

# Diminished 7th Chords — Common Progressions and Principles

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The following principles concerning diminished 7th chords are pretty complicated and take quite awhile to absorb, unfortunately. While it is quite possible that part of the fault lies with the choice of words (and I apologize if this is so), much must be said if the chords are to be *thoroughly* understood and used with knowledge, and not just with a hope and a prayer.

A good idea might be to wait until you play a song that contains a diminished 7th chord before tackling the subject so you will have some place to relate it to. This way you will *gradually* absorb the material instead of trying to do a crash course which would probably slip away pretty quickly without application.

## Diminished 7th Chords

Certain progressions using  $^{\circ}7$  chords appear very often, especially in major keys, so naturally you want to be familiar with them. The  $^{\circ}7$  chord is an amazing chord in that ***any note in the chord can be called the root.***

Example: a  $C^{\circ}7$  chord contains the notes C, Eb, Gb, Bbb (A); an  $Eb^{\circ}7$  contains the notes Eb, Gb, Bbb (A), Dbb (C); an  $F\#^{\circ}7$  ( $Gb^{\circ}7$ ) contains F# (Gb), A, C, Eb; and an  $A^{\circ}7$  contains A, C, Eb, Gb.

All 4 chords contain the same notes. They are called SYNONYMS (or Homonyms). This makes for problems when trying to name the chord; many people prefer to name the chord according to the bass note. Others prefer to group them into 3 categories, each containing 4 members (more on this soon). And there are many cases where a  $^{\circ}7$  chord can be renamed as a 7b9 chord (more on this also will follow).

Here is a chart of the  $^{\circ}7$  chords, grouped according to which ones are the same:

$i^{\circ}7$ Family:	{	$i^{\circ}7$	=	$biii^{\circ}7$	=	$\#iv^{\circ}7$	=	$vi^{\circ}7$
		$C^{\circ}7$		$Eb^{\circ}7$		$F\#^{\circ}7$		$A^{\circ}7$
$iv^{\circ}7$ Family:	{	$iv^{\circ}7$	=	$\#v^{\circ}7$	=	$vii^{\circ}7$	=	$ii^{\circ}7$
		$F^{\circ}7$		$G\#^{\circ}7$		$B^{\circ}7$		$D^{\circ}7$
$v^{\circ}7$ Family:	{	$v^{\circ}7$	=	$bvii^{\circ}7$	=	$\#i^{\circ}7$	=	$iii^{\circ}7$
		$G^{\circ}7$		$Bb^{\circ}7$		$C\#^{\circ}7$		$E^{\circ}7$

This chart will be important for certain types of MODULATION (key changing) techniques later, but for now it is just here for *reference* (you don't have to memorize it now).

Here are some common progression using  $^{\circ}7$  chords, with the  $^{\circ}7$  chords named according to the bass note; try them out.

- Em7 or
- 1)  $C/E$   $Eb^{\circ}7/Eb$   $Dm7/D$   $G9/G$       2)  $C7/C$   $C\#^{\circ}7/C\#$   $Dm7/D$   $G7/G$       3)  $F/F$   $F\#^{\circ}7/F\#$   $C/G$
- ↑  
bass note
- 4)  $C/C$   $C\#^{\circ}7/C\#$   $Dm7/D$   $Eb^{\circ}7/Eb$   $C/E$   $Fm6/F$   $F\#^{\circ}7/F\#$   $C7/G$
- 5)  $G/B$   $Bb^{\circ}7/Bb$   $F/A$   $Ab^{\circ}7/Ab$   $Em/G$   $G^{\circ}7/G$   $D/F\#$   $F^{\circ}7/F$   $C/E$   $Eb^{\circ}7/Eb$   $Dm7/D$   $G7/G$   $Cadd9/C$

Notice that *1st* (and occasionally a 2nd) ***Inversions of Triads*** pop up all over the place in these progressions. Even though you were advised that triads are not used too much in modern harmony tunes, as you get more used to creating rich chordal effects, you will be able to hear how to tastefully use triads without making everything sound too plain or too much like Renaissance and Baroque music (nothing wrong with these types of music—they are great—but we are dealing with 20th Century harmony on these sheets).

Notice in progression (5) above that naming the  $^{\circ}7$  chords from the bass makes it hard to see the logic of the progression. You might say, “The logic is clear – it is based on a descending bass”; but what about the Em to G $^{\circ}7$ ? No, the logic is based on following each triad with a  $^{\circ}7$  chord of the same name:

G/B G $^{\circ}7$ /Bb F/A F $^{\circ}7$ /Ab Em/G E $^{\circ}7$ /G D/F# D $^{\circ}7$ /F C/E C $^{\circ}7$ /Eb Dm7/D G7/G Cadd9/C

So always be on the lookout, when you see  $^{\circ}7$  chords, for easier ways to name them. The last determining factor in naming them has to do with more SYNONYMS. Any  $^{\circ}7$  chord contains the same notes as 4 different incomplete (no root) 7b9's.

Here is a *reference* chart of the affinities between  $^{\circ}7$  and 7b9 chords:

All i $^{\circ}7$ family $^{\circ}7$ chords	=	(II7b9), IV7b9, (bVI7b9), (VII7b9)	The circled chords are the most commonly used ones.
All iv $^{\circ}7$ family $^{\circ}7$ chords	=	(V7b9), bVII7b9, bII7b9, (III7b9)	
All v $^{\circ}7$ family $^{\circ}7$ chords	=	(VI7b9), I7b9, bIII7b9, #IV7b9 ← (also called bV7b9)	

Many people might prefer to rename certain  $^{\circ}7$  chords as 7b9's; the advantage is that this method opens up other doors:

Notice that in progression (2) on the previous page, you could rename the C $^{\circ}7$  as A7b9 (which is logical because it is a secondary V7). Now here is the advantage: If you can play A7b9, you might try A7+ or A7b9+ or A7#9+ (or even Eb9 or 13 by way of the cross-cycle principle). Calling the chord C $^{\circ}7$  doesn't open all these doors.

Here is a suggested list of commonly done conversions (major key) of  $^{\circ}7$ 's to 7b9's:

- 1) When any v $^{\circ}7$  family,  $^{\circ}7$  chord progresses to a ii(7), ii $^{\circ}7$ , or II7, convert the  $^{\circ}7$  to **VI7b9**.
- 2) When any iv $^{\circ}7$  family  $^{\circ}7$  chord progresses to a vi or VI7, convert the  $^{\circ}7$  to **III7b9**
- 3) When any iv $^{\circ}7$  family  $^{\circ}7$  chord progresses to a I or iii, you might convert it to **V7b9**
- 4) When any i $^{\circ}7$  family  $^{\circ}7$  chord progresses to a ii, V or v, you might convert it to **II7b9 or bVI7b9**
- 5) When any i $^{\circ}7$  family  $^{\circ}7$  chord progresses to a iii or III, you might convert it to **VII7b9**
- 6) When any i $^{\circ}7$  family  $^{\circ}7$  chord progresses to anything, you might substitute II7, bVI7, VII7 or IV7 for the  $^{\circ}7$  chord.
- 7) When any  $^{\circ}7$  progresses to a 7th chord or triad of the same letter name, don't convert; if it is a disguised version of this, convert to same letter name.  
Examples: C/C G $^{\circ}7$ /C# G7/D is fine, but C/C C $^{\circ}7$ /C# G7/D should be converted to C G $^{\circ}7$  G7.  
Also in this type of case, you may try and substitute any of the four 7th chord families that are related by virtue of SYNONYMS.  
Example: instead of C/C G $^{\circ}7$ /C# G7/D you might try C/C Eb7/Db G7/D because G $^{\circ}7$  is also A7b9, C7b9, **Eb7b9**, and F#7b9.

By the way, if you ever do encounter a  $^{\circ}7$  chord in a minor key tune, you will be able to figure out what to do with it if you understand  $^{\circ}7$ 's in major keys.

One last word of caution: most sheet music incorrectly lists  $^{\circ}7$  chords as  $^{\circ}$  triads. Example: if you see something like C G $^{\circ}$  G7 or C Eb $^{\circ}$  Dm7, many times they actually mean C G $^{\circ}7$  G7, C Eb $^{\circ}7$  Dm7. If in doubt, either consult the piano staffs on the music or just play a  $^{\circ}7$  chord instead of a triad.

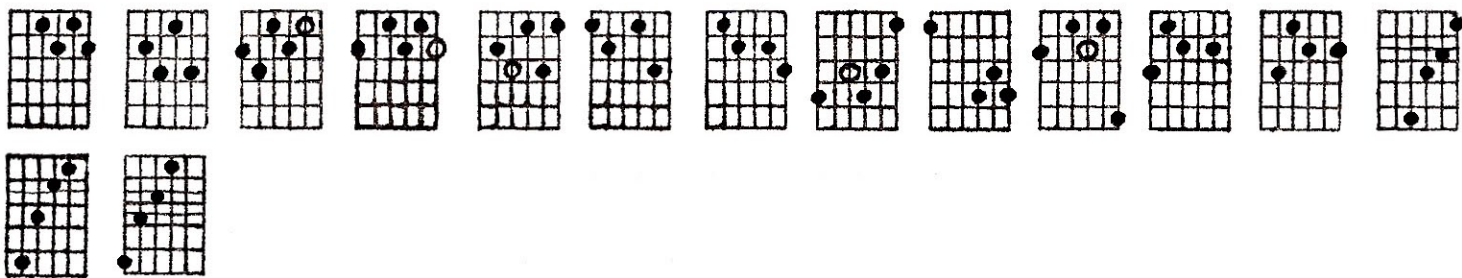
Often,  $^{\circ}7$  chords are played with non-chordal tones “frozen” on top of the chord; you will naturally end up with playing these chords when working out a song in chord-melody style (see *On a Clear Day*, *Pennies from Heaven*, *How About You*, *Manhattan*, and others).

Suggested tunes for getting into  $^{\circ}7$  chords:

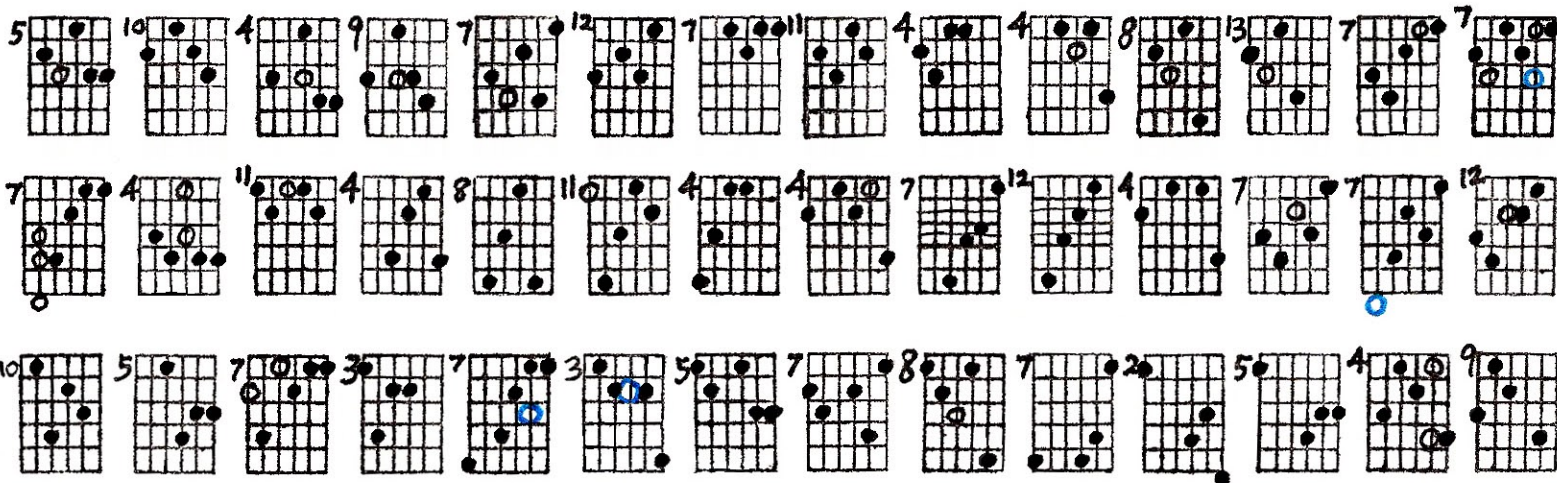
*Someone to Watch Over Me*, *People*, *Night and Day*, *Body and Soul*, *On a Clear Day*, *You Go to My Head*, *Birth of the Blues*, *San Francisco*, *Ol' Man River*, *Pennies from Heaven*, *How About You*, *Manhattan*, *This Nearly Was Mine*.

### DIMINISHED 7th FAMILY VOICINGS (all listed on C)

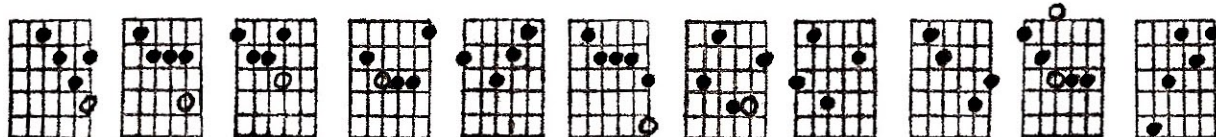
Try leaving out any note(s) in any voicing, if you are working in 3 NOTE HARMONY



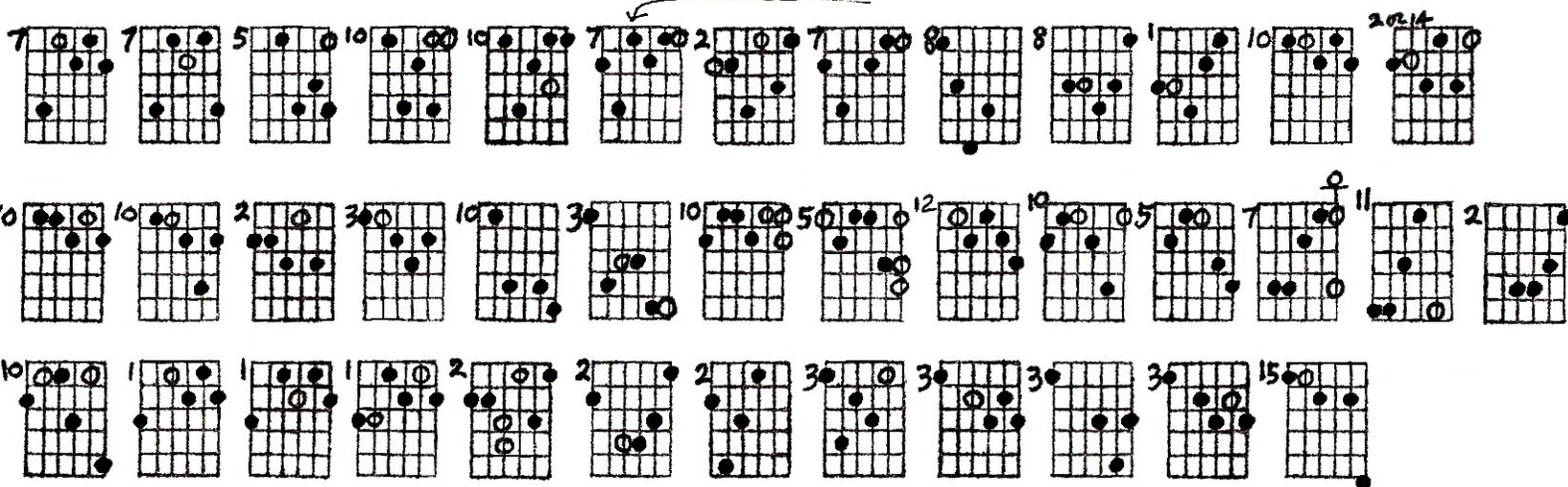
47th on top (if you move these forms in 3 fret increments, you get the (9th) (11th) 2ND, 4th + 6th on top)



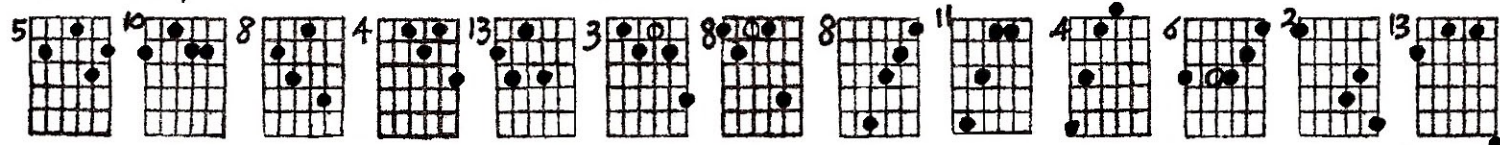
07's WITH INNER VOICE FROZEN UP A WHOLE STEP:



Forms with 45th in bass (some were listed above) and possible altered soprano or semi-bass



b7th on top -



Also try A<sup>b</sup>7, F7, D7, B7 + other inversions of A<sup>b</sup>9, 13, 13+11, 7/11 etc. and same on F, D.

The following principles concerning diminished 7th chords are pretty complicated, and take quite awhile to absorb, unfortunately. While it is quite possible that part of the fault lies with the choice of words, (and I apologize if this is so), much must be said if the chords are to be thoroughly understood and used with knowledge + not just with a hope and a prayer.

A good idea might be to wait until you play a song that contains a diminished 7th chord before tackling the subject so you will have some place to relate it to. This way you will gradually absorb the material instead of trying to do a crash course which would probably slip away pretty quickly without application.

**DIMINISHED 7th chords** - Certain progressions using 07 chords appear very often, especially in major keys, so naturally you want to be familiar with them. The 07 chord is an amazing chord in that any note in the chord can be called the root. Example: - a C<sup>07</sup> chord contains the notes C, Eb, Gb, Bbb(A); an Eb<sup>07</sup> contains the notes Eb, Gb, Bbb(A) Dbb(C); an F#<sup>07</sup>(Gb<sup>07</sup>) contains F#(Gb) A, C, Eb; and an A<sup>07</sup> contains A, C, Eb, Gb.

ALL 4 CHORDS CONTAIN THE SAME NOTES. THEY ARE CALLED **SYNONYMS** (HOMONYMS). This makes for problems when trying to name the chord; many people prefer to name the chord according to the bass note. Others prefer to group them into 3 categories, each containing 4 members (more on this soon), and there are many cases where a 07 chord can be renamed as a 7b9 chord (more on this also will follow).

Here is a chart of the 07 chords, grouped according to which ones are the same:

i <sup>07</sup> FAMILY	i <sup>07</sup> = biii <sup>07</sup> = #iv <sup>07</sup> = vi <sup>07</sup>
	C <sup>07</sup> Eb <sup>07</sup> F# <sup>07</sup> A <sup>07</sup>
iv <sup>07</sup> FAMILY	iv <sup>07</sup> = #v <sup>07</sup> = vii <sup>07</sup> = ii <sup>07</sup>
	F <sup>07</sup> G# <sup>07</sup> B <sup>07</sup> D <sup>07</sup>
v <sup>07</sup> FAMILY	v <sup>07</sup> = bvi <sup>07</sup> = #i <sup>07</sup> = iii <sup>07</sup>
	G <sup>07</sup> Bb <sup>07</sup> C# <sup>07</sup> E <sup>07</sup>

This chart will be important for certain types of MODULATION (key changing) techniques later, but for now it is just here for reference (you don't have to memorize it now).

Here are some common progressions using 07 chords, with the 07 chords named according to the bass note; try them out.

①  $\begin{matrix} \text{Em}7\text{ot} \\ \text{C} \\ \text{BASS NOTE} \rightarrow \text{E} \end{matrix} \quad \begin{matrix} \text{Eb}07 \\ \text{Eb} \end{matrix} \quad \begin{matrix} \text{Dm}7 \\ \text{D} \end{matrix} \quad \begin{matrix} \text{G}9 \\ \text{G} \end{matrix} \quad \textcircled{2} \quad \begin{matrix} \text{C}7 \\ \text{C} \end{matrix} \quad \begin{matrix} \text{C}\#07 \\ \text{C}\# \end{matrix} \quad \begin{matrix} \text{Dm}7 \\ \text{D} \end{matrix} \quad \begin{matrix} \text{G}7 \\ \text{G} \end{matrix} \quad \textcircled{3} \quad \begin{matrix} \text{F} \\ \text{F} \end{matrix} \quad \begin{matrix} \text{F}\#07 \\ \text{F}\# \end{matrix} \quad \begin{matrix} \text{C} \\ \text{G} \end{matrix}$

④  $\begin{matrix} \text{C} \\ \text{C} \end{matrix} \quad \begin{matrix} \text{C}\#07 \\ \text{C}\# \end{matrix} \quad \begin{matrix} \text{Dm}7 \\ \text{D} \end{matrix} \quad \begin{matrix} \text{Eb}07 \\ \text{Eb} \end{matrix} \quad \begin{matrix} \text{C} \\ \text{E} \end{matrix} \quad \begin{matrix} \text{Fm}6 \\ \text{F} \end{matrix} \quad \begin{matrix} \text{F}\#07 \\ \text{F}\# \end{matrix} \quad \begin{matrix} \text{C}7 \\ \text{G} \end{matrix} \quad \textcircled{5} \quad \begin{matrix} \text{G} \\ \text{B} \end{matrix} \quad \begin{matrix} \text{Bb}07 \\ \text{Bb} \end{matrix} \quad \begin{matrix} \text{F} \\ \text{A} \end{matrix} \quad \begin{matrix} \text{Ab}07 \\ \text{Ab} \end{matrix} \quad \begin{matrix} \text{Em} \\ \text{G} \end{matrix} \quad \begin{matrix} \text{G}7 \\ \text{G} \end{matrix} \quad \begin{matrix} \text{D} \\ \text{F}\# \end{matrix} \quad \begin{matrix} \text{F}07 \\ \text{F} \end{matrix} \quad \begin{matrix} \text{C} \\ \text{E} \end{matrix} \quad \begin{matrix} \text{Eb}07 \\ \text{Eb} \end{matrix} \quad \begin{matrix} \text{Dm}7 \\ \text{D} \end{matrix} \quad \begin{matrix} \text{G}7 \\ \text{G} \end{matrix} \quad \begin{matrix} \text{C} \\ \text{C} \end{matrix}$

Notice that 1st (and occasionally a 2ND) INVERSIONS of TRIADS pop up all over the place in these progressions - even though you were advised that triads are not used too much in modern harmony tunes, as you get more used to creating rich chordal effects, you will be able to hear how to tastefully use triads without making everything sound too plain or too much like Renaissance + Baroque music (nothing wrong with these types of music - they are great - but we are dealing with 20th CENTURY Harmony on these sheets).

Notice in progression ⑤ above that naming the 07 chords from the bass makes it hard to see the logic of the progression. You might say "the logic is clear - it is based on a descending bass", but what about the Em to the G<sup>7</sup>? No, the logic is based on following each triad with a 07 chord of the same name:  $\begin{matrix} \text{C} \\ \text{B} \end{matrix} \quad \begin{matrix} \text{G}07 \\ \text{Bb} \end{matrix} \quad \begin{matrix} \text{F} \\ \text{A} \end{matrix} \quad \begin{matrix} \text{F}07 \\ \text{Ab} \end{matrix} \quad \begin{matrix} \text{Em} \\ \text{G} \end{matrix} \quad \begin{matrix} \text{E}07 \\ \text{G} \end{matrix} \quad \begin{matrix} \text{D} \\ \text{F}\# \end{matrix} \quad \begin{matrix} \text{D}07 \\ \text{F} \end{matrix} \quad \begin{matrix} \text{C} \\ \text{E} \end{matrix} \quad \begin{matrix} \text{C}07 \\ \text{Eb} \end{matrix} \quad \begin{matrix} \text{Dm}7 \\ \text{D} \end{matrix} \quad \begin{matrix} \text{G}7 \\ \text{G} \end{matrix} \quad \begin{matrix} \text{C} \\ \text{C} \end{matrix}$

So always be on the lookout, when you see 07 chords, for easier ways to name them. The last determining factor in naming them has to do with more SYNONYMS. Any 07 chord contains the same notes as 4 different incomplete 7b9's. (two roots)

COMMON PROGRESSIONS + PRINCIPLES-

Here is a REFERENCE CHART of the affinities between 07 and 7b9 chords.

All i07 family 07 chords = II7b9, IV7b9, VI7b9, VII7b9

All iv07 family 07 chords = I7b9, bVII7b9, bII7b9, III7b9

All V07 family 07 chords = VI7b9, I7b9, bIII7b9, #IV7b9 (also called bV7b9)

The circled chords are the most commonly used ones.

Many people might prefer to rename certain 07 chords as 7b9's; the advantage is that this method opens up other doors:

Notice that in progression ② on the previous page, you could rename the C#07 as A7b9 (which is logical because it is a secondary V7). Now here is the advantage: if you can play A7b9, you might try A7+ or A7b9+ or A7#9+ (or even Eb9 or 13 by way of the cross-cycle principle). Calling the chord C#07 doesn't open all these doors.

- DEFINITELY ADVISED Here is a suggested list of commonly done conversions of 07's to 7b9's: (MAJOR KEY)
- ① when any V07 family 07 chord progresses to a ii7, ii9 or II7 convert the 07 to VI7b9
  - ② when any iv07 family 07 chord progresses to a vi or VI7 convert the 07 to III7b9
  - ③ " " " " " " " to a I or iii, you might convert it to V7b9
  - ④ when any i07 family 07 chord progresses to a ii, V, or V, you might convert it to II7b9 or VI7b9
  - ⑤ " " " " " " " " " iii or III " " " " VII7b9
  - ⑥ " " " " " " " to anything, you might substitute II7, bVI7, VII7 or IV7 for the 07 chord.
  - ⑦ when any 07 progresses to a 7th chord or triad of the same letter name, don't convert; if it is a disguised version of this, convert to same letter name

EXAMPLES: C/C G07# G7 is fine but C/C# G7 should be converted to C/C# D C G07 G7

Also in this type of case, you may try and substitute any of the 4 7th chord families that are related by virtue of SYNONYMS -> EXAMPLE:

instead of C/C G07# G7 you might try C/C Eb7 Db G7 because G07 is also A7b9, C7b9, Eb7b9, and F#7b9.

By the way, if you ever do encounter a 07 chord in a minor key tune, you will be able to figure out what to do with it if you understand 07's in MAJOR KEYS. One last word of caution: Most sheet music incorrectly lists 07 chords as triads -> EXAMPLE -> If you see something like C G0 G7 or C Eb0 Dm7, many times they actually mean C G07 G7, C Eb07 Dm7 - if in doubt, either consult the piano staves on the music or just play a 07 chord instead of a triad. Often, 07 chords are played with nonchord tones "frozen" on top of the chord; you will naturally end up playing these chords when working out a song in chord melody style (SEE 'CLEAR DAY, PENNIES FROM HEAVEN, HOW ABOUT YOU, MANHATTAN + OTHERS).

Some suggested tunes for getting into 07 chords:

SOMEONE TO WATCH OVER ME, PEOPLE, NIGHT + DAY, BODY + SOUL, 'CLEAR DAY, YOU GO TO MY HEAD, BIRTH OF THE BLUES, SAN FRANCISCO, OL' MAN RIVER, PENNIES FROM HEAVEN, HOW ABOUT YOU, MANHATTAN, THIS NEARLY WAS MINE