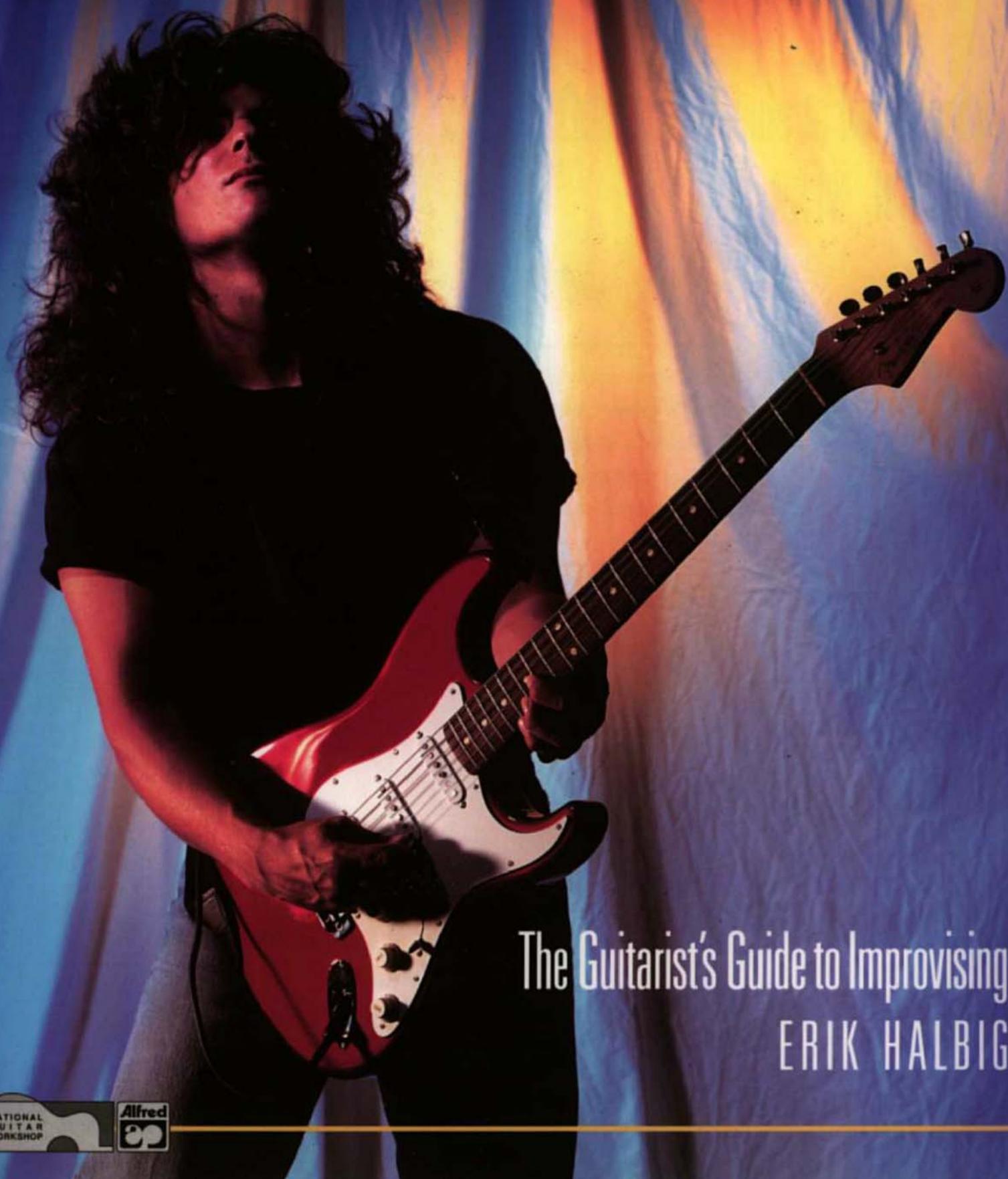


INTRODUCING

A NATIONAL GUITAR WORKSHOP PUBLICATION

The Pentatonic Scales



The Guitarist's Guide to Improvisating
ERIK HALBIG

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PENTATONIC THEORY

Knowing a little about the theoretical concepts behind the pentatonic scales will help you use this book. More importantly, it will give you the freedom you need to do some really burning solos with a sense of security.

THE MAJOR SCALE

The pentatonic scales are five note scales (penta = 5, tonic = tones) that are derived from the major scale, which has seven notes. The organization of pitches in the major scale is best described by using whole steps and half steps. A whole step, which is a major second interval, is equivalent to the distance between C and D, or any two notes that are two frets apart on the guitar. A half step, which is a minor second, is the distance between C and D^b, or any two notes that are one fret apart.

In the major scale, there are whole steps between the first and second, second and third, fourth and fifth, fifth and sixth, and sixth and seventh scale tones. There are half steps between the third and fourth, and seventh and root. It is simple to refer to these scale degrees with their numbers:



∨ and W = whole step
⤿ and H = half step

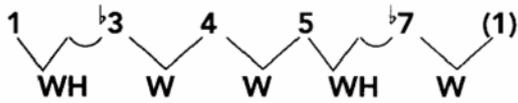


PHOTO: COURTESY OF REPRISE RECORDS

Jimi Hendrix. songs like Hendrix's "Hey Joe" show what a powerful vehicle the minor pentatonic scale can be for improvisation.

THE MINOR PENTATONIC SCALE

The minor pentatonic scale has a similar organization of pitches, but 3 and 7 are lowered one half step and there is no 2 or 6.



and WH = A whole step plus a half step

EXAMPLE 1

Let's compare the C Major scale to the C Minor Pentatonic scale.

T			
A			
B	3 5 7 3	5 7 4 5	3 6 3 5 3 5

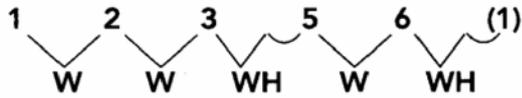
EXAMPLE 2

Here is the A Major scale compared to the A Minor Pentatonic scale.

T			
A			
B	5 7 9 5	7 9 6 7	5 8 5 7 5 7

THE MAJOR PENTATONIC SCALE

The major pentatonic has a similar organization of pitches to the major scale. As a matter of fact, they are exactly the same except the major pentatonic scale is missing 4 and 7.



EXAMPLE 3

Here is a comparison of the C Major scale to the C Major Pentatonic scale.

EXAMPLE 4

Let's look at the A Major scale compared to the A Minor Pentatonic scale.

THE MINOR PENTATONIC SCALE

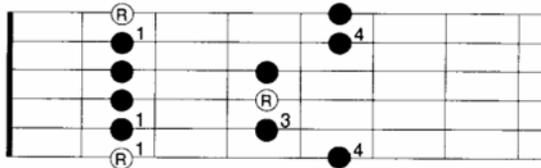
THE FIVE MINOR PENTATONIC PATTERNS

The minor pentatonic scale has five notes in an octave:

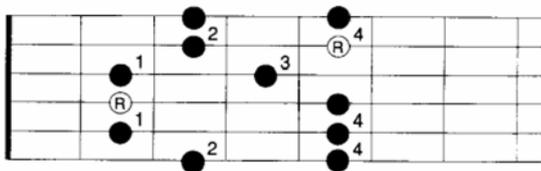
1 ♭3 4 5 ♭7

There are five basic patterns that are commonly used for playing the minor pentatonic scale.

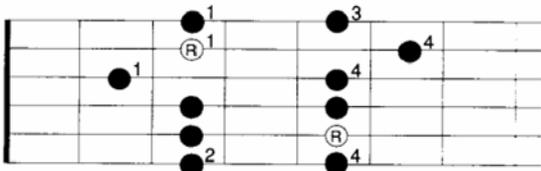
Pattern #1



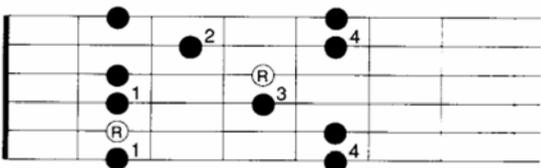
Pattern #2



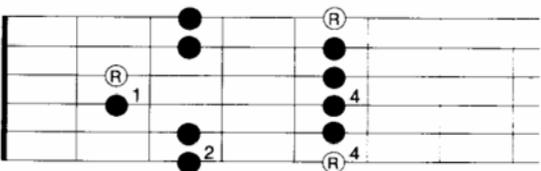
Pattern #3



Pattern #4



Pattern #5

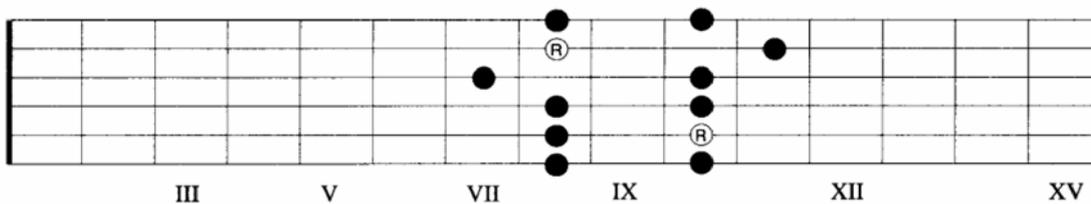


The fingerings shown should be used because they will help all the fingers develop equally. Obviously, if you don't use the weaker fingers they will not get any stronger. It is definitely possible to make your fourth finger as strong and independent as your first and second. So take that fourth finger off the bench and put it in the ball game. You will be making stretches you never thought you could make before.

Pattern #3 in G

EXAMPLE 7

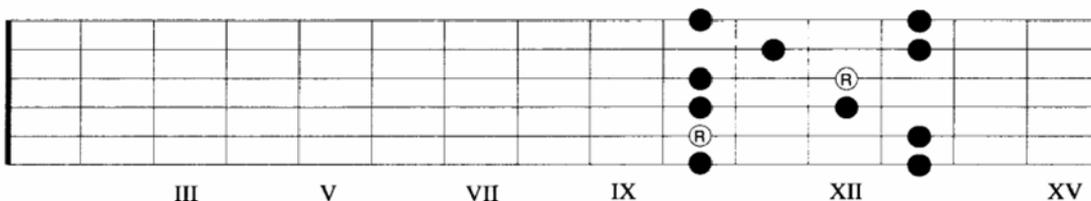
Pattern #3 in the key of G would start with the second finger on the eighth fret, or seventh position, because Pattern #3 always has the root on the fifth string, and your fourth finger plays the root note (G) on the tenth fret of that string.



Pattern #4 in G

EXAMPLE 8

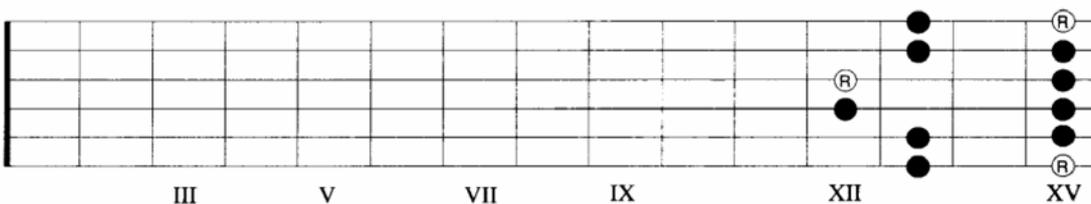
To play in the key of G with Pattern #4, you would start with the first finger on the tenth fret, or in the tenth position. Pattern #4 always has the root on the fifth string, and your first finger plays the root note (G) on the tenth fret of that string.



Pattern #5 in G

EXAMPLE 9

Pattern #5 would start in twelfth position with the second finger on the thirteenth fret to play in the key of G. The root is always on the sixth string in Pattern #5, and the fourth finger plays the root note (G) on the fifteenth fret.



When playing through these patterns, be sure to observe where all of the root notes appear.

LEARNING ALL THE KEYS

The next step is to practice the patterns in other keys. Try to pick a key and play through all five patterns in that key. Begin in the lowest possible position and move up the neck, as we did in the key of G in the "Putting the Patterns in a Key" section, Exercises 5 through 9. The table below shows how the minor pentatonic scale can be started in any given key in one of the first three positions. This means that you may not always be starting with Pattern #1. For instance, you may have to start with Pattern #4. Then you would play Pattern #5 and then #1, etc.

If you are an electric player, you should take advantage of the extra frets you have above the twelfth fret. Notice that when you arrive at the twelfth fret, everything starts over again. For example, if you were to begin playing in the key of B with Pattern #4 at the second fret, and then played through each pattern in succession up the neck, by the time you got back to Pattern #4, you would be at the fourteenth fret, or twelve frets higher. You could continue this upward from the fourteenth fret until you ran out of frets.

Practice each of these keys:

Key	Starting Pattern	Starting Fret	Key	Starting Pattern	Starting Fret
G	Pattern #1	3rd Fret	C [♯] /D [♭]	Pattern #3	2nd Fret
D	Pattern #3	3rd Fret	A [♭]	Pattern #5	2nd Fret
A	Pattern #5	3rd Fret	E [♭]	Pattern #2	1st Fret
E	Pattern #2	2nd Fret	B [♭]	Pattern #4	1st Fret
B	Pattern #4	2nd Fret	F	Pattern #1	1st Fret
F [♯] /G [♭]	Pattern #1	2nd Fret	C	Pattern #4	3rd Fret

VISUALIZATION

You should not only play the patterns, but also be able to visualize yourself playing them on the guitar in your mind's eye. Focus on two or three patterns a week. This involves making a mental picture of all the patterns in any given key. The purpose of this is to give you greater freedom in improvisational settings. You cannot reach your full creative potential if you have to struggle to remember the "correct" notes to play.

LEARNING SCALE DEGREES

Try to recite the names and scale degrees of the notes while playing the scale. This will help you learn the fretboard better. At the same time, it will improve the shape of your solos because you will be able to identify where the different intervals are in the patterns. This skill is vitally important for targeting certain notes as you improvise. For instance, take Pattern #1 in the

key of G. Play each note slowly, reciting the name and scale degree of each note (G-1, B^b-3, C-4, D-5, F-^b7). Do this with all of the patterns in all of the keys.

IMPROVISATION

The next step is a big one. This is where you actually make these un-musical scales sound like music. It's actually a lot easier than it seems. Begin with a simple chord progression, such as those in Examples 10 and 11. These progressions are on the tape that is available for this book. If you don't have the tape, record yourself playing these progressions on a tape recorder or have a friend play them.

First play straight up and down through the G Minor Pentatonic scale over each progression. This will not sound very musical, but you will be able to hear how the notes work over the chords. Next, try varying the order of the notes and rhythms that you play.

EXAMPLE 10

G min B^b C G min

EXAMPLE 11

G7 C7 G7 G7

C7 C7 G7 G7

D7 C7 G7 D7

MOTIVES

Using motives will help you develop solos. A motive is a short, catchy musical idea. Sometimes the simpler an idea is, the more it will be remembered. This holds true not only for soloing but for songwriting, as well. Try thinking of three or four note musical motives. Here is an example that uses motives.

EXAMPLE 12

Chords: G min, B \flat , C

Tablature (T, A, B strings):

T																			
A																			
B																			

Chords: G min, G min, B \flat

Tablature (T, A, B strings):

T																			
A																			
B																			

Chords: S, S, S

Tablature (T, A, B strings):

T																			
A																			
B																			

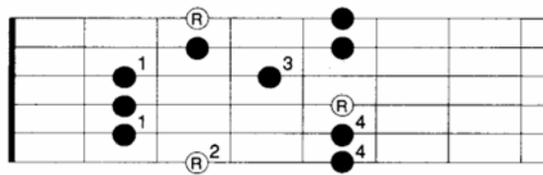
THE MAJOR PENTATONIC SCALE

THE FIVE MAJOR PENTATONIC PATTERNS

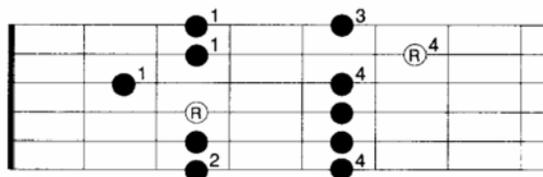
Like its minor counterpart, the major pentatonic scale consists of five notes in an octave:

1 2 3 5 6

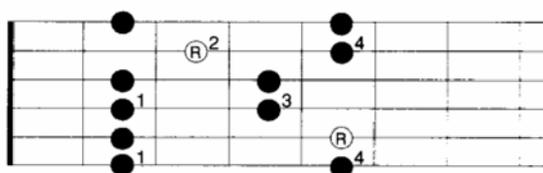
Pattern #1



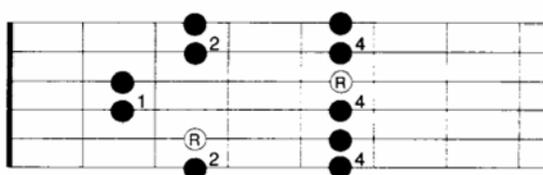
Pattern #2



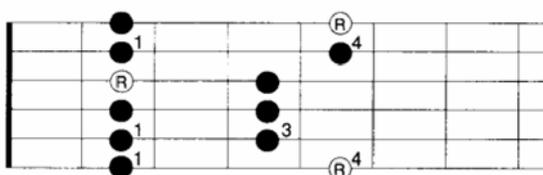
Pattern #3



Pattern #4



Pattern #5



Practice putting these patterns in a key, as we did in Examples 5 through 9 with the minor pentatonic patterns.

RELATIVE PENTATONICS

Every major pentatonic scale has a relative minor pentatonic scale. This means that the two scales share the same key signature and notes but have different roots. The way you phrase and resolve the notes of the scale will also dictate whether it is major or minor. There are strong notes, such as the root, that you can begin and/or end with that will help define the major or minor tonality.

For example, you can see that the C Major Pentatonic scale in Example 13 (C, D, E, G, A), has the same notes as the A Minor Pentatonic scale in Example 14 (A, C, D, E, G), but in a different order.

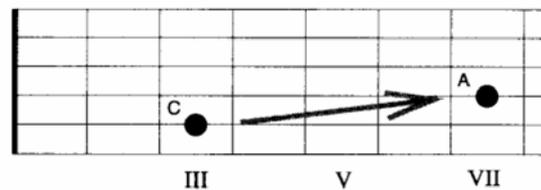
EXAMPLE 13

EXAMPLE 14

To find the relative minor pentatonic of a major pentatonic scale, think up four frets on the next higher string (except from the third to second strings, where you will need to think up five frets).

EXAMPLE 15

The relative minor pentatonic of C is A.



To find the relative major pentatonic of a minor pentatonic scale, think up three frets on the same string.

EXAMPLE 16

The relative major pentatonic of A is C.

T
A 2 5
B

So the patterns we use for major pentatonic are the same as the minor pentatonic but with the root notes in different places.

LEARNING ALL THE KEYS

Next, learn all 12 keys as you did with the minor, taking a couple of keys a week and really making them your own.

IMPROVISATION

It is time to put the major pentatonic scale to work in a musical situation. Practice improvising over the chord progressions in Examples 17 and 18.

EXAMPLE 17

EXAMPLE 18

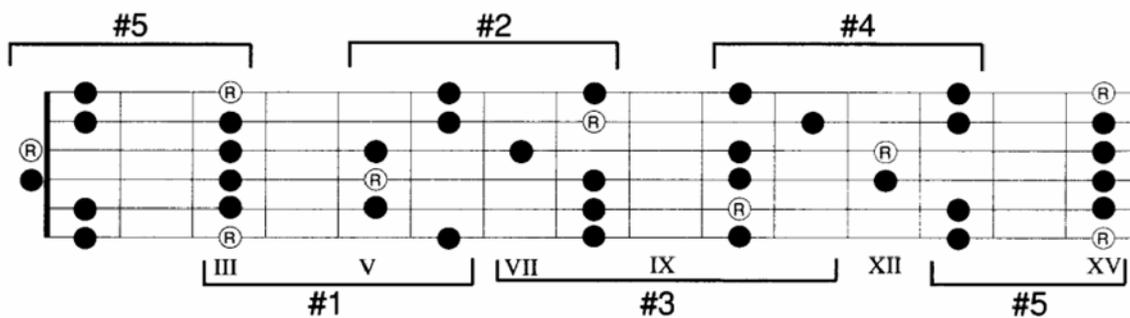
Begin by playing the patterns one at a time over each progression. Try to spend extra time isolating the patterns that you don't know as well. You can practice these patterns for years, but you don't really know them until you can use them in musical situations. The information you know means nothing until you use it in context.

CREATIVITY

Being truly creative with the pentatonic scales begins with expanding the range of your pattern playing horizontally along the neck.

THE ENTIRE MINOR PENTATONIC SYSTEM

The five basic minor pentatonic patterns fit together like a jigsaw puzzle. It is important to be able to tie them all together.

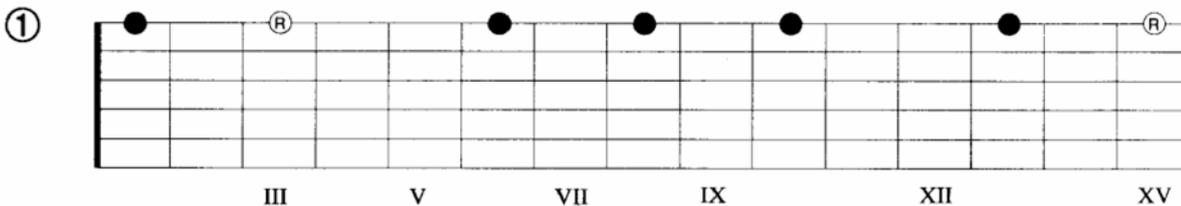


THE HORIZONTAL APPROACH TO THE MINOR PENTATONIC

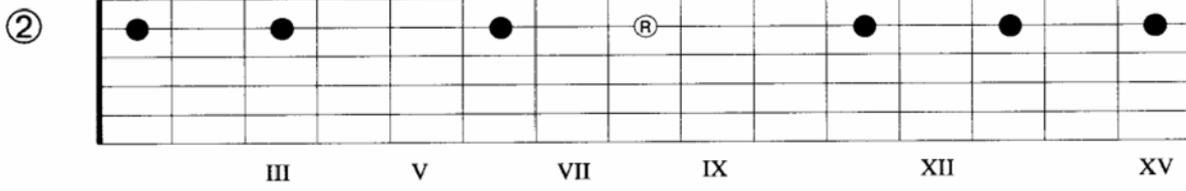
So that you are not confined to playing just the patterns, a strictly vertical approach, experiment with playing the scale up one string, a horizontal approach. Knowing the scale like this allows you to expand your range up or down the neck which will result in longer, more flowing lines in your solo playing.

THE G MINOR PENTATONIC SCALE ON SINGLE STRINGS.

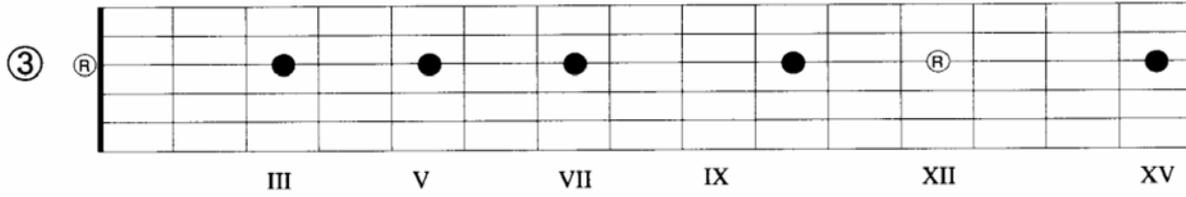
EXAMPLE 19



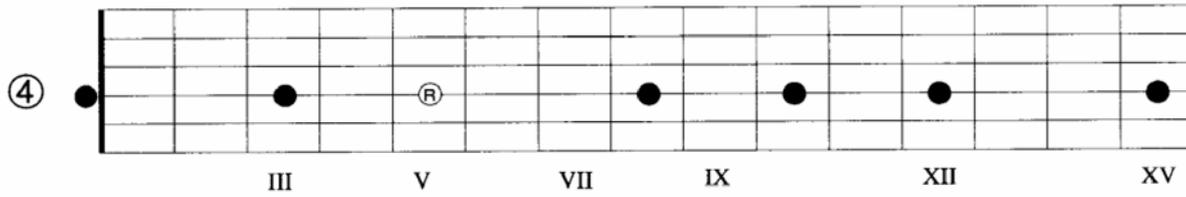
EXAMPLE 20



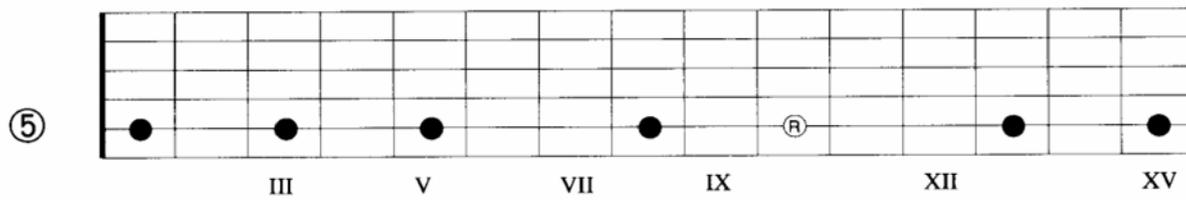
EXAMPLE 21



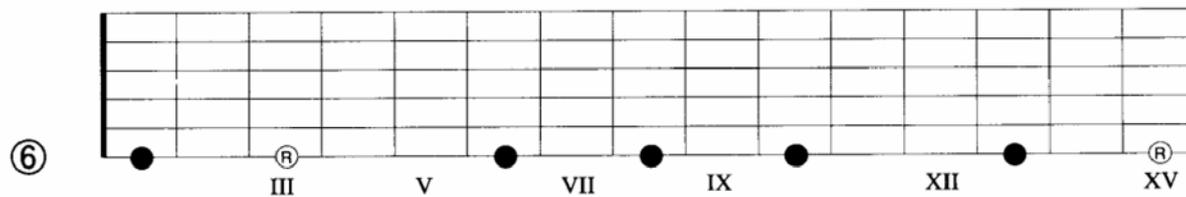
EXAMPLE 22



EXAMPLE 23

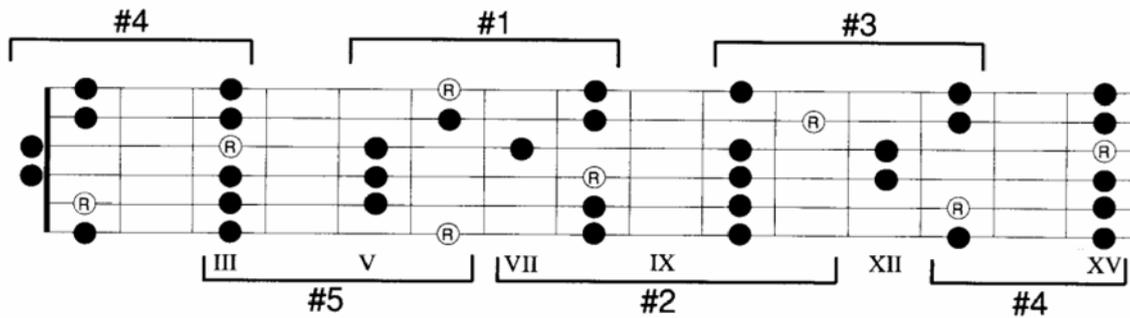


EXAMPLE 24



THE ENTIRE MAJOR PENTATONIC SYSTEM

Notice that this is identical to the Entire Minor Pentatonic System on page 17 except for the locations of the roots. As you now know, this is because of the relative relationship between the major and minor pentatonic scales. As with the minor pentatonic, the goal is to be able to tie all of these patterns together in your playing.

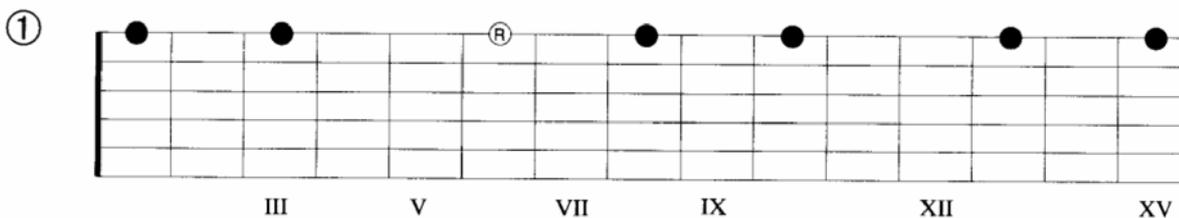


THE HORIZONTAL APPROACH TO THE MAJOR PENTATONIC

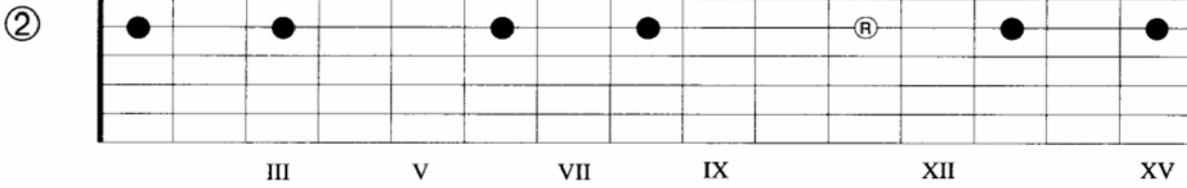
Once again, the next example will be exactly the same as those in Examples 19 through 24 except for the locations of the roots. Here is a place to test your knowledge. Examples 19 through 24 were in the key of G. What will be the major pentatonic key in the next exercises? Remember, we find the relative major key by thinking up three frets. If you play a G and think up three frets, you will find a B^b. Indeed, B^b is the root in all the following examples.

THE B^b MAJOR PENTATONIC SCALE ON SINGLE STRINGS

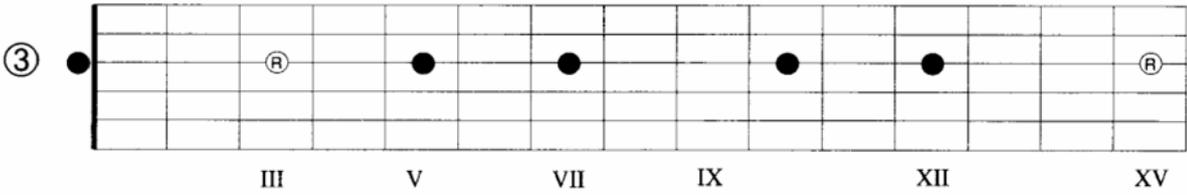
EXAMPLE 25



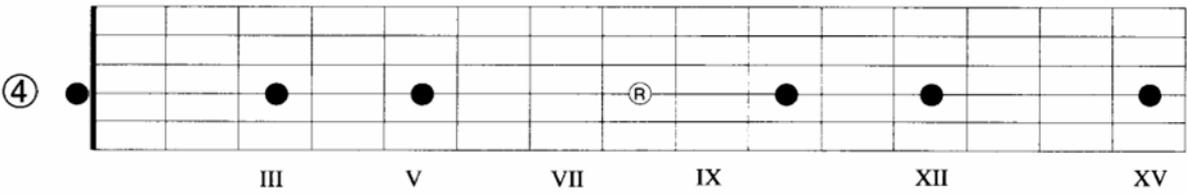
EXAMPLE 26



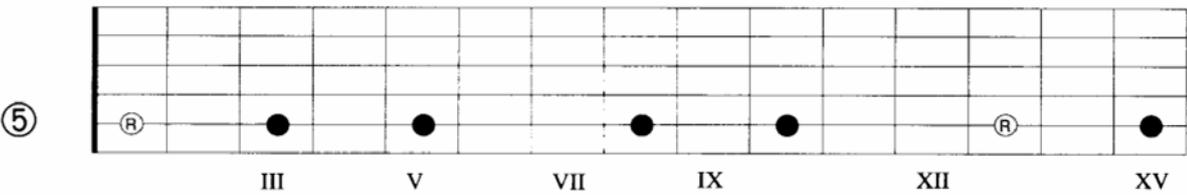
EXAMPLE 27



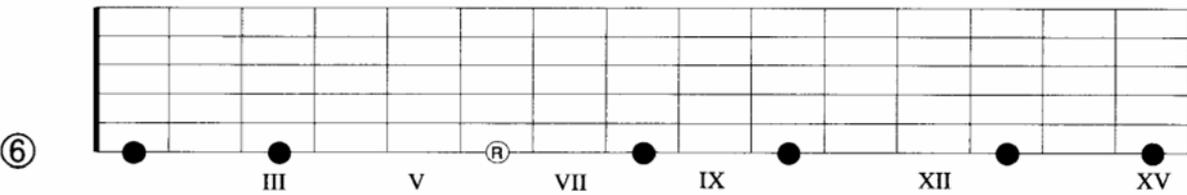
EXAMPLE 28



EXAMPLE 29



EXAMPLE 30



COMBINING STRING SETS

MINOR PENTATONIC

EXAMPLE 31

Here is an exercise in the key of G minor that combines two adjacent strings and moves up the neck. This will expose you to other ways of playing the scale and plant the seeds of some new ideas for improvising.

8va

T 1 3 1 3-6 3 6 3-6 8 6 8-10 8 11 8 11 13 10 13-15 13 15 13-15 18 15 18

A

B

EXAMPLE 32

Try this on other string sets.

T 0 3 1 3-6 3 5 3-5 7 6 8-11 8 10 7 10 12 11 13-15 13 15 12-15 17 15 18

A

B

EXAMPLE 33

Try this same idea skipping strings.

S S S S S S

T 1 3-6 3 6 8-10 8 10 13-15 13 15 18

A 0 3 5 3-5 7 10 7 10 12 15 12-15 17

B

MAJOR PENTATONIC

You can also apply these ideas to the major pentatonic scale.

EXAMPLE 34

Here is an example in G Major Pentatonic.

8va

S S S S S S

T 0 3 0 3-5 3 5 7-10 7 10 8 10 12 10 12-15 12 15 12-15 17 15 17

A

B

EXAMPLE 35

This will work on other string sets, too.

S S S S S S

T 0 2 0 3-5 3 4 2-4 7 5 8-10 8 9 7 9 12 10 12-15 12 14 12-14 16 15 17

A

B

Try this same idea skipping strings.

8va-----

S S S S S S
 0 3-5 3 5 7-10 7 10 12-15 12 15 19
 T 0 2 4 2-4 7 9 7 9 12 14 12-14 16
 A
 B

Eric Clapton. This legendary player put the major pentatonic to good use in songs like "Hideaway" (The Bluesbreakers) and "Keep on Growin'" (Derek and the Dominoes).

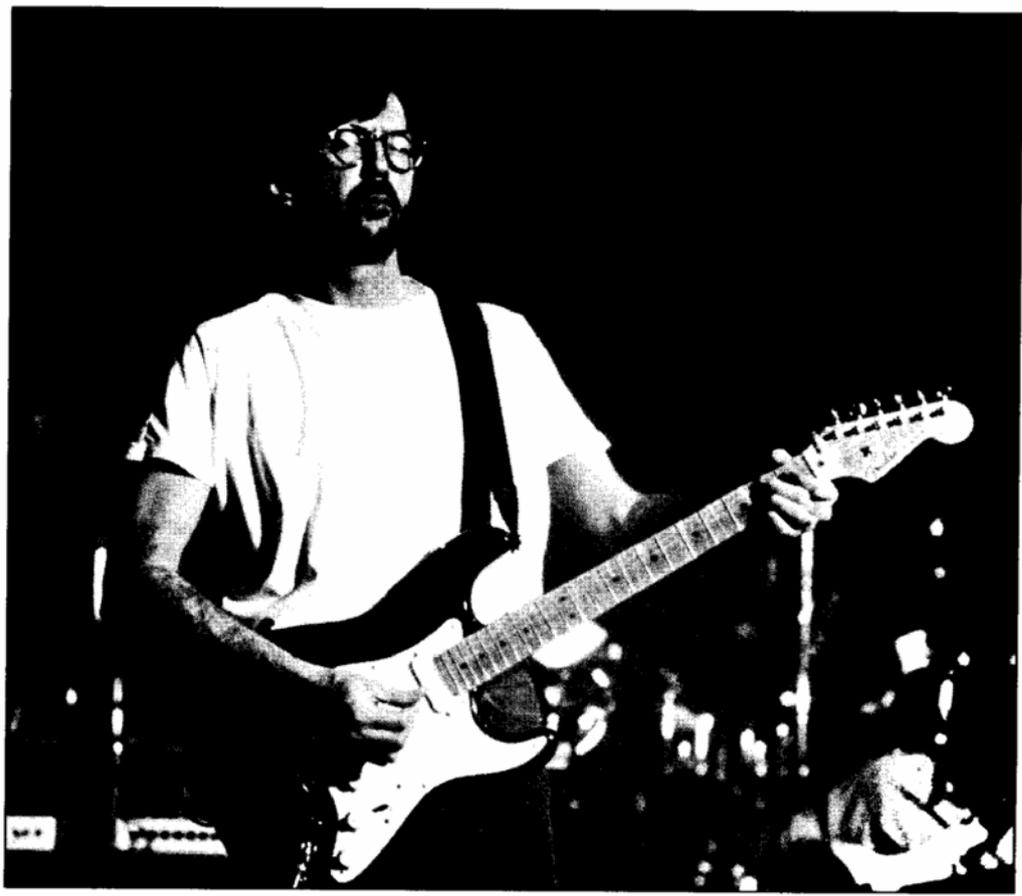


PHOTO: TERRY O'NEILL / COURTESY OF REPRIS RECORDS

COMBINING THE PATTERNS

Here is another idea you can try. Start in one pattern and in the middle of it, slide up to the next. This will not only show you how they connect, but will also expand your range when playing the patterns.

MINOR PENTATONIC

Patterns 1 & 2

EXAMPLE 37

Example 37 illustrates two patterns of the minor pentatonic scale in B-flat major (4/4 time). The top staff shows the scale in treble clef, with Pattern #1 (lower register) and Pattern #2 (higher register) connected by a sliding line. The bottom staff is a fretboard diagram with frets III, V, VII, IX, XII, and XV marked. Pattern #1 is shown between frets III and V, and Pattern #2 is shown between frets V and VII. The root note (R) is indicated at fret III for Pattern #1 and fret V for Pattern #2.

Now take it a step further and try combining three patterns.

Patterns 1, 2 & 3

EXAMPLE 38

Example 38 illustrates three patterns of the minor pentatonic scale in B-flat major (4/4 time). The top staff shows the scale in treble clef, with Pattern #1 (lower register), Pattern #2 (middle register), and Pattern #3 (higher register) connected by sliding lines. The bottom staff is a fretboard diagram with frets III, V, VII, IX, XII, and XV marked. Pattern #1 is shown between frets III and V, Pattern #2 between frets V and VII, and Pattern #3 between frets VII and IX. The root note (R) is indicated at fret III for Pattern #1, fret V for Pattern #2, and fret VII for Pattern #3.

Try combining four patterns.

Patterns 1, 2, 3 & 4

EXAMPLE 1 

The musical notation for Example 1 is in 4/4 time and features a sequence of notes across four patterns. Pattern #1 covers frets III to V, #2 covers V to VII, #3 covers VII to IX, and #4 covers IX to XII. The fretboard diagram below shows the fret positions (III, V, VII, IX, XII, XV) and fingerings (circles with 'R') for each pattern. Slides are indicated by arrows between frets VII and IX, and between frets XII and XV.

How about five patterns?

Patterns 1, 2, 3, 4 & 5

EXAMPLE 4 

The musical notation for Example 4 is in 4/4 time and features a sequence of notes across five patterns. Pattern #1 covers frets III to V, #2 covers V to VII, #3 covers VII to IX, #4 covers IX to XII, and #5 covers XII to XV. The fretboard diagram below shows the fret positions (III, V, VII, IX, XII, XV) and fingerings (circles with 'R') for each pattern. Slides are indicated by arrows between frets VII and IX, and between frets XII and XV.

You can take this as far as you like. Experiment with fingerings and places to slide other than those shown here. Once you have done that, it is important that you practice them in other keys.

MAJOR PENTATONIC

You can get a lot more mileage out of your ideas by learning to take a minor pentatonic lick and playing it as if it were from the relative major pentatonic scale.

Patterns 1, 2, 3, 4 and 5

EXAMPLE 41

Notice that these are the exact same notes as those in Exercise 40. The only differences are the root notes and the phrasing.

Now, go back and play Exercises 37, 38, and 39 in their relative major keys. Simply alter the phrasing so that B^b is emphasized instead of G.

Larry Carlton.
Check out Carlton's
"Small Town Girl"
for a good example
of how the major
pentatonic scale
sounds in a
jazz/pop tune.

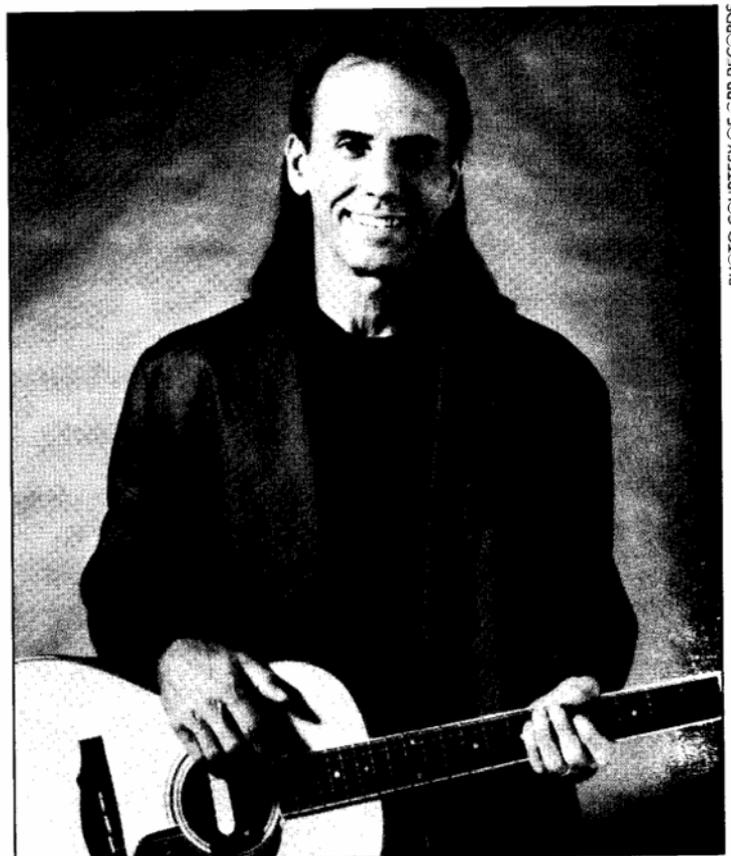


PHOTO COURTESY OF GRP RECORDS

SEQUENCING

This concept involves repeating a pattern as you ascend or descend through the scale. For instance, play the first three notes of the scale, then go to the second note of the scale and play three notes from there. Go to the third note of the scale and play three notes from there, etc.

EXAMPLE 42

Musical notation for Example 42, showing a treble clef staff with a 4/4 time signature and a bass staff with tablature. The treble staff features a sequence of triplets ascending and then descending. The bass staff shows the corresponding fret numbers for each note.

EXAMPLE 43

Can you see the pattern forming?

Musical notation for Example 43, showing a treble clef staff with a 4/4 time signature and a bass staff with tablature. The treble staff features a sequence of triplets ascending and then descending. The bass staff shows the corresponding fret numbers for each note.

EXAMPLE 44

Once you have ascended all the way through a pattern, do the same thing descending. Imagine that you have just played through a sequence of this pattern ascending, and now you are descending.

Musical notation for Example 44, showing a treble clef staff with a 4/4 time signature and a bass staff with tablature. The treble staff features a sequence of triplets descending. The bass staff shows the corresponding fret numbers for each note.

EXAMPLE 45

Try sequencing four notes and descending by reading the pattern backwards.

Musical notation for Example 45. The top staff is a treble clef in 4/4 time with a key signature of one flat (Bb). The melody consists of four measures of eighth notes, each measure containing four notes. The notes are: G2, A2, Bb2, C3; D3, E3, F3, G3; A3, Bb3, C4, D4; E4, F4, G4, A4. The guitar TAB below shows the fret numbers: 3 6 3 5 6 3 5 3. A '3' is written above the final fret number '3' to indicate a triplet.

Musical notation for Example 45, second part. The top staff is a treble clef in 4/4 time with a key signature of one flat (Bb). The melody consists of four measures of eighth notes, each measure containing four notes. The notes are: Bb4, C5, D5, E5; F5, G5, A5, Bb5; C6, D6, E6, F6; G6, A6, Bb6, C7. The guitar TAB below shows the fret numbers: 3 5 3 6 5 3 6 3. A '3' is written above the final fret number '3' to indicate a triplet.

EXAMPLE 46

You can sequence five notes. Again, experiment with a descending sequence of this pattern.

Musical notation for Example 46. The top staff is a treble clef in 4/4 time with a key signature of one flat (Bb). The melody consists of four measures of eighth notes, each measure containing five notes. The notes are: G2, A2, Bb2, C3, D3; E3, F3, G3, A3, Bb3; C4, D4, E4, F4, G4; A4, Bb4, C5, D5, E5. The guitar TAB below shows the fret numbers: 3 6 3 5 6 3 5. A '3' is written above the final fret number '3' to indicate a triplet.

Here's one that incorporates sequences of sixes.

The musical notation for Example 51 consists of two staves. The top staff is a treble clef in 4/4 time, showing a sequence of sixteenth notes with triplets. The bottom staff shows guitar fretboard notation for strings T, A, and B, with fret numbers and slurs indicating the sequence of notes.

INTERVALS

An interval is the distance between two notes. Intervals are measured in half steps. On the guitar, a half step is the distance from one fret to the next adjacent fret. For example, a perfect fourth interval equals five half steps or frets on the guitar.

Once you have measured five half steps up from the G to find that a perfect fourth above is a C, you can choose to play the C in a more convenient location on the fifth string. You can measure and re-finger any interval in this manner.

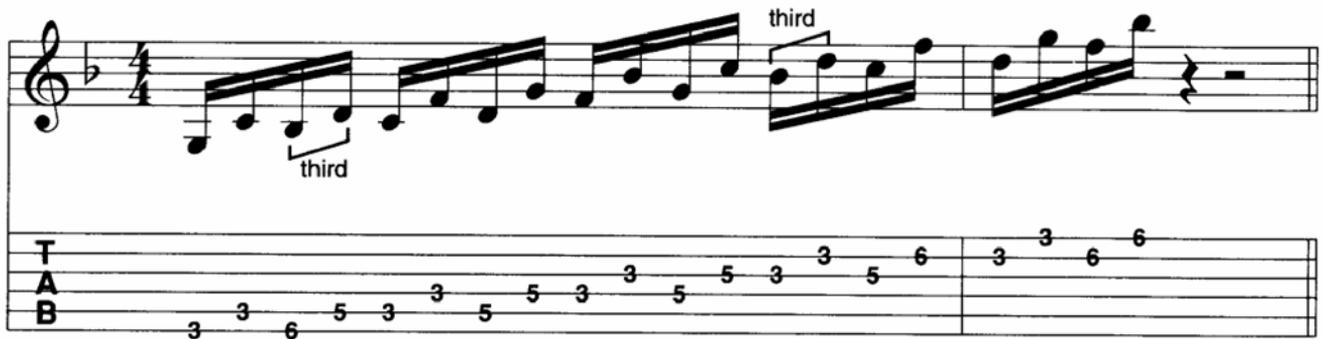
The diagram shows a guitar fretboard with the 6th string (G) and 5th string (C) highlighted. The G is on the 3rd fret, and the C is on the 7th fret. An arrow points from G to C, and fret numbers 1-5 are shown below the strings, indicating the interval.

An interesting way to spice up a solo is to play the pentatonic patterns in fourth intervals. You may notice that some intervals deviate from the others. For instance, the interval B^b to D, which is a major third (four half steps), appears during the exercise in fourths. For it to have been a fourth interval the notes would have had to be B^b to E^b . The problem is that there is no E^b in the G Minor Pentatonic scale. The closest scale tone is D, so we substitute it for the E^b . This kind of adjustment to stay within the scale is typical.

The following examples all use the G Minor Pentatonic scale, but this concept is good for any key, and for the major pentatonic scale, too.

Fourth Intervals

EXAMPLE 



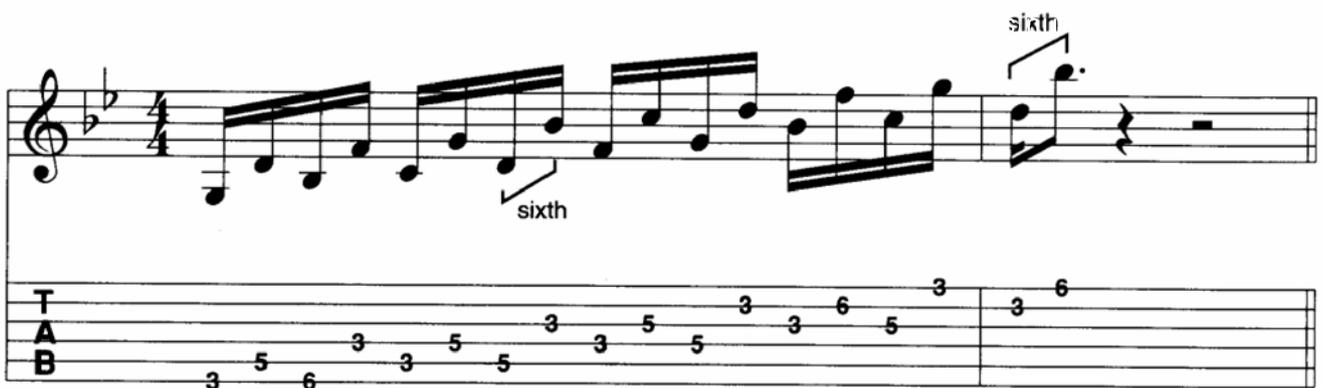
Playing the scales in intervals will expose you to ways of approaching the scale other than playing it straight through. It is intended to open your creative side and unleash the potential that is to be found in this scale. Keep in mind that these are exercises and they do start to sound odd if used exclusively. Use them sparingly and they will add interest to your solos.

Fifth Intervals

EXAMPLE 

A fifth equals seven half steps:

G - D, B^b - F, C - G, etc.



Seventh Intervals

A minor seventh equals ten half steps:

G - F, C - B^b, D - C, etc.

musical notation for a minor seventh interval (G - F) in 4/4 time, with guitar fretboard diagram below showing fingerings for strings T, A, and B.

Octaves

There are twelve half steps in an octave:

G - G, B - B, and C - C, etc.

musical notation for an octave interval (G - G) in 4/4 time, with guitar fretboard diagram below showing fingerings for strings T, A, and B.

LICKS WITH INTERVALS

Here are some sample licks with which you can experiment. Remember, use these ideas as springboards to create some licks of your own.

EXAMPLE 57

Here is an idea that uses fourth intervals.

Musical notation for Example 57: A 4/4 measure lick in G minor. The melody consists of eighth notes: G4 (b), A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The fretboard diagram shows the following fret numbers for strings T, A, and B: T (6, 6, 3, 3, 6, 5, 3, 5, 3, 5), A (5, 5, 3, 3, 5, 5, 3, 5, 3, 5), B (5, 3, 5, 3, 5, 3, 5, 3, 6, 3).

EXAMPLE 58

This lick uses intervals of a fifth.

Musical notation for Example 58: A 4/4 measure lick in G minor. The melody consists of eighth notes: G4 (b), A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The fretboard diagram shows the following fret numbers for strings T, A, and B: T (5, 7, 8, 6, 5, 8, 6, 8, 6, 8, 5, 6), A (5, 7, 8, 5, 7, 8, 6, 8, 6, 8, 5, 6), B (8, 7, 5).

EXAMPLE 59

Seventh intervals are highlighted in this example.

Musical notation for Example 59: A 4/4 measure lick in G minor. The melody consists of eighth notes: G4 (b), A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The fretboard diagram shows the following fret numbers for strings T, A, and B: T (10, 12, 11, 13, 11, 12, 10, 11, 12), A (10, 12, 10, 12, 12, 10, 12), B (13, 10, 13, 10). The seventh intervals (G4-B4, A4-C5, B4-A4, G4-F4, E4-D4) are highlighted with a light blue background in the original image.

BENDING

This last section is very important. Many beginning players randomly bend any note they happen to be playing. This is okay for some notes, but unless they get lucky, they always play a percentage of wrong or "out-of-tune" notes. Let's eliminate the guessing game.



MINOR PENTATONIC

As you now know, the degrees of the minor pentatonic scale are 1, $\flat 3$, 4, 5, and $\flat 7$. You can bend from any note in the scale to any other note in the scale. You can also bend to and from the 2 and 6, even though they are not in the minor pentatonic scale.

HALF STEP BENDS

Like anything else, there are certain notes that sound better than others when bent. The minor pentatonic tends to take on a bluesy quality when its notes are bent. For example, you can make these half step bends:

2 to $\flat 3$

4 to $\flat 5^*$

6 to $\flat 7$

* The occasional use of the $\flat 5$ degree lends a particularly bluesy quality to the minor pentatonic scale.

Here are some half step bends in the Key of G to practice.

2 to $\flat 3$

EXAMPLE 60

The musical notation shows a treble clef in 2/4 time. The first staff contains two half notes: G (second line) and F# (first space). An upward arrow labeled '1/2' is positioned above the F# note, indicating a half-step bend from G to F#. The second staff is a guitar fretboard diagram with strings labeled T, A, and B. The second fret is marked with a '2' on the A string.

4 to $\flat 5$ (a blues effect)

EXAMPLE 61

Musical notation for Example 61. The top staff is in 4/4 time, showing a whole note chord with a flat 5th. A curved arrow labeled '1/2' indicates a half-step bend from the 4th fret to the flat 5th. The bottom staff shows the guitar fretboard with the 5th fret marked on the string.

$\flat 6$ to $\flat 7$

EXAMPLE 62

Musical notation for Example 62. The top staff is in 4/4 time, showing a whole note chord with a flat 6th and a flat 7th. A curved arrow labeled '1/2' indicates a half-step bend from the flat 6th to the flat 7th. The bottom staff shows the guitar fretboard with the 5th fret marked on the string.

WHOLE STEP BENDS

There is an emotional quality that you can draw from the guitar when you bend that you cannot possibly get by simply playing the notes in the standard fashion. Think about this when you make these whole step bends:

- 1 to 2
- $\flat 3$ to 4
- 4 to 5
- 5 to 6
- $\flat 7$ to the Root

Practice whole step bends in the key of G.

1 to 2

EXAMPLE 63

Musical notation for Example 63. The top staff is in 2/4 time, showing a whole note chord with a 1st and a 2nd. A curved arrow labeled '1' indicates a whole-step bend from the 1st to the 2nd. The bottom staff shows the guitar fretboard with the 5th fret marked on the string.

$\flat 3$ to 4

EXAMPLE 64

Musical notation for Example 64. The top staff is in 2/4 time, showing a whole note chord with a flat 3rd and a 4th. A curved arrow labeled '1' indicates a whole-step bend from the flat 3rd to the 4th. The bottom staff shows the guitar fretboard with the 3rd fret marked on the string.

4 to 5

EXAMPLE 65

Musical notation for Example 65: A treble clef staff in 2/4 time showing a quarter note on the second line (F4) followed by a quarter note on the second space (G4). A slur is placed over both notes, with a '1' above it and a downward arrow indicating a bend. Below the staff is a guitar fretboard diagram with frets 1 through 5 labeled. A '1' is above the 5th fret, with a downward arrow indicating a bend.

5 to 6

EXAMPLE 66

Musical notation for Example 66: A treble clef staff in 2/4 time showing a quarter note on the second space (G4) followed by a quarter note on the third line (A4). A slur is placed over both notes, with a '1' above it and a downward arrow indicating a bend. Below the staff is a guitar fretboard diagram with frets 1 through 7 labeled. A '1' is above the 7th fret, with a downward arrow indicating a bend.

MAJOR PENTATONIC

This scale sounds anything but bluesy, even when its notes are bent. Still, you can pull more emotion out of the scale by bending the notes where you would not be able to on most other instruments. Some of my favorite bends in this scale go from 2 to 3, 5 to 6, and, if executed properly, 1 to 2 can sound nice.

Here are some bends to practice for the major pentatonic scale.

2 to 3

EXAMPLE 67

Musical notation for Example 67: A treble clef staff in 2/4 time showing a quarter note on the first space (E4) followed by a quarter note on the second line (F4). A slur is placed over both notes, with a '1' above it and a downward arrow indicating a bend. Below the staff is a guitar fretboard diagram with frets 1 through 5 labeled. A '1' is above the 2nd fret, with a downward arrow indicating a bend.

5 to 6

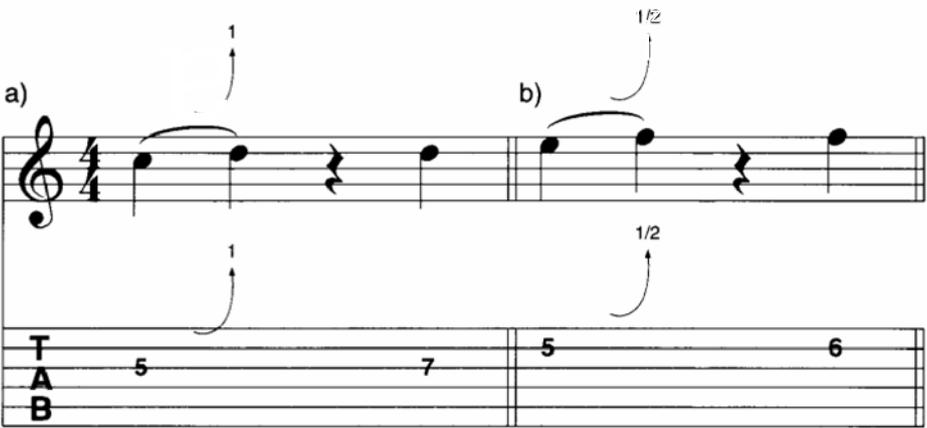
EXAMPLE 68

Musical notation for Example 68: A treble clef staff in 2/4 time showing a quarter note on the second space (G4) followed by a quarter note on the third line (A4). A slur is placed over both notes, with a '1' above it and a downward arrow indicating a bend. Below the staff is a guitar fretboard diagram with frets 1 through 7 labeled. A '1' is above the 7th fret, with a downward arrow indicating a bend.



BENDING IN TUNE

It is important to bend in tune. You can check yourself by playing the actual pitch to which you are bending. Make sure the actual pitch and the bent note sound the same.



REVERSE BENDS

There are different types of bends. Playing a note and bending it to another with a slur (not picking the second note) is the most common type.

You can also bend a note before you play it, and then bring the string down to its natural position after picking. This is often called a reverse bend, or a pre-bend.

EXAMPLE 71

The example shows two measures of music in 4/4 time. The first measure contains two notes: a quarter note on the 5th fret of the 5th string, followed by a dotted quarter note on the 5th fret of the 5th string. An upward arrow labeled '1/2' is above the first note, and a downward arrow labeled '1/2' is above the second note, indicating a half-step bend up and then a half-step release. The second measure contains two notes: a quarter note on the 5th fret of the 5th string, followed by a dotted quarter note on the 5th fret of the 5th string. An upward arrow labeled '1' is above the first note, and a downward arrow labeled '1' is above the second note, indicating a full-step bend up and then a full-step release. Below the staff is a guitar tablature with three lines labeled T, A, and B. The first measure shows a '5' on the 5th string line, and the second measure shows a '(5)' on the 5th string line, indicating the fretting hand position.

*B. B. King.
He's got the
blues, so he's got
the "bends," too!
Nearly all of
B. B. King's
playing is based
on pentatonic
scales.*

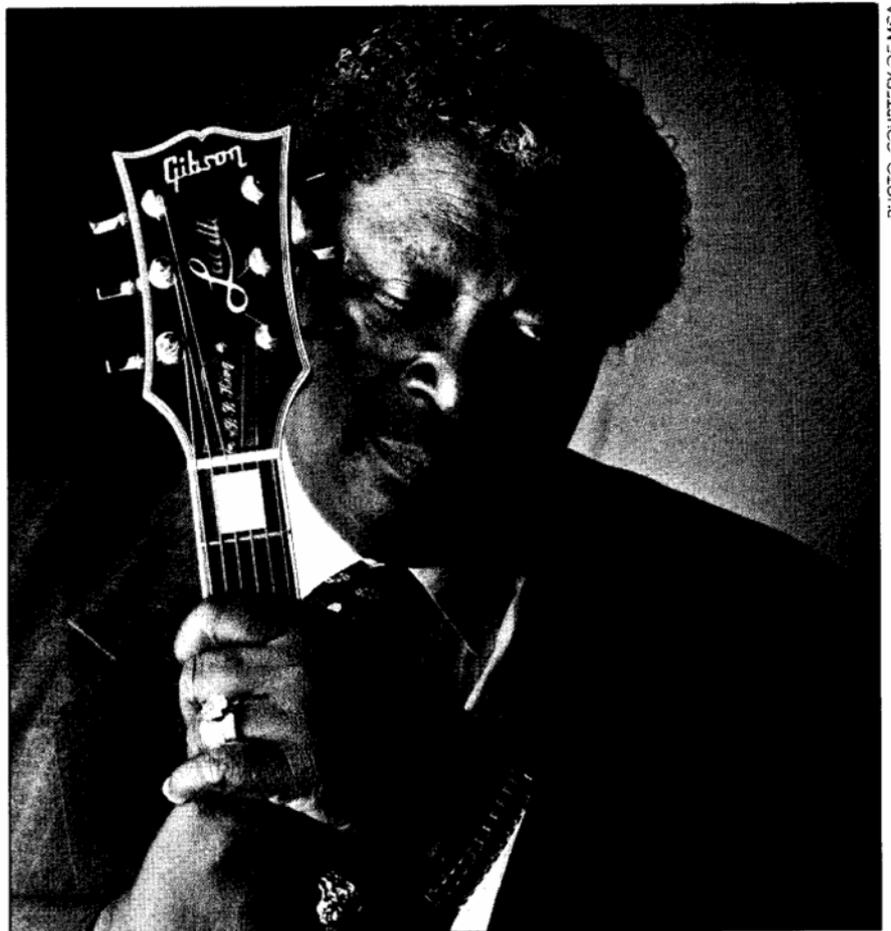


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SAMPLE SOLOS

I have included solos that incorporate many of the concepts discussed in this book so that you can see them used in an actual musical context.

The chord progression in this first solo is a standard 12 bar blues progression in the key of G.

MINOR PENTATONIC SAMPLE SOLO

1

2 G7 3 G7

T	8	6	S	3	6	8	6	8	10	13	10
A			7-5	3			3	3			
B			5	3	5				3	5	7

4

G7 8va G7

5

T	11	13	10	13	15	13	12	15	13	12	15	S
A												12
B												10

6

C7 1 C7

T	11	8	11	10	8	8	11	8	8	11	8	10	7	8	7	5	6	7	8	5	5	8	8	5	5	8	8	6	
A																													
B																													

ANALYSIS

The first measure is a pick-up lick that leads into the progression, and incorporates the concept of connecting patterns. This example begins in Pattern #2 and slides down to Pattern #1.

Measure 3 incorporates a string skipping concept that moves horizontally up the neck.

In Measure 4, I have sequenced some of the descending seventh intervals.

Measure 6 begins with a whole step bend and continues in a descending sequence of a four note pattern.

Measure 7 contains a string of descending and ascending fourth intervals.

Measure 8 demonstrates a half step bend and return.

Measure 10 has a whole step bend on the second string that is held out while you play a note (A) on the first string. The bend is then released in the next beat.

Measure 11 also demonstrates a half step bend. At the end of the measure, you will find a grace note hammered-on from the third to fifth frets of the first string. Grace notes are played very quickly right before the beat.

Measure 12 has two whole step bends and a pull-off at the end.

ANALYSIS

Measure 1 demonstrates descending four note sequences.

Measure 2 begins by combining C Major Pentatonic Patterns #1 and #5 on the first beat and then moves into fourth intervals.

Measure 3 combines D Major Pentatonic Pattern #5 with Pattern #1.

Measure 4 incorporates whole step bends from the 2nd to 3rd scale degrees of the G Major Pentatonic scale.

Measure 5, still using a G Major Pentatonic scale, combines Patterns #3 and #4.

Measure 6 demonstrates string skipping.

Measure 7 contains some descending seventh intervals.

Measure 8 has a whole step bend with a delayed return.

I hope that seeing these concepts used in an actual musical situation will help you formulate some ideas to use creatively in your own solos. Better yet, I hope that these ideas inspire you to come up with new concepts. Keep your eye out for other books about improvising from The National Guitar Workshop and Alfred, such as "Introducing the Dorian Mode" and "Introducing the Mixolydian Mode," both by Peter Einhorn.

HOW TO READ MUSIC

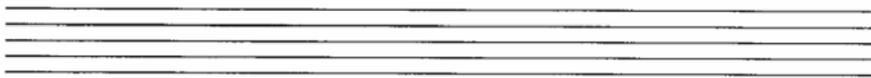
PITCH

Learning to read music will help you to get the most out of your National Guitar Workshop and Alfred instructional books. It will make you a better musician, too, because you will be able to communicate more easily with other musicians. What follows is a discussion of music reading basics. Remember that practice makes perfect! The more you practice reading, the easier it will become.

Staff



A staff containing five lines and four spaces is used in the writing of music. Notes are alternately written on the lines and spaces in alphabetical order.



Clef



The clef indicates which notes coincide with a particular line or space. Different clefs are used for different instruments. Guitar music is written in G clef. The inside curl of the G clef encircles the line which will be called "G". When the G clef is placed on the second line, as in guitar music, it is called the treble clef.



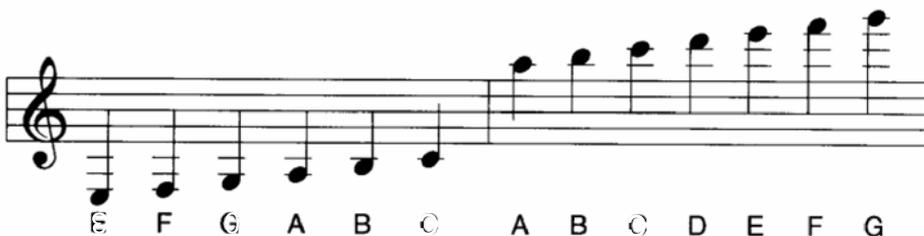
Using the G clef the notes are as follows:*



Ledger Lines



These are lines that are used to indicate pitch above and below the staff.



* In standard notation the guitar sounds an octave lower than written.

TIME

The Measure

The staff is divided by vertical lines called **bar lines**. The space between two bar lines is a **measure**. Each measure (bar) is an equal unit of time.



Double bar lines () mark the end of a piece.

Time Signature

Every piece of music has numbers at the beginning that tell us how to count the time.

Examples: $\frac{4}{4}$ $\frac{3}{4}$ $\frac{6}{8}$

The top number represents the number of beats or counts per measure. The bottom number represents the type of note receiving one count. Example: 4 = quarter note 8 = eighth note

Sometimes a **C** is written in place of 4/4 time. This is called **common time**.

Note values in 4/4 time:

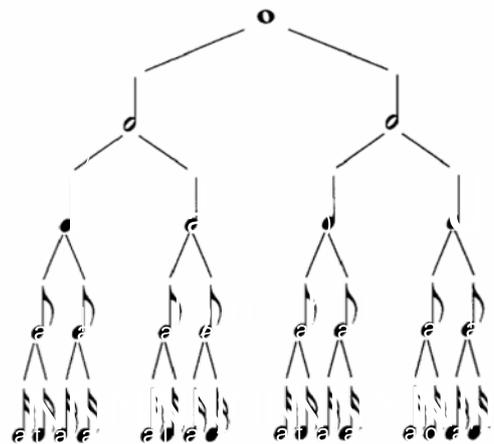
A whole note  = four beats

A half note  = two beats

A quarter note  = one beat

An eighth note  = 1/2 beat

A sixteenth note  = 1/4 beat



A GUIDE TO NATIONAL GUITAR WORKSHOP TABLATURE

Tablature, when combined with standard music notation, provides the most complete system for communicating the many possibilities in guitar playing.

In our TAB system, as in most, **rhythm** is not notated. For that, you will have to refer to the **standard notation**. Six lines are used to indicate the six strings of the guitar. The **top line** is the high E string (the string closest to the floor) and the **bottom line** is the low E string. **Numbers** are placed on the strings to indicate **frets**. If there is an "0", play that string open.

Fingerings are often included in TAB. You will find them just under the bottom line. A "1" indicates your left first or index finger. A "4" indicates your left fourth or pinky finger.

In the following example, the first note is played with the first finger on the first fret. The next note is played with the second finger on the second fret, then third finger plays the third fret, and the fourth finger plays the fourth fret.

The image shows a musical staff in 4/4 time with a treble clef. The notes are quarter notes on the G string: G1 (first fret), A2 (second fret), B3 (third fret), and C#4 (fourth fret). Below the staff is a six-line TAB system. The notes are represented by numbers 1, 2, 3, and 4 on the top line. Below the TAB system, the numbers 1, 2, 3, and 4 are written, indicating the fingerings for each note.

A tie in the music is indicated in TAB by placing the tied note in parentheses.

The image shows a musical staff in 4/4 time with a treble clef. The notes are quarter notes on the G string: G10 (tenth fret), G10 (tenth fret, tied to the previous note), B12 (twelfth fret), and B12 (twelfth fret, tied to the previous note). Below the staff is a six-line TAB system. The notes are represented by numbers 10, (10), 12, and (12) on the top line. Below the TAB system, the numbers 1 and 3 are written, indicating the fingerings for the first and third notes respectively.

Hammer-ons and pull-offs are indicated with slur marks, just like in standard notation. Our TAB also includes an "H" for hammer-ons and a "P" for pull-offs. These are found just above the TAB.

The image shows a musical staff in 4/4 time with a treble clef. The melody consists of eighth notes with slurs indicating hammer-ons and pull-offs. Below the staff is a guitar tablature with three lines labeled T (Treble), A (Middle), and B (Bass). The first measure contains four pairs of notes (8 and 5) with a 'P' above each pair. The second measure contains four pairs of notes (5 and 8) with an 'H' above each pair.

Upward **bends** are marked with upward **arrows**. Downward arrows are used to show a bend being released. A number above the arrow indicates how far to bend (1 = a whole step, 1/2 = a half step, etc.). Remember that the TAB will show the fret number on which your finger should be placed. The standard notation corresponds with the fret shown in the TAB. In the following example you will also find a tap (T) and a slide (S and \swarrow). Also, notice that if more than one note are played with one bend, they appear in parentheses in the TAB. Some notes are actually represented by the arrows themselves, as in the second note of the triplet in this example.

The image shows a musical staff in 4/4 time with a treble clef and a key signature of one sharp (F#). The melody includes a triplet of eighth notes with upward arrows indicating bends. A tap (T) is shown on the staff. Below the staff is a guitar tablature with three lines labeled T, A, and B. The first measure has frets 12 and 17 with a '1' above the 12. The second measure has frets 12 and (12) 10 with a '1' above the 12 and a '3' below the triplet. A slide (S) is indicated with a downward arrow. A tap (T) is shown on the staff at fret 17. Below the tablature are fingerings: 3, 4, 3, 1.

In the following example you will find several more symbols. The sign for **vibrato** (\sim), and the signs for **picking down** (\blacksquare) and the sign for **picking up** (\blacktriangledown).

The image shows a musical staff in 4/4 time with a treble clef. The melody features a series of eighth notes with various symbols above them: squares for picking down and triangles for picking up. A wavy line indicates vibrato. Below the staff is a guitar tablature with three lines labeled T, A, and B. The first measure has frets 8, 7, 5, 5, 5, 5, 7, 8, 8, 8, 8, 8. Above the tablature are symbols: squares for picking down and triangles for picking up, corresponding to the notes in the melody.

**INTRODUCING
THE PENTATONIC SCALES**

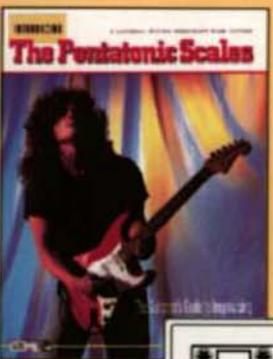
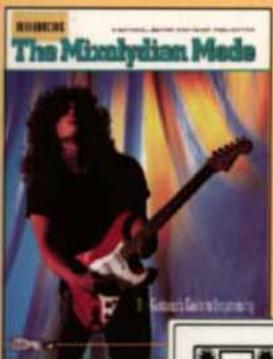
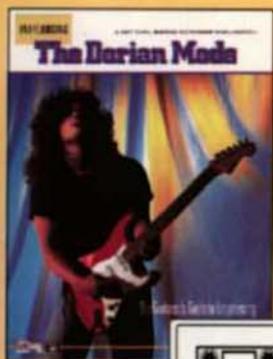
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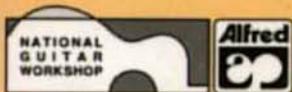
A Must For Every Improvising Guitarist

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