

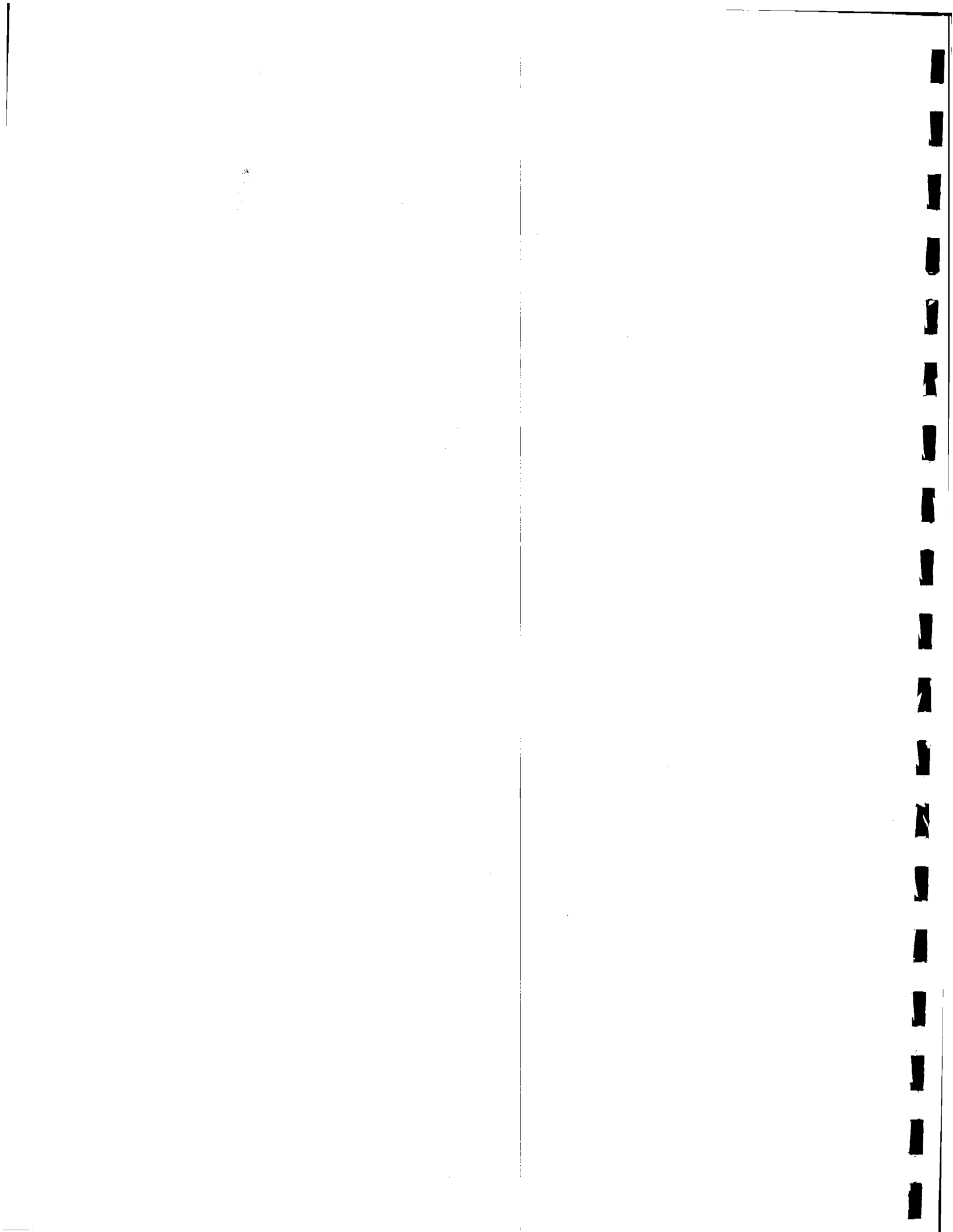
Videos  
Available

# Fretboard Logic

Reasoning Behind The Guitar's Unique Tuning



Reveals The Hidden Organization Of The Fretboard

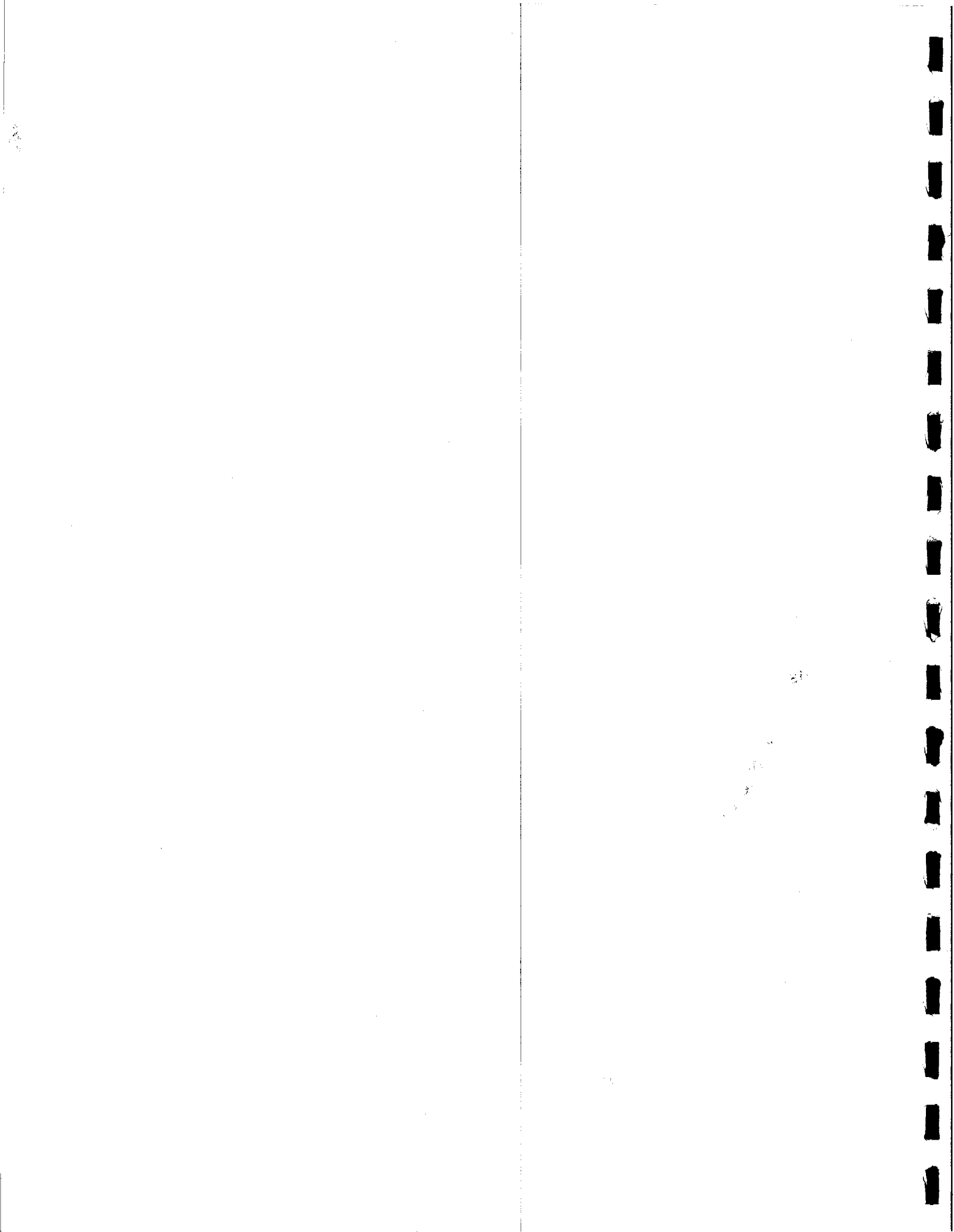


# Fretboard Logic

Volume I

**Bill Edwards Publishing**

305 St. Augustine Ave.  
Tampa FL 33617-7229



## Dedication

To my many teachers, for contributing to my understanding of the instrument and music, and especially my students, for making me constantly reexamine what I thought I already knew.

## Acknowledgements

Of all those who have made contributions, two people in particular deserve recognition here. Dave Carlisle and Steve Hodson have both provided counsel, assistance and expertise at various stages in the development of this method. Dave gets special thanks for his help with the cover design, and Steve for help with Bass

Logic, the videos, marketing and so much more.

I owe them both an enormous debt of gratitude for their continued advice, support and encouragement.

Thanks guys.

Copyright 1983, 1987, 1989 by Bill Edwards

All Rights Reserved

This volume may not be reproduced in whole or in part in any form without written permission from the publisher.

**Teachers** who wish to use this method may purchase it at a special discount by calling, writing, faxing or emailing to an address or number below. We now maintain an international database for the purpose of referring students who contact us in search of teachers who use Fretboard Logic in their area.

For a free listing in our registry as a Fretboard Logic teacher please contact us at:

Bill Edwards Publishing  
305 St. Augustine Ave  
Temple Terrace, FL 33617-7229  
(813) 985-2689 Phone  
(813) 985-0554 Fax  
emupub@gate.net Email  
billedwards.com Internet

Printed in the United States of America

“

**Quote Box**

A mind once expanded by a new idea  
never again returns to its original dimensions.

Anon.

”

# Contents

Preface.....	vii
Introduction.....	ix
The Five Basic Chord Forms.....	1
Forms and Positions - Chords.....	2
The CAGED Sequence - Chords.....	5
Naming Chords by Form and Position.....	7
Scales and Scale Forms.....	13
The Five Basic Scale Forms.....	14
Forms and Positions - Scales.....	16
The CAGED Sequence - Scales.....	17
Naming Scales by Form and Position.....	18
Lead Patterns.....	22
Forms and Positions - Lead Patterns.....	24
The CAGED Sequence - Lead Patterns.....	25
Naming the Lead Patterns.....	26
Finale.....	28
"Testing Testing...".....	29
The Answers to All Your Problems.....	32
The Twelve-Step Program.....	33
Alternate Placement of the "3rd" Interval.....	34
About the Author.....	35





## Preface

The idea for this book originated in the 1970's when the author was a guitar instructor at a music store. During that period, he stumbled upon something that demonstrated that despite years of lessons and countless books and courses, his teaching methods were still pretty disorganized. While mapping out a student's scale forms for the zillionth time, he finally recognized that although there were seven fundamental tonal orientations (modes), there were actually only five relevant guitar patterns, which corresponded to certain recurring chord forms as well. When the scale forms were rearranged to be played lengthwise along the neck, everything finally fit together for the first time in years of playing and teaching. He became aware that there was a guitar-specific pattern organization that was completely separate from the various music considerations such as theory, technique and style. He eventually came to the conclusion that the issues of this pattern organization should take first priority over the issues of music or style, if a truly structured learning experience was to occur.

Fretboard Logic evolved from the discovery that as a direct result of the guitar's tuning, number of strings, and the intervallic result (4th, 4th, 4th, 3rd, 4th), exactly three separate and specific pattern types occur on the fretboard: Chord Forms, Scale Forms and Lead Patterns. For learning purposes, each of these three pattern types will be examined in the same four contexts: First, as Basic Forms; second, as Forms in Positions; third, as forms in CAGED Sequence along the fretboard; and fourth, Naming them musically, from their form and position. There are five basic Chord Forms, five basic Scale Forms, and two basic Lead Patterns, and they are integral to one another as patterns.

A word about the format of the book. Given what is known about learning and the function of the two hemispheres of the brain, commonly known as left and right brain, the pages of the book have been divided into half text and half graphics whenever practical. The pattern nature of the fretboard also lends itself to this approach. Important concepts and points of interest are captioned in shadow boxes such as the one to the left. Relevant terms are italicized or boldfaced. When boldfaced, the terms are defined in context and included in a glossary at the end of the third and last volume of the series.

“

I am a little world made cunningly.

John Donne

”

# Introduction

The guitar has changed in many ways since it evolved away from its ancestors but the tuning system of six strings tuned EADGBE, which is fundamentally different from any other instrument, has reigned as the standard for hundreds of years. The reason for this is that no one has yet been able to improve on it, nor, as you will see, are they ever likely to. In fact, many players have taken this aspect of the instrument for granted without ever questioning it. When you consider that virtually everything that is played on the instrument gets "filtered" through this tuning system, it is ironic that of the millions of people who play, very few fully understand the reasoning behind the pitch selection of the strings. Yet, what could be more essential than a working knowledge of the instrument itself? Most guitar methods tackle bits and pieces of many subjects and present them collectively in the equivalent of baby steps. Fretboard Logic Vol. I will teach you a great deal about just one thing: how the tuning works out on the fretboard in terms of patterns.

First a little background is in order. In this introduction, we'll look at the different classes of tunings for stringed instruments, and then discuss monophonic versus polyphonic capabilities. Next we'll examine instruments that increment in one or two dimensions and some of the problems associated with interpreting music given the different designs. Finally we'll make some observations on ergonomics and the human interface, and conclude with a comparison of methods and a discussion of objectives.

There are two primary classes of tunings for stringed instruments. They are either symmetrical, meaning equal string to string intervals, or chordal, meaning tuned to a specific chord. For example, most of the string family, violins, violas, etc., are tuned symmetrically in 5ths. The electric bass is likewise tuned in straight 4ths. On the other hand, traditional five-string banjo tuning is GDGBD, making an open stringed G Major chord, and a pedal steel is tuned to either an E9th or a C6th chord. The guitar's tuning system is neither symmetrical nor chordal. It is literally in a class by itself. The notes EADGBE from bass to treble, result in the intervals of 4th, 4th, 4th, 3rd, and 4th. The tuning produces the intervals which create the pattern organization on the fretboard.

A **monophone** is an instrument which can only produce one tone at a time. If an instrument is **polyphonic**, it is designed to produce multiple tones simultaneously, making harmonic material such as chords and their voicings possible. Instruments of the brass, woodwind and string families are generally monophonic. Keyboard instruments such as pianos, organs, etc., are polyphonic. Normally, monophones are played in groups such as brass bands, string quartets, and symphony orchestras. The members of the string family, including violins, violas, cellos, etc., given multiple strings, can produce more than one or two notes at a time.

## Introduction

but the curvature of the bridge makes playing more than two simultaneous notes impractical in continuous usage. Even with a relatively flat bridge, the guitar would have a similar problem given the limitation of four fretting fingers, if not for the difference in tuning systems. The pattern organization produces an optimization of four fretting fingers, and therefore a practical polyphony.

Another difference in overall instrument design concerns whether the notes increment in only one or two dimensions. On a keyboard, the notes get higher or lower in only one dimension (right to left). On a violin, the notes increment in two dimensions creating a matrix of the playing area. In a matrix, there can be several duplicates of the exact same pitch, whereas on a keyboard, there is one and only one of each. When reading for a matrix instrument, a designation or a choice must be made to determine which of the available duplicates is to be played. However, the symmetry of the tuning means that the musical patterns, such as whole step, whole step, half step, etc., will continue to apply from position to position and string to string, making certain note choices more logical than others. Put another way, the shape of, say, a minor scale will be the same on any string and in any position. The odd interval on the guitar prevents this. With piano, there are several one-to-one correspondences which simplify things for the person reading music. One finger plays one key, producing one pitch, represented by one dot on the staff in standard notation. On guitar, a separate designation is often necessary to specify the string upon which a note should be played. It would appear that since the guitar increments in two dimensions, producing multiples of most notes, combined with the irregular intervals which eliminate musical symmetry, that we are provided with the worst of all possible worlds in terms of design. That would be true only if you attempt to understand the guitar in terms of the matrix of the violin, or the polyphony of the keyboard. The guitar cannot be truly understood in terms of either the violin or the piano except by contrast and comparison (although I am convinced that many teachers and guitar method authors have attempted both).

A major premise of this method is that the issues of the guitar should be understood separate from the issues of music for learning purposes. They are always at work together while playing, but while learning, they are best kept apart in one's mind. The guitar is imbued with a pattern organization which can be considered an ergonomic *interface* between the player and the music he or she plays. On the instrument side, the patterns are the interface for the four fretting fingers as output devices. On the music side, the tone groups and rhythms combine to produce a vibratory interface for our ears as input devices, which we perceive as music of differing quality and character. Those qualities and characters in turn become perceived as styles and physiological messages to which we respond as human beings given our own background and development. The fretboard, to repurpose the old tire ad, is where the rubber meets the road. If you're familiar

## Introduction

with computers, think of a piano keyboard as a hardware interface. By contrast, the guitar's should be considered a software interface, and not so obvious. The concept of interface can also be related to the typewriter keyboard in an interesting, if somewhat bizarre, way. Most people never question why each key is placed where it is on a typewriter or computer keyboard. If asked, they usually think what is termed the "QWERTY" organization, was developed for speed and ease of typing. In fact, the reverse is true. The mechanical linkages of the old style typewriters were easily overrun and jammed by an average typist. The designers were unable to come up with a speedier design, so some "Dilbertian" engineer hit upon the idea of slowing people down. The typewriter interface was designed to actually slow down the user to prevent key jams. Fortunately, the guitar's interface was designed to improve output, unlike the typewriter keyboard.

Fretboard Logic was developed to help guitarists achieve their musical goals regardless of whatever style of music or type of guitar is preferred. By becoming acquainted with the guitar's interface, you'll be able to apply other areas of study in a more organized manner. A large percentage of guitarists are self taught and rely on gathering random nuggets of information from here and there without much in the way of a game plan. Unfortunately, a thorough grasp of the fretboard layout is not really the kind of thing that you can pick up off a recording, or learn from a friend. It tends to get lost in the sauce, as the cook said.

Most guitar books fall into three categories: Popular arrangements, methods and what can only be termed reference books. Many books that are advertised as teaching methods are actually only useful for occasional reference material, since the material is not presented with any semblance of organization or structure. The attitude of the authors seems to be, "You figure it out." Fretboard Logic is not just another mindless "chord encyclopedia" or redundant "scale and mode" book. How chords and scales work out on the guitar is actually explained in terms of the fretboard pattern organization. On the other hand, a lot of guitar methods overwhelm even dedicated students by trying to cover reading, theory, technique, repertoire, style, etc., all at one time but on a simplified level. Many teach songs that are of no interest except perhaps, to small children. Books that are style oriented such as rock, heavy metal, blues, jazz, country, and classical methods, often do much the same thing, limiting the focus to certain kinds of music, guitars, techniques and/or artists. The problem with this is they often try to do too much at one time without proper foundations, and frequently students just drift away, perhaps blaming themselves for lack of talent. And another thing. Educational publishers prefer to use public domain material since they don't have to pay out composer royalties. Maybe you don't want to play songs that were a hit 75 years ago. The classic one for this is the kid who went into his first guitar lesson dreaming of "Eruption" and came out playing "Go Tell Aunt Rhody."

## Introduction

With all that said, I want to conclude with some observations that may surprise you. As a practicing guitarist, I am of the firm belief that no one else can make you a better player. It is up to each of us as individuals to stand out among the others. There is no method, gimmick, book or video which has the ability to make you play better or worse. Being a quality player means continually practicing and playing with the intent of improving, never giving up and often sacrificing much in the process. You can't substitute a few weeks or months of intense effort for years of sustained effort. That's not even the worst of it. It is all too easy to lose the hard won ground gained by sustained practice, to a few weeks or even days off from the grind. Ok, so you're thinking, "Well, what about those self-taught guys who never read a book or took a lesson and play better than a lot of guys who've taken lessons for years?" As far as I'm concerned, any guitarist can reasonably claim that he or she is self-taught even if they've taken years of lessons and read countless books. The reason is that only we as individuals can make that all important leap from theory to practice, and practice to perfection. Also, it comes easier for some than others.

I see Fretboard Logic as a kind of rosetta stone for guitar players. In other words, it is merely a learning tool. On the other hand, it won't make anyone a better player until they find a way to use it to produce music that other people want to listen to. Each of us has to find our own way to make that happen.

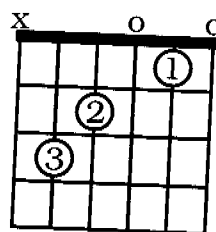
# The Five Basic Chord Forms

Although musically, **chords** are groups of three or more different notes played at the same time, on the guitar they are realized through Five Basic Chord Forms, or shapes. (Not three as shown in the little chord computers and certainly not dozens, as suggested in the chord encyclopedias.) There are exactly five fundamentally different ways to play chords as fretboard forms provided for by the tuning. These forms are the **C, A, G, E and D Forms**. They are presented first as open, or unbarred forms, using the first three fingers of the left hand. They can be considered the cornerstone of the fretboard's pattern organization.

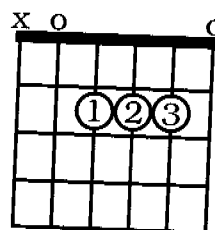
For beginners, the circles show where you place each fretting finger, just behind the frets without touching them. The numbers in the circles represent which finger of the left hand to fret with so that the Index = 1, Middle = 2, Ring = 3, and Pinky = 4. The lines going up and down represent the six strings, and the lines going across are the frets. The dark bar at the top is the nut, indicating open position. An "X" over a string means don't play it with the right hand, and an "O" means play it unfretted or open. **Open** can mean unfretted or unbarred.

If you're a just starting out you can gauge how well you know a chord form by being able to do these three things:

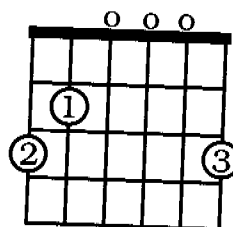
- 1) Play all the chord tones (fretted and open) clearly with no buzzing or muted strings.
- 2) Memorize the form.
- 3) Make the changes from chord to chord quickly and accurately.



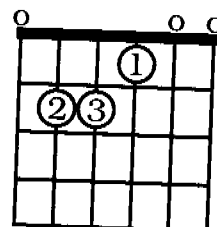
**C Form**  
**Open Position**  
(This is the  
Fretboard  
Description.)  
**C Chord**  
(This is the  
Chord Name.)



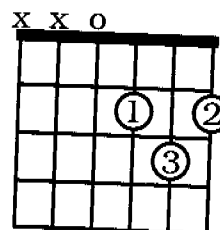
**A Form**  
**Open Position**  
(Guitar  
Description)  
**A Chord**  
(Chord Name)



**G Form**  
**Open Position**  
(Description)  
**G Chord**  
(Name)



**E Form**  
**Open Position**  
**E Chord**



**D Form**  
**Open Position**  
**D Chord**

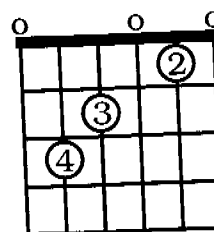
# Forms and Positions - Chords

The next stage is to treat the open chord forms as moveable, so they can be described as forms in other positions. This involves using the index finger to **bar**, (aka barre) or cover simultaneously, some or all of the strings while fretting the Chord Form with the three remaining fingers. This will require more strength and accuracy than the open chords, and is usually easier on the electric guitar than the classic or steel string acoustic.

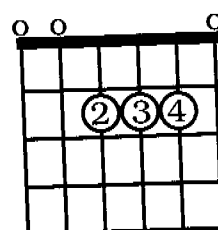
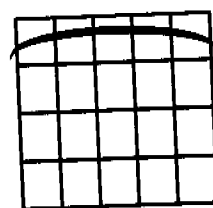
For now, the **position** is simply the number of the fret your index finger is barring. For example 7th position is barring the 7th fret using any form. The point is to recognize and identify chords by their Form and Position. Almost any chord that can be played as an open form can be used in other positions. To notate a position other than open, a number is placed next to the fret marker. If you are new to bar chords, start out by making the open forms using the 2nd, 3rd, and 4th fingers of the left hand as illustrated in the left hand column. Next make just the bar alone in various positions. Then combine. **The first two or three positions are the hardest, so don't waste too much time trying to fret them there at first.**

Three exercises for becoming familiar with forms and positions and making your hand stronger for bar chords are as follows:

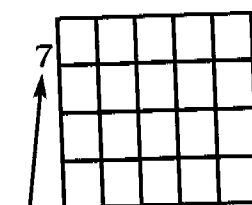
- 1) Start with the open forms using just the last three fingers and, releasing pressure, slide up the frets, fingers on strings, playing each as you go.
- 2) Bar any position and then change just the forms.
- 3) Combine the two previous exercises by playing up the neck from the open position and changing the form each time you move to a new position.



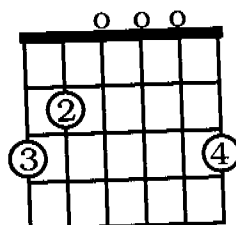
C Form Open  
Last 3 Fingers



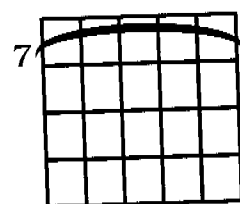
A Form Open  
Last 3 Fingers



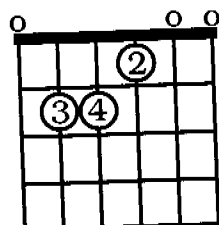
Number Indicates  
Position



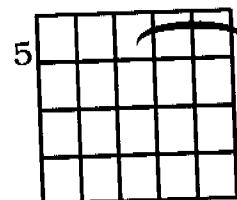
G Form Open  
Last 3 Fingers



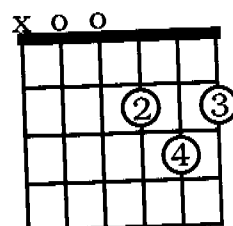
7th Position Bar



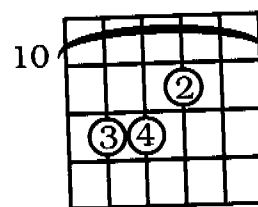
E Form Open  
Last 3 Fingers



5th Position  
Half Bar



D Form Open  
Last 3 Fingers



E Form  
10th Position



## Forms and Positions - Chords

The left column illustrates the Five Basic Chord Forms in the 5th position.

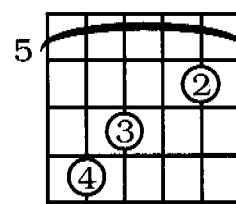
You will soon realize that there are two easy bar chords, two hard ones, and one in the middle. The E form and the A form are the easiest, the G and D are the hardest (because of the reach) and the C form is somewhere in between.

**In order to make them more accessible for beginners, the forms have been illustrated in the right hand column with alternate fingerings and partial forms.** It's easier to *recognize* them as full forms but it's usually easier to *play* them using partial forms. In each case, how you actually use them will depend on the circumstances.

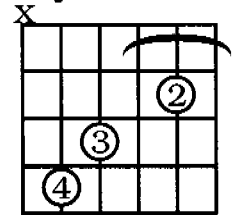
Since the E and the A forms are the least difficult to play, they tend to get used the most, and the rhythm part in many popular guitar songs consists of one or another of these forms moved around in various positions. Regardless of the style of music you prefer, you'll soon find you need facility with more than just the most common ones. Practice each form equally in various positions and don't limit yourself to just the easy ones.

The barred chords are considerably more difficult than the open chords especially on acoustic guitars. If you are having trouble with them, have your guitar restrung with the lightest possible strings, and ask your repairman to set your **action** or relative string height, as low as possible. If they still seem too hard to play, you can even loosen the string's tension to a lower pitch until you build up strength.

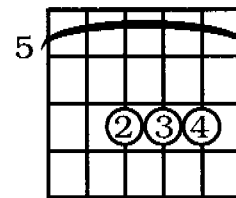
### Forms in 5th Pos. Easy Variations



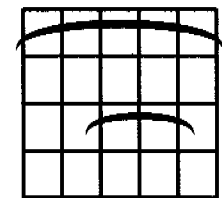
C Form  
5th Position



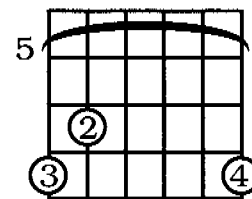
C Form  
Half Bar



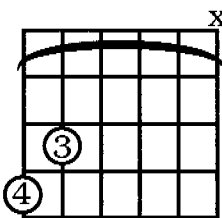
A Form  
5th Position



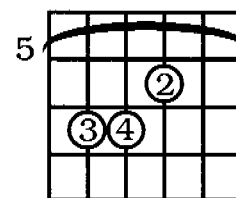
A Form 1st &  
3rd fingers only



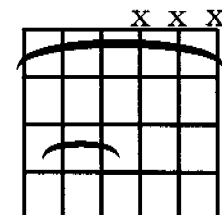
G Form  
5th Position



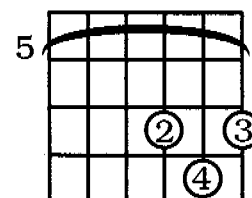
Partial G Form  
Bass Strings



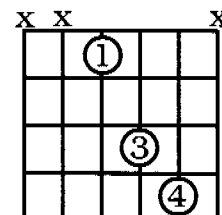
E Form  
5th Position



E Form 1st &  
3rd fingers only



D Form 5th Pos.



Partial D Form

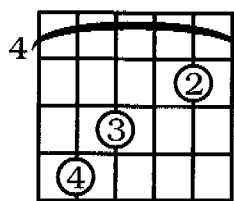
## Forms and Positions - Chords

Play through the following assorted forms and positions saying the description out loud as you go. Now is the time to get into the habit of using the fretboard descriptions. Say "C Form, 4th Position" **not** "C in the 4th position" or "C chord, 4th position." **Verbally distinguish the guitar forms from the chord names from now on.**

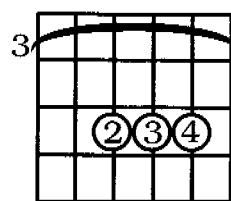
For now it is important to identify them by describing what your eyes are seeing and your fingers are playing. The *form* is what you play, the *chord* is what you hear. Note that the C and E forms are directly adjacent to the bar, whereas the A, G and D forms require a space of one fret between the bar and the form.

In the beginning, hand fatigue may be a problem. In fact, the strain can show up in your shoulders and back as well. Fortunately the more you play, the stronger you get. I'll bet any orthopedist would advise you to get up and do some stretching exercises if your hands get tired but you want to keep at it. Also don't forget about the numerous partial forms. If you can visualize the partial G and D forms with no trouble, don't hesitate to substitute them for the full forms for ease of playing.

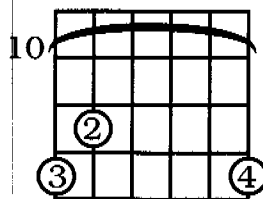
The important thing is to keep in mind that there are 5 forms to choose from - not just two or three. There is no doubt that many readers have bought huge chord books and then wondered how in the world you were supposed to remember all the different chords graphed out in them. If you try to memorize them you'll probably only remember a few of the more common ones. The way to learn them easily and permanently is to be able to build them from one or another of the five basic forms. This chord "building" is taken up in detail in Vol. II, and it is based on what is being presented here.



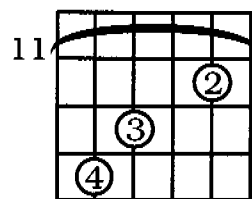
**C Form**  
**4th Position**



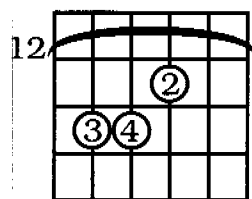
**A Form**  
**3rd Position**



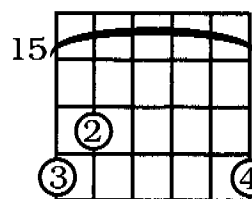
**G Form**  
**10th Position**



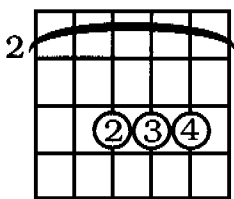
**C Form**  
**11th Position**



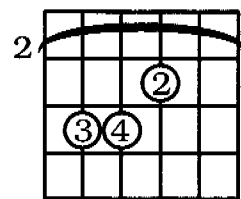
**E Form**  
**12th Position**



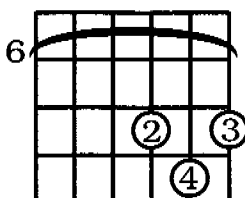
**G Form**  
**15th Position**



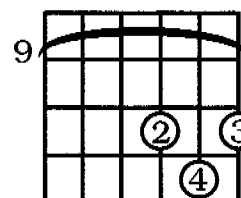
**A Form**  
**2nd Position**



**E Form**  
**2nd Position**



**D Form**  
**6th Position**



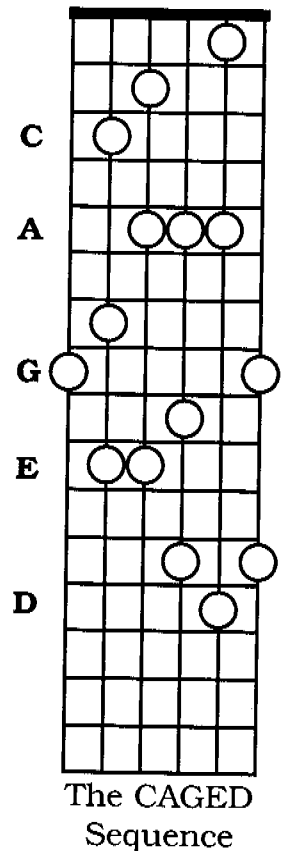
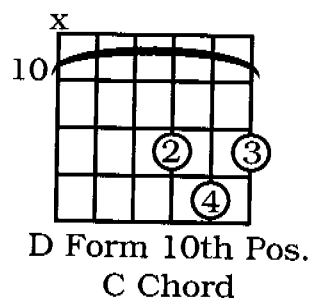
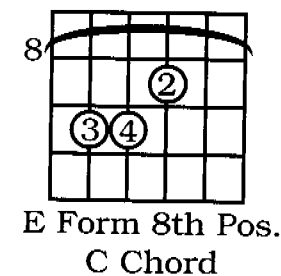
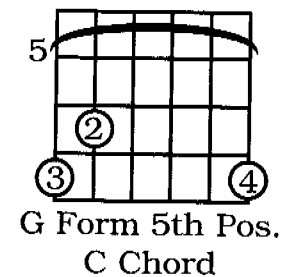
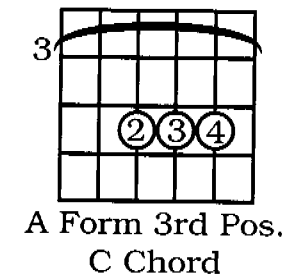
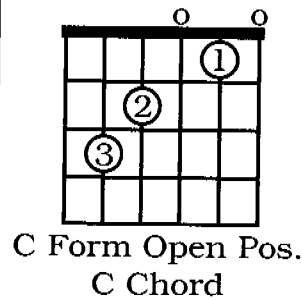
**D Form**  
**9th Position**

# The CAGED Sequence - Chords

If you've never seen this before, by the time you finish the section, you'll understand why the author considers the inventor(s) of the guitar's tuning system among the unsung heroes in music history. I don't know who gets the credit, but I've always wondered if he or she thought it out, tried a zillion combinations, or just stumbled onto it because their guitar was always out of tune. When the five basic chord forms are arranged in order along the length of the fretboard, they produce a contiguous **C-A-G-E-D Sequence** that provides the player with a failsafe method for finding their way around the neck, form by form. No matter which form or position you are using, the CAGED Sequence is all around you. It repeats at the twelfth fret and continues until you run out of real estate. Each form in the sequence is the exact same chord *musically*, played five different ways, *guitaristically*. The end of one form is the beginning of the next one.

In order to convey the structure of the CAGED Sequence, we have jumped somewhat out of order by **naming** or identifying musically, some chords without having laid the proper groundwork for this. Naming chords is taken up in the following section. While you play each form of the CAGED Sequence, visualize the forms that are adjacent to it. Keep in mind that you are traversing the fretboard form by form, as opposed to position by position. If your hand gets tired from the constant pressure, just lay your fingers on the strings with little or no pressure applied and proceed through the sequences.

The essence of this procedure is that you are playing the same music chord using different guitar forms in a sequence.

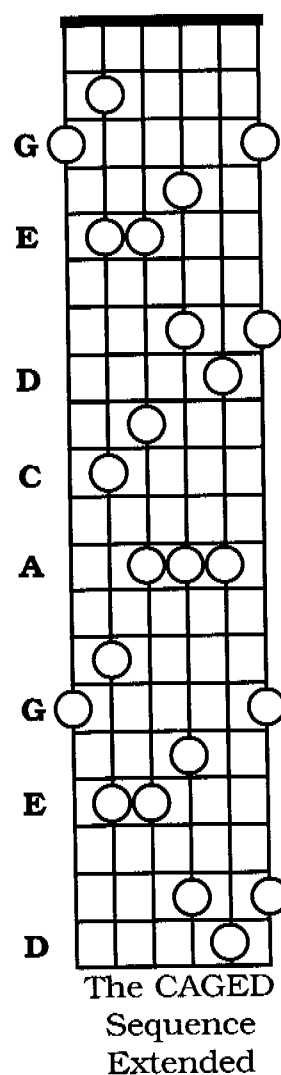
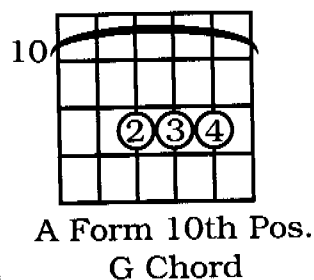
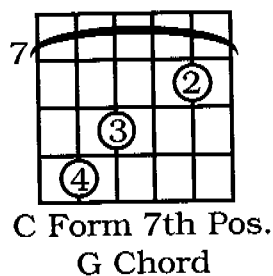
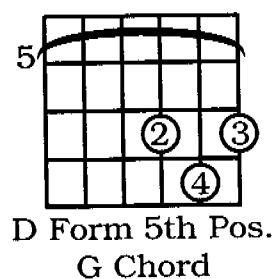
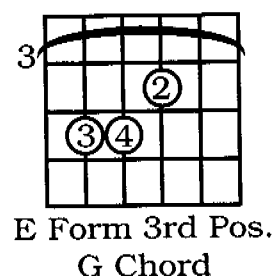
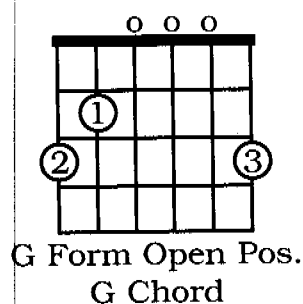


## The CAGED Sequence - Chords

The end of each form is the beginning of the next. The sequence never changes relative to itself. In other words, it can start in any position, with any of the basic forms, and the others will always be in the same location relative to it. Once you have established any form in any position, you should be able to recognize the sequence starting with the next form directly above and below the one you are playing.

Only the CAGED Sequences starting with the open C Form and G Form have been diagrammed but you should be familiar with the concept as a whole. The next exercise (not illustrated) is to play through the CAGED Sequence for chords starting with the A, E, and D forms in the open position. Then start with forms in the middle positions and do the sequence in both directions. If you don't understand the sequence well enough to do them without the graphs, go back to the beginning of the section and keep playing the diagrams until "it clicks." Each time through gets easier and more familiar. You have to picture the forms that are adjacent to the ones you are actually playing. The trick seems to be to hold the form in place until you've visualized the next one. Remember that the approach to the Scale Forms and Lead Patterns will be based upon what is shown for the Chord Forms.

The column on the right shows an extended version of the CAGED Sequence to illustrate that it continues on for as far as you can play. Electric guitars generally have a more accessible fretboard than their classical and acoustic counterparts, so a larger percentage of the playing area is going to be usable. **All of the chord forms in the sequence are completely separate from each other except for the C and D forms, which share a note on the second string.**



# Naming Chords by Form and Position

This section will require somewhat more mental effort on the part of the reader than previously. Up to this point, the majority of what has been presented has been relatively easy to visualize on the fretboard. Some ideas are not easily illustrated and have to be grasped in a more abstract manner. Naming chords by counting letters and accidentals is an example.

So far we have used only descriptive terminology. Forms, Positions, and Sequences only describe what is happening on the fretboard in a guitar orientation. The next step is to name the chords in a musical orientation. Again, the form is what you feel and see on the fretboard whereas the chord is what you hear played. In the last section we used different forms to play the same chord. Here we'll use the same form to play different chords. Some examples of chord *names* are E, Ab, B, and F#. Examples of chord *types* would be major, minor, suspended, and augmented seventh. A complete chord identification including both name and type would be something like C min., Ab diminished, and C# maj. 7th. Abbreviations and symbols are generally used rather than the complete written name and type. This section of Volume I will discuss naming the chords only. The different chord types are another subject altogether.

A minimum of three things are necessary to identify chords by their correct musical name. You need to know: 1) The music alphabet, 2) How accidentals (sharps and flats) work, and 3) How to count fret by fret using letters and accidentals. It sounds ridiculously simple but it winds up being harder than it seems. Counting on your fingers can be a transitional help but only if you do it right. Spread your fingers out wide and hold them still. Use a finger of the other hand for counting, not the thumb. This probably looks suspiciously like I'm teaching people their "ABCs" and how to count on their fingers but, oh well, there's no denying it. Call it better guitaring through Pre-K basics. Here goes:

- 1) The music alphabet uses only the first 7 letters, ABCDEF and G. (No H, I, etc.) You need to know it forward and backwards from any letter. It is also important to think of it as a circle so that the letter after G is A, and the letter before A is G.
- 2) A sharp ( # ) is when you *raise* any note or chord (move it one fret toward the body). The term "raised" indicates the pitch is higher by what is known as a 1/2 step. A flat ( ♭ ) is when you *lower* a note or chord or (move it one fret toward the headstock). The note above A is A#; the note below E is E♭ (for now).
- 3) To count fret by fret, you combine the letters with either the sharps or flats, but not both. For now, we'll put a sharp in between each letter and count forward. The counting rule is: letter, then same letter sharped; next letter then same letter sharped, and so on. There are two exceptions to this. **The exceptions are the pairs B and C, and E and F.** There is no # or ♭ in between B and C or E and F. Starting with the letter A, and counting one fret at a time, the order of notes and chords is: A, A#, B, C, C#, D, D#, E, F, F#, G, G# and back to A. Regardless what letter, form or position you start from, they count the same. If counting on your fingers gets in the way, don't use it.

## Naming Chords by Form and Position

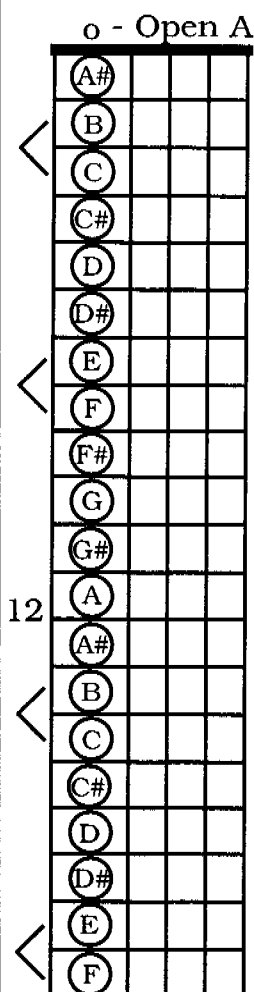
This system of counting letters works the same for notes and chords. The graph on the left shows the notes starting with the 5th string open A. The graph on the right shows the fret-by-fret counting of the A Chord Form. **Column 2 is continued on the next page.** All five forms work the same way. The order of the fret-by-fret counting stays the same. It just depends on which letter, note or form you start from. If you start with an open C Form, start your counting from the letter C. If you start from the E Form, start counting with E, and so on.

Don't forget the B-C and E-F rule. There is no sharp or flat between these pairs. On a piano keyboard we naturally tend to see groups of three black keys and then pairs of two. If you look from the point of view of the white keys, you'll notice that there are two pairs of notes that don't have a black key between them. Those notes are B & C and E & F. The B-C and E-F pairs are easy to see on the piano, but on the guitar you just have to remember them.

As you are playing the forms from the open position, start by using the last three fingers, and as you move up, count the bar finger to mark your place. After all, the bar designates the position. This way the counting procedure is the same for every form. Otherwise you'll have to count something different on each form, and it will take longer and be harder for no good reason.

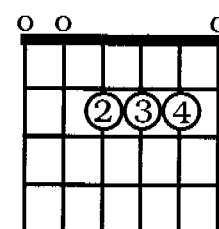


You name chords by counting fret by fret from the open position, or nut, **starting with the letter of the form you are using.**

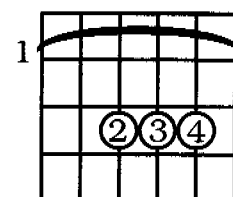


12

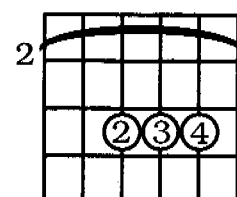
The notes of the A string fret by fret



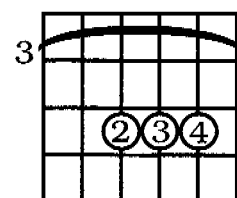
A Form Open  
**A Chord**



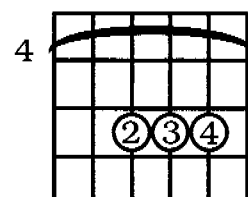
A Form 1st Pos.  
**A# Chord**



A Form 2nd Pos.  
**B Chord**



A Form 3rd Pos.  
**C Chord**



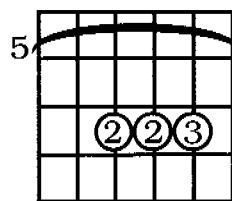
A Form 4th Pos.  
**C# Chord**

cont. next page>

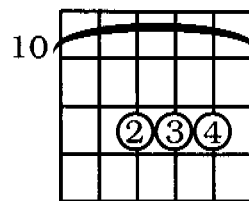
## Naming Chords by Form and Position

The graphs on both sides continue the fret-by-fret counting of the A form from the previous page up to the fourteenth fret.

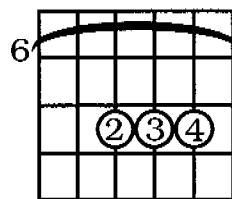
Don't spend too much time or effort trying to play chords in the first few barred positions perfectly. That's where the string tension is highest. Just concentrate instead on keeping the form intact during the initial transition from the open form to the barred. That seems to be where things are most likely to go to pieces formwise. It is natural to want to play the open forms the easy way at first, but it only makes it harder for the transition to the barred forms and so harder to name the chords. After you get used to the idea of naming by counting the letters, it won't matter so much which fingers you use. If you have previously learned to identify chords by naming the "root" on the fifth or sixth string, please try to avoid this. It is old fashioned and not well thought out. It requires the use of several different means to accomplish one thing. It also tends to cause players to think they can base everything on the two easiest forms. Again, get into the habit of verbally distinguishing between the form you are using and the actual chord name. It is important that the terms and concepts be differentiated and applied. The key to being able to count the forms fret by fret is to practice saying the music alphabet (A A# B C C# D D# E F F# G G# A...) over and over until you know it without mistakes from any letter. Then, when you add the forms on the fretboard, you can better divide your attention between the mental and physical requirements. Counting the flats is harder simply because we aren't used to saying the alphabet backwards especially with the added confusion of the the B-C, E-F exceptions.



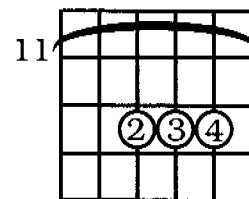
A Form 5th Pos.  
**D Chord**



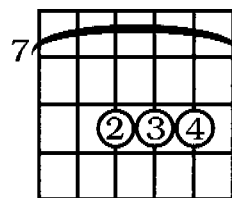
A Form 10th Pos.  
**G Chord**



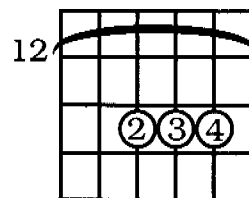
A Form 6th Pos.  
**D# Chord**



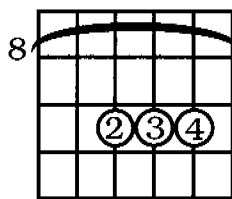
A Form 11th Pos.  
**G# Chord**



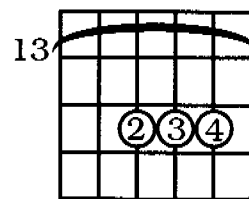
A Form 7th Pos.  
**E Chord**



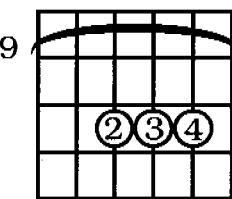
A Form 12th Pos.  
**A Chord**



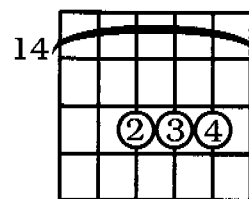
A Form 8th Pos.  
**F Chord**



A Form 13th Pos.  
**A# Chord**



A Form 9th Pos.  
**F# Chord**



A Form 14th Pos.  
**B Chord**

## Naming Chords by Form and Position - Sharps

The left column graph counts and names the first five positions using the E Form.

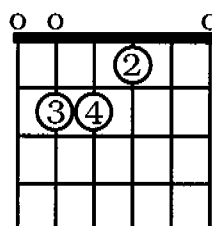
The right hand column counts and names the first five positions using the C Form.

Don't forget that the position is the number of the fret you are barring with your index finger. It is the same for all the forms.

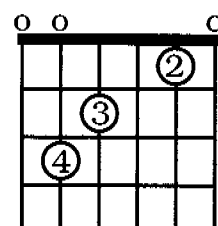
When you've completed these exercises, count up the remaining forms that aren't illustrated to at least the 12th position. If you do them right, when you get there you will be on the same chord that you started with.

If you're starting out, a good way to practice counting up the frets for naming is to put a form, any form, in any position and hold it in place. Don't let it move. Then, with the index finger of the right (or non-fretting) hand, count up to the bar by starting right on the nut and laying your index finger across the strings just like it is a bar. Count and move this "bar" as you go until it is on top of the bar of the fretting hand. It is a simple method but also visually oriented, and has often made the difference between whether a student learns to name chords correctly in one sitting or not.

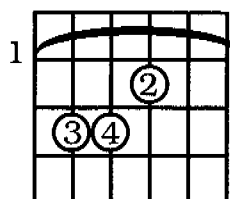
The key, I believe, is to remember to start counting with the letter name of the form you are using.



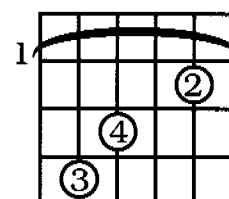
E Form Open  
**E Chord**



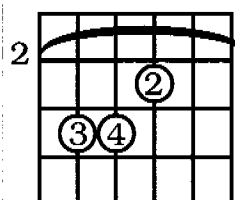
C Form Open  
**C Chord**



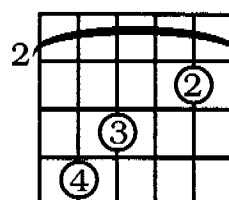
E Form 1st Pos.  
**F Chord**



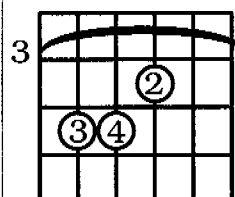
C Form 1st Pos.  
**C# Chord**



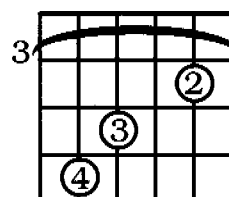
E Form 2nd Pos.  
**F# Chord**



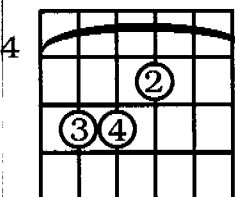
C Form 2nd Pos.  
**D Chord**



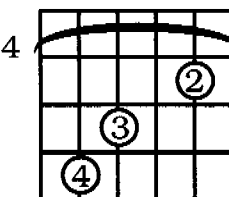
E Form 3rd Pos.  
**G Chord**



C Form 3rd Pos.  
**D# Chord**



E Form 4th Pos.  
**G# Chord**



C Form 4th Pos.  
**E Chord**



## Naming Chords by Form and Position - Flats

Having done it with sharps, and gone up the fretboard successfully will make the next part, going down using flats, easier. Play the chords starting in the left column saying both the form and position and the chord name, then do the right column and continue onto the next page.

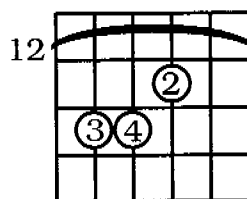
Working with flats, everything is reversed, and so a little more difficult. The key to doing this is to say the music alphabet using flats backwards a few times for practice before starting. The idea is to get the order straight in your mind so that looking at the different forms and positions and thinking new names won't throw you off. Also, you probably identify certain forms and positions as sharped, and this can also throw you off. As with the sharps, once you see it for a couple of forms, the process becomes automatic. Again, it is more important to know how the system works than to memorize chord names with no real understanding.

You will quickly realize that the chords in between the letters have two possible names. For example, Bb when counting down the fretboard, is the same as A# when counting up. For now either name is correct. Later on, which one is to be used will be determined by a music concept known as key.

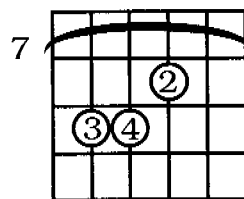


Music's meant to be fun, not like some crass music machine... that's not what we care about at all. We care a damn lot about music but like, so what if you mess up a couple of chords? Big deal. The point is you tried, and that's what counts.

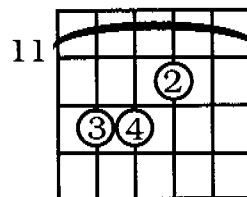
Johnny Rotten



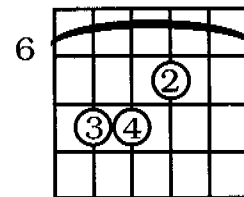
E Form 12th Pos.  
**E Chord**



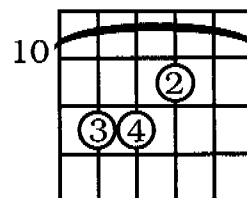
E Form 7th Pos.  
**B Chord**



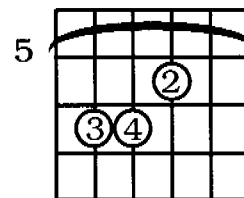
E Form 11th Pos.  
**Eb Chord**



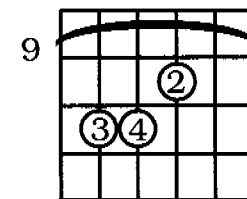
E Form 6th Pos.  
**Bb Chord**



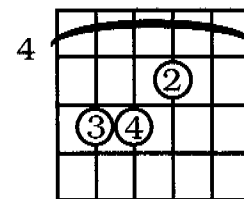
E Form 10th Pos.  
**D Chord**



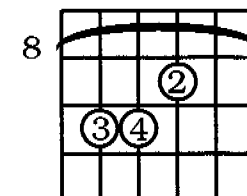
E Form 5th Pos.  
**A Chord**



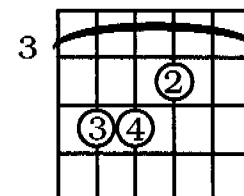
E Form 9th Pos.  
**Db Chord**



E Form 4th Pos.  
**Ab Chord**



E Form 8th Pos.  
**C Chord**





E Form 3rd Pos.  
**G Chord**

## Naming Chords by Form and Position - Flats

The column on the left completes the E forms counted down a fret at a time from the 12th position from the preceding page, ending with the open E Form.

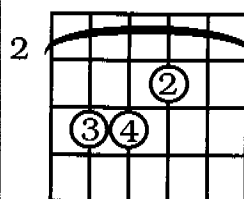
On the right, the G Forms have been diagrammed for five positions starting at the 12th using flats. These are not continued on the next page, but count down the fretboard until you reach the open G Form anyway. If you have done it right you will wind up at the open G chord. Count down the other three undiagrammed forms from the 12th position. You should end up at the familiar open chord each time. Don't forget to try using the index finger of the right hand as a movable counter. While holding a form in position for naming, lay the index across the nut and count up or down to the fretting hand bar, one fret at a time.

 Distinguish between Naming chords by counting a fret at a time, and connecting the forms by the CAGED Sequence. Counting fret by fret will give you the correct name for any chord, and the CAGED Sequence gives you the overall layout of the fretboard plus a shortcut to naming. 

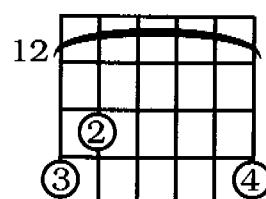
### Recap

By now you should be able to recognize all five Basic Chord Forms in any position, connect them in CAGED Sequence from any position, and name the chord from any form and position.

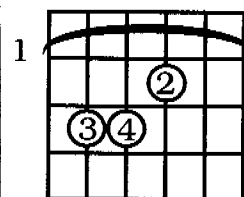
Now would be a good time to go back and review everything from the beginning. It always makes more sense the second time, and you may discover something you missed.



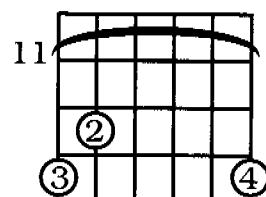
E Form 2nd Pos.  
**G<sup>b</sup> Chord**



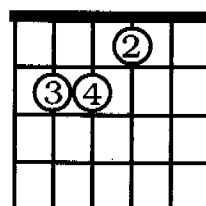
G Form 12th Pos.  
**G Chord**



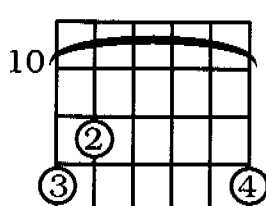
E Form 1st Pos.  
**F Chord**



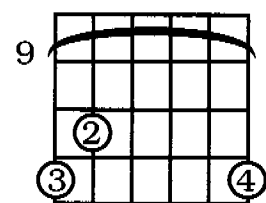
G Form 11th Pos.  
**G<sup>b</sup> Chord**



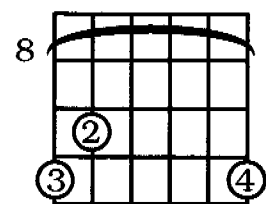
E Form Open Pos.  
**E Chord**



G Form 10th Pos.  
**F Chord**



G Form 9th Pos.  
**E Chord**



G Form 8th Pos.  
**E<sup>b</sup> Chord**

## Scales and Scale Forms

Whereas chords are notes played simultaneously, **scales** are groups of notes played in succession. As with the Chord Forms, the guitar's tuning provides five specific patterns for these as well, and they correspond in a precise manner. Although the Chord Forms are held in place and fairly easy to see and remember, Scale Forms must be visualized as a continuous pattern when being learned, since only one note at a time is played.

Over the years I've encountered various labeling and coinage for the Five Basic Scale Forms. I believe they have been more or less pasted on by well-meaning but ill-informed guitar teachers. Among them are the Greek modes (Ionian, Dorian, Phrygian, etc.,) Roman numerals and alphanumerics (Form I, Form IA, Form II, Form IIA, etc.,) primary/secondary terms like "transitional patterns," descriptors like "boxes," and stylistic names like "blues scale" and "rock pattern." I imagine few things to be more confusing to a guitar student than the variety of arbitrary naming conventions given to the Basic Scale Forms. The problem stems at least partially from the music vs. instrument overlap. Also, terms used in one field of endeavor are often misused, varied or corrupted when applied in another. Tremolo and vibrato are a good example of this type of confusion. Tremolo, by definition, is a steady change in volume whereas vibrato is a change in pitch. So naturally the guitar companies call their pitch changing bars, "tremolos."

Similarly, the Greek names for modes pertain to a music concept and have no function on a fretboard unless you choose to limit yourself to playing to and from the E strings starting with a certain finger. (Any teacher who still uses the Greek modes to identify Scale Forms to a beginning guitar student should be flogged.) It is easy to see how the mode and Scale Form confusion began, however. The association between the two seems convenient with respect to the aforementioned E strings on either end of the fretboard. It is similar to the limitation that occurs when players use the fifth or sixth string to identify chords with. On a guitar, the only naming convention that is sufficiently comprehensive is to identify the Scale Forms by their corresponding Chord Form. You will see that the Scale Forms can be visualized as a natural continuation of the Chord Forms, instead of a separate and unrelated entity.

We tend to take the paths of least resistance when learning, and you will find it easier to learn the Scale Forms by developing them as pattern extensions to the chord forms you already recognize than the arbitrary IIA form or the arcane Mixolydian mode. Trust me. And another thing. The dot scheme on guitar fretboards should go down in history as one of the worst design implementations ever, right along side color coded keyboards on those old electronic organs. How the current fretboard dot placement scheme has lasted, I'll never understand. With the exception of the ones at the 12th and the 5th frets, they just get in the way. Guitar tuning system: Good. Fretboard dots: Bad.

The most basic scales consist of five notes and are called **pentatonic**, or five-toned. There's nothing complicated about that particular Greek term.

# The Five Basic Scale Forms

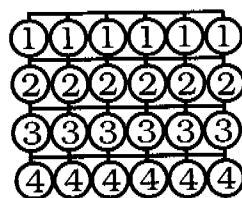
Just as there are Chord Forms that are easily recognized in any position, there are also Scale Forms that make patterns which can be easily learned and used. There is a C Scale Form that corresponds to the C Chord Form, an A Scale Form that is related to the A Chord Form, and so on.

Since the Scale Forms are not held in place like the Chord Forms, the general idea behind which finger to use for which note is four fingers to four frets, as illustrated in the top left diagram. For example, if you are playing a Scale Form in the second position, the index finger frets the necessary strings at the 2nd fret, the middle finger frets the strings at the 3rd fret, the ring frets them at the 4th, and the pinky takes the 5th.

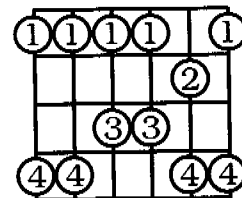
However, you will soon encounter Scale Forms that span more than four frets. This requires what is termed a **finger extension**, meaning a note that is played either above or below the usual four fret area. The position does not actually change though, and for all practical purposes, only the index and pinky fingers make extensions.

Not all Scale Forms will begin with the index finger, and not all Scale Form positions will be designated by the first finger. The index is sometimes treated as an extension so the Scale Form can better correspond to the Chord Form.

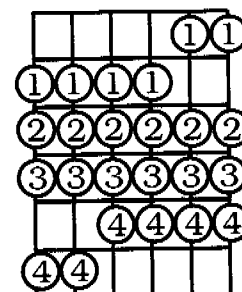
The graphs in the left hand column illustrate basic finger position for Scale Forms and extensions. Play through each of them one string at a time, ascending and then descending. The right column illustrates the Five Basic Scale Forms. The D Scale Form is the only one of the five basics to require an extension. The fingerings shown are optional, and as with chords, the correct fingers to use for scales will depend on the particular circumstances.



Normal Scale Form  
Finger Positions  
4 Fingers: 4 Frets

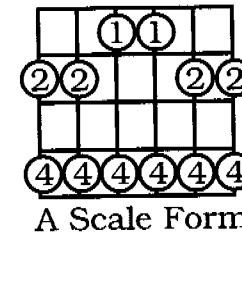


C Scale Form

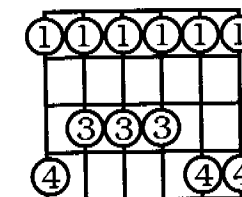


Scale Form

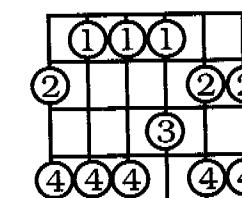
Finger Positions  
with Extensions



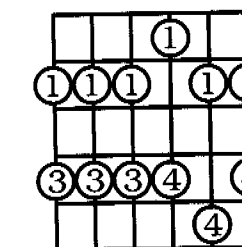
A Scale Form



G Scale Form



E Scale Form



D Scale Form

## The Five Basic Scale Forms

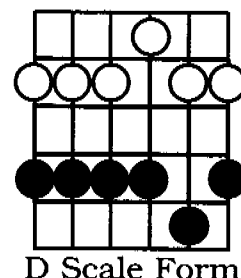
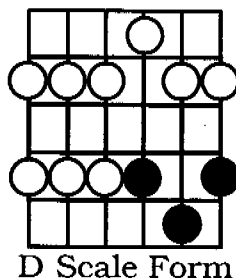
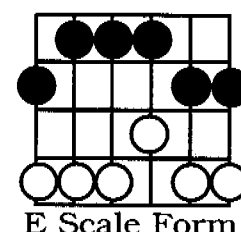
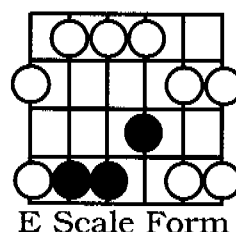
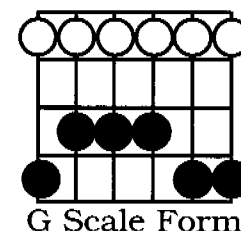
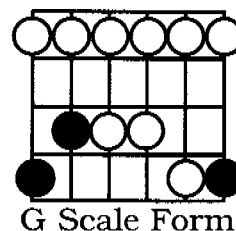
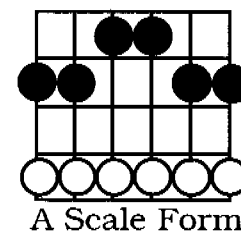
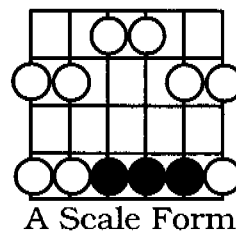
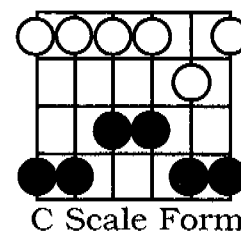
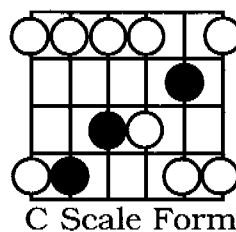
The left hand column illustrates that the Chord Forms are actually an integral part of the Scale Forms. This also shows why calling the Scale Forms anything else puts the subject into another area of discussion. The term "C Scale Form" (or C Form Scale) is a purely guitar oriented designation, and doesn't apply to any other instrument. As with the different types of chords, learning different types of scales will be a matter of developing them from the basic forms.

Practice playing the Basic Scale Forms in various positions. Learn them forward and backward from memory. When playing with a pick, it is a good idea to start with a down stroke and alternate directions for each note. It will be hard at first especially when changing from string to string, but discipline yourself now and you will benefit many times over later especially in terms of speed and accuracy. If you are using your fingers to pluck the strings, alternate them as well, using thumb and index or middle and index.

The forms in the right column have been contrasted to show that the end of one is the beginning of another. The "bottom" of the C Form is the "top" of the A Form. The bottom of the A is the top of the G, the top of the D form is the bottom of the E, and so on.



When learning scales, try to play as slowly as possible for accuracy the first few times. If the first few tries are correct, it will be much easier than trying to unlearn a rush job. The best way is to play dead slow until you are familiar with the form.



## Forms and Positions - Scales

Describing scales by form and position is similar to the method for chords. The pattern stays the same, but is moveable and can be played in various locations on the fretboard. The main difference stems from the fact that the position of the Scale Forms is not always referenced by the index finger as were each of the Chord Forms. The C and G Scale Forms are located by the index like the chord forms. For example, if you were to play a G form scale in the 4th position, your index would fret the strings at the 4th fret. As drawn, the D Form is also positioned by the index but contains an index extension that moves it temporarily out of place.

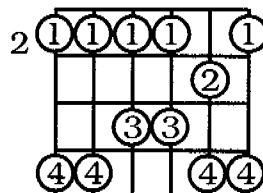
**The A and E Scale Forms (\*) are not referenced by the index finger for position.** The index notes in these two scale forms are treated like extensions in order for the Scale Forms to better follow the Chord Forms as patterns.

The graphs in the left hand column illustrate the reference point of the Basic Scale Forms in various positions. The graphs on the right show the relative positions of the corresponding Chord Forms.

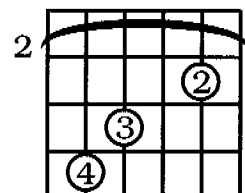


My daddy knew a lot of guitar players and most of them didn't work, so he said 'You should make up your mind to either be a guitar player or an electrician, but I never saw a guitar player that was worth a damn.'

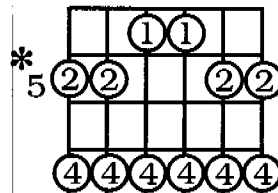
Elvis Presley



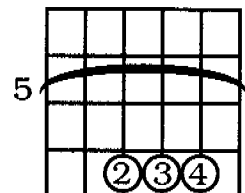
C Scale Form  
2nd Position



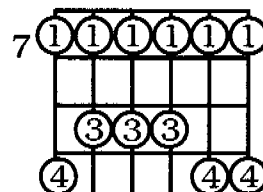
C Chord Form  
2nd Position



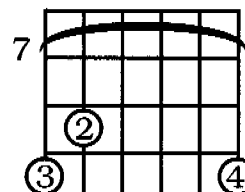
A Scale Form  
5th Position



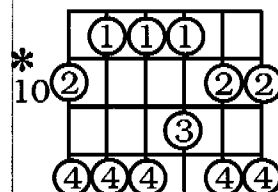
A Chord Form  
5th Position



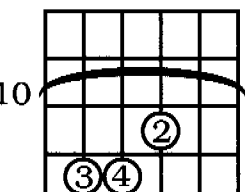
G Scale Form  
7th Position



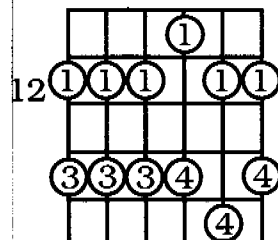
G Chord Form  
7th Position



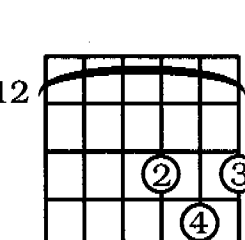
E Scale Form  
10th Position



E Chord Form  
10th Position

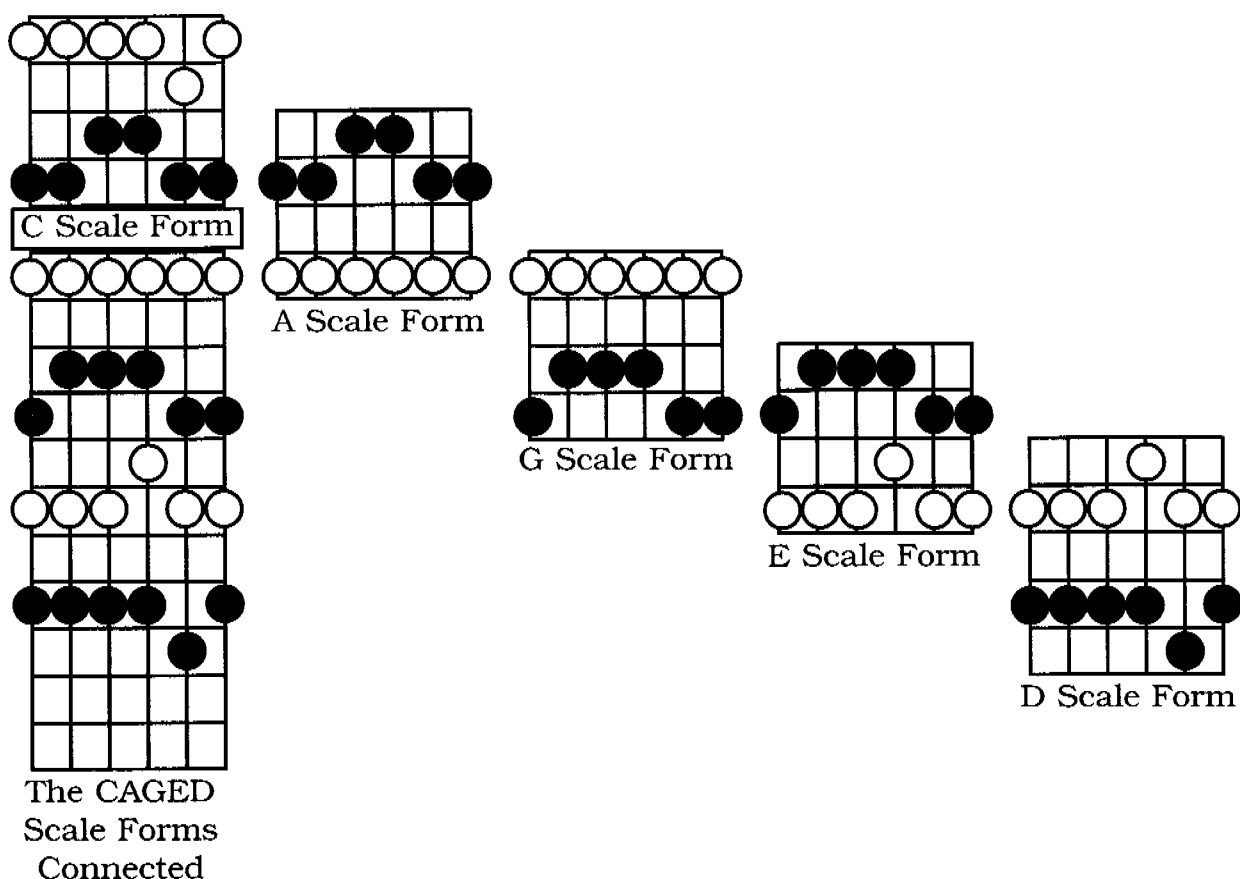


D Scale Form  
12th Position



D Chord Form  
5th Position

# The CAGED Sequence - Scales



This series of graphs is intended to lure you away from thinking of the scales as just five separate forms, and into seeing them also as parts of a continuous whole. Each Scale Form is the same five notes played at least twice in different positions starting with a different note.

The graphs are shaded to illustrate that the bottom of one Scale Form is the top of another. The diagram on the left shows how the Basic Scale Forms appear when connected end to end on the fretboard.

In this view, you should be able to see that the CAGED Sequence applies equally to both scales and chords.



The Chord Forms are generally separate from one another. The Scale Forms all share notes with adjacent forms on either end.



# Naming Scales by Form and Position

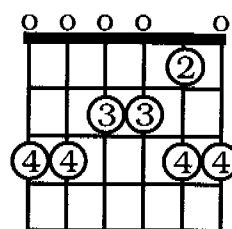
As with the chords, we established five basic forms for scales, and described them in terms of form and position. Then we viewed them as five parts of a contiguous sequence spanning more or less the length of the fretboard.

Now we will identify them by name, and later (in Vol. II), by *type*. Naming scales requires the same tools that naming the chords did, and since you've gone through the procedure already, you'll find it easier, if not automatic. If you find this section difficult, it would be a good idea to go back over the section on naming chords.

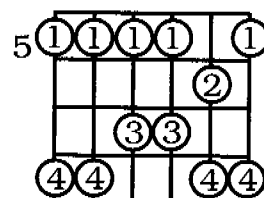
To find the correct name of a Scale Form, count fret by fret using the music alphabet with either sharps ascending or flats descending starting with the letter of the form you are playing. A quick review of the music alphabet ascending starting with the letter C: C C# D D# E F F# G G# A A# B and back to C. Using flats and descending starting with E: E Eb D Db C B Bb A Ab G Gb F and back to E.

The use of sharps only, when ascending, and flats only, when descending, is a simplification for the purpose of focusing on the issues at hand. The fingering suggested is also for learning purposes only, and once you know the forms, you can substitute whatever works best for you.

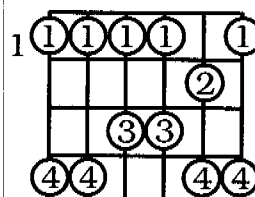
Some Scale Forms cannot be played from the open position, making the counting somewhat more difficult than for chords. When in doubt, refer to the corresponding Chord Form. The graphs show the scale names of the C form in each position starting with open and ending with the 14th on the next page. Play the form in every position and name it out loud as you go.



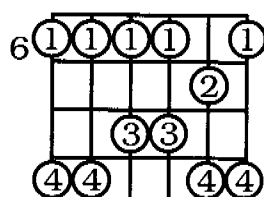
C Form Open  
C Scale



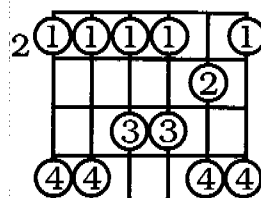
C Form 5th Pos.  
F Scale



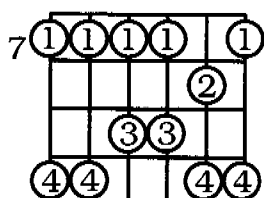
C Form 1st Pos.  
C# Scale



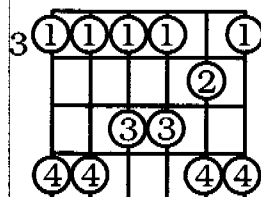
C Form 6th Pos.  
F# Scale



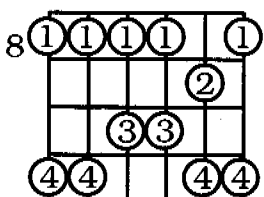
C Form 2nd Pos.  
D Scale



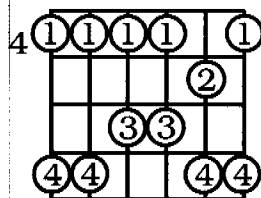
C Form 7th Pos.  
G Scale



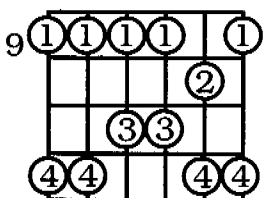
C Form 3rd Pos.  
D# Scale



C Form 8th Pos.  
G# Scale



C Form 4th Pos.  
E Scale



C Form 9th Pos.  
A Scale



## Naming Scales by Form and Position

The column on the left completes the C Scale Form circle from the previous page and continues up to the 14th fret.

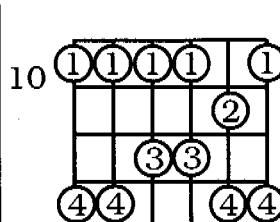
The right hand column counts the A Scale Form from the 1st position to the 5th. There is no open position possible for the A form scale. Play the A form in each position and name it as you go. Don't forget that the A form and the E form treat the index finger as an extension to better follow the Chord Forms and the second finger determines the correct position.

The other Scale Forms are illustrated in just a few positions rather than the entire range of the fretboard. Again, it is more functional to know how the system works than to rely on memorization. As you progress, you will automatically remember what you use the most anyway. If you are having trouble, go back to the Chord Forms and count them fret by fret, then try it with the scales again.

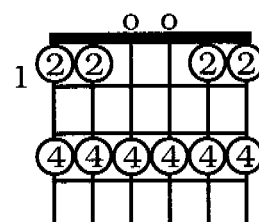


It is a decisive moment for civilization when man lays aside his arrows and devotes himself to plucking bowstrings for music. He can be very vulnerable at that point, as David discovered, in the Book of Kings, when he found himself suddenly the target of a tossed spear. But this very vulnerability is a precondition to all art, which reposes in fragile guitars rather than in swords. And thus the history of the guitar is essentially the story of some of man's best moments...

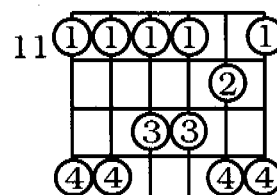
Frederic V. Grunfeld



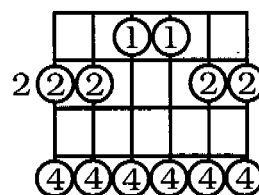
C Form 10th Pos.  
A# Scale



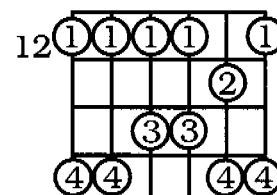
A Form 1st Pos.  
A# Scale



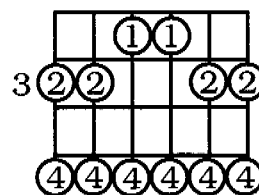
C Form 11th Pos.  
B Scale



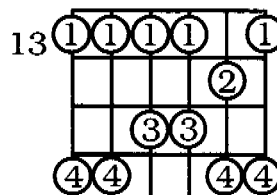
A Form 2nd Pos.  
B Scale



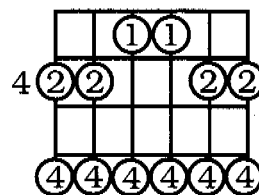
C Form 12th Pos.  
C Scale



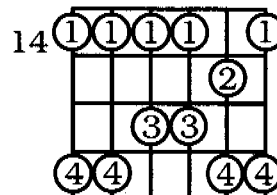
A Form 3rd Pos.  
C Scale



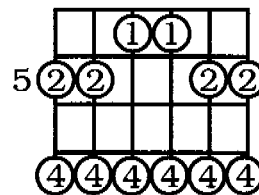
C Form 13th Pos.  
C# Scale



A Form 4th Pos.  
C# Scale



C Form 14th Pos.  
D Scale



A Form 5th Pos.  
D Scale

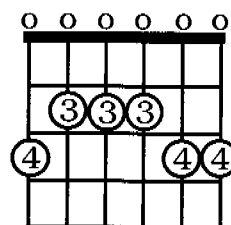
## Naming Scales by Form and Position

The column on the left names each of the G Scale Forms from the open position to the 4th. Even though they aren't pictured, continue on and play through each position until it repeats at the 12th fret and see if you come back to G. If you do, you've done it right.

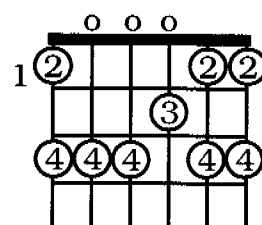
The right hand column shows the E Scale Forms. Here again, for naming purposes, the E Form, like the A Form, behaves as if the index were an extension, and the position is referenced by the second finger instead of the first.

Since there is no possible open E Form, the series starts in the 1st position.

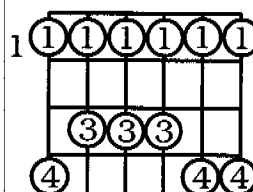
As with the G Form Scale, only five positions of the E Form are illustrated, but you should again play them all the way up the neck, naming each different scale as you go.



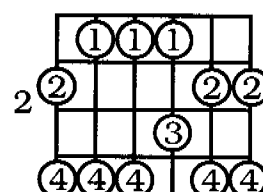
G Form Open  
G Scale



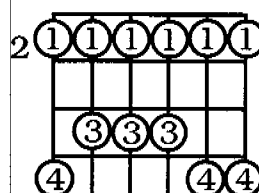
E Form 1st Pos.  
F Scale



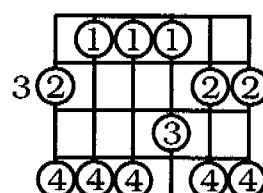
G Form 1st Pos.  
G# Scale



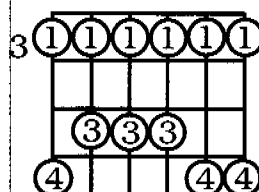
E Form 2nd Pos.  
F# Scale



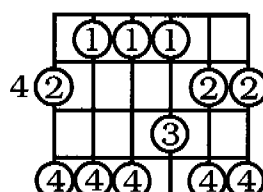
G Form 2nd Pos.  
A Scale



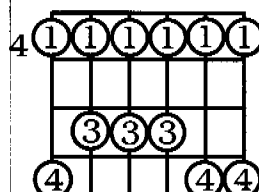
E Form 3rd Pos.  
G Scale



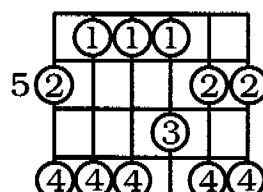
G Form 3rd Pos.  
A# Scale



E Form 4th Pos.  
G# Scale



G Form 4th Pos.  
B Scale



E Form 5th Pos.  
A Scale

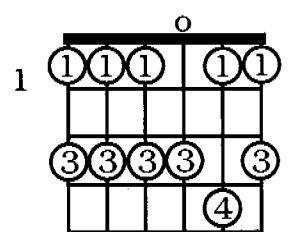
## Naming Scales by Form and Position

The last of the Basic Scale Forms, D Form, like the A and E, also cannot be played open, so it too will begin in the 1st position. It is illustrated such that the position is determined by the first finger, with an index extension on the third string. The series continues in the right hand column up to the ninth position.

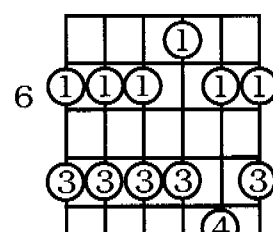
The importance of being thoroughly familiar with *all* five Scale Forms cannot be overemphasized. Since the notes are the same five, played with different patterns, the natural tendency is to use the form or forms that are easiest to manage. Of the five, the G form is without a doubt the most often used in beginning lead playing, but this can become limiting. The different look and feel of the five forms will cause you to phrase things in a way that is more unusual and perhaps more interesting.

### Recap

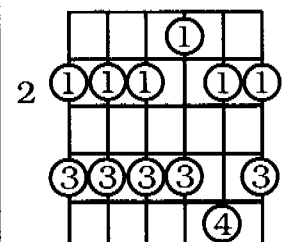
By this time you should have the same skills for the Basic Scale Forms that you acquired for the Chord Forms. You should be able to recognize and play all five Forms in any Position, visualize them in CAGED Sequence, and Name a scale by its Form and Position. Because of the relative degree of difficulty, you should expect to play the Scale Forms about 10-20 times as much as the Chord Forms to get control of them. Always distinguish between the fretboard description and the exact music name. If you are thinking the description, use the words "form and position" as in "C (Scale) Form, 2nd Position". If you are thinking key, use the name as in "D Scale." When talking to other guitar players, the physical description is useful, but other instrumentalists are only going to be aware of the musical terms.



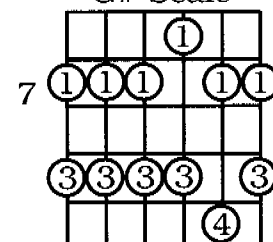
D Form 1st Pos.  
D# Scale



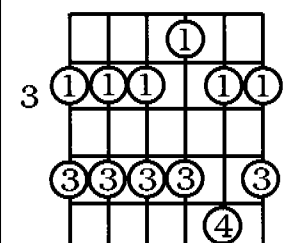
D Form 6th Pos.  
G# Scale



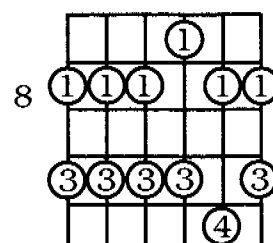
D Form 2nd Pos.  
E Scale



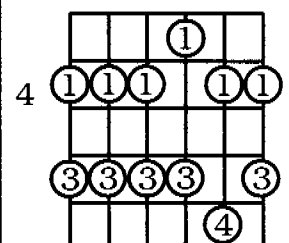
D Form 7th Pos.  
A Scale



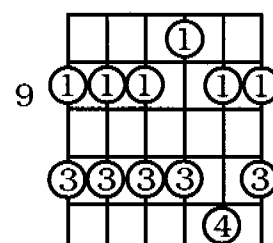
D Form 3rd Pos.  
F Scale



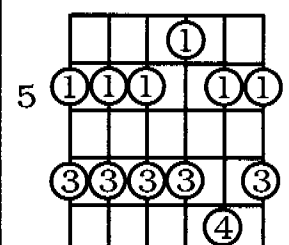
D Form 8th Pos.  
A# Scale



D Form 4th Pos.  
F# Scale



D Form 9th Pos.  
B Scale



D Form 5th Pos.  
G Scale

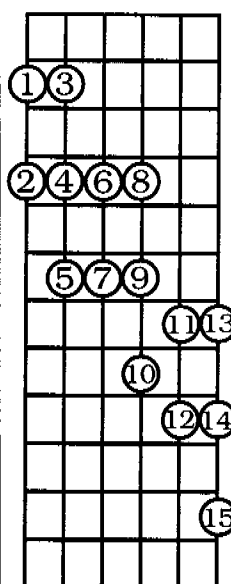
# Lead Patterns

There are Two Basic Lead Patterns which result from the guitar's tuning. This new arrangement gives us the ability to access more notes, and enables us to play things that would be impossible otherwise. The term **Lead Pattern** has been adopted primarily to distinguish these types of patterns from Scale Forms, but also to convey that they are often used in soloing, improvisation and lead playing. It is a guitar oriented name for a different form of scale, or more precisely, a symmetrical, extended, scale form which is played along the fret-board instead of across it. Whereas the Scale Forms are irregular patterns in one position, the Lead Patterns are regular patterns in several positions. (You get bonus points if you noticed that the Lead Patterns are made up of just the small or whole-step reaches of the Scale Forms.) They are illustrated first showing the notes numbered in ascending order in the left hand column. The right hand column illustrates that each Lead Pattern can be viewed as three groups of five notes with an adjustment made for the smaller interval of the 2nd and 3rd string pair. I hope you appreciate the elegance of the system when you realize that LP1 descending, is the same 3 motions string-to-string and position-to-position, as LP2 ascending. (And vice versa. See next page.) This may take a little longer to grasp, but it will be worth it.

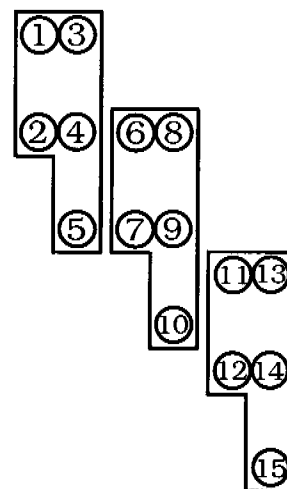
The Lead Patterns represent the third distinct pattern type that occurs solely as a result of the guitar's tuning system.



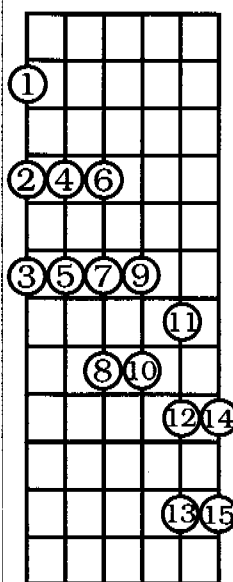
Visualize the lead patterns as all five Basic Scale Forms joined together, and then divided into two equal parts.



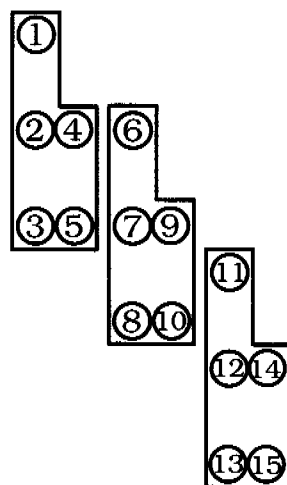
Lead Pattern 1



Lead Pattern 1  
Ascending Groups



Lead Pattern 2



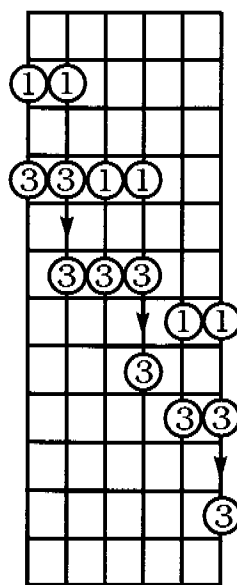
Lead Pattern 2  
Ascending Groups

## Lead Patterns

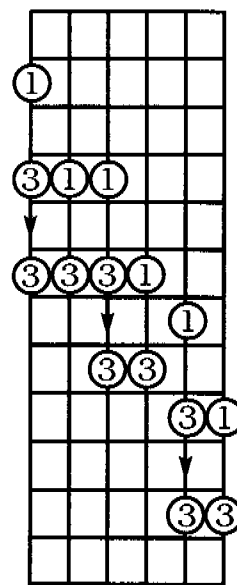
In these diagrams, the two Lead Patterns have been illustrated showing a fingering convention which is limited to the index and ring fingers only, so the player can concentrate on learning to move from position to position smoothly without having too many fingers get in the way.

The arrows indicate position changes, not *slides*, and are shown in ascending order in the top two graphs and descending order in the bottom two. The fingering, as usual, will become a matter of choice given the circumstances later on. The important thing right now is to be able to play the patterns in various positions without getting lost in the dots on the neck. One of the first things you will notice about the patterns is that they use a **stepwise**, or two fret motion. They progress in a regular fashion until they get to the 2nd and 3rd string, and then the pattern changes to a half step "finger squeeze" and then it goes back to being stepped.

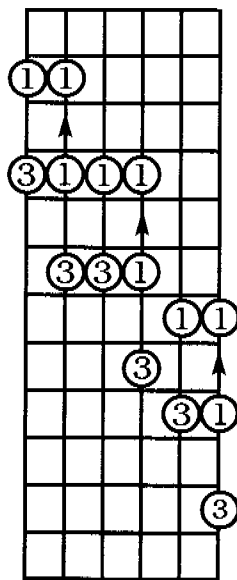
The finger motion of each three fives in LP1 ascending, is to change strings then change positions. This is the same for LP2 descending. The motion of each three fives in LP2 ascending, is to change positions, then change strings. This is the same for LP1 descending. As with the Chord Forms and Scale Forms, these patterns are the basic framework for a significant portion of the organization of the fretboard. Playing these patterns is not "playing lead" per se, but its a start. If you want to really play lead, learn these Basic Lead Patterns, and then experiment with putting the notes together into **phrases**, or musical statements, combined with other elements such as tonal groupings, coherent rhythmic statements, articulation techniques, etc. This is further discussed in Vols. II and III.



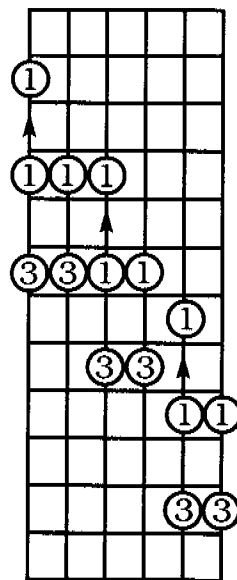
Lead Pattern 1  
Ascending



Lead Pattern 2  
Ascending



Lead Pattern 1  
Descending



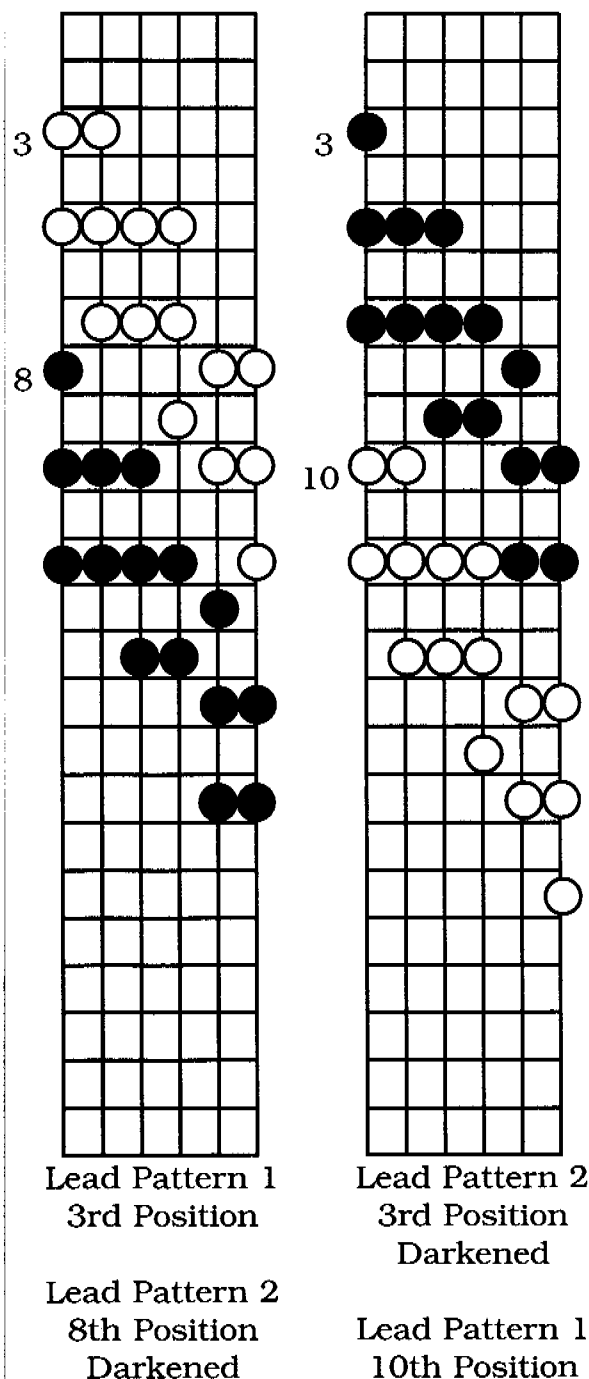
Lead Pattern 2  
Descending

## Forms and Positions - Lead Patterns

The graphs on the right illustrate the Lead Patterns' proximity to one another. In the left hand column, Lead Pattern 1 played in the 3rd position is the equivalent to Lead Pattern 2 played in the 8th position. In the right hand column, Lead Pattern 2 played in the 3rd position is the same as Lead Pattern 1 in the 10th position. (The first time you read the above, it will be about as clear as the ground water in the Love Canal, but it will make sense sooner or later.) As you play them you'll hear the similarities.

Tonally, each Lead Pattern is the same five notes played in the Scale Forms but with more range. The primary difference is that they run lengthwise instead of widthwise relative to the fretboard. The Scale Forms are all of the available notes in one position, and the Lead Patterns are a few notes from each Scale Form in several positions. When both Lead Patterns are illustrated side by side, all of the notes of the Five Basic Scale Forms are accounted for.

The patterns should be learned well enough to be played in any position possible using either one or both. To accomplish this with Lead Patterns, it will help to be able to move as easily from position to position, as from string to string. So practice using the string itself as a guide when changing positions and don't take your finger completely off when moving. As with the Chord and Scale Forms, the use of the term position is for descriptive purposes only and pertains to a fretboard location. Saying "Lead Pattern 1 in the 4th Position" will only make sense to another guitar player. The players of the other instruments in the group will have to have it translated to a scale, a key, or number in order for it to make sense to them. This is discussed in the section entitled Naming the Lead Patterns.

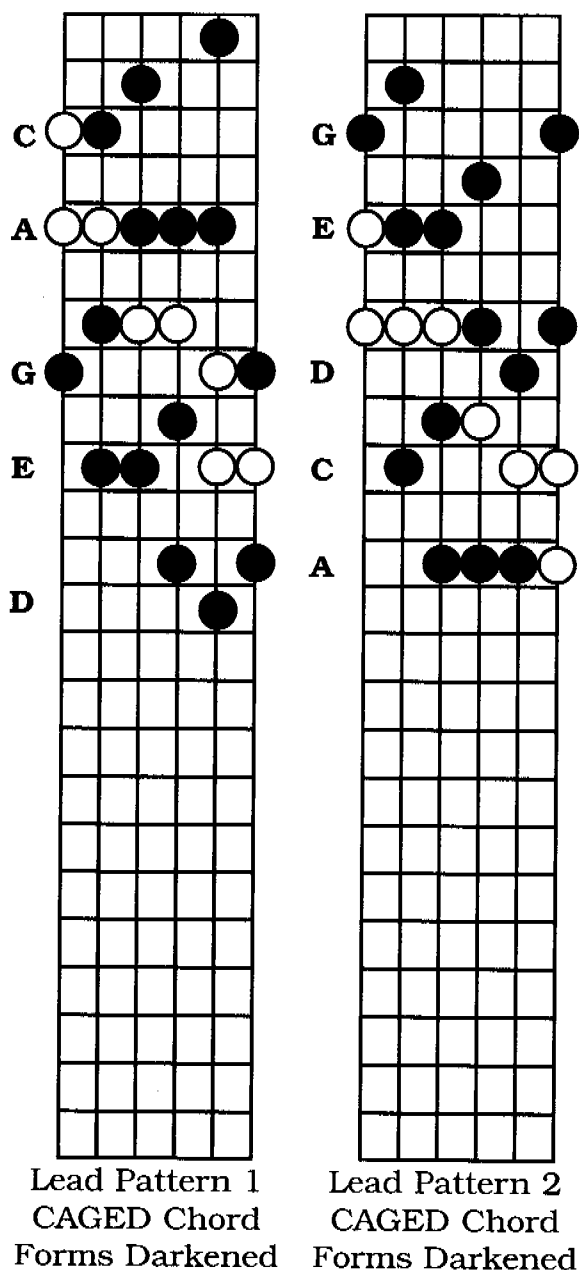


# The CAGED Sequence - Lead Patterns

The diagrams to the right show the relationship between the Lead Patterns and the Five Basic Chord Forms in Sequence. The Chord Forms are darkened. Notes have been added where necessary for clarity.

By now you should be able to appreciate the pervasive nature of the CAGED Sequence on the guitar fretboard. The Chord Forms, Scale Forms and Lead Patterns are each integral to this unique arrangement. In fact, no matter what you are trying to accomplish on the fretboard, you'll be working within or without the CAGED Sequence one way or another. The more aware of this you are, the easier your job will be when it comes time to apply what you know to the instrument.

With the Lead Patterns, the sequence functions differently than with the Chord and Scale Forms. Before, each form progressed along the length of the fretboard in CAGED order. Since the Lead Patterns flow along the fretboard as opposed to across it, the CAGED Sequence becomes stationary relative to what you are playing. It's function here is more on the order of a series of guide posts along the way.



## Naming the Lead Patterns

Naming the Lead Patterns requires one more step than naming either the Chord or Scale Forms. **The Lead Patterns are referenced by the first Chord Form of the CAGED Sequence included in the pattern.**

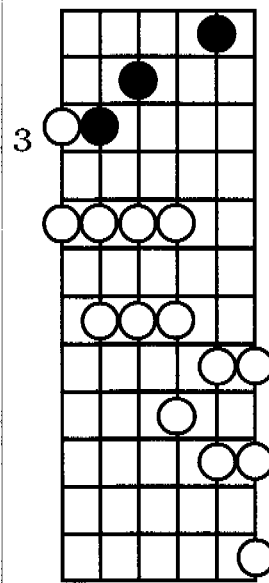
Lead Pattern 1 is referenced by the C Chord Form and Lead Pattern 2 is referenced by the G Chord Form. Given this, it will now be helpful to designate them as Groups - the C Group and G Group. This orientation also gives the player something more visual to grasp than the somewhat arbitrary "Lead Pattern 1" and "Lead Pattern 2" for naming purposes.

In the top left graph, LP1, or the C Group, begins on the third fret, and so it corresponds to the C Chord Form in the open position, therefore, it is in the key of C (for now). It is a C Group Lead Pattern (guitarwise) and a C Scale (musicwise).

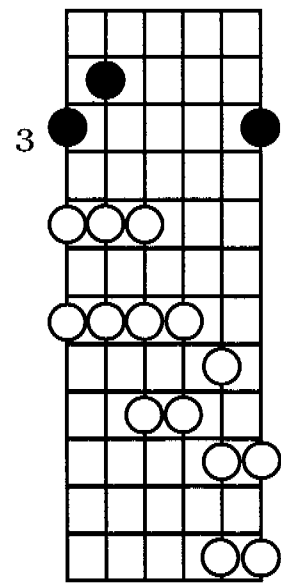
In the top right graph, LP2, or the G Group, begins on the 3rd fret, and corresponds to the G Chord Form in the open position, and so is in the key of G, musicaly.

The lower graphs illustrate this in higher positions. In the graph on the bottom left, the C Group is played from the 7th position. This corresponds musically with the C Chord Form in the 4th position which is an E chord. Therefore the Lead Pattern is in the key of E, or an E scale (for now).

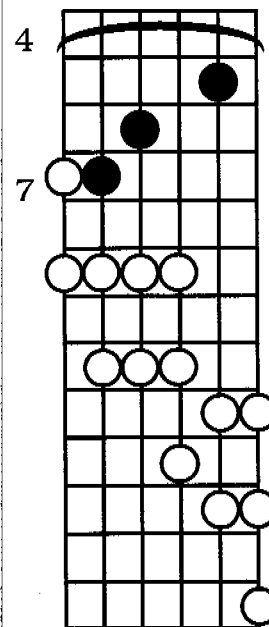
The bottom right hand graph shows the G Group Lead Pattern in the 7th position. This matches the G Chord Form in the 4th position which is a B chord. So this Lead Pattern is in the key of B, or a B Scale (again, for now). If you can name the Chord and Scale Forms, you will also be able to name the Lead Patterns provided you remember to reference it to the correct Chord Form.



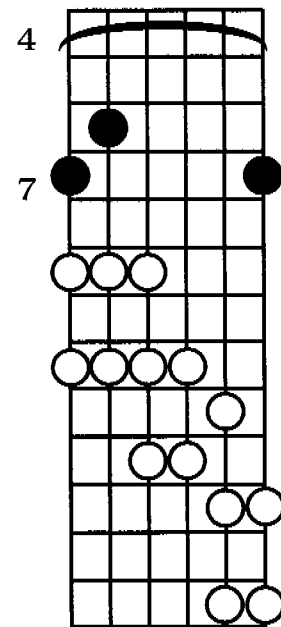
C Group  
3rd Position  
C Scale



G Group  
3rd Position  
G Scale



C Group  
7th Position  
E Scale



G Group  
7th Position  
B Scale



## Naming the Lead Patterns

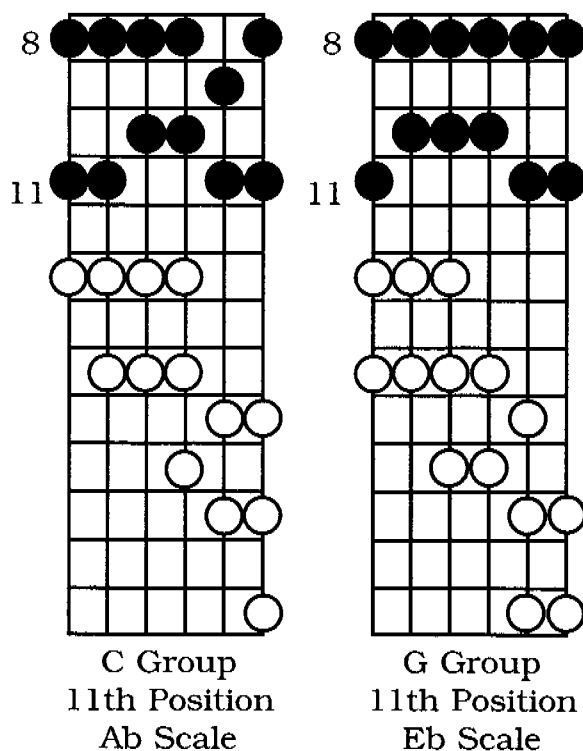
These graphs have been drawn to show that the naming of Lead Patterns can be done with Scale Forms, just as with the Chord Forms, so they have been matched up with their corresponding Scale Forms.

The C Group in the left column matches the C Scale Form in the 8th position so the key is Ab. The G Group in the 11th position matches the G Scale Form in the 8th position so the key is Eb. Using the Scale Forms instead of the Chord Forms for a reference isn't really as easy visually, but has been included for the sake of completeness.

At every opportunity an effort has been made to differentiate between the guitar description and the musical identity. Chords, scales and keys are music concepts common to all (polyphonic) instruments. Chord Forms, Scale Forms and Lead Patterns, as described here are specific to the guitar and are the sole result of the instrument's tuning.

## Recap

This is the end of the third section of Fretboard Logic Volume I. By now you should be familiar with the Lead Patterns in much the same manner as the Chord and Scale Forms which preceded them. You should be able to recognize and play both Lead Patterns in any position on the fretboard. You should be able to visualize the CAGED Sequence forms in relation to each of them, and you should be able to use the C and the G Chord or Scale Forms as a reference to name them in any position. Here is another pitch to reread and replay everything from the beginning. After you've done that a time or two, take the test. Then put down the book for a while and come back to it later. See if it stuck.



## Finale

The Basic Chord Forms, Scale Forms, and Lead Patterns are the three fundamental components of the pattern organization of the fretboard. They result from the implementation of six strings tuned 4th, 4th, 4th, 3rd, and 4th, and evolved as a means to confer true polyphonic capabilities upon the instrument given the limitation of four fretting fingers. This fretboard organization is the interface between the guitar player and the music he or she plays. I believe its comprehension is essential to the knowledgeable application of musical ideas to the guitar. Volume I focused on this pattern organization exclusively as the guitarist's first priority. Consider it just a foundation upon which to build. Without an understanding of why the instrument is tuned the way it is, learning the guitar can be unnecessarily frustrating. While the guitar's overall design and capabilities have evolved through advances in technology and changes in music styles, the tuning has remained the same. It is simple and efficient. It works perfectly. Although it is less than obvious, as you have seen, it can be learned in a short amount of time when not clouded by other issues. It is important that guitar players, even more than other instrumentalists, learn to distinguish the realm of the instrument's interface from the other areas of learning to be taken up. The fretboard relationships introduced here are merely a framework within which you can work to extract music from your guitar.

There are a total of three volumes to the series. The next, Fretboard Logic II continues from this point and covers the tonal elements of music exclusively. You will learn how to play different types of Chords, Scales and Arpeggios, by building them up from the basic fretboard forms. Our approach is faster, easier and more direct than either rote memorization or the cut and try approach. Groups of tones can only be expressed two ways: as played together or in succession. Chords are groups of tones played at the same time, Scales are tones played one after another, and Arpeggios are a hybrid whereby chords are played like scales. Each are presented within the context of the pattern organization discussed here.

I hope the following test provides an incentive to - you guessed it - reread and replay everything. I encourage feedback, so feel free to write with any questions, comments, criticisms or suggestions on how to improve the method. (If you want to help out, tell the folks at the stores to keep us in stock.) I've put many years of work into these little books, and done countless rewrites to make them more accurate and readable (and yes, I still find typos). I truly hope they help you get more out of your guitar. The bottom line is this: You've made a good decision in your choice of an instrument. As a vehicle for self expression, the guitar is second to none. And one more thing. The only way I've ever been able to learn anything difficult is to just keep at it until it somehow sinks in. Consider that whenever something new is presented, our brains have to fit it into what is called our "frame of reference." Maybe this is a little like breaking eggs to make an omelet. I believe there is a natural resistance to changing the status quo. Anything of value will not usually be easily attained, and learning to play the guitar is no exception.

## “Testing Testing...”

1) The two chords in the first column are common in many chord books. Can they also be considered basic chord forms? Explain.

2) If the E form chord is grouped on another set of strings (such as the 2nd, 3rd & 4th), will it still be an E form?

3) Describe the 5 chords in the right column in terms of form and position.

4) Give the names of the 5 diagrammed chords in question number three.

5) Which two pairs of notes do not have a sharp or flat in between them when counting fret by fret to name a chord?

6) In the CAGED sequence, which two chord forms share a note? Where?

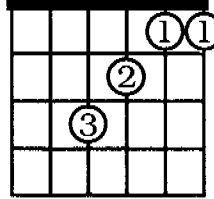
7) What flat chord is the same as A#? What sharp chord is the same as Eb?

8) Name the scale played when the C form is in the 5th position. Name the chord.

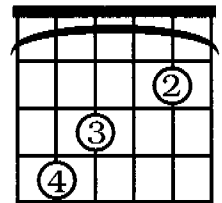
9) What is the term for a five note scale?

10) What are the three types of patterns which occur on the fretboard as a result of the tuning system?

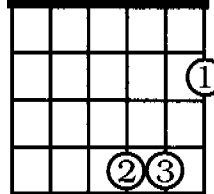
#1) x x



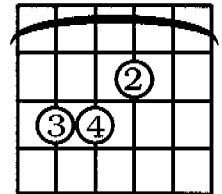
#3)



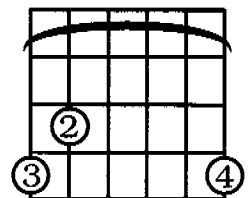
x x x



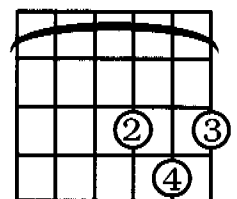
9



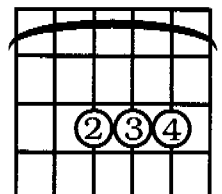
3



12



2



## "Testing, Testing..."

11) Describe the Scale Forms in the left hand column in terms of form and position.

12) Name the scales in question 11.

13) Who is funnier, Elvis Presley or Johnny Rotten?

14) Which Scale Forms treat the index as an extension instead of the position marker in order to correspond more closely to the chord form?

15) What are four ways Chord Forms, Scale Forms and Lead Patterns should be learned?

16) Which Chord Form identifies Lead Pattern 1? Lead Pattern 2?

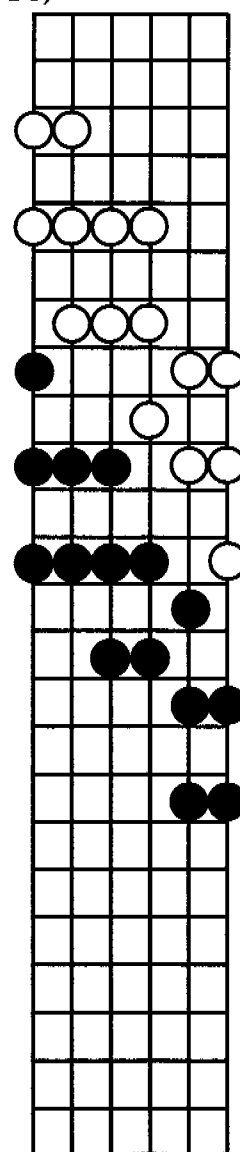
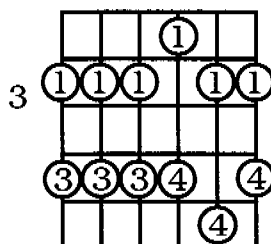
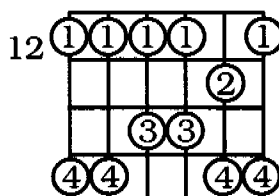
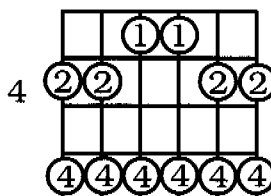
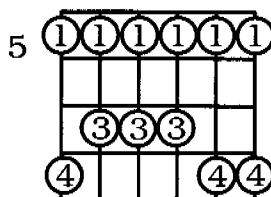
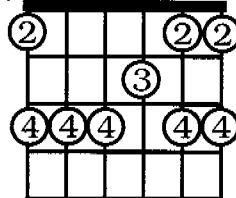
17) What position would you start the G Group on in order to play a B scale? (See diagrams on next page.)

18) Name the scale if you play the C Group from the 2nd fret.

19) Name the scale if you play Lead Pattern 2 from the 1st fret.

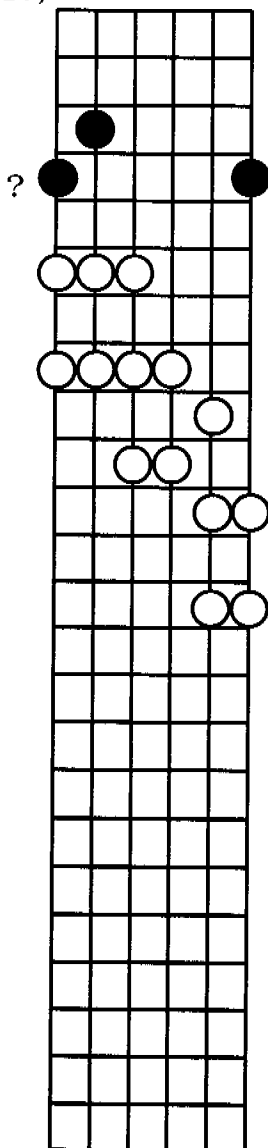
20) What fret would you start Lead Pattern 2 on to play a G# scale

#12) o o o #16)

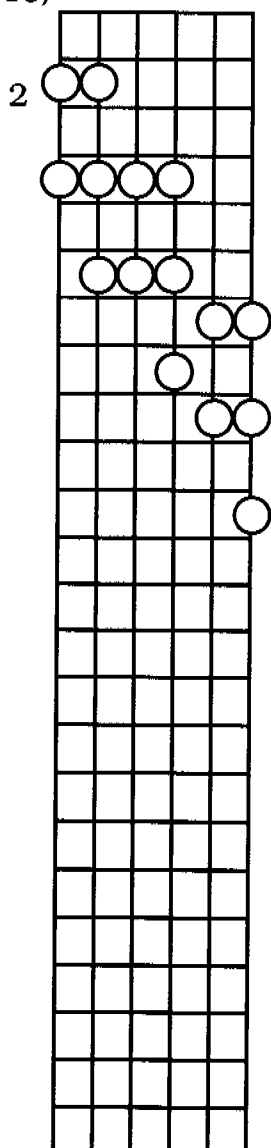


**"Testing, Testing..."**

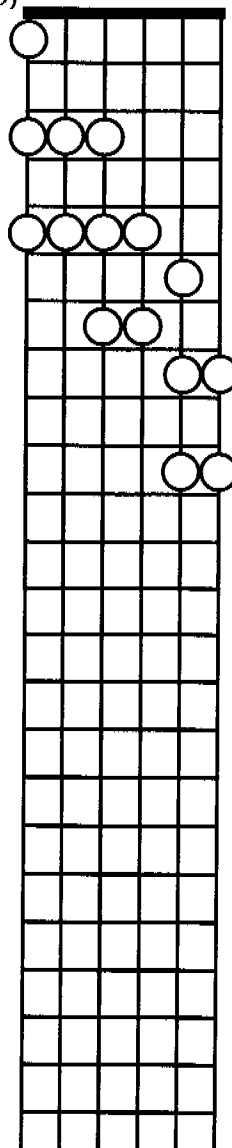
#17)



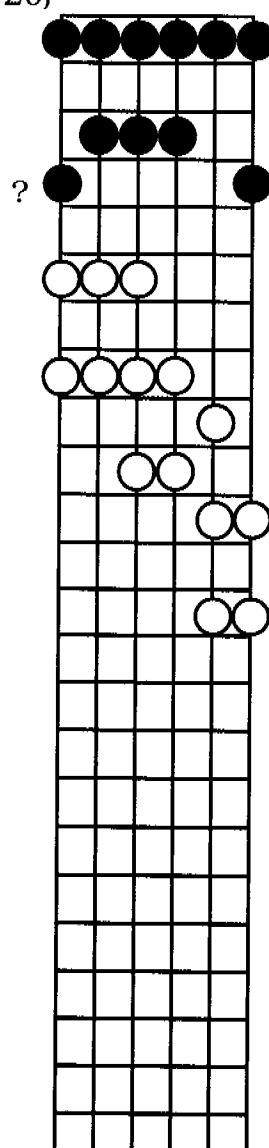
#18)



#19)



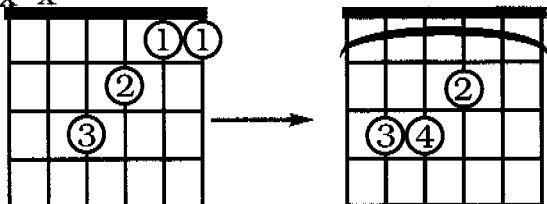
#20)



# The Answers To All Your Problems

1) The F and B chords pictured are often treated as basic forms. They are really only portions of other Chord Forms. The F chord pictured is a portion of the E form in the 1st position. (The B chord was a portion of the A form in the 2nd position.)

#1) x x



2) No. The forms retain their character only along the length of the strings, not across them. The form as described would be an A minor form.

3) C Chord Form 1st position.  
E Chord Form 9th position.  
G Chord Form 3rd position.  
D Chord Form 12th position.  
A Chord Form 2nd position.

4) C# (or Db)  
C# (or Db)  
A# (or Bb)  
D  
B

5) B and C, E and F.

6) D form and C form. 2nd string.

7) Bb. D#.

8 F scale.  
F chord.

9) Pentatonic.

10) Chord Forms, Scale Forms and Lead Patterns.

11) E Scale Form 1st position.  
G Scale Form 5th position.  
A Scale Form 4th position.  
C Scale Form 12th position.  
D Scale Form 3rd position.

12) F  
C  
C# (or Db)  
C  
F

13) Wrong. Fred Grunfeld. Clearly a trick question.

14) The A scale form and E scale form.

15) 1. As Basic Forms  
2. As Forms in Positions  
3. Within (or without) the CAGED Sequence.  
4. Named as a musical entity.

16) C form.  
G form.

17) 7th position.

18) B scale.

19) F scale.

20) 4th fret.

# Fretboard Logic 12 Step Program

Here it is one last time. Condensed. The reasoning behind the guitar's tuning is to make the instrument a practical polyphonic given the limitation of four fretting fingers. Because of the tuning, EADGBE, and the resultant string to string intervals, three distinct pattern types occur on the fretboard. They are Chord Forms, Scale Forms, and Lead Patterns. They are organized and interrelated to one another as patterns and can be considered separate from typical music issues such as pitch and time.

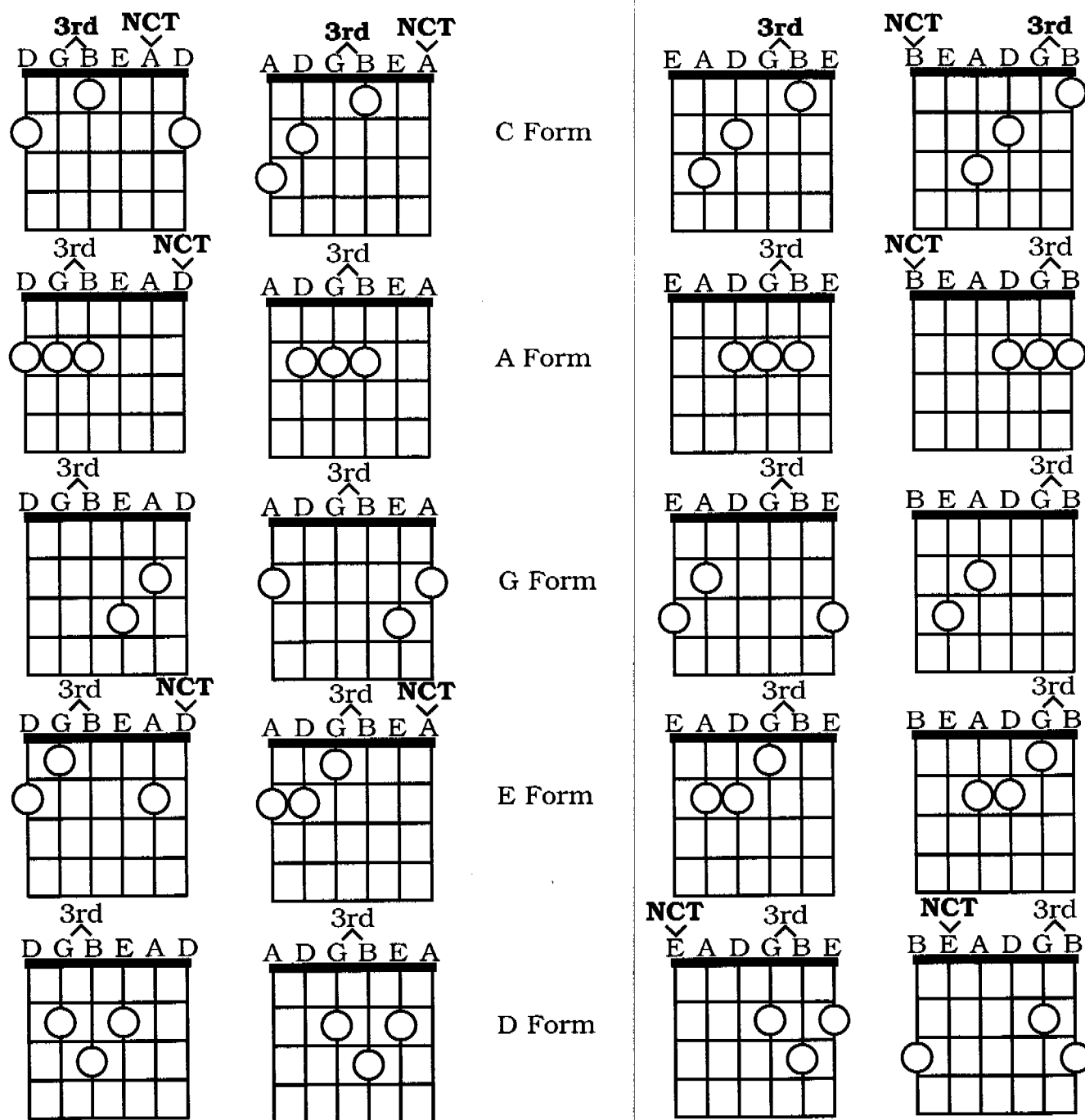
This pattern organization can be overviewed in a series of twelve steps as illustrated below. The three pattern types each must be grasped four separate ways in order for the guitarist to have a functional understanding of the interface between the player and the music he or she plays.

The four ways each pattern type must be learned are:

- 1) As Basic Forms distinct from one another and from other pattern types,
- 2) As Forms to be used in various Positions on the fretboard,
- 3) As forms in CAGED Sequence along the fretboard, and
- 4) Identified and Named as music entities.

Five Basic Chord Forms	Five Basic Scale Forms	Two Basic Lead Patterns
Chord Forms In Positions	Scale Forms In Positions	Lead Patterns In Positions
Chord Forms In CAGED Sequence	Scale Forms In CAGED Sequence	Lead Patterns Overlying The CAGED Sequence
Chord Forms In Positions Named As Chords	Scale Forms In Positions Named As Scales	Lead Patterns In Positions Named As Scales

## Alternate Placement of the "3rd" Interval



These graphs were included to illustrate that the placement of the 3rd anywhere but the 4th string pair (from the bass), produces more non-chord tones (**NCTs**), and so are less optimal given the limitation of three fretting fingers per form. The two left hand columns were common lute tunings, and are the intervallic equivalents of: CFADGC (4th 3rd 4th 4th 4th), GCFADG (4th 4th 3rd 4th 4th). The third column is standard tuning, included for comparison.



## About the Author

Bill Edwards became fascinated with the guitar in high school after hearing a friend (who actually took lessons) perform. He's made a living as a teacher and performer, and as an owner of a music store. He is the inventor and patent holder of the original Finger-Tite Locking Nut. In his spare time he works on projects that he hopes will make back the ton he lost to the pirates on that one. (It's a long and gruesome story and you don't wanna know. It's caused him to, at times, refer to himself in the third person.)

**"After 33 years of playing, perhaps there is hope yet."**

**George Johnson New Brunswick  
Canada**

"Dear Sir, I am writing to express my complete satisfaction with Fretboard Logic Volume I. Many thanks."

Mike Murphy Coral Gables FL

**"I was totally amazed at how easy it was to understand and apply it to the guitar. I've learned through other books, but little bits and pieces. Your book made sense of it all. I really wish I could of had this book years ago. Thank you for writing a masterpiece."**

**Chris Gronskei East Bethel MN**

"All those quotes were true. It does fill in gaps. Do you know the Castalia Guitar Poster? Well, you finally made sense out of it for me. Fantastic job."

Dominick Furlano East Stroudsburg PA

"I must have \$400.00 worth of guitar books at home, but these are the first ones that taught me what I really needed to know."

James Porter Riverview FL

*"Thanks to you for writing the Fretboard Logic series - it sure made a difference in my musical life as a guitarist."*

*Felix Rodriguez Arkansas Pass TX*

**"One of my students first brought it in and I looked it over and said wow, this is the first book that teaches the way I've been doing things for years. Before, I had to constantly write out patterns and graphs but now they're organized in one place. They really are excellent."**

**Steve Jolemore Virginia Beach VA**

*"No Fat.. like Grays Anatomy."*

*Paul Whitehead Eagan MN*

"I brought my set of books w/me on a recent trip skiing in Utah, showed them to my brother and told him I would buy him his own set for his birthday if he liked them. He is an eye surgeon one heck of a great brother and has been (as have I) struggling with the fretboard for ten years. Your books ignited a great spark of understanding in both of us. I am right brained he is left brained but the books clicked us both on. Thank you very much."

James B. Wood Hollywood FL

**"It's like a unified field theory for guitar players."**

**David Carlisle Plant City FL**

**"My satisfaction is beyond expression... 15 years well spent."**

**Keith Foster Dallas TX**

**"It is quite simply the best most helpful system of guitar pedagogy I've encountered in a great many years of unsuccessful searching, & after many abortive attempts during that time to develop some fundamental understanding of the instrument. Thanks."**  
**Dr. Doug Dobson Naperville, IL**

*"I am finishing Fretboard Logic Vol 1 and also have Vol II. I find them the best thing to come down the pike. Thanks a lot. Please send me Fretboard Logic Vol. 3. Vols. I & II were great!!!"* Dennis Snellgrove Amarillo TX

"I'm glad somebody has finally dealt once and for all with that black hole known as the fretboard. I'm basing our entire video series on Fretboard Logic."  
Craig Tarwater Walla Walla WA...

"... Dear Craig [Tarwater] I took your advice and ordered Bill Edwards' course Fretboard Logic. I agree its simplicity is almost genius."  
Michael Clarkson Dallas TX

"The first book is great!! Please send the second."  
Mac Hawley Evergreen CO

"I've got a lot of music books and tapes and yours are far and away the best. I'm a lawyer and your books are way better."  
Robert Kellman Lafayette CA

"I'm not in the habit of plugging books other than my own, but I have to compliment you... please send 5 copies for my own students." Ande Flavelle Caldwell NJ

"I've found your FRETBOARD LOGIC Series to be every bit as impressive as your many published customer's testimonials claim! A such, I'm delighted to (at last) be able to order myself a copy of Vol. III, and very much look forward to the hours and years of musical education and enjoyment that it's likely to initiate. Many thanks!"

Dan Leman Calgary Alberta Canada

"I have your wonderful book, Fretboard Logic. Would you please let me know how I may purchase Volume II by mail and please tell me what other books you have available?"

Jack Kershner Stafford NY

"I've been teaching myself to play for two years, and all along I've been waiting for someone to tell me what I read in your book. All of a sudden everything fell into place. Thank you so much."  
Kyle Ancowitz Hanover NH

*"I've had my classical guitar for four years (it was a gift). I've tried to learn to play it numerous times but never got past the first 10 pages of any of the 20 (no lie) guitar 'method' books I've bought. I bought your book 'Fretboard Logic Vol. I yesterday and I've been engrossed. I finally get it. After reading/practicing the concepts in the first 19 pages - I can honestly hope to make music! Bless you. Thanks again for sharing your knowledge -- I don't understand how other people's methods are still selling -- I will swear by this book as long as I'm playing (hopefully til my death -- at age 120.)"*

Inge Leland Fresh Meadows NY

Vol. 1 is the owners manual that should have come with your guitar.

**"You're going to change the way the guitar is taught forever..."**

**Rich DiBiase Bristol CT**

"I have, and frequently use, the first two volumes in this series. I have studied music at the university level and have played professionally for nearly twenty years and have never felt as clear about or confident with the guitar as I now do having applied your method. Many thanks." Mark Lee Amherst NY

**"Brilliant."**

**John Holly Denver CO**

"I see the greatness of these books and I understand what you are doing. And I thank you. It's a good thing you're doing." Bob Savage Friendsville MD

**"Fretboard Logic is 'The Best'!!"**

**C. J. Hamwyk Delft Netherlands**

"I've been playing about 28 years believe it or not, and I'm a guitar teacher. I found some of those patterns in Book One but not like you have. You've really done a good job here." Don LaDolce Cassadaga NY

**"Bells rang. Lights flashed. A little siren went off - your system is so tight - it makes honest to God sense." Jeffrey Ford Pendleton IN**

ISBN 0-9624770-0-1

50995>



9 780962 477003



"I would like to say that I've spent more money on guitar lesson books than I have on all my guitar equipment put together. If FRETBOARD LOGIC and FRETBOARD LOGIC II were available when I first started playing guitar I would have saved a lot of money. FRETBOARD LOGIC and FRETBOARD LOGIC II are the best instruction books I own, they are very easy to understand and very well put together. I would recommend these books to everybody from beginner to advanced players. Scott Spaulding Virginia Beach VA

**"I thought Volume I was excellent. It fills in gaps in my fretboard knowledge. I wish I'd had this 25 years ago."**

**David Tyra Terre Haute IN**

**"The claims were outrageous, the quotes unbelievable and I thought it just can't be that simple. Now I am feeling sorry for anyone who hasn't gotten your books. They honestly advanced me years beyond where I'm at. Thank you.**

**P.S. Why doesn't everyone know about this?"**

**Rev. Garth Heckman Madison WI**

"I just received your books, and I want you to know they are intensely appreciated. I've been playing almost 30 years, and I've got all kinds of books and videos, but these books mean more to me than all that other [expletive deleted]. I've had teachers but I learn best on my own. Have you studied systems analysis? I'm a scientist and these books are presented in a way that I would have if I knew the material. I wish I'd had these 15 years ago when my fingers weren't so stiff. Why aren't these books in every music store in America?"

**Michael Fitzgerald Waukegan IL**

ISBN 0-9624770-0-1 U.S. 9.95  
Canada/Intl. 10.95