From the Builder

The recent completion of our new organ at Helzberg Hall of the Kauffman Center for the Performing Arts in Kansas City, Missouri, marked the culmination of some ten years of reflection on our tonal work and mechanical-action design. The last decade has been a very exciting, and sometimes challenging, time for all of us at Casavant. We made an honest and profound reassessment of our views and convictions about our work. Like any artistic activity, pipe organ building can excel only with open minds, discipline, and passion. Looking at the Kauffman Center organ, on which project we started to work in 2005, this proves to us that this examination has been worthwhile and productive.

The first two instruments that exemplify our renewed approach are the French symphonic organ at the Brick Presbyterian Church in New York City (see THE AMERICAN ORGANIST, March 2006) and the mechanical-action organ at Principia College in Elsah, Illinois (see The Diapason, May 2006), the latter of which made the difference in the decision-making process for the Kauffman Center project.

In recent years, we had the privilege of installing new organs in concert halls outside North America. At the historic Teatro Aula Magna, located on the campus of the University of Puerto Rico in San Juan, the main core of this three-manual organ is installed in the two existing organ chambers flanking either side of the proscenium. The expressive Solo division located in the attic above the parterre literally binds the sound of the instrument to fill the 1,750-seat auditorium.

With the affirmed goal of making culture accessible to the entire population, new performing arts centers are inaugurated virtually every year in mainland China. The design of the new halls is generally innovative and calls for striking organ cases or facades. So far, we have had the opportunity to install two large mechanical-action organs in Chinese concert halls. In Hefei, a town of more than 5.5 million located in the central province of Anhui, the new four-manual, 74-rank organ is definitely symphonic in style, with an impressively warm tone and impressive bass sound. By contrast, the three-manual organ installed in Ordos, Inner Mongolia, features a more eclectic tonal scheme, giving the clear impression of a more direct contact with the instrument.

The Kauffman Center

As early as 1995, civic leader and philanthropist Muriel McBrien Kauffman discussed her vision for the Kauffman Center for the Performing Arts with her family and the community. After her death, Julia Irene Kauffman, her daughter and chairman of the Muriel McBrien Kauffman Foundation, helped make this vision a reality. Internationally renowned architect Moshe Safdie was selected, along with theater designer Richard Pilbrow and acoustician Yasu Toyota, his partners for the project. A large property strategically positioned between downtown Kansas City and the Crossroads Arts District was chosen for its size, potential for becoming a “cultural campus” and the role it would play in revitalizing a downtown section of the city. After several phases of design and fund-raising, ground was broken in October 2006. Five years later, the Kauffman Center for the Performing Arts was opened officially, on September 16–17, 2011.

In addition to being a powerful visual statement that has changed Kansas City’s skyline, the Kauffman Center for the Performing Arts brings a new level of artistic experience to performers and audiences. This world-class performing arts center complex comprises two halls. The Muriel McBrien Kauffman Theatre, a 1,800-seat proscenium theater inspired by the great European opera houses, presents a diversity of performances from around the world, including operas, pop entertainers, Broadway productions, and comedy shows.

Helzberg Hall, a 1,600-seat concert hall, hosts a variety of regional, national and international artists and groups, and serves as the home of the Kansas City Symphony. The two halls are accessed by the Brandmeyer Great Hall, a breathtaking foyer made of large glass panels that offers a unique view of the city.

The New Organ

Designing a monumental pipe organ for a new concert hall is always an engaging and exciting opportunity. In the Kauffman Center project, we had the privilege to work with a team of visionary and dedicated people who were aiming for the very best. In that regard, Julia Kauffman’s determination to see a pipe organ in Helzberg Hall is to be commended.
The new Casavant organ is the visual centerpiece of Helzberg Hall. Moshe Safdie put a strong imprint on the organ facade design, which was developed collaboratively over a period of two years with Didier Grassin. The visible wood pipes, made of Douglas fir, from the Pédale Contrebasse 16', the Violonbasse 16', and the Contre Bombarde 32', and polished tin pipes from the Grand Orgue Montre 16' and Pédale Montre 16' are inclined as much as ten degrees sideways and 16 degrees forward. Because of its singular design, the organ facade becomes the immediately recognizable signature of the hall.

Yasu Toyota created a fabulous acoustical environment that favors clarity of sound throughout the hall. It is an amazing experience to hear the sound of a single flute or string stop so distinctly from the balcony, even with the small boxes closed. Thanks to the truly remarkable acoustical qualities of the hall, we approached pipe scaling, voicing, and tonal finishing to create a naturally singing sound that achieves both exquisite tone color and the required power to fill the hall in solo and orchestral capacities.

The organ specification was developed in close collaboration with consultant James David Christie. Having played most organs installed in concert halls around the world and being for many years the organist of the Boston Symphony Orchestra, his vast experience has been invaluable at every stage of the project. John Obetz's vision and support must be saluted also. His influence in the community was a crucial factor in the decision to have a pipe organ at the Kauffman Center.

**Tonal Design**

The organ has 79 stops (102 ranks) over four manuals and Pedal. Three of the four manual divisions, Récit, Positif, and Grand Choeur, are enclosed to achieve maximum dynamic range. In order to achieve optimum tonal cohesion, the organ's layout is classical in essence, with the manual divisions located one above the other, and the Pédale divided C/Gr on either side. The Positif is located on the lower level, as close as possible to the choristers. The Récit, expressive Grand Choeur, and main Pédale are at the center level to optimize the interaction with the orchestra. As the console is located immediately under these divisions, the organist has an excellent sense of balance, considering the size of the instrument. The Récit is located at the upper level to color and complement the other divisions. The large Pédale stops are located against the back wall of the organ space. This disciplined layout contributes greatly to define the balance of the different divisions with each other. Consequently, the organ plays its musical role very effectively, either with the orchestra, with choirs, or as a solo instrument.

The tonal design was inspired by the large French symphonic organs of the late 19th century. However, the varied program selected by James David Christie for the March 2012 dedicatory recitals showed that the organ renders convincingly the broadest range of literature.

As expected in any organ of this size, principal choruses are found on the main manual divisions. The Grand Orgue principal chorus is echoed by that of the Positif. In the Récit, the French-inspired Plein Jeu harmonique, a harmonic progression, caps the full Swell sound. To reinforce bass tone in the Pédale, we elected to have independent mutations at 10', 6', and 4' pitches, instead of a traditional mixture; in this large hall, these have proved to be a fitting choice.

The organ features a wide variety of flute stops of contrasting character. Harmonic flutes of different timbre and volume are found in the three expressive divisions. Each of the four manual divisions includes a complete Cornet (there is an eight-rank, 16' Cornet décomposé in the Grand Choeur and a Cornet of harmonic flutes in the Récit). As far as strings, we have the ethereal Voix angélique/Voix céleste in the Grand Choeur, a tranquil Salicional/Unda Maris in the Positif, and the pungent Viole de Gambe/Voix céleste in the Récit. Finally, complete reed choruses are available on all divisions, plus a number of color reed stops for solos and timbral effects.

More importantly, all the stops blend together to create an unlimited number of registrations and to build an impressive, seamless crescendo from the whispering Voix angélique under expression to the thunderous Tutti.

**Technical Characteristics**

As for most of our concert hall projects, the entire organ is built with mechanical key and coupler action. In an instrument of this size, designing and making a mechanical action that remains light and responsive when played with many stops and couplers was a challenge. The team of experienced and creative persons that makes up our mechanical-action workshop reengineered our mechanical action in the early 2000s to achieve the best playing action possible. As part of that process, we made use of our long experience building electropneumatic mechanisms to develop an ingenious system that enables playing the organ with an independent electropneumatic action that does not alter the crispness of the mechanical action. This system, which is extremely responsive and allows control of the pallet release, has proved to be the best solution for mechanical organs requiring dual action for the use of selective electric couplers or a movable console on the stage.

Of note also are the expression enclosures of the Positif, Récit, and Grand Choeur divisions. These are of double-walled construction, with a void between both partitions. The louvers are made of solid wood. When one considers that some 60% of the organ’s tonal resources are under expression, the wide dynamic range from pianissimo to fortissimo is truly spectacular.

The wind system is made of large single-fold reservoirs and conical bellows for a breathing but stable wind. The system is extremely quiet, which is enhanced by the use of wooden wind trunks throughout.

**Conclusion**

Designing and building pipe organs for concert halls always presents interesting challenges. To find creative solutions that go beyond initial expectations is most rewarding. This is what all of us at Casavant have experienced with the Kauffman Center project. Tonally, the organ is especially elegant, and we expect that it will blend admirably with the sound of the orchestra. Also, the degree of refinement achieved with the mechanical action makes this instrument a joy to play.

Our entire team has been involved either in the design, construction, installation, or voicing of the Kauffman Center organ. We extend our heartfelt thanks to all the individuals with whom we have worked since 2005, for their confidence and outstanding collaboration through the entire process.

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It is our hope this new organ will draw international attention to the vibrant artistic community of Greater Kansas City.

Jacquelin Rochette
Simon Couture
Jean-Luc Hébert

From the Consultant

I was greatly honored when John Obetz recommended to the Kauffman Center for the Performing Arts that I serve as their consultant for a new concert hall organ. John is the “godfather” of the Kauffman Center organ, and he worked tirelessly for many years to plant the seeds for the inclusion of an organ in the new concert hall. It was a great pleasure to work with the illustrious team of architects, acousticians, and especially project manager Ken Dworak, a member of the Kauffman Center board of directors responsible for overseeing the organ project.

I have visited and performed on concert hall organs throughout Asia, Europe, Russia, and the United States, and I am pleased to say that the Kauffman Center for the Performing Arts Casavant organ is one of the finest concert hall organs in the world. The mechanical action is comfortable and responsive. Even playing with all four manuals coupled is not taxing. The voicing has been executed with great care; the excellent young voicers who worked on the project are professional musicians, and each one did outstanding work. This organ was primarily designed for use with orchestra in both orchestral literature and solo organ concertos; it will fulfill this role beautifully. There are three enclosed divisions, and the boxes are remarkable; they allow the organ to go from a whisper to triple fortissimo. Working with Casavant on this project was a joy, and I am especially grateful to Jacquelin Rochette, artistic director of Casavant, for his friendship and for allowing me to assist in this project from its beginning to the very end. Casavant’s attention to every minute detail was truly remarkable and impressive. They exhibited great understanding, patience, and skill in both designing and executing the unique facade of the Kauffman Center organ.

This project would never have happened if it had not been for Julia Irene Kauffman, chair of the Kauffman Center board of directors, who insisted that there be a magnificent, world-class organ in the Kauffman Center for the Performing Arts. I would like to again thank her for her generosity and for the extraordinary gift she has given to the Kansas City community and to the organ world.

James David Christie