

NEC Display Solutions Customer Installation Leisure & Entertainment

Royal Opera House

A range of technologies for a variety of applications



SITE INFORMATION

Sector

- Entertainment

Client Information

- Royal Opera House, London
www.roh.org.uk

Partner Information

- Intevi
www.intevi.uk

Installation date

- March 2018

EQUIPMENT

- NEC Ocean SO 3.9mm SMD LED wall
- 3 x NEC 84" X841UHD-2 ultra-high definition displays
- 5 x NEC 65" X651UHD-2 ultra-high definition displays
- 1 x NEC 65" X651UHD-2 SST ShadowSense™ touch display
- 1 x NEC 40" P404 display
- 4 x PX1004UL 10,000 ANSI lumen laser projectors with lenses



Now a venue where you can experience the arts without even having to buy a ticket, visitors to the recently transformed Royal Opera House are invited to relax in the new café, restaurant and bar areas where visual stimulation delivered via NEC LED, LCD and Projection technologies serves to enhance the experience.

The Royal Opera House in London's famous Covent Garden aims to enrich people's lives through opera and ballet. Home to two of the world's great artistic companies – The Royal Opera and The Royal Ballet, performing with the Orchestra of the Royal Opera House – the ROH seeks to be always accessible and engaging.

The ROH 'Open Up' initiative originates from the belief that opera and ballet should be experienced by everyone. Aiming for greater accessibility contributing to a modern European culture, the ROH seeks to attract new visitors and offer new and original experimental performances in addition to its more traditional repertoire.

The Challenge

Designed in the 1850s, transforming the historic building into a venue to appeal to today's audiences is not without its challenges. Harnessing the

latest technology whilst preserving the architectural heritage is a major achievement in this landmark deployment and testament to all parties involved. The new building and its interiors are designed by architects Stanton Williams, representing its core values of excellence, theatricality and curiosity.

Key enhancements include inviting new entrances, extended foyers and terraces, a new café, bar, shop and restaurant, together with an extensive programme of ticketed and free daytime events, activities and festivals for people of all ages and backgrounds. The ROH's requirements demanded best-in-class quality products.

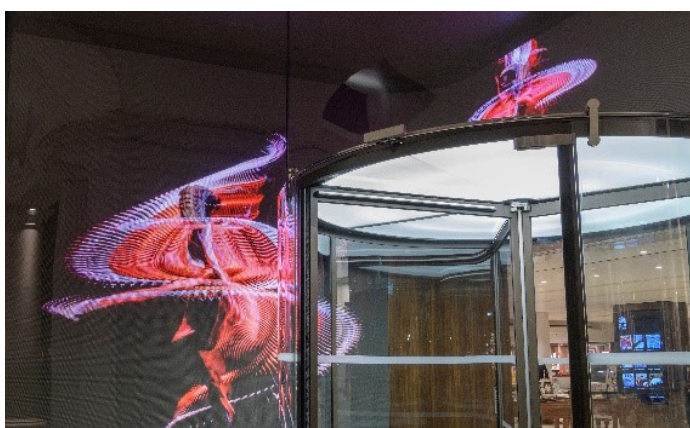
NEC was invited to make proposals to the ROH to support the transformation and to be its Display Technology Partner. As a result, the innovative display solutions throughout the building have been supplied and installed by NEC and Intevi, channel partner and solutions provider.

The NEC Solution

Perfectly and uniquely positioned to offer a broad range of visual technologies including LED, LCD and Projection; NEC was chosen to be the Display Technology Partner for the ROH to specify and install the perfect fit solution across a range of applications within the venue. The NEC global strap line 'Orchestrating a Brighter Future' neatly resonates with the goals and objectives of the ROH and the Open Up project.

Partnering with NEC Display Solutions, the ROH brings to life its modern and inclusive approach through a range of visual technologies including large format displays and projection solutions plus a striking 90 degree curved LED showpiece.

dvLED - NEC Ocean SO 3.9mm SMD LED



A dramatic 28.5sqm 90 degree curved LED screen is located in the redeveloped entrance area which opens out onto the Piazza attracting attention from the millions of visitors to this iconic part of central London.

The original design specified 2 x HD controllers with content synchronized by a Scala media player, however, this has been replaced by a single 4K controller making content creation simpler, guaranteeing perfect synchronization and achieving significant cost savings over the life time of the display. Anticipating 4K to be the standard resolution in the near future,

the ROH is benefiting from the future-proof flexibility of this system design. The design of the new Piazza entrance allowed only a very tight space for the installation of the LED modules; the glass frontage and revolving door were installed prior to the display. With less than 800mm space at its narrowest, a traditional ladder system was needed to install the frame and modules and a gantry and scaffolding required above the revolving door for access. Special LED modules were designed to create the 90 degree curvature four modules wide. The system supports automatic brightness adjustment together with a temperature warning and self-regulating control system to ensure protection from any excessive changes in heat.

Highly efficient and light weight direct view LED is the ideal technology for huge visualization surfaces offering the flexibility to be creative with different shapes and without the restrictions of frames or bezels. The vibrant colours, sharp contrast and high brightness output make it the optimal medium for outdoor and semi outdoor locations where ambient light is at its highest.

LCD - NEC Large Format 40", 65" & 84" UHD displays



In a range of sizes, the ROH uses NEC ultra-high definition large format displays to deliver inspirational content and 'what's on' information driven by Scala content management. NEC's UHD displays have been meticulously developed to deliver a richness of detail, precise and controlled colour reproduction, flexible connectivity and a guarantee of giving state-of-the-art technology with future-proof security.

Facing out onto Bow Street, 4 x 65" UHD displays deliver content at high brightness levels making it easily readable street-side to entice passers-by with 'what's on' highlights. Larger 84" panels are installed in the main Ground Level foyer and in the Linbury foyer to provide inspiration and information on forthcoming events, and in the ROH shop to showcase merchandise for sale. An interactive 65" display with ShadowSense™ touch functionality delivers pixel-free arms length viewing and superb 10 point touch precision accuracy. The Crush Room also utilises an 65" display to assist latecomers and a 40" screen is installed in the Amphitheatre Level showing similar content.

High performance UHD displays enable content to be shown at its best to highlight the ROH's creativity and excellence; engaging its visitors and communicating its corporate vision and values.

Projection - NEC PX1004UL laser projectors

Four NEC laser projectors combine to deliver a huge 14m x 3m projected image on a triangular wall in the main foyer to display artwork and acknowledgement of donors and sponsors. Installed by Intevi, the projectors are edge-blended to create an impressive wide format image. Laser technology brings substantial benefits in terms of brightness, lifetime and maintenance-free operation for a low cost of ownership and future-proof investment. Delivering 10,000 ANSI lumen brightness from each projector, this solution brings instant vivid colour and interest to the south wall of the foyer.



The Result

In conjunction with major architectural and design changes, new technology and visual stimulations enhance the experience for those visiting the Royal Opera House. The official opening of the redesigned ROH took place on September 21st 2018.

"NEC screens and projections animate the refurbished public spaces of the opera house in new and engaging ways, the bespoke digital wrap around screen at the refurbished Covent Garden Piazza entrance acts as an invitation into our new, welcoming spaces. We want as many people as possible to experience our art forms and get a taste of the remarkable creativity at play here and NEC's technology will assist us in promoting accessibility to everyone, opening culture to all," says Alex Beard, Chief Executive of the Royal Opera House.

"We are very honored and happy to support this venerable institution with our display technology. Our digital visualization solutions will complement the brand new approach of the Royal Opera House, bringing together traditional and innovative cultural techniques, appealing to the senses of all guests visiting the opera house", says Bernd Eberhardt, President and CEO of NEC Display Solutions Europe.

As the only display manufacturer able to supply all the different display technologies required to meet the diverse application needs of this exciting deployment, NEC Display Solutions is proud to be Display Technology Partner to the Royal Opera House.



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