

BOSE

PROFESSIONAL

CASE STUDY - PLACES OF WORSHIP | LJUBLJANA MOSQUE





CULTURAL CENTER COMBINES TRADITIONAL WITH CONTEMPORARY

The modern, 12,000-square meter Islamic Religious Cultural Center, located near the city center of Ljubljana, Slovenia, serves the needs of the Islamic community around the capitol city. The Ljubljana complex includes a mosque with its 40-meter-tall minaret, several buildings for education, offices and residential units, underground garage, restaurant, and sports hall.

The opening of the cultural center is significant, as this is the first mosque to open in Slovenia. Construction began in 2013 and was completed in February 2020 at a cost of approximately €34 million with the majority of funds from Qatari donations. Situated in a semi-industrial area of Ljubljana, the mosque serves up to 1,500 people and constitutes the core of the six-building cultural center, which is open to all Muslim and non-Muslim visitors.

All the buildings are made from white concrete combined with steel, glass, and wood. A large blue textile dome is suspended within the mosque's interior, providing a light-infused blue representation of heaven and is reminiscent of famous mosques like Istanbul's Blue Mosque.

"We wanted to link traditional Islamic architecture values with contemporary architecture," said architect Matěj Bevk of Bevk Perović Arhitekti, adding that the cultural center's glass facades were meant to show its transparency and

openness. With its design and peaceful splendor, the site's garden also serves as a nod to traditional mosques.

DELIVERING INTEGRATED AUDIO THROUGHOUT THE CENTER

Slovenian distributor, Lorex, already had a previous relationship with the leader of the Islamic faith in Slovenia. "When it was determined that the project would move forward, we reached out to the Islamic community's secretary general, Mr. Nevzet Porić," stated Dušan Osojnik, owner of Lorex. "We also proactively reached out to our colleagues in Bosnia and other neighboring countries to learn what sound system solutions were being used in other mosques."

After hearing several recommendations of Bose Professional audio solutions, the mosque planning committee decided a Bose Professional sound system would provide the perfect solution to complete the project. Given the special audio requirements of the mosque — including call to prayer and managing how sound would behave within the open space — it took time to ensure the architects could incorporate the audio solution needed without making any architectural compromises. This was key given the design of the building and its extensive use of hard-surface materials.



After two years of planning and designing, the plan would incorporate the mosque’s audio solution within the cultural center’s systems while serving a variety of needs for both now and in the future.

Identifying the type of solution needed is not new for Lorex, who has a history of providing audio solutions for mosques — particularly in Bosnia — where notably they have installed the audio for the King Fahd Mosque and the Gazi Husrev Bey Mosque, both located in Sarajevo.

BOSE PROFESSIONAL SATISFIES THE NEEDS OF DIVERSE SPACES

The Panaray MA12 modular columnar array loudspeakers proved to be the best solution for both audio quality and coverage, as well as integrating smoothly into the design aesthetic.

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— Dušan Osojnik
Owner of Lorex

It was important that the loudspeakers were mounted into the wall niches, yet not lose any acoustic performance nor inhibit the equal dispersion of audio throughout the main prayer hall. The prayer hall has a dome height of 24 meters and the minaret tower is 40 meters tall, which is used to call the faithful to prayer five times daily.

A variety of FreeSpace in-ceiling loudspeakers provided excellent background audio and speech intelligibility throughout areas outside the main prayer hall.

Specific to the minaret, the FreeSpace surface-mount loudspeakers were selected for their superior audio quality and coverage. Installed facing slightly downward, the enhanced audio range is controlled so the calls to prayer are broadcast only within the cultural center itself, limiting the impact on the surrounding non-Muslim community.

COMPLETED MOSQUE BRINGS COMMUNITY TOGETHER

The changes to the Islamic Religious Cultural Center provided new spaces for the community to gather and live. With the new Bose Professional audio system in place, there is now perfect speech intelligibility throughout the mosque and surrounding areas, providing exactly what was needed and exceeding all community members’ expectations. ■



SYSTEM COMPONENTS

- ControlSpace ESP-880A** engineered sound processor
- FreeSpace DS 100SE loudspeaker
- FreeSpace DS 40SE VA loudspeaker
- FreeSpace DS 16F loudspeaker
- Panaray MA12** modular columnar array loudspeaker

PARTNER: **LOREX**



Based in the capital city of Slovenia, Lorex provides its clients detailed audiovisual knowledge along with the expertise to design and install integrated professional AV solutions.



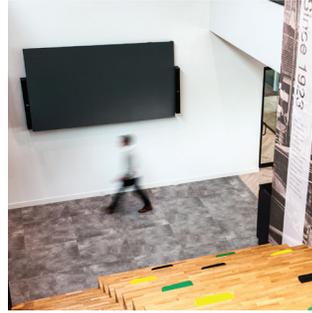
PANARAY **MA12**

Panaray MA12 provides wide 145° horizontal coverage and is designed to provide outstanding vocal intelligibility in acoustically demanding spaces. Allows for stacking of multiple enclosures in a line array configuration, providing increased vertical pattern control and improved 'throw' distance while reducing unwanted floor/ceiling reflections. The slim column enclosure blends with almost any décor.



CONTROLSPACE **ESP-880A**

An open-architecture DSP, the Bose Professional Control Space ESP-880A engineered sound processor is designed for a wide variety of applications - from small, self-contained projects to large, networked systems. It features 8x8 analog audio I/O, a AmpLink output, and advanced digital signal processing with 48kHz/24-bit audio conversion. Engineered for precise performance, the ControlSpace ESP-880A also features low-latency and ultra-low noise operation.



Bose Professional serves many different markets, delivering great sound in venues all around the world — performing arts centers, theaters, places of worship, stadiums, restaurants, schools, retail stores, hotels, and corporate buildings.

We know that our pro audio customers depend on us in a unique way. This is your business, your reputation, your livelihood — not just an amp, not just a loudspeaker. So, when you buy a Bose Professional product, you get the full weight of the global Bose Professional team behind you — our time, support, and attention. We see every purchase as the beginning of a partnership.



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