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## Part 8 - Voice Leading Chords

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## Voice ent Scale <br> - Cadence and Voice Leading Defined <br> Most Usable Voice Leading

- Bass Trading Root and Fifth (link to Perfect Fourth Quadrad Cadences/Bass Trading Root and Fifth)
- 7-3-6-2-5-1-4 Common Tone
- One Chord: Scalar Voice Leading on a Single Chord
- Two Chords: Voice Leading Pairs of Seventh Chords
- II-V-I and II-bII-I Top Voice Leading: Common Tone, Best Three-Note, E/D form, C/A form, G form
- Jazz Blues
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- Diminished-Sounding Dominant Cadences


## Theory Of Voice Leading

- Modes
- Major Scale Tone Triad Voice Leading
- Scale-Tone Seventh Chord Voice Leading
- Stepwise Quadrad Voice Leading
- Perfect Fourth Quadrad Cadences

Major Scale-Tone Seventh Chords in Perfect Fourths-Three Note Voicings, Major Scale-Tone Seventh Chords in Perfect Fourths-Four Note Voicings, Descend Five and Seven Voicings, Bass Trading Root and Fifth, Bass Trading Third and Seventh, Seventh Chord Inversions by String Set, Descend Seven / Descend Seven (Roots up in Fourths)

- Combining Stepwise and Fourths
- The Secondary Dominant Cycle
- Substitute Chords
- Chromatic Voice Leading

Chromatic Between Same Quality, Diminished Ascending Chromatic, Descending Diminished, Descending Chromatic, Chromatic Movement of a Single Voice

## Cadence Libraries

II-V-I, II-bII-I, IV7-\#IV07-I7, IVm7-\#IV7-Im7, Major IIm7(b5)-\#|I7-I, Descending Diminished, Chromatic Descending Minor, Chromatic Ascending Minor, Chromatic Descending Mixed Mode, (b)VI-V-I, I-VI-II-V (rhythm changes-includes III-VI-II-V), I-IV-VIIm7b5-III7-VIm

## TOP-VOICED CADENCES BY PARENT SCALE

All of the Arabic numbers (1, 2, 3, etc.) on the table below are shown without hyphens (1-2-3-4, etc.) to save space. " 1234 " indicates "1-2-3-4".

|  |  | $\text { to } \mathrm{VII}$ | to III |  | to VI |  | $\begin{array}{r} \text { to } \mathrm{II} \\ 1234[\# 4] 567 \\ \hline \end{array}$ |  | $\begin{gathered} \text { to } \mathrm{V} \\ 1234567 \end{gathered}$ |  | $\begin{array}{r} \text { to I } \\ 12[\mathrm{~b} 3] 356[\mathrm{~b} 7] 7 \end{array}$ |  | to IV |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| roots up in P4 |  |  |  | $\begin{aligned} & \text { VIIm7b5 } \\ & 23467 \end{aligned}$ | $\begin{aligned} & \text { VIIm7b5 } \\ & 23467 \end{aligned}$ | $\begin{array}{\|l} \hline \mathrm{III}(\mathrm{~m}) 7 \\ 23[4) 5 \\ {[\# 5] 67} \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline \mathrm{III}(\mathrm{~m}) 7 \\ 23[4) 5 \\ {[\# 5] 67} \\ \hline \end{array}$ | $\begin{aligned} & \mathrm{VI}(\mathrm{~m}) 7 \\ & 1[\# 1] 235 \\ & 67 \end{aligned}$ | $\begin{array}{\|l\|} \hline \mathrm{VI}(\mathrm{~m}) 7 \\ 1[\# 1] 235 \\ 67 \end{array}$ | $\begin{aligned} & \mathrm{II}(\mathrm{~m}) 7 \\ & 1234[\# 4] \\ & 567 \end{aligned}$ |  | $\begin{array}{\|l\|} \hline \text { V7 } \\ {[1] 234} \\ 567 \end{array}$ | V7 [1]2[b3]3 4567 | $\begin{aligned} & \mathrm{I}(\mathrm{ma}) 7 \\ & 12[\mathrm{~b} 3] 3 \\ & 56 \mathrm{~b} 7[7] \end{aligned}$ |
| II-bII-I of target |  | $\begin{array}{\|l\|} \hline \text { I6 } \\ 1356 \end{array}$ |  | $\begin{aligned} & \mathrm{IV}(\mathrm{ma}) 7 \\ & 1[\mathrm{~b} 3] 345 \\ & 6 \end{aligned}$ | $\begin{aligned} & \text { VIIm7b5 } \\ & 23467 \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { bVII7(6) } \\ 12345 \\ \text { b6b7 } \end{array}$ | $\begin{aligned} & \mathrm{III}(\mathrm{~m}) 7 \\ & 23[4) 5 \\ & {[\# 5] 67} \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline \mathrm{bIII7} 76) \\ & 1 \mathrm{~b} 2 \mathrm{~b} 34 \\ & 56 \mathrm{~b} 7 \end{aligned}$ | $\begin{array}{\|l\|} \mathrm{VI}(\mathrm{~m}) 7 \\ \mathrm{I}[\# 1] 235 \\ 67 \end{array}$ | $\begin{aligned} & \hline \mathrm{bVI} 7(6) \\ & 12 \mathrm{~b} 34 \mathrm{~b} 5 \\ & \mathrm{~b} 6 \mathrm{~b} 7 \end{aligned}$ | $\begin{array}{\|l\|} \hline \operatorname{IIm} 7 \\ 1234[\# 4] \\ 56[7] \\ \hline \end{array}$ | $\begin{aligned} & \mathrm{bII7}(6) \\ & \mathrm{b} 2 \mathrm{~b} 345 \\ & \mathrm{~b} 6 \mathrm{~b} 77 \end{aligned}$ | $\begin{aligned} & \hline \mathrm{V} 7 \\ & {[1] 2[\mathrm{~b} 3] 3} \\ & 4567 \end{aligned}$ | $\begin{aligned} & \text { bV7(6) } \\ & \text { 1b2b33 } \\ & \text { b5b6b7 } \end{aligned}$ |
| $\begin{aligned} & \text { IV7-\#IVํ7-I7 } \\ & \text { IVm7-\#IVํ7-Im7 } \\ & \text { IIm7b5-\#II7-I } \end{aligned}$ |  |  | $\begin{array}{l\|l} \text { VIm7 } \\ 123567 \end{array}$ | $\begin{aligned} & \text { \#VI7 } \\ & \text { \#135b7 } \end{aligned}$ | $\begin{aligned} & \operatorname{IIm} 7 \\ & 1234[\# 4] \\ & 56[7] \end{aligned}$ | $\begin{array}{\|l\|} \hline \# I I^{\circ} 7 \\ 1 \mathrm{~b} 3 \mathrm{~b} 56 \end{array}$ | $\begin{aligned} & \mathrm{V} 7 \\ & {[1] 2[\mathrm{~b} 3] 3} \\ & 4567 \end{aligned}$ | $\begin{aligned} & \text { \#Vㅁ } 7 \\ & 24 \mathrm{~b} 67 \end{aligned}$ | $\begin{array}{\|l\|} \hline \mathrm{I} 7 \\ 12[\mathrm{~b} 3] 3 \\ 56 \mathrm{~b} 7 \end{array}$ | $\begin{aligned} & \text { \#I07 } \\ & \text { \#135b7 } \end{aligned}$ | $\begin{array}{\|l\|} \hline \mathrm{IV}(\mathrm{ma}) 7 \\ 1[\mathrm{~b} 3] 345 \\ 6 \end{array}$ | $\begin{aligned} & \text { \#IV॰7 } \\ & \text { 1b3b56 } \end{aligned}$ | bVIIma7 $1246 \mathrm{~b} 7$ | $\begin{aligned} & \mathrm{VIII}^{7} \\ & 24 \mathrm{~b} 67 \end{aligned}$ |
| stepwise pairs | $\begin{array}{\|l\|} \hline \text { VIIm7b5 } \\ 23467 \end{array}$ | $\begin{aligned} & V \operatorname{Im} 7 \\ & 123567 \end{aligned}$ | $\begin{aligned} & \hline \mathrm{III}(\mathrm{~m}) 7 \\ & 23[4) 5 \\ & {[\# 5] 67} \\ & \hline \end{aligned}$ | $\begin{aligned} & \mathrm{IIm} 7 \\ & 1234567 \end{aligned}$ | $\begin{aligned} & \mathrm{VI}(\mathrm{~m}) 7 \\ & 1[\# 1] 235 \\ & 67 \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { VIIº } \\ \text { 24b67 } \end{array}$ | $\begin{array}{\|l\|} \hline \mathrm{II}(\mathrm{~m}) 7 \\ 1234[\# 4] \\ 56[7] \end{array}$ | $\begin{aligned} & \text { IIIm7 } \\ & 23567 \end{aligned}$ | $[1] 2[\mathrm{~b} 3] 3$ $4567$ | $\begin{aligned} & \mathrm{VIm} 7 \\ & 123567 \end{aligned}$ | $\begin{aligned} & \mathrm{I}(\mathrm{ma}) 7 \\ & 123567 \end{aligned}$ | $\begin{aligned} & \operatorname{IIm} 7 \\ & 1234[\# 4] \\ & 56[7] \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { IV6 } \\ 1234567 \end{array}$ | $\begin{aligned} & \text { IIIm7 } \\ & 23567 \end{aligned}$ |
| diminished descending chromatic |  |  |  |  | $\begin{aligned} & \text { IIm7b5 } \\ & 245 \mathrm{~b} 61 \end{aligned}$ | $\begin{aligned} & \text { IIdim7 } \\ & 24 \mathrm{~b} 67 \end{aligned}$ | $\begin{aligned} & \text { IIIIm } 7 \\ & 23567 \end{aligned}$ | $\begin{aligned} & \text { III07 } \\ & \text { \#135b7 } \end{aligned}$ | $\begin{aligned} & \text { VIm7 } \\ & 123567 \end{aligned}$ | VI7 <br> 1b3b56 | $\begin{array}{\|l\|} \hline \operatorname{IIm} 7 \\ 1234 \\ 56[7] \end{array}$ | $\begin{aligned} & \mathrm{II} \circ 7 \\ & 24 \mathrm{~b} 67 \end{aligned}$ | $\begin{array}{\|l\|} \hline \mathrm{V} 7 \\ {[1] 2[\mathrm{~b} 3] 3} \\ 4567 \end{array}$ | $\begin{aligned} & \text { V7 } \\ & \text { \#135b7 } \end{aligned}$ |
| diminished ascending chromatic |  |  | $\begin{aligned} & \hline \text { IIm7 } \\ & 1234 \\ & 56[7] \end{aligned}$ | $\begin{aligned} & \text { \#II॰7 } \\ & \text { 1b356 } \end{aligned}$ | $\begin{aligned} & \text { V7 } \\ & {[1] 234} \\ & 567 \end{aligned}$ | $\begin{aligned} & \# V^{\circ} 7 \\ & 24 \mathrm{~b} 67 \end{aligned}$ | $\begin{array}{\|l\|} \text { Ima7 } \\ 123567 \end{array}$ | $\begin{aligned} & \text { \#Io7 } \\ & \text { \#135b7 } \end{aligned}$ | $\begin{aligned} & \text { IVma7 } \\ & 13456 \end{aligned}$ | $\begin{aligned} & \text { \#IV7 } \\ & \text { 1b3b56 } \end{aligned}$ | $\begin{aligned} & \hline \operatorname{IIm} 7 \\ & 1234 \\ & 56[7] \end{aligned}$ | \#II\% ${ }^{\text {7 }}$ | $\begin{array}{\|l} \hline \mathrm{V} 7 \\ {[1] 2[\mathrm{~b} 3] 3} \\ 4567 \end{array}$ | \# ${ }^{\circ} 7$ |
| ascend chromatic same quality |  |  | IIm7 | \#IIm7 |  |  |  |  | IV7 | \#IV7 |  |  |  |  |
| descend chromatic same quality |  |  |  |  |  |  | IIIm7 | bIIIm7 |  |  |  |  | V7 | bV7 |
| IV-V-I of target |  |  | $\begin{array}{l\|l} \text { VIm7 } \\ 123567 \end{array}$ | $\begin{aligned} & \text { VIIm7b5 } \\ & 23467 \end{aligned}$ | $\begin{array}{\|l\|} \hline \operatorname{IIm} 7 \\ 1234 \\ 56[7] \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline \text { III7 } \\ 23[4) 5 \\ {[\# 5] 67} \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline \mathrm{V} 7 \\ {[1] 2[\mathrm{~b} 3] 3} \\ 4567 \end{array}$ $4567$ | $\begin{aligned} & \hline \mathrm{VI}(\mathrm{~m}) 7 \\ & 1[\# 1] 235 \\ & 67 \end{aligned}$ | $\begin{array}{l\|l} \text { Ima7 } \\ 123567 \end{array}$ | $\begin{aligned} & \mathrm{II}(\mathrm{~m}) 7 \\ & 1234[\# 4] \\ & 56[7] \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { IVma7 } \\ & 123456 \end{aligned}$ |  | $\begin{array}{\|l\|l\|} \hline \text { VIIm7b5 } \\ 23467 \end{array}$ | $\begin{aligned} & \hline \mathrm{I} 7 \\ & 12[\mathrm{~b} 3] 3 \\ & 56 \mathrm{~b} 7 \\ & \hline \end{aligned}$ |
| VI-V-I of target |  |  | $\begin{aligned} & \text { Ima7 } \\ & 123567 \end{aligned}$ | VIIm7b5 $23467$ | $\begin{aligned} & \text { IVma7 } \\ & 1234567 \end{aligned}$ | $\begin{aligned} & \text { III7 } \\ & 23[4) 5 \\ & {[\# 5] 67} \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { VIIm7b5 } \\ 23467 \end{array}$ | $\begin{aligned} & \mathrm{VI}(\mathrm{~m}) 7 \\ & 1[\# 1] 235 \\ & 67 \end{aligned}$ | $\begin{aligned} & \text { IIIm7 } \\ & 23567 \end{aligned}$ | $\begin{aligned} & \mathrm{II}(\mathrm{~m}) 7 \\ & 1234[\# 4] \\ & 56[7] \end{aligned}$ | $\begin{array}{\|l\|l} \text { VIm7 } \\ 123567 \end{array}$ | $\begin{aligned} & \text { V7 } \\ & {[1] 2[b 3] 3} \\ & 4567 \end{aligned}$ | $\begin{aligned} & \text { IIm7 } \\ & 1234567 \end{aligned}$ | $\begin{aligned} & \mathrm{I7} \\ & 12[\mathrm{~b} 3] 3 \\ & 56 \mathrm{~b} 7 \\ & \hline \end{aligned}$ |
| roots up <br> stepwise <br> see Linear Bass | VIm7 | bVII7 | Ima7 | IIm7 | IVma7 | V7 | VIIm7b5 | Ima7 | IIIm7 | IVma7 | VIm7 | VIIm7b5 | IIm7 | IIIm7 |
| roots down <br> stepwise <br> see Linear Bass | IIm7 | Ima7 | V7 | IVma7 | Ima7 | VIIm7b5 | IVma7 | IIIm7 | VIIm7b5 | VIm7 | IIIm7 | IIm7 | VIm7 | V7 |

## see also: Chromatic Voice Leading

## CADENCE AND VOICE LEADING DEFINED

A harmonic cadence is a familiar short chord progression (around two or three chords) that is known to establish a chord as a key by sound. We have heard the dominant chord (V or V7 type) so often before the tonic (I or Im type) that we have an automatic association with the tonic (I) being the key. This succession uses perfect fourths.

The entire sequence of perfect fourths in the major scale is VII-III-VI-II-V-I-IV (7-3-6-2-5-1-4). In the unaltered major scale, the triad versions of these chords are VII diminished-IIIm-VIm-IIm-V-I -IV. Notice the consecutive successions of three minor chords (IIIm-VIm-IIm) and three major chords (V-I-IV). The seventh chord qualities of these chords are VIIm7b5-IIIm7-VIm7-IIm7-V7-Ima7-IVma7.

Since V is known to lead to I, II can also lead to V , since it is the "V of V". This leads to the chord progression II-V-I, which is the most common three chord cadence.

In establishing the key on VI, we preceed it with III, so as to go up a fourth, as with V to I. To make the progression stronger, III is commonly changed to major if a triad or to a dominant seventh. VII dim-III-VIm or VIIm7b5-III7-VIm has become the most common minor cadence in establishing VIm as the key.

Voice leading is the creative design of voices in chords, treating the chords as an ensemble, made of voices. The succession of all of the top notes of a series of chords creates the top voice, commonly called the soprano. The succession of all of the bottom notes of a series of chords creates the bottom voice, commonly called the bass. With four voices, he next-to-top voice is called the alto and the next to bottom voice is the tenor. So, a series of chords can be thought of as a collection of voices or parts.

## Characteristics of Voice Movement

## retain common tones

It is preferred that notes are retained (don't change from chord to chord), when possible. This makes less work for the listener and allows the listener to focus on other important parts of a composition.

## move by small intervals

It is also preferred that when notes cannot be retained, they change by small intervals, making it easier for the listener. An exception is moving all voices up on the same chord, which is easy for the listener to follow.

## voiced chords versus traditional counterpoint

The type of voice leading discussed here is "voiced chords", where all voices play in rhythmic unision (called first species counterpoint). Voiced chords would have the same number of notes in each chord, or at least a similar number of notes. In the other four species of traditional counterpoint, voices generally occur in rhythmic unison, but non-chordal tones also pass between the "stacked" chord tones.

## Guitar Comping in Ensembles Uses Predominantly Top Voice Leading

## top and bottom are most noticed

In time-based entertaiment, like plays, music and public speaking, the audience remembers the beginning and end best. Likewise, listeners are most aware of musical parts at the top and bottom of the range of audible pitch. Those highest and lowest parts of an arrangement tend to stand out for the listener.

Guitarists can often represent the upper range of an arrangement, but in an ensemble (band or orchestra), the bass player (or other bass instrument like a keyboard) will grab the attention in the low range. This leaves the upper range for rhe guitarist.

Given the reasons mentioned above, guitarists playing in an ensemble should concenttrate on making design in the seqence of highest notes from chord to chord, which could be called top voice leading.

## 7-3-6-2-5-1-4 COMMON TONE

## Common Tone on First String

## 7-3-6-2-5-1-4 with common Tone 1 on first string

|  | II7\#5b9 | III7\#5b9 | VIm7 | IIm7 | V7sus4 | 16 | IVma7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (T) | 1 1-1() | 111 | (1) | 1 | (1) | 1 | (1)  1 |
|  | 333 | (2) 3 | 23 | 2(3) | 2 | (T) $12(3)$ | 2 |
|  | () | 3 | 4 | 4 | 3 | 4 | 3() 4 |
|  | - 1 | (1) | (1) | - | 1 (0)4 | ( (1) ${ }^{\text {- }}$ | 1 |
| b7 3 \#5 b9 |  | $13 \mathrm{b7}$ b9 \#5 | $15 \mathrm{b7}$ b | $51 \mathrm{lb} \mathrm{b}^{5}$ | $15 \mathrm{b7} 4$ | 6351 | 15735 |

## 7-3-6-2-5-1-4 with common Tone 2 on first string

| VIIm7b5 |  |  |
| :---: | :---: | :---: |
| ( | 1 |  |
| 333 |  |  |
|  |  |  |
|  |  | () |





7-3-6-2-5-1-4 with common Tone 3 on first string

| VIIm7/11b5 | III7b9 |  | VIm9 |  | IIm9 |  | V13 | Ima7 | IVma7 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) |  | $1(1) 1$ | 1 | (1) | (2) | 333 | 1 | 1(1) |  | 1(1) ${ }^{1}$ |
| 22 |  | 2 |  |  |  |  | (2) 33 |  |  |  |
|  |  |  |  | 333 |  | (1) 4 |  | 333 |  | 3 |
| (1)4 | (1) | (4) |  | $\square$ |  | -1 | (1) (0) 4 | - (1) | (1) | (1) |
| 1 b 5 b 74 |  | 5 b 231 | 163 | b7 25 |  | 676352 | $13 \mathrm{b7} 26$ | 51573 |  | 5137 |

## 7-3-6-2-5-1-4 with common Tone 4 on first string



7362514 with common Tone 5 on first string

| VII7\#5b9 | III7\#9 | VIm7 | IIm11 | V7 | Ima7 | IVma9 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11 | (1) | $(1)$ 1 | 1 (1)1 | (1) 1 1 111 | $(1)$   1 | (T) | 1 (1) |
| (2) 3 |   2  |    |  |  2  |   2 |  | 23 |
|     <br>     | $3(1)$ | 301 | (3) 4 | $3(1$ | $3(1) 4$ |  | () 4 |
| () | 1-44 | H |  |  |  |  |  |
| $13 \mathrm{b7}$ b9 \#5 | 15 3 b7 \#2 | $1567 \quad 36$ b7 | 1 b3 b7 14 | 1567351 | 15735 | 1 | $\begin{array}{llll}7 & 3 & 5\end{array}$ |

## 7-3-6-2-5-1-4 with common Tone 6 on first string

| VIIm7b5 |
| :--- |
|  1 1 <br>   1 <br>  (2)  <br>    |


| III7sus4 |  |
| :---: | :---: |
| (1) |  |
|  | 2 |
|  | 3 |
|  | (1)4 |



V9

I6


IVma7


## 7-3-6-2-5-1-4 with common Tone 7 on first string

| VIIm7b5 | III7b9 | VIm9 | IIm6 | V7 | Ima7 |  | IVma9\#11 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | $1 \quad 2$ | (0) 11110 | 1 | (1) |  | 1(1)1 | 1i11 |
| ()23 (4) | (\%) 304 |  | 2(3) 4 | 2 |  |  | $(2)$ 3 |
|  |  | () 4 |  | $3{ }^{3} 4$ |  | 3 | 4 |
| (1) ${ }^{\text {( }}$ | (0) | -1 | - | (1) | (1) | (1) | (1) |
| b763 651 | 3 b 625 | b7 b3 52 | $51 \mathrm{b3} 6$ | $15 \mathrm{b7} 3$ |  | 137 | 1372 \#4 |

## 6-2-5-1-4 with common Tone b3 on first string

| VIm7b5 |  |  |
| :---: | :---: | :---: |
|  |  |  |
| (2) | 3 |  |
|  |  | 4 |
|  | (1) |  |


| II7b9 |  |  |
| :---: | :---: | :---: |
| (7) | 1 | 3 (1) |
|  | 2 | 4 |
|  | (1) |  |
|  | - |  |


| V7\#5\#9 |  |
| :---: | :---: |
|  | 1 |
| (2) | 3 |
|  | 4 |
|  | (1) |


| I7\#9 |  |
| :---: | :---: |
|  | 1 |
| 2 (3) |  |
|  | 44 |
| - |  |

IV7


## 3-6-2-5-1-4 with common Tone b7 on first string



IV7sus4


## Common Tone on Second String

## 7-3-6-2-5-1-4 with common Tone 1 on second string

| VII7b9 |  |
| :---: | :---: |
| 1 | 1 |
| (2) | 3 |
|  |  |
|  | (1) |


$\mathrm{V} \operatorname{Im} 7$

|  | 1 |  |  |
| :--- | :--- | :--- | :--- |
|  | 1 |  |  |
|  |  |  |  |
| $(2)$ | 3 |  |  |
| 2 |  | 3 |  |
|  |  |  | 4 |


51 b3 b7

Iadd9

IVma7


7-3-6-2-5-1-4 with common Tone 2 on second string

| VIIm7b5 | III7 | VIm7 | IIm7 | V9 | Ima9 | IV6 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $(1)$ 2 | 1 | (1) 1 | 1 | 122 | 1 | (1) |  | (1) |
| 34 | 2 (3) |  | 23 (4) | 03340 | (2) 3 |  | 2 |  |
| () | 4 | $3(1)$ |  |  | 4 |  | (3) | 4 |
| - | - $-\infty$ | - 74.4 | (1) | (1) | (1) |  |  |  |

## 7-3-6-2-5-1-4 with common Tone 3 on second string



## 7-3-6-2-5-1-4 with common Tone 4 on second string








7-3-6-2-5-1-4 with common Tone 5 on second string

III7\#9



IVma9


## 7-3-6-2-5-1-4 with common Tone 6 on second string

| VIIm7b5 | III7sus4 | VIm7 | IIm7 | V9 | I6 | IVma7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\bigcirc 0 \|$ 1 1 | (1) 1 | 1 | (2) 3330 | 1 | (1) $1 .$ | (1) |
| 2 |  | 23 (4) |  | (2) 34 | 2 | 2 |
| (3) | $3(0)$ | $\square 1$ | () |  | 3() 4 | $3(1) 4$ |
| - 4 | - 4 | (0) | - | (1) | 1-1.1. |  |
| b5 1 l 3 b 7 | 5674 | b7 b3 51 | $1 \quad 67635$ | $13 \mathrm{b7} 2$ | 1536 | 1573 |

7-3-6-2-5-1-4 with common Tone 7 on second string
VIIm7b5

|  |  | 1 |  |
| :--- | :--- | :--- | :--- |
|  |  | 1 |  |
| 23 |  |  |  |
| 23 | $(4)$ |  |  |
|  | 1 | 1 |  |
| $67 b 3$ | 65 | 1 |  |



## 6-2-5-1-4 with common Tone b3 on second string



3-6-2-5-1-4 with common Tone b7 on second string


IV7sus4


## Emulating the Melody in 7-3-6-2-5-1-4 Song Examples

## core melodic tones

Core melodic tones are those that are both in the scale or arpeggio you are using in improv and in the current chord. They can also be called Duality Tones, which you can read about in Tonal Themes And Schemes/Improv Schemes And Comping/Duality Tones.

## emulate the head during the solo

It is common that an improviser thinks the head melody while improvising on the same changes as the head. In doing this, you can analyze the most important notes in the head melody and use them as a basic of both comping and soloing. Things will be moving by quickly when you are improvising so the notes you feature that relate to the head melody should have a simple basis. Core melodic tones are very effective in doing this.

In the examples, below, I'm featuring one core melody tone for each four bars. Your awareness of common tone voice is instrumental (pun intended) in this. First play these changes with common tone top voice leading, then emulate the common tone in soloing. You can also use the mass of notes in each chord as a template of importasnt notes for soloing in the same fretboard area.

## The Way You Look Tonight, bars 1-4

During bars one through four of the head melody (beginning at section A),"two" of the key is prominent (" G " in the key of " F "). It starts bar three and is all of bar four. Since it can work as a common tone through all the chords in bars one through four, I'm using it.

## The Way You Look Tonight, bars 5-8

"Three" ("A" in the key of "F") could be used for bars five and six. "Four" works for bars seven and eight, since " 3 " would clash with the melody note on " 4 " in each bar 7 and 8 .

## the diminished phenomenon allowing flat nine in the bass

In bar six, I used D7b9 (VI7b9 in the key of "F") instead of D7 to be a little more dramatic and use a harmonic minor V type chord for the key of G minor, the next chord (Gm in IIm of the key of "F", for bar 6). D7b9 has "b9" (of "D") in the bass. Generally, we don't use ninths in the bass, since they imply some other root than what we intend (usually implying the bass note as a root). When a chord has a diminished seventh subset though, "b9" can be in the bass. D7b9 no root is F\#dim7 = Adim7 = C dim7 = D\#dim7. Since diminished seventh chords are constructed with a serial (repeating) pattern of all minor thirds, they are easy for the listener to imagine the notes continue above and below the sounding chord. To experience this, play a diminished seventh chord in the middle of a piano and gradually extended it above and below in minor thirds. You'll see that you can easily "hear" the next note before playing it.

## The Way You Look Tonight, bars 9-16

Top voice " 1 " (" $F$ " in the key of " $F$ ") works well for bars 9-16. It is the only melody note in bars $9-10$ and 13 of the A section head. There is no melody in bars $14-16$. " 2 " (" $G$ " in the key of " $F$ ") would work well on bars 11-2, but I wanted to keep it simple, so I'll stick with top voice" 1 ".

## The Way You Look Tonight, bars 17-20 and 25-28

"Section B in is the key of " $b 3$ ". If section " $A$ " is in the key of " $F$ ", section " $B$ " is in "Ab" (the " $b 3$ " of " $F$ "). Bars 17-20 of section $B$ (continuing the numbering from section $A$ ) obviously needs to use common tone " 3 " (" 3 " of "Ab", which is "C"). It's the only note in bars 17-18, it starts bar 19 and half of of the notes in bars 17-20 are " 3 ". Note that F7b9 no root is Adim7.
" 5 " (" Eb " in the key of " Ab ") is the only note in bars 25-26, it starts bar 27 and over half of of the notes in bars 25-28 are " 5 ". Instead of actually using " 5 " ("Eb"), lets use " 3 " again, which is a third below " 5 ' and will harmonize with it. This allows us to repeat what we played for 21-24.

## The Way You Look Tonight, bars 21-24

Given that I want to use " 3 " ("C") before and after 21-24 (in 17-20 and 25-28), I'm using the nearby tone, " 2 " ("Bb"). It starts bar 21 and is a basic part of each of the last two chords. " 6 " (" F ") could have been a good choice otherwise, but would skip too far from the common tone " 3 " used before and after.

## The Way You Look Tonight, bars 29-32

In 29-32, I'm using a scalar top voice leading. After starting with " 3 " ("C"), I top voice-lead with "7, 1, 2, $\# 1$ " ( $\mathrm{G}, \mathrm{Ab}, \mathrm{Bb}, \mathrm{A}$ in Ab ). This voice-leads back to the " 2 " top voice (" G ") in bar one. The last two chords could be thought in the original key (not changing the notes, just a different point of view), where the top-voice tones would be " 4 " and " 3 " of the original key ("Bb" for the Gm7 chord and " A " for the C 13 ).

The Way You Look Tonight section A (in F), common tone top voice


## The Way You Look Tonight section B (in Ab), common tone top voice

| bar 17 <br> top voice 3 | bar 18 top voice 3 | bar 19 top voice 3 | bar 20 <br> top voice 3 | bar 21 <br> top voice 2 | bar 22 <br> top voice 2 | bar 23 top voice 2 | bar 24 <br> top voice 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Abma7 VIII | F7b9 VIII | Bbm9 XI | Eb13 XI | Abma9 IX | Fm7sus4 VIII | Bbm7 X | Eb9 VI |
| 111 | () 1 1 | 1 (1) | (1)1 2   | 1 | (1) 1 | 1 | 1 l |
| () | 2 |  | 3 | (2) 3 |  | 23 (4) | (0) 3 3 4 (1) |
| 3 | $3(1) 4$ | (2) 34 | (1) 4 | 4 | $3(1)$ |  |  |
| (4) | , |  |  | (1) | 14 | (1) | (1) |
| 13573 | b2 5b7 35 | $1 \mathrm{b3} 672$ | b73 6 | 1372 | 15674 | b7 b3 51 | 36725 |



## Autumn Leaves in Gm, common tone top voice

top voices are numbered in terms of the parent scale, Bb major

repeat bars 1-8


## Autumn Leaves, Preview Scalar Voice Leading



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## SCALAR VOICE LEADING ON A SINGLE CHORD

## practice each in forward and reverse order

## Ionian (Major Mode I)

## E form



## D form



## C form

| 6 | 5 | 4 | 3 | 2 | 1 | 7 | 6 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ima7/6 | Ima9 | IIm7 | Ima7 | I6/9 | I6 | Ima7 | I6 | I |
| 1 | 1 | 10 | (1) | 11 | (1) | 11 | 11 | 1 |
| (1) 2 | (0) |  |   | $(2)$ 3 | 23 | (1) | (2) | (0) |
| 3 | 3 | (2) 3 | $3(1) 4$ |  | (4) | 3 |  | 3 |
| (1) 4 | (1) | 4 |  | () |  | (4) | (0) | (4) |
| 3726 | 3725 | 1 b 3 b 7 b 3 | 1573 | 1362 | 1361 | 1357 | 136 | 135 |

## A form



## G form



## Dorian (Major Mode II)

## E form



D form

| 4 | b3 | 2 | 1 | b7 | 6 |  | 5 |  | 4 |  | b3 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IIm7sus4 | IIm7 | IIm9 | IIm | IIm7 | IIm6 |  | IIm |  | IIIm7 |  | IIm7 |  |
| (1) | (1) | (1) 11 | 1() | 1(1) | 1() 1 |  | (1) | (1) | 23 | (1) (1) | 23 | (1) |
| 2 | 22 | 2 |  | 2 |  | 2 |  |  |  |  |  |  |
| 3 | 3 | 3 | 2 | 3 | 3 |  | 3 |  | () |  | (1) |  |
| (1)4 | (1) | (0) |   | 4 ( 1 ( | 410 |  | ( ) |  |  |  |  |  |
| 15674 | 15 b 7 b 3 | 15672 | 56351 | $5 \mathrm{~b} 35 \mathrm{b7}$ | 5 b3 56 | b3 | 15 | 1 | b7 b3 | 1 | b7 b3 |  |

## C form



A form


## Phrygian Major (Major Sharp Five Mode III)

## E form



D form


## C form



## A form



G form


## Lydian (Major Mode IV)

## E form



## D form



## C form

| 6 | 5 | \#4 | 3 | 2 | 1 | 7 | 6 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IVma7/6 | IVma9 | IVma9\#11 | IVma7 | IV6/9 | IV6 | IVma7 | IV6 | IV |
| -1 | $\square 1$ |  1  1 <br>     | (1) | 11 | (1) | 11 | 11 | 1 |
| () 2 | (0) | (1) 12 | 2 | $(2)$ 3 | 23 | (1) | (2) | (0) |
| 3 | 3 | 3 | 3() 4 |  | (4) | 3 |  | 3 |
| (1) 4 | 1 (1) | (1) |  | (1) |  | (4) | (1) | (4) |
| 3726 | 3725 | 372 \#4 | 1573 | 1362 | 1361 | 1357 | 136 | 135 |

## A form



## G form



## Mixolydian (Major Mode V)

## E form



## D form

| 4 | 3 | 2 | 1 |  | b7 |  | 6 |  |  | 5 |  | 4 |  | 3 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| V7sus4 | V7 | V9 | V13 |  | V7 |  | V1 | 13 |  | V7 | V7sus4 |  | V7 |  |  |
| (1) | (1) | (1) | 1 $(2)$ |  | 1 11 |  | (1) | 1 |  |  |  | 1) 1 |  |  | 1 |
| 2 | 2 | 2 | 34 |  | 23 |  |  |  |  |  |  |  |  | (2) |  |
| 3 | 3 4 | 3 | (1) |  | () |  | 2 |  |  | 3 |  |  |  |  |  |
| $(0) 4$ | (1) | (1) |  |  |  | 4 |  | (1) | 4 |  | 4 |  |  |  |  |
| 15674 | 15 b7 3 | 15672 | b7 361 |  | 25 b 7 |  | 2 | 56 | bi | 15 |  | 14 | 4 |  |  |

## Cform



## A form



## G form



## Aeolian (Major Mode VI) and Harmonic Minor

## E form



## D form



## Cform



## A form



## G form



## VOICE LEADING PAIRS OF SEVENTH CHORDS

Pairs of chords built on two consecutive scale tones can be very useful in comping and chord soloing. I studied them extensively as a logical structure before discovering that Joe Pass used them extensively in his chord solos. They are relatively easy to finger and memorize.

By using the application options shown below, one pair of chords can be used for many chords in a progression by emphasizing one or another as either a chord named after its root or as a secondary root, as described in Substitution.

## application producing sevenths and ninths

| chord type | Ima7 | IIm7 | IIIm7 | IVma7 | V7 | V7 | VIm 7 | VIIm7b5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| use $\longrightarrow$ | IIm7 - IIIm7 | IIm7 - IIIm7 | $\operatorname{IIm} 7$ - IIIm7 | VIm7 - VIIø7 | V7-VIm7 | VIm7 - VIIø7 | V7 - VIm7 | VIm7 - VIIø7 |
| emphasize | IIIm7 | IIm7 | IIIm7 | VIm7 | V7 | VIIm7b5 | VIm7 | VIIm7b5 |
| logic | $\begin{aligned} & \operatorname{Ima} 9=1-3-5-7-2, \\ & \operatorname{III} 7=3-5-7-2 \end{aligned}$ | root | root | $\begin{aligned} & \operatorname{IVma} 9=4 \cdot 6-1 \cdot 3-5 \\ & \operatorname{VIm} 7=6-1-3-5 \end{aligned}$ | root | $\begin{aligned} \mathrm{V} 9 & =5-7-2-4-6, \\ \mathrm{VIIm} 7 \mathrm{~b} & =7-2-4-6 \end{aligned}$ | root | root |

application producing sixths (these work better in swing-related styles)

| chord type | Ima7 | IIm7 | IIIm7 | IVma7 | V7 | VIm7 | VIIm7b5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| use $\rightarrow$ | V7-VIm7 | VIm7 - VIIø7 | $\mathrm{n} / \mathrm{a}$ | IIm7 - IIIm7 | IIm7 - IIIm7 | n /a | n /a |
| emphasize | VIm7 | VIIm7b5 |  | IIm7 | IIIm7 |  |  |
| logic | $\begin{aligned} \mathrm{VIm} 7 & =6-1-3-5, \\ \mathrm{I} 6 & =1-3-5-6 \end{aligned}$ | $\begin{array}{\|c\|} \hline \mathrm{VIIm} 7 \mathrm{Lb5}= \\ 7-2-4-6, \\ \mathrm{IIm} 6=1-3-5-6 \end{array}$ | sixths must have a major sixth | $\begin{aligned} \operatorname{IIm} 7 & =2-4-6-1, \\ \operatorname{IV} 6 & =4-6-1-2 \end{aligned}$ | $\begin{aligned} \mathrm{IIIm} 7 & =3 \cdot-5-7 \cdot 2, \\ \mathrm{~V} & =5-7 \cdot-2 \cdot 3 \end{aligned}$ | sixths must have a major sixth | sixths must have a major sixth |

## links to pairs of sevenths fingerings

$\operatorname{IIm} 7$ and $\operatorname{IIIm} 7$, IIm7 and $\operatorname{IIIm} 7$ optimized for Ima7,
$\operatorname{IIm} 7$ and $\operatorname{IIIm} 7$ with chromatic dim. 7, IIm7 and IIIm7 with chromatic dim. 7 and bII7
V7 and VIm7, V7 and VIm7 optimized for IVma7
VIm7 and VIIm7b5, VIm7 and VIIm7b5 optimized for V7
VIm7 and VII dim. 7

## IIm7 and IIIm7

links to pairs of seventh fingerings

## IIm7 and IIIm7, string set 4-3-2-1

top is parent 4
top is parent
IIm7


156763

IIIm7


156763

IIm7

b3 6715
top is parent 7
IIIm7

b3 6715
top is parent 1

IIm7


IIIm7

$\operatorname{IIm} 9 \mathrm{nr}$

b7 b3 52

## IIm7 and IIIm7, string set 5-4-3-2

top is parent 4 top is parent 5 top is parent 6

$1567 b 3$

IIIm7


IIm7

top is parent 7 top is parent 1 top is parent 2
top is parent 3


IIm7

$\operatorname{IIm} 9 \mathrm{nr}$


## IIm7 and IIIm7, string set 6-4-3-2

top is parent 6


$1 \quad 67 b 35$

IIm7


top is parent 3


$6 \quad 51$ b3

Ima7


|  | 7 | 3 | 5 |
| :--- | :--- | :--- | :--- |

## IIm7 and IIIm7, string set 5-3-2-1

top is parent 6
top is parent 7 top is parent 1
top is parent 2 top is parent 3



## V7 and VIm7

links to pairs of seventh fingerings

## V7 and VIm7, string set 4-3-2-1

top is parent 7 top is parent 1 top is parent 2


15 b73

$15 \mathrm{b7}$ b3


36715
top is parent
IIIm7

b3 b7 15

$\begin{array}{llll}5 & 1 & 3 & b 7\end{array}$

$\begin{array}{lll}5 & 1 & b 3 b 7\end{array}$
top is parent 6

## V7 and VIm7, string set 5-4-3-2

top is parent 7 top is parent 1 top is parent 2




top is parent 5


15 b b3
op is parent 6 V9 nr


## V7 and VIm7, string set 6-4-3-2

top is parent 2

$1 \quad 6735$

b7b3 5


|  | 3 | 1 | 5 |
| :--- | :--- | :--- | :--- |

VIm7

b3 $\quad 1 \quad 5 \quad \mathrm{b7}$

top is parent 7
IVma7



## V7 and VIm7, string set 5-3-2-1

top is parent 2

top is parent 3



top is parent 1


IVma7


## VIm7 and VIIm7b5

links to pairs of seventh fingerings

## VIm7 and VIIm7b5, string set 4-3-2-1

top is parent 1 top


15 b 7 b 3


1 b 5 b 7 b 3

b3 b7 15

VIIm7b5

b3 b7 1 b5
top is parent 5 top is parent 6 VIIm7b5

b5 1 b3 b7
top is parent 7

$$
\mathrm{VIm} 9 \mathrm{nr}
$$


b7 6352

## VIm7 and VIIm7b5, string set 5-4-3-2

top is parent 1
top is parent 2


top is parent 7


## VIm7 and VIIm7b5, string set 6-4-3-2 (optimized for V7)

 top is parent 3 top is parent 4 top is parent 5

$\begin{array}{lllll} & 735\end{array}$


16735

## VIm7 and VIIm7b5, string set 5-3-2-1 (optimized for V7)

top is parent 3



top is parent 6


## VIm7 and VII dim. 7

links to pairs of seventh fingerings

## VIm7 and VII dim.7, string set 4-3-2-1


$15 \mathrm{b7}$ b3


1656 b3

b3 b7 15

b3 61 b5
top is parent 5

VIm7

top is parent 6
VII dim. 7

b5 1 b 3 b 7
top is parent 7
VIm9 nr

b7 b3 52

## VIm7 and VII dim.7, string set 5-4-3-2

top is parent 1
top is parent 2
top is parent 3
VIm7

|  |  |  | $(1)$ |
| :--- | :--- | :--- | :--- |
| 2 |  |  |  |
| 2 |  |  |  |
|  |  |  |  |$|$|  |  |  |  |
| :--- | :--- | :--- | :--- |
|  | 3 | 3 | 4 |
| $b 3$ | $b 7$ | 1 | 5 |

top is parent 5 top is parent 6 top is parent 7


## VIm7 and VII dim.7, string set 6-4-3-2

top is parent 3


1 b 7 b 35


16 b 3 b 5

b3 $15 \mathrm{b7}$
top is parent 6

$5 \quad$ b3 b7 2

top is parent 1
top is parent 2
$\operatorname{IIm} 7$

b3 $15 \mathrm{b7}$

VII dim7.


## VIm7 and VII dim.7, string set 5-3-2-1


top is parent 4
VII dim. 7


VIm7

top is parent 6

top is parent 1 top is parent 2


## IIm7 and IIIm7 Optimized for Ima7

links to pairs of seventh fingerings

## IIm7 and IIIm7 optimized for Ima7, string set 4-3-2-1

top is parent 4 top is parent 5 top is parent 6 top is parent 7 top is parent

| $\operatorname{IIm} 7$ |  |  |  |
| :---: | :---: | :---: | :---: |
|  | $(1)$ |  |  |
|  |  |  | 2 |
|  |  | 2 | 3 |
|  |  | 4 | 4 |
|  |  |  |  |
|  |  |  |  |

15 b 7 b 3

IIm7


IIIm7

IIm7


IIIm7


Ima7


## IIm7 and IIIm7 optimized for Ima7, string set 5-4-3-2

top is parent 4

$1567 b 3$
top is parent 5
top is parent 6 top is parent 7
top is parent



$\begin{array}{llll}5 & 1 & b 3 & b 7\end{array}$
top is parent 3 Ima7


1573

## IIm7 and IIIm7 optimized for Ima7, string set 6-4-3-2

"IIm7 and IIIm7, string set 6-4-3-2" already used Ima7 for top voice 5.

## IIm7 and IIIm7 optimized for Ima7, string set 5-3-2-1

"IIm7 and IIIm7, string set 5-3-2-1" already used Ima7 for top voice 5.

## IIm7 and IIIm7 with Chromatic ${ }^{\circ} 7$

links to pairs of seventh fingerings

## IIm7 and IIIm7 with chromatic ${ }^{\text {0 }}$, string set 4-3-2-1

 ascend and descend| parent 4 top IIm7 | parent \#4 top \#II7 | parent 5 top IIIm7 | parent \#5 top II ${ }^{\circ} 7$ | parent 6 top IIm7 | parent ${ }^{\text {b }} 7$ III | $\mathrm{I}^{\circ} 7$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | (1) 2 | (1) | 1 1-2) | 1 (1) | 1 1 | (2) |
| 23 | $3{ }^{3} 4$ | 23 | $3{ }^{3} 4$ |  |  | 34 |
| 4 |  | 4 | (0) | (0) 304 | () |  |
| (1) | (1) | (1) |  | - 7 \|l|l| |  |  |



## IIm7 and IIIm7 with chromatic ${ }^{\circ}$ 7, string set 5-4-3-2

 ascend and descend

## IIm7 and IIIm7 with chromatic ${ }^{\text {07 }}$, string set 6-4-3-2 ascend and descend



## IIm7 and IIIm7 with chromatic ${ }^{\text {07 }}$, string set 5-3-2-1 ascend and descend


parent \#2 top IVm7b5

parent b7 top \#II(bIII)m7

parent 3 top
IIm9

parent 7 top
IIIm7

parent 4 top
IIm7

parent 1 top
IIm7

parent \#4 top \#IIm7


parent 5 top IIIm7


parent \#5 top II ${ }^{\circ} 7$


## IIm7 and IIIm7 with Chromatic ${ }^{\circ} 7$ and blI7

links to pairs of seventh fingerings
IIm7 and IIIm7 optimized for Ima7 with chromatic ${ }^{\circ} 7$ and bll7, string set 4-3-2-1 descend only
parent 4 top parent 4 top parent 3 top parentb3 top parent 2 top parentb2top parent 1 top

IIm7


15 b 7 b 3
parent 7 top

b5 1 b3 6
bII7


15 b73 IIIm7

b3 b7 15

Ima7

parent b7 top
parent 6 top bIII7


36715
bII9

b7352

IIIm7

parent b6 top bII9

bIII7


parent 5 top parent b5 top IIIm7


15 b 7 b 3
bIII ${ }^{\circ} 7$


1 b 56 b 3

IIm7 and IIIm7 optimized for Ima7 with chromatic ${ }^{\circ} 7$ and bll7, string set 5-4-3-2 descend only
parent 4 top parent 4 top parent 3 top parent 3 3 top parent 2 top parent b2 top parent 1 top

IIm7

$1656 \mathrm{b3}$
bII7


15 b7 3

Ima7


1573
bII9


IIIm7

$\begin{array}{llll}5 & 1 & b 3 & b 7\end{array}$
bIII7


|  | 1 | 3 | $b 7$ |
| :--- | :--- | :--- | :--- |

$\operatorname{IIm} 7$

$\begin{array}{lllll}5 & 1 & 63 & 67\end{array}$
parent 7 top $\underline{\text { I }{ }^{\circ} 7}$

b5 1 b3 6
parent 7 top IIIm7

$\operatorname{IIm} 7$

parent b7 top parent 6 top
bIII7

parent b6 top
bII9

parent 5 top
IIIm7

$1567 \mathrm{b3}$
parent b5 top bIII ${ }^{\circ} 7$


165663

## IIm7 and IIIm7 chromatic ${ }^{\circ} 7$ and bll7 (of target), string set 6-4-3-2 descend only


parent b3 top parent 2 top
parent b2 top
parent 1 top
parent 7 top parent b7 top bIII7

bIII7

$\operatorname{IIm} 7$
IIIm7


## IIm7 and IIIm7 with chromatic ${ }^{\circ} 7$ and bII7 (of target), string set 5-3-2-1 descend only

parent 6 top
IIm7

parent b6 top
IIdim7


IIIm7

parent b2 top
bIII7

parent b5 top bIII ${ }^{\circ} 7$

parent 1 top
IIm7

parent 4 top
IIm7

parent 7 top parent b7 top

bIII7


## V7 and VIm7 Optimized for IVma7

links to pairs of seventh fingerings

## V7 and VIm7 optimized for IVma7, string set 4-3-2-1

| top is parent 7 |
| :--- |
|  (1)   <br>   V7  |
|  |
|  |
|  |$|$| 2 |
| :--- |

15 b73

$15 \mathrm{b7}$ b3
V7


IIIm7

b3 b7 15


top is parent 6 IVma7


## V7 and VIm7 optimized for IVma7, string set 5-4-3-2


VIm7

top is parent 3

top is parent 5
top is parent 6
VIm7



## V7 and VIm7 optimized for IVma7, string set 6-4-3-2

"V7 and VIm7, string set 6-4-3-2" already uses IVma7 for top voice " 1 ".

## V7 and VIm7 optimized for IVma7, string set 5-3-2-1

"V7 and VIm7, string set 5-3-2-1" already uses IVma7 for top voice " 1 ".

## VIm7 and VIIm7b5 Optimized for V7

links to pairs of seventh fingerings

## VIm7 and VIIm7b5 optimized for V7, string set 4-3-2-1


$1567 b 3$
top is parent 2


1 b 5 b 7 b 3

b3 b7 15

b3 b7 1 b5

$\begin{array}{lll}5 & 1 & b 3 b 7\end{array}$
top is parent 6
top is parent 7

V7


15 b73

## VIm7 and VIIm7b5 optimized for V7, string set 5-4-3-2

top is parent 1
top is parent 2
top is parent 3
top is parent 4
top is parent 5
VIIm7b5
VIm7


$1567 b 3$

VIIm7b5


1 b5b7b3

VIm7


$$
1.1
$$

VIIm7b5

b5 1 b3b7


## VIm7 and VIIm7b5 optimized for V7, string set 6-4-3-2

top is parent 3
top is parent 4 top is parent 5

top is parent 1
top is parent 2


| V 7 |  |  |  |
| :--- | :--- | :--- | :--- |
| 1 | 2 | 3 |  |
|  | 2 | 3 |  |
|  |  | 4 |  |
|  |  |  |  |
|  |  |  |  |

## VIm7 and VIIm7b5 optimized for V7, string set 5-3-2-1

top is parent 3

$1 \quad$ b7 b3 5





## II-V-I AND II-bII-I TOP VOICE LEADING

## major II-V-I and II-bII-I

Common tones: $1,2,3, b 34,5,6$ or b7. All can be II-bII-I.
Three-tone sequences (include retrograde such as 1-2-3 and 3-2-1): 1-\#1-2, 1-2-3, 1-2-b3, 1-b-3-4, $2-\# 2-3,2-3-4,2-3-5, b 3-4-5,3-4-5,3-5-6,4-5-b 7,4-5-6,5-\# 5-6,5-6-7,5-6-b 7,5-6-1,5-b 7-1, b 6-b 7-1$, b6-7-1, 6-\#6-7, 6-7-1, 6-b7-1, b7-7-1, 7-1-2 .

## minor II-V-I. II bII Im and IIm bII Im

Common tones 1, 2, b3 4, 5, or b7. All can be II-bII-Im.
Three tone sequences: 1-\#1-2, 1-2-b3, 1-b3-4, 2-b3-4, b3-4-5, b3-4-5, 4-5-b7, 5-b6-b7, 5-b7-1, b6-b7-1, b6-7-1, b7-7-1, b7-1-2.

## Key Scale

Key scale refers to any permanent or temporary tone center, where the tone center is numbered "I".

## Major II-V-I and Minor II-V-I

Major II-V-I cadences are literally drawn from IIm-V-I major scale-tone chords (Dm7-G7-Cma7). Minor II-V-I cadences are drawn from VIIm7b6-III7-VIm7 major scale-tone chords (Bm7b5-E7-Am7), where they are renumbered to II-V-I, so the tone center is on VI minor, the relative minor (of "I"). The III chord of the parent major scale is usually changed to major or dominant seventh (E7), making it a stronger " $V$ " chord in leading to the key on parent scale $V \operatorname{Im} 7$ ( Am 7 ).
bII chords should usually use the chord scale Lydian dominant, which is mode IV of bVI melodic minor. When the top voice leading is conducive, bVIm(ma7) bII7 Im is preferred to IIm-bII-Im. The bVIm(ma7)-bII7-Im cadence (Abm[ma7]-Db7-Cm) uses melodic minor $\operatorname{Im}(m a 7)$ to IV13\#11 in the key of flat six ( Ab melodic minor for the key of C ).


## Interchangeable Major and Dominant Seventh and Ninth

Major seventh (i.e. Cma7) can usually be replaced by dominant seventh (i.e. C7) by lowering the seventh a half step (one fret toward the head of the guitar).

Dominant seventh (i.e. C7) can usually be replaced by major seventh (i.e. Cma7) by raising the seventh a half step (one fret toward the body of the guitar).

Major ninth (i.e. Cma9) can usually be replaced by dominant ninth (i.e. C9) by lowering the seventh (not the ninth) a half step (one fret toward the head of the guitar).

Dominant ninth (i.e. C9) can usually be replaced by major ninth (i.e. Cma9) by raising the seventh a half step (one fret toward the body of the guitar).

## Flat Five Substitute

## II7-b|l7-I7

Where the second chord is a flat two of the key $(\mathrm{Db})$ in these examples, it is a substitute for the V chord. The root of the flat two chord is a flatted fifth away from the root of the V chord.

Where the first chord is a flat six of the key $(\mathrm{Ab})$ in these examples, it is a substitute for the II chord. The root of the flat six chord is a flatted fifth away from the root of the II chord.

Since melodic minor IV13\#11 = melodic minor VIIb5\#5b9\#9, and their roots are a flatted fifth apart, melodic and harmonic structures of both can be used at the same time. For example, a guitar player may play a G7\#5\#9 chord (VII\#5\#9 of Ab melodic minor) while a keyboard player thinks and plays Db13b5 (IV13b5 of Ab melodic minor), since all the notes of G7\#5\#9 are in Db13b5.

## bVI7-V-I7

Where the first chord is a flat six of the key ( Ab ) in these examples, it is a flat five substitute for the II chord. The root of the flat six chord is a flatted fifth away from the root of the II chord.

## Sharp Two Diminished Seventh Substitute

\#II dim7 may be substituted for V7 (or V9, bII7 or bII9) but cannot be played at the same time as any of the chords it substitutes for. Since \#II dim7 = I dim7, all of the notes except the root of the Idim7 move up chromatically (up a half step) to the tones of a I7 chord. For that reason, this progression works best ending on I7 (rather than Im7 or Ima7).

## Change of Mode

The " I " chord is often changed in jazz (and other styles) between major, minor and dominant types. It is especially effective to end a minor II-V-I with a major type (major 7, major 9 or 6 ) or a dominant type $(7,9,13)$. In major key blues, avoid using a b6, which occurs in IIm7b5 and V7b9 on a major II-V-I.

## The Page Layout

Each cadence row features three consecutive top tones of a heptatonic (seven tone) scale, three consecutive tones of a pentatonic scale or a common top tone. The left side of each page is II-V-I. The right side is II-bII-I. A complete major II-V-I is four rows:
row 1: major type I chords
row 2: dominant type I chords
rows 3 and 4 are the same as 1 and 2, but with the top tones in reverse order (retrograde)
Parts of the sequence are missing where the chords don't sound well.
Minor cadences with three consecutive top tones only have one type of " I " chord, so they have two rows: top voice in forward, then reverse order (i.e. 1-2-3 and 3-2-1). Common tone cadences of major II-V-I have two rows: one with a major type I chord and one with a dominant type I chord. Common tone cadences of minor II-V-I have only one row.

## How to Learn and Apply II-V-I Cadences

Usually, the best step-by-step plan would be:

+ Learn all of the common tone cadences first and apply them to II-V-I cadences as they occur in songs, using long durations of the chords. Subsititute II-bII-I as appropriate.
- learn the "best II-V-I" cadences and apply to II-V-I in songs as above.
- apply super-imposed cadences with top voice in low range of pitch in comping without creating a secondary melody to the soloist
- apply super-imposed cadences with top voice in a high range of pitch, creating a secondary melody to the soloist


## Common Tone II-V-I and II-bII-I

## common tone 1, major II-V-I and II-bII-I


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## common tone 1, minor II-V-I and II-bII-I



Dm7b5 VI

Dm7b5 X

Dbma7 IX


## common tone 2, major II-V-I and II-bII-I



| G9 IX |  |
| :---: | :---: |
|  | 1 |
| (0) | 3 |
|  |  |
|  | (1) |



b7 35 b2

Cma9 VIII


b7 b3 51
G9 IX

36725

13 b72
Dm7 X

$1 \quad b 7 b 351$
Db7b9 IX

$1 \quad$ b7 35 b2
C9 VIII

b7 352
Dm7 III
G7 III

Cma9 II


Dm7 III
Db7b9 III
Cma9 II


13671


1372


## common tone 2, minor II-V-I




13672


## common tone b3, E form major II-V-I and II-bII-I



## common tone b3, minor II-V-I and II-bII-I

| D7b9 X |  |  | G7\#5\#9 IX |  | Cm7 |  | VIII |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (T) 1-1 $^{1}$ |  |  | 1 |  | (1) |  |  |
|  |  | $2{ }^{2} 4$ | (2) | 3 |  |  |  |
|  | () |  |  | 44 | 3 () |  |  |
|  |  |  |  | D |  |  | 4 |
|  | b7 3 | 3562 |  | $3 \mathrm{b7}$ \#2 \#5 | 1567 | 763 | 5 b 3 |




Db9 III
Cm7 III



## common tone 3, major II-V-I and II-bII-I




Dm9 III


1 b3b7 2


G13 III
Cma7 III

G13 III



15673



Dm9 III




163672


16736

Dm9 III


1 b3b7 2

Db7\#9 III


1367 \#9


15673




## common tone 4, major II-V-I and II-bII-I


$1 \quad$ b7 b3


13 b7
C7sus4 VIII

b7 b3

1 b7 4

C7sus $4 \quad \mathrm{X}$


C7sus4 III


Dm7 III
Db7 IV
C7sus4 III


## common tone 4, minor II-V-I and II-bII-I



Dm7b5 X
Db7 IX
Cm7sus4 VIII



Cm7sus4 III

Db7 IV

Cm7sus4 III

$16567 \mathrm{b3}$

Dm7b5 V


## common tone 5, major II-V-I and II-bII-I

| Dm |  | X |  | G7 | IX | Cm | a7 VIII | Dm | 11 | VIII |  | 7 b 5 VIII | Cm | a7 VIII |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 |  |  | (1) | (1) | $2(1)$ |  |  | 1 |  | 1 | (1) | $2(1)$ |
|  |  |  |  | 2 |  |  | 34 |  |  |  | (2) | $3 \mathrm{l\mid l}$ |  | 34 |
|  |  | 40 |  |  | 4 |  | (1) |  |  | 40 |  | 4 |  | (1) |
|  |  |  |  |  |  |  |  |  |  |  |  | ( ) ${ }^{\text {a }}$ |  |  |
|  | b7 b3 | 634 |  | 13 | b7 1 | 1 | 735 |  | b7 b | 634 | 1 | 67365 | 1 | 735 |
| Dm | 11 | X |  | G7 | IX | C7 | 7 VIII | Dm | 11 | VIII |  | 7b5 VIII | C | 7 VIII |
|  |  | 1 |  |  | (1) | (1) | 230 |  |  | 1 |  | 1 | (1) | 2 j |
|  |  |  |  | 2 |  |  | 4 |  |  |  | (2) | 310 |  | 4 |
|  | 34 | 40 |  | (3) | 4 |  | () |  | 3 | 40 |  | 4 |  | () |
|  |  |  |  |  |  |  |  |  |  |  |  | (0) |  | $4$ |
|  | b7 b3 | 634 |  | 13 | b7 1 |  | 6735 |  | b7 6 | 634 |  | b7 $3 \mathrm{b5}$ | 1 | 6735 |
| Dm1 |  | XIII |  | G7 | XII |  | a7 XII | Dm | 11 | XIII |  | 7\#11 XII |  | a7 XII |
|  |  | 1 |  |  | ()1 |  | 1i |  |  | 1 |  | 1 |  | 11 |
|  | 2 | - |  |  |  |  | (1) |  |  |  |  | 2 |  | (1) |
|  | 3 | (1) 4 |  |  | 2 |  | 210 |  |  | (1)4 |  | (1) |  | 2 |
|  |  | $\square$ |  | ) 3 | (4) | (3) |  |  |  | $\square$ |  | 3 4 | (3) |   |
|  | b3 5 | 564 |  | b7 | 231 |  | 3575 |  | b3 5 | b7 4 |  | 3567 \#4 |  | 3575 |
| Dm1 |  | XIII |  | G7 | XII | C7 | XIII | Dm | 11 | XIII |  | 7\#11 XII | C7 | XIII |
|  |  | 1 |  |  | (1) 1 |  | (1) |  |  | 1 |  | 1 |  | (1) |
|  | 2 |  |  |  |  |  | 2 210 |  | 2 |  |  | 2 |  | 2 |
|  |  | $(1) 4$ |  |  |  |  | ) 314 |  |  | (1) 4 |  | () |  | ) 3 - 4 |
|  |  | - |  | ) 3 | - (4) |  | - 1 - |  |  | $\square$ |  | 3 4 |  | - |
|  | b3 5 | b7 4 |  | 67 | 231 |  | $3 \mathrm{b715}$ |  | b3 5 | b7 4 |  | 3567 \#4 |  | 36715 |
| Dm1 | 1 | III |  | G7 | IV | C6/ | /9 II | Dm | 11 | III |  | \#11 III | C6 | /9 II |
|  | 1 ( | (1)1 | () | 1 | $1(1)$ |  | 11 |  |  | (1)1 |  | 1   <br> 1  1 |  | 11 |
|  |  |  |  |  | 2 | (2) | 34 |  |  |  |  | 34 | (2) | 34 |
| (3) | 4 |  |  | 3() |  |  |  |  |  |  |  |  |  |  |
|  | - | $\square$ |  | - | - |  | () |  |  |  |  | (1) |  | (1) |
|  | 6367 | 14 |  | 567 | 351 |  | 3625 |  | 6367 | 14 |  | 367265 |  | 3625 |
| Dm1 |  | III |  | G7 | IV | C9 | IV | Dm | 11 | III |  | 9\#11 III | C9 | IV |
|  | ( | (1)1 |  | 1 | 11 |  | 1 1 <br> 1  |  |  | (1)1 |  | 1 1 <br> 1  |  | 1 |
|  |  |  |  |  | 2 |  | 333 |  |  |  |  | 34 | (2) | 333 |
| (3) | 4 |  |  | 3() |  |  |  |  |  |  |  |  |  | $\square$ |
| - | - | - |  | I | - |  | (1) |  |  |  |  | (1) |  | ( $)$ |
|  | 6367 | 14 |  | 567 | 351 | 1 | 36725 |  | b3 b7 | 14 |  | $3 \mathrm{b7} 2 \mathrm{~b} 5$ |  | 36725 |



## common tone 5, minor II-V-I

Abma7 VIII

1357

Dm11 X
Db7b5 VIII

Abma7/6 XIII

Abma7/6 XIII
Db795 XV

Abma7 III

1357

Dm7sus4 V
G7\#5 VIII

Cm7 VIII


$\begin{array}{lllll}1 & b 3 & b 714\end{array}$

Dm7sus4 V



13 b7 2 b5
Cm9 I

1636725

## common tone 6, major II-V-I



## common tone b7, major II-V-I and II-bII-I


1 b7 3 \#5
G7\#9 IX

C7 VIII



## common tone b7, minor II-V-I


1 b7 3 \#5


II-V-I and II-bII-I, Best Three Note (3 top notes voice-lead)

## 1-\#1-2, E form major II-bll-I (best)



## 1\#12, E form minor II-bII-I (best)


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## 1-2-b3, E form major II-V-I (best)



## 12b3, A form major II-V-I and II-bII-I (best)



1 b3 b7

$13 \mathrm{b7b2}$



## 1-2-b3, E form minor II-V-I (best)



## 12b3, C/A form minor II-V-I and II-bII-I (best)



b3
Cm7 III

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## 1-2-3, E form major II-V-I (best)

| 1 |  | $\underline{2}$ | 3 |
| :---: | :---: | :---: | :---: |
| Dm7 | X | G7 X | Cma7 X |
| (1) | 10 | $(1)$ 1 1 | 1(1) |
|  |  |  |  |
| 2 (3) |  | 3() 4 | 333 |
| $\square$ | 4 | 1- | (1) |
| 516367 |  | 156735 | 51573 |



## 1-2-3, C/A form major II-V-I and II-bII-I (best)



3

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## 1-b3-4, A form major II-V-I and II-bII-I (best)



4
C7sus4 III


## 2-\#2-3, E form major II-V-I and II-bII-I (best)



| ${ }^{3}$ |  |  |  |
| :--- | :---: | :---: | :---: |
| Cma7 |  |  |  |
|  VIII    <br>      <br>   2   <br> 3     <br>      <br>    4 4 <br> 1 5 3 7 3 |  |  |  |


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## 2-\#2-3, A form major II-V-I and II-bII-I (best)





1 b3b7 2


1 b3b7 2


1 b3b7 2


## 2-3-4, A form major II-V-I and II-bII-I (best)



3
Dm7 ${ }^{4} \quad$ III

$1 \mathrm{~b} 3 \mathrm{b7} \mathrm{b3}$



C7sus4 III

$\underline{2}$


13672

Dm7 III


3
Db7\#9 III


1 b3 b7b3

$13 \mathrm{b7}$ \#9

4
C7sus4 III


## 2-3-5, A form major II-V-I and II-bII-I (best)



13671


1 b73 6

Cma7 ${ }^{\underline{5}}$ III


15735

2
3
5
Db7\#9 III

Cma7 III


15735

5

Dm7 III

13671



1367 \#9
$\underline{2}$
Dm7 III

3
Db7\#9 III

1367 \#9



C7 III



G13 III

16736

b7

C7 III


5

| 5 |  |  |
| :---: | :---: | :---: |
| Dm11 III |  |  |
| 1 |  | (1)1 |
|  |  |  |
| (3) | 4 |  |
|  |  |  |

1 b3 b7 14

3


16736


1372


1636714


1367 \#9



1636714

3


2
Dm11 III G13 III C9 II


5
Dm11 III


1 b3 b7 14

3


1367 \#9


## b3-4-5, A form major II-V-I and II-bII-I (best)



## b3-4-5, A form minor II-V-I and II-bII-I (best)



5

$\mathrm{Cm} 7 \quad \mathrm{III}$


5

Dm11 III


Db7 IV

b3
Cm7 III


## 3-4-5, C form major II-V-I and II-bII-I (best)

| $\underline{3}$ |  |
| :---: | :---: |
| Dm9 XII |  |
| (1) | 1 |
|  | 2 |
|  | 3 |
| - | () |








Dm11 ${ }^{\frac{5}{}} \mathrm{XII}$





## 3-4-5, A form major II-V-I and II-bII-I (best)



163672

$\begin{array}{llll}5 & 1 & 3 & 67\end{array}$


15735


163672


15673

5


15735


163672


5
Dm11 III



4
Db7 IV


5


156735


1 b3 b7 14


163672

Cma7 III


| 5 |  |  |
| :---: | :---: | :---: |
| Dm11 III |  |  |
| 1 |  | (1)1 |
|  |  |  |
| (3) | 4 |  |
|  |  |  |

1 b3 b7 14

$\begin{array}{llll}5 & 13 & 67\end{array}$


15673



15673

3
Db7 IV C7 III


15673

## 3-4-5, G form major II-V-I and II-bII-I (best)



5 Cma7 VIII


5
Dm7sus4 V
G7 ${ }^{4}$ IV


3
Cma7 III



15673


4
Dm7sus4 V





| $\underline{c} \underline{5}$ |  |
| :--- | :---: |
| Dm7sus4 |  |
|  V V <br> 1 1  <br>    <br>    <br>  3  <br>    <br>    |  |



## 3-5-6, E form major II-V-I and II-bII-I (best)



## 3-5-6, G form major II-V-I and II-bII-I (best)


5


6
C6 VIII

1136
1 b7 3 b5

| ${ }^{2} \underline{3}$ |  |
| :--- | :---: |
| Dm9 |  | V

b3 5 b7 2
6
Dm7 V


1567635

b7 3 \#5 1

$1 \quad 6736$
3
Cma7 VIII

b7 3 \#5 1



1

G7\#5 VIII



1567635

b3 5672


1567635


1 b7 3 b5
5
Db7b5 VIII


$1 \quad 6736$


1 b7 365

## 4-5-6, E form major II-V-I and II-bII-I (best)



| $\underline{6}$ |  |  |
| :---: | :---: | :---: |
| Dm7 X |  |  |
| (2) |  | 33 |
|  |  |  |
|  | () |  |
|  |  |  |

67635


15674

$1 \quad 67635$

4
C7sus4 VIII

$15 \mathrm{b7} 4$

## 4-5-6, A form major II-V-I and II-bII-I (best)

| 4 |  |  |
| :---: | :---: | :---: |
| Dm7 III |  |  |
|  | 1 | (1) |
|  |  |  |
| (2) | 3 | 3 |
| $\square$ |  | 4 |



4


Db9b5 III
C6 III



1 b3 b7b3

$\underline{6}$
Dm7 III


| $\underline{6}$ |  |  |
| :---: | :---: | :---: |
| Dm7 II |  |  |
|  |  | (1) |
|  |  |  |
| (2) | 3 | 4 |
| $\square$ |  |  |


| 5 |  |  |
| :---: | :---: | :---: |
| Db9b5 |  |  |
| 1 | - | 1 |
| (2) | 3 |  |
|  |  |  |
|  | ( ) |  |


| C7sus4 III |  |
| :---: | :---: |
| (1) | 1 |
|  |  |
|  | 3() |
|  | - 4 |

## 4-5-b7, A form major II-V-I and II-bII-I (best)

| b7 | 5 | 4 | b7 | 5 | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| D7\#5 \#9 III | G7 III | C7sus4 III | D7\#5 \#9 III | Db9\#11 III | C7sus4 III |
| 1 | (1) 1.1010 | $(1)$ 1 | 1 | $1{ }^{1} 1111$ | (1) 1 |
| (2) 3 | 2 |  | (2) 3 | (2) 34 |  |
| 44 | 3() | $3(0)$ | 44 |  | 3() |
| (1) | 1 - | 4 | () | (1) | 4 |
| $13 \mathrm{b7}$ \#2 \#5 | 567351 | $15 \mathrm{b7} 4$ | $13 \mathrm{b7}$ \#2 \#5 | 1367265 | $15 \mathrm{b7} 4$ |

## 4-5-b7, A form minor II-V-I and II-bII-I (best)


b7


Dm7 III G7 III $\mathrm{Cm} 7 \quad \mathrm{III}$
b7
Db9\#11 III Cm7


## 5-\#5-6, A form major II-V-I and II-bII-I (best)



5
Dm11 III



1 b3b715
$\underline{6}$

b6
G7b9 III


Dm11 III


1 b3 b7 14




5
$13 \mathrm{b7} 25$

b6
5
Db9 III
C7 III


## 5-b6-b7, A form minor II-V-I and II-bII-I (best)



## 5-6-7 and 5-6-b7, E form major II-V-I and II-bII-I (best)




5
Dm11 VIII


$7^{\underline{7}}$ VIII



b7

$15 \mathrm{b7} 3 \mathrm{b7}$


## 5-6-7 and 5-6-b7, A form major II-V-I and II-bII-I (best)



7
Cma7 III


## 5-6-7 and 5-6-b7, G form major II-V-I and II-bII-I (best)



| $\underline{6}$ |  |
| :---: | :---: |
| G9 | IV |
|  | 1 |
| (2) |  |
|  | 4 |
| - |  |

$\mathrm{Cma}^{\underline{7}} \quad \mathrm{~V}$


$\underline{7}$


Dm7sus4 V
G9 IV


Dm7sus4 V
Db9b5 VIII


Cma9 VII

| 1 | 1 | 1 |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  | 2 |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  | 4 |  |  |  |
| 3 | 1 | 2 | 5 | 7 |



D7\#5\#9 IV
G9 IV
C7 III


Db9b5 ${ }^{\underline{6}}$ III


D7\#5\#9 IV
Db9b5 III

| $\underline{5}$ |
| :---: |
| ma7 III |



C7 III


## 5-6-1, E form major II-V-I and II-bII-I (best)



b7 b3 4


13672


1567351

$1 \quad$ b7b3 4


1673 \#5


5
Dm7 X Db7\#5 IX Cma7 VIII

$15 \mathrm{~b} 7 \mathrm{~b} 3 \mathrm{b7}$


15 b b3 67


## 5-6-1, G form major II-V-I and II-bII-I (best)




## 5-b7-1, E form major II-V-I and II-bII-I (best)



| $\underline{1}$ |  |  |
| :---: | :---: | :---: |
| Dm7 |  |  |
| (1) | 11 |  |
|  |  |  |
|  | 3() |  |
|  | , | 4 |


C7 ${ }^{\underline{5}}$ VIII

6735

## 5-b7-1, G form major II-V-I and II-bII-I (best)

| 5 | b7 | 1 | 5 | b7 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Dm7sus4 V | G7\#9 IV | Cadd9 V | Dm7sus4 V | Db13 III | Cadd9 V |
| $(1)$ 1 | 1 | 1(0) 1 | (1) 1 | 1 | 1()1 |
|  | (2) |  |  | (2) 33 |  |
| 3() | 34 | 3 | 3() |  | 3 |
| - 4 |  |  | 4 | (1) 4 |  |
| $15 \mathrm{b7} 4$ | $13 \mathrm{b7}$ \#2 | 5231 | $5 \mathrm{b7} 4$ | 136726 | 5231 |
| 5 | b7 | 1 | 5 | $\underline{6}$ | 1 |
| Dm7sus4 V | G7\#9 IV | C9 VII | Dm7sus4 V | Db13 VI | C9 V |
| (1) 1 | 1 | $1{ }^{1} 1$ | (1) 1 | (Di1 | (1) 1 |
|  | 2 (3) | (1) 21.30 |  | -1 |  |
| 3() | 44 |  | 3() | 3 | 2 |
| - 4 | - 1 | (1) 1 | 4 | (1) 4 4 10 | (1) 3 3 1 (4) |
| 5674 | 51367 \#2 | $3 \mathrm{b7} 251$ | $15 \mathrm{b7} 4$ | b7 236 | b7 231 |
| $\underline{1}$ | b7 | 5 | 1 | $\underline{6}$ | 5 |
| Dm7 V | G7\#9 IV | Cma7 III | Dm7 V | Db9b5 III | Cma7 III |
| 1 | 1 | 1$)$   1 | 1 | 1 | (1) |
| $2(3)$ | (2) | 12 | $2(3)$ | (2) 33 | 2 |
|  | 34 | $3(1) 4$ | 4 | - 4 | 3() 4 |
| $\square$ | $\square$ | 1-1 | $\square$ | (0) | 1-1 |
| $51 \mathrm{~b} 3 \mathrm{b7}$ | $13 \mathrm{b7}$ \#2 | 15735 | $51 \mathrm{~b} 3 \mathrm{b7}$ | 13672 \#5 | 15735 |
| $\underline{1}$ | b7 | 5 | $\underline{1}$ | $\underline{6}$ | 5 |
| Dm7 V | G7\#9 IV | C7 III | Dm7 V | Db9b5 III | C7 III |
| 1 | 1 | (1) 10101 | 1 | 1 | $(1)$ 1 1 |
| 2(3) | (2) |  | $2(3)$ | (2) 33 |  |
| 4 | 34 | 3() 4 | 4 | - 1044 | 3() 4 |
| $\square$ | $\square$ | - | $\square$ | (1) | -1 1 |
| $51 \mathrm{~b} 3 \mathrm{b7}$ | $13 \mathrm{b7}$ \#2 | 156735 | 51 b 3 b 7 | 13672 \#5 | 156735 |

## 5-b7-1, E form minor II-V-I and II-bII-I (best)

5
Dm11 VIII


1


1
Dm7 X


5

67635

15 b 7 b 3 b 7
b7

b7 36
5 Cm7 VIII

1567635

## b6-b7-1 and b6-7-1, E form minor II-V-I and II-bII-I (best)


$1 \quad \mathrm{~b} 7 \mathrm{~b} 3 \mathrm{~b} 5$
b7
1

b7 b3 bs
b7

| 1 |  |  |
| :---: | :---: | :---: |
| Cm 7 |  | VIII |
| (1) 11 |  | 111 |
|  |  |  |
| 3 ( |  |  |
| T | - |  |

b6


## 6-\#6-7, E form major II-V-I and II-bII-I (best)

| $\underline{6}$ |  |  |
| :---: | :---: | :---: |
| Dm7 |  | X |
| (2) | 333 |  |
|  |  |  |
|  | () |  |
|  |  |  |




7


## 6-\#6-7, G form major II-V-I and II-bII-I (best)


G7\#9 ${ }^{\text {\#6 }}$ IV
Cma7 ${ }^{7}$ III
$\operatorname{Dm} 7{ }^{\underline{6}} \mathrm{~V}$

7

| 1 |  |  |  |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  | 3 | 3 | 3 |
|  |  |  |  |



## 6-b7-1, E form major II-V-I and II-bII-I (best)


b7



6-b7-1, G form major II-V-I and II-bII-I (best)



## 6-7-1, E form major II-V-I and II-bII-I (best)



b7b3 5


15673

$167 b 35$

$153 \mathrm{b7}$
1
C7 VIII

$5 \mathrm{b7} 351$
Dm7 X Db7 IX


1 b73 6


$15 \mathrm{b7}$ b3 b7

## 6-7-1, G form major II-V-I and II-bII-I (best)



1567635
$15 \mathrm{~b} \quad \mathrm{~b} 35$



15 b7 3

$\begin{array}{ll}5 & 2 \\ & 31\end{array}$

$5 \mathrm{b7}$ b3 5

$\begin{array}{llll}5 & 1 & 3 & b 7\end{array}$

1


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## b7-7-1, E form major II-V-I and II-bII-I (best)



## b7-7-1, G form major II-V-I (best)



D7\#5\#9 III


3 67 \#2 \#5

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## b7-7-1, G form minor II-V-I and II-bII-I (best)

| b7 |  |  |
| :---: | :---: | :---: |
| D7\#5\#9 |  |  |
| 11 |  |  |
| () | 2 |  |
|  |  | 34 |
|  | (1) |  |



## II-V-I, E and D Form

## 1-\#1-2, E form major II-V-I and II-bII-I



## 1-\#1-2, E form minor II-V-I and II-bII-I



## 1-2-b3, E form major II-V-I and II-bII-I




## 1-2-b3, E form minor II-V-I and II-bII-I


b73 562


367625
$\underline{2}$

$13 \mathrm{b7} 625$


163563


15676351
-

b5 1 b3 67
b3


136725
$\underline{2}$

$1 \quad$ b7 35 b2


15676351

## 1-2-3, E form major II-V-I and II-bII-I



## 2-\#2-3, E form major II-V-I and II-bII-I


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## b3-4-5, E form major II-V-I and II-bII-I, rare


5

$1 \quad 6735$
5
Cma7 VIII


b3


## b3-4-5, E form minor II-V-I and II-bII-I



| $\underline{5}$ <br> Abma7 <br> AbIII |  |
| :--- | :---: |
|   1 1 <br>    0 <br>  3   <br> $(4)$    |  |

1357

13 b7

$1 \quad$ b7b3

1357

b3

$1 \quad$ b7 b3

## 3-4-5, E form major II-V-I and II-bII-I



3
Dm9 IX


5
Dm9 IX




4
G7 IX

$\underline{3}$
Dm9 IX

1 b7 2
$\underline{3}$
Dm9 IX


5


1 b7 3

4


1735


C7 ${ }^{\underline{5}}$ VIII


15673

## 3-5-6, E form major II-V-I and II-bII-I



## 4-5-6, E form major II-V-I and II-bII-I



6
Dm7 X

$167 b 35$


6

$1 \quad 6736$
4
C7sus4 VIII


## 4-5-b7, E form major II-V-I and II-bII-I



## 4-5-b7, E form minor II-V-I and II-bII-I



1656763



1656763
5

Db7b5 VIII

b7


Cm7 VIII


## 5-\#5-6, E form major II-V-I and II-bII-I


$13 \mathrm{b7} 2$


6

$1 \quad 6736$
5


5
Dm11 VIII

$1 \quad 67635$
\#5
G7b9 IX

b6

G7b9 IX


136762
b6
Dm7 X
$1 \quad 67635$

G7b9 IX


136762

Cma7 VIII


1735

5


C7 VIII


b7 634



136
6

$1 \quad 6735$
1735
b6
Db7 IX
C7 VIII


## 5-6-7 and 5-6-b7, E form major II-V-I and II-bII-I



## 5-b6-b7, D form minor II-V-I and II-bII-I



b6
b7



156735

5
Cm7 VIII


## 5-6-1, E form major II-V-I and II-bII-I and II-bII-I



$1567 \mathrm{b3} \mathrm{b7}$


1 b7 3 \#5

5 Cma7 VIII

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## 5-6-1, D form major II-V-I and II-bII-I



## 5b7-1, E form major II-V-I and II-bII-I



## 5-b7-1, E form minor II-V-I and II-bII-I

Dm11 ${ }^{5}$ VIII


15676351



15676351


## b6-b7-1 and b6-7-1, E form minor II-V-I and II-bII-I



1


1


## 6-\#6-7, E form major II-V-I and II-bII-I



## 6b-7-1, E form major II-V-I and II-bII-I



## 6-7-1, E form major II-V-I and II-bII-I


b7b3 5

15 b7 3





b7b3 5
G7 ${ }^{7} \quad \mathrm{X}$


567351

1


## 6-7-1, D form major II-V-I


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## b7-7-1, E form major II-V-I and II-bII-I



## b7-7-1, D form major II-V-I




## b7-7-1, E form minor II-V-I and II-bII-I


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## b7-1-2 (2-1-b7), E form major II-V-I


b7-1-2 (2-1-b7), E form minor II-V-I and II-bII-I

| $\underline{2}$ |  |  |
| :---: | :---: | :---: |
| Dm7 X |  |  |
| (2) |  | 33 (3) |
|  |  |  |
|  | () |  |
|  |  |  |

G7sus4 ${ }^{\underline{1}}$ VIII



## 7-1-2 (2-1-7), E form major II-V-I and II-bII-I

| $\underline{2}$ |  |  | 1 |  | $\underline{7}$ |  | $\underline{2}$ |  |  | 1 |  |  | $\underline{7}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 77 | X | G7sus4 VIII |  | Cma7 VII |  | Dm7 X |  |  | Dbma7 VIII |  |  | Cma7 VII |  |  |
| (2) | 3333 |  |  | (1)1 |  | 1 | (2) |  | $3(3)$ |  |  | 1 |  |  | 1 |
|  |  | T |  |  | (T) | 2 (1) |  |  |  | (T) |  | $2(1)$ | (T) |  | $2(1)$ |
|  | () |  | (3) | 4 |  | 3 |  | (0) |  |  |  | 3 |  |  | 3 |
|  | - |  |  |  |  | (4) |  |  |  |  | (4) | - |  | (4) | - |
|  | $b 7 \mathrm{~b}$ | 351 | 1 | b7 14 | 1 | 1357 | 1 | b7 b3 | 51 | 1 | 13 | 357 | 1 | 13 | 357 |

## II-V-I, C and A Form

## 1-\#1-2, C/A form major II-V-I and II-bII-I


1 b3b7

1 b3b7

Dm7 III

C7 I


## 1-\#1-2, C/A form minor II-V-I and II-bII-I



## 1-2-b3, A form major II-V-I and II-bII-I

| 1 | 2 | b3 | 1 | 2 | b3 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Dm7 III | G7 III | C7\#9 II | Dm7 III | Db7b9 II | C7\#9 II |
| 10 | (1) 22.30 | 1 | 1 (1) | $1{ }^{1} 1$ | 1 |
|  | 4 | (2) 3 |  | (2) 3 | (2) 3 |
| (3) 4 | () | 4 | (3) 4 |  | 4 |
| - |  | (1) ${ }^{\text {( }}$ |  | (1) | (1) |
| 16367 | 16735 | 1367 \#9 | 16367 | 136762 | $13 \mathrm{b7}$ \#9 |
| $\underline{\text { b }}$ | $\underline{2}$ | 1 | b3 | $\underline{2}$ | 1 |
| D7b9 III | G7 III | C6 | Ab7 IV | Db7b9 III | C6 |
| 111 | (1) $2 \times 2 \mathrm{3}$ | (1) | (1) 20230 | 1 1 | (1) |
| (2) 3 | 4 | 23 | 4 | 2() 3 | 23 |
|  | () | (4) | (0) |  | (4) |
| (1) |  |  |  | (0) |  |
| $13 \mathrm{b7b2}$ | 6735 | 1361 | 16735 | $5 \quad 3 \mathrm{b7}$ b2 | 1361 |
| b3 | $\underline{2}$ | 1 | b3 | $\underline{2}$ | 1 |
| D7b9 IV | G7 III | C7 I | Ab7 IV | Db7b9 III | C7 I |
| 1 | (1) 22.230 | (1) | (1) 22.30 | $1{ }^{1} 1$ | (1) |
| (2) 3 | 4 | 21 | $4{ }^{4}$ | 2() 3 | 2 |
|  | () | $(3)$ 4 | () |  | 3 () 4 |
| (1) |  | - | - | (1) |  |
| $13 \mathrm{b7b2}$ | 6735 | 13671 | 6735 | $5 \quad 3 \mathrm{b7b2}$ | $5 \quad 3671$ |

## 1-2-b3, C/A form minor II-V-I and II-bII-I


b3 b7
2


b3
$5 \quad 36762$

1

Cm7


## 1-2-3, C/A form major II-V-I and II-bII-I



3

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## 1-b3-4, A form major II-V-I and II-bII-I

| 1 |  | b3 |  |  | 4 |  | 1 |  |  | b3 |  |  | 4 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dm7 | III | G7 | \#5 | III | C7su | 4 III | Dm7 |  | III | Db9 |  | II | C7su | 4 III |
|  | (1) | (1) | 2 | (1) | (1) | 1 |  |  | () |  |  |  | (1) | 1 |
|  |  |  |  | 4 |  |  |  |  |  |  | 3 |  |  |  |
| (3) | 4 |  | () |  |  | () | (3) | 4 |  |  |  |  |  | 30 |
| $\square$ | - |  | - | - |  | 4 |  |  |  |  | ( |  |  | 4 |



1 b3 b7 b3



1 b3 b7 b3


13672


## 2-\#2-3, A form major II-V-I and II-bII-I





13671
$\underline{2}$
Dm7 III


3

b3


163672


1 b3b7 2


1 b7 3 \#5


1372$\underline{2}$



163672


13672

2-3-4, A form major II-V-I and II-bII-I


13671


1 b73 6


15 b74

$13 \mathrm{b7} 1$


13 b7 \#9

4 C7sus4 III


15 b7 4


1 b3 b7b3


1 b3 b7b3

$13 \mathrm{b7}$ \#9


1 b3 b7b3


## 2-3-5, A form major II-V-I and II-bII-I



13671


3
Db7\#9 III


13671


1367 \#9


1636714


1 b73 6




1367 \#9

5




1 b3 b714

b3-4-5, A form major II-V-I and II-bII-I


4
5

b3
D7b9 IV


4
Db7 IV


5
Cma7 III



## b3-4-5, A form minor II-V-I and II-bII-I


1 b73 5

5

$1567 b 35$



## 3-4-5, C form major II-V-I and II-bII-I



| $\underline{3}$ |  |  |
| :---: | :---: | :---: |
| C7 X |  |  |
|  | 1) |  |
|  |  | 2 |
|  | 3 | 4 |
|  |  | (1) |

## 3-4-5, A form major II-V-I and II-bII-I



| 5 |  |  |
| :---: | :---: | :---: |
| Dm11 III |  |  |
| 1 |  | (1)1 |
|  |  |  |
| (3) | 4 |  |
| - |  |  |



## 3-5-6, A form major II-V-I and II-bII-I



| 5 |  |  |
| :---: | :---: | :---: |
| Db9b5 |  | III |
| 1 |  | 1 |
| (2) | 34 |  |
|  |  |  |
|  | (1) |  |


| $\underline{6}$ |  |  |
| :--- | :---: | :---: |
| C6 |  |  |



## 4-5-6, A form major II-V-I and II-bII-I




1 b3 b7 b3


4
C7sus4 III


## 4-5-b7, A form major II-V-I and II-bII-I


$16367 \mathrm{b3}$

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## 4-5-b7, A form minor II-V-I and II-bII-I






| b7 |  |
| :---: | :---: |
| Cm7 | III |
| (1) | 1 |
|  | 2 |
|  | () |
|  | 4 |

## 5-\#5-6, A form major II-V-I and II-bII-I



1 b3 b7 14


1 b7 35 b2
1 b3b715


136726



1 b3 b7 14


5-b6-b7, A form minor II-V-I

1 b3 b7 14


| $\stackrel{5}{2}$ |
| :---: |
| Dm7sus4 |

Db9
b6
Di7sus
b7
Cm7 III

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$13 \mathrm{b7}$ \#2 \#5

b6
Db9 III


136725

5 Cm7 III


1567635

## 5-6-7 and 5-6-b7, A form major II-V-I



6
Db9\#5


Dm11 III Db9\#5 III

$13 \mathrm{b7} \# 2$ \#5


5 b7 352


$13 \mathrm{b7} \# 2$ \#5


5 b7 352

$\underline{6}$
Db9\#5 III


13 b7 2 \#5
b7


7
Cma7 III


C7 III

5
Cma7 III


136725


1367 \#2 \#5
D7\#5\#9 IV



13 b7 2 \#5

5
C9 II

$13 \mathrm{b7} 25$

For b6-b7-1, b6-7-1, 6-\#6-7, 6-b7-1, 6-7-1, and b7-7-1, see E/D and G forms

## II-V-I, G Form

For 1-\#1-2, 1-2-b3, 1-2-3, , 1-b3-4, 2-\#2-3, 2-3-4, 2-3-5, and b3-4-5, see E/D and C/A forms

## 3-4-5, G form major II-V-I

| $\underline{3}$ |  |
| :---: | :---: |
| Dm9 |  |
| (D) | 11 |
|  |  |
|  | () |
| 4 | - |



3
Dm7sus4 V

$\stackrel{\underline{5}}{\text { Dm7sus } 4}$ V


3
C7 III


## 3-5-6, G form major II-V-I and II-bII-I


for 4-5-6 and 4-5-b7 major II-V-I and II-bII-I: see E/D and A forms for 4-5-b7 and 5-b6-b7 minor II-V-I and II-bII-I: see E/D and A forms

## 5-6-7 and 5-6-b7, G form major II-V-I and II-bII-I

| G9 IV |  |
| :---: | :---: |
|  | 1 |
| (2) | 3 |
|  | 4 |
| - |  |



Dm7sus4 V

$15 \mathrm{b7} 4$
$\underline{\mathrm{b} 7}$
D7\#5\#9 IV


D7\#5\#9 IV

$13 \mathrm{b7} \# 2$ \#5

$13 \mathrm{b7} 2$


G9 IV


13672
Cma7 V



Cma7 III


C7 III


## 5-6-1, G form major II-V-I and II-bII-I



5
Dm7sus4 V
Db9b


6


Cadd9 V



## 5-b7-1, G form major II-V-I and II-bII-I



5
Dm7sus4 V



13 b7 \#2
b7


는
Dm7sus4 V


15 b74

Cadd9 V

$\begin{array}{lll}5 & 2 & 3\end{array}$
1

b7
Db13 III


136726
$\underline{1}$


5231

1




## 5-b7-1, G form minor II-V-I and II-bII-I



1 b 5674
b7 G7\#9 IV



## b6-b7-1 and b6-7-1, G form minor II-V-I and II-bII-I



## 6-\#6-7, G form major II-V-I and II-bII-I




7
Cma7 III


## 6-b7-1, G form major II-V-I and II-bII-I

| $\underline{6}$ | b7 | $\underline{1}$ | 6 | b7 |  | 1 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dm7 V | G7\#9 IV | Cadd9 V | Dm7 V |  | 13 VI | C6/9 | VII |
| $(1)$ 1 1 | 1 | 1()1 | $(1)$ 1 1 |  | (1)11 | 111 | 1 |
| 2 | 2 (3) |  | 2 |  |  | (2) | $3(4)$ |
| 3 () | 44 | 3 | 3 () |  |  |  |  |
| - $10-1$ |  | (1) O-\| $^{\prime}$ |  | (3) | \begin{tabular}{l\|l|l|}
\hline
\end{tabular} | (1) |  |
| $15 \mathrm{b7b35}$ | 51367 \#2 | 5231 | 1567635 |  | b7 136 | 1362 | 251 |


$\begin{array}{llll}5 & 1 & \text { b3 b7 }\end{array}$
b7

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## 6-7-1, G form major II-V-I and II-bII-I



## b7-7-1, G form major II-V-I and II-bII-I

| b7 |  |  | 7 |  | 1 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| D7\#5 |  | III | G7 V |  | Cadd9 V |  |  |
| 1 |  |  |  |  |  | 1 (1) | 1 |
| () | 2 |  |  | 2 |  |  |  |
|  | 3 |  |  | 34 |  | 3 | 3 |
|  | (1) |  |  | (1) | (1) | - | (4) |



## b7-7-1, G form minor II-V-I and II-bII-I



$\begin{array}{llll}5 & 1 & b 3 b 7\end{array}$



## b712 (21b7), and 712: see E/D and C/A forms

## JAZZ BLUES

## Common Tone

## Common Tone 1 on the first string



## Common Tone 2 on the first string


b7 352


same as bars 7-8 same as bars 9-10



## Common Tone b3 on the first string



13 b7 \#2
C7\#9 IX


13 b7 \#2


52367
A7b5\#9 IX


3 b7 \#2 b5

$13 \mathrm{b7} \# 2$

b7 35 b2

$13 \mathrm{b7}$ \#2
G9\#5 X



52367
same as bars 7-8


same as bars 7-8


13672

F\#dim7 X

same as bars 9-10

Bb13 VI



D7b9 VII


5 b2 3 b7
G7sus4 V

same as bars 7-8 same as bars 9-10

## Common Tone 6 on the first string



I

b7 3 \#5 1


Gm7 X

$1 \quad$ b7b3 5



15 b7 3
same as bars 9-10

Bdim7 IX

$1 \mathrm{b5} 6 \mathrm{~b} 3$
same as bars 7-8

Bdim7 V

$1663 b 5$

F13 VI

b7 361

D7\#9 IV



C7sus4 III

F13 VI

b7 361

F13

b7 361
same as bars 7-8

same as bars 9-10

b2 b7 36

I 13672
F9 VII


13672

b7 36
D7sus4 V


15 b 74


13672
Gm7 VII

b7 b3 51


13672


36725


1 b73 6
same as bars 7-8 same as bars 9-10

## Common Tone b3 on the second string



same as bars 7-8

153 b


15
same as bars 7-8


15673

C13 VIII

$1 \quad 6736$

## Common Tone 5 on the second string



C9 VII



13672
A7b9 VI


562367


G13 VIII

67361


Bdim7 VII

$1 \mathrm{b5} \quad \mathrm{~b} 36$


15673

D7b59 IX


3 b7b25

163672
Gm9 VIII


Dm7/11 VIII


$13 \mathrm{b7} 2$


13672

## same as bars 7-8 same as bars 9-10

## Common Tone 6 on the second string

| C13 |  | VIII | F7 | VIII | C13 |  | VIII | C13 |  | VIII | F7 | VIII | F\#dim7 | VIII |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | 2 | (1) | (1) | 1 | (1) | 2 | (1) | (1) | 2 | (1) | (1) | 1 | - 1 |  |
|  | 3 |  |  |  |  | 3 |  |  |  | 3 |  |  | (2) |  |
|  | () | 4 |  | $3(1) 4$ |  | () | 4 |  | () | - 4 |  | ( 4 | 3 | 4 |
|  |  |  |  | , |  |  |  |  |  |  |  |  | (1) | ) |
| 1 | 673 | 6 |  | b7 3 |  | 673 | 6 |  | 673 | 36 | 15 | 673 | 1656 | 663 |
| C13 |  | VIII | A7\# | 5 X | D |  | X | G9 |  | IX | same as | bars 7-8 | same as bar | rs 9-10 |
| (1) | 2 | (1) | 1 | 1(1) | (2) |  | 30 |  | 1 |  |  |  |  |  |
|  | 3 |  | 2 | 2 |  |  |  |  | 3 | 33 |  |  |  |  |
|  | () | 4 | (0) |  |  | (0) |  |  |  | $\square$ |  |  |  |  |
|  | , | $\square$ |  |  |  |  | $\square$ |  | ( | () |  |  |  |  |
| 1 | 673 | 6 | b7 3 | \#5 1 | 1 | 6763 | 3 |  | 3 b | b7 2 |  |  |  |  |

## Minor Pentatonic

## b3-1-b7-5, jazz blues - link to video

- $=125$

Swing Eighths $\quad . \quad=\sigma^{3} J^{\Omega}$

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## 1-3-1-b7-5, jazz blues - link to video

$$
\text { . }=125
$$

Swing Eighths $. . \quad=\overbrace{\circ}^{3}$

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## Major Pentatonic

## 5-6-1-6, jazz blues


bar 11


## Common Tone And Cadences

common tones 5 and 1, harmonic and melodic minor cadences. G/E form

| bar 1 | bar 2 |  | bar 3 | bar 4 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| C9 VI |  | G harmonic minor | C9 |  | Dbm(ma7) <br> Gb9\#11 <br> Gb Lydian b7 <br> Db mel. minor <br> Bb Aeolian 65 |
|  |  |     $(2)$ <br>   3 3 4 <br> 0     <br>      <br>  63 6 1 65 |   1 1 <br>  2 2 $3(4)$ <br>  2 3 3 <br>     <br>  0   <br> 67 2 5 1 |  |  |



| bar 9 | bar 10 | bar 11 |  | bar 12 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | G7sus4 V | Cadd9 V | C Mixo. \#1 <br> D harmonic minor <br> A Phrygian major <br> A7\#9 VI | Dm7 VI | Db Lydian (opt. b7) <br> Ab major (opt. b3) F Aeolian (opt. b5) |
| Dm7 VI |  |  |  |  | G7sus $4 \quad \mathrm{~V}$ |
| 1 | (1) | 1(1)1 | 1 | 1 | (1) |
| 2(3) | 2 |  | (2) | $2(3)$ | 2 |
| 4 | 3 | 3 | 34 | 4 | 3 |
|  | $1(1) 4$ | (4) |  |  | $\square 104$ |
| 1 1 b3b7 | $15 \mathrm{b7} 4$ | 523 | 13 b | 5 1  | 15674 |

## common tone 5, harmonic and melodic minor cadences, $\mathbf{C}$ form

| bar 1 | bar 2 |  | bar 3 | bar 4 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| F7 VI | Fm7 VI | Bb9 VI | F9 VII | Cm7 VIII | Cm7b5 F7b9 <br> F Phrygian major Ab Mixo. sharp one <br> Bb harmonic minor <br> Db major sharp five <br> F7b9 VII |
|  |    $(1)$  <br>      <br> $($  3 4  <br>      <br>      |  |  |  |  1 2  <br> $(x)$ 3 4  <br>   3 4 <br>     <br>     |


| bar 5 | bar 6 |  | bar 7 | bar 8 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fm7 VI | Bb9 VI | F9 VII | F Mixolydian sharp one $G$ harmonic minor A Locrian natural six Bb major sharp five D Phrygian major |  |  |
| Bb9 VII |  |  |  | Am7b5 VII |  | 9 VII |
| (1) 101 | 1 (1) | (1) | 1 | (1) |  | 1()2 |
| 2 |  | 2 | (2) 333 | 333 |  | $3{ }^{3} 4$ |
| (0) 4 | (0) 314 | (0) 4 |  |  |  |  |
| - 1 - 1 - |  | -1 | (1) | - (0) |  | (1) |
| 67352 | b3 b7 15 | b7 352 | 136725 | $1 \mathrm{b5} 7 \mathrm{b3}$ |  | 562367 |


| bar 9 | bar 10 | bar 11 |  | bar 12 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Gm7/11 VIII | F major flat six C Mixolydian b2 <br> C13b9 VI | F9 VII | F Mixo. sharp one $G$ harmonic minor <br> Bb major sharp five <br> D Phrygian major D7b9 VII | Gm7/11 VIII | C13b9 |
|  |  |  1   <br> 2 2 3 3 <br> 2 3 3  <br>     <br>     <br>     <br> 1    <br> 1 3 b 7 2 5 |  |  |  |

## FOUR-BEAT CADENCES

## How to Use These Cadences

## the target chords

The last chord in each sequence is a target chord. The target chord is typically on beat one. When it works harmonically, the first four chords can be played with one on each of the four beats of a bar preceeding the target chord.

A cadence version is shown for each of common chord types: a I chord, a IV chord, a II chord and a V chord.

## top-voice melodic cells

The sequence of notes made up by the highest-pitched note of each chord makes a melodic cell. It is identified with the title of each example, such as "b3-1-b7-5-1", indicating the numbered tones in the key.

## using part of the four-beat cadence

It would often obscure the original progression if you play the first chord of these four-beat cadences( five chords including the target chord) on the first beat of the bar before the target chord. When the first chord is basically the same as in the original progression, its obiously not a problem. But when the listener expects a IV chord (like bar two of a jazz blues) and you play a V chord, it can be a little disconcerting to the listener. Especially if you are playing with another musician that is playing the IV chord while you play the V chord. Just listen and make good decisions.

You don't have to use all four of the first four chords. You could use the fourth chord on the last beat before the target chord. You could use the third and fourth chords on the last two beats before the target chord. Or, you could use the second, third and fourth chords on the last three beats before the target chord.

## rhythm

To make the rhythm more interesting, some of the chords could use pushes and pickups. See Varying Rhythm and Hearing Pickups and Pushes. Pushes are generally better for the cadences, since they are less busy.

## building chord melody style

To build a chord melody style like Joe Pass or Barney Kessel, you need to know a lot about Voice Leading and a lot about melodic cells. See Four Steps To Improv/Melodic Cell Types. You can get started with a few melodic cell types and these Four-Chord Cadences.

Also see Melodically Superimposed Cadences, especially the Playing Cadences set of sections accessed from the table of contents on the first page.

## Minor Pentatonic

## b3-1-b7-5-1



## 5-b7-1-b3-1

| G major, target I | Bm7 II |  | Bb7 VI |  | Am7 V |  |  | Ab13 IV |  |  | G7 III |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | 1 | (1) | 230 | (1) | 1 | (1) | (1) | 2 | (1) | (1) | 1 | $1(1)$ |
|  |  | 2 |  | 4 |  |  |  |  | 3 |  |  |  | 2 |
|  |  | I |  | () |  | 3 () |  |  | () | 44 |  | 3() |  |
|  |  | - |  | -1-1 |  |  | 4 |  |  | $\square$ |  |  |  |
|  | 15 | 7 b 3 | 1 | b73 5 |  | $5 \mathrm{b7}$ | 3 b 7 | 1 | b7 3 | 62 |  | 5673 | 351 |

G major, target IV9


G major, target V7


C\#dim7 IV
D7sus4 V


## 5 -b5-4-b3-1

G major, target I


G major, target


G major, target V7


## Major Pentatonic

## b3-2-1-6-1



## 1-6-5-4-3



## 1-\#2-3-6-5



## DIMINISHED-SOUNDING DOMINANT CADENCES

Play the examples on the first system (pair of staves with music notation and tablature) to get familiar. The second and third systems are a library of fingerings by string set. The bottom system shows the top voice leading options.
Build the ninth-not root chords from the third of the $V$ chord of your target (C). Move up or down in minor thirds (B-D-F-Ab). In ascending order and in the key of your target, this will give you (G) 13 nr (major V type), (D)IIm7b5 (harmonic minor II type), (Db)bII9 no root (meleodic minor IV type), (E) III7b9 no root. The III7b9 has a remote relationship, so avoid using last before resolving to he target.

## Ninth No Root Type - link to video



## Thirteen Flat Nine Type - link to video

Be careful with the voice leading when resolving thes 13 b 9 types (more so that with the previous ninth no root type), especially the top and bottom voices (soprano and bass). Avoid chromatic changes when you can.

Two or more of these may be used to make a cadence to a target chord. The thirteen flat nine cadence tends to resolve better up a perfect fourth from the letter name of the last chord. So, if the last 13 b 9 chord is $\mathrm{G} 13 \mathrm{~b} 9 / \mathrm{Ab}$, it would resolve to a C chord.

Another way to look at these is that they are diminished seventh chords with a whole step voice movement on the top. Looking at it that way, any 13 b 9 voiced as you see it below could resolve up a major third from its bass note, such as $\mathrm{G} 13 \mathrm{~b} / \mathrm{Ab}$ resolving to a C chord.


## Using Diminished Scale For Diminished -Sounding Dominant Cadences

## what chords does the diminished scale make?

All of the notes of the diminished scale can't be sutained at once on a six-string guitar, nor on a seven string guitar, since the scale has eight notes. The chord quality including all the notes of the scale would be $13 \# 11 \mathrm{~b} 9 \# 9$ where the repeating half step-whole step scale pattern would begin by ascending a half step from the root (followed by whole step, half step, wholestep, etc.) or by descending a whole step from the root (followed by half step, whole step, half step, etc.).

## minor V type chord subsets of the harmonized diminished scale

V type chords in minor keys typically have flat nine or sharp nine. Subset chords of the harmonized diminished scale can be used to get the same or similar sound and feel. See Scale Ambiguity/Ambiguos Scales For Dominant chords/Compare Altered Dominants With Flat Nine Or Sharp Nine.

The composite of the first three chords below represents A13\#11b9\#9. A13\#11b9\#9 is the full chord, shown last,. It has eight notes and won't fit on the guitar.
link to video


## the 7b9 or 7\#9 part of the scale for minor V types

The most typical alterations of minor key V type chords are \#5, $\mathrm{b9}$ and \#9. The harmonized diminished scale (13\#11b9\#9) doesn't provide the sharp five. It does provide both the flat nine and sharp nine. In using the diminished scale for minor key V type chords, emphasize the 7b9\#9 part ot the scale, which is six of its eight notes. Don't over-emphasize the remaining two notes: the sharp eleven and the thirteen.

The thirteen is more acceptable than the sharp eleven. G Phrygian major (also called G Phrygian dominant) is the typical V type scale for C minor. C harmonic minor and G Phrygian major have the same notes. Each name is used to indicated the context as being the key of C minor (with a harmonic
minor scale) or the temporary key of G on the V of C . When a V type minor chord has a sharped fifth, it is usually a flat six of the $V$ type scale (G Phrygian major, 1-b2-3-4-5-b6-b7) that is used for the sharped fifth. The flat six (equivalent to flat thirteen) of the G Phrygian major scale can reresent the sharp five in the G7\#5 chord. "b13" is sometimes part of a chord name, indicating that a chord has a fifth and a sharped fifth, but calling the sharped fifth a "flat thirteen", so as not to break chord naming conventions. We don't want to get a ticket from the harmony police! See Chord-Naming Conventions/ Chord-Naming Rules By Chord Tone/Altered Fifths.

With Escherian or deceptive cadences, the key of C minor could be expected, but the actual result may be the key of C major. See Melodically Superimposed Cadences/Cadence Defined/Types Of Cadences/ Escherian cadence and see Establishing A Key/Key Defined/Authentic And Deceptive Cadences.

The thirteen tone is the same tone as a"six" and contradicts the typical V type chord with a sharped fifth (G7\#5). Although the thirteen (the "E" note in G13b9 as a V chord in C minor) sometimes sounds cool if the other instrument parts don't strongly emphasize the flat six, which could cause a conflict. In subtle arrangements, the six and the flat six can co-exist, but it takes finesse.

## where the $\mathbf{1 3 b 9}$ chord is part of the song

Sometimes the 13 b 9 chord is actually part of the song. It is used in a few Jobim Tunes and other songs listed in (just click the link at the end of this sentence) Melodic Cells/Melodic Cell Types/Harmonic Type Melodic Cells/Half-Whole-Half Cells And Diminished Scale/Harmonic Application Of Half-Whole-Half/applying diminished scale to 13 b 9 chords.

## identifying the diminished seventh part of the 13\#11b9\#9 chord

We want to emulate a V7b9 chord (G7b9 for the key of C minor). Without a root, that is a VII diminished seventh chord in the key of C minor, a B diminished seventh chord. Here's the logic: Thinking in the key of $V$ in the key of $C$ minor, we can use the name " $G$ diminished scale" (half/whole) where we ascend from the note $G$ in repeating half steps and whole steps. In the key of $V(G)$ the numbered tones are 1-b2-b3-3-\#4-5-6-b7. The diminished seventh chord part of that scale we want to emphasize consists of tones b2-3-5-b7. In G, that's Ab-B-D-F. Those tones make up a diminished seventh chord with four alternate names: Abdim7, Bdim7, Ddim7, Fdim7. Bdim7, the VIIdim7 is usually most relevant, since its root is a half step below " C " the tone center of the key of C minor.

## moving a chord part of 13\#11b9\#9 in minor thirds

Moving any subset chord of 13\#11b9\#9 (the harmonized diminshed scale) up or dowm in minor thirds will produce all chords that are part of $13 \# 11 b 9 \# 9$. Here are some examples: link to video


## ornamenting the subset chord

If a tone is in the bII $\operatorname{dim} 7$ ( $\mathrm{Db} \operatorname{dim} 7$ ) part of the $\mathrm{I} 13 \# 11 \mathrm{~b} 9 \# 9$ chord (C13\#11b9\#9), ornament it with a whole step above or with a half step below.

## MODES

Modal use of a seven tone scale like the major scale can establish any note of the scale as a key, without changing the notes involved. This does, however, call for a renumbering of the scale. To renumber the scale, each mode is compared to a major scale on the same note chosen as a tone center. If " D ", the second step of the C major scale was chosen as a tone center, it could be compared to a major scale on the same note, "D". Regardless of the key, this would produce the following mode formulas, expressing the relationship of each to a major scale on the same note.

By default, chords are built with an every-other note pattern, using the tertian cycle (cycle of thirds) 1-3-5-7-2-4-6-1 (repeating). Triads are built by default with every other note of the scale for three notes, such as $1-3-5$ for the I chord and 2-4-6 for the IIm chord. Seventh chords are built by default with every other note of the scale for four notes, such as 1-3-5-7 for the Ima7 and 2-4-6, 1 for the IIm7.

Modes of the Major Scale

| scale tone | letters in C | mode name | mode formula | triad | seventh chord |
| :--- | :--- | :--- | :--- | :--- | :--- |
| I | C-D-E-F-G-A-B-C | C major or Ionian | $1-2-3-4-5-6-7$ | I major | Ima7 |
| II | D-E-F-G-A-B-C-D | D Dorian | 1-2-b3-4-5-6-b7 (of D major) | II minor | IIm7 |
| III | E-F-G-A-B-C-D-E | E Phrygian | 1-b2-b3-4-5-b6-b7 (of E major) | III minor | IIIm7 |
| IV | F-G-A-B-C-D-E-F | F Lydian | 1-2-3-\#4-5-6-7 (of F major) | IV major | IVma7 |
| V | G-A-B-C-D-E-F-G | G Mixolydian | 1-2-3-4-5-6-b7 (of G major) | V major | V7 |
| VI | A-B-C-D-E-F-G-A | A Aeolian | 1-2-b3-4-5-b6-b7 (of A major) | VI minor | VIm7 |
| VII | B-C-D-E-F-G-A-B | B Locrian | 1-b2-b3-4-b5-b6-b7 (of B major) | VII dim. | VIIm7b5 |

By sharping the fifth of the major scale, another system of modes is produced. The mode on the sixth step is the popular harmonic minor, which is Aeolian natural seven. Modes of major scale and major sharp five scale are freely combined, especially Aeolian and harmonic minor.

Modes of the Major Sharp Five Scale

| scale <br> tone | letters in C | mode name | mode formula | triad | seventh chord |
| :--- | :--- | :--- | :--- | :--- | :--- |
| I | C-D-E-F-G\#-A-B-C | C major sharp five | $1-2-3-4-\# 5-6-7$ | I augmented | Ima7\#5 |
| II | D-E-F-G\#-A-B-C-D | D Dorian sharp four | 1-2-b3-\#4-5-6-b7 (of D major) | II minor | IIm7 |
| III | E-F-G\#-A-B-C-D-E | E Phrygian major third | 1-b2-3-4-5-b6-b7 (of E major) | III major | III7 |
| IV | F-G\#-A-B-C-D-E-F | F Lydian sharp two | 1-\#2-3-\#4-5-6-7 (of F major) | IV major | IVma7 |
| \#V | G\#-A-B-C-D-E-F-G\# | G\# Mixolydian sharp one | \#1-2-3-4-5-6-b7 (of G major) | \#V dim. | \#V dim. 7 |
| VI | A-B-C-D-E-F-G\#-A | A Aeolian natural seven <br> or A harmonic minor | 1-2-b3-4-5-b6-7 (of A major) | VI minor | VIm(ma7) |
| VII | B-C-D-E-F-G\#-A-B | B Locrian natural six | 1-b2-b3-4-b5-6-b7 (of B major) | VII dim. | VIIm7b5 |

Melodic minor is used modally in its ascending form, which is major scale with a flatted third. The descending form of melodic minor is the same as Aeolian, but will not be used here. Modes of the melodic minor are less common, but occur often in jazz.

Modes of the Melodic Minor Scale

| scale <br> tone | letters in C | mode name | mode formula | triad | seventh chord |
| :--- | :--- | :--- | :--- | :--- | :--- |
| I | C-D-Eb-F-G-A-B-C | C major flat three or C <br> melodic minor | 1-2-b3-4-5-6-7 | I minor | Im(ma7) |
| II | D-Eb-F-G-A-B-C-D | D Dorian flat two | 1-b2-b3-4-5-6-b7 (of D major) | II minor | IIm7 |
| bIII | Eb-F-G-A-B-C-D-Eb | Eb Phrygian flat one | b1-b2-b3-4-5-b6-b7 (of E major) | III augmented | IIIma7\#5 |
| IV | F-G-A-B-C-D-Eb-F | F Lydian flat seven | 1-2-3-\#4-5-6-b7 (of F major) | IV major | IV7 |
| V | G-A-B-C-D-Eb-F-G | G Mixolydian flat six | 1-2-3-4-5-b6-b7 (of G major) | V major | V7 |
| VI | A-B-C-D-Eb-F-G-A | A Aeolian flat five | 1-2-b3-4-b5-b6-b7 (of A major) | VI dimin. | VIm7b5 |
| VII | B-C-D-Eb-F-G-A-B | B Locrian flat four, super <br> Locrian, or "flat all" | 1-b2-b3-b4-b5-b6-b7 (of B major) | VII dimin. | VIIm7b5 |

## MAJOR SCALE TONE TRIAD VOICE LEADING

Up stepwise: all three tones ascend one scale step.
Down stepwise: all three tones descend one scale step.
Up a third: the root moves down a scale step and the third and the fifth stay the same.
Down a third: the fifth moves up a scale step and the root and the third stay the same.
Up a fourth: the third and the fifth move up a scale step and the root stays the same.
Down a fourth: the root and the third move down a scale step and the fifth stays the same.

## Three-Note Linear Scale Tone Triads

Memorize linear major scale tone triads in close voicing and in all three inversions (ascending 1-3-5, 3-5-1 or 5-1-3) with the lowest pitch fingered by (1) the first finger (2) the second or third finger or (3) the little finger.

You'll need to keep track of two things:

1. The major scale, which will progress from step " 1 " to " 1 " on one of the strings. (2) Once you establish the fingering for the major triad on step " 1 ", move from step " 1 " to to step " 2 " on the string where the major scale is ascending and flat the third. Keep track of where the third is by the order of the tones. From the lowest to highest pitch, close-voiced triads are 1-3-5, 3-5-1 or 5-1-3. From the lowest to highest pitch, open-voiced triads are 1-5-3, 3-1-5 or 5-3-1.
2. As you progress up the major scale, the chord qualities should be as follows: I major, II minor, III minor, IV major, V major, VI minor, VII diminished. Once you have played the I major and II minor triads, you have established a fingering for major and minor triads. When you get to the VII diminished triad, you can attain it by one of three alterations of major or minor triads: diminished $=$ minor $\mathrm{b} 5=$ major $\mathrm{b} 3, \mathrm{~b} 5=$ major \#1 (then descend the entire triad one half step).

## Inversion Cycles

When roots progress up in fourths or up in thirds, the inversion cycle is $1-3-5,5-1-3,3-5-1,1-3-5$, etc. With roots progressing down in fourths or down in thirds, the inversion cycle the opposite: 1-3-5, 3-5-1, 5-1-3, 1-3-5, etc.

## SCALE-TONE SEVENTH CHORD VOICE LEADING

Important: the root movement referred to on the left of each table below is conceptual only. Think of that movement as what the bass player plays. If the root moves in your voice leading, it is mentioned on the right side of the columnar chart.

## Neighboring and Passing Chords

In the same manner that a neighboring tone or passing tone can decorate chord tones of the current chord, groups of them can serve as neighboring or passing tone chords. As with the neighboring or passing tones, they should be de-emphasized rhythmically.

When any neighboring or passing chord is emphasized, it becomes a chord that is added to the composition. Be sure that you are communicating such a chord to the listener and other musicians as an appropriate chord for the arrangement.

Chord tones not mentioned on the right side below do not move.
root movement voice movement from first chord
root up a fourth root down a fourth
root up a step
root down a step

> fifth and seventh move down a scale step
root and third move up a scale step
third, fifth and seventh move down a scale step
root, third and fifth up a scale step

## Upper and Lower Harmony Chords

## root up a third

When a scale tone seventh chord is used on the third of the current chord, it produces a ninth no root named after the current root. This is not usually done on a major scale-tone III or VII chord. However, when the IIIm7 chord is changed to dominant seventh chord, it can be used as a III7b9 chord, though this changes the scale to harmonic minor on the sixth step of the parent major scale (E7b9 is a V7b9 chord of A harmonic minor, built on the sixth step of C major).

## root down a third

When a scale tone seventh chord is used on the sixth of a I, IV or V chord (root down a third), a minor seventh chord is produced. This minor seventh is a synonym of a sixth chord on the original root. For example, an Am 7 build on the sixth of C is a synonym of C 6 .

When a scale tone seventh chord is used on the sxith of a IIm chord (root down a third), a minor seventh flat fiver chord is produced. This VIIm7b5 is a synonym of $\operatorname{IIm} 6: \mathrm{Bm} 7 \mathrm{~b} 5=\mathrm{Dm} 6$.

Chord tones not mentioned on the right side below do not move.
root movement $\quad$ voice movement from first chord
root up a third
root down a third
root moves up a step seventh moves down a step

## 17-I7-IIm7b5 (=IVm6) I Voice Leading

Descend all notes of a dominant seventh chord without the root (I7) chromatically twice, then descend to the closest available tones of the " I " chord.

I-IV-I7n3-IV voice leading: ascend the voices which begin as the third and the fifth of the (I) by scale tones twice, then descend them once.

## Scale Tone Seventh Chords Are Tertian Quadrads

A scale tone seven chord is constructed by default with four notes in an every-other-note pattern called thirds. A series of notes made in thirds, such as a scale tone seventh chord can be called tertian, meaning made of thirds. A three note chord is called a triad. Following the same series of Greek names, a four note chord can be called a quadrad. So, scale tone seventh chords are tertian quadrads.

A five note chord is a pentad, six notes a sextad and seven notes a heptad.

## STEPWISE QUADRAD VOICE LEADING

## Parallel Scale Tone Chords

Successions of scale tone chords with their roots in stepwise order can be used to walk up or down the scale to a target chord. Although this is not all that exciting, you still need to know it, in order to do more sophisticated progression such as chromatic progression.
root position (root in bass), E form chords: string set 6-4-3-2, 107350 voicing

root position (root in bass), A form chords: string set 5-4-3-2, 015730 voicing

root position, combined $E$ form and $A$ form


## Creating A Scalar Voice With Inversions

Stepwise voice leading can be used to create a scalar voice by combining the inversions of a seventh chords on each of two consecutive scale tones. Alternate the inversions of the two chords as shown below. Notice that every other chord makes a series of inversions of a single chord.

## V7 alternated with VIm7

F 7 is V 7 of Bb major and Gm 7 is $V \operatorname{Im} 7$ of Bb major



## PERFECT FOURTH QUADRAD CADENCES

Diads are two note chords, triads are three note chords and quadrads are four note chords. Tertian chords are built with every other note of a seven tone scale, using the numeric sequence 1-3-5-7-2-4-6 1 , etc. The every-other-note creates a sequence of thirds, since each note is inclusively three notes from the next. Seventh chords are tertian quadrads.

Harmonic cadences are devices to establish a chord as the expected ending chord, and therefore its root as the tone center. This can be established for the piece of music as a whole, and for secondary and temporary tone centers during the piece.

## Secondary Dominants

The oldest cadence in music history is "V to I", where the chord on the fifth step of the key scale (called the dominant) leads to the chord on the first step of the key scale. This chord on the fifth of the scale of the intended tonic is commonly a dominant seventh type chord (or altered dominant seventh in jazz). When the intended tonic is not the first step of the parent major scale, the the seventh type chord on the fifth of the intended tonic is called a secondary dominant. See The Secondary Dominant Cycle.

## Flat Five Substitute

In jazz, a flat five substitute chord replaces the chord on the fifth with one a flat fifth above or below the root of the chord on the fifth of the tonic. The note a flat fifth above or below any given note is the same note. The flat five substitute becomes a chord built on the upper chromatic neighbor to the tonic, on the root up a half step (one fret) from the root of the intended tonic chord.

## The 7-3-6-2-5-1-4 Series of Perfect Fourths

This is the most common structural source for cadences. The major scale is the only scale whose notes can be ordered in a continuous series of seven perfect fourths.

Four-note scale-tone chords constructed in thirds can accurately be called major scale-tone tertian quadrads, but are are commonly called major scale-tone seventh chords. See Scale-Tone Seventh Chord Progression.

## Major Scale-Tone Seventh Chords in Perfect Fourths, Three-Note Voicings root in bass, trade three and seven, no fifth



## Recognizing II-V-I Cadences in Chord Progressions

Memorize letter names in perfect fourths. The sequence is B-E-A-D-G-C-F with every note flat, followed by B-E-A-D-G-C-F (all natural), then B-E-A-D-G-C-F with all notes sharp, as shown below.

## the perfect fourth series

B\#-E\#-A\#-D\#-G\#-C\#-F\#-B-E-A-D-G-C-F-Bb-Eb-Ab-Db-Gb-Cb-Fb

Any consecutive seven of the letters in the perfect fourth series constitutes the numbered tones"7-3-6-$2-5-1-4$ " for a particular major scale. Notice that " 1 " is the next to last letter in the series, so the major scale for any seven consecutive letters would be the next to last letter (reading left to right).
"II-V-I" would be the fourth through sixth letters of any consecutive seven letters, where the sixth letter is " 1 ". Go through a jazz fake book and look for "II-V-I" occuring multiple times in the same piece. The "II-V-I's" will often occur in many keys in the same song. Next, you'll need to determine whether those "II-V-I's" are major or minor.

Recognizing II-V-I cadences is a beginning. You'll then look for longer sequences of fourths in the "7-3-6-2-5-1-" order: VIIm7b5-IIIm7 (usually III7)-VIm7-IIm7-V7-Ima7-IVma7.

## Major II-V-I Cadences

In major mode, "IIm7 V7 $\operatorname{Ima} 7$ " is a "II-V-I" cadence. $\operatorname{IIm} 7$ may be $\operatorname{IIm} 9$ or other versions of $\operatorname{IIm} 7$ that include 2,4 or 6 in the key of the chord root. V7 may be V9, or other versions that include 2,4 or 6 in the key of the chord root. Ima7 may be Ima9, I6, or other versions that include 2 or 6 .

## Minor II-V-I Cadences

In minor mode, "IIm7b5 V7 Im7" is a"II-V-I" cadence. Their origin is VIIm7b5, III7 VIm7, where the key is established on VI. The chord roots are then renumberd so VII becomes II, III becomes V andVI becomes I. IIIm7 has been changed to III7 (which becomes V7 of the minor IIm7b5V7 Im7. In such a case, the III7 chord (functioning as V7) may optionally have \#5, b9 or \#9.

## Flat Five Substitutes And II bII I Cadences

In jazz, bII7 is commonly substituted for V7, changing II-V7-I (Dm7-G7-Cma7) to II-bII-I (Dm7$\mathrm{Db} 7-\mathrm{Cma} 7$ ). This is based on the synonym V7b5 = bII7b5. Scales to build harmony and melody based on this synonym are most notably derived from the melodic minor scale. Mode VII of melodic minor creates a V7\#9b9\#5b5 chord, which is a synonym of mode IV of melodic minor, which creates the bII13\#11 chord, a flat five substitute.

## II-V-I Cadences Of Four Parent Scale Types

major scale
harmonic minor scale
melodic minor scale
harmonic major scale

| $\operatorname{IIm} 13$ | V13 | Ima9 |
| :--- | :--- | :--- |
| $\operatorname{IIm} 7 \mathrm{~b} 5$ | V7b9b13 | $\operatorname{Im}$ |
| $\operatorname{IIm7b5}$ | V9b13 | Im |
| $\operatorname{IIm} 13 \mathrm{~b} 9$ | V9b13 | Ima9 |

## other options:

melodic minor VIIb5\#5b9\#9 for the II chord, harmonic minor V and Im
V13b9\#9\#11 using half/whole diminished scale

# Major Scale-Tone Seventh Chords in Perfect Fourths, Four-Note Voicings 

## Root to Root in Bass

## 107350 to 015730 with III7



107350 to 015730 with IIIm7


## More Root To Root In Bass

## 107350 to 013720 with III7



## 107350 to 013720 with IIIm7



1 b3 b7 1


## 107350 to 013720 with III7 (fifth string root ninths)



## Third to Third in Bass

## 301570 to 037150 with III7 (inversion of 107350 to 015730 )




301570 to 037150 with IIIm7 (inversion of 107350 to 015730 )


## Fifth to Fifth in Bass

## 503710 to 051370 with III7 (inversion of 107350 to 015730 )




503710 to 051370 with IIIm7 (inversion of 107350 to 015730 )


[^0]
## Descend Five And Seven (roots up in fourths)

## Voice Leading

Descend the fifth and seventh a scale step to become the scale tone seventh chord whose root is up a perfect fourth, in the cycle of root names 7362514

Major scale-tone seventh chords progress most smoothly with conservative voice leading, where each note in the chord moves to the same note in the next chord, or to the closest possible note in the next chord.

When the roots of major scale-tone seventh chords progress in perfect fourths with conservative voice leading, roots and fifths "switch" and thirds and sevenths "switch", as you can see in the text below.

- the root remains on the same note to become the fifth of the next chord.
- the third remains on the same note to become the seventh of the next chord.
- the fifth descends a scale step to become the root of the next chord.
+ the seventh descends a scale step to become the third of the next chord.
The root of each chord remains on the same note to become the fifth of the next chord. The third of each chord remains to become the seventh of the next chord. The fifth of each chord descends one scale tone to become the root of the next chord. The seventh of each chord descends one scale tone to become the third of the next chord.

By default, chords are constructed with the every-other-note cycle of numbers called the cycle of thirds, shown at the left below. A four-note chord on the first step of the major scale build in thirds would use scale tones $1,3,5$ and 7 . A four-note chords built on the second step built in thirds would use scale tones $2,4,6$, and 1 . These are listed in the illustraion below at the right, under the column headers "root, third, fifth, seventh". For each chord, the major scale tone used for the root is shown in the root column, the major scale tone used for the third is shown in the third column, etc. The third of the chord built on step five, for example, is major scale tone " 7 ".

Four-note chords built on steps three, six and two are minor seventh (1-b3-5-b7). The four note chord built on step five is dominant seventh ( $1-3-5-\mathrm{b} 7$ ). The chords built on steps one and four are major seventh (1-3-5-7).

In the chart at the right below, chords are listed in vertical order from top to bottom, built on major scale tones 7-3-6-2-5-1-4, respectively. This shows the root order of perfect fourths: 7-3-6-2-5-1-4, which repeats after " 4 " and is cyclical (serial).

Notice that " 7 " and " 2 " are root and third of the chord built on " 7 " (VIIm7 b5) and can be retained in progressing to the chord built on " 3 " (IIIm7) as its fifth and seventh, respectively. Also, notice that the " 4 " and " 6 " are fifth and seventh of the chord built on " 7 " and can each descend in progressing to the chord built on " 3 " as its root and third, respectively. This pattern is consistent: the " 3 " and " 5 " of the IIIm7 chord retain to become the fifth and seventh of the VIm7 chord and the " 7 " and " 2 " of the IIIm7 chord each descend to become the root and third of the VIm7 chord.
Roots become fifths by staying, fifths become roots by descending. Thirds become sevenths by staing, sevenths become thirds by descending. So, you could say that roots and fifths "trade" and thirds and sevenths "trade". Descend the fifth and seventh of each chord to become the root and third of the next.



## Fourteen Chord Sets of Voicings

Each two rows of chords below are a set. Play each cycle until you reach the chord at the first or second fret, then move that chord up twelve frets to continue the cycle. The "header" shows the chords by roman numeral in large type and possible connecting chords we'll study later listed between them in smaller type.

## Two Archetypal Chords and Four Qualities

The last chord in each 7362514 series (each row below) is an archetype major seventh. Learn the four versions in its family on scale tones IV, V, VI, VII, every other chord in reverse order. The two families of architypes will preview all chord voicings used in the fourteen chord set.

Memorize the order of qualities: VIIm7b5 IIIm7 VIm7 $\operatorname{IIm} 7$ V7 Ima7 IVma7. IIm7 is often altered to III7. If you memorize the type archetype sets of four chords and know the quality that's supposed to occur on each step, you can get very fluent on these voicings.

## Descend Five and Seven - Bass Note Trading Root and Fifth





* alternatives for this major 7:

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| VIIm7b5 |  |  | IIIm7 |  |  | optional III7 |  |  | VIm7 |  |  | $\operatorname{IIm} 7$ |  |  |  | V7 |  |  | Ima7 |  |  |  | IVma7 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bm7b5 VI |  |  | Em7 V |  |  | E7 V |  |  | Am7 V |  |  | Dm7 |  |  | III | G7 |  | III | Cma7 |  |  |  | Fma7 |  |  |
|  |  | 1 |  | 1 | (1) |  |  | (1) | (2) |  | 330 |  | 1 |  | (1) | (1) | 2 | 30 |  |  |  | (1) | (1) |  | $2(1)$ |
| (2) | 34 | (0) |  |  |  |  | 2 |  |  |  |  |  |  |  |  |  |  | 4 |  | 2 |  |  |  | 34 |  |
|  |  |  | 3 | $)$ | 4 | 30 | $)$ | 4 |  | () |  |  |  | 4 |  |  | ( |  |  |  |  |  |  | (1) |  |
|  | (1) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 4 |  |  |  |  |
| 1 | b7 b3 |  | 5 | 63 b | b7 1 | 5 | 3 | b7 1 | 1 | b7 | 635 | 5 | 63 | b7 | 1 | 1 | b7 | 35 | 5 | 3 | 7 | 1 | 1 | 73 | 35 |


*This voicing has its root and seventh on adjacent strings, making a minor second (half step or one fret) interval and can sound harsh. It can work when arpeggiated, or in an exotic style when appropriate.

|  | Bbma7 VIII |  |
| :---: | :---: | :---: |
| 001573 family <br> (see seventh chord inversions by string set) | (1) |  |
|  |  |  |
|  |  | 333 |
|  |  | (1) |


| b7 |  |
| :---: | :---: |
| Bb7 | VIII |
| (1) |  |
|  | 2 |
|  | 34 |
| - | (1) |

b7-b3
b7-b3-b5
Bbm7 VIII Bbm7b5 VIII


accumulate flats $\rightarrow$

005137 family
(see seventh chord inversions by string set)

| Ebma7 |  | VIII |
| :---: | :---: | :---: |
|  | 1 |  |
|  |  |  |
|  |  | 3 |
| (1) |  | (1) |

b7
b7-b3
b7-b3-b5
Ebm7 VII Ebm7b5 VII



* an alternatives for this major 7:



## Descend Five and Seven - Bass Note "Trading"Third and Seventh

Major sevenths with " 7 " in the bass are generally unusable. They can work when played briefly as part of a bassline.

Voicings with root and seventh on adjacent strings have minor second (half step or one fret) intervals and can sound harsh. They can work when arpeggiated, or in an exotic style when appropriate.

|  | Fma7 |  | X |
| :---: | :---: | :---: | :---: |
| 037150 family |  | (1) |  |
|  |  |  |  |
| (see seventh chord inversions by string set) | 2 |  |  |
| inversions by string set) | $\bigcirc$ |  | 30 |
|  |  | 4 |  |
|  | 37 | 71 | 5 |


| b7 |  |  |
| :---: | :---: | :---: |
| F7 |  | X |
|  | (1) |  |
|  |  |  |
| 2 |  |  |
| (1) | 3 | 4 (1) |
|  | 6715 | 5 |

b7-b3
b7-b3
Bbm7 X


accumulate flats $\rightarrow$
b7
Bbma7 X
073510 family
(see seventh chord inversions by string set)

Bb7 X

b7-b3-b5
Fm7b5 X
b3 b7 1 b5

b7-b3-b5
Bbm7b5 IX



| accumulate flats $\rightarrow$ |  |  | b7 |  | b7-b3 |  | b7-b3-b5 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Cma7 X |  | C7 X |  | Cm7 X |  | Cm7b5 X |  |  |
| 301570 family |  | (1) |  | (1) |  | 1) | (1) |  |  |
|  |  |  |  | 2 | 2 | 3 | 2 |  | 3 |
| (see seventh chord inversions by string set) | 2 | 33 | 3 | 4 |  | 4 |  |  |  |
|  |  | (1) |  | ( 0 |  | ( $)$ |  |  | () |
|  | 3 | 157 | 3 | 1567 | b3 | 1567 | b3 | 165 | 567 |

accumulate flats $\rightarrow$
$\mathbf{7 0 5 1 3 0}$ family
(see seventh chord inversions by string set)

b7
b7-b3
b7-b3-b5


Fm7 IX Fm7b5 IX




Ima7
IVma7


| accumulate flats $\rightarrow$ |  | b7 | b7-b3 | b7-b3-b5 |
| :---: | :---: | :---: | :---: | :---: |
|  | Cma7 X | C7 X | Cm7 X | Cm7b5 X |
| 001573 family | (1) | (1) 1 | (1) | (1) |
|  |  | 2 | 23 | 222 |
| (see seventh chord | 333 | 34 | 4 |  |
| inversions by string set | (1) | (1) | -10 | 0 (0) |
|  | 1573 | 15673 | $15 \mathrm{b7} 3$ | $16567 \mathrm{b3}$ |
| accumulate flats $\rightarrow$ |  | b7 | b7-b3 | b7-b3-b5 |
|  | Fma7 X | F7 X | Fm7 IX | Fm7b5 IX |
| 005137 family(see seventh chord | 1(1) ${ }^{1}$ | 1(1)1 | 1 | 1 1 |
|  |  | 2 | 2(3) | (2) |
|  | 3 |  | 4 | 4 |
| (see seventh chord inversions by string set) | (1) | (1) | $\square$ | -1] |
|  | 5137 | $513 \mathrm{b7}$ | 51 b 3 b 7 | b5 $163 \mathrm{b7}$ |




| accumulate flats $\rightarrow$ |  |  | b7 |  | b7-b3 |  | b7-b3-b5 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fma7 X |  | F7 | X | Fm7 | X | Fm7 | 65 X |
| 030157 family |  | (1) |  | (1) |  | (1) |  | (1) |
|  |  |  |  | 2 | 2 | 3 | 2 | 3 |
| (see seventh chord inversions by string set) | 2 | 3 | 3 |  |  |  |  | 4 |
|  | (1) | 4 (1) | (1) | 4 (1) | (1) | 4 (1) | (1) | (1) |
|  | 3 | 157 | 3 | 1567 | 63 | 1567 | b3 | 1 bs b7 |
| accumulate flats $\rightarrow$ |  |  | b7 |  | b7, b3 |  | b7, b3, b5 |  |
|  | Bbma7 X |  | Bb7 | X | Bbm7 | IX | Bbm7 | 5 IX |
| 070513 family <br> (see seventh chord inversions by string set) |  | 1 1 |  | 1 1 1 |  | 1 |  | 11 |
|  |  | (2) | 2 | (3) |  | 2 |  | 2 |
|  | 4 |  |  |  | 3 | (4) | 3 | (4) |
|  | (1) |  | (1) | - | I | $\square$ | + | $\square$ |
|  | 7 | 513 | 67 | 513 | b7 | 5163 | b7 | 5163 |


| VIIm7b5 |  | IIIm7 |  | optional III7 |  | VIm7 |  | IIm7 |  | V7 |  | Ima 7 |  | IVma7 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Em7b5 IX |  | Am7 VIII |  | A7 IX |  | Dm7 VII |  | Gm7 VI |  | C7 V |  | Fma7 V |  | Bbma7 III |  |
|  | (1) |  |  |  | $1{ }^{1} 11$ |  | (1) |  | 11 |  | (1) |  |  |  | (1) |
| 2 | 3 |  | 2 | 2 | (3) | 2 | 3 |  | 2 |  | 2 |  | (2) |  | 2 |
|  | 4 | 3 | (4) |  |  |  |  | 3 | (4) | 3 |  | 4 |  | 3 |  |
| (1) | (1) |  | $\square$ | (1) |  | (1) | $4(1)$ |  | $\square$ | (1) | $4(1)$ |  |  | (1) | $4(1)$ |
| b3 | $1 \mathrm{bs} \mathrm{b7}$ | 67 | 51 bz | b7 | 513 | b3 | $15 \mathrm{b7}$ | b7 | $51 \mathrm{b3}$ | 3 | $15 \mathrm{b7}$ | 7 | 513 | 3 | 1567 |



## Seventh Chord Inversions by String set

string set 5-4-3-2
generic family $\rightarrow 0015730 \quad 037150 \quad 051370 \quad 073510$

Cma7 III


$$
\text { Cma7 } \quad \text { V }
$$

Cma7 IX
Cma7 XII
major seventh




C7 IX
C7 XII




string set 6-4-3-2
generic family $\rightarrow \quad 107350 \quad 301570 \quad 503710 \quad 705130$


|  | Gm7b5 |  | II | Gm7b5 V |  | Gm7b5 |  | VIII | Gm7b5 |  | X |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| minor seventh flat five |  |  | 1 |  | 1) |  | 1 | (1) |  | 1 | 1 |
|  | (2) | 34 | (1) | 2 | 33 | 2 |  |  |  |  | 2) |
|  |  |  |  |  |  |  |  | 4 | 3 |  |  |
|  |  | (1) |  |  | () |  |  |  |  |  |  |
|  |  | 6763 |  | b3 | 16567 |  | 636 | 71 |  | 65 | b3 |


|  | Gdim. 7 II |  |  | Gdim. $7 \quad \mathrm{~V}$ |  | Gdim. 7 VIII |  | Gdim. 7 |  | XI |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| diminished seventh |  | 1 | 1 |  | (1) 1 |  | 1 1 1 (1) |  | 1 | 1 |
|  | (2) | 3 | (1) | 2 | 3 | 2 | 3 | 2 | (3) |  |
|  |  |  |  |  |  | 0 |  |  |  |  |
|  |  | D |  |  | () |  |  |  |  |  |
|  |  | 663 |  | 63 | 1656 |  | 6361 | 6 | 651 | 63 |

## string set 4-3-2-1

| generic family $\longrightarrow$ | 001573 | 003715 | 005137 |  | 007351 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| major seventh | Fma7 III | Fma7 VI |  | a7 X | Fma7 | XIII |
|  | (1) | (1) |  | i(1)i | (1) | $1(1)$ |
|  |  | 2 |  |  | 2 |  |
|  | 333 | (0) -3 |  | 3 | (1) |  |
|  | 1 (1) |  4  <br>  4  | (1) | (1) | - |  |
|  | 1573 | 3715 |  | 513 | 7 | 35 |


|  | F7 III | F7 VI | F7 X | F7 XIII |
| :---: | :---: | :---: | :---: | :---: |
| dominant seventh | (1) | (1) | 1(1)i | (0) 1.1711 |
|  | 2 | 2 | 2 | 2 |
|  | $3{ }^{3} 4$ | () 3 4 |  | () |
|  | (1) |  | (1) | -1-1 |
|  | 15673 | 36715 | $513 \mathrm{b7}$ | b7 351 |
| minor seventh | Fm7 III | Fm7 VI | Fm7 IX | Fm7 XIII |
|  | (1) | 1 (1) | 1 | (0) 1011 |
|  | 23 |  | $2(3)$ |  |
|  | 4 | (0) 304 | - 4 | () |
|  | (1) |    <br>    | - | -1 |
|  | 156763 | b3 6715 | $51 \mathrm{~b} 3 \mathrm{b7}$ | b7 6351 |

Fm7b5 III


Fm7b5 VI


Fdim. $7 \quad$ VI


Fdim. $7 \quad$ III


Fm7b5 IX


Fim. 7 IX

string set 5-3-2-1

| generic family $\longrightarrow$ | 010735 |  | 030157 |  | 050371 |  | 070513 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| major seventh | Cma7 | III | Cmat | V | Cm | 7 IX | Cma | 7 XII |
|  | (2) | 1 |  | (1) | () | (1) |  | 111 |
|  |  | 3 |  |  |  | 2 |  | (2) |
|  |  | (1) 4 | 2 | 3 |  | ) | 4 |  |
|  |  | -1] | (1) | 40 |  |  | (1) | -1 |
|  |  | 735 | - | 157 |  | 14 <br> 371 | 7 | 513 |


|  | C7 | III | C7 | V |  | C7 IX | C7 | XII |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dominant seventh | (1) | 23 |  | (1) | (1) | ) 1 \|l| (1) |  | 11 |
|  |  |  |  | - 2 |  | 2 | 2 | (3) |
|  |  | (1) 4 | 3 | $\square$ |  | 3() |  |  |
|  |  | 11] | (1) | $4(1)$ |  | 1 4 | (1) |  |
|  |  | 6735 | 3 | 1567 |  | $5 \quad 3 \mathrm{b71}$ | ${ }^{6} 7$ | 513 |
|  | Cm7 III |  | Cm7 V |  | Cm7 VIII |  | Cm7 XI |  |
| minor seventh | (1) | $2{ }^{2} 3$ |  | (1) | (1) | ) 1 年1 (1) |  | 1 |
|  |  | - 4 | 2 | - 3 |  |  |  | 2 |
|  |  | (1) |  |  |  | 30 | 3 | (4) |
|  |  | -1 | (1) | 40 |  |   4 | + | $\square$ |
|  | 1 | b7 635 | b3 | 1567 |  | 5 63671 | b7 | 5163 |


|  | Cm7b5 | II | Cm7b5 V |  | Cm7b5 VIII |  | Cm7b5 XI |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| minor seventh |     <br>    1 <br> $(2)$    |  |  | (1) | (1) | 1 (1) |  | $1{ }^{1} 1$ |
| flat five | (2) 3 |  | 2 | 3 | 2 |  | 2 |  |
|  | 4 |  |  | 4 |  | ) |  | (3) |
|  | (1) |  | () | 10 |  | 4 |  |  |
|  | 6763 |  | b3 | 65 b | 65 | 63671 | b7 | b5 1 b3 |

Cdim. 7 II
I
Cdim. 7 V
Cdim. 7 VIII
Cdim. 7 XI
diminished seventh


## Descend Seven (roots up in fourths)

## voice leading with three possibilities

Descending the seventh of a complete four-note seventh chord (with root, third, fifth and seventh) creates a chord with three possible names (synonyms):

- a chord with the same root name, but changed from seventh to sixth
- a scale tone seventh chord down a third (Ima7 descend seven becomes VIm7)
- a ninth chord without a root $(\mathrm{nr}=$ no root $)$ on the root up a fourth


## change seven to six

By descending the seventh of Ima7, IVma7, V7 or IIm7, by a scale tone, each of these seventh chords can be named instead as a sixth: 16, IV6, V6 or IIm6. In terms of the parent scale, Ima7 (1-3-5-7) changes to I6 (1-3-5-6), IVma7 (4-6-1-3) changes to IV6 (4-6-1-2), V7 (5-7-2-4) changes to V6 (5-7-2-3) and $\operatorname{IIm} 7(2-4-6-1)$ changes to $\operatorname{IIm} 6(2-4-6-7)$.

## major seventh to sixth (major or Lydian)


minor seventh to minor sixth (Dorian)


## dominant seventh to dominant seventh sharp five

In harmonic minor or Mixolydian b 6 , the sharp five can "proxy" as a flat six.


## synonyms down a minor third

Another function of the descended seventh on I, II, IV or VI can be to create relative minor chords, each named on a root down two scale steps. VIm7 is the relative minor of $\operatorname{Im} 7$ 7. $\operatorname{IIm} 7$ is the relative minor of IVma7. IIIm7 is the relative minor of V7. Also, IIm7 with its flatted seventh descended to six becomes $\operatorname{IIm} 6$ (2461) $=$ VIIm7b5 .

Changing a scale tone seventh chord to a scale tone sixth chord means the last note in the series of parent scale thirds is lowered by one number. Descending the seventh of Ima7 by a scale tone, 1-3-5-7 becomes 1-3-5-6. Descending the seventh of IVma7 by a scale tone, 4-6-1-3 becomes 4-6-1-2. Descending the seventh of V7 by a scale tone, 5-7-2-4 becomes 5-7-2-3. Descending the flat seven of $\operatorname{IIm} 7$ by a scale tone, 7-2-4-6 becomes 7-2-4-5.

## up a fourth to ninth no root

Descending the seventh of a chord one scale tone to its sixth creates a ninth chord with no root for the chord whose root is up a perfect fourth.

In "descend five and seven" voice leading, the fifth and seventh of the first chord each descended a scale tone to become the root and third of the next chord, respectively. The fifth descended to become the root of the next chord and the seventh descended to become the third of the next chord.

If the fifth does not descend to become the root of the next chord, the next chord will be without a root, but instead will have a note a scale tone above the root: " 2 ", since it didn't descend. The " 2 " can function as a ninth, but much be in the mid to upper range, not in the bass. In the bass, a ninth strongly weakens the sense of what is the root.

Since IIIm9 and VIIm7b5b9 are currently unaccepted chord qualities, the VIIm7b5 and IVma7 chords that would otherwise create them are not usable with the descend seven voice leading.

If the second chord in the pair of chords (with roots ascending in perfect fourths) is a VIm7, $\operatorname{IIm} 7, \mathrm{~V} 7$, Ima7 or IVma7 type, it will become a ninth no root (VIm9nr, IIm9nr, V9nr, Ima9nr, IVma9nr, where
" nr " means "no root"). If the chord on the third step of the major scale is altered to a dominant seventh chord, as it typically is, the VIIm 7 b 5 chord that preceeds it could descend its "b7" to "b6" (numbered in relation to the VII chord root) to become a III7b9nr.

Versions of Descend Seventh chord progressions are shown below for each of the seven steps of the major scale in perfect fourth order: 7-3-6-2-5-1-4 (VIIm7b5-IIIm7-VIm7-IIm7-V7-Ima7-IVma7 in seventh chords).

## VIIm7b5 to VIIm6b5 = III7b9 no root (Minor IIm7b5 to IIm6b5 = V7b9 no root)

In harmonic minor, these are IIm7b5 and V7b9. In There Will Never Be Another You, these chords occur as VIIm7b5 and III7b9 no root of the Eb major scale, which are $\operatorname{IIm} 7 \mathrm{~b} 5$ (Dm7b5) and V7b9 no root (G7b9nr) of the C harmonic minor scale.

| Dm7b5 V |  |
| :---: | :---: |
| (1) |  |
| 65 | 63 |
|  |  |



In terms of harmonic minor, lowering the b 7 in the $\operatorname{IIm} 7 \mathrm{~b} 5$ produces IIm6b5, which is the same as II diminished seventh or V7b9 no root.

Notice that the III7b9 is an altered version of the major scale tone IIIm7 chord, adding the b9.
The fifth of the parent major scale is raised to change the minor seventh chord to dominant seventh, then the b 9 can be added.

## IIIm7 to IIImb6 = VIm9 no root

In The Days Of Wine And Roses, these chords occur as IIIm7 (Am7) and VIm9 no root (Dm9nr) of the F major scale.


## VIm7 to llm6 = V9 no root

In All The Things You Are, bars one and two are Fm7 and Bbm7, which are represented below as VIm7 and IIm9 no root.


## IIm7 to IIm6 = V9 no root

In There Will Never Be Another You, bars five and six are Cm7 and F7, represented below as Cm7 and F9 no root.


## V7 to V6 = Ima9 no root

The Ima9 must have its root clearly identified aurally. In All The Things You Are, bars six and seven are G7 and Cma7, represented below as G7 and Cma9 no root.


## Ima7 to I6 = IVma9 no root

In All The Things You Are, bars four and five are Abma7 and Dbma7, represented below as Abma7 and Dbma9 no root.


## "Descend Seven" Progressions in Fourths with Change of Mode

Some progressions in perfect fourths require changing more than one note.

- Ima7 to $\operatorname{Im} 6=\operatorname{IV9}$ no root. Changing from Ima7 to IV9 requires not only a" 7 to 6 " voice movement, but also a flatted third. The I chord must change from a major to a minor basis.



## llm7 to llm6b5 = V7 b9 no root

In Misty, the second and third chords, Bbm 7 and Eb 7 b 9 progress to the fourth chord, Abma 7 as a IIm7 V7b9 Ima7 progression in the key of Ab. This darkens the mood of the major mode IIm7 V7 chord change by "borrowing" the V 7 b 9 from Ab harmonic minor.

In terms of harmonic minor, lowering the b 7 to 6 in the $\operatorname{IIm} 7 \mathrm{~b} 5$ produces $\operatorname{IIm} 6 \mathrm{~b} 5$, which is the same as II diminished seventh or V7b9 no root.


## Descend Seven Voicings with Root Movement in Perfect Fourths

## 015730 to 052370 voicings



*These voicings have minor second intervals (half step or one fret) and can sound harsh. They can work when arpeggiated, or in an exotic style when appropriate.

## 107350 to 503720 voicings

| IIIm7 | VIm9 no root | IIm7 | V9 no root | Ima7 |
| :---: | :---: | :---: | :---: | :---: | IVma9 no root



III7b9 no root
$V \operatorname{Im} 7$
b7 to $6 \longrightarrow$

IIm9 no root
V7
b7 to $6 \longrightarrow$

Ima9 no root


## 001573 to 005237 voicings



| VIIm7b5 | III7b9 no root |  | VIm7 | IIm9 no root | V7 | Ima9 no root |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| b7 to $6 \longrightarrow$ |  |  | b7 to $6 \longrightarrow$ |  | b7 to $6 \longrightarrow$ |  |  |
| Am7b5 VII | D7b | 9 nr VII | Gm7 V | Cm9nr IV | F7 III | Bbma9nr III |  |
| (1) |  | 1() 2 | (1) | 1 | (1) |  | 1() 1 |
| 222 |  | $3{ }^{3} 4$ | 22 | $2(1)$ | - 2 |  |  |
|  |  |  | 3 | 3 | 34 |  | $3{ }^{1}$ |
| () | () | (1) | ( ${ }^{\text {d }}$ | 4 | (1) | (1) | 1 (1) |
| $16567 \mathrm{b3}$ |  | 562367 | $15 \mathrm{b7}$ b3 | $5263 \mathrm{b7}$ | $15 \mathrm{b7} 3$ |  | 5237 |

*These voicings have minor second intervals (half step or one fret) and can sound harsh. They can work when arpeggiated, or in an exotic style when appropriate.

## 010735 to 050372 voicings

| IIIm7 | VIm9 no root | IIm7 | V9 no root | Ima7 |
| :---: | :---: | :---: | :---: | :---: |$\quad$ IVma9 no root




* an alternative for this major 9 no root is this $6 / 9$ no root:

| $\mathrm{Bb} 6 / 9 \mathrm{nr}$ VI |  |
| :---: | :---: |
|  | 1 |
| $2($ | ) 34 |
|  |  |
|  |  |
| 5362 |  |



* a strum-able alternative for this seventh chord uses five strings:

| C7 |  | III |
| :---: | :---: | :---: |
| (1) | 1 | 1 |
|  |  |  |
|  | 3() 4 |  |
|  |  |  |

descend seven on Autumn Leaves chord changes


Am7 VII D9nr VII Gma7 V Cma9nr V


15 b 7 b 3

$$
=\mathrm{Am} 6 \text { or F\#m7b5 }
$$



$=\mathrm{G} 6$ or Em7

$\begin{array}{ll}5 & 237\end{array}$

F\#m7b5 VII
$=\mathrm{Am} 6$ or D9nr

b3 b7 1 b5

B7b9 VII Em7
= $\mathrm{F} \#$ dim. 7 or $\mathrm{F} \# \mathrm{~m} 6 \mathrm{~b} 5$

b7 35 b2

b3 b7 15

b7b3 51


Am7 X
D9nr X
Gma7 VII Cma9nr VII
$=\mathrm{G} 6$ or Em7
F\#m7b5 IX
$=A m 6$ or D9nr

$16567 b 3$

B7b9 VIII $=\mathrm{F} \# \mathrm{dim} .7$ or $\mathrm{F} \# \mathrm{~m} 6 \mathrm{~b} 5$

$5 b 23 b 7$

Em7 VII


15 b 7 b 3

b3 b7 15


Gma7 VIII Cma9nr VIII


b5 1 b3 b7
F\#m7b5 X

B7b9 X Em7 VIII $=\mathrm{F} \# \operatorname{dim} .7$ or $\mathrm{F} \# \mathrm{~m} 6 \mathrm{~b} 5$

b2 5 b7 3

$\begin{array}{lll}5 & 1 & b 3 b 7\end{array}$

IIm7 V9nr (IIm6) Ima7 IVma9nr $\quad$ VIlm7b5 | III7b9nr |
| :---: |
| (IIm6b5) |$\quad$ VIm7



## descend seventh cycles on ever other chord in perfect fourths: 7362514

Descend seven voice leading: the root of each chord remains on the same note to become the fifth of the next chord. The third remains to become the seventh of the next chord. The fifth remains to become the ninth of the next chord. The seventh descends to become the third of the next chord.

## descend seven on the VIIm7b5, VIm7 and V chords

VIIm7b5 to III7b9 no root, VIm7 to $\operatorname{IIm} 9$ no root, V7 to V6 = Ima7 to IV9 no root.


## Descend seven on the IIIm7, IIm7 and Ima7 chords

IIIm7 to VIm9 no root, $\operatorname{IIm} 7$ to V9 no root, Ima7 to IV9 no root

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## roots down in fourths: ascend root and third

By playing the descend five and seven cycle shown earlier in reverse order, the root movement is down in fourths (instead of up in fourths). That is to say the root name in each case moves down as fourth. In this voice leading, the root and third both move up a scale step, while the note that names chord moves down a fourth. Roots down in fourths progressions uses the cycle of root names 4152637

This is essential in preparing for the next section, the Secondary Dominant Cycle, in which each target chord is preceeded by one whose root name is down a fourth.


## COMBINING STEPWISE AND FOURTHS

Stepwise and fourths root movement can be combined. It is most familiar when the last chord before the target I chord is a V chord. So, the two progressions that generates are IV-V-I and VI-V-I.

In minor mode, the parent scale's IVma7 III7-VIm7 (Fma7-E7-Am7) becomes the minor key scale bVI7-V7-Im7. IIIm7 of the parent scale (IIIm7 of C) is commonly changed to III7 (of C), which becomes V7 of the key (V7 of Am).

The darker and bluesier parent scale IV7-III7-VIm7 (F7-E7-Am7) of the parent scale is bVI7-V7-Im7 in the key scale (Am). The IV7 (F7 of C) of parent scale is bVI7 of the key scale (F7 in Am) and is usually harmonized with melodic minor mode IV (Lydian flat seven).

The organization of the voicings shown here is based on descend five and seven voicings. For voicings organized by the top voice, see the IV-V-I Cadence Library and the VI-V-I Cadence Library.

## String Set 5-4-3-2

IVma7-V7-Ima7



VIm7-V7(b9)-Ima7


V7

V7b9
G7b9 VII




b7 b3 51


15673

Ima7

$\begin{array}{llll}5 & 1 & 3 & 7\end{array}$

b7 b3 51

Ima7
Cma7 III


Ima7
Cma7 III


Ima7


## bVIma7-V7-Im7

## bVIma7-V7(b9)-Im7

bVIma7
Fma7 VIII


Im7



Im7
bVI7


Im7
Am7 V


676351


Am7 V


String Set 6-4-3-2

IVma7-V7-Ima7


VIm7-V7b9-Ima7


## THE SECONDARY DOMINANT CYCLE

Apply a melodic curve implied by the graphics below to each chord in the secondary dominant chord cycle. The repeating pattern for the cycle is up a scale tone third to a dominant seventh, then up a perfect fourth to a scale tone triad (the seventh letter of the scale will be represented with bVII major). In C, this would be: C-E7-Am-C7-F-A7-Dm-F7-Bb-D7-G-B7-Em-G7, then repeat.

Represent seventh chords with their triad basis $(1-3-5)$ and substitute the $b 7$ for a root only if the root can still be represented at least once. Learn to alter major scale tone chords to make dominant sevenths on every step of a major scale and be aware of the changes that makes in the major scale.

## Conforming Modes to the Relative Major and Minor System

To practice establishing temporary or permanent keys on each step of the major scale, each of the chords that follow a seventh chord in the Secondary Dominant Chord Cycle is standardized to a major (Ionian) or minor (Aeolian) scale. This means melodies for major chords will use a major scale on their root and minor chords will use Aeolian mode (also called natural minor). Aeolian mode places a tone center on the sixth step of a major scale, so D Aeolian has the same notes as the F major scale and B Aeolian has the same notes as the D major scale. I usually make an exception with scale tone five and leave it in Mixolydian mode. So a Secondary Dominant Cycle for C major, would use the C major scale for a G major chord, but the scale would use the mode name "G Mixolydian".

For scale tone seven, use a major chord on flat seven. Use a major scale on the root of the chord on flat seven. In Secondary Dominant Cycle for C major, the seventh step would be a Bb major chord with a Bb major scale.

## SUBSTITUTE CHORDS

## Chord on the Third

In effect, this adds an upper harmony. C and $\mathrm{Em}=\mathrm{Cma} 7 . \mathrm{C}$ and $\mathrm{Em} 7=\mathrm{Cma} 9 . \mathrm{Dm}$ and $\mathrm{F}=\mathrm{Dm} 7$. Dm and $\mathrm{Fma} 7=\mathrm{Dm} 9$.

## Chord on the Sixth

Similarly to the chord on the third above, this adds a harmony below the original root.

## Flat Five Substitute

Flat five substitutes replace a dominant type chord with another dominant type chord a root a flat fifth above or below (which produces the same note) the chord they replace.

When three consecutive chords have root movement in perfect fourths, the first and third chords have roots a whole step (two frets) apart. When, in such a case, the first and third chord are of the same quality, the middle of the three chords could be replaced with one that constitutes a chromatic root movement between three chords of the same quality. This commonly occurs by replacing IIIm7-VIm7IIm7 with IIIm7-bIIIm7-IIm7. Another is V-I-IV, replaced with V-bV-IV. In either case the substitute chord is a flat five substitute.

## Diminished Seventh Substitutes

## stepwise diminished voicing

Diminished seventh chords progress best from a whole step above or a half step below the chord they precede.

## chromatic diminished voicing

Diminished seventh chords can vary the quality of a dominant type chord by playing a diminished seventh version before it. They are commonly used in the progression I7-I07-IIm7b5-I, or its reverse order: $\mathrm{I}-\mathrm{IIm} 7 \mathrm{~b} 5-\mathrm{I} 7$ 7-I7.

The voice leading in $\mathrm{I} 7-\mathrm{I} 7$ - $-\mathrm{IIm} 7 \mathrm{~b} 5-\mathrm{I}$ is that the second chord descends the three notes other than the root chromatically (by one fret), then the third chord descends the notes other than the root chromatically again. Finally, the voices move to the nearest tones of a I major chord.

## Turnarounds

## alternate chords make turnarounds more interesting

The IIIm7-VI7-IIm7-V7 or III7-VI7-II7-V7 cadences are often voiced where the II-V chords are voiced up a whole step for the III-VI chords.

| III | VI | II | V | I |
| :---: | :---: | :---: | :---: | :---: |
| IIIm7 | VIm7 (or VI7) | $\operatorname{IIm} 7$ (or II7) | V7 | I |
| IIIm7 (or IIIm765) | VI7 or III ${ }^{\circ} 7$ | $\operatorname{IIm} 7$ (or IIm765) | V7 or $\mathrm{II}^{\circ} 7$ | I |
| IIIm7 | bIIIm7 (or biII7) | IIm7 | bII7 or V7 (or Vm7) | I |
| III7 | VIm7 | IIm7 | V7 | I |
| \# $\mathrm{V}^{\circ} 7$ (III769 nr) | VIm7 | IIm7 | V13/b9 (b9 in bass) | I |

## CHROMATIC VOICE LEADING

## A Chromatic Chord Between Chords of the Same Quality

Chromatic chords between chords of the same quality is used extensively in Building Cadences With Linear Harmonized Bass.

Tertian triads, quadrads and pentads are constructed in thirds (every other scale tone). Tertian triads are three-note chords built it thirds, teritian quadrads are four-note chords built in thirds and tertian pentads are five-note chords.

There are a few instances of triads or seventh chords built on two consecutive scale tones of seven-tone (heptatonic) scales. A chromatic chord may be inserted between two chords of the same quality whose roots are a whole step apart, filling a whole step with three chords progressing in half steps of the same quality. Parallel voicing is usually used, being the common practical choice. With this voicing, all tones move up and down chromatically (a half step at a time).

Major scale has the following consecutive chords of the same quality: IIm and IIIm; IIm7 and IIIm7. Melodic minor scale has many consecutive chords of the same quality: Im and IIm; IV and V major; IV7 and V7; IV9 and V9; VIdim and VII dim; VIm7b5 and VIIm7b5.

The only consecutive pentad in common use is the IV9 and V9 in melodic minor. ascending form. Melodic minor ascending is major scale with flat three. In classical music and sometimes elsewhere, the descending form of melodic minor is the same as Aeolian or natural mnior (1-b7-b6-5-4-b3-2-1). In jazz , the ascending form (majro flat three) is used for both ascending and descending.

Enharmonic notes are those with optional names with accidentals, such as $\mathrm{F} \#$ and Gb or Cb and B . As with single notes, sharps the middle note of the three chromatic tones is sharp in ascending and flat in descending. When a natural note is a choice for the middle note, such as $\mathrm{C}-\mathrm{B}-\mathrm{Bb}$ versus $\mathrm{C}-\mathrm{Cb}-\mathrm{Bb}$, the natural choice is best ( $\mathrm{C}-\mathrm{B}-\mathrm{Bb}$ preferred over $\mathrm{C}-\mathrm{Cb}-\mathrm{Bb}$ ).

## $\operatorname{IIm}(\mathrm{m} 7, \mathrm{~m} 9)$ and $\operatorname{IIIm}(\mathrm{m} 7, \mathrm{~m} 9)$

In either case, a chord progression may connect IIm and IIIm or IIm7 and IIIm7 chords with a chord of the same quality in-between.

## connecting IIm and IIIm, ascending and descending


connecting IIm7 and IIIm7, ascending and descending

| IIm7 |  | \#IIm7 |  | IIIm7 |  | IIIm7 |  | bIIIm7 |  | IIm7 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dm7 | V | D\#m7 | VI | Em7 | VII | Em7 | VII | Ebm7 | VI | Dm7 | 7 |
| (1) | 1 | (1) | 1 | (1) | 1 | (1) | 1 | (1) | 1 | (1) | 1 |
|  | 2 |  | 2 |  | 2 |  | 2 |  | 2 |  | 2 |
|  | () | 3 | () | 3 | (1) | 3 | D | 3 | () |  | $3(0)$ |
|  | - |  |  |  | - |  |  |  |  |  |  |

IIIm9 is not commonly used, since the ninth would be a \#4 of the parent scale. When it is used, it follows the same rules. Doesn't the progression below sound a little odd?

## connecting IIm9 and IIIm9 (uncommon), ascending and descending



## IV $(\mathbf{7}, 9)$ and $\mathbf{V}(\mathbf{7}, 9)$ triads

## connecting IV and $\mathbf{V}$, ascending and descending

These occur in major scale and in melodic minor (ascending form).

1513

1513


IV


## connecting IV7 and V7, ascending and descending

These occur in melodic minor and in progressions with changing modes, where the V chord is key scale major (chord scale V Mixolydian) and the IV chord is key scale Dorian (chord scale IV Mixolydian).

| IV7 | \#IV7 | V7 | V7 | bV7 | IV7 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| F7 VIII | F\#7 IX | G7 X | G7 X | Gb7 IX | F7 VIII |
| (1) 1 | (1) 1 | (1) 1 | (1) 1 | (1) 1 | (1) 1 |
|  |  |  |  |  |  |
| 304 | 3() 4 | $30{ }^{3}$ | 3() 4 | 3014 | $3(0) 4$ |
| - | - | - | - 1 |  |  |
| 15673 | 15673 | 15673 | 15673 | 15673 | 15673 |

## connecting IV9 and V9 (melodic minor = major b3), ascending and descending

Like the IV7 and V7 chromatically connected progressions above, these occur in melodic minor and in progressions with changing modes, where the V chord is key scale major (chord scale V Mixolydian) and the IV chord is key scale Dorian (chord scale IV Mixolydian).

| IV | \#IV | V | V | bV | IV |
| :---: | :---: | :---: | :---: | :---: | :---: |
| F9 VII | F\#9 VIII | G9 IX | G9 IX | Gb9 VIII | F9 VII |
| 1 | 1 | 1 | 1 | 1 | 1 |
| (2) 333 | (2) 333 | (2) 333 | (2) 333 | (2) 333 | (2) 333 |
|  |  |  |  |  |  |
| (1) | (1) | (1) | (1) | (0) | ( ${ }^{\text {( }}$ |
| 136725 | 136725 | 136725 | 136725 | 136725 | 136725 |

## melodic minor VI and VII

These occur in melodic minor. VI diminished or VIm7b5 can be used as a secondary on the third of a melodic minor IV chord (IV9 no root is VIm7b5). Likewise, VII diminished or VIIm7b5 can be used as a secondary on the third of a melodic minor IV chord (IV9 no root is VIm7b5).

## connecting VI dim. and VI dim., ascending and descending

VI dim.
(IV7 no root)


1 b 3 b 5
F7 no root IV
\#VI dim.
(\#IV7 no root)
A\# dim. V


F\#7 no root V


3567

VII dim.
(V7 no root)
B dim VI


1 b 3 b 5
G7 no root VI


3567

VII dim.
(V7 no root)
B dim VI


1 b 3 b 5
G7 no root VI


3567
bVII dim.
(bV7 no root) Bb dim. V


1 b3b5
Gb 7 no root V


3567

VI dim. (IV7 no root) A dim. IV


1 b 3 b 5
F7 no root IV


3567

## connecting VIm7b5 and VIm7b5, ascending and descending



F9 no root II



A\#m7b5 III


Bm7b5 IV


F\#9 no root III G9 no root IV


VII dim.
(V9 no root)
Bm7b5 IV


G9 no root IV

bVII dim. (bV9 no root)

Bbm7b5 III


Gb9 no root III


VI dim. (IV9 no root)

Am7b5 II


F9 no root II


## Diminished Ascending Chromatic Voice Leading

Ascending a whole step root movement with chords of different quality can use a diminished seventh chord rooted on the chromatic note between.

## IV7-\#IV7-I

\#IV diminished seventh (\#IV7) is commonly played in jazz and jazz blues during the later part of a IV chord. Since \#IV07 is equivalent to $\mathrm{I}^{\circ} 7$, it creates parallel chromatic voice leading back to the I 7 chord. In $\mathrm{I}^{\circ} 7$, three and five are flat; seven is double flat $(\mathrm{bb} 7=6)$. Each of the tones of the $\mathrm{I}^{\circ} 7\left(=\# \mathrm{IV} \mathrm{V}^{\circ} 7\right)$ move up a half step except the root: b 3 to $3, \mathrm{~b} 5$ to 5 and bb 7 to b 7 .

This same voice leading occurs by using IV7b9, since IV7b9 no root is the same as \#IV⒎ Because of this, an improvised accompaniment can use \#IV diminished seventh during the later part of IV7 even if the bass player stays on the root of IV. If the bass player is playing the root of IV and a chordal instrument plays \#IV ${ }^{\circ} 7$, the composite is IV7b9.

See the IV7-\#IVㅁ-I7 Library.

## IVm7-\#IV07-Im7

Similar to the IV7-\#IV $07-\mathrm{I}$ progression above, this chromatically voice-leads the \#IV 07 to I7. The third, fifth and seventh each ascend chromatically. In this case, the \#IV07 is not a subset of a larger IV chord. More care should be taken to play what is compatible with the rest of the arrangement and not indiscriminately use a $\# \mathrm{IV}^{\circ} 7$ when IVm 7 is played by the other musicians.

See the IVm7-\#IVㅁㄱ-I7 Library.

## IIm7-\#||7-I7/3

This is an alternate chord progression for the common IIm7-V7-Ima7 (or I7) progression. It is not a usable substitute chord progression and should not be played at the same time that other musicians play IIm7-V7-I7. The second chord would be in direct conflict with the V7 chord. To illustrate this, V7b9 contains all of the notes of $\mathrm{II}^{\circ} 7$, all of which are a half step below the tones of \#II ${ }^{\circ} 7$. This would create an unacceptable dissonance.

See the Major $\operatorname{IIm} 7(\mathrm{~b} 5)-\# \mathrm{II}^{\circ} 7-\mathrm{I} 7$ Library.

## Descending Diminished Chromatic Voice Leading Within One Chord

## See Descending Diminished.

## Descending Chromatic Voices

Descending whole step root movement with chords of different quality can be usually use a dominant seventh type chord rooted on the chromatic note between.

## II-bII-I

See the II-bII-I Library.

II-IIP7-I

## Chromatic Movement of a Single Voice

minor chromatic descent root to sixth
See Chromatic Descending Minor.
major chromatic descent root to sixth
dominant seventh chromatic flat seven to five
major or minor with chromatic between 5 \& 6

## CADENCE LIBRARIES

## II-V-I LIBRARY

Playing the major scale-tone 7-3-6-2-5-1 chord progression is a great way to practice minor II-V-I and major II-V-I (251)in one fell swoop. Minor II-V-I is derived from the parent major scale tone chords VIIm7b5-IIIm7-VIm (Bm7b5-Em7-Am7). By establishing the key on VIm of the major scale, VIIm7b5-IIIm7-VIm becomes IIm7b5-V7-Im (Bm7b5-E7-Am7). So, Bm7b5-E7-Am7 is VIIm7b5-III7-VIm7 in the C major parent scale and Bm7b5-E7-Am7 is IIm7b5-V7-Im7 in the A minor key scale.

III is commonly changed from III minor (Em in the key of C) to III major (E) or dominant (E7).
This changes the major scale-tone original chords to VIIm7b5-IIIm7-VIm, which are IIm7b5-III7$\operatorname{Im} 7$ in the key of VIm. Common alterations of the parent major III chord, as used in a minor key are \#5, b9, \#9 (E7\#5, E7b9, E7\#9, or combinations such as E7\#5b9 or E7\#5\#9).

Here are links to various ways to finger 7-3-6-2-5-1:
Descend Five and Seven Voicings
7-3-6-2-5-1-4 Common Tone
Major Scale-Tone Seventh Chords in Perfect Fourths, Three Note Voicings
Major Scale-Tone Seventh Chords in Perfect Fourths, Four-Note Voicings
II-V-I Top Voice Leading links: Common Tone, Best Three-Note, E/D form, C/A Form, G Form

## II bII I LIBRARY

Here are links to other related chapters or sections, followed by the library of fingerings.
Substitution/Flat Five Substitute
II-V-I Top Voice Leading. II-bII-I is on the right side of most pages in the section. Note than the bIIma7 chords can be used in place of bII7 by using bII Lydian instead of bII Lydian dominant.
Melodically Superimposed Cadences/Four Types Of Superimposed Cadences/Flat Five Substitute Chord Progression
Abbreviating and Elaborating Chord Progression/Cadences in Fourths with Optional Flat Five Substitutes".

## II-bII-I String Set 6-4-3-2



## II-bII-I String Set 5-4-3-2




II-bII-I String Set 5-3-2-1


## II-bII-I String Set 4-3-2-1


alternate targets:




## IV7-\#IV07-I LIBRARY

## Dominant Seventh Target (Blues IV7 to I7 or V7 to I7)

IV7-\#IV07-I7 with key scale common tone 1 on top

b3 61 b5
C7 VIII

b7 351
F7


F7 X

F\#dim7 XI

6361 b5
C7 VIII


## IV7-\#IV07-I7 with key scale 1-6-5 on top

| F9 VII |  | F\#dim7 V | VIII | C7 | VIII |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | T | 1 |  | (1) | I | 1 (1) |
| (2) | 333 | (2) |  |  | 2 |  |
|  |  | 3 | 4 |  | 3 () |  |
|  | (1) | (1) |  |  |  |  |

## IV7-\#IV07-I7 with key scale 2-b3-3 on top



## IV7-\#IV07-I7 with key scale 4-b3-1 on top



IV7-\#IV07-I7 with key scale 4-\#4-5 on top





3 b7 1

F\#dim7 VII

b7 35


b3 61


IV7-\#IV07-I7 with key scale 5-\#4-5 on top


13672


6 b3 b5 1


## IV7-\#IV07-I7 with key scale 5-6-b7 on top

| F9 | II |  |  |
| :--- | :--- | :--- | :--- |
|  |  | 1 | 1 |
|  | 2 |  |  |
|  | 2 |  | 3 |
|  |  |  | 4 |
|  |  |  |  |

13672
F\#dim7 IV

|  |  |  | 2 |
| :--- | :--- | :--- | :--- |
|  | 2 |  |  |
|  |  | 3 | 4 |
|  |  |  | 4 |
|  |  |  |  |

$1 \mathrm{b5} 6 \mathrm{~b} 3$

513 b7

13672
F\#dim7 VIII C7 IX

$1 \mathrm{b5} 6 \mathrm{~b} 3$

$\begin{array}{lll}5 & 1 & 3\end{array}$

## IV7-\#IV07-I7 with key scale b7-6-5 on top

F7sus4 III

|  | 1 |  |  |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
|  |  |  | 2 |
|  |  | 3 |  |
|  |  |  |  |
|  |  |  |  |

F\# dim7 IV


F7sus4 VIII


F\#dim7 VIII


IV-\#IV7-I, I-VI-II-V Targets - D/C Form for the Key of F

1735
C7 III
15673


C\#7 III


1656 b3
Gm7 III

$\begin{array}{llllll}5 & 1 & b 3 & 67\end{array}$


Fma7 III


IV-\#IV07-I, I-VI-II-V targets - C/A Form for the Key of F


$6 b 3 b 51$

C7


b3 61 b5
Gm7 VI

F7 VI

F\# ${ }^{\circ}$ 7 V



IV-\#IV-dim7-I, I-VI-II-V targets - G/E Form for the Key of F

Bbma7 X


C13 XIII

b7 361


6 b3 b5 1
C\# 07 XII Gm7 XII


6 b3 b5 1

b3 b7 15

Gm7 X


15 b 7 b 3
F7 XIII

b7 35

G\#07 X


165663


F\# ${ }^{\circ}$ 7 XIII

$1663 b 5$


## Dorian Minor 7 Target (V7 to IIm7 types)

## IV7-\#IV07-I7 with key scale common tone 1 on top


b3 61 b5

b7b3 5

F\#dim7 I


| F7 |  | VI |
| :--- | :--- | :--- |
|  |  | 1 |

36715
F7 X


F\#dim7 XI Cm7 VIII

b3 6165

b7b3 51

## IV7-\#IV07-Im7 with key scale 1-6-5 on top

F9 VII F\#dim7 VIII Cm7 VIII

$567 b 35$

## IV7-\#IV07-Im7 with key scale 2-b3-3 on top



IV7-\#IV07-Im7 with key scale 4-b3-1 on top
F13 I $\quad$ F\#dim7 II $\quad \mathrm{Cm} 7 \quad$ I


IV7-\#IV07-Im7 with key scale 4-\#4-5 on top

b7 361
F\#dim7 V Cm9 VII

6 b3 b5 1

b3 b7 25

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F7 VI

$3 \mathrm{b7} 1$
F\#dim7 VII



b3 61

b7 b3 5

## IV7-\#IVo7-Im7 with key scale 5-\#4-5 on top



## IV7-\#IVo7-Im7 with key scale 5-6-b7 on top

| F9 | II |  |  |
| :--- | :--- | :--- | :--- |
|  |  | 1 | 1 |
|  | 2 |  |  |
|  | 2 |  | 3 |
|  |  |  | 4 |
|  |  |  |  |

13672
F\# dim7 IV


F\#dim7 VIII Cm7 VIII


## IV7-\#IV07-Im7 with key scale b7-6-5 on top



|  | 7 IV |  |
| :---: | :---: | :---: |
|  | (1) | 2 |
|  | 3 |  |
|  |  |  |
|  |  | ( $)$ |


| Cm 7 |  | III |
| :---: | :---: | :---: |
| (1) | 1 | 1 |
|  |  | 2 |
|  | 3 () |  |
|  | 1 - |  |

F7sus4 VIII


F\#dim7 VIII Cm7 VIII



## IVm7-\#IV07-Im7 LIBRARY

IVm7-\#IV07-Im7 with key scale common tone 1 on top

Fm7 VI F\#dim7 VII Cm7 VIII

b76351

Fm7 $\quad \mathrm{X}$


b3 61 b5


F\# $\operatorname{dim} 7$ XI


b7 b3 51

$1 \quad 67635$

$16 \mathrm{b3} \mathrm{b5}$

$\begin{array}{llll}5 & 63 b 71\end{array}$

IVm7-\#IV07-Im7 with key scale common tone b3 on top


## IVm7-\#IV07-Im7 with key scale 4, \#4, 5 on top


b7 b3 51

F\# $\operatorname{dim} 7 \quad \mathrm{~V} \quad \mathrm{Cm} 7$


6 b3 b5 1


Fm7 I

b7 b3 51

Fm7 VI

F\#dim7 I
$6 b 3 b 51$



b3 b7 1


$1 \quad 67635$

## IVm7-\#IV07-Im7 with key scale b6, 6, b7 on top



|  |  | 1 | 2 |
| :--- | :--- | :--- | :--- |
|  | 2 | 1 |  |
|  |  | 3 | 3 |
|  |  |  | 4 |
|  |  |  |  |
|  |  |  |  |


| Cm |  | IV |
| :---: | :---: | :---: |
|  | 1 |  |
|  | 2(3) |  |
|  |  | 4 |
|  |  |  |

Fm7
VIII



## MAJOR IIm7(b5)-\#II07-I LIBRARY

## Major IIm7(b5)-\#II07-I Starting with Key Scale Tone 1 on Top

 major-II-\#II07-I with key scale common tone 1 on top
D\#dim7 VII C7

Dm7b5 VI

b7 351

$6 \mathrm{b3} 651$
VIII

D\# dim7 XI

Dm7b5 X

D\# dim7 XI


## Major IIm7(b5) \#II7 I Starting with Key Scale Tone 2 on Top

## major-II-\#II07-I : 2-\# 2-3 on top


b7 b3 51

II
D\# dim


1 b 56 b


15673

Dm7b5 II

b7b3b5 1
II

15 b7 3
Dm7b5 IX


1 b5 6 b3
C7 III

15673
X
D\# dim7 X
$6 b 3 b 51$


6 b 3 b 51


15 b7 3

## Major IIm7(b5) \#|lo7 I Starting with Key Scale Tone 4 on Top

## major-II-\#II07-I : 4-\#4-5 on top



Major IIm7(b5)-\#II07-I with Key Scale Common Tone 6 on Top major-II-\#IIO7-I I with common tone 6 on top
Dm7 VII


b3 b7 15

b3 61 b5
5136

## DESCENDING DIMINISHED LIBRARY

## I7-I dim7-IIm7b5-I major, 3-Note by String Set

The third chord is voiced as a m 7 b 5 , but is conceptually a m 7 b 5 , since the idea is to have the root of the first and last chord in every chord.

## I7-\#| dim7-IIm7-I major, close-voiced, strings 3-2-1



I7-\#| dim7-IIm7-I major, close-voiced, strings 4-3-2


## I7-\#I dim7-IIm7-I major, close-voiced, strings 5-4-3



## I7-\#| dim7-IIm7-I major, close-voiced, strings 6-5-4



17-\#I dim7-IIm7-I major, close-voiced, strings 1-4 (small range of frets)


I7-\#| dim7-IIm7-I major, close-voiced, strings 2-5 (small range of frets)

| Bb7 | IX |
| :---: | :---: |
|  | 1 |
|  | 2 |
|  | 0 |
| 4 | 4 |





17-\#I dim7-IIm7-I major, open-voiced, strings 1-5

| D7 | XIV |  |
| :---: | :---: | :---: | :---: |
|   1 1 <br> 2    <br>     <br> $(0)$    <br> b7 5 3  |  |  |



I7-\#| dim7-IIm7-I major, open-voiced, strings 2-6

| A7 |  | XIV |
| :---: | :---: | :---: |
|  |  | 0 |
| 2 | 1 | 1 |
| 2 |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
| b7 | 5 | 3 |





## I major-I dim7-IIm7b5-I major, 4-Note by String Set

## I major-I dim7-IIm7b5-I major, strings 4-3-2-1


b7 351

| $\mathrm{F} \operatorname{dim} 7$ |  |  | XII |
| :---: | :---: | :---: | :---: |
|  | 1 |  | 2 |
| () |  | 3 | (4) |
|  |  |  |  |
|  | (1) |  |  |





| $\mathrm{F} \operatorname{dim} 7$ |
| :--- |
|  1  IX <br>  1 2 2 <br>   $(3)$ 4 <br>     <br>     <br>     |




## I major-I dim7-IIm7b5-I major, strings 5-4-3-2



Bb7 VII


## I major-I dim7-IIm7b5-I major, strings 5-3-2-1



I major-I dim7-IIm7b5-I major, strings 6-4-3-2



## I6-I07-IV6 and V6-V07-I6

## I7-I dim7-IIm7b5-(IVm6)-I(7)

## Im7-I dim7-IIm7b5 (IVm6)-Im(7)

## CHROMATIC DESCENDING MINOR LIBRARY

| Am | V | Am(ma7) IV |  |  | Am7 |  | III | Am6 II |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 33 (3) |  |  | 2 |  |  | 1 |  |  | (1) | $\underline{1}$ |
|  | - | $\bigcirc$ |  | 4(1) |  |  |  |  |  |  |  |
|  |  |  |  |  | () |  | $4(1)$ |  |  |  |  |
|  | - 1 |  | (1) |  | - |  |  | (1) | ) |  | 4 |



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## CHROMATIC ASCENDING MINOR LIBRARY

The versions shown here each ascend chromatically from the fifth to the flatted seventh of a minor chord. For the "James Bond" version, change the last chord to the same as the second chord:

## four-note ascending chromatic from the fifth of a minor chord



## James Bond version


b3 515


Fma7 II


## with the alternate name for " $F$ "

The traditional name for a minor chord with a chromatically raised fifth is a major chord named after the "\#5" note (" $F$ ").


Am6 II
Am7 II


Four-Note Ascending Versions



## CHROMATIC DESCENDING MIXED MODE LIBRARY

This combines two earlier progressions. The first four chords in each progression below are the same as the progression shown in Chromatic Descending Minor Library. The last four chords in each progression below are the same those in the Chromatic Ascending Minor Library, but in reverse order.


## (b)VI-V-I LIBRARY

## Major bVI-V-I Starting with Key Scale Tone b3 on Top

## major bVI V I: b3-2-1 on top


Ab9 nr III

major bVI V I: b7-6-5 on top



| C7 | III |  |
| :--- | :--- | :--- |
| (1) | 1 |  |
|  | 1 | 1 |
|  |  |  |
|  |  |  |
|  | 3 |  |
|  |  |  |
|  |  |  |
|  |  |  |

## I-VI-II-V ("RHYTHM" CHANGES) LIBRARY

## E Form I Chord

## Ima7-VIm7-IIm7-V7, un-altered chords (E form I chord)


1735
VIm7

IIm7
IIIm7
VIm7
IIm7
V7

15673

b7 635

1 b3 b7 b3

b7 b3 5
$15 \mathrm{b7} 3$

## I-VII-IV altered chords with chromatic top voice leading ( $\mathbf{E}$ form I chord)





## I-VI-I-V altered chords with minor pentatonic top voice leading (E form I chord)




## A Form I Chord

## Ima7-VIm7-IIm7-V7, un-altered chords (A form I chord)

Ima9

VIm7
IIm7
V13
IIIm7
VIm7
IIm11
V13
$\begin{array}{llllllllllllllll}\text { Cma7 } & \text { II } & \text { Am7 } & \text { V } & \text { Dm7 } & \text { III } & \text { G13 } & \text { III } & \text { Em7 } & \text { II } & \text { Am7 } & \text { V } & \text { Dm11 } & \text { III } & \text { G13 } & \text { III }\end{array}$


## I-VI-I-V altered chords with chromatic top voice leading (A form I chord)



| Ima7 VI7\#5b9 | IIm7 | VI7\#5b9 | IIIm7 | VI7\#5b9 | IIm | VI7\#5b9 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | Cma7 III A7\#5b9 V D9 IV G7\#5b9 III Em7 VII A7\#5b9 V D9 IV G7\#5b9 III



15735


bIII9
Eb9 V



136725

IIm7

b7 3 \#5 b2


15735

IIm7
VI7\#5b9 IIIm9
G7\#5b9 IV Em9 V


bIIb9 Db9 III



## I-VI-I-V altered chords altered chords with minor pentatonic top voice leading

I9
C9 II


VI7\#5\#9 A7\#5\#9 V

b7 3 \#5 b2

IIm7
Dm7 III


1636763

V7\#5
IIIm7
VI7\#5\#9
IIm7
V7\#5
G7\#5 III


1 b 367 b 3

$1 \quad \mathrm{b7} 3$ \#5 b2

Dm7 III

$16367 b 3$

$1 \quad$ b7 3 \#5 1

| 19 |  | VI7\#5\#9 |  |  | II7\#9 |  | V7\#5 |  |  | III7\#5\#9 |  |  | VI7\#5\#9 |  |  | II7\#9 |  | V7\#5 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C9 | II | A7\# | \#5\#9 | V | D7\#9 | 9 IV | G7 |  | III | E7\#5 | 5\#9 | VI |  | \#5\#9 | V | D7\#9 | 9 IV | G7 | \#5 | III |
| - | $1]$ | (2) |  | (1) | 1 |  | (1) | 1 | (1) | 1 | 1 |  | (2) |  | (1) | 1 | 1 | (1) | 2 | (1) |
| (2) | 333 |  | 4 | 44 | (2) | 3 |  |  | 3 | (2) | 3 |  |  |  | 44 | (2) | 3 |  | 3 | 4 |
|  |  |  | () |  |  | 4 |  | () |  |  |  | 4 |  | () |  |  | 4 |  | () |  |
|  | ( ) |  |  |  |  | ( $)^{4}$ |  |  |  |  | ( 1 |  |  |  |  |  | ( $)^{4}$ |  |  |  |



## I-IVma9-VIIm7b5-III7-VIm LIBRARY

E form I chord
I type-IV9-VIIm7b5-III7-VIm7, un-altered chords

|  | I6 |  | IVma9 |  | VIIm7b5 |  | IIIm7 |  | VIm7 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Eb6 | 6 XI | Abma 9 | X | Dm7b5 | IX | Gm7 | IX | Cm 7 |  | VIII |
| approach steps from: | $\uparrow 1 / 2, \downarrow 1$ |  | $\uparrow 1 / 2, \downarrow 1$ |  | $\uparrow 1 / 2$ or $1, \downarrow 1 / 2$ |  | $\uparrow 1 / 2$ or $1, \downarrow^{1 / 2}$ |  | $\uparrow 1 / 2$ or $1, \downarrow 1$ |  |  |
|  | (1) | 0 | 1 |  |  | 1 |  | (1) | (2) |  | 330 |
|  |  | 21 | (2) | 3 | (2) 3 |  |  |  |  |  |  |
|  |  | (3) 4 |  | 4 |  |  | (2) | 3 |  | () |  |
|  |  | 1-1 | (1) | () | (1) |  |  | 4 |  |  |  |
|  | 1 | 136 | 13 | 72 | 1 b 7 |  |  | 6763 |  |  | 635 |

I type-IV9-VIIm7b5-III7-VIm7, altered chords with scalar voice leading

Ima7
Ebma7 XI

IV9
$\mathrm{Ab7}$
XI
$\uparrow 1 / 2$ or $1, \downarrow 1$


D7\#5 ${ }^{\text {VII7\#5 }} \mathrm{X}$
$\uparrow 1 / 2$ or $1, \downarrow 1 / 2$

III7b9 G7b9 IX Cm7 VIII $\uparrow 1 / 2$ or $1, \downarrow^{1 / 2}$
$\uparrow 1 / 2$ or $1, \downarrow 1$

approach steps from:

## A Form I Chord

## I type-IV9-VIIm7b5-III7-VIm7, un-altered chords



I type-IV9-VIIm7b5-III7-VIm7, altered chords with scalar voice leading

| approach steps from: | Ima7 | IV7 | VIIm7b5 | III7\#5 | VIm9 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Ebma 7 VI | Ab7 IV | Dm7b5 V | G7\#5 III | Cm9 III |
|  | $\uparrow 1 / 2, \downarrow 1$ | $\uparrow 1 / 2$ or $1, \downarrow 1$ | $\uparrow 1 / 2$ or $1, \downarrow^{1 / 2}$ | $\uparrow 1 / 2$ or 1, $\downarrow^{1 / 2}$ | $\uparrow 1 / 2$ or $1, \downarrow 1$ |
|  | (1) | (1) (1/\|l0 $^{\text {a }}$ | $(1)$ 2 | (1) 2 2 100 | 1 (1) |
|  | - 2 | 2 | -3 4 | 14 |  |
|  | $3(1) 4$ | (3) | (0) | () 1 | (2) 33 |
|  | 1-1 | 1 3 | $\bigcirc$ | -1-1-1 | - 1 -1. |
|  | 1573 | $13 \mathrm{b7}$ | $1 \mathrm{~b} 567 \mathrm{b3}$ | 1 b7 3 \#5 | 163672 |
| approach steps from: | Ima 7 | IV7 | VIIm7b5 | III7\#5 |  |
|  | Ebma9 V | Ab7 IV | Dm7b5 III | G7\#5 III | Cm9 ${ }^{\text {Vlm9 }}$ III |
|  | $\uparrow 1 / 2, \downarrow 1$ | $\uparrow 1 / 2$ or $1, \downarrow 1$ | $\uparrow 1 / 2$ or $1, \downarrow 1 / 2$ | $\uparrow 1 / 2$ or $1, \downarrow^{1 / 2}$ | $\uparrow 1 / 2$ or $1, \downarrow 1$ |
|  | 1 | (1) 22030 | 1-1. | (1) 212100 | 1 (1) |
|  | (2) ${ }^{(2)} 3$ | $4{ }^{4}$ |  | 34 |  |
|  | 1  <br>  4 | () | (3) 4 | () | (2) 33 |
|  | (1) | - | - 1 - | -17-1-1 | - |
|  | 1372 | b73 5 | $13 \mathrm{b7}$ | 673 \#5 | 163672 |

I type-IV9-VIIm7b5-III7-VIm7, altered chords with scalar voice leading


## Jazz Bass Harmonization

- Archetypal Walking Bass
- Harmonized Walking Bass, Roots in Fourths
- Full Scale Harmonization
- Im7-II7, Mixed Minor: 1-2-b3-4-5-b6-b7-7
- I7-II7, Mixolydian b6 and Major b6: 1-2-3-4-5-b6-b7 7
- I7-IIm7, Mixolydian: 1-2-3-4-5-6-b7-7
- Ima7(6)-IIm7( 7 ), Major 1-2-3-4-5-(b6 option)-6-7
- Im7-IIm7, Dorian: 1-2-3-4-5-6-b7


## ARCHETYPAL WALKING BASS

## Archetypal Walking Bass up a Fourth


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## Archetypal Walking Bass up a Fifth

All natural numbers are "generic" and may be flatted or sharped as the scale directs. Employ these fragment patterns: $1234,1764,1356,1354(\# 4), 1534,1536,134 \# 4,176 b 6$.

chord tones except fourth note
is scalar setup


## Archetypal Walking Bass on the 2-5-1-7-3-6-6 Chord Progression



1-3-5-1


$$
1-5-3-5
$$


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## 1-7-5-3

The root must descend to the seventh. Ascend to the third at the end if necessary to regain the higher range.


## 1-7-5-1

The root must descend to the seventh.


## Walking Bass 2-5-1-4-7-3-6-6: Non-Chordal Second Note

 1-2-3-5
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## 1-6-5-1

The sixth acts as an upper neighbor to the fifth. The fifth is on the third beat, which has second strongest metric accent (beat one is strongest).

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## 1453

The fourth acts as a lower neighbor to the fifth. The fifth is on the third beat, which has second strongest metric accent (beat one is strongest).


## 1651

The fourth acts as a lower neighbor to the fifth. The fifth is on the third beat, which has second strongest metric accent (beat one is strongest).


## Walking Bass 2-5-1-4-7-3-6-6: Chromatic Figures

## 1-3-5-b5

In this figure, the note on the third beat is intended to move chromatically down on the fourth beat, then down chromatically again to the root of the next chord. This cannot happen with the IV chord (Eb in this key) nor the VII chord (Am7b5), since their fifth is only a half step above the root of the next chord. Therefore, on the fourth beat of those chords, I am repeating the fifth of the chord, which was also on the third beat.


## 1-2-\#2-3, 1-b2 (=\#1)-2-b3 or 1-b2-b3-3

Although this figure has the strength of being linear, as "walking bass" implies, it weakens the third beat (the second strongest metric accent) by not using a chord tone.


## 1-6-5-b5

In this figure, the note on the third beat is intended to move chromatically down on the fourth beat, then down chromatically again to the root of the next chord. This cannot happen with the IV chord (Eb in this key) nor the VII chord (Am7b5), since their fifth is only a half step above the root of the next chord. Therefore, on the fourth beat of those chords, I am moving chromatically from 6 (for IV) or b6 (for VIIm7b5) to the next root.


## 1-b7-5-b5

The root must descend to the seventh.
In this figure, the note on the third beat is intended to move chromatically down on the fourth beat, then down chromatically again to the root of the next chord. This cannot happen with the IV chord (Eb in this key) nor the VII chord (Am7b5), since their fifth is only a half step above the root of the next chord. Therefore, on the fourth beat of those chords, I am using a scalar descent to the next root.


## HARMONIZED WALKING BASS, ROOTS IN FOURTHS

I7 to IV7
1-2-\#2-3-4


1-2-3-1-4


1-2-3-5-4

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## 1-3-5-b5-4



## 1-3-5-3-4



## 1-b7-5-b5-4


1367

b3 51

$5 b 73$

1367

1367

## 1-b7-6-5-4


1367


I7 to I7 to IV7

## 1-2-\#2-3, 5-b5-4-3, 4



## 1-3-4-\#4, 5-6-b7-5, 4



## 1-3-4-5, 1-b7-6-5,4




1367



## I7 to VI7 to IIm7

## 1-3-5-\#5, 6-\#1-2-3, 2



1-b7-5-4, 3-2-\#1-6, 2



## 1-b7-6-5, 6-5-4-3, 2




| F\#7 | IV |  |
| :--- | :--- | :--- |
|  | 1 |  |
|  |  |  |
|  |  |  |
|  |  | 3 |
| 4 |  |  |
| 4 |  |  |
| b7 | 1 | 5 |





I7 VI7 IIm7 V7 (two beats each)
1-b7-6-b3, 2-b5-5-b2, 1

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E7 VI


## 1-b7-6-\#1, 2-\#4-5-b2, 1



## IIm7 to V7 to 17

## 2-3-4-\#4, 5-6-b7-7, 1



## 2-1-7-6, 5-6-b7-7, 1



## IV7 to 17

## 4-b3-2-b2, 1


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## 4-5-6-b7, 1



## 4-6-b7-7, 1



## 4-6-b7-2, 1



## IV7 to IV7 to I7

## 4-1-6-5, 4-b3-2-b2, 1



## 4-b3-2-1, 4-5-6-b7, 1



## 4-b3-2-1, 4-6-b7-7, 1



## 4-6-b7-1, 4-b3-2-b2, 1



## VI7 to IIm7

6-5-4-3, 2


|  | Jazz Blues or Swing Blues |  |  |  |
| :--- | :--- | :---: | :--- | :--- |
| I7 | \| IV7 | $\mid 17$ | $\mid I 7$ | $\mid$ |
| IV7 | $\mid$ IV7 | $\mid 17$ | $\mid$ VI7 | $\mid$ |
| IIm7 | $\mid$ V7 | $\mid I 7$ | VI7 | \|IIm7 V7 |
| II7 | :\|| 17 |  |  |  |

## Everyday I Have the Blues in Bb, version 1




## Everyday I Have the Blues in Bb, version 2


$15 \mathrm{b7} 3$


15673


| F13 |  |
| :--- | :---: |
| VII |  |
|  1 1 $n$ <br> $(2)$ 3   <br>   3 3 <br>     <br>     <br>     <br>   4 4 <br> 1 3 6 2 |  |

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## Swing Blues Example 1

I7 to IV 7: 1-2-\#2-3, 4



IV7 to I7: 4-b3-2-b2, 1


17 to 17 to IV7: 1-2-\#2-3, 5-b5-4-3, 4


IV7 to IV7 to I7: 4-b3-2-b2, 1-6-b7-7, 1

$\begin{array}{lll}1 & \text { b7 b3 }\end{array}$
$\begin{array}{ll}5 & 367\end{array}$
D7/A IV

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## I7 to V7 to IIm7: 1-b7-5-4, 3-2-\#1-6, 2



## Ilm7 to V7 to I7: 2-1-7-6, 5-6-b7-7, 1



## 17 VI7 IIm7 V7 (two beats each): 1-b7-6-b3, 2-b6-5-b2, 1



## FULL SCALE HARMONIZATION

See the chapter Building Cadences with Linear Harmonized Bass.

## Harmonized Bass Scale for an Ionian Major Seventh Chord

Ascend or Descend. Based on Ima7 and IIm7.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ima7 | IIm7 | Ima7 | IIm7 | Ima7 | IIm7 | V7 |
|  | or I6 |  | or Ima9nr | or IVma7 | or $\mathrm{II}^{\circ} 7$ |  |

## Harmonized Bass Scale for a Harmonic Major, Major Triad

Ascend or Descend. Based on Ima7 and IIm7.

| 1 | 2 | 3 | 4 | 5 | b6 | b7 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I major | $\mathrm{II}^{\circ} 7$ | I major | $\mathrm{II}{ }^{\circ} 7$ | I major | $\mathrm{II}^{\circ} 7$ | I 7 | $\mathrm{II}^{\circ} 7$ |

## Harmonized Bass Scale for a Dorian Minor Seventh Chord

Tones b2, \#4, \#5, b6 and/or 7 may be omitted.
Ascend or Descend. Based on Im7 and IIm7.

| 1 | b 2 | 2 | b 3 | 4 | $\# 4$ | 5 | $\# 5$ | 6 | b 7 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\operatorname{Im} 7$ |  | $\operatorname{IIm} 7$ | $\operatorname{Im} 7$ | $\operatorname{IIm} 7$ | \#IVdim7 | $\operatorname{Im} 7$ |  | $\operatorname{IIm} 7$ | $\operatorname{Im} 7$ | IIdim.7 |

Ascend. Based on bVIIm7-VIIm7-Im7.

| 1 | b 2 | 2 | b 3 | 4 | $\# 4$ | 5 | $\# 5$ | 6 | b 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\operatorname{Im} 7$ | bVIIm 7 | VIIm 7 | $\operatorname{Im} 7$ | bVIIm 7 | VIIm 7 | $\operatorname{Im} 7$ | bVIm 7 | VIIm 7 | $\operatorname{Im} 7$ |

Descend. Based on IIm7-bIIm7-Im7.

| 1 | 7 | b 7 | 6 | b 6 | 5 | b 5 | 4 | 3 | b 3 | 2 | b 2 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I7 |  | $\operatorname{Im} 7$ | $\operatorname{IIm} 7$ | bIIm 7 | $\operatorname{Im} 7$ | \#IVdim7 | $\operatorname{IIm} 7$ | bIIm 7 | $\operatorname{Im} 7$ | $\operatorname{IIm} 7$ | bIIm 7 | $\operatorname{Im} 7$ |

## Harmonized Bass Scale for a Phrygian Dominant Seventh Chord

Ascend or Descend. Based on I7 and bVIIm7.

| 1 | b2 | 3 | 4 | 5 | b6 | b7 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I7 | bVIIm7 | I7 | bVIIm7 | I7 | bVIIm7 | I7 | II 7 |

## Harmonized Bass Scale For Lydian Major Triad

Ascend or Descend. Based on I major and II major.

| 1 | 2 | 3 | 4 | 5 | 6 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I major | II major | I major | II major | I major | II major | I major |

## Harmonized Bass Scale for a Mixolydian Dominant Seventh Chord

"Chromatic Diminished." Based on I7 Idim7 and IIm7b5 (=IVm6). bII7 may be added when descending.

| 1 | 2 | b 3 | 3 | 4 | $\# 4$ | 5 | $\# 5$ | 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |$\quad$ b7

Based on I7 and IIm7 (=IV6). bII7 may be added when descending.

| 1 | 2 | b3 | 3 | 4 | $\# 4$ | 5 | $\# 5$ | 6 | b7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I7 | $\operatorname{IIm} 7$ | Idim.7 | I7 | $\operatorname{IIm} 7$ | Idim.7 | I7 | IIdim.7 | IIm7 | I7 |
|  | or V7 |  |  |  |  | or V7 |  |  |  |

## Harmonized Bass Scale for an Aeolian/Harmonic Minor Chord

Based on $\operatorname{Im} 7$ and IIdim7.

| 1 | 2 | b3 | 4 | 5 | b6 | b7 | 7 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Im7 | $\begin{gathered} \text { IIdim. } 7 \\ \text { or IIm7b5 } \\ \text { or V7 } \end{gathered}$ | Im7 | $\begin{gathered} \text { IIdim. } 7 \\ \text { or IIm7b5 } \\ \text { or V7 } \end{gathered}$ | Im7 | $\begin{gathered} \text { IIdim. } 7 \\ \text { or IIm7b5 } \end{gathered}$ | Im7 | $\begin{gathered} \text { Idim. } 7 \\ \text { or V7 } \end{gathered}$ | Im7 |
|  | or bII7 |  |  |  |  |  |  |  |

## Harmonized Bass Scale for a Locrian Minor Seventh Flat Five Chord

Based on keyscale $\operatorname{Im} 7 \mathrm{~b} 5$ and bVIIm7. In the parent scale, they would be VIIm7b5 and VIm7. They can be used as V9nr and I6 of the key scale.

Based on $\operatorname{Im} 7$ and $\operatorname{IIm} 7$.

| 1 | b 2 | b 3 | 4 | b 5 | b 6 | 6 | b 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\operatorname{Im} 7 \mathrm{~b} 5$ | bVIIm 7 | $\operatorname{Im} 7 \mathrm{~b} 5$ | bVIIm 7 | $\operatorname{Im} 7 \mathrm{~b} 5$ | bVIIm 7 | $\mathrm{I}^{\circ} 7$ | bVIIm 7 |

The same chords as above, expressed as V9 no root and I6.

| 7 | 1 | 2 | 3 | 4 | 5 | $\# 5$ | 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| V 9 nr | I 6 | V 9 nr | I 6 | V 9 nr | I 6 | V 7 b 9 nr | I 6 |

## Im7 II7, MIXED MINOR: 12 b3 45 b6 b7 7

## string set 6432

Study the onstruction and memorize the fingerings for the Em7 chords below (every other chord). The Em7 chords in VII is an inversion of the previous


## I7 IIm7, MIXOLYDIAN: 123456 เ7 7

## IMA7(6) IIm7(7), MAJOR 12345 (b6 OPTION) 67

## I7 II7, MIXOLYDIAN 6 \& MAJOR ‘6: 12345 , 6 เ7 7

Im7 IIm7, Dorian: 123456 b7

## Building Cadences With Linear Harmonized Bass

- Using Cadences
- Linear Bass Cadence Summary
- Major Seventh Linear Bass Cadences
- Dominant Seventh Linear Bass Cadences
- Dorian Minor Seventh Linear Bass Cadences
- Aeolian Minor Seventh Linear Bass Cadences
- Locrian Minor Seventh Flat Five Linear Bass Cadences
- Melodic Minor Linear Bass Cadences


## USING CADENCES

## What Is A Cadence?

A cadence is a short musical succession of events that predicts the beginning of the next phrase or section. A barmonic cadence is a short chord progression that predicts a target chord that is a temporary or permanent tonic chord. It is usually a familiar chord progression that has established the key in a similar way in music we have heard in the past.

A rhythmic cadence brings attention to the beginning of a section or phrase. It usually has dynamic elements, such as an accent on the target chord and often uses staccato and syncopation to give the cadence "punch". The target is usually on beat one or pushes beat one (being on the last beat division before beat one, such as on the "and of four" in $4 / 4$ time). Rhythmic cadences are largely synonymous with pickups. See Rhythmic Words and Comping / Hearing Pickups and Pushes.

Harmonic phrases use a short chord progression, most commonly three chords (two setup chords and a target chord), such as II V I (called II, V of V and I in classical theory).

See also Globalizing/Changing Chord Progression and Cadences, Melodically Superimposed Cadences, Improv Level 4: Superimposed Cadence Solo Examples.

## Building Rhythmic Cadences

Think the rhythmic cadence first to build the harmonic cadence. Modern improvisation is usually more dependent on rhythm than pitch. Think a great rhythm, then use an adequate (or better) series of notes or chords.

Memorize one of the cadence rhythms below and one of the harmonic cadences (see Building Harmonic Cadences), by playing three chords in a row from one of the Linear Bass Cadence sections in this chapter (major, dominant, Dorian or Aeolian) ending with a chord shown in a box.

Of all the two-bar cadences shown on Common Three-Note Pickups For Rhythmic Cadences In 4/4 Time below each one enclosed in a box is archetypal (a main idea). The examples following it, up to the next box (not inclusive) are variations of it. The variations involve rests versus sustains.

## eighth note pushes and pickups for rhythmic cadences in 4/4 time

links to video: straight eighths swing eighths

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## sixteenth note pushes and pickups for rhythmic cadences in 4/4 time

links to video: straight sixteenths, swing sixteenths


5 " 34 " - the last two sixteenths before the target beat


9 "234" - the last three sixteenths before the target beat


13 "1234" - the last four sixteenths before the target beat


17 " 134 " - the first, second and fourth of the last four sixteenths before the target beat


21 " 124 " - the first, second and fourth of the last four sixteenths before the target beat


25 " 24 " - the second and fourth of the last four sixteenths before the target beat


29 " 24 " - the second of the last four sixteenths before the target beat

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## Building Harmonic Cadences

## building three-chord cadences

The chords in boxes are target chords. Commonly, you would target a chord that begins on beat one by playing chords a the end of the bar before it. Beat one can be "pushed" (see Rhythmic Words And Comping / Hearing Pickups And Pushes) where it's played "early" on the last part of the fourth beat, such as the "and of 4 ". This is the "and" spoken after four when counting half beats with the syllables "one, and, two, and, three, and, four, and".

Practice building a cadence to each of the four target chords in each ascending or decending family (such as Major Seventh Linear Harmonized Bass/ascend and Major Seventh Linear Harmonized Bass/descend). Use the same rhythmic cadence for each of the four, so you memorize it.

In the example below, the cadences for A dominant seventh on one string set (5432) are practiced in sequence.
three chord cadence on seventh type-link to video


In the example below, the cadence for F 69 is from major seventh type on string set $5432, \mathrm{Dm} 7$ from the Aeolian minor seventh type on string set 5432 and C9 from the Mixolydian type on string set 6432. three-chord cadences - link to video


## encircling cadences

Here's an interesting way to cadence, borrowed from a melodic device. Encircle the target chord (boxed) by asending with one or two chords before the target, the chord in the sequence after the target, then finally play the target chord. Or, encircle the target chord descending with the one chord in the sequence after the target chord followed by the one or two chords before it in the sequence, ending on the target chord. These are not familiar to listeners, so they need to be played clearly with long durations and sparse arrangements. The examples below are based on Dorian Minor Seventh Linear Harmonized Bass. encircling cadences - link to video


## LINEAR BASS CADENCE SUMMARY

## Major Seventh Linear Harmonized Bass

ascend - all string sets (cadence to target the I chords), in the reverse order of descending

descend- all string sets (cadence to target the I chords), in the reverse order of ascending

| 169 | Idim7 | VIIdim7 | 16/6 | $\operatorname{IIm} 7 / 5$ | bVI <br> dim7 | I69/5 | IIm7/b3 | IVdim7 | Ima7(9) 13 | IIm7 | IIdim7 | Ima7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

## Dominant Seventh Linear Harmonized Bass - chromatic

ascend (cadence to target the I chords)

| strings <br> 6432 | I7(9) | two chords chromatically below $\rightarrow$ | 19/3 | two chords chromatically below $\rightarrow$ | 19/5 | \#Vdim7 VIdim7 | 17/b7 | two chords chromatically below $\rightarrow$ | I7(9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| strings <br> 5321 |  | same as above |  | same as above |  | same as abo |  | same as above |  |
| strings <br> 5432 |  | same as above |  | same as above |  | two chords chromatically below $\rightarrow$ | $\begin{array}{\|l\|} \hline \text { I7 (13) } \\ \text { /b7 } \\ \hline \end{array}$ | same as above |  |
| $\begin{aligned} & \text { strings } \\ & 4321 \end{aligned}$ |  | same as above |  | same as above |  | same as abo |  | same as above |  |

descend - all string sets (cadence to target the I chords)

| I7(9) | Idim7 | $\begin{aligned} & \text { VII } \\ & \operatorname{dim} 7 \end{aligned}$ | $\begin{aligned} & \mathrm{I} 7(13) \\ & \mathrm{b} 7 \end{aligned}$ | $\begin{aligned} & \text { bVII } \\ & \operatorname{dim} 7 \end{aligned}$ | VI dim7 | 19/5 | bVdim7 IVdim7 | I7/3 | $\begin{aligned} & \text { bIII } \\ & \operatorname{dim} 7 \end{aligned}$ | II dim7 | I7(9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

## Dominant Seventh Linear Harmonized Bass - with IIm7

ascend - all string sets (cadence to target the I chords)

| I7 | IIm7 | $\begin{aligned} & \text { \#II } \\ & \operatorname{dim} 7 \end{aligned}$ | I9/3 | $\begin{aligned} & \text { IIm7 } \\ & \text { /b3 } \end{aligned}$ | $\begin{aligned} & \text { \#IV } \\ & \operatorname{dim} 7 \end{aligned}$ | I9/5 | $\operatorname{IIm} 7 / 5$ | VIdim7 | $\begin{aligned} & \hline \mathrm{I} 7(13) \\ & / \mathrm{b} 7 \end{aligned}$ | two chords chromatically below $\rightarrow$ | I9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

descend - (cadence to target the I chords)

| I9 | Idim7 | VIIdim7 | I7 (13) /b7 | $\begin{array}{ll}\operatorname{IIm} 7(9) & \mathrm{bII} 7(9) \\ / 5 & / 5\end{array}$ | I9nr <br> 15 | $\begin{array}{ll}\operatorname{IIm} 7(9) & \mathrm{bII7}(9) \\ 13 & 13\end{array}$ | I9nr 13 | $\operatorname{IIm} 7(9) \quad$ bII7(9) | I9nr |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

## Phrygian Dominant Seventh - minor key V type

Ascend with Dominant Seventh Linear Harmonized Bass - chromatic. Desccend with bVI Melodiic Minor Chord, Descending Roots To Target I7.

## Dorian Minor Seventh Linear Harmonized Bass

ascend- all string sets (cadence to target the Im chords)

descend- all string sets (cadence to target the Im chords)

| Im7 | two chords chromatically above $\rightarrow$ | Im7/b7 | two chords chromatically above $\rightarrow$ | Im7/5 | two chords chromatically above $\rightarrow$ | $\operatorname{Im} 7 / \mathrm{b} 3$ | two chords chromatically above $\rightarrow$ | Im 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

## Aeolian Minor Seventh Linear Harmonized Bass

ascend- all string sets (cadence to target the Im chords), in the reverse order of descending

| Im7 | IIdim7 | \#IIdim7 | Im7/b3 | IVdim7 | \#IVdim7 | Im7/5 | \#Vdim7 | VIdim7 | Im7/b7 | VIIdim7 | Im7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |

descend- all string sets (cadence to target the Im chords), in the reverse order of ascending

| Im7 | VIIdim7 | Im7/b7 | VIdim7 | bVIdim7 | $\operatorname{Im} 7 / 5$ | bVdim7 | IVdim7 | Im7/b3 | bIIIdim7 | IIdim7 | Im7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

## II Minor Seventh Flat Five Linear Harmonized Bass

The "target" is IIm7b5. Use in IIm7b5 V7 Im progression.
ascend- all string sets (cadence to target the Im chords), in the reverse order of descending
IIm7b5
two chords chromat-

ically below $\rightarrow$ | $\operatorname{IIm} 7 \mathrm{~b} 5$ |
| :--- |
| /b3 |

| $\begin{array}{l}\text { two chords chromat- } \\ \text { ically below } \rightarrow\end{array}$ | $\begin{array}{l}\text { IIm7b5 } \\ \text { /b5 }\end{array}$ |
| :--- | :--- |

two chords chromat-
ically below $\rightarrow$

| IIm7b5 <br> /b7 |
| :--- | :--- |

IIm7b5
descend- all string sets (cadence to target the Im chords), in the reverse order of ascending

| IIm7b5 | bIIdim7 | $\begin{aligned} & \text { IIm7b5 } \\ & \text { /b7 } \end{aligned}$ | $\begin{aligned} & \text { VIm7/ } \\ & \text { b7 } \end{aligned}$ | VIdim7 | $\begin{aligned} & \text { IIm7b5 } \\ & \text { /b5 } \end{aligned}$ | VIm7/5 | bVdim7 | $\begin{aligned} & \operatorname{IIm} 7 \mathrm{~b} 5 \\ & \text { /b3 } \end{aligned}$ | VIm7/b3 bIIIdim7 | IIm7b5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

## bVI Melodic Minor Chords, Descending Roots to Target 17

| bVI mel. min. <br> VIIm7b5 | bVI mel. min- <br> VIm7b5 | target chord | $\begin{aligned} & \text { bVI mel. minVI- } \\ & \text { Im7b5 } \end{aligned}$ | chromatic passing chord | bVI mel. min- <br> VIm7b5 | target chord |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Em7b5 VII | Dm7b5 V | A9 IV | Em7b5 VII | Ebm7b5 VI | Dm7b5 V | A9 IV |
| bVI mel. min. V9 | bVI mel. mi. IV7 | target chord | bVI mel. min V9 | chromatic passing | bVI mel. m` IV7 | target chord |
| C7 VIII | Bb7 VI | A7 V | C7 VIII | B7 VII | Bb7 VI | A7 V |

## MAJOR SEVENTH LINEAR BASS CADENCES

These cadences can also be used for Dominant Seventh Linear Bass Cadences, by replacing major seventh with dominant seventh and replacing major ninth with dominant ninth.

## ascend (major 7), string set 6432



## descend (major 7), string set 6432



## ascend (major 7), string set 5432

| Bbma7 I | $\mathrm{Cm} 7 \quad \mathrm{II}$ | C\#m7 IV |  | Ab6 V | A6 VI |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | $(1)$ 1 | (1) 1 |  | 1 | 1 | 1 |
| 2 | 2 | 2 |  | 2(3) 4 | 2 (3) | 4 |
| 3() 4 | 3() | 3() |  |  |  |  |
| - | 1 - | - |  |  |  |  |
| 1573 | $15 \mathrm{b7}$ b3 | $15 \mathrm{b7}$ b3 |  | 5136 | 513 | 36 |


| Bb6 VII | F\#dim7 VIII | Bb6 X | Ab69 X | A69 XI | Bb69 XII |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | $1{ }^{1} 1$ | 11 | 11 | 11 |
| 2(3) 4 | (2) | (2) | (2) ${ }^{(2)} 3$ | $(2)$ 3 | (2) 133 |
| - +1 | 3.4 | 3 |  |  |  |
| - | ( ) 1 | (1) (1) $^{\text {(1) }}$ | ( ) | () | - ( ) |
| 5136 | 165663 | 6351 | 1362 | 1362 | 1362 |

## descend (major 7), string set 5432



## ascend (major 7), string set 5321


descend (major 7), string set 5321


## ascend (major 7), string set 4321

| Ebma7 I | Fm7 III | F\#m7 IV | Ebma9nr V | Db6 VI | D6 |  | II |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | (1) | (1) | 1 | (0) 1.1111 .1 | (1) |  | 11.1 |
|  | 23 | 23 | () 23 |  |  |  |  |
| 333 | 4 | 4 | 4 | () |  | () |  |
| (1) | (1) | 10 | (1) |  |  |  |  |
| 1573 | 156763 | 1567 b 3 | 3725 | b7 6351 |  | 67 b3 | 6351 |


| Eb6 VIII | Bdim7 IX | Eb6 X | Ab69 X | A69 XI | Eb69 XII |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (0) 1.1110 | 1$)$ 2 <br>   |  1   <br>     | 11 <br> 10 | 11 <br> 1 | 11 <br> 1 |
|  |  | 0 O- $0^{*}$ | (2) 34 | (2) 34 | (2) 34 |
| () ${ }^{-1}$ | $\square$ |    <br>  4  <br>    |  |  | $\square$ |
| - 1 H-1. | 10 | ( $)^{\text {\| }}$ | - | - | 1-1 |
| 676351 | 165663 | 6351 | 1362 | 1362 | 1362 |

## descend (major 7), string set 4321



## DOMINANT SEVENTH LINEAR BASS CADENCES

Major Seventh Linear Bass Cadences can substitute for harmonization of the same basslines shown here, in part or in their entirety by using dominant seventh in place of major seventh and dominant ninth in place of major ninth.

## Dominant Seventh Linear Harmonized Bass - chromatic

## ascend (dominant 7 with parallel chromatic chords), string set 6432


descend (dominant 7 with parallel chromatic chords), string set 6432

ascend (dominant 7 with parallel chromatic chords), string set 5432

| Bb7 I | Ab | 9 | III | A9 | IV | V | Bb | 9 |  | V | Ab | b9 | VI | A |  | VII |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $(1)$ 1 |  |  |  | 1 2 |  |  |  | 1 |  |  | 1(1) |  |  | 1() |  |  |
|  |  | 3 | 4 (1) |  | 3 | 40 |  |  |  | 40 |  |  | 2 |  |  | 2 |
| $3(1) 4$ |  |  |  |  |  |  |  |  |  |  |  | 3 |  |  | 3 |  |
| 1 - |  | (0) |  |  | (1) |  |  | ( |  |  |  |  | (1) |  |  | () |
| 15673 |  | 367 | 25 |  | 367 | 25 |  | 367 | 2 |  |  | 2 | b7 |  | 52 | b7 |


| Bb9 VIII | Ab13 IX | A13 X | Bb13 XI | Ab9 X | A9 XI | Bb9 XII |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1(1) | 1 (2) | 1 (2) | 1  $(2)$ <br>    | 1 | 1 | 1 |
| 2 | 34 | 34 | 34 | (2) 34 | (2) 34 | (2) 34 |
| 3 | (0) | () | (1) |  |  |  |
| (1) |  |  |  | (1) | ( ) | (1) |
| $\begin{array}{lll}5 & 2 & \text { b7 }\end{array}$ | b7361 | b7361 | b73 61 | 13672 | 13672 | 13672 |

descend (dominant 7 with parallel chromatic chords), string set 5432


## ascend (dominant 7 with parallel chromatic chords), string set 5321

| Bb7 I | Ab9nr II |  | A9nr III |  | Bb9 IV |  | Ab9 V |  |  | A9 VI |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) 1 1 |  | 1 |  | 111 |  | 1 |  |  | 1 |  | 1 | 1 |
|  | 2 | 3 | 2 | 3 | 2 | 3 |  | $2($ | ) 3 |  | 2() | 3 |
| ()3 | () | 40 | () | 40 | $\bigcirc$ | 40 |  |  | 4 |  |  | 4 |
| -1 |  | - |  | $\square$ |  | $\square$ |  |  | - |  |  |  |
| 16735 | 3 | $25 \mathrm{b7}$ | 3 | 25 b 7 | 3 | 25 b 7 |  | 5 | 3672 |  | 53 | 3672 |


| Bb9 VII | F\#dim7 VIII | Gdim7 IX | Bb7 X | Ab9 XI | A9 XII | F9 XIII |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 1.1 | 111 | (2) 333 | (2) 333 | (2) 333 |
| $2(0) 3$ | (2) | (2) | 2 $(3)$ |  |  |  |
| 4 | 4 | 4 | 2    <br>     | () | () | () |
| $\square$ | (1) | ( ) 1 | $(0)$   | - 1 |     <br>     | $1-1$ |
| $\begin{array}{lllll} \\ 5 & 3 & 672\end{array}$ | $6 \mathrm{b365}$ | $6 \mathrm{b3} 55$ | $\begin{array}{llllll} \\ 67 & 513\end{array}$ | b72 | 1 b 25 | 1 b72 |

descend (dominant 7 with parallel chromatic chords), string set 5321


Fdim7 VII





Fdim7 VII


## ascend (dominant 7 with parallel chromatic chords), string set 4321

| Eb7 I | Db9n3 I | III | D9n3 IV | Eb9/3 V | Db9nr VI |  | D9nr VII |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | 1 |  | 1 | 1 |  | 1(1)1 |  | 1(1) | 1 |
| 2 | () 333 |  | (0) 333 | () 333 |  | 2 |  |  | 2 |
| 34 |  |  |  |  |  | 3 |  | 3 | 3 |
| (1) | (1) |  | (1) | (1) |  | (1) | (1) |  | (1) |
| $15 \mathrm{b7} 3$ | 36725 |  | 36725 | $3 \mathrm{b7} 25$ |  | 52367 |  | 52 | 2367 |


descend (dominant 7 with parallel chromatic chords), string set 4321


## Dominant Seventh Linear Harmonized Bass - with IIm7

## ascend (dominant 7 with $\mathrm{Ilm7}$ ), string set 6432


descend (dominant 7 with IIm7), string set 6432

| F9 | XII | Fdim7 |  | XII | Edim7 |  | XI | F7 |  | XI | Gm9 VIII |  |  |  | Gb9 VIII |  |  | F9 VII |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 11 |  | 1 | 1 |  | 1 | 1 |  | 1. | 1 |  |  | $1$ | (D) |  |  | 1 |  | 1 |  |  |
| (2) | 30 | (2) | 3 | 0 | (2) | 3 | (1) | 2 |  |  |  |  |  |  |  |  | 34 |  |  | 3 |  |
|  | - |  |  |  |  |  |  |  |  |  |  |  |  | 33 |  |  |  |  |  |  |  |
|  | ( $)^{\prime \prime}$ |  | () |  |  | $)$ |  | © |  |  |  |  |  |  |  |  | (1) |  |  | () |  |
| 1 | $6 \mathrm{b3b5}$ |  | 6 b 3 | 5 | 1 | $6 \mathrm{b3}$ |  | b7 | 51 | 3 |  |  | 63 | 72 |  | 53 | 3672 | 5 | 3 | b7 |  |



ascend (dominant 7 with llm7), string set 5432

| Bb7 I | $\mathrm{Cm} 7 \quad \mathrm{II}$ | C\#dim7 III | Bb9 V | Cm7 V | Edim7 VI |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $(1)$ 1 | 1 1 | 1 | 1 1-2 | (1) | 1 |
| -1    <br>     <br>     | 2 | (2) | (0) 3 3 40 | 2 | (2) |
| 3() 4 | 3 () | 34 |  |  | 34 |
| 1 - | - | (1) | (1) | (1) 3 3 40 | (1) |
| 15673 | $15 \mathrm{b7}$ b3 | $1 \mathrm{b5} 6 \mathrm{b3}$ | 36725 | b3 b7 15 | $1 \mathrm{b5} 6 \mathrm{b3}$ |


descend (dominant 7 with $11 m 7$ ), string set 5432


$1656 \mathrm{b3}$


## ascend (dominant 7 with 1 Im 7 ), string set 5321

| Bb7 I | Cm7 III | C\#dim7 III | Bb9 IV | Cm7 V | Edim7 VI |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1$)$ 1 1 | (1) 2 3 | 11 | 1 | (1) | 111 |
|  | 4 | (2) | 2 3 |    <br> 2  3 | (2) |
| ()3 | (0) | 4 | 0 O- $0^{*}$ |  | 4 |
| $\square 1$ | $1-1$ | (1) | - 1 -10 | O) | ( ) |
| 16735 | $\begin{array}{llll}1 & 67635\end{array}$ | $16 \mathrm{b3b5}$ | $3 \quad 25 \mathrm{b7}$ |  | $16 \mathrm{b3b5}$ |


| Bb9 VII | Cm7 VIII | Gdim7 IX | Bb7 X | Ab9n3 XI | A9n3 XII | Bb9n3 XIII |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | (1) 1010 | 1 | 111 | (2) 333 | (2) 333 | (2) 333 |
| 2()${ }^{2}$ |  | (2) | 2 $(3)$ |  |  |  |
| 4 | 3() | 4 |  | () | () | () |
| $\square$ | 4 | ( ) $\square$ | ( $)$    | - | , | 1 |
| $\begin{array}{llll}5 & 3 & 672\end{array}$ | b367 1 | $16 \mathrm{~b} 3 \mathrm{b5}$ | $67 \quad 513$ | b72 2 | 1 b 25 | 1 l b725 |

descend (dominant 7 with 1 Im 7 ), string set 5321


## ascend (dominant 7 with llm7), string set 4321



| Eb9 | nr VIII | Fm7 IX | Cdim7 X | Eb7 XI | Db9n3 XI | D9n3 XII | Eb9n3 XIII |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1(1)1 | 1 | (1) 2 | (1)(1) | (1) 11 | (1) 1 11 | (1) 1 11 |
|  | 1 122 | $2(3)$ | -13 4 |  | 2 | 2 | 2 |
|  | 3 | $4$ |  | () | 31 | 3 | 3 |
| (1) | 1 Cl | 1 | $1-10$ | -17n | -1( ) | -10) | 1 10) |
|  | 52367 | $\begin{array}{llll}51 \mathrm{~b} & \mathrm{~b} 7\end{array}$ | $1 \mathrm{b5} 6 \mathrm{b3}$ | 67351 | 15672 | 15672 | 15672 |

descend (dominant 7 with IIm7), string set 4321

| Eb9n3 XIII | Ebdim7 XIII | Ddim7 XII | Eb13 XI | Fm7 IX | E9nr IX |  | Eb9nr VIII |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) 11 | (1) 2 | (1) 2 |  | 1 |  | 1(1)1 |  | 1(1)1 |
| 2 | 34 | 34 | 3 | 2 (3) |  | 2 |  | 2 |
| 3 |  |  | () ${ }^{4}$ | 4 |  | 3 |  | 3 |
| (1) | (1) | (1) |  | - | (1) | (1) |  | (1) |
| 15672 | b5 $6 \mathrm{b3}$ | $1 \mathrm{b5} 6 \mathrm{b3}$ | 67 361 | $51 \mathrm{b3b7}$ |  | 52367 |  | 52367 |



## DORIAN MINOR SEVENTH LINEAR BASS CADENCES

## Dorian Minor Seventh Linear Harmonized Bass

## ascend (Dorian m7), string set 6432



descend (Dorian $m 7$ ), string set 6432

| Fm7 |  | XIII | Gm7 XI |  | Gbm7 X |  | Fm7 IX |  | Gm7 VIII |  |  | Gbm7 VII |  |  | Fm7 VI |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (2) 3330 |  |  |  | 1 |  | 1 |  | 1 |  | $1$ | (1) |  | 1 | (1) | - |  | 1 | (1) |
|  |  |  |  | $2(3)$ | $2(3)$ |  | 2(3) |  |  |  |  |  | -1 |  |  |  |  |  |
|  | (0) |  | 4 |  | 4 |  | 4 |  |  | ) | 4 |  |  | 4 |  |  |  | 4 |
|  | - | $\square$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 6763 | 35 |  | 51 b 3 | b7 | 51 b 3 | b7 | $51 \mathrm{b3}$ | 5 | 63 | 67 1 | 5 | b3 | b7 1 |  | 5 | 63 | 67 1 |

Gm7 V

Gbm7 IV





## ascend (Dorian m7), string set 5432



| Bbm7 VI | Abm7 VIII | Am7 IX | Bbm7 X | Abm7 XI | Am7 XII | Bbm7 XIII |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\bigcirc$ O\|ll|l | 1 | 1 | 1 | (1) 1 | (1) 1 | $(1)$ 1 <br>   |
|  | 23 (4) | 23 (4) | 23 (4) | 2 | 2 | 12 |
| $2(3)$ |  |  |  | 3() | $3(1)$ | 30 |
|    <br>   4 | (0) | (D) | (0) | , | - | 1 - |
| $\begin{array}{llllll}51 & 1 & 63\end{array}$ | b7 b3 51 | b7 b3 51 | b7 b3 51 | 15 b 7 b 3 | $15 \mathrm{b7}$ b | $15 \mathrm{b7} 3$ |

## descend (Dorian m7), string set 5432



| Cm7 |  |
| :--- | :---: |
| V |  |
|   1  <br> 2    <br>     <br>     <br>  3 3  <br> $b 3$ $b 7$ 1 5 |  |




## ascend (Dorian m7), string set 5321



## descend (Dorian m7), string set 5321


ascend (Dorian m7), string set 4321



## descend (Dorian m7), string set 4321



b3 6715

b3 6715

b3 6715

$15 \mathrm{b7}$ b3
Ebm7 I


## AEOLIAN MINOR SEVENTH LINEAR BASS CADENCES

## Aeolian Minor Seventh Linear Harmonized Bass

## ascend (Aeolian m7), string set 6432


descend (Aeolian m7), string set 6432


## ascend (Aeolian m7), string set 5432

| Bbm7 I | Cdim7 II | Dbdim7 III |
| :---: | :---: | :---: |
| (1) 1 | 1 | 1 |
| 2 | (2) | (2) |
| 3 () | 34 | 34 |
| - | ( $)^{1}$ | (1) |
| 15 b 7 b 3 | 165663 | $1656 \mathrm{b3}$ |



Edim7 VI


| Bbm7 VI |  |  |
| :---: | :---: | :---: |
| Q | 1 | (1) |
|  |  |  |
| $2(3)$ |  |  |
|  |  | 4 |
| $\begin{array}{lllllll}51 \mathrm{~b} & \mathrm{~b} 7\end{array}$ |  |  |


descend (Aeolian m7), string set 5432

| Bbm7 XIII | Adim7 XI | Bbm7 X | Gdim7 X | F\#dim7 V | Bbm7 VI |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (1) 1 <br>   | 1 | 1-1 117 | 1-1 | 1-1 | Q $0^{(1)}$ |
| 2 | (2) | 23 (4) | (2) | (2) |  |
| 3() | 3 4 |  | $3{ }^{3} 4$ | 3.4 | 2 (3) |
| - 1 | (D) | (1) | (1) | (1) | - 4 |
| $15 \mathrm{b7} 3$ | 165663 | b7 3351 | $1 \mathrm{b5} 6 \mathrm{~b} 3$ | $1 \mathrm{b5} 6 \mathrm{b3}$ | 516367 |



## ascend (Aeolian m7), string set 5321



Dbdim7 III


Edim7 VI



descend (Aeolian m7), string set 5321


## ascend (Aeolian m7), string set 4321

| Ebm7 I | Fdim7 III |
| :---: | :---: |
| (1) | (1) 2 |
| 22 | 34 |
| 3 |  |
| (1) | () |
| $15 \mathrm{b7} 3$ | 1656 |

Gbdim7 IV



| Abdim7 |  |  |
| :---: | :---: | :---: |
|  | (1) |  |
|  | 3 | 4 |
|  |  |  |
|  |  |  |


| Adim7 |
| :--- |
|  (1) VII  <br>   2 2 <br>  3 4  <br>     <br>     |


| Ebm7 |  |  | VII |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  | 1 | 1 | 1 |
|  | $2(3)$ |  |  |  |
|  |  |  |  | 4 |
|  |  |  |  |  |
|  | 5 | 1 |  |  |


$1 \mathrm{b5} 6 \mathrm{b3}$


descend (Aeolian m7), string set 4321

| Ebm7 XIII | Ddim7 XII | Ebm7 XI | Cdim7 X | Bdim7 IX | Ebm7 VII |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | (1) 2 | (1) 1.1111 | (1) 2 | (1) 22 | 1 |
| 22 | $3{ }^{3} 4$ |  | $3{ }^{3} 4$ | $3{ }^{3} 4$ | $2(3)$ |
| 3 | - | () ${ }^{-1}$ |  |  | 4 |
| (1) | - (0) |  -1  | - (0) | - (0) | - |
| $15 \mathrm{b7} \mathrm{b3}$ | 165663 | b7 b3 1 | $1 \mathrm{~b} 56 \mathrm{b3}$ | $1 \mathrm{~b} 56 \mathrm{b3}$ | $\begin{array}{llll}51 \mathrm{~b} & \mathrm{~b} 7\end{array}$ |



165663


1 b 56 b 3

| Ebm7 IV | Gbdim7 IV |
| :---: | :---: |
| 1 (1) | (1) 2 |
|  | 34 |
| (1) 304 |  |
| -1] | (1) |
| b3 b7 15 | 165663 |


| Fdi | m 7 | II | I |
| :---: | :---: | :---: | :---: |
| (1) 2 |  |  |  |
|  | 3 | 3 | 4 |
|  |  |  |  |
|  | ( | ( $)$ |  |


| Ebm7 |
| :---: |
| (1) |
| 22 |
| 3 |
| (1) |
| 1567 b 3 |

## LOCRIAN m7b5 LINEAR BASS CADENCES

## Locrian m7b5 Linear Harmonized Bass

## ascend (Locrian m7b5), string set 6432 (use up to Gm7b5 C7 Fm7)

| Gm7b5 II | Fm7b5 III |  | F\#m7b5 IV |  | Gm7b5 V |  | Fm7b5 VI |  |  | F\#m7b5 VII |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | (1) |  | (1) |  | (1) |  | 1 | (1) |  | 1 | (1) |
| (2) 340 | 2 | 33 | 2 | 33 | 2 | 33 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | (1) 4 | 4 |  | (1) | 4 |
| (1) |  | (1) |  | (1) |  | (1) |  |  |  |  |  |  |
| $1 \quad \mathrm{~b} 7 \mathrm{~b} 3 \mathrm{~b} 5$ | b3 165b7 |  | b3 $1 \mathrm{b5}$ b7 |  | b3 1 b5 b7 |  | b5 b3b7 1 |  |  | b5 b3 b7 1 |  |  |
| Gm7b5 VIII | Fm7b5 IX |  | F\#m7b5 X |  | Gm7b5 XI |  | F\#m7b5 XIII |  |  | Gm7b5 XIV |  |  |
| 1 (1) |  |  | 1  <br> 1 1 |  |  |  |  |  |  |   1 1 <br> 2 3 4  |  |  |
| 2 |  | (2) |  | (2) |  |  |  |  |  |  |  |  |
| (1) 4 | 3 |  | 3 |  | 3 |  |  | $1+10$ |  |  |  |  |
| - 1 \|n |  |  |  | - |  | - |  | $(1)$ |  |  |  |  |
| b5 b3 671 | $67 \quad 65183$ |  | 67 65163 |  | $67 \quad 65183$ |  | $1 \quad b 7 b 3 \quad 1$ |  |  | $\frac{1}{1}$ |  |  |

descend (Locrian m7b5), string set 6432 (use up to Gm7b5 C7 Fm7)

| Gm7b5 XIV | Gb dim7 XIII | Gm7b5 XI | Fm7 IX | D dim7 IX | Gm7b5 VIII |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1  1 |  1 1 <br>  1 1 | 1 1 1 <br>    | $\begin{array}{\|l\|l\|l\|} \hline & & 1 \\ \hline \end{array}$ | 1 1 1 |  1 |
| (2) 340 |  | - (2) | 2(3) | (2) 310 | 2   |
|  | 1. 1 | 3 |  |  | (0) 4 |
| - (1) | (0) ${ }^{-1}$ | -7-13 |  | - (0) | $\square$ |
| $1{ }^{1} \mathrm{b7} 33 \mathrm{b5}$ | 166365 | 67 65 1 b3 | $67 \quad 511 \mathrm{bl}$ | 166365 | b5 b3 b7 1 |
| Fm7 VI | B dim7 VI | Gm7b5 V | Fm7 III | Ab dim7 III | Gm7b5 II |
| 1 (1) | $1{ }^{1} 1$ | (1) | (1) | $1{ }^{1} 1$ |    1 |
| , | (2) 1300 | 233 | 2  3 | (2) 30 | (2) 34.0 |
| 3() 4 |  |  | 4 |  |  |
| - | (0) | ( ( ) | $\square 10$ | (1) | ( ${ }^{(1)}$ |
| $5 \quad$ b3 b7 1 | $16 \mathrm{b3b5}$ | b3 16567 | b3 $15 \quad 156$ | $16 \mathrm{b3b5}$ | $1{ }^{1} \mathrm{~b} 7 \mathrm{~b} 3 \mathrm{~b}$ |

ascend (Locrian m7b5), string set 5432 (use up to Bm7b5 E7 Am7)

| Bm7b5 II | Cdim7 II | C\#dim7 III |
| :---: | :---: | :---: |
| (1) 2 | 1 | 1 |
| $3{ }^{3} 4$ | (2) | (2) |
| (1) | 34 | 34 |
| -1-1 | (1) | (1) |
| 1656763 | 16563 | 165663 |



| Edim7 |  | V |
| :---: | :---: | :---: |
|  | , |  |
| (2) |  |  |
| 3 | 3 | 4 |
|  | (1) |  |


| Bm7b5 VII | F\#dim7 VIII | Gdim7 X | Bm7b5 X | Adim7 XI | Bm7b5 XIV |
| :---: | :---: | :---: | :---: | :---: | :---: |
| O\|-1910 | 1 | 1 | 1 | 1 | 1$)^{\prime}$ 2 <br>  3 |
| 2 | (2) | (2) |  | (2) | [ 3 14 |
| (3) |  3 4 <br>    | -3 4 | 23 (4) | - 3.4 | 0 |
| - 4 | (1) | $\square 1(1)$ | 2    <br>     |  | - 1 |
|  | 165663 | 165663 | 6763651 | 165663 | $16567 \mathrm{b3}$ |

descend (Locrian m7b5), string set 5432 (use up to Bm7b5 E7 Am7)

| Bm7b5 XIV | Adim7 XI | Bm7b5 X | Am7 IX | F\#dim7 V | Bm7b5 VI |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $(1)$ 2 | 1 | 1 | 1 | 1 | $\bigcirc$ |
| 34 | (2) |  | 23 (4) | (2) | 2 |
| (0) |  3 4 | 23 (4) |  | 3 34 | (3) |
| - | (1) | - | (1) | (1) | 4 |
| $16567 \mathrm{b3}$ | 165663 | 6763651 | b7 6351 | 165663 | 6516367 |






## ascend (Locrian m7b5), string set 5321 (use up to Bm7b5 E7 Am7)

| Bm 7 b 5 |  |  | I |
| :---: | :---: | :---: | :---: |
|  |  |  |  |



C\#dim7 III


Edim7 VI


| Bm7b5 X |  |
| :---: | :---: |
|  | 1 1 |
| 2 |  |
|  | (3) |
|  | $\square$ |
|  | b5 1 b3 |


descend (Locrian m7b5), string set 5321 (use up to Bm7b5 E7 Am7)



ascend (Locrian m7b5), string set 4321 (use up to Em7b5 A7 Dm7)

| Em7b5 II | Fdim7 III | F\#dim7 IV | Em7b5 V | G\#dim7 VI | Adim7 VII |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | (1) 2 | (1) 2 | 1 (1) | (1) 2 | (1) 2 |
| 333 | $3{ }^{1} 4$ | $3{ }^{3} 4$ | 2 | $3{ }^{3} 4$ | 34 |
|  | $\square$ | $\square$ | (1) 3 | I | - |
| ( 0 | - | (1) | - | - ( ) | - (1) |
| $1 \mathrm{~b} 5 \mathrm{b7}$ b3 | 165663 | 1 b 56 b 3 | b3 b7 165 | $1 \mathrm{b5} 6 \mathrm{~b} 3$ | $1 \mathrm{~b} 56 \mathrm{b3}$ |
| Em7b5 VIII | Bdim7 IX | Cdim7 X | Em7b5 XI | Ddim7 XII | Ebm7 XIV |
| i 1 | (1) 2 | (1) 2 | , | (1) 22 | (1) |
| (2) |  |  | (0)23 (4) | 34 | 333 |
| 4 |  |  | - | (1) |  |
| - | ( 0 | - (0) | ( ) - - | - (0) | - (0) |
| b5 $1 \mathrm{~b} 3 \mathrm{b7}$ | 165663 | 1 b 56 b | 6763651 | 1 b 56 b | $1 \mathrm{~b} 57 \mathrm{b3}$ |

descend (Locrian m7b5), string set 4321 (use up to Em7b5 A7 Dm7)

| Em7b5 XIV | Ddim7 XII | Em7b5 XI | Dm7 X | Bdim7 IX | Em7b5 VIII |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (1) 1 | (1) 2 | 1 | (1) 1 1 1 1 | (1) 2 | i 1 |
| 122 |  | $0{ }^{23} 1$ |  |  | (2) |
| 3 |  |  | () |  | 4 |
| - 10 | - 1 (1) | (1) ${ }^{\text {( }}$ |     <br> 17    <br> 1751    | - 1 (1) |     <br>     |


| Dm7 VI | Abdim7 VI | Em7b5 V | Dm7 III | Fdim7 III | Em7b5 II |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | (1) 2 | 1 (1) | 1 (1) | (1) 22 | (1) |
| $2(3)$ | 3 | - 2 |  |  | 22 |
| 4 |  | (0) 3 | () 3 4  <br>     | - | 3 |
|  | - (0) |  |  | $\square 10$ | $\qquad$ |

## MELODIC MINOR LINEAR BASS CADENCES

These use chords built on steps VII, VI, V and IV of bVI melodic minor in relation to the target chord. The primary setup chord is the IV chord of melodic minor, which is the bII7 of the target chord. They are most useful in descending order, as shown here. See Modes/Modes Of Four Hepatatonic Scales/Melodic Minor Modes.

## Target Chord A7, Using F Melodic Minor Chords, Descending Roots

| F mel. min. <br> VIIm7b5 <br> Em7b5 VII | F mel. min. VIm7b5 |  | target chord |  | F mel. min. VIIm7b5 |  | chromatic passing chord |  | F mel. min. VIm7b5 |  | target chord |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) 2 |  | 2 | 1 2 |  | (1) 2 <br>  3 |  | $(1)$ 2  <br>  3 4 |  | (1) 2 |  | 1 2 |  |  |
| $3{ }^{3} 4$ |  | $3{ }^{3} 4$ |  | 3 4 |  | $3{ }^{3} 4$ |  |  |  | 3 4 | () | 3 | 4 |
| (1) |  | () |  |  |  | (1) |  | (0) |  | () |  |  |  |
| -1-1 |  |  |  | (1) |  |  |  | - |  | 1 |  | (0) |  |
| $1 \mathrm{b5} 67 \mathrm{b3}$ |  | $6567 \mathrm{b3}$ |  | b7 25 | 1656763 |  | $16567 \mathrm{b3}$ |  | 16567 b 3 |  | $3 \mathrm{b7} 25$ |  |  |
| F mel. min. V9 | F mel. min. IV7 |  | target chord |  | F mel. min. V9 |  | chromatic passing chord |  | F mel. min. IV7 |  | target chord |  |  |
| C7 VIII | Bb7 | VI | A7 | V | C7 | VIII | B7 | VII | Bb7 | VI | A7 |  | V |
| (1) 212303 | (1) | 2 | (1) | 2 30 | (1) | 230 | (1) | 28 | (1) | 2 3 | (1) | 2 | 30 |
| 4 |  | 4 |  | 4 |  | 4 |  | 4 |  | 4 |  | 4 | 4 |
| () |  | () |  | (0) |  | () |  | () |  | () |  | () |  |
| 1 - |  | -1-1-1 |  | 1-1.-1 |  | -1-1 |  | -1-1. |  | , |  |  |  |
| 1 b 735 | 1 | b73 5 | 1 | b73 5 |  | b73 5 | 1 | b73 5 | 1 | b73 5 | 1 | b7 3 | 35 |

## Target Chord D7, Using Bb Melodic Minor Chords, Descending Roots




- Used In Solo Guitar or in Composition
- Back-Cycling with Dominant Sevenths
- Back-Cycling with II V Pairs
- Back-Cycling with Major Scale-Tone Fourths


## USED IN SOLO GUITAR OR IN COMPOSITION

Joe Pass and Wes Montgomery were my earliest inspirations for this globabization. These extended cadences in fourths with flat five substitutes and stand-alone II-V chord changes would not be easily understood if played along with another chord progression and another bass line. They need to be used alone, not simultaneously with another chord progression, unless the second progression was composed to be made compatible. For that reason, they are used in solo guitar, such as Joe Pass style or in composition.

Joe Pass used them extensively in his solo guitar performances and when he accompanied Ella Fitzgerald. He used dominant chords with their roots progressing in perfect fourths as connective filler.

IIm-V is sometimes used as a stand-alone pair of chords without progressing to "I". Here's a list of songs in which they were used as part of the composition:

- 1931 - Just Friends (John Klenner, lyrics by Sam M. Lewis)
- 1943 - Speak Low, bars 9-12 (Kurt Weill)
- 1944 - Round Midnight (Thelonius Monk)

1945 - Groovin' High (Dizzy Gillespie)

- 1946 - Tenderly (Walter Gross)
- 1954 - Four (Miles Davis)
- 1955 - Joy Spring (Clifford Brown)
- 1956 - When Sunny Gets Blue (Marvin Fisher and Jack Segal)
- 1960 - West Coast Blues (Wes Montgomery)
- 1960 - Meditation (Antonio Carlos Jobim)
- 1960 - Four on Six (Wes Montgomery)
- 1964 - Girl from Ipanema, B section (Antonio Carlos Jobim)
- 1965 - Ceora (Lee Morgan)
- 1967 - Wave (Antonio Carlos Jobim)
- 1968 - Road Song, bar four of the B section (Wes Montgomery)
- 1973 - Valdez in The Country (Donny Hathaway)
- 1976 - Knocks Me off My Feet (Stevie Wonder)
- 1976 - Ordinary Pain (Stevie Wonder)


## BACK-CYCLING WITH DOMINANT SEVENTHS

## "Back-Cycling" Defined

Back-cycling is planning a series of chords in a series with a target in mind. It is most often a series of chords with their roots ascending in perfect fourths. Perfect fourths use the number cycle 7362514. In practicve, with sharps and flats, that can manifest as \#4-7-3-6-2-5-1-4-b7-b3-b6-b2-b5. Perfect fourths use the letter cycle BEADGCF (bead go-catch-fish), which makes the cycle B\#-E\#-A\#-D\#-G\#-C\#-F\#-B-E-A-D-G-C-F-Bb-Eb-Ab-Db-Gb-Cb-Fb. Whew!

## Flat Five Substitutes

A flat five substitute uses a bII of a target, instead of a $V$ of target.
When chords progress with their roots ascending in perfect fourths, each chord can be considered the fifth of the next chord. With B7-E7-A7-D7, for example, B7 is the V7 chord in the key of E, E7 is the V7 chord in the key of A and A7 is the V7 chord in the key of D. A flat five substitute replaces the "V" chord with a chord whose root (and letter name) is a flatted fifth (up or down) from the root of the V chord. This makes the replacement chord flatted second of the chord it preceeds. B7-E7-A7 with "E7" replaced with its flat five substitute makes the progression $\mathrm{B} 7-\mathrm{Bb} 7-\mathrm{A} 7$, making the progression chromatic instead of fourths.

## Targeting a Chord

## the combined cycles

Fourths is $7-3-6-2-5-1-4$. With every other chord as a flat five substitute beginning with the second chord, the cycle becomes the $7-\mathrm{b} 7-6-\mathrm{b} 6-5-\mathrm{b} 5-4$ chromatic series. With every other chord as a flat five substitute beginning with the first chord, the cycle becomes the 4-3-b3-2-b2-1-7 chromatic series. This table shows the original progression in the top row and flat five substitutes and their combinations in the following rows. Notice that the combinations are chromatic. You'll probably find this easier to visualize on the fretboard.

| original | \#IV | VII | III | VI | II | V | I | IV | bVII | bIII | bVI | bII | bV |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| first b5 sub.series | I |  | bVII |  | bVI |  | bV |  | III |  | II |  | I |
| first combination | I | VII | bVII | VI | bVI | V | bV | IV | III | bIII | II | bII | I |
| second b5 sub. series |  | IV |  | bIII |  | bII |  | VII |  | VI |  | V |  |
| second combination | \#IV | IV | III | bIII | II | bII | I | VII | bVII | VI | bVI | V | bV |

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## cycle of dominant sevenths in C

notice that the notes on the third string descend chromatically


## Blues in $G$ with back-cycled sevenths in fourths

## videotab

Swing Eighths $\sqrt[-]{ }=\bullet^{-3}$

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## BACK-CYCLING WITH II V PAIRS

Use the IIm-V part of cadences shown in Voice Leading/II-V-I Top Voice Leading. Tend to use the voicings with the root in the bass.

## Back Cycling is Different with IIm V Pairs

Back-cycling is planning a series of chords in a series with a target in mind. It is more straight-forward when used in fourths (see Back-Cycling with Dominant Sevenths).

## Voice Leading the Bass According to the II Chord

IIm-V pairs commonly voice-lead stepwise or chromatically down from the IIm chord of the IIm-V pair to a target IIm type chord, such as IIm7. This is commonly IIm V starting on IIIm to setup the progression to II minor, or as IIIm-VI7-bIIIm-bVI to II minor.

## Voice Leading the Bass According to the V Chord

IIm-V pairs also voice-lead chromatically down from the V chord of the IIm V pair to a target dominant chord.

## bllm7-bV7 to IV7

By using a flat five substitute for the V chord in a IIm-V pair, the pair becomes IIm7-bII7.

## I-VIm-IIm-V example - videotab

. $=125$
Swing Eighths $\quad . \boldsymbol{\varnothing}=\overbrace{}^{3}\rceil$


## BACK-CYCLING WITH MAJOR SCALE-TONE FOURTHS

## Using the 7-3-6-2-5-1-4 Series

Major scale-tone chords with their roots ascending in perfecet fourths use the number series 7-3-6-2-$5-1-4$. Major scale tone seventh chords for Bb major are shown below with their roots ascending in perfect fourths. Note that the cycle continues through both rows.


## Autumn Leaves example in fourths with flat five substitutes

Each of the target chords named above the staff (except not the D7 in bar six) is treated as a target. Three chords are used to setup for each target chord by back-cycling, using four roots in perfect fourths with the target as the fourth chord.

Autumn Leaves in fourths with flat five substitutes - click to play



## 

- Basic Comping, Melody and Improv
- Favored Jazz Song List
- Modal Songs
- Blues Songs (Jazz)
- 1-6-2-5 Songs
- Harmonic Minor Cadence Songs
- Melodic Minor Cadence Songs
- Minor Key Ambiguity Songs
- 7-3-6-2-5-1-4 Songs
- Abstract Songs


## BASIC COMPING, MELODY AND IMPROV

Work up a version of comping and melody in a simple manner on each song. Use both auditory and print resources. Just because it is in print, doesn't mean its correct. First play the melody and comping separately. If you can combine them as a chord solo or some kind of arrangement, that's great, but don't let that prevent you from getting a working version of the comping and melody right away.

## cycle through a short list of songs

Practice a few songs at a time to make it interesting. You also can study batches of songs that cover the same subject, such as the same type of chord progression, melodic or harmonic structure or technique. Make a list of three to ten songs, closer to three. Play them all in three stages.

## Work an Element into Your Improv

## practice a new element

Play a set of and element for a few minutes, then integrate them into free improv. Constantly look for areas of improvement and new ideas. Exercise a technique in a progressive manner with a few instances, like a set of bend exercises. Find a new melodic cell and practice it up and down a scale or arpeggio. Practice set of rhythms to use in your comping or soloing. See Comping Rhythms and "be inventive rhythmically".

## work the element into your improv

Now improvise a guitar part in your existing style, without introducing the new element at first. After minute or two, work the new element into your improv. Spend as much time or more improvising than you did exercising.

## within a couple days, use the integrated improv in jamming or performing with someone

At least, play in in performing state of mind, as if you are being heard by an audience. By practicing an element, then working it into your improv, now you need to use it in some sort of performance in the next few days, before it is lost. If you use it in performance soon enough, it can get integrated into your playing, and review effortlessly as you perform!

## FAVORED JAZZ SONG LIST

The songs below were ordered according to the complexity of their chord progression. One "point" was given for each major II-V-I, minor II-V-I-bII, sequence of fourths cadence or complex key change (shown by an asterisk after the number of keys in the last column).

Modal Songs

|  | major <br> II-V | minor <br> II-V | bII (of target) <br> (mel.min.IV) | fourths | chromatic <br> K=key voice <br> C=chord voice | stepwise <br> 3 or more | keys | favorite <br> fake book |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Red Baron | 1 |  |  |  |  |  | 1 |  |
| Canteloupe Island |  |  |  |  |  |  | $3^{*}$ |  |
| Afro Blue |  |  | 1 |  |  | IIm, IIIm, IV | 2 | Real Book 6 |
| Song for My Father |  |  | 1 |  |  | Vim, V, IV. III | 2 | Real Book 6 |
| Moanin' |  |  |  |  |  |  | 1 | New Real Book 2 |
| Mercy, Mercy, Mercy |  |  |  |  |  |  | 1 | New Real Book 1 |
| Affirmation | 1 |  |  |  |  |  | 2 | New Real Book 1 |
| Put It Where You Want It | 1 |  |  |  | K b7,I07,I7 |  | 1 | New Real Book 1 |

Blues

|  | major <br> II-V | minor <br> II-V | bII (of target) <br> (mel.min.IV) | fourths | chromatic <br> K=key voice <br> C=chord voice | stepwise <br> 3 or more | keys | favorite <br> fake book |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :--- |
| Freddie Freeloader |  |  |  |  |  |  |  |  |
| Mr. P.C. |  |  | 1 |  |  |  | 1 | Real Book 6 Book 6 |
| Equinox |  |  | 1 |  |  |  | 1 | Real Book 6 |
| Pawky |  |  | 1 |  |  |  | 1 |  |
| All Blues |  |  | 1 |  |  |  | 1 | Real Book 6 |
| Bag's Groove |  |  |  |  |  |  | 1 | Standards Real Book |
| Tenor Madness | 1 |  |  | $1-6-2-5$ |  |  | 1 | Real Book 2 |
| Sonnymoon for Two | 1 |  |  | $1-6-2-5$ |  |  | 1 | Real Book 6 |
| Au Privave | 1 |  |  |  |  |  | 1 | Real Book 2 |
| Bloomdido |  |  | 1 (bIIIm) | $1-6-2-5$ |  |  | 1 | Real Book 2 |
| Billile's Bounce |  |  |  |  |  |  |  |  |

1-6-2-5

|  | major II-V | minor II-V | bll (of target) (mel.min.IV) | fourths | chromatic $\mathrm{K}=\mathrm{key}$ voice C=chord voice | stepwise <br> 3 or more | keys | favorite fake book |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Breezin' | 1 |  |  | 1-6-2-5 |  |  | 1 |  |
| The Way You Look Tonight | 3 |  |  | 1-6-2-5 |  |  | 2 | New Real Book 1 |
| I Got Rhythm | 1 |  |  | 1-6-2-5 |  |  | 3 | Standards Real Book |
| Isn't She Lovely | 1 | 1 |  | 6-2-5-1 |  |  | 2 |  |
| One Note Samba | 2 |  | 2 |  | K 3,b3,2,b2 |  | 3 | Real Book 6 |
| Anthropology | 2 |  |  | $\begin{aligned} & 1-6-2-5, \\ & 3-6-2-5 \end{aligned}$ |  |  | 2 | New Real Book 1 |
| Misty | 4 |  |  | 1-6-2-5 |  |  |  | New Real Book 1 |
| Donna Lee | 3 | 1 |  |  |  |  | 2 | Real Book 6 |
| St. Thomas | 2 |  | 2 | $\begin{aligned} & 1-6-2-5, \\ & 3-6-2-5 \end{aligned}$ | K 34\#45 |  |  | New Real Book 1 |
| Yardbird Suite | 2 | 2 | 1 | 3-6-2-5-1 |  |  | 3 | Real Book 2 |
| Stormy Weather | 1 |  |  | $\begin{aligned} & 1-6-2-5, \\ & 3-6-2-5 \end{aligned}$ | $\begin{gathered} \text { K 1\#12, } \\ 4 \# 45,5 \# 56 \end{gathered}$ |  |  | New Real Book 1 |
| Angel Eyes (minor key I VI II V) | 4 | 1 | 1 | $\begin{aligned} & \text { minor } \\ & 1-6-2-5 \end{aligned}$ |  |  | 3 | New Real Book 1 |

Changing Major Scales, Two Bars or More Each

|  | major II-V | minor II-V | bll (of target) (mel.min.IV) | fourths | chromatic $\mathrm{K}=$ key voice C=chord voice | stepwise 3 or more | keys | favorite fake book |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IIV V blues <br> (1111 4411 5511) |  |  |  | 5-1-4 |  |  | 13 |  |
| I Got Rhythm B section |  |  |  |  |  |  | 4 | Standards Real Book |
| The In Crowd |  |  |  |  |  |  |  |  |
| How High the Moon | 3 | 1 | 1 |  |  |  | 3 | Real Book 6 |
| Tune Up | 3 |  |  |  |  |  | 3 | New Real Book 1 |
| Poinciana |  |  |  |  |  |  |  | Real Book 3 |
| Afternoon in Paris |  |  |  |  |  |  | 3 | Real Book 1 |
| Bluesette | 4 | 2 |  |  |  |  | 6 | Standards Real Book |
| God Bless the Child | 3 | 1 |  |  | K 1,7,b7,6 |  |  | Real Book 6 |
| Have You Met Miss Jones | 5 |  |  |  |  |  | 5 | Standards Real Book |
| Here's that Rainy Day | 4 |  |  |  |  |  | 4 | New Real Book 1 |
| 500 Milea High | 3 | 1 |  |  |  |  | 7 | Real Book 1 |
| Donna Lee | 3 | 1 |  |  |  |  | 2 | Real Book 6 |
| All the Things You Are | 4 | 2 |  | $\begin{gathered} 7-3-6-2- \\ 5-1-4 \end{gathered}$ |  |  | 3 | Real Book 6 |
| Ornithology | 4 | 1 |  | $\begin{gathered} 3-6-2-2- \\ 5-1 \end{gathered}$ | K 3,b3,2,b2,1 |  | 3 | Real Book 6 |

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## Harmonic Minor Cadence

(see common minor key scales and arpeggios)

|  | major II-V | minor II-V | bll (of target) (mel.min. IV) | fourths | chromatic K=key voice C=chord voice | stepwise <br> 3 or more | keys | favorite fake book |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Baja Nights |  |  |  |  |  |  | 1 |  |
| Caravan | 1 | 1 | 1 | 1-6-2-5 |  |  | 2 | Real Book 2 |
| Blue Bossa | 1 | 1 |  |  |  |  | 2 | Real Book 6 |
| Road Song | 5 | 1 |  |  |  |  | 3 | Real Book 6 |
| Autumn Leaves | 1 | 1 |  | 7-3-6-2-5-1-4 |  |  | 2 | Real Book 6 |
| Black Orpheus | 1 | 2 |  | 7-3-6-2-5-1-4 |  |  | 3 | Real Book 6 |
| Fly Me to the Moon | 2 | 2 |  | 7-3-6-2-5-1-4 |  |  | 1 | New Real Book 2 |
| Nature Boy |  | 2 |  |  |  |  |  | New Real Book 1 |
| My Funny Valentine (section A only) |  | 2 | 1 |  | $\begin{gathered} \text { K/C } \\ \text { 1,7,b7,6,b6 } \end{gathered}$ |  | 1 | Standards Real Book |
| 1625 songs |  |  |  |  |  |  |  |  |
| jazz blues |  |  |  |  |  |  |  |  |

## Melodic Minor Cadence

(includes combined harmonic minor and melodic minor cadences)

|  | major II-V | minor II-V | bII (of target) (mel.min.IV) | fourths | chromatic $\mathrm{K}=\mathrm{key}$ voice C=chord voice | stepwise <br> 3 or more | keys | favorite fake book |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Song for My Father |  |  | 1 |  |  | Vim, V, IV. III | 2 | Real Book 6 |
| I Want You (intro/chorus) |  |  | 1 |  |  |  | 1 |  |
| Glass Onion | 1 |  | 1 |  |  |  | 1 |  |
| Pawky |  |  | 1 |  |  |  | 1 |  |
| Footprints | 1 |  | 2 |  |  |  | 1 | Real Book 6 |
| Sunny |  | 1 | 1 |  |  |  | 1 | Standards Real Book |
| Sugar |  | 1 | 2 |  |  |  | 1 | Real Book 6 |
| Moanin' |  | 1 | 2 |  |  |  | 1 | New Real Book 2 |
| One Note Samba | 2 |  | 2 |  | K 3,b3,2,b2 |  | 3 | Real Book 6 |
| This Masquerade | 3 |  | 1 |  | K/C 1,7,b7,6 |  | 3 | New Real Book 1 |
| Tenderly | 4 | 1 |  |  | K4\#45 |  | 1 | New Real Book 1 |
| Willow Weep for Me | 5 | 2 |  |  | K2\#234 |  |  | New Real Book 1 |
| 1-6-2-5 songs with melodic minor |  |  |  |  |  |  |  |  |
| 1-6-2-5 with harmonic minor and melodic minor |  |  |  |  |  |  |  |  |

## Minor Key Ambiguity

|  | major <br> II-V | minor <br> II-V | bII (of target) <br> (mel.min.IV) | fourths | chromatic <br> K=key voice <br> C=chord voice | stepwise <br> 3 or more | keys | favorite <br> fake book |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Summertime |  | 2 | 1 |  |  |  | 1 | Standards Real Book |
| Get Lucky |  |  |  |  |  |  | 1 |  |
|  |  |  |  |  |  |  |  |  |

## Major Flat Six

|  | major <br> II-V | minor <br> II-V | bII (of target) <br> (mel.min.IV) | fourths | chromatic <br> K=key oice <br> C=chord voice | stepwise <br> 3 or more | keys | favorite <br> fake book |
| :--- | :---: | :---: | :---: | :---: | :--- | :--- | :--- | :--- |
| Sleepwalk |  |  |  |  |  |  | 1 |  |
| Bag's Groove |  |  |  |  | IV7\#iV07 I7 |  | 1 | Standards Real Book |
| Tenor Madness | 1 |  |  | $1-6-2-5$ | IV7\#VV7 I7 |  | 1 | Real Book 2 |
| Au Privave | 1 |  |  | $1-6-2-5$ | IV7\#VV7 I7 |  | 1 | Real Book 6 |
| How Insensitive | 2 | 1 | 2 (last in A <br> third-to-last in B) |  |  |  | 2 | Standards Real Book |
| Corcovado | 2 |  | 1 |  | I13 IV13v9 <br> IVm7 |  | 3 | Real Book 6 |
| Wave | 5 |  | 1 |  |  |  | 3 | Real Book 6 |

## 7-3-6-2-5-1-4

| 7362514 | major <br> II-V | minor <br> II-V | bII (of <br> target) <br> (mel.min.IV) | fourths | chromatic <br> K=key voice <br> C=chord voice | stepwise <br> 3 or more | keys | favorite <br> fake book |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :--- |
| Take Flve | 1 | 1 |  | $7-3-6-2-5-1-4$ |  |  | 2 | Standards Real Book |
| Autumn Leaves | 1 | 1 |  | $7-3-6-2-5-1-4$ |  |  | 2 | Real Book 6 |
| My Favorite Things | 1 | 1 |  | $7-3-6-2-5-1-4$ |  |  | 3 | Real Book 6 |
| Billile's Bounce | 2 |  |  | $1-6-2-5$ <br> $7-3-6-2-5-1-4$ |  |  | Real Book 2 |  |
| Black Orpheus | 1 | 2 |  | $7-3-6-2-5-1-4$ |  |  | 3 | Real Book 6 |
| Scrapple from the Apple | 1 | 1 |  | $7-3-6-2-5-1-4$ | K 4,\#407,5 |  | 1 | Real Book 6 |
| Fly Me to the Moon | 2 | 2 |  | $7-3-6-2-5-1-4$ |  |  | 1 | New Real Book 2 |
| There Will Never Be <br> Another You | 3 | 1 |  | $1-6-2-5$ |  |  | Real Book 1 |  |
| Blues for Alice | 6 | 1 |  | $7-3-6-2-5-1-4$ |  |  | 1 | Real Book 6 |
| Confirmation | 4 | 2 |  | $7-3-6-2-5-1-4$ |  |  | 3 | Real Book 6 |
| Georgia on My Mind | 5 | 1 | 1 | $7-3-6-2-5-1-4$ |  |  |  |  |
| All the Things You Are | 4 | 2 |  | $7-3-6-2-5-1-4$ |  |  |  |  |

Abstract

|  | major II-V | minor II-V | bll (of target) (mel.min.IV) | fourths | chromatic <br> K=key voice <br> C=chord voice | stepwise <br> 3 or more | keys | favorite fake book |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| The Days Of Wine and Roses | 3 | 2 | 1 (second chord is b5 of fourth chord) | $\begin{aligned} & 7-3-6-2-5- \\ & 1-4 \end{aligned}$ |  |  | 1 | Standards Real Book |
| Killing Me Softly With His Song | 1 |  | 1 (next-tolast chord) | 2-5-1-4 |  |  | 2 | New Real Book 1 |
| It Don't Mean A Thing | 2 |  |  |  | $\underset{1,7, b 7,6, b 6,5}{C_{1}^{C}}$ |  | 3 | Real Book 6 |
| In A Mellow Tone | 2 |  |  |  | K 4,\#47,5 |  | 2 | Real Book 6 |
| Corcovado | 2 |  | 1 |  |  |  | 3 |  |
| Chopin Waltz Op. 64, No. 2 | 1 | 1 |  |  |  |  | 1 |  |
| Someday My Prince Will Come | 3 |  |  |  | $\begin{aligned} & \text { K3,b307,2; } \\ & \text { KIV:4,\#4ㄱ,5 } \end{aligned}$ |  | 2 | Real Book 6 |
| Valdez in the Country | 3 |  | 1 |  |  |  | 1 | Standards Real Book |
| Don't Get Around Much Anymore | 1 | 2 |  |  |  |  | 2 | Real Book 6 |
| Groovin' High | 4 |  |  |  | KIIIm, bIIIm, Ilm |  | 1 | Real Book 6 |
| Four | 5 |  |  |  |  |  | 1 | New Real Book 1 |
| Night in Tunisia | 1 | 3 | 1 |  |  |  | 3 | Real Book 6 |
| How Insensitive | 2 | 1 | 2 (last in A and third-to-last in B) |  |  |  | 2 | Standards Real Book |
| (Somewhere) over the Rainbow | 3 | 2 | 1 (bVII in fifth bar of A) | 6-2-5-1 | $\begin{aligned} & \text { KIIIm, bllion, } \\ & \text { Ilm } \end{aligned}$ |  | 2 | New Real Book 1 |
| In a Sentimental Mood | 2 | 2 |  | 1-6-2-5 | $\begin{gathered} \text { K/C } \\ \text { 1,7,b7,6,b6 } \end{gathered}$ |  | 2 | Real Book 6 |
| One for My Baby | $\begin{aligned} & 3 \text { (two } \\ & \text { V IIm) } \end{aligned}$ |  | 1 |  |  | I, IIm, IIIm; IIm, IIIm, IV,V |  | New Real Book 1 |
| Meditation | 3 | 1 |  | 3-6-2-5-1 | K 3,b3,2 |  | 2 | Standards Real Book |
| Golden Lady | 4 |  |  |  | $\begin{gathered} \text { C 1, 7, b7, } \\ \text { b6, } 5 \end{gathered}$ | I,IIm, Illm | 4 | Real Book 6 |
| Misty | 5 | 1 |  | 3-6-2-5-1 |  |  | 2 | New Real Book 1 |
| Yardbird Suite | 2 | 2 | 1 | 3-6-2-5-1 |  |  | 3 |  |
| Girl from Ipanema | 4 | 1 | 1 | $3-6-2-5-1$ |  |  | 4 | Standards Real Book |
| Gentle Rain | 3 | 3 | 1 | 3-6-2-5-1 |  |  | 1 |  |
| Joy Spring | 6 |  | 2 |  | $\begin{gathered} \text { two K } \\ 3, \mathrm{~b} 3,2, \mathrm{~b} 2 \end{gathered}$ |  | 3 | Real Book 6 |
| Have You Met Miss Jones | 5 |  |  | 3-6-2-5-1 | K \#407 |  | 5 | Standards Real Book |
| My Funny Valentine | 3 | 2 | 3 |  | K/C 1,7,b7,6,b6 | I,IIm, IIIm | 2 | Standards Real Book |
| Round Midnight | 4 | 4 |  |  | C17b76 |  |  | Standards Real Book |
| Skylark | 4 | 1 | 3 | 1-6-2-5 |  |  | 3 | New Real Book 1 |

## MODAL SONGS

On each modal song, use these two standard layered steps. They build on one another and can be used simultaneously. You can come back to them later and add harmonic minor, melodic minor and arpeggios.

## Layer One - Pentatonic Scales

Establish a blues or swing basis. Elaborate with chromatics, using minor pentatonic with chromatics between four and five. See Movable Pentatonic Scales With One Chromatic.

Optionally, microtonal bends on the flatted third. If the chord you are using the microtonally bent flat third on is a minor chord, make the bend slight, so it doesn't make the chord sound major.

If the chord on the same root you are using a microtonally bent flat third on is major (such as a D minor pentatonic scale on a D major chord), the microtonal bend can go higher, but don't get too close the the natural third (without bending all the way to it), or your note may sound erroneously flat.

## Layer Two - Pentatonic Scale Subsets of Modes

Complete the heptatonic (seven-tone) scale mode, such as F minor pentatonic as a subset of F Aeolian, where you would add the two and flat six to complete the mode.

## Common Aeolian Key Scales and Arpeggios

## memorize one key form column at a time for each song



## Canteloupe Island

See Pedal Point Chord Progression / I IV I7: Thirds With Pedal Point"1".

| chord | pentatonic scales | major scale modes |
| :--- | :--- | :--- |
| Fm | Fm7/11 | F Dorian <br> (Eb major) |
| Db9 | Fm7/11b5 | F Aeolian b5 <br> (Ab major b3) |
| Dm7 | F ma6/9 | F major |

## Afro Blue

| chord(s) | pentatonic scales | major scale modes |
| :--- | :--- | :--- |
| Fm7 Gm7 Abma7 | Fm7/11 | F Aeolian <br> (Ab major) |
| Eb7 | Cm7/11 | C Phrygian <br> (Ab major) |
| Dm7 | F ma6/9 | F major |

## Song for My Father

| chord(s) | pentatonic scales | major scale modes |
| :--- | :--- | :--- |
| Fm7, Cm7 C7 | Fm7/11 | F Aeolian <br> (Ab major) |
| Db7 | Fm7/11b5 | F Aeolian b5 <br> (Ab major b3 <br> = Ab melodic minor) |
| Eb7 | $\mathrm{Cm} 7 / 11$ | C Phrygian <br> (Ab major) |

## BLUES SONGS (JAZZ)

Use these standard four layers in blues without harmonic minor nor melodic minor. They build on one another and can all be used simultaneously. Make these a default for your harmonic minor improv. Blues with harmonic minor and melodic minor will be approached later in the sections on each of those subjects, Harmonic Minor Cadence Songs and Melodic Minor Cadence Songs.

For now, the third layer will make major scale modes more complex by darkening, using a mode with flatted notes.

## Layer One - Pentatonic Scales

Establish a blues or swing basis. Elaborate with chromatics, using minor pentatonic with chromatics between four and five. See Movable Pentatonic Scales with One Chromatic.

Optionally, microtonal bends on the flatted third. If the chord you are using the microtonally bent flat third on is a minor chord, make the bend slight, so it doesn't make the chord sound major.

If the chord on the same root you are using a microtonally bent flat third on is major (such as a D minor pentatonic scale on a D major chord), the microtonal bend can go higher, but don't get too close the the natural third (without bending all the way to it), or your note may sound erroneously flat.

## Layer Two - Pentatonic Scale Subsets of Major Scale Modes

Complete the major scale mode, such as D minor pentatonic as a subset of D Aeolian, where you would add the two and flat six to complete the mode.

## Layer Three - Darkening Modes

This layer will complex what is done in layer two on blues by using modes with flatted tones, esspecially flat three and flat seven. These tones darken the mood and are the essence of African American coloration of European harmony.

The development of blues and jazz added Dorian and Mixolydian modes to the previous Ionian (major, such as a "C" major tone center with a "C" major scale) and Aeolian (major mode VI, such as an "A" tone center with a C major parent scale). Previous to the development of American blues and jazz the relative major and minor system used major scale tones one and six as the common tone centers. Mixolydian darkens major by flatting the seventh step of the major scale.

Flatting notes makes scales sadder or bluesier in mood. The mood of a "C" major scale is darkened with a flatted seventh is "C" Mixolydian and further darkened with Dorian, which has both a flatted third
and flatted seventh. See Modes, Modes On I IV V Blues, Modes On Jazz Blues and The Expressive Use Of Modes.

Major chords are happy and bright in mood, minor chords dark and sad. The emotive character of a scale is based on its tonic triad, made up of its first, third and fifth steps. In major and Mixolydian modes, built on the first and fifth steps of a major scale, the tone triad is major, therefore bright and happy in mood. In Dorian and Aeolian modes, built on the second and sixth steps of a major scale, the tonic triad is minor, therefore dark and sad in mood.

Major and Mixolydian differ with their seventh. Mixolydian has a flatted seventh, which darkens it. The four-note tonic seventh chord in Mixolydian is dominant seventh. It has a disrturbing, dissonant flatted fifth interval between its third and seventh. At the same time, it has a bright-mooded major triad as its basis (root, third and fifth). The triad comprised of its third, fifth and seventh is diminished, a very dark (depressed) mood. This makes a troubled hybrid of happy, depressed and angry moods.

The major seventh chord built on the first step of Ionian mode (major scale mode one, such as a "C" tone center with a "C" major scale) is a hybrid of moods also. The triad built on its third, comprised of its third, fifth and seventh is a minor. Combined with the major triad built on its root, it has the romantic hybrid of happy and sad.

Dorian mode (major scale mode two, such as a " $D$ " tone center with a "C" major scale) differs from Aeolian mode (major scale mode six, such as an " A " tone center with a "C" major scale) in that Dorian has a brighter-mooded major sixth. Aeolian's flat sixth is darker in mood.

We have heard alot more Aeolian melody than Dorian. So much more that we can accept Aeolian melody played when the chord progression directs Dorian, as long as the flatted sixth (the distinguishing note) is not sustained too long. Usually two seconds is the limit for notes that disagree with the harmony. See The Two Second Rule in Melodically Superimposed Cadences and The One To Two Second Rule in Melodic Cells.

## Layer Four - Arpeggio Cadences

Learn the arpeggios for each of the chords in the song you are preparing to improvise on. See ScaleTone Seventh Chord Progression. It is very useful to first express the chord progression with chord fingerings, then with arpeggios and look at the nature of voice leading. See descend five and seven and descend seven.

## Common Jazz Blues Scales and Arpeggios

|  | key shape $\rightarrow$ | key | form |  | key D form |  | key C form | key A form | key G form |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| layer 1 | Ima6/9 pentatonic subset of I Mixolydian (chromatic option) |  |  |  | 3 |  |  | 3.6 | $6251{ }^{626}$ |
|  |  |  |  |  | $5(1) 46$ |  | 67 1 <br> $1 / 3$  | 5 514672 |  |
|  |  | (1)4 | $5{ }^{5}$ |  | 1 67 |  | \| 36 | |  | $3{ }^{36} 21$ |
|  |  |  |  |  | 625  <br> 7  |  | (1)46725 | $625(1) 36$ | (1) 4675 |
|  |  |  | 462 |  | b7 ${ }^{\text {b }}$ (1) ${ }^{\text {a }}$ |  |  | b7 71.467 |  |
|  |  |  | b7 |  |  |  |  |  |  |
|  | $\operatorname{Im} 7 / 11$ pentatonic subset of I Dorian (chromatic option) |  | b35 51 |  | 5(1)462 | $\sqrt[631]{6}$ |  |  | 625(1)\|6 |
|  |  |  |  |  | $\begin{array}{l\|l\|l\|} 3 & 16763 \\ \hline \end{array}$ |  | 625 |  | 67 b 3 |
|  |  |  | 462 |  | 625 |  | 6763 (1) | $625(1) 6$ | 62 |
|  |  |  | $67 b 3$ |  | 67 b3 (1)4 |  | $\begin{array}{\|l\|l\|} \hline 166 \mid \\ \hline 5(1) 46725 \\ \hline \end{array}$ | $67 \mathrm{b3}$ 4.67  <br> -1 6  | (1)467 b3 5 |
|  | I (dom.) 7/11 <br> pentatonic subset of I <br> Mixolydian <br> (chromatic option) | $67$ |  |  | 5(1)462 |  | ${ }^{6} 225$ | $5 \longdiv { 5 4 6 7 2 5 }$ | $625(1) 36$ |
|  |  |  |  |  |  |  |  | $\square$ | 67) 11467 |
|  |  |  | 51 |  | $\begin{array}{l\|l\|l} \hline 625 \\ \hline \end{array}$ |  | \|36| | $625(1) 36$ | $362$ |
|  |  |  | $3{ }^{3}$ |  | 67 (1)4 <br> 18  |  | (1)46725 | 67\| ${ }^{6}$ | (1)467 5 (1) |
|  |  |  | 462 |  | 3 \| |  |  | 36 |  |
|  |  |  | 3 |  |  |  |  |  |  |
|  | I7/11\#1 pentatonic subset of I Mixolydian \#1 (= II harmonic minor). The tone "I" that names the key is located in the "empty" circle. | (1)467) 50 |  | $25(1) 462$ |  | 3625 |  | $5(1) 46725$ | $* 1$   <br> 6   <br> 1   |
|  |  | $\# 1$ 3 $\# 1$ |  |  | $\# 1$ 67 <br> 67  <br> 6  |  | 67 \| $1(0) 4$ | $\# 1$   <br> 1   | 6250] |
|  |  | $\frac{25(1) 462}{701}$ |  |  |  | \% 36 (1) |  | $625(0) 36$ | 67\| 6181467 |
|  |  |  |  |  | 362 |  |  |
|  |  | \#1 67 <br> 362 3 |  |  |  |  | $3{ }^{* 1}$ |  | (1)  $\square$ <br>    | 36 | (1)467) 5 ( |
|  |  |  |  |  |  |  | 36 |  | $3{ }^{3} 11$ |
|  | Im6/11b5 pentatonic subset of I Dorian b5 (bVII major b6) (chromatic option) | $\begin{array}{c\|c} \text { (1) } 4,67 b 3 & 1 \\ \hline h 51 \end{array}$ |  |  |  |  |  |  |  |
|  |  |  |  |     <br> 2    |  | 62  <br> 4 b 2 b 3 (1)4 |  | 65 |  |
|  |  |  |  | 1$) 4$ 2 | 62 1 6 |  |  |  |
|  |  | $\begin{array}{l\|l\|l\|} \hline 65 & \\ \hline 2 & \\ \hline 2 & (1) 4.62 \end{array}$ |  |  |  | 2 19462 <br> 63 $\mathbf{4 5 6 7 b 3}$ |  | $\begin{array}{c\|c\|c\|c} \hline 65 & 6 & 65 \\ \hline(1) 4 & 672 \end{array}$ |  | 63 63 |  |
|  |  | 2 (1) 4.62 <br> 63 656763 |  |  |  | 62 (1) | 62bs |  |  |  |
|  |  | 62  |  |  |  | 1 $\mathbf{b 5}$ $\mathbf{b 3}$ |  | b7b3 | (1)46763 (1) |
|  |  |  |  |  |  | 6 b5 |  |  |  |
|  | IIm7/11 pentatonic <br> subset of IV <br> Dorian <br> (chromatic option) |  |  |  |  | (1)4676351 |  | 25(1)462 |  | 63 1  <br> 62 5  <br> 6   | 5(1)46725 |
|  |  |  |  |  |  |  | 3 $67 b 3$ |  |  |  |  |  |
|  |  |  |  | $25(1) 462$ |  |  |  |  | ${ }^{62} 65(1){ }^{6} 6$ |  |  |
|  |  |  |  |  |  |  |  | 1 61 |  |  |  |
|  |  |  |  | $5 \longdiv { 5 1 4 6 7 2 5 }$ | 6 - |  |  |  |  |  |  |  |
|  | $\mathrm{Vm} 7 / 11$ pentatonic subset of V Dorian. <br> " 1 " is " 5 " on of a fingering in the key of "I", such as Ima6/9 or Im7/11 above (chromatic option) |  |  |  |  |  |  |  |  |  | $25(1) 462$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | $631 \mid 6763$ |  |  |  |  |  |  |  |
|  |  |  |  | 625 |  |  |  |  |  |  |  |
|  |  |  |  | $4{ }^{46763)(1) 4}$ |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |

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layer 2 refer to each mode as need above as shown with its pentatonic subset

## layer 3 darken major with Mixolydian darken Mixolydian with Dorian darken Dorian with Dorian b5

layer 4

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Freddie Freeloader

| chord | layer 1: <br> pentatonic scales | layer 2: major <br> scale modes | layer 3: darkened <br> modes | layer 4: arpeggios |
| :--- | :--- | :--- | :--- | :--- |
| Bb6 Bb9 | Bb ma6/9 | Bb Mixolydian (Eb <br> major) | Bb Dorian (Ab <br> major) | $\mathrm{Bb} 6, \mathrm{Bb} 9, \mathrm{Bb} 13$ |
| Eb6 Eb9 | Bbm7/11 | Bb Dorian Ab <br> major) | Bb Dorian b5 (Ab <br> major b6) | Eb6, Eb9, Eb13 |
| F7 | Fm7/11 | F Mixolydian (Bb <br> major) | F Dorian (Eb major) | F9, F13 |
| Ab7 | Fm7/11 | Ab Mixolydian | Bb Mixolydian b6 <br> (Eb melodic minor) | Ab9, Ab13\#11 |

## modal pedal point

The feature of Freddie Freeloader and All Blues from Miles Davis' Kind Of Blue is pedal point progression. They are uncommon cases where the head is based on the accompaniment. Each uses an accompaniment figure that was used long before Kind Of Blue.

Modal pedal point triads, as used on Freddie Freeloader work best from the root of each chord, since other chord tones would suggest a different root.

Modal pedal point thirds, as used on All Blues can be built on root, third, fifth or seventh. They produce a rich library of chords, including many cool dissonant ones where the lower tone of the third is an upper or lower neighbor to the chord tone.

## the six nine chord progression in $\mathbf{B b}$

Freddie Freeloader uses triads with a pedal tone. It features the I and IV chords (Bb and Eb), each with the root retained in the bass with a VIm triad moving to a Vm triad. These are part of Bb 6 and Bb 9 chords, so I call the pair a "six nine" chord progression.

During Bb , play VIm to Vm ( Gm to Fm ) over Bb bass.


Bb 6 is steps $1-3-5-6$ of a Bb major scale (see the cycle of thirds below). Without the fifth, the tones " $6-1$ 3" make a VIm chord in Bb major. So, VIm can be thought of as the first chord in this "six nine" chord voicing.


Gm and Fm are IIIm and IIm triads in Eb major.
first inversion Eb major scale tone triads on string set 432 (third in bass) the second row of numbers (3-5-1, 4-6-2, etc.) show numbers tones of the parent Eb major scale

| I major $3-5-1$ | $\begin{aligned} & \text { II minor } \\ & 4-6-2 \end{aligned}$ | $\begin{gathered} \text { III minor } \\ 5-7-3 \end{gathered}$ | IV major 6-1-4 | $\begin{aligned} & \text { V major } \\ & 7-2-5 \end{aligned}$ $7-2-5$ | $\begin{gathered} \text { VI minor } \\ 1-3-6 \end{gathered}$ | VII diminished 2-4-7 | I major |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Eb III | Fm V | Gm VII | Ab VIII | Bb X | Cm XII | D dim. XIII | Eb XV |
| 1 | 2 | 2 | 1 | 1 | 2 | 1 | 1 |
| (2) | 3 4 | 3 3 4 | (2) | (2) | 3 4 | $\square$ | (2) |
| 3 |  |  | 3 | 3 |  | 3 (4) | 3 |
| (1) 1 | $\xrightarrow{\square 1}$ | -17 | (1) 1 | (1) 1 | $\bigcirc$ | 17-1 | (0) |
|  |  |  |  |  |  |  |  |

Notice the fingering strategy in this linear string set of triads is that the third finger is retained on the fourth string. This facilitates faster chord changing. Similarly, the redundant barre in both the seond inversion and root position below (after the circular diagram) allow faster chord changing.
As you can see, the notes above on strings 4-3-2 are those of Gm and Fm, the VIm and Vm chords in the key of Bb (see below). In the parent scale Eb (see Modes Of I IV V Blues), Gm and Fm are IIIm and IIm chords. Doesn't that make sense, given that IIIm and IIm are the two consecutive minor chords built on a major scale?



Bb9 is steps 57246 of an Eb major scale (see the cycle of thirds below). In terms of the key of the chord root Bb , those tones (57246) are the root, third, fifth, flatted seventh and ninth of Bb9. The last three
tones are " 246 " the parent scale Eb, the fifth flatted seventh and ninth of Bb9 and comprise a IIm chord of the parent scale Eb . So..... Bb 9 without a root and without a fifth is $\mathrm{Fm}, \mathrm{a} \mathrm{Vm}$ of Bb and a IIm of Eb (the parent scale).


Here are alternate fingerings on string set 4-3-2. Now we've covered all three inversions: root, third nad fifth in the bass. These are called root position, first inversion and second inversion, respectively. Notice that the sets don't necessarily start with the I major triad, but with whatever is at the lower end of the fretboard, since each set will span twelve frets from around the third to fifteenth position. This mimics the pianists ability to go up and down the inversions of a chord. It is more complicated for the guitarist, since we have six linear systems (strings) instead of one (the piano keyboard). For guitarists run up and down the inversions, we need to memorize more graphic shapes that the piano player does. See the inversions of the Eb major and Fm triads, below.

## second inversion Eb major scale tone triads on string set 4-3-2 (third in bass)

the second row of numbers ( $2-5-7,3-6-1$, etc.) show the numbered tones of the parent Eb major scale this fingering set uses a "redundant barre"

| $\begin{gathered} \text { V major } \\ 2-5-7 \end{gathered}$ |  | $\begin{gathered} \text { VI minor } \\ 3-6-1 \end{gathered}$ | VII dim. <br> 4-7-2 | $\begin{aligned} & \text { I major } \\ & 5-1-3 \end{aligned}$ |  | $\underset{6-2-4}{\text { II minor }^{2}}$ | $\begin{gathered} \text { III minor } \\ 7-3-5 \end{gathered}$ | $\begin{gathered} \text { IV major } \\ 1-4-6 \end{gathered}$ |  | V major 2-5-7 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bb | III | $\mathrm{Cm} \quad \mathrm{III}$ | D dim VI | Eb | VIII | Fm VIII | Gm X | Ab | XIII | Bb | XV |
|  | (1) ${ }^{1}$ | (0) 1 | 111 |  | i(1) ${ }^{1}$ | (0)1i | (0) ${ }^{11}$ |  | i(1) ${ }^{1}$ |  | i(1) ${ }^{\text {i }}$ |
|  |  | $1 / 2$ | (2) |  |  | 1/2 | $1 / 2$ |  |  |  |  |
|  |  | 3(4) |  |  |  | 3(4) | 3(4) |  |  |  |  |
|  | (1) | 11- |  |  | (1) | 1 | 1 |  | (1) | (1) | (1) |

root position Eb major scale tone triads on string set 4-3-2 (root in bass)
the second row of numbers $(246,357$, etc.) show the numbered tones of the parent Eb major scale this fingering set uses a "redundant barre", except for the retained third finger on the D diminished triad


## the six nine chord progression in Eb

During Eb, play VIm to Vm (Cm to Bbm) over Eb bass.


Eb6 is steps 1-3-5-6 of a Eb major scale (see the cycle of thirds below). Without the fifth, the tones "6-1-3" make a VIm chord in Eb major. So, VIm can be thought of as the first chord in this "six nine" chord voicing.


Cm and Bbm are IIIm and IIm triads in Ab major.
first inversion Ab major scale tone triads on string set 3-2-1 (third in bass) the second row of numbers (3-5-1, 4-6-2, etc.) show numbers tones of the parent Eb major scale

| I major 3-5-1 |  | $\mathrm{II} \mathrm{minor}_{4-6-2}$ |  | $\begin{gathered} \text { III minor } \\ 5-7-3 \end{gathered}$ |  | IV major 6-1-4 |  | V major$7-2-5$ |  | $\begin{aligned} & \text { VI minor } \\ & 1-3-6 \end{aligned}$ |  | VII diminished 2-4-7 <br> G dim. XIV |  | I major$3-51$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ab | IV | Bbm | VI | Cm | VIII | Db | IX | Eb | XI | Fm | XIII |  |  | Ab |  | XVI |
| (1) | ${ }_{1}^{11} 1$ | (1) | 11.1 | (1) | ${ }^{1} 1.1$ | (T) | 1.19 | (T) | 1.19 | (1) | ${ }^{1} 1.1$ |  | 111 | (1) |  | $11^{1}$ |
|  | ${ }^{2} 1$ |  |  |  | $\cdots$ |  | ${ }^{2}$ |  | ${ }^{2} 1$ |  | TIT |  | 2 (3) |  |  | ${ }^{2}$ |
|  | O |  | () |  | () |  | () |  | () |  | () |  | , |  |  |  |
|  | $\square$ |  | , |  |  |  | , |  | O |  |  |  | ) |  |  |  |

Notice that the fingerings above facilitate faster chord changing with a redundant barre.
As you can see, the notes above on strings 3-2-1 are those of Cm and Bbm , the VIm and Vm chords in the key of Eb (see below). In the parent scale Ab (see Modes Of I IV V Blues), Cm and Bbm are IIIm and IIm chords (IIIm and IIm are the two consecutive minor chords built on a major scale).


Eb9 is steps 5-7-2-4-6 of an Ab major scale (see the cycle of thirds below). In terms of the key of the chord root Eb , those tones (5-7-2-4-6) are the root, third, fifth, flatted seventh and ninth of Eb9. The last three tones are " $2-4-6$ " the parent scale Ab , the fifth flatted seventh and ninth of Eb 9 and comprise a IIm chord of the parent scale Ab . So....Eb9 without a root and without a fifth is $\mathrm{Cm}, \mathrm{aVm}$ of Eb and a $\operatorname{IIm}$ of Ab (the parent scale).


See Pedal Point Chord Progression / "Six Nine" VIm Vm Triads With Pedal Point "1", and especially Scale Tone Triads Of Four Heptatonic Scales for fingerings (in this case, the major scale fingerings).
second inversion Ab major scale tone triads on string set 3-2-1 (third in bass) the second row of numbers (2-5-7, 3-6-1, etc.) show the numbered tones of the parent Eb major scale this fingering set uses a "redundant barre"

| I major 2-5-7 |  | II minor 3-6-1 |  | $\begin{gathered} \text { III minor } \\ 4-7-2 \end{gathered}$ |  | $\begin{gathered} \text { IV major } \\ 5-1-3 \end{gathered}$ |  | $\begin{gathered} \text { V major } \\ 6-2-4 \end{gathered}$ |  | $\begin{aligned} & \text { VI minor } \\ & 7-3-5 \end{aligned}$ |  | VII diminished 1-4-6 |  | I major 2-5-7 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Eb | III | Fm | IV |  | m. VI | Ab | VIII | B | IX | Cm | XI | Db | XIII | Eb | XV |
|  | 111 |  | 111 |  | $1 i 1$ |  | 111 |  | 111 |  | 1i1 |  | 111 |  | 111 |
|  | (2) |  | 2 |  |  |  | (2) |  | 2 |  | 2 |  | (2) |  | (2) |
|  |  |  | (3) |  | (3) |  |  |  | (3) |  | (3) |  |  |  |  |
| (1) | $\square$ |  | $\square$ |  | $\square$ | () | - |  | $\square$ | $\square$ | $\square$ | () | - | () |  |

root position Eb major scale tone triads on string set 4-3-2 (root in bass) the second row of numbers (1-3-5, 2-4-6, etc.) show the numbered tones of the parent Eb major scale this fingering set retains the third finger on the third string


Consider using neighboring scale tone triads to enhance the six nine progression. Just before the parent scale IIIm triad, use a parent scale IV major triad, or just before the parent scale IIm triad, use the parent scale I major triad.

By learning all three inversions of the triads on a string set, you can then combine them within a confined area, such as this group of Eb parent scale triads to be used over a Bb root. Eb to Bb (the last two chords) forms a plagal cadence, while Cm to Bb forms what I call the "gospel" plagal cadence, a cool modern version. Each progression is shown with triads, then with the Bb pedal point included.



## more major scale tone triad inversions

To more thoroughly study the major scale tone triad inversions, see these sections of Pedal Point Progression:
major scale tone triads on string set 4-3-2
major scale tone triads on string set 4-3-1
major scale tone triads on string set 5-4-3

## the six nine chord progression in Ab (using Eb melodic minor)

Miles didn't use the six nine progression on Ab 7 in the first ending, but could have. By treating Ab 7 as a IV7 type of an Eb melodic minor parent scale, the VIm and Vm (Fm and Ebm) chords of the chord scale Ab could be used. These are IIm and Im in the parent scale Eb melodic minor.



Also experment with neighboring triads:


## more melodic scale tone triad inversions

To more thoroughly study the major scale tone triad inversions, see these sections of Pedal Point Progression:
melodic scale tone triads on string set 4-3-2
melodic minor scale tone triads on string set 3-2-1
melodic minor scale tone triads on string set 5-4-3

## All Blues

( C is an ignored passing chord)

| chord | layer 1: <br> pentatonic scales | layer 2: major <br> scale modes | layer 3: darkened <br> modes | layer 4: arpeggios |
| :--- | :--- | :--- | :--- | :--- |
| G7 | G7/11 | G Mixolydian (Eb <br> major) | G Dorian (F major) | Bb6, Bb9, Bb13 |
| Gm, Gm7 | Bbm7/11 | Bb Dorian Ab <br> major) | Bb Dorian b5 (Ab <br> major b6) | Eb6, Eb9, Eb13 |
| D7\#9, <br> D7\#5\#9 | Dm7/11 | D Aeolian (F <br> major) | D Aeolian b5 (F <br> melodic minor) | Dm9, D9 |
| Eb7\#9 | Gm7b5 | G Aeolian b5 | n/a | Ebm9, Eb9 |

See Pedal Point Chord Progression/I-IV-I7: Thirds With Pedal Point " 1 " and Modes Of Four Heptatonic Scales.

## Mr. P.C.

## standardized chords

Like with Breezin' standardize all these chords to sevenths.

| original chord progression $\longrightarrow$ | Cm 7 | Cm 7 | Cm 7 | Cm 7 |
| :--- | :--- | :--- | :--- | :--- |
| standardized chord | Cm 7 (as is) | Cm 7 (as is) | Cm 7 (as is) | Cm 7 (as is) |
| original chord progression $\longrightarrow$ | Fm 9 | Fm 9 | Cm 7 | Cm 7 |
| standardized chord | Fm 7 | Fm 7 | Cm 7 (as is) | Cm 7 (as is) |
| original chord progression $\longrightarrow$ | $\mathrm{Ab} 13 \# 11$ | G 7 b 13 | Cm 7 | Cm 7 |
| standardized chord | Ab 7 | G 7 | Cm 7 (as is) | Cm 7 (as is) |

## seventh chord inversions

The inversions are shown below for $\mathrm{Cm} 7, \mathrm{Fm} 7, \mathrm{G} 7$ and Ab 7 . Use a comping rhythm with four chords every two bars, like the Evil Ways chorus/Charleston:


Mr. P.C. string set 5-4-3-2


|  | Fm | I | Fm7 | V | Fm7 | VIII | Fm7 |  |  | X |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fm7 | $\bigcirc$ | 10 |  | 1 | (1) | 1 |  |  | (1) |  |
|  |  |  | 23 | (4) |  | 2 |  | 2 |  |  |
|  |  |  |  |  | 3 | ) |  |  |  |  |
|  |  | 4 | (0) |  |  |  |  | ) 3 | 3 | $4(1)$ |
|  |  | b3 67 | b7 b3 | 51 | 15 | $7 \mathrm{b3}$ |  | b3 67 | 71 | 5 |


|  | Ab7 V | Ab7 VII | Ab7 XI | Ab7 XIII |
| :---: | :---: | :---: | :---: | :---: |
| Ab7 | 1 | 1 | (1) 1 | (1) |
|  | 2 (3) | 12 3 (3) |  |  |
|  | - 4 | 4 | 304 | 2    <br> 2    |
|  | - | (0) (1) $^{\text {a }}$ | - 1 -1] | 0 3 40 |
|  | $\begin{array}{lllll}5 & 1 & 367\end{array}$ | 67351 | 15673 | 36715 |



Combine $\mathrm{Ab7}$ and G 7 to make a four chord sequence during two bars:
Ab7


## Mr. P.C. string set 4-3-2-1



Combine Ab 7 and G 7 to make a four chord sequence during two bars:

Ab7

Ab7 IV


Ab7 VI


G7 XII

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## Mr. P.C. string set 6-4-3-2



Combine Ab 7 and G 7 to make a four chord sequence during two bars:
Ab7 IV
Ab7 VI
G7
G7 XII

Ab7


## Mr. P.C., scales for improv

Use key minor pentatonic (C minor pentatonic). Its preferable to use key b6 on the IVm chord (Fm7). Use parts of $\operatorname{Im} 9, \mathrm{IVm} 9 \mathrm{bVI9}$ and V 7 b 9 ( $\mathrm{Cm} 9, \mathrm{Fm} 9, \mathrm{Ab} 9$ and G7b9). Its best at this point to learn the arpeggios here: Minor Pentatonic To Five Ninth Arpeggio Types.

Using key ( F ) Aeolian b 5 on the bVI7 (Ab7) chord retains the key. In terms of chord scale, it is bVI Lydian b7 (Ab Lydian b7) and in terms of parent scale, it is bIII (Eb) melodic minor.

In melodic minor, the triads on steps one and two are minor (Im and IIm). The six nine ("Six Nine" VIm Vm Triads With Pedal Point " 1 ". ) progression can be used on the Ab7 chord, since the VIm and Vm of Ab are the IIm and Im in Eb melodic minor.

Explore subsets of Ab13\#11: Ab7 (Ab Lydian b7), Cm7b5 (C Aeolian b5), Ebm9[ma7] (Eb melodic minor) and Fm6, and D7\#9b9\#5b5 (D super Locrian). The family of bVI13\#11 (Ab13\#11) chords is parelled by the II7\#9b9\#5b5 family (D\#9b9\#5b5, "Swiss army" seventh) which is II super Locrian (D super Locrian). See Modes Of Four Heptatonic Scales. Ab13\#11 and D7\#9b9\#5b5 are flat five substitutes of one another.

## 1-6-2-5 SONGS

links to songs in this section
Breezin'

## Breezin'

## "rhythm changes"

Like I-IV-V blues, the I-VIm-IIm-V chord progression in Breezin' is a foundation of jazz chord progression. I VIm IIm V is commonly referred to as "rhythm changes", both because it is a common staple of a rhythm section and is the basis of the song from George Gershwin's American folk opera, Porgy And Bess,"I Got Rhythm".

## standardizing chords

The chords are standardized to four-note seventh chords by elaborating smaller chords and abbreviating larger ones. A triad would be changed to the appropriate seventh chord type. If it is functioning as a I type chord, it would be a major seventh. If functioning as a VIm type chord, it would be a minor seventh. So, triads are elaborated to seventh chords.

Chords of five or more notes such as ninth chords can be abbreviated to seventh chords. With a ninth, simply omit the ninth. With a thirteenth, use only the seventh chord part of the thirteenth (root, third, fifth and seventh).

The A9sus. 4 chord (or G/A) can be treated at first as A7, which would be the standardized version of A9. Afterward, you can go back to the progression an emphasize the " 4 " of the the A chord, making it suspended. This is treating the A7 as an Em7, the other component in a IIm7-V7 chord change, where Em 7 is the $\operatorname{IIm} 7$ and A 7 is the V7. Descending the seven of the Em7 one scale tone makes it A9 no root. See Descend Seven in the chapter, Voice Leading.

| original chord progression $\longrightarrow$ | Dma7 | Bm 7 | Em 7 | A9sus.4 |
| :--- | :--- | :--- | :--- | :--- |
| standardized chord | Dma7 (as is) | Bm 7 (as is) | Em 7 (as is) | A7 |
| original chord progression $\longrightarrow$ | Dma9 | G/A = A9sus4 no 5 |  |  |
| standardized chord | Dma7 | A7 |  |  |

## seventh chords on secondary roots of I VIm IIm V on string set 5-4-3-2

Each of these chords is acceptable as a ninth chord. The hypothetical IIIm9 and VIImb5b9 ninth chords on steps III and VII are not acceptable, since they would have flat ninths. We only find flat ninths acceptable on dominant chords (chords with a major third and flatted seventh). See Principles Of Acceptable Dissonance, Questions Of Actual Dissonance And Mood and b9 On Dominant Chords.

Seventh chords of each ninth chord are shown below. To figure this out, you need to have the cycle of thirds in numbers memorized so you can figure out what is on the third of the current chord. You also need to know the major scale-tone seventh chord qualities, so you can state the type of seventh chord on that note that is the third of the current chord.

Secondary roots are $\operatorname{Ima} 9$ is 1-3-5-7-2, so IIIm7 (3-5-7-2) is on its third. VIm9 is 6-1-3-5-7, so Ima7 $(1-3-5-7)$ is on its third. $\operatorname{IIm} 9$ is $2-4-6-1-3$, so $\operatorname{IVma7}(4-6-1-3)$ is on its third. V9 is $5-7-2-4-6$, so VIIm7b5 (7-2-4-6) is on its third.

| roman-numbered seventh | $\mathrm{Ima7}$ | VIm 7 | IIm 7 | V 7 |
| :---: | :---: | :---: | :---: | :---: |
| seventh chord by letter | $\mathrm{Dma7}$ | Bm 7 | Em 7 | A 7 |
| scale tones of $D$ | $1-3-5-7$ | $6-1-3-5$ | $2-4-6-1$ | $5-7-2-4$ |
|  |  |  |  |  |
| roman-numbered ninth | $\mathrm{Ima9}$ | VIm 9 | Im 9 | V 9 |
| seventh chord by letter | $\mathrm{Dma9}$ | Bm 9 | Em 9 | A 9 |
| scale tones of $D$ | $1-3-5-7-2$ | $6-1-3-5-7$ | $2-4-6-1-3$ | $5-7-2-4-6$ |
|  |  |  |  |  |
| seventh chord on third | IIIm 7 | $\mathrm{Ima7}$ | $\mathrm{IVma7}$ | VIIm 7 b 5 |
| seventh chord by letter | $\mathrm{F} \# \mathrm{~m} 7$ | $\mathrm{Dma7}$ | $\mathrm{Gma7}$ | $\mathrm{C} \# \mathrm{~m} 7 \mathrm{~b} 5$ |
| scale tones of $D$ | $3-5-7-2$ | $1-3-5-7$ | $4-6-1-3$ | $7-2-4-6$ |

## I VIm IIm V on string set 5-4-3-2

Dma7 V


Dma7 VII


Dma7 XI


Dma7* XIV



* Major seventh with the seventh in the bass is dissonant, but as part of a sequence as shown in the first row below, it can make sense to the listener.


## Em7b5


b3b71b5

b5 1 b3 b7
secondary root sevenths of Dma9-Bm9-Em9-A9 on strings 5-4-3-2


* Major seventh with the seventh in the bass is dissonant, but as part of a sequence as shown in the first row below, it can make sense to the listener.


## alternate VII dim7 for secondary root on third of V7b9 (A7b9)

C\#dim7 III C\#dim7 VI C\#dim7 IX C\#dim7 XII

## C\#dim7


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## I VIm IIm V on string set 6-4-3-2



* Major seventh with the seventh in the bass is dissonant, but as part of a sequence as shown in the first row below, it can make sense to the listener.


## alternate IIm7b5 for a minor II V cadence (Em7b5 to A7)

## Em7b5


secondary root sevenths of Dma9, Bm9, Em9, A9 on strings 6-4-3-2


* Major seventh with the seventh in the bass is dissonant, but as part of a sequence as shown in the first row below, it can make sense to the listener.


## alternate VIIdim7 for secondary root on third of V7b9 (A7b9)

| C\#dim7 |
| :--- |
|  II  <br> 2 1 1 <br>   3 <br>   3 <br>    <br>    <br>    <br>    <br>  63 6 |

C\#dim7 VIII
C\#dim7 XI


C\#dim7

## I VIm IIm V on string set 4-3-2-1



* Major seventh with the seventh in the bass is dissonant, but as part of a sequence as shown in the first row below, it can make sense to the listener.


## alternate IIm7b5 for a minor II V cadence (Em7b5 to A7)

Em7b5 II Em7b5 V Em7b5 VIII Em7b5 XI

## Em7b5



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secondary root sevenths of Dma9-Bm9-Em9-A9 on strings 4-3-2-1


* Major seventh with the seventh in the bass is dissonant, but as part of a sequence as shown in the first row below, it can make sense to the listener.


## alternate VIIdim7 for secondary root on third of V7b9 (A7b9)

| C\#dim7 | C\#dim7 II | C\#dim7 V | C\#dim7 VIII | C\#dim7 XI |
| :---: | :---: | :---: | :---: | :---: |
|  | 1 (2) | $1{ }^{1} 2$ | 1 2 | (1) 2 |
|  | $3{ }^{3} 4$ | (3) 4 |  | $3{ }^{3} 4$ |
|  | (0) |  |  | - 1 |
|  |     <br>     | $\square$ | ( ) - | 1-10) |

## I-VIm-IIm-V on string set 5-3-2-1

Dma7* II Dma7 VII Dma7 X Dma7 XII

Dma7 $\quad$|  |  | 1 | 1 |
| :--- | :--- | :--- | :--- |
|  |  |  | 1 |
| 4 |  | $(2)$ |  |
| 4 |  |  |  |
| $(1)$ |  |  |  |
| 7 | 5 | 1 | 3 |



* Major seventh with the seventh in the bass is dissonant, but as part of a sequence as shown in the first row below, it can make sense to the listener.


## alternate IIm7b5 for a minor II V cadence (Em7b5 to A7)

## Em7b5



secondary root sevenths of Dma9-Bm9-Em9-A9 on strings 5-3-2-1

|  | F\#m7 II |  | F\#m7 V |  | F\#m7 IX |  | F\#m7 XI |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| F\#m7 | (1) | 1 (1) |  | 1 | (1) | 23 |  | (1) |
|  |  |  |  | 2 |  | 4 | 2 | 3 |
|  |  | ) | 3 | (4) |  | (0) |  | 1 |
|  |  | - 4 | $1$ | $\square$ |  |  | $\bigcirc$ | 40 |
|  | 5 | 63671 | 67 | 5163 | 1 | b7 635 | b3 | 1567 |
|  | Dma7* II |  | Dma7 VII |  | Dma7 X |  | Dma7 XII |  |
| Dma7 |  | 111 | (1) | 2 |  | (1) | $\bigcirc$ | (1) |
|  |  | (2) |  | 31 |  |  |  | 2 |
|  | 4 |  |  | (1) 4 | 2 | 3 | 3 ( | ) |
|  | (1) | - |  | 11 | (1) | $4(1)$ |  |  |
|  | $\begin{array}{lllll}7 & 513\end{array}$ |  | 1735 |  | 3 | 157 |  | 4 |
|  |  |  |  |  | 5 | 371 |
|  | Gma7 III |  |  |  | Gma7 VII |  | Gma7 X |  | Gma7 XII |  |
| Gma7 | () | $10$ |  1 1 |  | (1) |  | - (1)  <br>    |  |
|  |  | (1) |  | (2) |  | 31 |  |  |
|  | $3(0)$ |  | 4 |  |  | (1) 4 | 2 | 3 |
|  |  |  | $\square$ |  | -1 | (1) | - 4 (1) |
|  |  | 4 |  |  |  | 1735 <br> 175 |  | 3 |  |
|  | 5 | 371 |  |  |  |  |  |  |  |  |  |
|  | C\#m7b5 III |  | C\#m7b5 VI |  | C\#m7b5 IX |  | C\#m7b5 XII |  |
| C\#m7b5 |  | 11 |  | (1) | (1)\| |  | 1 <br> 2 | $1{ }^{1} 1$ |
|  | (2) | 3 |  | - 3 | 2 |  |  | 1 |
|  |  | - 4 |  | 4 |  | () |  |  |
|  |  | (1) ${ }^{\text {a }}$ |  | 1 (1) |  | 1-4 4 | 1 | $\square$ |
|  | 1 | 676365 |  | 16567 | 65 | b367 1 | b7 | b5 1 b3 |

* Major seventh with the seventh in the bass is dissonant, but as part of a sequence as shown in the first row below, it can make sense to the listener.


## alternate VIIdim7 for secondary root on third of V7b9 (A7b9)

C\#dim7 III
C\#dim7 VI
C\#dim7 IX
C\#dim7 XII

## C\#dim7



|  | 1 | 1 |
| :---: | :---: | :---: |
| 2 |  |  |
|  |  | 3) |
|  |  |  |

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## improv with scales

Practice improvising with D major pentatonic first, occasionally darkening with a b3. Practice D minor pentatonic with an optional major third and use it occasionally. Learn ninth arpeggios for each chord, using both Minor Pentatonic To Five Ninth Arpeggio Types and Major Pentatonic To Two Ninth Arpeggio Types.

Notice that the intro uses the I-VIm-IIm-V "rhythm changes" from "I Got Rhythm".
Design each arpeggio so you are moving by step to the next. If an arpeggio fingering is difficult to interface with another, consider using a few notes from a pentatonic or seven tone scale to connect.

## modal double stops

Think in chord scale to work out double stops on each chord. When you actually improvise with them, work to keep focus on the key scale, D major. You probably want to the use the double stops sparingly to retain more of a jazz style. They can be very useful in jazz though. You can hear them in Jim Hall's playing, for example.

## I Got Rhythm

First, prepare for improvising by abbreviating the chord progression. Record yourself playing the I-VIm-IIm-V changes (Bbma7-Gm7-Cm7-F7). Simplify the progression with the arpeggios you practice by playing Gm9 over Bbma7-Gm7 and Cm9 over the Cm7-F7. Before playing with your track, play the arpeggios in a looped fashion that allows you to play nonstop for two bars each. Play with a metronome as you get started to make sure your performance of the arpeggios is strong rhythmically and consistent dynamically.

Next, change to one bar each arpeggio (still just Gm9 and Cm9).
Coordinate the transistion from one arpeggio to another, so they change by step and not by skip.
When you're ready to add more, start playing 1-2-3-5 on F 7 b 9 of Bb harmonic minor to lead into Bb in the first bar. Target the root, third or fifth of Bb .

The most common chord root movement in jazz (and popular music in general) is perfect fourths: 7-3-6-2-5-1-4. In Bb , that is A-D-G-C-F-Bb-Eb. Memorize the sequence of fourths in letters: B-E-A-D-G-C-F. This is used for the accumulative order of flats and is the cycle of fifths backwards. You need to be able to consider a key signature, start on the seventh degree of the scale, recognize that seventh degree's location in B-E-A-D-G-C-F, and cycle to the end and back from the beginning to include all seven letters. Of course, you must apply the key signature's flats or sharps and associate the letters respectively with 7-3-6-2-5-1-4, having started on " 7 ".

In $\mathrm{Bb}, \mathrm{B}$ and E are flat. The seventh degree of the scale is " A ". Cycling through the order of fourths from " A " and applying the key signature produces A-D-G-C-F-Bb-Eb, corresponding with the numbered tones as follows, including seventh qualities:

| 7 | 3 | 6 | 2 | 5 | 1 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Am7b5 | Dm7 | Gm7 | Cm7 | F7 | Bbma7 | Ebma7 |

$\mathrm{Bb}-\mathrm{Gm}-\mathrm{Cm}-\mathrm{F}$, beginning on the Gm is 6-2-5-1
Eb6 in bar 6 is a IV chord in the same emotive family as Ebma7 (Ima7 type).
Edim7 is \#IVdim7 and is commonly used during the later of the duration of the IV7 or IV9 chord. It a IV7 chord with a sharped root.

In bar 7, the perfect fourth root sequence is extended to begin on the III chord, Dm7. This makes the progression 3-6-2-5-1, D-G-C-F-Bb.

## 1-6-2-5 in Bb with Harmonic Minor Cadences

## Bb7

Bma6/9, Bb7/11
Bb Misolydian
Bb13, Gm7, Dm7b5

Cm7
Cm7/11
C Dorian
Cm13, Ebma7

Bb major sharp five D7b9

F7
F Mixolydian
F13, Am9b5

F Phrygian major
F7b9, Edim7

## 1625 in Bb with Melodic Minor Cadences

Use these on any song in the 1-6-2-5 category.

Bb7
Bma6/9, Bb7/11
Bb Misolydian
Bb13, Gm7, Dm7b5

Cm7
Cm7/11
C Dorian
Cm13, Ebma7

Eb melodic minor Ab13\#11, D7 $\pm 9 \pm 5, \mathrm{Cm} 9 \mathrm{~b} 5$

Db melodic minor
Gb13\#11, C7 $99 \pm 5, \mathrm{Bbm} 9 \mathrm{~b} 5$

## G7

Bb7/11\#1
Bb Mixo. \#1 (C har. min.)
G7b9

F7
F Mixolydian F13, Am9b5

Ab melodic minor Db13\#11, G7 $\pm 9 \pm 5$, Fm9b5

辟

Gb melodic minor Cb13\#11,F7 $\pm 9 \pm 5$, Ebm9b5

## HARMONIC MINOR CADENCE SONGS

On each song, use these standard four layers. They build on one another and can all be used simultaneously. Make these a default for your harmonic minor improv.

## Layer One - Pentatonic Scales

Establish a blues or swing basis. Elaborate with chromatics, using minor pentatonic with chromatics between four and five. See Movable Pentatonic Scales With One Chromatic.

Optionally, microtonal bends on the flatted third. If the chord you are using the microtonally bent flat third on is a minor chord, make the bend slight, so it doesn't make the chord sound major.

If the chord on the same root you are using a microtonally bent flat third on is major (such as a D minor pentatonic scale on a D major chord), the microtonal bend can go higher, but don't get too close the the natural third (without bending all the way to it), or your note may sound erroneously flat.

## Layer Two - Pentatonic Scale Subsets of Major Scale Modes

Complete the major scale mode, such as D minor pentatonic as a subset of D Aeolian, where you would add the two and flat six to complete the mode.

## Layer Three - Harmonic Minor Modes and Subsets

Determine the relative major key for the minor key in which you wish to use harmonic minor. Use the relative major scale as a parent scale. Modify the parent major scale by sharping its fifth and put the tone center on its sixth.

When using harmonic minor on chords that have a flatted seventh, such as Am7 in the key of "A", deemphasize the natural seven (G\#, which is sharp five of the parent scale). See the table of major sharp five scales in all keys, showing the harmonic minor scales they create on their sixth step.

## Layer Four - Arpeggio Cadences

Learn the arpeggios for important cadences in the minor key, most commonly IIm7b5-V7b9-Im. Elaborate on the cadences with neighboring and passing scale tones. Take a look at major sharp five scale tone seventh chords, especially the Major Sharp Five Scale Tone Seventh Chords in the chapter on Scale-Tone Seventh Chord Progression.

Descending five and seven of the IIm7b5 becomes V7. Descending only the seven becomes V7b9, no root. See descend five and seven and descend seven.

## Common Minor Key Scales and Arpeggios




## 1-6-2-5 in Bb with Harmonic Minor Cadences

Bb7
Bma6/9, Bb7/11
Bb Misolydian
Bb13, Gm7, Dm7b5
Cm7
Cm7/11
C Dorian
Cm13, Ebma7
Bb major sharp five D7b9
Chrygian major C7b9, Edim7

G7
Bb7/11\#1
Bb Mixo. \#1 (C har. min.)
G7b9

## F7

$\begin{array}{ll}\text { F Mixolydian } & \text { F Phrygian major } \\ \text { F13, Am9b5 } & \text { F7b9, Edim7 }\end{array}$

## Sultans of Swing (verse)

See also Flake and Sultans Of Swing in Rock Improv Commentary.

| chord | layer 1: <br> pentatonic scales | layer 2: major <br> scale modes | layer 3: harmonic <br> minor mode | layer 4: arpeggios |
| :--- | :--- | :--- | :--- | :--- |
| Dm C Bb | Dm7/11 | D Aeolian <br> (F major) | D harmonic minor <br> (F major sharp five) | Em7b5 A7b9 to Dm |
| A | Am7/11 | A Phrygian <br> (F major) | C Phrygian major <br> (F major sharp five) | Dbma7 |

I Want You, Verse

| chord | layer 1: <br> pentatonic scales | layer 2: major <br> scale modes | layer 3: harmonic <br> minor mode | layer 4: arpeggios |
| :--- | :--- | :--- | :--- | :--- |
| Am7 <br> Am C | Am7/11 | A Aeolian (C major) <br> or <br> A Dorian (Gmajor) | A harmonic minor <br> (C major sharp five) | Bm7b5 E7b9 to Am |
| Dm7 <br> Dm F | Dm7/11 | D Aeolian (F major) <br> or <br> D Dorian (C major) | D harmonic minor <br> (F major sharp five) | Em7b5 A7b9 to Dm |
| E7b9 | E7/11 | E Phrygian (C major) | E Phrygian major <br> (C major sharp five <br> = A harmonic minor) | Bm7b5 to E7b9 |

## Baja Nights

| chord | layer 1: <br> pentatonic scales | layer 2: major <br> scale modes | layer 3: harmonic <br> minor mode | layer 4: arpeggios |
| :--- | :--- | :--- | :--- | :--- |
| Am7 | Am7/11 | A Aeolian (C major) | A harmonic minor <br> (C major sharp five) | Bm7b5 E7b9 to Am |
| Dm7 | Am7/11 | D Dorian (C major) | A harmonic minor <br> (C major sharp five) | Bm7b5 E7b9 to Am |
| E7b9 | E7/11 | E Phrygian (C major) | E Phrygian major <br> (C major sharp five <br> ( A harmonic minor) | Bm7b5 to E7b9 |

## Caravan

| chord | layer 1: <br> pentatonic scales | layer 2: major scale modes | layer 3: harmonic minor mode | layer 4: arpeggios |
| :---: | :---: | :---: | :---: | :---: |
| C | Cm7/11 | C Phrygian (Ab major) | C Phrygian major <br> (Ab major sharp five) | Gm7b5 C7b9 to Fm |
| Db | Cm7/11 | C Phrygian | C Phrygian major | Dbma7 |
| Fm | Fm7/11 | F Aeolian (Ab major) | F harmonic minor (Ab major sharp five) | Fm9(11) |
| before F7 | Cm7/11 b3 to 3 | C Phrygian (Ab major) | C Phrygian major | Gm7b5 C7b9 to F7 |
| F7 | F7/11 b3 to 3 | F Mixolydian | n/a | F9 |
| before Bb7 | Fm7/11 b3 to 3 | F Phrygian (Ab major) | F Phrygian major | Cm7b5 F7b9 to Bb7 |
| Bb7 | $\mathrm{Bb} 7 / 11 \mathrm{~b} 3$ to 3 | Bb Mixolydian | $\mathrm{n} / \mathrm{a}$ | Bb9 |
| before Eb7 | Bbm7/11 b3 to 3 | Bb Phrygian (Ab major) | Bb Phrygian major | Fm7b5 Bb7b9 to Eb7 |
| Eb7 | $\mathrm{Eb} 7 / 11 \mathrm{~b} 3$ to 3 | Eb Mixolydian | $\mathrm{n} / \mathrm{a}$ | Eb9 |
| before Ab6 | $\mathrm{Eb} 7 / 11 \mathrm{~b} 3$ to 3 | Eb Phrygian (Ab major) | Eb Phrygian major | Bbm7b5 Eb7b9 to Ab6 |
| Ab6 | $\mathrm{Ab} 7 / 11 \mathrm{~b} 3$ to 3 | Ab Mixolydian | n/a | Ab6, Ab9 |

## Blue Bossa

| chord | layer 1: <br> pentatonic scales | layer 2: major scale <br> modes | layer 3: harmonic <br> minor mode | layer 4: arpeggios |
| :--- | :--- | :--- | :--- | :--- |
| Cm | Cm7/11 | C Aeolian (Eb major) | C harmonic minor <br> (Eb major sharp five) | Dm7b5 G7b9 to Cm |
| Fm | Cm7/11 | C Aeolian (Eb major) | C harmonic minor <br> (Eb major sharp five) | Fm9 |
| Dm7b5 | option 1: treat Dm7b5 to G7b9 as all G7b9 (see below) |  |  |  |
| Dm7b5 | Dm7/11b5 | D Locrian (Eb major) | C harmonic minor <br> (Eb major sharp five) | Dm11b5b9 |
| G7b9 | Gm7/11 | G Phrygian (Eb major) | G Phrygian major <br> (Eb major sharp five <br> =C harmonic minor) <br> and G7/11 subset | G7b9 |
| Db will be treated like Bbm and Bb Aeolian. Ebm7 and Ab7 will be treated like IV Dorian of Bb Aeolian. |  |  |  |  |
| chord | pentatonic scales | major scale modes | harmonic minor mode | arpeggios |
| Ebm7 | Ebm7/11 | Eb Dorian (Db major) | n/a | Ebm9 |
| Ab7 | Ebm7/11 | Eb Dorian (Db major) | n/a | Ab9 <br> Ebm7b5 Ab7b9 to <br> Bbm7 (=Db6) |
| Dbma7 | Bbm7/11 <br> $(=$ Dbma6/9) | Bb Aeolian (Db major) | Bb harmonic minor <br> (Db major sharp five) |  |

## Autumn Leaves

| chord | layer 1: <br> pentatonic scales | layer 2: major scale <br> modes | layer 3: harmonic <br> minor mode | layer 4: arpeggios |
| :--- | :--- | :--- | :--- | :--- |
| Cm7 | Cm7/11 | C Dorian (Bb major) | C harmonic minor <br> (Eb major sharp five) | Dm7b5 G7b9 |
| F9 | Cm7/11 | C Dorian (Bb major) | C harmonic minor <br> (Eb major sharp five) | Dm7b5 G7b9 |
| Bbma7 | Gm7/11 | G Aeolian (Eb major) | G harmonic minor <br> (Bb major sharp five) | Gm11 (Bbma7/G) |
| Ebma7 | Cm7/11 | Bb major | n/a | Cm11 (Ebma7/C) |
| Am7b5 | A m7/11b5 | A Locrian | n/a | Cm11 |
| D7 | Dm7/11 | D Phrygian | D Phrygian major | D7b9 |
| Gm7 | Gm7/11 | G Aeolian | G harmonic minor | Gm11 (Bbma9/G) |
| Gb7 | Gbma6/9 | Gb Lydian dominant | n/a | Gb9 |
| Fm7 | Fm7/11 | F Dorian | n/a | Fm9 |
| E7 | Ema6/9 | E Lydian dominant | $\mathrm{n} / \mathrm{a}$ | E9 |

## Road Song

|  | chord | layer 1: <br> pentatonic scales | layer 2: major scale <br> modes | layer 3: harmonic <br> minor mode | layer 4: arpeggios |
| :--- | :--- | :--- | :--- | :--- | :--- |
| A | Gm7 | Gm7/11 | G Aeolian (Bb major) | G harmonic minor <br> (Bb major sharp five) | Am7b5 D7b9 |
|  | D7\#9 <br> Am7 D7 | Dm7/11 | D Phrygian (Bb major) | G harmonic minor <br> (Bb major sharp five) | Am7b5 D7b9 |
|  | Gm7, Fm7, <br> Ebma7 and <br> Cm7 | Gm7/11 | G Phrygian (Eb major) | C harmonic minor <br> (Eb major sharp five) | Cm11 |
|  | Em7b5 <br> EGm6 | Gm6/11 | G Dorian (F major) | $\mathrm{n} / \mathrm{a}$ | Em7b5 |
| B | Cm7 (bar 9) | Cm7/11 | C Dorian (Bb major) | $\mathrm{n} / \mathrm{a}$ | Cm11 |
|  | F7 | Cm7/11 | C Dorian (Bb major) | $\mathrm{n} / \mathrm{a}$ | F13 |
|  | Bbma7 | Bbma6/9 and <br> Dm7/11 | Bb major scale | $\mathrm{n} / \mathrm{a}$ | Gm11 (Bbma9/G) |
|  | Bm7 | Bm7/11 | B Dorian | A major scale | Bm11 |
|  | E7 | Bm7 | B Dorian | A major scale | E13 |
|  | Bbm7 | Bbm7/11 | Bb Dorian (= Ab major) | $\mathrm{n} / \mathrm{a}$ | Bbm11 |
|  | Eb7 | Bbm7/11 | Bb Dorian (= Ab major) | $\mathrm{n} / \mathrm{a}$ | Eb13 |
|  | Abma7 | Fm7/11 | F Aeolian (= Ab major) | F harmonic minor <br> (Ab major sharp five) | Fm11 |

## Jazz Blues, using Harmonic Minor

for bars 7-10 and 11-2, use add this to the above 1-6-2-5 information

| chord | layer 1: <br> pentatonic scales | layer 2: major scale <br> modes | layer 3: harmonic <br> minor mode | layer 4: arpeggios |
| :--- | :--- | :--- | :--- | :--- |
| I7 bright | Ima6/9 or Im76/11 | I Mixolydian (IV major) | VI harmonic minor <br> (I major \#5) | IIm7 V7 (bII7) Ima7 |
| I7 (bluesy) | Im7/11 | I Dorian (bVII major) |  | IIm7 V7 (bII7) I7 |
| IV7 | VIm7/11 | VI Aeolian (I major) |  | Vm7 I7 (bV7) IV7 |
| \#IVo7 | Im6/11b5 | I Dorian b5 (bVII major <br> b6) | n/a | \#IVdim 7 |
| \#IV7 <br> Escherian <br> (imply Vm <br> part of I9 <br> in bar 7) | Im7/11b5 | V Aeolian (bVII major) | V Aeolian (bVII <br> major)/V harmonic <br> minor hybrid | VIm7b5 II7b9 to Vm <br> = I9 nr, n3 |

## How High the Moon

| chord | layer 1: <br> pentatonic scales | layer 2: major scale <br> modes | layer 3: harmonic <br> minor mode | layer 4: arpeggios |
| :--- | :--- | :--- | :--- | :--- |
| Gma7 | Gma6/9 <br> Bm7/11 | G major | G har. min. just <br> before Gm | Am7 D7 (Ab7) Gma7 <br> D7b9 just before Gm |
| Gm7 | Gm7/11 | G Dorian (F major) | n/a | Gm9 |
| G7 | Gm6/11 | Fma6/9 <br> Am7/11 | F major | F har. min. just before <br> F |
| Fma7 | C9 <br> C7b9 just before F |  |  |  |
| Fm7 | Fm7/11 | F Dorian (Eb major) | F har. min. just before <br> Fm | Gm7 C7 (Gb7) Fma7 <br> C7b9 just before Fm |
| Bb7 | Fm6/11 | F Dorian (Eb major) | Eb har. min. just <br> before Eb | Bb9 <br> Bb7b9 just before Eb |
| Ebma7 | Ebma6/9 <br> Gm7/11 | Eb major | Ebma9 |  |
| Am7b5 | Am7/11b5 | G Aeolian (Bb major) | n/a | Am7b5 |
| D7b9 | Am6/11b5 | G Aeolian (Bb major, <br> bluesy) | G harmonic minor <br> (Bb major \#5) | D7b9 |
| Gm7 | Gm7/11 | G Aeolian (Bb major) | G harmonic minor <br> (Bb major \#5) | Gm9 |
| Em7 | Em7/11 | E Aeolian (G major) | E harmonic minor (G <br> major \#5) | Em9 |
| Bm7 | Bm7/11 | E Aeolian (G major) | n/a | Bm7 |
| Bb7 | Bb9 | F melodic minor (E <br> super Locrian) | n/a | Bb13\#11 |
| Am7 | Am7/11 | A Dorian (G major) | n/a | Am7b5 |
| D7 | Am6/11 | G har. min. just <br> before Gma7 | D7b9 |  |

## MELODIC MINOR CADENCE SONGS

On each song, use these standard four layers. Make these a default for your improv.
Modes of melodic minor are typically used in jazz to create cadences to target chords. They primarily use bII13\#11 (Db13\#11) of the target or V7 super-altered (G7\#9b9\#5b5) of the target (Cma7, C7 or Cm7). Sometimes, Lydian dominant, the scale version of $13 \# 11$ is used as a temporary target. Rarely, it is even used as a tonic chord, as in the Simpson's Theme.

## melodic minor modes for setup chords

Setup chords in a cadence lead to the target chord. See Target Chords And Setup Chords in Melodically Superimposed Cadences.
modes of Ab melodic minor scale used for a C target chord

| tone of target | bVI | bVI | I | bII | bIII | IV | V |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| tone of mel. m. | I | II | bIII | IV | V | VI | VII |
|  | Ab melodic minor | Bb Dorian flat two | C Phrygian flat one ( Cb ) | Db Lydian flat seven (Lydian dominant) | Eb Mixolydian flat six | F Aeolian flat five | G Locrian flat four (super locrian) |

## Three Most Usable Melodic Minor Modes

## which mode should study first?

Study either Aeolian flat five or Lydian dominant first. Aeolian flat five is a familiar context for both improvisers and listeners. Lydian domiant harmonizes well. Lydian dominant also voice-leads well to the target. If you have not experienced improvising with either, choose Aeolian flat five. If you are experienced with Lydian dominant, start with it.

## tension-release with V super Locrian

Super Locrian is the basis of the use of melodic minor in jazz. It creates super-altered $V$ chords which create a lot of tension before resolving to the target I. It doesn't harmonize well, though. Aeolian flat five is much more conducive in making melodic phrases, with its strong relationship to dark minor melodies.

## the flat five substitute

Chord synonyms share the same notes but have different names. Chords built in Lydian dominant (Lydian flat seven) are synonyms of those built in super Locrian. The basis of these synonyms is bII7b5
and V7b5, which have exactly the same notes. In the key of C, bII7b5 is Db7b5, and is a subset of bII (Db) Lydian dominant. In C, V7b5 is G7b5, and is a subset of V G) super Locrian.

Many other chords that are part of the bII13\#11 chord (Db13\#11, built from Db Lydian dominant) are synonyms of chords that are part of V7\#9b9\#5b5 (G7\#9b9\#5b5, built from G super Locrian). The G and Db chords below for example use the same notes, so could be played with either a " G " or " Db " bass note (on bass guitar or stand-up bass).


## the dark minor blues sound of Aeolian flat five

Aeolian flat five can be very familiar, especially when based on minor pentatonic with a flat five ( $\mathrm{m} 7 / 11 \mathrm{~b} 5$ ). It bears a strong relationship to Lydian dominant. Chords built in thirds in Lydian dominant without the root are synonyms of chords built in thirds in Aeolian flat five. Aeolian flat five works very effectively, but really functions as a part of chords built in Lydian dominant.


A ninth chord is a five-note chord built with every-other note of a seven-tone scale, such as melodic minor. The ninth chord built on the fourth step of melodic minor using scale tone numbers $4,6,1, \mathrm{~b} 3$ and 5 and is a IV dominant ninth or IV9 (Db9). A seventh chord is a four-note built with every other note of a seven-tone scale. The seventh chord built on the sixth step of a melodic minor scale uses scale tone numbers 6-1-b3-5 and is a VI minor seventh flat five or VIm7b5 (Fm7b5). Without its root ("4"), the IV9 chord has the same notes as the VIm7b5 chord.

Using the table of numbered and lettered scale tones in the Ab melodic minor scale, you can see the letter names of the notes used to build a Db 9 chord are $\mathrm{Db}, \mathrm{F}, \mathrm{Ab}, \mathrm{Cb}$ and Eb , scale tone numbers 4-6-1-b3-5. The Fm7b5 chord uses the same letters and numbers without the Db ("4"), 6-1-b3-5.

Inspect the Db 9 chord below to see that it has the letters $\mathrm{Db}, \mathrm{F}, \mathrm{Ab}, \mathrm{Cb}$ and Eb . The Fm 7 b 5 chord has the same letters without Db .


Elaborating the VIm7b5 (Fm7b5) chord with other tones of of IV (F) Aeolian flat five of the target chord makes the same harmonic sounds as $\mathrm{bII}(\mathrm{Db})$ Lydian dominant chords but without the root (Db). It is a common practice to sound a part of a chord that makes another chord, such as the Fm7b5 and Db9 above. This can be studied extensively in Secondary Roots, in the chapter on Substitution. The elaboration of secondary roots with scales is discussed in Secondary Tonics.

## Lydian dominant, the most harmonizable melodic minor mode

The entire thirteenth sharp eleven (Db13\#11) chord built on Lydian dominant is usable as an arpeggio. Its root, third and fifth voice-lead very well to the triad of the target chord. Aeolian flat five chords built on its third are Secondary Roots and provide a good alternative to Lydian dominant.

## Aeolian Flat Five in Four Layers

## layer one - pentatonic scales

Establish a dark minor blues basis with IV minor pentatonic with a flat five (Fm7/11b5). Resolve to the triad tones of the target chord.

Alternately, think of the IVm7/11b5 (Fm7/11b5) pentatonic scale as II major pentatonic with a flat three ( $\mathrm{Dm} 6 / 9$ ). Play this scale in a swing style, particularly emphasizing its sixth ("B"). Optionally, Use major 6/9 fingerings in Movable Pentatonic Scales With One Chromatic with a flatted third.

## layer two - m7/11b5 scale subset of Aeolian flat five

Elaborate the $\mathrm{m} 7 / 11 \mathrm{~b} 5$ pentatonic with Aeolian flat five. Fm7/11b5 is a subset of F Aeolian.

## layer three - Aeolian flat five as a secondary tonic on Lydian dominant

Thinking of the IVm7b5 (Fm7b5 for a "C" target) as a secondary root chord on the third of Lydian domiant ( Db Lydian dominant for a C target), think of IV (F) Aeolian flat five as being a mode built on the third of bII13\#11 (Db13\#11). See Secondary Roots and Secondary Tonics.

## layer four - arpeggio Cadences

Learn the arpeggios for the target ninth chord with no root. This will make a seventh chord on its third. See Secondary Root On The Third. Resolve the IVm7b5 to that chord. For a C7 target chord, this is Fm7b5 to Em7b5 (C9 no root is Em7b5). For Cma7, it is Fm7b5 to Em7. For Cm7, its Fm7b5 to Ebma7.

Elaborate on the cadences with neighboring and passing scale tones. Study Harmonic Clusters in the Tonal Layers chapter and Harmonic Clusters in the Double Stops chapter.

## Lydian Dominant lin Four Layers

## layer one - pentatonic scales

Establish a swing-based bII major pentatonic melody (Dbma6/9 for a C target), especially emphasizing the sixth and use syncopated rhythm. Optionally, use chromatics for either scale as shown in Movable Pentatonic Scales With One Chromatic.

## layer two - bll major pentatonic subsets of bll Lydian dominant

Elaborate the bII major pentatonic with Lydian dominant, adding the sharp four and flat seven.

## layer three - Aeolian flat five as a secondary tonic on Lydian dominant

Thinking of the IVm7b5 (Fm7b5 for a "C" target) as a secondary root chord on the third of Lydian domiant ( Db Lydian dominant for a C target), think of IV (F) Aeolian flat five as being a mode built on the third of bII13\#11 (Db13\#11). See Secondary Roots and Secondary Tonics. This is the same third layer as for Aeolian flat five, intentionally.

## layer four - arpeggio Cadences

Learn the arpeggios for the $\mathrm{bVIm}(\mathrm{ma} 7)$ - bII9 - I (or Im) cadence. For a "C" target chord, this is $\mathrm{Abm}(\mathrm{ma} 7)$ - Db 9 to $\mathrm{Cma} 7, \mathrm{C} 7$ or Cm 7 .

Elaborate on the cadences with neighboring and passing scale tones. Study Harmonic Clusters in the Phrases Build With Core Melody, Cell Elabration and Filler chapter and Harmonic Clusters in the Double Stops chapter. Take a look at melodic minor scale tone seventh chords, especially the Melodic Minor Scale-Tone Seventh Chords in the chapter on Scale-Tone Seventh Chord Progression.

Descending five and seven of the $\operatorname{Im}(\mathrm{ma} 7)$ in melodic minor becomes IV7. These are respectively used for $\mathrm{bVIm}(\mathrm{ma} 7)$ and bII7 in the key of the target chord. Descending only the seven becomes IV9, no root in melodic minor (bII9 no root in the key of the target). See descend five and seven and descend seven.

## Super Locrian in Four Layers

## layer one - half/whole/half

Of course, all of the melodic minor modes have these same scalar intervals, but super Locrian feels most like a seven tone scale. Aeolian flat five has more of a relation to the IVm 7 b 5 chord and $\mathrm{IVm} 7 / 11 \mathrm{~b} 5$ pentatonic scale and Lydian dominant has more of a harmonic relation to the bII13\#11 chord.

The half whole half sequence has a distinct jazz/middle eastern feeling.
The fingering for super Locrian is half-whole-half steps, followed by five notes each a whole step apart from its neighbor. The formula for super Locrian is $1, b 2, b 3, b 4, b 5, b 6, b 7$. Thinking of flat four as natural three, there is a note a half step above the tone center (" b 2 " is a half step above " 1 ") and a note a half step below three (b3 is a half step below $b 4$, which is 3 ). From three (" $b 4$ ") up to one, it is five notes in whole steps: $3, \mathrm{~b} 5, \mathrm{~b} 6, \mathrm{~b} 7$ and 1 . On a single string, it looks like this (from the players perspective, looking down at their own guitar):


The half/whole-half part of the scale is common to harmonic minor (7-1,-2-b3), melodic minor (also 7-1-2-b3) the hybrid Aeolian harmonic minor (7-b7-b6-5) and two instances in melodic minor resolving to a target chord.

Both of these melodic minor instances descend a half step, then a whole step. One instance starts on b6 of the target makes a half/whole/half sequence if it resolves on down to the major third of the target. In "C", this is the note sequence "Ab-G-F-E". The other instance works on any target chord with a perfect fifth. In "C" the second instance is " Cb (" B ")- $\mathrm{Bb}-\mathrm{Ab}-\mathrm{G}$ ".

## layer two - five notes in whole steps

The five tones in whole steps sound sort of wacky/weird, like the whole tone scale. (also Emotive Qualities Of Chords/whole tone scale). The whole tone scale divides the octave into six equal intervals of a whole step. Melodic minor has five of the six notes in the whole tone scale. That portion of melodic minor can get the same wacky/weird sound.

## layer three - think super Locrian in connecting bll\#11 tones

Use the middle-eastern half/whole/half and the wacky whole step regions of the super Locrian scale to connect tones of the bII\#11 chord.

## layer four - use clusters of tones from altered V chords

Arpeggiate altered V chords, not only in terms of the notes of a held chord, but also thinkng of chord tones on a single string, especially $V$ chord tones $\# 9-b 9$ resolving to the fifth of the target $(\mathrm{Bb}-\mathrm{Ab}-\mathrm{G}$ for a C target chord) and $V$ chord tones $\# 5-\mathrm{b} 5$ resolving to the root of the target $(\mathrm{Eb}-\mathrm{Db}$ to C for a C target.

## 1-6-2-5 in Bb with Harmonic Minor Cadences

Bb7
Bma6/9, Bb7/11
Bb Misolydian
Bb13, Gm7, Dm7b5
Cm7
Cm7/11
C Dorian
Cm13, Ebma7

Bb major sharp five D7b9

G7
Bb7/11\#1
Bb Mixo. \#1 (C har. min.)
G7b9

## F7

F Mixolydian F13, Am9b5

F Phrygian major F7b9, Edim7

## 1-6-2-5 in Bb with Melodic Minor Cadences

$|$| Bb 7 |
| :--- |
| $\mathrm{Bma6/9}, \mathrm{Bb7/11}$ |
| Bb Misolydian |
| $\mathrm{Bb} 13, \mathrm{Gm} 7$, Dm7b5 |


$|$| Cm 7 |
| :--- |
| $\mathrm{Cm} 7 / 11$ |
| C Dorian |
| Cm 13, Ebma7 |


| Eb melodic minor <br> Ab13\#11, D7 $\pm 9 \pm 5, \mathrm{Cm} 9 \mathrm{~b} 5$ | G7 <br> Bb7/11\#1 <br> Bb Mixo. \#1 (C har. min.) <br> G7b9 | Ab melodic minor Db13\#11, G7 $\pm 9 \pm 5$, Fm9b5 |
| :---: | :---: | :---: |
|  |  |  |
|  |  |  |
|  |  |  |
|  | F7 |  |
| Db melodic minor | F Mixolydian | Gb melodic minor |
| Gb13\#11, C7 $\pm 9 \pm 5, \mathrm{Bbm} 9 \mathrm{~b} 5$ | F13, Am9b5 | Cb13\#11, F7 $\pm 9 \pm 5$, Ebm9b5 |

## Common Melodic Minor Scales and Arpeggios




## Surfing with the Alien

\(\left.$$
\begin{array}{|l|l|l|l|l|}\hline \text { chord } & \text { pentatonic scales } & \text { major scale modes } & \text { other heptatonic mode } & \text { arpeggios } \\
\hline \text { G bluesy } & \text { Gm7/11 } & \begin{array}{l}\text { G Dorian } \\
\text { (F major) }\end{array} & \begin{array}{l}\text { G Dorian b5 (very } \\
\text { bluesy) } \\
\text { (F major flat six) }\end{array} & \begin{array}{l}\text { Gm7 } \\
\text { (Gm7b5 for G } \\
\text { Dorian b5) }\end{array} \\
\hline \text { C } & \text { Gm6/11 } & \begin{array}{l}\text { G Dorian } \\
\text { (F major) }\end{array} & \begin{array}{l}\text { G Dorian b5 (very } \\
\text { bluesy) } \\
\text { (F major flat six) }\end{array} & \begin{array}{l}\text { Gm7 to C9 } \\
\text { (Gm7b5 to C7 for G } \\
\text { Dorian b5) }\end{array} \\
\hline \text { Em7 } & \text { Em7/11 } & \text { E Aeolian } & & \begin{array}{l}\text { Em9 } \\
\hline \text { C7 }\end{array}
$$ Em7/11b5 <br>

(G meolodic minor)\end{array}\right]\) C13\#11 |  |
| :--- |

Kid Charlemagne, verse

| chord | layer 1: <br> pentatonic scales | layer 2: major scale <br> modes | layer 3: complex hepta- <br> tonic mode | layer 4: arpeggios |
| :--- | :--- | :--- | :--- | :--- |
| C7\#9 | Cm7/11 <br> (optional major 3) | C Dorian (Bb major) <br> or C Mixolydian (F <br> major) |  | Cm9, C7\#9 |
| Am G F | Am7/11 | A Aeolian <br> (Cmajor) | A harmonic minor <br> (C major \#5) | Am, G and F |
| Bb13\#11 | Bbma6/9 |  | D Aeolian b5 <br> (= Bb Lydian dominant <br> = melodic minor <br> = E super Locrian <br> =A Phrygian b1) | Fm(ma7) to Bb9 |
| F G Am G | Am7/11 | A Aeolian (Cmajor) | A harmonic minor <br> (C major \#5) | F, G, Am |
| Dm7 F6 | Dm7/11 | D Dorian (Cmajor) | n/a | Dm7 = F6 |
| Em7 | Em7/11 | E Phrygian (Cmajor) | n/a | Em7 |
| F7 | Am7/11b5 |  | A Aeolian b5 <br> (C melodic minor) | F13\#11 |
| G7 | G7 | G Mixolydian | n/a | G9 |

## Song for My Father

| chord | layer 1: <br> pentatonic scales | layer 2: major scale <br> modes | layer 3: complex hepta- <br> tonic mode | layer 4: arpeggios |
| :--- | :--- | :--- | :--- | :--- |
| Fm7 | Fm7/11 | F Aeolian | F harmonic minor (de- <br> emphasize natural 7) | Fm9 |
| Eb7 | Cm7/11 | C Phrygian <br> (Ab major) | n/a | Eb9 |
| Db7 bluesy | Fm7/11b5 | $\mathrm{n} / \mathrm{a}$ | F Aeolian b5 <br> (= Ab melodic minor) | Db9 |
| Db7 Lydian <br> dominant | Dbma6/9 | $\mathrm{n} / \mathrm{a}$ | Db Lydian dominant <br> (= Ab melodic minor) | Abm(ma7) Db9 |
| C7sus.4 | Cm7/11 | C Phrygian (Ab major) | F harmonic minor <br> (Ab major \#5) | Gm7b5 to C7 |

## Stray Cat Strut

| chord | layer 1: <br> pentatonic scales | layer 2: major scale <br> modes | layer 3: complex hepta- <br> tonic mode | layer 4: arpeggios |
| :--- | :--- | :--- | :--- | :--- |
| Cm7 | Cm7/11 | C Aeolian (Eb major) | C harmonic minor (de- <br> emphasize natural 7) | Fm9 |
| Bb7 | Fm7/11 | G Phrygian <br> (Ab major) | n/a | Eb9 |
| Ab7 bluesy | Cm7/11b5 | n/a | C Aeolian b5 <br> (= Ab melodic minor) | Db9 |
| Ab7 Lydian <br> dominant | Abma6/9 | n/a | Ab Lydian dominant <br> ( Eb melodic minor) | Abm(ma7) Db9 |
| G7 | Gm7/11 | G Phrygian (Eb major) | C harmonic minor <br> (Eb major \#5) | Gm7b5 to C7 |
| Fm7 | Fm7/11 | F Aeolian (Ab major) | F harmonic minor (de- <br> emphasize natural 7) | Fm9 |
| Eb7 | Cm7/11 | C Phrygian(Ab major) | n/a | Eb9 |
| Db7 bluesy | Fm7/11b5 | n/a | F Aeolian b5 <br> (= Ab melodic minor) | Db9 |
| Db7 Lydian <br> dominant | Dbma6/9 | n/a | Db Lydian dominant <br> $(=$ Ab melodic minor) | Abm(ma7) Db9 |
| C7 | Cm7/11 | C Phrygian (Ab major) | F harmonic minor <br> (Ab major \#5) | Gm7b5 to C7 |

## 1-6-2-5 Songs with Melodic Minor

use this on any song in the 1625 category

| chord | layer 1: <br> pentatonic scales | layer 2: major scale <br> modes | layer 3: complex hepta- <br> tonic mode | layer 4: arpeggios |
| :--- | :--- | :--- | :--- | :--- |
| Ima7 or I7 | Ima6/9 or I7/11 (bluesy), <br> optionally slur \#2 to 3 | major | I Mixolydian (bluesy) | C major 7 |
| bVI7 just <br> before VIm7 | bVII9 (arpeggio) |  | I Mixolydian b6 <br> (= IV melodic minor) | bVII13\#11 |
| VIm7 | VIm7/11 | VI Aeolian <br> (= I major) | IIIm7 to VIm9 |  |
| IIm7 | IIm7/11 | II Dorian <br> (= I major) |  | VIm9 to IIm9 |
| bVI7 just <br> before V | bVI9 (arpeggio) |  | bVI Lydian dominant <br> (= bIII melodic minor) | bVI13\#11 |
| V7 | Vm7/11, optionally <br> slurring \#2 to 3 | Mixolydian | IIm9 to V9 |  |
| bII7 just <br> before I | bII9 (arpeggio) |  | bII Lydian dominant <br> (= bVI melodic minor) | bII13\#11 |

## 1-6-2-5 in Bb with Melodic Minor Cadences

## use these on any song in the 1625 category

Bb7<br>Bma6/9, Bb7/11<br>Bb Misolydian<br>Bb13, Gm7, Dm7b5<br>Cm7<br>Cm7/11<br>C Dorian<br>Cm13, Ebma7

|  | G7 <br> Bb7/11\#1 <br> Bb Mixo.\#1 (C har. min.) <br> G7b9 melodic minor | Ab melodic minor <br> Ab13\#11, D7 $\pm 9 \pm 5, \mathrm{Cm} 9 \mathrm{~b} 5$ |
| :--- | :--- | :--- |
|  | F 7 | Db13\#11, G7 $\pm 9 \pm 5, \mathrm{Fm} 9 \mathrm{~b} 5$ |
|  | F Mixolydian |  |
| Db melodic minor <br> Gb13\#11, C7 $\pm 9 \pm 5, \mathrm{Bbm} 9 \mathrm{~b} 5$ | F13, Am9b5 | Gb melodic minor <br> Cb13\#11, F7 $\pm 9 \pm 5, \mathrm{Ebm} 9 \mathrm{~b} 5$ |

## Sunny

| chord | layer 1: <br> pentatonic scales | layer 2: major scale <br> modes | layer 3: complex hepta- <br> tonic mode | layer 4: arpeggios |
| :--- | :--- | :--- | :--- | :--- |
| Am | Am7/11 | A Aeolian <br> (C major) | A harmonic minor <br> (C major sharp five) | Bm7b5 E7b9 to Am |
| C7 | Cma6/9 <br> (=Am7/11) | A Phrygian <br> (F major) |  | Gm7 to C9 |
| A7b9 just <br> before F | C\# dim.7 arpeggio |  | C Mixolydian \#1 <br> (= D harmonic minor <br> = F major \#5) | A7b9 to Dm (Dm <br> during F chord) |
| F bright | Am7/11 | A Aeolian <br> (C major) |  | Dm9 (Fma7/D) |
| F bluesy | Am7/11b5 |  | A Aeolian b5 <br> (C melodic minor) | Dm9 (Fma7/D) |
| Bm7b5 | Bm7/11b5 | B Locrian | E Phrygian <br> (= A Aeolian <br> = C major) | Bm7b5 <br> E7 dark <br> Em7/11 <br> E7 bright <br> E7/11 |
| Bb7 | Bb9 (arpeggio) | E Phrygian major <br> (= C major \#5 <br> = A harmonic minor) | Am7b5 to D7b9 |  |

## Glass Onion

| chord | layer 1: <br> pentatonic scales | layer 2: major scale <br> modes | layer 3: complex hepta- <br> tonic mode | layer 4: arpeggios |
| :--- | :--- | :--- | :--- | :--- |
| Am | Am7/11 | A Aeolian <br> (C major) | A harmonic minor <br> (C major sharp five) | Bm7b5 E7b9 to Am |
| F | Am7/11b5 | A Aeolian <br> (C major) | A Aeolian b5 <br> (C melodic minor) | Dm9 (Fma7/D) |
| Gm7 | Gm7/11 | G Dorian | G harmonic minor <br> (Bb major sharp five) | Am7b5 to D7b9 |
| F7 | Am7/11b5 | A Aeolian <br> (C major) | A Aeolian b5 <br> = C melodic minor | F9 |
| D7 | Adim7/11 |  | A Locrian natural 6 <br> (= Bb major \#5 <br> = G harmonic minor) | Am7b5 to D7b9 |

I Want You chorus

| chord | layer 1: <br> pentatonic scales | layer 2: major scale <br> modes | layer 3: complex hepta- <br> tonic mode | layer 4: arpeggios |
| :--- | :--- | :--- | :--- | :--- |
| Dm | Dm7/11 | D Aeolian (F major) | D harmonic minor <br> (major sharp five) | Dm9 |
| E7b9 bluesy | Em7 | E Phrygian (C <br> major) | n/a | Bm7b5 to Em7 |
| E7b9 bright | E7 | E Phrygian (bluesy) | E Phrygian major | Bm7b5 to E7b9 |
| Bb7\#11 | Dm7/11b5 | D Aeolian b5 <br> (F melodic minor) | Bb Lydian dominant <br> = E super Locrian <br> = F melodic minor | Fm(ma7) to Bb9 |
| Aaug | A7\#5 arpeggio | A Phrygian <br> (Bb major) | A super Locrian <br> (Bb melodic minor) | Bbm(ma7) to Eb9 |

## Hurricane

| chord | layer 1: pentatonic scales | layer 2: major scale modes | layer 3: complex heptatonic mode | layer 4: arpeggios |
| :---: | :---: | :---: | :---: | :---: |
| Am | Am7/11 | A Aeolian (C major) | A harmonic minor (C major sharp five) | Bm7b5 E7b9 to Am |
| F bright | Am7/11 | A Aeolian (C major) |  | Dm9 (Fma7/D) |
| F bluesy | Am7/11b5 |  | A Aeolian b5 (C melodic minor) | Dm9 (Fma7/D) |
| C | Cma6/9 | C major | A harmonic minor (C major sharp five) | Bm7b5 E7b9 to Am $(\mathrm{Am} 7=\mathrm{C} 6)$ |
| Dm | Dm7/11 | D Dorian (C major) | n/a | Dm7 |
| E dark | Em7/11 | E Phrygian | E Phrygian major |  |
| E bright | E7/11 | $\begin{aligned} & \hline \text { E Phrygian (C } \\ & \text { major), bluesy } \\ & \hline \end{aligned}$ | E Phrygian major | Bm7b5to E7b9 |
| G bluesy | Gm7/11 | G Dorian (F major) |  |  |
| G bright | G7/11 | G Mixoydian (C major) | just before Am: <br> G Mixolydian \#1 <br> (C major sharp five <br> = A harmonic minor) | just before Am: <br> Bm7b5 E7b9 to Am or <br> B7b5 Bdim7 to Am |

## Only So Much Oil

|Gm7 |Eb7 |Gm7 |Eb7 |
|Gm7 |C7 |Eb7 D7 |Gm7 D7 / / |
Gm 7 uses G Aeolian is mode VI of Bb major.
Eb 7 uses G Aeo. $\mathrm{b} 5=\mathrm{Bb}$ mel min. $=\mathrm{Bb}$ maj $\mathrm{b} 3=\mathrm{Eb}$ Lydian dominant
C7 uses G Dorian $=$ F maj. scale $=$ C Mixolyldian
D7 uses G har. min. $=\mathrm{Bb}$ major \#5 scale $=\mathrm{D} 7$ Phrygian major.
Improv with G minor pentatonic. During the Eb 9 chord, flat the fifth of Gm pentatonic ( Db notes replace D notes). Incorporate the Eb13\#11 arpeggio into bars 2 and 4.

| chord | layer 1: <br> pentatonic scales | layer 2: major scale <br> modes | layer 3: complex hepta- <br> tonic mode | layer 4: arpeggios |
| :--- | :--- | :--- | :--- | :--- |
| Gm7 | Gm7/11 | G Aeolian <br> (Bb major) | A harmonic minor <br> (C major sharp five) | Bm7b5 E7b9 to Am |
| Eb7 | Gm7/11b5 |  | G Aeolian b5 <br> (Bb melodic minor) | Bbm(ma7) to Eb9 |
| D7 dark | Dm7/11 | D Phrygian <br> (= G Aeolian <br> = Bb major) | A Locrian natural 6 <br> (= Bb major \#5 <br> = G harmonic minor) | Am7b5 to Dm9 |
| D7 bright | D7/11 |  | D Phrygian major <br> ( = Bb major \#5 <br> = G harmonic minor) | Am7b5 to D7b9 |
| C9 | Gm7/11 or <br> Gm6/11 | G Dorian | G Lydian dominant | C9 |
| Bbdim7 | Gdim7/11 |  | G Dorian b5 <br> = F major b6 | G dim 7 |

## MAJOR FLAT SIX SONGS

## Sleepwalk

| C | Am |
| :--- | :--- |
| Cma6/9 |  |
| C major |  |
| D13,F\#m11b5b9 | Am11 |


| Fm |
| :--- |
| $\mathrm{Fm} 7 / 11$ |
| C major b6 |
| $\mathrm{Fm} 6, \mathrm{Fm} 9$ (ma7) |

G G7/11<br>C major<br>G13, Dm7, Em7, Bm7b5

play bars 1-4 twice more

$|$| C |
| :--- | :--- |
| Cma6/9 |
| C major |
| D13, F\#m11b5b9 |


$|$| Fma7 |
| :--- | :--- |
| Cma6/9 |
| C major |
| D13, F\#m11b5b9 |


| Fma69 |
| :--- | :--- |
| Fma7 |


| Fma6/9 |
| :--- | :--- |
| Cma6 |
| C major |
| D13, F\#m11b5b9 |


| C |
| :--- |
| Cma6/9 |
| C major |
| D13, F\#m11b5b9 |


| C7 |
| :--- |
| C7/11 |
| C Mixolydian |
| C13, Gm7, Am7, Em7b5 |


| C | F | C |
| :--- | :--- | :--- |
| Cma6/9 |  | Cma6/9 |
| C major |  | C major <br> Cma13 |
| Cma13 |  |  |

C7

C major C Mixolydian Cma13 C13

| G | Bb |
| :--- | :--- |
| $\mathrm{G} 7 / 11$ | $\mathrm{Gm} 7 / 11$ |
| C major | C Miso. b6 |
| Cma13 | Bb13\#11 |

G
G7/11
C major
G13, Dm7, Em7, Bm7b5

## Swing Blues in Bb

| Bb7 |
| :--- |
| Bb69, Bb711 |
| Bb Mixolydian |
| Bb13, Gm7, Dm7b5, Fm7 |

## Eb7

Bbm69, Bbm711
Bb Dorian
Eb13, Cm7, Gm7b5, Bbm7

## Bb7

Bb69, Bb7/11
Bb Mixolydian
Bb13, Gm7, Dm7b5 Fm7

## Bb7

Bb69, Bb711
Bb Mixolydian
Bb13, Gm7, Dm7b5

| Bb7 | G7 |
| :--- | :--- |
| Bb69, Bb711 | Bb711\#1 |
| Bb Mixo. | C major |
| Bb13 | Cma13 | Bb13 Cma13

Bb7
E13\#11

Eb7
Bm69, Bbm711
Bb Dorian
Eb13, Cm7, Gm7b5, Bbm7
$\left|\begin{array}{l}\text { Cm7 } \\ \text { Cm711, C Dorian } \\ \text { Cm711b5/C Dor. b5 (Bb ma.b6) } \\ \text { Cm13, Ebma7 }\end{array}\right|$

Edim7
Cm711b5/C Dorian flat five Bb major flat six Dm11

## F7

Cm711, C Dorian
F Mixolydian b2 ( Bb major b6)
F13(opt.b9), Am9b5

## Corcovado

$|$| D7/A |
| :--- |
| Am6/11 |
| D Mixolydian |
| D13, F\#m11b5b9 |

D7/A
Abo 7
Dm7/11b5
D Dorian b5
Dm11b5
Ab ${ }^{\circ} 7$

| Fo7 |
| :--- |
| Dm6/11b5 |
| A harmonic minor |
| Dm11b5 |

$$
\begin{array}{|l}
\text { Fma7 } \\
\text { Dm7/11 } \\
\text { F major } \\
\text { Fma13 }
\end{array}
$$

| $\operatorname{Em} 7$ |
| :--- | :--- |
| Em7/11 |
| F major |
| Em7 |


| A7\#5 |
| :--- |
| A7/11 |
| D harmonic minor |
| A7b9 |


repeat bars 1-8

| Fm7 |
| :--- | :--- |
| Fm7/11 |
| F Dorian |
| Fm11 |

Bb 7 b 5
$\mathrm{Fm} / 9$
F melodic minor
$\mathrm{Bb} 13 \# 11, \mathrm{Fm} 9($ ma7 $)$
Em7
Em7/11
F major
Em7

Abo 7<br>Dm7/11b5<br>D Dorian b5

## Dm7 <br> Dm7/11 <br> D Dorian <br> Dm11

G7b9
Fm6/9
F melodic minor
Bb13\#11, Fm9(ma7)
Em7
Em7/11
Fmajor
Em7

$|$| Dm7 |
| :--- |
| Dm7/11 |
| D Dorian |
| Dm11 |



| C6 |
| :--- |
| Am7/11 |
| C major |
| Cma13 |


| Am7 |
| :--- |
| A7/11 |
| D harmonic minor |

## A7\#5 <br> A7/11 <br> D harmonic minor A7b9

(A7)
A7/11
D harmonic minor
A7b9

## How Insensitive

$|$| Dm9 |
| :--- |
| Dm7/11 |
| D Dorian |
| Dm11 |


$|$| Cm6 |
| :--- |
| Cm6/9 |
| F Mixolydian |
| Cm6, Am11b5 |

Bbma7
Gm7/11, Dm7/11
Bb major
Bbma13
Em7b5
Em7/11b5
F major
Em11b5b9
Cm7
Cm7/11
C Dorian
Cm11

Bbma7
Gm7/11, Dm7/11
Bb major
Bbma13

| Cm 7 |
| :--- | :--- |
| $\mathrm{Cm} 7 / 11$ |
| C Dorian |
| Cm 11 |

Bbma7
Gm7/11, Dm7/11
Bb major
Bbma13

| Em7b5 | A7b9 | Dm7 |
| :--- | :--- | :--- |
| Em7/11b5 | Em7/11b5 | Dm7/11 |
| F major | D harmonic | D Aeolian |
| Em11b5b9 | minor <br> A7b9 | Dm11 |

## F7 <br> Cm7/11 <br> C Dorian <br> F13

A7b9
Em7/11b5
D harmonic minor
A7b9


Ebma9
Gm7/11
Bb major
Bbma13
Dm7
Dm7/11
D Aeolian
Dm11
Bdim7
Fm7/11b5
F Dorian b5
Bdim7, Fm11b5
Ebma9

Db7
Db6/9, Fm7/11b5
Db Lydian b7
Db13\#11
|Bdim7

| Dm7 | Db7 <br> Db6/9,Fm711b5 <br> Db Lydian b7 <br> Db13\#11 |
| :--- | :--- |

## Bm7 <br> Bm7/11 <br> B Dorian <br> Bm11

Dm7
Dm7/11
D Aeolian
Dm11

## Wave (A section)

$|$| Dm9 |
| :--- |
| Dm7/11 |
| D Dorian |
| Dm11 |


$|$| Dma7 |
| :--- |
| Dma6/9, F\#m7/11 |
| D major |
| Dma13 |


$\mathrm{Bb}{ }^{\circ} 7(\mathrm{~A} 13 \mathrm{~b} 9 / \mathrm{Bb})$
$\mathrm{Gm6} / 11 \mathrm{~b} 5$
D major b6
A7b9, Gm9(ma7), Gdim7

| Gm6 |
| :--- |
| Gm6/11 |
| D major b6 |
| Gm6, Gm9(ma7) |


| Bb7 | A7\#5 |
| :--- | :--- |
| Bb69,Dm711b5 | A7/11 |
| D Aeoolian b5 | D har. minor |
| Bb13\#11 | Dm11b5 |

Dm9<br>Dm7/11<br>D Dorian<br>Dm11

Am7
Am7/11
D Mixolydian
Am11

| F\#13 | F\#7\#5 | B9 | B7b9 |
| :--- | :--- | :--- | :--- |
| F\#7/11 |  | B7/11 | B7/11 |
| B har. minor |  | B Mixo. | B Mixo. b2 |
| F\#7b9 |  | B9 | B7b9 |

G13

G13

## D7b9 (D13b9)

Am7/11b5
D Mixolydian b2
D7b9, Cm9(ma7), Cdim7

| Dm9 <br> Dm7/11 <br> D Dorian <br> Dm11 | G13 | G13 | $\operatorname{Dm} 9$ G13 <br> Dm7/11  <br> D Dorian  <br> Dm11  |
| :--- | :--- | :--- | :--- |

## MINOR KEY AMBIGUITY SONGS

## 7-3-6-2-5-1-4 SONGS

## ABSTRACT SONGS

## Swing Blues with Altered Scales

| I7 | I alt, Mb2, SP <br> (match alt) | IV7 |  | I7 |  | I7 | I alt, Mb2, SP <br> (match alt) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I69, 711 |  | Im69, m711 |  | I69, Ib711 |  |  |  |
| I Mixo. |  | I Dorian | V alt, Mb2, SP | I Mixo. |  |  |  |
| I 13 |  | IV13 (opt \#11) | (match alt) | I 13 |  |  |  |
| IV7 |  | \#IVdim7 |  | I7 |  | VI7 |  |
| Im69, m711 |  | $\operatorname{Im} 711 \mathrm{~b} 5$ |  | I69, 711 |  | I711\#1 |  |
| I Dorian |  | I Dorian b5 | V alt, Mb2, SP | I Mixo. | III alt, Mb2, SP | I Mixo (opt.)\#1 | VIalt, Mb2, SP |
| IV13 (opt \#11) |  | IV13b9 | (match alt) | I13 |  | VI7b9b13 |  |
| IIm7 |  | V7 |  | I7 | VI7 | IIm7 | V7 |
| IIm711 |  | IIm711,V711 |  | I69, 711 | I711\#1 | IIm711 | IIm711,V711 |
| I major | II alt, Mb2, SP | I major (opt.b7) | V alt, Mb2, SP | I Mixo. | 1 Mixo (opt.)\#1 | I major | V alt, Mb2, SP |
| IIm13 | (match alt) | V13 | (match alt) | I 13 | VI7b9b13 | IIm13 | V13 |

+ "alt" indicates the common altered types Phrygian major or super Locrian
SP = super Phrygian (b9\#9b13), especially good for Aeolian type target
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I Dorian b5 is IV Mixolydian b2 (IV13b9). The later part of bar II could be I Dorian b5.
Autumn Leaves with Altered Scales

| IIm7 <br> IIm711 <br> I major <br> IIm13 | II alt, Mb2, SP (match alt) | V7 <br> IIm711,V711 <br> I major (opt.b7) <br> V13 | V alt, Mb2, SP <br> (match alt) | Ima7 <br> I69, IIIm711 <br> I major. <br> Ima13 (arprg.) | I alt, Mb2, SP (match alt) | $\begin{aligned} & \text { IVma7 } \\ & \text { Ima69 } \\ & \text { I major } \\ & \text { IVma13\#11 } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| VIIm7b5 <br> VIIm711b5 <br> VI Aeolian <br> VIIm11b5b9 | IVma13\#11 | III7 <br> Im611b5 <br> VI har. minor III11b9b13 | III SL, SP (match alt) | VIm7 <br> VIm711 <br> VI Aeolian <br> VI7b9b13 |  | VI7 <br> I711\#1 <br> I Mixo (opt.) \#1 <br> VI7b9b13 | VIalt, Mb2, SP |
| IIm7 <br> IIm711 <br> I major <br> IIm13 | II alt, Mb2, SP (match alt) | V7 <br> IIm711,V711 <br> I major (opt.b7) <br> V13 | V alt, Mb2, SP (match alt) | Ima7 <br> I69, IIIm711 <br> I major. <br> Ima13 (arprg.) | I alt, Mb2, SP (match alt) | $\left\lvert\, \begin{aligned} & \text { IVma7 } \\ & \text { Ima69 } \\ & \text { I major } \\ & \text { IVma13\#11 } \end{aligned}\right.$ |  |
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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \operatorname{IIm} 7 \\ & \text { IIm711 } \\ & \text { I major } \\ & \text { IIm13 } \end{aligned}$ | II alt, Mb2, SP (match alt) | V7 <br> IIm711,V711 <br> I major (opt.b7) <br> V13 | V alt, Mb2, SP (match alt) | Ima7 <br> I69, IIIm711 <br> I major. <br> Ima13 (arprg.) | I alt, Mb2, SP (match alt) | $\begin{aligned} & \text { IVma7 } \\ & \text { Ima69 } \\ & \text { I major } \\ & \text { IVma13\#11 } \end{aligned}$ |  |
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| VIIm7b5 <br> VIIm711b5 <br> VI Aeolian <br> VIIm11b5b9 | IVma13\#11 | III7 <br> Im611b5 <br> VI har. minor III11b9b13 | III SL, SP (match alt) | VIm7 <br> VIm711 <br> VI Aeolian <br> VI7b9b13 |  | VIm7 | VIalt, Mb2, SP |

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- The Best Way to Learn
- Tablature and Chord Diagrams
- Chords and Chord Progression
- Comping Rhythms
- Jazz Theory
- Harmony
- Being in a Band
- Playing Parts in a Band
- Technique
- Equipment Use and Maintenance


## THE BEST WAY TO LEARN

The best way to learn is to teach to someone else. The worst is lecture.

## TABLATURE AND CHORD DIAGRAMS

Does the top horizontal line on tablature represent the largest or smallest string? What is the string number of the top line in tablature? (Answer: reading tablature)

What do the numbers in the white space between the tablature and standard music notation indicate? (Answer: reading tablature)

What do the vertical lines on chord diagrams indicate, strings or frets? Does the very top horizontal line on a chord diagram indicate the nut (plastic or bone slotted piece that the strings rest on on the head of the guitar) or the first fret? (Answer: reading chord grid diagrams - second page).

If you play a note without fretting the string, it called an "open string" and the string vibrates to the nut. In tablature, should such a note be numbered " 0 " or " 1 "?

We press strings onto the narrow metal frets that are hammered into the fingerboard in order to vary the pitch of notes by changing the vibrating string length. We call the space between each pair of consecutive frets a "fret", when it is actually a "fretting space". Which fretting space is between the third and second fret? Answer: the third fret (or fretting space).

What do the numbers on the fretboard diagrams indicate?
For fretboard diagrams or tablature, which is the number for the index finger?
On a chord diagram, what does a small circle above the nut indicate? Large circles on my diagrams indicate the note that names the chord, which is sometimes a reference note not played. Notes shown by the large circles always share the same note name.

What does it mean when a string on a chord diagram has no number on it?
What are some things you can do to make sure a string does not sound?

## CHORDS AND CHORD PROGRESSION

Alphabetically, which notes are one fret apart? (answer: full fretboard natural notes).
What are the letter names of the notes on the fifth, tenth and twelfth frets, from sixth through first? (answers: full fretboard natural notes).

What is a chord root, semantically (according to the letter in the chord name) and aurally (the aural definition involves the imagination)? (answer: chord roots)

Barre chords are typically formed by using the index finger as a virtual nut (or virtual capo) by barreíng all the strings and forming virtual open position chords with the three remaining fingers. Give an example. (answer: basic barre and power chords).

Demonstrate a major and minor barre chord rooted on the sixth string. Demonstrate a major and minor chord rooted on the fifth string. (answer: basic barre and power chords).

Such chords you demonstrated above are designed after open position chords, named after their letter and have a root on one of the three bass strings in relatively the same location (same string and same fret above the "virtual nut" you make with the barre). Demonstrate E, A, C, G and D form major barre chords, being aware that $\mathrm{D}, \mathrm{A}$ and G open position chords have an "empty" first fret. (answer: Major Chords in Five Octave Shapes). See also: Octave Shapes and Major Arpeggios.

How many different notes does a triad have? A quadrad? A pentad? A sextad? A heptad?
What is the default method of constructing triads with the major scale? (answer: chord construction).
What is the order of major scale tone numbers and letters in thirds (the tertian cycle)? Hint: use groups of odd and even numbers. (Answer: number and letter cycles)

What is the significance of the numbers 1-3-5 (answer: chord construction)?
What are the numbered tones in the key of the chord root for major, minor? (answer: triads).
Demonstrate Em, Am, Dm, Gm and Cm form minor barre chords. (answer: Minor Chords In Five Octave Shapes).

What number does suspended 4 and suspended 2 replace in a major triad? ... in a minor triad?
What are parent scales, key scales and chord scales?
What are the parent scale numbers in a II minor chord (answer: 2-4-6)? What are the chord scale numbers in a II minor chord (answer: 1-b3-5).

What are the parent scale and chord scale numbers in a IIIm chord?

What are the parent scale and chord scale numbers in a IV major chord?
Trick question: what are the parent scale numbers in a IV minor chord?
Trick question: what are the numbers in a VI major chord?
What are the numbered tones for an add 9 chord in the key of the chord root?
Demonstrate major and minor triads built on steps one through six of C major and $G$ major.
Play the following progressions in $\mathrm{C}, \mathrm{G}, \mathrm{D}, \mathrm{A}, \mathrm{E}, \mathrm{Gb}, \mathrm{Db}, \mathrm{Ab}$ and in Eb . For each key, name the chords by letter and qualilty: I-IV-V-I, I-V-IV-I, V-IV-I-V, I-VIm-IV-V, I-V-VIm-IV, I-VIm-IImV and I-VIm-IV-V. Use open position chords whenever you can for now.

## C and G major chords on steps one through six



## COMPING RHYTHMS

Read Accents and Varying Rhythms.
What is a push? (aural answer: accent three, then push three).
What is a rest push (punchy) versus a sustain push (smooth)? Which would be typical of bossa nova and which typical of James Brown?

What is a pickup? (aural answer: accent three, then pickup to three).
The three mathematical operations in musical rhythm: halving/doubling, dotting and tuplets.
Swing eighths use tuplets. They play on the first and third of three parts and can vocalized by saying "bah um bah" on each beat, spaced very evenly. Demonstrate. Next, sing "bah um bah" repeatedly on each beat and "fade out" the "um's". You should begin to hear the familiar swing rhythm that you have heard in blues. (aural answer: swing eighths).

The Charleston comping rhythm is in swing eighths and is two half notes with a push to the second half note. Demonstrate. (aural answer: Charleston comping rhythm in swing eighths).

Counting " $1+2+3+4+$ " perfectly even, clap a straight eighths version of the Charleston comping rhythm. (aural answer: Charleston comping rhythm in straight eighths).

Rhythmic "hits" are thematic accents placed at (metronomic) locations in time. The "back beat" is hits on beats two and four in $4 / 4$ time. Count "one two three four" and clap on two and four to demonstrate. (answer: back beat).

Another way to vary a rhythm is to add a hit to an empty beat. Demonstrate adding a hit to the empty beat four in the Charleston comping rhythm, which makes the "Blues By Five" comping rhythm. (aural answers: Charleston comping rhythm in swing eighths, Charleston add four in swing eighths, Charleston in straight eighths, Charleston add four in straight eighths).

## JAZZ THEORY

What are the formulas (numbered tones in the key of the chord root) for major, minor, diminished, suspended fourth, suspended second and augmented chords? (answer: triads)

Do you need to know triad names to understand larger chord names? (answer: triad names in larger)
What are the three ways a chord name indicates b3? (answer: thirds)
What is the default numbered tone that " 7 " (or 9,11 or 13 ) indicates in a chord name? (answer: sevenths, ninths, elevenths and thirteenths). How would a chord name indicate two other versions of the number seven? (answer: sevenths, ninths, elevenths and thirteenths)

What are the three ways to indicate the numbered tone b 5 in a chord name? (answer: altered fifths). What are the three ways for a \#5? (answer: altered fifths).

How many notes are in an eleventh chord? (answer: see the major scale tone chords by type table)
Can the first number after the letter name in a chord name indicate more than one number? (answer: sevenths, ninths, elevenths and thirteenths).

Do secondary numbers after the letter names (such as the "b9" in "C7b9" or the " \#5" and" \#9" in "C7\#5\#9") indicate more than one note for each number? (answer: numbers after the letter name)

How many notes are in 9sus4? (answer: chord formulas, suspended fourths).
What are parent scales, key scales and chord scales?
Describe the default method of figuring out a secondary root seventh chord (tertian quadrad) on the third of a ninth chord in numbers, using the parent scale (use the quality of the seventh chord on the third of the ninth chord)?

What number would you subtract from chord tones 9 through 13 to get the lower octave equivalents? See Modes / Modes Of Four Heptatonic Scales.

What are key scales, parent scales and chord scales?
What are the parent scales for C7, F7 and G7? (answer: Modes On I-IV-V Blues).
What are key scales for C7-F7-G7 for a blues in C (name the modes each of their parent scales in terms of the note "C")?

What are the qualities of the tertian triads (three note chords built in thirds) and tertian quadrads (four-note seventh chords built in thirds) of each of the four usable heptatonic scales: major scale, major
sharp five scale (harmonic minor built on its sixth step), melodic minor scale, major flat six (harmonic major)?

What are the names of the largest acceptable chord and acceptable add tones ( 2,4 and 6 ) on each of the seven steps of the each of the four usable heptatonic scales), excluding suspended chords?

What are the numbered tones of a V7 in terms of the parent scale? What would those numbers be without the root? Which numbered tone of the parent scale ( $5,7,2$ or 4 ) is the third of a V7 chord? What is the numbers of the tones in a triad built on the third of the V7 chord? Is there any numerical difference (in terms of its parent scale ) between the numbered tones of a triad built on the third of a V7 chord and the same V7 chord without a root?

What is the nature of the descending number in formulas that occurs in the ascending consecutive order of modes of major sharp five, melodic minor and major b6 (harmonic major)? (answer: see the "mode" row at the top of the table for each scale in Modes Of Four Heptatonic Scales).

Playing Mr. P.C. in the key of Cm , the Cm 7 and Fm 7 chords use an Eb major parent scale. What is the key scale for Cm7? What is the key scale for Fm7? What is the chord scale Fm7?

Playing Mr. P.C. in the key of Cm , the $\mathrm{Ab} 13 \# 11$ parent scale is Eb melodic minor. What is the key scale for Ab13\#11? In the same key of Cm , the G7b13 chord's parent scale is Eb major sharp five. What is the key scale for G7b13? What is another name for C Aeolian natural seven? (Answer: C harmonic minor).

How many notes are in G7b13? What is the lower-octave equivalent of b13? Does G7b3 effectively have two versions of a fifth?

What are the names of the largest acceptable chord and acceptable add tones on each of the seven steps of the major sharp five scale (harmonic minor will be constructed on its six), excluding suspended chords?

## Answers To Jazz Theory

Yes, triad names are commonly the prefix immediately after a letter name and imply all the notes that the triad names as the basis of the larger chord.

## HARMONY

Thirds are constructed by combining two notes in a major scale, usually sounded together What is the number of consecutive tones included in a scale-tone third?...in a scale-tone sixth?

What is the method of building thirds on the major scale? See Heptatonic Thirds and Sixths and Thirds as Subsets of Major Scale Tone Chords.pdf

On which steps of the major scale do major thirds (above) occur?
When you invert thirds by putting the lower note up an octave or the upper note down an octave, they become sixths. What happens to the qualities when thirds are inverted to sixths (major and minor)? (implied answer: Major seconds, thirds, sixths and sevenths are named so because the upper note in each case is in a major scale named after the lower. A minor sixth would use a flattted version of the sixth step of the scale named after the lower note.)

## BEING IN A BAND

## General

How cool is it being in a band? (being in a band answer).
Are band politics like national politics? (national politics ansswer).
What lasts longer, a band or a marriage? (marriage question).
What do you get when you drop a piano down a mine shaft? (mine shaft answer).

## Being A Guitarist

How many guitar players does it take to screw in a light bulb? (light bulb answer).
How do you get a guitar player to turn his volume down? (volume down answer).
Did you hear about the guitarist that was in tune? (guitarist in tune answer).
Why did the guitar player put drumsticks on his dashboard? (drumsticks answer).
What do you call a guitarist that breaks up with his girlfriend? (breakup answer).
What do you say to a guitarist in a three-piece suit? (three piece suit answer).
What's the difference between a guitarist and a savings bond? (savings bond answer).
How do you make a guitarists eyes light up? (eyes light up answer).
What's the parent's response to "When I grow up I want to be a guitar player!"? (grow up answer).
How can you tell if the stage is level? (level stage answer).

## Answers To Being In A Band

## general

Good question.
Yes, like national politics, band they are much healthier when they are democractically run.
A flat minor.
Only as cool as you are humble.

## being a guitarist

Neither have I.
Homeless.

Now son, you can't do both.
Shine a flashlight in his ear.
Put some sheet music in front of him.
When the guitar player is drooling out of both sides of his mouth.
Eventually a savings bond will mature and earn money.
Will the defendant please rise.
So he could park in the handicap spot.
One to change it and a bunch more to say "I could do better than that".

## PLAYING PARTS IN A BAND

## notable ideas

See Compatibility Of Parts, Theme And Variation.
When is a musical part just"background"? (answer: background part).
How many significant musical ideas (that have to be thought about) can a listener typically understand at once? (answer: how many musical ideas at once).

What can we do to an arrangement when there are too many notable musical ideas going on at once? (answer: too many parts solution).

## compatibity of parts

What is theme and variation? (answer: theme and variation defined).
In ensemble parts, is each part that makes of the ensemble on the same parts of the beats as another part? (answer: parts of an ensemble and parts of the beat).

What do different rhythmic levels have to do with making more parts understandable at once? (answer: parts at different rhythmic levels).

## Playing Parts in a Band Answers

Usually only two or three.
When one musical part is at a different rhythmic level from another, such as one at two parts per beat and another at four parts per beat, it is easier for the listener to understand both at once. However, the relationship between the parts shouldn't be too complex. Four parts per beat in one part and three in another are challenging to hear at once, but can work if simple enough otherwise.

Combine some of the parts so they are become a single idea with variation.
A duplication, elaboration or abbreviation of an existing part.
No, that's what makes them ensemble parts. Some parts of the emsemble are on different parts of the beats than others. They combine in a "gearlike" or "dovetail" fashion to make something more detailed.

When it doesn't require the listener's attention because it just keeps time or is something the listener is so familiar with they don't have to think about it.

## TECHNIQUE

## Playing Posture

Read Playing Posture. Watch Five Levels of Fretting Pressure.
What it the most common cause of stress, fatigue and injury for guitar players? (answer: stress, fatigue and injury).

Demonstrate five levels of fretting pressure. (answer: Five Levels of Fretting Pressure).
Demonstrate the posture for your upper body in playing guitar (answer: upper body posture).
What should the position of the head of the guitar be, in relation to the bridge? (answer: head of guitar and bridge).

How many degress do I keep the neck in relation to the floor? (answer: neck degress to the floor).
What is the rounded part of the guitar body for, where it curves in toward the middle of the guitar body? (answer: rounded part of guitar body, curving toward middle).

When sitting and playing the guitar, what should the relationship be between your knee and your hip? (answer: knee and hip).

When sitting and playing the guitar, should both feet be flat on the floor? (answer: feet on floor). Is it okay to bend your fretting hand wrist? (answer: bending fretting hand wrist).

How far should you tilt the upper part of the guitar body back toward you? (answer: tilt back upper part of guitar body).

What part of the neck should you look at and how often? (answer: look at neck).
How far should the guitar be from your fretting hand shoulder? (answer: distance from fretting hand shoulder).

Should your fretting hand fingers be parallel to the frets. (answer: finger angle to frets).
Should sitting posture be much like standing posture? (answer: sitting versus standing posture). How often should you take a break from sitting? (answer: break from sitting).

## Fly Me to the Moon exercise

Using four-note seventh chords in, demonstrate these four steps:

1. Linear arpeggios stroke lengths of one half inch or less
2. Three-note seventh no fifth chords with bass (thumb) and two-note chords (index and middle)
3. Four note seventh chords in bass (thumb), mid (index), top (two high notes with middle and ring), mid (again).
4. Bass notes and three note chords

## Technique Answers

You should avoid bending your fretting hand wrist and make it momentary when you do bend it.
Keep the lower back in its nearly straight, naturally-curved shape. Since you are reaching around in a circular manner (seen from an aerial view), your upper back is slightly rounded. The shoulders should not be forward of the clavicle by more than about a half inch.

No. Elevate your foot six to nine inches with a foot stool.
The knee should be the same heighth or slightly lower than your hip.
$45^{\circ}$.
At least a five minute break every 20-30 minutes of playing. Stand and play if you like, for the break.
About one open-hand span.
Sitting posture should mimic standing posture in regard to the angle of the neck, distance from the fretting hand shoulder and distance tilting the guitar back from the imaginary vertical plane.

You should train yourself to only occasionally glance at the edge of the fretboard, so you can look at your audience or sheet music.

At least as high as the bridge.
About two to six inches.
Angled about $10^{\circ}-20^{\circ}$, like a violinist.
To rest on your leg when sitting.
Tightening muscles that you don't need.

## EQUIPMENT USE AND MAINTENANCE

## picking up your guitar and setting it down

Is it okay to pick your guitar up by holding the strap? (answer: pickup by strap).
Should you lean your guitar against the wall or other vertical surface? (answer: lean guitar).

## tone and volume control

The tone controls on a guitar are usually passive and don't have a built-in pre-amp. They always let the low (bass) frequencies go on to the amp, but attenuate the high (treble) frequencies the more you adjust the control to a lower number. So, you should think of the tone control as a treble control, since it only affects the treble.

Pickups closer to the neck produce more bass and pickups closer to the bridge produce more treble. Guitars with two or more pickups have a switch to select one or more pickups at a time. Turning the volume control down on a guitar usually decreases the treble a little along with decreasing the volume, unless the guitar has an uncommon treble bleed circuit.

How can you coarsely decrease the bass with your guitar pickup selection? (answer: pickup select less bass).

How can you discretely decrease the bass with your guitar volume controls on a guitar with two or more pickups and a volume control for each pickup (like a Gibson Les Paul, 335 or SG)? (answer: pickup adjust less bass).

Will adjusting your guitar's volume control affect the treble? (answer: volume control and treble).

## guitar maintenance and adjustment

How should you tighten the nut on your guitar jack, if it becomes loose? (answer: tighten nut on guitar jack).

Should you adjust the trussrod yourself? (answer: adjust trussrod).
All of the following clearance issues require being able to fret every note on the guitar with reasonably bard picking without noticeable buzzing, including bent notes wherever you can. See reasonable guitar specs.

What should the distance be between the twelfth fret and the sixth string? (answer: twelfth fret clearance to sixth string).

What should the distance be between the twelfth fret and the first string? (answer: twelfth fret clearance to first string).

What should the distance between the first fret and the sixth string be? (answer: first fret clearance to sixth string).

What should the distance between the first fret and the sixth string be? (answer: first fret clearance to first string).

While fretting the first and last frets at the same time (to create a "straight edge" with the string), what should the distance between the seventh fret and the sixth (largest) or first (smsallest) string be? (answer: seventh fret clearance).

## electrical connection to the amp

When the guitar is not making sound through the amp or the sound is intermitent, what is the path from the pickup to the speaker and how should I trouble-shoot it? (answer: bad connection).

## Equipment Use and Maintenance Answers

You should usually take the mounting plate off (Fender) or remove the plate to access the electronics cavity (Les Paul, SG, Ibanez) and hold the guitar jack at its base while tightening the nut, so you don't spin the jack and break the wires loose.

The sum of the thickness of the sixth and fifth strings.
By choosing a pickup closer to the neck.
A distance equal to or less than the thickness of the third (" $G$ ") string.v
Turning the volume down decreases the treble slightly, unless you have a treble bleed circuit, which is rare.

Ideally the same or less than the thickness of the second (" B ") string or less. This can vary to as much as the thickness of the third string, but more will make the action (distance from the strings to the fretboard) too great for easy fretting.

The signal starts at the pickup goes to switches, then volume controls, then the jack, the guitar cable, finally the amp and its speaker. Go in that order. I've never had a pickup fail, only its connection.

First do something really basic: adjust the amp to your typical settings and see if you get sound by touching the tip of the guitar cable, plugged into the amp, not into the guitar. Don't touch the sleeve, only the tip. Touching the sleeve will ground out the signal and keep it quiet. If you hear a loud buzz when you touch the tip, that's a good sign. If so, proceed to check out the guitar (the following paragraphs). If you don't hear a loud buzz touching the tip, try another guitar cable, maybe the first one has a bad internal connection.

Start with the switches: change the pickup selection while sounding a chord on the guitar and see if the sound crackles. If it does, you can often flick the switch back and forth many times and the dirt and carbon will fall away from contacts in the switch and it will work properly. If not (and flicking the switch makes noise) try the correct kind of contact cleaner (see Dan Erlwine's book How To Make Your Electric Guitar Play Great). Sometimes switches fail and have to be replaced. Try everything else first, before going to a repair person (or changing it yourself if you know how).

Next the volume controls. Much the same as with a switch, if a volume control makes noise, you can rotate it many times to clean the contacts or use the correct kind of contact cleaner (see Dan Erlwine's book How To Make Your Electric Guitar Play Great). Sometimes volume controls (potentionmeters) fail and have to be replaced. Try everything else first, before going to a repair person (or changing it yourself if you know how).

Is the guitar jack loose? If so, you should usually take the mounting plate off (Fender) or remove the plate to access the electronics cavity (Les Paul, SG, Ibanez) and hold the guitar jack at its base while tightening the nut, so you don't spin the jack and break the wires loose.

If you checked the cord first and touching the tip made sound you should have found some other problem by now. If not, double check all the steps. Still no?....get professional help.

It's usually better to use a guitar stand, guitar hanger, lean the guitar in a corner or pay someone to stand there and hold it for you.

The sum of the thickness of the fifth and fourth strings.
No! Pick the guitar up by the neck or body. A strap can come loose, especially when the guitar is not hanging from yourn shoulder by the strap.

Only if you're sure you know how. Get information in Dan Erlwine's book How To Make Your Electric Guitar Play Great. If you're not confident, take your guitar to a qualified repair person.

By having two or more pickups selected with the selector switch and turning the volume down on the one closer to the neck.

A distance equal to or less than the thickness of the fifth (next to largest) string.


This book is heavily enhanced with internal and external links. As on the internet, links are blue and underlined.

This index only works on a computer, since the course is edited and appended nearly every day. On a computer, click the blue, underlined item and go to the linked content.

Chapter titles are title case (the first letter of each word is capitalized). When an entry is an important definition, a bullet $(*)$ is shown at its left.

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[^0]:    $\begin{array}{llll}5 & 1 & 3 & \text { b7 }\end{array}$

