



Extron Energy Efficient Power Amplifiers Are an Ideal Match for the Chopin Museum

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Tomasz Wojciechowski
Senior AV Designer and Project Manager,
Microtech International SA

The Fryderyk Chopin Museum is a modern museum in Warsaw, Poland, devoted to the life of the composer Fryderyk Chopin. Located within the historic Ostrogski Palace in the heart of the city, the museum was opened in April 2010 to coincide with the 200th anniversary of the birth of Chopin. To support the many exhibits throughout the museum, there are numerous freestanding, self-contained AV systems that serve to communicate the story of Chopin's life and accomplishments. These systems are designed mostly as interactive display stations for the visitors, each devoted to a specific period or milestone in the life of the celebrated composer.

Designers selected the Extron MPA 152, XPA 1002, and XPA 2001 power amplifiers to play a critical role in the successful integration of the AV systems. The compact Extron amplifiers were chosen because of their unique ability to both meet the stringent requirements imposed by the environment and fit within the limited equipment space.

Significant Design Challenges

The integrator for the project, Microtech International SA in Wroclaw, Poland, was tasked with the challenge of designing nearly 100 individual AV systems. Originally built at the end of the 17th century, the Ostrogski Palace sustained nearly total destruction during World War II and was subsequently rebuilt after the war as an extensive re-creation of the original structure. Because of the building's historic value, the integrator was precluded from modifying any aspect of its architecture when installing equipment or running cables. Each of the AV systems would, therefore, have to be installed in cabinets and kept separate from the building structure.



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The compact equipment cabinets provided for installation offered limited space. While some of the systems provided audio playback only through headphones, the majority required an amplifier and speakers. This requirement, along with the limited cabinet space, presented a considerable design challenge since traditional amplifiers are bulky, generate significant heat, and require some separation from other devices to keep from overheating them.

Highly Efficient, Compact Power Amplifiers

Microtech International found the ideal products in Extron's highly efficient power amplifiers, and the right opportunity to implement them at the Chopin Museum. According to Tomasz Wojciechowski, Senior AV Designer at Microtech and Project Manager for this installation, "Extron amplifiers satisfied our need for good quality, Class D audio amplifiers that delivered high performance and efficiency." The **MPA 152**, **XPA 1002**, and **XPA 2001** are housed in compact 1U enclosures, consuming just one quarter to one half rack space. They also generate very little heat and do not require cooling. This combination of space and heat efficiency made these amplifiers excellent candidates for this project, allowing them to be placed directly adjacent to other equipment within the cabinets, and therefore satisfy the integrator's need for compact AV systems with amplifiers that are efficient yet sufficiently powered.

Microtech also selected these Extron amplifiers based on their ability to provide high fidelity audio performance in a Class D design, essential for accurately reproducing Chopin's music. Another feature invaluable to the concealed amplifier installations is a standby mode that is automatically engaged after a period of inactivity. This allows the amplifiers to power down on their own to save energy, without requiring control system programming or opening of the cabinets to shut them off.



MPA 152
Stereo Power Amplifier - 15 Watts Per Channel



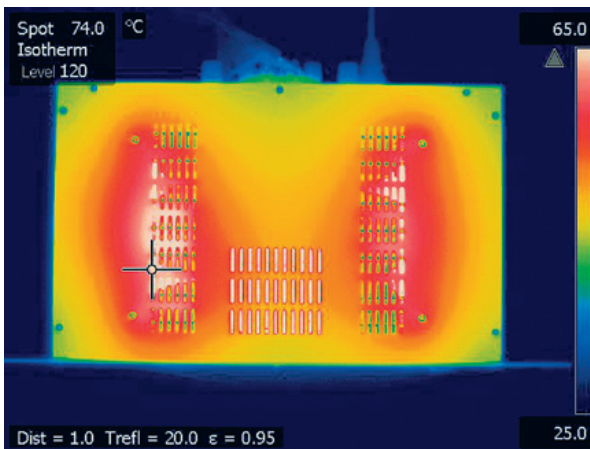
XPA 1002
Stereo Power Amp - 100 Watts Per Channel



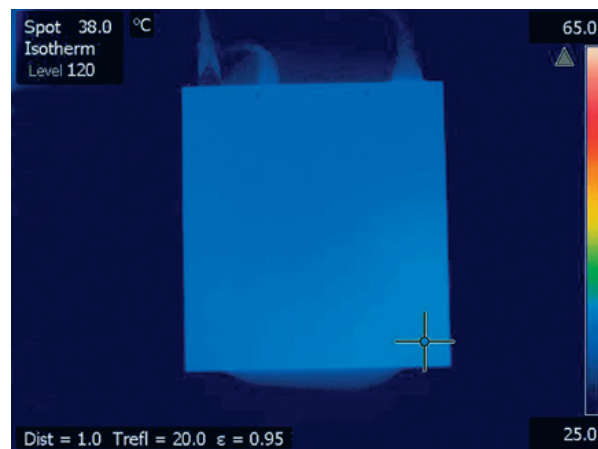
XPA 2001
Mono 70/100 V Power Amplifier - 200 Watts



Infrared Photography shows Amplifier Heat Output



Conventional amplifiers generate significant amounts of heat and require separation from other equipment to prevent overheating. Forced air cooling may be necessary.



Extron energy efficient amplifiers run cool, allowing them to be placed adjacent to neighboring devices within enclosed spaces.



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