

JULIE AUCOIN

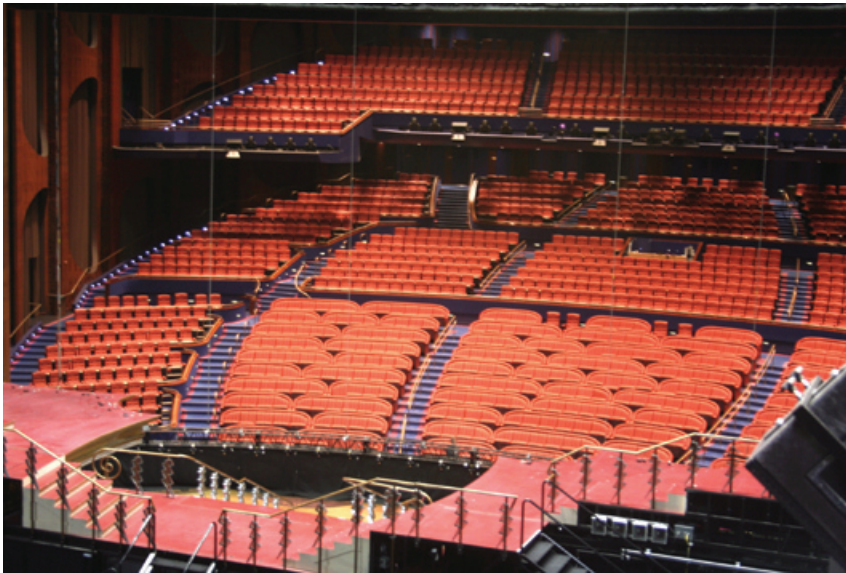
Viva ELVIS

Las Vegas City Center's
Cirque du Soleil homage
to the King. *by Mark Frink*

“Viva Elvis” portrays the life of the “King of Rock ‘n’ Roll” with his songs, including his Tupelo, MS boyhood, Army enlistment, movie career, marriage to Priscilla and Vegas comeback, running them all through Cirque du Soleil’s psychedelic blender that includes the requisite acrobatics and more dancing than usual for a Cirque show. The usual pre-show antics are replaced by a couple dozen bobby-soxers who mingle and flirt with the audience before a gold-record curtain “pops the clutch” with a dramatic kabuki drop.

The show is conceived as a live concert, with live band and (except one) singers presenting a trip down memory lane and showing how Presley’s life and music came to be embedded in our cultural psyche. Obviously Elvis’ voice isn’t live, but music director and arranger Erich von Tourneau listened to thousands of hours of recordings from more than 900 albums, bootlegs, films, and concert recordings to find the voices of Elvis to be remastered for the 30 tunes, which have also been re-arranged with a modern feel. “Jailhouse Rock,” “Burning Love,” and of course, “Viva Las Vegas” are a few of the exuberant show-stoppers.

The 1,840-seat Elvis Theatre in City Center’s Aria Resort and Casino has a generous stadium rake, with the audio mix position in the center where it belongs. The plush seats all have cup-holders, and the center of the lower sections has ‘banquet sofas’ that



Clockwise from top left:

Elvis Theatre seating as seen looking over the set's imperial staircase from backstage catwalk.

Twin Meyer LCS LX-300 11-frame Matrix3 mix engines.

Assistant Head of Sound Aaron Beck at the Meyer LCS Cue Console control surface.

seat four or six as a Las Vegas reference to showroom booths of yore.

Good Luck Charm

“Viva Elvis” sound was designed by Jonathan Deans (www.designingsound.com), whose Broadway credits include a 2010 Tony nomination for “La Cage aux Folles,” “Young Frankenstein,” “Pirate Queen,” “Ragtime,” “Fosse,” and soon Bono and The Edge’s Spider-Man musical, to name just a few. He’s assisted by Associate Sound Designer Jason Rauhoff.

This is the 13th Cirque show Deans, as well as his seventh resident show on the Las Vegas strip, most of which are characterized by Meyer Sound Level Control Systems (LCS) Matrix3 mixing systems

and Meyer Sound loudspeakers. However, this his first all-digital design, with an Optocore digital signal path.

“Meyer speakers have become my first choice due to several reasons. One being the quality control of their products,” Deans comments. “Of course it also helps that all of their products are fantastic sounding and the voicing of each product line makes it possible for me to do my kind of work with an assortment of speakers that are sized for their installed location. One other thing which is very unique for a company of Meyer’s size is the customer support and service, which is totally unbelievable and allows me to sleep at night.”

We were given a backstage tour by

Assistant Head of Sound Aaron Beck, who has been involved, literally from the ground-floor, as Sound Project Manager. Beck worked closely with Bob Barbagello and Mario St. Onge from installer Solotech, and SVC consulting firm Auerbach Pollock Friedlander’s Matthew Ezold, CTS.

Beck and Head of Sound Kevin Owens trade off mixing the show. Additional sound operations crew includes Monitor Mixer Dave Robertson and RF Tech Whitney Day, along with deck audio by John Kessler, Jason Bauer and Ezra Fowler.

Both the main and monitor consoles are similar LCS Cue Console control surfaces, each comprised of four 16-fader bays, three meter modules, and a transport module. They’re built into custom studio console furniture by Sound Construction

:: Viva Elvis ::

& Supply of Nashville.

In the control room, redundant main and backup 48-channel Ableton Mac computers, each equipped with RME MADI cards feeding dual Optocore MADI interfaces, are used in the show for Elvis' voice, time code, click track, additional band tracks, and replacement tracks if a musician is missing due to illness or otherwise. Each musician has so much choreography that understudy musicians are unpractical.

In the main equipment room backstage, a Steinberg Nuendo 128-track Mac computer, using two 64-channel RME MADI cards going to a third Optocore dual MADI interface, provides playback routed to the show's input channels. The set-up allows sound checks and rehearsals without musicians.

"We do this with a file change in Optocore to move the inputs from the normal stage boxes and RF inputs to inputs from the Nuendo system," Beck explains. "No wires to re-patch or switches - just a different Optocore file with a different audio input map to get 128 tracks of playback where live inputs would be."

The main console employs two TC Electronic M6000 reverbs for effects, one set up as four machines for drums, per-

cussion, guitars and horns, and the other for Elvis vocal tracks, live lead vocals and backing vocals. The monitor mixer uses eight TC M-One reverbs, four for vocals and four for instruments.

All Shook Up

The main sound reinforcement system consists of left and right 12-box Meyer MICA compact line arrays, flown above four deck-stacked 700-HP subwoofers. Two more 12-box MICA center cluster arrays are supplemented by eight flown M3D directional subs. Across the front of the 80-foot wide stage, nine M1-SM cabinets are hidden behind soffits in the stage lip, with four Meyer M'elodie compact line array modules and a pair of UPJunior compact loudspeakers filling in at the sides.

Extensive coverage by the surround system is accomplished by four pairs of Meyer MSL-4, UPQ and UPJ on each side of the theater to cover far, mid and

near seats from oblong coves in the theater's side walls. Overhead there are three rings of down fill loudspeakers, with five MTS-4A loudspeakers from the first and highest catwalk, five CQ-1s across the second catwalk and five UPJs from the third and lowest catwalk. Yoked UPJ and single M'elodie cabinets provide rear-fill surrounds from the balcony rail, and additional rear surround comes from UPA-1Ps at the back of the theater.

All 144 loudspeakers are controlled and monitored via Meyer RMS (remote monitoring systems) on two screens, one for the mains and a second for the surrounds. The main LCS system also employs a 24-channel LCS Wild Tracks playback system to use with the extensive surround system.

One unusual and effective feature in the sound design is 20 Crown Audio MA-3600-powered Danley Sound Labs TH-115 tapped-horn subwoofers, which are installed in 5-foot deep concrete bunkers throughout the theater's floor and covered with plywood. A Waves BassMaxx processor is used on these subs to great effect at several points in the show.

Optocore provides the digital backbone



House left Meyer MICA array



Meyer Galileo and Apogee DA-16X drive rack



Clear-Com Eclipse-Median intercom

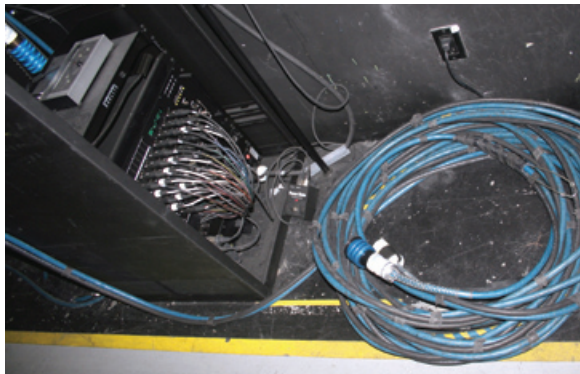
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in the form of the largest single-ring fiber optic digital audio network ever installed. The audio network consists of 504 inputs and 776 outputs. Elvis' Optocore system has 21 network devices on a single synchronous, redundant optical ring.

For example, on each side of the stage is an Optocore LX4AP 48 x 16 analog XLR stage box. The Optocore network also goes to the two mix positions, RF world and the rack room.

Upstairs in the main equipment room are twin Meyer LCS LX-300 mix engines, two towers of 11 Matrix3 frames each. The monitor mix system employs five Optocore AES interfaces to feed dozens of stereo IEM mixes via the network to the RF room transmitters and other hardwire locations.

The Front of House LCS mixer has only three Optocore interfaces, because



Optocore LX4AP 48 x 16 stage box

most of its outputs feed AES digital directly into an adjacent rack to six Meyer Galileo 616 processors for the arrays, and four Apogee DA-16X converters providing analog for the many individual speaker locations: the extensive surrounds and all of the fills.

"The flexibility of Optocore has allowed me to change thousands of signal paths without moving a single wire into

any of our consoles, 40 wireless microphones and 30 in ear monitors," Beck comments. "We use every feature Optocore has and the system has been rock solid every single day. I would not want to do another show without it."

Wireless Hotel

The performers seem constantly in motion and they're mostly wireless. The wireless equipment is all housed in small rack room upstage

right, and the system uses a total of 123 frequencies. There are 40 channels of Sennheiser EM 3732 UHF receivers, whose AES digital signals are fed to the consoles via an Optocore DD32E and clocked from Optocore with a Drawmer DMS-2 D-Clock word clock distributor.

Sennheiser SKM 5200 handheld transmitters with MD 5235 dynamic capsules are used by the four female

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vocalists who sing harmonies, solos and duets with the King's voice. Along with Colonel Tom Parker providing occasional narrative glue between numbers, the backup singers and the musicians are all outfitted with Sennheiser SK 5212 miniature transmitters.

For the musicians, singers and performers, there are 30 channels of wireless Sennheiser SR350 G2 IEM transmitters,

except for drummer Benoit Clement, who uses an Aphex Headpod for his hard-wired IEMs.

The movement of equipment and scenery backstage during the show is incredible and communication is vital. For wired communications, a Clear-Com Eclipse-Median intercom mainframe with 96 ports that lives upstairs in the amp room is connected to 32 Clear-



RF central: 40 mics, 30 IEMs & 10 BTR-800

Lectrosonics Venue Wireless Mics by the Numbers.



6 channels in 1RU
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Com V-Series 12-button intercom panels throughout the theater, including six audio work locations.

The show relies on 10 Telex BTR-800 wireless intercom base stations and 40 Telex TR-800 2-channel belt packs. The base stations are modified with individual transmit outputs and processed by Professional Wireless Systems GX4 antenna combiners and are then routed to a custom Transmit Splitter, which combines their outputs and routes them to PWS helical antennas in the several transmit zones.

Similarly the receive inputs of the Telex base stations use a PWS DB-IC, a non-diversity version of their DB-16 antenna combiner, to filter and actively manage RF gain.

Viva Las Inputs

The show originally called for a band cart that would travel around the stage, but that concept quickly became obsolete. The show now has four unique drum and percussion set-ups. The first two sets have separate inputs, while the third set is switched to the first set via a macro change in the Optocore software.

The fourth set is changed by moving two Whirlwind W6 28-channel multi-core cables from one sub-snake to another, festival-style. A total of 92 mics

are used on drums and percussion alone. The inputs for the four sets of drum kits and percussion set-ups are changed festival style, with unneeded channels simply not being landed in those scenes.

The kick drum uses both a Shure Beta 91 (boundary design) mic and an Audio-Technica AT2500 dual-element (cardioid condenser and dynamic) mic. Neumann KM140 condensers are used on hi-hats and snares, with an SM57 beneath the snare. Audix D2 mics are deployed on rack and floor toms and DPA 4011s are positioned for overheads for all the drum kits and percussion set-ups.

“The sound system mixed with the live band onstage, arrangements and audience makes for a very fun and enjoyable job.”

The percussion set-up includes a Shure Beta 52A for the concert bass drum, Neumann KM140s on concert toms and snare, an Audix i5 on the timbales, and an Audix D4 on the field drum. The congas and ride cymbal have Sennheiser MKH40 pencil condensers and a djembe is mic’ed with a Beta 98D/S above and a Beta 56 below it. A cajón played onstage a few times is mic’ed with a wireless DPA 4061, as is the marching snare in the solo for “Return to Sender.”

Trumpet, trombone and baritone saxophone all employ wireless DPA 4099 mics, while an offstage clarinet part is played into a Neumann TLM170. Bass and guitars are transmitted wirelessly, re-amped and mic’ed backstage with Audio-Technica AT4040 large-format condensers.

“The system is amazing to mix on,” Beck sums up. “The pre-amps in Optocore are so quiet you almost think something is not working. The Meyer system delivers a dynamic, responsive system.

The low end response on the kick and bass guitar is very full and tight. The sound system mixed with the live band onstage, arrangements and audience makes for a very fun and enjoyable job on a nightly basis!” Fat city, Daddy-o.

There are two 90-minute shows nightly except Wednesday and Thursday and tickets start at \$99. According to the agreement between Presley Enterprises

and Cirque, other Elvis Projects include a touring Elvis show planned for Europe and Asia, as well as an international “Elvis Experiences” of interactive multimedia exhibits, with one new project scheduled to open each year until 2015. That’s a whole lotta Elvis. Thank you very much. ■

Mark Frink is *Editorial Director of Live Sound International*.



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