

## The Chromatic Scale

Music as we know it uses the following alphabet to designate the different tones:

A	A <sup>#</sup>	B	C	C <sup>#</sup>	D	D <sup>#</sup>	E	F	F <sup>#</sup>	G	G <sup>#</sup>	A
	B <sup>b</sup>			D <sup>b</sup>		E <sup>b</sup>			G <sup>b</sup>		A <sup>b</sup>	

Notice that B<sup>b</sup> is written under A<sup>#</sup> (likewise D<sup>b</sup>/C<sup>#</sup> and others); this means that they are the *same sound* (the reasons for needing to be able to use both symbols will become clear soon—you will have to take many things on faith at first in the study of music). This alphabet is called the *chromatic scale*; notice that there are 12 different *sounds* in it. Also you just have to accept the fact that there is no sharp or flat between B and C and between E and F (an explanation would waste too much space here).

## The Major Scale

Before we can talk about major scales we must talk a little about *intervals* (an interval refers to the distance or difference in pitch between any two notes). The two most basic type of intervals are the half step and the whole step. Any two notes which are *adjacent* (next to each other) in the chromatic scale are said to be a half step apart (such as A and A<sup>#</sup>, A<sup>#</sup> and B, B and C, etc.). Any two notes which are *separated* by one note in the chromatic scale are said to be a *whole step* apart (such as A and B, B<sup>b</sup> and C, B and C<sup>#</sup>, etc.).

A *major scale* is a group of consecutive tones from one letter name to its repetition in which all intervals between adjacent letter names are whole steps except for between 3 and 4 and between 7 and 8, which are half steps.

Example: The A major scale is:

1	2	3	4	5	6	7	8
A	B	C <sup>#</sup>	D	E	F <sup>#</sup>	G <sup>#</sup>	A
		∨				∨	
		half step				half step	

The distance between the first and eighth tones is called an *octave*. The notes in the scale (also termed *degrees* of the scale) are given the following names: 1 = tonic (also root), 2 = supertonic, 3 = mediant, 4 = subdominant, 5 = dominant, 6 = submediant, 7 = leading tone, 8 = octave, tonic, or root. As you will see, chords are built on the different degrees of a scale and the above names will apply to these also, except that chords built on 1 and 8 are called tonics exclusively, not roots or octaves.

Roman numerals are usually used instead of Arabic numbers in music notation when referring to the degrees of a scale (Example: the subdominant is usually written as IV, not 4).

The major scales are the foundations of most musical theory and must be memorized as soon as possible. Look at it this way: in learning to speak English you had to just learn the alphabet, then simple words and how to spell them, then how to use them in sentences, and so on. So it is with music—first the alphabet (chromatic scale), then the words (major scales, chords, and others), then the sentences (phrases, songs, etc.).

Here are the Major Scales listed in order of the number of sharps or flats.

**No sharps or flats:**  
**C D E F G A B C**

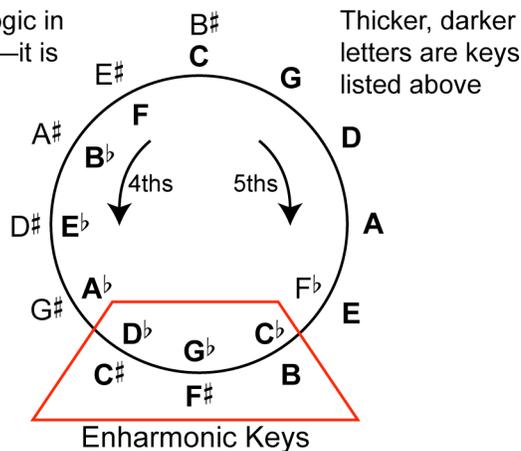
<p><b>Sharps:</b></p> <p>1: <b>G</b> A B C D E F# G</p> <p>2: <b>D</b> E F# G A B C# D</p> <p>3: <b>A</b> B C# D E F# G# A</p> <p>4: <b>E</b> F# G# A B C# D# E</p> <p>5: <b>B</b> C# D# E F# G# A# B</p> <p>6: <b>F#</b> G# A# B C# D# E# F#</p> <p>7: <b>C#</b> D# E# F# G# A# B# C#</p>	<p style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;">Memorize these scales mentally</p>	<p><b>Flats:</b></p> <p>1: <b>F</b> G A B<sup>b</sup> C D E F</p> <p>2: <b>B<sup>b</sup></b> C D E<sup>b</sup> F G A B<sup>b</sup></p> <p>3: <b>E<sup>b</sup></b> F G A<sup>b</sup> B<sup>b</sup> C D E<sup>b</sup></p> <p>4: <b>A<sup>b</sup></b> B<sup>b</sup> C D<sup>b</sup> E<sup>b</sup> F G A<sup>b</sup></p> <p>5: <b>D<sup>b</sup></b> E<sup>b</sup> F G<sup>b</sup> A<sup>b</sup> B<sup>b</sup> C D<sup>b</sup></p> <p>6: <b>G<sup>b</sup></b> A<sup>b</sup> B<sup>b</sup> C<sup>b</sup> D<sup>b</sup> E<sup>b</sup> F G<sup>b</sup></p> <p>7: <b>C<sup>b</sup></b> D<sup>b</sup> E<sup>b</sup> F<sup>b</sup> G<sup>b</sup> A<sup>b</sup> B<sup>b</sup> C<sup>b</sup></p>
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See below first  
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Before you dig in on the memorizing of the major scales, it would be wise to learn a few shortcuts. Notice in the *sharped* keys (those with sharps) that the keys progressively add one more sharp each time—like the key of G has one sharp, D has two, A has three, and so on. Now, notice that each key is the 5th of the previous key and that the sharps *themselves* are each added in to the scales in the relationship of a 5th.

Example: the key of G has one sharp: F# ; the key of D (which is the 5th of G) has two sharps: the F# again and the sharp that is a 5th up from it: C#.

Look for logic in the wheel—it is there



Thicker, darker letters are keys listed above

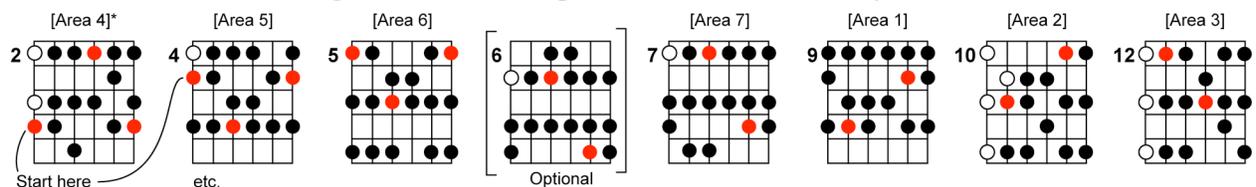
But if you memorize the little wheel given below, in the long run, you are going to save a lot of time. This wheel is called the Cycle of 5ths and also the Cycle of 4ths, depending on whether you go clockwise or counterclockwise.

Notice that the flat keys are related to the cycle of 4ths in the same manner that the sharp keys are related to the cycle of 5ths.

So memorize the wheel first, then the major scales—this is the easiest way to go. Don't put off learning all this information *now* or you will be in a mess of trouble later, trying to cope with even basic concepts, let alone

advanced ones. Whenever you have free time with your mind, like while eating, driving (but be careful), etc., you can practice this.

Here are some fingerings of the major scale (listed in the key of A, but transposable to all keys if you know the Chromatic Scale). Some of these fingerings may not seem important to you now, but each has a reason for being given—to lay the groundwork for the ability to improvise multi-line music. After learning them in A, transpose them to all other keys.



[\*As presented in "Jazz Guitar: Single Note Soloing Vol. 1"]

[Root = ●]



# Major Scales (continued)

2-19-74

The major scales are the foundations of most musical theory and must be memorized as soon as possible. Look at it this way: when learning to speak English, you had to just learn the alphabet, then simple words and how to spell them and then how to use them in sentences and so on. So it is with music - first the alphabet (**CHROMATIC SCALE**), then the words (**MAJOR SCALES, CHORDS and others**), then the sentences (phrases, songs, etc.).

Here are the **MAJOR SCALES** listed in order of the number of #'s or b's.

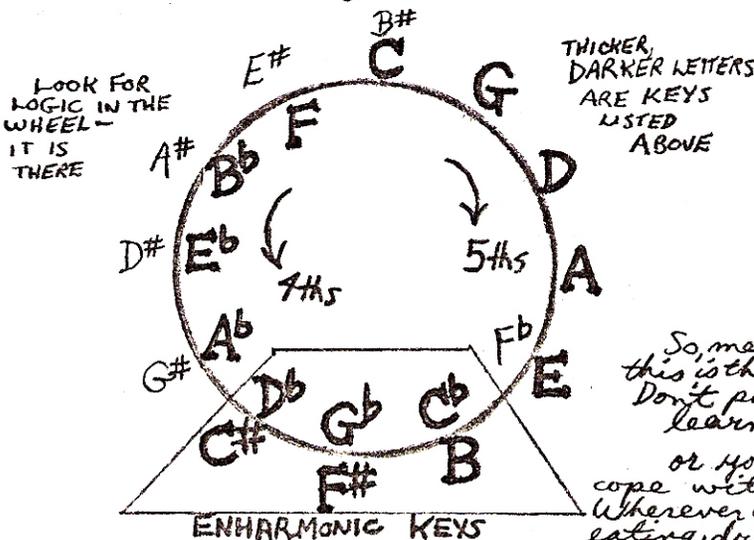
- |                             |                      |                 |                             |
|-----------------------------|----------------------|-----------------|-----------------------------|
| SHARPS                      | NO SHARPS OR FLATS → | C D E F G A B C | FLATS                       |
| 1 - G A B C D E F# G        |                      |                 | 1 - F G A Bb C D E F        |
| 2 - D E F# G A B C# D       |                      |                 | 2 - Bb C D Eb F G A Bb      |
| 3 - A B C# D E F# G# A      |                      |                 | 3 - Eb F G Ab Bb C D Eb     |
| 4 - E F# G# A B C# D# E     |                      |                 | 4 - Ab Bb C Db Eb F G Ab    |
| 5 - B C# D# E F# G# A# B    |                      |                 | 5 - Db Eb F Gb Ab Bb C Db   |
| 6 - F# G# A# B C# D# E# F#  |                      |                 | 6 - Gb Ab Bb Cb Db Eb F Gb  |
| 7 - C# D# E# F# G# A# B# C# |                      |                 | 7 - Cb Db Eb Fb Gb Ab Bb Cb |

MEMORIZE THESE SCALES MENTALLY

SEE BELOW first ↓

Before you dig in on the memorizing of the major scales, it would be wise to learn a few short-cuts. Notice in the sharped keys (those with sharps) that the keys progressively add 1 more sharp each time - like the key of G has 1 sharp, D has 2, A has 3 + so on. Now, notice that each key is the 5th of the previous key and that the sharps themselves are each added in to the scales in the relationship of a 5th.

EXAMPLE: The key of G has 1 sharp - F#; the key of D (which is the 5th of G) has 2 sharps - the F# again and the sharp which is a 5th up from it - C#. Now all this may be confusing you a little, but if you memorize this little wheel given below, in the long run, you are going to save a lot of time.



This wheel is called the **CYCLE OF 5ths** and ALSO the **CYCLE OF 4ths**, depending on whether you go clockwise or counterclockwise.

Notice that the flat keys are related to the **CYCLE OF 4ths** in the same manner that the sharp keys are related to the **CYCLE OF 5ths**.

So, memorize the wheel first, then the major scales - this is the easiest way to go. Don't put off learning all this information now

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