

Andy Newton's wish list (2007):

1. Chromatic: All 12 chromatic notes should be playable as simple draws or blows or draw bends.
2. Straight major scale: At least one major scale should be playable with just blow and draw notes.
3. Octave repetition: The pattern of blow and draw notes should be repeated the same in every octave.
4. Direction: Notes should get higher from left to right, and from blow to draw in each hole.

Andy Newton showed that there are only three ways to satisfy these four properties:

- a 5-hole-octave pattern that plays 4 major keys without bends (fourkey tuning),
- another 5-hole-octave pattern that plays 2 major keys (twokey tuning),
- a 6-hole-octave pattern that has no bends (chromatic tuning).

Information about fourkey harmonicas is available at <http://4keyharps.wordpress.com/>

10.3 layout in C, modified at hole 10 (available in all keys from Seydel)

	1	2	3	4	5	6	7	8	9	10
blow	D	F	G	A	C	D	F	G	A	C
draw	E	F#	Ab	B	Db	E	F#	Ab	B	D
bend	Eb		Bb		Eb		Bb		Db	

First major position

blow	2	4	5	6	1	2	4	5	6	1
draw	3			7		3			7	2
bend										

Second major position

blow	5		1	2	4	5		1	2	4
draw	6	7		3		6	7		3	5
bend										

Third major position

blow	1		4	5		1		4	5	
draw	2	3		6	7	2	3		6	1
bend										7

Fourth major position

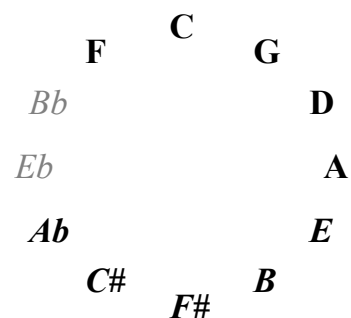
blow	4			1		4			1	
draw	5	6	7	2	3	5	6	7	2	4
bend										3

Fourth minor position

blow	4	6	7	1	3	4	6	7	1	3
draw	5		7#	2		5		7#	2	4
bend										

12.3 layout in Eb (Db, D, Eb, E, F available in Seydel Solo Pro 12 Steel)

	1	2	3	4	5	6	7	8	9	10	11	12
blow	F	Ab	Bb	C	Eb	F	Ab	Bb	C	Eb	F	Ab
draw	G	A	B	D	E	G	A	B	D	E	G	A
bend	F#			Db		F#			Db		F#	



Blows, Draws, & Bends on a C fourkey

LeGato tuning: Fourkey's Big Brother!

Blow button in

C# Eb F# Ab Bb C# Eb F# Ab Bb C# Eb

Blow button out

C D F G A C D F G A C D

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

Draw button out

C# E F# Ab B C# E F# Ab B C# E

Draw button in

D F G A C D F G A C D F

C major scale breath-simple (all draw notes)

C#	Eb	F#	Ab	Bb	C#	Eb	F#	Ab	Bb	C#	Eb
C	D	F	G	A	C	D	F	G	A	C	D
1	2	3	4	5	6	7	8	9	10	11	12
C#	E	F#	Ab	B	C#	E	F#	Ab	B	C#	E
D	F	G	A	C	D	F	G	A	C	D	F

C major scale button-simple (all button out)

C#	Eb	F#	Ab	Bb	C#	Eb	F#	Ab	Bb	C#	Eb
C	D	F	G	A	C	D	F	G	A	C	D
1	2	3	4	5	6	7	8	9	10	11	12
C#	E	F#	Ab	B	C#	E	F#	Ab	B	C#	E
D	F	G	A	C	D	F	G	A	C	D	F

More at <http://home.comcast.net/~rbmy/fourkeyintrod.pdf>