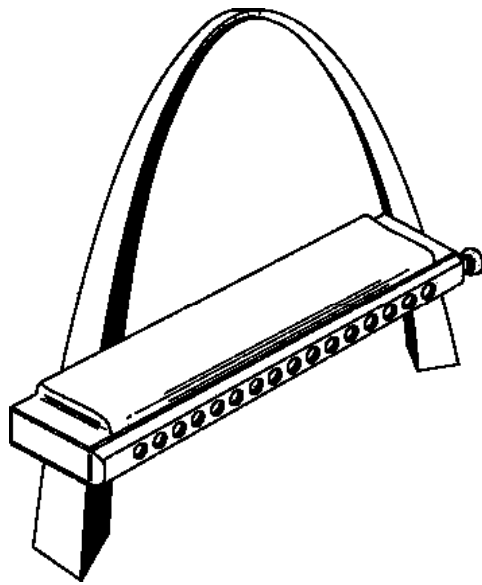


Student Guide for  
SOLO-TUNED HARMONICA  
(Part II — Chromatic)

Presented by



The Gateway Harmonica Club, Inc.

St. Louis, Missouri

To participate in the course **Solo-Tuned Harmonica (Part II — Chromatic)**, the student must have . . .

- a 12- or 16-hole chromatic harmonica in the key of C

. . . and must have completed the course **Solo-Tuned Harmonica (Part I — Diatonic)** or must have previously learned the basic harmonica skills covered in that course.

This course is designed to teach beginner level chromatic players the basics of playing the 12-hole or 16-hole solo-tuned chromatic harmonica, which is tuned differently from the 10-hole chromatic instrument.

Students in this course will learn:

- how the chromatic scale differs from the diatonic scale
- where the notes of the chromatic scale are located on the solo-tuned harmonica
- the meaning of various musical notations and symbols used in standard staff notation
- how to use this knowledge in playing a number of familiar melodies presented in this coursebook as well as in various published sources.

Basics of scales, pitch and rhythm presented in the **Part I** course will be expanded upon to include additional musical concepts helpful to the chromatic harmonica player.

# MUSIC FUNDAMENTALS FOR THE SOLO-TUNED CHROMATIC HARMONICA

The course **Solo-Tuned Harmonica (Part I — Diatonic)** provided instruction in three basic musical concepts:

- SCALE -- a series of musical tones arranged in a sequence of rising or falling pitches
- PITCH -- the “highness” or “lowness” of an individual note
- RHYTHM -- the pattern in time made by a series of notes

This course provides additional instruction on all of these topics as they apply to the chromatic harmonica as well as to other musical instruments:

## STAFF NOTATION

As in the **Part I** course, this course is based on the use of staff notation, the most widely understood system of written symbols used by musicians of Western Civilization over a period of many centuries. This system uses symbols such as these . . .



. . . to indicate the highness and lowness (pitch) of notes and also to indicate the patterns in time (rhythm) in which they are to be sung or played.

The present course will help the student to understand further what these and other symbols tell us about **pitch and rhythm**.

But before we consider those topics, we must take a further look at the subject of **scales** as they apply to the **chromatic harmonica**.

# SCALES

In Part I we learned that a scale is an ascending sequence of musical tones or pitches, and that a major diatonic scale is a sequence of eight musical tones spanning an octave, commonly known by the syllable names ...

DO RE MI FA SO LA TI DO

We also learned that as they relate to specific fixed pitches, tones are identified by letter names, and that for the major diatonic scale in the key of C the letter names of the eight notes are ...

C D E F G A B C

## PLAYING THE MAJOR DIATONIC SCALE ON THE CHROMATIC HARMONICA

The major diatonic scale provides most of the notes that make up the vast majority of all music played in Western culture. In the key of C, this scale is played in the exact same manner on the solo-tuned chromatic harmonica as you learned to play it on the solo-tuned diatonic harmonica.

**EXERCISE:** To review, let's play the eight notes in our middle octave in the pattern of blowing, drawing and moving that produces the C major scale. Starting on hole 5, play the following sequence:

BLOW 5 then DRAW 5 then MOVE TO HOLE 6  
BLOW 6 then DRAW 6 then MOVE TO HOLE 7  
BLOW 7 then DRAW 7 then MOVE TO HOLE 8  
DRAW 8 then BLOW 8

Next practice playing **down** the scale using the same routine

BLOW 8 then DRAW 8 then MOVE TO HOLE 7  
DRAW 7 then BLOW 7 then MOVE TO HOLE 6  
DRAW 6 then BLOW 6 then MOVE TO HOLE 5  
DRAW 5 then BLOW 5

Even though you have already learned this sequence, continue to practice repeating these patterns of blowing, drawing and moving until you can do them smoothly and comfortably without looking at the page or thinking about the hole numbers.

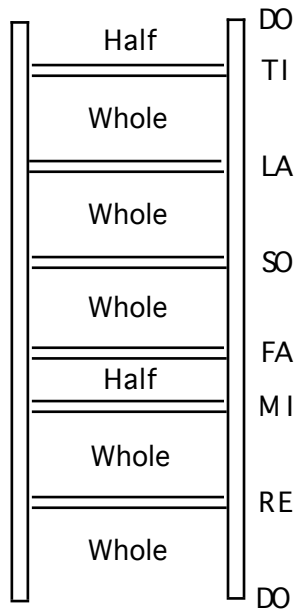
## WHOLE STEPS AND HALF STEPS

Although it may not be immediately noticeable to the listener, not all of the **pitches** in the major diatonic scale are the same **distance apart**; or, put another way, not all of the **steps** are the same **size**.

The major scale is called a **diatonic scale** because it is made up of **two** kinds of steps: **wholesteps** and **halfsteps**.

## VISUALIZING THE DIATONIC SCALE

The word scale itself comes from the Latin word for ladder. One way to visualize the major diatonic scale is with the use of this diagram of a ladder. The bottom and top of the ladder represent **DO** and the rungs represent **RE, MI, FA, SO LA,** and **TI**. Notice that the space between **MI** and **FA** and between **TI** and **DO** are only half the size of the other spaces:



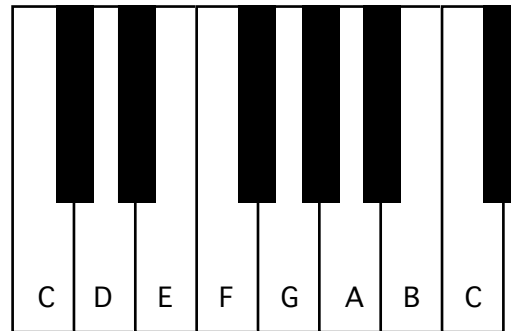
As we move up the ladder of the major scale, the sequence of steps is:

WHOLE, WHOLE, HALF,

WHOLE, WHOLE, WHOLE, HALF

## VISUALIZING THE CHROMATIC SCALE

The chromatic scale, however, includes all of the **halfsteps** in between the notes of the diatonic scale. This can be better visualized by looking at a piano keyboard:



On a piano, some of the pairs of adjacent white keys (C and D; D and E; F and G; G and A; A and B) have a black key positioned between them. This is because the pitches of those white keys are a **wholestep** apart. (The black keys are used to play notes that are a **halfstep** between the white keys.)

Notice that there is no black key between the E and the F or between the B and the C. This is because the pitches of those white keys are only a **halfstep** apart.

**Diatonic harmonicas** were designed to play music that uses **only** the “white key” tones of the diatonic scale. (Some diatonic players have learned to use special techniques to add the in-between “black key” tones to their playing. These techniques are not covered in this course.)

The **chromatic harmonica** is designed to play music that uses both the “white key” and “black key” tones.

## PLAYING THE CHROMATIC SCALE IN THE KEY OF C

Just as you learned to play the diatonic scale as an important step in learning that instrument, you need to learn to play the chromatic scale – including those “black key” half-steps. Let’s begin by adapting our familiar pattern of blowing, drawing and moving to include the additional action of pushing the slide button when we want to play a “black key” halfstep note. We’ll use the symbol -> to indicate playing a note with the button pushed in. (Release the button before playing the next note.)

**EXERCISE:** Here is the pattern of blowing, drawing and moving that produces the chromatic scale for the key of C. Starting on hole 5, play the following sequence:

BLOW 5 then ->BLOW 5 then DRAW 5 then -> DRAW 5 then MOVE to hole 6  
BLOW 6 then DRAW 6 then -> DRAW 6 then MOVE to hole 7  
BLOW 7 then ->BLOW 7 then DRAW 7 then -> DRAW 7 then MOVE to hole 8  
DRAW 8 then BLOW 8

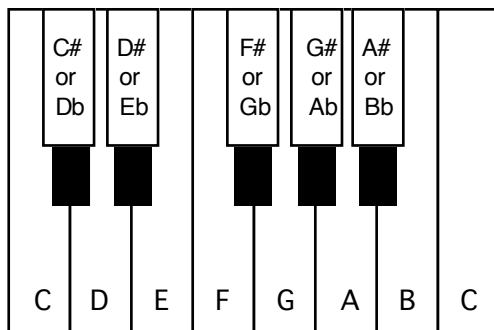
Next practice playing **down** the scale using the same routine

BLOW 8 then DRAW 8 then MOVE to hole 7  
->DRAW 7 then DRAW 7 then ->BLOW 7 then BLOW 7 then MOVE to hole 6  
->DRAW 6 then DRAW 6 then BLOW 6 then MOVE to hole 5  
->DRAW 5 then DRAW 5 then ->BLOW 5 then BLOW 5

Practice repeating the above exercise regularly. Eventually, you will be able to play up and down the chromatic scale smoothly and comfortably without looking at the page or thinking about the hole numbers.

## THE NAMES OF THE “IN-BETWEEN” NOTES

We already use letter names to identify the notes of the diatonic scale. We now must learn special letter names for the “in-between” notes. Actually, each in-between note has two names as indicated in the diagram below:



As shown here, two special musical symbols have been added to the letter names of the in-between notes.

One of these symbols looks like this . . .

#

and is called a sharp. The other special symbol looks like this . . .

b

and is called a flat.

### WHY TWO NAMES?

Why are the in-between notes given two names? Why, for example, is the note between C and D called both C# and Db? The reason is that

- the first name indicates that the note is a halfstep above C, and
- the second name indicates that the note is a halfstep below D.

Both names are useful in certain musical situations, some of which will be demonstrated in the examples and exercises of this course.



## FINDING ALL OF THE NOTES ON THE SOLO-TUNED CHROMATIC HARMONICA

The solo-tuned chromatic harmonica, like the piano keyboard, is designed to provide all of the notes of the chromatic scale. The chromatic harmonica tuned in the key of C is built so that in each hole, any note of the C major scale (whether blow or draw) can be **raised a halfstep** by pressing the slide (sometimes called a button) located at the end of the mouthpiece.

The 12-hole and 16-hole chromatic harmonicas (12-hole shown here) accomplish this by means of the following tuning arrangement:

	1	2	3	4	5	6	7	8	9	10	11	12
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Blow	C	E	G	C	C	E	G	C	C	E	G	C
Blow (slide in)	<i>C# or Db</i>	<i>E# or F</i>	<i>G# or Ab</i>	<i>C# or Db</i>	<i>C# or Db</i>	<i>E# or F</i>	<i>G# or Ab</i>	<i>C# or Db</i>	<i>C# or Db</i>	<i>E# or F</i>	<i>G# or Ab</i>	<i>C# or Db</i>
Draw	D	F	A	B	D	F	A	B	D	F	A	B
Draw (slide in)	<i>D# or Eb</i>	<i>F# or Gb</i>	<i>A# or Bb</i>	<i>B# or C</i>	<i>D# or Eb</i>	<i>F# or Gb</i>	<i>A# or Bb</i>	<i>B# or C</i>	<i>D# or Eb</i>	<i>F# or Gb</i>	<i>A# or Bb</i>	<i>D*</i>

\* With the slide in, the draw note in the last hole on the 12-hole or 16-hole chromatic is a D instead of a B# or a C. This is simply the instrument designer's way of giving the player one additional halfstep above the highest blow note (C# or Db) in the last hole.

As noted in **Part I** and shown above, the 12-hole and 16-hole solo-tuned harmonicas duplicate the Cs that end and begin the adjacent octaves of the C major scale.

Another characteristic shown in the above diagram is that there are two places in each octave where the same note can be played in the same hole either by blowing or drawing. The reason this occurs is that, as explained earlier, the step from E to F and the step from B to C are only halfsteps, so . . .

- pressing the slide to raise the blow note E a halfstep produces E#, which is the same pitch as the draw note F
- pressing the slide to raise the draw note B a halfstep produces B#, which is the same pitch as the blow note C

This arrangement occasionally becomes useful if you need to change your breath flow on one of these notes for breathing comfort or if you want to keep your breath flow the same for a group of adjacent notes.

## ENHARMONICS

When two notes — for example, C and D — are a wholestep apart, the note a halfstep above C is the same as the note a halfstep below D. Thus, C# and Db are two names for a note of **the same pitch**. Notes that have the same pitch but different names are called **enharmolics** of each other. They are . . .

This note . . .	C#	D#	E	E#	F#	G#	A#	B	B#
is the same as . . .	Db	Eb	Fb	F	Gb	Ab	Bb	Cb	C

Understanding enharmolics is especially helpful to chromatic harmonica players when playing flats. Here's why:

A note can be sharped (raised a halfstep) simply by pressing the slide and maintaining the same air flow direction (blow or draw) in the same hole. Since we already know that . . .

- C, E, and G are always blow notes
- D, F, A and B are always draw notes

we can now also remember that when we sharp these notes . . .

- C#, E#, and G# are always blow notes in the same holes
- D#, F#, A# and B# are always draw notes in the same holes

However, to flat a note (lower it a halfstep), the player must (1) press the slide; (2) sometimes (but not always) move one hole to the left; and (3) sometimes (but not always) change the air flow direction. The chromatic player must remember that . . .

- Eb, Gb, and Bb are always draw notes one hole to the left
- Db, Fb, and Ab are always blow notes in the same holes
- Cb is always a draw note, either one hole to the left for the first hole of the octave or in the same hole for the fourth hole of the octave.

Many players find it easier to think of the flatted notes in terms of their enharmonic counterparts. For example, when they see an Ab, they mentally convert it to a G#.

**EXERCISE:**

Try this process yourself by filling in the blanks in the following enharmonics table.

Think of this note	Db	Eb	Fb	Gb	Ab	Bb	Cb
as . . .							

**ANOTHER USE FOR ENHARMONICS**

In most cases, playing a sharp or flat on a chromatic harmonica will require you to push the slide — but not always. As indicated on the preceding page, a Cb is the same pitch as a B, so it is played as a B; likewise, B# is the same pitch as C and is played as a C. The same situation exists with E#, which is played as F, and Fb, which is played as E. The notes E#, Fb, B# and Cb do not appear often in staff notation, but they are used in some special situations. As a chromatic harmonica player, you need to know the equivalent notes to play when they do appear.

## PLAYING THE CHROMATIC SCALE FROM STAFF NOTATION

Now let's see what the notes of the chromatic scale look like when written in staff notation. In this case the in-between notes are given their sharp names.



### EXERCISE:

1. Draw vertical lines through the staff to group the notes by hole number
2. How many notes are played in the first hole? The second? The third? The fourth?
3. Play the notes
4. Repeat this sequence several times

Here are the same notes written from highest to lowest:



### EXERCISE:

1. Draw vertical lines through the staff to group the notes by hole number
2. Play the notes
3. Repeat this sequence several times

Here is how the same notes of the chromatic scale look when they are given their flat names.



**EXERCISE:**

1. Draw vertical lines through the staff to group the notes by hole number
2. How many notes are played in the first hole? The second? The third? The fourth?
3. Play the notes
4. Repeat this sequence several times

Here are the same notes written from highest to lowest:



**EXERCISE:**

1. Draw vertical lines through the staff to group the notes by hole number
2. Play the notes
3. Repeat this sequence several times

## PLAYING A SONG THAT INCLUDES SHARPS

Here is a song in which some of the notes are marked as sharps. Let's apply what you have learned thus far to analyzing and playing this song.

### EXERCISE:

1. Circle all the sharped notes
2. What is the name of the only note that is sharped in this song? \_\_\_\_\_
3. Is this a blow note or a draw note? \_\_\_\_\_
4. What is its hole number? \_\_\_\_\_
5. Is it played with the slide in or out? \_\_\_\_\_
6. Play the song

## Aura Lee

Traditional

1 2 3 4

5 6 7 8

9 10 11 12

13 14 15 16

## ADDING A “KEY SIGNATURE” TO ‘AURA LEE”

In analyzing this song we found that all of the Fs were marked as sharps. The reason for this is that the scale on which this song is based is the G major diatonic scale, which consists of the notes G, A, B, C, D, E, F# and G.

If a song is written using the notes of the G major scale and ending on G, the song is said to be in the key of G major. Rather than adding a sharp symbol every time an F appears, composers and publishers find it easier to place a sharp on the F line once at the beginning of each staff. (**Note that this applies to Fs in ALL octaves, not just the ones on the top line of the staff.**)

A grouping of one or more sharps or flats marked at the beginning of each staff is called a key signature, indicating which notes are to be sharped or flatted throughout the song. Here is the same song you played on the preceding page, marked this time with a key signature for the key of G.

### EXERCISE:

1. Circle all the notes that should be played as sharps
2. Play the song

### Aura Lee

Traditional

1 2 3 4

5 6 7 8

9 10 11 12

13 14 15 16

## PLAYING A SONG THAT INCLUDES FLATS

Here is a song in which some of the notes are marked as flats. Let's apply what you have learned thus far to analyzing and playing this song.

### EXERCISE:

1. Circle all the flatted notes
2. What is the name of the only note that is flatted in this song? \_\_\_\_\_
3. Is this a blow note or a draw note? \_\_\_\_\_
4. What is its hole number? \_\_\_\_\_
5. Is it played with the slide in or out? \_\_\_\_\_
6. Play the song

## Home On The Range

Traditional

The musical notation for "Home On The Range" is presented in a single staff with a treble clef and a key signature of one flat (B-flat). The time signature is 2/4. The melody consists of 32 measures, numbered 1 through 32. The notes are as follows:

- 1: C4 (quarter)
- 2: C4 (quarter)
- 3: D4 (quarter)
- 4: E4 (quarter)
- 5: F4 (quarter)
- 6: G4 (quarter)
- 7: A4 (quarter)
- 8: B4 (quarter)
- 9: C5 (quarter)
- 10: B4 (quarter)
- 11: A4 (quarter)
- 12: G4 (quarter)
- 13: F4 (quarter)
- 14: E4 (quarter)
- 15: D4 (quarter)
- 16: C4 (quarter)
- 17: B3 (quarter)
- 18: A3 (quarter)
- 19: G3 (quarter)
- 20: F3 (quarter)
- 21: E3 (quarter)
- 22: D3 (quarter)
- 23: C3 (quarter)
- 24: B2 (quarter)
- 25: A2 (quarter)
- 26: G2 (quarter)
- 27: F2 (quarter)
- 28: E2 (quarter)
- 29: D2 (quarter)
- 30: C2 (quarter)
- 31: B1 (quarter)
- 32: A1 (quarter)



## ADDING A KEY SIGNATURE TO “HOME ON THE RANGE”

In analyzing this song we found that all of the Bs were marked as flats. The reason for this is that the scale on which this song is based is the F major diatonic scale, which consists of the notes F, G, A, B $\flat$ , C, D, E, and F.

If a song is written using the notes of the F major scale and ending on F, the song is said to be in the key of F major. Rather than adding a flat symbol every time a B appears, composers and publishers find it easier to place a sharp on the B line once at the beginning of each staff. (Note that this applies to Bs in ALL octaves, not just the ones on the top line of the staff.)

Here is the same song you played on the preceding page, marked this time with a key signature for the key of F.

### EXERCISE:

1. Circle all the notes that should be played as flats
2. Play the song

## Home On The Range

Traditional

The musical score for "Home On The Range" is presented in a single system with five staves. The key signature is one flat (F major), and the time signature is 2/4. The melody is numbered 1 through 32. The notes are: 1 (F), 2 (G), 3 (A), 4 (B $\flat$ ), 5 (C), 6 (D), 7 (E), 8 (F), 9 (G), 10 (A), 11 (B $\flat$ ), 12 (C), 13 (D), 14 (E), 15 (F), 16 (G), 17 (A), 18 (B $\flat$ ), 19 (C), 20 (D), 21 (E), 22 (F), 23 (G), 24 (A), 25 (B $\flat$ ), 26 (C), 27 (D), 28 (E), 29 (F), 30 (G), 31 (A), 32 (B $\flat$ ). The piece concludes with a double bar line.

## ACCIDENTALS

If you see a sharp or a flat written in front of a note, it means that the changed note is not part of the scale on which the song is based, since the key signature supplies all the notes for that scale. Sharps and flats used to alter scale notes are known as accidentals. They apply only until the end of the measure (a measure is the space between two vertical bar lines); if the altered note is used again in the next measure then a new accidental must be written.

Accidentals are not “accidental” in the usual sense of the word, but very deliberate! As mentioned earlier, the sharp, **#**, raises a note one halfstep, and the flat, **b**, lowers a note a halfstep. You may also on rare occasions see a double-sharp, usually written as **x**, or a double-flat, **bb**, which raise or lower the note by two halfsteps.

The natural sign,



can be used to cancel any of the other accidentals, or to cancel (until the bar line) a flat or sharp in the key signature.

The diagram shows a musical staff with a treble clef and a key signature of two sharps (F# and C#). The staff contains a sequence of notes: C4, D4, E4, F#4, G4, A4, B4, C5. Above the staff, a bracket labeled "Accidentals" spans from the F#4 note to the B4 note, with three downward-pointing arrows indicating the accidentals on F#, G, and A. Below the staff, a bracket labeled "The non-scale tones are G#, C# and Bb" spans from the G#4 note to the Bb4 note, with three upward-pointing arrows indicating the accidentals on G#, C#, and Bb. The Bb4 note is the second note in the final measure of the staff.

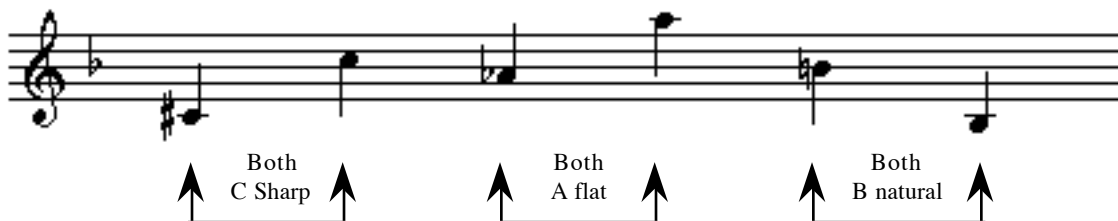
Notice that in the last measure above, the second Bb doesn't need an accidental. The flat is still in effect from earlier in the measure.

Since the key signature supplies all the sharps or flats that are part of the major or natural minor scale, accidentals are written only when the piece departs from one of those scales in some way. This will happen sometimes when the composer switches to another scale in the course of a piece or when he or she just adds something extra for a special effect. The sight of an accidental in a measure always means that either:

- A note is used that is not in the key signature, or
- A note changed by an accidental earlier in the measure is being restored to a note that is in the key signature.

## ACCIDENTALS APPLY TO ALL OCTAVES

When an accidental is used to change the pitch of a note within a measure, the change applies to all octaves of that note occurring within that same measure, as shown in this example:



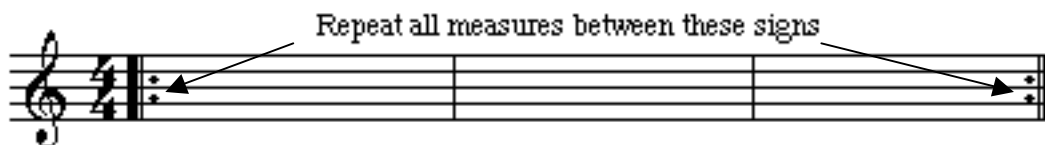
## PRECAUTIONARY ACCIDENTALS

Accidentals are in effect only until the next bar line or until cancelled by another accidental within the same measure. However, composers often remind a reader that an accidental is no longer in effect by marking the note explicitly with a precautionary accidental in the next measure, like this:



## REPEAT SIGNS

Sometimes a composer wants to instruct the player to repeat a portion (or even all) of a song. A special pair of symbols called repeat signs are used for this purpose.



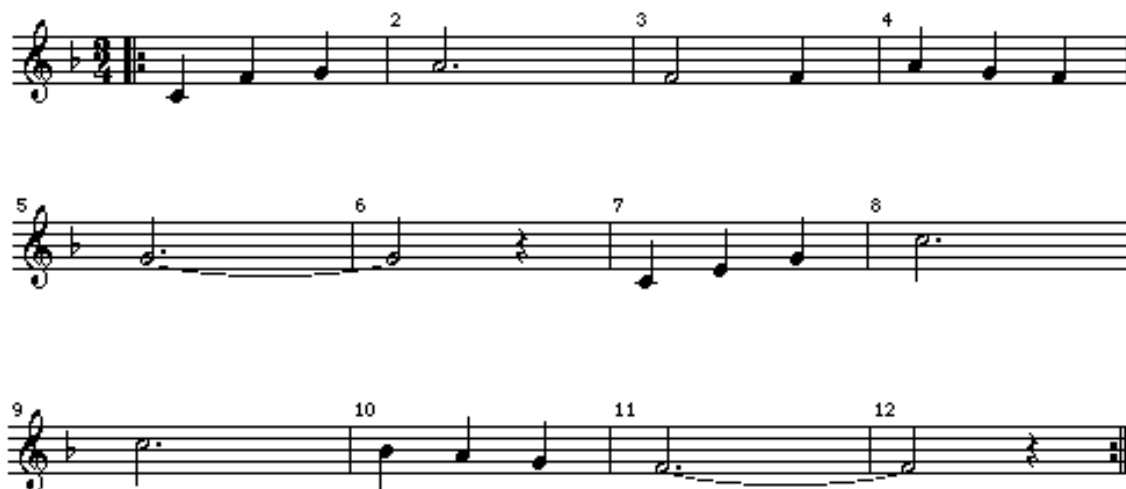
Here is a song that includes repeat signs.

### EXERCISE:

1. Which measures are to be repeated? \_\_\_\_\_ through \_\_\_\_\_
2. In what key is this song written? \_\_\_\_\_
3. Circle the notes that must be played as flats
4. Play the song

## Down In The Valley

Traditional





## THE CODA

In addition to repeat signs like those you saw in “Down In The Valley,” composers sometimes use other signs and phrases to instruct the performer to move from one place to another in the song. The coda symbol . . .



marks the beginning of the final section of a song. The coda symbol is used in conjunction with phrases that direct the performer to move either backward or forward to other points in the song.

- The phrase “D.C. al Coda” means go back to the first measure of the song and play until you reach the phrase “To Coda”.
- The phrase “D.S. al Coda” means go back to the measure marked with the symbol  (called “segno”) until you reach the phrase “To Coda”
- The phrase “To Coda” (often accompanied by the  symbol) means to move forward to the measure where the coda symbol appears. THIS PHRASE IS IGNORED THE FIRST TIME IT IS ENCOUNTERED. IT IS ONLY OBSERVED AFTER A “D.C. al Coda” OR “D.S. al Coda” IS REACHED.

The song on the following page uses some of these symbols and phrases.

**EXERCISE:**

1. In what key is this song written? \_\_\_\_\_
2. Which measures contain notes that are “accidentals”? \_\_\_\_\_
3. Circle the notes that must be played as sharps
4. Which measure is played after playing measure 16 the first time? \_\_\_\_\_
5. Which measure is played after playing measure 32? \_\_\_\_\_
6. Which measure is played after playing measure 16 the second time? \_\_\_\_\_
7. Play the song

**LET THERE BE PEACE ON EARTH**

By SY MILLER and  
JILL JACKSON

The musical score is written in treble clef with a key signature of one sharp (F#) and a 4/4 time signature. It consists of 48 measures across six staves. The notes are as follows:

- Staff 1 (Measures 1-8): G4, A4, B4, C5, B4, A4, G4, F#4, E4, D4.
- Staff 2 (Measures 9-16): E4, D4, C4, B3, A3, G3, F#3, E3, D3, C3, B2, A2. Measure 16 includes a fermata and the instruction "To Coda".
- Staff 3 (Measures 17-24): G3, F#3, E3, D3, C3, B2, A2, G2, F#2, E2, D2, C2, B1, A1. Measure 24 includes a fermata.
- Staff 4 (Measures 25-32): G2, F#2, E2, D2, C2, B1, A1, G1, F#1, E1, D1, C1, B0, A0. Measure 32 includes a fermata and the instruction "D.C. al Coda".
- Staff 5 (Measures 33-40): G1, F#1, E1, D1, C1, B0, A0, G0, F#0, E0, D0, C0, B-1, A-1. Measure 40 includes a fermata and the instruction "Coda".
- Staff 6 (Measures 41-48): G-1, F#-1, E-1, D-1, C-1, B-2, A-2, G-2, F#-2, E-2, D-2, C-2, B-3, A-3. Measure 48 includes a fermata.

## FINE (pronounced FEE-NAY)

Another phrase used to help the performer navigate through a song is "Fine", meaning the end. Fine is used in conjunction with one of two other phrases (either "D.C. al Fine" or "D.S. al Fine") to direct the performer from the last (bottom) line of the song back to an earlier point in the song and then on to and ending with the measure marked Fine. LIKE "To Coda", "Fine" IS IGNORED UNTIL EITHER "D.C. al Fine" OR "D.S. al Fine" IS REACHED.

Here's a song that uses D.C. al Fine and Fine. It also uses repeat signs and accidentals.

### EXERCISE:

1. In what key is this song written? \_\_\_\_\_
2. Which measures contain notes that are "accidentals"? \_\_\_\_\_
3. Which measure is played after playing measure 8 the first time? \_\_\_\_\_
4. Which measure is played after playing measure 8 the second time? \_\_\_\_\_
5. Which measure is played after playing measure 16? \_\_\_\_\_
6. After which measure does the song end? \_\_\_\_\_
7. Play the song

## Sentimental Journey

By BUD GREEN, LES  
BROWN and BEN HOMER

The musical score for "Sentimental Journey" is written in treble clef with a 7/8 time signature. It consists of 16 measures across four staves. Measure 1 starts with a repeat sign. Measures 2, 3, and 4 are the first line. Measures 5, 6, 7, and 8 are the second line, with the word "Fine" written above measure 8. Measures 9, 10, 11, and 12 are the third line. Measures 13, 14, 15, and 16 are the fourth line, with "D.C. al Fine" written above measure 16. The score includes various note values, rests, and accidentals (sharps and naturals).

## NUMBERED ENDINGS

You have already seen an example (“Down In The Valley”) in which the performer is instructed by repeat signs to play the song through twice. Sometimes, however, the composer writes slightly different endings for each time the song is played. For this situation, numbered endings are used in conjunction with repeat signs as shown below. In this example measures 31 and 32 are played following measure 30 the first time through but measures 33 and 34 are played following 30 the second time through.

### EXERCISE:

1. In what key is this song written? \_\_\_\_\_
2. Circle the notes that should be flatted.
3. Which measure is played after playing measure 32? \_\_\_\_\_
4. Play the song

## DOWN BY THE RIVERSIDE

American Traditional

The musical score for "Down by the Riverside" is presented in a single treble clef staff with a key signature of one flat (B-flat). The piece consists of 34 measures. The first 28 measures are the main body of the song. At measure 29, there is a double bar line followed by a first ending bracket labeled "1." which covers measures 31 and 32. A second ending bracket labeled "2." covers measures 33 and 34. A mouse cursor is visible over measure 28.



## THE FERMATA OR “BIRD’S EYE”

Here is a song that incorporates another symbol, the fermata . . .



sometimes called a “bird’s eye.” This symbol indicates that the note over (or sometimes under) which it is positioned is to be held longer than its actual note value. The length of the hold is determined by the performer to reflect the desired “mood” of the piece.

### EXERCISE:

1. In what key is this song written? \_\_\_\_\_
2. Circle the notes that should be flatted.
3. In which measure does the fermata appear? \_\_\_\_\_
4. Play the song, holding the note with the fermata as long as sounds good to you

## Tenderly

Music by WALTER GROSS

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
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29  
30  
31  
32  
33  
34

## LOOKING AT A SONG IN A DIFFERENT KEY

So far you have examined and played songs in the keys of C, F and G. These have actually been major keys based on the scale do, re, mi, fa, so, la, ti, do. The song below is written in the key of G minor, which requires two flats (Bb and Eb) to produce the minor scale G, A, Bb, C, D, Eb, F, G. This song includes several of the symbols you have learned to this point (repeat signs, natural signs and numbered endings).

This song is also written in 6/8 time, a time signature different from those of the previous songs. The material in the Appendix to this coursebook provides further information on time signatures. For now, it is sufficient for you to think of this song as having six beats in each measure with an eighth note counting for one beat.

### EXERCISE:

1. Circle the notes that should be flatted.
2. Play the song

## Greensleeves

Old English Folk Song

1 2 3 4

5 6 7 8

9 10 11 12

13 14 15 16 17

## ANOTHER SONG IN G MINOR

Here is another song for you to learn and practice. This one is also in the key of G minor.

### EXERCISE:

1. Circle the notes that should be flatted.
2. Play the song

## When Johnny Comes Marching Home

American Traditional

1 2 3 4

5 6 7 8

9 10 11 12

13 14 15 16



# APPENDIX

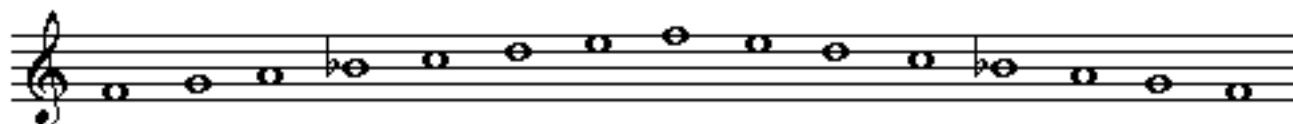
This appendix provides supplementary information on topics covered in this course and in the preceding course, **Solo-Tuned Harmonica (Part I — Diatonic)**.

## NOTATION OF PITCH

### KEY SIGNATURES

As previously noted, if you write a piece of music using the notes of the F major scale and ending on F, the piece may be said to be “in the key of F major”.

We have already seen that if you want to write a tune using notes of the F major scale you will need to use the flatted form of the B. That means that in the key of F the B flat will be needed throughout the piece. Rather than write the flat every time a B appears it is easier to just indicate it once at the beginning of each staff. That is the reason for the key signature, the collection of sharps or flats you will often see at the start of each line of music printed in staff notation. A musician reading the signature will remember to lower all the Bs to B flat:



F major scale without key signature



F Major scale with key signature

Similarly, playing the A major scale requires F#, G# and C#, so pieces written for that scale use a key signature of three sharps:

C# C# G#

Key signature includes sharps on F, C and G

### Melody using "A major" key signature

A key signature is printed at the beginning of each line and stays in effect until canceled by another one.

The sharps or flats in a key signature are always displayed in a standard arrangement to make them easier to recognize. Here are all fourteen signatures and their keys, as they appear in the treble clef:

F,d Bb,g Eb,c Ab,f Db,bb Gb,eb Cb,ab

G,e D,b A,f# E,c# B,g# F#,d# C#,a#

The lowercase letters above indicate the relative minor keys which use the same key signatures as the various major keys. For example, the key of D minor uses one flat (Bb) just as the key of F major. We have not discussed minor scales at this point, but remember that any key signature indicates either a major or minor key. You can almost always determine whether a particular song is written in a major or minor key by looking at the last note of the melody. A song with a key signature of one sharp, for example, is probably in the key of G major if its melody ends on G; however, if the melody ends on E, the song is probably in the key of E minor.

Notice that flats and sharps are never mixed in a key signature—the signature is always just one or the other.

Also, the flats or sharps are always added in the same order: the first flat is always Bb and the first sharp is always F#; the second flat is always Eb; the second sharp is always C#, and so on. This helps you to quickly identify the notes — if a key has only two sharps in its signature they will always be F# and C#: you don't need to look at their placement on the staff. The illustration below shows the order in which flats and sharps are always added to the key signature:



<b>Major Key</b>	<b>F</b>	<b>Bb</b>	<b>Eb</b>	<b>Ab</b>	<b>Db</b>	<b>Gb</b>	<b>Cb</b>
Minor Key	D min	G min	C min	F min	Bb min	Eb min	Ab min
	add Bb	add Eb	add Ab	add Db	add Gb	add Cb	add Fb



<b>Major Key</b>	<b>G</b>	<b>D</b>	<b>A</b>	<b>E</b>	<b>B</b>	<b>F#</b>	<b>C#</b>
Minor Key	E min	B min	F# min	C# min	G# min	D# min	A# min
	add F#	add C#	add G#	add D#	add A#	add E#	add B#

## A SHORTCUT TO KEY SIGNATURE IDENTIFICATION

Usually students just memorize the signatures, remembering for example that one sharp means G major or E minor: Two means D major or B minor; etc. But there is a shortcut to identifying a key from its signature.

**For Sharp Keys:** Notice that the last sharp in a key signature is always the seventh note of the major scale for that key, or the second note of the corresponding (relative) minor scale.



Last sharp in signature is the seventh note in the major scale or the second note in the minor scale.

In the illustration above the last sharp is D#, so we know that the scale being used is either E major or C# minor.

**For Flat Keys:** In a similar way the last flat in a flat signature is always the fourth note of the major scale for that key, or the sixth note of the corresponding (relative) minor scale.:



Last flat in signature is the fourth note in the major scale or the sixth note in the minor scale.

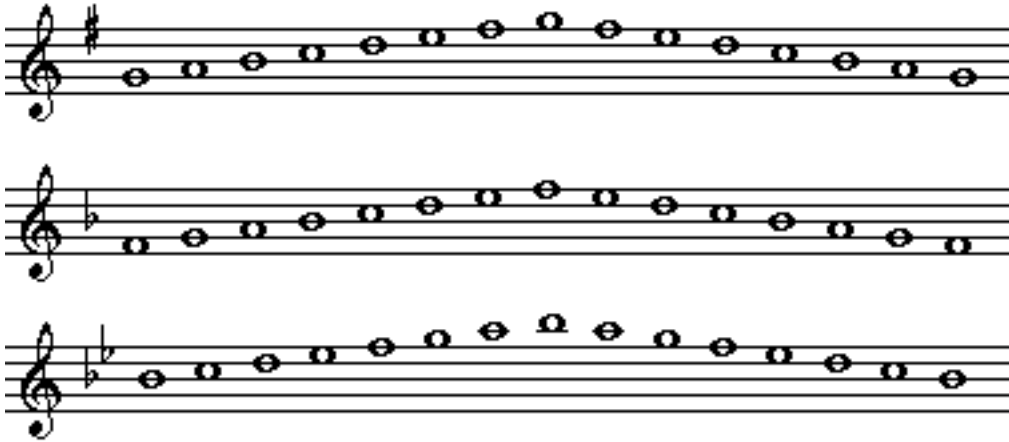
In the case shown above, the last flat is Ab, so we know that the scale being used is either Ab major or F minor.

Of course, both of these methods require that you know whether the piece is major or minor. Just remember, as noted earlier you can almost always determine whether a particular song is written in a major or minor key by looking at the last note of the melody. The last note of the piece is almost always the "key" note, or the note that gives the key its name.



## THE CONVENIENCE OF KEY SIGNATURES

Now that you understand the function of key signatures, let's examine several more scales, just to make a point.



Though the scales may involve from one to seven sharps or flats, the pattern of notes on the staff looks the same for all of them. The key signature takes care of all necessary sharps or flats. If we're writing a melody that uses only the notes of a single major or natural minor scale we'll never need to add any sharps or flats, since they are provided by the key signature.

# NOTATION OF RHYTHM

## THE BEAT AND THE MEASURE

If you were inventing your own system of writing music, how would you indicate when each note should be played and how long it should last?

Staff notation defines a rhythm by relating it to an imaginary steady pulse or beat. For example, some notes may last two beats, some one beat, some only one half beat or less. The beats themselves are counted evenly, like the ticking of a clock, and they are counted in groups called measures. The measures are usually of two, three, or four beats, and they might sound like this if you were to count them out loud:

2-beat measures: “**One** two **One** two **One** two **One** two”

3-beat measures: “**One** two three **One** two three **One** two three”

4-beat measures: “**One** two three four **One** two three four”

The **larger** letters represent metric accents. A note played on an accented beat is generally slightly louder than others, or is emphasized in some other way. Usually the first beat of any measure will have the strongest accent, which is called the primary accent. Later, we’ll see that some measures also have a weaker secondary accent. For example, 4-beat measures can have a secondary accent on the third beat, like this:

“**One** two **three** four **One** two **three** four”

## THE SYMBOLS OF RHYTHM NOTATION

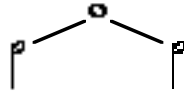
Measures are separated in staff notation by vertical measure lines (sometimes called bars or bar lines) as shown below.



Several wholenotes separated by measure lines or bar lines

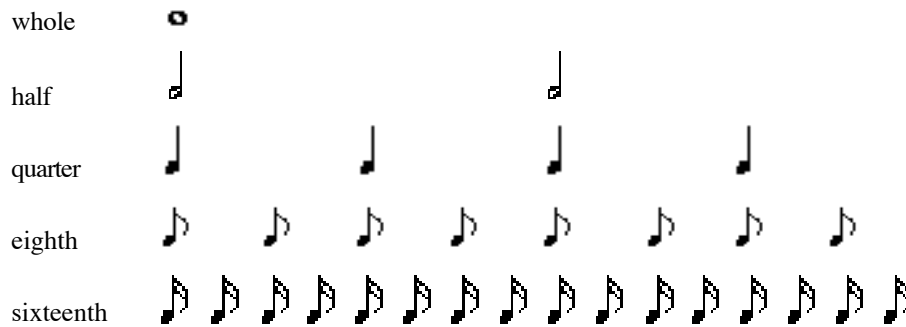
All the symbols for musical notes are derived from the basic one we have already been using, which is called the wholenote.

A note half as long as a whole note is called, of course, a halfnote, and it is made by adding a stem to the whole note:



One whole note is worth two half notes

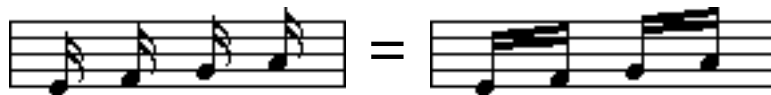
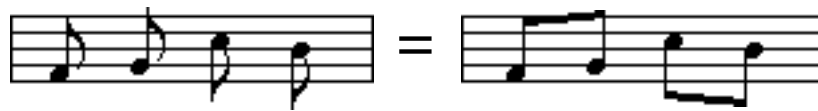
Then we fill in the half note to make a quarternote, equal in time to one fourth of a whole note. Next we add a flag to make an eighthnote, and then add more flags as needed; two flags for a sixteenthnote, for example.



In theory we could keep adding flags forever and make shorter and shorter notes, but you will rarely see a note shorter than a sixteenth note in popular music.

## BEAMS

Beams are a substitute for flags. You can beam together two or more notes that would otherwise have flags as long as there aren't any unbeamed notes separating them. The illustrations below show alternate ways of beaming the notes in the same measure:



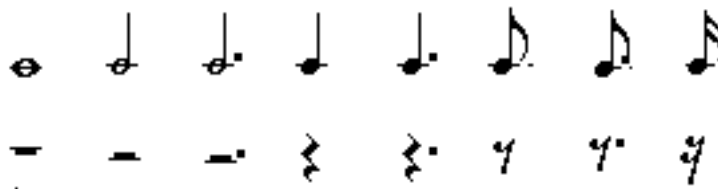
## DOTTED NOTES

A dot lengthens a note's value by half. For example, since a quarternote is equal to two eighthnotes, a dotted quarternote will be equal to three eighthnotes. A dotted halfnote is equal to three quarternotes and a dotted eighthnote to three sixteenthnotes. The dotted note often appears as part of a dotted pair, in which it is combined with a short note equal to one third of its value. Usually the dotted note comes first, as shown here:



## RESTS

A rest indicates a length of silence. For every note value, there is a corresponding rest. Each of these rests indicates that the silence is held for the same number of beats as its equivalent note.



Notes and their equivalent rests

The difference in appearance between the whole rest and the half rest is hard to remember at first. Perhaps it will help if we say that the whole rest symbol fills the top half of a space to show that it has greater value than the half rest, which fills the lower half of a space.



## METER

So far we have discussed only relative note values; we know that a halfnote is half as long as a whole note, for example, but we don't know how many beats to count for either of them. That information is provided by the meter signature or time signature which appears at the beginning of the piece, right after the clef and the key signature. It is most often shown as two numerals, one directly above the other similar to a fraction:



The lower number refers to note type: for example, “4” means quarter notes while “8” means eighth notes. The upper number tells you how many beats each measure will have if you count the beat with notes of the given value. Usually you do count the beat with notes of the value given in the lower number of the signature, but there is an exception in the case of compound meter, which we'll explain shortly.

A “4/4” signature tells the reader that each measure of the following music will have the same time value as four quarter notes, and it also suggests that each measure will have four beats. It doesn't mean that every measure will necessarily have four actual quarter notes in it — only that the combined values of the notes and rests in the measure will add up to equal four quarter notes.

## COMMON TIME AND CUT TIME

4/4 is probably the most frequent meter in classical and popular music; it is sometimes called common time. Another meter you will often see is 2/2, or cut time, which allows the same number of quarternotes in each measure as 4/4 but counts only two beats per bar, so that the halfnotes each get one beat. For this reason cut time is often used for fast pieces. In cut time an eighthnote lasts only a quarter of a beat, a quarternote is half a beat, and a whole note is worth two beats.

The time signature for 4/4 is often written not with numbers but with the sign, C, which means the same thing. A "C" with a vertical line through it is used to represent 2/2, or cut time. Examples of both these time signatures are shown below:



## WALTZ METER

Waltz meter (3/4) is another familiar meter: each measure has three beats, and the beat is counted in quarternotes:



## SIMPLE AND COMPOUND METER

Simple meters are those in which the beat is represented by a plain undotted note. All the meters we have seen so far are simple: 2/2, 2/4, 3/4, and 4/4. In simple meters the upper number of the time signature tells the number of beats per measure and the lower number identifies the note that is equal to one beat.

In compound meters the time signature is interpreted a little differently, with one beat equal to a dotted note. For example, according to our previous definition "6/8" would literally mean that there are six beats to the measure with one beat for each eighthnote. However, musicians usually count only two beats in a 6/8 measure, so that each beat is as long as one dotted quarternote (remember that one dotted quarternote is equal to three eighthnotes). 9/8 is treated the same way: if you were tapping your foot you'd tap it three times in each 9/8 measure, again beating the time in dotted quarternotes.

This familiar melody should give you the feel for 6/8:

The it - sy bit - sy spi - der ran up the wa - ter spout

Beat 1 2 1 2 1 2 1 2

Many marches are written in 6/8 or 12/8 meter.

### **BEAMING WITH A PURPOSE**

Now that you know the importance of the beat in rhythm notation you can appreciate that beams are useful for grouping notes together to make the beats clear to the eye of the reader.

Beats: 1 2 3 4 (1) 2 3 4

## STEM DIRECTION

The stems on halfnotes, quarternotes, etc. can go either up or down. Either way the note will sound the same, but the choice of stem direction may be important for visual clarity. If you have only one line of music on a staff then the stem direction depends on position: usually, notes below the middle of the staff have their stems up and those on the middle line or above have their stems down. Notice that descending stems are always on the left side of the note head and ascending ones are always on the right:



Notes with varying stem direction

Notice also that flags always wave to the right, regardless of stem direction.

## THE TIE

The tie joins two notes of the same pitch so that they sound like one. Sometimes a tie is used to mean the same thing as a dot:



The tie can also be used to make notes of a length that can't be created with dots, such as a quarternote plus a sixteenth. And a tie is the only way to hold a note over a bar line. Examples of both uses are shown below:



Ties can also be used to make beat groupings clear within a measure.