

## Chromatic wedge progressions and common-tone diminished seventh chords

This handout supplements MGTA, pp. 625-629.

The textbook's discussion of **chromatic wedge progressions** is excellent, but the discussion of **common-tone diminished sevenths** is a bit misleading in that MGTA treats  $ct^{o7}$  chords as if they were a generalized phenomenon. However, in practice  $ct^{o7}$  chords are commonly encountered in only three contexts—leading to I, to V or  $V^7$ , and to  $ii^7$ —which are most easily learned as three particular idioms.

The two most frequently used  $ct^{o7}$  chords are those resolving to I and to V (or  $V^7$ ). In both cases the common tone is the root of the chord of resolution.

1) **Resolving to I.** The voice leading is as follows:  $\sharp\hat{2}$  acts as a neighbor to  $\hat{3}$ .  $\sharp\hat{4}$  and  $\hat{6}$  act as neighbors to  $\hat{5}$  (leading to a I chord with a doubled fifth).  $\hat{1}$  is a common tone.

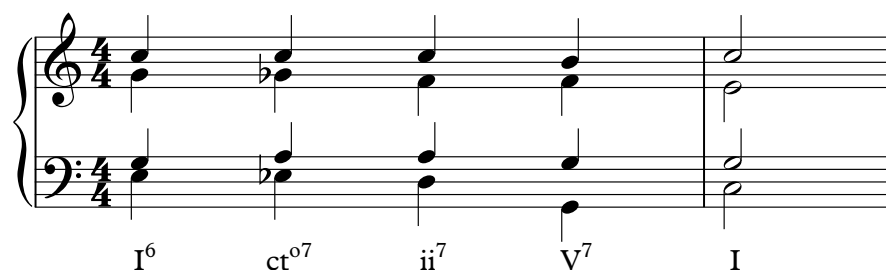
The musical notation shows a chromatic wedge progression resolving to I. It consists of three measures. The first measure contains a I chord (C major) in the bass clef. The second measure contains a  $ct^{o7}$  chord (C diminished seventh) in the bass clef. The third measure contains a I chord (C major) in the bass clef. The notes are: I (C4, E4, G4),  $ct^{o7}$  (C4, E4, G4, Bb4), I (C4, E4, G4). The bass clef is used for all chords. The notes are: I (C4, E4, G4),  $ct^{o7}$  (C4, E4, G4, Bb4), I (C4, E4, G4). The bass clef is used for all chords. The notes are: I (C4, E4, G4),  $ct^{o7}$  (C4, E4, G4, Bb4), I (C4, E4, G4). The bass clef is used for all chords.

This results in a chord spelled as if its root were  $\sharp\hat{2}$ . However,  $ct^{o7}$  chords do not behave according to root-based progression principles, so there's no root in the usual sense;  $ct^{o7}$  chords should be analyzed simply as  $ct^{o7}$ , regardless of "inversion". (The chord of resolution will determine whether a  $\sharp iii^{o7}$  should be labeled as  $ct^{o7}$  or  $vii^{o7}/iii$ , as in the last example above.)

2) **Resolving to V or  $V^7$ .** This  $ct^{o7}$  chord is spelled as  $\sharp vi^{o7}$ . The voice leading is analogous to the  $ct^{o7} \rightarrow I$ :  $\sharp\hat{6}$  acts as a neighbor to  $\hat{7}$ ,  $\sharp\hat{1}$  acts as a neighbor to  $\hat{2}$ ,  $\hat{5}$  is a common tone. If there is no seventh in the V chord,  $\hat{3}$  goes down to double the fifth, just as in the  $ct^{o7} \rightarrow I$ . If there is a seventh, then  $\hat{3}$  acts as its lower neighbor.

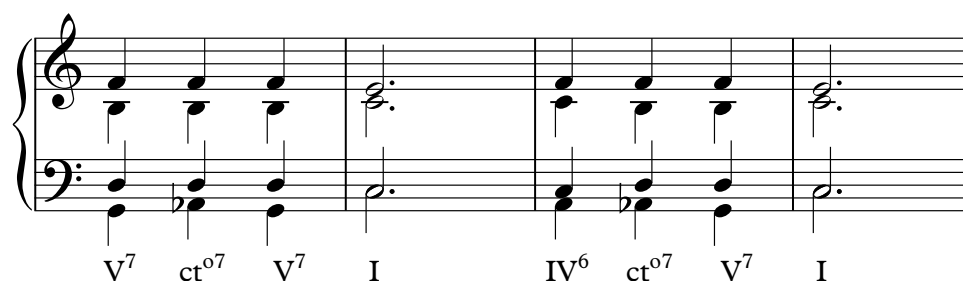
The musical notation shows a chromatic wedge progression resolving to V or  $V^7$ . It consists of three measures. The first measure contains a V chord (F major) in the bass clef. The second measure contains a  $ct^{o7}$  chord (F diminished seventh) in the bass clef. The third measure contains a V chord (F major) in the bass clef. The notes are: V (F4, A4, C5),  $ct^{o7}$  (F4, A4, C5, Eb5), V (F4, A4, C5). The bass clef is used for all chords. The notes are: V (F4, A4, C5),  $ct^{o7}$  (F4, A4, C5, Eb5), V (F4, A4, C5). The bass clef is used for all chords. The notes are: V (F4, A4, C5),  $ct^{o7}$  (F4, A4, C5, Eb5), V (F4, A4, C5). The bass clef is used for all chords.

3) **Resolving to  $ii^7$ .** The other conventional  $ct^{o7}$  chord resolves to  $ii^7$  (never to just a  $ii$  triad). The common tones are the 5<sup>th</sup> and 7<sup>th</sup> of the  $ii^7$ . It is most often used to connect  $I^6$  to  $ii^7$ .



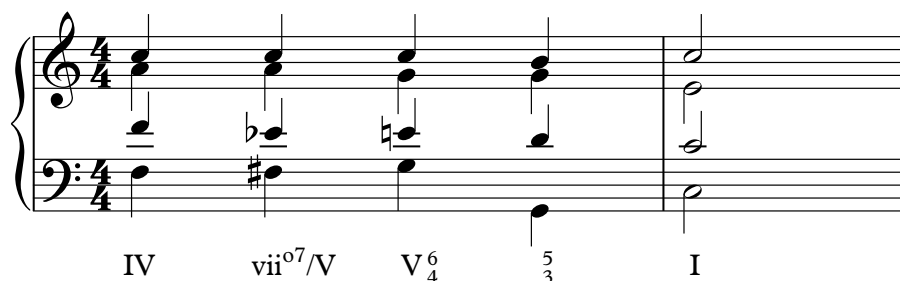
This is enharmonically equivalent to the  $ct^{o7} \rightarrow I$ , but the downward voice leading of  $ct^{o7} \rightarrow ii^7$  generally leads it to be spelled as if the root were scale degree  $\hat{6}$ .

3½)  $ct^{o7}$  or  $vii^{o7}$ ? Finally,  $V^7$  can be approached via a similar downward voice leading:



As in the  $ct^{o7} \rightarrow ii^7$ , the 5<sup>th</sup> and 7<sup>th</sup> are common tones (and so is the 3<sup>rd</sup>). MGTA identifies this as a  $ct^{o7}$  chord, which is logical (see example 30.30). But it can also be analyzed as a regular  $vii^{o7}$  chord, since  $vii^{o7}$  has a dominant function and may proceed to  $V^7$  before resolving to the tonic. It is worth noting that this sort of usage is reasonably common in Classical style, while the other  $ct^{o7}$  chords are more characteristic of Romantic and 20<sup>th</sup>-C music.

Speaking of Classical antecedents, the  $ct^{o7}$  chord may have developed from the cadential idiom in which  $vii^{o7}/V$  proceeds to a cadential  $\frac{6}{4}$  chord before resolving to  $V$ .



In this idiomatic cadential pattern, the seventh of the diminished chord resolves up to  $\hat{3}$ . We can choose to understand this as a momentary delay of the “proper” downward resolution to  $\hat{2}$ , and feel that the diminished chord still functions as  $vii^{o7}/V$  because the cadential  $\frac{6}{4}$  belongs to the dominant function. But the voice leading is identical to that of the  $ct^{o7} \rightarrow I$ . In fact, in this context composers sometimes wrote the “ $vii^{o7}/V$ ” chord with  $\sharp\hat{2}$  in place of  $\flat\hat{3}$ .

