

# Chord Construction (Formulas)

Ted Greene  
last update: 1976-05-26

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  $\flat$  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. → Answer: A#, C<sup>x</sup> [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.

<b>MAJOR</b>	<b>MINOR</b>
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	m9/13th — 1,b3,5,b7,9,13
	m7/11/13th — 1,b3,5,b7,11,13
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

<b>DOMINANT</b>	<b>DIMINISHED</b>
Dominant 7th — 1,3,5,b7	Diminished 7th — 1,b3,b5,bb7(6)
Dominant 7/6th — 1,3,5,b7,13	Diminished 7/7th — 1,b3,b5,6,7
Dominant 9th — 1,3,5,b7,9	Diminished 7/9th — 1,b3,b5,6,9
Dominant 13th — 1,3,5,b7,9,13	Diminished triad — 1,b3,b5
Dominant 7sus — 1,4,5,b7	
Dominant 7/6sus — 1,4,5,b7,13	
Dominant 11th — 1,5,b7,9,11	
Dominant 13sus — 1,5,b7,9,11,13	
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	
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	
+ — 1,3,#5 ←	
+11b9 — 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.

Augmented chord can actually have its own little family too.

# CHORD CONSTRUCTION (FORMULAS)

11-16-73  
12-31-74  
5-26-76

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, and 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 b 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 → Answer: A# C## and E#. Or, another good method is the one given in Elementary Harmony by Robert Ottman (see separate sheet on this). This symbol means "double sharp."

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.

<u>MAJOR</u>	<u>MINOR</u>	<u>DOMINANT</u>
MAJOR (TRIAD) - 1, 3, 5	MINOR (TRIAD) - 1, b3, 5	DOMINANT 7th - 1, 3, 5, b7
" 6th - 1, 3, 5, 6	m 7th - 1, b3, 5, b7	" 7th - 1, 3, 5, b7, 13
" 7th - 1, 3, 5, 7	m 7/11th - 1, b3, 5, b7, 11	" 9th - 1, 3, 5, b7, 9
" 10th - 1, 3, 5, 9	m 9th - 1, b3, 5, b7, 9	" 13th - 1, 3, 5, b7, 9, 13
" 11th - 1, 3, 5, 7, 9	m 11th - 1, b3, 5, b7, 9, 11	" 7sus - 1, 3, 5, b7
" 6/9th - 1, 3, 5, 6, 9	m 10th - 1, b3, 5, 9	" 7/6sus - 1, 4, 5, b7, 13
" 13th - 1, 3, 5, 7, 9, 13	m 7/13th - 1, b3, 5, b7, 13	" 11th - 1, 5, b7, 9, 11
" 7/6th - 1, 3, 5, 7, 13	m 9/13th - 1, b3, 5, b7, 9, 13	" 13sus - 1, 5, b7, 9, 11, 13
" 6/9+11 - 1, 3, 5, 6, 9, +11	m 7/11/13th - 1, b3, 5, b7, 11, 13	" 13+11th - 1, 3, 5, b7, 9, +11, 13
" 7+11 - 1, 3, 5, 7, +11	m 7b5 - 1, b3, b5, b7	" 9+11th - 1, 3, 5, b7, 9, +11
" 9+11 - 1, 3, 5, 7, 9, +11	m 7b5/11 - 1, b3, b5, b7, 11	" 9b5 - 1, 3, b5, b7, 9
" 10+11 - 1, 3, 5, 9, +11	m 7+ - 1, b3, #5, b7	" 7+ - 1, 3, #5, b7
" 1+11 - 1, 3, 5, +11	m 7b5/11 - 1, b3, b5, b7, 11	" 7b5 - 1, 3, b5, b7
SUSPENDED - 1, 4, 5	m 7+ - 1, b3, #5, b7	" 7#9 - 1, 3, 5, b7, #9
2 - 1, 2, 5	m 7/11+ - 1, b3, #5, b7, 11	" 7b9 - 1, 3, 5, b7, b9
7+ - 1, 3, #5, 7	m 6 - 1, b3, 5, 6	" 7#9+ - 1, 3, #5, b7, #9
7+ - 1, 3, #5, 7, 9	m 6/9 - 1, b3, 5, 6, 9	" 7b9+ - 1, 3, #5, b7, b9
	m 6/7 - 1, b3, 5, 6, 7	" 7#9b5 - 1, 3, #5, b7, #9
	m 6/9/7 - 1, b3, 5, 6, 7, 9	" 7b9b5 - 1, 3, b5, b7, b9
	m 6/11 - 1, b3, 5, 6, 11	" 13b9 - 1, 3, 5, b7, b9, 13
	m 6/9/11 - 1, b3, 5, 6, 9, 11	" 13b9+11 - 1, 3, 5, b7, b9, +11, 13
	m 6/9+11 - 1, b3, 5, 6, 9, +11	" 13#9 - 1, 3, 5, b7, #9, 13
	m 7 - 1, b3, 5, 7	" 9+ - 1, 3, #5, b7, 9
	m 9 - 1, b3, 5, 7, 9	+ - 1, 3, #5
		" 11b9 - 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, b7 (6)
- " 7/7th - 1, b3, b5, 6, 7
- " 7/9th - 1, b3, b5, 6, 9
- " TRIAD - 1, b3, b5

— augmented chord can actually have its own little family, too!