

# Multiphonics 101: A Progressive Approach for the Horn

Presented by Maddy Tarantelli, DMA  
IHS Mid-South 2018

## I. Introduction

- » Multiphonics production: sung (brass) or split tone (woodwinds)
- » Some works with multiphonics
  - Bujanovsky *Sonata for Solo Horn*
  - Weber *Concertino*
  - Zhou Long *Tipsy Howl*
  - Lydia Busler-Blais *Moon Lillies*

## II. Physical and Technical Considerations

- » Chest and Head Voice: become familiar with your own range
- » Resistance: The voice and the horn
  - The back pressure of playing mixed with the lack of pressure with singing make this extended technique challenging
  - Multiphonics are best set up where the horn is playing a pedal note and the performer sings triadic intervals above. This allows each to compensate for the other without compromising too much of the quality of the sound.
- » Temperament Comparison<sup>1</sup>: Just Intonation vs. Equal Temperament
  - App: Tonal Energy-can go back and forth the two temperaments (plus many more)

Comparison of Interval Size in Equal Temperament and Just Tuning			
Interval	Equal temperament	Just tuning	Difference
Half step	100 cents	112 cents	+ 12 cents
Whole step	200	204	+ 4
Minor third	300	316	+ 16
Major third	400	386	- 14
Fourth	500	498	- 2
Augmented fourth	600	590	- 10
Diminished fifth	600	610	+ 10
Fifth	700	702	+ 2
Minor sixth	800	814	+ 14
Major sixth	900	884	- 16
Minor seventh	1000	996	- 4
Major seventh	1100	1088	- 12
Octave	1200	1200	0

---

<sup>1</sup> Peter Middleton, *Comparison of Interval Size in Equal Temperament and Just Tuning*, NFA Online, accessed February 15, 2018, <http://www.nfaonline.org/Annual-Convention/Convention-Chronicles/Handouts/2016/PeterMiddleton.pdf>.

