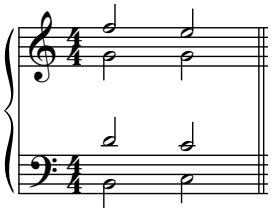
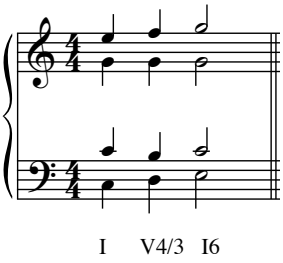
Inversions of V_7



V^6_5

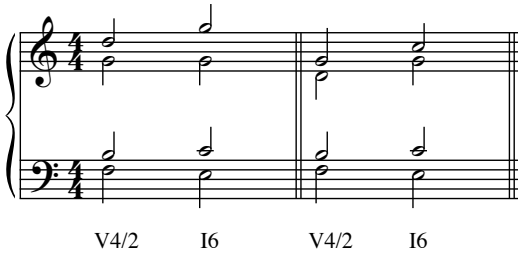
Because the leading tone is in the bass, V^6_5 always resolves to root-position I.

Though many soprano voices are possible, the most idiomatic possibility is to put the seventh in the soprano, so that the soprano moves from $\hat{4}$ to $\hat{3}$. This is effective because the most active scale degrees are in the outer voices.



V^4_3

V^4_3 is very similar to both vii°_6 and V^6_4; in fact, if you combine the scale degrees from those chords, the result is V^4_3. Like vii°_6, V^4_3 resolves to either I or I_6. It is most typically used to harmonize parallel tenths between the outer voices moving between I and I_6, and like vii°_6 the parallel tenths sanction a special exception to the rules: $\hat{4}$ is the seventh of the chord, and as such must in all other circumstances resolve down by step; when V^4_3 moves to I_6, however, the seventh may move up by step to $\hat{5}$. The scale degrees exactly parallel those used in vii°_6, with $\hat{2}$ to $\hat{3}$ in the bass sanctioning the unusual move from $\hat{4}$ to $\hat{5}$ in the soprano.



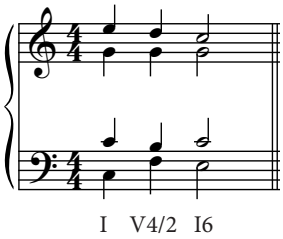
V^4_2

Because the seventh is in the bass, V^4_2 must resolve to I_6. While a number of soprano voices are possible (including a resolving leading tone, switching the typical outer voices in V^6_5), the most idiomatic option is to leap up a fourth in the soprano, either from $\hat{2}$ to $\hat{5}$ or from $\hat{5}$ to $\hat{1}$. This creates nice counterpoint (contrary motion, leap against step), and it is a good opportunity to expand a melody's register.

Doubling and Voice Leading

Inversions of V_7 are always complete, so there are no doublings. The leading tone always resolves in an outer voice, and the seventh always resolve in any voice, with the exception of moving up by step in parallel tenths with the bass out of V^4_3.

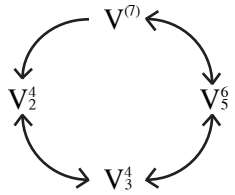
Using Inversions of V_7



Despite the similarity of V^4_3 to $vii^{\circ}{}_6$ and V^6_4, V^4_3 cannot be used to fill in a voice exchange using passing tones in the outer voices, for the simple reason that this would result in a doubled fifth, leaving the chord quite audibly incomplete (or else turning it into a $vii^{\circ}{}_6$). Inversions of V_7 can be used to expand voice exchanges, they just involve one passing tone and one incomplete neighbor in the outer voices. For example, if the bass ascends from I to I_6 and the passing tone is in the soprano, which inversion of V_7 would be most effective? V^4_2 works well here, because it leads naturally to I_6. All of the permutations of ascending v. descending bass and PT in soprano or bass can be set except one; when the soprano moves from $\hat{2}$ to $\hat{3}$, setting this as part of a voice exchange using an inversion of V_7 is not possible. (Why not?)

Inversions of V_7 often act like incomplete neighbors in the bass; while they must resolve to I or I_6, they may be approached from any chord that leads to V.

Just like V and V_6, multiple inversions of V_7 can be used to expand dominant harmony. When doing this, use the following circle as a guide.



The most basic guideline is not to move across the circle, but only by a single step along the circle. A move across the circle would juxtapose root position V_7 with V^4_3, a voice-leading chord, or else create conflicting drives to resolution in the bass with V^6_5 and V^4_2. Note that the arrow between $V_{(7)}$ and V^4_2 points toward V^4_2; while V^4_2 can follow V or V_7 effectively, it doesn't work to move the bass from the seventh to the root; we still want to hear I_6 to resolve V^4_2, but the stable root-position V wants to move to root-position I (and will create a doubled third if it instead moves to I_6).

A final note: following root-position dominant harmony, V^6_5 and V^4_2 are often most effective when they introduce the seventh – i.e. when they come from V, not V_7.