

Breakdown of 7th Chords

7th chords give everyone trouble, but they don't have to. I like to break them down on a theory of mutation. Let's start with the key of C major:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| C | D | E | F | G | A | B | C |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

As you can see the key of C major has no sharps or flats. It is the equivalent of playing all the "white" keys on the piano. However, this can be deceiving because the notes are not equidistant apart. The distance between C and D is known as a whole-step. The distance between E and F is known as a half-step. On a guitar the frets are measure in half-steps. This means that two frets equal a whole-step as you move up on one string. You should already be familiar with this. If not, then you need to review your basic understanding of a scale before learning about 7th chords. I only place this reminder to allow you to see this relationship:

w = whole-step

h = half-step

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | | D | | E | | F | | G | | A | | B | | C |
| | w | | w | | h | | w | | w | | w | | h | |
| 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 |

With this information we can determine the major and minor 3rd relationships that give us our seventh chords. A major 3rd equals two consecutive whole-steps and a minor 3rd equals a whole-step followed by a half-step or a half-step followed by a whole-step. In the chart below, you will see how each of these relationships determines the type of chord being played. For instance, an order of major 3rd – minor 3rd – major 3rd equals a major 7th chord. An order of major 3rd – minor 3rd – minor 3rd equals a dominant 7th chord. These patterns stay the same no matter where your starting point. That is why I have included two charts illustrating two different reference notes. Also remember that even though you will see a double-flat (bb), it needs to retain the same name as previously identified. If you call the B double-flat an A it will change the name of the chord in Chart 1 to include a 6th instead of a 7th. It is the "legal-eze" of chord structure.

Chart 1

Min 3 = Minor 3

Maj 3 = Major 3

| | | | | | | | | |
|----------|-------|-----------|-------|-----------|-------|------------|---|----------------------------|
| C | | E | | G | | B | = | CMaj7 |
| 1 | Maj 3 | 3 | Min 3 | 5 | Maj 3 | 7 | = | Major 7th |
| C | | E | | G | | Bb | = | C7 |
| 1 | Maj3 | 3 | Min3 | 5 | Min 3 | b7 | = | Dominant 7th |
| C | | Eb | | G | | Bb | = | Cm7 |
| 1 | Min 3 | b3 | Maj 3 | 5 | Min 3 | b7 | = | Minor 7 th |
| C | | Eb | | Gb | | Bb | = | Cm7b5 |
| 1 | Min 3 | b3 | Min 3 | b5 | Maj 3 | b7 | = | Minor 7 b5 |
| C | | Eb | | Gb | | Bbb | = | Cdim7 |
| 1 | Min 3 | b3 | Min 3 | b5 | Min 3 | bb7 | = | Diminished 7 th |

Chart 2

Min 3 = Minor 3

Maj 3 = Major 3

| | | | | | | | | |
|----------|-------|-----------|-------|-----------|-------|-----------|---|----------------------------|
| E | | G# | | B | | D# | = | CMaj7 |
| 1 | Maj 3 | 3 | Min 3 | 5 | Maj 3 | 7 | = | Major 7th |
| | | | | | | | | |
| E | | G# | | B | | D | = | C7 |
| 1 | Maj3 | 3 | Min3 | 5 | Min 3 | b7 | = | Dominant 7th |
| | | | | | | | | |
| E | | G | | B | | D | = | Cm7 |
| 1 | Min 3 | b3 | Maj 3 | 5 | Min 3 | b7 | = | Minor 7 th |
| | | | | | | | | |
| E | | G | | Bb | | D | = | Cm7b5 |
| 1 | Min 3 | b3 | Min 3 | b5 | Maj 3 | b7 | = | Minor 7 b5 |
| | | | | | | | | |
| E | | G | | Bb | | Db | = | Cdim7 |
| 1 | Min 3 | b3 | Min 3 | b5 | Min 3 | bb7 | = | Diminished 7 th |
| | | | | | | | | |