

# The Play By Ear DISCOVERY

# Music theory you *must* know but *don't* know (because you *think you already know it*)

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I wanted to be a rock star when I was a kid. I was good on the guitar at an early age and used guitar-chord knowledge to teach myself piano (after a couple years of lessons).

That changeover from one instrument to another drove home some music theory concepts that rocked my musical world. I made an unobvious discovery; a discovery missed by most musicians out there. That's what this book is about.

No matter your musical skills, you will either acknowledge and recognize the rare insights I share here or aspire to understand them better.

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# Introduction

# The Most Important Theory

This is the most *important* music theory you *must* know, but *don't* know because you *think* you *already* know it. Oddly enough, it is *this* rudimentary theory that is the most overlooked, undervalued and assumed by most musicians. Any training you might have gotten in this area was probably based on facts and presented without any kind of conceptual understanding.

Beginners learn this theory out of context because they don't know enough to be able to gauge what is *really* important and what is not. On the other side, the experienced "old dog" just can't believe there's any new tricks to be discovered; and especially not in this basic area. Our problem is that we either don't know enough or we know too much.

In either case, we don't give this theory the attention it deserves. Many very surprised, highly-experienced musicians discover these concepts late in their years of playing. It's doesn't have to be that way.

If you think you already know this, don't be too quick to judge. Allow yourself the "chance" curiosity that *perhaps* there is something more. This training shows context and gives you a rare glimpse of conceptual insights that are very hard to see on your own. It is the simplicity of experience.

# The Play By Ear Discovery

You're looking to discover something that is hidden right under your very nose. This information is specific to showing you how to "see" it but for most, it's not an immediate thing. You have to study it for a while before things come together. There is great power in what you are looking to discover.

#### How Will You Know When You've Found It?

You'll have an AHA moment when you realize you can control music by applying only 8 notes. You'll see how the major scale brings order to the infinite musical universe. When this concept truly sinks in, you'll have a clear vision of where you are going *and how you are going to get there*.

#### Why Is This So Hard To See?

It's because your mind is divided between two ways of viewing music; one numerical (1, 2, 3, etc.) and the other alpha (Ab, B, C#, etc.). Because most musicians ONLY know alpha thinking, they find it hard to instantly switch gears to numbers. It's a natural reaction to resist the unknown.



Numbers are hard to accept because we're not taught to view music numerically; we're taught to follow by sight-reading alpha tones. In that "following mode" you cannot improvise or lead with creativity. To lead you must understand numbers take the chord structure of a song and use that as a springboard to deviate. That's the system and there is no guesswork involved.

It's one thing to read through (or totally dismiss) this material and assume that "you got it." Most people read the facts and think that's all there is. Unless you walk away exclaiming "Wow, I'll never think the same way again!" and start applying musical math immediately to your playing and thinking, then you don't get it.

#### What Are You Trying To Discover?

You are looking for an encompassing realization of "basic" music theory that is *far beyond a "basic" understanding*. That within these simple facts lie an undeniable truth and enlightenment that few musicians realize; that the major scale numerical order controls everything in music (except rhythm and tempo).



It's difficult to acknowledge that simple truth when you do not understand the infinite scope of the concept so let's refine it even more. If all 12 keys are based on one 8-note order (the scale), that represents a 12:1 ratio reduction that puts you in control of any key at any time. That hidden fact alone should set your mind reeling. If it doesn't, it will.

You must gaze beyond the basic 12:1 ratio enlightenment. You only play a song in one key at a time. Numerically however, *you are playing in all 12 keys at the same time*. If it applies to one key, it applies to all.

#### **Answers To Our Most Difficult Questions**

Our minds are not able to quickly comprehend the overpowering leverage numerical thinking gives us over music. When you apply numerical thinking, you start figuring out the answers to the most difficult questions musicians muse over.

- How do you manage and control music?
- How do you keep track of each key without any reference?
- How do you create any chord you need without any reference?
- How do you transpose any song to any key easily?
- How do you figure out the basic chords of any key immediately?
- What is the basis of "playing by ear"?
- What is the basis of improvisation?
- How do you teach yourself to play better on your own?

Usually those answers are learned over a lifetime of blood, sweat and experience. Any **one** of them alone might take you years to figure out on your own. The Play By Ear Discovery answers every one of them.

# Enlightenment

The basis of enlightenment is that numbers control in a way that alpha-based notes do not. With numbers there are no sharp or flat designations; just one set order for all 12 keys. That 12:1 ratio reduction lets you mentally tame any key. This awareness is the *initial spark* of enlightenment.

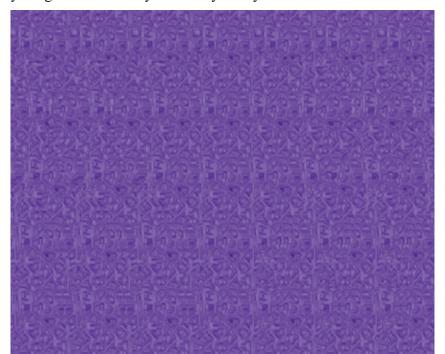
Discovering enlightenment puts you way ahead of your experience level. When you see it, music makes a lot more sense. Your discovery will be an enormous leap in knowledge.

You'll feel a sense of euphoria as you continue to analyze and marvel at what you missed previously. You'll compare your mind set before and after and understand how something so "obvious" was hidden before you.

All the facts and theory that lacked depth of meaning before, suddenly comes alive. You'll come to realize with greater experience that thinking in numbers is easily **the most important thing a musician must know.** It is the key to advanced musicianship

#### 3D Thinking

Consider those 3D pictures that are hard to see if you don't know how to look at them. Remember the first time you ever saw one? You looked and looked and looked and looked and they kept saying "It's a balloon." "I don't see it . . ." you said. No matter how hard you looked, it just didn't appear. Then you learn to relax your gaze and when you see it you say "Now I understand."



It's a balloon!



That's exactly what we're talking about here. You're going to realize something that's hidden. If not, then like the 3D picture, you've got to keep looking and relax your gaze. When it happens, there will be no mistake to the treasure you have uncovered.

#### Conclusion

You may have played the piano a long time with many many years of experience. You've gotten better over the years sight reading and maybe reached a higher degree of proficiency through following.

But sight-reading and play-by-ear training does not intersect. Many fine pianists can attest to this. They're tigers with sheet music but totally lost without it in front of them. When you adopt numerical thinking, your sight-reading skills are magnified because you understand what you are doing.

Chances are great, no matter what your skill level, that you've never looked down at your hands and made any conscious effort to memorize the chords you are reading on paper. The fact is undeniable. If you don't know your chords, you cannot be independent on the piano simply by being a good sight reader.

Everything is dependent upon the major scale order. **EVERYTHING!** After many years of playing, an experienced musician comes to realize this or, maybe not. That's the Play By Ear Discovery you must relax your gaze to see.

The next few pages cover the most important music theory and set the stage for the final chapters where the Play By Ear Discovery starts to come together. It's EXTREMELY IMPORTANT to do the Keys and Scales exercise. That's the first major light that comes on. Even if you think you know it, do it. The light may very well come on in a way you weren't expecting.

#### **Watch The Videos**

The videos are on the web page under the Free Lessons; Getting Started Tab. They're short and very to-the-point with a lot of conceptual insights.

http://keyeduppiano.com/free lessons.php

I'd recommend you reread parts of this book many times and ponder it. Numerical thinking builds on top if itself and the more you apply it, the more natural it becomes. Continue to muse on the subject of an infinite musical universe that is controlled exclusively by those eight little numbers in order.

# **Beyond The Basics**

#### How You Missed The Boat

Some believe they missed the boat to playing music by ear. They're right but it's not so much that you missed it, you just didn't see it. You wonder why? It's because the "boat" comes too early when we're not looking for it. You'll be happy to know that it's still anchored at the dock waiting for you. First, you've got to learn to navigate.

# The Two Most Important Theories in Music

What some might dismiss as "too basic" is anything but. What you are going to learn is overlooked by nearly everyone. Most training just touches on the fact without devoting much time to the most important conceptual aspects of their usage. Everything in music is based on:

<u>The Major Scale</u>: This is the Mother of Music.

#### Chords and Numbers:

This is the primary use of numbers because chords manipulate numbers more than anything else in music. As such, it is deemed the 2nd most important theory. Melody ties for 2nd but that's an ever-changing variable (infinity). Since melody can be changed by changing the chords, chords must take precedent as the framework to melody.

Because the use of numbers in creating chords is too broad to expand upon here, it's covered in another book "How To Play Any Chord and Throw Away This Book." This is your next step to playing by ear; learning chords. If you like how I explain things here, you'll like that.

# The System For Maintaining Order

There is a system to understanding how to get around independently on the piano. These two root-theories are the tools you use to do it. Make no mistake these are the bare basics of music; theory you think you already know. Yet, most people don't realize the enormous power they wield because they don't know how to use this information.

Literally, you apply these theories every time you play. They are never far from your thoughts because often, you need to apply them quickly. When you are confused, look to these theories to answer your questions. Learn to harness these tools and you'll be afraid of no key very very fast.



# Scales and Keys

This the #1 theory in music and the most misunderstood. It's the Rosetta stone of music that reduces all scales to one numerical order. It may seem too simple to believe but 8 notes control everything.

#### Music Theory Has Little To Do With The Actual Key

An actual key is designated when music is performed but music theory doesn't care what key it is. It's just numbers. Therein lies a hidden concept but it is too broad for you to see.

Too broad because again, we are confused between the numerical versus alpha thinking. It is our comprehension and how we cope with the difference between a name designation of either 1 or C# (or any root note). We're indoctrinated through training to follow alpha thinking and *that's our downfall to control*. You can only control with numbers but because you think "alpha," psychologically, you resist.

We humans like order to our learning process. We try to turn alpha thinking into some kind of "science" to organize our thoughts. We learn scales and key signatures and do rote practices. We memorize all the sharps and flats (but still keep referring back to the key signature when reading). Unfortunately, *alpha thinking isn't any kind of science at all*. If it were a science, you'd know how to play by ear. Consider this.

#### Alpha Thinking - 96 Notes Confuse

Alpha thinking is the mind-set for standard piano lessons and the music industry. It always has been, and always will be. Nothing will rock that great tradition and pedagogy of classical training. Unfortunately for the masses, that method only teaches you to follow but not to lead. The problem with using letters for notes is you can't add, subtract or manipulate them like you can numbers.

With alpha thinking, you must keep track of 12 different keys times 8 notes each for a total of 96 notes. That's a lot to keep track of and the way we compensate is to teach with rote what cannot be taught with logic. That is, we drill scales. It's no wonder that the "96 Concept" takes years of study and hard work to master. It's an approach that tackles every key like climbing a mountain. Sadly, after all that time most still don't know how to play by ear.

However, alpha thinking is a major part of music and of great importance so it cannot be discounted. Your perspective of alpha thinking is keenly increased when you master numbers. They go hand-in-hand and cannot exist without the other.

#### **Numerical Thinking - 8 Notes Control**

One, single 8-note order applies to all 12 keys. What it comes down to is *reduction* as a way to control music. Specifically, a 12:1 ratio reduction that removes all sharps, flats and treats all keys as one. With 8 numbers you keep track of everything. Applying that 12:1 reduction gives you tremendous leverage over music.

#### **Definitions:**

Scale: A series of eight notes that begins and ends on the same note.

Each note is designated a number from 1 through 8.

Major Scale: A series of whole steps with half steps located at the 3/4 and 7/8

intervals of the scale. There is only one major scale order that

applies to all 12 keys.

Root Note: Also called the tonic, it is the first note of a scale. There are 12

notes in an octave, thus 12 possible keys. Whatever note you

start on names the key and is assigned the number 1.

#### **How To Start Thinking In Numbers**

You have to let you mind comprehend this concept by laying aside all alpha thinking for the moment. Can you allow yourself to be lead down a particular path without preconceptions or opinions? If not, then do it just for fun.

Follow this list in order and discover the first major hidden concept. It is presented in a way that your mind clearly understands as numerical content. Follow this path blindly and DON'T THINK ABOUT MUSIC at all; just the facts as laid out before you. This exercise teaches your mind how to process numerical thinking. It will change you.

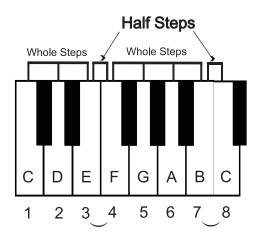
- 1. Play all the white notes progressively up, one at a time, from C to high C. This is the major scale the same as singing do-re-mi-fa-sol-las-ti-do.
- 2. Now, do the same thing playing 8 white notes starting on any other white note. This doesn't produce a major scale like starting on C. Why is this? It's not what you think.

A law of physics says no two things can be in the same place at the same time and it's the same with all keyboard positions. All are in a different location than C and thus require sharps and flats to compensate for, mimic and maintain the same numerical order as C. The primary difference between keys is not their pitches, but rather the root note's relative physical location on the keyboard compared to C.

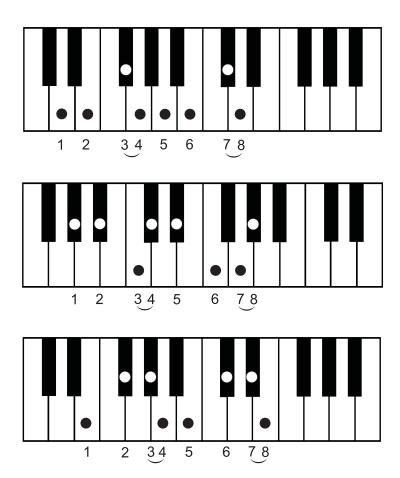


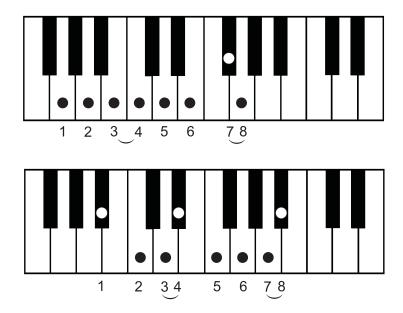
The key of C shows the keyboard at rest with notes that fall directly in line with 2 whole steps and a half step, followed by 3 whole steps and a half step. Figure 2 shows the universal numerical order for all keys.

Figure 1
The KEY OF C is the model for all other keys numerically because it has no sharps or flats.



3. Study the examples below and concentrate on where whole steps and half steps fall in order. Disregard the names of the notes or anything you might know about scales. It doesn't matter where you start, just concentrate on the numerical order.





- 4. When you think you understand the uniform numerical pattern, sit down at the piano.
- 5. Plunk out major scales using only your brainpower to consistently produce a major scale starting on any note (black notes included).

DO NOT look at this book or follow any kind of reference. Don't think about key signatures or any rote reflexes of playing-scales-gone-by. Don't think about anything alpha. CONCENTRATE ONLY ON THE NUMERICAL ORDER! CONCENTRATE ON REPEATING THE PATTERN OVER AND OVER AGAIN.

You ear will tell you if you make a mistake but THIS IS NOT A HUNT AND PECK EXERCISE. This is a program-your-mind exercise.



6. Do not go on until you master, without error, playing a major scale starting anywhere. Again, this isn't guesswork; it's exact-work. Ingraining this numerical pattern is something your mind can really absorb and muse over.

# Why picking out a major scale is so important

The above exercise removes all doubt that you are able to create a major scale starting anywhere on the keyboard from scratch. It is this numerical pattern that controls music and the reason why you must be able to do it flawlessly each time, every time.

Being able to do this is the basis for everything you count in music. It is the key to building chords, transposing and playing by ear.



#### **Skewed Thinking**

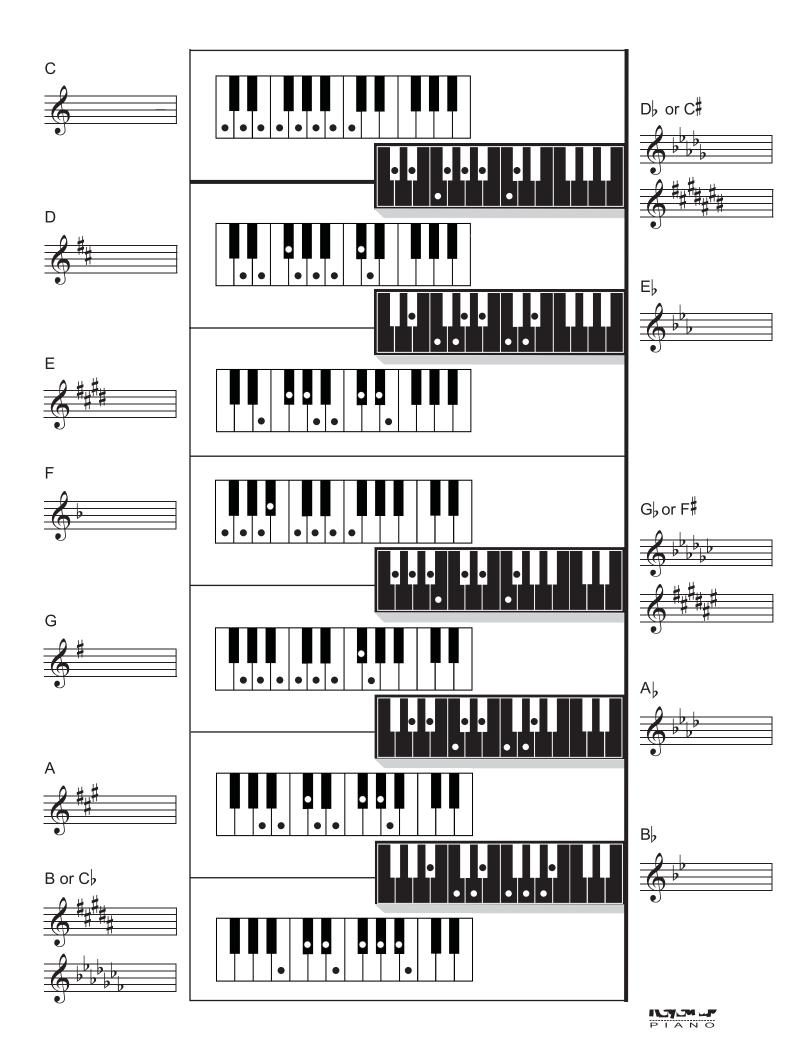


Analyze and compare all the major scale orders on the next page with their associated key signatures. Specifically, notice that all sharp and flat notations of the key signature match exactly the notes for each major scale.

This is an important distinction and a key concept to ponder. One does not play a note sharp or flat *because the key signature says to*, but rather the key signature represents the fact of that keys numerical order.

#### **Final Thought**

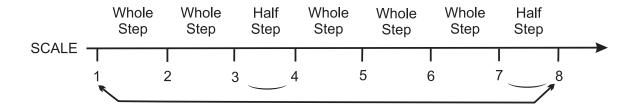
Replace alpha thinking with numbers as your primary awareness. Don't resist numbers. Realize that numbers and alpha-tones coexist peacefully together. An enlightened musician applies unilateral thinking in this area. We label the key as alpha but control it with numbers.



12

#### Chords and Numbers

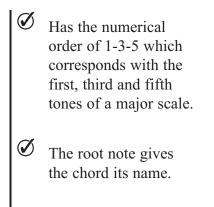
All scales, in every key, are numerically the same. Note spacings are consistent throughout and each note of each scale is given a number from 1 through 8. Forget about the names of the notes or sharps and flats, the diagram below represents any scale.

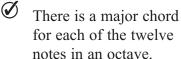


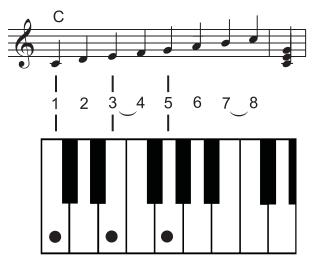
#### **Chord Foundations - Basic 3-Note Triads**

There are two types of chords that serve as the foundations to all chords; major and minor chords. From these basic 3-note triad chords, all chords are built. You must learn these chords as a second nature in the same way that you know the keyboard.

#### **MAJOR CHORD**



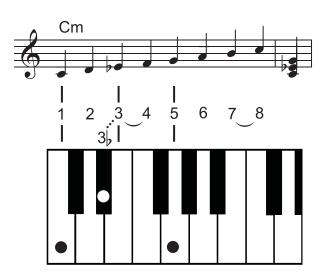




#### **MINOR CHORD**

This is a slight modification of a major chord in that the third note of the scale is flatted.

- Has the numerical order of 1-3, -5 as it relates to the major scale.
- The root note gives the chord its name followed with an "m" (e.g. Am).
- There is a minor chord for each of the twelve notes in an octave.



#### **A Building Science**

Building chords is not difficult. In all cases, you begin with either a basic major or minor chord and "build" subsequent chords from there. "Building" simply means that as chords get higher in number, they are based on lesser builds. For example a 9th chord is built on top of a 7th; an 11th chord on top of a 9th; a 13th on top of an 11th and so on.

Major chords build in this order:

Minor chords build in this order:

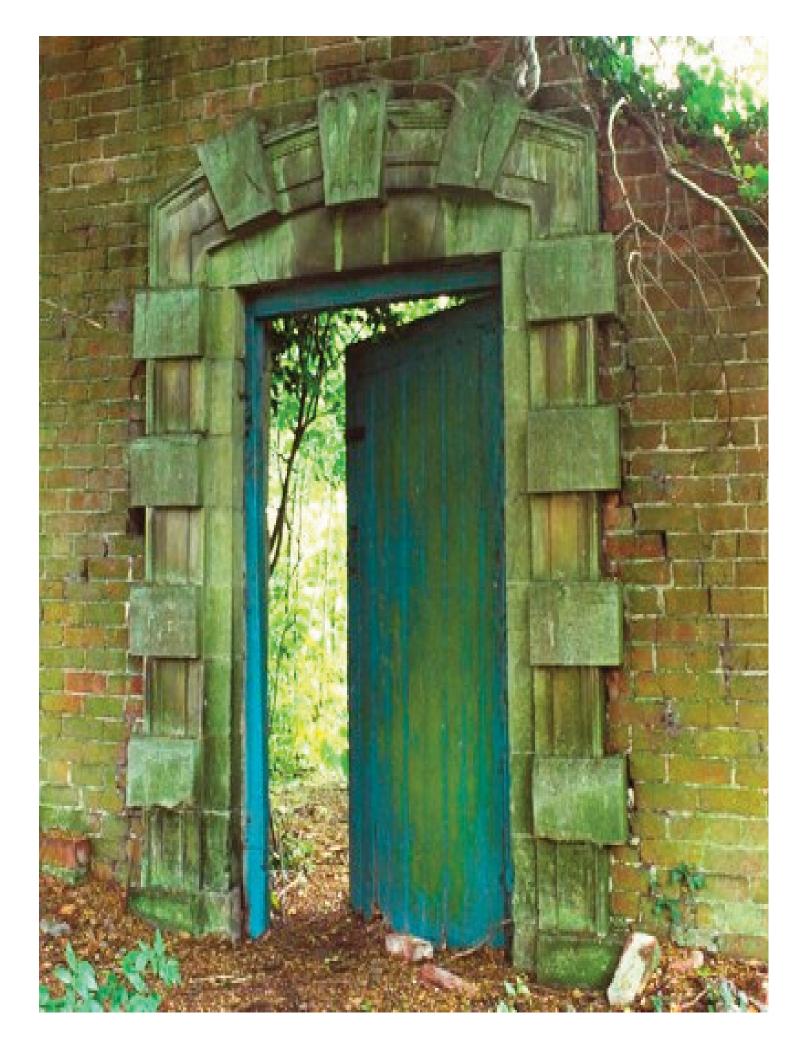
$$1 - 3 | - 5 - 7 | - 9 - 11 - 13$$

#### It's All Numbers

It is this static application of numbers over alpha tones that gives a good musician control over music. With numbers you can keep track of where you are; build new chords; transpose to another key; and chart chord progressions. With numbers you understand the symmetry of music. When you understand one key, you understand them all. This is a major part of the Play By Ear Discovery.

To learn more see: How To Play Any Chord and Throw Away This Book.





# **Becoming The Master**

# The Enlightened State

Some people can sense that something is different; a feeling in your gut that says you're on the right track -even if you don't fully see the whole picture just yet. There is a discovery to be driven home here and what you are about to read is as close to that awareness as I can eloquently unfold. Music is so complex yet so simple.

Simplicity controls all. You can command music when you harness the tools and know how to use them. It all boils down to you acknowledging the one system used to manage the overwhelming concept of infinity. Therein is the depth of the discovery.

#### The Infinite Musical Universe

Infinity is how you must view music. The entire musical universe can be imploded down to one teensy gravity unit of 8 notes. That is a powerful metaphor. There are a zillion songs written and a google more to come. Compare the infinite outcome to the limited numerical order that controls it all. It's overwhelming.

You must look deep to realize that all music is equal; some more enjoyable than others but equal nonetheless. The quest is learning to cope with such an overwhelming subject. The play-by-ear discovery harnesses and controls that overwhelm and puts you in command.

<u>Beethoven's 5th</u> is no different than Paul Simon's <u>Bridge Over Troubled Waters</u>. Both are just captured moments in time with numbers and chord structures that are basic and nothing special. That's the way it is with most music; chord-wise nothing special. Most songs are more alike structurally than they are different.

We tend to learn music one song at a time; practice it to exhaustion and perform. We get done with one song and then "graduate" up to a "harder" piece. Some songs are harder to play fingering-wise but besides that, nothing is harder.

You say "Yes, but fingering is everything." and I say that it's not. You may have sloppy fingering but *you can play anything in your head perfectly.* You MUST concentrate on the Yin and Yang of infinity and equalness of all. No song is harder than the other. There is no graduation. All are the same!



# Numbers Are Everywhere

Having a strong numerical consciousness in music is the key to critique. How certain composers bend the rules and control music through their mastery of the 8 notes is incredible. It's a conscious effort for them to be creative like this but most people don't recognize the genius when they see it on paper.

You become an opinionated expert able to judge the worth of somebody's arrangement of a song based on number shuffling. The most creative composers are master manipulators of 8 notes that use odd-numbered jumps; uncanny chord modulations; and creative use of the time signature.



You'll start to recognize twists and turns in progressions or time signatures that are rare to common composition. We live in a world however, where the most common composition is made up of 3 chords (1-4-5) to infinity. The play-by-ear discovery stresses that stark realization of the 1-4-5 order as a rule. All music is rooted in 1-4-5. Those chords are "home" in any key and always present.

# Music Theory Psychs Us Out.

From the outside looking in, let's look at key signatures. We view keys with a lot of notation (sharps or flats) like individual mountains. Each key has its own unique fingering pattern on the keyboard (when playing scales). All keys are unique when it comes to *fingering*.

#### Why We Practice Scales

The true premise of practicing scales is to teach your hands to memorize the rote reflexes of fingering for each key. If you drill yourself long and hard enough, then maybe keys with a lot of notation won't be so hard to play. You don't have to refer back because your hands have a *feel* for the key from so much practice.

That's assuming that you even practice scales. Most don't. For them, the key signature experience is different. They shy away from keys with lots of sharps and flats because they *perceive those keys as the most difficult*, and they are right. To them, the more notation, the more they have to constantly refer back to the key signature to verify. Some who practice scales have the same issues. We do not know how to break free of the following mode.

#### Why We Don't Have To Practice Them

No matter how much notation is shown on a key signature, it always reduces down to 8 notes in a generic, major scale order. When you view scales as numbers, key signatures become less something to "follow" and more something that just "identifies the key."

"How can I remember all of those scales off the top of my head?" you ask. By knowing the major scale order of 8 notes *you can figure out* any sharp or flat for any key *whenever you need to*. That's how it is when you play by ear. You must be able to figure things out when they come up and usually, it's on the fly. That's where the major scale ruler is used over and over again.

What about the notion that the more sharps and flats, the harder to play? Chord patterns in many of the most popular keys (some with a lot of notation) have fingering that is just as easy as the key of C. Many keys are not harder to play *when you understand them*. They're just *harder to follow* when you don't.

# Quick Highlight Review

The major scale is the seed of music theory.

There is no sharp or flat when using numbers; only numbers wherever they might fall on the keyboard in order. Again, the 12:1 ratio reduction. All scales and keys are equal. This is your most major point of concentration; the symmetry of all keys.

• We use sharps and flats to compensate for the different location a note holds on the keyboard compared to C.



A law of physics says no two things can be in the same place at the same time. Because notes are in different positions than the actual C note, they require sharps and flats to compensate for their own unique location on the keyboard. The primary difference between keys is their relative, physical location on the keyboard compared to C.

#### We don't play notes sharp because it says to on the staff

The key signature mimics the fact of the major scale for any key, not the other way around.

The key signature *on the staff* represents "alpha" thinking and that's what you must put aside for the moment. You must start thinking in



numbers. View the key signature for what it is; the identification of the facts as the sharps and flats fall in the universal numerical order of the major scale.

 Use just your mind to play the scale without regard to anything other than numerical order / Count out the of whole and half steps of the scale.

Concentrate on numbers only and the relative whole step /half step order. When you can **do this without error**, you realize just how much you are in control. There is no guessing. This is top level control of this concept to be able to play a major scale anywhere, anytime.

Everything you do to control music depends on your ability to create a major scale from scratch.

# The Discovery Exposed

You must accept infinity in music as a paradox to the simplicity of mastering 8 notes in order and ratio reductions. The play-by-ear discovery is exposed. Still you are unclear on the depth of this discovery.

#### We make things much harder than they really are.

Many people cannot accept or believe this kind of simplicity is the Grail you are searching for. Nothing in music is more important than the major scale; the simplist concept of all. There is brilliance in the 12:1 ratio reduction. That alone should keep you musing for a long while, but there's more.

#### The Science of Music

The Science of Music is based on what you have just read. If you can count to 8 and understand how, why and when you need to, that's all you need. That deep kind of insight takes time to coalesce. That's why reduction is the key.

Besides the major scale, music is a machine of sub-theories that silently interact together behind the scenes. You apply these sub-theories to figure out answers to specific musical questions (i.e. what's the key; what's the next key; where do I put the next notation; etc...). Though questions may seem endless, the list of sub-theories is limited.

#### The 10 Sub-Theories Of Music

Sub-Theories are very specific formulas to isolated musical questions. Read the list below slowly and consider the formulas each sub-theory applies to answer any questions you may have about that unique topic.

- 1. Building chords (1-3-5-7-etc);
- 2. Coding and decoding progressions (numerically and alpha);
- 3. Figuring progressive orders of the keys (circle of fifths);
- 4. Figuring progressive orders of notations (adding sharps and flats);
- 5. Identifying the key on the key signature;
- 6. Calculating modulation from one key to another and back;
- 7. Combining Major and Minor key signatures;
- 8. Determining the 6 guidepost chords of any key quickly;
- 9. Figuring out the most logical order of notes to a melody; and
- 10. Mapping any key numerically for quick reference.

These 10 Sub-Theories are limited and define the borders of the musical universe. It's an infinite universe of questions, compositions, choices, and theorical applications that are controlled by these 10 Sub-Theories.

#### It's All About Reduction

In a nutshell you apply each of the 10 Sub-Theories to all 12 keys, alpha and numbers. Whatever the outcome of that theory might be, it's a 12:1 ratio reduction that applies to all other keys as well.

Reduction is more than just the major scale. It's the logic you apply when you have the *need for an answer in a moment in time*. Let's say you like a unique fingering for a specific chord (called a voicing). It can be reduced to numbers *as you might see it* and quickly duplicated in another key. That one unique moment in time has a 12:1 reduction. Are you starting to get a sense of the vastness of the Musical Universe?

#### The Final Reduction - The Awakening



Reduction doesn't just apply to keys, it applies to Sub-Theories too. There are 10 Sub-Theories which means there are 10 formulas you apply in music to get answers. Every one of the 10 Sub-Theories are based on the major scale. This creates yet ANOTHER, nearly mind-blowing 10:1 reduction of 10 Sub-Theories to 1 major scale order. This realization should push you over the edge.

With this Final Reduction you now have a full view of the infinite musical universe. You've got all the tools you need but it is going to take you a while for this all to sink in. You must learn to understand how to control it. THIS is the mind-set of the Master. You can be the Master too.

Everything in music is reduction. It is this full-circle awareness that defines the perimeter of all theory in music. That within this set framework of note order and reductions, all of music is conquered.

Music is infinity and this is how you manage it.

