

TRIADS

Now that we know how to create and recognize intervals, we have the basis for understanding **harmony**—notes sounding (or at least being heard) at the same time. While the most basic harmonic element is the interval (two notes), we can go one step further and add a third, simultaneously-sounding note: now we have a chord. A chord with three notes (for our purposes) is called a **triad** ("tri" as in three notes). But these three notes are arranged in a particular way: in vertical 3rds (also called "stacked" 3rds).

The four basic triads derive their different **qualities** from the four possible ways to arrange major and minor thirds. A triad could be **Major**, **Minor**, **Diminished** or **Augmented** (just like the interval qualities). **PLEASE NOTE: A triad will always be named in terms of its root (the lowest note in the vertical arrangement of 3rds).** The examples below are all different kinds of "C" triads.

Major: a major third with a minor third on top
(the interval from the bottom to top note is a perfect 5th)

The diagram shows a treble clef staff with three notes: C4 (middle C), E4, and G4. A bracket between C4 and E4 is labeled "major 3rd". A bracket between E4 and G4 is labeled "minor 3rd". A larger bracket between C4 and G4 is labeled "perfect 5th between low & high notes". To the right of the staff is a blue box with the text "HALF STEPS" and the numbers "3" and "4" stacked vertically.

C major triad ("CM")

Minor: a minor third with a major third on top
(the interval from the bottom to top note is a perfect 5th)

The diagram shows a treble clef staff with three notes: C4, Bb4, and Eb4. A bracket between C4 and Bb4 is labeled "minor 3rd". A bracket between Bb4 and Eb4 is labeled "major 3rd". A larger bracket between C4 and Eb4 is labeled "perfect 5th between low & high notes". To the right of the staff is a blue box with the text "HALF STEPS" and the numbers "4" and "3" stacked vertically.

C minor triad ("cm")

Diminished: a minor third with another minor third on top
(the interval from the bottom to top note is a diminished 5th)

The diagram shows a treble clef staff with three notes: C4, Bb4, and Fb4. A bracket between C4 and Bb4 is labeled "minor 3rd". A bracket between Bb4 and Fb4 is labeled "minor 3rd". A larger bracket between C4 and Fb4 is labeled "diminished 5th between low & high notes". To the right of the staff is a blue box with the text "HALF STEPS" and the numbers "3" and "3" stacked vertically.

C diminished triad ("c^o", "c dim.")

Augmented: a major third with another major third on top
(the interval from the bottom to top note is an augmented 5th)

The diagram shows a treble clef staff with three notes: C4, E4, and G#4. A bracket between C4 and E4 is labeled "major 3rd". A bracket between E4 and G#4 is labeled "major 3rd". A larger bracket between C4 and G#4 is labeled "augmented 5th between low & high notes". To the right of the staff is a blue box with the text "HALF STEPS" and the numbers "4" and "4" stacked vertically.

C augmented triad ("C Aug.", "C+")

7TH CHORDS

The same process that brought about the three-note triad chord can be extended to make a four-note chord. The triad is formed by selecting every other note (three notes total) in a scale. If we add one more note through the same process (a third higher), we get a 7th chord. The top note (the last note added) is an intervallic 7th from the root (bottom note) of the chord.

Similar to the four qualities of the triads, there are five types of 7th chords:

Major, Minor, Dominant, Half Diminished and Diminished

Abstractly, the different qualities of the 7th chords can be determined by their interval contents:

Major 7th (a major triad plus a major 3rd) "CM7, C Maj7"
 Interval: M7 above root + major triad

Dominant 7th* (a major triad plus a minor 3rd) "C7, C dom7"
 Interval: m7 above root + major triad
 *also called: "Major-Minor 7th" and/or "7th"

Minor 7th (a minor triad plus a minor 3rd) "C-7, C min7"
 Interval: m7 above root + minor triad

Half Diminished 7th* (a diminished triad plus a major 3rd) "C-7b5, C^ø7"
 Interval: m7 above root + diminished triad
 *also called "7^ø"

Diminished 7th* (a diminished triad plus a minor 3rd) "C^o7, C dim7"
 Interval: d7 above root + diminished triad
 *also called "7^o"

*It is possible to have an **augmented** 7th chord (an augmented triad with a minor third on top), but it is most-often used in music after the Classical era.*

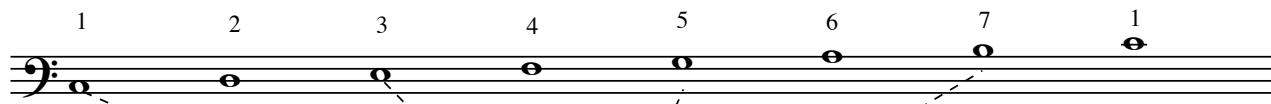
The superscript symbols for diminished and half diminished are:

Diminished: **o**

Half Diminished: **ø**

Seven basic 7th chords

All 7th chords can be thought of as "alterations" of a major 7th chord, which starts with a scale:

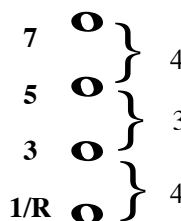


The major 7th chord comes from the 1, 3, 5, & 7 notes of the major scale



7th B
5th G
3rd E
1st/Root C

You can form a major 7th chord by using the 1st, 3rd, 5th and 7th notes of a major scale (as above), or you can space-apart the notes by a specific number of half steps (as seen on the right):



The number of half-steps between the notes of ANY major 7th chord

Once you form a major 7th chord, the other 7th chords can be made by altering notes above the root:

Major 7	Dominant 7	Minor 7	Half-diminished 7	Diminished 7
CΔ7	C [♮] Dom7	C-7	Minor 7, flat 5	Diminished 7
CM7	C [♮] Dom7	Cm7	C-7(b5)	C [°] 7
CMaj7	C7	Cmin7	Cm7(b5)	Cdim7

7	[♭] 7	[♭] 7	[♭] 7	^{♭♭} 7
5	5	5	[♭] 5	[♭] 5
3	3	[♭] 3	[♭] 3	[♭] 3
1/R	1	1	1	1

A quick guide to building the five most commonly-encountered 7th chords

This method lets you build 7th chords using half steps. The examples below will use G as a chord root, but the method works the same for any root note.

These half step formulae build the notes of the chord from the bottom- (root) up. It is best to do this process on a piano/keyboard so you can easily count half steps, but also so you can hear the chords (!). In the absence of a piano/keyboard, a picture of a keyboard (two octaves' worth) will work.

Major 7	HALF STEPS
"Gmaj7"	
F#	
D	4
B	3
G	4

Dominant 7	HALF STEPS
"G7"	
F	
D	3
B	3
G	4

Diminished 7	HALF STEPS
"G°7"	
Fb (E)	
Db	3
Bb	3
G	3

Minor 7	HALF STEPS
"G-7"	
F	
D	3
Bb	4
G	3

Minor 7, b5 aka Half - Diminished	HALF STEPS
"G-7 b5"	
F	
Db	4
Bb	3
G	3