

# **Exotic Scales**

**New Horizons  
for Jazz Improvisation**

*J.P. Befumo*



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**SuperiorBooks.com, Inc.**

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## FOREWORD

When I first took piano lessons as a child I learned to read music and follow the notation on sheet music. Although I learned scales and was exposed to modes as part of my music instruction, composition and improvisation remained a mystery until my late teens when I took lessons from a jazz pianist during my freshman year in college. Even then, although I could repeat patterns that I copied from the instructor, and even modify those patterns slightly, true improvisation did not come easily, because I did not understand the underlying musical structure.

Despite my extensive formal education, I found that I still could not create a style of my own: I simply did not have a structure that allowed me to explore options in a systematic and creative way. It was not until I studied a text on Jazz Improvisation and actually practiced using the various modes and progressions, that I began to grasp how to improvise, as well as how to add color and complexity to my playing.

As a formally trained musician, I was at first skeptical of the approach propounded in *Exotic Scales*. After all, ‘real’ jazz players rarely approach improvisation from the perspective of applying a single scale over an entire progression. Rather, they think in terms of changing scales and modes, and applying arpeggios over specific passages. When I sat down and carefully analyzed the *results* that emerge from applying these scales in the harmonic settings developed in the book, I was

amazed to find that this is precisely what emerges, albeit from a rather unconventional approach. Thus, as the reader works his or her way through the text and the numerous examples provided, it develops that although the player is *thinking* in terms of a single, easy-to-internalize scale, what is really emerging is exactly the right arpeggio, mode, or scale for each chord in the developed progression.

Musical theory is a complex subject, and one that lends itself to many approaches and perspectives. Even relatively elementary aspects of the subject, such as the diatonic modes, are a subject of ongoing discussion among musical scholars. For example, while one might interpret the Aeolian mode as a diatonic major scale played from the sixth degree, another musician will insist (equally correctly) on approaching it in terms of its intrinsic step/half-step structure. In this sense, *Exotic Scales* abstracts what would otherwise be an extremely complex set of techniques into their simplest form—an abstraction that, in all honesty, had never occurred to me until reading this book.

I am convinced that this is an approach that is particularly well suited to the backgrounds and approaches employed by guitarists, although it will also be beneficial to any instrumentalist seeking to enter the world of jazz improvisation. A book like *Exotic Scales* would have been a great time-saver in my own musical journey. It not only presents the use of modes other than the seven basic diatonic modes used in Jazz, but also presents a basic introduction to the use of modes that would be valuable for a beginner with little music theory and for a more advanced student as a reference.

I have been honored to have the opportunity to work directly with Joseph Befumo in a number of capacities and to have made music with him. I have learned much from him, and I suspect that in reading this book, you will also.

Gerald Rudolph, Ph.D

## INTRODUCTION

As a performing guitarist I'm always on the lookout for ways to separate my playing from the myriad of others who are milking the usual pentatonic minors, majors, and blues scales for all they're worth. Exotic scales always seemed like an intriguing way to add some spice to my solos, but every time I'd try one, it just seemed to sound so . . . outside. I knew enough theory to be able to design solos ahead of time and make them fit just about any set of changes, but having grown up on improvisation, I favored an approach that would allow me to simply doodle over a progression, let the creativity flow, and sound good.

Several years ago I encountered a series of books that purported to present just about every exotic scale there is. These, unfortunately, simply presented tables of intervals, leaving the reader to make what sense of them they could; an approach that seemed somewhat less than helpful. Even though I knew some theory, it took a good deal of effort to sit down, analyze these scales, and to come up with harmonic environments within which they could be melodically applied. It was precisely this effort, in fact, that led to the creation of this book.

Even with an appropriate progression in hand, my initial attempts to turn these scales into something resembling music proved to be a rather tedious and frustrating exercise. By recording the steps that I followed, and the compositions that ultimately emerged, this

book not only allows others to reproduce my results, but also provides a methodology through which readers can approach novel and worthwhile harmonic territories on their own.

Because many of the finest musicians I know possess little or no theoretical background, I realized that in order to reach the widest possible audience, I would have to assume little in the way of formal musical training. You need not read music, nor have any knowledge of musical theory to use this book. Everything you need to know is provided. This is first and foremost a book about application and performance, so only enough theory is included to allow the information presented to be understood and applied.

In order to keep this book down to a manageable size, while still covering the essentials of this vast subject, only one mode of each scale (with the exception of the Aeolian mode of the Diatonic Major scale) is fully analyzed. The results for the subsequent modes are tabulated at the end of each chapter, leaving the reader to carry out the full analysis as an exercise.

All examples are provided in the popular MP3 format. In addition, the CD, available for purchase or for use without charge online at [www.exotic-scales.com](http://www.exotic-scales.com), contains PDF files of tablature, MIDI files of background arrangements to practice against, as well as source files for popular music programs, including Jammer™, Finale™, and Cakewalk™. Evaluation versions are also provided.



## **Part I:**

### **Basic Harmonic Theory, Diatonic Scales and Modes**

This section presents the basic information needed to fully utilize the material that follows. This information is presented in a hands-on manner, by analyzing the major diatonic and natural minor scales that will be familiar to most players.



## Chapter 1—Harmonic Foundations

### The Evenly Tempered Scale

Guitars, pianos, and most other Western instruments are designed around the *evenly tempered scale*. The place where musical theory meets physics is *the octave*. An octave simply represents a halving or doubling of frequency; that is, if you play an *A 440* (that is, an A note whose frequency is 440 cycles per second) on a piano, the next A note you encounter, moving from left to right, will have a frequency of 880 cycles per second. Move left instead, and the next A note will have a frequency of 220 cycles per second. The more cycles per second, the higher the pitch of the note. That's all the mathematics we'll need for our understanding of musical theory.

Our basic Western scale divides each octave into twelve equal segments called steps. Hence, *all* of the scales we'll be considering are, in reality, simply different variations on this set of twelve notes.

We can envision the evenly tempered scale as a series of twelve cells, each of which represents the smallest division we can use in creating our music, as shown in Table 1-1.

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

Table 1-1

After we get to twelve, the same sequence repeats itself an octave higher. Playing these notes without restriction is known as the chromatic scale. If you pick up your guitar or sit down at your piano and tap keys at random, you'll be playing chromatically, and will probably notice that the results are not terribly musical.

Musicians, centuries ago, reached the same conclusion, and as a result, they came up with a scheme for playing some of the notes and not others. This compartmentalization is shown in Table 1-2:

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

**Table 1-2**

If you were to sing only the notes that have numbers above them, the result would be the familiar *do-re-mi-fa-sol-la-ti-do* that we all learned in kindergarten. This is known as the diatonic major scale. Once again, the same sequence continues on either side, *ad infinitum*.

Although this might not be immediately obvious, it's actually the distances *between* the notes that gives the major scale its characteristic sound. That is, notice that there are two boxes between the 1 and the 2, two boxes between the 2 and the 3, only one box between the 3 and the 4, two boxes between the 4 and the 5, two between the 5 and the 6, two between the 6 and the 7, and one between the 7 and the 1 of the next repetition. By convention, each group of 2 boxes is known as a *full step*, and a distance of a single box is referred to as a *half step*. Hence, we can describe the diatonic major scale by the following sequence of whole and half steps:

*Whole-whole-half-whole-whole-whole-half.*

One important thing to notice is that there are no half steps between E and F, or between B and C. The significance of this will become clear later. If you have a piano or keyboard handy, you can readily see how this is reflected in the fact that there are no black keys between the corresponding pairs of white keys.

As shown in Table 1-3, this sequence of whole/half steps can

be applied starting at any note, and the result will always be a major scale.

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

**Table 1-3**

As we'll see throughout this book, changing the sequence of steps and half steps results in *very* different sounding scales! Examine Table 1-3 and notice how the sharps and flats fall where they do because they *have to* in order to make the sequence of steps and half steps come out right.

### Interval Maps

A common way of identifying scales is the interval map. This is simply a sequence of seven numbers (for seven-note scales) indicating the number of semitones between each scale degree and the next. For example, the major scale shown in Table 1-3 is represented by the following interval map:

2-2-1-2-2-2-1

By comparing this interval map to the sequence of steps and half steps illustrated in Table 1-2, the relationship will become clear.

One result of this approach to characterizing scales is that rotating the numbers illustrates the various modes of the same scale. (A mode simply refers to playing a scale from some note other than

the first.). Thus, if the interval map of one scale can be related to that of another by simply starting at some point other than the first number (and looping back to the beginning when you reach the end), then the two scales are actually different modes of a single scale. Throughout this book, the interval maps for each scale are shown in parentheses when the scale is introduced.

### Circles of Fifths and Fourths

Although it might seem natural to order the keys alphabetically, as we did in Table 1-3, there are actually more logical and informative ways of arranging things. Let’s see how things work out if, instead, we follow each scale with the one beginning at its fifth degree; that is, since G is the fifth of C, that would be the next scale in our list.

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

**Table 1-4**

Note that in Table 1-4 we have deliberately omitted the last note in the G scale. What note should we put there? If you guessed “F#” . . . give yourself a star! Remember, there is no half-step between E and F, and hence, F will naturally fall in that empty space between the sixth and seventh degrees. Hence, the note we want for the seventh degree of our G scale is an F#, right? This is why when you look at a staff for a piece of music in the key of G, there will be exactly one sharp on it, and that sharp will be on the line of the staff corresponding to the note F.

Let try that again so we can get a feeling for the emerging pattern.

The fifth degree of G is D, so that’s where we’ll start our next line, using the notes from the G scale (including the F#). This is shown in Table 1-5:

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

**Table 1-5**

What note do you suppose we're going to use for the seventh degree? If you said "C#," congratulations! Remember, once again, there is only a half-step between B and C, so the C would go in the empty space between the sixth and seventh degrees. If we look at a sheet of music in the key of D, we'll see that it has *two* sharps on the staff—one on the F and one on the C.

Let's do that one more time.

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

**Table 1-6**

Since A is the fifth degree of D, that's where we started our next line in Table 1-6. We can readily see that the note G will fall in that empty space between the sixth and seventh degrees, and hence, the note we want to put under the seventh degree is G#. Thus, the key of A has three sharps, one on F, one on C, and one on G. This procedure of starting each new key from the fifth degree of the previous one, and adding a sharp on the seventh degree of the newly formed key, is referred to as the *circle of fifths*, for reasons we shall come to shortly. First, however, now that we know where sharps come from, let's see if we can do something similar for *flats*.

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

**Table 1-7**

As we can see from Table 1-7, to find flats, we start each new line from that note that appears in the *fourth* degree of the key before it. Since there's a *full* step (two half steps) between A and B, it's easy to see that in order to maintain the sequence of steps and half steps, the note in the fourth degree of our new F scale must be a *Bb*. Moreover, the next scale we're going to build will also be a *Bb*, since that's the fourth degree of our most recent key (F).

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

**Table 1-8**

As illustrated in Table 1-8, the fourth degree of our *Bb* scale must be an *Eb*, in order to maintain the step/half-step structure of the scale. If you haven't guessed this already, the key of F has one flat, and that flat appears on the B line of the staff. Similarly, the key of *Bb* has *two* flats—one on B and one on E. Following these procedures, one can easily figure out the sharp and flat patterns of all possible keys.

Figure 1 shows the circle of fifths graphically. To read it, follow the outer ring in a clockwise direction to find the sequence in which sharps are added in each key. Follow the inner ring in a counterclockwise direction to read the sequence in which flats are added. You can also see how, within each wedge of the pie, we find notes that are identical, but are spelled differently, such as *C#* and *Db*. Such notes are known as *enharmonic equivalents*.



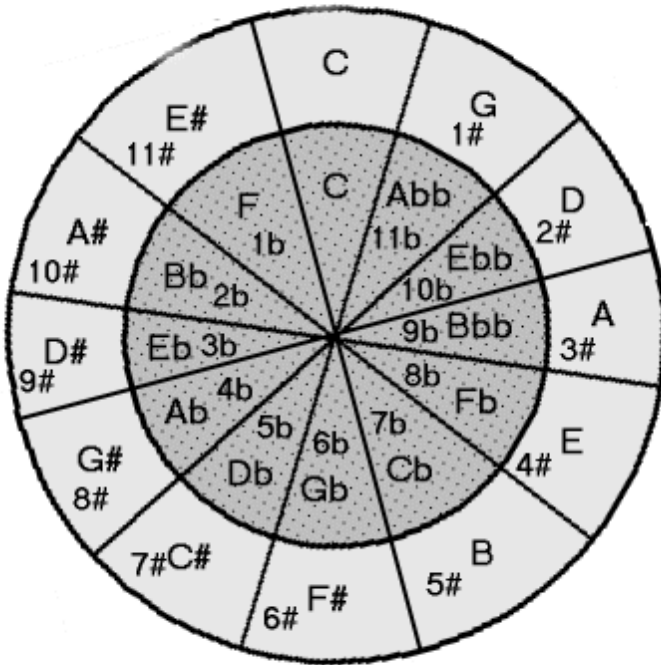


Figure 1

### Enharmonic Equivalency

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

Table 1-9

As shown in Table 1-9, there are two ways of naming the notes between the “main” numbered tones. This, in fact, is what makes

the scale “evenly tempered.” Way back in the days of J. S. Bach, this wasn’t the case, and C#, for example, wasn’t the same note as Db. The upshot of this is that instruments had to be built for a specific key. Imagine having to buy twelve pianos just to be able to play in any key!

As we shall see when we begin harmonizing our scales, sometimes it’s neater to use one enharmonic spelling rather than another.

## Intervals

Before moving on to harmonizing scales, let’s take a look at intervals, and how they’re named.

An interval is simply the difference in pitch between any two notes. The sound quality of each interval is a result of the ratio of the frequency of the two notes. What’s important for right now is that we become familiar with the *names* of the various intervals, since I’ll be using these names throughout this book.

As we discussed earlier, the most important interval is the octave, since it identifies the first and last notes of a twelve-tone scale. Each of the other intervals identifies a particular note’s distance from the first note (the *root* or *tonic* of the scale). The basic intervals are the *second*, the *third*, the *fourth*, the *fifth*, the *sixth*, and the *seventh*, corresponding to the notes we identified in Table 1-9 as representing the notes of the diatonic scale. In addition, the zero interval (the distance from a note to itself) is called the *unison* interval. In order to deal with those in-between notes, the basic intervals are further qualified as being *perfect*, *major*, *minor*, *augmented*, or *diminished*.

The term “perfect” is applied to the unison, the fourth, the fifth, and the octave; that is, when referring to one of these intervals when they fall in one of the numbered slots shown in Table 1-9, we refer to them as “perfect.” The second, third, sixth, and seventh are referred to as “major” if they fall directly under their respective numbers, and “minor” if they are lowered by one half step. Hence, a note falling in the box between the 2 and the 3 (Table 1-0) is referred to as a *minor third*. Similarly, in the key of C, the Bb is referred to as a minor seventh.

The following rules summarize the relationship between the various intervals:

- When a major interval is lowered by a semitone (a half-step), it becomes a minor interval.
- When a minor interval is raised by a semitone, it becomes a major interval.
- When a major interval is raised by a semitone, it becomes an augmented interval.
- When a minor interval is lowered by a semitone, it becomes a diminished interval.
- When a perfect interval is raised by a semitone, it becomes an augmented interval.
- When a perfect interval is lowered by a semitone, it becomes a diminished interval.

## Harmonizing A Scale—Where Chords Come From

One the areas where many musicians encounter difficulty is determining what chords to use when trying to compose a song or progression. Often, they simply resort to grabbing for chords that seem to sound good, with no real understanding of why certain progressions do or don't work. While there's nothing wrong with simply going with what sounds good, it's always nice to have at least a passing acquaintance with the rules, even if you intend to break them. Moreover, the technique we're about to explore forms the cornerstone for what we'll be doing throughout this book, so let's get down to it.

### The I chord

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

**Table 1-10**

As shown in Table 1-10, the basic approach to creating chords amounts to “take one, skip one, take one, skip one. . . .” This is often

referred to as “stacking thirds.” In this particular example, we have a 1, a 3, a 5, and a 7. This combination is known as a *Major Seventh Chord*. What we can deduce from this is that the chord built on the first degree of the diatonic major scale is a major seventh chord. This will be the case regardless of what key we’re in; in other words, in the key of Bb, the Bb chord will be a BbMaj7. This will become clearer as we work through a few more examples.

### The II chord

Let’s continue by stacking thirds, but this time beginning with the second degree—the D. In order to get 4 notes, we’ll simply extend the scale into a second octave, as shown in Table 1-11. (Note that when extending the scale, the additional intervals are numbered sequentially; that is, the 1 is counted as an 8, the 2 as a 9, the three as a 10, the 4 as an 11, and so forth.)

1		2		3	4		5		6		7	1/8		2/9
C		D		E	F		G		A		B	C		D
		↑			↑				↑			↑		

**Table 1-11**

Okay, what have we got here? The notes resulting from stacking thirds are D, F, A, and C. To understand what kind of chord these notes form (hint: it’s *not* a major seventh), we need to compare them to the diatonic scale beginning with the first note of the cord; in this case, D. The result is shown in Table 1-12.

	1		2		3	4		5		6		7
D M aj. scale:	D		E		F#	G		A		B		C#
Thirds from C scale, second degree:	D			F				A			C	
Result:	1			b3				5				b7

**Table 1-12**

As we can clearly see, we no longer have the 1-3-5-7 sequence that defines a major seventh chord. The flatted third (b3) indicates a minor chord, and the flatted seventh means it's a minor seventh. Hence, we see that the chord built on the second degree of the C scale is a Dm7. More generally, the chord built on the second degree of *any* diatonic major scale will *always* be a minor seventh.

Before proceeding to analyze each note in the C major scale, let's take a closer look at how the notes in a chord affect its voicing.

By far, the most important notes in a chord are the third and the seventh. Although it might seem as if the root would be the most important of all, the root is often carried by the bass, and third and the seventh actually carry more information.

	<b>7</b>	<b>b7</b>
<b>3</b>	Maj7	Dom7
<b>b3</b>	Min(maj7)	Min7

**Table 1-13**

Table 1-13 shows the chord types that result from the various combinations of flatted and natural thirds and sevenths. As we've already seen, a major third and a major seventh result in a major seventh chord. If, instead, we pair up a major third with a minor (flatted) seventh, the result is a dominant seventh chord. Similarly, a minor third and a minor seventh combine to produce a minor seventh chord. Finally, a minor third and a major seventh result in a minor/Major-seventh chord, also known as a *minor large* chord.

There are, of course, many other flavors of chords, but we'll investigate those as they present themselves. For now, let's continue harmonizing our major scale!

## The III chord

	1		2		3	4		5		6		7
E M aj. Scale:	E		F#		G#	A		B		C#		D#
Thir ds from C scale, third degree:	E	F		G		A		B	C		D	
R esult:	1	b2		b3		4		5	b6		b7	

**Table 1-14**

Here again, by stacking thirds we come up with a 1, a b3, a 5, and a b7, which means that the third chord in our harmonized diatonic C major scale is an Em7. As before, we can conclude that in every key, the chord built on the third degree of the major scale will always be a minor seventh.

## The IV chord

	1		2		3	4		5		6		7
F M aj. scale:	F		G		A	B b		C		D		E
Thir ds from C scale, fourth degree:	F		G		A		B	C		D		E
R esult:	1		2		3		#4	5		6		7

**Table 1-15**

Stacking thirds starting on the major scale's fourth degree yields a 1, 3, 5, 7 sequence, which represents another major seventh chord. The chord built on the fourth degree of the diatonic major scale in every key will always be a major seventh. In this case, the chord is an Fmaj7. In fact, if we wanted to add some additional spice, we could use an Fmaj7(#11), which would account for that #4 (recall that the 4 is the same note as an 11). By the way, that #4 is often referred to as the *tritone*, and is the note that gives the blues scale its distinctive boisterous tonality.

## The V chord

	1		2		3	4		5		6		7
G M aj. scale:	G		A		B	C		D		E		F#
Thir ds from C scale, fifth degree:	G		A		B	C		D		E	F	
R esult:	1		2		3	4		5		6	b7	

**Table 1-16**

Stacking thirds starting on the major scale's fifth degree yields a 1, 3, 5, b7 sequence. This is the first time we've encountered this particular combination, but we know from Table 1-13 that it's called a *dominant seventh chord*. For reasons that will be explained shortly, the presence of a dominant chord is usually the best indication of the overall key within which you're playing.

## The VI chord

	1		2		3	4		5		6		7
A M aj. scale:	A		B		C#	D		E		F#		G#
Thir ds from C scale, sixth degree:	A		B	C		D		E	F		G	
R esult:	1		2	b3		4		5	b6		b7	

**Table 1-17**

Stacking thirds starting on the major scale's sixth degree yields a 1, b3, 5, b7 sequence—another minor seventh chord. In this case it's an Am7, but once again, the chord built on the sixth degree of *any* diatonic major scale will always be a minor seventh.

## The VII chord

	1		2		3	4		5		6		7
B M aj. scale:	B		C #		D #	E		F #		G #		A #
Thir ds from C scale, seventh degree:	B	C		D		E	F		G		A	
R esult:	1	b2		b3		b4	b5		b6		b7	

**Table 1-18**

Stacking thirds starting on the major scale’s seventh degree yields a 1, b3, b5, b7 sequence, which we haven’t encountered before. This particular combination is known as a m7b5 (pronounced “minor seventh flat five”), also known as a *half diminished*. Although, like the dominant seventh, this chord is unique in harmonized scale, it’s less useful as an indicator of key, because it’s not as commonly used, and because it doesn’t possess the powerful cadence (to be discussed shortly) of the dominant seventh chord.

## Chords and Cadence

Having harmonized the entire diatonic major scale, we now know that:

- The I chord is always a major seventh
- The II chord is always a minor seventh
- The III chord is always a minor seventh
- The IV chord is always a major seventh
- The V chord is always a dominant seventh
- the VI chord is always a minor seventh
- The VII chord is always a half diminished

This brings us back to our earlier question about how we select chords for a progression or a song. If our song remains in a single key throughout its entirety (not always the case), we would use only these chords and these voicings. Of course, many musical compositions *modulate* through several transient key centers, but even then, this



rule applies to each temporary key center.

The next question that you might be asking is whether we can just use any of these chords in any order we want, or if certain sequences work better than others do.

Early in the development of Western music, people asked this same question, and to answer it, certain rules were developed to help avoid dissonant transitions. These rules ensured that the tonic tone would always assert itself strongly as a ‘home’ chord; that is, they ensured that the composition would have a strong sense of its key center. The result is that music, which adheres to these rules, is imbued with a sense of sonic motion that tends toward the key center. The name for this is *cadence*, which comes from the Latin word meaning “to fall.”

The traditional rules of cadence state that:

- The I chord can move to any chord
- The II chord can move to any chord except the I
- The III chord can move to any chord except the I or the VII
- The IV chord can move to any chord
- The V chord can move to any chord except the II or the VII
- The VI chord can move to any chord except the I or the VII
- The VII chord can move to any chord except the II or the IV

Of course, one is always free to create music in whatever manner the ear may decree; however, keeping these rules in mind will ensure that the composition has a definite sense of key identity.

It must be remembered that these rules apply only to the conventional major and minor tonalities. They may or may not be completely relevant to other kinds of scales, however, there is nothing to prohibit their use in these more exotic environments. Accordingly, I will use these rules to generate progressions for all of the scales presented in this book. It should be kept in mind, however, that their

main advantage in these situations will be to provide a structured approach to creating progressions; that is, their usage does not imply the inner voice movement that actually led to the formation of the rules of cadence.

## Progressions and Cadences

Groups of chords that follow these rules, when repeated cyclically within a composition, are known as *progressions*. The following progressions are used in the vast majority of simple popular songs, and represent a good starting point for your own compositions:

I	V	IV	V	I
I	VI	II	V	I
I	II	IV	V	I
I	II	VI	V	I
I	III	II	V	I
I	III	VI	V	I
I	III	IV	V	I

**Table 1-19**

There are a few things you should notice about these progressions: First, they all begin and end with a *I* chord. Although nothing in music is etched in stone, beginning and ending on the tonic helps convey a sense of the composition’s primary key center, even though it may modulate through other transient keys in the course of the piece. Second, the last two chords always consist of the five chord moving to the one chord. This V-I movement is known as *perfect cadence*, and conveys the strongest sense of resolution. There are four primary cadences:

- Movement from the V chord to the I chord is referred to as the *perfect cadence*.
- Movement from the I chord to the V chord is known as the *imperfect cadence*, and usually occurs in the middle of a composition, and not at the end.

- Movement from the IV chord to the I chord is called the *plagal cadence*.
- Movement from the V chord to any chord other than the I is called the *interrupted cadence*.

Let's apply this information to create a progression you can use to practice the diatonic major scale. Our goal will be to create a progression that uses *all* of the harmonized chords at least once, while respecting the rules of cadence listed above. This will allow you to hear what the scale sounds like in each of its intrinsic harmonic settings. This is an approach that we will be using throughout this book.

As we've seen, the chords we have to work with are:  
Cmaj7, Dm7, Em7, FMaj7, G7, Am7, Bm7b5.

Of course, we'd rarely find a song that uses *every* chord in a given key, and only those chords, but our goal here is to see what the scale sounds like in each of its normal contexts.

Let's start out with one of the common progression listed in Table 1-18: I-III-II-V-I, which, in the key of C, gives us:

Cmaj7-Em7-Dm7-G7-Cmaj7.

From this base, we'll try to insert the remaining chords (IV=Fm7, VI=Am7, VII=Bm7b5).

Since the II can move to any chord except the I, and the VII can move to any chord except the II or the IV, we can safely insert the VII between the II and the V:

Cmaj7-Em7-Dm7-Bm7b5-G7-Cmaj7.

The III can move to any chord except the I or the VII, and the VI can move to any chord except the I or the VII, so we can slip the VI in between the III and the II:

Cmaj7-Em7-Am7-Dm7-Bm7b5-G7-Cmaj7.

Finally, since the IV can move to any chord, and the II can move to any chord except the I, we'll put the IV between the II and the VII:

Cmaj7-Em7-Am7-Dm7-FMaj7-Bm7b5-G7-Cmaj7.

And there we have a progression that employs each scale tone chord from the C diatonic scale. Once again, most real tunes would employ more than one key center, and experienced improvisers play a variety of scales and arpeggios over different parts of the song, but

the goal here is to provide a progression over which you can solo using only the C major scale, in order to begin to hear its tonality over the various kinds of chords.

For the examples in this book, I employ all of the harmonized chords from each mode of each scale, in a progression that obeys the rules of cadence described above. The intent is not to create complete musical compositions, but rather, to provide a harmonic environment against which the reader can examine the sound of the scale in each of its legitimate harmonic settings. This approach ensures that the reader will be free to explore the sound of each scale, without the necessity of avoiding specific scale tones that might tend to clash with a particular chord.

For convenience, one fingering pattern for the diatonic major scale is shown in Table 1-20. Since we'll be using this same type of table throughout this book, a few words of explanation may be helpful.

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
	7	3	6	2		7
<i>Eighth fret</i>	<b>R</b>	4			5	<b>R</b>
			7	3		
	2	5	<b>R</b>	4	6	2

**Table 1-20**

The first line of the table indicates the strings of the guitar, from the lowest frequency (closest to the top of the guitar) to the highest (closest to the bottom of the guitar). The fret indicated in the left column shows where you'd play the scale in the key of C. The numbers in the grid indicate the numeric degree of each note, with "**R**" indicating the location of the root notes.

## **Chords Used In This Book**

As you work through this book you'll notice that I use a lot of extended (or altered) chords, particularly the 7(#5#9), the 7(#5b9), and so forth. The reason I do this is to help the reader develop a feel for the sound of these often-foreign scales in the most harmonically supportive environment. Nevertheless, it's important to realize that in

real playing situations, you don't have to stand around waiting for an Ab7(b5b9) to come flying your way. By playing the appropriate scale over an ordinary dominant seventh chord, *your solo* will be effectively supplying those extended notes. Chord diagrams for all chords used are included in the example files.

## Searching for Slash Chords

A common scenario we'll encounter over and over when trying to harmonize scales is that we'll come up with scale tones that simply don't add up to any kind of recognizable chord. For example, when we analyze the III chord of the *Chromatic Hypodorian Inverse*  $\flat^3$  scale, we come up with the following:

### ***Chromatic Hypodorian Inverse* $\flat^3$ Scale—III Chord:**

<b>E Major Scale:</b>	E		F#		G#	A		B		C#		D#
<b>CHDI 3 3<sup>rd</sup> Deg.:</b>	E	F	G $\flat$	A $\flat\flat$		B $\flat\flat$			C	D $\flat$		
<b>Initial Results:</b>	1	b2	bb3	bb4		bb5			b6	bb7		
<b>Results (reinterpreted):</b>	1	b9	2	b3		4			#5	6		

**Table 1-21**

Good grief! What can we make of this? Reinterpreting some of these notes, as shown in Table 1-21 helps somewhat, but the best we can do here is augmented suspended fourth chord—a legitimate but uncommon voicing. What I'll typically do in these situations is search for a slash chord that contains the most significant tones we're seeking to harmonize. What are the significant tones? Well, in this case, the tones we'd like to map include the A $\flat\flat$  (b3), the C (#5), the D $\flat$  (bb7) and maybe the G $\flat$  (bb3) and/or the F (b9). When we encounter these situations throughout this book, I'll generally say something like: "How about an A7(#5#9)/E?" But where and how do I come up with these magical chords that do precisely what we want? Well to start with, you might want to draw yourself up a chart like the one shown in Table 1-22. (You can find one on the companion

CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com) under:  
 \ExoticScales\Grid.rtf).

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

**Table 1-22**

Next, proceed to circle or highlight all of the tones of interest, as shown in Table 1-22. Note that I not only mark the tones that are resident in each scale, but fill in the altered tones as well.

1		2		3	4		5		6		7
C	C #	D		E	F		G		A		B
C #		D #		E #	F #	G	G #		A #		B #
D		E	F	F #	G		A		B	C	C #
E b		F		G	A b		B b		C	C #	D
E	F	F #	G	G #	A		B	C	C #		D #
F		G		A	B b		C	C #	D		E
F #	G	G #		A #	B	C	C #		D #		E #
G		A		B	C	C #	D		E	F	F #
A b		B b		C	D b		E b		F		G
<b>A</b>		<b>B</b>	<b>C</b>	<b>C #</b>	<b>D</b>		<b>E</b>	<b>F</b>	<b>F #</b>	<b>G</b>	<b>G #</b>
B b		C	C #	D	E b		F		G		A
B	C	C #		D #	E	F	F #	G	G #		A #

**Table 1-23**

Finally, work your way through the chart, line by line, searching for situations in which the highlighted tones represent a recognizable chord. In Table 1-23, I've identified the line representing the A scale as a potential candidate. The first thing I do is examine the root—is it resident in the harmonized scale I'm trying to match? A quick look back at Table 1-20 reveals that Bbb (the enharmonic equivalent to A), is the bb5 in our harmonized scale. In terms of an A chord form, the C# is a major third, and the G is a minor seventh—so far, so good, since this means we're dealing with some kind of altered dominant. We then examine the tones that typically show up in altered dominant chords; namely, the b5, #5, b9, and #9. We see immediately that the F, one of the tones we've highlighted, is the #5, and C, another of our target tones, is the #9. Consequently, we can conclude that A7(#5#9) will be the chord on the left side of our slash chord. To reiterate, in terms of our original harmonized target chord (E), we find that from A7(#5#9) the root, A, gives us our bb4; the major third (C#) gives us our bb7; the #5, F, gives us our b9; the b7, G, gives us our b3; and the #9, C, gives us our b6. Not bad. This means we can harmonize the third degree of our C Chromatic Hypodorian Inverse  $\natural_3$  scale as an A7(#5#9)/E chord.

Once again, I won't walk through this process every time I grab for a slash chord, but when you see me perform this slight of hand, now you'll know how it's done.

## Examples

The companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com) is a mixed-mode disk, meaning that it contains both audio tracks that can be played on an ordinary CD player, along with additional support materials that can be accessed using a computer. The audio examples contain two tracks for each scale covered in the chapters of this book; one containing a melody, and the other offering just the background tracks, so you can practice your own improvisations. All examples were created using a Brian Moore® i2.5 MIDI guitar, and recorded directly to MIDI using the example tracks as backup. For the most part, I tried *not* to play the notes of the specific arpeggios corresponding to the backup tracks, but rather, merely improvised using the fingering patterns presented in the book. In the analysis section of each chapter I examine several bars of the resulting solo, showing how the resulting notes of the solo fit into the harmonic environment. In creating these examples I was delighted to discover that, due to the way the progressions are created, simply doodling over the scales generally yields pretty musical results. Support materials are organized on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com) by chapter. Each mode folder contains examples in the following formats:

## MIDI

MIDI stands for *Musical Instrument Digital Interface*, and represents a standard format for producing digital music. MIDI can be thought of as an electronic player piano. The MIDI file contains definitions of what notes should be played, using what digital instrument sounds, and when to play them, but contains no actual sound data itself. It's up to the individual computer's sound card to reproduce the sounds when the MIDI file is "played." Most modern PC operating systems are automatically configured to play back MIDI



files using your sound card. The MIDI files in the examples contain several repetitions of the chord progressions being illustrated. You can play the MIDI file on your computer and improvise your scales using it as a background. MIDI files may be played using your computer's built in media player, any popular sequencer package, or the copy of *Noteworthy Composer*<sup>™</sup> included on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com) in the \applications\Noteworthy\ folder.

## **MP3**

Unlike MIDI, MP3 is a technology used for compressing and encoding actual sound data. If your computer can't automatically play MP3 files, a copy of *Winamp*<sup>™</sup> is included on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com) in the \applications\Winamp\ folder, or you can download a free player from: <http://www.winamp.com>

The MP3 examples contain recordings of me improvising along with the chord changes presented in the MIDI files. These examples can serve to give you a feeling for the sound of each scale.

## **Transcriptions**

The transcription files are presented in PDF (Portable Document Format) files. They contain musical notation and tablature of the recorded solos, as well as chord diagrams for each progression. (Note that the notation in the tablature and Finale files from which they were created are one octave above that of the MIDI files, as guitar notation is typically transcribed in that manner.) If you do not have an Adobe Acrobat reader (needed for displaying .PDF files), a copy is included on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com) in the \applications\Adobe\ folder, or you can download one for free from:

<http://www.adobe.com>

## **Jammer™**

Jammer is a wonderful program from SoundTrek, Inc. A demo version is included on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com) in the \applications\Jammer\ folder, or a copy can be downloaded from:

<http://www.soundtrek.com>

Jammer allows you to simply enter a chord progression and select a music style. It will then generate a complete backup band, and play the changes for you in a loop. It's really an indispensable tool for practicing. The chord progressions for each of the scales presented in this book are included as .CMP (Jammer format) files.

## **Finale™**

Finale, from Coda Music (<http://www.codamusic.com>) is the granddaddy of all music notation programs, is very powerful, and is used to produce most commercial sheet music. The example Finale files were used to produce the transcription files, and hence, contain the same information. (Note that the notation in the Finale files is one octave above that of the MIDI files, as guitar notation is typically transcribed in that manner.) The advantage to using the .MUS (Coda Finale format) files is that you can slow down the playback, and actually watch the music scroll across the screen as you play along. An application for accessing the Finale files is included on the CD in the \applications\Finale\ folder. Additional demo programs, as well as Finale Notepad—a 'lite' version of Finale—can be downloaded from their site.

## **Cakewalk™**

Cakewalk, from Twelve-Tone systems (<http://www.cakewalk.com>), is an excellent sequencing program, which also offers decent notation capabilities. For those who use this package, the examples are included as .WRK (Cakewalk format) files. Like the Finale files, these also include chord diagrams, and can be slowed down for convenient play-along.

## **Noteworthy Composer™**

Noteworthy Composer, from Noteworthy Artware (<http://www.noteworthysoftware.com/>), is an absolutely superb shareware notation program. While not quite as powerful as Finale or Cakewalk, its \$39.95 price tag puts it within the reach of even the most struggling musician. An evaluation copy is included on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com) in the \applications\Noteworthy\ folder, or you can download a free evaluation copy from Noteworthy's web site.

## Additional Examples

The folder \MiscExamples\ on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com) contains examples of sixteen assorted modes of the scales analyzed in the chapters of this book. These scales contain examples in MIDI, MP3, and PDF format. In addition, each includes a PDF file presenting a guitar fingering diagram.

The following scales are included:

Scale	Description	File Names
A have Raba	Harmonic Minor Mode V	misc01.*
A rabian	Neapolitan Major Mode V	misc02.*
Byzantine	Hungarian Minor Mode V	misc03.*
Chromatic Hypodorian Inverse	Persian Mode VI	misc04.*
Chromatic Hypophrygian ##4 ##5	Enigmatic Ascending Mode II	misc05.*
Hindu	Melodic Minor Mode V	misc06.*
Hungarian Gypsy	Neapolitan Minor Mode V	misc07.*
Locrian bb6	Aeolian bb6 Mode II	misc08.*
Malini	Sam Bah Mode V	misc09.*
Mela D havalam bari	Enigmatic Descending Mode III	misc10.*
Mixolydian #5	Neapolitan Minor Mode III	misc11.*
Oriental	Hungarian Minor Mode II	misc12.*
Phrygian	Diatonic Major Mode III	misc13.*
Ravel	Melodic Minor Mode VII	misc14.*
Romanian	Harmonic Minor Mode IV	misc15.*
Super Locrian bb7	Harmonic Minor Mode VII	misc16.*

## Chapter 2—Modes

The subject of modes is one that often represents a source of confusion even to experienced musicians. Although there are numerous theoretical ways of looking at modes, functionally, it simply boils down to playing a given scale from a note other than its tonic.

Remember how we examined our C scale in terms of its characteristic steps and half steps (Table 2-1)?

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

**Table 2-1**

Well, suppose instead of starting at C, we were to start at A instead. Obviously, this would change the sequence of steps and half steps (see Table 2-2), and as a result, would change the sound of the scale.

A		B	C		D		E	F		G	

**Table 2-2**

We can compare this to a regular A major scale, as shown in Table 2-3:

	1	2	3	4	5	6	7
A M aj. scale	A	B	C#	D	E	F#	G#
C scale, m ode V I	A	B	C	D	E	F	G
R esult	1	2	b3	4	5	b6	b7

**Table 2-3**

As we see, compared to the A major scale, this new *A* scale has a flatted third, a flatted sixth, and a flatted seventh. Consequently, we can expect it to have a minor kind of flavor. The sixth mode of the diatonic major scale is called the *Aeolian Mode*, and is also known as the *Natural Minor scale*. (By the way, the first mode, which we analyzed in Chapter 1, is known as the *Ionian Mode*.)

Obviously, we could easily follow the procedure shown in Chapter 1 to analyze every mode of the major scale, however, that would quickly become rather tedious and quite redundant. Instead, I'll analyze just one additional mode—the Aeolian—in detail, leaving analysis of the remaining modes as an exercise. The results and relevant examples for every mode, however, are included on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com).

### **Aeolian (2 1 2 2 1 2 2)**

The Aeolian mode (also known as the *Natural Minor scale*) of the diatonic scale is derived by starting at the sixth step of the Ionian. In other words, an A-Aeolian contains the same notes as a C-Ionian. The Aeolian has a minor tonality due to its minor third and minor seventh degrees. The Aeolian mode is the basis of the Minor Pentatonic and Blues scales, with which most guitarists are intimately familiar.

1		2	b3		4		5	b6		b7	
C		D	E b		F		G	A b		B b	
C #		D #	E		F #		G #	A		B	
D		E	F		G		A	B b		C	
E b		F	G b		A b		B b	C b		D b	
E		F #	G		A		B	C		D	
F		G	A b		B b		C	D b		E b	
F #		G #	A		B		C #	D		E	
G		A	B b		C		D	E b		F	
A b		B b	C b		D b		E b	F b		G b	
A		B	C		D		E	F		G	
B b		C	D b		E b		F	G b		A b	
B		C #	D		E		F #	G		A	

**Table 2-4**

Here's a basic fingering pattern:

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
<i>(E ighth fret)</i>	<b>R</b>	4	b7	b3	5	<b>R</b>
					b6	
	2	5	<b>R</b>	4		2
	b3	b6			b7	b3
			2			

**Table 2-5**

**I Chord:**

<b>C M ajor Scale:</b>	C		D		E	F		G		A		B
<b>A eolian 1<sup>st</sup> deg.:</b>	C		D	E b		F		G	A b		B b	
<b>R esults:</b>	1		2	b3		4		5	b6		b7	

**Table 2-6**

Starting with the first degree and stacking thirds, we see that we have a 1-b3-5-b7. This is a minor seventh chord. We see, therefore, that we can use the Aeolian scale over a minor seventh chord whose root is the same as that of the scale. In the key of C this would be a Cm7.

## II Chord:

D Major Scale:	D		E		F#	G		A		B		C#
Aeolian 2 <sup>nd</sup> D deg.:	D	E <sup>b</sup>		F		G	A <sup>b</sup>		B <sup>b</sup>		C	
Results:	1	b2		b3		4	b5		b6		b7	

**Table 2-7**

By comparing the notes of our base Aeolian scale, starting at the second degree (D) with the normal step/half-step pattern of a diatonic major scale beginning at the same note, we discover that the Aeolian differs in the flatted second, third, fifth, sixth, and seventh. The chord that results from stacking thirds is a min7(b5). The lowered second (b9) also works well in this context. Thus we can play the Aeolian scale over a min7(b5) chord whose root is two semitones above that of the scale; that is, we'd play a C Aeolian over a Dmin7(b5) chord.

## III Chord:

E <sup>b</sup> Major Scale:	E <sup>b</sup>		F		G	A <sup>b</sup>		B <sup>b</sup>		C		D
Aeolian 3 <sup>rd</sup> D deg.:	E <sup>b</sup>		F		G	A <sup>b</sup>		B <sup>b</sup>		C		D
Results:	1		2		3	4		5		6		7

**Table 2-8**

The third degree of our Aeolian scale is Eb, a minor third. As before, we compare the Aeolian mode starting at the third note of the scale with the diatonic major scale starting at the same note, in this case, Eb. The result is pretty simple—it's a major seventh. Hence, we use the Aeolian scale over a major seventh chord whose root is a minor third (three semitones) above that of the scale. In the key of C, we'd play a C Aeolian scale over an Ebmaj7 chord.



## IV Chord:

F M a j o r S c a l e :	F		G		A	B b		C		D		E
A e o l i a n 4 <sup>th</sup> D e g. :	F		G	A b		B b		C		D	E b	
R e s u l t s :	1		2	b3		4		5		6	b7	

**Table 2-9**

This is another simple one: the IV chord is a minor seventh. We can apply an Aeolian scale to a minor seventh chord whose root is a perfect fourth (five semitones) above that of the scale; that is, we'd use a C Aeolian scale over an Fmin7.

## V Chord:

G M a j o r S c a l e :	G		A		B	C		D		E		F#
A e o l i a n 5 <sup>th</sup> D e g. :	G	A b		B b		C		D	E b		F	
R e s u l t s :	1	b2		b3		4		5	b6		b7	

**Table 2-10**

The minor third coupled with a minor seventh indicates another minor seventh chord. We can apply an Aeolian scale to a minor seventh chord whose root is a perfect fifth (seven semitones) above that of the scale. In C, we'd play a C Aeolian scale over a Gm7. The significance of this chord will become clear later when we analyze the *Harmonic Minor* scale. For now, remember how we observed that in the major scale, the V chord was a dominant seventh, and noted that this was the most important chord in establishing the overall feeling of a key center? Moreover, when we talked about cadences, we saw that the V-I cadence (called the *Perfect Cadence*), represented the strongest movement in Western music. Well, what happened here? We've got the minor seventh characteristic of a dominant seventh chord, but instead of a major third, we have a minor third. Where did

that come from. Well, if you look up at Table 2-4, you'll see the problem is that the Natural Minor scale (the Aeolian mode) has a minor seventh instead of the major seventh like the major scale. In C, that's Bb. Thus, by the time we shift our way down to the V chord, that minor seventh has become a minor third, and we no longer have a dominant seventh chord in the V position. We really don't have to worry too much about that now, but make a mental note of it for later.

**VI Chord:**

A b M ajor Scale:	A b		B b		C	D b		E b		F		G
A eolian 6 <sup>th</sup> D eg.:	A b		B b		C		D	E b		F		G
R esults:	1		2		3		#4	5		6		7

**Table 2-11**

As shown in Table 2-11, we can play the Aeolian scale over a maj7(#11) chord whose root is a minor sixth (eight semitones) above that of the scale. A C Aeolian scale is played over an Abmaj7(#11) chord.

**VII Chord:**

B b M ajor Scale:	B b		C		D	E b		F		G		A
A eolian 7 <sup>th</sup> D eg.:	B b		C		D	E b		F		G	A b	
R esults:	1		2		3	4		5		6	b7	

**Table 2-12**

This is another easy one: we can play a C Aeolian over a Bb7 chord.

**Progression**

Let's examine what kind of progression might provide a background for experimenting with our C Aeolian scale. As we've seen, the chords we have to work with are:

Cm7, Dmin7(b5), Ebmaj7, Fmin7, Gm7, Abmaj7(#11), Bb7.  
 We'll start out with a common jazz progression: I- II-IV-V-1

(which happen to be the only chords that correspond to scale tones in the key of C). this gives us:

Cm7-Dmin7(b5)-Fm7-Gm7-Cm7.

From this base, let's try to insert the remaining chords [bIII=EbMaj7, bVI=AbMaj7(#11), bVII=Bb], according to the rules of cadence. We can use Eb as a temporary tone center:

EbMaj7	=	I
Fm7	=	II
Gm7	=	III
AbMaj7(#11)	=	IV
Bb7	=	V
Cm7	=	VI
Dmin7(b5)	=	VII

Since the VII (Dm7b5) can move to any chord except the II or the IV, and the I (EbMaj7) can move to any chord, we can safely slip the EbMaj7 (the I chord in our temporary key center) in between the Dmin7(b5) and the Fm7, yielding:

Cm7-Dmin7(b5)-EbMaj7-Fm7-Gm7-Cm7.

The II (Fm7) can move to any chord except the I, and the V (Bb7) can move to any chord except the II or the VII, therefore we can insert the Bb between the Fm7 and the G:

Cm7-Dmin7(b5)-EbMaj7-Fm7-Bb7-Gm7-Cm7.

That leaves us with only the AbMaj7(#11) to contend with. In our temporary key center, AbMaj7(#11) is the IV, and the IV can move to any chord. Moreover, since the V can move to any chord except the II or the VII, we can add the AbMaj7(#11) between the Bb7 and the Gm7:

Cm7-Dmin7(b5)-EbMaj7-Fm7-Bb7-AbMaj7(#11)-Gm7-Cm7.

In order to reinforce the feeling of playing against a C key center, I'll go ahead and add some extra C chords wherever it's legal. (I leave it to the reader to verify that these additions are consistent with the rules of cadence.) The result is:

Cm7-Dmin7(b5)-EbMaj7-Cm7-Fm7-Cm7-Bb7-Cm7-AbMaj7(#11)-Cm7-Gm7-Cm7.

Hence, we now have a 12-bar progression against which we can freely improvise using our Natural Minor scale.

## Analysis

The image displays a musical analysis of a four-bar excerpt. The top staff is a treble clef melody line in 4/4 time, with notes and accidentals. Above the staff, four chord diagrams are shown: Fm7 (bar 1), Cm7 (bar 2), Bb7 (bar 3), and Cm7 (bar 4). The bottom staff is a guitar fretboard diagram with six strings and fret numbers (0-11) indicating the positions of the notes in the melody.

**Figure 2**

Figure 2 shows an excerpt (bars 5-8) from the example file (`\ExoticScales\CH2\example.pdf`). Let's walk through this segment of the solo and see what emerges. Remember, in playing the solo I followed the fingering patterns and my ear, rather than explicitly attempting to play notes from the chords. Indeed, as described earlier, the whole reason for utilizing chords from the harmonized scale is so that approaching the solo in this manner will yield musical results.

In the first bar, over the Fm7, the Eb gives us a b7, the Ab is a b3, the Bb is the 4, the D is a 6, and Eb is another b7. In bar 2 we're playing over a Cm7. The C, of course, is a 1, the Eb is the b3, G is the 5, and the D gives us a 2. In the third bar, in terms of the Bb7, the D provides a 3, the C gives us a 2, the Bb is the root, the Ab is a major seventh, and the B is another root, which ties into bar 4, where it becomes a minor seventh when played over the Cm7.

## Examples

Support materials may be found in the following locations on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com):

MIDI	ExoticScales\CH2\example.mid
MP3	ExoticScales\CH2\example.mp3
Transcription (PDF)	ExoticScales\CH2\example.pdf
Jammer™	ExoticScales\CH2\example.cm.p
Finale™	ExoticScales\CH2\example.us
Cakewalk™	ExoticScales\CH2\example.wrk
Noteworthy Composer	ExoticScales\CH2\example.nwc

**Table 2-13**

## Modes of the Diatonic Major Scale

Mode	Name	Intervals	Progression
2	Dorian	2122212	Cm7-Dm7-Am7(b5)-Bbmaj7-Cm7-Emaj7(#11)-F-G-Cm7
3	Phrygian	1222122	Cm7-Bbm7-Dbmaj7(#11)-Cm7-Eb7-Abmaj7-Gm7(b5)-Fm7-Cm7
4	Lydian	2221221	Cmaj7(#11)-Em7-Cmaj7-D7-Bm7-Cmaj7-Am7-F#m7(b5)-Gmaj7-Cmaj7(#11)
5	Mixolydian	2212212	C7-Em7(b5)-C7-Dm7-C7-Bbmaj7-C7-Am7-C7-Fmaj7-Gm7(b5)-C7
6	Aeolian	2122122	Cm7-Dm7(b5)-Emaj7-Cm7-Fm7-Cm7-Bb7-Cm7-Abmaj7(#11)-Cm7-Gm7-Cm7
7	Locrian	1221222	Cm7(b5)-Dbmaj7-Ebm7-Cm7(b5)-Bbm7-Ab7-Fm7-Gbmaj7(#11)-Cm7(b5)

**Table 2-14**

## Summary

As we've discovered in this chapter, the concept of a mode simply means playing a particular scale from an alternative starting point. We've also found that this seemingly minor adjustment can make significant differences in the sound of the resulting scale. In the coming chapters we will examine some more exotic variations on the 12-tone octave.



## **Part II:**

### **Exotic Scales With No Augmented Intervals**

An *augmented interval* refers to a pair of notes separated by *three* semitones. As we discovered when we examined the familiar major scale, each note was separated by either a half step (one semitone) or a full step (two semitones). The scales examined in this section adhere to this convention; that is, they contain no intervals greater than two semitones. This results in structures that are easier to harmonize and apply than the more exotic scales examined in subsequent sections, which contain one or more augmented intervals.

While some might argue as to whether any scales built upon a twelve-semitone octave should be termed “exotic,” each one represents an arrangement of tones that are not normally heard in popular music, and from that perspective, can be considered exotic. Of course, precisely how exotic they might seem will depend on the musical tastes and experience of the listener/soloist. Nevertheless, assimilating even the smallest fraction of this material is guaranteed to get your playing out of the doldrums and into new harmonic territory.





## Chapter 3—The Melodic Minor Scale (2 1 2 2 2 2 1)

### Melodic Minor Overview

When we analyzed the Natural Minor scale, we noticed that the presence of a flatted seventh introduced cadence difficulties because the V chord was no longer a dominant seventh. Sometime in the development of Western music, this problem was addressed by creating a new scale—the *Harmonic Minor*—which restored the major seventh to the Natural minor scale, thereby returning the V chord to a dominant seventh. However, as we shall see when we examine the Harmonic Minor scale, the combination of a major seventh and a minor sixth introduces an augmented interval between the two notes. This was found to be an unacceptably difficult interval for vocalists. This problem was resolved by raising the sixth degree for ascending lines only, since the augmented jump was less problematical when descending. The result was the Melodic Minor. In modern times the Melodic Minor has come to be used for both ascending and descending lines, and is sometimes referred to as the Jazz Minor.

	1	2	3	4	5	6	7
Diatonic	C	D	E	F	G	A	B
Natural M inor Scale	C	D	E b	F	G	A b	B b
Harm onic M inor Scale	C	D	E b	F	G	A b	<===> B
M elodic M inor	C	D	E b	F	G	A	B

Table 3-1

Table 3-1 shows the Melodic Minor compared to both the Harmonic Minor and the Natural Minor (Aeolian) scales. The Melodic Minor represents the bare essentials of a minor scale—the lowered third.

Table 3-2 illustrates the first mode of the Melodic Minor scale in twelve keys:

1		2	b3		4		5		6		7
C		D	E b		F		G		A		B
C #		D #	E		F #		G #		A #		B #
D		E	F		G		A		B		C #
E b		F	G b		A b		B b		C		D
E		F #	G		A		B		C #		D #
F		G	A b		B b		C		D		E
F #		G #	A		B		C #		D #		E #
G		A	B b		C		D		E		F #
A b		B b	C b		D b		E b		F		G
A		B	C		D		E		F #		G #
B b		C	D b		E b		F		G		A
B		C #	D		E		F #		G #		A #

**Table 3-2**

Here’s a basic fingering pattern:

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
(E ighth fret)	<b>R</b>	4		b3	5	<b>R</b>
			7			
	2	5	<b>R</b>	4	6	2
	b3					b3
		6	2		7	

**Table 3-3**

## I Chord:

C Major Scale:	C		D		E	F		G		A		B
Melodic Minor 1 <sup>st</sup> deg.:	C		D	E <sup>b</sup>		F		G		A		B
Results:	1		2	b3		4		5		6		7

**Table 3-4**

Starting with the first degree and stacking thirds, we see that we have a 1-b3-5-7. This is a min(maj7) chord, also known as a *minor large*. We see, therefore, that we can use the Melodic Minor scale over a min(maj7) chord whose root is the same as that of the scale. In the key of C this would be a Cmin(Maj7).

## II Chord:

D Major Scale:	D		E		F <sup>#</sup>	G		A		B		C <sup>#</sup>
Melodic Minor 2 <sup>nd</sup> Deg.:	D	E <sup>b</sup>		F		G		A		B	C	
Results:	1	b2		b3		4		5		6	b7	

**Table 3-5**

By comparing the notes of our Melodic Minor scale, starting at the second degree (D), with the normal step/half-step pattern of a diatonic major scale beginning at the same note, we discover that the resulting chord is a min7. Thus we can play the Melodic Minor scale over a minor seventh chord whose root is two semitones above that of the scale; that is, we'd play a C Melodic Minor over a Dm7 chord.

## III Chord:

E <sup>b</sup> Major Scale:	E <sup>b</sup>		F		G	A <sup>b</sup>		B <sup>b</sup>		C		D
Melodic Minor 3 <sup>rd</sup> Deg.:	E <sup>b</sup>		F		G		A		B	C		D
Results:	1		2		3		#4		#5	6		7

**Table 3-6**

The third degree of our Melodic Minor scale is Eb, a minor third. As before, we compare the Melodic Minor mode starting at the third note of the scale with the diatonic major scale starting at the same note, in this case, Eb. A major seventh chord with an augmented fifth is known as . . . surprise: a *Maj7(#5)* or simply as a *Maj7+* chord. Hence, we use the Melodic Minor scale over a *Maj7(#5)* chord whose root is a minor third (three semitones) above that of the scale. In the key of C, we'd play a C Melodic Minor scale over an Eb*Maj7(#5)* chord.

**IV Chord:**

F Major Scale:	F		G		A	Bb		C		D		E
Melodic Minor 4 <sup>th</sup> Deg.:	F		G		A		B	C		D	Eb	
Results:	1		2		3		#4	5		6	b7	
Results (reinterpreted):	1		2		3		#11	5		6	b7	

**Table 3-7**

The Major third and minor seventh make this IV chord a dominant seventh. The #4 (tritone) is a note characteristic of the blues scale, and will also work well against the dominant tonality. We can apply a Melodic Minor scale to a dominant seventh chord whose root is a perfect fourth (five semitones) above that of the scale; that is, we'd use a C Melodic Minor scale over an F7 or an F7(#11).

**V Chord:**

G Major Scale:	G		A		B	C		D		E		F#
Melodic Minor 5 <sup>th</sup> Deg.:	G		A		B	C		D	Eb		F	
Results:	1		2		3	4		5	b6		b7	
Results (reinterpreted):	1		2		3	4		5	#5		b7	

**Table 3-8**

The natural third and flatted seventh means we have another dominant seventh chord – hardly surprising since this is the very reason

the Melodic (and Harmonic) Minor scales were formulated (see Chapter 3 for a more detailed discussion). We can apply a Melodic Minor scale to a dominant seventh chord whose root is a perfect fifth (seven semitones) above that of the scale. In C, we'd play a C Melodic Minor scale over a G7, or a G7(#5).

### VI Chord:

A Major Scale:	A		B		C#	D		E		F#		G#
Melodic Minor 6 <sup>th</sup> Degree:	A		B	C		D	E <sup>b</sup>		F		G	
Results:	1		2	b3		4	b5		b6		b7	

**Table 3-9**

As shown in Table 3-9, we can play the Melodic Minor scale over a min7(b5) chord whose root is a major sixth (nine semitones) above that of the scale. A C Melodic Minor scale is thus played over an Am7(b5) chord.

### VII Chord:

B Major Scale:	B		C#		D#	E		F#		G#		A#
Melodic Minor 7 <sup>th</sup> Degree:	B	C		D	E <sup>b</sup>		F		G		A	
Results:	1	b2		b3	b4		b5		b6		b7	
Results (reinterpreted):	1	b2		#9	3		#4		#5		b7	

**Table 3-10**

In this situation, the presence of a b3 and a b4 introduces some ambiguity as to the nature of the chord. As shown in Table 3-10, that b4 will naturally tend to assert itself as a major third. Although it would certainly be permissible to harmonize this chord as a min7(b5), a better solution is to reinterpret the scale degrees as shown, and voice the chord as a 7(#5#9). This explicitly accounts for both the b3 and the b4 in the harmonic setting, eliminating any possibility of ambiguity. The #4 (the tritone) will work well against this chord, as

will the b2. Hence, for the example tracks this VII chord is expressed as a B7(#5#9).

## Progression

Let's examine what kind of progression we can devise to provide a background for experimenting with our C Melodic Minor scale. As we've seen, the chords we have to work with are:

Cmin(Maj7), Dm7, EbMaj7(#5), F7(#11), G7(#5), Amin7(b5), B7(#5#9).

Once again, our goal is to assemble a progression that uses all of these chords, while respecting the common rules of cadence. The C scale-tone chords we have to work with are the Cmin(Maj7) (I), the Dm7 (II), the F7(#11) (IV), the G7(#5) (V), the Amin7(b5) (VI), and the B7(#5#9) (VII). A progression that utilizes these chords is: I-VI-II-IV-VII-V-I, or:

Cmin(Maj7)-Amin7(b5)-Dm7-F7(#11)-B7(#5#9)-G7(#5)-Cmin(Maj7).

That leaves us with the EbMaj7(#5) to contend with. Let's consider Bb as a temporary key center. From this perspective:

EbMaj7(#5)	=	IV
Dm7	=	III
F7(#11)	=	V

Since III-IV-V is a legitimate sequence, we can slip the EbMaj7(#5) between the Dm7 and the F7(#11), like so:

Cmin(Maj7)-Amin7(b5)-Dm7-EbMaj7(#5)-F7(#11)-B7(#5#9)-G7(#5)-Cmin(Maj7).

Finally, it would be nice if we could slip a few extra Cmin(Maj7) chords in there, just to emphasize the feeling of playing in the key of C. The reader can verify that the following changes are consistent with the rules of cadence:

Cmin(Maj7)-Amin7(b5)-Dm7-EbMaj7(#5)-F7(#11)-Cmin(Maj7)-B7(#5#9)-Cmin(Maj7)-G7(#5)-Cmin(Maj7).

## Analysis

The figure shows a 4-bar musical excerpt. The top staff is a treble clef melody in C minor. Above the staff are four chord diagrams: Cm(maj7), Am7(b5), Dm7, and EbMaj7(#5). The bottom staff is a guitar fretboard diagram with fingerings: 0, 12, 0, 0 for the first bar; 10, 10, 12, 10, 9, 12, 9 for the second bar.

**Figure 3**

A 4-bar excerpt (19-22) from the example file (\ExoticScales\CH3\example.pdf) is presented in Figure 3. In the first bar we're playing over a Cm(Maj7) chord. In this context, the C represents the root note, the B is the major seventh, the G is the fifth, and the Eb is the minor third. The final G note ties into the second bar, where it takes on the function of a minor seventh when played over the Am7(b5) chord. In the third bar, playing over a Dm7 chord, The A is a 5, the F gives us a b3, the D is the root note, the C represents a minor seventh, the B is a 6, and the D is another root. The last note, in bar 4, is a B, which, in terms of the EbMaj7(#5), represents the #5.

## Examples

Support materials may be found in the following locations on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com):

MIDI	ExoticScales\CH3\example.midi
MP3	ExoticScales\CH3\example.mp3
Transcription (PDF)	ExoticScales\CH3\example.pdf
Jammer™	ExoticScales\CH3\example.cmp
Finale™	ExoticScales\CH3\example.us
Cakewalk™	ExoticScales\CH3\example.wrk
Noteworthy Composer	ExoticScales\CH3\example.nwc

**Table 3-11**

### Modes of the Melodic Minor Scale

Mode	Name	Intervals	Progression
2	Dorian b2	1222212	C m 7-A 7 (#5#9)-C m 7-F7 (#5)-C m 7-G m in7 (b5)-E b7 (#11)-C m 7-D bM a7 (#5)-C m 7-B b m in (M a7)-C m 7
3	Lydian Augmented	2222121	C M a7 (#5)-A m in (M a7)-E 7 (#5)-D 7 (#11)-G #7 (#5#9)-F# m in7 (b5)-B m 7-C M a7 (#5)
4	Lydian Dominant	2221212	C 7 (#11)-F#7 (#5#9)-D 7 (#5)-C 7 (#11)-A m 7-B bM a7 (#5)-E m in7 (b5)-G m in (M a7)-C 7 (#11)
5	Hindu	2212122	C 7-E 7 (#5#9)-F m in (M a7)-C 7-D m in7 (b5)-B b7 (#11)-C 7-A bM a7 (#5)-G m 7-C 7
6	Locrian 2	2121222	C m in7 (b5)-F m 7-C m in7 (b5)-A b7 (#11)-G bM a7 (#5)-D 7 (#5#9)-C m in7 (b5)-B b7-C m in7 (b5)
7	Ravel	1212222	C 7 (#5#9)-D b m in (M a7)-E b m 7-B b m in7 (b5)-G b7 (#11)-C 7 (#5#9)-A b7-E M a7 (#5)-D b m in (M a7)-C 7 (#5#9)

**Table 3-12**



## Chapter 4—The Neapolitan Major Scale (1 2 2 2 2 2 1)

### Neapolitan Major Overview

As we can see in Table 4-1, the Neapolitan Major really isn't a major scale at all, since it contains a minor third. It does, however, contain a major seventh, so its basic tonality is a min(Maj7). As Table 4-1 illustrates, the Neapolitan Major is close in structure to the Melodic Minor scale, and features a minor second in addition to the Melodic Minor's minor third.

	1		2		3	4		5		6		7
Diatonic Major Scale	C		D		E	F		G		A		B
Melodic Minor Scale	C		D	E <sup>b</sup>		F		G		A		B
Neapolitan Major Scale	C	D <sup>b</sup>		E <sup>b</sup>		F		G		A		B

**Table 4-1**

Table 4-2 illustrates the first mode of the Neapolitan Major scale in twelve keys:

1	b2		b3		4		5		6		7
C	D b		E b		F		G		A		B
C #	D		E		F #		G #		A #		B #
D	E b		F		G		A		B		C #
E b	F b		G b		A b		B b		C		D
E	F		G		A		B		C #		D #
F	G b		A b		B b		C		D		E
F #	G		A		B		C #		D #		E #
G	A b		B b		C		D		E		F #
A b	B		C b		D b		E b		F		G
A	B b		C		D		E		F #		G #
B b	C b		D b		E b		F		G		A
B	C		D		E		F #		G #		A #

**Table 4-2**

Here's a basic fingering pattern:

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
<i>(Eighth fret)</i>	<b>R</b>	4		b3	5	<b>R</b>
	b2		7			b2
		5	<b>R</b>	4	6	
	b3		b2			b3
		6			7	

**Table 4-3**

**I Chord:**

<b>C M a jor Scale:</b>	C		D		E	F		G		A		B
<b>Neapolitan M a jor 1<sup>st</sup> deg.:</b>	C	D b		E b		F		G		A		B
<b>R esults:</b>	1	b2		b3		4		5		6		7

**Table 4-4**

Starting with the first degree and stacking thirds, we see that we have a 1-b3-5-7. This is a min(Maj7). We see, therefore, that we

can use the Neapolitan Major scale over a min(Maj7) chord whose root is the same as that of the scale. In the key of C this would be a Cmin(Maj7).

### II Chord:

Db Major Scale:	Db		Eb		F	Gb		Ab		Bb		C
Neapolitan Major 2 <sup>nd</sup> Deg.:	Db		Eb		F	G		A		B		C
Results:	1		2		3	#4		#5		#6		7

Table 4-5

By comparing the notes of our Neapolitan Major scale, starting at the second degree (Db), with the normal step/half-step pattern of a diatonic major scale beginning at the same note, we discover that we have several options, depending upon how we choose to treat the #6 and/or the #4. If we simply take the 1-3-#5-7, we have a Maj7(#5). On the other hand, we can also treat the #6 as a b7, in which case our options are a 7(#5) or a 7(b5). This suggests that the Neapolitan Major scale can be played over any of these chord forms, providing that the root of the chord is a single semitone above that of the scale. For the example tracks, I use the DbMaj7(#5), because that augmented fifth is going to be the most assertive tone in the scale.

### III Chord:

Eb Major Scale:	Eb		F		G	Ab		Bb		C		D
Neapolitan Major 3 <sup>rd</sup> Deg.:	Eb		F		G		A		B	C	Db	
Results:	1		2		3		#4		#5	6	b7	

Table 4-6

The third degree of our Neapolitan Major scale is Eb, a minor third. As before, we compare the Neapolitan Major mode starting at the third note of the scale with the diatonic major scale starting at the same note, in this case, Eb. The resulting chord is a dominant seventh

chord with an augmented fifth. In the key of C, we'd play a C Neapolitan Major scale over an Eb7(#5) chord.

### IV Chord:

F Major Scale:	F		G		A	Bb		C		D		E
Neapolitan Major 4 <sup>th</sup> Degree:	F		G		A		B	C	Db		Eb	
Results:	1		2		3		#4	5	b6		b7	
Results (reinterpreted):	1		2		3		#11	5	b6		b7	

**Table 4-7**

The major third and minor seventh make this another dominant seventh chord. The #4 (tritone) is a note characteristic of the blues scale, and will also work well against the dominant tonality. We can apply a Neapolitan Major scale to a dominant seventh chord whose root is a perfect fourth (five semitones) above that of the scale; that is, we'd use a C Neapolitan Major scale over an F7, an F7(#5) or an F7(#11). For the example tracks I'll use an F7(#11).

### V Chord:

G Major Scale:	G		A		B	C		D		E		F#
Neapolitan Major 5 <sup>th</sup> Degree:	G		A		B	C	Db		Eb		F	
Results:	1		2		3	4	b5		b6		b7	
Results (reinterpreted):	1		2		3	4	#4		#5		b7	

**Table 4-8**

The natural third and flatted seventh means we have another dominant seventh chord, this time with either a b5 or a #5. We can apply a Neapolitan Major scale to a 7(b5) or a 7(#5) chord whose root is a perfect fifth (seven semitones) above that of the scale. In C, we'd play a C Neapolitan Major scale over a G7(#5).

## VI Chord:

A Major Scale:	A		B		C#	D		E		F#		G#
Neapolitan Major 6 <sup>th</sup> Degree:	A		B	C	D <sup>b</sup>		E <sup>b</sup>		F		G	
Results:	1		2	b3	b4		b5		b6		b7	
Results (reinterpreted):	1		2	#9	3		#4		#5		b7	

**Table 4-9**

As shown in Table 4-9, we *could* play the Neapolitan Major scale over a min7(b5) chord whose root is a major sixth (nine semitones) above that of the scale. Because of the ambiguity introduced by the b4, however, we can also use a 7(#5#9) chord, which is a better alternative, since it explicitly places the b3 and b4 into a well defined harmonic structure. For the example tracks, the C Neapolitan Major scale is played over an A7(#5#9) chord.

## VII Chord:

B Major Scale:	B		C#		D#	E		F#		G#		A#
Neapolitan Major 7 <sup>th</sup> Degree:	B	C	D <sup>b</sup>		E <sup>b</sup>		F		G		A	
Results:	1	b2	bb3		b4		b5		b6		b7	
Results (reinterpreted):	1	b9	2		3		#4		#5		b7	

**Table 4-10**

This is another of those situations where the presence of a b4 gives us the option of interpreting the resulting chord as a dominant seventh. By voicing this chord as a 7(#5b9), we account for the “outside” tones and provide a more secure harmonic environment for soloing. The tritone (#4/b5) is a “blues note,” that will work well in the resulting harmonic setting. For the example tracks, this works out to a B7(#5b9).

## Progression

Let's examine what kind of progression might provide a background for exploring the sound of our C Neapolitan Major. As we've seen, the chords we have to work with are:

Cmin(Maj7), DbMaj7(#5), Eb7(#5), F7(#11), G7(#5), A7(#5#9), B7(#5b9).

Once again, our goal is to assemble a progression that uses all of these chords, while respecting the common rules of cadence. The C scale-tone chords we have to work with are the Cmin(Maj7) (I), the F7(#11) (IV), the G7(#5) (V), the A7(#5#9) (VI), and the B7(#5b9) (VII). A progression that utilizes these chords is: I-VI-IV-I-VII-I-V-I, or:

Cmin(Maj7)-A7(#5#9)-F7(#11)-Cmin(Maj7)-B7(#5b9)-Cmin(Maj7)-G7(#5)-Cmin(Maj7).

That leaves us with the DbMaj7(#5) and the Eb7(#5) to contend with.

Let's consider Ab as a possible temporary key center. From this perspective:

Cmin(Maj7)	=	III
DbMaj7(#5)	=	IV
Eb7(#5)	=	V
F7(#11)	=	VI
G7(#5)	=	VII

The sequence VII-V-III-IV-III is consistent with the rules of cadence, and gives us: G7(#5)-Eb7(#5)-Cmin(Maj7)-DbMaj7(#5)-Cmin(Maj7). This shows that we can insert the Eb7(#5)-Cmin(Maj7)-DbMaj7(#5) subsequence between the G7(#5) and the Cmin(Maj7) in our original progression. This gives us:

Cmin(Maj7)-A7(#5#9)-F7(#11)-Cmin(Maj7)-B7(#5b9)-Cmin(Maj7)-G7(#5)-Eb7(#5)-Cmin(Maj7)-DbMaj7(#5)-Cmin(Maj7).

## Analysis

The diagram illustrates a four-measure chord progression and its corresponding melody. The chords are:  $B7(\flat 9)$ ,  $Cm(maj7)$ ,  $G7(\flat 5)$ , and  $E\flat 7(\sharp 5)$ . The melody is written in treble clef with a 4/4 time signature. Below the melody is a guitar fretboard diagram with fingerings indicated by numbers 1-4.

**Figure 4**

In Figure 4, we see an excerpt (bars 5-8) from the example file (\ExoticScales\CH4\example.pdf). In bar 1, playing over a  $B7(\sharp 5\flat 9)$ , the  $E\flat$  represents a 3 and the  $G$  is a  $\sharp 5$ . Both notes are repeated once. The  $C$  which begins the second half of the measure gives us our  $b9$ . The  $E\flat$ , once again, is another third, and the  $F$  is a  $\sharp 4$ —the tritone. In bar 2 we're playing over a  $Cm(Maj7)$ . In this context, the  $G$  is a 5, the  $F$  gives us a 4/11, and the  $E\flat$  is now a minor third. Moving into the second half of the bar, the  $B$  gives us a major seventh, the  $C$  is the root note, and the final  $B$  is another major seventh. Bar 3 presents us with a  $C$ , functioning as a 4/11 in the context of the  $G7(\flat 5)$ . Finally, in bar 4, playing over an  $E\flat 7(\sharp 5)$ , the  $B$  represents a  $\sharp 5$ , and the  $C$  is a 6<sup>th</sup>.

## Examples

Support materials may be found in the following locations on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com):

MIDI	\\ExoticScales\CH4\example.midi
MP3	\\ExoticScales\CH4\example.mp3
Transcription (PDF)	\\ExoticScales\CH4\example.pdf
Jammer™	\\ExoticScales\CH4\example.cm
Finale™	\\ExoticScales\CH4\example.mus
Cakewalk™	\\ExoticScales\CH4\example.wrk
Noteworthy Composer	\\ExoticScales\CH4\example.nwc

**Table 4-11**

### Modes of the Neapolitan Major Scale

Mode	Name	Intervals	Progression
2	Leading Whole Tone	2222211	C M a7 (#5)-G #m in7 (b5)-C M a7 (#5)-A #7 (#5b9)-D 7 (#5)-B m in (M a7)-C M a7 (#5)-E 7 (#11)-F #7 (#5)-C M a7 (#5)
3	Lydian Dominant Augmented	2222112	C M a7 (#5)-D 7 (#11)-A m in (M a7)-G #7 (#5b9)-F #7 (#5#9)-E 7 (#5)-D 7 (#11)-B M a7 (#5)-C M a7 (#5)
4	Lydian b6 b7	2221122	C 7 (#11)-F #7 (#5b9)-E 7 (#5#9)-D 7 (#5)-B b7 (#5)-A b7 (#5)-G m in (M a7)-C 7 (#11)
5	Arabian	2211222	C 7 (#5)-G b M a7 (#5)-E 7 (#5b9)-F m in (M a7)-C 7 (#5)-D 7 (#5#9)-B b7 (#11)-C 7 (#5)-A b7 (#5)-C 7 (#5)
6	Half-Diminished b4	2112222	C 7 (#5#9)-A b7 (#11)-E b m in (M a7)-D 7 (#5b9)-G b7 (#5)-E M a7 (#5)-C 7 (#5#9)-B b7 (#5)-C 7 (#5#9)
7	Ravelbb3	1122222	C 7 (#5b9)-D b m in (M a7)-B b7 (#5#9)-G b7 (#11)-C 7 (#5b9)-A b7 (#5)-E 7 (#5)-D 7 (#5)-D b m in (M a7)-C 7 (#5b9)

**Table 4-12**



## **Part III: Exotic Scales With One Augmented Interval**

An *augmented interval* refers to a pair of notes separated by *three* semitones. Scales containing one or more augmented intervals tend to sound more exotic, and are more difficult to harmonize and apply than scales built solely on one- and two-semitone divisions. The scales presented in this section all contain a single augmented interval.



## Chapter 5—The Neapolitan Minor Scale (1 2 2 2 1 3 1)

### Neapolitan Minor Overview

As we can see in Table 5-1, the Neapolitan Minor scale differs from the so-called Neapolitan Major only in having a minor sixth degree. Like the Neapolitan Major, it contains a major seventh, so it's also basically a min(Maj7) scale. The minor sixth degree introduces an augmented (three half step) interval between the sixth and the seventh, lending the scale a more exotic sound.

	1		2		3	4		5		6		7
Diatonic Major Scale	C		D		E	F		G		A		B
Neapolitan Major Scale	C	D b		E b		F		G		A		B
Neapolitan Minor Scale	C	D b		E b		F		G	A b			B

**Table 5-1**

Table 5-2 illustrates the first mode of the Neapolitan Minor scale in twelve keys:

1	b2		b3		4		5	b6			7
C	D b		E b		F		G	A b			B
C #	D		E		F #		G #	A			B #
D	E b		F		G		A	B b			C #
E b	F b		G b		A b		B b	C b			D
E	F		G		A		B	C			D #
F	G b		A b		B b		C	D b			E
F #	G		A		B		C #	D			E #
G	A b		B b		C		D	E b			F #
A b	B		C b		D b		E b	F b			G
A	B b		C		D		E	F			G #
B b	C b		D b		E b		F	G b			A
B	C		D		E		F #	G			A #

**Table 5-2**

Here's a basic fingering pattern:

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
<i>(Eighth fret)</i>	<b>R</b>	4		b3	5	<b>R</b>
	b2		7		b6	b2
		5	<b>R</b>	4		
	b3	b6	b2			b3
					7	

**Table 5-3**

**I Chord:**

<b>C M ajor Scale:</b>	C		D		E	F		G		A		B
<b>Neapolitan M inor 1<sup>st</sup> deg.:</b>	C	D b		E b		F		G	A b			B
<b>Results:</b>	1	b2		b3		4		5	b6			7

**Table 5-4**

Starting with the first degree and stacking thirds, we see that we have a 1-b3-5-7. This is a min(maj7) chord. We see, therefore, that we can use the Neapolitan Minor scale over a min(maj7) chord

whose root is the same as that of the scale. In the key of C this would be a Cmin(Maj7).

### II Chord:

Db Major Scale:	Db		Eb		F	Gb		Ab		Bb		C
Neapolitan Minor 2 <sup>nd</sup> Deg.:	Db		Eb		F		G	Ab			B	C
Results:	1		2		3		#4	5			#6	7

**Table 5-5**

By comparing the notes of our Neapolitan Minor scale, starting at the second degree (Db), with the normal step/half-step pattern of a diatonic major scale beginning at the same note, we discover that we have several options, depending upon how we choose to treat the #6 and/or the #4. If we simply take the 1-3-5-7, we have a major seventh. On the other hand, we can also treat the #6 as a b7, in which case we have a 7(#11). This suggests that the Neapolitan Minor scale can be played over either of these chord forms, providing that the root of the chord is a semitone above that of the scale. For the example tracks, I use the DbMaj7, making a mental note to treat that #6 (B) with caution while soloing.

### III Chord:

Eb Major Scale:	Eb		F		G	Ab		Bb		C		D
Neapolitan Minor 3 <sup>rd</sup> Deg.:	Eb		F		G	Ab			B	C	Db	
Results:	1		2		3	4			#5	6	b7	

**Table 5-6**

The third degree of our Neapolitan Minor scale is Eb, a minor third. As before, we compare the Neapolitan Minor mode starting at the third note of the scale with the diatonic major scale starting at the same note, in this case, Eb. The resulting chord is a dominant seventh chord with an augmented fifth. In the key of C, we'd play a C Neapolitan Minor scale over an Eb7(#5) chord.

## IV Chord:

F M ajor Scale:	F		G		A	E b		C		D		E
N eapolitan M inor 4 <sup>th</sup> D eg.:	F		G	A b			B	C	D b		E b	
R esults:	1		2	b3			#4	5	b6		b7	

**Table 5-7**

The minor third and minor seventh make this a minor seventh chord. The #4 (tritone), the note characteristic of the blues scale, will also work well against this minor tonality. We can apply a Neapolitan Minor scale to a minor seventh chord whose root is a perfect fourth (five semitones) above that of the scale; that is, we'd use a C Neapolitan Minor scale over an Fm7.

## V Chord:

G M ajor Scale:	G		A		B	C		D		E		F#
N eapolitan M inor 5 <sup>th</sup> D eg.:	G	A b			B	C	D b		E b		F	
R esults:	1	b2			3	4	b5		b6		b7	
R esults (reinterpreted):	1	b9			3	4	b5		#5		b7	

**Table 5-8**

The natural third and flatted seventh means we have another dominant seventh chord, this time with a b5 and a b9. We can apply a Neapolitan Minor scale to a 7(b5b9) or a 7(#5b9) chord whose root is a perfect fifth (seven semitones) above that of the scale. In C, we'd play a C Neapolitan Minor scale over a G7(b5b9).

## VI Chord:

A b M ajor Scale:	A b		B b		C	D b		E b		F		G
N eapolitan M inor 6 <sup>th</sup> D eg.:	A b			B	C	D b		E b		F		G
R esults:	1		#2	3	4			5		6		7

**Table 5-9**

As shown in Table 5-9, we can play the Neapolitan Minor scale over a major seventh chord whose root is a minor sixth (eight semitones) above that of the scale. Because of the ambiguity introduced by the #2, however, we'll need to exercise some caution when soloing, since that B will want to assert itself as a minor third. For the example tracks, the C Neapolitan Minor scale is played over an AbMaj7 chord.

### VII Chord:

B M ajor Scale:	B		C#		D#	E		F#		G#		A#
Neapolitan M inor 7 <sup>th</sup> Deg.:	B	C	D b		E b		F		G	A b		
R esults:	1	b2	bb3		b4		b5		b6	bb7		
R esults (reinterpreted):	1	b9	2		3		#4		#5	6		

**Table 5-10**

This is a situation in which there is basically no satisfactory way to harmonize the scale degree directly. Hence, we're compelled to search for a slash chord that will contain the important tones. A G7(#5b9) gives us a G (#5), a B (1), an Eb (3), an F (b5), and an Ab (bb7). That seems to cover all of our important scale tones. Hence, we should be able to play a C Neapolitan minor over a G7(#5b9)/B chord.

### Progression

Let's examine what kind of progression might provide a background for practicing our C Neapolitan minor. As we've seen, the chords we have to work with are:

Cmin(Maj7), DbMaj7, Eb7(#5), Fm7, G7(b5b9), AbMaj7, G7(#5b9)/B

Once again, our goal is to assemble a progression that uses all of these chords, while respecting the common rules of cadence. The C scale-tone chords we have to work with are the Cmin(Maj7) (I), the Fm7 (IV), the G7(b5b9) (V), and the G7(#5b9)/B (VII). A progression that utilizes these chords is: I-IV-I-VII-V-I, or:

Cmin(Maj7)-Fm7-Cm(Maj7)-G7(#5b9)/B-G7(b5b9)-Cmin(Maj7).

That leaves us with the DbMaj7, the Eb7(#5), and the AbMaj7 to contend with. Let's consider Ab as a possible temporary key center. From this perspective:

AbMaj7	=	I
Cmin(Maj7)	=	III
DbMaj7	=	IV
Eb7(#5)	=	V
Fm7	=	VI
G7(b5b9)	=	VII

The sequence VII-I-III-IV-V-III is consistent with the rules of cadence, and gives us: G7(b5)-AbMaj7-Cmin(Maj7)-DbMaj7-Eb7(#5)-Cmin(Maj7). This shows that we can insert the AbMaj7-Cmin(Maj7)-DbMaj7-Eb7(#5) between the G7(b5) and the Cmin(Maj7) in our original sequence. This gives us:

Cmin(Maj7)-Fm7-Cm(Maj7)-G7(#5b9)/B-G7(b5b9)-AbMaj7-Cmin(Maj7)-DbMaj7-Eb7(#5)-Cmin(Maj7)



## Analysis

The figure displays a musical score for a 5-bar excerpt. The top staff is a treble clef with a key signature of one flat (Bb) and a common time signature (C). The notes are: Bar 1: Eb, C, C; Bar 2: Bb, G, Ab, G, Ab, G; Bar 3: F, Db, F, B; Bar 4: C, Ab, C; Bar 5: B, C. Above the staff are guitar chord diagrams for Cm(maj7), G7(#5b9)/B, G7(b5b9), AbMaj7, and Cm(maj7). Below the staff is a fretboard diagram with six strings and five frets, showing fingerings: 11-8-8, 12, 9-8-9-8, 10-11-10, 10-11-10, 10-9-10.

**Figure 5**

A 5-bar excerpt (bars 23-27) from the example file (\ExoticScales\CH5\example.pdf) is presented in **Figure 5**. Starting with the first bar, in which we're playing over a Cm(Maj7), the Eb gives us a b3, the two C notes are, of course, the root notes, and the B gives us a major seventh. In the context of our G7(#5b9)/B, the Ab in the second bar is a 6 (in terms of B). The G is a #5, and the next two notes repeat the Ab and the G. In terms of the G7(#5b9), these notes represent the b9 and the root, respectively. In bar 3 we're playing over a G7(b5b9). The first note, and F, functions as a minor seventh. The Db represents the b5. The next two notes are another F and a Db. Finally, the B yields a major third. Hence, all of the notes represent scale tones in this harmonic setting. In the fourth bar, playing over the AbMaj7, The C gives us a major third, and the Ab is a root tone. The next note is another C, followed by an Eb, which functions as a fifth. The last note is another C (major third.). Finally, over the Cm(Maj7) in the last bar, The B gives us our major seventh, and the C, of course, is the root tone. Neat, huh?

## Examples

Support materials may be found in the following locations on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com):

MIDI	\\ExoticScales\CH5\example.mid
MP3	\\ExoticScales\CH5\example.mp3
Transcription (PDF)	\\ExoticScales\CH5\example.pdf
Jammer™	\\ExoticScales\CH5\example.cmp
Finale™	\\ExoticScales\CH5\example.mus
Cakewalk™	\\ExoticScales\CH5\example.wrk
Noteworthy Composer	\\ExoticScales\CH5\example.nwc

**Table 5-11**

### Modes of the Neapolitan Minor Scale

Mode	Name	Intervals	Progression
2	Lydian #6	2221311	C M a7 (#11) - F #7 (#5b9) - D 7 (#5) - B m in (M a7) - C M a7 (#11) - E m 7 - G M a7 - A #+ - C M a7 (#11)
3	Mixolydian #5	2213112	C 7 (#5) - D m 7 - A m in (M a7) - E 7 (#5b9) - F M a7 - G #+ - C 7 (#5) - B b7 (b5) - C 7 (#5)
4	Hungarian Gypsy	2131122	C m 7 - A b M a7 (#11) - E b M a7 - D 7 (#5b9) - C m 7 - D 7 (b5b9) / F # - G m in (M a7) - B b7 (#5) - C m
5	Locrian 3	1311222	C 7 (#5b9) - D b M a7 - F m in (M a7) - B b m 7 - A b7 (#5) - G b M a7 (#11) - E + - C 7 (#5b9)
6	Ionian #2	3112221	C M a7 - E m in (M a7) - B 7 (#5b9) - C M a7 - A m 7 - F M a7 (#11) - D #+ - G 7 (#5) - C M a7
7	Ultra Locrian bb3	1122213	C + - E 7 (#5) - D M a7 (#11) - D b m in (M a7) - G b m 7 - A b7 (#5b9) - A M a7 - C +

**Table 5-12**

## Chapter 6—The Harmonic Minor Scale (2 1 2 2 1 3 1)

### Harmonic Minor Overview

When we harmonized the diatonic major scale (Ionian mode), one of the things we learned was that the most important chord in establishing the overall feeling of a tone center was the dominant seventh chord, built on the fifth degree of the scale. When we examined cadences, we noted that the strongest harmonic movement is the transition from that V chord to the I (it isn't called *Perfect Cadence* for nothing). Recall, also, our discussion about how the minor seventh of the natural minor scale forced the V chord to be a minor seventh instead of the more desirable dominant seventh. Well, that was the impetus behind the development of the Harmonic Minor scale.

	1	2	3	4	5	6	7
Diatonic Major Scale	C	D	E	F	G	A	B
Natural Minor Scale	C	D	E $\flat$	F	G	A $\flat$	B $\flat$
Harmonic Minor Scale	C	D	E $\flat$	F	G	A $\flat$	B

**Table 6-1**

As we can see in Table 6-1, the Harmonic Minor scale addresses this problem by substituting a major seventh for the natural minor's minor seventh. While this resolves the cadence problem by returning the V chord to a dominant seventh, it introduces an augmented interval between the  $\flat 6$  and the 7. This interval is

responsible for giving the Harmonic Minor scale its exotic sound.

Table 6-2 illustrates the first mode of the Harmonic Minor scale in twelve keys:

1		2	b3		4		5	b6			7
C		D	E <sup>b</sup>		F		G	A <sup>b</sup>			B
C <sup>#</sup>		D <sup>#</sup>	E		F <sup>#</sup>		G <sup>#</sup>	A			B <sup>#</sup>
D		E	F		G		A	B <sup>b</sup>			C <sup>#</sup>
E <sup>b</sup>		F	G <sup>b</sup>		A <sup>b</sup>		B <sup>b</sup>	C <sup>b</sup>			D
E		F <sup>#</sup>	G		A		B	C			D <sup>#</sup>
F		G	A <sup>b</sup>		B <sup>b</sup>		C	D <sup>b</sup>			E
F <sup>#</sup>		G <sup>#</sup>	A		B		C <sup>#</sup>	D			E <sup>#</sup>
G		A	B <sup>b</sup>		C		D	E <sup>b</sup>			F <sup>#</sup>
A <sup>b</sup>		B <sup>b</sup>	C <sup>b</sup>		D <sup>b</sup>		E <sup>b</sup>	F <sup>b</sup>			G
A		B	C		D		E	F			G <sup>#</sup>
B <sup>b</sup>		C	D <sup>b</sup>		E <sup>b</sup>		F	G <sup>b</sup>			A
B		C <sup>#</sup>	D		E		F <sup>#</sup>	G			A <sup>#</sup>

**Table 6-2**

Here's a basic fingering pattern:

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
<i>(Eighth fret)</i>	<b>R</b>	4		b3	5	<b>R</b>
			7		b6	
	2	5	<b>R</b>	4		2
	b3	b6				b3
			2		7	

**Table 6-3**

Well, let's get down to business and start harmonizing this new scale.

## I Chord:

C M a j o r S c a l e:	C		D		E	F		G		A		B
H a r m . M i n . 1 <sup>st</sup> D e g .:	C		D	E $\flat$		F		G	A $\flat$			B
R e s u l t s:	1		2	b3		4		5	b6			7

**Table 6-4**

Starting with the first degree and stacking thirds, we see that we have a 1-b3-5-7. This is a min(maj7). We see, therefore, that we can use the Harmonic Minor scale over a min(maj7) chord whose root is the same as that of the scale. In the key of C this would be a Cmin(Maj7).

## II Chord:

D M a j o r S c a l e:	D		E		F $\sharp$	G		A		B		C $\sharp$
H a r m . M i n . 2 <sup>nd</sup> D e g .:	D	E $\flat$		F		G	A $\flat$			B	C	
R e s u l t s:	1	b2		b3		4	b5			6	b7	

**Table 6-5**

By comparing the notes of our Harmonic Minor scale, starting at the second degree (D), with the normal step/half-step pattern of a diatonic major scale beginning at the same note, we discover that the resulting chord is a min7(b5), also known as a half-diminished. Thus, we can play the Harmonic Minor scale over a half-diminished chord whose root is two semitones above that of the scale; that is, we'd play a C Harmonic Minor over a Dmin7(b5) chord.

## III Chord:

E $\flat$ M a j o r S c a l e:	E $\flat$		F		G	A $\flat$		B $\flat$		C		D
H a r m . M i n . 3 <sup>rd</sup> D e g .:	E $\flat$		F		G	A $\flat$			B	C		D
R e s u l t s:	1		2		3	4			#5	6		7

**Table 6-6**

The third degree of our Harmonic Minor scale is Eb, a minor third. As before, we compare the Harmonic Minor mode starting at the third note of the scale with the diatonic major scale starting at the same note, in this case, Eb. The result, as shown in Table 6-6, is a Maj7(#5) chord. Hence, we use the Harmonic Minor scale over a major seventh augmented chord whose root is a minor third (three semitones) above that of the scale. In the key of C, we'd play a C Harmonic Minor scale over an EbMaj7(#5) chord.

**IV Chord:**

F M a j o r S c a l e :	F		G		A	Bb		C		D		E
H a r m . M i n . 4 <sup>th</sup> D e g. :	F		G	A b			B	C		D	E b	
R e s u l t s :	1		2	b3			#4	5		6	b7	

**Table 6-7**

The lowered third and lowered seventh make this a minor seventh chord. The #4 will also work well against this minor tonality. We can apply a Harmonic Minor scale to a minor seventh chord whose root is a perfect fourth (five semitones) above that of the scale; that is, we'd use a C Harmonic Minor scale over an Fmin7.

**V Chord:**

G M a j o r S c a l e :	G		A		B	C		D		E		F#
H a r m . M i n . 5 <sup>th</sup> D e g. :	G	A b			B	C		D	E b		F	
R e s u l t s :	1	b2			3	4		5	b6		b7	

**Table 6-8**

The natural third and flatted seventh mean we have a dominant seventh chord—hardly surprising since this is the very reason the Harmonic Minor scale was formulated. We can apply a Harmonic Minor scale to a dominant seventh chord whose root is a perfect fifth (seven semitones) above that of the scale. In C, we'd play a C Harmonic Minor scale over a G7, or a G7(b9).

## VI Chord:

Ab Major Scale:	Ab		Bb		C	Db		Eb		F		G
Harmonic Minor 6 <sup>th</sup> Deg.:	Ab			B	C		D	Eb		F		G
Results:	1			#2	3		#4	5		6		7

**Table 6-9**

As shown in Table 6-9, we can play the Harmonic Minor scale over a Maj7 or Maj7(#11) chord whose root is a minor sixth (eight semitones) above that of the scale. However, we need to be a little cautious of that #2, which will tend to sound like a minor third. This means that we might also play the Harmonic Minor over a min(Maj7) chord. A C Harmonic Minor scale is played over an AbMaj7(#11) chord, or an Abmin(Maj7) chord. In either case, we'll have to be careful of introducing dissonance between the #2 and the 3.

## VII Chord:

B Major Scale:	B		C#		D#	E		F#		G#		A#
Harmonic Minor 7 <sup>th</sup> Deg.:	B	C		D	Eb		F		G	Ab		
Results:	1	b2		b3	b4		b5		b6	bb7		

**Table 6-10**

A chord with a b3, b5, and bb7 is known as a diminished seventh chord. We can play a C Harmonic Minor over a Bdim7 chord.

## Progression

Let's examine what kind of progression might provide a background for experimenting with our C Harmonic Minor scale. As we've seen, the chords we have to work with are:

Cmin(Maj7), Dmin7(b5), EbMaj7+, Fmin7, G7(b9), AbMaj7(#11), Bdim7.

Once again, our goal is to assemble a progression that uses all of these chords, while respecting the common rules of cadence. The

C scale-tone chords are the Cmin(Maj7) (I), the Dm7b5 (II), the Fm7 (IV), the G7b9 (V) and the Bdim7 (VII). A progression that utilizes these chords is: I-II-IV-I-VII-V-I, or:

Cmin(Maj7)-Dmin7(b5)-Fm7-Cm(Maj7)-Bdim7-G7(b9)-Cmin(Maj7).

That leaves us with the EbMaj7+ and the AbMaj7(#11) to deal with. Let's start by observing that the diminished chord has an ambiguous root, that is, any of its 4 notes could be considered the root of the chord. Hence, a Bdim=Ddim=Fdim=Abdim.

Let's consider Eb as a temporary key center. From this perspective:

Fdim (same as Bdim)	=	II
EbMaj7+ (same as D#)	=	III
AbMaj7(#5) (same as G#)	=	IV

Since II-III-IV-II is a permissible sequence, we can therefore replace the Bdim7 with the sequence: Fdim7-EbMaj7+-AbMaj7(#11)-Bdim7, which gives us:

Cmin(Maj7)-Dmin7(b5)-Fm7-Cmin(Maj7)-Fdim7-EbMaj7+-AbMaj7(#11)-Bdim7-G7(b9)-Cmin(Maj7).



## Analysis

The image shows a musical score for four bars. Above the staff are four chord diagrams: Cm(maj7), Fdim7, EbMaj7(#5), and AbM7(#11). The staff contains a melodic line with triplets and slurs. Below the staff are four fretboard diagrams corresponding to the bars, showing fingerings for the notes.

**Figure 6**

In Figure 6 we examine 4 bars (14-17) from the example file (\ExoticScales\CH6\example.pdf). In the first bar, playing over a Cm(Maj7), the G note represents a fifth, the and the Eb gives us our minor third. The next two notes repeat the first two. Next, the B yields a major seventh, followed by another E. The C is a root tone, followed by another B, which tied into the second bar, where it takes on the function of a b5 in the context of the Fdim7. Continuing in bar 2, we have an Ab, functioning here as the Fdim7's b3, an F, which gives us the root tone, another b5 (B), and finally, a D, functioning here as a bb7 (6). Hence, bar 2 contains all scale tones in terms of the Fdim7. In bar 3 we're playing over an EbMaj7(#5). The first note is a root tone (Eb), followed by a D, functioning here as a major seventh. Next we have a B, giving us our #5, followed by another D. Finally, we end bar 3 with a G, yielding a major third in the EbMaj7(#5) context. The last bar starts off with an Ab, functioning as a root tone over the AbMaj7(#11). The G gives us a major seventh, and the final note is another Ab.

## Examples

Support materials may be found in the following locations on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com):

MIDI	ExoticScales\CH6\example.midi
MP3	ExoticScales\CH6\example.mp3
Transcription (PDF)	ExoticScales\CH6\example.pdf
Jammer™	ExoticScales\CH6\example.cm
Finale™	ExoticScales\CH6\example.us
Cakewalk™	ExoticScales\CH6\example.wrk
Noteworthy Composer	ExoticScales\CH6\example.nwc

**Table 6-11**

### Modes of the Harmonic Minor Scale

Mode	Name	Intervals	Progression
2	Locrian #6	1221312	Cm in7 (b5)-D bM aj7 (#5)-G bM aj7 (#11)-Cm in7 (b5)-B bM in (M aj7)-E bdim 7-Cm in7 (b5)-A dim 7-Cm in7 (b5)-F7 (b9)-Cm in7 (b5)
3	Ionian #5	2213121	CM aj7 (#5)-E7 (b9)-D m 7-FM aj7 (#11)-CM aj7 (#5)-A m in (M aj7)-G #dim 7-B m in7 (b5)-CM aj7 (#5)
4	Romanian	2131212	Cm 7-D7 (b9)-A m in7 (b5)-B bM aj7 (#5)-E bM aj7 (#11)-F #dim 7-G m in (M aj7)-Cm 7
5	Ahava Raba	1312122	C7 (b9)-E dim 7-B bM 7-C7 (b9)-D bM aj7 (#11)-A bM aj7 (#5)-C7 (b9)-F m in (M aj7)-C7 (b9)-G m 7 (b5)-C7 (b9)
6	Lydian #2	3121221	CM aj7 (#11)-B7 (b9)-D #dim 7-F #m in7 (b5)-CM aj7 (#11)-E m in (M aj7)-A m 7-GM aj7 (#5)-CM aj7 (#11)
7	Super Locrian bb7	1212213	C dim 7-D bM in (M aj7)-E bM in7 (b5)-G bM 7-C dim 7-A b7 (b9)-AM aj7 (#11)-EM aj7 (#5)-D bM in (M aj7)-C dim 7

**Table 6-12**

**Chapter 7—The Harmonic Major Scale (2 2 1 2 1 3 1)**

**Harmonic Major Overview**

The Harmonic Major differs from the Harmonic Minor in its natural third. Compared to a diatonic major scale, the Harmonic Major has a lowered sixth degree—an interval characteristic of the natural minor. This alteration introduces an augmented interval between the sixth and the major seventh, and, as with the Harmonic Minor, this augmented interval lends an exotic sound to the scale. As with the Harmonic Minor, the major seventh ensures that the V chord will be a dominant seventh, resulting in strong harmonic movement.

	1	2	3	4	5	6	7
Diatonic Major Scale	C	D	E	F	G	A	B
Harmonic Minor Scale	C	D	E <sup>b</sup>	F	G	A <sup>b</sup>	B
Harmonic Major Scale	C	D	E	F	G	A <sup>b</sup>	B

**Table 7-1**

Table 7-2 illustrates the first mode of the Harmonic Major scale in twelve keys:

1		2		3	4		5	b6			7
C		D		E	F		G	A b			B
C #		D #		E #	F #		G #	A			B #
D		E		F #	G		A	B b			C #
E b		F		G	A b		B b	C b			D
E		F #		G #	A		B	C			D #
F		G		A	B b		C	D b			E
F #		G #		A #	B		C #	D			E #
G		A		B	C		D	E b			F #
A b		B b		C	D b		E b	F b			G
A		B		C #	D		E	F			G #
B b		C		D	E b		F	G b			A
B		C #		D #	E		F #	G			A #

**Table 7-2**

Here's a basic fingering pattern:

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
<i>(Eighth fret)</i>	<b>R</b>	4			5	<b>R</b>
			7	3	b6	
	2	5	<b>R</b>	4		2
		b6				
	3		2		7	3

**Table 7-3**

Well, let's get down to business and start harmonizing this new scale.

**I Chord:**

C M ajor Scale:	C		D		E	F		G		A		B
H armonic M ajor 1 <sup>st</sup> deg.:	C		D		E	F		G	A b			B
R esults:	1		2		3	4		5	b6			7

**Table 7-4**

Starting with the first degree and stacking thirds, we see that we have a 1-3-5-7. This is a major seventh chord. We see, therefore, that we can use the Harmonic Major scale over a Maj7 chord whose root is the same as that of the scale. In the key of C this would be a Cmaj7.

**II Chord:**

D M a jor Scale:	D		E		F#	G		A		B		C #
H a r m o n i c M a j o r 2 <sup>nd</sup> D e g .:	D		E	F		G	A b			B	C	
R e s u l t s:	1		2	b3		4	b5			6	b7	

**Table 7-5**

By comparing the notes of our Harmonic Major scale, starting at the second degree (D), with the normal step/half-step pattern of a diatonic major scale beginning at the same note, we discover that the resulting chord is a min7(b5), also known as a half diminished. Thus, we can play the Harmonic Major scale over a half-diminished chord whose root is two semitones above that of the scale; that is, we'd play a C Harmonic Major over a Dmin7(b5) chord.

**III Chord:**

E M a jor Scale:	E		F#		G#	A		B		C#		D#
H a r m o n i c M a j o r 3 <sup>rd</sup> D e g .:	E	F		G	A b			B	C		D	
R e s u l t s:	1	b2		b3	b4			5	b6		b7	
R e s u l t s (r e i n t e r p r e t e d):	1	b2		#9	3			5	#5		b7	

**Table 7-6**

The third degree of our Harmonic Major scale is E, a major third. The 1, b3, 5, and b7 result in a minor seventh chord, however, if we take this approach there is a potential for ambiguity because the b4 can assert itself as a major third. Alternatively, we can treat the b4

as a major third, and the b3 as a #9. For the example, I'll be using a C Harmonic Major scale over an E7(#9) chord.

### IV Chord:

F M ajor Scale:	F		G		A	Bb		C		D		E
H arm onic M ajor 4 <sup>th</sup> D eg.:	F		G	A b			B	C		D		E
R esults:	1		2	b3			#4	5		6		7

**Table 7-7**

The minor third and major seventh make this chord a min(Maj7). The #4 (the tritone) is a note characteristic of the blues scale, and will also work well against this minor tonality. We can apply a Harmonic Major scale to a min(Maj7) chord whose root is a perfect fourth (five semitones) above that of the scale; that is, we'd use a C Harmonic Major scale over an Fmin(Maj7).

### V Chord:

G M ajor Scale:	G		A		B	C		D		E		F#
H arm onic M ajor 5 <sup>th</sup> D eg.:	G	A b			B	C		D		E	F	
R esults:	1	b2			3	4		5		6	b7	
R esults (reinterpreted):	1	b9			3	4		5		6	b7	

**Table 7-8**

The natural third and flatted seventh means we have a dominant seventh chord – hardly surprising since this is the very reason the Harmonic Minor scale (and it's derivative the Harmonic Major) were formulated. We can apply a Harmonic Major scale to a dominant seventh chord whose root is a perfect fifth (seven semitones) above that of the scale. In C, we'd play a C Harmonic Major scale over a G7, or a G7(b9).

## VI Chord:

Ab Major Scale:	Ab		Bb		C	Db		Eb		F		G
Harmonic Major 7 <sup>th</sup> Degree:	Ab		B	C		D		E	F		G	
Results:	1		#2	3		#4		#5	6		7	

**Table 7-9**

As shown in Table 7-9, we can play the Harmonic Major scale over a Maj7(#5) chord whose root is a minor sixth (eight semitones) above that of the scale. However, we need to be a little cautious of that #2, which will tend to sound like a minor third. In the example, the C Harmonic Major scale is played over an AbMaj7(#5) chord.

## VII Chord:

B Major Scale:	B		C#		D#	E		F#		G#		A#
Harmonic Major 7 <sup>th</sup> Degree:	B	C		D		E	F		G	Ab		
Results:	1	b2		b3		4	b5		b6	bb7		

**Table 7-10**

A chord with a b3, b5, and bb7 is known as a diminished seventh chord. We can play a C Harmonic Major scale over a Bdim7 chord.

## Progression

Let's examine what kind of progression might provide a background for practicing our C Harmonic Major scale. As we've seen, the chords we have to work with are:

Cmaj7, Dmin7(b5), E7(#9), Fmin(Maj7), G7(b9), AbMaj7(#5), Bdim7.

As usual, our goal is to assemble a progression that uses all of these chords, while respecting the common rules of cadence. The chords that correspond to scale-tones in the key of C are the Cmin(Maj7) (I), the Dm7b5 (II), the E7(#9) (II), the Fm7 (IV), the G7(b9) (V) and the Bdim7 (VII). A progression that utilizes these

chords is: I-II-IV-I-VII-III-V-I, or:

Cmin(Maj7)-Dmin7(b5)-Fm7-Cmin(Maj7)-Bdim7-E7(#9)-G7(b9)-Cmin(Maj7).

That leaves us with the AbMaj7(#5) to deal with. Let's consider B as a temporary key center. From this perspective:

E7(#9) = IV

Bdim7 = I

Ab (same as G#) = VI

Thus, we can insert that AbMaj7(#5) between the Bdim7 and the E7(#9), thusly:

CMaj7-Dmin7(b5)-Fm(Maj7)-CMaj7-Bdim7-AbMaj7(#5)-E7(#9)-G7(b9)-CMaj7.



## Analysis

The figure displays a musical analysis of a 4-bar excerpt. At the top, four chord diagrams are shown for the following chords: Dm7(b5), Fm(maj7), CMaj7, and Bdim7. Below these is a single staff of music labeled 'Melody' in treble clef. The melody consists of four bars. The first bar features a triplet of eighth notes (F, G, Ab) followed by a quarter note G and an eighth note C. The second bar starts with a quarter note B, followed by quarter notes C and C, and ends with a quarter note Ab. The third bar begins with a quarter note B, followed by quarter notes C and E, and ends with a quarter note F. The fourth bar consists of a single quarter note D. Below the melody staff is a fretboard diagram with six strings and a 12-fret scale. The fret numbers for the notes in the melody are: 8-10-11-10-8-10-11-10 (for the first bar), 9-10-10-11 (for the second bar), 9-10-9-10-9-10 (for the third bar), and 12 (for the fourth bar).

**Figure 7**

Figure 7 presents a 4-bar excerpt (bars 2-5) from the example file (`ExoticScales\CH7\example.pdf`). In the first bar we're playing over a  $Dm7(b5)$ . In this context, the F functions as a  $b3$ , the G is an  $11^{th}$ , the Ab gives us our  $b5$ , and the G is another  $11^{th}$ . The triplet repeats the first three notes of the bar, followed by another G, and a C, functioning here as a minor seventh. Moving into the second bar, where we're playing over an  $Fm(Maj7)$ , we start with a B, acting as a  $\#4/b5$  (the tritone), followed by a C, which functions as a perfect fifth. After another C, we end the bar with an Ab, which gives us our minor third.

In the third bar we're playing over a  $CMaj7$ . The B note functions as a major seventh, followed by a C—the root note. Next we have an E, which works as a major third, and an F, giving us an  $11^{th}$ . The second half of the bar starts on a G, which represents a perfect fifth, another E, and finally, another F. In the last bar we have a D, which, in the context of the  $Bdim7$ , functions as a minor third.

## Examples

Support materials may be found in the following locations on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com):

MIDI	ExoticScales\CH7\example.midi
MP3	ExoticScales\CH7\example.mp3
Transcription (PDF)	ExoticScales\CH7\example.pdf
Jammer™	ExoticScales\CH7\example.cmp
Finale™	ExoticScales\CH7\example.us
Cakewalk™	ExoticScales\CH7\example.wrk
Noteworthy Composer	ExoticScales\CH7\example.nwc

**Table 7-11**

### Modes of the Harmonic Major Scale

Mode	Name	Intervals	Progression
2	Dorian b5	2121312	Cm in7 (b5)-Gbm a7(#5)-Cm in7 (b5)-Bbm a7-Cm in7 (b5)-D7(#9)-A dim 7-F7 (b9)-Cm in7 (b5)
3	Phrygian b4	1213122	C7(#9)-Bbm in7 (b5)-Eb7 (b9)-C7(#9)-Dbm in (M a7)-Em a7(#5)-G dim 7-Abm a7-C7(#9)
4	Lydian b3	2131221	Cm in (M a7)-D7 (b9)-B7(#9)-Am in7 (b5)-F#dim 7-GM a7-Ebm a7(#5)-Cm in (M a7)
5	Dominant b2	1312212	C7 (b9)-E dim 7-A7 (#9)-FM a7-Bbm in (M a7)-Dbm a7(#5)-C7 (b9)-Gm7 (b5)-C7 (b9)
6	Lydian Augmented #2	3122121	CM a7(#5)-B7 (b9)-D#dim 7-Am (M a7)-G#7(#9)-F#m in7 (b5)-Em a7-CM a7(#5)
7	Locrian bb7	1221213	C dim 7-Dbm a7-Ebm in7 (b5)-Gbm in (M a7)-Ab7 (b9)-Dbm a7-C dim 7-Am a7(#5)-F7(#9)-C dim 7

**Table 7-12**

## Chapter 8—The Blues Modified Scale (2 1 2 1 1 3 2)

### Blues Modified Overview

As we can see in Table 8-1, the Blues Modified scale is basically a minor seventh scale, with the addition of the tritone (#4/b5). Rather than replacing either the perfect fourth or fifth, the tritone appears as a b5, and the perfect fifth remains in the form of the bb6. This should, therefore, be a scale that can be easily introduced over many traditional blues progressions.

	1		2		3	4		5		6		7
Diatonic Major Scale	C		D		E	F		G		A		B
Blues Modified Scale	C		D	E b		F	G b	A bb			B b	

**Table 8-1**

Table 8-2 illustrates the first mode of the Blues Modified scale in twelve keys:

1		2	b3		4	b5	bb6			b7	
C		D	E b		F	G b	A bb			B b	
C #		D #	E		F #	G	A b			B	
D		E	F		G	A b	B bb			C	
D #		E #	F #		G #	A	B b			C #	
E		F #	G		A	B b	C b			D	
F		G	A b		B b	C b	D bb			E b	
F #		G #	A		B	C	D b			E	
G		A	B b		C	D b	E bb			F	
G #		A #	B		C #	D	E b			F #	
A		B	C		D	E b	F b			G	
A #		B #	C #		D #	E	F			G #	
B		C #	D		E	F	G b			A	

**Table 8-2**

Here's a basic fingering pattern:

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
<i>(Eighth fret)</i>	<b>R</b>	4	b7	b3	bb6	<b>R</b>
		b5				
	2	bb6	<b>R</b>	4		2
	b3			b5	b7	b3
			2			

**Table 8-3**

**I Chord:**

<b>C M a j o r S c a l e :</b>	C		D		E	F		G		A		B
<b>B l u e s M o d i f i e d 1<sup>st</sup> d e g . :</b>	C		D	E b		F	G b	A bb			B b	
<b>R e s u l t s :</b>	1		2	b3		4	b5	bb6			b7	

**Table 8-4**

The Blues Modified scale starts out with a fairly common chord: the min7(b5). The presence of the 4, b5, and 5 is a sequence that's right at home in most blues progressions and turn-arounds, and

you're sure to recognize it as soon as you hear it. In this position, the resulting chord is expressed as a Cmin7(b5).

### II Chord:

D M ajor Scale:	D		E		F#	G		A		B		C#
B lues M odified 2 <sup>nd</sup> D eg.:	D	E b		F	G b	A b b			B b		C	
R esults	1	b2		b3	b4	bb5			b6		b7	
R esults (reinterpreted):	1	b2		#9	3	4			#5		b7	

**Table 8-5**

As shown in Table 8-5, a bit of reinterpretation results in a somewhat more comprehensible situation. By treating the b4 as a 3, the b6 as a #5, and the b3 as a #9, we can fall back on our old standby, the 7(#5#9). In this instance we'll be playing a C Blues Modified scale over a D7(#5#9).

### III Chord:

E b M ajor Scale:	E b		F		G	A b		B b		C		D
B lues M odified 3 <sup>rd</sup> D eg.:	E b		F	G b	A b b			B b		C		D
R esults:	1		2	b3	b4			5		6		7
R esults (reinterpreted):	1		2	#9	3			5		6		7

**Table 8-6**

We have a few different options here. The obvious approach would be to call this an Ebmin(Maj7), and leave it at that; however, since the diminished fourth is identical with a major third, we can also call this a major seventh. Better still, suppose we use an EbMaj9, which will explicitly sound both the F and the Abb, and treat that Gb as a passing tone in our solos over this chord? This is the option used in the example tracks.

## IV Chord:

F M ajor Scale:	F		G		A	Bb		C		D		E
B lues M odified 4 <sup>th</sup> D eg.:	F	G b	A bb			B b		C		D	E b	
R esults:	1	b2	bb3			4		5		6	b7	

**Table 8-7**

The effective absence of a third means that this will be a suspended chord of some sort. We have several options: an Fsus2 (1, 2, 5), an Fsus4 (1, 4, 5), an F7sus4 (1, 4, 5, b7), an Fsus46 (1,4,5,6), or an Fsus469 (1,4,5,6,9). The choice depends on whether we want to take a minimalist approach, or one that provides the greatest number of scale tones in the harmonic environment. Since the bb3 (2/9) is going to have a tendency to clash with the b2, I've selected the middle road—the Fsus46—for the example tracks.

## V Chord:

(G b) F # M ajor Scale:	F#		G#		A#	B		C#		D#		E#
B lues M odified 5 <sup>th</sup> D eg.:	G b	A bb			B b		C		D	E b		F
R esults:	1	b2			3		#4		#5	6		7

**Table 8-8**

This one is a fairly straightforward augmented major seventh chord. Our C Blues Modified scale can, therefore, be applied over a GbMaj7(#5) chord.

## VI Chord:

G M ajor Scale:	G		A		B	C		D		E		F#
B lues M odified 6 <sup>th</sup> D eg.:	A bb			B b		C		D	E b		F	G b
R esults:	1		#2		#3		##4	#5		#6	7	
R esults (reinterpreted):	1		b3		4		5	#5		b7	7	

**Table 8-9**

As difficult as this one seems, it's not nearly so bad once we reinterpret it a bit, as shown in Table 8-9. Our choices are a minor seventh chord, a min(Maj7), or the safe route—a plain minor triad. I'm going to opt for the plain vanilla Gm in the examples, since it allows the most flexibility for exploring those additional tones in the solo. Remember, if (for example) *you* play the F in your solo, then you turn the overall tonality into a minor seventh. If, instead, you play the Gb, then you've effectively changed that simple little triad into a Gm(Maj7).

### VII Chord:

B b M a jor Scale:	B b	C	D	E b	F	G	A
B lues M odified 7 <sup>th</sup> D eg.:	B b	C	D	E b	F	G b	A b b
R esults:	1	2	3	4	5	b6	bb7

**Table 8-10**

This is another situation in which our best course is to play a simple harmonic background, and leave it to the solo to create the more extended textures. Accordingly, in the examples we'll be playing our C Blues Modified scale against an ordinary Bb chord.

### Progression

Let's examine what kind of progression might provide a background for exploring the sound of our C Blues Modified scale. As we've seen, the chords we have to work with are:

Cmin7(b5), D7(#5#9), EbMaj9, Fsus46, GbMaj7(#5), Gm, Bb.

As usual, our goal is to assemble a progression that utilizes all of these chords, while respecting the common rules of cadence. The C scale-tone chords we have at our disposal are the Cmin7(b5) (I), the D7(#5#9) (II), the Fsus46 (IV), and the Gm (V). A progression that utilizes these chords is: I-II-IV-V-I, or:

Cmin7(b5)-D7(#5#9)-Fsus46-Gm-Cmin7(b5).

That leaves us with the EbMaj9, the GbMaj7(#5), and the Bb

to deal with. Let's start by considering Bb as a temporary key center. In this environment, D7(#5#9) is the III, EbMaj9 is the IV, Bb is the I, and Fsus46 is the V. This suggests that we can put the EbMaj9-Bb subsequence between the D7(#5#9) and the Fsus46, like so:

Cmin7(b5)-D7(#5#9)- EbMaj9-Bb-Fsus46-Gm-Cmin7(b5).

Now we have only to address the placement of that GbMaj7(#5). In the key of G, Cm7 is the IV, (Gb) F#Maj7(#5) is the VII, and D7(#5#9) is the V. Since IV-VII-V is a permissible sequence, we can put that GbMaj7(#5) between the Cmin7(b5) and the D7(#5#9):

Cmin7(b5)-GbMaj7(#5)-D7(#5#9)- EbMaj9-Bb-Fsus46-Gm-Cmin7(b5).



## Analysis

The figure displays a musical analysis of a four-bar melodic line. At the top, four chord diagrams are shown, corresponding to the chords Cm7(b5), Gbmaj7(#5), D7(#5#9), and Ebmaj9. Below these is a treble clef staff labeled 'Melody' containing the notes of the line. The bottom part of the figure shows a guitar fretboard with fingerings for each bar: 11-11-8-10, 12-10, 12-10-11-12-8, and 12-8.

**Figure 8**

In Figure 8 we examine 4 bars (9-12) from the example file (\ExoticScales\CH8\example.pdf). In the first bar, playing over a Cm7(b5), we begin with a Bb, which functions as a minor seventh, followed by an F#, providing our b5. Next, the Eb is a minor third. The F (natural) acts as an 11<sup>th</sup>, then ties into the second bar, where it takes on the function of a major seventh in the context of the Gbmaj7(#5). Moving right along in the second bar, we have a D, acting as a #5, and another F. In the third bar we're playing over a D7(#5#9). In this context, the D is a root note, the F acts as a #9, and The F# gives us our major third. Following another D, we end the bar with a Bb, which starts out functioning as a #5, then ties into the fourth bar, where it acts as the perfect fifth of the EbMaj9.

## Examples

Support materials may be found in the following locations on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com):

MIDI	\\ExoticScales\CH8\exam ple.m id
MP3	\\ExoticScales\CH8\exam ple.m p3
Transcription (PDF)	\\ExoticScales\CH8\exam ple.pdf
Jammer™	\\ExoticScales\CH8\exam ple.cm p
Finale™	\\ExoticScales\CH8\exam ple.m us
Cakewalk™	\\ExoticScales\CH8\exam ple.w rk
Noteworthy Composer	\\ExoticScales\CH8\exam ple.nw c

**Table 8-11**

### Modes of the Blues Modified Scale

M ode	N am e	I n t e r v a l s	P r o g r e s s i o n
2	Ravel bb5	1211322	C7(#5#9)-Fm -A b-C7(#5#9)-Bbm 7-Dbm aj7-E M aj7(#5)-Ebsus4-C7(#5#9)
3	Jazz Minor b4	2113221	Csus2-B7(#5#9)-Em -Dsus4-Ebm aj7(#5)-Am in7(b5)-C Sus2
4	Dorian b2 bb3	1132212	Csus4-Dm -A7(#5#9)-F-Bbm (M aj7)-Dbm aj7(#5)-Gm 7(b5)-C sus4
5	Lydian Augmented b2	1322121	CM aj7(#5)-E -A sus2-G #7(#5#9)-Dbm -F#m 7-Bsus4-CM aj7(#5)
6	Super Lydian Augmented ##4	3221211	Cm -Fm 7-BM aj7(#5)-G 7(#5#9)-Cm -Abm aj7-D # -A #sus4-Cm
7	Hindu bb7	2212113	C-E7(#5#9)-Dm 7-Am -FM aj7-Abm aj7(#5)-G7sus4-C

**Table 8-12**

## **Chapter 9—The Enigmatic Ascending Scale** **(1 3 2 2 2 1 1)**

### **Enigmatic Ascending Overview**

As we can see in Table 9-1, the Enigmatic Ascending scale is basically a major scale, with an ambiguous seventh degree (the #6 will tend to act like a minor seventh). It also contains the tritone (#4/b5), which is a tone characteristic of the blues scale. Unlike its cousins the Enigmatic Minor and Enigmatic Descending (both of which are analyzed in the next section of this book), the Enigmatic Ascending scale has only one augmented (three half-step) interval.

	1	2	3	4	5	6	7
Diatonic Major Scale	C	D	E	F	G	A	B
Enigmatic Minor	C	D <sup>b</sup>	E <sup>b</sup>	<====>	F <sup>#</sup>	G	A <sup>#</sup> B
Enigmatic Descending	C	D <sup>b</sup>	<====>	E	F	<====>	G <sup>#</sup> A <sup>#</sup> B
Enigmatic Ascending	C	D <sup>b</sup>	<====>	E	F <sup>#</sup>	G <sup>#</sup>	A <sup>#</sup> B

**Table 9-1**

Table 9-2 illustrates the first mode of the Enigmatic Ascending scale in twelve keys:

1	b2			3		#4		#5		#6	7
C	D b			E		F#		G #		A #	B
D b	E b b			F		G		A		B	C
D	E b			F#		G #		A #		B #	C #
E b	F b			G		A		B		C #	D
E	F			G #		A #		C		D	E b
F	G b			A		B		C #		D #	E
G b	A b b			B b		C		D		E	F
G	A b			B		C #		D #		E #	F#
A b	B b b			C		D		E		F#	G
A	B b			C #		D #		E #		F##	G #
B b	C b			D		E		F#		G #	A
B	C			D #		E #		F##		G ##	A #

**Table 9-2**

Here's a basic fingering pattern:

	<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
	<i>(Eighth fret)</i>	<b>R</b>		#6			<b>R</b>
		b2	#4	7	3	#5	b2
			<b>R</b>				
			#5	b2	#4	#6	
		3				7	3

**Table 9-3**

**I Chord:**

<b>C M a j o r S c a l e:</b>	C		D		E	F		G		A		B
<b>E n i g m a t i c A s c . 1<sup>st</sup> d e g .:</b>	C	D b			E		F#		G #		A #	B
<b>R e s u l t s:</b>	1	b2			3		#4		#5		#6	7

**Table 9-4**

The Enigmatic Ascending scale starts right out with a

challenging situation. That #6 opens the door for voicing this chord as either a Maj7(#5), or a 7(#5b9) chord. Either way we'll have to be a bit careful around that A#/B vicinity, however, since the altered dominant chord covers more of the 'outside' tones, my inclination is to go with that. Accordingly, the examples use a C7(#5b9).

**II Chord:**

D b M a j o r S c a l e :	D b		E b		F	G b		A b		B b		C
E n i g m a t i c A s c . 2 <sup>nd</sup> D e g . :	D		E		F#		G#		A#	B		C
R e s u l t s	1		#2		#3		##4		##5	#6		7
R e s u l t s ( r e i n t e r p r e t e d ) :	1		b3		4		5		6	b7		7

**Table 9-5**

As shown in Table 9-5, even though our remapping trick does little to alleviate the ambiguity around the seventh degree, we see that we can harmonize this chord as either a minor seventh or a min(maj7). My inclination would be to sidestep the entire issue by calling this one as a simple minor triad, leaving the soloist to define the higher tonalities. In our examples, therefore, we'll be playing a C Enigmatic Ascending scale over a Dbm chord.

**III Chord:**

E M a j o r S c a l e :	E		F#		G#	A		B		C#		D#
E n i g m a t i c A s c . 3 <sup>rd</sup> D e g . :	E		F#		G#		A#	B	C	D b		
R e s u l t s	1		2		3		#4	5	b6	bb7		

**Table 9-6**

The third scale degree will be harmonized as another simple major triad (1, 3, 5). Basically, we should be able to play an Enigmatic Ascending scale over a major triad whose root is a major third above that of the scale. Of course, there's obviously going to be a good deal of chromaticism between the #4 and the bb7, but that's what gives

this scale its flavor. In the examples, we'll be applying a C Enigmatic Ascending scale over an E chord.

### IV Chord:

F # M a j o r S c a l e :	F #		G #		A #	B		C #		D #		E #
E n i g m a t i c A s c . 4 <sup>th</sup> D e g . :	F #		G #		A #	B	C	D b			E	
R e s u l t s :	1		2		3	4	b5	bb6			b7	
R e s u l t s ( r e i n t e r p r e t e d ) :	1		2		3	4	#4	5			b7	

**Table 9-7**

By thinking of that bb6 as a perfect fifth, we realize that this is going to be a dominant seventh chord. We can account for the b5, if we like, by calling it a 7(#11). In either case, the root of the chord will be an augmented fourth above that of the scale. In our examples this will translate to a C Enigmatic Ascending scale over an F#7(#11) chord.

### V Chord:

(G #) A b M a j o r S c a l e :	A b		B b		C	D b		E b		F		G
E n i g m a t i c A s c . 5 <sup>th</sup> D e g . :	G #		A #		B	C	D b		E		F #	
R e s u l t s :	1		2		b3	b4	bb5			b6		b7
R e s u l t s ( r e i n t e r p r e t e d ) :	1		2		#9	3	4			#5		b7

**Table 9-8**

With a little renumbering, we see that the V chord (an augmented fourth) can be interpreted as a 7(#5#9). Our C Enigmatic Ascending scale can, therefore, be applied over a G#7(#5#9) chord.

## VI Chord:

(A#) B b M ajor Scale:	B b		C		D	E b		F		G		A
Enigmatic A sc. 6 <sup>th</sup> Deg.:	A #	B	C	D b			E		F #		G #	
R esults:	1	b2	bb3	bb4			b5		b6		b7	
R esults (reinterpreted):	1	b9	2	b3			b5		b6		b7	

**Table 9-9**

As difficult as this seems, it's not nearly so bad once we reinterpret it a bit, as shown in Table 9-9. Basically, our only choice is a min7(b5), with its root an augmented sixth (minor seventh) above that of the scale. In our examples, we play the C Enigmatic Ascending scale against an A#min7(b5) chord.

## VII Chord:

B M ajor Scale:	B		C #		D #	E		F #		G #		A #
Enigmatic A sc. 7 <sup>th</sup> Deg.:	B	C	D b			E		F #		G #		A #
R esults:	1	b2	bb3			4		5		6		7

**Table 9-10**

This is another situation in which the effective lack of a third limits our choices to either a sus2 or a sus4 chord. Since the sus2 would only tend to exacerbate the dissonance between the b2 and the bb3, our best course is to choose the sus4. Accordingly, in the examples we'll be playing our C Enigmatic Ascending scale against a Bsus4 chord.

## Progression

Let's examine what kind of progression might provide a background for experimenting with our C Enigmatic Ascending scale. As we've seen, the chords we have to work with are:

C7(#5b9), Dbm, E, F#7(#11), G#7(#5#9), A#min7(b5), Bsus4

Since the majority of these chords don't fall into the C scale tones, let's consider Db as an alternative key center. As usual, we'll start and end on C in order to emphasize the sound of playing in that key. From the perspective of Db, we have:

Dbm	=	I
(Gb) F#7(#11)	=	IV
(Ab) G#7(#5#9)	=	V
(Bb) A#min7(b5)	=	VI
C7(#5b9)	=	VII

A progression that utilizes these chords, while adhering to the basic rules of cadence is: VII-I-VI-V-IV-VII, which gives us:

C7(#5b9)-Dbm-A#min7(b5)-G#7(#5#9)-F#7(#11)-C7(#5b9).

This leave us with E, and Bsus4 to work into the progression. Taking G as a transient key center, we find that F#7(#11) is the VII, Bsus4 is the III, E is the VI, and C7(#5b9) is the IV. Since the sequence VII-III-VI-IV is a permissible cadence, we see that we can insert the Bsus4-E subsequence between the F#7(#11) and the C7(#5b9) in our original progression, yielding:

C7(#5b9)-Dbm-A#min7(b5)-G#7(#5#9)-F#7(#11)-Bsus4-E-C7(#5b9).



## Analysis

The image displays a musical score for a guitar piece. At the top, four chords are listed with their corresponding fretboard diagrams: C7(#5b9), Dbm, A|m7(b5), and G|7#5. Below the chords is a melody line in treble clef with a key signature of one flat and a 4/4 time signature. The melody consists of the following notes: Bar 1: Ab, E, Ab, Bb; Bar 2: Bb, E, Ab; Bar 3: F#, E, Ab; Bar 4: F#, E, Ab. Below the melody line is a guitar fretboard diagram with six strings and four frets. The fret numbers are: Bar 1: 9, 9; Bar 2: 9, 11; Bar 3: 9, 11; Bar 4: 11, 9, 9.

**Figure 9**

Figure 9 presents the first 4 bars from the example file (`\ExoticScales\CH9\example.pdf`). In the first bar we're playing over a  $C7(\#5b9)$ . In the context, the first note, an  $A_b$ , functions as a  $\#5$ . Next, the  $E$  gives us a major third, which is followed by another  $A_b$ . Finally, the  $B_b$  starts out functioning as a minor seventh, then ties into the second bar, where it acts as a  $6^{\text{th}}$  in the context of the  $D_b m$  chord. We finish up bar 2 with an  $A_b$ , which here functions as a perfect fifth. In bar 2, playing over an  $A\#m7(b5)$ , we have a  $B_b(A\#)$ , representing the root note, and an  $E$ , functioning as a  $b5$ . In the last bar we're playing over a  $G\#7(\#5\#9)$ . Here, the  $F\#$  is our minor seventh, the  $E$  is a  $\#5$ , the  $A_b(G\#)$  is a root note, and, finally, we end on another  $\#5$ .

## Examples

MIDI	ExoticScales\CH9\example.mid
MP3	ExoticScales\CH9\example.mp3
Transcription (PDF)	ExoticScales\CH9\example.pdf
Jammer™	ExoticScales\CH9\example.cm.p
Finale™	ExoticScales\CH9\example.mus
Cakewalk™	ExoticScales\CH9\example.wrk
Noteworthy Composer	ExoticScales\CH9\example.nwc

**Table 9-11**

### Modes of the Enigmatic Ascending Scale

Mode	Name	Intervals	Progression
2	Chromatic Hypophrygian ##4 ##5	3222111	Cm -B7 (#5b9) -Am7 (b5) -F7 (#11) -D# -Cm -Bbsus4 -G7 (#5#9) -Cm
3	Lydian b6 bb7	2221113	C -D7 (#11) -Am7 -E7 (#5#9) -D7 (#11) -C -F#m in7 (b5) -Ab7 (#5b9) -Gsus4 -C
4	Arabian bb6	2211132	C7 (#11) -Gb7 (#5b9) -Em in7 (b5) -D7 (#5#9) -Bb -C7 (#11) -Fsus4 -Gm7 -C7 (#11)
5	Aeolian b4 bb5	2111322	C7 (#5#9) -E7 (#5b9) -Dm in7 (b5) -Bbsus4 -Bb7 (#11) -C7 (#5#9) -Ab6 -Fm in (Maj7) -C7 (#5#9)
6	Locrian bb3 bb4	1113222	Cm in7 (b5) -Dbsus4 -Bb7 (#5#9) -Ebm in (Maj7) -D Maj7 (#5) -Cm in7 (b5) -Gb6 -Ab7 (#11) -Cm in7 (b5)
7	Ionian b2 bb3	1132221	Csus4 -A7 (#5#9) -Db7 (#5b9) -Dm in (Maj7) -F -Csus4 -Bm in7 (b5) -G7 (#11) -Csus4

**Table 9-12**

## Chapter 10—The Aeolian bb7 (2 1 2 2 1 1 3)

### Aeolian bb7 Overview

The Aeolian bb7 differs from the Aeolian mode of the Diatonic Major scale in its diminished seventh degree. This alteration introduces an augmented interval between the diminished seventh and the octave, and, as with the other scales in this section, this augmented interval gives an exotic sound to the scale.

	1	2	3	4	5	6	7
Diatonic Major Scale	C	D	E	F	G	A	B
Aeolian Mode	C	D	E <sup>b</sup>	F	G	A <sup>b</sup>	B
Aeolian bb7 scale	C	D	E <sup>b</sup>	F	G	A <sup>b</sup>	B <sup>bb</sup>

**Table 10-1**

Table 10-2 illustrates the first mode of the Aeolian bb7 scale in twelve keys:

1		2	b3		4		5	b6	bb7		
C		D	E b		F		G	A b	B bb		
C #		D #	E		F #		G #	A	B b		
D		E	F		G		A	B b	C b		
D #		E #	F #		G #		A #	B	C		
E		F #	G		A		B	C	D b		
F		G	A b		B b		C	D b	E bb		
F #		G #	A		B		C #	D	E		
G		A	B b		C		D	E b	F b		
G #		A #	B		C #		D #	E	F		
A		B	C		D		E	F	G b		
A #		B #	C #		D #		E #	F #	G		
B		C #	D		E		F #	G	A b		

**Table 10-2**

Here's a basic fingering pattern:

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
<i>(Eighth fret)</i>	<b>R</b>	4		b3	5	<b>R</b>
					b6	
	2	5	<b>R</b>	4	bb7	2
	b3	b6				b3
		bb7	2			

**Table 10-3**

**I Chord:**

<b>C M ajor Scale:</b>	C		D		E	F		G		A		B
<b>A eolian bb7 1<sup>st</sup> deg.:</b>	C		D	E b		F		G	A b	B bb		
<b>R esults:</b>	1		2	b3		4		5	b6	bb7		

**Table 10-4**

Our choices for the I chord are either a minor triad (1, b3, 5)

or a minor sixth (1, b3, 5, 6). For the example tracks I apply the C Aeolian bb7 scale over a Cm6 chord.

### II Chord:

D M a j o r S c a l e :	D		E		F#	G		A		B		C#
A e o l i a n b b 7 2 <sup>nd</sup> D e g. :	D	Eb		F		G	A b	B bb			C	
R e s u l t s :	1	b2		b3		4	b5	bb6			b7	

**Table 10-5**

The II chord is another min7(b5), in this case, a major second (two semitones) above the root of the scale. On the example tracks we play a C Aeolian bb7 over a Dmin7(b5) chord.

### III Chord:

E b M a j o r S c a l e :	Eb		F		G	A b		B b		C		D
A e o l i a n b b 7 3 <sup>rd</sup> D e g. :	Eb		F		G	A b	B bb			C		D
R e s u l t s :	1		2		3	4	b5			6		7

**Table 10-6**

The III chord harmonizes to a Maj7(b5), which is an uncommon, but not unheard of voicing. An alternative is to harmonize this chord as a Cm69/Eb. The reason this works is because, in terms of Eb, the Cm69 gives us C (6), Eb (1), G (3), A (b5), and D (7). For the example tracks, we'll be playing our C Aeolian bb7 over a Cm69/Eb.

## IV Chord:

F M a j o r S c a l e:	F		G		A	B b		C		D		E
A e o l i a n b b 7 4 <sup>th</sup> D e g.:	F		G	A b	B b b			C		D	E b	
R e s u l t s:	1		2	b3	b4			5		6	b7	
R e s u l t s (r e i n t e r p r e t e d):	1		2	#9	3			5		6	b7	

**Table 10-7**

The fourth degree of the Aeolian bb7 scale is F, a perfect fourth. The minor-third/diminished-fourth/minor-seventh combination signals a common situation in which the resulting chord can be interpreted as either a minor seventh or an altered dominant. Since the latter approach resolves any ambiguity that might otherwise result from the b4 tending to sound like a major third, that route is preferable. In this case, the C Aeolian bb7 scale is used over an F7(#9) chord. More generally, whenever we see a 7(#9) chord, we can apply an Aeolian bb7 scale whose root is a perfect fourth below that of the chord.

## V Chord:

G M a j o r S c a l e:	G		A		B	C		D		E		F#
A e o l i a n b b 7 5 <sup>th</sup> D e g.:	G	A b	B b b			C		D	E b		F	
R e s u l t s:	1	b2	bb3			4		5	b6		b7	

**Table 10-8**

This one's another dominant suspended fourth chord. In concrete terms, we'll be playing a C Aeolian bb7 over a G7sus4 chord.

## VI Chord:

Ab Major Scale:	Ab		Bb		C	D	E	F	G	
Aeolian bb7 6 <sup>th</sup> Deg.:	Ab	Bbb		C	D	Eb		F	G	
Results:	1	b2		3		#4	5		6	7

**Table 10-9**

The sixth degree of the Aeolian bb7 scale is an Ab—a minor sixth interval. This is a Maj7 or a Maj7(#11) chord. The C Aeolian is played over an AbMaj7(#11).

## VII Chord:

(Bbb) A Major Scale:	A		B		C#	D		E		F#		G#
Aeolian bb7 7 <sup>th</sup> Deg.:	Bbb		C		D	Eb		F		G		Ab
Results:	1		#2		#3	#4		#5		#6		7
Results (reinterpreted):	1		b3		4	b5		b6		b7		7

**Table 10-10**

The seventh degree of the Aeolian bb7 scale is a Bbb, which is enharmonically equivalent to A (a major sixth). After a wee bit of renumbering, we see that we can voice this chord as an Amin7(b5).

## Progression

Let's examine what kind of progression we might assemble that would provide a background for exploring our C Aeolian bb7 scale. The chords we have to work with are:

Cm6, Dmin7(b5), Cm69/Eb, F7(#9), G7sus4, AbMaj7(#11), Amin7(b5).

The chords that correspond to scale-tone chords in the key of C are: Cm6 (I), Dmin7(b5) (II), F7(#9) (IV), G7sus4 (V), and Amin7(b5) (VI). A basic progression that utilizes these chords is I-VI-II-IV-V-I, which gives us:

Cm6-Amin7(b5)-Dmin7(b5)-F7(#9)-G7sus4-Cm6.

That leaves us with the Cm69/Eb and the AbMaj7(#11) to

work into the progression. Let's try Eb as a temporary key center. From that perspective:

Cm69/Eb	= I
F7(#9)	= II
G7sus4	= III
AbMaj7(#11)	= IV
Cm6	= VI
Dmin7(b5)	= VII

Since VII-I-VI-IV-II is a valid sequence, we see that we can insert the Cm69/Eb-Cm7-AbMaj7(#11) between the Dmin7(b5) and the F7(#9) of our original progression, as follows:

Cm6-Amin7(b5)-Dmin7(b5)- Cm69/Eb-Cm6-AbMaj7(#11) - F7(#9)-G7sus4-Cm6.



## Analysis

The figure displays a musical score for a guitar. At the top, four chord diagrams are shown for the first four bars: Cm6, Am7(b5), Dm7(b5), and Cmin9/Eb. Below these is a melody line in treble clef, 4/4 time, with a key signature of one flat. The melody consists of the following notes: Bar 1: C4, D5, Eb5, F5; Bar 2: G4, F4, Eb4, C4; Bar 3: G4, Ab4, A4, C5; Bar 4: C5, Eb5, F5, Eb5. Below the melody line is a guitar fretboard diagram with six strings and 12 frets. The fret numbers for each string are: Bar 1: 8-10-11; Bar 2: 10-8-10-11-10-8; Bar 3: 10-11-12-10-11-12-10-10; Bar 4: 8-12-8-10-12-12-8-10.

Figure 10

In Figure 10 we examine the first 4 bars of the example file (`\ExoticScales\CH10\example.pdf`). Playing over a Cm6 in the first bar, we begin on the root tone, followed by a D (the 9<sup>th</sup>), an Eb (minor third), and an F (11<sup>th</sup>). In the second bar we're playing over an Am7(b5). In this context, the G represents a minor seventh, the F is a #5, and the G is another minor seventh. Note how that augmented fifth (F) still sounds good in this context, even though it's an 'outside' tone with respect to the harmonic setting. In the second half of the bar we have an Ab, the major seventh—another 'outside' tone which sounds just fine—a C, which gives us a minor third, an A (the root tone), and another F. Of course, I *could* have easily gone back and edited the example to utilize solely notes for the chords, however, this would defeat the purpose of our entire approach, which is to show how the scales can be applied in an improvisational setting, and still yield musical results!

Moving along into the third bar, in which we're playing over a Dm7(b5), we start out with a G, functioning as an 11<sup>th</sup>, followed by an Ab, which gives us our b5. Next, we have an A (natural), giving us a perfect fifth—another 'outside' note that nonetheless sounds good over the Dm7(b5). Next, after repeating the first three notes, we have a C, which is a minor seventh in this harmonic setting. An additional A (natural) and a C finish up bar 3.

In bar 4 we're playing over a Cmin9/Eb. In this context, the

Eb represents the root note, followed by a D, functioning as a major seventh. After another Eb, we have a series of sixteenth notes, containing a C (6<sup>th</sup>), D (major seventh), Eb (root), and another D. The last two eighth notes are an Eb (root), and an F, which represents a 9<sup>th</sup> in the Eb context.

### Examples

Support materials may be found in the following locations on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com):

MIDI	\\ExoticScales\CH 10\exam ple.m id
M P3	\\ExoticScales\CH 10\exam ple.m p3
Transcription (PDF)	\\ExoticScales\CH 10\exam ple.pdf
Jam mer™	\\ExoticScales\CH 10\exam ple.cm p
Finale™	\\ExoticScales\CH 10\exam ple.m us
Cakewalk™	\\ExoticScales\CH 10\exam ple.w rk
Noteworthy Composer	\\ExoticScales\CH 10\exam ple.nw c

**Table 10-11**

### Modes of the Aeolian bb7 Scale

Mode	Name	Intervals	Progression
2	Locrian bb6	1221132	C m 7-C m 11/D b-G bM a7-B b m 7-G m 7 (b5)-C m 7-F sus4-E b7 (#9)-C m 7
3	Ionian b5	2211321	C (b5)-D 7#9-A m 6-G b m in7 (b5)-E sus4-D 7 (#9)-C (b5)-F m a7 (#11)-B m 7-C (b5)
4	Dorian b4	2113212	C 7 (#9)-D sus4-E bM a7-A m 11/B b-A m 7-D sus4-C 7 (#9)-E m in7 (b5)-G m 7-C 7 (#9)
5	Phrygian bb3	1132122	C sus4-D m in7 (b5)-F m 6-B b7 (#9)-C sus4-D bM a7-C sus2/A b-G m 7-C sus4
6	Lydian b2	1321221	C M a7 (#11)-E m 6-A 7 (#9)-D b m in7 (b5)-F # m 7-B sus4-B sus2/G -C M a7 (#11)
7	Super Lydian Augmented	3212211	C m in7 (b5)-F m 7-E b m 6/9/F # -B M a7 (#11)-A b7 (#9)-E b m 7-B bsus4-C m in7 (b5)

**Table 10-12**

## Chapter 11—The Locrian $\flat 7$ Scale (1 2 2 1 2 3 1)

### Locrian $\flat 7$ Overview

As we can see in Table 11-1, the Locrian  $\flat 7$  scale differs from the Locrian mode of the major scale only in its major seventh degree. This  $\flat 7$ , however, introduces an augmented interval between the  $\flat 6$  and the seventh, which is responsible for giving the scale its exotic sound. Like the Locrian mode, it contains a minor third, so it's also basically a minor scale, but the presence of the major seventh gives it a min(Maj7) tonality.

	1	2	3	4	5	6	7
Diatonic Major Scale	C	D	E	F	G	A	B
Locrian Mode	C	$D \flat$	$E \flat$	F	$G \flat$	$A \flat$	$B \flat$
Locrian $\flat 7$ Scale	C	$D \flat$	$E \flat$	F	$G \flat$	$A \flat$	$\langle = = = = \rangle$ B

**Table 11-1**

Table 11-2 illustrates the first mode of the Locrian  $\flat 7$  scale in twelve keys:

1	$\flat 2$		$\flat 3$		4	$\flat 5$		$\flat 6$			7
C	D $\flat$		E $\flat$		F	G $\flat$		A $\flat$			B
C #	D		E		F #	G		A			B #
D	E $\flat$		F		G	A $\flat$		B $\flat$			C #
E $\flat$	F $\flat$		G $\flat$		A $\flat$	B $\flat\flat$		C $\flat$			D
E	F		G		A	B $\flat$		C			D #
F	G $\flat$		A $\flat$		B $\flat$	C $\flat$		D $\flat$			E
F #	G		A		B	C		D			E #
G	A $\flat$		B $\flat$		C	D $\flat$		E $\flat$			F #
A $\flat$	B		C $\flat$		D $\flat$	E $\flat\flat$		F $\flat$			G
A	B $\flat$		C		D	E $\flat$		F			G #
B $\flat$	C $\flat$		D $\flat$		E $\flat$	F $\flat$		G $\flat$			A
B	C		D		E	F		G			A #

**Table 11-2**

Here's a basic fingering pattern:

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
<i>(Eighth fret)</i>	<b>R</b>	4		$\flat 3$		<b>R</b>
	$\flat 2$	$\flat 5$	7		$\flat 6$	$\flat 2$
			<b>R</b>	4		
	$\flat 3$	$\flat 6$	$\flat 2$	$\flat 5$		$\flat 3$
					7	

**Table 11-3**

**I Chord:**

C M ajor Scale:	C		D		E	F		G		A		B
Locrian $7 1^{st}$ deg.:	C	D $\flat$		E $\flat$		F	G $\flat$		A $\flat$			B
Results:	1	$\flat 2$		$\flat 3$		4	$\flat 5$		$\flat 6$			7

**Table 11-4**

We can't harmonize this one as a min(Maj7) because of the  $\flat 5$ . Similarly, we can't call it a min7( $\flat 5$ ) because of the major seventh.

Let's examine a B chord: The root (B) provides the 7 of our C mystery chord. The 3 (D#) provides the b3 (Eb) of our C chord. Finally, the fifth (F#) is enharmonically equivalent to the b5 we need in our harmonized C Locrian ♭7. Hence, we can use a B/C for the I chord of this harmonized scale.

**II Chord:**

Db Major Scale:	Db		Eb		F	Gb		Ab		Bb		C
Locrian 7 2 <sup>nd</sup> Deg.:	Db		Eb		F	Gb		Ab			B	C
Results:	1		2		3	4		5			#6	7

**Table 11-5**

By comparing the notes of our Locrian ♭7 scale, starting at the second degree (Db), with the normal step/half-step pattern of a diatonic major scale beginning at the same note, we discover that we have two options, depending upon how we choose to treat the #6. If we simply take the 1-3-5-7, we have a major seventh. On the other hand, we can also treat the #6 as a b7, in which case we have a dominant seventh. There's really nothing to recommend one approach over the other. This suggests that the Locrian ♭7 scale can be played over either of these chord forms, providing that the root of the chord is one semitone above that of the scale. For the example tracks, I use the DbMaj7, making a mental note to treat that #6 (B) with caution while soloing.

**III Chord:**

Eb Major Scale:	Eb		F		G	Ab		Bb		C		D
Locrian 7 3 <sup>rd</sup> Deg.:	Eb		F	Gb		Ab			B	C	Db	
Results:	1		2	b3		4			#5	6	b7	

**Table 11-6**

The third degree of our Locrian ♭7 scale is Eb, a minor third. As before, we compare the Locrian ♭7 mode starting at the third note of the scale with the diatonic major scale starting at the same note, in

this case, Eb. The resulting chord would have to be a minor seventh with an augmented fifth—not a common chord. We could use an augSus4 chord (1, 4, #5), which simply circumvents the b3 and the b7 altogether, but this misses all of the really intriguing tones. A more interesting approach is to voice this chord as an F#sus4/Eb. The F#sus4 gives us the Gb (b3), the B (#5), and the Db (b7). Hence, this slash chord contains all of the significant tones we’re seeking to harmonize.

### IV Chord:

F M a j o r S c a l e :	F		G		A	B b		C		D		E
L o c r i a n 7 4 <sup>th</sup> D e g. :	F	G b		A b			B	C	D b		E b	
R e s u l t s :	1	b2		b3			#4	5	b6		b7	

Table 11-7

The minor third and minor seventh make this a minor seventh chord. The #4 (tritone) is a note characteristic of the blues scale, and will also work well against the minor tonality, as will the b2/b9. We can thus apply a Locrian  $\flat 7$  scale to a minor seventh chord whose root is a perfect fourth (five semitones) above that of the scale; that is, we’d use a C Locrian  $\flat 7$  scale over an Fm7.

### V Chord:

G b M a j o r S c a l e :	G b		A b		B b	C b		D b		E b		F
L o c r i a n 7 5 <sup>th</sup> D e g. :	G b		A b			B	C	D b		E b		F
R e s u l t s :	1		2			#3	#4	5		6		7

Table 11-8

This is another situation in which we effectively have no third. Although we could use either a sus4 or a sus2 chord, the presence of the #3, #4 and 5 degrees suggest that there’s already enough congestion around that area, so the sus2 chord would be a much better choice. We can therefore apply a Locrian  $\flat 7$  scale to a sus2 chord whose root is a diminished fifth (six semitones) above that of the scale. In C, we’d play a C Locrian  $\flat 7$  scale over a Gbsus2 chord.

## VI Chord:

Ab Major Scale:	Ab		Bb		C	Db		Eb		F		G
Locrian 7 <sup>th</sup> Deg.:	Ab		B	C	Db		Eb		F	Gb		
Results:	1		#2	3	4		5		6	b7		
Results (reinterpreted):	1		#9	3	4		5		6	b7		

**Table 11-9**

As shown in Table 11-9, we can play the Locrian  $\flat 7$  scale over a dominant seventh chord whose root is a minor sixth (eight semitones) above that of the scale. We can deal with any potential ambiguity introduced by the #2, by voicing this chord as a 7(#9). For the example tracks, the C Locrian  $\flat 7$  scale is played over an Ab7(#9) chord.

## VII Chord:

B Major Scale:	B		C#		D#	E		F#		G#		A#
Locrian 7 <sup>th</sup> Deg.:	B	C	Db		Eb		F	Gb		Ab		
Results:	1	b2	bb3		b4		b5	bb6		bb7		
Results (reinterpreted):	1	b9	2		3		#4	5		6		

**Table 11-10**

This is a situation in which the best solution is the simplest—a plain vanilla major triad. Hence, we should be able to play a C Locrian  $\flat 7$  over a B chord.

## Progression

Let's examine what kind of progression might provide a background for experimenting with our C Locrian  $\flat 7$  scale. As we've seen, the chords we have to work with are:

B/C, DbMaj7, F#sus4/Eb, Fm7, Gbsus2, Ab7(#9), B.

Since the majority of these chords fall outside of the scale tones in the key of C, we'll need to search for an alternative key center to establish our progression. Let's consider Ab as a possibility. From this perspective:

Ab7(#9)	=	I
B/C	=	III
DbMaj7	=	IV
F#sus4/Eb	=	V
Fm7	=	VI

A progression that utilizes these chords, while respecting the rules of cadence, is III-VI-IV-I-V-III, which gives us:

B/C-Fm7-DbMaj7-Ab7(#9)-F#sus4/Eb-B/C.

That leaves us with the Gbsus2 and the B to work into our progression. Let's try B as a temporary key center. From that perspective DbMaj7 is the II, Gbsus2 is the V, B is the I, and Ab7(#9) is the VI. Since the sequence II-V-I-VI is a legitimate sequence, we can insert the Gbsus2-B in between the DbMaj7 and the Ab7(#9), like so:

B/C-Fm7-DbMaj7-Gbsus2-B-Ab7(#9)-F#sus4/Eb-B/C.



## Analysis

The image displays a musical score for a 4-bar excerpt. The top staff is a treble clef with a key signature of one flat (Bb) and a common time signature (C). The melody is written in a single line. Above the staff, four chord diagrams are provided for each bar: B/C, Fm7, DbMaj7, and Gbsus2. The bottom staff is a fretboard diagram with six strings and a key signature of one flat. The fret numbers are: 11, 14, 11, 12 for the first bar; 9 for the second bar; 9, 9, 8, 9 for the third bar; and 10, 9 for the fourth bar.

**Figure 11**

Figure 11 presents a 4-bar excerpt (bars 17-20) from the example file (\ExoticScales\CH11\example.pdf). Bar 1 begins with an Eb, which represents a minor third in terms of the B/C harmonic setting. Next we have an F#, functioning as a #4/5b (tritone), followed by another Eb. Finally, we have a B, which starts out functioning as a major seventh, then turns into a #4/b5 as it ties into the second bar where it sounds over an Fm7. The second bar ends on an Ab, which provides the Fm7's minor third. In bar 3, where we're playing over a DbMaj7, we start with a C, functioning here as a major seventh. This is followed by an Ab (the perfect fifth), then another C and another Ab. The bar ends with an F, which is the DbMaj7's major third. In the last bar, the Ab takes on the role of the suspended second against the Gbsus2 chord.

## Examples

Support materials may be found in the following locations on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com):

MIDI	\ExoticScales\CH11\example.midi
MP3	\ExoticScales\CH11\example.mp3
Transcription (PDF)	\ExoticScales\CH11\example.pdf
Jammer™	\ExoticScales\CH11\example.cm.p
Finale™	\ExoticScales\CH11\example.us
Cakewalk™	\ExoticScales\CH11\example.wrk
Noteworthy Composer	\ExoticScales\CH11\example.nwc

**Table 11-11**

### Modes of the Locrian $\flat 7$ Scale

Mode	Name	Intervals	Progression
2	Ionian #6	2212311	C M a $\flat$ 7 -G m 11/D -B b6/B -C M a $\flat$ 7 -E m 7 -F sus2 -A # -G 7 (#9) -C M a $\flat$ 7
3	Dorian Augmented	2123112	E b sus4/C -D m 7 -A b/A -F 7 (#9) -G #6 -E b sus2 -B b M a $\flat$ 7 -E b sus4/C
4	Phrygian #4	1231122	C m 7 -D b sus2 -E b 7 (#9) -C # sus4/B b -C m 7 -A b M a $\flat$ 7 -F #6 -F #6 9/G -C m 7
5	Lydian #3	2311221	C sus2 -D m 7/F # -D 7 (#9) -B m 7 -C sus2 -F add9/A -F 6 -G 7 -C sus2
6	Dominant #2	3112212	C 7 (#9) -C m 7/E -A m 7 -F 7/B b -D #6 -F M a $\flat$ 7 -E b add9/G -C 7 (#9)
7	Chromatic Hypodorian Inverse b4	1122123	C 6 -C add9/E -D M a $\flat$ 7 -A m 7/D b -G b m 7 -A 7 (#9) -G sus2 -C 6

**Table 11-12**

## Chapter 12—Dhenuka Scale (1 2 2 1 3 2 1)

### Dhenuka Overview

As we can see in Table 12-1, the Dhenuka scale is similar to the Locrian  $\flat 7$  scale, except for the presence of a major, rather than a minor sixth. This effectively moves the augmented interval down by two semitones. Like the Locrian  $\flat 7$  scale, the Dhenuka contains a minor third, so it's also basically a minor scale, and like the Locrian  $\flat 7$ , the presence of the major seventh makes it a min(Maj7) scale.

	1	2	3	4	5	6	7
Diatonic Major Scale	C	D	E	F	G	A	B
Locrian $\flat 7$ Scale	C	D $\flat$	E $\flat$	F	G $\flat$	A $\flat$	B
Dhenuka Scale	C	D $\flat$	E $\flat$	F	G $\flat$	A	B

**Table12-1**

Table 12-2 illustrates the first mode of the Dhenuka scale in twelve keys:

1	b2		b3		4	b5			6		7
C	D b		E b		F	G b			A		B
C #	D		E		F #	G			A #		B #
D	E b		F		G	A b			B		C #
E b	F b		G b		A b	B bb			C		D
E	F		G		A	B b			C #		D #
F	G b		A b		B b	C b			D		E
F #	G		A		B	C			D #		E #
G	A b		B b		C	D b			E		F #
A b	B		C b		D b	E bb			F		G
A	B b		C		D	E b			F #		G #
B b	C b		D b		E b	F b			F		A
B	C		D		E	F			F #		A #

**Table 12-2**

Here's a basic fingering pattern:

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
<i>(Eighth fret)</i>	<b>R</b>	4		b3		<b>R</b>
	b2	b5	7		6	b2
			<b>R</b>	4		
	b3		b2	b5	7	b3
		6				

**Table 12-3**

**I Chord:**

<b>C M ajor Scale:</b>	C		D		E	F		G		A		B
<b>D henuka 7 1<sup>st</sup> deg.:</b>	C	D b		E b		F	G b			A		B
<b>Results:</b>	1	b2		b3		4	b5			6		7

**Table 12-4**

We can't harmonize this one as a min(Maj7) because of the b5. Similarly, we can't call it a min7(b5) because of the major seventh.

A diminished will work, since it contains a 1, b3, and b5. Consequently we can use a Cdim7 for the I chord of our harmonized Dhenuka scale.

## II Chord:

Db Major Scale:	Db		Eb		F	Gb		Ab		Bb		C
Dhenuka 2 <sup>nd</sup> Deg.:	Db		Eb		F	Gb			A		B	C
Results:	1		2		3	4			#5		#6	7

**Table 12-5**

By comparing the notes of our Dhenuka scale, starting at the second degree (Db), with the normal step/half-step pattern of a diatonic major scale beginning at the same note, we discover that we have two options, depending upon how we choose to treat the #6. If we simply take the 1-3-#5-7, we have a major seventh augmented [Maj7(#5)]. On the other hand, we can also treat the #6 as a b7, in which case we have an altered dominant 7(#5). There's really nothing to recommend one approach over the other. This suggests that the Dhenuka scale can be played over either of these chord forms, providing that the root of the chord is one semitone above that of the scale. For the example tracks, I use the DbMaj7(#5), making a mental note to treat that #6 (B) with caution while soloing.

## III Chord:

Eb Major Scale:	Eb		F		G	Ab		Bb		C		D
Dhenuka 3 <sup>rd</sup> Deg.:	Eb		F	Gb			A		B	C	Db	
Results:	1		2	b3			#4		#5	6	b7	

**Table 12-6**

The third degree of our Dhenuka scale is Eb, a minor third. As before, we compare the Dhenuka mode starting at the third note of the scale with the diatonic major scale starting at the same note, in this case, Eb. The resulting chord would have to be a minor seventh with an augmented fifth—not a common chord. We could use an

augSus4 chord (1, 4, #5), which simply circumvents the b3 and the b7 altogether, but this misses all of the really interesting tones. An alternative approach would be to find a slash chord that captures the most interesting tones: the b3, #4, #5, and b7. Well, a B9 gives us our B (#5), a C# (b7), D# (1), F# (b3), And A (#4), which represent all of the significant tones we've identified. Therefore, we can play our C Dhenuka scale over a B9/Eb chord.

**IV Chord:**

F M a jor Scale:	F		G		A	B b		C		D		E
D henuka 4 <sup>th</sup> D eg.:	F	G b			A		B	C	D b		E b	
R esults:	1	b2			3		#4	5	b6		b7	
R esults (reint erpreted):	1	b9			3		#4	5	#5		b7	

**Table 12-7**

The major third and minor seventh make this a dominant seventh chord. The #4 (tritone) will also work well against the dominant tonality. The b9 and #5 can be incorporated as altered tones, voicing this chord as a 7(b9) or a 7(#5b9). We can thus apply a Dhenuka scale to a dominant seventh or altered dominant chord whose root is a perfect fourth (five semitones) above that of the scale; that is, we'd use a C Dhenuka scale over an F7(b9).

**V Chord:**

G b M a jor Scale:	G b		A b		B b	C b		D b		E b		F
D henuka 5 <sup>th</sup> D eg.:	G b			A		B	C	D b		E b		F
R esults:	1			#2		#3	#4	5		6		7
R esults:	1			b3		4	#4	5		6		7

**Table 12-8**

This is another situation in which we derive a min(Maj7) chord. We can therefore apply a Dhenuka scale to a min(Maj7) chord whose root is a diminished fifth (six semitones) above that of the scale. In C,

we'd play a C Dhenuka scale over a Gbmin(Maj7) chord.

### VI Chord:

A M ajor Scale:	A		B		C#	D		E		F#		G#
D henuka 6 <sup>th</sup> D eg.:	A		B	C	D b		E b		F	G b		
R esults:	1		2	b3	b4		b5		b6	bb7		

**Table 12-9**

As shown in Table 12-9, we can play the Dhenuka scale over a diminished seventh chord (1, b3, b5, bb7) whose root is a major sixth (nine semitones) above that of the scale. For the example tracks, the C Dhenuka scale is played over an Adim7 chord.

### VII Chord:

B M ajor Scale:	B		C#		D#	E		F#		G#		A#
D henuka 7 <sup>th</sup> D eg.:	B	C	D b		E b		F	G b			A	
R esults:	1	b2	bb3		b4		b5	bb6			b7	
R esults (reinterpreted):	1	b9	2		3		#4	5			b7	

**Table 12-10**

This is a situation in which the best solution is a dominant seventh, or an altered dominant chord. Hence, we should be able to play a C Dhenuka over a B7(b9) chord.

### Progression

Let's examine what kind of progression might provide a background for practicing our C Dhenuka scale. As we've seen, the chords we have to work with are:

Cdim, DbMaj7(#5), B9/Eb, F7(b9), Gbmin(Maj7), Adim7, B7(b9).

The chords that correspond to scale tones in the key of C are the Cdim (I), the F7(b9) (IV), the Adim7 (VI), and the B7(b9) (VII).

A basic progression that employs these chords, while respecting the rules of cadence, would be I-VII-VI-IV-I, which gives us:

Cdim-B7(b9)-Adim7-F7(b9)-Cdim.

That leaves the DbMaj7(#5), B9/Eb, and Gbmin(Maj7) to be integrated into the progression. If we look at the key of Db as a potential transient key center, we find that:

DbMaj7(#5)	=	I
B9/Eb	=	II
F7(b9)	=	III
Gbmin(Maj7)	=	IV
Cdim	=	VII

Since the sequence III-IV-VII-I-II-VII is consistent with the rules of cadence, we see that we can safely insert the subsequence Gbmin(Maj7)-Cdim-DbMaj7(#5)-B9/Eb between the F7(b9) and the Cdim of our original progression, like so:

Cdim-B7(b9)-Adim7-F7(b9)-Gbmin(Maj7)-Cdim-DbMaj7(#5)-B9/Eb-Cdim.



## Analysis

The figure displays two musical systems. The first system, labeled 'Melody', shows a treble clef staff with a 4/4 time signature. It contains two measures of music, each with four groups of triplets. Above the first measure is a chord diagram for C dim, and above the second measure is a chord diagram for B7(b9). Below the staff is a fretboard diagram with fret numbers: 11-0, 10-0, 10-11, 11-0, 11-0, 10-12, 10-11, 0-11, 0-10, 12-10, 11-10, 11-0, 11-10, 0-9.

The second system shows a treble clef staff with a 4/4 time signature. It contains two measures of music, each with a triplet of notes. Above the first measure is a chord diagram for A dim7, and above the second measure is a chord diagram for F7(b9). Below the staff is a fretboard diagram with fret numbers: 10-12, 10-12, 12-10, 12-9, 0.

**Figure 12**

A 4-bar excerpt (bars 19-22) from the example file (*\ExoticScales\CH12\example.pdf*) is shown in Figure 12. In bar 1, playing over a Cdim chord, we have an Eb (b3), C (root), and an A (bb7) in the first set of triplets. The second set of triplets contains a C (root), A (bb7), and an F# (b5). In the third set of triplets we get an A (bb7), F# (b5), and an Eb (b3). Finally, the final set of triplets contain the F# (b5), Eb (b3), and C (root). Hence, the first bar contains all chord tones outlining the Cdim7 arpeggio.

In bar 2, playing over a B7(b9) chord, the first set of triplets

contains a B (root), A (b7), and F#(5). The second set of triplets contains another A (b7), F# (5), and an Eb (major third). In the second half of the bar we begin with another F# (5), followed by an F, which is a #4/b5 (the tritone). Finally, we have an Eb (another major third), and a B (root).

In bar 3, we're playing over an Adim7 chord. In this setting, the C functions as a minor third, the A, of course, is the root note, followed by another C, another A, and finally, a C, which ties into the fourth bar, where it functions as a perfect fifth over the F7(b9) chord. Next we have an A, which acts as major third, an F#, which gives us our b9, and finally, we end on the F, the root note of the chord.

## Examples

Support materials may be found in the following locations on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com):

MIDI	\\ExoticScales\CH 12\exam ple.m id
M P3	\\ExoticScales\CH 12\exam ple.m p3
Transcription (PDF)	\\ExoticScales\CH 12\exam ple.pdf
Jam m er™	\\ExoticScales\CH 12\exam ple.cm p
Finale™	\\ExoticScales\CH 12\exam ple.m us
C akew alk™	\\ExoticScales\CH 12\exam ple.w rk
N otew orthy C om poser	\\ExoticScales\CH 12\exam ple.n w c

**Table 12-11**

### Modes of the Dhenuka Scale

M ode	N am e	I ntervals	P rogression
2	Ionian #5 #6	2213211	C M a7 (#5)-B badd9/B -E 7 (b9)-D m in 7 (b5)-A #7 (b9)-C M a7 (#5)-G #dim 7-F m in (M a7)-C M a7 (#5)
3	D orian A ugm ented #4	2132112	C m in 7 (b5)-D 7 (#5b9)-A b/A -B bM a7 (#5)-E b m in (M a7)-C m 7 (b5)-G #7 (b9)-F #dim 7-C m in 7 (b5)
4	Phrygian 3 #4	1321122	C 7 (b9)-F #9/B b-D b m in (M a7)-A bM a7 (#5)-F #add9/G -F #7 (b9)-E dim 7-C 7 (b9)
5	Lydian #2 #3	3211221	C m in (M a7)-F add9/F #-B 7 (b9)-A m in 7 (b5)-F 7 (b9)-D #dim 7-G 7 (#5)-C m in (M a7)
6	U ltra Locrian 2	2112213	C dim 7-G b m 7 (b5)-E M a7 (#5)-D 7 (b9)-D add9/E b-A b7 (b9)-A m in (M a7)-C dim 7
7	C hrom atic M ixolydian b4	1122132	C 7 (b9)-E m in 7 (b5)-G b7 (b9)-C add9/D b-D M a7 (#5)-B bdim 7-G m in (M a7)-C 7 (b9)

**Table 12-12**



## Chapter 13—The Locrian #2 $\flat_3$ Scale (3 1 1 1 2 2 2)

### Locrian #2 $\flat_3$ Overview

As we can see in Table 13-1, the Locrian #2  $\flat_3$  scale differs from the Locrian mode of the major scale only in that its  $\flat_2$  is replaced by a  $\flat_3$ ; that is, the original  $\flat_3$  is still there, but it now functions as a #2. This #2, introduces an augmented interval between the root and the augmented second, which is responsible for giving the scale its exotic sound. Since it contains both the augmented 2 ( $\flat_3$ ) and a major third, we can expect this scale to have an ambivalent minor-major feeling about it. Due to the presence of a minor seventh, it will assert itself as either a minor seventh or a dominant, depending on the harmonic setting.

	1	2	3	4	5	6	7
Diatonic Major Scale	C	D	E	F	G	A	B
Locrian Mode	C	$D \flat$	$E \flat$	F	$G \flat$	$A \flat$	$B \flat$
Locrian #2 $\flat_3$ Scale	C	<====>	$D \sharp$	E	$F$	$G \flat$	$B \flat$

**Table13-1**

Table 13-2 illustrates the first mode of the Locrian #2  $\flat_3$  scale in twelve keys:

1			#2	3	4	b5		b6		b7	
C			D #	E	F	G b		A b		B b	
C #			D ##	E #	F #	G		A		B	
D			E #	F #	G	A b		B b		C	
E b			F #	G	A b	B bb		C b		D b	
E			F ##	G #	A	B b		C		D	
F			G #	A	B b	C b		D b		E b	
F #			G ##	A #	B	C		D		E	
G			A #	B	C	D b		E b		F	
A b			B	C	D b	E bb		F b		G b	
A			B #	C #	D	E b		F		G	
B b			C #	D	E b	F b		G b		A b	
B			C ##	D #	E	F		G		A	

**Table 13-2**

Here's a basic fingering pattern:

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
<i>(Eighth fret)</i>	<b>R</b>	4	b7	#2		<b>R</b>
		b5		3	b6	
			<b>R</b>	4		
	#2	b6		b5	b7	#2
	3					3

**Table 13-3**

**I Chord:**

<b>C M ajor Scale:</b>	C		D		E	F		G		A		B
<b>Locrian #2 3 1<sup>st</sup> deg.:</b>	C			D #	E	F	G b		A b		B b	
<b>R results:</b>	1			#2	3	4	b5		b6		b7	
<b>R results (reinterpreted):</b>	1			#9	3	4	b5		b6		b7	

**Table 13-4**

This one harmonizes to another altered dominant; namely, a

7(b5#9). This means that we can play a Locrian #2 ♭3 over such a chord whose root is the same as the scale. For the examples, this will be a C7(b5#9).

### II Chord:

(D#) E♭ Major Scale:	E♭		F		G	A♭		B♭		C		D
Locrian #2 3 2 <sup>nd</sup> Deg.:	D#	E	F	G♭		A♭		B♭		C		
Results:	1	b2	bb3	bb4		bb5		bb6		bb7		
Results (reinterpreted):	1	b9	2	b3		4		5		6		

Table 13-5

By comparing the notes of our Locrian #2 ♭3 scale, starting at the second degree (D#), with the normal step/half-step pattern of a diatonic major scale beginning at the same note, we discover that we have a minor sixth chord (1, b3, 5, 6). For the example tracks we play a C Locrian #2 over a D#m6 chord.

### III Chord:

E Major Scale:	E		F#		G#	A		B		C#		D#
Locrian #2 3 3 <sup>rd</sup> Deg.:	E	F	G♭		A♭		B♭		C			D#
Results:	1	b2	bb3		b4		b5		b6			7
Results (reinterpreted):	1	b9	2		3		#4		#5			7

Table 13-6

The third degree of our Locrian #2 ♭3 scale is E, a major third. As before, we compare the Locrian #2 ♭3 mode starting at the third note of the scale with the diatonic major scale starting at the same note, in this case, E. The resulting chord is a major seventh augmented [Maj7(#5)] chord. Hence, we see that we can use the Locrian #2 ♭3 scale over a Maj7(#5) chord whose root is a major third (four semitones) above that of the scale. For the example tracks that works out to playing a C Locrian #2 ♭3 over an EMaj7(#5) chord.

## IV Chord:

F M a j o r S c a l e:	F		G		A	B b		C		D		E
L o c r i a n # 2 3 4 <sup>th</sup> D e g.:	F	G b		A b		B b		C			D #	E
R e s u l t s:	1	b2		b3		4		5			#6	7

**Table 13-7**

The minor third and major seventh make this a min(Maj7) chord. We can thus apply a Locrian #2 ♭3 scale to a min(Maj7) (or a min7) chord whose root is a perfect fourth (five semitones) above that of the scale; that is, we'd use a C Locrian #2 ♭3 scale over an Fmin(Maj7).

## V Chord:

G b M a j o r S c a l e:	G b		A b		B b	C b		D b		E b		F
L o c r i a n # 2 3 5 <sup>th</sup> D e g.:	G b		A b		B b		C			D #	E	F
R e s u l t s:	1		2		3		#4			##5	#6	7
R e s u l t s (r e i n t e r p r e t e d):	1		2		3		b5			6	b7	7

**Table 13-8**

After some prudent remapping, we see that we can interpret that #6 as a b7, and voice this chord as a 7(b5). We can therefore apply a Locrian #2 ♭3 scale to a 7(b5) chord whose root is a diminished fifth (six semitones) above that of the scale. In C, we'd play a C Locrian #2 ♭3 scale over a Gb7(b5) chord.



## VI Chord:

Ab Major Scale:	Ab	Bb	C	Db	Eb	F	G	
Locrian #2 3 6 <sup>th</sup> Deg.:	Ab	Bb	C		D#	E	F	Gb
Results:	1	2	3		#4	#5	6	b7
Results (reinterpreted):	1	2	3		5	#5	6	b7

**Table 13-9**

As shown in Table 13-9, we can play the Locrian #2  $\flat_3$  scale over a dominant seventh chord whose root is a minor sixth (eight semitones) above that of the scale. For the example tracks, the C Locrian #2  $\flat_3$  scale is played over an Ab7 chord.

## VII Chord:

Bb Major Scale:	Bb	C	D	Eb	F	G	A	
Locrian #2 3 7 <sup>th</sup> Deg.:	Bb	C		D#	E	F	Gb	Ab
Results:	1	2		#3	#4	5	b6	b7

**Table 13-10**

In this case, the absence of a third dictates that this be voiced as a sus2 chord. Hence, we should be able to play a C Locrian #2  $\flat_3$  over a Bbsus2 chord.

## Progression

Let's examine what kind of progression might provide a background for practicing our C Locrian #2  $\flat_3$ . As we've seen, the chords we have to work with are:

C7(b5#9), D#m6, EMaj7(#5), Fmin(Maj7), Gb7(b5), Ab7, Bbsus2 .

Since the majority of these chords fall outside of the scale tones in the key of C, we'll need to search for an alternative key

center to establish our progression. Let's consider Db as a possible key center. From this perspective:

(Eb) D#m6	=	II
Fmin(Maj7)	=	III
Gb7(b5)	=	IV
Ab7	=	V
Bbsus2	=	VI
C7(b5#9)	=	VII

A basic progression that utilizes these chords, while adhering to the rules of cadence is: VII-III-VI-II-VII-V-IV-VII, which gives us:

C7(b5#9)-Fmin(Maj7)-Bbsus2-D#m6-C7(b5#9)-Ab7-Gb7(b5)-C7(b5#9).

That leaves only the EMaj7(#5) to be integrated into the progression. In the key of C, C7(b5#9) is the I, EMaj7(#5) is the III, and Fmin(Maj7) is the IV. Since I-III-IV is a legitimate sequence, we can insert the EMaj7(#5) between the C7(b5#9) and the Fmin(Maj7) in our original progression, which gives us:

C7(b5#9)-EMaj7(#5)-Fmin(Maj7)-Bbsus2-D#m6-C7(b5#9)-Ab7-Gb7(b5)-C7(b5#9).

## Analysis

The figure displays a musical analysis of a 4-bar excerpt. At the top, four chords are identified: C7(b5 #9), EMaj7(#5), Fm(maj7), and Bbsus2. Each chord is accompanied by a guitar chord diagram. Below the diagrams is a treble clef staff labeled 'Melody' with a 4/4 time signature. The melody consists of the following notes: Bar 1: C4 (quarter), E4 (quarter), G4 (quarter), F#4 (quarter); Bar 2: Bb4 (quarter), Ab4 (quarter), Bb4 (quarter), Ab4 (quarter); Bar 3: F4 (quarter), Bb4 (quarter), Ab4 (quarter), F4 (quarter); Bar 4: F4 (quarter), C5 (quarter), Bb4 (quarter), F4 (quarter). Fingering numbers (1-3) are shown above the notes. Below the staff is a guitar fretboard diagram with six strings and four frets. The fret numbers are: Bar 1: 11, 9; Bar 2: 11, 9, 11; Bar 3: 10, 10, 10, 11, 9; Bar 4: 10, 10.

**Figure 13**

Figure 13 presents a 4-bar excerpt (19-22) from the example file (\ExoticScales\CH13\example.pdf). In the first bar, playing over a C7(b5#9) chord, the F# functions as a b5, and the Ab is a #5. In bar 2, we're playing over an EMaj7(#5). We start with a Bb, which represents a #4/b5 (the tritone), followed by an Ab (the major third), and another Bb. In bar 3, the first three notes are all F, which is the root tone of the Fm(Maj7). Next we have a Bb, which in this context functions as an 11<sup>th</sup>, and an Ab, which gives us a minor third. The last bar contains an F, which is the perfect fifth of the Bbsus2, followed by a C, which is our suspended second.

## Examples

Support materials may be found in the following locations on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com):

MIDI	\\ExoticScales\CH13\exam ple.m id
MP3	\\ExoticScales\CH13\exam ple.m p3
Transcription (PDF)	\\ExoticScales\CH13\exam ple.pdf
Jammer™	\\ExoticScales\CH13\exam ple.cm p
Finale™	\\ExoticScales\CH13\exam ple.m us
Cakewalk™	\\ExoticScales\CH13\exam ple.w rk
Noteworthy Composer	\\ExoticScales\CH13\exam ple.nw c

**Table 13-11**

### Modes of the Locrian #2 3 Scale

Mode	Name	Intervals	Progression
2	Double Flat	1112223	Cm 6-Dm in (M aj7)-A 7 (#5#9)-F7-D 7sus4/Eb-Cm 6-D bM aj7 (#5)-G sus2-Cm 6
3	Altered bb3 7	1122231	CM aj7 (#5)-Eb7-G bsus2-A b7 (#5#9)-D b7 (#9)-D 7 (b5)-Bm 6-CM aj7 (#5)
4	Neapolitan Major #6	1222311	Cm in (M aj7)-A #m 6-D b7 (b5)-Eb7-Cm (M aj7)-F sus2-BM aj7 (#5)-G 7 (#5#9)-Cm in (M aj7)
5	Lydian #5 #6	2223111	C 7 (b5)-F #7 (#5#9)-E sus2-D 7-A #M aj7 (#5)-Am 6-Bm 7-C 7 (b5)
6	Mixolydian Augmented #4	2231112	C 7 (#5)-Am in (M aj7)-Eb7 (#5#9)-D sus2-B b7 (b5)-C 7 (#5)-G #M aj7 (#5)-Gm 6-C 7 (#5)
7	Aeolian #3 #4	2311122	Gm 7/C - F #M aj7 (#5)-D 7 (#5#9)-B b7-Gm 7/C -A b7 (b5)-Fm 6-Gm in (M aj7)-Gm 7/C

**Table 13-12**

## Chapter 14—The Hungarian Major Scale (3 1 2 1 2 1 2)

### Hungarian Major Overview

As we can see in Table 14-1, the Hungarian Major scale bears little resemblance to the Hungarian Minor (which we'll examine in the next section), and the similarity of the names is probably coincidental. Although technically a major scale, the presence of a raised second (D#), which is identical with a minor third, suggests that this scale will have an ambiguous sound, particularly in its first degree.

	1	2	3	4	5	6	7
Diatonic Major Scale	C	D	E	F	G	A	B
Hungarian Minor Scale	C	D	E b	<====>	F#	G	A b
Hungarian Major Scale	C	<====>	D #	E	F#	G	A   B b

**Table 14-1**

Table 14-2 illustrates the first mode of the Hungarian Major scale in twelve keys:

1			#2	3		#4	5		6	b7	
C			D #	E		F #	G		A	B b	
D b			E	F		G	A b		B b	C b	
D			E #	F #		G #	A		B	C	
E b			F #	G		A	B b		C #	D b	
E			F # #	G #		A #	B		C #	D	
F			G #	A		B	C		D	E b	
G b			A	B b		C	D b		E b	F b	
G			A #	B		C #	D		E	F	
A b			B	C		D	E b		F	G b	
A			B #	C #		D #	E		F #	G	
B b			C #	D		E	F		G	A b	
B			C # #	D #		E #	F #		G #	A	

**Table 14-2**

Here's a basic fingering pattern:

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
<i>(Eighth fret)</i>	<b>R</b>		b7	#2	5	<b>R</b>
		#4		3		
		5	<b>R</b>		6	
	#2			#4	b7	#2
	3	6				3

**Table 14-3**

**I Chord:**

C M ajor Scale:	C		D		E	F		G		A		B
H ungarian M ajor 1 <sup>st</sup> deg.:	C		D #		E		F #	G		A	B b	
R esults:	1		#2		3		#4	5		6	b7	
R esults (reinterpreted):	1		#9		3		#4	5		6	b7	

**Table 14-4**

As we observed above, the augmented second will want to express itself as a minor third, which may lead to an ambiguous or dissonant situation. The basic chord is a dominant seventh (major

third with a minor seventh.). We can address the ambiguity explicitly by voicing this chord as a C7(#9).

**II Chord:**

D # (E b) M ajor Scale:	E b		F		G	A b		B b		C		D
H ungarian M ajor 2 <sup>nd</sup> D eg.:	D #	E		F#	G		A	B b		C		
R esults	1	b2		b3	b4		b5	bb6		bb7		
R esults (reinterpreted):	1	b2		#2	3		#4	5		6		

**Table 14-5**

As shown in Table 14-5, a bit of reinterpretation results in a somewhat more comprehensible situation. Still, there is going to be ambiguity between the #2 and the major third. We could call this as a D#m6 or a D#6 with equal potential for dissonance. Since we have neither an unaltered second nor a fourth, there’s no way to sidestep the issue by using a suspended chord. Instead, let’s consider a slash chord. A C7(b5) provides us with C (bb7), E (b3), F# (b3), A (b5), and Bb (bb6), which pretty much covers our significant tones. Hence, we can harmonize the second degree of the Hungarian Major scale as a C7(b5)/D# chord.

**III Chord:**

E M ajor Scale:	E		F#		G#	A		B		C#		D#
H ungarian M ajor 3 <sup>rd</sup> D eg.:	E		F#	G		A	B b		C			D#
R esults:	1		2	b3		4	b5		b6			7

**Table 14-6**

The third degree of our Hungarian Major scale is E, a major third. As usual, we compare the Hungarian Major mode starting at the third note of the scale with the diatonic major scale starting at the same note, in this case, E. As we can see, we can’t use a min(Maj7) because of the b5, so we’re going to have to search for an appropriate slash chord. A Cm7, we’ll discover, gives us a c (b6), Eb (7), G (b3),

and Bb (b5), which pretty much covers our most interesting chord tones. Therefore, we'll voice this one as a Cm7/E.

**IV Chord:**

F# M ajor Scale:	F#		G#		A#	B		C#		D#		E#
Hungarian M ajor 4 <sup>th</sup> Deg.:	F#	G		A	Bb		C			D#	E	
R esults:	1	b2		b3	b4		b5			6	b7	
R esults(reinterpreted):	1	b9		#9	3		b5			6	b7	

**Table 14-7**

The IV chord offers several possibilities. One approach is to call this as an F#7(b5#9), which accounts for the 1, the b3, the b4, the b5, and the b7, leaving little room for dissonance except for the b2. Perhaps an even better alternative is to use an F#7(b5b9), because the minor third is frequently used in soloing over a dominant seventh chord. This is the approach I use in the example tracks.

**V Chord:**

G M ajor Scale:	G		A		B	C		D		E		F#
Hungarian M ajor 5 <sup>th</sup> Deg.:	G		A	Bb		C			D#	E		F#
R esults:	1		2	b3		4			#5	6		7

**Table 14-8**

Well, we can't use a min(Maj7) because of the #5, and since there are no other common chord forms that do what we want, we'll have to search for a slash chord. The tones we'd like to cover are, obviously, the b3, #5, and 7. If we examine a Cm7(b5) chord, we'll discover that it offers us a C (4), Eb (#5), F# (7), and Bb (b3), which should work fine. Hence, we'll harmonize this chord as a Cm7(b5)/G.



## VI Chord:

A Major Scale:	A		B		C#	D		E		F#		G#
Hungarian Major 6 <sup>th</sup> Degree:	A	Bb		C			D#	E		F#	G	
Results:	1	b2		b3			#4	5		6	b7	

**Table 14-9**

As shown in Table 14-9, we can play the Hungarian Major scale over a minor seventh chord whose root is a major sixth (nine semitones) above that of the scale. The tritone (#5) is a bluesy note that will work well against the minor tonality of this harmonic environment. In the example this chord will be expressed as an Am7.

## VII Chord:

Bb Major Scale:	Bb		C		D	Eb		F		G		A
Hungarian Major 7 <sup>th</sup> Degree:	Bb		C			D#	E		F#	G		A
Results:	1		2			#3	#4		#5	6		7

**Table 14-10**

This is another situation in which we effectively have no third. A sus2 is out of the question because we also have no perfect fifth. That leaves us with just one choice: a BbaugSus4, but this is not a real common chord form, so once again, we'll have to resort to a slash chord. A C diminished seventh, we'll discover, offers up a C (2), D# (#3), F# (#5), and A (7), which pretty much covers our important tones. Hence, we'll harmonize the VII chord as a Cdim7/Bb.

## Progression

Let's examine what kind of progression might provide a background for improvising with our C Hungarian Major scale. As we've seen, the chords we have to work with are:

C7(#9), C7(b5)/D#, Cm7/E, F#7(b5b9), Cm7(b5)/G, Am7, Cdim7/Bb.

As usual, our goal is to assemble a progression that uses all of these chords, while respecting the common rules of cadence. The C scale-tone chords we have at our disposal are the C7(#9) (I), the Cm7/E (III), the Cm7(b5)/G (V), and the Am7 (VI). A progression that utilizes these chords is: I-VI-V-I, or:

C7(#9)-Am7-Cm7(b5)/G-C7(#9). (We've deliberately omitted the Cm7/E but will use it later.)

That leaves us with the C7(b5)/D#, the F#7(b5b9) and the Cdim7/Bb to deal with. Let's start by considering G as a temporary key center. From this perspective, Cm7(b5)/G is the I, F#7(b5b9) is the VII, Cm7/E is the VI, and C7(#9) is the IV. Since I-VII-VI-IV is a legitimate sequence, we can recast our progression as follows:

C7(#9)-Am7-Cm7(b5)/G-F#7(b5b9)-Cm7/E-C7(#9).

Next we need to do something with that Cdim7/Bb, and the C7(b5)/D# (noting that D# is enharmonically equivalent to Eb.) In the key of Bb, Am7 is the VII, Cdim7/Bb is the I, C7(#9) is the II, C7(b5)/D# is the IV, and Cm7(b5)/G is the VI. Since VII-I-II-IV-VI is a permissible sequence, we can insert the Cdim7/Bb-C7(#9)-C7(b5)/D# between the Am7 and the Gm(Maj7), like this:

C7(#9)-Am7-Cdim7/Bb-C7(#9)-C7(b5)/D#-Cm7(b5)/G-F#7(b5b9)-Cm7/E-C7(#9).

## Analysis

The image shows a musical score for a guitar. The top staff is a treble clef with a key signature of one flat (Bb). The melody consists of four bars. Above the staff, four chords are indicated: C7(9), Am7, Cdim7/Bb, and C7(9). Each chord has a corresponding fretboard diagram showing the fingerings for the notes. The bottom staff is a guitar fretboard with six strings and a key signature of one flat. The fretboard shows the following fret numbers for the melody notes: Bar 1: 0, 11, 0, 11, 0; Bar 2: 11, 9, 0, 10, 0; Bar 3: 0, 10, 0; Bar 4: 10, 10, 0, 0.

**Figure 14**

In Figure 14 we examine the first 4 bars of the example file (\ExoticScales\CH14\example.pdf). In bar 1, playing over a C7(#9), the first two notes are C, which is the root tone of the chord. Next, the Bb provides the minor seventh of the C7(#9). The remaining two notes in bar 1 are both C. Bar 2 starts off with a Bb, which, in the context of the Am5, functions as a b9. This is yet another example of how an ordinarily dissonant tone (the b2) can sound good in the right musical context. Next, the G gives us a minor seventh, followed by an E (a perfect fifth), and an Eb (the tritone). In Bar 3, we're playing over a Ddim7/Bb. In this context (Bb), that leading C is a 9<sup>th</sup>, the A functions as a major seventh, and the G is a 6<sup>th</sup>. The last note, another C, ties into the fourth bar, where its function changes from the 9<sup>th</sup> of Bb to the root of the C7(#9). Moving along in bar 4, we have another C, an Eb (#9), an E (major third), and finally, a G (perfect fifth).

## Examples

Support materials may be found in the following locations on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com):

MIDI	\\ExoticScales\CH 14\exam ple.m id
M P3	\\ExoticScales\CH 14\exam ple.m p3
Transcription (PDF)	\\ExoticScales\CH 14\exam ple.pdf
Jam m er™	\\ExoticScales\CH 14\exam ple.cm p
Finale™	\\ExoticScales\CH 14\exam ple.m us
C akew alk™	\\ExoticScales\CH 14\exam ple.w rk
Noteworthy Composer	\\ExoticScales\CH 14\exam ple.nw c

**Table 14-11**

### Modes of the Hungarian Major Scale

M ode	N am e	Intervals	Progression
2	A lttbb6 bb7	1212123	C -A 7 (#9)-C 6/D b-G bm 7-E b7 (b5#9)-C m 6/E -C dim 7/G -C
3	Locrian 2 7	2121231	B 6/C - A b7 (#9)- B dim 7/G b-A bm 7 (b5)/E b-D 7 (b5#9)-F m 7-B dim 7- B 6/C
4	A ltered 6	1212312	C m 7 (b5)-A m 6/D b-E bm 7-C m 7 (b5)-A dim 7/E -A 6-A 6/B b-G b7 (#9)- C m 7 (b5)
5	M elodic A ugm ented	2123121	F m in7 (b5)/C - G #dim 7-D dim 7/E b -D m 7-F m 7/A -F7 (#9)-B m in7 (b5)- F m in7 (b5)/C
6	D orian b2 #4	1231212	C m 7-C dim 7/D b-F #dim 7-C m 7-E bm 7 (b5)/B b-A 7 (b5#9)-C m 7-F #/G - E b7 (#9)-C m 7
7	Lydian A ugm ented #3	2312121	D dim 7/C -D m 7 (b5)/A -G #7 (b5#9)-D m 7/F # -D 7 (#9)-F dim 7-B m 7- D dim 7/C

**Table 14-12**

## Chapter 15—The Sambah Scale ( 2 1 1 3 1 2 2 )

### Sambah Overview

As shown in Table 15-1, the Sambah resembles the Aeolian mode of the Diatonic Major scale, with the exception that the fourth degree is lowered by one semitone. This has the effect of introducing an augmented interval (three semitones) between the diminished fourth and perfect fifth degrees. The presence of a minor third and a diminished fourth (which is enharmonically equivalent to a major third) suggests that this scale will have an ambiguous tonality. Coupled with the minor seventh, these two tones will make this sound like either a minor seventh or a dominant scale, depending on the harmonic setting.

	1	2	3	4	5	6	7
Diatonic Major Scale	C	D	E	F	G	A	B
Aeolian (Natural Minor)	C	D	E $\flat$	F	G	A $\flat$	B $\flat$
Sambah Scale	C	D	E $\flat$	F $\flat$	<====>	G	A $\flat$

**Table 15-1**

Table 15-2 illustrates the first mode of the Sambah scale in twelve keys:

1		2	b3	b4			5	b6		b7	
C		D	E b	F b			G	A b		B b	
C #		D #	E	F			G #	A		B	
D		E	F	G b			A	B b		C	
D #		E #	F #	G			A #	B		C #	
E		F #	G	A b			B	C		D	
F		G	A b	B b b			C	D b		E b	
F #		G #	A	B b			C #	D		E	
G		A	B b	C b			D	E b		F	
G #		A #	B	C			D #	E		F #	
A		B	C	D b			E	F		G	
A #		B #	C #	D			E #	F #		G #	
B		C #	D	E b			F #	G		A	

**Table 15-2**

Here's a basic fingering pattern:

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
<i>(Eighth fret)</i>	<b>R</b>		b7	b3	5	<b>R</b>
				b4	b6	
	2	5	<b>R</b>			2
	b3	b6			b7	b3
	b4		2			b4

**Table 15-3**

**I Chord:**

<b>C M ajor Scale:</b>	C		D		E	F		G		A		B
<b>Sam bah 1<sup>st</sup> deg.:</b>	C		D	E b	F b			G	A b		B b	
<b>R esults:</b>	1		2	b3	b4			5	b6		b7	
<b>R esults (reinterpreted):</b>	1		2	#9	3			5	#5		b7	

**Table 15-4**

As discussed above, this scale can be harmonized as either a minor seventh or a dominant seventh, depending on how we choose

to interpret the minor third and the diminished fourth. If we interpret the chord as a minor seventh, this leaves that diminished fourth sort of hanging, just waiting to cause trouble for our solos. If, on the other hand, we take the altered dominant option, we can deal with this confusion explicitly, eliminating any potential for ambiguity. With this in mind, in the example tracks I play a C Sambah scale over a C7(#9) chord.

**II Chord:**

D Major Scale:	D		E		F#	G		A		B		C#
Sambah 2 <sup>nd</sup> Deg.:	D	E <sup>b</sup>	F <sup>b</sup>			G	A <sup>b</sup>		B <sup>b</sup>		C	
Results:	1	b2	bb3			4	b5		b6		b7	
Results (reinterpreted):	1	b9	2			4	#4		#5		b7	

**Table 15-5**

Okay, no third and no fifth makes this one a bit difficult. As we’ve seen before, one possibility is to use an augmented suspended fourth, however, since that isn’t the most common of chords, and also, doesn’t really account for all of our important tones, a better bet might be to search for an appropriate slash chord. If we analyze an AbMaj9, we’ll discover that it contains the Ab (b5), C (b7), Eb (b9), G (4), and Bb (b6), which pretty much covers our more interesting tones. Hence, it appears as if we can harmonize this scale tone as an AbMaj9/D.

**III Chord:**

E <sup>b</sup> Major Scale:	E <sup>b</sup>		F		G	A <sup>b</sup>		B <sup>b</sup>		C		D
Sambah 3 <sup>rd</sup> Deg.:	E <sup>b</sup>	F <sup>b</sup>			G	A <sup>b</sup>		B <sup>b</sup>		C		D
Results:	1	b2			3	4		5		6		7

**Table 15-6**

The third degree of our Sambah scale is Eb, a minor third. As before, we compare the Sambah mode starting at the third note of the scale with the diatonic major scale starting at the same note, in this

case, Eb. The harmonized scale that results is a major seventh. This tells us that we can generally apply the Sambah scale to a major seventh chord whose root is a minor third (three semitones) above that of the scale. For the example tracks I play a C Sambah over an EbMaj7 chord.

### IV Chord:

(Fb) E M a j o r S c a l e:	E		F#		G#	A		B		C#		D#
S a m b a h 4 <sup>th</sup> D e g.:	Fb			G	A b		B b		C		D	E b
R e s u l t s:	1			#2	3		#4		#5		#6	7
R e s u l t s (r e i n t e r p r e t e d):	1			#9	3		#4		#5		b7	

**Table 15-7**

After a bit of renumbering, it's clear that this will be another altered dominant chord. For the examples I'll use a 7(#5#9), playing a C Sambah over an E7(#5#9) chord.

### V Chord:

G M a j o r S c a l e:	G		A		B	C		D		E		F#
S a m b a h 5 <sup>th</sup> D e g.:	G	A b		B b		C		D	E b	F b		
R e s u l t s:	1	b2		b3		4		5	b6	bb7		

**Table 15-8**

The 1, b3, 5, and 6 (bb7), indicates a minor sixth chord. Thus, we'll apply a C Sambah scale over an Gm6 chord.



## VI Chord:

Ab Major Scale:	Ab		Bb		C	D	Eb		F		G
Sambah 6 <sup>th</sup> Deg.:	Ab		Bb		C		D	Eb	Fb		G
Results:	1		2		3		#4	5	b6		7
Results (reinterpreted):	1		2		3		#11	5	b6		7

**Table 15-9**

As shown in Table 15-9, we can play the Sambah scale over a major seventh chord whose root is a minor sixth (eight semitones) above that of the scale. For the example tracks I use a C Sambah over an AbMaj7(#11) chord.

## VII Chord:

Bb Major Scale:	Bb		C		D	Eb		F		G		A
Sambah 7 <sup>th</sup> Deg.:	Bb		C		D	Eb	Fb			G	Ab	
Results:	1		2		3	4	b5			6	b7	

**Table 15-10**

Here again we have an altered dominant chord. Accordingly, for the examples I play a C Sambah over a Bb7(b5).

## Progression

Let's examine what kind of progression might provide a background for practicing our C Sambah scale. As we've seen, the chords we have to work with are:

C7(#9), AbMaj9/D, EbMaj7, E7(#5#9), Gm6, AbMaj7(#11), Bb7(b5).

As before, our goal is to assemble a progression that uses all of these chords, while respecting the common rules of cadence. The C scale-tone chords we have at our disposal are the C7(#9) (I), AbMaj9/D (II), E7(#5#9) (III), and Gm6 (V). A progression that utilizes these chords is: I-III-II-V-I, or:

C7(#9)-E7(#5#9)-AbMaj9/D-Gm6-C7(#9).

That leaves us with the EbMaj7, the AbMaj7(#11), and the Bb7(b5) to deal with. Let's consider Eb as a temporary key center. From this perspective:

EbMaj7	=	I
Gm6	=	III
AbMaj7(#11)	=	IV
Bb7(b5)	=	V
C7(#9)	=	VI
AbMaj9/D	=	VII

Since VII-I-VI-IV-V-III is a legal sequence, we see that we can insert the subsequence I-IV-V [EbMaj7-C7(#9)-AbMaj7(#11)-Bb7(b5)] between the VII (AbMaj9/D) and the III (Gm6) in our original progression, yielding:

C7(#9)-E7(#5#9)-AbMaj9/D-EbMaj7-C7(#9)-AbMaj7(#11)-Bb7(b5)-Gm6-C7(#9).

## Analysis

The image displays a musical analysis of a 4-bar excerpt. At the top, four chord diagrams are shown with their corresponding labels: C7(#9), E7(#5#9), AbMaj9/D, and EbMaj7. Below these is a treble clef staff labeled 'Melody' with a 4/4 time signature. The melody consists of the following notes: Bar 1: E4, Eb4, E4, Eb4; Bar 2: E4, G4, E4, C4; Bar 3: Bb4, Ab4, Bb4, G4; Bar 4: G4, F4, E4, D4. Below the treble staff is a guitar fretboard diagram with six strings and a 12-fret scale. The fretboard shows the following fret numbers: Bar 1: 6, 6, 6, 6; Bar 2: 9, 12, 9, 9; Bar 3: 11, 9, 11, 9; Bar 4: 8, 8, 8, 8.

**Figure 15**

Figure 15 illustrates a 4-bar excerpt (bars 10-13) from the example file (\ExoticScales\CH15\example.pdf). In bar 1, playing over a C7(#9), we have a succession of E (major third) and Eb (#9) notes. In bar 2 we're playing over an E7(#5#9). In this context, the E represents a root note and the D is a minor seventh. Next we have another E, followed by a G, which here functions as our #9. Finally, we end the bar with a C, which gives us our #5. In bar 3, playing over an AbMaj9/D, we have a Bb (#5, in the context of D), an Ab (tritone), followed by another Bb and another Ab. The last note, a G, functions as an 11<sup>th</sup>, then ties into bar 4, where it takes on the role of a major third when played over the EbMaj7 chord.

## Examples

Support materials may be found in the following locations on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com):

MIDI	\\ExoticScales\CH 15\exam ple.m id
M P3	\\ExoticScales\CH 15\exam ple.m p3
Transcription (PDF)	\\ExoticScales\CH 15\exam ple.pdf
Jam mer™	\\ExoticScales\CH 15\exam ple.cm p
Finale™	\\ExoticScales\CH 15\exam ple.m us
Cakewalk™	\\ExoticScales\CH 15\exam ple.w rk
Noteworthy Composer	\\ExoticScales\CH 15\exam ple.nw c

**Table 15-11**

### Modes of the Sambah Scale

Mode	Name	Intervals	Progression
2	Locrian bb3	1131222	D 7 (b5)/C -D 7 (#5#9)-Fm 6-B b7 (#9)-D 7 (b5)/C -D bM a7-A b7 (b5)-G bM a7-D 7 (b5)/C
3	Raga Supradhipam	1312221	C M a7-D b7 (#5)/B -E m 6-D b7 (#5#9)-A 7 (#9)-F M a7 (#11)-G 7 (b5)-C M a7
4	Lydian Augmented #2 #6	3122211	C 7 (#5#9)-G #7 (#9)-B M a7-E M a7-F #7 (b5)-D #m 6-B M a7 (#5)/A #-C 7 (#5#9)
5	Malini	1222113	C m 6-A 7 (#5#9)-F 7 (#9)-A M a7 (#5)/G -A bM a7-C m 6-D bM a7-E b7 (b5)-C m 6
6	Mela Latangi	2221131	C M a7-C M a7 (#5)/F #-B m 6-E 7 (#9)-D 7 (b5)-G M a7-A b7 (#5#9)-C M a7
7	Ionian b5 b7	2211312	C 7 (b5)-B bM a7-A m 6-G b7 (#5#9)-D 7 (#5#9)/E -D m 7-F M a7-C 7 (b5)

**Table 15-12**

## **Part IV: Exotic Scales With Two Augmented Intervals**

An *augmented interval* refers to a pair of notes separated by *three* semitones. Scales containing one or more augmented intervals tend to sound more exotic, and are more difficult to harmonize and apply than scales build solely on one- and two-semitone divisions. The scales presented in this section all contain two augmented intervals.



## Chapter 16—The Hungarian Minor Scale (2 1 3 1 1 3 1)

### Hungarian Minor Overview

As we saw when we examined the Harmonic Minor, the combination of a major seventh and a minor sixth introduced an augmented interval between the two notes. This gave the Harmonic Minor an unusual and somewhat exotic sound. The Hungarian Minor resembles the Harmonic Minor, with the exception of an augmented fourth, which introduces yet another augmented interval (between the minor third and the augmented fourth). This also adds a considerable feeling of chromaticism in the #4-5-b6 sequence.

	1	2	b3	4	5	b6	b7	7
Natural M inor Scale	C	D	E b	F	G	A b	B b	
H armonic M inor Scale	C	D	E b	F	G	A b	<====>	B
H ungarian M inor Scale	C	D	E b	<====>	F#	G	A b	<====> B

**Table 16-1**

Table 16-1 shows the Hungarian Minor compared to both the Harmonic Minor and the Natural Minor scales. As can easily be seen, the Harmonic Minor is derived from the Natural Minor by raising the minor seventh to a major seventh. This results in improved cadence because harmonizing the scale places a dominant seventh chord in the V position. The Hungarian Minor can be derived from the Harmonic Minor by replacing the perfect fourth with an augmented fourth.

Clearly, this structure retains the cadential advantages of the Harmonic Minor, while introducing an additional augmented interval.

Table 16-2 illustrates the first mode of the Hungarian Minor scale in twelve keys:

1		2	b3			#4	5	b6			7
C		D	E <sup>b</sup>			F <sup>#</sup>	G	A <sup>b</sup>			B
C <sup>#</sup>		D <sup>#</sup>	E			F <sup>##</sup>	G <sup>#</sup>	A			B <sup>#</sup>
D		E	F			G <sup>#</sup>	A	B <sup>b</sup>			C <sup>#</sup>
E <sup>b</sup>		F	G <sup>b</sup>			A	B <sup>b</sup>	C <sup>b</sup>			D
E		F <sup>#</sup>	G			A <sup>#</sup>	B	C			D <sup>#</sup>
F		G	A <sup>b</sup>			B	C	D <sup>b</sup>			E
F <sup>#</sup>		G <sup>#</sup>	A			B <sup>#</sup>	C <sup>#</sup>	D			E <sup>#</sup>
G		A	B <sup>b</sup>			C	D	E <sup>b</sup>			F <sup>#</sup>
A <sup>b</sup>		B <sup>b</sup>	C <sup>b</sup>			D	E <sup>b</sup>	F <sup>b</sup>			G
A		B	C			D <sup>#</sup>	E	F			G <sup>#</sup>
B <sup>b</sup>		C	D <sup>b</sup>			<sup>#</sup>	F	G <sup>b</sup>			A
B		C <sup>#</sup>	D			E <sup>#</sup>	F <sup>#</sup>	G			A <sup>#</sup>

**Table 16-2**

Here's a basic fingering pattern:

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
<i>(Eighth fret)</i>	<b>R</b>			b3	5	<b>R</b>
		#4	7		b6	
	2	5	<b>R</b>			2
	b3	b6		#4		b3
			2		7	

**Table 3-3**

Well, let's get down to business and start harmonizing this new scale.

**I Chord:**

C Major Scale:	C		D		E	F		G		A		B
Hungarian M in. 1 <sup>st</sup> deg.:	C		D	E <sup>b</sup>			F <sup>#</sup>	G	A <sup>b</sup>			B
Results:	1		2	b3			#4	5	b6			7

**Table 16-4**



Starting with the first degree and stacking thirds, we see that we have a 1-b3-5-7. This is a min(maj7). We see, therefore, that we can use the Hungarian Minor scale over a min(maj7) chord whose root is the same as that of the scale. In the key of C this would be a Cmin(Maj7). The tritone (#4) will add a bluesy twang against the minor tonality of this chord.

### II Chord:

D Major Scale:	D		E		F#	G		A		B		C#
Hungarian M in. 2 <sup>nd</sup> Deg.:	D	E b			F#	G	A b			B	C	
Results:	1	b2			3	4	b5			6	b7	

Table 16-5

By comparing the notes of our Hungarian Minor scale, starting at the second degree (D), with the normal step/half-step pattern of a diatonic major scale beginning at the same note, we discover that the resulting chord is a dominant seventh with a diminished fifth. Thus, we can play the Hungarian Minor scale over a 7(b5) chord whose root is two semitones above that of the scale; that is, we'd play a C Hungarian Minor over a D7(b5) chord.

### III Chord:

E b Major Scale:	E b		F		G	A b		B b		C		D
Hungarian M in. 3 <sup>rd</sup> Deg.:	E b			F#	G	A b			B	C		D
Results:	1			#2	3	4			#5	6		7

Table 16-6

The third degree of our Hungarian Minor scale is Eb, a minor third. As always, we compare the Hungarian Minor mode starting at the third note of the scale with the diatonic major scale starting at the same note, in this case, Eb. This will be a major seventh augmented chord (1,3,#5,7), but we're going to have to be a bit careful of that

#2, since it will tend to sound like a minor third. In our example we use the C Harmonic Minor scale over an EbMaj7(#5) chord.

### IV Chord:

F# M ajor Scale:	F#		G#		A#	B		C#		D#		E#
H ungarian M in. 4 <sup>th</sup> D eg.:	F#	G	A b			B	C		D	E b		
R esults:	1	b2	bb3			4	b5		b6	bb7		

**Table 16-7**

The diminished (double flatted) third means this chord will effectively have no third. Ordinarily, this would indicate a suspended 2 or a suspended 4 chord, but the absence of a perfect fifth precludes this easy solution. Consequently, we're compelled to search for a slash chord to cover our harmonized tones. An AbMaj7, we'll discover, offers us the Ab (bb3), C (b5), Eb (bb7), and G (b2). Hence, we can harmonize this scale degree as an AbMaj7/F#.

### V Chord:

G M ajor Scale:	G		A		B	C		D		E		F#
H ungarian M in. 5 <sup>th</sup> D eg.:	G	A b			B	C		D	E b			F#
R esults:	1	b2			3	4		5	b6			7

**Table 16-8**

The major third and major seventh means we have a major seventh chord. We can apply a Hungarian Minor scale to a major seventh chord whose root is a perfect fifth (seven semitones) above that of the scale. In C, we'd play a C Hungarian Minor scale over a GMaj7.

## VI Chord:

A b M a j o r S c a l e:	A b		B b		C	D b		E b		F		G
H u n g a r i a n . M i n o r i n 6 <sup>th</sup> D e g .:	A b		B	C		D	E b			F #		G
R e s u l t s:	1		#2	3		#4	5			#6		7
R e s u l t s ( r e i n t e r p r e t e d ):	1		#9	3		#4	5			b7		7

**Table 16-9**

As shown in Table 16-9, we *could* play the Hungarian Minor scale over a Maj7 or Maj7(#11) chord whose root is a minor sixth (eight semitones) above that of the scale. However, we'd need to be a little cautious of that #2, which will tend to sound like a minor third, and also of that #6, which will want to sound like a minor seventh. Another alternative is to play the C Hungarian Minor over an Ab7(#9), in other words, treat the #6 as a b7, and the #2 as a #9. We'll still have to be a bit careful with the Eb and the G, but as the examples will indicate, this approach works out nicely.

## VII Chord:

B M a j o r S c a l e:	B		C #		D #	E		F #		G #		A #
H u n g a r i a n M i n o r i n 7 <sup>th</sup> D e g .:	B	C		D	E b			F #	G	A b		
R e s u l t s:	1	b2		b3	b4			5	b6	bb7		
R e s u l t s ( r e i n t e r p r e t e d ):	1	b2		b3	b4			5	b6	6		

**Table 16-10**

This one is a toughie. The b3 and the bb7 suggest a diminished seventh, but we don't have a diminished fifth. Our best bet is probably to treat that bb7 as a sixth, and voice the chord as a minor sixth (1, b3, 5, 6). We will, of course, have to exercise some caution playing that G (b6), as well as the Eb (b4). Let your ears be your guide. For the example I'll be playing a C Hungarian Minor over a Bm6 chord.

## Progression

Let's examine what kind of progression might provide a

background for practicing our C Hungarian Minor scale. As we've seen, the chords we have to work with are:

Cmin(Maj7), D7(b5), EbMaj7(#5), AbMaj7/F#, GMaj7, Ab7(#9), Bm6.

Our goal, once again, is to assemble a progression that uses all of these chords, while respecting the common rules of cadence. The C scale-tone chords we have at our disposal are the Cmin(Maj7) (I), the D7(b5) (II), the Gmaj7 (V) and the Bm6 (VII). A progression that utilizes these chords is: I-II-VII-V-I, or:

Cmin(Maj7)- D7(b5)- Bm6- GMaj7-Cmin(Maj7).

That leaves us with the EbMaj7(#5), the F#sus4, and the Ab7(#9) to deal with. Let's consider Eb as a temporary key center. From this perspective:

EbMaj7(#5)	=	I
Gmaj7	=	III
Ab7(#9)	=	IV
Cmin(Maj7)	=	VI
D7(b5)	=	VII

Since III-VI-IV-I-VI is a permissible sequence, we can add Cm(Maj7)-Ab7(#9)-EbMaj7(#5) between the Gmaj7 and the Cmin(Maj7) of our initial progression, like so:

Cmin(Maj7)- D7(b5)- Bm6- Gmaj7-Cmin(Maj7)-Ab7(#9)-EbMaj7(#5) -Cmin(Maj7).

Switching now to the key of G, AbMaj7/F# will be the VII, Cmin(Maj7) is the IV, and D7(b5) is the V. Since IV-VII-V is an approved sequence, we can insert the AbMaj7/F# between the Cmin(Maj7) and the D7(b5), which gives us:

Cmin(Maj7)-AbMaj7/F#-D7(b5)- Bm6- Gmaj7-Cmin(Maj7)-Ab7(#9)-EbMaj7(#5) -Cmin(Maj7).

## Analysis

The diagram illustrates the first four bars of a musical example. At the top, four chord diagrams are shown: Cm(maj7), AbMaj7/F#, D7(b5), and Bm6. Below these is a melody line in treble clef with a key signature of one sharp (F#). The melody consists of the following notes: Bar 1: C4 (quarter), B4 (quarter), G4 (quarter), F#4 (quarter); Bar 2: D5 (quarter), Eb5 (quarter), F#4 (quarter), G4 (quarter); Bar 3: F#4 (quarter), G4 (quarter), Ab4 (quarter), G4 (quarter); Bar 4: F#4 (quarter), G4 (quarter), Ab4 (quarter), G4 (quarter). Below the melody line is a guitar fretboard diagram with six strings and a capo on the 9th fret. The fret numbers for each string are: Bar 1: 9, 10, 10, 8; Bar 2: 10, 11, 9, 10, 11; Bar 3: 9; Bar 4: 9.

Figure 16

Figure 16 illustrates the first 4 bars of the example file (\ExoticScales\CH16\example.pdf). In the first bar, playing over a Cm(Maj7), the B gives us our major seventh, the G is a perfect fifth, the D is a ninth, and the C provides the chord root. In bar 2, we're playing over an AbMaj7/F#. In the context of the F# root, the D functions as a #5, the Eb is a 6<sup>th</sup>, the F#, of course, is the root note, and the G is a b9. The last note in the bar is an Ab, which starts out functioning as a 9<sup>th</sup>, then ties into bar 3, where it becomes the b5 when played over a D7(b5) chord. Next in bar 3 we have an F#, which works as a major third in the context of the D7(b5), then ties into bar 4, where it's the perfect fifth of the Bm6.

## Examples

Support materials may be found in the following locations on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com):

MIDI	\\ExoticScales\CH 16\exam ple.m id
M P3	\\ExoticScales\CH 16\exam ple.m p3
Transcription (PDF)	\\ExoticScales\CH 16\exam ple.pdf
Jam m er™	\\ExoticScales\CH 16\exam ple.cm p
Finale™	\\ExoticScales\CH 16\exam ple.m us
Cakewalk™	\\ExoticScales\CH 16\exam ple.w rk
Noteworthy Composer	\\ExoticScales\CH 16\exam ple.nw c

**Table 16-11**

### Modes of the Hungarian Minor Scale

M ode	N am e	Intervals	Progression
2	O riental	1311312	C 7 (b5b9)-A m 6-F#M a7/E -C 7 (b5b9)-Fm a7-D bM a7(#5)-C 7 (b5b9)-B b m in (M a7)-G b7 (#9)-C 7 (b5b9)
3	Ionian A ugm ented #2	3113121	C M a7(#5)-B 7 (b5)-A m in (M a7)-E m a7-F 7 (#9)-C M a7(#5)-G #m 6-F M a7/D # -C M a7(#5)
4	Locrian bb3 bb7	1131213	D M a7/C -D 7 (#9)-A M a7(#5)-A b 7 (b5b9)-G b m in (M a7)-D b M a7-F d im 7-D M a7/C
5	Byzantine	1312131	C M a7-D b7 (#9)-A b M a7(#5)-C M a7-F m in (M a7)-C #M a7/B -E m 6-G 7 (b5b9)-C M a7
6	Lydian #6 #2	3121311	C 7 (#9)-C M a7/A #-E m in (M a7)-F #7 (b5b9)-D #m 6-B M a7-G M a7(#5)-C 7 (#9)
7	A lt bb7	1213113	C m 6-E M a7(#5)-A 7 (#9)-A b M a7-E b7 (b5b9)-D b m in (m a7)-A M a7/G -C m 6

**Table 16-12**

**Chapter 17—The Enigmatic Minor Scale (1 2 3 1 3 1 1)**

**Enigmatic Minor Overview**

As Table 17-1 illustrates, the Enigmatic Minor most closely resembles the Dorian b2 #4 (sixth mode of the Hungarian Major scale). The Enigmatic Minor can be derived from the Dorian b2 #4 by simply raising the sixth degree. The augmented sixth introduces a second augmented interval between the fifth and sixth degrees, which gives the Enigmatic Minor an even more exotic sound than other scales with just a single augmented interval.

	1		2		3	4		5		6		7
Major Scale	C		D		E	F		G		A		B
Dorian b2 #4	C	D b		E b	<====>	F #	G		A			B
Enigmatic Minor Scale	C	D b		E b	<====>	F #	G	<====>		A #		B

**Table 17-1**

Table 17-2 illustrates the first mode of the Enigmatic Minor scale in twelve keys:

1	b2		b3			#4	5			#6	7
C	D b		E b			F #	G			A #	B
C #	D		E			F ##	G #			A ##	B #
D	E b		F			G #	A			B #	C #
D #	E		F #			G ##	A #			B ##	C ##
E	F		G			A #	B			C ##	D #
F	G b		A b			B	C			D #	E
F #	G		A			B #	C #			D ##	E #
G	A b		B b			C #	D			E #	F #
G #	A		B			C ##	D #			E ##	F ##
A	B b		C			D #	E			F ##	G #
B b	C b		D b			E	F			G #	A
B	C		D			E #	F #			G ##	A #

**Table 17-2**

Here's a basic fingering pattern:

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
<i>(Eighth fret)</i>	<b>R</b>		#6	b3	5	<b>R</b>
	b2	#4	7			b2
		5	<b>R</b>			
	b3		b2	#4	#6	b3
					7	

**Table 17-3**

Well, let's get started harmonizing this new scale.

**I Chord:**

<b>C M ajor Scale:</b>	C		D		E	F		G		A		B
<b>Enigmatic M in 1<sup>st</sup> deg.:</b>	C	D b		E b			F #	G			A #	B
<b>Results:</b>	1	b2		b3			#4	5			#6	7

**Table 17-4**

Starting with the first degree and stacking thirds, we see that



we have a 1-b3-5-7. This is a minor(maj7). (We could, if we wished, cast the #6 as a b7, and use this scale over a minor seventh chord as well). We see, therefore, that we can use the Enigmatic Minor scale over a min(maj7) or a minor seventh chord whose root is the same as that of the scale. In the key of C this would be a Cmin(Maj7). The tritone (#4) will add a bluesy twang against the minor tonality of this chord, and the b2 will also work well in this harmonic environment.

## II Chord:

D b M a j o r S c a l e :	D b		E b		F	G b		A b		B b		C
E n i g m a t i c M i n . 2 <sup>nd</sup> D e g . :	D b		E b			F#	G			A #	B	C
R e s u l t s :	1		2			#3	#4			##5	#6	7
R e s u l t s ( r e i n t e r p r e t e d ) :	1		2			4	b5			6	b7	7

Table 17-5

Well, no amount of head scratching is going to turn this into a recognizable chord. The absence of a perfect fifth prevents us from voicing this as a sus2 or sus4. Our only option is going to be some kind of slash chord. The interesting notes here are the #3, the ##5, and the 7. Well, if we examine an Ebm6, we find that it contains an Eb (9), an F# (#3), a Bb (##5), and a C (7). Consequently, our II chord is pretty well covered by an Ebm6/Db.

## III Chord:

E b M a j o r S c a l e :	E b		F		G	A b		B b		C		D
E n i g m a t i c M i n . 3 <sup>rd</sup> D e g . :	E b			F#	G			A #	B	C	D b	
R e s u l t s :	1			#2	3			##4	#5	6	b7	
R e s u l t s ( r e i n t e r p r e t e d ) :	1			#9	3			5	#5	6	b7	

Table 17-6

The third degree of our Enigmatic Minor scale is Eb, a minor third. As before, we compare the Enigmatic Minor mode starting at the third note of the scale with the diatonic major scale starting at the same note, in this case, Eb. This will be an altered dominant chord—

a 7(#5#9), but we're going to have to be a bit careful of that ##4, since it will tend to sound like a perfect fifth. In our example we use the C Enigmatic Minor scale over an Eb7(#5#9) chord.

**IV Chord:**

F# M a j o r S c a l e:	F#		G#		A#	B		C#		D#		E#
E n i g m a t i c M i n . 4 <sup>th</sup> D e g.:	F#	G			A#	B	C	D b		E b		
R e s u l t s:	1	b2			3	4	b5	bb6		bb7		
R e s u l t s (r e i n t e r p r e t e d):	1	b2			3	4	#4	5		6		

**Table 17-7**

This chord can be voiced as a sixth (1, 3, 5, 6). For the examples I'll be playing a C Enigmatic Minor over an F#6 chord.

**V Chord:**

G M a j o r S c a l e:	G		A		B	C		D		E		F#
E n i g m a t i c M i n . 5 <sup>th</sup> D e g.:	G			A#	B	C	D b		E b			F#
R e s u l t s:	1			#2	3	4	b5		b6			7
R e s u l t s (r e i n t e r p r e t e d):	1			#2	3	4	#4		#5			7

**Table 17-8**

With just a little renumbering, we see that the V chord can be expressed as a Maj7(#5). In C, we'd play a C Enigmatic Minor scale over a GMaj7(#5).

**VI Chord:**

(A#) B b M a j o r S c a l e:	B b		C		D	E b		F		G		A
E n i g m a t i c M i n . 6 <sup>th</sup> D e g.:	A#	B	C	D b		E b		F#	G			
R e s u l t s:	1	b2	bb3	bb4		bb5		b6	bb7			
R e s u l t s (r e i n t e r p r e t e d):	1	b9	2	b3		4		#5	6			

**Table 17-9**

This one leaves us only one choice—search for a slash chord. The important tones we'd like to cover are the C (bb3), the Eb (bb5), and the G (bb7). An Cm7 will provide us with an C (bb3), an Eb (bb5), a G (bb7), and a Bb (1), which is exactly what we were looking for. Consequently, we can play our C Enigmatic Minor over an Cm7/A# chord.

## VII Chord:

B Major Scale:	B		C#		D#	E		F#		G#		A#
Enigmatic Minor, 7 <sup>th</sup> Degree:	B	C	Db		Eb			F#	G			A#
Results:	1	b2	bb3		b4			5	b6			7
Results (reinterpreted):	1	b9	2		3			5	#5			7

**Table 17-10**

This one can be voiced as either a major seventh, or a Maj7(#5). For the example I'll be playing a C Enigmatic Minor over a BMaj7 chord.

## Progression

Let's examine what kind of progression might provide a background for practicing our C Enigmatic Minor scale. As we've seen, the chords we have to work with are:

Cmin(Maj7), Ebm6/Db, Eb7(#5#9), F#6, GMaj7(#5), Cm7/A#, BMaj7.

Since the majority of these chords do not correspond to scale tones in the key of C, let's see if we can find an alternative key center that will be more suitable. Let's start with Db as a possible solution. This key center gives us:

Ebm6/Db	=	I
Eb7(#5#9)	=	II
(Gb) F#6	=	IV
(Bb) Cm7/A#	=	VI
Cmin(Maj7)	=	VII

A progression that utilizes these chords is VII-I-VI-II-IV-VII,  
or:

Cmin(Maj7)-Ebm6/Db-Cm7/A#-Eb7(#5#9)-F#6-  
Cmin(Maj7).

This leaves our GMaj7(#5) and the BMaj7 to be worked into the progression. Let's explore G as another possible temporary key center. From this perspective, F#6 is the VII, GMaj7(#5) is the I, BMaj7 is the III, and Cmin(Maj7) is the IV. Since VII-I-III-IV is a valid sequence, we see that we can insert the GMaj7(#5)-BMaj7 between the F#6 and the Cmin(Maj7), which results in the following final progression:

Cmin(Maj7)-Ebm6/Db-Cm7/A#-Eb7(#5#9)-F#6-GMaj7(#5)-  
BMaj7-Cmin(Maj7).

## Analysis

The diagram illustrates a 4-bar musical excerpt. The top staff shows a melody in treble clef with a key signature of two flats and a 4/4 time signature. The notes are: Eb, G, Eb, G, Eb, G, Eb, G, B, Eb, G, Eb. Above the melody, five chord diagrams are shown: Eb7(#5#9), F#6, GMaj7(#5), BMaj7, and Cm(maj7). Below the melody, a bass line is shown with fingerings: 8-8-8-6-9-6, 8, 8-9-10-7, 10-9-10, 6, 9-6.

**Figure 17**

In Figure 17 we examine a 4-bar excerpt (bars 20-23) from the example file (\ExoticScales\CH17\example.pdf). In bar 1, where we're playing over an Eb7(#5#9), the Eb is, obviously, the root note, and the G gives us a major third. These two notes are repeated, followed by another E, and then a Db, which functions as a minor seventh in this context. Next we have a B, which gives us a #5, and finally, another Db, which ties into bar 2, where it functions as a perfect fifth when played over the F#6.

In bar 3 we're playing over a GMaj7(#5). In the first half of the bar we have an Eb (#5), a B (major third), a C (11<sup>th</sup>), and an A (9<sup>th</sup>). In the second half of the bar we have a G (root tone), a B (major third), and another G. Finally, in the fourth bar we start out with an Eb, which, played over the BMaj7, functions as a major third. Next we have a Db, which provides a 9<sup>th</sup>, and finally, another Eb, which ties into the next bar, where it becomes the minor third of the Cm(Maj7).

## Examples

Support materials may be found in the following locations on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com):

MIDI	\\ExoticScales\CH17\exam ple.m id
M P3	\\ExoticScales\CH17\exam ple.m p3
Transcription (PDF)	\\ExoticScales\CH17\exam ple.pdf
Jam m er™	\\ExoticScales\CH17\exam ple.cm p
Finale™	\\ExoticScales\CH17\exam ple.m us
C akew alk™	\\ExoticScales\CH17\exam ple.w rk
Notew orthy C om poser	\\ExoticScales\CH17\exam ple.nw c

**Table 17-11**

### Modes of the Enigmatic Minor Scale

2	Chrom atic M ixolydian Inverse #5	2313111	B m in7 (b5)/C -B bM a j9/A - F#M a j7 (#5)-D 7 (#5#9)-A #M a j7 -F6 - B m in (M a j7)-B m in7 (b5)/C
3	Chrom atic H ypodorian Inverse #4	3131112	C 7 (#5#9)-G #M a j7-D #6-C m 7/B b-C 7 (#5#9)-A m in (M a j7)-E M a j7 (#5)- C m 13/G -C 7 (#5#9)
4	Chrom atic H ypodorian Inverse 3	1311123	C 6-A 7 (#5#9)/E -F M a j9/D b-G b m in (M a j7)-A 7 (#9)-F M a j7-A m 6/G -C 6
5	A rabian #2 7	3111231	C M a j7 (#5)-A b7 (#5#9)-E b m + -C M a j7 (#5)-F m in7 (b5)/G b-E M a j7 - F m in (M a j7)-B 6-C M a j7 (#5)
6	Chrom atic D orian bb4 bb5	1112313	C m + -D m in (M a j7)-A M a j7 (#5)-F7 (#5#9)-C m + -A b6-D bM a j7 (#5)- D m in7 (b5)/B b-C m +
7	Chrom atic D orian 7	1123131	C M a j7-C #m 7 (b5)/D -E 7 (#9)/B -C M a j7-E 7 (#5#9)-G 6-A bM a j7 (#5)- D b m in (M a j7)-C M a j7

**Table 17-12**

## **Chapter 18—Verdi’s Enigmatic Descending Scale (1 3 1 3 2 1 1)**

### **Verdi’s Enigmatic Descending Overview**

As we can see in Table 18-1, the Enigmatic Descending scale begins much like the Enigmatic Ascending, but adds a second augmented (3 semitone) interval between the perfect fourth and the augmented fifth. Compared to its other cousin, the Enigmatic Minor, both augmented intervals are lowered by two semitones. As Table 18-1 shows, the Enigmatic Descending scale is basically major in nature, having both a major third and a major seventh, however, that #5 means it will be an augmented major, and the #6 will tend to give it a dominant feel.

	1	2		3	4	5		6		7
Diatonic Major Scale	C	D	E	F	G	A	B			
Enigmatic Minor	C	D <sup>b</sup>	E <sup>b</sup>	<====>	F <sup>#</sup>	G	<====>	A <sup>#</sup>	B	
Enigmatic Ascending	C	D <sup>b</sup>	<====>	E	F <sup>#</sup>	G <sup>#</sup>	A <sup>#</sup>	B		
Enigmatic Descending	C	D <sup>b</sup>	<====>	E	F	<====>	G <sup>#</sup>	A <sup>#</sup>	B	

**Table 18-1**

Table 18-2 illustrates the first mode of the Enigmatic Descending scale in twelve keys:

1	b2			3	4			#5		#6	7
C	D b			E	F			G #		A #	B
C #	D			E #	F #			G ##		A ##	B #
D	E b			F #	G			A #		B #	C #
D #	E			F ##	G #			A ##		B ##	C ##
E	F			G #	A			B #		C #	D #
F	G b			A	B b			C #		D #	E
F #	G			A #	B			C ##		D ##	E #
G	A b			B	C			D #		E #	F #
G #	A			B #	C #			D ##		E ##	F ##
A	B b			C #	D			E #		F ##	G #
B b	C b			D	E b			F #		G #	A
B	C			D #	E			F ##		G ##	A #

**Table 18-2**

Here's a basic fingering pattern:

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
<i>(Eighth fret)</i>	<b>R</b>	4	#6			<b>R</b>
	b2		7	3	#5	b2
			<b>R</b>	4		
		#5	b2			
	3				7	3

**Table 18-3**

**I Chord:**

<b>C M a j o r S c a l e :</b>	C		D		E	F		G		A		B
<b>Enigm a t i c D e s c . 1<sup>st</sup> d e g . :</b>	C	D b			E	F			G #		A #	B
<b>R e s u l t s :</b>	1	b2			3	4			#5		#6	7
<b>R e s u l t s ( r e i n t e r p r e t e d ) :</b>	1	b9			3	4			#5		b7	7

**Table 18-4**

With a bit of renumbering, we see that the I chord can be interpreted as an altered dominant; specifically, a C7(#5b9).



## II Chord:

D b M a j o r S c a l e :	D b		E b		F	G b		A b		B b		C
E n i g m a t i c D e s c . 2 <sup>n d</sup> D e g . :	D b			E	F			G #		A #	B	C
R e s u l t s :	1			#2	3			##4		##5	#6	7
R e s u l t s ( r e i n t e r p r e t e d ) :	1			#9	3			5		6	b7	7

**Table 18-5**

This is another altered dominant—in this case, a Db7(#9). In general, we see that we can apply the Enigmatic Descending scale to a 7(#9) chord whose root is one semitone above that of the scale.

## III Chord:

E M a j o r S c a l e :	E		F #		G #	A		B		C #		D #
E n i g m a t i c D e s c . 3 <sup>r d</sup> D e g . :	E	F			G #		A #	B	C	D b		
R e s u l t s :	1	b2			3		#4	5	b6	bb7		

**Table 18-6**

The 1-3-5-6 (bb7) mean that this one is a sixth chord. For the example tracks we'll be playing a C Enigmatic Descending over an E6 chord.

## IV Chord:

F M a j o r S c a l e :	F		G		A	B b		C		D		E
E n i g m a t i c D e s c . 4 <sup>t h</sup> D e g . :	F			G #		A #	B	C	D b			E
R e s u l t s :	1			#2		#3	#4	5	b6			7
R e s u l t s ( r e i n t e r p r e t e d ) :	1			b3		4	#4	5	b6			7

**Table 18-7**

The combination of minor third and major seventh dictate that this will be a min(Maj7) chord. We can therefore play the Enigmatic Descending scale over a min(Maj7) chord whose root is a perfect

fourth above that of the scale. For the example tracks this works out to a C Enigmatic Descending played over an Fmin(Maj7).

**V Chord:**

(G #) A b M a j o r S c a l e:	A b		B b		C	D b		E b		F		G
E n i g m a t i c D e s c . 5 <sup>th</sup> D e g .:	G #		A #	B	C	D b			E	F		
R e s u l t s:	1		2	b3	b4	bb5			b6	bb7		
R e s u l t s (r e i n t e r p r e t e d):	1		2	#9	3	4			#5	6		

**Table 18-8**

The 1, 3, #5 that emerges after a bit of renumbering signals a G+ (augmented) chord. We can thus apply the Enigmatic Descending scale to an augmented chord whose root is a minor sixth above that of the scale. For the example tracks we'll be using the C Enigmatic Descending scale over a G#+ chord.

**VI Chord:**

(A #) B b M a j o r S c a l e:	B b		C		D	E b		F		G		A
E n i g m a t i c D e s c . 6 <sup>th</sup> D e g .:	A #	B	C	D b			E	F			G #	
R e s u l t s:	1	b2	bb3	bb4			b5	bb6			b7	
R e s u l t s (r e i n t e r p r e t e d):	1	b9	2	b3			b5	bb6			b7	

**Table 18-9**

This one is pretty simple: we can play the Enigmatic Descending scale over a min7(b5) chord whose root is a minor seventh above that of the scale. For the example tracks this means that the C Enigmatic Descending scale is played over an A#m7 chord.

**VII Chord:**

B M a j o r S c a l e:	B		C #		D #	E		F #		G #		A #
E n i g m a t i c D e s c . 7 <sup>th</sup> D e g .:	B	C	D b			E	F			G #		A #
R e s u l t s:	1	b2	bb3			4	b5			6		7

**Table 18-10**

The effective absence of both the third and the fifth indicates that the only way we're going to harmonize this scale degree is by finding an appropriate slash chord. The tones we'd like to cover are the Db (bb3), F (b5), and A# (7). If we examine a C#6 chord, we'll find that it provides all of these tones, plus the G# (6). Consequently, we'll voice the VII chord as a C#6/B.

## Progression

Let's examine what kind of progression might provide a background for practicing our C Enigmatic Descending scale. As we've seen, the chords we have to work with are:

C7(#5b9), Db7(#9), E6, Fmin(Maj7), G#+, A#m7, C#6/B.

The chords that correspond to scale tones in the key of C are the C7(#5b9) (I), E6 (III), Fmin(Maj7) (IV), and C#6/B (VII). A basic progression that utilizes these chords, while respecting the rules of cadence, is I-IV-III-IV-VII-I, or:

C7(#5b9)-Fmin(Maj7)-E6-Fmin(Maj7)-C#6/B-C7(#5b9).

That leaves us with the Db7(#9), the G#+, and the A#m7 to integrate into our progression. Since A# and G# are enharmonically equivalent to Bb and Ab, respectively, let's consider Ab as a possible temporary key center. From this perspective:

G#+	=	I
A#m7	=	II
C7(#5b9)	=	III
Db7(#9)	=	IV
Fmin(Maj7)	=	VI

Since III-II-IV-I-VI is a legitimate sequence, this suggests that the A#m7-Db7(#9)-G#+ can be inserted between the C7(#5b9) and the Fmin(Maj7) in our original progression, like so:

C7(#5b9)-A#m7-Db7(#9)-G#+-Fmin(Maj7)-E6-Fmin(Maj7)-C#6/B-C7(#5b9).

## Analysis

The figure displays a musical score for a 4-bar excerpt. The top staff is a treble clef with a key signature of one flat (Bb) and a 4/4 time signature. Above the staff are four guitar chord diagrams: E6, Fm(maj7), Bbm7/B, and C7(b9). The notes in the staff are: Bar 1: Ab, B, Bb, Ab; Bar 2: C, C, Bb, Ab; Bar 3: Ab, Bb, Db, F; Bar 4: Ab, F, Db, C, Bb. Below the staff are two fretboard diagrams for the bass strings (E, A, D, G). The fret numbers are: Bar 1: 9-12-11-9, 10-9-10, 11; Bar 2: 10-10-9, 8, 11; Bar 3: 11, 8-11, 10-9, 11-10, 10; Bar 4: 9, 10-9, 10, 11-10, 8.

**Figure 18**

Figure 18 shows a 4-bar excerpt (bars 15-18) from the example file (ExoticScales\CH18\example.pdf). In bar 1, we're playing over an E6 chord. In the first half of the bar we have an Ab (major third), a B (perfect fifth), a Bb (the tritone), and another Ab. In the second half of the bar we have an F, which functions as a b9, an E, which gives us the root of the chord, another F, and a Db, which gives us our sixth.

In bar 2, playing over an Fm(Maj7), we start with two C notes, which give us the perfect fifth of the Fm(Maj7), followed by a Bb, functioning as an 11<sup>th</sup>, and an Ab, which represents our minor third. In bar 3, we're playing over a Bbm7/B, so our overall harmonic setting will be B. In the first half of the bar we have an Ab (6<sup>th</sup>), Bb (major seventh), Db (9<sup>th</sup>), and F (tritone). In the second half of the bar we find an E (11<sup>th</sup>), Db (9<sup>th</sup>), C (b9), and another F (tritone).

In bar 4, we're playing over a C7(#5b9) chord. We start out with an Ab, which, in the current harmonic context, represents the #5. Next we have an F (11<sup>th</sup>), followed by another Ab. In the second half of the bar we have another F, followed by a Db, which gives us our b9. Then we have a C, the root tone, and finally, a Bb, which is our minor seventh.

## Examples

Support materials may be found in the following locations on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com):

MIDI	ExoticScales\CH18\exam ple.m id
M P3	ExoticScales\CH18\exam ple.m p3
Transcription (PDF)	ExoticScales\CH18\exam ple.pdf
Jam mer™	ExoticScales\CH18\exam ple.cm p
Finale™	ExoticScales\CH18\exam ple.m us
Cakewalk™	ExoticScales\CH18\exam ple.w rk
Noteworthy Composer	ExoticScales\CH18\exam ple.nw c

**Table 18-11**

### Modes of the Enigmatic Descending Scale

Mode	Name	Intervals	Progression
2	Chromatic Phrygian #4 #5	3132111	C7(#9)-B7(#5b9)-Em in (M aj7)-Am 7-C6/A #-D#6-G+-C7(#9)
3	Mela D havalam bari	1321113	C6-A7(#9)-E+-Dbm in (M aj7)-F#m 7-A6/G -AbM aj7(#5)-C6
4	Chromatic Hypophrygian b6	3211131	Cm in (M aj7)-Fm /F#-B66-Fm 7-Cm in (M aj7)-Ab7(#9)-D#+-GM aj7(#5)-Cm in (M aj7)
5	Persian #2 bb7	3111213	C+-Gbm in7(b5)-Em aj7(#5)-Am in (M aj7)-F7(#9)-C+-Ab7(b9)-D#dim 7-C+
6	Locrian bb3 bb4 bb6	1113132	Cm 7-Cm /Db-Eb7(#9)-D7(#5b9)-Cm 7-Gm in (M aj7)-Bb+-Gb6-Cm 7
7	Chromatic Mixolydian 6 7	1131321	Bm /C-Bm in7(b5)-Gbm in (M aj7)-Db7(#5b9)-D7(#9)-A+-F6-Bm /C

**Table 18-12**



## **Chapter 19—The Purvi Scale (1 3 2 1 1 3 1)**

### **Purvi Overview**

As shown in Table 19-1, the Purvi resembles the Hungarian Minor scale, with the first augmented interval lowered by two semitones. The result is a predominantly major scale (major third and major seventh), but with an exotic sound imparted by the presence of the two augmented intervals. These two augmented intervals also introduce a minor sixth (characteristic of the natural minor scale) and a minor second (which gives the Phrygian mode its distinctive sound). Hence, we can expect this scale to have some tinge of minor character as well.

	1	2	3	4	5	6	7	
Diatonic Major Scale	C	D	E	F	G	A	B	
Hungarian Minor Scale	C	D	E <sup>b</sup>	<====>	F <sup>#</sup>	G	A <sup>b</sup>	B
Purvi	C	D <sup>b</sup>	<====>	E	F <sup>#</sup>	G	A <sup>b</sup>	B

**Table 19-1**

Table 19-2 illustrates the first mode of the Purvi scale in twelve keys:

1	b2			3		#4	5	b6			7
C	D b			E		F#	G	A b			B
C #	D			E #		F##	G #	A			B #
D	E b			F#		G #	A	B b			C #
E b	F b			G		A	B b	C b			D
E	F			G #		A #	B	C			D #
F	G b			A		B	C	D b			E
F#	G			A #		B #	C #	D			E #
G	A b			B		C	D	E b			F#
A b	B b b			C		D	E b	F b			G
A	B b			C #		D #	E	F			G #
B b	C b			D		#	F	G b			A
B	C			D #		E #	F#	G			A #

**Table 19-2**

Here's a basic fingering pattern:

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
<i>(Eighth fret)</i>	<b>R</b>				5	<b>R</b>
	b2	#4	7	3	b6	b2
		5	<b>R</b>			
		b6	b2	#4		
	3				7	3

**Table 3-3**

Well, let's get started harmonizing this new scale.

**I Chord:**

C M ajor Scale:	C		D		E	F		G		A		B
Purvi 1 <sup>st</sup> deg.:	C	D b			E		F#	G	A b			B
R esults:	1	b2			3		#4	5	b6			7
R esults (reinterpreted):	1	b2			3		#11	5	b6			7

**Table 19-4**



Starting with the first degree and stacking thirds, we see that we have a 1-3-5-7. This is a major seventh. We see, therefore, that we can use the Purvi scale over a major seventh or a Maj7(#11) chord whose root is the same as that of the scale. In the key of C this would be a CMaj7. The tritone (#4) will add a bluesy twang against the major tonality of this chord. For the example tracks we'll be using a CMaj7 chord.

### II Chord:

Db Major Scale:	Db		Eb		F	Gb		Ab		Bb		C
Purvi 2 <sup>nd</sup> Deg.:	Db			E		F#	G	Ab			B	C
Results:	1			#2		#3	#4	5			#6	7
Results (reinterpreted):	1			b3		4	#4	5			b7	7

**Table 19-5**

By comparing the notes of our Purvi scale, starting at the second degree (Db), with the normal step/half-step pattern of a diatonic major scale beginning at the same note, we discover that the resulting chord could be either a min(Maj7), a minor seventh, or a min7(b5), depending on how we interpret the various ambiguous notes. This means that the Purvi scale can be applied over any of these chord forms, so long as the root of the scale is a semitone above that of the scale. For the example tracks we'll apply a C Purvi scale over a Dbmin(Maj7) chord.

### III Chord:

E Major Scale:	E		F#		G#	A		B		C#		D#
Purvi 3 <sup>rd</sup> Deg.:	E		F#	G	Ab			B	C	Db		
Results:	1		2	b3	b4			5	b6	bb7		
Results (reinterpreted):	1		2	#9	3			5	#5	6		

**Table 19-6**

The third degree of our Purvi scale is E, a major third. As

before, we compare the Purvi mode starting at the third note of the scale with the diatonic major scale starting at the same note, in this case, E. As shown in Table 19-6, the harmonized scale that results is either a minor or a major sixth. We could also play the Purvi over an augmented chord by treating the b6 as a #5. In each of these cases, the root of the chord would be a major third above that of the scale. For the example tracks I take the most straightforward approach, which is to play a C Purvi over an E6 chord.

### IV Chord:

F# M a j o r S c a l e:	F#		G#		A#	B		C#		D#		E#
Purvi 4 <sup>th</sup> D e g.:	F#	G	A b			B	C	D b			E	
R e s u l t s:	1	b2	bb3			4	b5	bb6			b7	
R e s u l t s (r e i n t e r p r e t e d):	1	b9	2			4	#4	5			b7	

**Table 19-7**

The diminished (double flatted) third means this chord will effectively have no third; that is, it will be a suspended 2 or a suspended 4 chord. For the examples I'll use a dominant sus4 (1, 4, 5, b7), playing a C Purvi over an F#7sus4 chord.

### V Chord:

G M a j o r S c a l e:	G		A		B	C		D		E		F#
Purvi 5 <sup>th</sup> D e g.:	G	A b			B	C	D b			E		F#
R e s u l t s:	1	b2			3	4	b5			6		7

**Table 19-8**

This is another of those situations when we'd like to use a Maj7(b5), but since that's really not a common chord voicing, we'll use a slash chord instead. Clearly, the tones we wish to capture are the B (3), the Db (b5), and the F# (7). As it turns out, an E6/9 provides us with an E (6), G# (b2), B (3), C# (b5), and an F# (7), so that should work out nicely. Thus, we'll apply a C Purvi scale over an E6/9/G chord.

## VI Chord:

A b M a j o r S c a l e:	A b		B b		C	D b		E b		F		G
P u r v i 6 <sup>th</sup> D e g.:	A b			B	C	D b			E		F#	G
R e s u l t s:	1			#2	3	4			#5		#6	7
R e s u l t s (r e i n t e r p r e t e d):	1			#9	3	4			#5		b7	7

**Table 19-9**

As shown in Table 19-9, we can play the Purvi scale over a Maj7(#5) or a 7(#5#9) chord whose root is a minor sixth (eight semitones) above that of the scale. For the example tracks I use a C Purvi over an Ab7(#5#9) chord.

## VII Chord:

B M a j o r S c a l e:	B		C#		D#	E		F#		G#		A#
P u r v i 7 <sup>th</sup> D e g.:	B	C	D b			E		F#	G	A b		
R e s u l t s:	1	b2	bb3			4		5	b6	bb7		

**Table 19-10**

Here again we have no third, so the options are a sus2 or a sus4 chord. Since there's already enough congestion between the b2 and the bb3, my preference would be to go with the sus4. Accordingly, for the examples I play a C Purvi over a Bsus4.

## Progression

Let's examine what kind of progression might provide a background for exploring the sound of our C Purvi scale. As we've seen, the chords we have to work with are:

CMaj7-Dbmin(Maj7), E6, F#7sus4, E69/G, Ab7(#5#9), Bsus4.

As usual, our goal is to assemble a progression that uses all of these chords, while respecting the common rules of cadence. The C scale-tone chords we have at our disposal are the CMaj7 (I), E6 (III),

E69/G (V), and Bsus4 (VII). A progression that utilizes these chords is: I-VII-III-V-I, or:

CMaj7-Bsus4-E6-E69/G-CMaj7.

That leaves us with the Dbmin(Maj7), the F#7sus4, and the Ab7(#5#9) to deal with. Let's consider D as a temporary key center. From this perspective:

E6	=	II
F#7sus4	=	III
E69/G	=	IV
Bsus4	=	VI
Dbmin(Maj7)	=	VII

Since II-VII-III-IV is a valid sequence, we can insert the Dbmin(Maj7)-F#7sus4 between the E6 and the E69/G, which gives us:

CMaj7-Bsus4-E6- Dbmin(Maj7)-F#7sus4-E69/G-CMaj7.

Now we have only the Ab7(#5#9) to work into the progression. Let's try Eb as another transient key center. In this environment, E69/G is the III, Ab7(#5#9) is the IV, and CMaj7 is the VI. Since III-IV-VI is a valid sequence, we can insert the Ab7(#5#9) between the E69/G and the CMaj7, like so:

CMaj7-Bsus4-E6- Dbmin(Maj7)-F#7sus4-E69/G-Ab7(#5#9)-CMaj7.

## Analysis

The image displays a musical score for a guitar piece. At the top, four chord diagrams are shown: C Maj7, Bsus4, E6, and Dbm(maj7). Below these is a melody line in treble clef with a 4/4 time signature. The melody consists of four bars of music. The first bar is over a C Maj7 chord and contains notes E4, C4, B3, and Db4. The second bar is over a Bsus4 chord and contains notes E4, Ab4, and Db4. The third bar is over an E6 chord and contains notes E4, F#4, and Ab4, with two triplet markings. The fourth bar is over a Dbm(maj7) chord and contains notes Ab4, F#4, and E4. Below the melody line is a guitar fretboard diagram with six strings and four bars of fretting information. The fretting is as follows: Bar 1: 7-0-7-9; Bar 2: 7-6-6-9; Bar 3: 0-7-9, 7-9-7-9, 9-9; Bar 4: 9-7-10-9.

**Figure 19**

Figure 19 excerpts the first 4 bars from the example file (\ExoticScales\CH19\example.pdf). In bar 1, playing over a CMaj7, we have an E (major third), a C (root tone), a B (major seventh), and a Db (b9). Moving on to bar 2, where we're playing over a Bsus4 chord, we start out with an E, which here functions as our suspended fourth, followed by an Ab (6<sup>th</sup>), and a Db (9<sup>th</sup>). Finally, we have an E, which starts out functioning as a 4<sup>th</sup>, then ties into the third bar, where it works as a root tone when played over the E6 chord. The first set of triplets in bar 3 starts with another E, followed by an F# (9<sup>th</sup>), and an Ab (major third). The next set of triplets contains a B (perfect fifth), Db (6<sup>th</sup>), and then another B. Finally, the bar ends with another B, another Ab (major third), and an E, which starts out functioning as a root tone, then ties into the fourth bar, where it acts as a minor third when played over the Dbm(Maj7) chord. Bar 4 continues with an Ab, functioning as a perfect fifth, an F#, which represents an 11<sup>th</sup>, and finally, ends on an E (the minor third).

## Examples

Support materials may be found in the following locations on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com):

MIDI	\\ExoticScales\CH19\example.midi
MP3	\\ExoticScales\CH19\example.mp3
Transcription (PDF)	\\ExoticScales\CH19\example.pdf
Jammer™	\\ExoticScales\CH19\example.cmp
Finale™	\\ExoticScales\CH19\example.us
Cakewalk™	\\ExoticScales\CH19\example.wrk
Noteworthy Composer	\\ExoticScales\CH19\example.nc

**Table 19-11**

### Modes of the Purvi Scale

Mode	Name	Intervals	Progression
2	Chromatic Hypophrygian	32113111	Cm7-C7sus4/F#-Bmaj7-F7sus4-A#sus4-Cm7-D#sus2-G7(#5#9)-Cm7
3	Chromatic Hypodorian	21131113	Csus2-Am in (Maj7)-E7(#5#9)-D7sus4-Csus2-C69/Eb-Amaj7-Gsus4-Csus2
4	Chromatic Mixolydian	11311132	C7sus4-Bbsus2-Fsus4-D7(#5#9)-Bb69/Db-Gbmaj7-Gm in (Maj7)-C7sus4
5	Chromatic Lydian	13113211	E69/C-B7sus4-Esus4-Gbm in (Maj7)-Db7(#5#9)-Am6-Fmaj7-E69/C
6	Chromatic Phrygian	31132111	C7(#5#9)-F7sus4/B-Emaj7-Dsus4-C7(#5#9)-Fm(Maj7)-G#m6-A#7sus4-C7(#5#9)
7	Chromatic Dorian	11321113	Csus4-Dm in (Maj7)-Dbmaj7-Amaj7(#5)-Fsus2-F69/Ab-G7sus4-Csus4

**Table 19-12**

## Chapter 20—The Persian Scale (1 3 1 1 2 3 1)

### Persian Overview

As we can see in Table 20-1, the Persian scale differs from the Locrian  $\flat 7$  scale only in its having a major instead of a minor third degree. This  $\flat 3$ , however, introduces an augmented interval between the  $\flat 2$  and the major third, which is responsible for giving the scale its second augmented (three semitone) interval. The major third and major seventh degrees tell us that this will be predominantly a major-sounding scale.

	1	2	3	4	5	6	7
Diatonic Major Scale	C	D	E	F	G	A	B
Locrian $\flat 7$ Scale	C	$D \flat$	$E \flat$	F	$G \flat$	$A \flat$	B
Persian Scale	C	$D \flat$	<====>	E	F	$G \flat$	$A \flat$
						<====>	B

**Table 20-1**

Table 20-2 illustrates the first mode of the Persian scale in twelve keys:

1	b2			3	4	b5		b6			7
C	D b			E	F	G b		A b			B
C #	D			E #	F #	G		A			B #
D	E b			F #	G	A b		B b			C #
E b	F b			G	A b	B b b		C b			D
E	F			G #	A	B b		C			D #
F	G b			A	B b	C b		D b			E
F #	G			A #	B	C		D			E #
G	A b			B	C	D b		E b			F #
A b	B			C	D b	E b b		F b			G
A	B b			C #	D	E b		F			G #
B b	C b			D	E b	F b		G b			A
B	C			D #	E	F		G			A #

**Table 20-2**

Here's a basic fingering pattern:

<b>Strings:</b>	<b>E</b>	<b>A</b>	<b>D</b>	<b>G</b>	<b>B</b>	<b>E</b>
<i>(Eighth fret)</i>	<b>R</b>	4				<b>R</b>
	b2	b5	7	3	b6	b2
			<b>R</b>	4		
		b6	b2	b5		
	3				7	3

**Table 20-3**

**I Chord:**

C M a jor Scale:	C		D		E	F		G		A		B
Persian 1 <sup>st</sup> deg.:	C	D b			E	F	G b		A b			B
R esults:	1	b2			3	4	b5		b6			7
R esults (reinterpreted):	1	b9			3	4	#4		#5			7

**Table 20-4**

We can see after a bit of renumbering that the I chord can be



harmonized as an augmented major seventh. For our example, we'll be playing a C Persian scale over a CMaj7(#5) chord.

### II Chord:

Db Major Scale:	Db		Eb		F	Gb		Ab		Bb		C
Persian 2 <sup>nd</sup> Deg.:	Db			E	F	Gb		Ab			B	C
Results:	1			#2	3	4		5			#6	7
Results (reinterpreted):	1			#9	3	4		5			b7	7

**Table 20-5**

By comparing the notes of our Persian scale, starting at the second degree (Db), with the normal step/half-step pattern of a diatonic major scale beginning at the same note, we discover that we have two options, depending upon how we choose to treat the #6. If we simply take the 1-3-5-7, we have a major seventh. On the other hand, we can also treat the #6 as a b7, in which case we have an altered dominant seventh. [7(#9)]. The factor that recommends the altered dominant approach is that it solidifies the relationship between the #2 (which will want to assert itself as a minor third), and the major third. We'll still have to be careful of the major seventh (C), but at least we've eliminated one of the two potential sources of ambiguity. Consequently, for the example tracks I use a C Persian I scale over a Db7(#9) chord.

### III Chord:

E Major Scale:	E		F#		G#	A		B		C#		D#
Persian 3 <sup>rd</sup> Deg.:	E	F	Gb		Ab			B	C	Db		
Results:	1	b2	bb3		b4			5	b6	bb7		
Results (reinterpreted):	1	b9	2		3			5	#5	6		

**Table 20-6**

The third degree of our Persian scale is E, a major third. As usual, we compare the Persian mode starting at the third note of the scale with the diatonic major scale starting at the same note, in this case, E. The resulting chord is an E6 (1, 3, 5, 6). We see that we can

play a Persian scale over a sixth chord whose root is a major third (four semitones) above that of the scale.

### IV Chord:

F M a j o r S c a l e :	F		G		A	B b		C		D		E
P e r s i a n 4 <sup>th</sup> D e g . :	F	G b		A b			B	C	D b			E
R e s u l t s :	1	b2		b3			#4	5	b6			7

**Table 20-7**

The minor third and major seventh make this a min(Maj7) chord. The #4 (tritone) is a note characteristic of the blues scale, and will also work well against this minor/major tonality, as will the b2/ b9. We can thus apply a Persian scale to a min(Maj7) chord whose root is a perfect fourth (five semitones) above that of the scale; that is, we'd use a C Persian scale over an Fmin(Maj7).

### V Chord:

G b M a j o r S c a l e :	G b		A b		B b	C b		D b		E b		F
P e r s i a n 5 <sup>th</sup> D e g . :	G b		A b			B	C	D b			E	F
R e s u l t s :	1		2			#3	#4	5			#6	7

**Table 20-8**

This is another situation in which we effectively have no third. Although we could use either a sus4 or a sus2 chord, the presence of the #3, #4 and 5 degrees suggest that there's already enough congestion around that area, so the sus2 chord would be a much better choice. We can therefore apply a Persian scale to a sus2 chord whose root is a diminished fifth (six semitones) above that of the scale. In C, we'd play a C Persian scale over a Gbsus2 chord.

## VI Chord:

Ab Major Scale:	Ab		Bb		C	Db		Eb		F		G
Persian 6 <sup>th</sup> Deg.:	Ab		B	C	Db			E	F	Gb		
Results:	1		#2	3	4			#5	6	b7		
Results (reinterpreted):	1		#9	3	4			#5	6	b7		

**Table 20-9**

As shown in Table 20-9, we can play the Persian scale over an altered dominant chord whose root is a minor sixth (eight semitones) above that of the scale. We can deal with any potential ambiguity introduced by the #2, by voicing this chord as a 7(#5#9). For the example tracks, the C Persian scale is played over an Ab7(#5#9) chord.

## VII Chord:

B Major Scale:	B		C#		D#	E		F#		G#		A#
Persian 7 <sup>th</sup> Deg.:	B	C	Db			E	F	Gb		Ab		
Results:	1	b2	bb3			4	b5	bb6		bb7		
Results (reinterpreted):	1	b9	2			4	#4	5		6		

**Table 20-10**

This is a situation that calls for yet another suspended chord. There's really nothing to recommend one over the other, so I'll toss a coin and play a C Persian over a Bsus4 chord, noting that we should be able to apply the Persian scale to either a sus2 or a sus4 chord whose root is a major seventh above (or one semitone below) that of the scale.

## Progression

Let's examine what kind of progression might provide a background for practicing our C Persian scale. As we've seen, the chords we have to work with are:

CMaj7(#5), Db7(#9), E6, Fmin(Maj7), Gbsus2, Ab7(#5#9), Bsus4.

The chords which correspond to scale tones in the key of C are the CMaj7(#5) (I), the E6 (III), the Fmin(Maj7) IV, and the Bsus4 (VII). A progression that utilizes these chords is I-VII-III-IV-I, or:

CMaj7(#5)-Bsus4-E6-Fmin(Maj7)-CMaj7(#5).

This leaves us with the Db7(#9), Gbsus2, and Ab7(#5#9) to be integrated into our progression. Let's observe that Gb is enharmonically equivalent to F#, and try G as a potential temporary key center. From this perspective:

Bsus4	=	III
CMaj7(#5)	=	IV
E6	=	VI
(F#) Gbsus2	=	VII

Since IV-VII-III is a permissible sequence, we can insert the Gbsus2 between the CMaj7(#5) and the Bsus4, like this:

CMaj7(#5)-Gbsus2-Bsus4-E6-Fmin(Maj7)-CMaj7(#5).

Next let's treat the Db7(#9) as its enharmonic equivalent [C#7(#9)], and try D as another temporary key center. In this harmonic environment, Gbsus2 (F#) is the III, Db7(#9) is the VII, and Bsus4 is the VI. This means we can insert the Db7(#9) between the Gbsus2 and the Bsus4, like so:

CMaj7(#5)-Gbsus2- Db7(#9)-Bsus4-E6-Fmin(Maj7)-CMaj7(#5).

Finally, we need to find a home for the Ab7(#5#9). This time we can try Eb as a key center. From this perspective we have Fmin(Maj7) as the II, Ab7(#5#9) as the IV, and CMaj7(#5) as the VI, indicating that we can insert the Ab7(#5#9) between the Fmin(Maj7) and the CMaj7(#5), which leaves us with:

CMaj7(#5)-Gbsus2- Db7(#9)-Bsus4-E6-Fmin(Maj7)-Ab7(#5#9)-CMaj7(#5).

## Analysis

The image displays a musical score for a 4-bar excerpt. The top staff is labeled 'Melody' and is written in treble clef with a key signature of one flat (Bb) and a 4/4 time signature. The first two bars are under the chord 'CMaj7(#5)', and the last two bars are under 'Gbsus2'. The melody in the first bar consists of an E4 quarter note, followed by a sixteenth-note triplet of F4, F#4, and Ab4, then a quarter note B4, an eighth note C4, and a quarter note E4. The second bar continues with Ab4, B4, and C4. The bottom two staves show guitar fingerings: the first bar has fret numbers 3, 4, 1, 0, 1, 0, 4, 7, 0; the second bar has 2, 2, 0, 2, 0, 7, 0, 2. The third and fourth bars have fret numbers 2, 0, 2, 0, 1, 1, 3, 0, 0, 4, 4.

**Figure 20**

Figure 20 shows a 4-bar excerpt (bars 17-20)- from the example file (\ExoticScales\CH20\example.pdf). In the first bar, playing over a CMaj7(#5) chord, we start out with an E (major third), followed by a group of sixteenth notes consisting of an F (11<sup>th</sup>), F# (the tritone), and an Ab (#5). Next we play a B (major seventh), C (root tone), and an E (major third). The bar ends with an Ab (#5), a B (major seventh), and a C, which ties into bar 2, where it represents the tritone in the context of the Gbsus2 chord.

In the beginning of bar 2, we're playing a B, and hammering the C (held over from bar 1) to a Db, representing the 11<sup>th</sup> and perfect fifth of Gbsus2, respectively. Next, we play an F# (root tone), followed by an Ab and a Db (the suspended second and a fifth). The preceding motif is repeated, followed by a B (the 11<sup>th</sup>), and another Ab-Db interval. Finally, we play an F#, which begins as a root tone under the Gb, then carries into the third bar, where it becomes an 11<sup>th</sup> when played over the Db7(#9).

In bar 3, we add an F (major third) to the Gb held over from bar 2. This is followed by a B (minor seventh), and a Db (root tone). Next we play a B-F combination (minor seventh and major third), followed by an Ab (a perfect fifth). At the end of bar 2 we play an F and an Ab, which function as a major third and a perfect fifth, respectively, in bar 3, then tie into bar 4, where they act as a #4 and a 6<sup>th</sup> in the context of the Bsus4. Next, we play an F# and a B, which represent the perfect fifth and the root of the Bsus4. This interval is repeated, completing bar 4.

## Examples

Support materials may be found in the following locations on the companion CD downloadable on-line at [www.exotic-scales.com](http://www.exotic-scales.com):

M ID I	\\ExoticScales\CH 20\exam ple.m id
M P 3	\\ExoticScales\CH 20\exam ple.m p3
T ranscription (P D F)	\\ExoticScales\CH 20\exam ple.pdf
Jam m er™	\\ExoticScales\CH 20\exam ple.cm p
F inale™	\\ExoticScales\CH 20\exam ple.m us
C akew alk™	\\ExoticScales\CH 20\exam ple.w rk
N otew orthy C om poser	\\ExoticScales\CH 20\exam ple.nw c

**Table 20-11**

### Modes of the Persian Scale

M ode	N am e	I ntervals	P rogression
2	Ionian #2 #6	3112311	C 7 (#9)-E b6 9/B -E m in (M a j7)-F sus2-C 7 (#9)-A # sus4-D #6-G 7 (#5#9) - C 7 (#9)
3	Chrom atic Phrygian Inverse	1123113	C 6-A bM a j7#5-D b m in (M a j7)-C 6-A 7 (#9)-E 7 (#5#9)-D 7 sus4-G sus2-C 6
4	Todi	1231131	C m (M a j7)-D b7 sus4-E b7 (#5#9)-C m (M a j7)-A b7 (#9)-F #sus4 - C #7 sus4/G -B 6-C m (M a j7)
5	Chrom atic M ixolydian Inverse	2311311	C sus2-F #M a j7 (#5)-B m (M a j7)-D 7 (#5#9)-A # -F sus4-G 7 (#9)-C sus2
6	Chrom atic H ypodorian Inverse	3113112	C 7 (#5#9)-E M a j7 (#5)-A m in (M a j7)-F 7 (#9)-G #6-D #sus2-B b7 sus4 - C 7 (#5#9)
7	Chrom atic H ypophrygian Inverse	1131123	C sus4-A 7 (#5#9)-G b m in (M a j7)-D bM a j7 (#5)-D 7 (#9)-F -G 7 sus4-C sus4

**Table 20-12**

