

## Fully-Diminished and Half-Diminished 7th Chords

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The Diatonic half-diminished ( $\text{vii}^{\flat 7}$ ) and fully-diminished ( $\text{vii}^{\circ 7}$ ) 7th chords are built on the Leading Tone (*ti*) in major and minor keys, and are Dominant-function chords.

The half-diminished 7th chord ( $\text{vii}^{\flat 7}$ ) is diatonic in *major* keys, comprising scale degrees:

$\hat{7} \hat{2} \hat{4} \hat{6}$  (*ti re fa la*)

The fully-diminished 7th chord ( $\text{vii}^{\circ 7}$ ) is diatonic in *minor* keys, comprising scale degrees:

$\hat{7} \hat{2} \hat{4} (\downarrow)\hat{6}$  (*ti re fa le*).

Note that the  $\text{vii}^{\circ}$  triad in either a major or minor key is the upper three notes of a  $\text{V}^7$ . Thus, if you can spell a Dominant 7th in any *major* key, omit the root and add *la* and you will have the  $\text{vii}^{\flat 7}$ ; in *minor*, omit the root and add *le*, and you will have the  $\text{vii}^{\circ 7}$ :

C:  $\text{V}^7$   $\text{vii}^{\flat 7}$ c:  $\text{V}^7$   $\text{vii}^{\circ 7}$ 

Alternatively, many people think of Leading-tone 7th chords as Dominant 9th chords without the roots. The Dominant 9th in a *major* key is a major-minor 7th with a *Major* 9th, comprising scale degrees:

$\hat{5} \hat{7} \hat{2} \hat{4} \hat{6}$  (*sol ti re fa la*).

The Dominant 9th in a *minor* key is a major-minor 7th with a *Minor* 9th, comprising scale degrees:

$\hat{5} \hat{7} \hat{2} \hat{4} (\downarrow)\hat{6}$  (*sol ti re fa le*).

So if you can spell the diatonic  $\text{V}_7^9$  in a major or minor key, just omit the root and you will have the  $\text{vii}^{\flat 7}$ , or  $\text{vii}^{\circ 7}$ , respectively:

C:  $\text{V}^7$   $\text{V}^{(M)9}_7$   $\text{vii}^{\flat 7}$ c:  $\text{V}^7$   $\text{V}^{(m)9}_7$   $\text{vii}^{\circ 7}$