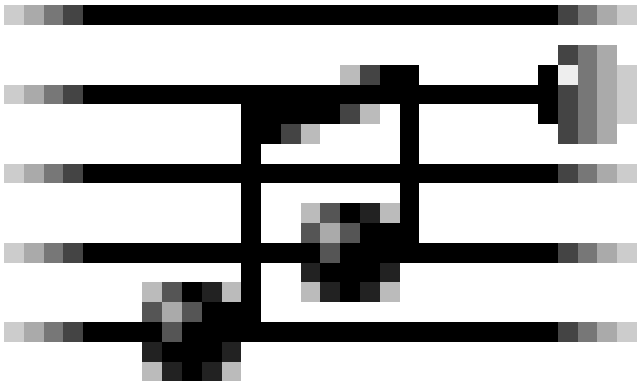
A Reference for Jazz Theory



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Michael Morangelli

Composer and Sound Designer

Has performed extensively both in New York City and Boston. His credits include the Angelo Tallaracco and Bob January Big Bands, Fire & Ice Jazz Octet, and the Blue Rain Lounge Quartet. He was also staff guitarist for South Park Recording Studio.

In Boston since 1985, he has played with the George Pearson Group (local headliners at the Boston Jazz Society Jazz Festival in 1990), Urban Ambience, and was founder and leader of the Whats New Septet (1995). His Jazz compositions have been recorded by Comraderie Tapes and included in the missing links Tape Sampler.

Composing for film since 1996, he has provided scores for Board Stories, Rules of Order, the independent production American Lullaby, and the CityScape production Wastebasket. He has also provided music, efx, and sound design for Eric Mauro and his work has appeared on theBitscreen.com, the Seoul Animation Festival, Aspen Shortfest, and the ExCentris New Media Festival in Montreal.

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THE REEL SCORE

Film:

Worked in MIDI with delivery on DAT accompanied by the Audio Data files and either the sequence or Finale Lead Sheet Conductors score.

All material is laid up to QuickTime for review with spotting and cues notes if required.

Web:

Flash audio materials are optimized for file size and laid up in Flash suitable for web display.

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Is handled with Media Cleaner Pro providing suitability for CD-R or web presentation.

-Basic Concepts I-

Tonality

Tonality is the organized relationship of tones in music. This relationship - as far as the COMMON PRACTICE of composers in the 18th and 19th Centuries was concerned - implies a central TONE (KEY TONE) with which all other tones support or create movement toward it.

Modality refers to the choice of tones between which this relationship exists.

In addition to Major, Minor, & Chromatic scales, a large number of MODES can be constructed in any given TONALITY.

Our Western System is a *Major-Minor System* and we tend to interpret music based on other MODES as being either major or minor - - - usually with unsatisfactory results.

NB When you deal with the music terminology you must keep in mind it describes sounds individually or as groups of individual tones manipulated as blocks (Melody and chords) There are other musical terminology s which deal with each of the elements of music - Rhythm, Texture etc. but they are still concerned with describing sounds - or silences - and how they are manipulated over time.

Intervals

An *INTERVAL* is the distance between two notes and is measured in whole/half steps. To understand any melodic or harmonic discussion you must understand INTERVALS.

The *Half Step* is the smallest interval in the Western Tradition (the distance from one piano key and the very next key is a half step) - a *Whole Step* consists of two Half Steps.

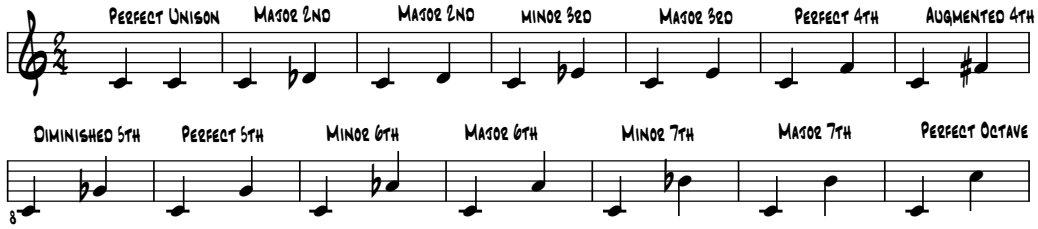
There are two major kinds of Intervals - *MELODIC* (successive tones - melody) and *HARMONIC* (two tones which occur simultaneously - chords).

Intervals are either - *Major, Minor, or Perfect.*
Major and Perfect intervals become *Augmented* when increased by 1/2 Step.
Minor and Perfect intervals become *Diminished* when decreased by 1/2 Step.

Eg: Intervals Steps

Interval	Number of Steps
minor 2nd	1/2 (Half)
major 2nd	1 (Whole)
minor 3rd	1 1/2
major 3rd	2
perfect 4th	2 1/2
perfect 5th	3 1/2
minor 6th	4
major 6th	4 1/2
minor 7th	5
major 7th	5
octave	6

Intervals



Intervals can be measured up or down and beyond the limits of the octave but are still numbered consecutively.

Eg: Interval Numbers

1	2	3	4	5	6	7	8	9	10	11	12	13
C	D	E	F	G	A	B	C	D	E	F	G	A

-Scale Intervals (Melodic Intervals)-

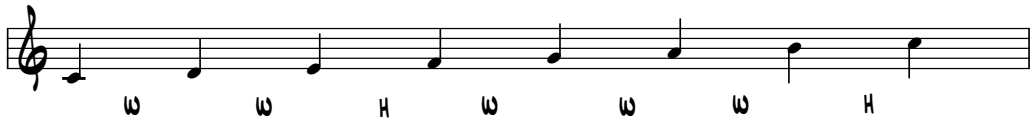
The major, minor, chromatic, etc. have characteristic interval distances between notes and that is what produces the sounds we label major, minor, (etc), scales.

Eg: Scale Steps

Major Scale

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

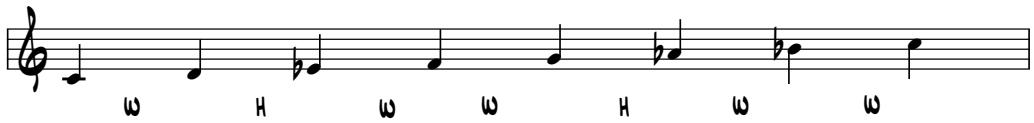
Major Scale



Minor Scale

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

Minor Scale



-Chord Intervals (Harmonic Intervals)-

Chord structure, inversion, alteration, and extension are described in intervals and distance from the ROOT of the Chord or lowest note for inversions.

NB The way of indicating chords is a short-hand and as such requires you understand what is implied by the short-hand symbol or abbreviation - much confusion is associated by what is implied in the structure of the chord.

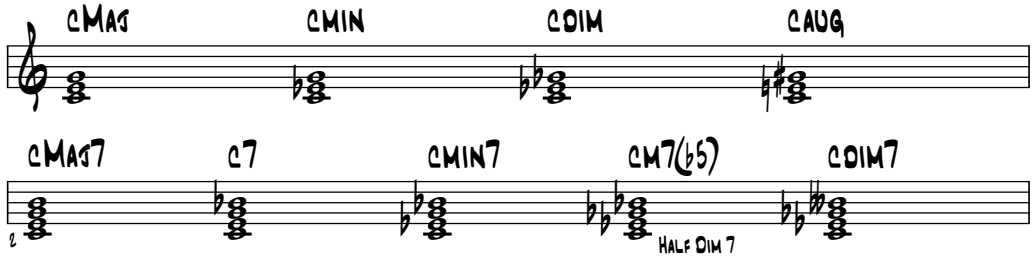
Eg: Distance from Root

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

- C Maj Triad = C E G (1-3-5) with a Major 3rd interval from C to E and Minor 3rd from E to G. It is called a Major chord because in contains the Major 3rd interval between the C and the E.
- C min Triad = C Eb G (1-b3-5) with a minor 3rd interval from C to Eb and a Major 3rd interval between Eb and the G. It is called a minor chord because of the minor 3rd interval between the C and the Eb.

- C Dim Triad = C Eb Gb (1-b3-b5) with a minor 3rd interval from C to Eb and a minor 3rd interval between Eb and the Gb. It is called a Dim chord because of the Dim 5th interval between the C and the Gb.
- C Aug Triad = C E G# (1-3-#5) with a major interval between both C and E and E and G#. It is called an augmented chord because of the augmented 5th interval between the C and the G#.
- C Maj7 = C E G B (1-3-5-7) indicates a Major chord of four voices (extending one more interval a major 7th distance from the Root - C).
- C Dom7 = C E G Bb (1-3-5-b7) indicates a Major chord of four voices (extending one more interval a minor 7th distance from the Root - C).
- C min7 = C Eb G Bb (1-b3-5-b7) indicates a Minor chord of four voices (extending one more interval a minor 7th distance form the Root - C).
- C half Dim7 = C Eb Gb Bb (1-b3-b5-b7) indicates a Dim chord of four voices (with the 5th step flatted) (extending one more interval a minor 7th distance from the Root - C) This term is confusing and the chord often appears as min7b5 - half Dim7 is used to differentiate this chord from the full Dim7 and to accommodate its occurrence in the minor keys.
- C Dim7 = C Eb Gb Bbb (A) (1-b3-b5-bb7) indicates a Dim chord of four voices (with the 5th step flatted) (extending one more interval a diminished 7th from the Root - C).

Chord Intervals

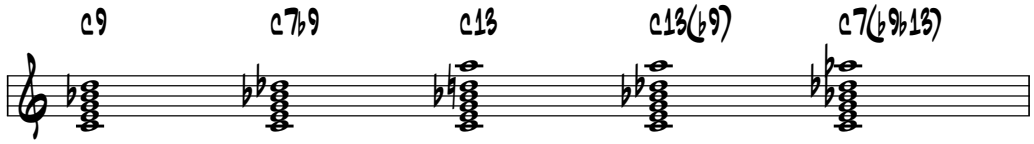


Extensions beyond the 7th follow the same pattern with a general rule being if a chord tone of the Triad is altered the quality is altered and if the extensions beyond the 7th are altered it must be indicated within ().

Eg: Extensions

C9 = (C E G Bb D)
C7b9 = (C E G Bb Db)
C13 = (C E G Bb D F (which is often omitted) A)
C13b9 = (C E G Bb Db A)
C7 (b9b13) = (C E G Bb Db Ab)

Chord Extensions



-Basic Concepts II-

Chord Construction

Chords are composed of *superimposed thirds* - there are other systems such as *Quartal Harmony*, which superimpose *fourths*. Construction in thirds is the basis for most Popular and Jazz Harmony.

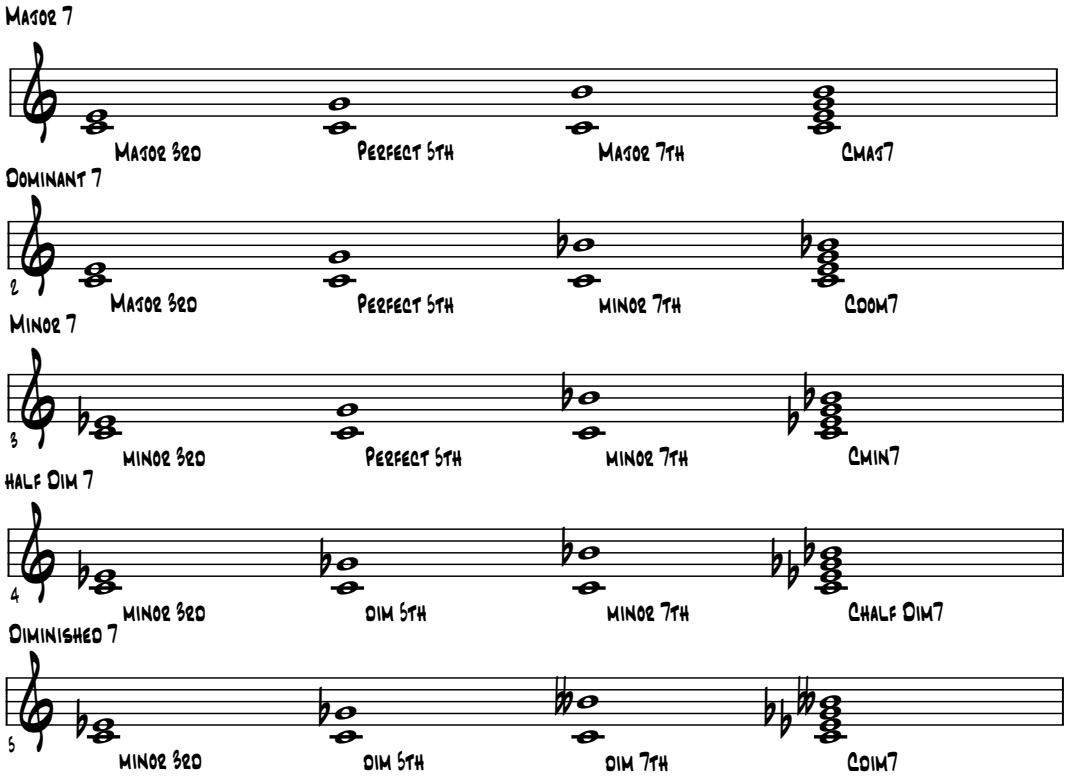
To understand how to construct chords a thorough understanding of *Scales* and *Key Signatures* is necessary.

There are three common ways of construction.

-Interval Construction: need to know intervals to do this one-

- C Maj7 contains stacked notes a major 3rd interval, a perfect 5th interval, and a major 7th interval above the ROOT note C.
- C x7 contains stacked notes a major 3rd interval, a perfect 5th interval, and a minor 7th interval above the ROOT note C.
- C min7 contains stacked notes a minor 3rd interval, a perfect 5th interval, and a minor 7th interval above the ROOT note C.
- C half dim7 contains stacked notes a minor 3rd interval, a diminished 5th interval, and a minor 7th interval above the ROOT note C.
- C dim7 contains stacked notes a minor 3rd interval, a diminished 5th interval, and a diminished 7th above the ROOT note C.

Chord Interval Construction



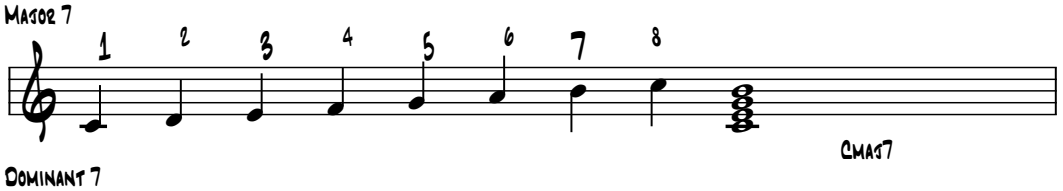
Major Chord (alteration of the I Chord): need to know scales and key signatures to do this one

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

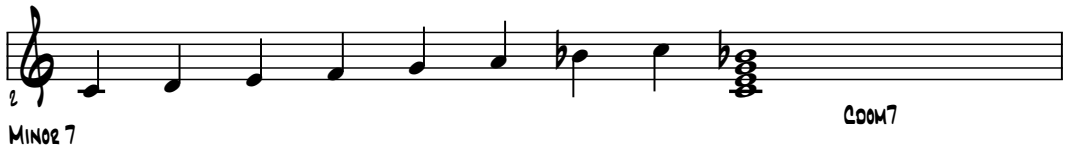
- C Maj7 (C E G B) 1-3-5-7 steps of the Major Scale
- C x7 (C E G Bb) 1-3-5-b7 steps of the Major Scale
- C min7 (C Eb G Bb) 1-b3-5-b7 steps of the Major Scale
- C half dim7 (C Eb Gb Bb) 1-b3-b5-b7 steps of the Major Scale
- C dim7 (C Eb Gb Bbb) 1-b3-b5-bb7 steps of the Major Scale

Chord Construction-Alteration of the I chord

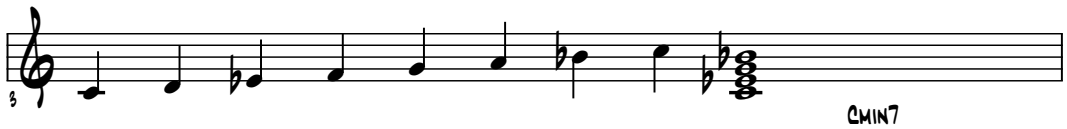
Major 7



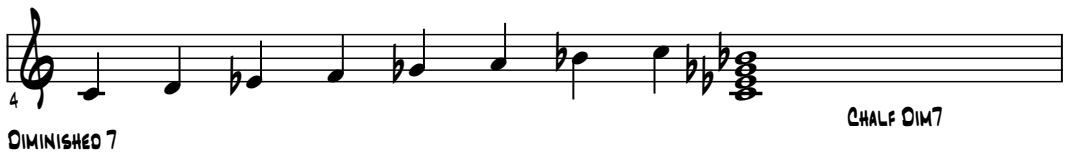
Dominant 7



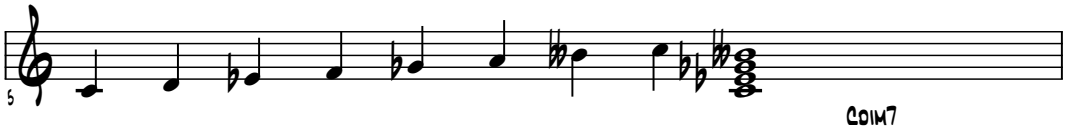
Minor 7



Half Dim 7

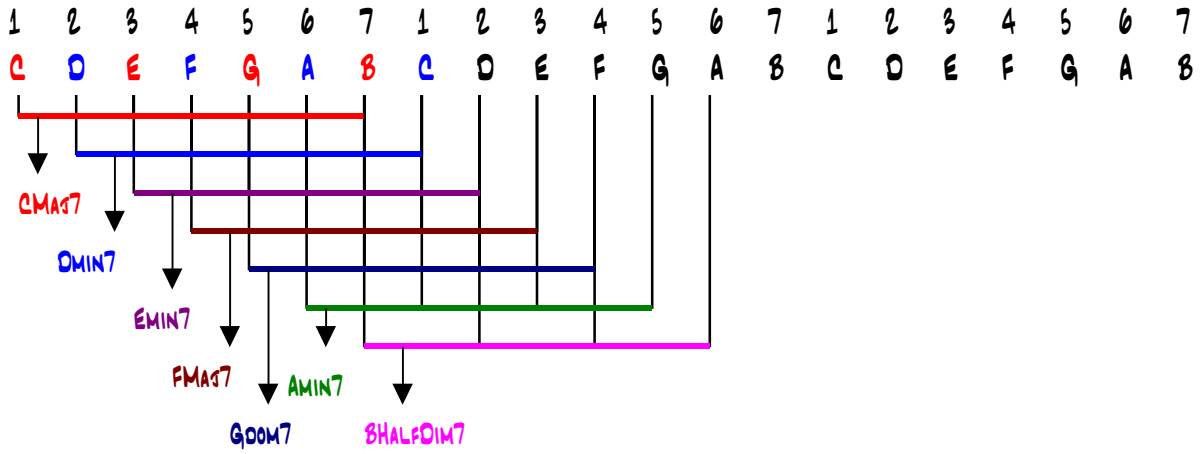


Diminished 7



-Diatonic Chord (Chords natural to any given key)-

Build - stack - notes a 3rd apart on every scale tone in the key. You will need to identify the quality of each after. The Diatonic chords for each scale and scale type is given as you are using only the notes in the scale (Diatonic).



Root Note	C Maj7	C E G B
2 Step	D min7	D F A C
3 Step	E min7	E G B D
4 Step	F Maj7	F A C E
5 Step	G x7	G B D F
6 Step	A min7	A C E G
7 Step	B half dim7	B D F A

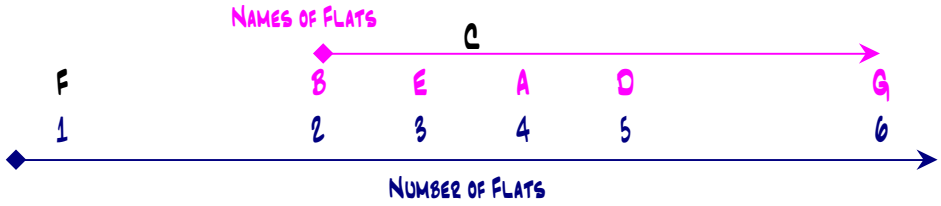
Scales & Key Signatures

To figure out the key signature for a given Scale you must know that:

- Flat keys have a flat included in the name - Bb, Eb, Db etc. with the key of F being the exception.
- Sharp keys are indicated by just the letter - B, E, D etc.
- The key of C has no sharps or flats.

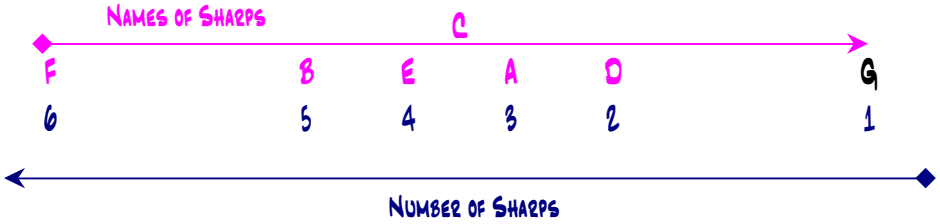
Flat Keys

- Keys are F Bb Eb Ab Db Gb Cb
- Number of Flats are 1b-F, 2b-Bb, 3b-Eb, 4b-Ab
- Names of the Flats are F-Bb; Bb-Bb,Eb; Eb-Bb,Eb,Ab

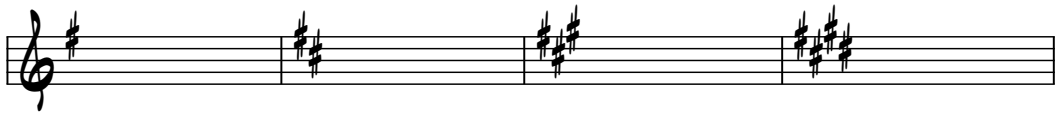


Sharp Keys

- Keys are G D A E B F# C#
- Number of Sharps are 1#-G, 2#-D, 3#-A, 4#-E
- Names of the Sharps are G-F#; D-F#,C#; A-F#,C#,G#; E-F#,C#,G#,D#



Sharps



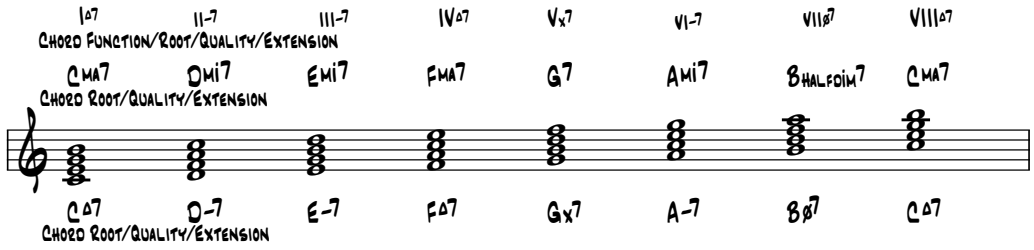
Flats

-Basic Concepts III-

Chord Notation: "Chord Symbols"

- Chordal Figure: C MI7 = C indicates root of chord / MI indicates quality / 7 indicates extension above the root.
- Roman Numeral: II-7 = II indicates tonal relationship (harmonic function) it identifies its place in the key (- is a short hand for MI).
- Figured Bass: II-7 (6/5) = 1st inversion Eb-G-Bb-C with Eb to C an interval of the 6th and Eb to Bb an interval of the 5th.

Chord Symbol Sytles



Diatonic Scale Chords

Diatonic (melody or harmony) is confined to a given scale and is from a given scale - Chords consist of scale tones only which produce a given quality.

Major:

I	II	III	IV	V	VI	VII	VIII
MAJ7	MIN7	MIN7	MAJ7	DOM7	MIN7	HALF DIM7	MAJ7

Minor:

I	II	III	IV	V	VI	VII	VIII
MINMAJ7	HALF DIM7	MAJOR7 OR AUG7	MIN7	DOM7	HALF DIM7	DIM7	MINMAJ7

- All 7th chords as Jazz is based upon 4 note voicings - Chords are produced by superimposing thirds upon the Root note - C Eb G Bb = Diatonic ii-7 chord in Key of Bb as key of Bb is Bb C D Eb F G A Bb (C-7 = 2 4 6 8 steps of the Bb Scale).
- The scale to construct the Diatonic Minor Chords is the Harmonic Minor Scale with two changes: III Chord is a Major or Major with raised 5th (+7); vi Chord Root is raised 1/2 Step. In John Mehegan minor scale chords use the Ascending Melodic Minor (#6, #7) for the Bass Line and the Harmonic Minor (#7) for the inner voices.
- The reason for the #6 and #7 is to preserve common harmonic progressions - I VI II V. The use of the 6th step of the scale would not allow this - though often borrowed in Modal treatments. "Think in Major for Bass Note and 'borrow' from Minor for inner voices".

Scales

Major: The Major Scale Tonality (an interval pattern which the Western Musical Tradition has labeled "Major") is created by:

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

-Minor: The Minor Scale Tonality is created by (Three scale types)-

Harmonic - the 6th degree is flatted; 7th degree unaltered.

1	2	3	4	5	6	7	8
C	D	Eb	F	G	Ab	B	C
	W	H	W	W	H	W	H

Melodic - the 6th and 7th degrees remain unaltered when ascending and the 6th and 7th are flatted (Natural Minor) descending - in effect the it is the *Melodic Minor Ascending and the Natural Minor Descending*.

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

NATURAL – THE 6TH AND 7TH DEGREE ARE FLATTED.

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

NB THE *HARMONIC MINOR SCALE* IS USED FOR CHORD CONSTRUCTION IN MINOR TONALITY. JOHN MEHEGAN MAKES THE FOLLOWING ADJUSTMENT TO PRESERVE THE NATURAL 6TH FOR BASS MOVEMENT: BASS LINE IS THE *ASCENDING MELODIC MINOR SCALE* AND THE INNER VOICES ARE DERIVED FROM THE HARMONIC MINOR SCALE. THE KEY SIGNATURE FOR THE MINOR SCALES IS THE SAME AS THE RELATIVE MAJOR SCALE (MINOR 3RD ABOVE ROOT NOTE OF THE MINOR SCALE).

CHROMATIC CHORDS

CHORDS CONTAINING ONE OR MORE TONES NOT IN THE KEY (SCALE) TO PROVIDE FOR MELODIC ADJUSTMENT OR HARMONIC SUSPENSE.

CONSTRUCTION:

- CAN ALTER THE CHORD QUALITY (MIN7 TO MAJ7) BY ALTERING AN INTERNAL VOICE.
- RAISE OR LOWER THE ROOT 1/2 STEP (CMAJ7 TO C♯MAJ7).
- ALTER THE QUALITY AND RAISE OR LOWER THE ROOT (CMAJ7 TO C♯MIN7).

INVERSION:

- A NOTE OTHER THAN THE ROOT OF THE CHORD IS PLACED IN THE LOWEST VOICED POSITION.

INVERSION	BASS NOTE	FIGURED BASS
ROOT	ROOT	R
1ST	3RD	6/5
2ND	5TH	4/3
3RD	7TH	4/2

NB MAJOR SCALE/MINOR SCALE DIATONIC CHORDS AND CHROMATIC CHORDS CAN BE INVERTED. DIMINISHED CHORDS ARE ALWAYS CONSIDERED TO BE IN ROOT POSITION. JAZZ IS BASICALLY A ROOT POSITION MUSIC BUT INVERSIONS CAN BE INVALUABLE IN STRENGTHENING A JAZZ BASS LINE.

-Harmonic Movement-

Harmonic Movement

The Frequency of Chord Changes in relation to the Bar (and/or) the number of Chords per Bar and Placement of Chords in relation to the Time Signature (meter). In general chords occur on strong (accented) beats.

- Tempo: affects the harmonic rhythm - faster tunes fewer changes.
- Melody: many notes (dense melodic construction) fewer changes.

NB Rapidly changing chords tend to produce a feeling of restlessness; less frequent tends to create and of spaciousness and relaxation.

Harmonic Principles

Harmony has a starting point of REST and 'MOVES' to another point of REST (cadence). Chord function is determined by DISTANCE from the REST point and PUSH toward a REST point. Chords provide COLOR (vertical sound) for melodic line (homophonic texture - melody with a subordinate harmonic support).

Three Categories (by function - movement toward or away from rest point)

Tonic/Subdominant/Dominate and are PRIMARY or SECODARY in each category.

Movement from →			Movement to
	Primary		
TONIC	SUBDOMINATE	DOMINATE	TONIC
I Maj	IV Maj (ii min)	V Maj/dom7	I Maj
	Secondary		
iii min		iii min	
vi min	ii min (IV Maj)	vii dim (vii Half dim)	vi min

Eg: Tonic-Dominant-Tonic progression

Tonic		Dominant		Tonic
CMaj7	CMaj7	G7	G7	CMaj7
		Becomes		
Tonic		Subdominant	Dominant	Tonic
CMaj7	CMaj7	Dmin7	G7	CMaj7
		Becomes		
Tonic	Secondary Tonic	Subdominant	Dominant	Tonic
CMaj7	Amin7	Dmin7	G7	CMaj7

-Movement - Basic Concepts-

- The TONIC tends to move to the SUBDOMINATE, the SUBDOMINATE to the DOMINANT, and the DOMINANT to the TONIC.
- Can also 'mark time' by movement within the same category - TONIC to TONIC.
- Can use RETROGRADE movement - DOMINANT to SUBDOMINANT.
- Any Chord may follow the TONIC (I chord).

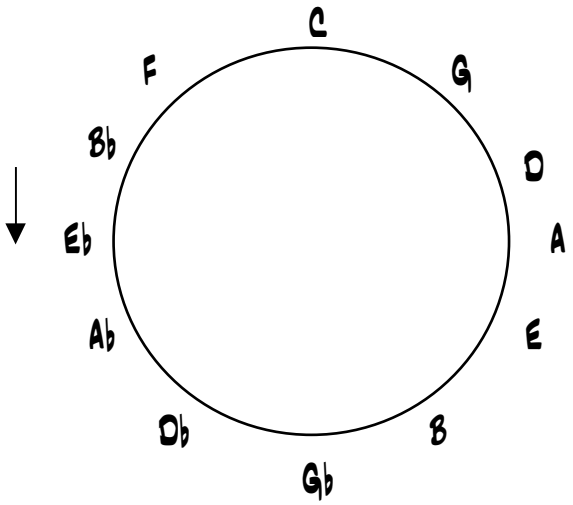
Eg: Movement by Function

IMaj7	IVMaj7	VIIHalfDim	IIImin7	VImin7	IImin7	VDom7	IMaj7
Tonic	Subdominant	Dominant	Tonic	Tonic	Subdominant	Dominant	Tonic

Chord Progressions - In Jazz and Popular harmony there are three basic Chord movements *ROOT MOVEMENT BY 5TH, DIATONIC, CHROMATIC.*

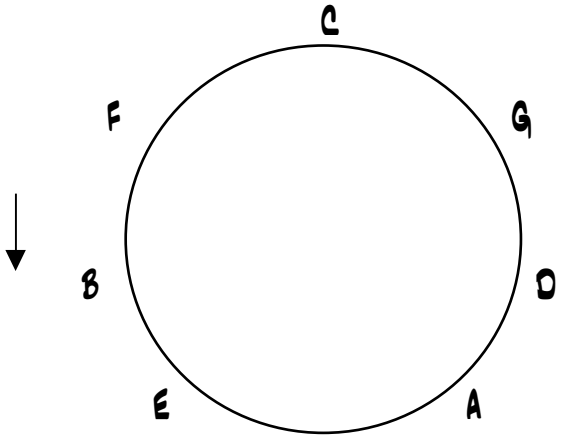
Root Movement by 5th (Circle Patterns) is the most common and 'satisfying' root movement in Jazz and Popular harmony. There are two types PERFECT and DIATONIC.

PERFECT:



- Usually found in conjunction with SEQUENCE, MODULATION, or SEQUENCE AND MODULATION. Includes the Chromatic Root.

DIATONIC:



- To avoid chromatic roots a slight alteration is used. Found in entirety or in fragments. Movement is complete when the I Chord is reached then can start movement again or move to any other chord. All Chords are common to the Tonic Key.

-General Guide - Circle Movement-

- May begin on any chord.
- Effective only in Root Position.
- Chord QUALITY may vary - chain of Dom7 chords possible, any chord may be altered to the Dom7 quality and progress down P5 to Maj/min/Dom/half dim - (V of V).

Diatonic Movement: Diatonic stepwise patterns may progress through the scale in ascending, descending, or ascending and descending patterns.

-General Guide - Diatonic Movement-

- Appear in groups of 3 or more chords (fragments).
- Often found at the beginning and end of a phrase.
- Originate on beat 1 of an odd bar (1-3-5 etc).
- Often combined with Chromatic and Circle patterns.

(Chromatic Patterns: Chord Movement based on non-key roots)

-General Guide - Chromatic Movement-

- Result of use of alternate/substitute chords (Tritone Sub - Dom7♭5).
- Insertion of dim7 chord.
- Not really a modulation but an alternative chord used in place of a Circle Progression (for variety and smoother root movement).

Modulation

Used to create Harmonic variety. Movement from one Key to another may be smooth and subtle or abrupt.

-General Guide Lines-

- May occur quite frequently.
- May be temporary and simply pass through a Key area.
- May be sustained for the entire Section.
- Relative minor to Major and Major to minor quite common.
- Generally occur at the beginning/end of a new phrase or section.

-Locating Modulation-

- Necessary to note modulations to understand the *Functions of* chords in context.
- Steps for location:
  - : Convert chords to Roman Numerals and think Diatonically.
  - : Locate two or more chords with quality or accidentals chromatic to starting Key - dom7 chords particularly - if I/II/V chord is altered in Major; the ivmin/iiHalfdim/Vdom7/imin in minor Keys.
  - : If Major quality is found on other than the I/IV of starting Key.
  - : Identify Pivot Chord which has one function in Key Center it comes from and another in the Key Center it goes to:

Cmi Cmi#7 Cmi7 F7 BbMaj7

Key of Cmin = imin7/iimin7 in Key of Bb

  - : Allows the complete chord pattern to be interrupted without impairing the overall forward Motion.

-Deceptive Modulation-

- Created by abruptly and *briefly moving* into an unexpected Key area.
- Generally moves to a remote Key Center (more than one ♯/♭ away from the original Key.
- Both the Deceptive chord and the preceding chord usually contain one or more common tones.
- Approached by dom7 chord, which resolves up 1/2 step.

-Deceptive Cadence-

- The use of a chord other than Tonic chord after a cadential formula has been used.
- Generally used to extend a phrase/section in a composition.

IIimin7 Voom7 IMaj7
Dmin7 G7 Cmaj7

Deceptive Cadence:

Dmin7 G7 AbMaj7

-Chord Function-

(Tonic/Subdominant/Dominant)

Function and Chord Quality (7th Chords)

(See chart Harmonic Movement Chapter)

-Major-

- I or IV (or temporary) in a major key - Functions as a Tonic or Subdominant.

-Dominant-

- V (or temporary) - Functions as a Dominant or Subdominant.

-Minor-

- I or IV (mi6) (or temporary) in a minor key - Functions as a Tonic or Subdominant II or III or VI (mi7) (or temporary) in a major key - Functions as a Secondary Tonic or Subdominant.

-Half Diminished-

- vii (or temporary) as a Secondary Dominant in a major key II or VI (or temporary) as a Subdominant or Secondary Tonic in a minor key or minor key area Found Diatonically in the Harmonic and Natural Minor Scales (ii07/vi07) Most successfully used when functioning as a ii07. When it appears as vi07 in the Melodic Minor Scale it is predominately a TONIC MINOR SOUND.

-Diminished-

- vii dim7 (or temporary when passing up to a minor chord in minor area) - Functions as Secondary Dominant *Connects* or bridges ascending or descending stepwise progressions - Functions as a Subdominant; Dominant is it embellishes a I Chord; Subdominant if embellishing II or V chord Dom7b9 without Root - Functions as a Dominant Chord (must determine Root) Since the dim7 is constructed of equal intervals it produces an ambiguous sound. To determine the root you must

know where it is going (resolution). It is a NON-DIATONIC chord when used with Major Keys. It possesses no qualities of rest or finality - once used, it must go someplace. Use enharmonic spelling.

-Augmented-

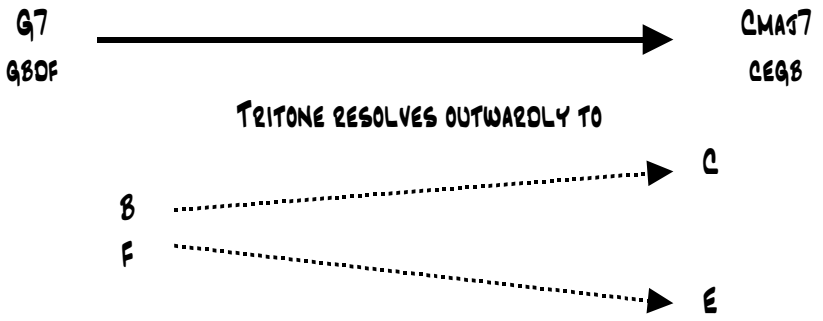
- Embellishing chord if root is the same as the following chord functions as a Tonic and appears as a Triad (C+ to C Maj) Leading Tone to Following Chord - Functions as a Dominant (C+7 to F M7) An equal interval chord and produces an ambiguous sound Root is hard to determine - as an embellishing chord (C+ to C Maj) root can be C/E/G# - as leading tone can resolve to A/F/Db.

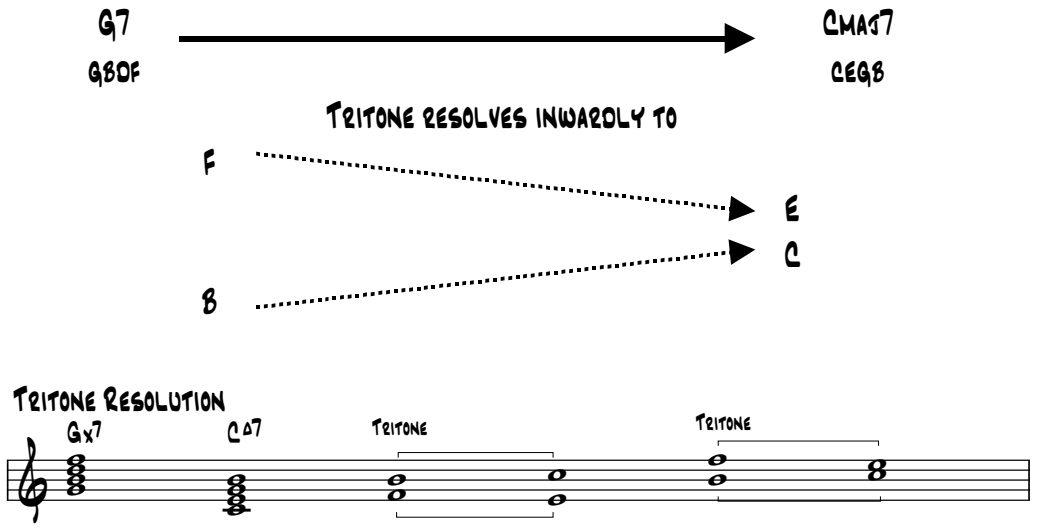
Dominant Function

-The Dominant 7 Cadence (Vx7 to IM7)-

- CADENCE is a musical event that occurs in both melodic and harmonic movement. Its purpose is to convey an impression of momentary or permanent REST, ENDING, and/or CONCLUSION.
- The x7 cadence is the first and most basic cadences that occur in Western European Derived Music.
- The appearance of the TRITONE INTERVAL is what creates the distinctive characteristic of the x7 and creates its individual tension and unrest The two chord degrees which create this internal are the 3rd and 7th and even if inverted the TRITONE still exists.
- The TRITONE RESOLUTION (result of the FORWARD MOTION of the TRITONE) moves inwardly or outwardly to the 1st and 3rd degrees of the related TONIC chord - this is what creates tension in the x7 chord and the resolution to the IM7 creates rest.

eg: Tritone resolution





RULE: ANY TONIC CHORD MAY BE PRECEDED BY ITS OWN DIATONIC V7 CHORD

-AUGMENTED 7 APPROACH TO IM (V+7 TO IM)-

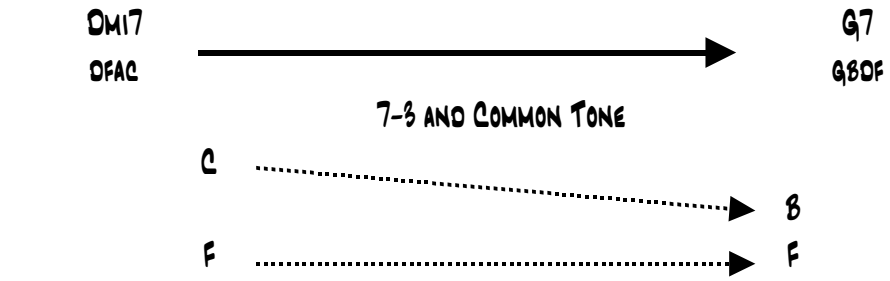
- THE TONIC MINOR KEY TONALITY IS CREATED WHEN SPECIFIC DEGREES OF THE MAJOR SCALE ARE ALTERED. JAZZ HARMONY SUGGESTS THAT CHORDS APPROACHING THE IM MAY BE ALTERED AS WELL.
- THE TONIC MINOR MAY BE APPROACHED BY ITS RELATIVE X7 CHORD WITH A RAISED 5TH DEGREE (V+7). THE RAISED 5TH DEGREE OF THE X7 BECOMES THE B3 OF THE TONIC MINOR.

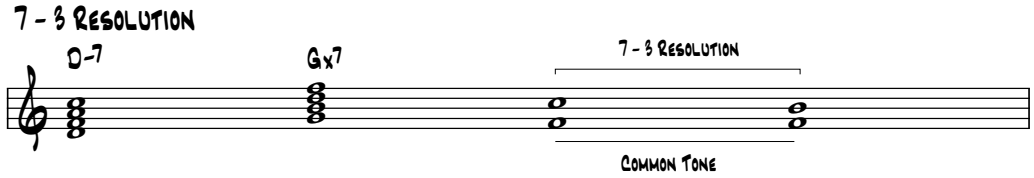
SUBDOMINANT FUNCTION

-THE MINOR SEVENTH CHORD (II-7 TO VX7)-

- ONE OF THE MOST FLEXIBLE - IT DOES NOT CREATE AS MUCH FORWARD MOTION AS THE VX7 CHORD BUT SERVES AS A X7 HELPER.
- THE II-7 CHORD USUALLY PRECEDES THE X7 AND PROVIDES PREPARATION AND FOUNDATION FOR THE USE OF THE VX7. IT IS LESS TENSE, AS IT IS ONE DEGREE REMOVED FROM THE TRITONE OF THE VX7 CHORD.
- THE 7-3 RESOLUTION OCCURS AS THE 7TH STEP OF THE II-7 CHORD MOVES DOWN TO THE 3RD STEP OF THE X7 CHORD - THE 3RD OF THE II-7 CHORD BECOMES THE 7TH OF THE X7 CHORD (COMMON TONE: WHEN A NOTE OF ONE CHORD SUSTAINS INTO BUT FUNCTIONS DIFFERENTLY IN A FOLLOWING CHORD).

EG: 7-3 RESOLUTION





RULE: ANY X7 CHORD MAY BE PRECEDED BY ITS RELATIVE II-7 CHORD

TONIC FUNCTION

- THIS IS THE I CHORD - THE CHORD WHICH DEFINES THE KEY AND WHICH THE DOMINANT AND SUBDOMINANT FUNCTIONS MOVE TOWARD TO CREATE THE SENSE OF REST OR END OF FORWARD MOTION.
- THE TONIC MINOR IM#7: MEHEGAN USES THIS AS THE TONIC MINOR - IF YOU USE THE IM6 CHORD THE ADDED 6TH IS JUST A COLOR TONE AND IT IS STILL BASICALLY A TRIAD (MAY ALSO CAUSE CONFUSION AS AN INVERTED D7

-Chord Extensions-

Unresolved Tensions

Jazz Harmony and Melody are not limited to notes derived strictly from CHORD TONES. Additional tones that color these basic chord structures may be successfully added (a color tone is an addition to the chord which does not alter function but enriches the sound). Also called Unresolved Tensions in certain instances. The technique for expanding any scale tone chord is to elevate each NON-CHORD Tone up one octave.

Rule: Logic and taste determine the use of any Color Tone

-Major Extension-

6th/7th/9th/11th

- The 6th is classified as a chord tone - C6 is really a TRIAD with an added color tone.
- The 7th can be considered an UNRESOLVED TENSION if used with the 6th degree (C6 (add7) = CEGBA). (Mehegan uses a 4 voice system to the 7th degree as chord tone but this is a 7th added to a 6th chord).
- The 9th is a color tone - must be careful of melody note as can clash with 3rd scale degree in melodic line.
- The 11th (natural 11th) causes a clash with the 3rd degree of the chord - it is raised to #11 degree - especially useful for endings. May require MELODIC adjustment as this is the raised 4th is in effect an altered scale tone. Should be supported by the 9th chord degree to avoid confusion with the 13 sound.

-Minor Extensions (i Minor)-

6th/7th/9th/11th (Derived similar to Major extensions IM6)

- The 6th can be classified as a chord tone - Am6 is really a TRIAD with and added *color tone.*
- The 7th can be considered an UNRESOLVED TENSION if used with the 6th degree (Cm6 (add7)). In Mehegan the mL /- (♯7) is a Diatonic Minor Tonality (Chord tone in if used in a 4 voice system - again a 7th added to a m6 chord).
- The 9th is a color tone - must be careful of melodic clash.
- The 11th does not require alteration.

-Minor Extension (Subdominant m7)-

9th/13th

- The 13th appears on all but the Tonic Major and Minor. It is not usually used in 'Head' accompaniment but freely in improvisation support - due to the interval structure of the m13 (min6/9) as the 13 - ♭3 create a TRITONE and the ♭7 -13 create a Major 7th interval -- this can create a feeling of Bi-tonality.
- The iiim7 does not take the 9th extension as this breaks the chord from the Diatonic framework - the 9th degree is chromatic to the Key it appears as a iim7 chord (Em9=EGBDF♯ as iiim7 in Key of C F♯ is a chromatic tone).

-Minor 7♭5 Extension-

♭9/9/♭13/13

- When approaching the *minor tonic* may add ♭9 and/or ♭13 (when functioning as a ii) Note that the -7♭5 is diatonic in the minor mode.
- ♭9/9/♭13/13 extensions are dictated by melodic considerations.

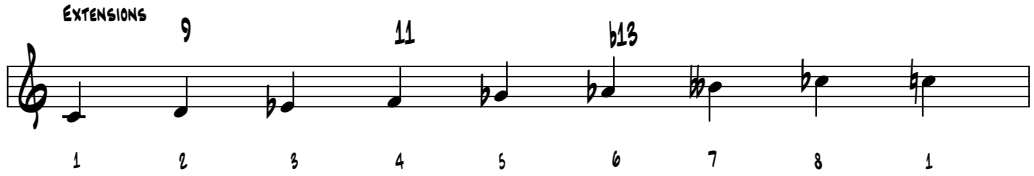
-Diminished Extension (o7 chord)-

9/11/b13

- Most abstract on all the unresolved tension structures of any chord. The o7 is constructed from an artificial scale and the extensions are taken from that scale.

Chord Tones								
C	D	Eb	F	Gb	Ab	Bbb	Cb	C
	9		11		b13			
Extensions								

Diminished Scale: series of Whole & Half Steps



-Dominant Extensions-

b5/#5/9/#9/b9/11/#11/13/b13

- The 5th may be altered to #5 or b5. The natural 5th is not used when altered 5th is present - it may appear with the #11 (raised 11th).
- The 9th can appear as a natural 9th or altered to #9 or b9 (to accommodate melody or voice leading. The #9 and b9 can appear together. The 5th may be omitted as color tone - not essential to the chord and may create a DISONANCE with the altered tension voice. Never use the natural 9th with an altered 9th (minor 2nd clash).
- In using the 11th: if the 3rd is present in the chord the 11th must be altered to the #11 to avoid the 3rd - 11th minor 2nd clash. If the 3rd is omitted, can be x11 or sus4 chord.

- Altered suspension chords (x7#3 enharmonic to the 11)
  : Suspended tone moves up by step; the resolution can be delayed until the next bar; the suspended tone resolves into the following chord; the raised 3rd of the x7 chord is unprepared and has an inactive resolution; the x7 is preceded by a x7-4 of the same bass
  : note: If the 9th is present it is a x11 and if the 9th is omitted it is a sus4 chord. If the #9 is included, it is really a M7 chord so the #9 is never used with a x11 chord.
- The 13th may be coupled with the 9/#9/b9. The b13 must be supported by the 9/#9/b9 otherwise would sound like the #5 alteration. Never used with the b5 alteration and never used with the #5 alteration (enharmonic). If the +5 chord appears can use the b13 with the 9th as support if used as a x7 function.

Function & Chord Quality

Rule: 7th chords can be extended with additional 'color tones' without destroying the function of the original chord (Tonic/Subdominant/Dominant). Any 'characterization' b or # to ornamental tones does not effect chord Quality Maj/Dom/Min/Halfdim/dim.

--9th Chords-

- The natural 9th interval may be added to all Chord Qualities. It is supported by the 7th or the added 6th interval.
- The b9 & #9 are added to the x7 chord with the b9 often applied when resolving to a minor chord.
- All three types of 9th's are self-supporting - do not need the presence of the 11th or the 13th.

-11th Chords-

- The natural 11th is added to the min7/halfdim7/Dim7 chords.
- It must be supported by the natural 9th interval.
- The 3rd of the chord is omitted.
- If not accompanied by the 9th it is considered a 4-3 Suspension (sus4). Accompanied by either the 9th or b9th it is considered an 11th. The #9 is not permitted as it forms a -11th chord (C G Bb Eb F).
- May be added to Dom7 (13/9)(13/b9)(b13/9)(b13/b9)

-Augmented 11th Chords-

- On Major chords it must be supported by the 9th.
- The natural 5th is usually omitted unless voiced one octave below the #11.
- A x7 chord containing a dim 5th above the Root (enharmonic) in any octave is considered a x7b5 chord in not accompanied by the 9th. Accompanied by the 9/b9/#9 it is considered and Augmented 11th (+11) chord.
- The #11 is avoided in the Bass Clef for clarity but may be doubled - omitting the 3rd - if it is the top voice.
- May be added to x7: (13/9)(13/b9)(13/#9)(b13/9)(b13/b9)(b13/#9).

-13th Chords-

Appears only in the x7 chord.

- Usually supported by the 9/b9/#9. The b13 must be supported by the natural or altered 9th intervals.
- The natural 5th is omitted - if not supported natural or altered 9th it is an Augmented 5th (+5).

NB Function of the 6th scale degree: Major = added 6; Dominant = 13th; Minor = added 6; Half Diminished = non functional; Diminished = o7 (bb7).

Parallel Interval Structures

A melodic line may be supported by building the same internal relationships below each Melodic Tone (may also create a harmony above the melody).

- May be 4th/5th/3rd/etc. above or below a given tone - can be expressed as dim9/dim9 add Maj7/dom9 (13#11) or Am/G7 etc.
- These structures are generally used for special effects or arrangements and are not employed when creating a more conventional revision to a popular tune - may be used freely in intro s/endings (keep as many common tones as possible move other by step).
- Should be used sparingly as parallel structures can become monotonous.

Principle of Mixed Positions

Consists of building any number of voicing possibilities between the Bass Note of a chord (Root or Inversion) and the melody note.

Follow the function of the tones comprising any chord:

- Essential Tones (those revealing the Basic Quality Maj/Dom/min/Halfdim/Dim)

3rd	———	Maj/min
5th	———	Halfdim/Dom

P 5th is not a color tone, Dim 5th is

7th	———	Maj/min

- Ornamental Tones

9/#11	———	Major
9/b9/#11	———	Dominant
11/#11/b5		↓
13/b13		↓
9/11	———	Minor
9/11	———	Halfdim
9/11	———	Diminished

Any of these can be included in the voices possible between the bass and the melody note – *quality and matching ornamental tones* must be observed.

-Chord Tensions-

General Considerations

Tensions take the name form the INTERVAL they make above the ROOT of the Chord and any chord can theoretically support any DIATONIC 7/9/11/13 as a tension above the ROOT.

The sense of DISSONANCE of a tension derives (usually) from a potential major 7th interval between the tension note and the chord tone below it.

EG: Maj 7th interval-tension and lower chord tone

	1	3	5	7	9	13
13th chord	G	B	D	F	A	E

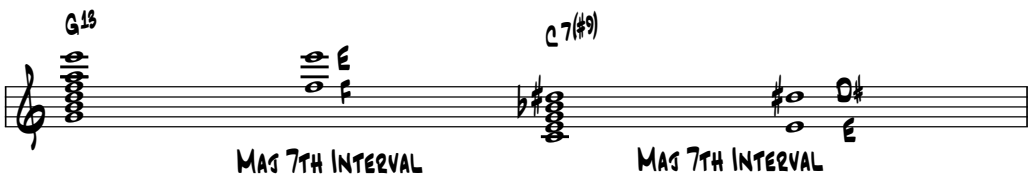
Maj 7th interval

EG: Maj 7th interval-tension and lower chord tone

	1	3	5	7	9
x7 (#9) chord	C	E	G	Bb	D#

Maj 7th interval

Maj 7th Interval within Chord



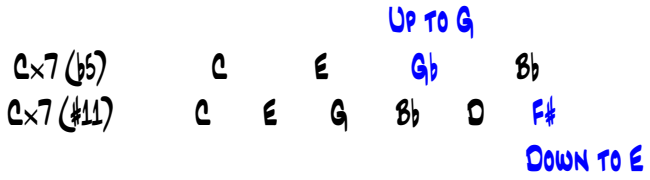
This dissonant relationship is often stressed in both chord voicings and melodic lines. Tensions are usually sounded above the basic chord tones in order that the dissonant interval be emphasized. The *resolution* of the tension *resolves* the dissonance.

Due to mode mixture in tonal music tensions may be derived from major or minor scale sources. Although the 13th is a major derived tension, it is not used in minor contexts – minor derived b13/b9/#9 are often used in major contexts (also the #4 of the Lydian scale and the b2 of the Phrygian scale – the b9 is avoided in contexts other than the x7 chord).

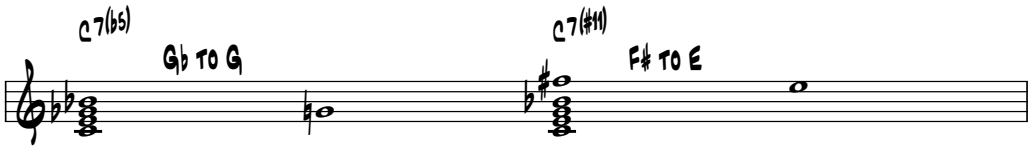
Tensions are ordinarily diatonic

- Exception: In chords having M3rd interval – they frequently support a tension 1/2 step below (d5th) the P5th as a *substitute* to the P5th. This dim 5th derives dissonance from the M2nd interval it creates with the 3rd of the chord. It resolves upward to the P5th.
- The (enharmonic) +11 takes dissonant quality in a more usual way – from the M7th interval it creates with the P5th of the chord. It resolves down to the 3rd.

Eg: Enharmonic b5 and #11



The b5/+11 Resolution



- Avoidances:
  - The 9th (enharmonic to #4) on a III-7 when used as a Substitute for the I Maj7 is not used or very rare as it weakens the Tonality defined by the I Maj7.
  - A potential tension will be avoided if it might obscure the 'local' harmonic Progression - interfere with one of the essential lines of the Progression.
- Non Chord Tone Resolution:
  - The #9 can resolve DOWN to a ♭9.
  - The I add 6 chord (Triad with 6th added) - it does not create a dissonant interval but it is not part of the Triad. It can stand as a tension resolving to the 5th of the I chord or more usually as the resolution of the M7th interval of the I Maj7 (C Maj7 to C6). Do not confuse the 6th and the 13th - enharmonic but appear in different contexts.

-Chord Patterns-

The Chord Pattern

A chord pattern is a series (usually of 4 diatonically related chords) that are built on specific degrees of a given scale. Harmonic forward motion and recognizability are the chord patterns main characteristic.

-Root Movement by 5th and variations-

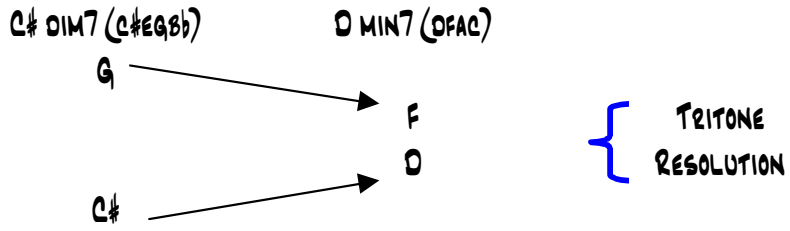
I vi ii V

- The I and vi are based on the Tonic function; the ii is a Subdominant function; the V is a Dominant function. It follows the Tonic/Subdominant/Dominant/(Tonic) motion.

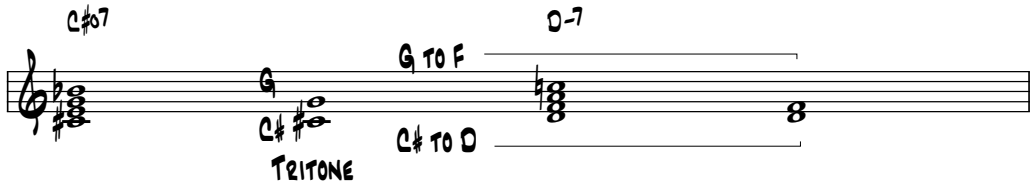
	Tonic Function		Dominant Function	
Original	I Maj7 (C)	I Maj7 (C)	G×7	G×7
	Tonic ←	Secondary Tonic - Subdominant →	Subdominant	Dominant
Function	I Maj7	Vi min7	Ii min7	V dom7
Chord	C Maj7	A min7	D min7	G×7
Root Movement	C	A	D	G
			Follows Circle of 5ths	

I #IO7 II V7

- The #IO7 closes in on the Root and 3rd of the II-7 chord with a Tritone resolution.



The Tritone Resolution



: The I is a Tonic Function; the #IO7 is a passing tone chord; the II is a Subdominant Function; the V is a Dominant Function. The C# & E chord tones of the #IO7 pass upward to the D & F chord tones of the II chord.

I Maj7	#IOIM7	II min7	VOOM7
C Maj7	C# DIM7	D min7	G OOM7
Tonic	Passing Chord	Subdominant	Dominant
Rest	Tritone Tension	Less Tense	Tritone Tension
	Movement away from Tonic		Movement to Tonic

: May also appear as I VIx7(b9) II V to preserve the *Root Movement* by 5th - the 6th degree of the scale is placed in the bass of the I#O7 chord creating an A7(b9) chord.

I bIII07 II V

- The I is a Tonic Function; the bIII07 is a passing tone chord; the II is a Subdominant Function; the V is a Dominant Function. The Gb & Eb chord tones of the bIII07 pass downward to the F & D chord tones of the II chord.

  : The bIII07 does not contain a Tritone interval and is not as tense a sound as the #IV07.
  NB there is an enharmonic tritone Eb to Bbb (A)

I Maj7	bIII dim7	II min7	V dom7
C Maj7	Eb dim7	D min7	G dom7
Tonic	Passing Chord	Subdominant	Dominant
Rest	Less Tense	Less Tense	Tritone Tension
	Movement away from Tonic		Movement to Tonic

I IV7 IV iv-

The I is a Tonic Function; the IV7 is a Subdominant Function - V of IV (V/IV); the IV chord is a Subdominant Function; the iv- produces Subdominant Modal Intensification which increases the strength of movement to the Tonic.

I	I dom7	IV	iv min
C	C dom7	F	F min
Tonic	Subdominant	Subdominant	Subdominant
Rest	Tritone Tension	Less Tense	Modal Intensification
	Movement away from Tonic		Movement to Tonic

-Circle Sequential Patterns-

Sequence is the immediate repetition of a melodic line, harmonic pattern, or both at another pitch.

General Guidelines (Circle Sequential Patterns)

-ii V-

- Moves down in sequence a whole step.

D min7	G7	C min7	F7
ii min7	V dom7	ii min7	V dom7
Key of C →		Key of Bb →	

- Moves down in sequence a half step.

B min7	E7	Bb min7	Eb7
ii min7	V dom7	ii min7	V dom7
Key of A →		Key of Ab →	

- Moves up in sequence a whole step.

G min7	C7	A min7	D7
ii min7	V dom7	ii min7	V dom7
Key of F →		Key of G →	

- May begin on any chord.
- Effective only in Root Position.
- Chord quality may vary: o7th is rare; chain of x7th chords is possible; any chord may be altered to x7th quality and progress down P5 to Maj/Dom/min/halfdim.
- ii V which progress down a whole or half step may occur several times in succession or as a single sequence.
- In these patterns all chords not labeled as ii V are still functioning as temporary ii V.

ii	V	ii	V	ii	V
D min7	G7	E min7	A7	D min7	G7
		Temporary ii V			
		Key of D			

- ii V moving down a whole step may begin on a min7 or halfdim7 chord.
- ii V moving down a half step may begin on a min7 or halfdim7 chord.
- ii V moving down a whole/half step may occur several times or as a single sequence.
- ii V ascending usually involves only one sequence (ascending stepwise motion is not as satisfying and weaker than descending ii min chord is often found as a halfdim).

-ii V I-

- When moving down a whole or half step really an extension of the ii V to include the I.
- When moving down in whole steps it follows the Perfect Circle of Fifths and the I chord is altered to min to become the ii of the next sequence.

ii	V	I	ii	V	I	ii	V	I
A min7	D7	G Maj7	G min7	C7	F Maj7	F min7	Bb7	Eb Maj7
Key of G			Key of F			Key of Eb		

-Extended Sequential Patterns-

- A series of x7 chords moving through the Perfect Circle of Fifths are repeated down a half step.
- A whole section of a tune may be repeated in sequence down a half step.

Summary (Circle Sequential Movement)

- Begins with a 1/2/4/8 Bar pattern which is then repeated one or more times in sequence – the last sequence need not be complete and is often altered or extended.
- May move at any interval but most often found moving up or down by step.
- Quality of the Chords are usually ii min (min/halfdim); V dom7; I (Maj7/add 6).
- Melodic Connections are usually made through common tones or stepwise movement.

-Diatonic Stepwise Patterns-

Diatonic stepwise patterns may progress through the scale steps in Ascending, Descending, or Ascending/Descending patterns.

-I Maj II min7 III min7-

With this pattern the chord following the III-7 will depend on the Chord of Destination.

- If returning to the III min7 some form of the IV chord will be used.
- If III min7 is returning to the II mi7 chord the VI min7/vi min7/bIII dom7/bIII min7/bIII dim7 may be used.

I Maj7	II min7	III min7	VI dom7	II min7	V dom7	I Maj7
Eb Maj7	F min7	G min7	C7	F min7	Bb7	Eb Maj7
			vi min7	II min7		
			C min7	F min7		
			bIII dom7	II min7		
			Gb dom7	F min7		
			bIII min7	II min7		
			Gb min7	F min7		
			bIII dim7	II min7		
			Gb dim7	F min7		

- If returning to the I Maj the II min7 is used.

-II min7 III min7 IV (Maj or min7)-

- Used as a substitute for the II min7 dom7 IV min7 pattern.

	II min7	V dom7	IV min7
	D min7	G7	F min7
Becomes			
	II min7	III min7	IV min7
	D min7	E min7	F min7
		Think of as a G13 inverted without the 9th	
		GBDFAE to EGBDF	

- Used as a substitute for II min V dom II min V dom pattern.

	II min7	V dom7	II min7	V dom7
	D min7	G7	D min7	G7
Becomes				
	II min7	III min7	IV Maj7	V dom7
	D min7	E min7	F Maj7	G7
		Think of as a G13 without the 9th	Major substitute for II min7	

: In this pattern the IV is usually a Maj7 or min7 but often altered to IV min7 or IV min#7 (which resolves to III min7 or bIII dom7) and IV dim7 (which resolves to III min7).

Summary

The illustrated Diatonic Stepwise patterns seldom appear in sheet music.

-Generally-

- Appear in groups of three or more chords.
- Often found at the beginning and end of a phrase.
- Originate on the first beat of an odd bar: 1/3/5/7 etc.
- May be used in conjunction with Circle of Fifths and/or Chromatic patterns.

-Extension Patterns-

Used to delay or evade a *Final Cadence* thus extending the harmony and melody.

Ending delaying arrival at the I chord

-The Tag Ending-

The addition of two or four extra bars at the end of a tune may be added or a part of the structure of the tune repeated.

The III halfdim7 VI dom7 Tag

- May require melodic change with the III halfdim7 (can also use III min7)
- Can use the bVII dom7 to replace the III min chord (Tritone Sub). This can resolve to VI dom7 then circle of 5ths pattern or can resolve to the bIII dom7 then circle of 5ths pattern.

ii min7				V dom7		
ii min7	V dom7	iii min7	VI dom7	ii min7	V dom7	I Maj7
D min7	G7	E min7	A7	D min7	G7	C Maj7

ii min7	V dom7	bVII dom7	VI dom7	ii min7	V dom7	I Maj7
D min7	G7	Bb7	A7	D min7	G7	C Maj7

ii min7	V dom7	bVII dom7	bIII dom7	bVII dom7	bII dom7	I Maj7
D min7	G7	Bb7	Eb7	Ab7	Db7	C Maj7

The Sequence Tag

- This pattern moves up a Maj/min2nd or min3rd interval and then usually returns to the original two bars.

VI DOM7					II MIN7	V DOM7	I MAJ7
A7					D MIN7	G7	C MAJ7
TO:							
VI DOM7	II MIN7	VII DOM7	III MIN7	VI DOM7	II MIN7	V DOM7	I MAJ7
A7	D MIN7	B7	E MIN7	A7	D MIN7	G7	C MAJ7
		MODULATION TO KEY OF D				BACK TO C	

Temporary IV Maj Key Extension

- Temporary movement to the key of the IV Maj in order to extend the final section of a tune.

V DOM7								I MAJ7
G7								C MAJ7
TO:								
V DOM7	V MIN7	I DOM7	IV MAJ7	III DOM7	VI DOM7	II MIN7	V DOM7	I MAJ7
G7	G MIN7	C7	F MAJ7	E7	A7	D MIN7	G7	C MAJ7
	MODULATION TO KEY OF F			BACK TO C	→			

Fade out

- Gradual diminuendo while repeating the last few bars of a tune – usually done on the two bars just before the final cadence.

Chord Time Extension

-Retrograde Movement-

- Reverses a chords normal movement.
- Can be used to extend a chord and delay its normal conclusion.

iii min7	vi dom7			ii min7	V dom7	I Maj7
E min7	A7			D min7	G7	C Maj7
To:						
iii min7	vi dom7	ii min7	ii♯ dim7	ii min7	V dom7	I Maj7
E min7	A7	D min7	D♯ dim7	D min7	G7	C Maj7

Retrograde Extension

- May be used when one chord extends for more than one bar - a strong device so use sparingly.

I Maj7	I Maj7	I Maj7
To:		
I Maj7	♭II Maj7	I Maj7

Used to Replace:

I Maj7	V dom7	I Maj7
I Maj7	IV Maj7	I Maj7
I Maj7	♭VII dom7	I Maj7
I Maj7	ii min7 ($^4_3$)	I Maj7

-Moving Line Patterns-

A pattern where a passing line is created over a chord extending for several measures. It is a Linear Embellishing Technique (The Passing Tone Line). The Passing Tone Line is applicable to Maj/Dom/min chords. It produces a single line of Diatonic or Chromatic passing tones connecting the Root or 5th of the object chord (where you are coming from) with a chord tone of the following chord (where you are going to).

NB The effect produces no new chords but: may represent an essential part of the harmonic identity of a composition; may be used to create interest; and may be used to create movement.

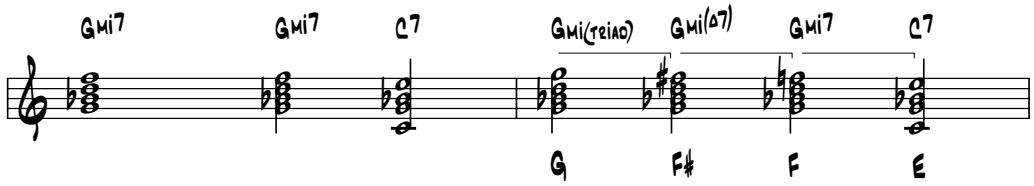
The Descending Line

-The 8/♯7/7 pattern-

- May be used to create a feeling of movement when a minor chord extends for several beats or measures.
- Usually originates on the first beat of the bar and moves to a x7 chord a 5th or half step below.
- Substitute for the ii Vx ii Vx or ii Vx figure (with the Vx delayed two beats).

ii min7		ii min7	Vx7
G min7		G min7	C7
Becomes			
G mi	G mi♯7	G mi7	C7
G	F♯	F	E

8/♯7/7 Pattern

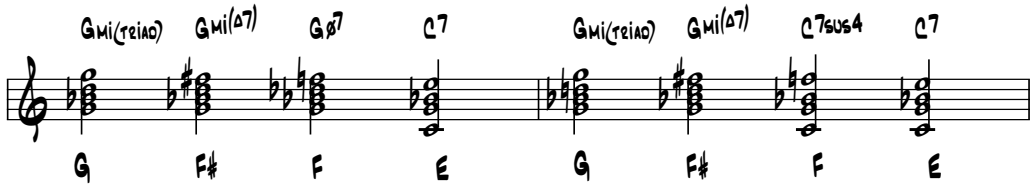


- Can also use the halfdim to replace the last ii chord and Vx7 (sus4) inserted before the Vx7 chord.

G mi	G min#7	G halfdim7	C7
G	F#	F	E

G mi	G min#7	C7 (sus4)	C7
G	F#	F	E

With Halfdim/sus4



NB Sometimes only a fragment of the pattern is used (#7 to 7)

-#7/7 pattern-

- Preceded by a x7 a fifth or 1/2 step above becomes a *suspension* in both cases.

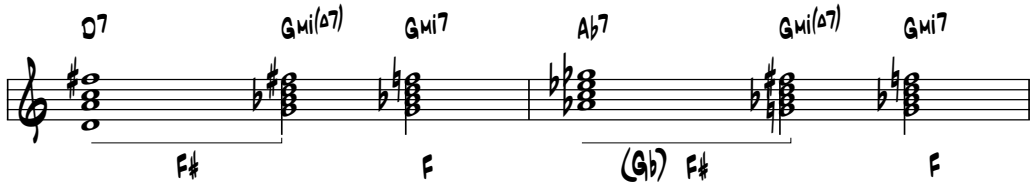
5th

VI domΔ7	ii min#7	ii min7
D7	G min#7	G min7
F#	F#	F

1/2 Step above

bIII domΔ7	ii min#7	ii min7
Ab7	G min#7	G min7
Gb	F#	F

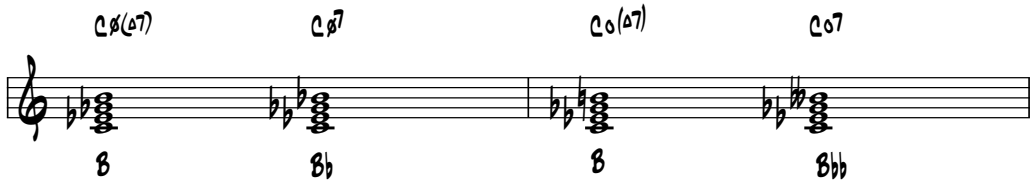
#7/7 Fragment



- This pattern can appear on the Dim7 and Halfdim7 chords.

C halfdim#7	C halfdim7
B	Bb
C dim#7	C dim7
B	Bbb

With Halfdim/Dim



-The 9/8/#7/7 or ##7(R)/#7/7/6 pattern-

	I min		I min
	D min		D min

Becomes

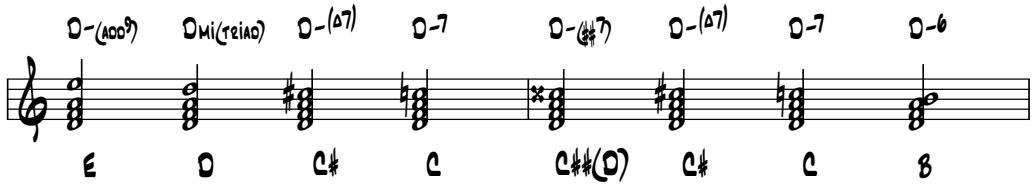
D min (add9)	D min	D min#7	D min7
E	D	C#	C

Or

D min##7	D min#7	D min7	D min6
D	C#	C	B

*This sometimes appears as D min/C+/F6/Bhalfdim

9/8/#7/7 or ##7/#7/6



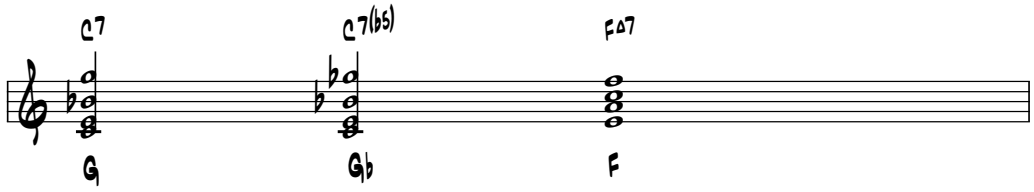
- This movement descending and the 5/#5/6 ascending capitalize on the 'irregularities' found in the upper structure of the different minor scales: the minor triad structure is found in all of the minor scale structures – the notes above may be from any of the minor scales without destroying the minor tonic quality.

-The x7b5 Passing Tone Line Embellishment-

- On the Vx7b5:

V DOM7		I MAJ7
C7		F MAJ7
Becomes		
C7	C7b5	F MAJ7
G	Gb	F

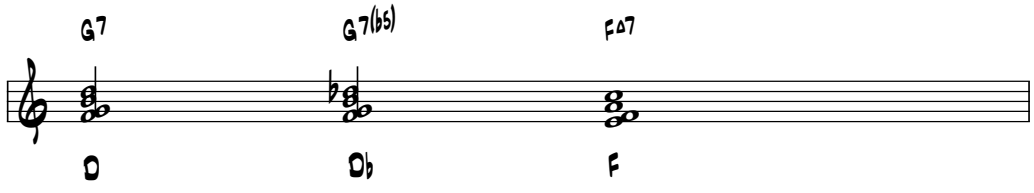
Vx7b5 Embellishment



- On the IIx7:

II DOM7		I MAJ7
G7		F MAJ7
Becomes		
G7	G7b5	F MAJ7
D	Db	C

IIx7b5 Embellishment



The Ascending Line

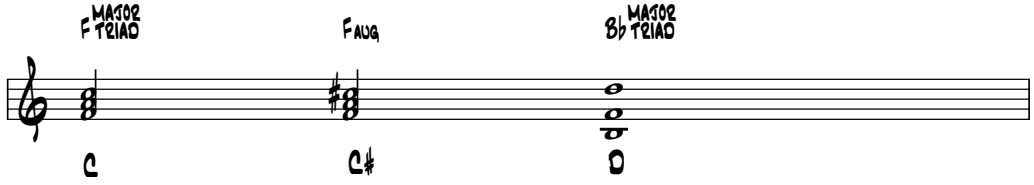
-The Augmented Chord Passing Tone Line Embellishment-

I Maj IV Maj
F Maj Bb Maj

Becomes

F Maj F Aug Bb Maj
C C# D

Augmented Chord Passing Tone



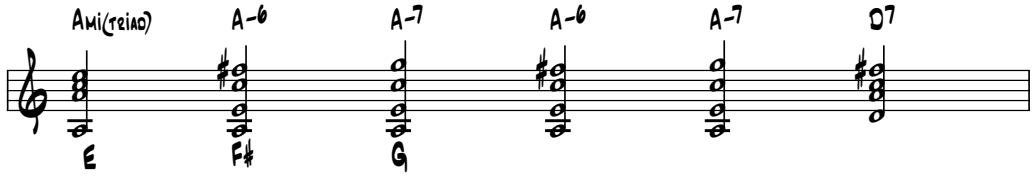
The Ascending/Descending Line

-5th Movement (To enrich patterns)-

- Minor Chords

iii min7	vi dom7	iii min7	vi dom7	iii min7	vi dom7
Or					
iii min7	iii min7	iii min7	iii min7	iii min7	vi dom7
Becomes					
iii min	iii min6	iii min7	iii min6	iii min7	vi dom7
A min7	A min6	A min7	A min6	A min7	D7
E	F♯	G	F♯		

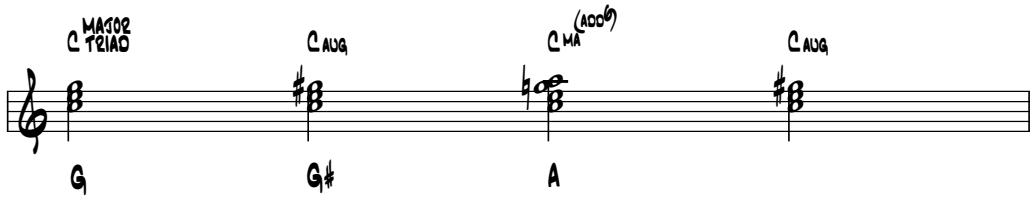
Minor Chords



- Major Chords

I Maj7		I Maj7	
C	C aug	C add6	C+
G	G♯	A	G♯

Major Chords



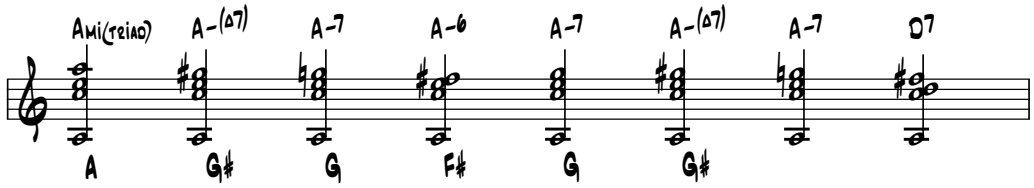
The Descending/Ascending Line

-Top Voice Movement (To enrich patterns)-

- Root to 6th

III min7		VIx7		III min7		VIx7	
Or							
III min7	III min7	III min7	III min7	III min7	III min7	III min7	VIx7
A min7	A min7	A min7	A min7	A min7	A min7	A min7	D7
Becomes							
A min	A min#7	A min7	A min6	A min7	A min#7	A min7	D7
A	G#	G	F#	G	G#		

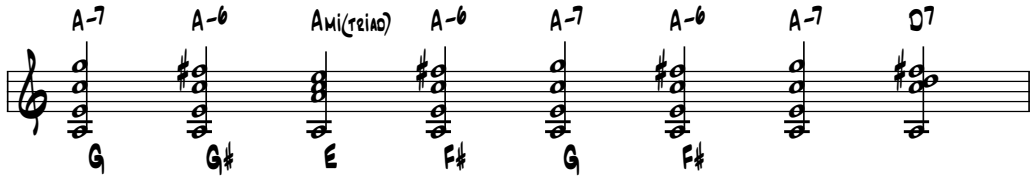
Root to 6th



- 7th to 5th

III min7	III min7	III min7	III min7	III min7	III min7	III min7	V dom7
Becomes							
A min7	A min6	A min	A min6	A min7	A min6	A min7	D7
G	F#	E	F#	G	F#		

7th to 5th



-Other Movement-

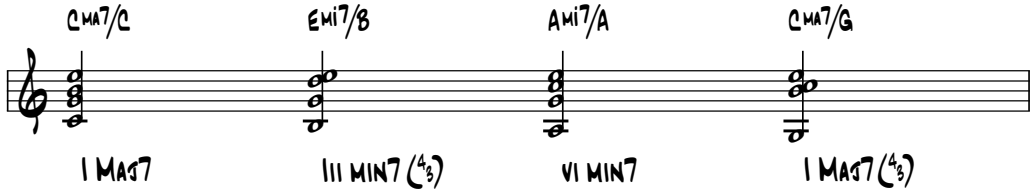
Bass Line Movement

-Descending on Major or Minor Chords-

- Originates on the first beat of the bar.
- Used when Major/minor chord extends over several beats or bars.
- Often used in Broadway Show Tunes but seldom appears in sheet music.
- Utilizes inversions and secondary functions.

I Maj7		I Maj7	
C Maj7		C Maj7	
Becomes			
I Maj7	iii min7 ($^4_3$)	vi min7	I Maj7 ($^4_3$)
C Maj7	E min7/B	A min7	C Maj7/G
C	B	A	G

Descending Bass Movement-Major & Minor Chords



-The Cadential (6/4)-

(6/4/3 is full inversion spelling - Mehegan uses 4/3 to denote 5th in the Bass)

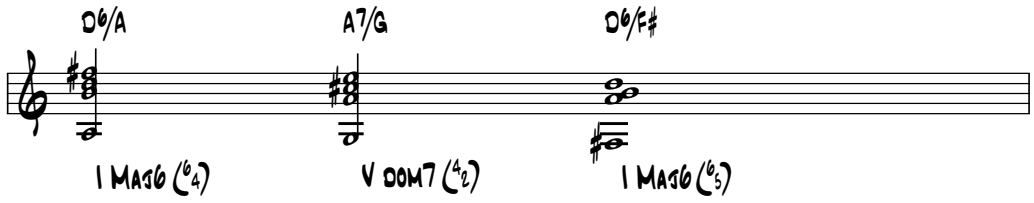
- Can be Major or minor chord.
- Most often the I/V7/I cadence.
- A Triad construction.
- Used to delay the arrival of the x7 chord.

V dom7	I Majb
A7	Db

Becomes

I Majb ($^{6}_{4}$)	V dom7 ($^{4}_{2}$)	I Majb ($^{6}_{5}$)
D Majb	A7	D Majb
A	G	F#

Cadential (6/4)



Parallel Movement

Three or more chords of the *same quality* or *structure* moving in succession by step or leap: usually Maj 7/min 7/dom 7.

-Parallel Dominant Chords-

- Can be used to substitute for a descending progression which creates passing chords.

I Maj7	III halfdim7	VI dom7		II min7
				delayed
C Maj7	E halfdim7	A7		D min7
Becomes				
I Maj7	III min7	III halfdim7	VI dom7	II min7
	Sub I Maj	II-V elaboration		
C Maj7	E min7	E halfdim7	A7	D min7
Becomes				
I Maj7	VII dom7	bVII dom7	VI dom7	II min7
	double passing tone chords			
C Maj7	B7	Bb7	A7	D min7

-Parallel Major Chords-

- Can be used as an Ending.

II min7	V dom7		I Maj7	I Maj7	
D min7	G7		C Maj7	C Maj7	
Becomes					
II min7	V dom7	I Maj7	bVII Maj7	bII Maj7	I Maj7
			Sub I Maj7	Passing Tone Chord	
D min7	G7	C Maj7	Bb Maj7	Db Maj7	C Maj7
Becomes					
II min7	bII Maj7	I Maj7 IV Maj7	bIII Maj7 bII Maj7	I Maj7	
	Tritone Sub	Sub for I maj7	Passing Tone Chord	Displaced	
D min7	Db Maj7	C Maj7 F Maj7	Eb Maj7 Db Maj7	C Maj7	

-Parallel minor Chords-

- may be used to bridge stepwise movement.

VI min7		V min7
A min7		G min7
Becomes		
VI min7	bVI min7	V min7
A min7	Ab min7	G min7

- can be used in place of Tritone Sub.

III min7	VI dom7	II min7	V dom7	I Maj7
E min7	A7	D min7	G7	C Maj7

Becomes

III min7	bIII dom7
E min7	Eb7

Becomes

III min7	bIII min7
E min7	Eb7

NB Often extensive reworking when using *parallel interval structures* so must experiment. They are used to enrich (color and/or strengthen a weak progression). Use all these devices sparingly and with CAUTION as they quickly become monotonous.

- Also see Parallel Interval Structures in chapter on Chord Extensions

-Minor Tonalities-

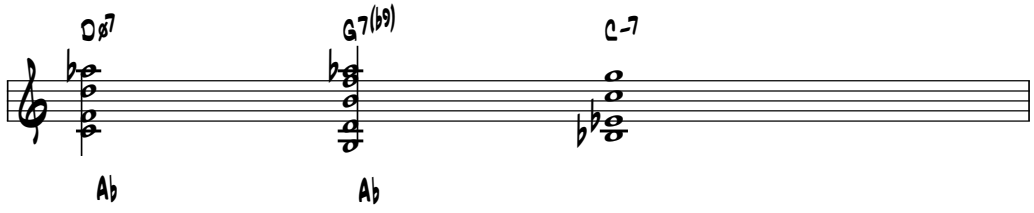
Approaches

-The ii halfdim7 V dom7b9 i min-

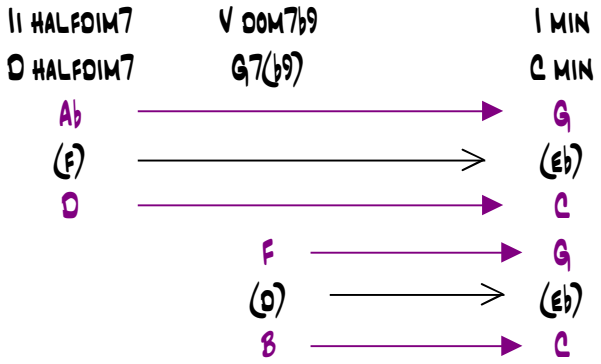
- The ii-7 function may be enhanced by flatting the 5th when approaching a minor chord of *any* type.
- The b5 step of the ii chord is related Diatonically to the b6 step of an implied *Harmonic Minor Scale.*
- Use of the Vx7b9 finishes the ii V sequence in minor tonality - the b9 step of the V chord is a common tone to the b5 step of the ii chord.

ii halfdim7	V dom7b9	i min
D halfdim7	G7(b9)	C min
Ab	→ Ab	
b5th to b9th		

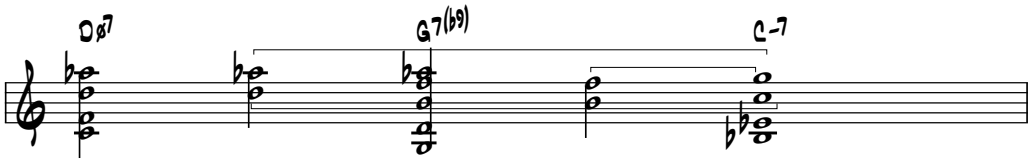
ii halfdim7/Vdom7b9/i min



- Two Tritones are present which 'want' to resolve to the I min.



Two Tritones



- The II halfdim7 V dom7 can move to major or minor tonality.
- Can function as a sequential pattern.

-Chord Pattern variations in minor keys-

- Diatonic parallels may be extended from major to minor tonalities.

I Maj7	VI min7	II min7	V dom7
C Maj7	A min7	D min7	G7

In Major paralleled in minor by

I min7	VI halfdim7	II halfdim7	V dom7b9
C min7	A halfdim7	D Halfdim7	G7(b9)

I Maj7	I dom7	IV Maj7	Iv min7
C Maj7	C dom7	F Maj7	F min7

In Major paralleled in minor by

I min7	I dom7	IV Maj7	Iv min7
C min7	C7	F Maj7	F min7

IV Maj is diatonic to the Melodic minor scale

-MOVEMENT POSSIBILITIES-

Vx7 I

- Any Tonic chord may be preceded by its own Diatonic x7 - any V may go to relative I chord.

C Maj7 Bb Maj7
G7 C Maj7 F7 Bb Maj7
D Maj7 G Maj7
A7 D Maj7 D7 G Maj7

II-7 - Vx7

- Any x7 chord may be preceded by it own relative II-7 chord.

G7 Eb7
D min7 G7 Bb min7 Eb7
F7 D7
C mi7 F7 A mi7 D7

Tonic

- Any chord may follow the Tonic (or I chord) - including any Tonic type chord and/or at any moment.
  : Tonic chord is a position of Rest it can start any movement away from rest

Relative V of V

- Any Vx7 chord may be preceded by its own relative V chord.

	G7		Eb7
D7	G7	Bb7	Eb7
	F7		D7
C7	F7	A7	D7

Relative V of II

- Any II-7 chord may be preceded by its own relative Vx7 chord.

	G min7		Eb min7
D7	G min7	Bb7	Eb min7
	F min7		D min7
C7	F min7	A7	D min7

Relative IV6

- Any I Maj or I min chord may be preceded by it own relative IV chord.

	C Maj7		D Maj7
F Maj7	C Maj7	G Maj7	D Maj7
	Ab Maj7		B Maj7
Db Maj7	Ab Maj7	E Maj7	B Maj7

Relative iv-6

- Any I Maj or I min chord may be preceded by its own relative iv min chord.

C Maj7 D Maj7
F min7 C Maj7 G min7 D Maj7
Ab Maj7 B Maj7
Db min7 Ab Maj7 E min7 B Maj7

bIIx7 (Tritone) Sub

- Any authentic Vx7 may be replaced by its relative bIIx7/Tritone Substitute.

C7 D7
Db7 C7 Eb7 D7
Ab7 B7
Bbb7 (A7) Ab7 C7 B7

Cadential Axiom

- Any combination of cadential tendencies may be used provided that Forward Motion in order of relative chord strength is maintained.

-Chordal Operations I-

Harmonic Chord Generators

A Prefix Operation places before the Object chord a chord which is structurally subordinate to the object chord and imparts a sense of forward motion to it.

Resultant Chord is a chord generated from the basic Harmony. In Bop they impart a strong Forward Motion (Push) toward a stable goal (Tension - Rest). It is newly generated in relation to the Object chord.

Original Chord:	C7
Apply Chordal Operation to original Chord:	G7 C7
Object Chord:	C7
Resultant Chord (from operation):	G7

NB All substitute chords must contain some resemblance to the chord they are replacing. These substitute chords generate harmonic versatility.

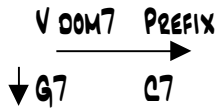
Substitute chords are just what the word says - Substitute. They are not the real item. Eg: although any chord may follow a Tonic, *NOT any* chord may follow a substitute tonic.

Musicality and logic must be considered with chord color, relationship, and the necessary similarity to the chord being replaced.

Dominant Operations

-The V Prefix (V of V)-

- The symbol for Dominant Prefix Operation is a downward pointing arrow plus the Roman numeral of scale step plus a top arrow connecting this resultant chord and pointing to the object chord.



- Applicable to any chord which places before the Object chord the Major/Vx7 which is the V of the object chord.

F (object chord) D7 (object chord)

Becomes

C7 F A7 D7

(Resultant chord) (resultant chord)

OR

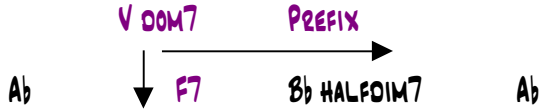
Ab Bb HALFDIM7 Eb7 Ab

(object chord)

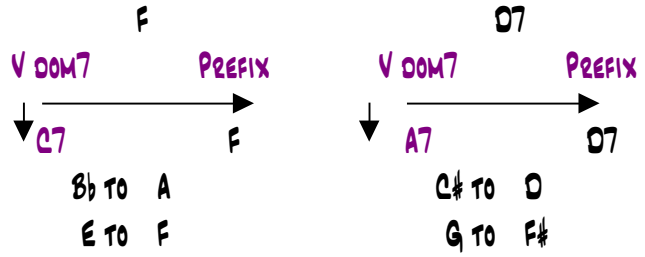
Becomes

Ab F7 Bb HALFDIM7 Eb7 Ab

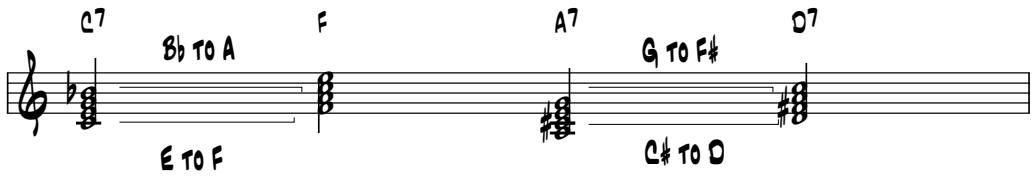
(resultant chord)



- The essential line for the Resultant – Object chord is: 7th and 3rd of the resultant chord move respectively to 3rd and Root of the Object chord.



V Prefix resolution



-The b5x7 Substitute (bIIx7Sub/Tritone Sub)-

- A DOM7 chord built on the b5 degree of the *Fundamental chord* (the chord being substituted) and may substitute for a DOM7 or MIN7 Fundamental Chord.

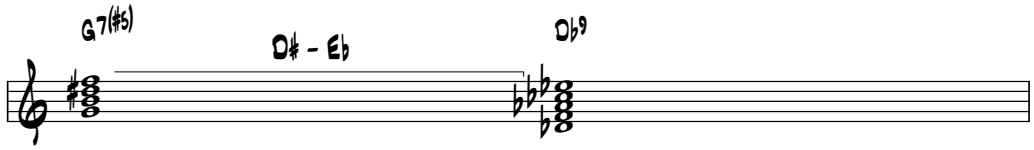
I MAJ7	IV MAJ7	VII HALFDIM	III DOM7	VI DOM7	II MIN7	V DOM7	I MAJ7
C MAJ7	F MAJ7	B HALFDIM	E7	A7	D MIN7	G7	C MAJ7
Becomes							
C MAJ7	F MAJ7	B HALFDIM	Bb7	A7	D MIN7	Db7	C MAJ7
Or							
C MAJ7	F MAJ7	B HALFDIM	Bb7	A7	Ab7	G7	C MAJ7
Or							
C MAJ7	F MAJ7	B HALFDIM	E7	Eb7	D MIN7	Db7	C MAJ7

- Change in Quality must accommodate the melodic considerations.
- Tritone Sub may replace HALFDIM7 as well as DOM7 and MIN7 chord.
- If the melody note in the Root of the Fundamental Chord the Tritone Sub becomes a x7b5 or x9 (#11).

- When applied to the x9 extension chord the Tritone Sub can be a substitute for the x7+5 due to the enharmonic 9th.

V DOM7#5	bII DOM7
G7+5	Db7
G B D# F	Db F Ab Cb Eb
	Enharmonic 9th

x9/x7+5 Enharmonic 9th



- When improvising, these alterations are often disregarded.
- The Tritone Sub usually moves down 1/2 step BUT may also move down P5 to its Circle resolution.
- Often mixed with Fundamental Chord.

D min7	G7	C Maj7
Becomes		
D min7 Ab7	G7 Db7	C Maj7

- The Tritone Sub & x7b5 are enharmonic – difference is apparent only with the 9th extension – avoid using the b9 extension on bIIx7 to I Maj progression: let your ear be final judge.

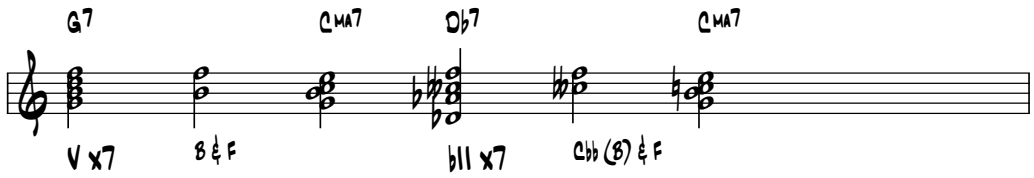
NB the Tritone Sub can be a substitute for x7 because the Fundamental chord and the Substitute chord have the same Tritone Resolution.

V dom7	I Maj7	
G7	C Maj7	
F	E	Tritone
B	C	Resolution

With Tritone Sub

♭II dom7	I Maj7	
F	E	Tritone
C♭ (B)	C	Resolution

Enharmonic Tritone



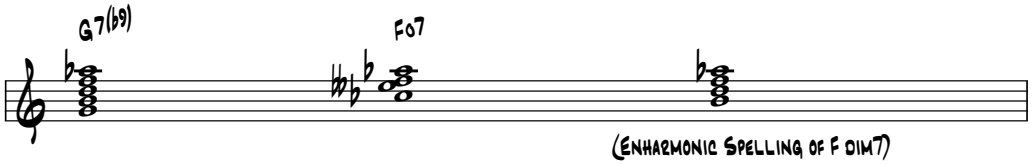
- The Tritone Sub is a most versatile substitute - may be the substitute of virtually any V of V

-ivo7 Substitute for the Vx7 (ivo7Sub)-

- Actually an incomplete x7b9 chord (sometimes shorthand when dealing with only 4 voice chords).

V dom7b9
G7b9 G B D F Ab
iv dim7
F dim7 F Ab Cb Ebb (F Ab B D)

F dim7 as Incomplete x7b9



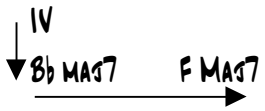
(Enharmonic Spelling of F dim7)

-Chordal Operations II-

Subdominant Operations

-The IV Maj Prefix-

- The symbol for Subdominant Prefix Operation is a downward pointing arrow plus the Roman numeral of scale step plus a bottom arrow connecting this resultant chord and pointing to the object chord.



- An operation *theoretically* applicable to any chord but most often the I which places before the object chord the IV Maj built on the 4th of the object chord.

I Maj — F — Becomes — IV Maj B♭ — I Maj F

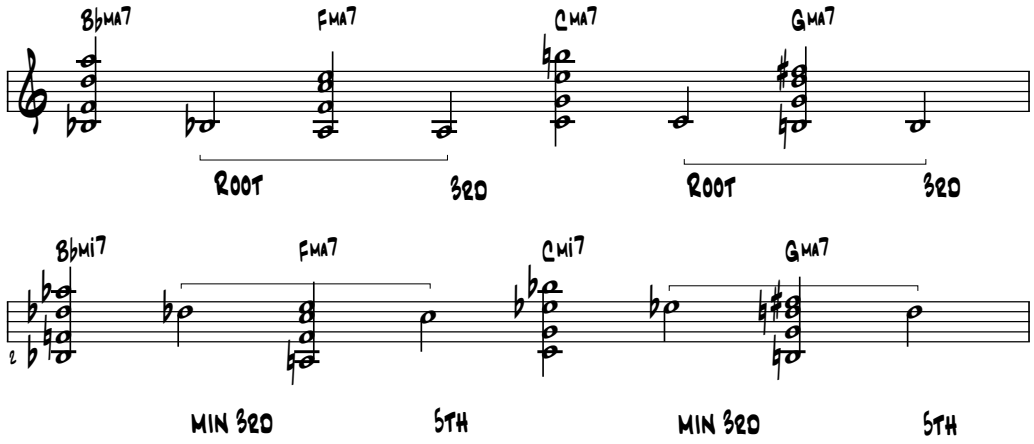
OR

I Maj — G — IV Maj C — I Maj G

- The quality of the IV Prefix corresponds to the 3rd (Maj or min 3rd) of the object chord - but due to mode mixture the resultant chord may be major while the object chord is minor.

- The essential line:
  - : The Root of the resultant chord if major resolves to the 3rd of the object chord.
  - : The 3rd of the resultant chord if minor resolves to the 5th of the object chord.

IV Major Prefix Essential Line



- The IV may also resolve to its relative Major or minor tonic – Subdominant to Tonic movement.
- In a cadence, add the 6th to the IV chord – when inverted, has same order of tones as the II min7 chord. The IV min6 chord has same tones as a II halfdim7 chord.

NB the IV Maj Prefix occurs less frequently than the V Prefix and should be considered structurally subordinate to it.

-The ii V Elaboration (an embellishing technique)-

- The sign for an embellishing technique is:

- Places before the object chord (x7) a min7 or halfdim7 chord which is a P5 above the object chord.

V dom7 Becomes	ii min7	V dom7
G7	D min7	G7

- Possible for the object chord to be a min7/halfdim7 and then altered to a dom7 and then preceded by ii.
- The dom7 may have also arisen through a V Prefix operation or Tritone Sub substitution and then preceded by ii.

(Temporary Key C)	(Temporary Key F)	Key of Bb	
VI Dom7	II dom7	V dom7	I Maj7
G7	C7	F7	Bb Maj7
Becomes			
D min7 G7	G min7 C7	C min7 F7	Bb Maj7
OR (with Tritone Sub)			
(bIII dom7)	(bIV dom7)	(bII dom7)	I Maj7
Db7	Gb7	Cb7 (B7)	Bb Maj7
Becomes			
Ab min7 Db7	Db min7 Gb7	F# min7 B7	Bb Maj7

- Best done when creating or continuing a lengthy pattern.
- May replace the x7 (sus 4) chord.

G7 (sus 4)	G7
Becomes	
D min7 or halfdim7	G7
Also appears as	
D min7/G	G7

- The ii-7 can also generate its Vx chord.

I Maj7	VI dom7		ii min7	
G Maj7	E7		A min7	
Becomes				
I Maj7	iii halfdim7	VI dom7	ii min7	V dom7
G Maj7	B halfdim7	E7	A min7	D7

- The ii min7 chord may be preceded by its own relative Vx7 chord (V of ii Secondary Dominant).

NB the elaboration of single x7 chords into ii V groups is one of the unique characteristics of Bop harmony.

-The bVIIx7 Substitute for the iv min (iv-Sub)-

- The iv min functions as a Subdominant minor chord in this context - if the I chord can be preceded by the iv min6 (Subdominant modal intensification) it can also be preceded by the bVIIx7.

I Maj7	I dom7	IV Maj7	iv min6	I Maj7
C Maj7	C dom7	F Maj7	F min6	C Maj7
Becomes				
I Maj7	I dom7	IV Maj7	VII dom7	I Maj7
C Maj7	C dom7	*F Maj7	*Bb dom7	*C Maj7

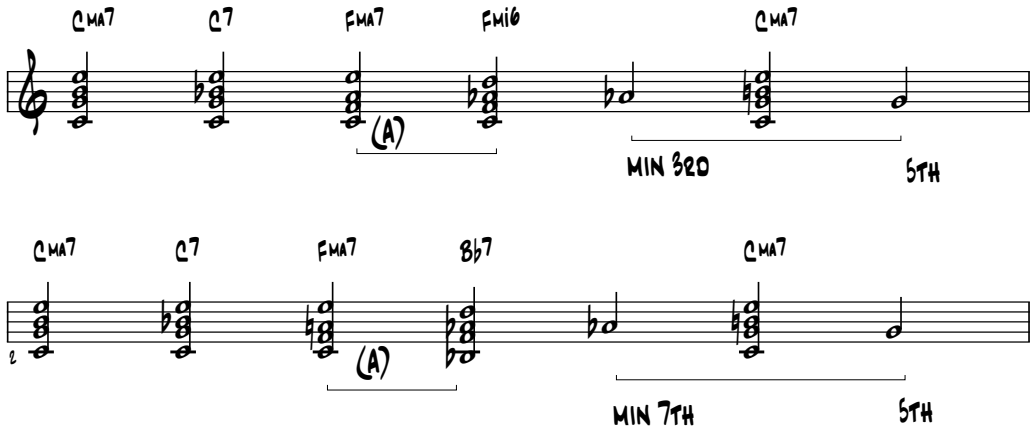
*Essential line is still A Ab G (3rd to 7th to 5th)

- Can be preceded by its relative ii min chord.
- Can be used in modulation from minor key to Parallel Major key.

i min7	IV dom7	iv min6	I Maj7
C min7	F7	F min6	C Maj7
Becomes			
i min7	IV dom7	♭VII dom7	I Maj7
C min7	F7	B♭7	C Maj7
Becomes			
i min7	IV dom7	iv min7 ♭VII dom7	I Maj7
C min7	F7	F min7 B♭7	C Maj7

Essential line is still (A) (A♭ min 3rd/min 7th) (G 5th)

♭VII dom7 Sub for the IV min



- The ii halfdim7 may substitute for the IV min but it is not common.

The #iv halfdim7 substitute for a ii-7 chord (ii-7 Sub)

- Careful as actually changes the quality of the ii min7 chord – it is not used if the 3rd of the fundamental chord is in the melody.
- Think of as a ii x9 chord.

NB can change the quality of a substitute chord to agree with melodic demands.

Tonic Operations

-The iii min7 substitute for I Maj chord (I Maj Sub)-

- Really a I Maj9 without the Root in this substitute function.
- Used sometimes to avoid a strong cadential feeling as it weakens the I Maj resolution.
- May be the first chord in a I vi ii V progression.

I Maj7	vi min7	ii min7	V dom7
C Maj7	A min7	D min7	G7
Becomes			
iii min7	vi min7	ii min7	V dom7
E min7	A min7	D min7	G7

- May precede a bIII dim7 chord in a I bIII dim7 ii V progression.

I Maj7	bIII dim7	ii min7	V dom7
C Maj7	Eb dim7	D min7	G7
Becomes			
iii min7	bIII dim7	ii min7	V dom7
E min7	Eb dim7	D min7	G7

- Most interesting when used as a Pivot Chord.

ii min7	V dom7	I Maj7	VI dom7	ii min7	V dom7	I Maj7
D min7	G7	C Maj7	A7	D min7	G7	C Maj7
Becomes						
ii min7	V dom7	iii min7	VI dom7	ii min7	V dom7	I Maj7
D min7	G7	E min7	A7	D min7	G7	C Maj7

Temporary shift to Key of D

- In a I #I dim7 II min7 V dom7 progression extend the #I dim7 down to create a VI dom7b9.

I Maj7	#II dim7	II min7	V dom7
C Maj7	C# dim7	D min7	G7
Becomes			
III min7	IV dom7b9	II min7	V dom7
E min7	A7b9	D min7	G7

- May also begin a pattern with the I Maj Sub.

I Maj7	VI dom7	II dom7		V dom7	I Maj7	VI dom7
F Maj7	D7	G7		C7	F Maj7	D7
Becomes						
III min7	VI dom7	VI min7	II dom7	V dom7	III min7	VI dom7
A min7	D7	D min7	G7	C7	A min7	D7
I Maj Sub		II V elaboration			I Maj Sub	

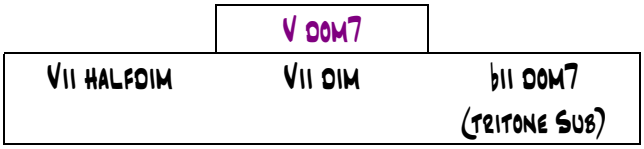
- The III min7 substitute for I Maj may also be a III halfdim7 and serves the same function.

NB Must be careful to understand function in context it can also be functioning as a II chord and not be a I Maj Sub and part of a II V Elaboration – it can then proceed to a VI min7/VI halfdim7 as a Subdominant/Dominant etc.

-Chordal Operations III-

Substitution Set Chart

V Set



IV Set

IV min Set

#II dim7 Set

I Maj7 Set

Examples

I VI II V

The basic progression is (C Maj7 C Maj7 G7 G7) the quality of the subdominant chords can be changed as long as root movement (stated or implied) and the tritone resolution remains the same.

- Can be altered to (always with melodic considerations)

I Maj7	I Maj7	V dom7	V dom7
C Maj7	C Maj7	G7	G7
To			
I Maj7	VI min7	II min7	V dom7
C Maj7	A min7	D min7	G7
	I Maj7 Sub	II V elaboration	
To			
I Maj7	VI dom7	II min7	V dom7
C Maj7	A dom7	D min7	G7
	Change in Quality (V of II)		
To			
I Maj7	#I dim7	II min7	V dom7
C Maj7	C# dim7	D min7	G7
	Incomplete VI dom7b9 (also a passing tone chord)		
To			
I Maj7	bIII dom7	II min7	V dom7
C Maj7	Eb7	D min7	G7
	Tritone Sub for VI dom7		
To			
I Maj7	bVII min7 bIII dom7	II min7	G7
	II V elaboration		

Generalizations: Substitution

- The substitution of a chord for another of the same set preserves the essential lines of any progression – the Aug 4th resolution.
- Each of the chords named by Roman Numerals in the chord generation operations + tonic triad has associated with it a set of other chords which may replace it without destroying the essential linear or harmonic function.
- Degrees of inclusion of one chord of a set by another is high.

V dom9	VII halfdim7
G B D F A	B D F A

- Substitution within these sets is an important improvisational tool/technique for all Bop musicians. This practice gives a degree of harmonic freedom without sacrificing the essential lines or harmonic functions that provide a basis for improvisation.

-Chordal Operations IV-

Linear Chord Generators

The Object chord may have any structure. The root of the Resultant Chord is a Passing Tone, Neighbor, or Incomplete Neighbor to the Root of the Object Chord. The Resultant chord may have any structure and its Root may be Diatonically or Chromatically related to the Object Chord - any neighboring chord acting to enrich the chordal progression.

A Passing Tone is a non-harmonic tone that is found step-wise between tones of a different pitch. Tensions in this case are Diatonic to the chord following.

A Neighboring Tone is a non-harmonic tone that is found between two harmonic tones of the same pitch.

An Incomplete Neighboring Tone is a tone that is found between two harmonic tones of different pitch, approaches the second tone by step, and has no stepwise relationship with the tone immediately preceding it.

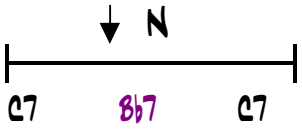
Tensions in both the NT/INT are the same as the Main chord.

-Complete Neighbor Prefix-

- Sign for Complete Neighbor Prefix groups the Object chords and the Complete Neighbor Chords

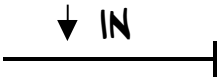
- It places before the Object Chord a Resultant Chord that elaborates the essential tones of the Object Chord.

- Complete Neighbor because it has a stepwise relationship (away from and back to) to the Root of the Chord immediately following and preceding it.

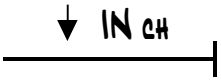


-Incomplete Neighbor Prefix-

- Sign for Incomplete Neighbor Prefix groups the Object chords and the Incomplete Neighbor Chord.



- If chords have the same structure and root relation is chromatic a CH is put above the cross bar.

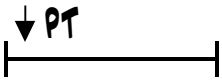


: It places the Root of the Resultant Chord so that it approaches the Object Chord by step *BUT* has no stepwise relation to the Root of the chord immediately proceeding.

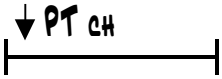
NB Neighboring Tones may be: Diatonic (B♭ Maj7 A min7); Chromatic (G♯7 - A7); or Mode Mixture (A♭ Maj7 - G7).

-Passing Tone Prefix-

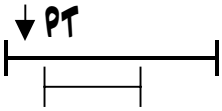
- The symbol groups chords involved in the Passing Tone operation.



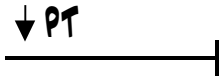
: If movement is chromatic



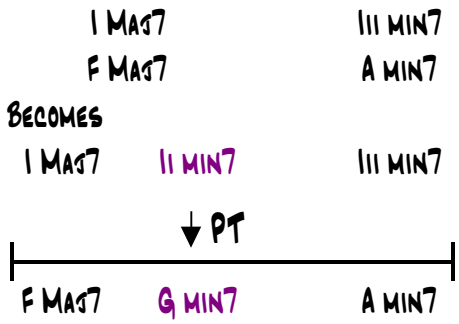
: If two passing chords involved

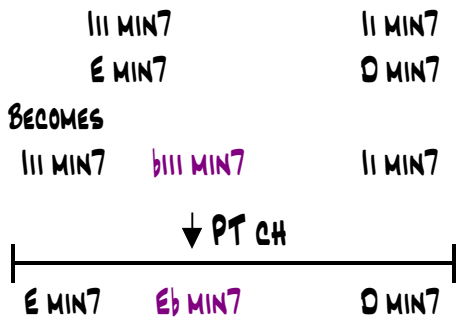


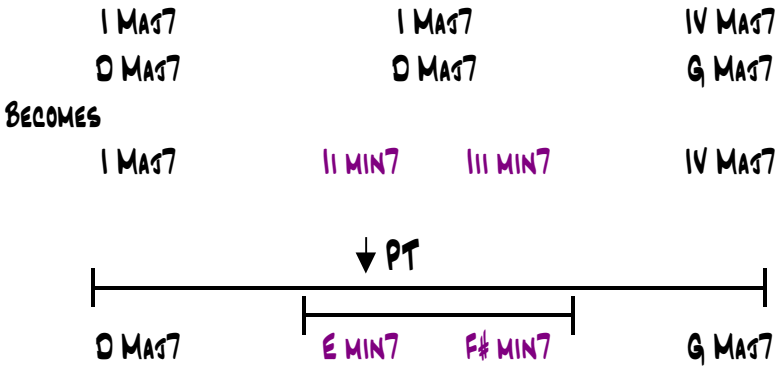
: If single passing chord



- This operation creates passing tones between the essential notes of the Object Chord and the corresponding members of the following chord and may be Diatonic; Chromatic; Roots a third apart – ascending and descending.

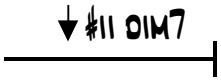






-The #II DIM7 Prefix-

- Two sets of Object Chords - a major or minor triad (usually the I Maj/I min or V); any chord functioning as a II min. In both cases the name of the operation is derived from the Object Chord.
  - : If Object Chord is a I or V, the name is taken from the Root of each chord. If Object Chord is a II min the name is taken from the Tonic of the Scale the II min chord belongs.
- The operation places before the Object Chord a DIM7 chord containing 1 or 2 tones which approach members of the Object chord by half step.
- In both cases there is one tone in common between Resultant Chord and Object Chord - sometimes called the CommonTone DIM7.
- The symbol is:



I Maj7 V Dom7

C Maj7 G7

Becomes

#II Dim7 I Maj7 #II Dim7 V Dom7

#II Dim7 #II Dim7

D# Dim7 C Maj7 A# Dim7 G7

I Maj7 V Dom7

C Maj7 G7

Becomes

I Maj7 II min7 V Dom7

C Maj7 D min7 G7

II V elaboration

Becomes

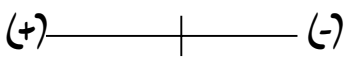
I Maj7 #II Dim7 II min7 V Dom7

#II Dim7

C Maj7 D# Dim7 D min7 G7

-Subdominant Modal Intensification-

- The symbol is:

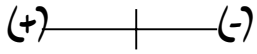


- The Object chord, any member of the IV substitution set, followed by a chord which contains the 5th degree of the scale - is given stronger directionality by the creation of a line consisting of the Major 6th scale degree in the Object chord, moving through the minor 6th scale degree in the resultant chord, to the 5th degree in the following chord.

IV Maj7 — I Maj7
F Maj7 — C Maj7

Becomes

IV Maj7 — IV min7 — I Maj7

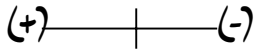


F Maj7 — F min7 — C Maj7
A — Ab — G

ii min7 — I Maj7
G min7 — F Maj7

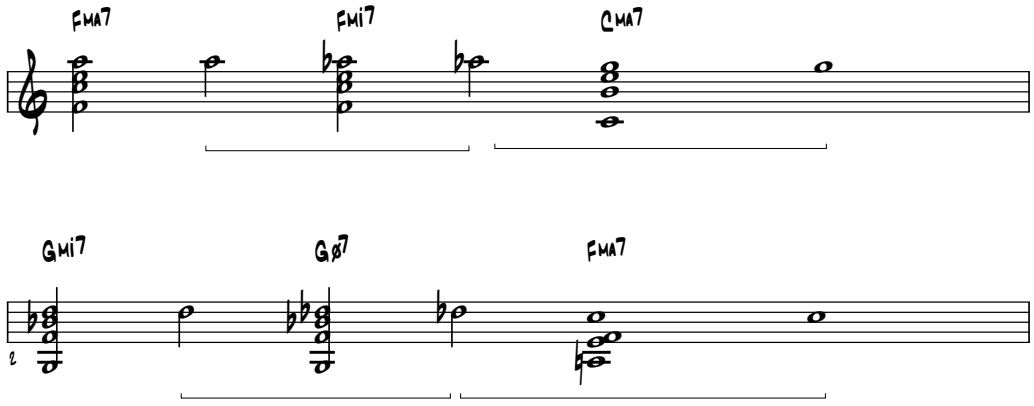
Becomes

ii min7 — ii halfdim7 — I Maj7



G min7 — G Halfdim7 — F Maj7
D — Db — C

Subdominant Modal Intensification



-Modes: Basic Principles I-

Scale Materials

-The Modes-

- A central tone to which other tones are related establishes tonality - the manner in which these tones are played around the central tone produces modality.
- Seven stand apart form the other scale patterns because of their Whole and half step order.
  - Ionian
  - Dorian
  - Phrygian
  - Lydian
  - Mixolydian
  - Aeolian/Locrian
- Modes bear the names given them during the Middle Ages - but resemblance is on construction NOT usage.
  - Ionian: the familiar Major Scale.
  - Aeolian: the natural minor Scale.
  - Locrian: Infrequently used and is distinctive because of a dim7 tonic triad.
  - Lydian & Mixolydian: Major tonic triad.
  - Dorian & Phrygian: minor tonic triad.
- Are built on steps of the Major Scale
  - Ionian 1-1 (C to C in the C Major Scale)
  - Dorian 2-2 (D to D in the C Major Scale)
  - Phrygian 3-3 (E to E in the C Major Scale)
  - Lydian 4-4 (F to F in the C Major Scale)
  - Mixolydian 5-5 (G to G in the C Major Scale)
  - Ionian 6-6 (A to A in the C Major Scale)
  - Locrian 7-7 (B to B in the C Major Scale)

Modal Harmony

-Simple Chords are preferred-

- Major/minor triads.
- 7th chords are used sparingly (usually V x7/II-7)
- In each mode there is a dim triad which occurs on a different
- Step.
  - : Phrygian: on the 5th step and when altered produces another Dominant equivalent.
  - : Locrian: on the Tonic BUT alteration changes the degree of Locrian flavor – so often sounded without the 5th.
- Extensions are avoided to maintain harmonic simplicity.
- Modal melodies are often harmonized with chords of traditional construction – BUT in Root Progressions required by the Modal Scale pattern.

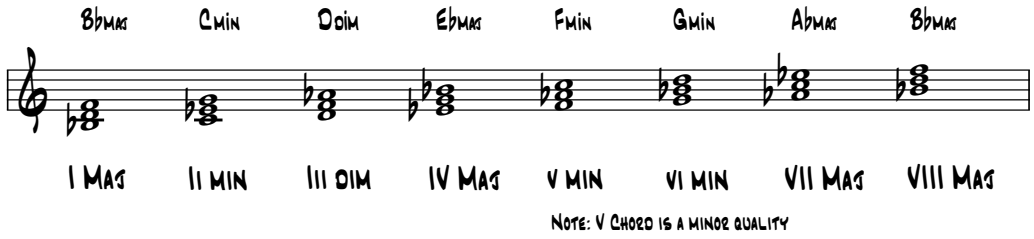
Bb Mixolydian (built on the 5th step of the Eb Major Scale)

Eb Scale : Bb to Bb

Bb	C	D	Eb	F	G	Ab	Bb
	W	W	H	W	W	H	W
Maj	Min	Dim	Maj	Min	Min	Maj	Maj
I	II	III	IV	V	VI	VII	VII

Modal Chord Construction

Bb Mixolydian (Eb/Bb-Bb)



Note: V Chord is a minor quality

- Leading tone of the Major scale is avoided creating v min chord.

C Mixolydian (built of the 5th step of the F Major Scale)

F Scale : C to C

1	2	3	4	5	6	7	8	2	3	4	5
C	D	E	F	G	A	Bb	C	D	E	F	G
	v chord is a G min			Root		b3rd		5th			

- May use chords outside the Mode to harmonize a modal melody.
- Root movement will progress by Step/Third/P4/P5.
- Altered chords may be found creating a mixture of Major/minor Keys and/or Modes.
- A tune may end on other than the I chord and in minor mode the i mi may be altered to the I Maj for the final cadence.

NB Harmonic movement in *Modal Harmony* (and in general) does not follow rigid principles - Sound/Style/Taste determine what is used.

Modal Reference

- Often the use of materials which imply certain modes rather than rigorously adhering to them.
- Even in basically Diatonic Modal References some Chromaticism is evident.
- To identify the Mode – identify the 1/2 steps.

Ionian : C scale (C to C)

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

Dorian: C scale (D to D)

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

Phrygian : C scale (E to E)

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

Lydian : C scale (F to F)

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

Mixolydian : C scale (G to G)

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

Aeolian : C scale (A to A)

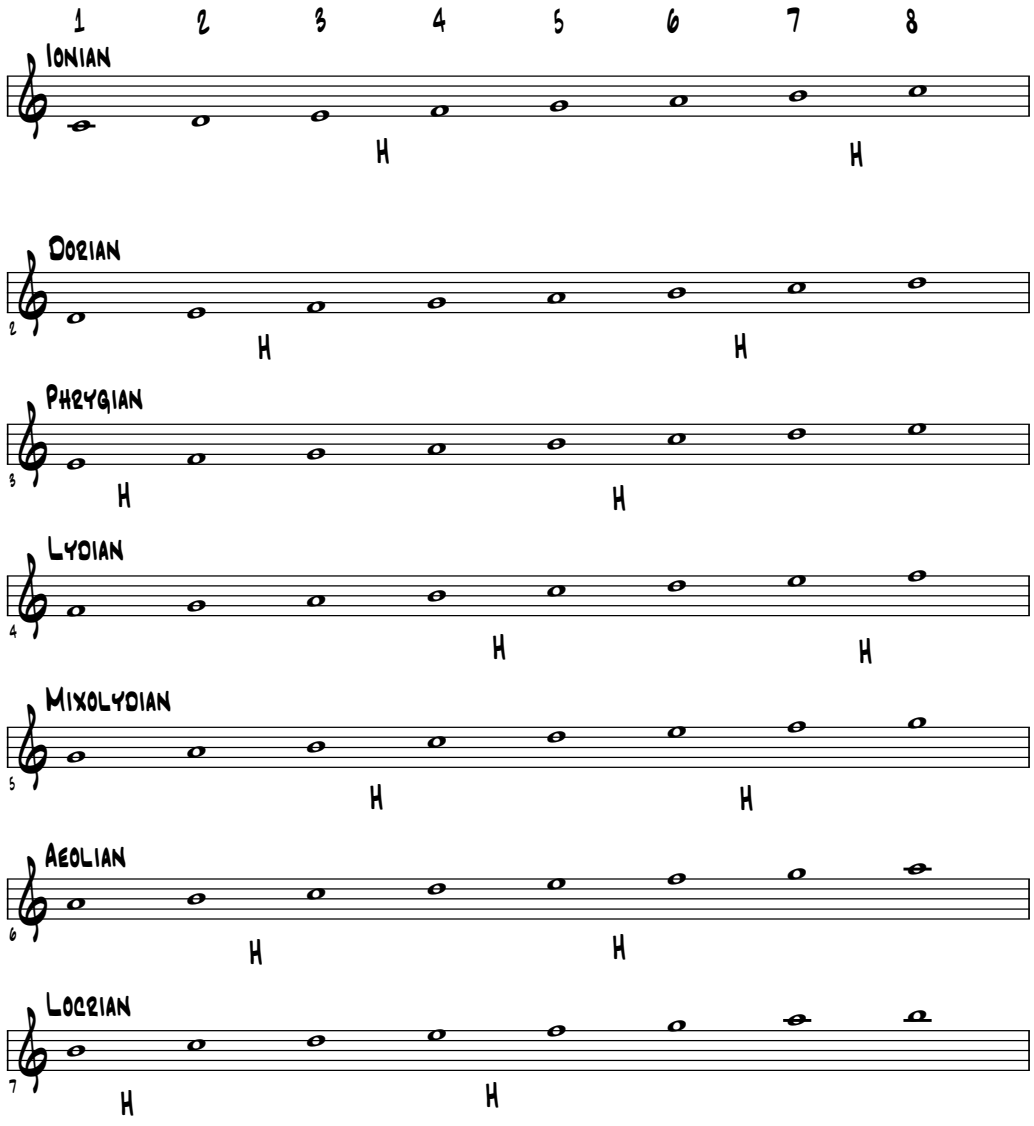
1	2	3	4	5	6	7	8
A	B	C	D	E	F	G	A
	W	H	W	W	H	W	W

Locrian : C scale (B to B)

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

Modal Reference

C Scale



-Modes: Basic Principles II-

Characteristics

-Scale Steps-

Each Mode has a characteristic scale step which separates it from the Natural (Aeolian Mode) minor and Major (Ionian Mode) Scale.

- Mode relation to Parallel Major Scale/minor scale
  - : Lydian: Major scale with 4th step raised.
  - : Mixolydian: Major scale with leading tone lowered.
  - : Dorian: Natural minor scale with 6th step raised.
  - : Phrygian: Natural minor scale with 2nd step lowered.

Lydian: 4-4 (C scale F to F)

F Major Scale

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

F Lydian Mode

F	G	A	B	C	D	E	F

Mixolydian: 5-5 (C scale G to G)

G Major Scale

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

G Mixolydian Mode

G	A	B	C	D	E	F	G

Dorian: 2-2 (C scale D to D)

D Natural Minor Scale

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

D Dorian Mode

D	E	F	G	A	B	C	D

Phrygian: 3-3 (C scale E to E)

E Natural Minor Scale

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

E Phrygian Mode

E	F	G	A	B	C	D	E

NB The Ionian is the Major Scale; the Aeolian is the Natural minor Scale; the Locrian does not relate to a Major/minor alteration.

-Chords (Triads)-

- A set of chords may be constructed within the diatonic limits of each Mode.
- As with Major/minor scales there is a definitive relations between Primary and Secondary chordal materials.
- The Primary are the Tonic chord and the two Dominant equivalents.
- The Dominant equivalents are identified as those Major or minor triads that include the characteristic scale step which produces the principal 'flavor' of the Mode.

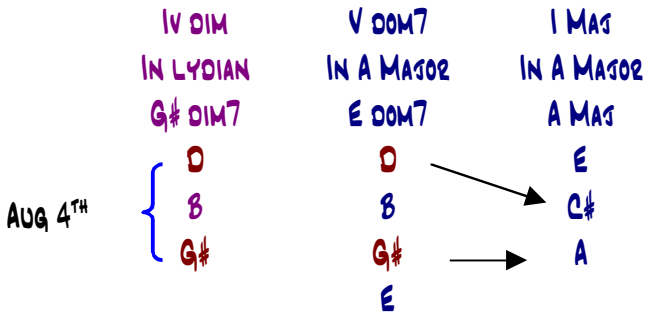
EG: Lydian Mode

The #4 step is the characteristic scale step differentiating the Mode from the Parallel Major

D Lydian : A scale D to D

I Maj	II Maj	Iii min	Iv dim	V Maj	Vi min	Vii min
D F# A	E G# B	F# A C#	G# B D	A C# E	B D F#	C# E G#
	G#		G#			G#
TONIC	Dom		(dim)			Dom

- In each Mode there is a dim. Triad (iv dim in Lydian) – this is a difficult chord as the dim 5th interval tends to stress the V7 of the corresponding Major Key.



(G♯/D) Same Tritone Resolution

-Extended Chords-

- Modal chords by thirds – other than triads – need special attention.
- Useful 7th/9th chords in modes (excepting Ionian) are those involving no tritone (min7/min9).
- The TRITONE present in many 7th/♭9th chords implies the V7 of the Major Scale.
- Triads/7th/9th chords progress easily from one another while in the same mode.

-Color-

- A single Mode is not necessarily used throughout an entire section. The Modes may be arranged effectively according to their Tension Relationships.

- The Dorian is the mid-point.
- Shifting Modes on a Stationary Key Center to be effective one must make much melodic reference to the Modal Tonic.
- Chromatic alterations – both melodic and harmonic – are devices natural to Modal writing.
  - The dim. Triad is a frequent subject for chromatic alteration – the tritone is altered to give the stability and resonance of P5th (the Root is lowered or the dim 5th is raised).

Definitions

- Pure Modal Passage: A Modal melody is harmonized with chords from the same Mode and on the same Tonal Center.
- Polymodality: Two or more different Modes on the same or different Tonal Center.
- Polytonal & Modal: Same Mode appears on different Tonal Centers.
- Polytonal & Polymodal: Different Modes occur on different Tonal Centers.
- Modal Modulation: movement from one Tonal Center to another by same mode.
- Modal Interchange: Tonal Center remains when Mode changes.

-Applied: John Mehegan-

(A mode is a displaced scale from Root to Root of the Chord)

Modes and Quality

-Modes existing in any Key-

Chord	Displacement (Key of C)		Name	Quality
I	C-C	1-1	Ionian	Major
II	D-D	2-2	Dorian	Minor
III	E-E	3-3	Phrygian	Minor
IV	F-F	4-4	Lydian	Major
V	G-G	5-5	Mixolydian	Dominant
VI	A-A	6-6	Aeolian	Minor
VII	B-B	7-7	Locrian	Half diminished

- One of the most important elements of Jazz Improvisation.
  - : Effective in creating a Horizontal 'blowing' line especially when expanded to meet the 60 Chord System.
  - : Remember must be able to accommodate Altered and Chromatic chords.

The Modes

-Major Mode (Ionian/Lydian)-

- In any Major Scale appears on I and IV.
- In determining which of these two modes to chose, the determining factor must be the relative strength of these two major positions in Diatonic Harmony.
  - : Thus the major chord takes the Ionian mode except in cases where the Bass Line gives a strong feeling of IV.

Eg:

I Maj7	ii min7	iii min7	IV Maj7	V dom7
C Maj7	D min7	E min7	F Maj7	G7

Here, the use of the Ionian mode on the IV Maj7 would destroy the key Tonic running through the entire Bass Line-Lydian should be used

RULE: If the Major Chord is a I or the Temporary I of a new Key it takes the scale of that key from Root to Root.

-Dominant Mode (Mixolydian)-

- Since it always appears at only one position diatonically there can be no doubt concerning use of this Mode.
- Dominant chords other that the V are considered a Temporary V on another Key.
  - : In Jazz Harmony these Temporary (V of V) seldom resolve to their natural Majors. However at the moment they are played, they 'infer' the V of a new key.

RULE: If the Dominant chord is a V of a new Key it takes the scale of that key from Root to Root.

-Minor Mode (Dorian/Phrygian/Aeolian)-

- In a chord series with a strong key feeling the three modes are used in their respective positions.

EG:

I Maj7	VI min7	II min7	V dom7	I Maj7
C Maj7	A min7	D min7	G7	C Maj7
Ionian	Aeolian	Dorian	Mixolydian	Ionian

Or

II min7	III min7	IV Maj7	V dom7	VI min7	II min7	V dom7	I Maj7
D min7	E min7	F Maj7	G7	A min7	D min7	G7	C Maj7
Dorian	Phrygian	Lydian	Mixolydian	Aeolian	Dorian	Mixolydian	Ionian

- There is never a question concerning the II chord since it belongs to a Primary Function of any key and always takes the Dorian mode.
- III and VI can be functioning as a Temporary II of a new key.

I Maj7	II min7	III min7/II min7	V dom7	I Maj7
C Maj7	D min7	E min7	A7	D Maj7
		III/II		
Key of C →		C D	Key of D →	

- In these cases, both the II min and the III/temp II min would require the Dorian Mode.

RULE: If the minor chord is a II or a Temporary II of a new key it takes the scale of that key root to root.

-Half Diminished Mode (Locrian)-

- The halfdim7 chord appears on the 7th step of the scale and always takes the Locrian Mode.
- Halfdim7 chords on other than the 7th step of the scale are considered Temporary vii of another key.
- In Jazz Harmony the Temporary vii halfdim7 chord seldom reaches its natural resolution - the moment it is played it 'infers' the vii halfdim7 of a new key.

RULE: If the halfdim7 chord is a vii halfdim7 or a Temporary vii halfdim7 of a new key it takes the scale of that key Root to Root.

-The Diminished Mode (Artificial)-

- The 07 chord has no 'natural' position in any key. We have learned to employ the 07 chord at any point in a key BUT at no point does it 'infer' any tonality.
- An arbitrary scale is employed for the 07 chord which utilizes all the tones of the chord in addition to a series of chromatic and auxiliary tones.

C dim Scale

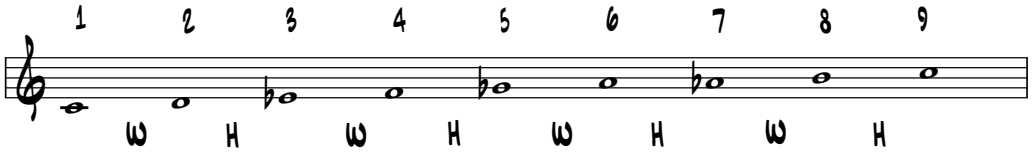
C D Eb F Gb A Ab B C

W H W H W H W H

This is an Artificial scale.

Diminished Mode

C Diminished Scale



Note: There are 9 scale steps in the Diminished mode

APPLIED TO EXTENDED VOICINGS

-Major-

- The Maj(6/9) & Aug6 take the Ionian mode.

-Dominant-

- The x9/x13 etc. take the Mixolydian mode.
- If an altered Dominant x7b9/x7+11 etc. an adjustment must be made within the mode to accommodate those altered extensions.

-Minor-

- All extended ii or Temporary ii chords employ the Dorian mode.
- Extension of the iii chord to the 9th is not used. The 9th extension is not diatonic to the Key.
- The extended vi chord as a Temporary ii the Dorian mode is employed.
- The vi chord employs the Aeolian mode - no adjustment of the 9th is required.

-Half Diminished-

- Presents a special problem since the 9th employed does not fall in the Locrian mode - it is a 9th from the Root of the chord.
- The vii halfdim7 is the weakest in terms of Key inference of the four natural Qualities and is further weakened by the introduction of the 9th.
  : The halfdim9 assumes the non-key reference found in the halfdim7 chord.
- The halfdim9 employs the Tone row of the Locrian mode with a raised 2 step.

C halfdim9 (Key of Db/C-C)

1	2	3	4	5	6	7	8	9
C	Db	Eb	F	Gb	Ab	Bb	C	Db
R		b3		b5		b7		b9

Becomes:

C	D	Eb	F	Gb	Ab	Bb	C	D
R		b3		b5		b7		b9

-Diminished-

- Use the Diminished Scale (Whole/Half Step Tone Row)

Minor Scale Modes

(Follow rules described for the Major Scale Modes)

-BeBop: Tensions in Chord Voicings-

General Considerations

- In BeBop, the low Bass Root is always assumed to be provided by the Bass Player.
  - Although it may or may not be included in the voicing.
  - The Bass Player may or may not actually play it.
- Due to Low Register 'muddiness' the interval above the Root is usually a fifth or larger.
- 3rd & 7th interval of the chord are essential for aural determination of the Function of the chord and so are not normally omitted.
- The 5th interval of the chord can and is sometimes omitted.
- Any number of possible Tensions may be used in any voice.
- The Tension used represents its resolution in the register in which it occurs.
  - Because of this, tension and resolution do not ideally exist as adjacent voices in the same register.
  - There are exceptions.
- Most voicings of chords in BeBop may be understood as subsets of Modal arrangements of Chord tones and Tensions - built in thirds and fourths.
- In homophonic textures, accompanying chords of 3 to 5 voices are often limited to the Tenor Range - in this more limited range the 2nd provides dissonance in place of the 7th.
- In 'spread voicings' the 7th interval provides dissonance.

Chord Voicings

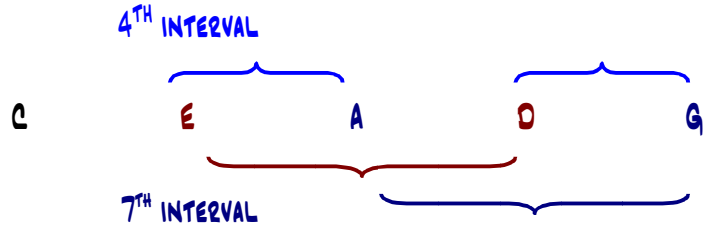
-The model built in Thirds-

- The most 'natural' arrangement of chord tones and tensions is in ascending 3rds.
- This arrangement provides each tension with a chord tone a 7th below (bringing its dissonance aurally to the fore).
- A voicing based on the arrangement considers:
  - The major derived 13th chord is not used in a minor context.
  - The minor 9th interval is restricted to the x7 chord all other minor 9th intervals are avoided.
  - The major derived #4 interval is rarely used on the III-7 secondary Tonic as it weakens the tonality.
  - Any potential tension will be avoided if it might obscure the 'local harmonic progression' (interferes with the essential lines of the progression).
- Voicings in 3rds may omit:
  - Any tension for the greater convenience in the voicing.
  - The 5th if it is Perfect.
  - The Root if in Bass or understood to be in the Bass.
- To spread the voicing into the Lower Register can displace by an octave in the actual voicing of the chord.
- The Diminished Chord uses a Maj 9th above the Root NOT the min 9th indicated by the Diminished Scale.

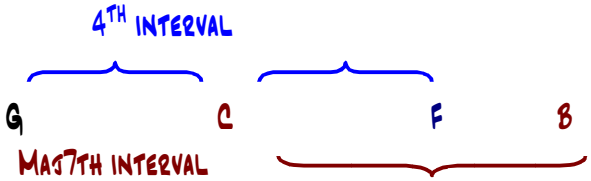
NB it is the intervalic structure and Contextual Function of the chord which determines the available Tensions.

-The model built on Fourths-

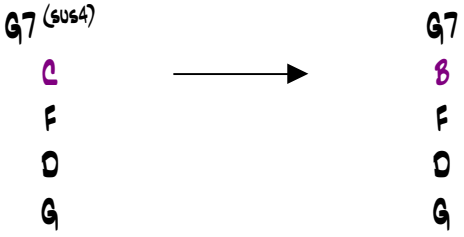
- Voicings stressing 4ths have been popular in BeBop because:
  - : They maintain the dissonant 7th interval (a 7th is the sum of each pair of adjacent 4ths):



  - : Eliminates the 'sweetness' of 3rds that characterize the model built in 3rds.
- The x7 omits the major derived 1 (arrangement in 4ths places the 3rd of the x7 chord a major 7th interval above the 11th of the x7 chord):



  - : Also, the major derived 1 and 7 are strongly identified with the most common type of 4-3 suspension.

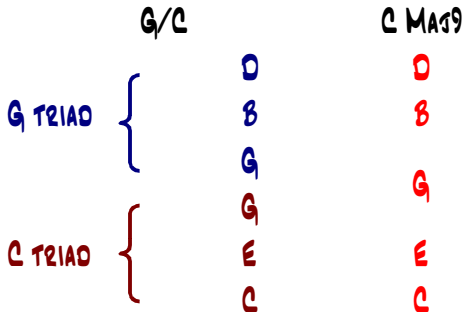


- The #4 on the Tonic Degree (Lydian derivative) is placed high in the voicing (or might be heard as enharmonic 'Blue note' or weaken the feeling of Key).
- 4ths are NOT generally used in voicing the #11 DIM7 chord.

NB following the model of the overtone series, the ear expects to find most distant dissonant tensions in the higher registers.
(The choice of 3rds or 4th voicings is mainly dependent on contextual considerations)

-Polychordal Voicings-

- These are partitioned by register into two units of 3 or 4 voices each.
- Each unit is usually identifiable separately as triads or 7th chords:



- The lower of the two is interpreted by the ear as representing the basic chord with the upper unit heard as the extensions to the basic triad.
- The lower chord must clearly support the tensions of the upper unit.
- Characteristics:
  - : Register separation of the two units.
  - : Inclusion in the lower unit of enough basic chord tones to express the desired chord.
  - : Inclusion of most of the tensions in the upper unit.

NB this is not polytonality but a concept of chord voicing (no duality of Keys is expressed.)

-Tonal Considerations in Melodic Organization-

- The voicings using Tensions are often expressed melodically in BeBop by Arpeggiation.
- Arpeggiation is more often expressed in a model based on 3rds but 4ths are used and effective.
- Arpeggiation of Polychordal voicings developed most fully in the Jazz of the 60's and 70's.

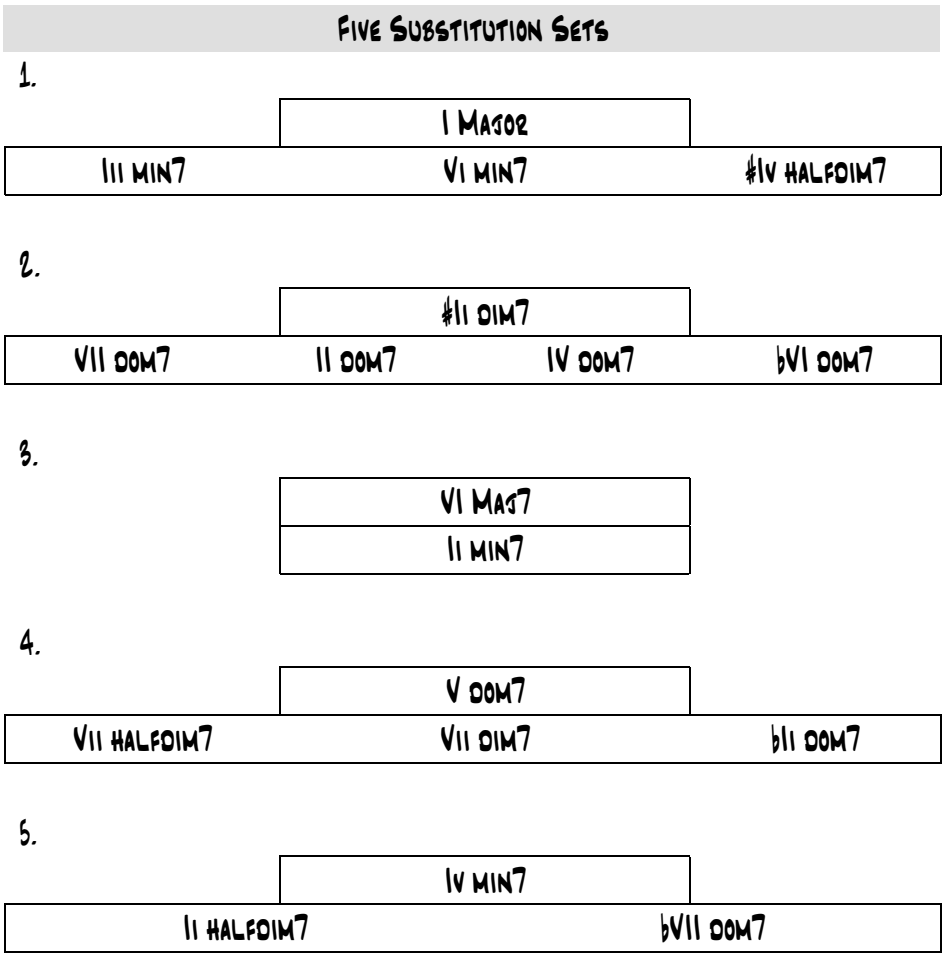
-BeBop: Tensions-

Tonal Characteristics/Chordal Considerations

- In a Tonal Diatonic setting a tension is a pitch related to a structurally superior pitch - usually a chord tone - by step.
- The tension represents and substitutes for the structurally superior pitch - called its Resolution - in the register in which it occurs (most tensions are located <u>above</u> their resolution).
- A broader concept than suspension, appogiatura, passing tone, or neighboring tone - there is no requirement for 'manner of approach', 'manner of leaving', or 'rhythmic position' in its definition.
- The use of tensions in one of the <u>strongest</u> characteristics of BeBop melodic lines and chordal voicings.
- There are contextual <u>limitations</u> of their use.

-Possibilities Grouped by Harmonic Function-

- BeBop performance practice groups chords by linear and harmonic function into five substitution sets.



- These subsets can aid in representations of available tensions.

Tension/Resolution on Substitution Sets

-The I Set-

- Major Key: (6-7-9-#4)

Tensions: I Maj7 Chord (C Maj7)

6-5 (A to G)		7-6 (B to A)			9-8 (D to C)			#4-3/5 (F# to E/G)	
I Ma7	III min7	I Ma7	VI mi7	#IV halfdim7	I Ma7	VI mi7	#IV halfdim7	Lydian	
C Ma7	E min7	CMa7	A mi7	F# halfdim7	CMa7	A mi7	F# Halfdim7	C Ma7	C Ma7
Chord Step								(Ionian)	(Lydian)*
6-5	4-b3	7-6	9-R	4-b3	9-8	4-b3	b6-5	#4-3/5	4-3/5

*Lydian is the IV Ma7 chord (Here relative to the key of G with F# in the key signature)

- Minor Key: (6-7-9-4)

Tensions: I min Chord (C min)

Natural6-5	Natural7-Natural6	9-8	4-b3
A to G	B to A	D to C	F to Eb

-The IV Set-

- Major Key: (6-7-9-#4)

Tensions: IV Maj7 Chord (F Maj7)

6-5 (D to C)	7-6 (E to D)		9-8 (G to F)		#4-3/5 (B to A/C)	
I Ma7	I Ma7	II mi7	I Ma7	II mi7	I Ma7	II mi7
F Ma7	F Ma7	D min7	F Ma7	D min7	F Ma7	D min7
Chord Step						
6-5	7-6	9-8	9-8	4-b3	#4-3/5	Natural6-5/7

-The iv min Set-

- Major Key: (6-7-9-4)

Tensions: iv min7 Chord (F min7)

6-5	7-6 (Eb to Ab)			9-8 (G to F)			4-b3 (Bb to Ab)	
iv mi7	iv mi7	ii halfdim7	bVII x7	iv mi7	ii halfdim7	bVII x7	iv mi7	ii halfdim7
F mi7	F mi7	G halfdim7	Bb7	F mi7	G halfdim7	Bb7	F mi7	G halfdim7

Chord Step

6-5	b7-6	b9-8	4-b7	9-8	4-b3	6-5	4-b3	b6-b5

- Minor Key: (6-9-4)

Tensions: iv min7 Chord (F min7)

6-5 (D to C)	9-8 (G to F)		4-b3 (Bb to Ab)	
iv mi7	iv mi7	ii halfdim7	iv mi7	ii halfdim7
F mi7	F mi7	G halfdim7	F mi7	G halfdim7

Chord Step

6-5	9-8	4-b3	4-b3	b6-b5

-The Vx Set-

- Major Key: (13-b13-#11-#9-9-b9)

Tension V dom7 Chord (G7)

13-5 (E to D)			b13-5 (Eb to D)			
V dom7	vii halfdim7	vii dim7	V dom7	vii halfdim7	vii dim7	bII dom7
G7	B halfdim7	B dim7	G7	B halfdim7	B dim7	Db7

Chord Step

13-5	4-b3	4-b3	b13-5	b4-b3	b4-b3	b9-8

#11-5 (C# to D)			#9-3 (A# to B)		
V dom7	vii halfdim7	vii dim7	V dom7	vii halfdim7	vii dim7
G7	B halfdim7	B dim7	G7	B halfdim7	B dim7

Chord Step

#4-5	9-b3	9-b3	#9-3	#7-R	#7-R

9-8 (A to G) V DOM7 G7	b9-8 (Ab to G) V DOM7 G7

CHORD STEP

9-8	b9-8

- MINOR KEY: (#9-b9-b6-#4)

TENSIONS: V DOM7 CHORD (G7)

b9-8 Ab-G	#9-b9 A# (Bb)-Ab	b6-5 Eb-D	#4-5 C#-D

TENSIONS: V DOM7 CHORD SUBSTITUTE (G7) VII DIM7/bII DOM7

VII DIM7/bII DOM7 #7-6/6-5 Bb-Ab	bII DOM7 b5-5 G-Ab	bII DOM7 9-8 Eb-Db

-THE #1107 SET-

- MAJOR KEY: (b6-b7-#7)

TENSIONS: #II DIM7 (D# DIM7)

#II DIM7/II DOM7/IV DOM7/bVI DOM7 b6-b5/6-5/#4-3/#9-b9 B-A	IV DOM7 #4-5 C-B	VII DOM7 b9-8 C-B

#II DIM7/IV DOM7/bVI DOM7/VII DOM7 #7-b7/6-5/#4-3/#9-b9 D-C	bVI DOM7 #4-5 Eb-D	II DOM7 b9-8 Eb-D

#II DIM7/IV DOM7/bVI DOM7/VII DOM7 #7-b7/6-5/#4-3/#9-b9 D-C	bVI DOM7 #4-5 Eb-D	II DOM7 b9-8 Eb-D

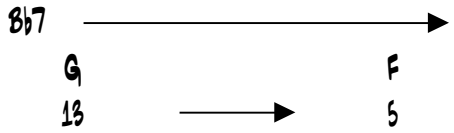
bVI DOM7/VII DOM7/II DOM7	VII DOM7	IV DOM7
6-5/#4-3/#9-b9	#4-5	b9-8
F-Eb	F#-F	Gb-F

VII DOM7/II DOM7/IV DOM7	II DOM7	bVI DOM7
6-5/#4-3/#9-b9	#4-5	b9-8
G#-F# (Gb)	A-Ab	A-Ab

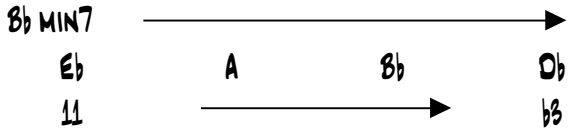
Melodic Resolution

-Level 1-

- The resolution occurs immediately on the surface of the composition before the chord supporting the tension changes.



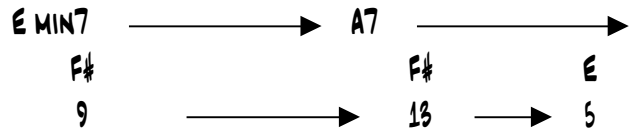
- The resolution is delayed by melodic ornamentation *but not* so long as to allow the chord to change before the resolution appears.



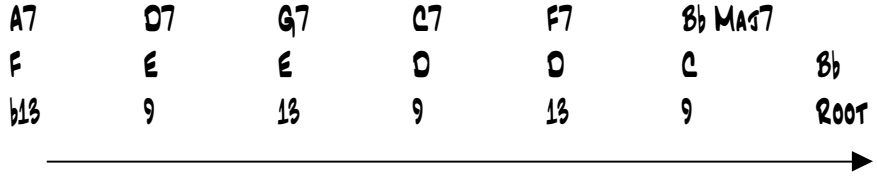
- Such immediate and relatively immediate resolutions of Tensions are extremely common in BeBop.

-Level 2-

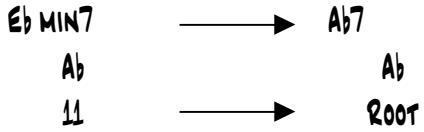
- Delaying the resolution of a tension until or after the chord has changed.



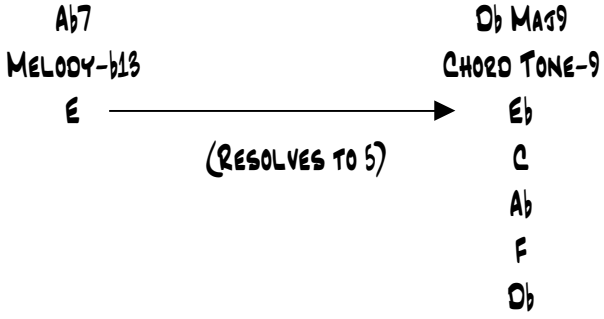
- Resolution becomes tension because the chord has changed upon arrival of the resolution (thus 'chains' of stepwise tensions are possible).



- A tension sustains through a chord change to become a consonance - thereby losing its need to resolve.



- A tension may actually find its resolution in an accompanying voice in the same register as the tension



-Melodic Line Summary-

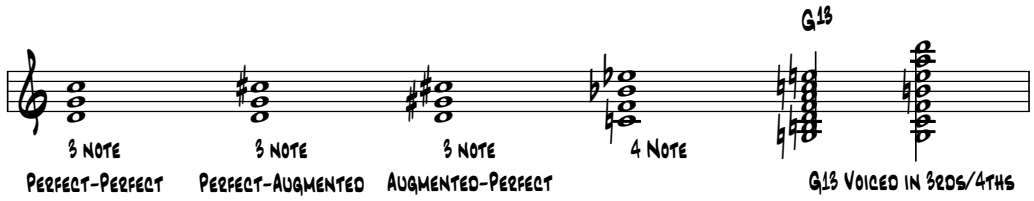
- BeBop melodic lines are characterized primarily by a surface emphasis on Tension.
- Melodies often Arpeggiate the chord voicing.
- Nearly all tensions in melodic lines resolve.
- BeBop compositions share melodic-harmonic structure with other types of tonal music.
- Motivic organization of BeBop melodic lines is similar to that of earlier tonal music.

-Chords by Fourths (3 Note)-

Quartal Materials

- Chords by 4ths are built by superimposing intervals of the 4th.
  - In other spacings (superimposed 3rds) voiced in 4ths the chord members must be spaced a 4th apart to preserve the distinctive Quartal Sound.
  - If not the quartal structure will sound like an 11th/13th/etc extended chord.
- Three, Four, and Five notes have a Pentatonic Flavor.
- Chords by 4th are ambiguous in that - like all chords built by equidistant intervals (07/+7) - any member can function as the Root.
- Because of ambiguity of this 'rootless' harmony to Tonality, the burden of key verification falls upon the voice with the most active melodic line.

Chords by 4ths



Three Note Chords by 4ths

- Three types of intervalic arrangement of three note chords by 4ths are possible:

Perfect/Perfect	Perfect/Augmented	Augmented/Perfect
C	C♯	C♯
G	G	G♯
D	D	D
All Perfect 4th Intervals	Augmented 4th (G-C♯)	Augmented 4th (D-G♯)

- In all types of three note chords by 4ths two inversions are possible - inverting helps prevent the harmonic monotony of uniform 4th intervals providing variety of color.
  - : Either inversion can be used as a Fundamental structure because of the presence of the strong Perfect 5th interval.
  - : If the Perfect 5th interval is allowed to dominate the texture, the 2nd interval created by the inverted 7th often sounds like a note added to a simple chordal formation.

Fundamental	Inversion 1st	Inversion 2nd	
C	D	G	
G	C	D	} 2nd
D	G	C	}

- Open spacing increases harmonic expressiveness.
- Any note in a Perfect Quartal chord may be doubled.
  - : Outer voice doubling enriches harmonic color.
  - : Inner voice doubling strengthens any moving Line.
- A succession of chords by P4th does not fall within the interval structure of any one scale.
  - : If are to be made to fit a scale pattern, miscellaneous 4ths must be used (Perfect and Augmented 4ths).
- The Perfect/Perfect chord is seldom used as a dissonant structure - it is consonant in a quartal context.
- In chords containing an Augmented 4th the upper note of the Tritone best resolves to the nearest note of the prevailing melodic or scale formation.
- Any chord tone in any type of 3 or 4 note Quartal chord by skip a 4th or 7th if the other voices remain stationary.
- Any type of three note chord by 4th can progress Diatonically, Chromatically, or by Skip to any other chord by 4th if one voice moves with strong melodic purpose.
- Clarity is difficult to achieve in the lower registers.
- Pedal point lessens any dissonant tones need for Resolution.
- Chords by 4th may be approached or left by triads when:
  - : The Upper most voice is prepared.
  - : When suspensions are not resolved.
  - : When the 6th or 9th is added to a Cadential Tertian Tonic.
- May be approached or left by 9th chords if fourth inversion is used and the top voice is the Root.
- Approached by 7th chords when the 3rd/5th of Parallel 7th chords are replaced by the 4th.

- Approached by 13th chords when they are arranged so that 4th intervals predominate.
- In Quartal cadences the final chord is more powerful in its inverted form.
- Quartal chord tones move so freely that in cadences made solely by 4ths the chord may have any Bass note.
- Chords by 4ths are used as 'dominates' in cadences of any Harmonic Idiom (mixture of chord construction if the interval of the 4th predominates).

-Chords: Fourths (4 Note +)-

Four Note Chords by 4ths

- A Quartal structure more resonant that the 3 note Quartal structures.
  - The new note forms a consonant interval (10th) with the Bass note.
  - Adds color and variety.
  - Extremely useful in their three inverted forms.
- Moving through inversions of the same chord will produce real harmonic movement without a Root change.
- These chords resolve easily to chords by 3rds when two voices move in conjunction while others remain stationary.
- When the Augmented 4th is present, the tritone moves easily if placed at the tope of the chord.
- Compound construction (3rd & 4th intervals) bring fresh color to Quartal harmony.
  - The 3rd may be added above or below a three note quartal chord.
  - This compound chord with the Maj 3rd added in the top voice is effective when used as a cadential Tonic.
- The chromatic introduction of quartal chord may cause a sudden shift of Tonality or scale formation.
- These 4 note chords can be arranged in 5ths as easily as chords in 3rds can be arranged in 6ths.
  - When the 5th interval predominates a quartal chord the 4th becomes restless.
  - Advisable to resolve the 4th to a 3rd of a compound quartal chord before returning to a pure chord by 4ths.

Multi-Note Chords by Fourth

- Chords built of superimposed P4ths are consonant to and include the Five note chords.
  - : The 6 note quartal chord results in a change in tension because of the sharp dissonant interval (belong to the 3/4/5 note quartal chords containing an Augmented 4th).
  - : 13th and multi-note Quartal chords often contain the same notes. The similarity is *theoretical not aural*. If 3rd overrun a six/seven note chord the ear hears a 13th. If overrun by 4ths the ear hears a quartal chord.

G13

Voiced in 3rds

G B D F A (C) E

Voiced in 4ths

G C F B E A D

  - : If number of 3rds & 4ths are equal, the chord may be a pivotal structure and belonging either to the tertian or quartal category – or both.
- 12 different notes can be 'stacked' in 4ths – if muddy, place larger intervals on the bottom or omit a tone.

-Other Scales-

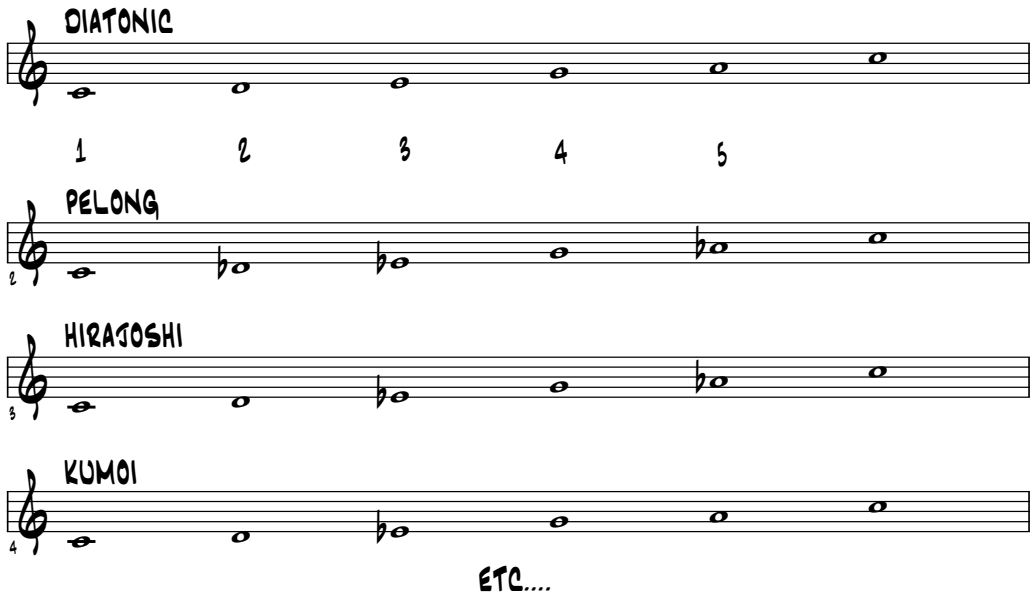
Pentatonic

- There are various kinds of Basic Five-tone or pentatonic scales.

Diatonic	1	2	3	5	6	8
	C	D	E	G	A	C
Pelong	1	b2	b3	5	b6	8
	C	bD	bE	G	bA	C
Hirajoshi	1	2	b3	5	b6	8
	C	D	bE	G	bA	C
Kumoi	1	2	b3	5	6	8
	C	D	bE	G	A	C

etc

Pentatonic examples



- The modal construction technique that produces the 7 diatonic modes also produces modes of each type of pentatonic scale.
- Diatonic pentatonic scales are harmonically limited in scope because of the lack of semitones.
  - Pure pentatonic music is most effective when used for short spans of time.
  - Pentatonic materials function well harmonically or melodically - but seldom both at the same time.
  - Pentatonic melodies are often harmonized with 'foreign' chords.
- One type of pentatonic scale combines well with another type on the same or different key center.

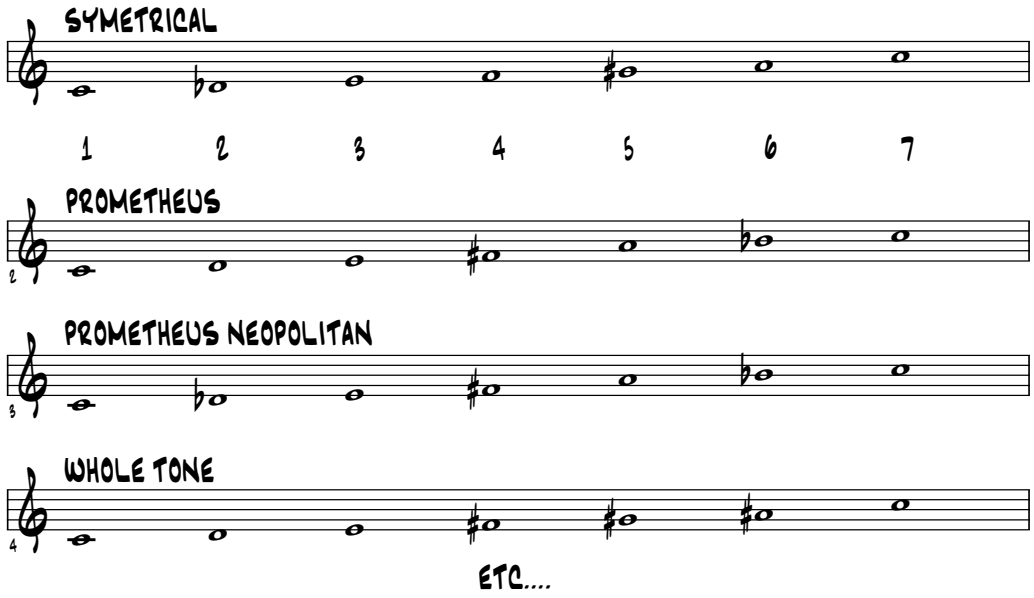
Hexatonic Scales

- There are various types of 6 tone Hexatonic scales.

Symmetrical	1	b2	3	4	#5	6	8
	C	Db	E	F	G#	A	C
Prometheus	1	2	3	#4	6	b7	8
	C	D	E	F#	A	Bb	C
Prometheus Neapolitan	1	b2	3	#4	6	b7	8
	C	Db	E	F#	A	Bb	C
Whole Tone	1	2	3	#4	#5	#6	8
	C	D	E	F#	G#	A#	C

ETC

Hexatonic Examples



ETC....

- Modal construction techniques produce six modes of each type except the Whole Tone scale (no 1/2 steps).
- Melodic material from these scales is usually harmonized with chords form other scales or with chords in a non-scalar relationship.
  - These scales (except the Whole Tone) have a primarily melodic function.
  - Most often harmony is non-hexatonic and moves independent of any implications of melody.
  - Often melody and harmony are in polytonal relation.
  - The Whole Tone is limited due to an equidistant intervalic structure - produces Augmented chords in harmonic construction - true value lies in use as a contrast it provides when used with other scales and techniques.

Chromatic Scales

- Made of the Octave divided into twelve half steps.
- Can be used as an ornamentation of a Diatonic scale.
- As an independent scale with 12 *equally important* steps.
- May impose a Tonic feeling through fixed or shifting key centers.
- May have no tonality.
- Modal versions in the equidistant chromatic scale are not possible.

Synthetic Scales

- Although a single tone through its overtone series suggests most obviously the Major scale - the formation of these scales is partly rationalized.
- The major is only one of the many scales contained in the Basic 12 tone Chromatic scale that is found in the upper regions of the overtone series.
- Free placement of scale steps results in original scale formations beyond the sphere of Major and Minor modes.
- Formed by placing any number of major/minor/augmented 2nds in any order.
  - It is advisable that scales be allowed to form as a part of the impetus of melodic or harmonic patterns.
- Some 'original' or synthetic scales are used more often than others - often coincide with *Folk Scales*.
- Like modes the primary chords are the Tonic and the two triads that include the scale step/steps containing the most determinable characteristic colors of the scale in question.

-Non Harmonic Tones-

Chromatic Tones

The chromatic scale involves all 12 tones and therefore cannot infer any specific chord.

-Utilization-

- The most effective ways of utilizing the Chromatic Tones is:
  - Treat the Root-3rd-5th-7th-9th of the chord as principle tones.
  - In approaching a chord choose one of the principal tones as a 'target' note.
  - Pass through the chromatic tones a m2nd on each side of the 'target' note then into the 'target' note.
- The Chromatic Tones may move in either direction before resolving to the principal tone - although modern idioms prefer the descending form.

Sensitive Tones

Jazz employs a sixty chord harmonic system over which is played a 12 tone melodic line.

-The 9-11-13-

- Calculated from chord Root:

Chord Quality	Sensitive Tone
Major	9-#11
Dominant	b9-9-#9-11-#11-b13-13
Minor	9-11
Halfdiminished	9-11
Diminished	9-11

Non Harmonic Tones

Tones which are not part of the surrounding or implied chord are called non harmonic (or non chordal) tones.

-Passing Tone-

- Lies between two tones of different pitch; approached and resolved by step; may occur on a strong or weak beat; generally used to smooth the melodic line.

-Neighboring Tone-

- Lies between two chord tones of the same pitch; is approached and resolved by step; usually occurs on a weak beat; used to embellish or delay the progress of the melodic line.

-Unprepared Neighboring Tone-

- Approached by leap; resolves by step; on a weak (unaccented beat).

-Appogiatura-

- Occurs on a strong (accented) beat; approached by leap; resolves by step; used to color the line and create interest of excitement.

Escape

- It is approached by step and resolves by leap to a chord tone; used to embellish a melodic line.

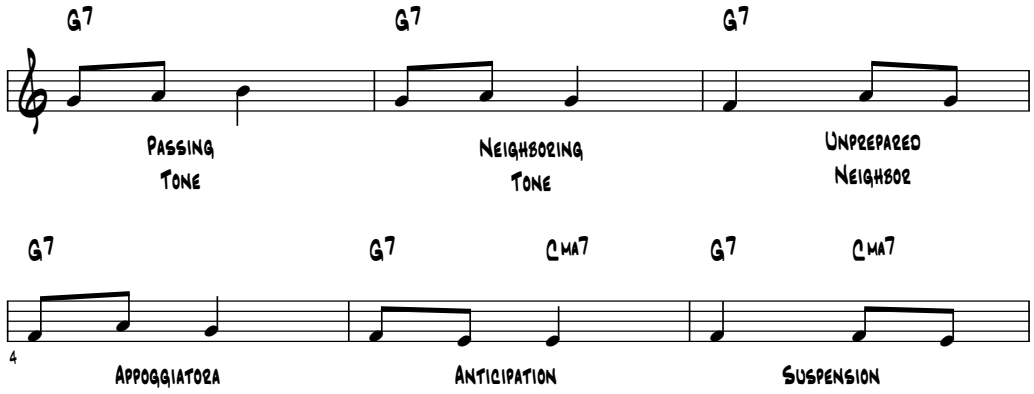
-Anticipation-

- In a progression of two chords, any tone of the second chord is sounded before the second chord appears; occurs on a weak beat; may anticipate a tone of the second chord in a different voice.

-Suspension-

- A non harmonic tone which is held over from the previous chord; used for color and to create interest by holding back the expected chord tone.
  - : The complete suspension figure has three elements: The preparation (chord tone); the suspension proper occurring on a strong beat; the resolution (chord tone) generally a step below the suspended tone.

Non Harmonic Tones



Conclusions

- When non harmonic tones are found they often take the place of the chord tone above or below.

#2nd	→	3rd
#3rd (11th)	→	3rd
#4th (b5)	→	5th
#5th	→	5th/added 6th

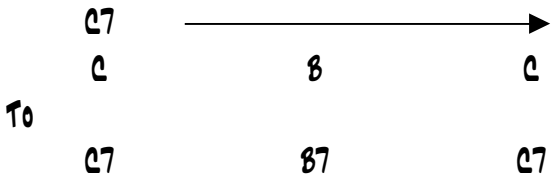
- When a non harmonic tone is a Maj 2nd above a tone of the 07 chord, the chord tone a Maj 2nd below is usually omitted.

-Harmonizing Non Harmonic Tones-

When harmonizing a melody it is often desirable to harmonize the non harmonic tones appearing in the melodic line.

Possibilities

- A o7 chord may be built from the non harmonic tone.
- Against a min 7 or Maj 7 chord may be harmonized with a Major chord built a half step above the root of the given chord.
- Chords of the same quality may be used to harmonize the non harmonic tone.
  - All upper parts of the chord may move together creating a passing or neighboring chord.
- Against a Major chord may be harmonized with:
  - A halfdiminished 7th chord built a whole step above.
  - A minor chord built a P 4th above.
  - A min 7th chord built a whole step above.
  - A Major chord built a P 4th above.
  - A halfdiminished 7th chord built a P 5th above.
  - A min 7th chord built a P 5th above.
- Almost all non harmonic tones placed against a x7 chord may be harmonized within the x7 chord - they may be also harmonized outside of the chord. Two tones require special treatment (#5ed/Maj 7th interval):
  - The M7 can be harmonized with a x7 one half step below.



: The #3rd (11th) against the x7/Maj 7 can be harmonized with a minor or halfdiminished 7 chord built a whole step above the Root of the original chord.

G min7	C7 (sus 4)	C7
F	F	E
To		
G min7	D min7	C7
G min7	D halfDim	C7
Or		
G min7/G	G min7/C	C7/C
	Equivalent to C7 (sus 4)	

NB The chord chosen to harmonize the non harmonic tone will be determined by context, individual taste, and experimentation.

-The Blues-

A fairly fixed set of chords or changes (I IV V) is the basic framework within a 12 Bar pattern. The emotional 'mood' sometimes referred to as 'The Blues' is a poetic reference - NOT a musicological one.

Harmonic Forms

-Basic: Major-

I add6	I add6	I add6	I dom7
C6	C6	C6	C7
IV dom7	IV dom7	I add6	I add6
F7	F7	C6	C6
V dom7	IV dom7	I add6	(V dom7)
G7	F7	C6	G7

-Basic: Dominant-

I dom7	IV dom7	I dom7	I dom7
C7	F7	C7	C7
IV dom7	IV dom7	I dom7	I dom7
F7	F7	C7	C7
V dom7	IV dom7	I dom7	(V dom7)
G7	F7	C7	G7

-Basic: Minor-

I ming	I ming	I ming	I dom7	
C ming	C ming	C ming	C7	
Iv min7	IV dom7	I ming	I ming	
F7	F7	C ming	C ming	
Ii halfdim7	V dom7	I ming	(Ii halfdim	V dom7)
D halfdim7	G7	C ming	(D halfdim7	G7)

-Traditional-

I add6	IV dom7	I add6		V min7	I dom7
C6	F7	C6		G min7	C7
IV dom7	IV dom7	I Maj7	ii min7	iii min7	bIII dom7
F7	F7	C Maj7	D min7	E min7	Eb7
ii min7	V dom7	I add6	bIII dim7	(ii min7/	V dom7)
D min7	G7	C6	Eb dim7	D min7	G7

-Parker Revision: Major-

I add6	IV Maj7	VII min7	III dom7b5	VI min7	II dom7b5	V min7	I dom7b5
C6	F Maj7	B min7	E7b5	A min7	D7b5	G min7	C7b5
I min7	IV dom7	iv min7	bVII dom7	iii min7		VI dom7b5	
C min7	F7	F min7	Bb7	E min7		A7b5	
ii min7	V dom7	ii min7	V dom7	I add6	bIII Maj7	(bVI dom7	V dom7)
D min7	G7	D min7	G7	C6	Eb Maj7	Ab7	G7

-Parker Revision: Minor-

I ming6	iv ming6	I ming6		I dom7	
C ming6	F ming6	C ming6		C7	
iv min7	bVII dom7	I ming6		bVI dom7	
F min7	Bb7	C ming6		Ab7	
ii halfdim7	V dom7	I ming6	bIII dom7	bVI dom7	V dom7
D halfdim7	G7	C ming6	Eb7	Ab7	G7

Creating Different Blues Progressions

- In both Major and minor progressions the fifth bar will usually contain some quality of the IV chord - some say must - to retain the basic blues quality and design.
- Decide on a goal point and then experiment to reach the goal - helpful to work backwards from the goal point.

-Sheet Music Conversion I-

Similarities and Differences in Concept

-Pop Tune-

- The texture of a pop tune is basically homophonic - melody with a subordinate Harmonic support.
- The pop tune composer is concerned with adding a simple harmonic accompaniment to melody/lyrics.
- Each chord is considered for its color (vertical sound) and effect when combined with melody/lyrics.
- Harmonic movement is not disregarded - although of secondary importance.
- The Bass line chord movement is of comparatively minor importance.

-Jazz Tune-

- Main emphasis is concerned with superimposing one or more melodies or contrapuntal lines over a recurrent chord progression.
- Concentrates on the flow of the Harmonic material.
- The chordal Bass line is a major consideration to help establish a more effective underpinning for improvisation.
- Improvises and employs chord patterns or progressions which *avoid harmonic dead spots* (Forward Motion) - by completing Incomplete patterns, smoothing out the Harmonic Flow, and shifting the Harmonic Rhythm.

NB the problems of conversion vary according to: the Individual composer, the Era composed, and the Function the music was originally composed for.

Considerations

-Harmonic Rhythm-

- Pop and Jazz chord backgrounds consist of one or two (occasionally up to four) chords per bar.
- Pop tune sheet music accompaniment is designed for one individual to play - usually a Piano arrangement.
  - Flow of music is maintained by Quarter note movements.
  - If chord is held: Bass, embellishing chords etc. maintain the Quarter note movement.
- Jazz reduces the tune to its 'Basic Outline' to allow idiomatic substitutions and embellishments to inserted - requires a knowledge of the various Jazz styles and conventions idiomatic to that particular style.
- Jazz generally employs strong Chordal Root (Chordal Bass line) movement to create Forward Motion.
- In areas of static harmony:
  - Pop tune will rely on a moving Bass pattern to create movement.
  - Jazz tune will insert chords (Substitutes, etc.) to maintain harmonic movement, variety, color, and substance.
- For both, the Tempo and Character of the tune will determine the harmonic rhythm - frequency - of the changes.

-Sheet Music Conversion II-

Procedure

- Simplify and analyze the Piano accompaniment to determine the *Basic Chord Outline*. And convert to Roman Numerals - to determine function.
- Determine what the correct chord quality and extension is:

C Maj	C-C Maj7-C Maj9-C6
C Dom7	C7-C9-C13-C Aug
C Dom (#5)	C7 (sus 4)
C Dom (b5)	C7 (#11)
C min	C min7-C min9
C halfdiminished	C halfdim7 (C min7b5)-Eb min6*

*On all min6 chords build a halfdim7 a min 3rd below

- Correct common faults to most sheet music:
  - : Unprepared x7 chords.
  - : Incomplete patterns.
  - : Interrupted patterns.
  - : Key changes not indicated.
  - : Additional chords for melodic adjustment.
  - : Misspelled inversions.

Solutions

- When x7 chord appears on the first beat of the bar and is held throughout four beats prepare the x7 by inserting a -7/halfdim 7 chord a P 5th above at the beginning of the bar.
- Complete the incomplete patterns and adjust interrupted patterns to smooth out root movement, make harmonic sense, and maintain continuity/forward motion.
- Omit chords, which cover isolated melody tones.
- Correct mislabeled inversions.
- Keep in mind:
  - Major chords can move anywhere
  - x7/-7/halfdim 7 chords usually move down a P 5th or min 2nd.
  - 07 chord moves up a Maj 2nd or down a min 2nd.

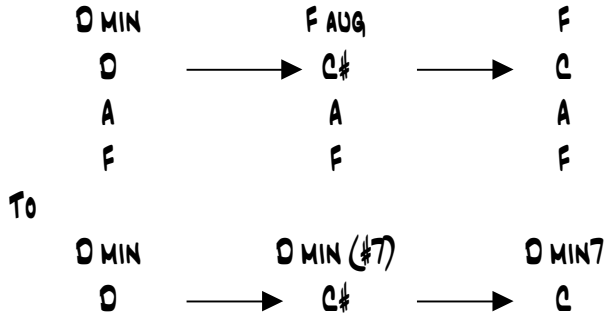
Revising Sheet Music Chord Symbols

-When only Triads Are Given-

- Major functioning as a I Maj: add the 6/Maj 7 depending on melody line min 6 to avoid the min 2nd clash with root as melody note.
- Minor functioning as a II/III/VI chord: add min7; if min 6 is given, it is usually a halfdim 7 chord a min 3rd below - or an incomplete x9 chord built a P 5th below the root of the min 6 chord.
- Minor functioning as a I min chord: add min 6/min #7.
- Major functioning as a Vx chord: add x7.
- Diminished: determine function and add 07 - could be incomplete x7♭9 chord.
- Augmented functioning as a V chord: add aug 7th - could also be a x9♭13/x7♭13.

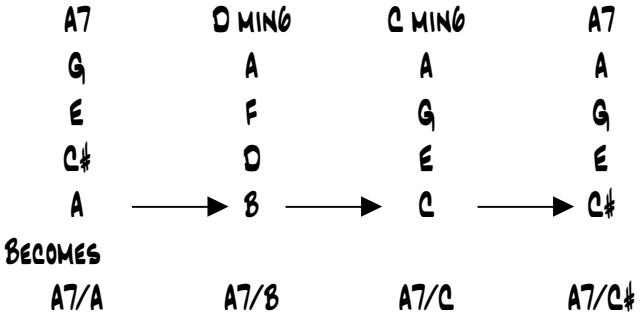
-Inner Line Movement-

- Often indicated by Triads:



-Bass Line Movement-

- May be indicated by several chords which obscure the basic chord pattern - find the basic chord and indicate Bass movement with letters.



-Non Harmonic Tones-

- Several chords may be listed - based on the melodic line - really an attempt to harmonize non harmonic tones. Simplify by omitting all but the 'basic' chord.

C Maj7	F# C# dim A7 C# dim	D min7

Becomes

C Maj7	C#dim or A7♭9	D min7

-Chords a 3rd Apart-

- Often incorrectly named - sometimes indicating a rootless inversion:

D min7	F min	C Maj7

Becomes

D min7	D♭ Maj7 or D halfdim7/G7♭9	C Maj7

-Vx7 Approaches-

- The IV add6 Vx7 progression is often found - it can stay but is commonly changed to ii-7 Vx7.
- If the Vx7 is approached by the vi-7 chord it is really an incomplete pattern - it also implies a short pedal on the Vx chord:

vi min7	V dom7	V dom7
A min7	G7	G7

Becomes

A min7/C	D min7/C	G7/C

o (dim) Symbol Is Only Present

- Generally implies that the melodic tone is a member of the o7 chord.
  - : The root is chosen in relation to the *following* chord.
  - : May also be an attempt to harmonize a non harmonic tone.

-Chord Extensions On Same Root Quality-

- Really an attempt to notate inversion of the same chord:

D min	D min7	D min6	E7

Becomes

D min7/D	D min7/C	B halfdim7/D	E7/E

NB there are many harmonizations possible for a tune - any particular harmonization becomes common practice through usage.

-FORM-

Definition

In the Arts as a whole it is an important concept referring to the shape, arrangement, relationship, or organization of the various artistic elements.

Referring to a Performing Art, one must add - in time: how the Performance is structured within the duration of time.

Specifically to music: it is how the elements of music are organized in time. It is based on basically two factors - repetition and contrast. Much of the skill of the composer and the improviser is measured by how skillfully the repetition and contrast is utilized to provide a performance which leads the listener to the new while providing the familiar as rest points - both of which provide the means to follow the musical development over time.

Jazz Forms

Much of the Jazz Repertoire is based on 'Pop' music vocal forms - one characteristic of much of present day Jazz and almost exclusively pre Bop Jazz is the presentation of previously composed material performed within a 'jazz' style interpretation. These compositions were for the most part based on common vocal forms.

-Phrase Length-

- Phrase length is usually 4 bars - the blues contain three - four measure phrases.
- The phrase - a time period of musical activity - is usually punctuated by a period of musical rest.
- The musical phrase is equivalent to the word grouping known as a phrase - one thought or idea separated from another by a period of silence. Thus a conversation is organized in time by the phrase - it provides intelligibility by presenting new ideas and thoughts in a pattern allowing comprehension.
- The phrase is organized around the motif - the smallest musical grouping which the larger phrase develops.

-Contrast & Repetition-

- The Classic/Traditional blues pattern provides a perfect example of the use of contrast & repetition.
- The harmonic form encompasses 12 bars and is divided into 3 - four measure grouping. Looking at the harmonic content from the Blues Chapter it is formed:
  - : The first four bars state the tonality - with a hint at the second four by the inclusion of the IVx7 in bar two.
  - : The second four bars provide a contrast but in bars 7 & 8 restate the opening four measures by returning to the very first stated chord.
  - : The last four bars are a complete contrast to the first 8 bars by including the Vx7 chord on bar 9 and then restating the chords of the first and fifth measure and preparing for the next verse.
- If you realize that the blues are a vocal form - even when composed as an instrumental composition - it is the organization of the words which clarify why the form works and can be truly described as a timeless genre:

Death Sting Me Blues

Blues, Blues, Blues why did you bring trouble to me?
Blues, Blues, Blues why did you bring trouble to me?
Oh death please sting me, and take me out of my misery

: Here, the initial statement is declared in the first 4 bars; repeated in bars 5 – 8; and a complete contrast in bars 9 -10.

Bars 1 – 4 statement of initial theme
Bars 5 – 8 repetition
Bars 9 -12 contrast

32 Bar Song Forms

-A-A1-B-A2-

A section	two 4 bars phrases with last two setting up a return to bar 1 (1st ending).
A1 section	two 4 bar phrases with last two setting up the transition to the Bridge or B section
B section	two 4 bar phrases introducing new material with the last two bars setting up a return to the A section material.
A2 section	Restatement of the original material with last two bars setting the final cadence.

- This is the typical song form and clearly demonstrates the Repetition & Contrast concept as the organizing principle.
- It can be charted as:

Part	Phrase Length		Section Length
A	4 measure phrase	4 measure phrase	8 measure
A1	4 measure phrase	4 measure phrase	8 measure
B	4 measure phrase	4 measure phrase	8 measure

A2	4 measure phrase	4 measure phrase	8 measure

-Others-

- A-B form of two sections of 16 bars. Repetition & Contrast is achieved by phrase repetition within each large section.
- A-B-A-C which introduces two sections of new material but contrasted with alternating repetition.
- Through Composed which cannot be broken down into repeating and contrasting sections. The Repetition & Contrast is often achieved through the use of harmonic or melodic repetition (especially sequence both harmonic and melodic) and contrast at the phrase level.

Latin Forms

Latin music has a different historical development from Jazz - although the Roots of both Jazz and Latin Musics are the same. The forms employed by the various Latin Musics are larger *but* still employ the concept of Repetition and Contrast. There are major differences in that Latin forms: utilize larger sections and employ three, four and five part forms. In addition, much of the repetition is in sequence and not exact.

-Examples-

- (16 + 16 + 16 + 8 + 12) = 68 bars total.
  : Chega De Saudade
- (<8+8> + <8+8> + <8+8> + 12 +8) = 68 bars total.
  : Desifinado
- (16 + 16 + 16 + 16) = 64 bars total.
  : Pensitiva
  : Nica's Dream
  : Invitation
- (16 + 8 + 16 + 8 + 16) = 64 bars total
  : One Note Samba
- (16 + 16 + 8 + 16) = 56 bars total
  : Meditation
- (16 + 16 + 16) = 48 bars total
  : The Night Has a Thousand Eyes
- (16 + 16 + 12) = 44 bars total
  : Once I Loved
- (12 + 12 + 8 + 12) = 44 bars total
  : Wave
- (8 + 8 + 16 + 8) = 40 bars total
  : Girl From Ipanema