

**THE
PLECTRUM BANJO
BEYOND
CHORD
MELODY**

**A New Approach
to Advancement
by Ron Hinkle**



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Ron Hinkle, Banjo Instructor

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All of my work is humbly dedicated to:
The young banjoists of today and tomorrow.
My most sincere hope is that this
book proves valuable to them in
their important role of ensuring the
future of the plectrum banjo.

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Note to Students

I wrote this book for me! It is an accurate representation of who I am at this time in my life. It reflects my past: A working musician and teacher for almost 40 years, singing and playing the banjo, guitar, ukulele, clarinet, and saxophone in a bewildering array of settings, from my humble banjo band beginnings and “hobby” groups playing several different musical genres, to professional Trad Jazz groups, and world-class military bands playing for *huge* crowds in several European and Asian countries. It also reflects my life experiences: I’ve proudly served in two wars and continue to serve at this writing; experienced -70° in Alaska, +125° in the shade in Iraq, the largest volcanic eruption of the 20th Century (I was 8 miles from Mt. Pinatubo when it erupted!), tornados in Oklahoma and Alabama (close enough to count as life-changing events); and spent 30+ years in a sometimes futile but ultimately successful search for self, etc.

It reflects my present of course: This is where I am today as a musician, educator, and human being, and the things I’ve done to get there. Most importantly, it reflects my future (or at least I hope it does)! My life experiences have finally brought me to the point where I feel I can give back to society all it’s given me and more. In short, I wrote this book the only way I know how: *From* and *with* all my heart.

Of course, I also wrote this book for you! If you don’t mind, I would like to think of you as one of my students, not just a buyer of my book. The least I can do as a thank you for buying is to provide continued service, especially if you need help understanding any of the lessons. If you don’t ask for help, I’ll have to assume that you either understand everything perfectly, or that you’ve given up on the book altogether. I’ll also have to assume that I did everything perfectly; at a certain level I’m fine with this, but I know that can’t possibly be true!

I would also like to consider you to be a potential collaborator. I would appreciate feedback, so I can continue to improve on this and future books. Feedback from beginning level students is especially valuable to me; I am concerned that this book may be perceived as being too difficult at first glance. Anything I can add or modify to change this perception would benefit you, me, and future students.

I hope that this book inspires lots of new ideas, both from myself and you. There *will* be additional volumes in the future! Please join me in my quest to produce “a better banjo player” by considering yourself a partner-in-crime (just don’t forget that I’ve already gotten the benefit of reading this book several times: I’m way ahead of you, so you better get to work!). Anytime you have an idea/question/suggestion/complaint/etc based on the material in this book, please contact me at banjoplayer1@yahoo.com. I’m in this for the long haul, and I hope you are too! I’m also available for lessons via webcam, if you’re interested.

One last thing: As good as *I* think this book is, it—or any other book for that matter—*will only work if you work it!* Please don’t let it become just another dust collector on your shelf. . .you and the book mean too much to me to allow that to happen! Thank you for buying my book and becoming one of my students!



Preface

Let me take a few moments to explain my motivations for writing this book. If you are anxious to get started, please feel free to skip ahead to the actual book (p.4), but I think you'll understand my approach a bit more if you understand me.

I literally grew up in a banjo band. I was a painfully shy and self-conscious kid who didn't have a lot of school friends; my friends were the members of the Grays Harbor Banjo Band and their kids (who all played the banjo too). In that warm and supportive community atmosphere, I was able to come out of my shell to the extent that I did.

I was also not what you would call "ambitious"; in fact, I was quite lazy! I was the youngest of seven kids—raised by my mother and two sisters—and never had to lift a finger around the house. I was a "straight-C" kid in school, because I just didn't care for homework, and besides, I was convinced I wasn't very smart to begin with. It's taken me a large part of my adult life to work past these self-perceptions and limitations.

About the only thing I seemed to be able to do (in my view anyway) was play the banjo. I could hear the melodies and chords to songs right from the start, and quickly developed the ability to play chord melody to practically any banjo band song. Details like, oh, what key the song was in, didn't matter to me; I didn't know the names of the chords anyway! I just played what I heard (time and education have shown that I heard right, for the most part). As an adult, I've gradually come to realize what a gift that was; I just assumed everyone could do that. After all, I was just a shy, dumb kid; why should I be anything special?

The upshot of all this is, since I found chord melody to be so easy, it evolved to become my default position. What might have motivated someone else to work harder just became another justification for my laziness. I have a feeling that if I hadn't had such an easy time with it, I might have just quit the banjo altogether. So you might say that chord melody was my savior. Today I'm glad to be a banjo player; I have many regrets regarding my childhood shyness and laziness, but at least I stayed with the banjo.

When I left the nest at age 18, I put the banjo away and hardly took it out again for the next 10 years. Then, shortly after I started playing again in earnest, I had *the* life-changing experience: I met Buddy Wachter. Let me tell you, there have been many times that I wish I had never met or even heard him play the banjo! I've always been able to "hear" everything he does. It all makes perfect sense to my ear, even if I don't understand the music theory behind it. Physically, I'm able to do many of the technical things he does. On a certain level, I've always felt that I *should* be able to play like him. As you can imagine, it's very frustrating.

So what's kept me from achieving that? #1: My afore-mentioned laziness! #2: I'm just a lightly-educated "natural"; he is a larger-than-life musical genius who plays many instruments at a world-class level of ability and confidence *and* is very highly educated in music theory (as John Green puts it: "he's from outer space!"). And #3, my main point: Since chord melody is so easy for me, I'm able to justify away playing at a higher level. It's too easy for me to say "well, I guess I just don't want it bad enough" and "at least I'm able to play chord melody." The upshot of this point is that I should have met Buddy when I was 12 years old, and somehow been convinced that I could do that stuff too (and that would have been quite a trick, considering my low self-esteem at the time).

That banjo band up-bringing? While it was a great supportive atmosphere, it was also coddling and enabling. I was never pushed by the band—I guess the attitude was that since I played chord melody so well, I was already a valuable asset. Besides, I was just a kid; *how cute is that?* Plus the fact that we were kind of isolated up there in the Great Northwest; nobody there seemed to have heard of any of the plectrum banjo greats, or at least didn't have recordings of them (they were mostly tenor players, my father and sister included). I might have aspired to the level of those recordings, had I heard them at that age (valuable lesson for those with young phenoms in their bands. . .). And because we just played simple “banjo” music, there was no built-in requirement for deep musical thought. *And* I was never pushed by my father: He was afraid that if he pushed, I might quit. The sad truth is; he was probably right!

So here I am (at this writing), 39 years since taking up the banjo, and 23 years since first hearing what can really be done with it, and all I have to show for my efforts and supposed “gift” is a higher level of chord melody and a few worked up (read: copied) solos. Up to only recently, I've been in an extremely frustrating and self-imposed “chord melody rut.” This brings me up to the motivation for writing this book.

I'm the type of person who feels like he has to reinvent the wheel in everything he does. I finally applied that reasoning to achieving my banjo goals! I've always known *what* I had to learn, I just didn't know *how* to learn it, so I finally took the bull by the horns and figured out how to teach myself (since I seemed to be the only one I would listen to!). Shortly into the “how” part of my self-education, I realized I should be writing all this stuff down so that others could learn from my experience.

There is nothing “new” in this book; it's just basic music theory, *applied to the plectrum banjo*. The key is, it is *not* a chord melody *approach* to the instrument. That is the true source of my frustration; I tend to look at the banjo through chord melody eyes and ears. With that approach, all you'll ever learn is of course, chord melody! To break out of that rut, you must come at it from another angle. That's what is “new” about this book: I show you how to approach the banjo from a *musicians* standpoint.

This book should in no way be considered a “complete method.” You'll want to use it in conjunction with other books that are designed to take you from A to Z. This one will take you from about E to T, or thereabouts. Someday I plan to write an A to Z method, and the lessons in this book will be integrated into it.

Anyway, the book is called “Beyond Chord Melody” but let me say this: *I have nothing against chord melody*, other than my own frustration with it, and a deeply held belief in how limited and *limiting* it is! There's a lot more that can be done on the instrument, and I want to use my personal experience to help you find that out for yourself. I could have just as correctly called the book “In Addition To Chord Melody, You Can Play This,” but that doesn't roll off the tongue quite as easily! There's already plenty of great teaching material out there, dedicated to the Chord Melody style. Don Van Palta, Dave Frey and Don Stevison are three who have contributed way more than I could ever dream of doing in that area. I recommend their books!

If you're still wanting more “preface” before beginning the hard work, skip ahead and read the last two chapters, *Putting It All Together*, and *What Should A Plectrum Banjoist Know?* Otherwise, *turn the page and get to work!*

The Plectrum Banjo: Beyond Chord Melody

“A mind, stretched to a new idea, can never return to it’s original dimensions.” Oliver Wendell Holmes

What I’m attempting to do with this book is introduce a different approach to **advancement** on the Plectrum Banjo. I make extensive use of scales, jazz chords, arpeggios, and picking techniques—more of a jazz guitar or tenor banjo approach, if you will—to #1: Give beginning/intermediate players a more solid footing in physical technique and practical music theory, and #2: Give advanced chord melody players a way to break out of their technique rut, and maybe even lead them into the world of jazz.

I’m not going to lie to you: Some of the material in this book is not “easy.” Some of it may take quite a while to fully integrate and understand. If there’s any “silver bullet” I can offer to you here, **it’s called hard work!**

I realize that advanced players may get more out of this book than beginners, but I’ve made a valiant attempt to give something useful for players at **all** levels. In short, **if you really want to improve, and can find a personal starting point in this book**, I have every confidence that everything in here will be well within your reach. I firmly believe it will have a dramatic effect on your playing, assuming you **work hard** and develop an effective practice routine. As with all things worth doing, **practice** is the key.

I make the assumption here that you already play chord melody, but it’s no problem if you don’t; this is simply an alternative method of playing the banjo (in some ways, it’s actually easier). To be a complete master though, you really need to learn how to play chord melody; it is **the** characteristic way of playing the plectrum banjo.

So, here’s the chapter breakdown:

Chapter 1: Scales: This chapter is potentially the hardest, because: It will probably be a new concept for most plectrum banjo players; it **can** be a boring subject (or at least perceived as such); and it’s easy to think you don’t need them for the banjo. Trust me—**it does pertain to playing the banjo!** Scales are the foundation for all that follows. I guarantee, if you can buckle down and get through the material, the rest will be easy.

2: Harmonized Scales: This is where you will begin to see how the whole banjo puzzle fits together (and see why the scales are so important).

3: Arpeggios: For me and my banjo playing, arpeggios have been nothing short of a musical/physical revelation! They have changed my playing more than anything else. And again, understanding the scales is the key.

4: Symmetrical Music Patterns: Tri-tones, diminished, augmented, whole-tone, chromatic, circle of keys: Big words, explained and demystified (and applied to the banjo) in one easy chapter! Right here, in this very book! News at 11.

5: Picking Hand Techniques: Single-string requires a different picking technique, and here it is. If you’re strictly a chord player, you might want to start with this chapter. . .

6: Ear Training: The true path to “playing by ear”—**who doesn’t have that as a goal?**

7: Banjo Ala Mode: Basic scales and arpeggios in all 12 keys. Why? Why not?

8: Putting It All Together: In the concluding chapter, I give some insight into putting your new-found knowledge to practical use.

9. What A Plectrum Banjoist Should Know: I don’t care much for opinions—and I’m sure you don’t either—but it’s hard to avoid them. So I couldn’t very well let you go until you’ve heard mine, could I?

So anyway, I start out with a simple test. When you “pass” this test, well then, the sky’s the limit! If it takes you a little while to “get it,” no worries; the work you put into it will set you up for success with the rest of the book. There is no time limit or grade on this test. All I ask is that you give yourself a realistic chance to understand the material—*or at least physically do it*—before deciding you *can’t* do it. For the advanced players, taking the test will be a good starting point to understand where I’m going and the terminology I use to take you there.

Anyway, without further ado, here’s the test: Here is a basic C scale on the 4th and 3rd strings, and a basic C arpeggio on the 4th and 3rd strings. Play them now if you can:

If you were able to understand and play these, you’re ready to move on to the first chapter (if the “TAB” staff is new to you though, please read on).

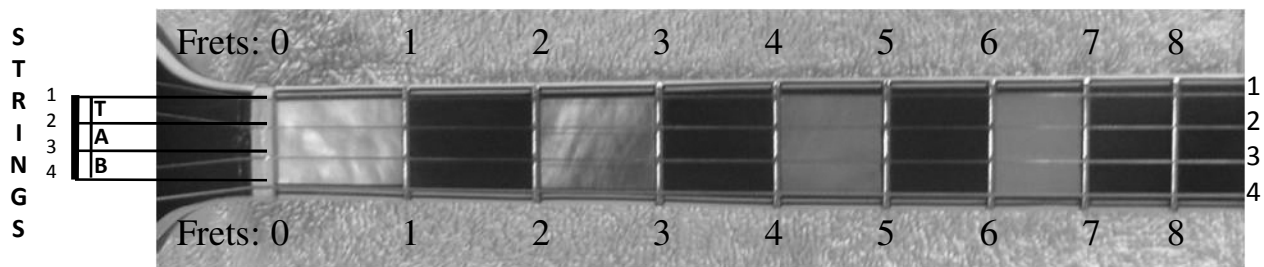
If not; did I mention before that I *really* want you to pass this test? On the next page, I will “teach the test.” As far as the rest of the book is concerned, you definitely need to pass this test before moving on. As I said before, I’m convinced that anyone who has the *interest to improve* can do this. Work on the next two pages and keep returning to this page until you can pass the test. *I know you can do it!*

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The number one reason for not being able to play the test material will be obvious: *not knowing how to read music*. Let me say a few things about that: To succeed with this book, you *do not need to know how to read standard musical notation*. It would help of course, but is not totally necessary. The “TAB” staff of the example is the important thing to learn. I don’t even pretend to teach you how to read music in this book (although I do offer plenty of hints); that’s beyond the scope of this book. All I’m trying to do is show you a new way to wiggle your fingers and to understand the finger-wiggling; TAB is perfect for that and is easy to learn. Even if you *do* know how to read music, you’ll still need the TAB for correct fingerings. Anyway, I hope you’ll take the opportunity to learn to read standard notation (that’s why it’s there), using the TAB as the gateway, but it’s not important for this book.

Tablature, affectionately known as TAB, is a popular form of music notation for most fretted instruments. I'm not sure why it hasn't caught on in the four-string banjo world, but I'm going to do my best to change that. I don't think of it as "cheating" or "providing a crutch"; it's a legitimate form of notation that even musically-educated guitarists and mandolinists use. And I think it's a better, more complete way of notating music than the chord diagram. Chord diagrams serve the valuable purpose of teaching chord melody, but of course they only show chords, making them unusable for single-string technique, and leaving the reader to guess at everything else. TAB takes care of it all equally well, just in a different but easily learned "language." My objective here is to turn you into a TAB pro! Let's look at the test scale again:

The TAB staff is a graphic representation of the banjo fretboard. The top line is the first, or D string, the next line down is the second, or B string, the next line down is the third, or G string, and the bottom line is the fourth, or C string (think "**bottom** line=**lowest** note"). Let me illustrate it in another way. Lay your banjo on your lap and look down at it (this of course assumes you play right-handed: Lefties, you know what to do.).



Now, compare this picture with the TAB line above. Using the first measure of the TAB as an example: The first note "0" means play the 4th string open, the "2" means to finger the 2nd fret, 4th string, the "4" means to finger the 4th fret, 4th string, etc. If you know how to read music, you can easily see how this relates to the standard notation staff above it (and if you don't know how, you can see what an opportunity this is to learn. . .).

Now, go back and take the test again. Like I said, I really don't care if you know how to read standard notation, so long as you can understand the TAB. For the most part, I'm not really concerned with note values either (quarter note, eighth note, etc.); the primary objective of this book is to learn new finger movement patterns, regardless of note value. The rest of that stuff can be learned after you've gotten your fingers moving. In other words, learning to physically play these exercises—through the ease of TAB—will make it easier to learn to read music.

If you're still having trouble, go on to the next page. Otherwise, move on to the first chapter.

The number two reason for not being able to pass the test will be purely physical. If you have never done any single-note work before, you will literally have to train your fingers to do it. By sheer coincidence, that is the underlying premise of this book; training your fingers to do new things. So, if you're having physical difficulties passing the test, trust me, you are in the right place! Let me see what I can do to help you get started. Listen to the Midi File, *Basic C Scale*. Then take another look at the test scale:

Pick: Down, Up, Down, Up, etc.

Fingers: Open, 1st, 3rd, 4th, open, 1st, 3rd, 4th, etc.

This time I'm dealing mainly with physical details. I've notated the picking action: Down-up-down-up etc. (for more detail on this subject, refer to the *Picking-Hand* chapter); and which fingers to use: Open = open string, 1st = index finger, 2nd = middle finger, 3rd = ring finger, 4th = little finger.

If you can drum your fretting-hand fingers on the table (try it now!), you have the physical capability to do this! I'm convinced that nothing in this book should be beyond your physical capability. . .some of it may be a bit of a stretch (literally and figuratively), but that's the whole point of the book: Stretching your body and your mind to new things.

Let me take a moment to more fully explain why scales and arpeggios are so physically important and why I think you should learn them. At all levels, the physical technique aspect is the key to advancement.

➤ At the beginner/intermediate level, it's very important to just get your fingers moving. Do you have difficulty getting your fingers to form new chord shapes? Moving from one chord to the next? Having the strength to hold a chord? Single-note work is the quickest way to strengthen and educate your fingers, *and* your picking hand. ***Even if you never learn any practical musical uses for it, your overall playing, including chord melody or just chord strumming will improve.***

➤ At the advanced level, this is the stuff that will break you out of your rut and give you the technical facility to move into classical and jazz. That's where I am in the grand scheme of things: I have been stuck in a chord melody rut for the past 39 years! I've known for at least 20 of those years what I needed to do, but lacked the direction and motivation. I offer this book to you as the direction and motivation *you* might have been lacking.

Short of jazz, I've also found that, now that my physical technique has improved, Harry Reser's music is suddenly easy for me (on both tenor and plectrum). And all the worked-up solos that I've played for years are taking on new life. So I'm not only improving what I already do, I'm moving into areas that used to be difficult for me.

Anyway, when you understand the example above, go back to the first page and try again. If you're still having difficulty, go on to the next page.

Now, let me address the third and what I consider to be the most frustrating reason to not pass the test: Lack of *belief* that you can do it. Listen, I know beyond a shadow of a doubt that *my* main learning weakness is my low self-esteem. *Frankly, a few years ago, it probably would have kept me from even opening, much less trying a book like this.* I still battle with myself when I get into subjects that I consider to be “over my head” or beyond my level of desire. Even music: I have the tendency to glaze over and turn off when I read technical stuff. That’s one of my main motivators for writing this book: I had to find my own way around my mental block, and in so doing, I believe I’ve found a way to help others who may have the same difficulties I do. In short, I know where you’re coming from, and I will *not* stand in judgment of you. If this book gains the reputation as a “self-help book for banjo players,” so be it! I’ll have accomplished my goal of improving your banjo playing.

Anyway, TAB was the primary mental-block buster for me; I had myself convinced that I wasn’t a good music reader. Standard music notation, especially applied to the banjo—*which I already “knew” how to play, after all*—was a big turn-off for me. Discovering TAB has been my salvation. Applying it to the few single-note things I did know led me deeper and deeper into increasingly advanced technique. And the whole process has made me a much better music reader, in turn leading me deeper and deeper into the stuff that *used* to turn me off. My playing and knowledge have grown exponentially since taking on this project.

At a deeper level, I—like many people—am a mass of *exasperating* contradictions.

➤ I want desperately to be a better player, yet by my actions (or lack thereof), I seem determined *not* to improve.

➤ I am stubbornly proud that I’ve accomplished as much as I have despite my shortcomings, yet in my heart I know I could be *so much better* (“I don’t need any of that fancy theory stuff!”—the ultimate cop-out). That one really hurts and confuses, and I know that if I don’t fix it now—while I’m still physically capable—I will just become a bitter, un-self-actualized old man. The banjo is *that* important in my life, or should I say, my life is *that* intertwined with the banjo.

That leads me to a related subject: *Lack of interest*. I’d like to think that you wouldn’t have bought this book if you weren’t interested in advancing. . . so that’s a question you’ll have to ask yourself. Are you *truly* interested in learning? Interested enough to buckle down when the going gets tough? I’m only saying this because *I* could have benefitted from a good talking-to 30 years ago!

Sorry to lay all this on you, but it’s important for you to understand why I take this so seriously; writing this book has literally been life-changing for me. If the banjo is as important to you as it is to me, I’m sure you’ll understand. I really do take my—*and your*—improvement personally. Trust me, if this is a self-esteem issue, I’m with you Brother/Sister!

So go back again and give the test one more good-ol’ college try. If you still can’t get it, contact me at banjoplayer1@yahoo.com and I’ll either talk you through it in person or discuss refunding your money. *I want you to succeed!*

Chapter 1: Scales

What are they?

“A series of notes in ascending or descending order, starting on a keynote and ending on the same note an octave higher.”

What do you need to know?

Being the first step in this book’s material, knowing how to hold a banjo and pick will suffice!

Why are they so important?

- They are a great finger work-out!
- They are the basis for the majority of music theory, and are thus very important to the complete understanding of the banjo.
- They are the primary gateway skill (along with arpeggios) to learning to play jazz.

Scales

Ugh! Scales! What a turn-off. I know, I *know*. . . *believe me, I know!* 20 years elapsed between my first personal inkling of their importance and my actual buckling down to learn them. *Please don't let this happen to you!* Bottom line up front: Scales are the foundation for all that follows, not just for technique, but more importantly for musical understanding. If you don't learn them, *then you may as well plan now to be stuck in the chord melody rut for the rest of time!* Again, *believe me, I know!* You'll have to excuse my "hard sell": In my travels I've found that, even in the classical music world—where world-class musicians *know intimately* how important they are—scales are still seen as drudgery. Put it in the "but I'm just a banjo player" context, and you can see why I push this idea so strongly. *Ya just gotta learn 'em!* And then practice, practice, practice!

Anyway, music is almost entirely made up of scales, scale fragments, and other closely related stuff (which I will illustrate at the end of this chapter). Don't worry; they are *not* as difficult as you may think. I promise you *will* survive the ordeal! I start out with very basic exercises and gradually add complexity. Here are some key points:

***Physical Development:** This is the most important benefit of practicing scales. *Even if you never learn how to use scales in your actual performance*, regular scale practice will strengthen your fretting hand and the coordination between your two hands more than anything else you can do. This strength and coordination will dramatically improve—among other things—your chord melody playing (ironic, I know. . .).

***Musical Development:** Understanding scales is literally the key to the rest of music! What you will learn in this chapter is absolutely essential for understanding the next chapter, and the next, etc. Sure, at first I just want you to learn how to *play* the scales; as you progress through the book though, you'll find that the reason is much deeper than just "because I said so!" For example: Want to learn to "play by ear?" Scales and especially "harmonized scales" (next chapter) are one of the secrets.

***Jazz:** Have you ever listened to Bebop? Enough said! One *huge* benefit I've found is that knowing scales—and having them ingrained in my hands—has opened up endless possibilities on the banjo. Before I buckled down and started learning them, I could only listen and dream of being able to play jazz. I could hear what they were doing, but my fingers lacked the physical discipline and education to go where they needed to go.

Now, before I go on, I must address a couple of concerns. First, how many times have you heard *or said* this: "The plectrum banjo is not a scale instrument; that's what the tenor is for." Well okay, I didn't say it would be easy. . . seriously though, the plectrum may not be the *optimum* instrument for scales, but it can be done (the *best* instrument is the guitar). Actually, I'd go so far as to say that in some ways, the plectrum is a *better* scale instrument than the tenor. . . I'll explain more in a bit when I get to the scale modes. A big part of that physical development mentioned above is learning to both overcome the shortcomings of this instrument and take advantage of its strengths. It can be done, and I'm here to say that it must be done! The benefits far outweigh the difficulties.

Lastly, I need to briefly define my limits and parameters: There are an unknown, even *unknowable* number of "scales" in all of the world's music. This could easily become an all-consuming life's work (that's what musicologists do). In this book, I am only concerned with a few easily-defined scales. Anyway, turn the page and dig in!

To get this ball rolling, I'm going to go back to the scale from the "test" chapter, and delve into it a little deeper.

All scales have a "structure," the pattern that gives it its unique sound. In the "Western" music tradition (Euro-American), there are 12 distinct pitches, each separated by one half step or "semitone" (this is called a "chromatic" scale, by the way):

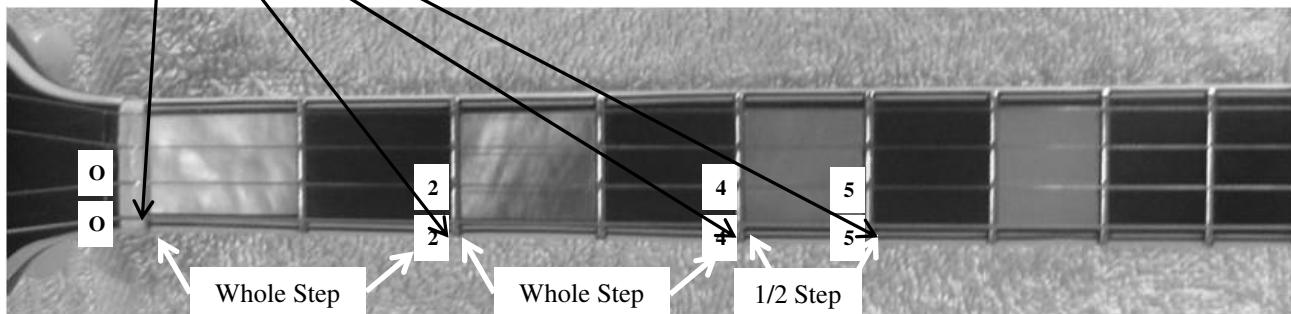


Up: C, C#, D, D#, E, F, F#, G, G#, A, A#, B. Down: C, B, Bb, A, Ab, G, Gb, F, E, Eb, D, Db, C

Note: C#=Db, D#=Eb, F#=Gb, G#=Ab, A#=Bb: Same pitches, different names—called "enharmonic spellings." At a certain point in your development, this will become important, but not yet.

Most basic scales use seven of those pitches, a.k.a. notes. The 8th note—called the "octave"—is the same note as the first note, only an octave higher. The notes are separated by a specific combination of half-steps and whole-steps (the structure). Our first scale is called a C "Major" scale. Play it a few times to get the sound and feel of it. Its structure is:

C-whole step-D-whole step-E-half step-F-whole step-G-whole step-A-whole step-B-half step-C



Now that you've got the basic idea of what a major scale is, what it looks like on the fretboard, and, most importantly, *what it sounds like*, I'm going to start increasing the complexity. On the plectrum banjo, there are only two major scales you can easily play that start on open strings: C, pictured above, and G, which is the same fingering pattern as C, but played on the third and first strings.

To become truly proficient with scales (and the banjo), you need to be able to play any scale in any key, *anywhere on the fretboard*. That is the true learning objective in this chapter, and is easier than you think. So, on the next page is the C Major Scale in the next octave, using no open strings. This is called a "closed" scale pattern, and can be easily transposed to any other key, just by shifting to the appropriate area of the fretboard (since you don't have to worry about open strings). For the rest of the keys, refer to Chapter 8, *Banjo Ala Mode*. Listen to Midi File "C Ionian Scale."

Now play the whole scale again, concentrating on the jump from one string to the next. Don't worry about "time" at first; just get your fingers to go to the right place. For extra help, listen to and play along with the Midi File.

C IONIAN or Major

Additional Performance Notes:

*Here we start to be concerned with which finger to use for which note. Many players rarely use their little finger unless they absolutely have to. For closed scales, ***you absolutely have to!*** Your little finger is stronger than you think; you just have to train it (this will really strengthen your little finger for chord melody too!). Beyond that, I think you'll find it's obvious which finger goes where, just by learning the scale.

*There's a bit of controversy among players regarding keeping your fingers down as you go up the scale, or lifting each finger as you go up. I think you'll find that it's better to lift each finger; that way, you're ready to move to the next string. For example, in the second measure of the exercise above, notice that you have to jump from the second string/tenth fret (little finger) to the first string/ninth fret (index finger). This would be very difficult if you kept your fingers down.

*While playing these scales, ***always*** use "down-up-down-up" picking, even when going from one string to the next. As with most things, there are exceptions/alternatives to this "rule," but at a much more advanced level. By the way, now would be a good time to start referring to the chapter on the Picking-Hand, if you haven't already.

*The scale pattern I'm showing (three-notes-per-string, or simply "3-3-3") is only one of the many possible ways to finger them. You can of course modify the patterns in many ways—I call them "situational patterns"—a concept you are encouraged to explore once you've physically ingrained these basic patterns and truly learned the fretboard.

*In all but a few specific cases, I have chosen to limit myself and the exercises in these chapters to the key of C: Other keys would get in the way of some other concepts that I think are more important. Refer to Chapter 8, *Banjo Ala Mode* for the other keys.

Practice Routine

Now, before I introduce any more scales, I'm going to show you an effective practice routine. This is most effective when done with a metronome. Set it on 70 bpm to begin with (by the time you get to the 16th notes, you'll see why I start it so slow). If you don't own a metronome, I recommend you get one. Until you do though, I've included some metronome Midi Files (wasn't that nice of me?). You'll be surprised at how hard it is at first to stay with the beat at the slow speed. "I swear, this metronome keeps speeding up and slowing down!" Sorry, ***it's not the metronome.*** . . . don't worry, it gets easier with practice. The Midi File "Scale Practice Routine" has a click track with it (set at 70 bpm); listen to it before you try the exercise so you can hear how this all fits together. Then play along with it. Try to sound like the midi file: Rigid, machine-like precision. Please take the time to get this routine down well before moving on.

Here I begin to be concerned with note values, but only as they relate to the practice routine. If you don't know what quarter, eighth, triplet, and sixteenth notes are, don't worry; just read the TAB and play with the Midi File and you will be playing *and* learning them! Take advantage of the opportunity to “learn by doing, hearing, and seeing”; just don't let yourself get too wrapped around the axle with terminology. Remember, at this point of the game, this is mostly about physical technique.

First up is *quarter notes* (one note per beat). As you play, count out loud (on the beat):

“one-two-three-four-one-two-three-four” etc.

Next up is *eighth notes* (two notes per beat). As you play, count out loud: “one-and-two-and-three-and-four-and” (numbers on the beat, “and” between the beats).

Next up is *triplets* (three notes per beat). As you play, count out loud:

“one-and-a-two-and-a-three-and-a-four-and-a” etc.

Last up is *sixteenth notes* (four notes per beat). As you play, count out loud:

“one-e-and-a-two-e-and-a-three-e-and-a-four-e-and-a” etc.

If you're having trouble staying with the metronome, try accenting the first note of each beat. For additional help with the triplets, refer to the triplet practice routine in the picking-hand chapter (page 70). When you can play comfortably at 70 bpm, start increasing the speed incrementally. Work your speed up, but always keep this fact in mind: *True precision* is most effectively learned at slow, deliberate speeds.

I recommend you spend a good amount of time with this scale before moving on. The rest will be easier if you do!

Now, if there was only one kind of scale, we'd be done! But, there are actually *seven variations* (called Modes) of the C Major scale. Fortunately for us mere mortals, they all use the same notes! "Huh?!? How can that be?" you may incredulously ask.

This is actually exceedingly simple: Look at this two-octave C scale. You've learned what we will call the #1 Scale Mode, meaning it started on the #1 note (C).

1(C) 2(D) 3(E) 4(F) 5(G) 6(A) 7(B) 8(1) 2 3 4 5 6 7 8(1)

"Oh wait, can it be that simple?" Yes! It is! The #2 Scale Mode starts on the #2 note (D); the #3 Scale Mode starts on the #3 note (E); etc. The resulting variations are all "C Major scales" (no sharps or flats); they just start and stop on different notes (and frets), and thus have different names, different structures, and a different sound and feel. The whole and half steps stay right where they are, and they are all 3-3-3 patterns.

So, here is the #2 C Scale Mode. Slide your first finger up from the 5th fret C to the 7th fret D, and play this scale. **Note:** Read the TAB *carefully*—each scale pattern is a little different:

8 D DORIAN: Minor with a raised 6th scale degree. Listen to Midi File "#2 Scale Mode."

Now, slide your first finger up from the 7th fret D to the 9th fret E and play the #3 C Scale Mode:

8 E PHRYGIAN: Minor with a lowered 2nd scale degree. Listen to Midi File "#3 Scale Mode."

Now, slide your first finger up from the 9th fret E to the 10th fret F and play the #4 C Scale Mode:

8 FLYDIAN: Major with a raised 4th scale degree. Listen to Midi File "#4 Scale Mode."

Now, slide your first finger up from the 10th fret F to the 11th fret G and play the #5 C Scale Mode:

8 G MIXOLIDIAN: Major with a lowered 7th scale degree. Listen to Midi File "#5 Scale Mode."

Are you with me so far? Take your time, and make sure you're playing the right notes. I promise, this really is as difficult as it gets in this chapter! The Scale Mode concept is the important thing to learn as far as the rest of the book is concerned. For audio help, listen to the Midi Files individually, and the "Scale Modes" Midi to get the overall effect. Turn the page for #6 and #7.

Now, slide your first finger **down** from the 12th fret G to the 2nd fret A and play the #6 C Scale Mode (I brought it down an octave to make the fingering and the notation easier. You can of course play this scale pattern from the 14th fret also).

Now, slide your first finger up from the 2nd fret A to the 4th fret B and play the #7 C Scale Mode:

Finally, slide up to the 5th fret C, and you’re back to where you started. Now to explain more fully what you just did.

Did you notice the funny sounding names of each scale? If you say “It’s all Greek to me,” you would be absolutely correct! They are formally called the “Church Modes,” and have been around in one form or another since the days of Pythagoras. I’m not going to bore you with any details beyond that for now. They are a handy way of organizing the scales, but more importantly, they are essential for playing and understanding basic harmony theory, which I will talk about a lot more through the course of this book. **Jazz would be impossible without them.** By the way, I will use the Greek names for the modes from here on out, so spend a few moments and learn them.

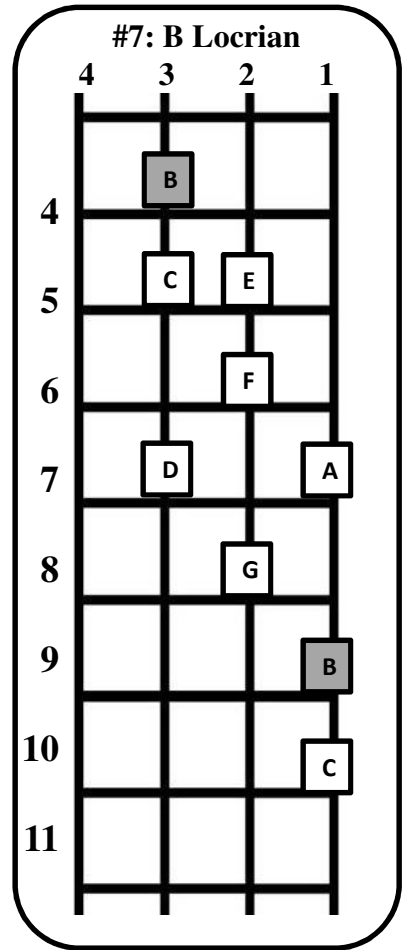
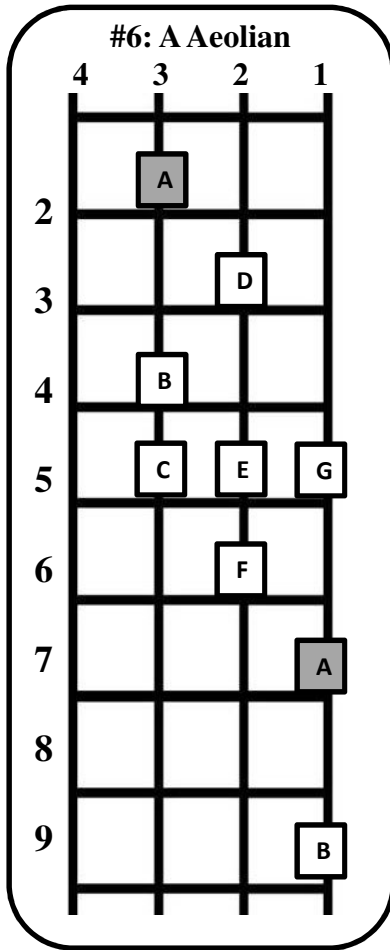
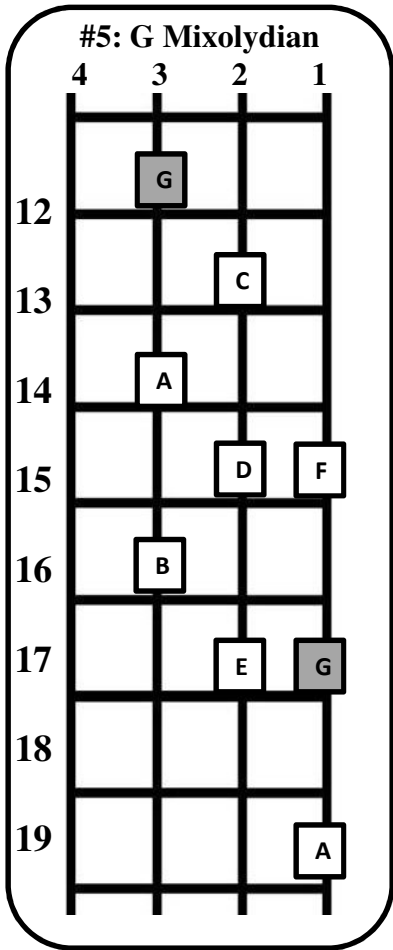
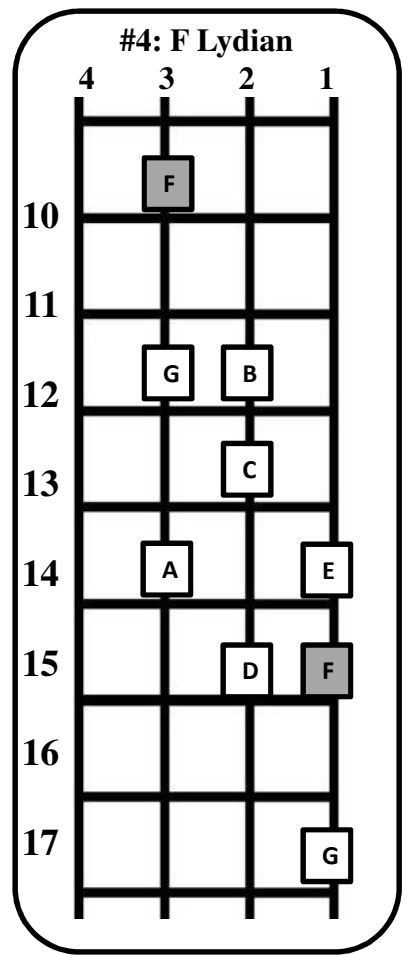
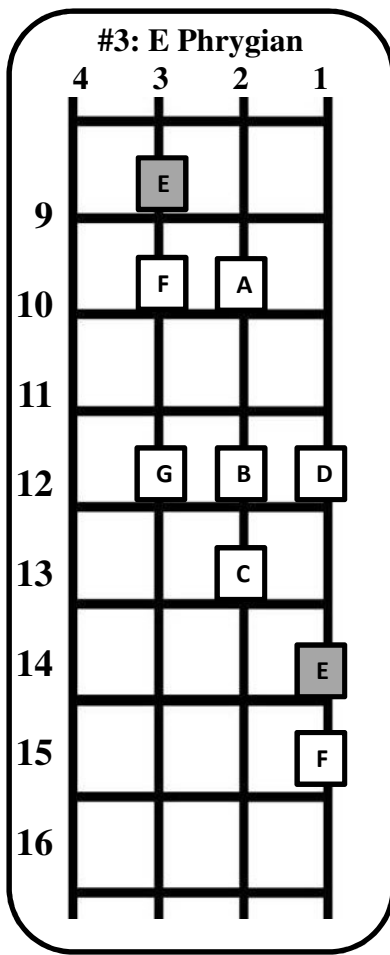
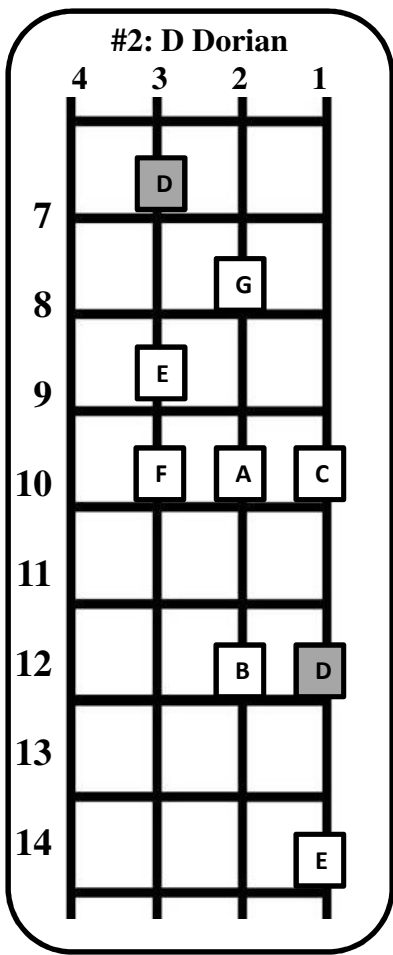
“Big whoop” you may say. . . “What’s this got to do with the price of tea in China? I’m not interested in Jazz!” No, you probably won’t use any of these scales per se in your playing anytime soon, so, why **should** you learn them? Let me count the reasons:

1. Physical Development: I can’t harp on this one enough; the more different things you teach your fingers to do (and your ears to hear), the easier the next step will be. In the worlds of classical and jazz, the scale is king; any serious musician worth his/her salt knows inside and out all the modes in all the keys and then some. We in the banjo world have a lot of catching up to do.

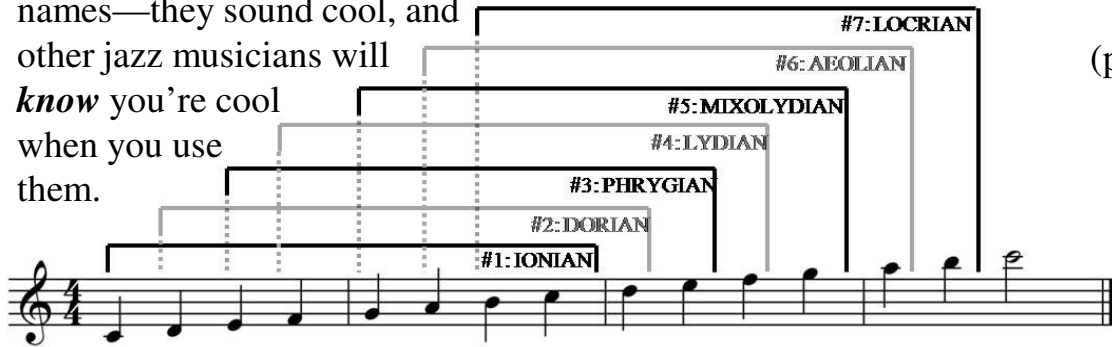
2. Ear Training: These scales will sound different, maybe even “weird” until you get used to them. That’s why they’re so important to ear training; they stretch your ears to a “new normal.” And as I alluded to in the chapter intro, you need to understand the Modes well to truly make sense of the Harmonized Scales in the next chapter. Understanding **them** is in turn essential to truly understanding chords, which is a major key to understanding music theory and “playing by ear” (see the *Ear Training* chapter for more on this important aspect). At any rate, **the modes are absolutely essential!**

3. Organization: One of the reasons I languished for so many years with my own playing is that I wasn’t practicing the right stuff. Learning the modes has given me the physical and mental framework I needed to finally progress.

4. Taking the banjo in new directions: Let me be frank: I intend for my legacy to be one of “broadening the parameters of banjo music.” Why not learn to use it in ways that most other instruments have been used for years? ***Isn’t our beloved banjo worthy of progress? I think it is. . .***



So, just to reinforce the idea that the modes are all derived from the Major Scale, look at this picture. We take a two-octave “mega-scale,” and chop it up into seven different one-octave chunks, and voila, we have the Church Modes! As you work through the next two chapters, you’ll see this theme repeated many times in many different contexts. It is *the* most important concept in this book! And like I said, *do* memorize the Greek names—they sound cool, and other jazz musicians will *know* you’re cool when you use them.



Now, yet another way to reinforce the concept is to look at the banjo fretboard (right). Can you “see” the seven mode structures among all those notes (and why you need to learn all the notes on your fretboard {hint, hint})? Try it now: Find the first C note on the third string, and—using the 3-3-3 pattern—follow the scale up the neck. Try to picture all the Modes this way.

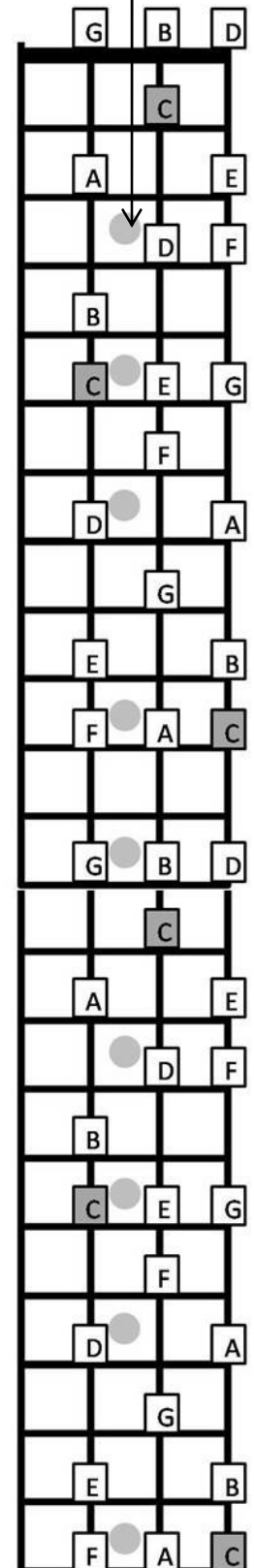
Now, see if you can do the same using a 3-2-3 pattern. How about a 2-2-2 (six note) pattern? I call these “situational scale patterns.” Remember I mentioned scale “fragments?” You’ll rarely see complete scales in music; the melody will more often consist of mode fragments. Ingraining the various fragment patterns in your fingers will make songs easier to play, and the jazz improvisation patterns are literally limited only by your imagination. Instead of the “by guess and by golly” method (That approach only *works* for outright geniuses: Are you one? Neither are I!), you’ll have clearly defined neural pathways to follow. And again, *the Modes bring it all together!* I could easily write another book, filled with nothing but mode fragment patterns. . .hmm. . .

Oh, remember I said that in some ways the plectrum is a *better* (or at least more practical) scale instrument than the tenor? Here’s how you can prove it to yourself. Play *this* scale now:



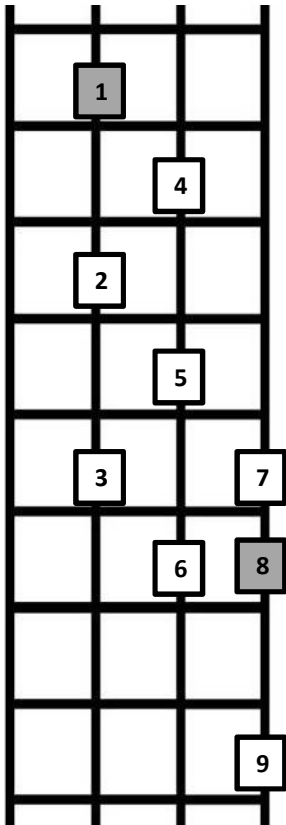
This is a 4-4 pattern in the key of F. Notice how awkward it is? *This* is how you play *closed* scales on the tenor banjo! The tenor is totally tuned in “fifths,” so the 4-4 pattern is the only way to do it. This is also an illustration of why I don’t show plectrum scales using the 4th string; they’re impractical. The close tuning between the top three strings on the plectrum makes for fast, versatile scale work, albeit in only one octave. The guitar tuning is even better for this.

(position markers):

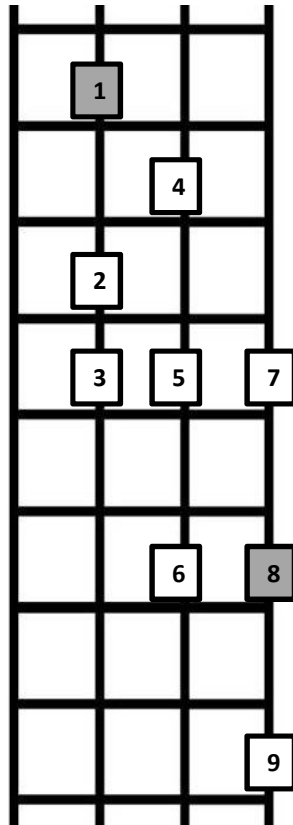


Here are the scale diagrams again with numbers instead of note names. All you have to do to play them in other keys is find the key note you want on the third string, and start the scale pattern from that note. For example, an F Ionian (Major) scale would start on the 3rd string-10th fret F. So would an F Dorian, an F Phrygian, etc. Anyway, you'll see all this in Chapter 8.

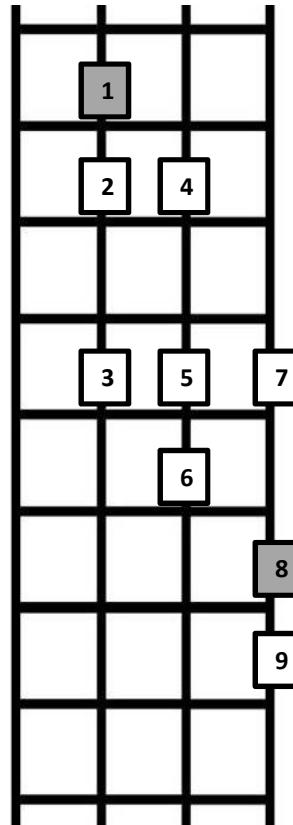
IONIAN



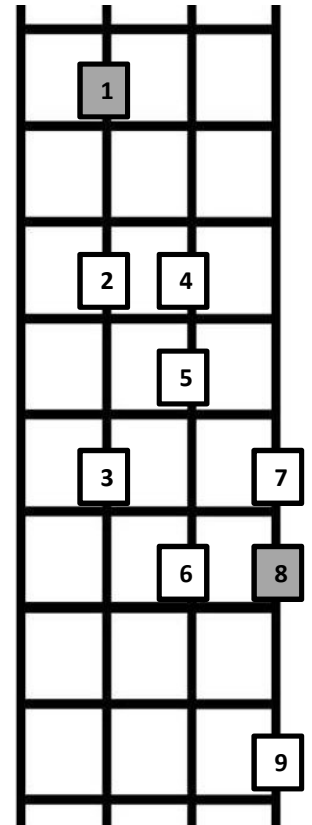
DORIAN



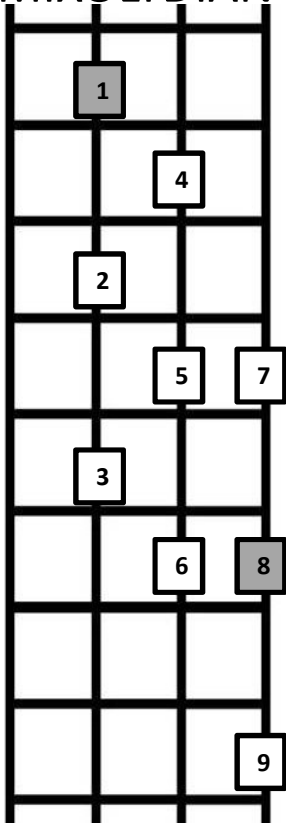
PHRYGIAN



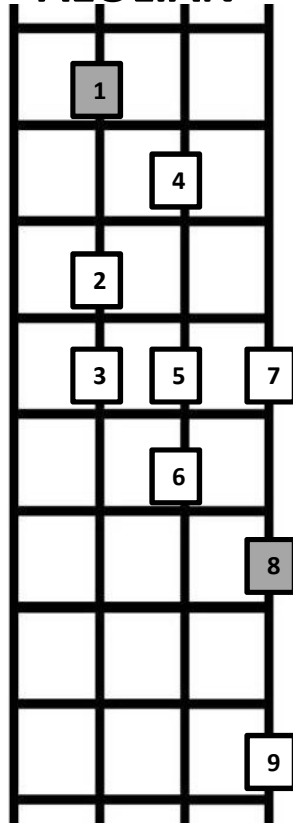
LYDIAN



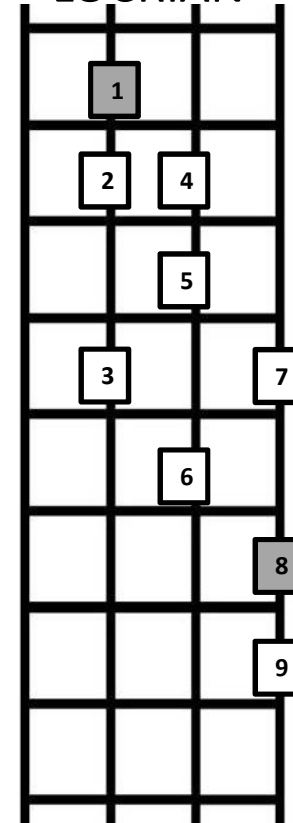
MIXOLYDIAN



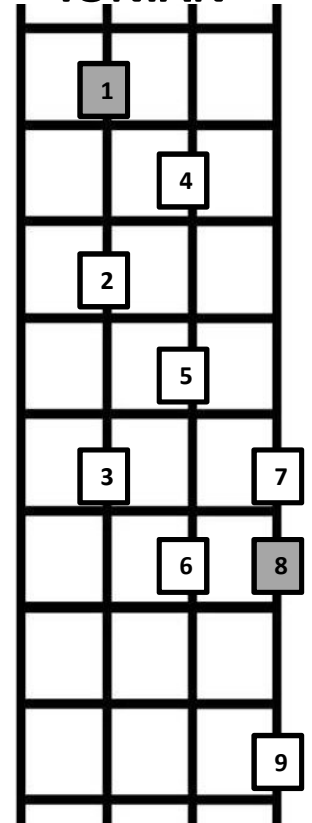
AEOLIAN



LOCRIAN



IONIAN



On a fretted instrument, this is easy; it's simply a matter of shifting everything to another area of the fretboard (using closed scale patterns). From a strictly "finger-training" viewpoint, playing in other keys is not necessary. From a "musical-functionality" viewpoint however, it is vital.

I'm going to stop right here for now. Think about it: You've learned seven different scales. Multiply those by the twelve key sets (one key for each pitch in the chromatic scale), and you have 84 different scales potentially under your fingers! That should suffice for 99% of your musical needs (understatement of the year). I will revisit scales throughout the book, and give you all 12 key sets in the *Banjo Ala Mode* chapter.

Practical Exercise

Now I want to give you a practical exercise. Remember at the beginning of the chapter I said that music is literally made of scales, scale fragments, and other closely related stuff? The best way to illustrate this is to break down a song into its scalar parts. One song that is well-suited to this is *Blue Spanish Eyes*. You'll find the music—with TAB—on the next page.

There are so many possible angles from which to explore this simple tune, but I'm going to limit myself to the task at hand.

First off, notice that although the song is in the key of C (no sharps or flats) and the first chord is a C, it does not start on a C *note*: It starts on E. As you pick through it, notice that the first eight bar phrase is nothing but an E Phrygian Scale. The E is the "third" of the C chord and scale, so this could be thought of as a *C scale starting on the third* (which it is of course), but I want you to realize that it is more correctly thought of as an *E Phrygian scale*. This will become a really important distinction when we get into the *Harmonized Scales* chapter, and again in the *Ear Training* chapter. I emphasize it here to show more reason to learn the modes, *as if you need any!*

The next eight bar phrase consists of a *D Dorian Scale*.

The next phrase starts out with the E Phrygian again, but morphs into an E Locrian with the addition of the Bb. Then it breaks down into shorter scale fragments to the end.

Note: There's a lot of additional theory that could be read into this whole process, but that would complicate the issue unnecessarily. The point is that the song is made up of scales and can be directly compared with the material that you just learned a few pages ago. I should also note that there are many different ways to finger this melody; I chose this particular way because again it corresponds with the scales you've learned.

Not every song lends itself so well to this process, but the vast majority will at least have some mode fragments if not outright scales. Again, the main point is to show that the modes are important to learn (and practice!). Next time you're practicing out of your banjo band book, do a little investigating, and apply the lessons learned in this chapter to your everyday playing.

Another interesting project: Learn to play single-string melody on all your songs, using the modes as your guide (in the next chapter you'll learn to play harmony!). You'll hear the song differently than you do with chord melody or chord strumming, and it will give you a new weapon for your jam session arsenal (and give the tenor players a run for their money!). I talk a lot more about this in the *Putting It All Together* chapter.

Blue Spanish Eyes

a study in practical Scale use

Bert Kaempfert
arr. Ron Hinkle

C

9 9 9 10 12 12 9 9 10 12 10 12 12 13 12 14

E Phrygian Scale

G7

15 15 7 7 7 9 10 16

D Dorian Scale

C C7

7 7 9 10 8 10 10 12 10 12 14 14 9 9 9 10

E Phrygian Scale

C C7 F

12 12 9 9 10 12 10 11 11 13 12 13 19 19

E LOCRIAN Scale (because of the Bb)

Fm C G7

18 18 20 18 17 17 14 15 15 14 12 13 12 12 13 15 12

C

13 13

So, to conclude this chapter, I want to say this: ***Don't worry if you don't yet fully understand the theory behind scales.*** I don't either! At a beginning level, I'm mostly concerned with getting your fingers moving. Practice diligently, and you will quickly start to notice changes in your playing, no matter what level you currently play at. For example:

*Scale work exercises all three aspects of mechanical development: The picking hand, the fretting hand, and the coordination between the two hands. There's no more direct way to accomplish this.

*Can you think of a better way to learn the fretboard other than to learn how to actually use it? Can you see how this knowledge will make you a better banjoist and musician?

*Knowledge is a wonderful thing! Your self-confidence will increase, and you'll no longer have to admit—***proudly or not***— “Oh, I don't know anything about scales.”

*If you use a metronome (***IF? What am I saying, of course you do!***), your sense of time will improve. Think about how important ***that*** is to a rhythm instrument player! And that reminds me: Make sure you practice all the modes using the scale practice routine. That's the surest way to ingrain them all into your fingers.

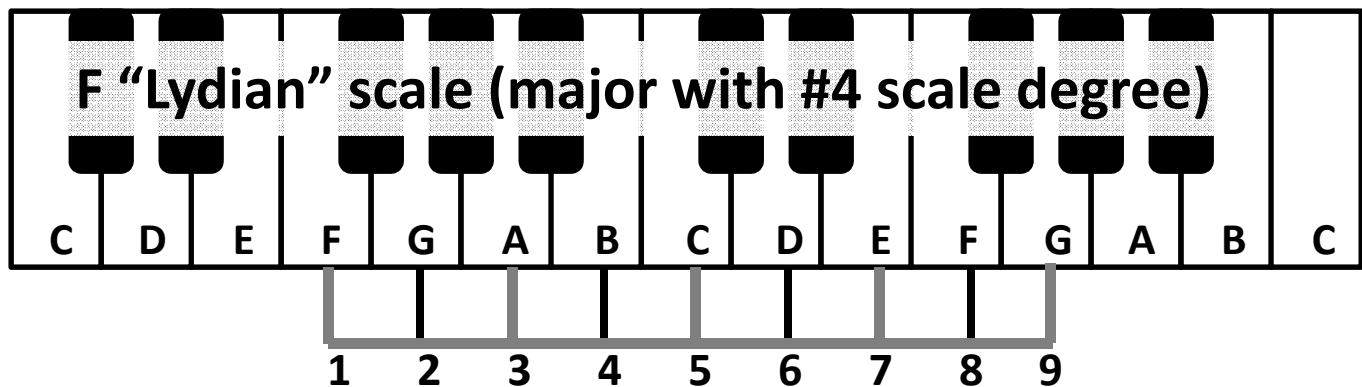
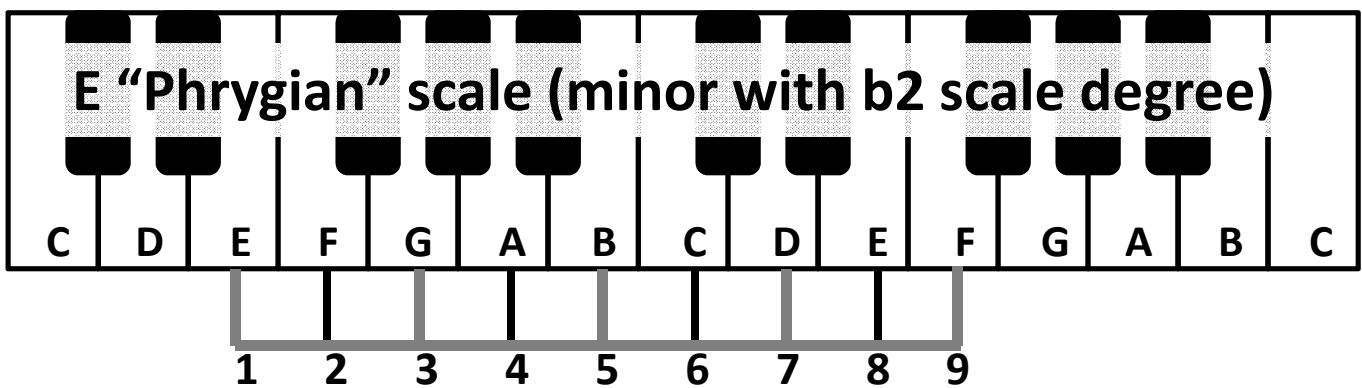
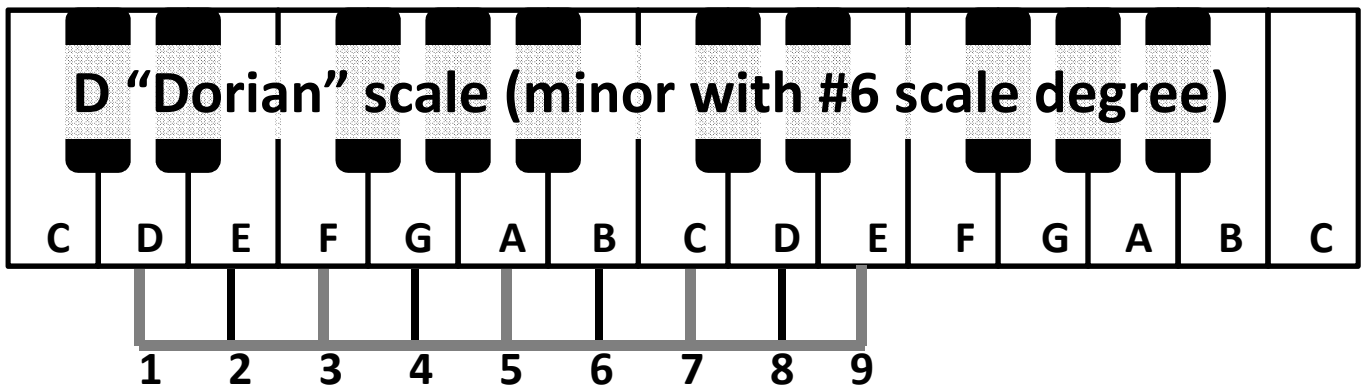
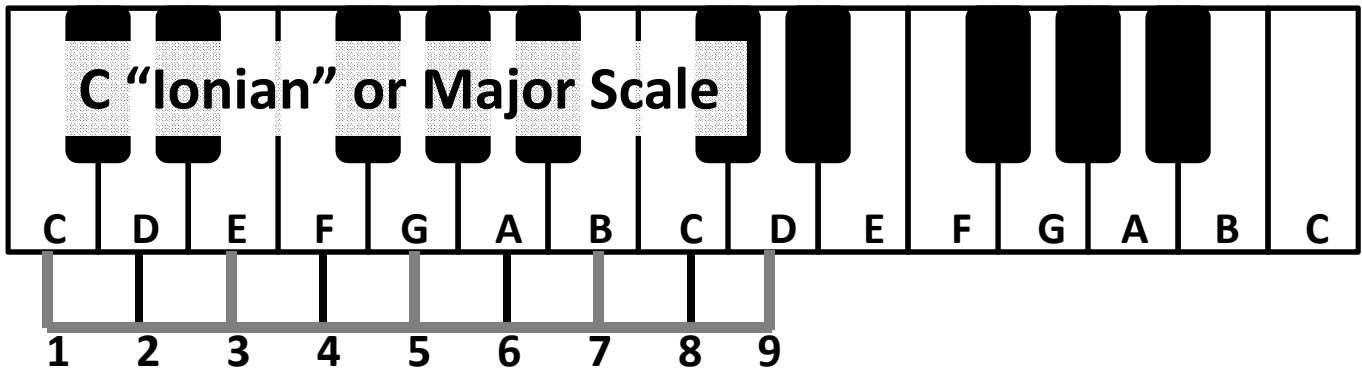
*As your jazz ear develops (if that's a direction you would like to go) your fingers will know what to do instinctively. There's nothing more frustrating than to hear something cool in your head and not have the ability to play it on the spot. ***Believe me, I know!*** In short, ***you can't reasonably expect to play jazz if you haven't done extensive scale work.*** It's taken me over 20 years (since first hearing Buddy Wachter play) to realize that for myself. As I said in the book introduction, I've always known ***what*** I had to learn, I just didn't know ***how***. Hopefully, I just saved you a lot of time and pain (but that's up to you)!

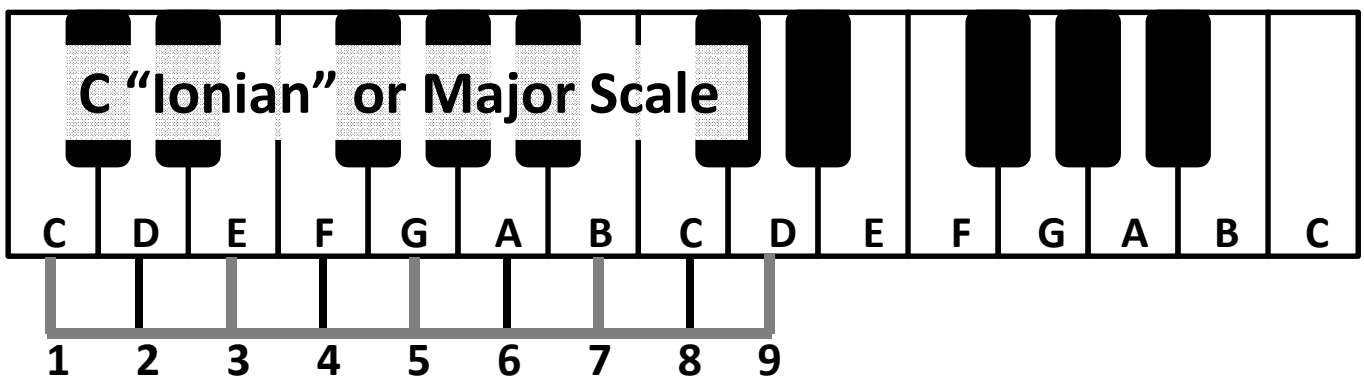
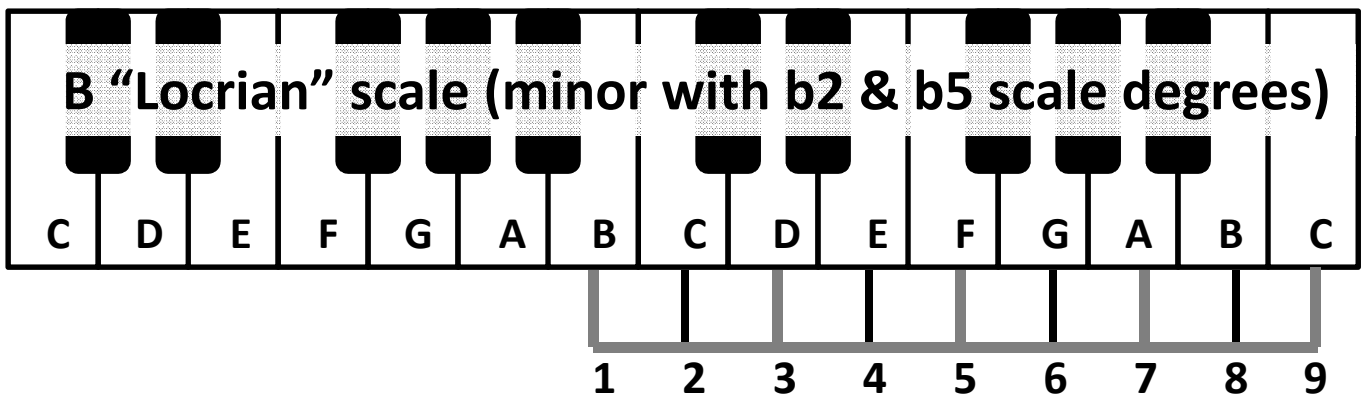
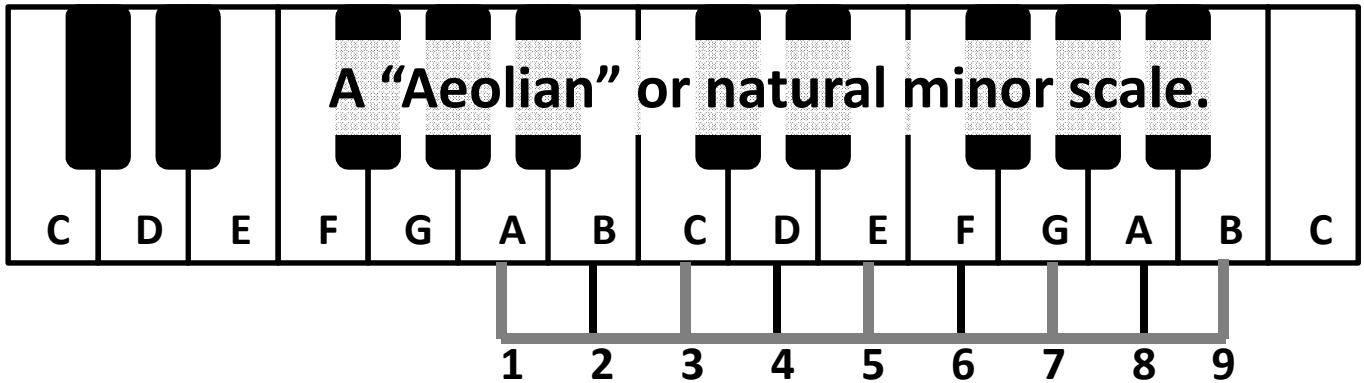
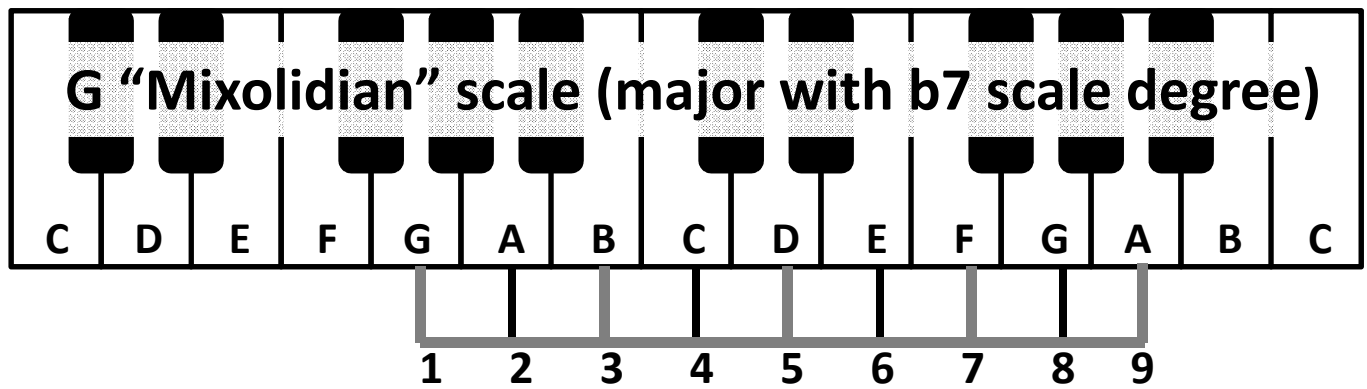
I haven't emphasized it very much yet, but you should be spending a fair amount of time on the Picking-Hand chapter also. If you haven't looked through it lately, I recommend you review it before moving on. Another good learning tool is playing along with the Midi files. That's why I included them; so you can hear how things sound, and to use as a metronome/play-along.

One last clarification: From here on out I will use the terms “scale” and “mode” interchangeably. I'll tend to use mode collectively, and scale individually. Just know that however I use the words, the meaning is exactly the same.

Again, you're about to discover the biggest reason for learning the modes; the next chapter is *Harmonized Scales*. But first, turn the page for bonus educational material.

In an effort to leave no stone unturned, I want to show you *one more way* to look at the scale modes. In the piano world, they are also known as the “white key scales.” You can easily see why in these diagrams; no “black” keys are played in any of them—in other words, there are no sharps or flats. If you have access to a keyboard, try these, or have a pianist friend play them for you (or just play the Midi File “White Key Scales”). There is so much fascinating history and music theory that goes along with these. . .that is beyond this book. . .sorry Bach, they’ll have to read it on their own somewhere else. Banjo playing is what *this* book is about! Do check it out on the internet though.





One final thought: Scales are an important aspect of musical understanding, but certainly not the only one. As you are going through the other chapters, keep what you learned in this chapter in mind, and please refer back often. You will be amazed at how your overall understanding grows with time. Everything in this book is related to everything else! I say this because the whole thing can seem overwhelming at first: Take only as big a bites as you can handle.

Chapter 2: Harmonized Scales

What are they?

Two or more scales played at the same time, producing a “scale with harmony,” or simply, a Harmonized Scale.

What do you need to know?

Have a basic understanding of the Scale Modes.

Why are they so important?

- Learn to play and hear simple harmonies.
- Truly understand chords in a more musical, “non-chord melody” way, leading you further away from chord melody.
- Give a simple way to add variety to your playing.

Harmonized Scales

I hope you have a good basic understanding of scales now, *'cause now it's gonna get real interesting!* Imagine if you will, four banjo players each playing a different scale mode at the same time, and their sounds together producing a series of chords. Now, count the strings on your banjo (four, I hope!), and say to yourself: "Self, I have four strings: *I* could play all four of those modes *all by myself, all at the same time!*" Well of course you can! You're a good lookin' banjo player, after all!

Here's where it gets a little tricky, and requires a fundamental paradigm shift: This chapter is secretly about chords, but not in the way that you've traditionally thought about them (ala chord melody or chord strumming). I'm going to show you how to play chords *as a by-product of modes*. The almost total reliance on chord melody, *as we know it*, is unique to the four-string banjo, and to the music that we tend to play. It's also a bit of a musical dead-end: I certainly don't mean to take anything away from Eddie Peabody and his considerable banjo legacy (he certainly did more than *I* could ever dream of doing), but, *in my opinion*, the popularity of his *playing style* pretty much derailed the plectrum banjo in it's 1920's developmental tracks. For more on this opinion, read the chapter *What Should A Plectrum Banjoist Know?*

Now, before I move on, I want to ask you a few questions: If I was to play a C scale, and I asked you to play "harmony" with me, what would you play? Now, consider what you learned about the *modes* in the last chapter: How would that knowledge effect your answer to the first question? Instead of #1: "I don't know how to play harmony," or #2: "I would just play what sounds right," can you see that there may be a describable and learnable "method to the madness" of playing harmony? If you think of a scale as a melody—some melodies *are* nothing but scales after all—can you see that learning to play and hear a "harmonized scale" could lead to being able to hear and then play a "harmonized melody?" So, along with the purely physical aspect of this chapter, there are also very strong "practical music theory" and "ear training" aspects. This is important stuff, and the modes are what make it possible!

As in the *Scales* chapter, we'll start out real basic. Without trying to explain further, I'll let the exercise explain itself. All we're doing here is combining modes—in this case, two modes—into one "harmonized" scale.

Two musical staves are shown side-by-side. The left staff is in 4/4 time, treble clef, and contains a C Ionian scale starting on the 2nd string. The notes are C, D, E, F, G, A, B, C. Below the staff is a fretboard diagram for the 2nd string, with fret numbers 1, 3, 5, 6, 8, 10, 12, 13. The right staff is also in 4/4 time, treble clef, and contains an E Phrygian scale starting on the 1st string. The notes are E, F, G, A, B, C, D, E. Below the staff is a fretboard diagram for the 1st string, with fret numbers 2, 3, 5, 7, 9, 10, 12, 14.

Now play the two scales together. Listen to MIDI File HS-01.

A musical staff in 4/4 time, treble clef, showing a two-note harmonized scale. The notes are pairs of notes: C2-G2, D2-A2, E2-B2, F2-C3, G2-D3, A2-E3, B2-F3, C3-G3. Below the staff is a fretboard diagram for the 2nd and 1st strings. The 2nd string frets are 2, 3, 5, 7, 9, 10, 12, 14. The 1st string frets are 12, 10, 9, 7, 5, 3, 2.

Et voila! We now have a two-note harmonized scale! I'm sorry, did I say this was complicated stuff? It is, but only if you let it be. No matter how complex it gets, at heart it's always as easy as 1-2 (or 1-2-3, or 1-2-3-4, as you'll soon see). You only need two fingers to play this of course. Experiment for yourself to find which two fingers are the best, but I'll give you a hint: Be ready to play it with any combination of fingers.

Here's the exact same harmonized scale, but on the second and third strings.

Two-note Harmonized Scale #2

5 6 8 10 | 12 13 15 17 | 15 13 12 10 | 8 6 5

5 7 9 10 | 12 14 16 17 | 16 14 12 10 | 9 7 5

And here's the same thing on the 3rd and 4th strings. This one has a little different "voicing," because of the tuning of those two strings. Listen to MIDI File HS-02:

Two-note Harmonized Scale #3

5 7 9 10 | 12 14 16 17 | 16 14 12 10 | 9 7 5

4 5 7 9 | 11 12 14 16 | 14 12 11 9 | 7 5 4

The only difference is that now the E, or "third" of the "chord" is on the bottom: Same two notes as the previous two harmonized scales, just stacked differently, or "inverted." This produces a "harmonic interval" of a sixth, which is one of the more pleasant sounding intervals. Buddy Wachter uses these chords a lot in an accompaniment role (sounds like a mandolin).

By the way, are these really "chords?" Well, technically not, because it takes three or more notes to officially make a chord. For simplification of terminology though, I will refer to them as chords.

Now would be a good time for me to touch on the subject of harmonic intervals. A harmonic interval is the vertical distance between one note in a chord and the next. Let's take a different look at our first harmonized scale:

I ii iii IV V vi vii I vii vi V IV iii ii I

2 3 5 7 | 9 10 12 14 | 12 10 9 7 | 5 3 2

1 3 5 6 | 8 10 12 13 | 12 10 8 6 | 5 3 1

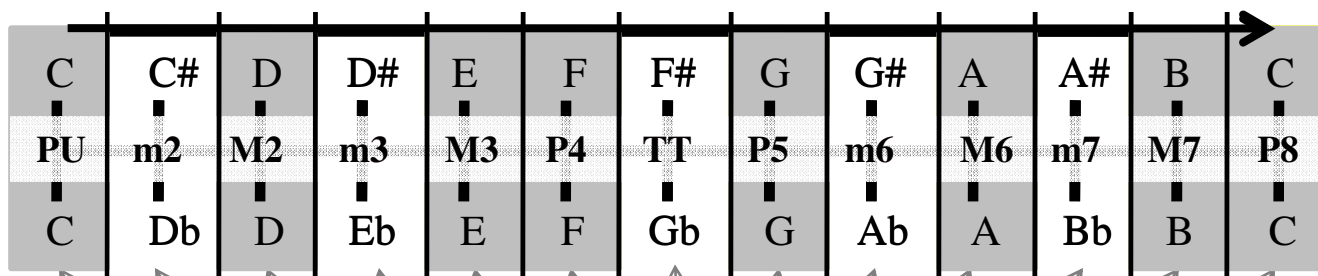
Each of these chords has a harmonic interval of a third between the notes (known as "harmony in thirds"). I've added the Roman numerals to introduce another new concept, which I'll explain more fully in a bit. For our purposes here, know that an upper-case numeral denotes a "quality" of a "major third" while the lower-case numeral denotes a quality of a "minor third." Notice that the two notes of each chord are either on two consecutive lines, or on two consecutive spaces.

Harmonic intervals—and their cousins, Melodic intervals—are an important music theory concept. It is a fairly large subject however, that could easily take up its own chapter, so I will limit the discussion to how they relate to Harmonized Scales, basic chords, and the arpeggios you’ll see in the next chapter.

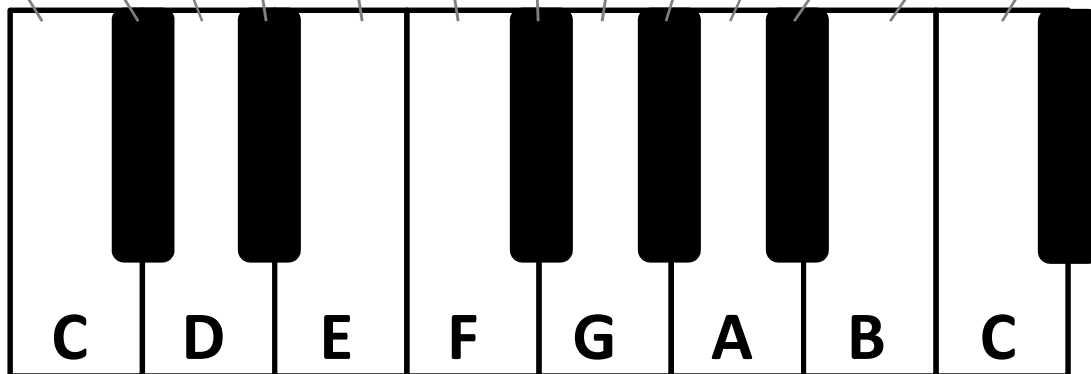
So, a simple explanation for the intervals—hmmm. . .let’s see. . .the best way to explain this is with a “note line.” This is a visualization of the 12 notes of the chromatic scale (13 including the repeated C). *Now, don’t go thinking this is going to be difficult stuff, because it really is quite simple!* You will just have to spend a little time thinking about them, but it will make a huge difference in your understanding of the banjo and music theory. Having said this, I realize that when *I* look at this illustration, I see all kinds of additional wonderful things that have taken me years to comprehend to the extent (and limit) that I currently do! It really is endlessly fascinating stuff to me!

The first-octave interval names and their abbreviations are: Perfect Unison (PU), Minor 2nd (m2), Major 2nd (M2), Minor 3rd (m3), Major 3rd (M3), Perfect 4th (P4), Tritone (TT), Perfect 5th (P5), Minor 6th (m6), Major 6th (M6), Minor 7th (m7), Major 7th (M7), and Perfect Octave (P8). Quick clarification: In this chart, the interval name refers to the “distance” between the tonic note—C in this example—and the next note. So “m2” means C to C#, etc. It also means the distance between any two notes, as you’ll soon see.

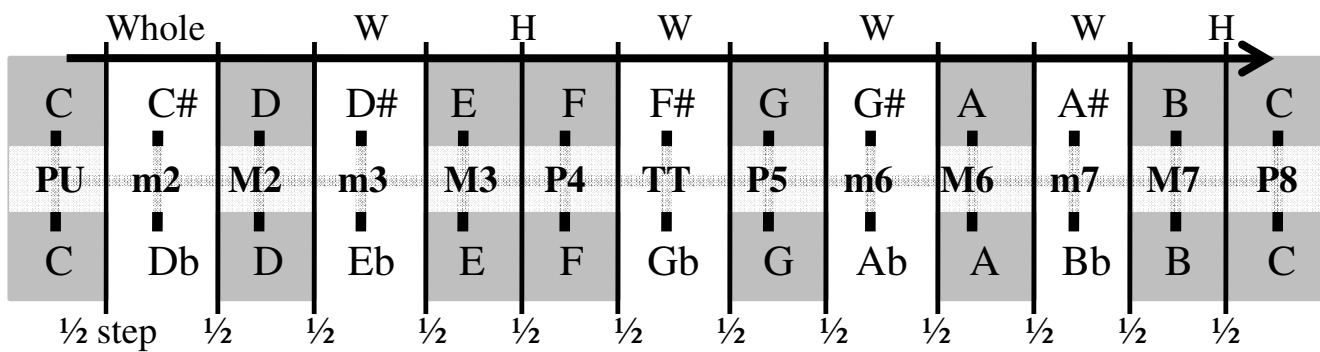
Anyway, here is that note line with the interval names. Remember, the notes with two names are called “enharmonic” notes. This will become important at some stage of your future development, but are unnecessary to this discussion. I’ve highlighted the familiar C scale to help you relate it to what you already know:



And just for good measure, here’s the piano keyboard for comparison. See the visual patterns? Isn’t this fun?



Now that I’ve shown you all of the first octave intervals, I’m going to tell you that for the purposes of this book, I’m only concerned with Minor and Major 3rds and how they relate to building chords. Now, let’s take a different look at the note line:



Remember the whole and half step structures from the *Scales* chapter? The Major Scale pattern is shown at the top as a reminder. Now, I'll relate them to the 3rd intervals (bottom numbers). Count the half steps (called a "semitone") between the **C and the E**: Can you see that there are four? It's the same distance between the **F and A** and the **G and B** (don't just take *my* word for it, count them yourself!). Those are the **Major 3rds**. Now, notice that there are only three semitones between the **D and F**, the **E and G**, and the **A and C** (and the **B and D** of the next octave). Those are the **Minor 3rds** (refer back to the scale illustration at the bottom of page 25). Almost all of traditional "Western music" (Euro-American) harmony/chord theory is based on stacked intervals of a 3rd (called "tertian" harmony). I'll have more to add to this when we get to the Three-Note Harmonized Scales.

But before we go there, let me relate this again back to the *Scales* chapter. If you think of each chord being composed of the "1" and "3" of a scale, what scales are they? You can probably already guess the answer based on previous knowledge, but I'll tell you anyway: The **I** is the 1 & 3 of an Ionian scale; the **ii** is the 1 & 3 of a D Dorian scale; the **iii** is the 1 & 3 of an E Phrygian scale; the **IV** is the 1 & 3 of an F Lydian scale; etc. If you remember from the *Scales* chapter, the Lydian and Mixolydian modes are altered major scales, and the Dorian, Phrygian, and Locrian modes are altered minor scales. Can you see (and hear) the deeper relationship between the modes and the chords produced by the harmonized scales, and the importance of learning the modes as they relate to chord theory and basic harmony?

[Key: **Major**, Minor]

I ii iii **IV** V vi vii **I**
Ionian (Major)–Dorian–Phrygian–**Lydian**–**Mixolydian**–Aeolian (Minor)–Locrian–**Ionian**

I'm only showing the harmonized scales in one octave, and in only one "mode" (based on the Ionian mode). Of course, you can play two octaves, and the modes would be contained within it, just like with the scales. All the same logic applies, just on a more complex level.

Before I move on, I want to give you an arrangement of a favorite song that is almost entirely made up of two-note harmonized scales. That song is none other than *Blue Spanish Eyes!* Just as it lent itself well to understanding mode use in music, it works even better to illustrate harmonized scales. You can use any of the three patterns—in any combination—on this. This technique can be used to play many simple songs.

By the way, you can easily see the stacked 3rds all the way through this arrangement: Every two-note combination (except the A7) is on either lines or spaces. This is a great visual cue to reading music.

Blue Spanish Eyes

a study in Harmonized Scales

Bert Kaempfert
arr. Ron Hinkle

The first system of music consists of two staves. The upper staff is in treble clef with a key signature of one flat (B-flat) and a 4/4 time signature. It features a melodic line with a C major triad (C-E-G) in the first measure, followed by a sequence of eighth notes: C, D, E, F, G, A, B, A, G, F, E, D, C. The lower staff is in bass clef and shows the corresponding chord voicings: C major (C-E-G), C major (C-E-G), and C major (C-E-G). Fingering numbers 1-3 and 1-2-3-4-5 are indicated for the right hand.

The second system of music consists of two staves. The upper staff continues the melodic line with a G7 chord (Bb-D-F) in the first measure, followed by a sequence of eighth notes: Bb, A, G, F, E, D, C, Bb, A, G, F, E, D. The lower staff shows the corresponding chord voicings: G7 (Bb-D-F), G7 (Bb-D-F), and G7 (Bb-D-F). Fingering numbers 1-3 and 1-2-3-4-5 are indicated for the right hand.

The third system of music consists of two staves. The upper staff continues the melodic line with a G7 chord (Bb-D-F) in the first measure, followed by a sequence of eighth notes: Bb, A, G, F, E, D, C, Bb, A, G, F, E, D. The lower staff shows the corresponding chord voicings: G7 (Bb-D-F), C major (C-E-G), and C major (C-E-G). Fingering numbers 1-3 and 1-2-3-4-5 are indicated for the right hand.

The fourth system of music consists of two staves. The upper staff continues the melodic line with a C major triad (C-E-G) in the first measure, followed by a sequence of eighth notes: C, D, E, F, G, A, B, A, G, F, E, D. The lower staff shows the corresponding chord voicings: C major (C-E-G), C7 (C-E-G-Bb), and F major (F-A-C). Fingering numbers 1-3 and 1-2-3-4-5 are indicated for the right hand.

The fifth system of music consists of two staves. The upper staff continues the melodic line with a Bb major triad (Bb-D-F) in the first measure, followed by a sequence of eighth notes: Bb, A, G, F, E, D, C, Bb, A, G, F, E, D. The lower staff shows the corresponding chord voicings: Fm (F-Ab-C), C major (C-E-G), A7 (A-C-E-G), Dm (D-F-A), and G7 (Bb-D-F). Fingering numbers 1-3 and 1-2-3-4-5 are indicated for the right hand.

The sixth system of music consists of two staves. The upper staff continues the melodic line with a C major triad (C-E-G) in the first measure, followed by a sequence of eighth notes: C, D, E, F, G, A, B, A, G, F, E, D. The lower staff shows the corresponding chord voicings: C major (C-E-G), C major (C-E-G), and C major (C-E-G). Fingering numbers 1-3 and 1-2-3-4-5 are indicated for the right hand.

I'm moving into the three-note harmonized scales in a moment, which adds the 5th scale degree onto the two-note scale. Before I do though, I want to point out something interesting: Listen to Midi File HS-03, then play this next example, and notice how strange it sounds: This is a harmonized scale played with only the 1st and 5th degrees.



Without the moderating influence of the 3rd, it just doesn't sound right. These are called "parallel fifths." I just wanted you to hear what they sounded like; keep this example in mind when you play the three-note scales.

Three-Note Harmonized Scales

Now we're going to move on to three-note, or "triad" harmonized scales. But first, what is a triad? A triad is a basic three-note chord, made up of the 1st scale degree (aka the "root"), the 3rd scale degree, and the 5th scale degree. Another, more important way of thinking about triads is that they are built by "stacking 3^{rds}." 3^{rds} are literally the "building blocks" of chords. Refer back to the 1/2 step note-line illustration from the top of page 27 for this discussion and count the semitones to aid in understanding.

There are only four possible types of triad:

Major Triad: Built with a Major 3rd (in this example, **C to E**) and a Minor 3rd (**E to G**).

Minor Triad: Built with a m3 (**C to Eb**) and a M3 (**Eb to G**).

Diminished Triad: Built with two m3s (**C to Eb**, and **Eb to Gb**).

Augmented Triad: Built with two M3s (**C to E**, and **E to G#**).

All the chords you will learn in this book have one of these triads as its base. Play this simple exercise to hear the differences. As always, ear training is vital to understanding: Memorize the *sound* of these triads, paying close attention to what makes each one sound unique. It also helps to sing the root note (C) while playing these chords. Listen to MIDI File "Triad Types."

C Major Triad	C Minor Triad	C Diminished Triad	C Augmented Triad
T 5	5	4	6
A 5	4	4	5
B 5	5	5	5

To make a triad, we add the 5th scale degree to the two-note "I" chord from before (C-E-G): Thus, to make a "triad scale," we add in the mode that starts on the G: A "G Mixolydian" scale.

Look at and play the first example on the next page: You should recognize these chord "shapes" from your previous playing experience, but I want you to remember that they are in a different context here: Now they are part of a harmonized scale, so you should think horizontally (each individual note leading to the next: called "voice leading") and not vertically (one note stacked on top of another). I hope you also realize how much more satisfying it is to understand *why it is what it is* instead of just some chord shape to memorize! I know *I* do! Listen to MIDI File HS-05.

C	D m	E m	F	G	A m	B dim	C
5	7	9	10	12	14	15	17
5	6	8	10	12	13	15	17
5	7	9	10	12	14	16	17

Because there are three notes in a triad, there are two “inversions” of the “root” triads. Now we’ll play it in the next, or “1st inversion.” All I’ve done is move the root note C to the top of the chord (arrow). Listen to MIDI File HS-06.

C	D m	E m	F	G	A m	B dim	C
10	12	14	15	17	19	21	22
8	10	12	13	15	17	18	20
9	10	12	14	16	17	19	21

And now the “2nd inversion”: Here I’ve moved the 3rd E to the top of the chord (and brought the whole thing down an octave). Listen to MIDI File HS-04.

C	D m	E m	F	G	A m	B dim	C
2	3	5	7	9	10	12	14
1	3	5	6	8	10	12	13
0	2	4	5	7	9	10	12

There is no *practical* way of playing the triad harmonized scale on the 4th, 3rd, and 2nd string; you’ll have to trust me on this. . .

I’ve added chord names, since these are now officially chords. You may notice that the “B dim” chord looks and sounds suspiciously like a G7 chord. . .remember though, we’re talking about *triads* here—we haven’t gotten to 7th chords yet! The chord has to be spelled “B-D-F” to fit the sequence. As you’ll soon find out, a G7 chord is a four-note chord and is spelled G-B-D-F. Pretty interesting, huh?

Remember the parallel fifths exercise from before? Isn’t it strange how playing all three notes at the same time smoothes out the sound? This effect becomes even more important when we add in a fourth note. I’m about to move into that area, but before I do, I want to show you a “bonus” scale. . .

This scale serves a double purpose: It is a cool sounding (but harder to play) scale, and it introduces the 7th to the chord (it replaces the 5th, which is the least important of the chord tones) which we’ll soon see in the Jazz 7th Chord Scales. This is done by replacing the G Mixolydian mode with a B Locrian mode. So now we have the three most important chord tones: The Root, the 3rd, and the 7th. These chords definitely add some color, and they’re an easy way to spice up a tune. Listen to MIDI File HS-07.

The most important points here are: To practice the Harmonized Scales and Triad Scales a lot; learn to “hear” and recognize them; learn to understand the theory behind them (you have my “permission” to read other books and internet articles toward that end!); and ultimately, challenge yourself to play songs using them.

I learned these things over 20 years ago in Buddy Wachter’s seminars, but struggled to apply them to everyday use. The reason why of course is that chord melody was so burned into my fingers and my psyche; I had great trouble thinking in other terms. I also didn’t understand the theory behind it. My biggest recommendation is that you realize this is *not chord melody*, at least not in the way that we banjo players think of it. It really is an entirely different way of thinking about the banjo. My chord melody *approach* to the banjo literally kept me from “getting” it.

So take some time now before you move on and ingrain these patterns into your fingers. And while you’re exercising your fingers, don’t forget to exercise your ears. . . just as you got used to hearing each of the different modes, you should get used to hearing the Harmonized Scales (hearing them as combined modes?). This will become even more important as I increase the complexity in the following pages, and again when you get to the *Ear Training* chapter. So, let’s move on!

At this point, there are two paths you can take:

➤**#1, move on to the Jazz 7th Chord Scales:** You may find them to be a bit daunting, but if you have a lot of experience with chords, they *are* the logical next step in the Harmonized Scale sequence.

➤**#2, skip to the Arpeggio chapter (p.39):** If you don’t have a lot of chord experience, I would rather you get the single-note workout the arpeggios offer now, than have you get bogged down on difficult chord shapes. So, if the chords prove to be too difficult for now, it’s okay to skip to the Arpeggio chapter. This book is really more about single-note technique anyway, but the Jazz 7th chords are vitally important to the overall understanding. The Jazz 7th Chords and Arpeggios are very closely related, so you’ll get the same information either way you go. And the chords will get gradually easier to play as your fingers strengthen through scale and arpeggio practice. If you do skip to the arpeggios now, don’t forget to come back to the 7th Chords at some point!

Jazz 7th Chord Scales

Wait a second, we were talking about harmonized scales just a moment ago, now suddenly we jump to “Jazz 7th Chords?” What’s up with that? Well, it just kinda snuck up! We went from a single note scale to a two-note “harmonized scale,” to a three-note “triad scale.” Now, with the simple addition of the 7th scale degree, we move into a whole brave new world of sound. Rather than show you the Jazz 7th chords as static chord diagrams though, I want to expose them for what they *really* are: *four-note scales*. First, play these individual modes:

C Major Scale: C to C on 4th string.G Mixolydian Scale: G to G on 3rd string. . .

. . .B Locrian Scale: B to B on 2nd string.E Phrygian Scale: E to E on 1st string. . .

Now play the full four-note harmonized scale. Obviously, these are chords; just don't lose sight of what produced them—playing four different modes together. It's a totally different way to think of it. A significant point to remember is that this particular series is named by the note on the fourth string—here, in the key of C. With that thought in mind, play the fourth string note by itself, then strum the whole chord so you can hear how it all relates. One more minor thing: These are technically “voicings” of the chords as opposed to pure “inversions” because of the interval skips between the **C and G**, and the **B and E** (so this sequence is a “root-voicing”: Root on lowest string) This phenomenon is of course caused by the banjo's tuning. Listen to MIDI File J7C-01.

CM7 Dm7 Em7 FM7 G7 Am7 Bm7b5 CM7

Ah. . . isn't that nice? My banjo band upbringing didn't really prepare my ear for these smooth, lovely sounds, so it took me awhile to get used to them. *I'm just now learning how to actually use them.* I think of this as the harmonic dividing line between the chord melody banjo we all know and love/hate, and the hip *jazz instrument* that I long to play.

With that thought in mind, there's something else I need to say: *These chords do not belong in the banjo band* (except of course the G7), *or—for the most part—in Dixieland Jazz.* When I put on my banjo band vest or my Trad Jazz hat, I am a purist about it, and the last thing I want to hear is a chord that just wasn't used in the 1920's (at least not by Eddie Peabody). So, in a strictly historical context, *this is where we leave the traditional plectrum banjo behind. You may or may not like that idea. It is, however, the ultimate premise of this book.*

Note: Many players have difficulty with the “bar” on the third and fourth string. For help with that, and an easier-to-play chord series, turn to the last page of this chapter.

Anyway, just as with the triads, these chords are built by stacking scale intervals in thirds (think odd numbers). Just as the “*I*” triad was built with the 1, 3, and 5 of an Ionian scale, the I Major 7 chord is built with the 1, 3, 5, **and 7** of an Ionian scale, the ii Minor 7 chord is built with the 1, 3, 5, and 7 of a Dorian scale, etc. The 9th, 11th, and 13th chords that modern jazzers use are simply extensions (still in thirds, or odd numbers) of these 7th chords. I’ll get into that a little bit in the chapter on Arpeggios.

And of course, we have another way to look at these chords: Here’s the breakdown in stacked-3rds terms, all in the key of C for Cym-plexity. Think of them as triads with an added 7th (literally, an extended chord, or simply, an “extension”). So the chord name refers to the type of triad, and the extension. You can also see that they are all “spelled” the same, but with slight modifications:

C Major 7 (CM7):	C-M3-E-m3-G-M3-B	(no modifications)
C Dominant 7 (C7):	C-M3-E-m3-G-m3-Bb	(flat the 7 th)
C Minor 7 (Cm7):	C-m3-Eb-M3-G-m3-Bb	(flat the 3 rd)
C Minor 7 b5 (Cm7b5):	C-m3-Eb-m3-Gb-M3-Bb	(flat the 5 th)
C Diminished 7 (Cdim7):	C-m3-Eb-m3-Gb-m3-Bbb*	(flat the 7 th again)

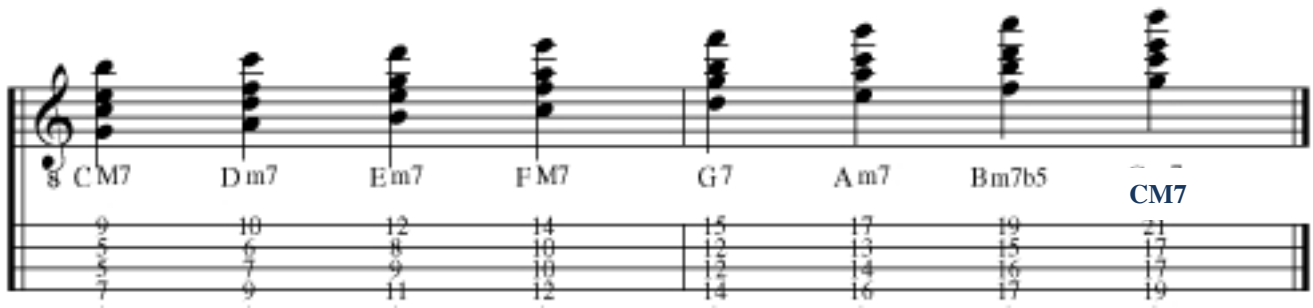
*Interesting sidebar here: In that diminished chord, one more m3 step would bring us back to **C**! And yes, it *has* to be spelled with a double flat (bb)! You can see that the chord would be spelled wrong if I used the enharmonic “A” instead of the “Bbb.” The fully diminished chord is the only Jazz 7th Chord that doesn’t occur naturally in the Harmonized Scale sequence. You’ll find more Diminished trivia in the *Symmetrical Music Patterns* Chapter.

*Interesting sidebar #2: Some music theorists refer to these chord types by their stacked 3rd relationships: A Major 7 chord would thus be called a “Major-minor-major chord,” etc. This naming scheme emphasizes the importance of those relationships.

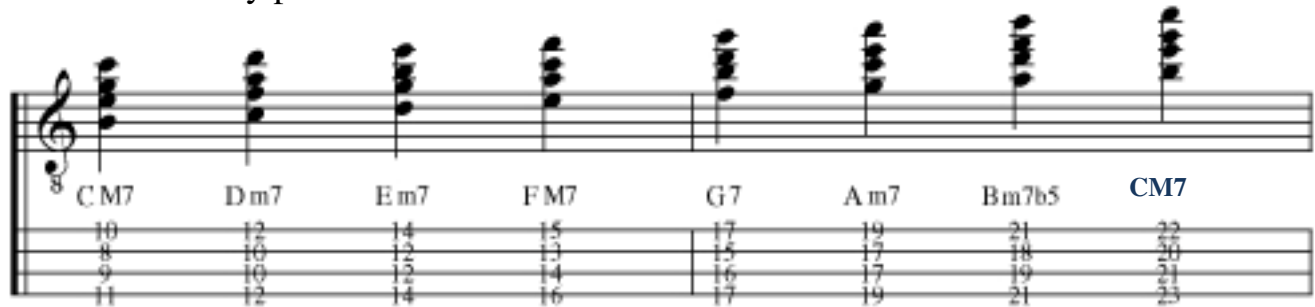
Having four notes, it follows that there are four different ways to play this sequence. I will show you the other three, although they are not terribly practical; in the next sequence (“3rd-voicing”), there are some lovely and practical individual chords, but that M7 shape is almost impossible to play, as you’ll see. As an ear training exercise, all are great, but the one I’ve already shown is easy enough that you don’t need any special skills (or huge hands!) to play. That’s important because *you have to play them to learn to hear them*. Anyway; here is the sequence with the root on the second string (3rd on the bass string). Listen to MIDI File J7C-02.



If you can play these easily, you’ve got bigger hands than I do! But they sure are cool sounding chords. Next is the sequence with the root on the third string and 5th on the bass string (“5th-voicing”). This one is actually fairly practical, and I’ve been finding more uses for some of the chords. Listen to MIDI File J7C-03.

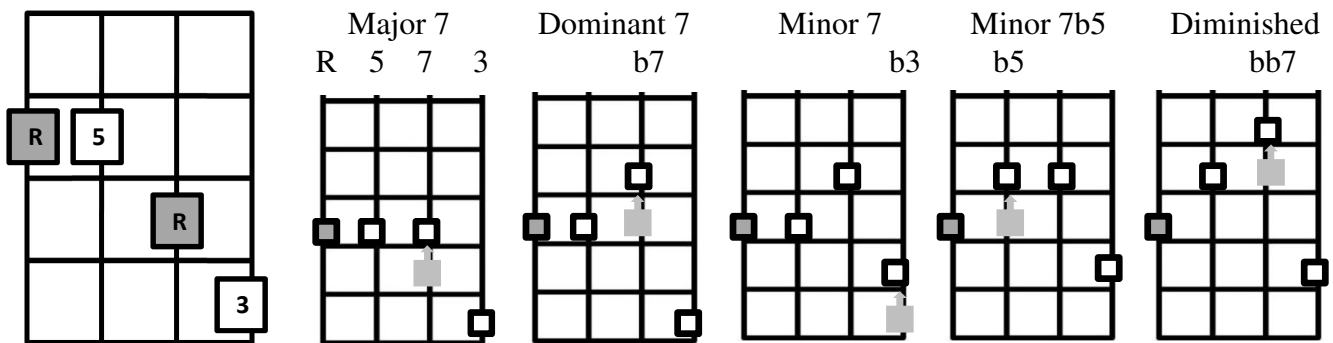


And last—my least favorite sounding sequence—with the root on the first string and 7th on the bass string (“7th-voicing”). Again, there are a couple of very usable forms here, but a few not very practical ones. Listen to MIDI File J7C-04.



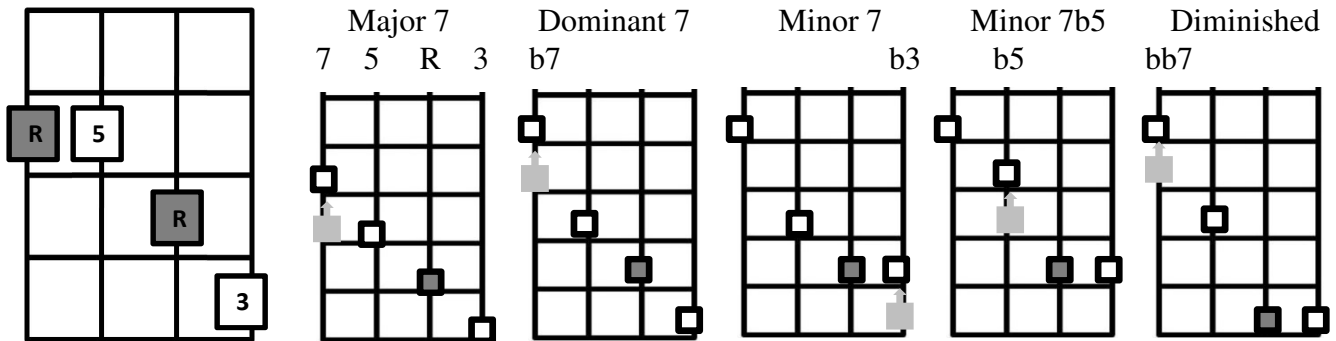
Now I want to show you another way to think about the Jazz 7th chords. I resisted putting these in because I don’t like chord diagrams. To me, they’re like “giving you a fish,” as opposed to “teaching you how to fish.” In this case though, they are the best way to illustrate this concept.

Here we’ll take a plain old “root-voicing” Major chord (referring to the root on the 4th string) and, through chromatic alterations, show you how it mutates through all the Jazz 7th chords. Similar to the *chord-as-product of harmonized scales* concept, think of these as *new-chord-as-product of chord mutation*. It might help to realize that the Root note (grey highlight) never moves. Of course, these are named by the root note, so where you put that determines what key they’re in. For these examples, play them with the root on F (4th string, 5th fret):



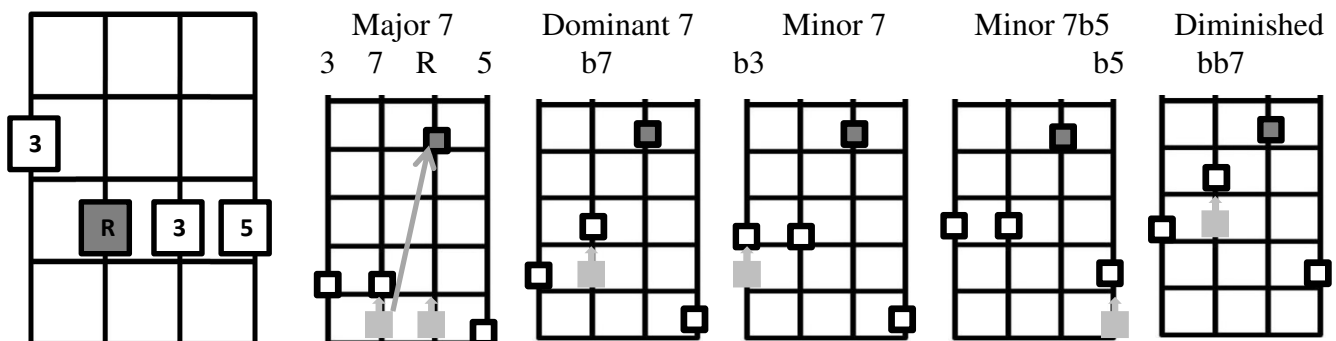
The first mutation happens with the addition of the 7th scale degree. Since there are two “roots” in this Major chord shape, we’ll flatten one of them to make a 7; next, we flatten the same note to make a “Dominant” 7th, the most common of the 7th chords; next, we flatten the 3rd to make a Minor 7 chord; next, we flatten the 5th to make a Minor 7 Flat 5 (known in the classical music world as a “Half Diminished 7th Chord”). The last one is one that I’m sure you’ve seen before: The Fully Diminished 7th Chord. You just maybe hadn’t seen it this way before. We get there by flattening the 7th again, making a double flat (bb).

Because there are two roots in the root-voicing Major chord, there are two viable options for playing the chords. This next sequence starts the same (root on 4th string, 5th fret F), but mutates very differently. The resulting chords have a funkier sound to them (I show this sequence in TAB on the last page of this chapter). The same mutation sequence happens in all the examples shown here. With the first alteration, this becomes a “7th-voicing” chord, one of two 7th voicing sequences possible.

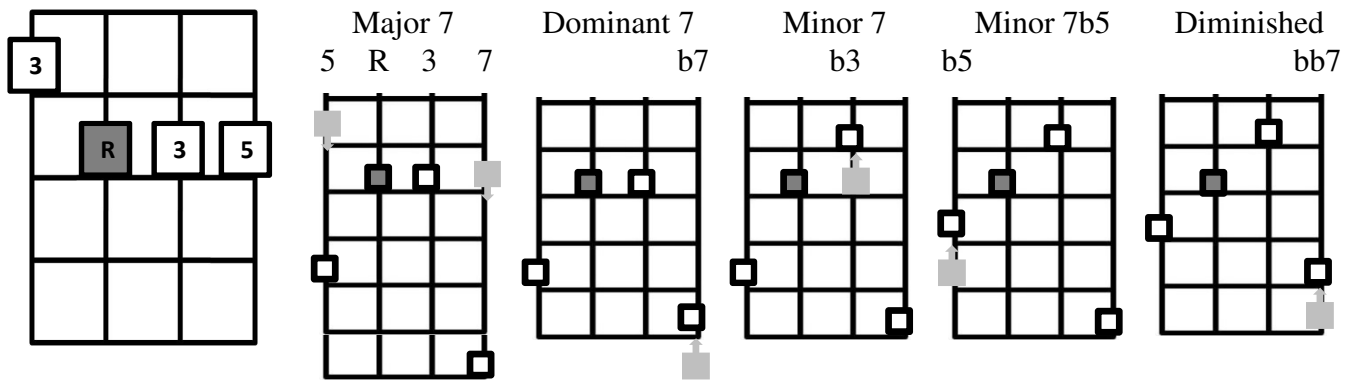


Now I will show you the 3rd-voicing series. This one is the least useful, and has a few very difficult to play forms. It’s also the hardest to illustrate and explain; I include it as a way of reinforcing the lessons from the previous example, and because they are cool sounding chords. At any rate, don’t be concerned if you can’t play some of them, especially the M7 chord. Just understand the theory behind them.

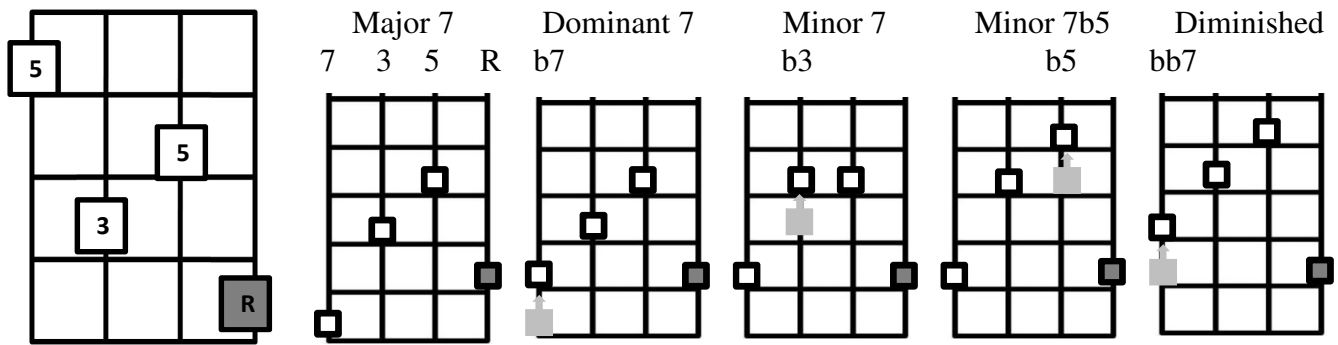
So anyway, we start with the 3rd-voicing Major chord. The root is on the third string; go ahead and place it on the third-string, tenth-fret F. Now it gets complicated: To find the nearest 7th scale degree, we need to move the root (there’s only one root in the form), so we need to replace the root note. The closest one is on the second string, four frets away! The rest of the mutations are the same as before: b7, b3, b5, and bb7. I hope you’ve noticed that the diminished chord is the exact same shape as the third inversion form. Isn’t that cool? The only difference is now it’s named for the note on the second string. I’ll get to more fascinating diminished chord factoids in a little bit.



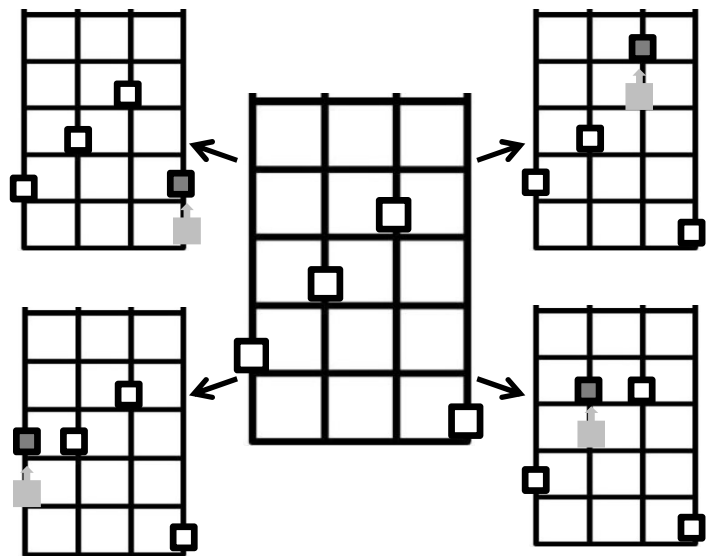
Now for the 5th-voicing series. This one is also based on a 3rd-voicing Major chord, but becomes a 5th-voicing 7th chord with the first modification. The 5th (first string) moves up four frets to become the 7th. The root is on the third string; go ahead and place it on the **third-string, tenth-fret F**. To mutate to the Major 7, change to the shape shown. By now, you know the rest of the routine. And of course, the diminished chord at the end of the road is once again the same shape, but is now named for the note on the third string. These chord shapes are quite useful and are pleasant sounding.



This leaves the 7th-voicing series, which is, like I said before, my least favorite. I'm pretty sure you have the mutation routine down by now, so I won't bother explaining. A couple of these chords are actually quite nice, and of course, there's that magical Diminished chord again!



Speaking of the Diminished chord, let me show you something that still amazes me: The logic behind this almost makes me want to be a mathematician. I've been showing how to end up with the diminished chord at the end of the chord mutation sequence; now I'll show you how to return to any of the dominant 7th chord shapes. All you have to do is lower one note—*any* of the four notes. That lowered note then becomes the root of the resulting 7th chord.



This is the kind of stuff that fascinates me! I hope I'm able to convey my love of music through these fascinating tidbits. Anyway, I'll explore Diminished Chord theory more in the *Symmetrical Music Concepts* chapter. They are very important to jazz; since they are so close to the Dominant 7th Chords (literally, one note away), they can often be used as a substitute for them.

I've covered a lot of material in this chapter. . .my first concern is that you are at least able to play the examples; next, that you are able to hear the differences; and finally, that you are able to understand the theory behind it all. You could easily spend years studying just this aspect of music, but that level of dedication is not necessary. Just like with the *Scales* chapter, this material needs to be practiced; the more you practice it, the more you'll understand and retain. The ultimate goal is to be able to use the material in your everyday playing.

Many players have difficulty with the “bar” on the third and fourth string. There are three ways to play it: With your finger arched (fingertip covering both strings), with your finger flat, or with two fingers. I show them here, using the Em7 chord on the fifth fret. I have wide fingertips, so the arch is easier for me. I recommend using the arch if you can, because it's easier to avoid touching the other strings. Using two fingers is okay, but it's difficult to move quickly from chord to chord.

Arched Middle Finger

Flat Middle Finger

Two Fingers



Also, here is the alternative to the root-voicing scale; the chord shapes are a little easier, and don't involve a bar on the third and fourth strings. On the left is the root-voicing F scale, and on the right is the alternate 7th-voicing scale. The alternate series doesn't have the same smooth, mellow sound, but adds it's own unique, funkier sound. Listen to MIDI File J7C-05.

The biggest point I want you to take from all of this is that the chords are derived from scales—which is very different from chord melody theory. You may still be playing 4-string *chord shapes*, but they are actually *4-string harmonized scales*. It seems like a subtle distinction, but when you “get it,” you will be amazed at the difference. Just like you need to understand the modes to play jazz, you also need to understand the chord/scales. Believe me, it's very difficult to tease “jazz” out of chord melody.

I'll conclude this chapter with yet another way to visualize the subject; a “chord stack” chart. This is a handy reference for all three subjects: Scales, Chords, and—as you'll soon see—Arpeggios. I present it here because it should make sense to you after learning how to build Harmonized Scales and Jazz 7th Chords. As I look at the chart, I am both amazed and relieved to see how simple and inter-related it all is!

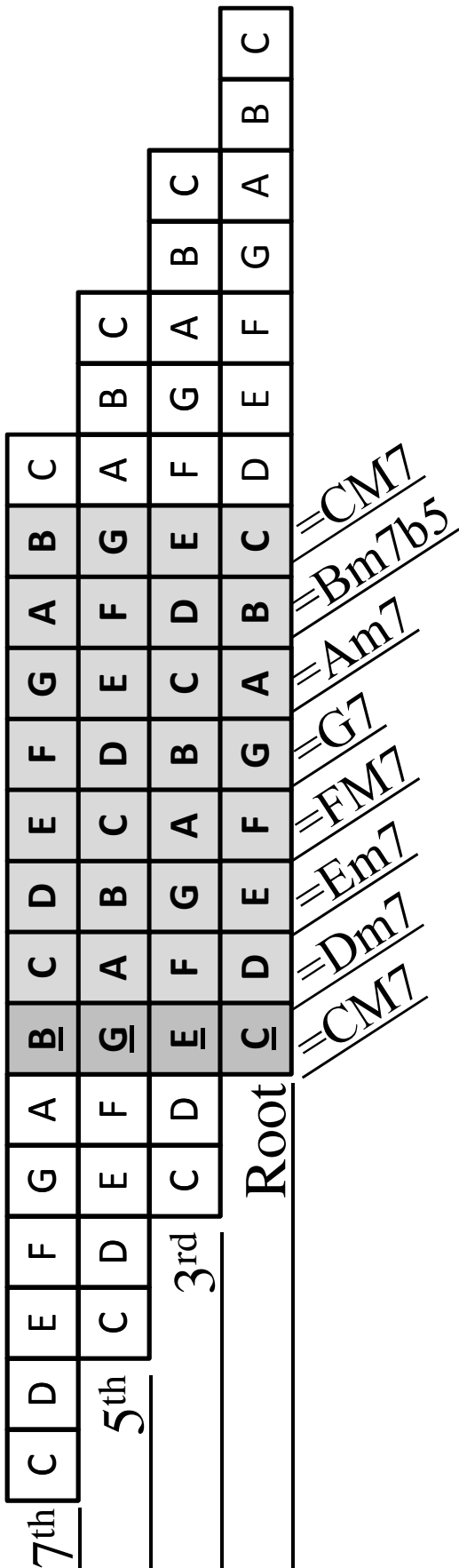
Chord Stacks

My first thought as I look at this chart? That this should clear up any lingering doubt as to the importance of the Scale Mode concept! Not only is it vital to true *scale* understanding, it is *everything* to true *chord* understanding. Maybe I haven't said this before, but the writing of this book has been a catalyst for my own learning about the subject. I "learned" it in a classroom years ago, but never applied it to the banjo, until now. It's only in the teaching and explaining of it that true understanding has set in. I've had one "aha!" moment after another. I hope it all has the same effect on you!

Back on my soapbox I go! I've known many plectrum banjoists—myself included—who have gone along their merry way, not knowing one thing about scales except that they're boring and have *nothing* to do with the plectrum banjo (it is a *chord melody* instrument, after all. . .). I did just fine, thank you, all those years, so *who am I* to harp on this? Well, "halleluiaah brother!", I am a scale convert! If you take one thing away from this book, it is just how important they are, certainly to *banjo* playing, but especially to *music* understanding. Anyway, I'll climb down now.

All I've done here is stack four 2-octave mega-scales on top of each other, staggered by 3rds to illustrate the *stacking* of 3rds (turn the page on it's side and read from the bottom up). Contained within this also of course is the C Harmonized Scale (Root & 3rd), the Triad Scale (R, 3rd, & 5th), and the Jazz 7th Chord Scale (R, 3rd, 5th, & 7th). As you can see, the four notes of the CM7 chord are also the starting notes of the C Ionian, E Phrygian, G Mixolydian, and B Locrian modes, highlighted from within their own mega-scale.

As you'll find out in the next chapter, this is also an excellent illustration of the Jazz 7th Arpeggios. So. . .important stuff? I'll let you come to your own conclusion on that, but I think you know how *I* feel!



Chapter 3: Arpeggios

What are they?

The individual notes of a chord, sounded one at a time in succession.

What do you need to know?

Have a basic understanding of scales and chords.

Why are they so important?

- They are a great finger work-out!
- They will deepen and complete your understanding of chords and their relationship to the scale modes.
- They are the other gateway skill (along with scales) to learning to play jazz.

Arpeggios

Now we get into an area of study that I consider to be the meat and potatoes of jazz. Arpeggios are the third pillar of Musical Development; you could think of them as a synthesis of the other two (Scales and Chords). Briefly, an arpeggio is a chord broken down into it's parts, or a scale with some of the pieces missing. Instead of playing the 1, 3, 5, and 7 all together (as in a chord), we play the notes one at a time in succession. And/or, instead of playing 1-2-3-4-5-6-7-1 (as in a scale), we play 1-3-5-7. And, just like chords, they are built with stacked 3rds.

A lot of the tunes popular in the banjo band world are built more from arpeggios than they are scales (I'm thinking of *Bye Bye Blues*, *Four Leaf Clover*, *Five Foot Two*, etc.). As American song writing matured from Tin-Pan Alley simplicity to the true American art form of the '30s, '40s, and '50s, the tunes became more scale based. Most "modern" jazz is scale based also. In contrast, the music (and jazz improv) of the banjo's Golden Age is more arpeggio based. In short, because of banjo tunes, you should already be familiar with the sound of arpeggios, whether you thought in those terms or not.

At the beginning level, the material in this chapter will be strictly for physical development. Again, I am convinced that anyone who can hold a banjo and a pick will be able to play these exercises, and benefit greatly from them. By the time you've got your fingers trained, your ear should start to understand what's going on. I haven't stressed this a lot yet, but you should spend a good amount of time listening to the Midi examples so you know what the exercises should sound like up to speed.

At an advanced level, I believe you'll find these exercises to be nothing short of transformational! I always knew I needed to work on arpeggios, but never really had a starting point. This book hardly begins to show all the possibilities; these are just ideas to give *you* a good starting point for your own development, and to give you a framework for your own ideas. I wish *I* had had something like this 20 years ago!

I'm going to start out really basic with arpeggios, just like I did with scales and harmonized scales. Remember how I showed the mutation sequence for the Jazz 7th Chords? I'll show the arpeggios in the same order: C Major Triad, C Major 7, C Dominant 7, C Minor 7, C Minor 7 flat 5, and C Diminished. If you skipped the Jazz 7th Chord chapter to get here, don't worry: This will serve well as a back-door introduction to them. The arpeggios are easier to play than the chords.

Keep in mind everything you learned in the *Scales* and *Harmonized Scales* chapters while working on the arpeggios. They are all related, and the more you understand each individual aspect, the more you'll understand the whole package.

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Here they are in their most basic form, in two separate octaves. Concentrate on the lower octave arpeggios first; they take advantage of open strings and are thus easier. The higher octave are "closed" arpeggios, just like with the scales. Go slowly at first; the main goal here is to hear how each arpeggio sounds. As you go through the mutations, pay close attention to what makes each one sound different from the others. Can you also "hear" the corresponding chord while you're playing these? Work up the speed until you can play them with a metronome (use the same basic practice routine you did with the scales). Listen to Midi File A-01.

C Major Arpeggio

C Major 7 Arpeggio

C Dominant 7 Arpeggio

C Minor 7 Arpeggio

C Minor 7 b5 Arpeggio

C Diminished 7 Arpeggio

As you can imagine, there's more than one way to play these. The more ways you know how to play them, the more practical they'll become for your everyday playing. So here's another fingering pattern for the second octave closed arpeggios; same notes, just another way to play them. On this one, you need to start with your little finger on the fourth string.

8 C Major Arpeggio C Major 7 Arpeggio

8 C Dominant 7 Arpeggio C Minor 7 Arpeggio

8 C Minor 7 b5 Arpeggio C Diminished 7 Arpeggio

Now I'm going to show the Jazz 7th Arpeggios as they correspond to the Scale Modes and the Jazz 7th Chords (beginning to see the relationships?). You can also easily see the "stacked 3rds" relationship here (all lines, or all spaces). I'll show them in the lower octave, on the fourth and third strings. You should also play these in the higher octave on the third and first strings. Listen to Midi File A-02.

8 CM7 Ionian... Dm7 Dorian... Em7 Phrygian... FM7 Lydian...

8 G7 Mixolydian... Am7 Aeolian... Bm7b5 Locrian... CM7 Ionian...

Some of these are a bit of a stretch. . .they will get easier with practice. I think my hands are fairly normal in size: On some of these, I actually have to move my hand back and forth to reach them. Believe me, it's worth the effort!

Now I'll show you a slight variation; all I've done is add the top note of each Jazz 7th Chord to the arpeggio. This brings the first string into the act and more clearly shows the connection with the chords. Play the chord, then the arpeggio. Listen to how they relate to each other. If you can hear one, you should be able to hear both. Listen to Midi File A-03.

The image shows a musical score for guitar in 4/4 time, featuring four systems of arpeggiated chords. Each system consists of a treble clef staff with a melody line and a guitar staff with chord diagrams and fingerings. The chords are: CM7 (C major 7), Dm7 (D minor 7), Em7 (E minor 7), FM7 (F major 7), G7 (G dominant 7), Am7 (A minor 7), Bm7b5 (B minor 7 flat 5), and CM7 (C major 7). Fingerings are indicated by numbers 1-4 on the strings.

So now what do we do with these? Like I said in the chapter intro, arpeggios are the meat and potatoes of jazz improvisation. Countless variations can be made on just these basic 7th arpeggios. Combine them with scales, mode fragments, harmonized scales, chords, etc., and you can see why having all these things under your fingers is so important: This is the jazz language; all you have to do is work on your grammar!

I also want to re-emphasize: Even though the stated goal of this book is to take you beyond Chord Melody, the finger strength and discipline gained from these exercises will greatly enhance your Chord Melody technique. Either way, you can't lose!

Get these basic arpeggios down really well. Starting on the next page, I'm going to take you in some new directions. Don't worry though, the exercises don't get any tougher physically than what you've already seen; the challenge will be for your ears. For that purpose, arpeggios are the best (and easiest) of all.

Extensions

As you'll remember from the *Harmonized Scales* chapter, the 7th is an “extension” of the basic triad. Now I'm going to show you the rest of the extensions beyond the 7th. Look at the Ionian example at the bottom of the page: The first measure shows the 1, 3, 5, and 7 that you've already seen. The second measure continues ascending, every line, until it finally comes back to the C. These are the extensions 9, 11, and 13. They are of course just the odd numbered scale degrees *extended into the next octave* (counting from the “1”), *or*, just more M3 and m3 intervals stacked on top of the ol' triad.

One more extension brings us back to the 1, two octaves up (there is no such thing as a “15th”). Another interesting thing you can also easily see from this illustration: The 9-11-13-1 of the Ionian arpeggio are the same notes as the 1-3-5-7 of the Dorian arpeggio (check it out now!). This pattern holds true through all the modes. That's a good reason these sound so different, and is also a clue to the unlimited improvisational potential of arpeggios. There really are very few “wrong” notes in jazz; understanding the context and training your ear for jazz will prove that point.

I have found that as I've learned to play and hear the extensions, the way I hear music—especially jazz—has changed and matured. Hearing and understanding that on a basic theory level is a big part of growing as a musician. That's why I consider these so important. Just like with the Jazz 7th Chords, they are the dividing line between “classic” plectrum banjo and “modern” jazz.

I'm not going to get into “altered extensions” or extended *chords* in this book, but the basic arpeggios are so easy, I can't help myself. Playing them is a lot easier than hearing them: They will sound strange and disjointed at first. That's the neat thing about the rest of the material in this chapter: They are easy exercises, but they train your ear to hear—and your fingers to play—some pretty advanced stuff. You'll see and hear what I mean. Don't be concerned if you don't understand the theory; just enjoy the physical workout. I didn't include TAB here because this example is only for illustrative purposes. Turn the page for the first extensions exercise. Listen to Midi File A-04.

The image displays seven musical staves, each representing a mode. The first staff is for the Ionian mode, showing the notes 1, 3, 5, 7, 9, 11, 13, and 1. A bracket above the notes 9, 11, and 13 is labeled "Same four notes" and points to the notes 1, 3, 5, and 7 of the second staff, which is for the Dorian mode. The other modes are shown in the following staves: Phrygian, Lydian, Mixolydian, Aeolian, and Locrian. The Ionian mode is repeated in the final staff. The notes are written in treble clef with a key signature of one flat (Bb).

1 3 5 7 9 11 13 1

Ionian Dorian (see the patterns here?)


Phrygian Lydian

Mixolydian Aeolian

Locrian Ionian

I hope you've noticed that all seven C diatonic notes are contained in each of these arpeggios. . .I'm not making this stuff up, folks. . .I'm just reporting the truth and nothing but the truth! So, every note in the C scale has a "function" in every extended, unaltered jazz arpeggio/chord. Pretty cool, huh? Let me illustrate it another way; this same logic applies to every arpeggio above:

<u>1</u>	2	<u>3</u>	4	<u>5</u>	6	<u>7</u>	8(1)	<u>9</u>	10	<u>11</u>	12	<u>13</u>	14	15(1)
C	D	E	F	G	A	B	C	{D	E	F	G	A}	B	C
		{D	E	F	G	A}								



Another point to make here if you haven't already noticed it: The "9" note is the same as the "2" note, just an octave higher. The same holds true for the 11 and 4, and the 13 and 6. This is a handy way to remember all the notes.

Speaking of remembering the notes, here's a simple memorization exercise: Recite over and over: C E G B D F A C. Then: D F A C E G B D. Then: E G B D F A C E, etc. To take the exercise another step, recite these while looking at the written notes in the corresponding arpeggio on the previous page. And while I'm on this tangent, the next step would be to recite the notes, look at the music, and play them on the banjo at the same time. Of course, this would be a great exercise for everything in this book.

I find this stuff to be endlessly fascinating, and I present it to you as a source of fascination to get you to see the value of basic music theory. Jazz musicians were "discovering" these simple things about the time jazz was really taking off and the banjo was dying away (the 1930's). So let's go; we have a lot of catching up to do! It's *physically* easier than you might imagine, so let your fingers lead the way; the ears will follow.

You know what? Let me take a moment to expound on that point: The only reason you don't hear "modern" jazz played on the banjo is because it's not "the way it's always been done." The banjo is almost as capable a jazz instrument as the guitar (just missing those bottom two strings!). My goal in my lifetime is to see these outdated conventions successfully challenged, and see the banjo become a *real jazz instrument*. It's long-term survival depends on it! Anyway, refer to the chapter *What Should A Plectrum Banjoist Know?* for more on this opinion.

So anyway, on the next page is the first of the extensions exercises. Remembering that the Jazz 7th chords are composed of the 1, 3, 5, and 7 scale degrees, you can see that the arpeggios are extended to include the 9th and 11th degrees (we'll get to the 13th soon). Like I said, these will sound strange at first, but you can see how easy this is. Just like with the scale exercises, always use down-up-down-up picking, even when going between strings. Listen to Midi File A-05.

1 3 5 7 9 11 9 7 5 3 1 1 3 5 7 9 11 9 7 5 3 1

The image shows four systems of musical notation for guitar. Each system includes a treble clef staff with a 6/8 time signature, a bass clef staff with a 4/8 time signature, and a guitar-specific staff with fret numbers. The exercises are designed to be played in pairs, with the first system being the most complex and the last being the simplest. The fret numbers are: System 1: 0 3 0, 0 4 0 4 4 0 4 0; System 2: 3 7 3, 4 7 4 7 7 4 7 4; System 3: 7 10 7, 7 11 7 10 10 7 11 7; System 4: 10 14 10, 11 14 10 14 14 10 14 11.

I have found the arpeggios to be even more transforming—physically, intellectually, and musically—than the modes. In the following pages, I’m going to show you some of the variations I’ve come up with. I’m only going to show you a few, because there are countless possibilities. The more you practice these and get them into your fingers and ears, the more variations you will come up with on your own. That of course is the ultimate goal of this book.

This first variation goes up in one arpeggio and down in the next, etc. It requires you to make a position change: Sliding your little finger or your first finger up, depending on where you are in the sequence. As you slide your finger from one arpeggio to the next, don’t forget to “slide” your ear and mind also: Get used to the rhythm of the chord changes.

Notice how you alternate between all “line” notes and all “space” notes. Visual cues like this will help you to be a better music reader. And if you don’t see accidentals, you’ll know you’re seeing a diatonic arpeggio. Listen to Midi File A-06.

This is the same exercise, only reversed. Now you go down in the first arpeggio, up in the next, etc.

Here’s how you can break the sequence down into more manageable bite-size chunks. Do this over and over with each two-arpeggio chunk.

This next variation is similar to the last but has a few important distinctions. I'm going to show you the "bite-size chunk" drill first to better illustrate: Notice that this one is all "line" notes. What I've done is jump from the CM7 arpeggio to the Em7 and back. This requires a bigger position shift—big enough to require a bit more practice. These position shifts are very important in jazz by the way, so strive for speed and accuracy. A totally different way to think of this is that now I've extended the CM7 arpeggio to the 13th. So, the first two measures can be thought of as a CM7-Em7 arpeggio, and the next two measures as a further extended CM7 arpeggio. Listen to Midi File A-07.

CM7 Em7 . . .or. . . CM7 1 3 5 7 9 11 **13** 11 9 7 5 3 1

0 3 7 3 0 3 7 3

0 4 0 4 7 4 7 4 0 4 0 4 7 4 7 4 0

Now, practice each two-measure segment with the same dual logic in mind.

0 3 7 3 2 5 9 5

0 4 0 4 7 4 7 4 2 5 2 5 9 5 9 5

3 7 10 7 5 9 12 9

4 7 4 7 10 7 11 7 5 9 5 9 12 9 12 9

7 10 14 10 9 12 15 12

7 11 7 10 14 10 14 11 9 12 9 12 16 12 16 12

10 14 17 14

11 14 10 14 17 14 17 14 12

Of course, arpeggios by themselves would get kinda boring after a little bit. Like I've said, we can combine musical tidbits any way we want to create musical ideas. This next exercise combines scale fragments with arpeggio fragments. Again, I start with the bite-size-chunk drill, then move on to the sequence exercise. I don't want you to think of these exercises as gospel: They are just examples to get you thinking on your own. After you've gotten some of *my* ideas ingrained into your fingers—and gotten used to how they sound—let *your* ear and imagination run free! Listen to Midi File A-08.

First exercise musical notation. Treble clef staff: C4 quarter, D4 quarter, E4 quarter, F4 quarter, G4 quarter, A4 quarter, B4 quarter, C5 quarter. Bass clef staff: 0 2 4 0 4 | 0 3 2 0 | 4 0 4 | 0 2 4 0 4 | 4 0 4 | 0 3 2 0 | 4 0 4 | 0.

Second exercise musical notation. Treble clef staff: C4 quarter, D4 quarter, E4 quarter, F4 quarter, G4 quarter, A4 quarter, B4 quarter, C5 quarter. Bass clef staff: 0 2 4 0 4 | 0 3 2 0 | 4 0 4 || 2 4 5 2 5 | 5 3 2 | 5 2 5.

Third exercise musical notation. Treble clef staff: C4 quarter, D4 quarter, E4 quarter, F4 quarter, G4 quarter, A4 quarter, B4 quarter, C5 quarter. Bass clef staff: 4 5 7 4 7 | 3 7 5 3 | 7 4 7 || 5 7 9 5 9 | 5 9 7 5 | 9 5 9.

Fourth exercise musical notation. Treble clef staff: C4 quarter, D4 quarter, E4 quarter, F4 quarter, G4 quarter, A4 quarter, B4 quarter, C5 quarter. Bass clef staff: 7 9 11 7 10 | 7 10 7 10 7 | 10 7 11 || 9 11 12 9 12 | 9 12 10 9 | 12 9 12.

Fifth exercise musical notation. Treble clef staff: C4 quarter, D4 quarter, E4 quarter, F4 quarter, G4 quarter, A4 quarter, B4 quarter, C5 quarter. Bass clef staff: 11 12 14 10 14 | 10 14 14 10 | 14 10 14 || 12 14 16 12 16 | 12 15 14 12 | 16 12 16 | 12.

You've probably noticed by now that all of these examples have skipped the B, or second string. There's a simple explanation for this: The second is so close in tuning to the third and first strings that it's hard to use it in arpeggios. Think of the second string as a "scale bridge," and now that we're combining scale and arpeggio fragments, we can let it in on the act. I'll show you a couple of examples, again to get the fingers, ears, and ideas flowing.

Notice that the note on the second string is always one octave above the key note (except in the first one). This is important from an organizational standpoint, and will help you in organizing your own ideas. The first arpeggio pattern is different from the rest because of the open strings involved. It might help to think of the last CM7 arpeggio pattern as being the "true" closed pattern for this particular chord/arpeggio. Listen to Midi File A-09.

Example 1: Musical notation showing a treble clef staff with a key signature of one flat and a 4/4 time signature. The melody consists of eighth notes. The bass staff shows fingerings: 0 4 0 4, 0 3 2, 3, 5 4 0, 4 0, 2 5, 2 5, 3 5 2, 5 2.

Example 2: Musical notation showing a treble clef staff with a key signature of one flat and a 4/4 time signature. The melody consists of eighth notes. The bass staff shows fingerings: 4 7, 4 7, 3 7 5 3, 5 7 4, 7 4, 5 9, 5 9, 6 9 5, 9 5.

Example 3: Musical notation showing a treble clef staff with a key signature of one flat and a 4/4 time signature. The melody consists of eighth notes. The bass staff shows fingerings: 7 11, 7 10, 7 10 9 7, 8, 10 7, 11 7, 9 12, 9 12, 10, 12 9, 12 9.

Example 4: Musical notation showing a treble clef staff with a key signature of one flat and a 4/4 time signature. The melody consists of eighth notes. The bass staff shows fingerings: 11 14, 10 14, 10 14 12 10, 12, 14 10, 14 11, 12 16, 12 16, 13, 16 12, 16 12.

The next example has an interesting twist to it. I've now put three notes on the second string: A note below the key note, a note above, and the key note. Again, the first one is different because of the open strings involved. To my ear, this is starting to get away from being just an arpeggio pattern, and getting closer to actual jazz improvisation patterns. Listen to Midi File A-10.

The musical score is written in 4/4 time and consists of four systems. Each system has a treble clef staff and a bass clef staff. The treble clef staff contains a melodic line with eighth and quarter notes, including some accidentals (sharps and naturals). The bass clef staff contains a bass line with fret numbers (0-14) and some open string indicators (T and B). The score is divided into measures by vertical bar lines, with repeat signs at the end of each system.

This is as far as I'm going to take this particular train of thought. There is so much more you can do; I'm discovering more every time I practice.

By now, you know that you have to practice this stuff a lot. Just learning it is not enough to make a difference in your playing! That is the ultimate goal. Sure, this is fascinating stuff (or at least I *hope* you share in my fascination), but it will only work if you *practice* it!

Before I finish with arpeggios, I want to show you a couple more examples of how to combine them with scales. This time though, it is more scale based. This will also serve as a scale refresher, since it's probably been awhile. It also helps to see how all this musical stuff is related. As musicians like to say: "It's all the same five lines and four spaces!" What I've done here is play a scale and put an arpeggio on the end of it. You'll notice the arpeggio always ends with the key note. Here we're really starting to use the whole fretboard—all four strings.

Something you may or may not have thought of: When we played the closed scale patterns, we didn't use the fourth string (you can of course—it's just impractical). And, as I pointed out a couple of pages ago, we rarely use the second string in arpeggios. These are clues to using the banjo's tuning peculiarities to your advantage. Use these clues and your growing knowledge of the banjo fretboard in your own playing and experimenting; look for how you can combine scales and arpeggios (and chords!) in musically coherent—and physically possible—ways. Listen to Midi File A-11.

The first system of musical notation consists of a treble clef staff and a bass clef staff. The treble staff contains a scale starting on G4, moving up to D5, and then back down to G4. The bass staff contains the corresponding fret numbers for the first two strings: 5 7 9 | 6 8 10 | 9 10 | 12 10 9 | 12 10 | 7 9 10 | 8 10 12 | 14 12 10 | 14 12 | 14 10 | 14.

The second system of musical notation consists of a treble clef staff and a bass clef staff. The treble staff contains a scale starting on A4, moving up to E5, and then back down to A4. The bass staff contains the corresponding fret numbers for the second and third strings: 9 10 12 | 10 12 13 | 12 14 | 15 14 12 | 15 14 | 16 12 | 16 | 10 12 14 | 12 13 15 | 14 15 | 17 15 14 | 17 15 | 17 14 | 17.

The third system of musical notation consists of a treble clef staff and a bass clef staff. The treble staff contains a scale starting on B4, moving up to F#5, and then back down to B4. The bass staff contains the corresponding fret numbers for the third and fourth strings: 12 14 16 | 13 15 17 | 15 17 | 19 17 15 | 19 17 | 19 16 | 19 | 2 4 5 | 3 5 6 | 5 7 | 9 7 5 | 9 7 | 9 5 | 9.

The fourth system of musical notation consists of a treble clef staff and a bass clef staff. The treble staff contains a scale starting on C5, moving up to G5, and then back down to C5. The bass staff contains the corresponding fret numbers for the fourth and fifth strings: 4 5 7 | 5 6 8 | 7 9 | 10 9 7 | 10 9 | 10 7 | 11 | 5 7 9 | 6 8 10 | 9 10 | 12 10 9 | 12 10 | 12 9 | 12.

The next exercise shows one way you can use the fourth string arpeggio notes in combination with a scale fragment. Listen to Midi File A-12.

The image shows a musical score for exercise A-12, consisting of four systems of music. Each system has a treble clef staff and a bass clef staff. The first system includes fingering numbers: (1 2 3 4 5 4 3 2 | 1 5 3 5 1) above the bass staff. The second system has no additional markings. The third system has no additional markings. The fourth system has no additional markings.

I'm going to close the chapter on arpeggios now. Just like with the scales and chords, these need to be practiced a lot. It's one thing to learn them; another to practice them. In the early going, if your fingers and forearm hurt, that's a good thing: It means you're learning a new movement pattern!

Don't be concerned with whether or not you can use these in your actual performance at first. But, just to show you that you already *do* use them (or at least need them), turn to the "study in scale and arpeggio fragments" in the *Putting It All Together* chapter (p.102). You'll find a familiar tune that will clearly illustrate the application and importance of all this music theory stuff.

You'll also find a little more scale and arpeggio work in the *Symmetrical Music Patterns* chapter, and reference for the rest of the keys in the chapter *Banjo Ala Mode*. As I'm sure I've made clear by now, I've barely scratched the surface of what's possible in this book. My only hope is that I've succeeded in giving you a rack to hang your hat on. The sky's the limit! To illustrate that, I've included one bonus arpeggio exercise, meant to push you in new directions. Turn the page and give it a try. . .

So, I was fooling around with arpeggios the other day, and came upon an interesting concept: Combining arpeggio fragments to create some very cool sounds—and yes, I’ve already figured out how to use them in improvisational passages. This is what I want to happen to *you* as you work the exercises in this book!

This one requires position shifts in more places: Beat 3 of the first measure, beat 1 of the second measure, and between the last two notes of each two-bar segment. Take your time. The concept of position shifts really opens up the fretboard. How big a position shift you can take is limited only by your practice time and dedication. Listen to Midi File A-13.

How many ways can *you* combine arpeggios/scales/chords/fragments with other arpeggios and/or scales and/or chords? How many licks does it take to get to the center of a Tootsie Roll Tootsie Pop? We may never know. . .but I’m going to do my best to figure it out!

0 4 0 4 2 5 | 2 5 3 7 3 | 7 4 7 4 0 | 2 5 3 7 5 9 5 | 9 5 9 5 2

4 7 4 7 5 9 | 5 9 7 10 7 | 10 7 11 7 4 | 7 10 9 12 9 | 5 9 5 9 7 10 | 12 9 12 9 5

7 11 7 10 9 12 | 9 12 10 14 10 | 14 10 14 11 7 | 10 14 12 15 12 | 9 12 9 12 10 14 | 16 12 16 12 9

11 14 10 14 12 16 | 12 15 14 17 14 | 17 14 17 14 11 | 14 17 15 19 15 | 12 16 12 16 14 17 | 19 16 19 16 12

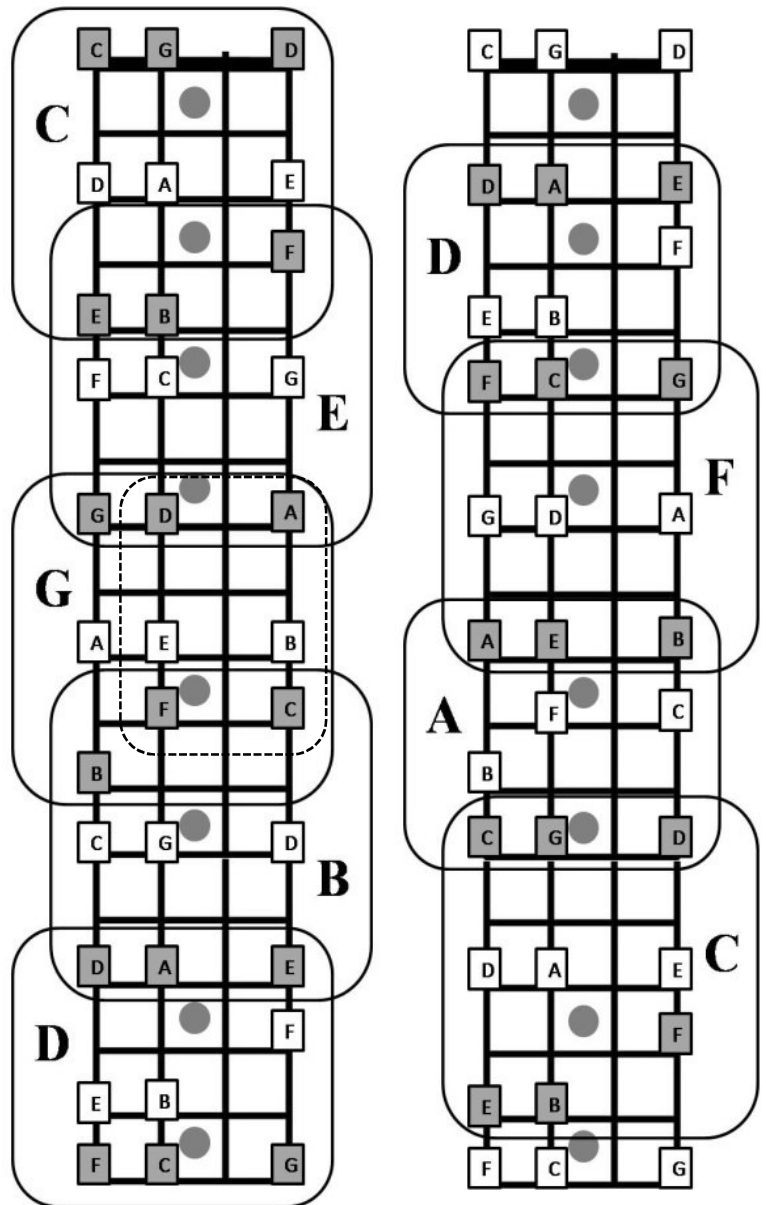
Arpeggio Miscellanea

In the interest of understanding Arpeggios and the banjo fretboard as much as possible, I want to show them in yet another light. There are so many different aspects, I'm not even sure where to start, so I'll just point out a few.

*These charts are meant to show how each arpeggio is related to the others. They all share notes of course.

*Memorize the "look" of each arpeggio. Tie the sound and the look together with the goal of arpeggios being as natural and automatic as chords. If you can hear a chord, you should be able to hear an arpeggio, and vice-versa.

*In the interest of brevity, I've only shown arpeggios that start on the fourth string. I'm sure you can see that the third/first string arpeggios are contained within the overall framework. Example: Notice the Dm arpeggio contained within the extended G7 arpeggio (dashed circle). Now, apply that logic to all of the arpeggio frames.



*Use the position dots as a reference point, but keep in mind this particular relationship only works in the key of C. It's better not to rely on the dots, but to learn to feel and hear each type of arpeggio.

A couple of thoughts on Jazz. Note: I need to point out that this is a very simplistic explanation of these concepts that mirrors my personal level of understanding at this stage of my development. There is so much more to know! I include it here in case you're at a similar level. Obviously, *I* have a lot to learn. . .

*Remembering that every note in the diatonic scale can be thought of as an extension of the basic chord, there really are very few "wrong" note choices. There are of course, "better" choices. As your jazz ear grows, your choices will improve and grow.

*The strongest note choices are the Root, the Third, and the Seventh. As long as you play those notes in key places (strong beat, chord change, etc.), you could even play wrong notes the rest of the time and very few listeners would notice.

Oh all right, one more bonus exercise! Here's one practical use for scale/arpeggio fragments. Listen to the intro of Buddy Wachter's Broadway Medley. It is this arpeggio sequence exercise almost all the way through. Listen to Midi File "Bud's Lick."

The first system of musical notation consists of a treble clef staff with a key signature of one flat (Bb) and a 3/8 time signature. The melody is written in eighth notes. Below the staff are four measures of guitar fretboard diagrams. The chords indicated are CM7, Dm7, Em7, and FM7. The fretboard diagrams are: Measure 1: 0 2 4 0 4 0; Measure 2: 2 4 5 2 5 2; Measure 3: 4 5 7 4 7 4; Measure 4: 5 7 9 5 9 5.

The second system of musical notation continues the melody from the first system. It consists of a treble clef staff with a key signature of one flat (Bb) and a 3/8 time signature. The melody is written in eighth notes. Below the staff are four measures of guitar fretboard diagrams. The chords indicated are G7, Am7, Bm7b5, and CM7. The fretboard diagrams are: Measure 1: 7 9 11 7 10 7; Measure 2: 9 11 12 9 12 9; Measure 3: 11 12 14 10 14 10; Measure 4: 12 14 16 12 16 12.

Chapter 4: Symmetrical Music Patterns

What are they?

Scale and arpeggio patterns that have a symmetrical structure.

What do you need to know?

Have a basic understanding of scales, chords, and arpeggios.

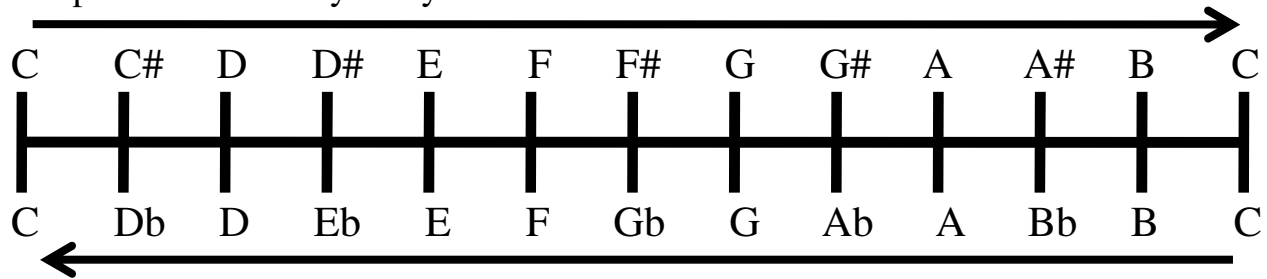
Why are they so important?

- They are a great finger work-out!
- They will deepen your understanding of music in general, and scales, chords, and arpeggios in particular.
- They are an important skill for the playing and understanding of jazz.

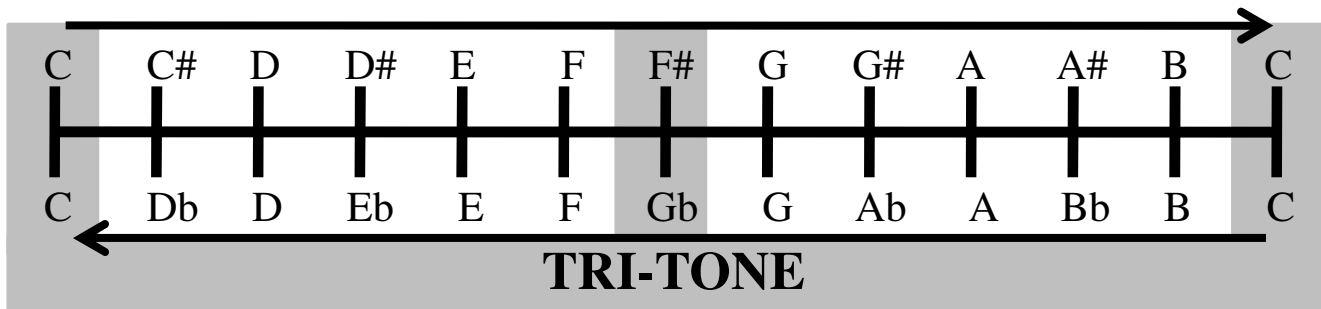
Symmetrical Music Patterns

You'll remember from the scale chapter that all the scales have a characteristic "structure" of whole and half steps. There are predictable patterns within that structure, but all in all, they are asymmetric. What I'm dealing with in this chapter are *symmetric* patterns. Why? Because they're simple and are important to truly understanding music and the banjo fretboard, *and* I find them fascinating! My goal is to get you fascinated too, so you can more easily learn some important stuff. Music theory is fun!—no, really!

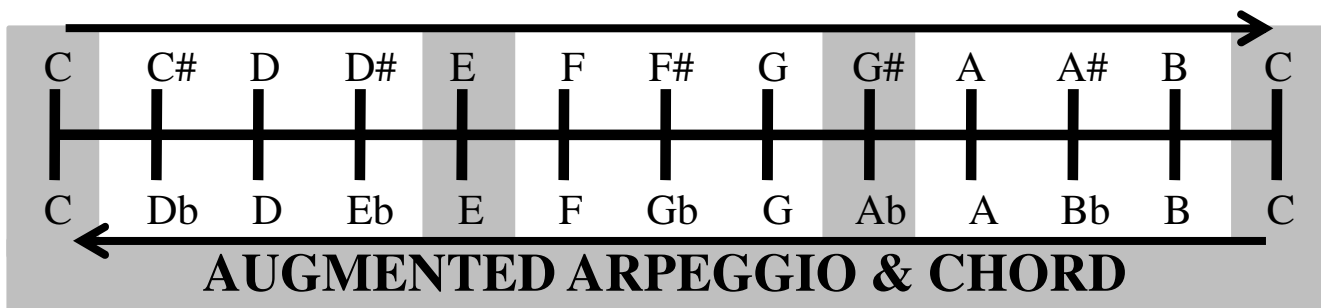
I want to introduce a concept I'll call *Symmetrical Music Patterns*—hereafter called *SMPs*. We'll start with the notes: If you counted all the notes from C to shining C, you would find there are twelve of them. Twelve is a nice round number, and there are many ways to divide it: By 1, 2, 3, 4, and 6. Let me illustrate. Here is a note-line (similar to a number line, come to think of it) with all twelve notes (thirteen including the repeated C—so, a baker's dozen). The arrows show how you spell them going up (with sharps) and going down (with flats). About those notes with two names: They are the same note, just "spelled" differently. They're called "enharmonic" notes.



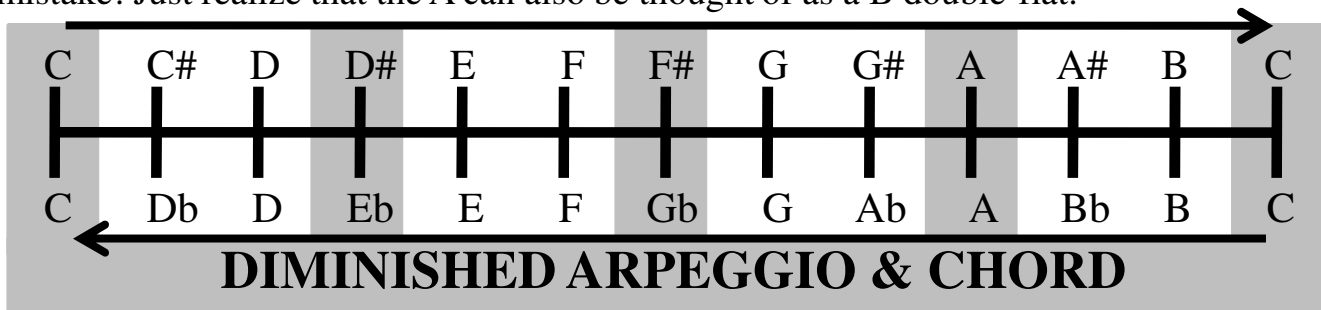
First, we'll divide this note line by 2. The result is what we call a "Tri-tone" interval (highlighted notes). Back in Bach's day, this was known as the "Devil's Interval." Listen to Midi File "Tri-tone." It sure is an evil sounding interval, huh? This sound is what powers the Dominant 7th Chord (among others), one of the most important sounds in all of music, but especially jazz. For more on this, see the chapter on Ear Training.



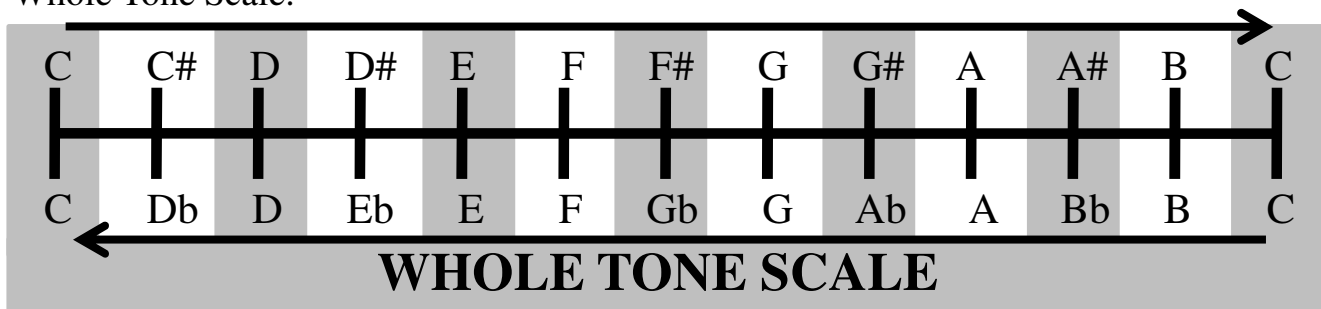
Next, we'll divide by 3. The result is an "Augmented Arpeggio," and an "Augmented Chord." Listen to Midi File "Augmented Arpeggio & Chord."



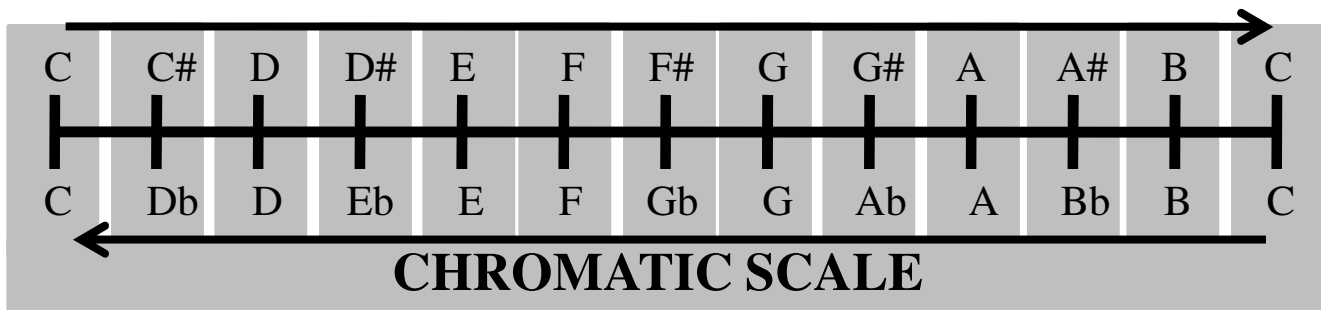
Next, we'll divide by 4. The result is a "Diminished Arpeggio," and a "Diminished Chord." Listen to Midi File "Diminished Arpeggio & Chord." I'm sure you're familiar with the Diminished Chord from your earlier experience and the Jazz 7th Chord chapter. By the way, you might remember the "spelling" issue from earlier: Bbb instead of A? That's still true; it's just impossible to show it on this chart, so don't go thinking I made a mistake! Just realize that the A can also be thought of as a B double-flat.



Next, we'll divide by 6. The result is a "Whole Tone Scale." Listen to Midi File "Whole Tone Scale."



Let's see, what's that leave? Oh yeah: 1! If we divide by 1, of course *every* note is highlighted. This is called a "Chromatic Scale." Listen to Midi File "Chromatic Scale."



So, how to relate this to the banjo? Easy: By learning to play them! I want to approach this strictly from a technical point of view for now. As I've hinted at before, this is a mental approach I recommend for all the technical stuff. It can be boring drudgery unless you challenge your mind. So, be fascinated enough to learn them just because they exist.

Another thought on this: I've found that when I learn something new, musical ideas soon come to me to fill the vacuum. I know I've harped on this a lot in this book, but here I go again. Unless you have scale and arpeggio patterns already ingrained in your hands, you can't reasonably expect to play jazz—at least not coherently. The Symmetrical Music Patterns aren't something that you would want to use exclusively; they are unique sounding tricks that will liven up a jazz solo when used sparingly and properly. But if you don't learn them and practice them, you won't have them at your disposal. Only learn and practice the things you want to use when you play (paraphrasing my dentist: Only floss the teeth you want to keep.). . .

So to get started, here is the *Tri-tone SMP* for the banjo. By the way, I'm showing them in—and the midi files are recorded in—the key of F so as to avoid open strings:

As you can see, this one is not terribly practical. You'll probably never use it except in maybe passing from one idea to another. It is a valuable ear-training tool though, so it's worth your time to play. By the way, did you notice that this example is actually in two different keys (F and B Natural)? Do you see it? Just adds to the fascination for me. There are many possible fingering patterns for this one; challenge yourself to find several, and to use this as an idea connector.

Next is the *Augmented Arpeggio & Chord SMP*. Now we start to see how SMPs equal symmetrical fingering patterns. Just like with the Tri-tone, there are many possible ways to finger the arpeggio, and you can probably see that this example is actually in three different keys: F, A, and C#/Db. Since you're intimately familiar with your Arpeggios by now, you can also think of this as a 1-3-#5-1 Arpeggio.

One more thing: The chord repeats itself every four frets. To hear that for yourself, play the chord shape on the 3rd, 7th, 11th, and 15th frets. The notes are all the same, and the chord can be named for any of the three notes. If this doesn't make you stop and say "Hmm. . .," I'm not sure what will!

Next is the *Diminished Arpeggio & Chord SMP*. Again, there are many possible ways to finger the arpeggio, and *this* example is actually in *four* different keys: F, Ab, Cb, and Ebb. This chord repeats itself every *three* frets. To hear that for yourself, play the chord shape on the 6th, 9th, 12th, 15th, and 18th frets. The notes are all the same, and the chord can be named for any of the four notes. Diminished arpeggios and chords are arguably the most important SMPs for Jazz. They are definitely worth your time to explore the many different ways to finger them.

Next is the *Whole-Tone Scale SMP*. This scale is made up entirely of whole steps, thus the name.

Because this scale uses every other note, there are technically only two whole-tone scales. In these examples, one is in F, the other is a half step up in Gb. More fascination!

The whole-tone scale is actually quite useful, and occurs frequently in jazz, at least in short snippets. Harry Reser’s *Heebie Jeebies* is based on it. Again, I show it here in a full two-octave range, so it jumps around a bit more than is practical.

Last is the *Chromatic Scale SMP*. I only show this one in a one-octave range. As you can see, this one has a very nice, symmetrical fingering pattern. Besides being useful musically, this makes for a great finger exercise. Use the practice sequence you learned in the *Scales* chapter—and don’t forget to use your metronome!

So, to close out this section, I just want to re-emphasize a few things. To my mind, the more *practical* music theory you learn, understand, *and use*, the better musician—and thus banjo player—you will be. I have in the past found theory to be boring and beyond my simple, banjo-player mentality. The way I’ve overcome that cop-out is to make it interesting to myself. I hope you find my way of presenting this material to be at least interesting, if not fascinating.

Let me climb back onto my soap-box for a moment: There seems to be a mentality in the banjo community that says music theory is beyond banjo players, and is not necessary for general fun in a jam session. I want to challenge that belief! I fell into that trap for many years myself, and yet I longed to be a better player (sound familiar?). There is only one real route to improvement, and that is *hard work!* And a good part of that hard work is in learning music theory!

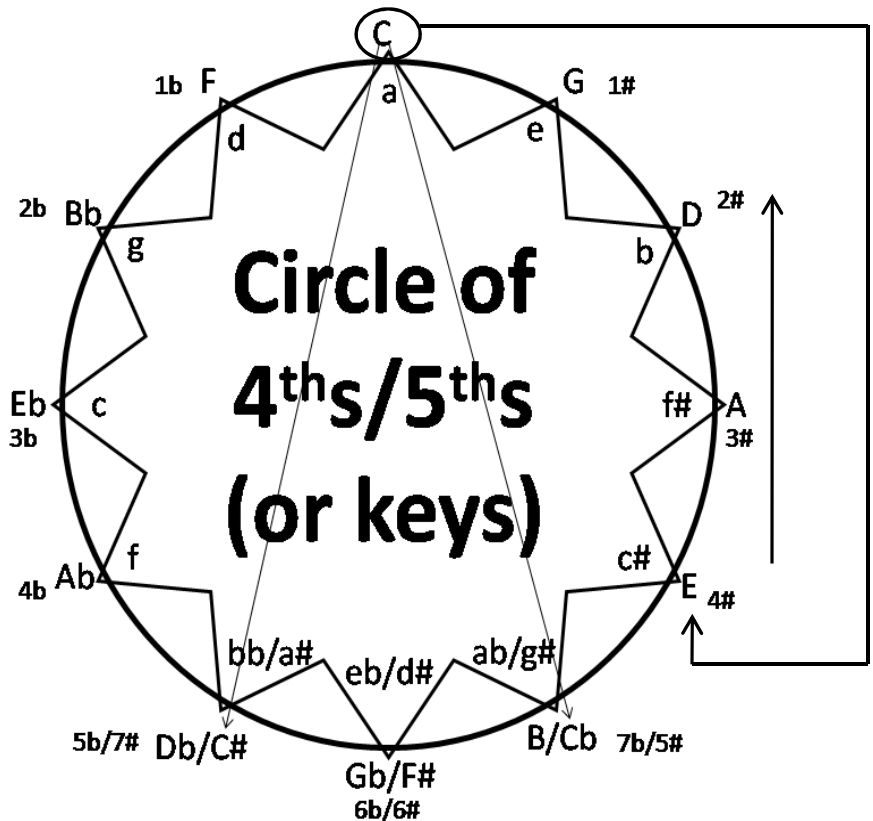
The Circle of Keys

I chose to include the Circle of Keys in this chapter because I find it so fascinating. It is a mathematically perfect work of art that just happens to be one of the most important music theory concepts out there. You could easily spend your whole musical life without knowing what it is (my father had no idea what it was until I showed him), but just about everything we do as musicians *literally revolves around it* in one direction or the other. I believe that knowing it intimately will make you a better musician.

To explain, let me show you an example from a very familiar banjo tune, *Five Foot Two*. You will probably know what I'm talking about right away without necessarily knowing what the phenomenon is called. Look at the chord progression (better yet, play it: C-E7-A7-D7-G7-C).

The musical notation shows a 4/4 time signature. The first line of music has chords C, E7, and A7. The lyrics are: "5 foot 2, eyes of blue, oh what those 5 feet could do, has". The second line of music has chords D7, G7, C, and G7. The lyrics are: "an - y - bo - dy seen my gal?". Below the staff is a guitar-style fretboard diagram with strings labeled T (top), A, and B (bottom). Fingering numbers are provided for each note.

The song starts on the “tonic” chord (C) and then jumps part way around the circle to E7. It now has to work it’s way back to tonic through all the keys in-between (“going around the horn.” To take the sailing analogy one step further, the dominant 7 is the “wind” that makes our ship go around the horn—more on that in the ear training chapter). If we rotated the circle until the F was in Cs place, we’d have the chord progression for the key of F. The same is true for all 12 keys on the circle.



This is an example of a pure circle of keys chord progression. Most songs don't fit this cleanly into the picture (frankly, music would be pretty boring if they did), but *parts of all of them* will follow the same path. An easy way to learn this circle is to analyze songs in your music book with it. Beyond intellectualizing this though, it is most important to learn to *hear* the progression, if you don't already. Trust your ear. The vast majority of "Western" (Euro-American) music has used this system since the time of Bach; it should sound quite familiar, logical, and pleasing to your ear.

Now, at the risk of confusing the heck out of you, I need to explain something else. This is usually referred to as the "Circle (or "Cycle") of Fifths," and slightly less often as the "Circle of Fourths." I prefer *Circle of Keys*, because it's less confusing, but I think you should understand the reasons for the other names.

If you follow the circle counterclockwise (which is the direction music follows most of the time), you'll see C-F-Bb-Eb-Ab-Db-Gb/F#-B-E-A-D-G-C. If you were to play a C scale downwards to the F and count the notes, you'll find there are five notes. Follow this logic the rest of the way around the circle. Similarly, if you play a C scale *upward* to the F, you'll find there are four notes. Let me show it with a scale line:

C Scale up a "fourth": 1 2 3 4 5
 C D E **F** G A B C
 5 4 3 2 1 :and down a "fifth."

Just as fascinating (and/or confusing), if you go *clockwise* around the circle from C to G, the same logic applies, only reversed. So, now you see why I prefer to call it the "Circle of *Keys*," and why it qualifies as an SMP. I find it to be endlessly fascinating, and every time I study it I learn something new. By the way, there's a clue here why the Unison, 4th, 5th, and Octave intervals are called "Perfect" intervals. Hmmm. . .

Now, following in my tradition of using the banjo to learn new concepts, I want you to "play" the Circle of Keys counterclockwise. It's easy, and here it is. Play this exercise slowly, deliberately, and *often*. Sing along with it and memorize the sound until you can sing it unaccompanied. You'll see this exercise again (and more) in the same vein in the *Ear Training* chapter:

This opens up a very large music theory can of worms, which I shall close for now. Suffice to say that you should memorize the Circle frontward and backward. As I alluded to before, you should also analyze all the tunes in your banjo band book. You will be amazed at how consistently they follow the Circle. It should be obvious to you that the Circle of Keys is one of the most important "Keys" to learning to play by ear. Learn to "hear" one tune (chord progression), and you'll hear at least five others; learn to hear five *different* tunes, and you'll hear dozens! I touch on that some more in the *Ear Training* chapter.

Chapter 4: Picking Hand Techniques

What are they?

Basic techniques for holding and using the pick.

What do you need to know?

Have a basic understanding
of how to hold a banjo and a pick.

Why are they so important?

- Single-string technique (for playing scales and arpeggios) is different from chord strumming technique.
- It is important to use the pick properly while learning scales and arpeggios so you don't develop bad habits.
- They are an important skill for the playing of jazz.

Picking-Hand Techniques

I hope you understand the vital role the picking-hand—right or left—plays in the grand scheme of banjo playing, especially as I’m presenting it in this book. You can divide mechanical technique into three realms: The picking-hand, the fretting-hand, and the coordination between the two hands. The *Scales* and *Arpeggios* chapters deal mostly with coordination; it may seem like just fretting-hand stuff, but you could not play any of it without two-hand coordination (I’ll touch briefly on fretting-hand exercises at the end of this chapter). So, it is important that you learn proper picking technique as it relates to the fretting-hand. In other words, if all you’ve done is play chord melody or chord strumming styles, then you may need to learn a new way of picking.

I recognize that no two players are exactly alike. Physical differences and personal technique priorities can have a large effect on what works for one person and not the next. Having said this, I must point out that I am only one person; I can only present it the way that I play it within the limits of my particular physical attributes. I have done a lot of study and work on my picking-hand (plus a lot of observing of great players), and I can assure you the techniques I show here work very well for me.

Let me give you my personal picking-hand testimony. I started out learning single-string picking on the tenor banjo. After about a year, I switched to the plectrum and found that I could easily play chord melody, so I learned more of a strumming technique. Years later, when I started learning duo-style technique, my picking evolved into a hybrid of the two. More recently, I’ve been working hard on the two extremes of picking-hand technique: Lots of precise scale/arpeggio work (and learning Harry Reser tunes), and some of the heavy-handed Eddie Peabody strokes. This dual approach has had a profound effect on my strumming/picking technique. Through it all, I’m finding a happy medium that seems to work for all the techniques.

I guess the important moral of this story is that everything I have learned regarding my picking-hand has gone into the current edition of the final product. Each adaptation I’ve made for a new technique has come full circle and improved my overall playing. So don’t look at this chapter as my attempt to change what you already do; look at it as an enhancement of your existing technique, with the goal of making you a better all around “right-hand man” (sorry—“picking-hand person”).

So, I’ll start out from the very beginning, with how to hold the pick properly. If this is different from what you do now, it may feel strange. By the time you’ve worked through the various exercises, it should feel more normal. I’ve pictured everything in “banjo-player’s-eye view,” so the pictures show what it should look like to you as you play.

Throughout the exercises in this chapter, strive to keep your picking-hand relaxed. Having a death-grip on the pick is detrimental to proper technique, and will probably result in dropping the pick more often, a decrease in your speed and accuracy, and the wearing out of your hand. If you do this properly, you’ll have no need for any of the gimmicky things I’ve seen over the years: Things like double-back tape, rubber bands holding the pick to the fingers(!), etc. Finger sensitivity is a big part of this picture, so experiment with how tight *you* have to grip for pick control. The exercises will help in that personal research.

HOW TO HOLD THE PICK

STEP 1: Reach out like you are going to shake someone's hand. Keep your hand relaxed.



STEP 2: Balance the pick on your index finger. The tip of the pick becomes an extension of your fingertip.



STEP 3: Close your thumb onto the pick. Hold the pick between your index fingertip and your thumb.



Now that you're holding the pick correctly, let's move on to how to hold the *banjo* properly. The angle of the banjo in your lap has a profound effect on your picking hand, as you shall see.

Wrong Way: Banjo is flat on my stomach. Notice the resulting angle of my wrist: This makes it very difficult to strum and pick properly.



Right Way: 30 degree angle to my stomach. Notice how my wrist is straighter: This relieves undue tension so my strumming and picking is easier.



So, turn the banjo at a 30 degree angle to your stomach, and drape your arm over the banjo with the meaty part of your forearm on the armrest. This is the same whether you hold the banjo on both legs as shown, or just on your right leg. Rest your fingers on the banjo head. The banjo should be balanced on your lap: Don't grip it with your picking arm. Everything should feel relaxed; if not, take a deep breath and. . .*relax!*

Now I'm going to show you a series of pictures, showing the many different facets of proper picking-hand technique. You'll notice throughout that my middle, ring, and little fingers are *always* in contact with the banjo head. If you want to have the pick control necessary for the single-string exercises in this book, you just *have* to do this. I know there are great players who *don't* do this and still play plenty of single-note stuff, but I'll tell you what: They must have had some real challenges to overcome in learning to do it.

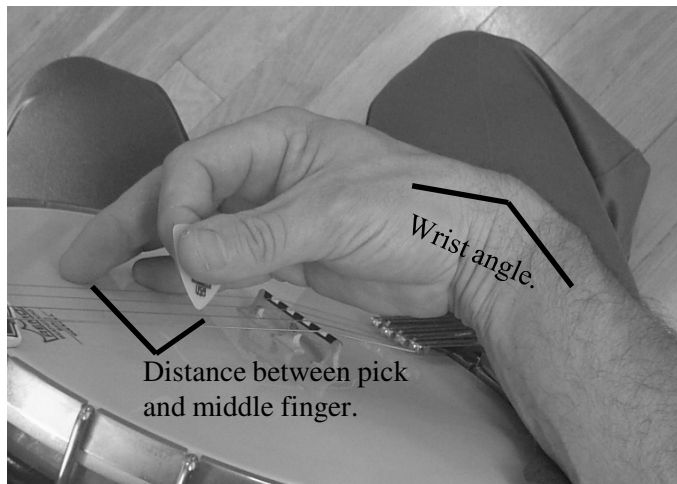
Let me make a distinction between "picking" and "strumming": Picking infers controlled single-note technique, and strumming infers chording technique. Since this book is mostly about scales and arpeggios, I'm only covering picking technique here. You need to be able to do both, of course. As you become a more accomplished and well-rounded player, the dividing line between the two becomes somewhat blurred. You don't want to be playing along, saying "Okay, now I'm picking. . .ooh! Now I'm strumming, oops. . .now I'm. . .oh heck!" Your "final-product" technique becomes a natural blend of the two by necessity.

I really dislike setting "rules" because there are always exceptions. I have found though that it's best to learn something as if it were the *only* way of doing something; then, when I've mastered it, start looking for exceptions. This chapter definitely fits into that rule/exception dichotomy, so it should be read with a tiny grain of salt. Plus, all of these exercises are a bit of an exaggeration, for the purpose of learning the movements.

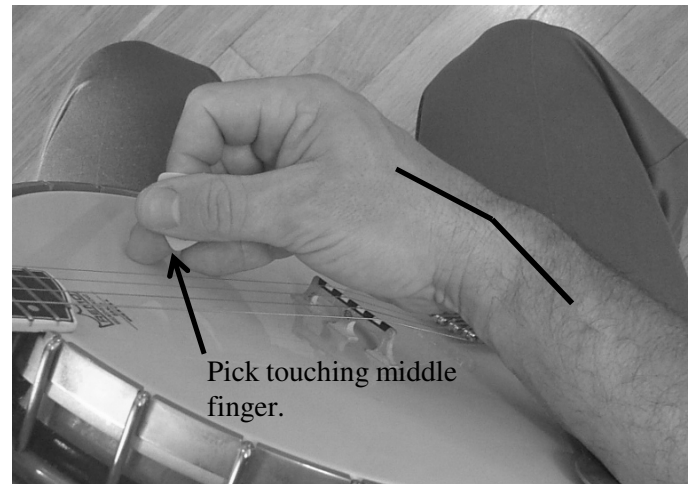
Proper picking technique is simply a matter of *moving* the picking-hand correctly. There are three “planes” of movement that I’m concerned with here: The *horizontal* plane—how the pick moves through the strings; the *vertical* plane—how far the pick is from the banjo head; and the *pick-angle* plane—how flat the pick is in relation to the string.

First we’ll discuss the horizontal plane:

Beginning of stroke



End of stroke



There are a couple of things to notice here: **Separation of fingers:** Think of your picking-hand as two separate entities: Your “pick holders” (thumb and first finger), and your “foundation” (the rest of your fingers). When you are in position to start a stroke, there’s a good two inches between your pick and your second finger. Keeping your foundation planted in one place, push your pick through the strings, moving only your pick holders. At the finish of the stroke, your pick should be practically on top of your middle finger. Essentially, you close the gap between your pick and middle finger. Then move your pick-holders back to the starting point, still keeping your foundation planted. One natural result of this finger separation is the next thing to notice:

Wrist angle: If you execute the finger-separating hand motion correctly, your wrist angle will change without thinking about it. So your wrist motion becomes the *result* of the stroke, instead of the *cause* of it. To the casual observer, this *looks* like simple strumming, where your whole hand moves as a unit (what physiologists would call a “gross motor movement”), but it is actually quite different. It is much more controlled and precise (a “*fine* motor movement”). Of course, for picking on one string only, the horizontal movement is a lot smaller and even more precise.

So instead of just flapping your hand around on the end of your arm, now you’ve got the smaller, more precise hand muscles working for you; it is these muscles that need to be exercised, and believe me, they will be! By the way, the stronger and more precise your *picking* becomes, the stronger and more precise your *strumming* will be.

Try it now: Gently strum several chords (all down strokes), keeping your foundation planted in one place. Notice how the two entities separate and come back together, and how your wrist angle changes through the stroke. Since this is the biggest plane of movement, you should work a lot on this one, especially if it is new to you. Relax through the strokes, but feel the power!

Remember: All these exercises are a bit of an exaggeration, for the purpose of learning the movements. As I said, the horizontal plane is the biggest and arguably most important. It is the foundation for the other two planes. The second is the vertical plane.

The vertical plane refers to how far the tip of the pick is from the banjo head, and consequently how heavy or light you are on the strings. It's obvious; the deeper you are into the strings with your pick, the more resistance there will be (meaning slower picking) and the louder your sound (sometimes quiet is nice too. . .). So this is an important stylistic aspect of picking. And whether you're aware of it or not, any time you strum a chord or pick a string, a fair amount of unconscious and automatic vertical motion occurs. In duo-style picking (a.k.a. cross-picking), there is a lot of it! Anyway, look at the pictures below:

Pick Down



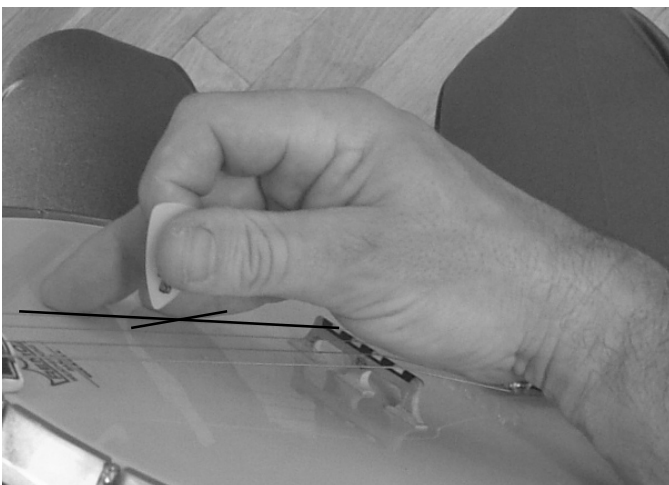
Pick Up



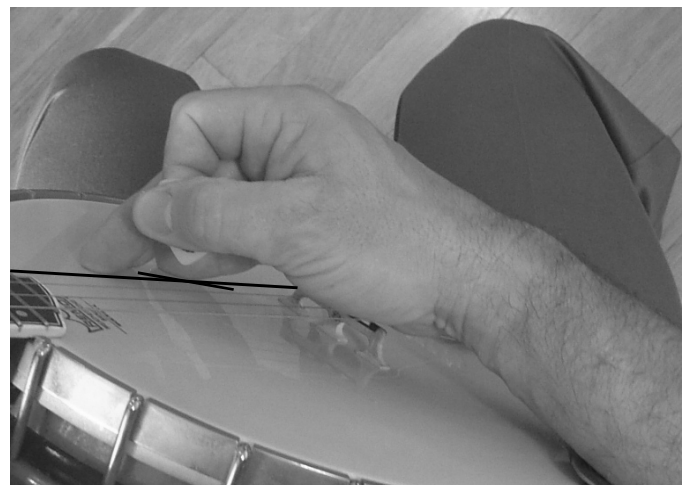
Of course, here I have definitely exaggerated the movement, but you get the picture. For the purposes of training your hand though, I want you to move this much also. It's like push-ups for the hand; your pick-holders push up and away from your foundation, which is still planted in the same place it was on the last page. It's just another plane of movement from a stable base. In actual use—like in duo-style—this movement becomes very fast, and is, for the most part, an unconscious part of the overall technique.

So, that brings us to the third movement plane: The pick-angle plane. This refers to how flat the pick is in relation to the strings. Look at the pictures below:

“Hitch-hikers Thumb”



Bent Thumb



This one is harder to see, so I've highlighted the first string and the pick's relationship to it. You can think of this one in two ways: #1, the physical act of twisting the pick is a powerful element of picking, and #2, holding the pick in either static position pictured changes the resistance of the pick on the string and, most importantly, the *tone* it produces in a tremolo. As with the vertical plane, there's a fair amount of pick-angle plane movement in everything you do. Isolate the movement by exaggerating it, then relax and watch your hand in action; you should clearly see it.

Either way, it is an important aspect of picking technique. For instance: Harry Reser's bright and percussive sound was achieved with the pick flat to the strings and close to the bridge; the smoother sound of Perry Bechtel was achieved by angling the pick and playing closer to the neck. Another example: Jazz guitarists typically use a smaller, stiffer, rounder pick than we do: With it held at an angle to the strings, they are able to play blindingly fast single-note runs (because there's less resistance). Amplification takes care of the lost power and volume.

All three of these planes of movement happen simultaneously when we play; you just might not have thought about it. The important thing here is to isolate those planes and work on them individually to produce a stronger, more precise final product. As I said before, there's more to strumming than just flapping your hand around on the end of your arm. You know, thinking about it, I'll bet that's why I've never had a problem holding onto my pick when I play: My fingers, which just happen to hold the pick, are in control, not my arm.

Okay, now you know how to hold the banjo and the pick, and you've been introduced to the three major planes of movement for the picking-hand. Now let's put it to use with some playing exercises. We'll cover the Tremolo, Broken Chords, Duo Style picking, and a practical exercise. So, without much further ado:

The Tremolo

The Tremolo has historically been used on the banjo for one main reason: To make up for the lack of tonal sustain offered by the instrument. So we would say that the tremolo is an "idiomatic" element of banjo playing (and mandolin playing). This opens us up to all sorts of banjo player jokes, but I won't go there!

I'll never forget the first time someone asked me how to tremolo. I had no idea what to say: "I don't know—I just. . .do it!" or something like that (talk about an idiomatic!). Fortunately, I took Buddy Wachter's seminar, and now I know how to describe it. In fact, the majority of the picking-hand material I present in these books is paraphrased directly from his seminars. So, thank you Bud; you've effected my life more than you'll ever know!

Keeping the picking movement planes in mind, the tremolo really is nothing more than just "pick down, pick up, repeat if necessary." Listen to Midi File "Tremolo Workout." Play the patterns on the next page with your metronome set at 80 bpm. By the way, since this is a picking-hand drill, you should deaden the strings with your free hand, so you're not distracted by the sound of the strings.

The *eighth notes* are slow enough that you can concentrate on your hand position and how you hold the pick. Don't move on until you're totally comfortable, and your tremolo sounds like slow machine-gun fire: Rigid and precise.

The *triplets* are next: You may find them to be the most difficult to control. Definitely don't move on until you've got them mastered. For more help with them, go to the next page.

The sixteenth notes are faster but easier: They're pretty close to a normal tremolo. The double-triplets are the hardest. When you've mastered all of them, move the metronome up to 90 bpm and start again. You can never practice this too much! The Tremolo is important to master, because it's an integral part of the rest of the picking-hand techniques and precise single-string playing.

BEAT

1 2 3 4

EIGHTH NOTES:

Down Up D U D U D U

TRIPLETS:

D U D U D U D U D U D U

SIXTEENTH NOTES:

D U D U D U D U D U D U D U D U

DOUBLE-TRIPLETS:

DUDUDU DUDUDU DUDUDU DUDUDU

Now, I'll show this in standard musical notation to more clearly show the relationship to the beat:

1 2 3 4 1 2 3 4

1 2 3 4 1 2 3 4

I know from experience with students on several instruments that triplets can really “trip” some folks up. . .sorry, couldn’t help it. . . Anyway, even some of my highly-trained college musician friends have trouble with them. It’s nothing to be ashamed of; it just needs some extra attention (*and they’re important enough to warrant the extra time spent*). If you are one who has difficulty with them, here are a few things that should help. Even if you don’t have trouble, it would be good to try these exercises.

#1: Listen to and play along with Midi File “Triplet Drill.” There are three separate ones, at 60 bpm, 70 bpm, and 80 bpm.

#2: Notice the D - u - d - U - d - u - D - u - d - U - d - u picking pattern. Put an accent on the beat (just like the midi file).

#3: Sing along with the midi file before playing it; sing “**One**-and-a-**Two**-and-a-**Three**-and-a-**Four**-and-a-” etc. Sing and play it like a robot would—well, *like the midi file*; rigid and precise. Notice that all the strokes are exactly evenly spaced.

Before I finish this subject, I want to point out one more thing: If you think about it, the tremolo is the same basic movement as playing fast single-note runs. That’s another reason why precision is so important with your tremolo. It’s not just a matter of picking up and down as fast as you possibly can with no regard for rhythm; sometimes it may seem that way, but the majority of the time, the tremolo will be very precise and disciplined. That’s why it’s so important to practice it.

Broken Chords

There are four basic broken chord strokes. Let me illustrate (as you can see, you’ll need to have the triplets mastered for #s 1 and 2). Listen to the Midi File “Broken Chords”:

Beat: 1 & a 2 & a 3 & a 4 & a

#1: 1st String:

D	U
---	---

D	U
---	---

D	U
---	---

D	U
---	---

2nd String:

D	
---	--

D	
---	--

D	
---	--

D	
---	--

#2:

U	D
---	---

U	D
---	---

U	D
---	---

U	D
---	---

D	
---	--

D	
---	--

D	
---	--

D	
---	--

Beat: 1 e & a 2 e & a 3 e & a 4 e & a

#3: 1st String:

D	U
---	---

D	U
---	---

D	U
---	---

D	U
---	---

2nd String:

D	
---	--

D	
---	--

D	
---	--

D	
---	--

3rd String:

D	
---	--

D	
---	--

D	
---	--

D	
---	--

#4:

U	D	U
---	---	---

D	U	D	U
---	---	---	---

D	U	D	U
---	---	---	---

D	U	D	U
---	---	---	---

D	
---	--

D	
---	--

D	
---	--

D	
---	--

A Broken Chord is just a chord played one note at a time in rapid succession. Unlike an Arpeggio though, the Broken Chord is played while holding the chord (without moving your chord fingers). In that sense, it is related to the Arpeggio, but is an entirely different picking technique. Another way to think about it is, instead of strumming all the strings in one smooth stroke, you hit one string and then the next and then the next, etc.

Now let me illustrate it in TAB. Don't think of the down strokes as two separate picking motions, but rather as one smooth, controlled stroke. Notice that #1 and #3 start with down strokes, and #2 and #4 start with up strokes. Otherwise, they are the same "down-up" movement pattern (see brackets). This is a significant difference because #1 places the important note on the second string, #3 places it on the third string, and #2 and #4 place it on the first string (circled notes: Your ear will gravitate toward the note that occurs *on* the beat). You'll probably find that #2 and #4 take some concentration to maintain because they're counter-intuitive, starting on an up stroke: Definitely practice these with your metronome, and get them to sound with machine-gun fire precision. Listen to the intro to Buddy Wachter's *Liebstraum*; it is Broken Chord #4.

The image displays four musical staves, each representing a different Broken Chord technique. Each staff is in 4/8 time and features a circled note on the first beat of each measure, with a bracket above it indicating a 'down-up' movement pattern. The notes are played in a sequence of down and up strokes, with the circled note always being a down stroke. The bass line for each staff consists of a series of open strings.

- #1:** The circled note is on the second string. The sequence of notes is: 2nd string (down), 3rd string (up), 2nd string (down), 3rd string (up), 2nd string (down), 3rd string (up), 2nd string (down), 3rd string (up).
- #2:** The circled note is on the first string. The sequence of notes is: 1st string (up), 2nd string (down), 1st string (up), 2nd string (down), 1st string (up), 2nd string (down), 1st string (up), 2nd string (down).
- #3:** The circled note is on the third string. The sequence of notes is: 3rd string (down), 2nd string (up), 3rd string (down), 2nd string (up), 3rd string (down), 2nd string (up), 3rd string (down), 2nd string (up).
- #4:** The circled note is on the first string. The sequence of notes is: 1st string (up), 2nd string (down), 1st string (up), 2nd string (down), 1st string (up), 2nd string (down), 1st string (up), 2nd string (down).

By now, you should really understand the importance of the precision and control I talked about in the section on the Horizontal Plane of movement. Whether you use these Broken Chords in your own playing or not, they are very important to the development of that control. I guarantee your picking hand will literally come alive with mastery of them!

Duo-Style

Now we move into my favorite area of picking-hand technique: Duo-Style Picking. It's called Duo-Style because, done correctly, it sounds like two banjos. It is also often referred to as Cross-Picking. You'll quickly see how the Tremolo and Broken Chord strokes are an integral part of the technique, so make sure you have them down well. Think of the notes on the 1st string (grey highlight) as an unbroken tremolo, and the rest of the notes as accompaniment. Notice they are all in $\frac{3}{4}$ time (waltz); this is where they tend to be used, and is the easiest way to learn them. *Liebesträum* is the perfect tune for them, as you'll see from the playing example. Listen to each Duo-Style Midi File.

	Beat: 1	2	3
#1:	1 st D U D U D U 2 nd D 3 rd D 4 th D	1 st D U D U D U 2 nd D 3 rd D 4 th D	1 st D U D U D U 2 nd D 3 rd D 4 th D
#2:	1 st U U 2 nd 3 rd D 4 th D	1 st U U 2 nd D 3 rd D 4 th D	1 st U U 2 nd D 3 rd D 4 th D
#3:	1 st D U D U 2 nd 3 rd D 4 th D	1 st D U D U 2 nd D 3 rd D 4 th D	1 st D U D U 2 nd D 3 rd D 4 th D
#4:	1 st D U D U 2 nd 3 rd 4 th D	1 st D U D U 2 nd 3 rd D 4 th	1 st D U D U 2 nd D 3 rd 4 th
#5:	1 st D U D U 2 nd 3 rd 4 th D	1 st D U D U 2 nd D 3 rd D 4 th	1 st D U D U 2 nd D 3 rd D 4 th

Make sure you play the “accompaniment” part correctly. Another tip to learning these strokes is to learn just the accompaniment first. To then say “just add in the tremolo and you’ve got it!” would be a gross over-simplification, but; when you do get the whole thing down, that’s what it will feel like. I remember one of the first times I played *Liebstraum* in a banjo show (Boise): I started playing, and I realized that I could hear myself through the sound system better than I could from my banjo. It was a very surreal experience; I managed to hold it together and was able to separate myself from, well, *myself!* That was one time I believe I truly sounded like two banjo players.

I want to show you one more exercise that you can do in conjunction with all of the other Picking Hand exercises. This one will force you into the “finger separation” that I talked about with the Horizontal Movement Plane, and will really exercise the muscles responsible for the movement. It will accentuate all three planes of movement.

While holding your picking hand in picking position, reach around with your free hand and grab hold of your second, third, and little fingers. Don’t allow those fingers (the “foundation”) to move. Try all of the Tremolos, and the Broken Chord and Duo-Style strokes while in this position. Spend a fair amount of time practicing this way, and you’ll get a really good workout.



Now I’ll show you a practical musical application. These techniques are a lot more fun with actual music! Turn the page for *Liebstraum*.

LIEBESTRAUM: A study in Duo-Style

Liebestraum has always been one of my favorite banjo songs. I first learned it when I was 13 or 14 from an old family friend (unfortunately, all these years later, I can't remember her name), pretty much as it's presented in the first example. Then, in 1988, I heard Buddy Wachter's recording of it: Well, *that* changed everything (understatement of the century)! I struggled with learning the duo-style until I took one of Bud's seminars. His step-by-step explanation of the duo-style technique made it much easier for me. Over the years since then, I've always returned to this song as a way of warming up my right hand, and when learning to apply the technique to a new piece of music. It is in that spirit that I present *Liebestraum* here: As a way of learning to play duo-style (not to mention, it's a very nice piece of music even in the basic form).

This arrangement has been simplified. In Buddy's recording (and my own recorded interpretation), some of the chords are different, and there are more moving counter melodies. There are also a fair amount of broken chord strokes. All the techniques are so closely related, sometimes it's hard to tell where one ends and the other begins. Anyway, I highly recommend you listen to both recordings to get the full effect (I've included an MP3 of mine in case you don't have my CD).

So, think of this as a progression:

Level I: Learn the basic chord melody form first. Concentrate on the chords and on keeping a steady, relaxed tempo (one strum per beat).

Level II: Learn to play just the melody note in a smooth, unbroken tremolo (note: play the melody with the same finger that you used in each chord) . Use the "double-triplet" tremolo. As you'll discover later, this is a very important element of the finished product.

Level III: Next, learn it with Duo-Style stroke #1. Here's where you start to hear why it's called "duo-style." Done correctly, you should sound like two players: One playing the unbroken tremolo melody, and the other playing a rhythm pattern accompaniment.

Level IV: Finally, learn it with Duo-Style strokes #s 2, 3, 4, and 5. When you've gotten all of the strokes down, mix and match to your own taste!

Liebestraum

Plectrum Banjo

Franz Liszt

The musical score for 'Liebestraum' by Franz Liszt, arranged for Plectrum Banjo, is presented in 3/4 time with a key signature of one flat (B-flat). The score is divided into six systems, each containing a treble clef staff and a five-line banjo staff. The right hand uses a plectrum, and the left hand uses fingers. Chords are indicated by letters above the treble staff, and fingerings are indicated by numbers 1-4 on the treble staff and 1-5 on the banjo staff. The piece consists of 18 measures.

System 1 (Measures 1-4): Treble staff has chords F and A7. Banjo staff has fingerings 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7.

System 2 (Measures 5-8): Treble staff has chords D7, D7#5, D7, G9, G7. Banjo staff has fingerings 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5.

System 3 (Measures 9-12): Treble staff has chords C7, F, C. Banjo staff has fingerings 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9.

System 4 (Measures 13-16): Treble staff has chords F and A7. Banjo staff has fingerings 13, 13, 13, 13, 13, 13, 13, 13, 13, 13, 13, 13, 13, 13.

System 5 (Measures 17-18): Treble staff has chords D7, D7#5, D7, G9, G7. Banjo staff has fingerings 17, 17, 17, 8, 8, 7, 12, 12, 12, 0, 0, 0, 0, 0.

Liebestraum

21

C7 C6 C9 F

21

C7 C6 C9 F

25

B^bm A m B^bm G dim F F*

25

B^bm A m B^bm G dim F F*

29

D m D^bm D m B dim A A*

29

D m D^bm D m B dim A A*

33

F#m G#

33

F#m G#

37

C#6 C C B C C#6 C#

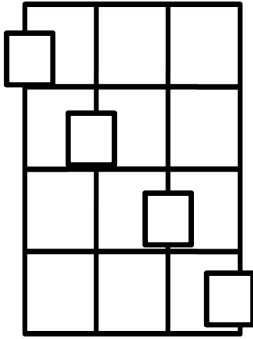
37

C#6 C C B C C#6 C#

Fretting-Hand Exercises

If training the picking hand by itself is important, than so is training the fretting hand. Scales and arpeggios are a wonderful way of doing this of course, but they don't cover everything. So in this short section, I'll show you a couple of simple exercises that will really wake up your fretting hand. These are also taken directly from Buddy Wachter's seminars.

Finger this chord shape. Since this is a fretting-hand exercise, deaden the strings with your picking-hand.

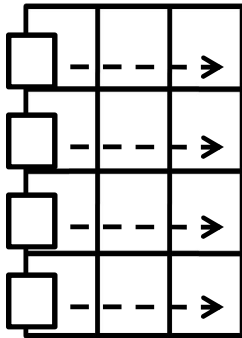


*One by one, lift each of your fingers away from the fretboard and tap several times. Lift the finger high and feel the stretch.

*Now, lift and tap two fingers at a time. This gets a little more complicated when it's your second and third finger. Don't just do adjacent fingers; try your first and third finger at the same time. Try all combinations of lift and tap.

*Now, lift your first and second finger and switch strings, back and forth several times. Try all combinations of lift and switch.

*Lastly, invert the whole chord shape and go through the whole routine again.



Now try this exercise: Start with all four fingers on the fourth string.

*One finger at a time, lift and tap each string (same fret) and back.

*Move one finger one string, then the next finger, then the next, etc. "Crawl" all the way across the fretboard and back like a spider.

Is your forearm burning yet? Good! That means you're working hard! For an additional training element, do these exercises with a metronome. These exercises are only examples; use your own imagination for more variations.

There is a dual purpose to all of this: #1, of course is the physical workout. You can only do these for a short duration at first.

The secondary and underlying purpose is to train your fingers to do new things. There are thousands of possible chords shapes on the plectrum banjo, and many of them are quite difficult. If your fingers have already been trained and exercised, new chord shapes will be easy to learn. And of course, chords that used to be difficult for you should get easier.

Ear Training

Ear Training is arguably the most important but most neglected element of playing any kind of music, including banjo music. I include it in this “technique” book not necessarily because it fits the pattern of the rest of the book, but because it is so important to overall advancement on the instrument. But first, let me tell you about an important way it *does* fit into the overall scheme of my non-chord melody approach.

I have a very strong “ear” for music. That is one of the reasons I play chord melody so easily; I hear the melody *with chords*. Early on, I was able to match up the chord shapes that went with what I was hearing, and voila; instant chord melody! I didn’t have to “learn” it, it was just there. As I said in my opening chapter, this quickly became my lazy-teen’s default setting (whew! So glad I didn’t have to actually *work* at it; I probably would’ve quit!).

Fast-forward 18 years to when I first heard Buddy Wachter in person: That experience literally *woke me up* to what I never knew was possible on the plectrum banjo (and I haven’t been the same since!). Through the years since then, I have tried in vain to learn to “play like Buddy.” You see, I hear all these wonderful things in my head, but then I pick up my banjo and it all disappears! Especially when I’m in a banjo jam session or on a stage in front of people. Couple this with my learned-in-childhood fear of making mistakes. . . *It’s so frustrating!*

I’ve been able to force a few things through my thick skull and into my fingers (mostly by learning various “worked-up” solos), but I’ve only recently realized the *root* of the problem. The problem is: I so easily hear chord melody in my head, and just *touching* my banjo seems to activate it, especially when I’m surrounded by other chord melody players! *What else could I possibly expect to produce?* That’s why the jazz tenor sax has been so important to my musical development: I can’t play chord melody on it, and it’s forced me to learn a new sound concept!

Another point I alluded to above, is the sound concept *setting* that you are in. I have found that the music I produce at any given moment is very much affected by the style of the music and the level of the musicians I’m playing with. While I’m intimidated by really good musicians, I know I play better when I jam with the “masters.” When you’re surrounded by advanced jazz harmonies, the simple “tonic-dominant” harmonies of typical banjo music just sound kinda lifeless.

So the whole point of my tangent here is to point out an obvious connection to getting out of the chord melody rut. You’ve got to get something else into your ears and your brain! So an important aspect of learning all this single-string *technique* is to learn a single-string “*sound concept*” to go along with it. Besides being aware that you need it, the obvious path to this goal is just to listen to and sing along with what you’re playing in the exercises, and then to play it back in your head. Match up the sound your banjo produces with what you hear in your head, and make that your default setting. That’s why I’ve been emphasizing the listening aspect in all the chapters.

Can’t hear music in your head? Hmmm. . . I’m not sure I totally buy into the concept of tone-deafness. I wouldn’t know though; I hear music all the time, whether I want to or not. All I can say is, if you don’t hear music in your head, then here is the most important lesson to take away from this (or any) book. You’ve got to get the music in there!

“Ear training” is the obvious answer to learning to hear music. I suppose it is a bit of a gift, but it’s also a *skill* that I’m convinced almost anyone can learn (or at least improve on). And, by extension, those with a “natural” gift should be able to turn it into pure genius. So, to get started, let me say this: The majority of the information in this chapter is simple common sense. I’ll start out with some tips on how to incorporate ear training into everything you do, then finish with some exercises to specifically target the subject.

How To Incorporate Ear Training Into Everything You Do

1. Live an “*ear-training life*”: One of the drawbacks of *my* musical ear is that I am unable to shut music out, even when I would like to. Background music (muzak) won’t *stay* in the background with me; my mind unconsciously zeroes in on it and starts to analyze it. I used to consider it a curse, but I’ve come to realize how lucky I am. What I’m proposing here is that you make a conscious, intellectual effort to *notice* the music going on around you—and it really is *all* around you—and, *whether you like the music or not*, get in the habit of trying to figure out what it is you’re hearing.

2. *Listen* to what you play: Sorry if I sound condescending here, but not everyone thinks that way! *I* am my own harshest judge, to the point of disliking my playing even when I play well. My point is, realize that anytime you strum a chord in public, you are producing a sound that is heard by others. You don’t want to be afraid of what “others may think,” but you should be concerned with whether or not you’re producing a sound worth hearing. And don’t be afraid to judge yourself. For example, while you’re playing, say to yourself, “okay, I’m being too soft [or loud, or slow, or fast, or. . .] here.” I don’t want you to feel bad (or overly good, for that matter) about your playing, but you shouldn’t be afraid to tell yourself that you “could sound a little better.”

3. *Listen* to what *others* play: Try a little experiment: The next time you are in a jam session, or a banjo band rehearsal, lay out for a couple of choruses, or maybe even a whole tune or two. You might be surprised at how much more you hear when you’re not concentrating on playing. If you have a real strong player in your group, and/or if you have a special guest artist playing with you, listen hard to what they’re doing; you’ll probably hear things that you would like to learn to do. While listening to the band (or a recording for that matter), follow along with your music and see if you can hear the chord changes and phrase breaks, or if you can hear when a complete chorus has gone by. Learn to “hear” and anticipate when a known chord change is coming up.

4. *Put your music away!*: When you’ve memorized a tune, *play it without your music!* You might be surprised at how well you’ve learned it.

5. *Set a memorization goal*: Set a goal of learning and memorizing one new tune a week or one new tune before each band rehearsal, for example. The goal is accomplished when you can play the tune without your music. Playing without music is very liberating; it takes your focus away from reading and puts it on listening, giving you the time to musically interact with the other musicians.

6. *Sing along with the tunes*: Yes, singing is *the* single most important aspect of ear training. I don’t care if you think your voice sounds good or not (to yourself or anyone else), you just have to do it. I truly believe that anyone, even the “tone deaf,” can learn to sing, at least well enough to get musical benefit from it. There are many ways to incorporate singing into your practice routine.

For example: Strum one chord in a song and sing the phrase that goes with it. If you can sing in pitch and in “time,” so much the better: You’ll be able to hear how the melody fits with the chord. Sing slowly and deliberately. Don’t worry about keeping time at first: The main point is listening to the notes. Let’s say, oh, how about Four Leaf Clover?

[strum a C chord] *I’m looking over, a four leaf clover, that* [D7] *I overlooked before,* [G7] *one is for sun-shine, the* [C] *second is* [A7] *rain,* [D7] *third is for roses, that* [G7] *grow in the* [G7+] *lane, etc.*

Another singing example: Buddy Wachter showed me a jazz exercise that can be applied just as easily to modes and arpeggios; singing what you play. In other words, play a C scale (or arpeggio), and sing it at the same time. The idea is to “connect” the voice (ear) with the fingers. Start with the basics, and keep playing/singing as you progress. This goes back to what I said earlier about developing a new sound concept.

7. Learn music theory: I’ve talked about this before in other contexts, but it is certainly true for ear-training purposes. If you *know* what it is you’re listening to, you’re more likely to *understand* it, and in turn, more likely to *really listen* to it. For example, the Circle of Keys (from the chapter on SMPs): Memorization of this *one* thing—both the theory *and the sound* of it—will cover 90% of your ear-training needs! In fact, the majority of the Ear Training Drills later in this chapter will literally revolve around the Circle of Keys. I *know* it seems like learning music theory would ruin the fun of music—I resisted learning and applying it to the banjo for years myself—but just the opposite is true. Understanding theory—*and playing better banjo because of it*—amplifies the fun more than you could ever imagine. My jazz band professor in college used to say “Jazz is fun: The better *you* play, the more fun *I* have!” Anyway, there are plenty of great and *free* music education resources on the internet; take advantage of them!

8. Take a music appreciation class: Your Community College or Community Education Center (or local orchestra?) will probably offer a class of some kind, or maybe you can find a Classical Music Club. Learn to hear the different orchestral (or folk) instruments and the music forms they are played in. Alternatively, you could find a good book on the subject and find a classical music station or classical music CDs: Follow along with the book. Become a *music connoisseur*. My listening abilities really took off in college Music History and Music Theory classes. Listening ability > hearing ability > playing ability. Do the math.

9. Actively and critically listen to lots of music! As I’ve been teaching myself to play jazz, this thought has occurred to me: Even if I had the best technique in the world (*how* to play), how would I know *what* to play if I didn’t listen to music for playing examples? I’m lucky; I hear music in my head all the time (often to the point of distraction). I have found that if I actively listen to *anything*, that music—no matter how complex, *or if I like the music or not*—continues to stream through my head until I listen to something else. I have talked to people who claim to not hear music in their head at all. I find this impossible to imagine, but I guess I’ll have to take their word for it! Anyway. . .you’ve got to get the music into your head so you can turn it around and give it back through your playing.

I've got to say it: Banjo recordings are *not* the best source of listening material! Unless, of course, banjo music is all you're interested in. . .granted, if there is a specific banjo technique you're trying to learn, then of course you have little choice, but: You really should consider broadening your listening choices.

The first thing that comes to my mind with my particular musical goals is early jazz. I especially enjoy listening to some of the fine Trad Jazz bands that are playing today. Those guys have done their homework, and some can really play in the style of the 1920's. Of course, there's nothing wrong with the original recordings of Louis Armstrong, Bix Beiderbeck, Sydney Bechet, Johnny Dodds, etc. "But they're all horn players!" you may say. Keep in mind that the early jazz guitarists got their solo chops by *copying the horn players!* Otherwise, they would have just remained rhythm players, like most of the banjoists of the day.

Side note: I'm convinced that if the early jazz band banjoists had stayed with the banjo instead of switching to guitar, we would have a very different banjo sound today! The banjo is fully capable of playing "modern" jazz; it just hasn't been done much. Or should I say, it hasn't been well accepted and/or encouraged by the banjo main stream. For more on my opinion on this subject, read the chapter *What Should A Plectrum Banjoist Know?*

The whole point of this is to improve your listening and hearing skills. For that purpose, just about any "good" music will do. For example, because I also sing (and my Momma done raised me right!), I'm a huge fan of Frank Sinatra, Nat King Cole, Ella Fitzgerald, Dean Martin, etc. I remember how when I first got into Sinatra, the way I heard and played the banjo changed because my sense of phrasing improved.

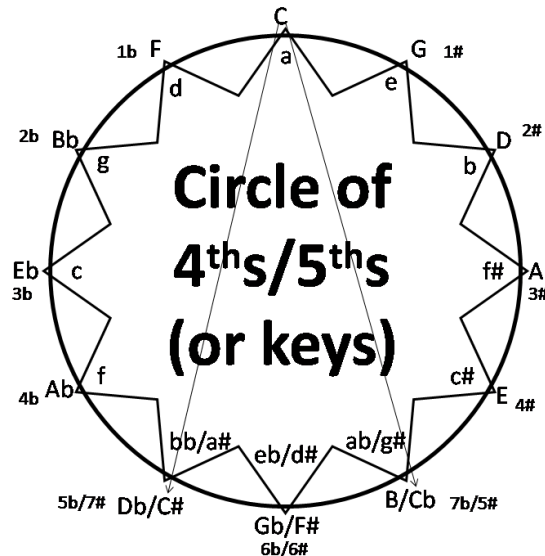
Another example; I have recently gotten into playing the jazz tenor sax (mind you, I have a long way to go, but I sure have fun!). My new heroes are Coleman Hawkins, Lester Young, Ben Webster, Don Byas, etc. I would have to say that this new direction in my musical life led directly to me making positive changes in my banjo playing *and* to writing this book (because I finally discovered my "inner jazz musician").

I've also enjoyed a growing variety of "ethnic" music: Mexican Mariachi, Jewish Klezmer, Gypsy Jazz, the various types of Irish music, etc. Gypsy Jazz, led by the great guitarist Django Reinhardt, is a wonderful source of banjo ideas. Django was actually a banjo player first (albeit, a six-string banjitar). To illustrate his importance to us, Django was actually one of Buddy Wachter's first inspirations. Anyway, there are plenty of great Gypsy Jazz guitarists playing today. By the way, YouTube is a great place to find all of this and more, including a growing number of fine banjo and Trad Jazz videos. It has become my first and primary source for listening material. It's not just for the kids anymore!

Anyway, the more you listen—and the more types of music you listen to—the better musician you'll become. Next, I'm going to get into some specific exercises you can do—with your banjo!—to learn to play by ear.

Ear Training Drills

These drills will serve a dual purpose: Learning some simple music theory concepts, and training your ear. Like I said, most of this will involve the Circle of Keys, so here's the Circle again for easy reference. I covered some important points about the Circle in the Symmetrical Music Patterns chapter, so you may want to review that now:



Remember this drill from the SMP chapter? Play it again now:

C F B \flat E \flat A \flat D \flat G \flat B E A D G C

Notice how these notes follow the circle counter-clockwise?

Now, let's put some chords to this Circle of Keys movement. Listen to MIDI File "Circle of Keys," then play this exercise. Take your time; play the "root" note by itself (gray highlight), then the chord.

C7	F7	B\flat7	E\flat7	A\flat7	D\flat7
G\flat7	B7	E7	A7	D7	G7

Wow, there's so much involved in this, I don't know where to start. . .let's see:

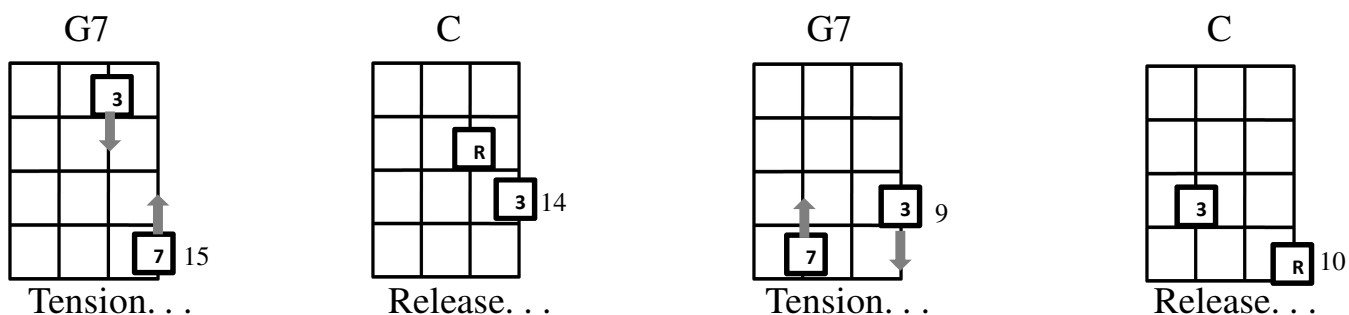
Listen first to how the root note moves, and memorize the sound. You will be surprised at how often you hear that exact movement in the songs that you play.

Harder to hear is how the “7” and the “3” move, but it’s easy to *see* in these chord diagrams. Notice that they “switch places” on each consecutive chord. These two notes form a “tri-tone” interval. This is one of the most dissonant intervals in music, and is what makes music move forward. Let me digress for a moment and show another playing/listening exercise. There’s a chance that this is going to confuse the heck out of you. . .that’s okay: It just means that this book will continue to be valuable until you’ve had your “ah-ha!” moment. I won’t care how long that moment takes if you won’t. . .

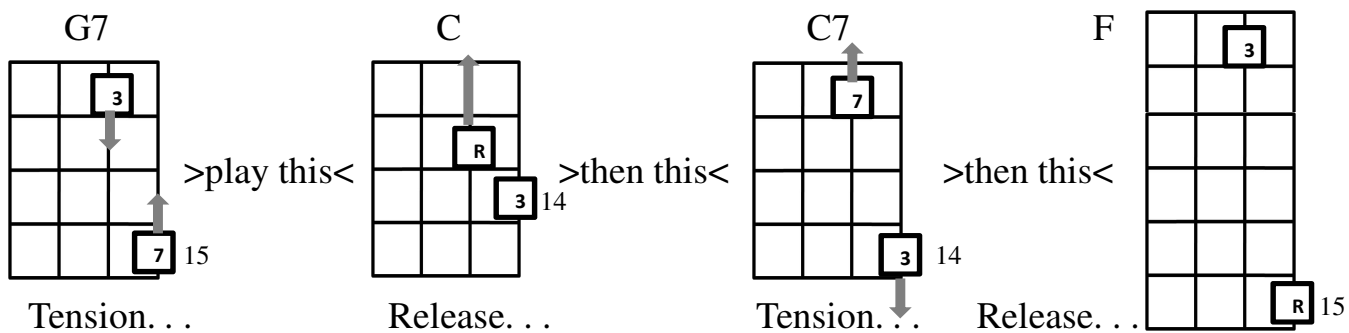
Okay, here’s how this works: The two most important notes in the Dominant 7 chord—and in Circle of Keys movement, and thus, music in general—are the 3rd and the 7th. These two notes played together, form a “tri-tone,” which is the most dissonant chordal interval. Dissonance needs to “resolve,” and the natural way for this one to resolve is [read slowly and carefully, then repeat]: The 3rd of the G7 chord (B) resolves *up* to the root of the C chord, and; the 7th of the G7 chord (F) resolves *down* to the 3rd of the C chord (E). This 3-1/7-3 resolution is the same in every key, and is what makes music move forward: Dissonance/Tension—Consonance/Release.

Play the first two “chords” over and over again until you can “hear” this tension-release sequence. Listen to Midi File “V-I.”

Now play the next two chords over and over. You’ll hear the same two notes resolving to the same two notes (in the second example, deaden the 2nd string).



Now, play this exercise. Listen to Midi File “II-V-I.” What I’ve done here is change the C chord to a C7 chord. . .



. . .which then wants to resolve to the F chord (counter-clockwise on the circle). Now, try the exercise on the previous page again, and listen for this movement. That exercise keeps going because it never resolves. As an experiment, stop anywhere in the exercise; it should sound incomplete, as if it needs to go somewhere. That is the concept of “tension-release” at work, and is what gives well written music its sense of movement.

Now, let me show you one more exercise to learn to hear the Circle of Keys movement, this time in the context of scale fragments. What I've shown here is to play the first four notes of the C scale: C(1)-D(2)-E(3)-F(4). Then the F scale: F(1)-G(2)-A(3)-Bb(4). Then the Bb scale: Bb—Eb. This pattern follows the Circle of Keys all the way around until it returns to the C scale. Don't panic looking at all those key signatures: Just play the TAB, and you'll hear the movement (it's the same simple four-note pattern over and over again, starting on a different fret each time). Listen to MIDI File *I up to IV*.

C up to F, F up to Bb, Bb up to Eb, Eb up to Ab, Ab up to Db, Db up to Gb,

11 13 11 12 | 4 6 4 5 | 9 11 9 10 | 2 4 2 3 | 7 9 7 8 | 0 2 0 1

I believe strongly in these exercises; I want you to play them a lot, even if you don't understand the theory. Listen to the Midi Files a lot too. I'm convinced that if you do this, you will soon begin to hear and recognize the tension/release cycle, and the Circle of Keys movement. These things will get you at least half the way toward the goal of "playing by ear." When you do start to hear this phenomenon, start paying closer attention to the songs you play. It should make your music understanding/listening—and music *playing*—skills come alive. The circle of keys deserves a lot more attention than I've given here, but I'm going to move on. I recommend you learn everything you can about it. Look it up on the internet.

Harmonized Scales Revisited

Now, what about the other half of the way? Well, remember the Harmonized Scales? Now I'm going to show you some simple ways to incorporate *them* into your ear training regimen. Here is the 2nd Inversion Triad Scale again; play it again now and sing along with it:

C Dm Em F G Am B dim C

“Wait, wait! How do I *sing along with chords?!?*” Oh, I never thought of that. . . actually, what I want you to do is sing each of the scales contained in the Triad Scale, one at a time, while playing it. So, play the scale through a couple of times to get the whole thing into your ear, then try to single out one of the individual modes and sing along (kill two birds with one stone by singing the note names). What you’ll be doing is *singing harmony with yourself*. This is ultimately the most important reason for learning the Church Modes. As is shown in this exercise, they are the key to harmony. For an added challenge, play the Jazz 7th Chord Scale and sing along with that!

The next logical step would be to play the C Major scale *by itself*, and sing either the E Phrygian scale or the G Mixolydian scale at the same time (or any combination of played and sung scales). Ultimately, you want to be able to do this *without playing* any scale. This will prove that you’ve gotten the harmony sound into your head.

If you have a practice partner, you could play the scales together (example: you play the Major Scale, and your partner plays the Phrygian Scale). Better yet, play *Blue Spanish Eyes* together, one on the melody, and one on the harmony. Play slowly, and listen hard to how the two notes sound together. Of course, there are dozens of similar “pretty” tunes you could do this with. They are ideal for learning the basics of harmony.

Another ear training resource available to you is the Midi files. To get you started on this, listen to the Midi File “Basic C Scale.” Listen to it a few times, then play harmony with it, using the E Phrygian (#3) scale. When you can hear the two scales together, stop playing and try to sing the #3 scale by itself. This drill can be done with any of the scale Midi Files; challenge yourself to see how “far out” you can get!

The main reason I am able to play chord melody so easily is that I can hear all the harmonies. It’s a gift, but I believe almost anyone can learn to do it. I have recently begun to learn tunes with more “sophisticated” harmonies, in an effort to stretch my ears beyond their natural level.

So, here I am, trying to show you how to go “beyond chord melody,” and I keep showing things that will improve your chord melody playing! Well, like I said, “it’s all the same five lines and four spaces!”

Now I’m going to go in yet another direction. I want to show you how you can tap into some of the musical skills you probably already have. If you know some songs, you have what you need for these exercises.

Scales in numbers: As I’ve said many times, scales are the “key” to all music. For the purposes of this discussion, I want you to replace the scale notes with numbers. Sing (or at least think) **1 2 3 4 5 6 7 ^{1,1}7 6 5 4 3 2 1, 1 _{7 6 5}**. “1” is the keynote, the numbers in subscript are below the keynote, and the numbers in superscript are the octave and up from the keynote. If you have trouble singing accurately, try playing the scale on your banjo and singing along with it, or sing along with any of the scale Midi Files.

Melodies in numbers: Just like with the scale, replace the song notes with the appropriate numbers. Aye, there's the rub! Which scale degree and appropriate number is it? At first, this will take memorization. Start with simple and familiar songs (no added accidentals, or "diatonic"; these songs will typically have only two or three chords); sing words first, then numbers. Note: Using your new knowledge of scales and arpeggios, can you see the scale and arpeggio "fragments" within the music? There's more on this in the chapter *Putting It All Together*.

Jingle Bells: 3 3 3, 3 3 3, **3 5 1 2 3**, 4 4 4 4 4 3 3 3-3 2 2 3 2, 5, 3 3 3, 3 3 3, **3 5 1 2 3**, 4 4 4 4 3 3 3-3 5 5 4 2 1.

Happy Birthday: ${}_5 5 6 5$ 1 ${}_7, 5 5 6 5$ 2 1, ${}_5 5$ **5 3 1** ${}_7 6$, 4 4 3 1 2 1. The Alphabet Song: 1 1 5 5 6 6 5, 4 4 3 3 2-2-2-2-1, 5 5 4, 3 3 2, 5 5 4, 3 3 2, 1 1 5 5 6 6 5, 4 4 3 3 2 2 1.

Dixie: **5 3 1 1 1 2 3 4 5 5 5 3 6**, 5 6, 5 6, **5 6 7** ${}^{1 2 3, 1 5}$ 1, 5 3 5, 2 3 1.

Amazing Grace: ${}_5$ 1, 3 1 3, 2 1, ${}_{6, 5, 5}$ 1, 3 1 3, 2 3 5. . . 3 5, 3 5 3 1, ${}_{5, 6}$ 1 1 ${}_{6, 5, 5}$ 1, 3 1 3, 2 1.

You Are My Sunshine: ${}_5$ 1 2 3 3, 3 2 3 1 1, **1 2 3 4 6**, 6 5 4 3, 1 2 3 4 6, 6 5 4 3 1, 1 2 3 3, 4 2 2, 3 1.

When The Saints Go Marching In: 1 3 4 5, 1 3 4 5, 1 3 4 5 3 1 3 2, 3 2 1, 1 3 5 5 4, 3 4 5 3 1 2 1.

Joy To The World: 1 **7, 6 5, 4 3 2 1**, 5 6, 6 7, 7 ${}^1 \dots {}^{11}$ 7 6 5 5, 4 3, 11 7 6 5 5, 4 3, 3 3 3 3 3 4 5. . . 4 3 2 2 2 2 3 4. . . 3 2 1 1 , 6 5, 4 3 4 3, 2, 1.

Like I said, these tunes only have two or three chords. When you get into tunes with more chords and/or with accidentals, a different approach is required, which I will explain in the *Putting It All Together* chapter.

I hope these exercises demonstrate clearly just how important scales and arpeggios are to music: Music is literally made of them! The goal of this last exercise is for you to hear the scale degrees and how they relate to the song. Ultimately, you want to be able to hear what scale degree the song starts on. By the way, you'll find that most of the songs that we play have a range of an octave and a half or less. That's because the average singer has the same range.

These are just a few of the effective strategies to learning to play by ear. I've barely scratched the surface in this chapter! The most important point of all? **Listen!**

Banjo Ala Mode

In this chapter you'll find the basic Scale Modes and Extended Arpeggios in all 12 keys. I provide this mainly as a study resource, but there's an ulterior motive: If you were to "run through" all of these scales and arpeggios a few times (*hint, hint. . .*), you would have those patterns that you already learned down really well! The point is, they're all the same exact patterns, just starting in different places on the fretboard, *and there isn't a one of them that's any tougher to play and/or understand than another!*

➤ Don't worry about scary looking key signatures; just read the TAB. **But:** This could serve as a back-door approach to learning to read and understand those key signatures. . .

➤ Realize that "playing in other keys" is simply a matter of moving the "people's key" (C) to another part of the fretboard. This is why the "closed" scale and arpeggio patterns are so important; when you start to deal with open strings (which of course you *should* at some point in your development), it can get a little tricky. That's why you won't see hardly *any* open strings. This can seem like a scary concept, but is actually an easier way to approach the instrument. *It's certainly a more **musically correct** way to approach it. . .*

➤ In an effort to keep you out of the extreme high range of the instrument (and/or, keep you from running out of room), I changed octaves in the mode sequence in different places for each key. Don't let this confuse you! Again, just read the TAB.

➤ Rather than think of this as 84 different scales/arpeggios (including C), think of this as 12 different "mode sets." Example: You can think of a G Mixolydian scale as it's own unique entity, but it might be easier to think of it as just part of the C Mode Set (Remember? Just a slice of that two-octave mega-scale on p.17). Just learn the names of the individual notes and the names and order of the chord types. This should help cement the idea of the importance of the mode concept from an **organizational** standpoint. We can only memorize so much, after all. To the uninitiated, you'll look like a genius!

➤ I've only included the "root voicing" Jazz 7th Chords here. Refer to the *Harmonized Scale* chapter for the other voicings.

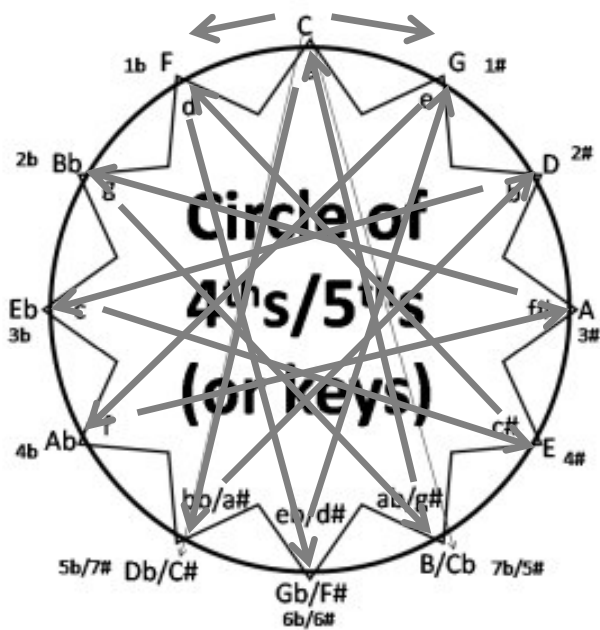
➤ *I've harped on **this** before:* Learn to "hear" how each of the modes relates to the parent key! You will truly have arrived as a *musician* when you've gotten that down, not to mention be able to play harmony by ear! And the importance of the modes from a **musical** standpoint will suddenly be clear. In fact, you should find yourself asking why you ever doubted me!

➤ By all means, learn these mode sets in the order that I've presented them. Why? Remember the things I've said before about going around the Circle of Keys? That's why! In fact, you'll find a lot more "Circle Lore" here.

➤ Do you think you might know the banjo fretboard pretty well by the time you learned all (or even half) of this? Do you think this would help you learn and play tunes? Do you think this might make you a better banjoist/musician? Umm. . . But let's face it: *Do you need to know any of this stuff to play in a banjo band or banjo convention jam session? **Of course not!*** Most importantly though, do you need it to become an all-around master of the instrument? I'll let you decide that on your own, but I think you know by now how I feel. At the very least, I want you to realize that this is all very much *within the realm of possibility* for the instrument, *so why not learn it?* Why limit yourself? Don't you **want** to be the best you can be, and help me to carry the banjo into the future?

I've presented these as separate "Mode Sets," one for each of the 12 chromatic pitches. They are presented in counter-clockwise order as usual, but I've also cross-referenced it so you can more easily study in chromatic order and clockwise order. I highly recommend you learn to understand this concept in all three ways! Use this circle for reference. The outside arrows of course show counter-clockwise (*up* by 4^{ths}) and clockwise (*up* by 5^{ths}), and the inside arrows show chromatic (follow the arrows around the circle chromatically). If you haven't already noticed, I am fascinated by patterns! This is one of the ways *I* learn best. This is also a literal illustration of the phrase "what goes around, comes around!" The point is, music is nothing but a big repeating continuum. *Musicians* know this, and I want *banjoists* to know it too!

What I *don't* want you to do is learn the "easy" keys first (fewer sharps or flats). Like I said before, none of these are any harder than the other; they just start on different frets and have different names! And because of TAB, you don't need to know those names to get started. Notice the number beside the key name? That refers to how many sharps or flats are in the key. I don't get much into key signatures in this book, but I recommend you learn about them. I *will* explain the "order of flats" and the "order of sharps" though. As you go around the Circle counter-clockwise, flats are added in this order: Bb, Eb, Ab, Db, Gb, Cb, Fb. As you go around the Circle clockwise, sharps are added in this order: F#, C#, G#, D#, A#, E#, B#. Notice it's backwards from the order of flats! This opens up a whole new area of fascinating Circle theory that I will not go into here. I have to finish this book sometime you know (and that information is easily available elsewhere)!



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I want to reintroduce one more thing before sending you on your merry way. You may remember this exercise from the *Ear Training* chapter. Before you move on from the key of C to the key of F, play the "C up to F" part. Play (and listen closely to) each four-note segment before moving to the next key. This will reinforce the lessons of both chapters.

C up to F, F up to Bb, Bb up to Eb, Eb up to Ab, Ab up to Db, Db up to Gb,

Gb up to Cb (B), B up to E, E up to A, A up to D, D up to G, and G up to C

Mode Set: Key of C

No sharps, no flats. Cross-reference: Chromatic p. 95, clockwise, p. 101.

C Ionian Scale; Extended Arpeggio; & CM7

The first system shows the C Ionian scale in treble clef, followed by an extended arpeggio (C-E-G-A-Bb-C) and the CM7 chord. The bass line contains the following fret numbers: 5 7 9 6 8 10 | 12 10 9 10 8 6 9 7 | 5 0 4 0 4 | 4 0 4 0.

D Dorian Scale; Extended Arpeggio; & Dm7

The second system shows the D Dorian scale in treble clef, followed by an extended arpeggio (D-F-A-B-C-D) and the Dm7 chord. The bass line contains the following fret numbers: 7 9 10 8 10 12 | 14 12 10 12 10 8 10 9 | 7 2 5 2 5 2 5 | 5 2 5 2.

E Phrygian Scale; Extended Arpeggio; & Em7

The third system shows the E Phrygian scale in treble clef, followed by an extended arpeggio (E-G-A-B-C-E) and the Em7 chord. The bass line contains the following fret numbers: 9 10 12 10 12 13 12 14 | 15 14 12 13 12 10 12 10 | 9 4 7 4 7 | 7 4 7 4.

F Lydian Scale; Extended Arpeggio; & FM7

The fourth system shows the F Lydian scale in treble clef, followed by an extended arpeggio (F-A-B-C-E-F) and the FM7 chord. The bass line contains the following fret numbers: 10 12 14 12 13 15 14 15 | 17 15 14 15 13 12 14 12 | 10 5 9 5 9 | 9 5 9 5.

G Mixolydian Scale; Extended Arpeggio; & G7

The fifth system shows the G Mixolydian scale in treble clef, followed by an extended arpeggio (G-B-D-F-A-G) and the G7 chord. The bass line contains the following fret numbers: 12 14 16 13 15 13 15 17 | 19 17 15 19 15 13 16 14 | 12 7 11 7 10 | 10 7 11 7.

A Aeolian Scale; Extended Arpeggio; & Am7

The sixth system shows the A Aeolian scale in treble clef, followed by an extended arpeggio (A-C-E-G-A) and the Am7 chord. The bass line contains the following fret numbers: 2 4 5 3 5 6 5 7 | 9 7 5 6 5 3 5 4 | 2 9 12 9 12 | 12 9 12 9.

B Locrian Scale; Extended Arpeggio; & Bm7b5

The seventh system shows the B Locrian scale in treble clef, followed by an extended arpeggio (B-D-F-A-B) and the Bm7b5 chord. The bass line contains the following fret numbers: 4 5 7 5 6 5 7 9 | 10 9 7 8 6 5 7 5 | 4 11 14 10 14 | 14 10 14 11.

C Ionian Scale; Extended Arpeggio; & CM7

The eighth system shows the C Ionian scale in treble clef, followed by an extended arpeggio (C-E-G-A-Bb-C) and the CM7 chord. The bass line contains the following fret numbers: 5 7 9 6 8 10 9 10 | 12 10 9 10 8 6 9 7 | 5 12 16 12 16 | 10 12 16 12.

Mode Set: Key of F

Add one flat (Bb). Cross-reference: Chromatic p. 96, clockwise, p. 90.

F Ionian Scale; Extended Arpeggio; & FM7

The first system shows the F Ionian scale in treble clef with a key signature of one flat. The scale is written in a four-measure phrase. Below the staff is a guitar fretboard diagram with fingerings: 10-12-14, 11-13-15, 14-15, 17-15-14, 15-13-11, 14-12, 10, 5-9-5-9, 5-8, 5, 9-5, 9-5, 5.

G Dorian Scale; Extended Arpeggio; & Gm7

The second system shows the G Dorian scale in treble clef with a key signature of one flat. The scale is written in a four-measure phrase. Below the staff is a guitar fretboard diagram with fingerings: 12-14-15, 13-15-17, 15-17, 19-17-15, 17-15-13, 15-14, 12, 7-10, 7-10, 7-10, 7, 10-7, 10-7, 7.

A Phrygian Scale; Extended Arpeggio; & Am7

The third system shows the A Phrygian scale in treble clef with a key signature of one flat. The scale is written in a four-measure phrase. Below the staff is a guitar fretboard diagram with fingerings: 2-3-5, 3-5-6, 5-7, 6-7-5, 6-5-3, 5-3, 2, 9-12, 9-12, 8-12, 6, 12-9, 12-9, 9.

Bb Lydian Scale; Extended Arpeggio; & BbM7

The fourth system shows the Bb Lydian scale in treble clef with a key signature of one flat. The scale is written in a four-measure phrase. Below the staff is a guitar fretboard diagram with fingerings: 3-5-7, 5-6-8, 7-8, 10-8-7, 8-6-5, 9-5, 3, 10-14, 10-14, 10-14, 10, 14-10, 14-10, 10.

C Mixolydian Scale; Extended Arpeggio; & C7

The fifth system shows the C Mixolydian scale in treble clef with a key signature of one flat. The scale is written in a four-measure phrase. Below the staff is a guitar fretboard diagram with fingerings: 5-7-9, 6-8-10, 8-10, 12-10-8, 10-8-6, 9-7, 5, 12-10, 12-15, 12-15, 12, 15-12, 10-12, 12.

D Aeolian Scale; Extended Arpeggio; & Dm7

The sixth system shows the D Aeolian scale in treble clef with a key signature of one flat. The scale is written in a four-measure phrase. Below the staff is a guitar fretboard diagram with fingerings: 7-9-10, 8-10-11, 10-12, 14-12-10, 11-10-8, 10-9, 7, 14-17, 14-17, 14, 17-14, 17-14, 14.

E Locrian Scale; Extended Arpeggio; & Em7b5

The seventh system shows the E Locrian scale in treble clef with a key signature of one flat. The scale is written in a four-measure phrase. Below the staff is a guitar fretboard diagram with fingerings: 9-10-12, 10-11-13, 12-14, 15-14-12, 13-11-10, 12-10, 9, 16-19, 15-19, 15-19, 15, 19-15, 19-16, 16.

F Ionian Scale; Extended Arpeggio; & FM7

The eighth system shows the F Ionian scale in treble clef with a key signature of one flat. The scale is written in a four-measure phrase. Below the staff is a guitar fretboard diagram with fingerings: 10-12-14, 11-13-15, 14-15, 17-15-14, 15-13-11, 14-12, 10, 17-21, 17-21, 17, 21-17, 21-17, 17.

Mode Set: Key of Bb

Two flats (Bb, Eb). Cross-reference: Chromatic p. 97, clockwise, p. 91.

Bb Ionian Scale; Extended Arpeggio; & BbM7

The Bb Ionian scale is shown in treble clef with a key signature of two flats (Bb, Eb) and a 4/4 time signature. The scale is played in ascending and descending directions. The extended arpeggio is shown in bass clef with fingerings: 3, 5, 7, 4, 6, 8, 7, 8, 10, 8, 7, 6, 4, 7, 5, 3, 10, 14, 10, 14, 10, 15, 10, 14, 10, 14, 10, 12, 10, 10.

C Dorian Scale; Extended Arpeggio; & Cm7

The C Dorian scale is shown in treble clef with a key signature of two flats (Bb, Eb) and a 4/4 time signature. The scale is played in ascending and descending directions. The extended arpeggio is shown in bass clef with fingerings: 5, 7, 8, 6, 8, 10, 8, 10, 12, 10, 8, 10, 8, 6, 8, 7, 5, 12, 15, 12, 15, 12, 15, 12, 15, 12, 15, 12, 13, 13, 13, 13.

D Phrygian Scale; Extended Arpeggio; & Dm7

The D Phrygian scale is shown in treble clef with a key signature of two flats (Bb, Eb) and a 4/4 time signature. The scale is played in ascending and descending directions. The extended arpeggio is shown in bass clef with fingerings: 7, 8, 10, 5, 10, 11, 10, 12, 15, 12, 10, 11, 10, 8, 10, 8, 7, 14, 17, 14, 17, 13, 17, 13, 17, 14, 13, 14, 14, 14.

Eb Lydian Scale; Extended Arpeggio; & EbM7

The Eb Lydian scale is shown in treble clef with a key signature of two flats (Bb, Eb) and a 4/4 time signature. The scale is played in ascending and descending directions. The extended arpeggio is shown in bass clef with fingerings: 6, 10, 12, 10, 11, 13, 12, 13, 15, 13, 12, 15, 11, 10, 12, 10, 6, 15, 19, 15, 19, 15, 19, 15, 19, 15, 17, 17, 17, 17.

F Mixolydian Scale; Extended Arpeggio; & F7

The F Mixolydian scale is shown in treble clef with a key signature of two flats (Bb, Eb) and a 4/4 time signature. The scale is played in ascending and descending directions. The extended arpeggio is shown in bass clef with fingerings: 10, 12, 14, 11, 13, 15, 15, 15, 17, 15, 15, 15, 15, 13, 11, 14, 12, 10, 17, 21, 17, 20, 17, 20, 17, 21, 17, 17, 17.

G Aeolian Scale; Extended Arpeggio; & Gm7

The G Aeolian scale is shown in treble clef with a key signature of two flats (Bb, Eb) and a 4/4 time signature. The scale is played in ascending and descending directions. The extended arpeggio is shown in bass clef with fingerings: 12, 14, 15, 15, 15, 16, 19, 17, 15, 16, 15, 13, 15, 14, 12, 14, 19, 19, 22, 19, 22, 19, 22, 19, 22, 19, 20, 20, 20, 20.

A Locrian Scale; Extended Arpeggio; & Am7b5

The A Locrian scale is shown in treble clef with a key signature of two flats (Bb, Eb) and a 4/4 time signature. The scale is played in ascending and descending directions. The extended arpeggio is shown in bass clef with fingerings: 2, 3, 5, 3, 4, 6, 5, 7, 8, 7, 5, 6, 4, 5, 5, 3, 2, 9, 12, 8, 12, 5, 12, 8, 12, 8, 12, 9, 9, 9.

Bb Ionian Scale; Extended Arpeggio; & BbM7

The Bb Ionian scale is shown in treble clef with a key signature of two flats (Bb, Eb) and a 4/4 time signature. The scale is played in ascending and descending directions. The extended arpeggio is shown in bass clef with fingerings: 3, 5, 7, 4, 6, 8, 7, 8, 10, 8, 7, 8, 6, 4, 7, 5, 3, 10, 14, 10, 14, 10, 15, 10, 14, 10, 14, 10, 12, 10, 10.

Mode Set: Key of Eb

Three flats (Bb, Eb, Ab). Cross-reference: Chromatic p. 98, clockwise, p. 92.

Eb Ionian Scale; Extended Arpeggio; & EbM7

The Eb Ionian scale is shown in a 4-measure sequence. The first two measures are ascending and descending eighth-note runs. The third measure is an ascending eighth-note run. The fourth measure is a chordal EbM7. The bass line shows fret numbers: 8 10 12 | 9 11 13 | 15 13 12 | 13 11 9 | 12 10 | 3 7 | 3 7 | 7 3 | 7 3 | 5 5.

F Dorian Scale; Extended Arpeggio; & Fm7

The F Dorian scale is shown in a 4-measure sequence. The first two measures are ascending and descending eighth-note runs. The third measure is an ascending eighth-note run. The fourth measure is a chordal Fm7. The bass line shows fret numbers: 10 12 13 | 11 13 15 | 13 15 | 17 15 13 | 15 13 11 | 13 12 | 10 5 | 8 5 8 | 5 8 | 8 5 | 8 5 | 5 5.

G Phrygian Scale; Extended Arpeggio; & Gm7

The G Phrygian scale is shown in a 4-measure sequence. The first two measures are ascending and descending eighth-note runs. The third measure is an ascending eighth-note run. The fourth measure is a chordal Gm7. The bass line shows fret numbers: 12 13 15 | 13 15 16 | 15 17 | 18 17 15 | 16 15 13 | 15 13 | 12 7 | 10 7 10 | 6 10 | 6 10 | 10 7 | 10 7 | 7 7.

Ab Lydian Scale; Extended Arpeggio; & AbM7

The Ab Lydian scale is shown in a 4-measure sequence. The first two measures are ascending and descending eighth-note runs. The third measure is an ascending eighth-note run. The fourth measure is a chordal AbM7. The bass line shows fret numbers: 1 3 5 | 3 4 6 | 5 6 | 8 6 5 | 6 4 3 | 5 3 | 1 8 | 12 8 12 | 9 12 | 8 12 | 12 8 | 12 8 | 8 8.

Bb Mixolydian Scale; Extended Arpeggio; & Bb7

The Bb Mixolydian scale is shown in a 4-measure sequence. The first two measures are ascending and descending eighth-note runs. The third measure is an ascending eighth-note run. The fourth measure is a chordal Bb7. The bass line shows fret numbers: 3 5 7 | 4 6 8 | 6 8 | 10 8 6 | 8 6 4 | 7 5 | 3 10 | 14 10 13 | 10 13 | 10 13 | 13 10 | 14 10 | 10 10.

C Aeolian Scale; Extended Arpeggio; & Cm7

The C Aeolian scale is shown in a 4-measure sequence. The first two measures are ascending and descending eighth-note runs. The third measure is an ascending eighth-note run. The fourth measure is a chordal Cm7. The bass line shows fret numbers: 5 7 8 | 6 8 9 | 8 10 | 12 10 8 | 9 8 6 | 8 7 | 5 12 | 15 12 15 | 12 15 | 12 15 | 15 12 | 15 12 | 12 12.

D Locrian Scale; Extended Arpeggio; & Dm7b5

The D Locrian scale is shown in a 4-measure sequence. The first two measures are ascending and descending eighth-note runs. The third measure is an ascending eighth-note run. The fourth measure is a chordal Dm7b5. The bass line shows fret numbers: 7 8 10 | 8 9 11 | 10 12 | 13 12 10 | 11 9 8 | 10 8 | 7 14 | 17 13 17 | 13 17 | 13 17 | 17 13 | 17 14 | 14 14.

E Ionian Scale; Extended Arpeggio; & Em7

The E Ionian scale is shown in a 4-measure sequence. The first two measures are ascending and descending eighth-note runs. The third measure is an ascending eighth-note run. The fourth measure is a chordal Em7. The bass line shows fret numbers: 8 10 12 | 9 11 13 | 12 13 | 15 13 12 | 13 11 9 | 12 10 | 8 15 | 19 15 19 | 15 19 | 15 19 | 19 15 | 19 15 | 15 15.

Mode Set: Key of Ab

Four flats (Bb, Eb, Ab, Db). Cross-reference: Chromatic p. 99, clockwise, p. 93.

Ab Ionian Scale; Extended Arpeggio; & AbM7

The first system shows the Ab Ionian scale in treble clef, 4/4 time, with a key signature of three flats. The scale is written across four measures. Below the staff is a guitar fretboard diagram with fingerings: 1 3 5 2 4 6 5 6 | 8 6 5 6 4 2 5 3 | 1 6 12 8 12 | 12 6 12 8.

Bb Dorian Scale; Extended Arpeggio; Bbm7

The second system shows the Bb Dorian scale in treble clef, 4/4 time, with a key signature of three flats. The scale is written across four measures. Below the staff is a guitar fretboard diagram with fingerings: 3 5 6 4 6 8 6 8 | 10 8 6 8 6 4 6 5 | 3 10 13 10 13 | 13 10 13 10.

C Phrygian Scale; Extended Arpeggio; & Cm7

The third system shows the C Phrygian scale in treble clef, 4/4 time, with a key signature of three flats. The scale is written across four measures. Below the staff is a guitar fretboard diagram with fingerings: 5 6 8 6 8 9 8 10 | 11 10 8 9 8 6 8 6 | 5 12 15 12 15 | 15 12 15 12.

Db Lydian Scale; Extended Arpeggio; & DbM7

The fourth system shows the Db Lydian scale in treble clef, 4/4 time, with a key signature of three flats. The scale is written across four measures. Below the staff is a guitar fretboard diagram with fingerings: 6 8 10 8 9 11 10 11 | 13 11 10 11 9 8 10 8 | 6 1 5 1 5 | 5 1 5 1.

Eb Mixolydian Scale; Extended Arpeggio; & Eb7

The fifth system shows the Eb Mixolydian scale in treble clef, 4/4 time, with a key signature of three flats. The scale is written across four measures. Below the staff is a guitar fretboard diagram with fingerings: 8 10 12 9 11 13 11 13 | 15 13 11 13 11 9 12 10 | 4 3 7 3 6 | 6 3 7 3.

F Aeolian Scale; Extended Arpeggio; & Fm7

The sixth system shows the F Aeolian scale in treble clef, 4/4 time, with a key signature of three flats. The scale is written across four measures. Below the staff is a guitar fretboard diagram with fingerings: 10 12 13 11 13 14 13 15 | 17 15 13 14 13 11 15 12 | 10 5 8 5 8 | 6 5 8 5.

G Locrian Scale; Extended Arpeggio; & Gm7b5

The seventh system shows the G Locrian scale in treble clef, 4/4 time, with a key signature of three flats. The scale is written across four measures. Below the staff is a guitar fretboard diagram with fingerings: 12 13 15 13 14 16 15 17 | 18 17 15 16 14 15 15 13 | 12 7 10 6 10 | 10 6 10 7.

Ab Ionian Scale; Extended Arpeggio; & AbM7

The eighth system shows the Ab Ionian scale in treble clef, 4/4 time, with a key signature of three flats. The scale is written across four measures. Below the staff is a guitar fretboard diagram with fingerings: 13 15 17 14 16 18 17 18 | 20 18 17 18 16 14 17 15 | 13 8 12 8 12 | 12 8 12 8.

Mode Set: Key of Db

Five flats (Bb, Eb, Ab, Db, Gb). Cross-reference: Chromatic p. 100, clockwise, p. 94.

Db Ionian Scale; Extended Arpeggio; & DbM7

This system shows the Db Ionian scale in treble clef, followed by an extended arpeggio and the DbM7 chord. The bass line includes fret numbers: 6 8 10 7 9 11 10 11 13 11 10 11 9 7 10 8 | 6 1 5 1 5 1 4 | 1 5 1 5 1 3.

Eb Dorian Scale; Extended Arpeggio; Ebm7

This system shows the Eb Dorian scale in treble clef, followed by an extended arpeggio and the Ebm7 chord. The bass line includes fret numbers: 8 10 11 9 12 13 15 13 11 13 11 9 11 10 | 8 3 6 3 6 3 6 | 6 3 6 3 5.

F Phrygian Scale; Extended Arpeggio; & Fm7

This system shows the F Phrygian scale in treble clef, followed by an extended arpeggio and the Fm7 chord. The bass line includes fret numbers: 10 11 13 11 13 14 13 15 16 15 13 14 13 11 13 11 | 10 5 8 5 8 4 8 | 4 8 5 8 5 3.

Gb Lydian Scale; Extended Arpeggio; & GbM7

This system shows the Gb Lydian scale in treble clef, followed by an extended arpeggio and the GbM7 chord. The bass line includes fret numbers: 11 13 15 13 14 16 18 16 15 16 14 13 15 13 11 | 11 6 10 6 10 6 10 | 10 6 10 6 8 6.

Ab Mixolydian Scale; Extended Arpeggio; & Ab7

This system shows the Ab Mixolydian scale in treble clef, followed by an extended arpeggio and the Ab7 chord. The bass line includes fret numbers: 1 3 5 2 4 6 4 6 8 6 4 6 4 2 5 3 | 1 6 12 8 11 8 | 11 8 12 6 8.

Bb Aeolian Scale; Extended Arpeggio; & Bbm7

This system shows the Bb Aeolian scale in treble clef, followed by an extended arpeggio and the Bbm7 chord. The bass line includes fret numbers: 3 5 6 4 6 7 6 8 10 8 6 7 6 4 6 5 | 3 10 13 10 13 10 13 | 10 13 10 13 10.

C Locrian Scale; Extended Arpeggio; & Cm7b5

This system shows the C Locrian scale in treble clef, followed by an extended arpeggio and the Cm7b5 chord. The bass line includes fret numbers: 5 6 8 6 7 9 8 10 11 10 8 9 7 6 8 6 | 5 12 15 11 15 11 15 | 15 11 15 12 13.

This system shows the final scale in the mode set in treble clef, followed by an extended arpeggio and a chord. The bass line includes fret numbers: 6 8 10 7 9 11 10 11 13 11 10 11 9 7 10 8 | 6 13 17 13 17 13 17 | 13 17 13 17 13.

Mode Set: Key of Gb

Six flats (Bb, Eb, Ab, Db, Gb, Cb). Cross-reference: Chromatic p. 101, clockwise, p.

95.

Gb Ionian Scale; Extended Arpeggio; & Gbm7

This block contains the first system of music. It features a treble clef staff with a key signature of six flats (Bb, Eb, Ab, Db, Gb, Cb) and a 4/4 time signature. The scale is written as a sequence of eighth notes. Below the staff is a guitar fretboard diagram with six strings and a 24-fret scale. The scale notes are: 11-13-15, 12-14-16, 15-16, 18-16-15, 16-14-12, 15-13, 11, 6-10, 6-10, 6-9, 6, 10-6, 10-6, 8.

Ab Dorian Scale; Extended Arpeggio; Abm7

This block contains the second system of music. It features a treble clef staff with a key signature of six flats and a 4/4 time signature. The scale is written as a sequence of eighth notes. Below the staff is a guitar fretboard diagram with six strings and a 24-fret scale. The scale notes are: 1-3-4, 2-4-6, 4-6, 8-6-4, 6-4-2, 4-3, 1, 5-11, 5-11, 5-11, 8, 11-8, 11-8, 8.

Bb Phrygian Scale; Extended Arpeggio; & Bbm7

This block contains the third system of music. It features a treble clef staff with a key signature of six flats and a 4/4 time signature. The scale is written as a sequence of eighth notes. Below the staff is a guitar fretboard diagram with six strings and a 24-fret scale. The scale notes are: 3-4-6, 4-6-7, 6-8, 9-8-6, 7-6-4, 6-4, 5, 10-13, 10-13, 9-13, 9, 13-10, 13-10, 10.

Cb Lydian Scale; Extended Arpeggio; & Cbm7

This block contains the fourth system of music. It features a treble clef staff with a key signature of six flats and a 4/4 time signature. The scale is written as a sequence of eighth notes. Below the staff is a guitar fretboard diagram with six strings and a 24-fret scale. The scale notes are: 4-6-8, 6-7-9, 8-9, 11-9-8, 9-7-6, 8-6, 4, 11-15, 11-15, 11-15, 11, 15-11, 15-11, 11.

Db Mixolydian Scale; Extended Arpeggio; & Db7

This block contains the fifth system of music. It features a treble clef staff with a key signature of six flats and a 4/4 time signature. The scale is written as a sequence of eighth notes. Below the staff is a guitar fretboard diagram with six strings and a 24-fret scale. The scale notes are: 6-8-10, 7-9-11, 9-11, 15-11-9, 11-9-7, 10-8, 6, 1-5, 1-4, 1-4, 1-5, 1, 1.

Eb Aeolian Scale; Extended Arpeggio; & Ebm7

This block contains the sixth system of music. It features a treble clef staff with a key signature of six flats and a 4/4 time signature. The scale is written as a sequence of eighth notes. Below the staff is a guitar fretboard diagram with six strings and a 24-fret scale. The scale notes are: 8-10-11, 9-11-12, 11-13, 15-13-11, 12-11-9, 11-10, 8, 3-6, 3-6, 3-6, 6-3, 6-3, 3.

F Locrian Scale; Extended Arpeggio; & Fm7b5

This block contains the seventh system of music. It features a treble clef staff with a key signature of six flats and a 4/4 time signature. The scale is written as a sequence of eighth notes. Below the staff is a guitar fretboard diagram with six strings and a 24-fret scale. The scale notes are: 10-11-13, 11-12-14, 13-15, 16-15-13, 14-12-11, 13-11, 6, 5-8, 4-8, 4-8, 5-4, 8-5, 5.

Gb Ionian Scale; Extended Arpeggio; & Gbm7

This block contains the eighth system of music, which is identical to the first system. It features a treble clef staff with a key signature of six flats and a 4/4 time signature. The scale is written as a sequence of eighth notes. Below the staff is a guitar fretboard diagram with six strings and a 24-fret scale. The scale notes are: 11-13-15, 12-14-16, 15-16, 18-16-15, 16-14-12, 15-13, 11, 6-10, 6-10, 6-9, 6, 10-6, 10-6, 8.

Mode Set: Key of B

Five sharps (F#, C#, G#, D#, A#). Cross-reference: Chromatic p. 90, clockwise, p. 96.

B Ionian Scale; Extended Arpeggio; & Bm7

This block shows the B Ionian scale, its extended arpeggio, and the Bm7 chord. The scale is written in treble clef with a key signature of five sharps (F#, C#, G#, D#, A#). The arpeggio is shown in both treble and bass clefs. The Bm7 chord is shown in treble clef.

C# Dorian Scale; Extended Arpeggio; C#m7

This block shows the C# Dorian scale, its extended arpeggio, and the C#m7 chord. The scale is written in treble clef with a key signature of five sharps. The arpeggio is shown in both treble and bass clefs. The C#m7 chord is shown in treble clef.

D# Phrygian Scale; Extended Arpeggio; & D#m7

This block shows the D# Phrygian scale, its extended arpeggio, and the D#m7 chord. The scale is written in treble clef with a key signature of five sharps. The arpeggio is shown in both treble and bass clefs. The D#m7 chord is shown in treble clef.

E Lydian Scale; Extended Arpeggio; & EM7

This block shows the E Lydian scale, its extended arpeggio, and the EM7 chord. The scale is written in treble clef with a key signature of five sharps. The arpeggio is shown in both treble and bass clefs. The EM7 chord is shown in treble clef.

F# Mixolydian Scale; Extended Arpeggio; & F#7

This block shows the F# Mixolydian scale, its extended arpeggio, and the F#7 chord. The scale is written in treble clef with a key signature of five sharps. The arpeggio is shown in both treble and bass clefs. The F#7 chord is shown in treble clef.

G# Aeolian Scale; Extended Arpeggio; & G#m7

This block shows the G# Aeolian scale, its extended arpeggio, and the G#m7 chord. The scale is written in treble clef with a key signature of five sharps. The arpeggio is shown in both treble and bass clefs. The G#m7 chord is shown in treble clef.

A# Locrian Scale; Extended Arpeggio; & A#m7b5

This block shows the A# Locrian scale, its extended arpeggio, and the A#m7b5 chord. The scale is written in treble clef with a key signature of five sharps. The arpeggio is shown in both treble and bass clefs. The A#m7b5 chord is shown in treble clef.

This block shows the B Ionian scale, its extended arpeggio, and the Bm7 chord. The scale is written in treble clef with a key signature of five sharps. The arpeggio is shown in both treble and bass clefs. The Bm7 chord is shown in treble clef.

Mode Set: Key of E

Four sharps (F#, C#, G#, D#). Cross-reference: Chromatic p. 91, clockwise, p. 97.

E Ionian Scale; Extended Arpeggio; & EM7

Fingerings: 9 11 13 10 12 14 13 14 | 16 14 13 14 12 10 13 11 | 9 4 4 4 5 4 7 | 4 8 4 3 4 4

F# Dorian Scale; Extended Arpeggio; F#m7

Fingerings: 11 13 14 12 14 16 18 16 14 16 14 12 14 13 | 11 6 9 6 9 6 9 | 9 6 9 6 7 6 6

G# Phrygian Scale; Extended Arpeggio; & G#m7

Fingerings: 1 2 4 2 4 5 4 6 | 7 6 4 5 4 2 4 2 | 1 8 11 8 11 7 11 | 7 11 8 11 6 8

A Lydian Scale; Extended Arpeggio; & AM7

Fingerings: 2 4 6 4 5 7 6 7 | 9 7 6 7 5 4 6 4 | 2 9 13 9 13 9 13 | 13 9 13 9 9 9

B Mixolydian Scale; Extended Arpeggio; & B7

Fingerings: 4 6 8 5 7 9 7 9 | 11 9 7 9 7 5 8 6 | 4 11 15 11 14 11 14 | 11 14 11 15 11 11

C# Aeolian Scale; Extended Arpeggio; & C#m7

Fingerings: 6 8 9 7 9 10 9 11 | 13 11 9 10 9 7 9 8 | 6 13 16 13 16 15 16 | 16 13 16 13 13 13

D# Locrian Scale; Extended Arpeggio; & D#m7b5

Fingerings: 8 9 11 9 10 12 11 13 | 14 13 11 12 10 9 11 9 | 8 15 18 14 15 14 18 | 16 18 14 18 15 15

E Ionian Scale; Extended Arpeggio; & EM7

Fingerings: 9 11 13 10 12 14 13 14 | 16 14 13 14 12 10 13 11 | 9 16 20 16 20 16 20 | 20 16 20 16 16 16

Mode Set: Key of A

Three sharps (F#, C#, G#). Cross-reference: Chromatic p. 92, clockwise, p. 98.

A Ionian Scale; Extended Arpeggio; & AM7

The first system shows the A Ionian scale in treble clef, starting on A4. The extended arpeggio is shown in bass clef, starting on A2. The AM7 chord is shown in bass clef.

B Dorian Scale; Extended Arpeggio; Bm7

The second system shows the B Dorian scale in treble clef, starting on B4. The extended arpeggio is shown in bass clef, starting on B2. The Bm7 chord is shown in bass clef.

C# Phrygian Scale; Extended Arpeggio; & C#m7

The third system shows the C# Phrygian scale in treble clef, starting on C#4. The extended arpeggio is shown in bass clef, starting on C#2. The C#m7 chord is shown in bass clef.

D Lydian Scale; Extended Arpeggio; & DM7

The fourth system shows the D Lydian scale in treble clef, starting on D4. The extended arpeggio is shown in bass clef, starting on D2. The DM7 chord is shown in bass clef.

E Mixolydian Scale; Extended Arpeggio; & E7

The fifth system shows the E Mixolydian scale in treble clef, starting on E4. The extended arpeggio is shown in bass clef, starting on E2. The E7 chord is shown in bass clef.

F# Aeolian Scale; Extended Arpeggio; & F#m7

The sixth system shows the F# Aeolian scale in treble clef, starting on F#4. The extended arpeggio is shown in bass clef, starting on F#2. The F#m7 chord is shown in bass clef.

G# Locrian Scale; Extended Arpeggio; & G#m7b5

The seventh system shows the G# Locrian scale in treble clef, starting on G#4. The extended arpeggio is shown in bass clef, starting on G#2. The G#m7b5 chord is shown in bass clef.

The eighth system shows the final scale and arpeggio in the mode set, starting on A4 and A2 respectively.

Mode Set: Key of D

Two sharps (F#, C#). Cross-reference: Chromatic p. 93, clockwise, p. 99.

D Ionian Scale; Extended Arpeggio; & DM7

The D Ionian scale is shown in treble clef with a key signature of two sharps (F# and C#) and a 4/4 time signature. The scale is played in ascending and descending directions. The extended arpeggio is shown in bass clef with fingerings: 7 9 11 8 10 12 11 12 14 12 11 12 10 8 11 9. The DM7 chord is shown in bass clef with fingerings: 2 6 2 6 2 6 2 6 2.

E Dorian Scale; Extended Arpeggio; Em7

The E Dorian scale is shown in treble clef with a key signature of two sharps (F# and C#) and a 4/4 time signature. The scale is played in ascending and descending directions. The extended arpeggio is shown in bass clef with fingerings: 9 11 12 10 12 14 16 14 12 14 12 10 12 11 9 4 7 4 7 4 7 4 4 4.

F# Phrygian Scale; Extended Arpeggio; & F#m7

The F# Phrygian scale is shown in treble clef with a key signature of two sharps (F# and C#) and a 4/4 time signature. The scale is played in ascending and descending directions. The extended arpeggio is shown in bass clef with fingerings: 11 12 14 12 14 15 14 16 17 16 14 15 14 12 14 12 11 6 9 6 9 5 9 5 9 6 9 6.

G Lydian Scale; Extended Arpeggio; & GM7

The G Lydian scale is shown in treble clef with a key signature of two sharps (F# and C#) and a 4/4 time signature. The scale is played in ascending and descending directions. The extended arpeggio is shown in bass clef with fingerings: 12 14 16 14 15 17 16 17 19 17 16 17 15 14 16 14 12 7 11 7 11 7 11 7 11 7 7.

A Mixolydian Scale; Extended Arpeggio; & A7

The A Mixolydian scale is shown in treble clef with a key signature of two sharps (F# and C#) and a 4/4 time signature. The scale is played in ascending and descending directions. The extended arpeggio is shown in bass clef with fingerings: 2 4 6 3 5 7 5 7 9 7 5 7 5 3 6 4 2 9 13 9 12 9 12 9 13 9 9.

B Aeolian Scale; Extended Arpeggio; & Bm7

The B Aeolian scale is shown in treble clef with a key signature of two sharps (F# and C#) and a 4/4 time signature. The scale is played in ascending and descending directions. The extended arpeggio is shown in bass clef with fingerings: 4 6 7 5 7 8 7 9 11 9 7 8 7 5 7 6 4 11 14 11 14 11 14 11 14 11 11.

C# Locrian Scale; Extended Arpeggio; & C#m7b5

The C# Locrian scale is shown in treble clef with a key signature of two sharps (F# and C#) and a 4/4 time signature. The scale is played in ascending and descending directions. The extended arpeggio is shown in bass clef with fingerings: 6 7 9 7 8 10 9 11 12 11 9 10 8 7 9 7 6 12 16 12 14 12 16 12 14 12 14.

D Ionian Scale; Extended Arpeggio; & DM7

The D Ionian scale is shown in treble clef with a key signature of two sharps (F# and C#) and a 4/4 time signature. The scale is played in ascending and descending directions. The extended arpeggio is shown in bass clef with fingerings: 7 9 11 8 10 12 11 12 14 12 11 12 10 8 11 9 7 14 18 14 18 16 14 15 14 14 14.

Mode Set: Key of G

One sharp (F#). Cross-reference: Chromatic p. 94, clockwise, p. 100.

G Ionian Scale; Extended Arpeggio; & Gm7

The first system shows the G Ionian scale in treble clef with a key signature of one sharp (F#) and a 4/4 time signature. The scale is written in eighth notes. Below the staff is a guitar fretboard diagram with fret numbers: 0 2 4 1 3 5 4 5 | 7 5 4 5 3 1 4 2 | 0 7 11 7 11 | 7 11 7 11 7 | 7.

A Dorian Scale; Extended Arpeggio; Am7

The second system shows the A Dorian scale in treble clef with a key signature of one sharp (F#) and a 4/4 time signature. The scale is written in eighth notes. Below the staff is a guitar fretboard diagram with fret numbers: 2 4 5 3 5 7 5 7 | 9 7 5 7 5 3 5 4 | 2 9 12 9 12 | 9 12 9 12 9 | 9.

B Phrygian Scale; Extended Arpeggio; & Bm7

The third system shows the B Phrygian scale in treble clef with a key signature of one sharp (F#) and a 4/4 time signature. The scale is written in eighth notes. Below the staff is a guitar fretboard diagram with fret numbers: 4 5 7 5 7 8 7 9 | 10 9 7 8 7 5 7 5 | 4 11 14 11 14 | 10 14 10 | 10.

C Lydian Scale; Extended Arpeggio; & CM7

The fourth system shows the C Lydian scale in treble clef with a key signature of one sharp (F#) and a 4/4 time signature. The scale is written in eighth notes. Below the staff is a guitar fretboard diagram with fret numbers: 5 7 9 7 8 10 9 10 | 12 10 9 10 8 7 9 9 | 5 12 16 12 16 | 12 16 12 | 12.

D Mixolydian Scale; Extended Arpeggio; & D7

The fifth system shows the D Mixolydian scale in treble clef with a key signature of one sharp (F#) and a 4/4 time signature. The scale is written in eighth notes. Below the staff is a guitar fretboard diagram with fret numbers: 7 9 11 8 10 12 10 12 | 14 12 10 12 10 8 11 9 | 7 2 6 2 5 2 3 | 2 5 2 6 2 | 2.

E Aeolian Scale; Extended Arpeggio; & Em7

The sixth system shows the E Aeolian scale in treble clef with a key signature of one sharp (F#) and a 4/4 time signature. The scale is written in eighth notes. Below the staff is a guitar fretboard diagram with fret numbers: 9 11 12 10 12 13 12 14 | 16 14 12 13 12 10 12 11 | 9 4 7 4 7 4 7 | 4 7 4 7 4 | 4.

F# Locrian Scale; Extended Arpeggio; & F#m7b5

The seventh system shows the F# Locrian scale in treble clef with a key signature of one sharp (F#) and a 4/4 time signature. The scale is written in eighth notes. Below the staff is a guitar fretboard diagram with fret numbers: 11 12 14 12 15 15 14 16 | 17 16 14 15 15 12 14 12 | 11 5 9 5 9 | 5 9 5 | 5.

G Ionian Scale; Extended Arpeggio; & Gm7

The eighth system shows the G Ionian scale in treble clef with a key signature of one sharp (F#) and a 4/4 time signature. The scale is written in eighth notes. Below the staff is a guitar fretboard diagram with fret numbers: 12 14 16 13 15 17 16 17 | 19 17 16 17 15 13 16 14 | 12 7 11 9 11 | 7 10 7 | 7.

Putting It All Together

I've given you a lot of information in this book! I hope you see, first, how important it all is, and second, how it's all interrelated. To illustrate this, I'm going to give you a simple practical exercise, meant to tie everything together into one bundle: Analyzing songs to see how scales and arpeggios (and thus the related chords) work in actual music, and then learning to play more efficiently and musically correct. Seeing music theory in action should help to reemphasize some of the things that I've harped on in this book, and give you some powerful tools for further understanding and advancement.

On the next page you'll find *I'm Looking Over A Four-Leaf Clover*. But before I get to that, I need to digress for a moment. Remember the "Melodies In Numbers" from the *Ear Training* chapter? There I limited everything to the scale degrees of one scale. That was a simplification in order to introduce the concept. Now, I will show you how to apply the "Scales In Numbers" concept to different chords. I will also extend the idea to "arpeggios in numbers." This method will cover every chord and every accidental you may see in music, no matter how sophisticated the tune may be.

So, back to *Four-Leaf Clover*: The first thing to notice is that I've circled each chord segment. The tunes popular in the banjo world tend to be simple to begin with, and this is a further simplification of the original. Anyway, you can see that the first four bars are all with a C chord, so every note of the melody belongs to that chord (or to the C scale, thus the "2" and the "7"). Remember the superscript ¹ is the octave up from the keynote 1. You can easily see where the scale and arpeggio fragments are with the numbers.

Here's where I break from the number method shown in the *Ear Training* chapter. Notice the next chord is a D7, so now the numbers correspond with a D7 chord or scale (D is the new "1"). Follow this logic all the way through the tune. To save confusion in the early going here, you should think of each chord segment as a separate entity.

I'm only showing one song example, but you could do this breakdown with every tune in your book—and I highly recommend you do just that! There's no better way to learn the tune and prove to yourself what I've been saying all along: Music is literally made of scales, arpeggios, and fragments of both. To a large extent, the melody will dictate the chord progression; having said this, I must also point out that most melodies were written to fit within a specific chord progression.

The other important point to make here is regarding the physical aspect of playing. If you know how to play your scales and arpeggios, melodies are easy! To show you what I mean, play this example. The fingering is *lengthwise* on the fretboard (a **chord melody approach**: Melody minus the chord), as opposed to *across the fretboard* like on the following page. Which one is easier? The even better question is "which one is more correct and efficient?" Having said this, I should point out that there are many "correct" fingerings possible; don't take this arrangement as gospel.

10 5 2 0 1 0 2 5 10 9 10

I'm Looking Over A Four-Leaf Clover

a study in scale and arpeggio fragments

C

1 5 3 2 1 2 3 5 1 7 1

10 8 9 7 5 7 9 8 10 9 10

Detailed description: This system shows a C major scale fragment in treble clef, 4/4 time. The notes are C4, E4, G4, A4, B4, A4, G4, E4, C5, B4, A4, G4. The bass line consists of single notes: C3, G2, F2, E2, D2, C2, G2, F2, E2, D2, C2, G2.

D7

1 1 2 3 5 1

12 7 9 11 10 12 12

Detailed description: This system shows a D7 chord fragment in treble clef, 4/4 time. The notes are D4, F#4, A4, D5, F#4, D5. The bass line consists of single notes: D2, A1, B1, C2, D2, A1, D2.

G7 **C6** **A7**

3 2 1 3 2 1 6 6 6 1

9 7 8 9 8 8 7 7 7 7

Detailed description: This system shows three chord fragments in treble clef, 4/4 time. The first is G7 (G4, B4, D5, F#4), the second is C6 (C4, E4, G4, A4, B4, C5), and the third is A7 (A4, C5, E5, G5). The bass line consists of single notes: G2, F2, E2, G2, F2, E2, C2, B1, C2, D2, E2, C2.

D7 **G7**

1 6 5 1 6 5 1 1 1 1

12 9 10 12 9 10 8 8 8 8 8

Detailed description: This system shows two chord fragments in treble clef, 4/4 time. The first is D7 (D4, F#4, A4, D5), and the second is G7 (G4, B4, D5, F#4). The bass line consists of single notes: D2, A1, B1, C2, D2, A1, D2, G2, F2, E2, G2, F2, E2, D2.

F **Fm** **CM7** **A7**

6 5 b5 6 5 3 7 7 2 1 b7

12 10 9 12 10 7 9 9 9 7 8

Detailed description: This system shows four chord fragments in treble clef, 4/4 time. The first is F (F4, A4, C5, F5), the second is Fm (F4, A4, C5, Bb4), the third is CM7 (C4, E4, G4, Bb4), and the fourth is A7 (A4, C5, E5, G5). The bass line consists of single notes: F2, C2, Bb1, F2, C2, G2, C2, E2, F2, G2, A2, F2, C2.

D7 **G7** **C**

5 6 b7 5 1 1

10 9 10 12 8 10 10

Detailed description: This system shows three chord fragments in treble clef, 4/4 time. The first is D7 (D4, F#4, A4, D5), the second is G7 (G4, B4, D5, F#4), and the third is C (C4, E4, G4, C5). The bass line consists of single notes: D2, A1, B1, C2, D2, A1, D2, C2, G2, F2, E2, C2, G2.

Now, let's relate it to the Circle of Keys. Remember the *Five Foot Two* example from the SMP chapter? If not, take a moment to review it now (p.60). That was a "pure" Circle of Keys chord progression. *Four Leaf Clover* isn't quite as clear cut, but a definite map is still there. Let's take a look at the chord progression:

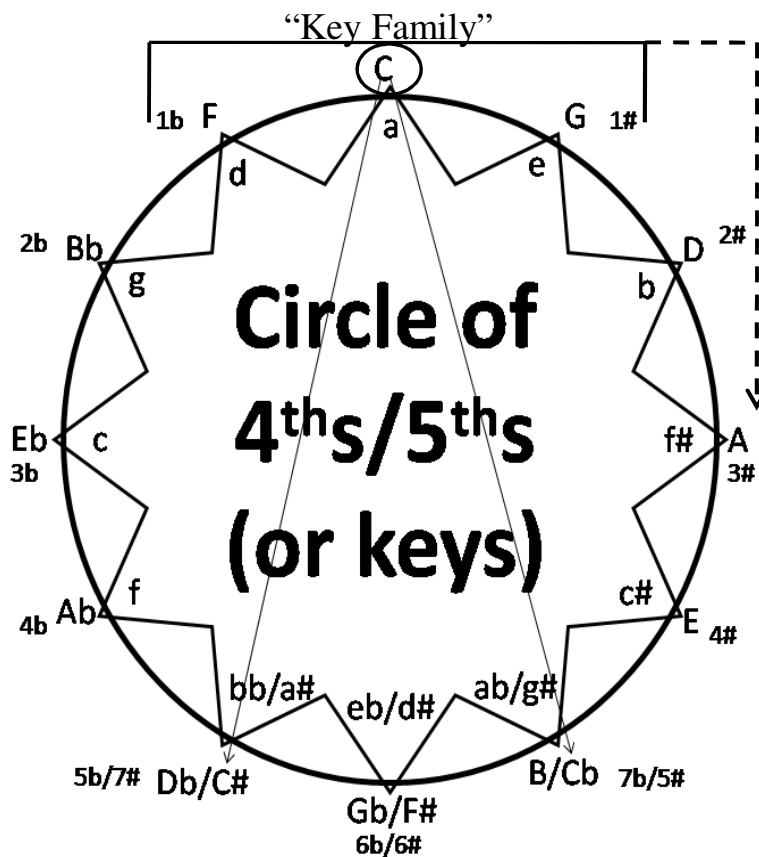
C --- / --- / --- / --- / --- / D7 --- / --- / --- / --- / --- /
 G7 --- / --- / --- / C6 --- / A7 --- / D7 --- / --- / --- / G7 --- / --- / --- /
 C --- / --- / --- / --- / --- / D7 --- / --- / --- / --- / --- /
 F --- / Fm --- / C --- / A7 --- / D7 --- / G7 --- / C --- / --- / --- /

So, first we have a C chord for four measures. Then it jumps to the D7 (II7); from here, it has to work it's way back to the tonic (C; refer to the Circle below) by way of the G7 (V7). No sooner has it returned to the C when it makes another, bigger jump, this time to the A7 (VI7). So, guess what happens next? It again has to work it's way back to the tonic, now through D7 and G7. When it returns to the C, it's at the beginning of the next phrase. This is known as a "6-2-5-1" chord progression.

This phrase starts out the same as the first, but then it does something even more unexpected: it jumps the other direction around the Circle to F (IV)! Then, through the IV minor, it returns to the C, only to jump back to the A7 (a "I-down-to-VI"), and then back around the circle to the tonic C.

A significant point here: In the key of C, C F and G (aka I, IV, and V; see the connection with scale/mode theory?) make up the "Key Family." These are the three chords that make up the blues, and the vast majority of pop, ethnic, and other music. You were probably wondering why those were the first chords you ever learned, huh?

Look through your banjo band book, and you'll notice that the vast majority of the tunes have similar characteristics to *Four Leaf Clover*. In fact, get your book out now.



Have this page handy as you're looking at your music. First, notice what key the song is in (look at the last chord and/or note to make sure), and how many measures it has. Circle the key note on the diagram. Make a list of all the chords in the tune (in the order that they appear, and each time they do). Now, look through that list and with the Circle as the roadmap, look for the patterns.

This is probably the most important of the theory lessons to be gained from this book. You can easily see what a difference a thorough knowledge of the Circle would make in your learning, understanding, hearing, and playing of songs.

Now, it would be easy to conclude from this exercise that the whole point of this book—besides the Circle of Keys theory part—has been to learn how to play *Four Leaf Clover* in single-string style. Well. . .I suppose it is. . .*if* you allow that to be the only lesson. In the grand scheme of things, using the lessons in the book will allow you to correctly play single-string on *every song* in your book, which still may not seem like much to you. But think about it this way:

The ability to pick out a simple melody—using correct fingerings *because you know the fretboard* (as opposed to the first example from three pages ago)—is a significant step toward ending your dependence on chord melody technique, and starting your journey toward jazz improvisation, or at least toward a greater understanding of the plectrum banjo. And if you are not yet able to play chord melody and are limited to chord strumming, well then, this opens up a whole new musical vista for you!

Another significant point about this: Being able to play single-string melody is an important skill for playing in a banjo band. I grew up in the Grays Harbor Banjo Band, which at that time was predominantly tenor banjos, thanks to my Father who was the teacher of a large portion of the members (including myself and my sister). This had two very positive effects: #1, we played everything faster than other bands because of all the single-string tenor players, and #2, you could really hear the melody. We were an exciting, good sounding band!

So, short of learning to play jazz, playing single-string melody probably *is* the most important *technique* lesson to be gained from this book! In fact, I would go so far as to say that you should limit yourself to playing only single-string melody for the foreseeable future, using the scale and arpeggio lessons as the guide. Why?

➤ You'll learn a totally different way to play, adding variety to your playing. Think about it: If all you know how to play is chord melody, you'll naturally use that technique for everything you do, and then run into a brick wall when you're confronted with a tune not suited for chord melody (*and there's a lot of 'em!*). Limiting yourself to single-string playing is the ultimate pattern-breaking exercise!

➤ You'll contribute an important and often sorely missing aspect to your banjo band—namely, a clearly-heard melody!—making you even more popular than your good looks already allow. And, because of the Harmonized Scales and ear training, you should be able to play single-string *harmony* also (or even better, melody and harmony *at the same time!*), wowing your band-mates and exponentially multiplying your popularity!

➤ You'll be surprised at how satisfying it is to realize you are playing something more efficiently and correctly (not to mention that you are playing something most plectrum banjoists never *think* to play, or *don't know how* to play). This will eventually happen without having to think about correct fingerings.

➤ *You can't very well improvise jazz without first learning to play single-string.*

So, a natural “hierarchy of skills” to apply to the banjo from the lessons in this book would be: 1. Proper single-string technique; 2. The ability to properly *harmonize the melody* on two, three, or four strings (as opposed to playing four-string chord melody—a subtle but important distinction); and 3. The ability to improvise jazz, using the scale, chord, and arpeggio patterns as the base. I'm going to take one last opportunity to say it one more time: You've got to *practice, practice, practice!* So what are you waiting for?

What Should A Plectrum Banjoist Know?

I've learned a lot during the process of writing this book! In fact, a lot of the content of this book only came to me after I started writing it. I knew most of this stuff of course, I had just never thought about how to put it into words or explain it to someone else. The biggest evolution in my own thinking came with a deeper understanding of the role of the plectrum banjo in the overall scheme of music. This has in turn led me to a deeper understanding of *why* it fills the limited niche it does. I believe that I've learned enough now to deserve having an opinion about what a plectrum banjoist should know to be a complete master of the instrument, and to take it new directions—*my* most coveted personal goals. So here goes! The plectrum banjo according to Ron Hinkle:

Let me make one thing perfectly clear, if I haven't already in this book: Chord Melody is *the characteristic* style of playing the plectrum banjo. So much so, that a true master of the instrument absolutely *has* to have absolute command of the style to honestly call themselves a true master. Please don't think I'm trying to minimize the importance and/or legitimacy of the style; nothing could be further from the truth.

I also want to make clear that I am an Eddie Peabody fan! Nothing I say in this book regarding his *style* should be construed as an attack on *him*. And while I'm at it (making things perfectly clear, that is), let me remind you that this is an *opinion* piece. . .if something I say here clashes with *your* opinion, so be it! Just don't hate me for it.

So why do I want you to go “beyond” chord melody? Because it is only *half* of the complete picture! In my opinion, there are too few players today who can (or do) go beyond it. In the past I've been one who “can't,” so I should know. I use the phrase “in the past” somewhat optimistically, because chord melody will always be my “default/fall-back position,” especially when playing in a jam session. I put the word “can't” in quotation marks (there I go again!) because every “reason” I have for not going beyond sounds suspiciously like an *excuse*. I learned years ago to replace “I can't” with “I won't,” in a mostly successful effort to work through my childhood excuses. For some reason though, the banjo occurrence of “I can't” has proven very tenacious.

Anyway, has this one-sided approach always been true for the plectrum banjo? Not at all! At the same time that Eddie Peabody was setting the chord melody style in stone (1920's), Harry Reser was recording amazingly complex *plectrum* banjo solos (maybe too complex to win an audience?). You may say, “but he's a *tenor* player” (*oh, the power of publicity!*). Well of course he was—arguably the best of them all—but he was *also*—and here's where my opinion starts to rear it's ugly head—arguably the best plectrum player, and made many fine recordings on the instrument.

Don't be confused by the fact that he only *published* “tenor banjo” music. That was strictly a business deal: There were more tenor players than plectrum, even then (and if anyone likes money even more than musicians, it's publishers!). Plus, he (and his publisher) knew better than to try to go head to head with Peabody, who clearly won the banjo *popularity* contest, then and now. I understand *why* this is such a controversial subject. . .I just don't think it should be! Reser played plectrum also, plain and simple! A careful listening to several of his “tenor” recordings, not to mention a casual glance at most of his 1920's publicity photos (and his 1936 *Tiger Rag* movie short—see it on YouTube) will prove that. Get over it, and add him to your to-learn list.

Perry Bechtel is the other “best” historic example: His 1958 LP, “*The Greatest of Them All!*” stands out as a watershed tour de force of plectrum banjo technical wizardry. If you’ve never heard Perry Bechtel. . .*gasp!* Realize of course, he was playing this way in the 1920s too; he just lacked the publicity (or location: He *wasn’t* in NYC or L.A.) or the recordings to catch more than local attention during the banjo’s popular era.

There have been many others who went well beyond the limitations of Chord Melody of course (and some who still do), but Reser and Bechtel stand out in my plectrum banjo Valhalla (alongside Eddie Peabody—making up the “holy trinity” of the banjo).

It is problematic to mention living players, because inevitably someone will be hurt by being left out. Remember though, this is *my* opinion piece, so bear with me. I feel a need to mention the one player who to me stands out above all the rest, and that of course is Buddy Wachter. He is Peabody, Reser, and Bechtel (and more) rolled into one! To me, those three are the historical epitome of plectrum banjo style and technique—the blueprint if you will. But could Peabody play like Reser or Bechtel or vice versa? Probably not! Buddy plays all three styles equally well (actually better)! Certainly, that places him above each of them, individually and collectively. The important point here is, he “mastered the masters” and then went beyond them to develop his own unique style and sound. If you want a perfect example and role-model of the *complete* master of the instrument, you need look no further than Buddy.

So, I guess the major premise of this book is that you should be concerned with being the best all-around player you can be (chord melody is not the only game in town!). I’ve taken that goal on as my personal mission in life, not just because I want someday to be one of the best, but because I want to have an active role in raising the musical standard for the plectrum banjo! I want more company on this difficult climb to banjo mastery!

Anyway, here’s where I actually get to the point of this opinion piece. I have been mostly a Chord Melody guy all my life (again, I refer to it as a “chord melody rut”). I’ve toyed with Bechtel and Reser through the years, but I wasn’t truly ready to tackle their music until now. . .until I learned the technical things necessary to do them justice. It’s one thing to copy the *sound* (which is all I did before; I’m nothing more than a good imitator—a parrot); it’s a “whole-nuther” thing to understand the *theory and technique* required to reproduce the sound, and to apply it to music in general. That process is really just beginning for me.

That’s where this book comes in, or at least I hope it does. I am truly certain of the importance of the techniques presented here: I *know* in my heart—from personal experience—that this is the stuff you need to *start* tackling Bechtel and Reser. Before, I unwittingly tried to use a chord melody approach to advance (“When all you have in life is a hammer, everything in life looks like a nail.”). It was a musical dead-end, and led me to nothing but increasing frustration. It was only in committing to *changing my approach*—both mentally and physically—that the true musical progress began.

And that leads me back to Reser for a moment: I have it on good authority that Harry Reser, in addition to being a great banjoist, was quite the music theory genius. You can bet that he knew all his scales, chords, arpeggios, modes etc. forward and backward, *which of course is why he was so good*. There’s all the historical reason we should need for learning this stuff!

This leads me to my last area of discussion: The *future* of our fine instrument.

The future of course lies in the hands of the young players of today and tomorrow. Although I've disparaged my own youth many times as I've worked through my childhood issues, I certainly recognize how lucky I was to have grown up in the banjo band community. More wonderful people could hardly exist, and I know it first hand! Even now, 40 years on, their influence is felt in the way I think and live my life.

I am excited by the current youth bands and some of the wonderful players they are producing; it would seem that the banjo will survive after all! Having said this, I must point out a few things I would change about *my* banjo band upbringing if I could. *I wish* I had learned music theory as a kid! *I wish* I had had more exposure to great plectrum players, either in person or on recordings. *I wish I had been pushed to become a musician, and not just a banjo player! "If wishes were fishes. . ."* Oh well; even if I had had these things, the unanswerable question remains; *would I have listened?*

My point here is, young players will naturally aspire to what is shown to be possible. Thus, they need to be exposed to the complete plectrum banjo spectrum, even if the players who are complete masters are not easily available locally. Therein lies the power of modern technology. YouTube is a wonderful resource, with a growing supply of high-quality banjo videos, not to mention all the great Gypsy Jazz guitar videos.

To paraphrase my listening advice in the *Ear Training* chapter: *Don't limit your kids to just the banjo!* The necessary music theory can also be learned from a jazz oriented piano teacher. The guitar is another great source of jazziness, as are the jazz wind instruments. In fact, if it wasn't for my mid-life discovery of the jazz tenor sax, I may have never started on this mission. I hope to create, through this and future books, a *jazz banjo* (as opposed to chord melody banjo) resource that will rival the piano and guitar. I also hope to transform myself into the level of all-around plectrum master who I believe would be worthy of influencing future players.

Let's face it, you and I are not going to be around forever. Hopefully, the banjo will be, but in order to accomplish this feat, *it must evolve* and find ways to be relevant to *now*. Echo of the past it must be of course—it wouldn't be a Jazz Age banjo otherwise—but it doesn't have to be a *dying* echo. So when you hear a young, up-and-coming banjoist play something a little "out there," don't sneer and say "well that's not how *we* used to do it!" Say something like, "Wow, that's different. I can see how that could enhance the future of the banjo!"

When I started writing this opinion piece, my intent was to add justification to how important *my* book is, but to heck with that! The most important thing to me is that you and I and our fellow banjoists find *any* way to improve our playing, *and* carry the banjo into the future. I can only hope that in that future, my humble efforts will have become a contributing factor in that overriding goal.

To conclude, let me restate an important point. Although the title of this book is "Beyond Chord Melody," I fully concede that chord melody is very important to the plectrum banjo. *However*, because of the historical examples of Bechtel and Reser (and the living proof that it can be done), being a *complete* master means going well *Beyond Chord Melody*. Thank you for listening. May the Force be with you.

Acknowledgements

I have a lot of people to thank of course. . .I couldn't possibly remember or acknowledge everyone who has touched me musically and/or banjoistically over the last 39 years, but this book *could not have been written* without:

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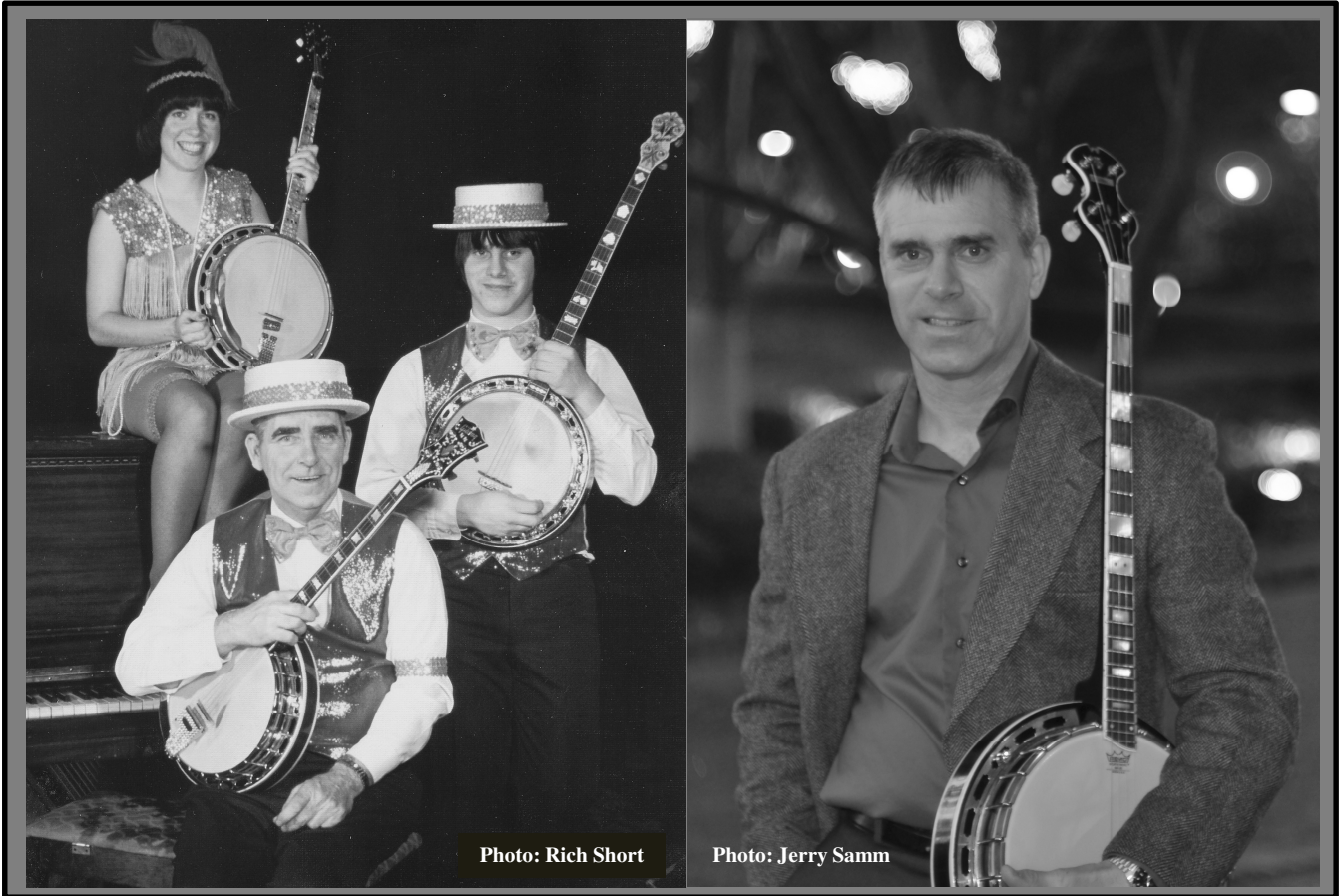
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About The Author



**1974: With sister, Linda Hall,
and father, Myron Hinkle**

Today

Ron Hinkle has been playing the banjo since the age of 12. He and his sister, Linda Hall, learned from their father, Myron Hinkle, who was a long-time professional banjoist and pianist. Myron founded the Blue Banjo Boys, the Seattle Banjo Club, and the Grays Harbor Banjo Band, and is a 2009 inductee in the Four-String Banjo Hall of Fame.

Besides growing up in the GHBB, Ron and Linda were also members of the Grays Harbor Junior Banjo Band, which became known as the Jubilee Five. This group played throughout the Pacific Northwest for five years, had their own local TV show in Aberdeen, Washington, and made an appearance at the 1974 Sacramento Banjorama. Linda is a hot tenor player (just like Dad!) and is still an active member of the GHBB.

As an adult, Ron has been the banjoist for several Trad Jazz groups, and a featured soloist and clinician at banjo shows and Trad Jazz fests throughout the U.S. and Germany. He has a degree in Music Education from Central Washington University in Ellensburg, Washington. He was also a professional ski instructor for eight years.

An early mid-life crisis. . .er. . .“career decision” led him to become an Army Bandsman (clarinet, sax, banjo, guitar, ukulele, and vocals), a career which continues at this writing. He has played the banjo in 31 countries on four continents, including a lovely tour of Iraq. He has been stationed in Germany, Korea, Arizona, and, at this writing, Alabama (Redstone Arsenal). He lives a very contented life with his wife Paige, and their three cats, Jean (De)Clawed Kitty, Anna-Marie Mouser-Prowler, and Malcolm the Manx. His daughter, Carlee, is currently pursuing a degree in Psychology.