## Guitar Theory Outline - $1 \quad$ Perth Collegiate C. Valentini

1. The musical alphabet is ABCDEFG

This does not include H, I, J, etc.
2. In-between all except two of these letters are sharps and flats. The complete musical alphabet is called the Chromatic Scale and looks like this.
A A\#
B C
C\#
D D\#
E F
F\#
Gb
G G\#
Ab

A Semitone is the distance from one note in the Chromatic Scale to the next note. i.e. A\# to B, B to C, D to Eb .

A Tone is the distance from one note to the second note after it. i.e. B to C\#, A\# to C, D to E.

A Sharp raises a note by one semitone.
A Flat lowers a note by one semitone.
Remember that there is only a semitone between E and F and B and C, (like on the piano where black keys are missing). So the distance between E and F \# is only a tone, and the distance between B and $\mathrm{C} \#$ is only a tone.

Since there is only a semitone between E and F , and B and $\mathrm{A}, \mathrm{E} \#$ sounds the same as $\mathrm{F}, \mathrm{B} \#=\mathrm{C}, \mathrm{Cb}=\mathrm{B}$, etc. However, just as the words "knight" and "night" sound the same but are spelled differently, we must be careful to "spell" these notes properly. Do not change E\# to F or Cb to B etc.
3. Using this info, we can construct scales. There are many kinds, but for now, we will deal with the most important one, the Major Scale. It's the one that sounds like Do, Re, Mi, Fa, etc. All major scales follow a recipe. This recipe is:

1
Tone ${ }^{2}$ Tone
3 4

Semitone Tone
5
Tone

6
7
8
Tone
Semitone
To construct a major scale:
a) Write out all the letters beginning on the name of the scale and ending on the same letter.

## i.e. Ab B C D E F G Ab

All the letters are different and must remain this way.
Since the name of this scale is Ab we must begin with Ab , not A .
b) Write the recipe underneath these letters.
i.e. $\mathbf{A b}$
$\begin{array}{lll}\mathrm{B} & \mathrm{C} \\ & & \end{array}$
D $\quad \mathrm{T}$
E
T
F $\quad$ T
Ab
S

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c) Change these notes by adding sharps or flats so that they match the recipe.


Never mix sharps and flats in a major scale.
Spell the note properly. All letter names must be different.
If the distance between the 7th and 8th notes is not a semitone, go back to step a).
4. Once you understand how scales are constructed, you can use the faster way of writing them out. If we collect only the notes in a scale that are sharp or flat, we get a Key Signature.

If the scale has sharps use: FCGDAEB (Father Charles Goes Down And Ends Battle)
If the scale has flats, use the reverse: BEADGCF
Sharps and Flats in a key always follow the same order. i.e. If you have 3 sharps, they will always be F\# C\# G\# . i.e. four flats Bb Eb Ab Db

## Figuring out Sharp and Natural Keys

The name of a sharp key is always one semitone (different letter name) above the last sharp.
i.e. You have a key with 3 sharps. The sharps must be F\# C\# G\#. The last sharp is G\#. One semitone above G\#, (that is also a different letter name), is A. So you are in the key of A

In reverse. You want to write out the scale of F\#. One semitone below F\# is F, but we need it to be a different letter name which is E\#. Follow the saying until you get to E\#. So our key signature is F\# C\# G\# D\# A\# E\#

## Figuring out Flat Keys

The name of the key is always the second last flat. i.e. You have 4 flats. They must be Bb Eb Ab Db . So the key is Ab , which is the second last flat.
In reverse. You want to write out the scale of Gb . Use the order and add the next flat in it. So that gives us Bb Eb Ab Db Gb Cb

Exceptions to the rule: C has no sharps and no flats. F has one flat and that's Bb
All the Major Keys and their Key Signatures.

| C | none |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| G | F\# |  |  |  |  |
| D | F\# | C\# |  |  |  |
| A | F\# | C\# | G\# |  |  |
| E | F\# | C\# | G\# | D\# |  |
| B | F\# | C\# | G\# | D\# | A\# |
| F\# | F\# | C\# | G\# | D\# A\# | E\# |
| C\# | F\# | C\# | G\# | D\# A\# | E\# |
|  |  | B\# |  |  |  |


| $\mathbf{F}$ | Bb |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Bb | Bb | Eb |  |  |  |  |  |
| Eb | Bb | Eb | Ab |  |  |  |  |
| Ab | Bb | Eb | Ab | Db |  |  |  |
| Db | Bb | Eb | Ab | Db | Gb |  |  |
| Gb | Bb | Eb | Ab | Db | Gb | Cb |  |
| Cb | Bb | Eb | Ab | Db | Gb | Cb | Fb |

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## 5. Triads

Triads are chords with three notes in them. There are four types of triads. Each has a short form and a recipe. They are:

Major (+) 1st note of the scale, 3rd note of the scale, 5th note of the scale
Minor (-) Same as above but with the 3rd note lowered by a semitone
Diminished (o) Same as a minor, but with the 5th note also lowered by a semitone
Augmented (x) Same as a major, but with the 5th note raised by a semitone

## Examples

| C+ | C E G | C- | C Eb G | Co |  | Eb Gb |  | Cx | C E G\# |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A+ | A C\# E | A- | A $\mathrm{C} E$ | Ao | A | C Eb |  | Ax |  |  |  |
| F+ | F A C | F- | F Ab C | Fo | F | Ab | Cb | Fx | F | A |  |
| Db+ | $\mathrm{Db} \boldsymbol{F} \mathrm{Ab}$ | Db- | Db Fb Ab | Dbo | Db | Fb | Abb | Dbx |  | b |  |

In each case, the letter name must remain the same. So although Abb sounds the same as G, it has to stay as some kind of A . Just like Fb sounds the same as E , it has to stay some kind of F .

## 6. Seventh Chords

There are three different kinds of sevenths.
$+7 \quad$ (The seventh note in the scale)
$-7 \quad$ (The seventh note lowered by a semitone.)
o7 (The seventh note lowered by a tone.)
When you add these to a triad, you get a seventh chord. If the type of triad and the type of seventh agree then we can call it by one name.
i.e. $\mathrm{C}+7$ is a $\mathrm{C}+$ triad with $\mathrm{a}+7$ on top. (C E G B)
$\mathrm{C}-7$ is a C - triad with a -7 on top ( C Eb G Bb)
If the triad and the seventh do not agree then the chord will have two designations.
i.e. $\mathrm{C}+-7$ is a C major triad with a-7 on top.

A Dominant $7^{\text {th }}$ is the most common $7^{\text {th }}$ chord and is actually a + -7. (major triad with a minor $7^{\text {th }}$ ) i.e. CEGBB and is written simply C 7

A Diminished $7^{\text {th }}$ (o7) Chord is quite special. Since all the notes in it are the same distance apart, there are only three different o7th chords.

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## 7. Ninth Chords

Major 9th $(+9)=+7$ with a +9 on top
i.e. C E G B D (Written as Cmaj9)

Minor $9^{\text {th }}(-9)=-7$ with $\mathrm{a}+9$ on top
i.e. C Eb G Bb D (written as Cmin9)

Dominant $9^{\text {th }}($ Dom9) $=$ Dom 7th with a +9 on top
i.e. C E G Bb D (written as C9)

Dominant Minor $9^{\text {th }}($ Dom-9) $=$ Dom 7th with a -9 on top
i.e. C E G Bb Db (written as C7b9)

## 8. Sus Chords

A Sus or Suspended chord is simply the major triad with that note added, usually the $2^{\text {nd }}$ or the $4^{\text {th }}$ i.e. Csus $4=$ C E G F

Csus2 $=$ CEGD
It usually sounds better if the added note is higher than the other three.

## 9. Jazz chords

In Jazz the guitar is usually part of a rhythm section, (drums, bass, keyboard, guitar), and the root of the chord is being played by the bass or keyboard. With more complex chords it's sometimes advisable or even necessary, (because we run out of fingers), to eliminate the root, the third or the fifth from the chord. i.e. Cmaj11 = C E B D F or C G B D F or E G B D F

## 10. Power Chords

A power chord is a chord that is missing the third. This way the chord is not heard as a major or minor so can be both. Power chords are usually played on the bottom 3 or 4 strings of the guitar.

## 11. Bar Chords

A bar chord is where you put your first finger across all 6 strings. You then finger an open string chord using your other 3 fingers. The most important open string chords are A and E (major and minor). For example if you put a bar behind an E+ it then becomes F+, then up one fret to F \# major and so on following the chromatic scale.

## 12. Functional Harmony

If we build chords on every note in a scale, using only the notes in that scale, then we end up with the principle chords in that key. We use roman numerals to denote these chords.
I+ II- III- IV+ V+ VI- VIIdim (In the key of C we get C+ D- E- F+ G+ A- Bdim)
Most songs can be played with just I IV and V (the V usually is a dom7th chord)
The minor chords in that key will be II III and VI (The VI is usually also a dom7th)
(Without getting into minor keys, we can stop there, but the minor chords are really I, IV and V in the relative minor key.)
The chord chart is arranged according to the principle chords in each key.

