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# Harmonica Method

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# Introduction

The harmonica is a free-reed wind musical instrument, played by blowing or drawing air through one or more holes. Other names for the harmonica are harp, blues harp, mouth harp, hand reed, Mississippi saxophone, or pocket sax.

The first harmonica was created 1824 at Vienna from Anton Reinlein and Anton Haeckl. In 1857 Matthias Hohner was the first to mass produce harmonicas, and create the Hohner Company, the industry leader in reed instruments to date. In 1924 Hohner created the chromatic harmonica. The harmonica became popular in the 1950's, that it was introduced it in the blues music.

Today the harmonica is used mostly in blues and folk music, but also sounds great for rock, classical, and tango music.

This method intends to help one learn to play the harmonica without a teacher. Unlike most harmonica methods, it does not target to a specific music genre.

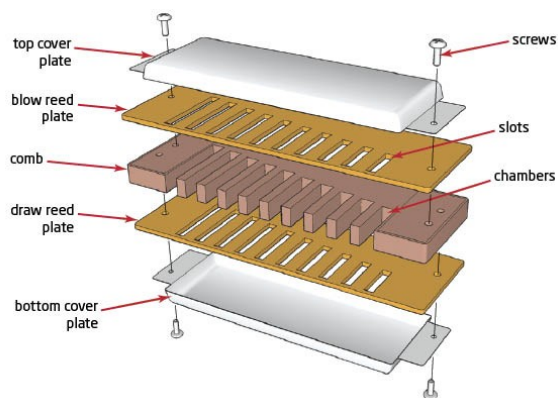
Knowledge of basic music theory is required to master this method. Yet, this method uses the tablature music notation system, being much easier for the beginner to read than modern notation.

For this method we will use the 10-hole diatonic harmonica in C, the most common harmonica for harmonica learning. After completing the method you should be able to play any harmonica. It is recommended that you use the Hohner Marine Band harmonica in C, the most classic harmonica, with a very clear sound and a standard shape and size, making it ideal for learning and very good for concert playing.

## Harmonica Anatomy

The harmonica consists of three basic parts, hold together with screws or nails:

- The cover plates: the covers that make sure you can't reach the reeds while playing, and protect the harmonica from external hazards. Open back cover plates produce bright and clear sound. Additionally open sides make the sound even brighter. Full cover plates produce warm and full sound, good for mississippi blues, bluegrass, jazz, and classical music. Metallic plates produce bright sound. Plastic plates produce soft plastic sound. Wooden plates produce soft clean sound.
- The reed plates: the metallic (commonly copper) platters that serve as stands for the reeds. The reeds are the thin metallic strips that generate sound by vibrating when you blow or draw air at the holes of the harmonica. The plates have small holes in the size of the reeds, called slots, that serve as guides for the air that comes from the chambers. Broken reeds require full reed plate replacement.
- The comb: the largest part of the harmonica, most commonly wooden, serves as host for the chambers through which air will be guided to the reed plate slots, and finally to the reeds. Wooden combs produce more warm, clean and original sound than other materials, but swell with moisture and saliva. Plastic combs do not suffer moisture effects and are light. Plexiglass combs allow you to see through the harmonica, making it easier to know when



your harmonica requires cleaning. Metal (usually aluminium) combs sound like plastic but are more heavy and durable.

Some harmonicas, mostly chromatic ones, have valves (also called "windsavers") attached to their reed plates, that prevent air from travelling through unused reed holes, providing more air to the target reed. These valves used to be made of leather, but nowadays are made of a thin plastic strip, or pair of strips.

## **Harmonica Types**

There are several harmonica types, each with it's own special sound and abilities.

### ***Diatonic***

The diatonic harmonica is the most common harmonica type. It has two notes per hole: one sounds when blowing, and one when drawing. The common diatonic harmonica has 10 holes, and is tuned to one specific scale.

In the diatonic style, you will also find piccolo harmonicas (that is, small harmonicas) that can fit easily to your smallest pocket.

Diatonic harmonicas are mostly used in rock, blues, jazz and gospel music.

### ***Chromatic***

Chromatic harmonicas have four notes per hole, and a side button. When the button is not pressed, each hole sounds one diatonic note when blowing and one when drawing. When the button is pressed, the notes become sharp. This allows you to play the whole chromatic scale.

Chromatic harmonicas are mostly used in classical and tango music.

### ***Tremolo***

Tremolo harmonicas have two rows of holes. Each hole produces only one note, eather when blowing or drawing. When playing, you drive air through both the upper and lower line of holes. Both holes produce the same note, but one is slightly tuned away from the other, producing a warm vibrating effect.

Tremolo harmonicas are mostly used in folk (celtic, irish, etc) music.

### ***Octave***

The octave harmonica looks like the tremolo, but it has a banana-like shape. The lower row is tuned an octave higher than the upper one, producing a strong sound.

### ***Orchestral***

Orchestral harmonicas have a variety of styles, specifically designed for orchestral playing. There are chord harmonicas designed to play chords, or chromatic harmonicas with all notes and semitones in a row (without button). These harmonicas are mostly useful in classic ensembles.

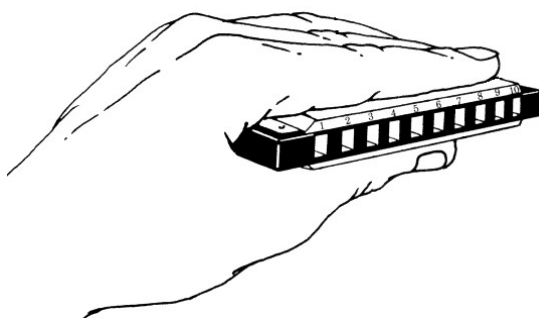
## Harmonica Care

In order to keep your harmonica in good condition, you need to follow these rules:

- Never expose your harmonica to extreme heat or cold.
- Don't chew gum or eat before playing. Keep your mouth clear, to keep your harmonica also clear for it to sound good.
- Don't put your harmonica in your pocket without it's case. The case prevents fluff to get in harmonica's holes.
- Before playing, hold your harmonica in your hands or under your arm to warm it. This will bring the whole harmonica smoothly to your body's temperature, preventing sudden changes of it's parts' size, leading to loosening and bad sound.
- After playing a piece, tap your harmonica against your hand with the holes down, to drop moisture and saliva.
- Try to control excess saliva, so that your harmonica remains dry.
- Before playing a valved harmonica, try heating the harmonica slightly above body temperature (you can use a hair dryer for this). This prevents the valves to get stuck.

## Holding the Harmonica

The harmonica is hold in the left hand, with it's upper body touched by the index finger, it's lower body hold with the thumb, and it's row of holes towards the player's mouth. Hole number 1 (the lowest note) should be on the left side. The right hand folds the back of the harmonica, forming a cup with your hands.



## Note Playing

The first hard – yet most essential – thing to do for every beginner harmonica player, is to blow in a single hole, thus playing a single note.

Place the harmonica against your lips. Close your lips, and make them like you want to kiss the harmonica. Touch the harmonica with your lips at hole 4. Try blowing without opening your lips. The air must escape through a very small hole in the middle of your lips, into hole 4. Don't blow hard, but instead blow gently through your diaphragm. Then try the same action, but instead of blowing, try drawing. Try this technique on holes 4 through 8. When you have mastered the technique, you must be able to blow in a specific hole alone. Don't continue to the next chapter before mastering this technique.

This method of playing the harmonica is called "single note pucker" or simply "pucker". There is also another method where you use your tongue to block harmonica's holes, named "tongue block", and others like the pucker-like "lip block" (turning the harmonica slightly upwards) and tongue-block-like "U-block" (blowing with the tongue directly in the holes). Those methods are not recommended, since they are harder to use, less flexible, and add more saliva and humidity to the harmonica.

When you are required to play a chord, you will need to open your lips slightly, so that air goes through more than one holes. After mastering the single note technique, chords will be no problem.

## Preparing a New Harmonica

New harmonicas are not ready to play like old ones. Most of them are not perfectly tuned, but manually tuning your harmonica is not recommended for beginners. Yet, there are more to work with.

When your harmonica is new, the reeds are hard. As you play they soften, and become more easy to play loud and bend (bending is an advanced technique you will learn later on). Then your harmonica will be ready.

To prepare your harmonica for playing, start playing in the middle notes (holes 4 – 8). Try not to breathe with force through your harmonica. Just breathe in it. Breathe from the diaphragm. You need to use the whole volume of your lungs in order to make your harmonica sound smooth. After you can fully control your breathing, try playing in the upper notes, and then in the lower ones. The first music pieces on this book are arranged so that you first play in the middle, then advance to the high, and then to the low holes of your harmonica.

## Get to Know your Harmonica

Each harmonica has a letter written on it. The letter represents the key it is tuned to. Harmonica tuning uses the richter tuning system, so that you can play chords that sound correct on the scale you play.

The following table describes the notes that 10-hole diatonic harmonicas will sound at each hole, based on the key of your harmonica (positive numbers are for blowing, negative are for drawing).

Key	Hole																			
	1	-1	2	-2	3	-3	4	-4	5	-5	6	-6	7	-7	8	-8	9	-9	10	-10
C	C	D	E	G	G	B	C	D	E	F	G	A	C	B	E	D	G	F	C	A
D $\flat$	D $\flat$	E $\flat$	F	A $\flat$	A $\flat$	C	D $\flat$	E $\flat$	F	G $\flat$	A $\flat$	B $\flat$	D $\flat$	C	F	E $\flat$	A $\flat$	G $\flat$	D $\flat$	B $\flat$
D	D	E	F $\sharp$	A	A	C $\sharp$	D	E	F $\sharp$	G	A	B	D	C $\sharp$	F $\sharp$	E	A	G	D	B
E $\flat$	E $\flat$	F	G	B $\flat$	B $\flat$	D	E $\flat$	F	G	A $\flat$	B $\flat$	C	E $\flat$	D	G	F	B $\flat$	A $\flat$	E $\flat$	C
E	E	F $\sharp$	G $\sharp$	B	B	D $\sharp$	E	F $\sharp$	G $\sharp$	A	B	C $\sharp$	E	D $\sharp$	G $\sharp$	F $\sharp$	B	A	E	C $\sharp$
F	F	G	A	C	C	E	F	G	A	B $\flat$	C	D	E	E $\sharp$	A	G	C	B $\flat$	F	D
F $\sharp$	F $\sharp$	G $\sharp$	A $\sharp$	C $\sharp$	C $\sharp$	E $\sharp$	F $\sharp$	G $\sharp$	A $\sharp$	B	C $\sharp$	D $\sharp$	F $\sharp$	E	A $\sharp$	G $\sharp$	C $\sharp$	B	F $\sharp$	D $\sharp$
G	G	A	B	D	D	F $\sharp$	G	A	B	C	D	E	G	F $\sharp$	B	A	D	C	G	E
A $\flat$	A $\flat$	B $\flat$	C	E $\flat$	E $\flat$	G	A $\flat$	B $\flat$	C	D $\flat$	E $\flat$	F	A $\flat$	G	C	B $\flat$	E $\flat$	D $\flat$	A $\flat$	F
A	A	B	C $\sharp$	E	E	G $\sharp$	A	B	C $\sharp$	D	E	F $\sharp$	A	G $\sharp$	C $\sharp$	B	E	D	A	F $\sharp$
B $\flat$	B $\flat$	C	D	F	F	A	B $\flat$	C	D	E $\flat$	F	G	B $\flat$	A	D	C	F	E $\flat$	B $\flat$	G
B	B	C $\sharp$	D $\sharp$	F $\sharp$	F $\sharp$	A $\sharp$	B	C $\sharp$	D $\sharp$	E	F $\sharp$	G $\sharp$	B	A $\sharp$	D $\sharp$	C $\sharp$	F $\sharp$	E	B	G $\sharp$

## Music Notation with Tablature

Tablature is a music notation method for a specific instrument. There are many tablature systems for the harmonica. In this book we will use the following sign conventions:



- A positive number (p.e. 5 or +5) means you have to blow on that hole.
- A negative number (p.e. -5) means you have to draw on that hole.
- A number that is larger than 10 is a chord. For example, 12 is the chord of blowing in holes 1 and 2 simultaneously, -567 is a draw of holes 5, 6 and 7, and so on. This method is for 10-hole diatonic harmonicas, so this notation is not a problem. For harmonicas (mostly chromatic) that have more than 10 holes, other notation systems are used.
- A number with a quote (p.e. 5') means you have to play on that hole by half-bending the note (you will learn this technique later on).
- A number with a double quote (p.e. 5'') means you have to play on that hole by full-bending the note (you will learn this technique later on).
- A number with a triple quote (p.e. 5''') means you have to play on that hole by over-bending the note (you will learn this technique later on).

Rests will be noted as blow on hole zero (0).

The big problem with tablatures is that note length and special techniques are not noted.

In this method we will use an additional line to show you the length of the note. In the timing line, length will be:

/1 for a whole note  
 /2 for a half note  
 /4 for a quarter note  
 and so on

Dotnote will be notated with a backslash (\) instead of a slash.

Staccato (momentary playing a note, and then pausing for the rest of it's time value) will be notated with a dot (.) instead of a slash.

Slide (a technique shown later on) will be notated with an equal sign (=) at the tab line.

Shake (a technique shown later on) will be notated with a curl (~) at the tab line

A plus sign (+) will note the addition of two times. For example, /2+/8 means you have to play the note for half a note, and without stopping, you should continue to play the note for an additional eighth note.

## \* Good Night Ladies (Merilly we Roll Along)

by Edwin Pearce Christy

TIME	/2	/2	/4	\2	/2	/2	/4	\2	/2	/2	/4	/2	/4	\4	/8	/4	/4	\2	/4
TAB	5	4	3	4	5	4	-4	-4	5	4	-5	-5	-5	5	5	-4	-4	4	0
TIME	\4	/8	/4	/4	/4	/4	/2	/4	/4	/2	/4	/4	/2						
TAB	5	-4	4	-4	5	5	5	-4	-4	-4	5	5	5						
TIME	\4	/8	/4	/4	/4	/4	/2	\4	/8	/4	/4	\2	/4						
TAB	5	-4	4	-4	5	5	5	-4	-4	5	-4	4	0						

## \* Ode to Joy (*Ode an die Freude*)

from Ludwig van Beethoven's Symphony No. 9 in D minor, Op. 125 "Choral"

```
TIME  /4 /4 /4 /4 /4 /4 /4 /4 /4 /4 /4 /4 \4 /8 /2 /4
TAB    5  5 -5  6  6 -5  5 -4  4  4 -4  5  5 -4 -4  0
TIME  /4 /4 /4 /4 /4 /4 /4 /4 /4 /4 /4 /4 \4 /8 /2 /4
TAB    5  5 -5  6  6 -5  5 -4  4  4 -4  5 -4  4  4  0
TIME  /4 /4 /4 /4 /4 /8 /8 /4 /4 /4 /8 /8 /4 /4 /4 /4 /4
TAB   -4 -4  5  4 -4  5 -5  5  4 -4  5 -5  5 -4  4 -4  3
TIME  /4 /4 /4 /4 /4 /4 /4 /4 /4 /4 /4 /4 \4 /8 /4
TAB    5  5 -5  6  6 -5  5 -4  4  4 -4  5 -4  4  4
```

## \* On Top of Old Smokey

American folk

```
TIME  /4 /4 /4 /4 \2 \2+/2
TAB    4  4  5  6  7 -6
TIME  /4 /4 /4 /4 \2+\2+/2
TAB   -5 -5  6 -6  6
TIME  /4 /4 /4 /4 \2 \2+/2
TAB    4  4  5  6  6 -4
TIME  /4 /4 /4 /4 \2+\2+/2
TAB    5 -5  5 -4  4
```

## \* Oh My Darling, Clementine

American folk

```
TIME  /8 /16 /4 /4 /8 /16 /4 /4 /8 /16 /4 /4 /8 /16 /2
TAB    4  4  4  3  5  5  5  4  4  5  6  6 -5  5  -4
TIME  /8 /16 /4 /4 /8 /16 /4 /4 /8 /16 /4 /4 /8 /16 /2
TAB   -4  5  -5 -5  5 -4  5  4  4  5  -4  3 -3 -4  4
TIME  /8 /16 /4 /4 /8 /16 /4 /4 /8 /16 /4 /4 /8 /16 /2
TAB    4  4  4  3  5  5  5  4  4  5  6  6 -5  5  -4
TIME  /8 /16 /4 /4 /8 /16 /4 /4 /8 /16 /4 /4 /8 /16 /2
TAB   -4  5  -5 -5  5 -4  5  4  4  5  -4  3 -3 -4  4
```

## \* Happy Birthday

TIME \4 /8 /2 /2 /2 /1

TAB 6 6 -6 6 7 -7

TIME \4 /8 /2 /2 /2 /1

TAB 6 6 -6 6 -8 7

TIME \4 /8 /2 /2 /2 /2 /2

TAB 6 6 9 8 7 -7 -6

TIME \4 /8 /2 /2 /2 /2

TAB -9 -9 8 7 -8 7

## \* Auld Lang Syne

American folk

TIME /4 \4 /8 /4 /4 \4 /8 /4 /4 \4 /8 /4 /4 \2

TAB 6 7 7 7 8 -8 7 -8 8 7 7 8 9 -910

TIME /4 \4 /8 /4 /4 \4 /8 /4 /8 /8 \4 /8 /4 /4 \2

TAB -910 89 8 8 7 -8 7 -8 8 -8 7 -6 -6 6 7

TIME /4 \4 /8 /4 /4 \4 /8 /4 /4 \4 /8 /4 /4 \2

TAB -10 9 8 8 7 -8 7 -8 -10 9 8 8 9 -910

TIME /4 \4 /8 /4 /4 \4 /8 /4 /8 /8 \4 /8 /4 /4 \2

TAB -910 89 8 8 7 -8 7 -8 8 -8 7 -6 -6 6 567

## \* Amazing Grace

Gospel song

TIME \8 /16 /2 \8 /16 /2 /4 /2 /4 /2

TAB 6 7 8 -8 7 8 -8 7 -6 6

TIME \8 /16 /2 \8 /16 /2 /4 /1

TAB 6 7 8 -8 7 8 -8 9

TIME \8 /16 /2 \8 /16 /2 /4 /2 /4 /2

TAB 8 9 8 -8 7 8 -8 7 -6 6

TIME \8 /16 /2 \8 /16 /2 /4 /1

TAB 6 7 8 -8 7 8 -8 7

## \* Camptown Races

by Stephen Foster

TIME /4 /8 /8 /4 /4 /4 /4 /2

TAB 6 6 6 5 6 -6 6 5

TIME /4 \2 /4 \2

TAB 5 -4 5 -4

TIME /4 /8 /8 /4 /4 /4 /4 /2

TAB 6 6 6 5 6 -6 6 5

TIME /4 /4 /4 /4 /1

TAB -4 -4 5 -4 4

TIME /4 /4 /4 /4 /1

TAB 4 4 5 6 7

TIME /4 /4 /4 /4 /1

TAB -6 -6 7 -6 6

TIME /4 /8 /8 /4 /4 /4 /4 /2

TAB 6 6 6 5 6 -6 6 5

TIME /4 /4 /4 /4 /1

TAB -4 -4 5 -4 4

## \* Oh! Suzana

by Stephen Foster

TIME /8 /8 /4 /4 /2 /8 /4 /4 /2 /8 /4 /4 /4 /4 \2

TAB 4 -4 5 6 6 -6 6 5 4 -4 5 5 -4 4 -4

TIME /8 /8 /4 /4 /2 /8 /4 /4 /2 /8 /4 /4 /4 /4 \2

TAB 4 -4 5 6 6 -6 6 5 4 -4 5 5 -4 -4 4

TIME /2 /2 /4 \2 /4 /4 /4 /4 /4 \2

TAB -5 -5 -6 -6 -6 6 6 5 4 -4

TIME /8 /8 /4 /4 /2 /8 /4 /4 /2 /8 /4 /4 /4 /4 \2

TAB 4 -4 5 6 6 -6 6 5 4 -4 5 5 -4 -4 4

## \* Swing Low, Sweet Chariot

Gospel song

```
TIME  /4 \2 /4 /2 /8 /8 /2
TAB   -7  6 -7  6  6  5 -4
TIME  /8 /8 /8 /8 /8 /8 /4 \2
TAB    6  6  6  6 -7 -8 -8 -8
TIME  /4 /8 /8 \2 /4 /4 /8 /8 /2
TAB    0  8 -8 -7 -8  6  6  5 -4
TIME  /8 /8 /8 /8 /8 /8 /4 \2
TAB    6  6  6  6 -7 -7 -6  6
```

## \* Blowin' in the Wind

by Bob Dylan

```
TIME  /2 /4 /4 /2 /4 /4 /2 /4 /4 /2 /2
TAB    6  6  6 -6  6 -5  6  5 -4  4  0
TIME  /4 \2 /4 /2 /4 /4 /1 \2
TAB    5  6  6 -6  6 -5  6  0
TIME  /4 /4 /2 /4 /4 /2 /4 /4 /2 /4 /4 /2 /2
TAB    5 -5  6  6  6 -6  6 -5  6  5 -4  4  0
TIME  /4 \2 /4 /2 /4 /4 /1 \2
TAB    5  6  5 -5 -5  5 -4  0
TIME  /4 /4 /2 /4 /4 /2 /4 /4 /2 /8 /4 /4 /2 /2
TAB    5 -5  6  6  6 -6  6 -5  6  6  5 -4  4  0
TIME  /4 \2 /4 /2 /4 /4 /1 \2
TAB    5  6  6 -6  6 -5  6  0

TIME  /4 /2 /4 /4 \2 /4 /4 /4 /4 /4 \2
TAB    5 -5 -5  5 -4 -4  5  5  5 -4  4
TIME  /4 /2 /4 /4 /4 /4 /4 /4 /1 \2
TAB    5 -5 -5  5 -4 -4  4 -4  4  0
```

## \* She'll Be Comin' 'Round the Mountain

Children song

```
TIME  /4  /4  /4  /4  /4  /4  /4  /4  /4  /4  /4  /1
TAB    6  -6   7   7   7   7  -6   6   5   6   7

TIME  /4  /4  /4  /4  /4  /4  /4  /4  /4  /4  /4  /1
TAB    7  -8   8   8   8   8   9   8  -8   7  -8

TIME  /4  /4  /4  /4  /4  /4  /4  \2  /4  /4  /4  /4  /4  \2
TAB    9   -9   8   8   8   8  -8   7   7   7  -6   7   7   7

TIME  /4  /4  /4  /4  /4  /4  /4  /4  /4  /4  /4  /4  /1
TAB   -8   7  -7  -6   6   7   7   7   8  -8   7  -6   7
```

## \* Tha mi sgith

Scottish Air

```
TIME  /4  /4  /2  /4  /4  /2  \4  /8  /4  /4  /4  /4  /4  /4
TAB   -4  -4  -8   7  -6   7  -6   6   5  -4   4  -4   5   4

TIME  /4  /4  /2  /4  /4  /2  \4  /8  /4  /4  /2  /2
TAB   -4  -4  -8   7  -6   7  -6   6   5  -6  -4  -4

TIME  \4  /8  /4  /4  /4  /4  /4  /4  \4  /8  /4  /4  /2  /2
TAB   -6   6   5  -4   4  -4   5   4  -6   6   5  -4   5   7

TIME  \4  /8  /4  /4  /4  /4  /4  /4  \4  /8  /4  /4  /2  /2
TAB   -6   6   5  -4   4  -4   5   4  -6   6   5  -6  -4  -4
```

## \* Perhaps, Perhaps, Perhaps

by Cake

```
TIME  /8  /8  /8  /8  /8  /8  /4  /2
TAB    4  -4   5  -5   5  -5  -4   0

TIME  /8  /2+/8  /8  /8  /8  /8  /8  /8  /2
TAB   -4   6       5   6   5  -5  -4   0   0

TIME  /8  /2+/8  /8  /8  /8  /8  /8  /8  /2
TAB   -4   6       5   6   5  -6  -5   0   0

TIME  /8  /8  /4  /8  /8  /4  /8  /8  /4
TAB   -4  -5   0  -4   5   0   4  -4   0

TIME  /8  /8  /8  /8  /8  /8  /4  \4
TAB    6   7   7   7   7  -7  -5   0
```

```

TIME /4 /4 /8 /2 /4 /4 /4 \4
TAB 7 -7 -5 0 -7 -6 5
TIME /8 /8 /8 /8 /8 /8 /4 \4
TAB 6 7 7 7 7 -7 -5 0
TIME /8 /8 /4 /8 /2 /8 /8 /4 /4 \4
TAB 7 7 -7 -5 0 -7 -7 -6 6 0

```

```

TIME /8 /8 /8 /8 /8 /8 /4 /2
TAB 4 -4 5 -5 5 -5 -4 0
TIME /8 /2 /8 /8 /8 /8 /8 /8 /8 /2
TAB -4 6 0 5 6 5 -5 -4 0 0
TIME /8 /2 /8 /8 /8 /8 /8 /8 /8 /2
TAB -4 6 0 5 6 5 -6 -5 0 0
TIME /8 /8 /4 /8 /8 /4 /8 /8 /4
TAB -4 -5 0 -4 5 0 4 -4 0

```

## Bending

Bending is the method used to produce a lower pitch note than the one that would sound when playing normally on a specific hole. Bending is achieved by driving the air down through your mouth.

Draw on hole 2 of your harmonica. As you are drawing, move quickly your tongue in the back of your mouth, at the bottom of your jaw. You'll hear the note changing it's pitch. This is bending.

Better bending can be achieved if you tighten your lips and jaw while bending.

When bending, you can produce three different sounds: slightly changing the pitch is called half bend, changing the pitch a semitone is called full bend, and changing the pitch a whole tone is called overblow (or overdraw, based on the direction of the air).

Notes on holes 1 to 6 can be bent by drawing and overbent by blowing, while notes on holes 7 to 10 can be bent by blowing and overbent by drawing.

The following table displays all the notes, including bends, on a C diatonic harmonica.

''	Eb	Ab	C	Eb	F#	Bb				Bb
"								Eb	F#	B
+	C	E	G	C	E	G	C	E	G	C
<b>hole</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
-	D	G	B	D	F	A	B	D	F	A
'	C#	F#	Bb	C#		Ab				
"		F	A							
'''			Ab				C#	F	Ab	C#

## \* Por una cabeza

by Carlos Gardel

```
TIME /8 /8 /8 /8 /8 /8 /4 /8 /8 /8 /8 /8 /4
TAB 4 -4 -4' 5 -5 5 0 -4' 5 -5 6 -7 -6 0

TIME /8 /8 /8 /8 /8 /8 /8 /8 \4 /8 /8 \4
TAB 7 -8 -7 7 6 -7 6 -6 6 5 -4 0

TIME /8 /8 /8 /8 /8 \4 /8 /8 /8 /8 /8 \4
TAB -8 7 8 -8 -7 0 -7 -6 7 -7 6 0

TIME /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 \4
TAB 6 -6 -6 -7 7 -7 6 -5 5 6 5 -4 4 0

TIME /8 /8 /8 /8 /8 /8 /4 /8 /8 /8 /8 /8 /4
TAB 4 -4 -4' 5 -5 5 0 -4' 5 -5 6 -7 -6 0

TIME /8 /8 /8 /8 /8 /8 /8 /8 \4 /8 /8 \4
TAB -6 -7 7 -6 -7 -6 -7 7 -7 -6 -5 0

TIME /8 /8 /8 /8 /8 /8 /8 /8 /8 /16 /16 /8 /8 /8 /8 /4
TAB -7 -6 -5 -4 4 -3 4 -4 5 -5 -6 6 -5 -6 5 0

TIME /8 /8 /8 /8 /4 /4 /8 /8 /8 /8 /8 /1
TAB -6 -7 7 -6 -7 -5 6 -6 -7 6 -6 0

TIME /4 /8 /4 /8 /2 /2 /4 /4 /8 /4 /8 /2 /2 /4
TAB 7 7 -8 8 8 -7 0 -6 -6 -7 7 7 6 0

TIME /4 /8 /4 /8 /2 /8 /8 /8 /8 /2 /8 /8 /8 /8 /2 /2 /4
TAB -5 -5 6 -6 -6 -6 -7 7 -6 -7 -6 -7 7 -6 7 -7 0

TIME /4 /8 /4 /8 /2 /2 /4 /4 /8 /4 /8 /2 /2 /4
TAB 7 7 -8 8 8 -7 0 -6 -6 -7 7 7 6 0

TIME /4 /8 /4 /8 /2 /8 /8 /8 /8 /2 /8 /8 /8 /8 /1 /4
TAB -5 -5 6 -6 -6 -6 -7 7 -6 -7 -6' -6 -7 -6' -6 0
```



## \* Theme from Danube Waves

by Joseph Ivanovici

TIME /4 /4 /1 /4 /4 /1 /4 /4 /1 /4 /4 /1

TAB 0 5 5 -6' -6 -7 -6' 5 7 -7 -6 8

TIME /4 /4 /1 /4 /4 /1 /4 /4 /1 /4 /4 /1

TAB 0 8 -9 8 -8 8 -8 7 -7 5 7 -6

## \* Theme from Jesu, Joy Of Man's Desiring

BWV 147 by Johann Sebastian Bach

TIME /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8

TAB -2 -3" -3 -4 4 4 5 -4 -4 6 5"' 6 -4 -3 -2 -3" -3

TIME /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8

TAB 4 -4 5 -4 4 -3 -3" -3 -2 -2' -2 -3" -4 5"' -6 7 -7

TIME /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8

TAB -6 7 -2 -3" -3 -4 4 4 5 -4 -4 6 5"' 6 -4 -3 -2

TIME /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8

TAB -3" -3 2 -4 4 -3 -3" -2 -1 -2 -2' -2 -3 -4 6 -4 -3

TIME /8 /8 /8 /1

TAB 6 -3 -4 -47

## \* Habanera

from Georges Bizet' Carmen Suite

TIME /4 /4 /8 /8 /8 /8 /4 /4 /4 /8 /8

TAB -4 -4' 4 4 0 4 -3 -3' -3" -3" -3"

TIME /4 /4 /16 /8 /8 /8 /8 /4 /4 /4 /2

TAB -3"' -2 -2" -2 -2" 2 -2" -2 -2" 2

TIME /4 /4 /8 /8 /8 /8 /4 /4 /4 /8 /8

TAB -4 -4' 4 4 0 4 -3 -3' -3" -3" 0

TIME /4 /4 /4 /16 /8 /8 /8 /8 /4 /4 /2

TAB -3" -2 -2" 2 -2" 2 -1 2 -2" 2 -1

TIME /8 /4 /4 \4 /8 /4 /4 \4  
 TAB -3" -1 2 -2' -3" -2' 2 -1  
 TIME /8 /4 /4 /8 /8 /8 /8 /4 /4 /4  
 TAB 2 -2' -2 -3" -3" -3" -3" -3 -3" -2  
 TIME /8 /4 /4 \4 /8 /4 /4 \4  
 TAB -3 2 -2' -2 -3 -2 -2' 2  
 TIME /8 /4 /4 /8 /8 /8 /8 /4 /4 /4  
 TAB -2' -2 -3" -3 -3 -3 -3 -4' -3 -3"  
 TIME /8 /4 /4 \4 /8 /4 /4 \4  
 TAB -6 -8 8 9' -3" -2' 2 -1  
 TIME /8 /4 /4 /8 /8 /8 /8 /4 /4 /4  
 TAB 2 -2' -2 -3" -3" -3" -3" -4 -4' -3"  
 TIME /8 /4 /4 \4 /8 /4 /4 \4  
 TAB -7 8 9' 9 -3 -2 -2' 2  
 TIME /8 /4 /4 /4 /4 /8 /8 /16 /16 /8 /8 /1  
 TAB -2' -2 -3" -4' -3 -3" -2 -3" -2 -2' 2 -1

## \* Hungarian Dance no 5 in G minor

by Johann Brahms

TIME \2 /4 \2 /4 \2 /8 /8 /1 \2 /8 /8 /1 /4 /4 \4 /8 /1  
 TAB -3" -4 -5 -4 -4' -4 5 -4 -3' 4 -4 -3" -2 -2" 2 -3" -1  
 TIME \2 /8 /8 \2 /4 \2 /8 /8 /1  
 TAB -3" -4 -5 -6 -5 5 -5 6 -5  
 TIME /8 /8 /4 /8 /8 /4 \2 /4 /4 /4 \4 /8 /2 /4 /4  
 TAB -3' 4 -4 -3" -3' 4 -2 -2" -2 -2" 2 -3" -1 -1 0  
 TIME /2 /2 \2 /4 /4 /2 /8 /8 /8 /8 /8 /8 \4  
 TAB -6 -6 -6"' -6 0 6 5"' 6 -6 6 5"' -6 6 0  
 TIME /2 /2 \2 /4 /4 /2 /8 /8 /8 /8 /8 /8 /8 \4  
 TAB 6 6 -6 6 0 -5 5 -5 6 -5 5 6 -5 0  
 TIME /2 /2 /4 /2 /2 /2 /8 /8 /8 /8 /8 /8 /4 /4  
 TAB 5 5 6 -5 5 -4 -4' -4 5 -4 -4' 5 -4 0  
 TIME /4 /2+8 /8 /2 /2 /4 /2 /8 /8 /8 /8 /8 /8 /4 /4  
 TAB -6 0 -3" -3 -4' -4 -4 -4' -4 5 -4 -4' 5 -4 0

## Chords

Most diatonic harmonicas are tuned in the richter system, allowing you to play specific chords easily. In general, on all diatonic harmonicas you can play the following chords:

by playing Straight harp:

- I maj            all on blows holes 1-3, 4-6, 7-9
- II min           on draw hole 4-6
- V maj/maj-7<sup>th</sup> on draw hole 2-5 (2-4 for major)

by playing Cross harp (explained at the "Playing Positions" chapter):

- I maj/maj-7<sup>th</sup> on draw hole 2-5 (2-4 for major)
- IV maj           all on blows holes 1-3, 4-6, 7-9
- V min           on draw hole 4-6

by playing Third position (explained at the "Playing Positions" chapter):

- I maj           on draw hole 4-6
- IV maj           on draw hole 2-4

Specifically, on a C diatonic harmonica you can play the following chords:

Name	Tab
C	Any blow on three or more holes
C5	34, 67, 910
Dm	-456, -8910
Dmsus4 6 <sup>th</sup>	-23456
Dm 6 <sup>th</sup>	-3456, -34567, -4567, -45678, -5678, -56789, -6789, -678910, -78910
Fb5	-567

You can also play some chords with missing notes.

Name	Miss	Tab
C	5	12, 45, 78
Em	5	23, 56, 89
G	5	-23
Aadd9	3,5	-67
Dsus4	5	-12
Dsus4 6 <sup>th</sup>	5	-123, -234, -1234

Name	Miss	Tab
Dmsus4 6 <sup>th</sup>	5	-2345
D 6 <sup>th</sup>	3,5	-34, -78
D 6 <sup>th</sup>	3	-678
F	5	-56

## Scales

Here are listed some common scales played on the harmonica, along with the music genres that those scales are most common in.

### ***C Major***

Common in: folk, rock

on C diatonic: 4 -4 5 -5 6 -6 -7 7

### ***G Major***

Common in: blues, folk, rock

on G diatonic: 4 -4 5 -5 6 -6 -7 7

### ***F Major***

Common in: horn/brass music

on F diatonic: 4 -4 5 -5 6 -6 -7 7

on C diatonic: -5 6 -6 -7 ' 7 -8 8 -9

### ***D Major***

Common in: folk

on D diatonic: 4 -4 5 -5 6 -6 -7 7

### ***Bb Major***

Common in: blues, horn/brass music

on Bb diatonic: 4 -4 5 -5 6 -6 -7 7

### ***Eb Major***

Common in: horn/brass music

on Eb diatonic: 4 -4 5 -5 6 -6 -7 7

## ***A Major***

Common in: blues, folk, rock

on A diatonic: 4 -4 5 -5 6 -6 -7 7

## ***E Major***

Common in: blues, rock

on E diatonic: 4 -4 5 -5 6 -6 -7 7

## ***Pentatonic (Blues Scale)***

Common in: blues

on C diatonic: 3 -3' 4 -4' -4 -5 6 -7 -7' 7 -8' -8 -9 9

## **Playing Positions**

Some times you can play a piece in a different scale than the key of the harmonica you use. Then we say that you play in a different position. For example, if you have a harmonica in the key of C and you are playing a piece in the key of G, then you are playing in 2<sup>nd</sup> position, (aka cross harp). This technique is very common in blues music, in order to bend – instead of play normaly – specific notes.

The positions in harmonica are:

<b>Position</b>	<b>Mode</b>	<b>Scale Type</b>	<b>Scale in C harp</b>	<b>Tonic Notes</b>	<b>Music type</b>
1st Position / Straight Harp	Ionian	Major	C	1, 4, 7 and 10	folk and pop
2nd Position / Cross Harp	Mixolydian	Major	G	2 / +3, 6 and 9	blues and jazz
3rd Position / Slant Harp	Dorian	Minor	D	-1, -4, and -8	minor-key folk and blues
4th Position	Aeolian	Minor	Am	-3', -3, -7, and -11	folk ballads
5th Position	Phrygian	Minor	E	2', 2, 6, 10	
6th Position	Locrian	Minor	B	-4', -4, -8, and -12	
12th Position	Lydian	Major	F	-2', -2', -6, and -10	

The scales and the harmonicas you have to use to be able to play those scales by bending, are:

### Music Scale    Harp Scale

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

### \* Old Joe Clark

```

TIME \8 /16 /4 /4 \8 /16 /4 /8 \4
TAB  -4 -4 5 -5 5 5 -4 4 -3

TIME /4 /4 /4 /8 \4
TAB  -4 5 -5 5 -4

TIME \8 /16 /4 /4 /4 /4 /8 \4
TAB  -4 -4 -4 -5 5 -4 4 -3

TIME /4 /4 /4 /8 \4
TAB  3 -3 -3" -3" 3

TIME /4 /4 /2 /4 /8 \4
TAB  3 3 3 -4 4 -3

TIME /4 /4 /4 /8 \4
TAB  3 3 3 -3 -3"

TIME /4 /4 /2 /4 /8 \4
TAB  3 3 3 -4 4 -3

TIME /4 /4 /4 /8 \4
TAB  3 -3" -3" -3" 3

```

## \* El Choclo

by Angel G. Villoldo (Originally in D minor, transcribed in Eb major to play it easily on a C harp.)

```
TIME /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /16 /16 /4 /8
TAB 5 5 -5 -5 5 5 -6 -6 7 7 -9 -9 9 -9 8 8
TIME /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /16 /16 /4 /8
TAB 8 8 -10 -10 8 8 7 7 -8 -8 7 7 -8 7 -7 -7
TIME /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /16 /16 \4
TAB 5 5 -5 -5 5 5 -6' -6' -7 -7 -9 -9 9 -9 8
TIME /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /16 /16 /4 /8
TAB 8 8" 8 10' -9"' -9"' 8 8 -8 -8 7 -7 7 -7 -6 -6
TIME /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /16 /16 /4 /8
TAB 5 5 -5 -5 5 5 -6 -6 7 7 -9 -9 9 -9 8 8
TIME /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /16 /16 /4 /8
TAB 8 8 -10 -10 8 8 -7"' -7"' 8 8 9 9 -10 9 -9 -9
TIME /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /16 /16 /8
TAB -5 -5 -9 -9 8 8 -8 -8 7 7 -7 -7 7 -7 -6
TIME /8 /8 /8 /8 /8 /8 /16 /16 /8
TAB -6 -6 7 -7 -6 -6 -7 -6 -6'
TIME /8 /8 /8 /8 /8 /4 \4
TAB -7 -7 -8 7 -7 -6 0
```

```
TIME /8 /8 /8 /8 /4
TAB 5 4"' 5 -987 -987
TIME /8 /8 /8 /8 /8 /8 /4
TAB -987 9 -9 8 8" -9 8
TIME /8 /8 /8 /8 /8 /4
TAB -7 -8 7 -6 7 -7
TIME /8 /8 /8 /8 /8 /4 /4 /8
TAB -5 -7 -6 6 5"' -6 65 0
TIME /8 /8 /8 /8 /4
TAB 5 4"' 5 -876' -876'
TIME /8 /8 /8 /8 /8 /4 /2
TAB -876' 8 -8 7 -7 -8 75
TIME /8 /16 /16 /8 /8 /8 /8 /8 /8 /8 /8 /4 \4
TAB 7 -8 7 -7 -6 -6' -6 -7 7 -8 8" 8 0
```

```

TIME /8 /8 /8 /8 /8 /8
TAB 5 8 -7''' -6 5 0
TIME /8 /8 /8 /8 /8 /8 /16 /16 \4
TAB -7''' -6 5 -6 -7''' -8 8 -8 -7
TIME /8 /8 /8 /8 /8 /8
TAB 5 -8 -7 -6' 5 0
TIME /8 /8 /8 /8 /8 /8 /16 /16 \4
TAB -6' 5 -6' -7 -8 -7''' -8 -7''' -6
TIME /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /16 /16 \4
TAB 5 -7''' -7 6''' 5''' -5 5''' -6' 6''' -7 -7''' 8 9' 8 -8
TIME /8 /8 /8 /8 /16 /16 \4 \
TAB -7 6''' -7 -7''' -8 -7''' -7 |_ 1st time
TIME /8 /8 /8 /8 /16 /16 \4 |
TAB -6 -7 -6 -6 -7 -6 -6' /
TIME /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /4 \
TAB 5''' -8 -7''' -7''' -7 6''' -7 5''' -6 -6' -7 -6 |_ 2nd time
TIME /8 /16 /16 /8 |
TAB 5 5''' -6' -6 /

```

## Advanced Techniques

These techniques are used to add color to your playing.

### ***Choking***

Try whispering the word "duck" in the harmonica. You will notice that the "ck" sound produces a chocking sound.

### ***The Train Whistle***

Try whispering the word "too-wee" in the harmonica, while bending. You should get a sound similar to the train whistle. This effect is mostly used in railroad music.



## \* The Yellow Dog Drag

by Ron Manus and Steven Manus

In this piece, play all bends using the train whistle effect, and all other notes using the chocking effect.

TIME /1

TAB -45"

four times, steadily increasing speed:

TIME /4 /4 /4 /4

TAB -12 -12 -12 -12

three times:

TIME \8 .16 \8 .16 \8 .16 \8 .16

TAB -34 -34 45 45 -34 -34 45 45

once:

TIME \8 .16 \8 .16 \8 .16 \8 .16

TAB -34 -34 45 45 -45 -45 45 45

§

twice:

TIME \8 .16 \8 .16 \8 .16 \8 .16

TAB 56 56 -56 -56 56 56 -56 -56

once:

TIME \8 .16 \8 .16 \8 .16 \8 .16 \8 .16 \8 .16 \8 .16

TAB -34 -34 45 45 -34 -34 45 45 -34 -34 45 45 -45 -45 45 45

TIME /1 .4 \2

TAB -4" 4 4

TIME \8 .16 \8 .16 \8 .16 \8 .16 \8 .16 \8 .16 \8 to Coda ⊕

TAB -34 -34 45 45 -34 -34 45 45 -34 -34 45 45 -34

TIME /2 /4 /4

TAB -45" -45 -45

TIME /8 /8+\2

TAB -45" -34

TIME /2 /4 /4

TAB -45" -45 -45

TIME /8 /8+\2 D.S. al Coda

TAB -45" -34

Coda 

Four times, steadily slowing down:

TIME /4 /4 /4 /4

TAB -12 -12 -12 -12

once:

TIME /1

TAB -45"

## ***Vibrato***

Vibrato is the effect produced by continuously opening and closing the back of your harmonica using your right hand. It sounds like a vibrating note, hence the name.

You can produce a more subtle vibrato by placing your right hand more horizontally at the back of your harmonica, almost placing your middle finger against the back of your harmonica. Now you can produce the vibrato by moving only your middle finger. This is called finger vibrato.

You can produce a more expressive vibrato by using your mouth. Shape your mouth like saying "ioioioioio". This is called mouth vibrato.

Try adding vibrato to the pieces you already learned, in order to make them more sound-rich.

## ***Slide***

Slide is produced by sliding the harmonica on your mouth.

## ***Shake***

The shake is produced when you slide the harmonica on your mouth while you keep blowing, sliding from the first note to the second, and back to the first, and so on.

## **\* Theme from Toreador**

from Georges Bizet' Carmen Suite

TIME \4 /8 \4 /8 /8 /8 /8 /8 \4

TAB 5=8 8" 8 8" 8 -8 7 -7 7

TIME /8 /8 /8 /8 /8 \4 /8 /8 /8 /8 /8 \4

TAB -7 7 -7 -6 -6' -6 6 -5 5 -5 5 -4

TIME \4 /8 /4 /8 /16 /16 /8

TAB -4=-9 -9 -9 -9 8 -8 7

TIME /8 /8 /8 /4 /8 /16 /16 /8

TAB 6 7 -8 -8 -8 7 -7 -6

TIME /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 /8 \16 \16 \16 /8

TAB 5 -6 6"' -5~ -4 -5~ 6"' 7~ -8~ 8~ -9 0 8 8" 8 -10

## **Rythmic Chords**

Open your mouth so that you can blow on three holes. Cover the two of them with your tongue. Now blow, release your tongue from the holes, and block again the two holes with your tongue. The two holes serve as the accompaniment chord. Use this technique to add accompaniment chords to your playing.

## **Uncommon Techniques**

Most of these techniques are credited to Pat Missin ([www.patmissin.com](http://www.patmissin.com)), and can sometimes be usefull to extend your harmonica playing abilities beyond the common harmonica player.

### ***Simultaneous blow/draw chords***

Use your hands to perfectly seal the back of your harmonica. Blow hard in the lower holes. The air driven through the blow reeds will return in the slots and activate the draw reeds. With practice you will be able to use this technique on all the holes of your harmonica.

### ***Circular breathing***

This technique allows you to play vely long notes.

Fill your mouth with water. Now, slowly push the water out of your mouth by using your tongue as a piston, while at the same time you breathe normally. Now, use the same technique with your harmonica: Blow in the 5<sup>th</sup> hole, as soon as you run out of air, use your tongue to drive air through your harmonica, while you inhale air. Now you are ready to blow normally into your harmonica once again.

You can use the same technique for draw notes.

### ***Sustain***

Sustain (or Drone) is a note that is continously played along with the actual melody. Sustain notes are very common in Byzantine, Scottish, Irish, Celtic, and Balcan music.

You can play sustained notes by using your tongue to block the holes between the note sustained and the note playing the melody (the air is driven through the sides of your tongue).

In the harmonica you can only sustain draw notes against the draw notes of the melody, and blow notes against the blow notes of the melody. You can also take advantage of the fact that the 2<sup>nd</sup> draw and 3<sup>rd</sup> blow reeds are the same note.

### ***Other Non-popular techniques***

There are also many other not-so-poppular techniques that can be applied to the harmonica, that can be utilized while you get expertise on the harmonica. These techniques fall in the field of harmonica improvisation, can be used to make your harmonica's sound ritcher, and are not officially used in harmonica scores.

## **Notes on Chromatic Harmonicas**

Chromatic harmonicas differ from diatonic ones by a button on the right side of the harmonica. This button allows you to increase the pitch of every note by a semitone. Chromatic harmonicas are

mostly used in classical and tango music, since these genres make extensive use of various chromatic notes.

When buying a chromatic harmonica, you should check that your harmonica has at least three full octaves (12 holes). The Hohner Chrometta 12 is a classic, but Hohner now produces many chromatic harmonica models for amateur or professional use. You should also check that your harmonica is tuned in the key of C.

The following table describes the notes for the 12-hole chromatic harmonica in C.

Button	Hole																							
	1	-1	2	-2	3	-3	4	-4	5	-5	6	-6	7	-7	8	-8	9	-9	10	-10	11	-11	12	-12
Out	C	D	E	F	G	A	C	B	C	D	E	F	G	A	C	B	C	D	E	F	G	A	C	B
In	Db	Eb	E#	Gb	Ab	Bb	Db	B#	Db	Eb	E#	Gb	Ab	Bb	Db	B#	Db	Eb	E#	Gb	Ab	Bb	Db	B#

Remember to heat your chromatic harmonica slightly above body temperature before playing, by using a hair dryer or a similar device. This prevents the valves from getting stuck. With sticking valves you won't be able to play the harmonica.

Start playing the chromatic as learning a new instrument. The chromatic differs from the diatonic just as the electronic keyboard differs from piano. Try playing all the pieces you learned in this book with your chromatic, by replacing bends with the button press, to produce the target semitone sound. Remember that chromatic and diatonic holes do not produce the same note (check the note table above).

## Harmonica Tuning and Repair

**WARNING!** If you are willing to use the techniques described in this chapter, you are highly recommended to experiment on cheap harmonicas before proceeding on tuning and repairing an expensive harmonica. If you don't want to experiment on these techniques, there are trained professionals who can do modifications and tuning to your harmonica.

### Required Tools

- 1 small straight screwdriver
- 1 small cross (philips) screwdriver
- 1 steel metal plate up to 0.25 mm thick
- toothpicks
- 1 sanding detailer
- 1 embossing tool (ball ended tool)
- 1 sharp blade (preferably brass)
- 1 tuner

### Optimizations

If your harmonica uses screws, disassemble and reassemble your harmonica to make it more airtight.

When you have learned to play the harmonica, it's better to lower the reeds so they are closer to the slot. This makes them more responsive. Read the "Reed Adjustment" paragraph on how to do this.

If your harmonica has sharp edges, you can use a sandpaper to smoothen them, to prevent lip and hand cuts while playing. Start with 180 to 240 grit sandpaper, and finish with 320 to 600.

## ***Cleaning***

Take the harmonica apart.

Remove gently any non-harmonica object that may have stuck in it, such as hair, lint, food particles, or even burr.

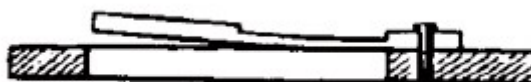
Make sure you don't modify any of the reeds configuration.

## ***Reed Aligment***

Look at the reed sraight through the light, to ensure the reed is misaligned before proceeding. Using a toothpick, push the reed at it's side to realign it, while looking at the reed through the light, to ensure correct movement.

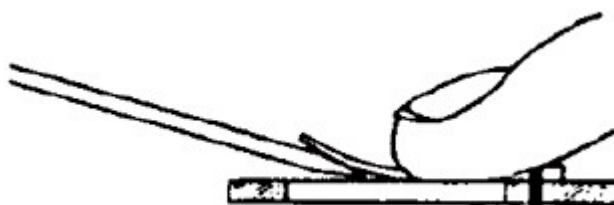
## ***Reed Adjustment***

Ideally, each reed's base and lower half should be as close to the reedplate as possible, always in parallel with the reedplate, while it's upper half should be gently curved upwards. Longer reeds should be more curved, while shorter should be little or not at all. The reed must never lean towards it's slot or touch the reedplate, as in the image.



Always start by adjusting the base of the reed, and end by adjusting it's tip.

To increase a reed's response, gendly press the reed at it's base using your thumb, towards it's slot. Then, increase the reed's curve as needed.



To curve the reed's whole upper half, use your finger to hold the lower half in place, while using a toothpick to pull the upper half out of the slot, as in the image.

To curve a specific area of the reed, place a metal plate under the reed (between the reed and the reedplate), and use a toothpick to press the reed at the right place to achieve the desired curving.

## ***Embossing***

Embossing is the proccess of reducing the width of a slot, thus making the slot more airtight.

For the upper half of the reed, use a ball-ended tool to press the edge of the reed inside it's slot, resulting in pressure at the slot's walls.

For the lower half of the reed, use a sharp blade.

At all times, make sure the reed does not touch the embossed sides while vibrating.

## ***Tuning***

**WARNING!** Repair and optimization actions on the harmonica may change the reeds tuning. Always tune your harmonica after repairs, embossing and optimizations. Always warm your harmonica before tuning it (warm reeds produce lower pitches, and when you play the harmonica gets warm, so you want the right pitch on a warm harmonica).

To tune a reed:

- Support the reed, by placing a sheet of paper under it.
- Using the sanding detailer, remove metal from the reed. Always remove metal from a small area along the length of the reed. Don't press hard, because you may change the reed curve. To increase pitch, remove metal near the tip, and to decrease remove near the base of the reed.
- Use the tuner to test the tuning every a couple of strokes.

## ***Repairs***

### **A note does not play**

There are several reasons that make a note not to play:

- Something is blocking the reed. Disassemble the harmonica and clean it.
- The reedplates are placed incorrectly. Disassemble the harmonica and reassemble it correctly.
- The reed is adjusted incorrectly. Readjust the reed.
- The reed is broken. Replace the reedplate.

### **A note plays with a buzz sound**

Eather there is something blocking the free movement of the reed and you need to clean your harmonica, or the reed is misaligned and you need to realign it.

### **A note plays with a high pitch squeal**

Eather you are playing incorrectly, or the reed has problems. To correct reed problems, apply some nail polish in the corners at the base of the reed.

### **A note takes too much air to play**

Eather the harmonica is not airtight, or the reed is misaligned. Disassemble and reassemble the harmonica. If the problem persists, realign the reed.

### **It takes too much air to play the harmonica, and the notes sound weak**

The harmonica is not airtight. Disassemble and reassemble the harmonica.

### **A note sounds out of tune**

Make sure you are not overblowing or overdrawing (this may happen to beginners). If you are not and the notes still sound out of tune, tune the harmonica.

**The reed sticks or does not play as it should**

The reed is too close to the reedplate. Increase the gap between them.

**A reed has been completely broken**

Replace the reedplate with a new one.

END OF DOCUMENT