

# Whitney

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The present building, built in 1891, was designed by Perkins and Bankroft in a Queen Anne and Romanesque style, with a Masonic Temple measuring 103-by-80-by-68.5 feet-tall, made of sandstone, brick and a copper tower.

As might be expected, the Lodge room is not only stunningly beautiful – a high-ceiling, stately proportioned room, with rich mahogany woodwork – it boasts near perfect acoustics. There is no need for a microphone anywhere in the room as sound projection is crystal clear.

The Woodbury and Harris organ – a tracker organ – is also a celebration of geometric balance. As I discovered in my research into musical acoustics to write American Luthier, the organ is one of the oldest and most complex of western musical instruments. The earliest documented organ made in Alexandria around 270 B.C. by a curious engineer named Ktesibios, was the result of an experiment with a birdsong whistle made to work via water falling into a cistern. His hydraulis – named for the role of water in making sound – was a technological marvel. It was also living proof of the links between abstract numbers, the proportional length of an organ's pipes and musical consonance. In an "old-fashioned" tracker organ – as with the original organ before electronics – the organist, through his fingers on the keys, has direct control of the valves controlling the air in the pipes.

When you look at the beautifully stenciled Masonic organ, you might not realize that you are looking at a musical time capsule because of a mysterious

aspect of organ-building called "voicing." Despite the best laid plans of organ builders, it is impossible to predict exactly how the pipes will sound once the organ is assembled in its new home.

Voicing an organ is far more complex than tuning a piano. The voicer must first refine the tone of each pipe, ensure that it responds correctly to the pressure and speed of the performer's touch, link the sound of each pipe to all the other pipes – and then refine the sound of each pipe even further in its response to the acoustics of the room. The process involves making minute adjustments on each pipe – as one organ voicer put it, "to make an eight-foot flute sound less 'shy' or give a pipe an 'extravagant character.'" Voicing an organ can take a year or longer. An organ is "voiced" only once at the time it is installed, essentially freezing its sound as if in a time capsule.

So that, as organist Michael Joseph explained, the 1895 Masonic organ can only sound like it did when it was first installed in 1895. "This organ in this building is in its own time capsule. That's why I wanted to do this concert, to share the space and the music on this hidden gem," said Joseph in a recent interview as we sat in the Lodge room.

Michael Joseph obtained his Bachelor's and his Masters in Music Education from the University of New Hampshire and has worked in music education in New Hampshire and Massachusetts for 30 years. Currently, he is organist for the First Parish Unitarian Universalist in Billerica, Massachusetts.

Joseph will perform "gorgeous counterpoint" by Frescobaldi (1635); "a lilting light fugue" by Dietrich Buxtehude (1650s); a French baroque offertory by Francois Couperin (1700's); "Toc-

cota and Fugue In D Minor" by J.S. Bach; and an original piece he wrote "Fanfare Toccata," (1993).

The fugue is a fixed form involving one theme – the subject – and its response – the countersubject.

Using these two themes like geometric shapes, the composer can create endless permutations and tessellations. No composer mastered the craft of the fugue better than Bach.

In his book Measure for Measure: A Musical History of Science," Thomas Levenson explains the brilliance of Bach: "The lines speak to one another, variation succeeding variation to build an increasingly complex weave of all the elements....As it unfolds, the piece creates an astoundingly vivid sense of an inevitable logic, combined with an exalting, soaring quality that evokes an older image, the sudden height of a gothic cathedral."

Levinson: "Bach's works create a bridge between the language of the poets and the language of modern science. The glory of his great organ pieces is that they feel 'true' – they are mathematically precise, complete, coherent...they allow us to hear what Heisenberg meant when he spoke of the bond between beauty and truth and science."

The concert "Unveiling One of Nashua's Hidden Gems" will offer a rare look back in musical time – to the medieval stone mason's geometry of proportion that created the gothic cathedrals; the life lessons of the masons; the precise tessellation of pipes in an organ; Bach's mastery of craft in composition and the craft of performance by Michael Joseph.

Don't miss it!

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