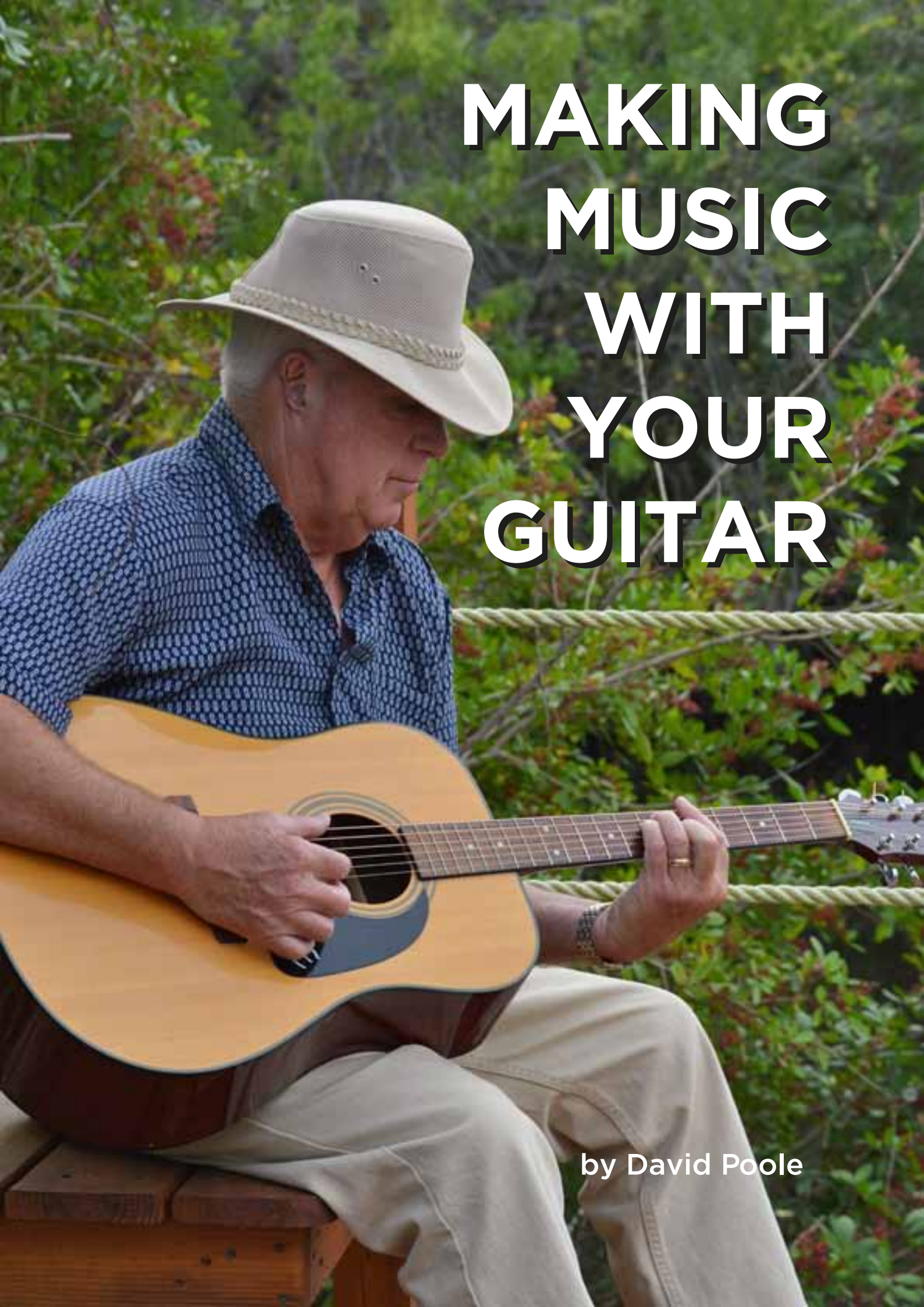

MAKING MUSIC WITH YOUR GUITAR

by David Poole

Making Music With Your **GUITAR**

A free guitar tutor
by David Poole,
with contributions from
Mark Fitzpatrick and Jerry Bird

The music theory which appears in this book is universal and may be applied to all instruments including the voice.
In this book we have applied it to the guitar.

Contributors

Mark Fitzpatrick, Port Charlotte Florida USA

Since Mark graduated from the Berklee College of Music in Boston in 1976.

He has taught a variety of instruments in both schools and privately. Mark has toured with many bands including 'The Clancy Brothers' Ireland's famous folk singers. He has also opened and run a number of successful recording studios and managed to accumulate over 300 album credits and write over 100 songs. Mark currently teaches guitar, bass & banjo in South West Florida, where he lives with his wife Cathy, and plays jazz and light rock in solo gigs and with several bands.

Jerry Bird, Dorchester, UK

Jerry Bird is known principally as a fiddle player, and has played in various folk, and folk-rock bands for more years than he cares to remember. He learned to play guitar in his teenage years, and was mostly self-taught. He was encouraged to teach by the award-winning fingerstyle guitarist Terry Lees, and became a member of the Registry of Guitar Tutors in 2010. He currently performs with the folk-rock band State of Undress, and also plays many solo gigs, playing a mixture of contemporary and traditional folk, along with his own self-penned material. He is also a writer, and has had three books published in the field of folklore, including 'Songs From the Magical Tradition', an exploration of the stranger aspects of traditional British folk song.

Typeset in Garamond by Jerry Bird
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INTRODUCTION

Although I have played the guitar for many years it is only in the past 6 years or so that I have been fortunate enough to find two musicians, now friends, who have taught me how music is written and performed. One of these, Jerry Bird, lives in my home town of Dorchester, England and the other, Mark Fitzpatrick, in Port Charlotte, Florida.

Apart from the geography, which affects some music terminology, they each play different styles of music. These include popular, blues and jazz to Celtic and folk, these often in alternative tunings. Naturally they teach in different ways and over these years I have collected much hand-written material. I wanted to set this out in a logical manner starting with the basics and moving onto the more complex to help other guitarists as I have been helped,

I have tried to navigate a path which keeps to the essentials you need to know but is not simplistic.

Although most guitarists will be familiar with the written 'Tab' or tablature method of writing guitar scores I have deliberately avoided this. To really enjoy making music with your guitar it helps to have an understanding of how it is constructed and played.

You can dip into this book as you increase your musical knowledge; see how the chords or scales you are playing are built and much more.

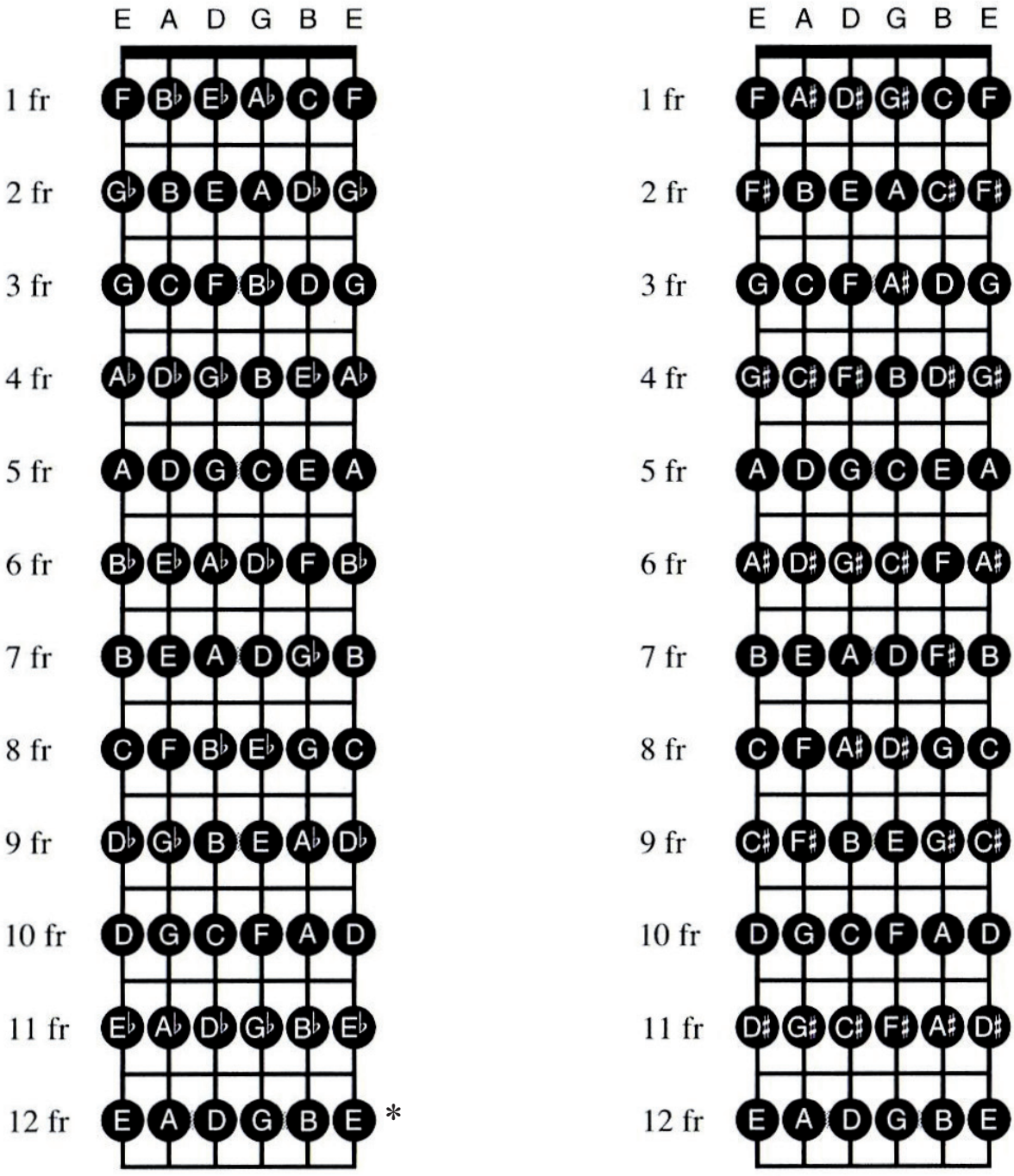
If you like the guitar and want to improve at your own pace this is for you.

Although Jerry and Mark have contributed greatly to this book any errors or omissions are mine.

David Poole

CONTENTS

Fretboard Diagram *Figure 1*



* Same note names as the open strings

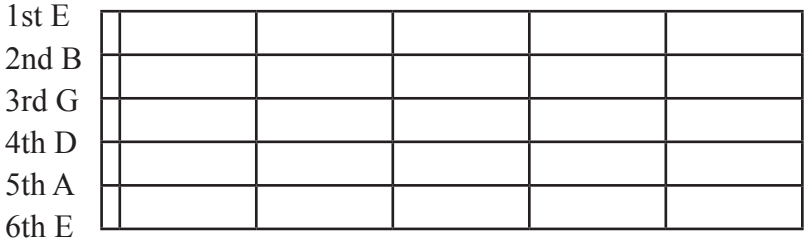
Standard Tuning

With six strings on a guitar there are many ways in which they can be tuned. Here we will deal with standard tuning and later in the book we cover some of the other tunings used to get a particular sound or bass note.

In standard tuning we tune each string to a specific note starting with the 6th string, the thickest and nearest to the musician up to the 1st or top string which is the thinnest.

Strings are tuned 6thE - 5thA - 4thD - 3rdG - 2ndB - 1stE.

Played open we have the notes EADGBE.



We can tune the guitar by using an electronic tuner or by relative tuning.

Relative tuning relies on the fact that the lowest note, on the open 6th string, will alter less in weather conditions, and we tune each higher string to it as follows:

We place our finger on the 6th string at the fifth fret and pluck the open 5th string adjusting it up or down by turning its tuning peg on the guitar until they sound the same. What we have done is to produce the same A note on the fretted 6th string and unfretted 5th string.

We repeat this by fingering the 5th string at the 5th fret and adjusting the open 4th string to the same D note, and again with the fretted 4th string with the open 3rd string to give us G.

For the next tuning we fret the 3rd string at the 4th fret and play the open 2nd string to give us B.

Finally we fret the 2nd at the 5th fret and play the open 1st string adjusting the 1st string until they sound the same and give us an E.

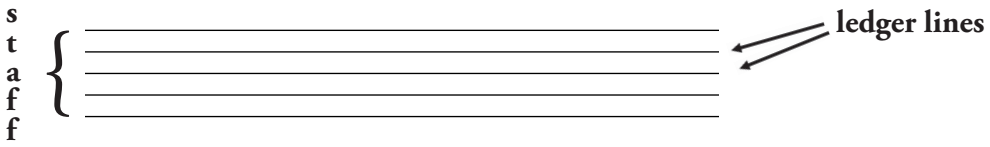
When playing with other musicians we tune to each other and usually use an electronic tuner. Using the electronic tuner the A note is pitched at 440 Hz.

Fretboard Diagram

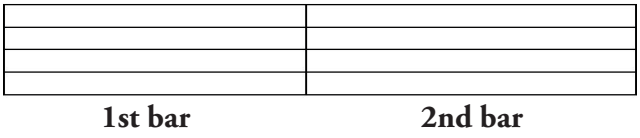
On the previous page are the notes on the guitar fretboard in standard tuning. *Fig 1.*

Music Notation

Music is written on prepared sheets with 5 lines called ledger lines making up the staff (also called 'the stave). *Fig 2.*

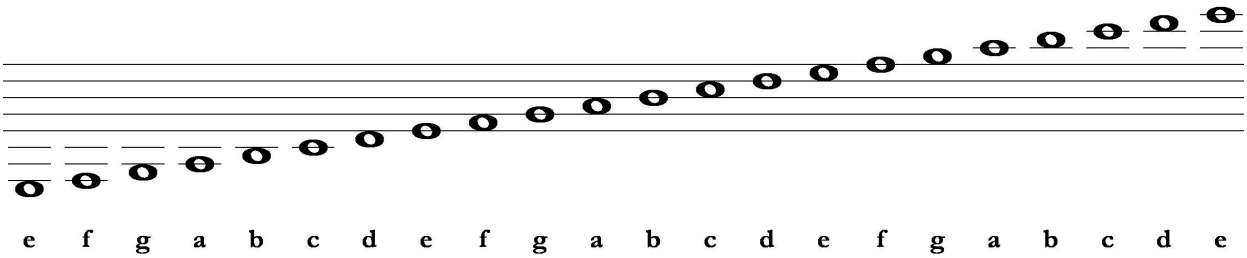


Each staff is then divided by vertical lines into measures also called bars. *Fig 3*.



Notes are then written on or between the ledger lines with the lowest notes at the bottom of the staff and the higher notes at the top.

Guitar music is written using only one staff, so extra ledger lines are added to those notes which are above or below the staff. *Fig 4*.

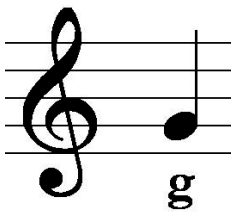


Treble & Bass Clefs

At the start of a piece of music the first measure will display the Clef which tells us which notes correspond to which lines or spaces on the staff.

Treble Clef. Figure 5

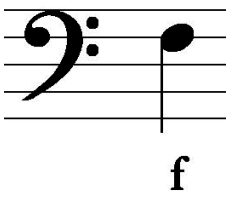
For a guitar we use only the Treble Clef (G Clef) which spirals around the 2nd line from the bottom, This spiral tells us that notes on this line are G.



From here we can work out where the other notes are by going up or down the musical alphabet A B C D E F G.

Bass Clef. Figure 6

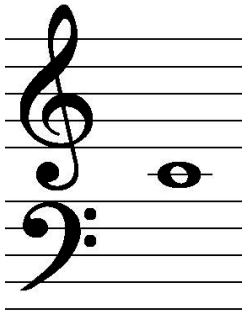
The Bass Clef has two dots above and below the second line from the top. These dots tell us that the notes on this line are F.



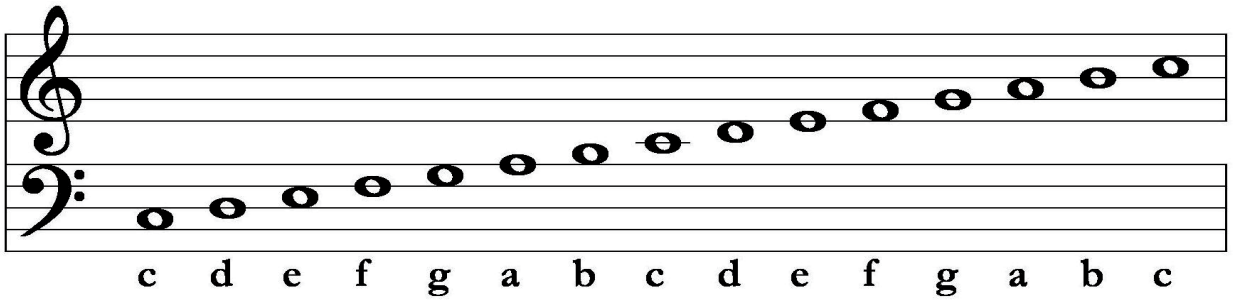
Treble & Bass Clef Piano Music. Figure 7

Piano music uses two staves the top being Treble Clef and the bottom Bass Clef (F Clef).

Middle C is shown as a line through the note between the two staves.



Here we show 'The Grand Staff' with notes added. Figure 8



Key Signatures

After the Clef the next symbol to appear in the opening bar is the Key Signature.

This tells us which of the scales the music is written in. For example the Key Signature of G major is F#. *Fig 9.*

This also indicates that each time we play this note we raise it by a ***semi-tone**** to sharpen it. We do this unless the music tells us otherwise.

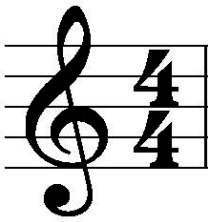
Tones and semi-tones are also called steps and half steps.

The Key Signature for F major is Bb. *Figure 10*

Here we flatten or drop the B note a half step to flatten it and play it thus until told otherwise.

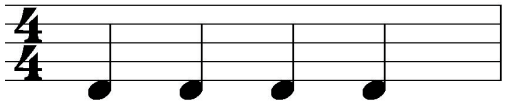
The Key of C major has no sharp or flat notes and when no symbol appears the music is in the key of C major.

Time Signatures



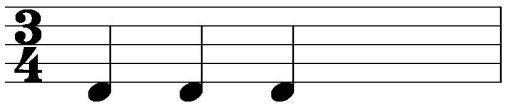
The third symbol in the opening bar is the Time Signature. This consists of two numbers one set above the other. The bottom number indicates the time value (number of beats) for each note in the piece. The top number how many of these beats are in each measure (bar).

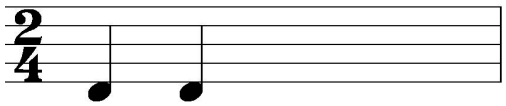
So music in 4/4 time has a standard note value of a quarter note and there are four of these quarter notes in each bar. *Fig 11.*

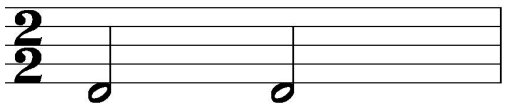


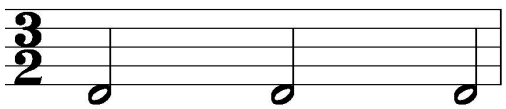
With ¾ time the standard note value is still a quarter note but there are only three of them in a bar.

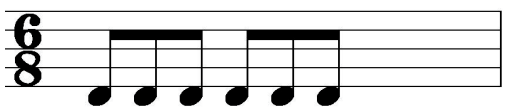
Other time signatures are as follows. *Fig 12.*

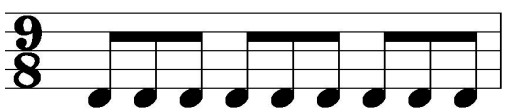






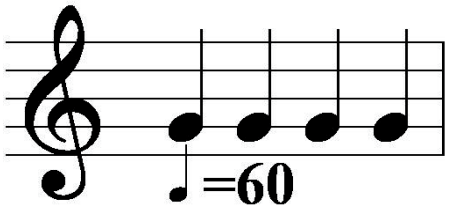






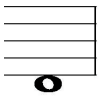
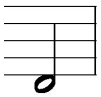
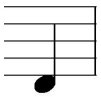
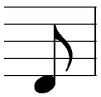
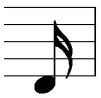
Tempo. Figure 13

This determines the length of time for a standard beat by denoting how many of these beats are played in a minute. It also appears in the first bar and whenever the tempo changes in the piece and looks like this.



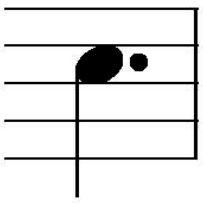
Note Values. Figure 14

Each note in a piece is played for a specific number of beats or part of a beat and has a particular name.

	WHOLE NOTE	SEMI-BRIEVE	4 BEATS
	HALF NOTE	MINIM	2 BEATS
	QUARTER NOTE	CROTCHET	1 BEAT
	EIGHTH NOTE	QUAVER	1/2 BEAT
	1/16 NOTE	SEMI-QUAVER	1/4 BEAT
	1/32 NOTE	DEMI-SEMI-QUAVER	1/8 BEAT

Dotted notes. Figure 15

Add 50% to the value of the note, so a dotted quarter note/crotchet lasts for one and a half beats, not one.



Triplets

Denoted by a bracket with the number 3 over three notes, or a combination of notes and rest (*Fig. 16*). Each of the three notes has two thirds of its normal value. So if you triplitise 3 quarter notes you reduce the value of the combined notes from three beats to two. You may also make a triplet of two notes, a quarter note and an eighth note, to give you a quarter note value. As you can see in this example. *Fig.17.*

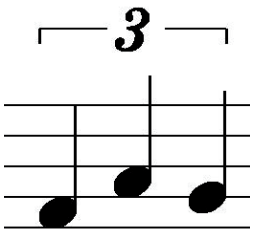


Figure 16

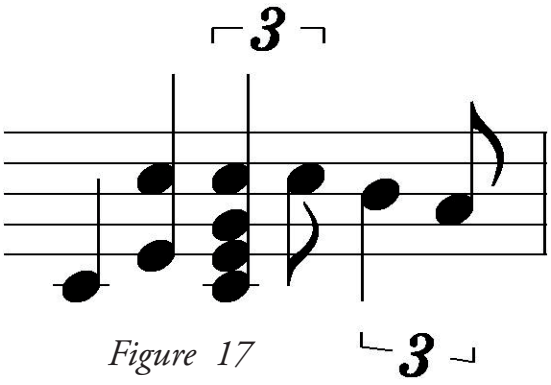
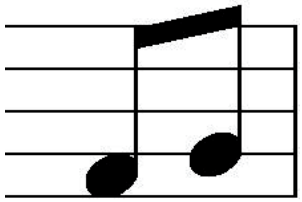


Figure 17

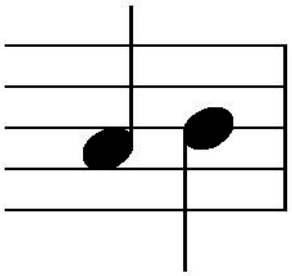
Beamed Notes. Figure 18

To make a piece of music easier to read, two or more notes, of an eighth value or less, may be joined by their stems. These notes are then said to be 'beamed'.



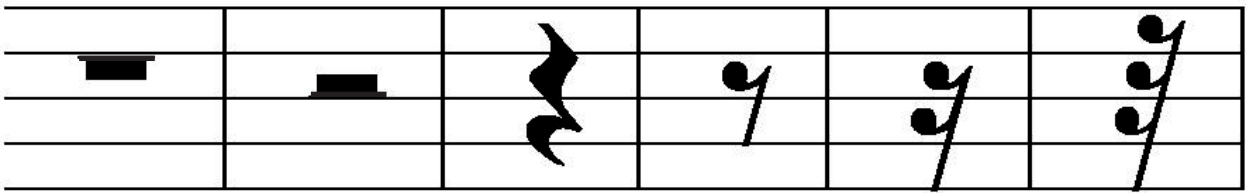
Notes stem up/stem down. Figure 19

The convention when writing notes is that those on the third line of the staff (b note in Treble Clef) and above are written with the stem down and to the left of the note. Notes below this are written with the stem up and to right of the note.



Rests. Figure 20

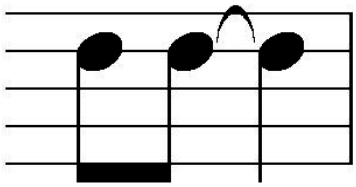
Rests have different symbols to notes and are not played. They do however, have a time value in beats, and part beats, in each measure.



whole note | half note | quarter note | 1/8 note | 1/16 note | 1/32 note

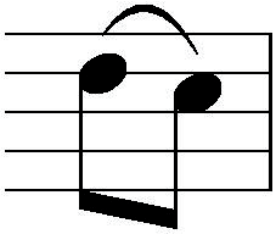
Ties. Figure 21

A tie links two notes together and they are played as one note.
This device enables the composer or arranger to get the right length of note for the phrase and still fit within the time signature.



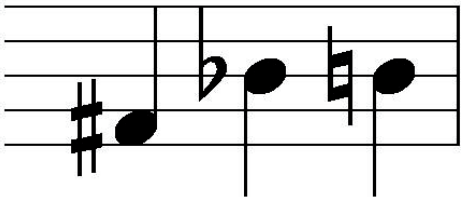
Slurs. Figure 22

Unlike tied notes these notes are played separately but smoothly one into the other. In some guitar sheet music specific symbols tell the musician that a hammer on, pull off or slide should be used to get from one note to the next. See 'Common Guitar Music Symbols' *Fig. 25* (next page).



Sharp, flat and natural notes. Figure 23

All notes written are natural unless marked otherwise in the Key Signature. Where notes in the score are played differently from the Key Signature, we mark them as sharps, flats or naturals, and these are called 'accidentals'.



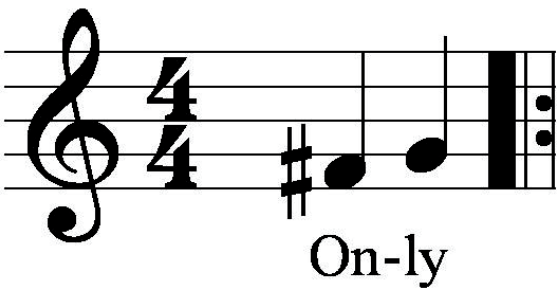
A '#' sign before the note denotes it is raised a semitone (half step) and a 'b' before note, that it is lowered a semitone. The '♮' sign indicates a natural note, not sharpened or flattened. When we sharpen a note, we raise the note a semitone to the next note on the Chromatic Scale*, so a G becomes G#. When we flatten a note, we go down the Chromatic Scale a semi-tone so that the G becomes F#, also known as Gb. (*see page 11).

Where a note has been sharpened, flattened, or naturalised in a measure/bar, we continue to play it at this value for the remainder of the bar. In the next bar, the note reverts to that of the Key Signature, unless the accidental is repeated.

Pickup notes. Figure 24

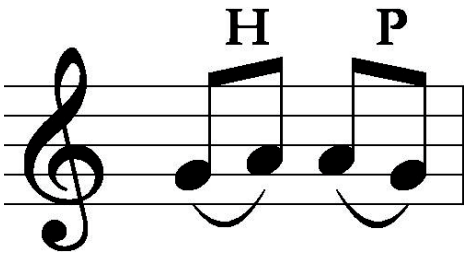
In the 1st measure the music may have what are known as pickup notes.
These are an introduction to the main score.

First measure of *Only You*

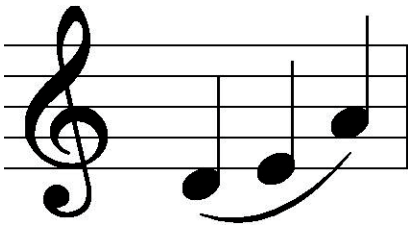


Common Guitar Music Symbols *Figure 25*

Slurs Illustrated earlier, these might be played as a hammer-on or pull-off. In some music a symbol above the notes indicates how you should play them.

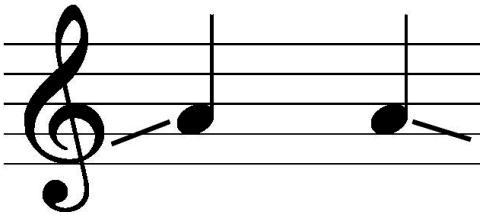


Phrase Mark Visually identical to a slur but connects notes in a passage of play, often to tie in with the lyrics



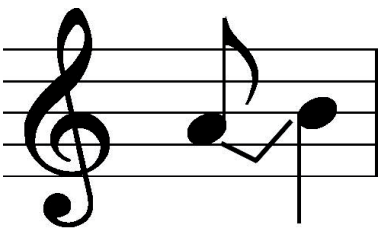
Slide Notated as a dash. For two slurred notes connected by a slide you should pick the first note and slide to the second.

A dash preceding a note indicates a slide into the note and a dash following a slide from it. Both of these to indefinite points.

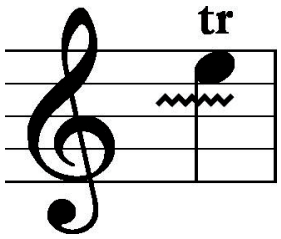


Grace Note Represented by a small note. A grace note is a very quick ornament leading into another note. Most commonly executed with a slide, hammer-on or pull-off.

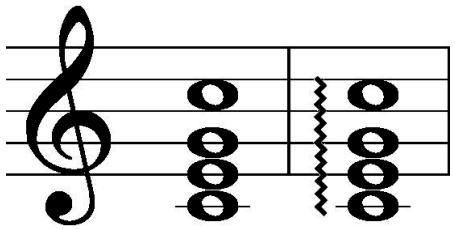
Bend With your guitar you can also bend a note by moving the stopped string upward. You can bend up a full tone, for example the fretted A note to a B. Bends are represented with upward curves.



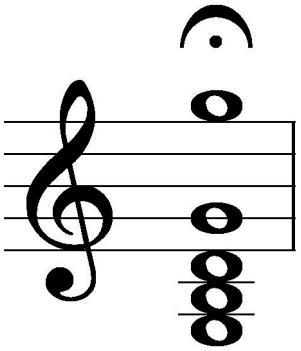
Trill A rapid alternation between the specified note and a higher note.



Chord and arpeggiated chord The normal notes written above each other are played together with a strum or pick. Notes in an arpeggiated chord are played in rapid succession usually in ascending order. These are also called 'broken chords', and are indicated by a vertical wavy line.



Fermata A pause where a note or chord is sustained for longer than its normal value.



Dynamics These indicate a performance style to the musician. Here are some of the most common symbols:

f forte **loud**

mf mezzo forte **moderately loud**

p piano **soft**

mp mezzo piano **moderately soft**

rit. ritardando **slow down gradually**

 crescendo **gradually getting louder**

 diminuendo **gradually getting quieter**

Twelve Tones of the Chromatic Scale

There are only twelve tones used to make western music. A scale made up of these twelve tones or notes is called a Chromatic Scale and forms the basis of all music. The distance between each of the notes is called an interval.

The Chromatic Scale consists of all notes, including sharps and flats, from the root note to its octave. The interval between each of these notes is a half step or semitone:

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

The sharps here reference the note before them on the scale. We can also refer them to the following note on the scale giving us the alternative names for the same notes (their 'enharmonic'):

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

From these notes we can build other scales by adjusting the distance between notes (intervals) by a semitone or tone (half step or whole step).

All scales are based on a starting point, known as the root note, the end point being this note an octave higher. In scale formation the root note is also the key name for the scale.

For example, for a scale in C we start with the C note and we go on to add the next note and so on a half step to C#, or a whole step to D. We then repeat this until we get to C again but an octave higher. Then we write out a formula for the scale based on the intervals.

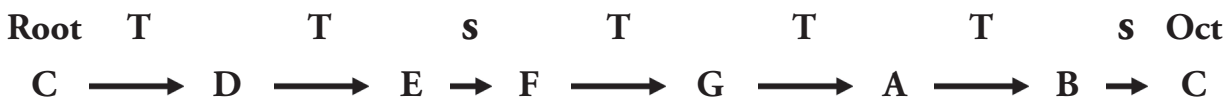
Note: throughout this section on scales, we have used the following abbreviations:
'T' (tone) — the same as 'W' (whole step).
's' (semitone) — the same as 'H' (half step).

The Natural Major Scale (Ionian)

Many scales have been created and used over time each with its own unique sound. One scale has become the reference scale for all the others and is called the natural major scale (Ionian).This scale is made up of 7 notes and its formula of intervals is:

T T s T T T s (W W H W W W H)

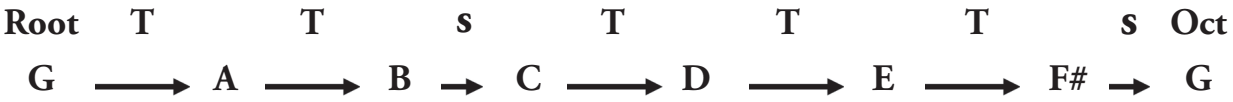
To build this scale we refer to the chromatic scale above and insert the note letters applying to these intervals. Using the note C as our root we form the scale of C major:



Note there are no sharps or flats in this key.

Countless western music has been written using this scale. Once you remember its simple formula you can apply it to any note as the starting point (the root), to work out the major scale for that note.

If we use G as our start, or root note, and apply the **T T s T T T s** formula to the chromatic scale we obtain the following G major scale:



We can apply this formula of intervals to any of the notes on the chromatic scale to get the natural major scale for that root.

Now that we have a scale established, we can number each note starting with the root note. This allows us to identify the position of each note within the scale. In the major scale we number from one to seven using Roman numerals. The eighth note is the same tone as the first only higher in sound and is called the octave, 'oct' meaning eight. Later in chordal theory we will number notes past the octave. You should be aware of the position of each note within the scale. For example if we are playing the major scale in the key of G the fifth note is D.

1	***11***	***111***	***1V***	***V***	***V1***	***V11***	***Oct***
G	**A**	**B**	**C**	**D**	**E**	**F#**	**G**

Also note that F# is the key signature of G major

Diatonic Scales pertain to a specific key. Thus the notes and the diatonic chords created from them are all in the major scale.

Playing Intervals

When we play an interval we sound two different notes at the same time. Staying with the G major scale, if we play an interval of a third starting with the root note, then we would play the G and the B (the third note of the scale) together. If we play a fifth then we play the G with the D, and so on.

The Natural Minor Scale (Aeolian)

As explained earlier when we sharpen (#) a note we raise the note up a half step to the next note on the chromatic scale so a G becomes G#. When we flatten (b) a note we go down the chromatic scale a half step so the G in this example becomes F#, also known as Gb.

The natural minor scale also consists of seven notes and is related to the major scale which we use as a reference. We create the minor scale by altering the major scale (reference scale) by flattening the **third, sixth** and **seventh** notes of the major scale.

We write this formula out as:

1 2 **b3** 4 5 **b6** **b7**

Where a note is not changed, from its form in the key, it is said to be 'natural'.
The scale of G minor is therefore:

1	*11*	*111*	*1V*	*V*	*V1*	*V11*	*Oct*
G	A	**Bb**	C	D	**Eb**	**F**	G

Relative Minor Scale

The relative minor of a major scale is the sequence of notes that satisfy the minor scale formula of 1, 2, **b3**, 4, 5, **b6**, **b7**. All natural major scales have a relative minor scale and it always starts on the 6th note of the relevant major scale.

To better understand this let's look at the C major scale. This scale has the notes:

C D E F G A B C

The relative minor scale of C major starts on the 6th note which is A, and is called A minor.

The A major scale uses the major scale formula of **T T s T T T s** applied to the chromatic twelve tones starting with A as its root. Applying this formula our A major scale is:

Root	**T**		**T**		**S**		**T**		**T**		**T**		**S**	**Oct**
I		*II*		*III*		*IV*		*V*		*VI*		*VII*		*VIII*
A		**B**		**C#**		**D**		**E**		**F#**		**G#**		**A**

We can see that the A major scale has three sharps:— C#, F# and G# and this is how the Key of A major is notated as the Key Signature on the musical staff.

To obtain the A minor scale we now alter the major scale applying the formula:

1, 2, **b3**, 4, 5, **b6**, **b7**.

The three sharps in the A major scale are removed and we end up with the notes

A B C D E F G

These are the notes of the C major scale.

In our G major example the sixth note of the G scale is E and this is the root note of its relative minor.

We can turn the E major scale into E minor using our formula 1, 2, **b3**, 4, 5, **b6**, **b7**.

from E major	**E**	**F#**	**G#**	**A**	**B**	**C#**	**D#**	**E**
to E minor	**E**	**F#**	**G**	**A**	**B**	**C**	**D**	**E**

These are the notes of the G major scale.

Pentatonic Scales

In western music one scale is used quite often in blues, country and rock music. This is the pentatonic scale consisting of five notes hence 'penta' meaning five.

Major Pentatonic

From the **natural major scale** the formula for creating the major pentatonic is to take only the 1-2-3-5-6 intervals **dropping the 4th and 7th intervals**.

Minor Pentatonic

From the **natural minor scale** we take the 1-3-4-5-7 intervals **dropping the 2nd and 6th notes of the minor**.

For example, the relative minor of C major is Am and the Am pentatonic scale is created by dropping the 2nd and 6th intervals from this scale.

A minor scale	*I*	*II*	*III*	*IV*	*V*	*VI*	*VII*	*VIII*
	A	**B**	**C**	**D**	**E**	**F**	**G**	**A**
pentatonic scale	**A**	**—**	**C**	**D**	**E**	**—**	**G**	**A**

Blues Scales

Blues scales create a different feel to the music in the way that Jazz chords do.

We can create a blues scale by inserting a 4th note (often referred to as the 'dirty' note) into the 5 note minor pentatonic scale. This note is entered into the scale a semitone or half step above the 3rd note of the pentatonic scale (4th of the natural minor).

Taking the A minor pentatonic scale above we arrive at the Am Blues scale below:

	I	***II***	***III***	***IV***	***Blue note***	***V***	***VI***	***VII***	***VIII***
A minor scale	**A**	**B**	**C**	**D**	**—**	**E**	**F**	**G**	**A**
pentatonic scale	**A**	**—**	**C**	**D**	**—**	**E**	**—**	**G**	**A**
A blues scale	**A**	**—**	**C**	**D**	**Eb**	**E**	**—**	**G**	**A**

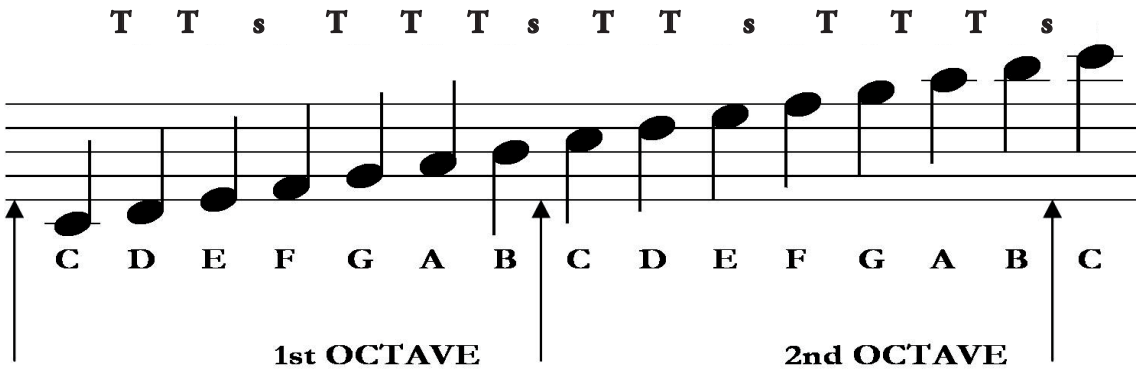
The E minor blues scale looks like this:

	I	***II***	***III***	***IV***	***Blue note***	***V***	***VI***	***VII***	***VIII***
E minor scale	**E**	**F#**	**G**	**A**	**—**	**B**	**C**	**D**	**E**
pentatonic scale	**E**	**—**	**G**	**A**	**—**	**B**	**—**	**D**	**E**
E blues scale	**E**	**—**	**G**	**A**	**Bb**	**B**	**—**	**D**	**E**

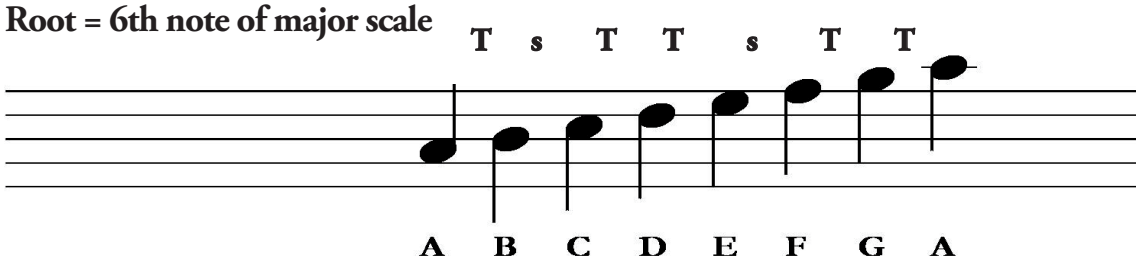
Relating all these Scales *Figure 26*

The diagram below helps you visualise how each of these scales are constructed and related.

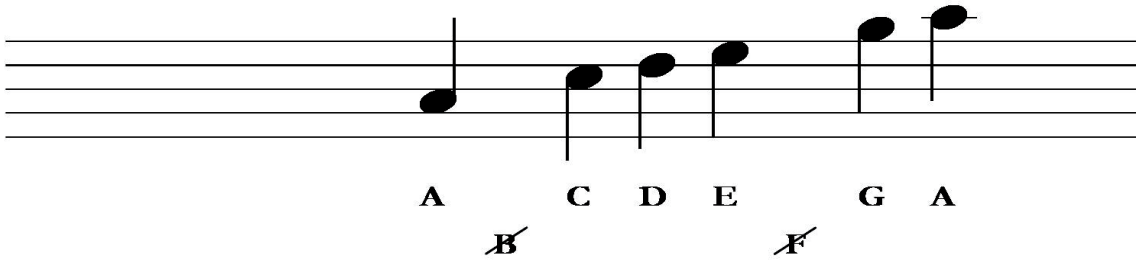
Natural major scale 'Ionian' C (7 notes)



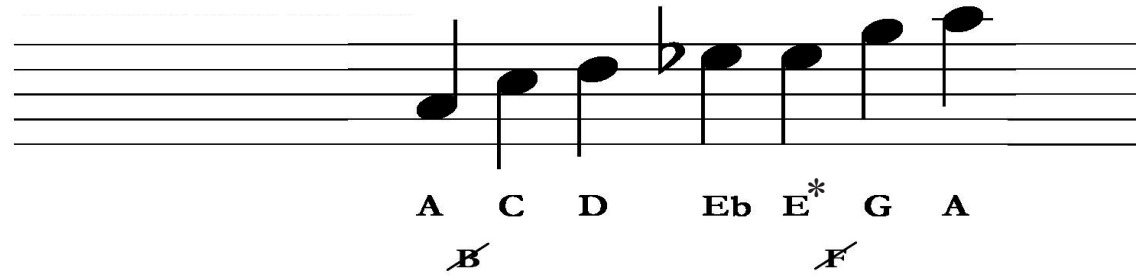
Relative minor 'Aeolian' Am (7 notes)
Root = 6th note of major scale



Am pentatonic scale (5 notes)
Remove 2nd & 6th notes of minor



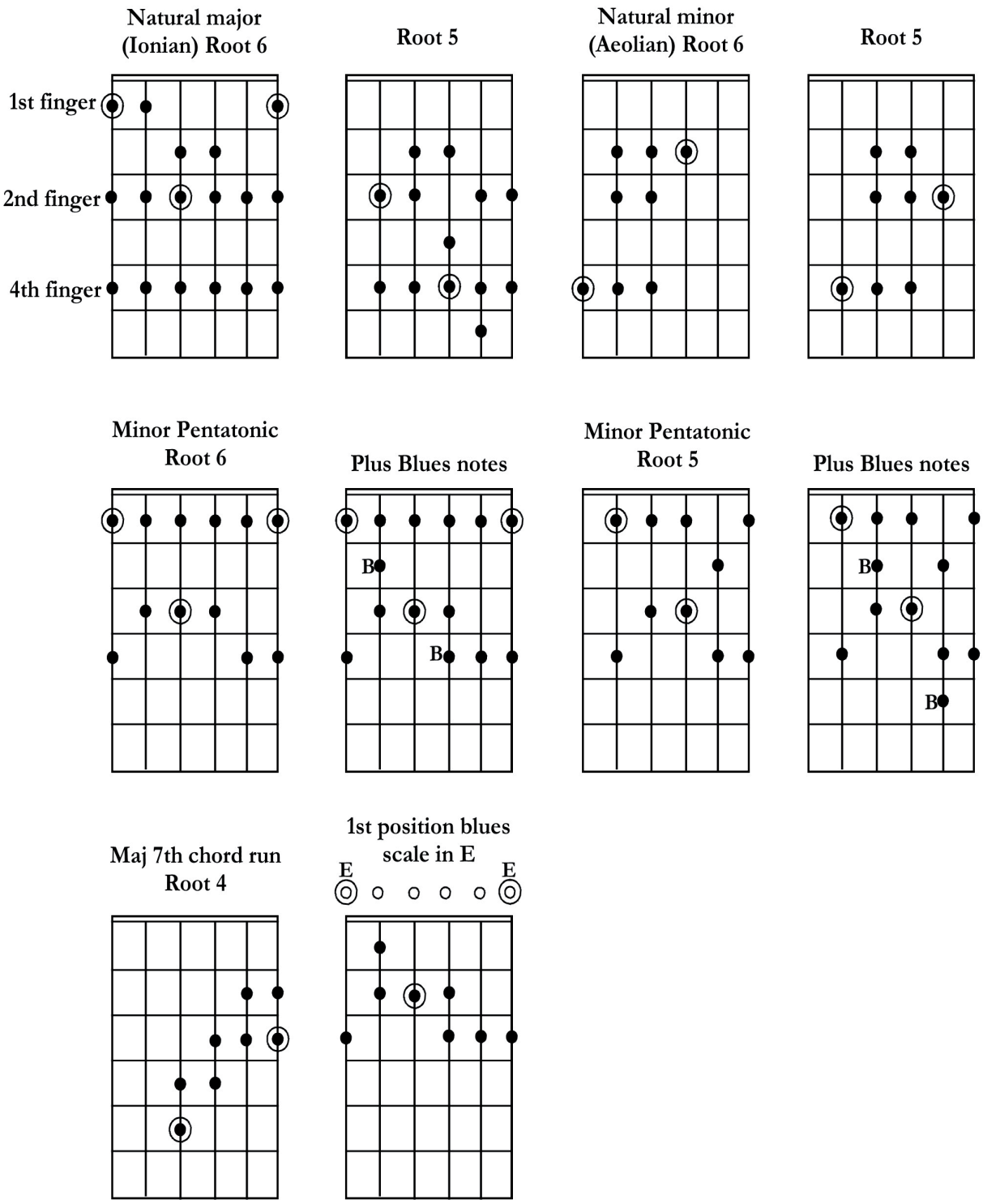
A blues scale (6 notes)
Pentatonic scale + a 4th note
a semitone above 3rd note



* In a musical scale we would write Fb, a theoretical note, so as to avoid the same letter name.

Scale Fingering *Figure 27*

Fingering for all these scales is below:



Circled dots indicate the root notes of the scale.
White dots above the fretboard indicate open strings.

Chords

When we have constructed a natural major scale we can build chords from the notes contained within it.

Chords from the major scale consist of at least three notes (a triad) and are generally constructed by linking third intervals.

The Major Triad

The major triad consists of three notes and we take the 1st- 3rd and 5th notes of the natural major scale. We denote these chords by their root note.

I is the root note of the chord (Tonic) *V* is the Dominant and *1V* is the Sub Dominant. You will see the relevance of these terms when we look at the 'Cycle of Keys' latter.

In the C major scale the notes of the C major chord are C-E-G.

In G the notes G-B-D form our G major chord. Major chords are denoted as C, C major or C maj.

The Minor Triad

This also consists of three notes from the major scale and its formula is 1-b3-5.You can see from this formula we have flattened the third interval in order to change this chord from major to minor. From the C major scale our C minor chord is C-Eb-G and in G major our G minor chord is G-Bb-D.

Minors are denoted as Cm, Cmin or C–

The importance of the Third Interval

You can see that the third interval of the major scale is very important. If unchanged, or 'natural', it produces a major chord sound. If it is flattened (minored), it produces a minor chord sound.

Complex Chords

Now that we understand the basic triads we can build on them by adding more notes. When we build upon the basic 3 note triad there are rules that we need to memorise to do it properly and to understand chord notation.

Major 7 Chords

When we add the natural seventh interval to the major triad we call this chord 'maj7'. So the chord formula for any 'maj7' chord is 1-3-5-7.

For example, when we add the B note (seventh interval of the C major scale) to a C chord we denote it as 'Cmaj7'.

We can add other intervals to this sequence, and as long as the natural 7th interval is present, we include the notation 'maj' in the chord name. We refer to it by the last added interval. So 'Cmaj9' has the formula 1-3-5-7-9, with the notes C-E-G-B-D.

Dominant 7 Chords

A dominant 7th chord is a major triad with a flattened 7th interval. The formula for this chord is 1-3-5-b7. These chords are notated as merely a 7 added to the root note for example C7. The notes in this chord are C-E-G-Bb.

If we build on dom7 chords we add the new higher interval to preceding notes but name the chord by the last added interval. For example a C7 chord with the 9th interval added would be notated as C9. The formula for this chord is 1-3-5-b7-9 and the notes for 'C9' are C-E-G-Bb-D.

When the seventh is not present we notate the chord as 'add'. For example 'Cadd9' has the formula 1-3-5-9 and the notes C-E-G-D.

The importance of the Seventh Interval

In addition to the root and third the seventh interval is important in chord building. Natural 7ths result in 'maj7' chords which have an ethereal sound. Flattened sevenths have a major sound and are used extensively in turnarounds (see pages 36-7).

Adding notes above the Octave

When intervals are added above the octave (eighth interval) they are counted 9-10-11-12-13-14. The 8th 10th and 12th intervals are merely repeats of the triad notes (1-3-5) but an octave higher. If it's a 'maj7' chord the 14th note is a repeat of the 7th so we don't need to count any of these again. **So, the only new notes that can be added to the triad from the major scale are the 2nd, 4th and 6th intervals, and those an octave higher, that is, the 9th, 11th and 13th.**

Commonly, complex chords are voiced using these 9th, 11th and 13th intervals. These spread the sound out more, so that the additional notes don't clash with the others by being all within the same octave. We can also sharpen (#) or flatten (b) these additions.

Complex Minor Chords

Notation rules that apply to major chords also apply to minor chords. We denote minor chords as min, m or with a minus sign −.

When we add the natural 7th to a minor chord we must denote it as 'min/maj7th'. So a C chord with 1-b3-5-7 it would be denoted as 'Cm maj7'. As with major chords, if we add a flattened 7th the chord is named 'Cm7' or 'C-7' and the formula is 1-b3-5-b7.

Diminished 7th Chords

A diminished 7th chord is in a category all of its own, with a very distinctive sound. In this chord we flatten the third and the fifth intervals and add a flattened 7th to make a four note chord. Each of the fingered notes can be treated as the root and we can therefore have four different notations for the chord played on the same two frets. These chords are denoted as dim7 or º7 e.g. Gdim or Gº7.

Augmented Chords

In these chords we sharpen the 5th interval of the triad. Because the third is natural and not flattened the chord is major in sound but the sharpened fifth creates dissonance and a 'bluesy or jazzy' feel. These chords are denoted aug, + or ♯5. For example Caug, C+ or C♯5. The chord formula is 1-3-♯5

Suspended Chords

There are two types of suspended chords the 'sus2' and 'sus4'. In both cases the third of the triad is not present. It is replaced by the second in 'sus2' chords and the forth in the 'sus4'. These unusual chords are often used before major chords, minor chords and their 7ths of the same letter name. So the chord sequence might be Dsus4 to D7 or Dsus4 to Dmaj7.

When playing barre chords the 3rd is automatically eliminated but in open chords you can finger a four finger chord where the 11th is played an octave higher than the 4th and also include the 3rd of the chord.

Take this example where we play the G chord G-B-D and add C an octave higher on the 2nd string. We are actually playing G add 11 but the sound is of a sus4 chord.

M7b5 chords

Think of this as a jazz chord. Like the Diminished it is a four note chord but has its root on the 5th string. The formula is 1-b3-b5-b7. So 'Cm7b5' has the notes C-Eb-Ab-Bb and these chords have a distinct minor sound.

5 chords (Power Chords)

Not really chords, as these contain only the root and its *V*. They are played on two or three of the bass strings with a down pick. The octave of the root may also be added to give greater emphasis to the root note. Rock and blues music often uses this technique.

Chord Structure Summary. Figure 28

To recap here are the key points in forming chords:

Major (no sign)	1 — 3 — 5
Major 7th	1 — 3 — 5 — 7
Dominant 7th	1 — 3 — 5 — b7
Minor (— or m)	1 — b3 — 5
Min/maj 7th	1 — b3 — 5 — 7
Minor 7th (m7)	1 — b3 — 5 — b7
Augmented (+ or aug)	1 — 3 — #5
Diminished (o or dim)	1 — b3 — b5
Diminished 7th (o 7)	1 — b3 — b5 —b7
Sus 2	1 — 2 — 5
Sus 4	1 — 4 — 5
Notes added to the basic major or minor chord triad may be played an octave higher and are denoted by simply adding '7'. Thus a 2nd becomes a 9th, a 4th becomes an 11th and a 6th becomes a 13th	

Playing Chords

Barre Chords

A moment ago we mentioned barre chords. Barre simply means barred. Here you lay your index finger across the fretboard to stop the barred notes at this point and finger other notes below this bar to complete your chord. Barre chords are said to be rooted on the 6th, 5th, 4th and occasionally the 3rd string.

Inverting and Voicing Chords

When we play a chord we usually start from the lowest root note and play in the order of the note intervals. Taking the chord Gmaj7 we would play 1-3-5-7 (G-B-D-F#) with G in the bass played on the 6th string.

Inversions

We can invert chords by starting with a different note in the bass but following the same sequence of intervals. These chords are called 'slashed chords'. Let's look at different inversions of the chord Gmaj7 which is played 1-3-5-7, G-B-D-F#.

1st inversion: 3-5-7-1. B-D-F#-G.
We mark the new bass note by denoting the chord 'Gmaj7/B'.

2nd inversion: 5-7-1-3. D-F#-G-B.
This time D is in the bass and we denote it Gmaj7/D.

3rd inversion: 7-1-3-5. F#-G-B-D.
Here F# is the bass note and we denote the chord Gmaj7/F#.

Voicing

When we voice a chord we do change the sequence that the notes are played. Although all the notes are the same, the ear hears something slightly different and picks up particularly on the last note of the sequence. For example Em (1-b3-5) has the notes E-G-B but in the 1st (open) position we usually play the open E string, fret the B and E and play the rest of the strings open. So the order is E-B-E-G-B-E.

But we can play the G on the 1st string rather than playing it open, and end on this interval. This voicing of Em has a different sound. The top G is often played to fit the melody line in 'chord melody' solo guitar playing.

Strictly speaking this is still denoted Em as we have the root note of the chord at the bass. However, we could denote it 'Em add G' so that we know to put a top G in the chord.

Chord Fingering

On the following pages (figures 29-32) are selected chord fingering diagrams**.**

Fig. 29: Frequently used open chords (1st position).

Fig. 30: Root 6 Barre chords.

Fig. 31: Root 5 Barre chords.

Fig. 32: Other moveable chords, including Power Chords and Open D tuning.

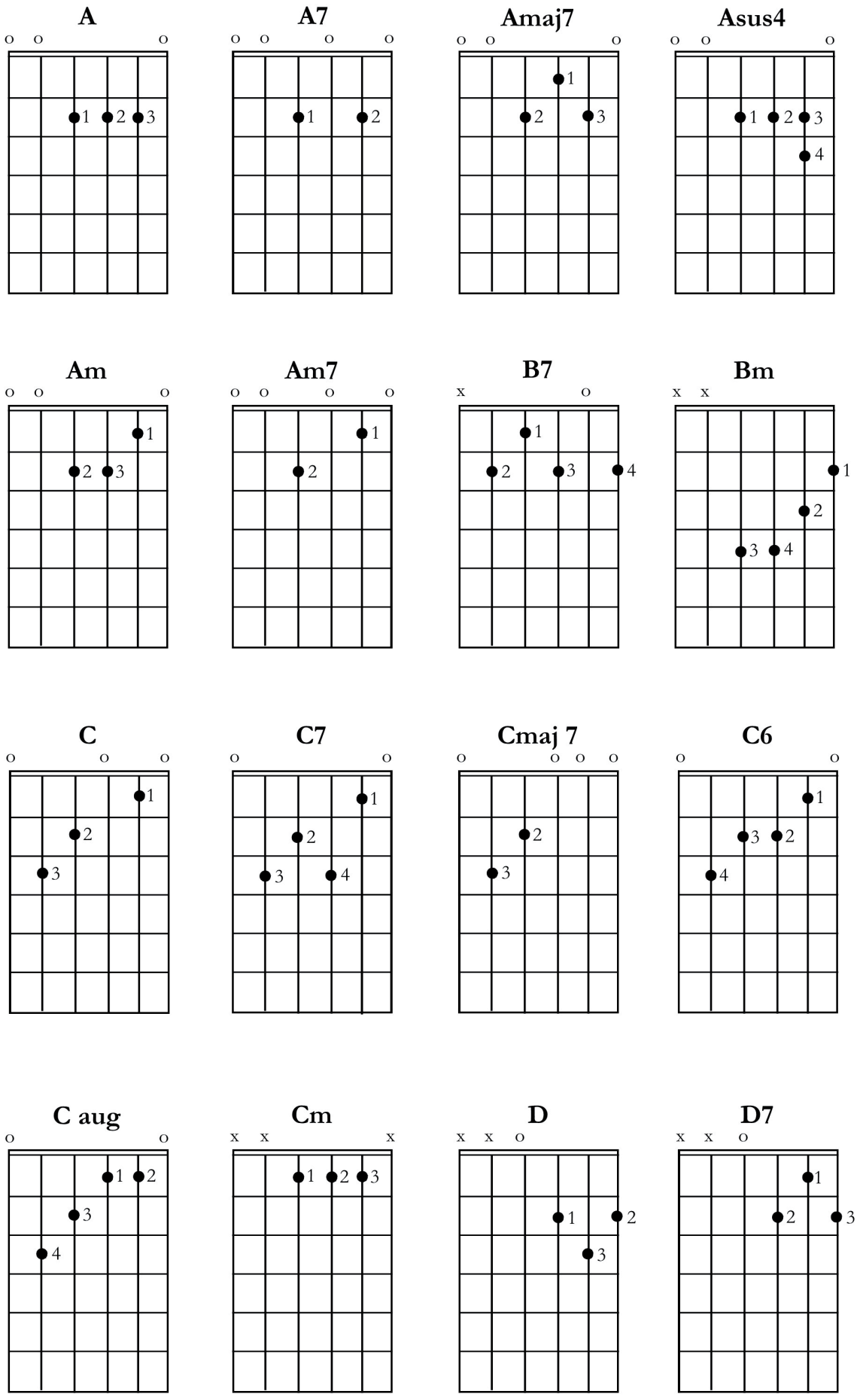
* Strings marked with an 'X' are not played and those with an 'O' are played open.

* A finger laid flat across two or more strings is called a barre, and is marked with a straight line.

* Fingered notes are marked with a number which corresponds to your fingers.

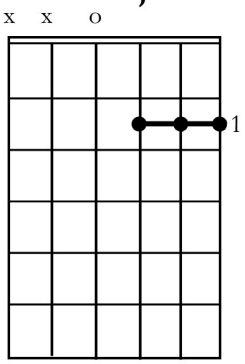
* The 'root' of the chord is marked 'R'.

Open Chords *Figure 29*

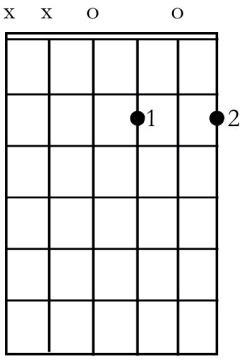


Open Chords *Figure 29 (cont.)*

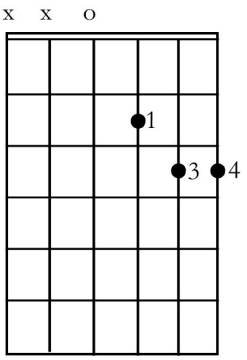
Dmaj7



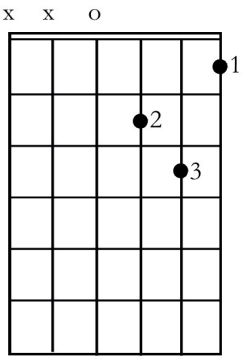
D6



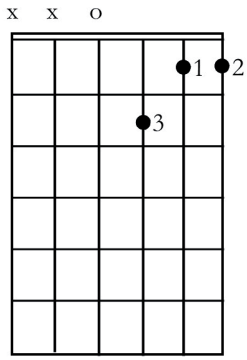
Dsus4



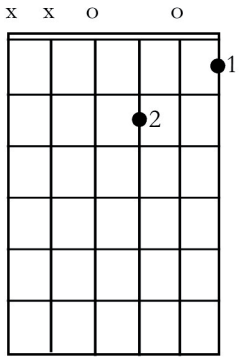
Dm



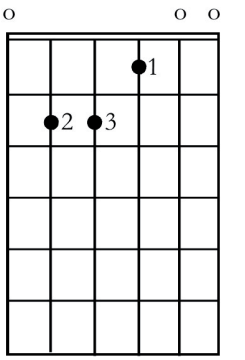
Dm7



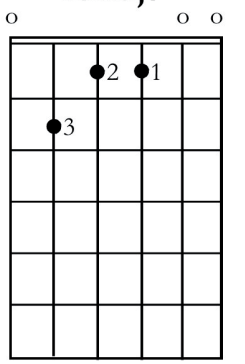
Dm6



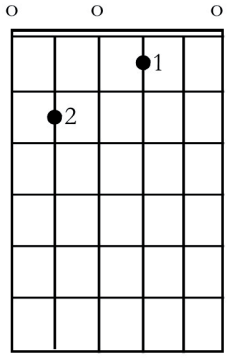
E



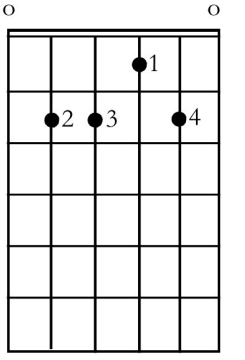
Emaj7



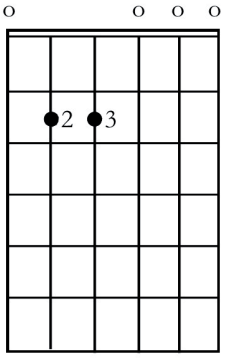
E7



E6



Em



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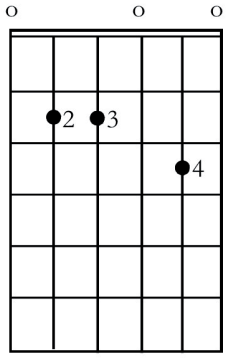
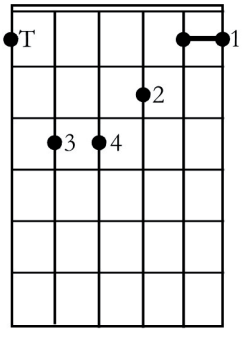
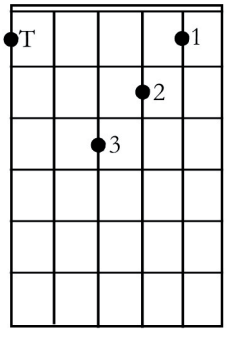


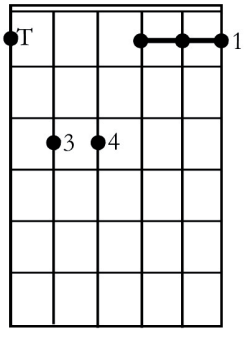
F



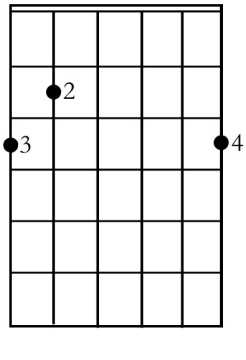
Fmaj7



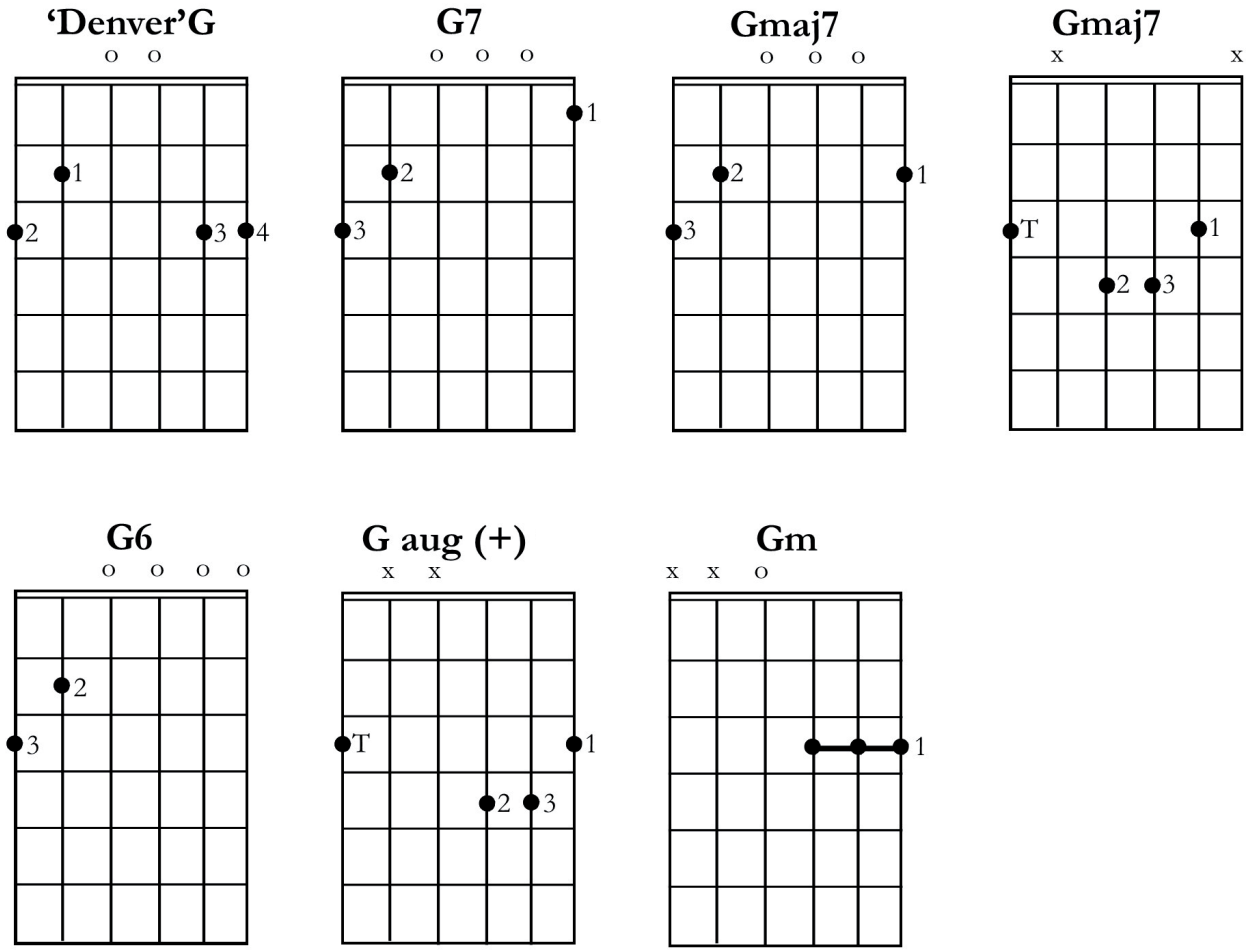
Fm



G

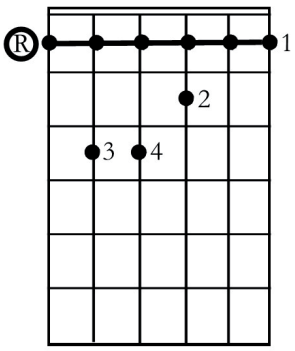


Open Chords *Figure 29 (cont.)*



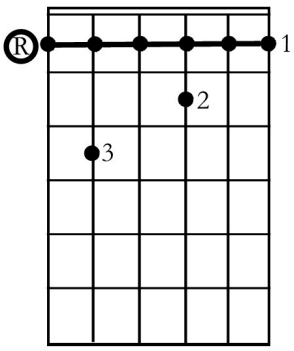
Root 6 Barre Chords *Figure 30*

Major (Dom)



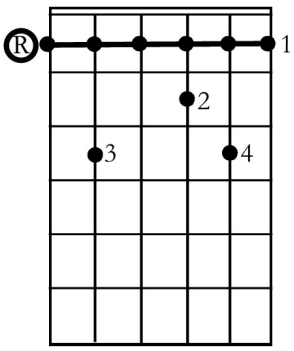
1-3-5

(Dom) 7th



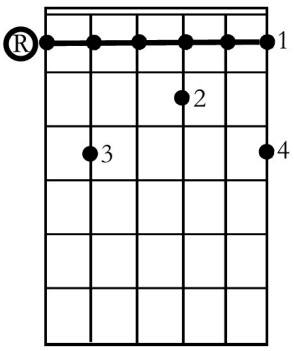
1-3-5-b7

Dom 6th



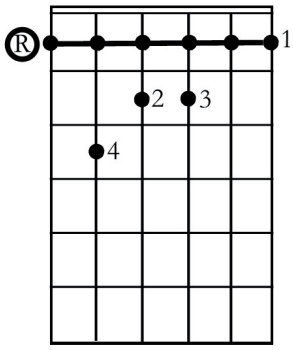
1-3-5-6-b7

Dom 9th



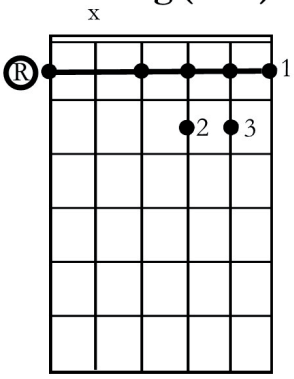
1-3-5-b7-9

Maj 7th



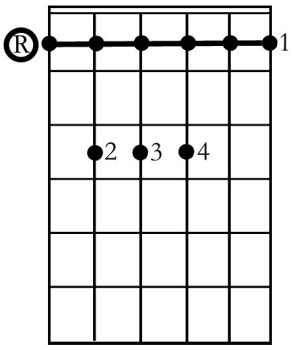
1-3-5-7

7th aug (+7th)



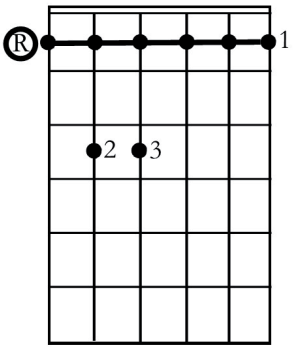
1-3-#5-b7

Sus4



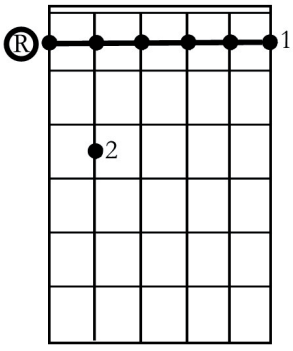
1-4-5

Minor (- or m)



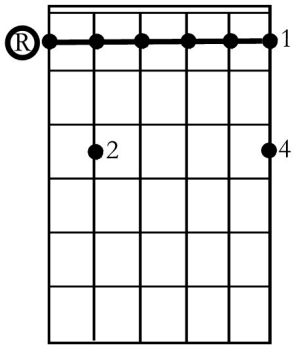
1-b3-5

Minor 7th



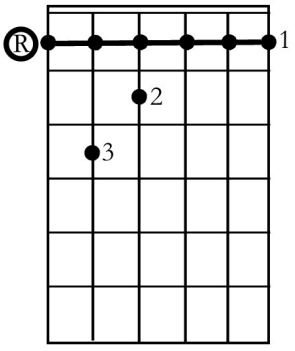
1-b3-5-b7

Minor 9th



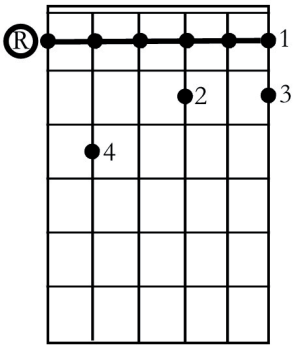
1-b3-5-b7-9

Minor/maj 7th



1-b3-5-7

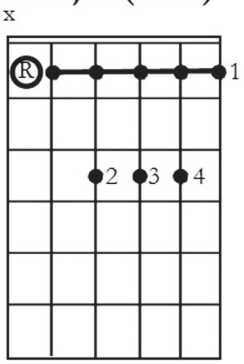
Dom7th b9



1-3-5-b7-b9

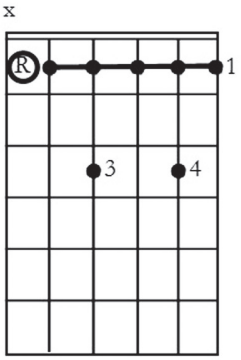
Root 5 Barre Chords *Figure 31*

Major (dom)



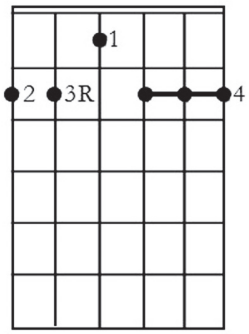
1-3-5

Dom 7th



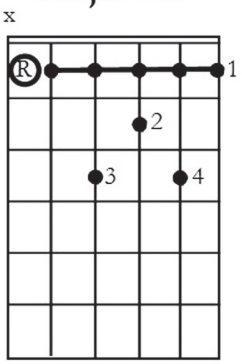
1-3-5-b7

Dom 9th



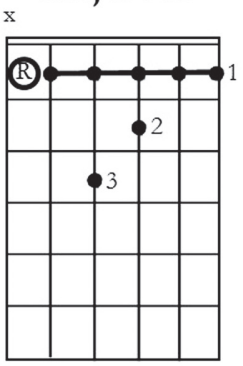
1-3-5-b7-9

Major 7th



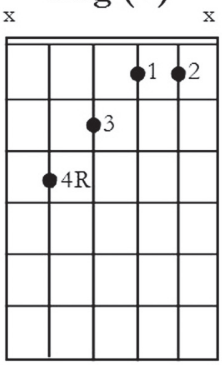
1-3-5-7

Major 9th



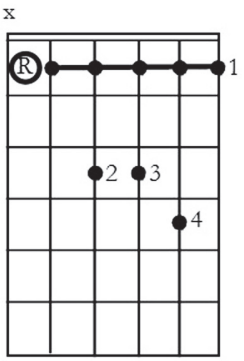
1-3-5-7-9

Aug (+)



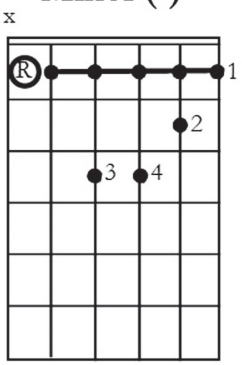
1-3-#5

Sus 4



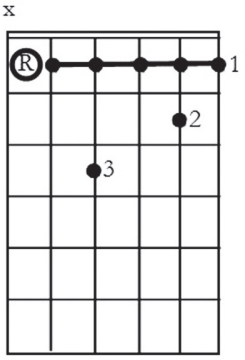
1-4-5

Minor (-)



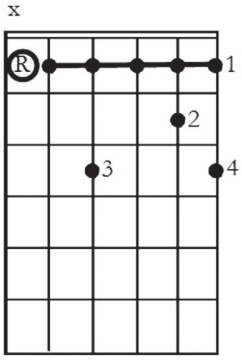
1-b3-5

Minor 7th



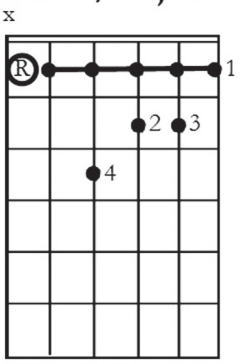
1-b3-5-b7

Minor 6th



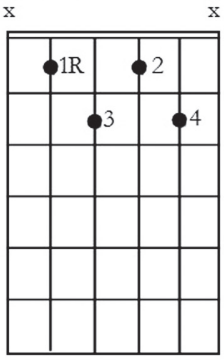
1-b3-5-6-b7

Minor/maj 7th



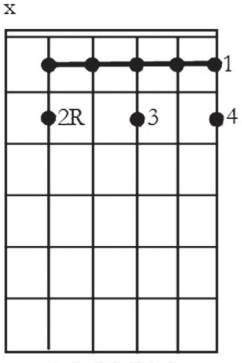
1-b3-5-7

Min7th b5



1-b3-b5-b7

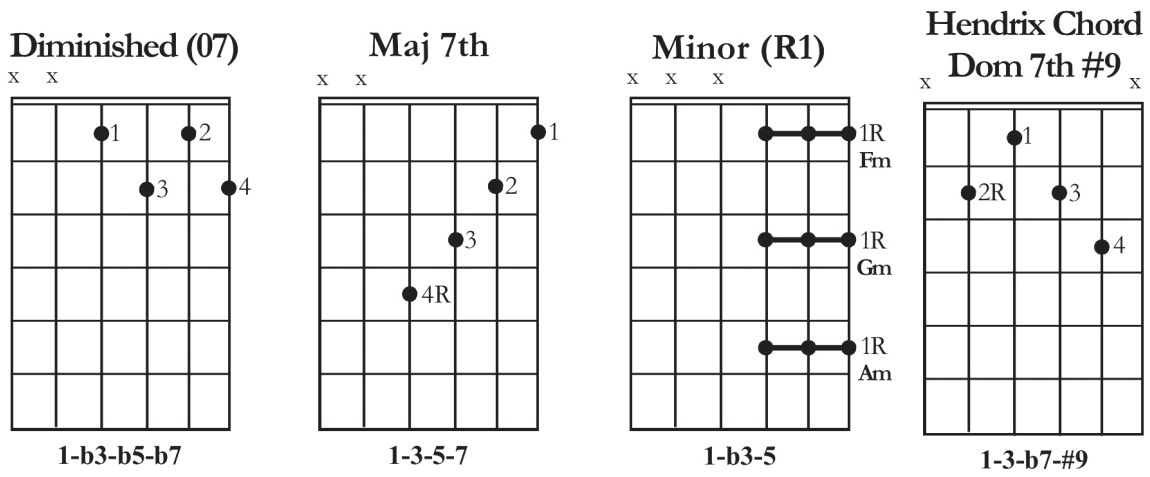
Dom7th b9



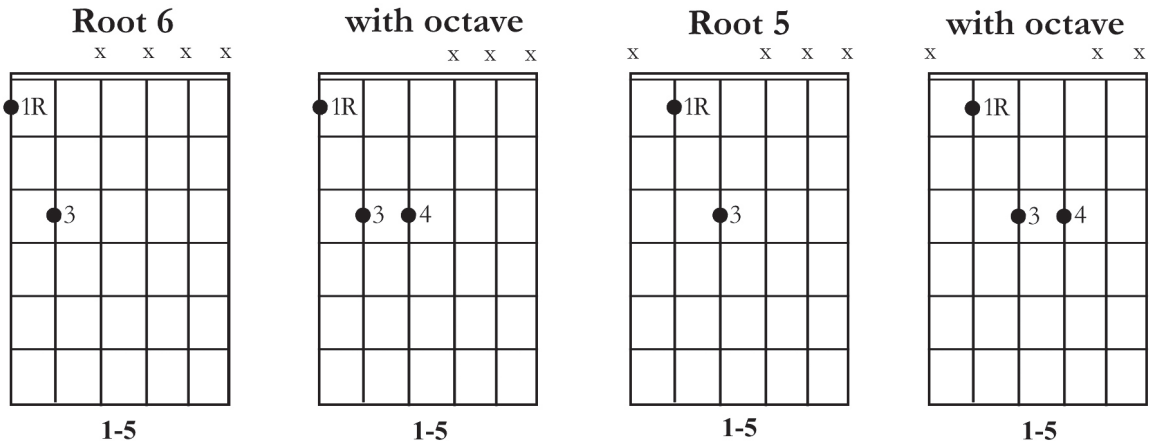
1-3-5-b7-b9

Other Moveable Chords *Figure 32*

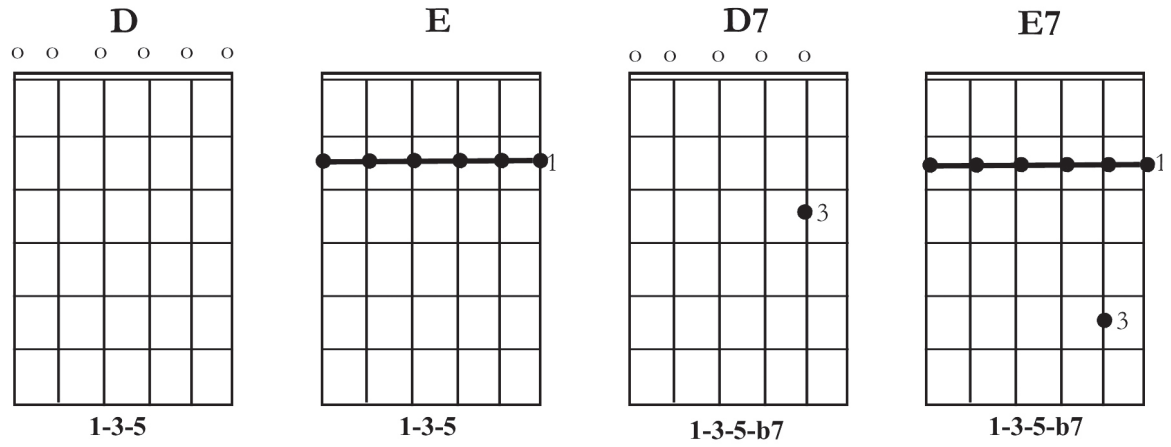
Miscellaneous Chords



Power (5) Chords



Open D Tuning Chords (see pages 52-3)



Using chords

Chords in the major scale are numbered in Roman numerals according to their position from the root which is *I*. These chords are normally played major or minor as follows.

Major chords are notated in upper case and minors in lower case, for example:—

I	*ii*	*iii*	*IV*	*V*	*vi*	*vii*
G	Am	Bm	C	D or D7	Em	F#m or F#dim

In G the *vi* Aeolian (relative minor) is the Em chord and the *ii* Dorian is Am.
If we want to add extensions to these chords we mark against the interval number like so:—

'ii7' corresponding to Am7 in the above key. Major chords are also called 'dominants' and can be notated as 'dom' against their interval thus:— *'domI'*.

Chord Progressions

Chord progressions can be applied to any of the 12 music keys.

We can play any of the Major chords as 7ths or maj7ths instead of dominants and the minors as 7ths or major7ths. We can also add an Augmented chord prior to or after the major. Commonly used are *V7's* of any diatonic chord working into a progression. The most common turnaround is *V7* to *I,* in the above key D7 to G, with *ii-* to *V* the next in line. This would be Am to D.

Suspended chords are often used to resolve into majors or major 7th's.

Cadences

Whilst dealing with chord progressions you should be aware of the term 'cadence'.
A cadence is formed by two chords at the end of a passage of music.

Perfect cadences sound though the music has come to an end and is formed by the chords *V-I.* Other forms of cadence are used to achieve different endings.

Figure 33:
Perfect Cadence *V-I*

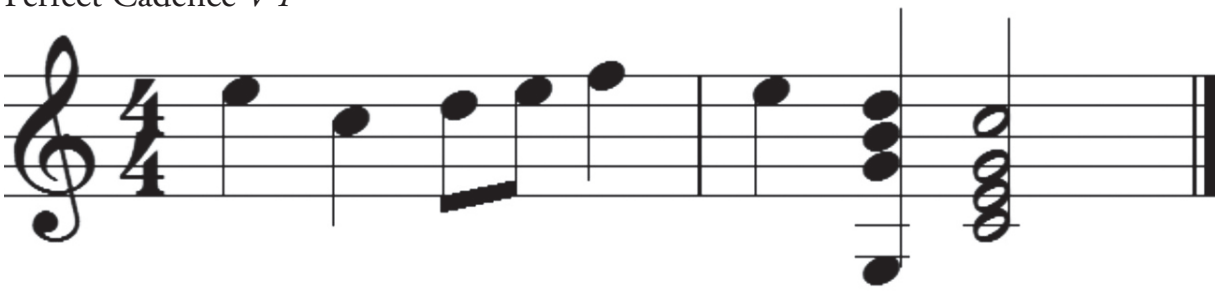


Figure 33:
Interrupted Cadence *V-vi* a 'surprise' cadence with a minor instead of a major.

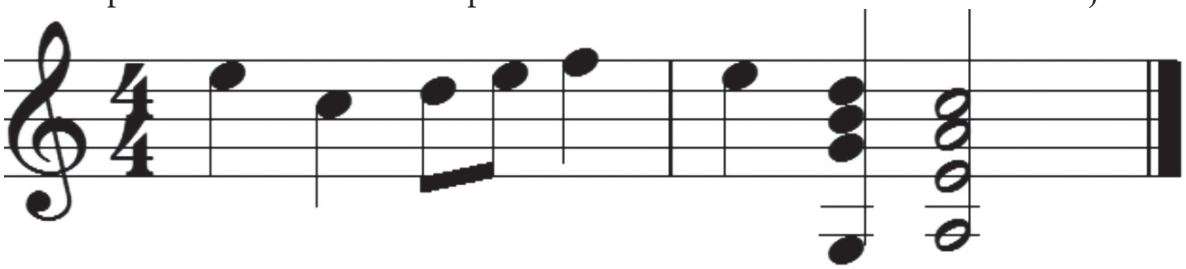


Figure 33:
Imperfect Cadence *I-V* sounds unfinished and ends on chord *V*.

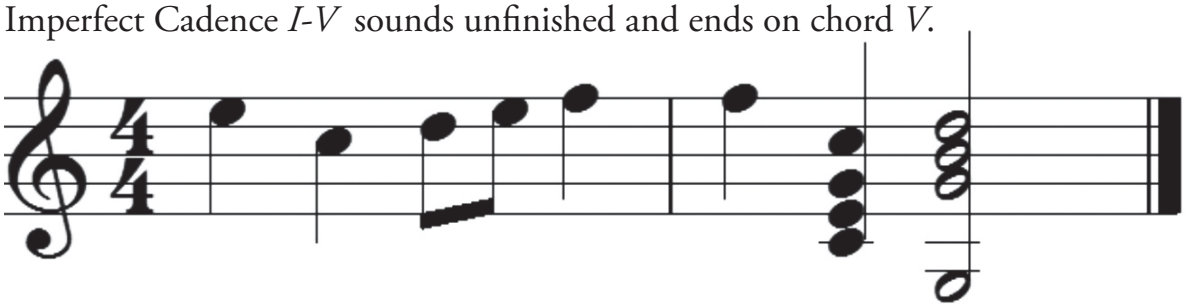
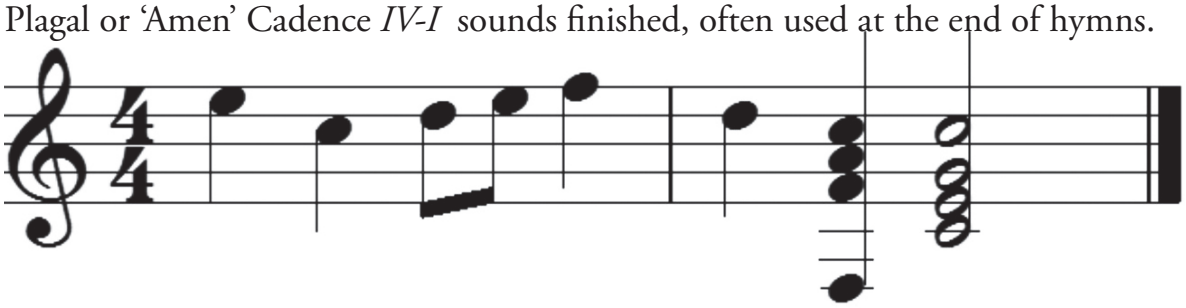


Figure 33:
Plagal or 'Amen' Cadence *IV-I* sounds finished, often used at the end of hymns.

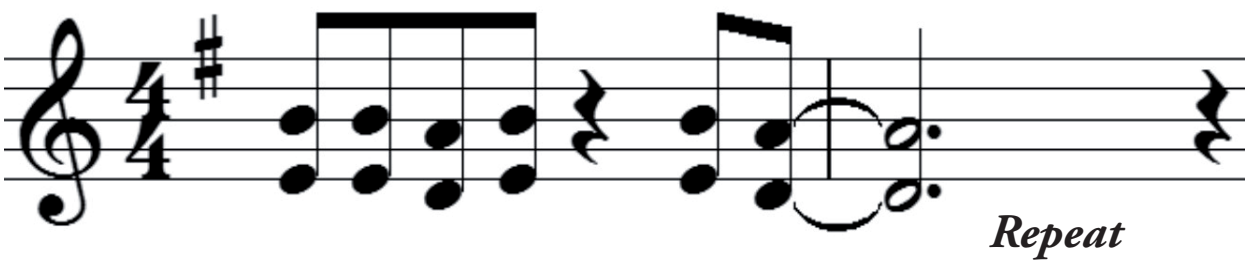


Comping Chords

Comping is the use of chords in different forms for the same triad throughout the piece. Playing the chord in the open, root 4, root 5, root 6 positions. This gives more variety to the music.

Playing '5' Power Chords. Figure 34

These are played on 2 or 3 strings, using only the root and 5th, omitting the 3rd. Intro signature licks and interval riffs can be incorporated into power (or 5) chord progressions. Example: J.J. Cale's *Cocaine*, as recorded by Eric Clapton.



The 4 chord trick

Countless popular music uses what I call the 4 chord trick of the 3 major chords (known as the '3 chord trick') of the key, together with the relative minor of the root chord.

You can strum these chords to many songs to accompany the voice. If you are playing an instrumental however, you will need to pick out the melody line with single notes, intervals or additional chords to recognise the tune.

Key	***I***	***iii***	***IV***	***V***	***vi***	***Note***
C	C	e	F	G	a	I-iii-V notes of the major triad I-IV-V major chords of key vi relative minor chord
G	G	b	C	D	e	
D	D	f#	G	A	b	
A	A	c#	D	E	f#	
E	E	g#	A	B	c#	
B	B	d#	E	F#	g#	
F	F	a	Bb	C	d	

Using scales with chords for leads, riffs and solos *Figure 35 (next page).*

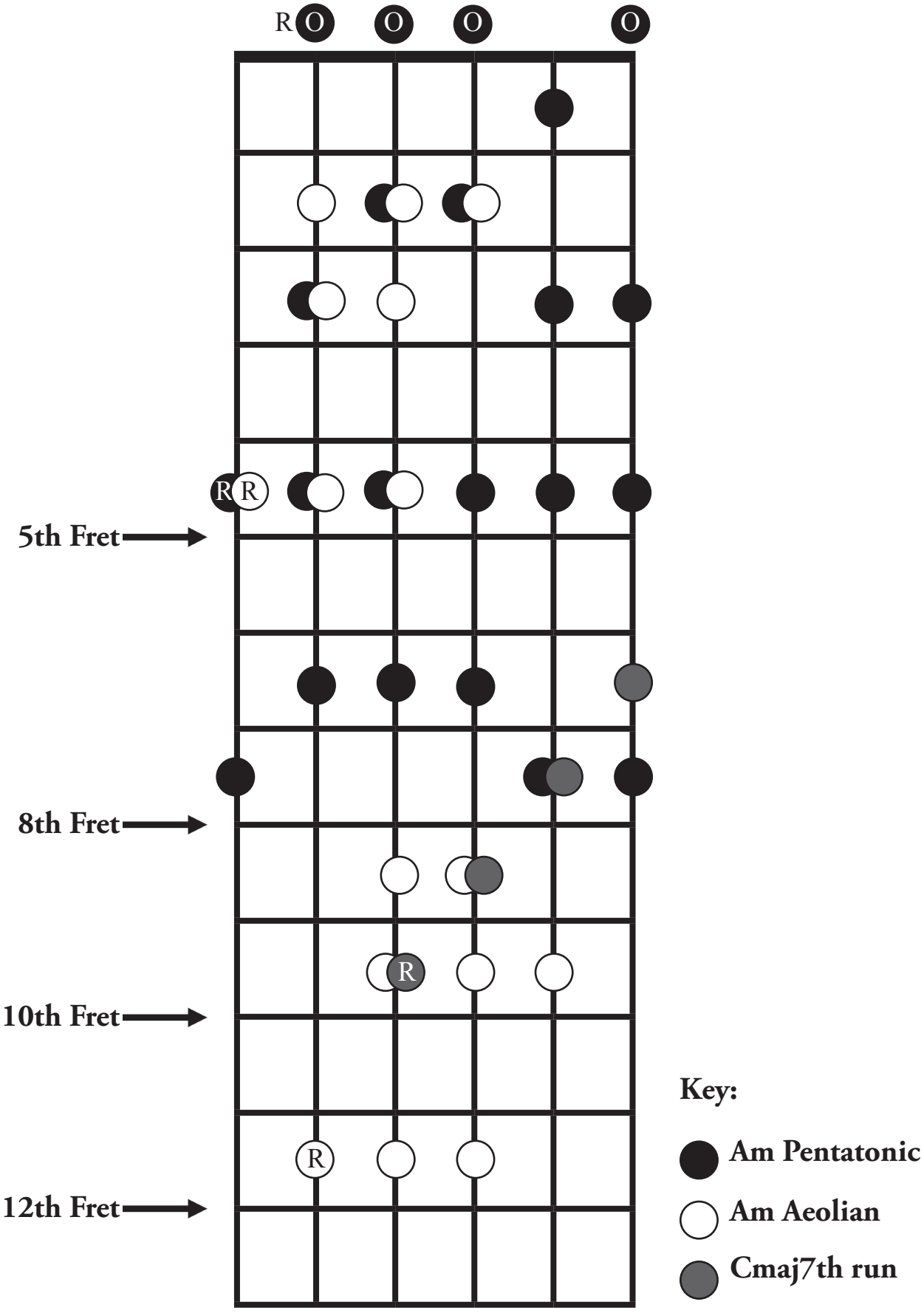
A riff is a repeating phrase which can appear throughout the music. It is generally of one to four bars in length and forms a hook for the listener.

A lick is a melodic line which a guitarist will use during a solo and can be played anywhere on the fretboard**.**

Pentatonic scales can be used with the Root's major chord *I* or its relative minor *vi* in playing riffs, intros and outros. See the following example in C major. Here we can riff using the Am pentatonic and the A (minor) Aeolian and also use the Cmaj7th run.

We can play the Am pentatonic scale off its root (6th string, 5th fret). And the Am natural (Aeolian) off the same root as well as the 5th string 12th fret. The Cmaj7th run is rooted on the 10th fret, 4th string.

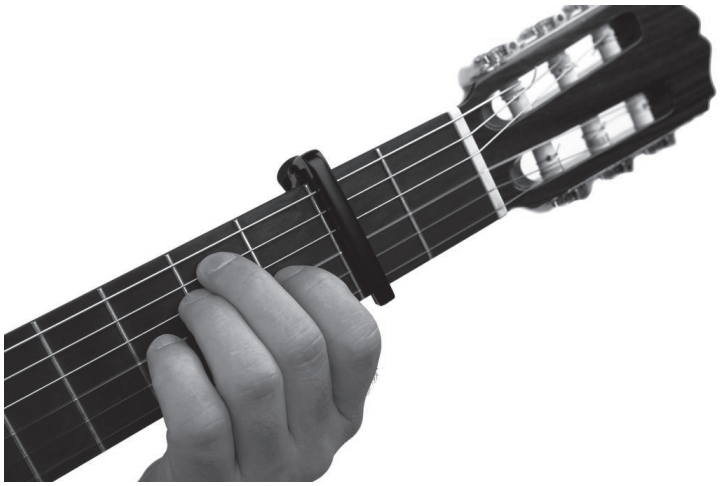
Playing scales to 'riff' over melody in key of C *Figure 35*



Using a Capo *Figure 36*

The capo looks like this and is clipped onto your guitar fretboard. It is chiefly used to enable you to use open chord shapes, but in a higher key. Let's take an example.

If you finger the open C chord but set your capo behind the 2nd fret you are now playing a D chord. And with the capo in place you can continue to play the open Am shape which plays as Bm, G shape which plays as A and so on. Capos are used when picking or strumming chords, and playing in this manner you avoid having to use barre chords and have to remember fewer chord shapes.



The other use for a capo is to bar selective strings as in this lovely arrangement, by Jerry Bird, of the Irish Classic *Sheebeg Sheemore Figs 37* and *38*.

Figure 37

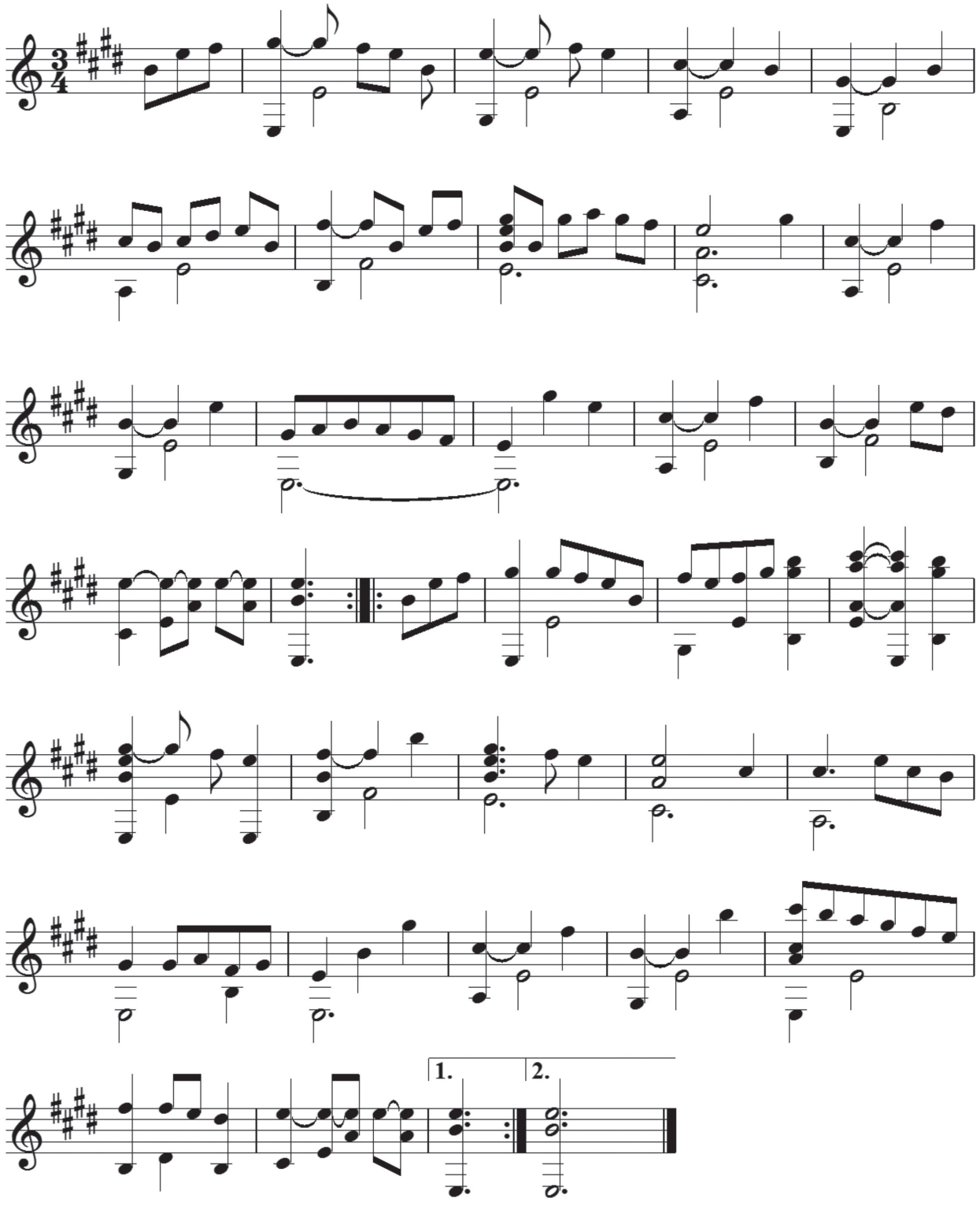
The capo is placed on strings 1-5 at fret 2, enabling the root note to be played using open string 6 in the key of E, with the left hand completing the root chord using the D chord shape. *Sheebeg Sheemore* is usually played in the key of D, which would involve tuning the strings down by a whole tone.

Figure 38

Sheebeg Sheemore

Tuning EADGBE Capo 2 on ADGBE only.

Turlough O' Carolan



Signature Licks

Some music can be recognised by the opening bar or two. A series of notes introduces the music so that it is instantly recognisable. These licks can also appear in the interlude. One such signature lick is contained in the first two measures (bars) of the Beatles' *Day Tripper, Fig. 39* and the Temptations' *My Girl, Fig. 40:*

Figure 39: Day Tripper (Lennon/McCartney):

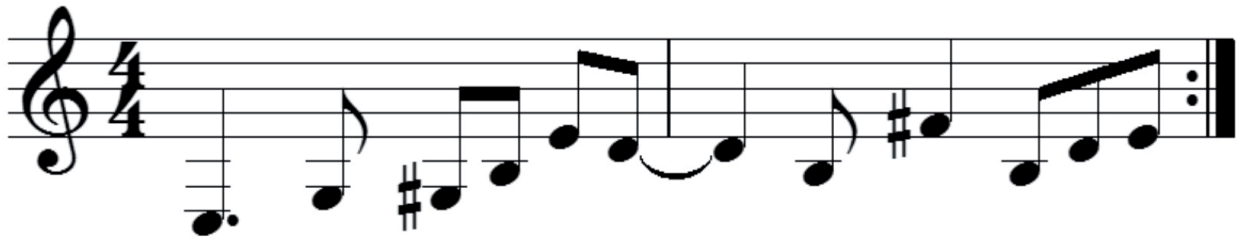
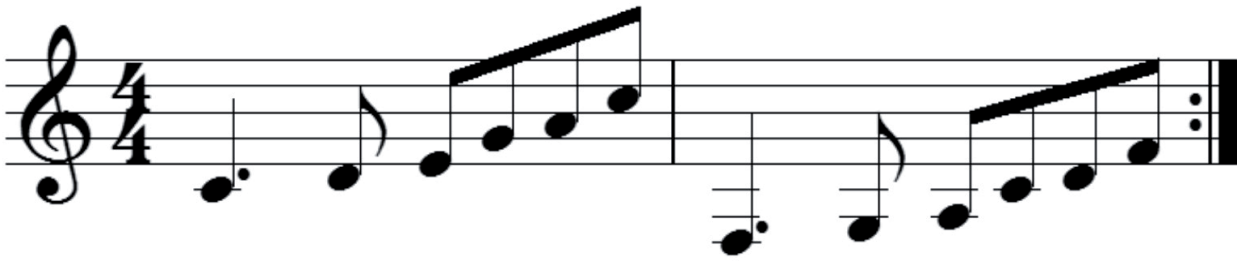


Figure 40: My Girl (Robinson/White):



Modal Interchange is where one or more of the chords are played as the complete opposite of their Diatonic structure.

Diatonic	G	Am	Bm	C	D	Em	F#m
Modal Interchange	Gm	A	B	Cm	Dm	E	F#

These chords are substituted periodically without changing the key and they create a dynamic in the piece. Take these two examples in the key of C major.

The Eagles' song *Desperado* includes this chord progression:

/ G / G7 / C / Cm /
Here the Cm chord, not in the key, follows C.

We can also use a major chord to replace what would be a minor in the diatonic scale. *Georgia on my Mind* by Hoagy Carmichael:

/ C / E7 / Am / Dm / Fm7 /

Here the second measure features the E7 chord rather than Em7. In addition the 4th measure includes Fm7 instead of F7.

Substituted Chords

These also feature in modal interchange, as we have not followed the normal diatonic structure, but substituted chords which are a half-step (semitone) higher. These chords are commonly used to precede another diatonic chord.

Diatonic Chords	*Imaj*	*iim*	*iiim*	*IVmaj*	*V*	*vim*	*viim/viidim*
Example, Key of A	Amaj	Bm	C#m	Dmaj	E	F#m	G#m/G#dim
Substituted Chords (raised a semitone)	A#maj	Cm	Dm	D#maj	F	Gm	Am/Adim

Modulation

When you change keys in a piece of music it is called modulation. Most commonly you would change by a whole step, for example from playing in G to playing a section in the key of A.

We can make these key changes very smooth by going from the major chord in one key to the same note letter minor in another.

For example, below, we change from the key of C to the key of F:

| C | Dm | G7 | ***Gm7*** C7 | F |

This chord progression goes from the *V7* (G7) in C to the ***ii7*** **(Gm7)** and the *V7* (C7) in F.

In the standard *A Nightingale Sang in Berkeley Square* by Eric Maschwitz and Manning Sherwin, played in G major, the chorus modulates to the key of B major. B is the third of the G chord and this change is melodious, coming as it does with the chorus.

Figure 41: A Nightingale Sang in Berkeley Square

G Em Bm G C B7 Em
That certain night, the night we met, there was magic abroad in the air.
Gmaj7 Cmaj7 G Cm6
There were an-gels din-ing at the Ritz,
G Em Am7 D7 G
And a nightingale sang in Berk-ely Square.

Gm7|Em7|Am7|Dsus4|D7

G Em Bm G C B7 Em
I may be right, I may be wrong, but I'm perfectly willing to swear
Gmaj7 Cmaj7 G Cm6
That when you turned and smiled at me.
G Em Am7 D7 G
A nightingale sang in Berk-eley Square. (continued over)

B G#m7 C#m F#7
The moon that lingered over London Town,
D#m7 Cm7 F#7
Poor puzzled moon, he wore a frown.
B G#m7 C#m F#7
How could he know we two were so in love?
C#m7 Am D+
The whole damned world seemed upside down,

G Em Bm G
The streets of town were paved with stars,
C B7 Em
It was such a ro-mantic af-fair,
Gmaj7 Cmaj7 G Cm6
And as we kissed and said good-night,
G Em Am7 D7 G
A nightingale sang in Berk-eley Square.
E7
I know 'cause I was there,
Am Am7 D7 G
That night in Berk-eley Square.

G+| Gsus4| G

Blues

12 and 16 bar chord progressions

The blues is a musical form, which emerged from the early days of slavery in the USA, and developed from its African roots into an American folk genre.

Blues chord progressions usually consist of 12 or 8/16 bars (measures). In its most basic form, it utilises just three chords, I, IV and V, constituting the 'three chord trick' referred to previously.

The last measures consist of a turnaround, after which you either repeat the previous measures, or substitute an ending.

Standard 12 Bar Blues Key E major:

I	*I*	*I*	*I7*	*IV7*	*IV7*	*I*	*I7*	*V7*	*IV7*	*I*	*V7*
E	E	E	E7	A7	A7	E	E7	B7	A7	**E***	**B7***

*Substitute turnaround here

16 Bar Blues Chord Progression Key E major:

I	*I*	*V7*	*V7*	*IV7*	*IV7*	*IV7*	*IV7*	*I*	*I*	*V7*	*V7*	*1*	*I*	*V7*	*V7*
E	E	B7	B7	A7	A7	A7	A7	E	E	B7	B7	**E***	**E***	**B7***	**B7***

*Substitute turnaround here

Simple turnarounds

A turnaround chord progression in the last few bars of the score leads you back to a repeat of the earlier measures. In modified form it can lead to an ending.

V or *V7* to *1* (B or B7 to E): *ii to V* to *I(F#m to B to E)*

Turnaround (2 bars):

I	*I7*	*IV7*	*iv7*	*I*	*V#7*	*V7*	*V7*
E	E7	A7	Am7	E	C7	B7	B7

Typical ending (2 bars):

I	*I7*	*IV7*	*iv7*	*I*	*i#7*	*I7*	*I7*
E	E7	A	Am7	E	F7	E7	E7

Many blues players will introduce a song with an additional two bars of instrumental music.

Figure 42 is a typical example in E major:

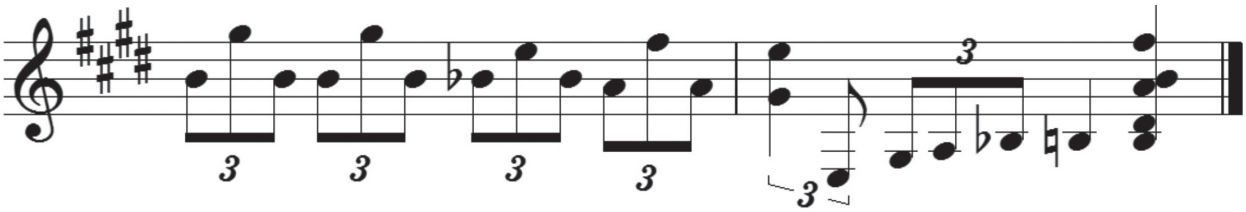


Figure 43: See See Rider, a 12 bar blues in E major — a traditional song recorded by Blind Lemon Jefferson, and The Animals.

E E E E7
See, see Rider, See what you done done, Lord, Lord Lord,
A7 A7 E
See, see Rider, See what you done done,
B7 A7 E
You made me love you, Now your man done come.
B7
Hey, hey, hey hey.

Figure 44: St James' Infirmary Blues

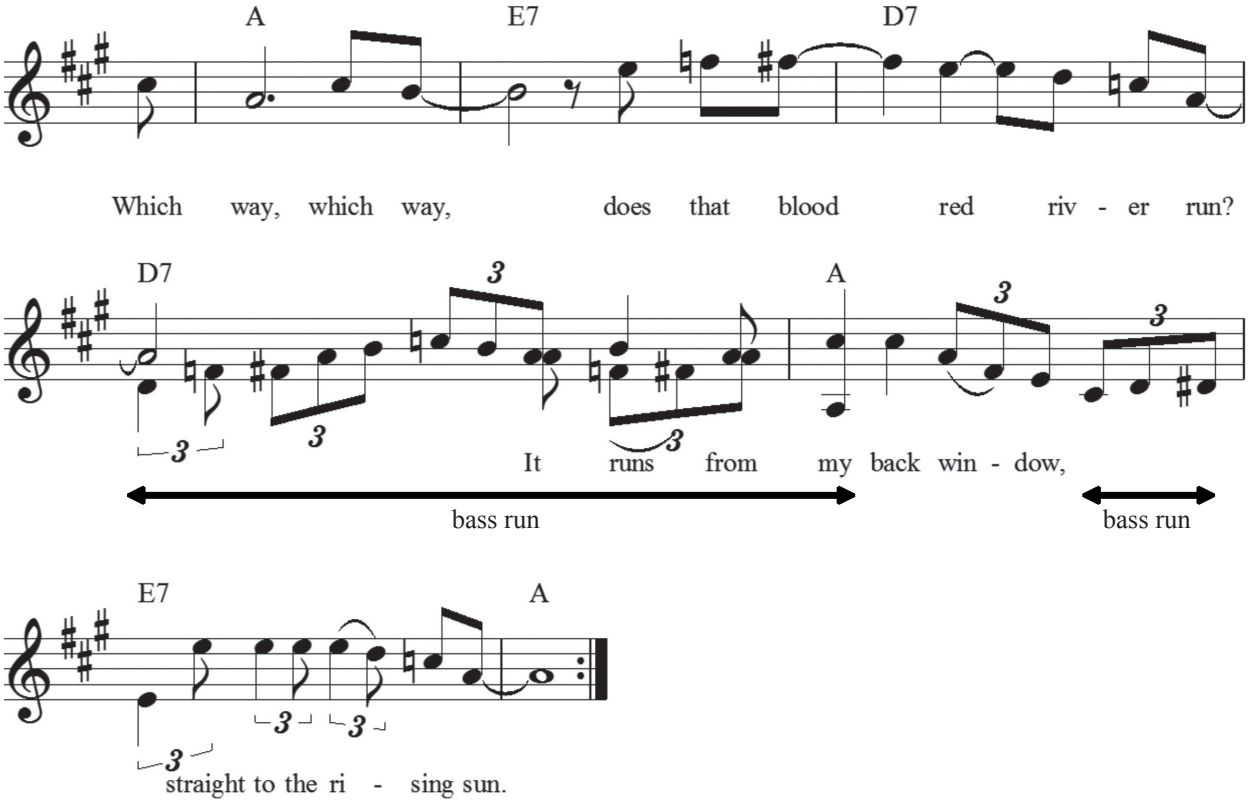
A 16 bar blues in D minor — a traditional folk-blues song recorded by many artists, including Louis Armstrong and Janis Joplin.

Dm A7 Dm Dm7
It was down in old Joe's bar room
Dm Gm7 A7 A+7
On a corner by the square
Dm A7 Dm Dm7
The drinks were served as usual
Bb7 A7 Dm A7
And the usual crowd was there

Bass Runs

A series of ascending or descending bass notes usually played using the scale notes. They are used between phrasings of the melody and also in changing from one chord to another.

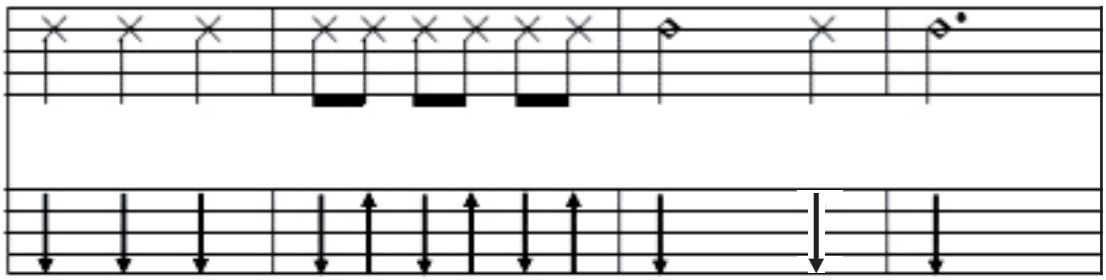
Take this example, the blues classic *Blood Red River*, which was recorded by Brownie McGhee and Sonny Terry. Here in A major. *Figure 45*



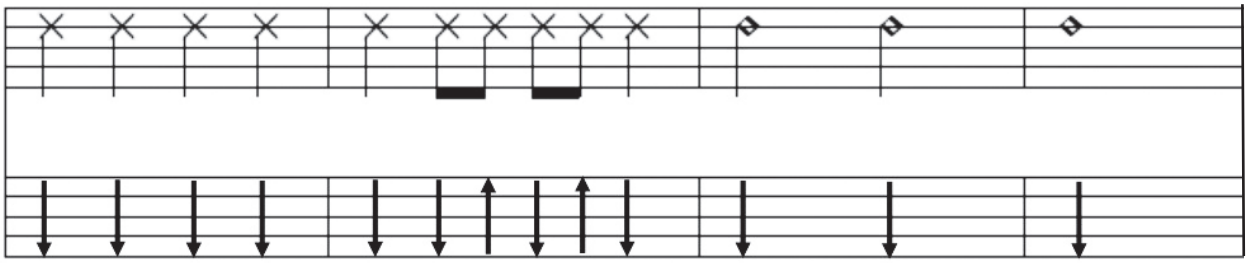
Strumming Chords *Figure 46*

Here are two strumming patterns, the first for 3/4 Waltz Time and the second 4/4 time.

3/4 Time



4/4 Time



Strumming patterns essentially use rhythmic figures associated with notes but placed in 1, 2 or 4 measures that repeat. Hold the full chord and strum down and up as shown.

Either a 'pick' (plectrum), or fingers may be used, according to preference. Picks are available in a variety of thicknesses according to taste. Thumb-picks attach to the thumb and are used to pick bass lines, and may be used in strumming, fingerstyle playing, or a combination of both.

When strumming using fingers it is common to use the back of the nail of your fore-finger on the downstroke, and the thumbnail on the upstroke.

- To prevent strumming an unwanted note when playing open chords, finger the lowest available note of the chord triad. For example, thumb the F# on the 6th string when playing D.
- If we are strumming chords we can smooth the transitions by making a 'scratch' sound.
- We can also 'palm mute' a chord, letting the back of our palm touch the strings. This technique is really useful in playing 'power chords'.
- Note we have used the symbol ↓ for a down strum and ↑ for up. You will find music printed by some publishers use ⊓ for down and V for up.

In music written purely in chords we can use the repeat sign •/• See *Fig. 47.*

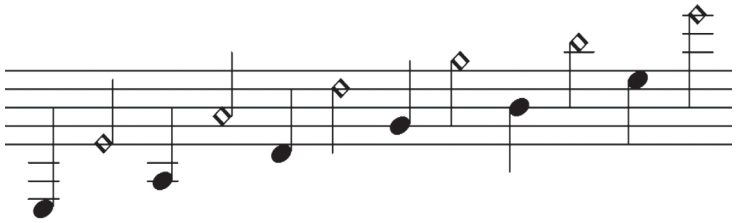
Amazing Grace (by John Newton). *Figure 47*

| G | ·/· | C | G |
Amazing grace, how sweet the sound
| G | ·/· | D | D7 |
That saved a wretch like me.
| G | ·/· | C | G |
I once was lost, but now I'm found
| Em | D | G | ·/· |
Was blind, but now I see

Harmonics *Figure 48*

Put simply, these are sounds achieved by the vibration of strings which are plucked while being momentarily touched at the fret, usually with the little finger. Most easily done at the 12th fret, this produces a high pitched, ethereal sound.

Harmonics are notated in sheet music with diamond-headed notes. The open-string harmonics, available at the 12th fret (in standard tuning), are shown below. Alongside, are the notes produced by simply plucking the strings.



Picking Styles

Fingerstyle

When playing fingerstyle guitar you pick the strings with your right hand fingers and thumb. This contrasts with the technique of strumming and playing single notes with a pick.

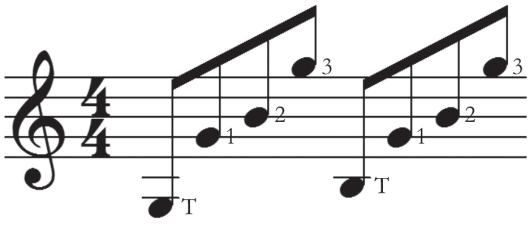
The thumb is used to pick the 6th, 5th and 4th strings with downstrokes to give us the lower notes. The first three fingers are used for the other strings with upstrokes. The index finger picks the 3rd string, the ring finger the 2nd string and the third finger the 1st.

Flat-picking

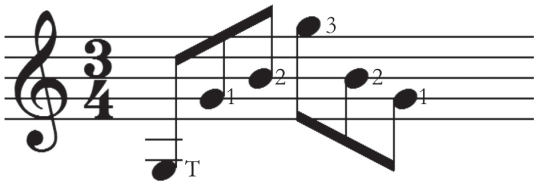
Is simply a term to describe striking the strings with a pick (plectrum) which is held between the thumb and first two fingers.

There are many picking patterns. Here is a selection:

Picking pattern in 4/4 time Figure 49



Picking in pattern in ¾ time Figure 50



Chords to *House of the Rising Sun,* 3/4 time. *Figure 51*

3/4 Time

| Am | C | D | F |
There is a house in New Or-leans
| Am | C | E | E7 |
They call the Rising Sun
| Am | C | D | F |
It's been the ruin of many a poor boy
| Am | E | Am | E |
And God, I know I'm one

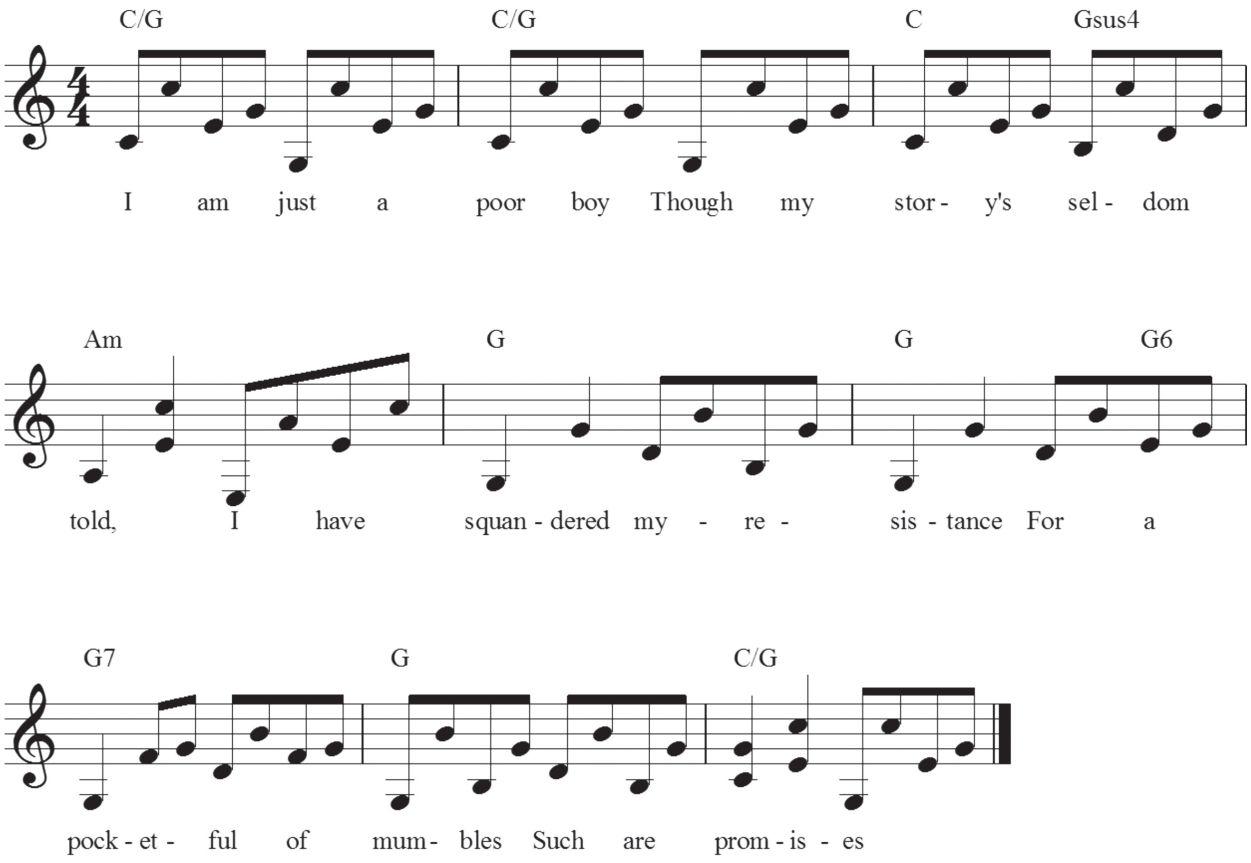
The above song is commonly played using the fingering pattern illustrated in *Fig. 50.*

Travis Pick. Figure 52

Named after Merle Travis. In this style of picking we establish a strong, rhythmic bass line by alternating between the root and fifth note of each chord using the thumb. Between the bass notes the other three fingers play the higher notes of the chord.

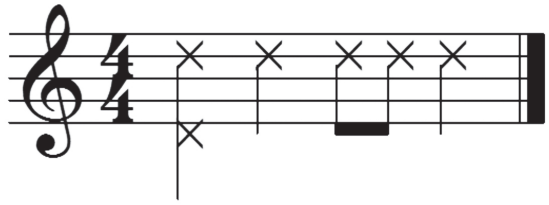
Used by Paul Simon in playing *The Boxer*.

The first nine bars of the song are reproduced below:

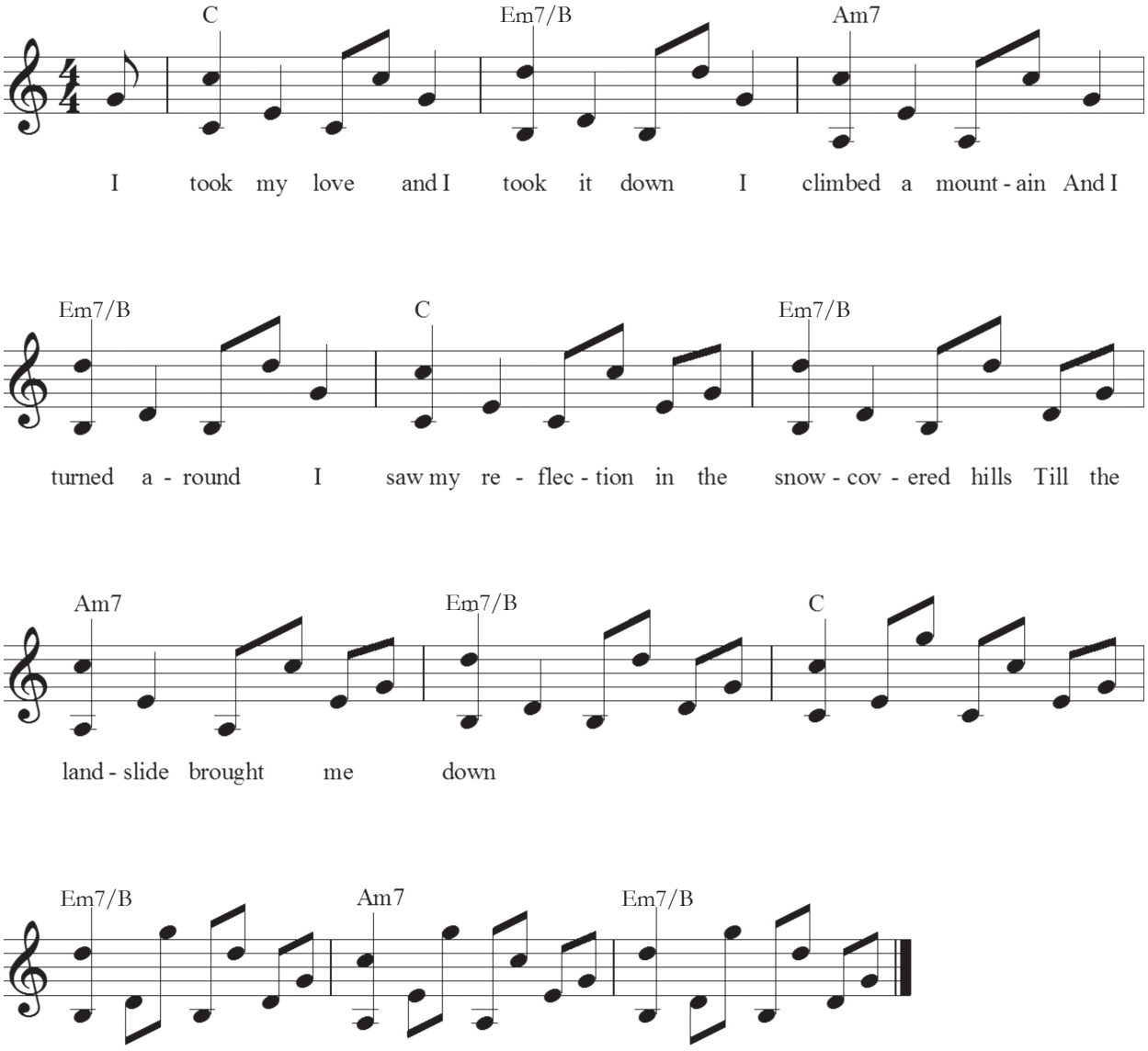


Jump Roll. Figure 53a

Here we play two notes of the chord together on the first beat — a bass note with a higher note of the chord. This is followed by arpeggiated notes of the chord, generally on the higher strings to the following rhythm, giving a distinctive sound.



Playing examples include Ralph McTell's on his *Streets of London* and Lindsey Buckingham's on *Landslide* by Fleetwood Mac (*Fig. 53b*). Note in this example how the playing gets more elaborate with each measure, while maintaining the essential beat of the 'jump roll'. Note, Lindsey Buckingham plays with a capo at the third fret for this song.



Cycle of Keys

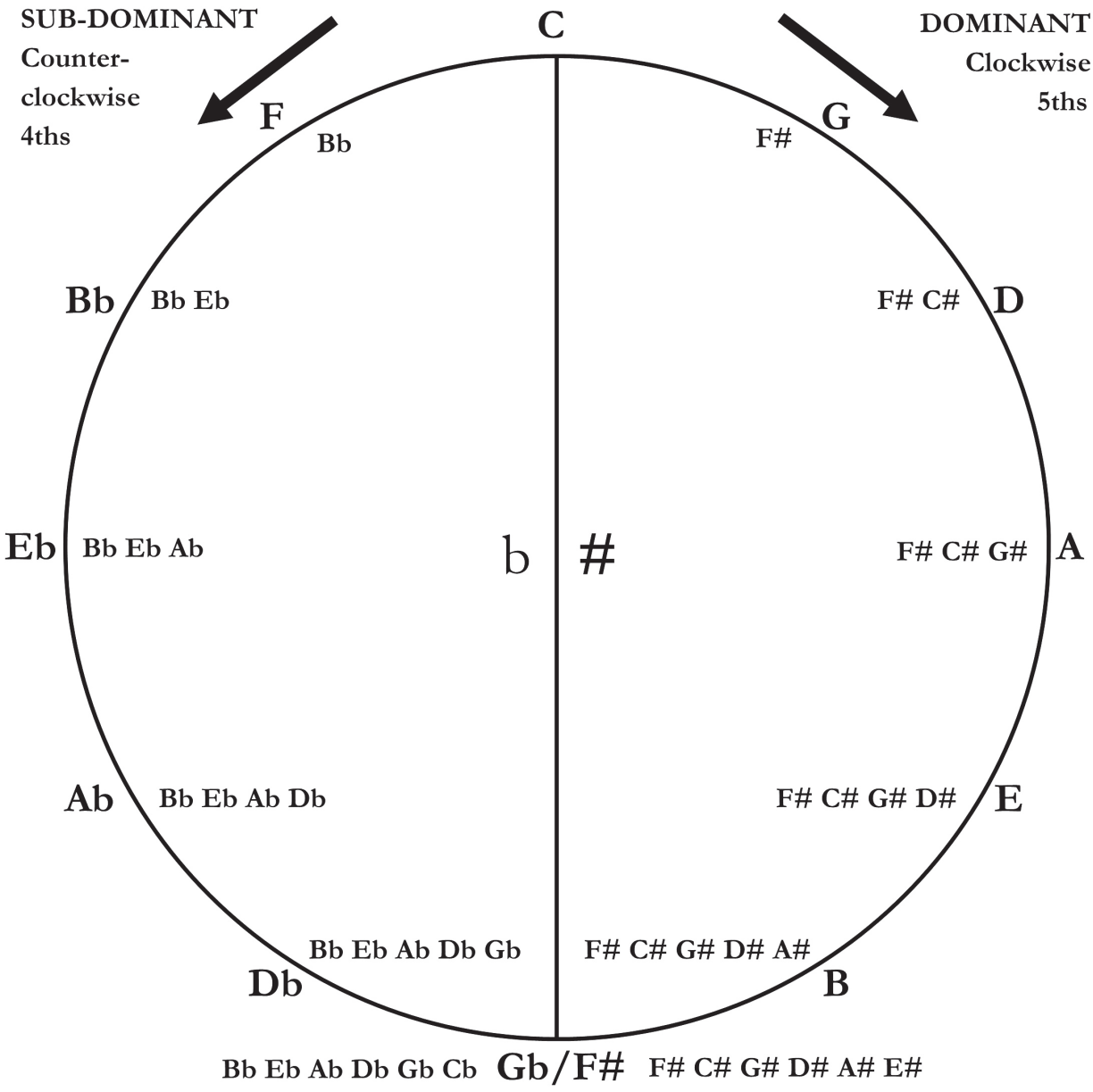
Just as the notes of a chord are related to the scale beginning with the root note, the chords themselves are related to each other in a sequence. For example:

In C major, the C chord, where C is the root of the scale, is called the 'tonic' chord.

The F chord (Root = 4th note of the scale of C) is called the sub-dominant chord.
The G chord (Root = 5th note of the scale of C) is called the dominant chord.

This relationship is called the cycle of keys. As you can see (*Fig. 54*) with C at the top, going clockwise gives us the G major chord, which is the dominant formed from the 5th interval of the C major natural scale. Counterclockwise from C we arrive at the F chord which is the Sub-dominant formed from the 4th interval of the C major scale.

The Cycle of Keys *Figure 54*



- **For # keys add prior changes and the 7th of the scale.**
- **For b keys add prior changes and the next key's name.**

Moving to G major (the tonic), to the right clockwise is D. This is the dominant chord, the 5th, of the G major natural scale. If we go counterclockwise we have the sub-dominant C major chord, the 4th of the G major scale. We can repeat this process, going right and left from the tonic chord of each natural major scale. Note all these chords are played as majors.

This sequence also applies to the 'same letter' natural minor scales.

There is a direct relationship between these major chords and their relative minor chords. For example:

Relative Minors

Am is the relative minor of C major, A being the 6th degree (note) of the 'Ionian' scale. Am is the tonic chord.
Dm is the sub-dominant (counterclockwise) 4th chord.
Em is the dominant (clockwise) 5th chord.

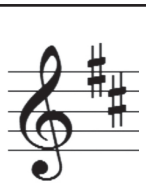
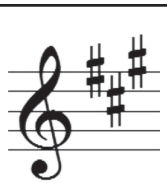
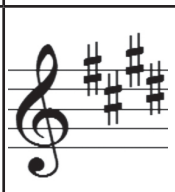
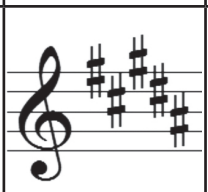
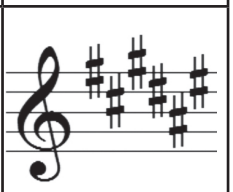
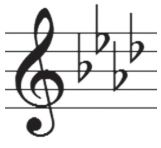
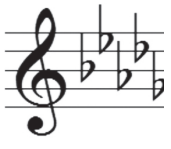
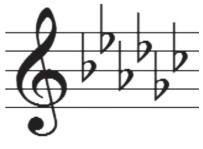
Parallel Chords

Finally, we have chords which are parallel to the major chords.
For example, parallel to the C major chord we have the following chords:

Cm which is the 'tonic'
Fm the 'sub-dominant' (counterclockwise)
Gm the 'dominant' (clockwise)

As well as giving us the major chord relationships the 'Cycle of Keys' also provides the key signatures of all the natural major scales formed from the 12 tones of the chromatic scale.

A chart of the major key signatures is set out below. *Figure 55*

C	**G**	**D**	**A**	**E**	**B**	**F#**
						
No sharps or flats	One sharp F#	Two sharps F# C#	Three sharps F# C# G#	Four sharps F# C# G# D#	Five sharps F# C# G# D# A#	Six sharps F# C# G# D# A# E#
	F	**Bb**	**Eb**	**Ab**	**Db**	**Gb**
NOTE: F# and Gb are the same						
	One flat Bb	Two flats Bb Eb	Three flats Bb Eb Ab	Four flats Bb Eb Ab Db	Five flats Bb Eb Ab Db Gb	Six flats Bb Eb Ab Db Gb Cb

Modes

In this section of music theory we look at modes. It will help you understand this more easily if you refer back to *Fig. 26* (on page 15), which illustrates the construction of scales.

A scale that is built from the notes of one scale is called a mode. The most commonly used are the modes of the natural major scale, which as you know, has seven notes and therefore seven modes. Since we are starting at different points within the reference scale and playing to its octave, each mode's interval formula of tones and semitones is different.

So far we have seen how to create the natural major scale (Ionian Mode) from the chromatic 12 tones. We have also learned that the relative minor scale begins on the 6th interval of the natural major scale and is called the 'Aeolian mode'. Each mode is referenced according to its root note, just like any other scale, and the mode name is based upon the note's position within the reference scale. Based on the chord triads built off each interval we can tell if the mode is major or minor.

The natural major and natural minor scales form the basis of western music. Other scales, with different intervals, are used in eastern and other music. The use of modes other than the Ionian and Aeolian is often found in folk (particularly Celtic) music, and also in jazz.

Using the C natural major scale, in this example, the complete set of modes is set out below.

Modes. F*igure 56*

Mode	Position	Note	Interval sequence	Scale type
Ionian	Root I	C	T T s T T T s	Natural Major
Dorian	II	D	T s T T T s T	Minor
Phrygian	III	E	s T T T s T T	Minor
Lydian	IV	F	T T T s T T s	Major
Mixolydian	V	G	T T s T T s T	Major
Aeolian	VI	A	T s T T s T T	Natural Minor
Locrian	VII	B	s T T s T T T	Dim/Minor 7th

To remind you, each note of a scale represents a degree, and the distance from one note to another is called an interval.

Modes for guitarists

After Ionian and Aeolian, which we have already covered, Mixolydian and Dorian are the most commonly used. The Mixolydian mode is just a major scale with a flattened seventh, used in R&B, blues and rock.

For example, C Mixolydian = C D E F G A **Bb** C

The Dorian mode is a normal minor scale with the sixth note raised a half tone.

Example, A Dorian = A B C D E **F#** G A

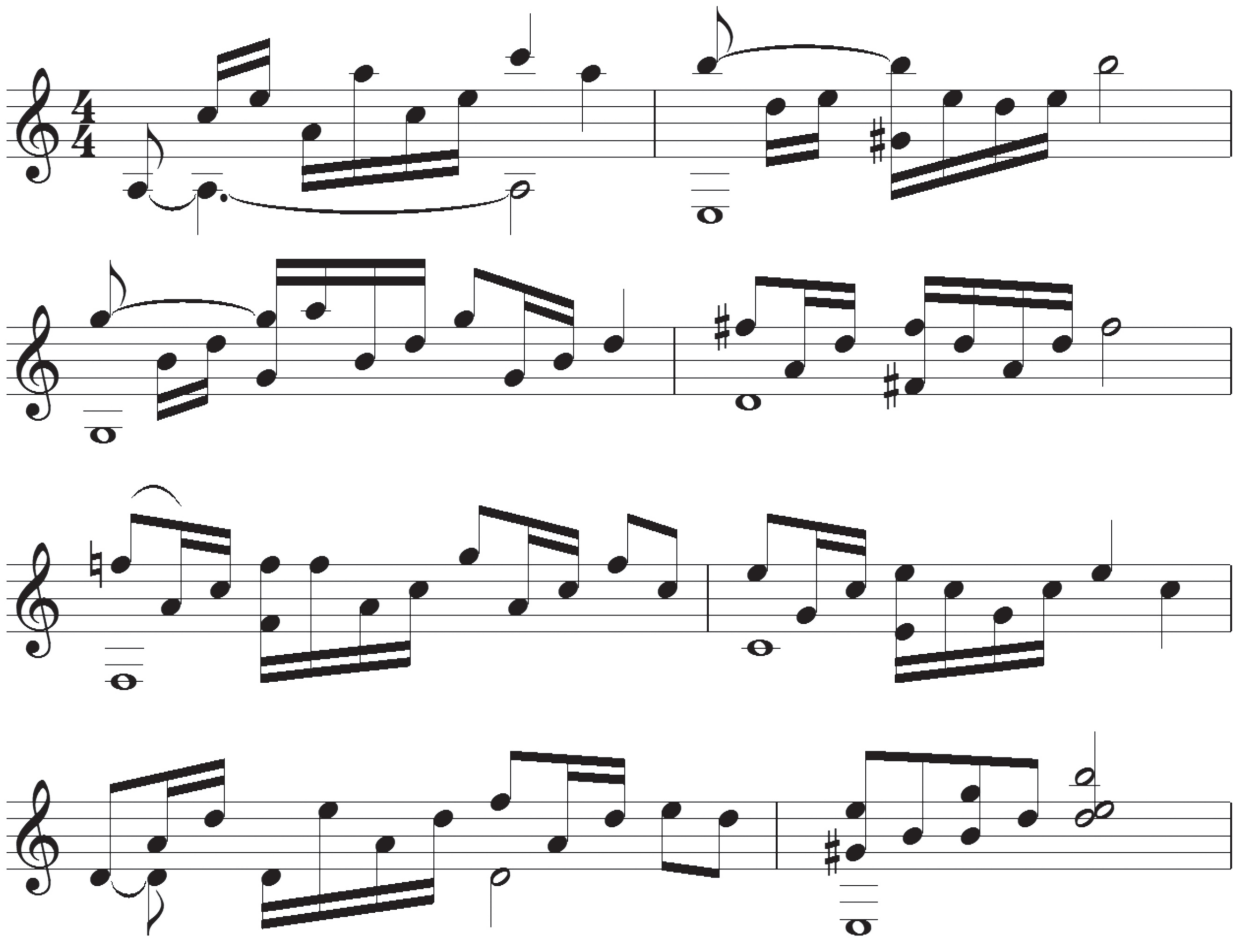
Reading Sheet Music *Figs 57, 58, 59*

In this section on reading music we will cover song structure, endings and repeats. We will then give an example of what is called a 'lead sheet'.

Popular songs usually consist of an 'intro' (introduction), verses, choruses and in some cases a bridge. There may be instrumental solos and finally an 'outro' (ending).

Earlier on we gave some examples of intros and outros. Verses contain the storyline of the song lyric and tend to have the same music. Chorus lyrics and music are usually both repeated.

Intro to *Hotel California* (by Don Henley and Joe Walsh). *Figure 57*



A bridge is a break from the rest of the song, often having a very different chord progression.

In some music these different parts of the music are labelled A,B,C. A being the verse, B the chorus and C the bridge (sometimes called the middle eight).

This alphabet tells the musicians the musical form and that the score repeats according to the letter name.

For example the Eagle's *Hotel California*'s format is A A B A A B A A B in other words 2 verses followed by a chorus and so on with no bridge.

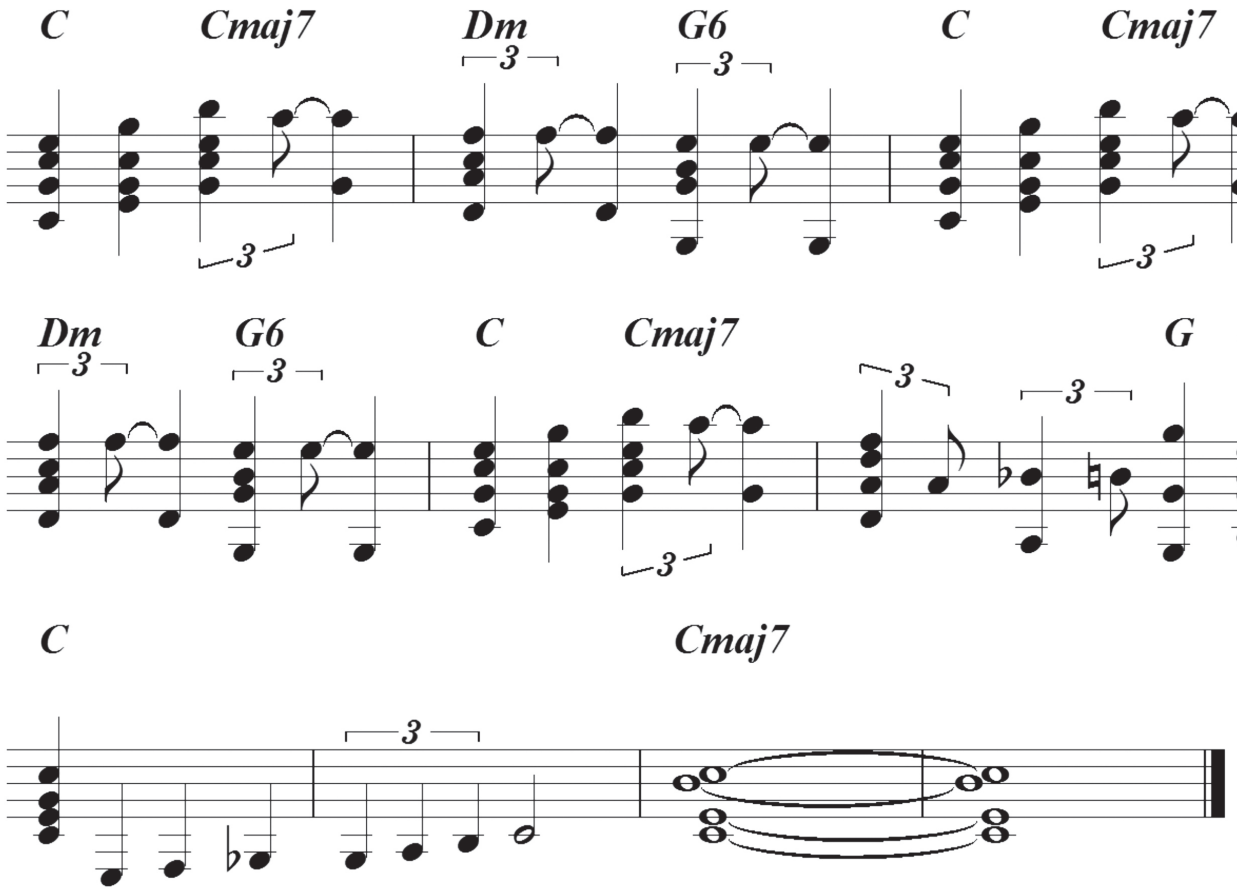
An example which includes a bridge is John Denver's rendition of *Country Roads*, which is structured A B A B C B B in other words, verse / chorus / verse / chorus / bridge / chorus / chorus.

A further example with a bridge, but no chorus, is Hoagy Carmichael's jazz classic *Georgia on My Mind*. Here the configuration would be written A A B A, where B is the bridge.

Below is the outro to this song, which consists of a repeated phrase ending in a perfect cadence, (V-I / G-C), followed by a bass run leading to the chord of Cmaj7.

Major seventh chords are often used in jazz chord progressions, particularly to end a piece.

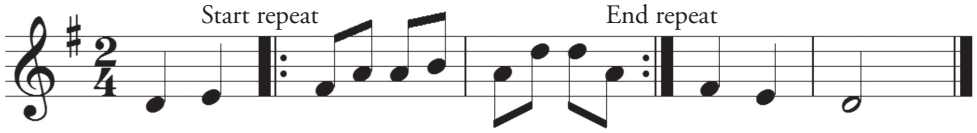
Georgia on My Mind. Figure 58



Endings and Repeats

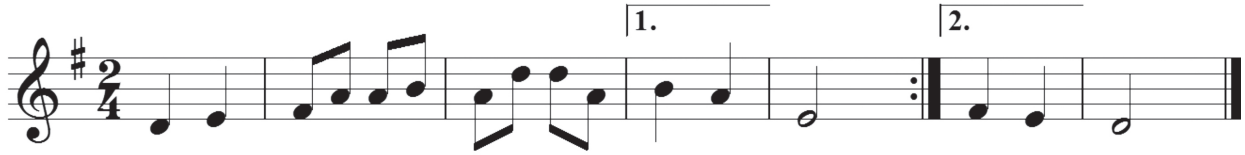
Many songs have symbols that represent different sorts of endings and section repeats.

Simple repeats. Figure 59:



The end repeat sign tells the musician to go back one time to the start repeat sign, or if there is no start repeat, to the beginning of the movement.

1st & 2nd endings. Figure 60:

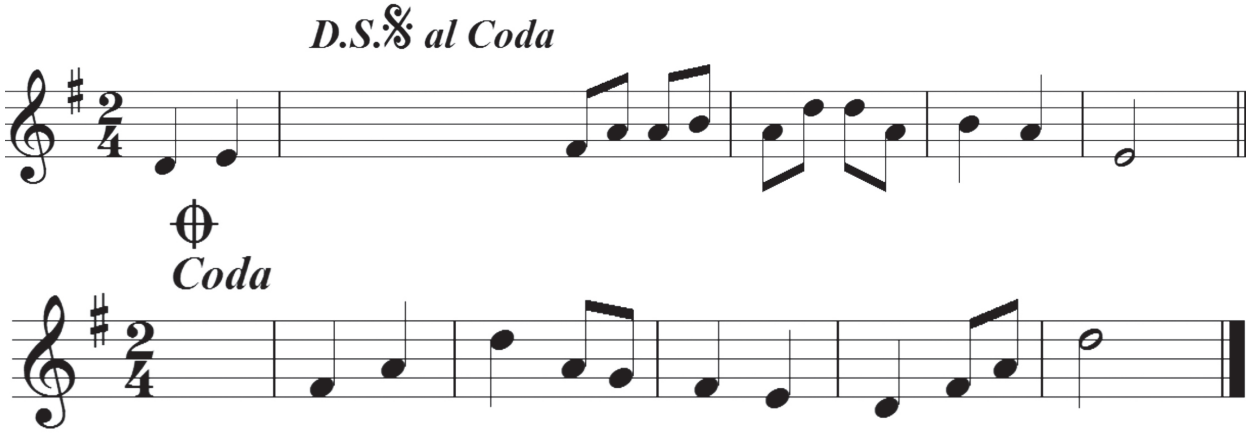


First and second endings indicate two different phrases to be played at the end of a passage. There may be three or even more endings in some music.

Alternative endings and codas

D.C. al fine written above the musical stave means go back to the beginning of a piece (*Da Capo* meaning 'head') and repeat the whole, ignoring any repeats (so only playing a first ending where there are more than one), to the point at which ***fine*** is written above the stave.

D.S. al Coda above the stave means go back and repeat as far as a special sign (*Dal segno* meaning 'sign'), and then jump to the coda (*coda* meaning 'tail'), which is the final phrase which ends the music. An example is given in *Fig. 61* below:



Repeated measure / bar. Figure 62:

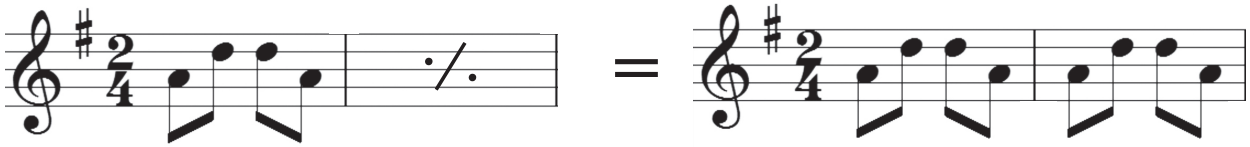


Figure 63:

Example of a 'lead sheet'. This is a basic score of the melody line, with accompanying guitar chords and lyrics.
Scarborough Fair is a traditional British folk song made famous worldwide by Simon and Garfunkle in 1966.

Chords to accompany the voice

If you are playing solo guitar and have, or believe you have, a reasonable singing voice you can accompany your vocal by picking or strumming chords. (See the 4 chord trick on page 30). Your voice carries the melody line of the song. You can also introduce fingerstyle passages, intros and outros, and move from one chord to another with single notes and add bass runs.

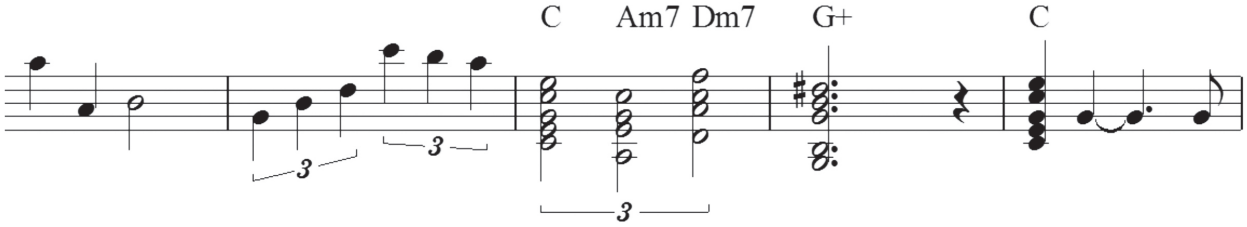
In most guitar songbooks a chord name is printed above the staff. This has two uses either you can strum the chord playing the part of a rhythm guitar, or you can use it as a fingering shape guide when playing fingerstyle.

Chord Melody arrangements with melody line, chords, bass notes and use of the higher octave.

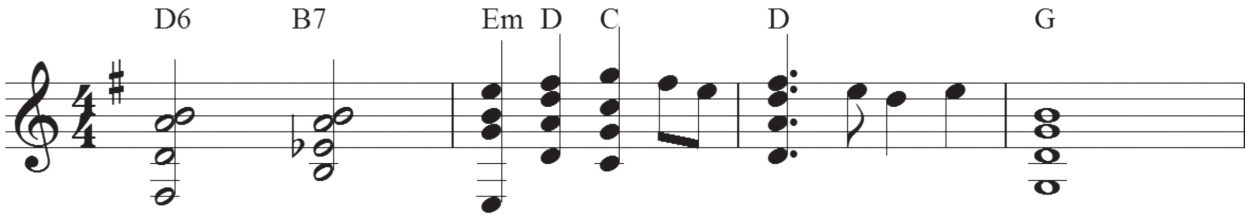
In this form of playing the melody line of the music is carried by your guitar, not your voice. The melody line is usually the top line of each measure and consists of single notes. The tune is therefore recognisable and you add chords and/or intervals of two notes to add depth and emphasise passages of play.

Some of these chords will include the note in the melody line, others will not. Where they do, the top note of these melody chords will carry the tune.

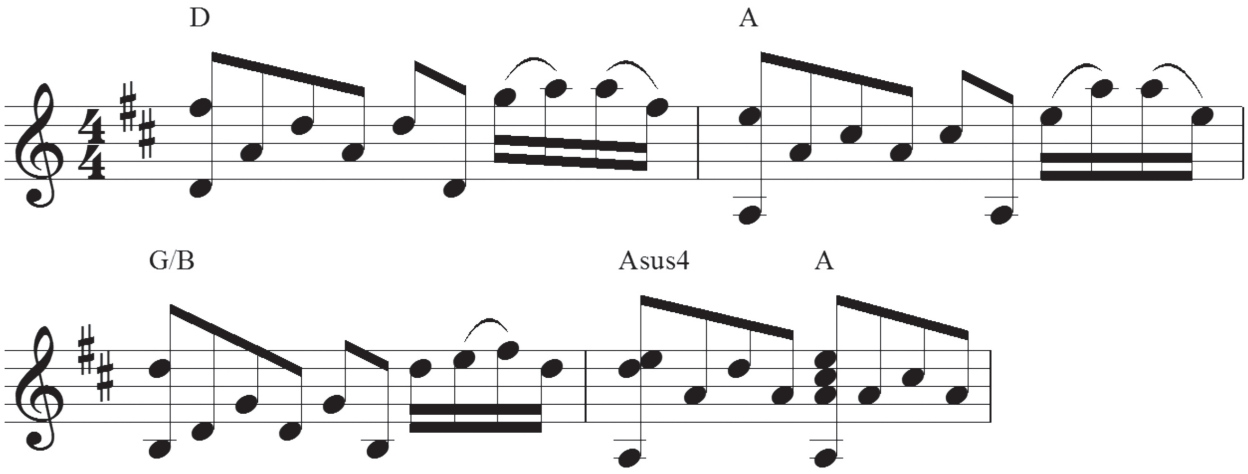
Look at how this works in this five-bar section from a fingerstyle version of *Crazy* by Willie Nelson. Here the only chords carrying a melody note (a top E), are the C chords in the 3rd and 5th measures (bars). The other chords form a nice blues-style progression linking these two melody chords. *Figure 64*



This style of playing can mean that you are playing inversions of the normal chord shape or adding additional notes to the chord. Remember in chord construction unless these chords include a 7th, natural or flattened, these will be notated as 'add' e.g. 'C add F#' which is the C major triad with a sharpened 4th added. In the extract below, from a fingerstyle version of *Yesterday*, the C chord in the second bar has a G note at the top to carry the melody line. This chord can be denoted as 'C add G'. *Figure 65*

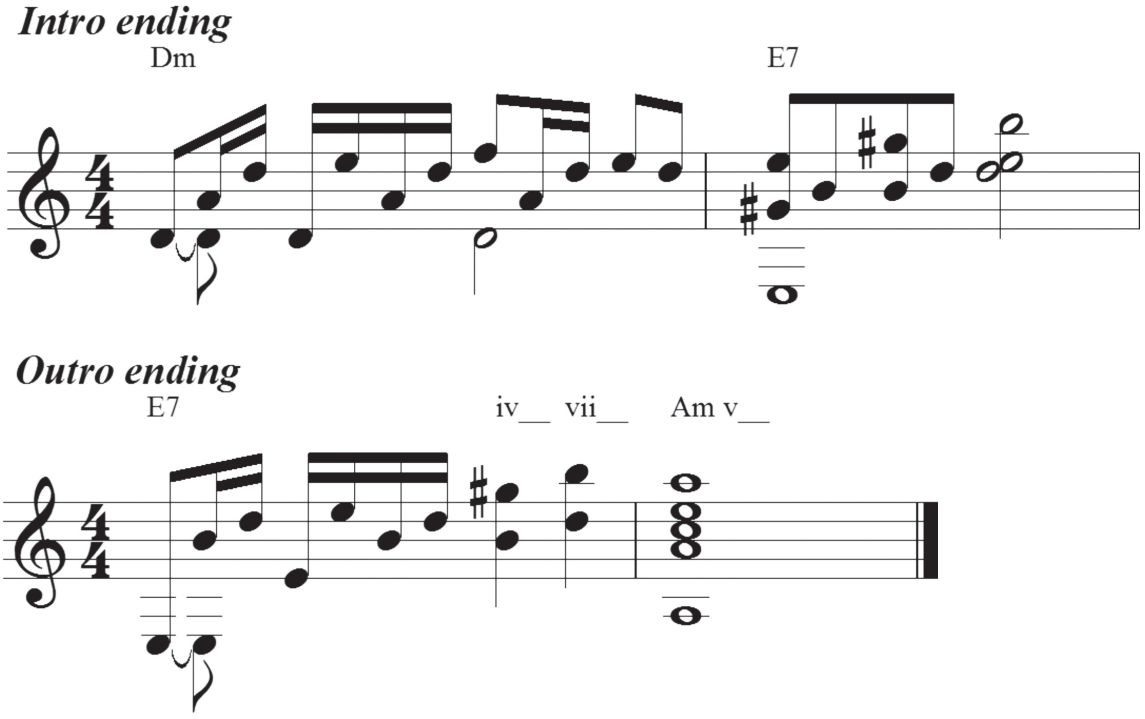


Intros and outros in fingerstyle playing can take many forms, sometimes using different chords — dominant, minor, augmented, but all with the same letter name. They may also use the chord progressions we saw earlier. With intros a very effective device is to arpeggio the notes of the chords which appear later in the music. See this in Bryan Adams' *Everything I do. Figure 66*



Outros are sometimes a repeat of the measures used in the intros, apart from the final bar which will be different. We are looking for an ending which might be pleasant, unusual, melodious or incongruous — it is up to the composer or arranger. Bear in mind it is the last thing you will hear in the music.

The last measure of the intro however, leads into the main body of the music and we are normally looking for a smooth transition. In this version of The Eagles' *Hotel California* compare the last two bars of the intro with those of the outro. *Figure 67*



A few playing Tips

- Try to leave chords sustained as long as possible while playing the melody line.
- When you strum a chord strum to its melody note.
- Playing / rewriting the melody line an octave higher may eliminate difficult chord fingering.
- Make chord changes more interesting by 'walking' from one to another. For example, using open chords, change from C to Am by way of a 'B' note on the 5th string. Or go from G to Em by way of 'F#' on the 6th string.
- Non chordal notes of either the melody line or in a bass run help give you time for chord change fingering.
- Keys. If playing in a key with 4 or more sharps or flats remember the naturals from the Key Signature, and sharpen/flatten the rest of the notes.

Key	***Sharps / flats***	***Naturals***
E major	4 sharps	E, A, B
B major	5 sharps	B, E
F# major	6 sharps	B
Ab major	4 flats	C, F, G
Db major	5 flats	F, C
Gb major	6 flats	C

Non-standard Guitar Tunings

There are many forms of alternative tuning and we have set out below some of the most popular. Alternative tunings all involve tuning one or more strings to a lower pitch than in standard tuning. For this reason they are sometimes referred to as 'slack' tunings. The table below illustrates which strings are tuned down, and by how much.

STANDARD	E	A	D	G	B	E
DROPPED D	D	A	D	G	B	E
	-T					
DADGAD	D	A	D	G	A	D
	-T				*-T*	*-T*
OPEN D	D	A	D	F#	A	D
	-T			*-ST*	*-T*	*-T*
OPEN G	D	G	D	G	B	D
	-T	*-T*				*-T*

***T* = tone (whole step), *ST* = semitone (half step).**

Dropped D tuning

This is most often used when playing in the key of D because it produces a deep resonant six string chord from an open D chord shape. It will however, also mean some big stretches when fingering some chords!

An alternative method is to tune the whole guitar a tone lower, and use a capo on strings 1-5 at the second fret, as in the example given in *Fig. 38* (page 33). This will avoid many of the stretches.

DADGAD tuning

DADGAD tuning is often used to play traditional music and sounds like it has been around for ever. Yet it was almost certainly invented by the acoustic player David Graham in the 60s. The new chord shapes are difficult to work out but once you have figured out a few, the world of Celtic music is open to you.

Open D tuning

This tuning creates any major chord by barring the first finger across all strings.

As the name implies a D major chord is produced by playing all the strings open and you work your way up the neck from there. Like all open tunings it is used extensively by slide players but is also used in playing traditional folk music. See chord diagrams *Fig. 32* (page 27).

Open G tuning

An alternative to open D tuning which gives us the chord of G major when playing the open strings. Used by slide players and also in many fingerstyle folk arrangements. Also known as the 'banjo' tuning, it is a favourite of Keith Richards.

Choosing the right guitar

Guitar Types

Guitars are available in three sizes — full, three-quarters and half — and are also available for right and left-handed players (picking hand).

Classical Acoustic

Nylon-strung classical guitars generally have wider fretboards. Many beginners will start with a classical guitar because the lower-tensioned nylon strings are perceived to be easier to finger. However, the higher action of a classical guitar has some disadvantages compared with a steel-strung guitar, particularly when picking notes high up the neck.

Steel-strung Acoustic

Suitable for beginners to advanced players, these generally have a narrower fretboard. This makes forming chords (particularly barred chords) easier than on a classical guitar. The steel strings have a higher tension than nylon strings, and this necessitates the use of a 'truss rod' which runs the full length of the neck, inside the wood, to prevent warping. These guitars produce a louder, clearer sound, more suitable for accompanying the voice, and are the usual choice for folk or acoustic rock music. They start at very reasonable prices.

Classical or steel-strung guitars may have a 'cutaway', where the body close to the neck is shaped to allow the fingering hand to reach beyond the usual 12th or 14th fret where the neck joins the body.

Twelve-String Guitars

Popular in country and acoustic rock music, the twelve string guitar has six courses of two strings. In standard tuning, the lower three are tuned one octave apart, and the higher three are tuned in unison. This gives a bright sound, a little like a mandolin or bouzouki.

Electro-acoustic

Any acoustic or classical guitar with the addition of an electric pickup so that it can be plugged into an amp.
The body may be cut away so that the higher frets can be played more easily and they often incorporate an electronic tuner.

Electric Guitars

The electric guitar can have a solid or hollow body and the vibrations from the strings are transmitted by metal 'pick ups' which are attached to the body. These are connected electronically to an amplifier. The bridge holding the strings is metal and a metal bar may be attached to it. An arm fixed to this bar allows the string tension to be raised or lowered by tilting the bridge forward and back. This bar is variously called the tremolo or whammy.
Electric guitars generally have longer necks than acoustics, and have lower tensioned strings, which makes it easier to 'bend' notes.

Semi-coustic also known as Jazz or F hole guitars

These guitars have a thin hollow body not as deep as the acoustic guitar, and rather than being flat like most acoustics, they are profiled a little like a violin, with 2 f-shaped holes instead of the conventional single sound hole. It has the same pickup system as the solid body guitar and a long neck. It can be played in practice without an amp but requires amplification otherwise.

Strings

Essential in producing the sound you want, strings should be changed frequently to maintain a bright sound. Generally the thicker the string gauge, the louder the sound.

Strings may consist of a single material like steel or nylon. Wound strings have a core of one material with an over-winding of other materials.

The tone of a string depends partly on its weight and therefore its diameter or gauge. Steel strings for a six string guitar usually come in sets which consist of wound, lower -pitched strings and single material strings for the high E, B, and sometimes the G . These sets are referenced either by the gauge of the first (top E) string or of the first and last strings. For example:— 10 or 10-47.

Specialist sets of strings are available from some suppliers for guitarists who prefer to play in one or more of the open, or 'slack', tunings.

Separate string sets are sold for acoustic and electric guitars — these are not interchangeable!

For an Acoustic Guitar the range is:

	High E		**Low E**	
Extra Light	10	to	47	
Light	12	to	53	(most common)
Medium	13	to	56	
Heavy	14	to	59	

Practice Amps

This refers to any smaller portable amp that is used for practising at home. It is versatile and may be used for recording or gigging.

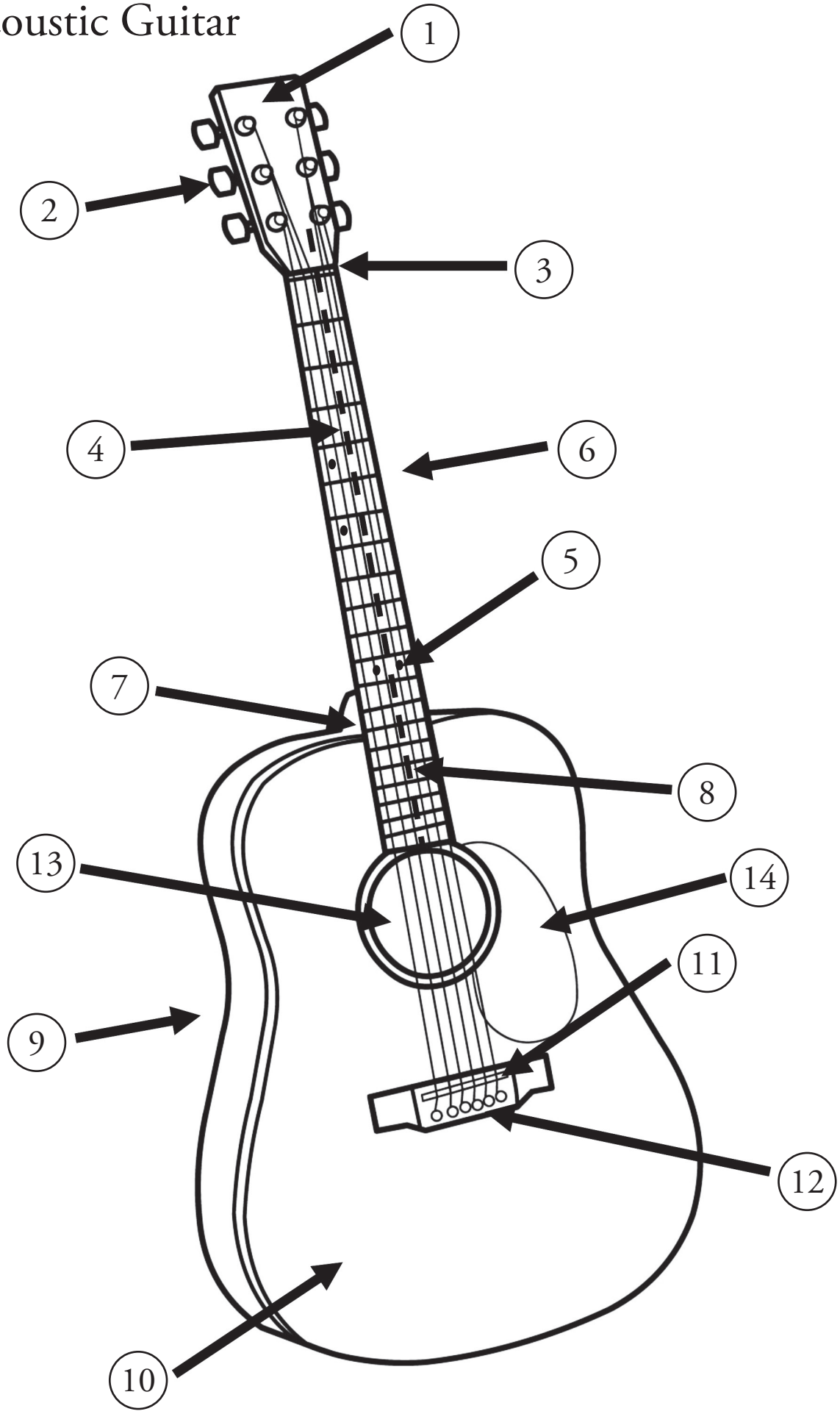
They generally have one speaker and a power range of around 5 to 30 watts. Power is usually mains electric, with an additional battery alternative in some models. Amps are sold for both electro-acoustic and electric guitars.

Look for the following effects provided by different amps.

- Gain. This controls the level of signal from the instrument. May be used to provide 'overdrive' or distortion for effect.
- On many amps you will be able to vary the bass, middle and high tones. The key is to experiment to get the sound you want.
- Clean Sound — no effects.
- Reverb — this adds an echo effect.
- Tremolo — just as the name suggests.
- Chorus — fills out the sound especially of chords.

Finally some amps incorporate a recording loop so that you can lay down a chord progression and play a melody line or riff over it.

Acoustic Guitar



Parts of the Acoustic Guitar *Figure 68*

1. Headstock.
2. The tuners (tuning pegs).
3. Nut. A plastic or bone strip with grooves for each string to give them consistent lateral placement.
4. Fretboard with inset metal frets. Each fret is a half-tone/half-step on the chromatic scale. Standard acoustic guitars normally have 20 frets (the 14th usually at the heel) and an electric guitar 22-24.
5. Inlays. Circular pieces of bone or plastic inserted into the fretboard to mark certain frets. Single dots on frets 5, 7, 9, 15 and 17 with double dots on the 12th fret.
6. The Neck. Contains all of the above.
7. The heel. The section of the neck which joins the body of the guitar, thicker than the neck itself to reinforce the joint.
8. Truss rod. This metal rod runs vertically inside the guitar. Its purpose is to counteract the enormous tension created by the tightened strings and prevent curvature of the guitar. The truss rod can be adjusted to raise or lower the height of the strings above the fretboard known as the 'action'.
9. Body.
10. Sound board.
11. Bridge. Either bone or plastic. Bone gives a louder, clearer sound.
12. Saddle. Holds the bridge in place and to which the strings are anchored with bridge pins. In an acoustic guitar the vibration of the strings are transferred by the bridge and saddle to the sound board which vibrates the air inside the guitar. This is amplified by the body and exits by the sound hole.
13. Sound hole.
14. Scratch plate (pick guard). A laminated plastic section which protects the sound board.

LIST OF FIGURES