Building a Natural Trumpet

a C. Farrell Scholarship Creative Project

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The Natural Trumpet

- Predecessor to modern trumpets with valves
- Single tubing with no valves
- Grounded to root key
- Used harmonic series to produce multiple tones
The Harmonic Series
Why did development occur?


- Repertoire influences efficiency demands

- Baroque trumpet vs. Natural trumpet – use of intonation holes
Modern Developments

- Invention of valves
- Bb trumpet
- Piccolo trumpet - used to mimic performance of the natural trumpet
Day One – August 5, 2013

The main workshop where my station was located
My toolbox, pre-cut brass, and workshop guide
The garage with multiple soldering stations
A long tube prepared for soldering
A soldered tube on the mandrel, ready for burnishing and polishing
Two polished pipes (top) and one unpolished pipe (below)
Teeth cut and folded along one side of the bell piece
Bell soldered and folded shut
Work completed after day one: three polished pipes, one unpolished pipe, and a folded and soldered bell piece
Day Two - August 6, 2013

Working at the anvil
After a few rounds of annealing and burnishing
Making progress on the bell shape
Working hard burnishing at the mandrel
My "torch" of a bell pipe

My bell after many rounds of polishing
Smoothing out my newly bent bows with a burnishing rod and bench vice
Progress at the end of day two
Garland secured on the carving block and carving tool
Polished and finished bell at the end of day four- to show placement of ball decoration
The seams of the garland and bell are lined up and taped together before folding the rim of the bell.
The inside of my bell before folding over the garland—note the bumpy appearance from hand-hammering.
Small wire loop on the inside of a bow
End of day four: a completed trumpet without rope
My new mouthpiece with sleeves
Natural trumpet mouthpiece (left) with standard modern B-flat trumpet mouthpiece (right)
Comparing bore size of the natural trumpet mouthpiece (left) and a standard Bb trumpet mouthpiece (right)
Performing on the Natural Trumpet

- Performance is limited to certain settings & repertoire

- Limitations: intonation, key, chromaticism

- Example: Let the Bright Seraphim - Handel