

# Uilleann Pipes Fundamentals

Upper Potomac Piper's Gathering  
January 17-19, 2020



THE KBB PRODUCTION COMPANY

[KBBproductions.net](http://KBBproductions.net)    [BrianBigleyMusic.com](http://BrianBigleyMusic.com)

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## I. Important features and maintenance of your set

- A. Air tightness
  - 1. Keys
  - 2. Joints
  - 3. Leather
  - 4. Fingers
  - 5. Reeds properly mounted in reed seat
- B. Working, Noiseless Flapper Valves - yes, it is possible
  - 1. Bellows
  - 2. Bag
  - 3. Mark on the outside to indicate where the valve is attached to the pipe
- C. Little Conveniences
  - 1. Hip and/or elbow pads. Comfort is king!
  - 2. Ring around the arm belt to keep buckle engaged
  - 3. Belts that are not too long or short
  - 4. One regularly used connection from bag to bellows
  - 5. Minimal assembly, if possible
  - 6. A case conducive to easy extrusion, assembly,
  - 7. A case that fits your pipes

## II. Tuning Process

- A. *Every time you play*, check the tuning to a tuner
  - 1. Know the difference between the just and equal scales
  - 2. Know the individually justified note's deviation relative to the equal scale (see maintenance guide and Equal Vs. Just chart below)
- B. Be hyper aware of the amount of pressure being used to achieve an in-tune note on the chanter, drones, and regulators
- C. Chanter - make the chanter pressure as consistent through the two octaves as possible
  - 1. Some notes go up in pitch with increased pressure



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2. Some notes go down in pitch with increased pressure
  3. Some notes go up in pitch with decreased pressure
  4. Some notes go down in pitch with decreased pressure
  5. Some notes will need alternative fingerings
    - From day to day
    - Between octaves
    - Depending on pressure
    - Depending on what other instruments you are playing with
    - Depending on the type of tune being played, you might let a note slide if it is pretty close (Reel - not a big deal for a passing note versus a Slow Air - long note tuning is paramount)
  6. More often than not, the 'E' note in the second octave will take the most pressure to get into tune
- D. Drones - make sure the drone reeds are robust enough to stay in tune with the fluctuations in pressure required for the chanter
1. Start with the tenor drone and do a scale (both octaves) with the chanter
  2. Add the Baritone and do the scale as above
  3. Add the Bass and do the scale as above
  4. Note the effect of the 'phase locking' phenomenon
    - Under certain conditions of the drone reeds sharing a chamber, they will lock as a result of sharing the air pressure
    - The effect is that if you tune one drone, the tone of the other two will go with it, to a certain point where they fall out of phase



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- E. Regulators - make sure the regulator reeds are robust enough to stay in tune with the fluctuations in pressure required for the chanter (and drones)
  - 1. After getting your regs close to being in tune throughout the range of the regulator, take one note at a time on the reg and play a two octave scale on the chanter, slowly making sure that the note (on the regulator) doesn't waiver under the fluctuations in pressure. When done successfully, add the drones to make sure all are working together.
  - 2. Note the slightly different pressures that are required to make all of the notes come into tune, making sure not to stray too far from the standard of the tuner

### III. Playing Fundamentals

- A. Listening, the piper's eleventh finger
  - 1. By careful listening, you absorb the aesthetic
- B. Know your scales and arpeggios
  - 1. This will give you 20% of all tunes, *right* under your fingers
- C. Learn how to count and subdivide rhythms
  - 1. |1 e + a| 2 e + a |3 e + a| 4 e + a|
- D. When learning a tune or a scale, play slowly with a metronome and tuner in front of you -
  - 1. Gradually speed up the metronome
  - 2. Find your zone of proximal development to track progress
- E. Forget all of the above and just enjoy yourself playing

### IV. Equal Vs. Just Scales Chart



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Interval	12-tone Cents	Just Intonation Cents	Difference
Unison	0	0	0
Minor second	100	111.73	-11.73
Major second	200	203.91	-3.91
Minor third	300	315.64	-15.64
Major third	400	386.31	13.69
Perfect fourth	500	498.04	1.96
Tritone	600	582.51	17.49
Perfect fifth	700	701.96	-1.96
Minor sixth	800	813.69	-13.69
Major sixth	900	884.36	15.64
Minor seventh	1000	996.09	3.91
Major seventh	1100	1088.27	11.73
Octave	1200	1200	0



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