

Music Notation 3

Music Fundamentals

14-119-T

In the last lecture, we thoroughly explored *enharmonics* and the octave. In this lesson, I hope that many of the questions you might have about these two topics will be answered as we learn about the keyboard.

Why the Piano?:

Since I'm a composer, many people are surprised to learn that I don't play the piano. The most common question, and often times the most annoying, people ask me is, "how do you know what to write down?" The truth of the matter is that, like most people, I hear music in my head. Composition is mostly the ability to write down what we hear! More than that, however, is the *theoretical knowledge* composers use to help them work out ideas. *Theoretical knowledge* is simply what we are learning in this course. For example, by now you know how to write **middle C** on the staff with a treble or bass clef. You also know how to write an **E** above the **middle C** (or **E4**). At this point, you may not know how those two notes together sound, but if you continue to study music, you soon will. In other words, the *theoretical knowledge* you are learning in this class is forming the foundation for you to become a composer!

Theoretical knowledge is not a technical term you have to memorize for an exam. In fact, I'm not sure if this is a term that is commonly used in the music world, but I hope it makes sense to you. Most people agree that musicianship and theory should be taught using a three-prong approach: theoretical knowledge, ear-training, and piano skills. Each one of these areas complement one another. For example, understanding the keyboard layout will help you become more proficient with the theoretical knowledge you possess at this time (eg., reading music). Conversely, understanding how to read music will help you understand how to learn piano. Later in the semester, your understanding of the keyboard will help you start developing your ear. So much of music theory is easier to understand if we have a working knowledge of the keyboard. Do not misunderstand, when you finish this course, you will not be able to play the piano as well as Glenn Gould, Count Basie, or even Billy Joel. If you are interested in becoming proficient on the piano, I encourage you to take piano lessons or a piano class. This course will simply give you an understanding of how the piano is arranged, and how we can relate that to written notation and music theory.

The keyboard:

Regardless of whether you are playing a piano, organ, synthesizer keyboard, clavichord, or harpsichord, the arrangement of the keys on the keyboard will be the same. However, the number of keys on the keyboard will vary from instrument to instrument. Synthesizer keyboards vary greatly in size. At times you will see full keyboards as explained later, and at other times you may only see 12 keys with only the range of an octave (remember the octave has twelve $1/2$ steps!). Since you are most likely not going to have access to the other instruments mentioned, which also vary in size, we will focus on the piano. Regardless of whether or not the piano is an upright, spinet, baby grand, or concert grand, all pianos have 88 keys. The range of the keyboard is from A1 to C8! From this, we know that the lowest C on the keyboard is C1. The A1 is three $1/2$ steps below this C (C to B= 1, B to B-flat=1, and B-flat to A=1, thus three $1/2$ steps). The range, therefore of the piano is seven octaves plus three $1/2$ steps. This a large range, and one of the largest acoustic instruments used today (An organ technically has the largest range, and the lowest instrument is the contra-bassoon. The instrument with the highest range is the *crotales*, a percussion instrument similar to the glockenspiel or bells).

Each key goes in the order of our musical alphabet (A,B,C,D,E,F,G – discussed in the first lecture). Regardless of where we begin, as we ascend on the keyboard (or go from left to right), the alphabet progresses. For example, **B** always comes after **A** and before **C**. From one key to the next key is simply a 1/2 step. Therefore, from **B** to **C** is a half step. Remember that the enharmonic of **B-sharp** is **C-natural**. **C** to **D-flat** (or **C-sharp**) is a 1/2 step and so forth. At this time, you may want to review the *enharmonics* discussion from lecture two.

Conclusion:

Understanding the keyboard is necessary for further instruction. Please spend time using the interactive practice keyboard module to develop your proficiency at recognizing the names of the keys on piano.

In the next lecture, we will continue our study of *enharmonics* and *accidentals*.