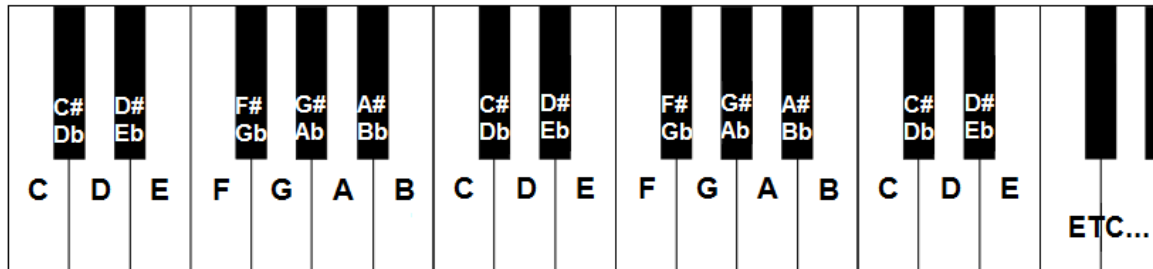


Intervals and Scale Creation on the Guitar: *Part 1*

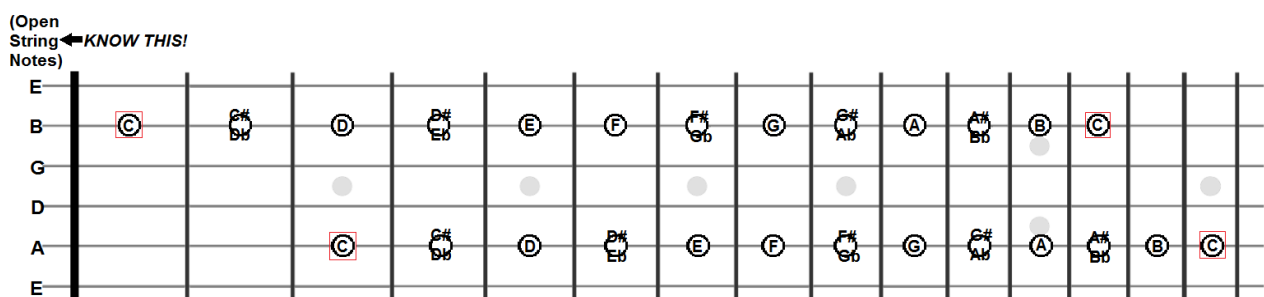
This lesson provides the framework for understanding how all chords and scales are constructed. Learning this will make you a better player and a more cognizant musician. Think of your favorite songs. Any song, artist, genre. Would you believe me if I told you that every song you've ever heard in your life, every song you've ever sung along with or tried to play was comprised of just 12 notes in different combinations? It's true! Take a look at a piano, arguably the most fundamental instrument across all genres of music:



There you have it, 12 notes repeated ad infinitum. Every time you move up or down one note, it is a “**half step**”, or “semitone”. If you move up or down two notes, it is a “**whole step**”, or “whole tone” (or just “tone”). Every black key on the piano is a flat/sharp note, called an **accidental**. Tonally, F# is the exact same as Gb, but in written music, which one you choose to call it is important. But for now, just think of them as the same note. Why is there no black key between E and F, or B and C? There just isn't. Commit it to memory. Practice saying this out loud:

- “Moving up from C to D is a whole step up, or whole tone.”
- “Moving down from A to Ab (or G#... see?) is a half step down, or semitone.”
- “Moving up from E to F is a half step up, or semitone.”

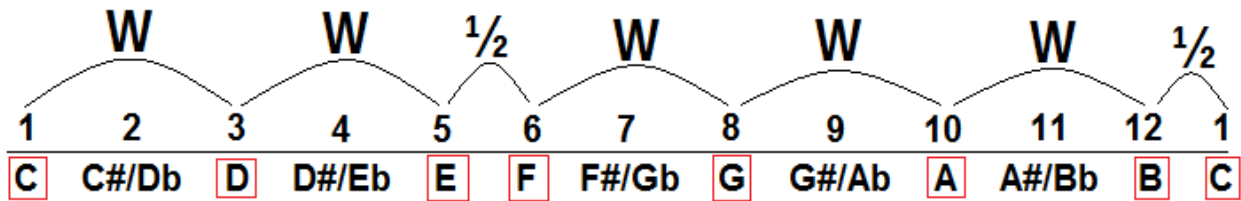
Each group of 12 notes, from C to C, or A to A, or D# to D# etc is called an **octave**. Playing from one C to the next, including every note in between is called the **chromatic scale**. On a guitar, each string is ordered like a little piano, except of course you can only play one note per string at a time. Try playing it:



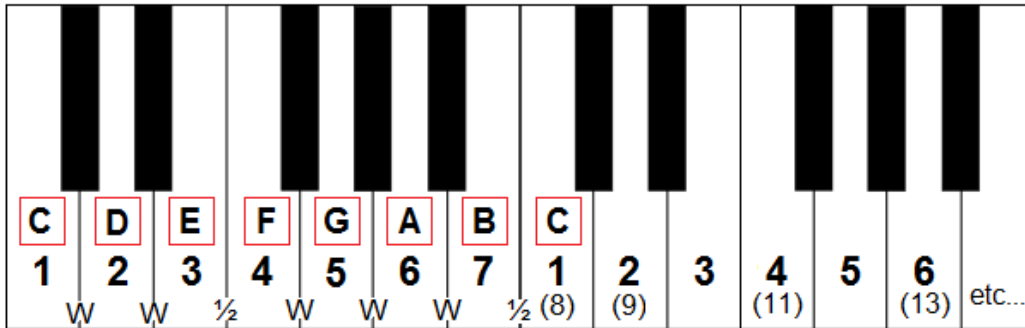
It doesn't sound that great on it's own right? Well, it is within these sets of notes that all scales and chords are created. Here comes the biggest take-away from the first part of this lesson:

★ All scales & chords are a predetermined sequence of whole and half steps within the chromatic scale. ★

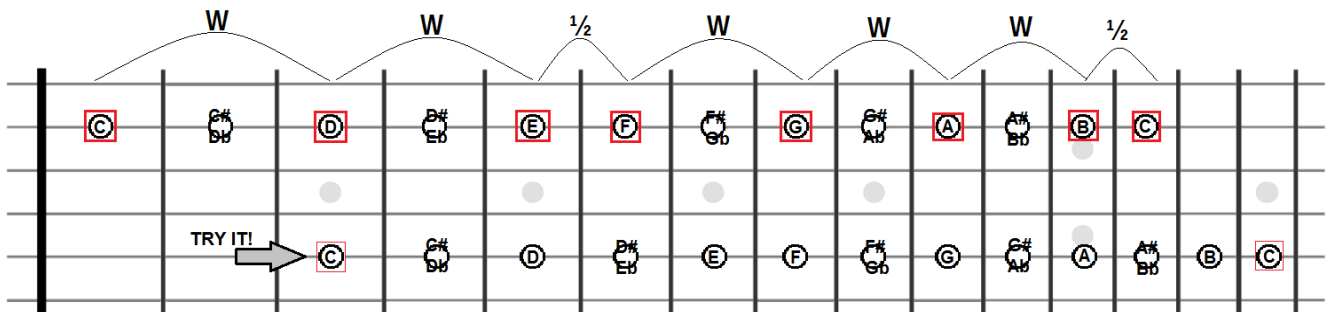
The most important scale is the **major scale**, the classic “do re mi fa so la ti do” that we all know and love. So how do we get the major scale from this pattern? It's quite simple really. Every major scale, no matter what note you are starting on, follows the formula **W W ½ W W W ½** [*W is a whole step, ½ is a half step*]



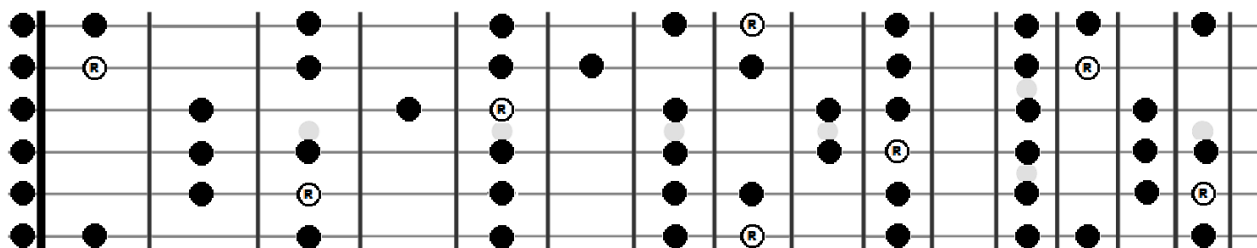
Take a moment to study and understand that diagram. We took the major scale formula, starting on 'C', and determined the C major scale has the notes **C D E F G A B C**. The key of C major contains no sharp or flat notes, and likewise on a piano does not use any of the black keys. Take a look:



And on your guitar:



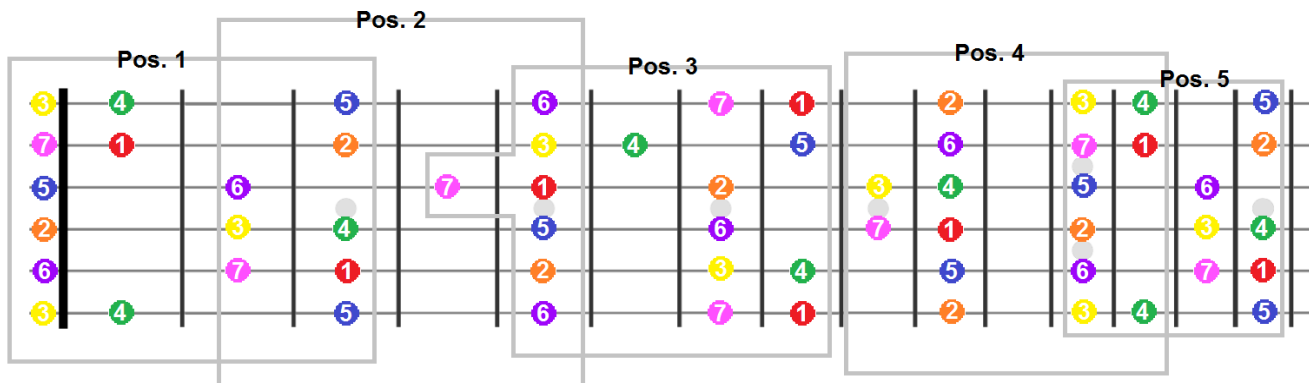
Now play through it- actually sounds nice, doesn't it? Do you hear the "do re mi fa so la ti do"? You can take any note on the guitar neck, and use this formula to create it's major scale! When you take all the notes in a given key and identify them on the neck, you end up with something like this: (Continuing with key of C in this example)



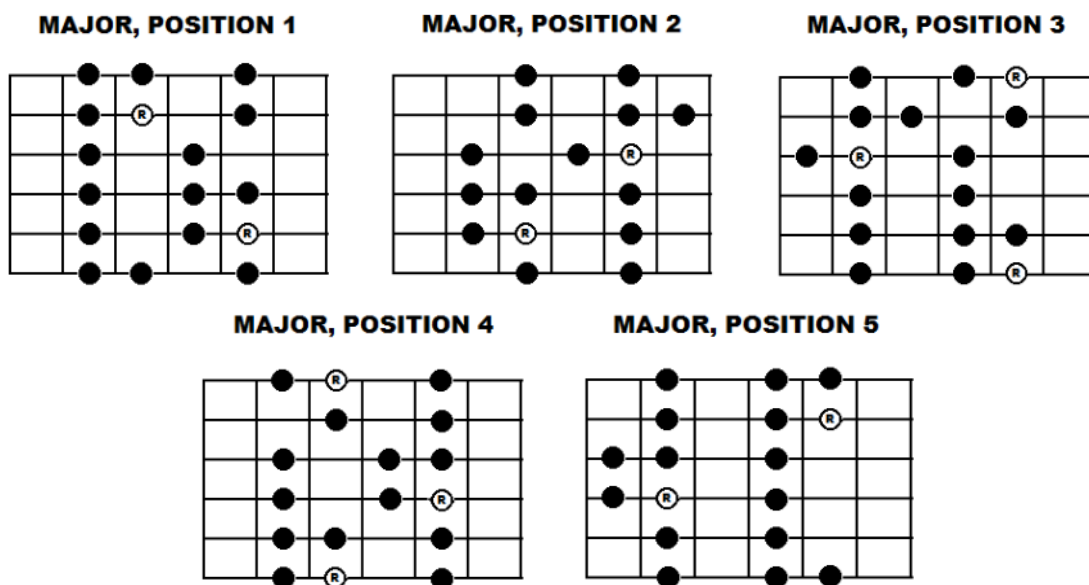
See how that works? It is pretty simple in it's design. Every **Ⓜ** is a 'C', and on each string the notes progress along in our **W W 1/2 W W W 1/2** pattern, *repeated endlessly*. The more you practice learning every note name on the fretboard, the easier you'll be able to discern and assemble improvised scales and chords.

Here is one final way to envision this concept. This diagram may seem overwhelming at first, but it is the best way to comprehensively view scales on the guitar fretboard. It enables you to see how each position of the major scale is configured, and if you have followed this lesson from beginning to end, you will hopefully recognize the inherent simplicity of it's design.

Recall the notes in the C major scale as we wrote it out:



Now you can clearly see how each of the 5 major scale positions are split up organized. If you refer to the Major Scale Positions sheet, you will see each of these blocks separated out.



No matter what major key you are playing in, those positions never change shape. If you are in the key of E major. Every **Ⓡ** becomes an 'E'. And the same **W W ½ W W W ½** progression continues, but starting on E. Ultimately, the *notes themselves change* relative to which key you're in, because every key has it's own sequence of notes. But *the patterns stay the exact same*. These are "movable shapes" and can be played with an **Ⓡ** (root) beginning on any fret of the guitar.

To complete this lesson, let's draw out the notes for every major scale, using our major scale formula. Again, remember that *the sequence of whole and half steps never changes* when constructing a major scale, the only thing that matters is what note you are starting on!

	W		W		1/2	W		W		W		1/2	
	1	2	3	4	5	6	7	8	9	10	11	12	1
Key of:	1	2	3	4	5	6	7	8	9	10	11	12	1
A Major	A	A#/Bb	B	C	C#/Db	D	D#/Eb	E	F	F#/Gb	G	G#/Ab	A
A#/Bb Major	A#/Bb	B	C	C#/Db	D	D#/Eb	E	F	F#/Gb	G	G#/Ab	A	A#/Bb
B Major	B	C	C#/Db	D	D#/Eb	E	F	F#/Gb	G	G#/Ab	A	A#/Bb	B
C Major	C	C#/Db	D	D#/Eb	E	F	F#/Gb	G	G#/Ab	A	A#/Bb	B	C
C#/Db Major	C#/Db	D	D#/Eb	E	F	F#/Gb	G	G#/Ab	A	A#/Bb	B	C	C#/Db
D Major	D	D#/Eb	E	F	F#/Gb	G	G#/Ab	A	A#/Bb	B	C	C#/Db	D
D#/Eb Major	D#/Eb	E	F	F#/Gb	G	G#/Ab	A	A#/Bb	B	C	C#/Db	D	D#/Eb
E Major	E	F	F#/Gb	G	G#/Ab	A	A#/Bb	B	C	C#/Db	D	D#/Eb	E
F Major	F	F#/Gb	G	G#/Ab	A	A#/Bb	B	C	C#/Db	D	D#/Eb	E	F
F#/Gb Major	F#/Gb	G	G#/Ab	A	A#/Bb	B	C	C#/Db	D	D#/Eb	E	F	F#/Gb
G Major	G	G#/Ab	A	A#/Bb	B	C	C#/Db	D	D#/Eb	E	F	F#/Gb	G
G#/Ab Major	G#/Ab	A	A#/Bb	B	C	C#/Db	D	D#/Eb	E	F	F#/Gb	G	G#/Ab

So therefore, each key contain the following notes:

Key of:	1	2	3	4	5	6	7	1
A Major	A	B	C#/Db	D	E	F#/Gb	G#/Ab	A
A#/Bb Major	A#/Bb	C	D	D#/Eb	F	G	A	A#/Bb
B Major	B	C#/Db	D#/Eb	E	F#/Gb	G#/Ab	A#/Bb	B
C Major	C	D	E	F	G	A	B	C
C#/Db Major	C#/Db	D#/Eb	F	F#/Gb	G#/Ab	A#/Bb	C	C#/Db
D Major	D	E	F#/Gb	G	A	B	C#/Db	D
D#/Eb Major	D#/Eb	F	G	G#/Ab	A#/Bb	C	D	D#/Eb
E Major	E	F#/Gb	G#/Ab	A	B	C#/Db	D#/Eb	E
F Major	F	G	A	A#/Bb	C	D	E	F
F#/Gb Major	F#/Gb	G#/Ab	A#/Bb	B	C#/Db	D#/Eb	F	F#/Gb
G Major	G	A	B	C	D	E	F#/Gb	G
G#/Ab Major	G#/Ab	A#/Bb	C	C#/Db	D#/Eb	F	G	G#/Ab