

# The seventh chords

When we add a **seventh note** (minor 7<sup>th</sup> or major 7<sup>th</sup> note) to **the basic triad** (root - third - fifth), we get a **seventh chord**.

**Triad chord + seventh note = seventh chord**

**Spelling of a seventh chord is: Root - third - fifth - seventh**

For example, if we have the chord C major or C minor, the root of the chord is the note C.

Minor 7<sup>th</sup> and major 7<sup>th</sup> notes with respect to C are:

- Minor 7<sup>th</sup> → B flat
- Major 7<sup>th</sup> → B

Major 7<sup>th</sup>, minor 7<sup>th</sup> notes are found using the sequence of notes (C C# D... G G# A A# B C) and the sequence of intervals (Root, minor 2<sup>nd</sup>, major 2<sup>nd</sup>..... major 6<sup>th</sup>, minor 7<sup>th</sup>, major 7<sup>th</sup>, octave).

Adding Bb or B note to C major or C minor gives us seventh chords.

When we add a major 7<sup>th</sup> or minor 7<sup>th</sup> note to a major or minor chord we get different kinds of seventh chords.

## How many types of seventh chords?

The spelling of a 7<sup>th</sup> chord is: root - third - fifth - seventh

To form a seventh chord for a given root, we find the third, fifth and seventh notes with respect to the root. There is more than one option available when filling up these notes. This gives us more than one kind of seventh chord for any root, while following the formula for sevenths.

- The root note is given. There are no options, just one root note.
- Only **one** fifth note for a given root.
- But **the third note has two options**: minor or major third.
- The seventh note also has **two** note options to choose from: minor seventh or major seventh.

Any **minor chord** which has a minor 3<sup>rd</sup> note can be combined with either a minor 7<sup>th</sup> or a major 7<sup>th</sup> note to give **2** different seventh chords.

Any **major chord** which has a major 3<sup>rd</sup> note can be combined with either a minor 7<sup>th</sup> or a major 7<sup>th</sup> note to give another **2** different 7<sup>th</sup> chords.

$$1 (\text{root}) \times 1 (\text{fifth}) \times 2 (\text{third}) \times 2 (\text{seventh}) = 4$$

**Total 4 combinations of third and seventh notes are possible for any given root along with its fifth note, giving us 4 seventh chords from each root.**

## The 4 seventh chords

The chart below gives the names of the seventh chords based on the third and seventh we choose.

Chord	Notes
minor7	Root 5 <sup>th</sup> m3 m7
Dominant7	Root 5 <sup>th</sup> M3 m7
Major7	Root 5 <sup>th</sup> M3 M7
mM7	Root 5 <sup>th</sup> m3 M7

(M3 → major 3<sup>rd</sup> note, m3 → minor 3<sup>rd</sup> note, m7 → minor 7<sup>th</sup> note, M7 → major 7<sup>th</sup> note)

Minor 3<sup>rd</sup> note + minor 7<sup>th</sup> note → minor 7<sup>th</sup> chord

## 7th chords as addition of 7th note to triad chords

The spelling of a minor 7<sup>th</sup> chord is: root – minor 3<sup>rd</sup> – fifth – minor 7<sup>th</sup>

The first part of the chord (root – minor 3<sup>rd</sup> - fifth) is the same as a minor chord from the root.

So, minor 7<sup>th</sup> chord = minor chord + minor 7<sup>th</sup> note.

Similarly, each of the seventh chords can be remembered **as additions of one of the two seventh notes (minor or major 7th) to either a major or a minor chord.**

**Minor chord + minor 7<sup>th</sup> = minor 7<sup>th</sup> chord**

**Minor chord + major 7<sup>th</sup> = minor major 7<sup>th</sup>**

**Major chord + minor 3<sup>rd</sup> = dominant 7<sup>th</sup>**

**Major chord + major 7<sup>th</sup> = major 7<sup>th</sup> chord**

## The 4 seventh chords of C

Spelling (formula) for 7<sup>th</sup> chords is: root – third – fifth – seventh

The third and seventh position has 2 options each. Each combination of third and seventh note will give us a different 7<sup>th</sup> chord of C.

The notes for seventh chords of C are:

- Root: C
- Fifth: G
- **Thirds** Major 3<sup>rd</sup> note: E, Minor 3<sup>rd</sup> note: Eb
- **Sevenths** Major 7<sup>th</sup> note: B, Minor 7<sup>th</sup> note: Bb

Now, use the chart above to get each of the seventh chords by using the appropriate notes.

Chord	root	fifth	3 <sup>rd</sup>	7 <sup>th</sup>
C minor7	C	G	E <sub>b</sub>	B <sub>b</sub>
C Dominant7	C	G	E	B <sub>b</sub>
C Major7	C	G	E	B
C mM7	C	G	E <sub>b</sub>	B

Combining a minor 3<sup>rd</sup> with minor 7<sup>th</sup> gives us the C minor 7<sup>th</sup> chord.

The major 3<sup>rd</sup> with major 7<sup>th</sup> gives us the C major 7<sup>th</sup> chord.

The major 3<sup>rd</sup> with minor 7<sup>th</sup> gives the C7 chord (C dominant).

The minor 3<sup>rd</sup> with the major 7<sup>th</sup> gives the C minor major 7<sup>th</sup> chord.

## Sevenths by adding 7<sup>th</sup> note to C major or minor

From the chart above, we see that C minor 7<sup>th</sup> and C minor major 7<sup>th</sup> both have a minor 3<sup>rd</sup> note. The minor 3<sup>rd</sup> note along with root and fifth gives the minor chord (3 note triad chord).

When the root is C, minor 3<sup>rd</sup> note along with the C and the fifth, gives the C minor chord.

Similarly, C major 7<sup>th</sup> and C dominant 7<sup>th</sup> both have the major 3<sup>rd</sup> note. The major 3<sup>rd</sup> note along with C note and the fifth note gives us the C major chord.

**So, each of the 4 seventh chords can be played by adding one of the two seventh notes (minor 7<sup>th</sup> or major 7<sup>th</sup>) to the C major or C minor chord.**

We get the C major 7<sup>th</sup> chord by adding the major seventh note (B) to the C major chord (C E G).

Adding the minor 7<sup>th</sup> note (B<sub>b</sub>) to C major chord gives us C dominant 7<sup>th</sup> (C7)

Adding the minor 7<sup>th</sup> note to the C minor chord gives C minor 7<sup>th</sup> chord (C E<sub>b</sub> G B<sub>b</sub>).

Adding the major 7<sup>th</sup> note to the C minor chord gives C minor major 7<sup>th</sup> chord (C E<sub>b</sub> G B).

## Seventh chords symbols or short codes

These are some of the commonly used symbols for the seventh chords.

**Dominant 7th** is the chord we refer to as the 'seventh' chord'. For example if you see G7, that is the G dominant 7th being referred to.

**Minor 7th** can be written as 'm7' or '-7'. For example G-7 is G minor 7th. Gminor7th can be written as **Gm7** or **Gmin7** also.

**Major 7th** can be written as **M7** or **Δ**. For example FΔ is F major 7th.

**Minor major 7th** is the root chord of the melodic minor scale. **mM7** or **Δ** refers to the minor major 7th chord.

Dominant 7th, minor 7th and major 7th chords are much used in popular and other music, while minor major seventh will be found rarely.

## Exercise for 7th chords

Below is a standard jazz progression. All the chords used are sevenths - minor, major or dominant. Find the notes for each chord.

**Fmi<sup>7</sup>      Bbmi<sup>7</sup>      Eb<sup>7</sup>      AbMA<sup>7</sup>      DbMA<sup>7</sup>      Dmi<sup>7</sup> G<sup>7</sup>      CMA<sup>7</sup>      CMA<sup>7</sup>**

*mi7 → minor 7<sup>th</sup>, MA7 → major 7<sup>th</sup>, 7 → dominant 7<sup>th</sup>*

**The sequence of notes :**

A A# B C C# D D# E F F# G G# A A# B C C#

**The sequence of intervals :**

root - minor 2<sup>nd</sup> - major 2<sup>nd</sup> - minor 3<sup>rd</sup> - major 3<sup>rd</sup> - perfect 4<sup>th</sup> - tritone (flat five, sharp four) - perfect 5<sup>th</sup> - minor 6<sup>th</sup> (sharp five) - major 6<sup>th</sup> - minor 7<sup>th</sup> - major 7<sup>th</sup> - octave

**Formulae for the seventh chords :**

<b>Chord</b>	<b>Common notes</b>	<b>Type of third</b>	<b>Type of seventh</b>
Major 7 <sup>th</sup>	Root, fifth	Major	Major
Minor 7 <sup>th</sup>	Root, fifth	Minor	Minor
Dominant 7 <sup>th</sup> (7 <sup>th</sup> )	Root, fifth	Major	Minor

**Procedure to find the notes of a seventh chord:**

1. From the chord symbol (mi7, MA7 or 7) identify the type of chord (minor 7<sup>th</sup>, major 7<sup>th</sup> or dominant 7<sup>th</sup>).
2. From the chart above, find the type of third and seventh used in that type of 7<sup>th</sup> chord.
3. From the sequence of notes, using the sequence of intervals, find the thirds and sevenths for the chord.

**Example :**

**Ab Major 7<sup>th</sup> (AbMA7)**

From the formulae for seventh chords, find out the notes included in a **major seventh chord: root, major 3<sup>rd</sup>, 5<sup>th</sup> and major 7<sup>th</sup>.**

From the sequence of intervals and the sequence of notes, find the notes corresponding to the intervals. From the sequence of notes, start with Ab as the root and **find out the major 3<sup>rd</sup> note, fifth note and major 7<sup>th</sup> note.**

r	m2	M2	m3	M3	4rth	4#	5th	m6	M6	m7	M7	R
Ab / G#	A	A#	B	C	C#	D	D# / Eb	E	F	F#	G	Ab / G#

We see that Ab major seventh has the notes : **Ab - C - Eb - G**