Substitutions and Turnarounds

From *Fundamentals of Jazz Improvisation: What Everybody Thinks You Already Know*

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Substitutions

The Tritone Substitution

A tritone is an interval of three tones or whole steps. A tone is two semi-tones, two adjacent keys on the piano up form the starting pitch. A whole step is two half-steps. Three whole steps equals six half-steps. (See the section on intervals above.) From F up to B is a tritone; from B up to F is a tritone. A tritone is exactly half an octave. It is a sharp-4 or a flat-5.

![Tritone Wheel Diagram](image1)

<table>
<thead>
<tr>
<th>Tritone Wheel</th>
<th>Compass</th>
<th>Clock</th>
</tr>
</thead>
<tbody>
<tr>
<td>The cross shows notes a tritone away.</td>
<td>Turn the outer wheel like the degrees on a compass.</td>
<td>Turn the cross like the arms of a clock.</td>
</tr>
</tbody>
</table>

Whenever a dominant chord is used in a progression as an active chord leading somewhere, a chord a tritone away from that dominant chord can be substituted. For example, a ii V7 I in B-flat is C minor, F7, B-flat major. A tritone away from F is B. The progression becomes C minor, B7, B-flat. This works well because the primary functional notes of the dominant chord are still present: major 3rd of the dominant chord (leading tone to I), and minor 7 (which can be considered a secondary downward leading tone due to its strong tendency to resolve to the 3rd of I).
Perhaps an easier way to incorporate tritone substitutions is to think of them as a ½-step above the chord of resolution. In a V7 I sequence such as F to B-flat, instead of thinking the tritone away from F to find B, think ½-step above B-flat to find B.

See the “Tritone Concepts” heading in the Chord Progressions section for examples.

**Cotrane Changes**

John Coltrane developed this progression as an adaptation to the Miles Davis tune *Tune Up*. Coltrane explored the formula in compositions such as *Giant Steps* and *Countdown*. They can be applied in most circumstances where there are four bars of a major chord or on a four bar ii V7 I, especially during improvised solos. The progression also works well as a turnaround.

Simple complexity is a good descriptor. Starting on tonic, one proceeds up a minor 3\textsuperscript{rd} then down a perfect 5\textsuperscript{th}, up a m3, down P5 until returning to I. One can start on the supertonic instead of tonic, as in a ii V7 I, first moving up a minor second (for example, D minor to E-flat 7). The chords generally change on beats one and three with three being dominant in quality and one being major.

In the above example, notice that the pairs of V7 I move by major 3rds, the roots forming and augmented triad. In C major the first chord is C followed by the pair E-flat 7 to A-flat, a V7 I in A-flat. The next pair is B7 to E major, V7 I in E. The last pair brings the sequence back to I with G7 to C major, V7 I in C. The pair sequence is C A-flat E C, an augmented triad.
Blues

Fundamental Harmonic Structure

Quick Change: Measure 2 of the blues often includes the subdominant.

Subdominant, mm. 5-6: iv VII7 I leading back to I.
Subdominant, mm. 5-6: Bass up ½-step changing harmony to diminished.

Dominant, mm. 9-10: Four options included in composition (not substitutions).

Option 1: Dominant for two bars.

Option 2: ii V7 (perhaps most common)

Option 3: “Take it from the five.” V down to IV to I

Option 4: V/V to V (ii made dominant)
Other possibilities for last four bars:

IV flat-VII7 I (iv flat-VII7 I)

II7 (or V/V) | Tritone Substitution | I (I7 or minor)

Minor blues may have minor chords in the dominant measures.

Lead-in Concept

In many situations an ii V7 can be inserted to lead into a structural point of a tune. It may be an important chord, delineating a section of melody, defining four or eight measure group, or fulfill other harmonic needs.

In the blues, a ii V7 can be placed in m. 4 leading to the subdominant.
A ii V7 in m. 8 of the blues can lead to the dominant (or other chord in m. 9).

![Chord diagram]

**Extended Lead-in**

Where harmonic space allows, the *Lead-in* can be extended by means of a cycle of V7s, a cycle of ii V7s, descending or ascending ii V7s, tritone substitutions, or other progressions.

Blues, mm. 1-5: cycle lead-in to IV. This sequence is demonstrated in *blues for Alice* (Charlie Parker). The tonic chord has a major 7\textsuperscript{th} instead of the traditional minor 5\textsuperscript{th} found in a blues tonic. This, plus the half-diminished quality of the first chord in m. 2 help to start the cycle more smoothly. The major 7\textsuperscript{th} of I is the same as the root of the first chord in m. 2. The half-diminished chord’s flat-5 is in the key signature and is root of the *quick change* chord often played in m. 2.

![Chord diagram]

**iii for I**

The mediant is a substitute for tonic. In C the chord tones are C E G B. The mediant in the key of C is E. Using the C major key signature the chord tones for E are E G B D. Pitches are the similar and can be made more so depending on the extensions used.

![Chord diagram]
In *Rhythm Changes* I vi ii V7 can become iii vi ii V7. This is often converted to a cycle of ii V7s by changing the quality of vi to VI7.

\[ \text{I} \quad \text{VI7} \quad \text{ii} \quad \text{V7} \quad \text{(iii)} \quad \text{VI7} \quad \text{ii} \quad \text{V7} \]

In the *Blues* iii is sometimes substituted for I in mm. 7-8. This can lead to a cycle of ii V7s. The cycle can be extended when iv flat-VII7 is substituted in measure 6 and the *tritone substitution* is used for the *lead-in* to the dominant in m. 9.

*Blues, mm. 5-8:* iii substituted for I in m. 7

\[ \text{IV} \quad \text{(iii)} \quad \text{I} \]

*Blues, mm. 5-9:* *Tritone Substitution* in m. 8 for *Lead-in* to m. 9

\[ \text{IV} \quad \text{I} \quad \text{ii} \quad \text{V7} \]

*Blues, mm. 5-8:* iv flat-VII7 I, mm. 6-7

\[ \text{IV} \quad \text{(iv) VII7} \quad \text{I} \]

*Blues, mm. 5-9:* Combined elements to create *Descending Chromatic ii V7 Progression*
The mediant is often substituted for I in measure 11 when a iii vi ii V7 or iii VI7 ii V7 turnaround in inserted. A major mediant is used when the turnaround is a cycle of dominants: III7 VI7 II7 V7.

ii V7 for V7 and V7 for ii V7

In most situations, when there is a dominant chord a ii V7 can be substituted. Likewise, when a ii V7 is present a V7 can be used.
The Turnaround

Turnaround to Top of Form

The primary definition of a *turnaround* is a chord sequence that facilitates the repetition of the form. It helps to bring the music from the end of a *chorus* (one time through the chord progression of the tune) back to the beginning of the next chorus. A *turnaround* takes one from the bottom to the top of the tune.

Example: Turnaround applied to blues changes.

![Blues Changes Example](image)

Section Delineation

*Turnaround* progressions can delineate a section of the form of a tune as in the *lead-in* concept above (Blues section). This is frequent at the end of the first A “turning around” to the second A section. It is frequent as a means to bring the listener into the bridge (contrasting section) of the tune.

![Section Delineation Example](image)
Vamps and Circular Progressions

Another definition and use of a *turnaround* is any progression that circles back upon its starting point; a progression that turns upon itself. This can happen at the beginning, middle, or end of a phrase. *Turnaround* progressions can *vamp* (to play the same material repeatedly).

I vi ii V7 or iii vi ii V7 vamp

Coltrane Changes

iv °VII7 I
Catalog of Turnarounds

Based on Circle of 5ths Cycle:

\[ \begin{array}{lll}
C & V7 & C \\
C & D7 & G7 & C \\
C & A7 & D7 & G7 & C \\
C & A7 & D7 & G7 & C \\
E7 & A7 & D7 & G7 & C \\
E7 & A7 & D7 & G7 & C \\
C & A7 & D7 & G7 & C \\
C & A7 & D7 & G7 & C
\end{array} \]
Based on Tritone Substitutions:

\[ C \quad Gb7 \quad C \]

1 7117 (*TT Sub) 1
*Tritone Substitution

Creates descending chromatic root movement

\[ C \quad C-7 \quad Gb7 \quad C \]

1 ii TT Sub 1

\[ C \quad Gb7 \quad C-7 \quad Gb7 \quad C \]

1 TT/ii ii TT Sub 1

\[ E-7 \quad Gb7 \quad C-7 \quad Gb7 \quad C \]

iii TT/ii ii TT 1

Chromatic Descending Dominant Progression

\[ E7 \quad Gb7 \quad C7 \quad Gb7 \quad C \]

III7 TT/ii II7 TT/I 1

Chromatic Mediant

\[ C \quad Gb7 \quad Ab-7 \quad Gb7 \quad C \]

1 V7/A7 ii V7, TT Sub for G7

\[ Gb-7 \quad Gb7 \quad Ab-7 \quad Gb7 \quad C \]

ii V7 ii V7, TT Sub for G7

\[ A7 \]

TT Sub for G7
Chromatic ii V7 Progression

\[
\begin{array}{cccc}
A-7 & D7 & Ab-7 & Db7 & C \\
\end{array}
\]

ii \( V7 \)
G7
or TT sub for A\(_\flat\)

Chromatic Mediant

\[
\begin{array}{cccc}
C & A7 & Ab-7 & Db7 & C \\
\end{array}
\]

i \( V17 \)
TT Sub
ii \( V7 \)
TT Sub for G7

E-7

\[
\begin{array}{cccc}
E-7 & A7 & Ab-7 & Db7 & C \\
\end{array}
\]

ii \( V7 \)
TT Sub for E\(_b\)
(V7 of A\(_\flat\))

V7 to Major as in
Coltrane Changes

\[
\begin{array}{cccc}
E-7 & E\(_b\)7 & Ab\(_b\)7 & Db7 & C \\
\end{array}
\]

iii \( V7 \)
TT Sub
TT Sub
for A7

Based on iv\(_b\) VII7 I

\[
\begin{array}{cccc}
C & E-7 & G\(_b\)7 & C \\
\end{array}
\]

i \( V7/iv \)
iv \( \sharp V17 \)
Coltrane Changes

C7 up m3
D7 up m2
E7 down P5
A97 up m3
G7 down P5
E7 up m3
G7 down P5
C7

C:
ii
---------------------
A♭

Expanded ii V7 I

Coltrane Changes

C :  
ii
---------------------
E♭

V7

C :  
ii
---------------------
E♭

V7

C :  
ii
---------------------
E♭

V7

C ♯ E C =
descending
augmented triad