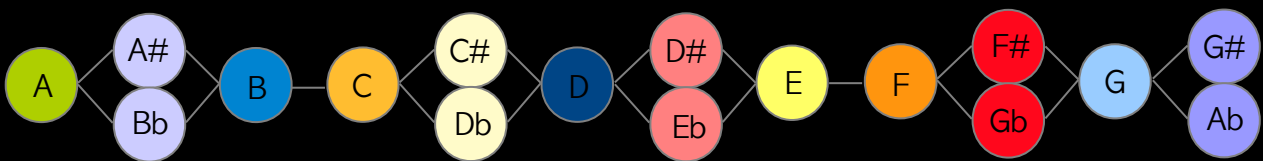


KEY BUILDER GUIDE



BUILD A KEY
FROM SCRATCH

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Introduction

What Is A Key?

How Are Keys Built?

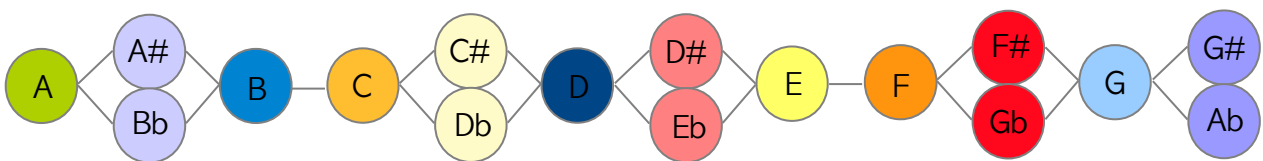
A key is a group of 7 notes, which are derived from the Chromatic Scale using a kind of formula. From these 7 notes, 7 chords are built, using a fairly simple method which we will discuss a little later.

So, it makes sense that if we want to discover how keys work, we first need to know the Chromatic Scale ...

What Is The Chromatic Scale?

Well, a scale is simply a sequence of notes which are played one after the other, and 'chromatic' comes from the Greek word, 'chroma', meaning 'coloured'. So the Chromatic Scale contains all the sound colours of the musical rainbow, if you like.

In other words, the Chromatic Scale is simply all the notes which you find in music, of which there are 12:



Notice that some of the notes in the Chromatic Scale are called by TWO names: A# is also known as Bb, C# is also known as Db, D# is also known as Eb, F# is also known as Gb, and G# is also known as Ab.

NOTE: # = sharp, b = flat. So when you see A#, you say A sharp; when you see Bb, you say B flat.

These notes that go by two names are called ENHARMONIC EQUIVALENTS. In other words, A# is the enharmonic equivalent of Bb, Bb is the enharmonic equivalent of A# - they are the SAME NOTE - they have the same frequency, in other words they sound exactly the same.

How Do You Play The Chromatic Scale?

On your guitar, choose a string, let's say the E string. Now play the E string open – that is the note E. Next hold down the E string on the first fret and play that note.

Next hold down the E string on the 2nd fret and play that. Then move to the 3rd fret. Then to the 4th fret and so on, until you have played every consecutive fret up to the 12th fret.

You will have now played through every note in the Chromatic Scale.

Now, an important thing to realise is that you can start the Chromatic Scale from any note in the scale.

For example, we just started by playing the open E string, which is the note E, so the note on the first fret of the E string is the next note in the Chromatic Scale: F. The note on the 2nd fret of the E string will of course be the next note in the Chromatic Scale after F, which is F# (also known as Gb), and so on.

Note that when you have got to G# / Ab, the next note after that is A.

So now you know why the notes on your fretboard are the way they are – you should now be able to go along each string, naming each note as you move to each successive fret, up to the 12th fret.

The note on the 12th fret of each string will be the same note as the open string on which it is found. For example, the note on the 12th fret of the A string, is A; the note on the 12th fret of the B string, is B etc.

How Many Keys Are There?

Remember that a key is a group of 7 notes taken from the Chromatic Scale – with these 7 notes, 7 chords are built.

Now, you can build a key off of every note in the Chromatic Scale – in other words, because there are 12 notes in the Chromatic Scale, there are also 12 keys in total.

How Do You Find The Notes In A Key?

Before, we learnt that we need to extract the notes in a particular key by applying a kind of formula to the Chromatic Scale.

First, we need to pick which key we want to find – it doesn't really matter which one – let's just say that we want to find the notes and chords in the key of C.

Now we look at the Chromatic Scale, and we start by picking the note C. Next comes the 'formula'.

I will first give you the formula, then I will explain what is meant by it. The formula is this:

T, T, S, T, T, T.

Now what does that mean? The T stands for Tone (also called a 'whole tone'), and the S stands for Semi-tone. In musical theory, a semi-tone is the distance between any two adjacent notes in the Chromatic Scale.

So, the distance between the notes E and F is a semi-tone. The distance between the notes A and A# is a semi-tone. The distance between the notes C# and D is a semi-tone. The distance between the notes F# and G is ... you guessed it, a semi-tone.

A tone, or whole tone, is 2 semi-tones. So the distance between the notes F and G is a tone. The distance between the notes A and B is a whole tone. The distance between the notes C# and D# is a tone. The distance between the notes E and F# is a whole tone. You get the picture.

SIDEBAR: Before we move on, take time to listen to the difference between the way a semi-tone and a whole tone sound: play your A string open – that is obviously the note A, then play the A# note on the 1st fret of the A string.

Go back and forth between these two notes a few times, just listening to this semi-tone.

Next, play your open A string again, but this time, follow the A note with the note B, which is on the 2nd fret of your A string.

Go back and forth between these two notes a few times, just listening to the way this whole tone sounds.

Now let's move on to how to get the notes in the key of C. The note C will be the first note that you pick from the Chromatic Scale. From here, you apply the formula: T, T, S, T, T, T.

So you go along a Tone from C and find the note D; then you go along another Tone from the note D and you find the note E; next you go a Semi-tone from E and get the note F; the next note will be a Tone from F, which is G; After G, go up a further Tone to find the note A; lastly, go up one more Tone from A to find the note B.

Now you have drawn the notes C, D, E, F, G, A, B out of the Chromatic Scale using the formula T, T, S, T, T, T.

So these are the notes which make up the key of C. Another name for this sequence of notes is called the C Major Scale.

How Do You Find The Chords In A Key?

Now that you have the notes in the key of C, you can build the chords. This is a simple process – what we want to do is build a TRIAD off of each note in the C Major Scale.

A triad is simply a chord which has three notes in it. Let's start by building a triad on the note C. What we do now is to take alternative notes in the scale, from the note C, until we have three notes.

So we take the note C, SKIP the note D, take the note E, SKIP the note F, and take the note G – this gives us our first triad (or chord) in the key of C.

These notes: C, E and G make up the familiar chord C Major. We will get into why it is called C Major specifically in another lesson, just take my word for it for the time being.

The next chord we want to build starts on the notes D – so we take the note D, SKIP E, take F, SKIP G and take A. This gives us our second triad in the key of C.

These notes: D, F and A make up the chord D Minor. Again, we will get into why it is a minor chord later. If you do the same for the other notes in the C Major Scale, you will get the following:

The notes C, E, G = C Major chord
 The notes D, F, A = D Minor chord
 The notes E, G, B = E Minor chord
 The notes F, A, C = F Major chord
 The notes G, B, D = G Major chord
 The notes A, C, E = A Minor chord
 The notes B, D, F = B Diminished chord

Now, I imagine that all these chords will be familiar to you besides perhaps the B Diminished.
 Chord Numbers In The Key Of C

Because the C Major chord is built from the first note in the key of C, we call it the 1 chord (normally it looks like the roman numeral I).

The same is true of all the other chords in the key of C: the D Minor is called the II chord, the E Minor is called the III chord, the F is called the IV chord, the G is called the V chord, the A Minor is called the VI chord, and the B Diminished is called the VII chord.

Whether a chord is Major, Minor or Diminished is called the QUALITY of the chord. So the chord quality of the I chord in the key of C is Major, the chord quality of the II chord in the key of C is Minor, and so on.

This next point is very important: because we are using the same formula to derive all 12 keys, each key will have 7 notes which are specific to it, and each key will have 7 chords built from those notes which are specific to it.

Furthermore, the I, IV and V chords in every key will always be Major; the II, III, and VI chords in every key will always be Minor; and the VII chord in every key will always be Diminished.

The Key Of C Major In Theory

So now you have learnt what the Chromatic Scale is, and you have learnt how to extract the 7 notes in the key of C from the Chromatic Scale, using the formula: T, T, S, T, T, T.

Furthermore, you have learnt how to use these 7 notes to build the 7 chords in the key of C picking alternate notes from the scale until you have the three notes which make up each of the 7 triads in the key of C.

On top of that, you have learnt that IN EVERY KEY, the I, IV, and V chords will be Major in quality; the II, III and VI chords will be Minor in quality; while the VII chord will be Diminished in quality.

The Key Of C Major In Practice

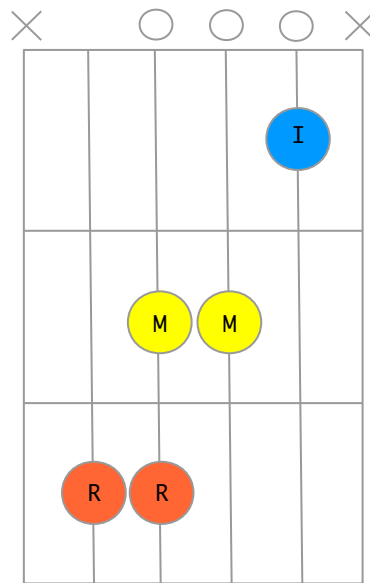
Now that you have done the theory, what does this mean to you in practice? Let's start with the C Major Scale.

I will give you one position to play the C Major Scale on your fretboard – practice this position, but make sure you know the actual notes you are playing too.

Firstly, have a look at the diagram of the notes on your fretboard – this will help you to visualise the notes in the the C Major Scale ...

The C Major Scale (Open Position)

Now that you've seen the outlay of the notes on your fretboard, look at the position of C Major Scale below:



C Major Scale

Notice how the usual C Major chord shape is within this C Major Scale. You can refer to the diagram of the notes of the fretboard to see that this scale contains all of the notes in the key of C.

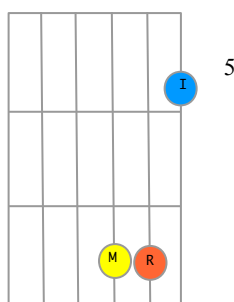
NOTE: Be careful to add the open strings, as indicated by the zeros next to certain strings (I.e. The D, A, and B strings).

You can find the C Major Scale in many positions all over your guitar fretboard.

Next, let's look at the chords in C major. You have found what all the notes in each of the chords in the key of C are – so let's try to find some other chord shapes on the fretboard.

For example, you know that the notes in the C Major chord are C, E, and G. Now that you know how to find all the notes on your fretboard, try to find a few groupings of these notes.

The notes in the C Major chord don't need to be in any particular order. So, for example, you could a C note on the 5th fret of the G string, a E note on the 5th fret of the B string, and a G note on the 3rd fret of the high E string.



There you go – that's another way to play the C Major chord. Try to do this for the other chords in the key of C too.

What To Practice This Month

* Make sure that you know the notes along each string of your guitar. This will come in handy, even essential, in the months to come when we start to talk about more in-depth concepts and theories.

* Listen again to how a semi-tone sounds in relation to a whole tone. You can use any notes for this – and while you are doing it, bring your voice into the picture by singing the notes as you play them. This will greatly help you to internalise the sound of semi-tones and tones.

* Revise how to derive the notes in the key of C and use the same formula to derive the notes in the key of G.

* Revise how to derive the chords in the key of C and use this method to get the chords in the key of G. Make sure you remember what we spoke about with regards to chord qualities.

* Using the notes that you found in the key of G, try to find one version of a G Major Scale on your fretboard.

* Try to find one alternative way to play each of the chords in the key of G, just as we did in the key of C.

Closing Thoughts