

## Diatonic Music Theory

If you know a major scale, you know more about music theory than you might think. Scales imply chords and keys. To begin all you need to know are the basic diatonic note names.

### **C Major implies a scale, chord and key.**

1. Scales are built in adjacent seconds.

C Major Scale:

C D E F G A B C  
1 2 3 4 5 6 7 8

All major and minor scales use this sequence of letters. Just start on any letter and add the key signature and you will get the appropriate major or minor scale. Practice the sequence on every letter, and then add the key signatures around the cycle of fifths. (The note-name sequence will always be the same regardless of the accidentals.)

2. Chords and arpeggios are built in thirds, so just skip every other letter.

C Major 13<sup>th</sup>:

C E G B D F A C  
1 3 5 7 9 11 13 (15)  
(2 4 6 1)

Just start on any letter and add in the alterations demanded of the particular chord symbol. Practice 'speaking' the sequence beginning on each letter. Regardless of the chord type the basic note-name sequence (with very few exceptions) will be the same.

3. Keys imply a normal progression of chords that move in ascending fourths (1 2 3 4) or descending fifths (5 4 3 2 1):

Normal Progression in C Major:

C F B E A D G C  
1 4 7 3 6 2 5 1

I VI vii iii vi ii V I (Roman numerals are used to indicated Major in Caps, and minor, lower case)

This progression of descending fifths can be applied in all major and minor keys; it is a diatonic 'cycle.' Practice this sequence beginning on every note. This cycle should be done in every key signature as well, but regardless of the accidentals the note-name sequence will always be the same. . The progression 3-6-2-5-1 is very common in jazz and popular tunes. Look for 2-5-1's in the tunes you play; when you find them you know you are in the key of the '1' chord or tonic, and the major scale of this key will work when soloing over all of these chords.

#### 4. Diatonic guide tones are a series of alternating 3rds and 7ths.

Right Hand guide tones:

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

Left Hand bass progression:

C F B E A D G C  
I IV vii iii vi ii V7 I

These two notes provide the essential character of the individual chords in a key. These are the essential two-note piano voicings. As chords change, or progress through these notes flip. 3rds change into 7ths, and 7ths into 3rds. This creates a harmonic line that soloists often follow. They should be practiced in all major (and minor keys). Pianists should play the guide tones in the left-hand, and drop the bass notes completely when playing in an ensemble.

The chord sequence this produces in C Major is:

CMaj7 FMaj7 Bmi7b5 Emi7 Ami7 Dmi7 G7 CMaj7  
I IV vii iii vi ii V7 I

### **C Minor also implies a scale, chord and key, but there are three scales that need consideration in minor, Melodic Minor, Dorian Mode, and Harmonic Minor.**

1. The C minor scale is Melodic Minor. This minor scale has an ascending and descending form. Ascending Melodic Minor is the same as a major scale with a lowered third scale degree. C D Eb F G A B C.

1 2 b3 4 5 6 7 1

In jazz, especially the minor modes, Ascending Melodic Minor is very important.

Descending Melodic Minor is the same as Natural Minor, or Aeolian Mode, which is derived by assuming C as the sixth scale degree of a major scale, which is Eb Major. C Descending Melodic Minor is C Bb Ab G F Eb D C. C minor and Eb Major have the same note set, and therefore are relative keys. (Natural Minor scales sequences are 1 2 b3 4 5 b6 b7 1)

In practice, C Melodic Minor is performed C D Eb F G A B C Bb Ab G F Eb D C.

1 2 b3 4 5 6 7 1 b7 b6 5 4 b3 2 1

2. The C Minor chord is generally derived from Dorian Mode, which is found by assuming C as the second scale degree of a major scale, which is Bb Major. The

lowered sixth found in Natural Minor (Aeolian Mode) clashes with the 5<sup>th</sup>, so is used less often in building chords, however, Melodic Minor Ascending is sometimes used to build Minor/Major 7<sup>th</sup> chords.

The C minor 13<sup>th</sup> chord is C Eb G Bb D F A  
1 b3 5 b7 9 11 13

3. The C Minor Key is derived from the C Harmonic Minor Scale.

C D Eb F G Ab B C  
1 2 b3 4 5 b6 7 1

Normal Progression in C Minor is:

C F B Eb Ab D G C  
1 4 7 b3 b6 2 5 1

This is the guide tone third and sevenths and normal progression in Harmonic Minor:

Right-Hand Guide Tones:

B	Eb	Ab	D	G	C	F	B
Eb	Ab	D	G	C	F	B	Eb
C	F	Bb	Eb	Ab	D	G	C
iM7	iv	VII7	III+	VI	ii	V7	iM7

Left Hand bass progression

### The V7 Cycle:

“Beadguh.”

The diatonic (white key notes) cycle of chord roots in a key is C F B E A D G C, which has been discussed. Notice how BEADG is central to the sequence.

Now for a cycle that includes all of the notes of the chromatic scale, just incorporate BEADG two times like this: Say “C-F” which stands for ‘Circle of Fifths,’ and then just repeat ‘beadguh’ twice, the first time with flats, and the second time without.

**C-F (Bb Eb Ab Db Gb) (B E A D G) C F . . .**

That’s the V7 (‘five’) cycle. Learn to play this sequence on your instrument, and then follow it as you change key signatures, adding one flat or subtracting one sharp with each successive key. Practice scales, chords, and patterns using the cycle. Also, the keys of Db, Gb and B also need to be learned enharmonically as C#, F#, and Cb. So technically, there are 15 keys to learn.

**Other scales you need to know, apart from your major and minor scales:  
Symmetrical scales:**

These scales are extremely important, as they are excellent for building your finger technique, and because they are difficult to sing, they are great for your ears and mental imaging of half and whole steps. These scales are very important. Learn them now.

**1. The Chromatic scale:**

This is the all half-steps scale (every adjacent successive note), and it is a great geography lesson on your instrument! This is the most important scale of them all because it contains every note. Be able to play it fast and full-range, as there is only one chromatic scale and it works on every chord.

C C# D D# E F F# G G# A A# B C B Bb A Ab G Gb F E Eb  
(ascending) (descending)

**2. The Whole Tone (2 half-steps) scales:**

These are the all whole steps scale and there are only two patterns:

C D E F# G# A# C, and

C# D# F G A B C#

They work on dominant 7<sup>th</sup> chords with an augmented 4<sup>th</sup> & 5<sup>th</sup>. (C+7)

These scales are found by skipping every other note in the chromatic scale.

These scales work well over the V7#5 chord.

**3. The Half-Whole step scales:**

These are also called Octatonic scales. They alternate 1/2 and whole steps and there are only three patterns. If you start the scale with the 1/2 step it works on an altered V7 chord.(C7-b9-#9-b5) If you start the scale using a whole step, it works over a diminished chord.

C Db Eb E Gb G A Bb . . .

Db D E F G Ab Bb B Db . . .

D Eb F Gb Ab A B C D . . .

**Added note, or Bebop Scales.**

These scales are cool because they keep the chord tones on the strong beats of the measure, which is where our ears expect harmonic information to change, generally speaking, beats one and three.

**1. The V7 Bebop scale**

is a major scale with an extra note inserted between the six and seventh scale degrees.

C D E F G A **A#** B C

1 2 3 4 5 6 #6 7 1

This scale-type can be used on any V7 chord. It's just a major scale with a major and a minor seventh. If you know your major scales, then it should be a snap to add this extra note.

## 2. The Maj7 Bebop Scale

is a major scale with an extra note inserted between the fifth and six scale degrees.

C D E F G **G#** A B C  
1 2 3 4 5 #5 6 7 1

This scale type works for any Maj7 chord. It's just a major scale with an extra note. Again, a snap to learn if you know your major scales.

### The Blues Scale V7 Lick:

This is a very important blues scale idea that players use over V7 chords. Notice that this is only a reordering of the A Blues scale: A C D D# E G A. This idea can be used on any V7 chord. If you know your blues scales, this lick is really easy to learn.

Over a C7 chord it's spelled like this:

C D D# E G A C  
1 2 #2 3 5 6 1

I like to combine it with the V7 Bebop scale playing this sequence of notes IN 1/8<sup>TH</sup> notes:

C C D D# E G A G C B Bb A G F E D C  
1 1 2 #2 3 5 6 5 8 7 b7 6 5 4 3 2 1

## Things all jazz musicians have to master:

### 1. Rhythm

All jazz players must master the swing feel and its corresponding articulations. An understanding of different 'grooves' or beat styles, like funk, samba, bossa nova, clave, montuna, ECM, 12/8, and shuffle, is essential. All jazz players are drummers! Join the drum line! Get total control over meters and subdivisions. You can't be too good at rhythm.

### 2. Melody

All jazz players must sing. Yes, even you. You must be able to internalize pitch. You'll need an intimate understanding of phrasing, line-concept that singers and horn players use. Get used to singing! Join the choir. Start memorizing jazz solos by singing along. Work daily on sight-reading and sight-singing. Far too many horn players are pushing buttons and blowing, yet not really 'hearing' internally the pitch and tone quality they produce. Improvisation demands an internal mental image of sound. Singing really helps one to develop this ability.

### **3. Keyboard or Guitar Harmony**

All jazz players have an excellent understanding of piano or guitar, as well as bass lines. You will need to play a harmony instrument at some point. This means jazz theory and memorizing tunes. Chords, keys, scales, etc. The piano is the giant pocket calculator of jazz. OK, accordion will work, and yes drummers, this means you too!

### **4. Drama and Form**

All jazz players understand pacing and shape as well as any good story-teller or stand-up comedian. You must be able to communicate ideas and use them to generate an emotional response in your audience. You must begin listening to masters of drama in every field. If you are shy, take a public speaking course or get in a play production. Jazz musicians are extremely quick-witted. They love improvisational humor.

### **5. Listening**

All good jazz players are master listeners. This is the easiest, and possibly the most overlooked aspect of learning to play jazz. Your listening must be extensive and intimate. You cannot do enough listening to the jazz masters. That goes for you, too! Have you heard a big band recording today?