a "modal" nature.

With this in mind, here is chart spelling out the eight (8) seventh chords built in diatonic fourths and a rudimentary "realization" of these chords in the key of "C" major. These chord spellings are also for the relative minor of "C" major, namely "A" natural minor. Upper extensions could and should be examined. Explore and experiment.

C major 7	C, F, B, E.	G dominant 7	G, C, F, B.
D minor 7	D, G, C, F.	A minor 7	A, D, G, C.
E minor 7	E, A, D, G.	B minor 7	B, E, A, D.
F major 7	F, B, E, A.	C major 7	C, F, B, E.



Comments: Please note that building chords in diatonic fourths replaces the fifth of the chord with it's diatonic fourth in all seven of the diatonic seventh chords. Observations:

One chord: The tritone interval between the "F" and the "B", which is "normally" associated with dominant seventh type chords (V7), creates a "disguising" of the Tonic chord.

Two chord: Is a minor seventh suspended fourth (ii-7sus4) or minor eleventh chord (ii-11).

Three chord: Is identical in makeup to the Two chord.

Four chord: Is identical in makeup to the Tonic chord.

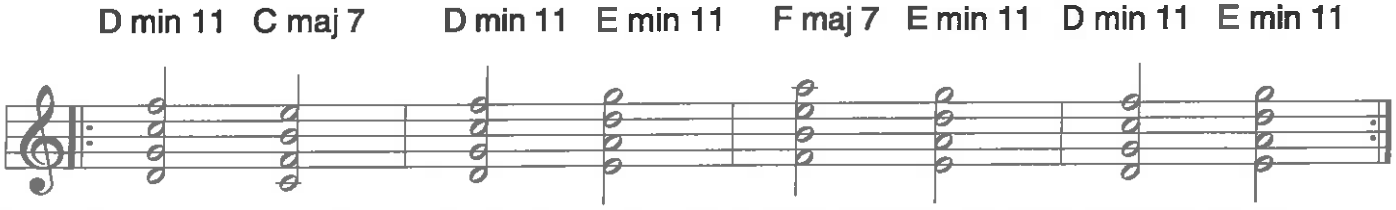
Five chord: Is basically a dominant seventh suspended fourth chord (V7sus4).

Six chord: Is identical in makeup to the Two chord.

Seven chord: Is identical in makeup to the Two chord. Note that the flatted fifth (b5), normally associated with the diatonic chord built on the seventh degree of the major scale, i.e. half diminished is omitted.

One use of chords built in perfect fourths in "modal" performance might be to employ the above shapes to "gravitate" around the particular chord in use. Possible choices for voicings in fourths are listed below. The following ideas and resulting sounds are very common in the Jazz world. Jazz piano great McCoy Tyner, who spent many years performing with saxophonist John Coltrane, has made the parallel motion (gl) of chords built in fourths one of his many "trademark" sounds while improvising in the Jazz medium. Mr. Tyner is one of many who have come to love and rely on this potentially "outside" (gl) component on their musical palette.

For eight (8) measures of "D" minor try:



Note: the above seventh chords simply replace their diatonic fifth with their diatonic fourth.

Discussion: Discuss the concept illuminated in the preceding pages about the three families of chords. Encourage students to question for themselves whether this approach works for them or not. Ask for possible chords that would not "fit in" to one of the three families of chord types. As the tonality moves further "outside", does this concept of "chord type" still apply? Is it possible to still think in terms of a tonal center when listening, analyzing and performing chromatic or atonal sounding musical pieces? Does this categorizing of harmony limit the artist in their artistic perspective ? Discuss the concept put forth by Charlie Parker, "to learn your horn, then forget it and play Jazz", coincide with the concept of chord families? Is this method of learning the harmonic aspects of the music we love to play conducive to Mr. Parkers idea? Discuss the aspects of this "categorizing" chordal color in relation to analysis of actual pieces of music.

Exercises: Continue to analyze the musical arrangements contained in the supplemental text.

Listening: The essential ability at this juncture is to be able to identify the basic "color" of each of the three chord families. Encourage students to listen to their favorite recordings and begin to analyze this music for use of the three distinct chord families. Being able to aurally distinguish between the three chord types as put forth in the preceding pages is *totally essential.* Whether the learning methodology used to achieve this goal is the one set forth in this text or not, this ability to hear any chord and "categorize" it's "nature" is truly a "stepping stone" in ones artistic growth.

"The person who removes a mountain begins by carrying away a small stone." Chinese proverb.

work space / notes:

TWO-FIVE-ONE SEQUENCE HARMONIC SEQUENCE

Among the most common chord progressions found in contemporary improvised music, the Two / Five One chord progression is diatonically based and contains the tension and release concept so essential to good "art." The "tension" part of this simple three chord progression starts on the chord built on the second degree of our tonic scale, which moves to the second chord of our progression, which is built on the fifth scale degree of our tonic scale. Our third chord of this progression, which contains the release, is built on the first scale degree of our tonic scale. This simple chord progression is one of many ways to establish a particular key as a temporary or overall tonal center. The Two-Five-One can be derived from the common Four-Five-One as found in many styles of music. Roughly speaking the "Two" and "Four" chords are interchangeable. Lets see why. In the key of "C" major, our Two chord,

"D" min 7 is spelt: D, F, A, C. Our Four chord, "F" maj 7 is spelt: F, A, C, E.

By this simple example one can readily see the F major triad contained within the "D" min 7 chord. So why choose "Two" (ii min 7) instead of "Four" (IV)? There is a historical musical evolution for the usage of the "Two" chord whose explanation is outside the intent of this writing. For our present concerns, each of the two choices, while assuming similar roles in relation to the dominant, provides a different coloring of the overall harmonic effect in approaching a tonal center. Let's examine each one individually, we'll take the Four chord first.

Due to it's potential "tonic" nature, the Four chord (IV) has been generally used to provide a temporary tonal center and harmonic background for supporting a melody that is similar to or a continuation of the original theme, but found up a perfect fourth from the tonic. Simple "blues" melodies illustrate this idea, which in many situations is a literal repeat of the original theme or motif (gl) up a fourth, i.e. "C" up to "F." In the fifties, the emergence of "Rock and Roll" provided a new style of music utilizing the existing One / Four / Five structure so similar to the "Blues." There are a "gillion" rock tunes based on this simple harmonic formula. The "amen" affect (gl), generally associated with spiritual worship, has supported countless melodies that have uplifted the human spirit over the centuries. Many times during a performance I'll insert this "amen" type of vamp, i.e. moving from One (I maj 7) to Four (IV maj 7) back to One (I maj 7) just to enjoy the gentle rocking motion and settle things down a bit, before going back into the cycle of the tune etc.

The diatonic Two chord (ii min 7) provides a cadential motion that precedes the dominant seventh from a fourth below, which is probably the most common root movement of Western harmony. The Two minor seventh chord (ii min 7), due to it's "untonic" like construction, seems to augment the tension capsulated in the dominant seventh chord (V7) creating a greater sense of "forward motion" towards the resolution to the tonic. Whether followed by a resolution to a tonic type structure (I maj 7) or not, the Two-Five "cell" is a very important component of traditional Jazz harmony. The evolution of this "cell" and it's use in supporting melodies can be clearly illuminated by studying the compositions of John Coltrane. What "Trane" seems to have done is to exhaust the possibilities of the Two-Five "cell", which necessitated the "doubling up" of the Two-Five as found in his composition "Moments Notice", recorded on Blue Note Records. One cool concept that emerges from the listening of this composition is that an artist must create a musical idea over the standard Two-Five then modulate (gl) that idea *during it's execution* up a half step and complete the phrase and it's resolution. This becomes a very exciting endeavor in faster tempos. Find "Tranes" recording of this tune and dig his ideas, it is a very beautiful thing. As "Trane" continued to evolve and exhaust the Two-Five "cell", new forms of harmonic motion evolved for the Jazz artist. "Tranes" "Giant Steps", on Atlantic records, illustrates the continuing of this musical evolution.

The evolution of both the double Two-Five of "Moments Notice" and the "Post Bop" (gl) harmony of "Giant Steps" can be traced in "Tranes" live and studio recordings prior to the writing and recording of the above mentioned tunes, "But Not for Me" (Atlantic LP 1361) comes to mind.

As previously discussed, I believe that all chords can be reduced to one of the three harmonic possibilities found within the Two-Five-One "cell." As an artist's aural abilities evolve, the harmonic possibilities concerning the Two-Five-One evolves also. This is commonly referred to among players as "substituting"(gl).

With the above ideas in mind, let's look at some elemental ideas to start out with and gradually evolve into the more complex substitutions. This will be achieved by looking at various component substitution possibilities then combining these elements into the Two / Five / One Substitution chart presented later in this section. Using the key of "C" major, let's build our Two / Five / One chord progression. Remember, always build your chords up through the seventh to help clarify their function. Let's spell our chords and discern their "color."

1	2	3	4	5	6	7	8
C	D	E	F	G	A	B	C
C	E	G	B	D	F	A	C
1	3	5	7	9	11	13	15

TWO (ii min7)	FIVE (V7)	ONE (I maj 7)
D, F, A, C	G, B, D, F	C, E, G, B

By viewing the Two / Five / One chord progression in regards to tension and release, the following illustration emerges:

ii min 7	**V 7**	**I maj 7**
	TENSION	**RELEASE**

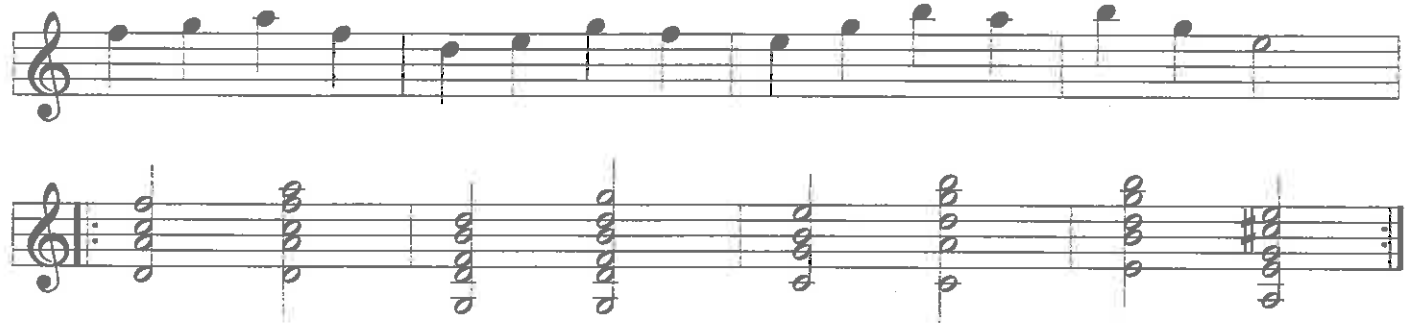
Complete the following exercises to create a Two-Five-One chord progression for each of the twelve major keys. NOTE: If necessary, build the scale / chord model for each key emulating the one provided in this section to help "spell" out your answers.

KEY	ii min 7	V7	I maj7	KEY	ii min 7	V7	I maj7
C	_____	_____	_____	Gb	_____	_____	_____
G	_____	_____	_____	Db	_____	_____	_____
D	_____	_____	_____	Ab	_____	_____	_____
A	_____	_____	_____	Eb	_____	_____	_____
E	_____	_____	_____	Bb	_____	_____	_____
B	_____	_____	_____	F	_____	_____	_____

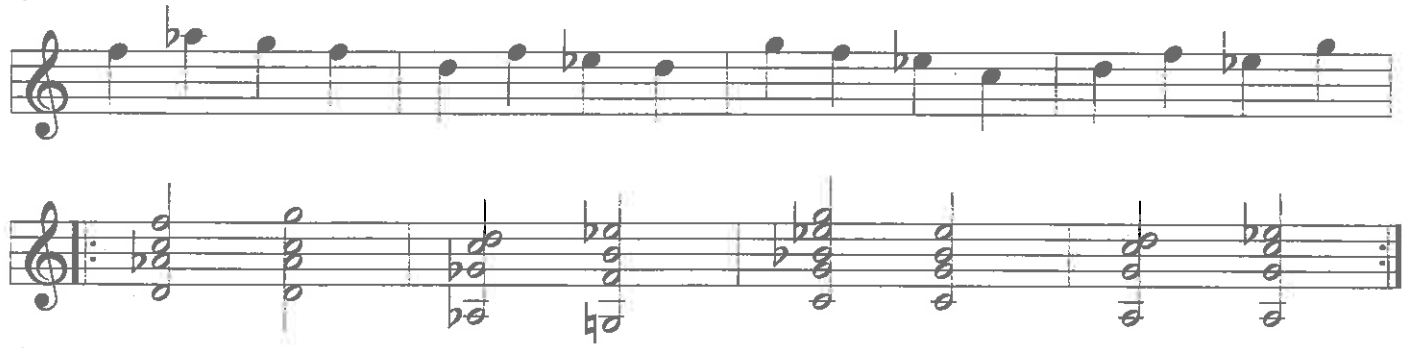
work space / notes:

Here are some basic block Two / Five / One turnarounds (gl), alternating in the keys of "C" major and "C" minor. Each of the entries is preceded by a guide tone (gl) type melody created from the voicings. Analyze and fill in the chord symbols as you proceed.

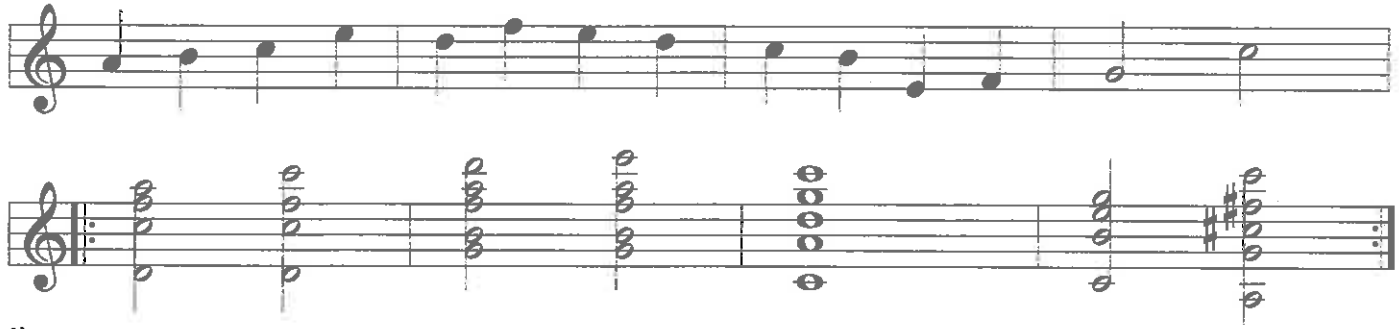
1)



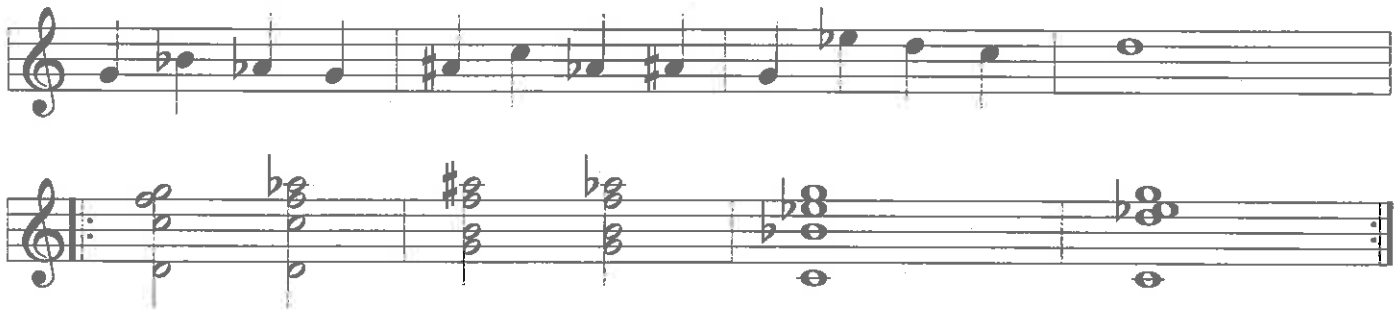
2)



3)

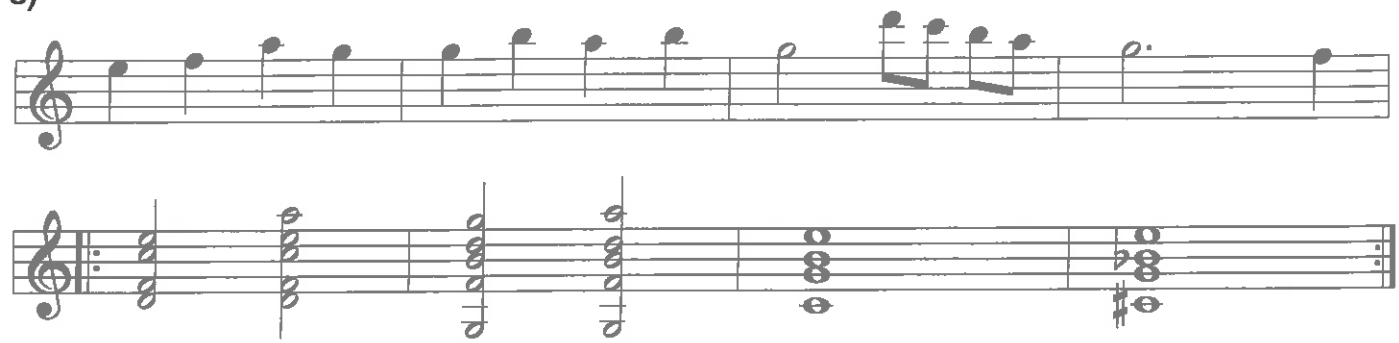


4)

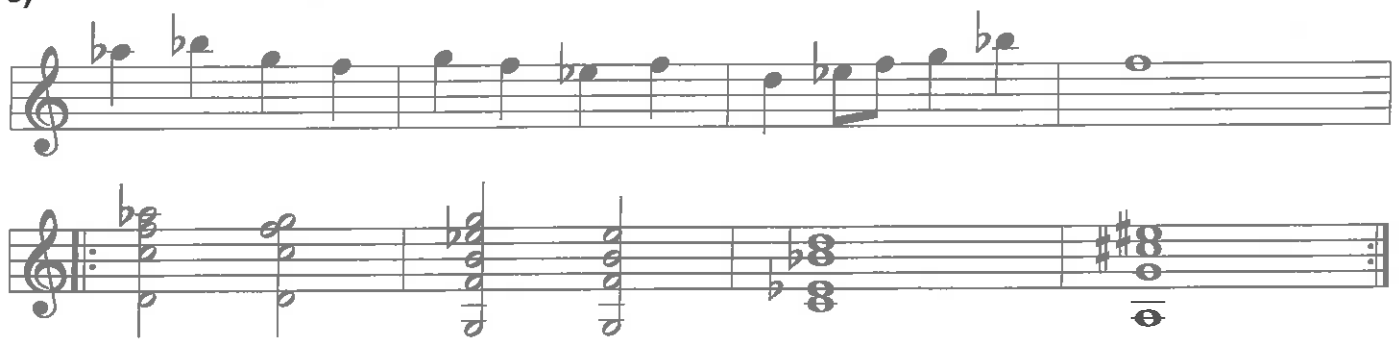


work space / notes:

5)



6)



SUMMARY FOR CHORD FUNCTION AND FAMILIES

The best source for harmonic progressions is in the actual existing music that you like to perform, create yourself and listen to. What is presented here are common uses of the various diatonic functions of each chord within the major scale. By simplifying all chords into a chord type, i.e. either Two, Five or One, our learning task is greatly reduced. When building larger more complex harmonic progressions using Three, Four, Six, and Seven, clarity of function and direction can be illuminated by following the guidelines according to *chord type*. The overall dictating force to chord progressions and music I term artistic "intent." The sincere intent of one's artistic integrity allows for potentially "square" pegs to fit smoothly into "round" holes. If the "square peg" is the chord that we are hearing and is a necessary component of our artistic statement, we'll create or find a way to make it work. Comments ? Questions ? As always, *explore and experiment !*

Discussion: Why use the Two chord instead of the Four chord?

Listening: Miles Davis' "Tune Up" for its series of Two / Five / One "cells." "Misty", by Erroll Garner, is also a good vehicle for viewing common usage of the Two / Five One component.

Exercises: Begin analysis for the Two / Five One chord progression in the arrangements contained within the supplemental text. Choose pieces "randomly" from any Real Book and have students identify the Two / Five / One cell.

Jamie Aebersold's Two / Five / One playalong study is an excellent supplemental learning tool for Two / Five / One studies.

"Motivation is what gets you started, habit is what keeps you going." Jim Ryun

IMPROVISATORY THEORETICAL CONCEPTS / DERIVATIONS OF MELODIC CHOICES FOR THE ONE, TWO AND FIVE CHORD TYPES

The next three sections form the crux of the advanced theoretical concepts of this book. With the prior knowledge provided, i.e. the ability to construct the major scales, discern the modes from those scales and spell out the chords used to support the melodies created from those scales, we now move into the area of application. What follows is the grouping of harmony and chords, identified by chord type, i.e. One (I), Two (ii) and Five (V) and suggestions for groups of notes, i.e. scales, that can be used to create melodic ideas over these three chord types. All of the scale entries included are divided into four groups. Each group and entry is individually analyzed. A compilation of all the entries becomes the "Tonal Convergence Chart" at the close of this analytical discussion. This chart becomes the source for possible melodic and harmonic examples, for each entry of the chart, later in this text.

The scale choices that are listed in each section are basically organized from "inside" to "outside." By this the author means that "inside" scale choices are easiest to apply to a particular chord change and sound most consonant. "Outside" choices create greater tension and generally take more time to assimilate into one's melodic vocabulary. Both "inside" and "outside" choices contain groups of notes from which beautiful melodies can be created over that particular harmony. As one moves further "outside" the artist must be more organized and have a clearer direction of their improvised line. This concept is known as the "strength of the player," the stronger improvisers being able to manage greater amounts of dissonance in their melodic lines and still make musical sense. As one gradually increases their melodic choices, their range of expression increases. Thus, greater intimacy and stronger climaxes. By starting at the beginning of the list of choices, the gradual tonal expansion down the list will be logical and have a firm foundation to be built upon. One must mature as an artist, part of this maturing process is the gradual assimilation of more tonal responsibilities. Greater responsibilities require more discipline to maintain but provide greater rewards to the artist. Patience is the key word. Thoroughly examine and woodshed (gl) possible choices. Give your ears time to assimilate the new sounds, be curious and experiment. Begin a notebook containing your favorite musical ideas. Manuscript is provided at the back of this text to start this important cataloguing of one's musical ideas, which eventually may and potentially will evolve into "themes" for original compositions.

The dominant seven (V7) chord family, which by its nature creates tension, has the largest selection of scale choices and substitutions. New concepts emerge in this section and will be addressed accordingly. "Musical proofs" are included to help justify and illuminate complex choices and concepts. Some of the material is of a rather advanced nature. A thorough explanation of major scales, modes, chord construction, and function is provided for the beginning improviser. The various types of tension that surround the dominant 7th family, the substitutions and "outside" scale choices are included for the "advanced" player. Suffice to say that the advanced player got to that level by thoroughly digesting, both cognitively and on their instrument, the material contained in the first sections. Both levels are included so that this text is both applicable to the beginning improvisers as well as advanced players and is organized so that a beginning student can begin to see the scope of the responsibilities before them. Discipline again becomes a key word, which tempered with patience provides the necessary energy to face the challenge presented by the artistic potentials contained within the "Equal Tempered System of Tonal Organization." We'll discuss tonic harmony and some of its melodic possibilities first.

Tonic harmony is basically designed and utilized as a tonal center, providing a "restive" sound quality that the other two types of harmony i.e. Two and Five, have a tendency to gravitate or resolve towards. Tonic harmony could also be described as the key signature of the music to be performed, either in the major or minor environment. Various resting points within that piece of music could also be viewed as *temporary* tonic centers which outline our pathway away from and back to our original tonal center, i.e. the original key of the music. Listed below are groups of notes / scales that provide various colors used to create melodic lines over harmony that functions as the overall or temporary tonal center of any given piece of music. For illustrative purposes, we'll use the key of "C" major as our tonal center, I major 7 with extensions:

C	E	G	B	D	F#	A	C (C#)
1	3	5	7	9	11	13	15 (#15)

1) Triads such as: C maj = C, E, and G
   E min = E, G, and B
   G maj = G, B, and D are possibilities.

2) C Major Scale - C, D, E, F, G, A, B, C
3) C Major Scale with #11 - C, D, E, F#, G, A, B, C
4) C Major Pentatonic Scale (gl) - C, D, E, G, A
5) C Major Arpeggio Scale - C, E, G, B, D, F#, A, C#
6) Any of the "Modes" or modal variations created from these tonic scales.
7) Chromatic scale - C, Db, D, Eb, E, F, Gb, G, Ab, A, Bb, B

Any of the prolations discussed previously that concern the interval studies discussed in chapter 1, i.e. musical ideas built in 3rd's, 4th's, 5th's, 6th's, 7th's, 8th's (octaves), using the notes of the above "C" major scale and variations are obviously applicable.

Two chord harmony (ii min 7), generally functions as a passing chord which moves to the dominant, (V7), before resolving to the tonic (I maj 7). In the case of a composition utilizing a minor key as it's tonal center, the following scale possibilities which are presented here as relating to the Two minor seventh chord (ii min 7), could be applied to situations where the overall tonic of a particular piece of music is minor, i.e. (i min 7). Using "C" major as our tonal center, our Two chord is built upon "D" natural. Thus:

D	F	A	C	E	G	B	D
1	3	5	7	9	11	13	15

The following melodic possibilities are *basically* listed by tonal consonance (inside) to tonal dissonance (outside).

1) D Dorian Mode = D, E, F, G, A, B, C, D, = C Major Scale
2) D Aeolian Mode = D, E, F, G, A, Bb, C, D, = D Minor / F Major Scale
3) D Phrygian Mode = D, Eb, F, G, A, Bb, C, D, = Bb Major Scale
4) D Locrian Mode = D, Eb, F, G, Ab, Bb, C, D, = Eb Major Scale
5) D Melodic Minor = D, E, F, G, A, B, C#, D, = D Major Scale (with a lowered 3rd degree)
6) D Harmonic Minor = D, E, F, G, A, Bb, C#, D, = D Major Scale (with lowered 3rd and 6th)
7) D minor Pentatonic = D, E, F, A, C, D
8) D Chromatic scale = D, Eb, E, F, Gb, G, Ab, A, Bb, B, C, Db, D

Again, any and all prolations, arpeggios, interval studies and sequences created over the "D"-7 (ii- min 7) chord, could be based upon any of these groups of notes or scales.

Dominant Seventh (V7)

Let's begin to examine groups of notes (scales), from which melodic ideas can be created that will organically contain a tension building ability. The possibilities listed are grouped into four distinct groups. Each "group" is then analyzed separately as "musical proofs" one through four, for their component structures. These are then "distilled" into scale choices used for creating different degrees of tension or "shades of emotion" over dominant harmony. Using the key of "C" major, our dominant seventh chord (V7) with extensions is thus spelt:

G	B	D	F	A	C	C#	E
1	3	5	7	9	11	#11	13

Group #1 Based on diatonic possibilities:

1) G Mixolydian = G, A, B, C, D, E, F, G
2) G Lydian b7 = G, A, B, C#, D, E, F, G
3) A Aeolian = A, B, C, D, E, F, G, A
4) F Lydian = F, G, A, B, C, D, E, F
5) F Lydian b7 = F, G, A, B, C, D, Eb, F
6) D Dorian = D, E, F, G, A, B, C, D
7) E Phrygian = E, F, G, A, B ,C, D, E
8) B Locrian = B, C, D, E, F, G, A, B

Group #2 Based on the fully diminished chord:

1) Db Lydian = Db, Eb, F, G, Ab, Bb, C, Db
2) Db Lydian b7 = Db, Eb, F, G, Ab, Bb, Cb, Db
3) D diminished = D, E, F, G, Ab, Bb, B, C#, D
4) Eb major = Eb, F, G, Ab, Bb, C, D, Eb
5) E Lydian b7 = E, F#, G#, A#, B, C#, D, E
6) F diminished = F, G, Ab, Bb, B, C#, D, E, F
7) F minor 7 = F, G, Ab, Bb ,C, D, Eb, F
8) F# major = F#, G#, A#, B, C#, D#, E#, F#
9) Ab Lydian = Ab, Bb, C, D, Eb, F, G, Ab
10) Ab diminished = Ab, Bb, Cb, Db, D, E, F, G, Ab
11) A major = A, B, C#, D, E, F#, G#, A
12) Bb Lydian b7 = Bb, C, D, E, F, G, Ab, Bb
13) B Lydian = B, C#, D#, E#, F#, G#, A#, B
14) B diminished = B, C#, D, E, F, G, Ab, Bb, B

Group #3 Melodic Minor:

1) C Melodic minor = C, E, Eb, F, G, A, B, C
2) D Melodic minor = D, E, F, G, A, B, C#, D
3) F Melodic minor = F, G, Ab, Bb, C, D, E, F
4) Ab Melodic minor = Ab, Bb, Cb, Db, Eb, F, G, Ab

Group #4 Whole Tone: entries contain identical pitches, just six different starting points.

1) G + = G, A, B, C#/Db, D#/Eb, F, G
2) A + = A, B, C#/Db, D#/Eb, F, G, A
3) B + = B, C#/Db, D#/Eb, F, G, A, B
4) Db + = Db, Eb, F, G, A, B, Db
5) Eb + = Eb, F, G, A, B, Db, Eb
6) F + = F, G, A, B, C#/Db, D#/Eb, F

DOMINANT SEVENTH STUDIES: MUSICAL PROOF ONE DIATONIC CHOICES

Of the eight musical scales listed in group #1, only two (2) pitches emerge that are not diatonic to the "C" major scale. These are "C#", found in scale #2 and "Eb", found in scale #5. Let's analyze each situation.

1) "G" Lydian b7, scale choice #2 from group # 1 on the previous chart.

The same conflict of tones that is inherent with tonic harmony concerning the sharp eleventh (#11) potentially manifests itself in dominant seventh chords. Due to the major third above the root in constructing the major triad, the creation of the minor ninth interval between the major third and the natural eleventh produces a dissonance generally avoided and dictates the raising of the eleventh one half step. The same situation applies to the dominant chord, whose construction also begins with a major triad. Let's spell out our dominant seventh chord in the key of "C" major.

1	3	5	7	9	#11	13	15
G	B	D	F	A	C#	E	G

Our scale choice #2 in group one provides the following group of pitches to create melodic ideas from over dominant harmony. This particular group of pitches is musically known as the Lydian b7 scale. Using "G" natural as our root our scale is spelt thus:

G	A	B	C#	D	E	F	G
1	2	3	#4	5	6	7	8

The presence of the non-diatonic "C#" is basically derived from the potential conflict illustrated by our arpeggio, where the major third above the root ("B" natural) clashes with the diatonic 11th, "C" natural; by creating an interval of a minor ninth, thus the "C"# in entry #2 in group one. Viewed as the sharp fourth degree of our Lydian scale, the musical enharmonic (gl) equivalent is known as the "flatted fifth." This "flatted fifth" forms one of the musical pillars of a style of Jazz historically known as "Be-Bop." If you're unfamiliar with Be-Bop, make a mental note now to research and discover this wonderful style of Jazz. Play both dominant seventh arpeggios on your instrument, using the same procedure applied to the tonic arpeggios, using both the natural eleven (11), in this case "C" natural and the sharp eleven "C#." Again, let *your* ear be the judge.

2) Scale choice five (#5) of group one (#1) contains the non-diatonic pitch of "Eb" contained within the scale "F" Lydian b7. Let's analyze this situation and derive its presence.

The quickest solution to this musical problem is to simply see the derivation from scale choice four (#4) of group one (#1). Thus: F Lydian - "F, G, A, B, C, D, E, F" is completely diatonic to "C" major. The "Eb" contained in the "F" Lydian b7 grouping of notes creates what could also be called a mode, i.e. " Lydian b7." Its sound provides a distinct "color" used by improvising musicians. The Lydian flat seven (b7) color is just a slight variation of "F" Lydian. Its color helps to add a bit of "whole tone" sound when used over a "G" dominant seventh chord by providing both the diatonic fifth of "G" dominant seventh (namely "D" natural) and the augmented 5th of "G" dominant seventh ("D#"), which in this case is enharmonically present as "Eb." Note that the presence of the "Eb" and the partial whole tone quality it creates make for some cool resolutions to the tonic minor color. Use of the Lydian flat seven in creating melodic ideas over dominant harmony is very common. Here we are building from the flat seventh degree of the dominant. Try building this Lydian b7 group of pitches from other degrees of the dominant seventh chord, such as b2, major 3, perfect 5th etc. (see musical proof #3 in this section).

DOMINANT SEVENTH STUDIES: MUSICAL PROOF TWO / DIMINISHED STUDIES

The following material is included to provide the structural musical basis for group two (#2) scale choices in relation to our dominant seventh chord. Once these ideas are discussed, a brief "artistic" explanation follows to help categorize the various "colors" associated with scale choices derived from our diminished studies. Our overall tonic will be "C" major, thus our dominant is built on "G" natural. To begin, let's spell out the "G" dominant seventh. Thus:

1	3	5	7
G	B	D	F

Now let's add the ninth chord tone, thus:

1	3	5	7	9
G	B	D	F	A

Now let's flat the nine, a common occurrence in contemporary harmony, thus:

1	3	5	7	b9
G	B	D	F	Ab

Let's examine the four note arpeggio that starts on the 3rd of our "G7b9" chord. Thus:

B	D	F	Ab

This group is a fully diminished seventh arpeggio, constructed exclusively by minor 3rd intervals. See chapter 1 for a more detailed explanation of the diminished scale. Here's the magic, by lowering any one note of this arpeggio a half step we can spell four different dominant seventh chords. Watch for enharmonic spellings to ease understanding. Thus:

	B	**D**	**F**	**Ab**	**becomes**	
1)	Bb	D	F	Ab	=	Bb7
2)	Db	F	Ab	B(Cb)	=	Db7
3)	E	G#	B	D	=	E7
4)	G	B	D	F	=	G7

Thus, our four different dominant seventh chords, whose roots are a **minor third apart.**

G7	Bb7	Db7	E7

If we add a flatted ninth to each seventh chord we arrive at:

	1	3	5	7	b9
G7b9 -	G	B	D	F	Ab
Bb7b9-	Bb	D	F	Ab	Cb(B)
Db7b9 -	Db	F	Ab	Cb(B)	Ebb(D)
E7b9 -	E (Fb)	G#(Ab)	B	D	F

These chords have been spelt out diatonically in relation to their tonic keys, the pitches in parentheses are their enharmonic equivalents.

Let's respell the four dominant seventh chords using these enharmonic equivalents:

	1	3	5	7	b9
G7b9 -	G	B	D	F	Ab
Bb7b9-	Bb	D	F	Ab	B
Db7b9	Db	F	Ab	B	D
E7b9 -	E	Ab	B	D	F

The discerning musical eye will notice that the same fully diminished seventh arpeggio is found in each of the four different dominant seventh flat nine chord arpeggios. **Each of the four pitches of the above diminished seventh arpeggio become the four "leading tones" (gl) of four different tonics.** We can fully utilize this phenomenon when improvising melodies over dominant seventh harmony as it gravitates or resolves to various tonal centers. Let's construct the four Two (ii min 7), Five (V7), One (I maj 7) chord progressions and begin to "distill" the melodic choices found in "group two." Thus, our four Two (ii min 7) Five (V7) One (I maj 7) chord progressions are:

D-7	G7b9	C major / minor 7
F-7	Bb7b9	Eb major / minor 7
Ab-7	Db7b9	Gb major / minor 7
B-7	E7b9	A major / minor 7

Do notice that all vertical listings are a minor third apart.

Let's reduce each group to just it's Two (ii min 7) Five (V7b9) components.

(D-7 G7b9) (F-7 Bb7b9) (Ab-7 Db7b9) (B-7 E7b9)

These four Two (ii min 7) Five (V7b9) sequences will all gravitate towards each of the four tonics listed above due to the common fully diminished seventh chord found in the upper structure of the four different dominant seventh flat nine chords. Let's discuss each entry of group #2 in relation to dominant harmony and identify its derivation from our chart. First though, we must address the concept of "artistic" license when applied to an improvising musician. The fully diminished seventh chord and it's scale create a very distinct sound or color. Deriving our four dominant seventh chords from this structure, we proceed to artistically "soften" the fully diminished sound by first eliminating the flatted ninth. Once this is achieved, all the other structural configurations that were discussed earlier (chapter 2) in regards to defining dominant harmony can now be applied to each of the four different dominant seventh chords that were derived from this diminished concept. Thus, interval studies, arpeggios and upper structure alterations can be applied to any of the four different dominant seventh chords, which in the above example is "G7", "Bb7", "Db7", and "E7", as they converge on *one tonic*, which in our illustration is "C" major. By "softening" the diminished sounds, many new aural shades and colors emerge. Their hue and intensity could be defined in relation to how "inside" or how far "outside" they are in regards to the tonal center being gravitated towards, perhaps best viewed by physical proximity on the cycle of fourths diagram. The harmonic aspect to the above melodic "situation" is addressed in chapter 4 under the Two-Five-One Harmonic heading.

work space / notes:

Now let's examine each choice in group two (#2) of our dominant seventh family in relation to "G7", our dominant chord in "C" major. This listing is done chromatically.

1) Db Lydian - derived from Db7b9, a "softened" color:

Spelt:	Db	Eb	F	G	Ab	Bb	C	Db	Analyzed against:
G7 =	b5	#5	b7	Root	b9	#9	4	b5	

NOTE: **An extremely useful color. Any and all dominant seventh chord (V7) variations, built on the pitch "Db", when substituted for any variation of "G7" (V7) is termed the "tritone" substitution. "Db" is a tritone away from "G."**

2) Db Lydian b7 - a variation of Db Lydian:

Spelt:	Db	Eb	F	G	Ab	Bb	Cb	Db	Analyzed against:
G7 =	b5	#5	b7	Root	b9	#9	maj 3	b5	

NOTE: Same essential grouping as "Ab" Melodic minor.

3) D diminished - both the scale and arpeggio are directly derived from upper part of G7b9:

Spelt:	D	E	F	G	Ab	Bb	B	C#	D	Analyzed against:
G7 =	5	6	7	Root	b9	#9	maj3	#11	5	

NOTE: Could easily resolve to four tonics, i.e. "C", "Eb", "Gb", and "A", major or minor keys.

4) Eb Major - derived as the overall tonic of Bb7b9:

Spelt:	Eb	F	G	Ab	Bb	C	D	Eb	Analyzed against:
G7 =	#5	b7	Root	b9	#9	4	5	#5	

NOTE: This group readily will resolve to "C" minor.

5) E Lydian - derived from E7b9 a "softened" color:

Spelt:	E	F#	G#	A#	B	C#	D#	E	Analyzed against:
G7 =	6	maj7	b9	#9	maj3	#11	#5	6	

NOTE: This color is hard to blend due to the "F#", but a beautiful "color" is derived by using just the "E" triad. Try moving the "F#" up to "G." Mozart, and many others, loved this #4 to 5.

Spelt:	E	G#	B	Analyzed against:
G7 =	6	b9	maj 3	

6) E Lydian b7 - slight variation of "E" Lydian:

Spelt:	E	F#	G#	A#	B	C#	D	E	Analyzed against:
G7 =	6	maj7	b9	#9	maj3	#11	5	6	

NOTE: Be careful with the "F#", perhaps best used moving chromatically to "G."

7) F diminished - direct descendent of the diminished arpeggio found in the upper part of Db7b9:

Spelt:	F	G	Ab	Bb	B	C#	D	E	F	Analyzed against:
G7 =	b7	Root	b9	#9	maj3	#11	5	6	b7	

NOTE: Could easily resolve to the four tonics "C"," Eb"," Gb", and "A", major or minor keys.

8) F minor seventh (F-7) - kind of a hybrid, but directly derived from the ii min 7 / V7 / I of "Eb" major. Could also be viewed as "Ab" Lydian:

Spelt:	F	G	Ab	Bb	C	D	Eb	F	Analyzed against:
G7 =	b7	Root	b9	#9	4	5	#5	b7	

Note: Explore the other Two chord possibilities created by the V 7b9 situation, i.e. "Ab" and "B" minor 7.

9) Gb major - tonic of Ab min 7 / Db7b9 as illustrated in chart:

Spelt:	Gb	Ab	Bb	Cb	Db	Eb	F	Gb	Analyzed against:
G7 =	maj7	b9	#9	maj3	b5	#5	b7	maj7	

NOTE: Hard to control due to presence of both major 7th and flat seven, although this group provides chromatic resolution to the fifth ("G") of our tonic, "C" major or minor.

10) Ab Lydian - derived from G 7b9, a "softer" sound with some great tensions. Authors note; I love this color, especially when arpeggiated, check it out.

Spelt:	Ab	Bb	C	D	Eb	F	G	Ab	Analyzed against:
G7 =	b9	#9	4	5	#5	b7	Root	b9	

11) Ab diminished - derived directly from the upper structure diminished 7 arpeggio of G7b9:

Spelt:	Ab	Bb	B	C#	D	E	F	G	Ab	Analyzed against:
G7 =	b9	#9	maj3	#11	5	6	b7	Root	b9	

NOTE: Could easily resolve to the four tonics "C", "Eb", "Gb", "A". Again, major or minor keys.

12) A major - tonic to which E7b9 resolves to:

Spelt:	A	B	C#	D	E	F#	G#	A	Analyzed against:
G7 =	2	maj3	#4	5	6	maj7	b9	9	

NOTE: Don't emphasize the "F#" against the "G7" chord, more or less like the situation in choice number five (#5), use the triad and become "polytonal" (gl).

Spelt:	A	C#	E	Analyzed against:
G7 =	9	#11	13	for starters.

13) Bb Lydian - derived from Bb7b9, a "softer" sound with some good tensions (gl):

Spelt:	Bb	C	D	E	F	G	A	Bb	Analyzed against:
G7 =	#9	4	5	6	b7	Root	9	#9	

NOTE: The "Bb7" substitute for "G7" is commonly used in "Latin" flavored compositions. "Lydian b7" is also a choice built from "Bb."

14) B diminished - derived directly from the upper structure diminished seventh arpeggio found in G7b9:

Spelt:	B	C#	D	E	F	G	Ab	Bb	B	Analyzed against:
G7 =	maj3	#4	5	6	b7	Root	b9	#9	maj3	

Note: Could easily resolve to the four tonics, "C", "Eb", "Gb", "A", major or minor.

DOMINANT SEVENTH STUDIES: PROOF THREE / MELODIC MINOR SUBSTITUTION

This concept simply builds a melodic minor scale, which is identical in both ascending and descending forms, on four different degrees of the dominant seventh scale, i.e. the Mixolydian mode. Let's "crunch" down the numbers and letters to see what we've actually got here.

In "C" major, "G" Mixolydian is spelt:

1	2	3	4	5	6	7	8
G	A	B	C	D	E	F	G

Our melodic minor choices are built from the b2, 4th, 5th, and 7th scale degrees of "G" Mixolydian. Following our most "inside" to most "outside" scheme of organization, based here on how closely our grouping of notes corresponds to our diatonic scale, let's start with the melodic minor built on the fourth (4th) degree of the "G" Mixolydian scale. Thus,

1) "C" melodic minor is spelt:

1	2	3	4	5	6	7	8
C	D	Eb	F	G	A	B	C

The "Eb" is non-diatonic. Its presence when aurally viewed against the "G7" sound provides the augmented fifth (+5) or whole tone color to be used at the artist's discretion. Where have you seen this scale before?

2) Next in "tonal insideness" is the melodic minor scale built on the fifth scale degree of "G" Mixolydian, "D" natural. Thus. "D" melodic minor is spelt:

1	2	3	4	5	6	7	8
D	E	F	G	A	B	C#	D

The only non-diatonic pitch is "C#." This, when aurally viewed against the "G" dominant seventh, provides the #4 / b5 color so essential to Be-Bop players. This group contains the same pitches as a "G" Lydian b7 scale. Handy!

3) Moving further "out", let's build a melodic minor configuration on the seventh scale degree of the "G" Mixolydian scale. Thus:

1	2	3	4	5	6	7	8
F	G	Ab	Bb	C	D	E	F

Viewed aurally against the "G" dominant seventh, the "Ab" and "Bb" correspond to the b9 and #9 of the "G" dominant 7 arpeggio. Let's illustrate:

1	3	5	b7	b9	#9	11	13
G	B	D	F	Ab	Bb	C	E

"A" natural is our diatonic ninth; "Ab" and "Bb" are "hip" alterations of this chord degree. Experiment with these sounds, try using this group, i.e. "F" melodic minor over a "G"7#9 chord.

4) Moving further "out", let's build a melodic minor scale from b2 of "G" Mixolydian. Thus, flat two is "Ab":

1	2	3	4	5	6	7	8
Ab	Bb	Cb	Db	Eb	F	G	Ab
		(B nat.)					

When viewed against a "G" dominant seventh arpeggio extended up through the thirteenth:

1	3	5	7	9	#11	13
G	B	D	F	A	C#	E

This scale choice generates tension by use of the flat nine ("Ab"), sharp nine ("Bb"), "B" natural is diatonic, flat five / sharp eleven ("Db"), augmented five ("Eb"), "F" and "G" are diatonic.

These four melodic minor scale choices, when diatonically generated from the b2, 4, 5, and the 7th scale degrees of the Mixolydian mode, provide some interesting colors. Experiment. Try building melodic minor scales from other degrees of the Mixolydian scale. Do compare the melodic minor derivations with the fully diminished seventh derivations, i.e.

melodic minor from b2, 4, 5, b7 of V 7 and

fully diminished from b2, 3, 5, b7 of V 7b9.

Also, what's the deal with this? "C" melodic minor = "F" Lydian b7 ?

C, D, Eb, F, G, A, B, C, = F, G, A, B, C, D, Eb, F.

It is all a matter of aural intervallic perspective ! Just more grist for the mill ! Explore and experiment !

DOMINANT SEVENTH STUDIES: MUSICAL PROOF FOUR WHOLE TONE SCALE:

As previously illustrated in chapter 1, the whole tone scale is constructed exclusively upon the interval of the whole step. Group four (#4) of the section concerning melodic choices over dominant seventh harmony is exclusively in the domain of the whole tone scale. A brief study of this group shows a collection of pitches that apply to all our six scale choice possibilities. Let's start with our dominant triad in the key of "C" major. Our dominant triad is spelt:

1	3	5
G	B	D

To "augment" this triad we simply raise the fifth one half step, thus:

1	3	+5
G	B	D#

By extending our triad to include the seventh, we arrive at:

1	Δ3	+5	b7
G	B	D#	F

By applying our whole tone scale formula of consecutive whole steps, we "fill in" the "G" seventh arpeggio and create the "G" whole tone scale. Thus:

G A B C#/Db D#/Eb F G etc.

This is the group of pitches that appears following all of the scale choices of group four (#4). What we've basically done is redefine this group of pitches in relation to six dominant seventh augmented fifth chords, which would potentially resolve to six different keys. This multiple key possibility is further enhanced by the whole tone groups ability to be initiated on six different stating points, each of which provide a unique "reflection" back upon the tonic center. This gives the improviser greater resource to work with i.e., building the same whole tone scale, "G, A, B, Db, Eb, F", from various scale degrees as they relate to our tonic of "C" major or, due to whole tone colors beautiful symmetry, the natural resolution to six different tonics, i.e. ""C", "D", "E", "Gb", "Ab", "Bb", both major and minor. For those "impassioned", crunch this concept down, distill it's foundations, discover the "truths" and they'll be yours forever. The augmented colors are advanced. To blend them musically basically requires the "internalization" of the color, thus sing your lines and internalize, then create new emotional contexts using this unique and wonderful color.

work space / notes:

TONAL CONVERGENCE CHART

The following tonal convergence chart chromatically lists the melodic possibilities discussed in the musical proofs. The chord symbol on the left is the substitute dominant harmony being outlined by the scale choice in the middle column. The right hand column provides a brief theoretical derivation for the scale choice. NOTE: Diatonic modes are omitted, see "Musical Proof Group One" for a thorough explanation of the diatonic modes if necessary. These "possibilities" are "realized" harmonically (gl) in chapter 4.

TONAL CONVERGENCE CHART

1) I maj #4	C Lydian w#11	Diatonic #11
2) i min / maj 7	C Melodic Minor	Mode of Lydian b7
3) bII maj 7	Db Lydian	Tritone Substitute
4) bII 7 #11	Db Lydian b7	Tritone Substitute
5) bII +	Db+	Whole Tone Scale
6) ii diminished	D dim 7	V7b9 Concept
7) ii min / maj 7	D Melodic Minor	Mode of Lydian b7
8) bIII maj 7	Eb maj 7	Derived from Tritone Substitute
9) III 7 #11	E Lydian b7	V7b9 Concept
10) IV maj 7 #11	F Lydian	Parent Scale of V7
11) IV7 #11	F Lydian b7	Parent Scale of V7 w/+5
12) iv diminished	F dim 7	V7b9 Concept
13) iv min / maj 7	F Melodic Minor	Mode of Lydian b7
14) IV+	F+	Whole Tone Scale
15) iv min 7	F-7	Mode of Ab Lydian, Parent to Bb7
16) #IV maj 7	F#(Gb)maj 7	Cool Sound, Derived from Tritone Substitute
17) V 7 #11	G Lydian b7	Diatonic with #4
18) V 7+	G+7	Whole Tone
19) bVI maj 7	Ab Lydian	V7b9 Concept
20) bvi min / maj 7	Ab Melodic Minor	Mode of Lydian b7
21) bvi diminished	Ab dim 7	V7b9 Concept
22) VI maj 7	A maj 7	Derived from Tritone Substitute
23) VI+	A+ 7	Whole Tone Scale
24) bVII 7 #4	Bb Lydian b7	Derived from Tritone Substitute
25) VII maj 7 #11	B Lydian	Derived from Tritone Substitute
26) vii diminished	B dim 7	V7b9 Concept
27) VII+	B+	Whole Tone Scale

Discussion: Lots to consider. Discuss the implications of "multiple" tonal centers in relation to the fully diminished seventh arpeggio. Do the same for the whole tone group.

Exercises: Begin to play through the possibilities for each of the "chord types." Musical examples of each entry on this chart is provided in chapter four, where the melodic idea is supported with appropriate harmonic backing.

work space / notes:

Years ago, while attending college, one of the requirements for the baccalaureate degree I was completing was a course in elementary vocal techniques. The professor, Dr. Allen Frank, was what back then was known in the Jazz world as a "cocktail" pianist. This cat plays so beautifully. Anyway, on entering the class each session, Dr. Frank would be seated at the piano casually doing his "thing." As the class settled down to begin, Dr. Frank would usually end his improvisations with an extended tonic arpeggio. One time, while enjoying these improvisations, as the last pitches were sounded, I realized that I could not identify what had been played. After that class, I asked Dr. Frank what was the arpeggiated figure used to end his improvisations. He passed along to me the idea of the sharp fifteenth (#15) as being an extension of the tonic arpeggio, this being the next "correct" sounding pitch after the thirteenth (13). After a brief discourse about the relationship between the naturally occurring overtone series and the well tempered system of our modern day piano, Dr. Frank encouraged me to explore these upper partials. Thus, the following ideas are concerned with the upper extensions of the One (I maj 7), Two (ii-7) and Five (V7) chord types previously illuminated in the preceding sections. Starting out as an experiment, to ascertain chordal intervals above (13), the following ideas were crunched down to obtain the following information. By extending the arpeggios of each of these three chord types, the following results were obtained from which seventh chords were built then analyzed and grouped accordingly. The actual pitches utilized are the pitches that "sounded correct" according to each chord type. For those who are curious to recreate the experiment, these are the simple steps I followed. Using a well tuned piano:

1) Depress the sustain pedal and arpeggiate a "C" major chord extended up through the entire range of the piano. The pitches I arrived at are listed in chart #1 of this section. Repeat the process for the Two (D-7) chord (see chart #2 for my results), and Five, G7 (see chart #3 for my results). Let your ear be the guide as to which pitches sound "correct."

Results:

1) Both the One and Two chord types, although starting on different pitches, yielded identical results with a common cyclical key relationship and a consistent major / minor third interval sequence between pitches. See charts #1 and #2. This translates into "open season" when substituting Tonic type chords for Two type chords, i.e., "F" maj 7 for "D" min 7 etc., especially with a bass player on the gig (gl).

2) The Five chord type, see chart #3, yielded an "area" of different results which is followed by a partial repeat of the cycle created above in regards to the One and Two chord types. See charts #1 and #2. This "area" is analyzed against a G7 chord, in relation to the key of "C" major, see chart #4, and shown in the overtone series convergence diagram, see chart #5. Suggestions for scale choices are included. A brief explanation of each choice follows as well as an overall profile of the experiment.

3) A summary chart, see chart #6, for all of the seventh chord entries, are listed by chord type creating potential substitutions of Two / Five / One progressions, each individual entry is grouped with it's corresponding "partners" from each of the three charts as we move down the lists. Locate this chart at the end of this discussion and begin the mix and matching of possibilities that can last a lifetime! Manuscript is provided opposite this chart to help preserve your discoveries.

Chart #1, "C" major arpeggio, all twelve keys, Major and Minor are present:

C	E	G	B	D	F#	A	C#	E	G#	B	D#	F#	A#	C#	F	Ab	C	Eb	G	Bb	D	F	A	C	E
1	3	5	7	9	#11	13	#15	3	+5	7	#2	#4	#6	#1	4	b6	1	b3	5	b7	9	4	6	1	3

C maj 7
E min 7
Gmaj 7
B min 7
D maj 7
F# min 7
A maj 7
C# min 7
E maj 7
G# min 7
B maj 7
D# min 7
F# maj 7
A# min 7
C# maj 7
F min7
Ab maj 7
C min 7
Eb maj 7
G min 7
Bb maj 7
D min 7
F maj 7
A min 7

"C" major arpeggio and breakdown into seventh chords.

Chart #2, "D" minor arpeggio, all twelve keys, Major and Minor are present:

D	F	A	C	E	G	B	D	F#	A	C#	E	G#	B	D#	F#	A#	C#	F	Ab	C	Eb	G	Bb	D	F
1	b3	5	b7	9	11	13	1	3	5	#7	9	b5	6	#1	3	#5	#7	b3	b5	b7	b9	4	b6	1	b3

D min 7
F maj 7
A min 7
C maj 7
E min 7
G maj 7
B min 7
D maj 7
F# min 7
A maj 7
C# min 7
E maj 7
G# min 7
B maj 7
D# min 7
F# maj 7
A# min 7
C# maj 7
F min 7
Ab maj 7
C min 7
Eb maj 7
G min 7
Bb maj 7
D min 7

"D" minor arpeggio and breakdown into seventh chords, note that the diatonic third scale degree "F" is "b3" and that "F#" is 3, raised a half step.

Chart #3, "G" major arpeggio.

G	B	D	F	A	C#	E	G#	B	D#	F#	A#	C#	F	Ab	C	Eb	G	Bb	D	F	A	C	E	G	B
1	3	5	b7	9	#11	13	b9	3	+5	#7	#9	#11	b7	b9	4	b6	1	b3	5	7	9	4	6	1	3

G 7

B min 7 b5

D min / maj7

F maj+5

A maj 7

C# min 7

E maj 7

G# min 7

B maj 7

D# min 7

F# maj 7

A# min 7

C# maj 7

F min 7

Ab maj 7

C min 7

Eb maj 7

G min 7

Bb maj 7

D min 7

F maj 7

A min 7

C maj 7

E min 7

G 7

"G" major arpeggio and breakdown into seventh chords, note that the diatonic seventh scale degree "F" is "b7" and that "F#" is "#7", raised a half step.

Chart #4

	CHORD	SPELT	ANALYZED AGAINST G7	SCALE CHOICE
1)	G7	GBDF	1, 3, 5, b7	F Lydian
2)	B min 7b5	BDFA	3, 5, b7, 9	F Lydian
3)	D min / maj7	DFAC#	5, b7, 9, #11	G Lydian b7 (D Melodic Minor)
4)	F maj 7+5	FAC#E	b7, 9, #11, 13	G Lydian b7
5)	A maj7	AC#EG#	9, #11, 13, b9	D Lydian
6)	C# min 7	C#EG#B	#11, 13, b9, 3	B Lydian
7)	E maj 7	EG#BD#	13, b9, 3, #5	B Lydian
8)	G#-7	G#BD#F#	b9, 3, #5, b7	B Lydian

EXPLANATIONS:

1) Nothing heavy here, diatonic sounds and colors

2) Same as above

3) The "G Lydian b7" scale is one worth examining. Many good "colors" emerge. The #4 to tonic and natural 3 to flat seven are both tritones, the #4 also lends a bit of whole tone color. This scale configuration also contains the melodic minor scale from the fifth scale degree. From b7 to b7, i.e., "F to F", there's also quite a bit of "whole tone" color.

4) Same as above (#3)

5) The building a Lydian scale on Two provides quite a bit of tension due to it's "tonic" nature and graphic location to the tonic. The "F#" contained in this scale when built from "D", is a "cool" passing tone to "G", the fifth of our tonic C maj 7 chord. The use of the Lydian b7 scale on the second degree of the major scale also creates a Five (V7) of Five (V7) situation, a "cycling" of dominants so common in the "bridge" (gl) sections of older Jazz standards, i.e. "I Got Rhythm" etc. and many Latin flavored compositions. "Girl from Impanema" by A. C. Jobim comes to mind.

6) This "B" Lydian is a very useful color. Due to its proximity to our tonic, it's easily executed theoretically and contains some beautiful tensions.

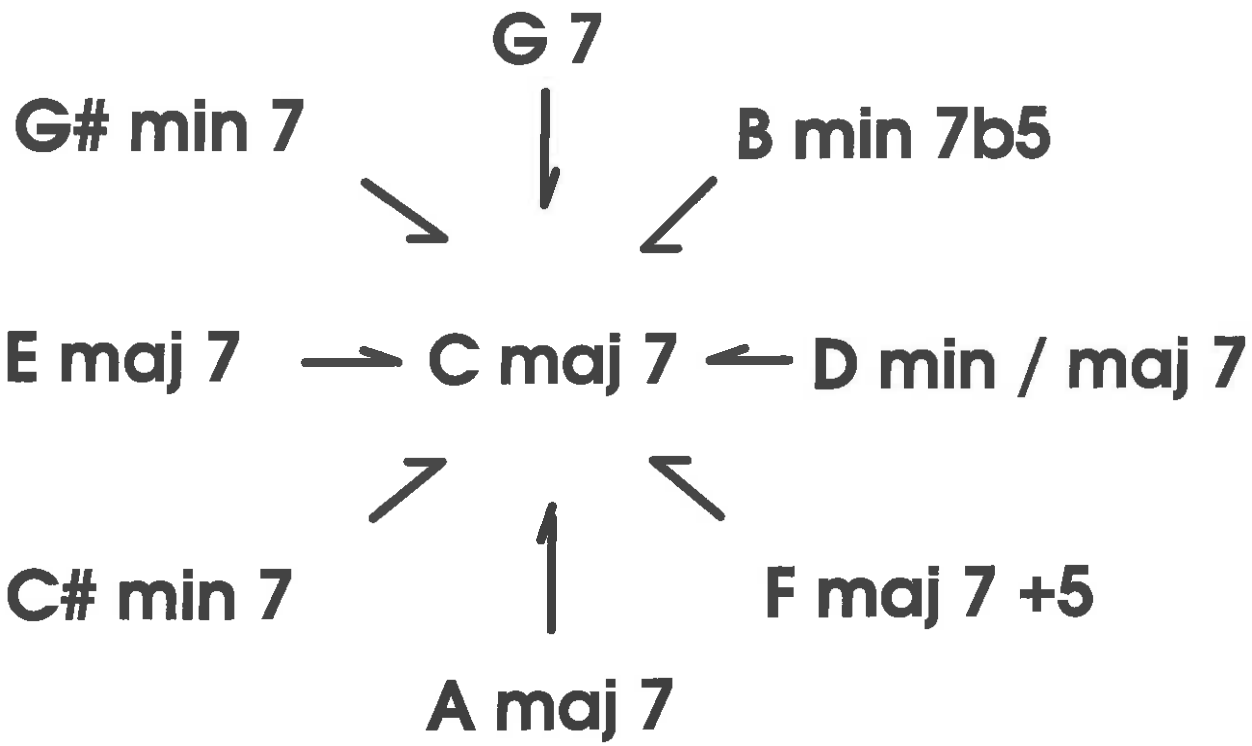
7) Same as above (#6)

8) Same as above (#6 and #7)

The extending of each of the chord type arpeggios based on the overtone series can potentially expand the resource. The overall concept here, as previously stated, is to **view scale choices which apply to various chord types as a group of notes to create melodic ideas from over that particular harmony.** If one was to apply this concept to the major scale, the results have spanned three solid centuries and is still yielding new, interesting and varied combinations, i.e. G.F. Handel's "Joy to the World" and Charlie Parker's "Confirmation" are two melodies based in a common musical system but sound totally different and distinct.

From charts #4 and #5, the polytonal implications are obvious. "E maj / G"," A maj / G" etc. Perhaps these chordal possibilities will yield new directions for scale choices and voicings, whether accompanied with a Two (ii-7) chord or not. The scale choices are pretty generic, George Russell's book, The Lydian Chromatic Concept of Tonal Organization thoroughly outlines further concepts in scale choices.

Chart # 5, Overtone Series Convergence Diagram:



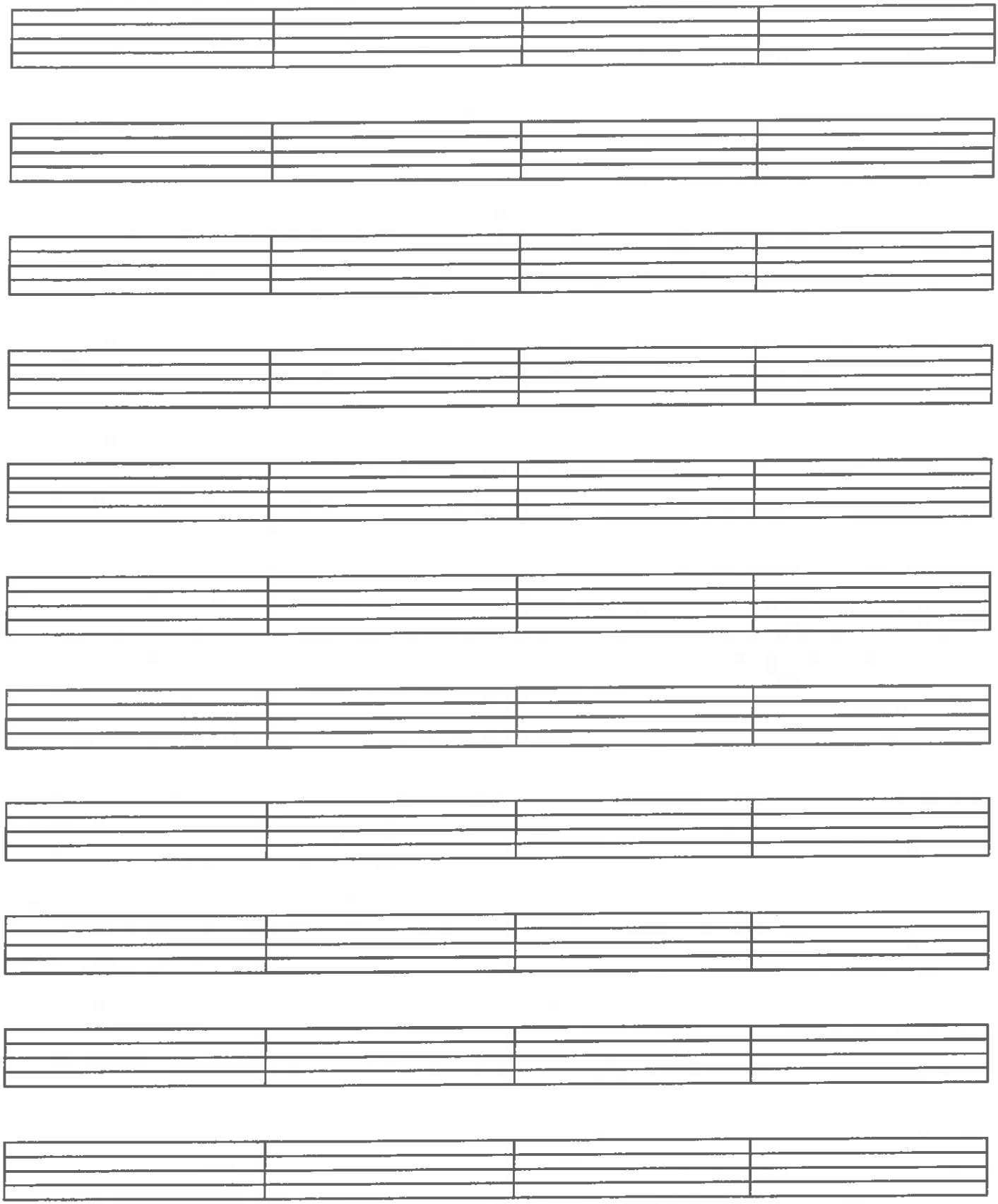
Profile of Experiment

When a player expands their tonal resources to include the upper structure components of the naturally occurring overtone series of the Equal Tempered System of Tonal Organization, the tonal "gravity" of their melodic and harmonic lines potentially takes on a "softened", less "tonally" centered or directed character. Charlie Parker described his experimentation with these same upper structure components while shedding over the changes to "Cherokee" as one of the "turning points" in his artistic growth. It takes time to assimilate and accept these upper extensions as sounding "correct." The execution of the arpeggios from their fundamental pitches provides the "springboard" into the their upper structure components. This is especially true when initially addressing Dominant seventh harmony and its myriad of potential upper structure alterations and configurations. As artistic strength is gained with these resources, the necessity of always outlining the entire arpeggio to clarify the upper partials is gradually reduced, freeing up the player to potentially create melodic and harmonic lines that encompass a wider range of "overtone colors", while reducing the dictating force of their usage, i.e., tonal gravity. Thus, a potentially "freer" and more colorful aural and tonal palette to create from. This level of understanding and execution, whether cognitive or intuitive, is generally indicative of a thorough grasp of the tonal resources provided by the "Equal Tempered System." Depending on your artistic goals, this "level" can become a *very cool place to hang out.*

Discussion: Is it possible that all of the seventh chords listed below each of the three arpeggio charts constitute possible substitutions for that particular harmony? If so, then does it follow that each of the seventh chord entries actually correspond as we move systematically down the list? Examine the tritones in each of the groupings. Look for numerical patterns. See summary chart of this discussion on the following page. Manuscript follows to keep track of ideas.

Chart # 6: Pairing of Two / Five / One entries from charts #1, #2 and #3. On the manuscript provided, begin the process of "mix and match" from the following listing.

Two	Five	One
D min 7	G 7	C maj 7
F maj 7	B min 7b5	E min 7
A min 7	D min / maj 7	G maj 7
C maj 7	F maj 7+5	B min 7
E min 7	A maj 7	D maj 7
G maj 7	C# min 7	F# min 7
B min 7	E maj 7	A maj 7
D maj 7	G# min 7	C# min 7
F# min 7	B maj 7	E maj 7
A maj 7	D# min 7	G# min 7
C# min 7	F# maj 7	B maj 7
E maj 7	A# min 7	D# min 7
G# min 7	C# maj 7	F# maj 7
B maj 7	F min 7	A# min 7
D# min 7	Ab maj 7	C# maj 7
F# maj 7	C min 7	F min 7
A# min 7	Eb maj 7	Ab maj 7
C# maj 7	G min 7	C min 7
F min 7	Bb maj 7	Eb maj 7
Ab maj 7	D min 7	G min 7
C min 7	F maj 7	Bb maj 7
Eb maj 7	A min 7	D min 7
G min 7	C maj 7	F maj 7
Bb maj 7	E min 7	A min 7
D min 7	G 7	C maj 7



"The highest reward for a person's toil is not what they get for it, but what they become by it."
John Ruskin

MELODIC APPLICATION: In the previous presentation of melodic resources in chapter 1, all musical scales and scale shapes were derived from the major scale. The intent of this presentation allows one to view the gradual reshaping of the major scale shapes into different groupings providing different melodic colors. With these major scale concepts basically under your fingers, the following presentation will reverse the above format and "trace" the associated groups and colors as the "evolve" back to the major scale group and color. The inherent musical tension created by the scale groups which follow will dictate their placement in the scheme of things as we artistically "soften" (gl) our tension, creating different colors and hues as they evolve back to our musical starting point, i.e. the major scale. The following ideas are of a reasonably advanced nature. Be patient with your learning "curve", proceed slowly and gradually assimilate the new colors. There is a lot of wonderful music that can be potentially created with the following concepts which build musical tension and release. A firm understanding of the diatonic essentials previously discussed in the first three chapters form the basis for this next level of recombining existing knowledge.

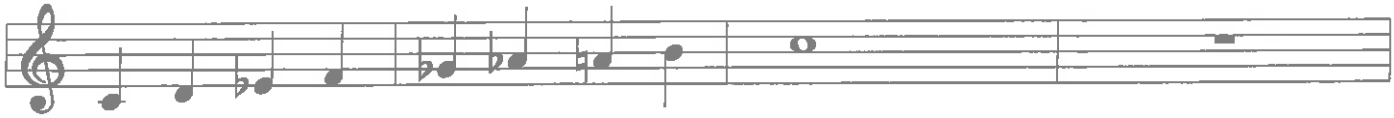
It may be said about "art" that it illuminates the balance or imbalance between tension and release. As musical artists, the various melodic groupings available each contain different levels of this tension creating ability. As previously stated, I feel that the polar opposite of the major scale is the diminished scale. I view these two groups as polar because while we draw tonal stability from the major scale, the diminished scale, in general musical terms, is musically unstable and generally seeks resolution to a tonal or key center, either major or minor, which from the authors view, is most easily derived from the major scale, the basis of the musical system under scrutiny. **When modulating or establishing a particular key as a structurally important tonic component within a musical composition, a sure way is to present some manifestation of the dominant chord of the key which we are heading towards**. The tritone interval encapsulated in the dominant seventh chord (V) creates the tension that is released when the tonic (I) is sounded, providing a possible resting point. With the addition of the flatted ninth to our dominant seventh chord, the creation of the fully diminished seventh chord in the upper structure of the dominant seventh flat nine (V7b9) provides some interesting musical possibilities, (see chapter 3, musical proof # 2 for a thorough explanation of this phenomena). These "diminished" possibilities may become an integral part of the improvisers language and through the "softening" (gl) process which follows, potentially provides a vast amount of melodic resource. With this in mind, here is a format for shedding (gl) the diminished seventh scale and associated colors and resolving them into their various tonal centers using the inherent tension and release found in the structure of the basic Two-Five-One chord progression. The following resolutions are to major scale groups, obviously, these concepts could and should be applied to their relative minor keys as well. Due to the symmetrical construction of the diminished scale, the potential resolutions include the tonic major and minor of the Five chord being employed as well as the major and minor tonics up or down intervals of the minor third. These possible resolutions become manifest due to the various "tritone" possibilities contained within the symmetrical diminished construction, which creates the diminished seventh color. In chart form:

"G" 7b9	"Bb" 7b9	"Db" 7b9	"E" 7b9 resolve to
"C" major / minor	"Eb" major / minor	"Gb" major / minor	"A" major / minor.

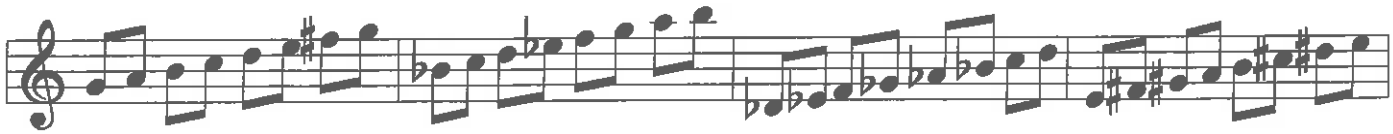
So in reality, the one diminished scale created in the upper structure of "G" 7b9 potentially contains the leading tones to resolve to all of the key centers listed above. Review musical proof # 2 on page 70, dominant harmony for a detailed analysis of this phenomena.

1) Run the three diminished scales ("C", "Db", "D") to their appropriate four Tonics.

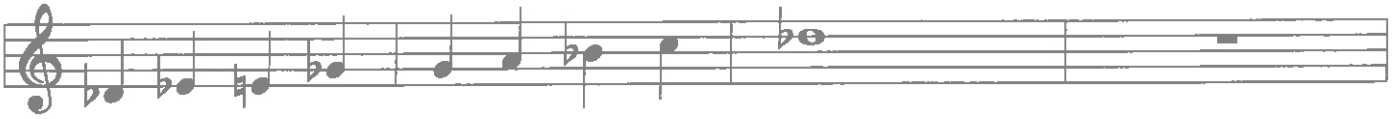
1a) "C" diminished scale to:



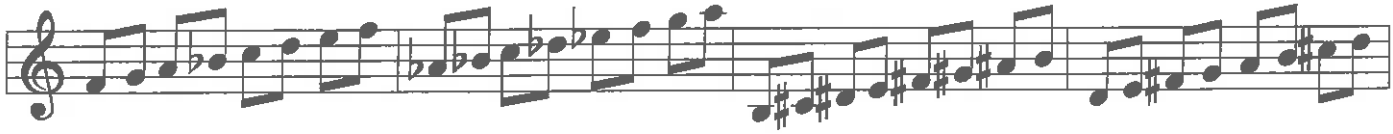
"G" major / minor "Bb" major / minor "Db" major / minor "E" major / minor



1b) "Db" diminished scale to:

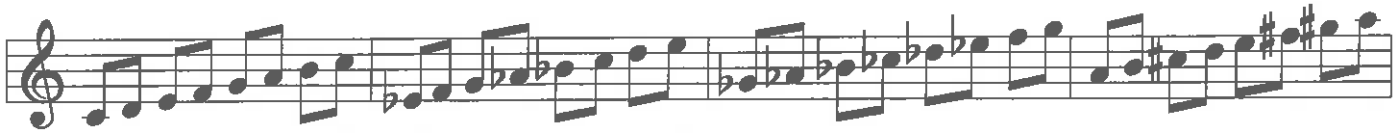


"F" major / minor "Ab" major / minor "B" major / minor "D" major / minor



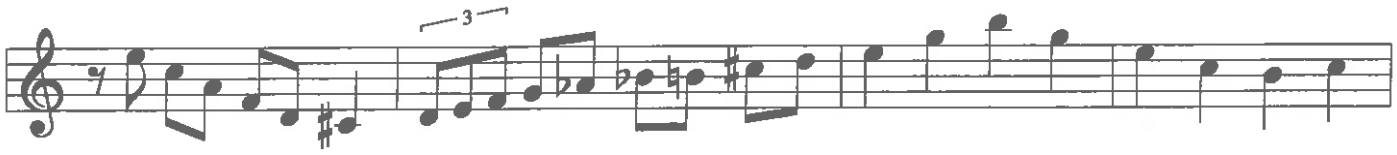
1c) "D" diminished scale to:

"C" major / minor "Eb" major / minor "Gb" major / minor "A" major / minor

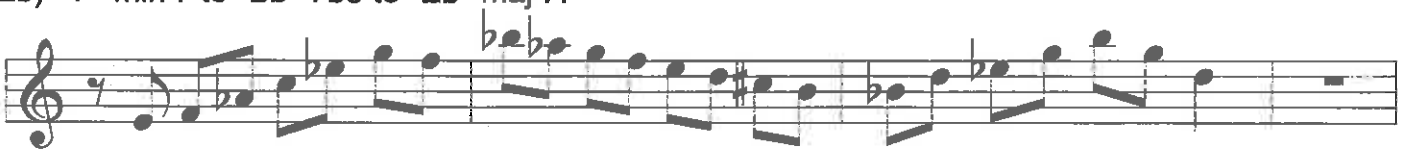


2) Same concept as #1 with the addition of a Two (ii-7) melodic idea to be created and executed prior to running the diminished scale shape and it's resolution. These examples use an a arpeggio to realize the Two and One chord harmony and we'll use the "D" diminished scale, i.e. "G"7b9, "Bb"7b9, "Db"7b9 and "E"7b9 in the following example.

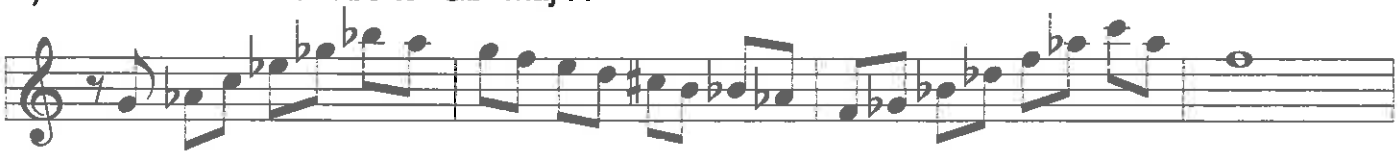
2a) "D" min 7 to "G" 7b9 to "C" maj 7.



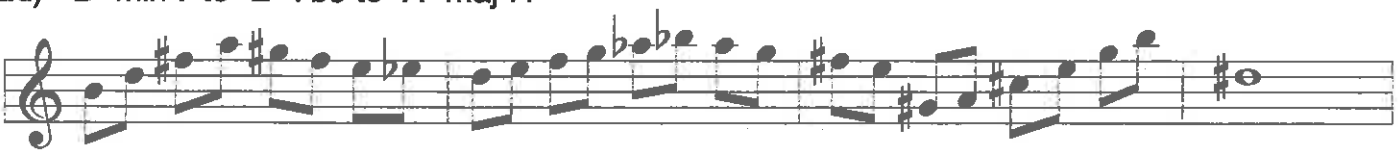
2b) "F" min 7 to "Bb" 7b9 to "Eb" maj 7.



2c) "Ab" min 7 to "Db" 7b9 to "Gb" maj 7.

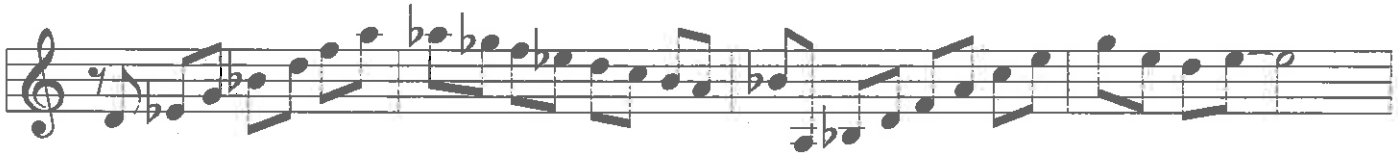


2d) "B" min 7 to "E" 7b9 to "A" maj 7.



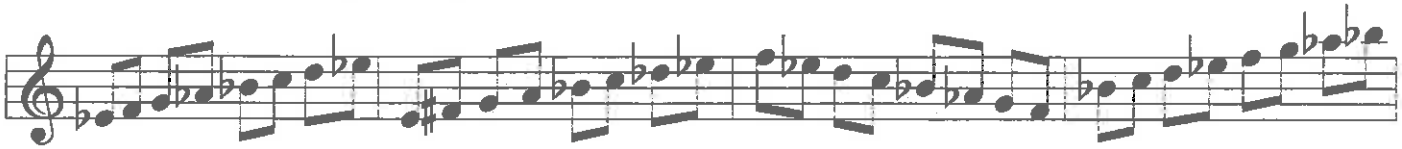
Recreate the above format for the "C" and "Db" diminished scales and their respective keys.

3) The following idea is to substitute a melodic idea generated from the Four chord (IVmaj 7) for the Two chord (ii min 7), move into the diminished shape and resolve to the proper tonic. Here we are simply starting our melodic idea from Four (IVmaj 7), which is the third scale degree of the Two chord. We'll outline the Four and One chords in the following example by use of an arpeggiated figure. Explore this concepts through all twelve keys. The following example is in "Bb" major.



4) A very common chord progression found in contemporary music is to use the fully diminished chord as passing (gl) between tonic harmony (I maj 7) and Two chord harmony (ii-7). Basically referred to as the sharp One diminished (# i dim 7). This harmonic situation is an integral part of "rhythm changes", a common "vehicle" (gl) of the 1930's and 1940's. When soloing, strong improvisers will substitute this color into their chordal and melodic ideas, whether written or not, to create a greater sense of energy and forward motion (gl). Create a melodic idea from the major scale group, move into the diminished shape creating tension, move on to the Two chord etc. Motivated folks will continue this cycle to Five (V7) and resolve back to the starting tonic (I maj 7). Push this *"treatment"* through all twelve keys. Also, what is the relationship between the diminished scale found in the sharp one diminished chord and the dominant seventh flat nine chord built on the sixth degree of the major scale? Very important! Explore.

4a) Example in "Eb" major using #1 dim 7.



5) A close associate to sharp One diminished seventh (#1 dim 7) is the dominant seventh flat nine (V7b9) built on the Sixth degree of the major scale, which oftentimes is used in a similar fashion. Thus:

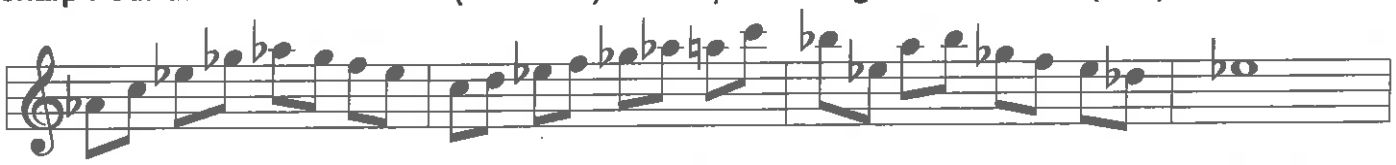
I maj 7	#1 dim 7	ii min 7	V7
I maj 7	VI7b9	ii min 7	V7

By crunching down the letter names we find the same fully diminished seventh chord in both the sharp One diminished (#1) and dominant seventh flat nine (V7b9) built on the Sixth degree of the major scale. In C major;

#1 dim 7	is spelt	C#, E, G, Bb
VI7b9	is spelt	A, C#, E, G, Bb

Explore this concept to help create new pathways covering the same musical ground.

6) A similar situation to the above often occurs in the twelve bar Blues form. A common substitution utilizing the fully diminished seventh scale and chord shapes is found following the Four chord (IV7) of bar six in a twelve (12) bar Blues form. This chord is generally known as the sharp Four diminished seventh (#iv dim 7). Example starting on the 5th bar (Ab7) of "Eb" blues.



7) With the musical construction of the diminished sounds being minor thirds, a unique and important consideration emerges with regard to the "doubling" up of the Two-Five progression into Three-Six-Two-Five grouping, an all to common chord progression not to be acquainted with, see chapter 2 and 3 for more ideas on this fundamental musical component. Thus: two basic possibilities emerge relating the above Three-Six-Two-Five with the minor third interval. Comparing the Three-Six to Two-Five, we realize that the component parts have identical construction, i.e. a Two chord type moving to a Five chord type and are located a whole step apart. For example, in the key of "C": major we arrive at:

Three	**Six**	**Two**	**Five**
E-7	**A7**	**D-7**	**G7**

The minor third interval is dividable into whole steps and half steps. With this in mind, is moving a particular diminished chord or scale up or down a whole step the equivalent of moving that same group down or up a half step? Confused? Let's add a flat nine to each of our Five chords above, to create the diminished seventh chord in it's upper structure then crunch it all down.

	A7b9	G7b9
Spelt	A, C#, E, G, Bb.	**G, B, D, F, Ab.**

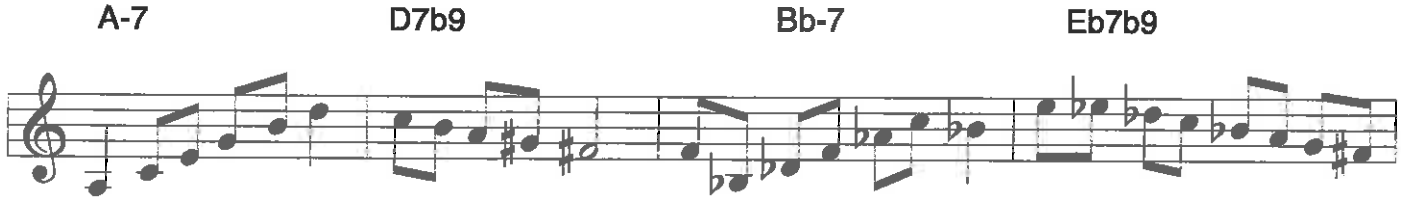
To restate our question, is the diminished chord and scale found within the "G"7b9 located a whole step below "A"7b9, equivalent to the diminished chord and scale found a half step above the "A"7b9, namely "Bb"7b9? Let's spell out the "Bb"7b9 shape and compare. Thus:

Bb7b9	is spelt	**Bb, D, F, Ab. Cb (B)**

A cursory glance between the "G"7b9 and the "Bb"7b9 reveals an identical grouping of pitches. These pitches are a minor third apart and comprise the fully diminished seventh chord found within the upper structure of any dominant seventh flat nine (V7b9). See chapter 3 for a more thorough explanation of this important concept. For our Three-Six-Two-Five progression, with the inclusion of a flatted ninth to our dominant chords, the common relationship between dominant seventh flat nine chords (V7b9), a minor third apart creates a situation where our possible choices now include moving up a half step from Three-Six. Thus, our original chords evolve from:

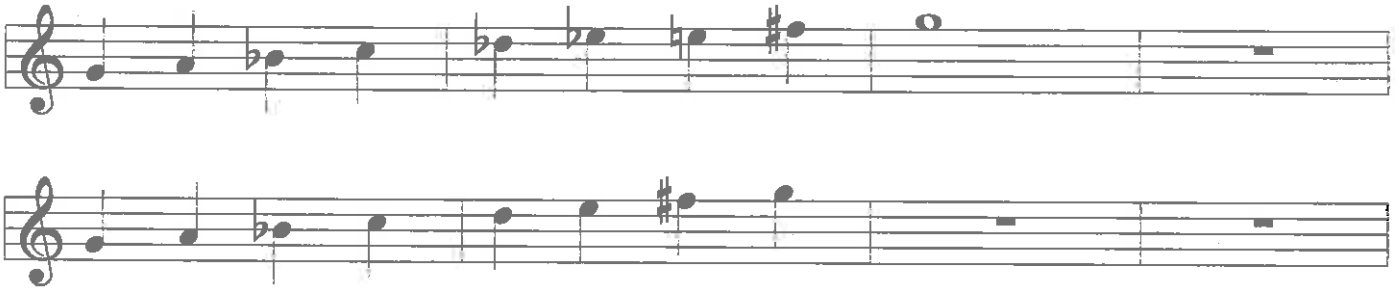
Three	Six	Two	Five	
E-7	A7b9	D-7	G7b9	evolve into
E-7	A7b9	F-7	Bb7b9	

In terms of moving things around, this can become very handy. The following arpeggiated Two chord / diminished scale example, in "F" major, comes to mind, explore and experiment. This above situation is addressed chordally here in chapter #4 as well as in chapter #5, under the heading of "Three-Six-Two-Five." Example:



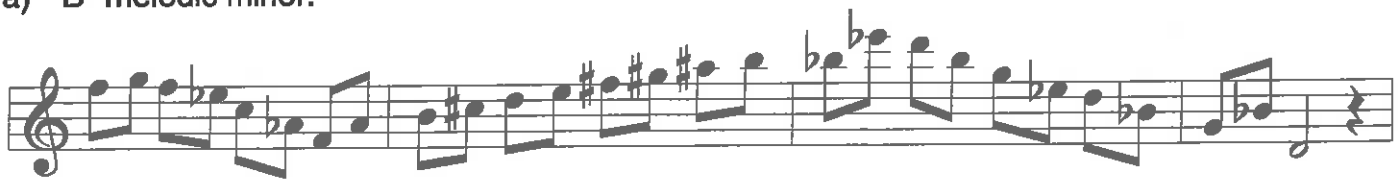
Check out the harmonic motion of John Coltrane's "Moments Notice."

8) Let's "soften" our fully diminished seventh color into our **Lydian flat seven / melodic minor** shape and generate musical ideas in the same format for the fully diminished seventh. This "softened" color is similar to the diminished sounds but begins to move us melodically away from the "minor third symmetrical construction" of the diminished scale and chords, so readily identifiable once the "ear" has them locked in. Compare "G" diminished to "G" melodic minor:



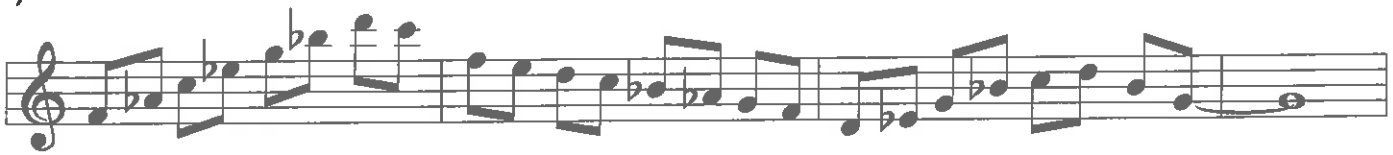
Remember that Lydian flat seven is built from b2, p.4. p.5 and b7 of our chosen dominant chord and that building this group of notes from the four degrees creates *different* upper structure alterations to the four dominant chords, see chapter # 3, dominant harmony, musical proof #3. Explore these concepts and tensions through all twelve keys. Begin to reverse the arpeggio and scale shapes, i.e., create descending lines. Example below using "B", "Eb", "F" and "Ab" melodic minor over "Bb" 7 altered (gl) resolving to "Eb" major, all of which is preceded by an appropriate Two minor seven (ii min 7) idea. Always look for half step resolutions to chord tones, (i.e. 1, 3, 5) when initially venturing "outside."

a) "B" melodic minor:

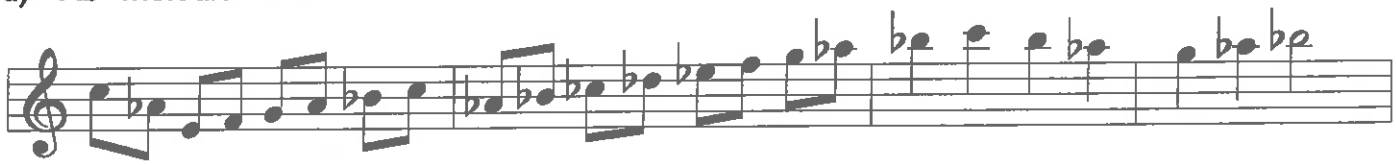


b) "Eb" melodic minor:

c) "F" melodic minor:



d) "Ab" melodic minor:

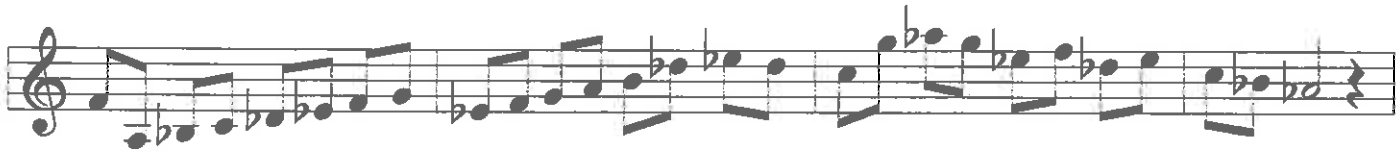


8a) A second approach for these melodic minor substitutions is to resolve each of the potential resolutions of the above concept to the four keys as done with the diminished group. Thus, from the above example, "Ab" melodic minor would be the flat second scale degree of "G" 7, the fourth scale degree of "Eb" 7, the fifth scale degree of "Db" and the flat seventh scale degree of "Bb" 7. The resolving keys of these dominants would normally be "C", "Ab", "Gb" and "Eb", major or minor. So, another approach for generating ideas with the melodic minor color. Please do realize that the Lydian flat seven scale pitches are contained within the melodic minor group, it all becomes a matter of perspective, explore and experiment.

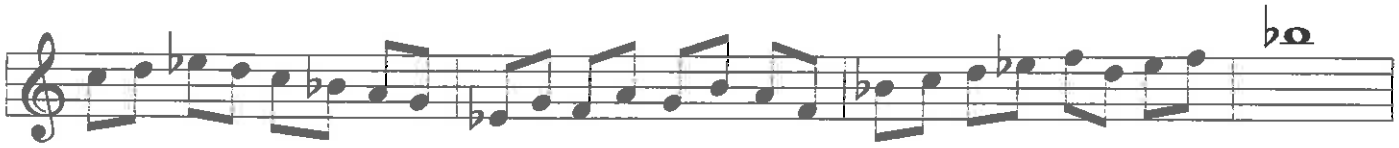
9) By raising the third scale degree of the melodic minor scale or the flat seventh degree of our Lydian flat 7 scale a half step, we arrive back at the major scale group. When employing the major scale to create melodic lines, these lines could be said to be diatonically or modally generated. Although this entry is the penultimate of this format, please realize that **the vast majority of music created in the Equal Tempered System of Tonal Organization is diatonically generated.** The above format is the reverse of the original presentation of the material found in chapter #1, to provide a different and potentially important perspective. This perspective includes visualizing both the "inside" and "outside" ends of the melodic spectrum as provided by the "Equal Tempered System." As discussed in the introduction to this text, the major scale has produced countless melodies over the centuries. J.S. Bach, W. Mozart, L. Beethoven, R. Wagner, D. Ellington and C. Parker all had basically the same theoretical musical resources available. We draw upon the same organizational system and it's resources. It is up to the "artist" to internalize the resources and reshape the structures to aurally materialize their artistic concepts. Explore and experiment.

10) Using the previous concepts of resolving one group of pitches to more than one key, use the following **whole tone** shape and resolve it to it's six appropriate tonic major scales. See chapter #3, dominant studies musical proof #4. The examples below utilizes the "G" whole tone scale resolving into "Ab", "Bb", "C", "D", "E" and "Gb" major with an appropriate Two minor seven (ii min 7) chord.

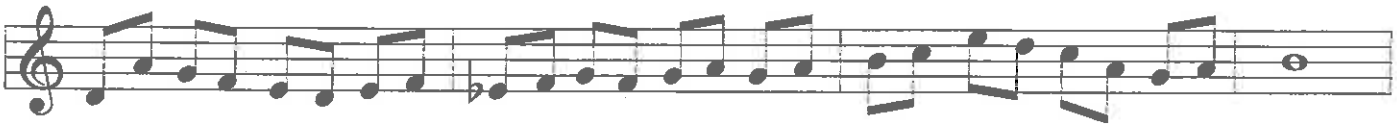
10a) To "Ab" major:



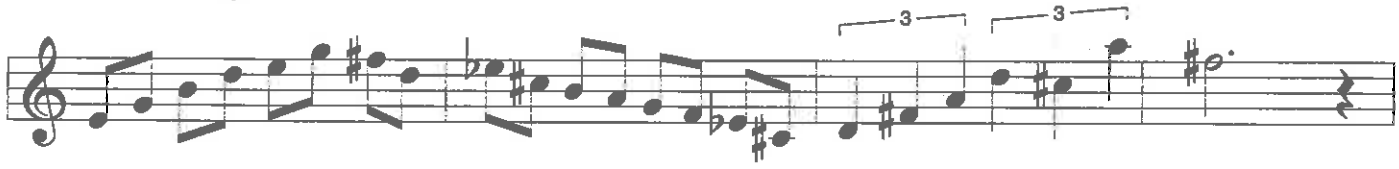
10b) To "Bb" major:



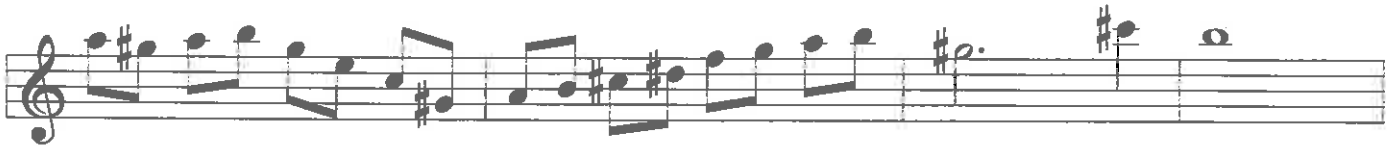
10c) To "C" major:



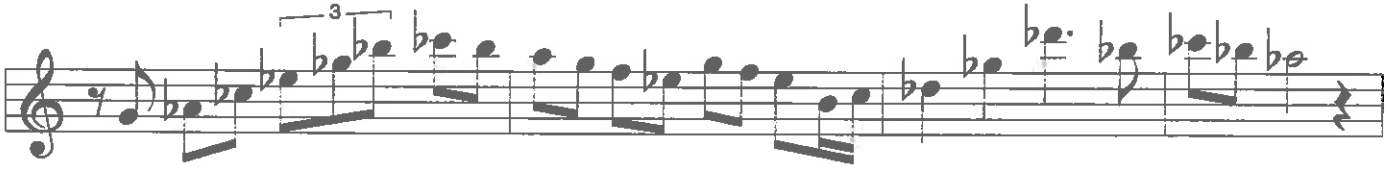
10d) To "D" major:



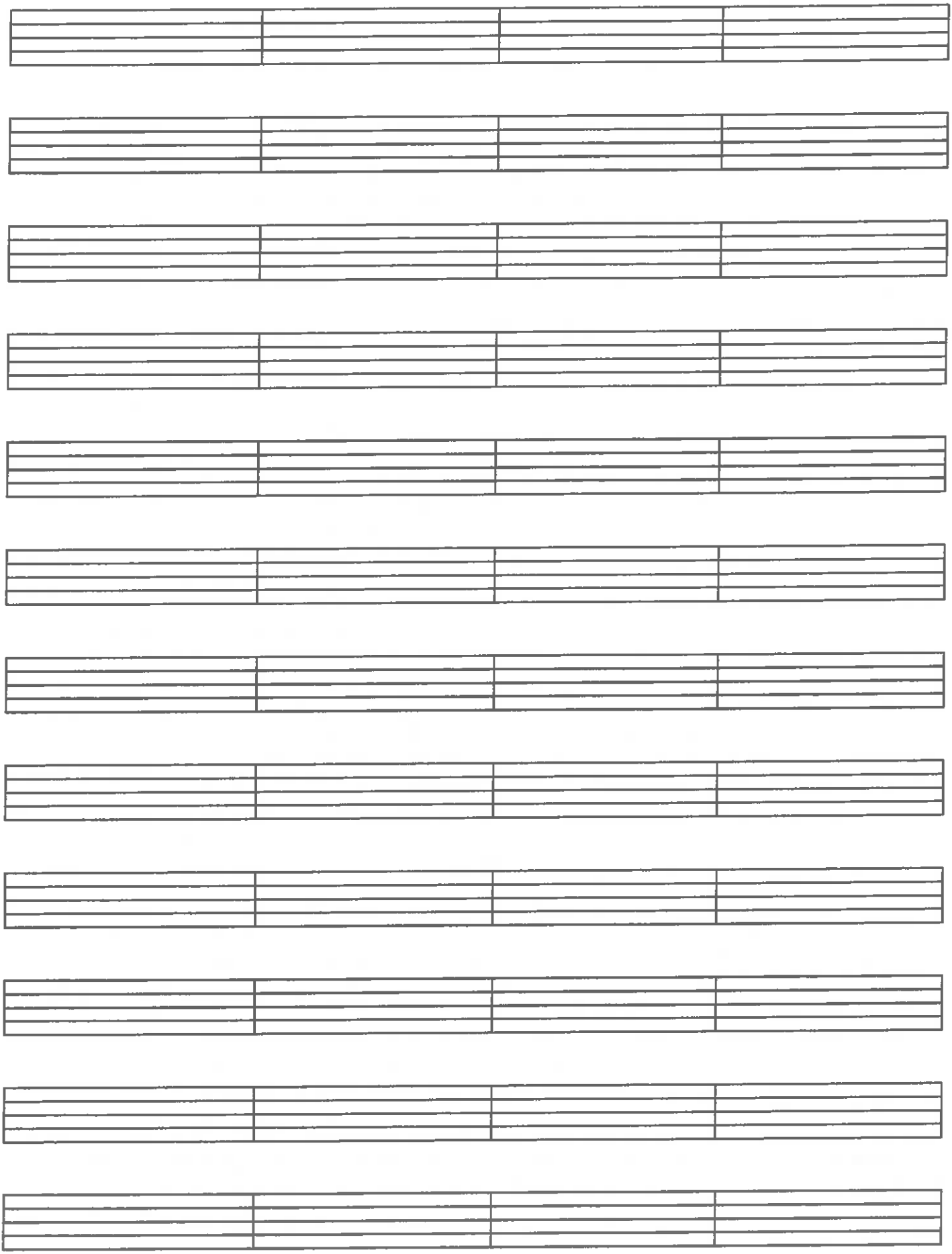
10e) To "E" major:



10f) To "Gb" major:



Exercises:
On the manuscript provided on the following page, recreate the above exercises for the "other" whole tone scale, i.e. "Ab", and resolve it to its six appropriate Tonics, i.e. "Db", "Eb", "F", "G", "A" and "B", using both the major and minor tonality.



Creating melodic line in an improvisational musical setting is similar to participating in verbal conversation when among friends with common interests. What basically occurs in conversation is that each participant generally takes a turn to add too or continue the general trend of thought being discussed, while the other participants hopefully become listeners, internalizing the new data being provided by the speaker and formulating their responses. Improvisational musical dialogue follows along the same lines as verbal conversation with the additional concept that everyone involved is talking at once, the combination of the voices becoming the overall statement by the group. The "soloist" leads the conversation, supporting group members "murmur" their musical thoughts that hopefully reflect, accentuate, prompt and support what the soloist is "saying" musically. The "topic" of the musical conversation could be said to be the musical composition the group is performing. The intellectual intensity of a musical conversation basically corresponds to verbal dialogue in the level of musical communication and interaction between the participants. Suffice to say that when a person internalizes a large amount of information on a particular topic, they generally have a quite a bit to say and can "spice up" a conversation on that topic. The same concept applies to music. As one's musical vocabulary grows, their range of ideas and possible combinations expands. Their ability to musically personify a wider range of emotions is strengthened and their thoughts or musical phrases become a melodic story line, capturing their artistic statement as defined by the essence of the "vehicle", i.e. the melody, harmony, form and general mood of the "topic" or musical composition being performed. With this in mind, let's discuss various components of improvised musical dialogue individually. All of the following ideas are, just that, ideas. Ideas to stimulate thought and consideration of these artistic elements. Again, utilize what works for you. Remember though that your present day attitudes and abilities will naturally evolve and progress as you work at your craft. Ideas that seem far fetched today, from whatever source, might become new avenues of artistic thought and direction tomorrow.

Phrasing / Tone: If there is one dominating aspect of recognizing an "artistic signature" of a particular player's Jazz lines, I feel that it is phrasing / tone. Improvised music is "akin" to verbal conversation. The intent and emotional content of our ideas are conveyed by how we phrase. The tone quality chosen to portray this idea brings the phrase to life emotionally. Think of the myriad of different ways one might say "hello" when greeting another. Apply this simple concept to your phrasing. Listen to your inner voice, physically manifest this inner voice by vocally producing it, then find and produce <u>your</u> "voice" on your chosen instrument. Rarely will two "original" players phrase in an identical fashion. As one increases their time spent listening to Jazz masters, consciously or unconsciously we begin to categorize their overall approach and its emotional impact. A player's tone can be, and in most cases is, as individual and unique as their phrasing. Tone production is based on many factors, i.e. gear, instrument, hands, technique employed etc. It is not uncommon for a player to spend lots of time and effort shaping the actual tone they produce. Getting "your" right tone plays a large part in producing "your" art. It is a tough choice when deciding whether phrasing or tone is the true essence of one's artistic signature. Taken together, the combined elements will begin to produce your artistic signature. After "years" of listening, recognition of "famous" artistic signatures becomes second nature, whether listening to the radio, listening to a friends stereo, music played in supermarkets, elevators or the mall. Once we learn to know and love a particular players tone and phrasing, they become unmistakable. Regardless of one's artistic discipline, developing one's own artistic signature that portrays and personifies their emotional and artistic statement is the "oneness" all "true" artists aspire to achieve.

Rhythm: At any given moment, any "groove" potentially exists within our physical environment, it could be said to be like static electricity, which is in the air but not organized into a discernible presence. We must initiate and sustain that groove. It is amazing how some players, with the aid of a simple metronomic pulse, can create the essential groove. This groove has to come from somewhere. Any ideas? This concept is sometimes referred to as the "forward motion" (gl) of a players artistic statement. "If you can sing the line, you'll be able to play the line." I've heard this idea many times throughout the years. Transcribe your favorite lines vocally, internalizing it's rhythmic emotion. Create different "versions" of this idea by placing it within different rhythmic environments, i.e., Latin , straight ahead, ballad etc. If one can sing and play the line, writing out the lick in standard musical notation is the "closure" to this format of study, commonly referred to as "transcribing." The ability to transcribe rhythmic ideas potentially can become additional fuel for your own internalized rhythmic motor. Jazz lines rhythmically have been traditionally an eighth note rhythmic figure. "Mature" eighth note musical phrases can contain different "styles" of eighth notes in the same line. For example, a jazz melodic line may start with "aggressive" eighth notes, i.e. ones that almost want to "rush" (gl) and are "excited", the middle eighth notes perhaps are "even", said to be in the "middle of the groove." The end of the line might contain eighth notes that are "pulled back" or retarded "just a hair", perhaps balancing the front of the line's "aggressiveness." Lots of potential rhythmic combinations. Latin flavored eight notes generally tend to be more "evenly" executed. "Swing" eighth notes are sometimes characterized by sort of a "loping" quality that places the accent on the off beat. This "elusive" concept of getting your lines to "swing" is potentially remedied by a combination of listening and "scat" singing (gl). Taking simple melodies and rephrasing them in a "swing" styling is a good place to start. I remember a time when a friend realized that their vocal inability to "swing" was the inhibitor to getting their guitar lines to "swing." These "scat" syllables personify the intellectual and emotional intensity of the line and become very individualistic. "Scat" singing can become a great joy for the artist, can basically be done anywhere, anytime and sharpens the internalized ability of creation. Do it. The same concepts applies to "comping" (gl) in the chordal world. In the rhythmic role, chordal instruments get to provide harmonic support as well as "drive" the groove. *This is a very cool thing to do.* Listening to recognized Jazz giants will hopefully become a great source of joy and inspiration to you, providing a vast resource of rhythmic ideas and eighth note interpretation. The goal to strive to attain in this artistic improvisational "discipline" is to develop the "oneness" between our "heart" and our "hands", gradually developing the ability to "instantly" execute on our instrument what we are hearing, regardless of the source. As the "Duke" points out to us, "it don't mean a thing if it ain't got that swing." "You better git it in your soul", as "Mingus" say's. These quotes from Jazz masters exemplify the necessity of internalizing the musical vocabulary and language from a rhythmic standpoint as well as identifying the source of our own rhythmic energy. Look to chapter 5 for further discussion of "rhythmic elements."

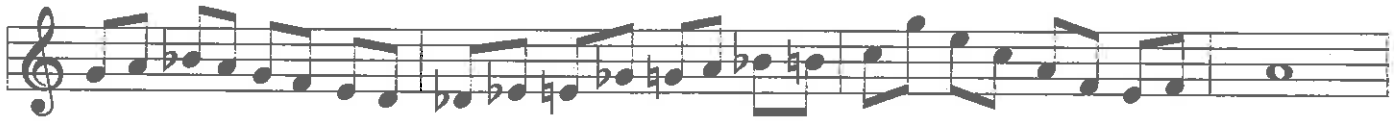
Quotes: The ability of a player to take melodic fragments, "cliché" (gl)" or not, and insert them into their improvised lines is indicative of their level of ability to think musically while creating that improvised line. A potential source of humor and perhaps "comic relief", "quoting" is fun and potentially like call and response, which can contain tremendous power in the right hands.

Character of melody / vehicle: The "character" of the melody of a particular musical composition creates the "mood" or "environment" to improvise within. I translate this to "vehicle" and group accordingly. Thus, "Latin" tunes, "ballads", "minor" blues are three types of "vehicles" that provide varying "emotional contexts" to improvise within. As we mature, we find certain elements within these "vehicles" that become "essential spices." Once this knowledge of "spices" is gained by our own labors, they become "ours" forever, to be used at our discretion, enhancing and expanding our emotional range of expression.

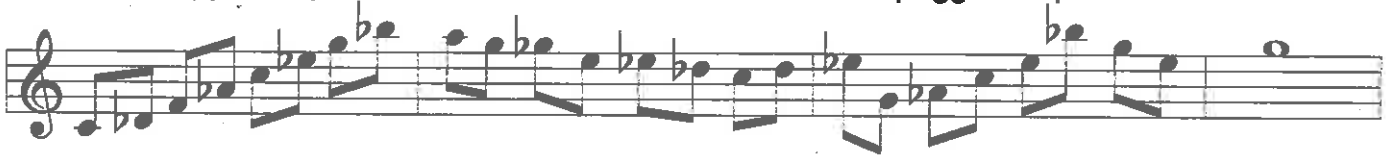
Energy: The ability to generate energy is a inherent property of a musical experience. The ability to "energize" our musical statements separates the "impassioned" artist from the masses. What is life without passion? **Thorough internalization of the "language" is the key.**
The following Two-Five-One ideas are included to provide a basis to help you get started in creating your own "lines." If the thought of reading standard musical notation breaks you out in a cold sweat, realize that you are not alone. *Now* is the best time to begin unlocking the reading door. Even if one does not aspire to become a reading "monster" (gl), please realize that even a rudimentary ability to read standard musical notation unlocks a *unlimited* supply of potential musical resource. Years ago, my professor at college Dr. James B. Miller, when somewhat frustrated by my poor reading skills and unconcerned attitude quipped, "it's either learn to read or memorize." I've chosen the latter of the two. I have always felt that improvisational music is created from an internalized musical vocabulary. Although my ability to read standard musical notation is limited in terms of execution in brighter tempos, I've developed my reading and analysis ability to discern the written musical information at a "functioning" level. A basic discerning ability is crucial to musical analysis, learning new melodies if recordings are unavailable, figuring out chord melodies, passing along musical information to friends and peers, on and on. Be patient with the reading if it is new for you, for like most new skills, time and perseverance become key factors in the overall success. If beginning to "read", purchase a inexpensive beginning book that contains the basic elements of standard musical notation. Try to spend ten to fifteen minutes per practice session working on your reading. You'll amaze yourself how quickly you can pick it up. Gradually increase the amount of time spent reading and the challenge level of the material you are working on. Work with a metronome and avoid stopping if an error is made. Train your eyes to continue moving regardless of the results. Through repetition, the notation symbols become ingrained.

The following musical ideas contain some of the essential component parts of the lines I generally create. Due to the rhythmic simplicity of the notation used, these musical ideas are perhaps more valuable for analysis, discerning the musical components utilized to create tension and release in the Two-Five-One chord progression. The majority of the following lines resolve on the root, third or fifth of the tonic chord. When first starting out, try to resolve your lines to one of these three pitches of the tonic triad. This will help to "firm up" the tonal sense of your lines. The following musical examples are in various keys. Once the "lick" is under your fingers, transposition to the other eleven keys is recommended. As always, explore and experiment.

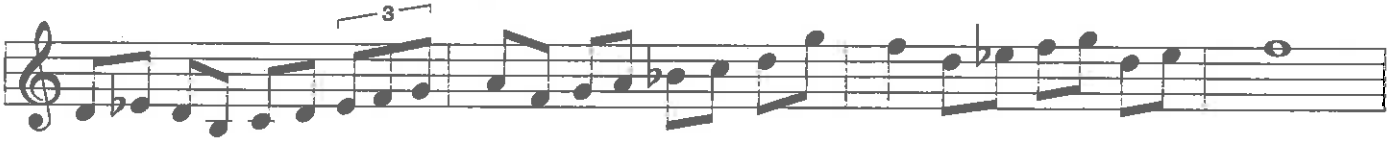
1) Symmetrical diminished shape as dominant color in "F."



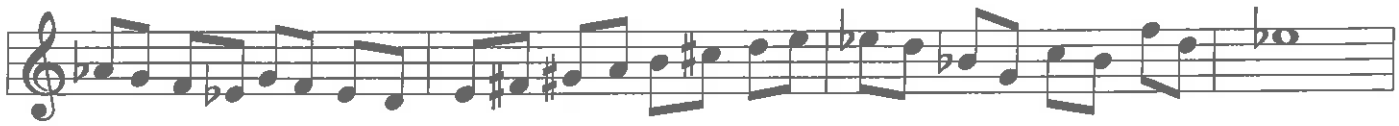
2) Nice arpeggio shape for ii-7, diminished lick, then similar arpeggio shape for tonic in "Ab."



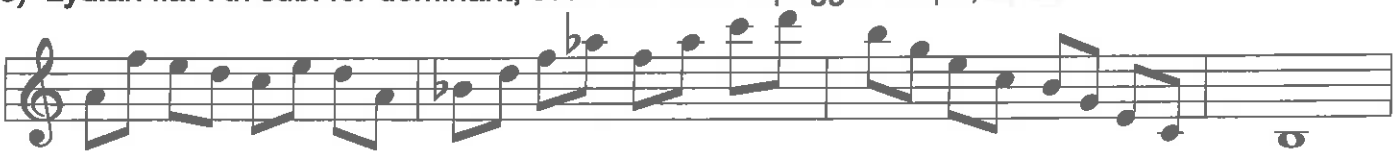
3) Basically diatonic, half step lead in to ii-7 ("G#") is cool, in "Bb."



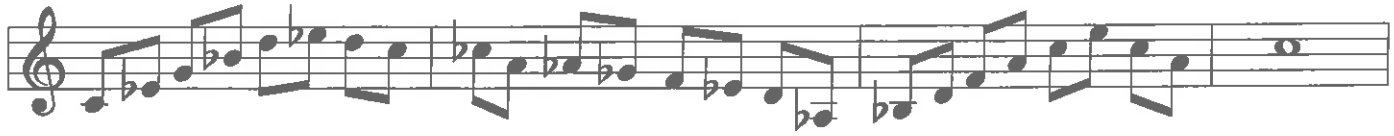
4) Tritone substitute (sub.) for dominant chord, in "Eb."



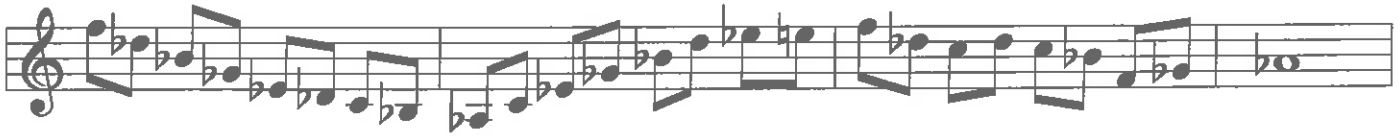
5) Lydian flat 7th sub. for dominant, essential tonic arpeggio shape, in "C."



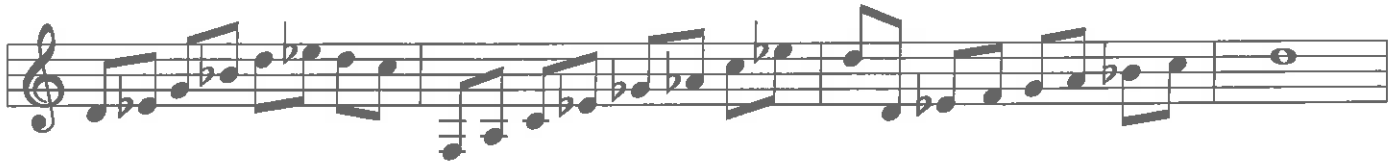
6) Diminished scale shape, beautiful extended tonic arpeggio, in "Bb."



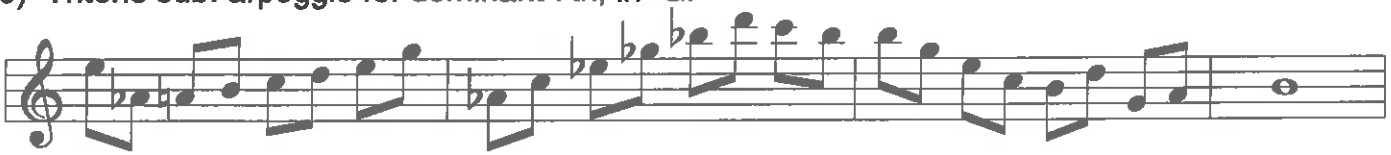
7) Essential dominant 7th arpeggio, in "Db."



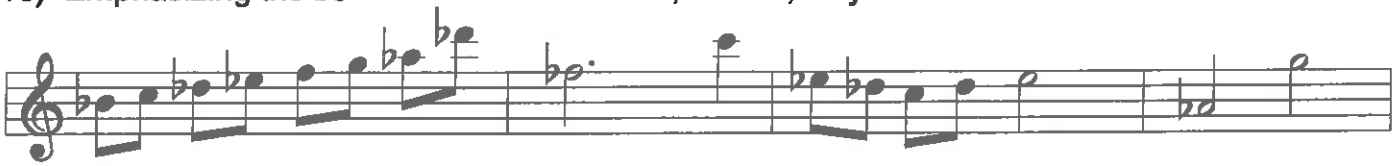
8) Similar dominant 7th arpeggio as above with a bit of diminished color, in "Bb."



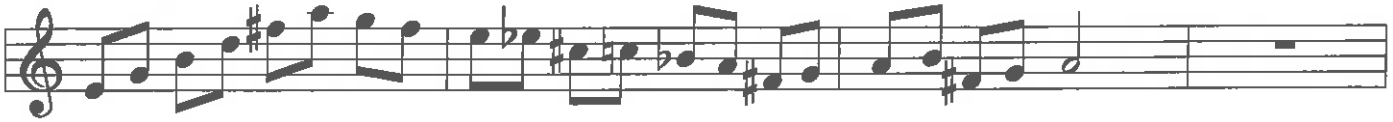
9) Tritone sub. arpeggio for dominant 7th, in "G."



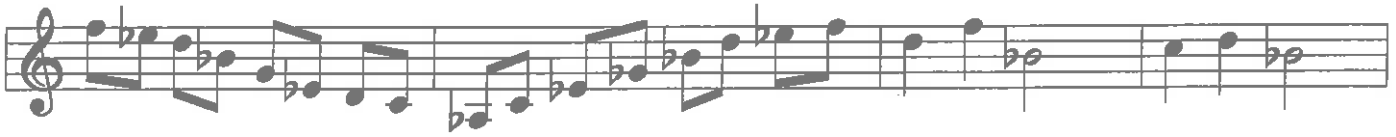
10) Emphasizing the b9 of the dominant chord, in "Ab", very "Dexterish."



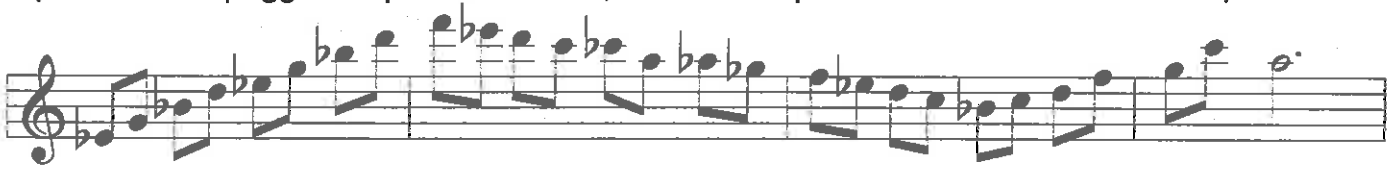
11) Essential ii-7 arpeggio to diminished scale shape, learn this lick in all twelve keys, in "D" maj.



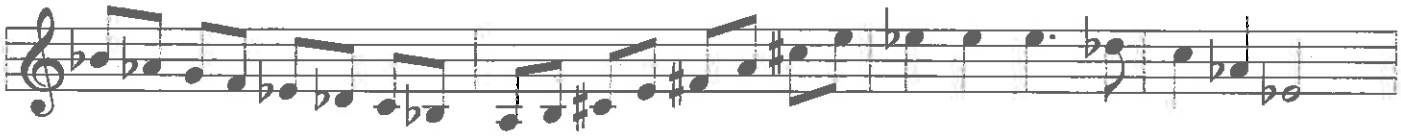
12) Lydian b7 sub. for dominant chord, potentially a very important color, in "Bb."



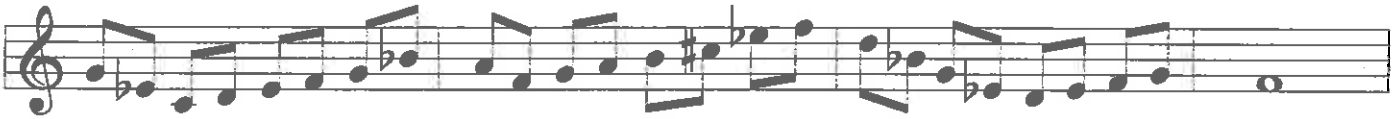
13) Cool ii-7 arpeggio shape from the 3rd, nice half step resolution to 5th of the tonic, in "Bb."



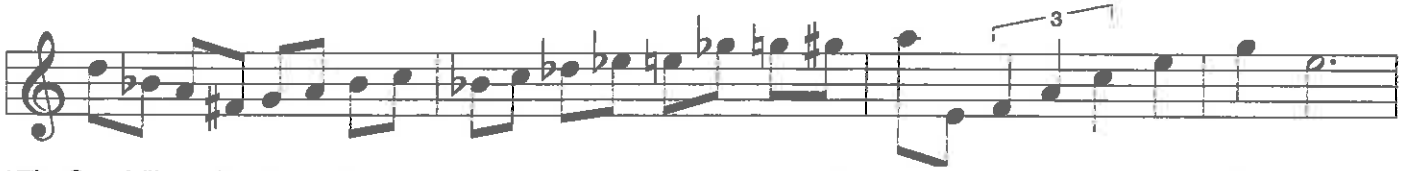
14) Tritone sub for the dominant, Pentatonic flavor, in "Ab."



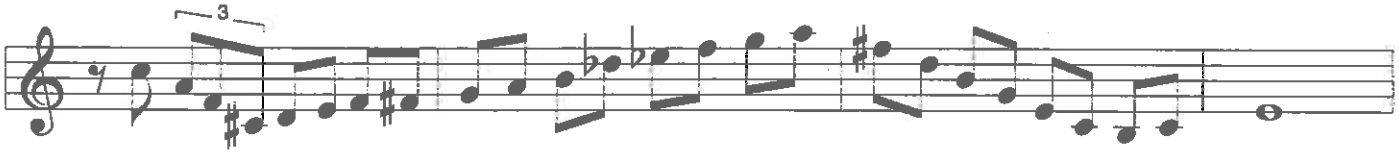
15) A "bit of the whole tone", in "Bb."



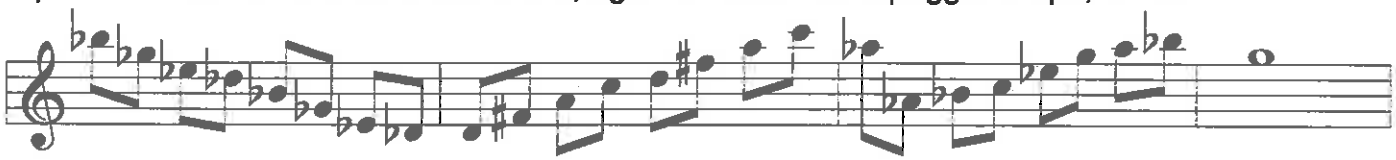
16) Straight diminished lick, *shed this one* and reprolate to your tastes, in "F."



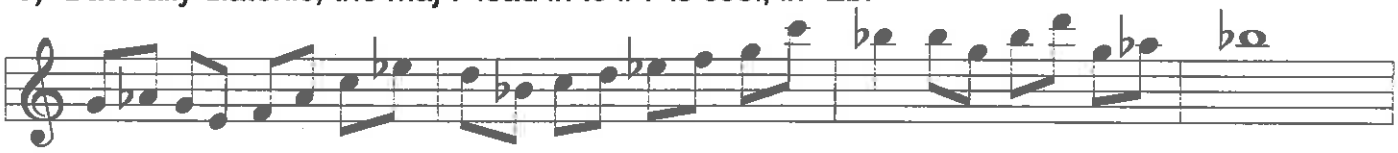
17) Cool "bop like" ii-7 lick, whole tone dominant to essential tonic arpeggio color, in "C."



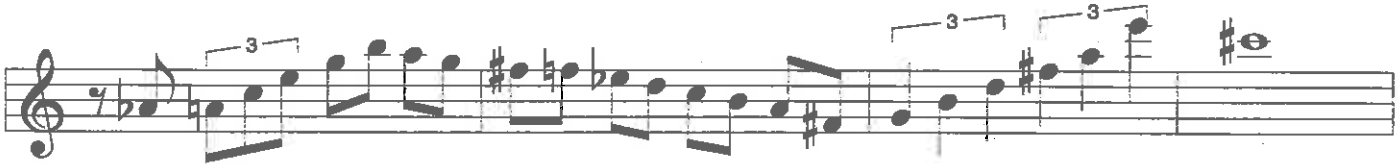
18) Tritone sub. for the dominant chord, again an essential arpeggio shape, in "Db."



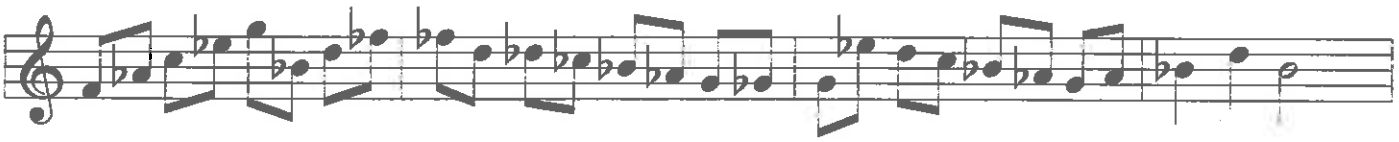
19) Basically diatonic, the maj 7 lead in to ii-7 is cool, in "Eb."



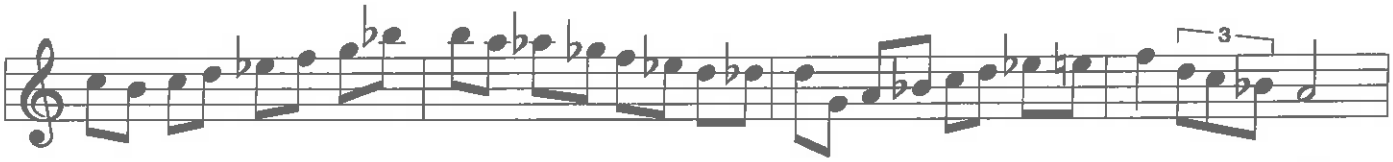
20) Overall, this lick contains some important components, explore and experiment, in "G."



21) Essential ii-7 arpeggio, diminished shape with half step lead into the 5th of the tonic, in "Eb."

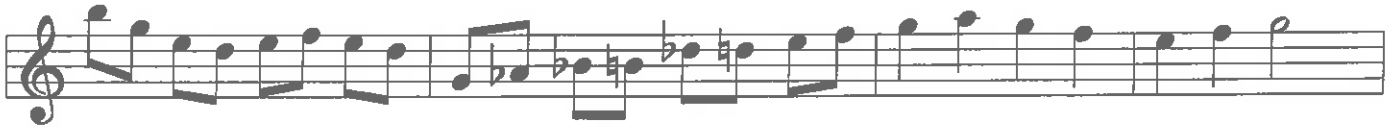


22) Basically diatonic with some hip half steps, in "Bb."

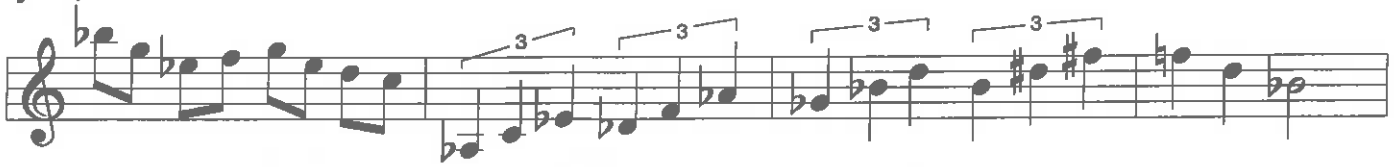


23) Tritone sub for dominant chord, the tritone sub can become very important, study it, in "F."

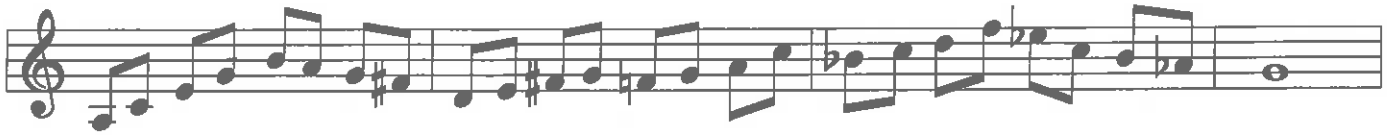
24) Symmetrical diminished scale shape with a half step lead in, in "C."



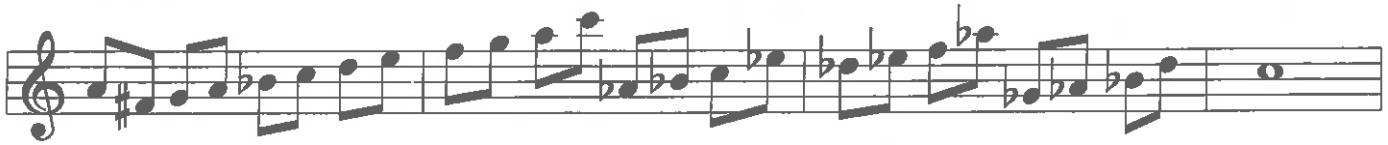
25) Cycling in 4th's from flat 7 of the tonic, these triads move up, try other prolations using this cycle, in "Bb."



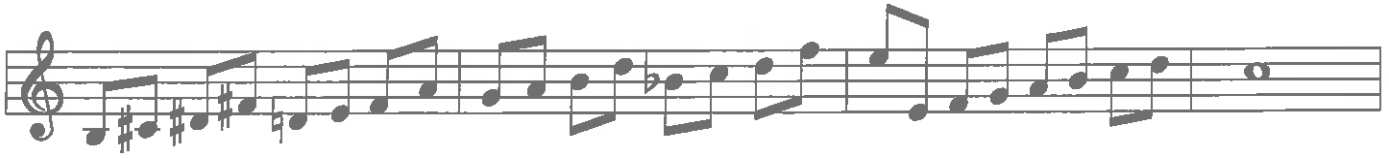
26) Cycling in minor thirds then fourths from the dominant, in "G."



27) Cycling in minor thirds then fourths from the tonic, in "F."



28) Moving around a la "Giant Steps", cycling in minor thirds and fourths, in "C."



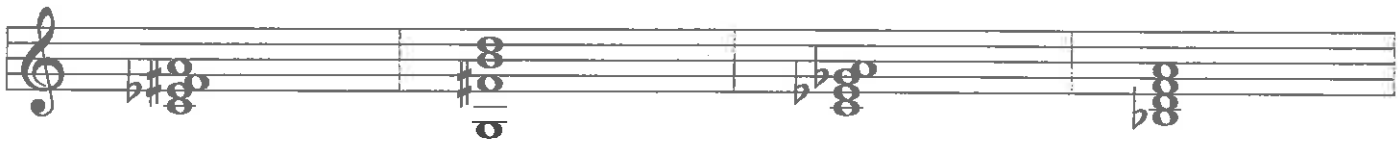
"Success is more attitude than aptitude."

work space / notes:

As with the melodic principles surrounding the diminished seven scale and chord, let's take a look at the diminished seventh chord and it's associated voicings and gradually evolve and soften their color back towards it's original derivation point, the diatonic Mixolydian mode with it's altered flatted ninth, built from the fifth degree of the major scale. The following shapes are "generic", providing the basic color in easy to execute voicings.

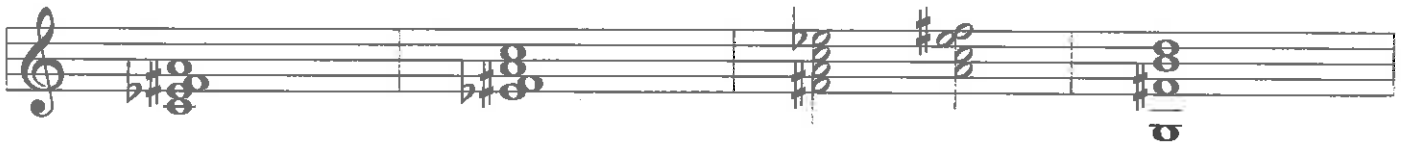
1) Resolve the diminished shape below to each of its associated four (4) tonics over the entire range of the piano. The first example below is for "C" diminished seventh. Watch for the enharmonic spellings of the diminished chords as we approach different key signatures representing different tonal centers. Essentially, these diminished chords are exact same group of pitches, just revoiced and renamed. Thus:

1a) C dim 7 G maj 7 1b) C dim 7 Bb maj 7



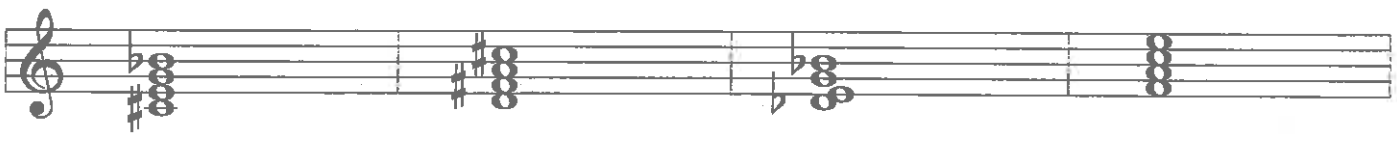
1c) C dim 7 Db maj 7 1d) C dim 7 E maj 7

As you may surmise, nice "chordal" runs can be created moving the above shape "around" in minor thirds. Here is a common lick (gl) based on this idea. In the modern day sense, this following diminished run is a bit "cliché", gradually will "hipify" this sequence, but for all practicable purposes, this is an excellent place to start. In "G" major, play the following shapes in the order presented and enjoy the delayed resolution and generally "cool" sound. In "G" major moving, over the "D" dominant pedal (gl), thus creating "D" 7b9 colors. Example 1c.

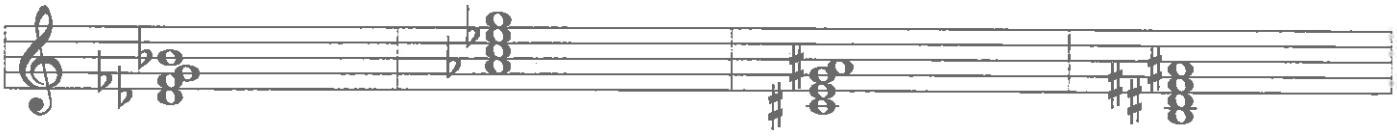


2) Resolve the diminished shape below to each of its associated four (4) tonics over the entire range of the piano. Example below is for "Db" / "C#" diminished seventh.

2a) Db dim 7 D maj 7 2b) Db dim 7 F maj 7



2c) Db dim 7 Ab maj 7 2d) Db dim 7 B maj 7

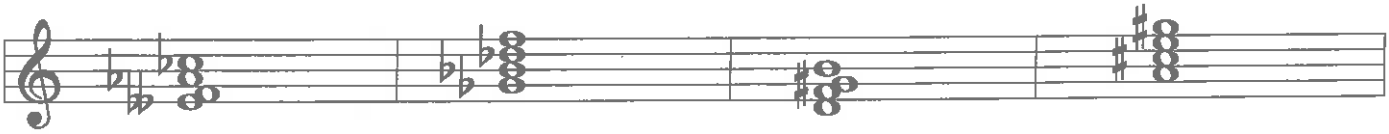


As you may really surmise, nice "chordal" runs can be created moving the above shape "around" in minor thirds. Here is a common lick (gl) based on this idea. In "D" major, play the following shapes in the order presented and enjoy the delayed resolution and generally "cool" sound. In "D" major, over the dominant "A" pedal. Example 2c.

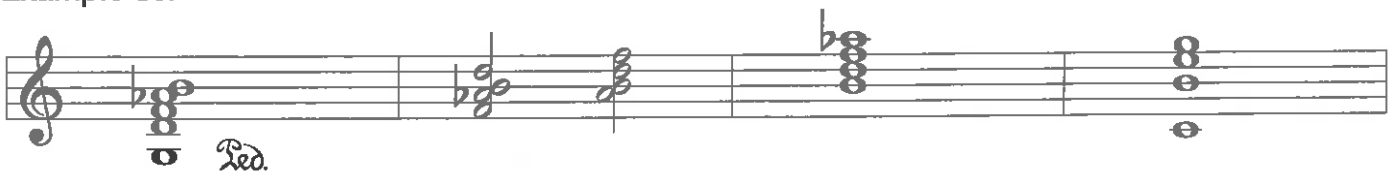
3) Resolve the diminished shape below to each of its associated four (4) tonics over the entire range of the piano. Example below is for "D" diminished seventh.

3a) D dim 7 C maj 7 3b) D dim 7 Eb maj 7

3c) D dim 7 Gb maj 7 3d) D dim 7 A maj 7



As you may now truly surmise, nice "chordal" runs can be created moving the above shape "around" in minor thirds. Here is a common lick (gl) based on this idea. In "C" major, play the following shapes in the order presented and enjoy the delayed resolution and generally "cool" sound. In "C" major, over the dominant "G" pedal.
Example 3c.

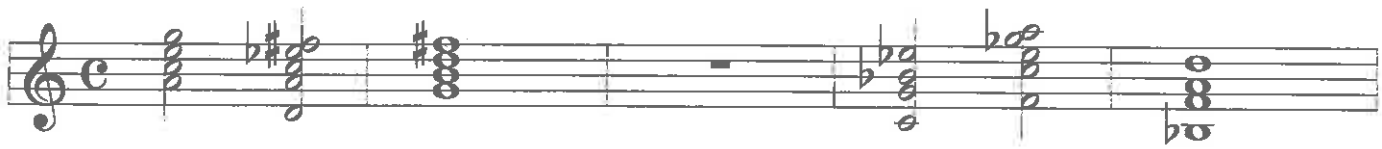


4) Following our previous melodic format, (see melodic application), let's add an appropriate Two minor seven chord (ii-7), move to the dominant seventh flat nine, i.e. diminished shape and resolve to the four appropriate tonics. We'll use the diminished scales above in the same order throughout. First example below for "C" diminished seventh. This format of presentation is designed to clearly show the " nondiatonic diminished chord" relationship that exists in the upper structure of the four different dominant seventh flat nine chords. These four dominant seventh flat nine chords are used here in various inversions, respelt accordingly, the root of the chords are included, but in reality, we are only concerned here with the "upper structure" component and its resolutions. Again, please realize that each of the pitches of the diminished seventh chord provide the four "leading tones" i.e. seventh scale degree, of the four tonics we are resolving to.
Examples: "C" diminished shape, the resolving keys are "G", "Bb", "Db", and "E" major or minor. The key factor to note is the intervallic distance between these four tonal centers. Any guesses? Right, the *minor third.* Our four Two Five One progressions are:

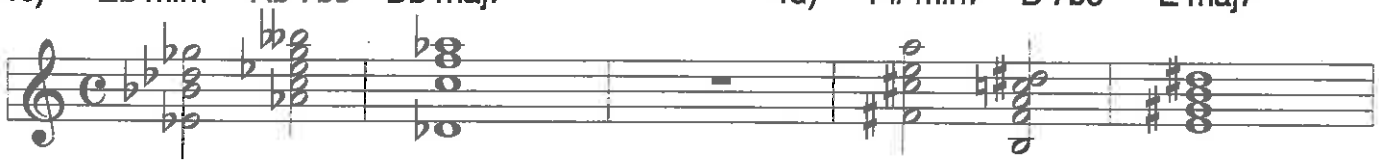
"A" min 7 to "D" 7b9 to "G" maj 7. "C" min 7 to "F" 7b9 to "Bb" maj 76/9.

"Eb" min 7 to "Ab" 7b9 to "Db" maj 7. "F#" min 7 to "B" 7b9 to "E" maj 7.

4a) A min7 D 7b9 G maj7 4b) C min7 F 7b9 Bb maj7



4c) Eb min7 Ab 7b9 Db maj7 4d) F# min7 B 7b9 E maj7

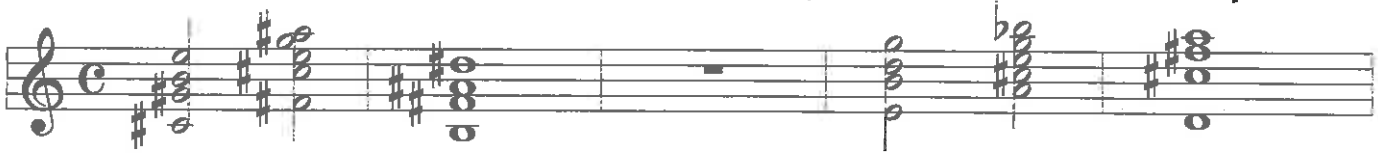


5) "Db" diminished shape, same format. As with the above illustration, we are using a common diminished seventh chord to resolve to four different tonics. These four dominant seventh flat nine chords are used here in various inversions, respelt accordingly, the root of the chords are included, but in reality, we are only concerned here with the "upper structure" component and its resolutions. Please realize that each of the pitches of the diminished seventh chord provide the four "leading tones" of the four tonics we are resolving to. In the example below the four Two-Five-One progressions are:

"C#" min 7 to "F#" 7b9 to "B" maj 7. "E" min 7 to "A" 7b9 to "D" maj 76/9.

"G" min 7 to "C" 7b9 to "F" maj 7. "Bb" min 7 to "Eb" 7b9 to "Ab" maj 7.

5a) C# min 7 F# 7b9 B maj7 5b) E min7 A 7b9 D maj7



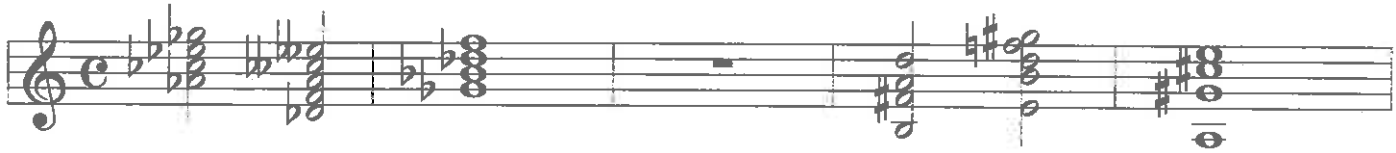
5c) G min7 C 7b9 F maj7 5d) Bb min7 Eb 7b9 Ab maj7

6) "D" diminished shape, same format:

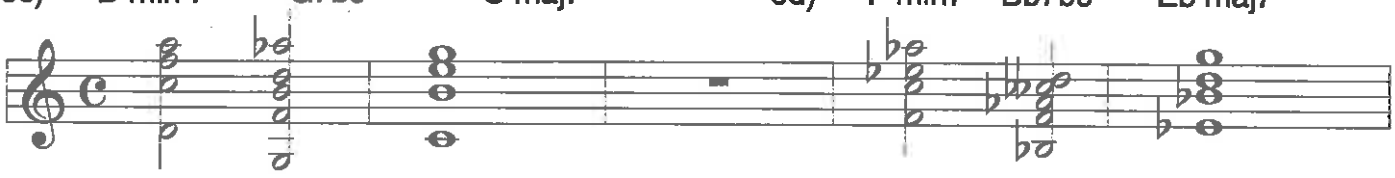
"Ab" min 7 to "Db" 7b9 to "Gb" 7b9. "B" min 7 to "E" 7b9 to "A" maj 7.

"D" min 7 to "G" 7b9 to "C" maj 7. "F" min 7 to "Bb" 7b9 to "Eb" maj 7.

6a) Ab min 7 Db 7b9 Gbmaj7 6b) B min7 E 7b9 A maj7

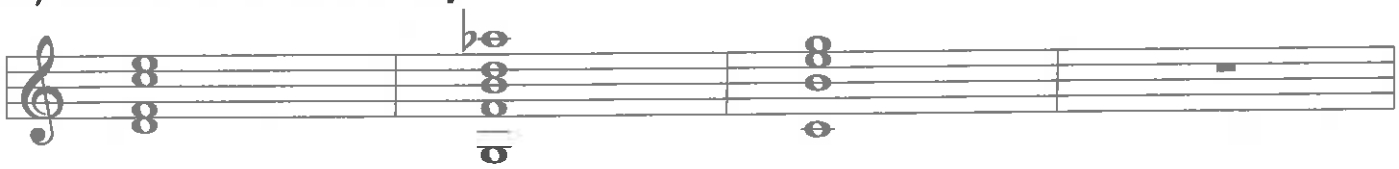


6c) D min 7 G7b9 C maj7 6d) F min7 Bb7b9 Eb maj7



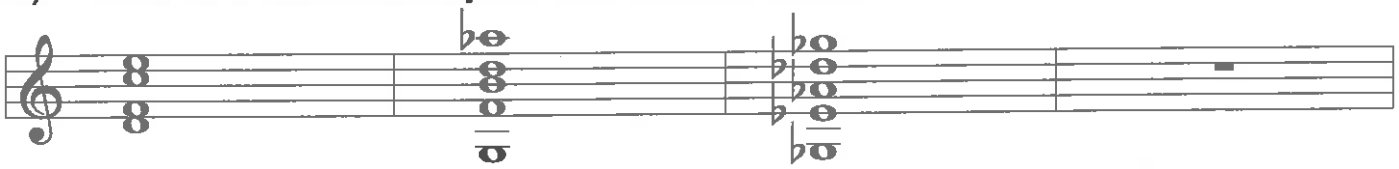
7) Lets pick one of the Two / Five possibilities from above and resolve it to it's for different tonics. Each of the following choices potentially will become very common, depending on your artistic tastes and direction. "Softening" the flat nine / diminished color to other hues is also very common with the four different dominant root motions. These first four examples use the same Two chord and dominant seventh flat nine moving to four different keys. In the next group we'll "artistically" shape each voicing depending on the tonal center we're approaching.

7a) D min 9 to G 7b9 to C maj 7.

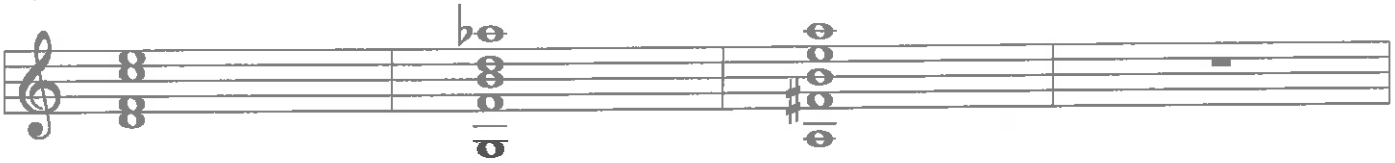


7b) D min 9 to G 7b9 to Eb maj 7. Somewhat "moderne."

7c) D min 9 to G 7b9 to Gb maj 6/9. The "definitive tritone sub."

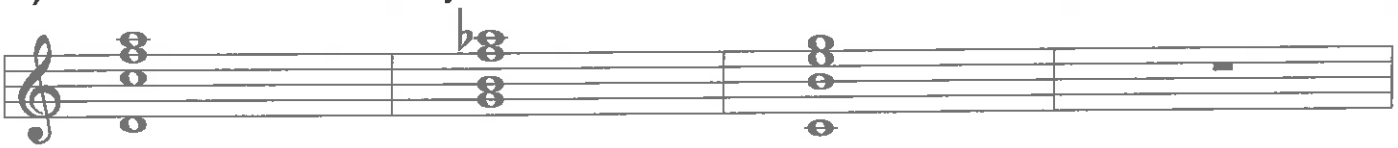


7d) D min 9 to G 7b9 to A maj 6/9. The ever cool "b7" dominant to tonic.

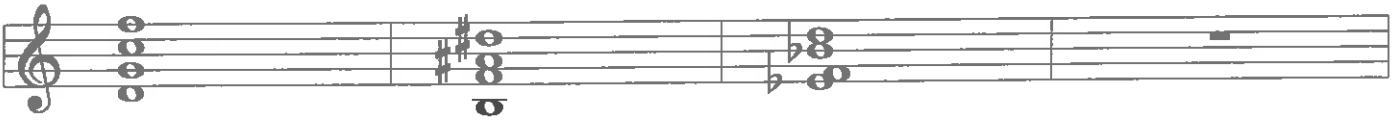


Artistically "softened" and revoiced for a smoother resolution.

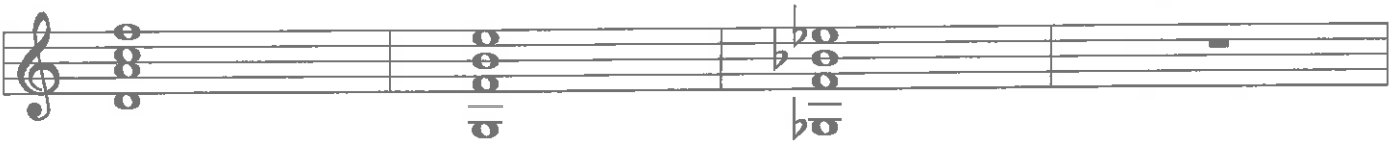
7e) D min 7 to G 7b9 to C maj 7.



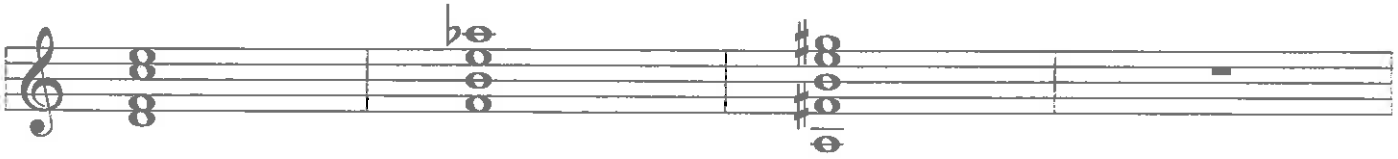
7f) D min 11 to G 7#5#9 / B to Eb maj 7. Somewhat "moderne."



7h) D min 7 to G 7 13 to Gb maj 7 13. Note chromatic line in top voice.



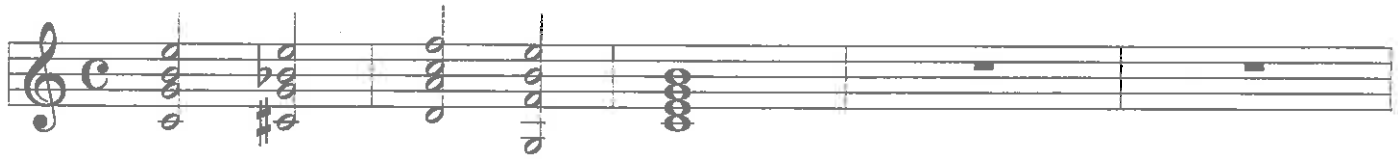
7i) D min 9 to G 7 13 b9 / F to A maj 7 6/9. Note common tone in top voice.



Although I got a bit ahead of myself with the previous substitutions, I feel it is important to see the possibilities "opened up" by the fully diminished chord's resolutions even if the dominant chord employed does note contain the fully diminished chord in it's upper structure. We are basically "breaking the rules", (if there really are any rules anyway), to create new combinations based on what the dominant seventh flat nine potentially provides, i.e., resolution to four different tonics. (See diminished proof in chapter 3, dominant harmony). Now back to fully diminished chord concepts.

8) A very common chord progression found in contemporary music is to use the fully diminished chord as passing (gl) between tonic harmony (I maj 7) and Two chord harmony (ii-7). Basically referred to as the sharp One diminished (# i dim 7). This harmonic situation is an integral part of "rhythm changes", a common "vehicle" (gl) of the 1930's and 1940's. Here is the above progression in the key of "C" major. Do transpose this important chord progression to the other eleven keys.

8a) Example in "C" major using #1 dim 7.



9) A close associate to sharp One diminished seventh (#1 dim 7) is the dominant seventh flat nine (V7b9) built on the Sixth degree of the major scale, which oftentimes is used in a similar fashion. Thus:

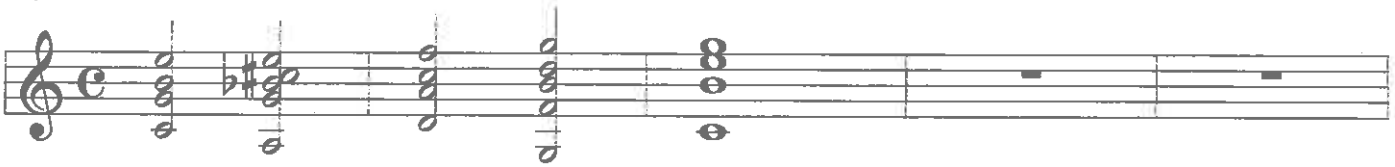
I maj 7	#1 dim 7	ii min 7	V7
I maj 7	VI7b9	ii min 7	V7

By crunching down the letter names we find the same fully diminished seventh chord in both the sharp One diminished (#1) and dominant seventh flat nine (V7b9) built on the Sixth degree of the major scale. In C major;

#1 dim 7	is spelt	C#, E, G, Bb
VI7b9	is spelt	A, C#, E, G, Bb

Explore this concept to help create new pathways covering the same musical ground.

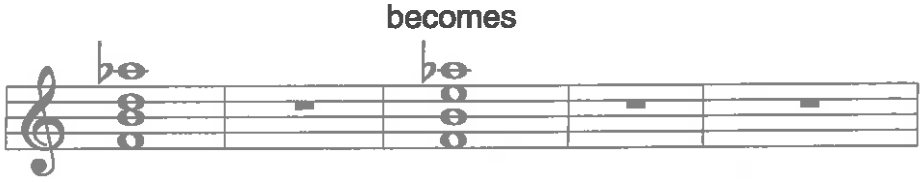
9a)



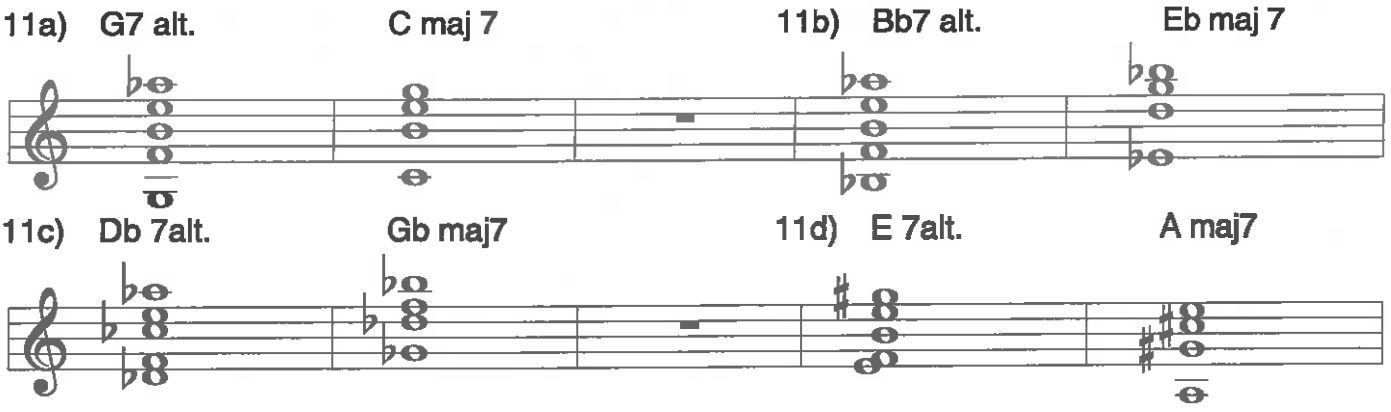
10) A similar situation to the above often occurs in the twelve bar Blues form. A common substitution utilizing the fully diminished seventh scale and chord shapes is found following the Four chord (IV7) of bar six in a twelve (12) bar Blues form. This chord is generally known as the sharp Four diminished seventh (#iv dim 7). Example starting on the 5th bar (F7) of "C" blues.

ALTERED DOMINANT SHAPES

11) Let's "soften" our fully diminished shape to an "altered" dominant. Using "D" diminished 7, the upper part of the "G" 7b9 chord, thus:



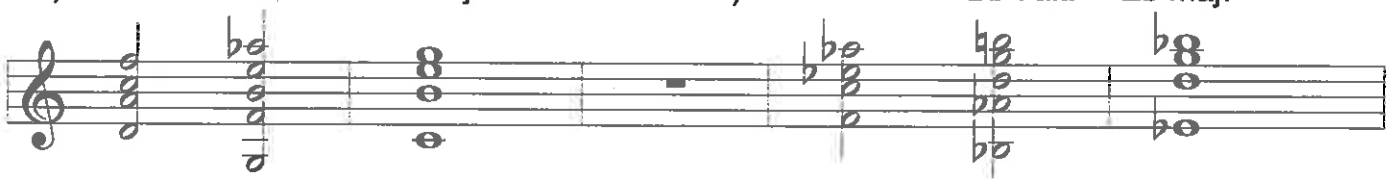
This voicing is basically a dominant seventh flat 9 / thirteenth, i.e. (V7b913). This shape can be utilized in a similar fashion as did the fully diminished seventh, i.e. we can build this shape from flat two (b2), major third (maj 3), perfect fifth (p.5) and flat seventh (b7) of our dominant chord and resolve it to the associated tonics as done in example one (#1) and two (#2) above. This shape does not "perfectly invert" as does the fully diminished seventh chord due to it's asymmetrical construction. Crunch down the pitches, analyze them against the dominant seventh chord under scrutiny and the resulting concepts and colors will be yours forever! Here's this idea for the keys of "C", "Eb", "Gb", and "A" major. Once this concept is in place, do shed this voicing and it's resolutions through the same "treatment" as we did with the diminished scales and chords. The following examples will resolve the same "altered" dominant chord to its appropriate four tonics. We'll refer to this upper structure (gl) configuration as "altered" (alt.) (gl). Examine the pitches of this voicing in relation to the four possible roots, i.e., "G", "Bb", "Db", "E."



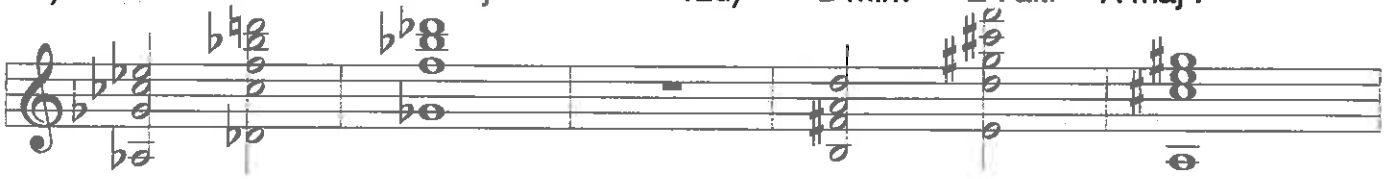
work space / notes:

12) Lets add the appropriate two minor seven chord to the above groups creating four Two-Five-One progressions. Again, "grind" this "concept" through the remaining eight keys.

12a) D min7 G7alt. C maj7 12b) F min7 Bb 7alt. Eb maj7



12c) Ab min7 Db 7alt. Gb maj7 12d) B min7 E 7alt. A maj 7



DOMINANT NINTH SHAPES

13) A slight variation of the above dominant voicing is a bit "softer" still, softer by raising the flat nine (b9) to natural nine. There is a bit of "artistic license" here, due to the analysis of the resolutions of the above shape to the four tonics provided by the diminished concepts. Here's why. Now in "G" major, lets spell the shape under scrutiny, i.e. "D7,9,13" as it would be found in the above musical setting, i.e. third inversion moving in minor thirds.

"C", "F#", "B", "E" = b7, maj 3, 13, 9 as analyzed against "D7,9,13

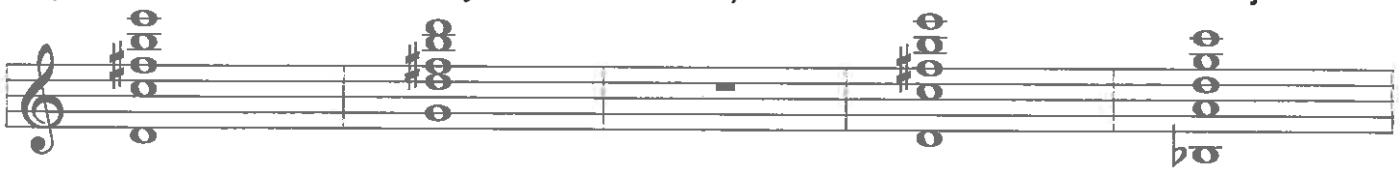
up a minor third = "Eb", "A", "D", "G" = b9, p.5, 1, p.4 as analyzed against "D7,9,13

up a minor third = "F#', "C", "F", "Bb" = maj 3, b7, #9,+5 as analyzed against "D7,9,13

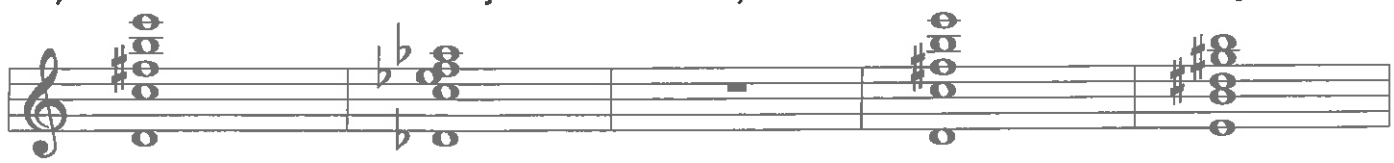
up a minor third = "A", "Eb", "Ab", "Db" = p.5, b9, b5, maj 7 as analyzed against "D7,9,13."

When viewed against "D7", we note the presence of a major seventh (maj 7) in the fourth grouping. Simple dominant chords, as previously discussed, rely on the "tritone" interval between the major third (maj 3) and the minor seventh (b7) to create tension. So, the above situation is a bit imperfect. When "Db" is in the chord resolving to "G" major, try to create a pleasing melodic line using that pitch. When moving one voicing, i.e. a "constant structure" (gl), up or down in minor thirds, as in the above case, the aural ability to analyze what is happening becomes "blurred", thus the above "theoretical deviation" is basically null, **good harmonic motion becoming the responsibility of the creative artist and *not the theory*,** thus, the following possibilities begin to emerge. Here is the above "D" 9 / 13 voicing resolving to its four possible keys, i.e. "G", "Bb", "Db" and "E" major. Again, the proper dominant root will be included, the voicing enharmonically respelled according to it's resolution. Explore the resolutions to the minor key color at your leisure, also the remaining eight keys with the above voicing properly transposed.

13a) D 9 / 13 G maj7 13b) D 9 / 13 Bb maj7



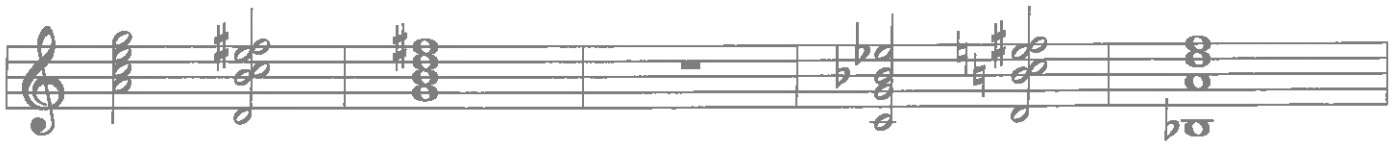
13c) D 9 / 13 Db maj7 13d) D 9 / 13 E maj7



The Lydian scale group, built upon the roots of the above voicings, ("C", "Eb", "F#", and "A"), will provide a solid group of pitches to create melodic ideas from over the above harmonic situation.

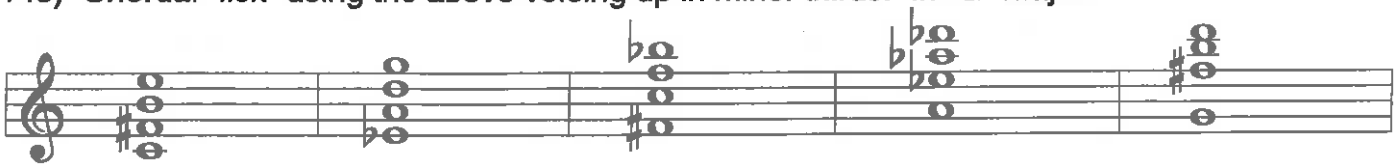
14) Here are examples using the above "softened" dominant voicing, with an appropriate Two minor seven chord (ii-7) resolving to the appropriate four (4) tonics. Again, move this "concept" through the remaining eight keys using the proper Two, Five and Tonic chords.

14a) A min7 D 9/13 G maj7 14b) C min7 D 9/13 Bb maj7



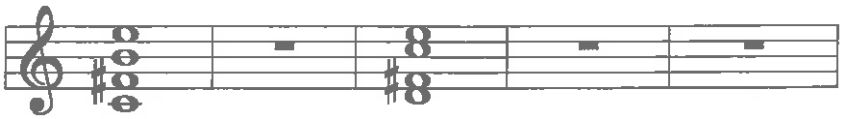
14c) Eb min7 D 9/13 Db maj7 14d) F# min7 B 9/13 E maj7

14e) Chordal "lick" using the above voicing up in minor thirds. In "G" major.

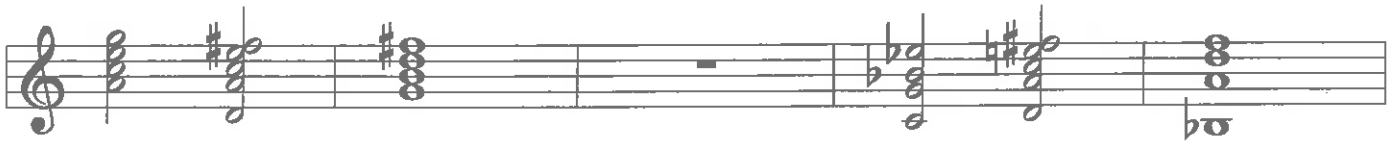


15) Raising the seventh a whole step and the thirteenth a half step we evolve back to the common dominant ninth chord. We'll use "D" 9 and resolve it to "G", "Bb", "Db" and "E" major. Thus:

"D" 9 13 / "C" becomes "D" 9



15a) A min7 D 9 G maj7 15b) C min7 D 9 Bb maj7



15c) Eb min 7 D 9 Db maj7 15d) F# min7 D 9 E maj7

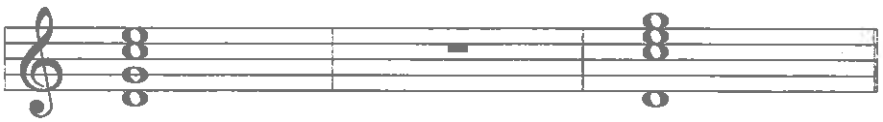
16) By moving the third of this chord up a half step, thus:

"D" 9 becomes "C" / "D"

we create a major triad in the upper structure of a dominant seventh chord. This will function well as a "softened" dominant. Perhaps one melodic possibility is to use just the major "triad" found in the upper structure of this shape as a basis for musical ideas. How about creating ideas from the scales from which these triads are created? Moving the "triads" in minor thirds also comes to mind, explore and experiment. What groundbreaking Jazz composition utilized a variation of the above format, i.e. moving triads in minor thirds and perfect fourths? Hint: One of the "nicknames" of the composer of this tune is "Trane." The preceding pages examines the evolution of the diminished seventh chord "back" to the major triad. There is a couple of *"tons"* of shedding to get these shapes and colors comfortably on your improvising palette. Thus, we have basically completed our "circle" back to the major scale. As our dominant harmony becomes more "tonicized", (i.e. less dissonant and more like tonic harmony in sound and construction), it's ability to readily function in the minor third "treatment" as in the previous examples decreases. The artist has to show greater care in its use and resolutions. "Crunch" down each of the above examples, spell out the letter names; distill the "tensions" as related to the appropriate dominant seventh chord; create scale choices based on your own concepts; use the information in this text to generate possible scale choices and choose what will best musically illuminate the "art" in your "heart." The more advanced "modern" shapes are more difficult to utilize and control. A gradual expansion from the diminished sounds and concepts as presented here once the basic dominant voicings are on your "palette", will help to integrate these new colors, which again is a kind of "evolution" or "softening" of potential "shades" of color founded upon the diminished seventh group and it's permutation concepts. Successful use of these components in actual improvised performance situations takes time. Be patient, keep goals clearly defined and stay on task. Of course, explore and experiment.

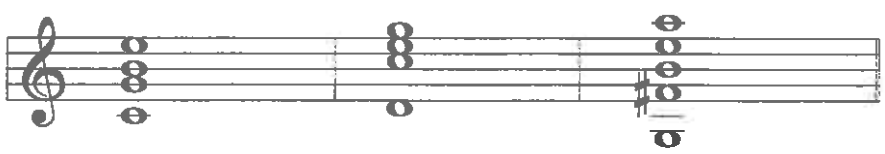
17) Here is the above structure "revoiced."

17a) becomes

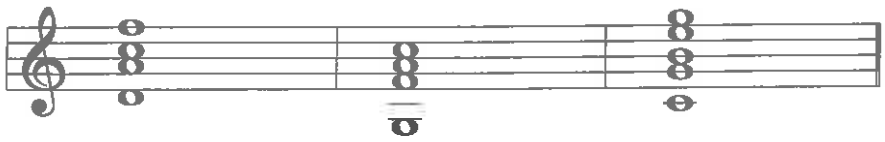


This can become a very important voicing. Lets begin the examination of this shape showing it's evolution's into similar possible shapes encompassing different color tones. Here is a basic Four-Five-One utilizing this dominant shape in the key of "G" major.

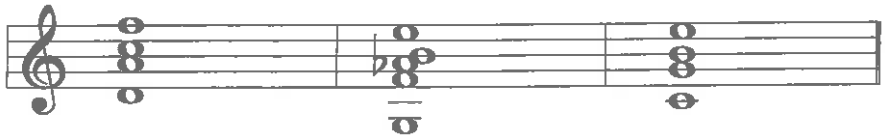
17b) C maj7 D 9sus4 G maj7



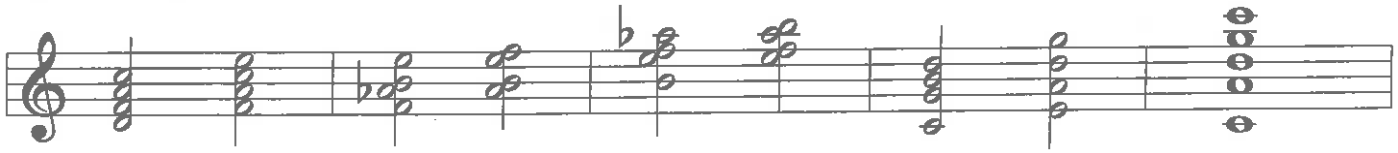
17c) Here is a basic Two-Five-One variation of the preceding example, in "C" major.



17d) Here is the above Two-Five-One now altered to include a flat nine (b9) and thirteenth in the dominant seventh shape. The 11th or sus 4 is lowered a half step to the 3rd. Where have we seen this voicing before? Thus:



17e) Here is the above "turnaround" (gI) including moving the dominant chord shape up in minor thirds and resolving to I maj 7, which in this example is "C" major. Eliminating the root creates a "lighter" texture that moves in minor thirds more easily.



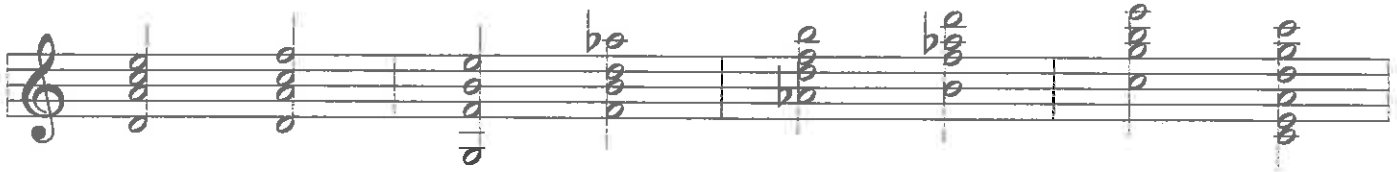
This last grouping of upper structure component, i.e. maj 3, b7, b9 and 13th, was originally "derived" from the fully diminished seventh chord, by raising the fifth a whole step. Please keep in mind that both of the "softening" or reshaping possibilities of upper structure components presented provide potential "pathways" of using these colors to create tension. Basically, simple solutions of Two / Five / One perhaps utilize *one voicing* for each of the three chords. The majority of the examples thus far have followed this format. The following examples will begin to illuminate a more advanced approach whereby any or all of the three individual harmonies of the Two / Five / One progression can be realized by combinations of different voicings. This is when the fun begins and the possible combinations truly become "endless."

Each of the previous examples have illustrated one basic possibility for each of the three harmonies. Now we begin to combine the above individual possibilities creating longer, smoother, less "block like" harmonic lines that contain the essential color of the each of the Two, Five and One chords as we "weave" our way from tension to release. This "weaving" I feel is one of the "keys" to the art form, Jazz piano great Bill Evans comes to mind. No two players "weave" exactly alike. *Their "pathways" become their artistic signature.* Possible "pathways" or "treatments" include; moving in half steps, moving diminished and or altered dominant voicings in whole step / half step or minor thirds, augmented triads in whole steps, moving voicings in perfect fourths, or combining the minor third / perfect fourth motion etc. One must begin to make "artistic" choices that will best characterize their art. The following possibilities combine many elements that may or may not be to your liking. Explore and experiment, use whatever elements best illuminate the "art in your heart."

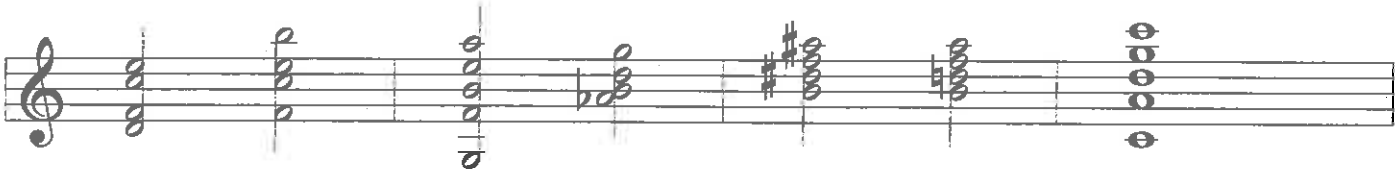
work space / notes:

18) Here are six examples of "modern" four bar Two-Five-One turnarounds, based in the key of "C" major / minor. Notice the inclusion and "borrowing" of other forms of "softened" dominant seventh flat nine (V7b9) shapes as we "mix and match" and move in minor thirds and generally resolve by half step. **Exercise:** Identify and write in each voicing.

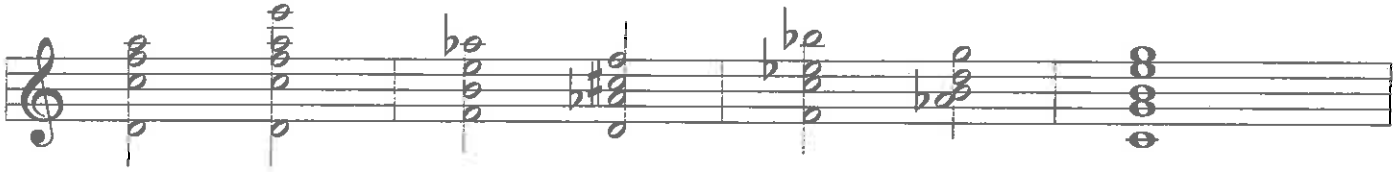
18a)



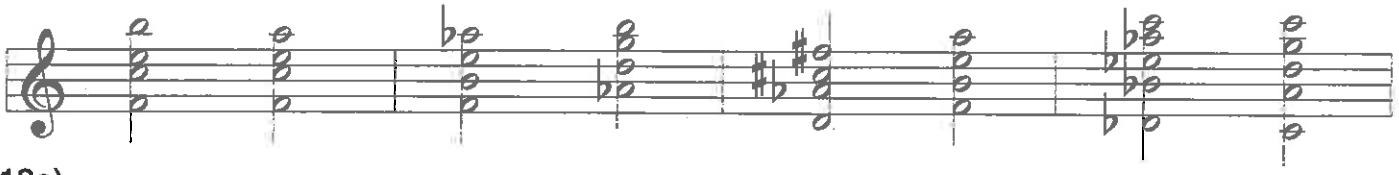
18b)



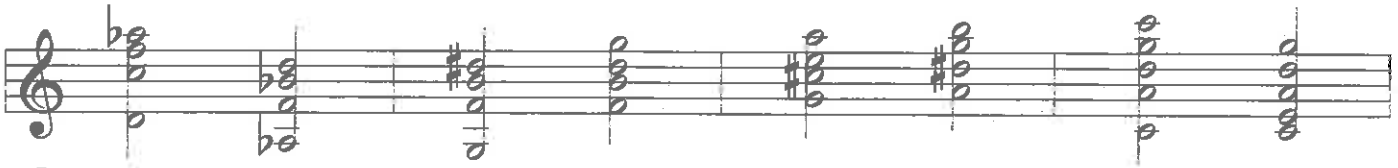
18c)



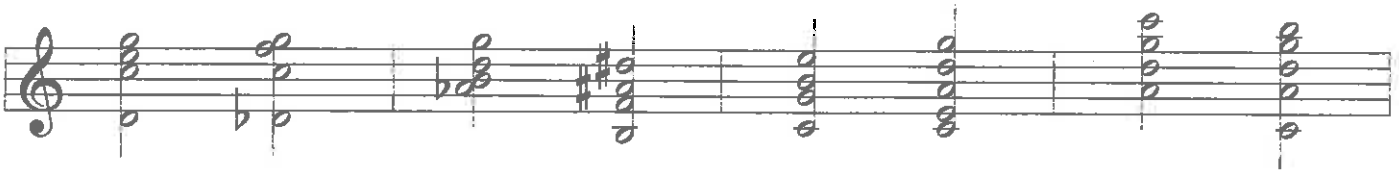
18d)



18e)

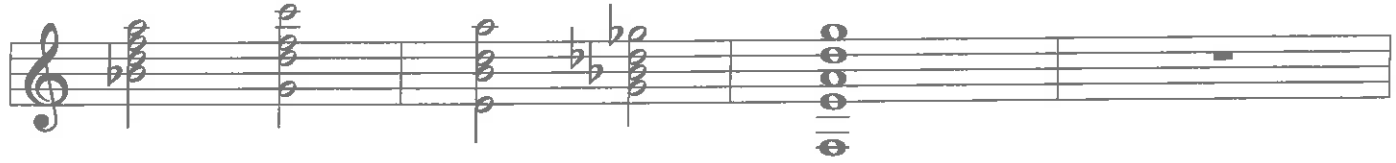


18f)

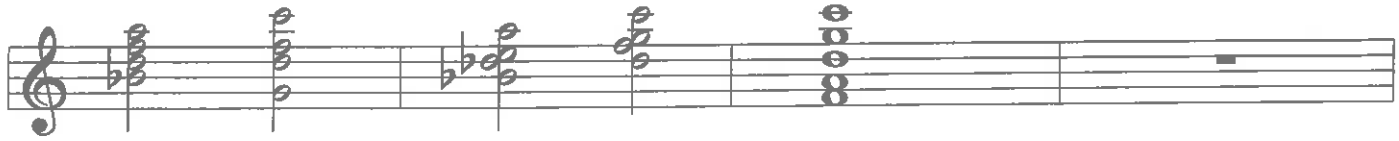


19) The above musical examples in "C" major utilize concepts, voicings and treatments that are pretty advanced. The basic construction of the above turnarounds is based upon the information contained within examples one (#1) through nine (#17) in this section. **These turnarounds came into "being" by crunching down the theory, i.e. exploring, and just trying different combinations based on that theory, i.e. experiment.** Here are some more examples of the above concepts in "F" major / minor.

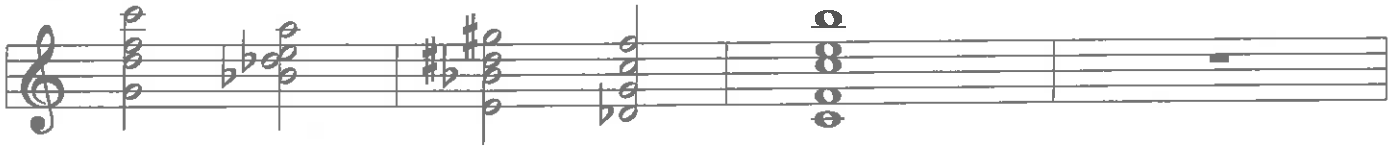
19a)



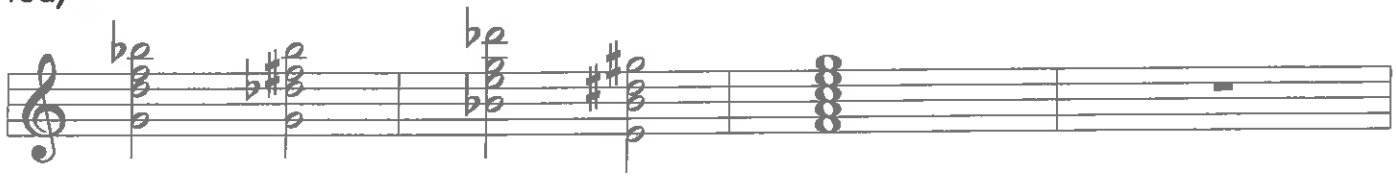
19b)



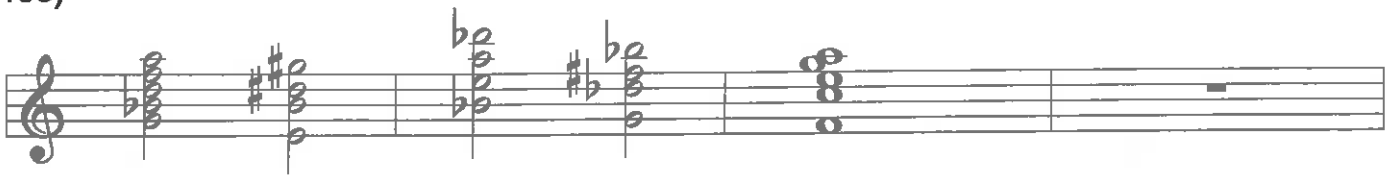
19c)



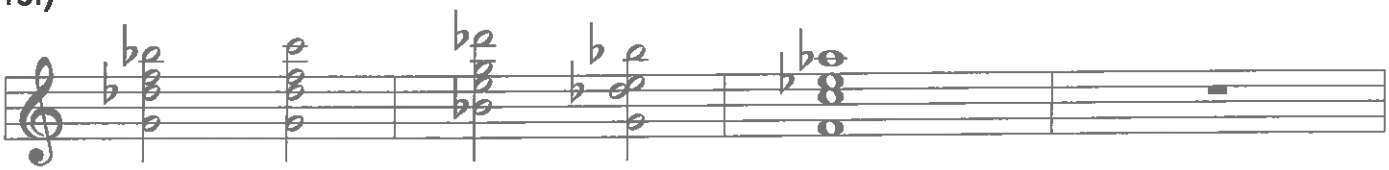
19d)



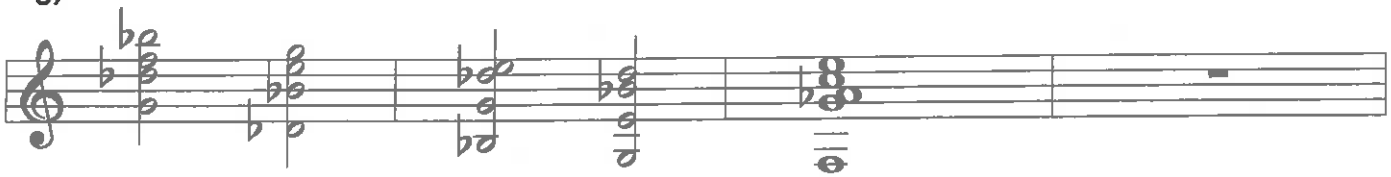
19e)



19f)



19g)



work space / notes:

20) With the musical construction of the diminished sounds being minor thirds, a unique and important consideration emerges with regard to the "doubling" up of the Two-Five progression into the Three-Six-Two-Five grouping, an all too common chord progression with which not to be acquainted, (see also chapters 2 and 5 for more ideas on this fundamental musical component). The minor third interval is again the key. Thus, two basic possibilities emerge relating the above Three-Six-Two-Five with the minor third interval. Comparing the Three-Six to Two-Five, we realize that the component parts have identical construction, i.e. a Two chord type moving to a Five chord type and are located a whole step apart. For example, in the key of "C" major, we arrive at:

Three	Six	Two	Five
"E" min 7	**"A" 7**	**"D" min 7**	**"G"7**

The minor third interval, like most musical intervals, is dividable into whole steps and half steps. With this in mind, is moving a particular diminished chord or scale up or down a whole step the equivalent of moving that same group up or down a half step? Let's add a flat nine to each of our dominant chords above, to create the diminished seventh chord in it's upper structure, then crunch it all down.

	"A" 7b9	"G" 7b9
spelt	A, C#, E, G, Bb.	G, B, D, F, Ab.

To restate our question, is the diminished chord and scale found within the "G" 7b9 located a whole step below "A" 7b9, equivalent to the diminished chord and scale found a half step above the "A" 7b9, namely "Bb" 7b9 ? Let's spell out the "Bb" 7b9 shape and compare:

"Bb" 7b9	spelt	Bb, D, F, Ab. B.

A cursory glance between the "G" 7b9 and the "Bb" 7b9 reveals an identical grouping of pitches. These pitches are a minor third apart and comprise the fully diminished seventh chord found within the upper structure of any dominant seventh flat nine (V7b9), see chapter 3 for a more thorough explanation of this important concept. For our Three-Six-Two-Five progression, with the addition of a flatted ninth to our dominant chords, the common relationship between dominant seventh flat nine chords (V7b9) a minor third apart, creates a situation where our possible choices now include moving up a half step from Three-Six. Thus, our original chords evolve from:

Three	Six	Two	Five	
"E"-7	**"A" 7b9**	**"D"-7**	**"G" 7b9**	**evolve into**
"E"-7	**"A" 7b9**	**"F"-7**	**"Bb" 7b9**	

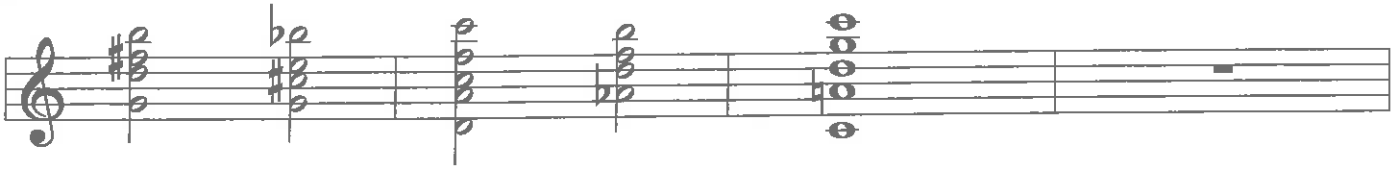
In terms of moving shapes around, this can become *very handy.* The following examples come to mind. The Three-Six-Two-Five harmonic situation is *very common* in many Jazz "standards." Explore and experiment.

work space notes:

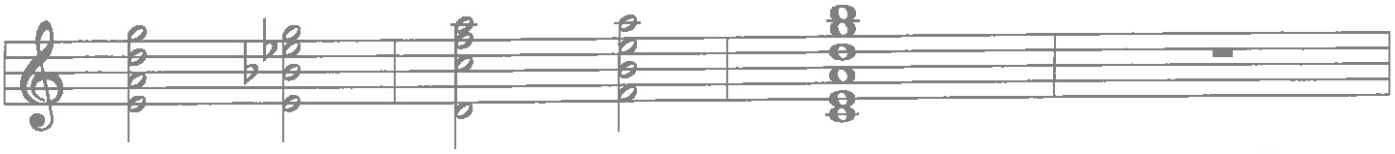
These examples based on Three Six Two Five in "C" major / minor. As before, identify each voicing and write it's symbol over each voicing.

20a)

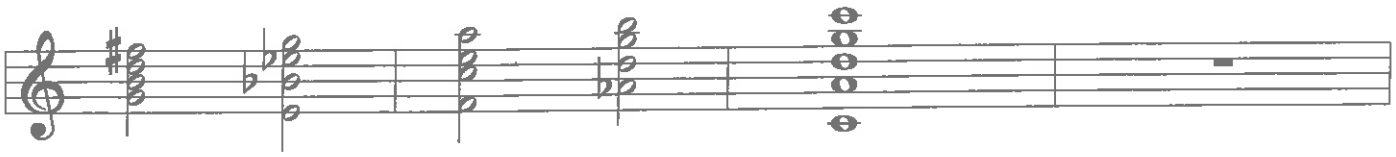
20b)



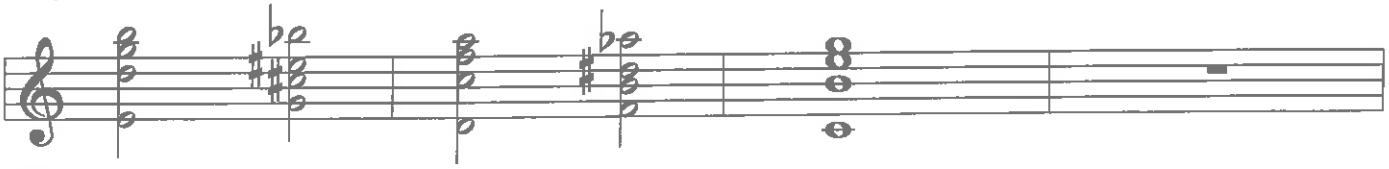
20c)



20d)

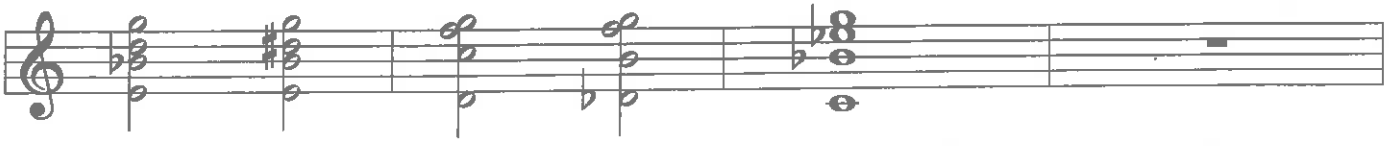


20e)



20f)

20g)



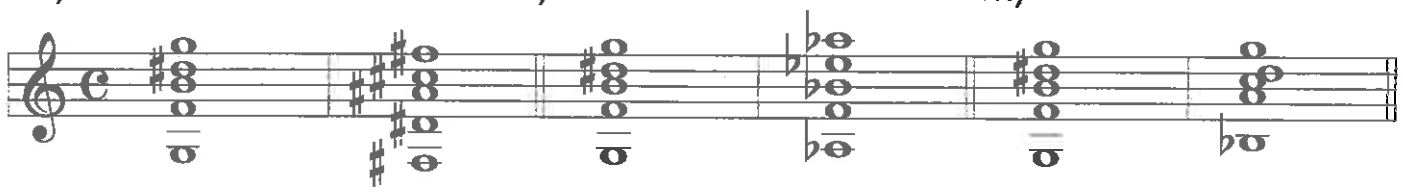
work space / notes:

WHOLE TONE SHAPES

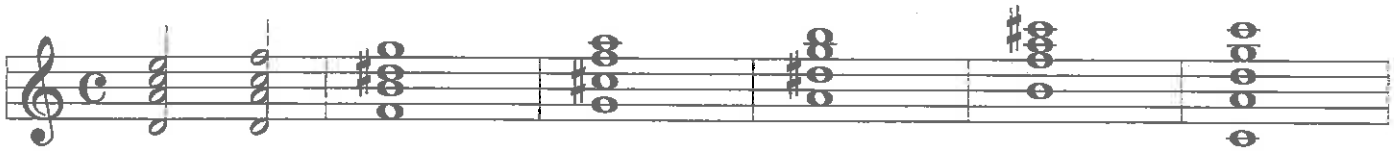
As discussed in the dominant "proofs" section in chapter #3 , the whole tone shapes are built on the augmented triad. Due to the symmetrical nature of the whole tone configuration, it's possible resolutions encompass six keys by thinking of each pitch in the whole tone scale in the dominant or fifth scale degree function, see chapter #3, musical proof #4, whole tone studies. As distinct as the diminished color that starts off this section, the whole tone / augmented sounds created from the whole tone scale provide yet another wonderful possibility for creating artistic energy in the balance of tension and resolution. As done previously with the diminished seventh color, lets resolve one whole tone shape to it's six appropriate tonics. Example using "G" 7+5 resolving to the "C", "D", "E", "F#", "Ab" and "Bb" major key centers.

21a) 21b) 21c)

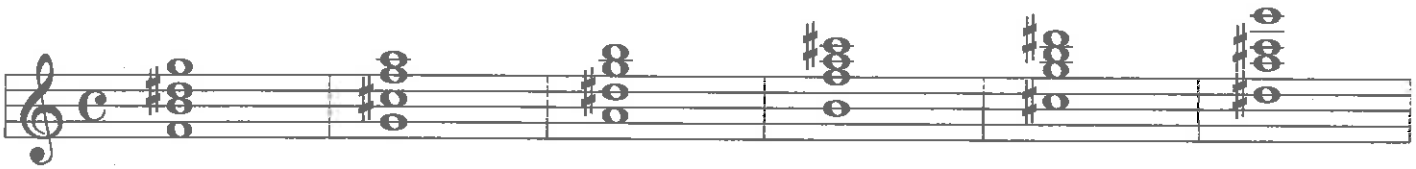
21d) 21e) 21f)



21g) As you may surmise, nice chordal runs can be created by moving the upper part of this shape in whole steps. Example moving "G" 7+5 / "F" up in whole steps resolving to "C" major 6 / 9.

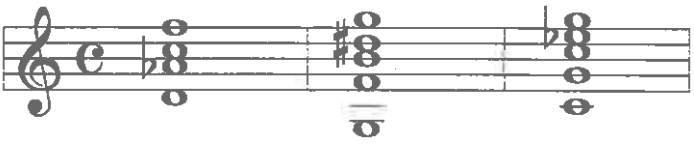


21h) Different upper structure configurations are created when the "G" 7+5 / "F" is moved up in the whole step fashion, lets analyze each new configuration. Using the previous shape we arrive at:

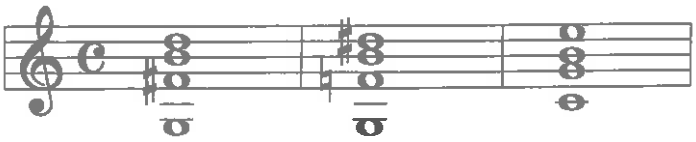


Notice that what we basically have here is a "G" whole tone scale as the bass pitches (starting from flat seven "F" in the above example), while the upper three voices create different whole tone triads.

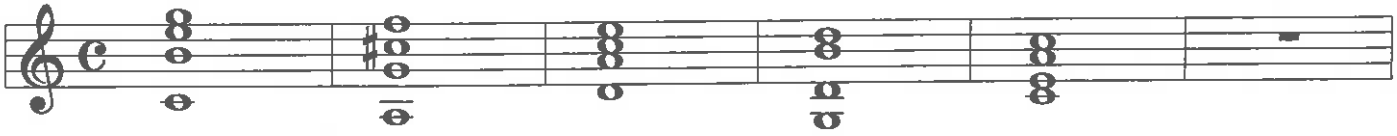
21i) Mainly used on the dominant seventh, the augmented fifth lends itself well to the Five / One resolution in minor keys. Example in "C" minor below.



21j) Another common use for the augmented sounds is between the motion of One moving to Four. Remember the sharp One diminished studies ? Same concept, different color. The harmonic motion is from One, to One augmented, to Four and so forth. Example below in "G" major.



21k) Another cool positioning for the augmented colors is on the Six chord as part of the One / Six / Two / Five / One turnaround. Try this group with a bit of a Latin feel. In "C" major:



The augmented sounds and colors are unique and distinctive, easily recognized once the "ear" has them locked in. Although only two augmented shapes are used in the example above, please realize that there are many other possibilities for voicings and usage. Explore and experiment.

Discussion: Introduce yourself to J.Coltrane's "Giant Steps". I remember hearing this recording "early on" in my studies and it became sort of a focal point to head towards. As the years of study have gone by, as more information and skills have been acquired, I've tried to find and figure out the theoretical evolution from the basic Two / Five / One cell into the more complex cycling found in "Giant Steps", trying to get a grasp of the historical tonal evolution of the Jazz language. Find a chart of "Giant Steps" and begin a melodic and harmonic journey.
Listening: "Giant Steps" by J.Coltrane on Atlantic records.
Exercises: Play through the examples in this section, pick out ideas you like and begin to incorporate these colors on your artistic palette.

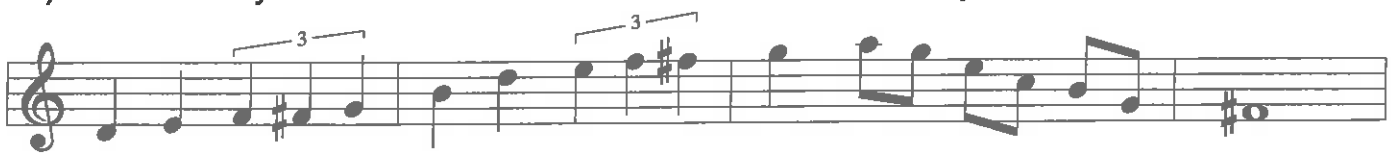
TONAL CONVERGENCE CHART MELODIC / HARMONIC REALIZATIONS
TWO (ii min7) TO FIVE (V7) TO ONE (I maj / min 7) SUBSTITUTION CHART.
The following musical examples are "realizations" of the Tonal Convergence chart, creating a melodic and harmonic realization from the chord symbols and scale group for each entry on the chart. What I've tried to do here is to illustrate possible harmonic choices to support melodic ideas created from the scale choices contained in the chart. These substitutions obviously can be mixed and matched. *Voicings should be created as needed.* Many of these substitutions also resolve nicely to minor keys. Let your ear be your guide. This listing in "C" major, is again done chromatically to provide a possible methodology for learning. Again the idea emerges that musical choices for creating and releasing tension over the Two / Five / One harmonic motion provide "groups of pitches to create melodic / harmonic ideas from." That each of the groups contain different musical elements and configurations that can potentially characterize the emotional statement that you are trying to personify in your musical creations. One's "artistic signature" develops as the artist expands and fine tunes their ability to create a "evolving" emotional statement. This "real tme" (gl) artistic statement "evolves" by using different shades or degrees of tonal tension coupled with chosen orchestration and dynamic shading, to personify the evoloving emotional content and climax of their statement. The truly joyous aspect of this whole process is the magic of *discovery; of melodies, groups of chords, new combinations based on existing models,* as each one of us **Individually chooses what musical elements will best convey our artistic statements.** As always, explore and experiment.

TWO (ii min7) TO FIVE (V7) TO ONE (I maj 7) SUBSTITUTION CHART

Chord Symbol	Scale Choice		Tension ii-7	V7	Resolution I maj 7
1) I maj 7 #11	C Major #4		D7	G7sus 4	C maj 7 #11
2) i min 7	C Melodic Minor		D-7	G7+	C min 9
3) bII-7	Db Lydian		D-9	Dbmaj7	C maj 7
4) bII7#11	Db Lydian b7	a)	D-7	G7b9	C maj 7
		b)	D-7	Db9	C maj 7
		c)	Ab-9	Db9	C maj 7
5) bII+	Db Augmented		D-9	G7+	C maj 9
6) ii dim 7	D Diminished		D-7b5	G7b9	C min 9
7) ii-7	D Melodic Minor		D-9	G7b5	C maj 9
8) bIII maj 7	Eb Major	a)	D-7	Bb7/6	C maj 7 6/9
		b)	F-7	Bb713	C maj 7 6/9
9) III7#11	E Lydian b7	a)	D-6/9	E9	C 6/9 #11
		b)	B-7	E9	C maj 6
10) IVmaj7#11	F Lydian		D-7	G7	C maj 6/9
11) IV7#11	F Lydian b7		D-7	G7+	C min 9
12) IV+	F Augmented		D-7	G7+	C min 7
13) IV dim 7	F Diminished		D-7	G7b9	C maj 7
14) iv-7	F Melodic Minor		D-7b5	G7b9	C 6/9
15) iv-7	F Natural Minor		D-7b5	G7b9	C min 9
16) bVmaj7	Gb Major	a)	D-7	Db7	C maj 7
		b)	Ab-7	Db7	C maj 7#11
17) V7#11	G Lydian b7		D-9	G7#11	C maj 9
18) V7+	G Augmented		D-9	G7+	C maj 7#11
19) bVImaj7	Ab Major	a)	D-7b5	Bb7	C maj 7
		b)	F-7	Bb7sus4	C maj 76/9
20) bvi-maj7	Ab Melodic Minor		D-7b5	G7b9	C min 6/9
21) bvi dim 7	Ab Diminished		D-7b5	G7b9	C maj 7
22) VI maj	A Major	a)	D-7	E9	C maj 7
		b)	B-7	E9	C maj 7 6/9
23) VI+	A Augmented		D-11	G7+	C maj 7
24) bVII7#4	Bb Lydian b7	a)	D-7	Bb7	C maj 7
		b)	F-9	Bb713	C maj 6
25) VII7#4	B Lydian	a)	D-9	Db7#9	C maj 76/9
		b)	Ab-9	Db713	C maj 7 6/9
26) VII dim 7	B Diminished		D-7b5	G7b9	C min 11
27) VII+	B Augmented		D-6/9	G7+	C min 6/9

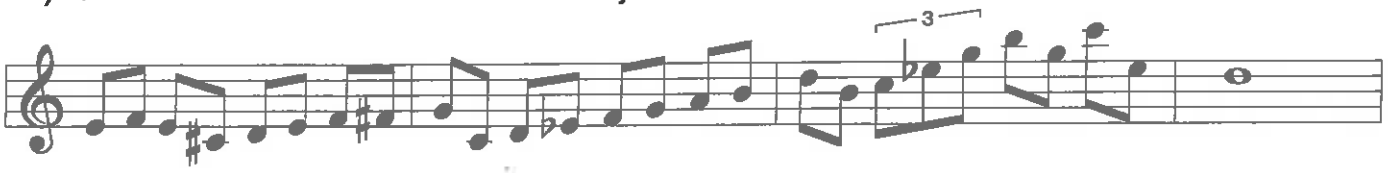
work space / notes

1m) Chromatically altered diatonic line. Resolves to #11 of "C" major. D7 G7sus 4 C Δ7 #11.

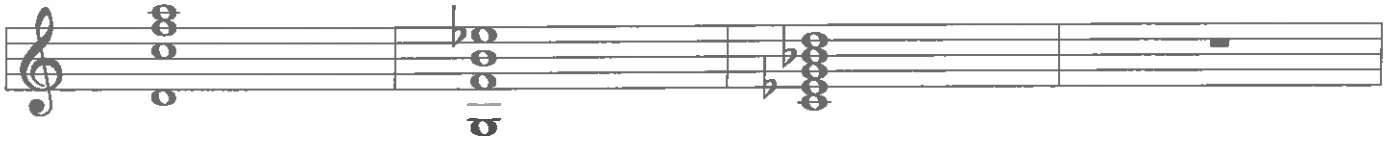


1h) V 9 of V sus 4 to tonic maj 6/9#11, *a bit "modern."*

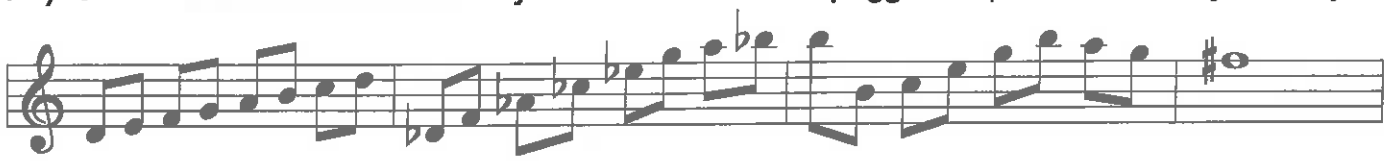
2m) Could be viewed as minor Tonic to major Tonic. D-7 G7+ C min 9.



2h) ii min 7 to V 7(+) to tonic min 9, *very common grouping.*

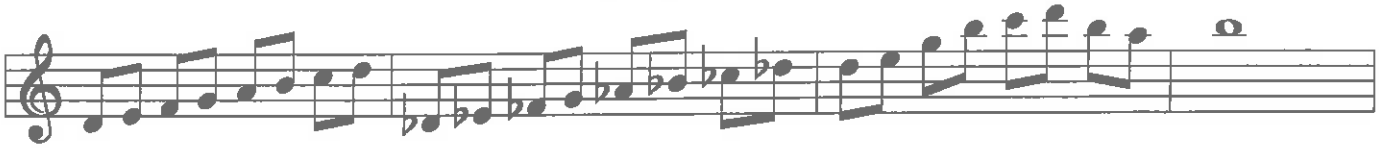


3m) Scalar Dorian mode followed by dominant seventh arpeggio shape. D-9 Dbmaj7 C maj 7.

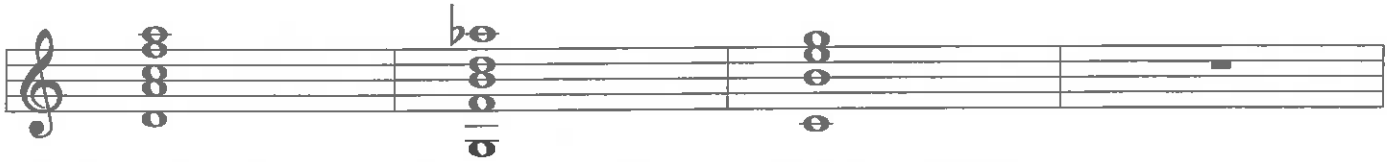


3h) ii min 9 to b II maj 9 to tonic maj 76/9, *"softer" half step resolution.*

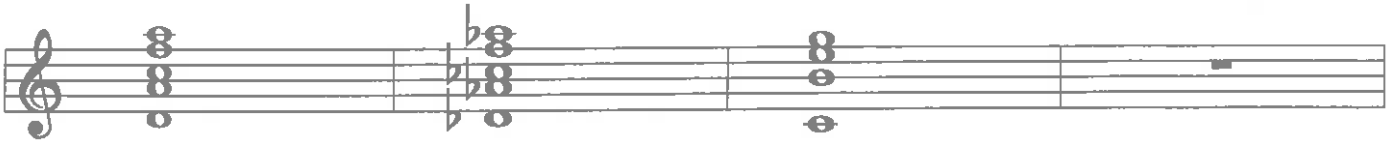
4m) Similar to #3 with a bit of diminished quality. D-7 G7b9 C maj 7.



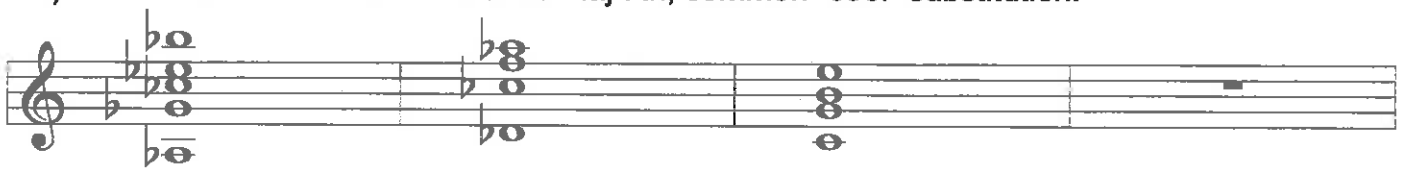
4ha) 1st inv. ii min 9 to 3rd. inv. V 7b9 to 1st inv. tonic maj 7th, *good for fast 2-5'-1's.*



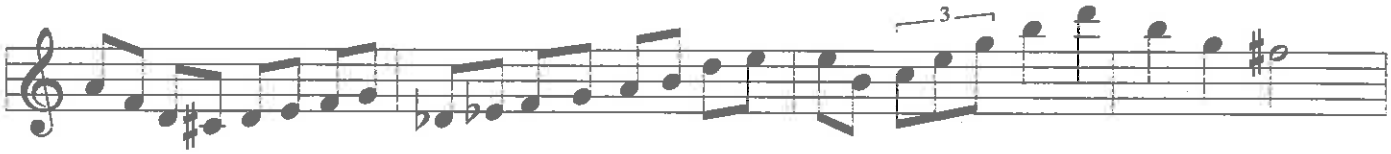
4hb) ii min 9 to tritone sub V 9 to tonic maj 7th, *very common sequence.*



4hc) tritone sub ii min 9 to V 9 to tonic maj 7th, *common "cool" substitution.*

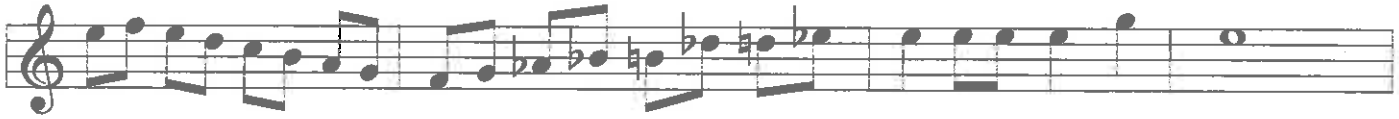


5m) Tritone substitute with a bit of whole tone color. D-9 G7+ C maj 9.

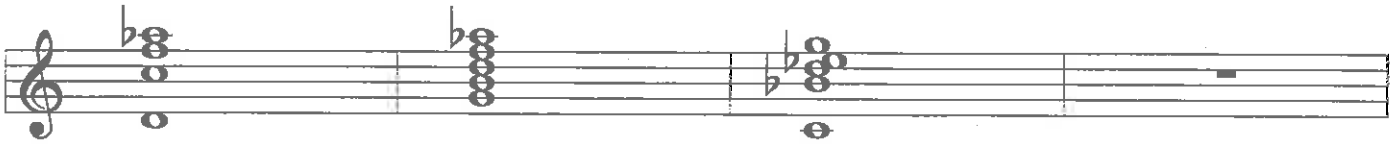


5h) ii min 9 to V 7(+) to tonic maj 9, *chromatic "guide tone" (gl) line.*

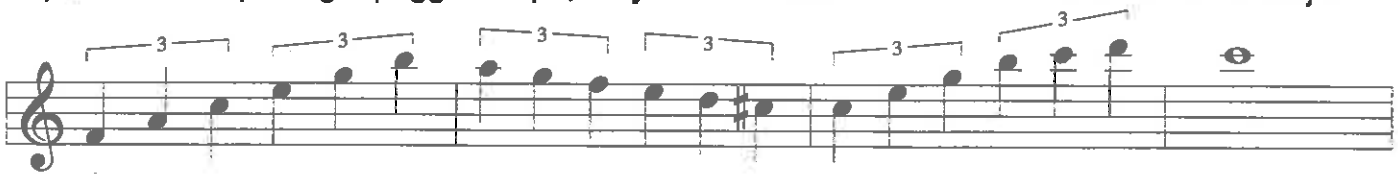
6m) Very symmetrical diminished shape. D-7b5 G7b9 C min 9.



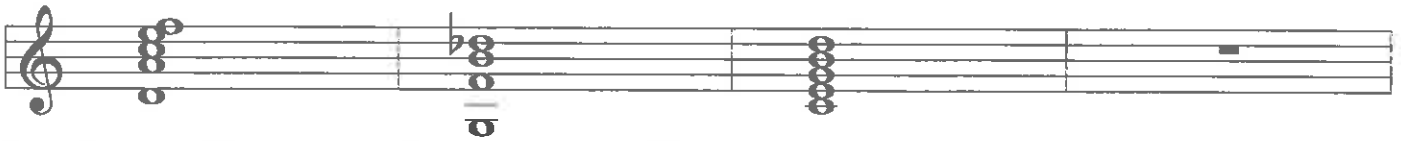
6h) ii min 7b5 to V 7b9 to tonic min 9, *very common sequence.*



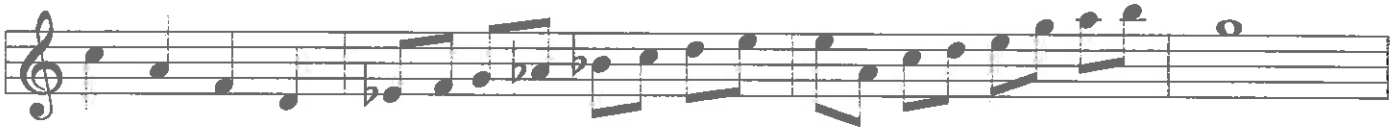
7m) I love this opening arpeggio shape, very common lick. D-9 G7b5 C maj 9.



7h) ii min 9 to V 7b5 to tonic maj 9, *a bit "surprising."*

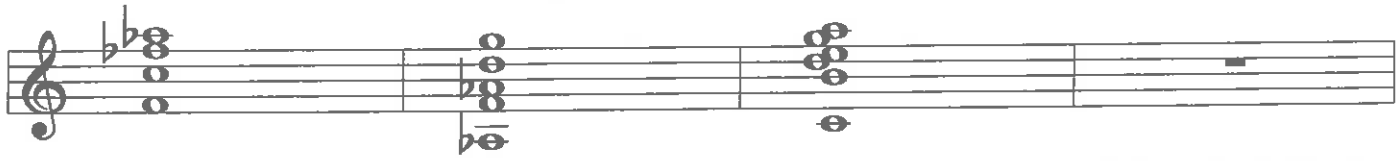


8m) Diatonic "Eb" scale, half step lead in to "E", the third of "C" major. D-7 Bb7/6 C maj 7 6/9

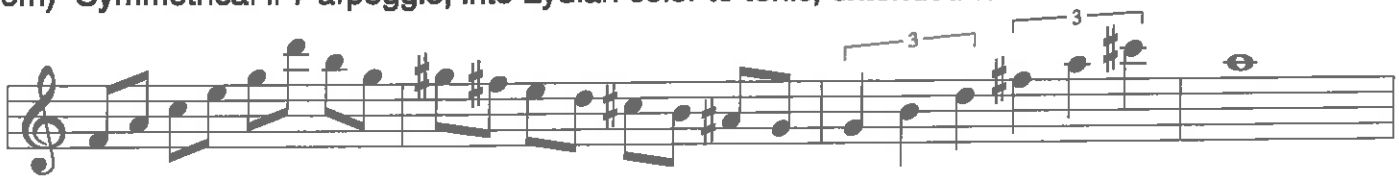


8ha) ii min 7 to b7 sub V 7/13 to tonic maj 76/9, *very common grouping.*

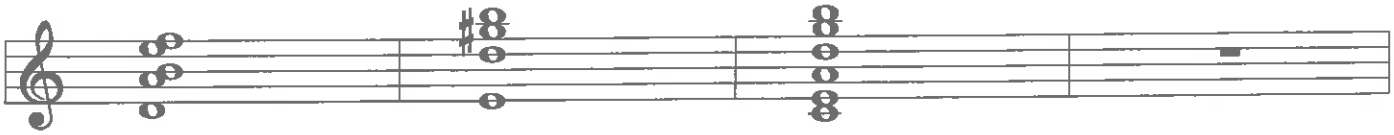
8hb) sub ii min 9 to V 7/13 to tonic maj 7, *very common sequence in "Latin" flavors.*



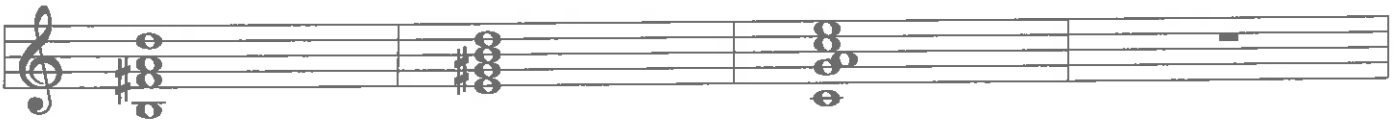
9m) Symmetrical ii-7 arpeggio, into Lydian color to tonic, extended to #15. D-6/9 E9 C 6/9 #11.



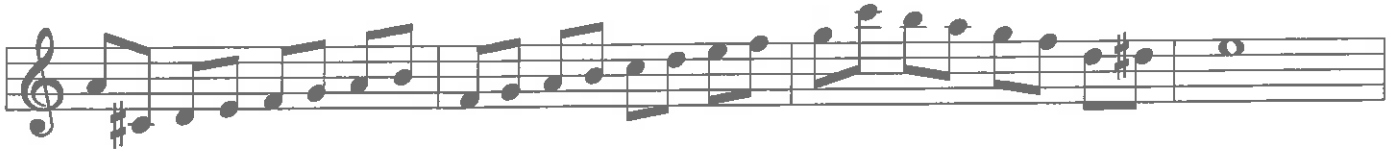
9ha) ii min 9 to maj 3rd sub V 9 to tonic maj 76/9, *relatively "modern."*



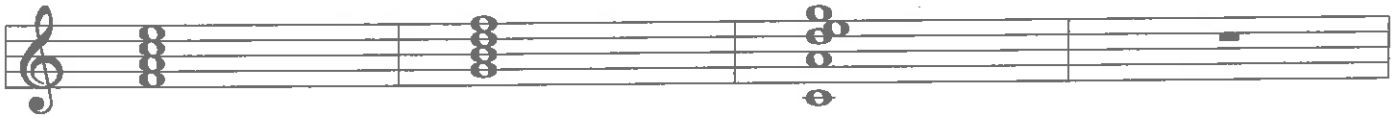
9hb) sub ii min 7 to maj 3rd sub V 9 to tonic maj 6, *again "modern."*



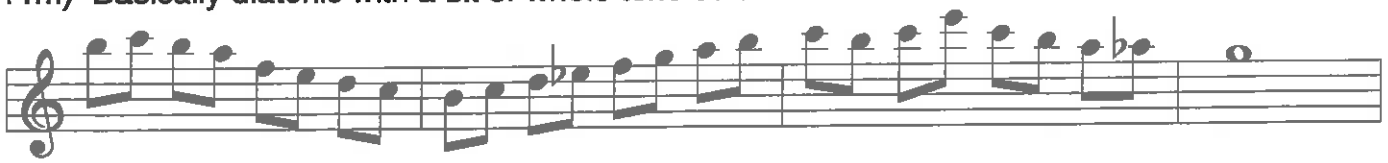
10m) Overall, basically diatonic with some half step shifts. D-7 G7 C maj 6/9.



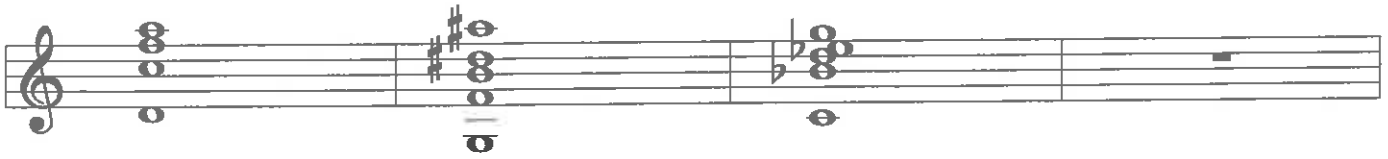
10h) 1st inv. ii min 9 to V 7 to tonic maj 6/9, *very common sequence.*



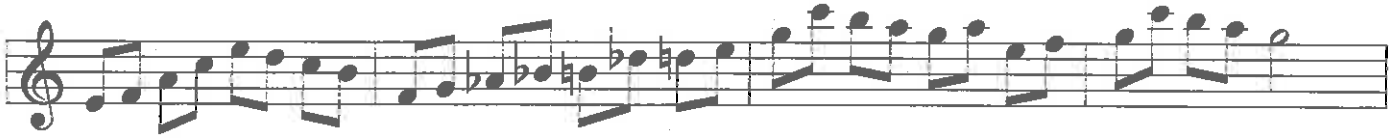
11m) Basically diatonic with a bit of whole tone color. D-7 G7+ C min 9.



11h) ii min 7 to V 7#9#5 to tonic min 9, *"bluesy" color.*

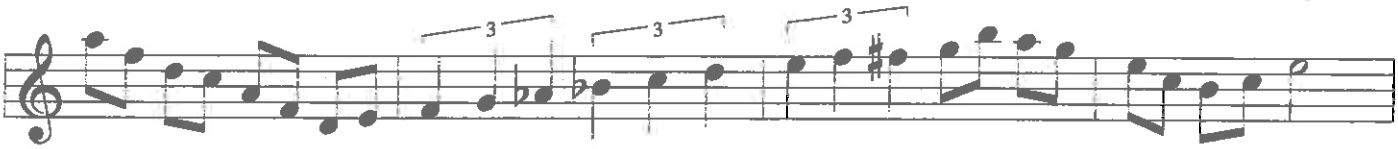


12m) Diatonic ii-7 and I maj 7 chords, symmetrical diminished shape. D-7 G7+ C min 7.



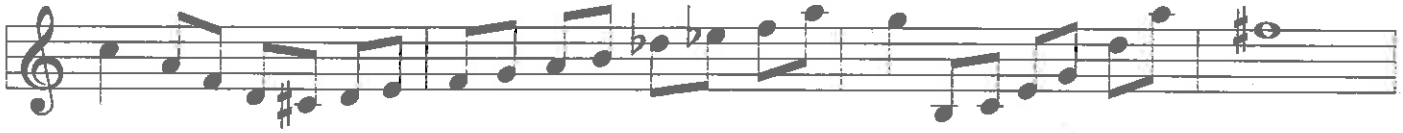
12h) ii min 7 to V 7(+5) to tonic min 7, *"stronger" minor sequence*

13m) A bit of the whole tone color surrounded by diatonic sounds. D-7 G7b9 C maj 7.



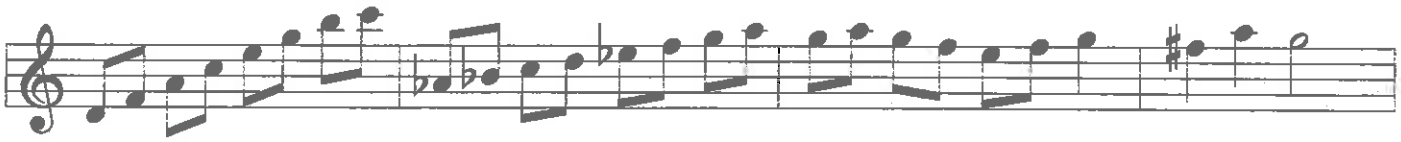
13h) ii min 7 to V 7b9 to tonic maj 7, *very common turnaround (gl).*

14m) Basic whole tone idea to a very cool tonic color. D-7b5 G7b9 C 6/9.

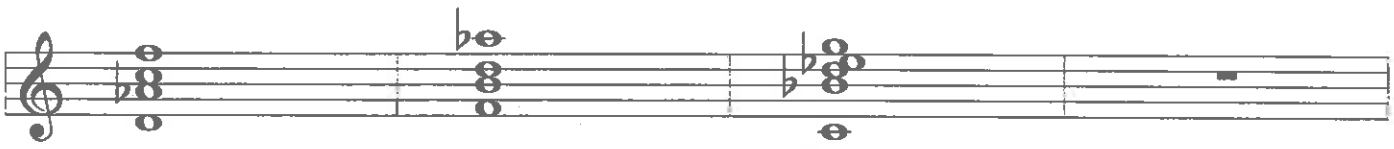


14h) ii min 7b5 to V 7b9 to tonic maj 6/9, *"surprising" resolution.*

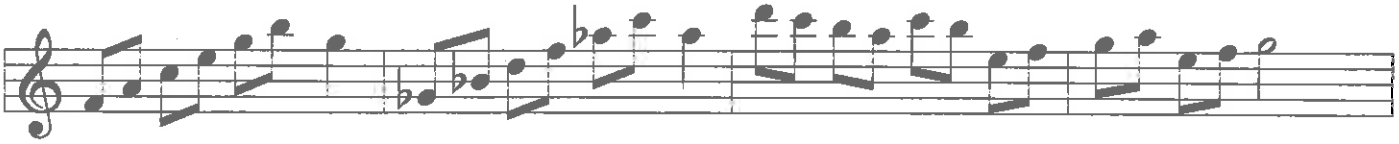
15m) Nice ii-7 shape, basic Lydian scale substitution to tonic cliché. D-7b5 G7b9 C min 9.



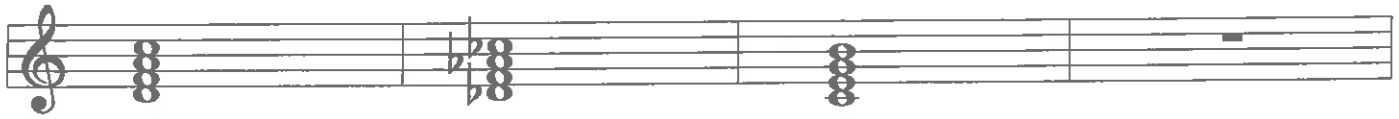
15h) ii min 7b5 to 3rd inv. V 7b9 to tonic min 9, *very common minor sequence.*



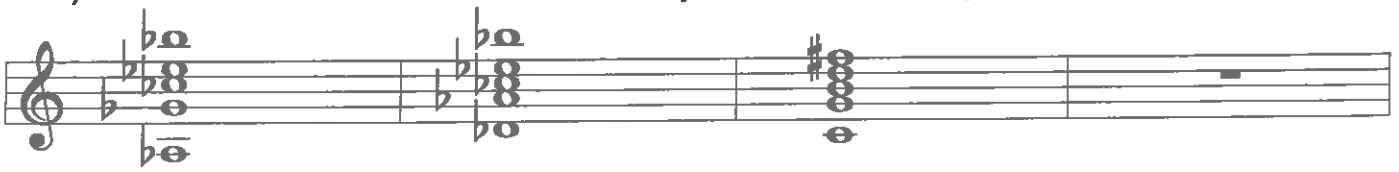
16m) Basically the ii-7 shape up a half step resolving to tonic prolation. D-7 Db7 C maj 7.



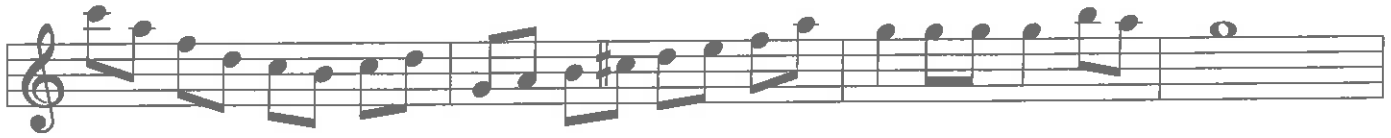
16ha) ii min 7 to tritone sub V 7 to tonic maj 7th, *common "Jazz" turnaround (gl).*



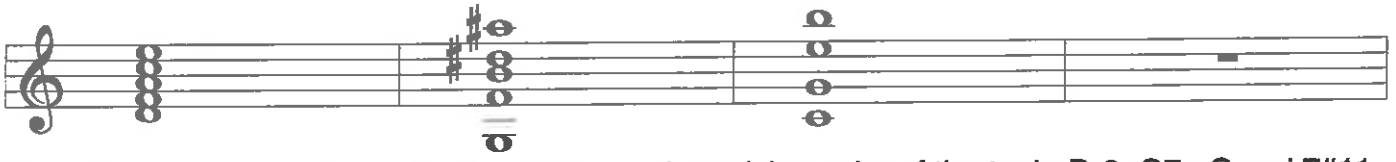
16hb) Tritone sub ii min 9 to V 7/13 to tonic maj 7#11, *common sequence.*



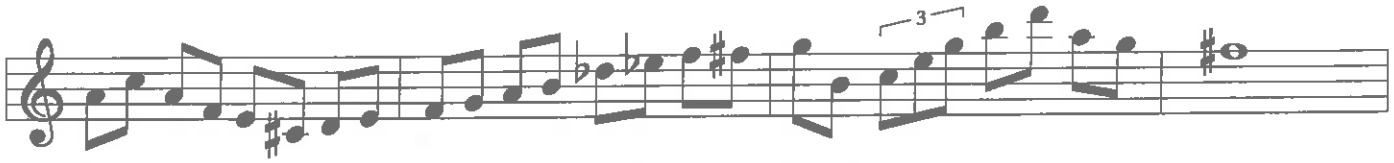
17m) Overall diatonic, a bit of whole tone color, repeated notes swing fine. D-9 G7#11 C maj 9.



17h) ii min 9 to V 7#9#5 to tonic maj 7, *nice tension and resolution.*

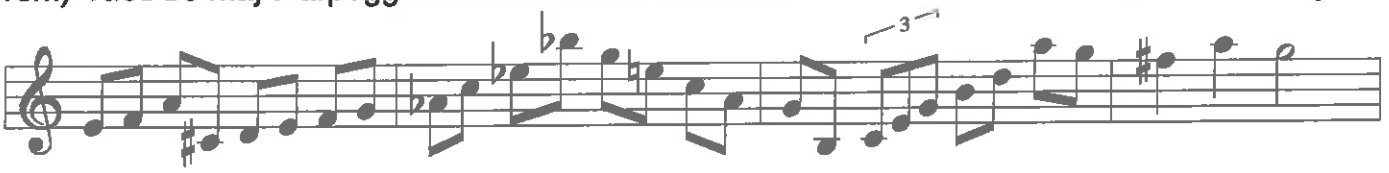


18m) Basically whole tone, dig the rhythm and resolving color of the tonic D-9 G7+ C maj 7#11.

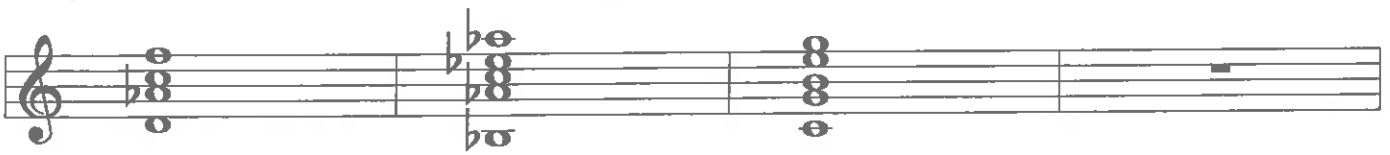


18h) ii min 9 to 3rd inv. V (+5) to tonic maj 7#11, *cool "modern" sequence.*

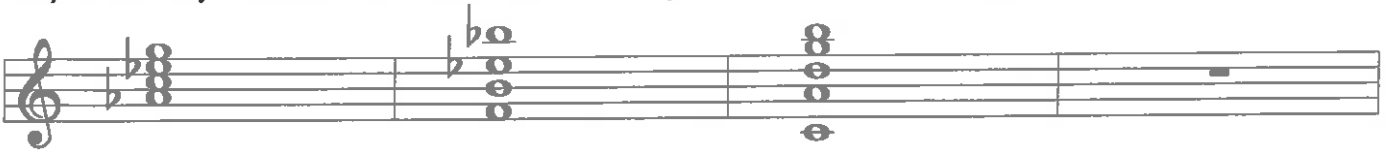
19m) Nice b6 maj 7 arpeggio in the middle of this lick. D-7b5 Bb7 C maj 7.



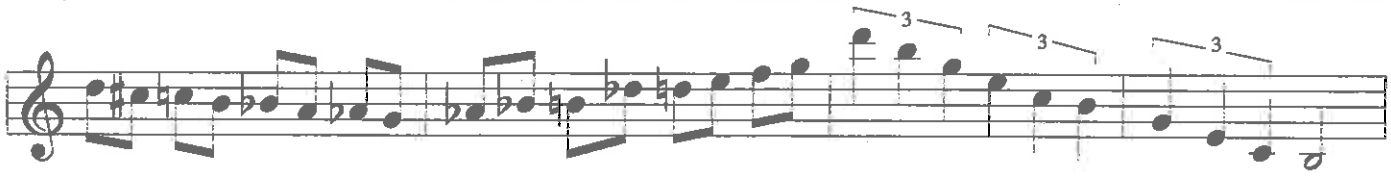
19ha) ii min 7b5 to triadic V 7/9/13 to tonic maj 7, *a bit "deceptive."*



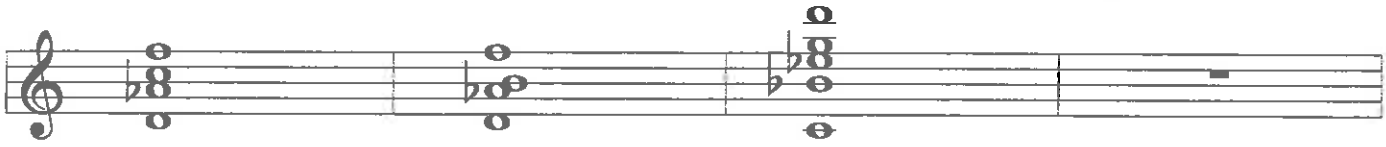
19b) b six maj 7 to 3rd inv. V sus 4 to tonic maj 76/9, *cool "modern" approach.*



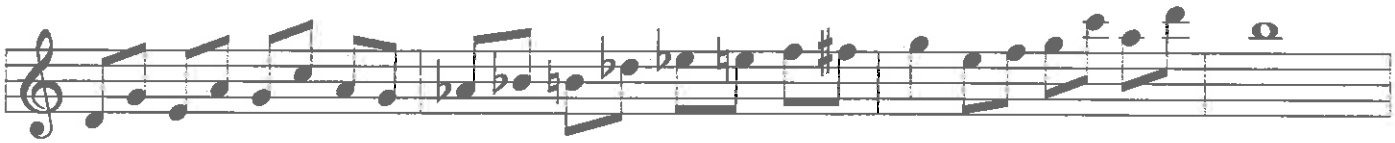
20m) A real mutt, chromatic then diminished then diatonic. D-7b5 G7b9 C min 6/9.



20h) ii min 7b5 to 2nd inversion (inv.) V 7b9 to minor tonic, *very common sequence.*

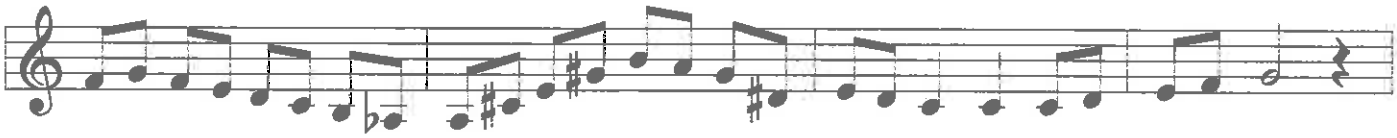


21m) Fourths to diminished color. D-7b5 G7b9 C maj 7.



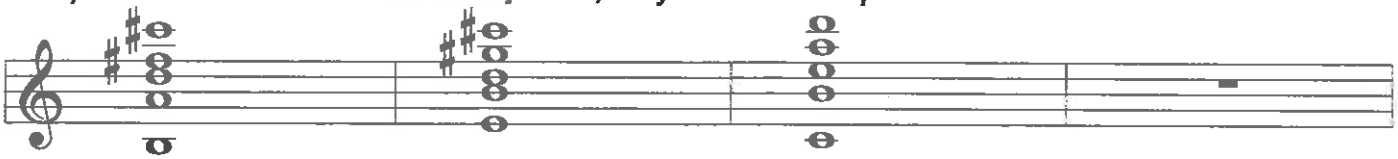
21h) 2nd inv. ii min 7b5 to 4th inv. V 7b9 to minor tonic, *distinctly "dark."*

22m) Symmetrical shape for substitution, modern color. D-7 E9 C maj 7.

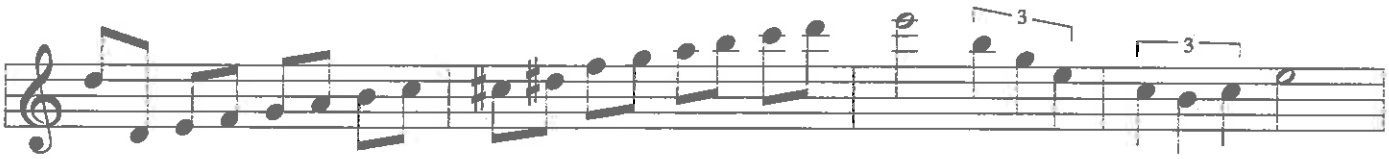


22ha) ii min 7 to sub V 7 to 1st inv. tonic maj 7 6/9, *"softer" quality.*

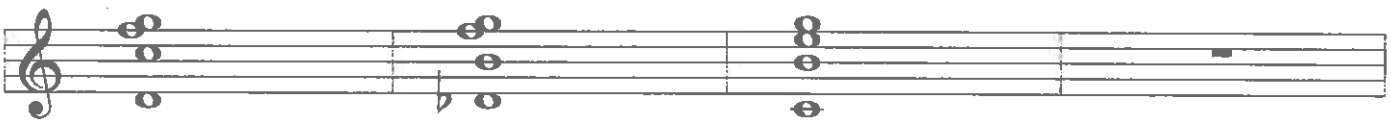
22hb) ii min 9 to V 9/13 to tonic maj 7 6/9, *very common sequence.*



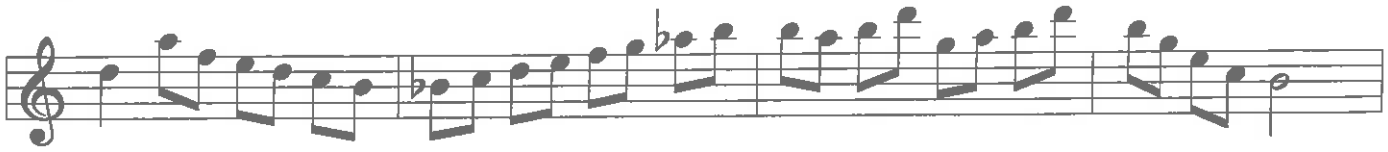
23m) Cool whole tone lick, voice the resolving "E" with a maj 7 shape. D-11 G7+ C maj 7.



23h) ii min 11 to 2nd inv. V 7b5 to tonic maj 7, *essential sequence for "Bossa Nova" grooves.*

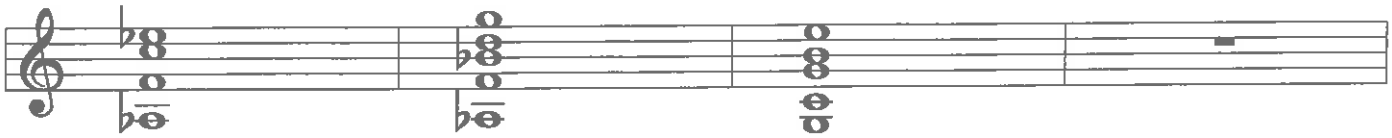


24m) Cool and common "Latin" substitute. D-7 Bb7 C maj 7.

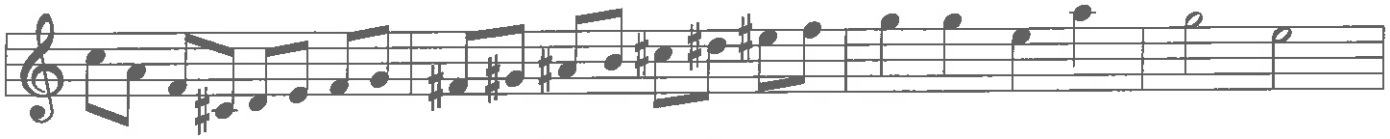


24ha) ii min 7 to V 9/13 to tonic maj 7, *very common sequence.*

24hb) 1st inv. ii min 7 to 3rd inv. V 9/13 to 2nd inv. tonic maj 7, *dark "modern" sound.*

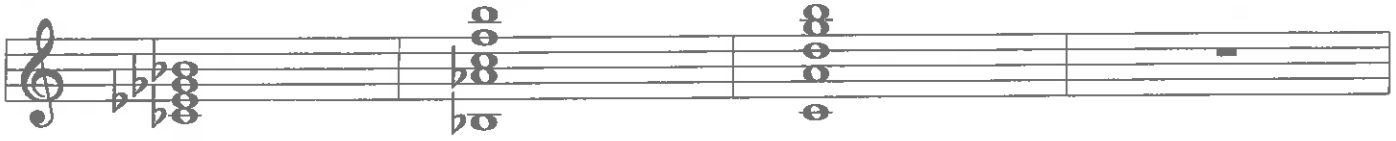


25m) Like this ii-7 lick yet? This substitution is one I really dig. D-9 Db7#9 C maj 76/9.

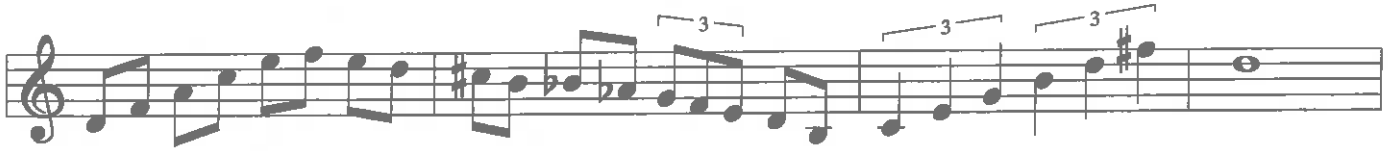


25ha) ii min 9 to tritone sub V 7 #9 to tonic maj 7 6/9, *common "Jazz" sequence.*

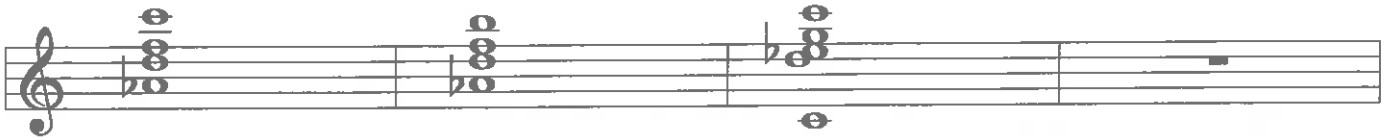
25hb) 1st inv. ii min 9 to V 9/13 to tonic maj 7, *bright "modern" sound.*



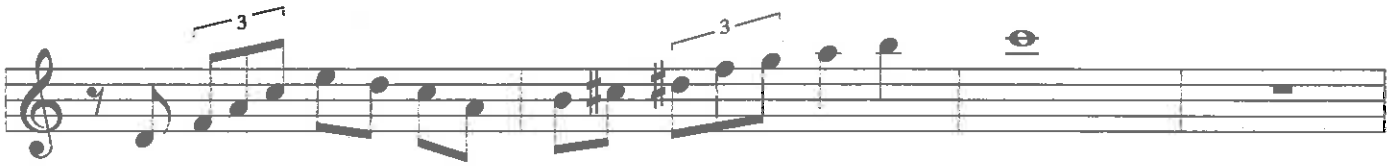
26m) Nice dominant alterations. D-7b5 G7b9 C min 11.



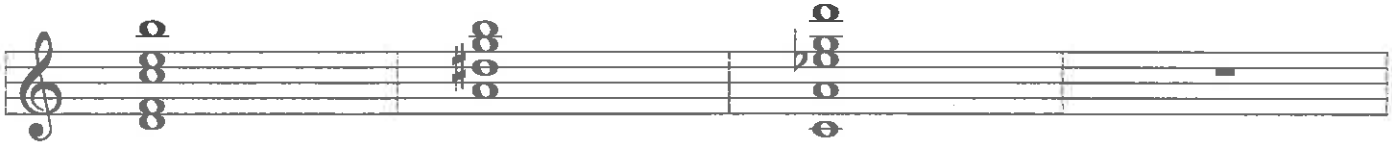
26h) 2nd inv. ii min 7b5 to 4th inv. V 7b9 to tonic min 9, *very "dark" tonic color*



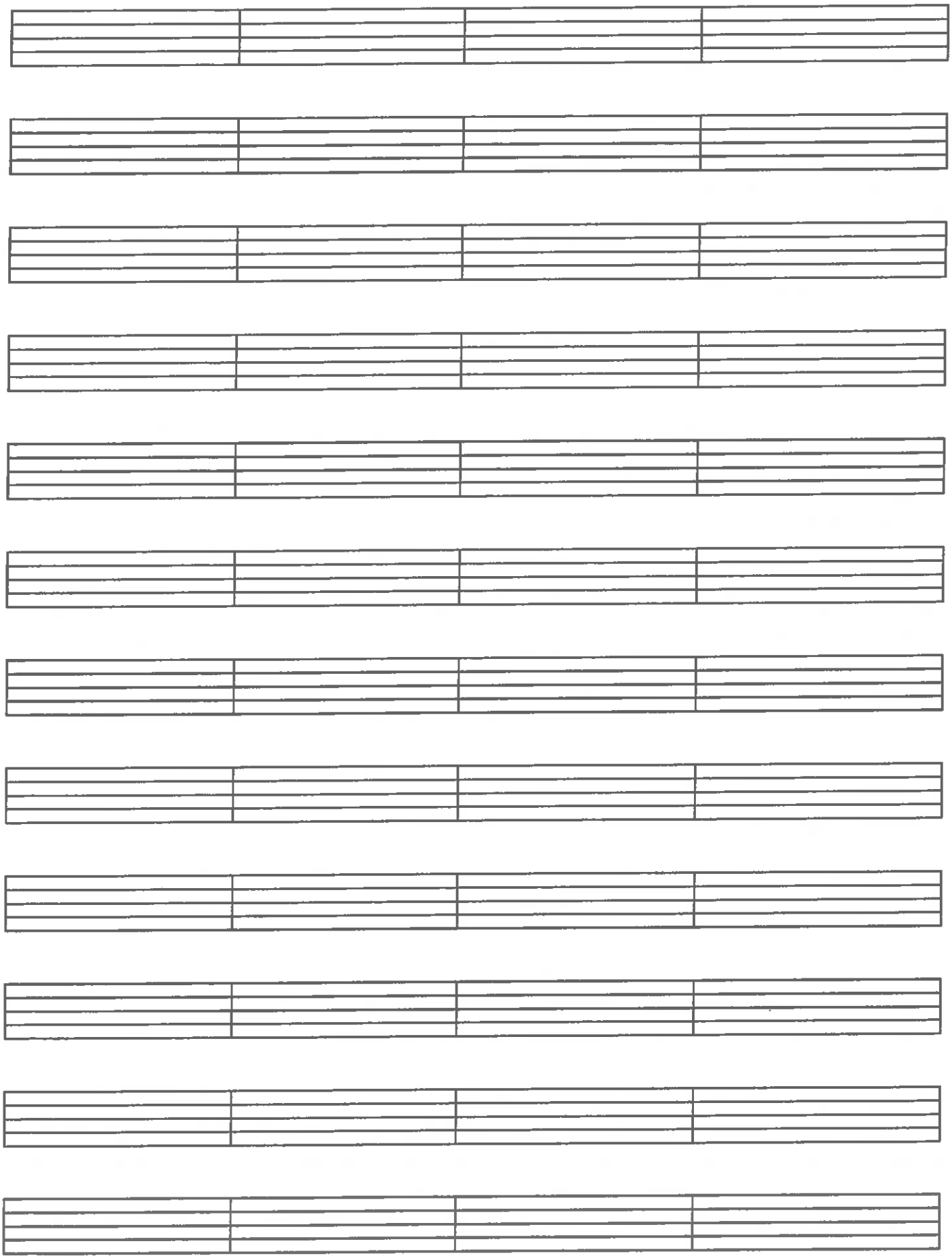
27m) Classic ii-7 arpeggio, basic whole tone color. D-6/9 G7+ C min6/9.



27h) ii min 9/13 to 4th inv. V (+5) to tonic min 6/9, *definitely "moody."*



Begin the "mix and match" process from the previous groupings creating your own melodic and harmonic ideas.



The roots of most contemporary music can be traced to the "Blues". Needless to say the "Blues" is a world unto itself. For our purposes, certain aspects of this "world" must be illustrated and included in this text. The key essential aspects to be discussed here are the "Blues" form, the "Blues" scale, and the harmony, i.e. chords, used to support "Blues" melodies. We'll discuss the "Blues" form first. The most common "Blues" form is termed the "Twelve Bar Blues." This musical "form" contains, as the name implies, twelve (12) measures which is generally broken down to three (3) groups of four (4) measures. In the simplest application, each of these three groups is identified by a tonal center. These tonal centers are built on the first, (I7), the fourth (IV7), and the fifth (V7) of the overall key of the music were performing in. Let's sketch out a "Twelve Bar Blues Form" using the previous concept. Using "C" blues as our overall tonal center we arrive at:

Chord Changes:	(I) C7	(VI) F7	(V) G7
Number of Measures:	4	4	4

In this condition, our example is a bit primitive. But it does form the foundation for the following "realization" (gl) of the "Twelve Bar Blues Form", that has been the "vehicle" for countless "Blues" and "Rock & Roll" tunes. Again, in "C" major:

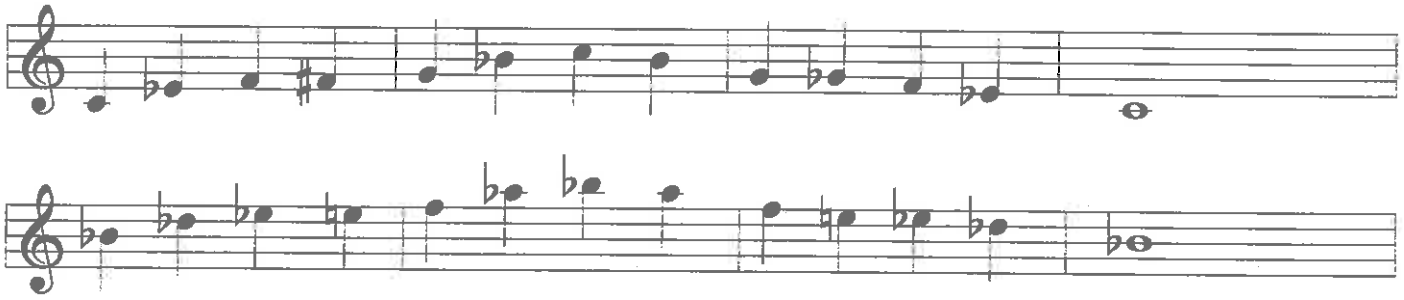
Chord Changes:	C7	F7	C7	G7	F7	C7	G7
Number of Measures:	4	2	2	1	1	1	1

Look familiar? This "realization" has been around for quite awhile. Study both examples and compare. The first, fifth, and ninth bars are most important. More on this concept in the next few pages. In your listening to your favorite "Blues" players, key in on these three points in the form and spend time to figure out what's happening. By "unlocking" these secrets yourself, once acquired, they'll be yours forever.

Melodic ideas for playing "Blues" are mainly derived from the "Blues" scale. In the key of "C" major, this scale is spelt:

C	Eb	F	F#	G	Bb	C
1	b3	4	#4	5	b7	8

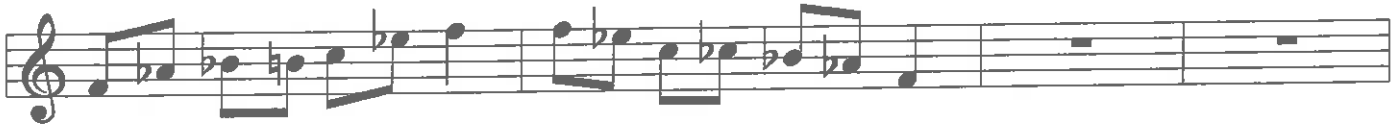
"C" Blues scale, followed by transposed example for group performance.



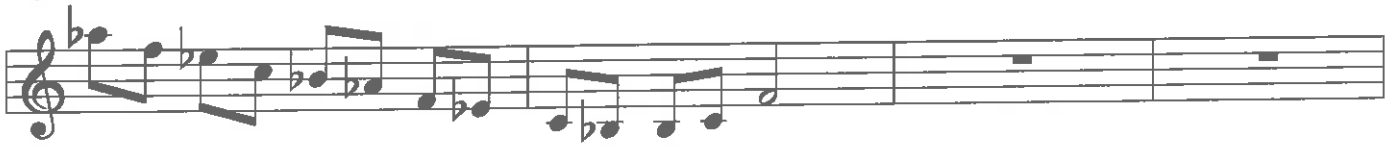
The pitches "D" natural, "E" natural, and "A" natural are also used but mainly as passing tones (gl). Melodies derived exclusively from the "Blues" scale will sound fine over many variations of "Blues" chord changes. Being based on a tradition of orally / aurally passing the music from player to player, listening to great blues players can become your best source of new information. Vocally transcribe your favorite "Blues" lines to "internalize" the emotional power contained within this simple group of notes, i.e. the "Blues" scale, and find them on your ax (gl). Here are a few Blues melodic ideas in "F", with a brief musical description of each. Try these ideas at the "top" (gl) of the chorus.

One of the most important "breakthroughs" I've had in the study of Jazz guitar came about when I worked to develop the ability to play full consecutive choruses of twelve bar blues using just single line melodic improvisations. Prior to this point in my development, my blues playing was a series of cliché licks that never really told any kind of story, something which I've always been rather fond of doing. Working with "Franz", (one of the hardest working 2 and 4 guys in the business), gradually the blues form became clearer and thus more exciting. It is an ancient form I think, don't know for sure, but the story telling ability of this twelve bar cycle has brought a great joy to my music. Developing the ability to play whole consecutive choruses unaccompanied really changed the way I look at, listen to and play the blues. It is also a great way to warm up prior to performing. Check it out, oh yea , you can hire Franz or one of his cousins at your local music shop.

1a) Basically up then down the Blues scale.

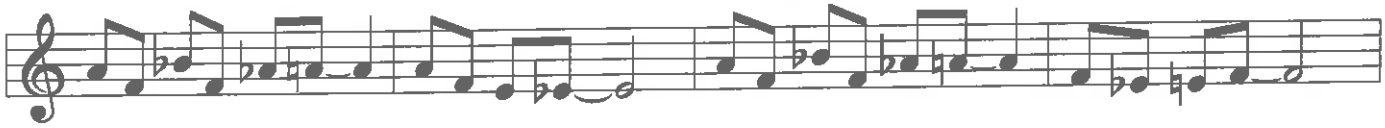


1b) Basically the minor Pentatonic scale, so common among the "rockers."

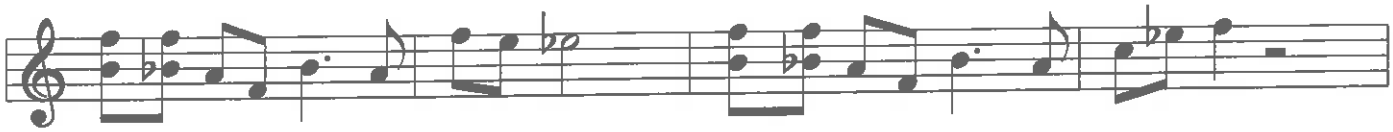


1c) A common idea is to simply alternate between the major and minor third with the tonic.

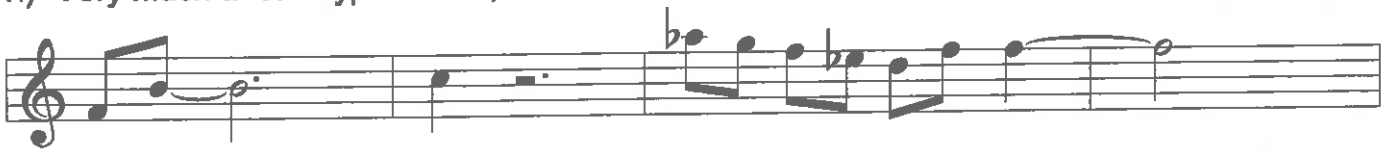
1d) Similar to previous idea of alternating the major and minor third, with a twist.



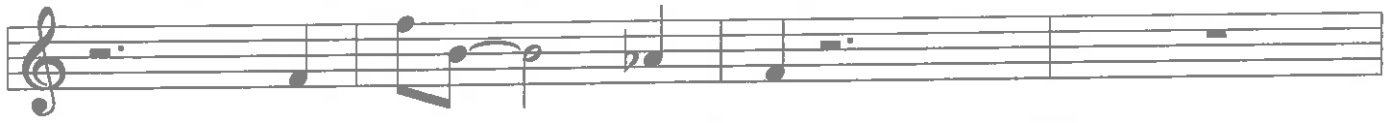
1e) Common Blues double stop for string players of all varieties.



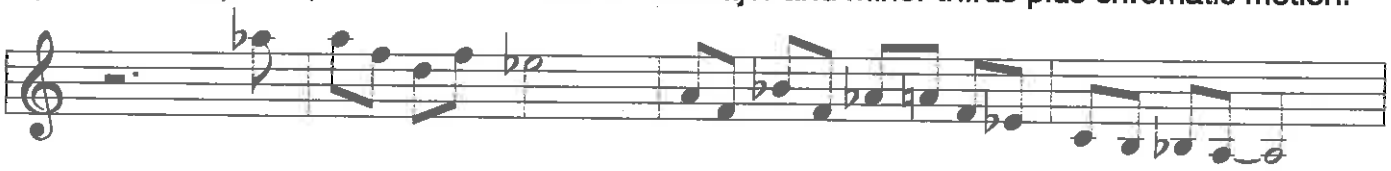
1f) Very much a "call" type of idea, somewhat old-fashioned.



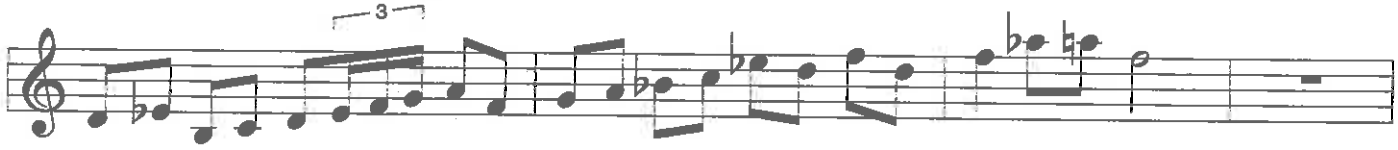
1g) "Vamp" (gl) line type idea, perhaps used as a background figure behind the soloist.



1h) Almost "bop" like, this idea uses both of the major and minor thirds plus chromatic motion.



1i) More in the "bebop" styling, but Blues none the less.

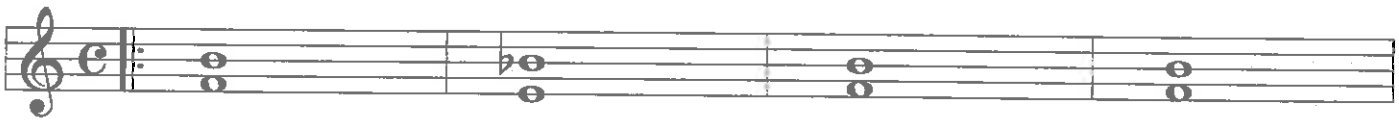


Blues harmony is based on the dominant (V7) chord. Remember the tritone interval contained within the chord built on the fifth scale degree of the major scale, as previously discussed in chapter 2? This inherent tension provides the propulsion for "Blues" harmony. The One, Four, and Five chords are the principal changes (gl) of the "Twelve Bar Blues". In the key of "G" major blues, these chords are spelt:

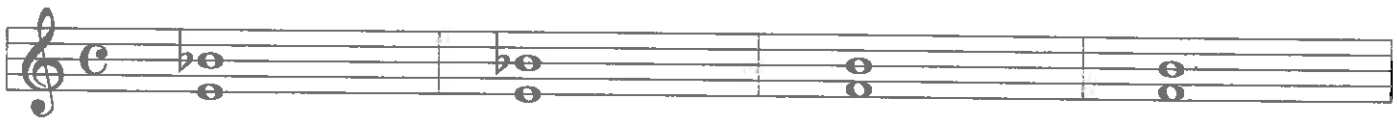
		1	3	5	b7	tritone interval between 3rd and 7th.		
(I7)	G 7 =	G,	B,	D,	F	B	to	F
(IV7)	C 7 =	C,	E,	G,	Bb	E	to	Bb
(V7)	D 7 =	D,	F#,	A,	C	F#	to	C

Each of these three chords contain the tritone interval between the third and seventh. Refer back to chapter 2 on Dominant Harmony if you are confused about this building block. One approach to harmonizing a 12 bar blues is simply to use just the third and seventh of each of the three principle chords i.e., One, Four and Five. The third and the seventh degrees of these dominant chords create the tritone interval, so essential to dominant harmony and the Blues flavoring. The following example in the key of "G" "blues" illustrates this idea. This realization also could be viewed as a guide tone (gl) approach to the twelve bar Blues, see section B later in this chapter for a discussion of guide tone concepts.

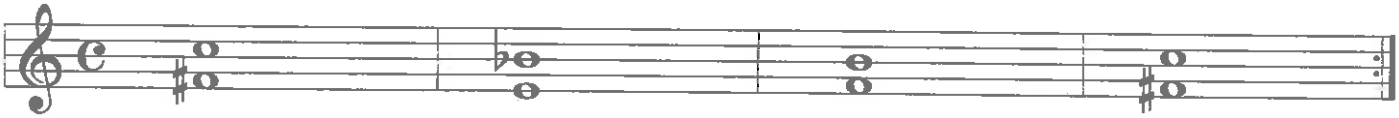
Tonic moving to Four in bar two back to tonic for bars three and four.



Starting on Four in bar #5, then moving back to One in bars #7 and #8.



Starting on Five in bar # 9, moving to Four, then resolving to One and then back to Five for the turnaround (gl), completing the 12 bar cycle.

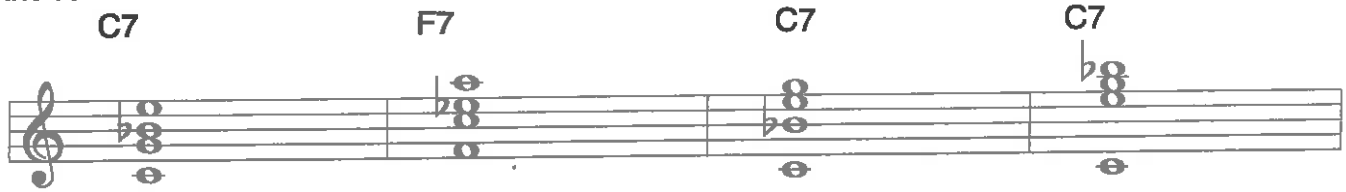


Run this simple realization above through the other eleven keys.

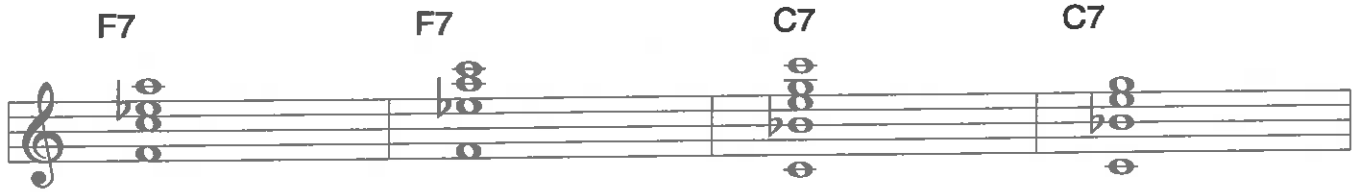
More "advanced" blues playing consists of "fleshing out" the simple harmonization as previously illustrated. As the harmony becomes more complex, melodic ideas derived from these chords are integrated into your blues lines. The key to playing the "Blues" is knowing the form, having a feel for the "Blue" notes, i.e. b3, #4, b7, and listen, listen, listen to the "Blues" greats that have come before us. The following examples of "Twelve Bar Blues" start with simple harmonic realizations and progress to more complex "fleshed out" harmonic possibilities. Mix and match, choose which ones sound good to you. The examples are given in the key of "C" blues, but could and should be transposed to all keys. Sample melodic line for this realization below the changes. Enjoy!

BLUES HARMONIZATIONS

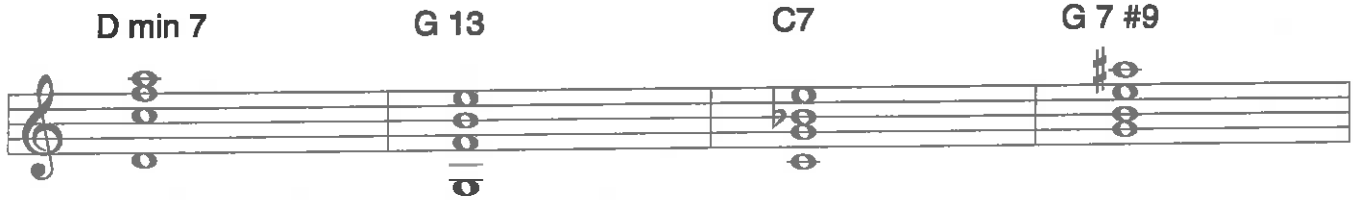
1) This first realization is basically comprised of block chords and is pretty generic. Execute these shapes following the metrical pattern as outlined on the staff below. Follow this format for the remainder of this section.



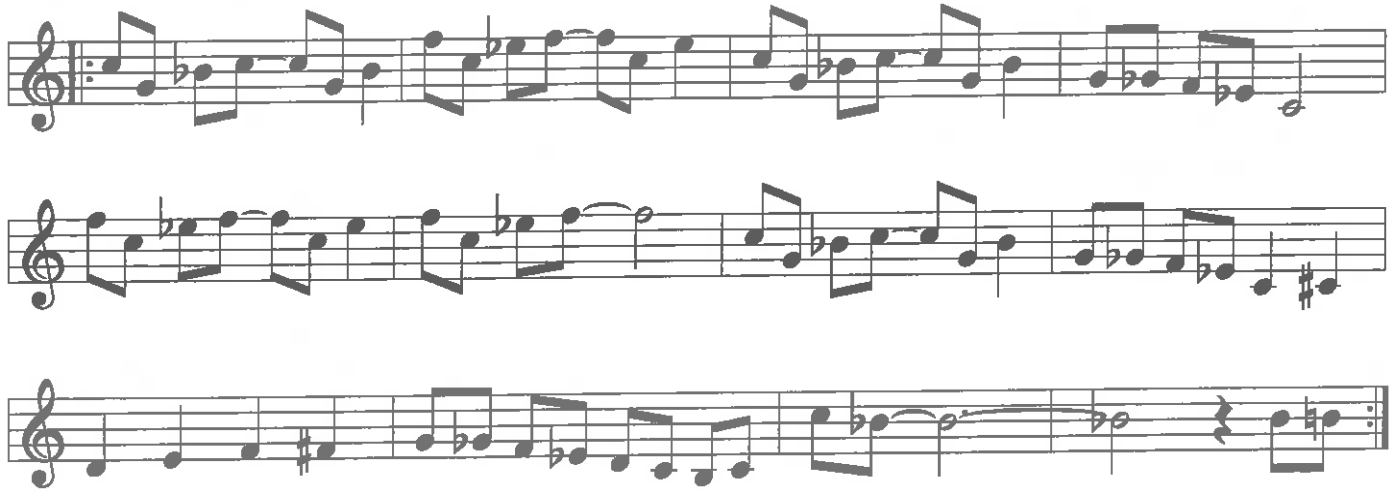
Change shapes, moving to the Four chord for two measures. Move back to One.



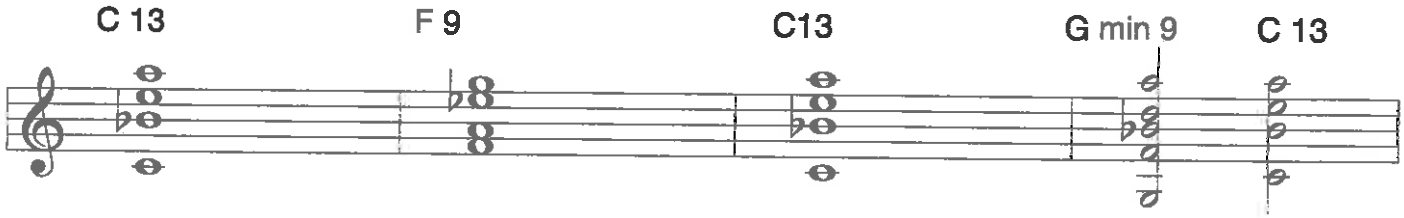
Two / Five moving to One, then the turnaround, returning to the "top" for a new cycle.



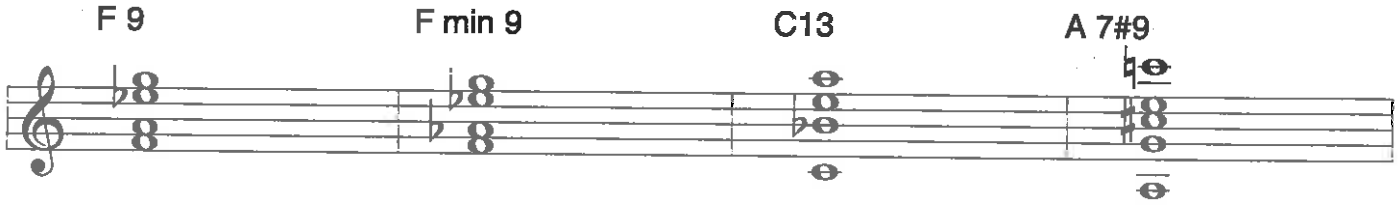
The Five chord, "G" 7#9, resolves to the One at the top of the new cycle. One time through this entire twelve bar cycle constitutes *one whole chorus*. It is essential to develop the ability to hear and recognize this form, especially the "top", or beginning of the new chorus. Once this ability is attained, everything seems to make a whole lot more sense. Melodic realization for ex. #1.



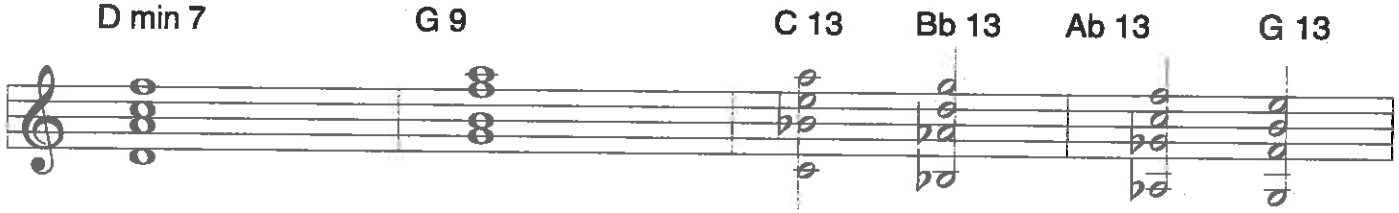
2) This realization uses chord shapes that are potentially essential Jazz voicings. Revoice as you see fit. The dominant ninth shape is the essential "funk" chord. All of these shapes are in root position and movable forms. Once comfortably under your fingers, use the half step lead in to "jazz up" your lines.



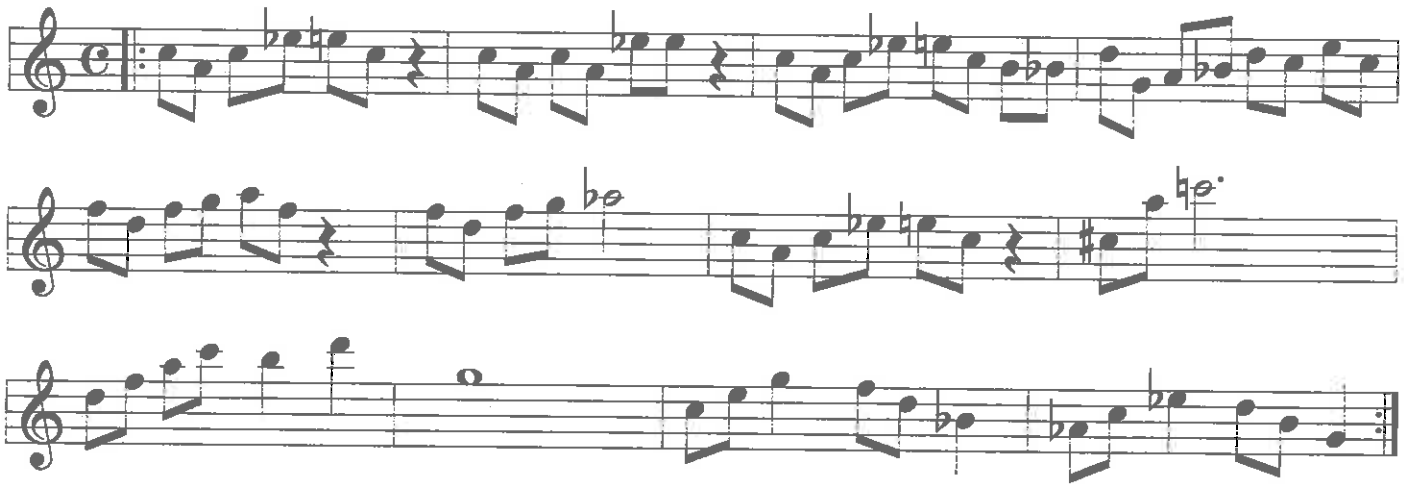
Moving back to Four in the fifth bar. Lowering the third of the "F" 9 then moving back to One is very common. Our Six chord, "A" 7#9, functions as Five of Two, which starts the turnaround.



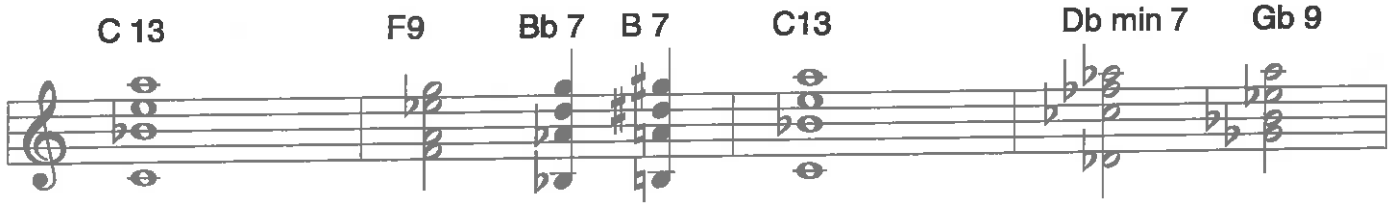
The following Two / Five grouping is very common in all styles of Jazz and Blues. It's easy execution enables fast moving chord passages that can swing very hard. The whole tone line down from One takes us into Five by half step, ending this twelve bar cycle and returning us to the top. Try using a constant structure downward and give the bass line a "walking" (gl) feel.



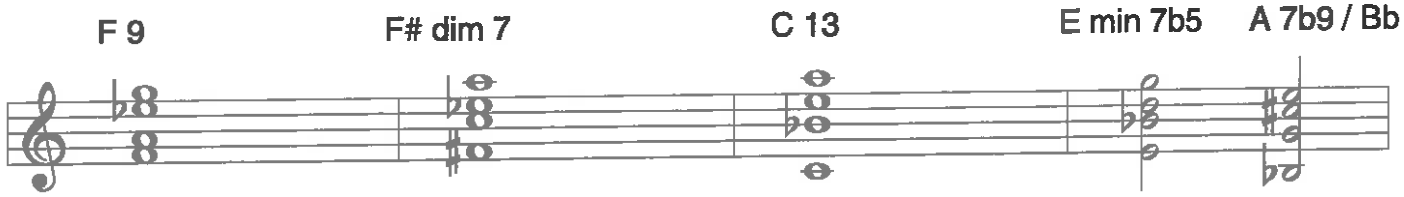
Playing a steady four beat rhythm, a la Freddie Green (with Count Basie), provides a solid basis for evolving more complex rhythmic lines. Melodic realization for example #2.



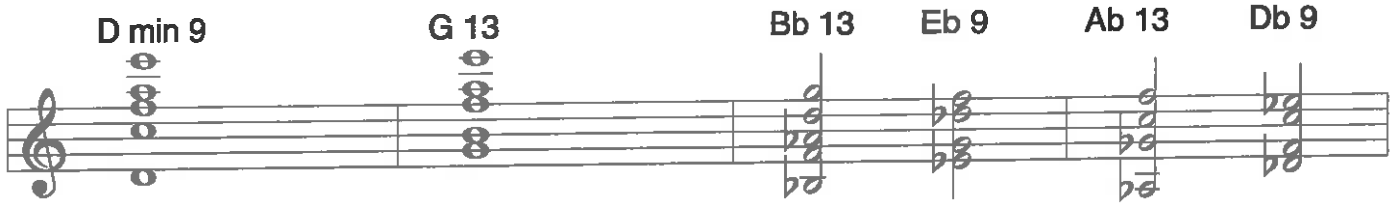
3) Start with a half step lead in into the One chord to begin this "Bop" orientated realization of a twelve bar blues. Try moving into Four from a half step above. Walk the "Bb" 7 chord chromatically back up to One. The fourth bar is a Two / Five into Four from a half step above.



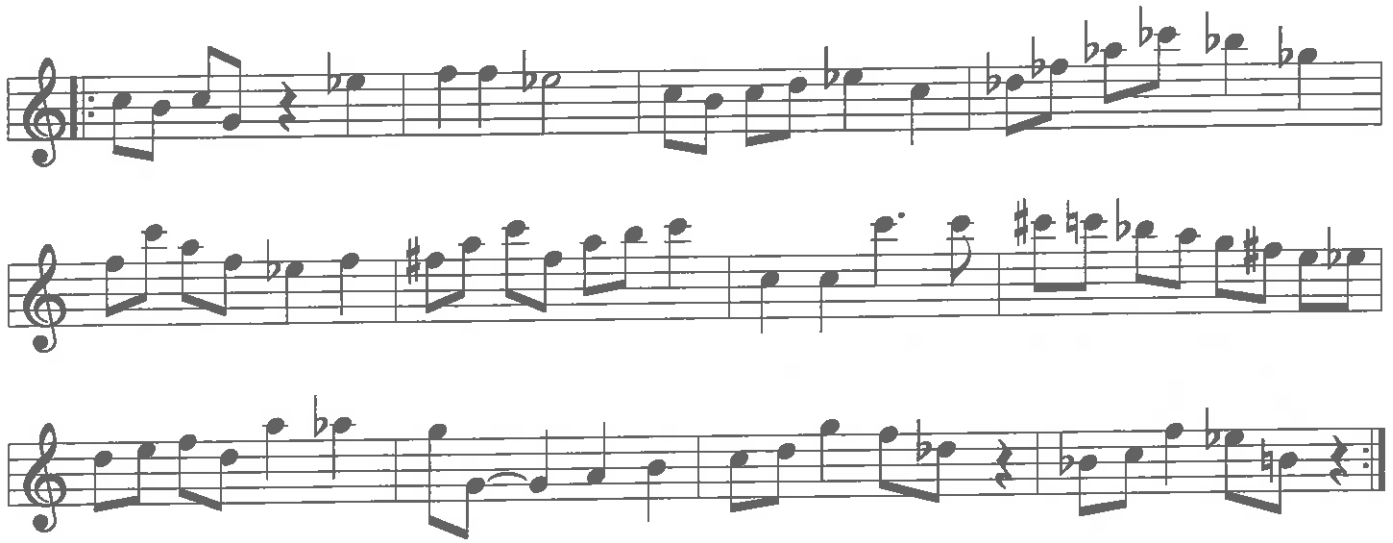
The sharp Four diminished chord used in this passage is very common. The half diminished Two to dominant seventh flat nine used at this point in the cycle is common with "Boppers."



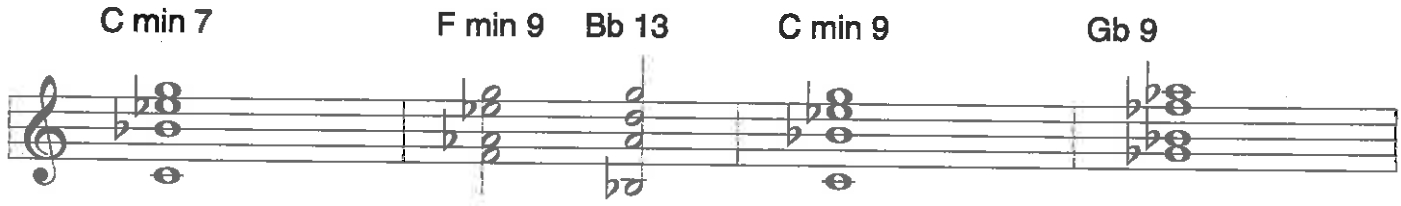
This Two minor nine / Five chord group is very common and movable. This turnaround simply cycles perfect fourths from flat seven of the original tonic, the last chord to which could resolve by half step etc.



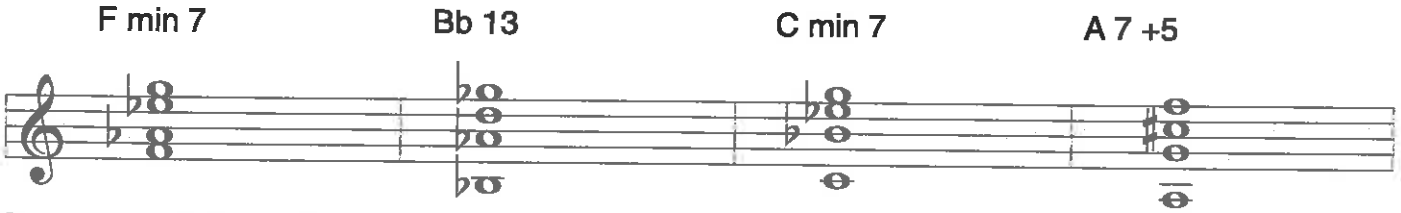
Once learned, gradually increase the tempo of this realization. Some of the greatest names in Jazz history love to play as fast as possible, Charlie Parker comes to mind. The Omni Book, which contains "Birds" transcribed improvisations is fascinating. A special thank you to Jamie Aebersold for transcribing and publishing this invaluable work. Melodic realization for example #3.



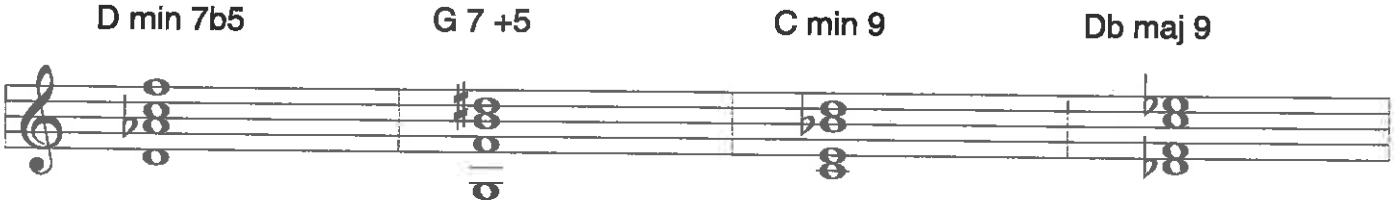
4) Here is a minor blues that provides some essential colors and shapes.



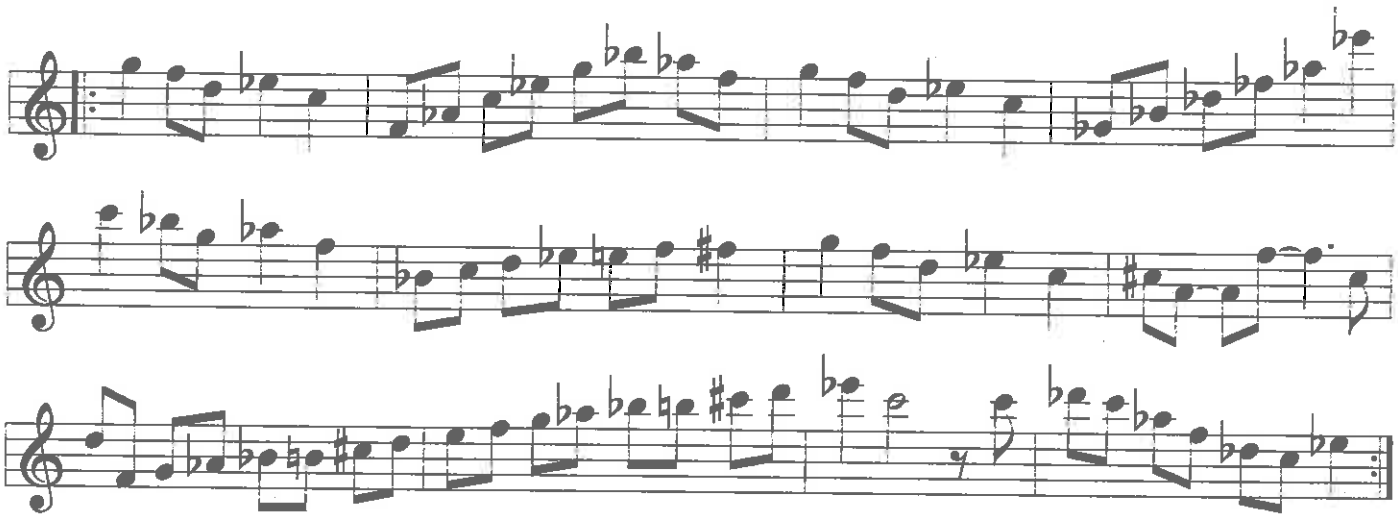
Try walking a bass line from the tonic down to Six in the following measures.



Common half diminished Two to augmented Five shapes resolving to One minor nine. The flat Two major nine is a refreshing surprise to complete this turnaround and cycle.



Melodic realization of example #4.



5) The substitution chart for "Twelve Bar Blues" harmony on the following page starts with simple harmonic realizations and progress to more complex "fleshed out" harmonic possibilities. Mix and match, choose which ones sound good to you. The examples are given in the key of "C" blues, but could and should be transposed to all keys. Enjoy! Note, the time signature used here is 4/4, vertical lines represent bar lines, hash marks between vertical lines represent individual musical beats. Examples ten (10) and twelve (12) address "Blues" in a minor key. The same "Blues" scale basically applies to minor keys as well as major keys. Explore "Blues" tunes written in minor keys, i.e. "Somebody Loan Me a Dime", "Work Song" etc. also the sixteen (16) bar extended form a la "Sugar" by Stanley Turentine. Look to the list of tunes on in chapter 5, section C for additional titles.

BLUES PROGRESSIONS - 12 bar form:

	1	2	3	4	5	6	7	8	9	10	11	12
	/ / / /	/ / / /	/ / / /	/ / / /	/ / / /	/ / / /	/ / / /	/ / / /	/ / / /	/ / / /	/ / / /	/ / / /
1	C 7	%	%	%	F 7	%	C 7	%	G 7	F 7	C 7	%
2)	C 7	F 7	C 7	%	F 7	%	C 7	%	D-7	G 7	C 7	G 7
3)	C 7	F 7	C 7	G-7 C 7	F 7	F# dim7	C 7 B 7	Bb 7 A 7	D-7	G 7	C 7	G 7
4)	C 7	F 7	C 7	G-7 C 7	F 7	F-7	E-7	A 7	D-7	G 7	C 7 A 7	D-7 G7
5)	C 7	F 7	C 7	C#-7 F#7	F 7	F# dim7	C 7	A 7	D-7	G 7	C 7 Eb 7	D 7 Db7
6)	C 7	F 7	C 7	C 7b9	F 7	F-7 Bb7	E-7 A7	Eb-7 Ab7	D-7	G 7	E-7 A 7	D-7 G 7
7)	C 7	B-7b5 E7	A-7 D7	G-7 C7	F 7	F-7	E-7 A7	Eb-7 Ab7	D-7	G 7	C 7 A7+	D-7 G 7
8)	C 7	C# 7	C 7	C 7b9	F 7	F# dim7	C 7	A 7	D-7	G 7 Bb7	Eb7 Ab7	Db7
9)	C7	D-7	E-7	G-7 C7	F 7	F# dim7	C 7	A7#9	D-7	G 7	C7 Bb7	C7 Bb7
10)	C-7	F-7	C-7	%	F-7	%	C-7	A7#9	D-7b5	G7b9	C-7	G 7+5
11)	C-7	F-7	C-7	C#-7 F#7	F-9	Bb 7	C-7	A7#9	D-7b5	Ab7 G7	C-7	G7#9
12)	C-7	F-7	C-7	%	F-7	Bb 7	C-7	A7b9	D-7b5	G7+5	Dbmaj 7	%

RHYTHM

Numerous texts have been entirely devoted to the study of Rhythm, some of which may be available in your local library. For our purposes, we'll explore two rhythmic groupings, but first some introductory remarks regarding potential rhythmic resources. The closure for this discussion includes the evolution of ideas into potential performance applications.

During this century, America's only indigenous musical art form flourished into a global musical force known as "Jazz." While the harmonic and melodic components have evolved from tonal to atonal, i.e. "inside" to "outside", the rhythmic vehicles used to carry these colors has essentially remained consistent. Although the variations are endless, our listening tells us that some type of eighth note figure is layered over a quarter note figure, i.e. "walking line" (gl) in the bass. An ancient form, presently termed polyphony (gl), the eighth note figure has carried the bulk of the load improvisationally. Why? Each artist must answer this question individually. This author's ideas revolve around the concept that an eighth note figure over a quarter note bass line allows for the simplest mathematical ratio, that still contains some semblance of variety, that also can "swing" pretty hard! That being two (2) to one (1). From that basis, complexity is valued numerically by increasing the first number in our ratio creating, in chart form:

SIMPLE			TO		COMPLEX		
1:1	2:1	3:1	4:1	5:1	6:1	7:1	etc.

Thus, as one's improvised musical lines become more rhythmically complex, the rhythmic ratios will gradually increase. Obviously, rhythmic ratios that are evenly divisible by the time signature (gl) being employed, are more readily executed. It's when a player begins to superimpose "odd" numerical rhythmic ratios in relation to the time signature being employed that the rhythmic "challenge" and "fun factor" increases. The above idea is also true with the 3/4, 6/8, 5/4 ect. time signatures, explore. Start to implement the above ratios by tapping your foot to emulate the "beat", while superimposing the various possibilities by clapping your hands. With this in mind, the beginning creative musical artist has a elementary perspective and understanding of the increasing complexities of the rhythmic world. Research other publications that address rhythmic concepts as their sole topic. Your energies in this direction will be greatly rewarded.

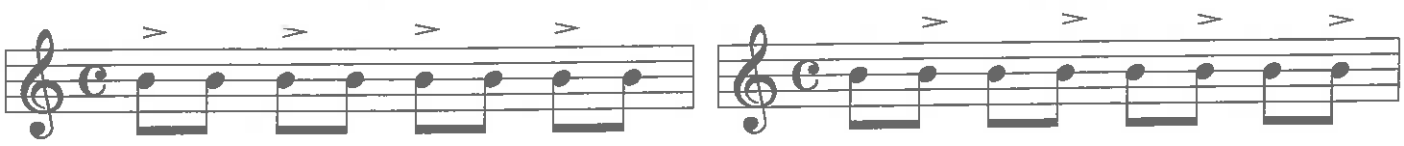
In regard to a more practical application, the author's approach views musical improvisation with regards to rhythm as a listening activity. With the historical precedence of improvised music being an oral and aural tradition, the easiest and fastest way to get your improvised musical ideas to "swing" is to internalize the music to be performed or created through listening. Thus, sing your lines! Listen to your favorite players and sing their lines, internalize the rhythmic "magic" that makes their improvisations "swing" so beautifully. Sing along with your favorite recordings, feeling the "groove" (gl), and develop a sense of how the improvised line lays on top of it. Once you can "swing" vocally, it's just a matter of "wood shedding" to transfer your internalized rhythmic ideas to your chosen instrument. Once under your fingers, writing out these musical ideas will greatly facilitate learning the written musical language.

Artists in any discipline have studied the "greats" that have preceded them. This concept applies to any realistic endeavor. Music, painting, sculpture, architecture, mathematics, medicine, design, history. Is music the singular art that exists only in the aural realm? By analyzing the component parts of "great" works, students become acquainted with the "tools" used to develop and produce great art. Improvised music is received aurally and traditionally has been passed along in that manner. Modern technology has provided us with an inexhaustible supply of "aural art." Use it, internalize it, and your creative musical abilities will grow.

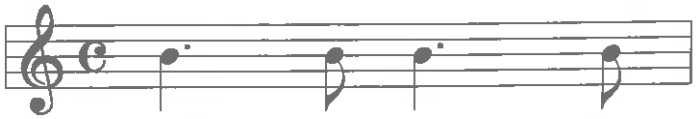
"Eighth notes" become part of a players "musical signature", which is "written out" in improvised musical dialogue. As a creative artist, you will develop your own. The two part nature of the eighth note rhythmic value allows for three basic articulations.

1) "Even eighths" are basically two equal eighth notes in regard to length and articulation. *Strive for evenness in your eighth notes when starting out.* It is easier to add rather than delete various ingrained articulations. Even eighths "swing" just fine, in the middle of the groove, if they're "pulled" back or retarded just a hair or perhaps pushed ahead just a little bit. The "even" styling approach to the eighth note is used extensively in Latin flavored music.

a) Articulated even eighths, where either the first or second eighth note is emphasized:

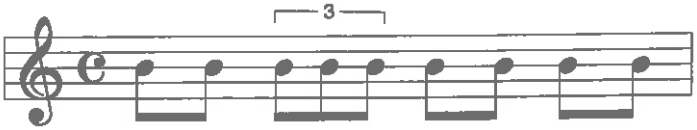


2) "Swing" eighth notes are based on a re-apportionment of time easily notated as shown below. This figure provides a sort of "loping" quality that "swings" hard under the right circumstances.

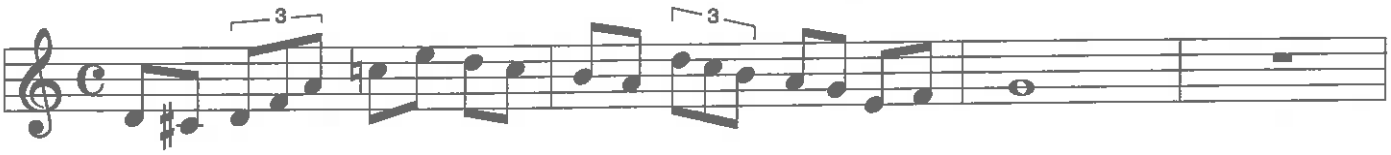


Other approaches to eighth note interpretation are as varied as the players who use them. The key is to listen and internalize by "vocally" transcribing your favorite players. Suffice to say, that when an "artist" can "swing" vocally, that internalized ability will gradually manifest itself in their actual performance on their chosen instrument.

3) Another eighth note rhythmic figure essential to your rhythm repertoire is a variation of the two (2) note eighth note grouping into a grouping of three eighth notes per beat, more commonly termed the "eighth note triplet." Written out in standard rhythmic notation, one possible use of the eighth note triplet could be:



The following melodic figure, which combines the arpeggiated two chord figure with the eighth note triplet followed by eighth notes, is potentially "classic" jazz rhythmic phrase or pattern, when used over the standard Two / Five / One chord progression. Example in "C" major.

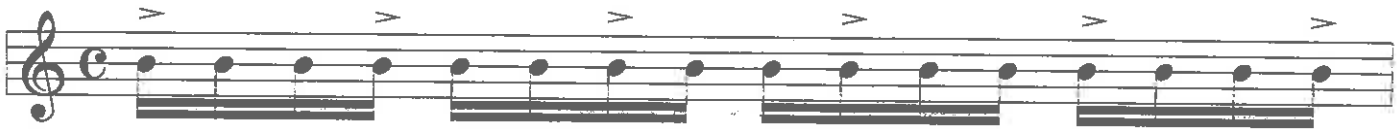


The second grouping is based on "doubling up" our eighth note figure to **"sixteenth notes"** as applied to one beat of musical time. This figure is common and is applicable in many musical situations. Also by working with a group of four (4) rhythmic units, our articulation possibilities are expanded.

1) Thus we can articulate any of the four sixteenth notes in each group. Example.

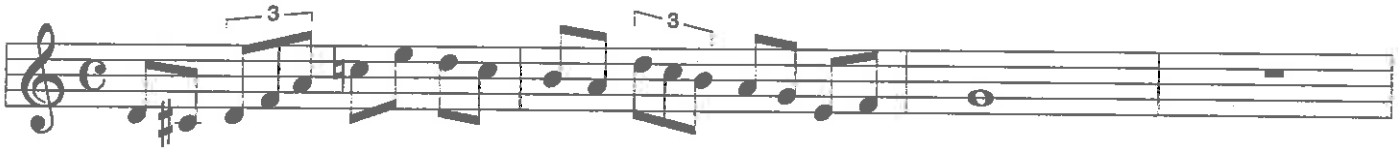
Each of these articulations provide a different flavor. The sixteenth note rhythmic prolation has become an essential part of the language of contemporary composers, especially in "Latin" flavored compositions. Again, listening to your favorite artists is the key to unlocking the musical potential contained within.

1a) One "hip" prolation of the sixteenth note grouping is included here to help the student generate rhythmic ideas based on the sixteenth note subdivision. Simply group sixteenth notes in sets of three and articulate or accent the first note in each set of three. Thus:



In practice, sing or clap the rhythm figure evenly and gradually accent the first note of each group of three. Lot's of wonderful rhythmic ideas can be generated from this foundation. It's up to you!

So much emphasis has been placed on "singing" your lines that some suggestions for vocalizing are perhaps in order. Although these syllables are kind of funny at first, each artist gradually develops their own syllables that personify both color and intensity in their improvised lines. This evolves gradually into "scat" singing. These are just suggestions and provide a possible starting point, whatever works for you is best.



do ba dwe va da do be va da dwe ba swe ba ba do be ze bo da...

PERFORMANCE IDEAS AND TECHNIQUES

1) Rhythm is as much a natural ability as well an acquired one. Tremendous powers lie within the rhythmic world. A "good sense of rhythm" generally implies an individual's ability to "relax" and listen, absorb what's happening around them and respond in a musically compatible way. A "good sense of time" implies the players ability to project ahead to musical reference points i.e. cadences, turnarounds, and new sections common to all the players in the group and avoid "rushing" (gl) or "dragging" (gl) while reaching that point.

2) There is a physical power in the rhythmic world created by "locking in" with the other players in the group. For myself in the Jazz World, this simply means to actively and continually listen to the drummers "ride" cymbal and for most playing exactly what they are playing rhythmically. Once "locked in", you can feel this power, while the possible rhythmic directions expand. Without "locking in," nothing really seems to "work."

Whatever the groove or the player(s) involved, this active listening by myself and all players allows for the "communion of voices", so essential to good improvised music. There will be the gig where *your* "sense of time" is perhaps the most "advanced" among the players. Be diplomatic, but also lead with authority when you have the "ball", drive your rhythmic ideas home, "testifying" as some do say. The powers of the rhythmic world lie within all of us, by simply listening, we can combine and share our rhythmic passions with others, check it out. Overall, my rhythmic concept revolves around an internalized ability to "sing" rhythmically what I want to say musically. This was achieved through vocally transcribing my favorite players, using these internalized musical ideas as the foundation for generating my own lines, then finding these lines on my instrument. Internalize sounds and rhythms, and begin to develop your own improvisational "voice."

3) Another aspect of "rhythm" in improvised music, the "art" of "comping". From a purely business perspective, when starting out, there's more work backing soloists than as a soloist, most of whom were "sidemen" (gl) at some point in their careers. The ability to provide musical support behind a soloist is paramount when working in an improvisationally musical setting. This area of discussion is mainly directed towards chordal accompaniment, although the following information may be of some value to soloists when directing the rhythm section they're working with. Things to consider:
3a) The concept for comping is to provide harmonic support for what the soloist is doing, provide musical ideas when necessary and help drive towards the climax of the solo. Depending on the instrumentation, start out with chords which contain the root, third, fifth and seventh to better illuminate chord quality, i.e. One, Two or Five chord type.
3b) When comping, begin to understand and think in terms of "call and response." Originally part of religious ceremonies, this "interplay / dialogue" between participants is as "old as the hills" and can contain tremendous power. Check out the Count Basie Orchestra. When the "call and response" concept is integrated in an improvisational musical setting, players are truly communicating with one another. When one listens to great improvised music, this is exactly what's happening. It is a truly beautiful experience both as a listener or player.
3c) When "comping", always strive to get "underneath" the soloist in terms of volume. There's nothing more distractive to the soloist than not being able to hear themselves.
3d) **When first starting out, "comp" chord changes <u>on</u> the downbeats,** especially the first beat of the measure when a new chordal color is introduced. As your rhythmic scope expands so will you're "comping rhythms." After years of performance and listening, I still believe that quarter notes on the beat "swing" the hardest. Again check out Count Basie's big band recordings.
3e) Beginning guitarists should "chomp" (gl) chords with quarter note values in the traditional style of big band performance, i.e. Freddie Greene with Count Basie. This is achieved by striking the chord and sustaining the sound until the next beat, then relaxing the left hand, damping the strings when the same process is repeated. In fast moving changes, this can be quite a task!
This approach to comping strengthens a player's concept of "time" and tempo and naturally evolves into "comping", which allows more rhythmic freedom and interpretation.
4) When "walking" a bass line, strive to sustain each pitch for its full value. For bass players, this is termed, "full value quarter notes," and is essential in getting a rhythm section to swing.
5) "Lock in" a rhythm section by having the bass player as physically close to the drummer's high hat cymbals as possible. These are played traditionally on the second and fourth beats of a four beat measure. The guitar can "lock in" on the bass player's full value quarter notes. Traditionally, the drummer plays some type of quarter note figure on the ride cymbal, the timbre of which is easily heard by the soloist who subdivides these quarter notes into the eighth note value used as the basic rhythmic division of improvised lines. Listen to each other and "lock in."
6) An invaluable and inexhaustible resource for actual comping rhythms is found in big band music. Use it!

COMPOSITIONAL FORMS IN MUSIC

Entire texts are devoted to this area of musical study and suffice to say a "working" knowledge of basic forms is essential to the improvising musician. Letter names are used to denote musical sections and these letter names are generally determined by melodic content. Listed below are three of the most common forms found in contemporary music. When learning new "tunes", take time to figure out its form, this can greatly facilitate the learning process. From simple to complex:

1) **BINARY FORM** = A B

Usually each section is sixteen bars, with melodic material in section B similar to section A but with a different ending (usually including a musical climax).

2) **SONG FORM / SONATA** = A A B A

Usually each section is eight bars, generally the first "A" section is repeated with a different closing cadence (gl). The B section is usually comprised of contrasting melodic material in a different key center than the A section. Usually eight bars also, the B section sets up the return to the last A section. The last A section is generally eight bars and is a repetition of the original melodic material with a closing cadence (gl). This form is basically derived from the Sonata Allegro form of the "classical period" of the 18th and 19th centuries (explore). One neat feature of this form concerns memorizing songs written in this form. Once the A section is learned, one has basically learned 75% of the tune!

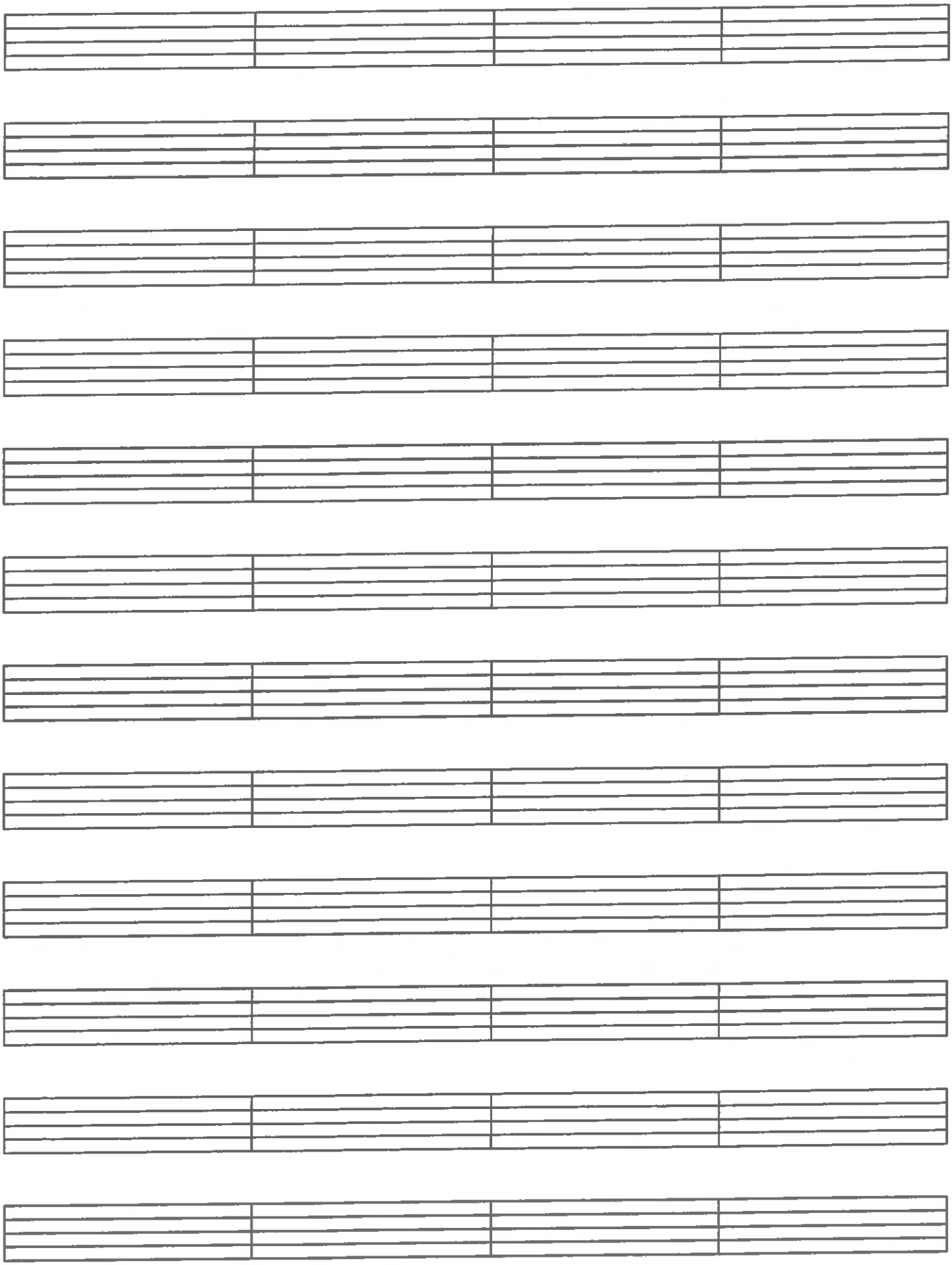
3) **BLUES FORM**

Generally a twelve (12) bar cycle, where call and response type melodic interplay are involved. The "Blues" form is simple and fun to play. Look for more ideas on the "Blues" form and playing in the preceding pages.

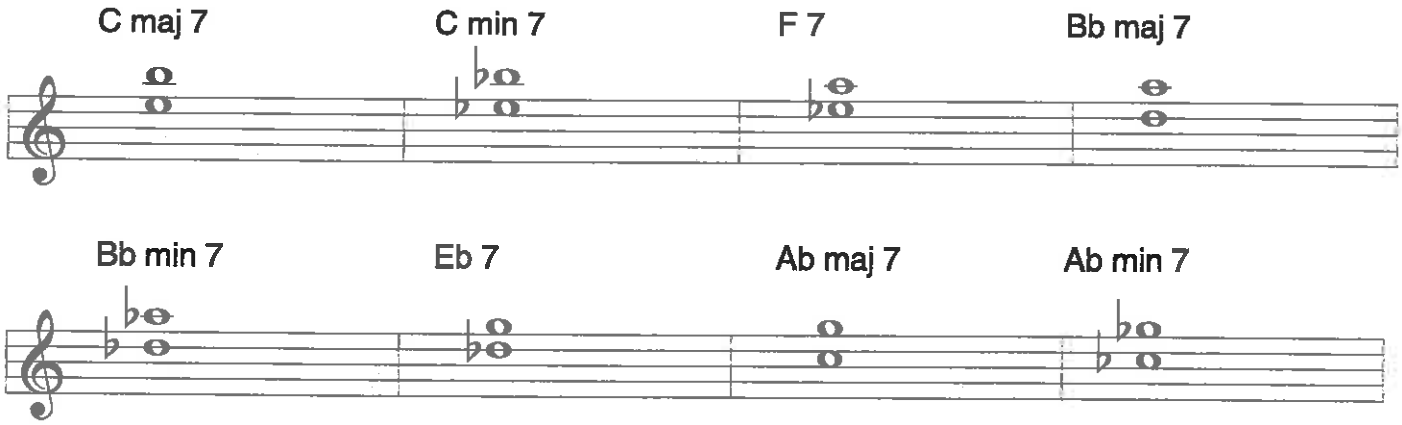
As new "tunes" are learned, analyze the melodic and harmonic structure, discerning (gl) the form of the composition Common practice with the above forms on the bandstand is to perhaps use an introduction, or "right on it" as players term, starting the piece to be performed with the chosen melody, i.e. the "theme." Longer melodies and forms are generally played down once, shorter melodies sometimes twice. Once the "head" (gl) has been "stated", players will improvise over the form and harmony of the chosen "tune", creating "variations." Upon completion of the soloing, the melody is restated and the piece ends, with or without a coda. Endless variations of the above format have been created and will continue to be created. LISTEN, LISTEN, LISTEN to your favorite players, this will initially be your best source for ideas. *It is up to us to continue this evolution, expand the existing forms and create new ones.* As always, explore and experiment.

For the improvising musician, the structural form of a composition contains not only the written melody and harmony but the composers emotional statement as well. The original melody and harmony create the "storyline" that essentially creates the musical "environment" of that particular piece. The improvising musician creates within this environment imposing their own emotional interpretation of this storyline. Advanced improvisers inject their emotional statements into the form of the piece of music their performing, "molding" their improvisations to the overall form of a particular tune, basically creating a new melody for the piece of music being performed without losing sight of the overall emotional environment created by the original writing. This concept is potentially the gist of what musical improvisation is all about. The idea of quoting (gl) melodic ideas from different tunes written in a similar format perhaps becomes a starting point for the beginning improviser.

Exercise: Expand one of the modal melodies you created in chapter 1 as the basis for a standard 32 bar A / A / B / A composition on the following page.



1) "Guide Tone" lines are basically created from the harmonic progression of a particular piece of music. These lines are helpful for beginning improvisers to stay "inside" of the written harmony. Generally created from the Third and Seventh of each chord of the progression, these lines can also include the root, Fifth or other chord tones or non-chord tones for that matter. The idea of using the Third and Seventh for the basis of these lines is that these two chord degrees determine chord "quality," i.e., major, minor or dominant seventh. This major or minor dichotomy could also be viewed as chord type, i.e., Two, Five or One. The overall idea is to gradually alter the line, usually by half step, as the chord progression evolves. Due to the exhaustive use of the Two / Five / One chord progression in many Jazz "standards," the guide tone lines are fun and easy to create in the "standards" setting. The following example illustrates this concept starting in "C" major. Analyze the pitches in relation to the chord changes written above each measure.



Other uses for guide tone lines could be as the basis of an orchestral arrangement, improvised "vamp" (gl) lines behind soloists, as the basis for melodic sequences etc. Needless to say, the roots of the chords of the harmonic progression also provide a guide tone line. For advanced players, this translates into getting a sense of the "big picture" in regards where a tune is going. Try executing just the roots of the harmonic progression under scrutiny and see if it doesn't help clarify the overall direction, form and statement of a particular composition.

2) The **"half step" lead-in** potentially will become an integral component of making your musical ideas "swing." The "target" chord is approached by either a half step below or above and generally exhibits the identical chord quality as the target chord. Experiment. *Usually* found on beat four, or the "and of four", the half step lead-in chord can put greater emphasis on the target chord than if the target chord were directly struck. For example, "G7" is our target chord. Two possible choices for "half step lead-in" include a half step above and a half step below our target chord. Thus:

half step lead in choices	**Ab7**		
		G7	target chord
	Gb7		

For C maj 7:

half step lead In choices	**Db maj 7**		
		C maj 7	target chord
	B maj 7		

3) The "flat nine" proof previously addressed in chapter three is rather weighty for illuminating possible melodic and harmonic choices. To review, the key to the initial "internalizing " is to take each of the three different diminished scales, i.e. "C", "Db", and "D", and resolve them to the four tonic keys they naturally gravitate towards, based on the upper diminished seventh chord component of the dominant seventh flat nine chord. Here is chart for the three diminished scales.

Diminished scale or chord :	V7b9	Resolution	
"C" diminished 7	D7b9 -	G	major or minor
	F7b9 -	Bb	major or minor
	Ab7b9	Db	major or minor
	B7b9 -	E	major or minor
"Db " diminished 7	Eb 7b9	Ab	major or minor
	F# 7b9	B	major or minor
	A 7 b9	D	major or minor
	C 7b9	F	major or minor
"D " dim 7 scale / chord	G 7b9	C	major or minor
	Bb 7b9	Eb	major or minor
	Db 7b9	Gb	major or minor
	E 7b9	A	major or minor

Those of you who are "truly" ambitious, initially will address the proper Two (ii-7) chord, move to the diminished scale and then resolve to One, major or minor, (I maj 7, i-7). With the addition of a metronome and the cycle of fifths, this becomes an excellent musical "workout".

4) Another essential use of the diminished seventh chord is as a passing chord between One (I maj 7) and Two (ii-7), commonly known as the **sharp one diminished (#1 dim 7).** Its use is very cool and very common among more advanced players. "Shed" I maj 7 to #1 dim 7 to ii-7 to V7. In "C" major, C maj 7 to C # dim 7 to D-7 to G 7 etc. Work this concept out in all twelve keys.

5) Another common usage of the fully diminished chord and scale is on the **sharp forth scale degree (#4 dim 7)** moving either to the Five chord or tonic chord. See "Blues" substitution chart.

6) The half diminished chord to the dominant seventh flat nine , which contains the fully diminished seventh chord in it's upper structure, (see chapter 3), warrants special mention. The half diminished is a generic Two (ii-7) with a flatted fifth; the flat nine is an extension of the dominant seventh. This chord progression is a variation of the basic Two-Five, with the b5 and b9 being the same pitch, regardless of the tonic key. In "C" major:

Chord symbol	D min 7 b5	G7b9	C maj 7
Spelt	D,F,Ab,C	G,B,D,F,Ab	C,E,G,B

Scale choices: i.e. groups of notes to create melodic ideas from.
6a) The Lydian scale built on the flat five (b5) of the Two chord, i.e. "Ab" Lydian.
6b) The major scale that "Ab" Lydian is derived from i.e. "Eb" major.
6c) The diminished scale from the root of the Two half diminished chord, which also could work over the "G"7b9, i.e. a "D" diminished scale. The minor seven flat five too dominant seventh flat nine is also associated with minor tonics, i.e., "C" minor, it's commonly used in both musical situations. The use of the relative major, i.e., the "Eb" major scale, to provide a group of pitches to create a melodic idea from in the above case is a possible choice when resolving to "C" minor.

7) Explore using the **Harmonic minor scale** from b2, 4, 5, b7, of the V7b9 dominant chord and explore its use over the Two minor seven flat five chord. This group of pitches also contains the **Lydian flat 7** scale, which is fully discussed in the Dominant harmony chapter 3. Example for "C" harmonic minor / "F" Lydian b7.

8) Advanced diminished concepts. As previously discussed in chapters 1 and 3, our fully diminished seventh scale, created in the upper structure of the dominant seventh flat nine chord is comprised of two fully diminished seventh arpeggios. Thus, in "C" major using the G7b9 dominant chord we create our fully diminished scale;

B C# (Db) D E F G Ab Bb B comprised of

B D F Ab and Db E G Bb

the two fully diminished seventh arpeggios. "Musical proof" number two in chapter 3 illuminates the possible resolutions of the fully diminished scale into four different keys based on the fully diminished seventh arpeggio found in the upper structure of four dominant seventh flat nine chords, located a minor third apart. These keys are "C", "Eb", "Gb", and "A" major or minor. What we did was to extract the pitches of the two arpeggios from the scale created from the whole step, half step scale formula and using this scale to create tension over dominant harmony, then "soften" our diminished sounds into other "colors", and apply to the same dominant seventh flat nine resolutions. Here we'll examine the other fully diminished seventh arpeggio created by filling in the notes using the same whole step, half step formula. Thus, in the key of "C" major, our dominant seventh flat nine chord is spelt:

G	B	D	F	Ab
1	3	5	b7	b9

The fully diminished seventh chord is built starting on the third of the V 7 b9, thus:

B D F Ab. Applying the whole tone, half tone formula we arrive at the following group of pitches.

B C# D E F G Ab Bb B.

This is the diminished scale that is used as the basis to derive the choices in "musical proof #2" in chapter 3. Eliminating the "B" fully diminished seventh arpeggio from the scale above we arrive at the following group of pitches.

C# E G Bb (A#).

Placing this group under the same scrutiny as our previous one, the following concepts and possibilities emerge. This fully diminished seventh arpeggio is found in the upper structure of the four following dominant seventh flat nine chords.

A7b9 C7b9 Eb7b9 F#7b9.

To what four tonics do these dominant chords resolve too? Thinking Five to One, the four keys are "D", "F", "Ab" and "B" major or minor.

Comparing these four keys to the original diminished seventh's group resolutions, we arrive at the following two groups of four keys, in chart form;

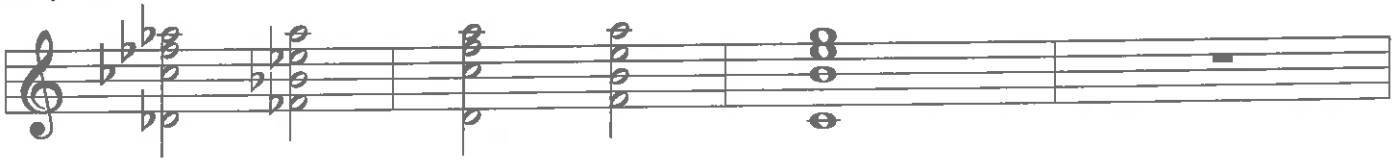
C major / minor	Eb major / minor	Gb major / minor	A major / minor
B major / minor	D major / minor	F major / minor	Ab major / minor

What does this all mean anyway! Well, basically our two groups of four keys are a half step apart. The overall benefit is to "theoretically" be able to resolve each of the three fully diminished scales or chords, i.e., "C", "Db", and "D", into eight (8) possible keys. It is the "half step" resolutions which emerge from the above concepts that are so very cool. John Coltrane's "Moments Notice" is the "vehicle" of choice musically. Those of you that are familiar with the chord structure of "Moments Notice" will say "hey, wait a minute Joe", the basic Two-Five "cyclings" in that tune is to move up a half step not down, and how right you are! Use the above format to "crunch" down the situation when the half tone, whole tone diminished configuration is used to generate the two diminished arpeggios that formed the basis for our comparison. If the whole tone / half tone created two resolving groups a half step below each other, surely the reverse of this musical situation must create two resolving groups a half step above each other. Check it out if your curious, as Dr. Miller used to say, just more "grist for the mill."

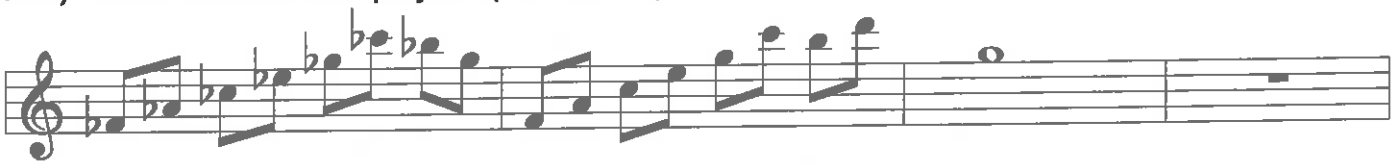
"Modern" Turnarounds:

The following chordal examples (h) are basically generated from the concepts above. A brief description and example for "single line" ideas (m), which are generated from the harmonic possibilities, follows each harmonic entry. From left to right, the following Two-/ Five / One turnarounds in "C" major emerge from the above theoretical concepts.

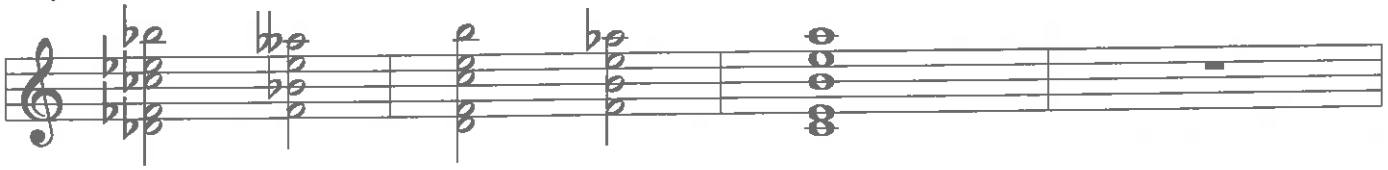
8ah) "Db" min 7 "Gb" 7 alt. "D" min 7 "G" 7 alt "C" maj 7



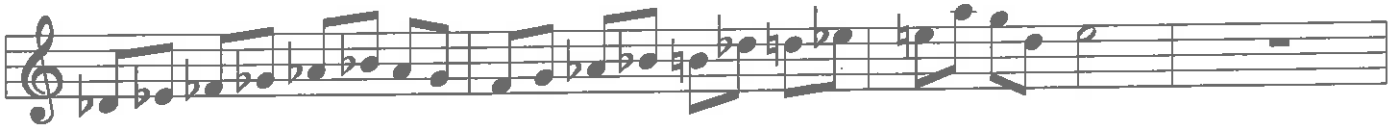
8am) Same melodic idea played up a half step.



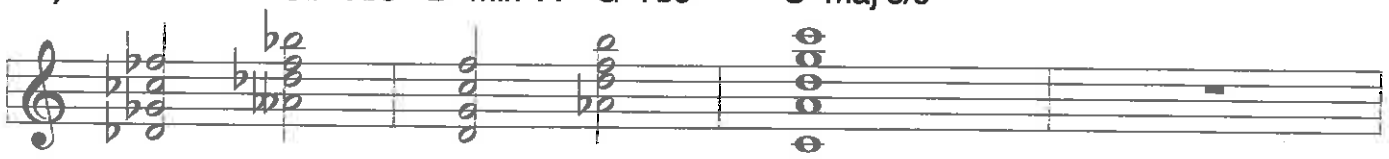
8bh) "Db" min 9/13 "Gb" 7 alt. "D" min 9/13 "G" 7 alt. "C" maj 9



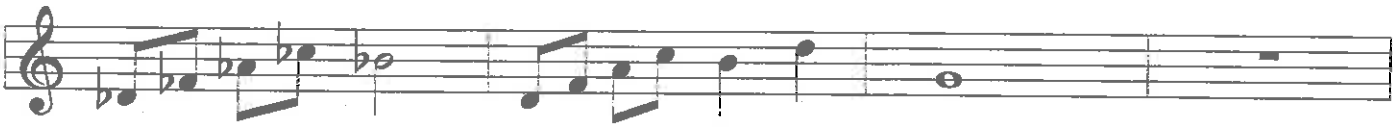
8bm) Scalar idea followed by diminished color.



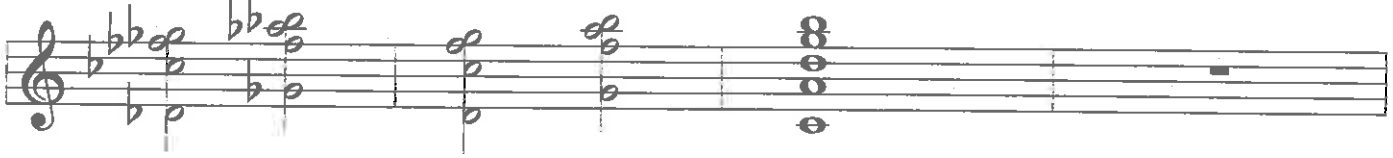
8ch) "Db" min 11 "Gb" 7b9 "D" min 11 "G" 7b9 "C" maj 6/9



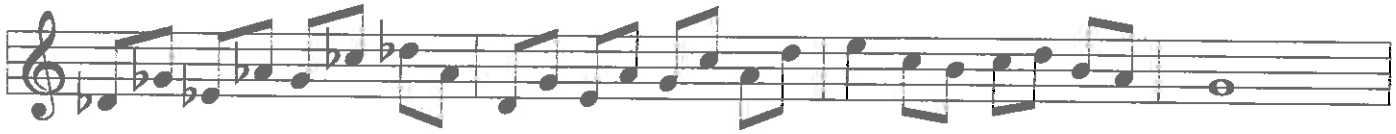
8cm) Moving first idea up a half step, very common.



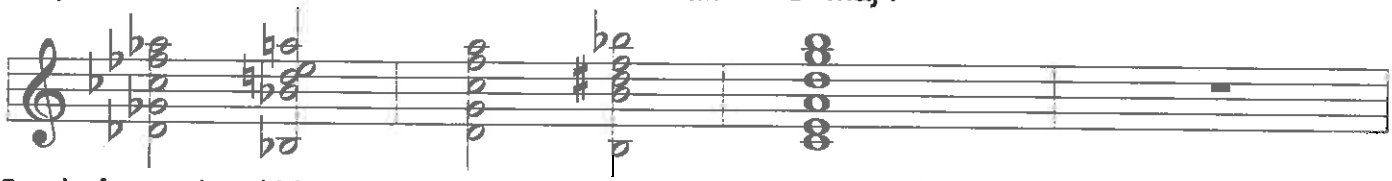
8dh) "Db" min 11 "Gb" 9 "D" min 11 "G" 9 "C" maj 7 6/9



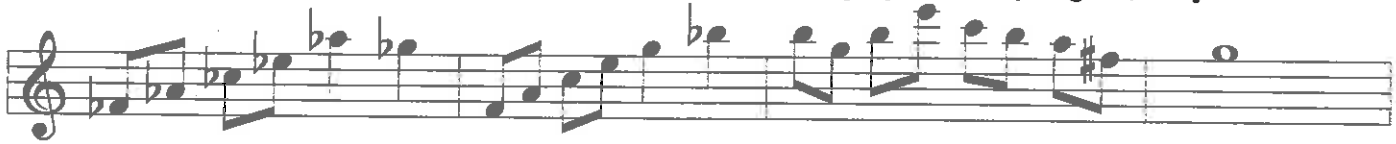
8dm) Using fourths, moving up a half step, then resolving.



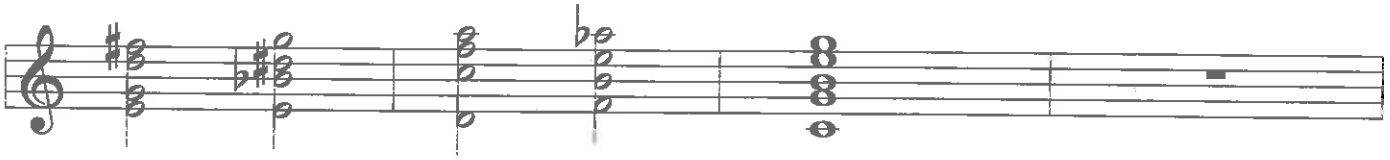
8eh) "Db" min 11 "Gb" 7 alt. "D" min 11 "G" 7 alt. "C" maj 7



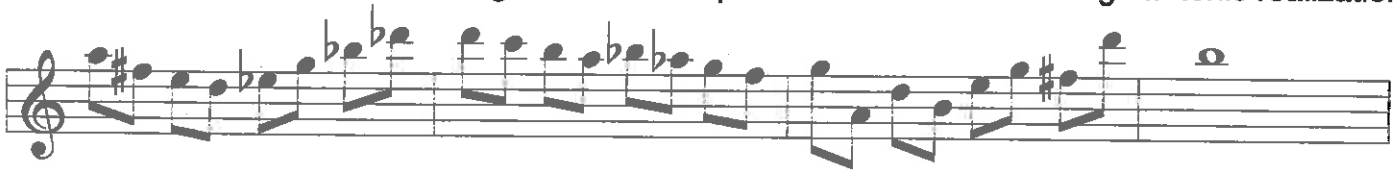
8em) Arpeggiated idea moved up a half step then resolving by half step, again, very common.



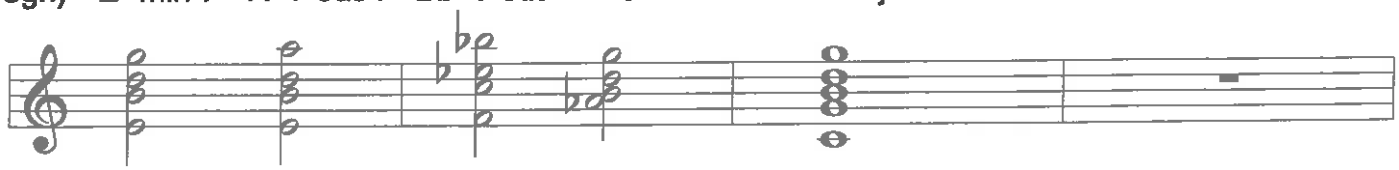
8fh) "E" min 9 "A" 7 alt. "D" min 7 "G" 7 alt. "C" maj 7 6/9



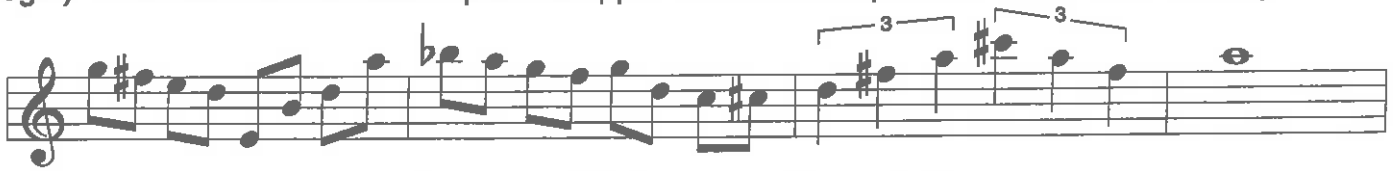
8fm) Half step shifts then resolving. I like the "leap" down and somewhat angular tonic realization.



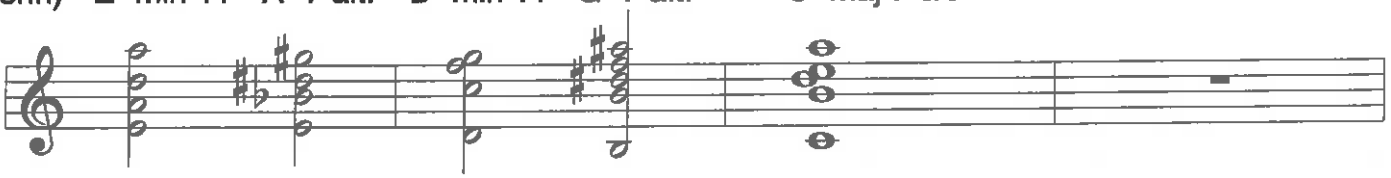
8gh) "E" min 7 "A" 7 sus4 "Bb" 7 sus 4 "G" 7 alt. "C" maj 9



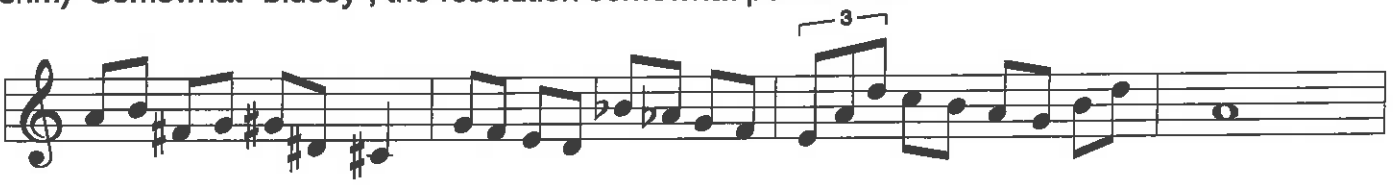
8gm) This resolution is based upon the upper structure components of the tonic sonority.



8hh) "E" min 11 "A" 7 alt. "D" min 11 "G" 7 alt. "C" maj 7 6/9



8hm) Somewhat "bluesy", the resolution somewhat pentatonic.

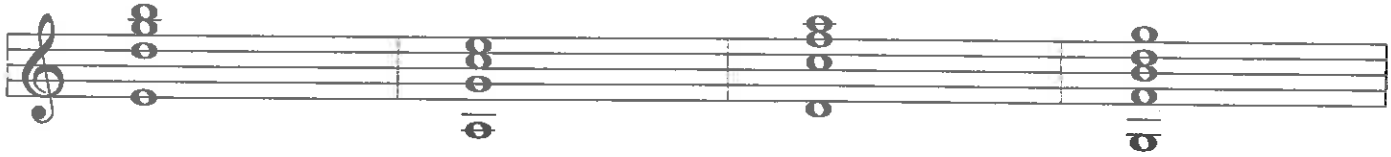


9) If we "doubled" up our common chord progression of Two (ii-7) to dominant seventh (V7) we create the chord progression referred to as **Three (iii-7), Six (VI7), Two (ii-7), and Five (V7).** In "C" major, "E"-7 to "A" 7 to "D"-7 to "G" 7. This could be viewed as two (2) Two / Five sequences, i.e., "E"-7 "A"7 is Two (ii-7) Five (V7) in "D" major, "D"-7 "G" 7 is Two-Five in "C" major. This is an extremely common harmonic situation found in many great "tunes." This grouping also works well as an "intro" to many musical situations. Here's a few possibilities and variations. Experiment, mix and match, create your own. In the last four choices, implied direction of the melodic line and "strength of the player" (gl) are determining factors for success. For our purposes here, "C" major is our tonal destination. Transposition to our eleven (11) other major keys is also recommended. This concept of transposing various musical ideas to all twelve keys is important for many reasons. Most critical of these reasons I believe is that by transposing a musical idea to all twelve keys, it becomes readily available in "fragmentary" musical situations. My meaning here is that although being able to play "everything" in every key is the ultimate goal, while reaching this goal, musical situations will arise where "fragments" of various keys will provide wonderfully refreshing musical color in common occurring musical situations. What we are doing is to "borrow" musical "fragments" from other keys to "disguise" and enhance these commonly occurring musical situations. Generally, the source and application of this "borrowing" is from musical keys different from the one we are actually playing in, i.e., using "Db" 9, which is diatonic to "Gb" major to substitute for "G" 7 when heading towards "C" major. Thus we "borrow" a "fragment" from the key of "Gb." Thus, eventually develop the discipline to "grind" your favorite licks, substitutions whatever through all twelve keys, this concept alone will generate a large musical vocabulary to substitute from. Also, if you ever work with vocalists this "all twelve key ability" is essential. Just kidding!

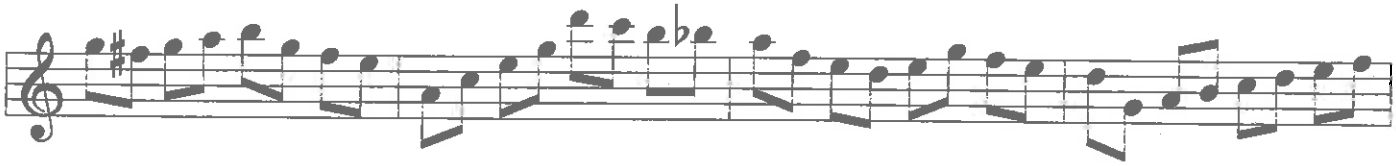
	Three	Six	Two	Five
a)	Emin 7	Amin 7	Dmin 7	G7
b)	Emin 9	A7/13	Dmin 9	G7/13
c)	Emin 7	Eb9	Dmin 7	Db9
d)	Emin 7b5	A7b9	Dmin 7b5	G7b9
e)	Emin 9	Ebmin 9	Dmin 9	G7/13
f)	Emin 9	A7/13	Abmin 7	Db9
g)	Emin 9	A7b9	Fmin 9	Bb7b9
h)	Gmin 7	C7b9	Fmin 7	Bb7b9
i)	Bbmin 9	Eb9/13	Abmin 9	Db9/13
j)	Bb7/13	Eb7#9	Ab7/13	Db7#9
k)	Cmaj7	Ebmaj7	Abmaj7	Dbmaj7
l)	Dbmin 9	Gb7/13	Dmin 9	G7/13

Note: please realize that the diminished chords created in the upper structure part of dominant seventh flat nine (V7b9), when utilized in the three-six-two-five chord progression perfectly invert either *a whole step below or a half step up from each other. Explore.* The following chordal realizations (h) and melodic lines (m) correspond letterwise to the above listing. These groupings of chords and corresponding melody do not resolve in each of the following examples, supply the resolution as you see fit. One resolution possibility is by half step to a chord tone of the overall tonic key of these examples, which is "C" major or minor. Like the majority of the musical examples in this text, harmonic possibilities and their corresponding melodic ideas are voiced and written in a "academic" nature, *you* the artist has the eventual responsibility to bring the artistic theoretical components contained within the musical examples to "life." Choose which components suit your needs and fancy, begin to catalogue your ideas and begin to create and evolve your own "artistic signature."

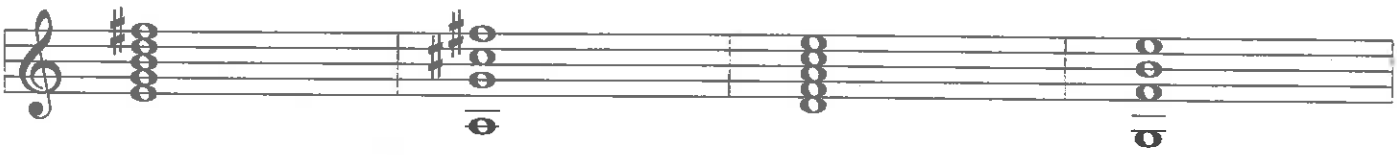
9ah) Emin 7 Amin 7 Dmin 7 G7



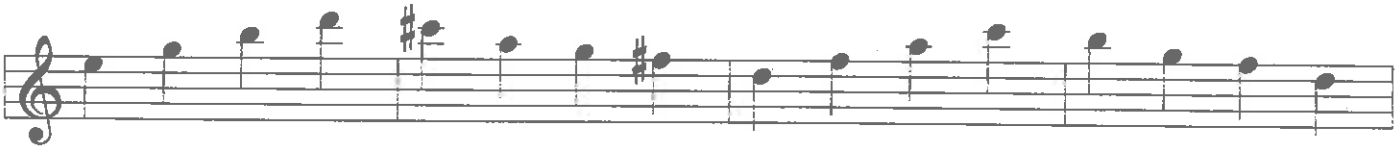
9am) Resolve by half step to "G."



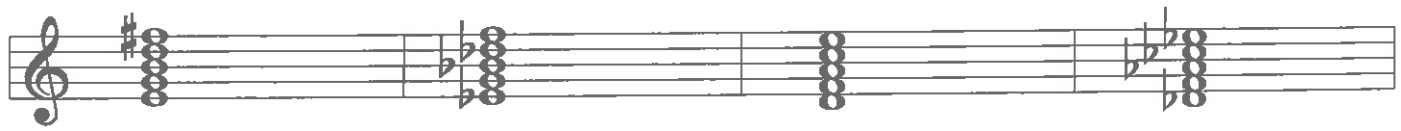
9bh) Emin 9 A7/13 Dmin 9 G7/13



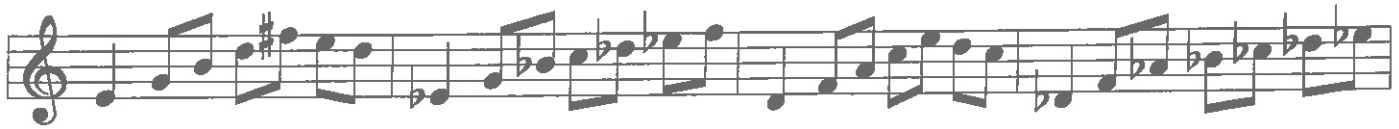
9bm) Basic arpeggios.



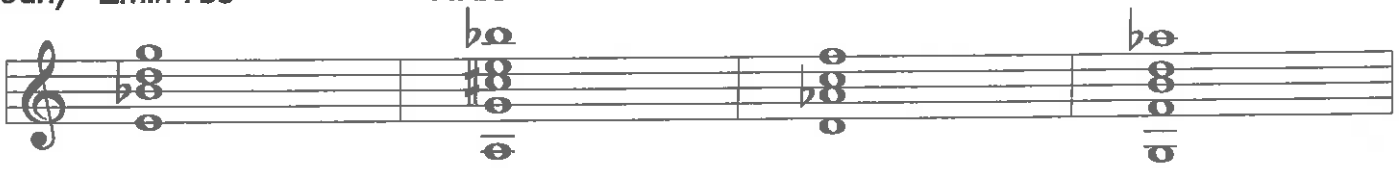
9ch) Emin 7 Eb9 Dmin 7 Db9



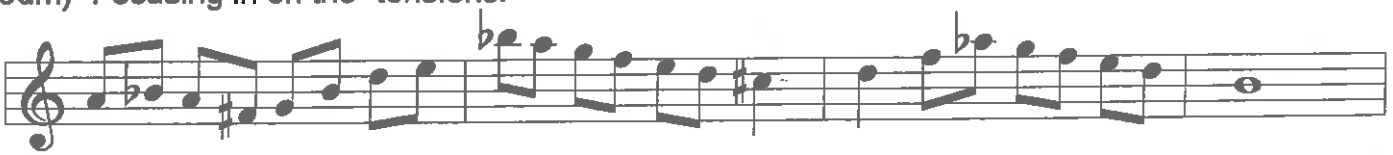
9cm) Combining arpeggios and scalar motion.



9dh) Emin 7b5 A7b9 Dmin 7b5 G7b9

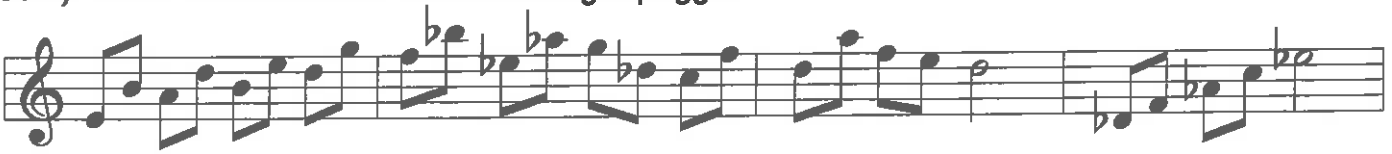


9dm) Focusing in on the "tensions."

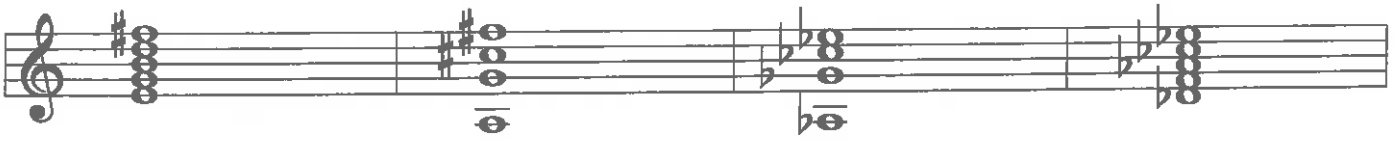


9eh) Emin 9 Ebmin 9 Dmin 9 Db maj 9

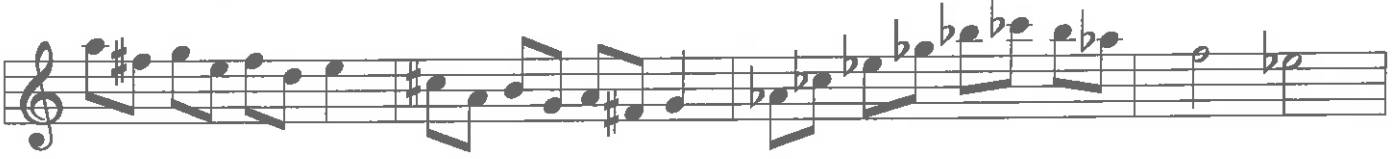
9em) Wider intervallic idea with a closing arpeggio.



9fh) Emin 9 A7/13 Abmin 7 Db9

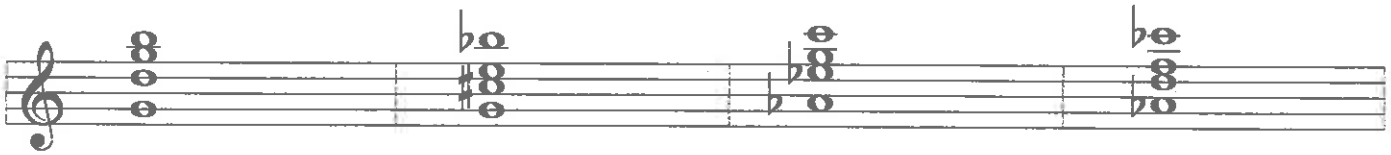


9fm) Combining a sequence with an arpeggio.

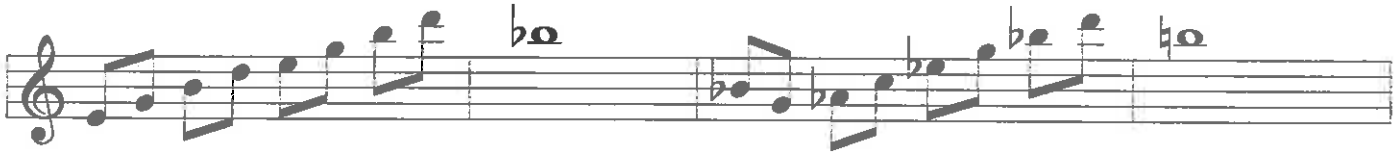


work space / notes:

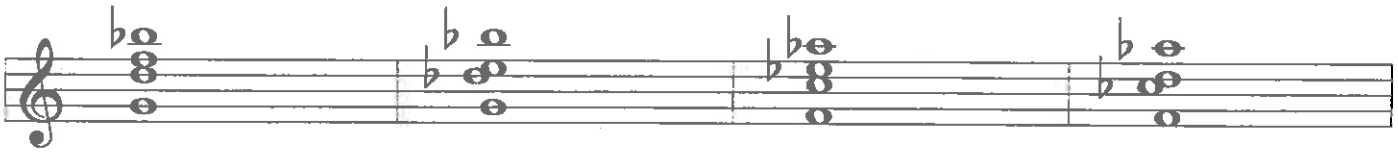
9gh) Emin 9 / G A7b9 / G Fmin 9 / Ab Bb7b9 / Ab



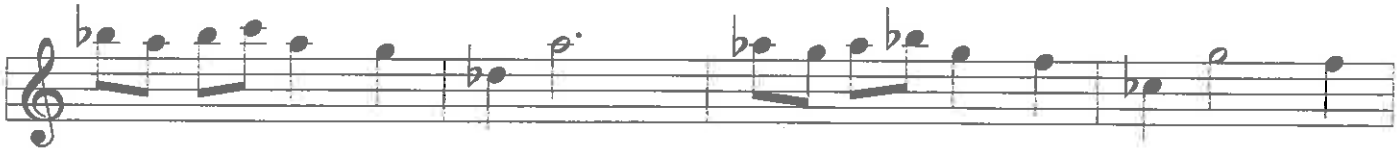
9gm) Basic arpeggios.



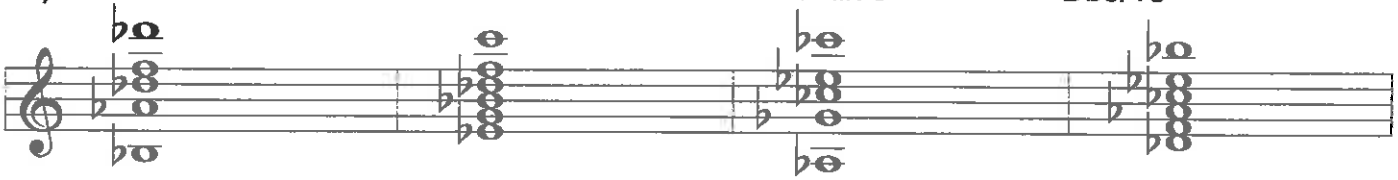
9hh)) Gmin 7 C7b9 / G Fmin 7 Bb7b9 / F



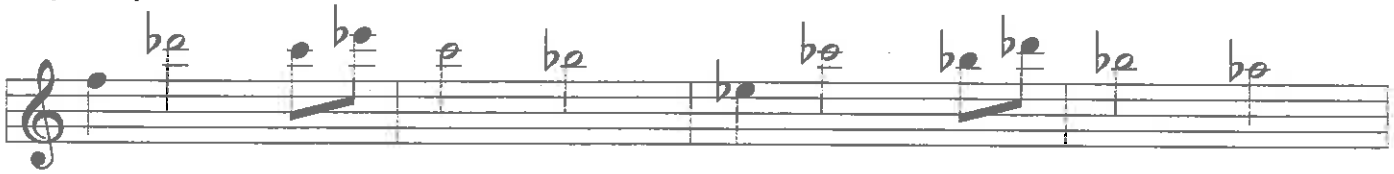
9hm) Melodic idea moved down a half step.



9ih) Bbmin 9 Eb9/13 Abmin 9 Db9/13

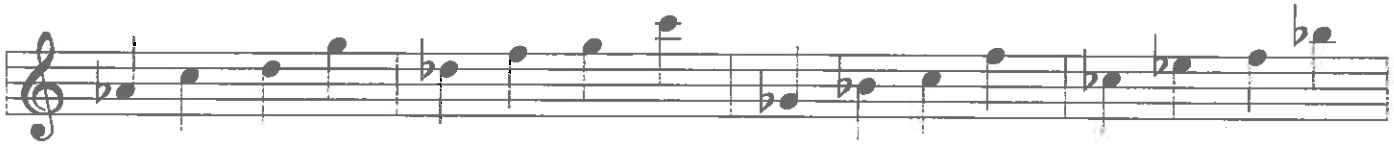


9im) Sequential idea.

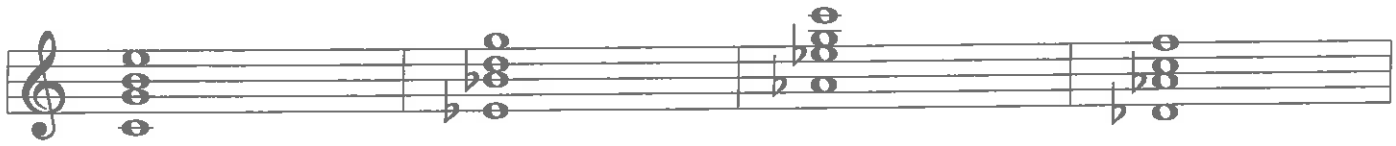


9jh) Bb7/13 Eb9 Ab7/13 Db9

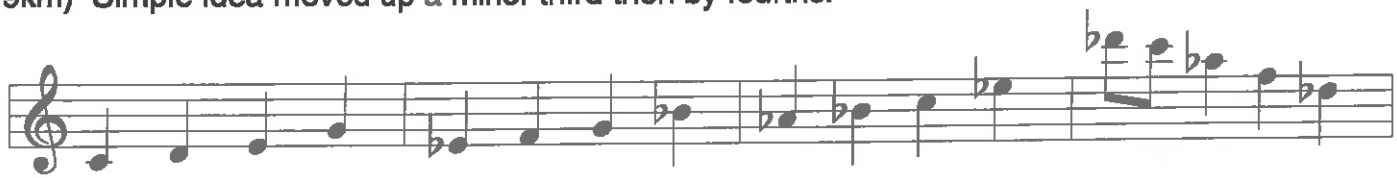
9jm) Starting an idea from flat seven.



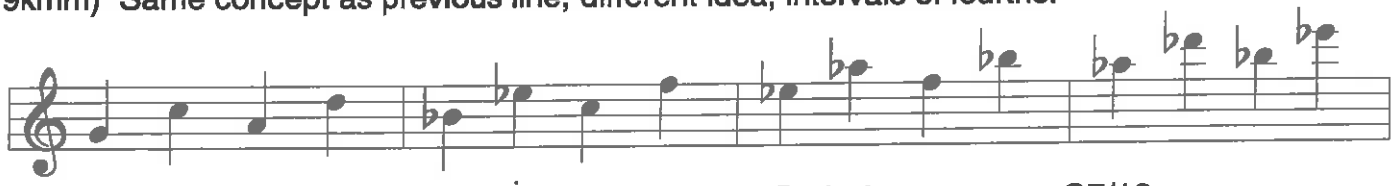
9kh) Cmaj7 Ebmaj7 Abmaj7 Dbmaj7



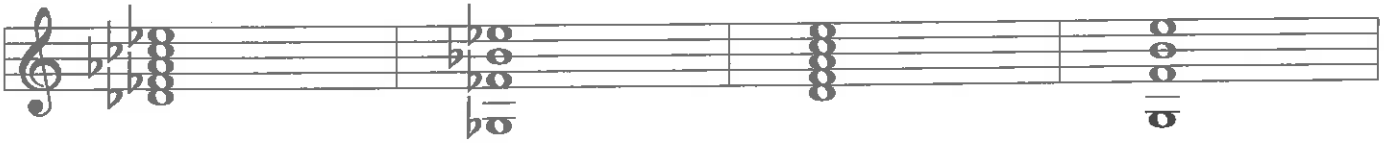
9km) Simple idea moved up a minor third then by fourths.



9kmm) Same concept as previous line, different idea, intervals of fourths.



9lh) Dbmin 9 Gb7/13 Dmin 9 G7/13



9lm) Diatonic idea moved up a half step.

ESSENTIAL CONCEPTS / PERFORMANCE CONSIDERATIONS CHAPTER 5 / SECTION C

1) "Chord Quality", i.e. Two, Five or One, is determined by the third and seventh of the chord. The key to "inside" (gl) playing through "changes" (gl) is to use the proper third and seventh as dictated by the chords within the progression.

2) The idea of a **"vertical" approach** generally connotes using an arpeggiated figure, either ascending or descending, derived from whatever chord is in use. Horizontal or linear, as the term implies, creates melodic ideas more in the shape of scales etc. Both approaches are essential to the well rounded, creative artist. Try arpeggiating (vertical) the Two (ii-7) chord, followed by a scalar (horizontal) approach to the dominant seventh and tonic.

3) Listening to your favorite players creates a source for ideas. Transcribing solos is a sure way to develop a "bag of licks" (gl) rapidly. An alternative to transcribing is to "sing" the solos, learn them "by heart", so to speak, this internalizes the sounds and helps to illuminate and clarify the elusive concept of "swinging" (gl) regardless of the music under scrutiny. This "vocal" transcription also greatly facilitates written transcribing.

4) If, as you are performing, you **"hear it, then play it."** Of course the musical "environment" plays a big part in the above concept, don't get fired because of your musical ego! I include this thought because the strengthening this ability manifests itself in a better connection between your "internalized musical creator" and your hands and eventually becomes the bottom line for improvising musicians.

5) Begin to **develop the ability to think ahead**. Strong sight readers read ahead of the actual point of the music being performed. Strong improvisers cognitively project ahead to what they're going to play. When one drives a car, their eyes sweep the horizon they're heading towards, hopefully that is. Musically the same idea applies. As you progress musically, try to "bite" off larger and larger "chunks" of time. The analogy of skipping a rock over water illuminates my idea here. The distance between "skips" become musical phrases. As you grow stronger musically, the distance between skips become longer and longer. Thus, longer phrases, better "time" and more rhythmic freedom to direct your musical ideas to actual reference points in the music, i.e., end of sections, cadences, turnarounds etc.

6) This next section of our study guide will chiefly concern itself with concepts and considerations in regard to **preparation for performance**, i.e., how to practice / woodshed (gl). Earlier we discussed a possible "finite" amount of material to be thoroughly digested. With this in mind, I've included some ideas about shedding that have helped me organize and discipline my available practice time. Read through the ideas and use what works for you.

6a) If possible, divide your available practice time into segments, each of which can be devoted to a specific task, i.e., scales, arpeggios, technique, learning new tunes etc.. Keep a written record of what you're doing. **Begin a list of tunes you know and of ones to be learned.**

6b) **Work with a metronome** if available. With "swing" and Blues concepts, develop the ability to hear the clicks as the 2nd and 4th beat of a musical measure. This important concept is simply achieved by counting one and three before the "clicks." Thus, one, click (2), three, click (4) etc. In Latin styling, make the clicks one and three. Start slowly. This takes time but is essential. Putting your musical ideas within the "physical time" provided by the metronome creates a "gravitational musical environment" that sharpens and strengthens your musical prowess.

6c) If a piano is available, using the sustain pedal, develop the ability to "strike" the chord you're working on, using the decay time to run your scale choice, prolations or arpeggio over that particular sonority. This can become a tremendous resource for learning, as well as getting your piano chops (gl) together.

6d) When working over a new set of chord changes, play just the roots of the chords. This gives a startling clear picture of the where and how of a particular harmonic progression)

6e) When working over changes, try creating melodic lines utilizing only quarter note values as your rhythmic figure. Once comfortable with the changes, move onto eighth notes etc.

6f) When venturing "outside," while "shedding", move from a consonant group, to a dissonant group, back to the consonant group. Example: substituting "Ab" melodic minor over "G7b9", try using "G" Mixolydian moving to "Ab" melodic minor, back to "G" Mixolydian. This helps in developing your "ear strength" that allows the player to take it "out", but just as important, to move back "inside."

6g) **If a particular "lick" is a problem, slow it down.** Once learned gradually work it up to tempo.

6h) If that "lick" is still a problem, play it 100 times, then up and down the fingerboard.

6i) Work to consciously relax yourself physically while practicing and performing.

6j) **If available, tape yourself as you practice. "Listening back" to yourself can be very illuminating.**

6k) A two track cassette recorder allows for taping chord progressions then adding your improvised ideas over those changes, all which can then be reviewed. This tool has become one of my valuable learning assets.

6l) Develop a **"performance perspective"** or mindset that helps you focus and concentrate on the tasks at hand. Strive to match intensities with other players in your group.

6m) **Try to develop the musical idea you just played** as opposed to presenting a new idea. In conversation, we hopefully develop one thought into the next. It's the same with improvising musical ideas. Creating longer lines is a sure sign of maturing artistically. One "disciplinary action" I've imposed upon myself when I'm shedding and "space out" on what I'm actually supposed to be working on is to take whatever "lick" I "spaced out on" and run it chromatically up and down the fingerboard. Once completed I return to the "problem" I was working on. This has helped me "stay on task" and use my practice time more effectively, while also getting a potential new "lick" under my fingers.

6n) **Warm up slowly**, like with any physical endeavor, starting slowly helps to avoid tensing up.

6o) Remember, "**practice makes permanent**", the "what and how" of what we "shed" becomes the "what and how" of our performances, don't practice mistakes.

7) Character of Vehicle

Certain characteristics of particular musical styles help to define the "essence" of some of the more common vehicles in vogue today. Although no improvisational rules are truly "hard and fast", certain melodic tendencies and their harmonic counterparts are employed in the following musical styles that tend to define the "character of the vehicle."

7a) "Rhythm" changes: The extensive use of the Three (iii min 7), Six (vi min 7), Two (ii min 7), Five (V7) to One (I maj 7) chord progression, examples such as "I Got Rhythm" and "Oleo" come to mind.

7b) The Four (IV7) chord in the fifth bar of a "Blues" tune, "Straight No Chaser", "Bill's Bounce" come to mind.

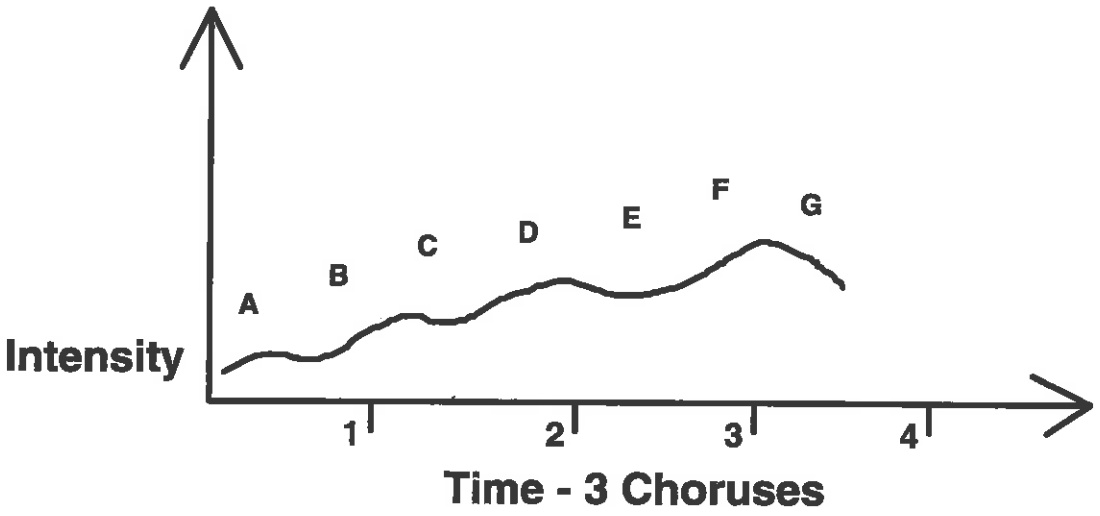
7c) The Five (V7) of Five (V7) built on the second scale degree in the third bar of "Bossa Nova" or "Latin" tunes, examples such as "The Girl From Impanema", "Watch What Happens", "Desafinado" and "Lucky Southern" come to mind.

7d) The modulation from Tonic (I maj 7) to Four (IV maj 7) followed by minor Four (iv min 7) or a variation thereof in many "standard" tunes, examples such as "There Will Never Be Another You", "Misty", "A Foggy Day" come to mind.

7e) The use of the minor Tonic (I min 7) or Two (ii min 7) as the first chord of a "ballad", examples such as "Body and Soul", "In A Sentimental Mood" and "Heres That Rainy Day" come to mind.

The above components are "essential" in helping to "characterize" the above musical "vehicles." There are many other such "components". **Study the biographies, analyze and play the music universally respected Jazz composers** to broaden insights into form, structure, melody, and enlarge your musical palette.

8) Building a Solo. The following ideas and chart are provided to help develop the "big picture" in regards to soloing. These concepts and suggestions are based more in general artistic theories, coupled with purpose and direction. On any given set of changes each completed cycle is referred to as one chorus (gl). For demonstrative purposes, let's take three choruses. Moving to a pictorial explanation with intensity and time as our X to Y axis:



Now let's discuss our lettered reference points.

a) A good place to start is with the melody of the tune you're playing, perhaps a variation of the basic motive.

b) At the end of any given chorus is the turnaround (gl). Many players feel that these turnarounds contain the "meat" of the improvisation. This area is also the "link" to our second chorus. Usually a ii-V lick or a melodic sequence works well. Gaining strength in this area gradually allows us to lengthen our solos and "stretch out" (gl).

c) Into our second chorus, perhaps using a rhythmic motive from the melody of the tune as a basis for ideas. Gradually build tension.

d) Into the last chorus, perhaps identify the melody of a different tune i.e., "quote", keeping our forward motion alive. Head to climax.

e) Start to "lock in" and head to our climax. Repeated notes, fast rhythmic passage, and sequences can all help to build tension.

f) Climax and release of tension can be achieved many ways. Hold one note, play 10,000 notes, displace the rhythmic pulse, lots of ways to climax, it's something to strive for and control.

g) If applicable, play a simple phrase that the next soloist can "pick up the thread of" to start their improvisations. Using the original melody at this juncture will provide convincing "closure" to your improvisations.

These ideas are presented to help structure your soloing. The important components being illustrated by the graph. This being a gradual building of tension, its eventual climax and release, trying to keep the melody line and form of the composition chosen in mind while improvising through the changes used to support the original melody. **When first beginning to improvise, if you run short of improvised musical ideas, your artistic interpretation of the melody will always work.**

9) Format for generating new ideas and improving transposition abilities.
9a) Collect as many favorite ii / V / I licks as you can find.
9b) Transpose them into one key.
9c) Pull from your collection 7 licks, each one starting on a different note of the extended Five (V) chord, this being the fundamental tension of the Two / Five / One.
9d) Transpose this group of seven licks to the other eleven keys in your head *without* writing them down. Developing your repertoire in this way will vastly improve your ability to play in all keys.

10) Like verbal conversation, our musical thoughts and expressions contain different intensities. In musical terms, this concept aurally translates into ***DYNAMICS.*** Listening to a computer generated voice corresponds basically to listening to music that contains no dynamics, i.e., no variation of volume or articulation. Nine tenths of making "it" work depends on a players ability to "correlate" the emotional intensity of their musical lines with appropriate use of varying dynamics. The other one tenth encompasses the development of the technical skills that evolve and develop over a period of years into one's ability to "deliver" and "execute" their "voice" on whatever instrument they so choose to employ. The Miles Davis recording "Milestones", I believe, illustrates varying approaches to the above idea. Perhaps the greatest Jazz recording ever made, Mr. Davis's "voice", which is consummately expressive in it's lyrical simplicity, is surrounded by two "voices" that are as complex as any that have ever attempted this art form. The contrast achieved between these three "voices" is truly beautiful and astounding. The "rock" group Led Zeppelin's "Stairway To Heaven" clearly outlines the "storytelling" abilities of *varying dynamics, textures and intensities.* While "dynamics" in musical performance are generally concerned with the loudness and softness of presentation, the truly "dynamic" artist is one who "captures" their emotional statement in the "universal" language, (define that for yourselves), which is readily translatable to each individual member of their audience in their own unique way.

11) Ideas about **the music business in general**. Keeping a realistic financial profile and investing a portion of what bread is left over into your art helps the artist gain the necessary "time, space and tools to ply their craft." "The "work" is out there, you just have to go out and "scare" it up", which was a friends reply to my "moaning" about the "lack" of work. Match your best "art" with "gigs" that require your approach and style of playing, to create the perfect musical ambiance for that particular room. The above concept is also essential in maintaining intellectual and artistic sanity! Developing other "marketable" skills such as the ability to read standard musical notation accurately (strong sight readers definitely get more calls), teaching, covering a "rock", "country" or "Blues" gig convincingly, being an amiable sort of human being, developing musical arranging skills, instrument repair skills, booking skills, business skills, knowing the tax rules, salesmanship and opening your own nightclub may all help you stay in the music "business" and keep playing. Many "classic" musical recordings were made by players in their twenties, many by players in their thirties, forties, fifties and so forth, good things sometimes take time. If you know you have the talent and can continue to "play", good things will happen, dedicating one's life to one's art is a noble thing indeed. *Do it for the love of the art.* During an artists career, thousands of people are met along the way through their art, this is a very beautiful thing, think about it. The entertainment business pays some of the highest salaries on the planet, surely it is not unusual to think of one making a decent living. Recorded history reveals to us the discipline to meet the tasks. Be it as it may, making a living playing music is one thing, the joy of helping others along their way either through direct instruction or by sharing your music is potentially as great a reward. The literary work that comes to mind that biographically illuminates many of the ideas presented above is Irving Stone's Depth's of Glory, the life and times of Camille Pissarro, "grandfather" of "Impressionist" school of painting in Paris, France during the nineteenth century. Check it out if your curious

List of Tunes: The following brief list of "tunes" is provided for the beginning student. The compositions listed range from the most requested "standards" at work to favorite "Jazz" tunes often heard at "jam" sessions. Players talk about knowing a hundred tunes and a hundred licks as a basis to grow from. Thorough knowledge of a tune encompasses the overall form, the melody, the harmony i.e., chord changes, the lyrics, if applicable, as well as knowledge of the composer and previous recordings of this title by recognized Jazz greats. If you hear a "tune" you like, chances are you'll find other tunes worth learning and playing by the same composer. All of these titles are found in various "fake" books available through music stores and catalogues. Ask your friends for help in obtaining a copy. *"Seek and yea shall find."*

A Foggy Day
A Night in Tunsia
Afro Blue
All Blues
All the Things You Are
Autumn Leaves
Blue Bossa
Cherokee
Confirmation
Don't Get Around Much Anymore
Four
Girl From Impanema
Green Dolphin Street
Have You Met Ms. Jones
I'll Remember April
Impressions
Joy Spring
Just Friends
Lucky Southern
Misty
My Funny Valentine
Nica's Dream
Night and Day
Ornithology
Round Midnight
Satin Doll
Straight No Chaser
Summertime
Take Five
There Will Never Be Another You
Tune Up
Watch What Happens
Wave
What a Wonderful World

Blues tunes:
Straight No Chaser
Blues Walk
Mr. P.C.
Tenor Madness
Blue Monk
Au Privave
Footprints
Stormy Monday
All Blues

ESTABLISH A LIBRARY Discography / Bibliography: One of the most important possessions to the musician is their listening library. Since we all have our favorite Jazz artists, I will mention some of the LP's that have inspired me to continue to seek, learn and expand my horizons. Listening to these records has helped me become more in tune with what a musician has to produce, as well as bring me to the cold reality that I've got lots of work to do! Woodshedding and listening are two main components of artistic growth. My musical literary library, which mainly consists of theoretical texts, learning methods, biographies, resource texts and "fake" books (gl) provides a potentially inexhaustible amount of musical material to be digested. The idea is to always be learning, curious and searching for new artistic resources. A good source for Jazz recordings is Jamey Aebersold's "Double Time Records." Check your local music store for books.

Discography / Bibliography for Guitar

Jazz *(Any and all recordings of)*
Charlie Christian
Wes Montgomery
George Benson
Joe Pass
Ted Greene
Pat Metheny

Blues / Rock
Duane Allman — *Live at the Fillmore*
Eric Clapton — *Layla album*
Jimmy Page — *Stairway to Heaven*
B.B. King — Any and all
Robben Ford — any and all
Jeff Beck — *Blow by Blow*
Stevie Ray Vaughn — *Texas Flood*

Country / Folk
Chet Atkins
Hank Garland
Leo Kotke

Recommended Books: Guitar

Ted Greene - All of Mr. Greene's books are amazing and well worth the cost.
Joe Pass - Jazz Guitar Chords.
George Russell - Lydian Chromatic Concept of Tonal Organization
Charlie Parker - "Omni" Book.
Jamie Aebersold - "Playing Along" series.
Johnny Smith - Volume One and Two.
Robben Ford - "Blues" book and accompanying recording.
Joe Craig - Essentials of Modern Guitar.
Fake Books - The contents of the Real Book "Volume One" is essential for beginning Jazz Players.

Discography / Bibliography for Piano

Straight Ahead		Contemporary	
Bill Evans	*Kind of Blue w/ M. Davis*	Keith Jarrett	Solo piano works
McCoy Tyner	*Ballads w/ J. Coltrane*	Chick Corea	*Romantic Warrior*
Bill Evans	*Live at the Vanguard*	Lyle Mays	with Pat Metheny
Thelonious Monk	*Live at the Five Spot*	Yellow Jackets	*Live Wire*
Oscar Peterson	*A Trio in Transition*	Weather Report	*Heavy Weather, Mr. Gone*
Marcus Roberts III	*Alone with Three Giants*	Chick Corea	*Friends*

Recommended Books:

Hannon's, "Virtuoso Piano" volumes one and two.
Mark Levine - The Jazz Piano Book

Discography / Bibliography for Vibes

Essential players: any and all recordings of:
Red Norvo - early styles.
Lionel Hampton - early styles.
Milt Jackson - Bebop styles and Blues.
Bobby Hutcherson - Neo Bop and Hard Bop with a heavy influence of African rhythms.
Cal Tjader and Tito Puente - Latin styles.
Gary Burton - consummate 4 mallet solo and group playing.
Michael Maineri - with Steps Ahead - Jazz Fusion.
Dave Samuels - pianistic 4 mallet playing with Spiro Gyra, Horace Silver and solo projects.

Recommended Books:

Elden Buster Baily - Mental and Manual Calisthenics for the Modern Mallet Player.
David Friedman - Pedaling and Dampening Techniques for the Vibraphone.
Gary Burton - Introduction to Jazz Vibes.
Gary Burton - Four Mallet Technique.
Jerry Coker - Patterns for Jazz.
Mark Levine - Jazz Piano Book.
Any of the Jamie Aebersold Jazz Improvisation Music Minus One records with charts.
Fake Books - The Original Real Books, Volumes I and II.
Sher Music Co. - The Worlds Greatest Fake Book, The New Real Books, Volumes I and II.

Discography / Bibliography for Saxophone

Smithsonian Collection of Jazz
Coleman Hawkins — *Cirius*
Lester Young — *Count Basie and the Kansas City Seven*
Johnny Hodges / Duke Ellington — *Black, Brown and Beige Suite*
Charlie Parker — *The Complete Verve Recordings*
Cannonball Adderley — *C. Adderley with Nancy Wilson*
Miles Davis Quintet — *Milestones*
Sonny Stitt — *Personal Appearance*
John Coltrane — *Blue Trane, Impressions, Thelonious Monk and J. Coltrane*
Sonny Rollins — *Newk's Time, The Eternal Triangle*
Paul Desmond / Dave Brubeck — *Take Five*
Dave Liebman, Steve Grossman, Elvin Jones — *Live at the Lighthouse*
Michael Brecker - Brecker Brothers — *Heavy Metal BeBop*
Michael Brecker - Chick Corea — *Three Quartets*
George Coleman -w/ Miles Davis — *My Funny Valentine*
Wayne Shorter — *JuJu, Atlantis*
David Sanborn — *Straight to the Heart*
Phil Woods — *Live at the Showboat*
Joe Lavano — *Tones, Shapes and Colors*
Stanley Turentine — *Suger*
Dexter Gordon — *Gotham City*

Recommended books:
David Liebman - Developing a Personal Saxophone Sound.
Jamie Aebersold - Omni Book, transcribed recordings of Charlie Parker.

Discography / Bibliography for Trumpet / Trombone

All Chet Baker / Gerry Mulligan Quintet
Fred Hubbard
Here to Stay
Blue Spirits
Backlash
Hubtone's
Super Blue
Skydive
Breaking Point
Red Clay
High Blues Pressure
Lee Morgan
The Procrastinator

Clifford Brown / Max Roach Inc.
Study in Brown 1955
Clifford Brown Quintet
The EM Arch Series
But Beautiful
Memorial Album

Miles Davis
Sketches of Spain
Miles + 19
Seven Steps to Heaven
Workin' and Steamin"
Four and More
My Funny Valentine
So What
Circle in the Round
Any pre- 1970's Miles Davis
Milestones
Clifford Brown
Brownie Eyes
Jazz Legacy

Trombone
J.J.Johnson - any
Bill Watrous - any
Kai Winding - any
Bob Brookmeyer - any
Jack Teagarten - any

Recommended books for Trumpet / Trombone:

John McNeil - Jazz Trumpet Techniques - for developing articulation and fast fingers, by.
Jerry Coker - Patterns for Jazz.
Dan Hearle - Scales for Jazz Improvisation.
Jerry Coker - The Jazz Language, - a theory text for jazz composition and improvisation.
Some recommended materials for basic fundamentals for trumpet are:
Arban's Complete Celebrated Method for Trumpet, by Dr. Charles Colin Edition.
Saint Jacome, Grand Method for Trumpet or Cornet.
Herbert / Clarke Technical Studies for the Cornet.
Schlossberg Daily Drills for Trumpet.
Raymond S. Kotnica / Joseph Viola, Berklee Series, Chord Studies for Trumpet.
W.M. Smith. Top Tones for the Trumpet.
J R. Shoemaker, Legato Etudes for the Trumpet - based on the vocalises of Guiseppe Concone.

Discography / Bibliography for Bass

Upright Bass
Ron Carter with Miles Davis
Niels Orstead Pederson with Oscar Peterson / Joe Pass
Charlie Hayden with Pat Metheny
John Patitucci with Chick Corea
Paul Chambers with Miles Davis
Scott LaFaro with Bill Evans
Eddie Gomez with Steps Ahead

Electric Bass
Jaco Pastorius any recordings
Stanley Clarke
John Patatucci
Marcus Miller
Marc Johnson *Bass Desires*

Recommended Books:

Chuck Sher - The Improviser's Bass Method.
Rufus Reed - The Evolving Bassist.
Jamie Aebersold - Transcribed Bass Lines by Ron Carter.

Discography / Bibliography for Drums / Percussion:

Become familiar with at least some of the following drummers:

a) Philly Jo Jones
b) Gene Krupa
c) Buddy Rich
d) Louie Bellson
e) Art Blakey
f) Elvin Jones
g) Tony Williams
h) Max Roach
I) Ed Thigpen
j) Steve Gadd
k) Sonny Paine (Count Basie Orchestra)
l) Peter Erskine
m) Harvey Mason
n) Vinnie Colaiuta
o) Jeff Porcaro
p) Greg Bissonette
q) Dave Weckel
r) Neil Pert
s) Jeff Tang Watts
t) Roy Haines
u) Tryloc Gortu

Recommended Books for Drums / Percussion

Learn all 26 rudiments in the N.A.R.D. book.
Pratt, Contest Solos.
Ed Thigpen, Essence of Brushes.
George Wilcoxon, Rolling Rhythm.
George Stone, Stick Control.
Louis Bellson, Contemporary Brush Technique.
Jim Chapin, Advanced Techniques for the Modern Jazz and Bebop Drummer.
Ted Reed, Syncopation.
Nick Ceroli, Art of Modern Jazz Drumming.
Dave Weckel, Drummer Plus One.
Irv Cottler, I've Got You Under My Skin.
Ted Reed, Latin Rhythms.
Paul Capozzoli, Around the Drums Series.
Dahlgreen and Fine, 4 Way Coordination.
Louis Bellson, Modern Reading Text.
John Danser, Big Band Drum Charts.
Bill Wheeler, Drum Superstar Series.
Billy Benn, Drummers Club Date Handbook.
Jim Holland, Complete Book of Drum Fills.
Joe Cusatis, Rhythmic Pattern for the Modern Drummer.
Ron Fink, Latin American Rhythms for Drum Set.

GLOSSARY:

Altered	Refers to upper structure configurations of dominant seventh chords
Amen effect	Moving from the One chord to the Four back to One etc., generally associated with gospel music
Arpeggio	"Harplike", "broken chord." A musical phrase comprised of chord tones
Ax	Slang term for instrument
Bag of Licks	Collection of your own favorite musical phrases or chord changes
Block	Refers to voicing each melody note with an appropriate harmony
Bridge	Slang for the "B" section of the A,A,B,A and A,B form
Cadence	Two or more chords ending a section of music, commonly V7 to I
Changes	Slang for chords
Chart	Slang for musical score
Chops	Slang for a players ability to execute musical phrases
Chord Progression	Specific groups of chords played in succession
Chord Substitutions	Replacing one chord with another, generally of the same chord "type"
Chorus	One complete cycle of the entire form of a piece of music
Chromatic	Consecutive half steps either ascending or descending
Cliché	Stereotypical musical phrase
Color tones	Slang term for upper structure components of diatonic harmony
Common tone	Two musical components sharing a common member
Comping	Providing harmonic background
Constant Structure	Moving the same shape up or down the fingerboard
Diatonic	Using only pitches within the key signature
Diatonic Harmony	Building chords from notes only contained within the given key signature
Discern	"Figure out"
Dominant	Harmony built on the fifth scale degree of the major scale
Drag	Playing slower than the tempo being employed
Enharmonic	Two labels for one pitch, i.e. "A#" or "Bb"
Equal Tempered System	System of musical organization based on the twelve major / relative minor scales
Explore	"Crunching" down the theory
Experiment	Using theoretical concepts to generate new combinations
Fake books	collections of lead sheets from various music publishers, also known as "real" books
Fundamental	Starting pitch of musical scales
Groove	Slang for emotional and rhythmic content of a particular style of music
Half Diminished	Generic minor seventh chord with a flatted fifth
Head	Slang for the melody of a song
Inside	Diatonic musical ideas
Interval	Term used to measure the musical distance between two pitches
Inversions	Chord voicings where the lowest pitch is not the root of the chord
Invert	Reversing of a musical interval
Key Signature	Term used to describe the number of sharps or flats associated with each of the twelve major / minor keys
Lead	Refers to the highest pitch in a chord voicing
Lead Sheets	Written music including the melody and appropriate chord symbols
Lick	Slang for a musical phrase

Localized Position	Executing musical ideas in one area of the fingerboard
Mediant	Harmony built on the third scale degree of the major scale
Middle Register	The center of the overall range of a musical instrument
Modes	Scales derived directly from major scales, from ancient church music
Modulate	To change keys
Monster	Slang for a musician with tremendous musical skills
Motif	Musical idea
Octave	The interval containing 8 diatonic tones (Harvard Dictionary)
Outside	Non diatonic musical ideas
Overtone Series	Mathematical breakdown of a vibrating string into it's component parts
Palette	Platform for mixing colors
Passing Tones	Non-chord tones viewed within a scale applied to a particular harmony
Passing chord	Transitory chord between principle chords
Pedal	Sustained pitch in an outer voice, bass or treble
Pentatonic	Scale containing five pitches
Polyphony	Two musically significant melodic ideas played simultaneously
Position	Determined by the placement of the index finger (#1) of the left hand
Post Bop	Style of Jazz characterized by complex cycles of chord progressions
Prolation	Recombining existing combinations into new configurations
Quartile	Refers to harmony constructed in fourths
Realization	The actual music derived from musical symbols
Real time	refers to "as it is happening"
Relative Minor	A major scales minor counterpart sharing identical key signatures
Root	Fundamental pitch of a chord, also used in naming the chord, i.e. C is the root of C major
Rubato	To "rob", displacement of musical time within a tempo to accommodate interpretive phrasing
Rush	Playing faster than the tempo being employed
Scat	Vocalization of musical phrases
Shedding	Slang for practicing
Sideman	Accompanying member of a musical group
Softening	Slang for the gradual tonicising of a musical color
Staff	Template of lines and spaces for notating music
Standard	Musical compositions that have withstood the test of time
Stretch Out	Extended soloing
Strength of Player	Describes a players ability to fit round musical pegs into square musical holes
Subdominant	Harmony built on the fourth scale degree
Substitution	Replacing one musical component with another
Swing	Jazz concept and description of a particular style of jazz music
Tensions	Upper structure chord tones, i.e. 7, 9, 11, 13, #15 and their alterations
Tertian	Refers to harmony constructed in thirds
Timbres	Term to describe musical colors
Time signature	Numerical fraction describing the rhythmic groove
Tonic	Theoretical name for the first degree of the major / relative minor scale
Tonality	Term used to describe overall musical effect of a particular musical idea, i.e. major / minor/ dominant seventh etc.
Top	Slang for the beginning of a new chorus
Treble Clef	Symbol used to denote the second line of a musical staff as the pitch "G" natural

Tritone	Musical interval of the augmented fourth / flatted fifth
Turnaround	Musical idea located at the end of a musical section usually followed by repeat sign
Two Chord	Harmony built on the second scale degree
Upper structure	Chord tones found above the fifth, i.e., 7th, 9th, 11th, and 13th
Vanilla	Slang for generic chord voicing of root, third, fifth and seventh
Vehicle	Term used to describe artistic parameters
Voicing	Arrangement of pitches for a particular chord
Walking	Refers to a bass line that outlines the chord progression using primarily quarter note rhythmic values
Western	In this text, slang for Equal Tempered System
Western Harmony	Chords based in the Equal Tempered System
Woodshed	Slang for a place where one sheds, also to review a difficult musical passage, i.e. practice.

ANSWER KEY

Page 3

C,D,E,F,G,A,B,C
G,A,B,C,D,E,F#,G
D,E,F#,G,A,B,C#,D
A,B,C#,D,E,F#,G#,A
E,F#,G#,A,B,C#,D#,E
B,C#,D#,E,F#,G#,A#,B
Gb,Ab,Bb,C,Db,Eb,F,Gb
Db,Eb,F,Gb,Ab,Bb,C,Db
Ab,Bb,C,Db,Eb,F,G,Ab
Eb,F,G,Ab,Bb,C,D,Eb
Bb,C,D,Eb,F,G,A,Bb
F,G,A,Bb,C,D,E,F

PAGE 8

C,D,E,G,A,C
G,A,B,D,E,G
D,E,F#,A,B,D
A,B,C#,E,F#,A
E,F#,G#,B,C#,E
B,C#,D#,F#,G#,B
Gb,Ab,Bb,Db,Eb,Gb
Db,Eb,F,Ab,Bb,Db
Ab,Bb,C,Eb,F,Ab
Eb,F,G,Bb,C,Eb
Bb,C,D,F,G,Bb
F,G,A,C,D,F

Page 9

1) major third
2) augmented fourth
3) perfect fifth
4) major seventh
5) perfect fourth
6) major sixth
7) major sixth
8) minor sixth
9) minor seventh
10) major seventh
11) augmented second
12) minor seventh
13) augmented fourth
14) minor sixth
15) major sixth
16) augmented fifth
17) minor second
18) minor third

Page 9

2a) major third
2b) minor sixth
3a) major seventh
3b) minor second
4a) perfect fourth
4b) perfect fifth
5a) major 2nd
5b) minor 7th
6a) major 6th
6b) minor 3rd
7a) tritone
7b) augment 4th

Page 17

Major	Relative minor	Major	Relative minor	Major	Relative minor
C	Eb	E	C#	Ab	F
G	E	B	G#	Eb	C
D	B	Gb	Eb	Bb	G
A	F#	Db	Bb	F	D

Page 17

Natural Minor

A,B,C,D,E,F,G,A,
Bb,C,Db,Eb,F,Gb,Ab,Bb
B,C#,D,E,F#,G,A,B
C,D,Eb,F,G,Ab,Bb,C
C#,D#,E,F#,G#,A#,B#,C#
D,E,F,G,A,Bb,C,D
Eb,F,Gb,Ab,Bb,Cb,Db,Eb
E,F#,G,A,B,C,D,E
F,G,Ab,Bb,C,D,E,F
F#,G#,A,B,C#,D,E,F#
G,A,Bb,C,D,Eb,F,G
Ab,Bb,Cb,Db,Eb,Fb,Gb,Ab

Page 18

Melodic Minor

C,D,Eb,F,G,A,B,C
D,E,F,G,A,B,C#,D
E,F#,G,A,B,C#,D#,E
F,G,Ab,Bb,C,D,E,F
G.A,Bb,C,D,E,F#,G
A,B,C,D,E,F#,G#,A
B,C#,D,E,F#,G#,A#,B
Db,Eb,Fb,Gb,Ab,Bb,C,Db
Eb,F,Gb,Ab,Bb,C,D,Eb
Gb,Ab,Bbb,Cb,Db,Eb,F,Gb
Ab,Bb,Cb,Db,Eb,F,G,Ab
Bb,C,Db,Eb,F,G,A,Bb

Page 19

Harmonic Minor

Eb,F,Gb,Ab,Bb,Cb,D,Eb
Ab,Bb,Cb,Db,Eb,Fb,G,Ab
Db,Eb,Fb,Gb,Ab,Bbb,C,Db
Gb,Ab,Bbb,Cb,Db,Ebb,F,Gb
B,C#,D,E,F#,G,A#,B
E,F#,G,A,B,C,D#,E
A,B,C,D,E,F,G#,A
D,E,F,G,A,Bb,C#,D
G,A,Bb,C,D,Eb,F#,G
C,D,Eb,F,G,Ab,B,C
F,G,Ab,Bb,C,Db,E,F
Bb,C,Db,Eb,F,Gb,A,Bb

Page 20

Pentatonic Minor

Eb, F, Gb, Bb, Db
Ab, Bb, Cb, Eb, Gb
Db, Eb, Fb, Ab, Cb
Gb, Ab, Bbb, Db, Fb
B, C#, D, F#, A, B
E, F#, G, B, D,
A, B, C, E, G, A
D, E, F, A, C, D
G, A, Bb, D, F, G
C, D, Eb, G, Bb, C
F, G, Ab, C, Eb, F
Bb, C, Db, F, Ab, Bb

Page 31

1a) 1 1/2 1 1/2 1 1/2 1 1/2
1b) 1/2 1 1/2 1 1/2 1 1/2 1
2) C,Eb,Gb, A
Db,E,G, Bb
D,F,Ab, B
3) Chromatic Scale
4) Minor 3rd
5) C,D,Eb,F,Gb,Ab,A,B,C
Db,Eb,E,Gb,G,A,Bb,C,Db
D,E,F,G,Ab,Bb,B,C#,D

Page 24

G Dorian	F,G,A,Bb,C,D,E	A Mixolydian	A,B.C#,D,E,F#,G
C Phrygian	C,D,Eb,F,G,Ab,Bb,	D Ionian	D,E,F#,G,A,B,C#,
Bb Aeolian	Bb,C,Db,Eb,F,Gb,Ab	F# Locrian	F#,G,A,B,C,D,E,
G Lydian	G,A,B,C#,D,E,F#	Eb Phrygian	Eb,Fb,Gb,Ab,Bb,Cb,Db
B Dorian	B,C#,D,E,F#,G#,A		

Page 33 Whole tone scales

1) C,D,E,F#,G#,A#,C
F,G,A,B,C#,D#,F
Bb,C,D,E,Gb,Ab,Bb
Eb,F,G,A,B,Db,Eb
Ab,Bb,C,D,E,Gb,Ab
Db,Eb,F,G,A,B,Db
Gb,Ab,Bb,C,D,E,Gb
B,C#,D#,F,G,A,B
E,F#,G#,A#,C,D,E
A,B,C#,D#,F,G,A
D,E,F#,G#,A#,B#,D
G,A,B,C#,D#,F,G

Page 34

2) Whole Step

3)

C,E,G#	Gb,Bb,D
Db,F,A	G,B,D#
D,F#,A#	Ab,C,E
Eb,G,B	A,C#,E#
E,G#,B#	Bb,D,F#
F,A,C#	B,D#,F##

4) Chromatic Scale

Page 35 Blues scale

C,Eb,F,F#,G,Bb,C	Gb,Bbb(A),Cb,C,Db,Fb,Gb
G,Bb,C,C#,D,F,G	Db,Fb,Gb,G,Ab,Cb,Db
D,F,G,G#,A,C	Ab,Cb,Db,D,Eb,Gb,Ab
A,C,D,D#,E,G,A	Eb,Gb,Ab,A,Bb,Db,Eb
E,G,A,A#,B,D,E	Bb,Db,Eb,E,F,Ab,
B,D,E,E#,F#,A,B	F,Ab,Bb,B,C,Eb,F

Page 45 / 46

Cmaj	C,E,G	G,B,D	Fmaj	F,A,C	C,E,G	Bbmaj	Bb,D,F	F,A,C
	D,F,A	A,C,E		G,BbD,	F,A,C		C,Eb,G	G,Bb,D
	E,G,B	B,D,F		A,C,E	E,G,Bb		D,F,A	A,C,Eb
	F,A,C			Bb,D,F			Eb,G,Bb	
Ebmaj	Eb,G,Bb	Bb,D,F	Abmaj	Ab,C,Eb	Eb,G,Bb	Dbmaj	Db,F,Ab	Ab,C,Eb
	F,Ab,C	C,Eb,G		Bb,Db,F	F,Ab,C		Eb,Gb,Bb	Bb,Db,F
	G,Bb,D	D,F,Ab		C,Eb,G	G,Bb,Db		F,Ab,C	C,Eb,Gb
	Ab,C,Eb			Db,F,Ab			Gb,Bb,Db	
F#maj	F#,A#,C#	C#,E#,G#	Bmaj	B,D#,F#	F#,A#,C#	Emaj	E,G#,B	B,D#,F#
	G#,B,D#	D#,F#,A#		C#,E,G#	G#,B,D#		F#,A,C#	C#,E,G#
	A#,C#,E#	E#,G#,B		D#,F#,A#	A#,C#,E		G#,B,D#	D#,F#,A
	B,D#,F#			E,G#,B			A,C#,E	
Amaj	A,C#,E	E,G#,B	Dmaj	D,F#,A	A,C#,E	Gmaj	G,B,D	D,F#,A
	B,D,F#	F#,A,C#		E,G,B	B,D,F#		A,C,E	E,G,B
	C#,E,G#	G#,B,D		F#,A,C#	C#,E,G		B,D,F#	F#,A,C
	D,F#,A			G,B,D			C,E,G	

Page 50

1a) Cmaj9	C,E,G,B,	1h) Gbmaj7	Gb,Bb,Db,F
1b) Dbmaj9	Db,F,Ab,C,Eb	1i) Gmaj713	G,B,D,F#,E
1c) Dmaj7 6/9	D,F#,A,B,C#,E	1j) Abmaj7	Ab,C,Eb,G
1e) Ebmaj7	Eb,G,Bb,D	1k) Amaj9 13	A,C#,E,G#,B,F#
1f) Ema7b5	E,G#,Bb,D#	1l) Bbmaj9#11	Bb,D,F,A,C,E
1g) Fmaj9	F,A,C,E,G	1m) Bmaj7	B,D#,F#,A#

Page 52

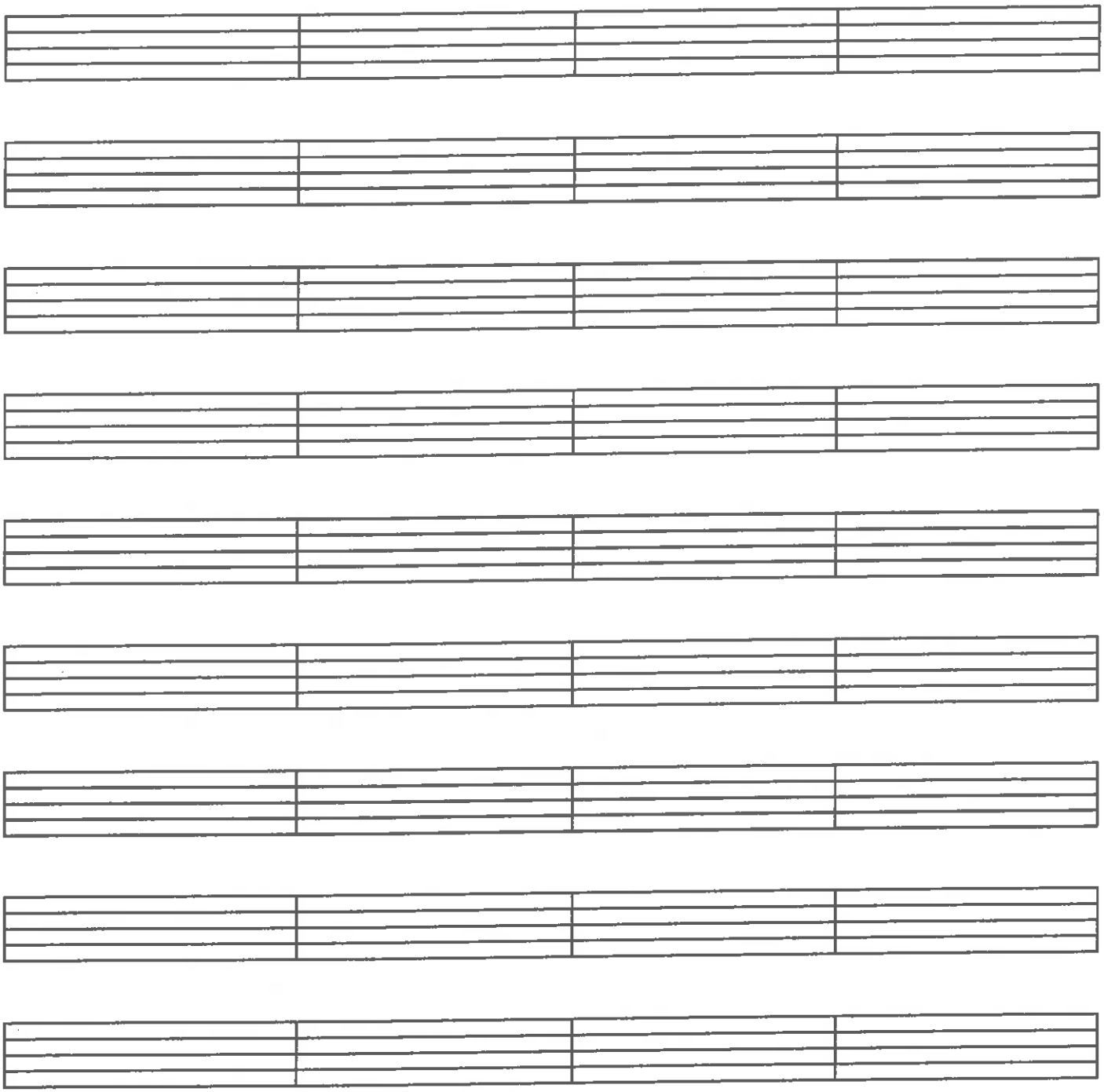
2a) D-7	D,F,A,C	2g) Abmin/ maj 7	Ab,Cb,Eb,G
2b) Ebmin7b5	Eb,Gb,Bbb,Db	2h) Amin7b5	A,C,Eb,G
2c) Emin6	E,G,B,C#	2l) Bbmin7	Bb,Db,F,Ab
2d) Fmin9 13	F,Ab,C,Eb,G,D	2j) Bmin9	B,D,F#,A,C#
2e) F#min6/9	F#,A,C#,D#,E,G#	2k) Cmin9 13	C,Eb,G,Bb,D,A
2f) Gmin11	G,Bb,D,F,A,C		

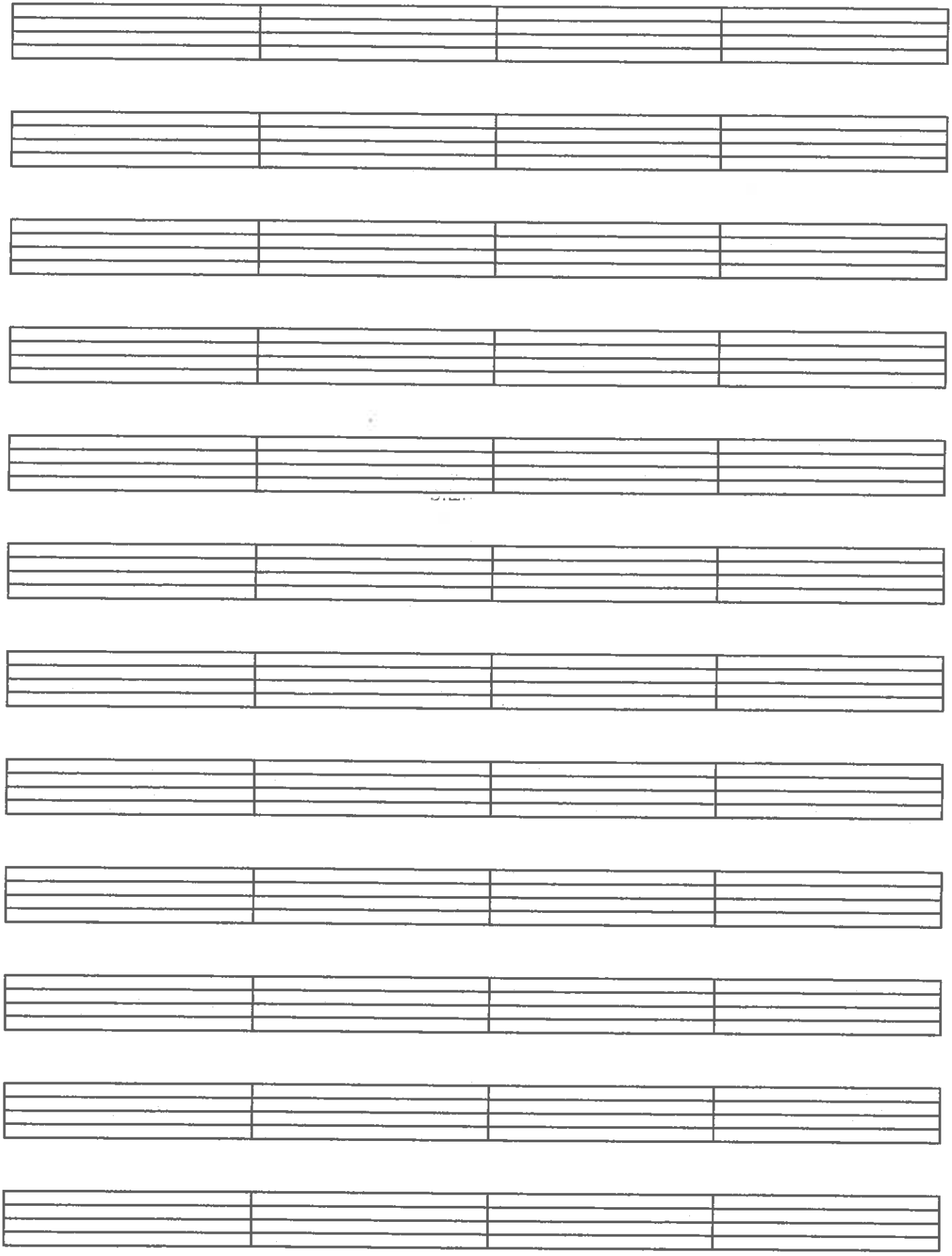
Page 55

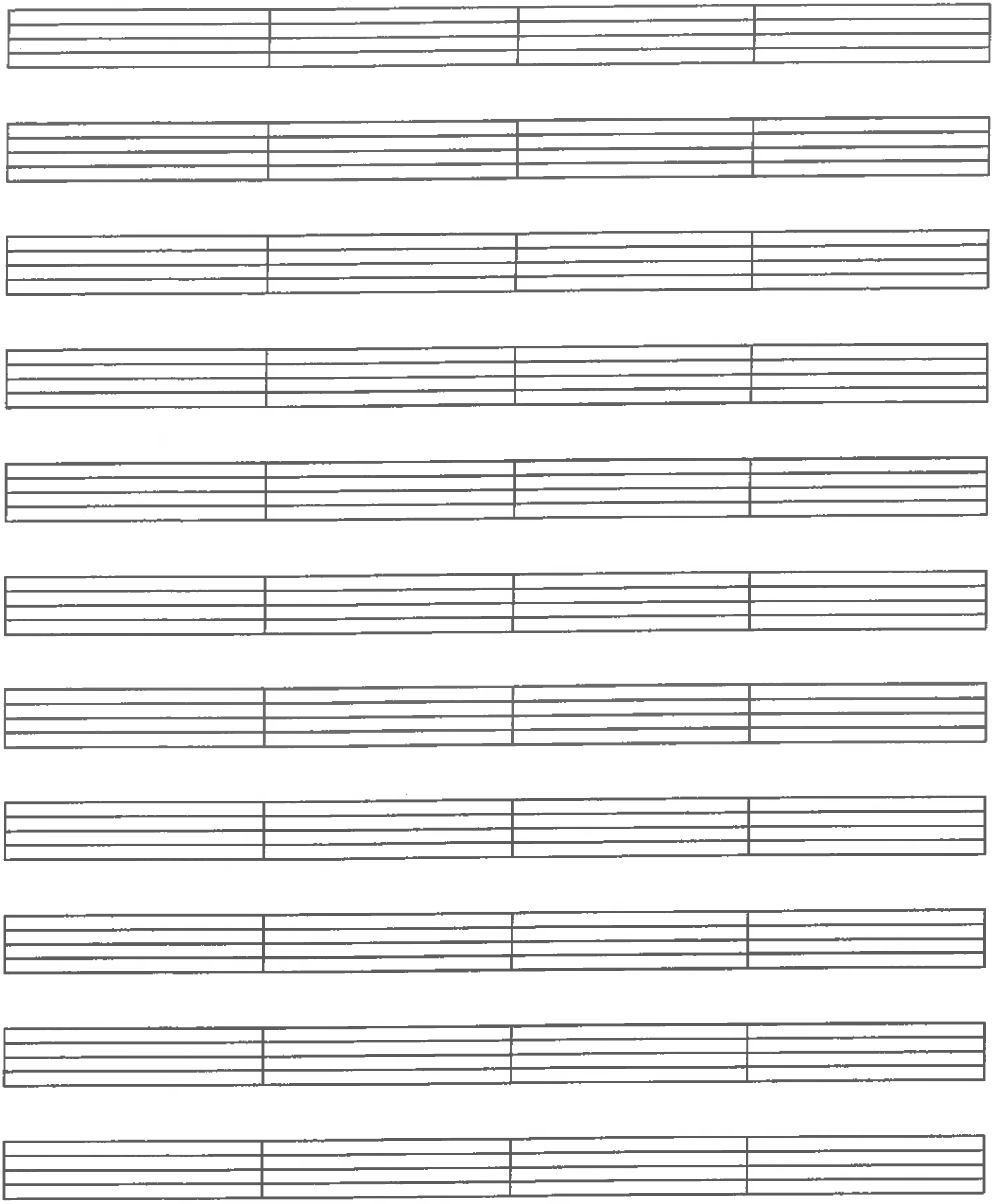
3a) G7	G,B,D,F	3h) D7b9	D,F#,A,C,Eb
3b) Ab7#9	Ab,C,Eb,Gb,B	3l) Eb7b5	Eb,G,Bbb,D,
3c) A7b5	A,C#,Eb,G	3j) E7#9	E,G#,B,D,F## (G)
3d) Bb7 13	Bb,D,F,Ab,G	3k) F 9	F,A,C,Eb,G
3e) B7b9	B,D#,F#,A,C	3l) F#7b9	F#,A#,C#,E,G
3f) C 9 13	C,E,G,Bb,D,A	3m) G79#11	G,B,D,F,A,C#
3g) Db 7sus4	Db,Gb,Ab, Cb		

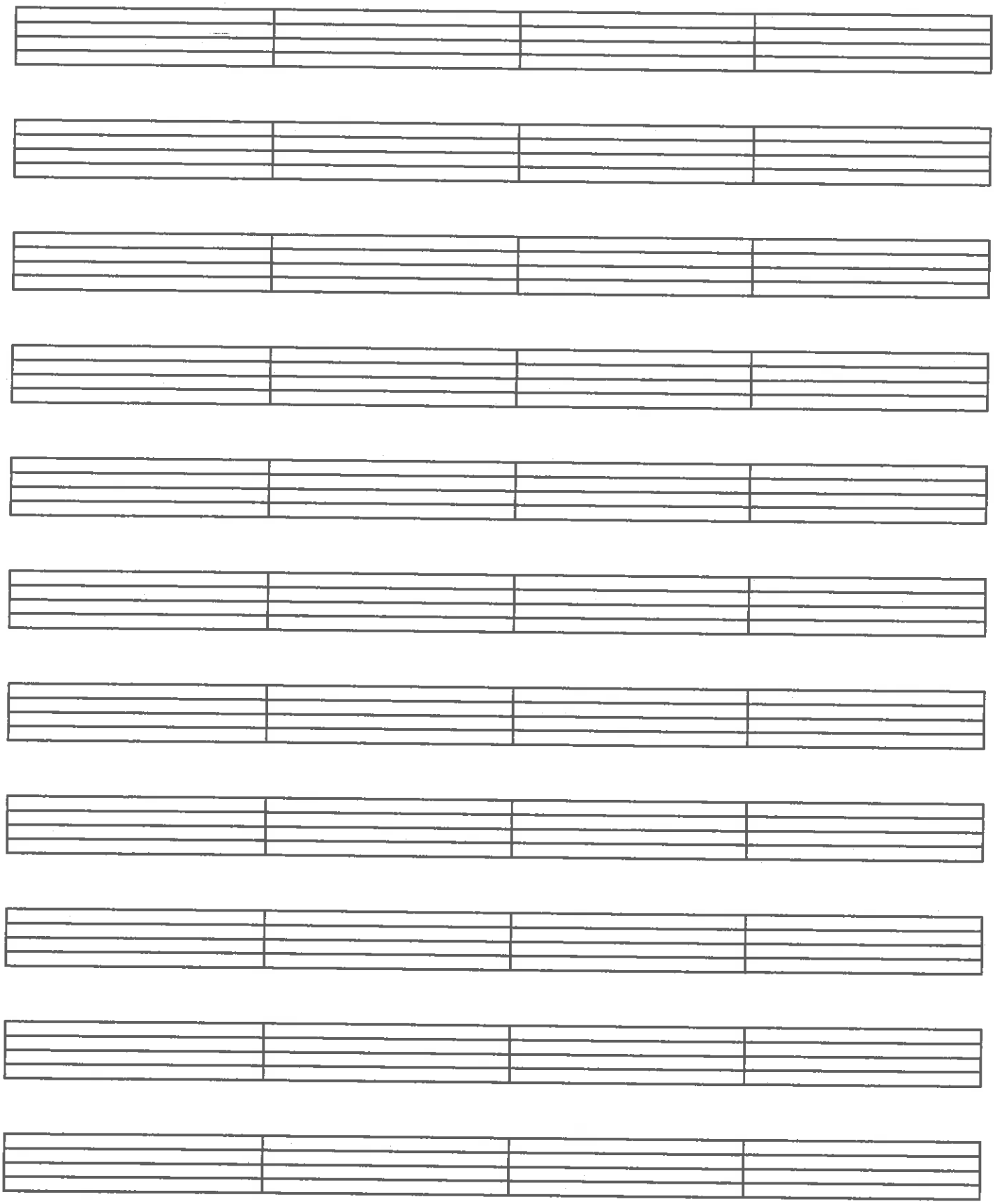
Page 65

	ii-7	V7	I 7		ii-7	V7	I 7
Cmaj	D-7	G7	Cmaj7	Gbmaj	Ab-7	Db7	Gbmaj7
Gmaj	A-7	D7	Gmaj7	Dbmaj	Eb-7	Ab7	Dbmaj7
Dmaj	E-7	A7	Dmaj7	Abmaj	Bb-7	Eb7	Abmaj7
Amaj	B-7	E7	Amaj7	Ebmaj	F-7	Bb7	Ebmaj7
Emaj	F#-7	B7	Emaj7	Bbmaj	C-7	F7	Bbmaj7
Bmaj	C#-7	F#7	Bmaj7	Fmaj	G-7	C7	Fmaj7









Dynamite!

TONAL RESOURCES

FOR THE

CREATIVE MUSICIAN ©

BY

JOE CRAIG

JOE CRAIG
PO 202254
ANCHORAGE, ALASKA
99520

OTHER WORKS BY THIS AUTHOR:

TEACHING GUIDE for Tonal Resources for the Creative Musician. Guideline for use of this text for music educators. The Tonal Resources for the Creative Musician text is available as a coordinated series for concert, "Eb" and "Bb" instruments, bass clef and guitar.

ESSENTIALS OF MODERN GUITAR © Outlines the progressive "evolution" of fundamental musical sounds and colors into the modern improvisers language from the theoretical and physical planes for guitar, 175 pages.

CHORD MELODY GUIDE / JAZZ PERFORMANCE SERIES © Musical arrangements of Jazz "standards". Measure by measure melodic and harmonic analysis. Supplemental text for both the Tonal Resources for the Creative Musician and Essentials of Modern Guitar texts, 100 pages.

TONAL RESOURCES
for the
CREATIVE MUSICIAN ©

by

JOE CRAIG

BEGINNING FUNDAMENTALS THROUGH ADVANCED CONCEPTS

INSTRUCTIONAL WORKBOOK FORMAT

ESSENTIAL INFORMATION FOR INTERNALIZING THE "IMPROVISERS" LANGUAGE

THEORETICAL EXPLANATIONS FOR:

SCALE THEORY / APPLICATION

CHORD THEORY / APPLICATION

MELODIC SUBSTITUTION / APPLICATION

CHORD SUBSTITUTION / APPLICATION

RHYTHM / BLUES / PERFORMANCE CONSIDERATIONS

SUPPLEMENTAL TEXT OF JAZZ STANDARDS

BIBLIOGRAPHY AND DISCOGRAPHY OF ESSENTIAL MATERIALS FOR THE "IMPROVISING" MUSICIAN

MADE IN ALASKA