

Scales and Chords

Scales

A Scale is a set of notes arranged in a certain order according to a pattern of intervals. Scales provide the building blocks for Melodies and Chords. There are many different *types* of Scales but the most important (and common) are called Major and Minor.

The Major Scale uses the following pattern of Intervals: (W=Whole Step, H=Half Step)

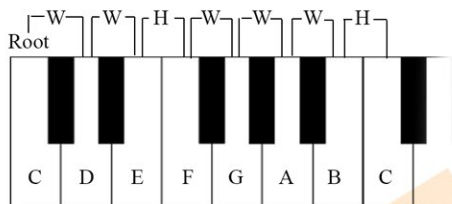
W W H W W W H

A Minor Scale uses the following pattern of Intervals:

W H W W H W W

The first Note in a scale, the Note for which that Scale is named, is called the Root. To find the Notes in any scale, choose a Root Note, then follow the corresponding Interval pattern for the *type* of Scale to get the rest of the notes in that Scale.

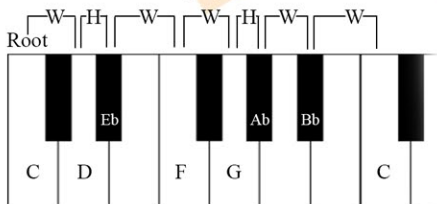
For example, a C Major Scale is built as follows:



Because we are making a C Scale, “C” is the Root Note of our Scale. Because we are making a Major Scale, we follow the Interval pattern: WWHWWWH to find that the Notes in the C Major Scale (in ascending order) are: C D E F G A B C

The top Note of the Scale is the same as the Root Note, just one Octave higher, and indeed the Scale continues from this Note, following the same Interval pattern, all the way up the keyboard. This is the case for *all* Major and Minor Scales.

For another example, below is a C Minor Scale:



While the Root Note is the same, “C”, because this too is a C Scale, the Interval pattern is different, because this is a Minor Scale, and therefore some of the Notes are different as well. However, several of the Notes are the same in the C Major and C Minor scales as well. In fact, many Scales share *some* Notes, but they are almost never exactly the same.

Chords

A Chord is three or more Notes played at the same time, on any instrument, or with a combination of voices. Similarly to Scales, there are different *types* of Chords, each named for the Intervals between the Notes that comprise them. An understanding of Chords is essential for communicating musical ideas in a group/ensemble.

To fully understand how to make a chord, it is useful to reference the Major and Minor Scales, as indicated to the left, and assign number values (1-7) to each Note in these Scales. The Root Note is number 1, the rest of the Notes follow in ascending order. So, in a C Major Scale, the corresponding Note names and number values are as follows: C=1, D=2, E=3, F=4, G=5, A=6, B=7 (At this point we’re back to C, which, even though it’s the next Octave up, still counts as the number 1). In a C Minor Scale, the corresponding Note names and number values are as follows: C=1, D=2, Eb=3, F=4, G=5, Ab=6, Bb=7.

Triads

Also, like Scales, the two most commonly used *types* of Chords are called Major and Minor. These are three-note Chords, or Triads, and they are made as follows:

The Major Chord is comprised of Notes 1, 3, and 5, of a Major Scale. For example, a C Major Chord is comprised of C, E, and G.

The Minor Chord is comprised of Notes 1, 3, and 5, of a Minor Scale.* For example, a C Minor Chord is comprised of C, Eb, and G.

*As it can be confusing to use different Scales for reference, the formula for a Minor Chord can also be thought of as Notes 1, 3b (flat 3), and 5, on the Major Scale. (To get the flat 3, simply take the 3, and lower it one Half Step.)

More Chords

The following table shows the formulas and symbols for some of the other commonly used *types* of Chords. These all use the Major Scale for reference, any deviation from the Notes of the Scale will be noted with Accidentals, with the symbols: “#” indicating one Half Step higher, and “b” indicating one Half Step lower:

Name	Symbol	Formula	Example (in C)
Major	(none)	1, 3, 5	C, E, G
Minor	- (or) m	1, 3b, 5	C, Eb, G
Seven	7	1, 3, 5, 7b	C, E, G, Bb
Major Seven	maj7 (or) Δ7	1, 3, 5, 7	C, E, G, B
Minor Seven	-7 (or) m7	1, 3b, 5, 7b	C, Eb, G, Bb
Six	6	1, 3, 5, 6	C, E, G, A
Diminished	o (or) dim	1, 3b, 5b, 6	C, Eb, Gb, A
Half Diminished	ø7	1, 3b, 5b, 7	C, Eb, Gb, Bb
Augmented	+	1, 3, 5#	C, E, G#
Suspended	sus	1, 4, 5	C, F, G



IN THE BAND