

NOTES, SCALES AND POSITIONS ON THE DIATONIC HARMONICA

A PRIMER FROM LEEDSHARMONICA.UK

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INTRODUCTION

This document is intended for harmonica players who are already playing a bit and want to dive into a little bit of theory and understand what they're playing.

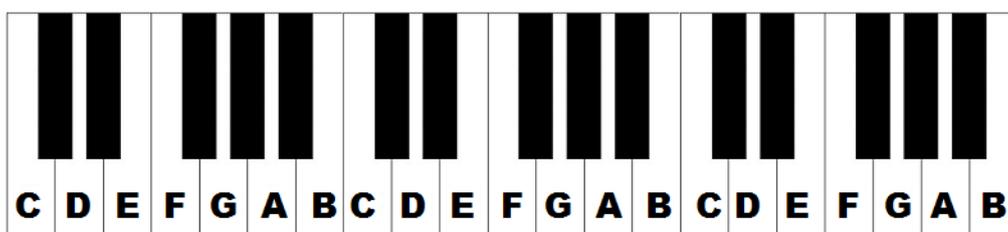
This is not intended to be an exhaustive dive into music theory as applies to the harmonica, rather just present a basic overview of what you really need to know to identify the notes on your harmonica and play them in the first three positions.

Great care has gone into making sure the information presented here is accurate but mistakes are expected. Please contact kev@leedsharmonica.uk with comments and corrections.

Examples use a C harmonica.

1. THE CHROMATIC SCALE

In Western music we name notes after letters of the alphabet A through to G. These are the white keys on the piano.



The keyboard also has black keys. These go in between many of the notes. The black notes are called *sharps* or *flats*.

The note in between A and B for example is called either A sharp (A#) or B flat (Bb). Similarly the notes between D and E are called either D# or Eb.

Some of the white keys don't have black keys in between them. It's important to remember there's no sharps or flats in between B and C, and there's none in between E and F either. See if you can identify the sharp and flat notes on the diagram above.

Collectively these notes make up what is known as the *chromatic scale*. There are lots of scales we can use to make music, but all of the other ones just use a selection of notes from this one.

Here's the C chromatic scale:

C Db D Eb E F Gb G Ab A Bb B C

The sharps haven't been noted for simplicity. Notice the scale goes alphabetically and loops back to A after G.

The distance from one note in the sequence to it's nearest neighbours is called a *half-step*, or *semi-tone*. Examples of half steps include. Db to D and E to F. A *whole-step* or *whole-tone* is the distance between two notes. Examples of whole-steps include Db to Eb and E to Gb.

2. THE MAJOR DIATONIC SCALE

The harmonica is a *diatonic* instrument. That means that it doesn't have all the notes of the chromatic scale available. Instead it just uses a subset of these notes. Specifically, it has the notes of what is known as the *diatonic scale*.

The notes in a major diatonic scale follow a a specific pattern of whole and half steps as follows.

Whole, Whole, Half, Whole, Whole, Whole, Half

Referencing the chromatic scale above, if we start at C and follow the formula we get the following. This is the C major diatonic scale. It's the scale your C harmonica was designed to play.

C D E F G A B C

Notice there are no sharps or flats in the C major scale.

3. SCALE DEGREES

Lets take things one step further and number the notes of the C major scale. These are called *scale degrees*.

C major scale: C D E F G A B C
 C major scale degrees: 1 2 3 4 5 6 7 8/1

So we can refer to C as the 1st, F as the 4th and so on. This will become important later on.

3. THE MAJOR SCALE ON YOUR HARMONICA

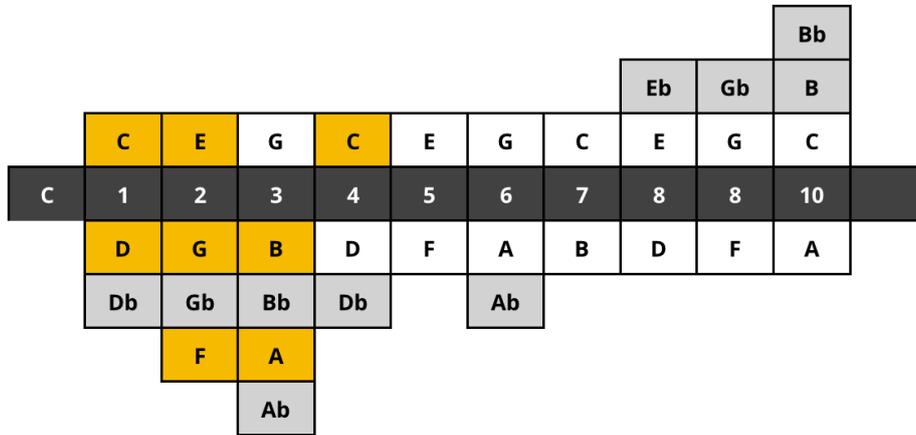
Here's a diagram of your C harmonica. Hole numbers in the middle, blow notes on the top and draw notes on the bottom.

	C	E	G	C	E	G	C	E	G	C	
C	1	2	3	4	5	6	7	8	8	10	
	D	G	B	D	F	A	B	D	F	A	

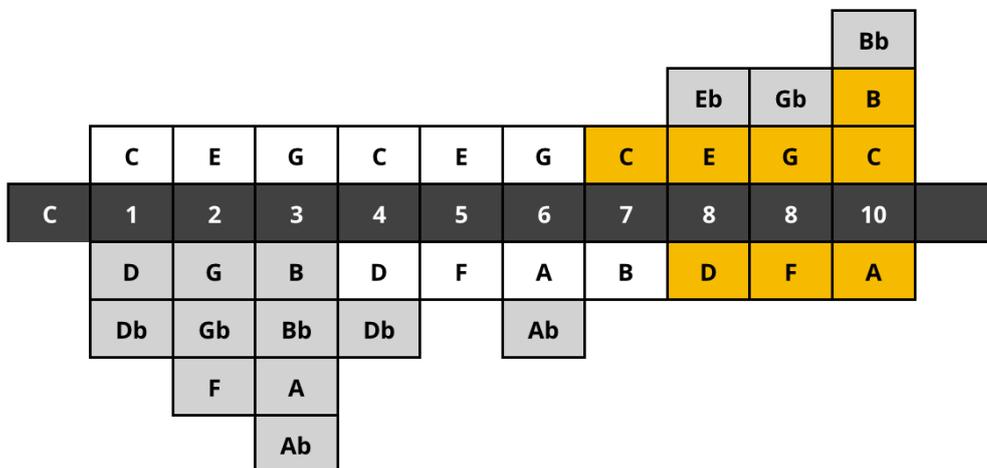
If you examine the notes in the diagram you'll find they're all part of the C major scale (**C D E F G A B C**) and they all repeat at least once across the range of the harmonica.

By using the notes made available by bending we can make a complete major scale in all three octaves.

We've seen the middle octave scale already. Here's the C major scale in the lower octave:



And the C major scale in the upper octave.



4. POSITIONS

Above we've seen the the C major scale on the C harmonica. We refer to this as *first position*. There are many other positions available (in fact there's 12, one for each note in the chromatic scale) but the majority of the time blues and folk players will use the one of the first three. *First position, Second Position, and Third Position.*

We've already seen what first position can do above so let's go straight for second. Chances are if you're reading this you've already been playing in second position whether you realise it or not. The majority of blues, folk, country, pop, you name it is played in second position. It's often referred to as playing *cross harp*.

In second position we're not going to play in the key of C anymore. Now we're going to play in the key of G.

You may be wondering how we're going to play in G on a C harmonica, and that's a good question. First let's write out the G major scale. Like we did for C above we'll use the chromatic scale and follow the sequence of half and whole steps to find our scale. It turns out like this.

G major scale: G A B C D E F# G
 G major scale degrees: 1 2 3 4 5 6 7 8/1

Now we have a sharp in our scale, F#. Let's look again at the notes on the harmonica.

