

## RE-JUBILATION: REDESIGNING JUBILEE!

Oct 1, 2004 12:00 PM, By Nicholas Phillips

*Jubilee!* at Bally's Las Vegas is the quintessential Vegas spectacular with big music, lavish scenery, complex stage mechanics, costumes by Bob Mackie and Pete Menefee, and, of course, the Strip's finest showgirls! The formula has proven successful for some 23 years, and now, it is replete with revamped illumination by Ken Billington and Jason Kantrowitz.

*Jubilee!* presented a unique challenge for the co-designers, particularly in terms of scheduling. The spectacular performs twice daily, six days a week, and the schedule was to be unaltered during the redesign process. To accommodate the performance schedule, Kantrowitz drafted a work schedule calling for a four-week program to get from original, to interim, to new *Jubilee!* The basic framework of the schedule called for an eight-hour workday followed by two 100-minute performances.

Chris Nelson, Bally's director of entertainment, attested to the challenge at hand. "The entire show had to be completely re-designed without canceling any performances," he says. "Who better to do it than a team who understands Vegas entertainment, has many years experience with large casts, understands musical theatre, and can help us sink the *Titanic* twice nightly!"

It was determined that nearly every position and every light required reworking for the new design. A great deal of original instrumentation was still in use; Kleigl, Altman, and Berkey Colortran ellipsoidals were all replaced with new ETC Source Fours®. The schedule for this massive re-hanging, circuiting, coloring, and focusing was planned with the idea of completing a position per day. All of this work had to be finished by 5pm each day in order to have enough time to get the interim lighting working for the nightly performances. A typical day saw the crew arriving at 9am to strip a position bare and re-hang it to the new design specifications. This generally took the majority of the day, leaving a couple of hours for focusing. Most positions went through an inverse reduction — the number of fixtures decreased with the purpose of each fixture becoming more effective. For example, the front light went to a pink, and a color changer system fitted with scroller was added to give flexibility.

The focus was typically completed behind the show curtain while the audience entered for the first nightly performance, leaving no time to re-cue the new lights for the evening's shows. This was the greatest challenge for the team — creating interim cues to make it through the equipment change over the course of the day. To do this, they relied on *Jubilee!*'s robust control package, with an ETC Obsession II® 4000 handling dimmer and scroller channels and the moving lights controlled by a Flying Pig Systems Wholehog® II console. All DMX was routed via Ethernet using a Pathway Connectivity Pathport system. The best way of dealing with the old and new show information on the Obsession II was to move all of the old show's levels from the 1 to 800 range of channels to the higher 1,000 to 1,800 range. This allowed the design team to keep the old show running, while moving the new lights into the new show's channels as the positions were completed daily. Eventually, all of the old show channels above 1,000 would be cleared, leaving only new show data in the under 1,000 range.

The process of creating these interim cues was worked through on the second Obsession II console. Associate designer Jim Milkey made extensive use of the console's selective channel display; only the old show channels were recalled in preview. Three quarters of the translations were handled by Obsession II's "Replace with" command. The decidedly more complex translations were handled on paper, with each "Movefade" instruction handwritten on spreadsheet-style track sheets. The translations proved numerically intensive, particularly in the aforementioned example with the front light, where entire systems were reduced to the use of one pink color system and one scroller system.

For the translations, Billington used Milkey's selective channel track sheets to evaluate what each old light was doing and decide how to have the new lights appear likewise. This effort ensured that the show would be lit similarly to how it had been in the past for each night's performances. The re-patched, translated interim cues for that day's changing positions were then loaded into the primary console in time for the performances. This was the first opportunity to see the results of the cue translations live on stage. Fortunately, most of the interim cues were successful.

Set electrics are an enormous undertaking in *Jubilee!* Fortunately, head electrician Louis Bradfield has been with the theatre for 31 years. He personally constructed much of the electrics and control systems. The massive showbiz scenery contains some 45,000 6S6 and G2 lamps, controlled by 20 custom controllers designed by Bradfield. The lamps chase stunningly and are not seen on such a scale anywhere else.

Similarly grandiose is *Jubilee!*'s fiber-optic curtain, comprised of approximately 50 miles of fiber with more than 10,000 fiber ends. Thirty-eight DMX controlled, color changing illuminators power the drop. As the head electrician, Bradfield is also responsible for the operation and maintenance of the on-set hydraulic systems, most of which he designed. There are seven such systems doing amazing effects, from collapsing columns in the "Samson and Delilah" number, to sinking the *Titanic*, aided by 1,100 lbs. of dry ice in four custom-built, hydraulically actuated foggers and "steam" effects that consume 22 cylinders of compressed CO2 per week. The pyrotechnics consist of 50 loads per performance, and the *Titanic*'s broilers are fired with compressed natural gas controlled in real time by Bradfield. Kantrowitz oversaw the re-cueing of the set electrics during the relighting process and sought to utilize, for the first time, the full extent of all that had been built into the original scenery.

Once the equipment turnover was complete, the creation of the completely new looks began. At this point, Jason Badger joined the team as the moving light programmer. Each of *Jubilee!*'s four production numbers were scheduled to have two days of cueing with a third day for a full dress rehearsal. The crew arrived at 9am to begin setup of the design table. With the customary equipment in place, each day's number was worked through step-by-step, scene-by-scene. At 5pm, the table was struck, and the interim cues were reloaded in both consoles.

Day two of cueing for each number brought the same progression, with the interim show reloaded at the end of the day. The morning of the third day was used to finish up the number and sync the new cues with *Jubilee!*'s SMPTE timecode. A full dress rehearsal followed in the afternoon with the company, the artistic staff, and management. Billington and Kantrowitz then made adjustments, and the relit production number was inserted into that evening's performances. The subsequent days continued the process until the show relighting was complete. Billington and Kantrowitz then got two full performances to evaluate and fine-tune the show as a whole.

This is not the first time Billington and Kantrowitz have co-designed a spectacular. The duo's credits include *The Radio City Christmas Spectacular*, ten seasons of *Stars on Ice*, and Disneyland's nighttime spectacular *Fantasmic!* Their styles are similar, and they make the most of being able to each focus on differing aspects, ultimately increasing the speed with which a complex show such as *Jubilee!* can be lit. On such tight schedules, particularly without halting the production, the team's ability to share the workload and then reconvene with a fantastic result is invaluable. Instances where Billington worked on the conventional lighting while Kantrowitz was busy updating the moving lights for the same or upcoming scene proved to be most time effective. "It's a constant collaboration with Ken and I working as one on the show," Kantrowitz says. "It allows us to work very quickly, as we can both be looking at different details."

"In relighting *Jubilee!*, we brought a sense of clarity and updated freshness to the show," Kantrowitz says. "Our experience with large-scale musical spectaculars has taught us the importance of helping direct the audience's focus. Sitting in a large theatre, watching a huge stage jam-packed with a hundred performers, tons of lavish costumes and scenery, in a whirlwind of symphonic music can be overwhelming. The show is fast paced, and the light cues had to support that energy, but lighting helps the gorgeous showgirls and the amazing costumes look even more glamorous. It makes the scenery feel even more spectacular. It helps transport the audience into a more romantic and exotic time in Las Vegas."

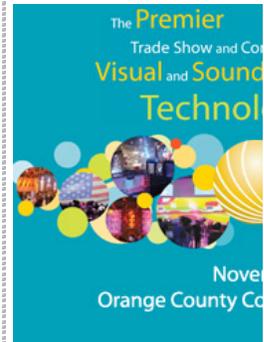
**Lighting design**  
KB Associates, Inc.

**Lighting designers**  
Ken Billington  
Jason Kantrowitz

**Associate lighting designer**  
Jim Milkey

**Assistant lighting designer**  
Nicholas Phillips

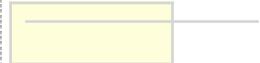
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Russ Rabin

**Jubilee!**

**Company manager**

Fluff LeCoque

**Head electrician**

Louis Bradfield

**Head lighting**

Russ Rabin

**Bally's Entertainment: Entertainment director**

Chris Nelson

**Technical director**

Drew Strozza

**Assistant technical director**

Trevor Long

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ETC Source Four®-5°

ETC Source Four-10°

ETC Source Four-19°

ETC Source Four-26°

ETC Source Four Jr.

Zoom 25°/50°

ETC Source Four®

PAR NSP

ETC Source Four

PAR MFL

ETC Source Four

PAR WFL

PAR 64 NSP

PAR 64 MFL

PAR 64 WFL

PAR 56

PAR 38

6' 30LT MR 16 75W

EYC ZipStrip

8' 40LT MR 16 75W

EYC ZipStrip

6' 30LT MR 16 75W

EYC MiniStrip

3'-0" Kliegl FCL

Flood Striplight

3'-6" Kliegl FCL

Flood Striplight

4'-0" Kliegl FCL

Flood Striplight

6'-0" Kliegl FCL

Flood Striplight

8'-0" Kliegl FCL

Flood Striplight

Kliegl 68'

Borderlight 500W

FCL

6' 12LT R40 250W

Strip

7'-6" 15LT R40

250W Strip

R20 Footlights

Fiber Optic

Illuminators

Martin Mac 2000

Wash PC

High End Systems

Studio Spot 575

HES Cyberlight

HES Studio Color

575

Coloram II Scroller

Chroma-Q Scroller

ColorRocket

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Scroller  
Xenon Super  
Trouper Low Boy  
MDG Atmosphere  
HES WholeHog® II  
Console  
ETC Obsession II®  
4000 DPS

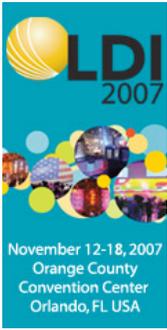
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