

## "Fretboard Memory" The E-book- Discovering The Fretboard *The Easy Way*

*Definition: the flat face of the neck of the guitar, onto which the metallic frets are placed.*

The absolute most important aspect that you need to know is the fretboard, or the notes that make up the guitar.

There are 12 different notes in music. Imagine them as blocks :



There are three different types of notes on the fretboard, but only two categories. They are :

- Primary Notes - A, B, C, D, E, F, G
- Secondary Notes (Sharps and Flats)
  - Sharps - Sharps consist of G#, A#, C#, D#, F#
  - Flats - Flats consist of Ab, Bb, Db, Eb, Gb

Let's start with the basics.

### Primary Notes

There are a few ways to look at your guitar to understand the Primary Notes. It is important for all musicians to understand the way the "musical alphabet" works. The musical alphabet is similar in many respects to the "regular" alphabet, in that it uses standard letters (a, b, c...). Where the musical alphabet differs, is that in the musical alphabet, the letters only progress up to G, upon which, they begin again at A. As you continue up the musical alphabet, the pitches of the notes get higher (when you go past G up to A again, the notes continue to get higher, they don't start at a low pitch again.)

On the guitar, each of these letter names represents a specific fret on the fretboard. Between each letter name, there is a "blank" fret (these are the sharps and flats, which we'll deal with later).

#### *\*There are TWO Exceptions*

Between the notes B and C, and also between the notes E and F, there is no "blank" fret.

These notes directly follow each other on the fretboard. This is visible in the diagram of the guitar fretboard further below.

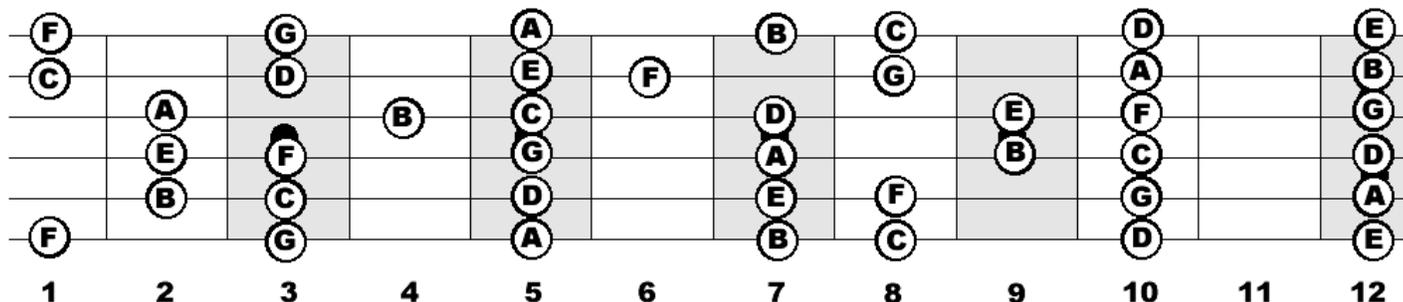
As you can see, the note F directly follows the note E on the sixth string of the guitar (the sixth string is referred to as the "E string" because that is the letter name of the open string.) As you continue up the string, you'll see that the notes G and A are separated by a blank fret, as are A and B. This is when we encounter the other exception; the note C directly follows B on the fretboard. Between C and D, there is a blank fret, as there also is between D and E. You've now worked your way up to the 12th fret of the guitar, and are back at the letter E again.

The counting process is the exact same on the fifth string (the "A string") as it was on the sixth string. Try working up the string without looking at the diagram, saying out loud each letter name until you've reached the 12th fret, at which point you should be back at the letter A again.

#### *\*Remember: There is No space between B and C, or between E and F!*

Possibly the best way to go about learning the fretboard is to start by committing several note names and frets to memory on each string. For example, if you've memorized that, on the sixth string, A is at the 5th fret, and C is at the 8th fret, if you are required to find the note D, instead of counting all the way up from the open string (E), you can count up 2 frets from C, because you know it is at the 8th. This makes things much quicker. As time progresses, you will naturally start to remember where all the other notes are.

Let's take a look at the entire fretboard using Primary Notes the way you will see them, holding your guitar (assuming the Low E string is at the bottom of the image):



On the twelve frets we show, you can now see how many variations of each Primary Note that you can play. Here are the calculations using ONLY Primary Notes on each string.

<p><b>Low E String</b></p> <ul style="list-style-type: none"> <li>• A - 1</li> <li>• B - 1</li> <li>• C - 1</li> <li>• D - 1</li> <li>• E - 1 (plus open string = 2)</li> <li>• F - 1</li> <li>• G - 1</li> </ul>	<p><b>A String</b></p> <ul style="list-style-type: none"> <li>• A - 1 (plus open string = 2)</li> <li>• B - 1</li> <li>• C - 1</li> <li>• D - 1</li> <li>• E - 1</li> <li>• F - 1</li> <li>• G - 1</li> </ul>	<p><b>D String</b></p> <ul style="list-style-type: none"> <li>• A - 1</li> <li>• B - 1</li> <li>• C - 1</li> <li>• D - 1 (plus open string = 2)</li> <li>• E - 1</li> <li>• F - 1</li> <li>• G - 1</li> </ul>
<p><b>G String</b></p> <ul style="list-style-type: none"> <li>• A - 1</li> <li>• B - 1</li> <li>• C - 1</li> <li>• D - 1</li> <li>• E - 1</li> <li>• F - 1</li> <li>• G - 1 (plus open string = 2)</li> </ul>	<p><b>B String</b></p> <ul style="list-style-type: none"> <li>• A - 1</li> <li>• B - 1 (plus open string = 2)</li> <li>• C - 1</li> <li>• D - 1</li> <li>• E - 1</li> <li>• F - 1</li> <li>• G - 1</li> </ul>	<p><b>High E String</b></p> <ul style="list-style-type: none"> <li>• A - 1</li> <li>• B - 1</li> <li>• C - 1</li> <li>• D - 1</li> <li>• E - 1 (plus open string = 2)</li> <li>• F - 1</li> <li>• G - 1</li> </ul>

Now let's take a look at the TOTAL number of times Primary Notes repeat :

Note	Number Of Times It Is Present (Counting Open Strings)
A	7
B	7
C	6
D	7
E	8
F	6
G	7

**Now We Have A Mathematical System Going!**

**Notice that all A, B, D, and G notes appear seven times.**

Hmm..seven. Well, there are seven Primary Notes on your guitar, using the first twelve frets. What a good way to remember how many Primary Notes there are.

**The C and F notes appear six times.**

This is because in standard tuning, you have no open string to play. That is why there are only six possible notes that you can play.

**Now, why are there eight possible notes that the E can play?**

Well, we know that there are TWO strings on your guitar that are tuned the same. They are the two E strings. That equals two possible notes. Now, six are left. That is because there are six possible notes you can play, NOT counting the two E strings that are tuned together.

This is a relatively simple concept. What you can gather is that in Primary Notes, you can ONLY play the given note open and fretted on the given string.

You can ALSO see that the pattern repeats itself in a mathematical expression.

Let's use an example :

**You are playing the Open E string. That note of course, is an E. Once you play that, let's say you want to play the notes in their original order (A, B, C, D, E,**

F, G). Well, you are playing an Open E, so your order begins in note order, which means :

**E Note = (Next Note In Order) = F. The F note will be the first fret on the Low E string. In order to play the NEXT sequential order note, you will need to find the G note. That will be, by looking at the chart above, the third fret on the same string. Remember, we are ONLY using the Low E string right now.**

You can play with this a little by using the diagram above, and you will see the pattern yourself.

Let's look at one more string using the same concept.

**You are playing the Low E string on the fifth fret. That would be an A note. This will be easy, because we can start out on the A in sequential order.**

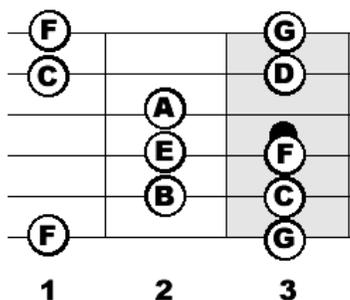
**So, since you are ON the A note on the Low E string, you will want to find the B note. That will be on the seventh fret of the same string.**

You don't HAVE to follow the order of Primary Notes, as they can start anywhere, but by following this idea, you can see how every Primary Note relates to the other.

Now that the idea of note relation is complete, let's break down the Primary Notes as they are labeled into smaller "chunks."

Doing this will increase your recognition of what the Primary Notes actually are. If you were to try to learn the fretboard's Primary Notes all at the same time, it might leave you a bit confused. We are going to break them down into three frets at a time.

### Frets 1-3



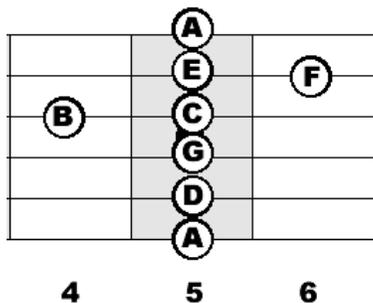
Let's look at how many possible notes you can play using the first three frets of your guitar :

- A = 1 note + 1 open a string = 2
- B = 1 note + 1 open b string = 2
- C = 2 notes (no open strings) = 2
- D = 1 note + 1 open d string = 2
- E = 1 note + 2 open strings = 3
- F = 3 notes + (no open strings) = 3
- G = 2 notes + 1 open g string = 3

What do you notice?

**That equals 17 total notes that you can play using only the first three frets.**

### Frets 4-6



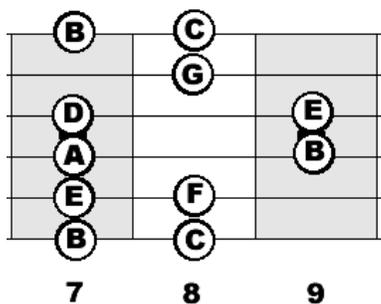
- A = 2 notes + 1 open a string = 3
- B = 1 note + 1 open b string = 2
- C = 1 note (no open strings) = 1
- D = 1 note + 1 open d string = 2
- E = 1 note + 2 open e strings = 3
- F = 1 note (no open strings) = 1

- G = 1 note + 1 open g string = 2

What do you notice?

**That equals 14 total notes that you can play on frets 4 to 6.**

**Frets 7-9**

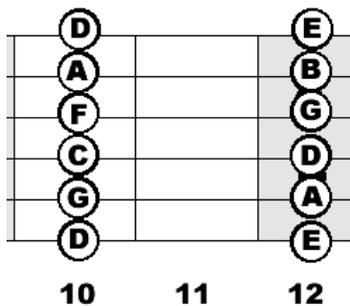


- A = 1 note + 1 open a string = 2
- B = 3 notes + 1 open b string = 4
- C = 2 notes (no open strings) = 2
- D = 1 note + 1 open d string = 2
- E = 2 notes + 2 open e strings = 4
- F = 1 note (no open strings) = 1
- G = 1 note + 1 open g string = 2

What do you notice?

**That equals 17 total notes that you can play on frets 7 to 9.**

**Frets 10-12**



- A = 2 notes + 1 open a string = 3
- B = 1 note + 1 open b string = 2
- C = 1 note (no open strings) = 1
- D = 3 notes + 1 open d string = 4
- E = 2 notes + 2 open e strings = 4
- F = 1 note (no open strings) = 1

<ul style="list-style-type: none"> <li>• <math>G = 2 \text{ notes} + 1 \text{ open g string} = 3</math></li> </ul>
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What do you notice?

**That equals 18 total notes you can play on frets 10 to 12.**

**Calculate :**

Let's run a quick, easy calculation.

Using ONLY Primary Notes on the 12 frets that we are using :

**Frets 1-3 = 17 Possible Notes**

**Frets 4-6 = 14 Possible Notes**

**Frets 7-9 = 17 Possible Notes**

**Frets 10-12 = 18 Possible Notes**

**17 + 14 + 17 + 18 = 66 Possible Primary Notes**

**\*Important Notes :**

1. The note name on the 12th fret of any string is always the same as the open string.
2. Memorize the open string name, and several more note names and locations on both the sixth and fifth string first. This will make finding all other notes much quicker.
3. The note on the Low E string is ALWAYS the same note as the High E string. This is because they are tuned the same.
4. There is No space between B and C, or between E and F.
5. If you know the note names on the sixth string, then you know the note names on the fourth string. Simply count over two strings from the sixth, and up two frets, and you've found the octave of the note on the sixth string.
6. You can apply the same philosophy to learning notes on the third string. By finding the appropriate note on the fifth string, and counting over two strings, and up two frets, you'll have found the octave on the third string.

**Secondary Notes**

The remaining 5 notes are Secondary Notes. They have dual names, meaning they can be called sharp or flat. (The term used to describe this is "enharmonic"). Sharps are represented by a "#" and flats are represented by a "b". Think of a sharp as meaning "go up one" and a flat as "go down one".

The 5 Secondary Notes are called G#/Ab, A#/Bb, C#/Db, D#/Eb, and F#/Gb.

Another thing to notice is that after G#/Ab We arrive at A again. This second A vibrates exactly twice as fast as the first A, and therefore, the ear tends to hear it as another version of the same note. The second A is called the OCTAVE of the first A.

If we continue after the second A, we get A#/Bb an OCTAVE higher than the first, B an OCTAVE higher, C an OCTAVE higher etc., etc., until we get to A again. This A is two OCTAVES higher than the first A. If we keep going, the whole pattern just repeats over and over until we can't get any higher on the instrument.

( If you didn't run out of notes, you could keep right on going until the notes were so high that you couldn't hear them). The same is true if you travel in the opposite direction. The pattern repeats until you run out of notes.

Here's something to help you remember the sharps and flats. If you sharpen a pencil, you raise a point on it. Therefore, if you play A and then play the next higher note, you would call the second note A#. Likewise, if you play B and then play the next lower note, you would call the second note Bb. Remember that A# and Bb are the exact same note or, a term we just learned - "enharmonic."

**It should be noted that usually when you see two notes put together, the "/" stands for "for." For example, if you were to play a C/G, usually you would say "C for G." That is not the case here. The "/" just means "or" in this case.**

Here is what the Secondary Notes would look like on your guitar.

	A#/Bb			C#/DB		D#/Eb			F#/Gb		G#/Ab
1	2	3	4	5	6	7	8	9	10	11	12

Let's take this same chart and apply the Primary Notes to it as well.

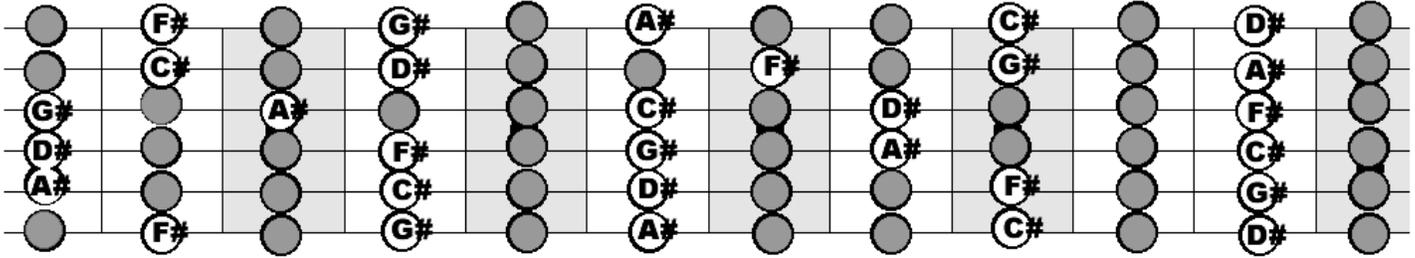
With all 12 blocks filled you can see a Sharp always follows a Primary Note and a Flat always precedes a Primary Note.

A	A#/Bb	B	C	C#/DB	D	D#/Eb	E	F	F#/Gb	G	G#/Ab
1	2	3	4	5	6	7	8	9	10	11	12

The notes will always follow each other in this order.

Thus, the note order = A, A#/Bb, B, C, C#/Db, D, D#/Eb, E, F, F#/Gb, G, G#/Ab.

The dots in gray are the Primary Notes that you have already seen.



Instead of displaying the inharmonic notes, or the flats, we created a table below. Everywhere you see a C#, you can also place the Db in it's spot. If we were to include both variations, it would be hard to read.

C# = Db	D# = Eb	F# = Gb	G# = Ab	A# = Bb	
<b>Low E String</b> <ul style="list-style-type: none"> <li>• A#/Bb - 1</li> <li>• C#/Db - 1</li> <li>• D#/Eb - 1</li> <li>• F#/Gb - 1</li> <li>• G#/Ab - 1</li> </ul>	<b>A String</b> <ul style="list-style-type: none"> <li>• A#/Bb - 1</li> <li>• C#/Db - 1</li> <li>• D#/Eb - 1</li> <li>• F#/Gb - 1</li> <li>• G#/Ab - 1</li> </ul>	<b>D String</b> <ul style="list-style-type: none"> <li>• A#/Bb - 1</li> <li>• C#/Db - 1</li> <li>• D#/Eb - 1</li> <li>• F#/Gb - 1</li> <li>• G#/Ab - 1</li> </ul>	<b>G String</b> <ul style="list-style-type: none"> <li>• A#/Bb - 1</li> <li>• C#/Db - 1</li> <li>• D#/Eb - 1</li> <li>• F#/Gb - 1</li> <li>• G#/Ab - 1</li> </ul>	<b>B String</b> <ul style="list-style-type: none"> <li>• A#/Bb - 1</li> <li>• C#/Db - 1</li> <li>• D#/Eb - 1</li> <li>• F#/Gb - 1</li> <li>• G#/Ab - 1</li> </ul>	<b>High E String</b> <ul style="list-style-type: none"> <li>• A#/Bb - 1</li> <li>• C#/Db - 1</li> <li>• D#/Eb - 1</li> <li>• F#/Gb - 1</li> <li>• G#/Ab - 1</li> </ul>

What does this tell us about Secondary Notes?

The answer is simple. Since all strings are tuned to standard tuning, there are no open strings that work using Secondary Notes. This ALSO means that a Secondary Note can ONLY appear five total times on each string, until you end up going back to the start.

This is why we saved Secondary Notes for last. By learning the Primary Notes first, you actually already learned the hard part.

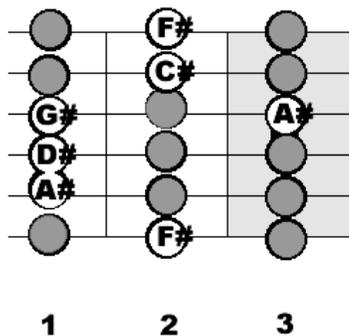
Note	Number Of Times It Is Present
A#/Db	6
C#/Db	6
D#/Eb	6
F#/Gb	6
G#/Ab	6

That is easy to remember isn't it? There are SIX total times that the notes above appear on the fretboard. Why six times? That's easy too. The reason that the notes appear six times is that you have to remember the twelfth fret repeats the notes. Since we know that, that would ACTUALLY mean the notes only appear five times. That takes us [guitaralliance.com/frets101/members/fretboard\\_memory\\_ebook/index.htm](http://guitaralliance.com/frets101/members/fretboard_memory_ebook/index.htm)

back to why there are only FIVE Secondary Notes.

By breaking the fretboard down into three parts, we can see the idea a little more clearly. Since we know that none of the open strings will be used, we have no need for a mathematical expression. Instead, let's just crunch the numbers.

### Frets 1 -3

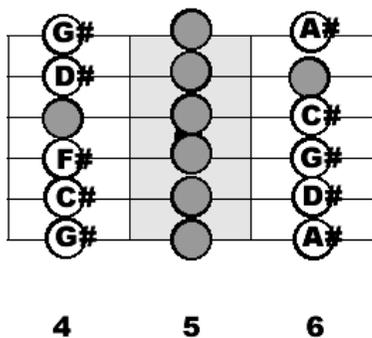


- A#/Bb - 2
- C#/Db - 1
- D#/Eb - 1
- F#/Gb - 2
- G#/Ab - 1

What do you notice?

**We have a total of 7 Secondary Notes Using Frets 1 to 3.**

### Frets 4-6

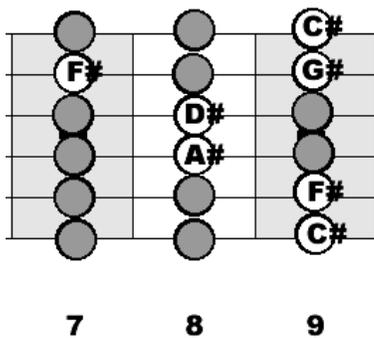


- A#/Bb - 2
- C#/Db - 1
- D#/Eb - 2
- F#/Gb - 1
- G#/Ab - 3

What do you notice?

**We have a total of 9 Secondary Notes Using Frets 4 to 6.**

### Frets 7-9

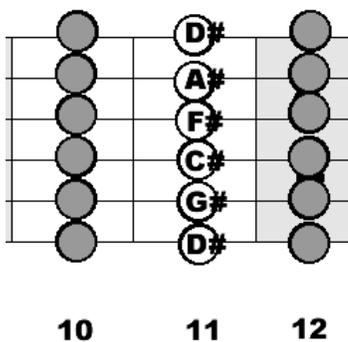


- A#/Bb - 1
- C#/Db - 2
- D#/Eb - 1
- F#/Gb - 2
- G#/Ab - 1

What do you notice?

**We have a total of 7 Secondary Notes Using Frets 7 to 9.**

### Frets 10-12



- A#/Bb - 1
- C#/Db - 1
- D#/Eb - 2
- F#/Gb - 1
- G#/Ab - 1

What do you notice?

**We have a total of 6 Secondary Notes Using Frets 10 to 12.**

### Calculate :

It's time for another calculation.

Frets 1-3 = 7

Frets 4-6 = 9

Frets 7-9 = 7

Frets 10-12 = 6

**7 + 9 + 7 + 6 = 29 Possible Secondary Notes**

### \*Important Notes :

1. "Sharp" is notated as #.

2. "Flat" is notated as b.
3. If a letter name is followed by a sharp(#), the note is one fret higher than the fret you'd normally play that letter name on.

**Example: you'd play G on the third fret, sixth string. You'd play G# on the fourth fret sixth string.**

4. If a letter name is followed by a flat(b), the note is one fret lower than the fret you'd normally play that letter name on.

**Example: you'd play D on the tenth fret, sixth string. You'd play Db on the ninth fret sixth string.**

5. F# = Gb, G# = Ab, A# = Bb, C# = Db, D# = Eb
6. The note name on the 12th fret of any string is always the same as the open string.
7. Memorize the open string name, and several more note names and locations on both the sixth and fifth string. This will make finding all other notes much quicker.

Now that you have an understanding of the differences between Primary and Secondary Notes, as well as their relation to each other, let's look at the full fretboard diagram, will all the notes on the fretboard. Remember, the Primary Notes are in gray.

