

Guitar Reference

By: Frank Markovich

Guitar Reference Introduction

The purpose of this book is to give the student the reference materials for learning how to play the guitar. In this book you will find everything from how to hold the guitar to some basic music theory. Much of the book is geared to the beginning guitarist but as the book progresses there is more information available for the intermediate and advanced guitarist. Use this book as a reference and a guide. You should choose songs to practice the material on.

For example, when you are learning your first position chords (position refers to what fret your first finger falls at) you should choose songs that you are familiar with and play them over and over again until you get a good sound and can play them at the right tempo (rate of speed). It may take a few months to master the beginning chords and then a few months to master the more advanced barre chords. Take your time and learn each of them so that you do not have to think about what you are playing as you play it. Once you have mastered the first position chords move on to the Barre chords and apply the same logic. Then move on to more advanced chords such as 13th and diminished chords.

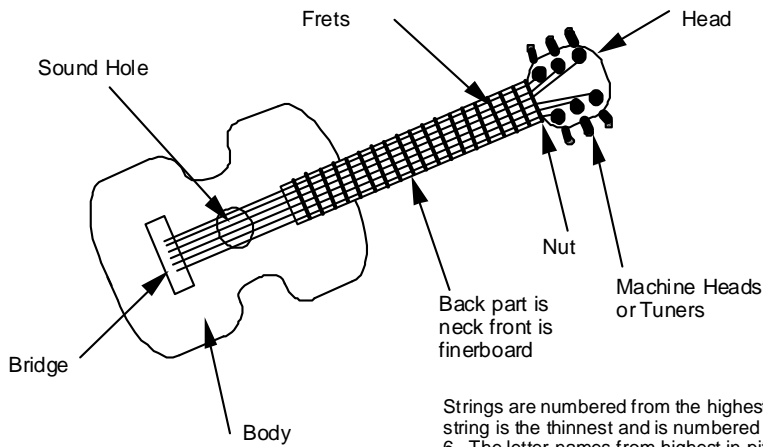
For scales, it is usually best to start with either the major or minor pentatonic (five note scales) and then go on to the major scales. Follow the instruction during that part of the book.

Learn to read both the traditional notes and tablature. All music for the guitar with the exception of classical music now uses tablature extensively. It is no longer a nice thing to be able to read it, it is now a requirement that you can read tablature. All the major guitar magazines and books use tablature some without traditional music above or below it.

Memorize the blues patterns and scales. It is important that you become proficient in playing the blues. If you are an intermediate or advanced player learn the blues scales and how to improvise to the blues.

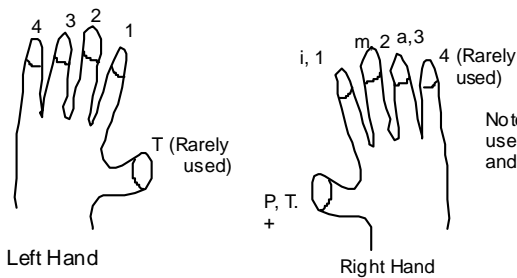
Most of all have fun playing the guitar. Strive to improve your playing and work (or play) on it consistently. Take classes, get together with other guitarists, see concerts, and listen to others play to inspire you. Practice new things and be open to other types of music. Use this reference as a place to start and as a place to learn and review.

Parts Of The Guitar



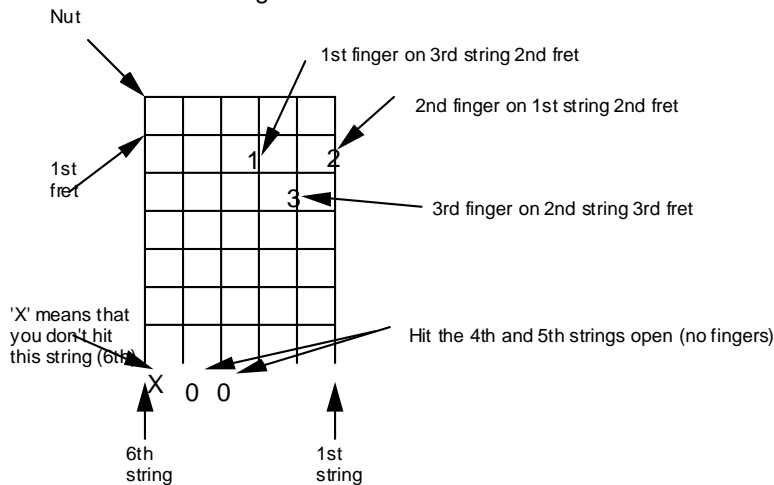
Strings are numbered from the highest in pitch to the lowest. The first string is the thinnest and is numbered 1 to the fattest string which is numbered 6. The letter names from highest in pitch to lowest are, e, b, g, d, a, and e. Memorize the names of the strings.

How fingers are numbered on the guitar.



Note that sometime one dot is used to indicate index, 2 dots middle, and 3 dots ring finger on the right hand.

Reading A chord Chart

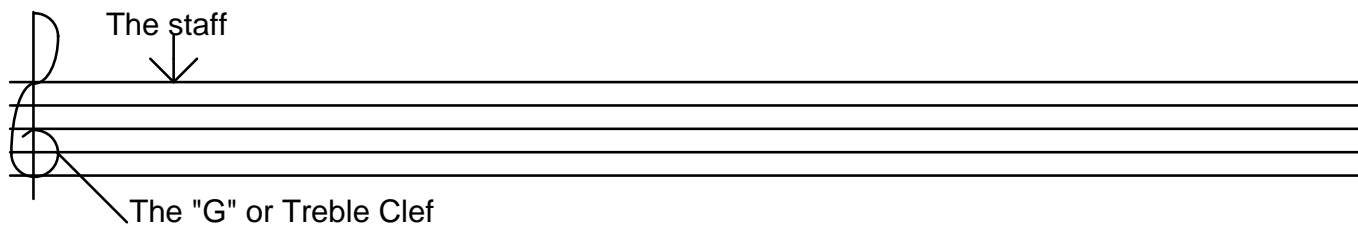


Hold your guitar in an upright position on your right leg (reverse if left handed) with the head of the guitar pointed slightly up. Your hands should not support the guitar as you need them to play. The guitar is balanced between the right leg, right upper arm, and your torso. Your left hand should be positioned on the neck with the thumb in back of the neck opposite the 2nd fret. Make sure that you are sitting in an upright position and that your elbows are neither pointing in or out from your body.

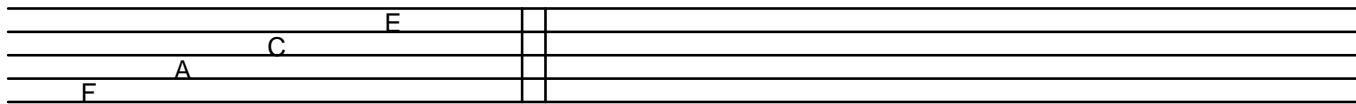
The Basics of Music

Music is written on a "staff" which consists of 5 lines and 4 spaces. The musical alphabet contains 7 letters repeated endlessly (A, B, C, D, E, F, G). In addition there are sharps and flats that can be applied to each of these notes. A sharp raises a note while a flat lowers a note. The letter name would be reflected. For example, if you flatted a B the note would be called B Flat (b) or if you sharped a C the note would be called C sharp (#).

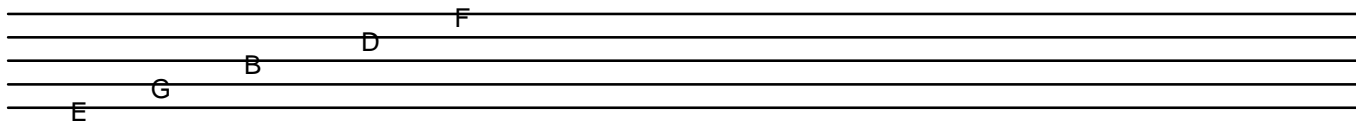
Before all music on the guitar there appears a G or Treble clef sign. It is called a G clef because the symbol looks like a Gothic G.



Notes in spaces spell out the word Face.



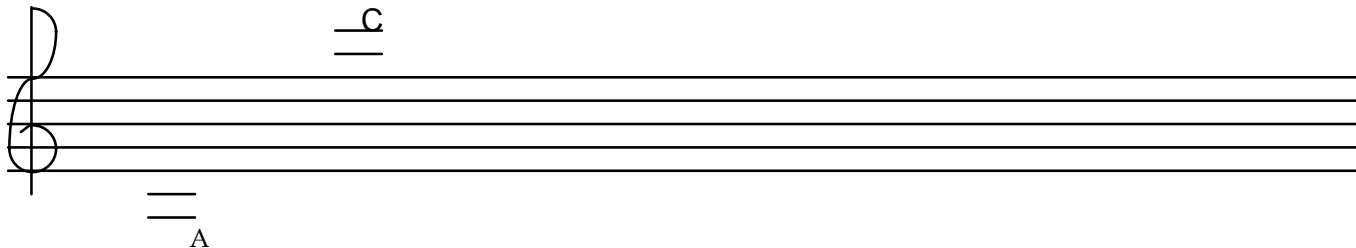
Notes on the lines can be remembered by Every Good Boy Does Fine.



When you learn notes it is best to say the names of the notes aloud in the beginning until you have them memorized. It is critical that you know the names of the notes by heart as you progress. You might want to make some flash cards to help you remember the names of the notes. You could study these while you are sitting on a bus or at lunch.

Lines are added above and below the staff to increase the range. These lines are called ledger lines.

Ledger lines increase the range of the notes.



The lowest notes on the guitar are actually very low. Low E (the sixth string open) is 82 Hz. The notes on the guitar actually sound one octave lower than written. The range of notes on the guitar is just under four octaves.

Guitar Fingerboard

	E	A	D	G	B	E
F		A#, Bb	D#, Eb	G#, Ab	C	F
F#, Gb	B	E	A	C#, Db	F#, Gb	
G	C	F	A#, Bb	D	G	
G#, Ab	C#, Db	F#, Gb	B	D#, Eb	G#, Ab	
A	D	G	C	E	A	
A#, Bb	D#, Eb	G#, Ab	C#, Db	F	A#, Bb	
B	E	A	D	F#, Gb	B	
C	F	A#, Bb	D#, Eb	G	C	
C#, Db	F#, Gb	B	E	G#, Ab	C#, Db	
D	G	C	F	A	D	
D#, Eb	G#, Ab	C#, Db	F#, Gb	A#, Bb	D#, Eb	
E	A	D	G	B	E	

Chords

Chords are combinations of notes that sound pleasing to the ear. A chord has at least three different letter named notes to it. Chords will be the first thing that you will learn on the guitar. You need to start slowly doing about three chords per week. These must be memorized. As you progress you should start to see patterns with the fingers and also start to hear what different chords sound like. With most things on the guitar you need to keep your fingers on the left hand curved and use just the tips of your fingers on the string right next to the fret wire to get a good sound. Listen closely to your sound and strive for a good tone with no buzzing. At first do not worry about how long it takes you to form a chord, just keep the beat going no matter what.

Chords are used for many things such as accompanying voice or other instruments, playing melodies with chords, rhythmic backdrops etc. For many players it is the most enjoyable part of playing.

Chords are called such things as C, D7, Am etc. and these all have a meaning. A letter name only means a major chord. For example, the C above means a C major chord. We just say C but it implies a C major chord. For the small 'm' it will mean minor. An 'Am' chord is a 'A minor' chord. The 7 as in D7 means D dominant 7 chord. Later in the book is discussed how the notes for each of these chords is derived.

As a beginner you should learn the following chords: A, Am, A7, Am7, B7, Bm, C, C7, D, Dm, D7, Dm7, E, Em, E7, Em7, F, F#m, G, G7 and Bb. Once you have learned all of these chords you should move on to Barre Chords (where you use a finger to cover more than one string).

If you are an intermediate player work on memorizing the three main sixth and fifth string root barre chords. Once you have those done work on more advanced moveable chords such as 9th, 13th, Maj7, etc. chords. Try chord melodies and bass runs between various chords in order to spice things up a bit.

Playing chords is more than just changing from one chord to another at the right time. You will need to learn such things a muting, connecting chords, rhythms, passing chords, fingerpicking, fills between chords, bass runs, etc. before you really have mastered the art of playing chords.

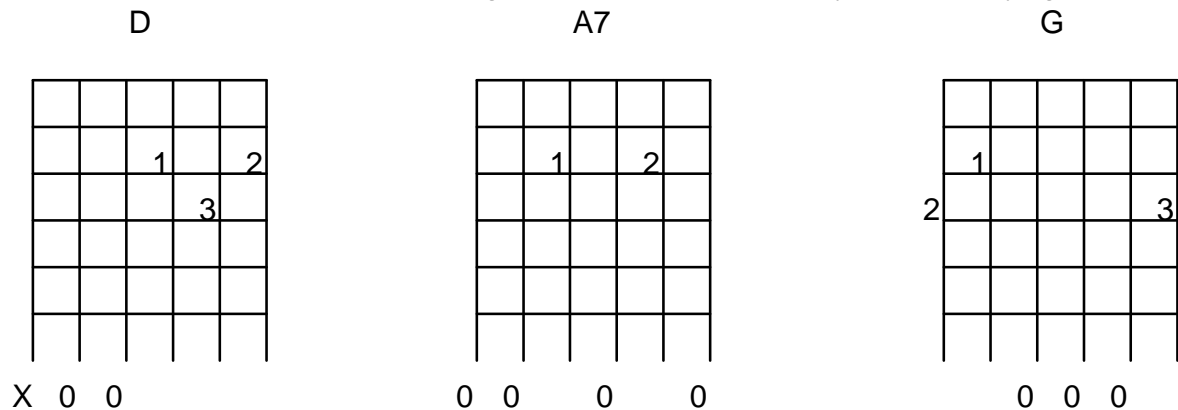
Practicing

It is important that you practice on a regular basis. The more you practice the better you will play. I have seen students with average talent become professional musicians by working hard at it. I have also seen students with lots of talent do nothing with their playing because they were lazy. Set a schedule and set goals and before long you will be playing interesting pieces.

It is best to find a location where you will not be disturbed and then practice a minimum of a half hour a day. In the beginning don't push it. Your hands will get tired and sore and it can be discouraging. Just take your time but be consistent.

The First Three Chords.

To start with you should work on just three chords for the first week. These are D, A7 and G. A chord is just a combination of notes that sounds pleasing to the ear. The D chord you will learn has the notes D, F#, and A(F Sharp). These notes may be repeated. In the D fingering you will be playing A on the 5th string, D on the 4th string, A on the 3rd string, D on the second string and F# on the first string. It does not matter what order the notes are as long as the notes are D, F# and A you will be playing a D chord.



To change from a D to an A7 chord try the following. Holding the D chord lift off the third finger. Then move the first and second fingers together up one string to the 4th and 2nd strings respectively. To go from A7 back to D just reverse the process. Move the 1st and second fingers down one string and then put the 3rd finger on the second string 3rd fret. The goal here is to learn these chords so that you do not have to look at them while you play. Force yourself not to look at your guitar but only at the music.

One exercise that can help is to hold the chord then just relax your fingers enough so that you are not putting pressure on the strings but only touching them. Then put pressure and repeat the process. Once you can do that try to lift the fingers about a 1/4 of an inch above the strings when you release pressure. Then go away from the chord and try to move the fingers back as a group.

Chords are combinations of different notes that sound pleasing to the ear. Later in the book we will look at what notes make up each chord but for now the three chords above are as follows: For D the notes are D, F# (F sharp), and A, for G the notes are G, B and D, and for A7 the notes are A, C#, E and G. When we say a chord and it is just a letter such as D what we mean is a D major chord. Any major chord has three different notes in it. A seventh chord has four different notes a, a ninth chord five different notes etc.

Care of Your Guitar

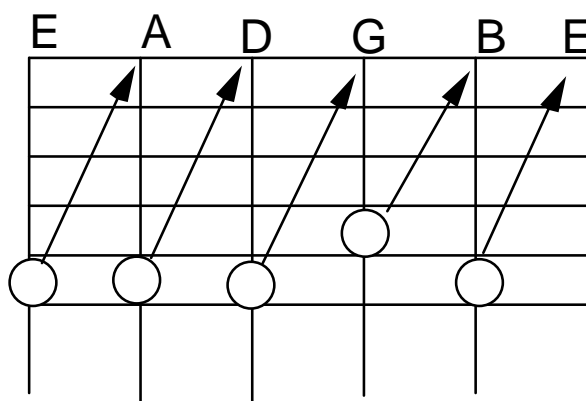
Your guitar is made out of wood and common sense should prevail. The most important thing to do is to avoid changes in temperature and humidity. This is particularly true of rapid changes. These changes can cause the wood to crack or warp. Many people do not understand this and actually do damage to the instrument that is both expensive and detrimental to the sound the instrument will produce. Try to keep the guitar in a climate controlled room. Avoid such places as the trunk of your car, adjacent to the wall heater, etc. If possible keep the guitar in its case as much as possible.

Clean your guitar on a regular basis and polish it using a fine guitar polish such as the Martin brand. Do not polish the fingerboard. Follow the directions on the package.

Tuning Your Guitar

It is important that you keep your guitar in tune at all times. It does not necessarily need to be in tune with concert pitch (although that is desirable), but at least in tune with itself. There are many ways in which to tune your guitar but following is the most straightforward manner.

1. Tune your first string to a known note. An "E" tuning fork is ideal. Remember to raise the pitch of a string you tighten the string and to lower the pitch of a string you loosen it.
2. To tune the second string to the first string play the second string fifth fret and match that pitch to the first string open.
3. To tune the third string to the second string play the third string fourth fret and match that pitch to the second string open.
4. To tune the fourth string to the third string play the fourth string fifth fret to the third string open.
5. To tune the fifth string to the fourth string play the fifth string fifth fret to the fourth string open.
6. To tune the sixth string to the fifth string play the sixth string fifth fret to the fifth string open.



There are a couple of techniques that can assist you in tuning. First of all sing both notes. Second, listen for beats. The further apart the beats are the closer in tune the notes will be. Then once you feel that your guitar is in tune try playing a couple of chords. The best one to check the tuning with is the E chord. Other good choices are the G and A chords.

One other method is to use harmonics: To do that tune the 1st string then use the 6th string 5th fret harmonic to the open 1st string. Then tune the 6th string 5th fret harmonic to the 5th string 7th fret harmonic. Repeat the pattern for the 5th and 4th strings and then for the 4th and 3rd strings. Tune the 2nd string to the 6th string 7th fret harmonic. This technique is used by many rock players since it can be done even when there is quite a bit of other sound going on. It is also very accurate.

Beginning Chord Playing

1. $4/4$ = Means $4/4$ time, top number tells how many beats per measure while the bottom number tells which type of note gets a count. In this case a quarter note (note that is filled in and has a stem) gets one count. When playing chords in $4/4$ time start by doing all quarter notes. In other words strum each chord 4 times per measure.
2. One measure is the distance between bar lines (the vertical lines on the staff).
| - one measure - | (this measure would get four counts or beats in $4/4$ time).

The very first thing that you should do is to work on getting a good sound out of your guitar. Start with a D chord (this actually means D major as a letter only implies that the chord is a major chord) and strum it with your thumb in a downward motion over the sound hole or over the neck pickup on an electric guitar. Try to use a little bit of the fleshy part of the thumb and a little bit of the thumb nail. It is really important that all the notes sound and that they sound as if they were hit simultaneously.

To check the chord, play across the strings from the lowest in pitch (low E string) to the highest in pitch. Make sure each note sounds clearly. Then strum downward using your thumb and pivoting at the wrist. The movement is like flicking water from your hands. Play slowly and evenly at first while counting to 4 while you play.

D

$4/4$:				:
count		1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
		other			

The double bar lines with two dots means to repeat to where the double lines and two dots face the direction.

Then try with an A7 chord:

$4/4$:				:	Then try changing chords.
count		1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	

$4/4$:								:
count		1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

Then do two measures each:

$4/4$:				:
		D	A7		

count 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4

Then one measure each:

$\begin{array}{cccc} & D & & A7 & & D & & A7 \\ 4/4 & ||: & | & | & | & | & :|| \\ \text{count} & 1 & 2 & 3 & 4 & 1 & 2 & 3 & 4 & 1 & 2 & 3 & 4 & 1 & 2 & 3 & 4 \end{array}$

Play slowly at first and count aloud while you play. Listen to make sure all of the notes are sounding. When you feel comfortable with the D to A7 add in the G chord. First doing 4 measures each then two then one measure each. Going from a D to a G chord. Then try going from a A7 to a G chord using the same method. Again, count aloud while you play. Do this type of pattern for each new chord that you learn.

$\begin{array}{cccccccc} & D & & & & & & G \\ 4/4 & ||: & | & | & | & | & | & | & :|| \text{ Etc.} \\ \text{count} & 1 & 2 & 3 & 4 & 1 & 2 & 3 & 4 & 1 & 2 & 3 & 4 & 1 & 2 & 3 & 4 & 1 & 2 & 3 & 4 \end{array}$

Chord Practice Sheet

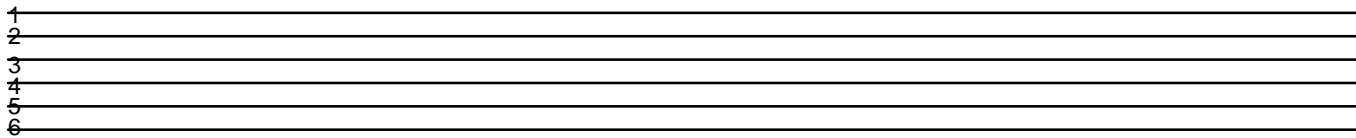
1. 4/4 ||: Am | | D | | Am | | D | :||
2. 4/4 ||: Am | D | Am | D | :||
3. 4/4 ||: Am | | C | | Am | | C | :||
4. 4/4 ||: Am | C | Am | C | :||
5. 4/4 ||: Am | | G | | Am | | G | :||
6. 4/4 ||: Am | G | Am | G | :||
7. 4/4 ||: Am | | E | | Am | | E | :||
8. 4/4 ||: Am | E | Am | E | :||
9. 4/4 ||: Am | | E7 | | Am | | E7 | :||
10. 4/4 ||: Am | E7 | Am | E7 | :||
11. 4/4 ||: Am | | D7 | | Am | | D7 | :||
12. 4/4 ||: Am | D7 | Am | D7 | :||
13. 4/4 ||: A | | D | | A | | D | :||
14. 4/4 ||: A | D | A | D | :||
15. 4/4 ||: A | | C | | A | | C | :||
16. 4/4 ||: A | C | A | C | :||
17. 4/4 ||: A | | G | | A | | G | :||
18. 4/4 ||: A | G | A | G | :||
19. 4/4 ||: A | | E | | A | | E | :||
8. 4/4 ||: A | E | A | E | :||
20. 4/4 ||: A | | E7 | | A | | E7 | :||
21. 4/4 ||: A | E7 | A | E7 | :||
22. 4/4 ||: A | | D7 | | A | | D7 | :||
23. 4/4 ||: A | D7 | A | D7 | :||
24. 4/4 ||: E | | D | | E | | D | :||
25. 4/4 ||: E | D | E | D | :||
26. 4/4 ||: E | | C | | E | | C | :||
27. 4/4 ||: E | C | E | C | :||
28. 4/4 ||: E | | G | | E | | G | :||
29. 4/4 ||: E | G | E | G | :||

30. 4/4 ||: E | | D7 | | E | | D7 | :|| 31. 4/4 ||: E | D7 | E | D7 | :||
32. 4/4 ||: Em | | D | | Em | | D | :|| 33. 4/4 ||: Em | D | Em | D | :||
34. 4/4 ||: Em | | C | | Em | | C | :|| 35. 4/4 ||: Em | C | Em | C | :||
36. 4/4 ||: Em | | G | | Em | | G | :|| 37. 4/4 ||: Em | G | Em | G | :||
38. 4/4 ||: Em | | D7 | | Em | | D7 | :|| 39. 4/4 ||: Em | D7 | Em | D7 | :||
40. 4/4 ||: Em | | A | | Em | | A | :|| 41. 4/4 ||: Em | A | Em | A | :||
42. 4/4 ||: Em | | Am | | Em | | Am | :|| 43. 4/4 ||: Em | Am | Em | Am :||
40. 4/4 ||: Em | | A7 | | Em | | A7 | :|| 41. 4/4 ||: Em | A7 | Em | A7 | :||

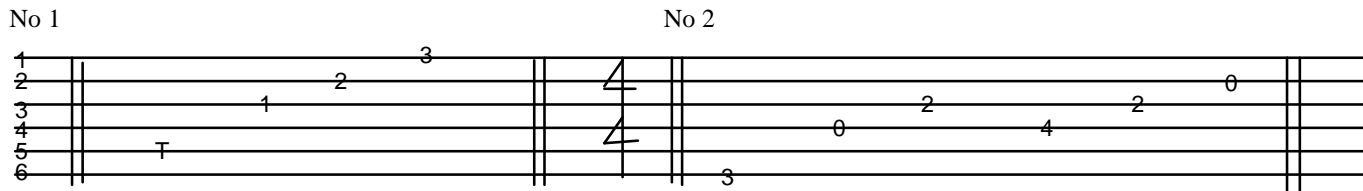
Reading Tablature

Tablature is a means of notating music that goes back to before the time of Christ. It can only be used for the instrument that it is written for and because of that is not as universal as traditional music notation that can be applied to any instrument or voice. Quite a bit of the literature for the guitar is written in tablature and currently much is written with both tablature and traditional music notation. Tablature will enable us to communicate very quickly ideas and pieces that would take much longer to do if you had to first learn traditional musical notation.

In tablature it is much like reading a chord diagram. Each of the lines represents a string with the top line being the first string (Highest in pitch) and the bottom line the 6th string. If you look below you will see an example of a blank tablature piece.



If you are dealing with right hand tablature then the numbers on the strings refer to the fingers on the right hand that you would use to fingerpick with.



In example #1 this is right hand tablature. Going from left to right. The first thing you see is a T on the 5th string line. This means that the thumb would hit the 5th string. Then a 1 on the 3rd string line which would mean that the index finger would hit the 3rd string. A 2 on the 2nd string line would mean that the middle finger would strike the 2nd string, and lastly a 3 on the first string line would mean that the pinkie would hit the first string.

In No 2 this is left hand tablature. A 3 on the 6th string line would mean that you would play the 3rd fret of the 6th string. A 0 on the 4th string line would mean to hit the 4th string open. A 2 on the 3rd string line would mean to hit the 3rd string 2nd fret.

Bass Notes For Chords

Chord	Bass Note	Alternate Bass note
A, Am, A7	5th	4th or 3rd
B7	5th	4th
Bm	5th if Barre 3rd otherwise	4th
C, C7	5th	4th
D, Dm, D7	4th	5th or 3rd
E, Em, E7	6th	5th
F	5th	4th

Barre Chords

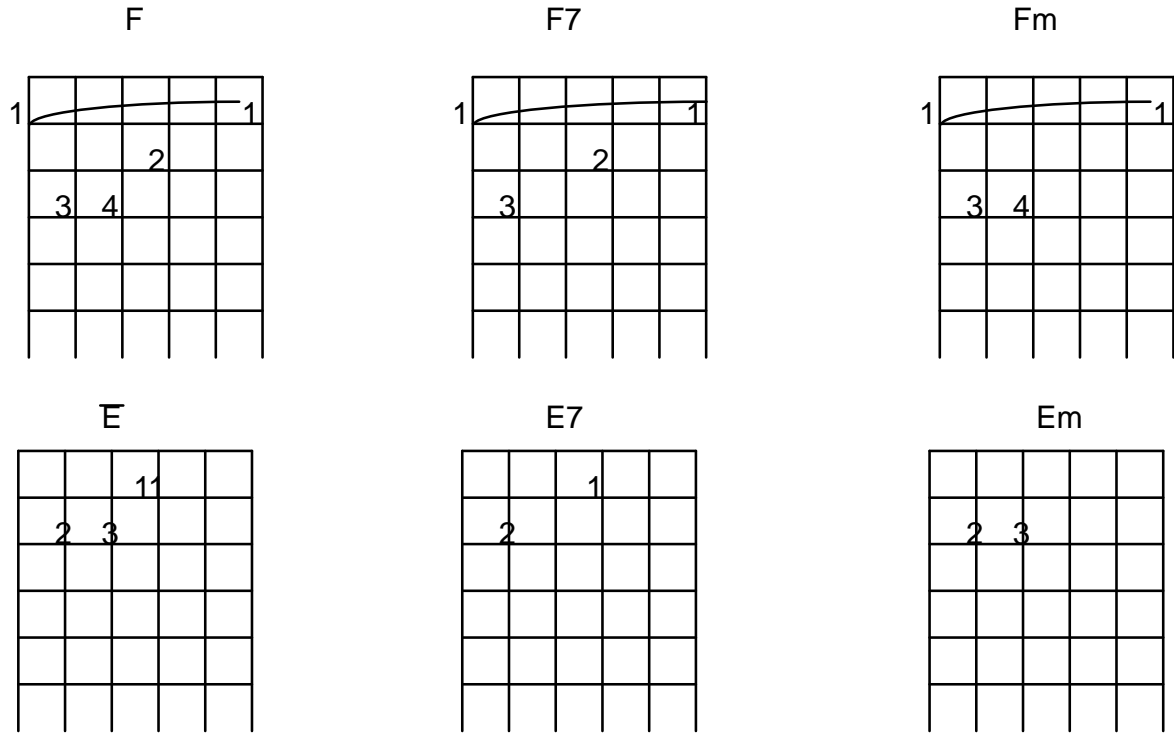
There are a number of steps to developing chord technique. First is learning all the beginner or first position chords. This first step is critical in that everything else is built off of that. Next is going to Barre Chords. This is a major step and will lead you to being able to play more complicated songs and in new keys. If you only play the first position chords you will be limited to a few keys. But with Barre Chords you can play in any key. In addition there are many techniques that can only be done with Barre Chords.

The first place to start is to learn two pieces of information. First, the Barre Chords are built off of forms learned with the beginning chords. Second, as you move a form down the neck the letter name changes by what note you are holding down on one of the strings.

For example if you look at the Sixth String Root Barre Chords for explanation you will see the relationship. Notice that under each Barre Chord there is a first position chord (all some form of E). Remember that the name of the sixth string open is an E. That is what you play on the E type chords. If you could make that moveable then whatever fret you played on the sixth string would be the letter name of the chord. This is accomplished by Barring the fingerboard by putting your first finger across all of the strings. In this manner you are making a moveable 'Capo' with your index finger. If you do it on the first fret it is a F type chord. That is because on the sixth string-first fret the note is F. Play the Barre and finger the other notes as indicated and you will have either a F, F7 or Fm depending upon the fingering. Relate these to the E, E7 and Em chords respectively. Visualize this. Then as you move up the fingerboard the letter name changes.

Look very closely at your E chord. Now image that you cannot use your first finger on your left hand. You would use your 2nd finger on the 3rd string 1st fret, ring finger on the 5th string 2nd fret, and pinkie on the 4th string 2nd fret. Now move the chord towards the sound hole one fret. Next put the Index finger down across the first fret. You are now playing a F chord. If you lift up your 2nd finger you have a Fm chord and if you put your second finger down again and lift up the 4th finger you have a F7. Now put your 4th finger down again and slide down the fingerboard one fret. You now have a F# (or Gb) chord. Move it one more fret and you have a G chord. Whatever note you are holding on the 6th string is the letter name of the chord that you are playing.

Remember that it is all built off of the first position E type chords. In fact your barre chords are all built off of the beginning chords that you have already mastered.



Notes on the 6th String.

Fret	1	2	3	4	5	6	7	8	9	10	11	12
------	---	---	---	---	---	---	---	---	---	----	----	----

Name F F#/Gb G G#/Ab A A#/Bb B C C#/Db D D#/Eb E

You should memorize the names of the notes on the 6th string. Try playing these chords now whenever possible. A good song to start on is Dock Of The Bay.

Try the following examples using Barre Chords:

1. F G
4/4 ||: | :||
2. F Bb
4/4 ||: | :||
3. F C
4/4 ||: | :||
4. F A Bb G
4/4 ||: | | :||
5. F Bb C Bb
4/4 ||: | | | :||
6. A 12-Barre Blues In F
F Bb F C Bb F C
4/4 ||: | | | | | | :||

7. Then try the same progression as seventh chords.

F7 Bb7 F7 C7 Bb7 F7 C7

4/4 ||: | | | | | | | | | | :||

Fifth String Root Barre Chords

The 5th string root barre chords work in the same fashion as the 6th string root. Whatever fret is being played on the 5th string is the root of the chord and you need only apply the form. Below are the 5th string root forms.

Bb Major		or	Bb Major		Bb7		or					
Bb7			Bbm		Bbm7							
Fret	1	2	3	4	5	6	7	8	9	10	11	12
Name	Bb	B	C	Db	D	Eb	E	F	Gb	G	Ab	A
	A#			C#		D#			F#		G#	

You should memorize the names of the notes on the 5th string along with the forms. Notice that the forms are the same forms as the 1st position 'A' chords. This should help you to memorize them. Also for the major chord there are two forms that are commonly used. I prefer to use the form where my third finger does a half barre and I do not hit the first string but it is up to you. That form is much harder to learn how to play but once mastered is easier to make the changes from other chords. There are also two common forms for the 7th chord. These two forms are both commonly used. I use each form in different places. I suggest that you stick with the first form until you really learn it before going on to the second form.

There are chords that are built off of the other strings also but this will give you a good start. It is important that you do memorize the names of the notes on each of the strings. Even if you don't learn how to read music you will still need to find various chords and scales based upon the notes on the guitar. To easily do this memorize the chromatic scale. An explanation of it follows on the next page. It is used for a number of things in music, only one of which is figuring out the notes on the guitar or other instruments.

Common Progressions

Following are examples of very common chord progressions. These should be learned so that when you hear them you will recognize them. I have indicated songs that these progressions are used in. They may be the whole song or just a major part of the song.

1. 4/4 ||: Am G | F E7 :|| Used in Hit the Road Jack, Stray Cat Strut, Walk Don't Run.
A common variation is 4/4 ||: Am G | F G :|| This is used in such songs as All Along the Watch Tower and the End to Stairway to Heaven.

2. 4/4 ||: C | Am | F | G7 :|| Could also be in 6/8 time and other times.

It is commonly done to such songs as Silhouettes, 26 Miles (Santa Catalina), Tears on My Pillow and Every Breath You Take. There are many variations to this progression such as follows.

Variation #1

||: C | Am | Dm7 | G7 :||

Variation #2

||: C | C# Dim7 | Dm7 | G7 :||

Variation #3

||: C | Dm7 G7 :|| Used to My Girl Bill.

3. The most common set of two chords in music is the progression that goes from the second chord in a key to the 5th chord in a key. In the Key of C this would be from Dm7 to G7. The key of C has the notes C, D, E, F, G, A, B, and C to the scale. The second note is a D and if you built a chord on that note it would be a Dm7 chord. The 5th note is G and building a chord on that note make a G7 chord.

4/4 ||: Dm7 | G7 :|| This is used to many Latin songs such as Evil Ways. But even more important it is used in parts of lots of songs such as Satin Doll, That's What Friends Are For etc.

4. Sometimes the progressions are only a part of the song. A common bridge or B part of a song is as follows.

||: E7 | A7 | D7 | G7 :|| It is sometimes used as a main part of a song such as Spinning Wheel.

A Variation of it is

||: Em7 | A7 | Dm7 | G7 :|| This is used as a turnaround in such songs as Misty and Our Day Will Come.

5. Of course a very common progression is the 12 Barre Blues. There are many variations of this but below are some of the more common ones in the key of A. All of these chords could be 7th's.

||: A | | | D | | A | | E | D | A | :||

Variation 1

||: A | | | D | | A | | E | D | A | E :||

Variation 2

||: A | D | A | | D | | A | | E | D | A | :||

Variation 3

||: A | D | A | | D | | A | | E | D | A | E :||

Variation 4

||: A | | | D | | A | | E | D | AD | AE :||

Variation 5

||: A | | | D | | A | | E | D | A A7 D D7 | A F7 E7 / :||

All Of these should be learned and you should be able to recognize them when you hear them. You should also be able to play any of them.

6. This is used in a lot of Soul type songs.

||: G | Bm7 | Am7 | D7 :|| A variation is to add on the last beat of the second measure a Bbm7 as a passing chord. This would be for I'm Easy.

7. The Beatles used a ascending progression that others also use.

||: G | Am7 | Bm7 | C :|| For Here There And Everywhere

This is also used in Reverse many times.

||: C | Bm7 | Am7 | G :|| As in the middle of Blackbird.

8. Another common progression used in rock revolves around the 3 principle chords in a key.

||: C F | G7 :|| for La Bamba and Twist and Shout. Or a Variation that is used in songs such as Louie Louie.

||: C F | G F :|| Note that sometimes each chord might get one or two measures or even more before changing.

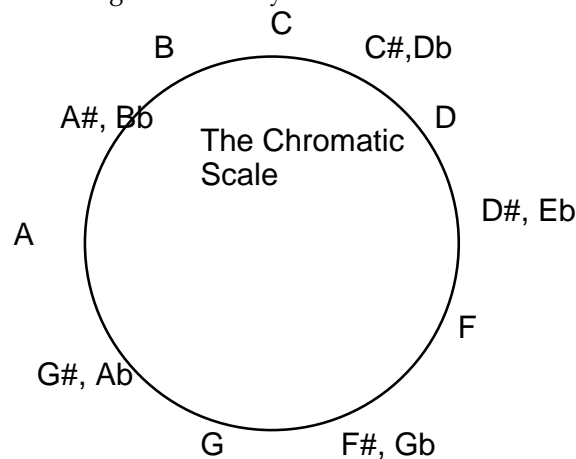
9. For Tequila and On Broadway.

||: GF :|| or ||: G | F :||

This does not exhaust the types of progressions that you will find in music. But this will give you a good start. Practice each of these and as you listen to music try to identify each of the progressions. Also note that at times these do not start on the first chord but may start in the middle of a chord progression. Many songs string a couple of these progressions together and still others may string the same progression together in different keys.

The Chromatic Scale

There are many uses for the chromatic scale in music that you should know. This scale should be memorized in order to be able to use it when necessary. It is not difficult to memorize it because there are sharps and flats between all of the notes with the exception of B-C and E-F. If you just learn that you should have no trouble. Following is a summary of the some of the various uses for the chromatic scale.



1. You can transpose using the chromatic scale. For example, if you had a song with the chords Eb, Ab and Bb7 these could be changed using the chromatic scale. Change Eb to D now since you went one space counter-clockwise from Eb then you must go one space counter-clockwise from each of the other chords. Therefore Ab becomes G and Bb7 becomes A7. Note that only the letter name changes when you transpose a chord. The 7 stays as does any other item after the letter name. The letter name includes the # or b. Now lets assume that we transposed this piece but we couldn't sing it in this new key then we could try another key. Again start with Eb, Ab and Bb7. Change the Eb to say a G chord now we have moved four spaces clockwise so all of the chords must change four spaces clockwise the Ab will become C and the Bb7 will become D7. You should try this with starting on D, A, C and F for the first chords. Also if the chords had been Ebm, Abm and Bb7 then if we changed the first chord to D letter name the chords would be Dm, Gm and A7 respectively. Note that the minor follows the chord letter name.

2. You can also use the chromatic scale to find any note on the guitar. The names of the open strings on the guitar are E, A, D, G, B, E, from the lowest pitched string to the highest pitched string. If you want the name of the notes on a string start with the open string and go clockwise up each fret for the rest of the notes. for example on the 6th string open is a E one note clockwise from E is F so the first fret is F the second fret is F# or Gb the third fret is G and so on at the 12th fret you should end up on E. The 12th fret is always the same letter name of the open string.

3. You can also use the chromatic scale to figure out the three principle chords in any key. The V chord (5 chord) is always 5 spaces counter-clockwise and the IV chord (4 chord) is always 5 spaces clockwise from the I or Tonic chord. For example if you are in the key of C then the V chord is G7 (note that the V chord is always a 7) and the IV chord is F. The Three principle chords in the key of C are the C, F and G7 chords.

4. The chromatic scale can also be used to figure out other scales by using patterns. For example a Major scale has the following pattern of Whole and 1/2 steps. Whole, Whole, 1/2, Whole, Whole, Whole, 1/2. A whole step is two notes over a 1/2 step is one note over. For example for the C major scale it would be C a whole step up from C would be D a whole step up from D would be E a 1/2 step from E would be F a whole step from F would be G a whole step from G would be A a whole step from A would be B and a 1/2 step from B would be a C. Note that it goes alphabetically and that no letter name is repeated. This technique can be used for any scale not just major scales.

Scales and Chord Construction

In order to understand how the chord tones are decided you must first understand scales. You need not know how to read music to understand this but it does help. You do need to know the chromatic scale though and if you don't yet know it refer to my notes on the chromatic scale and it's uses.

As you remember the chromatic scale is comprised of 12 different notes that are equally spaced apart. There are sharps and flats between each letter name with the exception of the notes B to C and the notes E to F. Scale goes from A.

A, A# or Bb, B, C, C# or Db, D, D# or Eb, E, F, F# or Gb, G, G# or Ab back to A.

You can begin or end any where.

A major scale is a series of 8 notes. It follows the alphabet. In the musical alphabet there are 8 letters. A-G and then it starts over. The pattern for a major scale uses what we call 1/2 and whole steps. A half step is from one note in the chromatic scale to the next one. For example, from A to Bb is a 1/2 step. Two half steps make up a whole step so from A to B is a whole step.

You also go in a major scale alphabetically. If you have a choice you will choose the note letter name that is the next letter in the alphabet and apply the sharp or flat to it.

The pattern for a Major Scale is as follows:

Whole Step, Whole Step, 1/2 Step, Whole Step, Whole Step, Whole Step, 1/2 Step.

Let's look at some examples, first the scale of C Major:

C (Whole Step to) D (Whole Step to) E (1/2 Step to) F (Whole Step to) G (Whole Step to) A (Whole Step to) B (1/2 Step to) C.

Notice that it started and ended on the note C.

Let's see what happens if we start on A.

A (Whole step to) B (whole step to either C# or Db, since C comes after B we will choose C#) C# (1/2 step to) D (Whole Step to) E (Whole step to) F# (Whole Step to) G# (1/2 step to) A

Notice that three times we could have chosen a sharp or a flat. After the first one that we choose a sharp you will know that the rest will all be chosen as sharps. In music it is rare that sharps and flats are mixed in a scale. In Major Scales it never happens.

Let's try Bb as a scale.

Bb (Whole Step to) C (Whole Step to) D (1/2 step to either D# or Eb again remember that you go alphabetically and do not repeat notes so you will go to Eb) Eb (Whole Step to) F (Whole Step to) G (Whole Step to) A (1/2 Step to) Bb.

All of these as do all scales begin and end on the same note. Now I could number the notes in the scale from 1 to 8 for example the C scale would be.

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

or the A Scale

A	B	C#	D	E	F#	G#	A
---	---	----	---	---	----	----	---

1 2 3 4 5 6 7 8

Any scale can be numbered.

To find the notes in a chord you first get the scale that goes with that letter name and from that work out the notes in the chord. Let's do the key of C for an example

For all chords you use only the odd numbers. For a Major chord for example you use the 1 3 and 5th notes of the scale. In C this would be the notes C, E and G. Any combination of those notes would give you a C chord.

For Minor chords you again take the odd numbers but you flat the third note of the scale. The pattern is 1 b3 and 5th notes. For Cm the notes would be C, Eb and G.

For 7th chords you take 1, 3, 5 and b7. for C this would be C, E, G and Bb.

For Minor 7th it is 1,b3, 5, b7 or for Cm7 = C, Eb, G, and Bb.

For a Major 7th it is 1,3, 5, and 7. For C Major 7= C, E, G and B.

A good rule to learn is that for major chords don't alter any notes for minor flat the 3rd and if you go up to or past a 7th flat the 7th. For dominant chords (One with only a letter and a number) flat the 7th.

When you go to 9ths, 11ths, and 13ths you extend the scale.

C	D	E	F	G	A	B	C	D	E	F	G	A
1	2	3	4	5	6	7	8	9	10	11	12	13

To give you an example a C13th would be 1, 3, 5, b7, 9, 11 and 13. You go up to the number. The idea is to go to the number. It will almost always be odd. There is one major exception to this and that is the 6th chords.

There patterns are Major 1, 3, 5 and 6th, Minor 1, b3, 5 and 6th. These chords are not in classical music and they exist as chords improperly called but we are stuck with them.

Two other types of chords are augmented 1, 3, #5 (augmented 7th, 1, 3, #5 and b7) and the diminished chords 1, b3, b5 (diminished 7th, 1 b3, b5, bb7) Yes on diminished 7th you double flat the 7th.

Other chords may tell you to do something to a note in the chord. An example of this may be a C7 b5 #9 chord would be 1 ,3, b5, b7, #9 or the notes C, E, Gb, Bb, and D#. These are called altered chords and are used quite a bit in jazz but not so much in other forms of music.

One last thing is suspended chords they substitute in the 4th of the scale for the 3rd of the scale. A C7 sus would be C, F, G and Bb or 1, 4, 5, and b7.

You need to also realize that there are 15 major scales that are commonly used. They are: C, G, D, A, E, B, F#, C#, F, Bb, Eb, Ab, Db, Gb, and Cb scales. You should be able to figure out any of those scales along with the major, minor and 7th chords of those scales. This would be an excellent exercise for you to do. Try to write out one a day for the next 15 days. This would only take about 3 or 4 minutes for each one and by the time you were done you would have a reference of all of the scales and main chords.

Formulas

Major Chords

Major 1, 3, 5
 M7 1, 3 ,5, 7
 M9 1, 3 ,5, 7, 9
 M11 1, 3, 5, 7, 9, 11
 M13 1, 3, 5, 7, 9, 11, 13

Dominant Chords

7 1, 3 ,5, b7
 9 1, 3, 5, b7, 9
 11 1, 3, 5, b7, 9, 11
 13 1, 3, 5, b7, 9, 11, 13

Minor Chords

Minor 1, b3, 5
 m7 1, b3 ,5, b7
 m9 1, b3, 5, b7, 9
 m11 1, b3, 5, b7, 9, 11
 m13 1, b3, 5, b7, 9, 11, 13

Diminished

Dim 1, b3, b5
 Dim 7 1, b3, b5, bb7

Augmented

Aug 1, #3, 5
 Aug7 1, #3, 5, b7

A couple of other commonly used scales are the major and minor pentatonic (5 note) scales. The major pentatonic consists of the 1, 2, 3, 5, 6 and 8th degrees of the major scales. The minor consists of the 1, b3, 4, 5, b7 and 8th degrees of the major scale.

There are also scales built off of each of the degrees of a major scale. With these you will play the major scale but starting on a different note and going up 8 notes. The major scale is actually referred to as an Ionian mode. The other modes are the Dorian (built off of the 2nd degree of a major scale), Phygian (3rd degree), Lydian (4th degree), Mixolydian (5th degree), Aeolian (6th degree), Locrian (7th degree). For example a D dorian mode would be built off of the C major and have the following notes: D, E, F, G, A, B, C, and D. The most useful of these are the dorian and the mixolydian modes.

Another useful scale is the diminished. Pattern for diminished is 1, 2, b3, 4, b5, #5, 6, 7, and 8. Whole tone is 1, 2, 3, #4, #5, #6 and 8. A weird one is Hungarian minor which is 1, 2, b3, #4, 5, b6, 7, and 8.

Common Strums

Following is a brief explanation of the most used techniques in guitar strumming without the use of the pick. I will start with the Basic things you do with the right hand. These should be memorized and practiced till you feel comfortable with them. It is important that you use the correct right hand position when doing any of these. Hold your right hand over the sound hole. Keep your fingers curved and touching each other. Each joint should be curved. Your thumb needs to be to the left of the fingers. If you look down over the top of the hand you should see a small triangle formed by the thumb the index finger and the strings. At no time should the thumb be opposite the other fingers. When striking a string you should use some of the fleshy part of the finger and some of the nail.

Basic Moves.

1. Sweep-The sweep is played by using the thumb in a downward motion. It is usually best to do it over the sound hole but for variety do it down near the bridge to give a brighter sound.
2. Brush-The brush is done with the back of the nails of the index, middle and ring fingers. The motion is to have you fingers curved and then go over the strings in a downward motion by uncurling the fingers and using the back of the nails of your fingers. This motion is fast and the sound is bright. Do not move the hand but only the fingers.
3. Pluck-To do the Pluck each finger hits a individual string but they do it at one time. Index finger will hit the 3rd string, middle finger the second string, ring finger the first string. They will happen with the free stroke so that the fingers slightly hook each string and then are brought toward the palm of the hand. Remember to have to correct right hand position when you do this and the other techniques.
4. Rest stroke with the thumb. When using the thumb you will do the rest stroke 99% of the time with popular and folk music. To do the rest stroke you hit the string in a downward motion and come to rest on the string below the one you just struck. Hence the name rest stroke. Practice going from the 4th to the 5th string and the 5th to the 4th etc.
5. The other fingers will do the free stroke. This is when the finger slightly hooks the string and the finger is brought up approaching the palm of the hand. It is vital the finger not touch or rest on any other strings. This is the stroke that is used for 99% of the playing in folk music for the fingers other than the thumb.
6. The Scratch-This is with the index finger only. It can be either a downward scratch or an upward scratch that you use. It is important that you only use the index finger. This is the closest that you can get to the rhythmic patterns that you are learning with the pick without using a pick.

The above can be mixed up in different orders to give you all sorts of interesting patterns. Lots of these are used in playing and you should become familiar with each of them.

Applications.

1. The Bass-Chord patterns are the easiest to master for this point in time. I recommend that you try each of the following to both a 4/4 type pattern and a 3/4 type pattern. For 4/4 it will be a bass-chord and for the 3/4 pattern it will be a bass-chord-chord pattern.

1. Bass-Sweep.
2. Bass-Brush.
3. Bass-Pluck.
4. Bass-Scratch.

Also try this pattern with a pick. Try the Bass-Scratch with both a down scratch and a up scratch.

2. Combinations of the three techniques can get very tricky. Here is a common Latin beat.

brush
sweep
up-scratch
brush
sweep
up-scratch
brush
up-scratch

This is done in 4/4 time and each event gets 1/2 of a beat. All 1/8th notes.

3. Another common pattern is done by many country players.

Bass (1/4 note)
Brush (1/8th note)
Scratch up (1/8th note)
Bass (1/4 note)
Brush (1/8th note)
Scratch up (1/8th note)

4. Another common type strum starts with a 1/4 note then all the rest are 8th notes. It is counted 1 2& 3& 4&.

Bass
Scratch-down
Scratch-Up
Scratch-down
Scratch-Up
Scratch-down
Scratch-Up

With this type of technique you should be able to apply to all of the rhythms on the timing page just as if you were using a pick and not your fingers. With this you can play many rhythms. You can also do a brush instead of the first bass or a Scratch-down for the first beat. Just be creative any you will come up with many variations of the above ideas.

You should practice each of these until they are automatic and to the point that you can do them when changing chords without having to think about the strum and only being concerned with the chord change.

With a little work you can add in hybrid picking which is using the pick and the fingers. This works particularly well with bass chord strums. It can also work with fingerpicking and other techniques. It takes some time getting used to this but don't worry as over time this is easy. You can also use a thumb pick and fingerpicks with a steel string guitar to make it louder. Note that these take some time getting used to and sometimes produce a sound that is metal sounding and not as pleasing to the ear.

Lastly, some of these can be combined with fingerpicking to produce even more complex strums. I like to think of each one of these as colors to be explored when playing. Each one has a slightly different sound and can be used in a different context to portray different things. Play each one until they are perfect.

The next section is on bass runs. This will help you connect the chords together and is used in all styles of playing.

Bass Runs

When Changing from one chord to the next it is advisable to use bass notes to tie the two chords together. Following is a list of Bass notes and runs between different chords that you might like to try. These are just suggestions of the most common ways to change chords using bass runs. There are many other runs that are commonly used in different types of music.

All of these are in 4/4 time with each item getting one beat. Look at the notes from last week to see how to apply these to 3/4 time. You should try each of these to both 4/4 and 3/4 time.

1. From D to A7. While holding down the D chord. Can also be used for D to A, D7 to A, D7 to A7.

Hit the 4th String open.
strike the D chord.
Hit the 5th String 4th fret.
5th String 2nd Fret.
Change to the A7 Chord and hit the 5th string open
Hit the A7 chord. etc.

2. From A7 to D reverse the process. Hold the A7 Chord.

Hit the 5th String open.
Strike the A7 Chord.
Hit the 5th String 2nd fret.
Hit the 5th String 4th Fret.
Change to the D chord and hit the 4th String open.
Strike the D chord. etc.

3. From D to G. While holding a D chord.

Hit the 4th String open.
Strike the D chord.
Hit the 6th String open
Hit the 6th String 2nd Fret.
Change to a G chord hit the 6th String 3rd fret.
Hit the G chord Etc.

4. For G to A7. Hold the G chord down.

Hit the 6th string 3rd fret.
Hit the G chord.
Hit the 6th String 3rd Fret.

Hit the 6th String 4th Fret.
Change to the A7 chord and hit the 5th string open
Hit the A7 chord. Etc.

5. For C to D7. Hold the C chord down.

Hit the 5th String 3rd Fret.
Hit the C chord.
Hit the 5th string 3rd fret.
Hit the 5th string 4th fret
Change to a D7 chord and hit the 4th string open.
Hit the D7 chord. Etc.

6. For E to A. Hold the E chord down.

Hit the 6th string open.
Hit the E chord.
Hit the 6th string 2nd fret.
Hit the 6th string 4th fret.
Change to the A chord and hit the 5th string open.
Hit the A chord. Etc.

7. For the A to E. Hold the A chord down.

Hit the 5th string open
Hit the A chord.
Hit the 6th String 4th fret.
Hit the 6th String 2nd fret.
Change to the E chord and hit the 6th string open.
Hit the E chord. Etc.

8. For G to C. Hold the G chord down.

Hit the 5th string 3rd fret.
Hit the G chord.
Hit the 5th string open
Hit the 5th string 2nd fret.
Change to a C chord.
Hit the 5th string 3rd fret.
Hit the C chord. etc.

9. For C to G. Hold the C chord down.

Hit the 5th string 3rd fret.
Hit the C chord.
Hit the 5th string 2nd fret.
Hit the 5th string open
Change to a G chord, Hit the 6th String 3rd fret.
Hit the G chord. Etc.

10. For C to Am. Hold the C chord down.

Hit the 5th string 3rd fret.
Hit the C chord.
Hit the 5th string 3rd fret.
Hit the 5th string 2nd fret.
Change to the Am chord. Hit the 5th string open.
Hit the Am Chord. Etc.

11. For Am to C reverse the process. Hold a Am chord down.

Hit the 5th string open.
Hit the Am chord.
Hit the 5th string open.
Hit the 5th string 2nd fret.
Change to a C chord and hit the 5th string 3rd fret.
Hit the C chord. etc.

12. For F to Dm Use the same pattern as from C to Am but subtract 1 from all the strings to hit.

Hit the 4th string 3rd fret.
Hit the F chord.
Hit the 4th string 3rd fret.
Hit the 4th string 2nd fret.
Change to the Dm chord. Hit the 4th string open.
Hit the Dm Chord. Etc.

13. For Dm to F.

Hit the 4th string open.
Hit the Dm chord.
Hit the 4th string open.
Hit the 4th string 2nd fret.
Change to a F chord and hit the 4th string 3rd fret.
Hit the F chord. etc.

14. For G to Em take #10 and Add one to the string name.

Hit the 6th string 3rd fret.
Hit the G chord.
Hit the 6th string 3rd fret.
Hit the 6th string 2nd fret.
Change to the Em chord. Hit the 6th string open.
Hit the Em Chord. Etc.

15. For Em to G take #11 and add 1 to the string. Start with Em Chord.

Hit the 6th string open.
Hit the Em chord.
Hit the 6th string open.
Hit the 6th string 2nd fret.
Change to a G chord and hit the 6th string 3rd fret.
Hit the G chord. etc.

16. For G to Bm do the following. Start with the G chord.

Hit the 6th string 3rd fret.
Hit the chord.
Hit the 6th string 3rd fret.
Hit the 5th String open.
Hold the Barre Bm and hit the 5th string 2nd fret.
Hit the Bm chord. etc.

17. For Bm to G do the following. Start with the Bm chord.

Hit the 5th string 2nd fret.
Hit the chord.
Hit the 5th string 2nd fret.
Hit the 5th string open
Change to the G chord. Hit the 6th string 3rd fret.
Hit the G chord. etc.

18. For Am to D7. Start with the Am chord.

Hit the 5th string open.
Hit the chord.
Hit the 5th string 2nd fret.
Hit the 5th string 3rd fret.
Change to the D7 chord. Hit the 4th string open
Hit the chord. etc.

Do the same thing for Am to any type of D chord-Dm, D7, Dm7 etc.

Each one of the above should be memorized. Try to use them in various songs. Then try to apply the ideas to other chord changes.

Bass Run For Basic Rhythm Changes

1. For 6/8 time. Six beats per measure.

Chord	Beat	What You Do
G	1	Hit the 6th string 3rd fret.
	2	Hit the chord.
	3	Hit the chord.
	4	Hit the chord.
	5	Hit the 6th string 3rd fret.
	6	Hit the 6th string 2nd fret.
Em	1	Hit the 6th string open.
	2	Hit the chord.
	3	Hit the chord.
	4	Hit the chord.
	5	Hit the 5th string open.
	6	Hit the 5th string 2nd fret
C	1	Hit the 5th string 3rd fret.
	2	Hit the chord.
	3	Hit the chord.
	4	Hit the chord.
	5	Hit the 5th string 3rd fret.
	6	Hit the 4th string 2nd fret or 5th string 4th fret.
D7	1	Hit the 4th string open.
	2	Hit the chord.
	3	Hit the chord.
	4	Hit the chord.
	5	Hit the 6th string open.

6 Hit the 6th string 2nd fret.

Repeat the whole pattern.

2. To do this type of pattern in 4/4 time.

Chord	Beat	What to do
G	1	Hit the 6th string 3rd fret.
	2	Hit the chord.
	3	Hit the chord.
	4	Hit the 6th string 2nd fret
Em	1	Hit the 6th string open.
	2	Hit the chord.
	3	Hit the chord.
	4	Hit the 5th string 2nd fret.
C	1	Hit the 5th string 3rd fret.
	2	Hit the chord.
	3	Hit the chord.
	4	Hit the 5th string 4th fret(or 4th string 2nd
	fret).	
D7	1	Hit the 4th string open.
	2	Hit the chord.
	3	Hit the chord.
	4	Hit the 6th string 2nd fret.

Making The Changes

There are many tricks you can use to help make chord changes. Following are some of those techniques and examples of how to apply them. Most of you have already applied many of these without even realizing it. By application of these techniques you can really improve changing from one chord form to another. Look for them when you add in new chords.

1. The "Pivot" or "Common Finger" technique is when you have a note that is the same between two chords and a common finger on that note. A good example of this is changing from a 'C' to a 'D7' chord the first finger stays on the 2nd string first fret and you just move the 2nd and 3rd fingers.
2. The "Common Form" technique is when your finger pattern stays the same and you just switch strings. An example of this is changing from a 'Am' to an 'E' chord. In that case just move the fingers as a group up one string. In many cases this is only partial. For example, changing from a 'D' to a 'A7' chord you will move the first two fingers up a string but lift the 3rd finger up.
3. The "Slide" technique is similar to the "Common Finger", in this you will keep a finger on a string and slide it up or down a fret to the next chord. A great example of this is when changing from a 'E' or 'E7' to an A chord. Slide the first finger from the 1st fret 3rd string to the 2nd fret 3rd string.
4. With "Barre Chords" one technique that is commonly used is what you might want to call a 'Flatten'. If you were playing a 6th string root 'G' chord and wanted to quickly go to a 'C' chord you could flatten your third finger on the 5th fret across the 4th, 3rd, and 2nd strings. You can easily change these chords many times in a measure.
5. The "Anticipation" is a little difficult to see at first. In it you start to get one or more fingers ready before you make the change. One example is when changing from a 'G' to a 'C' chord. If you finger the 'G' with the 2nd, 3rd and 4th fingers you can have the 1st finger ready to go down on the 2nd string first fret on the 3rd or 4th beat.

Many times you can combine the above techniques. Look at the common chord changes you make and try to see ways to make the changes with these techniques.

One more thing that you need to practice is to start the change on the 2nd half of the last beat of the measure. Always look ahead and try to be prepared for the next chord. Use both your ear and your intellect. Many times I will visualize the next chord before I play it.

Applying The Percussive Effect

As you should already know the guitar is a member of the percussion family of instruments. The definition of percussion is that it is an instrument whose sound is produced by striking, hitting or hammering. The guitar is plucked which is a type of striking. To be a member of the string family a instrument would be bowed.

When playing to get a muted percussion effect what one must do is to either hit the strings with muting all the strings or by hitting the strings and then immediately muting the strings. The later technique is what is used most often. The muting can be done with either the right or the left hand but is most often done with the left hand.

Try the following with a G chord. Strum 1/4 notes counting 1, 2, 3, 4, and accenting on beats 2 and 4. Make the accent real strong. For example, think of it as a p (piano or soft) on beats 1 and 3 and as ff (fortissimo-very loud) on beats 2 and 4. When you have that down do mute immediately after beats 2 and 4 by flattening your fingers and touching all of the strings without putting pressure on them right after you hit the chord. Think of it as you hit the chord you release it. This takes some amount of practice and can sound terrible at first but once you have it down it will improve your sound greatly.

If you are doing Barre chords it is actually a bit easier in that when you mute you just relax the hand. Either way think of it this way.

1	2	3	4
Chord	Chord, Relax	Chord	Chord, Relax

If you look at the above as a time line you can see that the moment you hit the chord you should relax on beats 2 and 4.

You can try this with any of the rhythms that we have done so far. Apply to easy songs at first as the chords should be easy to do before attempting this.

Harmonics

When a string is plucked the string vibrates not only as a whole but also as fractions ($1/2$, $1/3$, $1/4$... $1/N$). These are called overtones. The string vibrating as a whole is the fundamental. It will be the loudest sound while the fraction $1/2$ is second, $1/3$ rd is third, etc. You can get these notes to sound out by themselves by dividing the string into those fractions and then touching the string lightly over the fractional part of the string while striking the string near the bridge. This will give you "Harmonics" and the fractional pitch. If a string is divided in $1/2$ the note sounded will be exactly one octave higher than the open string. You can get this pitch by hitting the string at the 12th fret.

To do this touch the string right above the 12th fret (fretwire) very lightly. In fact you should touch it so lightly that the string in no way moves. Strike the string with your right hand very close to the bridge. Then immediately remove the finger above the 12th fret. You will get a bell like sound. Try this on the 3rd string and you will get a 'G' that is one octave higher than the 3rd string open.

Other frets commonly used are the 7th which divides the string in 3rds and the 5th fret which divides the string into 4ths. These harmonics can be used to play some songs. It is difficult to get a full scale out of the harmonics and only certain tunes can effectively be used. One tune to try is 'My Favorite Things'. The first part of the melody can be played on the first two strings at the 12th and 7th frets. Try it and see how they work. I have also written out for you 'Amazing Grace'.

A number of guitarists also use 'artificial harmonics' by holding a note with the left hand and then using the index finger of the right hand to get the 12th fret above that and the thumb to pluck it. This is difficult but players such as Tuck Andres use it very effectively. Van Halen has also used this on countless tunes. With that technique you could play almost any song. But be warned that it takes concentration beyond what you would normally do. This is really for only the very advanced player.

Hammering On

There are many techniques that you can use to add to your playing and improve your accompaniment. One of these is the "hammer". This can be done with either single notes or with a number of notes at one time. It is used extensively in folk and rock music and is finding its way into Jazz and other art forms.

The basis technique is to put your finger down on a note without striking with your right hand. For example, do the following:

While holding a G chord.

Beat	
1	Hit the 6th string 3rd fret.
2	Hit the chord
3	Hit the 4th string open
&	Hammer on the 4th string 2nd fret
4	Hit the chord

For the hammer put the 2nd finger down very hard on the 4th string 2nd fret. You must hit it as if your 2nd finger was a hammer. This takes practice. The hammered note should sound as loud as the previous note.

Once you can do it with a G chord try it with the following chords.

For a D chord. (Also D7 and Dm)

Beat	
1	Hit the 4th string open
2	Hit the chord
3	Hit the 3rd string open
&	Hammer on the 3rd string 2nd fret
4	Hit the chord

On this chord as on many you will actually lift one finger off the chord in order to do the hammer. On the D chord you lift your first finger only off of the third string 2nd fret on the 3rd beat and then on the and after the 3rd beat you put your index finger down on the chord. Try for a smooth flowing action when doing this. It does take some practice to get the right feel. For a A, Am, or A7 chord

Beat	
1	Hit the 5th string open
2	Hit the chord
3	Hit the 4th string open
&	Hammer on the 4th string 2nd fret
4	Hit the chord

Notice how the A form is very similar to both the D and the G forms. For a E, Em, or E7 chord

Beat	
1	Hit the 6th string open
2	Hit the chord
3	Hit the 5th string open
&	Hammer on the 5th string 2nd fret
4	Hit the chord

Again notice how the E forms are like the A forms. While holding a C chord.

Beat	
1	Hit the 5th string 3rd fret.
2	Hit the chord
3	Hit the 4th string open
&	Hammer on the 4th string 2nd fret
4	Hit the chord

A common variation for the C chord is as follows. While holding a C chord.

Beat	
1	Hit the 5th string 3rd fret.
2	Hit the chord
3	Hit the 4th string open
&	Hammer on the 4th string 2nd fret
4	Hit the chord

Fingerpicking Patterns

The most common type of fingerpicking patterns done in American Folk Music are called Travis Picking. This is a type of picking that has been developed that closely resembles ragtime or stride piano. The essence of this is the alternating bass played with the thumb on guitar or with the left hand on the piano. Listen to compositions by such people as Scott Joplin to get an idea of where this style came from. First with pattern picking and then with specific arrangements. Such players as Joan Beaz, Leo Kottke, Doc Watson, Chet Atkins, Paul McCartney, Jimmy Page and others use this style. Listen to them to get a feel for what you should be doing. Also to blues players such as Brownie McGee and Mississippi John Hurt.

1. Bass Note Patterns

For the Bass you will always use your thumb with the rest stroke. For example, to strike the 5th string hit the 5th string in a downward motion and follow through and stop with your thumb resting on the 4th string. Your thumb will then make a small circle to come into position for the next note. You should use a little of the fleshy part of the thumb and the corner nail. Try the following Bass note patterns using only your thumb and doing the rest stroke. I have indicated chords that you can hold down while you are doing each exercise. These are only suggestions as other chords will also work fine these chords are in brackets.

1A. (Am, A7, C)

Count	What you do
1	Thumb hits the 5th string
2	Thumb hits the 4th string

1B. (E, Em, E7)

Count	What you do
1	Thumb hits the 6th string
2	Thumb hits the 5th string

	3	Thumb hits the 5th string		3	Thumb hits the 6th string
	4	Thumb hits the 4th string		4	Thumb hits the 5th string
1C.	(F, Dm)		1D.	(G, G7)	
	Count	What you do		Count	What you do
	1	Thumb hits the 4th string		1	Thumb hits the 6th string
	2	Thumb hits the 3rd string		2	Thumb hits the 4th string
	3	Thumb hits the 4th string		3	Thumb hits the 6th string
	4	Thumb hits the 3rd string		4	Thumb hits the 4th string
1E.	(E, Em, E7)		1F.	(A, Am, C)	
	Count	What you do		Count	What you do
	1	Thumb hits the 6th string		1	Thumb hits the 5th string
	2	Thumb hits the 4th string		2	Thumb hits the 3rd string
	3	Thumb hits the 5th string		3	Thumb hits the 4th string
	4	Thumb hits the 4th string		4	Thumb hits the 3rd string
1G.		(Full C)			
	Count	What you do			
	1	Thumb hits the 5th string			
	2	Thumb hits the 4th string			
	3	Thumb hits the 6th string			
	4	Thumb hits the 4th string			

The above patterns will be the main ones that you will use. The bass notes change as you change chords while the strings played with the first and second fingers many times remain the same. It is critical that you can do all of the above with a good tone before you go on to the next step. I know that it is a little boring to just be doing bass notes but it is important that you take this step. I have suggested chords that you can hold down while doing each of the above but you could also do them with just open strings. You want to do these so that the pattern just flows.

2. Once you have mastered the bass notes then you need to move on to adding the rest of your fingers into the patterns. Usually with this pattern you will use only your index and middle fingers. That is why this style is many times called "three finger fingerpicking". Some players such as Doc Watson actually only use their Index finger and their thumb. I do not recommend this and Doc Watson has alluded that he would play much better if he had learned to use all his fingers. In Classical Guitar you would use the ring finger also but not the pinkie. I recommend that you use the index and middle finger for these patterns but that you become agile enough to use your ring finger for some of the other patterns we will be doing. You can also practice holding your pick and then using the second and third fingers. This is popular with many country players.

The stroke for your other fingers is called the "Free Stroke" and is done by striking the string with the finger in the following manner. Let's assume that you are hitting the 2nd string with your index finger. The index finger will be just below the second string and actually just hook the string and bring the index finger upward toward the palm of your hand. It should not touch the other strings. Again like the thumb you should make a small circle to bring it back to where it can strike the next note. This movement is very small and your index finger moves only about an inch total. It is important to note that you do not bring it all the way until it touches the palm. Also keep your fingers touching each other as you do this.

As you learn each of the following you should try to do each pattern a minimum of 5 minutes each day. This is just to learn the pattern and not counting trying to apply it to a song. That shouldn't happen until the pattern is very comfortable for you to play.

The first pattern that we will try you should first practice holding an Am chord with your left hand. In fact all of the examples in this section will be referenced to an Am chord. I prefer not to name these patterns as there is no convention that is widely used to name different fingerpicking patterns.

- | <p>2A.</p> <table border="0"> <tr> <th style="text-align: left;">Count</th> <th style="text-align: left;">What you do</th> </tr> <tr> <td>1</td> <td>Thumb hits the 5th string</td> </tr> <tr> <td>&</td> <td>Middle hits the 1st string</td> </tr> <tr> <td>2</td> <td>Thumb hits the 4th string</td> </tr> <tr> <td>&</td> <td>Index hits the 2nd string</td> </tr> <tr> <td>3</td> <td>Thumb hits the 5th string</td> </tr> <tr> <td>&</td> <td>Middle hits the 1st string</td> </tr> <tr> <td>4</td> <td>Thumb hits the 4th string</td> </tr> <tr> <td>&</td> <td>Index hits the 2nd string</td> </tr> </table> | Count | What you do | 1 | Thumb hits the 5th string | & | Middle hits the 1st string | 2 | Thumb hits the 4th string | & | Index hits the 2nd string | 3 | Thumb hits the 5th string | & | Middle hits the 1st string | 4 | Thumb hits the 4th string | & | Index hits the 2nd string | <p>2B.</p> <table border="0"> <tr> <th style="text-align: left;">Count</th> <th style="text-align: left;">What you do</th> </tr> <tr> <td>1</td> <td>Thumb hits the 5th string</td> </tr> <tr> <td>&</td> <td>Silence (Don't hit anything, pause)</td> </tr> <tr> <td>2</td> <td>Thumb hits the 4th string</td> </tr> <tr> <td>&</td> <td>Index hits the 2nd string</td> </tr> <tr> <td>3</td> <td>Thumb hits the 5th string</td> </tr> <tr> <td>&</td> <td>Middle hits the 1st string</td> </tr> <tr> <td>4</td> <td>Thumb hits the 4th string</td> </tr> <tr> <td>&</td> <td>Index hits the 2nd string</td> </tr> </table> | Count | What you do | 1 | Thumb hits the 5th string | & | Silence (Don't hit anything, pause) | 2 | Thumb hits the 4th string | & | Index hits the 2nd string | 3 | Thumb hits the 5th string | & | Middle hits the 1st string | 4 | Thumb hits the 4th string | & | Index hits the 2nd string |
|---|-------------------------------------|-------------|---|---------------------------|---|----------------------------|---|---------------------------|---|---------------------------|---|---------------------------|---|----------------------------|---|---------------------------|---|---------------------------|--|-------|-------------|---|---------------------------|---|-------------------------------------|---|---------------------------|---|---------------------------|---|---------------------------|---|----------------------------|---|---------------------------|---|---------------------------|
| Count | What you do | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Thumb hits the 5th string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| & | Middle hits the 1st string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Thumb hits the 4th string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| & | Index hits the 2nd string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Thumb hits the 5th string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| & | Middle hits the 1st string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Thumb hits the 4th string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| & | Index hits the 2nd string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Count | What you do | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Thumb hits the 5th string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| & | Silence (Don't hit anything, pause) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Thumb hits the 4th string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| & | Index hits the 2nd string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Thumb hits the 5th string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| & | Middle hits the 1st string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Thumb hits the 4th string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| & | Index hits the 2nd string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>2C.</p> <table border="0"> <tr> <th style="text-align: left;">Count</th> <th style="text-align: left;">What you do</th> </tr> <tr> <td>1</td> <td>Thumb hits the 5th string</td> </tr> <tr> <td>&</td> <td>Silence</td> </tr> <tr> <td>2</td> <td>Thumb hits the 4th string</td> </tr> <tr> <td>&</td> <td>Index hits the 2nd string</td> </tr> <tr> <td>3</td> <td>Thumb hits the 5th string</td> </tr> <tr> <td>&</td> <td>Middle hits the 1st string</td> </tr> <tr> <td>4</td> <td>Thumb hits the 4th string</td> </tr> <tr> <td>&</td> <td>Silence</td> </tr> </table> | Count | What you do | 1 | Thumb hits the 5th string | & | Silence | 2 | Thumb hits the 4th string | & | Index hits the 2nd string | 3 | Thumb hits the 5th string | & | Middle hits the 1st string | 4 | Thumb hits the 4th string | & | Silence | | | | | | | | | | | | | | | | | | | |
| Count | What you do | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Thumb hits the 5th string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| & | Silence | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Thumb hits the 4th string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| & | Index hits the 2nd string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Thumb hits the 5th string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| & | Middle hits the 1st string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Thumb hits the 4th string | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| & | Silence | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

2D. At this point the pinch is introduced. In this technique you will strike two notes at the same time in a "pinching motion". This may take a bit of practice to get the feel of it and to play both notes together. There is a "feel" to this and a motion that once you get it you've really got it.

- | | |
|--------------|---|
| <p>Count</p> | <p>What you do</p> |
| 1 | Thumb hits the 5th string, Middle Hits 1st String |
| & | Silence |
| 2 | Thumb hits the 4th string |
| & | Index hits the 2nd string |
| 3 | Thumb hits the 5th string |
| & | Middle hits the 1st string |
| 4 | Thumb hits the 4th string |
| & | Index hits the 2nd string |
-
- | <p>2E.</p> | <table border="0"> <tr> <th style="text-align: left;">Count</th> <th style="text-align: left;">What you do</th> </tr> <tr> <td>1</td> <td>Thumb hits the 5th string, Middle Hits 1st String</td> </tr> <tr> <td>&</td> <td>Silence</td> </tr> <tr> <td>2</td> <td>Thumb hits the 4th string</td> </tr> <tr> <td>&</td> <td>Index hits the 2nd string</td> </tr> <tr> <td>3</td> <td>Thumb hits the 5th string</td> </tr> <tr> <td>&</td> <td>Middle hits the 1st string</td> </tr> <tr> <td>4</td> <td>Thumb hits the 4th string</td> </tr> </table> | Count | What you do | 1 | Thumb hits the 5th string, Middle Hits 1st String | & | Silence | 2 | Thumb hits the 4th string | & | Index hits the 2nd string | 3 | Thumb hits the 5th string | & | Middle hits the 1st string | 4 | Thumb hits the 4th string |
|------------|--|-------|-------------|---|---|---|---------|---|---------------------------|---|---------------------------|---|---------------------------|---|----------------------------|---|---------------------------|
| Count | What you do | | | | | | | | | | | | | | | | |
| 1 | Thumb hits the 5th string, Middle Hits 1st String | | | | | | | | | | | | | | | | |
| & | Silence | | | | | | | | | | | | | | | | |
| 2 | Thumb hits the 4th string | | | | | | | | | | | | | | | | |
| & | Index hits the 2nd string | | | | | | | | | | | | | | | | |
| 3 | Thumb hits the 5th string | | | | | | | | | | | | | | | | |
| & | Middle hits the 1st string | | | | | | | | | | | | | | | | |
| 4 | Thumb hits the 4th string | | | | | | | | | | | | | | | | |

& Silence

2F. The following couple of patterns are sometimes referred to as rolls. Even though this is maybe not universal when you hear of a roll this is the type of fingerpicking they are refereeing to.

Count	What you do
1	Thumb hits the 5th string, Middle Hits 1st String
&	Index hits 2nd string
2	Thumb hits the 4th string
&	Middle hits 1st string
3	Thumb hits the 5th string
&	Index hits 2nd string
4	Thumb hits the 4th string
&	Middle hits 1st string

Count	What you do
1	Thumb hits the 5th string, Middle Hits 1st String
&	Index hits 2nd string
2	Thumb hits the 4th string
&	Middle hits 1st string
3	Thumb hits the 5th string
&	Index hits 2nd string
4	Thumb hits the 4th string
&	Middle hits 1st string

2H. Now instead of just picking you will add in a brush stroke on the 2nd beat.

Count	What you do
1	Thumb hits the 5th string
&	Silence
2	Brush stroke
&	Silence
3	Thumb hits the 5th string
&	Index hits 2nd string
4	Thumb hits the 4th string
&	Middle hits 1st string

2I. Now in addition to the Brush you will add in a up-scratch

Count	What you do
1	Thumb hits the 5th string
&	Silence
2	Brush stroke
&	Scratch up
3	Thumb hits the 5th string
&	Index hits 2nd string
4	Thumb hits the 4th string

& Middle hits 1st string

As you can see at this point there are many variations that you could do. Try alternating one to the next for variety in a song. Following are some other common patterns.

2J. Notice that on this one the thumb is not playing on each beat. This is good for a Calypso or other syncopated feel song.

Count	What you do
1	Thumb hits the 5th string
&	Index hits 2nd string
2	Middle hits 1st string
&	Thumb hits the 4th string
3	Index hits 2nd string
&	Middle hits 1st string
4	Thumb hits the 5th string
&	Index hits 2nd string

2K. On this fingerpicking you go to the 3rd string after each of the other things you do. On the and after each beat the index finger strikes the 3rd string.

Count	What you do
1	Thumb hits the 5th string
&	Index hits 3rd string
2	Middle hits 2nd string
&	Index hits 3rd string
3	Ring hits the 1st string
&	Index hits the 3rd string
4	Middle hits 2nd string
&	Index hits 2nd string

2L. This variation adds a pinch on the third beat.

Count	What you do
1	Thumb hits the 5th string
&	Index hits 3rd string
2	Middle hits 2nd string
&	Index hits the 3rd string.
3	Thumb hits the 4th string, Ring hits the 1st string
&	Index hits the 3rd string
4	Middle hits 2nd string
&	Index hits 2nd string

Another common type of pattern that is used in many songs is called an arpeggio fingerpicking. Arpeggio means literally "Broken Chord". This style is used in songs such as "House Of The Rising Sun" and the beginning of "Stairway to Heaven". Try it to your favorite songs.

3A. Simple 4/4 pattern

Count	What you do
1	Thumb hits the 5th string
&	Index hits 3rd string

2	Middle hits 2nd string
&	Ring hits the 1st string
3	Thumb hits the 4th string
&	Index hits the 3rd string
4	Middle hits 2nd string
&	Ring hits the 1st string

3B In this one the middle and ring finger hit two strings at one time.

Count	What you do
1	Thumb hits the 5th string
&	Index hits 3rd string
2	Middle hits 2nd string and ring hits the 1st string
&	Index hits the 3rd string.
3	Thumb hits the 4th string,
&	Index hits the 3rd string
4	Middle hits 2nd string and ring hits the 1st string
&	Index hits 3rd string

3C Sort of a 3A done backwards

Count	What you do
1	Thumb hits the 5th string
&	Ring hits the 1st string
2	Middle hits 2nd string
&	Index hits the 3rd string
3	Thumb hits the 4th string
&	Ring hits the 1st string
4	Middle hits 2nd string
&	Index hits the 3rd string

3D Another variation of 3A

Count	What you do
1	Thumb hits the 5th string
&	Index hits 3rd string
2	Middle hits 2nd string
&	Index hits the 3rd sting
3	Ring hits the 1st string
&	Index hits the 3rd string
4	Middle hits 2nd string
&	Index hits the 3rd sting

3E Count What you do

1	Thumb hits the 5th string
&	Index hits 3rd string
2	Middle hits 2nd string
&	Index hits the 3rd sting
3	Ring hits the 1st string

&	Middle hits the 2nd string
4	Index hits the 3rd string
&	Middle hits the 2nd string

3F In a 3/4 or 6/8 pattern

Count	What you do
1	Thumb hits the 5th string
&	Index hits 3rd string
2	Middle hits 2nd string
&	Ring hits the 1st string
3	Middle hits the 2nd string
&	Index hits the 3rd string

Another very common fingerpicking technique is to pick 3 strings at once with the right hand. This is usually referred to as a pluck. It is not difficult and the most basic form would be a bass pluck strum. To do this type of pluck. You hit the first-three strings simultaneously. Use the first finger to strike the 3rd string, second finger on the 2nd string and ring finger on the 1st string. The three fingers hook their respective strings and are moved as a group up towards the palm of your hand. In the following examples we will look at first using just a pluck with a bass note and then adding in individual notes.

4A. A basic Bass-Pluck in 4/4 time

Count	What you do
1	Thumb hits the 5th string
2	Index 3rd string, Middle 2nd string, Ring 1st string
3	Thumb hits the 4th string
4	Index 3rd string, Middle 2nd string, Ring 1st string

This needs to be practiced enough so that the 3 notes are together and sound like just one note. This means that even though it seems very simple you need to practice it quite a bit.

Lastly, you can try hybrid picking on any of these. To do that hold the pick with your thumb and index finger and use it in place of the thumb. Then just change the fingers used for the rest of the strum to one more: index becomes middle, middle becomes ring, and ring becomes pinkie. This is very common for Country music players and for Rock and Jazz to a lesser extent.

Bass Notes For Chords

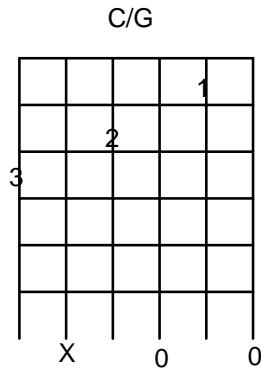
The two most important notes you play are the melody or highest note in a chord and the Bass or lowest note in a chord. One way that composers are judged is by their Bass lines. In modern music it is common to have moving Bass lines against chords and also to specify the bass note to chords to get proper movement of the Bass line. Chords with indicated Bass lines will be written as follows:

C/G means a C chord with a G as the Bass or lowest pitched note.

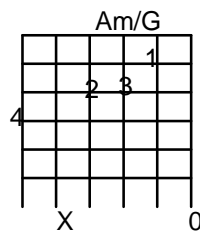
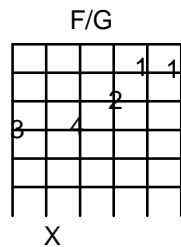
C/D means a C chord with a D as the Bass or lowest pitched note.

The second letter after the slash means the bass note to be played. It was just a few years ago that the guitarist had to figure the bass notes out for themselves in almost all situations but now many pieces give you that information.

To figure out what to play find the lowest note of that letter name. For example, the C/G chord you need to find the lowest G possible and then modify the chord to play the G in the Bass. There is a 'G' on the 6th string 3rd fret. See the following chart.



Almost always there will be a note on the 5th or 6th string that you can use. Occasionally you will have to use a note on the 4th string as a bass note. This happens if the bass note lies on mainly the notes D or Eb. For those two notes you must play them on the 4th string or de-tune your guitar. Here are a couple of other examples:



Simplifying Chords

Many times when you look at music you will be confronted with a couple of problems dealing with chords. First the song may be in a key that is difficult to play on the guitar. Secondly, there may be chords that have extensions that are difficult. You can also simplify the chord changes with a few basic rules and some commonsense.

1. When there are a number of chords in one measure you can usually leave out chords on weak beats. For example, if you saw the following chords in a measure of 4/4 time you could leave out the 2nd and 4th chords because they fall on weak beats.

G F#m Em A7= G G Em Em

2. Any number higher than a 7 can be changed to a 7. A 'D13' becomes a 'D7'. A 'Am11' becomes a 'Am7'.

3. To go one step further you can even drop the number entirely. In the case of a 'D6' chord you can play a 'D' chord. It is better though to follow rule #2 if possible.
4. Chords must always stay in the same family though. A minor chord cannot be changed to a major chord etc. Therefore a 'Am7' can change to a 'Am' but not to a 'A' chord.
5. Once you have simplified the chords play them to make sure that they sound correct. Be sure to play through them a few times.

Bending Notes and Other Techniques

When playing many forms of music and in particular the blues there are times when notes must be raised or lowered as you play them. On some instruments this is relatively easy but on others it can prove to be difficult or impossible. For example, on the piano you cannot change the pitch of any of the notes. But on your guitar you can rather easily.

A common note to bend is the "D" at the 3rd string 7th fret when playing a Blues in A. It is very common to bend this up to a Eb. Here is how you will do it. Play the D at the 7th fret of the 3rd string. Now while holding the note down push the string either up or down until you are where the next string would be or even a little further. Then release and go back to the D. If you do these as an 1/8th note pattern it will sound good. When you bend a note with the 3rd finger also put the 1st and 2nd fingers down and use them to help you bend the note. It will be considerably easier to bend if you use all three fingers.

Another technique is to start with the note "bent" and go down to the original note. Try this. On beat 1 of a measure start with the "D" bent up to the Eb and then relax to D on beat 2. Do as indicated below.

Beat	What to do
1	Start with the 7th fret, 3rd string bent up to Eb.
&	Relax to get to D at the 7th fret 3rd string.
2	Pick the D again.
&	Play C, 5th fret 3rd string.
3	Play A, 7th fret 4th string and hold for 2 beats.
4	Hold.

Both of these ways of bending notes can be used with many of the notes in the blues scale. You will need to really practice this to get it down. If you own a tape recorder then try playing a blues in A chords and then improvising to the tape. If you do not have a tape get a friend to play the chords. If you cannot get a friend to play find a classmate or buy a record that has the blues in A. If all else fails just try this without any background. Try to hear the chords in your head as you play. This is difficult but in the long run it could be the best way.

Beginnings and Endings

When people listen to you play what they remember most is the beginning and the ending to the song you play. Just as people say that first impressions are lasting impressions the same holds true for music. When you have a strong beginning, or introduction and a good solid ending it helps really gel the piece together. In addition it is ideal to start simply and then build as the piece is played. To start you should listen critically to CD's, tapes, the radio etc., to see how others start and end songs. When you are playing you cannot fade as they do on the radio. You will need something stronger.

To get some ideas as to what you should do start by looking at the song itself. Many times a beginning and ending are almost staring you in the face. For example, look at the last 4 or 5 measures. You may be able to use it as an introduction or an ending. Maybe the song is in the key of G and the last few chords go: G | Em | C | D7 | G | |. This would make both a good ending and a good introduction. Start by

playing the G | Em | C | D7 and begin the song. Examples of songs this could work in are "Earth Angel", "Breaking Up Is Hard To Do", "Every Breath You Take" and so on. In fact this series of chords (progression) is commonly used as a introduction or as a turnaround (a means of going back to the start of a piece or section of a piece). You should try this in every key you play in.

Intro. #1

4/4 G | Em | C | D7 (First chord in song should be G)

Variation #1

4/4 G | Em | Am7 | D7 (First chord in song should be G)

Variation #2

4/4 G | Bb dim7 | Am7 | D7 (First chord in song should be G)

Variation #3

4/4 G | Em7 | A7 | D7 (First chord in song should be G)

Play each one until you can hear them.

By putting a G at the end of each of these you will also have an ending. You need to try it with different songs until you get the idea of what does work for you and what does not.

Ending #1

4/4 G | C | G | D7 | G ||

You should try each of the introductions as endings.

Another common progression used for beginnings and endings especially in folk and country music is:

Intro. #2

4/4 G | C | G | D7 (First chord should again be a G Chord)

To apply as an ending.

Ending #2

4/4 G | C | G | D7 | G ||

Sometimes you need to change the number of beats each chord gets.

4/4 G C | G D7 | G ||

or maybe it is in 6/8 time.

6/8 G | C | G | D7 | G ||

Some songs have a ascending progression that can be used for and introduction.

Introduction #3

4/4 G | Am7 | Bm7 | C | (First chord as a G).

Examples are "Here, There, and Everywhere", "Summer", etc.

Ending #3

4/4 G | Am7 | Bm7 | C | G ||

Or a descending progression

Introduction #4

4/4 C | Bm7 | Am7 | D7 (First chord is G)

As a ending.

Ending #4

4/4 C | Bm7 | Am7 | D7 | G ||

Another common Introduction/ending is:

Intro. #5

4/4 G | Bm7 | Am7 | D7 (First chord is G)

Ending #5

4/4 C | Bm7 | Am7 | D7 | G ||

One that I have always liked uses a minor chord to add a little tension.

Intro. #6

4/4 G | C Cm (First chord is a G)

Ending #6

4/4 G | C Cm | G ||

Intro. #7. For Blues in G the Robert Johnson style is also very commonly used.

4/4 G G7 C Cm(6) | G Eb7 D7 D7 || As an ending go to G.

This is just to get you started. Look at the last 4 measures or 8 measures of a song and many times these can be used as a introduction or ending. It is just a matter of thinking about what you can and cannot do.

Blues In A Bass Example

Refer to the tablature on blues to help out on exactly how to play the blues. In all these examples you play 2 notes at one time.

For A and A7

Count Play

1	Hit 5th string open and 4th string 2nd fret.
&	Hit 5th string open and 4th string 2nd fret.
2.	Hit 5th string open and 4th string 4th fret.
&	Hit 5th string open and 4th string 4th fret.
3	Hit 5th string open and 4th string 2nd fret
&	Hit 5th string open and 4th string 2nd fret.
4	Hit 5th string open and 4th string 4th fret.
&	Hit 5th string open and 4th string 4th fret.

For D and D7

Count Play

1	Hit 4th string open and 3rd string 2nd fret.
&	Hit 4th string open and 3rd string 2nd fret.
2	Hit 4th string open and 3rd string 4th fret.
&	Hit 4th string open and 3rd string 4th fret.
3	Hit 4th string open and 3rd string 2nd fret.
&	Hit 4th string open and 3rd string 2nd fret.
4	Hit 4th string open and 3rd string 4th fret.

& Hit 4th string open and 3rd string 4th fret.

For E and E7.

Count Play

1 Hit 6th string open and 5th string 2nd fret.

& Hit 6th string open and 5th string 2nd fret.

2 Hit 6th string open and 5th string 4th fret.

& Hit 6th string open and 5th string 4th fret.

1 Hit 6th string open and 5th string 2nd fret.

& Hit 6th string open and 5th string 2nd fret.

2 Hit 6th string open and 5th string 4th fret.

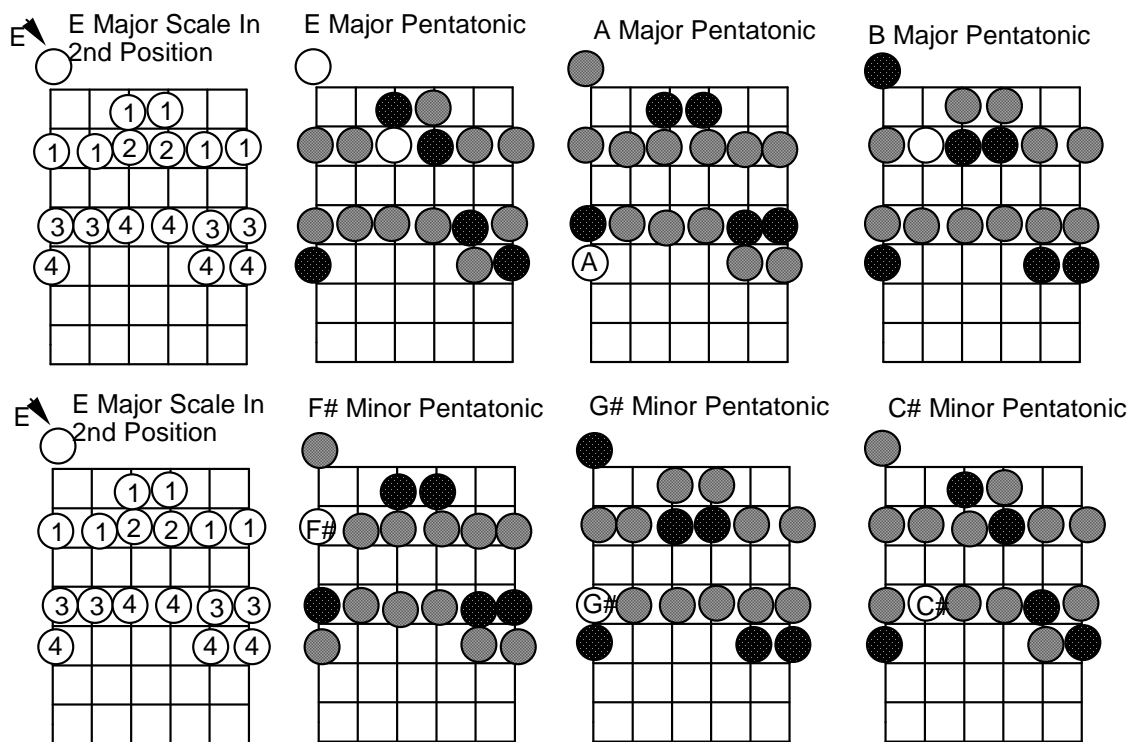
& Hit 6th string open and 5th string 4th fret.

What you will do is to use these as a substitute to the chord. If you are playing a blues and see a A7 or A chord then

The Pentatonic Scales within Major Scales Page 1

<p>G Major Scale In 2nd Position</p>	<p>G Major Pentatonic</p>	<p>C Major Pentatonic</p>	<p>D Major Pentatonic</p>
<p>G Major Scale In 2nd Position</p>	<p>A Minor Pentatonic</p>	<p>B Minor Pentatonic</p>	<p>E Minor Pentatonic</p>
<p>C Major Scale In 2nd Position</p>	<p>C Major Pentatonic</p>	<p>F Major Pentatonic</p>	<p>G Major Pentatonic</p>
<p>C Major Scale In 2nd Position</p>	<p>D Minor Pentatonic</p>	<p>E Minor Pentatonic</p>	<p>A Minor Pentatonic</p>

<p>D Major Scale In 2nd Position</p>	<p>D Major Pentatonic</p>	<p>G Major Pentatonic</p>	<p>A Major Pentatonic</p>
<p>D Major Scale In 2nd Position</p>	<p>E Minor Pentatonic</p>	<p>F# Minor Pentatonic</p>	<p>B Minor Pentatonic</p>
<p>A Major Scale In 2nd Position</p>	<p>A Major Pentatonic</p>	<p>D Major Pentatonic</p>	<p>E Major Pentatonic</p>
<p>A Major Scale In 2nd Position</p>	<p>B Minor Pentatonic</p>	<p>C# Minor Pentatonic</p>	<p>F# Minor Pentatonic</p>



As you can see clearly these scales are all related. By using the above information you can visualize the various scales. I feel that this is an important step in trying to learn both the guitar fingerboard and how to improvise.

Take your time and work through each of these scales and patterns. I suggest learning one new scale and the relations to it each week. It is important to review each of them every day once you learn them for at least one month and then review them on a weekly basis after that.

What Scale to Use Over Which Chord

Deciding which scale to use against a particular chord depends upon a number of factors. These include the following:

1. Style of music.
2. Key tune is in.
3. What chords come before the chord and what chords come after.
4. Complexity of the song.
5. The melody.
6. Tempo.
7. In some cases the range.

Putting those aside for now here are some general guidelines.

For a major chord you can use the following:

1. A major scale of the same letter name.
2. A major pentatonic scale with the same letter name> (Good for country, folk, and simple styles).
3. A major scale up a degree of a 5th (Functions as a Phygian mode).

Example for a C Major chord (or C Maj. 7 etc.)

1. A C major scale.
2. A C major pentatonic scale.
3. A G major scale.

For a dominant (un-altered) chord (7th, 9th, 11th, or 13th) use the following:

1. A major scale a 4th higher (Mixolydian mode).
2. A major pentatonic scale of the same letter name.
3. A blues scale of the same letter name.
4. A minor pentatonic scale of the same letter name.

Examples for a C7 chord.

1. A F major scale.
2. A C major pentatonic scale.
3. A C blues scale.
4. A C minor pentatonic scale.

For an altered dominant chord (such as a 7 b9, 7#5 or b5) or just a 7th chord use the following:

1. A diminished scale built on the b2.
2. A whole tone scale.
3. Any listed in previous example.

Examples for a C7b9.

1. A Db diminished.
2. A C whole tone scale.

For a minor chord use the following:

1. A major scale down a whole step (dorian mode).
2. A minor pentatonic scale with the same letter name.
3. A blues scale with the same letter name.
4. A harmonic or melodic minor scale of the same letter name. (Used for a minor 6th chord or a minor chord with a major 7 added).

Examples for a Cm7 chord.

1. Bb major scale starting on C (dorian mode).
2. A C minor pentatonic scale.
3. A C blues scale.
4. For a Cm6 chord use a C harmonic or melodic minor scale.

For a diminished chord use the diminished scale of the same letter name.

Example for C dim or C dim 7.

1. A C diminished scale.

For an augmented chord use the whole tone scale of the same letter name:

Example for a C + or C +7.

1. A C whole tone scale.

Note that these scales can be combined and mixed up. For example if you are playing a C7 chord you could combine the C minor and C major pentatonic scales to get a combination scale that would work well. If you want to always sound correct but are not too adventuresome use the pentatonic scales suggested. These always work but many times give you a bland sound. For many rock players these are the only scales outside the blues scales that they use.

For the blues, you can use the ideas above but also use a blues scale of the key during the entire solo. While this is sometimes a good way to start it is best to change scales as the chords change. For blues treat it like they were all some form of a dominant chord. Even though blues is rather simple there is so much that can be done with it from an improvising outlook it can be rather complex.

Besides the scales it is helpful if not necessary to learn the arpeggios for each of the chords that you will be doing. I suggest you learn the basic arpeggio and then an extended arpeggio. By that I mean for a C7 learn the C7 arpeggio which would be C, E, G and Bb. For an extended C7 use C, E, G, Bb, D, F, and A. Many times for the extended a #11 is used, for a C7 with a sharp 11 use C, E, G, Bb, D, F# and A.

These aren't the only scales that can be used against a chords but they are a good start. The key is to develop your ear and to try different scales out in various songs. Note that you also do not have to stay fully within the scale. Passing tones are common and should be used as approaching notes from either a 1/2 step above or below (this works well with the arpeggios). All in all, start using your ear and listening to others solo to figure out what they are doing. Play as many solo's from others as you can.

Learn your music theory and then apply it. Knowing how scales are constructed and how chords are developed will help in deciding which scale will work best and how best to fit notes into the solo ideas. Also remember that you don't have to play fast to sound good. In fact some of the best improvisers in various styles are not fast players. People such as Erik Clapton, Carlos Santana, B. B. King, Wes Montgomery are not fast but rather lyrical. That is what you should strive for. Make your solo's say something and not be just fast.

Amazing Grace (Do as Harmonics)

First staff of guitar notation. Chords: G, C. Fret numbers: 12, 12, 12, 12, 12, 7, 12, 7.

Second staff of guitar notation. Chord: G. Fret numbers: 12, 12, 12, 12, 12, 7.

Third staff of guitar notation. Chords: D7, G. Fret numbers: 7, 12, 7, 12, 7, 12, 12, 12.

Fourth staff of guitar notation. Chords: C, G. Fret numbers: 7, 12, 7, 12, 12, 12, 12, 12.

Fifth staff of guitar notation. Chords: D7, G. Fret numbers: 12, 7, 12.

Sixth staff of guitar notation, empty.

Seventh staff of guitar notation, empty.

Eighth staff of guitar notation, empty.