

It's Your Basic Theory 101

I personally think that understanding basic theory is essential to being a well-rounded musician. The basic fundamentals of theory give you a foundation to support your musical journey. I use basic theory when I get into situations where I feel like I'm creatively lacking ideas and I use these fundamentals to give me logical possibilities and new ideas.

There is a sheet that is a visual accompaniment to this. Use it as your central guide and this document as your instructions of sort.

Intervals

A interval can be understood as the distance between two things in time and space. Oooh that sounds deep. But in music it's the distance from one note to another note. The musical term for intervals is also called "steps". So you might find me calling an interval a step as well. In this Basic Theory 101 lesson we will only discuss four different intervals. These are minor 2nd, Major 2nd, Minor 3rd, and Major 3rd. The reason I'm not going into all intervals is because we must take things one-step at a time grasshopper as to not overload our wigs.

Major and Minor Seconds

A half step is the smallest interval in western harmony. It is one fret on the guitar or going from a white key to black key on the piano. It is also known as a Minor 2nd. It's used in the theme for "Jaws". The reason why it's called a 2nd is because you go from one note to the next closest note. So if A is 1 then B would be 2. Kind of hard to explain but that's it in a nutshell. You have two types of 2nd's. You have Minor 2nds and Major 2nds. Minor is smaller than Major. You can remember this like when you got in trouble as a kid. If you were in minor trouble not a big deal. If you were in major trouble then watch out. A Minor 2nd is the same thing as a half step. (From one fret to the next fret on the guitar). A Major 2nd is two half steps put together to form a whole step. (From one fret skip over a fret then the next one is a whole step or Major 2nd).

Major and Minor Thirds

3rds are a lot like 2nds but they are a little farther apart in intervals. You have two types of 3rds. You have Minor 3rds and Major 3rds. Minor again being smaller than Major. A Minor 3rd is a whole step plus a half step so three half steps total. That would be playing a fret then skipping two frets and the next one is a Minor 3rd. A Major 3rd is a total of two whole steps or four half steps. Which on the guitar would be playing a note then skipping three frets and the next one is a Major third interval. And that wraps up all the intervals we need to talk about for now.

Musical Alphabet

The musical alphabet is like the English alphabet but it only has 7 letters. The musical alphabet starts on A and ends on G. It is A,B,C,D,E,F,G and then it starts over at A again.

There are two built in half step or minor 2nds in the Musical Alphabet. Those half steps are between B&C and E&F.

Here is a sentence you should memorize.

**There are half steps in the musical alphabet between B&C and E&F the rest are whole steps.*

The musical alphabet (Notice how the B&C and E&F are close together)

A BC D EF G A

Chords and Scales

Chords

You have four different basic types of chords. These are Major, Minor, Augmented, and Diminished.

Chords are made up of three different notes that are some form of 3rd apart. (3rd being like what we talked about in the explanation of intervals above.)

| | |
|--------------------------|----------------------------|
| Major chord = M3+m3 | Ex. C E G= C Major |
| Minor chord = m3+ M3 | Ex. C Eb G= C Minor |
| Augmented Chord = M3+ M3 | Ex. C E# G#= C Augmented |
| Diminished Chord = m3+m3 | Ex. C Eb Gb = C Diminished |

You will mostly only hear or play major and minor chords in popular music. Augmented and Diminished Chords are more often used in Jazz and Blues or other types of music. That's not to say that you won't find those chords in your favorite song.

Most people learning how to play guitar learn a G chord pretty early on. But they might or might not know what a G chord is and why it is what it is. First off if a chord is called just a letter name then that means that it's Major. You have to say that a chord is minor for it to be minor. For example a G chord is a G Major chord and an G minor chord well it's a G minor chord. Pretty easy. Moving on. To make up a G chord you have to have three notes. To make any chord you have to have at least three notes and they must be 3rds apart from each other. Since our G chord is Major it means that it's intervallic formula is M3+m3=Major Chord. That means that our notes that make up a G major chord are G,B, and D. Reason being is that if you go up a M3 from G you get B and if you go up from B a m3 you get D. You always find your root note, (Root note is the note that names your chord in this case G), then go up from there.

*Chords are built in 3rds, Scales are built in 2nds (remember this)

Scales

I'm only going to talk about one scale for now and that is the Major Scale. A Major scale is made up of 8 notes they are either half steps or whole steps apart from each other. The intervallic formula for a Major Scale is W-W-1/2-W-W-1/2. So if we remember *there are half steps in the musical alphabet between B&C and E&F the rest are whole steps* then it's easy to understand a C major scale. Some major scales have accidentals. Accidentals are sharps or flats. We won't get into those for now. Let's keep it basic and study a major scale that doesn't have any sharps or flats. The Major scale without any sharps or flats will be C Major. Notice how C-D is a whole step D-E is a whole step and E-F is a half step. F-G,G-A,A-B, are all whole steps and B-C is a half step. Also notice that when I write out the major scale I keep the half steps closer together than the whole steps as to visualize the scales intervals.

C Major scale

C D EF G A BC

Harmonizing a Major Scale

Harmonizing a Major scale is taking all the basic theory information we talked about before and using that to understand a Key. We will be using intervals, chords, scales, and the musical alphabet to harmonize. You've heard people say this song is in the Key of C before. Well that's what I mean when I say "Harmonizing a Major Scale". If you take a scale and you harmonize it then you turn that scale into chords.

Harmonizing a C Major scale (Key of C)

- 1) Write out a C Major Scale. Remember the intervallic make up of a Major scale is W-W-1/2-W-W-W-1/2. Our C Major scale will be C D EF G A BC.
- 2) Now go down each note in the scale and build your chords. Remember that Chords are built in 3rds and Scales are built in 2nds. So you are going to stack each note in a 3rd since you are building chords. Let me explain. Take your first note of your C major scale which is C. Then you count up the scale three notes with one being C. Such as C=1 D=2 E=3. Since your building a C chord and chords are built in thirds then E will be your next note in your C chord. Then you count up three from E. E=1 F=2 G=3. Now G is your next note in your chord.

| | | | | | | | | | | | | | | | | | | | |
|---|---|----|---|---|----|--|---|---|----|---|---|----|--|---|---|----|---|---|----|
| C | D | EF | G | A | BC | | C | D | EF | G | A | BC | | C | D | EF | G | A | BC |
| 1 | 2 | 3 | | | | | | | 1 | 2 | 3 | | | | | | | | |

C Major Chord= C E G (Notice how C to E is two whole steps or a Major 3rd apart. Notice also that E to G is a whole step and a half step or Minor 3rd apart. This is why that chord is called a C Major. Because it's a M3+m3= Major chord

- 3) Now you do this same thing for each note in the scale. Build a chord out of each note in the scale by counting up thirds.

| | | | | | | | | | | | | | | | | | | | |
|---|---|----|---|---|----|--|---|---|----|---|---|----|--|---|---|----|---|---|----|
| C | D | EF | G | A | BC | | C | D | EF | G | A | BC | | C | D | EF | G | A | BC |
| | 1 | 23 | | | | | | | 1 | 2 | 3 | | | | | | | | |

So we built just a D chord out of stacking thirds. Our first note was D we counted up three notes and got F. Then we counted up from F three notes and got A. Now we need to figure out if this D chord is Major, Minor, Augmented, or Diminished.

We look at the first group of thirds and that is D to F. That is a whole step and a half step or a Minor 3rd. The next group of thirds is F to A. F to A is two whole steps or a Major 3rd. If we have a chord that's built with m3+M3= Minor chord. So our D chord is a D minor chord because its built by m3+M3.

4) Now do this for all 8 notes in the major scale.

If you harmonize your C Major Scale right you will get these chords

C Major D Minor E Minor F Major G Major A Minor B Diminished C Major

Each one of these chords is given a Roman numeral. If the Roman numeral is capital it is a major chord if it is lower case then it is a minor chord.

C =I Dm =ii Em =iii F =IV G =V Am =vi Bdim =vii dim C =I

All major scales have the same chord structure. Meaning that the second chord in every Major key will be Minor= ii. The third chord in every Major key will be Minor=iii and so.

Major Scale Harmony in Roman Numerals

I=Major ii= Minor iii=Minor IV=Major V=Major vi=Minor vii=Diminished I=Major

Major Chords in a Major Key I IV V

Minor Chords in a Major Key ii iii vi

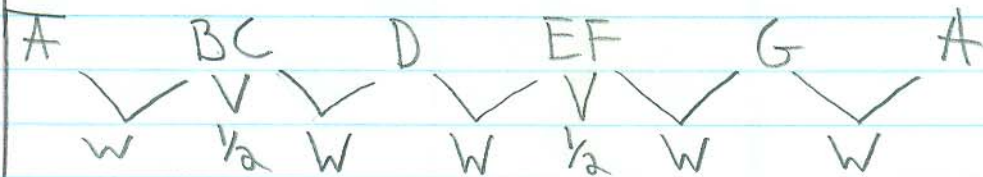
Diminished Chords in a Major Key vii dim

* there are no augmented chords in a major scale

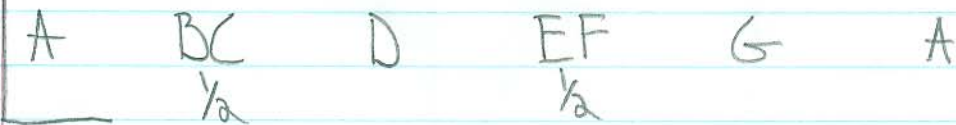
Intervals

$\frac{1}{2}$ step = B \rightarrow C = one fret = minor 2nd
Whole step = A \rightarrow B = two frets = major 2nd
Whole step + $\frac{1}{2}$ = A \rightarrow C = three frets = minor 3rd
Two whole steps = B \rightarrow D = four frets = Major 3rd

Musical Alphabet



* There are $\frac{1}{2}$ steps in the musical alphabet between B+C and E+F the rest are whole steps.



* Chords are built in 3rds.
Scales are built in 2nds.

Chords

M3 + m3 = Major chord
m3 + M3 = minor chord
M3 + M3 = Augmented chord
m3 + m3 = diminished chord

Scale

Major scale = W W $\frac{1}{2}$ W W W $\frac{1}{2}$

Major Scale

C major scale = C D E F G A B C
 W W $\frac{1}{2}$ W W W $\frac{1}{2}$

Major Scale Harmony

| | | | | | | |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------------|
| C \rightarrow M3 | D \rightarrow m3 | E \rightarrow m3 | F \rightarrow M3 | G \rightarrow M3 | A \rightarrow m3 | B C |
| E \rightarrow m3 | F \rightarrow M3 | G \rightarrow m3 | A \rightarrow M3 | B \rightarrow M3 | C \rightarrow m3 | D E |
| G \rightarrow m3 | A \rightarrow M3 | B \rightarrow M3 | C \rightarrow m3 | D \rightarrow m3 | E \rightarrow M3 | F G |
| C | D \bar{m} | E \bar{m} | F | G | A \bar{m} | B $^{\circ}$ C |
| <u>I</u> | ii | iii | <u>IV</u> | <u>V</u> | vi | vii $^{\circ}$ <u>I</u> |

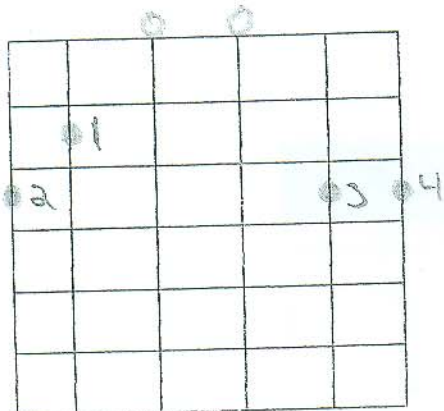
try another scale + key

F major scale

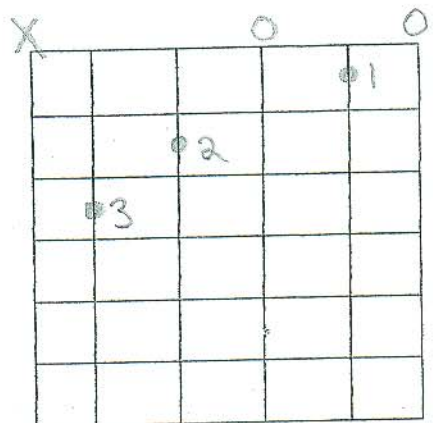
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|----------|-------------|--------------------|-----------|-------------|----------------|-------------------------|
| F | G | A B b | C | D | E F | |
| A | B b | C D | E | F | G A | |
| C | D | E F | G | A | B b C | |
| F | G \bar{m} | A \bar{m} B b | C | D \bar{m} | E $^{\circ}$ F | |
| <u>I</u> | ii | iii | <u>IV</u> | <u>V</u> | vi | vii $^{\circ}$ <u>I</u> |

- Major chords in a major scale = I, IV, + V
- Minor chords in a major scale = ii, iii, + vi
- The seventh scale degree is diminished in a major scale.

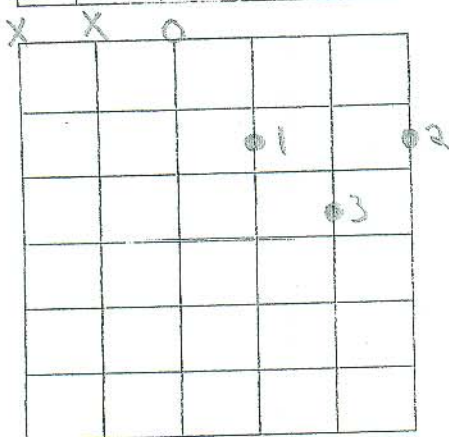
G



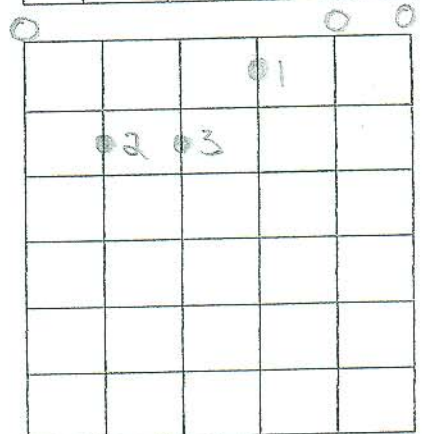
C



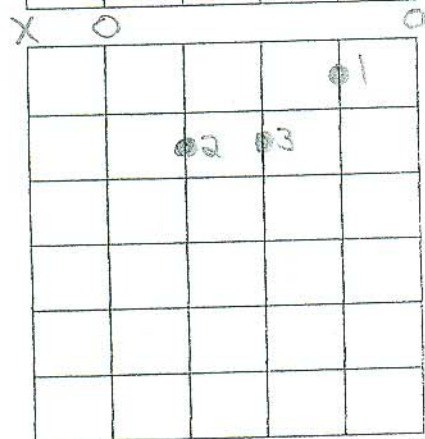
D



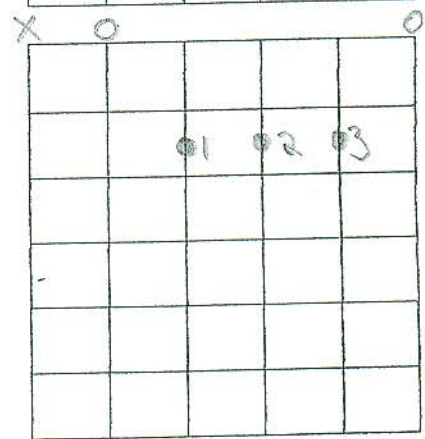
E



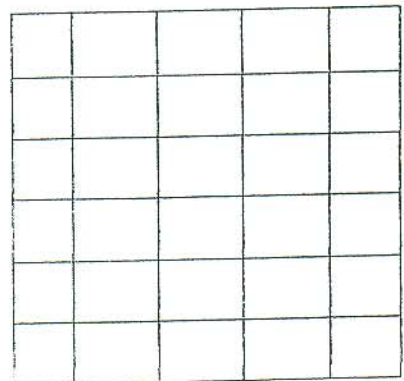
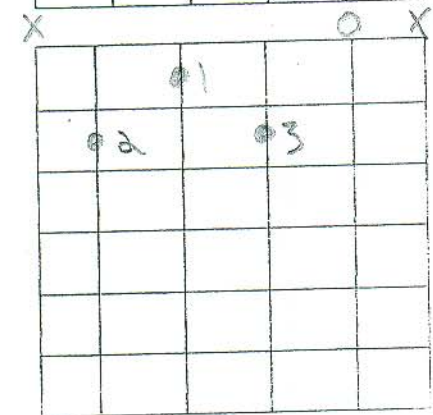
A_m

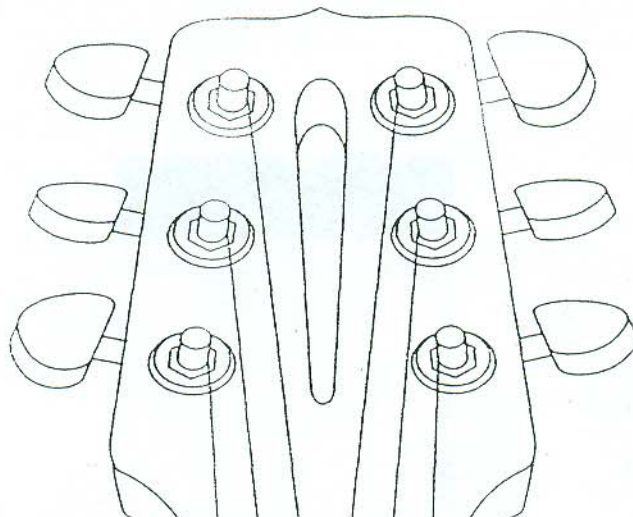


A



B⁷





String numbers

Open strings

6 5 4 3 2 1

E A D G B E

Fret numbers

| | | | | | | |
|----|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 1 | F | A ² B ₂ | D ² E ₂ | G ² A ₂ | C | F |
| 2 | F ² G ₂ | B | E | A | C ² D ₂ | F ² G ₂ |
| 3 | G | C | F | A ² B ₂ | D | G |
| 4 | G ² A ₂ | C ² D ₂ | F ² G ₂ | B | D ² E ₂ | G ² A ₂ |
| 5 | A | D | G | C | E | A |
| 6 | A ² B ₂ | D ² E ₂ | G ² A ₂ | C ² D ₂ | F | A ² B ₂ |
| 7 | B | E | A | D | F ² G ₂ | B |
| 8 | C | F | A ² B ₂ | D ² E ₂ | G | C |
| 9 | C ² D ₂ | F ² G ₂ | B | E | G ² A ₂ | C ² D ₂ |
| 10 | D | G | C | F | A | D |
| 11 | D ² E ₂ | G ² A ₂ | C ² D ₂ | F ² G ₂ | A ² B ₂ | D ² E ₂ |
| 12 | E | A | D | G | B | E |