

# From Ancient Modes...

Pythagoras was a Greek Mathematician who lived around 450 B.C. He established the 'Pythagorean Theorem' ( $a^2 + b^2 = c^2$ ). He was also credited by his contemporaries for 'filling in the blanks' in music. Some historians believe this to have been in reference to the 4<sup>th</sup> and 7<sup>th</sup> being added to the pentatonic scale. But it is also believed that this actually referred to his work in establishing the mathematical foundations of harmony. Math was considered to be of great importance to the people of Ancient Greece.

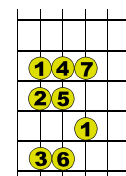
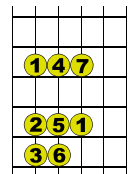
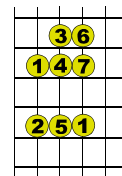
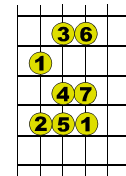
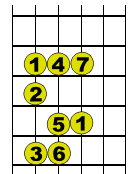
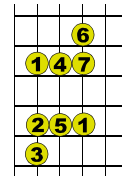
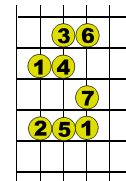
Much was lost during the fall of Ancient Greece. It's hard saying anything at all about how music was played or how it sounded. What has survived includes written accounts of events, paintings, a few writings on theory, and a very few bits and pieces of notation.

By the 10<sup>th</sup> century the Christian Church developed a modal system known as **Gregorian Chant**. These composers strove to master composing melodies, many of which are still heard in church hymns as well as popular 'seasonal' music such as Christmas Carols. Though inherited from Ancient Greece, this system wasn't exactly as the Greeks intended. For one, each mode was originally named according to the Greek Island most known for its use. These names were later mix-matched by a small group of scholarly monks.

The seven modes, as they are recognized today, are formed by starting on each step of the **ionian mode** (a.k.a. the major scale). Listed below are the names of the modes as well as the specific intervals within each mode. The tonic and octave have been left out for easier reading. Also included is the step pattern, a brief description, where the half-steps are and a one octave finger pattern.

## The Seven 'Church' Modes

<b>Ionian Mode</b>	Now known as the major scale, this mode was used more by common folk during the middle ages than by the newly developing Christian Church.
M2 <sup>nd</sup> M3 <sup>rd</sup> P4 <sup>th</sup> P5 <sup>th</sup> M6 <sup>th</sup> M7 <sup>th</sup>	
1 1 ½, 1 1 1 ½	Half-steps: the 3 <sup>rd</sup> - 4 <sup>th</sup> and the 7 <sup>th</sup> - Octave
<b>Dorian Mode</b>	This is a minor type mode with the beautiful brightness of the M6 <sup>th</sup> added in. It is found by using the 2 <sup>nd</sup> step of the ionian mode as the tonic note.
M2 <sup>nd</sup> m3 <sup>rd</sup> P4 <sup>th</sup> P5 <sup>th</sup> M6 <sup>th</sup> m7 <sup>th</sup>	
1 ½ 1, 1 1 ½ 1	Half-steps: the 2 <sup>nd</sup> - 3 <sup>rd</sup> and the 6 <sup>th</sup> - 7 <sup>th</sup>
<b>Phrygian Mode</b>	Found by using the 3 <sup>rd</sup> step of the ionian mode as the tonic, this mode has a somewhat Spanish flavor to it. The m2 <sup>nd</sup> is what gives this scale it's exotic sound.
m2 <sup>nd</sup> m3 <sup>rd</sup> P4 <sup>th</sup> P5 <sup>th</sup> m6 <sup>th</sup> m7 <sup>th</sup>	
½ 1 1, 1 ½ 1 1	Half-steps: the tonic - 2 <sup>nd</sup> and the 5 <sup>th</sup> - 6 <sup>th</sup>
<b>Lydian Mode</b>	This is the brightest mode of them all. Keep an open mind toward how it can be used to express feelings. Personally, I think it sounds like birds chirping in a forest.
M2 <sup>nd</sup> M3 <sup>rd</sup> +4 <sup>th</sup> P5 <sup>th</sup> M6 <sup>th</sup> M7 <sup>th</sup>	
1 1 1, ½ 1 1 ½	Half-steps: the 4 <sup>th</sup> - 5 <sup>th</sup> and the 7 <sup>th</sup> - Octave
<b>Mixolydian Mode</b>	This major type mode is often thought of as having a bluesy sound. Though new in the world, blues music has gained a respectable place among musicians everywhere.
M2 <sup>nd</sup> M3 <sup>rd</sup> P4 <sup>th</sup> P5 <sup>th</sup> M6 <sup>th</sup> m7 <sup>th</sup>	
1 1 ½, 1 1 ½ 1	Half-steps: the 3 <sup>rd</sup> - 4 <sup>th</sup> and the 6 <sup>th</sup> - 7 <sup>th</sup>
<b>Aeolian Mode</b>	This mode is also known as the pure minor scale. The modern major/minor system of tonality was not fully developed until some time during the renaissance.
M2 <sup>nd</sup> m3 <sup>rd</sup> P4 <sup>th</sup> P5 <sup>th</sup> m6 <sup>th</sup> m7 <sup>th</sup>	
1 ½ 1, 1 ½ 1 1	Half-steps: the 2 <sup>nd</sup> - 3 <sup>rd</sup> and the 5 <sup>th</sup> - 6 <sup>th</sup>
<b>Locrian Mode</b>	With the dissonance of the °5 <sup>th</sup> , this dark sounding mode is rarely used. It should be easy to hear how unstable the 5 <sup>th</sup> sounds compared to the phrygian mode.
m2 <sup>nd</sup> m3 <sup>rd</sup> P4 <sup>th</sup> °5 <sup>th</sup> m6 <sup>th</sup> m7 <sup>th</sup>	
½ 1 1, ½ 1 1 1	Half-steps: the tonic - 2 <sup>nd</sup> and the 4 <sup>th</sup> - 5 <sup>th</sup>



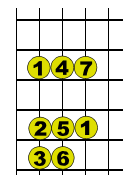
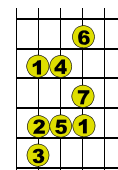
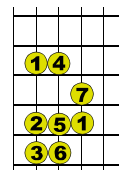
Practice each mode using the ear training exercises on page 7, one mode at a time. Pay attention to the half-steps, as well as any individual notes that make each mode unique. This is an excellent way to get acquainted with all the intervals within one octave.

# ...To Modern Scales

This page finishes covering all the scales commonly found in today's music. Once again, start with the ear training on page 7. Stick to one key to begin with. It will be easier to play each scale using other tonic notes after becoming more familiar with it.

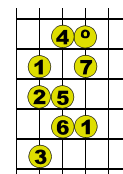
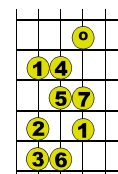
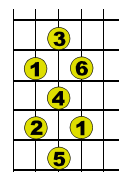
The **harmonic** and **melodic minor scales** were 'invented' to create a smoother resolution from the 7<sup>th</sup> to the tonic.

Harmonic Minor	
M2 <sup>nd</sup> m3 <sup>rd</sup> P4 <sup>th</sup> P5 <sup>th</sup> m6 <sup>th</sup> M7 <sup>th</sup>	In classical theory the 7 <sup>th</sup> step of the pure minor scale was raised to make the V - I chord progression sound smoother and flow more naturally. The interval between the 6 <sup>th</sup> and 7 <sup>th</sup> steps was avoided within the melody.
1 1/2 1, 1 1/2 3/2 1/2	
Melodic Minor (ascending)	
M2 <sup>nd</sup> m3 <sup>rd</sup> P4 <sup>th</sup> P5 <sup>th</sup> M6 <sup>th</sup> M7 <sup>th</sup>	This scale was invented to 'close the gap' by raising both the 6 <sup>th</sup> and 7 <sup>th</sup> steps. Since the purpose for raising the 7 <sup>th</sup> was to create a better resolution to the tonic, this scale was only needed when the melody ascended.
1 1/2 1, 1 1 1 1/2	
Melodic Minor (descending)	
M2 <sup>nd</sup> m3 <sup>rd</sup> P4 <sup>th</sup> P5 <sup>th</sup> m6 <sup>th</sup> m7 <sup>th</sup>	When the melody descended, there was no 'resolution' from the 7 <sup>th</sup> step to the tonic. Composers could switch between the ascending and descending scales as needed. Notice this is the same as the pure minor scale.
1 1/2 1, 1 1/2 1 1	



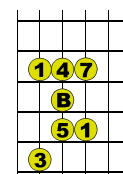
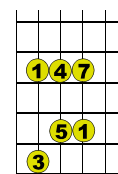
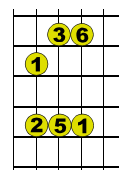
Because of the symmetrical nature of the **whole tone** and **diminished scales**, these scales tend to defy having any real tonal center. In the augmented scale any note can be used as the tonic and the scale pattern will stay the same. The diminished scale is similar, but with two possible 'modes'. In these finger patterns, the diminished sign (o) is used to indicate the dim. 7<sup>th</sup>.

Whole Tone Scale	
M2 <sup>nd</sup> M3 <sup>rd</sup> +4 <sup>th</sup> +5 <sup>th</sup> +6 <sup>th</sup>	This six-note scale is perfectly symmetrical. It maintains its identity forward, backward and starting on any note. It is also called the <b>augmented scale</b> since all the notes fit the augmented chord so well. (root, M3 <sup>rd</sup> , +5 <sup>th</sup> )
1 1 1 1 1 1	
Diminished Scale (1 <sup>st</sup> version)	
M2 <sup>nd</sup> m3 <sup>rd</sup> P4 <sup>th</sup> °5 <sup>th</sup> m6 <sup>th</sup> °7 <sup>th</sup> M7 <sup>th</sup>	The dim. 7 <sup>th</sup> chord has a root, m3 <sup>rd</sup> , °5 <sup>th</sup> , and °7 <sup>th</sup> . This 1 <sup>st</sup> version of the dim. scale is found by adding a note 1/2 step below each chordal tone. Thinking through this is a great way to become familiar with intervals.
1 1/2 1 1/2 1 1/2 1 1/2	
Diminished Scale (2 <sup>nd</sup> version)	
m2 <sup>nd</sup> m3 <sup>rd</sup> °4 <sup>th</sup> °5 <sup>th</sup> °6 <sup>th</sup> °7 <sup>th</sup> m7 <sup>th</sup>	Start with the diminished 7 <sup>th</sup> chord and practice thinking through all the notes 1/2 step above each chordal tone. Once again, this is good practice for getting more familiar the number of semitones within each interval.
1/2 1 1/2 1 1/2 1 1/2 1	



**Pentatonic scales** have five unique notes. Many variations of this have been found around the world pre-dating Ancient Greece. It's amazing how different five notes can sound depending on how they are played. An oriental feel can be created by slowly playing a few notes at a time with no real tonal center. The blues scale has also been included here as a variation of the minor pentatonic.

Major Pentatonic	
M2 <sup>nd</sup> M3 <sup>rd</sup> P5 <sup>th</sup> M6 <sup>th</sup>	In modern America, this scale is commonly associated with Country and Western music. It has even been called the Country Scale. This scale can be found by skipping the 4 <sup>th</sup> and 7 <sup>th</sup> steps of the major scale.
1 1 3/2 1 3/2	
Minor Pentatonic	
m3 <sup>rd</sup> P4 <sup>th</sup> P5 <sup>th</sup> m7 <sup>th</sup>	This scale is often associated with the blues. It is found by skipping the 2 <sup>nd</sup> and 6 <sup>th</sup> steps of the pure minor scale. Imagine what this scale might sound like to someone who has never heard the blues.
3/2 1 1 3/2 1	
Blues Scale	
m3 <sup>rd</sup> P4 <sup>th</sup> Blue P5 <sup>th</sup> m7 <sup>th</sup>	The 'blue note' in this scale really does have roots in African music. It was carried over through song during the days of slavery in America. Adding this unique note to the minor pentatonic will form the six note blues scale.
3/2 1 1/2 1/2 3/2 1	



# Summary Of Scales

Here is a summary of the scales found in this book. This list includes all the scales found in common use today. It does not include hybrid scales or the more exotic scales found in other systems of music. *Hint:* memorize the major and pure minor scales first.

<u>Scale Name</u>	<u>General Description</u>	<u>Intervals From The Tonic</u>						
Major Scale	Defines the modern major sound	M2	M3	P4	P5	M6	M7	
Pure Minor Scale	Defines the modern minor sound	M2	m3	P4	P5	m6	m7	
Lydian mode	Major type scale with an +4 <sup>th</sup>	M2	M3	+4	P5	M6	M7	
Ionian mode	The same as the major scale	M2	M3	P4	P5	M6	M7	
Mixolydian mode	Major type scale with a m7 <sup>th</sup>	M2	M3	P4	P5	M6	m7	
Dorian mode	Minor type scale with a M6 <sup>th</sup>	M2	m3	P4	P5	M6	m7	
Aeolian mode	The same as the pure minor scale	M2	m3	P4	P5	m6	m7	
Phrygian mode	Minor type scale with a m2 <sup>nd</sup>	m2	m3	P4	P5	m6	m7	
Locrian mode	Minor type scale with a m2 <sup>nd</sup> and a °5 <sup>th</sup>	m2	m3	P4	°5	m6	m7	
Harmonic minor	The minor scale with a raised 7 <sup>th</sup>	M2	m3	P4	P5	m6	M7	
Melodic minor (ascending)	The minor scale with a raised 6 <sup>th</sup> and 7 <sup>th</sup>	M2	m3	P4	P5	M6	M7	
Melodic minor (descending)	The same as the pure minor scale	M2	m3	P4	P5	m6	m7	
Whole tone scale	Made up of all whole steps	M2	M3	+4	+5	+6		
* Diminished (1 <sup>st</sup> version)	Made of alternating whole / half-steps	M2	m3	P4	°5	m6	°7	M7
* Diminished (2 <sup>nd</sup> version)	Made of alternating half / whole-steps	m2	m3	°4	°5	°6	°7	m7
Major Pentatonic	Major scale w/ the 4 <sup>th</sup> and 7 <sup>th</sup> steps left out	M2	M3	P5	M6			
Minor Pentatonic	Minor scale w/ the 2 <sup>nd</sup> and 6 <sup>th</sup> steps left out	m3	P4	P5	m7			
Blues Scale	Minor pentatonic w/ the 'blue note' added	m3	P4	Blue	P5	m7		

\* These two scales can be built over the diminished 7<sup>th</sup> chord ( root, m3<sup>rd</sup>, °5<sup>th</sup>, °7<sup>th</sup> )

## Scale Step Patterns

Knowing the scale step patterns is a basic part of this method. Place a separate piece of paper over everything but the scale names, then think through the step pattern for each scale. Here are the scale step patterns for the major and pure minor scales to get started. Work through all the scales listed above a couple times a week to gain confidence.

Major Scale Pattern 1 1 ½ 1 1 1 ½

Minor Scale Pattern 1 ½ 1 1 ½ 1 1

## Improvised Finger Patterns

To finish out this lesson, find at least one finger pattern for each scale using C on the 6<sup>th</sup> string as the tonic. Notice the scales listed above have been divided into six groups. Start by working on each group, one group per day. If all the lessons in this book have been worked out so far, then it shouldn't take long at all to play through this entire list *completely from memory*. With enough practice it should become second nature to see *any* finger pattern as a series of notes rather than just a memorized pattern on the fretboard.