

Unit 1 – Music Fundamentals I:

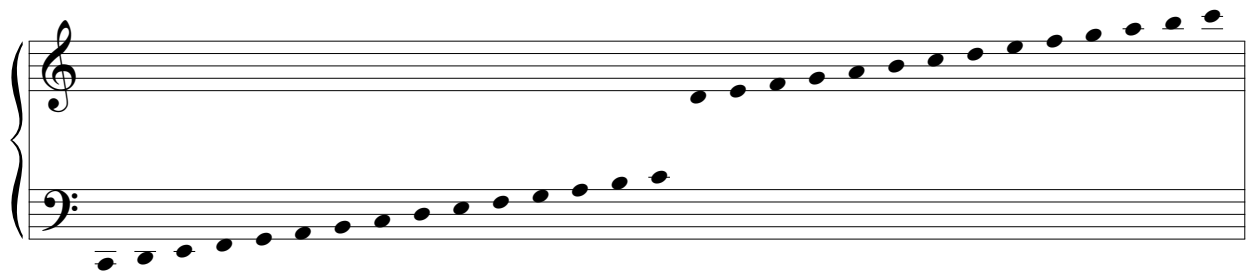
Pitch, Major Scales and Key Signatures, Rhythm, Meter, and Expressive Elements

Terminology

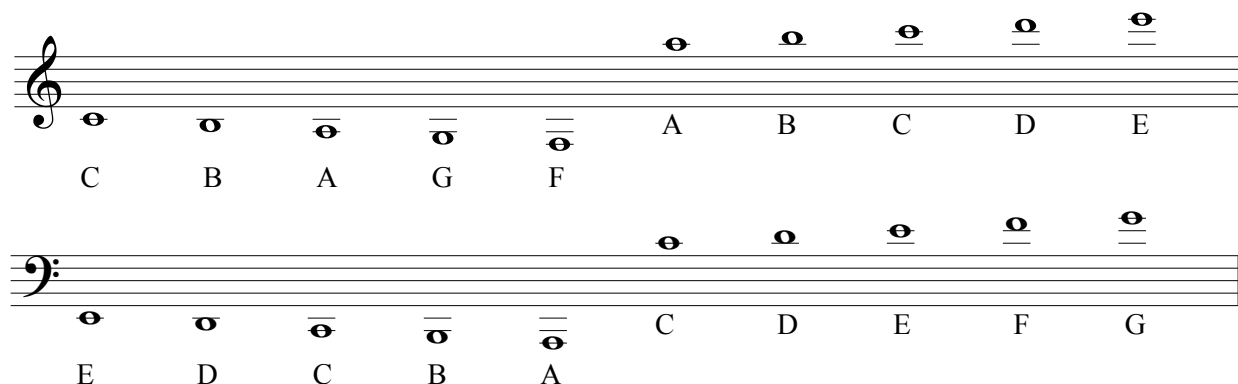
Enharmonic	Downbeat	Rubato
Dot	Offbeat	Vivace
Double dot	Duple meter	Crescendo
Tie	Triple meter	Decrescendo
Half step	Quadruple meter	Piano
Whole step	Time (meter) signature	Pianissimo
Major scale	Beaming	Mezzo piano
Tonic	Swing rhythm	Forte
Supertonic	Accelerando	Mezzo forte
Mediant	Adagio	Fortissimo
Subdominant	Allegro	Sforzando
Dominant	Allegretto	Terraced dynamics
Submediant	Andante	Agogic accent
Tonic	Andantino	Dynamic accent
Subtonic	Grave	Metrical accent
Leading tone	Largo	Anacrusis
Circle of fifths	Larghetto	Marcato
Sharp key signature	Lento	Slur
Flat key signature	Moderato	Tenuto
Compound meter	Presto	Tremolo
Simple meter	Prestissimo	Trill
Duplet	Ritardando	
Triplet	Ritenuto	

1.1 Pitch and Pitch Notation Handout

Grand Staff - The grand staff is associated most often with keyboard music.



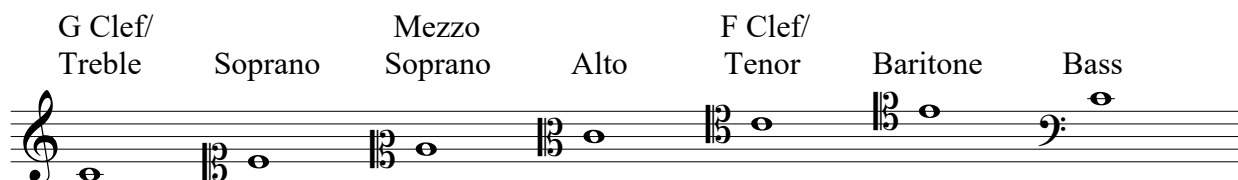
Ledger Lines - Lines located above or below the staff with the purpose of expanding notation.



C Clef - A C clef is positioned on any line of the staff to designate **middle C**.

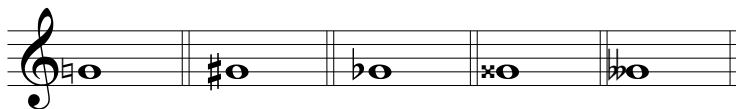
- The alto clef is the standard clef used for viola.
- The tenor clef is occasionally found in music for cello, bassoon, or trombone.
- The soprano, mezzo soprano, and baritone clefs are used less often than the alto and tenor clefs.

The image below depicts each staff and the corresponding location of middle C.

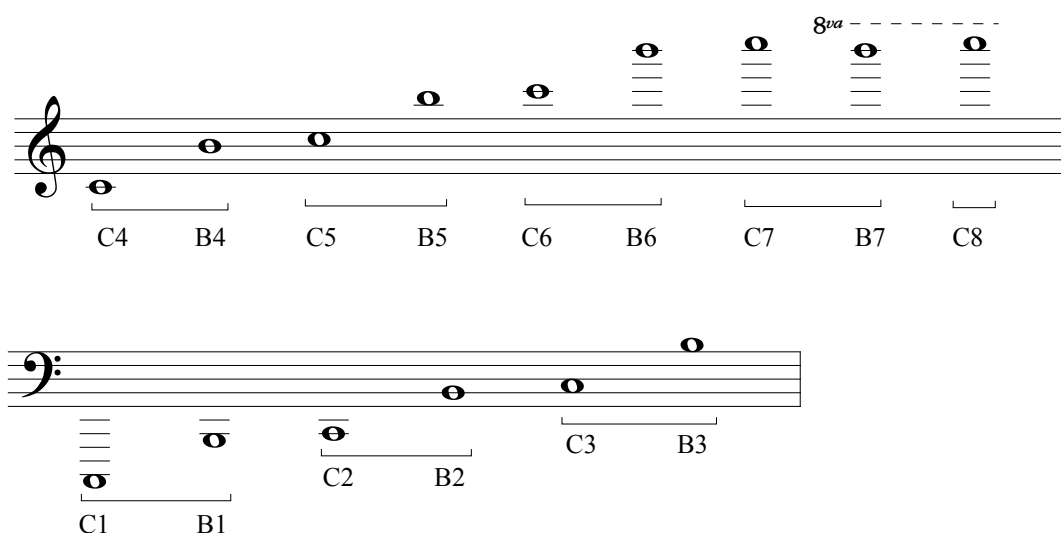


Accidentals - Accidentals are symbols that are placed before a note to indicate raising and lowering it.

- Natural ($\natural$) - cancels any previous sharp or flat and returns to the natural, or unaltered, pitch.
- Sharp ($\sharp$) – raises the pitch a half step.
- Flat ($\flat$) – lowers the pitch a half step.
- Double sharp ($\sharp\sharp$) – raises the pitch two half steps, or a whole step.
- Double flat ($\flat\flat$) – lowers the pitch two half steps, or a whole step.



Octave Identification - Octaves are numbered with middle C as C4. Every C begins a new octave number, meaning the B below C4 is B3, and the B above C4 is B4.



Enharmonic Equivalents - Tones that have the same pitch but different names are referred to as enharmonic equivalents.



1.2 Rhythmic Values

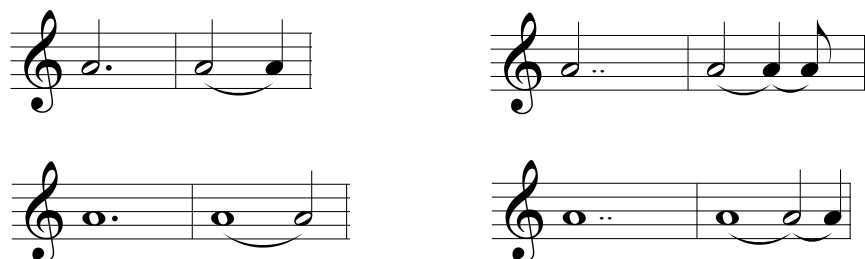
Rhythm is the pattern of regular or irregular pulses caused by the occurrence of strong and weak beats. Duration of notes, rests, and their subdivisions are illustrated in the following chart:

Name	Duration	Rest	Subdivision
Whole note			
Half note			
Quarter note			
Eighth note			

Tie - The tie is a curved line that connects two or more of the same notes. The note will be held for the duration of the two note values combined.



Dot - A dot is placed to the right of the notehead and lengthens it by half its value. It can be thought of as “the value of the note plus half the value of the note.” A second dot lengthens the dotted note by half the value of the dot.



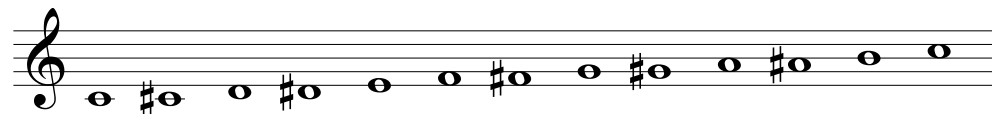
Meter - Meter is a regular, recurring pattern of strong and weak beats and is identified at the beginning of a composition by a time signature.



The upper number indicates the number of beats in each measure. The lower number indicates the note value that receives the beat, i.e., 2 signifies a half note, 4 refers to a quarter note, and 8 indicates an eighth note.

1.3 Half Steps and Whole Steps

Interval - An interval is the distance between two adjacent tones, with the half step being the smallest. On a keyboard, they occur between a white key and the next black key, a black key to the next white key, from E to F, and from B to C. On the staff, they are notated using sharps, flats, and naturals.



Half-Step Motion - In music involving half steps, sharped and flatted notes are generally followed by a note with a different letter name.



They will also be followed by the same note name during chromatic passages.



The following is the melody from the first four measures of Flight of the Bumblebee. This is an excellent and probably the best-known example of chromaticism in music.

Rimsky-Korsakov: Flight of the Bumblebee, mm. 1-4

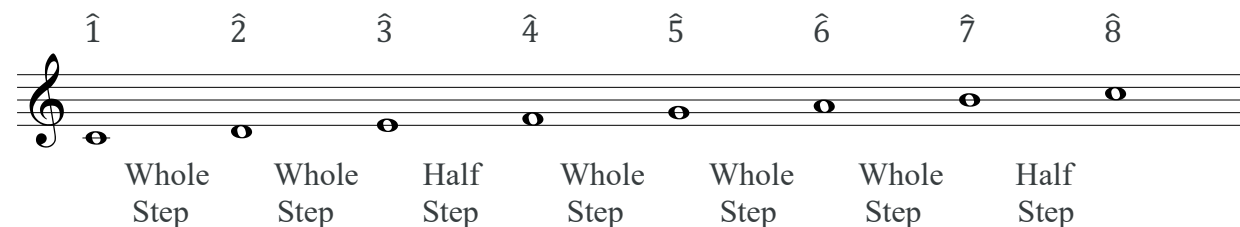


Whole Steps – Whole steps are made up of 2 half steps. On the keyboard their pattern is white key to the next white key, black key to the next black key, B to C#, E to F#, Bb to C, and Eb to F. The following is a whole-tone scale.



1.4 Major Scales and Scale Degrees

The Major scale consists of seven different pitches and uses a specific pattern of whole steps and half steps. In a Major scale, the pattern is whole-whole-half-whole-whole-whole-half (half steps occur between scale degrees $\hat{3}$ and $\hat{4}$ and between $\hat{7}$ and $\hat{8}$). The image below shows a C Major scale. Half steps occur between E and F, scale degrees $\hat{3}$ and $\hat{4}$, and between B and C, scale degrees $\hat{7}$ and $\hat{8}$.



Scale Degrees – Each note of the scale has a scale degree indication and scale degree name. The following chart identifies both scale degree and name.

Scale Degree	Name
1̂	Tonic
2̂	Supertonic
3̂	Mediant
4̂	Subdominant
5̂	Dominant
6̂	Submediant
7̂	Leading Tone – Major, harmonic minor, and ascending melodic minor
7̂	Subtonic – natural minor and descending melodic minor

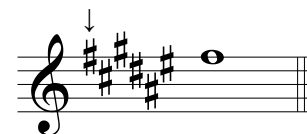
1.5 Major Keys and Key Signatures

Sharps - The order of sharps in a key signature is F#, C#, G#, D#, A#, E#, and B#. A popular mnemonic for remembering the order is **F**ather **C**harles **g**oes **d**own **a**nd **e**nds **b**attle. Another, and the one we use, is **f**at **c**ats **g**o **d**own **a**lleys **e**ating **b**read.

In order to determine the name of a Major key with sharps, name the note that is a half step above the last sharp. This example shows F# and C#. A half step above C# is D, creating the key of D Major.



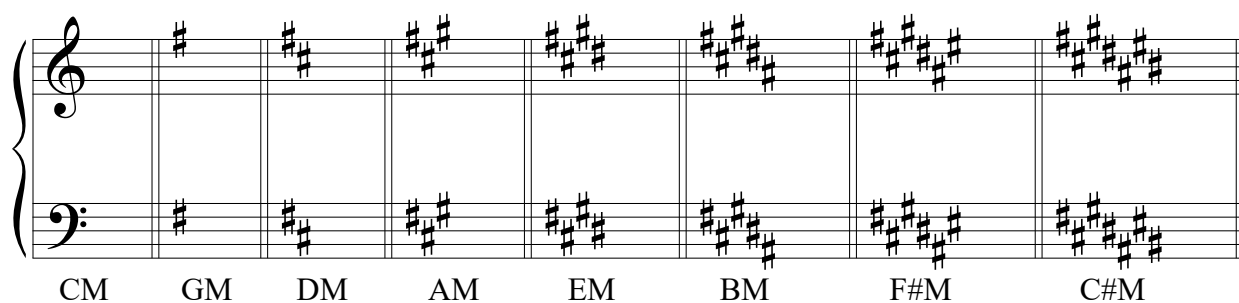
Care must be taken, however, when the last sharps are E# and B#. A half step above E# is F#, not F, because F# is in the key signature (marked with an ↓). The key, therefore, is F# Major.



The same holds true when the last sharp is B#. A half step above B# is C# and not C because C# is in the key signature (marked with an ↓). This creates the key of C# Major.

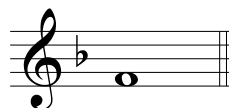


The following shows the sharps in order as they appear on the staff and their corresponding Major keys.



Flats - The order of flats in the key signature is B $\flat$, E $\flat$, A $\flat$, D $\flat$, G $\flat$, C $\flat$, and F $\flat$. An often-used mnemonic for flats is **battle ends and down goes Charles' Father**. Another is simply **bead, greatest common factor**.

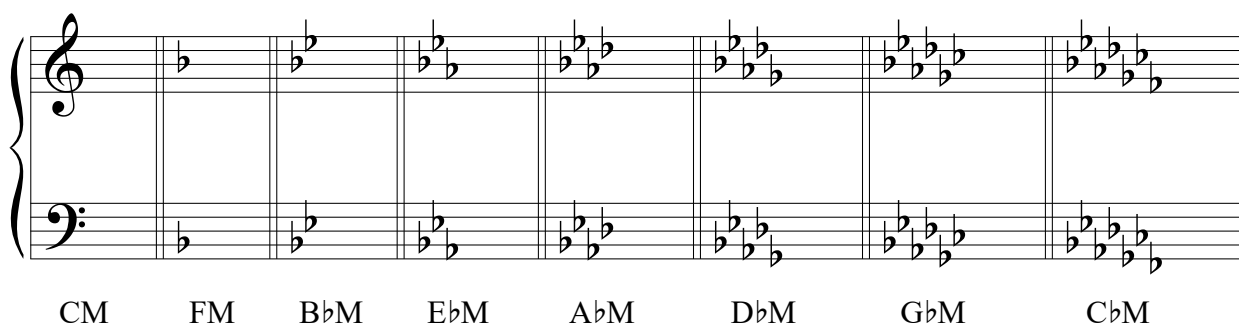
A Major key signature that contains flats is named by the next-to-the-last flat. An exception is the key of F Major, which has only one flat.



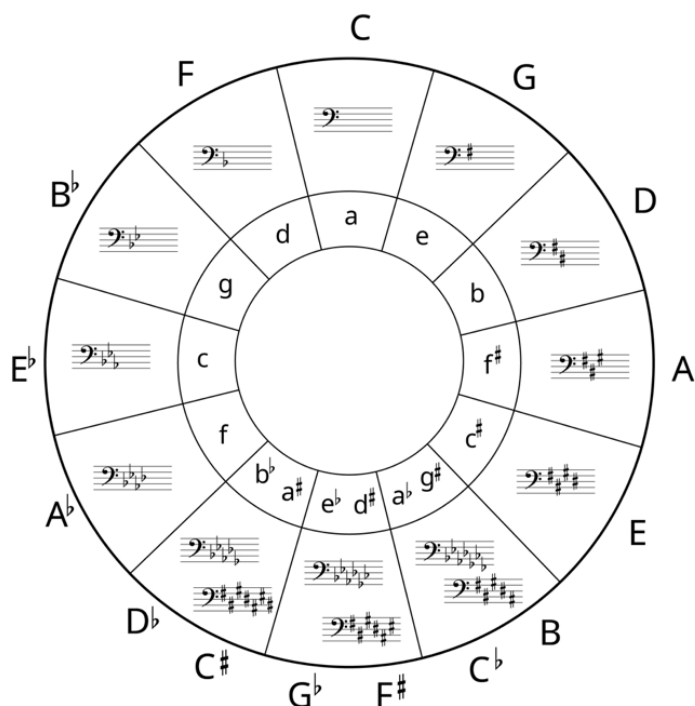
The following example has two flats – B $\flat$ and E $\flat$. E $\flat$ is the last flat and B $\flat$ is the next-to-the-last flat (marked with an *). The Major key is B $\flat$.



The following shows the order of flats and their corresponding Major keys.



Circle of Fifths - The circle of fifths is another way of determining a key signature. Moving clockwise, each added sharp moves up a 5th, or up 5 letter names, to determine the new key. For example, C Major contains no sharps or flats. When 1 sharp is added, the letter name moves up a 5th, or 5 letter names (C–D–E–F–G) to the key of G Major. When another sharp is added, the letter name moves up another 5th. A 5th above G Major is D Major.



Major keys that use flats move counterclockwise by 5ths. C Major contains no sharps or flats. When 1 flat is added, the letter name goes down a 5th, or 4 letter names (C–B–A–G–F), to F Major.

1.6 Simple and Compound Beat Division

Simple Meter - In simple meter, each beat is divided into two parts, i.e., a half note divides into two quarter notes, a quarter note divides into two eighth notes, an eighth note divides into two sixteenth notes, etc. The top numbers in the time signature are generally 2, 3, or 4.

The beat unit is a note value that **is not dotted**.

Beat Unit Beat Division

1 2 1 & 2 &

Beat Unit Beat Division

1 2 3 4 1 & 2 & 3 & 4 &

Beat Unit Beat Division

1 2 3 1 & 2 & 3 &

Compound Meter - In compound meter, each pulse is divided into groups of three. The top numbers are 6, 9, or 12, and the beat unit is a dotted note. In 6/8 meter there are only 2 basic pulses ($6 \div 3 = 2$), in 9/8 meter there are 3 ($9 \div 3 = 3$), and in 12/8 meter there are 4 ($12 \div 3 = 4$).

The beat unit is a note value that is **dotted**.

Beat Unit Beat Division

1 2 1 2 3 4 5 6

Beat Unit Beat Division

1 2 1 2 3 4 5 6

Beat Unit Beat Division

1 2 3 1 2 3 4 5 6 7 8 9

1.7 Meter and Time Signature - Duple, Triple and Quadruple Meters

Both simple and compound meters will generally have two, three, or four beats. Meters are identified as duple if there are two basic beats, triple if there are three, or quadruple if there are four. These are combined with the division names to describe a meter. For example, 2/4 is “simple duple,” 6/8 is “compound duple,” etc.

Simple meter:

Time Signature	Beats Per Measure	Classification
2	2	simple duple
4		
3	3	simple triple
4		
4	4	simple quadruple
4		
2	2	simple duple
2		
3	3	simple triple
2		
3	3	simple triple
8		

Compound meter:

Time Signature	Beats Per Measure	Classification
6 8	2	compound duple
9 8	3	compound triple
12 8	4	compound quadruple
6 4	2	compound duple
9 4	3	compound triple
3 16	3	compound triple

1.8 Rhythmic Patterns

Beaming Rules

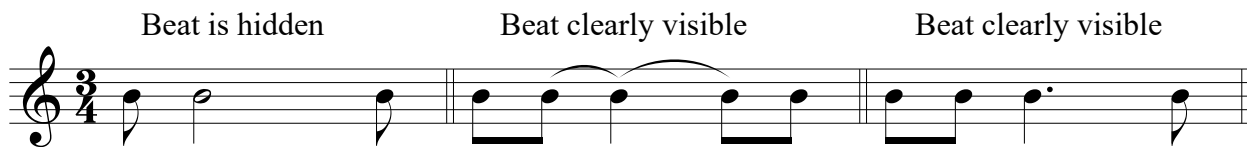
Do not beam across a bar line.

- All beaming takes place within the measure. An individual eighth note at the end of a measure should be written with a flag rather than connect to the first beat of the next measure.
- Do not beam across the center of a measure in 4/4 time.
- Beam according to the beat. Four eighth notes on beats 1-2 and 3-4 can be beamed, not 4 eighth notes on beats 2-3. The beamed notes can't go past the midpoint of the measure.

Correct Correct Not correct - beamed past midpoint

Beat is hidden Beat is barely visible

- Beam according to the beat in 3/4 time.
- Beam notes on the 1st and 2nd beats.
- Beam notes on the 2nd and 3rd beats.
- Beam all 3 beats.



In compound time, the beat is a dotted note that is divided into 3 equal parts. In 6/8 time there are 6 eighth notes per measure, but it feels like there are only 2 beats.

- The midpoint of the measure in 6/8 time is between beats 3 and 4. Keep the beats separated.

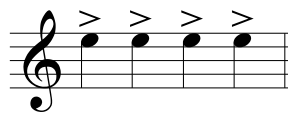


1.10 Dynamics and Articulation

Dynamics are located in the Glossary

Articulation – Articulation refers to how individual notes are played or sung.

Accent - Stressed or emphasized.



Musical score for "The Rose Tree" in G major, 3/4 time. The score is for piano and features a melody in the right hand and a bass line in the left hand. The melody consists of a series of eighth and sixteenth notes, often beamed together. The bass line is simpler, with some triplets. The score is divided into four measures.

The first staff of music is in treble clef with a 4/4 time signature. It contains two measures of music. The first measure has four eighth notes, each with an accent (>) above it. The second measure also has four eighth notes, each with an accent (>) above it. The staff ends with a double bar line.

The first measure of the song 'The Old Church' is shown on a five-line musical staff with a treble clef. It contains four quarter notes, all on the same line (the top line, F4). The notes are black and have stems pointing downwards. The measure is enclosed in a box.

First staff: Treble clef, 3/4 time. Three measures of quarter notes with accents: G4, A4, B4; A4, B4, C5; B4, A4, G4.

Slur – A slur is a curved line that indicates to sing or play in a legato manner.



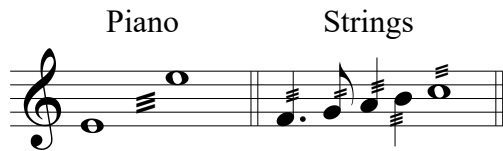
Staccato – Play the notes short and detached.



Tenuto – Sustain the full value of the note.



Tremolo – Tremolo is the rapid repetition of one or more notes.



Trill – A trill is the rapid repetition between two notes that are usually a half step apart.

