

# eVirtuoso-Online Lessons

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## Key Signatures Lesson 2

### Circle of Fifths and Fourths

The Major and Minor Keys previously discussed are also used in the Circle of Fifths and Fourths. The circle of fifths and fourths are important to study because they are organized to allow a very easy transition from one key signature to the next. Figure 1 below shows both the circle of fifths and the circle of fourths. The circle of fifths will utilize half the circle, rotating clockwise starting from C. The circle of fourths runs the opposite half rotating counter clockwise from C. The inner circle shows the relative minor keys.

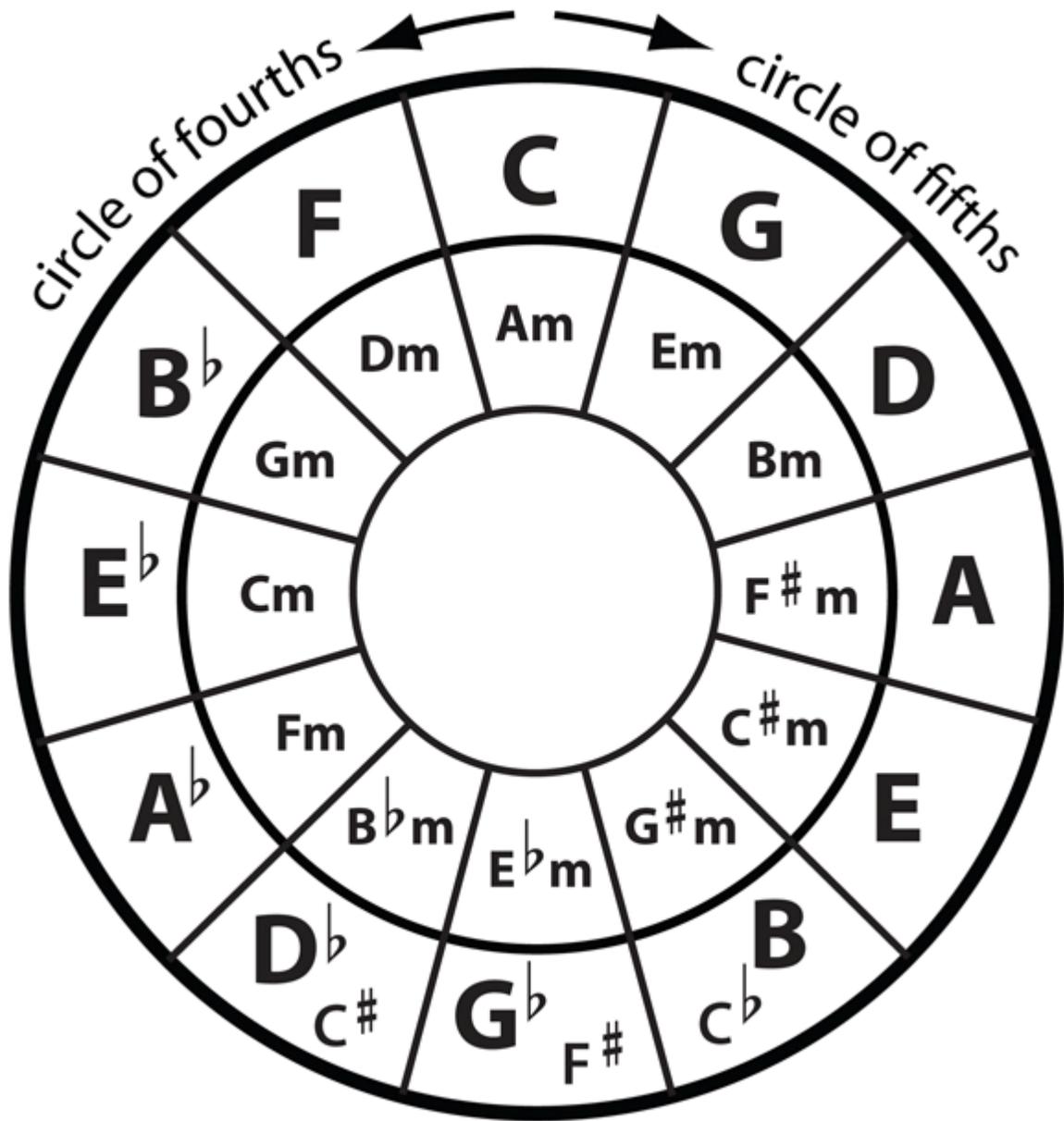


Figure 1 - Circle of Fifths and Fourths

The circle of fifth's sharp key signatures are a great starting point. The first key signature is the key of C. This key is easy to remember because it has no sharps or flats (C, D, E, F, G, A, B). To determine the next key, find the fifth note from the key of C, the G note, and that is the key of G. That is where the circle of fifth's name comes from; it is the fifth note in the scale that determines the next key signature. Now, to find what notes make up the key of G, take all the notes from the previous key and sharp one note. That note will be the previous key's fourth step note. In the key of C

the fourth note F becomes F#. Alternatively, order the key of C's notes for the key of G (G, A, B, C, D, E, F). In this order, sharp the seventh note F to become F#. This process creates the notes in the key of G (G, A, B, C, D, E, F#). So, it is clear to see that the difference between the key of C and the key of G is just one note, F#. This will be true for each key signature, both sharps and flats, in the circle of fifths and fourths.

The next sharp key signature in the circle of fifths is the key of D because D is the fifth note in the G major scale. The sharp note added to this key is C#. Remember, there are two ways to get to the C# note. From the key of G, the fourth step note C is sharped. Alternatively, order the notes for the key of D (D, E, F#, G, A, B, C), and sharp the seventh step note. The key of D has two sharps (D, E, F#, G, A, B, C#). The difference between the key of G and the key of D is just one note, C#. Remember, each new key signature adds a new sharp and carries over the previous sharps. The key of A adds a G# (A, B, C#, D, E, F#, G#), the Key of E adds a D# (E, F#, G#, A, B, C#, D#), and the key of B adds an A# (B, C#, D#, E, F#, G#, A#).

The relative minor sharp keys also function in a similar way except the sharped note is the previous key's sixth step note or the next key's second step note. Starting with the key of Am (A, B, C, D, E, F, G), the fifth note signals the next key is the key of Em. The sixth note in the key of Am, the F note, becomes F#. Alternatively, order the key of Am's notes for the key of Em (E, F, G, A, B, C, D), and the second step F becomes F#. So, the key of Em has the notes E, F#, G, A, B, C, D; the same notes in the key of G! The next key is Bm with all the notes in the key of Em except the C note is sharped (B, C#, D, E, F#, G, A). The key of F#m has three sharps, the third is the G# (F#, G#, A, B, C#, D, E). Now is it clear how this method works from one sharp key signature to the next. With a little practice, the differences between all these key signatures will become more apparent and easier to memorize.

Here is another method using a major fifth interval from the seventh step note to determine the new sharp note in the next key signature. The key of G is going to be used for this example. The key of G (G, A, B, C, D, E, F#) has the F# note as the seventh step. A major fifth interval from F# is the C# note. This is the sharp note added to get the key of D (D, E, F#, G, A, B, C#). A major fifth interval jump from C# will get the G# note. This G# note is added to our next key, the key of A (A, B, C#, D, E, F#, G#). This pattern continues throughout the major key signatures. The minor key signatures work in a similar fashion, but use the major fifth interval from the second step note. In the key of Em (E, F#, G, A, B, C, D), a major fifth interval from F#, the second step note, produces the C# note. C# is the note added to get the key of Bm (B, C#, D, E, F#, G, A). In the key of Bm, C# is now the second step. So, a major fifth interval from C# gets the G# note. This pattern continues throughout the minor key signatures.

Now that the sharp key signatures are completed, the major and minor flat key signatures are next. To navigate through the major key signatures with the circle of

fourths, use major fourth intervals for both the next key signature and the next key signature's flat note. First, here is an example from the key of C. A major fourth interval from the C note will produce the F note. This means the next key signature is the key of F. To find our first flat note, jump a major fourth interval from that F note, which is the Bb note. So, the notes in the key of F are F, G, A, Bb, C, D, and E. To determine the next key signature, travel a major fourth interval from the F note. This will be the key of Bb. To find the note to flat, travel a major fourth interval from Bb to get the Eb note. This produces the notes for the Key of Bb (Bb, C, D, Eb, F, G, A). The next key signature is Eb, and this key adds the Ab note (Eb, F, G, Ab, Bb, C, D). And the next key is Ab. Notice how the flat note added to the key becomes the next key signature. Ab was added to the key of Eb, and the key of Ab is now the next key signature. This process can continue for all the other circle of fourth major keys.

Here is a second method to work through the major flat key signatures. In this method, finding the next key signature does not change. However, to find the flat note in the next key, flat the seventh step note. For example, in the key of C, the major fourth interval gives us the fourth step note F (Key of F). The seventh step note in the key of C is B. So, B becomes Bb in the Key of F (F, G, A, Bb, C, D, E). Now, take the seventh step note (E) and flat it (Eb). This Eb is added to our next key signature Bb (Bb, C, D, Eb, F, G, A). The seventh step note in the key of Bb is the A note. Flat the A note to Ab, and the Key of Eb (Eb, F, G, Ab, Bb, C, D) is constructed. Hopefully, this process is becoming clearer. Continue your way through all the major flat keys for extra practice.

For the minor flat key signatures, finding the next key signature does not change. However, to find the flat note in the next key, flat the second step note. For example, in the key of Am, the major fourth interval produces the fourth step note D, the next key, key of Dm. The second step note in the key of Am is the B note. So, B becomes Bb in the key of Dm (D, E, F, G, A, Bb, C). Since E is the second step note in the key of D, Eb is added to the next key signature Gm (G, A, Bb, C, D, Eb, F). A is the second step in the key of Gm. So, the A note is flatted to Ab for the key of Cm (C, D, Eb, G, Ab, Bb). This pattern continues throughout the minor flat key signatures.

The second method to find the next minor key signature's flat note is to order the previous key's notes for the next key and flat the sixth step note. In the key of Am, the major fourth interval produces the next key, key of D. If the notes in the key of Am are ordered for the key of Dm, the note order is D, E, F, G, A, B, and C. The sixth note, B, becomes Bb. So, the notes in the key of Dm are D, E, F, G, A, Bb, and C. The next key signature after the key of Dm is Gm. If the notes in the key of Dm are ordered for the key of Gm, the note order is G, A, Bb, C, D, E, and F. The sixth step note is E. Flat E to Eb and now the Key of Gm notes are G, A, Bb, C, D, Eb, and F. This pattern continues throughout the minor flat key signatures. Continue to practice all these cycles until they become fully memorized.

Now that the circle of fifths and fourths have been discussed, a brief summary will help memorize these methods for learning key signatures. For the major sharp key signatures, remember that there are two methods to get to the next key signature. Either setup the previous key's notes for the next key and sharp the next key's seventh step note, or sharp the previous key's fourth step note. The starting key's fifth step note always determines the name of the next key signature. The relative sharp minor keys also function in a similar way except the sharped note is the previous key's sixth step note or the next key's second step note. The third method was to jump a major fifth interval from the sharp note added to the previous key to find the new sharp note to add to the next key signature. In the major keys it is the seventh step, and in the relative minor keys, it is the second step. For the major flat key signatures, the fourth step produces the next key in the circle of fourths and the flat note to add to the next Key. The second method is to find the flat note in the next key and make sure the seventh step note has been flatted. For the minor flat key signatures, finding the next key signature does not change. However, to find the flat note in the next key, flat the second step note. The second method is to order the previous key's notes for the next key and flat the sixth step note.

Several methods have been demonstrated to navigate through the circle of fifths and fourths. Depending on the situation and instrument, one of these methods will work best. So, take ample time to study and practice all these methods to ensure each method is clearly understood and memorized. Then, practice writing songs with different key signatures and even songs that contain multiple key signatures within each song.