

The Newbie Guide to Scales and Patterns for the “n”-String Bass

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Introduction

The popularity of the 5, 6 and even more stringed bass has occurred not only because of the extend range of these instruments but also for other more fundamental reasons. The added strings below the traditional “E” of a 4-string bass may have been added to allow a bass guitar to compete with synthesizers and the added high strings above the traditional “G” may allow the bass player to solo near the guitar range and easily form chords that are not muddy, but probably the most important advantage of these multi-stringed basses is the way an extended range of notes can be accessed at one fretboard position by going *across* the neck rather than by moving the hand up and down it.

The 4-string traditional player may not even be aware that such an advantage exists because of the way the limited number of strings obscures the bigger picture of more universal fingering patterns for scales. Therefore, to better elucidate the concepts here, we are starting with a theoretical bass of an undefined number of “many” strings that we shall call the “n”-string bass. Once the scale fingering patterns are recognized on the extended bass, reduction even to a 4-string instrument will be more or less obvious. In other words, we will be talking here not so much of the *facts* such as note placement on the fingerboard, but a concept of viewing bass fingering that can become a wonderful tool for the bass player.

The concept of patterns and scales we will present has to do with a special characteristic of the bass guitar: If you start a scale pattern on a different note you get the same scale in a different key! In other words all keys in a given scale have the SAME pattern of fingerings, just re-positioned to another starting point! You may think this is an obvious thing, but we point out that many instruments such as the piano or guitar, do NOT have this feature! For example, a “C” scale on a piano is all white keys, while another scale such as “Eb” is quite different!

Interval Relationships

As a first “helpful hint” we notice that if you pick ANY note on the fingerboard, and if there is enough range on your bass, you will always find the same note name an octave above if you jump over a string higher and jump over a fret going higher. A similar rule holds for the octave below. You jump over a string going lower and jump over a fret toward lower notes. Figure 1. Shows the relationship.

					R						
			R					4		5	
								R			
	R							<u>5</u>			

Figure 1. Interval patterns.

Similar easy relationships exist for *all* other intervals. For example, the 5th up from a given note [which we have labeled **R** for “root”] and then taken down an octave is found at the same fret on the next string lower. The 4th (but not down an octave) is found at the same fret but up a string. The 5th up from a given note is found on the next string up and then up skipping one fret. All of this is about making bass playing easy. Most commonly a bass plays the root note of any chord in the “changes”. For this reason knowing the scale of a given key is of paramount importance. So if you are playing in the key of C and are playing the “I” chord which is C major with the bass playing the root note which would be “C”, and the next chord is the “IV” chord which relates to the 4th note of the C scale, you therefore know the next chord is F major for which the root note is found at the 4th note of your C scale! And so it goes.

But often a bass player may need to play another note of a given chord, such as the note a 3rd or 5th up from the root of the chord as those notes also are present in a three note chord (major triad). As you can see from above, *once* you know where to find the root note of any given chord name, the interval rules immediately inform you where, say, the 5th or octave are located for that chord. The 5th of the F chord is thus found one string up and up skipping one fret from the F note. Be sure to remember that the interval to find the 3rd or 5th of the F chord starts from F and NOT from C!

Playing Using “Scales”, “Keys” and “Modes”

So now the problem of playing bass resolves into knowing where each and every note is located on the fingerboard. Yes, you *could* just memorize the entire set of notes for your whole fingerboard, but it turns out there is a simplification that musicians use. This is a system known as “scales” and “keys”. Most music is written using a given set of notes with specified intervals between them. The complete set of all the notes available in a given octave that includes all sharps and flats is called the “chromatic scale”. In Western music one might say ALL music is written in this “scale”, but in truth most music never uses all the notes in that scale. Most common is the “major” scale that consists of seven notes, plus the octave that restarts the scale on the same note name an octave higher. The minor scale is another with seven notes that is very common. The minor and major “pentatonic” scales are also popular. As you might guess from the prefix “penta” these scales only have 5 notes. You may also hear advanced players talking about playing in “modes”. This only means playing the same notes as the major scale, but starting the progression on a note other than the root. For example, the so-called minor scale is just a “mode” of the major scale.

The “key” is an indicator which tells the given note name the scale starts on. So there is one “key” for each note name in the chromatic scale. In other words your major scale might start on any one of the notes in the chromatic scale. Therefore, if you are playing bass at a jam, and the guitarist says, “this tune is in A minor”. He means the tune uses the A minor scale, which is a minor scale where the “root” note for the scale is an A! For a bass player you’ll find this is no problem because of the “sliding” feature. All you need to is mentally “slide” your minor scale pattern around on the fingerboard, until

the bold “**R**” note is on the “A” you choose to use. Usually for best bass sound it will be a lower pitched “A”.

Since the “root” note of the scale pattern is placed over the “key” note name, the student obviously must have *some* knowledge of the note names on the fingerboard. At minimum, the note name of each open string on your bass needs to be memorized and by memory, counting up notes, or by the interval relations given above, the student must be able to find the position of the note name represented by a given “key”. But the good news is that once you start to play, only the number of the given note in a scale becomes important and actual note names can for the most part be ignored.

The bottom line in all of this is that once you have a scale fingering pattern fixed in your mind and know how to move that pattern around the fingerboard so you can place the “R” tone on any given note there, you now can instantly play in any key they call out no matter how weird! If they want to play the tune in 5 sharps, the keys player may be going nuts, but for you it will be a snap!

The “Major” Scale Pattern and the “Box”

So now we need to look at the scale fingering patterns and see what it takes to learn them. The idea as we have hinted above is to mentally imagine a bass with a large number of strings which we have termed the “n”-string bass. Figure 2. shows such a mythical bass guitar! If we examine the pattern formed by playing a major scale across all these strings (on a bass all the strings are assumed tuned in 4ths) we find a system where large segments of the scale can be played in what is termed “in the box”.

The “box” encompasses four frets where each finger of the left hand plays a given fret and the thumb remains on the back of the neck. If you play “in the box” you are playing only with fingers and your hand doesn’t slide up and down the neck at all!



Figure 2. The mythical “n”-string Bass!

As it turns out, one cannot play a scale from the bottom to the top of an “n”-string bass and stay “in the box”. But if you carefully examine the “n”-string bass scale pattern presented in Figure 3., you’ll see that one plays a large segment (about 2 octaves) of the scale in a given “box” and then suddenly the “box” shifts one fret! Another segment of the scale is then played and the “box” shifts again. This fact makes a very large pitch range available to the player at what is essentially very nearly a single hand position! Just count the octaves available at one position on our mythical “n”-string bass! Notice that the boxes shift at notes 5 and 6 of the scale. The string that plays notes 5 and 6 actually belongs both to the “box” above and the one below! Thus, for this scale the “boxes” overlap, but for other scales they may or may not overlap.

Note how simple the scale pattern is in each box! Beginning on the string playing the bold “R” and going up the scale we begin with two strings each playing three notes each. Then we find two more strings also playing three notes but with the middle notes shifted one fret. Finally the 5-6 string signals the end of that box and the beginning of the next shifted box. The whole fingering pattern then repeats for another box. This repeating pattern for fingering any major scale can easily applied to a bass of any number of strings.

				((6))		((7))	((R))												
				((3))	((4))		((5))												
				(7)	((R))		((2))												
					(5)		(6)												
					(2)		(3)	(4)											
					6		7	(R)											
					3	4		5											
					<u>7</u>	R		2											
						<u>5</u>		<u>6</u>											
						<u>2</u>		<u>3</u>	<u>4</u>										
						<u>6</u>		<u>7</u>	<u>R</u>										
						<u>3</u>	<u>4</u>		<u>5</u>										
						<u>7</u>	<u>R</u>		<u>2</u>										
							<u>5</u>	<u>6</u>											
							2	3	4										

Figure 3. Major Scale Pattern on the “n”-string Bass.

Once the above pattern is assimilated, one easily sees that if you slide the whole thing around on ANY neck such that the bold “R” is positioned on a given “key” note, you then have an extended scale that can be easily played across the neck on a bass with any number of strings. The angled scale pattern basically can be repeated as many

times as necessary or trimmed to fit the number of strings on a given bass. It is a VERY powerful conceptual tool!

Note another interesting fact as well. While the scale fingering usually starts with what is shown as the bold “R” in the middle of the box, if you jump over a higher string and jump over a fret up to the octave note at the edge of the “box”, you find that one can now mentally use that new “R” as a starting point for a new scale! In other words you can suddenly simply slide your whole scale pattern up two strings and up two frets and have a whole new place to play “across” the bass further up the neck! You have thus, moved your entire scale pattern up an octave in pitch.

But also as the student advances the point should be reached where *either* root note in the box can be mentally placed on the “key” note name to form a pattern on the bass neck that is played. In this way what may appear to be an array of different scale patterns at various points on the neck are seen to be merely portions of a larger all-encompassing scale pattern.

Patterns for Other Scales

So now having come this far, we might start to ask about other scales. A simple one is the major pentatonic scale. It is exactly as seen above but with notes 4 and 7 removed leaving a 5-note scale. Figure 4 shows the result giving the pattern for the Major Pentatonic scale fingering pattern. Note the simplicity of the pattern. Each string has only two notes on it. Three strings have a “narrow” 3 fret spacing and then two strings with a “wide’ 4 fret spacing in a pattern that repeats over and over with a similar “sliding” action. In this case, there is a large overlap of the “boxes”.

				((6))			((R))								
				((3))			((5))								
					((R))		((2))								
					(5)		(6)								
					(2)		(3)								
					6			(R)							
					3			5							
						R		2							
						<u>5</u>		<u>6</u>							
						<u>2</u>		<u>3</u>							
						<u>6</u>			<u>R</u>						
						<u>3</u>			<u>5</u>						
							<u>R</u>		<u>2</u>						
							<u>5</u>		<u>6</u>						
							2		3						

Figure 4. Major Pentatonic Scale Pattern on the “n”-string Bass.

Minor Scales

Other scales of high interest are the relative minor and minor pentatonic scales. The good news is that the actual *pattern* of notes in the relative minor scale is identical to the major scale pattern, but the bad news is that they are re-named with different numbers. It works like this: If you start at middle “C” on a piano and play all the white keys up to the next “C”. that is the C major scale. But if you start at “A” and play all the white keys up to the next “A”, you have played the A minor scale! A minor is termed the “relative minor” to C.

Note that in Figure 5 the pattern of finger positions remains the same only the “numbers” identifying the notes have changed. What was labeled “6” in the major scale, now become the bold “R” in the relative minor. Hence to play in any minor key you would mentally position the “R” in the above pattern over the proper note on your fingerboard. Hence if the song is in A minor, you position the root “R” over the note “A” on the bass fingerboard that you choose as a starting point.

				((R))		((2))	((b3))												
				((5))	((b6))		((b7))												
				(2)	((b3))		((4))												
					(b7)		(R)												
					(4)		(5)	(b6)											
					R		2	(b3)											
					5	b6		b7											
					<u>2</u>	b3		4											
						<u>b7</u>		<u>R</u>											
						<u>4</u>		<u>5</u>	<u>b6</u>										
						<u>R</u>		<u>2</u>	<u>b3</u>										
						<u>5</u>	<u>b6</u>		<u>b7</u>										
						<u>2</u>	<u>b3</u>		<u>4</u>										
							<u>b7</u>		<u>R</u>										
							4		5	b6									

Figure 5. Relative Minor Scale Pattern on the “n”-string Bass.

All the previous discussion of “playing in the box” and the sliding boxes equally applies to the relative minor scales because in fact they are the same patterns just labeled differently. The same thinking also applies to the minor pentatonic scale which is a relative minor scale with the notes “2” and “b6” removed. The minor pentatonic patterns is shown below in Figure 6. Notice how the pattern of three “narrow” spaced strings and two “wide” spaced strings persists as in the major pentatonic scale. The ‘boxes’ also have a wide overlap as in the major pentatonic case.

				((R))			((b3))							
				((5))			((b7))							
					((b3))		((4))							
					(b7)		(R)							
					(4)		(5)							
					R			(b3)						
					5			b7						
						b3		4						
						<u>b7</u>		<u>R</u>						
						<u>4</u>		<u>5</u>						
						<u>R</u>			<u>b3</u>					
						<u>5</u>			<u>b7</u>					
							b3		<u>4</u>					
							<u>b7</u>		<u>R</u>					
							4		5					

Figure 6. Relative Minor Pentatonic Scale Pattern on the “n”-string Bass.

If you examine the “boxes” we’ve defined for the minor pentatonic scale one might think that the considerable “overlap” could lead to confusion in how one might define which notes belong to which “box”. In actual practice, however, none of this is really important since the player can stay within any one positional “box” as long as fingering is possible and not shift to the next box until forced to shift to a new one when the melodic line goes beyond the range of the present box. The “overlap” simply is a “plus” that lets you stay in a given box longer than you otherwise might.

The Blues Scale

There remains one final common scale that we will mention. That would be the blues scale. A blues scale is a six-note scale that can be thought of as a minor pentatonic scale with an added “b5”. The harmonic structure of blues is not quite like that of normal western music and is a topic beyond the scope of what we are discussing here, but nevertheless the idea of the “blues scale” is highly useful to the bass player. The blues scale pattern is shown in Figure 7. Notice that in this case the overall fingering pattern has changed from those above and the location of the “boxes” to play in has also been redefined! In this case the boxes do not overlap at all. Still, the blues pattern is quite simple and easy to start on any note. Blues actually doesn’t play in a “key” in the sense of other music, but blues players often call a “key” by which they mean the note the blues scale starts upon. For the n-string bass player that is enough. If you know which note to place the “R” of your pattern upon, you know how to set your blues scale for the song.

				((R))			((b3))							
				((5))			((b7))							
					((b3))		((4))	b5						
					(b7)		(R)							
					(4)	B5	(5)							
					R			(b3)						
					5			b7						
						b3		4	b5					
						<u>b7</u>		<u>R</u>						
						<u>4</u>	b5	<u>5</u>						
						<u>R</u>			<u>b3</u>					
						<u>5</u>			<u>b7</u>					
							<u>b3</u>	<u>4</u>	b5					
							<u>b7</u>	<u>R</u>						
							4	b5	5					

Figure 7. "Blues Scale" Pattern on the "n"-string Bass.

A Final Word

Our final word in this discussion will be to point out that your bass neck and especially the neck of an "n-string bass" is covered with notes! Your bass neck "slices" through the extended "n-string" scale diagrams, and when playing the scale on your bass you eventually run out of strings as you reach the edge of the neck. At this point to continue your scale you must play either further up the highest string or further down the lowest string. Thus, the advanced student will need to gain some familiarity with the pattern a given scale makes along the entire length of a string and furthermore be able to properly connect that pattern to the "n-string" pattern that was being played *across* the bass neck.

But for this discussion, we simply wish to show the beginning bass player how easy it is to play in any key, major or minor simply by learning one basic pattern and positioning that pattern over the note that represents the key. To recap, given the fact that bass players are usually most concerned about the root note of any chord, knowing the scale pattern lets the player easily find that note in any key simply by knowing the interval of that root note from the basic key note. Thus in the key of C, for example the IV chord is F whose root note is simply "4" of the C scale. The V chord is G, which has a root note of "5" on the C scale and so on. And finally if one knows the rules for common intervals, if the bass player wishes to play the third note of the F chord (FAC) which is a "C" it is easily found by knowing that a major triad chord is composed of three notes: a root, and another a 3rd above the root and another a 5th above the root. One doesn't even have to know the scale names to find them. The 5th of the chord is always up a string and up two frets from the root note of that chord!

It is interesting to observe that this “sliding scale pattern” method does not also work for 6 or 12 string guitars using standard “E, A, D, G, B, E” tuning. The reason is that although the four lowest strings of a guitar are tuned similar to a 4-string bass, the highest two strings are not. The next two strings are tuned to “B” and “E” rather than the “C” and “F” of a 6-string or 7-string bass. This shift in tuning is done so as to make the fingering of certain chord formations much easier. A bass on the other hand is more a single note playing instrument rather than a harmony instrument like a rhythm guitar playing chords. Thus, for a bass guitar the altered tuning is not much needed and strings consistently tuned in 4^{ths} is considered “standard” bass tuning. However, there has been a growing interest in bass-like tuning for guitars as a so-called “alternate tuning”. One reason for this interest is the obvious power of the “sliding pattern” methodology to greatly simplify scales and note relationships, but a disadvantage is that it is not possible to reach the fingering for certain chords when this bass-like “alternate tuning” is used.

It will probably take some time to get this all straight in your head, but once you do, your bass playing can take a large leap forward because of the vast territory covered by the knowing these simple patterns and rules. Once you “get it” you’ll begin to see why 5 and 6 string basses have suddenly become so popular and why it’s not just about a few extra notes! It’s about a way of thinking that makes bass playing a snap!