Advanced Music Theory

For MUSC 320 at Manhattan University, Spring 2025

Version 1.96 created 1/9/25 by Dave Smey

Introduction

Welcome to our advanced theory text, which I'll roll out in bits and pieces as the semester unfolds. For Advanced Theory we *really* need a custom textbook because we'll be sampling lots of different topics, trying to hit as much as we can. There's no one book that does it all!

As before I'm going to encourage you to invest in some more professional textbooks if you are really interested in this stuff. For the more traditional classical theory topics we'll do first, I recommend:

Kostka, Stefan M., and Byron Almén. *Tonal Harmony*. 9th ed. McGraw-Hill, 2023.

Aldwell, Edward, Carl Schachter, and Allen Cadwallader. *Harmony and Voice Leading*. 5th ed. Cengage Learning, 2018.

(I'm citing the most recent editions, but the smart move is usually to look for an older copy which will be much cheaper. Old editions of most textbooks are perfectly good, but academic publishers revise them in order to disrupt the used book market.)

The "serious" study of rock harmony is actually fairly new, so the work being done on it is still truly theoretical. If one is up for a thought-provoking volume you could try

Doll, Christopher. *Hearing Harmony: Toward a Tonal Theory for the Rock Era*. Ann Arbor: University of Michigan Press, 2017.

Finally, for Modern and "post-tonal" theory I like

Rahn, John. *Basic Atonal Theory.* New York: Schirmer, 1980.

(That's very much out of print, try interlibrary loan), or

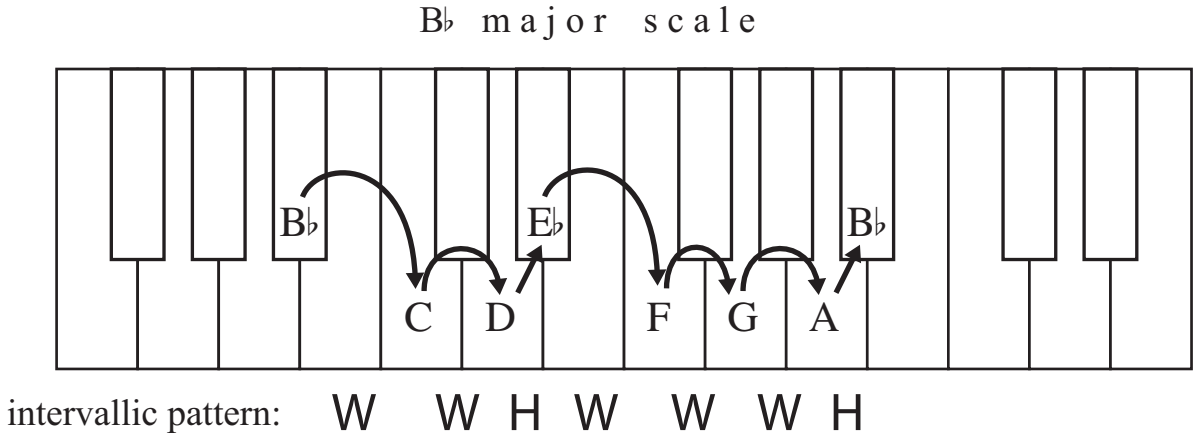
Straus, Joseph N. *Introduction to Post-Tonal Theory.* 4th ed. W. W. Norton & Co., 2016.

Chapter 1: The Basic Elements from Theory I

Here are some diagrams that illustrate basic ideas we learned in Theory I. Remember that if you are still fuzzy on these concepts you can always surf into the MUSC220 blog and look at the Theory I textbook.

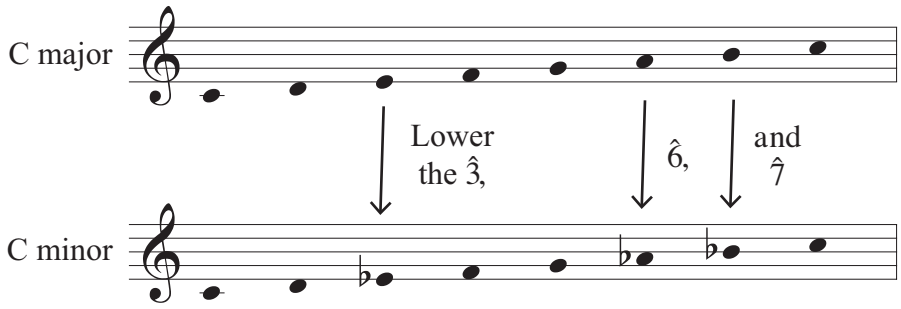
Major Scales

Understanding major scales as WWHWWWH.



Minor Scales

We learned minor as a transformation of major...



...and we also talked about the relative minor / relative major relationship.

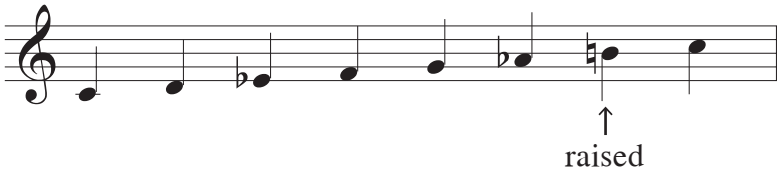
A minor A B C D E F G A

C major C D E F G A B C

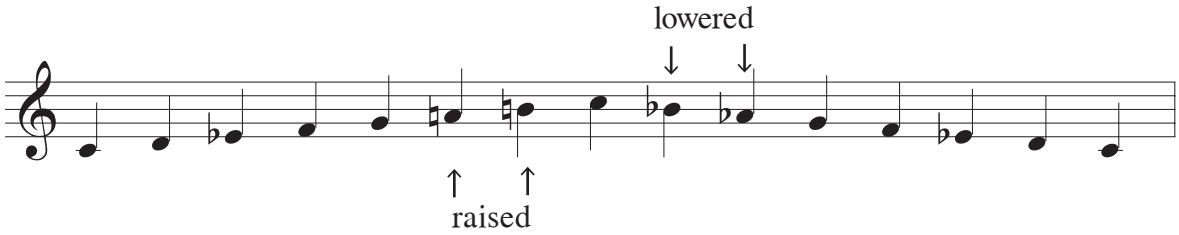
Finding the relative minor.

Variants of minor

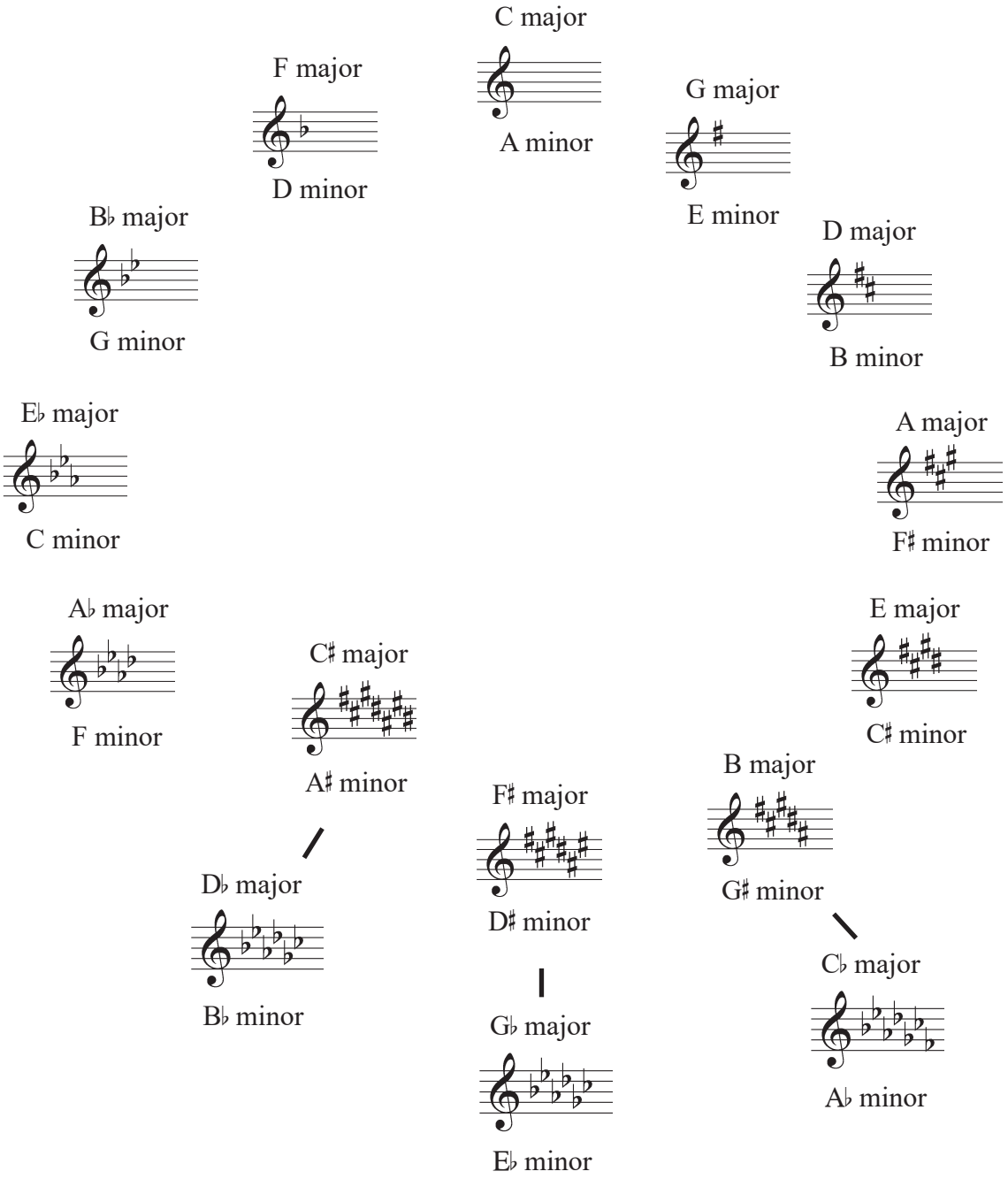
harmonic minor



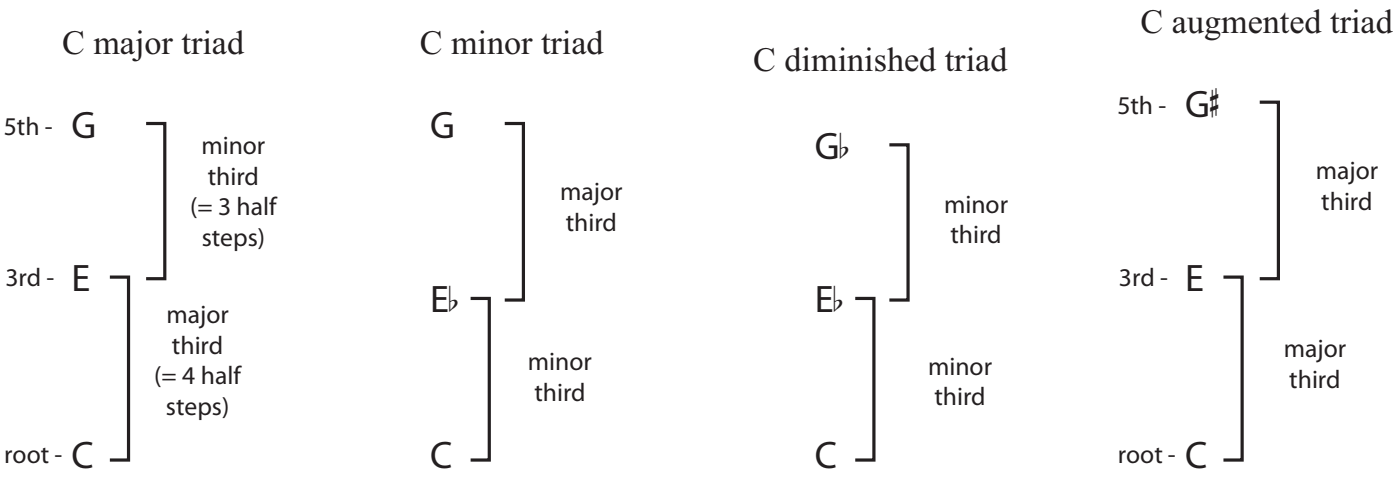
melodic minor



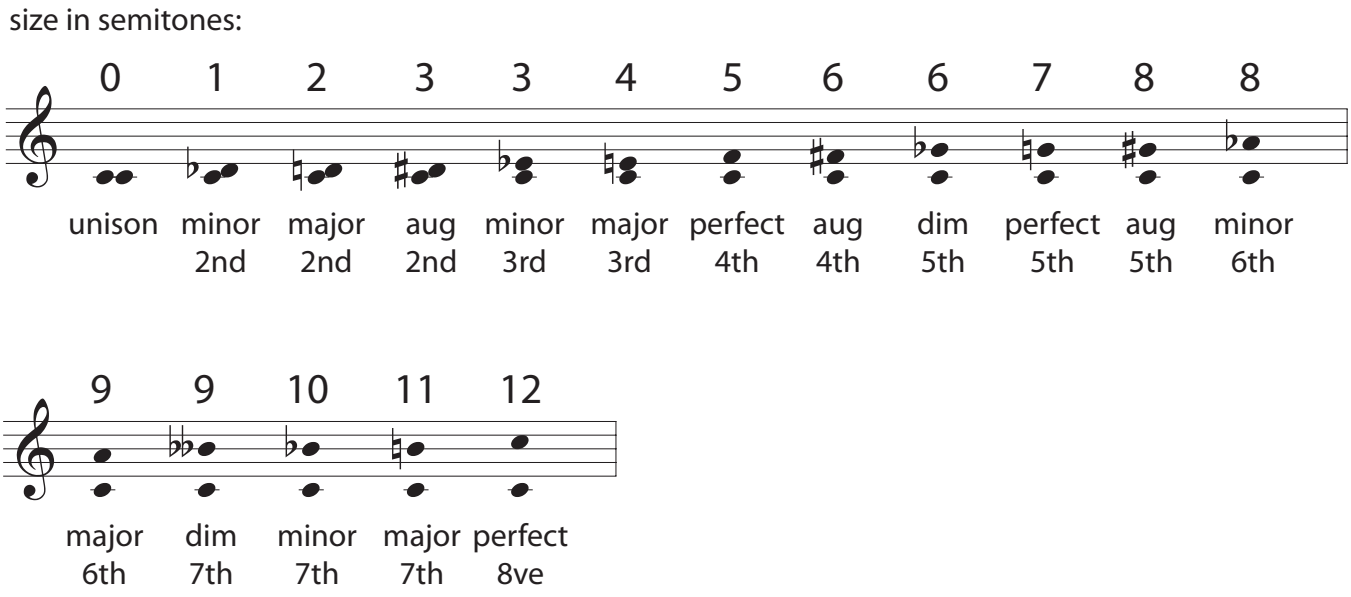
The circle of fifths



The four triad types



Intervals

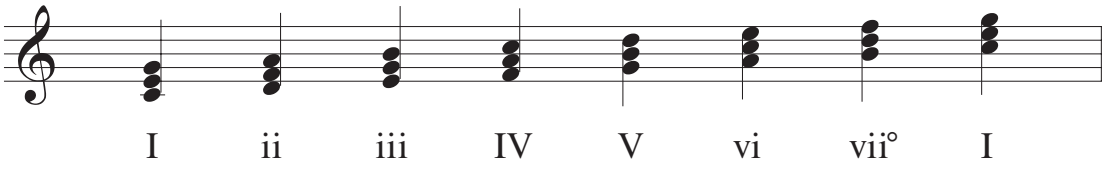


Unisons, fourth, fifths and octaves are the "perfect" intervals. They have one standard "perfect" size and they can be diminished or augmented.

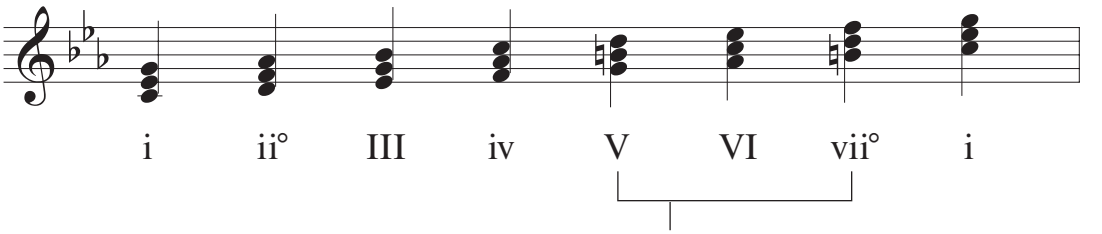
Seconds, thirds, sixths and sevenths are the "imperfect" intervals. They have a major and minor size, and they can be further diminished or augmented.

Diatonic Triads (a.k.a. the Roman Numerals)

in C major



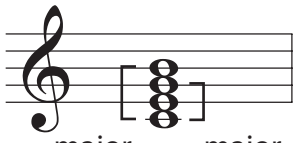
in C minor



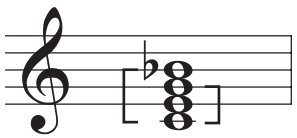
typical Classical-music alterations
with raised leading-tone

Seventh Chords

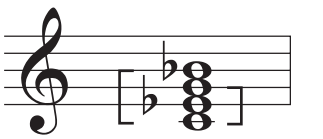
major seventh chord



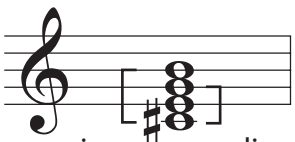
dominant seventh chord



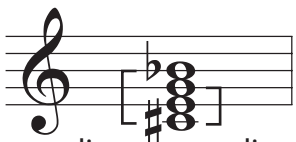
minor seventh chord



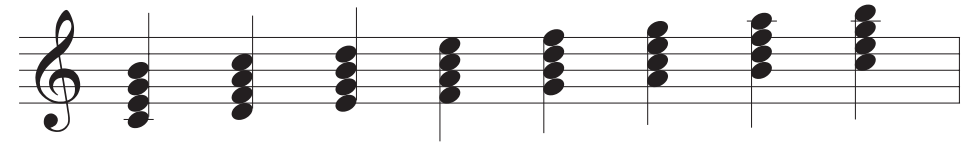
half-diminished seventh chord



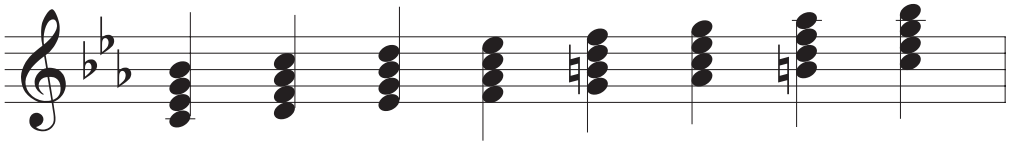
fully-diminished seventh chord



Diatonic Seventh Chords



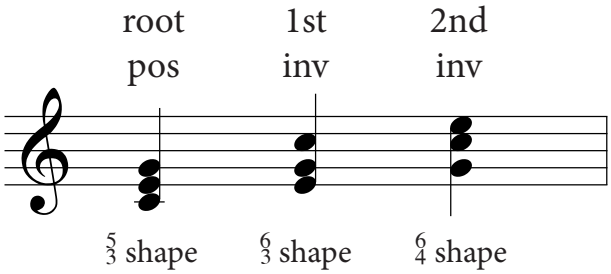
C: I^{M7} ii^{7} iii^{7} IV^{M7} V^{7} vi^{7} $vii^{\varnothing 7}$ I^{M7}



c: i^{7} $ii^{\varnothing 7}$ III^{M7} iv^{7} V^{7} VI^{M7} $vii^{\circ 7}$ i^{7}

Chord Inversions

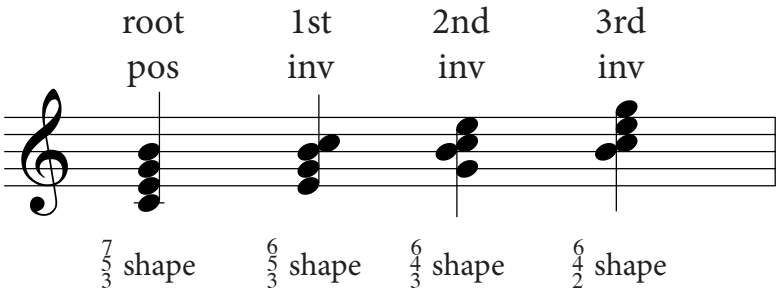
triad inversion shapes



figured bass symbols for "real music"

root position	=	I
1st inversion	=	I^{6}
2nd inversion	=	I^{6}_{4}

seventh-chord inversion shapes



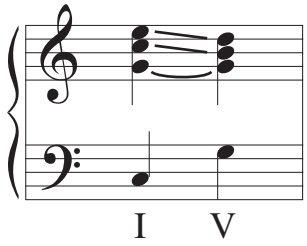
figured bass symbols for "real music"

root position	=	V^7
1st inversion	=	V^6_5
2nd inversion	=	V^4_3
3rd inversion	=	V^4_2

Writing Chord Progressions (with good counterpoint)

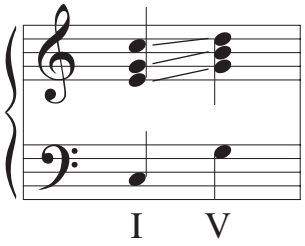
When the bass is moving by **fourth or fifth...**

Common-tone technique



One part holds over, the other two slide into place by step.

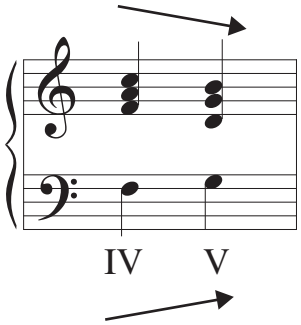
"Next-closest" technique



All parts move by a third or less.

When the bass is moving by **step...**

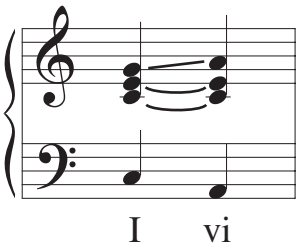
"Step Zone" technique



Slide to the next available shape in the opposite direction.

When the bass is moving by **third or sixth...**

Double common-tone technique

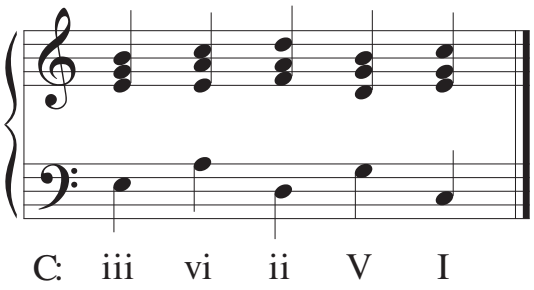


Hold over two notes, remaining tone moves by step.

Chapter 2: Some New Flowchart Details

In our Fundamentals textbook we gradually built up a progressions flowchart as we learned how to make different connections between chords. Let us revisit it now and add a few additional details that pop up frequently in Classical music.

The "spine" of the flowchart is bass notes that fall by fifth. We can start at the ultimate goal, the I chord, think back to V which is obviously a fifth above I, then back further to ii which is a fifth above that. Extending the chain further back ropes in vi and iii. Most people write this kind of progression with a zig-zagging bassline that alternates fourths and fifths.



$$\text{iii} \rightarrow \text{vi} \rightarrow \text{ii} \rightarrow \text{V} \rightarrow \textcircled{\text{I}}$$

In addition, we expanded the position leading up to V, including IV as well as ii.

$$\text{iii} \rightarrow \text{vi} \rightarrow \begin{bmatrix} \text{ii} \\ \text{IV} \end{bmatrix} \rightarrow \text{V} \rightarrow \textcircled{\text{I}}$$

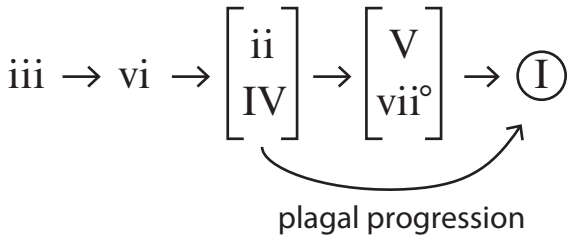
...and even though we haven't worked with it yet, we should include vii° as a possible substitute for V.

$$\text{iii} \rightarrow \text{vi} \rightarrow \begin{bmatrix} \text{ii} \\ \text{IV} \end{bmatrix} \rightarrow \begin{bmatrix} \text{V} \\ \text{vii}^{\circ} \end{bmatrix} \rightarrow \textcircled{\text{I}}$$

Now it is time to add a few exceptions that frequently occur in Classical-type music.

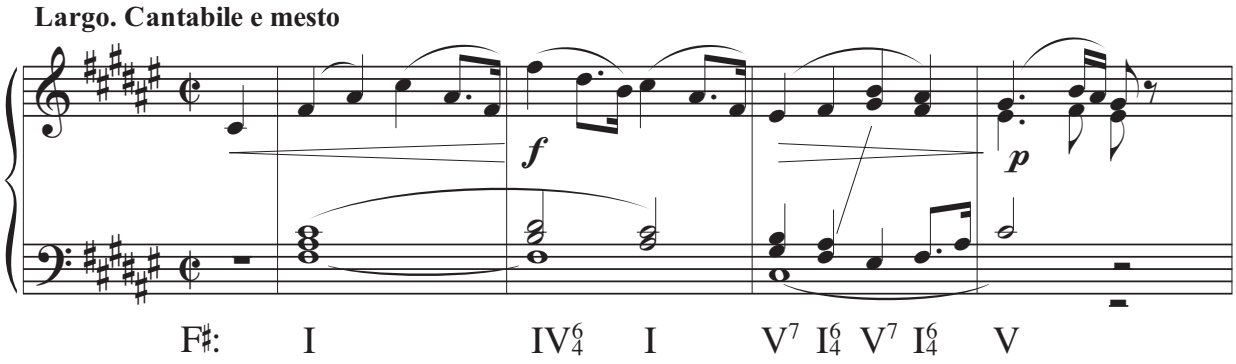
The Plagal Progression

We've talked about this one before. Instead of I-V-I, composers sometimes also like to go I-IV-I. It is the mirror image of the usual progression, going a fifth below tonic instead of above.



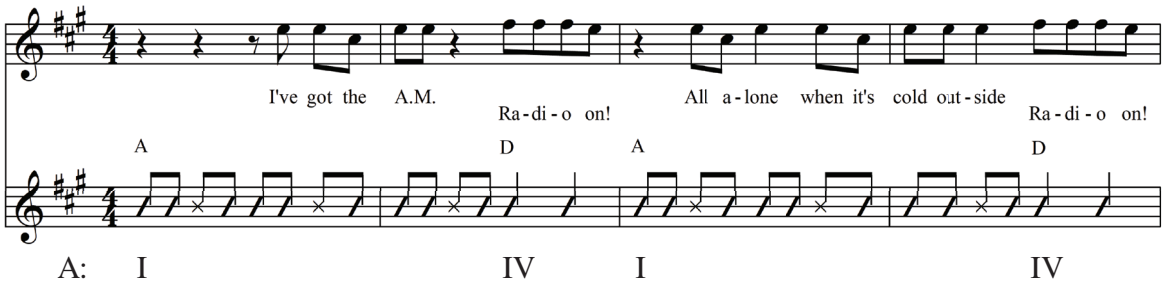
Here's a nice passage from a Haydn string quartet that does it.

Haydn, String Quartet in D major Op. 76 No. 5, second movement mm. 1-4



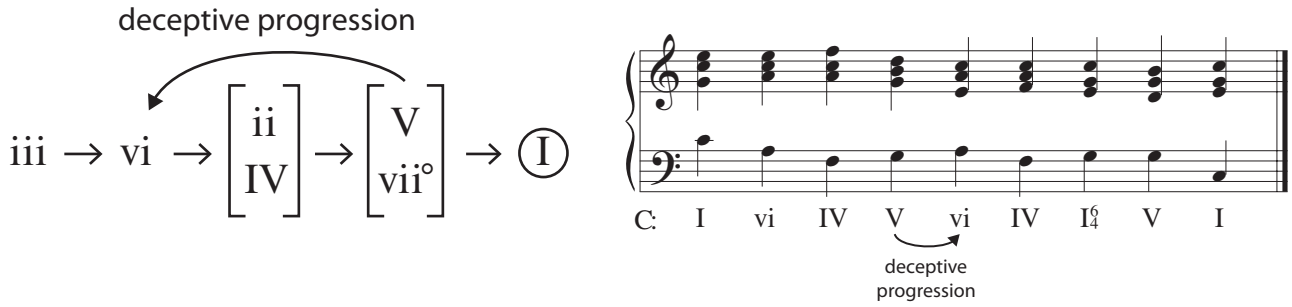
It's also a very popular move in folk and rock music, which seems to generally favor IV to get a "fresher" sound. One notable tune that jams almost exclusively on the plagal progression is "Roadrunner."

The Modern Lovers, "Roadrunner" [1976] ca. 3:23



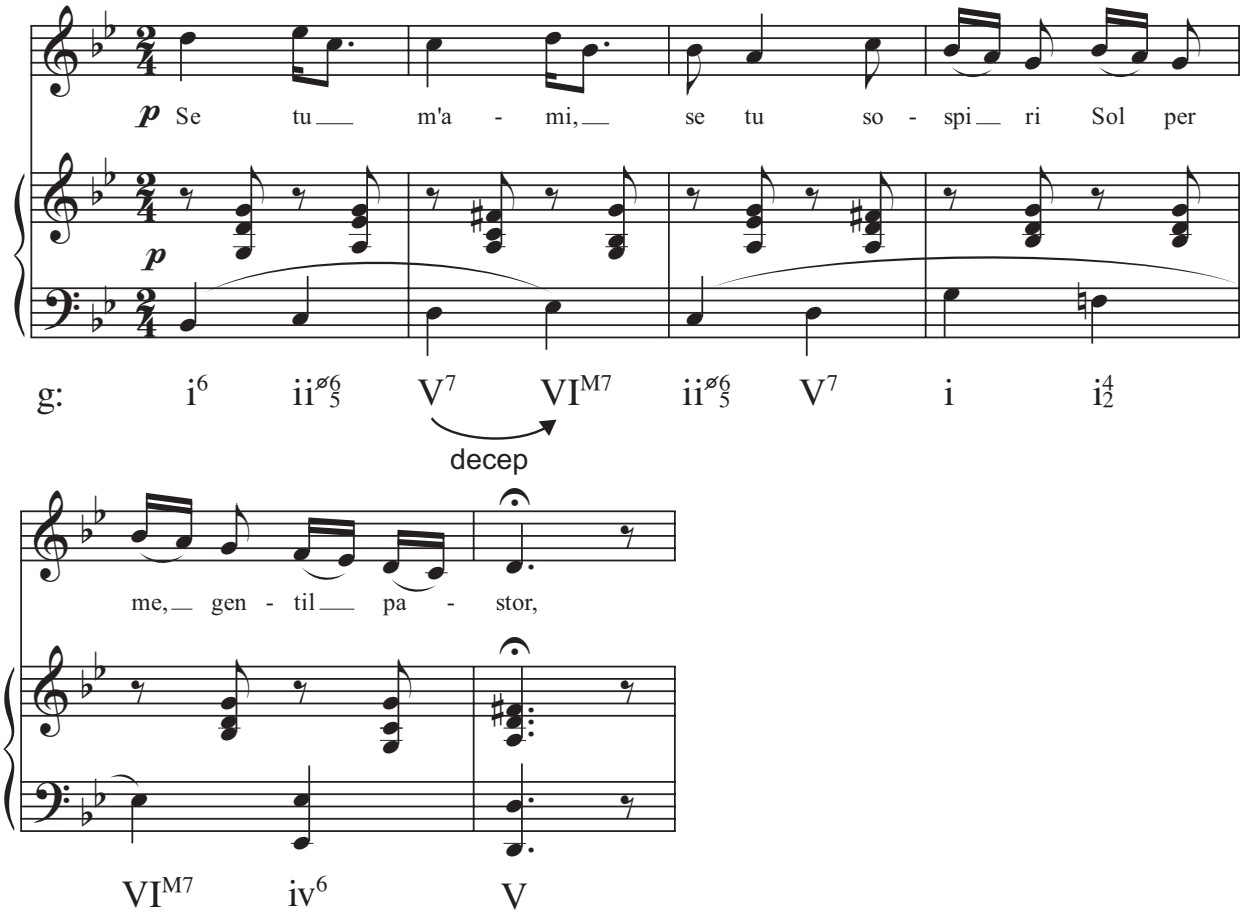
The Deceptive Progression

This is a handy device to extend whatever passage you are writing. You can let your progression proceed to V, but instead of resolving to I as expected you go up to vi. Sometimes this happens at a particularly dramatic moment to create a big "surprise."



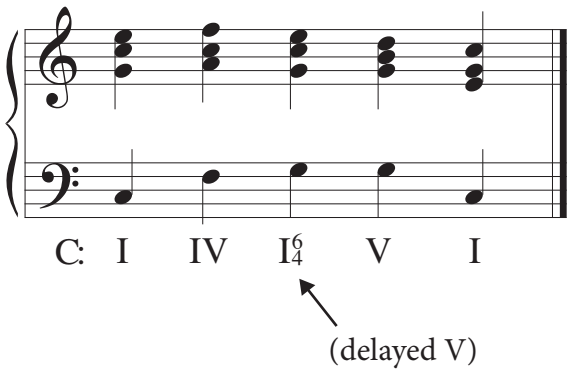
Here is a lovely song from the early 18th century that makes the deceptive move in a minor key.

Parisotti (attrib. Pergolesi), "Se tu m'ami"

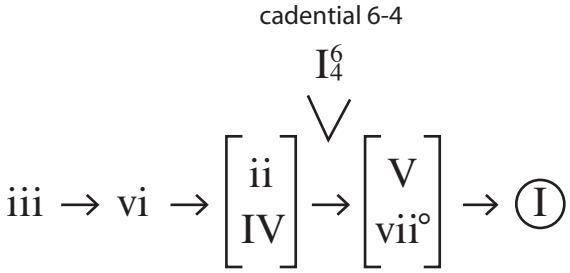


The Cadential 6-4

The cadential $\frac{6}{4}$ is a I chord in second inversion that is inserted before the V. It is a way of delaying the V and making a little more out of it.

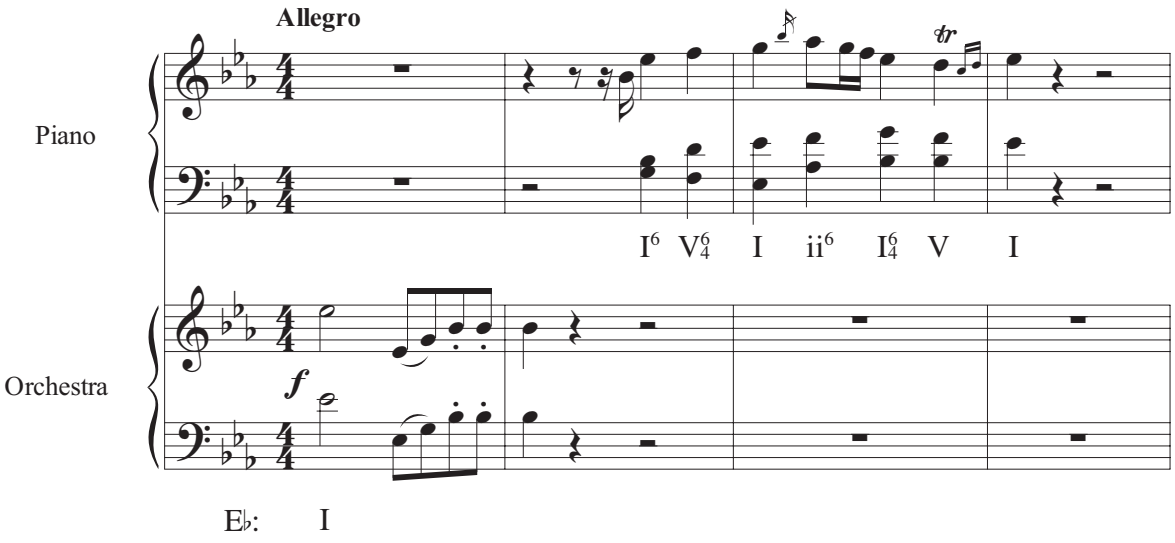


We could imagine it as an optional insertion into our flowchart.



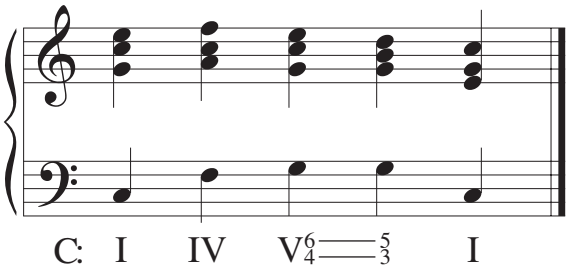
The cadential $\frac{6}{4}$ is very common in Classical music. Here's an example from a Mozart piano concerto, in which the piano repeats a cute little phrase in dialogue with the orchestra.

Mozart, Piano Concerto No. 9 in E-flat major, K. 271 "Jeunehomme," first movement mm. 1-4



Some people call it V^6_4

There is a certain school of thought that labels the cadential 6-4 as V^6_4, not I^6_4. They would analyze our model progression like so:

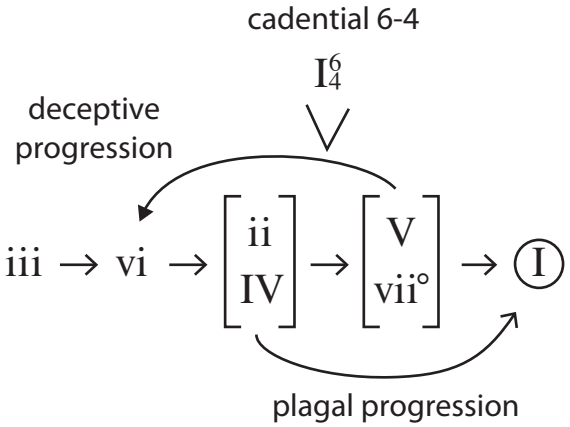


The idea here is that the $^6_4$ is "really" V, and we are just waiting for the tones to fall into place. The little numbers with the lines show that happening. I think this makes sense if you have a lot of experience looking at these figured-bass numbers, but for the average beginning theory student it is probably nonsensical.

We are not going to do this, and you don't have to worry about it. I'm just warning you that people like this are out there.

Now we've got a full standard diatonic flowchart.

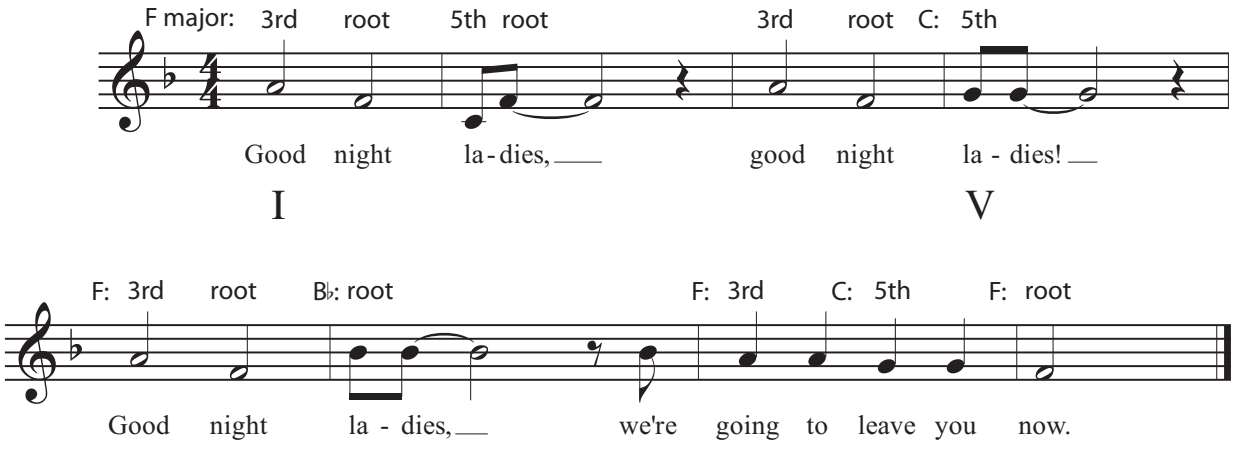
Here it is with all of our new bells and whistles added. The music of Haydn, Mozart, and Beethoven will tend to follow this ordering for a large percentage of the time.



This is the "diatonic" chart because it is what we expect when a composer is staying strictly in the key and only using notes from the scale. One of the last remaining exceptions is *chromatic* modifications to the progression, using notes from outside the key, which we will consider in Chapter 6.

Chapter 3: Non-Chord Tones

Most of the music you hear every day is based on chord progressions. A composer chooses a sequence of chords, and the notes in the progression provide a sort of backbone or framework for the music. It is possible to make an entire melody out of selected notes from the chords, like with this familiar folk tune:



However, we usually need more notes to flesh out the music. We add decorations and even interesting distortions to our harmonies in order to make it all sound a little more alive. These extra, added notes are called *non-chord tones*.

In order to illustrate the various kinds of NCTs I'm going to use a few graphic symbols:

● = chord tone (consonant, stable)

○ = non-chord tone (dissonant, subservient to more stable note)

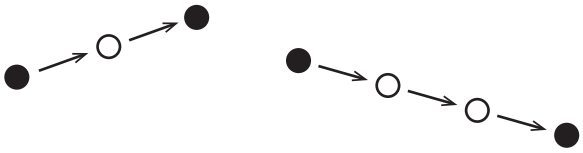
↗ = stepwise connection

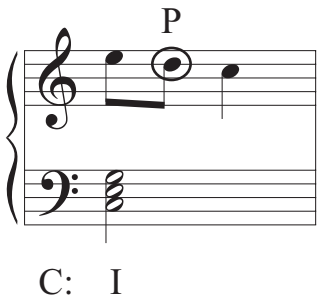
Basic melodic NCTs

First, let's consider some fairly simple ways to elaborate a musical line.

Passing tone

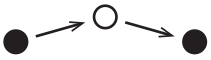
A passing tone comes from a note and continues on to a different note. All of the notes connect by step.

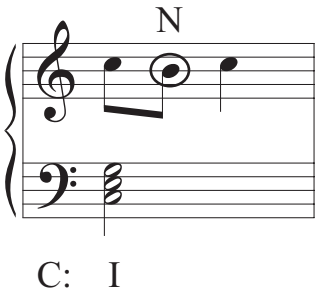




Neighbor tone

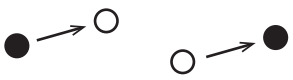
A neighbor tone goes back to the same note it came from.

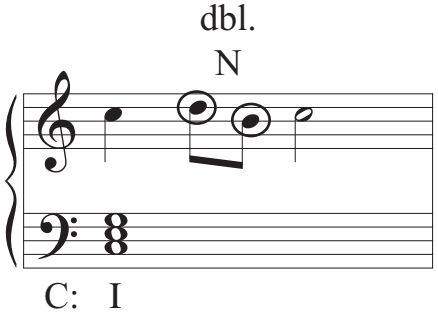




Double neighbor

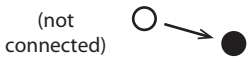
Instead of going immediately back to the note it came from, a double neighbor figure makes an "above, below, then back" pattern (or the opposite.)

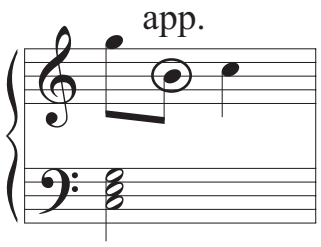


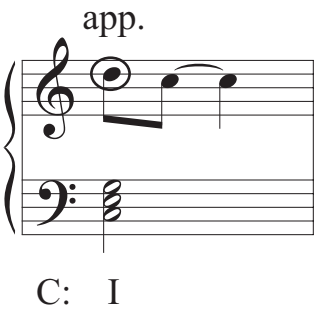


Appoggiatura [from the Italian word "to lean"]

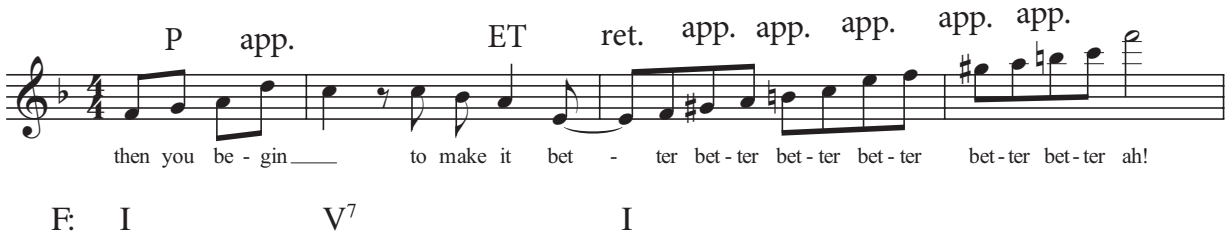
Also known as an "incomplete neighbor." An appoggiatura is approached by leap or just out of the blue, and then it resolves to a chord tone.





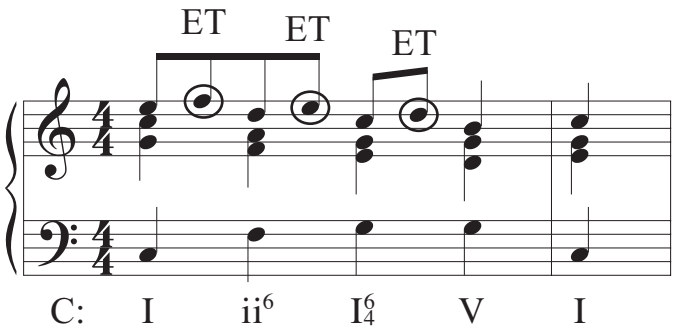


One of my favorite examples of this figure in pop music occurs towards the end of The Beatles' "Hey Jude," as Paul McCartney methodically climbs up the I chord for two octaves, decorating each chord tone with an appoggiatura.



Escape Tone

The escape tone is the only NCT that doesn't resolve to another chord tone - instead it comes *from* a chord tone. It's the opposite of the appoggiatura. The most common use of ET's in classical music is to decorate a scalar ascent or descent, like the example on the right.

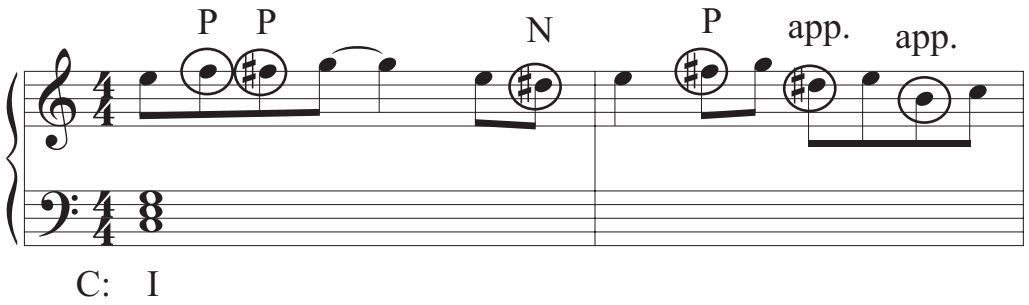


A few interesting distinctions you can make about NCTs.

Diatonic vs. Chromatic

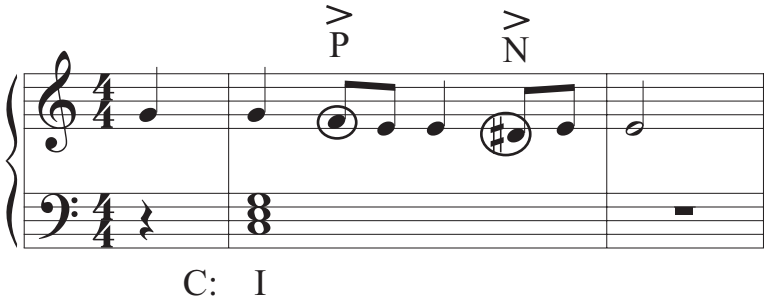
Diatonic NCTs use tones that belong to the scale. Chromatic NCTs use tones that are outside the scale (and require accidentals.)

A passage with mostly chromatic non-chord tones



Accented vs. Unaccented

An unaccented non-chord tone will be relatively "weak" and "unimportant" compared to the notes around it. An accented NCT, however, will stick out - it falls on the beat or it is longer than surrounding notes. You can mark accented P's, N's, or app's with a little accent mark.

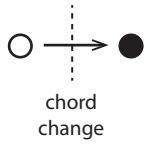


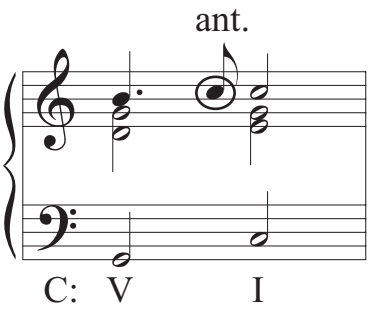
Displacement NCTs - anticipation, suspension, retardation and pedal

We also have a few NCTs that involve notes being where they don't belong - they either arrive early or hang on late.

Anticipation

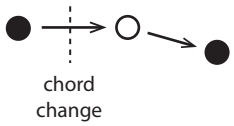
Here a note simply comes in early instead of waiting for the next chord. All of these displacement NCTs can involve either a sustained note (which is held through more than one harmony) or a repeated note. Anticipations are frequently a repeated note.



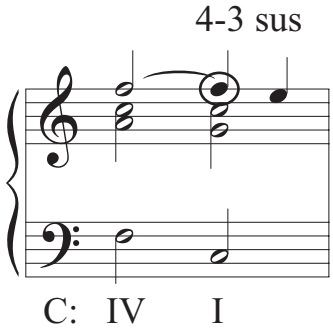


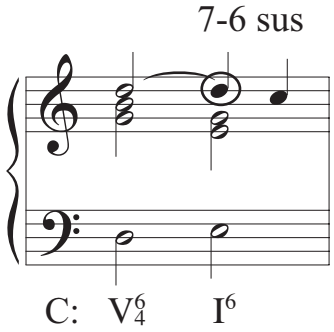
Suspension

Suspensions are perhaps the coolest NCT, but they also involve the most complicated theoretical baggage. Simply put, a suspension hangs over from the previous harmony and then *resolves down by step* into the new harmony.

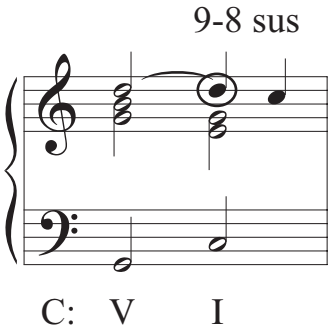


For some reason theorists like to classify suspensions with figured bass numbers. (We aren't really going to worry about it, but you might see technical discussion like this somewhere in the future.) Remember that figured bass numbers are all about the interval above the bass - when you figure out your suspension labels you don't have to think about what the roman numeral is, or the key - just measure the interval above the actual bass note. If you really want to understand this, you could look carefully at these examples and see if you can understand where the numbers come from.

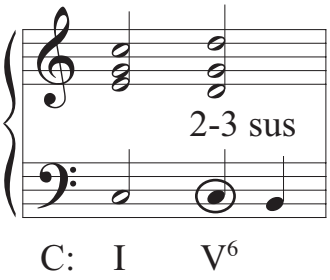




This one is always called "9-8" (even though we might be tempted to say "2-1.")

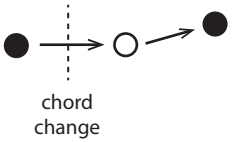


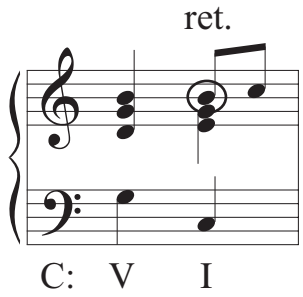
A suspension in the bass is always called "2-3." It refers to the fact that somewhere in the chord there is a tone that the bass is dissonantly rubbing up against - it makes a second against the bass, but once it resolves it makes a consonant 3.



Retardation

If a held-over note resolves up instead of down it is called a retardation. Retardations are less common than suspensions, and they usually don't get the fancy figured-bass style labels.

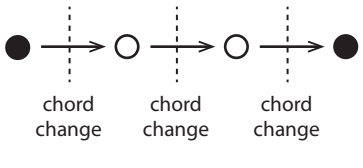


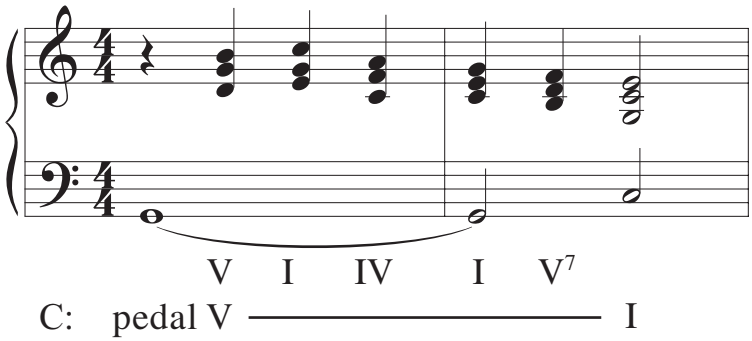


(Of course in recent years this technical term probably feels a bit uncomfortable due to contemporary sensibilities about the way we talk about our fellow human beings. I would not be surprised if some theorists are trying to coin some alternate name for it! If you don't want to use this label you could always call it "a displaced tone that resolves upward.")

Pedal Tone

A pedal tone is held across a number of harmonies. It is usually in the bass, and usually on scale-degrees $\hat{1}$ or $\hat{5}$. The harmonies on top usually go away from and then back to consonance with the pedal tone. You can analyze it in two layers - on the bottom you can indicate "Pedal V" (or "Pedal I"), and then in an upper layer you can track the harmonies that happen over the bass (with no inversion symbols.)





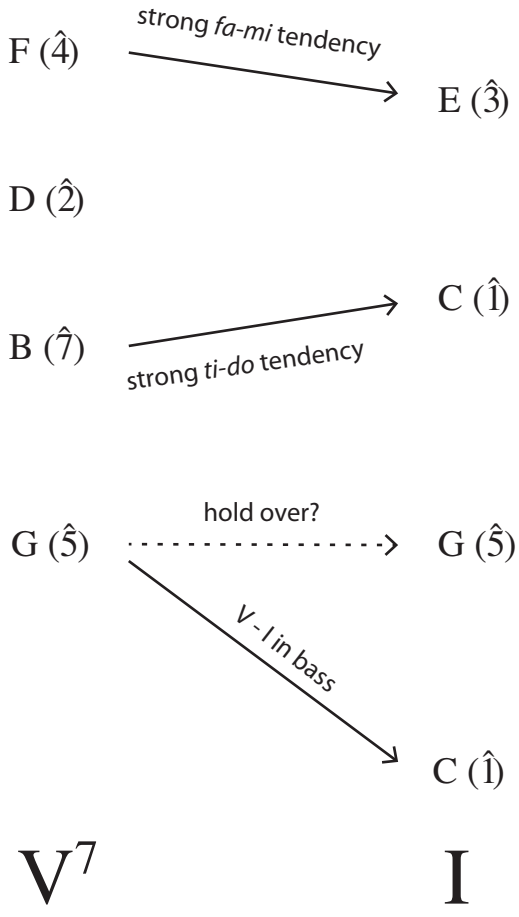
Chapter 4: Progressions with V7

The most common seventh chord in most kinds of music is V^7, which usually wants to resolve to I. In this chapter I will show you two quick formulas to write progressions with this slightly spicy harmony.

Tendency Tones

There is often a sense that the tones of a V^7 chord "want" to resolve in a certain way. This is probably caused by a combination of cultural and perceptual factors.

Let us consider a V7 chord in C major:



As it resolves, the seventh of the V^7 (*fa*) "wants" to resolve down to the third of the I (*mi*). The leading-tone (*ti,* the third of the chord) "wants" to go up to *do*. (There is something about the closeness of the target note, only a half-step away, that seems to make these resolutions particularly satisfying.)

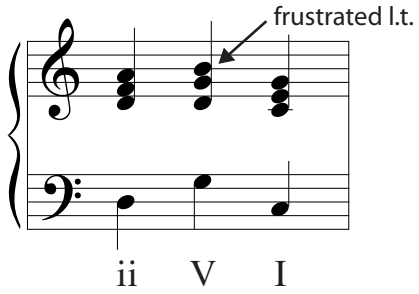
What the remaining tones want to do is more of a practical matter than a perceptually urgent one. The fifth of the chord (*re*) should probably go to *do*, but it could easily go up to *mi* if it needs to.

The root of the V7 (*sol*) probably wants to make a strong *sol-do* bass line. However, if it is in an upper voice it can be a common tone that holds over into I.

The Frustrated Leading-Tone

Theorists are particularly concerned with the tendency of the leading tone, which wants to go from *ti* to *do*. If the leading tone is in the top line of your V or V^7 chord, it must go to *do* or else it is called a "frustrated leading tone."

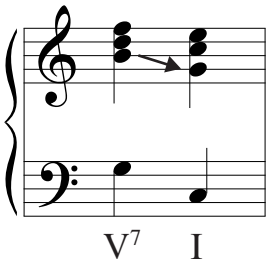
This is true even with a plain V chord! The idea is that leaping away from the leading tone is disappointing, because we anticipate the conventional resolution to *do* and will be annoyed if we don't get it.



A plain V chord with frustrated leading tone.

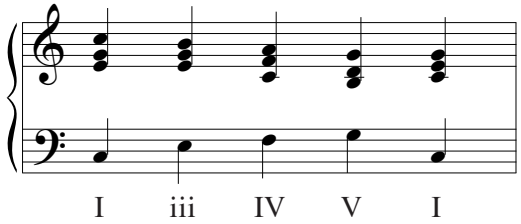
However, this rule is actually pretty narrow - it only applies when the leading tone is exposed in an outer voice (soprano or bass) and you leap away from it instead.

If you hide the leading tone in an inner voice it's considered fine. This will actually be one of our strategies to make good V^7-I's.

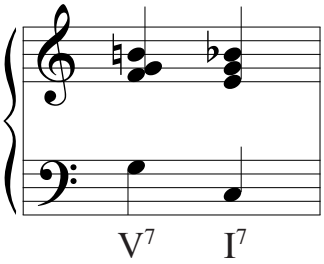


Frustrated leading tone in inner voice (which is fine)

There are also a few situations where the leading tone might connect downward by step that are not at all disappointing.



In this progression, the leading tone is part of the iii chord. It continues down by step and I don't think anybody would object. Stepwise connections are strong, so the motion from C-B-A is compelling and not disappointing in any way.

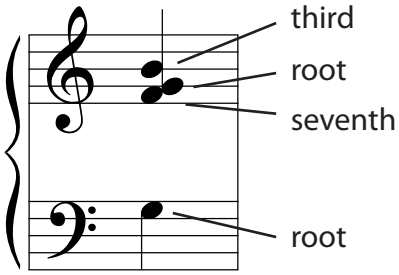


Similarly, in contexts where we go from one dominant seventh to another, the third of one chord often sinks down to the seventh of the next. Let us imagine that we are going from a V^7 to a I^7 in some kind of bluesy progression. This is also fine.

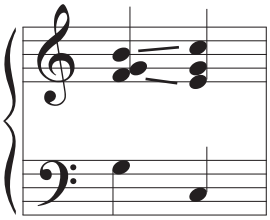
So with all of this tendency-tone business out of the way, let's look at two quick strategies to make good V^7-I progressions.

Strategy #1 - Omit the fifth, double the root

Surprisingly, you don't need to use all of the notes in your dominant seventh chord. You can omit the fifth, and nobody will miss it.

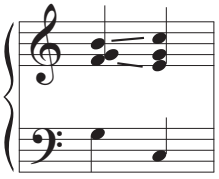


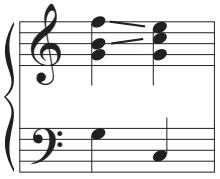
With this technique you build V^7 with the root on the bottom and root, third, and seventh on top.

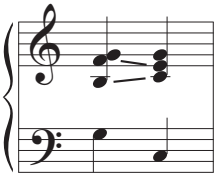


After that you follow all of your tendency tones. *Ti* goes to *do*, *fa* goes to *mi*, and that extra *sol* in the upper voices holds over as your common tone. This will make a normal-looking I chord.

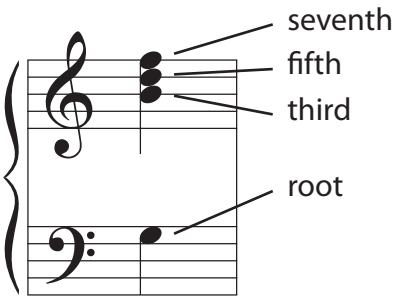
There are a few ways to rotate around your upper tones. I like the formation I've been using above because it fits very comfortably under the hand, but there are two other possible options as well.



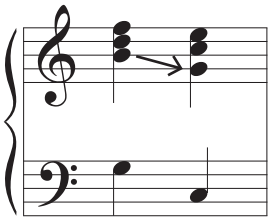




Strategy #2 - Frustrated leading tone in an inner voice



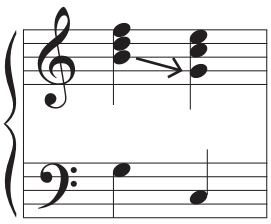
Here we will use all four tones of the V^7. The root is in the bass, everything else is on top, and you should make sure the leading tone (i.e. the third of the V^7) is somewhere in an inner voice.

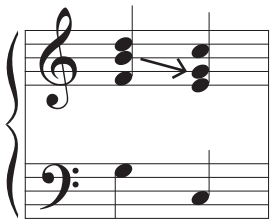


The leading tone ducks down to *sol*. Everything else slides into place.

Because *ti* is in an inner voice, it is not considered "frustrated." (You might say it is frustrated but nobody notices, so life goes on. It may have to do a little therapy later to deal with any lingering feelings of disappointment.)

Because the third of the chord cannot be on top, there are only two rotations of this voice-leading strategy that we can use.

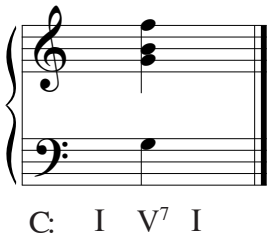




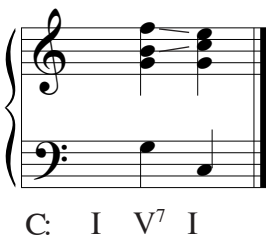
Simple I-V^7-I: Mirroring your I chord

We are going to write a lot of I-V^7-I progressions. To keep things simple you can make them in three easy steps. (1) Plan your V^7 and your "strategy." (2) Resolve to I. (3) Copy your final I as your first I as well. This will always work!

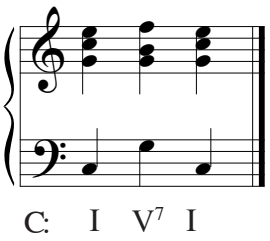
Here I am planning a V^7 with missing fifth.



We resolve it like always.



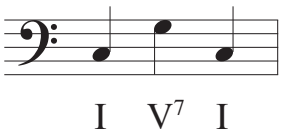
Copy the last chord as the first.

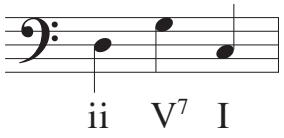


Other ways to get into your V^7

It's pretty hard to get into trouble as you enter into your V7 as long as you don't jump too much and remember your step zone. Let's consider three likely progressions that will contain V7.

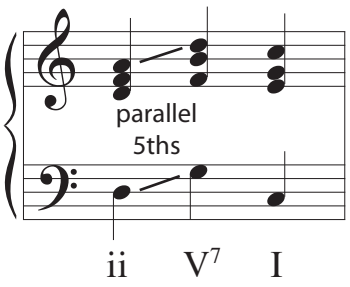
I - V^7 - I and ii - V^7 - I



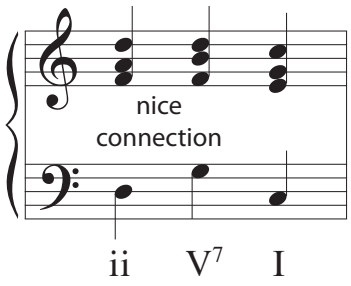


With either of these, the bass is jumping into the V7 by fourth or fifth, so we can use connections that are similar to our old common-tone and next-closest techniques. Remember that the point of these techniques was always to avoid jumping too much in your upper voices.

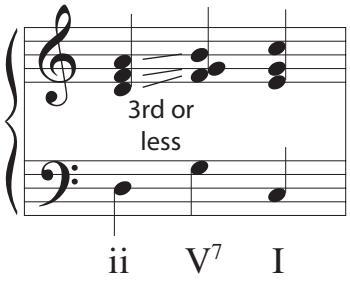
Here's an example of a progression gone wrong because the upper voice jumps by a fourth.



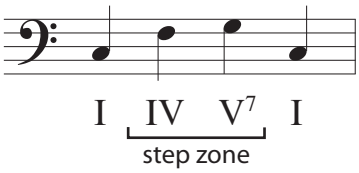
If we move our first chord up we get a nice, smooth connection with two common tones.



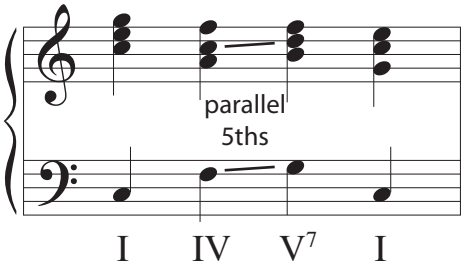
Here is one more ii-V^7 connection that moves a little more. Everything still moves by a third or less, using the same logic as our old "next-closest" connection.



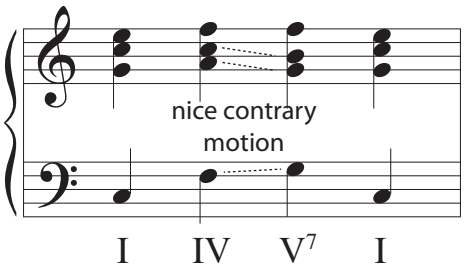
I - IV - V^7 - I



Here there is a step zone from IV to V, so you want to make most of the upper voices go in the opposite direction.



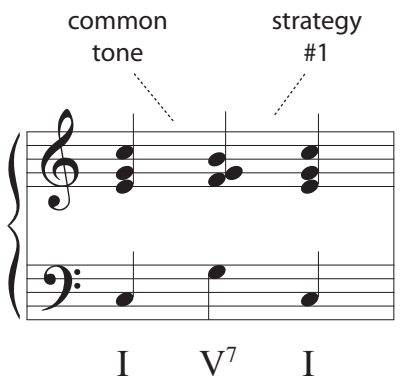
If you don't, you might make bad parallels against the bass.

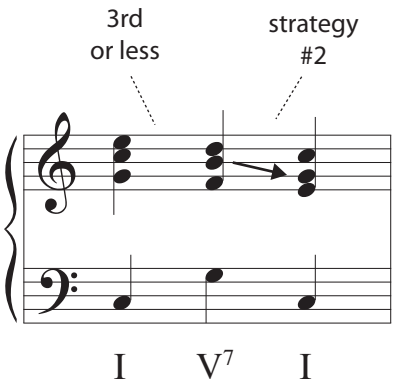


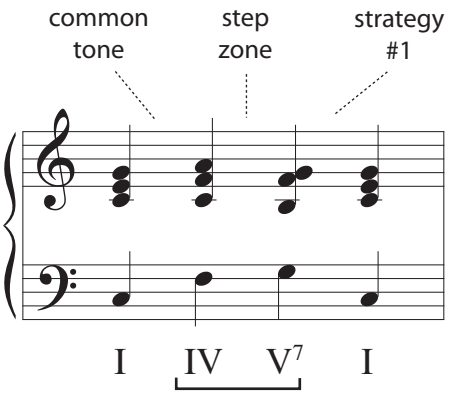
...so we want to pull most (or all) of the parts downward, in contrary motion. Here we hold over the F and move down the other two.

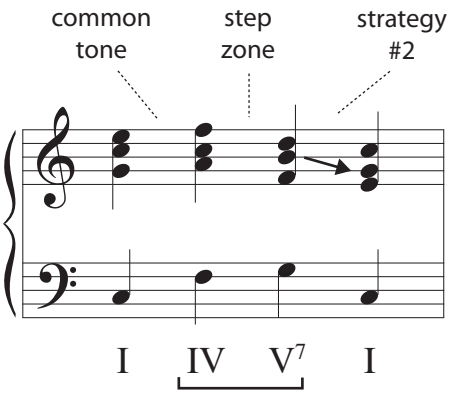
Overall, if you have a good feel for our old triad techniques and you learn our two new strategies for building and resolving V^7 it should be easy to write these more interesting progressions and avoid problems.

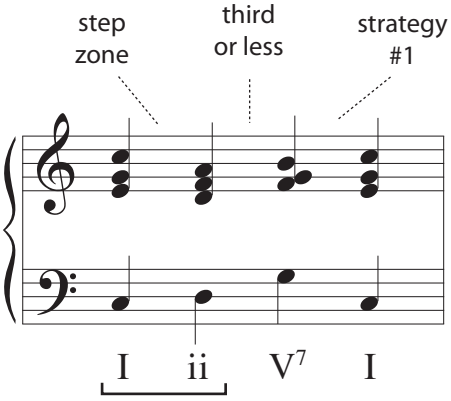
Let's conclude this section with annotated examples of various possible progressions that include V^7. This is not an exhaustive listing by any means.

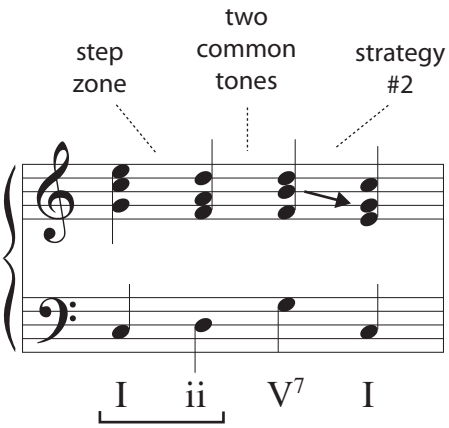






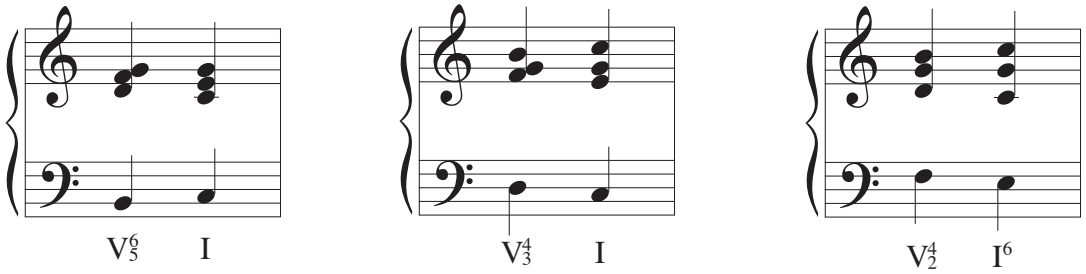






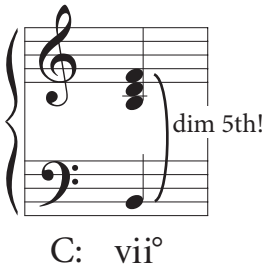
V^6_5, V^4_3 and V^4_2

Inverted V^7's are usually pretty straightforward. You want to use all four notes in the chord - put whatever tone you need in the bass and distribute the others on top. Then, just follow your tendency tones. *Fa* goes to *mi*, *ti* goes to *do*, *re* should probably also go to *do*, and *sol* holds over.

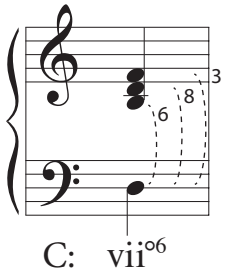


Chapter 5: Playing with vii°7

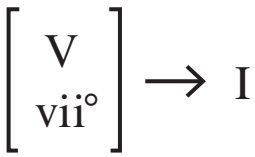
Up until now we've completely avoided the vii° chord, and there's a pretty good reason for that. Classical composers didn't like the sound of the vii° in root position, because they thought the diminished fifth was too harsh against the bass.

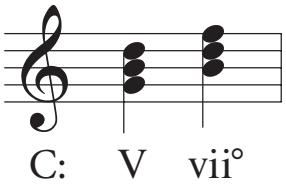


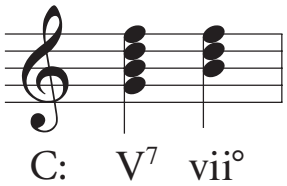
Interestingly, they didn't have a problem with vii°6, because putting the chord in first inversion makes all "nice" intervals against the bass.



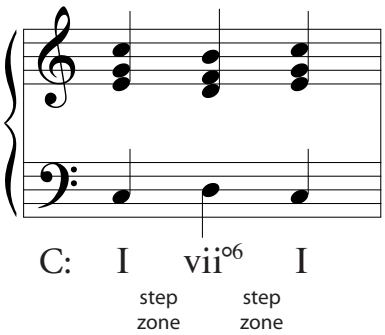
The vii°6 triad usually functions as a substitute for the V chord. If you compare the V and vii° you can see that they share two notes in common. And, perhaps more convincingly, the vii° is equivalent to the upper tones of the V7 chord.







If you really wanted to write a I - vii°6 - I progression you could pull it off by thinking of your step zones.

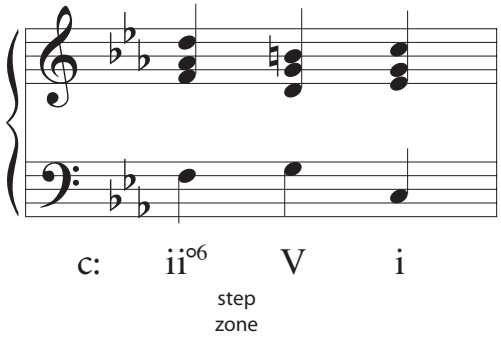


However, we aren't really going to bother with that! Just be mindful that this is something you might see in classical music.

ii°6 in minor

Also the same principle holds for ii° in minor. Classical composers were unlikely to use the diminished ii° in root-position, instead preferring ii°6. Instead of ii° - V - i they would write ii°6 - V - i.

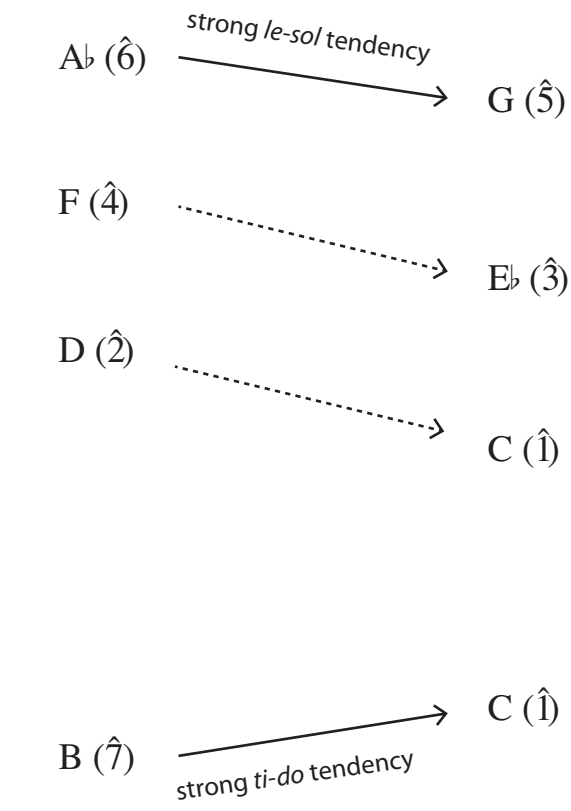
This is actually easy to write if you remember to mind the new "step zone" in the bass line.



But again I don't think we need to worry about this particular progression.

vii°7 in minor

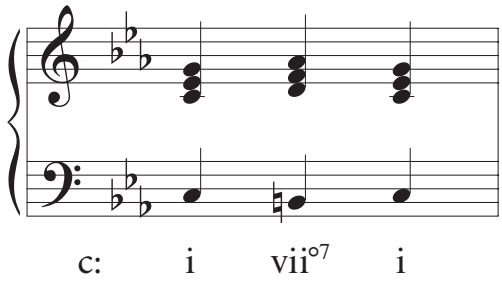
What we WILL practice a little bit is vii°7 to i in minor. Like with V7, the tones in this seventh chord have certain "tendencies" that we need to observe. As long as we follow the tendencies it will be a piece of cake.

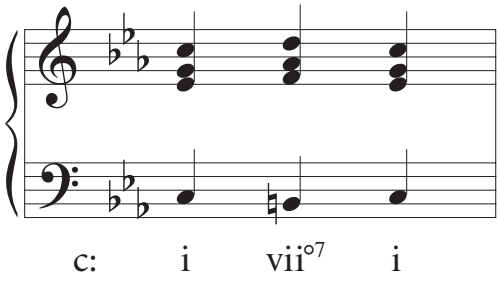


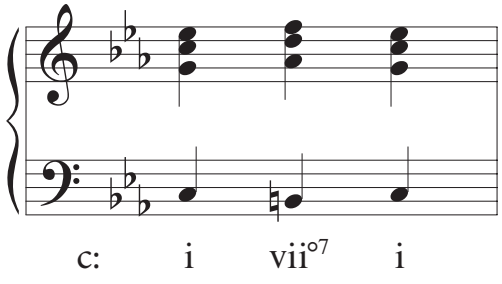
c: vii°7 i

Our root of the vii°7 wants to resolve to the tonic, *ti-do*. We'll take the upper tones and slide them down to the i chord. In particular, the seventh of the vii°7 has a very strong tendency to sink downward, *le-sol*.

To keep it simple we'll do i - vii°7 - i, not worrying about other chords that might lead up to vii°7.

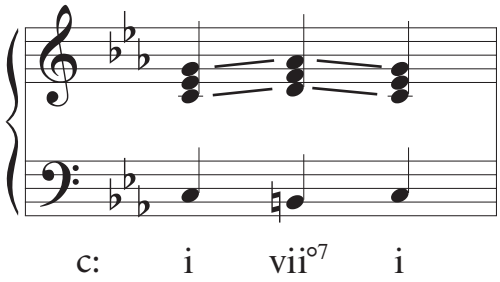






Unequal fifths

Perhaps the most eagle-eyed reader might notice something odd about our first i - vii^{o7} - i progression. We don't normally push triad shapes up and down like that. Isn't it making parallel fifths in the soprano and tenor?



The answer is no, because these are "unequal fifths." C-G is a perfect fifth but D-A♭ is diminished. It's not literally parallel motion so this is considered fine. You are only allowed to get away with this in your upper parts, though.