

CERRITOS COLLEGE PERFORMING ARTS CENTRE

AMERICAS LOS ANGELES, / USA

The new Performing Arts Center at Cerritos College on the outskirts of Los Angeles opened in Summer 2022 and includes a stunning 400-seat proscenium theatre, a 150-seat black box theatre and a 100-seat lecture hall.

In addition, students at the college have access to a band room, recording studio, practice rooms and a huge tech lab where they can learn lighting and rigging techniques. The larger theatre is equipped with a true L-C-R NEXO Line array and Yamaha Rivage CS-R5 console. The audio system was designed by Rick Wells, founding principal of Multi-Media Consulting, and AVI-SPL provided the installation team.

Consulting on the design of the theatre and the lighting equipment was TheatreDNA for Theatre Projects, which specified a full theatrical relay lighting system by ETC, including an ION XE 20 control console, which was installed by Polaris Lighting Associates. "The building followed our curriculum design to support high levels of academic achievement for students and a widening of our audiences with attractive new spaces," said Gary Pritchard, Dean of Fine Arts and Mass Communication at Cerritos College. "At the heart of our student-focused mission and the desire to draw in a diverse audience are the flexible black box studio and the aesthetically striking mainstage theatre." The college's curriculum requires that students are well-trained on current technology and equipment, which will eventually lead them into professional work in theatrical and concert venues, stadiums, theme parks, and touring companies.

"The venue is used primarily to train future performing artists and theatrical technicians, however, the facility has also been used by a few local community groups," added Pritchard. The proscenium theatre functions as a multi-use performance space for stage plays, musicals, dance, lecture presentations, graduations, film screenings and acoustic and amplified music performances. When it

came to decisions on technology, Rick Wells, Founding Principal of Multi-Media Consulting, had drawn up a design for the PA which had to be changed late into the project when the college stipulated that Yamaha / NEXO were to supply the equipment.

For Wells, this change deep into the project only caused a minor reshuffle of his design.

"I was responsible for the design of the audio, video, control, production intercom, AV networks and production video systems for the 400-seat theatre, the black box, the recording studio, and front and back of house areas," said Wells. "Originally when I programmed this project in the main hall it was with a Renkus-Heinz Varia system, and the project was almost all the way built when I was asked to redesign the entire venue with all Yamaha / NEXO products."

Each true L-C-R array consists of six NEXO GEO M10 speakers, with three NEXO LS18E 18in subs in a mono configuration on a fader.

"To maintain the architectural integrity of the space we located the subs on the stage ledge, directly above the arrays." Said Wells.

"I crossed the 18in subs over at 80Hz and let the arrays go beyond 80Hz to their natural low frequency cut-off point, this creates a tighter, punchier, low-mid experience," said Wells.

"When I initially tuned the system, I was not completely happy with the low-mids, so I added a pair of NEXO MSUB12 subs positioned over the left and right array to bring in a bit more punch and fullness in the low mids. I learned early on in my career to leave an allowance in my specifications so that I can change something once I get in the room if I need to. While not perfect, the 12s have become part of the left and right array." Wells stated that changing the entire design during construction was possible because the infrastructure matched up.

"I had to move the AC power from the stage grid to the projection room above the control room, because we originally designed the system with powered arrays, while the NEXOs



A new 84,000 sq ft facility
bridging a college campus and
the surrounding community
is kitted out with an array of
market-leading technology.

All photos provided by Tilden-Coil Constructors, Inc.

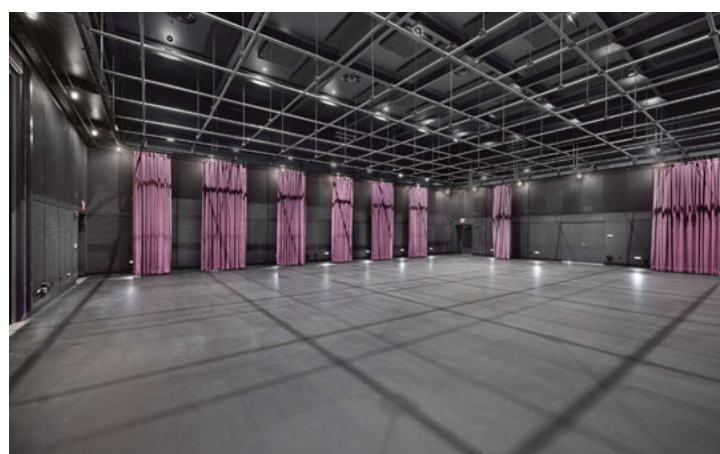
Below: The 400-seat proscenium theatre in
the Performing Arts Centre at Cerritos College.





Right: The black box theatre.

Opposite page: The 100-seat lecture hall for smaller recitals and spoken word performances.



are remotely powered. We used NEXO NXAMP4X4MK2 powered controllers; it wasn't an issue because we located breaker panel in the control room, so all we had to do was run the AC power up one floor to the new amp rack." The black box theatre does not feature fixed loudspeakers due to its flexible nature, but is an omnidirectional space with a sound system designed to be rigged to the pipe grid in any direction, with main and effects speakers to accommodate its flexible nature.

There are four 8in and four 12in NEXO point source portable loudspeakers designed to be mounted on speaker stands, or rigged from the technical balconies, and a single a 18in sub semi-permanently mounted in one corner. The Yamaha CL-5 Digital Mixing Console in the black box is connected to the Yamaha Rivage CS-R5 console in the main theatre, and both are connected to the recording console in the studio via Dante over fibre.

The overall design includes back of house performance monitoring, including the intercom system. The large theatre has a wireless Shure microphone system and a full video system with a Digital Projection M-Vision LASER 18K projector and a Stewart Filmscreen embedded for UHD video reproduction.

"AVI SPL installed the AV systems," said Wells. "Special acknowledgements to Daniel Bennett from NEXO, William

Murray, FAIA from Pfeiffer Eastman Architects, Michael Ferguson and his team at TheatreDNA, and a very special acknowledgement to the project manager Kevin Jones from Tilden-Coil Constructors, Inc."

Tasked with designing the proscenium theatre's functionality was TheatreDNA, with Founding Principal Michael Ferguson leading the project.

"The theatrical lighting system is a full relay system designed for modern LED lighting fixtures, so there are no dimmers – just relays," he explained. "Inside the theatre is lighting and lighting fixtures, a counterweight rigging system over the stage, along with adjustable acoustic drapery to soften the acoustics in the auditorium to suit the performance.

"The subtlety of this venue is in the differences of the different spaces," continued Ferguson. "The 400-seater theatre and small black box theatre are accompanied by a tech lab – a large space specifically for teaching touring and road-based rigging skills.

"Because aspects of these spaces are designed for training as well as performance, that makes them a little more user-friendly in certain aspects, but this remains a professionally functioning small performing arts centre, which is very well equipped with a big load-in area." The black box theatre is equipped with an ETC Colorcourse



AV control console, and both that and the main theatre's ION XE 20 console are integrated with the architectural lighting controls, meaning the lighting system is integrated with the theatrical system, and both can be used interchangeably.

ETC products used across the facility include Source Four, Source 4WRD, Source Four LED Series 2 Lustr and Tungsten HD, Desire D60, Desire D40, Sensor Dimming Rack, Paradigm Architectural Control Processor, Unison Paradigm 18in Touchscreen, Unison Paradigm 7in Touchscreen, Ion Xe 20 console, Selador Desire D40XTI and Selador Desire D22 LED.

"ETC is the largest manufacturer in the US and is known for having excellent responsiveness to service needs and a 24-hour tech support team," said Ferguson. "For that reason, they have dominated the American fixture market, and the dimming, control and relay market. For bidding projects, there are a handful of choices, and ETC has one of the best price and service points, so they win a lot of projects.

"One of the fun parts of this project was co-ordinating the functionality around the architecture's aesthetic ideas. The room looks really interesting, but functionally and acoustically it is a real success."

Within the proscenium theatre's design is a glowing, geometric element, and to create these patterns Lighting Designer Clifton Manahan from HLB Lighting Design specified Rosco Custom LitePad CCT 95 fixtures for the triangular panels that audience members see glowing in the balcony as they enter the space.

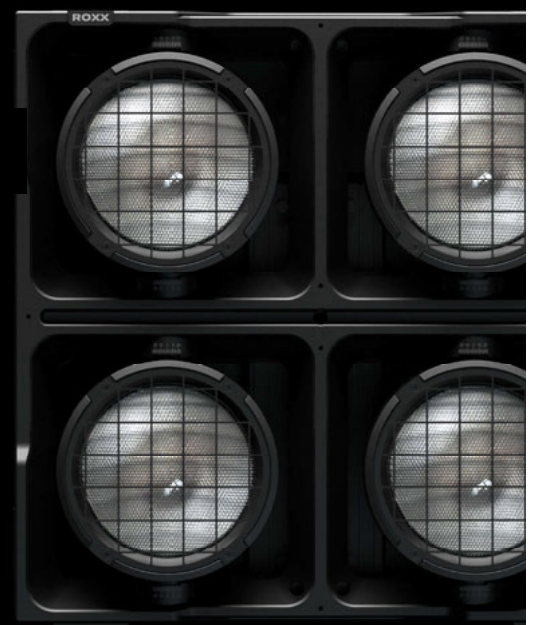
The installation included 20 triangular Custom LitePads, with the smallest triangles measuring 30.75in long and 6in high, and the largest were 9ft 8in long and 8in high.

As many of the LitePads were going to be installed together to create larger geometric patterns, the fixture's light consistency was important to Manahan. "We chose LitePad because of its good uniformity, its thin profile, and due to Rosco's ability to make large panels, as well as its dynamic-white capabilities and control system capability."

Manahan also noted that they specified the Rosco Custom LitePad CCT 95 fixtures because of their variable colour temperature and their ability to integrate into the lighting control system inside the theatre. The CCT 95 LitePads feature a colour temperature range of 2700K to 6500K. This enables the technicians inside the theatre to warm or cool the output of the light to match the mood or the style of performance. ■

www.cerritos.edu/theatre/PerformingArtsCenter

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