

Mariinsky Concert Hall Opens

By Dr. Yasuhisa Toyota

On November 29, 2006, the new concert hall that has been under construction in St. Petersburg, Russia held its official opening. (Previously, I wrote about this project in the May, 2005 News & Opinions.) The new, mid-size hall seats 1,100 and is part of a campus of buildings belonging to the Mariinsky Theatre, led by Artistic Director Valery Gergiev. The hall will primarily be the venue for chamber music, solo recitals and other concerts by the Mariinsky Theatre Orchestra (also known abroad as the Kirov Orchestra), which will use the new facility as its home hall. Guest performances by other ensembles and musicians are also planned. The concert hall's architect is the Paris firm of Fabre, Speller, Pumain Architects. The Russian general contractor NEVISS-Complex built the facility.



Figure 1: Interior of Mariinsky Concert Hall

From Calamity to New Concert Hall in 22 Months

The Mariinsky Concert Hall project had its inception in an incident that occurred in September 2003. A Mariinsky Theatre warehouse located a few blocks from the theater caught fire, destroying almost all of the theater's sets and costumes. Artistic Director Gergiev turned this calamity into a true "blessing in disguise" with his visionary idea to construct a concert hall on the site of the destroyed warehouse building.

At present, the land immediately adjacent to the Mariinsky Theatre awaits the building of a new opera house (seating 2000 and designed by architect Dominique Perrault). This project is currently in the design phase and is known as the "Mariinsky 2" project. To distinguish the concert hall project from the new opera house, the concert hall project came to be called "Mariinsky 3."

Because the Mariinsky 2 project is a development under the auspices of the Russian government, all of its progress is subject to the procedures and rules of an organization with a large administrative structure. The processes that must be followed can be time consuming. For the Mariinsky 3 project, Artistic Director Gergiev directly solicited private donations as the sources of funding.

The design period for Mariinsky 3 lasted eight months, from August 2004 to April 2005. The scheduled construction period of May 2005 to June 2006 provided a mere 14 months to complete the building, an aggressively fast timeline that usually would be considered out-of-the-question. Work proceeded with round-the-clock shifts, even during the winter months. Activity on the construction site could be seen 24 x 7, morning, noon and night. In June 2006, while the project was not fully complete, some 90% of construction was finished, and the orchestra was able to check the acoustics with a rehearsal on the hall's stage. Thereafter, five more months of "finishing touches" enabled the hall to hold its official opening in November, 2006.

Overview of the New Concert Hall

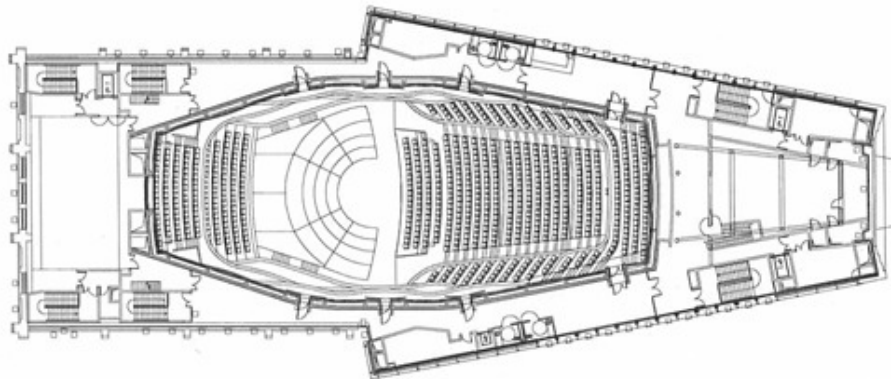


Figure 2: Plan of Mariinsky Concert Hall

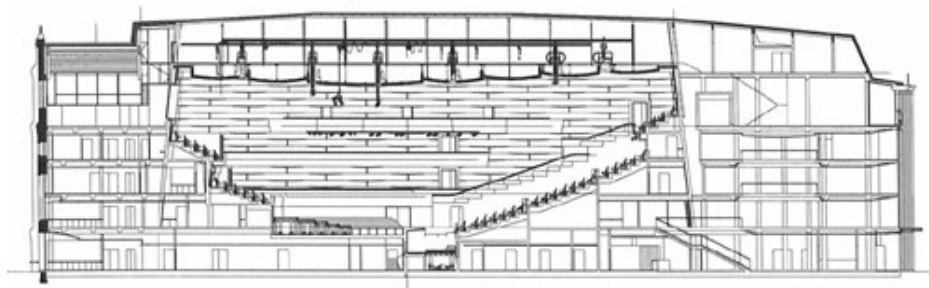


Figure 3: Longitudinal section of Mariinsky Concert Hall

The new concert hall's dimensions measure 22 m. (72 ft) wide, 52 m. (171 ft) long and 14.5 m. (48 ft) from the stage floor to the ceiling. Longitudinal section and plan of the hall can be seen in the Figures 2 and 3. While the hall's configuration basically has a shoebox shape, we made room for many seats around the stage area and gave considerable slope to the first floor's main seating area, two room design elements that distinguish this hall's configuration from the configurations of halls known throughout the world as the exemplars of the shoebox shape. The steep slope of the hall's first floor main seating area enables a large portion of the audience to view the entire stage, one of the room design's goals. The sloped floor also creates a feeling of oneness between stage and audience areas and contributes to the sense of presence experienced in the hall.

The hall's interior uses wood throughout the hall, for the ceiling, walls and floor. From an acoustical perspective, the ubiquitous use of wood in the hall interior created a challenge for us to obtain the requisite surface mass. In particular, for the ceiling's wood material, we resolved this need by specifying a thickness of as much as 20 cm. (8 in.).

During the construction phase, we installed a total of 230 sq. m. (2500 sq. ft) of perforated board panels backed with absorbent glass wool on the hall interior's walls. However, for these panels, we used an installation approach that would allow us to remove the panels at a later date and we reserved our final decision regarding the optimal amount of sound absorbing surface area until the orchestra began rehearsing in the hall and we could use actual listening and other methods to make the most informed assessment. In the end, we removed almost all of the sound absorbing panels, leaving only the upholstered audience seating as the sole sound absorbing elements in the hall. When the hall is unoccupied, its reverberation time measures 2.1 seconds (at 500 Hz) and, based on this measurement, we expect a reverberation time of 1.9 seconds (at 500 Hz) when the hall is fully occupied.

Pre-opening Listening Opportunities and the Hall's Opening Night

In advance of the hall's official opening, I listened to a full range of test performances, including string instrument, wind instrument and piano soloists, male vocalists and female vocalists, ensemble performances and then full orchestra performances. Through these listening opportunities, I confirmed that from the solo pianissimo of a harp or string instrument to the full orchestra's fortissimo, and for every variation of ensemble configuration in-between, the hall exhibits a high level of acoustical performance both in terms of the sound volume produced in the hall and the its overall appropriateness as the venue for a wide variety of instrumental and vocal configurations.

The hall's fundamental ability to resonate means that the music robustly reaches every audience seat, and while the hall's sound gives the sense of richly and warmly filling the hall's space, the sound produced by ensembles has clarity, with every instrument distinctly heard. On stage, as well, the musicians report that they can hear themselves and their fellow players well. Maestro Gergiev has also let us know that we successfully satisfied his hopes and expectations.

The new concert hall's opening concert began with Rimsky-Korsakov's *Capriccio Espagnol*, followed by the compositions of Tchaikovsky, Prokofiev and Shostakovich, in a nearly 3-hour-long program of Russian composers' works that culminated in a finale of Stravinsky's ballet music, *L'Oiseau de Feu*. For the immediate present, the hall will offer two to three concerts each month, and plans to gradually increase the frequency of performances so that, by this year's St. Petersburg "Stars of the White Nights Festival," in June, the new concert hall's calendar will be fully booked.