

- Establishing a default chord layout to be recommended to new players -

The work I have done recently on chromatic chord layouts leads me to propose a new standard for the recommendations to the new player. That would be for those who are already proponents of the so called Bryan Bowers layout, a general concept rather than an exact and complete layout and chord selection. Others are welcome to be persuaded to consider this chord layout approach.

What exactly is the "Bryan Bowers" layout? It is middle finger on the key root chord or "I", ring finger falling naturally on the dominant 7th (V7) in the row behind that of the I, and index finger falling naturally enough on the IV in the same row as the I. The relative minor is achieved by sliding the home position forward to another row. That all translates to "majors in the middle, minors toward the bass". By default then the implied position of the 7th is in the treble side row. The pattern for three or more keys would be the same. The orientation is holding the instrument upright, not played lap style.

←Treble side, Pin end

```
|----I7-----V7-----|
|IV-----I-----V-----|
|--ii-----vi-----iii--|
```

Bud Taylor indirectly started me on this trail when he correctly commented here a short while back that what many recommend is just a diatonic that plays in several keys, as opposed to something configured to play a wide variety of music to include a suite of 7th chords and harmonic minor progressions (i-iv-V7).

I think highly of the concept of middle row majors and bass row minors, 7ths in the treble side row. I accepted the challenge and came up with something that allowed me to personally play chromatic music more easily on a layout that was the Bryan Bowers layout at its core.

The place to start is with a factory instrument, on which all the existing chords have been rearranged. The old standard is as follows:

```
Ab-----Bb7-----F7-----C7-----G7-----D7-----A7
---Eb-----Bb-----F-----C-----G-----D-----A
-----Cm-----Gm-----Dm-----Am-----Em-----E7-----B7
```

But wait!! There is nothing to change! We only mess it up, when we start adding nonstandard chords, especially more minors.

The two 7ths in the bass row are critical to being able to play rags and harmonic minors with reasonable reaches and fingerings. Don't move them! Looking at this layout as chromatic rather than diatonic, the extension of the Bryan Bowers generic layout looks like something Bryan probably never envisioned. It is actually for chromatic music too, and is as follows:

```
|--IV7----I7-----V7-----II7-----VI7
|-----IV-----I-----V-----II-----VI
|-----ii-----vi-----iii-----III7-----VII7 - anchor end, bass side
```

I do not see any way to place all that closer to the home position on the I chord, while retaining the basic concept for the easier stuff.

Casting aside the IV7 for a major chord to complete another major key, we see that a chord layout need be only 15 bars to have a completely chromatic instrument that plays in 5 major keys, two quite chromatic, and two harmonic minor keys that are easy enough to finger. Lose one 7th, however, and a note in the chromatic scale is orphaned, not employed by any chord. The last 7th on the right is critical to the system.

With stock chords and tuning, the forgoing was an FCGD (dae) instrument, but what we often want is a CGDA (aeb) instrument. That is where one would find a Bm or an E, as follows, transposing much of the above layout:

```
Eb-----F7-----C7-----G7-----D7-----A7-----E7
---Bb-----F-----C-----G-----D-----A-----E
-----Gm-----Dm-----Am-----Em-----Bm-----B7-----F#7
```

Don't change B7 to an F#m or change F#7 to a place to slide B7. Look at how you might finger Em as Em-Am-B7 or Bm as Bm-Em-F#7. That is very playable. I tried it and have three instruments set up that way.

If you think you have to have F#m too, then either change E Major to F#m (don't move anything), or you will need the GDAE version like this:

```
Bb-----C7-----G7-----D7-----A7-----E7-----B7
---F-----C-----G-----D-----A-----E-----B
-----Dm-----Am-----Em-----Bm-----F#m-----F#7-----C#7
```

As soon as you start moving 7ths to accommodate minors, you get a dumbed down diatonic, pushing harmonic minor progression aside as too challenging along with the tunes that require them.

I name these 6-7 major key layouts using four (4) keys, because those are the best keys and should also correspond to the 10 note scale used in the mid bass octave. Each one is tuned and felted differently. The CGDA, for example, is the "Drew Smith" tuning.

If you just want a box that plays three chord majors and a few natural minors, then never mind. You could do as well playing a diatonic of some sort, perhaps better referred to as a semi-chromatic, like GDA.

Bringing the 7ths to the bass row in stair step fashion rather than clockwise sequence is what keeps the 7ths in close enough to the home positions on majors to make a wider ranging, chromatic tune playable. The 7ths are also then happily within playable distance of minors.

I don't actually do it this way because of harmonics. I do all the stuff I really intend to use in the first 15 bars on the right, assuming the 16th will fall on the 1/3 node harmonic. I then poke a major chord into the treble row at #15 and don't much care what happens beyond that.

There are three diminished 7th chords on the left. I have the diminished 7ths positioned so that treble/middle/bass row plays a descending tone sequence. I refer to them as D, A, and E because I can instantly remember minor third interval spellings for those chord name letters. Instead of E, A, and D; one might prefer the conventional C#, C, B, respectively. The GDAE would then look like the following:

```
E07-----X-----C-----D7-----A7-----E7-----B7
---A07-----X-----G-----D-----A-----E-----B
-----D07-----X-----Em-----Bm-----F#m-----F#7-----C#7
```

The X positions could be F, Am, and C7 in some order, all ruined in great degree by harmonics or weak support in the bass notes, but what I ended up doing, using a 21 bar chord set with cover, is bringing the diminished 7th chords in and leaving the last three positions empty, unblocking the soundhole. 18 chords are all I need or all that prove playable. How the thing sounds DOES matter. So if one is a GDA or GDAE kind of person, this is what it would look like with 18 chords:

```
X----E07-----C-----D7-----A7-----E7-----B7
--X-----A07-----G-----D-----A-----E-----B
----X-----D07-----Em-----Bm-----F#m-----F#7-----C#7
```

Sounder logic for a GDAE that is more chromatic would change B Major to C#m on the right side of the middle row. E would then have a relative minor. Mine are done that way. That is the only real "option" position and making it a major chord can save one from having to carry an extra instrument just to enable one more three chord key. It certainly won't be a favorite because of its location against the anchor end. I can spare B Major, because with E being a good vocal key for me, I have a separate EB killer diatonic instrument. What I would lose access to though would be a II7 for B (C#7), which my EB diatonic doesn't have. I don't do solo instrumentals much with a chromatic, but I certainly could sing with one. Mostly I would either just be playing along when someone else is in that key (B) or I would be playing a diatonic instrumental. In my case, having a missing II7 chord would not be critical in B.

My GDAE (bf#) 18 bar chromatic:

```
E07-----C-----D7-----A7-----E7-----B7
---A07-----G-----D-----A-----E-----C#m
-----D07-----Em-----Bm-----F#m-----F#7-----C#7
```

This uses all of the chromatic scale, at least one chord using each note, not counting the dim7 chords. The F is actually E# in the C#7 chord. It then matters, if someone gets a notion to drop or change C#7 for want of some other chord. C#7 is needed by F#m (f#-b-C#7). 15 bars is a pretty tight system, so it is best not to go looking for ways to personalize something that works, i.e. don't "fix" it.

The 10 tone GDAE scale in the bass is GG#ABCC#DD#EF# (no A# or F), implemented as GABC#DEF#GG# using custom strings and standard chromatic from #10 upward.

If one finds that a selection of chords isn't enough, another instrument is needed rather than bastardize the one already correct. Having a choice can be counterproductive.

In my own playing, the thumb is active in fingering all the chord progressions. It sometimes is substituted in preparation for a longer reach and return. My thumb is never primary. My pinky plays some chord fingering role, but I am not confident with it. It is not very powerful and usually comes into play when I need a chord in the anchor area where more force is needed. Then I am apt to role my hand and gain some strength from the wrist.

People will use what they want to. That will involve trust in the designer and respecting that there would be knowledge involved and much to consider to balance all constraints. There would likely need to be a critical mass of people who have adopted a system before being comfortable that people generally accept it as a good direction. The purpose of my post is to lobby among those who recommend things to others, who sometimes wind up as my customers, coming to me with a chord layout already in mind.

Please, the place to start is the position that does not cost extra. Enough with the custom string schedules, custom chords, refelting everything, never good enough until you get rid of the plastic cover, etc. If people are to take up the instrument, they need a starting position that is realistic and an instrument that is a good platform for later enhancements, after becoming sure of what they need and can afford.

The following is the series of chord layouts for various key combinations, all with identical relative patterns. Note that the middle two keys are always the "juiciest" and are the only ones with the III7 in the preferred position. I don't think it would make sense to carry two harps done differently but one key redundant as a central key. In other words don't do an FCGD and a CGDA with G central on either. Jump to at least a GDAE or EbBbFC, retaining the standard FCGD as best in CG. Having the same key on two harps is not otherwise redundant because of the varying chromatic range. GDAE is completely chromatic in G, while BbFCG lacks the III7 and a minor for G.

-**EbBbFC** (gd) 18 bar chromatic - flat keys

```
E07-----Ab----Bb7-----F7-----C7-----G7
---A07-----Eb-----Bb-----F-----C-----Am
-----D07----Cm-----Gm-----Dm-----D7-----A7
```

-**BbFCG** (da) 18 bar chromatic - complement to GDAE 'harp

```
E07-----Eb-----F7-----C7-----G7-----D7
---A07-----Bb-----F-----C-----G-----Em
-----D07-----Gm-----Dm-----Am-----A7-----E7
```

-**FCGD** (ae) 18 bar chromatic - a standard autoharp

```
E07-----Bb-----C7-----G7-----D7-----A7
---A07-----F-----C-----G-----D-----Bm
-----D07-----Dm-----Am-----Em-----E7-----B7
```

-**CGDA** (eb) 18 bar chromatic - popular for jamming, basically GD

```
E07-----F----G7-----D7-----A7-----E7
---A07-----C-----G-----D-----A-----F#m
-----D07----Am----Em-----Bm-----B7-----F#7
```

"Drew Smith" bass tuning. My refurbished, US vintage, Appalachian model offerings are done this way, albeit with 21 bars.

-**GDAE** (bf#) 18 bar chromatic - good for fiddle tune jamming and contra dance band

```
E07-----C-----D7-----A7-----E7-----B7
---A07-----G-----D-----A-----E-----C#m
-----D07----Em----Bm-----F#m-----F#7-----C#7
```

A bluegrass version could change C#m to B Major. That is not to say the C#m would never be missed. It is the relative minor for E.

-**DAEB** (f#c#) 18 bar chromatic - sharps 'harp

```
E07-----G-----A7-----E7-----B7-----F#7
---A07-----D-----A-----E-----B-----G#m
-----D07----Bm----F#m-----C#m-----C#7-----G#7
```

For the serious bluegrasser/honky tonker. Needs a complementary instrument for other common keys. See FCGD, a standard tuned autoharp.

The series just continues in either direction until every contiguous combination of four keys has been represented. These listed are the ones believed most likely to be considered and actually used.

All of these are compatible with meantone tuning. There are no enharmonics on any of them. A sharp is a sharp. A flat is a flat. The last one for example, cannot add a C chord, because B# is already used by G#7, potentially as much as about a quarter tone flatter in solo tuning, full meantone. Yes, that's weird, but it is a "sharps harp". Notes have enharmonic synonyms because of tuning differences in different roles. F, for example, is E# or Gbb. It depends.

On any of the above key combinations then, adding a major on the left would conflict with tuning of a 7th on the right. B7 and Eb Major would be a familiar conflict on a standard chromatic. That would be the FCGD that has B7 but not Eb.

If one is inclined to use Equal Temperament, adding three more chords for a full 21 would be workable. The tuning will be okay, but the chords will sound bad enough to be avoided. If one finds a point in having that, go for it.

In conclusion, for a new player, I recommend only the layout that uses standard chords and buttons. That would be the FCGD layout. Anything else will cost more, perhaps a lot more, and will press the issue of restringing and whether a 36 string instrument is the right platform for the keys chosen. I believe it is counterproductive to get too elegant and try to decide what another person's musical direction will be. Short of being able to change what the factory provides by default, there should be no suggestion that everything come to us as favoring G and D rather than C and G. The very significant cost that imposes would be a deal breaker for many first time buyers. If one is somehow affording to buy from a custom builder, then all sorts of ideas can be considered without affecting price particularly. Keep in mind that some of the lower end instruments like the Evoharp only have 36 strings, not 37.

Some may suggest a setup design that has merit but it won't be appropriate for that first instrument...too big a gulp...too involved. It would also have been decided by someone else what music a person will play and in what keys.

While the Bryan Bowers type layout has some bias toward diatonic music, it does not have to rule out playing chromatic music handily.

With a broader scope to include considerations for chromatic music, at some point the grander layout may need to be called something other than "the Bryan Bowers layout", maybe something a little catchier than "middle row major chromatic". I prefer "folk layout", because it is something the community figured out, independent of instrument manufacturers. The instrument's actual use is very different than the parlor use for which it was designed, and unlike the Oscar Schmidt company, we are not burdened by any lap style legacy to be accommodated or lack of suitable strings and chord bar sets.

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