How To Read Sheet Music

(last update: Sep-8-2019)

If you don't know what the symbols mean, a sheet of music may look inscrutable and intimidating. But it's just a shorthand way to show the pitches, speeds and rhythms for all of the parts in a piece of music. Of course it's not ***necessary*** to read music in order to sing in a choral group or play an instrument in a band or orchestra. But once you "break the code" – that is, understand what the symbols mean, and learn the words that musicians use to describe those symbols – you'll discover that it'll be faster and easier to learn new pieces, which should make your musical activities more fun. So why not give it a try?

This is a ***brief*** summary of the minimum you ***need*** to know to start reading music and to understand what the conductor of a choral group or orchestra tells you. It ***intentionally*** omits many details and variations that would be confusing when you're just starting out – and which you'll only need to know if/when you progress to more complicated music.

[1] **Basic Elements.** The most basic music components and terms are the ***staff***, the ***measure***, the ***clef***, the ***pitch***, the ***octave*** and the ***note***.

- **Staff.** Each individual note in a piece of music is written on a staff consisting of five lines and four spaces. Each line or space represents a particular pitch. The names of the pitches are letters A-G. The higher the line or space, the higher the pitch of the note.

- **Measure.** To help all the singers or players stay together in the same rhythm, vertical lines divide the staff into "measures", each of which has the same number of beats. For example, a march typically has 2 or 4 beats per measure, while a waltz or polka has 3. Later, we'll describe the "signature", which defines how many beats per minute. The vertical dividing line between measures is called a "bar" (as in the old song title "Beat Me Daddy, Eight to the Bar").

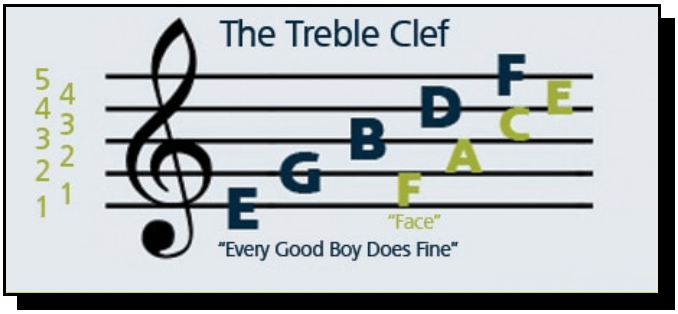
- **Pitch.** Music results from vibrating sound waves. The pitch of a particular note is determined by the "frequency" of the vibration, measured as wave cycles per second or "Hertz" (Hz for short). The more cycles per second, the higher the note.

- **Octave.** The "octave" is the interval between two notes where the Hz of higher note is exactly twice the Hz of the lower notes. . Octaves are important musically because the 2:1 ratio is so natural to the human ear that the octave sounds like "the same note just higher".

- **Clef.** At the start of a staff, a symbol called a "clef" tells what particular range of pitches it covers. Most vocal and piano music uses two clefs: the "Treble" and the "Bass":

  - Treble or "G" Clef for the higher notes (right hand on the piano)
  - Bass or "F" Clef for the lower notes (left hand on the piano)

Treble or "G" Clef. The treble clef is signaled by ornamental letter G, with the inner swoop encircling the "G" line on the staff. In choral music, the women's parts (Soprano and Alto) normally use the treble clef.

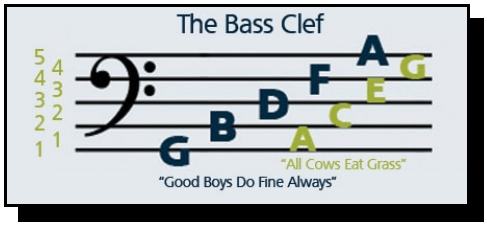


To help remember the pitch names for the treble clef, common mnemonics are:

Lines EGBDF = "Every Good Boy Does Fine"
Spaces FACE = the word "face."

When you hear an orchestra tuning up before a concert, the pitch they tune to is designated by the "A" space on the treble clef, which typically has a frequency of 440 Hz, and may also be called the "Stuttgart pitch".

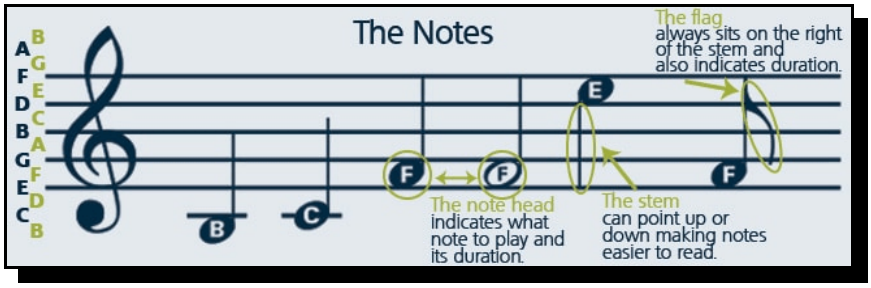
Bass or "F" Clef. The bass clef is signaled by an ornamental letter F, with the two dots surrounding the "F" line on the staff. In choral music, the men's parts (Tenor and Bass) normally use the bass clef.



Common mnemonics for the bass clef are:

Lines GBDFA = "Good Boys Do Fine Always"
Spaces ACEG = "All Cows Eat Grass."

- **Note.** Each note represents one sound, and consists of three parts: the ***head***, the ***stem*** and the ***flag***.

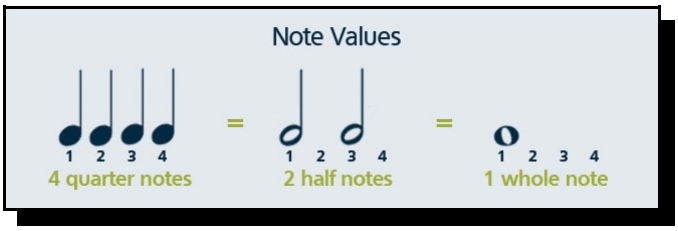


  - **Note Head.** The head is the round part, which is either filled (black) or open (white). Where the head sits on the staff (either on a line or a space) tells which pitch to sound. When a pitch is outside the range of the 9 lines and spaces within the staff, the note head will sit above or below the staff. A line above, below or through the head will tell exactly what pitch to sound. (See examples in the B and C notes in the illustration above.)

  - **Note Stem.** The stem is a thin line that may extend either up or down from the note head. In choral music, often the Soprano and Alto parts will share one treble clef and the Tenor and Bass parts will share one bass clef. To make clear which part is which, often the stems for higher voices (Soprano and Tenor) will point upward, and stems for lower voices (Alto and Tenor) will point downward.

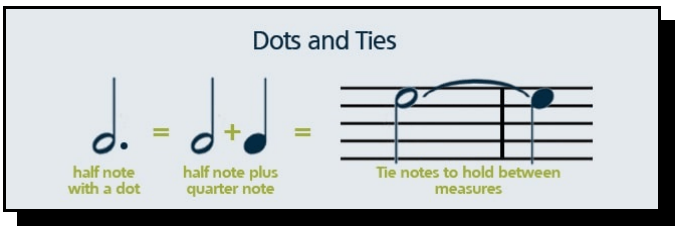
- **Note Flag.** The flag is a curvy mark to the right of the stem. It tells how long to hold a note. As you'll see below, the more flags, the shorter the note.

- **Note Duration.** Whether or not the note head is filled or open and whether or not it has a stem tell how long to hold that note:



  - **Quarter Note = 1 Beat.** Filled head with a stem.
  - **Half Note = 2 Beats.** Open head with a stem.
  - **Whole Note = 4 Beats**. Open head with no stem.

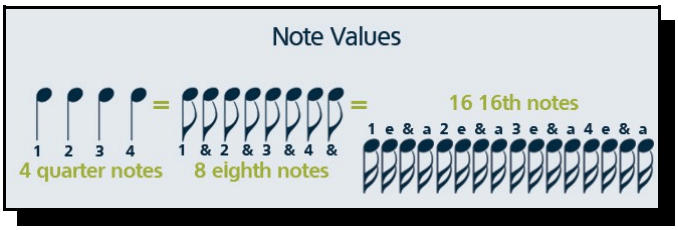
- **Increase Duration.** A "**dot**" placed to the right of any note adds 50% to the duration of the note. Thus:



  - Dotted Quarter Note = 1.5 Beats
  - Dotted Half Note = 3 Beats
  - Dotted Whole Note = 6 Beats

  Connecting two or more notes with an arc-shaped "**tie**" indicates the notes should be sounded without interruption. Ties are commonly used to mark notes that are held across the bars between measures.

- **Decrease Duration.** Every "flag" on the stem of a note cuts its length by 50%



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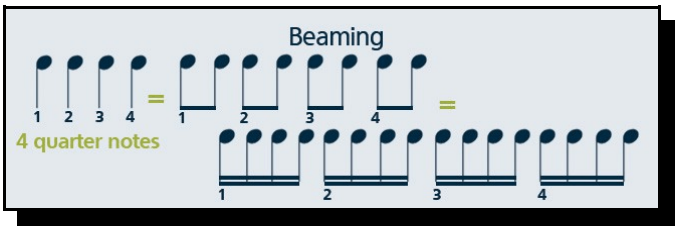
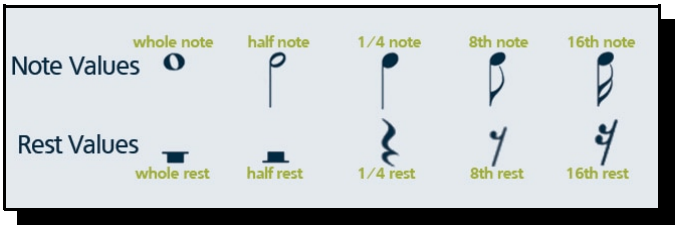
  Every "beam" connecting adjacent notes similarly cuts the length of both notes by 50%.



- **Rests.** When a part remains silent for one or more beats, a "rest" tells how long the silence lasts. For every note value, there is a corresponding rest symbol.



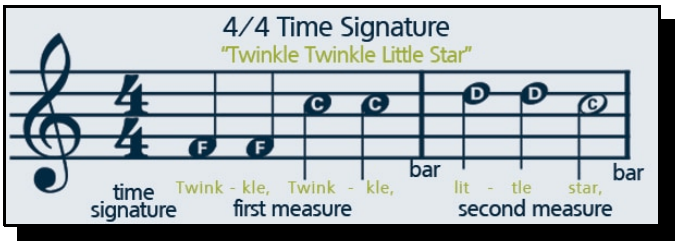
- **Key.** Most music you'll encounter is written in reference to a particular major or minor scale, which is called the "key" of the piece. The key takes its name from the first pitch in the scale, which is the "**tonic**" note. For example, a piece based on a scale of all white notes from one C to the next is in the key of "C Major". If the scale is all white notes from one A to the next, the key is "A Minor".

  Each letter note could indicate 2 or 3 different piano keys: a white note, the black note(s) touching that note on the left and/or the right. The key clarifies which note is intended.

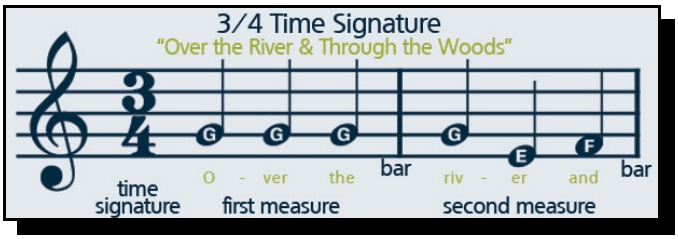
- **Signature.** Collection of symbols that define the rhythm and melodic key of the measures that follow. A signature appears at the start of every piece and whenever the rhythm or key changes during the piece.

[2] **Time Signature Defines Rhythm.** The time signature is two numbers, one on top of the other, that tell:

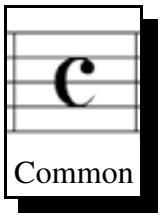
- Top = # Beats per measure
- Bottom = Length of 1 Beat.

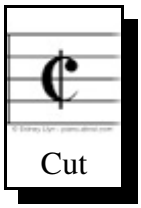


In the "Twinkle, Twinkle" example above, there are 4 beats per measure and a quarter note is one beat. In the "Over the River" example to the right, there are 3 beats per measure and a quarter note is one beat.

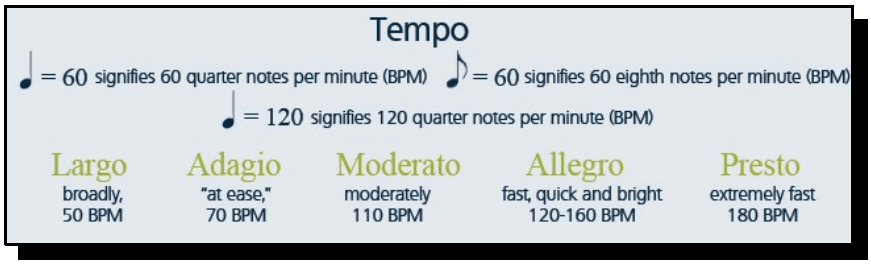


Exceptions: Common and Cut Time. Four quarter notes per measure is also called "common" time and the signature may show a letter "C" instead of 4/4. Two half notes per measure is also called "cut" time (or *alla breve*) and the signature may show a letter "C" with a vertical line instead of 2/2.





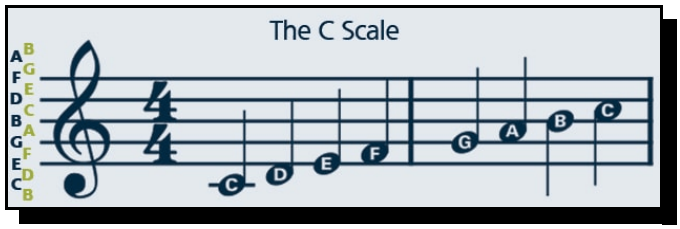
Tempo. Above the staff, there may be notations that indicate how fast or slow the music should be played. The tempo may be expressed in words (usually Italian) or as a beats-per-minute number to set a metronome (device that plays a clicking sound at the start of each measure). If you don't have a metronome, you can see how it works with this on-line tool:
www.metronomeonline.com/



[3] **Black Notes = Sharps and Flats.** So far we've only talked about the white notes on

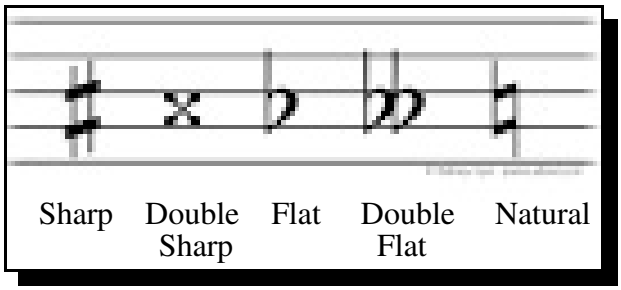
the piano.

The simplest "scale" (a series of notes spanning one octave) is the C Major, which can be played using only the piano white notes, which are called "Natural". To play a major scale that starts with any note except C-natural, you have to use the black notes, which are called "sharps" or "flats".



Each black note has ***two*** names, recognizing that it is both "sharp" (higher) in relation to the white key to the left and "flat" (lower) in relation to the white key to the right. So the black note between C-natural and D-natural may be called either C-sharp or D-flat.

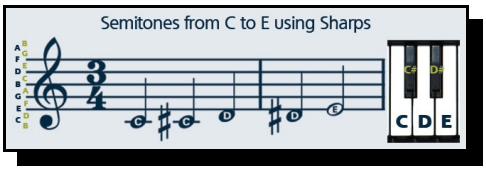
The symbols that indicate whether a note is sharp, flat or natural are called "accidentals". An accidental changes the note that follows from its normal pitch, overriding sharps or flats in the key signature:

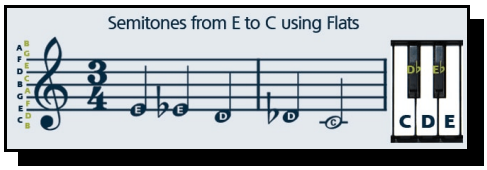


- **Sharp** raises note a half-tone.
  Double sharp raises note a whole-tone.
- **Flat** lowers note a half-tone. **Double flat** lowers note a whole-tone.
- **Natural** reverses effect of preceding sharps or flats on the note.

Accidentals apply to all subsequent notes within the measure in which they appear, unless canceled by another accidental sign, or tied into the following measure. If a note has an accidental and the same note appears in a different octave in the same measure, the accidental does ***not*** apply to the different octave.

The pitch of a black note is the same whether the accidental is a sharp or a flat. That is, C-sharp and D-flat indicate the same note.

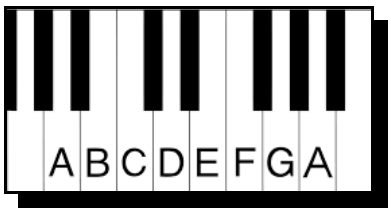




[4] **Key Signature Defines Pitches.** Every scale consists of 8 pitches, with 5 whole-tone intervals and 2 half-tone intervals. The "Major" and "Minor" scales differ in where the half-tone intervals are located. (Most people perceive pieces written in a major key as somewhat happy and cheerful, and pieces written in a minor key as somewhat sad and mournful.)

Major Scale. Half-tones are between pitches 3 and 4 and pitches 7 and 8. In the C Major scale at the right, half-tones are between E and F and between B and C.

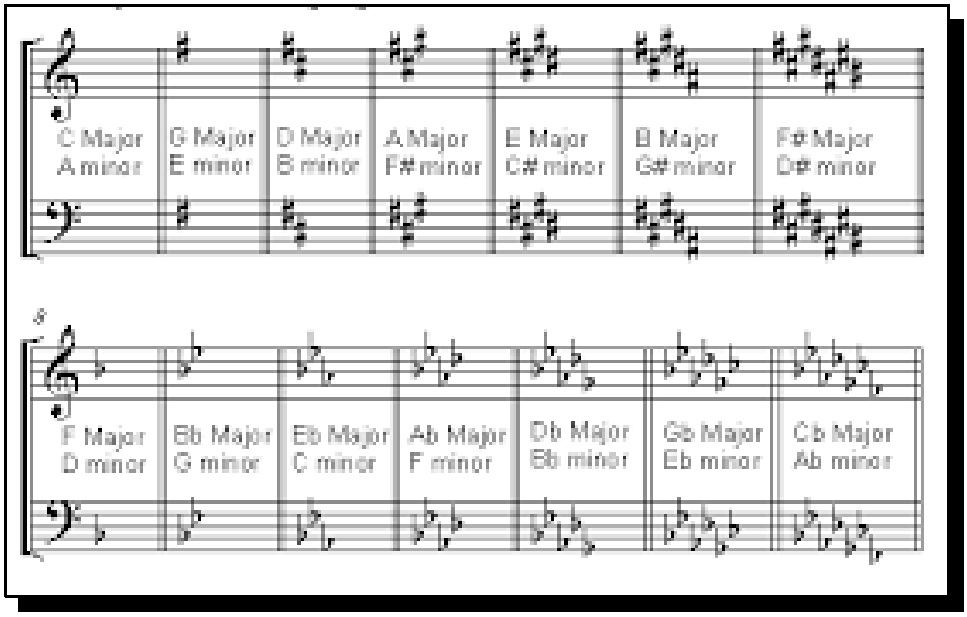
Minor Scale. Half-tones are between pitches 2 and 3 and pitches 5 and 6. In the A Minor scale at the right, half-tones are between B and C and between E and F.



Any piece of music may be "transposed" into a different key from the one in which it was written. Transposition shifts ***all*** the notes in the piece up or down the same amount. Music is often transposed when a piece is being performed by a voice or instrument different from the one for which it was written. For example, a song originally written for a voice in the Soprano/Tenor range might be transposed down so that an Alto or Bass could sing it. (When Encore Chorale sings Handel's Hallelujah Chorus from the *Messiah*, it is transposed down a whole tone, from the original D Major to C Major, to make it easier for older voices to sing.)

At the start of a piece, or whenever the key changes, a "signature" shows the default accidentals that apply to all subsequent measures in all octaves. This avoids cluttering up every single measure with accidentals, but it means that it's ***very important*** to look at (and remember) the key signature when reading a piece of music.

Here are all the possible key signatures:



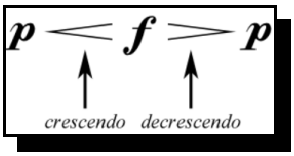
There's only one way to represent any particular key -- either all sharps or all flats – without creating any conflicting notes. For example, a G Major key signature that tried to use flats would create two conflicting "G" notes in the scale (G natural for the tonic and G-flat for the 7th note) and the F note would be unused.

[5] **Variations in Volume.**

- **Lower-case Letters** (usually italic) above the staff indicate variations in volume:
  - "p" stands for "Piano" (Italian for "soft"):
    p = soft ***pp*** = softer ***ppp*** = softest
  - "f" stands for "forte" (Italian word for "loud"):
    f = forte ***ff*** = louder **fff** = loudest

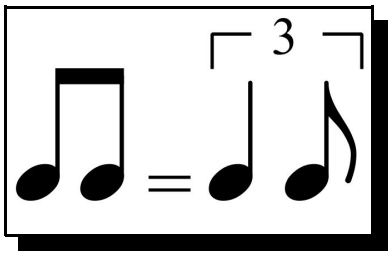
  You may also see "mp" or "mf", where "m" stands for "mezza" (Italian for "medium":
  mp = medium soft ***mf*** = medium loud

- **Crescendo/Decrescendo Symbols**. Changes in volume over a series of notes is indicate by the crescendo ("get louder") and/or decrescendo (get softer) symbols.

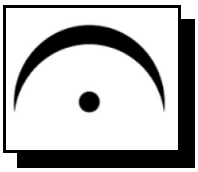


[6] **Exceptions, Other Symbols and Special Cases.**

- **"Swing" Time.** For some styles of music (such as boogie-woogie), although the notes may be written as two notes of the same length, they are intended to be performed with the first note twice the length of the second. In this case, the word "Swing" and/or an image like this will appear above the Time Signature.



- **Fermata.** A symbol above a note or rest that indicates that it should be held longer than its normal duration. Exactly how long depends on the conductor. Also called a "hold" or "birdseye" – it's a reminder to keep your eye on the conductor.



Your feedback would be welcome. If you have questions, corrections, suggestions or comments, please contact:

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Sources (besides of course Wikipedia, an overflowing font of useful information on all topics) include:

www.musicnotes.com sells sheet music on-line. It also provides a lot of helpful material (much of it free) on its blog. A lot of the information in this paper was inspired by:
www.musicnotes.com/blog/2014/04/11/how-to-read-sheet-music/

www2.siba.fi/muste1/index.php?id=2&la=en Sibelius Academy Music Theory 1. This may have more detail and cover more advanced topics than most beginning music-readers want to learn about, but if you're interesting in exploring further, it has a wealth of

information that quite well organized by topic.