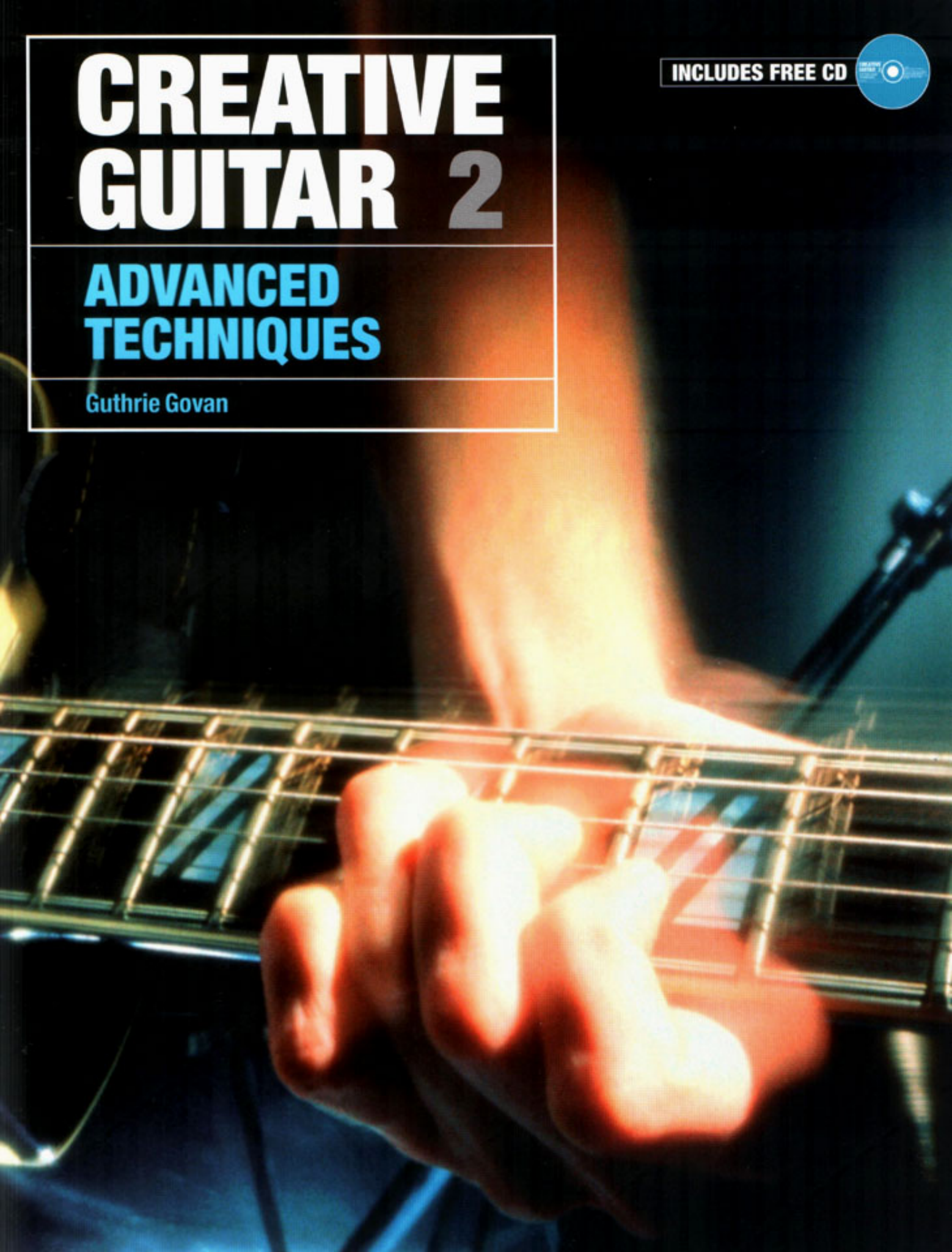


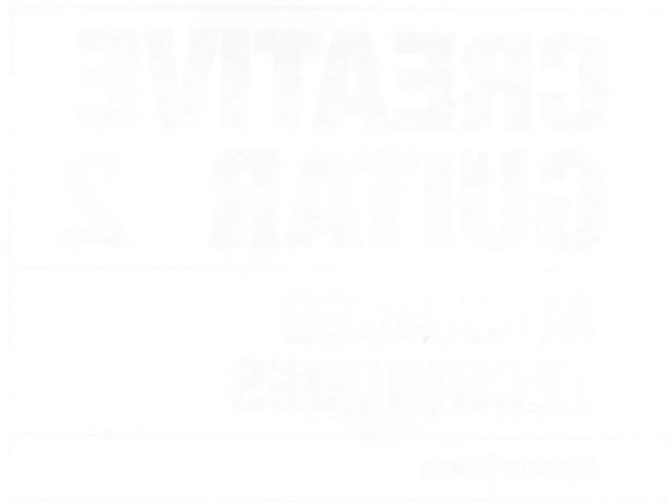
CREATIVE GUITAR 2

ADVANCED TECHNIQUES

Guthrie Govan

INCLUDES FREE CD





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On the CD, I've demonstrated each lick and example twice, first with a click track at 80bpm and then at 'full speed' (whatever that is!). There wasn't enough space to record absolutely everything, so I decided not to bother with examples like 'This is the sound of the G major scale' – I'm trusting your ability to read simple chord boxes and scale diagrams!

The CD contains demonstrations of anything that requires a particular playing technique, anything that

might look rhythmically confusing on paper and anything where the sound you're getting out of the guitar is more important than the actual notes in the written example.

As a bonus, I've thrown in a couple of backing tracks at the end, along with an accompanying demo solo for each. (You'll find these explained towards the end of the book.) Each track was designed to illustrate a specific 'new direction', but I guess you could play whatever you liked over them!

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Drums on tracks 50–52 played by Pete Riley.

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FOREWORD

The aim of this book and its companion volume, *Creative Guitar 1: Cutting-Edge Techniques*, is to help any rock guitarist who feels stuck in a rut. They field all of the most common questions and problems I've encountered over years of teaching guitar. They explain the nuts and bolts of theory in an accessible manner that you can actually *use*. They explain how to practise efficiently and diagnose what's going wrong in your playing. They show you lots of new licks. They promote a self-sufficient approach to learning to make sure you're well equipped to explore any aspect of playing that

interests you, whether it's in the books or not.

In short, these two books are quite ambitious, so they can't even pretend to constitute any kind of all-encompassing guitar Bible, but my main goal was to get you thinking about your playing and point your playing in some new directions.

I hope I at least achieved that much. Above all, I hope you enjoy working through this book and its companion. Remember, learning about your instrument should never feel like a chore; it's supposed to be fun and rewarding!

See you at the other end...

INTRODUCTION

In Part 1 of this series, I tried to explain the basics of music theory from a guitarist's perspective and gave a breakdown of the most common technical problem I've seen in students' playing over the years. One of the recurring themes throughout the previous book was the idea that accurate, efficient technique is the result of streamlining your playing motions, moving your hands as little as possible in order to achieve the required notes. Another was the concept of breaking down scales (and similarly intimidating morsels of music theory) in as many ways as possible, with the goal of turning them into valid improvisational tools rather than leaving them as dry technical exercises that don't sound any good in a musical context.

In this second book, I propose to show you how far you can go with these approaches. Now that you know the basic ideas, we can start having some *real* fun! I've started with an in-depth look at common techniques like alternate picking and legato, then applied the same ideas to more advanced techniques. There's some stuff in here that you might associate with a specific musical style, but I would warn against taking these preconceptions too seriously – eight-finger tapping may well be popular with the heavy-metal contingent, but you can also use it to create piano-like chord voicings and cascading scale runs that sound great with a clean tone. Conversely, the idea of incorporating some right-hand fingers into your picking technique has long been considered the province of the country player, but it sounds equally effective when you step on the overdrive!

Technique is a means to an end, and the broader

your range of playing techniques, the easier it will be for you to figure out the best-sounding (and easiest!) way to realise all those great licks you hear in your head. Much of this book is based around the theme of expanding and extending your vocabulary, and so, in addition to all of the technical stuff, you'll also find a selection of extended scale shapes that cover an unusually wide range, some ideas on how to coax impossibly high notes out of your instrument, some tips on how to make 'wrong' notes sound deliberate and colourful...and lots of unusual scales from all over the world for those players who are bored with the sound of those ubiquitous pentatonics and modes of the major scale.

One of my favourite chapters is the one about drawing inspiration from other instruments, and I've included some licks derived from instruments as diverse as the mandolin, the koto and the Hammond organ to get you into the spirit of things. This might seem like an ungrateful approach to your instrument – after all, guitars sound great when you play them in the 'normal' way, so why would you want to sound like any other instrument? – but in defence of the idea, I would put it to you that many innovative players developed their distinctive styles using elements like violin-style vibrato, vocal-style phrasing, sax-style amp setting or organ-style double-stops. At the end of the day, it's all music, regardless of which instrument did it first! The general message is that any guitarist who feels an urge to be more creative should start to think of himself or herself as *a musician who plays guitar* rather than just a guitarist. The difference might seem

a little academic, but the key to playing more creatively is to consider music holistically, rather than slavishly adhering to what you think a guitar is supposed to sound like.

This approach is what made it possible for Allan Holdsworth to develop his unique sound. The same approach has also given us inspirational players as

diverse as Danny Gatton, Tuck Andress, Tom Morello, Thurston Moore, Vernon Reid, Buckethead and The Edge. Who knows what effect it could have on your own playing?

Well, there's only one way to find out: check out the ideas laid out in the following pages and see where they take you...

1 ALTERNATE PICKING

Here's a bold, sweeping statement for you: nearly all rock guitarists are more proficient with their fretting hands than they are with their picking hands. In an attempt to rectify the situation, in this chapter I've compiled some classic picking exercises. Any guitarist can benefit from a little work on picking technique; even if you don't like the machine-gun effect that can result from picking every note, you'll still find this stuff beneficial for the overall accuracy of your playing.

As you'll see later on, there are various approaches that you can use, but the simplest and most universally useful is *alternate picking*, which basically means alternation between down- and upstrokes.

Most players feel that there's something more natural about downstrokes – I suspect that gravity might have something to do with this – but think of it this way: every time your hand executes two downstrokes, it must have performed an upward movement in between. Why not use that upward movement to pick a note rather than let it go to waste? As a huge advocate of laziness, I put it to you that this immediately halves the workload of your picking hand!

Quite aside from the efficiency of movement that it offers, alternate picking can also help with your timekeeping. Think of those funky Nile Rogers parts you hear on Chic records. These are based on a constant 16th-note pulse, but they're full of holes! Guitar parts like this sound the way they do because the picking hand doesn't strike the string on every possible 16th-note division – it's the gaps that make it groove. However, you'll get the best results if you keep your hand moving up and down in a constant

rhythm, as in this way you'll maintain your awareness of where you are in the bar.

Once you've got the right tempo and feel, you can go onto automatic pilot. Your picking hand will find maintaining that motion easier than having to keep stopping and starting. All you have to do is put your picking hand in contact with the strings when you're about to play a note or chord and then take it away again when there's a gap coming up.

If you're still not convinced, think of your picking hand as an engine. Letting it run at a constant speed is preferable to starting and stopping it all the time, so that it's effectively ticking over in neutral, primed and ready to go whenever you want to use it.

Here's another consideration: the more comfortable you are with that basic down-and-up movement, the better prepared you'll be for playing passages that involve a lot of string crossing. Whenever you have to change from one string to another, you suddenly have something extra to think about, and the last thing you want to do is lose your place in the middle of a bar. In this situation, the maximum possible peace of mind comes from the confidence derived from having your hand remember its basic down-and-up motion. If you have that, all you have to do is point it at the right string.

Here are a few more pointers. Get in the habit of holding the pick between your thumb and forefinger. There are notable exceptions to this rule (more on this later), but adopting this grip facilitates a comfortable hand angle, which is a good start.

It's also a good idea to take a little time to analyse just how much of the pick is protruding from your thumb-

and-forefinger assembly. For precision playing, you'll want to keep the exposed area of the pick to a minimum. Similarly, if you wanted to write or draw something with any degree of accuracy, you'd hold your pencil near the sharp end rather than near the rubber. Why? Because this gives you more control; your hand's basic movements are occurring closer to the paper, so they're projected onto it with greater precision. This picking lark works in much the same way.

On a related note, the more pick you have sticking out, the greater the danger of getting caught in the strings, so keeping that risk to a minimum would be another advantage of reducing that exposed area as much as possible.

Here's something else to think about: how pointed is your pick? The importance of this criterion varies depending on whether you strike the string with the flat of the pick or the edge. As I said earlier, there are tonal differences between the two approaches – using the flat of the pick (ie holding it parallel to the string) gives you a nice, full tone and not too much pick attack, whereas using the edge (with the pick at a 30–45° angle) gives you a scratchier tone with more top end.

It seems to me that the second approach can sometimes give you that little bit of extra definition when you're playing at extremely high speeds and a few extra beats per minute on the metronome scorecard, if that's the sort of thing you're into. If you use this kind of picking angle, you might like to think of it like this: picking a note basically entails getting the pick from one side of the string to the other, and your goal is to achieve this with as small a movement as possible. If your pick is angled, getting it all the way across the string using the sharp end obviously requires less movement than trying the same thing with the blunt end. All I'm doing here is taking the idea to its logical conclusion. (As a teenager, I used to spend hours filing and sandpapering my picks to a point. Now I've discovered Dunlop Jazz IIIs and regained control of my life.)

I would also make a case for using a relatively thick pick, for two reasons:

- You'll get a wider dynamic range. It's easier to get a quiet note with a hard pick than it is to play a really loud note with a soft pick.

- A sturdy pick only does what your hand tells it to do, while thinner ones have an annoying habit of flapping around when you attempt any sort of speedy picking. (To stretch my writing/drawing analogy a little further, playing with a floppy pick is a lot like using a rubber pencil.) To be fair, thin picks sound great for those strummy acoustic moments when you want to play energetically without sounding too harsh, so always consider your context.

Here's a really important point: the actual movement of your picking hand should come from your wrist. After all my harping on about efficiency, small movements and pencils, you might be forgiven for supposing that the most economical way of picking would be moving your thumb and forefinger in a 'writing' motion. In fact, this part of your hand is already fully engrossed with the important matter of holding onto the pick tightly enough to stop it slipping and changing the strength of its grip according to the tone or volume level you're trying to achieve. Expecting it to cope with moving the thing around at high speeds on top of these other important duties is asking for trouble – you're better off leaving it to the second-closest part of you: your wrist.

There's 'just one more thing...' (I had to squeeze a Columbo reference in somewhere!). You should think about whether your picking approach works in all situations or only in your practice routine. In a gig setting, you'll most likely be standing up (unless your name is Robert Fripp) and perhaps moving around a little, so it's important to ensure that your picking hand is anchored to the guitar in some way. I would recommend tying this in with your palm-muting technique – if there's a part of your picking hand that already spends most of its guitar-playing life attached to unused strings, you've got yourself the anchorage you need and you should be able to run around the stage like a chicken at an Ozzy gig without missing a note.

Alternatively, you might try leaning your palm on the bridge itself. This can yield some pleasing results when you're going for the Al DiMeola 'mutola' effect, especially if you're playing an instrument with the Gibson-style fixed-bridge-and-tailpiece combination, as the slope of the strings between the bridge and tailpiece encourages a nice, comfortable hand position.

Please bear in mind, though, that this approach won't work on guitars with floating tremolo units, as on these instruments, as soon as your palm touches the bridge plate, the pitch of everything suddenly goes sharp.

Another approach to the anchoring idea is exemplified by Michael Angelo, whose picking technique is the model of efficiency. (If you don't believe me, check out his instructional video.) He chooses to rest his right-hand fingertips on the surface of the guitar's body underneath the high E string so that he can move his pick easily from string to string without having to alter the way he's gripping it.

Here's something else to consider: how open or closed is your picking hand? You might find that closing your hand into a fist makes it easier to move around, but players like George Lynch (of Dokken fame) claim that they can play certain passages faster with the unused digits of their playing hand fanned out. I personally prefer a fairly closed hand position, but it's important not to tense up your hand up too much. (Perhaps I shouldn't have used the word *fist* earlier...)

A good general philosophy to adopt when honing your picking technique is to ask yourself if your chosen hand position is sufficiently versatile for your needs. You might be particularly fond of throwing in pinched harmonics for that squealing sound or adding a little touch of the country player's pick-and-fingers approach. Can you move easily from one technique to another without fundamentally altering your hand position?

After all that detailed stuff, I feel obliged to mention some notable players who do things completely differently. Steve Morse, for instance, holds his pick between his thumb and index and middle fingers. I find that this approach restricts mobility and feels a little cumbersome, but it clearly works for Mr Morse, who can alternately pick pretty much anything. Similarly, my pointed-picks-are-best argument clearly doesn't apply to George Lynch, Robben Ford or Pat Metheny, all of whom choose to use the side of the pick rather than the sharp end. And of course my anchoring idea clearly doesn't appeal to Eddie Van Halen, who plays stuff like the tremolo-picked melody in 'Eruption' with his right wrist sticking out, well away from the surface of the guitar and apparently not anchored to anything. When I see footage of Eddie's picking hand, it amazes me

that it works at all, but you can't argue with the results he's achieved with it. (Just to confuse the situation even more, Eddie uses a relatively thin pick and holds it between his thumb and middle finger, leaving his index finger flapping in the breeze. It looks odd, but when you see how painlessly he switches between picking mode and tapping mode, you start to see a strange logic in his approach.)

The moral of this particular story would seem to be that there are no hard-and-fast rules. I've tried to explain all of the little details that help with my own picking, and I think most of it is fairly logical and scientific, so if you're struggling to get your picking up to scratch, you'll probably find something helpful in here. However, I accept that everyone does things slightly differently, and as long as your picking hand is moving efficiently and feeling relaxed, I don't think it really matters what it looks like.

Exercises

Anyway, let's look at a few picking exercises to help you put all of this into practice. Example 1.1 should get you into the swing of things. It's a C major scale, and you'll note that the whole thing can be played using a strictly one-finger-per-fret approach. (I've included the picking directions for this one to show you what they look like. The squarer symbol of the two denotes a downstroke and the downwards-pointing arrow represents an upstroke. If these symbols seem the wrong way around to you, bear in mind that they were originally meant to look like the two ends of a violin bow. A violinist would start a downstroke with the squarer end of the bow – the 'frog' – and an upstroke with the eye-gouging end. The notation makes a little more sense when you think of it in this way!) You should start this exercise very slowly so that you can keep an eye on what your picking hand is up to – it might well be tempted to try two downstrokes in a row, for instance, which would completely disrupt the whole alternate-picking rhythm. You really have to adhere to the rules here, or you'll end up practising the wrong thing and you'll run into problems later on when you try to build up your speed. Try to ensure that all of the notes are of equal volume and that each one rings clearly for its full duration. This is particularly applicable to the last note on each string.

Example 1.1

Example 1.1 is a musical exercise in 4/4 time. The notation consists of a treble clef staff and a guitar staff. The treble staff shows a melodic line with various rhythmic patterns and fingering numbers (1, 2, 3, 4) above the notes. The guitar staff shows the fret positions for each note, with numbers 7, 8, 9, and 10 indicating the frets. The exercise is divided into two measures.

Example 1.2, meanwhile, uses the notes from the scale of C major rearranged in a more interesting order known as a *scale sequence*. Have a look at the first three bars. You'll see that, rather than simply running from the lowest note to the highest and back again, the scale is now grouped into clusters of four notes each. In other words, every beat contains a four-note mini-scale, each of which starts one note higher than its predecessor. (The second half of the exercise, of course, uses the same idea in reverse.) This is good training for your picking hand, because there's a lot of string crossing to negotiate. In addition, it sounds a little more interesting than Example 1.1!

One interesting point arises around the notes marked '3?' in the music. You may prefer to use your ring finger here to fret these notes, in flagrant defiance of the hallowed one-finger-per-fret principle, while sticking with your little finger would force you to use a larger area of your fingertip, because you'd have to fret the G and B strings in succession, rolling from one to the other. Try both fingerings in turn. The first makes it easier to achieve perfect separation between the notes and also tends to sound cleaner, but there are times when you have no choice but to fret adjacent strings with a single finger, so you should work on both.

Example 1.2

The first part of Example 1.2 shows a musical exercise in 4/4 time. The notation consists of a treble clef staff and a guitar staff. The treble staff shows a melodic line with a rhythmic pattern of eighth notes. The guitar staff shows the fret positions for each note, with numbers 7, 8, 9, and 10 indicating the frets. The exercise is divided into two measures.

The second part of Example 1.2 shows a musical exercise in 4/4 time. The notation consists of a treble clef staff and a guitar staff. The treble staff shows a melodic line with a rhythmic pattern of eighth notes. The guitar staff shows the fret positions for each note, with numbers 7, 8, 9, and 10 indicating the frets. The exercise is divided into two measures. There are '3?' markings above the notes in the second measure of the second part.

8 10-9-7 10-9-7 10-9-7 10-9-7 10-9-7 10-9-7 10-9-7 10-9-7 10-8-7 10-8-7 10-8-7 10

Example 1.3 is a variation on the above that requires you to go up and down the scale in threes:

Example 1.3

8-10-7 10-7-8 7-8-10 8-10-7 10-7-9 7-9-10 9-10-7 10-7-9

7-9-10 9-10-8 8-10-8 10-8-10 7-8-10 10-7-10 7-10-8 10-8-10 8-10-8 10-8-10 9

10-9-7 9-7-10 10-9-10 9-7-10 9-7-10 7-10-10 8-10-8 10-8-7 8-7-10

This exercise has the notes grouped in a triplet rhythm so that each group of three starts on a fresh beat. Example 1.4, meanwhile, takes the same 'threes' idea but groups it in 16th notes (ie four per beat) so that

this time the pattern isn't quite as obvious to the listener – especially if you try accenting the first note of every beat! Hopefully, this one sounds a little less mechanical and predictable than Example 1.3:

Example 1.4

Example 1.4 is a guitar exercise in 4/4 time, featuring a triplet rhythm of 16th notes. The score is presented in two systems. The first system shows the first two measures, with the treble clef staff containing a triplet of eighth notes (G4, A4, B4) and the guitar staff showing fret numbers 8-10, 7-8, 7-8, 10-8, 10, 7, 7, 9, 7, 9-10, 9-10, 7, 10, 8, 8. The second system shows the next two measures, with the treble clef staff containing a triplet of eighth notes (A4, B4, C5) and the guitar staff showing fret numbers 10-8, 8, 10-9, 10-9, 7, 9, 7, 7, 10, 7, 10-9, 10, 9, 7, 9, 7, 10, 7, 10-8, 10-8, 7, 8, 7, 10, 10.

Here's another way of taking a simple exercise and making it sound less obvious. If you compare Example 1.5 with Example 1.3, you'll see that the

notes are still grouped in threes but that this time the note groups that fall on even-numbered beats have been reversed:

Example 1.5

Example 1.5 is a guitar exercise in 4/4 time, featuring a triplet rhythm of 16th notes. The score is presented in two systems. The first system shows the first two measures, with the treble clef staff containing a triplet of eighth notes (G4, A4, B4) and the guitar staff showing fret numbers 8-10, 7-8, 7, 10, 7-8, 10, 7, 10, 8, 10. The second system shows the next two measures, with the treble clef staff containing a triplet of eighth notes (A4, B4, C5) and the guitar staff showing fret numbers 7, 9, 10, 9, 7, 9, 10, 7, 9, 7, 10.

Example 1.5 musical notation showing a treble clef staff with eighth notes and triplets, and a guitar tab staff with fret numbers: 7, 10, 9, 7, 9, 10, 9, 7, 10, 8, 10, 7, 10, 8, 7, 10, 7, 8, 7, 10, 8, 7, 8, 10.

And here's yet another variation. Example 1.6 should remind you of Example 1.2 with all of the even-numbered beats removed. (Incidentally, I strongly recommend that you follow the written music for these

examples. Even if you lack confidence in your music-reading abilities, you'll have to agree that the staff at least shows you how the patterns are constructed in a much more graphic way than the tab ever could.)

Example 1.6

Example 1.6 musical notation showing a treble clef staff with eighth notes and a guitar tab staff with fret numbers: 8-10, 7-8-7-8-10, 10, 7-9-10-9-10, 7-9, 10-9-7, 7, 10-9-7-9-7, 10-8-10-8-7, 10.

Of course, there's more to life than going up in threes and fours. Example 1.7 uses groups of six notes, so there's a bigger interval between the end of one group

and the start of the next. At some points – halfway through bar 1, for instance – you have to skip a string, so you'll need to work particularly hard at these points.

Example 1.7

Example 1.7 musical notation showing a treble clef staff with eighth notes and triplets, and a guitar tab staff with fret numbers: 8-10, 7-8-10, 10, 7-8-10, 7-9, 7-8-10, 7-9-10, 8-10, 7-9-10, 7.

Now try something a little more confusing. Example 1.8 has notes ascending in groups of five, but rather than have five notes crammed into each beat, it sticks with the more familiar-sounding 16th-note rhythm.

Consequently, each new group of five notes starts one 16th note later than the one before it, creating an interesting rhythmic effect. You really have to concentrate to get this one right!

Example 1.8

And here's another application of the same idea. Have another look at Example 1.6 and you'll see that Example 1.9 takes the same principle and applies it

to ascending groups of five – ie some of the groups are omitted altogether, creating a greater sense of movement:

Example 1.9

Now let's move on to intervals. Example 1.10 is a C major scale played in ascending thirds, which you

might think of as ascending threes with the middle note taken out of each group:

Example 1.10

(Incidentally, a good way of tackling the picking in the above exercise is to start off by looping the first six notes. Once you find you can pick that comfortably, you'll be pleased to find that the same

string-crossing pattern recurs in every subsequent group of six notes.)

Thirds generally have a melodic and pleasant quality about them. The same, alas, cannot be said of the

intervals in Example 1.11. This routine demonstrates ascending fourth intervals and, as you can see, that fingering problem first tackled in Example 1.2 is back with a vengeance. You should probably try to stick with the one-finger-per-fret principle for this one; if you try any other approach, you'll have run out of fingers by the time you get to the fifth note. (Having said that, you'll probably want to make an exception for the note marked '3?' in the music. This will allow you to get around the running-out-of-fingers problem, if only for the briefest of moments.)

This is a great exercise for improving the accuracy of your fretting hand. The hardest part of making it sound good is in ensuring that the notes don't overlap. Each must be cut off as the next is sounded, and your picking hand is far too busy to deal with the

situation, so the bulk of the note-damping responsibility falls to your fretting fingers. It might seem like a trivial exercise, but try looping the first two notes very slowly, shifting the pressure of your fingertip between the E and A strings as you play each note so that only one string is actually touching the fret at any given moment. If you barre lightly over both strings and flex the joint nearest the fingernail on your index finger, you'll get a feel for the general movement required. The next step would be to work on each of your other fingers in turn. The little finger won't co-operate at first, but it'll get used to the idea after a while. Once you've spent a little time working on this aspect of your fingering, you might well find that some of your own licks start to sound cleaner and more accurate.

Example 1.11

Example 1.11 musical notation and fretboard diagram. The diagram shows fret numbers for strings E, B, G, D, A, E. The melody consists of ascending fourth intervals. A '3?' is written above the fifth note of the second measure.

Fourths sound a lot more angular than thirds and they have a certain tension about them, which makes them appealing to jazz-fusion soloists and the like. On the other hand, if you heard the dulcet tones of

Example 1.11 emanating from an ice-cream van, I think you'd be puzzled!

The next three examples illustrate the remaining intervals in the C major scale:

Example 1.12

Example 1.12 musical notation and fretboard diagram. The diagram shows fret numbers for strings E, B, G, D, A, E. The melody consists of ascending second intervals.

Example 1.13

Example 1.13 shows a musical exercise in 4/4 time. The first measure contains a melodic line in the treble clef and a corresponding guitar fretboard diagram. The fretboard diagram shows fingerings for strings E, B, G, D, A, E across two measures. The first measure has fingerings: E (7), B (10), G (8), D (7), A (9), E (10). The second measure has fingerings: E (8), B (7), G (9), D (10), A (8), E (7). The third measure has fingerings: E (10), B (7), G (9), D (10), A (8), E (7). The fourth measure has fingerings: E (8), B (10), G (7), D (9), A (10), E (8).

Example 1.14

Example 1.14 shows a musical exercise in 4/4 time. The first measure contains a melodic line in the treble clef and a corresponding guitar fretboard diagram. The fretboard diagram shows fingerings for strings E, B, G, D, A, E across two measures. The first measure has fingerings: E (7), B (9), G (10), D (7), A (9), E (10). The second measure has fingerings: E (8), B (7), G (9), D (10), A (7), E (9). The third measure has fingerings: E (10), B (7), G (9), D (10), A (8), E (7). The fourth measure has fingerings: E (8), B (10), G (8), D (10), A (8), E (8).

You probably found that the fifths in Example 1.12 had a touch of that fourth-esque angularity about them, while the sixths in Example 1.13 had a melodic quality more reminiscent of thirds and the sevenths in Example 1.14 were as hard to listen to as they were to finger! In general, the wider intervals are harder to play but more interesting to hear. You probably

wouldn't want to use them all the time, but familiarity with intervals can certainly add variety to your choice of notes when you're improvising.

Now let's go all the way back to thirds and see what happens when you stack a couple of them together. In Example 1.15, each beat contains three notes moving either up or down in thirds:

Example 1.15

Example 1.15 shows a musical exercise in 4/4 time. The first measure contains a melodic line in the treble clef with four triplets of eighth notes. The fretboard diagram shows fingerings for strings E, B, G, D, A, E across two measures. The first measure has fingerings: E (8), B (7), G (10), D (8), A (10), E (7). The second measure has fingerings: E (10), B (9), G (7), D (9), A (10), E (8).

Time now for a quick bit of jargon-busting: this exercise demonstrates *diatonic triads*. A *triad* is the simplest type of chord (ie one containing only three

different notes) and *diatonic* refers to the fact that all of the triads in the exercise are constructed using notes from the same basic scale. (The subject of

triads will be covered in more detail later on. For the time being, just take note of their melodic, agreeable sound, and watch out for all that string crossing! And you *are* picking all of these alternately, aren't you? Just checking...)

I've arranged the triads so that they ascend and descend alternately because I think it sounds nicer

that way, but feel free to rewrite the exercise so that all of the triads go in the same direction, just for a bit of extra picking practice.

Example 1.16 takes this idea one step further. Stacking up three third intervals at a time generates the notes of *diatonic seventh chords*, which sound slightly more complex:

Example 1.16

The musical notation for Example 1.16 consists of a treble clef staff in 4/4 time and a guitar fretboard diagram below it. The fretboard diagram shows fingerings for strings E, B, G, D, A, E. The sequence of fret numbers is: 8-7-10, 9-10-7, 8-10, 7-10, 9-7-9, 10-7-8, 10, 9-7-10, 8-9, 10-7-9, 7-10, 7-10, 8-9, 10-8-9, 10.

Incidentally, all of the above exercises are worth trying with different rhythmic approaches. If I've written an exercise in 16th notes, try it in triplets and vice versa.

You can give your fretting hand a break now. All it

has to do in Example 1.17 is hold down a chord shape. You can let all the notes of the chord ring freely for this one – your mission here is to focus more on your picking hand.

Example 1.17

The musical notation for Example 1.17 consists of a treble clef staff in 4/4 time and a guitar fretboard diagram below it. The fretboard diagram shows fingerings for strings E, B, G, D, A, E. The sequence of fret numbers is: 10, 9, 8, 8, 8, 8, 9, 10, 10, 9, 8, 8, 8, 9, 10.

This exercise boasts the highest concentration of string crossings so far. In fact, you'll probably find it easiest to play if you think of each pair of notes as a unit. Try to target the first and third notes in each beat, letting the notes in between take care of themselves. A good test of your success here is to see how many times in a row you can play the exercise without making a mistake. You'll find that

increasing the repetitions is as hard as increasing the speed.

Example 1.18 at the top of the next page is a variation on the same idea. This time, you're not doubling up the lowest and highest notes, so the pattern is shorter. Your best tactic is to target the D string on the downstroke and the top E string on the upstroke.

Example 1.18

Example 1.18 is a guitar exercise in 4/4 time, featuring alternate picking and triplets. The notation is presented in a grand staff with a treble clef and a guitar-specific staff below. The guitar staff is labeled with strings E, B, G, D, A, E from top to bottom. The exercise consists of four measures, each containing a triplet of eighth notes. The fret numbers for the notes are: Measure 1 (10, 9, 8), Measure 2 (8, 8, 9), Measure 3 (10, 9, 8), and Measure 4 (8, 8, 9). Brackets above the notes in each measure indicate the triplet grouping.

You might have seen exercises like the following one described as *arpeggios*. An arpeggio is basically a chord broken up so that the notes are played in sequence rather than all at once. In fact all of the last four exercises were based on arpeggios, although this one is a little more ambitious! The three component notes of a C major chord are C, E and G, so for this exercise I've taken a portion of the fretboard – frets 7–10, as

usual! – and located every C, E and G in this area, covering all six strings. Now that Examples 1.17 and 1.18 have trained your hand to cope with the string crossing, you can turn your attentions back to your fretting hand. To play an arpeggio properly, you have to dampen each note when you're finished with it, much as you had to do with the ascending fourths in Example 1.11:

Example 1.19

Example 1.19 is a guitar exercise in 4/4 time, featuring alternate picking and triplets. The notation is presented in a grand staff with a treble clef and a guitar-specific staff below. The guitar staff is labeled with strings E, B, G, D, A, E from top to bottom. The exercise consists of four measures, each containing a triplet of eighth notes. The fret numbers for the notes are: Measure 1 (8, 7, 10), Measure 2 (10, 9, 8), Measure 3 (8, 8, 9), and Measure 4 (10, 10, 7). Brackets above the notes in each measure indicate the triplet grouping.

Here's what happens when you jumble the notes around a bit. Example 1.20 rearranges the last

exercise so that you're skipping some notes, creating bigger intervals:

Example 1.20

Example 1.20 is a guitar exercise in 4/4 time, featuring alternate picking and triplets. The notation is presented in a grand staff with a treble clef and a guitar-specific staff below. The guitar staff is labeled with strings E, B, G, D, A, E from top to bottom. The exercise consists of two measures, each containing a triplet of eighth notes. The fret numbers for the notes are: Measure 1 (8, 10, 7), Measure 2 (10, 9, 10), Measure 3 (8, 8, 12), Measure 4 (12, 8, 8), Measure 5 (8, 9, 8), Measure 6 (9, 10, 9), Measure 7 (10, 10, 7), and Measure 8 (10, 7, 10). Brackets above the notes in each measure indicate the triplet grouping.

Once you get used to it, I think you'll actually find this one easier to pick than the straight arpeggio in Example 1.19. And it sounds nicer, too!

Examples 1.21 and 1.22 really test your string-crossing abilities. They are constructed by taking all the notes available within the one-finger-per-fret hand position and breaking them down into a series of

diagonal shapes. (Look at the tab to see the logic behind this – the notes on the staff will be no help at all!) The results sound absolutely horrible, but that's not to say that you can't use excerpts from them in your playing – for instance, there's a very similar lick on Steve Vai's track 'The Animal', from his celebrated *Passion And Warfare* album.

Example 1.21

Example 1.21 is a musical exercise in 4/4 time. The melody is written in a treble clef and consists of eighth notes with triplet markings. The guitar tab below shows the string numbers for each note: 5-6-7-8 for the first four bars and 6-5-7-8 for the next four bars.

Example 1.22

Example 1.22 is a musical exercise in 4/4 time. The melody is written in a treble clef and consists of eighth notes with triplet markings. The guitar tab below shows the string numbers for each note: 8-7-8-6-7-8-5-6-5-6 for the first four bars and 7-8-6-7-8-5-6-7-5-6-5 for the next four bars.

The last few exercises were all about throwing as many string-crossing opportunities as possible into each bar, so you'd probably benefit from playing them at a moderate speed and trying to get them sounding

as precise as possible. This next one is more of a speed lick, so I invite you to try to play it as fast as you can, starting first on a downstroke and then on an upstroke:

Example 1.23

Example 1.23 is a musical exercise in 4/4 time. The melody is written in a treble clef and consists of eighth notes with sextuplet markings. The guitar tab below shows the string numbers for each note: 9-12-10-9-10-12 for the first four bars.

Which did you find easier? You're in good company either way – Paul Gilbert would choose to start with an upstroke while the equally frightening Greg Howe maintains that he can make the lick work only if he picks the G-string note with a downstroke. Whatever the case may be, your best bet is to accent that high note every time, as this will make sure that the lick retains its rhythmic definition at high speeds.

As you've probably guessed, my angle on all this is that you should be able to pick it both ways. The

more flexible your picking technique, the better, which explains the inclusion of Example 1.24.

Here, I've shown two other ways of fingering the same notes. You'll note that the string crossing occurs at different places in each, presenting new challenges for your picking hand. I think that the fingering in Example 1.23 is the best sounding arrangement for playing at high speeds, but you'll be happier in the long run if you can manage all three fingerings without too much trouble.

Example 1.24

Example 1.24 shows a guitar lick in 4/4 time. The treble clef staff contains a sequence of eighth notes, with brackets indicating groups of six notes. The guitar staff shows the corresponding fret numbers for each note, including string crossings between the G and D strings.

Examples 1.25 and 1.26 demonstrate a couple more Gilbertian variations. That high note on the G string can really stand out from the rest if accented a little, and you can get some interesting rhythmic effects by putting it in more interesting places within the bar. Example 1.25 doubles up the first two notes, thus

adapting the lick to work in a 16th-note context, while Example 1.26 is a little trickier – as you play through the pattern, the G-string note occurs once, then twice, then three times, then twice again, so staying in time all the way through the lick will require a lot of concentration.

Example 1.25

Example 1.25 shows a guitar lick in 4/4 time. The treble clef staff contains a sequence of eighth notes, with a repeat sign at the end. The guitar staff shows the corresponding fret numbers for each note, including string crossings between the G and D strings.

Example 1.26

The next few examples follow up on that rhythmic theme and take a new angle. So far, you've been picking all of the notes at a uniform speed (I hope!), but now it's time to move on and take a look at your picking hand's ability to change gear.

For the following exercises, I've indicated only the rhythmic outline instead of tabbing out anything too specific. You could start out by applying these rhythms to a single note and then come up with some more melodic-sounding licks of your own, or you could try applying them to some chord shapes. Yes, it's time to be creative!

This aspect of picking is just as important in rhythm

playing as it is when you're playing a flashy lead line. In fact, two of the areas in which I think it's particularly useful would be funk guitar and death-metal riffing. (The connection might seem a little tenuous, but trust me – from a picking-hand perspective, those two disparate styles really do demand similar rhythmic skills.)

Example 1.27 alternates between 16th notes and 16th-note triplets. The best way of keeping this pattern in time is always to aim for the first note of the next beat so that you remain aware of the pulse of the music, which obviously remains constant throughout the exercise, even though the actual spacing of the notes you're playing varies from beat to beat.

Example 1.27

Example 1.28 is trickier. It's business as usual for the first three beats of the bar, and then the last beat features a triplet, which messes up everything – when you loop, you'll have to start on a downstroke the first time, on an upstroke the second and so on. The hardest part is

guessing how much to slow down in beat 4 so that the triplet notes fill the duration of the beat precisely, but this ratio will become instinctive with practice. Remember, the triplet notes have to be perfectly even in length, so don't just miss out one of the 16th notes!

Example 1.28

Example 1.29 hones your speeding-up/slowing-down skills a little more thoroughly. In this exercise, each beat is divided into a different number of notes from

the one before it, so you'll really have to lock in with the metronome and concentrate on getting even note spacing.

Example 1.29



As you played through that last example, you might have wondered why I didn't split any of the beats

into five even notes. OK, if you're curious, let's give it a go:

Example 1.30



Odd, isn't it? Quintuplets (groups of five notes) are pretty rare in Western music, so you don't get to hear them a lot, which is probably why they sound so weird. On the other hand, you could probably learn to like them – they're commonplace in Indian classical music, and unusual-sounding guitarists like Bumblefoot and Shawn Lane frequently use groups of five notes in their licks. You might also have spotted this idea at the end of Eric Johnson's 'Desert Rose', from the *Ah Via Musicom* album, or in the third bar of the main melody from Frank Zappa's 'Peaches En Regalia', the classic version of which can be found on *Hot Rats*.

Quintuplets tend to sound less bizarre as you increase speed. For an extreme example, think of that preposterous keyboard line in the middle of Michael Jackson's 'Black Or White'. The lick might sound shockingly fast, but it doesn't sound particularly odd. And yet, guess what? Yup, it's all groups of five.

If you're finding it hard to switch between fours and fives, try to think of some words that use an appropriate amount of syllables (it helps if you can find words in which the first syllable is naturally accented) and use them as rhythmic templates. For example, if you chanted 'ineffective telemarketing' a

few times against a metronome, you'd easily be able to pace yourself so that each word started on a click. If you then experimented a bit with the speed of the words, you'd soon find a way of making each word expand to fit the beat without leaving a gap at the end. (Think 'robotic' for best results.) What you now have is a bizarre slogan outlining the rhythm of Example 1.30.

I know that the above isn't the sort of thing you'd want to try out if you thought anyone could hear you, but it really does help. In fact, classically trained Indian percussionists have to learn a vocal system called *talas* which uses different words to represent different rhythmic groupings. If you're curious, check out the title track of John McLaughlin's album *Que Alegria* to hear an example of this sort of thing being put into practice. And even if you're not curious, there's some amazing guitar playing on that album, not to mention two of the most underrated bass players you'll ever hear, so you really can't lose either way!

Meanwhile, Example 1.31 is a little more conventional. When the speed changes, it simply doubles, so there's no complicated subdivision to deal with:

Example 1.31



There are two types of note here: the customary 16th notes make up the first beat and a half and the next half a beat comprises 32nd notes. At slower speeds, you might find the 32nd notes harder to execute, but as you increase the speed you'll find that the key to playing them comfortably is to relax your wrist more,

tightening up when the next beat comes and you revert to 16ths. This exercise is reminiscent of snare-drum rolls, and you'll find it handy for adding a touch of rhythmic spice to your funk guitar parts.

Example 1.32 below is a more interesting application of the same idea:

Example 1.32



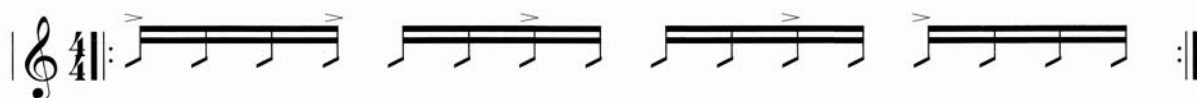
You'll note that I've accented the first 16th note after each group of 32nd notes. Really trying to target these notes is the key to keeping the pattern in time.

After a while, you might feel the urge to play the 32nds a little quieter than the 16ths in order to compensate for their more busy sound. I think that this is to be encouraged, as your playing will come across more musically in this way. As an extension of this, imagine applying Example 1.32 to a whole chord

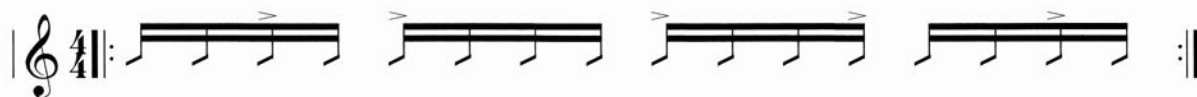
(E9 is always a winner at times like this). Rather than picking the 32nds more quietly, you'd probably find it easier to strum less of the chord at these moments – maybe just a couple of strings' worth.

The next two examples take a different approach to accenting. Here, things go back to straight 16th notes, but the accents are in less obvious places now. Try them out. Do they remind you of any particular musical style?

Example 1.33



Example 1.34



The accents in Examples 1.33 and 1.34 represent the *clave* and the *reverse clave* respectively. These are two rhythmic figures associated with Latin music, and seasoned players in that genre have cultivated a feel for these patterns in the same way that we have tried to develop a feel for the click of the metronome. If you use these rhythms as the basis for the accents in your rhythm playing or soloing, the results sound a little more exciting than when you're just accenting the first

note of each beat. If you want to hear just how rhythmically confusing things can get, you might want to check out the Afro-Cuban style of the incredible pianist Gonzalo Rubalcaba. (Of course, if you fancy sampling some more guitar-intensive Latin music, Al DiMeola is a good starting point.)

The next two exercises illustrate a more mathematical way of generating interesting accents. Example 1.35 uses triplets but accents every fourth

note, rather than every third one, thus you get three accented notes per bar spread out evenly over four beats. The results sound as if they're fighting against the click but without actually going out of time. You'll hear drummers like Virgil Donati doing things like this when they want to create a little tension in their playing. Once you've got the hang of the basic

exercise, you could try a variation in which you play only the accented notes, bringing out that fighting-against-the-beat effect.

Example 1.36 is more tricky. This time, you're trying to get five evenly spaced accents into a four-beat bar. This sounds *really* odd, but sometimes odd is good, as every Zappa fan knows...

Example 1.35



Example 1.36



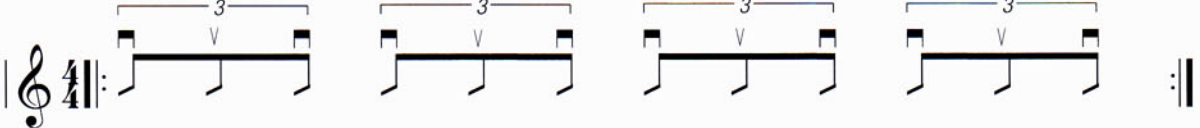
You might have spotted a general pattern emerging from those last two. Now here are a couple of trickier examples:

- If you wanted to squeeze nine evenly spaced accents into a bar of 4/4, you would divide each beat into groups of nine and then accent every fourth note.
- If you wanted seven such accents in a bar of 3/4, you would allocate a group of seven notes to each beat, then accent every third note.

And so on. You can take this idea to extremes, and the way in which it enhances your rhythmic understanding can add a new dimension to your improvisation. However, this is only worth investigating when you're comfortable with the more common rhythmic subdivisions explored earlier – groups of two, three and four notes are found much more often in Western music.

Now for a quick look at a more common kind of accenting. Consider triplet-based riffs like those found in Michael Schenker's 'Into The Arena'. These sound best when the first note of every beat is accented, so you could try the following picking pattern:

Example 1.37



This is like regular alternate picking, but with one difference: effectively, you're resetting your picking-hand motion so that it greets each new beat with a downstroke. This can often impart a better feel to what you're playing. If you find it unnatural, try to target the

second of each pair of consecutive downstrokes. The first one will take care of itself.

Once you're comfortable with the idea of resetting your picking hand to bring out the best in your accented notes, you might try some variations like the following:

Example 1.38

OK, time to move on now. There's another kind of popular picking exercise that places the emphasis on position shifting and keeps the string crossing to a minimum. This area was touched on in the 'Finger Independence' section in *Creative Guitar 1*, but this

time the notes from the C major scale are being used, rather than those from the much uglier-sounding chromatic scale, so the results should sound a little more like music. Example 1.39 is a good example:

Example 1.39

The general pattern of this lick will remind you of Example 1.3 – once again, the C major scale ascends in groups of three – but this time the fingering is completely different. In Example 1.39, you have to shift the position of your fretting hand once every three notes.

Example 1.40 over the page is based on the same principle, but this time alternate groups of three notes have been reversed, requiring you to lead with your little finger for some of the position shifts that the exercise demands:

Example 1.40

The hardest thing about those last two exercises is the sheer amount of position shifting that they demand. This next one features a lower shift-per-bar count, but some of the note groups from the previous exercise have been omitted, making the

shifts bigger and thus harder to play accurately. If you're playing an exercise like this from memory, you'll also have to concentrate a bit harder – each hand position now features two new notes rather than one:

Example 1.41

Here's a slightly less terrifying variation on the above. I've written out only the first two bars of this one, but I'm sure you can spot the pattern:

Example 1.42

Of course, you can also tackle groups of four notes using this single-string approach. Example 1.43

below suggests one appropriate fingering for this kind of endeavour:

Example 1.43

It's a little disconcerting when you have to perform a position shift in the middle of a beat, but you'll get used to it. You could always try moving the shift elsewhere in the pattern, perhaps playing the first two notes of each group with your little finger, but I think that the easiest way of playing it is by using the one suggested in the music.

Hopefully, you'll find this single-string approach helpful in your own playing style. Playing a simple melody on one string can often sound smoother and

more tonally consistent than playing the same thing within the confines of a single scale position – just think of the title track of Joe Satriani's *Flying In A Blue Dream* album for a good illustration of this. In addition, single-string exercises look like they sound, so trying to play stuff like this without looking at any scale charts or tablature is a very effective way of improving your ear and fretboard knowledge. I'll leave you with the following variation, in the hope that it gives you some ideas of your own:

Example 1.44

8va -----

III V VII VIII

E B G D A E

3 5 7 5 3 5 7 3 5 7 8 7 5 7 8 5 7 8 10 8 7 8 10 7 8 10 12 10 8 10 12 10

(8va) -----

X XII XIII

E B G D A E

10 12 13 12 10 12 13 10 12 13 15 13 12 13 15 12 13 15 17 15 13 15 17 13 15

2 SWEEP/ECONOMY PICKING

The previous chapter placed a lot of emphasis on efficiency of movement, and here I'll be looking at some other picking approaches, taking this idea to its logical conclusion.

Let's start with a quick look at sweep picking. If

you cast your mind back to Examples 1.17–1.19 from the previous chapter, you'll recall that they consisted of rows of notes on adjacent strings and turned out to be quite a challenge for the picking hand. Think how much easier it would be to pick Example 1.17 like this:

Example 2.1

The image shows a musical score for a guitar exercise. The top staff is a treble clef in 4/4 time, containing a melodic line of eighth notes. Below it is a six-string guitar tablature. The strings are labeled E, B, G, D, A, E from top to bottom. The tablature consists of a series of numbers representing frets and letters 'u' (upstroke) and 'v' (downstroke) indicating pick direction. The sequence of frets is: 10, 9, 8, 8, 8, 8, 9, 10, 10, 9, 8, 8, 8, 8, 9, 10. The pick directions are: u, u, u, u, v, v, v, v, u, u, u, u, v, v, v, v.

When you play the exercise like the one above, you have to change the direction of your pick only once per beat, whereas alternate picking makes your hand change direction *four times* per beat – ie every single note! In theory, this means that sweeping the exercise requires only 25 per cent of the effort you'd otherwise need to put in when picking the same thing alternately.

That's the basic idea of sweep picking, and you can see how the technique got its name – the pick literally sweeps across the strings as you play. (Incidentally, you'll find that some people use the word *rake* to define the same movement.) The technique isn't useful for everything you'll ever need

to pick, but whenever you need to tackle a series of notes on adjacent strings, sweeping is your most efficient option. The principle, as you've no doubt gathered, is to use a single pickstroke whenever you have to cross strings.

Sweeping can really help you to play fast passages effortlessly, but it can also make your fast playing sound ungainly and sloppy if you're not careful. To the untrained eye, sweeping can look a lot like common-or-garden strumming, so be sure to bear in mind the following important differences.

- **Timing.** Consider the difference between Examples 2.2a and 2.2b:

Example 2.2a

Example 2.2b

This is what an open C chord should look like. (If you're one of those people who strum all six strings but don't fret the note on the bottom E string, I implore you to change your ways. A C chord with a low E in the bass is a clumsy-sounding thing.)

When you're strumming, all of the notes of the chord should be treated as part of a single idea. When playing Example 2.2a, your aim is to get *every note* of that C chord to fall on the beat, while in Example 2.2b the notes have to be evenly spaced, spread out to fill the entire duration of the beat. For this to sound good, you have to slow down the motion of your picking hand in a very controlled manner. The pick should glide smoothly across the plane of the strings (if you dig in too deep, the pick will trip over itself, which sounds truly bad) and the movement should feel slightly stepped, in the sense that you should be aware of the timing of each individual note as you strike it. Throughout the first six notes of Example 2.2b, you should be thinking about where the second beat will fall and monitoring the speed of your hand movements accordingly, aiming to get the pick to the top E string just in time to play it – not before!

- **Muting.** In Example 2.2a all of the notes ring together,

whereas in 2.2b only one note should be audible at a time. Technically, 2.2b is an arpeggio, which means that, every time you pick a new note, you need to dampen the previous one. Most of this responsibility falls on your fretting hand – as you finish with each note, the relevant left-hand fingertip should release its grip just enough so that the string is no longer touching the fret. Don't move your fingers too far, though – if you relax so much that your fingertip leaves the string, you'll hear rogue open strings ringing out, which spoils the whole effect. The best way of muting the strings is to pre-form the whole shape, with all of your fingertips resting on the right strings, and then squeeze each note when required.

Naturally, your right-hand palm can be very helpful for muting unwanted strings, but when you're playing a sweep-intensive passage, your palm alone won't be equal to the task, so you really need to train your left-hand fingertips to dampen the bulk of the notes.

Maybe Example 2.2b was an unreasonably hard example – muting the open strings with your left hand verges on the impossible – but at least the sweeping-versus-strumming comparison was enlightening. Here's a more realistic example of how you might sweep an arpeggio:

Example 2.3

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Once again, this exercise comprises a C major arpeggio. You'll note that your hand briefly reverts to an alternate-picking approach when it reaches the top E string and then reverts to a sweeping motion as soon as it can. You might find it hard to switch between

the two picking styles, but it's well worth spending some time honing your skills in this area. After all, the whole point of practising stuff like this is to absorb it into your normal playing style.

Now spot the difference with this next one:

Example 2.4

Example 2.4 is a musical exercise in 4/4 time, featuring a C major arpeggio. The notation is presented on a single staff with a dashed line above it labeled "8va". The guitar tablature below the staff shows fret numbers for the E, B, G, D, and A strings. The exercise consists of two measures of an eight-note pattern. The first measure has notes on frets 12, 13, 12, 15, 12, 13, 12, and 14. The second measure has notes on frets 12, 13, 12, 15, 12, 13, 12, and 14. The notation includes various picking directions (V for downstroke, ^ for upstroke) and a pull-off from the fifth note to the sixth in the first measure.

This is essentially an eight-note pattern, and the lowest and highest notes aren't doubled here. As a result, you'll observe how the downstroke sweep covers all four strings but the corresponding upstroke sweep is compromised, covering only three strings. If you try to get the upstroke motion to cover all four strings, the downstroke suffers similarly.

This raises a general point: whenever your sweeping motion changes direction, what you want is an even number of notes on the highest/lowest string. In Example 2.4, things just haven't worked out quite that way, so you'd need to throw in a hammer-on or a pull-off to make everything add up.

As you can see, I chose to use a pull-off from the fifth note of the pattern to the sixth. I could have fingered the exercise with a hammer-on from the fourth note to the fifth and then swept the last three notes (without the interruption of that pull-off), but I think that the way I've written it here has a more defined rhythmic feel – the fifth note marks a main beat within the bar, so it would be a shame not to accent it. In fact, picking this high G not only sounds better, it also helps you to keep the lick in time at high speeds.

Here's another example of an occasion when sweep picking steadfastly refuses to fit to a pattern:

Example 2.5a

Example 2.5a is a musical exercise in 4/4 time, featuring a C major arpeggio. The notation is presented on a single staff with a dashed line above it labeled "8va". The guitar tablature below the staff shows fret numbers for the E, B, G, D, and A strings. The exercise consists of two measures of a six-note pattern. The first measure has notes on frets 12, 13, 13, 12, 12, and 14. The second measure has notes on frets 12, 13, 13, 12, 12, and 14. The notation includes various picking directions (V for downstroke, ^ for upstroke) and triplets.

Example 2.5b

Example 2.5b is a musical exercise in 4/4 time, featuring a C major arpeggio. The notation is presented on a single staff with a dashed line above it labeled "8va". The guitar tablature below the staff shows fret numbers for the E, B, G, D, and A strings. The exercise consists of two measures of a six-note pattern. The first measure has notes on frets 12, 13, 13, 12, 12, and 14. The second measure has notes on frets 12, 13, 13, 12, 12, and 14. The notation includes various picking directions (V for downstroke, ^ for upstroke) and triplets.

Each of these approaches has its own advantages. Example 2.5a, for instance, goes for rhythmic simplicity. The pick changes direction on the beat, which is handy from the timekeeping perspective, but the actual motion feels a little disjointed – your pick has been happily gliding along for the first three notes, and then it has to jump across to the far side of the top E string to start a new sweep. This is quite an abrupt movement, and it can feel a little jerky. In effect, you’re picking ‘outside’ the pair of strings at the point circled in the tab.

Now compare Example 2.5a with 2.5b. You’ll find that the picking hand’s changes of direction occur at really awkward points in the bar, but they require a little less movement. If you look at the circled area in the tab, you’ll note that you’re picking ‘inside’ – in other words, the pick approaches both the E and B strings from a starting point somewhere between the two.

Example 2.5b illustrates the basic principle of *economy picking*, which is theoretically the most efficient way of picking absolutely anything. The idea

is to sweep whenever you can and to pick inside the strings whenever the path of your picking hand has to change direction.

The following examples show you some examples of licks and patterns that lend themselves well to sweep and economy picking. Once you’ve got a feel for the basic picking patterns, you’ll be able to come up with all sorts of new licks by applying the same principles to other scales and arpeggios.

Example 2.6 is a funny one. It’s the kind of pentatonic lick you might hear from Steve Morse or Zakk Wylde, but they would pick it alternately to produce an aggressive and very rhythmic effect. If you sweep it as indicated, you’ll lose a little of that vibe, but your reward will be greater speed, and in the long run you’ll find it easier to play at lower dynamic levels. (The alternate-picking approach only really works if you go for it and pick quite hard.) The confusing part is that your picking hand changes direction at such awkward parts of the bar, so take it very slowly at first and aim for evenness:

Example 2.6

Example 2.6 shows a guitar lick in 4/4 time. The notation includes a treble clef, a 4/4 time signature, and a staff with notes. Below the staff is a guitar tab with fret numbers (7, 5, 7, 5, 9, 5, 7, 5, 7, 5, 7, 5, 9, 5, 7, 5) and picking directions (downstrokes 'V' and upstrokes '^').

Example 2.7, meanwhile, illustrates a nice way of picking repeating triad patterns. The key to getting rhythmic

definition is to concentrate on getting the downstrokes in time. The upstrokes take longer and feel more relaxed.

Example 2.7

Example 2.7 shows a guitar lick in 4/4 time. The notation includes a treble clef, a 4/4 time signature, and a staff with notes. Below the staff is a guitar tab with fret numbers (9, 5, 7, 9, 5, 7, 9, 5, 7, 9, 5, 7) and picking directions (downstrokes 'V' and upstrokes '^'). Triad patterns are indicated with a '3' and a bracket.

Example 2.8a illustrates the same idea in reverse. You'll probably find this one harder, because your picking hand has to change direction in the middle of the beat rather than at the start, as was the case in Example 2.7.

If you're working on a long passage using these ascending ideas, you might find it easier to finger them as in Example 2.8b. This is still harder than Example 2.7, but at least your hand changes direction at more obvious places within the bar:

Example 2.8a

Example 2.8b

This next exercise might remind you of one of the many head-turning licks from Steve Vai's 'The Attitude Song'. You'll feel your picking hand performing a slight snapping motion every beat to

make sure it reaches the first note of each beat in time. This lick features lots of fourths and fifths, so you could apply it over chords of A minor or A7, amongst others.

Example 2.9

Example 2.10 is an A Aeolian mode fingered with three notes on each string, rather than the CAGED-based shapes covered so far. This doesn't fit quite so conveniently into one hand-sized chunk of the neck, and it's certainly harder to visualise the

underlying chord shape, but the symmetry of this fingering allows you to apply the same down-up-down configuration to each string, which means that you can achieve preposterous speeds, if that's what you're into!

Example 2.10

Example 2.10 is a guitar lick in 4/4 time. The notation shows a treble clef staff with a melodic line and a guitar staff with fret numbers and picking directions. The fret numbers are 5-7-8 on the E string, 5-7-8 on the D string, 5-7-9 on the G string, and 6-8-10-7-8-10-12 on the B string. There are three sixteenth-note sweeps marked with '6' and 'V'.

Example 2.11 is a similar idea, with the first and last notes removed from every other string. The result is not quite a scale, not quite an arpeggio, but instead a bizarre hybrid of the two, reminiscent of certain Frank Gambale

licks. (You'll see that I've moved the fingering back a position for the last two strings, partially because it makes life a little easier and partially because the overall tonality of the lick works better over A minor this way.)

Example 2.11

Example 2.11 is a guitar lick in 4/4 time. The notation shows a treble clef staff with a melodic line and a guitar staff with fret numbers and picking directions. The fret numbers are 5-7-8 on the E string, 7 on the D string, 5-7-9 on the G string, and 5-6-8-7-5 on the B string. There are four sixteenth-note sweeps marked with 'V'.

Example 2.12 uses everyone's favourite A minor pentatonic shape but in a decidedly un-bluesy way. The pattern used here is an easy one to spot, but it does place demands on your fretting fingers, which have to

do a lot of barring. To get every note ringing out distinctly, you have to roll each barre from the lowest string to the highest so that you never hear more than one note at any given time.

Example 2.12

Example 2.12 is a guitar lick in 4/4 time. The notation shows a treble clef staff with a melodic line and a guitar staff with fret numbers and picking directions. The fret numbers are 5-5-7-7-8 on the E string, 5-5-7-7-7 on the D string, 5-5-8-7-7 on the G string, and 5-5-8-8 on the B string. There are four sixteenth-note sweeps marked with '6' and 'V'.

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Here's a suggestion: why not try to figure out backwards versions of the last three examples?

The next couple of exercises are sweep-arpeggio licks reminiscent of neo-classical players such as Jason Becker and Marty Friedman – check out their joint

recordings under the name Cacophony to hear lots more in this spirit. Example 2.13 takes a D major arpeggio and moves it through its various inversions, while Example 2.14 applies the same treatment to a D minor arpeggio. Both of these require abrupt, decisive position shifting:

Example 2.13

Example 2.14

Example 2.15 takes the first beat's worth of Example 2.13 and moves it up diatonically through the major scale, which means that you get to play major, minor

and diminished arpeggios in a pattern that works over D major or B minor. (Can you think of any other contexts in which this might work? Hint: modes...)

Example 2.15

The image shows a musical score for guitar, divided into four sections labeled IX, XI, XII, and XIV. Each section consists of a melodic line in the treble clef and a corresponding fretboard diagram in the bass clef. The fretboard diagrams show the strings (E, B, G, D, A, E) and the fret numbers for each string. The melodic lines are written in a key with two sharps (F# and C#) and a 4/4 time signature. The melodic lines feature a mix of eighth and quarter notes, with some sections including triplets. The fretboard diagrams show the fret numbers for each string, with some strings having multiple fret numbers. The fret numbers for the strings (E, B, G, D, A, E) are: IX (12, 11, 9, 10, 9, 12, 14, 10, 12), XI (11, 12, 14, 16), XII (14, 12, 14, 12, 14, 12, 15, 17, 14, 15), and XIV (14, 16, 17).

Examples 2.16 and 2.17 round things off with some seventh-chord arpeggios – Dmaj7 and Dm7, to be more precise. You can see how the fingering has been designed to keep an odd number of notes on each string in order to facilitate smooth sweeps.

Why not try to come up with some other seventh-arpeggio shapes based on this idea? You'll find that your hand will tend to cover more than one fretboard position when you finger these arpeggios with sweeping in mind.

Example 2.16

Example 2.16 shows a musical score for guitar in 4/4 time. The melodic line is in the treble clef and features a mix of eighth and quarter notes, with some triplets. The fretboard diagram is in the bass clef and shows the strings (E, B, G, D, A, E) and the fret numbers for each string. The fret numbers for the strings (E, B, G, D, A, E) are: 7, 8, 7, 5, 9, 10, 9, 8, 7, 8.

Example 2.17

Example 2.17 shows a musical score for guitar in 4/4 time. The melodic line is in the treble clef and features a mix of eighth and quarter notes, with some triplets. The fretboard diagram is in the bass clef and shows the strings (E, B, G, D, A, E) and the fret numbers for each string. The fret numbers for the strings (E, B, G, D, A, E) are: 6, 8, 6, 5, 8, 10, 8, 8, 6, 8.

I would urge you to get as comfortable as possible with alternate picking before you even think about this other stuff. It might not be the easiest way to pick in absolutely every situation, but it's probably the best all-round approach and it favours aspects of your

playing such as accenting the right notes and getting the timing as accurate as possible.

When your picking hand is executing a downstroke on every beat, it serves as a kind of built-in metronome, and if you compare alternate- and

economy-picked renditions of the same lick, you might well find that the alternate way sounds somehow more musical.

Economy picking, meanwhile, focuses more on keeping movement to an absolute minimum so that you can conserve a few calories, but this can be at the expense of the natural feel you get when you're comfortable with alternate picking. The best way around this dilemma is to practise everything very slowly.

There's a strange irony here: players like Frank Gambale, who has turned economy picking into something of an art form, describe the technique as 'speed picking', which would suggest that your main incentive to learn it would be to increase your speed (seems reasonable!). And yet here I am preaching the value of practising this stuff slowly. Where's the fun in that?

OK, here's my reasoning: if you treat economy picking merely as a means of increasing the amount of notes per second that you can churn out, you'll focus on speed rather than accuracy. I've known players to spend months practising a sweep arpeggio at ever-increasing speeds until they finally realise that the only audible notes they're playing are the first and last ones, with an indistinct, pitchless mush in between. If you become too obsessed with speed for speed's sake, there's a real danger of practising bad habits as you rush towards the busy end of the metronome. And, of course, the more you've practised a bad habit, the harder it is to remedy.

Trust me, a lot of this stuff is actually harder to play slowly than it is at full speed. When you're holding back, every note lasts longer and you're forced to concentrate on important stuff like its sound quality, dynamic intensity and timing. Once you've conquered that side of things, the speed will come very easily to you and the end product will sound a lot more like music.

How much you'll need sweep picking in your own playing will depend on what kind of notes you actually want to play. A lot of the traditional blues/rock soloing vocabulary relies heavily on adjacent notes within a given scale, which means that you have two or three usable notes on each string, and this luxury means that you can happily wander around a scale shape without too much need for sweeping. If you dabble in jazz, however, you'll probably need to cross a lot more strings when you're soloing because a lot of the most authentic-sounding jazz licks consist of adjacent chord tones – arpeggio shapes – which tend to feature only one note per string. It's harder to improvise at speed when you're using the relatively wide intervals in an arpeggio shape rather than a scale, but it's worth working on, whether you have jazz aspirations or not. Arpeggios give your playing a different texture, which many listeners would describe as 'more melodic', and once you've attained reasonable proficiency with sweep picking, you'll find note groupings creeping into your solos that you would previously have dismissed as unplayable. I admit that it makes you think a little harder, but maybe that's not such a bad thing...

3 LEGATO

Legato is a flashy Italian word for 'smoothly', which should give you some clue as to what kind of sound it describes. Picking every note gives a precise, machine-gun-like effect which sometimes sounds a bit too harsh and spiky to do justice to the melody you're playing. The best way of avoiding this is by tackling more notes with hammer-ons and pull-offs, and that's basically what legato playing is all about.

I should point out that the concept of legato doesn't apply only to guitar players; it's a broad musical term, and people who play other instruments use different approaches to achieve the same basic effect. A sax player, for instance, would achieve a legato effect by fingering a number of different notes in succession but sounding all of them with one long breath into the mouthpiece. A violinist would approximate the same thing by performing one long, smooth bow movement while fingering the various notes rather than bowing down for one note, up for the next and so on (the classic sawing motion you see string players indulging in when they get carried away). Your mission in this chapter is to work on emulating that flowing sound.

If you're looking for some specific reference points, think of how Joe Satriani sounds when he plays lots of notes, then think of Steve Morse's sound when he does the same. Joe's playing generally has a smooth, slippery feel to it, whereas Steve's tends to have more attack and a spikier sound. They're obviously both stunning players, so please don't think I'm trying to suggest that one approach is more effective than the other or anything like that, but their contrasting playing styles serve to illustrate how the balance of picked

and legato notes can have a huge effect on the overall sound of your own playing.

Now let's take a moment to look at how legato technique works. Of the two left-hand techniques involved here, the easiest is surely the *hammer-on*. As the name suggests, this involves sounding a note by hammering a fretting-hand fingertip onto the string. Since you're not picking the string, the volume of the resulting note has to be controlled by the degree of force invested in the hammering motion. The more you work on it, the easier you'll find it to get loud, confident-sounding hammered notes. Just bear in mind that you should aim to keep the actual movement of your fingers to a minimum. At first, it might seem easier to achieve volume by bringing your finger back, well away from the fingerboard, and taking a swing at the string from a distance, but this approach will slow you down in the long run, not to mention increase the risk of misfretting the occasional note. It's much better to focus the same amount of force into a smaller, more precise movement. If you've read *Creative Guitar 1* (and I strongly urge you to do so), you'll remember the analogy with Bruce Lee's 'one-inch punch'. Well, this is similar. Try stationing each of your fingers just a few millimetres from the strings and then, as you hammer notes, imagine that you're actually trying to push the strings *through* the fretboard. This might feel a little tense and overly forceful for a while, but it's a good aid in developing an efficient fretting-hand position. Once this starts to feel natural, your hand will be able to relax a lot more.

There are two basic kinds of hammer-on: the easier

kind involves first picking a note and then hammering onto the same string while it's still vibrating, while the second, more difficult kind involves hammering the first note on a new string, which is variously described as 'hammering on from nowhere' or 'left-hand hammering'. If you mastered both kinds, in theory you'd be able to play absolutely anything using only one hand – handy if you're prone to dropping your pick onstage or you have to turn pages of music while you're playing, or indeed if you just can't get enough of that legato sound! However, anyone who's new to these techniques should start out with the general policy of picking the first note on each string, which means that you'll avoid all sorts of string-damping issues. Once you've got your head around the more basic kind of hammer-on, the other kind will seem a bit more approachable.

The pull-off is a slightly more complex motion. For example, let's say you're using your ring finger to stop a note at the third fret and the next note you want to play is at the first fret on the same string. If you first make sure that your index finger is in place – pre-fretting the note, if you like – then you can pull off with your third finger to reveal the first-fret note lurking behind it.

It's tempting to think of this technique as a reverse hammer-on, but that way of thinking leads to the typical problem of your hammered notes coming out significantly louder than your pull-offs. In fact, the key to getting this technique sounding good lies in its very name: *pull-off*. As your finger leaves the string, it should give it a little twang rather than just lifting straight off. This gets the string vibrating, which means that the note will start off louder and ring for longer.

The most confusing thing about pull-off technique is that you're using one of your fingertips to control the volume of a note while the responsibility of pressing the string down onto the right fret falls to a different fingertip altogether. When you're hammering on, a single finger can tackle both of these duties, and it's the force with which the note is fretted that determines how much the string will vibrate, so no plucking motion is needed.

This seems like as good a time as any to mention Allan Holdsworth, a rare example of a player who

eschews pull-offs altogether yet is still famed for his legato playing. Allan has a strong dislike for what he describes as the 'miaowing' sound of pull-offs; if he has to get from a ring-finger note to an index-finger note on the same string, he'll hammer on with his index finger at the precise moment that the other digit leaves the string. If you've heard the man's playing (and I can't recommend it enough), you'll know that the results sound amazing. However, this approach requires two of your fingers to work in perfect synchrony, whereas with a regular pull-off the new note is already there, waiting for you, so you have only one finger to worry about. For this reason, I think it's probably best to develop a good pull-off technique first before heading off towards Planet Holdsworth.

When pulling off, it's best to move your finger downwards so that it clenches instead of straightens out, since the muscles dedicated to closing your hand are stronger than the ones that open it up again. Ardent fans of the Discovery Channel will doubtless have seen documentaries about those courageous headcases who catch crocodiles for a living. The reason why such guys have any success at all in their chosen field is that they understand the same principle and use it to their advantage: a crocodile's jaws might be able to snap shut with enough power to chew through a Land Rover, but once they *are* shut you can keep them that way using even the most primitive of restraints. The crocodile's jaws are designed to bite things, and similarly our hands are designed to grip things, so in each case the closing set of muscles is stronger than the corresponding opening set.

Anyway, moving away from that whole crocodile business, here's a classic all-encompassing exercise for analysing your legato technique. First, line up your fingers on the top (skinny) E string so that each covers one of four adjacent frets – if you went for frets 5–8, for instance, you'd use your index finger to play notes at the fifth fret, your middle finger for notes at the sixth and so on. Now pick the first-finger note and hammer on with your second finger, then pull off with your second finger so that the first-finger note sounds out again. Now hammer on with the second finger again...and so on. Basically, you're using hammer-ons

and pull-offs alternately to play a trill between A and B \flat . You should start softly, balancing the volume of the two notes, and then aim to preserve that balance as you build up to a louder trill.

Needless to say, that's not the whole exercise! So far, you've trilled only between the first and second fingers, and there are five other possible combinations: 1 and 3, 1 and 4, 2 and 3, 2 and 4, and 3 and 4. Try each trill in turn and compare them for volume, timing and clarity. No, really – give it a go!

What did you find? I'm guessing that you would agree with at least some of the following:

- 1 and 3 felt easier than 1 and 2.
- 1 and 4 proved easier than you expected, given the comparative weakness of the little finger.
- 2 and 3 felt a little cramped.
- 2 and 4 was tricky because your third finger wanted to tag along every time your fourth finger tried to fret a note.
- 3 and 4 came out at about half the volume level of any other finger combination.

In general, I think that pull-offs are harder to execute when you're trilling between two adjacent fingers as you have less leverage there. Besides, you have to pull off extra hard to match the volume of the other trills because your fingertip has to pluck so close to the fret, an area of the string's length that feels particularly inflexible.

Here's something that might help. Take the most awkward pairing of fingers – 3 and 4 – as an example. When your fourth finger pulls off, you'll feel your third finger trying to come along with it. You have to oppose this very natural tendency by trying to push your third finger into the fretboard as the fourth finger performs the pull-off. It'll feel as though you're hammering the third-finger note, even though you don't need to because it's already fretted. This might sound strange, but I promise you, it works!

For the curious, there's a physiological reason for

this apparent lack of independence between the ring and little fingers. These digits have to share a tendon in your hand, while each of the other two fingers has a corresponding tendon of its own. I'm not offering you an excuse for having a weak little finger, mind; I'm just explaining why that one feels so much less useful than its fellow digits. You can work around this problem once you know what it is you're dealing with, so hopefully, when you use something like the above exercise in your practice routine, you'll spend a little extra time on the pairs of fingers that co-operate the least and give them a chance to catch up with the others.

Here's the depressing part: so far, you've been trilling on the top E string pulling off quite forcefully without angering any of the other strings. Now try the same exercise on, say, the B string. This time, you might find that you inadvertently touch the top E as you pull off, creating unpleasant handling noises. By experimenting with the angle of your fingers relative to the plane of the fingerboard, you should be able to persuade the underside of your index fingertip to dampen the unused string, averting the danger of any actual notes being produced. However, you might still hear a muted *clunk* from the top E, in which case you'll have to look at your pulling-off technique and adjust the direction in which your finger is moving. Ideally, you want a diagonal motion so that your fingertip simultaneously moves towards the floor (thus plucking the string) and away from the fretboard (thus avoiding the other string).

When you feel fairly comfortable with this exercise, you might like to try a variation where your fingers are spread out a little more. You could assign your fingers to frets 5, 7, 8 and 10, for instance, or adopt a similarly spaced pattern higher up on the neck. Harder, isn't it? Because of the increased stretch, your fingers have to channel some of their strength into keeping their distance from each other, and so getting a clean pull-off, or indeed a clean hammer-on, seems to require more effort.

You can probably make life easier for yourself if you experiment with various hand and wrist angles. You'll get the best and least painful results if your thumb is about halfway down the back of the neck and there's a bit of clearance between your hand and the top E side of the fretboard. This way, your fingers

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are fairly straight, which means that they can splay out more. (Of course, your fingers need to be at least slightly curved or you won't get a convincing snap when you attempt a pull-off.)

An informative if narcissistic experiment is to watch your fretting hand in a mirror. Do your fingers look parallel to the frets or are they at an angle? You'll get the maximum stretching potential when your middle and ring fingers are parallel to the frets and the other two are spread out more diagonally. Naturally, this healthy hand position will degenerate into the infamous baseball-bat grip as soon as you start playing blues licks and bending strings, and that's absolutely fine, but whenever you need to play a stretchy legato passage,

adopting the more classical hand position outlined above will help you a lot.

If you're having trouble with your legato technique, remember that your fingers will learn to find pretty much anything easy once they've gone through the basic motions enough times.

Well, that's probably enough general stuff. Now let's try some examples. Example 3.1 has an A Aeolian fingering, and you should pick the first note on each string and hammer the remaining two, aiming as always for even timing and dynamics. Meanwhile, Example 3.2 is the corresponding descending pattern, requiring you to pick the first note on each string and pull off to the others.

Example 3.1

Example 3.1 is a musical score for guitar in 4/4 time, featuring a scale in A Aeolian mode. The notation is presented on a grand staff with a treble clef and a key signature of one flat. The scale is written as a sequence of eighth notes, with triplet markings over groups of three notes. The fret numbers for each string are indicated below the staff: E (5, 7, 8), B (5, 7, 8), G (5, 7, 9), D (5, 7, 9), A (6, 8, 10), and E (7, 8, 10).

Example 3.2

Example 3.2 is a musical score for guitar in 4/4 time, featuring a descending scale in A Aeolian mode. The notation is presented on a grand staff with a treble clef and a key signature of one flat. The scale is written as a sequence of eighth notes, with triplet markings over groups of three notes. The fret numbers for each string are indicated below the staff: E (10, 8, 7), B (10, 8, 6), G (9, 7, 5), D (9, 7, 5), A (8, 7, 5), and E (8, 7, 5).

If you number the notes (on each string in turn) from 1 to 3, you could describe Example 3.1 as a '1-2-3' configuration and Example 3.2 as '3-2-1'. In theory, you could jumble the notes up in any of the following orders:

123 132 213 231 312 321

Example 3.3 illustrates the 3-1-2 arrangement to get you into the swing of things. Patterns like this use each note of the scale fingering once and once only, just like the first two examples shown above, but they sound more interesting and they're a little harder to play:

Example 3.3

Example 3.3 shows a musical exercise in 4/4 time. The top staff is in treble clef with a key signature of one sharp (F#). It features a scale of eighth notes with triplets indicated by brackets and the number '3'. The fret numbers for the strings (E, B, G, D, A, E) are: 8-5-7, 8-5-7, 9-5-7, 9-5-7, 10-6-8, 10-7-8, 10.

So far, you've been playing the scale in triplets, which feels nice and convenient because it means that there's a strong beat there whenever you have to change strings. Example 3.4, however, groups the notes of Examples

3.1 and 3.2 in 16th notes, the idea being to accent the first note of each beat rather than the first note on each string. This really hones your timing and makes accenting a hammered or pulled note an interesting challenge.

Example 3.4

Example 3.4 shows a musical exercise in 4/4 time. The top staff is in treble clef with a key signature of one sharp (F#). It features a scale of 16th notes with accents (>) on the first note of each beat. The fret numbers for the strings (E, B, G, D, A, E) are: 5-7-8, 5-7-8, 5-7-9, 5-7-9, 5-7-9, 6-8-10, 7, 8-7, 10-8-6, 9-7-5, 9-7-5, 8-7-5, 8-7.

I've applied the legato treatment to straight scale fingerings, but now let's try it out on some other old favourites. Example 3.5 ascends in diatonic thirds, and the idea is to use pull-offs wherever possible. This gives

rise to some interesting phrasing, as the picked notes tend to fall a 16th note before or after the beat. You might find this reminiscent of many guitarists' phrasing, particularly those from the crazy world of bebop.

Example 3.5

Example 3.5 shows a musical exercise in 4/4 time. The top staff is in treble clef with a key signature of one sharp (F#). It features a scale of eighth notes ascending in diatonic thirds. The fret numbers for the strings (E, B, G, D, A, E) are: 5-8-7, 5-8, 7-5-8-7, 5-8, 7-5-9-7, 5, 9, 7-5-9-7, 9, 8-6-10-8, 7-10.

Creative Guitar ②: Advanced Techniques

Example 3.6 features that same A Aeolian fingering, but this time it's grouped in ascending fours. Here,

you're picking the first note on each string and also any note that falls on a main beat:

Example 3.6

Now let's go back to that one-string-at-a-time approach. You can apply a pattern of more than three notes to each string so that your chosen scale shape doesn't

run out as quickly. You might think of Example 3.7 as a 3-1-2-3-2-1 configuration, and it's typical of the legato runs you might hear in Richie Kotzen's playing:

Example 3.7

Wasn't that fun? Example 3.8 below shows you the starting points for some variations on this idea. Try

applying each different pattern in turn to the entire scale fingering:

Example 3.8

Don't be put off by the penultimate fingering pattern – you don't hear a lot of that seven-notes-in-a-beat grouping in popular music, but at moderate speeds and upwards you'll find that it sounds quite normal. The trick is to target the first note on each string. Like gas molecules, the remaining notes will then distribute themselves evenly throughout the space allotted to them.

Now for some serious homework. Examples 3.9–3.15 show seven different three-note-per-string fingerings for each mode of the major scale in turn. You might not want to learn all of these in one go, but once you've tried applying the ideas from the last examples to a few of these new fingerings, I think you'll see the benefits of knowing as many of them as possible.

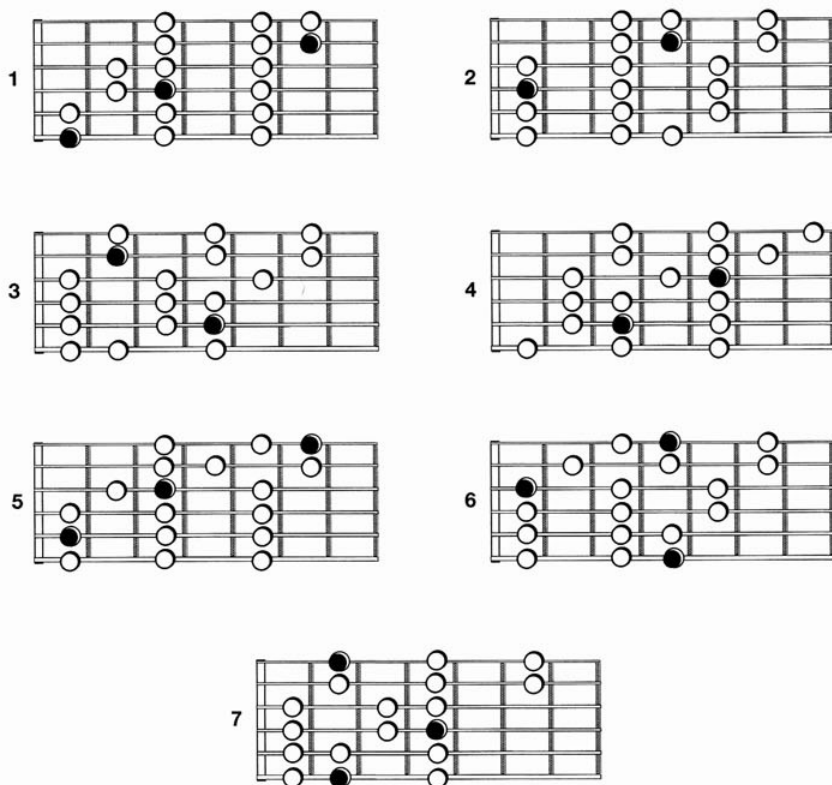
Incidentally, you'll notice that any one string in any one of these shapes will feature one of three basic fingering patterns: two tones (TT), a tone

followed by a semitone (TS) or a semitone followed by a tone (ST). Logically, you would handle the ST pattern with fingers 1, 2 and 4 and the TS pattern with 1, 3 and 4 (although sometimes you might find 1, 2 and 3 easier, particularly if you have a TT pattern on the next string). The TT pattern requires your hand to break out of that one-finger-per-fret spacing, and I put it to you that it's easier to use your second finger for the middle note, rather than your third, unless:

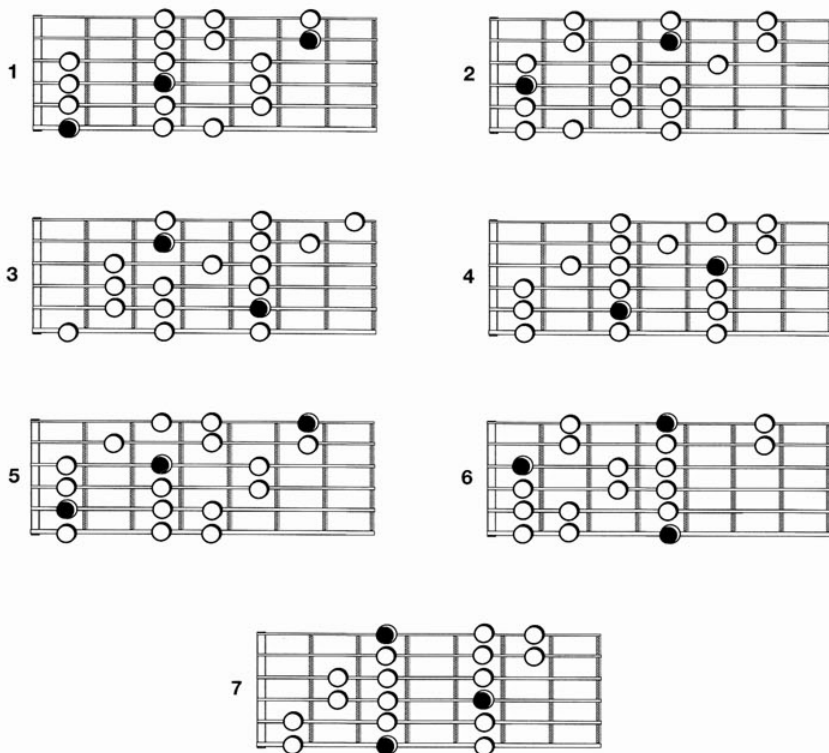
- you're playing right up at the top of the neck and some part of the guitar's body is obstructing your hand, or
- your name is Paul Gilbert and your hands are so huge that it really doesn't matter what fingers you use!

Anyway, here are those modal shapes:

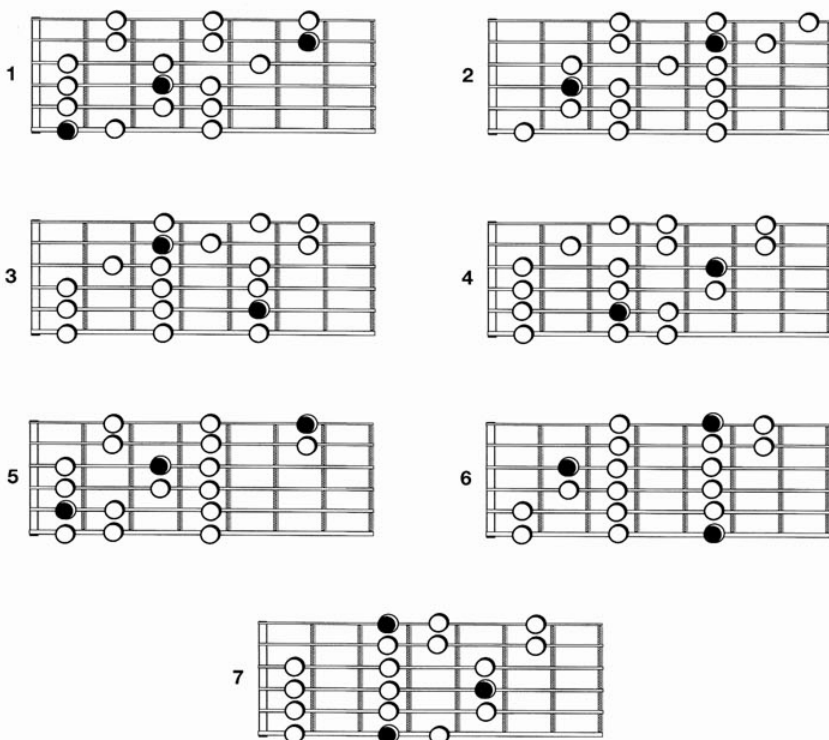
Example 3.9: Ionian mode



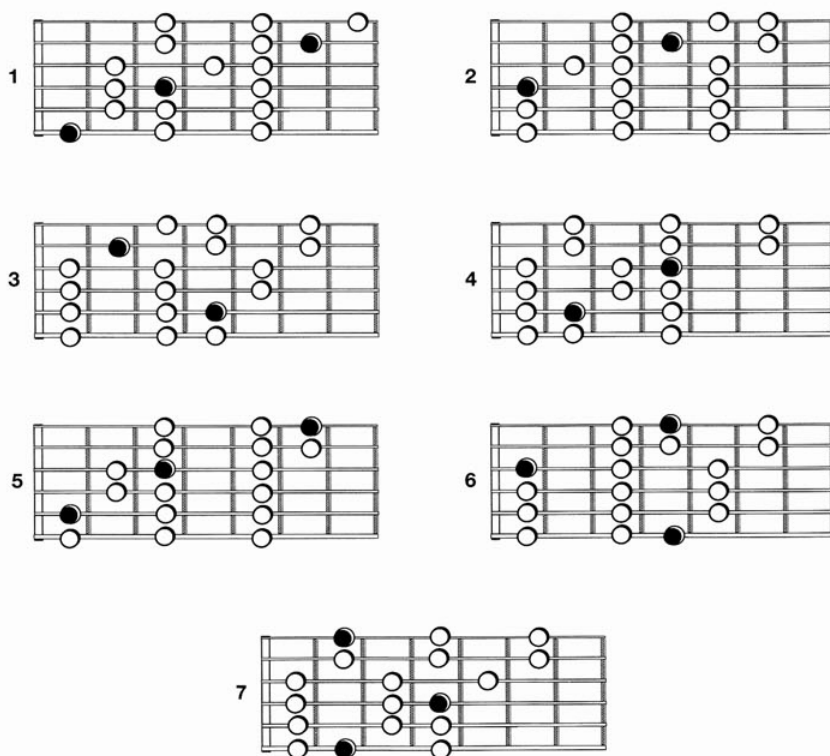
Example 3.10: Dorian mode



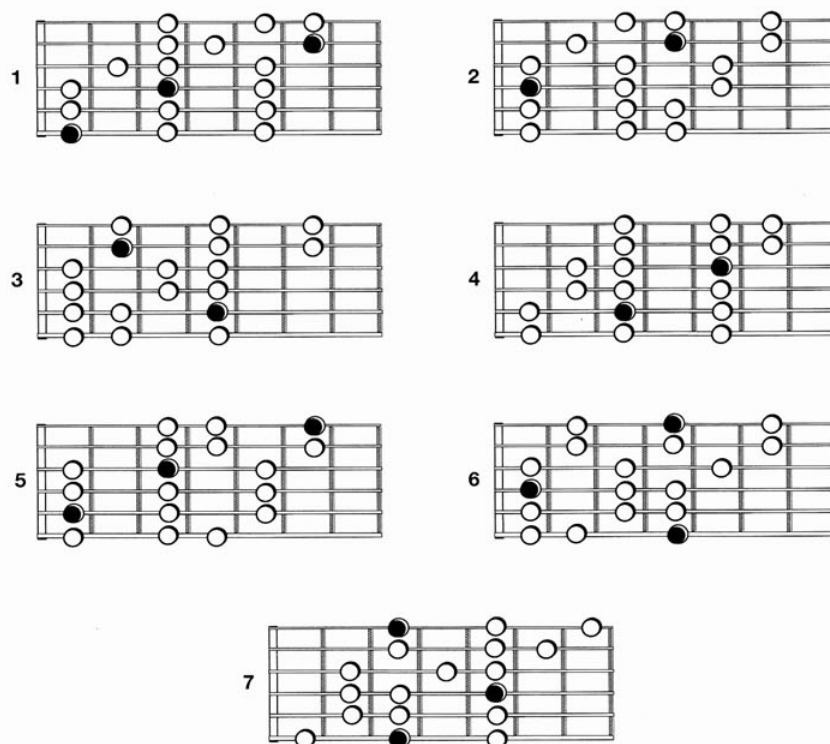
Example 3.11: Phrygian mode



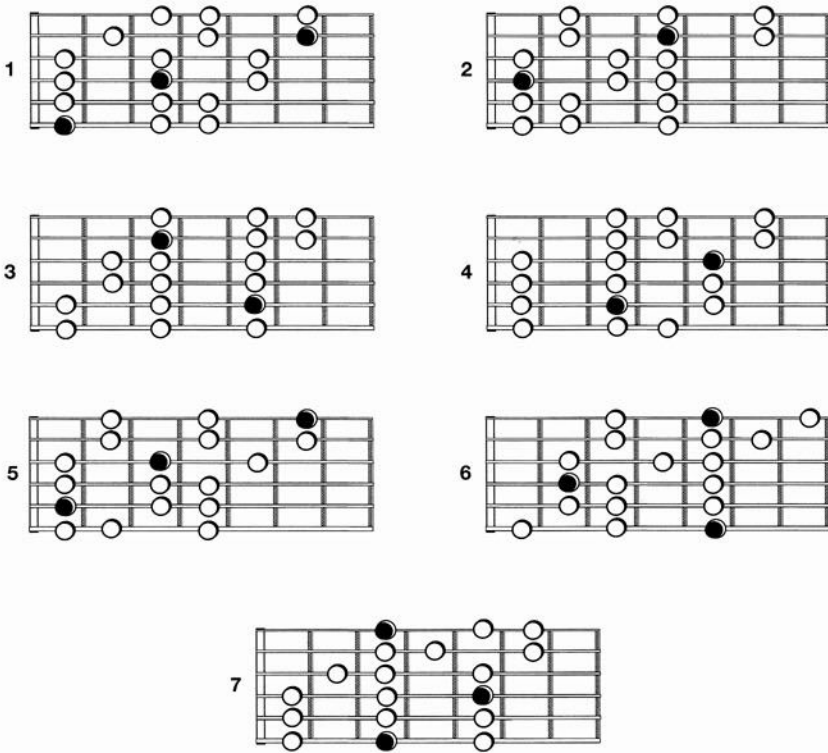
Example 3.12: Lydian mode



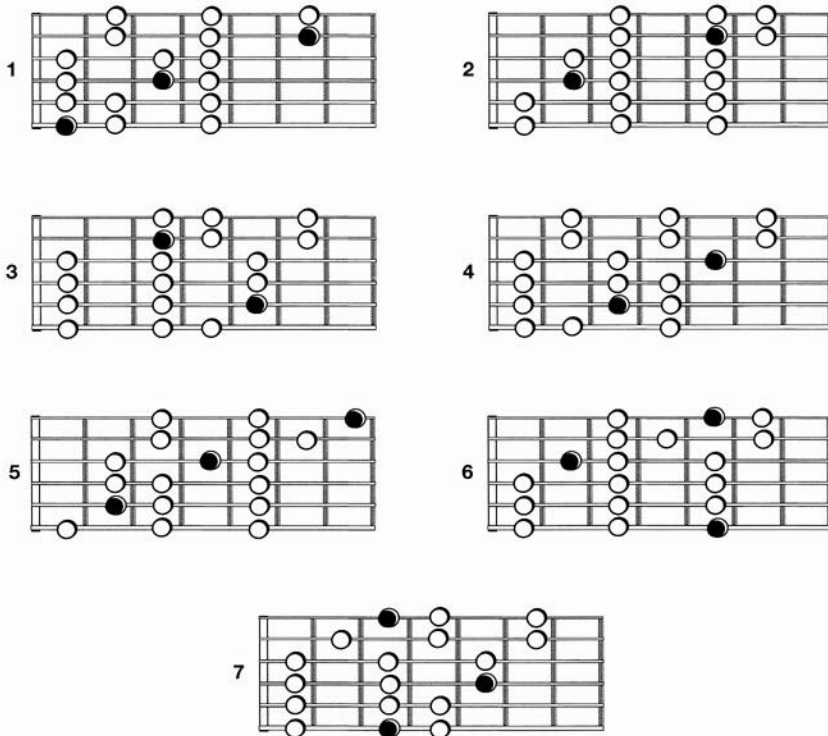
Example 3.13: Mixolydian mode



Example 3.14: Aeolian mode



Example 3.15: Locrian mode



One way of lightening the workload here is by working on ideas that move up the neck using only a string or two. Example 3.16 shows how you could join up two adjacent positions, moving between them using slides.

Slides have the same kind of fluidity to them as hammered and pulled-off notes, so this is an effective combination of techniques. You'll probably recognise some Satriani-esque traits in here:

Example 3.16

As with the seven-note groups you encountered earlier in the book, these groups of five are best tackled by targeting the first note in each beat and trusting the other notes to distribute themselves accordingly. In this exercise, you're simply alternating between two adjacent scale shapes, but you could

just as easily work your way up the whole neck using all of the shapes.

Example 3.17 is a variation on Example 3.16 with the addition of a few notes to make the pattern fit into a more conventional sextuplet rhythm. Some of the slides occur in more unusual places this time:

Example 3.17

Next, Example 3.18 brings in a second string, so you'll probably want to start by picking the first note on each. When you're comfortable with this, you could try hammering the first B-string note and picking only the

first note on the E string. The logical extension of this is not to pick any notes at all, but I suspect you'll find that the index-finger note starting each E-string sequence is a lot harder to hammer on from nowhere.

Example 3.18

Example 3.18 is a guitar exercise in 4/4 time, marked with a treble clef and a key signature of one flat. The notation includes a treble clef staff with a dashed line for the 8th octave (8va) and a guitar staff with fret numbers. The lick consists of several phrases, each starting with a glissando (gliss) and followed by a series of notes. The fret numbers for the guitar staff are: 5 7 8 7 5, 8 6 5 6 8 10, 7 8 10 8 7, and 8 10 12 10 8. The notes are beamed together in groups of four.

Example 3.19 uses the same principle, but this time a lot more of the neck is covered for a monster A minor lick:

Example 3.19

Example 3.19 is a guitar exercise in 4/4 time, marked with a treble clef and a key signature of one flat. The notation includes a treble clef staff with a dashed line for the 8th octave (8va) and a guitar staff with fret numbers. The lick consists of several phrases, each starting with a glissando (gliss) and followed by a series of notes. The fret numbers for the guitar staff are: 5 7 8 7 5, 8 6 5 6 8 10, 7 8 10 8 7, 8 10 12 10 8, 12 10 8 10 12 13, 10 12 13 12 10, 12 13 15 13 12, 15 13 12 13 15 17, 13 15 17 15 13, 15 17 19 17 15, 18 17 15 17 18 20, 17 19 20 19 17, and 20 (22). The notes are beamed together in groups of four.

The next two examples focus on your hammering-on-from-nowhere skills. If you follow the picking and hammering directions accurately, you'll soon get the

hang of things. These exercises sound pleasantly rhythmic at high speeds because the picked notes always occur at the start of a beat:

Example 3.20

Example 3.21

Example 3.22 takes things a little further. Getting used to this way of playing will make you more comfortable when you come to try some of the ideas in the following chapter, 'Tapping'. If your

normal fretting hand is self-sufficient, you can keep your tapping hand positioned over the fretboard, ready to add some extra-high notes whenever the fancy takes you.

Example 3.22

This final example is a tip of the hat to Joe Satriani's 'Power Cosmic'/'The Mystical Potato-Head Groove Thing' arpeggio. In this lick, nearly every note is hammered onto a new string, so you have to be extra

careful with your muting. (As I mentioned earlier, you might find it helpful to cheat by using your right hand to grasp the neck between the nut and your picking hand, thus keeping the open strings in check.)

Example 3.23

The musical score for Example 3.23 is written in 4/4 time and features a treble clef. The notation includes a melodic line in the treble clef and a corresponding fretboard diagram for the guitar. The fretboard diagram shows the strings E, B, G, D, A, and E from top to bottom. The melodic line consists of a sequence of notes with fingerings: 1, 2, 4, 1, 2, 4, 4, 2, 1, 4, 2, 1, 4, 2, 1. There are four glissando markings ('gliss') above the melodic line, each covering a group of notes. The fretboard diagram shows the following fret numbers for each string: E (5, 7, 9, 7, 8, 10, 12), B (7, 9, 10, 9, 10, 12), G (7, 9, 7, 8, 10, 12), D (7, 9, 10, 9, 10, 12), A (7, 9, 10, 9, 10, 12), and E (5, 7, 9, 7, 8, 10, 12). The notes are marked with 'H' for harmonic and 'H' for natural harmonics. The score is divided into four measures, each containing a glissando.

Hours of fun!

4 TAPPING

Tapping is a much-maligned aspect of guitar playing. Some consider it uncool and can't see any point in even trying it because they associate it with animal-print Spandex, biting the heads off bats, peroxide-poodle coiffure and other symptoms of Heavy Metal At Its Worst.

This is a shame because tapping is nothing more than a good solution to an otherwise insurmountable problem. If you want to hammer on a note and your fretting-hand fingers can't cope with the stretch, why not borrow a fingertip from your other hand and use that to do the hammering? All sorts of new playing possibilities can open up for you if you apply this principle to your playing, from impossible-sounding blues licks and wide-interval fusion lines to fresh new chord voicings and the freedom to hammer a melody and a bass line simultaneously. Please, please don't assume that only a headbanger could ever find tapping useful or you'll miss out on all sorts of interesting stuff.

First, let's deal with the mechanical side. Like I said, tapping involves using a right-hand finger to hammer onto the fretboard, but here are some more specific pointers. Before you even put your right hand anywhere near the fretboard, it's a good plan to figure out what you're going to do with your pick while you're tapping. If you plan to launch into a long, tapping-intensive solo, you could of course store the pick in your mouth for safe keeping or contemptuously toss it to the floor, but if you're playing a 'normal' picked lick and there's just one note in the middle that you want to tap, you'll need some way of keeping your pick easily accessible – the transition between the two playing approaches will be

quicker that way, so the end product will sound much less disjointed.

As you will recall from the 'Alternate Picking' chapter, the Eddie Van Halen approach to achieving this is to adopt a highly irregular picking-hand position, holding the pick between thumb and middle finger and thus leaving the index finger available at all times for tapping duties. If, however, you're used to holding the pick in the time-honoured thumb-and-forefinger fashion, you'll probably find your middle finger the best choice for tapped notes – it's the longest, strongest digit your hand possesses and it's not up to much when you're picking, so why not give it something to do?

To make tapping work reliably, you need to find some sort of anchor point at which your tapping hand can maintain contact with the guitar at all times. For a start, I would suggest lightly resting the wrist on the strings that are lower in pitch than the one you're playing, as this means that your hand damps the unwanted strings just as it does in its regular picking position. Think of the act of writing – your wrist leans on the surface of the paper and your hand movements feel much more precise as a result. If you don't lean your wrist enough, the motion of writing starts to feel awkward and imprecise, whereas if you lean too hard, your hand isn't able to glide smoothly across the page and you experience a juddering sensation on a roughly once-per-word basis. Your hand naturally finds a balance between the two, and it should be able to do the same in this guitar-playing context. (Incidentally, it's best to try to keep the angle between your wrist and forearm as

straight as possible when tapping; it'll feel more natural and will therefore be less tiring.)

This approach will get you through most tapping situations, particularly if you anchor your forearm on the upper bout of the guitar's body (the bit that's been helpfully chamfered away on all but the very cheapest Strat-style guitars). However, you can never be too careful. If you move around a lot when you play live, for instance, tapping the right fret or even the right string can be a very fiddly operation – in effect, it can feel like you're trying to hit a moving target. A lick might work every time in your bedroom and yet still let you down when gig night comes.

You'll obviously want to minimise the chances of this happening to you, so I would advise you to try resting your right-hand thumb on the edge of the fretboard (low-E-string side) for a bit of extra support. You'll find that this increases your chances of hitting the right string even when you're not looking at the fretboard.

I admit that this makes you compromise the way in which you hold your pick – you might well find it hard to rest your thumb on the top of the neck while it's stuck to the tip of your index finger! I personally find it easiest to hide the pick in the crook of my index finger at moments like these – with a little practice, you can develop a nice and easy flicking motion where your fingertip brushes the inside of your thumb, taking the pick along for the ride and ending up curled around it. Having said that, everyone does these things slightly differently, so experiment for a while and see what solutions feel best for you.

Hopefully, you've spotted the parallels between tapping and regular legato playing. As with a regular hammered note, the volume of a tapped note is

governed by how forcefully you hammer on, and you should be able to play the note at various dynamic levels without your finger ever having to stray too far from the string. The trick of visualising yourself hammering *through* the fretboard might help you get a feel for this.

Once you've tapped a note, your next problem is getting rid of it. Normally, your fretting hand would have the next note pre-fretted and ready to go so that you could reveal the new note by pulling off with your tapping finger. As with regular pull-offs, however, it's not enough simply to remove your finger; as your digit departs from the string, it needs to tweak it a little to get it vibrating. Your tapping finger can achieve this in one of two ways: it can either close up as it would in a regular pull-off, flicking upwards, or it can stay fairly straight and flick towards the floor with what feels like a sideways motion. I personally tend to prefer the latter approach, but you can get great results either way. Whichever method you choose, bear in mind that your tapping finger needs to move away from the plane of the strings every time it leaves the fretboard in order to avoid hitting extra notes. Work on eliminating handling noise and use whichever pull-off motion allows you to do this most comfortably.

Right then, let's look at some exercises! Example 4.1 is a descending E minor triad pattern that requires both of your hands to execute pull-offs, while Example 4.2 reverses the order of the fretting hand notes to produce a sound reminiscent of the tapping section at the end of Eddie Van Halen's incendiary 'Eruption' solo. I would urge you to stick with these two exercises and work on getting your two hands co-ordinated so that all of the notes are even. When you can do this at moderate speeds, it's safe to move on to the later exercises.

Example 4.1

The musical notation for Example 4.1 consists of two staves. The top staff is in treble clef, key signature of one sharp (F#), and 4/4 time. It contains four measures of a descending triad (E4, G4, B4). Each measure is marked with a 'T' above the first note and a slur with a '3' below, indicating a triplet. The bottom staff is in bass clef, key signature of one sharp (F#), and 4/4 time. It contains four measures of a descending triad (E2, G2, B2). Each measure is marked with a slur and fret numbers 12, 8, and 5 below, indicating the fretting hand positions. The strings are labeled E, B, G, D, A, E from top to bottom.

Example 4.2

Example 4.3 is a combination of the previous two exercises, and this time the triad ascends *and* descends. The hardest part here is probably the second note of the pattern – the ring/little finger (your choice)

of your fretting hand might try to pull off at the same time as your tapping hand. If you can discourage this kind of behaviour now, life will be a lot easier later on, trust me.

Example 4.3

Example 4.4 adds a flourish that you might associate with the playing styles of Randy Rhoads or Nuno Bettencourt. In effect, you're doubling up the tapped

note to create a pattern with a sextuplet rhythm. The tapped note really pops out when this exercise is played at high speeds.

Example 4.4

I suggest that you try out these ideas with as many different triad inversions as you can think of. It's relatively easy to come up with classical-sounding progressions by making minor adjustments to the basic fingering. For instance, if you take the E minor triad from the last few examples and move your tapping finger up one fret, a C major inversion appears. The

same E minor triad could be transformed into a G major inversion by moving your index finger down two frets and so on. Experiment!

Now let's fill in the gaps to create some more scalar-sounding ideas. I've picked E Aeolian here (for those about to rock!), so Examples 4.5–4.7 correspond to Examples 4.1–4.3 with an Aeolian note added:

Example 4.5

Example 4.6

Example 4.7

Example 4.8, meanwhile, is a nice little variation:

Example 4.8

Now it's time bring in some other ideas popular among the tapping fraternity. Example 4.9 introduces the idea of sliding the tapped note between two pitches. Here, you'll find that you really need to keep your tapping finger pushing into the fretboard or you'll lose notes. (You *did* remember to keep your thumb anchored at the top of the neck, didn't you?) The other tricky part is in perfecting

the timing of the slides, so don't get too carried away with increasing speed until you can honestly say that all of your tapped notes are equal in length. This kind of lick always reminds me of George Lynch's playing, while an entertaining variation is to tap a note and slide it rapidly up the neck to no particular pitch—you get a sort of zipping sound reminiscent of Eddie Van Halen or Richie Sambora.

Example 4.9

Example 4.10 is part Eddie Van Halen and part Angus Young! As with the last few examples, I've added an extra note to the basic E minor triad, but this time it's an open string. As a result, the index finger of your left

hand now has to perform hammer-ons. This activity might feel unfamiliar at first, but hang in there. (Incidentally, this lick outlines a chord progression from E minor to B minor.)

Example 4.10

Even if you don't like the sound of the tapping covered so far, I'm sure that you can find a use for this next idea. Example 4.11 takes things at a more relaxed pace and requires you to tap a single note onto a bent string. The result sounds like an impossible blues lick. Players like Billy Gibbons have been known to dabble in this technique, and there's even an example of it on Larry Carlton's immortal solo for 'Kid Charlemagne', from the Steely Dan album *The Royal Scam*.

The tab here basically directs you to bend the first note up a tone, hold it there and tap the same string at the 15th fret so that it sounds like a 17th-fret note,

then keep the bend held while you pull off with your tapping hand and release it only when you've distinctly heard the pitch of that pre-bent note at the start of bar 2. Be extra careful not to tap any neighbouring strings here, as bending the B string up a tone brings it perilously close to the G string. If you're having a lot of trouble with this one, try to develop a bending technique where the very tip of your bending finger pushes the G string out of the way and a slightly lower part of the same fingertip deals with the fretting of the B string. This can help you to maintain some separation between the strings, which results in greater accuracy.

Example 4.11

Example 4.11 musical notation. Treble clef staff shows a melodic line in 4/4 time. The first bar contains a quarter note on the 10th fret, a quarter note on the 12th fret, a quarter note on the 15th fret (marked with a circled '15' and a 'T' above it), and a quarter note on the 17th fret. The second bar contains a quarter note on the 12th fret, a quarter note on the 10th fret, a quarter note on the 8th fret, and a quarter note on the 9th fret. Labels 'BU' and 'LD' are placed above the first and second bars respectively.

If you trill that tapped/bent note, alternating between hammering and pulling off as fast as you can, you'll get an effect that might remind you of blues harmonica playing.

Example 4.12 is slightly different. This time, you have to pick the tenth-fret note, hammer onto the

12th, tap at the 15th and *then* bend. The key to making this work is to bend with your fretting hand; your tapping finger keeps pushing the string down onto the fret, but it has to be relaxed enough to follow the path of the string's movement rather than resisting it.

Example 4.12

Example 4.12 musical notation. Treble clef staff shows a melodic line in 4/4 time. The first bar contains a quarter note on the 10th fret, a quarter note on the 12th fret, and a quarter note on the 15th fret (marked with a circled '15' and a 'T' above it). The second bar contains a quarter note on the 17th fret (marked with a circled '17').

If you can execute the last two exercises cleanly, you have enough techniques at your disposal to come up with all sorts of licks, so try to find as many variations on this idea as you can.

The following two examples illustrate what happens when your left hand plays standard minor pentatonic shapes and your right hand punctuates things with some Aeolian tapped notes. You could

adjust the fingerings slightly to keep your choice of notes strictly pentatonic (ie the B-string note at fret 19 would have to be moved a fret higher), but I think that the licks work perfectly well as written – and they're easier this way, too! Ideas like this are useful because they're based around a fretting-hand position that we all know and love, so they'll slot right into your lick vocabulary with the minimum of effort.

Example 4.13

Example 4.14

Example 4.15 explores a pedal-point idea. In any given beat here, your fretting hand descends three notes of A Aeolian while your tapping hand provides the pedal

tone. Every beat's worth of notes is played one position lower than the notes from the previous beat, so you'll have to concentrate for the one over the page:

Example 4.15

Example 4.15 consists of two systems of musical notation. The first system is marked with a 8^{va} and includes fret numbers XII, X, VIII, and VII. The second system is marked with a (8^{va}) and includes fret numbers V, VII, VIII, and X. Each system shows a treble clef staff with eighth notes and a guitar staff with fret numbers and tapping marks. The fret numbers are: 19-15-19-14-19-12-17-14-17-12-17-10-15-12-15-10-15-8-14-10-14-8-14-7 for the first system, and 12-5-12-7-12-8-14-7-14-8-14-10-15-8-15-10-15-12-17-10-17-12-17-14 for the second system.

Example 4.16 is probably the most visually entertaining so far. The idea is to use your tapping hand to hold down a note *behind* the fretting hand. In effect, you're using a right-hand finger to shift the pitch of what would otherwise be an open string,

and you'll observe that it performs a two-fret slide once per beat. (Bear in mind that your finger never actually leaves the string.) Muting the unwanted strings is a tricky one here, but you can't deny that it looks cool!

Example 4.16

Example 4.16 shows a single system of musical notation. It includes a treble clef staff with eighth notes and a guitar staff with fret numbers and tapping marks. The fret numbers are: 12-15-19-12-15-19-10-15-19-10-15-19-8-15-19-8-15-19-10-15-19-10-15-19.

Example 4.17 is a more complex run reminiscent of the scalar tapping licks often used by Steve Vai. (Incidentally, I know that Winger might not be flavour

of the month with many readers, but Reb Beach, the band's guitarist, also has some very tasty licks along these lines, so check him out.) You might want to pick

the first note of this one, but the subsequent notes can all be played legato. Note the way in which your little finger hammers the first note on each new string

– this idea was first seen back in the ‘Legato’ chapter, but you can have a lot more fun with it now that you’ve got both hands on the fretboard.

Example 4.17

If you want to generate some bigger tapping licks, you should work on sliding between different positions, and Example 4.18 will give you the general idea. Once

you’ve memorised all of the correct notes on any given string, you can wander up and down the neck for as long as you like without losing momentum.

Example 4.18

But I digress. Example 4.17 went back to the hammering-on-from-nowhere idea, and Example 4.19 uses the same idea to facilitate a lick on a G major triad. You’ll need to

experiment with your left-hand index fingertip to keep the open B string quiet. Try to bring it up just high enough to touch the B string as it frets the top E.

Example 4.19

The next two workouts show you how you might extend the range of that last idea. Example 4.20 achieves this by adding a slide with the tapping hand and Example 4.21 does so by bringing the G string into the equation. The latter solution requires extra-careful muting, and I

would recommend using the fingertip-muting idea from Example 4.19 in conjunction with some right-hand palm muting over the fretboard. (Easy does it, though – if you lean on the strings too hard, hordes of unrequested notes will ring out, spoiling the whole effect.)

Example 4.20

Example 4.21

I thought I should round off this chapter by combining a few earlier ideas into one lick. Example 4.22 starts out as a sweep arpeggio, but on the second beat your right hand moves into tapping mode. The basic melodic pattern involves descending a G major arpeggio in groups

of three, with your tapping hand marking the first of each group of three. Timing is all important here – one slip-up and your hands will collide. These ideas are used to great effect by players like Greg Howe, who would describe Example 4.22 as a 'reciprocal' tapping lick.

Example 4.22

This one will take a little work, but it's worth it – apart from the last note, which I only put in because I found it funny. But how else could you end this lick? What happens if you try to play it backwards? As always, try to find your own variations on these ideas.

As you might expect, the key to success with all this tapping business is to go through the motions slowly and carefully at first. Once you've got the basic movements down, the speed and volume of your tapped licks will progress rapidly.

5 EIGHT-FINGER TAPPING

This approach to guitar playing has been given all sorts of silly names over the years, 'bidextral slurring' and 'the octadigital technique' being two of my personal favourites, but don't let that deter you from trying it out. Whatever these names might suggest to you, there's no rocket science involved, and you can learn the basic principles surprisingly quickly. Eight-finger tapping can add a whole new dimension to your legato playing, so it's well worth investigating.

Naturally, you don't necessarily need to use all eight fingers. A lot of the string-crossing tapped licks you hear in Steve Vai's playing use two right-hand fingers – for instance, he might use his middle finger to tap the B string at the 22nd fret but switch to his ring finger when tapping the high E string at the same fret. Similarly, if you were playing a Paul Gilbert-style string-skipping arpeggio and you wanted to extend its range by tapping some high notes at the end, you might use your middle and little fingers to tap two notes on the same string for a more 'bubbly' effect. Right at the other end of the style spectrum, you should check out how the late, great Michael Hedges used tapping on a steel-strung acoustic to create complex rhythmic textures in more of a 'new age' kind of context.

Taking this idea to its logical conclusion, you could ditch the pick altogether and devote all four of your right-hand fingers to tapping. This is where the real fun starts! Some notable exponents of this technique include...

- TJ Helmerich, a player who specialises in scalar tapping, often tapping four notes per string for an ultra-smooth, ultra-fast legato effect. (Recommended

listening: anything by the duo Brett Garsed And TJ Helmerich – advanced yet melodic rock fusion.)

- Jennifer Batten. Formerly Michael Jackson's guitarist of choice, Jennifer went on to play in Jeff Beck's backing band, where her use of a guitar synth and her two-handed techniques enabled her to duplicate all of the sequenced parts from the records, eliminating the need for a separate keyboard player. (Recommended listening: 'Who Else?' by Jeff Beck or Jennifer's solo album, *Above, Below And Beyond*.)
- Stanley Jordan, a veritable one-man band who plays melodies with his right hand while adding bass lines, counter-melodies and chordal embellishments with his left – in short, he plays the guitar as if it were a piano, and his solo playing sounds uncannily like two people jamming. (Check out his albums *Standards* and *Magic Touch* if you find this hard to believe. It'll seem even harder to believe once you've seen the guy live. I remember seeing Stanley play a few years back, and he took the visual aspect of his tapping technique to its logical extreme by playing two guitars at the same time, one with each hand.)

Playing like this requires your tapping hand to function rather like an upside-down version of your fretting hand – your right-hand fingertips should, as a default setting, be lined up so that they can easily fret adjacent notes on the same string. Bear in mind that your right-hand thumb won't be able to wrap itself around the back of the neck as easily as the other one can, so try anchoring

it on the top edge of the fretboard (the low-E end) – you’ll still be able to channel some of your hand’s natural gripping motion into the way you hammer notes, and you’ll have enough stability to perform the technique accurately and consistently. As a bonus, your palm won’t obscure your view of the neck quite so much and you’ll be able to see what you’re doing.

At first, you might find it hard to hit the strings square on every time. The best advice I can give you on that topic is to start with your fingertip positioning and work back from there. Your fingers might be unequal in length, but if you slowly curl them inwards, you should find a point at which all four fingertips can rest on the same string simultaneously. Remember this position and use it as your default. This way, no finger ever has to stray far from the string, which increases your accuracy.

As was the case with the other hand, you should strive to adopt a hand positioning where your wrist is as straight as possible, and it’s helpful to think of an analogy cited by Jennifer Batten here – imagine you’re shaking hands with the neck and you should end up with a comfortable tapping position that’s kind to your tendons and doesn’t tire you out too quickly.

(If you were tapping chords rather than single-note runs, you’d want your fingertips to be lined up with different strings rather than different frets, so your wrist might have to adopt a slightly different angle for each chord shape. If you’re a newcomer to the field of eight-finger tapping, however, your wisest course of action would be to get used to the basic hand position first.)

As usual, string-damping is a problem. The undersides of your left-hand fingers can still take care of the higher strings, but you can no longer mute the low ones with your palm – remember, it’s hovering

several inches above the neck, propped up by your thumb. If you read *Creative Guitar 1* (and if not yet, why not?), you’ll remember the idea of muting unwanted notes by tying a sock or some expensive equivalent around the strings at the nut end, which is an effective way of cleaning things up, although it’s no good if you just want to throw in the occasional eight-finger lick and you’re unwilling to sacrifice luxuries like open-position chords or natural harmonics. This is a tricky one – one option is just to go for it and tap the notes with as much conviction as possible, hoping for the best, while another idea might be to use your left-hand index finger as a kind of temporary sock, resting it lightly on all six strings and pushing down onto the frets only when absolutely necessary. (This is potentially the cleanest-sounding method of them all, but it does limit the mobility of your other fingers a little and it’s hard to avoid making the wound strings squeak whenever you move your left hand to a new area of the neck. Try it and decide whether it has a place in your playing style.)

Here’s a general observation: it’s a lot harder to improvise with eight-finger tapping, particularly over tricky chord changes, because you’re concentrating on two areas of the neck at once and have to visualise a different shape for each hand. This involves twice as much work as ‘normal’ playing, so players who specialise in the technique tend to have a wide repertoire of already-worked-out licks that they use as a basis for their soloing.

What follows is a series of exercises illustrating the above technique. Example 5.1 shows an Am7–Am9 arpeggio idea. You should be able to hang onto your pick while playing this one, using fingers 2, 3 and 4 to tap the top notes. Notice how much more ‘bubbly’ this sounds in comparison to your standard legato technique.

Example 5.1

8va

T T T T T T T T T T T T T T T T

E 8-12-15-17-15-12-8 8-12-15-17-15-12-8 8-12-15-19-15-12-8 8-12-15-19-15-12-8

B .10 .10 .10 .10

G

D

A

E

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Example 5.2 outlines an A major idea, starting with a sus4 chord in beats 1 and 2 and resolving it in the latter half of the bar. This exercise reminds me of

Jeff Watson, of Night Ranger fame, and your best bet is to tap those high fourth intervals with fingers 1 and 4.

Example 5.2

Example 5.3 takes the previous fourths idea to extremes. The note choice here is reminiscent of certain

Jan Hammer keyboard licks, and I can't think of any other way of playing it.

Example 5.3

OK, maybe the stretching was a little tricky in that last one. Example 5.4 takes the same basic idea but works it around the notes of an A minor-seventh arpeggio. Note how your hands take turns to shift position. You have to

concentrate to get this right, but once it becomes instinctive, you'll have all sorts of fun with the idea. Why not try it with other types of arpeggio? (Hint: the A major-seventh arpeggio would be an easy place to start...)

Example 5.4

This next exercise demonstrates a handy trick for those moments when you're playing in A minor and you need an eight-fingered lick in a hurry. Basically, it's business as usual for your left hand while your right hand apes its every movement, seven frets further up.

This trick works because you can construct a minor pentatonic scale starting from the second, third and sixth degrees of a major scale. Trust me! If you're playing in an A Dorian context, the chord of A minor is effectively the chord of ii from a G major

scale (G A B C D E F#), so A minor, B minor and E minor pentatonic scales will all contain exclusively notes from the A Dorian mode. By the same token, if you're playing in an A Aeolian context, the A minor chord is the chord of vi from a C major scale, so A minor, D minor and E minor pentatonic scales will all work. Since the E minor pentatonic scale works over both of the common A minor modes, it seems to be the safest bet for rock applications, so that's what your tapping hand will be playing in Example 5.5 below:

Example 5.5

Now here's a corresponding C major pentatonic idea. It sounds a little odder than the last example, but at high speeds it creates an interesting texture rather than sounding wrong. The idea this time is to mirror

your fretting hand five frets up instead of seven. If you're wondering how to finger the tapped notes in this or the previous example, just copy what your other hand's doing.

Example 5.6

The next exercise uses the same notes as Example 5.5, but this time each hand groups the notes in fifths

to achieve a more interesting, wide-interval sound. Try the same idea with your tapping hand up an octave:

Example 5.7

Example 5.8 shows you another idea using fifths, but this time your hands don't alternate quite so rapidly! You'll find that this one works well with a clean sound,

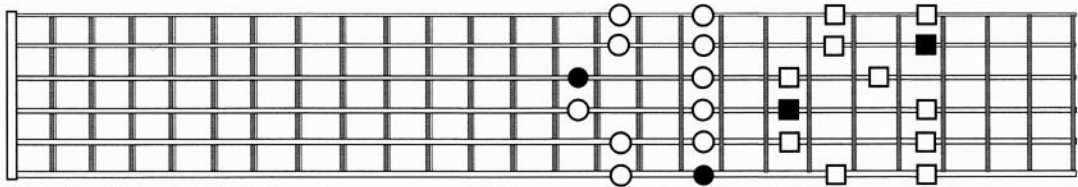
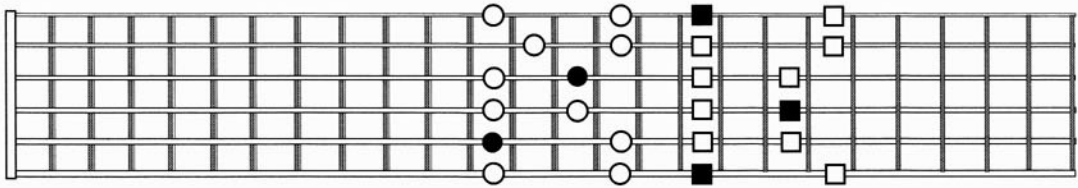
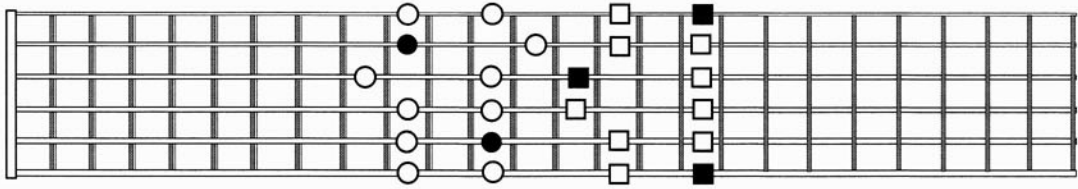
which will allow you to let all of the notes ring into each other, creating an effect something akin to a piano with the sustain pedal held down.

Example 5.8

OK, it's homework time. Example 5.9 shows you five eight-fingered shapes for A minor pentatonic. I think you can learn a lot from going through each of these shapes,

looking for the parts you find particularly easy and coming up with licks of your own based on the ideas covered so far. It doesn't sound like blues any more, does it?

Example 5.9



OK, that's probably enough pentatonic stuff for the moment! This next workout is a C maj7 arpeggio pattern (you'll see what's going on if you look at the music as well as the tab) and I've stuck that final note on at the end to suggest that this also makes a great

A minor lick, implying Am9. As with Example 5.8, this one can be used either as a single-note rock lick or as a cascading, clean-tone kind of affair where the notes ring into each other as much as possible. Try it both ways.

Example 5.10

Example 5.11 is a comical-sounding fingering for the chromatic scale, starting from A. The main problem

with this one will be in getting all of your tapped notes in time and even in length, so slowly does it.

Example 5.11

Example 5.11 is a guitar exercise in 4/4 time. The notation is split into two systems. The first system covers frets 5 to 13, and the second system covers frets 10 to 17. The exercise consists of two chromatic scales: an ascending scale from fret 5 to 13 and a descending scale from fret 13 to 10. Trills (marked 'T') are placed over the notes at frets 8, 9, 10, 11, 12, and 13. The fretboard diagram shows the strings E, B, G, D, A, E and the corresponding fret numbers for each note.

Continuing on this comical theme, the next exercise alternates between two chromatic scales, one ascending and the other descending. (In classical circles, this idea is known as playing in *contrary motion*.)

The fact that your two hands are going in different directions might distress you at first, but hang in there!

This lick has a very Buckethead vibe about it, and it might also remind you of a certain Nokia ringtone...

Example 5.12

Example 5.12 is a guitar exercise in 4/4 time, continuing the chromatic scale theme. The notation is split into two systems. The first system covers frets 10 to 18, and the second system covers frets 18 to 14. The exercise consists of two chromatic scales: an ascending scale from fret 10 to 18 and a descending scale from fret 18 to 14. Trills (marked 'T') are placed over the notes at frets 13, 14, 15, 16, 17, and 18. The fretboard diagram shows the strings E, B, G, D, A, E and the corresponding fret numbers for each note.

But enough of these Space Invaders noises. Examples 5.13 and 5.14 are based on the trusty A minor pentatonic,

and the fingering used here facilitates that ringing sustain sound and consequently works well with a clean tone:

Example 5.13

Example 5.14

Example 5.15 shows a similar approach applied to the whole A Aeolian mode. You might have heard players like Scotty Mishoe using these ideas at preposterously

high speeds, but I think that they work just as well at moderate tempi, so take it easy at first and concentrate on sustaining the notes as much as you can:

Example 5.15

Example 5.16 is a strange one – your tapping hand hammers on notes from nowhere at the 17th fret while your fretting hand moves a major-seventh arpeggio shape

up and down in increments of a tone. This lick has a strangely detached sound, and the legato aspect of it is less obvious than it was in many of the earlier examples.

Example 5.16

Example 5.17 offers you a completely different application for tapping that might remind you of Joe Satriani or indeed Primus’s Les Claypool. This pattern is a rhythmic groove – your left hand hammers ascending fifth intervals while your tapping hand

punctuates things with chordal stabs.

I would encourage you to get creative with this idea, as tapped grooves can sound surprisingly full in an unaccompanied context, and they sound great on acoustic guitars, too!

Example 5.17

Example 5.18 at the top of the next page explores an idea sometimes described as a *chordal capo*, in which your left hand holds down the Am9 shape shown in the chord box while your right hand adds ‘twiddles’. As you can see from the tab, the idea is to make each note last as long as possible so that all of the left-hand notes are sounded by pulling off with the appropriate tapping finger. The basic pattern in beat 1 goes like this:

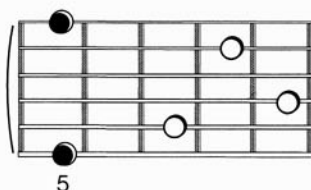
1 Tap the top E string with your right-hand index finger and hold it there while you...

- 2 ...tap the B-string note.
- 3 Now pull off with your index finger, wait for a moment and...
- 4 ...finally pull off with your little finger.

This pattern basically applies to each beat in turn – only the names of the strings will change. It’s a tricky one to get right, but it has a very unusual sound, so it’s worth the effort.

Example 5.18

Example 5.18 shows a musical sequence in 4/4 time. The top staff is a treble clef with eighth notes and tapping marks (T) above them. The bottom staff is a bass clef with fingerings in circles: 12, 15, 8, 13, 16, 8, 5, 14, 17, 5, 9, 14, 17, 9, 7, 12, 15, 9, 7, 12, 15, 7, 5, 5. A vertical line separates the two measures.



OK, homework time again. Examples 5.19 and 5.20 show you some eight-fingered arpeggio shapes for the basic G major and G minor triads while Example 5.21 shows you corresponding G major-seventh arpeggio shapes.

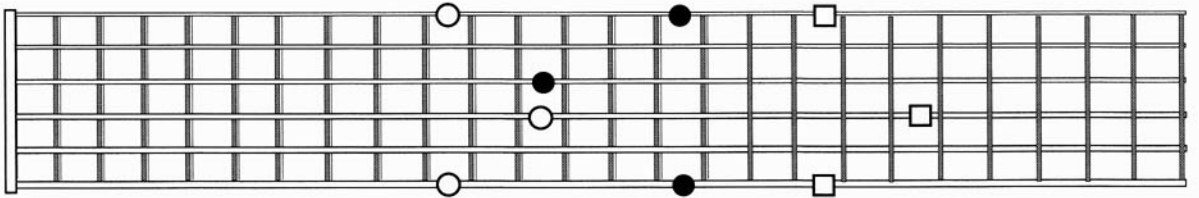
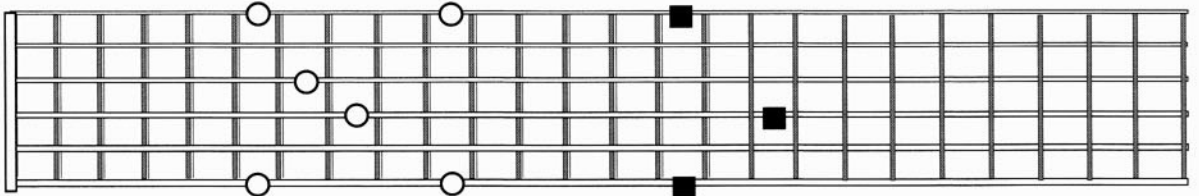
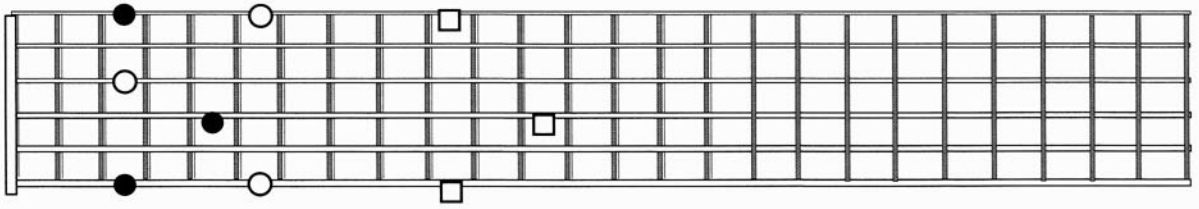
You'll note that, in each shape, every occurrence of any given note in the chord will always be played

by the same hand – for instance, in the first major-seventh shape, the left hand has all of the roots and thirds while the right hand tackles the fifths and sevenths. Thus you'll see from Example 5.22 how easy it is to transform the major-seventh shapes into corresponding shapes for the other main types of seventh chord. Have a go at working out all of them.

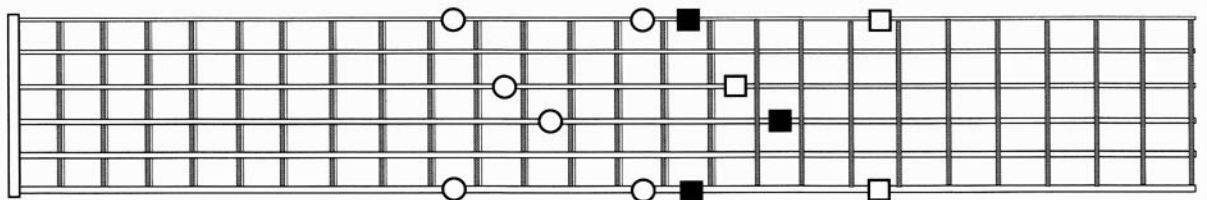
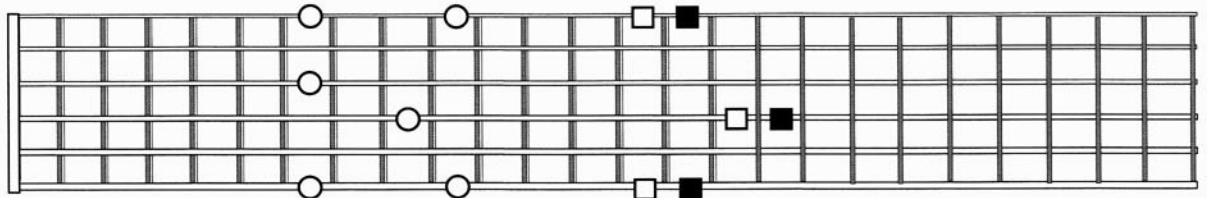
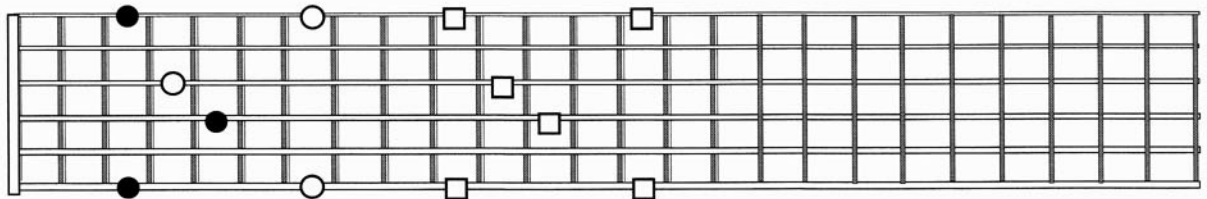
Example 5.19: G major arpeggios – eight-finger shapes

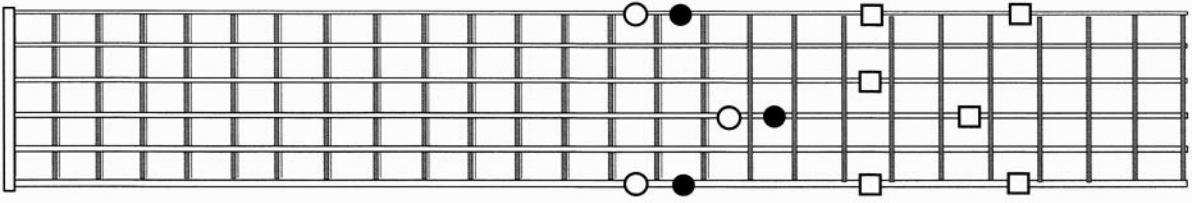
Three fretboard diagrams illustrating different eight-finger arpeggio shapes for the G major chord. The first diagram shows a shape with black dots on the 1st, 2nd, and 3rd strings at the 3rd fret, and white circles on the 4th, 5th, and 6th strings at the 3rd fret. The second diagram shows a shape with white circles on the 1st, 2nd, and 3rd strings at the 3rd fret, and black dots on the 4th, 5th, and 6th strings at the 3rd fret. The third diagram shows a shape with white circles on the 1st, 2nd, and 3rd strings at the 3rd fret, and black dots on the 4th, 5th, and 6th strings at the 3rd fret.

Example 5.20: G minor arpeggios – eight-finger shapes

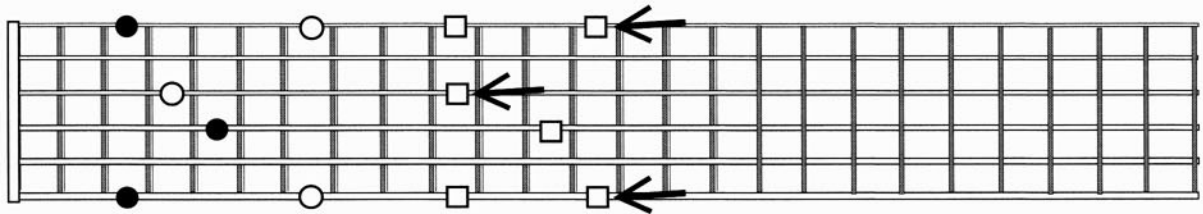


Example 5.21: Gmaj7 arpeggios – eight-finger shapes

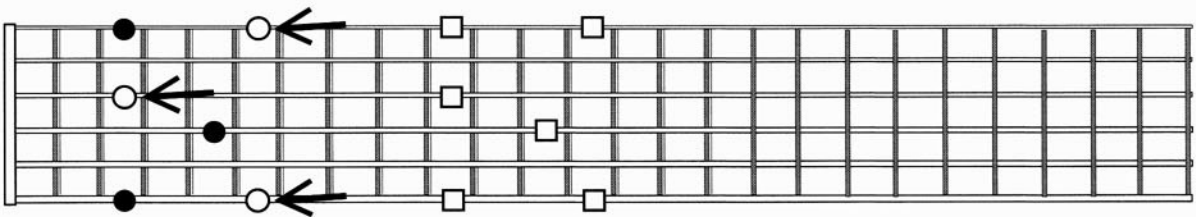




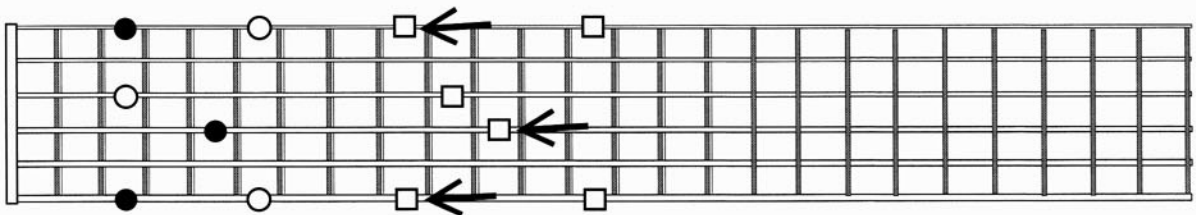
Example 5.22a: G7 arpeggio



Example 5.22b: Gm7 arpeggio



Example 5.22c: Gm7b5 arpeggio



Example 5.23 over the page shows one example of how you might construct a lick using the seventh arpeggio shapes illustrated above. The first bar uses the notes of an Am7 arpeggio, the third bar outlines a Dm9 arpeggio (without moving that far) and the second and fourth bars are constructed using the notes of Adim7. (A diminished-seventh chord, incidentally, is like a minor-seventh flat-fifth chord but with the seventh degree flattened again, hence the odd-looking formula: 1, b3, b5, bb7. This is the classic ‘suspense’ chord, and every note in it is a tone and a half away from the one before it and after it. For this reason, diminished-seventh shapes

are symmetrical – you can move them around the neck in three-fret jumps and still be playing the same chord. Does this give you any ideas about how to generate incredibly long yet easy-to-remember diminished licks?)

Then, for some final food for thought, Example 5.24 applies the eight-finger treatment to a standard G major scale. The shapes you’ll see here are basically the three-note-per-string shapes you encountered earlier but with all of the A-, D- and top-E-string notes moved down a string and five frets up. If you want your legato scale licks to sound faster and smoother, these shapes might well be the answer, so experiment!

Example 5.23

The first system of musical notation for Example 5.23 consists of a treble clef staff and a guitar staff. The treble staff shows a melodic line with trills (T) and sixteenth-note runs, with brackets indicating sixteenth-note groups. The guitar staff shows the corresponding fretting, with fingerings 12, 5, 8, 12, 15, 12, 8, 5, 7, 5, 14, 12, 12, 14, 5, 7, 15, 12, 8, 5.

The second system of musical notation for Example 5.23 consists of a treble clef staff and a guitar staff. The treble staff shows a melodic line with trills (T) and sixteenth-note runs, with brackets indicating sixteenth-note groups. The guitar staff shows the corresponding fretting, with fingerings 11, 5, 8, 11, 14, 11, 8, 5, 7, 5, 13, 11, 11, 13, 5, 7, 14, 11, 8, 5.

The third system of musical notation for Example 5.23 consists of a treble clef staff and a guitar staff. The treble staff shows a melodic line with trills (T) and sixteenth-note runs, with brackets indicating sixteenth-note groups. The guitar staff shows the corresponding fretting, with fingerings 10, 5, 8, 10, 13, 10, 8, 5, 7, 5, 12, 10, 10, 12, 5, 7, 13, 10, 8, 5.

The fourth system of musical notation for Example 5.23 consists of a treble clef staff and a guitar staff. The treble staff shows a melodic line with trills (T) and sixteenth-note runs, with brackets indicating sixteenth-note groups. The guitar staff shows the corresponding fretting, with fingerings 11, 5, 8, 11, 14, 11, 8, 5, 7, 5, 13, 11, 11, 13, 5, 7, 14, 11, 8, 5.

6 PICK AND FINGERS

After all that tapping, maybe it's time to look at another way in which your right hand can help you in your quest for new sounds and ideas. In notational terms, I should explain that the following symbols are traditionally used to denote the digits of the right hand:

- p = thumb
- i = index finger
- m = middle finger
- a = ring finger
- c = little finger

You'll mainly be using m (middle finger) and a (ring

finger) in the following examples, so as long as you know those two symbols, you'll be fine.

It is of course feasible to ditch your pick altogether when experimenting with these ideas – just ask Jeff Beck or Mark Knopfler – but I think it's more practical for rock players in general to start out with a hand position that combines the ease of normal picking with the tonal and string-crossing advantages of using fingers, so that's the way we'll be approaching the following examples.

The idea of using your pick and fingers together is particularly popular with country players, whom often play ideas like those in Examples 6.1 and 6.2:

Example 6.1

Example 6.1 is a musical score for guitar in 4/4 time. The melody is written on a treble clef staff. The first measure contains a quarter note G4 (fingering 2), a quarter note A4 (fingering 4), a quarter note B4 (fingering 0), and a quarter note C5 (fingering 1). The second measure contains a quarter note B4 (fingering 4), a quarter note A4 (fingering 0), and a quarter note G4 (fingering 4). The third measure contains a quarter note F#4 (fingering 0), a quarter note E4 (fingering 4), and a quarter note D4 (fingering 0). The fourth measure contains a quarter note C4 (fingering 4), a quarter note B3 (fingering 0), and a quarter note A3 (fingering 4). The fifth measure contains a quarter note G3 (fingering 0), a quarter note F#3 (fingering 4), and a quarter note E3 (fingering 0). The sixth measure contains a quarter note D3 (fingering 4), a quarter note C3 (fingering 0), and a quarter note B2 (fingering 4). The seventh measure contains a quarter note A2 (fingering 0), a quarter note G2 (fingering 4), and a quarter note F#2 (fingering 0). The eighth measure contains a quarter note E2 (fingering 4), a quarter note D2 (fingering 0), and a quarter note C2 (fingering 4). The bass staff shows the fretting hand with fingerings: 3-5-0-3-0-3-0-3-5-0-3-5-0-3-5-0-3. Picking directions are indicated by flags above the notes: down-pick for G4, A4, B4, C5, B4, A4, G4, F#4, E4, D4, C4, B3, A3, G3, F#3, E3, D3, C3, B2, A2, G2, F#2, E2, D2, C2.

Example 6.2

Example 6.2 is a musical score for guitar in 4/4 time. The melody is written on a treble clef staff. The first measure contains a quarter note G4 (fingering 2), a quarter note A4 (fingering 4), a quarter note B4 (fingering 1), and a quarter note C5 (fingering 0). The second measure contains a quarter note B4 (fingering 4), a quarter note A4 (fingering 0), and a quarter note G4 (fingering 4). The third measure contains a quarter note F#4 (fingering 0), a quarter note E4 (fingering 4), and a quarter note D4 (fingering 0). The fourth measure contains a quarter note C4 (fingering 4), a quarter note B3 (fingering 0), and a quarter note A3 (fingering 4). The fifth measure contains a quarter note G3 (fingering 0), a quarter note F#3 (fingering 4), and a quarter note E3 (fingering 0). The sixth measure contains a quarter note D3 (fingering 4), a quarter note C3 (fingering 0), and a quarter note B2 (fingering 4). The seventh measure contains a quarter note A2 (fingering 0), a quarter note G2 (fingering 4), and a quarter note F#2 (fingering 0). The eighth measure contains a quarter note E2 (fingering 4), a quarter note D2 (fingering 0), and a quarter note C2 (fingering 4). The bass staff shows the fretting hand with fingerings: 3-5-0-3-0-3-0-3-5-0-3-5-0-3-5-0-3. Picking directions are indicated by flags above the notes: down-pick for G4, A4, B4, C5, B4, A4, G4, F#4, E4, D4, C4, B3, A3, G3, F#3, E3, D3, C3, B2, A2, G2, F#2, E2, D2, C2.

Licks like these are descended from the rolls of banjo playing. Aim to keep your picking hand in its normal position and experiment with slight adjustments in your wrist angle, if necessary, so that your fingers can comfortably reach the strings. Most people find Example 6.2 harder than 6.1, but they both show very important

and versatile techniques, so persevere with them.

Example 6.3 brings the little finger into the equation and moves between G major and F major arpeggio shapes in various inversions, making for a neat little G Mixolydian lick. (You might want to try sweep-picking the same lick. Note how different the results sound.)

Example 6.3

Example 6.4 illustrates a nice trick used by many country players – it’s an unusual fingering for an ascending G Mixolydian scale, with an extra flat third thrown in for a slightly bluesier effect. (Well, to be completely honest,

the flat third is there mainly to preserve the pattern of three-string groupings for as long as possible, but not to worry – it sounds good, anyhow!) The longer you can sustain each note, the better things will sound:

Example 6.4

Example 6.5 shows how a pick-and-fingers approach can facilitate wide-interval licks without producing the

scratchiness of sweep picking. There are no thirds in this lick, so it’ll be equally at home in G major or minor:

Example 6.5

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This next exercise has a touch of Jerry Donahue about it. When you're learning to play it, you should bear in mind that the first two notes of each beat are merely there as a way of leading up chromatically to the third note. The last two notes of each beat are the

memorable ones; they spell out a melodic-sounding ascending-sixths pattern. Tonally, your priority should be to make those top-E-string notes really pop out, hitting them confidently and then cutting them to produce a staccato effect:

Example 6.6

Example 6.7 is virtually unpickable at high speeds, so it's a great advert for the pick-and-fingers combination! I borrowed the idea from Danny Gatton, and the idea is to lock fingers 1, 2 and 4 of your fretting hand in a

'double octave' shape, which you can then move around the neck to follow whatever basic notes you feel like playing. If you find this melodically limiting, bear in mind that the same shapes will work one string lower, too.

Example 6.7

Example 6.8 might sound like just another country lick, but it has funky applications, too. Your pick is handling all the single-note stuff and your right-hand fingers add some rhythmic double-stop punctuation. Make sure

that your picking motion is as subtle and controlled as possible; this exercise affects your whole wrist, so if you're too frenetic, your fingers will have a hard time finding the right strings for the double stops.

Example 6.8

Example 6.9 is a bizarre hybrid of Steve Vai and Carl Verheyen, with the now-obligatory country element thrown in for good measure. This shows you how the

combination of this new picking technique with some left-hand position shifting can create some really interesting results:

Example 6.9

Example 6.9 musical notation and guitar tablature. The notation includes a treble clef, a key signature of one flat, and a 4/4 time signature. The melody features triplets, glissandos, and slurs. The guitar tablature below shows fret numbers and picking directions (m for downpick, a for uppick) for the E, B, G, D, and A strings.

Example 6.10 rounds things off with a look at how players like Brett Garsed use the pick-and-fingers approach in

conjunction with legato to play the kinds of lines normally associated with sweep pickers like Frank Gambale:

Example 6.10

Example 6.10 musical notation and guitar tablature. The notation includes a treble clef, a key signature of one flat, and a 4/4 time signature. The melody features slurs, glissandos, and a complex rhythmic pattern. The guitar tablature below shows fret numbers and picking directions (m for downpick, a for uppick, c for chromatic) for the E, B, G, D, and A strings.

I think you'll agree that this method of playing sounds smoother than sweep picking. That's not to say that either method is superior, but the suggested picking directions shown here certainly give your playing a less abrasive timbre. I would also point out that the tonal

variation is greater this way. If you want the lick to sound 'human', pick it in this way, whereas if you want all of the notes to sound more consistent and mechanical, you should sweep it. There's surely a time and a place for each.

7 EXTENDING THE FRETBOARD

Even a humble 21-fret neck provides you with a range of four full octaves (if you can manage to bend up a tone and a half!), and really this should be more than enough for most purposes. Nonetheless, it's worth taking a quick look at how you might extend the guitar's range beyond these conventional limits.

In terms of getting notes lower than the open bottom E string, all you need to do is detune. If you plan to do a lot of this, you should probably consider upping your string gauges, as a loose, flappy string produces a relatively weak tone and the pitching is less defined. On the other hand, detuning by a semitone or so won't make a huge difference to the way in which your guitar feels and responds, yet it will undeniably give you a different sound – many Jimi Hendrix, Stevie Ray Vaughan and Van Halen riffs don't sound quite right when you play them at concert pitch but suddenly gain authenticity when you tune to E \flat .

If you're really fascinated by low notes, perhaps you should consider investing in a seven-string guitar. These instruments sport an extra low B string, and they're popular amongst the nu-metal fraternity (many of whom, it must be said, only really use the lowest few strings and would probably be just as happy with a regular detuned guitar). Players like Steve Vai and John Petrucci have used seven-stringed instruments to great effect in a soloing context, and you'll find that navigating your way around a seven-string isn't that hard, just as long as you remember that the lowest string isn't E any more!

Jazz players like George Van Eps and Ron

Eschete have actually been using seven-stringed instruments for decades, exploiting the increased range of any given scale position to enrich their chord-melody arrangements. These players are more likely to tune that low string all the way down to A, which has a certain logic about it if you use a lot of chord shapes with root notes on the A string and you want to thicken them up without having to think too hard.

The main problem with the low-B idea is that low strings ideally require a greater scale length in order to achieve optimum tone, which in simple terms is why basses are longer than guitars. This problem is addressed on baritone guitars by sticking a longer neck on a conventional guitar body, and you might also have seen the radial-fretting idea used by luthiers like Ralph Novak in which the frets fan out so that the scale length starts short, for the top strings, and gets progressively longer as you move towards the bottom strings.

One player who has really made the most of this concept would be Charlie Hunter, who played guitar for The Disposable Heroes Of Hiphoprisy and has since released a number of solo albums. Charlie plays a radially fretted, eight-stringed monster of an instrument that uses the low three strings of a bass and the top five strings of a guitar, enabling him to play bass lines and chordal melodies simultaneously and producing a good solid tone throughout the whole range of the neck. (It gets scarier – the fingerboard is arranged so that the bass strings are effectively fretless, and he's had the thing wired in

stereo so that these low strings can be sent to a bass amp while the higher strings are run through a Leslie rotating-speaker effect and into a separate amp for that Hammond-organ-type vibe!) Charlie has mastered the art of playing two completely different things at once, and it's well worth watching him play live, if you get the chance, if only to watch how his facial expressions mirror the guitar parts while the rest of his body moves in sync with the bass lines. This gives you an interesting insight into how he must approach the multitasking requirements of his playing style.

Of course, I'm not suggesting that buying a guitar like this will solve anyone's problems; I mentioned it because I think it's a good example of how a player might first imagine an ideal sound in his head and then experiment with equipment until he finds a rig that enables him to realise that imaginary sound.

As far as high notes go, I'm afraid that most attempts to create a seven-string guitar with a high A instead of a low B have been unsuccessful; physics seems to dictate that any string tuned significantly higher than the standard top E will be prone to break. (Anyone with a 12-string will know what I mean – that high G string snaps at the slightest provocation, doesn't it?)

Guitars with extra frets offer some potential – the Hamer Californian comes with 27 frets as standard, and I've seen Washburn instruments sporting as many as 36! Once again, though, there's a tonal problem, as the highest notes tend to sound plinky and lack sustain. In addition, it's hard to fret accurately up at the top end of such an instrument, as your fingertips are so much wider that the gaps between the frets that you might feel the urge to stick them in a pencil sharpener!

There is hope, however, as harmonics offer all sorts of potential for high notes. Let's take a look at some of the different ways in which you can go about creating these pure, bell-like tones.

Natural Harmonics

These are the harmonics that you get if you pluck a string while holding a fretting hand fingertip just above the 12th fret, touching the string very gently to ensure

that it never actually makes contact with the fret. When you get this technique right, you'll feel the string tickling your fingertip as it's plucked, and the resulting note has a pure, chiming quality about it.

That spot above the 12th fret is called a *node*, and you can find a node at any point that marks an exact fraction of the string's length. However, the bigger and more complicated the fraction, the less reliable the resulting note. For this reason, higher harmonics are harder to play consistently and some of them sound out of tune. Thus, the most widely used nodes are as follows:

- Fret 12, the halfway point between the nut and the saddle, giving a note one octave higher than the pitch of the open string.
- Frets 7 and 19, which divide the string into equal thirds and sound an octave and a fifth higher than the open string.
- Frets 5 and 24, which split the string into equal quarters, producing a harmonic that sounds two whole octaves higher than the open string.

Artificial Harmonics

Natural harmonics are very useful in keys like G or E minor, but if you want to find some harmonics for notes like C you'll need to master the art of producing *artificial harmonics*.

In this technique, you fret the appropriate note with your left hand and then use your picking hand not just to pluck the string but also to mark the node. (If you're stopping the string at the third fret, the most obvious node to go for would be the 15th fret, 12 frets up.) Fingerstyle players often achieve this by pointing at the node with the right-hand index finger while plucking with the thumb, but if you're too fond of your pick to adopt this approach you could hold it between your thumb and middle finger, using your index fingertip to touch the node as before. You can get a remarkably clean-sounding harmonic this way, but the technique might feel a little awkward, and if this is the case you could try a variation where you pluck the string with your picking hand's little finger and

point at the node with, say, your middle finger. This way, you get to hang onto your beloved pick!

Pinched Harmonics

These are artificial harmonics that are produced by simply holding the pick between your thumb and forefinger (as usual) and using the fleshy part at the side of your thumb to graze the string (at the node, of course) as you pick it. If you've got enough gain and treble on your amp, you'll be able to find all sorts of squealing, ultra-high-pitched harmonics with this technique.

It's possible to play a lick in the middle of the neck and add a pinched harmonic an octave higher to every note by picking around the area where the fretboard ends. After a bit of experimentation, you'll get a knack for guessing where, for instance, the 27th fret would be (handy for playing the 'Purple Haze' solo without an octave pedal!). However, this technique is always a little unpredictable, and it's probably best to use it in that spirit. Many rock/metal players add completely random pinched harmonics to a note and don't worry too much about the precise pitch – sometimes you just need to make a note squeal! (Some players achieve the same effect by picking the string normally and using their right-hand little finger to touch the node. I personally prefer the thumb method, because there are more visible reference points – pole pieces and the like – but there's nothing wrong with either approach; it's purely a matter of choosing which feels more comfortable.)

Tapped Harmonics

Here's another variation on the general theme of using the same part of your hand both to find the node and to get the string vibrating. This time, try holding down a chord shape and using the middle finger on your left hand to tap out the nodes 12 frets higher up. If you tap right above the fret with a forceful motion and then immediately remove your fingertip, the results should sound something like the start of 'Spanish Fly', Eddie Van Halen's acoustic showpiece on *Van Halen II*.

Remember that your tapping movement should have a little bounce in it or your fingertip will deaden the harmonic and you won't get the right ringing tone.

Whammy Stunts

When you start manipulating harmonics with a whammy bar, you can have all sorts of fun, making siren noises and suchlike. Heavy-metal guitarists in the '80s were very fond of these effects, but if you want to hear how it can be done musically, Jeff Beck is well worth investigating.

If you have an extreme trem, such as a Floyd Rose, you'll find that you can start with the bar depressed and then use a left-hand fingertip to dab the G string at, say, the third fret as you bring the bar up to pitch. The key to making this work lies in how forceful your dabbing motion is and how slack the string is at the precise moment of dabbing. If you get it right, you'll hear a high-pitched, swooping effect without the clunking sound you'd get if you tried to pick the note – very Dimebag Darrell!

In general, whenever you're trying to coax harmonics out of your guitar, your best bet is to select your bridge pick-up and turn the tone control up to 10. You'll also find that relatively new strings produce the best results. (Admittedly, some players prefer the sound of old strings – Eddie Van Halen springs to mind and the great Motown bassist James Jamerson famously used the same set of strings for ten years.) That said, it's possible to breathe a new lease of life into an old set of strings by boiling them for a few minutes (just make sure they're dry before you put them back on!). This renews some of the zinginess associated with new strings, but I have to say that the effect is short-lived – it can't remedy bad intonation, and of course the strings are likely to break at the slightest provocation. To be honest, this technique is more popular with bass players, for whom buying a new set of strings is a far costlier affair.

The following licks illustrate a few possible uses for harmonics.

Exercises

Example 7.1 arranges some natural harmonics in such an order that they outline an E minor pentatonic scale, with a couple of ninths added for a bit of extra colour. You'll probably want to move your pick closer to the bridge when you're playing the last four notes, a tactic that helps to bring out the higher-order harmonics:

Example 7.1

8^{va} ----- 15^{ma} -----

Nh -----

E 12 12 12 12 7 12 7 5 5 3:2 17 17

B 12 12 7 7 7 7 7 5 5 3:2 17 17

G 12 7 7 7 7 7 7 5 5 3:2 17 17

D 12 7 7 7 7 7 7 5 5 3:2 17 17

A 12 7 7 7 7 7 7 5 5 3:2 17 17

E 7 7 7 7 7 7 7 5 5 3:2 17 17

Example 7.2 shows a Vai-esque trick – consult tracks like Steve’s ‘Rescue Me Or Bury Me’, David Lee Roth’s ‘Damn Good’ or Frank Zappa’s ‘What’s New In

Baltimore?’ for examples. This lick mixes natural harmonics with normal stopped notes on the low strings, thus setting up two completely separate registers:

Example 7.2

8^{va} -----

gliss gliss

Nh Nh Nh Nh

E 12 12 12 12 5 5 5 5 5 4 3:2 3:2

B 12 12 12 12 5 5 5 5 5 4 3:2 3:2

G 12 12 12 12 5 5 5 5 5 4 3:2 3:2

D 12 12 12 12 5 5 5 5 5 4 3:2 3:2

A 12 12 12 12 5 5 5 5 5 4 3:2 3:2

E 0 7/8 10/7 1 3:2 3:2

Bm7 G/F Emadd9

Example 7.3 employs a simple chord shape to demonstrate how you can use harmonic nodes either an octave or an octave and a fifth above your stopped notes, thus squeezing a little extra value out of each chord shape. Fifths are fairly docile intervals, so you’ll

find that this trick works surprisingly consistently when you apply it to other chords.

Note that in this and subsequent examples, I’ve notated artificial harmonics by writing the fretted notes normally and indicating the nodes in brackets.

Example 7.3

E 4 (16) 2 (14) 0 (12) 0 (12) 4 (11) 2 (9) 0 (7) 0 (7)

B 4 (16) 2 (14) 0 (12) 0 (12) 4 (11) 2 (9) 0 (7) 0 (7)

G 4 (16) 2 (14) 0 (12) 0 (12) 4 (11) 2 (9) 0 (7) 0 (7)

D 4 (16) 2 (14) 0 (12) 0 (12) 4 (11) 2 (9) 0 (7) 0 (7)

A 4 (16) 2 (14) 0 (12) 0 (12) 4 (11) 2 (9) 0 (7) 0 (7)

E 4 (16) 2 (14) 0 (12) 0 (12) 4 (11) 2 (9) 0 (7) 0 (7)

F#m11

Example 7.4 illustrates the technique of *harp harmonics*, so called for the obvious reason that they sound a bit like something a harp might produce.

As you'll see from the tab, only half of the notes in this pattern are actually harmonics. If you let the notes ring into each other and play at a moderate speed, however, you'll create the illusion that they're all harmonics. To start this lick, barre all of the strings at the fifth fret and add your little finger to the top E string at the seventh fret. Now line up your right-hand index finger so that it's pointing at the 17th-fret

node on the low E string, with your thumb poised to pick the same string. Keeping this assembly intact, you should now position your right-hand middle finger so that it can comfortably pluck the D string. Your hand should remain in this position throughout the lick, moving down to the next set of strings as and when required.

You might have spotted this technique at work in the quiet section of The Police's 'Message In A Bottle', but you'll hear more extensive use of the idea in the playing of Chet Atkins, Lenny Breau and Tuck Andress.

Example 7.4

Am9

Example 7.5 comprises a few other chord shapes that work well with the harp-harmonic idea. Try to find some of your own. You'll find stretchy chord shapes don't work

so well because some of the notes double up or seem to occur in the wrong order. The fewer frets spanned by a chord shape, the more likely it will sound good.

Example 7.5

Example 7.6 is a variant where some less obvious nodes are used instead of those at the 12th fret. This

method requires a little more trial and error, but it's an interesting alternative to the normal method:

Example 7.6

Example 7.6 shows a guitar lick in D major/B minor. The notation includes a treble clef, a key signature of one sharp (F#), and a 4/4 time signature. The fretboard diagram below the staff shows the following fret numbers for the strings from top to bottom (E, B, G, D, A, E):

- String 1 (E): 10 (29)
- String 2 (B): 7, 8, 10, 8 (27)
- String 3 (G): 7, 7 (26), 7 (26)
- String 4 (D): 7 (26), 7 (26)
- String 5 (A): 0 (24)
- String 6 (E): 0 (24)

A dashed line labeled "8^{va}" indicates the octave of the notes. A natural harmonics sign (a diamond with a vertical line) is placed above the 10th fret on the B string.

Example 7.7 adds some pull-offs to the idea shown earlier in Example 7.4, and the result is a fully-fledged D major/B minor scale, replete with harp effect. The biggest problem with playing the last few licks lies

in trying to balance the volume between harmonics and normal notes, so make sure you pay close attention to this aspect of things – getting it right can improve the sound tremendously.

Example 7.7

Example 7.7 shows a guitar scale in D major/B minor. The notation includes a treble clef, a key signature of one sharp (F#), and a 4/4 time signature. The fretboard diagram below the staff shows the following fret numbers for the strings from top to bottom (E, B, G, D, A, E):

- String 1 (E): 9, 7
- String 2 (B): 7 (19), 8, 7
- String 3 (G): 7 (19), 7
- String 4 (D): 7 (19), 7
- String 5 (A): 7 (19), 7 (19)
- String 6 (E): 7 (19), 7 (19)

Arched lines above the notes indicate pull-offs between frets.

Example 7.8 touches on the idea of *slap harmonics*. Players like Tuck Andress are fond of this rather hit-or-miss technique where the side of a right-hand finger (the index finger is highly recommended) is used in an attempt to strike the right nodes for all of the notes of a given chord shape in a single

slapping motion. This can work very well, but you need to work on a brisk slapping motion – hit the strings confidently around the part of the neck where the 'average' node would be and then remove your hand immediately in order to let the resulting notes ring out clearly.

Example 7.8

Example 7.8 shows a guitar chord shape in E minor. The notation includes a treble clef, a key signature of one sharp (F#), and a 4/4 time signature. The fretboard diagram below the staff shows the following fret numbers for the strings from top to bottom (E, B, G, D, A, E):

- String 1 (E): 2
- String 2 (B): 3
- String 3 (G): 2
- String 4 (D): 2
- String 5 (A): 2
- String 6 (E): 0

The diagram also shows fret numbers for a barre: 5, 5, 4, 5, 5, 0. A natural harmonics sign (a diamond with a vertical line) is placed above the 7th fret on the B string. A dashed line labeled "8^{va}" indicates the octave of the notes.

Em11

Creative Guitar ②: Advanced Techniques

The following lick takes a parallel-fourths shape and moves it down through a B minor pentatonic scale. For each shape, the idea is to point your index finger at a node on the lowest string as you pluck the whole chord

shape with your thumb, middle and ring fingers. The addition of the harmonics effectively turns the lowest note of each chord into the highest, which has an interesting effect on the sound of each voicing.

Example 7.9

Bm7

This next workout calls for as much gain and treble as possible! The idea is to run the side of your right-hand palm gently along the strings, moving between the bridge and the front pick-up while using your fretting hand to

hammer and pull off the notes indicated in the tab. If you're applying the correct amount of pressure with your palm, your reward will be a long string of random-sounding harmonics suitable for any heavy-metal ending.

Example 7.10

(random palm harmonics) - - - - -

Example 7.11 a more calculated version of the same idea. To execute this one correctly, hold your right-hand index finger over the strings just above the 12th fret while your left hand hammers the notes indicated

in the tab. The fingering will remind you of the going-up-in-fourths scale patterns shown earlier, but the pitches that actually come out of your amp will sound much more interesting.

Example 7.13

Example 7.13 is a musical exercise in 4/4 time, marked *8va*. The melodic line in the treble clef consists of a sequence of trills (marked 'T') on the notes G4, A4, B4, and C5. Each trill is followed by a sixteenth-note rest (marked '16'). The fretboard diagram below shows the fingering for these notes: G4 (20th fret, diamond), A4 (7th fret, diamond), B4 (12th fret, circle), and C5 (17th fret, diamond). This sequence is repeated four times, with a bracket labeled '6' under each repetition. The guitar strings are labeled E, B, G, D, A, E from top to bottom.

Example 7.14 reminds me of the impossibly long harmonic-minor scale from the end of 'Eugene's Trick Bag', Steve Vai's neo-classical party piece from the film *Crossroads* (think Ralph Macchio rather than Britney Spears). When you find yourself running out of frets, simply run up the last seven notes again,

adding artificial harmonics 12 frets higher to keep the pitches ascending.

You could also try pinched harmonics or normal artificial ones here. Which technique best complements your particular set-up and playing style? Which *sounds* better to you?

Example 7.14

Example 7.14 is a musical exercise in 4/4 time. The melodic line in the treble clef shows a sequence of notes with slides (marked with a diamond) and artificial harmonics (marked with a diamond and a number). The fretboard diagram below shows the fingering for these notes: 12, 13, 15, 12, 13, 15, 12, 14, 13, 25, 15, 27, 17, 29. The guitar strings are labeled E, B, G, D, A, E from top to bottom.

Here's a funny thing: if you add an artificial harmonic to a note played with a slide, you can then move the

slide around to vary the pitch of said harmonic. Very Jeff Beck!

Example 7.15

Example 7.15 is a musical exercise in 4/4 time, marked *8va*. The melodic line in the treble clef consists of a sequence of glissandos (marked 'gliss') on the notes G4, A4, B4, and C5. The fretboard diagram below shows the fingering for these notes: 5 (17th fret), 7, 8, 10, 12. The guitar strings are labeled E, B, G, D, A, E from top to bottom.

That last example might have reminded you of passages such as Duane Allman's slide solo at the end of 'Layla', where he fearlessly takes the slide right up past the end of the neck and over the pick-ups in the quest for ever higher notes. On most guitars, you'll find it hard to control the pitching of these ultra-high notes because the guitar's body is in the way, so you might want to experiment with

holding the slide over the top of the neck like a lap-steel player.

Example 7.16 requires you to hold the slide in your picking hand and use it to 'bow' the strings in a subtle rubbing motion, creating a haunting, theremin-like effect suitable for those *One Flew Over The Cuckoo's Nest* moments. I liked the sound so much I squeezed it in at the start of the Asia track 'The Longest Night'.

Example 7.16

15^{ma} -----

gliss gliss gliss gliss

Rub with slide

E 29 31 32 34 36

B

G

D

A

E

Some players use other objects in place of a slide when tackling these high notes – Bumblefoot, for instance, wears a thimble on the little finger of his picking hand and Matthias Eklundh uses a hosepipe clip. You can even use the edge of the pick, particularly if you've scraped it along the wound strings to give it a grittier feel. For the next example, I continued to use a slide,

but this time the idea is to 'tap' imaginary notes. It's hard to pull off after such notes, but if you've got enough gain on your amp, you'll get away with it.

Note-wise, this is an A minor arpeggio. On a 24-fret guitar with twin humbuckers, you might well find that pushing the top string against a front-pick-up pole piece produces the same high A note.

Example 7.17

15^{ma} -----

T T T T

6 6 6 6

Tap with slide or thimble

E 20 24 29 24 20 22 20 24 29 24 20 22 20 24 29 24 20 22 20 24 29 24 20 22 20 24 29 24 20

B

G

D

A

E

Example 7.18 takes the idea shown in Example 7.17 to its logical conclusion. It's hard to play this A Aeolian mode with accurate pitching because you have absolutely no

reference points, but with a little practice you'll get used to the spacing of the 'imaginary frets' beyond the top of the neck, and it certainly has an interesting effect:

Example 7.18

15^{ma}

The image shows a musical score for a guitar exercise. The top staff is a treble clef in 4/4 time, containing a sequence of notes that ascend in pitch. A dashed line above the staff is labeled '15^{ma}'. Below the staff is a guitar fretboard diagram with six strings labeled E, B, G, D, A, E from top to bottom. The diagram shows fingerings for various frets: fret 26 (E string), fret 28 (B string), fret 29 (G string), fret 31 (D string), fret 29 (A string), fret 30 (D string), fret 32 (A string), fret 34 (D string), fret 31 (E string), fret 32 (B string), fret 34 (G string), fret 36 (D string), fret 37 (A string), fret 39 (D string), and fret 41 (E string).

Ouch!

8 EXTENDED SCALES

Here's some more food for thought: you can stretch the fingering of a scale to incorporate many more notes

than the traditional two- or three-note-per-string shapes allow you. For instance, check out Example 8.1 below:

Example 8.1

Yes, it's an E minor pentatonic lick that covers the whole neck! Your hand never really gets settled during this exercise, as your index finger has to start each string at a higher fret than the one immediately before it, but if you memorise the finger spacings, you can play this lick at considerable speeds, and it's quite a head-turner.

If you wanted to try playing seven-note scales in the same way, you could hammer three notes in the normal way, tap the fourth and start the next string one position

higher, as shown in Example 8.2. Allan Holdsworth practises his scales using this kind of four-note-per-string approach, but he applies a 1–2–3–4 fingering to each string's worth of notes and dispenses with the tapping idea altogether. It's great training for mind and fingers alike – there's never enough time to get settled in any one scale position – but it's probably easier to *start* by tapping the last notes on each string until you've memorised the general shape of the fingering:

Example 8.2

Example 8.3 allows you to achieve a similar range of notes, but this time you do so by keeping your hand in the more familiar three-note-per-string configuration and

adding lots of position shifts. This workout works well whether you choose to pick every note or opt for a more legato approach and is typical of players like Paul Gilbert:

Example 8.3

Example 8.3 is a guitar exercise in G major (one sharp) and 4/4 time. It consists of two systems of notation. The first system shows a melodic line in the treble clef with glissando markings over several phrases. Below it, the guitar strings (E, B, G, D, A, E) are shown with fret numbers: 3-5-7, 3-5-7-5-3-5-7-9, 5-7-9-7-5-7-9-10, 7-9-11-9-7-9-11-12, and 10-12-13-12-10. The second system continues the exercise, starting with an 8va marking and a dashed line. It features a melodic line with glissando and triplet markings. The fret numbers for the strings are: 12-13-15, 12-14-15-14-12-14-15-17-19, 20-22-20-19-17, and 15.

The next exercise goes back to the Holdsworth idea of using a 1-2-3-4 fingering on each string but loses those position shifts. This way, some of the notes

double up – ie the last note on each string is the same as the first note on the next – but that needn't be a bad thing. Here, it gives a kind of ultra-legato effect:

Example 8.4

Example 8.4 is a guitar exercise in G major (one sharp) and 4/4 time. It consists of two systems of notation. The first system shows a melodic line with sixteenth-note patterns, each group of six notes bracketed with a '6'. The fret numbers for the strings are: 8-10-12-14-12-10-8-10-12, 9-10-12-14-12-10-9-10-12, and 9-10-12-14-12-10. The second system continues the exercise with similar sixteenth-note patterns. The fret numbers for the strings are: 9-10-12, 9-11-12-14-12-11-9-11-12, 10-12-13-15-13-12-10-12-13, and 10-12-14-15.

And here's how the same idea applies to pentatonic fingerings. Note how the resulting legato sound is very

different from anything you could get from a normal two-note-per-string fingering:

Example 8.5

Of course, you don't need to play these ideas legato. Example 8.6 shows another way of breaking out of your normal pentatonic habits, this time by sweeping everything. In general, the idea is to play either one or

three notes on any given string so that the fingering co-operates with the requirements of sweep picking. You really have to work on note separation and even timing to get the best results from this one:

Example 8.6

You'll see how Example 8.7 takes the same basic approach and applies it to every possible group of

strings, with the desirable result that the lick lasts longer and sounds less like a normal scale:

Example 8.7

The next lick takes a fingering pattern that should be familiar to anyone who's ever played a diatonic scale in descending fourths. All I've done is stretched the shape a little, with the effect that the up-and-down contour of the lick is less predictable, particularly in

the latter half of the bar. (If you try this with your little finger at the 18th fret, incidentally, you'll get an off-the-wall blues lick suitable for use in the key of G minor. This is very reminiscent of Extreme's 'Get The Funk Out'.)

Example 8.8

Meanwhile, Example 8.9 ties in nicely with that bluesy theme. This time, you're playing an A minor *blues scale*, which is produced by adding a dirty-sounding flath fifth

to a standard minor pentatonic. This means that you're playing a six-note scale with a three-note-per-string fingering, and the pattern recurs on each pair of strings:

Example 8.9

Hopefully, this has given you lots of ideas. If you want to explore things further, check out the following diagrams.

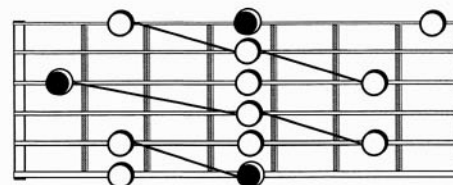
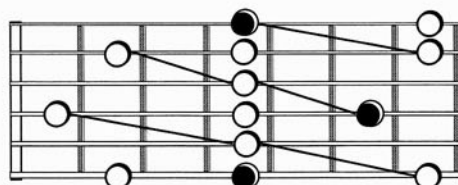
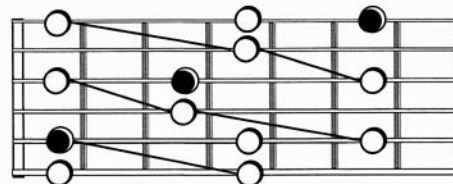
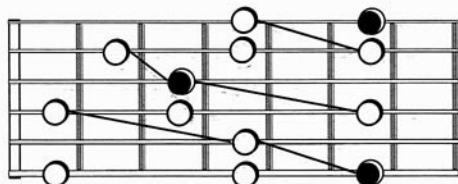
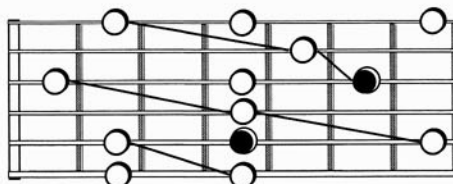
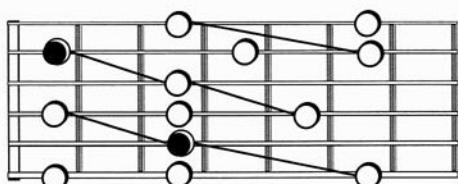
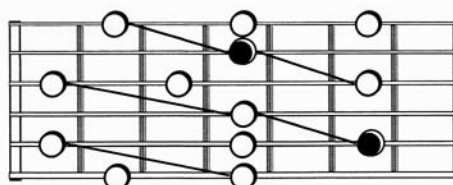
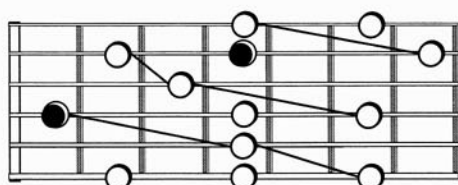
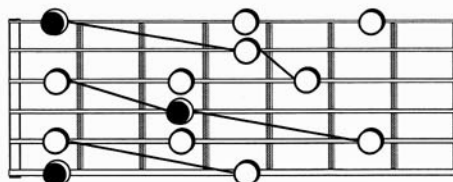
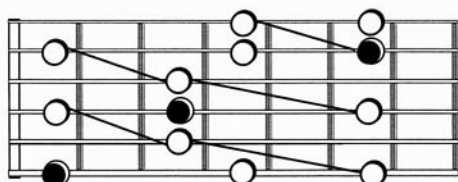
Example 8.10 shows many pentatonic shapes that are suitable for the sweeping approach covered in

Examples 8.6 and 8.7. (I think you tend to think in terms of diagonal shapes when learning these fingerings, so I've highlighted places where three consecutive notes fall on adjacent strings to show you exactly where all of the sweeps are.) Meanwhile, Example 8.11 shows you seven four-note-per-string positions for a major scale, in

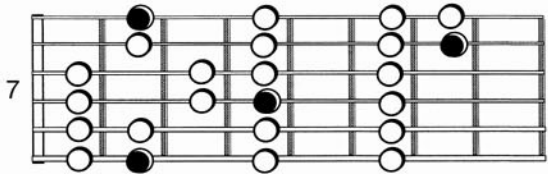
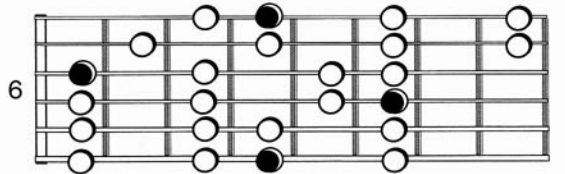
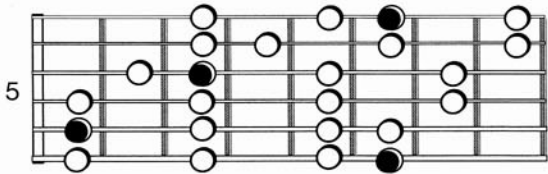
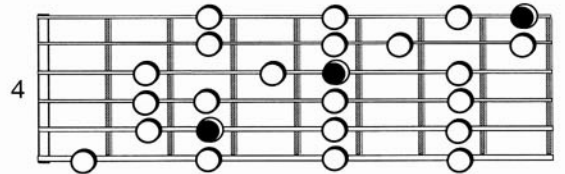
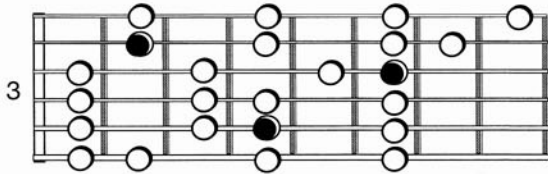
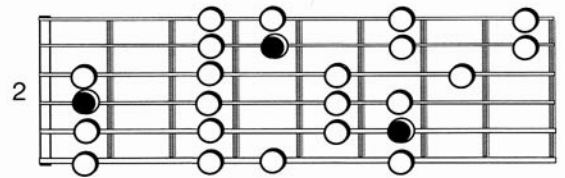
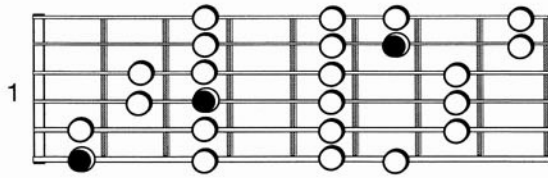
the manner of Example 8.4, and Example 8.12 shows some mammoth major-scale fingerings that extend all over the neck, just like the one in Example 8.2.

Experiment with these workouts and find the ones that work best for you. They make you play differently, don't they?

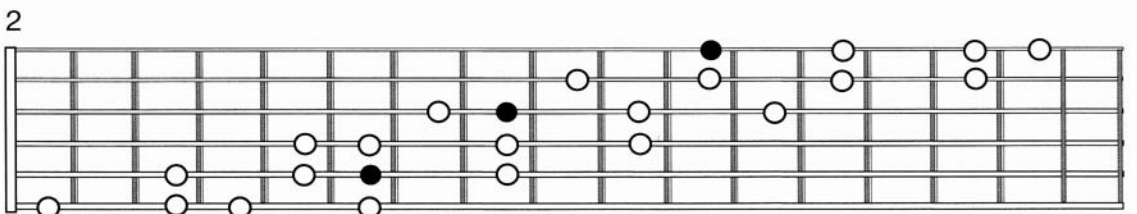
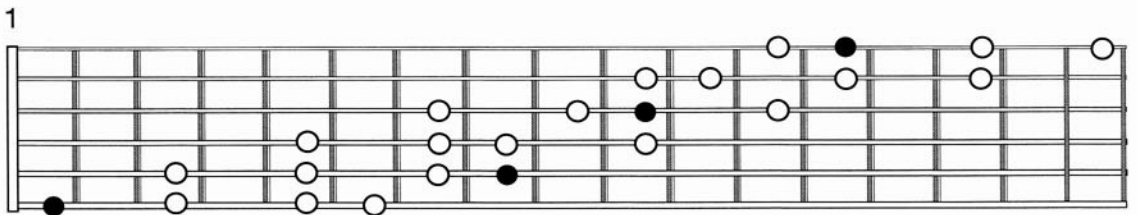
Example 8.10



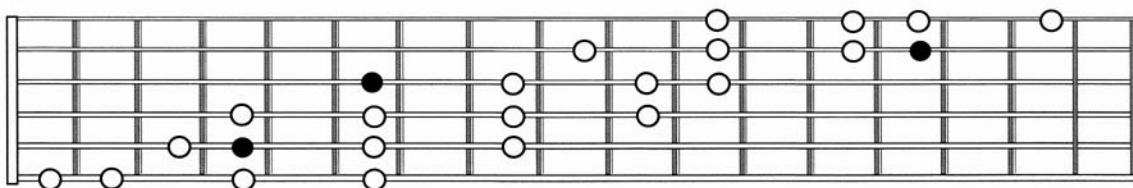
Example 8.11



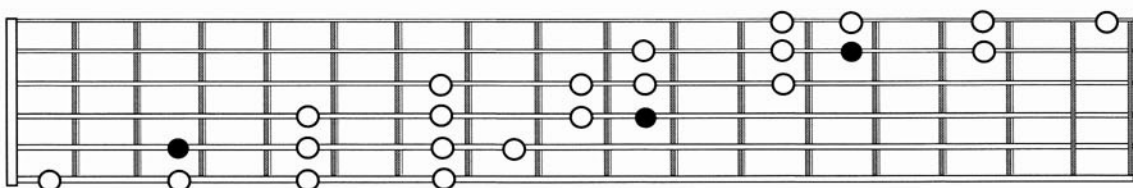
Example 8.12



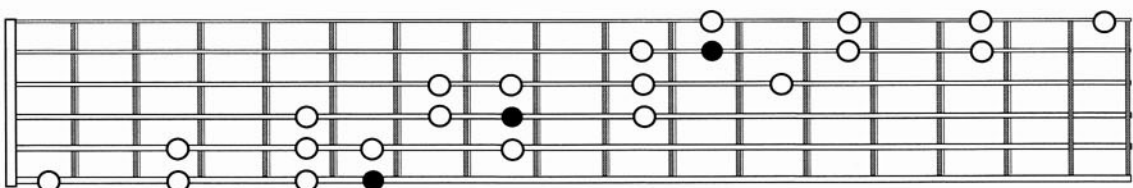
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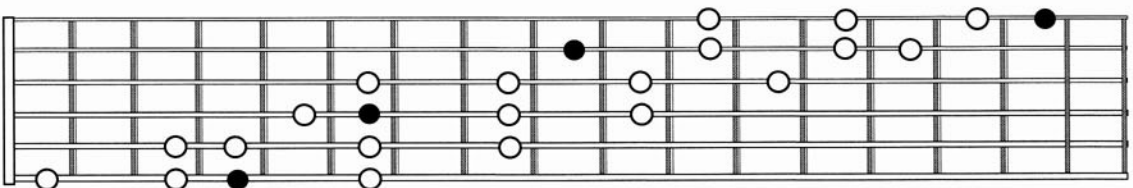
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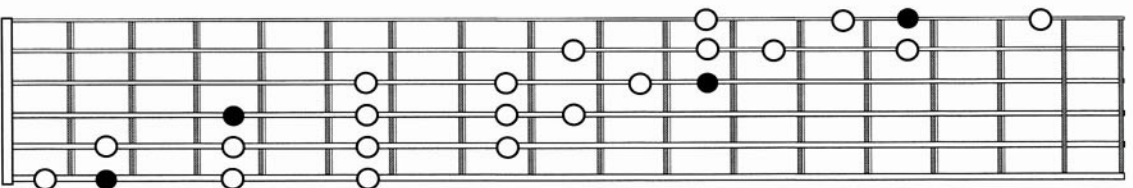
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6



7



9 EMULATING OTHER INSTRUMENTS

Just because we're guitarists doesn't mean we have to take our inspiration from other guitarists. You can learn from anything that sounds remotely like music, regardless of the instrument on which it's played. I put it to you that Yngwie Malmsteen's vibrato and Eric Johnson's tone are the results of listening to violin players, while fusion giants like Frank Gambale and Allan Holdsworth tend to take their cues from horn players. (In fact, Scott Henderson is notable in that field for being one of the few players who *really* sounds like a guitarist!) Danny Gatton and Robben Ford have used plenty of Hammond-organ licks in their playing, eccentrics like Buckethead have successfully translated slap-bass techniques onto guitar, and of course if you had a penny for every time you've heard someone say, 'Man, he really makes the guitar sing,' you'd be able to afford Dave Gilmour's Strat collection.

In this chapter, I thought I should introduce some ideas inspired by other instruments to get you into the spirit of things. Let's start with a look at some slap-guitar ideas.

Basic slap technique is all about hitting the low strings with the side of your right-hand thumb in a kind of bouncing motion while your fingers intervene from time to time by pulling notes on the higher strings to produce that popping effect. You'll probably find that the slapped notes sound best if you attack the strings near the point at which the neck joins the body.

Although I would recommend playing the following exercises gently at first, for the sake of accuracy, the best-sounding results ultimately come from getting a little more physical – the harder you attack the strings, the funkier the results will sound.

Example 9.1 illustrates a typical two-bar pattern. You're basically sliding an octave shape up and down between the fifth and seventh positions, and a lot of the notes are muted. This actually sounds more authentic than letting every note ring out clearly, because the whole point of slapping is to get a rhythmic, percussive vibe rather than come up with clever melodies:

Example 9.1

Slap gtr

The musical notation for Example 9.1 is a two-bar exercise in 4/4 time, key of D major. It features a treble clef and a key signature of two sharps (F# and C#). The exercise is divided into two measures per bar. The first measure of each bar contains two notes: a dotted quarter note on the treble staff and a dotted quarter note on the bass staff. The second measure of each bar contains two notes: a dotted quarter note on the treble staff and a dotted quarter note on the bass staff. The bass staff shows fret numbers 5 and 7, and 'X' marks indicating muted notes. The treble staff shows 'gliss' markings above the notes.

Example 9.2 is similar to the example on the previous page, but this time your thumb has to slap two dead notes in a row, so you'll need to work on getting that

bouncing motion in time at moderate speeds before you start to fool around with any ambitious metronome settings:

Example 9.2

Example 9.2 musical notation: Treble clef, key signature of two sharps (F# and C#), 4/4 time signature. The notation includes a 'gliss' instruction over a series of notes on the treble staff. Below the treble staff is a guitar tab with fret numbers (5, 7, 9, 7, 9) and 'X' marks indicating dead notes.

Example 9.3 features a new idea: slapping with both hands. This technique can increase your speed enormously, and whenever you see a pair of Xs in the tab, you should play the first with your fretting hand and the second with your right-hand thumb, as normal.

Left-hand slapping works best if you use two or three fingers together, keeping them relatively straight to avoid any unintentional natural harmonics. The alternation between your two hands is well worth working on, as it's a key feature in many classic slap licks.

Example 9.3

Example 9.3 musical notation: Treble clef, key signature of two sharps (F# and C#), 4/4 time signature. The notation includes a series of notes on the treble staff with 'R' and 'L' labels indicating right and left hand slapping. Below the treble staff is a guitar tab with fret numbers (0, X, X) and 'X' marks indicating dead notes.

Example 9.4 throws in a couple of new ideas. The last beat uses a right-left-right alternation to create a triplet and add rhythmic interest, and you're also hammering

notes on from nowhere after the open D and G strings to produce a brighter sound than you'd get with conventional hammer-ons. Slowly does it at first...

Example 9.4

Example 9.4 musical notation: Treble clef, key signature of two sharps (F# and C#), 4/4 time signature. The notation includes a series of notes on the treble staff with 'H', 'L', 'R', and 'L' labels indicating hammer-ons and slapping. Below the treble staff is a guitar tab with fret numbers (0, 7, 0, 6, 0, 7) and 'X' marks indicating dead notes. A triplet bracket is shown over the final three notes.

OK, I think by now you've got the idea about this whole right-hand/left-hand-alternation business. Next, Example 9.5 goes back to a purely right-hand

approach. This one requires a loose wrist action, as it alternates between slapped and popped notes in a triplet rhythm:

Example 9.5

Of course, not all bass players slap for a living, and to reflect this I've thrown in this next example to show how you might emulate the 'finger funk' sound associated with players like Jaco Pastorius, Tower Of Power's Francis Rocco Prestia and indeed the underrated Norman Watt-Roy from The Blockheads (Ian Dury's band). I normally play this kind of thing by alternating between my right-hand thumb and middle

finger, as this means that I can store my pick in the crook of my index finger, where it's easily accessible. If you don't get on with this approach, you might try using your thumb and index finger. Either way, the idea is to bring each digit back onto the string fractionally before it has to pick the next note, which creates little gaps between the notes. You might find it helpful to imagine that your strings are sticky:

Example 9.6

Jaco

Having said that the above example is inspired by fingerstyle bass players, I should add that the same approach also works if you're trying to play funky clavinet-style parts along the lines of Stevie Wonder's timeless 'Superstition' riff. Similarly, the technique shown in Example 9.7 was inspired by Chapman Stick players like Tony Levin, who often hammers the same note repeatedly with alternating fingers in this manner, but you'll also spot its potential for emulating those

cheesy '80s programmed synth bass lines, particularly if you mute the strings near the bridge with your right-hand palm.

Incidentally, I've suggested using your second and third fingers to do all the hammering purely so you can rest your index finger behind them to dampen any unwanted notes. It's hard to get a clear tone from every note, but it's an interesting effect when you get it right. In theory, it leaves your right hand free to tap

something completely different over the top, so you might like to try coming up with some two-handed

grooves incorporating these bassline ideas and some tapped chords.

Example 9.7

Chapman stick

Now let's have a look at how you might go about drawing inspiration from some other instruments. If you wanted to come up with some mandolin-like ideas, you would want to consider the following:

- Mandolins are tuned in fifths, not fourths, so they lend themselves more easily to widely spaced chord voicings.
- They're higher in pitch than guitars.
- Their ability to sustain is relatively limited, so the easiest way of keeping a note going is by using

tremolo picking (ie by repeatedly picking the same note as fast as possible, in a 'Just one Cornetto' kind of way).

Example 9.8 below reflects all of these factors. If you wanted full authenticity, I guess you'd want to try using a 12-string guitar. Between this book and its companion volume, however, I think I've already suggested buying a metronome, a cheap acoustic, a fretless guitar, a seven-string, a multitrack recorder and a phrase sampler, amongst other things, so I should probably calm things down on the spending front before I get you interested in E-Bows, active circuitry and stereo amp set-ups!

Example 9.8

Mandolin

Example 9.9 is a more 'guitaristic' form of tremolo picking in which you brush the strings lightly with one of your right-hand fingertips (you choose). Stevie Ray Vaughan was fond of this technique, and one of

the great things about it is the way in which it lets you play sustained chords at low volume levels with none of the brashness associated with normal tremolo picking:

Example 9.9

Stevie Ray Vaughan

Tremolo pick with fingertip

G13 **C9**

Here's a Satriani-like variation on the above idea. (Have a listen to 'The Snake' from the *Not Of This Earth* album if you require further proof.) The trick

with this one is to rub your pick against the strings as near the bridge as possible to achieve a budget-Mellotron effect:

Example 9.10

Mellotron

Rub pick near bridge

This next one is based on an idea often associated with U2's The Edge. The basic idea is to set up a delay pedal (uh-oh – more spending!) so that it produces a single repeat, a dotted eighth note after the original note. Therefore, if you play an eighth-note figure, the results come out as a constant string of 16th notes – ie what you're playing suddenly sounds twice as clever! To hear this idea applied to double stops, you should check out Albert Lee's 'Country Boy', and to hear it at preposterous speeds you need look no further than the 'Flight Of The Wounded Bumble Bee' intro to Extreme's 'He-Man Woman Hater'.

There's a simple formula for figuring out the correct delay time, by the way: divide 45,000 by the tempo of the music, and there's your answer in

milliseconds. If your delay unit won't tell you the number of milliseconds it's set to, you can play straight eighth notes and simply fine-tune the Delay Time knob until it sounds right. (I know for a fact that Albert Lee uses this method, on the grounds that a live band won't play a song at exactly the same tempo from one night to the next.) Most modern delays tend to offer you a 'tap tempo' facility, by which you simply tap your foot on a switch in time with the music and the pedal will do all of the maths for you.

In Example 9.11, I've illustrated how this delay trick can create a cello-like sound if you use the Volume knob or pedal to swell into each note. Van Halen's 'Cathedral' is perhaps the most famous track ever to exploit this effect:

Example 9.11

Pitches as heard

(w/DLA = ♯)

Pitches as played

E
B
G
D
A
E

12 15 14 14 14 15 12 14 15 14 14 13 14 14 15 14

Next, Example 9.12 takes a quick look at the potential of rubbing your hands along the windings of the low strings. (You can do this with your pick, too, but I find that this can sometimes sound a little too harsh.) If you keep your fingers fairly straight, the results not only sound like a DJ scratching some vinyl but the wrist motion also feels very similar to that activity.

Rage Against The Machine’s Tom Morello uses this idea to great effect.

On the CD example, I tried to use the same idea to create a Latin-sounding percussive effect, something along the lines of a guiro. The faster your hand moves, the higher pitched the resulting squeak will be, so bear this in mind as you try to bring out the accented notes:

Example 9.12

Percussion

(string squeaks)

etc

E
B
G
D
A
E

Moving on, you’ll remember that I mentioned how you can use tapping to create the trills normally associated with blues harmonica playing. Example 9.13 illustrates

this technique, and you might like to experiment with using your pick to tap the pre-bent note at the 20th fret rather than use a conventional tapping finger.

Example 9.13

Harmonica

8va

partial PBU LD BU(hold) T (trill at 20)

partial PBU LD BU(hold) T (trill at 20)

LD BSS

E
B
G
D
A
E

(17)(19)(18)–(19)–(22)–(19)

(17)(19)(18)–(19)–(22)–(19)

(19)–17–15

Creative Guitar ②: Advanced Techniques

This next exercise attempts to emulate the kind of overblown, theatrical phrasing used by singers like Mariah Carey. Trained vocalists can glide effortlessly between notes in a way that might remind you of string-bending but somehow seems to cover a wider range, so I've tried to emulate that effect here by

combining slides and bends. The results might not sound particularly like a convincing soul singer, but they illustrate an interesting way of approaching phrasing that I don't think would have been discovered if the 'vocalist' idea hadn't been used as a starting point.

Example 9.14 Soul vox

Example 9.15 shows you just how a smooth legato technique can help you to emulate saxophone licks. In terms of notes, this technique is reminiscent of John Coltrane's playing. The idea is to decorate each note of a G major arpeggio with the scale note above

it and the chromatic note immediately below it in order to produce a complex yet melodic effect. If you pick more of the notes, you'll hear this example mutating into something sounding like a Django Reinhardt lick:

Example 9.15 Sax

The next two exercises over the page are inspired by Hammond players such as Jimmy Smith. Example 9.16 uses a series of double stops, with a grace note leading up to the lower note of each. (Try to come

up with variations where the grace notes lead up to the higher notes instead.) You'll definitely benefit from using a pick-and-fingers approach for ideas such as these...

Example 9.16

Organ

Example 9.17 alternates between double stops and a G pedal tone. For the smoothest sounding results,

be sure to observe the right-hand fingering suggested here:

Example 9.17

I'll wrap things up with what Eric Johnson describes as the 'koto effect', referring of course to the Japanese instrument of that name. By pre-bending each note and releasing it as soon as it's been picked, you can add an

Oriental vibe to a lick (Marty Friedman is noted for his use of ideas like this), and if you pick as close to the fret as possible, you'll get an unnaturally thin-sounding tone that doesn't really sound like a guitar any more.

Example 9.18

Koto

Creative Guitar ②: Advanced Techniques

OK, now you're on your own! Hopefully, all of the above exercises have encouraged you to listen to a wider range of instruments in your pursuit of guitar-playing inspiration. There's a wealth of music out there just waiting to be plundered, so explore it all fearlessly and try to make some new discoveries for yourself. Remember that the most fruitful way to

apply this kind of thinking is to use another instrument merely as a starting point. You'll never make your guitar sound exactly like any other instrument – it is, after all, a guitar – but your attempts to emulate something unusual will encourage you to think more laterally about your instrument, thus generating lots of fresh ideas.

10 NEW CHORDAL IDEAS

In this chapter, I'd like to give you some ideas on how to explore some new chord voicings. The way in which guitar chords are voiced is largely governed by the fact that the instrument is tuned in fourths, thus getting three or four adjacent scale notes into a chord shape (ie using intervals of a second) is pretty much impossible by conventional means, whereas keyboard players find these kinds of voicings much easier to play. This doesn't seem fair to me. Why should they have all the fun?

One way of getting more clusters of adjacent scale notes into your chord voicings is by trying all of the shapes you already know on a high-strung guitar. This is what you get when you fit your guitar with the higher of each pair of strings from a 12-string set – ie you're replacing the lowest four strings with thinner ones tuned an octave higher and leaving the other two alone. This is a fascinating area for experimentation – the G and D strings become higher in pitch than the top E and B, so your favourite chord shapes suddenly take on a new, sparkling quality. Of course, this is a great tool for multitrack recording. (Incidentally, you might have heard the same idea described as 'Nashville tuning'.)

Another way of increasing your chord-voicing potential would be to leave your tuning alone and instead try to incorporate more open strings into your voicings. Rather than offer you any specific tips on how to do this, I'd rather you took a good long look at the sample chord shapes shown in Example 10.1 over the page and drew your own conclusions.

As you've seen by now, notes that are separated by small intervals sound clearer, more distinct and

generally prettier if you stick them at the top of your chord voicing rather than lower down in 'muddy' territory. You'll note that most of the above chord shapes reflect this, and it's a rewarding exercise to experiment with moving each shape around the neck, listening out for any chords that sound particularly good. (To hear what you can do with combinations of movable chord shapes and open strings, check out Jeff Buckley's *Grace* album, in particular the track 'So Real'.)

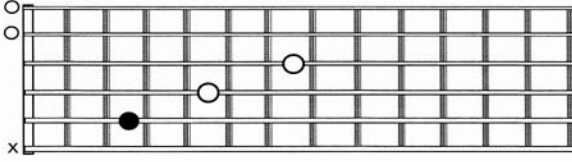
When you're trying to come up with chords in this way, you might find it helpful to start with a cluster of notes and experiment with playing different bass notes underneath. A scale cluster sounds a little more vague than a stack of thirds, so it's more likely to work in a variety of harmonic contexts. If, for instance, you start with the open B and top E strings, along with the sixth-fret C# on the G string and the seventh-fret A on the D string, you'll find that every note of the A major scale sounds good in the bass.

When you've spent a little time scouring the fretboard for ideas in this vein, you'll have amassed quite a dictionary of unusual chord shapes, but you still might not be satisfied – after all, each chord will work in only one key because of its dependence on open strings. The next step would be to try some two-handed chords. Once you bring your right hand onto the neck, you can finger pretty much any chord voicing you like, and you don't need any open strings to help you!

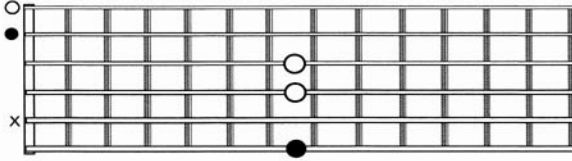
The only problem with two-handed chords is that you no longer have a picking hand at your disposal, so it's hard to get these shapes sounding good. In certain cases, you'll be able to strum the chord with your right

Example 10.1: Open-string chords

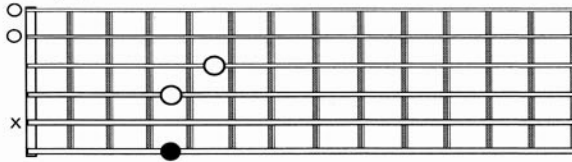
Cmaj9



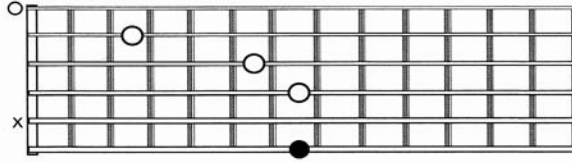
Bm11



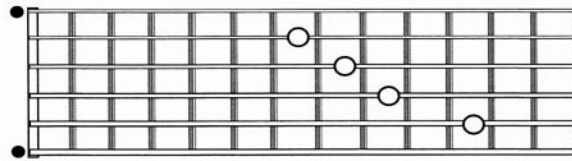
A \flat 7#5#9



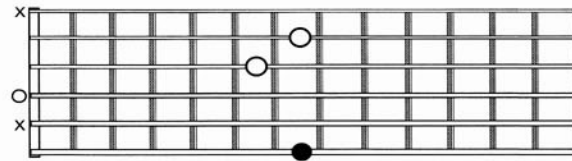
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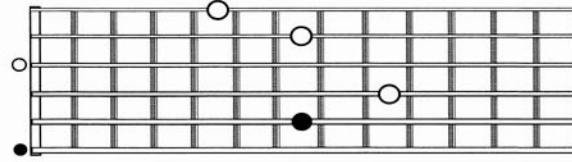
Emaj9



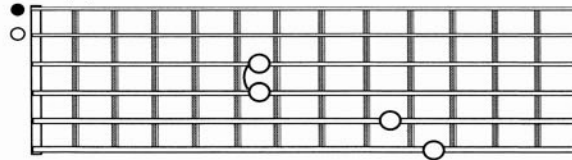
Bm add9



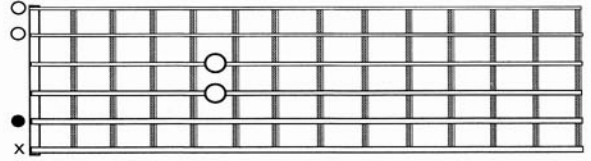
Em11



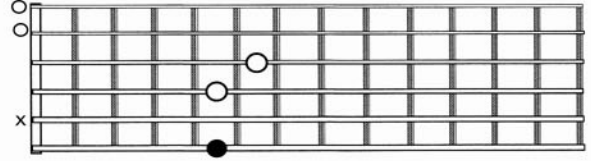
E13(9)



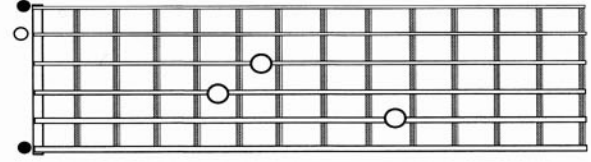
Am9



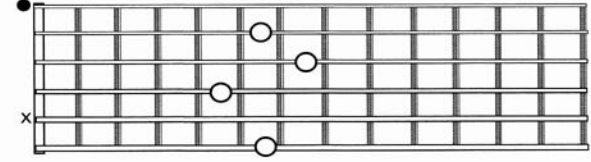
A9



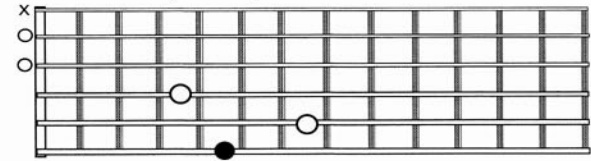
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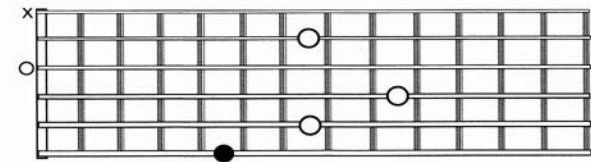
Emaj9/B



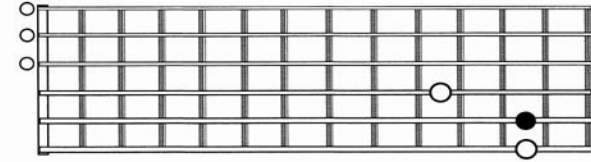
A13/Am13 (no 3rd)



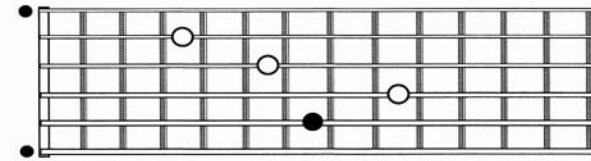
A13



Am9



Emaj13

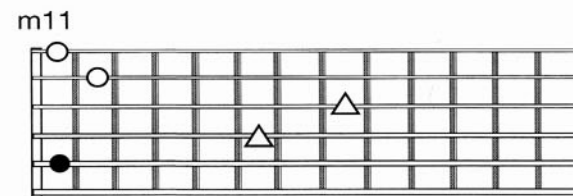
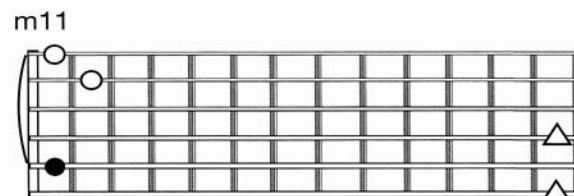
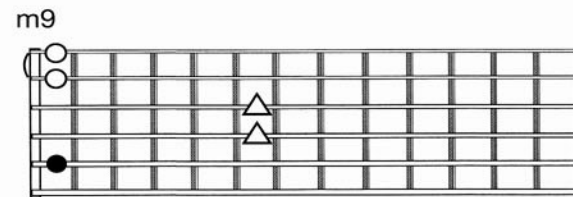
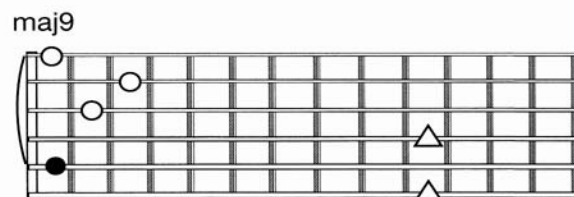
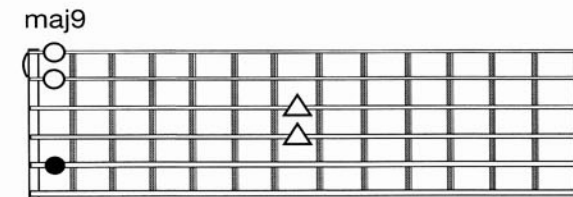
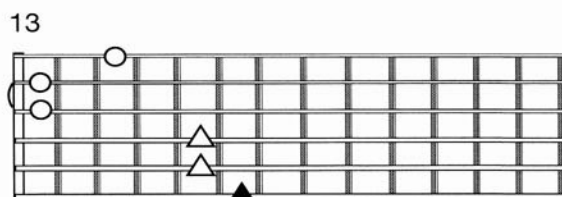
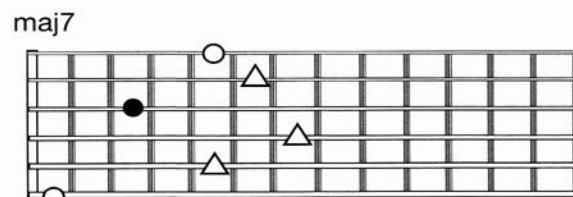
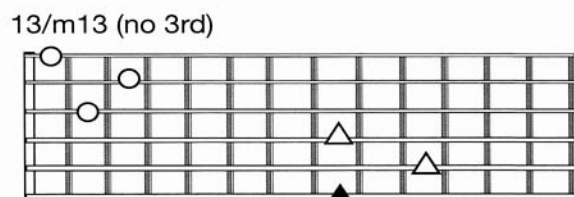
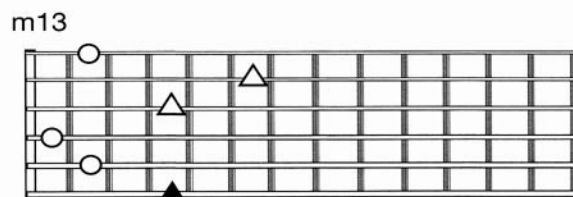
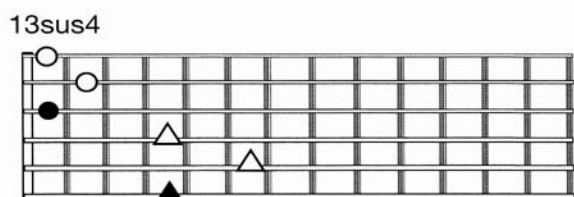
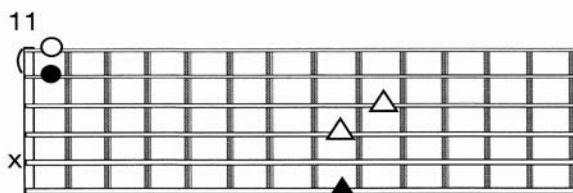
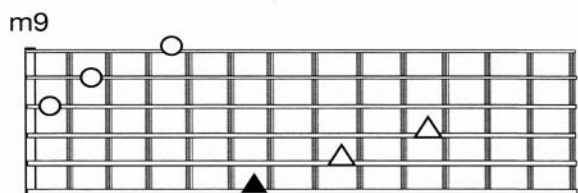


hand's little finger while its fellow digits are engaged in fretting duties, but in general you'll want to hammer all of the notes simultaneously to produce a piano-like block-chord effect. Using compression might help if you plan to do a lot of work on this aspect of chordal playing, as it can help to even out the volume of the

component notes and bring them up to the dynamic level of normal playing.

Check out the sample shapes in Example 10.2 and see what you think. Be sure to read the diagrams carefully, though, to ensure that the gap between your hands is the right amount of frets wide:

Example 10.2: Two-handed chords



This approach isn't for everyone, I admit, but it certainly opens up a lot of new possibilities. Moving away from the idea of *close-voiced* chords (for such the above

examples were), take a quick look at the following *open-voiced* shapes. Example 10.3 demonstrates the general idea as applied to the inversions of a C major triad:

Example 10.3

E		5		8		13		17
B	0		5		9		12	
G	2	5	5	10	10	14	14	17
D	3	3	7	7	10	10	15	15
A								
E								

As you can see, here I've taken the middle note out of each triad and moved it up an octave, so the resulting open-voiced shapes are built from fifths and sixths. These have a more open sound to them than conventional chord voicings, and they sound great

when you drench them in signal processing!

Example 10.4 demonstrates some shapes for open-voiced triads, with the root notes blocked in, as always, while Example 10.5 demonstrates some corresponding minor shapes:

Example 10.4

Example 10.5

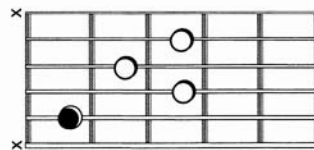
If you like the sound of these, you could take the idea further by...

- adapting the shapes to all of the remaining string groups;
- adding various high notes to create more complex open-voiced chords;
- whacking on some distortion, playing the shapes

as single notes and writing some licks based around the results. Think of Eric Johnson's 'Cliffs Of Dover' if you need inspiration!

Here's one final chordal concept for you to explore, a method of generating unfamiliar new chord shapes from the ones you already know. I've already shown you how to move a voicing up a scale (remember harmonising the major scale in seventh chords?), but now the idea is to move the chord up through itself.

Example 10.6



In general, it's worth exploring as many different inversions as possible, as every inversion has its own distinctive balance between the component notes. If the first example of a major-seventh chord you ever heard was an open A shape with the G# added on the bottom E string, you'd conclude that the major seventh was a pretty nasty piece of work, whereas the diagonal shape spanning frets 4-7 on the top four strings actually sounds sweet to the point of cheesiness. The following method won't give you every conceivable inversion of a chord, but

it'll certainly take you to some uncharted parts of the fretboard.

For a simple example, take the standard Cmaj7-shape chord voicing shown in Example 10.6. You'll see that the notes are arranged in a 1-5-7-3 formation, starting from the lowest note, so the plan would be to put them in a logical order (1-3-5-7) and then move the notes up through this cycle instead of through the whole scale. Thus 1-5-7-3 becomes 3-7-1-5, then 5-1-3-7, 7-3-5-1 and finally 1-5-7-3 again, as shown in Example 10.7:

Example 10.7

E	5	8	12	13	17
B	4	5	9	12	16
G	5	9	10	14	17
D	3	7	10	14	15
A					
E					

Cmaj7

Some of these permutations sound better than others, but you can be sure that they all contain the same notes – they're all Cmaj7 voicings, unbelievable though

that might seem when you listen to the bizarre sound of the 7-3-5-1 inversion!

If you took the same starting point and moved the

B-string note down to the third fret, you'd have a Cmaj9 chord with no third in it. This is a 1-5-7-9 voicing, so your best bet would be to keep everything within one octave, thus viewing the voicing as 1-5-7-2, and rearranging this last group of note names in order – ie

1-2-5-7. Now you can move the chord shape up through this simplified formula, generating arrangements of 2-7-1-5, 5-1-2-7, 7-2-5-1 and finally 1-5-7-2 again. Example 10.8 demonstrates how this translates onto the fretboard:

Example 10.8

Cmaj9

All of these voicings have the first, fifth, seventh and ninth you started with, but each puts them in a different

order, and it's up to you to decide which ones sound best. Here's another group. This time, you *can* do the maths:

Example 10.9

G13

Here's a final variation on the idea. This starts with a 1-5-9-b3-b7 voicing of an Am9 chord, but instead of the notes all moving up, the low A stays where it is and the other four notes ascend. More specifically, the ninth is lowered by an octave, turning the 5-9-b3-b7 part of the

chord into 5-2-b3-b7, which obviously can be rearranged to form 2-b3-5-b7, and that's the cycle through which the high part of the chord shape moves. (How else might you describe what's going on here? Hint: do the moving shapes remind you of any other chord type?)

Example 10.10

Am9

Your homework now, of course, is to try out this method on every chord shape you know. Enjoy!

11 THE 'WRONG' NOTES

We've spent a lot of time in this book looking at which scales best complement various chord progressions, so now I'd like to focus on how you can break all of those rules and get away with it.

If you read *Creative Guitar 1*, think back for a moment to the section on improvising with scales. There, I told you that some scale notes were more equal than others – ie root notes and other chord tones sound particularly good at prominent points, such as at the end of each phrase, while the remaining notes are best used as 'in-between' material for joining up the chord tones or adding embellishments to them.

I also pointed out that the tension you get from over-emphasising the less appropriate notes can sometimes be a valid musical effect, too, particularly if the chords aren't changing too quickly. If you persistently land on random-sounding notes, your audience will have no choice but to conclude that you neither know nor care about the identity of the chord over which you're playing, while if you land on them occasionally your audience will be intrigued and you'll keep their undivided attention for that little bit longer.

You can treat the 'wrong' notes in the same way – they work just fine if you use them to lead up to more 'correct' notes, and occasionally you might even choose to emphasise one, just for the shock factor. There's an amusing jazz tenet along the lines of 'Whenever you happen to play a bad note, play it twice, then people will think it was intentional'. This is obviously a very irresponsible bit of advice if you

take it too seriously, but there's certainly some truth in the fact that wrong notes sound best when played with conviction.

Just as a high concentration of chord tones will make you sound melodic, similarly a cluster of less obvious notes will normally come across sounding jazz or, at the very least, weird, so bear in mind that there's a time and a place for all of the following. If you're trying out these ideas in a solo and you think it's all getting a bit too odd for your liking, your best bet is to find your way back to some chord tones, making the transition as smooth and as musical as possible. This has the effect of somehow justifying the stranger notes you've just played. Using clever notes all the time will get to sound as boring as playing only chord tones – there's a balance to be struck here!

If you're looking for some good examples of wrong notes in action, you should investigate fusion players like John Scofield and Scott Henderson, both of whom will give you an interesting perspective on how these ideas might sound in a rock context. Both players use a biting, overdriven sound.

I'm going to start by returning to an idea covered briefly in the 'Eight-Finger Tapping' chapter. You'll remember that the major scale contains enough notes to generate three different minor pentatonic scales, starting from the second, the third and the sixth. This means that, for any given mode, you have three technically correct places at which to play your favourite blues licks, as illustrated by the following chart:

Creative Guitar ②: Advanced Techniques

Ionian	Major pentatonic starting on the root, up a fourth or a fifth
Dorian	Minor pentatonic starting on the root, up a second or a fifth
Phrygian	Minor pentatonic starting on the root, down a second or up a fourth
Lydian	Major pentatonic starting on the root, up a second or a fifth
Mixolydian	Major pentatonic starting on the root, down a second or up a fourth
Aeolian	Minor pentatonic starting on the root, up a fourth or a fifth
Locrian	Minor pentatonic starting down a second, up a minor third or a fourth

Using the less obvious pentatonics in a modal jam will help you to come up with licks that enhance the more colourful qualities of the mode without sacrificing the distinctive intervallic qualities of the pentatonic scales we all like to use. You'll often find it hard to resolve phrases based on these scales (some of them don't even contain the root note) because the 'good' notes aren't in the parts of the scale shape where you'd normally find them! For this reason, it's essential that you listen to each note as you play it rather than just relying on pre-rehearsed licks. As a reference point, a lot of Eric Johnson's fast-picked runs move between various pentatonics over a single chord, spending maybe a beat or two on each scale, and the effect sounds interesting at any speed.

An unexpected by-product of this idea is that it can

help you to tackle awkward chord changes. If, for instance, a song featured these chord changes...

Am – E \flat m – Gm – Cm

...you could assign a Dorian mode to each chord, which would give you access to the following pentatonic shapes:

In A Dorian: A minor, B minor and E minor pentatonics

In E \flat Dorian: E \flat minor, F minor and B \flat minor pentatonics

In F \sharp Dorian: F \sharp minor, G \sharp minor and C \sharp minor pentatonics

In C Dorian: C minor, D minor and G minor pentatonics

This means that you could tackle the whole progression by starting with an E minor blues box and moving it up a fret with every chord change – much easier! (Can you spot any short-cuts starting from the other pentatonics?)

All of that was interesting, but there weren't any wrong notes as such. Now let's throw in some fully-fledged *chromatic notes*. These are the notes that don't belong to the scale you're supposed to be using, and they should be used with caution, at least until you've become accustomed to the way that they sound, so I've suggested a few licks here to give you some starting points. All of these are designed to work in A minor, so I'm sure you'll find a home for at least some of them.

OK, time for some more fingerwork. Example 11.1 is a Richie Kotzen-esque idea that starts with an A minor pentatonic shape and chromatic notes are then added a semitone above the top note on each string. Note how the chromatic notes don't sound particularly offensive; the lick visits them in passing but quickly reverts to normal scale tones:

Example 11.1

Example 11.2 has a touch of the Shawn Lane about it, and it's a variation on Example 11.1 where you're basically adding chromatic notes *behind* the scale

shape, sliding your index finger down a fret for each but keeping the rest of your hand rooted firmly in pentatonic soil:

Example 11.2

Example 11.2 is a guitar lick in 4/4 time. The notation consists of a treble clef staff with a key signature of one flat (Bb) and a 4/4 time signature. The lick is divided into two measures. The first measure contains a sequence of notes: G4 (8), A4 (5), Bb4 (8), C5 (5), D5 (4), E5 (8), F5 (5), G5 (8), Ab5 (5), Bb5 (4), C6 (7), D6 (7), E6 (5), F6 (7), G6 (5), Ab6 (7), Bb6 (5), C7 (7). The second measure contains: D7 (7), E7 (5), F7 (5), G7 (4), Ab7 (7), Bb7 (5), C8 (6), D8 (7), Eb8 (6), F8 (5), G8 (8), Ab8 (5). The word "gliss" is written above the first, third, and fifth notes of the first measure, and above the first, third, and fifth notes of the second measure. Below the staff is a six-line guitar fretboard diagram with strings E, B, G, D, A, E from top to bottom. Fret numbers are placed on the strings to indicate fingerings: E (8, 5), B (8, 5), G (4), D (8, 5), A (7, 5), E (7, 5, 4, 7, 5, 7, 7, 5, 4, 7, 5, 6, 7, 6, 5, 8, 5).

Example 11.3 is more of a Steve Morse-type run. This workout is a little more ambitious with the chromatic notes, using them to fill in the gaps in the pentatonic box rather than adding them one at a time. This lick works

because, when you hear a few chromatic notes in a row, your ear singles out the highest and lowest notes as the most important ones. If these sound OK, the in-between notes will automatically make sonic sense.

Example 11.3

Example 11.3 is a guitar lick in 4/4 time. The notation consists of a treble clef staff with a key signature of one flat (Bb) and a 4/4 time signature. The lick is divided into two measures. The first measure contains a sequence of notes: G4 (8), Ab4 (5), Bb4 (7), C5 (6), D5 (5), E5 (8), F5 (5), G5 (8), Ab5 (6), Bb5 (7), C6 (8), D6 (5), E6 (8), F6 (7), G6 (6), Ab6 (5), Bb6 (8), C7 (5), D7 (8), Eb7 (7), F7 (6), G7 (5), Ab7 (8), Bb7 (5), C8 (8), D8 (7), Eb8 (6), F8 (5), G8 (8), Ab8 (6), Bb8 (5), C9 (8), D9 (5), Eb9 (7). The second measure contains: F9 (8), G9 (7), Ab9 (6), Bb9 (5), C10 (8), D10 (5), Eb10 (7), F10 (6), G10 (5), Ab10 (8), Bb10 (7), C11 (6), D11 (5), Eb11 (8), F11 (7), G11 (6), Ab11 (5), Bb11 (8), C12 (7), D12 (5), Eb12 (8), F12 (7), G12 (6), Ab12 (5), Bb12 (8), C13 (7), D13 (5), Eb13 (8), F13 (7), G13 (6), Ab13 (5), Bb13 (8), C14 (7), D14 (5), Eb14 (8), F14 (7), G14 (6), Ab14 (5), Bb14 (8), C15 (7), D15 (5), Eb15 (8), F15 (7), G15 (6), Ab15 (5), Bb15 (8), C16 (7), D16 (5), Eb16 (8), F16 (7), G16 (6), Ab16 (5), Bb16 (8), C17 (7), D17 (5), Eb17 (8), F17 (7), G17 (6), Ab17 (5), Bb17 (8), C18 (7), D18 (5), Eb18 (8), F18 (7), G18 (6), Ab18 (5), Bb18 (8), C19 (7), D19 (5), Eb19 (8), F19 (7), G19 (6), Ab19 (5), Bb19 (8), C20 (7), D20 (5), Eb20 (8), F20 (7), G20 (6), Ab20 (5), Bb20 (8), C21 (7), D21 (5), Eb21 (8), F21 (7), G21 (6), Ab21 (5), Bb21 (8), C22 (7), D22 (5), Eb22 (8), F22 (7), G22 (6), Ab22 (5), Bb22 (8), C23 (7), D23 (5), Eb23 (8), F23 (7), G23 (6), Ab23 (5), Bb23 (8), C24 (7), D24 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(8), F39 (7), G39 (6), Ab39 (5), Bb39 (8), C40 (7), D40 (5), Eb40 (8), F40 (7), G40 (6), Ab40 (5), Bb40 (8), C41 (7), D41 (5), Eb41 (8), F41 (7), G41 (6), Ab41 (5), Bb41 (8), C42 (7), D42 (5), Eb42 (8), F42 (7), G42 (6), Ab42 (5), Bb42 (8), C43 (7), D43 (5), Eb43 (8), F43 (7), G43 (6), Ab43 (5), Bb43 (8), C44 (7), D44 (5), Eb44 (8), F44 (7), G44 (6), Ab44 (5), Bb44 (8), C45 (7), D45 (5), Eb45 (8), F45 (7), G45 (6), Ab45 (5), Bb45 (8), C46 (7), D46 (5), Eb46 (8), F46 (7), G46 (6), Ab46 (5), Bb46 (8), C47 (7), D47 (5), Eb47 (8), F47 (7), G47 (6), Ab47 (5), Bb47 (8), C48 (7), D48 (5), Eb48 (8), F48 (7), G48 (6), Ab48 (5), Bb48 (8), C49 (7), D49 (5), Eb49 (8), F49 (7), G49 (6), Ab49 (5), Bb49 (8), C50 (7), D50 (5), Eb50 (8), F50 (7), G50 (6), Ab50 (5), Bb50 (8), C51 (7), D51 (5), Eb51 (8), F51 (7), G51 (6), Ab51 (5), Bb51 (8), C52 (7), D52 (5), Eb52 (8), F52 (7), G52 (6), Ab52 (5), Bb52 (8), C53 (7), D53 (5), Eb53 (8), F53 (7), G53 (6), Ab53 (5), Bb53 (8), C54 (7), D54 (5), Eb54 (8), F54 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(6), Ab69 (5), Bb69 (8), C70 (7), D70 (5), Eb70 (8), F70 (7), G70 (6), Ab70 (5), Bb70 (8), C71 (7), D71 (5), Eb71 (8), F71 (7), G71 (6), Ab71 (5), Bb71 (8), C72 (7), D72 (5), Eb72 (8), F72 (7), G72 (6), Ab72 (5), Bb72 (8), C73 (7), D73 (5), Eb73 (8), F73 (7), G73 (6), Ab73 (5), Bb73 (8), C74 (7), D74 (5), Eb74 (8), F74 (7), G74 (6), Ab74 (5), Bb74 (8), C75 (7), D75 (5), Eb75 (8), F75 (7), G75 (6), Ab75 (5), Bb75 (8), C76 (7), D76 (5), Eb76 (8), F76 (7), G76 (6), Ab76 (5), Bb76 (8), C77 (7), D77 (5), Eb77 (8), F77 (7), G77 (6), Ab77 (5), Bb77 (8), C78 (7), D78 (5), Eb78 (8), F78 (7), G78 (6), Ab78 (5), Bb78 (8), C79 (7), D79 (5), Eb79 (8), F79 (7), G79 (6), Ab79 (5), Bb79 (8), C80 (7), D80 (5), Eb80 (8), F80 (7), G80 (6), Ab80 (5), Bb80 (8), C81 (7), D81 (5), Eb81 (8), F81 (7), G81 (6), Ab81 (5), Bb81 (8), C82 (7), D82 (5), Eb82 (8), F82 (7), G82 (6), Ab82 (5), Bb82 (8), C83 (7), D83 (5), Eb83 (8), F83 (7), G83 (6), Ab83 (5), Bb83 (8), C84 (7), D84 (5), Eb84 (8), F84 (7), G84 (6), Ab84 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Example 11.5 illustrates a similar idea, but this one has you wandering down a fret in beat 2, back to normal in beat 3, down a fret in beat 4 and finally back to a nice, reassuring bluesy note in the second bar. I think it's the symmetry of this lick that makes it work – the shifts between the 'right' and 'wrong' scale positions

occur at very strong points in the bar, so they sound incredibly deliberate. Whenever you try a lick like this, you should be able to visualise some chord tones on the neck. These might save you if you go so far outside the correct tonality that you forget where you are. (I'm not joking, by the way – this really can happen!)

Example 11.5

While I'm on the subject of symmetry, here's an outrageously chromatic line in Example 11.6. It starts and ends on A, but everything in between is utter gibberish, constructed with diminished-seventh arpeggios on each string. All 12 notes of the chromatic

scale are in here, but the lick sounds like it was meant to be played in the key of A minor. This is purely because it starts and ends with A, so your ear assumes that that's the root note. You'll hear ideas like this in Dimebag Darrell's playing, not to mention Shawn Lane's:

Example 11.6

Yuk!

Now here's some food for thought: certain 20th-century classical composers were intrigued by the concept that you could write a melody that used each note of the chromatic scale once and once only. These melodies are sometimes called *12-tone rows*, and they sound pretty horrible to the average listener, so why not come up with a few of your own? (What greater

incentive could you ask for?) To hear this level of atonality in a (very) heavy-metal context, you might like to check out the Cacophony album *Speed Metal Symphony*.

The C major scale contains the notes C, D, E, F, G, A and B. The remaining five notes of the chromatic scale spell out $E\flat$, $G\flat$, $A\flat$, $B\flat$ and $D\flat$ – in other words, an $E\flat$ minor pentatonic scale. This means that you can play consistently wrong notes over a C Ionian

backing by playing blues licks a minor third up. Try using this observation to find a 'wrong' pentatonic for every mode. If you have Steve Vai's *Passion And Warfare* album, check out the track 'The Riddle' and, in particular, the lick that starts at 1:39ish. This lick

uses a C major pentatonic over an E Lydian backing. It's not the most wrong pentatonic he could have used, but it's pretty close, so it'll give you some idea of how the above principle might sound in a rock guitar context.

12 APPROACHING NEW SCALES

We've already taken a fairly extensive look at how you can pull apart the modes of the major scale to find chord progressions, arpeggios, pentatonics and so on. In this chapter, I'd like to offer some new scales for your perusal. Any scale can be treated in the same basic way. In each case, the path to understanding is through exploring the scale's intervallic and harmonic possibilities and by trying it out over an appropriate chordal backing so that your ear learns as much as possible about the sound of its component notes.

Melodic Minor

Let's start with the *melodic minor* scale, which can be expressed as the following formula:

1 2 \flat 3 4 5 6 7

In other words, it's just a major scale with the third flattened. What's the big deal? Well, let's start by harmonising it in seventh chords. In the key of A minor, you get the following:

Am/maj7 Bm7 Cmaj7 \sharp 5 D7 E7 F \sharp m7 \flat 5 G \sharp m7 \flat 5

For a start, this innocuous-looking scale has generated two new types of seventh chord: the James Bond-like minor/major seventh (1, \flat 3, 5, 7) and the major seventh with sharpened fifth (1, 3, \sharp 5, 7). I'll trust you to think of some fingerings for these chords by taking normal major-seventh shapes and doctoring the appropriate notes.

In addition, you should try playing the scale in various intervals. The fourths are particularly interesting –

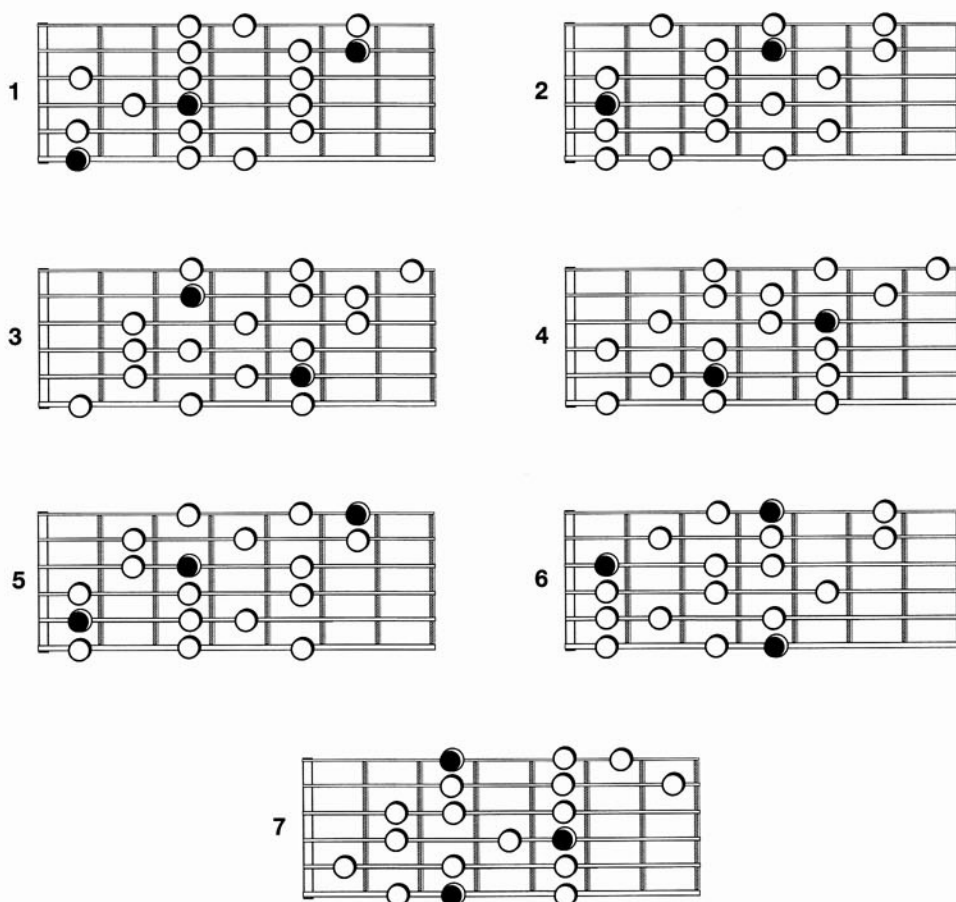
instead of six perfect fourths and an augmented one, as you would get from a standard major scale, the melodic minor boasts four perfect, two augmented and one diminished fourth, which sounds the same as a major third. Fourth-based patterns sound a lot more angular in this scale!

If you scour the scale for further goodies, you'll see that it contains one minor pentatonic scale (starting from the second degree), in contrast with the three that you can find in a major scale.

In short, simply altering one note of the major scale has all sorts of repercussions. Many rock players take a while to get used to the sound of this scale, which is perhaps best described as a classical-sounding, ultra-bright variation on the Dorian mode. Stick with it, though – you'll start to like this scale a lot more once you've heard it enough times. You can hear some good examples of it being used in a popular-music context in works of Sting (tracks like 'It's Probably Me' and 'Sister Moon' use it to great effect), and of course it's also the scale used in that old favourite 'Greensleeves'.

You can get a basic feel for A melodic minor by jamming first over an Am chord, then over an Am/maj7 and finally over an Am/maj7–D9 progression. Example 12.1 at the top of the next page shows you some three-note-per-string fingerings. You might want to try the old jazz trick of starting with the first, flat third and fifth and then bringing in the seventh, ninth, 11th and 13th one by one so that you learn the notes in their order of importance. I think that the most interesting note is probably the seventh, but you should draw your own conclusions.

Example 12.1



So where might you use this scale?

- It has an interesting tonality when you play it over a straight minor chord. You could try mixing it with a standard Dorian mode for some subtle jazz effects.
- So far, it's the only scale we've met that works over a minor-/major-seventh chord.
- If you remove the second and the seventh, you're left with a pentatonic scale that differs from the normal minor by having a natural sixth in place of the flat seventh. Translating your normal blues licks into this new scale will make them sound a lot more Robben Ford, and you can still bend the flat third slightly sharp if the fancy takes you.

Incidentally, you can make a handy little 'mode' from this scale by treating the fourth as the root. This works nicely over dominant chords. Example 12.2 over the page shows some fingerings for these new pentatonics.

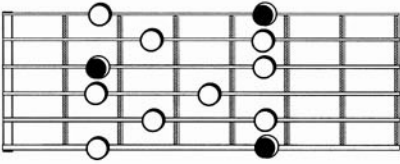
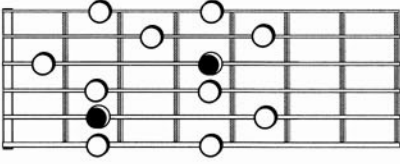
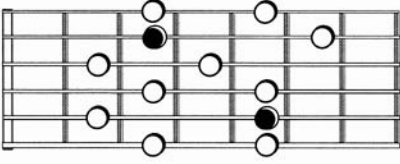
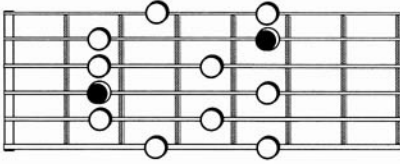
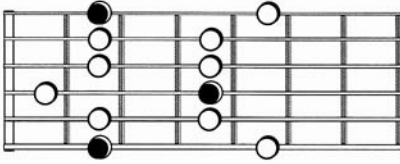
If you pull all of the modes out of the melodic minor, you get the following:

Melodic minor (m/maj7):	1	2	b3	4	5	6	7
Dorian b2 (m7):	1	b2	b3	4	5	6	b7
Lydian #5 (maj7#5):	1	2	3	#4	#5	6	7
Lydian b7 (7):	1	2	3	#4	5	6	b7
Mixolydian b6 (7):	1	2	3	4	5	b6	b7
Locrian b2 (m7b5):	1	2	b3	4	b5	b6	b7
Super-Locrian (m7b5):	1	b2	b3	b4	b5	b6	b7

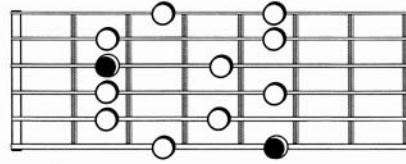
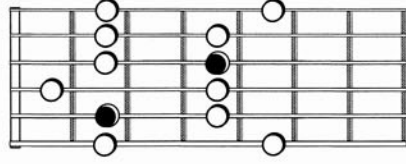
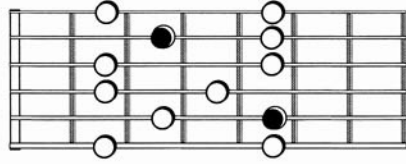
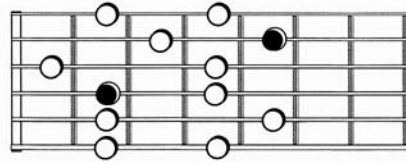
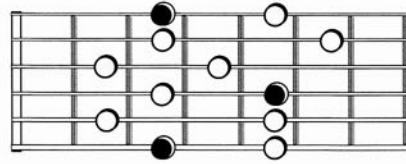
You can figure out some appropriate chordal vamps for each of these modes by looking at the seventh

Example 12.2

Minor Pentatonic (#6)



Dominant Pentatonic



chords lurking in each. You'll particularly like the Lydian flat seventh (or 'Lydian dominant') here, which adds a sophisticated sound when you use it over a dominant chord. If you play it over a 9#11 chord, you'll spot the tonality of the theme tune to *The Simpsons*, which can only be a good thing!

The Super-Locrian is probably the most interesting of these modes. Although you might think it works best over m7b5 chords, the jazz contingency tend to rename the notes as follows:

- 1 b2 b3 b4 b5 b6 b7
- 1 b9 #9 3 b5 #5 b7

Looking at this interpretation, you can spot this scale's huge potential for being played over any altered dominant chord. If you wanted to sound bluesy over an E7#9 chord, you'd still go for good old Uncle Pentatonic, but if you wanted a scale that matched the tonality of the chord a little more precisely, you could play a melodic-minor scale starting a semitone

above the root, and thus also a minor pentatonic scale a minor third above the root. This last idea would maintain the texture and bluesiness of your pentatonic licks but would give them a new, jazzy kind of sound. If you overdo it, of course, the results can sound atrocious, creating the impression that you don't know what key you should be playing in, but in small doses it can work really well – check out Scott Henderson's playing on the *Tribal Tech* albums to hear this and similar ideas being used to their full potential.

You should definitely spend some time getting to know the sound of the melodic-minor modes as they might just give your improvisation a much-needed kick-start. (On the other hand, it's best not to try them over 'Shakin' All Over' – sometimes you simply can't argue with classic scale choices!)

Harmonic Minor

Most of what I said about the melodic minor is equally true of the harmonic minor. This is another scale that has been widely used in classical music. Like the melodic minor, it has a natural seventh, which gives the chord of V a pleasing-sounding dominant character.

Unlike the melodic minor, this scale features a gap of a tone and a half between the sixth and seventh degrees, flanked by semitone intervals on either side. This gives the scale a strange quality which reminds many listeners of the music of other cultures: Arabic, Spanish, Hungarian, Gypsy, snake-charming – you decide.

As you would expect, some intriguing modes are available within this scale:

Harmonic Minor (m/maj7):	1	2	♭3	4	5	♭6	7
Locrian ♯6 (m7♭5):	1	♭2	♭3	4	♭5	6	♭7
Ionian ♯5 (maj7♯5):	1	2	3	4	♯5	6	7
Dorian ♯4 (m7):	1	2	♭3	♯4	5	6	♭7
Phrygian dominant (dom7):	1	♭2	3	4	5	♭6	♭7
Lydian ♯2 (maj7):	1	♯2	3	♯4	5	6	7
Super-Locrian ♭♭7 (dim7):	1	♭2	♭3	♭4	♭5	♭6	♭♭7

(You might like to know that the Phrygian dominant is also described as the Phrygian major or 'Spanish Phrygian', while the Dorian ♯4 is sometimes known as the 'Romanian scale'.)

This is the first time we've encountered a diminished-seventh chord in a harmonised scale. This is a symmetrical chord, where the 1, ♭3, ♭5 and ♭♭7 are separated by uniform intervals of a tone and a half. An interesting side-effect of this symmetry is that, when you play a diminished-seventh chord shape, any one of the notes could be used as the root. You can slide diminished-seventh shapes up and down the neck in three-fret increments, without altering the basic sound of the chord. But more on that later.

As with the melodic-minor modes, some of these harmonic-minor ones are more palatable than others. The last mode is so abstract-sounding that no one even bothered to come up with a name for it! (As you can see, I invented one, just to make the chart look complete.) On the other hand, the Phrygian dominant is very useful – it complements 7♭9 chords remarkably well, and players like Yngwie Malmsteen use it a lot. Try playing the notes of an A harmonic minor scale over an Am – E7♭9 progression, and you'll get the idea.

Similarly, Frank Zappa fans could have some fun with the brighter-than-bright Lydian ♯2 mode – it's an odd one, I freely admit, but there's something paradoxically stable about the way it sounds, so it lends itself well to one- and two-chord vamps like the ones you'll hear on Frank's *Shut Up And Play Yer Guitar* albums.

This scale is worth exploring regardless of your chosen playing style, but I think metal players in particular can use these modes to great effect. Harmonically, a lot of metal uses the idea of dissonance (the popularity of the ♭5 suggests itself as the most obvious example) so this rather jagged-sounding scale, with its unexpected tone-and-a-half interval, sounds right at home in ultra-heavy contexts!

Symmetrical Scales

As you'll recall from the previous chapter, the diminished-seventh chord is symmetrical, consisting of a series of tone-and-a-half intervals. Having met the chord in an harmonic-minor context, you might think that the Super-Locrian ♭♭7 is the ideal scale choice for such occasions, but I think that there's something more pleasing about the notion of using

a symmetrical scale to play over a symmetrical chord. With this in mind, you should consider the *diminished whole-half scale*:

1 2 \flat 3 4 \flat 5 \sharp 5 6 7

The gaps between these notes follow a repeating tone-semitone-tone-semitone pattern, hence the name. Just as you can move your diminished-seventh chord shapes up and down in three-fret increments, similarly you can treat any melodic idea derived from this scale in the same way. Not only is it an ideal scale to use over a dim7 tonality, it's also a fine source of 'outside'-sounding ideas over more conventional chords.

There's only one other mode to be found within the whole-half diminished scale; it follows a repeating semitone-tone-semitone-tone pattern, so it's called the *diminished half-whole scale*:

1 \flat 2 \flat 3 3 \sharp 4 5 6 \flat 7

You can see that this scale contains the raw ingredients for both minor and dominant-seventh chords. As with the Super-Locrian, the fun stuff seems to come out when you treat the *natural* third as the chord tone, and any altered chord without a sharpened fifth is complemented by the half-whole scale. (13 \flat 9 chords are particularly flattered by these notes.)

(Having said that, you don't need to wait for a G13 \flat 9 chord to crop up before trying these notes out; players like Robben Ford will happily use half-whole ideas over 'normal' chords like C7, just to liven things up a little.)

We should also spare a moment to consider the other basic symmetrical chord: the augmented triad. This tense-sounding chord features the notes 1, 3 and \sharp 5, which are separated by uniform intervals of two tones, so there are two ways to fill in the gaps and create an appropriate symmetrical scale:

- 1 You could add the notes of another augmented triad a tone higher, creating the aptly named *whole-tone scale*, which comprises six full tones and gives the following scale degrees:

1 2 3 \sharp 4 \sharp 5 \flat 7

You can spot this scale's potential for use over 7 \sharp 5 chords and the like. It's fun to play because you can move all of your shapes around in two-fret increments without having to worry about re-fingering anything. (If you experiment with this scale using a clean tone and lots of reverb, the results may well remind you of piano music by the likes of Debussy, Ravel and Satie.)

- 2 If you add the notes of another augmented triad a tone and a half higher, you get the *augmented scale*, which follows a tone-and-a-half-semitone-tone-and-a-half-semitone distribution of intervals and looks like this:

1 \flat 3 3 5 \sharp 5 7

This one isn't quite as symmetrical as the whole-tone scale, but it's not without its charms. Shawn Lane seems to like it, so it can't be all bad! If nothing else, you now know what to do the next time you come across an augmented or diminished chord.

Exotic Scales

In this section, I've kept the analysis to a minimum, so you'll have to do most of the thinking! Many of these scales are Westernised versions of the originals – not all musical cultures divide the octave into 12 equal semitones – but you'll get the general idea.

Some of the following can be interpreted as more familiar scales with certain notes added or removed – the 'Indian pentatonic', for instance, is clearly a Mixolydian mode with the second and sixth taken out – and some are just plain weird (Prometheus Neapolitan, anyone?). I urge you to mess about with them, invent a few fingerings for each and figure out what kind of chords they would complement. If you're ever at a loose end, try taking something like the Enigmatic scale and finding every possible chord within it. This could form the basis for a new composition – just ask Joe Satriani, who did just that on his *Not Of This Earth* album, and was helpful enough to call the finished tune 'The Enigmatic'. (Can you imagine how many blues classics would be entitled 'The Pentatonic' if everyone took this approach to naming their tracks?)

As always, the root notes are all-important in your quest to learn the distinctive sounds of these scales, and you might want to set up a drone note or chordal backing as you experiment with each. Much of this stuff is relatively uncharted in traditional rock music, so you're pretty much guaranteed to find something fresh in here – as long as you've got some idea what sort of sound you're looking for in the first place.

Right then, here come lots and lots of scales...

Pentatonic Scales

Indian: 1 3 4 5 \flat 7

Kumoi: 1 2 \flat 3 5 6

Hirajoshi: 1 2 \flat 3 5 \flat 6

Iwato (fifth mode of Hirajoshi): 1 \flat 2 4 \flat 5 \flat 7

Pelag: 1 \flat 2 \flat 3 5 \flat 6

Scriabin: 1 \flat 2 3 5 6

Egyptian (third mode of minor pentatonic): 1 2 4 5 \flat 7

Banshiki-cho (fourth mode of minor pentatonic):
1 \flat 3 4 \flat 6 \flat 7

Ritusen (fifth mode of minor pentatonic): 1 2 4 5 6

Rwanda Pygme: 1 2 \flat 3 5 \flat 7

Hexatonic Scales

Blues scale: 1 \flat 3 4 \flat 5 5 \flat 7

'Country' hexatonic: 1 2 \flat 3 3 5 6

Prometheus: 1 2 3 \sharp 4 6 \flat 7

Prometheus Neapolitan: 1 \flat 2 3 \sharp 4 6 \flat 7

Piongo: 1 2 4 5 6 \flat 7

Heptatonic Scales

Double harmonic (Byzantine scale):

1 \flat 2 3 4 5 \flat 6 7

Oriental (fifth mode of double harmonic):

1 \flat 2 3 4 \flat 5 6 \flat 7

Rahawi (Arabian): 1 \flat 2 3 4 \flat 5 \flat 6 \flat 7

Zangula (Arabian): 1 2 \flat 3 4 \flat 5 6 \flat 7

Hungarian minor (fourth mode of double harmonic):

1 2 \flat 3 \sharp 4 5 \flat 6 7

Hungarian major: 1 \sharp 2 3 \sharp 4 5 6 \flat 7

Enigmatic: 1 \flat 2 3 \sharp 4 \sharp 5 \sharp 6 7

Leading whole tone: 1 2 3 \sharp 4 \sharp 5 \sharp 6 7

Neapolitan: 1 \flat 2 \flat 3 4 5 6 7

Neapolitan minor: 1 \flat 2 \flat 3 4 5 \flat 6 7

Lydian minor: 1 2 3 \sharp 4 5 \flat 6 \flat 7

Major Locrian (Arabian): 1 2 3 4 \flat 5 \flat 6 \flat 7

Marva (raga): 1 \flat 2 3 \sharp 4 5 6 7

Todi (raga): 1 \flat 2 \flat 3 \sharp 4 5 \flat 6 7

Persian (fifth mode of Todi): 1 \flat 2 3 4 \flat 5 \flat 6 7

Octatonic Scales

Bebop scale: 1 2 3 4 5 6 \flat 7 7

Major/minor pentatonic combination:

1 2 \flat 3 3 4 5 6 \flat 7

Phrygian dominant with flat third:

1 \flat 2 \flat 3 3 4 5 \flat 6 \flat 7

Eight-tone Spanish scale:

1 \flat 2 \flat 3 3 4 \flat 5 \flat 6 \flat 7

Isfahan (Arabic): 1 2 \flat 3 4 5 6 \flat 7 7

13 ON THE CD

I deliberately left the previous chapter open-ended; I think the methods and approaches covered earlier in the book should be enough to guide you as you explore those exotic scales, or indeed any aspect of playing that interests you.

On The CD

At the end of the CD, you'll find some backing tracks and demo solos to give you some ideas about how to apply a few of the ideas covered in this book in a real musical situation.

As with the exotic scales, I don't propose to go into great detail about these tracks; I'd much rather leave things open so that you can draw your own conclusions and make your own decisions. However, a quick breakdown of the theme of each wouldn't hurt, so here goes.

Demo 1

This track uses some of the pentatonic scales encountered earlier to create a somewhat 'Japanese' vibe. The chord progression cycles around Emaj13, Em13, Gmaj7#11 and B11, spending four bars on each. Scale-wise, I opted for the following:

Emaj13: E major pentatonic (E F# G# B C#)

Em13: E Kumoi (E F# G B C#)

Gmaj7#11: E Kumoi, third mode (G B C# E F#)

B11: B Indian pentatonic (B D# E F# A)

(I have no idea what to call the third mode of the kumoi, but it's a fine pentatonic for those Lydian moments!)

For the first cycle of the chords, I simply went up and down the scales in groups of four. For the second, I tried to liven things up a bit with the 'koto technique' (as explained in the 'Emulating Other Instruments' chapter) and a more relaxed approach to the phrasing.

Demo 2

This one illustrates some more extended material along the lines of Examples 9.16 and 9.17 from the chapter on 'Emulating Other Instruments'. It's a dominant blues in G, and there are two tracks of guitar, each emulating some aspect of Hammond organ playing *à la* Jimmy Smith. One track illustrates chordal comping (that's Jazz parlance for rhythm playing) and the other features a solo. I haven't transcribed the licks, because I think the mindset behind this kind of playing is more important than the notes themselves; note how the *phrasing* has an 'organistic' vibe about it. The Leslie rotating-speaker effect, if you're interested, was courtesy of my Hughes and Kettner Rotosphere.

(NB: Backing track 2a features only the comping part and backing track 2b has no guitar at all.)

Demo 3

A sizeable chunk of this book looks at how to emulate other instruments, so I thought I should wrap things up with a look at the rather Zen goal of emulating another *guitar*. As you'll be able to tell as soon as you listen to it, this demo solo illustrates slide-type licks. The interesting part is that they're all executed with the whammy bar rather than with a bottleneck.

Many players view the whammy bar as a toy and

reach for it only when they're out of ideas. However, it can also be used in a very controlled way to slide between notes in phrases. A fingerstyle approach makes it a lot easier to play ideas like these cleanly – there's a lot of string-damping to be done, so the more

right-hand fingertips you can involve in the process, the easier it will be to keep those unwanted notes in check. Oh, and the backing track – as you'll no doubt gather – is a simple dominant blues in E.

Happy jamming!

AFTERWORD


In conclusion, I'd just like to end things by:

- 1 congratulating you for making it to the end of what has been quite a long and detailed book, and
- 2 reminding you that your journey isn't over yet.

On the contrary, from this point onwards I would encourage you to keep looking for new ideas and fresh inspiration – it's just that you're on your own from now on!

Guitar playing is a lifelong pursuit, and there's always something new that you could be learning. This is why your favourite players sound the way they do – they're constantly striving to expand and improve their art. This nugget of philosophy is simultaneously the simplest and the most profound of all the ideas looked at in these pages, and it should stand you in good stead as you continue to stretch the boundaries of what you can accomplish with your instrument.

Bon voyage!



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