Tonality (part 1)

Please feel free to ask questions on any point, or about the meaning of any word, on this sheet (or any other). Don't be ashamed – this is part of the learning process – only the fool is afraid to ask questions. Remember, if you don't "get" something now, it'll probably hang you up later. So please, ASK QUESTIONS.

One of the common threads that links almost all types of music that you might hear (like popular, jazz, classical, blues, rock, folk, etc.) is the concept of **Tonality** or **Key**. If you've ever played a song, classical piece or jammed on the blues, the chances are good that you were aware that it was in a certain **key**. But what does this mean, to be in a certain key or tonality? How does anybody know what key they're in ("Hey Egbert, what key you in?" "Key of A, man, key of A.")? It's very hard to give simple answers to these questions, and the only way you'll *really* understand what this is all about is to study music, to *analyze* music, and then the answers will appear.

But for now, so we have some working basis, let's say that the concept of tonality or key has to do with *the idea of one note or sound being the "center of attraction."* Example: Play this chord progression: A D E A A D E A

n: A D E A A D E A Beats per chord: // // // // // // // //

Can you hear that it is in the key of *A major* (key of A, for short)? Why is it in the key of A, and not D or E? Because the A major chord is the "center of attraction."

If all examples were as easy to analyze as this (as far as finding the key), you wouldn't have to do much studying. But unfortunately....

In case you are asking yourself at this point, "Do I really want to study all this just about tonalities and keys?" remember: **Virtually all music as we now know it is based on the concept of tonality or key**. If you want to be a musician, and you don't want to study this concept, it is like wanting to be a farmer but not wanting to study agriculture....you might as well forget the whole thing—"you ain't goin' very far."

But don't worry—it won't be too painful—many have come this road before you and even lived to tell about it. So, here we go....

Major Key Tonality (Based on the Major Scale)

The **Major Scale** has been the foundation of musical theory in the Western world for hundreds of years. One who has a friendly, working relationship with the major scales will progress many, many times faster in some very important areas like chord building, chord progressions, and true musical *understanding* (the knowledge of *what* sounds work together, and *why*) than one who does not. Time and time again, I have seen this to be true; in fact, I personally tried to avoid learning about major scales, and I floundered for years, especially in the area of *retention* (the long-term ability to remember). So many facts seemed unrelated or would slip away too easily because there was no common thread (namely, the major scale) to tie them all together. But all that has changed now – things make sense, there is order, there is logic, much of the seeming complexities of music can be easily understood....but you have to have a good foundation to build on.

So now you might be asking, "What *is* a major scale?" or "What is a scale?" for that matter. OK. A *Scale* is a fixed group of notes, almost always constructed in an ascending direction, from a given starting note.

Before we can discuss the major scale in more detail, we must first talk about *intervals*. The word *Interval*, in music, *refers to the distance between any 2 notes*. Two of the most basic kinds of intervals are the *1/2 step* and the *whole step*. The term 1/2 step refers to the interval between 2 notes that are adjacent (right next to each other) in the musical alphabet. Examples: A and Bb, Bb and B, B and C, C and C#, etc.

(If you are at all shaky on your musical alphabet, there are 4 easy drills that will sink it in fast – ask for them if necessary). Back to intervals....

The term whole-step refers to the interval between any 2 notes that are separated by one note in the musical alphabet. Examples: A and B, Bb and C, B and C#, C and D, etc.

So how does all this relate to the *major* scale? The next page will explain this, but first, re-read any point that is not absolutely clear, or you might get lost on page 2.

A major scale has, starting from any note, the following intervals between its successive notes: Whole step, whole step, 1/2 step, whole step, whole step, 1/2 step.

Example: starting from A:

A	B		C#	D	Ε	F#	G#	A
\sim	/	\vee	\vee	\vee	\vee	\vee	V	
who	ole	whole	1/2	whole	whole	whole	e 1/2	
ste	еp	step	step	step	step	step	step	

Notice that the notes C#, F# and G# were used rather than Db, Gb and Ab. These is a good reason for this, but it's too complicated for now, but the following guideline will produce good results at this stage of the game: <u>All letters of the musical alphabet must be present in a major scale</u>.

Write out the notes in the D major scale:

Write out the notes in the Bb major scale:

(A fast way to write out a major scale it to write out the "bare" letters first—that is, with no sharps and flats, and then add the necessary #'s and b's).

Here is a listing of the common major scales (some are admittedly less common than others). *Make it a point to mentally memorize* (physically too—this will be discussed soon) *at least one scale per week*.

Key	Scale	Key	Scale
С	C D E F G A B C		
G	G A B C D E F# G	F	F G A Bb C D E F
D	D E F# G A B C# D	Bb	Bb C D Eb F G A Bb
А	A B C# D E F# G# A	Eb	Eb F G Ab Bb C D Eb
Е	E F# G# A B C# D# E	Ab	Ab Bb C Db Eb F G Ab
В	B C# D# E F# G# A# B	Db	Db Eb F Gb Ab Bb C Db
F#	F# G# A# B C# D# E# F#	Gb	Gb Ab Bb Cb Db Eb F Gb
C#	C# D# E# F# G# A# B# C#	Cb	Cb Db Eb Fb Gb Ab Bb Cb

The notes in major scales are commonly numbered from 1 to 8. The 1st and 8th tones are also called the **Root** or **Tonic** or **Keynote** (different people use one or more of these 3 terms, but they all mean the same thing). As you may have guessed, the 1st note of a major scale also "names" the scale. Example: the scale that starts on the G note is called the G major scale (makes sense, right?).

The distance between the 1st and the 8th notes is called an **Octave**.

Playing the Major Scale

Depending on what direction(s) you want to go in, musically, you will find it very important—to mildly important, to be able to fluidly play the major scales. Here are some common diagrams (given in the key of D only):



As far as emphasis goes, remember your goals — is a command of the major scale necessary (let's discuss it again if you're in doubt as far as your priorities go)?

Chords Built from the Major Scale

- First of all, in case you're not aware of it: Every scale has chords inherent in it, or to put it another way: You can build chords from any scale. How? Well, to start with, *the 1st chord in a scale is built by combining every-other note* (non-adjacent notes) *in the scale, starting with the 1st note*.
 Example: Using the D major scale, we will combine every-other note in the scale, starting with the D note, and stopping after 3 notes are combined, for now. Result: we would have a chord consisting of the notes D, F# and A. Three-note chords built in this fashion are called *Triads*.
- 2) Triads can also be built by combining every-other note in a scale but *starting from <u>other</u> notes* than the 1st one.
 Example: In the D major scale you also have the following triads: E G B, F# A C#, G B D, A C# E, B D F#, and C# E G.

Don't go any further if all this is not perfectly clear. Reread whatever you have to and /or ask questions.

Naming of Triads, 3rd Intervals

In order to be able to name the triads in a major scale, we have to talk a little more about intervals. *IMPORTANT*: most intervals are classified according to at least 2 characteristics:

1) Their *general name*, which is found by counting up the alphabet and adding up the number of letters included.

Examples: C to F is a 4th (because there are 4 letters included \rightarrow C, D, E, F),

C to F# is still a 4th (#'s or b's don't matter in the general name),

A to G is a 7th, F to D is a 6th, F# to C is a 5th, Gb to C is a 4th, and so on.

2) Their *specific name*, which is found by counting the number of whole steps or 1/2 steps between the notes (there is also another method used to find specific names, and it will be discussed later).

Before you work with examples of this principle, the following should be said: *Triads are built in 3rd intervals*. One definition of a triad then is: *A 3-note chord built in 3rds*. (Notice the term "3rds" used for the term "3rd intervals" — this kind of slang is common).

Go back and check those triads in the key of D now, and see if you think they are built in 3rds.

Now for the specific names — there are *two* types of 3rd intervals in all of the commonly used triads, namely, the *Major 3rd* and the *Minor 3rd*. (The major and minor are the *specific names*.) What is the difference between the two? It's in the number of whole or 1/2 steps involved:

 A Major 3rd has 2 whole steps between the 2 notes involved. Examples: A to C#, B to D#, C to E, Db to F, D to F#, etc.
 A Minor 3rd has a step and a half (one whole step and one 1/2 step) between its notes.

Examples: A to C, B to D, C to Eb, Db to Fb (notice that Db to E would be a 2nd interval, not a 3rd) D to F, Eb to Gb, F to Ab, G# to B, etc.

Stop now, and reread anything that is not clear to you before you forge on.

There are 4 types of common triads, all of which are distinguished from each other by the types of 3rd intervals used in their construction:

1) The *Major Triad* has the following intervals (from the bottom up): a **major 3rd** and a **minor 3rd**.

Example: a D major triad has the notes D, F#, A (D to F# is a major 3rd, and F# to A is a minor 3rd). Another example: An Ab major triad has the notes Ab, C, Eb (Ab to C is a major 3rd, and C to Eb is a minor 3rd).

The *Minor Triad* has the following intervals (from the bottom up): a minor 3rd and a major 3rd.

Examples: a D minor triad has the notes D, F, A; an F minor triad has the notes F, Ab, C; a B minor triad has the notes B, D, F#.

3) The *Diminished Triad* has the following intervals (from the bottom up): a **minor 3rd** and a **minor 3rd**.

Examples: a D diminished triad has the notes D, F, Ab; an F diminished triad has the notes F, Ab, Cb; a B diminished triad has the notes B, D, F.

4) The *Augmented Triad* has the following intervals (from the bottom up): a major 3rd and a major 3rd.

Examples: a D augmented triad has the notes D, F#, A#; an Ab augmented triad has the notes Ab, C, E;

an F# augmented triad has the notes F#, A#, C \times (\leftarrow double sharp)

There are common symbols used to identify the different triads:

- 1) A major triad is written *without* any symbol other than the letter name itself. Example: if you see a chord diagram labeled D, it is understood that this is supposed to mean a D **major** chord.
- 2) A minor triad is symbolized by a small "m" or the word "min." Example: Am or Amin.
- 3) A diminished triad is symbolized by a little ^o. Examples: C^{o} , B^{o} , G^{o} , etc.
- 4) An augmented triad is symbolized by a little +. Examples: C+, B+, G+, etc.

Stop now and review anything that is at all fuzzy. (You are not expected to have *all* this information memorized now, but you should at least *understand* it before moving on). Then **fill out the 1st** *Quiz Page*.

Tonality Quiz #1

Try to answer the following questions without referring to your notes (the "Tonality" pages). Exercise your mind a little. Use your own words if you like, instead of memorized definition, but don't be ashamed to use the given definitions....the main thing is to understand the principles, no matter whose words you use to describe them.

1) What is a scale?

- 2) What does the word *interval* refer to?
- 3) Write ten examples of whole step intervals.
- 4) Write ten examples of 1/2 step intervals.
- 5) What is wrong with this supposed major scale? A B Db D E F# G# A

And this one? Bb C D D# F G A Bb

And this one? B C# D# E F G# A# B

- 6) Write out the following major scales: C, G, D, Ab, Bb and E.
- 7) What does the word *root* refer to?
- 8) What does the word *octave* refer to?
- 9) How are chords built from scales?
- 10) What is a triad? (Give at least 2 definitions)

11)	Identify the following intervals by their <i>general</i> name only:							
	F to C#	G to Bb	A to D	C to F#	G to F#			
	Bb to Db	D to B	Eb to F	F# to A#	Cb to Ab			
12)	Tell whether the following 3rd intervals are a major or minor:							
	B to D	C to E	E to G#	_ Ab to Cb	F to A			
	G to Bb	Db to F	C# to E#	Eb to Gb	Bb to D			
	A# to C#	D# to F#	G# to B#	Cb to Ebb	D to Gb			
					(watch out)			

13) Tell what kind of intervals (from the bottom up) are in the different types of triads:

- 1) major triad:
- 2) minor triad:
- 3) diminished triad:
- 4) augmented triad:

TONALITY - Page 1 5.28.76 flease fiel free to ask questione on any points or about the meaning of any word on this sheet (or any other). Don't be ashamed this is part of the learning process - only the fool is afraid to any other). Don't be ashamed this is part of the learning process - only the fool is scenare ASK avestions. Remember, if you don't "get "homething mow, it il protatly hang you better "scenare ASK avestions" Remember, if you don't "get homething mow, it il protatly hang you we leter "scenare ASK avestions" Remember, if you don't "get homething mow, it il protatly hang you we leter "scenare ASK avestions" Remember, if you don't "get homething mow, it ill protatly hang you we leter "that you might hear (like popular, jagg, classical, blues, rock, folk, etc.) is the concept of TONALITY or KEY. If you've ever played a song, classical piece or fammed on the plues, the chances are good that you were aware that it was in a certain key. But what does this mean, to be in a certain, know tonality? How does any books know what key they'ro in (" New Schort. certain keyor tonality? How does anybody know what key they're in (" Hey Egbert, what key you in?" " "Rey of A, man, Rey of A.")? It's very hard to give simple answers to these questions, and the only way you'll really understand what this is all about, is to study music, to analyze music, and then simple what this is all about, is to study music, to analyze music, and then the answere will appear. But for non sowe have some working basis, let's say that the concept of tonality or key 'has to do with the idea of one note or sound being the "center of attraction" — Example: Play this chord progression: A D E A A DE A Can you hear that it is in the key of A MANOR (Klyge A, for short)? A D E A A DE A Can you hear that it is in the key of A MANOR (Klyge A, for short)? is the "center of attraction" — Example: Play this chord progression the "center of attraction" and hear that it is in the key of A MANOR (Klyge A, for short)? is the "center of attraction". I have a start of the key of A, and not Dor E? Because the A major chord fall examples were as easy to analyze as the (as far as finding the key), you wouldn't have to do much studying. But infortunetely music In case you are asking yourself at this point, "Do it really want to study all the junk about tonalities and keys?", remember: VIRTUALLY ALL MUSIC AS WE NOW KNOW IT. IS BASED ON THE CONCEPT OF BEATS -> 11 PER CHORD VIRTUALLY ALL MUSIC AS WE NOW KNOW IT, IS BASED ON THE CONCEPT OF But don't worry it won't be too painful - many have come this road before you and even lived to tell about it. So, here we go.... MADOR KEY TONALITY (baced on the MADOR scale) The MASOR SCALE has been the foundation of musical theory in the Western world for hundreds of least. One who has a priendly working relationship with major scale will progress many, many times parter in some very important areas like chord kuilding chord progressions and the musical understanding (the knowledge gottat sounds work together, and why) than one whodoes not. Time and time again, I have seen this to be time; impact of personally tried to avoid lierning about major scales, and I ploundered for years, especially in the area of netention (the long term ability to remember). So many facts seemed unrelated or would alie avery too easily because there was no common thread (manely the major scales, there is logic, muchog the seeming complexities of music can be easily together. But all that has changed to have a good foundation to build on. So now you might beasking "What is a major scale?" or "What is a scale?" for that matter. OK a SCALE is a fixed group of no tes, almost always constructed in an ascending direction, from a given starting note always constructed in an ascending direction, from a given starting note always constructed in an ascending direction, from a given starting note always constructed in an ascending direction, from a given starting note always constructed in an ascending direction, from a given starting note always constructed in an ascending direction, from a given starting note always intervents. The word INTERVAL, in music, refers to the distance between Before we can discuss the major scale in more detail, we must first talk about INTERVALS. The word INTERVAL, in music, refers to the distance between any 2 notes. Two of the most basic kinds of intervals are the \pm STEP and the WHOLE STEP. The term \pm step refers to the interval between 2 notes that are adjacent (right next to each other) in the musical alphabet: Examples A and Bb, Board B, Band C, Cand C#, etc. (If you are at all shakey on your musical alphabet, there are A easy drills that will sink it in fast-sk for them if necessary). Back to interval between any 2 notes that are Apparated by one note in the musical alphabet : Examples A and B, Back to interval sk for them if necessary). Back to intervals in between any 2 notes that are Apparated by one note in the musical alphabet : Examples > A and B, Bband C, Band C#, Candletc. So how does all this relate to the major seals? The next page will explain So how does all this relate to the major scale? The next page will explain this, but first, re-read any point that is not absolutely clear, or you might get on pages

5-28-76 tonALITY- Page 2 A major scala has, starting pomany note, the following intervale between the successive notes : WHOLE, WHOLE, STEP, WHOLE, WHOLE, STEP. Example: Starting from A > A, B, C#, D, E, F# G# A whole whole whole whole whole whole to step step step step step step step that the notes C#, F# and G# were used rather than Db, Gb and Ab, There is a good reason for this, but it's too complicated for now, but the following guideline will produce good results at this stage of the game: All letters of the musical alphabet must be present in a major scale. Write out the notes in the DMAJOR SCALE : (a fast way to write out a major scale is to write out the "bare" letters first that is with no sharps + plats, and then add the necessary #'s or b's). Here is a listing of the common major scales (some are admittedly less common than others). Where it a point to MENTALLY memorine (physically too - this will be discussed soon) at least one scale per week. CDEFGABC The notes in major scales FGABOCDEF are commonly membered from 1 to 8. The 1st and 8th tones are also called the ROST or TONIC or KEYNOTE (different GABCDEF#G BOCDEOFGABO DEF#GABC#D EbFGAbBbCDEb ABC#DEF#G#A Ab BOC DO EDFG AD E F# G# A B C# J# E people use one or more of Db Eb F Gb Ab Bb C Db these 3 terms, but they B C# D# E F# G# A# B GO AD BOCD DO ED FGD all mean the same thing). F# G# A# B C# D# E# F# CO DO EO FO GO AD BOCO the 1st mote of a major scale also "names" the scale. Example: C# J# E# F# G# A# B# C# Playing The Major Scale the scale that starts on the Guote Depending on what direction (5) you is called the & MAJOR SCALE (makes want to go in, musically, you will sense, right ?). the distance between the 15th of the state is the distance between the 15th of the state is the distance between the 15th of the state is the distance between the 15th of the state is all it weny important to mildly important to be able to pluidly play the major scales. Here are some common diagrams (given in the Key of Donly): is called the G MAJOR SCALE (makes sense, night?) The distance between the 1st + others tes in the distance between the called an OCTANE. as far as emphasis goes, remember your goals - cla a command of the major scales necessary lets discuss it again if you're indonbt as far as your priorities go ?? CHORDS BUILT FROM THE MAJOR SCALE) First of all, in case you're not aware of it EVERY SCALE HAS CHORDS INHERENT IN IT, or to put it another way: You CAN BUILD CHORDS FROM ANY SCALE. How? Well, to start with, the 1st chord in a scale is kuilt by (1)CAMBINING EVERY-OTHER NOTE (NON-ADJACENT NOTES) in the scale, starting with the 1st note. Example : Using the Imajor scale, we will combine every-other note in the scale, starting with the Drote, and stopping after Inotes are combined, for now. Result: We would have a chord consisting of the notes D, F# and A. Three mote chords puilt in this fashion are called TRIADS. © Triads can also be built by combining every other note in a scale but starting from other notes than the 1st one. Example: cluthe D major scale you also have the following triads: EGB, F# AC#, GBD; A C#E, BDF#, and C#EF. Don't go any further if all this is not perfectly clear sereed who teres you have to an 1/2 ask questions

3.28.76 TONALITY - Page 3 to talk a little more about intervale, IMPORTANT: Most intervals are NAMING OF TRIADS 3RD INTERVALS classified according to at least 2 characteristics : O Their general mame, which is found by counting up the alphabet and adding up the number of letters included -> Examples: C to F is a Ath (because there are 4 letters included ~ C, D, E, F), C to F# is still a 4th (#'s or b's don't matter in the general mame), A to G is a 7th, F to D is a 6th, F# to C is a 5th, G6 to C is a 4th, and so on, (2) Their specific name, which is found by counting the number of whole steps or ± steps between the notes (there is also another method used to find specific names, and it will be discussed later). Before you work with examples of this principle, the following should be said : TRIADS ARE BUILT IN 3RD INTERVARS. One definition of a triad then is : A 3 NOTE CHORD BUILT IN 3RDS. (Notice the term "3rds" used for the term "3rd Intervals" - this kind of slang is common). In back and choose this of the day if the Normal Description of the second of the start in the the To back and check those triads in the key of Dnow, and see if you think they are built in 3rds, Non for the specific names - there are two types of 3nd intervale in all of the commonly used triads, namely the MAJOR 3RD and the MINOR 3RD. (The MAJOR and MINOR are the specific names). What is the difference between the two 3 alt in the much has a set of the specific names. the two? It's in the member of whole or I steps involved: O a MAJOR 3RD has 2 WHOLE STEPS between the 2 notes involved -> Examples: A to C#, B to D#, C to E, D to F, D to F# etc. (2) a MINOR 3RD has A STEP AND A HALF (one whole and one to step) between the notes. Examples: A to C, B to D, C to Eb, Db to Fb (notice that Db to E would be a 2nd interval, not'a 3rd), D to F, E6 to \$6, F to A6, \$# to B etc. Stop now, and reread anything that is not clear to you before you forge on , There are 4 types of common triads, all of which are distinguished from each other by the types of 3rd intervals used in their construction : O the MAJOR TRIAD has the following intervals from the bottom up: a MAJOR 3RD and a MINOR 3RD, Example : a DMAJOR TRIAD has the notes D, F#A (D to F# is a MAJOR 3rd and F# to A is a MINOR 3rd). another example : an Ab MAJOR TRIAD has the notes A, C, Et (Ab to C is a MAJOR 3rd and C to Et is a MINOR 3rd), (2) The MINOR TRIAD has the following intervale (from the bottom up): a MINOR 3RD and a MAJOR 3RD. Examples: a D MINOR TRIAD has the notes D. F.A; an F MINOR TRIAD has the notes F Abc; a B MINOR TRIAD has the notes B, D, F#. (3) The DIMINISHED TRIAD has the following intervale (from the bottom up): a MINOR 3RD and a MINOR 3RD. Examples: A D DIMINISHED TRIAD has the notes D, F, Ab. an F DIMINISHED TRIAD has the notes F, Ab, Cb; a B DIMINISHED TRAD has the notes BD, F. @ The AUGMENTED TRIAD has the following intervals (from the bottom up): a MAJOR 3RD and a MAJOR 3RD, Examples : A DAUGMENTED TRIAD has the notes D, F# A#; an A6 AVGMENTED TRIAD has the notes Ab, C, E; an F# AUGMENTED TRIAD has the notes F#, A#, C X (= DOUBLE SHARP). There are common symbols used to identify the different triade: O a major triad is written without any symbol other than the letter name itself & Example: If you see a chord diagram labeled D, it is understood that this is supposed to mean a D March chord. B a minor triad is symbolized by a small "m" or the word "min" Example: AmorAmin. B a dimished triad is symbolized by a little °. Examples : C°, B°, G° etc. D an augmented triad is symbolized by a little °. Examples : C°, B°, G° etc. @ an augmented triad is symbolized by a little +. Examples: C+, B+, Q+ etc. have all this information memorial how, but you should at least UNDERSTAND it before moving on). Then FILL out THE AT QUIZ PAGE.

TONALITY QUIZ #/

try to answer the following questions without referring to your notes (the "Tonality" pages). Exercise your mind a little. Has your own words if you like instead of memorined definitions, but don't be ashamed to use the given definitions the main thing is to understand the principles, no matter whose words you use to describe them.

O What is a scale ? What does the word interval refer to ? I write ten examples of whole step intervals? @ Write ten examples of 1 step intervale? (Swhat is wrong with this supposed majorscale? A B D & D E F# G# A C And this one? Bb C D D# F & A Bb and this one? BC#D# EF G# A# B @ write out the following major scales : C, G, D, Ab, Bb and E.

D what does the word <u>noot</u> refer to ? I what does the word octave refer to ? () How are chords built from scales ? (What is a triad ? (Hive at least 2 definitions)

O clountify the following intervale by their general mame only:
Fto C# ______ G to Bb ______ A to D _____ C to F# _____ G to F# ______
Bb to Db ______ D to B ______ E to F F ______ F# to A# ______ C to Ab ______
(2) Sell whether the following 3nds are MANOR or MINIOR:
B to D ______ C to E ______ E to F# ______ Ab to C to ______ F to A ______
G to Bb ______ D to F = ______ C # to E# ______ E to G to Ab ______
A# to C# ______ D# to F# ______ G# to B# ______ C to to E &_______
(3) Sell what kind of intervale (from the bottom up) are in the different types of triade:

2) MAJOR TRIAD: 2) MINOR TRIAD: 3) DIMINISHED TRIAD:

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4) AUGMENTED TRIAD: