

The Harmonica and Irish Traditional Music by Don Meade

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INTRODUCTION

The name “harmonica” has been applied to a variety of musical instruments, the earliest of which was probably an array of musical glasses created by Ben Franklin in 1761. The 19th-century German-speakers who invented the mouth-blown free-reed instrument now known as the harmonica originally called it a Mundharmonika (“mouth harmonica”) to distinguish it from the Handharmonika, i.e., the accordion. English speakers have since called it many things, including the mouth organ, mouth harp, French harp, French fiddle, harpoon, gob iron, tin sandwich and Mississippi saxophone. “Mouth organ” is the name most commonly heard in Ireland, where “harmonica” is sometimes used to refer only to larger chromatic models.

There is a notable local mouth organ tradition in south County Wexford, home to the renowned Murphy family of Bannow, but the instrument is quite popular throughout Ireland. It is, however, not usually regarded as highly by traditional music lovers as are the closely related concertina and button accordion. Many people still think of the harmonica as little more than a musical toy.

The tin whistle once suffered from a similar reputation. In recent decades, however, Mary Bergin and other virtuoso players have brought the once-humble whistle to the forefront of the Irish musical tradition. The harmonica is overdue for a similar re-evaluation. Recordings by the Murphys, Eddie Clarke and other top Irish players provide convincing proof that the mouth organ is fully capable of conveying all the beauty and subtlety of Irish traditional airs and dance tunes.

How to Learn Irish Music

The harmonica was designed to play and accompany simple major-key European melodies. The instrument has proved to be surprisingly flexible, however, and

ingenious musicians from China to the American south have found novel ways to play very different styles of music on it. Musicians in Ireland, influenced by the way in which song airs and dance tunes are played on instruments with a longer history in the country, have developed their own distinctive techniques and styles.

Instrumental technique is not really the key to playing Irish traditional music. Anyone who has ever heard a classical violinist stiffly bow through a fiddle tune will understand that technical competence cannot substitute for an understanding of traditional style. That understanding can only be acquired by listening to and emulating good traditional players. If you want to play Irish music, you should listen to as much of it as possible. Listen especially to music on the uilleann pipes, fiddle and flute, the most important vehicles for Irish traditional music for centuries and the instruments on which the foundations of traditional style were built.

If you can hum, lilt or whistle an Irish tune, you can learn to play it on the harmonica. The rest is just a matter of practice. Trying to play a tune you don’t really know, even if you can read sheet music or follow a written pattern of blow and draw notes, is really harder in the end than playing by ear.

You don’t need formal lessons to play Irish music on the harmonica. Trial and error will be your best teacher. Once you have a tune in your head, just try to play it. The more you play, the more you will understand about the structure and patterns of Irish tunes, and about the harmonica itself. And the more tunes you learn, the easier it will become to pick up new ones.

Before attempting to play jigs and reels, you should start by playing slower song airs, marches and waltzes. These tunes provide an opportunity to build up your lip muscles, work on breath control and tone,

and generally figure out how the harmonica works. Keep in mind that a complete traditional musician must be able to play slow airs as well as fast dance tunes.

When you acquire enough proficiency to move on to livelier tunes, keep in mind the importance of a steady tempo. If you have to slow down to play a difficult passage in a tune, you're playing the rest of it too fast. It's better to play slowly at a consistent tempo. If you can play fast, it doesn't mean that you have to do so all the time. No one would try to sing every song they know as quickly as possible but too many musicians take that approach to Irish dance tunes. Stick to a tempo that lets you put some expression into the music.

Mouth Accordion?

Fast-paced and highly ornamented Irish dance music is a challenging repertoire on any instrument. Harmonica players will find that some of the typical melodic patterns and embellishments used by fiddlers, flute players and pipers are difficult to reproduce on their instrument. While no Irish tune is totally impossible to play on the harmonica, some just don't fit it very naturally.

Some tunes are awkward on other instruments too. Flute players and pipers often alter fiddle tunes to make them playable on their instruments, and it is a rare button accordionist who is comfortable playing in all the keys used by fiddlers. You shouldn't give up without a struggle, but if re-phrasing a passage or changing a key allows you to play music that is otherwise fiendishly difficult, you don't have to be ashamed to do so.

Irish harmonica players can take some inspiration from players of other free-reed instruments used in the Irish tradition. The harmonica has a lot in common with the button accordion and "Anglo-German" concertina, both of which have a long history of use by Irish musicians. All three

are "single-action" free-reed instruments.

On a double-action instrument like the piano accordion or "English" concertina, the same note sounds on both the press and draw of the bellows when any key is pressed. On a single-action instrument, each button or hole sounds reeds for two different notes. If you press (or blow) you get one note but if you draw out you get an adjacent note in the same scale. This in-and-out pattern imposes a certain natural rhythm on the music and helps to explain why single-action instruments are the free reeds of choice for Irish dance tunes.

On both the button accordion and harmonica (but not the concertina), the notes of the scale are lined up in one row. Moreover, the tuning of chromatic harmonicas, which will be discussed below, is much like that of Irish-style two-row button accordions. Because of these similarities, harmonica players can often adapt button accordion techniques to their instrument.

That said, it must be pointed out that it took a long time for the button accordion to be accepted as a valid instrument for Irish traditional music. Only when accordionists succeeded in approximating the rhythm and ornamentation used on more traditional instruments did the "box" come into the mainstream of Irish music. Harmonica players can profit by their example.

WHAT KIND OF HARMONICA?

There are several distinct types of harmonicas. It is possible to play Irish traditional music on all of them, and each has its own advantages and disadvantages.

Standard Diatonic Harmonicas

The diatonic harmonica is by far the most common variety. The most popular version, often referred to as a "Richter" harmonica (see appendix on harmonica history) is a small instrument with 10 holes, each of

which contains a blow reed and a draw reed. Most diatonics have a single reed for each note but some have two, which may be tuned slightly apart in order to produce a wavering “tremolo” effect or an octave

apart for a fuller sound. All diatonic harmonicas have reeds only for the notes in a single major (*do-re-mi...*) scale – they are like pianos with no black keys.

STANDARD “RICHTER SYSTEM” 10-HOLE DIATONIC HARMONICA

Key of C

Blow reeds in upper case, draw notes lower case; available “bent” notes in italics

1	2	3	4	5	6	7	8	9	10										
							<i>D#</i>	<i>F#</i>	<i>A#/B</i>										
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; border: 1px solid black; padding: 5px;">C d</td> <td style="width: 10%; border: 1px solid black; padding: 5px;">E g</td> <td style="width: 10%; border: 1px solid black; padding: 5px;">G b</td> <td style="width: 10%; border: 1px solid black; padding: 5px;">C d</td> <td style="width: 10%; border: 1px solid black; padding: 5px;">E f</td> <td style="width: 10%; border: 1px solid black; padding: 5px;">G a</td> <td style="width: 10%; border: 1px solid black; padding: 5px;">b C</td> <td style="width: 10%; border: 1px solid black; padding: 5px;">d E</td> <td style="width: 10%; border: 1px solid black; padding: 5px;">f G</td> <td style="width: 10%; border: 1px solid black; padding: 5px;">a C</td> </tr> </table>										C d	E g	G b	C d	E f	G a	b C	d E	f G	a C
C d	E g	G b	C d	E f	G a	b C	d E	f G	a C										
<i>c#</i>	<i>f/f#</i>	<i>g#/a#</i>	<i>c#</i>		<i>g#</i>														

The scale used on a diatonic harmonica can start on any of the twelve notes used in Western music. Standard diatonic harmonicas are available for all twelve, some in both high- and low-pitched versions. The harmonica is classified by the note on which the scale starts. If *do* is C, the harmonica is in the key of C.

A typical ten-hole diatonic such as the Hohner Marine Band has a range of three octaves, but the only complete one starts with the blow note in hole 4. To play this scale, you first blow into and then draw from hole 4, then repeat this in holes 5 and 6. To finish the scale you reverse breath direction in hole 7, first drawing and then blowing. This reversal of breath direction ensures that the next octave starts on a blow note.

The high octave that starts with blow 7 lacks the 7th note (*ti*) in the scale. The pattern of blow and draw notes is also altered in this octave – draw notes are the lower of the two notes in each hole. In the middle octave, *do* and *re* are blow 4 and

draw 4, but in the high octave, blow 7 is *do* while *re* is draw 8 in the next hole.

The standard harmonica’s low octave starts with the blow reed in hole number 1 but the scale is missing *fa* and *la*, while *so* is both a draw note in hole 2 and a blow note in hole 3. The reason for these gaps and duplications is that the low octave tuning scheme was designed to make it possible to play simple two-chord accompaniment to major-key melodies.

Some of the missing notes can be played by “bending” other notes. We’ll return to the subject of bending below, but even with that aid the standard 10-hole diatonic’s tuning scheme sharply limits one’s ability to play many Irish traditional melodies.

Extended Range Diatonics

Longer standard diatonics give more scope for solo melody playing as they extend the range of notes above the gapped scale in the first three holes. If you stick to the right side of the longer diatonics, all the notes in the diatonic scale are available. The same

draw bends are available as on the 10-hole instrument and there are a few more blow bends possible in the highest holes.

As with the 10-hole diatonic, the draw notes are in different positions relative to the adjacent blow notes in each octave. This is very apparent in the extended high range, where in order to play a C major

scale on a C instrument it is necessary to skip from 10-blow to 12-draw and back to 11-blow to play C, D and E in sequence. Hohner's Marine Band M364 and M365 are the most easily available extended-range diatonic models. The 12-hole M364 is available in C, D and G, and the 14-hole M365 only in C and G.

12-HOLE HOHNER M364

Key of C

1	2	3	4	5	6	7	8	9	10	11	12
							<i>D#</i>	<i>F#</i>	<i>A#/B</i>	<i>C/D</i>	<i>D#/F#</i>

C d	E g	G b	C d	E f	G a	b C	d E	f G	a C	b E	d G
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

c# f/f# g#/a# c# g#

14-HOLE HOHNER M365

Key of C

1	2	3	4	5	6	7	8	9	10	11	12	13	14	
								<i>D#</i>	<i>F#</i>	<i>A#/B</i>	<i>C/D</i>	<i>D#/F#</i>	<i>F#/B</i>	<i>A/D#</i>

C d	E g	G b	C d	E f	G a	b C	d E	f G	a C	b E	d G	f C	a E
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

c# f/f# g#/a# c# g#

“Cross Harp” and Country Tunings

The standard 10-hole diatonic harmonica can be used to play Irish tunes but it is most favored by blues players, who make up the largest segment of the harmonica-playing public. Blues stylists, however, do not usually play in the key in which the harmonica is tuned, preferring the “cross

harp” or “second position” scale, which starts on a note pitched a fifth higher, i.e. so instead of *do*. In the C scale, so is G, which means the cross-harp scale on a C harmonica starts on G. So to play the blues in G, you use a C harmonica.

A complete cross-harp scale starts with

the blow reed in hole 6. The seventh note in this scale is half a step lower (flatter) than in the major scale, e.g., F instead of F# (F sharp) when playing on a C harmonica. In addition to providing this “blue” note, cross harp shifts important notes in the scale to low draw reeds that can be easily “bent” to sound notes the harmonica wasn’t designed to play at all. In the low octave, a cross-harp scale starts with 2 draw (or 3 blow, which is the same note) but you have to bend 3 draw down a whole step to play

the second note of the scale.

Bending, which will be discussed in more detail below, is one way to play missing notes on a diatonic harmonica but “country-tuned” diatonics provide another solution. These are standard ten-hole diatonics on which one or more reeds have been retuned so that you can play a complete two-octave major scale in the cross-harp position.

SIMPLE COUNTRY TUNING – SHARPENED 5 DRAW

Altered C harmonica

1	2	3	4	5	6	7	8	9	10																				
							<i>D#</i>	<i>F#</i>	<i>A#/B</i>																				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px;">C d</td> <td style="border: 1px solid black; padding: 5px;">E g</td> <td style="border: 1px solid black; padding: 5px;">G b</td> <td style="border: 1px solid black; padding: 5px;">C d</td> <td style="border: 1px solid black; padding: 5px;">E f#*</td> <td style="border: 1px solid black; padding: 5px;">G a</td> <td style="border: 1px solid black; padding: 5px;">b C</td> <td style="border: 1px solid black; padding: 5px;">d E</td> <td style="border: 1px solid black; padding: 5px;">f G</td> <td style="border: 1px solid black; padding: 5px;">a C</td> </tr> <tr> <td><i>c#</i></td> <td><i>f/f#</i></td> <td><i>a</i></td> <td><i>c#</i></td> <td><i>f</i></td> <td><i>g#</i></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>										C d	E g	G b	C d	E f#*	G a	b C	d E	f G	a C	<i>c#</i>	<i>f/f#</i>	<i>a</i>	<i>c#</i>	<i>f</i>	<i>g#</i>				
C d	E g	G b	C d	E f#*	G a	b C	d E	f G	a C																				
<i>c#</i>	<i>f/f#</i>	<i>a</i>	<i>c#</i>	<i>f</i>	<i>g#</i>																								

Irish tunes set in the “mixolydian mode” (more on modes below) use a blues-like scale with a flattened 7th interval, and for these the cross-harp position on a regular diatonic works well. You can also play a true major scale in the cross-harp position if you start with the blow reed in hole 6, but you need to play a blow bend in hole 9. On a C harmonica, this is a G major scale with F# instead of F. But you can’t play a G major scale in the octave that starts with draw 2. You can bend draw 3 down to sound A, but there is no bend that will give you an F# in the 5 draw hole. This is because bends are only possible if the pitches of the two reeds in a hole are offset by at least a whole tone, and the difference between E and F is only a half tone.

One way to play major melodies in crosssharp position (and still be able to throw in a lot of bluesy bends) is to retune the 5 draw reed, sharpening it half a step to F# on a C instrument (see the asterisked note above). With a combination of bent notes and this one retuned reed, you can play a true major scale in crosssharp position in two different octaves. If you start with the G draw reed in hole 2, you have to play a draw bend in hole 3 to sound A. If you start the scale with the G blow reed in hole 6, you have to play a blow bend in hole 9 to sound F#. Rick Epping, the first American to win the All-Ireland mouth organ championship, has made good use of this tuning, which is available on the Seydel “blues favorite country” model.

Another variation on standard tuning was invented by harmonica ace Brendan Power. In this tuning, which he calls “Paddy Richter,” the 3 blow reed is tuned up a whole step (e.g., from G to A on a C harmonica). Unlike “country” tunings, Paddy Richter is not designed to enable major-key playing in crosssharp position but does make it easier to play low-octave melodies in the modes used in Irish music. Bending the 2 draw will supply the one remaining missing note in the diatonic scale.

The most sophisticated “country” tuning is used on the Lee Oskar Melody Maker and Hohner “Country-tuned” Special 20 models. This scheme raises the 5 blow reed a half step, as in simple country tuning, and the 3 blow a whole step, as in “Paddy Richter.” But it also raises the 9 draw reed a half step. With these three alterations (shown with asterisks on the chart below), you can play a complete major scale over two whole octaves, starting with draw 2, without having to bend any notes.

“PADDY RICHTER” TUNING

C harmonica with sharpened 3 blow reed

1	2	3	4	5	6	7	8	9	10
							<i>D#</i>	<i>F#</i>	<i>B/A#</i>
C d	E g	A* b	C d	E f	G a	b C	d E	f G	a C
<i>c#</i>	<i>f#/f</i>	<i>a#</i>	<i>c#</i>		<i>g#</i>				

FULL COUNTRY (“MELODY MAKER”) TUNING

C harmonica with three altered notes

1	2	3	4	5	6	7	8	9	10
							<i>D#</i>		<i>B/A#</i>
C d	E g	A* b	C d	E f#*	G a	b C	d E	f#* G	a C
<i>c#</i>	<i>f#/f</i>	<i>a#</i>	<i>c#</i>	<i>f</i>	<i>g#</i>				

Country-tuned harmonicas are usually labeled in the cross-harp key (G for a C harmonica). But as the chart above shows,

a “G” Melody Maker is really just a standard C instrument with three altered notes.

This tuning is popular with Nashville-style country musicians who want to apply bluesy bends to major key melodies. Irish singer and bouzouki ace Andy Irvine has also made great use of Melody Maker instruments in this way. The best example of applying this tuning scheme to Irish dance tunes without relying on bent notes is Galway native Paul Moran's playing on *First Flight*, a 2002 duet recording with fiddler Fergal Scahill.

Country-tuned harmonicas might appeal to anyone who has played a lot of blues "harp" before attempting to tackle Irish traditional music. You can stick with the blow-and-draw note sequence familiar to cross-harp players and continue to bend notes, but you're not stuck with the flattened seventh of the blues scale.

Tremolo Diatonics

Tremolo harmonicas have two reeds for each note, one on the top plate and one on the bottom. In these instruments, unlike standard "Richter" harmonicas, blow and draw reeds are on the same reedplate, but not in the same holes. Each reed is isolated in its own chamber. The top and bottom plates have an identical tuning scheme, but the reeds on each are tuned with a slight offset in pitch to create the wavering tremolo effect. This design was invented by Wilhelm Anton Thie in Vienna and is known as the Wiener or Thie system.

Some Wiener tremolos, including Hohner's Comet models, have the two reedplates tuned an octave, rather than just slightly, apart. This is a different sort of tuning than that used on so-called Knittlinger-system harmonicas like the Hohner Auto-Valve or

"ORIENTAL" TREMOLO DIATONIC HARMONICA

Key of C

1	2	3	4	5	6	7	8	9	10	11	12
G d	C f	E a	G b	C d	E f	G a	b C	d E	f G	a C	b E

Marine Band "full concert," which have the two reedplates tuned an octave apart but still use the Richter system of having a blow and draw reed in each hole on each plate.

Most European-made tremolo instruments, including Hohner's Echo models, use the same tuning scheme as standard Richter diatonic harmonicas, with the first three holes set up for chord playing. These models are also usually tuned using "just" intonation, in which the chords sound pure but the intervals between notes deviate slightly from the "equal" intonation used on

most modern instruments

The tuning scheme used for most tremolo instruments made in the Far East (shown above) is different. It is similar to that of extended-range Richter diatonic and tremolo instruments. But in place of the chordal accompaniment setup in the first three holes, there is a full four-hole low octave with no missing notes in the scale. The middle and high octaves have the same tuning pattern as Richter diatonics but are shifted one hole to the right, starting with blow 5 instead of blow 4.

There is a smaller pitch offset between the two reeds for each note on Oriental tremolos, which gives them a “drier” sound than European models. They are also tuned using equal temperament . As free-reed wizard Rick Epping has noted, these differences make Oriental tremolos more suitable than European models for melody playing.

Oriental tremolos are also quite inexpensive, So it's not surprising that this kind of harmonica is the one most commonly played by traditional musicians in Ireland, including the celebrated Murphy family of County Wexford as well as past All-Ireland champions Michael Conroy, Noel Battle, Austin Berry, John Gavin and Pauline Gavin Callinan. At a fleadh cheoil mouth organ competition, most musicians will probably be playing Oriental tremolos. Other diatonic instruments are allowed but chromatic players have been exiled to the “miscellaneous instruments” competition.

It used to be hard to find Oriental tremolo models in the U.S. in keys other than C but Hohner now imports the Echo Celeste in all 12 keys. Some Suzuki and Tombo tremolos are also made in all keys, but they are not distributed in the U.S.

One interesting effect possible on tremolo harmonicas is to play on only one of the two reeds in each hole. The player can then

switch to playing both, as when a button accordionist changes the coupler setting to get a fuller sound. You can do this by covering either the lower or upper reed holes with your lip and playing only from the top or bottom. Antrim tremolo ace Kieran McHugh did this on his 1980's cassette recording.

Despite the traditional pedigree of Oriental tremolos, they don't suit all Irish-style players. Many harmonica players don't like the tremolo effect at all. And cross-harp stylists looking for bluesy effects will find they can't bend notes on a tremolo.

Solo-tuned Diatonics

Oriental tremolos are sometimes called “solo-tuned” because they don't have any missing notes in the diatonic scale. A true solo-tuned diatonic is a different sort of harmonica designed so that the pattern of blow and draw notes is the same in every octave. The first octave starts with the blow reed in hole 1 (do) and finishes with the blow reed in hole 4 (again do). But the next octave starts with the 5 blow reed, which is also do. The same pattern is repeated in the next octave, with both 8 and 9 blow sounding do.

Doubling up the “tonic” (do) note makes each octave a standardized four-hole module in which the sequence of blow and

SOLO-TUNED DIATONIC HARMONICA

Key of C

1	2	3	4	5	6	7	8	9	10	11	12
C d	E f	G a	b C	C d	E f	G a	b C	C d	E f	G a	b C

draw notes is the same. There is no need

to learn a separate tuning pattern in each octave. The player does still have to acquire a feel for which do reed he or she is

playing. 4 and 5 blow are both do, for example, but 4 draw sounds mi (half a tone lower) while 5 draw sounds re (a whole tone higher).

A number of solo-tuned diatonic models are available from companies that include Huang, Hering, Seydel, and Hohner. The Hohner Marine Band model (available only in C) produces a mellow tone and has long-lasting reeds but the lowest notes are weak because of air loss through the reed slots. On the air-tight, plastic-bodied Brazilian-made Hering Master Solo (also only in C), some reed slots are covered by plastic “wind-saving valves” of the type used in chromatic harmonicas. These prevent air from passing around reeds that aren’t being sounded and make for better tone and volume. The Hering is also cheaper than the Marine Band or Seydel solo models. The company has very no distributor in the U.S., but some internet sellers still have stocks of Hering instruments available.

Seydel make tremolo solo-tuned “Fanfare” instruments and recently introduced excellent “Session Steel” solo-tuned diatonics. They also make dual solo-tuned

instruments built like chromatics but with separate reedplates in D and G. One of the best reasons to play solo-tuned diatonics is that the same tuning scheme is used in true chromatic harmonicas, so playing the solo-tuned diatonic makes for an easy transition to the bigger instrument.

Chromatic Harmonicas

If a diatonic harmonica is like a piano with only white keys, the chromatic harmonica supplies the black ones. It is called “chromatic” because it includes all the colors of the musical rainbow. First marketed by Hohner in 1910, the chromatic is really two solo-tuned diatonic harmonicas in one instrument.

The reed plate on top has blow and draw reeds for one key, while the plate on the bottom has blow and draw reeds for a different key pitched half a tone higher (e.g., C on top, C sharp below). This combination includes all the notes of every key. In this respect the chromatic harmonica is very similar to an Irish-style two-row button accordion.

CHROMATIC HARMONICA

Key of C

1 2 3 4 5 6 7 8 9 10 11 12

C d	E f	G a	b C	C d	E f	G a	b C	C d	E f	G a	b C
C#d#	F f#	G# a#	c C#	C# d#	F f#	G# a#	c C#	C# d#	F f#	G# a#	c C#

To switch between the sets of reeds, the player presses in a spring-mounted slide on the right side of the harmonica. The slide allows air to pass over only one set of reeds at a time. Pressing it in while playing a single note will raise the pitch by a half tone (the interval between *mi* and *fa* or between *ti* and *do* in the diatonic scale).

Chromatic harmonicas come in different sizes and can have from 8 to 16 holes. To play a particular note, the player must know which hole to play, whether to blow or draw, and whether to press the slide. There is a price to be paid for having reeds for every note. Some chords available in the usual diatonic tuning scheme cannot be played on a chromatic. The chromatic's reed slots are also covered with plastic "wind-saving valves." These flaps prevent air loss through blow reed slots when playing draw reeds (and vice versa), but they also make it impossible to bend notes and get that lonesome, bluesy wail that for many people defines the sound of the harmonica. In general, it is not possible to get as strong and gutsy a tone on any chromatic as it is on a small diatonic.

Theoretically, a single chromatic instrument can be used to play in any key. Classical and jazz harmonicists do, in fact, play this way, so the most expensive professional-quality instruments are only made in the key of C. In practice, however, some keys require extensive use of the slide and are very awkward on the C harmonica, especially when one is playing fast-paced, highly ornamented Irish dance music. Even the most accomplished classical players concede that "flat keys" like F and B flat are easier on the C harmonica than the "sharp keys" like D and G common in Irish music.

Another problem with the purely chromatic approach is that the chords available on the C chromatic really only work for melodies set in C major or in some of the modal scales that use the same array of notes

(more on chords and modes below). So if you're playing in G on a C chromatic, for example, you won't be able to play a G chord and playing C blow chords will clash with the melody.

One good chromatic harmonica for Irish music is the classic 10-hole, wooden-body Hohner Chromonica 260, available in the keys of G and C, and not much changed since its introduction around 1910. The G instrument has the same range as "first position" on the fiddle, from low G to a high C. It is a perfect instrument for playing tunes in G major and related modal scales, and can be played in cross-harp position for tunes based on a D scale. The Chromonica 260 in C can be used in cross-harp position to play tunes in G or related modal scales, but playing in D on a C chromatic is quite awkward.

Hohner also makes other chromatic models, including the 12-hole Super Chromonica 270 and the more expensive, plastic-bodied CX-12. Both of these are available in all keys, including D, which is particularly useful for Irish music.

The Brazilian-made, 12-hole Hering 5148, 7148 (a slightly better version) and low-C "Baritono" 6148 models are excellent for Irish music but, as noted above, it has become difficult to get new Hering instruments in the U.S.

Seydel, based in Germany, makes a variety of chromatics. Their better models are available in "Irish tuning" (B/C or F#/G) and they will also make a C#/D model on request. These tunings are extremely useful when you start trying to use the slide for ornamentation as will be discussed below.

The Suzuki SCX-48 Chromatix is a superb instrument with very high quality reeds and an innovative modern design. Like the Hohner CX-12, however, the reeds for a given key are split between the top and

bottom plates, which makes it far more difficult to customize for “Irish” tunings. You can’t simply swap out a reed plate but must retune the entire instrument.

Other Asian-made chromatic models are available from Huang, Miwha, Tombo and Lark. Be aware that the Hering “blues chromatic” and “Vintage 40,” as well as Hohner “Koch” and “slide harp” models are chromatics with the same pattern of missing notes in the first three holes as a standard Richter diatonic instrument.

Other Tuning Schemes

There are many other harmonica tuning systems besides those shown in the charts above. The Lee Oskar line includes diatonic harmonicas in “major 7th” (all the F’s on a C diatonic tuned up to F#), harmonic minor (all the E’s and A’s on a C diatonic tuned down to D# and G#) and natural minor (all the E’s and B’s on a C diatonic tuned down to D# and A#). The Seydel website’s “Configurator” allows for almost any tuning scheme a customer can devise.

Hohner’s Steve Baker model is a 12-hole diatonic instrument that, instead of adding a higher range of notes to the normal 10-hole layout, applies the gapped-scale tuning normally used in holes 1 through 3 to another, lower set of three holes. This sacrifices the highest notes to provide more of the low-end draw bends preferred by blues and country stylists.

“Valved” diatonics are made by fitting wind-saving valves (little plastic strips) on draw reeds 1 through 6 and blow reeds 7 through 10. This prevents air leakage as well as the usual sort of blues bending. The option remains to remove some of the valves to allow bends where needed. Valving only draw reeds is a typical choice. Models include the Suzuki Promaster Valved.

A new type of harmonica invented by Rick Epping, the Hohner “Extreme Bending” XB-

40, adds extra reed chambers to the standard ten-hole diatonic instrument so that all notes, not just the usual ones, can be bent a full tone lower.

Brendan Power is a master of alternate tunings, including his “Powerbender,” which re-tunes the high octave of a standard diatonic for easier play, and other exotic models. He has recently begun using a 3-D printer to make improved plastic bodies for Hohner Chromonicas and exotic “Franken-harmonicas” that combine multiple reed plates in a single instrument. See www.brendan-power.com.

Where to Get a Harmonica

Hohner standard diatonic instruments are widely available in retail music stores. Other types of Hohner instruments, and virtually all non-Hohner harmonicas, are most easily ordered these days from online vendors.

TECHNICAL TIPS

Playing Single Notes

The first problem beginning harmonica players face is how to play one note at a time. Some players use their tongue to block out the notes they don't want to play. This technique is particularly favored by those who like to tap their tongue against the left side of a standard diatonic to sound chords while playing the melody from the right side of the instrument (more on this below). Tongue blocking can also be used to play the same note in two different octaves, one on the left side of your tongue and the other on the right.

The other way to play single notes is to pucker your lips, opening them just enough to blow into or draw out of one hole at a time. You can still play chords by opening your lips a bit more, but it's harder to get the “oom-pah” chordal accompaniment prized by tongue-blockers. It is easier, however, to play fast and accurate single-

note melodies this way. It is possible, of course, to combine the two techniques.

Chords

On all types of harmonicas, blowing any three adjacent notes produces a major chord. On a C instrument, it's a C chord – the notes C, E and G in some order. On a standard C diatonic, D minor chords (notes D, F and A) are available by drawing from holes 4, 5 and 6 or from holes 8, 9 and 10. A partial B minor chord (B and D) can be sounded by drawing from holes 3 and 4 or from 7 and 8, and a partial F major (F and A) in holes 5 and 6 or 9 and 10. These same chords are also available, in slightly different positions, on Oriental tremolo, solo-tuned and chromatic instruments (see the charts above).

On the standard C diatonic, but on no other type of C harmonica, a G major chord (G,B,D) is produced by drawing on holes 1, 2 and 3 or 2, 3 and 4, and a G7 chord (G,B,D,F) by drawing on holes 2, 3, 4 and 5.. The gaps in the low octave scale in the “Richter” tuning scheme were designed to make these “dominant” and “dominant 7th” chords available, thus providing basic two-chord backing for major-key melodies.

A tongue-blocking player can achieve a great effect by “vamping” on the tonic and dominant 7th chords while playing the melody. This can be done by tapping the tongue against the harmonica, alternately blocking and unblocking holes on the left side of the instrument while playing the melody from the right side of your mouth. This style of simple accompaniment recalls that used on the melodeon (single-row diatonic button accordion), which has a similarly limited selection of bass chords on the left side of the instrument. To hear a master of the tongue-blocking chord technique, listen to the late Phil Murphy's solos on the CD *The Trip to Cullenstown*. It's hard to believe there's only one player! If you're not playing in the major key in

which the harmonica is set, the available chords are less useful. Dorian modal tunes (more on this below) are an exception. A D Dorian tune, for example, is best accompanied by D minor and C chords, which are the only two three-note chords available on a chromatic. But for other modal scales, only “wrong” chords are available.

Despite the limitations, playing chords is a key element of style for many harmonica players. But if you use the harmonica's limited chords to accompany tunes that they don't really suit, you will produce something like the “harmony” an uilleann piper gets from sounding the instrument's D drones to accompany a melody set in G or A. Whether this sounds horrible to you or just characteristic of the instrument is matter of taste. Chromatic ace Eddie Clarke frequently added C chordal accents to G tunes. This didn't sound all that odd, but the availability of more appropriate chords is one of the main reasons to use chromatics in different keys rather than trying to play everything on a single instrument.

Bending Notes

One way to play the missing notes on a diatonic harmonica is to “bend” notes to get the missing pitches. Bending is a key element of blues style. If you've never done this, try the easy bend on the draw note in hole 3 on a standard 10-hole harmonica. Find the hole, purse your lips and draw air through it so that a single note sounds. Suck hard, draw your tongue back and drop your jaw slightly to lower the pitch. You can control the degree of the bend by subtle adjustments of tongue and jaw.

Bending can only be done in a hole in which the musical interval separating the blow and draw reed is greater than a half step. If the higher reed in a hole is a draw reed, you can play a draw bend, and vice versa. This means you can play draw bends

in holes 1, 2, 3, 4 and 6, and (with a bit more difficulty) blow bends in holes 8, 9 and 10 of a standard diatonic. The available bends are shown in italic in the tuning charts above.

What you're really doing when bending is not lowering the sound of the reed you think you're playing but forcing the other, lower-pitched reed in the same hole to produce a tone midway between the two.

By bending notes, the harmonica player can imitate the way fiddlers, pipers and flute players flatten or slide up into notes. The harmonica, in fact, is the only free-reed instrument on which this element of Irish traditional style can be used. It's very possible to overdo this effect. Note bending is a hallmark of blues "cross-harp" style and not in synch with the usual sound of Irish music as played on other free-reed instruments.

To bend or not to bend is really a question of taste and style, but the type of instrument also figures in. Players such as Mark Graham and Andy Irvine, who use single-reed diatonics and have been heavily influenced by American blues and country styles, make extensive use of bends in their playing, producing an interesting trans-Atlantic fusion style of Irish music.

But you can't really bend notes on a tremolo harmonica of the type used by the Murphy brothers or Noel Battle because the blow and draw reeds are separated into different chambers and can't interact. Similarly, the "wind-saving valves" in a chromatic harmonica block the airflow from passing over the blow reed when you're sounding the draw reed in the same chamber (and vice versa). So while you can choke a chromatic reed a bit, you can't really bend the tone fully as you can on a diatonic.

Not all bends are easy to play in all keys,

and considerable practice is required to control them. Some highly accomplished diatonic players use "overblow" and "overdraw" techniques pioneered by harmonica virtuoso Howard Levy to sound tones that cannot be played with traditional bends. Irish harmonica ace Mick Kinsella makes use of these advanced techniques, but they are outside the scope of this article and (in this writer's opinion anyway) not well suited to Irish music played in traditional style.

The Lips and Tongue

Whether you're a tongue blocker or a lip puckerer, your lips can be painfully chafed by rubbing on the harmonica. As you become more proficient and relaxed, this problem will ease. If necessary, however, you can use a little vaseline or other non-toxic lubricant on your lips. Don't use too much or you'll blow the lubricant onto the reeds and deaden the sound.

When you start playing the harmonica, you will discover lip muscles you didn't know you had. You have to build up your "embouchure" (to use the high-falutin' musical term) in the same way that other wind instrument players do. Relaxation is key, however. If you grip the instrument too tightly with your lips, the muscles will get fatigued in a hurry and you will not be able to continue playing.

Even if you don't use tongue blocking, you'll still want to use your tongue when playing the harmonica. To separate two successive notes of the same pitch, for example, you may find it useful to tongue the second note. You do this by starting the note with a "T" sound, as if saying "tah." This will release the air from your mouth in a short puff.

Many tunes have melodic passages that require the player to alternate between one lower note and a succession of higher notes. These patterns are easily played on

the fiddle or flute, but present difficulties on the harmonica because the player must move back and forth between widely separated holes without sounding any of the notes in between. It is often possible to alter the melody to avoid this difficulty, but you can also tongue your way around the problem. If you use your tongue to emphasize each of the higher notes, it will be easier to play them cleanly without sounding any of the “in-between” notes.

An alternative to tonguing is to use the back of your throat, as if saying “kah.” This is a technique favored by some flute players. You can also play a rapid-fire, trumpet-style triplet with tongue or throat, as if saying “tah-tah-tah” or “tah-tah-kah.” .

Other Body Parts

The nose is another useful body part for harmonica players. Half the notes on the harmonica are draw notes, which require the player to breathe in, so some of the air you need to stay conscious will be acquired just by playing draw notes. You can supplement this air supply, however, by breathing in through your nose as well as your mouth when you play a draw note.

Many minor and modal tunes (see section on modes below) emphasize the draw notes. On these tunes, you may find your lungs getting uncomfortably full. You can cope with this by using your nose like the air valve on an accordion, expelling excess air through your nose whenever blow notes do come along.

On any wind instrument, whether the flute, trumpet or harmonica, the player must learn to produce an economical and steady supply of air. If you find yourself out of breath after playing for a short while, you’re doing something wrong. Sit up straight or stand to play and use the muscles in your abdomen to regulate the flow of air. This will prevent you from getting out of breath as easily and you will be able to play

sustained notes more smoothly.

No two harmonica players sound alike, even if they play the same instrument in the same style. A large aspect of the harmonica’s sound is determined by the resonance provided by the player’s mouth, throat and even lungs. Good players constantly (though usually unconsciously) change the shape of their mouth and the force of their breath in order to coax notes into (or out of) tune and to create the kind of tone they wish to hear. With practice, you will come up with your own distinctive harmonica sound.

When moving from note to note on the harmonica you can move your head back and forth or move the harmonica. It will ease the tension on your neck muscles and make for smoother playing if you learn to move the harmonica. You'll also look less like a deranged muppet if you play this way.

Many harmonica players in Ireland play “tremolo” instruments, which have a built-in wavering sound because each note is sounded by two reeds tuned slightly apart. On single-reeded instruments, a vibrato effect can be achieved by cupping the harmonica in both hands and opening and closing the top or bottom hand. A little of this goes a long way, but it is a good effect on slow airs.

A more sophisticated vibrato can be produced by controlled pulsing of the throat muscles or diaphragm. This typical wind instrument technique has been exploited by jazz, blues and classical harmonica players. Brendan Power, Mick Kinsella and Rick Epping’s Triple Harp Bypass recording features virtuoso use of this effect.

MAJOR, MINOR, MODAL

Harmonica players, like other traditional musicians, learn mostly by ear and don't pay much attention to theory. It is useful,

however, to know a bit about the different scales used in Irish music.

The Major Scale in First Position

The standard diatonic tuning scheme was designed to make it easy to play melody and chords for a single major key, which can be thought of as the “home key” of the harmonica. Even on a chromatic harmonica, it is easier to play in the home key than in any other. Playing in this key is often called “first position.”

The major scale is simply the familiar do-re-mi... diatonic scale. A major-key melody, whether it's “Twinkle, Twinkle Little Star” or “The Irish Washerwoman,” will usually finish (“resolve”) on do, the “tonic note” of the key. If you are playing a C harmonica, the home key is C and do is C.

On a standard 10-hole diatonic harmonica, a complete major scale starts with do on the blow reed in hole 4 and ends with do on the blow reed in hole 7. The sequence of blow and draw notes necessary to produce this scale is easy to master. As discussed above, you can also start the major scale with do on the blow in hole 1, but there will be missing notes in scale in that range. The third octave, which starts with 7 blow, is nearly complete, lacking only the 7th note of the scale.

On an Oriental tremolo, complete major scales start with the blow notes in holes 2, 5 and 8; on a solo-tuned or chromatic instrument, with the blow notes in holes 1, 5 and 8. On Melody Maker instruments, complete scales start with draw 2 and blow 6. In these tuning systems, there are no missing notes in the diatonic scale.

In the major scale most notes, including do and re, are separated by an interval called a whole tone. The difference between mi and fa, however, as well as that between ti and do, is only half as great and is known as a half tone. This is why there is not a black

key between every two white keys on a piano. And this whole-whole-half-whole-whole-whole-half pattern of intervals defines the major scale.

Modes

Using the same array of notes as the major scale but starting on a note other than do produces a “modal” scale in which the half-tone intervals fall in different places. Tunes that use the notes of a major scale but that start and resolve on some other note than the tonic note of that scale are referred to as modal tunes. Such tunes abound in Irish music as they are easily played on the harp, tin whistle, un-keyed flute or the chanter of the uilleann pipes,

The “Ionian” mode is another name for the major scale. If you use the same notes but start the scale with *re* instead, you will produce what is known as the *re* scale or “Dorian” mode (some blues players call this “third position” or “slant harp”). A Dorian melody will resolve on *re* instead of *do* and the third and seventh notes will be half a tone flatter (lower) than the corresponding notes in the major scale.

Dorian melodies are extremely common in Irish music. Most Irish tunes referred to as being in a “minor” key actually use Dorian scales that resolve on A, E, D or B. A-Dorian tunes such as “The Star of Munster” use the same notes as major key tunes in the key of G and so can most easily be played on a G harmonica. E-Dorian tunes such as “Cooley's Reel” are easiest on a D harmonica. D-Dorian tunes (e.g., “Master Crowley's Reel”) are easiest on a C instrument and B-Dorian tunes (e.g., “The Banks of Lough Gamhna”) on an A instrument.

The natural minor scale, also called the Aeolian or *la* mode, or “fourth position,” can be played using the same array of notes as the major scale but starting on *la*. In this scale (which is not nearly as common in

Irish music as the Dorian mode), the third, sixth and seventh notes are half a tone flatter (lower) than in the major scale. A true E-minor tune (e.g., “The Rights of Man”) uses the same notes as G major and so can most easily be played on a G harmonica. A-minor tunes (e.g., “Paddy Ryan’s Dream”) are easiest on a C harmonica and B-minor tunes on a D harmonica.

Another mode commonly used in Irish music is the Mixolydian or so mode, which uses the same notes as the major scale but starts on so. This mode is the basis for the blues cross-harp (“second position”) scale. It is also the scale used on the highland bagpipes. On a standard 10-hole diatonic, the only full Mixolydian scale starts with the blow note in hole 6, but you can also start it with the blow note in hole 3 if you bend the draw note in hole 3 to sound the next note in the scale. On a chromatic harmonica, the Mixolydian scale starts with the blow note in hole 3 or 7.

The seventh note of the Mixolydian scale is flat compared to the major scale, so a Mixolydian tune rooted on D (e.g., “Rakish Paddy”) can be most played easily on a G harmonica, which has a C natural instead of a C#. Mixolydian tunes based on A (e.g., “The Ivy Leaf”) are easiest on a D harmonica and those rooted on G (e.g. “The Girl That Broke My Heart”) on a C harmonica.

Draw notes are more prominent in Dorian, Aeolian and Mixolydian melodies than in Ionian (major) melodies. This can cause problems because of the need to expel the excess air that accumulates in your lungs between blow notes. Like anything else, the more you practice playing in these modes, the easier it will become. The key is to be economical with your breath and to use your nose to expel air when necessary.

There are other modes, including the Phrygian (mi), Lydian (fa) and Locrian (ti),

but they are extremely uncommon in Irish music. A great many Irish melodies cannot, however, be strictly classified by scale or mode. Some use one mode in the first part and another in the second. Others use gapped scales in which the third and/or seventh notes are never played at all. Still others inconsistently flatten the third or seventh notes of the scale, slipping back and forth among Ionian, Mixolydian and Dorian modes. Such tunes are most easily played on a chromatic instrument.

Positional Playing

Major melodies in first position are the easiest on the harmonica. Strictly modal tunes that use the same notes as the first position major scale are also quite easily played. It’s trickier to play major melodies outside of first position, or modal melodies that start on other than the usual notes, To do so requires notes not easily playable on a diatonic harmonica.

An example of positional playing would be to play in D major on a G harmonica. This is similar to the Mixolydian/cross harp position described above. The difference is the seventh note of the scale, which in a Mixolydian tune is half a step lower than it is in the major scale. The D Mixolydian scale, for example, includes a C natural instead of the C# of D major.

To play in D major on a standard G diatonic, you can bend the draw D in hole 2 down to C# and, with more difficulty, bend down the blow D in hole 9. Unfortunately, you can’t bend the blow D in hole 6, and that just happens to be where the most useful C# would be located. That’s why the Lee Oskar Melody Maker and other country-tuned models are tuned the way they are with the C reed (5 draw) sharpened up to sound C#. With these instruments, it’s easy to play a true major scale in second position.

Other positions are possible on diatonic

harmonicas, but the need to bend more notes presents more difficulties. You can try to play a true D minor (Aeolian mode) tune on a C harmonica, for example, but there is no reed for the B flat in the D minor scale, and no way to produce one in the second octave by bending. With Howard Levy-style “overblows” and “overdraws,” it is possible (though very challenging) to play chromatically on a diatonic harmonica. That is not, however, a style compatible with the sound of other free-reed instruments used in the Irish tradition.

Without resorting to note-bending or overblows, diatonic harmonica players can emulate melodeon players, who often craft settings that omit notes they can't play. Connemara melodeon great Johnny Connolly is a master of this technique, which he demonstrates by playing subtly different settings of “Miss McLeod’s Reel” in D, G and A major – all on a box that has only the notes for the D major scale.

On a chromatic harmonicas, all positions are theoretically possible, as any note missing on one reed plate is available on the other. In practice, some positions are ridiculously difficult, but the slide does make it relatively easy to play a G scale on a C harmonica, an scale A on a D harmonica or a D scale on a G harmonica. This chromatic cross-harp approach can be heard at its best on recordings by Eddie Clarke.

A chart illustrating the common modes and positions most easily played on harmonicas of different keys is included as an appendix.

ORNAMENTATION

Ornamentation is one of the keys to making your harmonica playing sound truly Irish. The amount of ornamentation you put it is a matter of taste and different players have different styles of embellishment. As a rule, you should avoid over-decorating tunes to

the point where the original melody is obscured. You should definitely leave out ornamentation that you can't play without disrupting the rhythm of the tune.

Because of the similarities between the button accordion and the harmonica, the kind of embellishments that can be played on the harmonica are the same ones that are available on the “button box.” If you listen to what good Irish button accordionists do to ornament their music, it will give you some hints on how to dress up Irish tunes on the harmonica.

Grace Notes

The simplest ornament on the harmonica is the grace note. This is a very quick note that leads into a note of normal duration, which is the note being “graced.”. The most useful grace note is the higher one sounded using the same breath direction in the hole just to the right of the note being graced, though you can also “grace” with a lower note.

The note being graced is not delayed by the grace note. Instead, the grace note subtracts marginally from the length of the note previous to the one being graced. Grace notes can be tongued but are also very useful for separating two identical notes without using your tongue. This is a technique often used by button accordionists and mimics the way pipers, fiddlers or flute players flick down a finger to separate notes of the same pitch.

Triplet Ornaments

The most important ornamental figure on the harmonica is a quick two-hole triplet played without changing breath direction. A triplet is three notes played in the same amount of time as two notes of normal duration. Triplet ornaments are much easier if you purse your lips rather than tongue-block to play single notes. Blow or draw any note and quickly (without changing breath direction) shift one hole to the right

and back to the original note. The middle note of the triplet is usually (but not always) two steps higher than the note being ornamented, e.g., do-mi-do.

The first note of the triplet can be tongued to give it extra emphasis or to separate the triplet from the preceding note when, as is often the case, that note is of the same pitch as the first note of the triplet. To hear how this two-hole triplet should sound and where it should be used in a tune, the best model would be recordings by the Murphy family or Noel Battle.

Fiddlers, pipers and flute players often play a four-note ornament called a “short roll” that takes up half a beat (a quarter note or two eighth notes) in a reel or hornpipe. In the short roll, the note being ornamented is preceded by a higher grace note and followed by a note half a step lower before the player returns to the main note. If G is the note being ornamented, the short roll includes the sequence A-G-F#-G. The short roll cannot really be played quickly enough on the harmonica or the button accordion to make it work. Box players usually substitute a triplet for a short roll, and harmonica players can follow their example.

Staccato and Tongued Triplets

On blow notes you can play a one-hole triplet by changing breath direction for the middle note. Blow any note, then quickly play the draw note in the same hole and return to the original blow note. Each note in this kind of triplet has a clipped-off “staccato” sound that is particularly effective when playing hornpipes. It also approximates the sound of a bowed triplet on the fiddle.

You can also play a staccato triplet ornament on a draw note, but it may take two holes. You usually want the middle note of the triplet to be higher than the note being ornamented, so when starting on a draw note, you usually need to move to the

next hole to the right to play the middle note before returning to the original hole and drawing again.

An entirely different sort of staccato triplet can be played with the tongue alone on a single note. Play any note (blow notes are easier for this) and use your tongue as if saying “tah-tah-tah.” Alternatively, you can do what trumpet players do and use the back of your throat to finish the triplet, as if saying “tah-tah-kah.” Tremolo master Kieran McHugh of Antrim used this technique on his cassette recording.

Slide Ornaments

Another kind of one-hole triplet can be played only on a chromatic harmonica. This triplet is composed of the note being ornamented followed by a note a half step lower and the original note (e.g., do-ti-do). This kind of ornament is known as a mordent to classical musicians, but I refer to it as a “slide triplet” because you play it by using the slide on the chromatic.

The slide triplet can be played quickly and smoothly only if all three notes are in the same hole and same breath direction. This is possible only if you start the triplet on the higher-pitched of the two reed plates. On standard chromatic harmonicas, the notes on the higher-pitched reed plate are on the bottom of the instrument and are only available if you push the slide in.

To use slide triplets on a standard chromatic harmonica, you hold the slide in with your thumb or finger when playing. When you come to a note you want to ornament, you briefly release the slide and press it in again. An alternative is to disassemble the slide mechanism and reassemble it with the slide upside down, so that notes on the higher-pitched reed plate sound with the slide out. That way, you play the triplet by quickly pressing and releasing the slide, which is easier on the hand (more on this below in the section on

reversing the slide).

To hear what the slide triplet should sound like, listen to the recordings of Eddie Clarke, who pioneered this technique and relied almost exclusively on it for ornamentation. As with other ornaments, you can tongue the first note of the triplet to give it extra emphasis or to separate it from a preceding note of the same pitch. It is tempting to try to use the slide triplet on the lower-pitched reed plate, i.e., the one normally played when the slide is out. If you do so, however, the middle note of the triplet will be a half step higher instead of a half step lower than the note being ornamented. This just doesn't sound right, as it doesn't resemble ornaments used by Irish musicians on other instruments. If you want to embellish a note on the lower-pitched plate, you really should stick to the two-hole triplet described above.

The big disadvantage of the slide triplet is that you cannot use it when playing standard instruments in concert pitch. That's because you're playing from the higher reed plate, e.g. G# on a G instrument. There are ways around this problem, however, which will be discussed in the section on custom tunings below.

Anyone accustomed to playing the chromatic harmonica in the "normal" fashion may have problems adjusting to a system based on playing from the higher-pitched reed plate. If you've become accustomed to using the slide to get a note half a step higher, it is disorienting to get a note half a step lower. If you're already a chromatic player, you will have to lose old habits and relearn certain tunes to use this scheme.

Upward and Downward Triplets

The triplet ornaments described above start and end on the same note. It is also possible to play upward or downward triplets that start on one note and end on

another. Such triplets are very common in Irish tunes and can often put in or left out for sake of variation.

Some upward triplets are easily played because two of the notes are in adjacent holes and use the same breath direction. To play an E-F#-G (*la-ti-do*) triplet on a G chromatic, for example, you draw from holes 7 and 8 then blow into hole 8. Other triplets require the player to change breath direction twice by blowing and drawing in one hole and then blowing into the next hole to the right. For example, to play a B-C-D (*mi-fa-so*) triplet on a G chromatic, you blow and draw in hole 6 and then blow into hole 7 (on a diatonic it's holes 5 and 6). This sort of triplet sounds very clipped. Sometimes this sound is what is desired, as when a fiddler purposely bows each note of a triplet instead of slurring them together.

If you want to play such a triplet more smoothly, you can use the slide to play the middle note of the triplet. Doing this allows you to play all three notes as blow notes. A similar technique is used by two-row button accordionists, who use the lower-pitched outer row of buttons like a chromatic harmonica player uses the lower-pitched reed plate.

To play a smooth *mi-fa-so* triplet, hold the slide in, blow into hole 6. Move to hole 7 while simultaneously releasing the slide to sound the second note, then press the slide again while continuing to blow into hole 7 to complete the triplet. Practice is required to perform this sequence quickly and accurately.

On a standard harmonica, when playing from the higher-pitched reed plate with the slide in, every note is half a step higher than it would be on the lower reed plate. When playing an upward slide triplet in holes 6 and 7, however, the middle note (the one played with the slide) is actually a whole

tone higher than it would have been on the lower-pitched reed plate. The melodic difference is hardly detectable when the triplet is played quickly, however.

True Rolls

As noted above, it is not possible to play a “short roll” quickly enough on the harmonica, and we must substitute a triplet. It is possible, however, for a harmonica player to produce a passable five-note “long roll,” an ornament that replaces a whole beat in a jig, reel or hornpipe. The long roll starts with the note being ornamented and then continues with a higher note, the main note, a lower note and the main note again, e.g., G-A-G-F#-G.

To play a long roll fast enough to fit into a jig or reel, all the notes must use the same breath direction. To do this on a diatonic harmonica, play any note and then, without changing breath direction, move to the next hole to the right, back to the original hole, then to the next hole to the left and back to the original hole. If you start with the blow note in hole four, the roll would use the notes do-mi-do-so-do (C-E-C-G-C on a C diatonic). This sort of ornament is adapted from the rolls played by old-time melodeon (one-row accordion) players.

A chromatic player can produce a snappier version of the long roll by using the slide. You must play from the higher-pitched bottom reed plate on the chromatic in order to use the effect. The chromatic long roll can be thought of as a Murphy-style two-hole triplet followed by an Eddie Clarke-style slide triplet. To play it, blow or draw any note on the bottom (higher) reed plate and then, without changing breath direction, play the note in the next hole to the right. Return to play the original note and then use the slide to sound the note half a step lower finishing on the original note. If you start with the blow note in hole 5 on a standard C chromatic, this is do-mi-do-ti-do (C-E-C-B-C) but with every note

raised half a step since you're on the C# reed plate (it can be played in C if you play from the higher C plate on a standard B harmonica).

The rhythm of either version of the long roll is tricky to master. The first note (the one being “rolled”) should be sounded the longest, while the fourth, lower note should be played very quickly. The slide version of the true roll is easier to play in good rhythm than the diatonic version because that quick fourth note can be played with a flick of the slide instead of moving to another hole. The slide roll also sounds better because the fourth note is a half-tone lower than the note being rolled, which sounds more like the rolls played by fiddlers, pipers and fluters.

Chromatic players can use an alternative that is easier to play. Just hold the note that you want to ornament to the last possible split second and then use the slide to squeeze in a quick triplet. This is not really a roll, but it's played in the same amount of time and can be used in place of a true roll until you master the real thing.

CUSTOMIZING AND MAINTAINING CHROMATIC HARMONICAS

Reversing the Slide

Eddie Clarke played standard Hohner chromatics while holding the slide in with his thumb, releasing it to play triplet ornaments or notes on the upper reed plate. The same effects can be achieved with less stress on your hand by reversing the slide, i.e., by assembling the slide mechanism upside down so that the higher-pitched reeds are played when the slide is out.

To do this on a standard chromatic, remove the screws holding the slide assembly to the harmonica. Be careful not to lose the small plastic cylinders in the screw holes. Lift off the outermost piece (the

mouthpiece) to expose a three-layer sandwich of thinner metal strips. Take off the outer layer of the sandwich to get at the innermost strip, the slide itself. The slide has a small hole on the right side through which the end of a spring protrudes. Detach the slide from the spring, turn it over and reattach it upside down. Then reassemble the whole mechanism and reattach the screws. With the slide upside down, you can produce an Eddie Clarke-style slide ornament by quickly pressing and releasing the slide.

You can also reverse the slide on Hering and Seydel chromatics but not on some other models. It is difficult, for example, to disassemble the slide mechanism on the Hohner Chrometta. The Suzuki Chromatix and Hohner's CX-12 model are "cross tuned," i.e., the reeds for the "home" key are split between the top and bottom plates. Reversing the slide will still work, though on the Suzuki this requires drilling a new hole in the slide as the hole is not centered, but swapping reedplates for custom tunings (see below) won't work on these models.

Custom Tunings

The disadvantage of playing from the bottom reed plate of standard chromatics is that you can't play in concert pitch. That's why Eddie Clarke, who played on C/C# Chromonicas, was always half a step sharp on his recordings. That might be handy for sessions where everybody is playing half a step sharp, but it's annoying when you want to play with other musicians in standard tuning.

Clarke could have played in concert pitch if he had used a standard chromatic harmonica in the key of B, which has a bottom reed plate in the key of C. Such an instrument, which is tuned much like a B/C button accordion, has been used by Irish harmonica virtuoso Mick Kinsella. Like Clarke, Kinsella uses "second position" to

play in G on a C instrument.

To use Clarke's ornamentation system in "first position" (e.g. in G on a G harmonica), you need instruments tuned C#/D or F#/G. These aren't standard tunings, but you can buy or assemble such instruments from some makers and dealers. Seydel has F#/G instruments as a standard item and their website will take custom orders for virtually any tuning. Hohner chromatics in these tunings can be assembled by matching reed plates from different sets. To change a standard G/G# chromatic into an F#/G model, you need to get an F# reed plate from a standard F set. Then you remove the G# plate and replace it with the F# plate.

To assemble a C#/D Hohner Super-Chromonica 270, you have to replace the D# plate with a C# plate from a Hohner "tenor" C set of plates. A C# plate from a Hering 6148 "Baritono" C set can be used in the same way to replace the D# plate on Hering instrument. You can't use a C# plate from a regular C set because D instruments are the lowest-pitched chromatics and C the highest. The low octave on a D instrument is below the lowest note on a standard C instrument, so a standard C# plate doesn't match up with a standard D plate. Unfortunately, you cannot assemble a ten-hole C#/D or F#/G Hohner Chromonica 260 this way because Hohner doesn't make ten-hole D, tenor C or F reed plates.

Hering or Seydel plates are easily changed because they are attached to the comb with screws instead of tacks. To change plates on Hohner Chromonica models, you must carefully pry up the tacks holding them to the wooden body. The new reed plate must then be tacked down as tightly as possible to avoid air leaks.

Hohner does not sell customized harmonicas directly. You have to buy a

standard instrument from a retailer and send it to Hohner to change the plates. As plates are normally sold as a set, you will be charged for plates you don't need, e.g. an F plate when you really only want an F#. The Hohner repair department used to be very customer-friendly and would adjust and re-tune instruments for reasonable rates. The policy changed around 2009, however, so that it now costs about as much to have a chromatic re-tuned as it would to buy an entirely new instrument.

If you still choose to have Hohner do the modifications, you have to mail the instrument to them at the following address:

Hohner, Inc.
 Harmonica Repair Department
 1000 Technology Park Drive
 Glen Allen, VA 23059

“IRISH-TUNED” CHROMATIC HARMONICAS

F#/G

1 2 3 4 5 6 7 8 9 10 11 12

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

C#/D

1 2 3 4 5 6 7 8 9 10 11 12

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

B/C

1 2 3 4 5 6 7 8 9 10 11 12

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

U.S.-based Seydel players can get repairs or modifications done by Texas-based Greg Jones, who can be reached at:

greg@1623customharmonicas.com

Jean DuVal, a Quebec flute and harmonica player, created a 10-hole Chromonica with a solo-tuned top reed plate in G and a bottom plate in D. The D plate was originally a C# plate that he re-tuned up half a tone. While this tuning does not allow the use of Eddie Clarke-style slide triplets, it does make for interesting shortcuts, as you can go from G or A down to D merely by pressing in the slide. Seydel has recently added factory-made G/D solo-tuned instruments (called “Samplers”) to their line.

Brendan Power uses a variety of non-standard tunings, including a “slide diatonic,” a chromatic instrument on which the bottom reed plate is tuned a whole tone instead of a half tone higher than the top plate. On such an instrument, you can play on the top reed plate and flick the slide in and out to get triplets that go up a whole tone and back. Power also feels that this setup makes some difficult passages more easily playable.

Maintenance

Diatonic harmonicas are fairly robust but chromatics, with their complicated slide assembly and “wind-saving” valves, need a lot of regular attention to play well.

If you've got a harmonica with a wooden comb, you should try not to soak it or put it under the tap to clean it. Old-time blues players used to do this with wooden diatonic harmonicas because it makes for a bigger sound. But a wet wooden comb will expand, cause air leaks and abrade your lips. On a chromatic, it can make it impossible for the slide assembly to fit properly. You do need to take off and clean the pieces of a chromatic slide assembly occasionally, as they get gummed up with

bits of your lip and dried saliva. Take the slide mechanism apart, carefully clean the pieces, and reassemble it. Be careful not to lose the little plastic cylindrical screw anchors.

Before reassembling the slide mechanism, you can help keep it working smoothly by rubbing a little oil on the slide (I prefer olive oil to toxic machine oil!). A little oil on a wooden comb can also help keep the wood moist and create a bigger tone.

Ironically, by cleaning the slide you may remove bits of gunk that helped to seal the gap between the body of the instrument and the slide assembly, and this might actually cause more air loss and a weaker sound. Removing and re-attaching the slide mechanism may also cause the hole to become so chewed up that the screws no longer hold properly. You can use bits of paper to help anchor the screw in the hole.

Except for the very highest notes, each reed on a chromatic harmonica is covered by a plastic flap called a wind-saving valve or simply wind-saver. The two overlapping plastic strips that make up each valve on some models often become stuck together and rise above the reed slot, which causes an annoying flapping noise and a weaker sound. The valves will eventually get moist and loosen up after a few minutes of playing but you can separate the parts yourself with careful use of a small screwdriver, knife or toothpick to hasten this process.

The opposite problem is also possible – a valve can get sticky and will adhere to the plate, causing a delay before the reed sounds. It helps to warm up a cold instrument before playing so that condensation doesn't cause this to happen. You can also carefully lift up and clean a sticky valve.

Reeds do go out of tune. The D and G blow

reeds you use the most tend to go flat after a while. You can re-tune a reed by scratching it gently on one end or the other. Scratch or file the reed near the tip to raise the pitch. Scratch it nearer the base to lower the pitch. If you want to tune blow reeds, which are on the underside of the reed plate, take the plate off the comb to get at them. A harmonica repair kit from Lee Oskar includes files and chisels for tuning reeds as well as other useful implements.

If a reed doesn't sound at all, it's probably because a hair or a piece of dried skin is stuck to it or touching it. Carefully brush the reed with a soft toothbrush. You can also lift the reed with a small screwdriver, pin or toothpick and remove any extraneous matter interfering with a clean sound.

A reed that buzzes may be out of alignment, so that the vibrating reed touches the side of the slot in which it is mounted. You can correct this by gently nudging the reed sideways, something made easier with a small wrench that is included in the Lee Oskar tool kit.

A reed may also stop sounding altogether if metal fatigue causes it to droop so that there is not enough of a gap between the end of the reed and the surface of the reed

plate. You can pry the reed up to restore it to life. Be gentle as it won't sound if lifted too high either! Eventually a reed may simply get too worn out to retune. At that point, you really need a new reed plate, but don't throw away the old one. Save it to scavenge spare wind-saving valves.

If the slide is working properly but you hear two dissonant notes when playing from a single hole, you probably have a crack in the comb. The crack allows air blown in one hole to vibrate reeds on both reed plates. If the crack is not too severe, you can fill it in with wax or wood glue, but if this doesn't work, you need a new comb.

For professional assistance with harmonica repair and customization, I have had good experiences with:

Greg Jones
greg@1623customharmonicas.com
Seydel

Gary Lehmann
gnarlyheman@gmail.com
Suzuki

Burke Trieschman
burket@aol.com
custom work on Hohner and other models

APPENDIX A: IRISH / SCOTTISH / QUEBECOIS HARMONICA DISCOGRAPHY

Full-length harmonica recordings (CD's unless otherwise noted)

TOMMY BASKER

The Tin Sandwich, Silver Apple
www.cranfordpub.com

The late Cape Breton Islander played Scots and Irish tunes on simple diatonic harmonicas. He used virtually no ornamentation and rarely played single notes. He had rock solid rhythm though, and his chordal style emulated the Cape Breton fiddle technique of continually droning on open strings. Basker's 1960s duets with fiddler Johnny Wilmot appear on Silver Apple's Wilmot CD.

NOEL BATTLE

Music From the Reeds

The Mullingar Races (with accordionist Mick Foster)

Up and About in the Morning (with concertina player Roisin Broderick)
The many-time All-Ireland champion from Westmeath plays classic tremolo-style. His first CD, with accompaniment from pianist Brian McGrath, was released in 2008, followed by two duet collaborations. Battle's style is similar to that of the Murphys, but he prefers slightly quicker tempos and his mostly major-key repertoire is drawn more from tunes in the mainstream of contemporary Irish traditional music.

JOEL BERNSTEIN

The Rashers (with Randal Bays), cassette
Pigtown Fling

Joel, who lives in Seattle, performed with fiddler Randal Bays as "The Rashers." His chromatic playing in the Eddie Clarke style is extraordinary and he also plays great diatonic harmonica. The Rashers tape can be ordered from Joel at 3635 Burke N., Seattle, WA 98103. The more recent *Pigtown Fling* (and his old-timey duet with fiddler Ruthie Dornfeld, *Ways of the World*) were issued on Bays's Foxglove label.

DONALD BLACK

West Winds, Greentrax and (with Malcolm Jones) *Close to Home* (MacMeanmna)
A Scotsman who plays mostly double-reeded tremolo diatonics. His chord playing and rhythmic emphasis closely mimics the sound of Scottish piano accordion players.

LOUIS BLANCHETTE

Blanchette (1905-1969) recorded many sides of Quebec reels (one reel per track) in the 1930s on the "musique à bouche" with accompaniment from piano and his own stamping feet. His playing was reissued on a couple of LPs. There are some familiar Irish/Scots melodies, some with an odd beat added or subtracted. Strong dance rhythm, clean playing on tremolo instrument.

TOM BYRNE

Tom Byrne

A Donegal resident who grew up in Crewe, England, Byrne released a 2009 CD produced (and played on) by fiddle star Frankie Gavin. It features fast-paced, brilliant playing on chromatics. Byrne, who has a powerful tone and superb technique, shines on challenging Sean McGuire-style hornpipe showpieces.

EDDIE CLARKE

Crossroads (with Joe Ryan), Green Linnet
Sailing into Walpole's Marsh, Green Linnet
Unheard, CCÉ

The late Eddie Clarke's music is required listening for any would-be Irish chromatic harmonica player. A Dublin resident originally from Virginia, County Cavan, Clarke pioneered the system of playing a chromatic from the higher-pitched reed plate, using the slide for ornaments. He favored the cross-harp position and recorded most often in G# major and related modal scales on a standard Hohner C SuperChromonica. In his duets with Clare fiddler Joe Ryan, he matched Ryan so

closely that it's sometimes hard to distinguish the sound of the two instruments. The compilation *Sailing into Walpole's Marsh* included two solos and two duets with east Galway fiddler Maeve Donnelly. Clarke's Green Linnet LP tracks are available as digital downloads from various music websites. *Unheard*, a new multi-CD set of recordings of Clarke's harmonica playing and singing produced by Cavan fiddler Antóin Mac Gabhann, was released in late 2009.

JAMES CONWAY

Mouth Box

www.jimmyconway.com

Conway is a Chicago musician who plays many instruments in several styles, but on this self-produced disc concentrates on Irish harmonica. He plays mostly diatonic instruments, with a few tracks on a D chromatic, all with good rhythm and solid Irish style. The disc also includes Conway's excellent tin whistle playing, guitar backing from Martin Hayes' partner Dennis Cahill and a cameo appearance from harmonica genius Howard Levy. The Chicago Jimmy Conway, by the way, is not the Australian one, a well-known blues player down under.

TONY EYERS

Black Mountain Harmonica

Australian diatonic player who uses his own tuning system, a variation on country tuning that he calls "Major Cross."

<http://www.harmonicatunes.com/index.htm>

JOHN GAVIN and PAULINE GAVIN-CALLINAN

William's Pride

Top-flight, old-school tremolo diatonic playing by a father-and-daughter duo from Ballynacally, County Clare. Bouzouki backing from Eoin O'Neill. Available online from Custy's Traditional Music Shop.

DAVID HERZHAFT

Harmonica Celtique (Henry Lemoine - 41 rue Bayen 75017 Paris)

A book and CD from a French diatonic player with a background in blues and country. He plays Irish, Scottish, Quebec, French and Cape Breton tunes. The CD has thirty pieces played in normal and slow versions to aid the learner.

IRON LUNG

Triple Harp Bypass

An all-star trio that includes Brendan Power, Mick Kinsella and Rick Epping, with help from guitarist Martin Dunlea. It's an eclectic recording that is not purely Irish traditional music, as there are a good deal of bluesy stylings and original compositions. But this is an amazing alliance of diatonic and chromatic virtuosos and the disc includes great demonstrations of most of the ways you can play Irish and American old-time music on mouth organs. Available from www.brendanpower.com

BRYCE JOHNSTONE

Moothie (Smith/Mearns)

Mostly waltzes, airs and marches from this Scotsman. The cover photo shows him holding one of the those rotating spindles that hold several tremolo mouth organs of various keys.

DONAL KAVANAGH

A Dubliner and His Harmonica

Kavanagh plays tremolo instruments in old-time Irish style. He also uses some chromatics, but more as solo-tuned diatonics as he doesn't much use the slide. His repertoire is heavy on airs, hornpipes and waltzes, all played with sparing use of ornamentation but always in good rhythm. You can order Donal's CD for \$16 (US) from him at 61 Elizabeth Street, Aylmer, Quebec J9H 1E8

MICK KINSELLA

Harmonica

Steve Larkin and Mick Kinsella

Mick, a Dubliner with Wexford roots now living in Clare, is a superb all-around harmonica player who has mastered traditional blues style, Howard Levy overblows, jazz improvisation and the Eddie Clarke approach to Irish music on the chromatic harmonica. Mick has used a B chromatic to play in any key, a truly chromatic approach that mirrors that of B/C button accordionists. His debut solo recording includes traditional Irish tunes as well as original melodies, jazz, blues and Balkan music. His duo disc with fiddler Steve Larkin focuses on Irish repertoire. Mick also appears as a guest artist on recordings by Altan, Niamh Parsons and others. And he joined Brendan Power and Rick Epping on the Iron Lung CD.

BRUNO KOWALCZYK

A French player who plays mostly Tombo tremolo on tunes from Quebec and Ireland.

GABRIEL LABBÉ

Masters of French Canadian Music 3, with Philippe Bruneau (Folkways)

Harmonica Diatonique, Musique

Traditionnelle Québécoise (Studio Victor)

Hommage à Alfred Montmarquette (Disques Transit)

L'harmonica, une Passion (Disques Transit),

Gabriel Labbé, Harmonica diatonique (Disques Tout Crin)

En Concert, Gabriel Labbé, un Passionné d'Harmonica (SPDTQ DVD)

Rencontre avec Gabriel Labbé, un

Passionné d'Harmonica (SPDTQ DVD)

Labbé (1938-2008) was Québec's most famous harmonica player and a big influence on all French Canadian folk musicians of recent decades.

KIERAN McHUGH

The Wind in the Reeds, independent cassette

An Antrim native who plays a tremolo diatonic instrument, McHugh managed the neat trick of playing on one reed plate and covering the other with his lip, then switching to double-reed tremolo sound for a fuller effect, much like a button accordionist switching couplers. He used trumpet-style tongued triplets for ornamentation.

ARTHUR MIDDLETON

Mouth Organ Maestro

Harmonica Favourites (cassettes)

An Aberdeen native who plays diatonics for waltzes, airs, marches, schottisches and other tunes. Another harmonica player, Bert Burwood, joins on *Harmonica Favourites* along with piano, bass and drums.

PAUL MORAN

A Flying Start (with Fergal Scahill)

Paul Moran and Fergal Scahill, All-Ireland mouth organ and fiddle champs from

Corofin, County Galway, collaborated on this great duet album that is the best

example of playing Irish music on a

“country tuned” harmonica. Moran plays on Lee Oskar “Melody Maker” instruments,

which allow him to play major key tunes in “second position” on a diatonic instrument.

The instrument's restricted range

sometimes forces Moran to change octaves to find the necessary melody notes in some

passages, and he does not make use of the instrument's note-bending capabilities.

THE MURPHYS

The Trip to Cullenstown, Claddagh

The Tin Sandwich Band

The late Phil Murphy and his sons John and Philip (“Pip”) from Bannow, Wexford

formed a celebrated Irish mouth organ trio

in the 1980's. The Murphys play mostly

Oriental tremolo diatonics and favor relaxed tempos. They make great use of chordal

accompaniment and play well-thought-out

arrangements with cleanly executed two-hole ornaments and rock-solid rhythm. The Murphys can also be heard on some tracks of the fiddler Kevin Burke's recording *Up Close* (Green Linnet) and on a locally distributed 1980s cassette, *Traditional Music from South Wexford*. Their most recent recording is with the *Tin Sandwich Band*, together with button accordionist Benny McCarthy and guitarist/singer Donal Clancy.

BRENDAN POWER

New Irish Harmonica, Punch/Green Linnet
Born in Kenya, raised in New Zealand and now living in England, Power plays both diatonic and chromatic harmonicas in blues, Irish, jazz, Balkan and other styles. He also re-tunes instruments to his own patterns, including chromatics on which the two reed plates are set a whole tone rather than a half tone apart, and unique "Power Bender" models. *New Irish Harmonica* included some very traditional-style tracks and others that were free interpretations of Irish music incorporating elements from American country and blues styles. Power is much in demand as a session player and can be heard on *River of Sound*, *Arcady's Many Happy Returns*, *Altan's Blackwater* and many other discs. He has many other solo discs, and has recorded with Mick Kinsella and Rick Epping as "Iron Lung" (see listing above). He has a CD-ROM tutorial available from Madfortrad.com, and self-published tutors on playing Irish music on diatonic and chromatic harmonicas. His retuned harmonicas, recordings and books are available through www.brendan-power.com

ANDY O'SULLIVAN

Amergin, Green Note
A Kerry-based group that features Andy's Hohner CX-12 chromatic harmonicas with accordion, fiddle, banjo and other instruments. His playing of Sliabh Luachra tunes and barn dances is clean and in good rhythm – the best feature of this CD.

JEAN SABOT (with Laurent Dacquay)
Harmonica-Violon (Coop Breizh)
A harmonica/fiddle CD from Brittany featuring much Irish music.

STEVE SHAW

Blowing Through the Reeds
An independent recording of Irish, Scots and English dance tunes and airs on diatonic harmonicas (Lee Oskar G, Hohner Special 20 low D), played at moderate tempos with sparing use of ornamentation. Shaw tunes down his 2 draw reeds rather than the 3 blow reeds commonly altered in "country tuning," but to the same effect. With Martin Cole on guitar, fiddle, mandolin and vocals. Available directly from Shaw at moorcot@msn.com. See his website at: http://mysite.wanadoo-members.co.uk/trad_irish_harmonica

TONY "SULLY" SULLIVAN

Traditional Mouth Organ
CD and tutor from the Manchester musician better known as a tenor banjo player. See: www.halshawmusic.co.uk/mouth.html

JAMES THURGOOD

Handy Little Rig: Celtic and Old-Time Harmonica from the Maritimes (CD Baby)
A Canadian who plays Irish, Scots and old-time North American tunes in strict dance tempo using a simple, ten-hole Hohner Pro-Harp in G. The "Celtic" tracks are clean and in good rhythm, if a bit slower than is now popular, and without much use of ornaments. His "old-time" tracks include a lot huffing and puffing and unique ornamental flourishes. The CD includes extensive liner notes on harmonica styles and players in the Maritimes.

MATT WALKATE

Harmonica and Flute
An English player of diatonic and chromatics, Matt deploys a powerful tone and technique on this recording featuring diatonic and chromatic harmonica as well as flute and songs, with guitar, mandola

and bodhran accompaniment. Available from Matt (who performs and records with the band The House Devils) at mtwalkate@btopenworld.com

SEAN WALSH

Traditional Harmonica: The Wicklow Way
The man who introduced Eddie Clarke to the chromatic plays it in his own style on C#/D instruments. Order from him at: Sean Walshe, Ballinaclash, Rathdrum, Co. Wicklow, Ireland

GLENN WEISER

Author of several harmonica tutors, including *Irish and American Fiddle Tunes for Harmonica*. See www.celticguitarmusic.com/celHarm.htm

DON WESSELS

On Orkney
Maine native Don Wessels issued this CD recorded in the Orkney Islands with local musicians, which includes Scottish as well as Irish material. Visit his website at www.donwessels.com

Recordings with some harmonica tracks

JAMES ANDREWS, DONALD DAVIDSON, WILLIAM KEMP and THE SILVER CITY HARMONICA BAND

Sook and Blaw
A CD reissue of 78 rpm discs from the Scottish mouth organ players listed above as well as other free reed players.

JAMES ANDREWS and JIMMY HIDDLESTONE

Bob Smith's Ideal Band, Topic LP
Andrews and Hiddlestone recorded some tracks with this Glasgow band in the early '30s, including Andrews' tour de force version of the "High Level Hornpipe," on which he switches back and forth between two diatonic harmonicas. The liner notes included a Scottish newspaper review of a competition won by Andrews, with the headline "Sookin' and Blawin'."

JOE BURKE

A Cape Bretoner who had some tracks on *The Gaelic Tradition in Cape Breton, vol 1*, a now-deleted Topic recording.

PAUL DAVIS

Armagh Pipers Club, The Song of the Chanter,
Outlet LP
A 1970s recording featuring members of the Armagh Pipers Club. The late Paul Davis, an Englishman who played flute and concertina on the album, had one great track on harmonica, "Father Kelly's Reel," which he played on a C chromatic, using Murphy-style rolls.

GERRY DONOGHER (or Danaher)

A Sligoman born in 1935 who learned his music from his father John, a fiddle player. Recorded with the Coleman Country Ceili Band for RTE, it can be heard on *The Living Tradition*, released in 2000 by the Coleman Archive.

RICK EPPING

Rick is an all-around free-reed man who often plays harmonica and concertina simultaneously. The first American to win an All-Ireland mouth organ championship, Rick has toured with Frankie Gavin and with the harmonica trio Iron Lung (see listing above). He is also the inventor of the Hohner "Extreme Bending" harmonica, an instrument that gives crossharp stylists the ability to bend notes that can't be altered in that way on a traditional harmonica. A 1976 LP by the group Pumpkinhead includes a very impressive solo track by Rick on a country-tuned diatonic harmonica. He has also recently recorded with Dervish singer Cathy Jordan and Sligo guitarist, fiddler and blues-style harmonica player Seamie O'Dowd.

LARRY FITZPATRICK

Off to California, Advent LP
Larry was a native of Enniscorthy, County Wexford who played three tracks (reels,

flings and hornpipes) on this 1970s LP of San Francisco Irish musicians. He was a spectacularly good player on a 10-hole standard diatonic, using vamping chords and two-hole triplet ornaments.

MARK GRAHAM

Natural Selections

with Kevin Burke and Open House: *Open House; Second Story, Hoof and Mouth* (all Green Linnet)

Graham played harmonica and clarinet in Open House, a band that also included the fiddler Kevin Burke. Graham plays chromatics in the Eddie Clarke style and is also a great diatonic player for Irish and “old-timey” American tunes.

LARRY GRIFFIN

Ballinasloe Fair, Traditional Crossroads
Larry, who played fine tongue-blocking chordal accompaniment to songs, can be heard on tracks with Dan Sullivan's Shamrock Band and with singer Dinny “Jimmy” Doyle on this reissue collection of Victor 78 rpm recordings.

STEVE HICKMAN

Celtic Thunder, Green Linnet

Steve plays on one track on Celtic Thunder's first record, a great reel duet (“The Woman of the House/Paddy Lynn's Delight”) with flute player Linda Hickman.

ANDY IRVINE

Andy is most famous for his singing and bouzouki playing with the bands Planxty and Patrick Street. But all of his solo and band discs include very tasty harmonica playing. His harmonica is especially prominent on his classic 1970s duet disc with Paul Brady. Andy favors country-tuned diatonic instruments and often uses a

shoulder rack so that he can double on bouzouki.

LARRY KINSELLA

The Irish Phonograph, EMI LP

This LP includes a 1938 track from Wexford native Larry Kinsella, the first solo harmonica player to record Irish music. It's a superb rendering of the hornpipes “The Showman's Fancy” and “Pretty Maggie Morrissey.”

XAVIER LAUNE

French player with group Distant Shores.

DON MEADE

The author of this pamphlet has been recorded on a few tracks on recordings by New York-based button accordionist/fiddler Tom Dunne, singer Susan McKeown and Scotland's Battlefield Band. A solo recording is in the works.

NOEL PEPPER

The Lark in the Clear Air, Topic LP
Pepper, a Corkman living in England, played diatonics with a huff-and-puff style on several cuts of this compilation of “music on small instruments.” He soloed on slow airs and played dance tunes with flutist Paddy Moran.

FRED TOWNSEND

An Ottawa Valley player (father of fiddler Graham Townsend) who, according to the notes to James Thurgood's CD, recorded his own playing.

REG WATKINS

A Newfoundland player who, according to the notes to James Thurgood's CD, also recorded his own mouth organ playing.

APPENDIX B: MODE CHART

Starting Notes for Modal Scales

Harmonica Key	Ionian	Aeolian	Dorian	Mixolydian	Mixolydian 1 st pos.	Dorian 4 th pos.	Major 2 nd pos.
C	C	A	D	G	C	A	G
D	D	B	E	A	D	B	A
G	G	E	A	D	G	E	D
A	A	F#	B	E	A	F#	E

Other names for modal scales:

Ionian	<i>do</i> mode	major scale, straight harp	1 st position
Dorian	<i>re</i> mode	slant harp	3 rd position
Aeolian	<i>la</i> mode	natural minor scale	4 th position
Mixolydian	<i>so</i> mode	cross harp	2 nd position

The chart above illustrates the most common modal scales used in Irish music, and the keys of the harmonicas on which they can most easily be played.

The Ionian mode is the major scale. Playing in the major scale in which the harmonica is pitched (e.g., C on a C harmonica) is called “straight harp” by blues players. Other modes use the same array of notes but start the scale in a different place. The Mixolydian mode, which starts with *so* (G on a C harmonica), is the “cross-harp” scale favored by blues and country players. The Dorian mode, used extensively in Irish traditional music, starts on *re* (D on a C harmonica) instead of *do*. The Aeolian (natural minor) mode starts on *la* (A on a C harmonica).

Blues players over the years have referred to modal positions by number. “Straight harp” is “first position” and “cross harp” is “second position.” The Dorian mode is

“third position” and the Aeolian mode “fourth position.”

The last three columns illustrate positional scales, each of which requires one note that is not available on a standard diatonic harmonica. G major on a C harmonica (“Major in 2nd position”) can be played by raising the seventh note of the scale half a step, i.e., F# rather than F. A country-tuned diatonic is retuned to allow this. On a chromatic instrument, the F# can be played by using the slide.

“Mixolydian in 1st position” (e.g., a C scale with B flat) and “Dorian in 4th position” (e.g., an A natural minor scale with C sharp) are not spectacularly difficult on a chromatic harmonica, as these scales include only one note that must be played by using the slide. On standard diatonic instruments, however, these positions are only playable with Howard Levy-style “overblows” and “overdraws.”

APPENDIX C: HARMONICA HISTORY

Like the concertina and accordion, the harmonica is a “free-reed” instrument, i.e., one that produces sound from the passage of air over vibrating “reeds” that in modern instruments are actually thin metal strips. The reed in a saxophone or similar instrument is said to “beat” against the cushion of air that separates it from the mouthpiece, while the double reeds in an oboe mouthpiece or inside the chanter of the uilleann pipes beat against the air cushioned between the two reeds. But free reeds don’t beat at all – they just vibrate in mid-air. That vibration produces a tone by its effect on the air stream directed over it, a stream that may be supplied by a bellows, as in an accordion, or by lung power, as with the harmonica.

Free-reed instruments, including the Chinese sheng and Laotian khaen (often called Asian mouth organs or harmonicas) have been played since antiquity in the Far East. The reeds in these instruments are set into bamboo tubes that rise out of a wooden or gourd wind chamber. The player blows into a mouthpiece, which directs air into the tubes. Each tube has a hole in the side, which the player covers with a finger to allow the reed within to sound.

Examples of the sheng were brought to Europe in the 17th century and it has often been speculated that they must have had some influence on the creation of Western free-reed instruments. But as harmonica historian Pat Missin has pointed out (see www.patmissin.com), modern European free reed instruments really date from 1780, when Christian Gottlieb Kratzenstein, a Danish professor of physiology, won a prize from the Imperial Academy of St. Petersburg in Russia for a “speaking machine” based on a free reed of a different type than that used in Asian mouth organs.

As Missin’s website illustrates, sheng-type instruments use reeds cut out of the reedplate itself and that lie in the same plane. Either blowing or drawing will vibrate the reed, but it requires a resonating chamber to make much of a sound and the pitch is partially dependent on the size and shape of that chamber. Kratzenstein’s reed was slightly offset from reedplate, which meant that it would sound only if blown or drawn upon in a single direction. But it would also sound without any additional resonator. This feature was crucial to the later construction of small mouth organs with reeds for many pitches. Russian organ builder Franz Kirschnik adopted the new reed design to build the first reed organ (harmonium), an instrument that quickly spread to the rest of Europe in the late 1700s and predates all other Western free-reed instruments.

The first mouth-blown instrument to make use of the new-style free reeds was the *æolina* (aka *æoline* or *æolian*). This name, derived from *Æolus*, the Greek god of wind, has also been applied to other instruments, including a type of reed organ, but the mouth-blown *æolina*, invented in the early 1820s, was a simple, uncovered plate on which reeds tuned to various pitches were mounted. The player sounded the reeds by blowing directly on them. The earliest *æolinas* had only blow reeds laid out in chords, but more sophisticated versions soon appeared.

The *German Æolian Tutor*, published in England in 1830, included illustrations (see below, from patmissin.com) of many different versions, including a two-octave chromatic model with the reedplate mounted on wood and on which a C diatonic scale could be played on blow reeds and sharps and flats on draw reeds. The booklet also pictured an all-blow

“chromatic pandean aeolian” on which the player pressed tabs on the sharp and flat reeds to make them sound.

As the title of the English booklet makes clear, the *æolina* was regarded as a “German” instrument. The concertina, invented by English scientist Charles Wheatstone, is the only major Western free-reed instrument developed outside of German-speaking central Europe, where many artisans were working on new mouth- and bellows-blown free-reed instruments in the 1820’s and 30s. Wheatstone’s first free-reed instrument was a mouth-blown, metal-reed variation on the sheng that he called a “symphonium.” His bellows-blown concertina was developed simultaneously with a similar instrument called the “konzertin” invented by Carl Friedrich Uhlig in Chemnitz, Saxony.

Christian Friedrich Ludwig Buschmann is often cited as the inventor of the *æolina*, which he called the *Aura*, in Berlin in 1821, as well as a some sort of improved mouth organ in 1828. No examples of his instruments survive, however, and the only real source for these claims is a book written by one of Buschmann’s descendants at the height of Nazi-era German nationalism in 1938.

The modern harmonica’s “tin sandwich” design has reedplates on the top and bottom of a chambered wooden or plastic “comb,” with metal cover plates protecting the exposed reeds. We don’t really know who made this design breakthrough, or when and where such instruments were first produced. Martin Häffner and Lars Lindenmüller in their book *Harmonica Makers of Germany and Austria* (published by the German Harmonica Museum), gathered a great deal of information, but many questions about early harmonica history remain unanswered.

The most common type of harmonica

played today, with a single blow and draw reed in each hole, is usually attributed to an inventor named Richter from Austrian-ruled Bohemia. Richter is a mystery man, however, and we don’t even know his first name or the date of his invention. Häffner and Lindenmüller cite an 1882 article in the *Zeitschrift für Instrumentenbau* (Instrument Maker’s Gazette), which listed a harmonica maker named Joseph Richter who founded his business in Haida, Bohemia in 1828 and relocated to Regensburg, Bavaria in 1867. This may have been Richter the harmonica inventor, but no trace of harmonica production survives in any of the several Bohemian towns named Haida or Haidau.

Vienna rather than Berlin or Bohemia seems to have been the real center of free-reed development. One contributor was the clockmaker Georg Anton Reinlein, who made both reed organs and early accordions. In 1828 he advertised in the *Wiener Zeitung* a “newly designed two-octave Mund-harmonika on which one can play not only chords but anything at all.” Given the date, this may have been an improved version of the *æolina* rather than a more modern mouth organ.

In 1834, Friedrich Thie, an immigrant from Prussia, started making mouth organs in Vienna, where his son Wilhelm Anton Thie (1833-1905) would go on to become a major harmonica manufacturer. The younger Thie’s “Wiener” tremolo design, which has important differences with Richter’s, probably dates from the 1850s. The vast majority of diatonic harmonicas produced today are versions of either the Richter or Thie design.

Vogtland, which straddles the mountains separating Bohemia from what was then the kingdom of Saxony, was another center of early mouth organ production. In the late 1820s, violin maker Johann Georg Meisel and his partner Johann Langhammer began producing mouth organs of some sort in

Graslitz, Bohemia (now Kraslice in the Czech Republic). Around the same time, Johann Wilhelm Rudolph Glier and his brothers started their own mouth organ workshop in Klingenthal on the Saxon side of the border. Eventually, over 100 small manufacturers were making mouth organs in the region. Klingenthal is still a center of harmonica and accordion production, led by Seydel, a firm founded in 1847 and revived after German reunification.

Harmonica manufacturing also spread to the southwestern German states. Furniture maker Ignaz Hotz and his son Friedrich took up Mundharmonika production in the mid-1820s in Knittlingen, Baden, where they developed the “Knittlinger” harmonica, an octave-tuned version of the

Richter design. Around the same time, clockmaker Christian Messner started a harmonica business in Trossingen, Swabia, where his cousin Christian Weiss later set up his own firm.

Matthias Hohner was a relative latecomer to the business when he founded his own Trossingen firm in 1857 after having had a chance to observe Weiss’ methods. But it was Hohner who led the switch from hand craftsmanship to mass production, absorbed most of the smaller German firms and became the world’s dominant manufacturer. Hohner is still the world leader, but harmonicas are now produced in great numbers by other makers in Germany, China, Korea, Japan, the Czech Republic and Brazil.