## Intervals \& Chords

| Scale | Frets | Steps | Names of the Intervals and common symbols |
| :---: | :---: | :---: | :---: |
| Do | 0 | 0 | Perfect First, P1, First, unison, 1 |
|  | 1 | 1/2 | Minor Second, m2, flat two, b2, -2 |
| $\overline{\operatorname{Re}}$ | 2 | 1 | Major Second, M2, two, 2 |
|  | 3 | 11/2 | Minor Third, m3, flat three, b3, -3 |
| $\begin{aligned} & \mathrm{Mi} \end{aligned}$ | 4 | 2 | Major Third, M3, three, 3 |
| $\overline{\mathrm{Fa}}$ | 5 | $2^{1 / 2}$ | Perfect Fourth, P4, fourth, four, 4 |
|  | 6 | 3 | Diminished Fifth, Augmented Fourth, dim 5, aug 4, flat five, $b 5,-5$, sus 4 , tritone |
| Sol <br> 5 | 7 | 3112 | Perfect Fifth, P5, fifth, five, 5 |
|  | 8 | 4 | Augmented Fifth, Minor Sixth, aug 5, sharp five, \#5, m6, flat six, $b 6,+5,-6$ |
| La | 9 | 41122 | Major Sixth, M6, sixth, six, 6 |
|  | 10 | 5 | Minor Seventh, m7, flat seven, b7, -7 |
| $\begin{aligned} & \hline \mathrm{Ti} \\ & 7 \\ & \hline \end{aligned}$ | 11 | 51/2 | Major Seventh, M7, $\Delta 7$ |
| $\begin{aligned} & \hline \text { Do } \\ & 8 \text { (1) } \\ & \hline \end{aligned}$ | 12 | 6 | Perfect Eighth, P8, octave, eighth, eight, 8 |
|  | 13 | 61/2 | Minor Ninth, m9 (Octave above m2) |
| $\begin{aligned} & \hline \mathbf{R e} \\ & 9 \text { (2) } \end{aligned}$ | 14 | 7 | Major Ninth, M9 (Octave above M2), ninth, 9 |

The distance from one note to another is called an INTERVAL. Each interval has at least one name -- most have picked up nicknames along the way. The names of the intervals start with the Perfect First or the "one" interval. "One" means unison, or the difference between a note and itself. ("Zero" wasn't yet a mathematical concept in Europe when they made up this system.) Twelve half-tones later we get to the Perfect Eight or "Octave." In between are a lot of confusing names. Over the years, classical musicians tend to use the "proper" terms, while pop and jazz players have developed a shorthand for naming the intervals.
Don't let the jargon buffalo you. Here is a chart listing the more common interval names you might see in print or hear at a session. Remember, an interval is the distance between two notes. The first note is, by default, ONE. The interval you are searching for is $\boldsymbol{X}$ many steps UP from your ONE.
Below the table is a chart of some common chords, each with its interval "formula" alongside. In pop music, a chord always bears the name of its root note, followed with a word or two that indicates the harmony notes - the intervals given here are the distance from that root for each harmony note in the chord.

## common chord names

Major (M) (ma) (maj)
Minor (m) (min) (-)
Augmented (+) (aug)
Flat Five (b5)
Diminished ( ${ }^{\circ}$ ) (dim)
Suspended (sus4) (sus.)
Sus 2
Major sixth (sixth) (6) (M6)
Minor sixth (m6)
Seventh (dominant seventh) (7)
Major seventh (M7) ( $\Delta 7$ )
Minor seventh (m7) (-7)
Augmented seventh (+7) (7+5)
Diminished seventh (dim 7) ( ${ }^{\circ} 7$ )
Seventh flat five (7b5)
Minor seven flat five (m7b5)
Ninth (dominant ninth)(9)
Major ninth (M9)
Minor ninth (m9)
Add nine (add9)
Eleventh (11)
Thirteenth (13)
intervals based on the chord's root
$1-3-5$
$1-b 3-5$
$1-3-\# 5(b 6)$
$1-3-b 5$
$1-b 3-b 5$
$1-4-5$
$1-2-5$
$1-3-5-6$
$1-b 3-5-6$
$1-3-5-b 7$
$1-3-5-7$
$1-b 3-5-b 7$
$1-3-\# 5(b 6)-b 7$
$1-b 3-b 5-6(b b 7)$
$1-3-b 5-b 7$
$1-b 3-b 5-b 7$
$1-3-5-b 7-9$
$1-3-5-7-9$
$1-b 3-5-b 7-9$
$1-3-5-9$
$1-3-5-7-9-11$
$1-3-5-7-9-11-13$
intervals based on the chord's root
1-3-5
1-b3-5
1-3-\#5(b6)
1-3-b5
1-b3-b5
1-4-5
1-2-5
1-3-5-6
1-b3-5-6
1-3-5-b7
1-3-5-7
1-b3-5-b7
1-3-\#5(b6) - b7
1 - b3-b5-6 (bb7)
1-3-b5-b7
$1-b 3-b 5-b 7$
1-3-5-b7-9
1-3-5-7-9
-b3-5-b7-9
1-3-5-7-9-11
1-3-5-7-9-11-13

MAJOR vs. MINOR CHORDS
The words "major" and "minor" follow some conventions when used in a chord name. Don't get confused..
It is assumed that the "default" $3^{\text {rd }}$ is a major, and that the "default" seventh interval is minor.
So the word "minor" in a chord name means the triad is minor - we say nothing if the chord is major. The word "major" is reserved to indicate the $7^{\text {th }}$ is major - without the word "major" the $7^{\text {th }}$ interval is assumed to be minor.

So a C7 means a
C major chord with a minor $7^{\text {th }}$ added. While a CM7 means a
C major with a major $7^{\text {th }}$ added.
But a Cm7 means a
C minor chord with a minor $7^{\text {th }}$ added And the rare Cm(M7) would mean a
C minor chord with a major seventh.

