Part 1

Better Improvisation Through Intelligent Voice Leading

Ti-Do

Fa-Mi

Le-Sol

(and that’s more or less all you need to know)
Preface Part 1: The Major Scale Chart

Comfort in all keys is important for improvisers. The chart below helps younger players get all of the major keys under their fingers. Once all of the scales below are effortless, it generally doesn’t take long to master the minor scales. After all, they are often the same (or similar) scales starting on different notes.

Playing from the note letters is somehow less intimidating than seeing a key signature with 7 sharps in it. The practice book has a blank grid for students to fill out on their own. Here we go:

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**Order of Flats**: B, E, A, D, G, C, F

**Order of Sharps**: F, C, G, D, A, E, B

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Preface Part 2: Chord Templates (triads and seventh chords)

Knowing which note “letters” go into creating 3 note (triads) and 4 note (seventh) chords is incredible helpful for the young improviser. It also becomes really important when building chords in which lots of flats or sharps (or double flats/sharps) may entice students to build a chord incorrectly from a theoretical point of view. This chart should make everything clear.

No matter what alterations are made to each note (C#, Cb, C###), the 3 or 4 “letters” never change. Flats and sharps will be necessary if the chord tones are outside of the key signature, but the LETTERS DON’T CHANGE! The reason for this is that the chords we will be using now are all built in thirds. Even though Bb and A# share the same pitch (enharmonic), they are different notes. Scroll to the bottom for a nerd note.*

including three notes in your chord creates a TRIAD

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<th>Root (1)</th>
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including four notes in your chord creates a SEVENTH CHORD

That’s it. Any chord beginning with an A will be A-C-E or A-C-E-G. It doesn’t matter if the root is A# or Ab, fully Diminished or Minor 7/flat 5. It’s always the same. Memorizing the configurations above will make your life infinitely easier when learning chords, arpeggios, and patterns. Get to work!

*So playing Db, Fb, Abb would sound the same as playing Db, E, G, the second configuration is technically not built in thirds. E to G is a minor third, but Eb to E is an augmented second (aurally, these intervals are equivalent). Nerd note over.*
Part 1: Voice Leading Basics

First, let’s look at a C major scale.

In this text, we will use numbers as well as traditional solfege syllables.

The Tonic triad is made up of three tones in the above scale: Do (1), Mi (3), and Sol (5). In conventional music theory, we represent the Tonic triad with the Roman Numeral “I.” In most situations in jazz, the Tonic triad is extended to include (at least) the major 7th, or Ti (7), but for now, let’s stick with the major triad. We’ll explore the Major 7th chord soon.

The Dominant 7th chord is made up of four tones in the above scale: Sol (5), Ti (7), Re (2), and Fa (4). In conventional music theory, we represent the Dominant 7th chord with the Roman Numeral V or V7. The Dominant can appear as a triad with Sol (5), Ti (7), and Re (2) only, but in most jazz applications, Fa (4) is added.
**Tension and Release**

The key to playing a convincing improvised solo is connecting chords seamlessly. By utilizing/exploiting several key voice leading tendencies, a player can instantly sound confident in his or her ability to "make the changes."

Voice leading “works” due to the concept of tension and release. When played, the Tonic chord (I) has a finality to it. A Tonic chord often begins or ends a phrase, but each tone in the chord is content to stay where it is.

Dominant 7th chords (or triads) are another story. Three of the four tones in the Dominant chord need to resolve. More often than not, the Dominant chord will resolve to a Tonic chord. Two of these tendencies are particularly strong.

Let’s look at the notes in a C major triad and the notes in a G7 chord.

Voice leading generally works best when tones in one chord move to a tone in the next chord that are close by. Generally, the closer the notes, the smoother the voice leading. Using the chord tones of Tonic and Dominant, we find two half step intervals. These are our strongest voice leading tendencies. **Ti in G7 goes to Do in CΔ. Fa in G7 goes to Mi in CΔ.**

Re in G7 also goes well to Do in CΔ, but since that is a whole step, it’s not as strong as Ti to Do. Sol in G7 would go to G in CΔ, so from an improviser’s perspective, it probably offers the least interest. That’s not to say it can’t be used effectively, but for our purposes here, we will disregard for the moment and revisit Sol (5) shortly.
Here are the same tendencies in the key of C major in notation:

The most straightforward method of using this voice leading is to have the last note in your Dominant phrase be one of the two tones listed above (Ti or Fa) and have the first note be one of the resolution notes (Do or Mi, respectively) when the Tonic hits.

**Exercise 1**

This is a 4-bar passage that repeats as many times as you need. The most important consideration is resolving the FINAL NOTE in measure 4 (which should be Ti or Fa) effectively to the first note of the Tonic chord in measure 1.

**Important note**: while you can certainly end your Tonic phrase (end of m2) on Mi or Do, then move to Fe or Ti, respectively, it is not nearly as important to do so in this situation as it is when moving from Dominant to Tonic (m4 to m1). Chord tones in Tonic don’t need to resolve anywhere, but notes in the Dominant chord do. Using the above tendencies when going FROM Tonic to Dominant is still a good practice, however, and moving smoothly from a chord tone in I to a chord tone in V is generally desirable, just not AS important as when moving from V-I.

**Important note 2**: Rhythm. Creating idiomatic and convincing jazz rhythm on the fly is one of the most challenging aspects of improvisation, especially for younger players who may have listened to much jazz yet. At this point, just do your best and listen to as much jazz as you can. Later in this book, there is a great exercise for getting your mental rhythmic library sounding a little more natural and confident.
The Flat 9: the key to everything

Many players are comfortable recognizing the voice leading tendencies above, especially if they have studied basic music theory. I am a firm believe that the key to convincing jazz improvisation lies in a third voice leading tendency.

If we add an additional chord tone a third above Fa (4), we would have a G9 chord instead of a G7, with the 9th being La (6). This chord is very useful, but it is common to alter the Dominant 7th chord when it precedes a Tonic chord to create additional tension before the resolution.

One of the most common alterations is the lower the 9th (La) to the flat 9, changing La (6) to Le (b6).

Remember that somewhat boring Sol (5) to Sol (5) when moving from Dominant to Tonic? Well, do you see what we have now? A half step above Sol in the Dominant which resolves beautifully down a half step when we move V-I.

The diagram to the right shows the three strongest voice leading tendencies when moving from Dominant to Tonic.

Review
When navigating from Dominant to Tonic, it is

<table>
<thead>
<tr>
<th>G7b9 chord</th>
<th>CΔ triad</th>
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<tr>
<td>Ab- Le (b6)</td>
<td>G- Sol (5)</td>
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<td>F- Fa (4)</td>
<td>E- Mi (3)</td>
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<td>D- Re (2)</td>
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<td>B- Ti (7)</td>
<td>C - Do (1)</td>
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<td>G- Sol (5)</td>
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important to choose one of the three voice-leading tendencies listed below

- Ti ➤ Do
- Fa ➤ Mi
- Le ➤ Sol

Be sure the last note you play in the Dominant bar is Ti, Fa, or Le, and the first note you play in the Tonic bar is Do, Mi, or Sol (respectively)

**Exercise 2**

Using the same progression from the previous exercise, incorporate the new voice leading by ending m4 with Le and beginning m1 with Sol.

Once you feel comfortable with Le to Sol, bring back the other two voice leading tendencies and try to utilize a different one for each repetition of the form.

**Dominant to Minor Tonic Chords**

The examples above all include a major Tonic. All of the principles above, however, can and should be applied to minor keys as well. Take a look at the chart below. The only change that occurs is Mi becomes Me (a half step lower than Mi). Since it’s diatonically to the key, we will use 3 (and not ↓3).

The Dominant chord is almost always a Dominant 7th chord with alterations (b9, #9, etc.). Our leading tone (7) remains Ti, as it would in harmonic or Melodic Minor. The use of natural minor with “te” (half step below Ti) is generally reserved for “modal” playing.

In minor keys, the b9 becomes more common, because the added tension is more useful now that Fa moves to Me instead of Mi. This is now a whole step, not a half step, so the “pull” is not quite as strong as in major.
Part 2: The Fully Diminished 7th Chord

I’m not sure why this chord is not covered sooner in most methods. Once you understand the fully Diminished 7th chord, you essentially have 3 chords/patterns to master before you can improvise comfortably in all 24 keys (30, counting enharmonic key signatures).

Think I’m exaggerating? Check this out.

When moving from Dominant (V7) to Tonic (I), we determined that the movement of Sol to Sol (5-5) is the least interesting voice leading that we have.

So…let’s get rid of Sol in the G7 chord, and put the flat 9 back in.

OK.

So, if you have taken any theory prior to now, you should be able to identify the chord you have after you remove the root on the Dominant chord. It is still a seventh chord (4 notes), but it is made up entirely of stacked intervals of a minor third.

What we now have is the fully Diminished 7th chord (vii°7). In this particular example, we are looking at a B°7.

Since we have already determined that Ti-Do, Fa-Mi, Le-Sol, and to some extent, Re-Do, are our strongest voice leading tendencies. It stands to reason that moving vii°7-I is going to be extremely satisfying from a voice leading perspective. Often times, the vii°7 can stand in for a Dominant chord because so many of the notes are the same.
**Inversions** (or lack thereof)

If we rearrange chord tones, we get something called inversions.

Whether or not you are familiar with specific intervals, you can see visually that there is more space between chord tones in certain inversions of the C major triad above.

But what about when we move one of the chord tones of the original fully Diminished 7th chord?

Well, the notes are in a different order, but the intervals are all still minor thirds. As noted above, we can’t use the note “B” here, because we must stick with the D-F-A-C configuration. Let’s try it again.

Same story here. The double flat on top is irritating, but it keeps the F-A-C-E configuration intact. You’re fingers won’t care or notice the difference, I promise. Here’s one more on the next page.
One last time (here, we changed Ab to G# before we built the chord because Ab⁰⁷ has two double-flats and double flats are hard to look at). It also will help us when we move to our Tonic chord in the next section.

So we have four chords with the same four pitches and each chord is constructed of the same interval, top to bottom. While they are four different chords, since the all contain the same chord tones, we will call them:

**GROUP 1 DIMINISHED CHORDS**

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**Harmonic Function of Diminished Chords**

Diminished 7th chords can have a variety of harmonic functions, but the one we are going to exploit here is the substitution of vii⁰⁷ for V7. Remember, these two chords contain almost all of the same chord tones if you add the flat-9 alteration on the Dominant chord.

Let’s look at what happens when we apply the **ti-re-fa-le** syllables to each of the **Group 1 Diminshed** chords.
On the left, you see our voice leading. It looks nearly identical to the V7b9 - I progression. B°7 resolves to C\(\text{\#}\) just like G7b9 resolved to C\(\text{\#}\).

Let’s look at the next Group 1 chord progression.

If we treat the lowest note in the chord as “ti,” we have a D°7 resolves to Eb\(\text{\#}\). Let’s look at the voice leading. Remember, we must keep the D-F-A-C template in place, so we must use Cb instead of B.

Just as in the previous example, the same voice leading tendencies are used. The different pitches, however, may resolve in a different direction in each chord. For instance Cb here resolves down to Bb, but in the first example B natural (same pitch) resolved up to C.
Here are the third and fourth chords and their resolutions in Group 1.

In each of the resolutions from to $\text{vii}^{o7}$ - $\text{I}$ in Group 1, some of the notes will resolve to different notes than they do in other chords.

Your fingers (or slides) won’t really care, though. We can always substitute the relevant diminished seventh chord for $\text{V7b9}$ (or any altered Dominant chord, for that matter), so any Dominant to Tonic motion in C major, Eb major, Gb/F# major, A major, or their parallel minors, can all be approached with Group 1 chords.
**Group 1 Exercise**

Improvise over the following Dominant to Tonic progressions. In the blank next to each V7b9 chord, provide the correct diminished seventh chord that would take its place (see above for help). Take at least 4 repetitions of each key before moving to the next. Take a break in between keys.

Make a decision about which voice leading tendency you plan to use (Ti-Do, Re-Do, Fa-Mi, or Le-Sol) BEFORE you play each repeat.

Remember, the 4 chord tones do not change for any of the **Group 1** resolutions, but in different keys, where those tones resolve may. Use your ears to help guide you the correct resolution tones.
Part 3: Group 2 and 3 Diminished 7th Chords

Once you have Group 1 down, the next 2 groups are easy.

Here is the reason we only have 3 different diminished chords. Take a look at the Group 1 chord (in this case, Bo7). We will raise each chord tone a half step from one chord to the next.

As you can see, the chords start to repeat themselves after you raise them two half steps. Because there are no inversions, the groups begin to repeats themselves.

Group 2 and 3 chords have 4 chords each to which they resolve, completing the total of 12 Tonic, one for each major/minor key, to which you will ever resolve. Technically, it’s 15 chords, including enharmonics, but your ear doesn’t care.
GROUP 2 DIMINISHED CHORDS and Resolutions/Exercise
Part 3: Considerations for Minor Keys

Every example up to this point has featured a major Tonic triad. Lots of music is in a minor mode, however, so we need to take a look at what changes between resolving from Tonic to Dominant in major vs. minor. Notice the change in syllables for some of our minor scales: Mi to Me, La to Le, and Ti to Te. For now, let's examine four minor-based scales that are commonly found in jazz. You could easily skip this part and simply lower the third of your Tonic triad in the exercises above, but it's helpful to know WHY this stuff works in minor keys.

A natural minor scale is derived by taking the sixth note in any major scale and building a NEW scale starting on La (6), but keeping the same key signature without alteration. Take a C major scale:

C D E F G A B C

The sixth note (La) is A. Now start a scale on A, but keep the same key signature as C major.

A B C D E F G A

Voila. Natural minor. Aeolian is a fancy name that refers to the exact same scale. The natural minor scale is not used as often as the scales below, but the half step between Le and Sol can be exploited with nice results.
The **Dorian** scale is a natural minor scale with a raised sixth scale degree (Le becomes La).

A  B  C  D  E  F#  G  A

This raised sixth gives the scale a particularly “hip” sound (can’t find anything better to describe it…just listen to Miles a lot and you’ll hear it). This scale is also used frequently over the minor 7th chord, making it one of the more common minor modes used in jazz improvisation.

Note: The Dorian scale can also be derived by taking the second note in a major scale (Re) and building a new scale starting on that tone, but keeping the same key signature of the original scale (just like we did with Aeolian). **You could also build this scale by asking “A is the ‘re’ in what major key,” then play A to A in the key of G major.** This is helpful to know from a theoretical standpoint, but when you are actually in the process of improvising, your ear for the Dorian mode will develop faster if you hear it/play it as a minor scale with a raised sixth. The next two scales aren’t talked about as much from a chord-scale relationship standpoint (i.e. use a Dorian scale over a m7 chord, a Mixolydian over a G7, etc.), but they are incredibly important for improvisers to know and understand.

The **Harmonic Minor** scale is a natural minor scale with a raised seventh (Te becomes Ti). This is the “default” minor scale when it comes to basic music theory, but on its own, the top of the scale sounds a little odd due to the large interval between Le and Ti (an augmented second, if you’re keeping score).

The **Melodic Minor** scale is a natural minor scale in which the sixth and seventh scale degrees have been raised a half step (Le becomes La, Te becomes Ti). The end of this scale sounds very “major” when played due to the Sol-La-Ti-Do pattern that is so common in major modes.
Why are these scales essential to jazz improvisers? Because they both feature leading tones (Ti), whereas the Aeolian and Dorian Scales do not.

Let’s see what happens when we build triads on top of a Dorian Scale versus a Harmonic Minor Scale. We use the tones from each scale to build triads in thirds above each scale degree.

If you are unfamiliar, here is an quick guide to the Roman Numeral system for triads. There are 4 types or qualities of triads.

IV (capital)- Major Triad
i (lower case)- Minor Triad
ii° (lower case with circle)- Diminished Triad
V+ (capital with plus)- Augmented Triad*

Note: If you used all of the tones of the Harmonic (or melodic) Minor scale, as is, the III chord would be an Augmented Triad (III*). It is customary, however, to instead use the lowered 7th (te) in this particular triad, making it Major.

Did you notice what happens to the Dominant chord due to the lack of “ti” in the Dorian scale? Let’s look at the actual progression on the next page. What do you notice about the Dominant to Tonic progression in the Dorian scale vs. the Harmonic Minor scale? Though we didn’t build seventh chords above, we will do so on the Dominant chord here.
In Harmonic Minor (as well as melodic), the Dominant chord retains Ti, therefore remains E7. In Dorian, Te renders the chord E-7. The lack of Ti - Do significantly weakens the pull of the progression.

**Fa - Me (whole, not half step)**
You may have noticed that 4 -3 in all of the minor modes above is Fa to Me (not Mi). Because the third scale degree is lower in minor, that voice leading tendency is not as strong as in major.

**So...what to do?**
This is why the alteration of the b9 is commonly used in Dominant to Tonic progressions in minor keys. Because we’ve replaced the half step resolution of Fa to Mi with Fa to Me, the addition of Le - Sol is immensely satisfying. That sounds kind of gross, but it’s true.
Flat 9 Dominant Chords and Fully Diminished Seventh Chords in Minor

We remember that V7b9 and viio7 resolve to Tonic almost identically, and this remains true in minor keys. Even though Le is native to the minor mode, it’s still labeled as a flat-9. A “regular” 9 typically implies the Dorian-native raised sixth (La), but because the voice leading opportunity is lost, an unaltered 9th is uncommon. The 9th is often raised a half step (#9), but we will look at that alteration shortly.

In the progressions above, we have the same voice leading tendencies for Dominant to Tonic that we had in major, save the Fa to Me instead of Mi.
Diminished Chords in Minor Modes

All three groups of fully diminished 7th chords work equally well when resolving to a Minor Tonic as they do in Major.

Group 1 Dim7 Chords to Minor Tonic*

* The key of Gb minor would have more than 7 flats. Since their isn’t really a key of Gb minor, we’ll change to F# minor above. This changes the root of that particular Group 1 chord from Fdim7 to E#dim7. Same pitches (enharmonic), different notes to look at. Again, your ears and fingers won’t notice the difference.

The Gb- triad, DOES exist (Gb-Bbb-Db), so you could work with that if you wanted. In that case, Fdim7 would still be used.
Group 2 Dim7 Chords to Minor Tonic

Group 3 Dim7 Chords to Minor Tonic
Preface Part 1 (continued): The Minor Scale Chart

Who puts another preface in the middle of a book? Anyhow, now that we’ve worked with minor triads, it’s probably not a bad idea to take a look at the 15 natural minor scales in the same grid we used for the Major Scales. Using natural minor here keeps things flexible, as we can make simple alterations to get the scales we need. Memorizing these scales will make your life far easier as you become a more advanced improviser.

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**Order of Flats**: B, E, A, D, G, C, F  
**Order of Sharps**: F, C, G, D, A, E, B  
(same as major)

**Dorian**: Raise Le to La (6th only)  
**Harmonic**: Raise Te to Ti (7th only)  
**Melodic**: Raise Le to La AND Te to Ti (6th and 7th)

Note: Raising tones in certain minor keys will result

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**Number of Flats**: 0, 1, 2, 3, 4, 5, 6, 7  
Flats: A, D, G, C, F, Bb, Eb, Ab  
Sharps: A, E, B, F#, C#, G#, D#, A#
Part 4: Major and Minor 7th Chords (a brief visit)

Any reader familiar with improvisation has probably noticed the lack of of Major and Minor 7th chords functioning as Tonic. In most applications, all of the Tonic triads in the previous chapters should be replaced by Major or Minor 7th chords. Adding the 7th (a major or minor third above the 5th, respectively) adds harmonic interest and additional voice leading possibilities.

That being said, young improvisers should probably open their ears to the three basic voice leading tendencies (Ti-Do, Fa-Mi, Le-Sol) before trying to voice lead to the seventh of a chord.

Since we will wait to resolve to the seventh in a Dominant to Tonic progression until a later chapter, we can use this opportunity to practice arpeggiating each Major and Minor Triad, followed by the respective Major 7 and Minor 7 chord. Just as fluency in all major and minor scales is extremely beneficial to any improviser, knowing the arpeggios below can be just as useful. Before we do that, let’s make sure we are clear on how to build these chords.

Derivation of Major and Minor 7th Chords

In order to easily construct these chords, we need simply refer to the grids in previous chapters. Major 7th chords simply use the 1-3-5-7 (Do-Mi-Sol-Ti) from each Major Scale, and Minor 7th Chords do the same (Do-Me-Sol-Te) for the Natural Minor scales.
Exercise ? (I lost track): Arpeggios, Major and Minor Triads and Seventh Chords
Part 5: Supertonic - Dominant - Tonic (the ii-V-I progression)

The 2-5-1 (supertonic-dominant-tonic) progression is simply an extension of the dominant-tonic progression we have worked with already. Adding the ii chord gives us more opportunity for voice leading, although in many cases the pool of notes associated with the supertonic chord is closely related to those for dominant. Here are the chords as they appear diatonically in the Major and Harmonic Minor scales.

You could use a chord-scale approach to navigate the 2-5-1 progression, but at first, it’s probably best to “map out” your voice leading prior to playing. Strong voice leading tendencies often occur between the 3rd and 7th of chords above.
Here are a few good voice leading pathways while navigating basic 2-5-1 progressions. You can easily apply the same paths for the minor 2-5-1 above.

The common tones between supertonic and dominant are also useful, but the strongest tendency between 2 and 5 is probably Do - Ti. La - Le - Sol is also a nice chromatic line connecting the three chords of the progression.

**Exercise: 2-5-1 Progression in Major and Minor (1 chord/bar)**

Plan out the voice leading prior to playing each progression. Use the previous VL tendencies or the Dim7 groups to navigate from Dominant to Tonic. Transpose into multiple keys.

* while the supertonic seventh chord naturally occurs as half-diminished (m7b5) in the minor 2-5-1, you may retain La to make it a minor 7th chord. This hints as melodic minor and retains the nice La-Le-Sol voice leading.
Exercise: 2-5-1 Progression in Major and Minor (2 chords/bar)

Same exercise as above with a faster harmonic rhythm. Transpose into as many keys as possible.

The 3 “Ligon” Outlines

In his book Connecting Chords Through Linear Harmony, jazz educator and author Bert Ligon proposed that the navigation of the 2-5-1 pattern can be boiled down to three musical outlines. Countless alterations eventually occur, but even a cursory listen of classic jazz recordings reveals copious use of these patterns in some way.

In each, we’ve put the accidental that turns La into Le in brackets, but a little experimentation will likely lead your ear to prefer the b9 over the dominant chord. In Outline 3, the b9 alteration is more important since it resolves to Sol.
A Few Alterations of the Ligon Outlines

The outlines above can be used as is with good success. Small alterations, however, can make them even more interesting. Some are clear alterations, leaving the original outline completely recognizable. Some are combinations of two outlines. Some utilize chromatic passing or neighbor tones. The possibilities are endless, so be creative and use your ears to guide you new patterns. Voice leading is always they key! Don’t forget to transpose into other keys and tonalities.

Outline 1 w/ octave displacement and 2 chords per bar
Outline 2 w/ altered rhythm and 2 chords per bar
Outline 1 with altered rhythm and chromatic enclosures/passing tones
Outline 3 with altered rhythm and arpeggiated dominant pattern
Outline 1 with “sawtooth” pattern and chromatic subs over the dominant
Part 6: The #9 Alteration and the Altered Scale

By now, we have seen a whole lot of the V7b9 chord resolving to tonic. The V7#9 is an extremely common (if not more so) than the b9 alteration.

In this chord, we have RAISED La to “Li.” To my ear, the V7#9 lacks the obvious “pull” that the V7b9 does, which is why we didn’t cover this one first. That lack of clarity, though, actually makes it an extremely versatile choice when altering a dominant chord. Traditionally, the #9 alteration occurs in minor 5-1 (or 2-5-1) progressions, but it can be used in place of any dominant chord.

The Altered Scale

We have used “chord boxes” to show common resolutions when voice leading from dominant to tonic. The most common configuration of notes used to improvise over the V7#9 chord come together to form the Altered Scale.

Ti and Fa are not altered tones, as they occur diatonically in key of tonic. There are 4 tones that are chromatically “altered,” including Le from before, are Li (#9 of dominant), Di (#11 of dominant), and Ri (#5 of dominant). Each of these tension tones have specific resolutions that we will explore shortly, but first, let’s look at the derivation of the Altered Scale.
The “Diminished Whole Tone” Scale

Another name for the Altered Scale is another name for the Altered Scale. This name actually gives more insight into how to construct the scale to begin with.

Notes in diminished scales alternate between half and whole steps.
Notes in whole tone scales are whole steps apart.

The diminished whole tone (altered) scale BEGINS by alternating half and whole steps:
G to Ab (h)
Ab to A# (w)
A# to B (h)
B to C# (w)

Then continues entirely in whole steps
C# to D# (w)
D# to F (w)
F to G (w)

The choice of enharmonic notes here is a bit of a crap shoot. It doesn’t REALLY matter whether you use A# or Bb at the beginning of the scale (although A# is technically the #9, not Bb), so you’ll see variations of interpretation. There will also be a skip somewhere in there (in this case, there is no E, the scale just goes right from D# to F). You could have used Eb instead, but then you would have C# to Eb, skipping D. Get it?

Exercise
Write the Altered Scales for the starting notes listed below. Any time you play a piece that includes a dominant to tonic progression, write out the appropriate Altered Scale.
Voice Leading with the Altered Scale

So…there’s a lot of stuff going on here. The reason this collection of notes is so useful is that nearly every note is a “tension” tone, resolving to one of the chord tones of tonic. The tonic triad, however, is not going to be sufficient any longer, so we’ll have to extend it upward. Let’s take a look at some of our resolutions when using the Altered Scale. Solid lines denote the “preferred” resolution, while dotted lines represent other, less frequently used voice leading.

It’s a pretty big step forward from the last chapter and a lot to process. Take a moment to vomit if you feel like you need to do so…it’s ok, we’ll be here when you get back. Promise.

We’ll look at a few exercises after you’ve freshened up.

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### Diminished Groups and the Altered Scale

While the Altered Scale is typically used of a V7#9 chord, the scale also contains a b9 (Le). With the exception of Re, the Altered Scale contains the other three tones of the diminished group (Ti, Fa, and Le). Some may disagree, but I think the diminished groups are still viable choices of V7#9 chords.
Exercise: Utilizing Altered Scales in Context

Notate the E Altered Scale below

Assuming the E Altered Scale is used over an E7#9 functioning as a dominant chord in a V7-i (minor) progression, identify the supertonic and tonic chords (dotted boxes) in the progression below.

We know the “unaltered” tones (Ti and Fa) in the Altered Scale resolve to Do and Me, respectively. Use good voice leading practices to identify to which note of the A Dorian Scale each altered tone below resolves. *Your accidentals (enharmonic notes) may differ from the ones below depending on how you originally built your scale. Feel free to change the notes in the left column below if you’d like.*

| F- Le (↓6) | resolves to |
| G- Li (↑6) | resolves to |
| A#- Li (↑1) | resolves to |
| B#- Ri (↑2) | resolves to |
**Exercise (continued)**

Compose an “improvised” melody for the progression below. The last note in each dominant bar contains one of the 4 altered tones. Just as we did before, make sure the LAST NOTE in the dominant bar leads (resolves) to the CORRECT note in the tonic bar. Use the grid you completed above as a guide.

Note: Use the rhythm notated above to compose your melodies. This is a concept we will explore in depth in the next section.
Part 2

Better Improvisation through Composition

Training wheels for the developing improviser
The Problem

We’re skipping a major step.

Like, major.

Giving the kids the tools to know which chords imply which scales or how to navigate chords is important. But asking them to take that info and “just play” is like telling a toddler to “just ride” without training wheels. Both scenarios generally end in frustration and tears.

Sure, there are some kids who can come up with fantastical stories at young ages, fully fleshed with great voice and rhythm. Those kids listened to and digested lots of great stories that somebody read to them, most likely. Unfortunately, very few kids these days are listening to good jazz on a regular basis, so the idea of incorporating idiomatic jazz style and rhythm into their playing without doing so is all but impossible. Developing improvisers need a bridge.

Here is the most salient point of this whole section
It is unreasonable to be expected to spontaneously IMPROVISE a melody if you cannot first COMPOSE a melody with no time constraint.

What are we really asking our students to do when we tell them to “blow over those changes,” honestly? On top of good style and understanding of jazz articulation, these players have two major responsibilities that they need to juggl e simultaneously in order to play coherent lines:
- a strong understanding of harmony and the ability to come up with melodies on the fly
- a mental library of idiomatic jazz rhythms, called upon at will

You know the kids: you can almost hear their brains turning, but they just can’t multitask fast enough to make it work. This generally leaves you with two types of improvisers:

Students who understand the harmony but play jagged, irregular, or boring rhythms. generally these are students who practice “the page” a lot, but don’t listen to enough jazz

Students who play idiomatic rhythms, but have a poor understand of how to actually navigate the chords. These students generally listen to a lot of jazz, but don’t practice enough.

So what to do?

Let’s take some of the burden away, at least for a little while and see what happens.
Part 1: The Rhythm Chart Method

I’ll be straight right from the go.

If you want to use this portion of the method, you’ll need at least a decent understand of jazz rhythms. You should probably listen to jazz from time to time and be able to regurgitate some of the more pervasive and common rhythms you hear. Here’s how it works.

**Step 1**
Take any progression, tune, section, etc. over which you would like your student to improvise

![Rhythm Chart Example](image)

**Step 2**
Make up a rhythm and write it above the changes

![Rhythm Example](image)

**Step 3**
Specifically identify which notes should voice lead from one to another. At first, give them the first note so it’s obvious where they should go. Since not all progressions will be V-I, use your best judgement to voice lead effectively. Play everything and see how it sounds.

![Rhythm Lead Example](image)

*ERROR: SHOULD BE G, NOT F*
Step 4
Have students resolve those “tension” tones properly. Notice any dominant to tonic relationship or movement. Make a chord chart if necessary.

Step 5
Pick notes (generally diatonic) to fill in the rest of the progression. Try to focus on good note choice on strong beats.

Step 6
Play the page. Allow your student to revel in how good they sound with so little frustration.

I know, I know…
If you use these in a classroom setting, composing over the same rhythm will make everyone’s solo sound similar at first. Yes, you are limiting the amount of variation and creativity (enclosures, passing tones, delayed resolutions, etc.), but before they start doing any of that stuff, they should be able to display good, by the book voice leading. Once we remove the rhythm charts (training wheels) they can and should add all of that stuff in.
Baby Steps

The rhythm chart concept works best if you, as the teacher, can provide students with a steady supply of good rhythms. If you are not able to come up with rhythms spontaneously, just pull rhythms from great solos. At first, simpler solos tend to work better for developing players. Miles and Chet tend to work very well, but there is also something to be said for practicing “busier” rhythms from solos from Coltrane or Charlie Parker.

Here are the rhythms from the first 16 bars of Chet Baker’s improvised solo over Autumn Leaves. This one works nicely (as do many standards), because it features a standard form made up of 4-bar phrases. You can then cut and paste these rhythms into whatever tunes or progressions you are working on at a given time. The chords are included here, in case you want to apply them to similar progressions in other tunes, but the rhythms are often universally compatible.
Improvisation over more challenging tunes, as long as they generally contain “progressions,” become easier to understand and navigate with a simpler rhythmic structure. Let’s use the rhythm from Chet’s solo on Autumn leaves and superimpose it over the changes for Giant Steps, then use our knowledge of good voice leading practices to write a cohesive melody.

We all know Giant Steps is a tough tune, right? Well, of course it is if you try to improvise at QN = 250 AND you haven’t though about the voice leading AND you don’t have an arsenal of rhythms at your disposal. The whole tune is mostly 2-5-1 or 5-1 progressions, they just move fast and through a lot of keys.

Here, we bridge the gap by coming up with some nice rhythms ahead of time (or stealing them from Chet Baker), then actually compose our own solo. There were a few places in Chet’s rhythm that we tweaked to better outline the changes, but you could easily leave those alone. Those notes appear in brackets above.
Exercise: Rhythm Chart for Blues

Blues forms typically start on Dominant 7th chords, which is different from tunes we have looked at until now. Voice leading between thirds and sevenths within the chord still work nicely, but since many of the progressions here are dominant to dominant (instead of dominant to tonic), you’ll have to use good common sense (and your ear) to successfully navigate the changes with smooth voice leading. **Map out your voice leading FIRST, then complete the rest of the solo.** Several harmonic variations of the 12-bar blues are presented, so plan thoughtfully.
Exercise: Rhythm Changes

Write your own rhythm in the dashed boxes
Part 2: Moving Forward

Now that you have the framework, your options for variation are essentially limitless. The ultimate goal is to be able to spontaneously create musical, interesting lines in real time. Here is a review of how the process should go, step by step. Think of the process just like learning to ride a bicycle.

1. Big Wheels: Use teacher-provided rhythms to compose a solo.
2. Training Wheels: Take away more and more rhythms, allowing students to compose their own rhythms in between, making sure they make musical sense.
3. Parent Support: Student will compose solo with all of their own rhythms.
4. Student should spontaneously improvise over the tune without the written solo.

Here are a few tactics you and your students may find helpful during the process:

- **Always identify and label the two notes that you intend to voice lead** (the last note in the first chord, and the first in the next). At first, you can give them one note or the other. For instance, predetermine that the last note in the dominant bar will be “le” so that they will choose “sol” as the note of resolution.

- As students become more advanced, try to give them opportunities to create variations in voice leading. If the final note of resolution is G, you can give them the opportunity to encircle that note with Ab and F#. Have them delay the resolution using a suspension or other non-chord tone.

- Prior to “flying solo,” some students may benefit from using the rhythm chart without pre-planning the melody. It’s actually a good exercise for any improviser and mimics the mental process of sight reading.
More complex tunes and progressions

Most of the examples we have used up to this point feature actual chord “progressions,” in the more “classical” sense. More modern music may feature chord movement that does not follow traditional conventions, but just about every situation, you will be able to apply these concepts to achieve strong voice leading. Let’s look at Monk’s *Well You Needn’t*, a tune that features progressions moving up and down in half steps. Here are the changes for the first 8 bars.

![Chord Chart]

Now, let’s make chord charts for the two chords.

<table>
<thead>
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<th>F7</th>
<th>Gb7</th>
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<tr>
<td>Eb- Te (7)</td>
<td>Fb- Ti (7)</td>
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<tr>
<td>C- Sol (5)</td>
<td>Db- Le (6)</td>
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<tr>
<td>A- Mi (3)</td>
<td>Bb- Fa (4)</td>
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<tr>
<td>F- Do (1)</td>
<td>Gb- Di (#1)</td>
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Due to all of the half steps, this one is actually pretty straightforward. Technically, Fb is not Ti (E is), but it is the same pitch, so it functions the same way.

From here, create a rhythm chart and plan out your voice leading, then fill in the rest of the melody.
Big Picture Stuff

What were we accomplishing by altering the dominant chord? What is the purpose of writing a chord progression that moves exclusively in half steps? Tension and release, of course. But how are we actually accomplishing this?

We shift up or down in half steps, then gently “ease” back inside the harmony when we resolve. Essentially, we are playing a half step away from our notes of resolution for a great deal of these exercises to build tension in the listener, then creating the most satisfying sound by moving up or down to a chord tone.

Altered dominants, Altered Scales, tritone substitution, diminished scales, etc. It’s all more or less the same thing—chromatics up or down, then home again.

Here’s one more example of changes with a slightly less obvious voice leading pattern.
Part 3: Scale Fluency

Even though we have focused a great deal on connecting chords and voice leading, scale fluency is clearly a crucial part to playing melodic lines. Too many arpeggios up and down the changes can sound mechanical, like you are practicing instead of spontaneously creating great music.

The Jamey Aebersold Scale Syllabus is concise and completely comprehensive (and also free). Here is the link for you to check out: http://www.jazzbooks.com/mm5/download/FREE-scale-syllabus.pdf

The page linked above contains just about every chord type you’ll ever encounter, but here is a quick list of the scales corresponding to the chords we have covered in this method. The specifics of building each scale are covered in the Aebersold Scale Syllabus.

C△ or C△7, Major Scale

C- or C-7, Dorian Scale
Natural minor scale with a raised 6th scale degree

C7, Mixolydian Scale
Major Scale with a lowered 7th scale degree

C○7 (Cm7b5), Locrian Scale
Natural minor scale with lowered 2nd and lowered 5th.

C7#9, Altered Scale (diminished whole tone)
See above for info about the Altered Scale.

C7b9, Mixolydian Flat 2
Mixolydian scale with a lowered 2nd scale degree. Note that this scale doesn’t work well in minor keys because it implies a natural 13 (or 6th scale degree). Assuming this chord functions at the V7 (dominant) chord, the natural 13 (A natural, in this case) will typically conflict with the Ab, the third of the minor tonic. Personally, I don’t mind this clash, as long as it resolves DOWN when you hit tonic.

The scales listed here are probably the most common ones associated with each chord type, but by no means the only scale. Follow your ear and see what sounds good to you and to your teacher.
Scale Exercise 1

Write out 4 scales per day. Like on staff paper with a pencil. Putting pencil to paper helps transfer knowledge from working to long term memory. They can be the same scale in 4 keys or 4 different scales in the same key. It doesn’t matter. Practice these scales WITH the music in front of you. Don’t TRY To memorize the scales. Practice them until they are effortless. See Kenny Werner’s “Learning Diamond” for a great practice strategy for scales or anything else you cannot play effortlessly.

Diamond Practice Method

- All playing must be effortless. Nothing you play should be difficult for you. This corner of the diamond must be in play at all times
- Choose any 2 other corners
  - Play it all and play it perfectly, but you can’t play it fast
  - Play it fast and play it perfectly, but only play a small portion of the exercise
  - Play it fast and play it all, but it won’t be perfect.
  - This configuration is generally not the best choice for technical exercises like this. Favor the first two for now.
- One you can perform with all four corners, you have MASTERED the scale/exercise/tune/etc.
Scale Exercise 2

Identify the scale associated with each chord in a tune. Become fluent in those scales. Practice them many times each day while working on a tune.

From the changes above, the following scales should be written and practiced:
- Dorian (C, G, Eb)
- Mixolydian (C, Bb, Ab)
- Major (F, Eb)
- Locrian (D)
- Altered (G)

Note: all of the dominant chords (C7, Bb7, Ab7, and G7) can be altered with b9 or #9. The associated scales can/should be written and practiced.
Resources, Links, Technology, etc.

**Band-in-a-Box** is an invaluable piece of software. Think of it as a DIY Aebersold play along. You plug in the changes, pick the style, tempo, etc. hit play, and go. As an added bonus, the program generates convincing piano and guitar voicings, along with great bass lines for your younger players who need help. You can pay more for higher quality samples play-along sounds, but the core of the software doesn’t change. The better sounds make for a more convincing and enjoyable practice session, though.

http://www.pgmusic.com

**Anytune Pro** can slow down any audio track without changing the pitch OR change the pitch without changing the tempo. It’s available for iOS for about $15, but the songs need to be on your device in order for it to work. The desktop app (for Mac only, I think), allows you a lot more flexibility. You can also create loops and export the “slowed-down” version of songs to share with your students for practice purposes. That app is about $30, but I use it daily in class. Totally worth it.

**jazzadvice.com** has been one of my favorite online resources of late. Created by young jazz players Forrest Wernick and Eric O’Donnell, the site is updated frequently and complete free (but you can and should donate). Their series entitled *5 Skills You Won’t Learn in School* is revelatory and amazing.

**jazzbooks.com** from Jamey Aebersold sells play along books from almost every great artist and composer from the last 80 years. Everyone has used these and you should buy them, too. Use Anytune to slow down tracks that are too fast!

**Bert Ligon** has written several wonderful books on jazz and jazz improvisation. My favorite is *Connecting Chords Through Linear Harmony* and can be found on Amazon and other online booksellers.