$$
\begin{aligned}
& \text { FAT CATS GGT DRUNK } \\
& \text { AT ED'S BAR }
\end{aligned}
$$

(C)BaRRy tog seubu $\operatorname{such} 12,2 \infty 12$


Barry Joe Stuen
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Our system of music, which we inherited from Europe, has twelve different tonal choices, which repeat every octave. An octave can be described as a doubling of frequencies of waves of moving air we hear.

\section*{Scale Steps-- Each Major Scale is made of two functionally equal halves, and has a Tonic at each end. \\ | 1 Tonic | 2 Super Tonic | 3 Mediant | 4 Subdominant |
| :--- | :--- | :--- | :--- |
| 5 Dominant | 6 Submediant | 7 Leading Tone | 8 Tonic (octave of tone at 1) |}

Seven tones are used and five tones are skipped over and left out of each Major Scale. The pattern is one where all of the tones have a skipped-over spacer between them except for between steps 3 and 4 and steps 7 and 8 . This model helps us see that what is 3 and 4 in one scale serves as 7 and 8 in another. Placing each of the twelve different tones on a specific clock hour, I created this model to help folks understand how scales are constructed of the same steps-- using the same pattern-- just starting on different tones, and to show how scales are related to neighbor scales.

Each four-note horizontal row shown can be used as either the bottom half or top half of a Major Scale-as either scale steps 1234 or scale steps 5678 . Tones are expressed below as their clock hours, as numbers between 1 and 12. Tones which we effect with one of the five black notes on a piano are in bold. This same pattern is shown on the reverse with the conventional letter names and Sharps (\#'s) and Flats (b's) as appropriate, and shows the C Flat Major Scale and B Major Scale use the same tones.

Tones, represented by numbers assigned to clock hours, appear as either scale steps 1234 or 5678 of the particular scale which is constructed by combining any two neighboring horizontal rows. What appears as 5678 in one scale serves as 1234 in the next scale, which has a different 5678-- depicted as the next horizontal row down from it in this list-- to complete that next scale. Each four-note row, makes up half of each of two scales, and serves as the bottom half in one scale and the top half in another.

| $\begin{aligned} & \text { SCALE } \\ & \text { STEPS } \end{aligned}$ |  | Scale steps are shown here in vertical rows representing each scale step-in either half of a scale- because the same four tones can make up either the first half or second half of a particular Major Scale. |
| :---: | :---: | :---: |
| $\left.\begin{array}{ccccc} (\text { either } 1 & 2 & 3 & 4 \\ \text { or } 5 & 6 & 7 & 8 \end{array}\right)$ |  |  |
|  |  |  |
|  |  | Interpreting Horizontal Rows and Clock Hour Numbers in Horizontal Rows |
|  | 4 | Each row and the row following below it combine to make a Major Scale. |
| 5 | $5 \quad 7 \quad 9$ | The first tone in a row also appears as the last tone in the next row down. |
| 6 | $\begin{array}{llll}6 & 810\end{array}$ | The last tone in a row is one clock hour lower than that row's first tone. |
| 7 | $7 \quad 9116$ | Every vertical row ascends by one clock hour. |
| 8 | 81012 | Each scale made of any two rows only uses seven of the twelve tones. |
| 9 | 11 | The pattern of any two neighboring horizontal rows is: every other one |
| 10 | 101229 | for the first three, down one from the first one in that row, every other one |
| 11 | 1111310 | for the next three, and down one from the first one in that row, which is |
| 12 | $12 \quad 2411$ | the same as the first one in the row above it --. such as $2,4,6,1,3,5,7,2$. |
|  | $1 \begin{array}{lll}1 & 3 & 512\end{array}$ |  |
| 2 | 246 | This model depicts the rows which make up the 15 possible Major Scales. |
| 3 | $\begin{array}{llll}3 & 5 & 7 & 2\end{array}$ | All but three of the twelve different tones have two names each, so there |
| 4 | $\begin{array}{lllll}4 & 6 & 8 & 3\end{array}$ | are total of twenty one different names for the twelve tones. This creates |
| 5 | 57 | the situation where three of the Major Scales are made up of tones which |
| 6 | $6 \quad 810$ | have two names each; scales built of rows 5 and 6,6 and 7. and 7 and 8 |
|  | $7 \quad 911$ | can be constructed using either of those sets of names. Rows 4, 8, 9, 10. |
| 8 | 810127 | 11 and 12 are only used to construct one scale each, as the bottom row. |

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As read from top to bottom, each row repeats the letters F C G DAE B. This is the Circle of Fifths, and can be appreciated by noticing the letter one row below any letter appears as the fifth note of the Major Scale of that particular letter (such as the letter $G$ appearing below the letter $C$, and $G$ being the fifth note of the $C$ Major Scale). I like FAT CATS GET DRUNK AT ED'S BAR, both because it's funny and easy to say because of the consonants. I write it in upper case because it is also the order which the sharps appear and sharps effectively raise what is played to the next tone up. Going from bottom to top reveals the Circle of Fourths (because what is a fifth one way is a fourth the other way, such as C being the fourth note of the G Major Scale). To remember the order of the letters, which is the order which sharps are removed and flats are added, I use Bears Eat At Dad's Garbage Can First-- using lower case because the application of a flat calls for playing the next tone down. Just as adding a sharp raises a tone, removing a flat raises that flat up one tone to a natural.

Each Major Scale is made up of two halves it shares with each of its two neighbors in the Circle of Fifths. F, C, $G$ tells us the key of C Major is made of half of $F$ Major and half of $G$ Major. $G, D, A$ does the same for $D$, etc. Major Scale Name

$$
\text { Clock Hour Steps } \quad \text { Letter Name Steps Black piano keys appear in bold text. }
$$

Fb (no scale) 4

| Cb | 5 |  | 94 |  |  | $\underline{E} \mathrm{~b}^{\mathrm{Fb}}$ | Each row and the row below it create a |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gb | 6 |  |  |  |  | $\mathrm{B}, \mathrm{Cb}$ | Major Scale. There are 15 possible |
| Db | 7 | 91 | 16 | Db | Eb | F Gb | Major Scales, one for each of the twelve |
| Ab | 8 | 101 | 27 | Ab | Bb | C Db | tones, and two for the three which appear |
| Eb | 9 | 11 | 18 | Eb | F | G Ab | at the bottom of the clock in this model. |
| Bb | 10 | 12 | 29 | Bb | C | D $\mathbf{E} b$ | The convention is each letter may only be |
| F | 11 | 1 | 310 | F | G | A $\mathrm{Bb}_{\mathrm{b}}$ | used once per Major Scale, so there cannot |
| C | 12 | 2 | 411 | C | D | E F | be a C and a C\# in the same Major Scale-- |
| G | 1 | 3 | 512 | G | A | $B \quad \mathrm{C}$ | one tone would have to be designated as a |
| D | 2 | 4 | 61 | D | E | F\# G | D b, so there could be a C and $\mathrm{D} b$ (such as in |
| A |  | 5 | 72 | A | B | C\# D | the model row appearing at 8 o'clock which |
| E | 4 | 6 | 83 | E |  | G\# A | might be the top half of the D Flat Major |
| B | 5 |  |  | B |  | D\# E | Scale or bottom half of the A Flat Major |
| F\# | 6 | 810 | O 5 | F\# |  | A\# B | Scale) or as a B\#, so there could be a B\# and |
| C \# | 7 |  |  | C\# |  | E\# TH | C\#, which only appears in C\# Major. G\#, |
|  | 8 | 1012 | 127 |  | A\# | 1B\# C\# | D\#, A\#, E\#, and B\# at 8-12 have no scales. |

In designing this model, I placed the letter C at $12 \mathrm{o}^{\prime}$ clock, so that when the scale halves of each scale are depicted as shown here, the clock hour number of the other letters shows the number of sharps or flats which appear in a particular key. G Major, built on G at one o'clock, has one sharp, D Major has two sharps, etc., until C\# Major, with seven sharps appears at 7 o'clock. The same is true, although less obvious, going the other direction, with one flat in the key of F Major at 11 o'clock, etc.

The Tri Tone, which is known as the Devil in Music, is named for being three whole steps, appears in the Major Scale as the distance between the fourth and seventh notes, between the seventh note and the fourth note in the next octave above, or is the skipped-over note which divides the two halves of the scale. This note is also known as the flat five, the augmented fourth, and appears in one of six pairs of Tri Tones, identified in this model as the clock hour directly through the center of the clock-- either direction, because they are pairs. Since they are pairs, and since this model is systematic, we can see that each of the two tones making up a Tri Tone pair, appear as either tones seven and four, or four and seven, in the Major Scales built on the notes making up the Tri Tone pair found one hour higher:

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Drout 2-12-20:u some bold text reeds coreotion


Moore-Love, Karla
From: $\quad$ Barry Joe Stull [cannabisboo@yahoo.com]
Sent: $\quad$ Wednesday, February 12, 2014 1:21 PM
To: $\quad$ Moore-Love, Karla
Subject: Corrected Word Document Attached
Attachments: Clock Face Scale Steps.docx; PCRIDec18,2013.pdf
Hello Karla:
Here is the corrected copy of the document I distributed today (which I marked on each as a
draft) regarding my Communication, as a Word document. I am also attaching a PDF of a
document I mentioned, which is a copy of a note I had stamped by Commissioner Saltzman on

| December 18, 2013. Thank you for forwarding these both to Council. |
| :--- |
| Sincerely, |
| Barry Joe Stull |

Attachments: Clock Face Scale Steps (Word), PCRIDec18,2013 (PDF)

# PORTLAND CITY COUNCIL COMMUNICATION REQUEST <br> Wednesday Council Meeting 9:30 AM 

Council Mecting Date: $\qquad$

Today's Date $12-30-2013$
Name Barry Joe Sturm
Address $10852 S E$ Stark Street tis Port.OR 97216
Telephone no phone/disabulity Email cannabisboo@yahoo.com
Reason for the request:
$\qquad$ The Devil in Music
$\qquad$
$\qquad$
$\qquad$


- Give your request to the Council Clerk's office by Thursday at 5:00 pm to sign up for the following Wednesday Meeting. Holiday deadline schedule is Wednesday at 5:00 pm. (See contact information below.)
- You will be placed on the Wednesday Agenda as a "Communication." Communications are the first item on the Agenda and are taken promptly at 9:30 a.m. A total of five Communications may be scheduled. Individuals must schedule their own Communication.
- You will have 3 minutes to speak and may also submit written testimony before or at the meeting.

Thank you for being an active participant in your City government.

## Contact Information:

Karla Moore-Love, City Council Clerk
1221 SW 4th Ave, Room 140
Portland, OR 97204-1900
(503) 823-4086 Fax (503) 823-4571
email: Karla.Moore-Love@portlandoregon.gov
Sue Parsons, Council Clerk Assistant
1221 SW 4th Ave., Room 140
Portland, OR 97204-1900
(503) 823-4085 Fax (503) 823-4571
email: Susan.Parsons@portlandoregon.gov

Request of Barry Joe Stull to address Council regarding the devil in music (Communication)

FEB 12 2014

## PLACED ON FILE

Filed FEB 072014

## LaVonne Griffin-Valade

 Auditor of the City of Portland $\mathrm{By} \xrightarrow{\sim}$| COMMISSIONERS VOTED |  |  |
| :--- | :--- | :--- |
| AS FOLLOWS: |  |  |
|  | YEAS | NAYS |
| 1. Fritz |  |  |
| 2. Fish |  |  |
| 3. Saltzman |  |  |
| 4. Novick |  |  |
| Hales |  |  |

