

Strummer Camp: 2019 – Day 12

The Capo: A Magical Floating Nut

It's one thing to throw a capo on the fretboard and just start playing, but it's a horse of a different color when you understand how to *actually* use it.

A capo is a nifty little device that you use to change the way your guitar sounds in tonality. Most capos will cover all 6 strings of your guitar, but there are capos out there that actually target your choice(s) of string(s) – but I'll admit I've never used one.

The most common utilization of a capo is based on songs that call for it to be used. This can also be said for songs that don't actually use a capo, but the musician chooses to use it to either (1) simplify a progression and/or (2) make the progression match their vocal range.

There are plenty of good reasons to use a capo, but as with any good, there are also a few bads in the mix.

One drawback to the capo is based on whether or not you play in a band.

If you play in a band with other guitarists (not so much bass) then you or the other musician will have to come to some common ground with each other, such as:

#1. You'll both need to play with a capo (OR)

#2. One of you will need to know what actual tones are being heard

The bass guitar in your band MIGHT need to be involved here, but it all depends on how serious your bass player is in their playing. Most of the time, the bass won't have too many issue with the capo being used as he or she often uses “bass” (root) notes to play anyway.

That being said, other instruments should still know the actual tones being heard. This would be especially true for anyone playing keyboard/piano or a musician that uses an instrument that can't really use a capo.

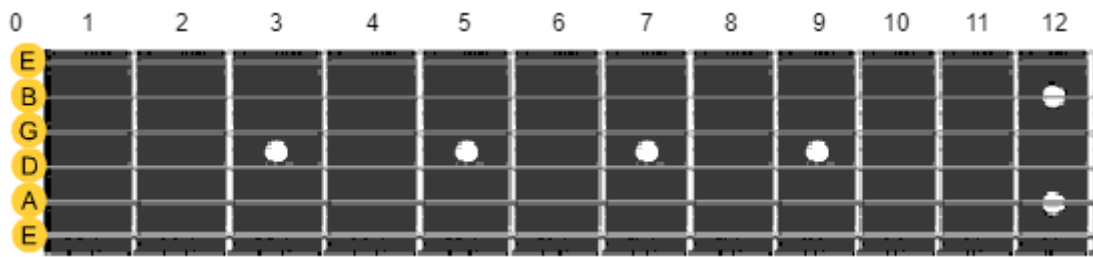
So, unless you are just a one-person act, there's more to a capo than just throwing it on the fretboard and going from there.

BIGGEST MYTH: Placing a capo on the fretboard automatically changes the key.

Not necessarily, at least in standard tuning. I've seen charts that claim, for example, if you place a capo on the 3rd fret of your guitar, you're in the key of G.

This can be somewhat “myth-busted” by first thinking of your guitar being played in standard tuning without fretting a single note.

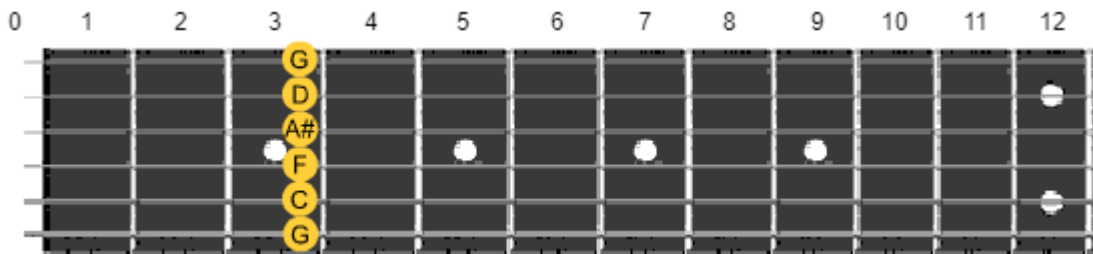
The notes you hear when you strum all 6 strings on your guitar (open) in standard tuning are:



This doesn't give you a single “normal” chord. While these notes played together DO technically create two chords (which are the same chords) they aren't exactly chords you will ever use.

The chords that are created here are G6add9 and/or A11 (no 3rd) – but I can't tell you a single time that I've heard or even used these chords. So, that's why I say you aren't really “getting” anything from those open strings.

Now, what happens if you place a capo on the 3rd fret? Here are the notes you'll hear if you don't fret anything:



Again, while these notes DO combine to form two chords (which are the same chords with different names) you aren't getting a normal chord out of just tossing the capo on the 3rd fret.

The chord(s) you get here would be C11 (no 3rd) and/or A#6add9 (Bb6add9) so unless you have seen or heard these chords before, something MORE must be done.

By now you can assume that when you just throw your capo on the fretboard, you won't get a single series of tones that give you any normal chord tone.

So, how do we GET chords when using a capo?

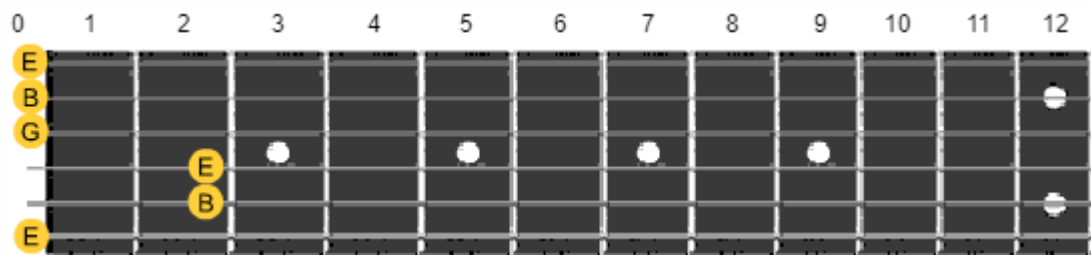
There are two basic concepts that will help define what a capo really means when we use it, which are:

1. What a cover song says to do (and)
2. What you choose to do with your original

The easiest concept to understand is the first one, because we are all accustomed to using a capo when being directed to do so.

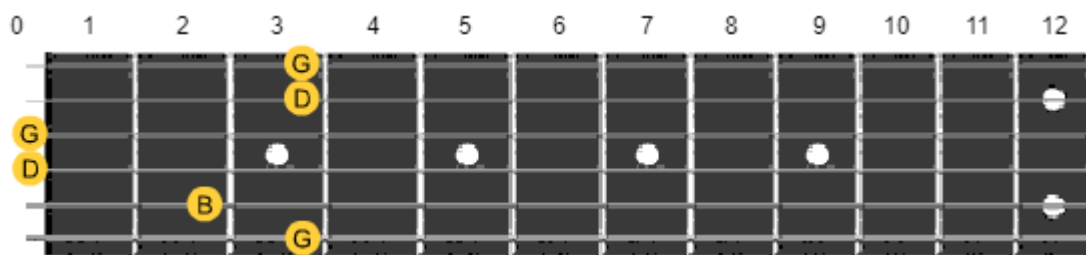
For example: A cover song calls for a capo on the 3rd fret. Simple enough. You place it on the 3rd fret and look at the chords being shown. Maybe a progression is asking you to play Em – G – D – A. First, how about we plot those chords WITHOUT a capo:

Em



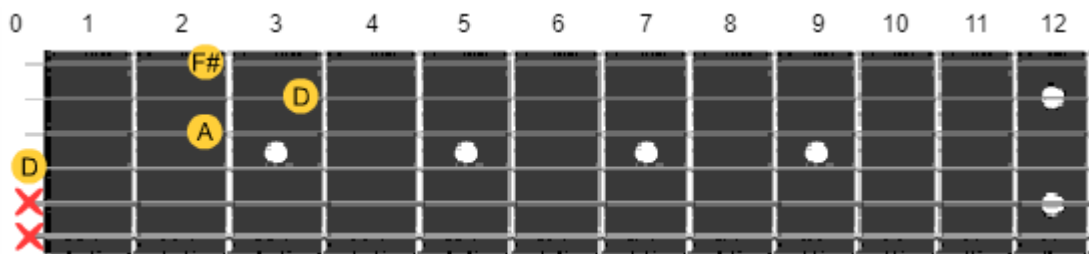
Notes Used:
E, G, B

G



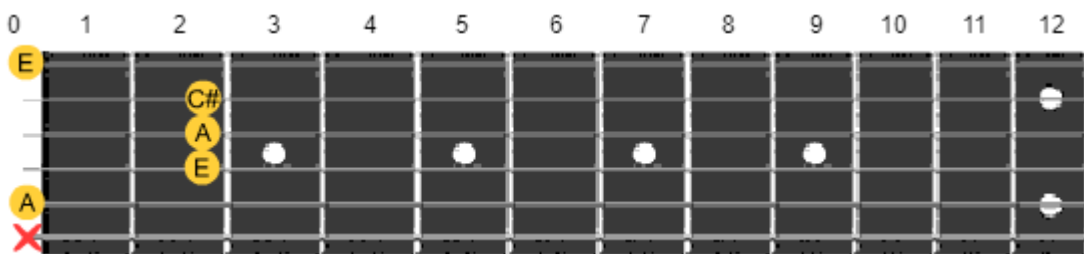
Notes Used:
G, B, D

D



Notes Used:
D, F#, A

A

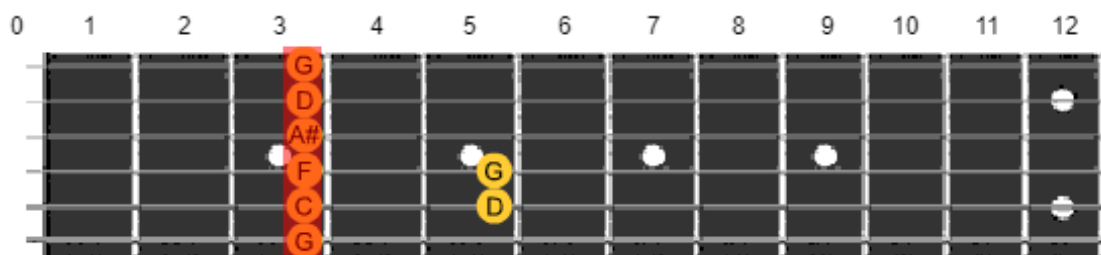


Notes Used:
A, C#, E

While you very likely already know those chord locations and even the notes used to form those chords, things begin changing when you use a capo.

After all, the capo is a “floating nut” for your guitar. So, when a capo is used, all the original notes that come from the standard open string tuning of E-A-D-G-B-e start to change.

Take that same progression and apply a capo to the 3rd fret. What you will SEE is the formation of the same chords. What you HEAR is totally different.

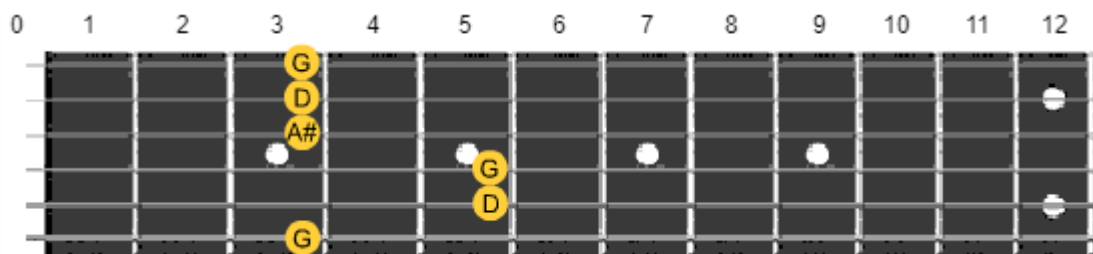


With the capo (red) in place, you can easily assume that the “C” note (a string) and the “F” note (d string) are no longer heard. Instead, the “C” note becomes a “D” note and the “F” note becomes a “G” note.

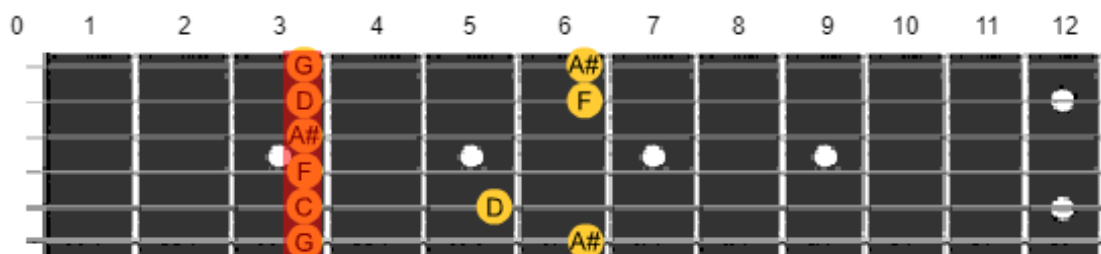
Since those are the only two *physically* fretted notes, you end up with the following notes being heard, starting from the low E string: G – D – G – A#(Bb) - D – G

Remove any of the duplicated notes and you have G – D – A#(Bb) from low to high

What is that chord above? It's a Gm:



What about the G chord?



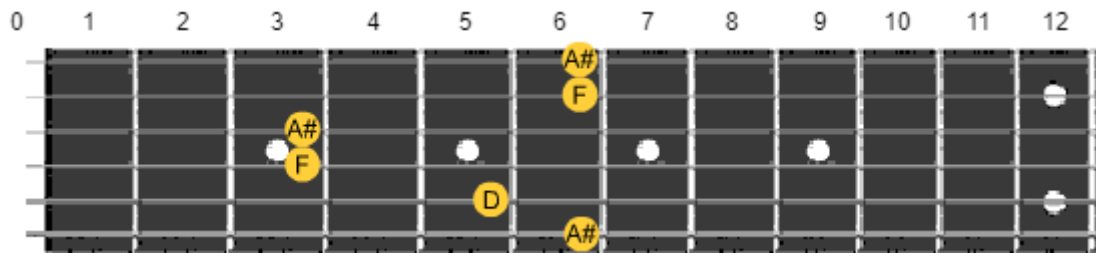
You definitely see that G Major shape, right? However, what you hear isn't a G chord.

This next part is pretty obvious, but once you fret a note from the starting position of the capo, the note changes. So, what you are getting here from low to high is this:

A#(Bb) - D - F - A#(Bb) - F - A#(Bb)

Remove any duplicated tones and you are left with: A#(Bb) - D - F

What chord is that? It's actually an A#(Bb) chord:



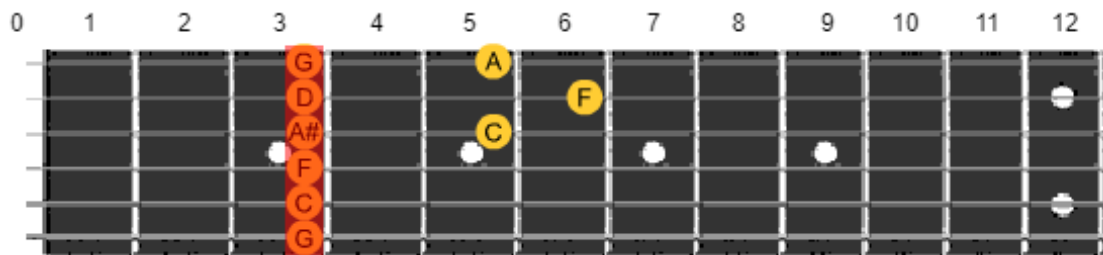
Naturally speaking, we wouldn't actually play THIS version of the A#/Bb chord. It's pretty insane. But, with the capo in place, we are really just forming the shape of an open G chord.

The capo would take care of the F and A#(Bb) note that appears on the 3rd fret above.

At this point, our capo has now converted our partial progression of the open Em - G into something totally different in TONE, which is Gm - A#(Bb)

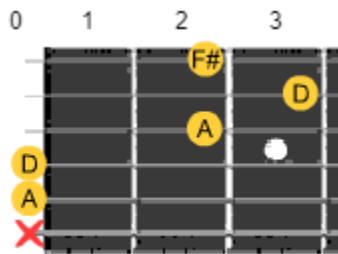
We physically form the Em - G shapes, but we don't hear them as such. The tones have shifted or "transposed" to sound different.

The next chord being called for is a D Major chord shape:



Now, even though you know I am going to go through the same process, this part is somewhat important. When you use a capo, the idea is still to play the shape that is being asked of you, and in this case, that's a D Major shape. You also know that a D Major open chord shape doesn't use all 6 strings.

At best, the D Major chord, when played in open position, will only use a MAXIMUM of 5 strings, like this:



Stop right there for a second and look at this diagram. You aren't likely accustomed to purposely playing the open A string in a D Major chord, but it is technically allowed.

D Major simply uses the combined notes of D, F#, A

The lowest tone you hear if you strum this chord as you see it would be the “A” note. In order to understand why this is technically allowed, a quick breakdown of the intervals used in a given chord will help.

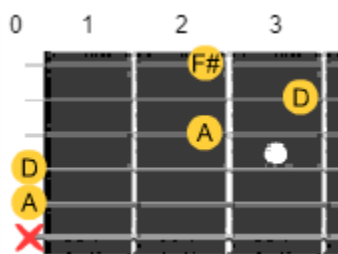
Any standard Major chord uses the following note construction: 1 – 3 – 5

The D Major chord starts with the “D” note. This would be the basis for PART of the D Major chord, which is often called the root note and/or the “1” in the chord construction itself.

Once you have established the root note, the next step in chord construction is to follow the root note up with the next alphabetical note. Notice I underlined the word construction. When you strum the D Major chord, all the notes ring out simultaneously, so that doesn't matter. But, when you are constructing the chord, you must use the framework.

Thus, the next alphabetical note from the “D” note would be the F#(Gb) note. So, since you have the “D” note in the [1] spot, the F#(Gb) would go in the [3] spot. The last alphabetical note in our D Major chord is the A note. It will go in the [5] spot.

Why is this important? If you go back to the shape I showed you a moment ago, which is shown below, you actually have an INVERSION of the D Major chord:



This is STILL a D Major chord, but the “A” note is the lowest note you hear. Remember that the A note was in the [5] spot from earlier. ***This inversion is considered a second inversion.***

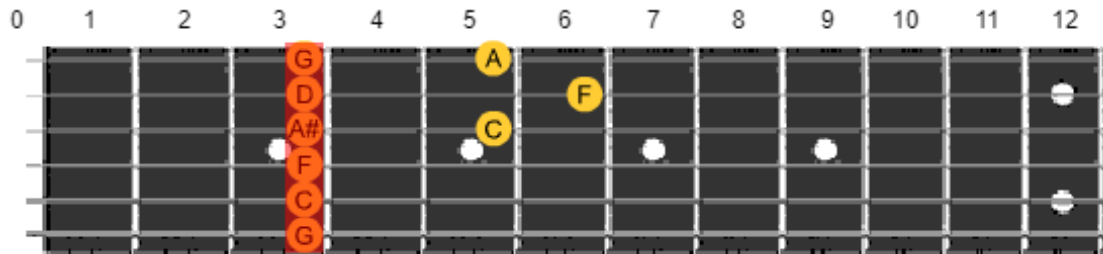
Simply put, it's a second inversion because the [5] is the lowest note you hear. Had the F#(Gb) note been the lowest note, you would be creating a *first inversion*. It would take the [3] from the D Major chord and REPLACE the lowest original note, which would have been D here.

So, what this ultimately means goes back to the actual shape of the chord being played in relation to the capo itself.

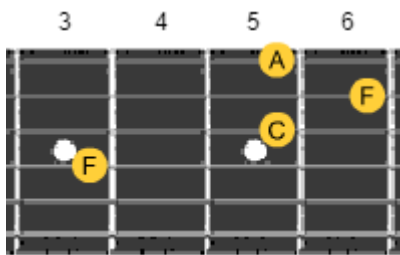
This part of transposition would depend on your method of strumming the D Major shape.

If you choose to be precise about your strumming, then you will want to only strum the original shape of the D Major chord. If you want to add a bit of depth (sometimes good, sometimes not) to the shape of the D Major chord, you can either intentionally or accidentally strum this shape and get a few slightly different tones.

First, let's refresh on the generic application of the capo as D Major is formed:



Here's the same D Major shape in relation to the capo, with the “precise” result of the D Major chord shape:

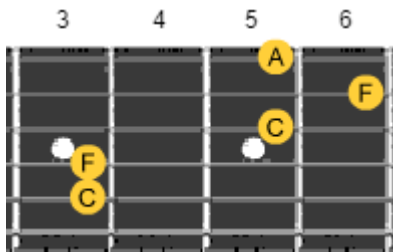


As with before, realize that you wouldn't physically fret the F note on the 3rd fret, though it's possible. The capo does that.

So, the notes you hear are just F, A, and C.

Playing what you see above ends up giving you an F Major chord. The F Major chord uses, in alphabetical order, the notes F, A, and C. This isn't an inversion, as the “F” note IS the lowest tone and root note.

What if we got a little strum happy? Here's what I mean:



What chord is this? Even though the lowest note you hear is a “C” note (which the capo takes care of for you), it's still an F Major chord. This is considered a second inversion because the “C” note is the [5] in the F Major chord.

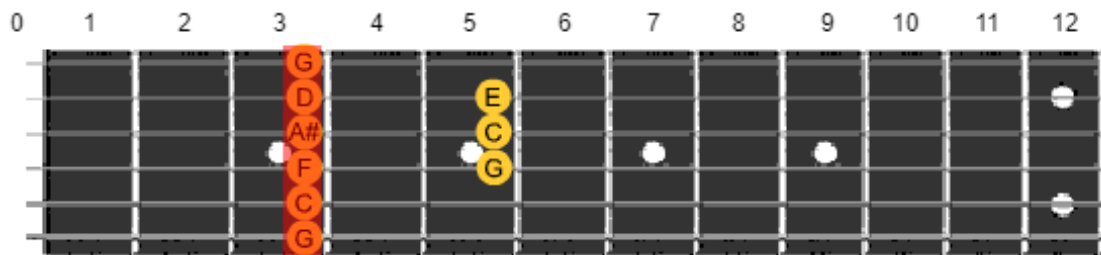
F Major uses F [1] – A [3] – C [5] ← the [5] is the tell tale.

And of course, had the A note been the lowest note you heard, it would be a first inversion.

So, even though you are forming a D Major chord shape, you are hearing an F Major chord.

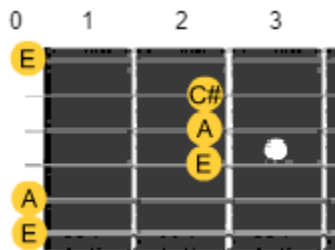
Quick Tip on Inversions: It's easier to identify the type of inversion by simply using the numerical order. A first inversion will be the [3] note as the lowest note. Since the number 3 comes before the number 5, it's in “first” place. A second inversion will be the [5] note as the lowest note. As you can expect, since 5 comes after 3, it would be in “second” place. That should help you remember.

One more chord and then all of this will be super easy to understand. The next chord being asked of us is the A Major chord shape. Remember, the shape is ALL we will actually get from the A Major. It won't sound like an A Major at all.



No doubt here that you can see the open chord shape of an A Major, right? The fretted notes are on the 5th fret. As with the D Major chord, the A Major chord, in open form, typically uses 5 strings – but again: in theory you can play all six strings.

Check it out:



To get the sound of an A Major, we need A, C#(Db) and E.
Thus, A = [1] C# = [3] E = [5]

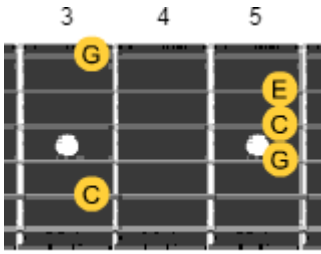
If we decided to play the low E string open, what type of inversion would we have?

I'll give you the answer at the BOTTOM of this page, but think on it for now.

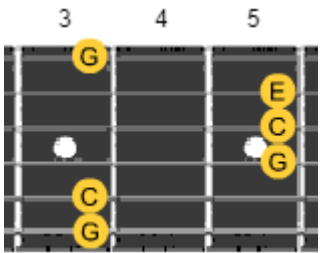
With the capo in place, it won't matter whether or not we choose to strum 5 or 6 strings, but I do want to touch on inversions as they can become important over time – especially when you aren't working the real of strumming.

So, keep in mind that an inversion doesn't change the chord name. It just changes the “thickness” of the chord itself.

Here is what we would physically form if we chose to just play the precise A Major chord shape with our capo on the 3rd fret:



This A Major shape is actually a C Major barre chord. Since the notes on the 3rd fret are covered by the capo, you are physically forming an open A Major chord shape, but it's going to sound like a C Major chord.



This time we have the “G” note on top, and again – the capo is taking care of all of the 3rd fret notes. So, we are still playing the open A Major chord shape.

We are hearing the notes of C, E, and G.

Even though the “G” note is heard as the lowest tone, we always want to alphabetize the overall range of notes. The “C” note comes first in this case in the alphabet, so we start there and keep going. This, as mentioned earlier, gives us the actual construction formula of:

C [1] E [3] G [5] ← The “G” is the [5] here and it is heard as the lowest tone in the second diagram above, so we have an inversion.

In a Nutshell...

- The song asked that we use a capo on the 3rd fret.
- The progression is listed as Em – G – D – A.
- We form the chords asked of us, but they won't sound like that.
 - The Em will sound like Gm
 - The G will sound like A#/Bb
 - The D will sound like F
 - The A will sound like C

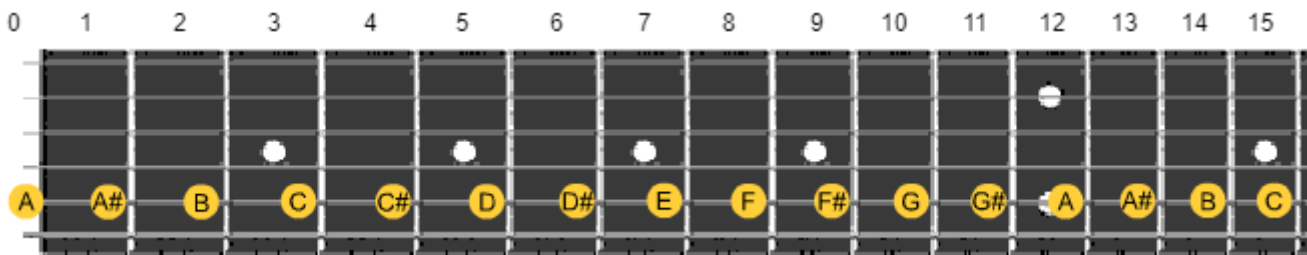
Whew, all that for figuring out what chord you hear vs. what chord you form? Well, no.

Actually, there is a MUCH easier way, but you must know all of the 12 notes in Western Music. I don't want to go into too much detail in this, so I'll keep it short and sweet.

Through all of this I've been using words like alphabetical and numerical, and this aspect is no different.

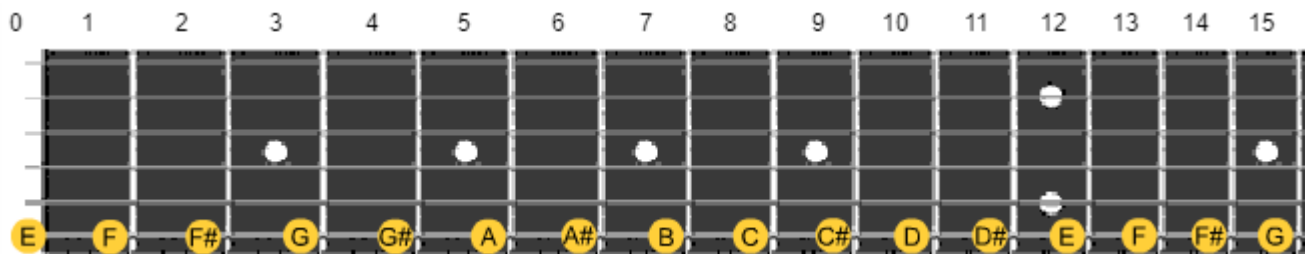
We can quickly learn the 12 notes in Western Music by starting with the first letter of the alphabet and moving through it until we get all 12 notes.

Here's the order of all 12 notes using the open A string as our basis:



While the fretboard shows 15 frets, notice that once we reach the 12th fret the notes repeat. Also notice that there is no B# or E#. Those aren't playable on guitar.

Also also (ha!) recognize that every single string, in standard tuning, will follow the exact same alphabetical order, which is now being shown on the low E string:



Since the Low E string and the high E string are both, in standard tuning, tuned so that the E note is the first open string used, this Low E string run and the high E string run of notes would be identical.

All of this should be pretty basic, but here's where things get neat. This is also where the **second aspect** of transposition comes into play – composition using transposition.

Go back and think about what was being asked of us in our cover song.

We were told to use a capo on the 3rd fret and we were also given the progression.

But, what if we wanted to (1) find a way to simplify an otherwise difficult chord progression and/or (2) simply needed it to be in a different key for our vocals.

Simplifying a Chord Progression With a Capo

The idea of simplifying a chord progression with a capo is likely the main reason you would want to use one.

For example, take a song that uses a specific progression: A#(Bb) – D#(Eb) – F

While you can just practice playing the progression over and over, you will most likely be forced to play these chords in somewhat awkward locations without a capo.

Here's an example of two ways you could play this progression:

A# D# F A# D# F

The image shows musical notation for the progression A# D# F A# D# F. Below the notation is a fretboard diagram with six strings. The notes are as follows:

Fret	6	8	10	3	4	1
6	x	x	x	3	4	1
6	8	10	3	3	2	3
7	8	10	3	1	3	3
8	8	10	1	x	3	1
8	6	8				
6						

No harm, no foul in either case – IF you can play them with minimal effort. Any of the x's you see here are based on MY opinion on how to play them.

The first D# chord is an A Style Major chord, which is hard to finger using the 6th fret on the high E string. So, I x'd it out. The A# in the second measure is the same issue. Furthermore, that D# in the second measure is pretty weird to play.

As a strummer/singer, I don't like having to fool with awkward shapes. I need my focus to be on the rhythm and the singing. So, I wouldn't play either of these versions. Sure, I can locate different places to play them as an overall concept, but that's going to cause me to move all over the place.

I would argue that moving all over the place is even harder than trying to get a grasp on the chords I originally thought of, so that's out of the equation for me as well.

The Solution?

Yep – it's capo time. The good thing about a capo is that it generally helps you focus on just two overall strings and the root/bass notes associated with them. Those two strings are going to be the Low E and the A strings. They will help you tremendously.

First, since the progression is based on A#/Bb as the first chord, I would look for one or two note locations for that A#/Bb note.

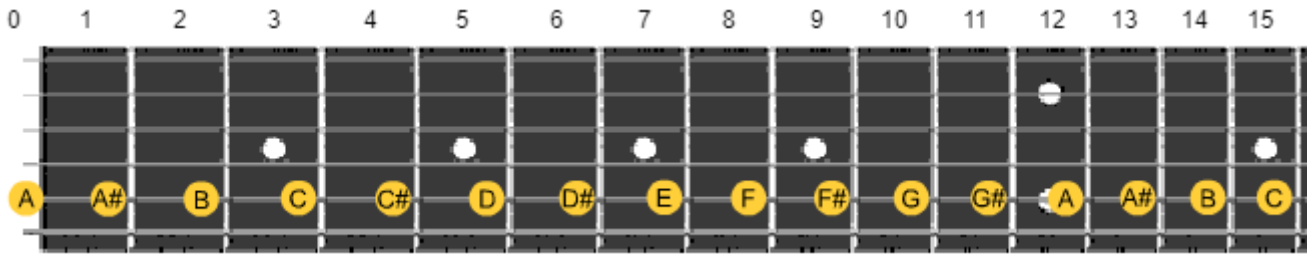
Here are all the notes on the Low E string:

The image shows a fretboard diagram for the Low E string. The frets are numbered 0 to 15. The notes are as follows:

Fret	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Note	E	F	F#	G	G#	A	A#	B	C	C#	D	D#	E	F	F#	G

Once we get to fret 12, the notes repeat. We are looking for A#(Bb) here, which is found on the 6th fret. We could use our capo there, but it will definitely force us to (1) play much higher on the fretboard than we might want and (2) cause a much higher range of tones to sound out.

So, maybe we should look at the open A string series of notes:

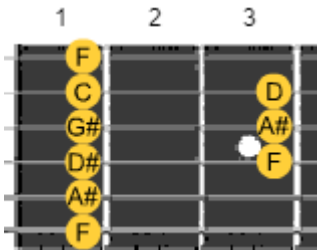


Much easier here, as the A#(Bb) note is on the 1st fret of the A string itself. Thus, we've only “lost” one fret, which actually ends up being just the open strings.

Since the A#(Bb), D#(Eb), and F Major chords don't use ANY open strings, that is our best starting point for sure.

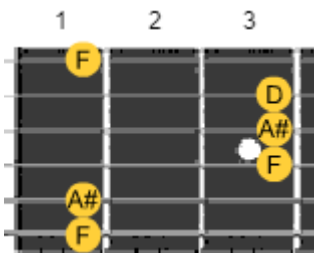
So, slap a capo on the first fret and go from there!

Look back real quick and see that the A# is merely one note UP from A. Thus, in order to create an A#/Bb chord, we quite literally move the open A chord *shape* up 1 fret.



This is showing the open A Major chord as it would relate to the capo. While the notes shown on the 3rd fret override the notes shown on the 1st fret, you still want to consider that the moment you remove your fretted fingers from the fretboard, you DO have those tones in there from the capo.

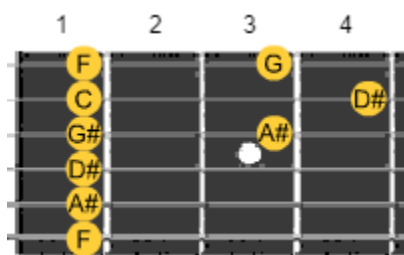
If you remove the visual notion of the capo, you really have what you see below:



No harm, no foul. Even if you strummed the entire series of strings, you'll end up with the tones of an A#/Bb chord, but you're only forming a simple A Major.

What about the next chord? We need a D#(Eb) chord, but since we shifted all the notes up one because of the capo, we aren't really “looking” for a D#/Eb chord, are we? Nope, we're REALLY looking for a D Major! This is the same principle as with what happened when we needed an A#/Bb chord, but since our capo has moved us up one fret, we did the same with the open A Major shape. In theory, we just build FROM the capo itself as the “floating nut.”

Here's what happens when you use the capo on the 1st fret and form a standard D Major chord:



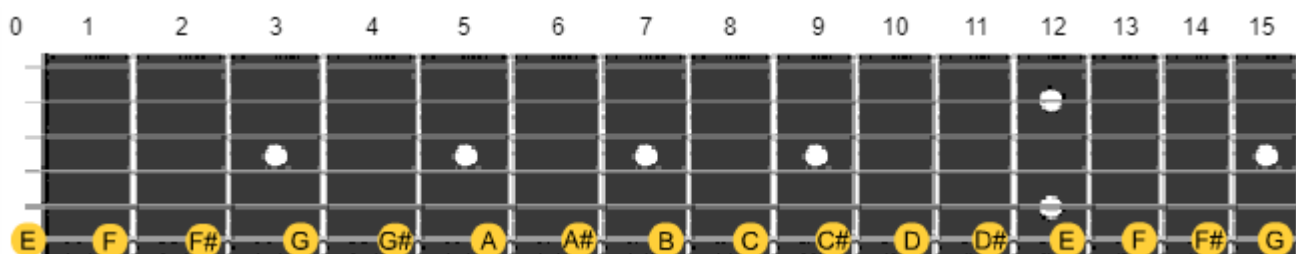
You can identify the D Major shape in there real fast, right? However, you are actually HEARING a D#/Eb chord.

You would likely want to just play the high 4 strings, but it's not the end of the world if you move up to the A string.

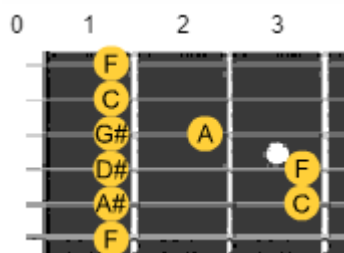
It's part of D#/Eb (D#, G, A#) ← but AVOID the “F” note. It will make the D#/Eb sound like a D#add9, which is slightly different.

The other chord here will be super simple. You just want an F Major chord. Since most everyone knows what an F Major chord looks like, you can use the capo on the 1st fret to really help drive this point home.

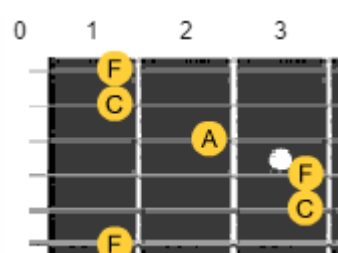
Allow the 1st fret to be thought of as the beginning stages of F Major. However, you need to get the rest of the shape. What is one step back from F Major in our 12 note system? We can use the low E string (or even A string for note recognition) to find the note:



The “F” note here is on the first fret, so back up one. That's an E note. We know we want an F MAJOR chord, so that means we can insert an E Major chord to the mix, like this:



Remove the notes not fretted >



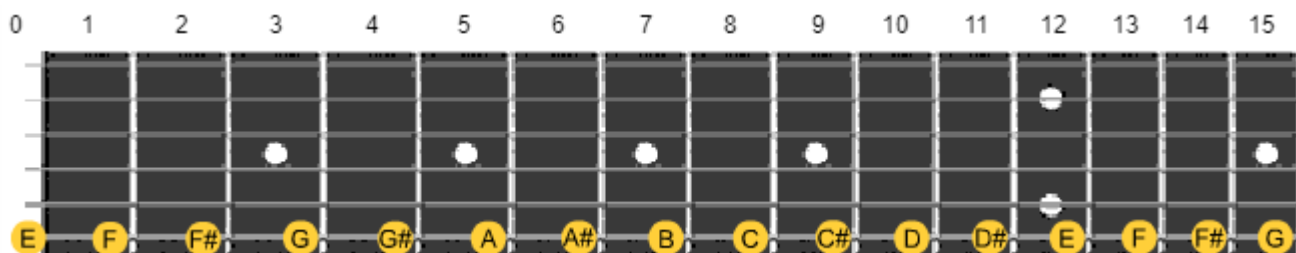
The image to the far right is just a plain old F Major chord. But, you are actually forming an E Major chord. Neat, huh?!

So, A#/Bb – D#/Eb – F without a capo becomes A – D – E WITH a capo!

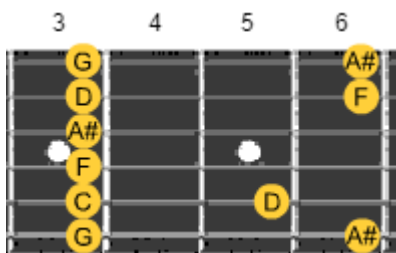
You can do the same thing in another location if you want, such as placing a capo on the 3rd fret as we did earlier.

This will shift the standard A#/Bb – D#/Eb – F arrangement to G – C – D. How?

If we use the 3rd fret capo as our basis, we need to consider the E string, not the A string as our location point. Why? Because the capo has now blocked us off from using the location of the A# note on the A string at the first fret. Simply stated, we can't use it now. So, look at the low E string:

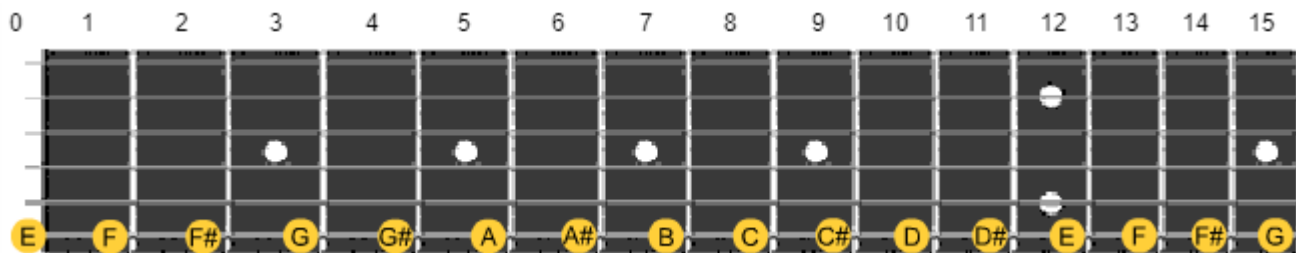


When we use the capo on the 3rd fret, we need to find the A#(Bb) note. That is our starting point for our required A#/Bb chord itself. It's on the 6th fret as seen above. So, we quite literally build from there. Here's the result:



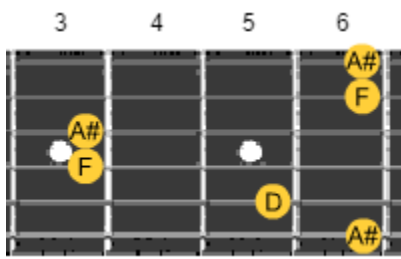
Notice you are using a G Major chord shape here. However, you are going to hear A#, D, and F. That's actually an A#/Bb chord. All you did was locate the required root note.

But how do we know that we would use a G Major shape? Check this out:



Look for the A# note, which is part of what we know we want the chord to sound like. It's on the 6th fret. Now, count backwards three spaces from there. You will land on the G note.

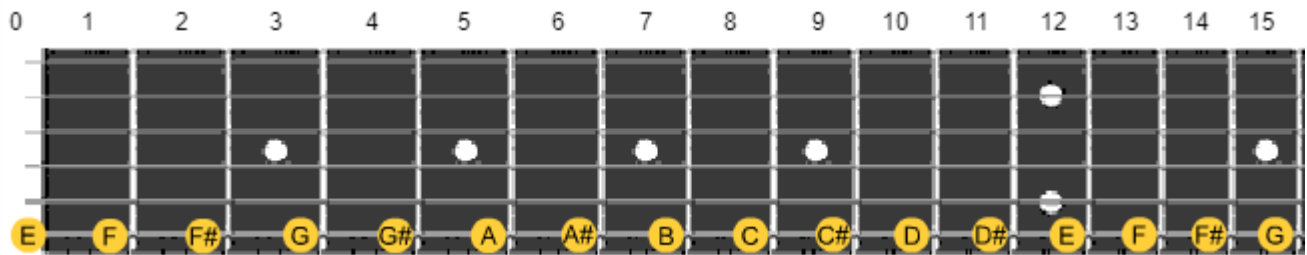
Since you know you want an A#/Bb MAJOR chord (not A#/m/Bbm) you simply insert the property of the chord in question. So, while you only found the “G” note by counting three spaces back (because capo 3) you are looking for a Major chord to replace it. Thus, a simple G Major chord shape will produce an A#/Bb Major chord tone quickly and efficiently:



There's your G Major shape. The capo is taking care of the 3rd fret notes for you, so you are genuinely just forming a basic G Major shape.

The knowledge of using C Major (instead of D#/Eb) as well as D Major (instead of F) works exactly the same.

Look for D#/Eb below and count backwards three spots (because capo 3)



There's your C shape. Now do the same thing again, this time using F. Count three spots backward and you will land on D. BAM!

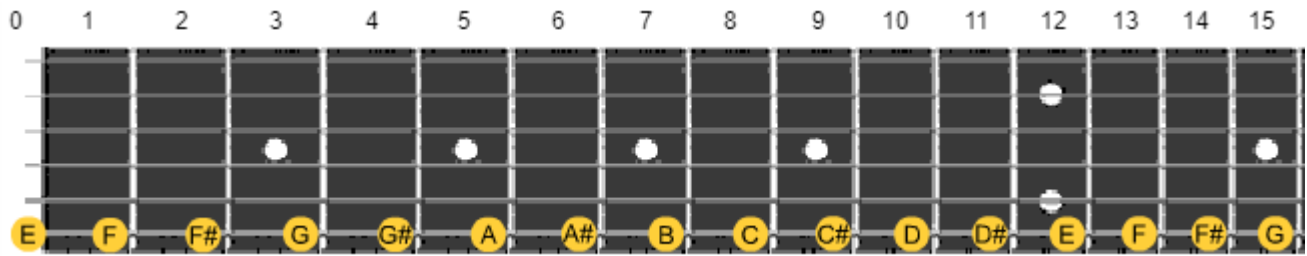
Thus, you have just transposed A#(Bb) – D#(Eb) – F using a capo to G – C – D.

See if you can figure out how, if you place a capo on the 8th fret, your progression shifts from the standard A#(Bb) – D#(Eb) – F to D – G – A.

You will want to count BACKWARDS from A#. In terms of note order, it would be easiest to use the A string:



The same applies with getting the G shape. Count backwards 8 spots from D#(Eb) and use the E string because it's easier:



Finally, count 8 spaces backwards from the F to find your A shape. Here you can use the same E string. This time count from the 13th fret back.

Incidentally, you can use either the E string or the A string as long as you count BACKWARD.

I think that more than covers enough food-for-thought information on how transposition works – at least for now.

Tomorrow's exercises will have you converting a few BASIC progressions, so if you aren't sure how all this works quite yet, don't worry. This is all prep material.