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## Introduction

So there you are... walking along, when suddenly you come to a big wall... and written all over it are ideas... ideas for songwriters.

Along the way, most songwriters have some questions. Many of the questions have easy answers, but sometimes you meet one that looks like a mountain in your path.

One of the biggest mountains can be described this way. Let's say we're writing a song. First we choose a key. Now here comes the mountain. Which chords are available in this key... and how do they flow from one to another in ways that sound good?

These questions are very easy to ask, but it took me years to understand what I wanted to know. Now I can explain some of what seemed mysterious to me then. If you are asking questions like these, this web site may help you to understand more quickly. Have fun!

## Page \# is in parenthesis

Part One (2)- Scales, Note Numbers, Roman Numerals
Part Two (5)- I, IV, and V chords, Keys, Chords in D
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... this is an on-going project

Imagine investing your time, your energy, and your talents to create something new for people. What if your invention was really cool, but many people hadn't heard about it?

There's a music program called Notion, developed by Dr. Jack M. Jarrett. I really like the program, and I've decided to help spread the word. NotionWow.com is my way of letting people know about Notion, as well as demonstrating how an individual songwriter might use it. If you have musical friends, especially songwriters, would you invite them to visit?

Thank you.

Many songwriter links can be found at... Jeff Mallett's Songwriter Site

One of my favorite organizations...
Songs Of Love

## Part One

To begin with, music is like a language. Take this paragraph, for instance. It's made up of sentences, which are made up of words, which are groups of letters. The letters are taken from the alphabet.

Music has an alphabet too, but we call it a scale. Each note is like a letter. We put notes from the scale together to make chords (words). Then we put the chords (words) together to make phrases (musical sentences.) Once you know how to make phrases sound good, you are well on your way to writing songs.

So chords are your vocabulary. You need to know chords. But knowing chords alone is not enough. That would be like speaking words and not being able to make sentences. You need to know how chords flow from one to another.

## Concept \#2 - The Major Scale

There are many scales, but there is one everyone needs to know. It's called the Major Scale. Almost everyone starts there.

The major scale has a particular sound. You've heard this sound many times. You've probably sung it too. Have you ever heard anyone sing "Do, Re, Mi, Fa, So, La, Ti, Do?" That's it. That's the major scale. That's the alphabet.

Next we simplify. Instead of "Do, Re, Mi, Fa, So, La, Ti, Do," we use "1, 2, 3, 4, 5, 6, 7, 1." Same sound, just numbers now instead of names.

## Intersection \#1

At this point, you might think we should learn a lot about scales, and someday I hope you can. But for now, we need to stay true to our purpose... to know the chords we need and how they flow. So let's move on.

It might surprise you, but it's possible to write a very good song without knowing a lot about scales. When you play a chord, you can immediately hum several notes that seem to fit. This process of playing and singing while searching for a strong melody is automatic. You "hear" the vocal lines in your head, or you experiment until you discover something you like. Part of the fun of writing songs is this searching process.

But while you can get along fine "discovering" the tune, it's a lot harder to discover chords. It's much easier if you already have a bunch of them available.


## Concept \#3 - Roman Numerals

Even though we walked quickly past scales, there is one important concept to remember. The notes in the scale can be numbered 1 through 7. That matters.

Next I'd like to introduce a new idea. Each note in the scale can be considered the starting point, or root, for a chord. In other words, there is a note we will call 1 , and there is a chord, made up of several notes, which uses note 1 as a starting point. Don't worry right now where those other notes come from. Just remember, there is a note called 1, and there is chord based on note 1 .

This chord based on note 1 is called the "one chord," and we use a roman numeral one (I) when we are referring to this chord. So if we want to talk about just the note, we will use " 1, , but if we're talking about the chord, we write "I." Get it? "1" means note number one. "I" means the one chord, which is built on note number 1.

The same holds true for the other notes in the scale.
There is a note " 2 " and there is a chord "ii."
There is a note " 3 " and there is a chord "iii."
There is a note "4" and there is a chord "IV."
There is a note " 5 " and there is a chord "V."
There is a note " 6 " and there is a chord "vi."
(There is a note " 7 " also, but the chord built on note 7 is a little trickier to understand, so we're leaving it out. You may still use note 7 when you sing, and note seven may appear in other chords, but the chord that uses 7 as a starting point is not needed right now.)

Did you notice? Some of the roman numerals are capitalized - I, IV, and V, while others are lower case - ii, iii, and vi. This is intentional. The capitalized chords have a certain sound, which some people describe as happy or bright. In music theory we call them"major chords." The lower case chords have a sound some people hear as being darker or sad. We call these "minor chords."


Let's Review
We started with our purpose: to learn about chords and how they flow. We then discussed how music is like a language, with stories, sentences, words, and letters, but we call them songs, phrases, chords, and notes. The notes come from the scale. The scale is similar to the alphabet.

Although it's very helpful to learn scales, we decided to postpone this area and jump straight to chords and how they follow one another. Most beginning songwriters can hum or sing a melody without knowing a lot about scales. But it's very hard to write songs when you still don't have an understanding of chords.

We did however observe one important fact regarding the major scale: it has seven notes. We numbered the notes one through seven and then made the further observation that each of these seven notes can function as a starting point, or root, for a chord. For instance, the chord built on note 1 is called "I."

Leaving off the chord built on note seven, we were left with six chords, which we labeled I, ii, iii, IV, V, and vi. The I, IV, and V chords are "major chords," and the ii, iii. and vi chords are "minor chords."

Review this page as often as you need until the material presented here starts to feel natural. When you feel good about what you've learned in this part, you are ready to proceed to Part 2. Have fun!

## Part Two

## Concept \#4 - Getting Started

For your first exploration into the world of songwriting, it's helpful to establish some "rules." These are not rules in the sense that they cannot be broken; these are suggestions or good ideas. You'll do better if you follow these "rules" most of the time.

Rule number 1 - Start and end your song with the I chord. This establishes clearly where you are, and helps both you and the listener experience a strong beginning and ending.

Rule number 2 - I, IV, and V are the three chords you will use most often. Many songs have been written with just these 3 chords.

Rule number 3 - Choose a key. We haven't discussed keys yet, so let's take care of that right here. You already know that a major scale can be numbered 1, 2, 3, 4, 5, 6, 7. Each of these numbers represents a note. You can sing the scale or play it on an instrument.

When you sing, you don't always think of the note as having a name, because your voice can sing high and low and everywhere in between. It may not matter to you what note it is as long as it sounds good. But when you play an instrument like the piano each note has a name and a location on the instrument.

So when you walk up to the piano to play $1,2,3,4,5,6,7$ you have to ask a question first. Where is note 1 ? The answer is you may choose whichever note you like to be note 1. But after you choose note 1 , the major scale determines where $2,3,4,5,6$, and 7 are located. You can't just jump around and call them whatever you want. You only get to choose note 1.

Whichever note you choose to be note 1 is the name of the "key." So if you choose a D to be note 1 , you will be playing in the key of $D$. If you choose an $A$, you will be playing in the key of A. Get it?

This could get confusing, but fortunately we can simplify things a lot with the help of a table.

| KEY | I | ii | iii | IV | V | vi |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | C |  |  | F | G |  |
| Db | Db |  |  | Gb | Ab |  |
| D | D |  |  | G | A |  |
| Eb | Eb |  |  | Ab | Bb |  |
| E | E |  |  | A | B |  |
| F | F |  |  | Bb | C |  |
| Gb | Gb |  |  | Cb | Db |  |
| G | G |  |  | C | D |  |
| Ab | Ab |  |  | Db | Eb |  |
| A | A |  |  | D | E |  |
| Bb | Bb |  |  | Eb | F |  |
| B | B |  |  | E | F\# |  |

Take a look at the table and answer this question. In the key of D, can you name the I, IV, and V chords? Sure you can. The I chord is D, the IV chord is G, and the V chord is A.


So what does that mean? It means you can write a simple song in the key of $D$ if you know how to play just three chords: D, G, and A. You will start the song with a D chord because that's the I chord. You will also end the song with a D chord. Along the way you will use D's, G's, and A's whenever you like.

And what do these chords look like? Here they are.

The D chord looks like this.


Here's the G chord.


And here's the A chord.


Intersection \#2
At some point, you will want to learn to play I, IV, and V in other keys, but for now this is enough to illustrate the principle. Our next step is to add in the minor chords; ii, iii, and vi. Just before we head in that direction...

In part two we stated some simple "rules." Start and end your song with the I chord. Along the way use I, IV, and V. Choose a key. If you aren't sure which chords are I, IV, and V , look it up in the table.

We learned that a key has the same name as note 1 . So if the key is D major, note 1 must be D.

We looked at the chords D, G, and A, both on a keyboard and on a guitar. We recognized the goal of eventually being able to play I, IV, and V in all twelve of the major keys, but rather than take the time now to explore all of these, we decided to move on to ii, iii, and vi.

Ready for Part Three?

## Part Three

Concept \#5 - ii, iii, and vi

The ii, iii, and vi chords are minor chords built on notes 2,3 , and 6 of the scale. They have a different sound than the three major chords we have already discussed. This adds many new possibilities to your music.

First, let's fill in the rest of the table.

| KEY | I | ii | iii | IV | $V$ | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | C | Dm | Em | F | G | Am |
| Db | Db | Ebm | Fm | Gb | Ab | Bt |
| D | D | Em | F\%m | G | A | Bm |
| Eb | Eb | Fm | Gm | Ab | Bb | Cm |
| E | E | F\#m | C/m | A | B | CHm |
| F | F | Gm | Am | Bb | C | Dm |
| Gb | Gb | Abm | Bbm | Cb | Db | Eb |
| G | G | Am | Bm | C | D | Em |
| Ab | Ab | Blam | Cm | Db | Eb | Fm |
| A | A | Bm | C\#m | D | E | F\%m |
| Bb | Bb | Cm | Dm | Eb | F | Gm |
| B | B | C | D\#m | E | F\# | G/ |

Now answer this question. In the key of $D$, name the three major chords and the three minor chords.

The answer: the three major chords (I, IV, and V) are D, G, and A, while the three minor chords (ii, iii, and vi) are E minor, F\# minor, and B minor.

What do the new chords look like?
The Em chord looks like this.


This is the F\# minor chord.


And B minor looks like this.


On a guitar, Em, F\#m and Bm look like this.


Concept \#6 - The Simple Map
This is where the big question begins to emerge. We now have six chords available. How do they flow from one to another?

There are two answers. The simple answer is... it doesn't matter which chord comes next as long as it sounds good. In some ways, this answer is correct. All six chords come from the same scale, and they work well enough together to just bounce from one to the other. But there is a better answer, though it takes longer to understand.

The better answer goes like this. Chords are flowing through the song, but they are also flowing into the minds of your listeners. To the listener, chords have an effect. Some chords feel stable and strong while others feel like they're leaning or going somewhere. Some chords create tension, waiting for another chord to come along and relax the tension. Sometimes a chord is meant to surprise the listener; sometimes to soothe. And there is also a kind of guessing game going on. The audience is wondering what chord comes next. Sometimes they guess right. Sometimes you throw them a curve.

In general, you want to throw enough curves to keep your audience guessing, but not so many that they start striking out. The listeners feel better when they "hear" chords coming, and guess right... just not all the time. They want to be surprised some of the time.

What I'm about to show you is a map. The map has one very simple purpose. It shows you chord sequences that your audience will tend to "guess in advance." These chord sequences sound natural, like walking down the stairs, with no sudden jumps or unexpected turns. A lot of music is created with simple sequences like these.

## The Simple Map



[^0]To use the map, remember two things. First, you may jump anywhere from I. Second, if a chord appears at more than one place, there is an "imaginary tunnel" connecting both spots, so you can move from one to the other. Got it?

With the map you can do exercises like:

1. Write a long "loop," starting with the I chord, Jump from I to wherever you like. Then work your way back to I by following the arrows.
2. Write several three or four chord sequences. Start anywhere on the map. Follow the arrows.

Here are some possible answers.
I - iii - vi - IV - ii - V - I is a "loop."
It starts and ends on I.
IV - V - I is a three chord sequence.
vi - ii - V-I is a four chord sequence.
ii - V - iii - vi is another.
You can find a lot more.
Remember, the Map doesn't write your song for you, but it helps you find natural, smooth-sounding chord patterns. If you experiment with these natural-sounding patterns, you will automatically start using them in your music. When you do, your audience will relate well to these sections. This is good for your audience. You want them to "hear" things in advance and guess right, not all the time, but a good percentage of the time.

Here's your homework. See how many short progressions you can create. Start anywhere. Then follow the arrows.


Let's Review
We began this section discussing the three minor chords. We call them ii, iii, and vi. These chords come from the same scale as I, IV, and V. All six chords work well together. We created a table with the six chords in each major key. Though you may use any chord in any order if it sounds good, we recognize that our listeners are part of the process, and they need to hear some natural-sounding patterns and some surprises. In
order to generate chord sequences that sound smooth and natural, we introduced a Simple Map. Following the arrows gives us many short phrases that work well. We ended by assigning a little homework. Have you done it?

This way to Part Four.

## Part Four

## Concept \#8 - Keeping Things Interesting

Imagine living in a world where there was only one shade of red, one shade of green, etc. You would get used to it, but it's far more interesting to have variations in color.

The same is true for chords in a song. It's much better to have several ways to play the same chord. We have a number of options to introduce variety. This is an exciting area to study, but it can get complex quickly.

I'll introduce you to the various ideas. Read them over, but don't get lost here.
Warning - If this is the first time you've seen the following concepts, they may seem confusing at first. Just skim read it then and go on to Part Five. Remember, you can write strong songs with simple chords too.
(I will illustrate some of the concepts with keyboard chord diagrams, but there are too many possibilities now for me to draw them all. At some point you may wish to find a book of chord diagrams for keyboard or guitar. Some keyboard chord diagrams have been included in the section called Charts and Maps.)

Are you ready?

Adding Interest

1. Chord Inversions
2. Slash Chords
3. Chord Variations
4. Seventh Chords
5. Altered Chords
6. Chord Substitutions
7. Secondary Chords

## 1. Chord Inversions

Suppose you are playing a simple D chord. You look down at your hand and notice you are playing three notes: a D, an F\#, and an A. You ask -"What would happen if I let go the D note and replaced it with another D further up the keyboard?" You would still have a D chord, but it would be a different arrangement of the three notes.

The idea here is: As long as you are playing a D , an F \#, and an A , regardless of where they are located on the instrument, you are playing a D chord.

Here is a picture showing the D chord with two inversions.


Do you see how the same three notes are involved? They just show up in different places.

## 2. Slash Chords

Until now, every time we showed a D chord, the bass note was always a D. What would happen if we played the F\# or the A instead? We would still be playing a D chord, but changing the bass note makes a big difference. It makes such a big difference that we have a way of indicating when we want the bass note to be one of those other possibilities. We call them slash chords.

When we want a D chord with D in the bass, we write D . When we want the F \# in the bass, we write D/F\#. When we want the A in the bass, we write D/A.



Did you notice that the middle chord, D/F\#, has only two notes in the right hand? This is intentional. When the "third" of the chord is in the bass, it often sounds best to leave the "third" out in the right hand. ( F \# is the "third" of the chord because the D scale goes $\mathrm{D}, \mathrm{E}$, F\#...)

## 3. Chord Variations

There are some very common variations musicians use all the time to keep chords sounding fresh. Here are a few.

The added second - D2


The suspended chord - Dsus


The major 6 chord - D6


The major 7 chord - DM7


The major 9 chord - DM9


## 4. Seventh Chords

Minor chords will often add a 7th to them.
This is E minor 7 - Em7


This is B minor 7 - Bm7


V chords often have a 7. In the key of $D$, the V chord is A, so you would see A7 appearing in the music. Here it is.

The A7 chord


## 5. Altered Chords

So far, all the changes we've made have added notes that are in the scale. There are other notes though that are not in the scale. Switching a note in the chord to a non-scale note gives us an altered chord.

Two very useful altered chords are the iv chord (notice we switched from IV to iv... from major to minor), and the iim7b5 (pronounced "two minor seven flat five"). In the key of D the IV chord is G, so the iv chord is G minor.


The iim7b5 is Em7b5. It looks like this.


## 6. Chord Substitutions

There are a whole group of chords with wild names like nines, elevens, thirteens, nine sharp fives, nine flat fives, and the list goes on. These chords have very interesting sounds. A good player will use these chords when that particular sound is needed. Often the player "substitutes" one of these complex chords for a simpler one in the music. Suppose the music calls for an A7. An A7b9 might sound even better. That's why we call them chord substitutions. You can use them in place of simpler chords you already know. Here are some substitutes for A7.


## 7. Secondary Chords

This topic is addressed in Part Five. Before going there, it might be good to step back and see where we've been.


## Let's Review

In this part, we saw the number of chords available to us suddenly explode. We learned that even simple chords can be played in several ways called inversions. Slash chords were introduced to keep track of bass notes when the bass is playing something other than the root. We used scale notes to get chords like 2, 6, M7, sus. We used non-scale notes to get iv and iim7b5. Chord substitutions like nines, elevens, and thirteens came along to replace sevens when needed.

We still haven't discussed how these new chords fit into our Map, and we haven't covered secondary chords yet. These topics are just ahead in Part Five.

## Part Five

## Concept \#9 - Chords From Other Keys

When we left Part Four, we were just about to discuss Secondary Chords. These are chords borrowed from other keys. Let's explain it this way.

Have you ever visited a Water Park with pools and slides? Let's take our Simple Map and use our imagination. First, I'm going to change the simple map from I, ii, iii, IV, V, vi to C, Dm, Em, F, G, and Am. These are the chords for the key of C. Second, I'm going to make each square in the diagram a "pool" in our imaginary Water Park. Got it?

## A Map For C



Do you remember the rules? You may jump anywhere from I, which in this case is C. If a chord appears at more than one place (like Dm or G), there is a "secret tunnel" connecting them, so being at one spot is the same as being at the other.

But this time we add a new rule. At any time you may leave the water to come down a slide. Where are the slides? Here they are!

## A Progression Map For C (The exprexion XIY mems pley chord X with bass note Y )



Okay... we have a few things to talk about.

1. First, let's talk about the blue boxes. Some of the chord variations now appear at the bottom of each box. For instance, C lists the 2 chord, the 6 chord, major 7, major 9, and suspended as possible options.
2. Three blue locations have been added. The octagon with C/G inside indicates that this chord quite often follows Dm or F, and then heads for G before going home to C. The
box labeled $\mathrm{F} / \mathrm{C}$ and $\mathrm{G} / \mathrm{C}$ shows that the right hand chord can change while the bass note (C) stays right where it is. This technique, holding a bass note while varying the chord above it, yields many surprising and useful sounds. Finally, the little box labeled C/E is often found between F and Dm. It works going either way.
3. The chords with a green background don't belong to the key of C; they come from other keys. They are useful when we want to "step further out." You can put a green chord almost anywhere, but when you do, you'll probably want to follow the arrows back toward the blue ones. Your audience will feel good when the chords that seem "far from home" step back to more familiar ground.
(A word about names - Some of the green chords are written as slash chords, like Am/F\#. This chord could also be written F\#m7b5. In general, whenever you take a simple minor chord and move the bass from the root down three half steps, you get a m7b5 on the new bass note. Sometimes calling it Am/F\# is easier for me.)

Just as before, your challenge is the same. See how many short progressions you can create. Start anywhere. Then follow the arrows. If you do these simple exercises, you'll soon gain a greater understanding of the chords available to you, and also how they move naturally from one to another.


Let's Review

You've reached the end of Part Five. In this section we imagined our Simple Map as being a group of pools, each one with slides flowing into it. These slides allow you to choose a chord outside the key and come back smoothly to more familiar sounds. We also added a few new ideas to the simple part of the map.

With all of these chord possibilities, you have a lot of room to explore and practice. Spend some time learning, and your music will show the difference.

Have fun!

This way to Charts and Maps (at end of doc as appendix I) and then on to Part 6 .

## Part Six

## Major Scales - I

Having made it through the first five parts of this web site, our next challenge may seem like a step backwards. We're going to leave the world of chords and progressions for a while and discuss music that happens one note at a time. Welcome to the world of scales.

## Concept - Half Steps and Whole Steps

First, a definition. On a keyboard, the distance from any note to the nearest note on the right or the left is called a half step. A distance of two half steps is called a whole step. (On a guitar string, every fret represents another half step.)

On a keyboard, when counting half steps and whole steps, look at the back edge of the keys (where white notes and black notes are both visible). If you look at only the front edge, where only white notes are next to one another, you might not count correctly. The distance from one white note to the next is sometimes a half step and sometimes a whole step. It depends on whether or not a black note is between them.


## Concept - Formula for the Major Scale

Half steps and whole steps allow us to describe a scale as a series of jumps. The major scale follows the formula "whole, whole, half, whole, whole, whole, half" or WWHWWWH. Beginning on the note C and following this pattern gives us $\mathrm{C}, \mathrm{D}, \mathrm{E}, \mathrm{F}$, G, A, B, C.


Notice that the words "whole" and "half" do not refer to any of the notes: they describe the distances between them. It could be written this way... C-w-D-w-E-h-F-w-G-w-A-w-B-h-C. Using numbers instead of notes gives us... 1-w-2-w-3-h-4-w-5-w-6-w-7-h-1.

Challenge - Learning the Major Scales
It's a good idea to make it your goal to learn all 12 major scales. This will take a while, but it's well worth it. When you have a good understanding of these 12 scales, it will be a lot easier to talk about modal and minor scales.

Secondly, it isn't enough just to play the scales up and down - it's important to play single-note songs. This forces you to jump around in that scale and still land on the right notes.

So the challenge is really two challenges... one is memorizing the scales, and the other is playing songs using the scales.

## We'll Start With C Major

It's true that each of the major scales follows the formula WWHWWWH, and if you need to you can generate them that way, but that isn't how we memorize them. We memorize them as "shapes" or "pictures" or "clumps of notes grouped together." For example, the "shape picture" for C major might look like this.

The starting note (Note 1) is C, and the piano keys needed to play this scale are all white notes.

Look at the white circles for a moment. Can you mentally picture the rest of the letter names? Do you "see" C, D, E, F, G, A, B, C? What if we numbered them? Can you see 1, $2,3,4,5,6,7,1$ ? Which key is number 5 ? The key $E$ is what number? Number 6 is what letter? And finally, if you were asked to play the sequence $5-3-2-1-6-4-5$, do you see which notes you would play and in what order?

When we say the challenge is to learn all 12 major scales, that's what we mean.

First, to be able to picture each scale...
second, to know the letter name of each note...
third, to know the number of each note...
fourth, to play sequences of notes when given the numbers.
A Moment For Perspective
If this is the first time you've seen this challenge, it may look like a long journey. I need to be honest with you... it is a long journey. But there is good news. First, your brain is very powerful, and it can keep track of all this information. Second, if we walk slowly through this (not rushing - just enjoying), and spend some time in all the places, eventually it will become easy, and you will be a better musician as a result.

## Let's Review

In this section we learned about whole steps and half steps. We also learned that a scale can be described as a series of whole and half steps. When we know the "formula" for the scale, we can choose a starting note and generate the rest of the scale by following the jumps indicated by the formula. (Also, the whole and half steps are not actual notes themselves... they are the distances between the notes.)

The major scale has the formula WWHWWWH. Beginning with C and following the jumps, we get C, D, E, F, G, A, B, C. These notes happen to be white notes, so the C scale picture looks like this.

Looking at this picture, we realized we would need to know each note as both a letter and a number, and then be able to play number sequences, not only in the C major scale, but also in eleven other major scales, which suddenly seemed like a big challenge. We accepted the challenge.

When you feel good about the concepts and ideas in this part, move on to Part 7. Have fun!

## Part Seven

## Major Scales - II

## Concept - Sharps and Flats

On a keyboard, moving one half step to the right (going higher in pitch) is called "sharp", and moving one half step to the left (going lower in pitch) is called "flat." This definition allows us to name the black notes. Each black note has two names.

The note between C and D is either C sharp (written C\#) or D flat (written Db ). The note between D and E is either D sharp (written D\#) or E flat (written Eb).

The note between F and G is either F sharp (written F\#) or G flat (written Gb). The note between $G$ and $A$ is either $G$ sharp (written G\#) or A flat (written Ab). The note between A and B is either A sharp (written A\#) or B flat (written Bb).


Side note: By the way, there are certain times when certain white notes are also named sharp or flat. It doesn't happen very often, but there are occasions when...

The note B might be called Cb
The note C might be called B\#
The note F might be called E\#
The note E might be called Fb
There are also double sharps. For example, F double sharp (written Fx) plays the note G. Then there are double flats. Gbb plays the note F.

Now that we understand sharps and flats, let's look at another scale.

## The G Major Scale

If you begin by playing the note G and then follow the formula for the major scale (WWHWWWH), you will get the following... G, A, B, C, D, E, F\#, G.


Side note: One of the rules of naming notes in a major scale is that each letter from A to G must be assigned as you move from note 1 up to note 7 . That's why note 7 in this scale is called F \# and not Gb .

Take a good look at the G scale. Which note is number 5 ? Which letter is associated with number 3 ? Could you play the sequence $6,5,8,3,2,5,1$.

## Above And Below The Scale

Although some songs can be played using only notes 1 through 8 , most songs go above or below the scale at some point. This would be a good time to say again that note 8 is really note 1 starting over. We say it's note 1 moved up an octave. Also, note 1 can be thought of as note 8 for the notes coming in from the left. So, even though we say $1,2,3$, $4,5,6,7,8 \ldots$ or do, re, mi, fa, so, la, ti, do... we understand that it really goes... $1,2,3,4$, $5,6,7,1,2,3,4,5,6,7,1,2,3,4,5,6,7$, and so on.

This creates a question when writing down melodies as numbers. When I ask you to play $1,2,7$, do you play the 7 that's a big jump up the keyboard, or do you play the 7 that's right next to 1 on the left side?

In order to make this clearer for my students, I write the notes in the octave below (the notes coming in from the left) as underlined numbers, and the notes in the octave above with lines through the middle. According to this system, the numbers would look like this...

## $\underline{1} \underline{2} \underline{4} \underline{5} \underline{6} 712345674234567$

Why Do We Use Numbers?
The nice thing about numbers is that when we change to a different major scale, though the letter names at the various locations change, the numbers stay the same. So, if a melody is played $3,5,2,3,1$ in one major key, it will be played $3,5,2,3,1$ in the other major keys as well. It's true that it will be higher or lower in pitch, and the letter name associated with 3 , or 5 , or 2 will be different, but the tune will sound the same.

My suggestion is to experiment with the notes in a scale until something you play reminds you of a song you already know. Then see if you can figure out a couple phrases from that particular song. Play it a few times in the key you are in, and then write down the numbers using the system I just explained. Then take those numbers and play them in another key of your choice. This exercise will show you how melodies keep the same numbers though they are played in different keys.

## One More Important Idea

There is another idea to consider, because in the long run it will be more and more valuable to you. As you play tunes you already know, and as you experiment writing your own melodies, you will eventually begin to "recognize the numbers" even when they are not written down. You will hear the notes in your mind, and you will recognize almost by "feel" which number comes next. You'll hear a song, and know which notes to
play. You will begin to improvise music, and make tunes up spontaneously. It will be very freeing. Then music becomes a lot of fun!


Let's Review
In this section we discussed sharps and flats. The symbol for sharp is \#, and it indicates a note one half step higher in pitch (to the right on a keyboard). The symbol for flat is similar to $\mathbf{b}$, and it indicates a note one half step lower in pitch (to the left on the keyboard). These ideas allow us to name the black notes, each of which has two names. Named as sharps, the black notes are C\#, D\#, F\#, G\#, and A\#. Named as flats, the black notes are $\mathrm{Db}, \mathrm{Eb}, \mathrm{Gb}, \mathrm{Ab}$, and Bb .

When naming the notes in a major scale, we use each of the letters from A to $G$ on scale notes 1 through 7. This determines whether black notes are named as sharps or flats.

We looked at the G major scale. We now have two scale pictures.


We also thought about the idea that a melody may go above or below scale notes 1 through 8. To give us a way to write these extra notes down, we introduced underlined numbers for the octave to the left, and numbers with a line through the middle to indicate notes in the octave to the right.

## $1 \underline{2} \underline{\underline{x}} \underline{5} \underline{6} 712345674234567$

We considered the possibility of experimenting with phrases in a given key, writing down what we played, and then playing the same phrase in another key.

We also considered that someday we may be able to hear a tune and know which notes to play. That will be a great day!

Take some time to think about and experiment with these ideas. Then move on to Part 8 . Have fun!

## Part Eight

Major Scales - III

## Concept - Major Keys With Sharps

We've already introduced the key of G, which has one sharp. Let's look at D, A, E, and B. Don't try to memorize them all at once, but do look at them to see the patterns.

The D Major Scale


The A Major Scale


A, B, C\#, D, E, F\#, G\#, A
The sharps are at positions 3,6 and 7.


E, F\#, G\#, A, B, C\#, D\#, E
The sharps are at positions $2,3,6$ and 7 .


## Are All These Scales Used Equally?

Actually, no. Beginning keyboard players usually start out in the key of C (no sharps or flats), because it's easier to read the notes if you don't have to stop and think whether any of them are sharps or flats. Then, after getting familiar with C, they move on to keys with one sharp or one flat, then two, and so on. Even after playing the piano for years, it's rare to find a piece written with more than five flats (the key of Db), or more than four sharps (the key of E). The key of B, the last one pictured above, is very rarely used.

Guitarists tend to favor the following keys... C, G, D, A, and E. The reason is because the "open" chords (chords where some of the guitar strings don't have to be pressed down) work well in these keys. Guitar players usually learn the open chords first and the "movable" (or "barre") chords later. The movable chords work in any key, but because of the sound of the open chords, acoustic players still tend to favor the keys of C, G, D, A, and E .

Guitarists also have the option of using a "capo", which clamps all the strings down at whichever fret is chosen, effectively shortening the guitar, which means you can then play open chords in a comfortable key, while the guitar gives off a sound in a different key, depending on where the capo is placed.
(It grows a bit more complicated when you add brass (or woodwinds) into the picture, because many of these instruments don't sound in the key that's written. A trumpet, for example, when reading the note C on paper, actually sounds the note Bb . This isn't the
time to explain it, but it's a good idea to be aware of the challenge, because when you decide to add brass players to your band, the writing of the parts will require some extra understanding.)

## Major Keys With Flats

The flat keys look like this. Just as before, don't try to learn this information fast. This takes a while, and you will need to spend time with each key, playing songs, writing songs, etc. But here they are at a glance.

The F Major Scale


F, G, A, Bb, C, D, E, F
The flat is at position 4.

The Bb Major Scale


Bb, C, D, Eb, F, G, A, Bb
The flats are at positions 1 and 4 .

The Eb Major Scale


Eb, F, G, Ab, Bb, C, D, Eb
The flats are at positions 1, 4 and 5 .

The Ab Major Scale


Ab, Bb, C, Db, Eb, F, G, Ab
The flats are at positions $1,2,4$, and 5 .
*****

The Db Major Scale


Db, Eb, F, Gb, Ab, Bb, C, Db
The flats are at positions $1,2,4,5$, and 6 .

## The Gb Major Scale



Gb, Ab, Bb, Cb, Db, Eb, F, Gb
The flats are at positions $1,2,3,4,5$, and 6 .
(Notice that the white note at position 4 is named Cb )
(One More Thing)
To be complete, I should tell you that three of these major scales can be written in another way.

Db (five flats - Db, Eb, F, Gb, Ab, Bb, C, Db) can be rewritten as...
C\# (seven sharps - C\#, D\#, E\#, F\#, G\#, A\#, B\#, C\#)
Of these two, Db is preferred. Five flats is easier to handle than seven sharps.

Gb (six flats - Gb, Ab, Bb, Cb, Db, Eb, F, Gb)
can be rewritten as...

```
F# (six sharps - F#, G#, A#, B, C#, D#, E#, F#)
                    These two keys are seldom used.
    B (five sharps - B, C#, D#, E, F#, G#, A#, B)
                            can be rewritten as...
Cb (seven flats - Cb, Db, Eb, Fb, Gb, Ab, Bb, Cb)
    B is preferred, but not seen very often.
```



Let's Review
In this section we illustrated the remaining major key "shape pictures," giving us a total of 12 major keys (and three more if you count the ones that can be rewritten as different names.) So in the written sense, there are $15 \ldots$ one key with no sharps or flats (C)... seven sharp keys (G, D, A, E, B, F\#, and C\#)... and seven flat keys (F, Bb, Eb, Ab, Db, Gb, and Cb).

Of these keys, some are more often used than the others. C is used a lot, especially by beginners. On the flat side, it's common to see music written in keys all the way up to five flats... specifically, the keys of $\mathrm{F}, \mathrm{Bb}, \mathrm{Eb}, \mathrm{Ab}$, and Db . On the sharp side, it's common to see keyboard music in G (one sharp) and D (two sharps)... and guitars (which tend to use the sharp keys) continue on to use A (three sharps) and E (four sharps).

We recognize that this material will take some time to learn, but it's worth it. Even the keys that are hardly ever used are worth exploring. Your homework this time is an extended project. Over the next few months, explore these keys... if possible, write a song in each of the keys you've never used before. Remember to enjoy the process... it's fun to learn!

When this page makes sense, continue on to Part 9.

## Part Nine

## The Circle Of Fifths

Suppose we take the 15 written major keys and put them in a straight line, beginning with 7 flats on the far left, moving toward C (no sharps or flats) and then continuing to 7 sharps on the far right...

7b, 6b, 5b, 4b, 3b, 2b, 1b, 0, 1\#, 2\#, 3\#, 4\#, 5\#, 6\#, 7\#
The names of the keys would be...
Cb, Gb, Db, Ab, Eb, Bb, F, C, G, D, A, E, B, F\#, C\#
Then imagine we wrapped this straight line around a clock with C at the top. (Because there are 15 keys represented on the line, and only 12 places on the clock, there will be a little bit of an overlap at the bottom.)

The resulting figure is called the "Circle of Fifths." In music theory, we call the interval from C to G a fifth, because G is the fifth note in the C major scale. D is the fifth note in the G major scale, and so on around the circle.

## The Circle of Fifths



Learning the Circle
There will come a time, if you keep learning, playing and writing, when you will know the circle of fifths because you will have spent time in all the keys. But when seeing it for the first time, it may help to have a few tricks. This is how I teach it to young students.

## C and F

First, there are two locations you will just have to memorize... C, which is easy because it's zero, and F. To remember F, say this... "Flat has one F, and F has one flat."

G, D, A, E, and B

The second group is G, D, A, E, and B. These are keys with sharps. To remember how many sharps each one has, just look at the letter. It takes a little imagination with G, but if you are willing to round the corners a bit, you can sort of draw a G with just one stroke of the pencil. Like this...


Writing a D takes 2 strokes of the pencil... an A takes 3 strokes... an E takes 4 strokes... and B... you can write the number 5 right on top of a B without ever wandering off of the letter.


That's one way to remember that G is 1 sharp... D is 2 sharps... A is 3 sharps... E is 4 sharps... and B is 5 sharps.

## Bb, Eb, Ab, Db, and Gb

Once you get used to the sharp keys, the flats use the "add up to seven" idea. Like this... if $G$ is 1 in your mind, then when you drop the symbol for flat into the picture (Gb), add enough to get a total of 7... in this case, you would need to add 6. So Gb is 6 flats. Or more simply... "G is 1 sharp, so Gb is 6 flats."

Let's try that again with another letter... Db. You know D is 2 sharps, because it takes two strokes of the pen. Putting the flat in means we have to add up to seven, so we're looking for a 5 . Therefore Db is 5 flats. Reducing it down, we get... "D is 2 sharps, so Db is 5 flats."

The same thing works for $\mathrm{A}, \mathrm{E}$, and B . We could say the following:
G takes 1 stroke of the pencil... so G is 1 sharp.
Therefore Gb is 6 flats. It adds up to seven.

> D takes 2 strokes of the pencil... so D is 2 sharps.
> Therefore Db is 5 flats. It adds up to seven.

A takes 3 strokes of the pencil... so $A$ is 3 sharps. Therefore Ab is 4 flats. It adds up to seven.

E takes 4 strokes of the pencil... so E is 4 sharps. Therefore Eb is 3 flats. It adds up to seven.

B can have a 5 written on top of it without ever leaving the B ... so B is 5 sharps. Therefore Bb is 2 flats. It adds up to seven.

## Cb, F\#, and C\#

Finally, the three extra keys. The rule of seven still works.
Because F is 1 flat, F\# is 6 sharps.
Because C is zero
$\mathrm{C} \#$ is 7 sharps, and Cb is 7 flats.

## Something Else About The Circle

Another interesting thing about the circle is that it's possible to write songs that use part or all of the circle as the progression. For example, you could start with a C chord, move to F , follow that with Bb , and keep going until you get back to C . Or you could write a song using the progressions we explored in the maps, and somewhere in the middle of the song use a part of the circle... for example, you could use B - E - A - D - G - C.

On a personal note... I remember when I was studying music, one of my teachers would assign keyboard drills that went around the circle. An example would be to play a chord... let's say it was a major 7 chord in root position (notes 1-3-5-7). We would play it in both hands at the same time. So for CM7 we would play c-e-g-b in the left hand and c-e-g-b in the right hand... eight notes at once. Then we would play it around the circle. CM7 (cegb) - GM7 (gbdf\#) - DM7 (df\#ac\#) - AM7 (ac\#eg\#)... until we got back to CM7. If you would like the same challenge, choose a chord, play it in both hands, and then take it around the circle. It's a good exercise when you know some chords and would like to get better at finding them quickly.
"The Photographic Opposites"
There are four sets of scales ( D and $\mathrm{Db}, \mathrm{E}$ and $\mathrm{Eb}, \mathrm{A}$ and $\mathrm{Ab}, \mathrm{B}$ and Bb ) that are like photographic negatives of each other. You might learn them more easily if you learn them in pairs.

Look at D and Db for a moment. Notice the D scale has black notes at positions 3 and 7. In the Db scale, there are white notes at positions 3 and 7.


The same idea can be seen with E and $\mathrm{Eb}, \mathrm{A}$ and $\mathrm{Ab}, \mathrm{B}$ and Bb .



Let's Review
In parts 6, 7, 8 and 9, we spent a good bit of time looking at major scales. We've thought about the names of each note, and the numbers associated with each scale position. We've illustrated these scales, and then wrapped them around a circle to create the Circle of Fifths. Your goal is to learn these scales, play melodies using these scales, and write songs in these keys. If you keep at it, someday each of these scales and keys will be easy to play. Along the way, remember to enjoy the process. Take your time, learn well, and have fun!

When these sections on major scales are understood, move on to Part 10. There is also a section on first steps in learning Other Instruments (at the end of doc in appendix II). The first instrument we will look at is keyboards.

## Part 10

## Understanding Modes

Imagine for a moment that time rolled backwards and you found yourself in a chapter in history where they had not yet discovered the sharps and flats, and "pianos" (which wouldn't have been around yet, but if they had been...) were only white notes, and the only major scale available was C.

So you accepted those limitations, and wrote a few songs in the key of C major, but then you wanted a new sound, something different... so you looked down at your hands, and the thought came, "What if I shifted my hands one note to the right?"

Let me pause here to correct a possible misinterpretation. In our modern world of music, we have a concept called "transposing." By it we mean that we can take a song and move every note up (or down) by a certain number of half steps. When we do this, the result is a little higher (or lower), but because we shifted every note the same amount, the song still sounds like it did before. The relative jumps from note to note have not changed.

Now back to the "unusual piano missing the black notes"... We know that the jumps from note to note in the C major scale follow the formula whole - whole - half - whole - whole - whole - half. In other words, the distance from note 1 to note 2 is a wider gap than from 3 to 4 . So even though our unusual piano may look to our eyes as though each note is evenly spaced, we know in the world of sound and frequencies it isn't that way. Perhaps an easier way of saying it is... just because the black notes have not yet been discovered doesn't mean they are not there. We still have to leave a space for them in our minds, because we know they are going to come along later.

So you shifted your hands one note to the right and played one of the songs you had written in C major, but now, because you had shifted it, and because the whole and half step jumps are at a different place under your hands, this new version of your song sounded quite different.

Great! We wanted a different sound. That was the purpose of shifting the song in the first place. So far, so good.

So you stepped back for a minute and asked, "What was it I just did?" And then you realized that you took the original key of C major (where we number the notes $1,2,3,4$, $5,6,7$ - with the note C being note 1 , D being note 2 , and so on), and "renumbered" it so the D is now note $1, \mathrm{E}$ is note 2 , etc.

Then you realized there was nothing to stop you from shifting again. What if E was note 1 , or F , or G ? In fact, there are seven different notes, any one of which could be note 1. Therefore you could play your song in seven different places, the original (in C major) and six other versions... by shifting the song to the right.

When this grows clear in your thinking, there's something else important to grasp. We used the key of C major in our example, because it's easy to see that all the notes are evenly spaced, and you can imagine shifting your hands one note to the right without any
difficulty. But stepping back into the present, we could have used any of the 12 major keys on our modern piano.

For example, the key of Db major has 5 black notes and 2 white notes. Keep those 7 notes, and remove the rest. Now 5 white notes are missing. It's not as easy this time to play the same song while shifting (because the scale notes, being both black and white, are not spaced evenly). Still, with practice you could probably do it. And you could renumber the notes just like we did before... the math isn't any harder.

What this means is... any song (using only scale notes) written in any of the 12 major keys can be played in its original location (where note 1 is the name of the key), and can also be played six other ways, each time shifting the hands one more scale note to the right, and renumbering the keys so that note 1 is at a new place.

This idea of shifting the song needed some names, and so the ancient Greeks (because they were thinking about this) gave each "shift" a name.

IONIAN
Played in the original major scale.
DORIAN
Played one scale note to the right. (The original note 2 is now note 1.)

PHRYGIAN
Played two scale notes to the right.
(The original note 3 is now note 1.)
LYDIAN
Played three scale notes to the right.
(The original note 4 is now note 1.)

MIXOLYDIAN
Played four scale notes to the right. (The original note 5 is now note 1.)

AEOLIAN
Played five scale notes to the right.
(The original note 6 is now note 1.)
LOCRIAN
Played six scale notes to the right. (The original note 7 is now note 1.)

## Thinking This Through

To think this through and understand what's happening, first you need to know the major scale pictures we looked at back in parts 6, 7, and 8. Second, you also have to know that Ionian mode is associated with note 1 of the major scale, Dorian with 2, Phrygian with 3, Lydian with 4, Mixolydian with 5, Aeolian with 6, and Locrian with 7.

Knowing these two things, you can then work through an example.
A DORIAN - We'll take A Dorian as our example. We know that Dorian is built on note 2 of the major scale. Which major scale has A as note 2? The answer is G. The G major scale is the place where we will find A Dorian as one of the possible "shifts." So far, so good.

Now, what about the scale? We remember the G major scale starts on note $G$ and climbs through the notes A, B, C, D, E and then instead of playing note F, we play F\#. So the G major scale is $G, A, B, C, D, E, F \#, G$. Also, these notes are numbered in our minds. $G$ is 1 , A is 2 , and so on up to F , which is 7 .

To play A Dorian we play the same notes, but now A is 1 , $B$ is 2 , all the way up to $G$, which is now 7. So the scale is A, B, C, D, E, F\#, G, A.

Next, which chords are available. Again, we use what we already know about G major. The basic chords found in G major are G, Am, Bm, C, D, and Em (and there is one more... the vii chord, which is F\# diminished. You may include this chord if you like, but you'll probably find yourself using the first six chords a lot and the vii chord less often.) Because we are in Dorian, the Am chord is now the "home" chord, and the other chords are available to use in progressions.

Some progressions would come to you right away... Am-G-Am, or Am-Em-Am, or Am-C-D-Am... in a short time you would discover quite a few more. These are your building blocks then for writing songs in A Dorian.

You might wonder, "Do I need a big map for A Dorian?" The answer is no. Remember, there are five notes missing from each octave of the piano, so chords which might have used those extra five notes are not available. This knocks out a lot of possibilities. Playing just the six chords (or seven if you use the vii chord) keeps you in the mode.

The last question is a little more involved. Suppose you are playing an instrument, perhaps an instrument that plays just one note at a time, and you don't want to associate A Dorian with the G major scale, because that takes a long time to think about. In fact, as soon as you hear the name A, you picture the A scale. So you would rather hear the word Dorian as indicating a change to be made to the A major scale. So somehow we've got to get to the A Dorian scale beginning with the picture for the A major scale.

To do this we compare the A Dorian scale (A, B, C, D, E, F\#, G) to the A major scale (A, B, C\#, D, E, F\#, G\#). Notice the differences are in notes 3 and 7. Both are down a half step in the Dorian version. So we could make a "rule" to memorize. We'll use X as a variable, as in math, to stand for any note on our modern keyboard. Here's the rule - "To play X Dorian, play the X major scale with notes 3 and 7 down a half step."

## The "Rules"

This idea of memorizing rules can be applied to the other modes as well. We'll add the rules to what we already know. As before, X can represent any note.

IONIAN
Played in the original major scale.
DORIAN
Played one scale note to the right.
(The original note 2 is now note 1.) or another way of thinking about it...
$X$ Dorian - play the X major scale with notes 3 and 7 down a half step To remember this rule, picture the D major scale. Notice that notes 3 and 7 need to be lowered to lose all the sharps and flats.

PHRYGIAN
Played two scale notes to the right.
(The original note 3 is now note 1.) or another way of thinking about it...
$X$ Phrygian - play the $X$ major scale with notes 2, 3, 6 and 7 down a half step To remember this rule, picture the E major scale. Notice that notes 2, 3, 6 and 7 need to be lowered to lose all the sharps and flats.

LYDIAN
Played three scale notes to the right.
(The original note 4 is now note 1.)
or another way of thinking about it...
$X$ Lydian - play the $X$ major scale with note 4 raised a half step
To remember this rule, picture the F major scale. Notice that note 4 needs to be raised to lose all the sharps and flats.

MIXOLYDIAN
Played four scale notes to the right.
(The original note 5 is now note 1.) or another way of thinking about it...
X Mixolydian - play the X major scale with note 7 down a half step
To remember this rule, picture the G major scale. Notice that note 4 needs to be lowered to lose all the sharps and flats.

> AEOLIAN
> Played five scale notes to the right.
> (The original note 6 is now note 1.)
> or another way of thinking about it...
> X Aeolian - play the $X$ major scale with notes 3,6 and 7 down a half step To remember this rule, picture the A major scale. Notice that notes 3, 6 and 7 need to be lowered to lose all the sharps and flats.
> LOCRIAN
> Played six scale notes to the right.
> (The original note 7 is now note 1.)
> or another way of thinking about it...
> X Locrian - play the $X$ major scale with notes 2, 3, 5, 6 and 7 down a half step
> To remember this rule, picture the B major scale. Notice that notes $2,3,5,6$ and 7 need to be lowered to lose all the sharps and flats.

## Experimenting With Modes

If you would like to experiment with modes, one of the easiest ways is to look again at the chart we saw earlier in these lessons. Here it is again.

| KEY | I | ii | iii | IV | $V$ | Vi |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | C | Dm | Em | F | $G$ | Am |
| Db | Db | Ebm | Fm | Gb | Ab | Bl |
| D | D | Em | F/m | G | A | Bm |
| Eb | Eb | Fm | Gm | Ab | Bb | Cm |
| E | E | F\#m | C/f | A | B | CHm |
| F | F | Gm | Am | Bb | C | m |
| Gb | Gb | Abm | Elom | Cb | Db | Ebm |
| $\bigcirc$ | G | Am | Bm | C | D | Em |
| Ab | Ab | Brm | Cm | Db | Eb | Fm |
| A | A | Bm | CHm | D | E | $\mathrm{F} \# \mathrm{~m}$ |
| Bb | Bb | Cm | Dm | Eb | F | Gm |
| B | B | CHm | D\# | B | F\# | G\# |

Take the six chords from any line (adding chord vii if you desire... it will be a diminished chord whose root is the seventh note of the major scale). Then choose a chord other than I as "home." Explore the various progressions you can create using these six (or seven)
chords. Keep in mind which chord is the home chord and keep coming back to it to establish that sound in your mind. When chord I is home, we are in Ionian. When chord ii is home, we are hearing the sound of Dorian. When chord iii is home, welcome to Phrygian.

IV as home gives us Lydian, V gives us Mixolydian, and vi brings us the sound of Aeolian. Adding in chord vii and using it as the home chord lands us in the world of Locrian.

Each mode has its own feel. If you do this simple experiment, spending some time in each mode, your musical horizons will expand.


Let's Review
In this section we explored the concept of modes. We discussed where they come from, what we call them, and how to think about them.

From a chord perspective, we looked at the six (or seven) chords needed to write songs in the various modes. We are using the same chords as we were using in major (Ionian), but the sound and feeling are new because a different chord is considered to be home. Also, because the notes in the scale are sometimes a whole step apart and sometimes a half step, shifting the scale puts the half steps in a different place. This also produces the new sound and feel.

From a melodic perspective (for single note instruments, or for single note lines on chordal instruments), we recognize that a player can memorize the major scales and think of the modes as changes to be made to the scales. In certain musical situations, this will be faster than trying to think of which major scale the mode comes from. To address this, we introduced "rules", and suggested a way to derive the rules in your mind using the major scale pictures for D, E, F, G, A and B. Each of these pictures shows which notes must be changed to create a certain modal scale.

We then considered the challenge of spending some time in each mode, exploring how the various home chords affect the feel of the progressions. Creating several progressions in each mode will help expand your songwriting resources.

Think about and experiment with these ideas, remembering to enjoy the process. When you feel good about this material, move on to Part 11.

## Part Eleven

## Minor Keys - I

One of the first questions people ask, after seeing the maps for major keys, is... "What about minor keys?"

To explore the world of minor keys, let's adopt the following strategy. We'll use "concepts" and "approaches." The "concepts" are ideas to consider until they become part of the way you think. The "approaches" are assignments or experiments you can do to gain skills working with minor keys.

## Minor Keys - Concept \#1

The first concept to consider is this... Not all songs that sound minor are really "Minor." In other words, you can create music with that minor sound, but it may not be coming from the place we call "Minor," so let's talk about that first.

Music sounds minor when the "home chord" is a minor chord. If you play a song, and a minor chord seems to be the center around which everything is happening, people will say, "That sounds like minor."

If you spent some time reading through the previous section on modes, you will remember there are three modes which have a minor chord as the home chord. The Dorian mode, the Phrygian mode, and the Aeolian mode. Let's review.

## The Dorian and Phrygian Modes

If we take any major scale, number the individual notes 1 through 7, and number the chords built on those notes as I, ii, iii, IV, V, vi, and vii (where I, IV, and V are major chords... ii, iii, and vi are minor chords... and vii is a diminished chord)... we will be playing in the Ionian mode, or major.

If we keep these same notes and chords as a kind of family (related to one another, and meant to be played together), but think of note 2 as the starting point, and chord ii as the home chord, creating a song that keeps coming back to ii, we will be playing in the Dorian mode. If we keep writing songs in this mode, we will eventually get so familiar with it that we will no longer think of the home chord as being chord ii in some major scale. Instead we will begin to see it as chord i in this interesting scale that has a different sound. Also, we will no longer see the root note as note 2 of some other scale - we'll see it as note 1 of this new scale... the Dorian scale.

But regardless of how we label it or think about it, the song we play will sound to the casual listener as though we are playing in a minor-sounding key. It's not really minor, of course. It's Dorian.

The same line of reasoning can be used for the Phrygian mode, except that the home note is note 3 and the home chord is chord iii. Songs written in the Phrygian mode will have a minor feel to them also, because the home chord is a minor chord.

## What About the Aeolian Mode?

The Aeolian mode is built on note 6 of a major scale. This is where the "Minor Keys" discussion begins to get interesting.

## Minor Keys - Concept \#2

Our second concept is this: What we call minor develops out of the Aeolian mode. In fact, the Aeolian mode is sometimes called "Natural Minor." Take any major scale... find note 6... and renumber everything so that note 6 is called 1 . This new scale will be numbered 1 through 7, but the jumps between notes will follow the formula "whole - half - whole - whole - half - whole - whole" or W-H-W-W-H-W-W.

To make it easier to see, let's choose C major, find note 6 (which is A), call that 1 , and then play the Aeolian mode. The notes are a, b, c, d, e, f, g, a. This is an interesting mode, and you can write songs in it using the same chords you were using in the key of C major... C, Dm, Em, F, G, Am, and Bdim... but the home chord is now Am. Start with Am, end with Am, keep coming back to Am, and you will have established a minor chord in the listener's mind.

Now take another look at the chords we're using, particularly the "five chord."
The one chord is Am.
The two chord is Bdim.
The three chord is C.
The four chord is Dm.
The five chord is Em.
The six chord is F.
The seven chord is G.

## Minor Keys - Concept \#3

Notice that the five chord is minor. Many years ago, musicians working with the Aeolian mode thought about it and decided it would be nice if the five chord was major instead of minor. This would allow the progression V to i to go from major to minor. They liked this sound a lot, but in order to make the five chord major, they had to change one note in the Aeolian scale... note seven. So they sharped note seven (they shifted it one half-step to the right).

In our example using A Aeolian, instead of playing the scale a, b, c, d, e, f, g, a, we would play a, b, c, d, e, f, g\#, a. This creates a rather unusual jump in the scale between notes 6 and 7, but it did accomplish the primary goal of getting a major chord as the five chord. They called this new scale "harmonic minor."

So that brings us to our third concept: Harmonic minor is the Aeolian mode with note 7 raised a half-step, allowing the five chord to be a major chord.

## Say It Again

Let's go through the process again. Start with any major scale... play those seven notes... then play the same seven notes beginning on note 6 ... renumber the notes so note 6 is now called $1 .$. this new scale is the Aeolian mode or natural minor... now play the Aeolian mode with note 7 raised a half-step.

Let's do an example... we'll start with the F major scale... f, g, a, bflat, c, d, e, f... find note 6... it's the d... play it again starting with d... d, e, f, g, a, bflat, c, d... So far so good that's D Aeolian or D natural minor. To get D harmonic minor, we raise note 7 a halfstep... which gives us d, e, f, g, a, bflat, c\#, d.

Again, notice the unusual jump from bflat to c\#. It kind of grabs your attention. Well, it grabbed everyone's attention a long time ago too, and they found they didn't always like that big jump from note 6 to note 7 . One interesting way to smooth it out is to start with the harmonic minor scale... then "bump" note 6 a little higher when going up the scale, and "pull" note 7 when coming down. In other words, we smooth out the big jump using two different adjustments... one adjustment when playing up the scale, and a different adjustment when coming back down. The result is... notes 6 and 7 are just like the major scale when going up, and just like the natural minor scale (or Aeolian) when going down.

This smoother scale is called "melodic minor," which brings us to our fourth concept...

## Minor Keys - Concept \#4

Melodic minor is harmonic minor with note 6 sharped when playing up the scale (or natural minor with both notes 6 and 7 sharped when playing up the scale), and natural minor coming back down.

## How Do I Remember This?

It's a little easier if you think of it this way. (This is simpler than finding note 6 , renumbering everything and then raising note 7 a half-step to get harmonic minor.)

First, learn the major scales.

Second, take any major scale (keeping its letter name in your mind), and flat notes 3 and 6. This automatically puts you into "harmonic minor" (with the same letter name.) For example, C major becomes C harmonic minor when you flat notes 3 and 6 .

Third, leave the flat 3 there, and watch carefully notes 6 and 7. If you keep the flat 6 and also flat note 7 all the time, you are in "natural minor" or Aeolian. After playing the Aeolian scale a couple times to get it in your head, play it again but this time raise notes 6 and 7 each a half step when going up the scale, lowering them back to flat 6 and flat 7 when coming down. This is "melodic minor."

## Minor Keys - Approach \#1

Your first assignment: take well-known tunes in major keys... play just the melody, one note at a time... but flat notes 3 and 6. Listen carefully to this new sound. Notice especially the jump between notes 6 and 7. Remember that you can make this jump smoother by "bumping up" note 6 when playing up the scale and "pulling down" note 7 when playing down the scale.


Let's Review
In this section we saw how minor keys grow out of the Aeolian mode.

We did have to make an adjustment however. The Aeolian mode (or natural minor) sounds minor and feels minor, but it doesn't have that nice V to i sound, because the five chord in Aeolian is minor. We can get the V to i sound by raising note 7 a half-step. This gives us a major chord for chord five. It also gives us a wide jump between notes 6 and 7 of the scale.

Sometimes we like this jump, but sometimes we would rather close this gap to make musical lines play more smoothly. Raising note 6 in passages going up, and lowering note 7 in passages coming down gives us melodic minor.

Because that takes a while to think through, we outlined an easier way. Starting with any major scale, we can get the harmonic minor scale (with the same letter name) by flatting notes 3 and 6 . If we flat note 7 all the time, we have Aeolian or natural minor. If we look
carefully at the Aeolian scale, then raise notes 6 and 7 when going up, leaving the Aeolian scale alone when going down, we get melodic minor.

When you feel you understand these concepts, move on to Part 12.

## Part Twelve

## Minor Keys - II

Having discussed the minor scales, let's talk about which chords are available when writing songs in minor keys.

## Minor Keys - Concept \#5

The place to begin is i - iv - V. When you stop to think about it, this is where most songwriters begin when writing in major keys, with the three chords... I, IV, and V. Many songs have been written using these three chords. So when we begin to explore minor keys for the first time, it makes sense to start there... with i , iv , and V .

The i chord is minor. The iv chord is minor. But the V chord is major. This is easy if you already know your major scales. Let's take an example... the key of D. Because we've written songs in D major (where D, G, and A are the I, IV and V chords), we simply shift our thinking a little, change the D major chord to D minor, change the G major chord to G minor, and keep the A major chord just like it is. Then playing the Dm chord as the "home chord," we begin creating phrases that include Gm and A. Some of these simple phrases would be...

Dm - A - Dm
Dm-Gm-Dm
Dm - Gm-A - Dm
Dm - Gm - Dm - A - Dm
Gm - Dm - Gm - A - Dm
(Also, the A chord may be played as A7 when the Dm chord follows... turning the dominant into a dominant 7 is common when the next chord is the "tonic," or i chord.)

## Minor Keys - Approach \#2

At this point, especially if minor keys are somewhat new to you, I would encourage you to write simple songs, or at least several musical phrases using these three chords... i, iv, and V. Hearing this sound clearly in your mind is an important first step.

## Minor Keys - Concept \#6

After i, iv, and V become familiar, the next question is... What about the chords built on notes $2,3,6$, and 7 ? Here's where we have a little bit of a departure from the way it works
in major keys. In major keys, if the bass note is note 2 , there's a good probability the chord is chord ii. The same can be said for notes 3 and 6 . If the bass note is note 3 (or 6), the chord is quite often chord iii (or vi). It's not always true, but more often than not it is. (And when you are first beginning, it's a good place to start.)

But in minor, it's a little different story. So we'll need to talk about each bass note. For the following examples, we will use the key of C minor. Remember, the C harmonic minor scale is... C, D, Eb, F, G, Ab, B, C.

When the bass note is note $1(\mathrm{C})$, the most common chord is Cm .
Other possibilities:

- the iv chord with its fifth in the bass ( $\mathrm{Fm} / \mathrm{C}$ )
- the VI chord with its third in the bass ( $\mathrm{Ab} / \mathrm{C}$ )

When the bass note is note $2(\mathrm{D})$, the scale suggests the chord D dim, made up of the three notes D, F, and Ab. However, when you begin writing and playing songs in minor keys, this chord is not necessarily the most common when the bass note is on note 2 .

Other possibilities:

- the vii dim chord with its third in the bass (Bdim/D)
- the V7 chord with its fifth in the bass (G7/D)

When the bass note is note 3 (Eb), the scale suggests the Eb aug chord, made up of the three notes Eb, G and B. This chord is one possibility, but probably more common is the chord $\mathrm{Cm} / \mathrm{Eb}$, using the tree notes $\mathrm{Eb}, \mathrm{G}$, and C .

When the bass note is note $4(\mathrm{~F})$, the most common chord is Fm.
Other possibilities:

- the V7 chord with its seventh in the bass (G7/F)

When the bass note is note $5(\mathrm{G})$, the most common chord is G or G 7 .
Other possibilities:

- the i chord with its fifth in the bass (Cm/G). This chord is quite often used to set up the progression V-i... (Cm/G-G-Cm).

When the bass note is note $6(\mathrm{Ab})$, the VI chord $(\mathrm{Ab})$ is a good option. Another good choice is the iv chord with its third in the bass ( $\mathrm{Fm} / \mathrm{Ab}$ ).

When the bass note is note 7 (B), the vii dim7 chord (Bdim7) is a good choice. So is the V chord with its third in the bass (G/B).
(The main idea here is this: in major keys there's a strong tendency to allow the bass note to be the root of the chord (especially when first learning to write songs). But in minor
keys, even when you are beginning, certain bass notes tend not to be the root. When the bass note is $2,3,6$, or 7 , quite often that bass note is the third of the chord. Knowing this right from the beginning will help you as you explore progressions in minor keys.)

## Minor Keys - Concept \#7

Each minor key is related to one of the major keys, or to put it another way, each major key has a relative minor key. The names of the two keys, the major key and its relative minor, are always three half steps apart. For example, C major has a relative minor, A minor. Notice that the note A is three half steps down from the note C. Similarly, D major has a relative minor, B minor. The note B is three half steps down from the note D .

These two keys, the major key you've chosen and its relative minor, share the same "key signature." The key signature is the number of sharps or flats in that particular major scale, and it is written on the staff following the clef sign at the beginning of each line of music. For example, the F major scale has one flat in its key signature. So the Dm scale (the note D is three half steps below the note F ) also has one flat in its key signature. In the same way, G major and Em share the same key signature (one sharp).

There are two things to notice about this. First, when you look at a piece of written music, you won't know which key the song is in. It might be major, or it might be in the relative minor (or it could also be in one of the modes, but for now we'll limit this discussion to major and minor.) We have to look at the notes and chords to tell whether it's major or minor. Secondly, if the piece is written in minor, there will very likely be a number of "accidentals" (notes with a sharp, flat or natural sign in front of them.) This is because the minor scale that uses the same key signature is what we called "natural minor," and harmonic minor (the minor scale that allows the V chord to be major) requires that we raise note 7 a half step. This raised note 7 has to be written into the music as it happens. For example, if you see one flat in the key signature, the song may be in F major, or it may be in Dm. But if it is in Dm, there's a good chance you'll see a number of C\# notes in the score, because C\# is the raised seven note which gives us the A major chord as the V chord.

Let's list the major keys and their relative minor keys.
C major (no sharps or flats) is related to A minor.
G major (1 sharp) is related to E minor.
D major (2 sharps) is related to B minor.
A major (3 sharps) is related to F minor.
E major (4 sharps) is related to C\# minor.
B major (5 sharps) is related to G\# minor.
Gb major (6 flats) is related to Eb minor.
Db major ( 5 flats) is related to Bb minor.
Ab major (4 flats) is related to F minor.
Eb major (3 flats) is related to C minor.

Bb major (2 flats) is related to G minor. F major (1 flat) is related to D minor.

The other possibilities, though rarely seen, would be...
F\# major (6 sharps) is related to D\# minor.
C\# major (7 sharps) is related to A\# minor.
Cb major (7 flats) is related to Ab minor.
This discussion of major keys and their relative minor leads us to a very important concept when writing music in minor keys.

## Minor Keys - Concept \#8

This is the "Switch-Over" concept. That's not its real name, but we'll call it that for the moment. The "Switch-Over" concept is this... if you are writing or playing in a minor key, there is a strong pull to switch over at some point to the relative major key. It's almost like driving a car on a highway and switching lanes. Then a little later, you might switch back to the minor key where you started. Once you get used to this, it happens quite easily.

You might ask... if this happens in minor keys, does it also happen when writing in major keys? Do we switch over to the relative minor and back? The answer is... you could if you wanted to, but it doesn't seem to happen nearly as often. For some reason, writing in minor lends itself to jumping across to the relative major and then back.

In my own mind (this is a personal explanation... other teachers might not say it this way), I compare it to the concept of gravity. Earth has a strong gravitational pull, and anything spinning around the earth, like the moon or a satellite, has a predictable orbit. But what if you went to a place where gravity wasn't so strong, and where more than one planet was involved? You might be sort of loosely pulled in the direction of one planet, and then when another one came near, you might orbit that one instead. To me, minor keys have the feeling of "a little less gravity," or to put it another way, a little more freedom to escape and land in a different key center.

## "Switching Over" - How Does It Work?

It's very simple once you catch it. It works like this. These two keys, the minor key and its relative major, share the same scale notes (except for the raised 7 note in harmonic minor), which means they share some of the same chords. Let's take the key of A minor as an example. In the progression Am - Dm - Am (i - iv - i), we played Dm as the iv chord. But Dm is the ii chord in C major, and we already know from writing songs in C major that Dm - G - C is a nice smooth progression. Because we've already played this so many times before, and because A minor is such a close relative to C major, you might someday, while experimenting in the key of A minor, play Am - Dm - G - C. In other words, you would have started the progression in A minor, but when you hit the Dm
chord, you switched over to a progression you already know from the key of C major. By the time you hit the C chord, you realize you've "changed lanes."

What really happened was you played a chord that could be "either or"... it would be one thing in the key of A minor... it's something else in the key of C major.

In music theory, we call switching from one key center to another "Modulation." One of the ways of "modulating" is to find a chord that the two keys share. You approach the chord from one key, and leave the chord in the other key.

There are other chords that work also. The Am chord is chord i, but it's also vi in C major. Then there's the F chord. It's chord VI in A harmonic minor, but it's also IV in C major. With so many options, it's easy to step back and forth.

Here are some more to try.
Am-Dm-Am-G-C
Am - E - Am - Dm - Am/E - FM7-G - C
Dm - Am - Dm - E-F - Dm - G-C
Getting back to the key of A minor is also easy, especially if you use an E chord, or an E7 chord. The E chord has the note G\# in it, which isn't part of the C major scale, so it tells the listener right away that something is happening. When you introduce the E chord or one of its variations (E7 or E7/B or E7sus4 followed by E7, etc.), everyone can hear A minor coming back. You can also get back to A minor using the shared chords... i.e., Dm and $F$.

## What Does This Mean?

It means if you would like to write a song in a minor key, you may write it using just the chords we normally associate with harmonic minor, or you may widen your view a little, and step right off the map, landing in another key, the relative major. This adds a lot of possibilities.

## Even More Possibilities

And one more thing... not only can a minor key jump to it's relative major; it can also jump to its "parallel major." Jumping to the parallel major is easy. If you are playing in A minor, start playing in A major. If you are playing in C minor, start playing in C major. (If the song you are writing benefits from the sound of the parallel major, you can modulate instantly at any time, jumping back to minor just as easily when you are ready to come back.)


Let's Review
In this section we discussed four different ideas.
First, when exploring minor keys, begin with i , iv, and V. This is the sound you will want to hear clearly before going any deeper.

Second, we allowed the bass note to play each note in the harmonic minor scale, and asked which chords would likely be played for each of these bass notes. We noticed that when the bass note is note $2,3,6$, or 7 , one of the common chord options was whichever chord has that bass note as its third.

Third, we talked about modulating (or "switching over") from a minor key to its relative major and then back. We saw that this happens quite easily because a minor key and it's relative major share so many of the same notes and chords.

Fourth, we mentioned that a minor key is also quite close to its parallel major, so jumping to the parallel major and back is an option.

If you are new to minor keys, I hope this will give you a place to begin. If you have played in minor keys before, but haven't thought about very much, maybe this will give you an outline in your mind, sort of an overview of the landscape.

Enjoy exploring, and then move on to Part 13.

## Part Thirteen

## Have you heard about...



Every once in a while, I come across an interesting idea in the world of music. Sometimes the idea is so surprising or compelling that I have to share the idea with other musicians.

## Have you heard about a software program called Notion?

Notion gives you a blank piece of music staff paper on your computer screen... then when you write notes on it... it plays your score using sounds recorded by the London Symphony!

Would you like to see an example? I entered these notes, and added the accents. When I hit play, this is how it sounds.

(Click on the flash player or download Violins.mp3 )
So I built a new web site to show how much fun you can have writing music for "your own orchestra." I thought many musicians, songwriters, teachers, and students would enjoy this product, but I didn't think too many people knew about it yet. So I decided to help spread the news.

If you would like to visit the site I described, here's the link. Especially stop in on page three... the one called "Songs"... it's surprising what you can do with a blank piece of staff paper and your own Notion orchestra.

Hope you enjoy learning about Notion. If you are interested in Notion, and would like to order it, today or someday in the future, we'd love to hear from you at NotionWow. Thank you.
<ITS AMAZING!!!!!! -editors note:-P>
Here's the next lesson... Part 14. which doesn't exist yet....

## APPENDIX I:

## Chord Charts and Maps

The following charts and maps are designed to print on one page. In these keyboard charts, the notes shown are played by the right hand. The bass note, played with the left hand, is not shown. Usually the bass note is the same letter name as the chord. For example, any chord with the name C (Cm6, CM7...) would have a C as its bass note.
(To come back to this page, click on the "Back" button on your browser.)

## The Twelve Major Scales

## Chords With The Name C

More Chords With The Name C Chords With The Name Db More Chords With The Name Db Chords With The Name D More Chords With The Name D Chords With The Name Eb More Chords With The Name Eb

Chords With The Name E More Chords With The Name E Chords With The Name F

# More Chords With The Name F Chords With The Name Gb <br> More Chords With The Name Gb Chords With The Name G More Chords With The Name G Chords With The Name Ab More Chords With The Name Ab Chords With The Name A <br> More Chords With The Name A Chords With The Name Bb <br> More Chords With The Name Bb <br> Chords With The Name B <br> More Chords With The Name B 

The Big Map In C The Big Map In Db<br>The Big Map In D<br>The Big Map In Eb<br>The Big Map In E<br>The Big Map In F<br>The Big Map In Gb<br>The Big Map In G<br>The Big Map In Ab<br>The Big Map In A<br>The Big Map In Bb<br>\section*{The Big Map In B}

The Generic Map for Major Scales
"G" at Harp On encouraged me to create a generic map and this is the result. It has a few more green circles, and some connections that are not included in the Big Maps.

## T-Shirts

I uploaded the artwork, and Zazzle.com does the rest. Several color schemes are available.
Click here for Music Map T-shirts.

## NotionWow.com

There's a software program I'm enjoying quite a lot. If you haven't heard about Notion yet, you're invited to visit and see what it's designed to do.

NotionWow.com

## On to Music Theory For Songwriters - Part 6

## How Were The Maps Developed?

When I was studying music theory in college, I was introduced to ideas pertaining to chords and chord flow. After leaving college, I was teaching piano to young students for a while. Searching for ways to make chord flow accessible to young minds, I began drawing diagrams that would allow a child to create strong progressions. It seemed best to put each chord at a visual location with arrows to direct the flow. I experimented with different variations before choosing what I now call the Simple Map. Years later, I added the secondary chords that make the Big Map look the way it does. A few adjustments were made to create the generic map.

I hope these pages, charts, and maps will help you understand chords and how they flow together. Enjoy writing music. Love and peace to all.

The Twelve Major Scales


No shaps or flats.


Two flats.


These finta.

Four flats.

Db

G

Oue shap.


A


B


Gb


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## Chords With The Name C


C6

Major 6 -adds note 6.

Cm6


Csus


C7


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More Chords With The Name C

C.13


Thiteon - whena lat 7 is in the chond, note fots caled I3.


C13
 flat 7, a 9, and an 11 .


C13b9


C11


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## Chords With The Name Db



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## More Chords With The Name Db



Minor 7 Flat 5 - this has alop been called balr-dinththed 7.


Db9


Db11


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D13


Thiteen - whena fiat 7 is in the chond, note is ts calied I3.


Minor 7 Flat 5 - this has alop been called halr-dinhthed 7.


D11


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## Chords With The Name Eb



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More Chords With The Name Eb


Fb13


Thitem - whena fat 7 is in the chond, note is ts called I3.


Eb13
 flat 7, a9, and an 11 .


Mraor 7 Flat 5 - this has aloo been called half-dinthted 7.


Eb9


Eb11


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## Chords With The Name E



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## More Chords With The Name F



F13


Thitem - whena fat 7 is in the chond, note fits calied 13.


Mror 7 Flat 5 - this has aloo been called balr-dinththed 7.


F9


F11


F9\#5
 a 9 anda lat 5 .
 a 9 and a shap 5.

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## Chords With The Name Gb



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More Chords With The Name Gb

Gbbl3

Thitem - whena fat 7 is in the chord, note fits calied 13.


Mraor 7 Flat 5 - this has atoo been called half-inhthed 7.
 a 9 anda lat 5 .


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More Chords With The Name G


G13
 flat 7, a9, and an 11.


G9


G11


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Chords With The Name Ab


## More Chords With The Name Ab



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Chords With The Name A


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## More Chords With The Name A



Mior 7 Flat 5 - this has aloo been called balr-dinththed 7.
 a 9 andalat 5 .


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Chords With The Name Bb


More Chords With The Name Bb



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More Chords With The Name B


B13


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A Progression Map For C (The expression $X / Y$ means play chord $X$ wilh bass note $Y$ )


## A Progression Map For Db

(The expression $\mathrm{X} / \mathrm{Y}$ means play chord X with bass note Y )


## A Progression Map For D

(The expression $\mathrm{X} / \mathrm{Y}$ means play chord X with bass note Y )


## A Progression Map For Eb

(The expression $\mathrm{X} / \mathrm{Y}$ means play chord X with bass note Y )


## A Progression Map For E

 (The expression $\mathrm{X} / \mathrm{Y}$ means play chord X with bass note Y )

## A Progression Map For F

(The expression $\mathrm{X} / \mathrm{Y}$ means play chord X with bass note Y )


## A Progression Map For Gb

(The expression $X / Y$ means play chord $X$ with bass note $Y$ )


## A Progression Map For G

(The expression $\mathrm{X} / \mathrm{Y}$ means play chord X with bass note Y )


## A Progression Map For Ab

 (The expression $\mathrm{X} / \mathrm{Y}$ means play chord X with bass note Y )

## A Progression Map For A

(The expression $\mathrm{X} / \mathrm{Y}$ means play chord X with bass note Y )


## A Progression Map For Bb

(The expression $X / Y$ means play ehord $X$ wih bass note $Y$ )


## A Progression Map For B

 (The expression $\mathrm{X} / \mathrm{Y}$ means play chord X with bass note Y )


## How Were The Maps Developed?

When I was studying music theory in college, I was introduced to ideas pertaining to chords and chord flow. After leaving college, I was teaching piano to young students for a while. Searching for ways to make chord flow accessible to young minds, I began drawing diagrams that would allow a child
to create strong progressions. It seemed best to put each chord at a visual location with arrows to direct the flow. I experimented with different variations before choosing what I now call the Simple Map. Years later, I added the secondary chords that make the Big Map look the way it does. A few adjustments were made to create the generic map.

I hope these pages, charts, and maps will help you understand chords and how they flow together. Enjoy writing music. Love and peace to all.

## Appendix II: First Steps in Keyboard

## A Word Of Encouragement

I encourage everyone to consider playing more than one instrument. Although you will probably always have a "main instrument" or "first choice," the joy and fun of experimenting with new instruments keeps your perspective fresh.

The challenge when learning extra instruments is to learn efficiently, because most of your music time (rehearsing, writing, performing) involves using your main instrument. So how can you fit these other instruments "into the cracks?"

Here's how. First, understand the concepts that govern the instrument. Second, understand the fingering or patterns that allow you to experiment freely. And third, use it to do "simple and effective" things. The reason I say "simple and effective" is because these are secondary instruments for you. It's not necessary to master complicated phrases on each one... you only need to learn enough to enjoy what you are doing, and to play simply and effectively.

## The Distraction, the Hill, and the Reward

The "Distraction" is you might get so interested in secondary instruments that you lose focus on the main challenge which has been given to you. Commit to keeping first things first. Hold on to what is most important. But then, with the little bits of time you have here and there, open up to the possibility of new things.

The "Hill" is the feeling you will get when trying something new. It's highly likely you will feel very unqualified, like a beginner, etc. If you've gotten used to how good you feel when playing your "real instrument," you might not like this "new" feeling of being back at square one. You may even experience the thought, "How does anyone ever play this thing?"

The "Reward" comes when you've experimented enough to get past the beginning stages to where music starts to flow... maybe just a phrase here and there, but it begins to sound
like something real... and you will begin to think, "Maybe I can get this after all." It's a good feeling, and it opens up your musical world.

With this reward in mind, let's explore first steps in other instruments. We'll begin with keyboards.

## First Steps In Keyboard

There is one very simple keyboard style that you can learn in a relatively short amount of time. It's especially effective as a simple accompaniment to a singer, which means as a songwriter you'll enjoy this kind of playing. Here are the main concepts...

Keyboard Concept \#1
Bass in the left hand... chord in the right... melody in the voice.
In this style, your left hand will be playing just the bass note. Sometimes it will be literally just one note, and sometimes it will be two notes with the same name played an octave apart.

The right hand chord will be somewhere in the middle of the keyboard, usually around middle C. The chord in the right hand will most often be three notes (though it can sometimes be only two notes, and sometimes four.)


Keyboard Concept \#2<br>Right hand on each beat... left hand on beat one...

On beat one of each measure, both your right hand and your left hand will come down together. Your left hand will then remain down, holding the bass note, while the right hand lifts up and then plays the same chord a few more times. You can try this exercise right now. Count to four over and over... 1, 2, 3, 4, 1, 2, 3, 4, etc. Start with your left hand. Allow it to drop onto the desk, or your lap, when you say 1 , and then don't pick it up again until just after you say 4 . Allow it to drop again immediately as you say the next 1. When you can do that comfortably, allow your right hand to hit the desk or your lap on each number.

# Right Right Right Right Right Right Right Right 

## Left (hold down _ _ Left (hold down

## Keyboard Concept \#3 <br> The Sustain Pedal

After learning the basic pattern in Keyboard Concept \#2, you will find something is still missing... the sustain pedal (on a piano it's the pedal on the right). This pedal allows the notes to play longer, giving a smoother sound. The idea here is that the pedal should go "up" when a chord change occurs, and then back down again just after the new chord has been established. For example, if you are playing a C major chord using the pattern just described, and you switch to an F chord, the pedal goes up when the chord changes, and then back down just after the change. It takes a little getting used to, but it becomes natural and easy after a while.

## Keyboard Concept \#4

Relaxing... hand positions... fingering... numbering.
Be sure to relax with a very natural approach. Sit up straight, but not stiffly. Rest your mind and your muscles. Let go of any tensions you may be feeling.

Your hand should look like it's resting on top of a ball. When the notes are close together, your hand may look like it's resting on a tennis ball. As the notes get more widely spaced, it may look like your hand is resting on a volleyball or basketball.

When playing a chord, use the fingering that allows your hand to stay as comfortable and rested as possible. On three note chords, I teach my students to play the outside notes with the thumb and little finger. The third note, the one in the middle of the chord, is played by whichever finger is closest (usually the index or the middle finger.) Also, allow the fingers which are not playing to relax as well. These should still look like they are resting on a ball, though they will be slightly above the keys.

We number the fingers $1,2,3,4,5$ beginning with the thumb as number 1 .

## Keyboard Concept \#5

Learn the 72 chords.

To get started you'll need to learn 12 major chords and 12 minor chords, each with three right hand ways of playing them (which adds up to 72 chords). This is your challenge. It
may take a couple weeks, or it may take a few months. Either way, accept the challenge, and play these chords over and over again. As you play them, learn their names as well.

The diagrams below illustrate the major and minor chords for each root. The left hand plays the note in the red box as a bass note. The right hand has three choices. It's important to learn all three.

When the right hand chord is shown with white letters, the suggested fingering is 1-2-5, or thumb-index-little. When the right hand chord is shown with black letters, the suggested fingering is $1-3-5$, or thumb-middle-little.




Keyboard Concept \#6
The "Close-To-Your-Hand" Concept
You may be wondering why you need to learn three ways to play each chord. Wouldn't it be enough to learn just one C chord and use it every time the music calls for a C chord? The answer is... you could, but it will sound better and smoother if your right hand moves to a C chord which is in close proximity to the chord you just played. Having learned three ways, you will have options, and one of those options will be "close to your hand." It's not necessary to always choose the closest variation, but it's a good idea most of the time.

Here's an example. Suppose you are playing a C chord, and then an F chord. The nearest F chord is not far away. Moving your right hand from the C to the nearby F chord makes for a smooth transition.


Keyboard Concept \#7
The bass can play another note in the chord.
When you first learn, you should probably choose the bass note to be the same as the chord letter name. After a while, you may begin experimenting by playing in the bass a different note from the same chord. For example, when playing a C chord, try playing an $E$ in the bass.
(A little bit about names - In music theory, we call the notes in the chord the root, the third, and the fifth. In a C major chord, the root is C, the third is E, and the fifth is G. When you play a chord with its third in the bass, we call this the "first inversion." When you play a chord with its fifth in the bass, we call this the "second inversion.")

## Keyboard Concept \#8 <br> When playing a major chord with its third in the bass (first inversion), omit the third from the right hand unless it's the highest note.

This may seem like a small detail, but it will make your music sound better and more polished if you omit the third from the right hand when the third is in the bass. Example: when playing an F chord in the right hand, don't play the note A in the right hand (play only the F and the C ) if you have chosen to put the A in the bass.

The only applies to major chords. You can put thirds in the bass with minor chords without changing the right hand.


Let's Review
In this section we considered the idea of adding some keyboard skills to your playing. We chose a simple songwriting style with the right hand playing a simple major or minor chord on each beat, and the left hand playing the bass as either a single note or as an octave.

We learned 72 chords, paying close attention to the fingering suggestions. We also learned that the bass note can play a chord note other than the root, and in particular, if the bass is on the third of a major chord, it's quite common to leave the third out of the right hand.

Enjoy learning these keyboard skills.


[^0]:    Concept \#7 - Using The Simple Map

