# GUITAR THEORY
# FOR EVERYBODY
## YOUR FIRST 5 STEPS TO LEARNING THE FRETBOARD

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Complete Fretboard "Cheatsheet"

## LESSON 1

The musical alphabet and it's natural intervals


**WHOLE STEP = 2 FRETS**
**HALF STEP = 1 FRET**

NOTES:

# LESSON 2

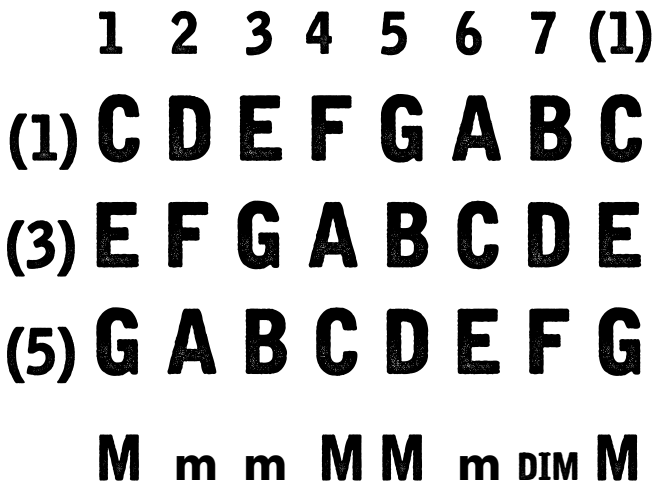
Major scales and how to construct them


NOTES:

- The “model major” scale is the C major scale because it contains all natural notes. This means no sharps or flats are used to achieve the arrangement of whole and half steps necessary for a major scale.
- The universal recipe for a major scale is: W W H W W W H
- To make a major scale in keys other than C you will need to add sharps (#) or flats (b) to manipulate the intervals (the space between the notes) to achieve the correct “recipe” for a major scale.
  - Example #1: D E F#G A B C#D
    W W H W W W H
  - Example #2: A B C#D E F# G#A
    W W H W W W H
- You can add sharps or you can add flats to “fix” or create a major scale, but you will NEVER add both. You will be adding only sharps or only flats when manipulating notes.
- By understanding the universal recipe of the major scale you can construct a major scale on any string without having to even know the notes.
- Playing a scale on one string will allow you to “see” and experience the distances or intervals between the notes in any major scale. Allowing you to understand what exactly you are playing when you play different scale shapes that go across the strings.

# LESSON 3

Connecting Scales and Chords




NOTES

- The above chart is called a chord matrix.
- The chord matrix will show you the tonality (Major, Minor, or diminished) in whichever key you choose to construct it in.
- The chord matrix will also show you the connection between the scale degree and the tonality of its corresponding chord (i.e. the first scale degree corresponds to a Major chord, the 2nd scale degree corresponds to a minor chord. Etc.).
- The chord matrix also reveals the universal rule of any major key's scale/ chord connection. The chords in any major key will follow this pattern:
    - The 1 chord is always Major
    - The 2 chord is always Minor
    - The 3 chord is always Minor
    - The 4 chord is always Major
    - The 5 chord is always Major
    - The 6 chord is always Minor
    - The 7 chord is always Diminished

**Follow the steps below to construct a matrix for any key:**

1. Write the given scale in row 1.

2. In row 2, write a scale that starts with the 3rd degree of the given scale in row 1.

3. In row 3, write a scale that starts with the 5th degree of the given scale in row 1.

4. Once constructed, write major or minor below the columns that correspond to the scale degree (This is the universal major key chord rule).

- Example #1

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| D | E | F# | G | A | B | C# | D |
| F# | G | A | B | C# | D | E | F# |
| A | B | C# | D | E | F# | G | A |

- Example #2

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| A | B | C# | D | E | F# | G# | A |
| C# | D | E | F# | G# | A | B | C# |
| E | F# | G# | A | B | C# | D | E |

- Example #3 (with scale degrees)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 1 |
| 3 | 4 | 5 | 6 | 7 | 1 | 2 | 3 |
| 5 | 6 | 7 | 1 | 2 | 3 | 4 | 5 |

- Knowing this information allows you to see what notes each chord contains, which can provide a wonderful basis for improvisation and give you some guidelines when choosing which notes to play over which chords.

# LESSON 4

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## Chord Analysis Using The Chord Matrix

- By using the chord matrix and seeing what notes are in a given chord you can then determine if that chord is major or minor.

- What allows you to analyze a chord are the spaces in between the notes also commonly called intervals.

- Within a triad (the three notes that a chord contains) there are two types of naturally occurring intervals:

    - Major 3rd - Equal to 2 whole steps
    - Minor 3rd - Equal to 1.5 whole steps

- The distance of these intervals is measured by calculating the number of steps in between the given pair of notes.

- Depending on the order in which the intervals occur you will have a major chord, a minor chord, or a diminished chord when using chords from a major scale.

- A major 3rd on top of a minor 3rd results in a major chord

- A minor 3rd on top of a major 3rd results in a minor chord

- A minor 3rd on top of a minor 3rd results in a diminished chord

Example #1

**(1) C**
**(3) E**
**(5) G**

- Between C and E there are 2 whole steps or a major 3rd
- Between E and G there are 1.5 whole steps or a minor 3rd
- Due to the above layout this is a C major chord

Example #2

**(1) A**
**(3) C**
**(5) E**

- Between A and C there are 1.5 whole steps or a minor 3rd
- Between C and E there are 2 whole steps or a major 3rd
- Due to the above layout this is a A minor chord

Example #2

**(1) B**
**(3) D**
**(5) F**

- Between B and D there are 1.5 whole steps or a minor 3rd
- Between D and F there are 1.5 whole steps or a minor 3rd
- Due to the above layout this is a B diminished chord

Understanding chord analysis is crucial to your chord knowledge on the guitar, once you understand chord analysis you can then change any chord on the guitar using the following process.

1. Make a given minor or major chord shape.

2. Figure out the notes that you are holding down (hint: they will be in the chord's triad).

3. Translate those notes into numbers corresponding to which row they turn up in the chord matrix (1,3, or 5).

4. Once you translate the notes into numbers identify the location of the 3rd (this could be multiple locations depending on the chord).

5. Manipulate the 3rd raising it a half step to make any minor chord major, or flatting it a half step to make any major chord minor.

Once fluent in chord manipulation, there is less urgency to memorize basic chord shapes due to your ability to "create" chords based on their inner workings.

# LESSON 5

## The CAGED Chord Navigation System

- The CAGED system is a way to navigate the guitar neck. It is a pattern for telling how chord shapes resulting in the same chord layout across the fretboard.

- The letters in the word CAGED are the exact order the chord shapes occur on the fretboard

- The CAGED system involves two critical pieces of information: the first is knowledge of the 5 basic moveable chord shapes, and second is the root note location for each of those 5 shapes.

- Each chord shape in the CAGED system is moveable and wherever it is moved the root note will be consulted to be able to name the chord.

**The root notes for each of the chord shapes are as follows:**

  - The C shape is rooted on the A string
  - The A shape is rooted on the A string
  - The G shape is rooted on the low E string
  - The E shape is rooted on the low E string
  - The D shape is rooted on the D string

The basic layout of the CAGED system is:

- Starting from the C shaped chord, you'll move to the A shape.
- From the A shaped chord you'll find the G shape next.
- From the G shaped chord you'll go to the E shape.
- From the E shaped chord you'll go to the D shape.
- Once on the D shaped chord, the next chord you'll encounter is the C shape.
- Then it repeats in a cycle.

# LESSON 6

## The Universal Rules - Putting it All Together

**THE MUSICAL ALPHABET**

- There is a naturally occurring half step between B&C and E&F
- Between every natural note pair that is not B&C and E&F there is a whole step

**THE MAJOR SCALE**

- The model major scale is the C major scale as it gives the proper arrangement of whole and half steps without alteration.
- The “master recipe” of the major scale is: W-W-H-W-W-W-H

**CHORD CREATION**

- To create the chords associated with any major scale you can create a chord matrix
- To create the matrix you will need to start with the notes contained in the first chord which are the 1st, 3rd, and 5th degrees
- Once you have the chord matrix filled out you will see the notes contained in each chord of that key
- Every major scale will result in the same types or tonalities of chords
- The universal rule/pattern for chord types of a major scale is: Maj-min-min-Maj-Maj-min-dim (this pattern corresponds and relates to the Nashville number system)

**CHORD ANALYSIS**

- When analyzing a chord you look at the intervals it contains
- A major 3rd = 2 steps, a minor 3rd = 1.5 steps
- A major 3rd on top of a minor 3rd is a major chord
- A minor 3rd on top of a major 3rd is a minor chord
- A minor 3rd on top of a minor 3rd is a diminished chord
- The 3rd or middle note of the triad is the crucial note here, by manipulating it you can make any major chord minor and any minor chord major

**THE CAGED SYSTEM**

- The CAGED system is a way of keeping track of the pattern of occurrence of the 5 basic chord shapes on the guitar neck
- It is crucial to know the 5 basic moveable chord shapes as well as where the root note is located for each of those shapes
- The CAGED pattern is cyclical and repeats over and over on the guitar neck
- The C and A shapes have their root on the A string
- The G and E shapes have their root on the low E string
- The D shape has it's root on the D string