

## The Museum-Panorama "The Borodino Battle"

The new exposition of the Museum-Panorama "The Borodino Battle" (Moscow, Russia) was created within preparation for the celebration of the 200th anniversary of Russia's victory in the Patriotic war of 1812. A3V was chosen to accomplishing this project as main A/V systems integrator due to the company's capability to offer turnkey solution and the great experience of working within the heritage market and quality services. We was responsible for the design, equipment supply, installation and start-up, warranty support, multimedia software development. Systems had to be designed for total reliability and easy of maintenance. The most interesting A/V installations of the new exposition are below.



### Entrance Hall

For the exhibit at the entrance hall were produced specially-designed ultra-thin LED lightboxes with a total surface area around 20 square meters. The entrance hall is equipped with background music audio system that includes BOSE 301 loudspeakers and INOUT AT480-R amplifier.



### The "Interactive Maps"

There are two notable interactive exhibits in the exposition. One of them allows visitors to learn the major stages of the Borodino Battle, and the second - to follow the Russian army in its foreign campaigns of 1813-1814. Special multimedia software based on map-schemes was developed for these purpose. Using ELO 32 inch touchscreen opposite to the big projection screen visitors can interact with the exhibit. The main image is generated on the 100 inch front projection screen MW Frame Standard using a computer and multimedia laser-led projector CASIO XJ-A155V. All equipment are characterized by being very well integrated into exposition design and seem a natural part of the exhibit and are not obtrusive.



## The "Great Fire in Moscow"

In an exhibit called the "Great Fire in Moscow" Panasonic PT-D6000 DLP projectors were used to create a single edge blended image on the enlarged reproduction of the engraving by Christian Wilhelm von Faber du Faur "Moscow. The 12th of September 1812". They were fed by two synchronized digital signage SpinetiX HMP 200 media players. APart SDQ5PIR active loudspeakers provided the accompaniment.



Original engraving "Moscow. The 12th of September 1812"



For the projection on to the opposite wall SpinetiX HMP 200 and multimedia laser-led projector CASIO XJ-A155V were used.

## The "Battle of Borodino"

A centerpiece of the museum is the panoramic painting The "Battle of Borodino" created in 1912 under supervision of Franz Roubaud. In the new exposition visitors can see the masterpiece together with light and sound presentation. The show lasts about 20 minutes and guides the visitor through the major subjects of the Borodino battle shown on the canvas. Five LED moving heads ProSvet SI-053 are controlled using the DMX protocol in sync with the narration and battle sound effects. Light spots of a various form act as a focal point for the visitors attention. The audio system derives eight audio channels from



Alcorn McBride 8TraXX Multichannel Audio Repeater which incorporate the necessary synchronization facility to create the effect of surround sound. In the hall were installed BOSE 301 loudspeakers augmented by APart SUB-A165 sub-woofers. Wireless control panel based on Apple iTouch allows service staff to control and monitor the show. It is connected to the control system via Wi-Fi. Additionally visitors can explore the painting at five interactive kiosks featuring ELO 24 inch touchscreens by using specially designed multimedia software.



## The Soundscape

To enhance the visitor's emotional perception background music audio system creates different sound patterns. In particular, on the stairs leading to the panoramic hall visitors can hear the sounds of the soldiers of the Russian army marching to the battle, and the other going down the stairs after seeing the panorama, you can hear the retreating columns of soldiers to Moscow.

Multichannel sound is delivered by Alcorn McBride 8TraXX-E Multichannel Audio Repeater. In order to ensure the surround effect some channels have run synchronously. Principal loudspeakers APart MASK2 are used in connection with INOUT AT480-R amplifiers.

## A/V systems control

The CUE control system provides the entire A/V system control. The system is fully automatic and easy to operate. Each morning it can be started by staff member from a single "start" button, and similarly at the end of the day a single button-press closes down all the A/V based exhibits.

All audio source equipment, five INOUT AT480-R amplifiers and ipCUE-delta controller have centralized location in rack in a dedicated electronic equipment room for easy of maintenance.



## The Kutuzov's Hut

In each of three windows are mounted NEC MultiSync P551 LCD monitors in portrait mode. Video in HD is sourced from SpinetiX HMP200 media player. To enlarge video signal across multiple displays Hetec V-Match C9 Video Wall Controller is used. CASIO XJ-A155V is projecting onto the curtains covering the fourth window. It is fed by solid-state Alcorn McBride Digital Video Machine 7400 video player. All LED light spots are controlled using the DALI protocol.



Overall system control is by ipCUE-gamma controller, and features a button control panel that allows service staff to control the exhibit. All video source equipment, video wall controller and A/V systems controller were mounted in a rack, hidden within hut's oven.

In the second room is fitted out the small conference room for meetings and seminars.

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