## Chord Construction (Formulas)

Your musical life will be much easier if you look for systems and ways to organize large clumps of knowledge into more easily digestible forms. The idea of chord construction can be simply broken down into 3 main groups of sound (and one small "odd-ball" group). Each of the 3 main groups has its own subdivisions and the groups are based on one basic chord type each, namely:

1) The MAJOR chord
2) The MINOR chord
3) The DOMINANT 7th chord
(The smaller group is based on the DIMINISHED 7th chord).
As you might know, chord construction can be, and is most often viewed in relation to major scales. For instance, any major chord is built by combining the 1, 3, and 5 (Root, 3rd and 5th tones) of its own major scale - like a G major chord contains the notes $G, B$, and $D$ which are the 1,3 , and 5 of the $G$ major scale.

If you are trying to figure out the notes in a chord that doesn't have a "normal" major scale (like A\# for example), you can relate to its more "normal" brother (A in this case) and then \# or 6 all the notes accordingly (\# in this case). Example: to find the notes in an A\# chord, find the notes of an A chord (A, C\#, and E) and \# them. $\rightarrow$ Answer: A\#, C× [this symbol means "double-sharp"] and E\#. Or, another good method is the one given in Elementary Harmony by Robert Ottman.

Not all notes need be played in most chords. Quite often, the 5th or Root (sometimes both) are left out; also much less often, the 3rd is omitted. (These statements refer to the chord voicings used by most guitarists who are involved with chords.) Also, these thoughts will come into focus as you work with the chord reference pages, chord progression pages, etc.

With all of this in mind, the following list is given for reference-you needn't try to memorize this material now-just keep referring back to it when you need to.

| MAJOR | MINOR |  |
| :---: | :---: | :---: |
| Major (triad) - 1,3,5 | Minor (triad) | - 1,b3,5 |
| Major 6th - 1,3,5,6 | m7th | - 1,b3,5,b7 |
| Major 7th - 1,3,5,7 | m7/11th | - 1,b3,5,b7,11 |
| Major /9th - 1,3,5,9 | m9th | - 1,b3,5,b7,9 |
| Major 9th - 1,3,5,7,9 | m11th | - 1,b3,5,b7,9,11 |
| Major 6/9th - 1,3,5,6,9 | m/9th | - 1,b3,5,9 |
| Major 13th - 1,3,5,7,9,13 | m7/13th | - 1,b3,5,b7,13 |
| Major 7/6th - 1,3,5,7,13 | $\begin{aligned} & \text { m9/13th } \\ & \text { m7/11/13th } \end{aligned}$ | $\begin{aligned} & \text { - 1,b3,5,b7,9,13 } \\ & -1, \mathrm{~b} 3,5, \mathrm{~b} 7,11,13 \end{aligned}$ |
| Major 6/9\#11 - 1,3,5,6,9,\#11 | m7b5 | - 1,b3,b5,b7 |
| Major 7\#11 - 1,3,5,7,\#11 | m7b5/11 | - 1,b3,b5,b7,11 |
| Major 9\#11 - 1,3,5,7,9,\#11 | m7+ | - 1,b3,\#5,b7 |
| Major /9\#11 - 1,3,5,9,\#11 | m7/11+ | - 1,b3,\#5,b7,11 |
| Major /\#11 - 1,3,5,\#11 |  |  |
| Suspended - 1,4,5 | m6 | - 1,b3,5,6 |
| $2-1,2,5$ | m6/9 | - 1,b3,5,6,9 |
|  | m6/7 | - 1,b3,5,6,7 |
|  | m6/9/7 | - 1,b3,5,6,7,9 |
|  | m6/11 | - 1,b3,5,6,11 |
|  | m6/9/11 | - 1,b3,5,6,9,11 |
|  | m6/9\#11 | - 1,b3,5,6,\#11 |
| Major 7+ - 1,3,\#5,7 | m7 | - 1,b3,5,7 |
| Major 9+ - 1,3,\#5,7,9 | m9 | - 1,b3,5,7,9 |

## DOMINANT

| Dominant 7th | - 1,3,5,b7 | DIMINISHED |  |
| :---: | :---: | :---: | :---: |
| Dominant 7/6th | -1,3,5,b7,13 |  |  |
| Dominant 9th | - 1,3,5,b7,9 |  |  |
| Dominant 13th | -1,3,5,b7,9,13 |  |  |
| Dominant 7sus | - 1,4,5,b7 | Diminished 7th | - 1,b3,b5,bb7(6) |
| Dominant 7/6sus | - 1,4,5,b7,13 | Diminished 7/7th | - 1,b3,b5,6,7 |
| Dominant 11th | - 1,5,b7,9,11 | Diminished 7/9th | - 1,b3,b5,6,9 |
| Dominant 13sus | - 1,5,b7,9,11,13 | Diminished triad | -1,b3,b5 |
| Dominant 13\#11th | - 1,3,5,b7,9,\#11,13 |  |  |
| Dominant 9\#11th | - 1,3,5,b7,9,\#11 |  |  |
| Dominant 9b5 | - 1,3,b5,b7,9 |  |  |
| Dominant 7+ | - 1,3,\#5, b7 |  |  |
| Dominant 7b5 | - 1,3,b5,b7 | $9=2$ | $11=4 \quad 13=6$ |

Dominant 7\#9 - 1,3,5,b7,\#9
Dominant 7b9 - 1,3, 5, b7,b9
Dominant 7\#9+ - 1,3,\#5,b7,\#9
Dominant 7b9+ - 1,3,\#5,b7,b9
Dominant 7\#9b5 - 1,3,b5,b7,\#9
Dominant 7b9b5 - 1,3,b5,b7,b9
Dominant 13b9 - 1,3,5,b7,b9,13
Dominant 13b9\#11 - 1,3,5,b7,b9,\#11,13
Dominant 13\#9 - 1,3,5,b7,\#9,13
Dominant 9+ - 1,3,\#5,b7,9
$+$
$+11 \mathrm{~b} 9$

- 1,3,\#5
- 1,3,\#5,b7,b9,11

$$
9=2
$$

$$
11=4
$$

$$
13=6
$$

The major, minor and dominant 7th will be referred to as the PARENT chords of the 3 FAMILIES of sound.

DIMINISHED
Diminished 7th - 1,b3,b5,bb7(6)
Diminished 7/7th - 1,b3,b5,6,7
Diminished 7/9th - 1,b3,b5,6,9
Diminished triad - 1,b3,b5

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Augmented chord can actually have its own little family too.

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As you minht know, chord construction canke, and inmoet oftan viewe ${ }^{3}$ in nelation to meaior Acalas be, and in for instance, anym-ajor chord is buile by combin ling the 1, 3, and 5 (Root, 3nd, and 5th notea $F$, $B$, and $D$ which are the 1, 3, and 5 Fif the jor chard contains the
th you are trying to figure out the mo ted in a chord that doesn' Lhare a "mormal" miajor ecale (litee A for example), youcan relate to to more "mormal" hrather (Acin thei cave) and then Tofind themotes in an $A$ 花 choid, $\operatorname{Hand}$ the motea of an A chord ( $A$, C A andE)
 is the ond fiven in Elemantan, R-innony hy Eobet ottman (asesepasate aheet Not all notes meed ke playedin most charda. Puite often, the 5thor Root (sometimes koth) are left out; also much lear often, the 3ind in omitted. (Thesesta tameitar, refer to the chord vocicin-yc waed by mostgritarists. whorare involved with chards). Aleo, thase thought in ill come in to fous as you work with the chord reference pages, choird progresoion paged, etc, With allofthis inmente, the fillowing bist is airen for seference- you beetit thy to memarine the neateral, mow just keep refersing back tu it whan you need to.

## MANOR

## MADOR (TRAD) - 1, 3,5

 6th $-1,3,5,6$" 7 th $-1,3,5,7$
" 19 th $-1,3,5,9$

$$
\text { m } 11 \text { th - } 1,63,5,63,9,11
$$ 9th $-1,3,5,7,9$ 6/9th-1,3,5,6,9

" 13 th- $1,3,5,7,9,13$
$\frac{117 / 6 \text { th }-1,3,5,7,13}{116(9+11-13,5,6,9+11}$

| $116,9+11-1,3,5,6,9,+11$ |
| :---: |
| $117+11-1,3,5,7,+11$ |
| $119+11-1,3,5,7,9,+11$ |
| $" 19+11-1,3,5,9,+11$ |
| $111+11-1,3,5,+11$ |
| SUSPENDED-1,4,5 |
| $2-1,2,5$ |
| $7+-1,3,45,7$ |
| $q+-1,3,45,7,9$ |

## MINOR

## DOMINANT



$$
\text { mith- } 1,63,5,67,9
$$ m m (92-1, 63,59 $m$ 7/13f2-1,63,5,67,13 $m$ ? $1 / 15011,1,63,5,67,9,13$ $m 7 / 11 / 134-1,6,3,5,67,11,13$


m7 1, 1,53,5,7
$m, 7,63,5,7,7$
" 13 H-1, 3, 5, 67,9,13
" 7505-1, $4,5,67$ " $7 / 6505-1,7,5,67,13$ " 11 th $-1,5,67,9,11$ "135u5-1,5,67,9,11,13
" $13+11$ th $-1,3,5,67,9,+11,13$ $9+11$ h $-1,3,5,6,7,9,+11$ $965-1,3,55,679$ $17+-1,3, \# 5,67$ $765-1,3,65,67$ 749-1,3,5,65, 株 ,769-1,3,5,67,69 $74=9+1,3,75,67,49$ " $76 q+-1,3,45,67,69$ $117965-1,3,65,67,40$ $76965-1,3,65,67,69$ $1369-1,3,5,67,69,13$ $1369+11-1,2,5,6,69,+11,13$ $13+19-1,3,5,67,49,13$
$9+-1,3,45,67,9$
$+-1,3,45$
$7+-1,3,75,7$
$q+-1,3,4,0,0$

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domanayt 7 H willbe
reperred to as the BARENT Chor da of the,

## DIMINISHED

DIMINLSHED 7th - 1,63,65,667(6)
" $7 / 7 \mathrm{Fh}-1,63,65,6,7$
" $7 / 9$ th $-1,63,65,6,9$ $"$ TKLAD - 1, 63, 65

