

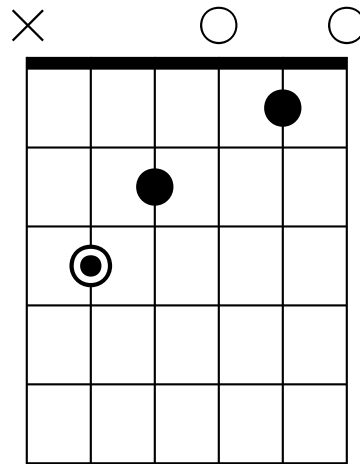
# Pentatonic Scales

## Part 2: Movable Minor Pentatonics

### Shapes, Boxes & Patterns

Many guitar players refer to shapes on the fretboard; such as, a "C shape chord," a "D minor shape arpeggio, or "shape one of the pentatonic." In these instances we are referring to the shape our fingers make on the fretboard. An open C chord has a distinct shape, and if we think about the arrangement of our fingers in relation to the strings and frets we can make a movable shape.

Let's do a thought experiment:



Above is a diagram for an open C chord. What is the relationship between the fingers, strings and frets in the above diagram? Let's make a list of the strings and what fret is pressed down on each string.

String 6: muted  
5: 3rd fret  
4: 2 fret  
3: open  
2 1st fret  
1: open

Now we have essentially made a recipe for the shape of a C chord. Let's now move the chord up 4 frets. In order to do that I will just add 4 to all of the frets listed above. What we get is this:

String 6: muted

5: 3rd fret + 4 = 7th fret

4: 2nd fret + 4 = 6th fret

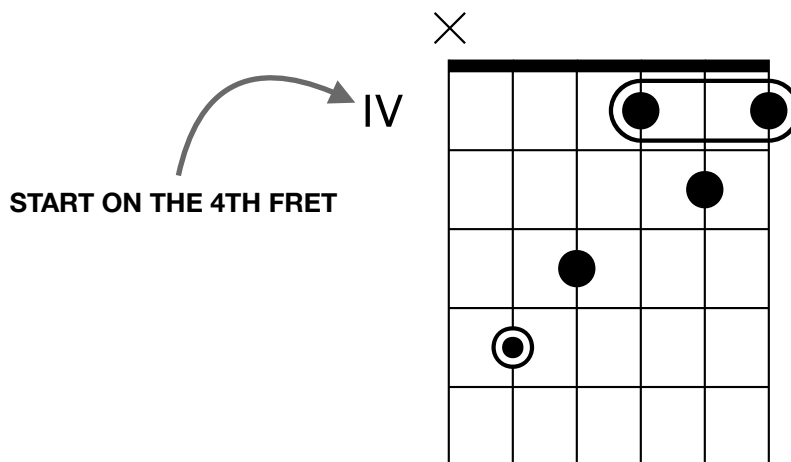
3: Open + 4 = 4th fret (Think of open strings as 0)

2: 1st Fret + 4 = 5th fret

1: Open + 4 = 4th fret

Another (and more musical) way of thinking about what we just did is we moved every note in our C chord up four 1/2 steps. Remember from previous lessons that moving one fret is the same as moving a 1/2 step.

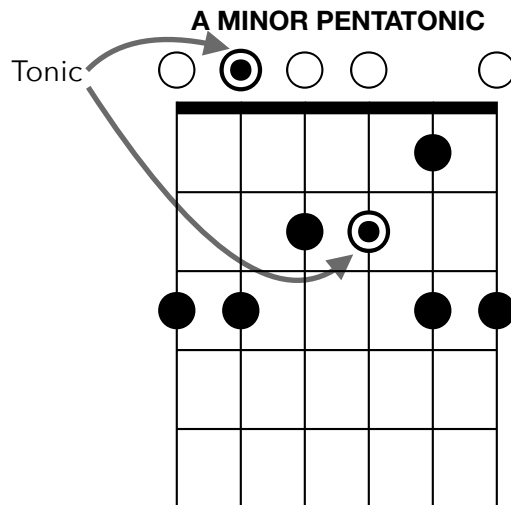
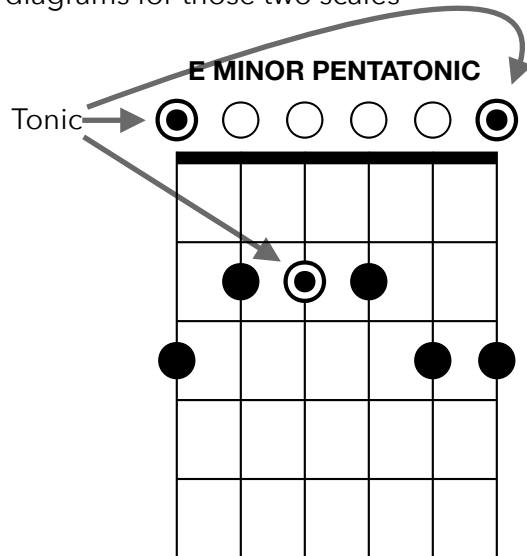
The last thing to do here is to mark what note in that C chord is the **root** of the chord. The root is the note the chord is named after, so let's find where the note C in the C chord diagram. It turns out there are 2 instances of C in the chord; one of the 3rd fret of the 5th string and one on the 1st fret of the 2nd string. Let's focus on the lowest instance of the root note which would be the one on the 5th string (indicated on the chord diagram with a bull's eye.) If I move that up four frets then I would land on the 7th fret. Any idea what note that is? It's E. Thus, by moving every note in our C chord up 4 frets (or 1/2 steps) we have arrived at an E chord using a "C shape." Here's what that diagram would look like.



If you want to try to play that chord you'll want to bar the 4th fret with your first finger, then use your 4th, 3rd and 2nd finger on strings 5, 4 and 2 respectively. This is known as a "C shape bar chord." It's pretty tough to play so feel free to skip it. We will use this concept of moving shapes up and down to learn two pentatonic patterns that are way easier to play than that C-shape E chord.

## Tonic on the E and A Strings

In the previous lesson we learned how to play the E and A Minor Pentatonic Scales in open position. Below are the diagrams for those two scales



As you can see in the above diagrams, the **tonic\*** is indicated with the bull's eye. In our E Minor Pentatonic those notes are all of the occurrences of the note E, and in the A Minor Pentatonic they are all the occurrences of the note A.

*\*When translated from Greek the word **tonic** simple means "tone" or "note," but in the context of scales and musical keys the word tonic refers to a specific note. It refers to the note that the scale we are playing is named after. It can also be thought of the letter name of the key you are playing in. If I write a song in the key of G, then the note G is the tonic. If I play a D minor scale then the tonic of that scale is D. It is a very similar concept to roots of chords. The tonic is the note a scale is named after, and the root of a chord is the note the chord is named after.*

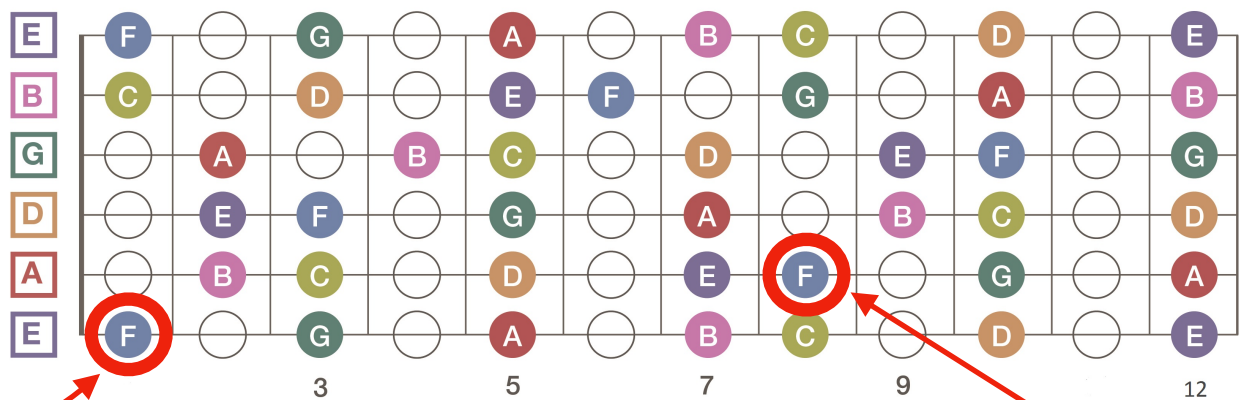
Like we discussed earlier with chord shapes, we can also move scale shapes (patterns) up the neck. Doing so will allow us to play in different keys. Notice how in the E Minor Pentatonic the tonic occurs on the open low E (6th) string, and on the A Minor Pentatonic it occurs on the

open A (5th) String. This means we can think of these two patterns as the tonic starting on the E string and the tonic starting on the A string. Let's just call them the **E String Tonic Pattern** and the **A String Tonic Pattern**. The word pattern here is interchangeable with the word shape.

From the previous lesson we should know that any scale is a repeating pattern of notes. This repeating pattern can be expressed with a formula. In order to make the formula we must measure the distance between each note in the scale. We use **intervals** to measure the distance between two notes. Lucky for us in the case of scales we only need to know two intervals: the **whole step** and the **half step**. Two notes that are two frets apart are a whole step apart and if they are one fret apart the distance between them is a half step. A third interval of 3 frets or a **whole plus a half step** will come in handy when dealing with pentatonics. This is all covered in detail in the previous lesson, so let's just get into the formula for any minor pentatonic scale:

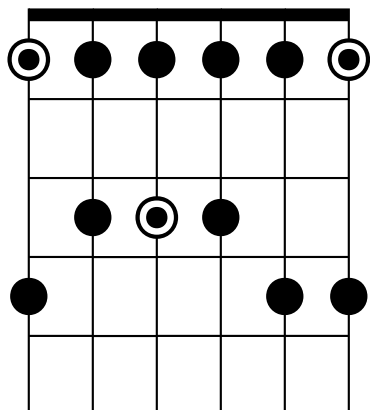
### W+H - W - W - W+H - W

In the above formula whole step is abbreviated with "W" and half step is "H." Thus, W+H means whole plus a half step. If it is the case that all minor pentatonic scales follow the same formula then we are able to utilize the E and A String Tonic Patterns no matter what note we start on. For example if we want to play F Minor Pentatonic, we simply need to locate the note F on either the E (6th) or A (5th) string, move to either of those frets and play the appropriate pattern (E or A String Tonic.) Using the fretboard diagram below we can see that the note F is located on the 1st fret of the E string. Another way to think about it is F is one half step above E, and we know from before that a half step is achieved by moving up or down one fret. So if we shift our E String Tonic Pattern up exactly one fret we will arrive at F Minor Pentatonic:

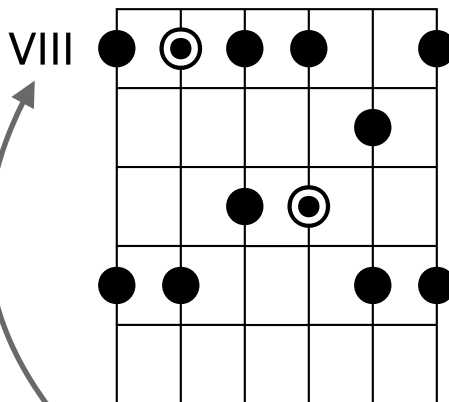


If we wanted to utilize the A String Tonic Pattern then we would simply locate F on the A string (8th fret) and start our A String Tonic Pattern on there. Below are the E and A string tonic diagrams for F Minor Pentatonic.

**F MINOR PENTATONIC  
(E STRING TONIC)**



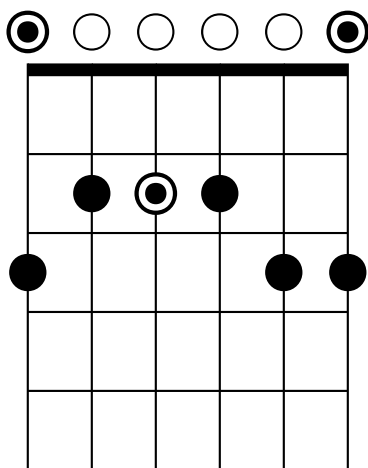
**F MINOR PENTATONIC  
(A STRING TONIC)**



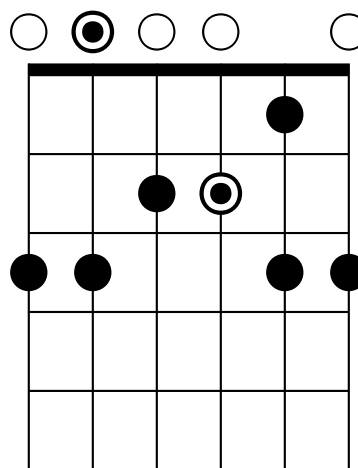
**START ON THE 8TH FRET**

If we compare the F Minor Pentatonic Diagrams to their open E and A Minor Pentatonic Counterparts we will see that the shapes of the scales are exactly the same. The only difference is the fret that we start on.

**E MINOR PENTATONIC  
(E STRING TONIC)**



**A MINOR PENTATONIC  
(A STRING TONIC)**



# Moving Shapes

Now that we have the concept of the E and A string tonic shapes down for our minor pentatonic, let's see if we can move these patterns around so we can play in different keys. Below we have four keys listed:

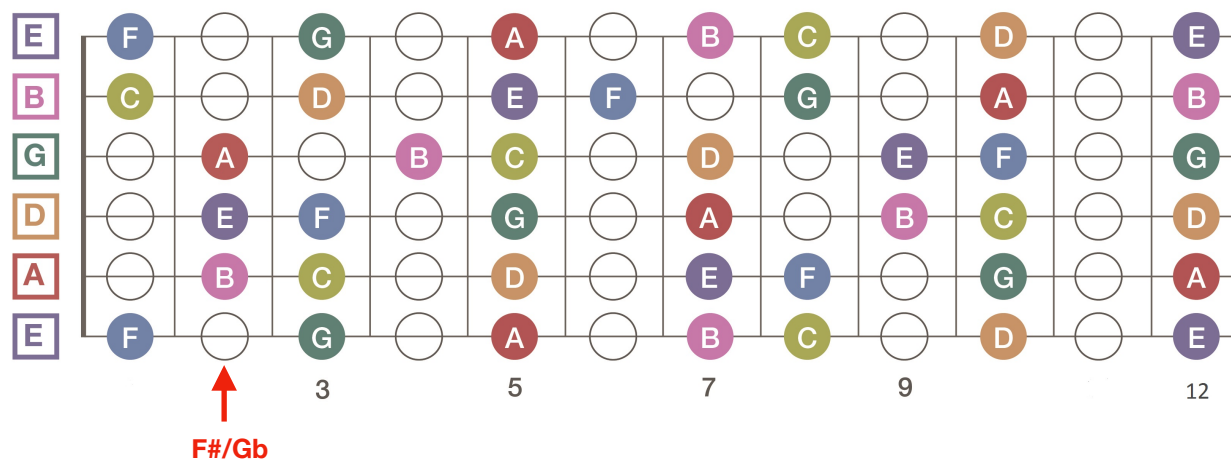
## G Minor Pentatonic

## C Minor Pentatonic

## F# Minor Pentatonic

## Eb Minor Pentatonic

The idea of this exercise is to be able to play a minor pentatonic scale in each key using both the E and A string tonic shapes. Use the fretboard diagram with all the notes written on it to help you find what in position to start the scales. Keys that have a sharp (#) are one half step (one fret) higher than the letter name of the note, and flats (b) are one half step lower. For example F# would be on the second fret of the Low E (6th) string, but we could also call that note Gb. Notes with different names that represent the same pitch are called **Enharmonic Equivalents**. Gb and F# are enharmonic.



## Answers:

### **G Minor Pentatonic:**

E String Tonic - Start on 3rd Fret

A String Tonic - Start on 10th Fret

### **C Minor Pentatonic:**

E String Tonic - Start on 8th Fret

A String Tonic - Start on 3rd Fret

### **F# Minor Pentatonic:**

E String Tonic - Start on 2nd Fret

A String Tonic - Start on 9th Fret

### **Eb Minor Pentatonic:**

E String Tonic - Start on 11th Fret

A String Tonic - Start on 6th Fret

## Wrapping Up

At this point you hopefully feel comfortable with the E and A string tonic shapes, and how to start moving them around the neck. Memorizing the notes on the E and A strings is a huge plus and can take some time. Instead of trying to sit and memorize the notes, it is better to learn them in context as you learn how to play different songs, riffs and exercises. In the next lesson we will learn three more shapes that you can use to play minor pentatonics. This will lead us into a discussion about major pentatonics, blues scales and how to use these scales to improvise over a variety of styles of music.