Introducing The Harmonica, Button Box and Anglo Concertina

The harmonica, the Anglo concertina and the button accordion are three instruments that operate on a similar blow/draw or push/pull principle. This means, in theory at least, that if you can get your mind around the way one of them works then moving on to another will be familiar, even relatively painless. So if you can rattle out a tune on the mouth organ you should at least have an idea how the concertina or button accordion works.

A full octave of musical tones or steps contains 12 notes, 13 if you count the next octave note. (To get an octave note just means doubling, or halving, the frequency, such as by halving the length of a guitar string, or causing a reed to vibrate half, or twice, as fast). A scale containing all those 12 notes is called a **chromatic** scale. Most basic songs and tunes however only need a select 8 of these tones, the familiar ‘doh, re, me, fa, so, la, ti, doh’ thing, that’s 7 only notes, or 8 if you count the second ‘doh’. This is called a **diatonic** scale.

The harmonica, Anglo concertina and button accordion are diatonic free reed instruments, in general they come with just the basic 7 notes that you will need to play most tunes, in one set key or starting point. And they make those notes when air is blown over little metal reeds that sit snugly in a frame. Each button, or hole on a harmonica, has two reeds and makes two different sounds, one when the bellows are pushed together, or you blow into a harmonica, another when the bellows are pulled apart, or you draw air in.

There’s a hitch here. If your song is in the key of C you will have all the notes of the C scale, a couple of octaves in fact. That’s good, the ones you don’t need are not there to get in the way. But the key of C could be too high, or low, for your voice. The key of D, or E or F might be a better choice for that particular song. You will need a different harmonica tuned in the new key. Or a different accordion or concertina. That’s another thing about diatonic instruments, you are going to need a few of them. Harmonicas are relatively cheap and easy to carry around, but accordions and concertinas not so. That’s why they usually build accordions with two or three rows of buttons, each row of 10 buttons is one set key. Typically the rows are a 4th apart, that is in G and C, or C and F, or A/D/G.

Here’s a diagram of a C harmonica, compliments of Suzuki Harmonicas. The scale starts on the C at hole 4 / blow. The next note, D, is hole 4/ draw. And so on up to hole 7 where things are reversed, the next note in the series, the B, is hole 7 / draw. That’s because they want to keep all the Cs and Es and Gs as blow notes, so that if you blow two or three holes together you will get a nice C major chord.

The same principle applies to the button accordion, except the first note of the scale is on button 3 / push (not 4), with the reverse occurring on the 6th button. Try playing a scale for two octaves. You will notice that things get bit messy towards the high end. Not to worry, we don't often get up there anyway, but with practice this push / pull pattern becomes very familiar, to the extent that these diatonic instruments are very easy to play by ear, without reference to a music score. Button accordions also have a couple of bass buttons on the left side that produce good solid bass chords without even thinking.

What about the Anglo concertina? Pretty much the same as the button accordion really. Imagine the melody side of an accordion cut in half, the five lower notes or top part goes to the left hand while the five higher notes to the right hand. Forget about the bass buttons though, they go west. So now you have two hands free to play melody. You may be able to play a tune on the lower octave with the left hand and the upper octave on the right simultaneously. Or do a chord vamp on the left while playing melody on the right. As with the other instruments adjacent buttons, being a third apart, make a nice chord when played together.

Anglo concertinas often have a third row of buttons that produce accidentals, those notes not found in the other two rows. This makes them 'sort of chromatic', for those occasional tunes where you do need to find that odd missing note. Also note that there are other types of concertinas such as the English system which is fully chromatic and makes the same note irregardless of the bellows direction. It is a different instrument entirely, the button rows run up and down whereas on the Anglo the rows fall crossways, in a natural arc under the fingers.

Where to from here? If you don't yet have a free reed diatonic instrument the harmonica is a good place start, they are relatively cheap. Get a couple of 10 hole harmonicas, sometimes they are called blues harps. Start with a C, then maybe add a G and a D, possibly an A, later. Try playing any basic folk or country or standard tune, generally starting around hole 4, but sometimes elsewhere. Soon the 'blow, draw, blow, draw, blow, draw, draw, blow' pattern will become natural and you will be able to play most tunes on demand.

When finances allow and you want to move up to a button accordion or concertina consider a multi row instrument. I find a C/F and an A/D/G accordion covers a range of five useful keys on just two instruments. Concertinas are usually in G/C or D/G with 20 buttons (10 for each key), but a 30 key model with the extra row of accidentals is recommended, it makes them that much more useful.

Have fun.

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Introducing The Diatonic Accordion

What is it A 'diatonic' accordion (squeezebox / melodeon / button-box) has only the seven notes of a major scale available, the ‘doh re mi fa so la ti doh’. This is enough to play most basic songs and tunes of interest to the folk musician. All the other notes usually available on 'chromatic' instruments, known as accidentals, are left out which keeps the weight down and the playing complexity simplified. Each accordion (or row) is tuned to just one key, and you generally get about two octaves out of it.

The bass side on the left just has a couple of simple bass chords, unlike the piano accordion. And in most cases the extra octave reed banks on piano accordions are also left out (again it keeps the weight down) though some boxes do have knobs on top to open or close another bank/s of reeds.

Boxes work like the 10 hole harmonica and the Anglo concertina, all have a push / pull or blow / draw action. Each button or hole gives two notes, one when you push the bellows together, another when you pull. Piano accordions on the other hand play the same note irrespective of the bellows direction, as well as having all the notes of the chromatic scale.

Advantages Like a ukulele, whistle or a harmonica squeezeboxes are portable and relatively light; economy of finger moves makes them fairly easy to play (because roughly half the note changes are made by changing bellows direction, the other half by a finger move to another button); they have a distinctive choppy sound with good volume which is ideal for dance music and sessions; they are very good for by-ear playing as it is not necessary to be able to sight read; great for folk and traditional styles using a diatonic scale; the basic bass chords complement the melody with little thinking involved; it is easy to play chords as adjacent buttons are a third apart. Some national styles have developed such as Cajun, Tex-Mex, Irish dance music, English folk and Morris dance, German waltzes etc., Italian folk music, Quebecois, Australian dance tunes.

Disadvantages Changing key is an issue, as a different row is needed for each key. So several accordions, or multi row instruments, may be necessary to cover a range of keys. Despite their lack of frills new instruments are not that cheap to buy either. The lack of accidentals may occasionally be a problem but multi-row instruments can assist here.

Playing a scale Once the push / pull pattern is in ones head playing instinctively by-ear, without reference to music notation, is easy. You just need to have the tune in your head. With a little practice playing most tunes is easy. To play a scale you start on the **third button down / push direction**, that's the tonic, the 'doh' of the scale. The next note, 're', is the same button but pull. 'mi' and 'fa' are push/pull on the next button down. And so on.

Finding the key/s Look for a letter stamped somewhere, usually on the bass strap. The third button down / push, is the key note. Take a set of harmonicas if inspecting a possible buy. Note that the ‘key’ note or tonic on a harmonica is **4 / blow, not 3 / blow**. So 3 / push on a box = 4 / blow on a harmonica.

Choices, choices, choices Multi rows are really several accordions sharing one set of bellows. Rows are generally tuned a 4th apart, ie. D and G, or C and F. The Irish tend to favour two rows tuned a semitone apart such as B and C, or C and C#. Theoretically this allows playing chromatically, in any key, though with a different starting point and fingering pattern for each key. Hmmm, sounds complicated to me. Typical key combinations are:

single row-	G, D, C, A are common keys
two row-	G/C; C/F; D/G; Bb/Eb
three row-	A/D/G; G/C/F
a semitone apart-	B/C; C/C# are popular in Ireland

Songs that modulate or have accidentals

Some tunes or songs may modulate to a different key. It may be that these notes can be found in the other row on a two row accordion so experiment.

Whole tone 7th gives a haunting effect

Some folk tunes have an interesting accidental in them, a whole tone instead of a semitone between note 7 note and the octave. The reels Staten Island and Over The Waterfall, and the song The Garton Mothers Lullaby are examples. With rows spaced a 4th apart this interesting accidental is possible on the 2nd row 4 / pull.

Playing relative minor keys

Relative minor keys can also be played, starting on 5 / pull instead of 3 / push, ie. a 6th higher than for the major scale.

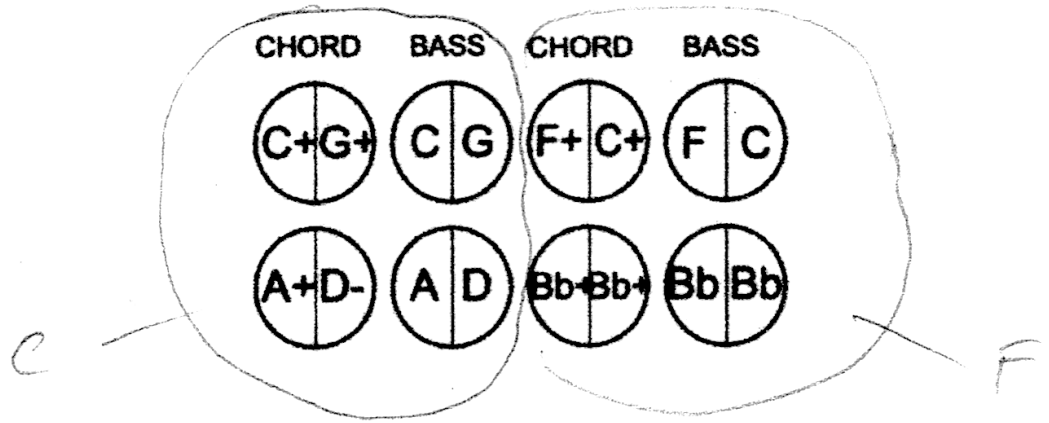
on a C accordion	to play in A minor	→	start on the A	(button 5 / pull)
on a D accordion	to play in B minor	→	start on the B	(button 5 / pull)

Building a repertoire Some tunes suit the button-box really well, others don't, so experiment. Accompanying yourself on the squeezebox while singing simultaneously can be tricky due to the tendency for sympathetic breathing with the push / pull action. Practice well before launching yourself on the discerning public. Look on YouTube for material for your repertoire.

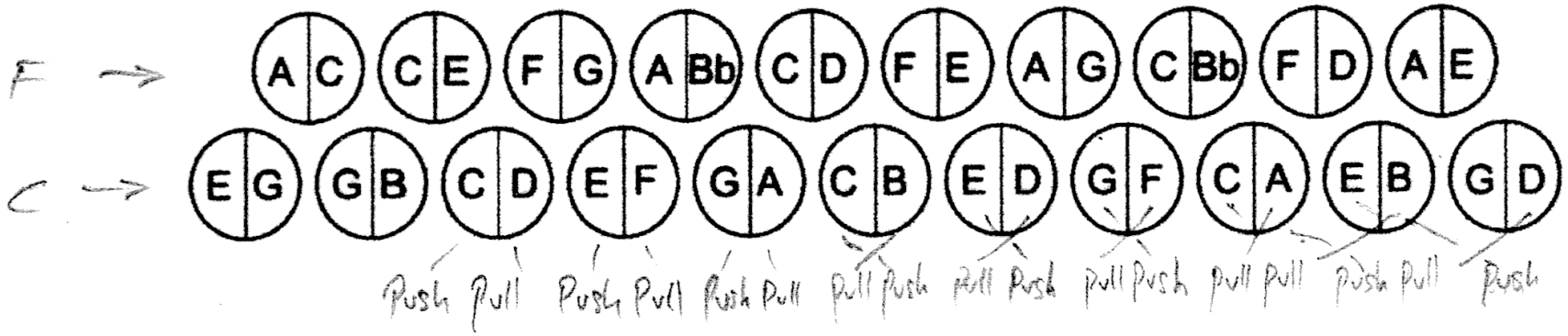
Buying an accordion Decide what you mainly need it for and what key/s. You may need several, I find a C/F (good for vocal) and D/G/A (good for dance tunes) gives a good coverage on two accordions. Italian models tend to sound sweet, German Hohners are great for volume. Avoid the Chinese models if possible, the reeds can be hard. Chinese toy accordions are not serious instruments, the bellows are too small for the full size reeds in them. Test the bellows for leaks by holding the instrument end up. Test the keys – are both reeds working per action? (For each actual note played two reeds sound, sometimes more). Check for loose reeds rattling around; reeds are held in place by bee's wax and resin which may melt if left in a hot car.

Have fun!!

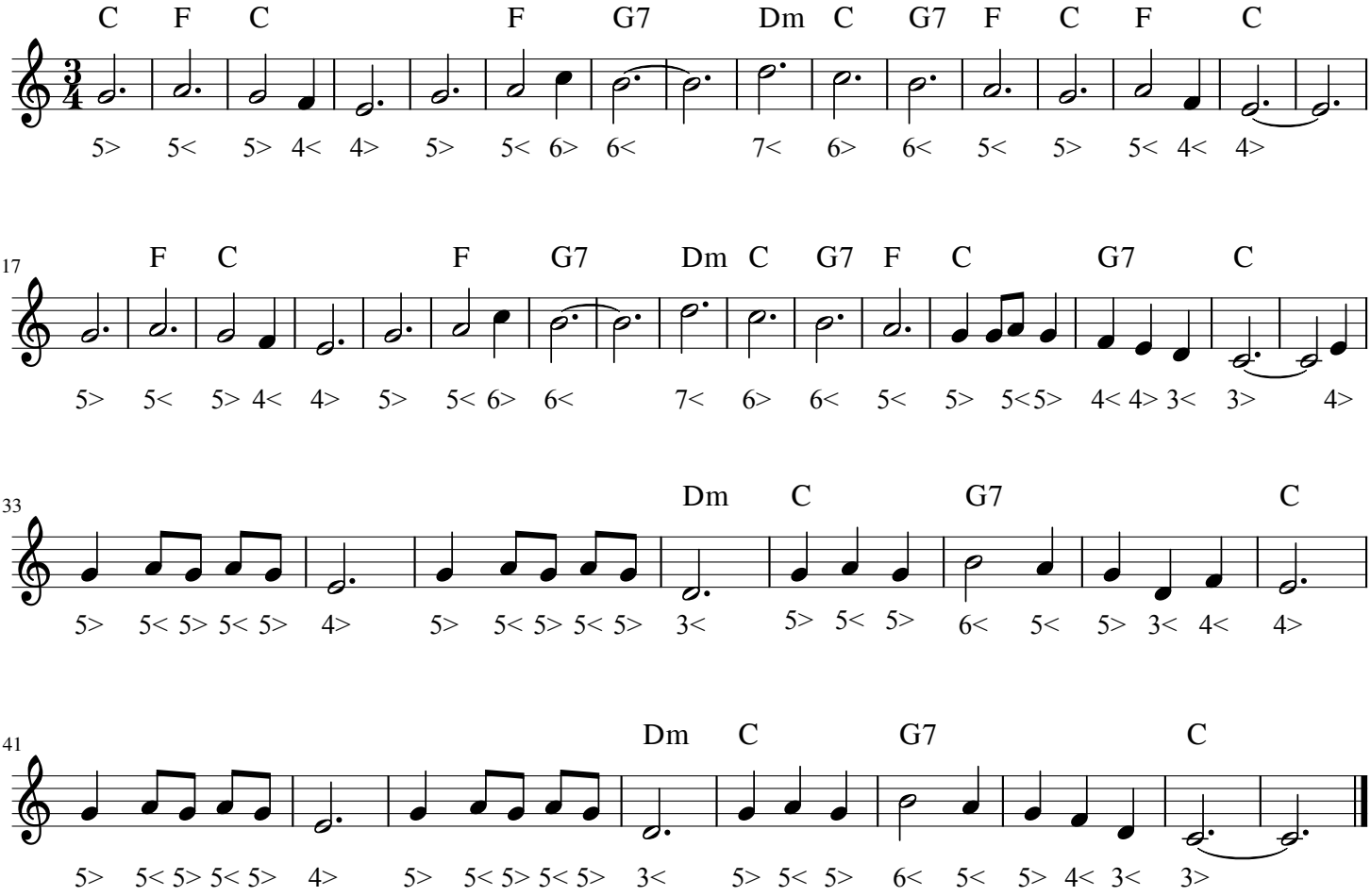
KEYBOARD LAYOUT: 21 button C/F with low notes



BELLOWS



Henry's Waltz



Henry's Waltz (harmonica)