

# Jazz Theory I

*5th edition*

by

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### Theory II Subject

Diminished Scales

Minor Key

Modal Interchange

Special Dominant

$\#IV-7(b5)$

Deceptive Resolution

Compound Chords

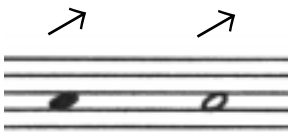
# Notation

- Notation is the most profound communication tool between the composer and the performer. If the music is not notated clearly, the performer will fail to sight read. The composer, most likely, has to be present at the rehearsal, and the performer will demand more payment for the over work. On the other hand, if the music is written perfectly clear, the performer will be blamed for a bad performance. As most of the college assignments will not accept hand written paper, this class requires basic notation skill by hand. The assignments done by unreadable hand writing or notated by computer will not be graded.
- Basically, a right up angle of 30° should be kept in mind. This angle is the maximum and/or comfortable angle to the sight reader's eyes.

**TIP** Unlike written language, music notation is very psychological to the sight reader. You must pretend to be a performer reading the music for the first time, trying to get all the necessary information (tempo, dynamics, articulations, etc.) as quick as possible.

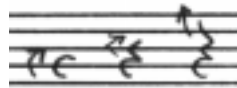
- **Note Head**

30° right up angle.



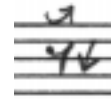
- **Quarter Rest**

Starts from the bottom. Note that the starting circle is on the 2nd line.



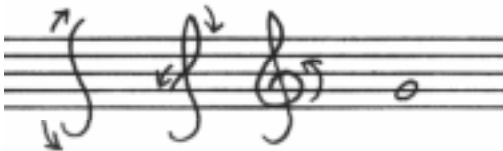
- **8th Rest**

Should fit between the 2nd and the 4th line.



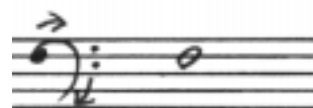
- **Treble Clef (G Clef)**

Starts from the bottom, should make a sharp top, and circle the note G.



- **Bass Clef (F Clef)**

Starts from circling the note F (4th line).



- **Stem**

The length of the stem is an 8va. The direction of the stem switches at the 3rd line.



- **Flag**

The direction of the flag is the same side of the note head, going down, and up.

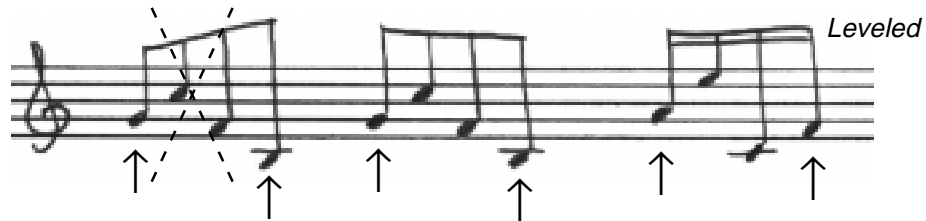


- **Important:** Each ledger must be the same size as the staff space. If the ledger lines are more than two, the length of the stem is extended to the 3rd line.

- **The Beam Angle**  
Should not exceed 30°.

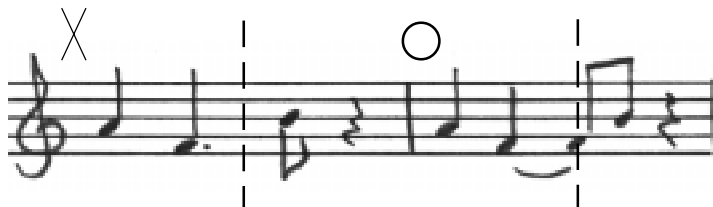


- The direction of the beam is decided by the first and the last note. However, it is better to use a leveled one when many notes in the beam are distant.



- **Imaginary Bar Line**  
An imaginary bar line is a line drawn in the middle of a measure that has a time signature in even beats (2/4, 4/4, 6/8, 12/8 etc.). It is a sub-division of a bar.

The dotted quarter on the 2nd beat crosses the Imaginary bar line which makes it harder to read. The sight reader will not be able to tell the time signature of the piece without going back to the top of the piece. Therefore, it must be written as shown in the 2nd bar.

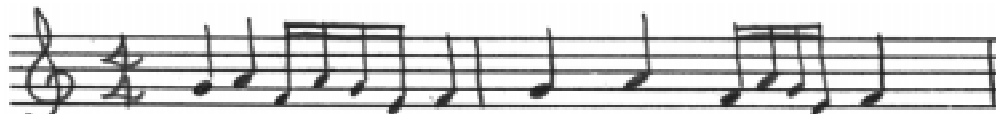


Exception to this rule is when the note value is bigger than 2 beats (half note in this case), because it is not as difficult to identify the imaginary bar line in sight reading.

- **Space**  
Spacing is one of the biggest issues. If each note is not spaced in relation to the others, the sight reading will not be easy.



The example on the first measure here makes sight reading almost impossible. You have to rewrite it as in the 2nd measure.



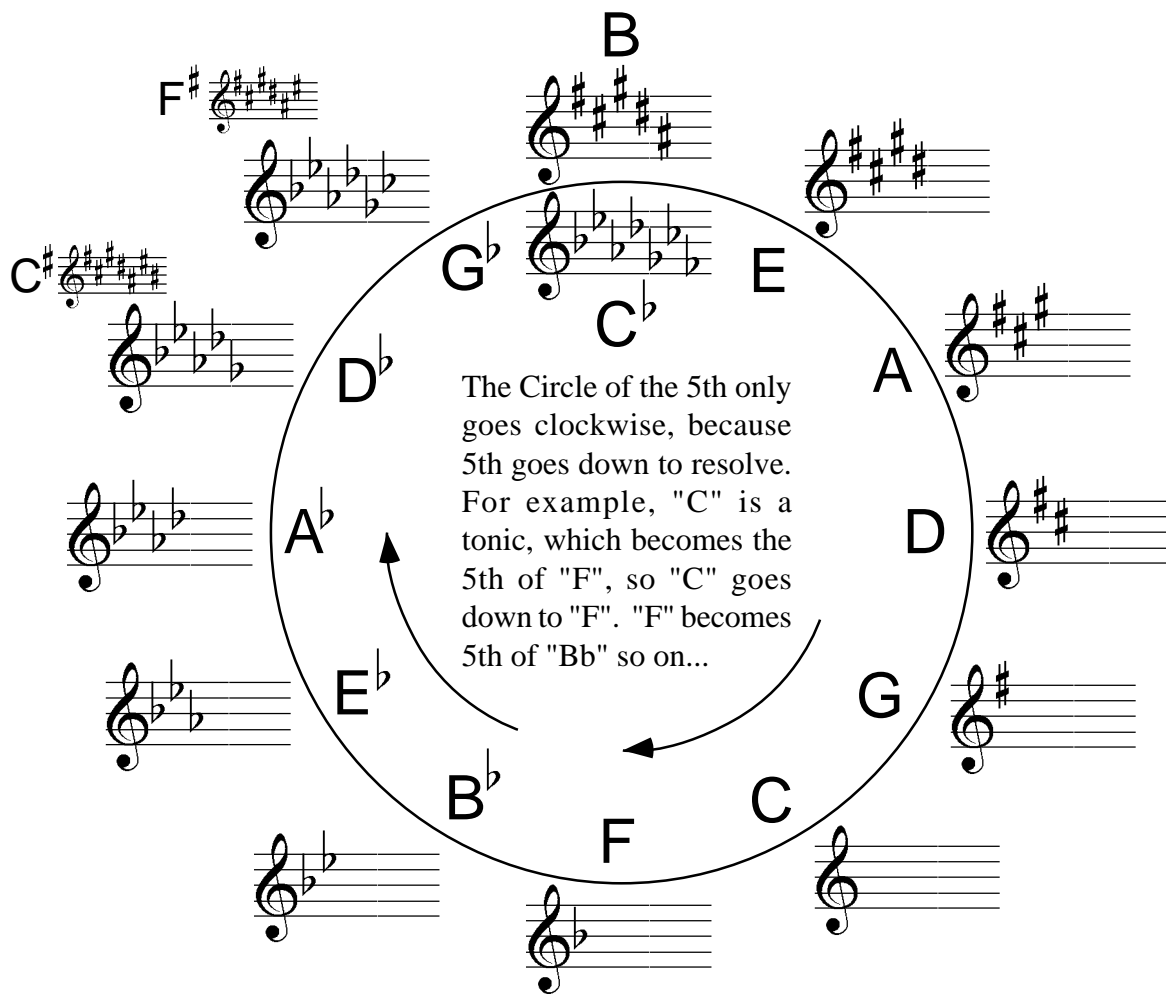
# Class Restriction (the big rules)

- \* The neat manuscript skill is required as described in page 2 and 3.
- \* When the Interval is asked verbally, the prefix must always be said along with the number. For example, 7th will not have any meaning if Major, minor or other prefixes are not attached.
- \* "-" sign must be used for chord tones, -3rd and -7th, while "b" sign is used for tensions, b9th and b13th.  
"Aug" and "dim" sign must be used for chord tones, Aug5th and dim5th, while "#" sign is used for tensions, #9th and #11th.
- \* The Chord spelling must follow the class rule as shown below:

	Never in this class	Prefered very much in this class
Major	X CM7 X CΔ7	CMaj7
minor	X Cm7	C-7
minor 7th with flatted 5th <i>Never "Half Diminished"! There is no diminish function.</i>	X Cø7	C-7(b5)
Augumented	X C+7	CAug7
diminished	X Co7	Cdim7
Chord with tensions	X C7 b9,b13	C7(b9 <sup>b13</sup> )

# Key Signature

## Circle of the 5th



b	<p>P5th Down</p> <p>B<sup>b</sup> — E<sup>b</sup> — A<sup>b</sup> — D<sup>b</sup> — G<sup>b</sup> — C<sup>b</sup> — F<sup>b</sup></p>
#	<p>P5th Up</p> <p>F<sup>#</sup> — C<sup>#</sup> — G<sup>#</sup> — D<sup>#</sup> — A<sup>#</sup> — E<sup>#</sup> — B<sup>#</sup></p>

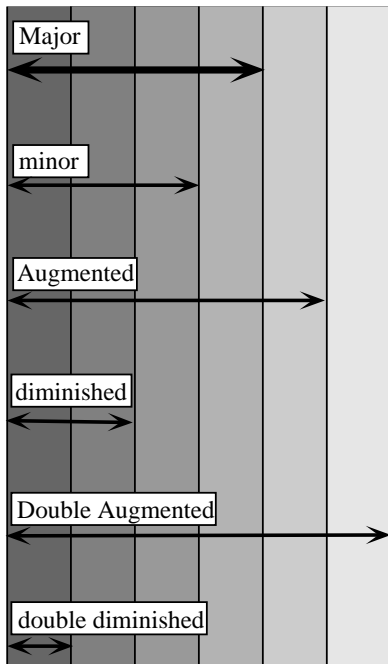
# Intervals

# Intervals

C Major Scale Starting from the Tonic	
Major 2nd	No Spot
Major 3rd	No Spot
Perfect 4th	1 Spot
Perfect 5th	1 Spot
Major 6th	1 Spot
Major 7th	1 Spot
Perfect 8th	2 Spots

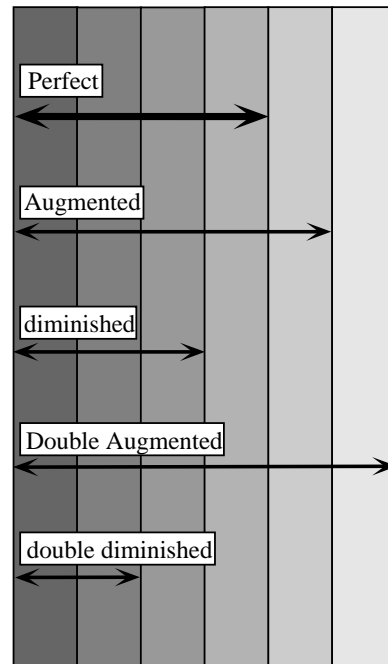
If the interval is 2nd, 3rd, 6th, and 7th, use this chart.

One level = Half Step



If the interval is 4th, 5th, and 8th, use this chart.

One level = Half Step



• **How to get the correct interval with no screw-ups**



Lets find the interval shown here, step by step as shown below.



1. Hide any accidentals.



2. Use your fingers to count the distance.

E	F	G	A	B	C	D	E	F	G
1	2	3	4	5	6	7	8	9	10

Now you know the interval is some kind of 10th. When you count, do not forget to include the first note.



Write down the number **NOW**.

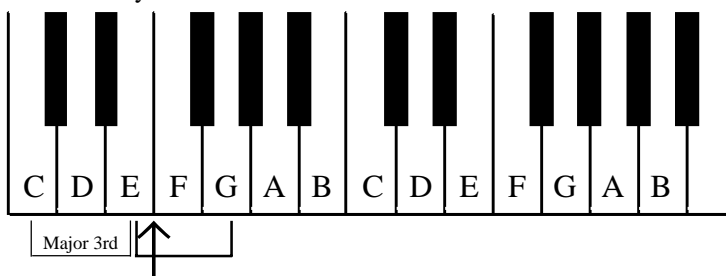
( 10th)

3. Since this is more than an octave away (the number is greater than 8), you have to take the top note down an octave in order to find the kind (Major, Perfect, etc.) or it will not fit with the chart shown on page 6.



Now this is a 3rd that will fit in the chart. The third is the Major-minor group, not the Perfect group. So, is this Major or minor?

Lets use the keyboard chart.



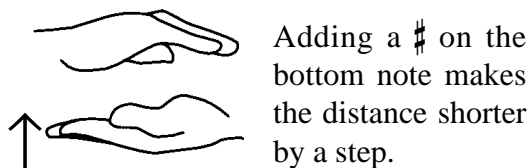
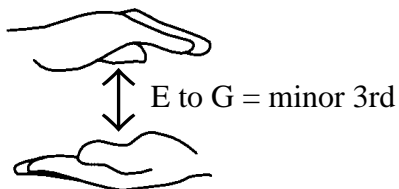
According to the chart on page 6, C to E is a Major 3rd and does not have the Spot (where the black key is missing). But E to G has the Spot, which tells you the interval is a step shorter than Major 3rd. Therefore, it is a minor 3rd.

4. Put the accidental back in.

**From here on, forget the keyboard.**



Use both of your hands vertically, and add the accidental.



• Now you know the answer is a diminished 10th. Easy!.

***\* The MORE Spots, the SMALLER the Interval. The Fewer Spots, the BIGGER the interval.***

# Chord

The definition of a chord is two or more notes in a certain interval away vertically. To be a tonal harmonic chord, the root and the 3rd are essential.

## Diatonic Triads

**Major Triad** (CMaj): Shows intervals of M3rd and P5th.

**minor Triad** (A-): Shows intervals of -3rd and P5th.

**Augmented Triad** (Eaug): Shows intervals of M3rd and Aug5th.

**diminished Triad** (C#dim): Shows intervals of -3rd and dim5th.

## Seventh Chord

**Major Seventh** (CMaj7): Shows intervals of M3rd, P5th, and M7th.

**minor Seventh** (A-7): Shows intervals of -3rd, P5th, and -7th.

**Dominant Seventh** (G7): Shows intervals of M3rd, P5th, and -7th.

**minor Seventh (b5)** (B-7(b5)): Shows intervals of -3rd, dim5th, and -7th.



Chord Tone & Tension (references)

C Major Scale

Root (1)    T9th    3rd    (4)    5th    13th    M7th

A minor Scale

Root (1)    T9th    -3rd    T11th    5th    b6th    -7th

G Dominant Scale

Root (1)    T9th    3rd    (4)    5th    T13th    -7th

CMaj7(#5)	Cdim7	CMaj6	C <sup>9</sup> <sub>6</sub>	C-6	C-(b6)
M7th	dim7th	M6th	M9th	M6th	-6th
Aug5th	dim5th	P5th	M6th	P5th	P5th
M3rd	-3rd	M3rd	P5th	-3rd	-3rd
Root	Root	Root	M3rd	Root	Root
			Root		

CMaj9	C-9	G7(b9)	G7(b13)	G7(#9)	C-(11)
M7th	-7th	Root	M3rd	T.Aug9th	-3rd
P5th	P5th	P5th	M3rd	-7th	-7th
M3rd	-3rd	M3rd	Root	P5th	T.P11th
T.M9th	T.M9th	T.-9th	T.-13th	M3rd	Root

# Inversion

- **Chord: Root Position and Inversion**

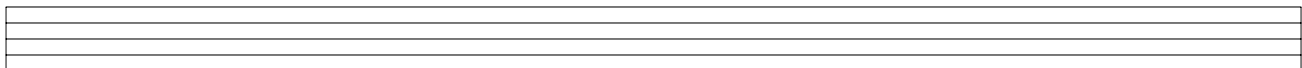
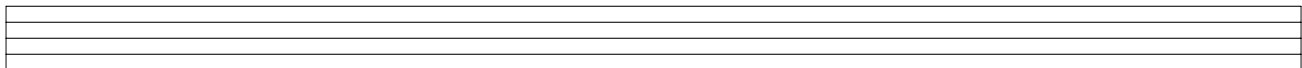
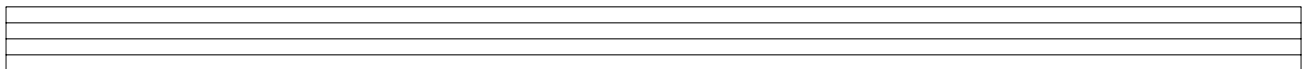
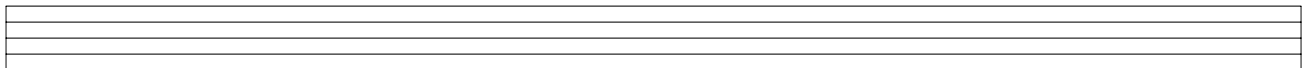
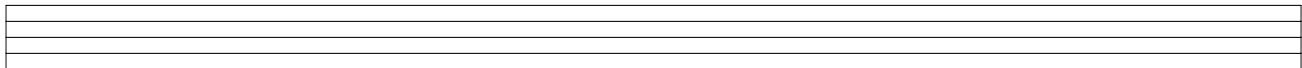
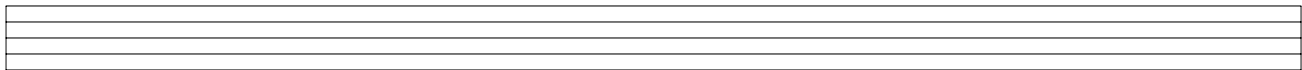
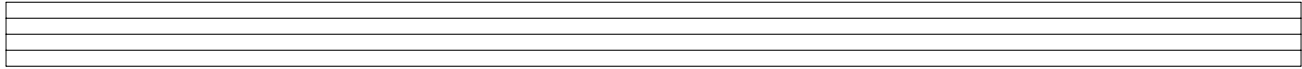
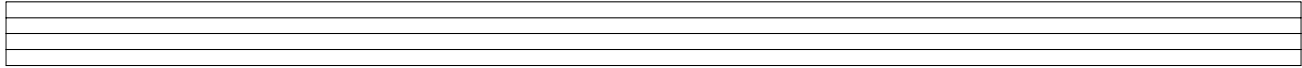
Almost every type of chord is formed with a rule. That is, if the root is on the staff line, the rest of the chord tones above it will also be on the line. Similarly, if the root is in the staff space, the rest of the chord tones above it will also be in the space. Therefore, whenever you see a chord formed with notes that are a mix of on the line and in the space, you should assume the chord is an Inversion.

- Examples shown below contains C $\flat$ , F $\flat$ , and B $\sharp$ . Those spellings are necessary to find the root of the chord.

- Likewise, all the tension notes must be written in the same rule to be a root positioned chord.

- Diminished chords are the ones you need to spell correctly, or you may never find the right scale.

- **Exception** is Six and/or Six Nine chords. Though usually, the Six chords are regarded as a type of inversion.



# Church Mode

Parent Key: C Major

Transposed to C Root

	C Ionian	C Ionian
Ionion I Maj7		
Dorian II-7		
Phrygian III-7		
Lydian IV Maj7		
Mixo-Lydian V7		
Aeolian VI-7		
Locrian VII-7(b5)		

[x=Avoid Note]

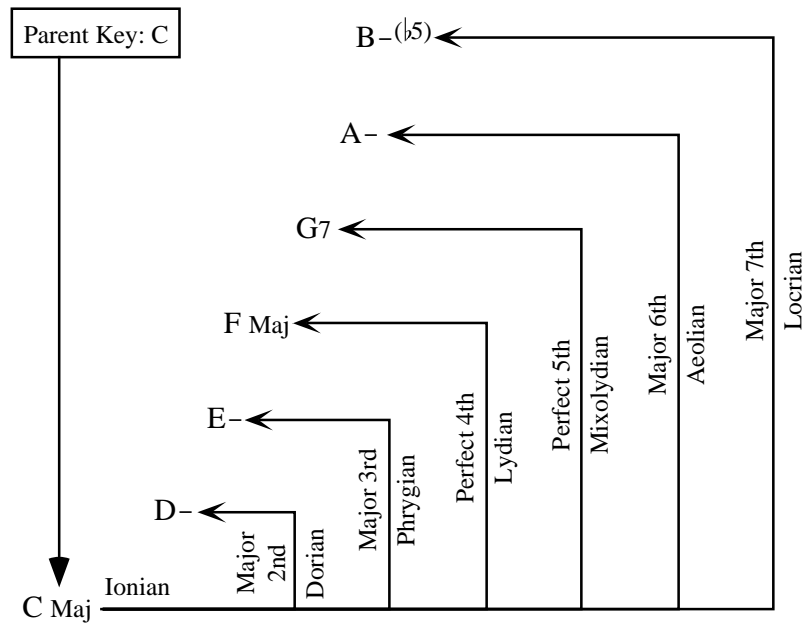
\*Note: The 6th note of Dorian becomes Avoid Note only when it is followed by V7 chord of the key, because the note will create Tritone with the -3rd, which will be a duplicate of the Tritone following V7 has.

## C Major Diatonic Chords

Diatonic Chords are chords built on each of the scale notes within the same key. Therefore, no note will have accidentals except melodic and harmonic minor scale.

C Maj7	D-7	E-7	F Maj7	G7	A-7	B-7(b5)
Ionian	Dorian	Phrygian	Lydian	Mixolydian	Aeolian	Locrian

- **How to get the correct mode scale with no screw-ups**



- Lets find the correct scale for  $E\flat$  Aeolian using the chart above. First, write out the notes across an octave from E to D (ignore the  $\flat$  at this point).



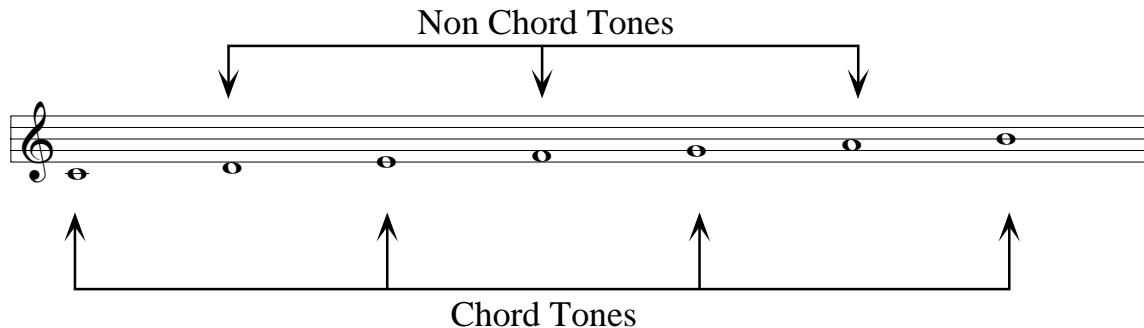
- Next, using the chart above, find the Parent key for  $E\flat$  Aeolian. The Aeolian is located at the Major 6th above the Parent key. You will get  $G\flat$  Major going down a Major 6th from  $E\flat$  as the Parent key.
- Apply the key signature of  $G\flat$  Major to the scale above. The key signature for  $G\flat$  Major is  $B\flat-E\flat-A\flat-D\flat-G\flat-C\flat$ .



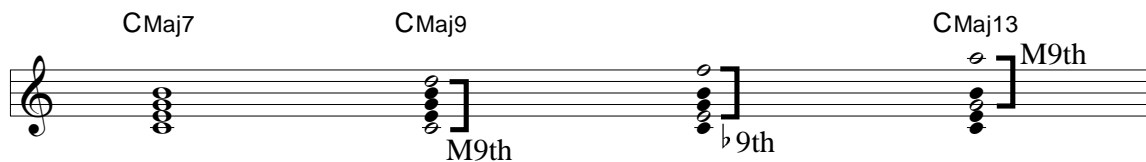
- This is the  $E\flat$  Aeolian scale. Easy, Isn't it?!

## Tension

- \* Tension notes are notes other than chord tones that can be placed 8va above the chord, yet will not create  $\flat 9$ th interval from one of the chord tones. If the note creates the  $\flat 9$ th interval from one of the chord tones, the note becomes a scale note rather than a tension note.



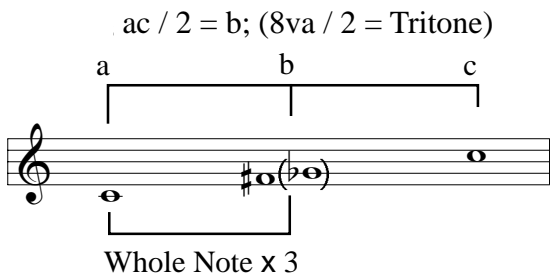
## Avoide Note



- \* The example above shows that each one of the non chord tones from the C Ionian scale can be placed above the chord, except the 4th note. The scale note 2nd (D) becomes Tension 9th, and the scale note 6th (A) becomes Tension 13th. The scale note 4th (F), however, will create  $\flat 9$ th interval from the chord tone 3rd (E). Therefore, the 4th note in a Ionian scale becomes an Avoid Note, which is identified by writing with a parenthesis, like (4), and is called "The scale note 4".
- \* The  $\flat 9$ th interval is the most dissonant interval that will destroy a sense of quality of the chord. In the example above, as soon as the note F is played over C Maj chord, it destroys a sense of Major harmony.
- \* The definition of the Avoid Note is;
  - 1) Do not start with.
  - 2) Do not hold with.
  - 3) Do not end with.

Note that in general, passing the Avoid Note with a value smaller than an 8th note will not create any effect. Occasionally, even the beat value (i.e., quarter note in 4/4) is acceptable if the note is placed on the weak beat (i.e., 2nd and 4th beat in 4/4).

**Tritone**

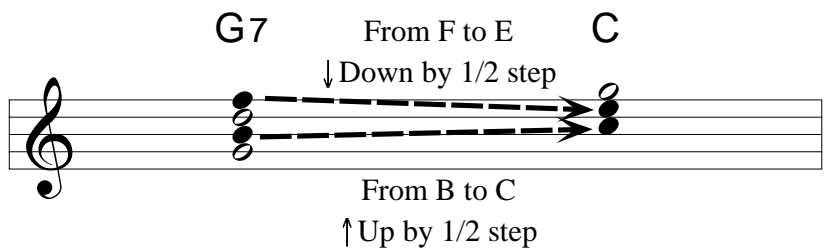


\* The word Tritone originally came from the interval built with three whole tones. However, it is often talked about as the three points within an Octave: the bottom note (a), the top note (c) and the very mid point note (b). Since the Medieval Era, this interval was often called "The Devil's interval" because of the difficulty in performance. Since this interval must be exact mid point of an Octave, the enharmonic spelling will not matter.

\* The real importance of the Tritone interval is as follows:  
 The Tritone interval is the most unstable interval to the human ear, and it wants to be resolved. In other words, this interval will not create a stable sound for use as a stand-alone chord. If this interval is used in the end of a music, it will never sound a sense of complete release. Note that it became more popular to purposely use the Tritone to make an unstable impression in this century.

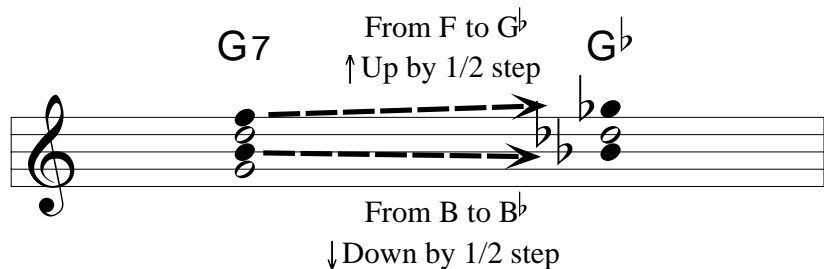
**The Primary Resolution (Inward resolution)**

Tritone goes inward to resolve to the root and the third of the target chord. The chord itself resolves down from G7 to C by Perfect 5th.



**The Secondary Resolution (Outward resolution)**

Tritone goes outward to resolve to the root and the third of the target chord. The chord itself resolves down from G7 to G $\flat$  by minor 2nd.







\* As seen in the example, an Altered Mixolydian scale is a result of a superimposed Substituted Dominant scale.

G Mixolydian (parent Key: C)



D $\flat$  Mixolydian (parent Key: G $\flat$ )



G Altered Mixolydian  
(D $\flat$  Mixolydian Superimposed  
over G Mixolydian)



D $\flat$  Lydian $\flat$ 7th  
(Raised 11th in order to maintain  
the substitute function)



- There are few important points that must be remembered:
  - 1) ONLY on a Dominant chord is a  $\flat$ 9th interval allowed for the non-chord tones, because Tritone is stronger than the  $\flat$ 9th dissonance effect.
  - 2) The 4th note of the Mixolydian (includes any kind of tension notes) is ALWAYS the Avoid Note, because the 4th note is the root of the target chord. Tritone must maintain the wanting to resolve, so it cannot anticipate the target.
  - 3) Note that the tension 9th splits to  $\flat$ 9th and  $\sharp$ 9th as a result of superimposing the Substituted Mixolydian.

V to I motion

G7      C      Altered Mixolydian (Commonly called; Altered Scale)

R(1)   T $\flat$ 9th   T $\sharp$ 9th   3rd   (4)    $\flat$ 5th   T $\flat$ 13th    $\flat$ 7th

subV to I motion

D $\flat$ 7      CMaj7      Lydian $\flat$ 7th (Mixolydian with  $\sharp$ 11th)

R(1)   T9th   3rd   T $\sharp$ 11th   5th   T13th    $\flat$ 7th

## Melody Analysis

\* This is jazz specific, while classical music theory explains further.

C7

T9th R 3rd  $b7th$  T9th R 5th

C7

5th (4) 3rd  $b7th$  T9th R 5th

C7

1/2 step  $\uparrow$   
C7 1/2 step  $\uparrow$

T9th Pass. 3rd  $b7th$  T9th R 5th

C7

1/2 step  $\uparrow$

5th App. 3rd  $b7th$  T9th R 5th

C7

1/2 step  $\uparrow$  1/2 step  $\downarrow$

T9th R 3rd W.App. R 5th  
App.

C7

B7

$b7th$   $b7th$  T $b13th$

C7

B7

$b7th$   $b7th$  T $b13th$   $b5th$

\* Analyzing melody is done by numbering each note according to the mode (C Mixolydian, in this example).

### An Avoid Note

An Avoid Note is one of the Scale Notes as explained before, so it will be marked accordingly. In this example, the 4th note is the Avoid Note to the Mixolydian. Therefore, it will be marked as (4), which indicates it is one of the Scale Notes.

### A Passing Note

Passing Note is a note located between the notes from the mode. A Passing Note must be preceded by a 1/2 step, and followed by a 1/2 step as well. Note that D# in this example is not T#9th because the Passing Note function is obvious.

### An Approach Note

An Approach Note, unlike a Passing Note, is a note that is followed by a note from the mode by a 1/2 step. Note that D# in this example is not T#9th because the Approach Note function is obvious.

### An Double Approach Note

An Double Approach Note is a note that is followed by an Approach Note. Note that a Double Approach note must have the opposite direction of an Approach Note by a whole step.

### Anticipation

Anticipation is defined by a value smaller than the beat value (i.e., Quarter Note in 4/4). In this first example, if the note A is a quarter note placed on 2 instead of an 8th note on the end of 2, it becomes T $b13th$  against C7, and will be changed to  $b7th$  on beat 3 even though the note is tied over.

The second example shows that the Anticipation appears followed by a rest. It is easier if the imagination is used to hear the ring of the note over the rest.

# Melody Analysis Exercise

\* Number each note according to the chord.

A

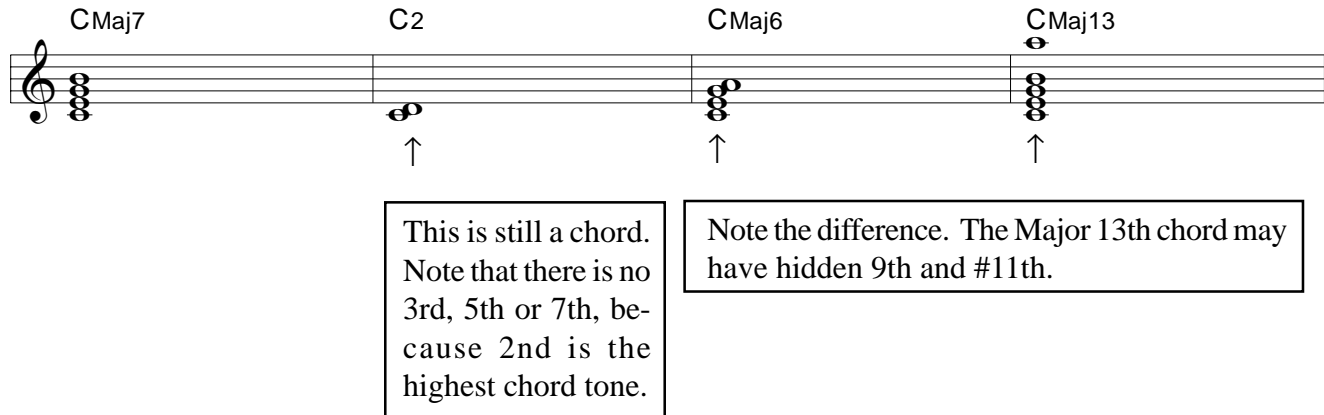
*Yardbird Suite by Charlie Parker*

B

A'

## Summary of Chord and Tension

- The definition of a Chord is any combination of more than one note piled up vertically.
- The definition of Tension is one of the non-chord tones from the scale (including the church mode scales), and can be placed an octave above the chord and yet does not create  $\flat 9$ th interval with any one of the chord tones. However, the  $\flat 9$ th violation will not affect the dominant chord which Avoid Note is always (4).



CMaj7                      C2                      CMaj6                      CMaj13

This is still a chord. Note that there is no 3rd, 5th or 7th, because 2nd is the highest chord tone.

Note the difference. The Major 13th chord may have hidden 9th and #11th.



C-7                      C-6                      C-( $\flat 6$ )                      C-7(13)

- As shown above, the number attached to the chord name indicates the available tensions. In 6 chord, because 6 is the highest number, 7th, 9th, 11th, and 13th will not be available in the strict sense in theory. However, composers often write 6 chord to prohibit only 7th. Especially in Major chord, Major 7th chord cannot be used if the melody is the root. Because the melody always sounds an 8va above the chord no matter what the actual range of the note is, it will sound the violation with the  $\flat 9$ th interval. Even though the melody is played in a close range on the same harmony instrument, it will still be weak sounding by a 1/2 step above the M7th of the chord. Thus, when the melody is the root of the chord, M6th or 6/9th chord must be used to maintain the integrity of the melody.
- The minor  $\flat 6$ th chord in the example above may be easier if treated as an inversion of  $A\flat$ Maj7 chord. However, spelling this chord this way maintains minor quality which affects the performance, and indicates Aeolian mode as well.
- Important Chord spelling rule:  
If a number appears with no prefix (i.e., C9, C13), it is a dominant chord; while the Maj sign must be used to indicate a Major chord (i.e., CMaj9, CMaj13), except on 6 chord, which does not need any prefix to identify whether Dominant or Major because 6 chord is prohibited to have 7th note which is needed to create Tritone in the dominant chord, and therefore it will never be a dominant chord.

# Diatonic Functioning Chord

## Basic Cadence

T - SD - T

CMaj7 FMaj7 CMaj7

T - D - T

CMaj7 G7 CMaj7

T - SD - D - T

CMaj7 FMaj7 G7 CMaj7

CMaj7 D-7 E-7 FMaj7 G7 A-7 B-7<sup>(b5)</sup>  
T SD T SD D T D

T = Tonic Function      SD = Subdominant Function      D = Dominant Function

### Tonic Functioning Chords

III- (E-7) is I Maj9 without the Root.  
VI- (A-7) is Inverted I Maj6

CMaj<sup>(13)</sup> E-7 A-7

### Subdominant Functioning Chords

II- (D-7) is Inverted IV Maj<sup>(13)</sup>.

FMaj<sup>(13)</sup> D-9

### Dominant Functioning Chords

VII- (B-7<sup>(b5)</sup>) is V7 without the Root.

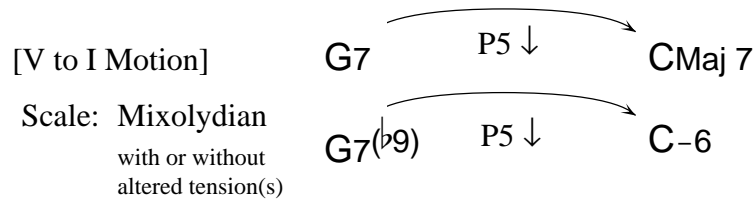
G7<sup>(9)</sup> B-7<sup>(b5)</sup>

Note: In jazz theory, -7<sup>(b5)</sup> will not substitute the dominant even though it contains Tritone. This chord is a member of minor chords, instead (i.e., II degree in a minor key).

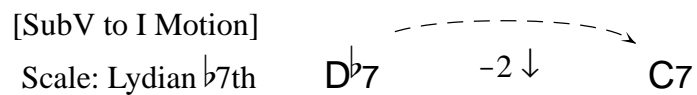
# Analysis

## Find all the Dominant Chords first

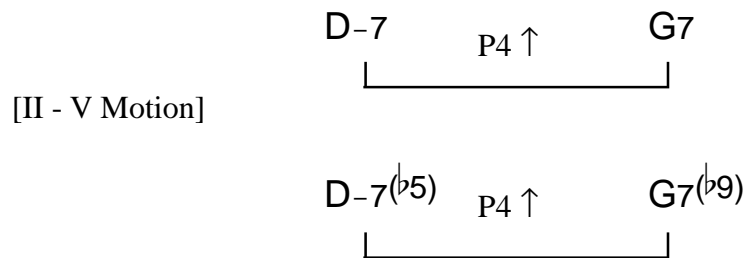
- When you see a set of progression:  $\_7$  (any Dominant 7th, including altered tension(s)) going **down Perfect 5th** to any kind of chord, draw an arrow.



- When you see a set of progression:  $\_7$  (any Dominant 7th, including altered tension  $\#11$ th) going **down minor 2nd** to any kind of chord, draw a dotted arrow. (See page 13 for the scale)



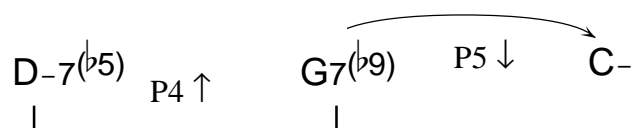
- When you see a set of progression:  $\_ -7$  (any minor, including  $\_ -7(\flat 5)$ ) going **up Perfect 4th** to  $\_7$  (any Dominant 7th, including altered tension(s)), draw a bracket.



### Complete Major II - V - I



### Complete minor II - V - I



# Harmonic Rhythm

- Harmonic Rhythm is a division line in music that evenly divides the section. I.e., a 32 bars music form is divided in 16 bars x 2, the 16 bars section will be divided in 8 bars x 2, the 8 bars section....., a measure in 4/4 is divided in 2 beats x 2...., and so on.
- Harmonic Rhythm creates a sense of section which affect melody as well as chord changes.
- Note that the Blues form differs in division. The 12 bars form could have been divided into 6 bars each, but the 6 bars section cannot be divided into 3 bars each because it is an odd number. Therefore, the Harmonic Rhythm in a 12 bars Blues form is 4 bars x 3.
- In most of the standard jazz music, which written in a 32 bars form, the Harmonic Rhythm subdivision is 8 bars x 4, because most common form styles are "A-A-B-A" and "A-B-A-C".

32 bars form	A(A)	4	4
	A(B)	4	4
	B(A)	4	4
	A(C)	4	4

- \* **IMPORTANT:** Note that any of the dominant functions are not affected when it appears within Harmonic Rhythm; However, II - V motion are affected. As shown in the examples , if the II - V motion is seen across the Harmonic Rhythm division, it will never sound II - V motion.

In both examples, E-7 will sound an extension of CMaj7 because E-7 is a tonic functioning diatonic chord. Therefore, it will not be analyzed with a bracket.

# Secondary Dominant

- Secondary Dominant Chords are non-diatonic dominant chords that resolve to a diatonic chord. V7 chord is already a diatonic chord, so it is called primary dominant chord. IV7 is not a Secondary Dominant Chord, because expected destination (Perfect 5th down) is a  $\flat$ VII, which is not a diatonic chord. However, it may be considered as a  $\text{SubV7}$  chord which resolved to III-7 (minor 2nd down), so it could be analyzed as  $\text{SubV7/III}$ .

C

CMaj7      D-7      E-7      FMaj7      G7      A-7      B-7( $\flat$ 5)

$\text{V7/II}$        $\text{II-7}$        $\text{V7/III}$        $\text{III-7}$   
 A7      D-7      B7      E-7

$\text{V7/IV}$        $\text{IVMaj7}$        $\text{V7/V}$        $\text{V7}$   
 C7      FMaj7      D7      G7

$\text{V7/VI}$        $\text{VI-7}$        $\text{V7/VII}$        $\text{VI-7}(\flat 5)$   
 E7      A-7      F#7      B-7( $\flat$ 5)



- Available Scale for Secondary Dominant Chords.

V<sup>7</sup>/II A7 Mixolydian  $\flat 13$  (see the option below)

R T9 3 (4) 5 Tb13 b7

V<sup>7</sup>/III B7 Mixolydian  $\flat 5, \flat 9, \flat 13$  (Can be Altered Mixo with  $\sharp 9$  added)

R Tb9 3 (4) b5 Tb13 b7

V<sup>7</sup>/IV C7 Mixolydian

R T9 3 (4) 5 T13 b7

V<sup>7</sup>/V D7 Mixolydian

R T9 3 (4) 5 T13 b7

V<sup>7</sup>/VI E7 Mixolydian  $\flat 9, \flat 13$

R Tb9 3 (4) 5 Tb13 b7

V<sup>7</sup>/VII F $\sharp$ 7 Mixolydian  $\flat 5, \flat 9, \flat 13$  (Can be Altered Mixo with  $\sharp 9$  added)

R Tb9 3 (4) b5 Tb13 b7

- It is very common to see V<sup>7</sup>/II with Tb9. This is because II-7 is assumed as a I-7 momentary, so the key signature of that assumed minor will apply, which is  $\flat 9$  to V<sup>7</sup>/II. This option will not occur with any other Secondary Dominant Chord.

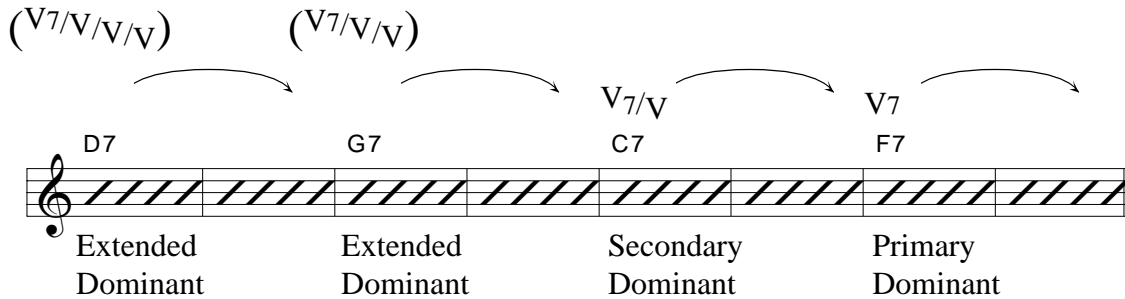
V<sup>7</sup>/II A7 Mixolydian  $\flat 9, \flat 13$

R Tb9 3 (4) 5 Tb13 b7

# Extended Dominant

Scale: Mixolydian

- Extended Dominant Chords are dominant chords in a pattern of Circle of 5th which eventually reaches to a target. The changes shown below are typical Rhythm Changes bridge in B $\flat$ . The target chord after this section is B $\flat$  Maj7, which is I Maj7.



- Note that the Roman Numeral Analysis is usually not applicable to the Extended Dominant Chords. However, this class will apply them with Parentheses as shown.



*Left:* **Hiro Honshuku** with **Dave Liebman** and **Tiger Okoshi** at Live House RAG.

*Bottom:* **Honshuku** with his Boston Blazing Orchestra and **Mike Stern**.



# Related II-

- Any dominant chord can be preceded by a minor chord, which is a P4th below the dominant chord. This is because the dominant chord is assumed as a V7 no matter where it is resolving to, so the added minor chord becomes a II- chord as the relationship. Therefore, the Roman numeral analysis are not applied, but brackets are needed.
  - Shown below is the bridge of Rhythm Changes and an arrangement applied with related II- chords. This kind of re-harmonization was common during the Be-Bop Era.

The image shows two staves of music for the bridge of Rhythm Changes. The top staff is the original arrangement with chords D7, G7, C7, and F7. The bottom staff shows a re-harmonized version with chords A-7, D7, D-7, G7, G-7, C7, C-7, and F7. Arrows and brackets indicate the relationships between the original and re-harmonized chords, including V7/V and II-7 substitutions.

- The example shown below is Autumn Leaves, and its arrangement. Note that the target is completely ignored and replaced with a sequence of <sup>sub</sup>V7 and its related II-7.

The image shows two staves of music for Autumn Leaves. The top staff is the original arrangement with chords C-7, F7, BbMaj7, EbMaj7, and A-7(b5). The bottom staff shows a re-harmonized version with chords C-7, F7, B-7, E7, Bb-7, Eb7, A-7(p5), and D7(p9). Roman numerals and brackets indicate the relationships between the original and re-harmonized chords, including subV7/V and II-7(b5) substitutions.

# PEACE

Horace Silver

G- II-7(b5) V7(b9) F II-7 V7  
 A-7(b5) D7(b9) G-7 C7

1 2

Bb <sup>b</sup>II Maj7 II-7(b5) V7(#9) I Maj7 A II-7 V7  
 BMaj7 Bb- C-7(b5) F7(#9) BbMaj7 B-7 E7

3 4 5

I Maj7 (I Maj7) VI-7 (VI-7) Db II-7(b5) SubV7 I Maj7  
 AMaj7 A/G# F#-7 F#-/E Eb-7(b5) D7(#11) DbMaj7

6 7 8

Bb n/a SubV7 I Maj7  
 C7(#11) B7(#11) BbMaj7

9 10

## PEACE

Horace Silver

B $\flat$  VII-7( $\flat$ 5) V7( $\flat$ 9)/VI VI-7 V7/V  
 A-7( $\flat$ 5) D7( $\flat$ 9) G-7 C7

1 2

$\flat$ II Maj7 II-7( $\flat$ 5) V7( $\sharp$ 9) I Maj7  
 BMaj7 C-7( $\flat$ 5) F7( $\sharp$ 9) B $\flat$ Maj7 B-7 E7

3 4 5

- The analysis shown on page 22 is a way for improvisation, which is not quite correct in the sense of strict theory. These complicated changes in the beginning are landing on bar 4. One reason is that the 4th bar will sound strong as a target to the human sense. Another reason is that all of the changes will not sound too far away from key in B $\flat$  Major. Therefore, if all of the progressions of the first 4 bars are analyzed as in key in B $\flat$  Major, it will be shown above. This analysis is done using a technique called Modal Interchange, which will be explained later in this book. When you are improvising, it is necessary to see the quick momentary key changes in order to make effective solo line. When you are composing, it is necessary to use a related change to get to a landing key.

## Analysis (cont.)

- Available Scale for "PEACE".

A-7(<sup>b</sup>5)      D7(<sup>b</sup>9)      G-7      C7  
 Loc      Mixo <sup>b</sup>9      Dori      Mixo

Note: When this is analyzed as VI-7 as theory suggests, Aeolian should be used instead. As matter of fact, if this piece is played slow using Aeolian rather than Dorian, it will sound more effectively.

BMaj7      C-7(<sup>b</sup>5)      F7(<sup>#</sup>9)      B<sup>b</sup>Maj7  
 Lyd      Loc      Mixo <sup>#</sup>9      Ion

B-7      E7      AMaj7      F<sup>#</sup>-7  
 Dori      Mixo      Ion      Aeol

E<sup>b</sup>-7      D7(<sup>#</sup>11)      D<sup>b</sup>Maj7      C7(<sup>#</sup>11)  
 Dori      Lyd <sup>b</sup>7      Ion      Lyd <sup>b</sup>7

B7(<sup>#</sup>11)      B<sup>b</sup>Maj7  
 Lyd <sup>b</sup>7      Ion

# Summary of Analysis

- When you are asked to analyze a tune in the class, the steps shown below are required

1. Arrow and Bracket Analysis, and the Key of the Moment indication with the box.

C CMaj7 A-7 D7 G7 CMaj7 FMaj7 G7 E-7 A7 D-7

2. Roman Numeral Analysis and Mode (Scale) Analysis.

I Maj7	VI-7	V7/V	V7	I Maj7	IV Maj7	V7	III-7	V7/II	II-7
Ion	Aeo	Mixo	Mixo	Ion	Lyd	Mixo	Phry	Mixo	Dori
							$\flat 9, \flat 13$		

C CMaj7 A-7 D7 G7 CMaj7 FMaj7 G7 E-7 A7 D-7

3. Indication for M.I.(Modal Interchange) and/or D.R.(Deceptive Resolution) if applicable.

I Maj7	VI-7	V7/V	V7	I Maj7	IV Maj7	V7	III-7	V7/II	II-7
Ion	Aeo	Mixo	Mixo	Ion	Lyd	Mixo	Phry	Mixo	Dori
							$\flat 9, \flat 13$		

C CMaj7 A-7 D7 G7 CMaj7 FMaj7 G7 E-7 A7 D-7

**D.R.**

4. Scale Degree Analysis.

I Maj7	VI-7	V7/V	V7	I Maj7	IV Maj7	V7	III-7	V7/II	II-7
Ion	Aeo	Mixo	Mixo	Ion	Lyd	Mixo	Phry	Mixo	Dori
							$\flat 9, \flat 13$		

**D.R.**

C CMaj7 A-7 D7 G7 CMaj7 FMaj7 G7 E-7 A7 D-7

# Project

- **Write a piece using the technique you have learned**

- 32 bars form recommended.
- Two types of the conventional forms are recommended.
  - 1) **A - A - B - A**  
i.e.; "Take The A Train"
  - 2) **A - B - A - C**  
i.e.; "The Days Of Wine And Roses"

If you are sure you can make unconventional form musically, it is acceptable as long as you know what you are doing.

I.e.; "Peace", "Blue In Green"

No Blues please.

- **Check Points**

- **Notation**  
Neatness, Imaginary bar line, Beats positioning, Accidentals, Ending bar line, Beaming, Clef and so on.
- **Scale notes**  
Notes must fit in the chord scales, unless otherwise it is an passing/approach note. Therefore, **you must analyze** with Roman numeral and name of the scale (mode) for your piece referring to the page 31.

- **Extra Points**

- Musical Phrasing.
- Intro and TAG (Outro).
- Recording of the piece.



# *Draft*

# Diminished Scales

## Diatonic Functioning Diminish Chord

I dim 7	..... resolve to	..... I Maj 7
#I dim 7	..... resolve to	..... II-7
bIII dim 7	..... resolve to	..... II-7
#II dim 7	..... resolve to	..... III-7
#IV dim 7	..... resolve to	..... V7
V dim 7	..... resolve to	..... V7
#V dim 7	..... resolve to	..... VI-7
bVI dim 7	..... resolve to	..... V7

- All the diatonic functioning diminished chords must resolve by half step up or down, except I dim 7 and V dim 7 resolve to the same root.

**C**      I dim 7      I Maj 7  
 Cdim7      CMaj7

R    T9    b3    T11    dim 5    (6)    dim 7    TM7

**F**      #I dim 7      II-7  
 F#dim7      G-9

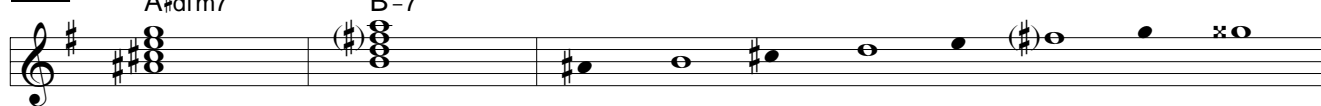
R    (2)    b3    (4)    dim 5    Tb13    dim 7    TM7

**Bb**      bIII dim 7      II-7  
 Dbdim7 C#dim7      C-7

See Tip on Page 29.


R    (2)    b3    (4)    dim 5    Tb13    dim 7    TM7

**G**       $\sharp$ II dim 7      III-7  
 A $\sharp$ dim7      B-7



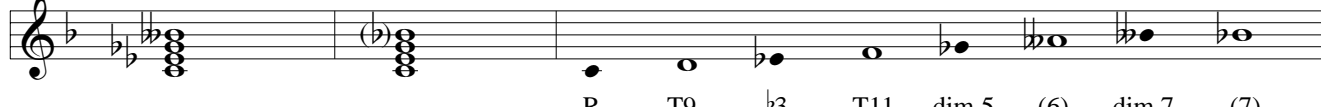
R      (2)       $\flat$ 3      (4)      dim 5      T $\flat$ 13      dim 7      TM7

**C**       $\sharp$ IV dim 7      V7  
 F $\sharp$ dim7      G7



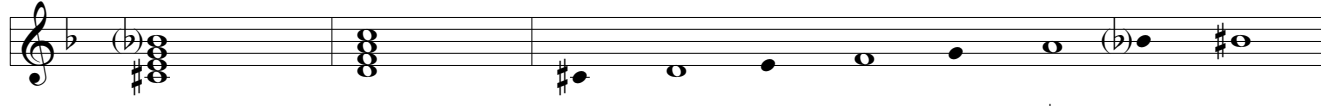
R      (2)       $\flat$ 3      T11      dim 5      T $\flat$ 13      dim 7      TM7

**F**      V dim 7      V7  
 Cdim7      C7




R      T9       $\flat$ 3      T11      dim 5      (6)      dim 7      (7)

**F**       $\sharp$ V dim 7      VI-7  
 C $\sharp$ dim7      D-7



R      (2)       $\flat$ 3      (4)      dim 5      T $\flat$ 13      dim 7      TM7

**B $\flat$**        $\flat$ VI dim 7      V7  
 G $\flat$ dim7      F $\sharp$ dim7      F7



See Tip on Page 29.

R      (2)       $\flat$ 3      (4)      dim 5      T $\flat$ 13      dim 7      TM7

## Symmetric Diminished Scale

- Symmetric Diminished Scale appears as non-diatonic functioning diminished chord (means it does not fit any one of eight categories described before). Because the scale is built with constant whole/half steps, there is no tension which will create  $\flat 9$ th interval. Therefore, all the tensions are available.
- The example shown above will sound strong resolution because of the root motion of V to I. G dim 7, however, does not create any logical voice leading (will be discussed later). Therefore, G dim 7 is not functioning as diatonic.

## Combination Dominant Scale

- If one diminished scale could built with whole and half steps, the reversed positions as half/whole would be possible, too. This scale is usually used for dominant. Note; there is no available tension this time.

- The same scale may start on the root of the substitute dominant chord.

# Non Diatonic Functioning Diminished Chords

## Additional information for the diminished chords (p.10-12).

- As we discussed thoroughly, diminished chord scales will be decided by the fact that if the diminished chord is acting as a diatonic function within the key of the moment. The list below shows the progressions which will **not create a resolution sound** in the sequence even though it may look diatonic functioning diminished chords. This list will be against the list on page 10.

$\flat$ II dim 7 ..... goes to, but does not resolve to ..... I Maj7  
 $\flat$ V dim 7 ..... goes to, but does not resolve to ..... IV Maj7  
 $\flat$ VI dim 7 ..... goes to, but does not resolve to ..... V7  
 $\flat$ VII dim 7 ..... goes to, but does not resolve to ..... VI-7  
 $\sharp$ VI dim 7 ..... goes to, but does not resolve to ..... VII-7( $\flat$ 5)

Those progressions are called **non diatonic functioning diminished chords** sequence. Therefore, the chord scales will not be considered by the Key of the moment. The Symmetric diminished scale will be used, instead.

- Again, if any of the diminished chords do not resolve in the Key of the moment as shown on the page 10, the chord scale will be Symmetric diminished scale as well.
- There is an **exception** to the rule above.

I	$\sharp$ I dim 7	V on 5th	$\sharp$ II dim 7	I on 3rd
C	C $\sharp$ dim7	G/D	D $\sharp$ dim7	C/E

The  $\sharp$ I dim 7 did not resolve to II-7. Instead, it resolved to V with the 5th (D) on bass. This is a semi-diatonic functioning progression, because the ear will hear the bass move to the 2nd degree of the diatonic scale (C Major) as where the II-7 is supposed to be, and the actual chord on top of the bass which is another diatonic chord.  $\sharp$ II dim 7 resolves to I with the 3rd on bass is also semi-diatonic for the same reason. Therefore, the chord scale will be decided by the Key of the moment. Note that this kind of progression is commonly heard in Gospel music.

### Tip

Enharmonic respelling is necessary when the root of the diminished chord is flat.

I.e.; Respell  $E\flat$  dim 7 to  $D\sharp$  dim 7 in order to find the chord scale.

# Minor Key

## Relative Keys

- Relative Keys are a pair of keys which uses same key signature. Those two keys are Major and minor, and the minor key starts from VI degree of the Major key. In other word, the tonic of relative minor starts from Major 6th above the tonic of relative Major.

C Major ---- Major 6th ↑ ---- A minor

C minor ---- Major 6th ↓ ---- E<sup>b</sup>Major

## Scale Degree

C Maj

I	II	III	IV	V	VI	VII						
					I	II	<sup>b</sup> III	IV	V	<sup>b</sup> VI	<sup>b</sup> VII	

A -

## Diatonic Chords / Modes

C Maj

Ion	Dori	Phry	Lyd	Mixo	Aeo	Loc						
I <sup>Maj7</sup>	II-7	III-7	IV <sup>Maj7</sup>	V7	VI-7	VII-7( <sup>b5</sup> )						
					I-7	II-7( <sup>b5</sup> )	<sup>b</sup> III <sup>Maj7</sup>	IV-7	V-7	<sup>b</sup> VI <sup>Maj7</sup>	<sup>b</sup> VII7	
					Aeo	Loc	Ion	Dori	Phry	Lyd	Mixo	

A -



**Minor Key (cont.)**

**Diatonic Chords**

**Natural minor**

I-7	II-7( <sup>b</sup> 5)	<sup>b</sup> IIIMaj7	IV-7	V-7	<sup>b</sup> VI-Maj7	<sup>b</sup> VII7
A-7	B-7( <sup>b</sup> 5)	CMaj7	D-7	E-7	FMaj7	G7

**Harmonic minor**

I-(Maj7)	II-7( <sup>b</sup> 5)	<sup>b</sup> IIIMaj7( <sup>#</sup> 5)	IV-7	V7	<sup>b</sup> VI-Maj7	VII <sup>dim</sup> 7
A-(Maj7)	B-7( <sup>b</sup> 5)	CMaj7( <sup>#</sup> 5)	D-7	E7	FMaj7	G <sup>#</sup> dim7

**Melodic minor Ascending**

I-(Maj7)	II-7	<sup>b</sup> IIIMaj7( <sup>#</sup> 5)	IV7	V7	VI-7( <sup>b</sup> 5)	VII-7( <sup>b</sup> 5)
A-(Maj7)	B-7	CMaj7( <sup>#</sup> 5)	D7	E7	F <sup>#</sup> -7( <sup>b</sup> 5)	G <sup>#</sup> -7( <sup>b</sup> 5)



## Harmonic Consideration for minor key

Typical minor diatonic chords in minor key chord progression.

I-7	II-7( <sup>b</sup> 5)	<sup>b</sup> III <sup>Maj</sup> 7	IV-7	V7	<sup>b</sup> VI <sup>Maj</sup> 7	VII <sup>dim</sup> 7
Aeo	Loc	Ion	Dori	Mixo	Lyd	dim
A-7	B-7( <sup>b</sup> 5)	C <sup>Maj</sup> 7	D-7	E7	F <sup>Maj</sup> 7	G <sup>#dim</sup> 7

- Because Mixolydian and diminished scales varies according to the Key of the Moment, all the tension notes must be adjusted.

E7

R      T<sup>b</sup>9      3      (4)      5      T<sup>b</sup>13      <sup>b</sup>7

Therefore, this is Mixo <sup>b</sup>9 which contains <sup>b</sup>13 automatically.

diminished scale for VII<sup>dim</sup>7 is shown below.

R      (2)      dim3      (4)      dim5      T<sup>b</sup>13      dim7      T<sup>Maj</sup>7

**Minor Key (cont.)**

- "-7(<sup>b</sup>5)" appears very distinctively. Most likely, this is a II chord of a minor key of the moment. If this chord is followed by a Dominant chord, it must be a minor II - V progression, no matter what chord to resolve. Therefore, the mode is Locrian for the II-7(<sup>b</sup>5), and Mixo <sup>b</sup>9 for the V7.

Night And Day by Cole Porter

I Love You by Cole Porter

# Modal Interchange

## C Natural minor

I-7	II-7( <sup>b</sup> 5)	<sup>b</sup> III <sup>Maj</sup> 7	IV-7	V-7	<sup>b</sup> VI <sup>Maj</sup> 7	<sup>b</sup> VII7
C-7	D-7( <sup>b</sup> 5)	E <sup>b</sup> <sup>Maj</sup> 7	F-7	G-7	A <sup>b</sup> <sup>Maj</sup> 7	B <sup>b</sup> 7

## Tonic minor

I-7	<sup>b</sup> III <sup>Maj</sup> 7	V-7
C-7	E <sup>b</sup> <sup>Maj</sup> 7	G-7

## Subdominant minor

II-7( <sup>b</sup> 5)	IV-7	<sup>b</sup> VI <sup>Maj</sup> 7	<sup>b</sup> VII7
D-7( <sup>b</sup> 5)	F-7	A <sup>b</sup> <sup>Maj</sup> 7	B <sup>b</sup> 7

- Note that the notes indicated black are scale degree <sup>b</sup>6 in C Natural minor (C Aeolian) which is the Avoid. That is why any diatonic chord contains scale degree <sup>b</sup>6 is not Tonic minor. Those are Subdominant minor chords.

## V-7 (G Phrygian)

G-7							
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">R</td> <td style="text-align: center;">(2)</td> <td style="text-align: center;"><sup>b</sup>3</td> <td style="text-align: center;">T11</td> <td style="text-align: center;">5</td> <td style="text-align: center;">(<sup>b</sup>6)</td> <td style="text-align: center;"><sup>b</sup>7</td> </tr> </table>	R	(2)	<sup>b</sup> 3	T11	5	( <sup>b</sup> 6)	<sup>b</sup> 7
R	(2)	<sup>b</sup> 3	T11	5	( <sup>b</sup> 6)	<sup>b</sup> 7	

- V-7 is not common, because <sup>b</sup>3 of the Parent minor Key (E<sup>b</sup> in C minor) which is necessary to characterize minor sound is not chord tone nor available tension on V-7 (Phrygian Mode) Scale.

minor II - V - I

- Because the II-7(<sup>b</sup>5) usually precedes the V7 chord, it is a modal interchange chord from Harmonic minor.

Altered Subdominant Chord

- Note that the <sup>b</sup>VI7 (altered <sup>b</sup>VI Maj7) and the <sup>b</sup>VII7 (diatonic) are not Dominant functioning chords because those are not located at the 5th position in the diatonic, and do not resolve to I- going down Perfect fifth.

## Modal Interchange (cont.)

- Mixolydian Modal Interchange Chord.

C Mixolydian Scale

V-7
bVIIMaj7

G-7
BbMaj7
C7

R
T9
3
(4)
5
T13
b7
R

<b>Summary of the basic Modal Interchange Chords</b>		
<b>Tonic minor</b> from natural minor	<ul style="list-style-type: none"> <li>• I-7                      Aeolian</li> <li>• bIIIMaj7                Ionian</li> <li>• V-7 (not common)    Phrygian</li> </ul>	
<b>Subdominant minor</b> from natural minor	<ul style="list-style-type: none"> <li>• bIIMaj7                Lydian</li> <li>• II-7(b5)                Locrian</li> <li>• IV-7                     Dorian</li> <li>• bVIMaj7                Lydian</li> <li>• bVI7                     Lydian b7</li> <li>• bVII7                    Mixolydian</li> </ul>	
<span style="font-size: 1.2em;">II-7(b5)</span> V7 from Harmonic minor	<ul style="list-style-type: none"> <li>• II-7(b5)                Locrian</li> <li>• V7                        Mixo b9, b13</li> </ul>	
<b>Mixolydian Modal Interchange</b>	<ul style="list-style-type: none"> <li>• bVIIMaj7                Lydian</li> <li>• V-7                        Dorian</li> </ul>	



## Special Dominant

- Special Dominant Chords are chords which appear in diatonic situation, yet do not resolve by going down Perfect 5th nor minor 2nd.

II7

II7 appears as a substitution of V7. The tritone resolves to a part of I Maj7 (5th, M7th).

Since II7 is derived from V7/V, Take The "A" Train changes (below) is well known.

- II7 can be explained as a Modal Interchange chord from I Lydian.

III7

Since III7 is derived from V7/VI, it resolves to IV Maj7 which is Inverted VI-6.

$\flat$ VI7

Since  $\flat$ VI7 is same structure as  $\text{Sub}V7/V$ , it resolves to I Maj with 5th on root.

## Special Dominant (cont.)

**VI7**

Since VI7 is derived from V7/II, it resolves to IV Maj7 which is II-9 without the root.

VI7	IV Maj7	V7/II	II-9
A7	F Maj7	A7	D-9

**VII7**

Since VII7 is derived from V7/III, it resolves to I Maj7 which is III- without the root.

VII7	I Maj7	V7/III	III-
B7	C Maj7	B7	E-





# #IV-7(b5)

- #IV-7(b5) is often found in standard jazz progressions as a special diatonic functioning chord. It can be explained theoretically in a number of different ways (shown below). Yet, as always, the available scale is Locrian because it is a minor 7th chord with a flatted 5th.

#IV-7(b5) Locrian  
F#-7(b5)

- It can be explained as a Modal Interchange chord from Tonic Lydian (C Lydian), just as II7 was explained in p. 37.

- #IV-7(b5) can be explained as a V7/V without the root.

#IV-7(b5)	V7	V7/V	V7
F#-7(b5)	G7	D7(9)	G7

- Instead of resolving to V, #IV-7(b5) can resolve to I/5th (inverted), just as #IV diminished chord did. This also supports that II7 followed by I chord (p. 29).

#IV-7(b5)	V7	#IV-7(b5)	I/5th
F#-7(b5)	G7	F#-7(b5)	C/G

- #IV-7(b5) can be found as a passing chord which resolve to IV chord. **This is the most common use of #IV-7(b5).**

#IV-7(b5)	IVMaj7	#IV-7(b5)	IV-7
F#-7(b5)	FMaj7	F#-7(b5)	F-7

- Those are the common use of  $\#IV-7(\flat 5)$  shown below. There are many Modal Interchange chords in the music, as well. Reviewing the Modal Interchange (p. 35-38), indicate those chords with "M.I.".

### Night And Day

Measures 1-5: D-7( $\flat 5$ ) G7 CMaj7 D-7( $\flat 5$ )

Measures 6-10: G7 CMaj7  $\#IV-7(\flat 5)$   $F\#-7(\flat 5)$  F-7

Measures 11-16: E-7  $E\flat dim7$  D-7 G7 CMaj7

### The Days of Wine And Roses

Measures 17-21: FMaj7  $E\flat 7$   $D7(\flat 9)$  G-7

Measures 22-26:  $B\flat-(Maj7)$   $B\flat-7$   $E\flat 7$  A-7 D-7

Measures 27-32:  $\#IV-7(\flat 5)$   $B-7(\flat 5)$   $B\flat 7$  A-7 D-7 G-7 C7 FMaj6

# Deceptive Resolutions

- **Standard Deceptive Resolutions:** A dominant 7th chord resolve to a tonic functioning chord (see page 16) other than I chord.

V7                      I                      V7                      VI-

G7                      C                      G7                      A-

VI- shares the root and the 3rd of I.

V7                      I                      V7                      III-

G7                      CMaj7                      G7                      E-

III- is I Maj7 without the root.

- **Non Standard Deceptive Resolutions:** Since the dominant 7th chord resolve to the I Major 7th in a Major key, other Modal Interchange Major 7th chords may be seen as a deceptive resolution.

V7                      bVI Maj7                      V7                      bIII Maj7

G7                      AbMaj7                      G7                      EbMaj7

Altered Deceptive Resolution of V7 to VI-.

Altered Deceptive Resolution of V7 to III-.

Other Modal Interchange Major Chords.

V7                      bII Maj7                      V7                      bVII Maj7

G7                      DbMaj7                      G7                      BbMaj7

## Deceptive Resolutions (cont.)

- One additional Deceptive Resolution is a dominant 7th chord followed by  $\#IV-7^{(b5)}$ . This progression may be seen as three different functions.

- $\#IV-7^{(b5)}$  appears as a related II-7 of  $V7/III$ .

$II-7$	$V7$	$\#IV-7^{(b5)}$	$V7/III$	$III-7$
$D-7$	$G7$	$F\#-7^{(b5)}$	$B7$	$E-7$

- $\#IV-7^{(b5)}$  appears as a passing chord to  $IV-7$ . This may be called Altered Subdominant minor, sometime.

$I\ Maj7$	$V7$	$\#IV-7^{(b5)}$	$IV-7$
$CMaj7$	$G7$	$F\#-7^{(b5)}$	$F-7$

*M.I.*

- $\#IV-7^{(b5)}$  appears as a Lydian Modal Interchange tonic functioning chord. As the  $VI-7$  and the  $III-7$  replaces  $I\ Major$  in the Standard Deceptive Resolution,  $\#IV-7^{(b5)}$  replaces  $I\ Major$  Lydian chord.

$II-7$	$V7$	$\#IV-7^{(b5)}$
$D-7$	$G7$	$F\#-7^{(b5)}$

*M.I.*

# Compound Chords

- Inversion** is a chord with the bass which is replaced with a chord tone other than the root.

Diagram illustrating the four inversions of a C7 chord:

- Root Position: C7
- 1st Inversion: C7/E
- 2nd Inversion: C7/G
- 3rd Inversion: C7/B<sup>b</sup>

- Hybrid** is a chord with a bass which is other than any of chord tones. Note that the any kind of 3rd against the bass can not be included in the upper structure chord, because it will characterize a chord to the bass. Basically, the upper structure chord is derived from the scale notes against the bass. However, because the 3rd of the bass is not included, ambiguous sound will be created.

Diagram illustrating three examples of hybrid chords:

- 1) CMaj7/D
- 2) D-7/G
- 3) A/D<sup>#</sup>

- 1) Derived from D Dorian with <sup>b</sup>7, 9, 11, and 13 those which create the upper structure chord. Since the <sup>b</sup>3rd (F) is missing from this chord, it will not sound D-7. It rather sound C Maj7 with the 9th on the bass.
- 2) Derived from G Mixolydian with 5, <sup>b</sup>7, 9 and S4. Note that the avoid note (S4: C) can be used because the 3rd (B) is missing from this chord. The sound will be D-7 with the 11th on the bass.
- 3) Derived from D<sup>#</sup> Locrian with 11, <sup>b</sup>7 and S2(<sup>b</sup>9). Note that the flat 9th interval created between D<sup>#</sup> and E is acceptable in two reasons. The one is because Locrian is a semidominant functioning mode, so as altered dominant tensions are, flat 9th interval will create more resolution sense. The other is because the upper structure chord creates strong unity as a chord, the ear can separate it from the bass. However, the caution must be taken when it is used.

- Polychord** is a chord combined with two triads or 7th chord. Usually, the upper structure is created from the available tensions of the bottom chord. This is extremely useful when the keyboard voicing is needed to be specified for ensemble arranging reasons.

Diagram illustrating three examples of polychords:

- D over C
- E- over D-
- F-7 over G<sup>b</sup>

# Project I

- **Write a piece using the technique you have learned.**

- 32 bars form recommended.
- Two types of the conventional forms are recommended.
  - 1) A - A - B - A  
ie; "Take The A Train"
  - 2) A - B - A - C  
ie; "The Days Of Wine And Roses"

If you are sure you can make unconventional form musically, it is acceptable as long as you know what you are doing.

ie; "Piece", "Blue In Green"

No Blues please.

- **Check Points**

- **Notation**  
Neatness, Imaginary bar line, Beats positioning, Accidentals, Ending bar line, Beaming, Clef and so on.
- **Scale notes**  
Notes must fit in the chord scales, unless otherwise it is an approach note. Therefore, **you must analyze** with Roman numeral and name of the scale (mode) for your piece.

- **Extra Points**

- Musical Phrasing.
- Intro and TAG (Outro).
- Recording of the piece.

# Project II

## 1. Quiz on Intervals and Chord Scales (Modes).

## 2. Write a piece using five subjects of the seven listed below (Diatonic Functioning Dominant Chords must be included as indicated). The piece must be analyzed according to the directions of Appendix A.

- 1) Diatonic Functioning Dominant Chords (include Primary Dominant).  
*Must use at least two of the four listed below.*
  - a) Secondary Dominant
  - b) Extended Dominant
  - c) Special Dominant
  - d) Substituted Dominant (SubV7)
- 2) Related II-
- 3) #IV-7(b5)
- 4) Diatonic Functioning Diminished Chord.
- 5) Minor Key.
- 6) Modal Interchange (exclude Lydian M.I. and Mixolydian M.I.).
- 7) Deceptive Resolutions

### Warning

- If the piece is notated and analyzed in a hard-to-read way, it will be returned without being graded.
- Note that this assignment is not for writing a musical composition, but for a correct harmony and melody with the theory you have learned.
- Duplicated analysis must be avoided (i.e. #IV-7(b5) as a Modal Interchange).

### Tip

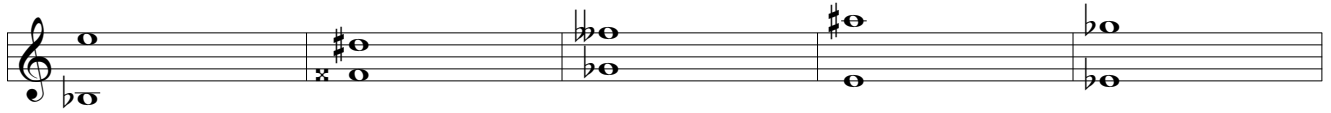
- Write the chord progression first, then the melody according to the available scales.
- The bass motion (P5th down, Major or minor 2nd up and down) will make the sound stronger.

# Quiz #1

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Write out the Intervals.



(                    ) (                    ) (                    ) (                    ) (                    )

2. Write a note by the given Interval.



-9th Below

P12th Above

Aug.6th Below

dim.15th Above

-10th Above

## Hint

1. Hide all the accidentals.
2. With your fingers, count the Interval. Do not forget to include the note to begin with.
3. Write down the number NOW.
4. If the Interval is more than an octave apart, take the top note down, so the Interval becomes within an octave.
5. Find how many of "1/2 Step Spot" in the distance according to the chart. Remember, you need to think of only C Major scale.
6. Find the kind ( Major, Perfect, etc.) using the bar chart. Use your both hands vertically, so you can picture the distance with the bar chart.  
For example, the Interval is 6th with 2 of "1/2 Step Spot" in the distance, because M6th supposed to have only 1 "1/2 Step Spot", it becomes one of the bar chart level shorter, so it is -6th.
7. Still holding your hands vertically, apply the accidental(s) you hid in the beginning one by one.



# Quiz #2

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Write out the Intervals.

(            ) (            ) (            ) (            ) (            )

2. Write a note by the given Interval.

M10th Above

Aug.4th Above

-13th Above

P15th Below

M7th Below

3. Find out the parent key, then write out the given scale.

Parent Key \_\_\_\_ B Phrygian

Parent Key \_\_\_\_ D<sup>b</sup> Mixolydian

Parent Key \_\_\_\_ A Lydian

Parent Key \_\_\_\_ D Locrian

Parent Key \_\_\_\_ B<sup>b</sup> Aeolian

1. Write out the Intervals. [4 point each]

( ) ( ) ( ) ( ) ( )

( ) ( ) ( ) ( ) ( )

2. Write a note by the given Interval. [4 point each]

Aug 4th ↓      -13th ↓      -9th ↑      Aug 5th ↑      M16th ↑

3. Fill out the blank, write out the Chord Scale and label each note. [5 point each]

Key <input type="text"/>	Roman Numeral	Mode	Parent Key	Key <input type="text" value="Eb-"/>	Roman Numeral	Mode	Parent Key
( <input type="text" value="III-"/> /			/ <input type="text" value="Eb"/> )	( <input type="text" value="bVI Maj"/> /			/ <input type="text"/> )

Key <input type="text"/>	Roman Numeral	Mode	Parent Key	Key <input type="text" value="D-"/>	Roman Numeral	Mode	Parent Key
( <input type="text"/> / <input type="text" value="F# Loc"/> /			/ <input type="text" value="G"/> )	( <input type="text"/> / <input type="text" value="F Ion"/> /			/ <input type="text"/> )

Key <input type="text" value="C"/>	Roman Numeral	Mode	Parent Key	Key <input type="text"/>	Roman Numeral	Mode	Parent Key
( <input type="text" value="VI-"/> /			/ <input type="text"/> )	( <input type="text" value="V7"/> /			/ <input type="text" value="C Harmonic minor"/> )

Key <input type="text" value="C"/>	Roman Numeral	Mode	Parent Key	Key <input type="text" value="G"/>	Roman Numeral	Mode	Parent Key
( <input type="text" value="V dim"/> /	<input type="text" value="n/a"/>		/ <input type="text" value="n/a"/> )	( <input type="text" value="bIII dim"/> /	<input type="text" value="n/a"/>		/ <input type="text" value="n/a"/> )

- Analyze the composition shown below by the direction given on the next page.

[Bossa]

Hiroaki Honshuku

♩ = 98

A

F#-7(b5)      A-/G      FMaj7      E7(b13)      EbMaj7      E-7(b5)

A7(b9)      D7      D#dim7      E-7

F-7      Bb7      E-7      Eb7      D-7      DbMaj7

B

GbMaj7      Ab-7      Bb-7      A7      Ab7

Ab-7      Db7      GbMaj7      Gdim7

Ab-7      Adim7      Ab-7      G7      GbMaj7

**Direction for the analysis**

- Indicate the key(s) with box(es) beginning of the piece and whenever modulation occur.
- Draw arrows, dotted arrows, and brackets.
- Write out roman numeral wherever it applies.
- Write out the name of mode or scale for every chords. Be aware of hidden altered tension.
- Indicate with *M.I.* wherever which applies.
- Write out the diminished scale on bar 10, 26, and 28 below. Number each scale note below the scale.

- Find the notes which are not one of chord tones under every chords, and write the number of the scale degree or tension number in the each boxes below. Use parenthesis if the note is not available. Use n/a for the measure which does not have any one of them. Be aware of anticipations.

1		2		3		4		5		6	
7		8		9		10		11		12	
13		14		15		16		17		18	
19		20		21		22		23		24	
25		26		27		28		29		30	
31		32									

# Quiz #2

Name \_\_\_\_\_

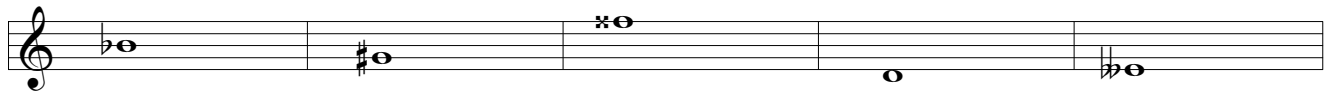
Date \_\_\_\_\_

1. Write out the Intervals.



(                    ) (                    ) (                    ) (                    ) (                    )

2. Write a note by the given Interval.



-9th Below

P12th Above

Aug.6th Below

dim.15th Above

-10th Above

## Hint

1. Hide all the accidentals.
2. With your fingers, count the Interval. Do not forget to include the note to begin with.
3. Write down the number NOW.
4. If the Interval is more than an octave apart, take the top note down, so the Interval becomes within an octave.
5. Find how many of "1/2 Step Spot" in the distance according to the chart. Remember, you need to think of only C Major scale.
6. Find the kind ( Major, Perfect, etc.) using the bar chart. Use your both hands vertically, so you can picture the distance with the bar chart.  
For example, the Interval is 6th with 2 of "1/2 Step Spot" in the distance, because M6th supposed to have only 1 "1/2 Step Spot", it becomes one of the bar chart level shorter, so it is -6th.
7. Still holding your hands vertically, apply the accidental(s) you hid in the beginning one by one.

1. Write out the Intervals. [4 point each]

( ) ( ) ( ) ( ) ( )

( ) ( ) ( ) ( ) ( )

2. Write a note by the given Interval. [4 point each]

Aug 4th ↓      -13th ↓      -9th ↑      Aug 5th ↑      M16th ↑

3. Fill out the blank, write out the Chord Scale and number each note. [5 point each]

Key **E<sup>b</sup>** Roman Numeral ( **III-** / Mode \_\_\_\_\_ )      Key **A<sup>b</sup>** Roman Numeral ( **V<sup>7</sup>/VI** / Mode \_\_\_\_\_ )

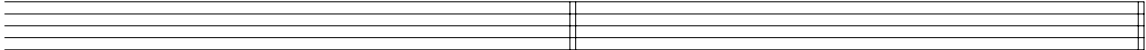
Key  Roman Numeral ( \_\_\_\_\_ / Mode **F#** Loc )      Key **F** Roman Numeral ( **SubV<sup>7</sup>** / Mode \_\_\_\_\_ )

Key  Roman Numeral ( **VI-** / Mode **B** \_\_\_\_\_ )      Key  Roman Numeral ( **SubV<sup>7</sup>/II** / Mode **E<sup>b</sup>** \_\_\_\_\_ )

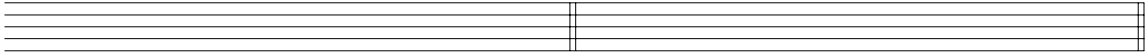
Key **B** Roman Numeral ( **V<sup>7</sup>/V** / Mode \_\_\_\_\_ )      Key  Roman Numeral ( \_\_\_\_\_ / Mode **F#** Phry )

1. Fill out the blank, write out the Chord Scale and number each note. [5 point each]


Key **E<sup>b</sup>** Roman Numeral ( **III-** / \_\_\_\_\_ ) Mode \_\_\_\_\_ )      Key **A<sup>b</sup>** Roman Numeral ( **V<sup>7</sup>/VI** / \_\_\_\_\_ ) Mode \_\_\_\_\_ )



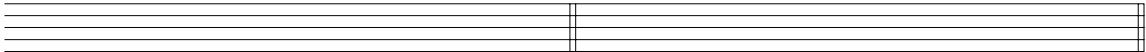
Key  Roman Numeral ( \_\_\_\_\_ / **F<sup>#</sup>** Loc ) Mode \_\_\_\_\_ )      Key **F** Roman Numeral ( **SubV<sup>7</sup>** / \_\_\_\_\_ ) Mode \_\_\_\_\_ )



Key  Roman Numeral ( **VI-** / **B** \_\_\_\_\_ ) Mode \_\_\_\_\_ )      Key  Roman Numeral ( **SubV<sup>7</sup>/II** / **E<sup>b</sup>** \_\_\_\_\_ ) Mode \_\_\_\_\_ )



Key **B** Roman Numeral ( **V<sup>7</sup>/V** / \_\_\_\_\_ ) Mode \_\_\_\_\_ )      Key  Roman Numeral ( \_\_\_\_\_ / **F<sup>#</sup>** Phry ) Mode \_\_\_\_\_ )



2. Analyze the music along with the direction listed as follow; [50 pints total]
- Draw arrows (including dotted arrows).
  - Draw Brackets.
  - Identify the Key of the music.
  - Apply Roman Numeral Analysis.
  - Apply Mode or Chord scale.
  - Scale Degree Analysis (applying number below each note against the chord).

B<sup>b</sup>7                      A-7                      G<sup>b</sup>7                      FMaj7

1                                      2                                      3                                      4

G-7                      C7                      FMaj7                      A-7                      A<sup>b</sup>dim7                      G-7                      C7

5                                      6                                      7                                      8

FMaj7                      F<sup>#</sup>dim7                      G-7                      C7                      D<sup>b</sup>-7                      G<sup>b</sup>7                      FMaj7

9                                      10                                      11                                      12

3. Write out the diminished chord scale appears in the bar 7 and the bar 9. [5 point each]




# Quiz

- Fill out the blank, write out the Chord Scale.

Key **B $\flat$**  Roman Numeral ( **II-** / \_\_\_\_\_ ) Mode \_\_\_\_\_ )      Key **D $\flat$**  Roman Numeral ( **IVMaj** / \_\_\_\_\_ ) Mode \_\_\_\_\_ )

Key  Roman Numeral ( \_\_\_\_\_ / **C $\sharp$**  **Loc** ) Mode \_\_\_\_\_ )      Key **G** Roman Numeral ( **V7** / \_\_\_\_\_ ) Mode \_\_\_\_\_ )

Key  Roman Numeral ( **VI-** / **G** \_\_\_\_\_ ) Mode \_\_\_\_\_ )      Key  Roman Numeral ( **III-** / **E $\flat$**  \_\_\_\_\_ ) Mode \_\_\_\_\_ )

Key **B** Roman Numeral ( **VII-( $\flat$ 5)** / \_\_\_\_\_ ) Mode \_\_\_\_\_ )      Key  Roman Numeral ( \_\_\_\_\_ / **C $\sharp$**  **Phry** ) Mode \_\_\_\_\_ )

Key **E** Roman Numeral ( **VI-** / \_\_\_\_\_ ) Mode \_\_\_\_\_ )      Key **A** Roman Numeral ( **IVMaj** / \_\_\_\_\_ ) Mode \_\_\_\_\_ )

Key  Roman Numeral ( \_\_\_\_\_ / **B $\flat$**  **Phry** ) Mode \_\_\_\_\_ )      Key **F** Roman Numeral ( **VI-** / \_\_\_\_\_ ) Mode \_\_\_\_\_ )

Key  Roman Numeral ( **II-** / **G** \_\_\_\_\_ ) Mode \_\_\_\_\_ )      Key  Roman Numeral ( **VII-( $\flat$ 5)** / **A $\sharp$**  \_\_\_\_\_ ) Mode \_\_\_\_\_ )

Key **D $\flat$**  Roman Numeral ( **II-** / \_\_\_\_\_ ) Mode \_\_\_\_\_ )      Key  Roman Numeral ( \_\_\_\_\_ / **F $\sharp$**  **Dori** ) Mode \_\_\_\_\_ )

- Number the melody according to each chords. Non-available note must be parenthesized. Be aware of the passing note, the approach note, and Enharmonic spelling on the altered tensions.

*from Waltz For Debby by Bill Evans*

**A**

1 FMaj7 2 D-7 3 G-7 4 E7 5 A7/C# 6 D7/C 7 G7/B 8 C7

9 F7 10 B<sup>b</sup>Maj7 11 G-7 12 C7 13 C7/B<sup>b</sup> 14 A-7 15 D7 16 G-7 C7

**B**

17 B-7 18 E7 19 A Maj7 20 B-7 21 C#-7 22 B-7 23 G-7 24 C7 25 A-7

26 D7 27 G-7 28 A7 29 D-7 30 F7 31 B<sup>b</sup>Maj7 32 A7 33 D-7 34 E7

**C**

35 A-7 36 A<sup>b</sup>7 37 G-7 38 G<sup>b</sup>7 39 F Maj7 40 D-7 41 G-7 42 E7 43 A7/C#

44 D7/C 45 G7/B 46 C7 47 F7 48 B<sup>b</sup>Maj7 49 B<sup>b</sup>6 50 E<sup>b</sup>7 51 A-7 52 D7

53 B-7 54 E7 55 A-7 56 B<sup>b</sup>Maj7 57 E<sup>b</sup>7 58 A-7 59 E7 60 A-7 61

62 E7 63 G-7 64 C7 65 F6 66 67 68

- 1) Draw solid and dotted arrows.
- 2) Draw brackets.
- 3) Write out applicable Roman numerals over the chord.
- 4) Write out the name of the scales or neame of the modes below each measure.

**A**

FMaj7 D-7 G-7 E7 A7/C# D7/C G7/B C7

1 2 3 4 5 6 7 8

F7 BbMaj7 G-7 C7 C7/Bb A-7 D7 G-7 C7

9 10 11 12 13 14 15 16

**B**

B-7 E7 AMaj7 B-7 C#-7 B-7 G-7 C7 A-7

17 18 19 20 21 22 23 24 25

D7 G-7 A7 D-7 F7 BbMaj7 A7 D-7 E7

26 27 28 29 30 31 32 33 34

**C**

A-7 Ab7 G-7 Gb7 FMaj7 D-7 G-7 E7 A7/C#

35 36 37 38 39 40 41 42 43

D7/C G7/B C7 F7 BbMaj7 Bb6 Eb7 A-7 D7

44 45 46 47 48 49 50 51 52

B-7 E7 A-7 BbMaj7 Eb7 A-7 E7 A-7

53 54 55 56 57 58 59 60 61

E7 G-7 C7 F6

62 63 64 65 66 67 68

1. Write out the Intervals. [4 point each]

( ) ( ) ( ) ( ) ( )

( ) ( ) ( ) ( ) ( )

2. Write a note by the given Interval. [4 point each]

M10th Above

Aug.4th Above

-13th Above

P15th Below

M7th Below

3. Fill out the blank, write out the Chord Scale and label each note. [5 point each]

Key  Roman Numeral Mode Parent Key Key  Roman Numeral Mode Parent Key  
 ( III-7 / / Eb ) ( bVI Maj7 / / )

Key  Roman Numeral Mode Parent Key Key  Roman Numeral Mode Parent Key  
 ( #IV-7(b5) / F#Loc / ) ( / F Ion / )

Key  Roman Numeral Mode Parent Key Key  Roman Numeral Mode Parent Key  
 ( SubV7/II / / ) ( V7/VI / n/a )

Key  Roman Numeral Mode Parent Key Key  Roman Numeral Mode Parent Key  
 ( I dim7 / n/a / n/a ) ( bIII dim7 / n/a / n/a )

1. Write out the Intervals. [4 point each]

( ) ( ) ( ) ( ) ( )

( ) ( ) ( ) ( ) ( )

2. Write a note by the given Interval. [4 point each]

M10th Above

Aug.4th Above

-13th Above

P15th Below

M7th Below

3. Fill out the blank, write out the Chord Scale and label each note. [5 point each]

Key  Roman Numeral Mode Parent Key Key  Roman Numeral Mode Parent Key  
 ( VI-7 / / G<sup>b</sup> ) ( SubV7 / / n/a )

Key  Roman Numeral Mode Parent Key Key  Roman Numeral Mode Parent Key  
 ( #IV-7(b5) / F#Loc / ) ( II-7 / / )

Key  Roman Numeral Mode Parent Key Key  Roman Numeral Mode Parent Key  
 ( V7/III / / n/a ) ( V7/VI / / n/a )

Key  Roman Numeral Mode Parent Key Key  Roman Numeral Mode Parent Key  
 ( V7/V / / n/a ) ( V7/VI / / n/a )



## About the author

**Hiroaki Honshuku : flute, ewi, composer, arranger, band leader**

<http://a-no-ne.com> • <http://anonemusic.com>

**Hiroaki Honshuku** was first introduced to jazz in 1985 while teaching music at the US Naval Base in Yokosuka, Japan. Two years later, Hiro came to Boston area. He started at Berklee College of music as a scholarship student in January 1987. By the fall, he was also accepted to New England Conservatory as a scholarship graduate student. He has studied with [George Russell](#), [Dave Holland](#), Bob Moses, George Garzone, Matthew Marvuglio, and Thomas McKinley. Hiro was chosen leader of the 1990 New England Conservatory Honors Jazz Quintet, which performed throughout New England region.

In May 1990, Hiro graduated simultaneously from Berklee College of Music and New England Conservatory. He received Summa Cum Laude for his Diploma of Music at Berklee as a performance major. He received Academic Honors and Distinction in Performance for his Master of Music at New England Conservatory as a Jazz Composition major. Besides being very active playing in New England region jazz clubs, he has been busy teaching in the Boston area. Since graduation, he has taught multiple levels of jazz theory and directed small and large jazz ensembles at New England Conservatory.

Hiro has been an assistant director for [George Russell](#) at New England Conservatory since 1987 until Russell's recent retirement. He was also invited as an assistant and a flutist as well as digital audio technician for Russell's Living Time Orchestra since 1997. Hiro has been deeply inspired by Russell's [Lydian Chromatic Concept for Tonal Organization](#), which now characterizes Hiro's writing style with Tonal Gravity without any traditional II-V-I resolution.

Hiro has also played with [Mike Stern](#), [Dave Liebman](#), [Mick Goodrick](#), [Dave Weckl](#), Tiger Okoshi, [George Russell](#), George Garzone, [Maria Schneider](#), Bob Moses, and Tom McKinley. Hiro has recorded more than 20 CDs for various artists. He also recorded 5 leader albums, which are available at [Amazon.com](#), [CDBaby](#), and [iTunes Store](#). The complete discography is available at [A-NO-NE web site](#).

While Hiro was into performing Avant-garde improvisational music using his electric gear in Berlin, Germany between 1990 and 1991, he was introduced to the Brazilian music by Paulo Maragucci, a well-known Rio de Janeiro composer/multi instrumentist who was studying at New England Conservatory. Since he joined Brazilian group, Manga-Rosa led by Sergio Brandão in 1992, not only his composition style has added Brazilian rhythms, Hiro has been very active performing and recording in the Brazilian music scene including Jequere led by José Pienasola, [Gustavo Assis-Brasil Group](#), [Teresa Inês Group](#), Gilson Schachnik Group, Alfredo Cardim, João Marcos, and many others. Hiro has performed for Teresa Inês Rio de Janeiro shows in 2000 – 2001.

In the jazz scene, Hiro has been a long-time regular member of [Jazz Composers Alliance Orchestra](#) and [Power Jazz Unit](#).

The nature of the A-NO-NE Band varies according to the performance. This concept was started by Hiro at the end of 1987 when he realized he wanted to be a strong composer. He made a list of good musicians around the Boston area, and tried to organize different size bands and different types of music for several concerts. The A-NO-NE Band can be a small Jazz group, Avant-garde, Funk Fusion and even a Big Band. All of the selections of the A-NO-NE Band are written by Hiro. Because of the success in four A-NO-NE Big Band concerts, he was invited to Paris as a guest conductor in June 1990, and his later formed big band "[Boston Blazing Jazz Orchestra](#)" was invited to the Jazz Festival in Kyoto '94 for a week long performance hosted by [Geila Zilkha](#).

Hiro still keeps his classical music activity. Among those, he was invited for a recital at [Paroisse de la Trinité, Paris](#), France, where he performed his own compositions dedicated to [Messiaen](#).

Besides Hiro is busy performing and teaching, Hiro also runs a small project studio for digital audio editing and MIDI sequencing as well as location recording works using the state of the art tools. To help his own audio work on Macintosh, he has programmed a few applications, which are freely available at [Apple web site under Dashboard Widget](#).