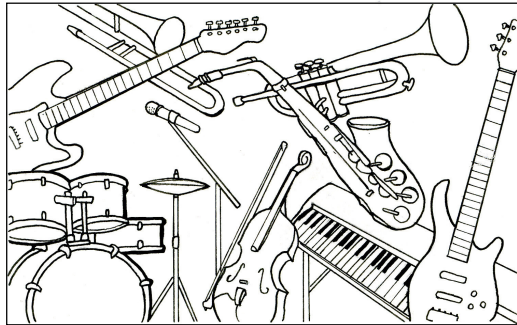


Melody 1



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Not for Sale

Marty Buttwinick

“Melody 1” contains the fundamental definitions about the mechanics of melody. When you understand these concepts, you can apply them to creating music, and be prepared for more advanced material when that time comes. These are the basics.

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Preface

Our System of Music

Our system of music is a *man-made* system based on nature and math. Music theory evolved over many centuries and stabilized into what we use today. In one way or another, current music theory applies to all styles of music in the Western world whether jazz, classical or any style of “popular” music.

Whereas most of these terms are nature- and math-based, some of the terms derive from people agreeing to call a certain thing a certain thing simply because it works — an arbitrary (something done based on individual preference or impulse). I mention this because students often ask “why” something is called what it is. Some of the answers are lengthy and technical (math-based), while some answers are “just because.” At this point, unless your curiosity takes over, as long as you understand what these words mean and how they relate to what you are learning (application), keep it simple and just go for understanding what’s here. The full explanation of why these terms are called what they are can be fairly involved and are topics for another text. (One of the reasons why certain college texts can be tough is because you can get too much information too soon, which can often be overwhelming.)

Since music deals with sound, you should demonstrate (play) everything on an instrument as much as possible. It can be difficult to fully understand what all of these things mean unless you *hear* what the words represent. Since the words represent sounds, you should hear the sounds. (Very often a person has already heard the sounds and can now put a name to them!)

The Language of Music

As we communicate with words when we speak, we communicate with music when we play. There are only so many symbols, sounds and words to understand, and when you learn them you can speak, read, write and understand music. Then one either develops a small, yet functional vocabulary, or a large and involved one.

You can break down the musical language into three categories: melody, harmony and rhythm. *Melody* is a series of single notes, *Harmony* is combinations of notes and *Rhythm* is the placement of sounds and notes through time. Besides physical technique and lyrics – that’s all there is to the mechanical fundamentals. The mechanics of music are finite. The creative application is unlimited.



Music Theory

What the words and symbols mean and how they relate to each other. The purpose of knowing theory is to have a clear understanding of what you are doing, so you can do it without any confusions which could inhibit how well you play.

Ear Training

Training you to recognize notes and rhythms using your perception of hearing. This is an important step to understanding the language of music.

Sound

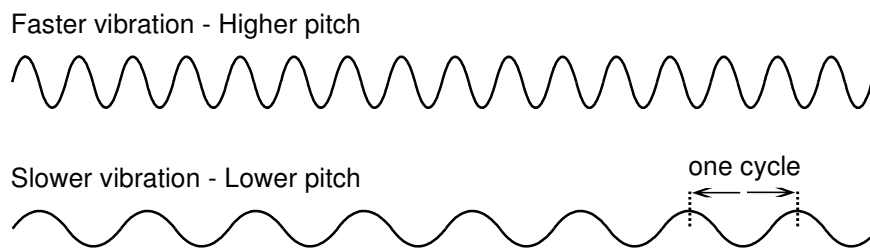
(1) Something that can be heard. (2) Vibrations through air, water or any matter that can be sensed by the ear.

Music

(1) A language of specific sounds. (2) A creation with these sounds. (3) Communicating with sounds that could be considered artistic or pleasing.

Pitch

(1) A sound at a specific frequency (how fast or slow something is vibrating). A vibration at a certain *speed* determines how high or low a pitch is. The faster the vibration the higher the pitch, the slower the vibration the lower the pitch. Pitch is measured in “cycles per second.”



Note

(1) A sound of a definite pitch. (2) A symbol that represents a musical sound.

Unison

Two notes at the same pitch: matching pitches. Play a note on an instrument and sing the exact same note and that's a *unison*. Any two instruments playing the same pitch is another example of a unison.

Tuning

Adjusting pitches.

Melody

(1) Notes played or sung one at a time in succession. (2) A series of single notes that are the main and most recognizable part of a song.

Harmony

(1) Two or more notes played together. (2) Specific combinations of notes whether played at the same time or not.

Rhythm

The placement of sounds through time: *when* the sounds are made.

Amplitude

(1) The volume of a sound — loud, soft or in between. (2) The *size* of a vibration.

A sound (note)



Same sound louder



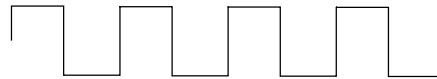
Timbre

(1) The quality of a sound that makes one voice or musical instrument different from another. The same pitch played on a guitar or a piano will have a different “timbre” to it. “Treble” and “Bass” on an instrument or stereo are also examples of timbre, commonly called “tone.” (“Timbre” is commonly pronounced tam-ber.)

A pitch

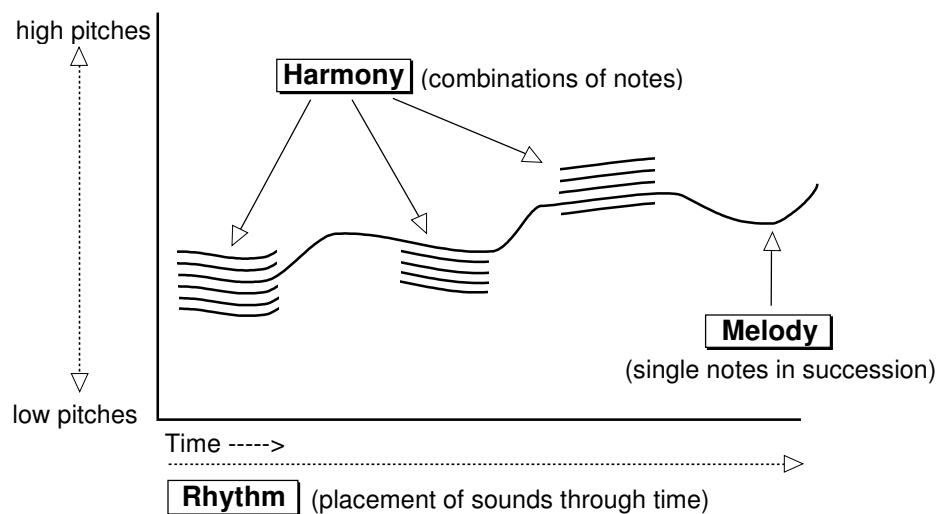


Same pitch with a different timbre



Three Elements of Music

Melody, harmony and rhythm are the three elements of music. They blend in various combinations to create desired emotional effects, and are the basis of all musical studies.



Three Components of a Sound

Pitch, amplitude and timbre are the three components of a sound. Any sound you hear will have these three elements within it.

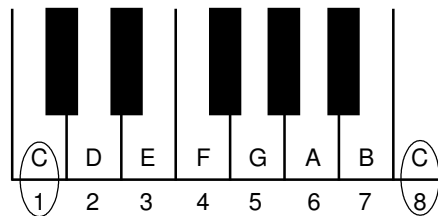
The Musical Alphabet

Music uses the seven alphabet letters A, B, C, D, E, F and G, which are the white keys on a piano. There are five other notes as well, the black keys, that we'll discuss later. The letter "C" is the main reference point in music so I've used it as the starting note in the examples below. Notice that the black keys are in a group of two and a group of three, and the "C" is to the left of the grouping of two. All "Western" instruments use these same notes. (i.e., guitar, bass, flute, violin, etc.)



Octave

The same note name eight notes higher or lower. Any two notes with the same name that are eight notes apart is an octave.



Scale

A series of notes going up and down in alphabetical order. C D E F G A B (C) and A B C D E F G (A) are examples of scales. Our main scales have eight notes: seven notes plus the octave.

Tonic

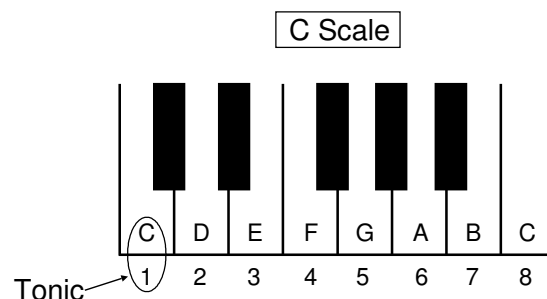
The note a scale is built from. "C" is the tonic of a C Scale. "A" is the tonic of an A Scale.

Key

All the notes in a scale considered as a group. A "scale" is the notes in alphabetical order and a "key" is those same notes, only as a group played however they are played. Most songs you have ever heard are in one key: one group of notes.

Scale Degree

The number of each note in a scale showing its order. A "C Scale" is C D E F G A B C, and the scale degrees are 1 2 3 4 5 6 7 8. C is the 1st note, D is the 2nd note, etc.



Scale Degrees and Ear Training

The purpose of scale degrees is to understand how notes relate to each other, both in theory and by sound alone. Scale degrees provide a relationship between the sounds you hear and what those sounds are called. As you can hear someone say a word and know what it means, you can learn to hear a melody and recognize the scale degrees. This is called “relative pitch.” “Three Blind Mice” in scale degrees is 3 2 1 3 2 1 5 4 4 3 5 4 4 3. To play this in the key of C, you would play the notes E D C E D C G F F E G F F E.

½ Step

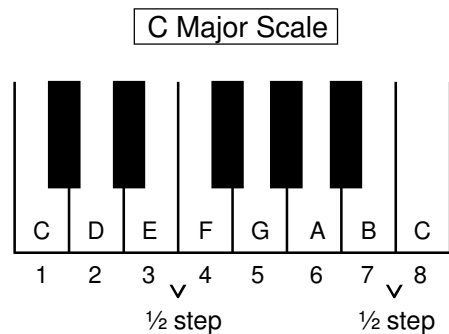
The distance from one note to the very next note, going up or down. On a piano, this is going from one note to the next closest note whether black key or white key. On a guitar or bass, a ½ step is from one fret (the metal bar going across the neck) to the next fret or from the open string to the first fret.

Whole Step

The distance of two ½ steps. Some examples are C to D, D to E, F to G, G to A and A to B.

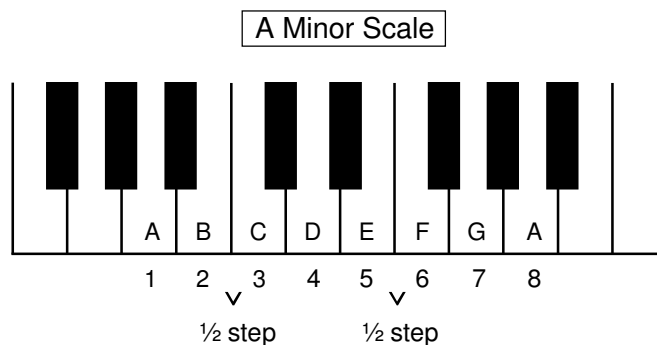
Major Scale

The word “scale” comes from the Latin word *scāla* meaning “ladder.” There are many types of scales. The most common scales are series of notes going up and down in alphabetical order. C D E F G A B C is a “C Major” Scale. What makes this a *major scale* is the arrangement of ½ steps and whole steps. The formula for a major scale is: all whole steps except ½ steps between the 3rd and 4th notes and the 7th and 8th notes.



Minor Scale

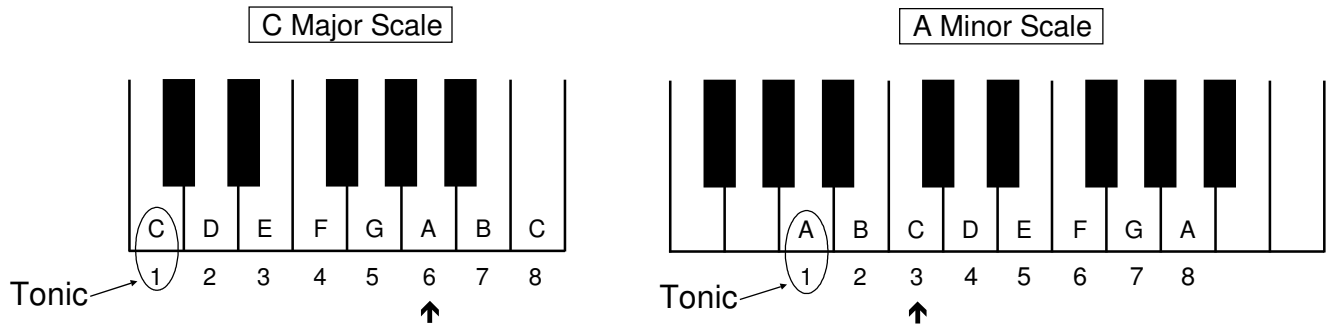
A “minor scale” is the next most used scale. The formula for a minor scale is: all whole steps except ½ steps between the 2nd and 3rd notes and 5th and 6th notes.



Relative Scales

C Major and A Minor have the same notes. They start on different tonics, but have the same notes; that is their relationship. C Major is the “relative major” of A Minor. A Minor is the “relative minor” of C Major.

The relative minor scale starts on the 6th degree of a major scale. The relative major scale starts on the 3rd degree of a minor scale.

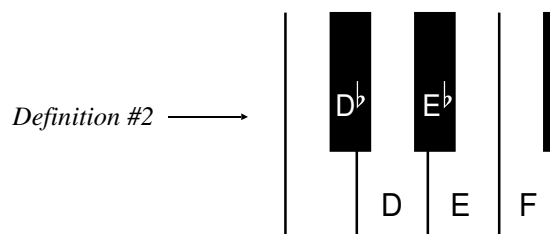


Natural Minor Scale

There are different kinds of minor scales. The one thing they have in common is the $\frac{1}{2}$ step between the 2nd and 3rd notes. That is what makes a scale minor. The minor scale used here is called a “natural minor,” because it naturally overlaps with a major scale, whereas the other minor scales do not.

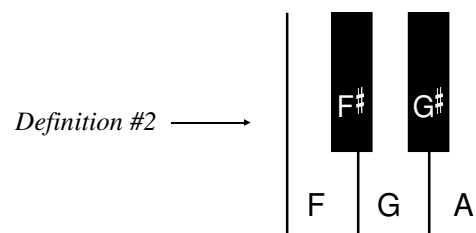
Flat

(1) A note that is slightly lower in pitch. (2) The \flat symbol meaning one half-step lower.



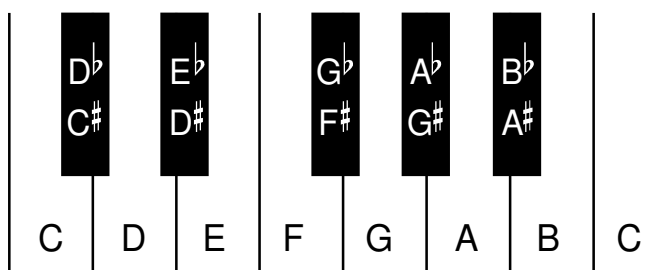
Sharp

(1) A note that is slightly higher in pitch. (2) The \sharp symbol meaning one half-step higher.



Enharmonic

Two names for the same note. Many of the notes have two names, most commonly the black keys.



Sharps or Flats?

What determines when to use a sharp or flat is where the note falls in the scale. A scale is a series of notes in *alphabetical* order, and all alphabet letters need to be present. If F is the tonic, the order of notes needs to be F G A B C D E F. To make an F Major scale you apply the *major scale formula* to it and adjust the sharps or flats accordingly.

Alphabetical order

F G A B C D E F
1 2 3 4 5 6 7 8

Applying the formula

F G A B^b C D E F
1 2 3 $\sqrt{4}$ 5 6 7 $\sqrt{8}$
 $\frac{1}{2}$ step $\frac{1}{2}$ step

There needs to be a $\frac{1}{2}$ step between the 3rd and 4th notes and between the 7th and 8th notes. The 3rd note is an A and the 4th note is a B, which is a whole step. To make this a $\frac{1}{2}$ step, you lower the B to a B^b making it a $\frac{1}{2}$ step. B is the 4th note, so that is the one you adjust. If you went A to A[#], there would be two A's and no B, which violates the definition of a scale and would be confusing to work with.

Incorrect

F G A A[#] C D E F
1 2 3 $\sqrt{4}$ 5 6 7 $\sqrt{8}$
 $\frac{1}{2}$ step $\frac{1}{2}$ step

Correct

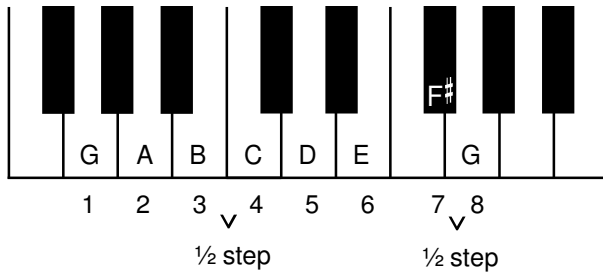
F G A B^b C D E F
1 2 3 $\sqrt{4}$ 5 6 7 $\sqrt{8}$
 $\frac{1}{2}$ step $\frac{1}{2}$ step

Although the whole step, $\frac{1}{2}$ step formula is correct in the above 1st example, the alphabetical order is not. The formula AND the alphabetical order is what determines whether to use sharps or flats in a scale.

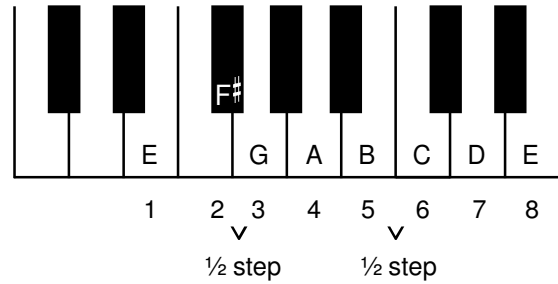
Eight Scale Examples

You can make a scale from every note. Here are eight scale examples to demonstrate the major and minor formulas. The left column are major scales, the right column are their relative minors. Notice how both the formula and alphabetical order is intact in each scale.

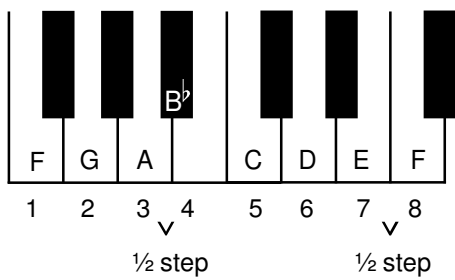
G Major Scale



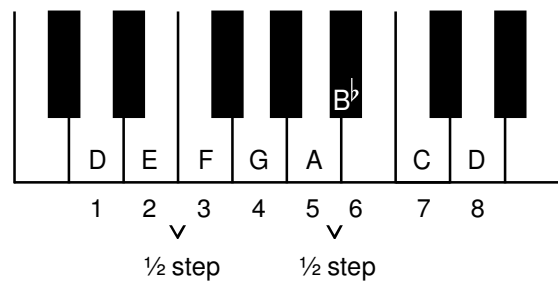
E Minor Scale



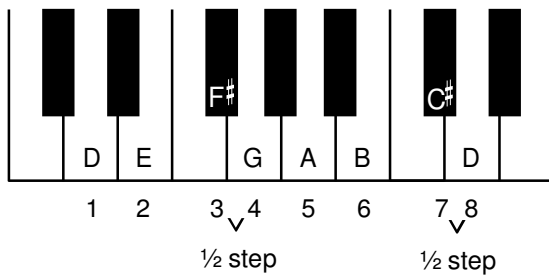
F Major Scale



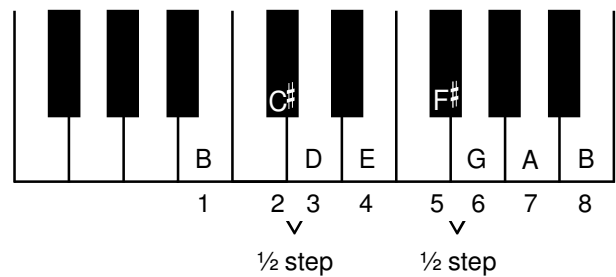
D Minor Scale



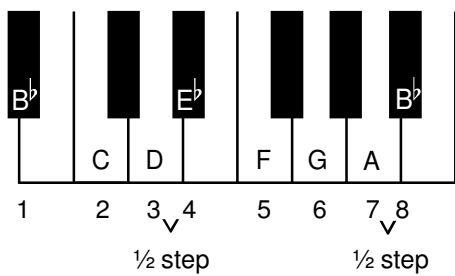
D Major Scale



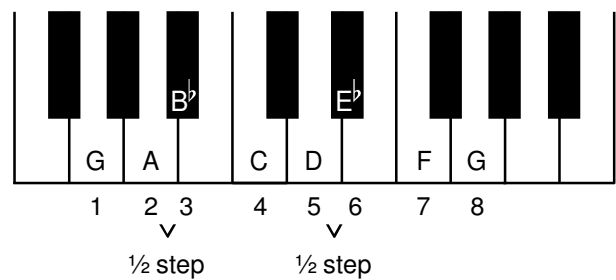
B Minor Scale



Bb Major Scale



G Minor Scale



Key Signature

How many sharps or flats are in a key. The *key signature* for “C Major” is no sharps and no flats. A “G Major Scale” has one sharp, so the key signature for G Major is one sharp. An “F Major Scale” has one flat, so the key signature for F Major is one flat. A key signature simply tells you which group of notes you’ll be using for a particular song or piece of music. This way, if someone says to play a song in the “Key of G” you know which notes to play.

Why Different Keys?

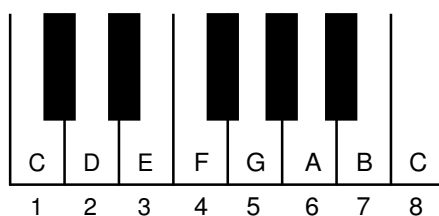
Keys are chosen for various reasons. The two main reasons for picking a specific key are: (1) the range of notes on a specific instrument (what the lowest and highest notes are), and (2) a vocalist’s range. A piano or guitar can play a song in any key, but singers need to have notes that are within their range, as well as any other melody instrument such as a trumpet or flute.

Why Learn Scales?

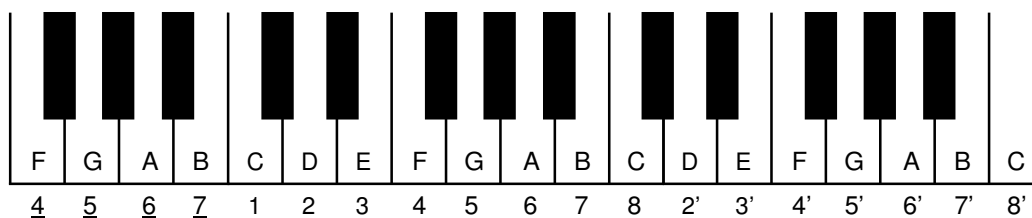
Scales are our musical vocabulary. Scales are to music as the alphabet is to the English language. As we make words with the alphabet for speech, we use scales to make melody and harmony for music. Music is a language, and the better you are with scales the more you can understand and speak it. You can make music without knowing scales — you just play or sing something! After all, music is an aesthetic communication with sounds so you don’t “have” to know anything — you just make something up. However, to be fluent with the language of music you need to understand and know scales. Keeping this in mind can make practicing scales less than boring.

More About Scale Degrees

Scale degree: The number of each note in a scale showing its order. A one octave major scale uses the numbers 1 2 3 4 5 6 7 8.



To show the notes *below* the one and *above* the 8, you can underline the notes below and put an apostrophe next to the notes above.



Scale degrees are a very workable way to explain how notes relate to each other, and are extremely useful for ear training (recognizing pitches and knowing what they are), as well as for writing out songs and musical ideas without using music notation.

Here is the song “Somewhere Over the Rainbow” written in scale degrees:

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

Transposing

Transposing means to change the key of a piece of music: using the same order and relationship of notes on different note names. The *scale degrees* tell you what the pitches are. The *key* tells you what the specific note names are. By understanding the basics of music, you can hear or look at a piece of music, recognize the scale degrees and play it in whatever key you want. You can always find the best key to sing or play a song in by finding the lowest and highest notes, discovering that key, then playing the song in that key. (1) find the lowest note, the 6, and the highest note, an 8, then (2) pick the key in which you can comfortably sing or play both of these notes.

Here is “Somewhere Over the Rainbow” in two different keys.

Key of C

1 8 7 5 6 7 8 1 6 5 6 4 3 1 2 3 4 2 7 1 2 3 1
C C' B G A B C' C A G A F E C D E F D B C D E C

Key of F

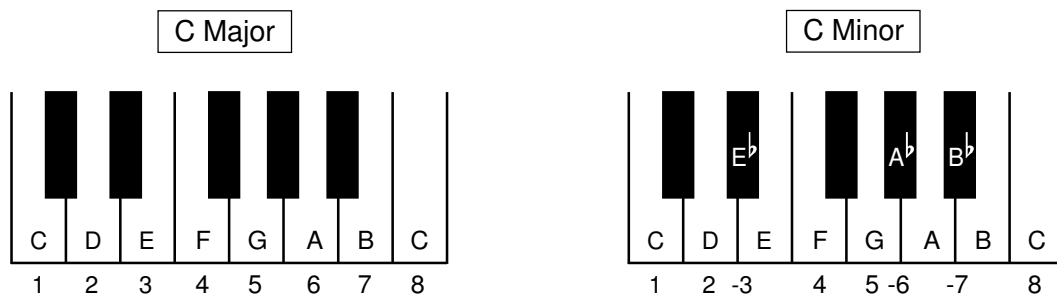
1 8 7 5 6 7 8 1 6 5 6 4 3 1 2 3 4 2 7 1 2 3 1
F F' E C D E F' F D C D Bb A F G A Bb G E F G A F

Parallel Minor

A “parallel minor” scale is a minor scale from the same tonic as a major scale, e.g., C Maj / C Minor, G Maj / G Min. And in reverse, the parallel major would be a major scale from the same tonic as a minor, e.g., C Minor / C Major.

Comparing a minor scale to a major scale is an important way to understand the relationship of notes. (And remember that the main purpose of theory is to understand the sounds that you hear.)

With a piano keyboard as a reference, this is how a minor scale is written in scale degrees:



The “dash” before a number means to lower that note a half-step from its major counterpart. (Keep in mind that our entire music system is based on the major scale and everything is compared to that.)

Scale Examples in Degrees

With this system of scale degrees we can define any scale. Here are some random scales to illustrate the point. All of these have specific names, but we don't need them at the moment.

C D E F G A B C
1 2 3 4 5 6 7 8

C D Eb F G Ab Bb C
1 2 -3 4 5 -6 -7 8

C D Eb F G A Bb C
1 2 -3 4 5 6 -7 8

C D Eb F G Ab B C
1 2 -3 4 5 -6 7 8

C D E F G A B C
1 2 3 4 5 6 7 8

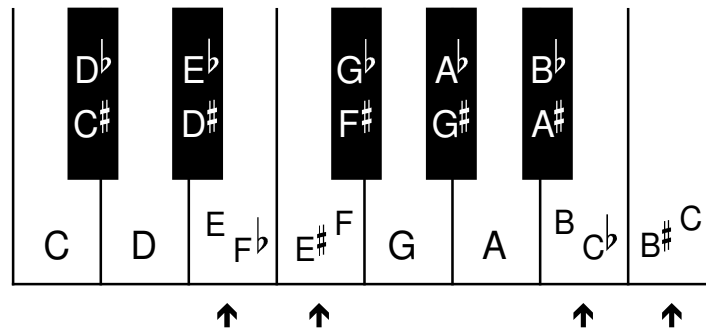
C D E F# G A B C
1 2 3 +4 5 6 7 8

How many keys are there?

There are major and minor keys built from each note. There are twelve notes, so there are twelve major keys and twelve minor keys: twenty-four keys. Since some notes have enharmonic names, e.g., F# / Gb, there are a total of thirty keys, some of which are more common than others. (A list of all the keys is at the end of this write-up.)

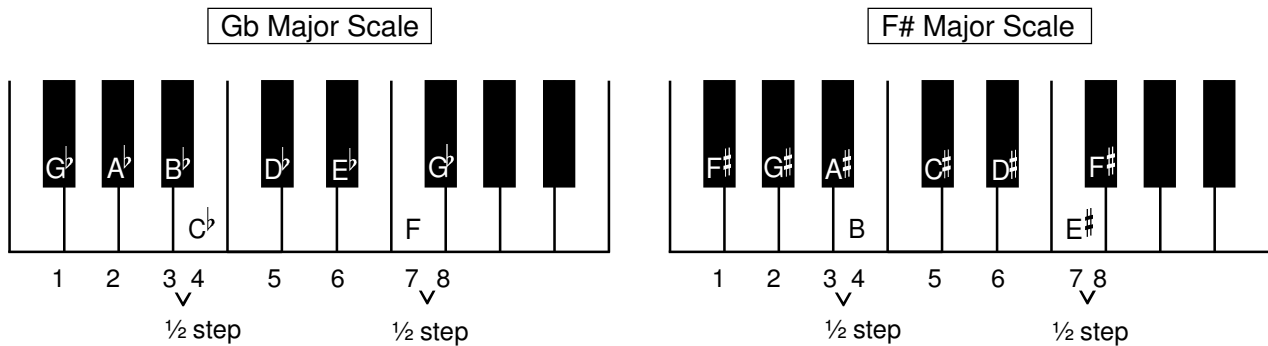
“White Key” Enharmonic Notes

In addition to the “black key” enharmonic notes, there are the “white key” enharmonic notes of E/Fb, E#/F, B/Cb and B#/C. (The following scale example demonstrates this usage.)



Some Enharmonic Scales

In the following scales, notice how both the alphabetical order and the formula are intact.



There are other scales using these enharmonic notes and they are listed in the table of keys on the following page.

Whether a key is called by one name or another is determined by the music. There are a few elements that determine this, and that is a topic for later music-theory write-ups.

Table of Major and Minor Keys

Number of Sharps or
Flats in each scale



C Major	C	D	E	F	G	A	B	C	0
G Major	G	A	B	C	D	E	F#	G	1
D Major	D	E	F#	G	A	B	C#	D	2
A Major	A	B	C#	D	E	F#	G#	A	3
E Major	E	F#	G#	A	B	C#	D#	E	4
B Major	B	C#	D#	E	F#	G#	A#	B	5
F# Major	F#	G#	A#	B	C#	D#	E#	F#	6
C# Major	C#	D#	E#	F#	G#	A#	B#	C#	7
Cb Major	Cb	Db	Eb	Fb	Gb	Ab	Bb	Cb	7
Gb Major	Gb	Ab	Bb	Cb	Db	Eb	F	Gb	6
Db Major	Db	Eb	F	Gb	Ab	Bb	C	Db	5
Ab Major	Ab	Bb	C	Db	Eb	F	G	Ab	4
Eb Major	Eb	F	G	Ab	Bb	C	D	Eb	3
Bb Major	Bb	C	D	Eb	F	G	A	Bb	2
F Major	F	G	A	Bb	C	D	E	F	1

A Minor	A	B	C	D	E	F	G	A	0
E Minor	E	F#	G	A	B	C	D	E	1
B Minor	B	C#	D	E	F#	G	A	B	2
F# Minor	F#	G#	A	B	C#	D	E	F#	3
C# Minor	C#	D#	E	F#	G#	A	B	C#	4
G# Minor	G#	A#	B	C#	D#	E	F#	G#	5
D# Minor	D#	E#	F#	G#	A#	B	C#	D#	6
A# Minor	A#	B#	C#	D#	E#	F#	G#	A#	7
Ab Minor	Ab	Bb	Cb	Db	Eb	Fb	Gb	Ab	7
Eb Minor	Eb	F	Gb	Ab	Bb	Cb	Db	Eb	6
Bb Minor	Bb	C	Db	Eb	F	Gb	Ab	Bb	5
F Minor	F	G	Ab	Bb	C	Db	Eb	F	4
C Minor	C	D	Eb	F	G	Ab	B	C	3
G Minor	G	A	Bb	C	D	Eb	F	G	2
D Minor	D	E	F	G	A	Bb	C	D	1

Do Re Mi

Before the scale degree system came into wide use, “Solfeggio” was the standard for understanding how pitches relate to each other. It is still a standard in many universities across the United States and Europe.

In Solfeggio, the major scale is: do re mi fa sol la ti do.

1	2	3	4	5	6	7	8
Do	Re	Mi	Fa	Sol	La	Ti	Do

“Solfeggio” is an Italian word stemming from the Sol and Fa syllables in the above scale. It is also called the “Sol-fa” system” in English, and “Solfege” in French.

This system was created in the 11th Century by a Benedictine monk named *Guido of Arezzo*. His name was “Guido,” and he lived in the town of “Arezzo” in Italy. He was a famous music theorist who created much of the music notation system we use today. (Music notation: writing notes on music paper.) He was in charge of the cathedral singers and was having difficulty getting them to remember the starting notes of one of the hymns they were singing. To remedy this, he took the first syllable from each line in the hymn and made a scale out of it. Hence, Do Re Mi Fa Sol La Ti Do. There were a number of modifications leading up to this finalization, but this is what we have today, and is the origin of “Do Re Mi”.

For an example of this in use, the beginning of “Somewhere Over the Rainbow” in Solfeggio goes like this:

Do	Do	Ti	Sol	La	Ti	Do	Do	La	Sol...
1	8	7	5	6	7	8	1	6	5...

There are different syllables used for minor scales, and a few variations on this system according to what “style” someone uses: French, Italian, American, etc. It can get quite involved, which is why I prefer the stable degree system — it’s simple: 1st note, 2nd note, 3rd note, etc.

Perfect Pitch

Perfect pitch is knowing what the names of notes are without a reference: you hear or sing a note and know what its note name is. Everyone I know with perfect pitch was born with it. I’ve been told that you can develop this ability but have yet to meet anyone who has.

Relative Pitch

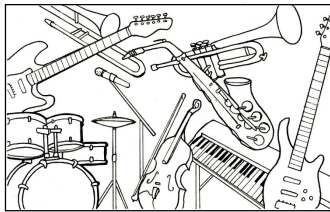
Specifically knowing and understanding how pitches relate to each other by ear. This is accomplished through ear training exercises. For example, if someone sung “Somewhere Over the Rainbow” to you, you would either know what the numbers were in the scale and/or could play it on an instrument with certainty. You wouldn’t know the note names until you play it on an instrument, but you’d know the relationship of those notes. Developing good relative pitch is essential for any lasting musical training and can be learned by most anyone given the right course of study.

Conclusion

These are the fundamental definitions that encompass melody. By understanding these materials, moving on to more advanced topics should be quite doable. When more advanced materials are confusing, it is usually because these fundamentals are not fully understood.

And more importantly, with this information you can begin to play and create music with a higher level of certainty. The purpose of theory is to stabilize the music you create. Just like with the English language, the better you understand the meanings of the words, the better you can be communicated with and the better you can communicate.

It's as simple as that!



How to Practice

Here are some guidelines for successful and efficient practicing:

- 1) Be there. Have your attention on what you are doing.
- 2) Be willing to learn something and accept the fact that it probably won't happen over a weekend. You could learn something specific in a few minutes, but application to your overall playing takes some time. (Though certain things can happen quickly depending on your current skill level. Different people progress at different speeds according to current ability levels, past experience and the subject being studied.)
- 3) Understand *what* you are practicing and *why* you are practicing it. Keep your personal goals in mind and practice for those results.
- 4) Learn to relax your body when playing. Accumulated tension is one of the biggest causes of body problems, rough playing and a host of ills. There are about 120 muscles, bones and tendons in both forearms and hands, and all of these "parts" are learning new coordinations. While you are learning control you will get tense. It can be natural to use force to do something until control is developed. Not being relaxed when you play is like driving a car with the brakes slightly depressed. The brake pads are going to wear out real fast and you're in for a bumpy ride. Notice and release tension when you play. Tension can occur in any part of your body: hands, wrists, arms, neck, shoulders, lower back, face, mouth, legs, feet.
- 5) Learn how to practice at the "right" speed. To play anything well, you need to develop complete control over what you are doing. Control is developed by repetitive actions at the speed that you can actually do the thing you are supposed to be doing. If you go too fast you can't "grab a hold" of whatever it is and it's like screeching around a corner in a car while driving too fast in the mountains. Go too fast and you end up in the trees. (If you ever got mad and frustrated while practicing I'd bet you were just going to fast!)
- 6) Understand the words and symbols on any written materials you are using. (I was giving a kid a piano lesson recently and she almost fell asleep in the middle of her lesson, but was bright and awake when she walked in. I snooped around and discovered that there was one symbol in a song book that her dad had gotten her that sent her under the table. I found the symbol, defined it for her and she instantly brightened up and came back to life.)
- 7) Learn to sing in tune if you don't already. If you can't, this is easier to learn than you might think. It's almost impossible to fully enjoy playing music if your ears aren't working.
- 8) Develop a good sense of rhythm. Having good rhythm is vital, probably the most vital aspect of being a musician. Good rhythm can be developed with the proper drills. If your sense of rhythm is really bad it could take some time; however, you CAN develop good rhythmic ability with efficient instruction and drilling.
- 9) Have fun. Music isn't worth doing if you can't have some fun while doing it. Not all studies are fun — many things aren't. But there is always a way to make some part of what you are doing fun and rewarding.

