Introduction

Jazz music at its best is largely an intuitive process. After all, it's not what you know, but what you *can do* with what you know, and in jazz what you know is largely dictated by what you can hear. Some of history's greatest jazz improvisers were known to be completely intuitive players, yet their solos demonstrate a degree of harmonic logic that eludes other players who may have an advanced intellectual understanding of harmony, but less developed aural skills and imaginations. But genius aside, it's fair to say that most aspiring jazz musicians seek a knowledge of theory to refine and expand their harmonic/melodic palate and thus bolster the intuitive process.

Typically, a working knowledge of scales and chords comes from small bits of information processed over a fairly long period of time. It may be rote learning by ear of vocabulary that "works," or applying certain scales to chords simply because we have been taught they go together. For some this is more than sufficient to enable the creation of some great jazz. However, the accumulation of scattered bits of information can also lead one to not see the harmonic "forest through the trees," resulting in limited command of fundamental harmonic and melodic concepts.

Enter the myriad array of chords and scales encountered in the study of jazz harmony. Contrary to how it may appear (especially to a student just starting out) the chord/scale universe of the twelve-tone system is not widely disparate. In reality, the vast majority of the tonalities we deal with emanate from the seven diatonic modes of the major scale, from modes derived by altering a single tone of the major scale, or reside within the various symmetric scale systems created by equal divisions of the octave.

In the limited time of today's presentation, we will examine the relationship between the colors of major and melodic minor modes, and how fourteen distinct yet related tonalities are created with one major scale and a single alteration. If we extrapolate to include the modes of harmonic minor and harmonic major, the same major scale with a *single* altered tone has the capacity to generate fourteen additional jazz chord/scale combinations. When transposed to twelve keys this covers three hundred thirty-six chords. This gives new meaning to the necessity of knowing one's major scales!

The key is understanding the structures within scales that underpin this phenomenon. In addition to viewing each scale from the root up, knowing how to apply shapes and structures within and across scales enables us to more effectively define sounds and implement vocabulary over a sea of tonalities.

ESSENTIAL DEFINITIONS:

Harmonic System: An asymmetric or symmetric scale that produces a unique set of related scales/chords/harmonies.

Upper Structure: A chord built from a chord tone other than the root. Often termed a "grip" as it relates to the hand on the keyboard

Common Upper Structure: an upper structure that produces essential intervals for multiple chords, often within the same harmonic system

Slash Chord: An upper structure over a bass note

Polychord: An upper structure over another chord

Modality: A set of distinct tonalities and related chord structures generated by an asymmetric scale.

Functional Harmony: Harmony in which tension and release is created by the cycle of fifths and dominant tonic resolutions. Bass alone can be indicative of the progression.

Modal Harmony: Harmony in which tension and release is created by the relative consonance and dissonance of modal key centers. Bass alone is not indicative of the progression.

Essential or Primary Color Tone(s): The interval(s) above the bass) that create the unique structure of each diatonic mode. Created by locating the tritone of the major scale over each modal root:

Ionian (modal):	4, 7
Dorian:	b3, 6
Phrygian:	b2, 5
Lydian:	#4, R (add 7th to differentiate from Locrian)
Mixolydian:	3, b7
Aeolian:	2, b6
Locrian:	b5, R (add 7th to differentiate from Lydian)

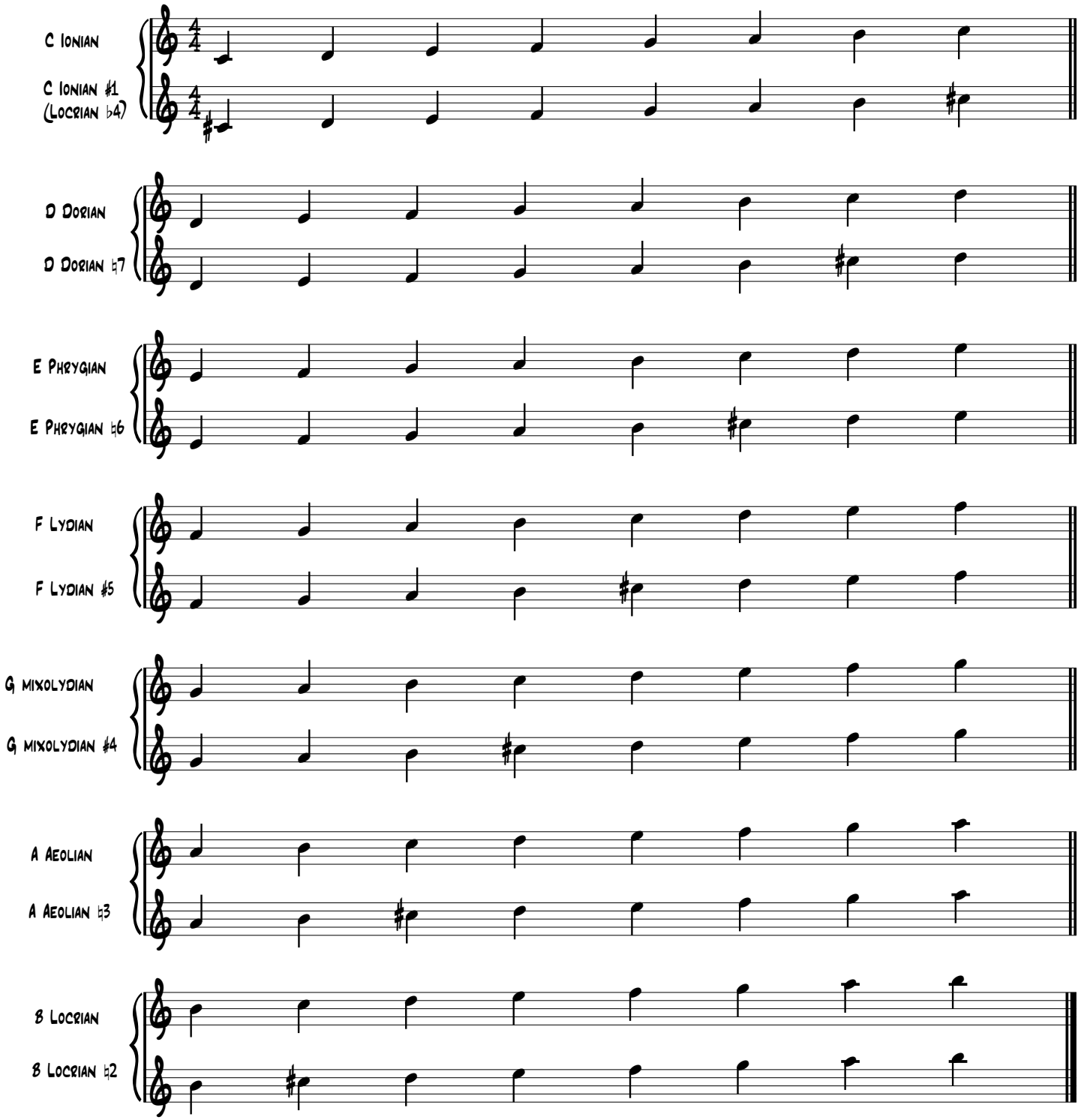
Upper structure 7^{th} chords in major:

maj7#4 ("Lydian")
min7b5 (mi6 inverted)
maj7
min7 (maj6 inverted)

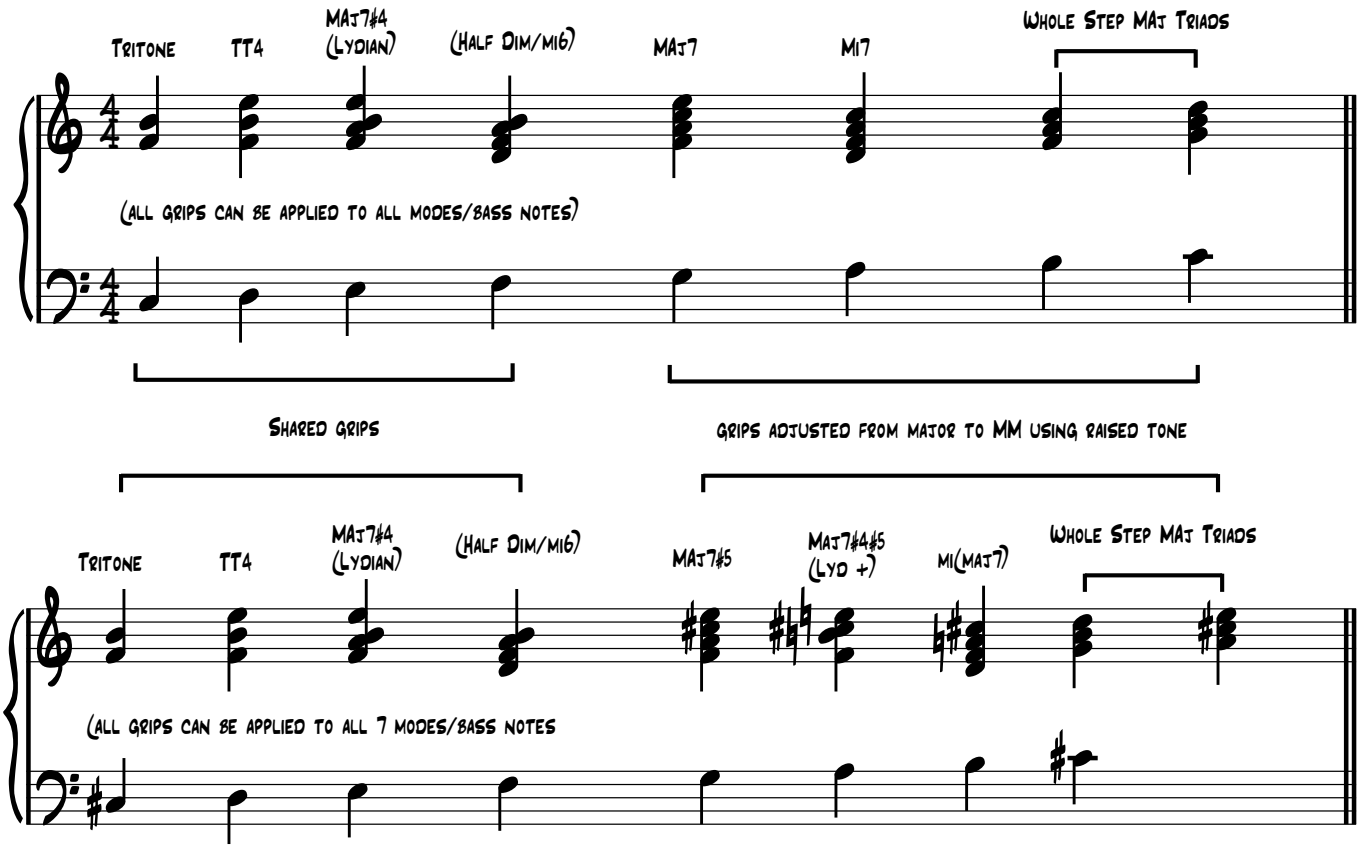
Upper structure 7^{th} chords in melodic minor:

maj7#4 ("Lydian")
min7b5 (mi6 inverted)
maj7#5, maj7#4#5
min maj7

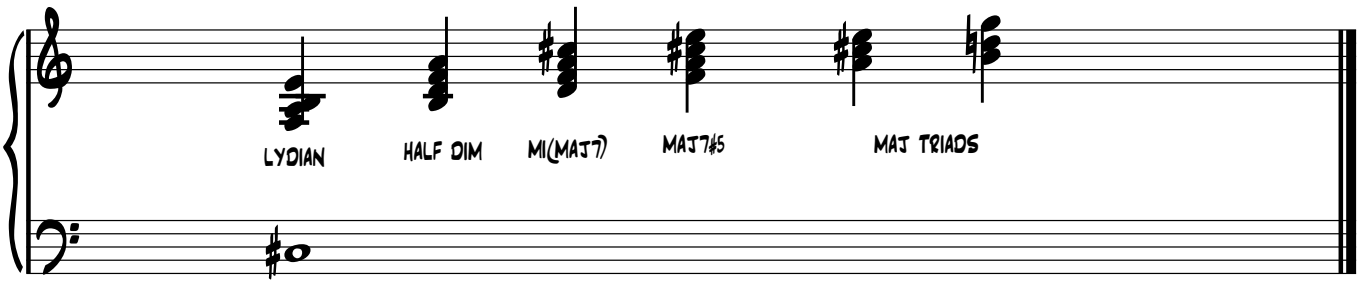
Major and Relative Melodic Minor Modes
C major, D melodic minor



Major and Relative Melodic Minor upper structure "Grips"



Example: layered grips for 7th mode melodic minor (altered dominant)*



*Grips apply to any mode of Dmm

UPPER STRUCTURE "GRIP" RELATIONSHIPS BETWEEN MAJOR AND RELATIVE MELODIC MINOR SCALES

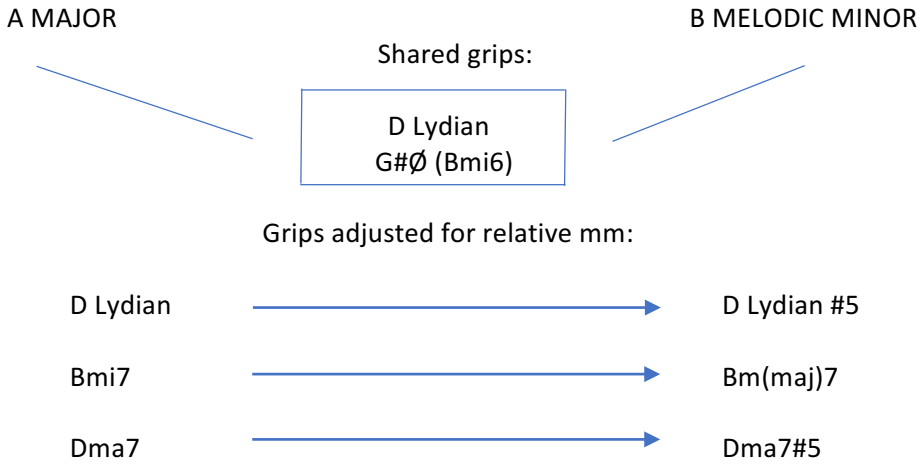
(A major and B Melodic minor chosen for example)

Process: Sharping the root of the major scale creates the 7th mode of the melodic minor scale one step above. Both scales share the same primary modal identities, as well as the corresponding Lydian and half diminished (inverted mi6) structures. The sharped root that created the relative melodic minor scale in turn becomes the altered tone of each of the melodic minor modes.

Modes of A major		Modes of B melodic minor
2. B Dorian		1. B Dorian ♮7
3. C# Phrygian		2. C# Phrygian ♮6
4. D Lydian		3. D. Lydian #5
5. E Mixolydian		4. E Mixolydian #4
6. F# Aeolian		5. F# Aeolian ♮3
7. G# Locrian		6. G# Locrian ♮2
1. A Ionian	(raised root)	*7. A Ionian #1 or A# (Bb) Locrian b4

*A divergence is created when the raised tone lies on the root. This scale, the 7th mode of melodic minor, can be viewed as either a major scale with its root sharped (Ionian #1), or major scale with all notes above the root flatted (Locrian b4). The quality of the chord is determined by the Lydian grip falling on the flatted 4th, which creates a dominant 7th chord with the maximum number of altered tensions (#9,b9, #5,b5). This scale has been given many names, including diminished whole tone, Superlocrian, or (most commonly) simply the "altered" scale.

The diagram below shows the shared upper structures for the relative major and melodic minor modes and the single alteration that brings the "grip" into the orbit of the relative melodic minor



As an exercise, play on the piano the shared grips over the root of each mode of a major scale. Then raise the bass note one step to the relative melodic minor and play the same upper structures. Then play the three grips on the left side and raise the note that brings it into the relative melodic minor. Note the subtle difference this creates between the major and relative melodic minor modes.

7TH CHORD QUALITIES OF THE RELATIVE MAJOR AND MELODIC MINOR MODES:

The process above utilizes "upper structures" (defined as chords created from tones other than the root) to provide voicings and suggest various melodic shapes unique to the quality of each chord. The movement of upper structures above the bass note will also create functional voice leading from chord to chord and create a strong melody across the tops of the chords. Many harmony players combine these voicings into "blocks" or "zones" which can be positioned over a bass note to represent various tonalities.

Following are the chords which correspond the seven modes of A major and B melodic minor. The upper structures listed under each of the parent scales will apply to all modes of that scale:

Chords of A major
(Grips: D Lydian, Dma7, G#Ø)

2. Bmi7 (9 11 13)
3. C# sus (b9 #9 b13)
4. D maj7 (9 #11 13)
5. E 7 (9 11 13)
6. A mi7 (9 11 b13)
7. GØ (b9 11 b13)
1. Amaj7 9 add 11 13)

Chords of B melodic minor
(Grips: D Lydian, G#Ø, D Lydian #5, D Maj7#5)

1. Bmi ma7 (9 11 13)
2. C# sus (b9 #9 ♮13)
3. D maj7 #5 (9 #11 13)
4. E7 (9 #11 13)
5. F#7 (9 11 b13)
6. G#Ø (♮9 11 b13)
7. Bb7 (b9 #9 #11 b13)

Once the sound of a grip has been internalized as representing a major and/or melodic minor scale, knowing where to place it above the root of a given chord is a great shortcut to formulating the sound of the individual modes/chords. The chart below shows the interval above the root each grip is located for each chord quality. Note the position of the grip is always the same for both the major and melodic minor version of the chord, the only difference being the raised note when applying the grip to melodic minor. When the raised note is the root (Ionian #1, Locrian b4) the major and mm grips still exists on the same scale degree (e.g. the second note of the scale) but the interval becomes a flatted interval above the root (Ionian #1, Locrian b4). Major triad upper structures are included in this chart.

Upper structure:	Lydian, ma7, +maj7	Mi7, mi6, min(maj 7)	half dim	maj triads (maj)	maj triads (mm)
Dorian, Dorian♮7:	b3	R	6	b3, 4	4, 5
Phrygian, Phrygian♮6:	b2	b7	5	b2, b3	b3, 4
Lydian, Lydian #5:	R	6	#4	1, 2	2, 3
Mixolydian, Mixolydian #4:	b7	5	3	b7, 1	1, 2
Aeolian, Aeolian♮3:	b6	4	2	b6, b7	b7, 1
Locrian, Locrian ♮2	b5	3	R	b5, b6	b6, b7
Ionian, Ionian #1 (Locrian b4)	4, b4	2, b2	7, b7	4, 5	5, b6

Modal identification practice over constant bass note, covers 14 modal colors for each root:

Bb Root

Major mode		Relative melodic minor mode
Bb Dorian（mi7 9 11 13) (Ab major scale)	Common Grips: Db Lydian GØ (Bbmi6) Grip adjustment for rel mm Db Lydian / Db Lydian #5 Dbma7 / Dbma7#5 Bbmi7 / Bbmi(maj)7 Db, F ma triads / Eb, F ma triads	**Bb Dorian ♮7 (mi maj7 9 11 13)** (Bb melodic minor scale)
Bb Phrygian (sus b9 #9 b13) (Gb major scale)	Common Grips: Cb Lydian FØ (Abmi6) Grip adjustment for rel mm: Cb Lydian / Cb Lydian #5 Cbma7 / Cbma7#5 Abmi7 / Abmi(maj)7 Cb, Db ma triads / Db, Eb ma triads	**Bb Phrygian ♮6 (sus b9 #9 13)** (Ab melodic minor scale)
Bb Lydian (maj7 9 #11 13) (F major scale)	Common Grips: Bb Lydian EØ (Gmi6) Grip adjustment for rel mm: Bb Lydian / Bb Lydian #5 Bbma7 / Bbma7#5 Gmi7 / Gmi(maj)7 Bb, C ma triads / C, D ma triads	**Bb Lydian #5 (+maj7 9 #11 13)** (G melodic minor scale)

Continue as above through all the modes with Bb as the root. Notice how the different grips within each key suggest subtly different melodic shapes, yet all blend into the same general sound. The ears should get in front the thinking process in short order – the concept of a sharped root of a major scale is elusive at first, but the sound of the grip structures over the bass will help to clearly define the mode and bring it into focus as a scale with its own individual tonal palate.