



Sing Me a Story

Carrie Underwood's *Storyteller Tour*
is designed to be spectacular, yet intimate

By: Sharon Stancavage

"In every single industry article, people always say that every project is a team effort, and how this big group all pulls together for the project. I've been doing this a long time and this was most assuredly a collaborative success story," asserts Carrie Underwood's production/lighting designer Butch Allen, of Blame Funnel Creative. For Underwood's *Storyteller Tour*, Allen worked closely with creative director Barry Lather and a host of others: "Geoff Donkin [tour manager], Chris Coffie [production manager], and Aaron Ford [stage manager] were all heavily involved in the development process of the show."

The process began last August. "We gathered a couple of times and brainstormed," Lather says. "The thought of doing the show in-the-round was something that we were all kind of gravitating to, and we were excited about trying to make it happen. Without a doubt, it would be a different-looking show for Carrie."

Staging

"We knew we wanted to have some satellite stages, other than just a circle in the center, so Carrie could get closer to the audience," Lather says. The north part of the stage is located where the traditional front of house would be, while the south part is where a traditional stage would be placed.

The massive stage, fabricated by SGPS Showrig's Las Vegas office, is 134' 6" long. It's also incredibly complex, especially the center, which is 48' in diameter and includes a turntable housing a bevy of lifts. An 8'-diameter lift in the center is Underwood's main way of entering and exiting, and is also used for props. Lather adds, "There are four band lifts, which are basically like four pieces of pie, that fit within the turntable; the entire center stage unit turns, and, within that circular unit are other, broken-off pieces."

Allen adds, "The center hub of the stage is really an interesting piece of machinery."

The lifts are impressive. "The band lifts go from 1' to 12'; that's big, moving all eight band members. The center lift for Carrie goes from 1' — 18'," explains Allen. All circular lifts in the design are illuminated using LED video panels covered by Plexiglas. Lather adds, "The north and south mast lifts are 10' in diameter and descend all the way down to ground level to load in Carrie, musicians, and props." They also elevate to a height of 18'.

Fitting the stage into the venue can also be quite the challenge, due to the various venue sizes. "The stage is 136' and a standard hockey floor is roughly 200'. The average basketball floor is 155', so it's really tight on that," reports Underwood's stage manager Aaron Ford.

The size of the stage is not necessarily a problem for Underwood, Allen notes: "It's funny that her power as a performer diminishes the scale of the stage; she's such a huge voice and talent that you don't notice this giant stage once she's on it."

Lather says, "The stage height is 5' on the outside and 6.6' in the middle. We have eight band members, we have Carrie, and there is a lot going on. However, there are audience members standing on the floor, so we have to be very, very sensitive to sightline issues. When Carrie is all the way at the other end of the venue and people standing on the other side can't see her, what are they looking at?"

Video

For those moments when Underwood is out of the view of the general admission audience on the arena floor, Lather says, "We have four oval-shaped IMAG screens." They're V9 Lite 9mm LED panels provided by PRG Nocturne, of



Underwood's massive stage, fabricated by SGPS, is almost 135' long.

DeKalb, Illinois. Each IMAG screen is surrounded by 12 Clay Paky Sharpys and 12 TMB Solaris Flares. "The Sharpys achieve great fly-ins and -outs for hits that are more than just temporary intensity shots," says lighting director Nathaniel Cromwell. "There are also static looks that frame the content and IMAG. Because the light has a hard, tight beam, there are a few times within the show where we put them all on Carrie, to draw the whole focus down to just her. Their placement in the overall design is brilliant, as they become so much more than just the aerial effects that they are known for. The Solaris Flares provide visual momentum in the up-tempo songs and reinforce content and overall feel of the mid and low tempos."

Above the screens are three video rings that form a stylized, ever-changing chandelier. "It was based on a picture I had," Lather notes. "It was part of my preliminary creative treatment of the show." The chandelier is comprised of three concentric rings: one 14' in diameter, another at 20' diameter, and one at 26' diameter; all are comprised of V12 LEDs. "We don't have a large background surface that can create an environment, because we're in-the-round, but the oval IMAG screens and concentric LED rings helped us create our environment when we want that look."

The rings are motion-controlled, via a Navigator system provided by SGPS, and are transformative: They can form a cone ["Cowboy Casanova," "Choctaw County Affair"], they can be tucked together ["Last Name," "Somethin' Bad"], there are double-ring looks ["Undo It," "Fishin' in the Dark"], and more. "We have an opening montage clip of a minute and thirty seconds," explains. "The video rings,

which are in the form of a cone, transforms before our very eyes; they form a tiered pyramid. When we first see Carrie, she is on top of the pyramid, singing 'Renegade Runaway,' which is very much a rock song."

The chandelier hangs under the venue scoreboard. Allen explains, "We were looking for something transformative, but it couldn't be giant and it couldn't be heavy because it is hanging under a scoreboard, which is everyone's biggest nightmare. The Carrie Underwood camp plays a very wide variety of venues over the course of the tour, so the trim heights vary wildly." And when Allen says "wildly," he means it: "There's a venue where, I believe, there's a scoreboard hanging at 34', and we were in a building in Boston where we were trimming everything out at 60'. And everywhere in between."

Content is provided by Olivier Goulet, of 4U2C, located in Montreal, and Orrin Zucker, of Ozone Animations, based in Boston. The media server of choice is the PRG Mbox.

Lighting

"It's an oddly simple lighting plan," explains Allen. The equipment, which is far from simple, is provided by Bandit Lites' Nashville office. "This really pretty big lighting system has only a crew of four people, and they are incredible." Bandit vice president Mike Golden says, "Carrie Underwood is extremely talented and a true professional, and her touring entourage reflects those same traits. I admire and respect this organization from the top down, and we are very honored to have been her lighting provider since 2006."

The overall lighting design was a team effort, Allen says:



Allen's lighting rig is comprised of several trusses; the two most prominent run the length of the arena.

"We came to the decision that, with a stage of this size, running the lighting system up the dasher line [the boards of a hockey rink; in an arena, they form the barrier between the audience and the main floor on the upstage/downstage axis] was expedient. It left the middle of the floor empty to do what needed to be done, and it was also a good call for the riggers, because it's easy to find those points there." The bulk of the lighting is on two 160' trusses that run the length of the dasher. Allen adds, "This show has the biggest front and back truss in the history of indoor touring." A 20' truss on the north end of the venue runs upstage and downstage, as well as a T-shaped truss that is located on the south end.

A massive set combined with a long, linear lighting rig can be problematic. "Loading in the lighting rig is currently the biggest challenge, because it blocks one side of the arena or the other," Ford says. "It's a little rough for the lighting guys—they have to wait until one side is up at head height before they can build the other."

Along with the Sharpys and Solaris Flares framing the IMAG, Allen's lighting rig includes 84 Chauvet Professional Rogue RH1 Hybrids, 36 Robe BMFL Spots, and 38 Clay Paky Spheriscans, a new product. Allen explains, "The Spheriscan is a moving mirror light; it moves super-fast and it will rotate 360° forever. It has no stop, which is very cool. The light that comes out of the thing is beautiful; in its raw form, it's gorgeous. The thing is bright and I really like it." The Spheriscan has a 1,400W, 6,000K Osram lamp working at 1,200W; the unit features a 13° — 34° zoom, has six rotating gobos, eight fixed gobos, and an eight-facet rotating prism. The Spheriscan can also be converted to

use without the mirror.

"Due to how this show had to lay out, we knew that our lighting system was going to block the house spots every day," Allen reports, so he turned to a CAST BlackTrax system paired with the Spheriscans. "They are very, very fast; they keep up very well," explains Marty Cochrane, product manager at Toronto-based CAST Blacktrax. "From our experience, they're just as fast as a Sharpy or a Sharpy Wash—maybe a little bit faster—but we found we still needed to do a little bit of prediction to get the light where it needed to be."

Sixteen Spheriscans are handled by BlackTrax. "We dedicate 16 units in four separate zones for [Underwood's] key light," explains Cromwell, who is handling BlackTrax on the road.

Fourteen proprietary BlackTrax IR cameras are located within the lighting rig, Cochrane explains: "It was very easy to integrate BlackTrax, because we just said, 'Where's your lighting system? We'll just take a tap out of that, and we'll set up our cameras around what you already have set up'."

During the show, Underwood wears a small BlackTrax beacon with infrared LEDs; four beacons are used. Two units are tagged for use with her costume, while two are set aside for accessories, like jackets. "It's a little different than what we normally do, because there are so many costume changes," Cochrane comments.

The BlackTrax system works with the show's MA Lighting grandMA2. "It's a very sophisticated system—everything configures to the millimeter, which was initially challenging but goes to show the precision of the system," Cromwell says.

"The BlackTrax system is unbelievable," Allen says. "It's

CONCERTS



No matter where Underwood is located, she is spotlighted perfectly, thanks to the CAST BlackTrax system.

something I can't believe I saw in my lifetime. We now have consistent color temperature and intensity on [Underwood] and we get every angle we need; it's really a beautiful system." Cromwell adds, "The BlackTrax guys have been great with road support."

Programming the show was, "a typical Butch Allen death march," Allen says. "We did the majority of it in five brutal days." Along for the march were programmers Rob Koenig, Cat West, and Cromwell. "We had two consoles going all the time; sometimes both people would be programming separate things, and Nate and I would be sitting aside," Allen adds.

Effects

In the past, Underwood has flown over the audience in a truck [her *Play On Tour*] and had a tornado on stage [*The Blown Away Tour*]. To help create a sense of spectacle for *The Storyteller Tour*, Lather turned to special effects. "I suggested quite a few things—pyro, lasers, CO2 jets, crackle mines, gerbs, and so on," he says, and everything he suggested was used.

The production opens with the song "Renegade Runaway." "Carrie is in a laser cone on top of the video ring pyramid, along with some cool CO2 effects and some

great lighting visuals," Lather says. "We use primarily white and gold lasers; there are four 30W boxes on the ground and the 30W laser creating the cone, which is in the ceiling." The production features a number of lasers on the floor and in the air, including Strictly FX [the show's effects provider, based in Wood Dale, Illinois] Coral Series lasers and units from X-Laser. There are also two Le Maitre low-smoke generators, six Ultratec Radiance Hazers, eight RGB LED-infused color-changing smoke geysers for atmosphere, four foggers, and ten CO2 jets.

Lather explains, "We have red road flares in 'Two Black Cadillacs,' which is a moody song with reds and congos. There's a big mine effect that shoots up in the air and has a loud crackle at the end of 'Before He Cheats,' at the end of our main show, before the encore. We also have a big flash-pot effect—it's a big mushroom-like cloud, a boom with this round white cloud that looks really cool." The flash-pot effect happens during "Little Toy Guns." The pyro product is from Next FX.

For the finale, "Something in the Water," Lather had something unique in mind: "I wanted a falling-water effect, so we could end the show on an inspirational and emotional note." This is accomplished using haze, fog, specialty confetti, and lasers. "It took a lot of tweaking to get the laser



Lather's video rings can be moved into a variety of configurations.

rain to the right spot," admits Ted Maccabee, partner at Strictly FX. The sparkling laser rain is created using two dozen 4'-long linear LaserEdge units from Strictly FX. They're located both above the video rings on a truss, as well as on the floor, and work with a traditional laser used to create the previously mentioned cone around Underwood.

Collaboration was also an integral part of the effects portion of the show. "Chris [Coffie] and Geoff [Donkin] were very receptive to our ideas," notes Maccabee.

D.A.S. Design Works, based in Santa Fe Springs, California provided two mechanical effects: the fabric boxes that appear during "Blown Away" and the jukebox that Underwood rises out of during "Cowboy Casanova." "The D in D.A.S. is Dave Odom, a professional mechanical engineer; the S is Sutai Wu, who is an electrical controls expert; and I'm the roadie that's been building stuff my whole life who advises what will and won't work on the road," explains Ford, the third partner in D.A.S.

The design of the "Blown Away" boxes is a creation of Lather's. "I've wanted to do it for ten years," he says. "I've done pencil drawings and every time I've gotten close to doing them, they ended up being cut."

Eight boxes in two sizes are located on the outer perimeter of the stage's central portion. They're comprised of

Rose Brand white China silk that reaches 18' when blowing. "There are also 56 blower fans from Dayton that are moving the fabric, as well as Antari Z 1520 RGB fog machines built into each one to help the volume," Ford says.

The "Blown Away" boxes, Ford notes, "have Chroma-Q compact Color Force lights in them to provide the uplighting. Basically, they change the production from a rock show to something more theatrical." Forty Chroma-Q Color Forces, supplied by 4Wall Entertainment's Los Angeles offices, are divided between the units.

D.A.S. also fabricated a custom 580lb jukebox filled with 5V, 12V, and 24V LEDs in the form of pixel tape from San Diego-based Environmental Lights. "It's a total of three universes and all the DMX control is from RC4 Wireless," Ford says. "We're using RC4Magic-900MHz DMXio transceivers. Sean Dane there has been absolutely incredible." In addition to the jukebox, Underwood has a color-changing mic stand that is wirelessly controlled via a RC4Magic DMX4dim. This is the same mic stand that she used in Time Square for *Dick Clark's New Year's Rockin' Eve*, broadcast on ABC.

Also, Lather notes, "We have gerbs shooting off the jukebox and, at the end of the song, a large gerb shoots off the floor up into the air 35'." Pyro, supplied by Strictly



The “Blown Away” boxes fabricated by D.A.S. Design Works in action.

FX, wasn’t originally part of the jukebox plan, Ford says: “We put the pyro in after the build of the jukebox during technical rehearsals. Then, over a break, I made some little parts to make the pyro mount a little cleaner.”

The jukebox also contains the lift that takes Underwood above the stage. Ford reports, “When the stage lift is down, the top of the jukebox is at stage height, so in order to make it look like she’s rising out of the stage, the stage lift and the jukebox lift have to run at the same time. The stage lift is run off the SGPS Navigator, and the jukebox is on a wireless control system that we built.”

Sound

On the audio side, Underwood’s long time front-of-house engineer Kirk Shreiner is running the show on a Yamaha Rivage PM10 console. Monitor engineer Cam Beachley has a PM10 as well. “Cam and I are the first two to use this desk on tour; it’s very exciting and we both love it,” Shreiner says.

Over the years, Shreiner has mixed on a variety of consoles, including models from Studer, Midas, and Yamaha. “I’ve always liked a Yamaha desk, and I heard

great things about the PM10. I know guys who got to demo it in the early stages and they told me all about it,” he says. “This year, if we didn’t get these new PM10s, I was debating if I wanted to go analog or not.”

A PM10 showed up at Clair Global, based in Lititz, Pennsylvania, the show’s audio vendor, and Shreiner was hooked. He explains, “After checking out the features and everything it could do, I knew I wanted it.”

Yamaha and Clair worked together to get Shreiner and Beachley the first PM10s out on the road. “We rehearsed in Nashville for almost a month, and we had a Yamaha rep with us the whole time, just in case,” Shreiner says. “He came to the first two shows as well, and, honestly, we haven’t had any issues.”

Shreiner especially likes the PM10’s microphone preamps, “There are a bunch of Rupert Neve pres on the console that you can assign to your channels to give it more of an analog feel,” Shreiner says. “This is the first digital desk that sounds more analog, at least to me. Basically, you get all the benefits of all the digital features but with a more analog sound.”

Mixing in the round is always a challenge, Shreiner

notes: “Even though Carrie is an amazing, powerful singer, when you’re in front of the PA like that, it always brings challenges with open microphones and feedback. In the beginning, I was struggling with it out there, but we figured out some things and it really calmed it down.”

Overall, Shreiner says, “I’m pretty simple when it comes to mixing. I don’t use a lot of gear; I’m just going with what the band is sending me.” For Underwood’s vocals, he’s using a BSS [Harman] DPR 901 II multi-band compressor: “I take it everywhere and I use it on her vocal. Cam talked me into trying it on one tour, and, once I started using it, it turned into my go-to. It’s awesome on the vocal, and I don’t leave home without it.” He’s also using a [Lab.gruppen] Lake LM44 for Underwood. “On the PM10, they have an insert, a dynamic EQ, and I do use it on her vocal as well. I’m hardly using any channel EQ, I’m doing it all through multi-band compression.”

Volume is also an issue for Shreiner: “Being in-the-round, compared to a normal stage setup, I feel like I’m limited by what I can do because of potential feedback. I’m not mixing her as loud as I normally do; but it’s a comfortable level, and I’m really enjoying it.”

Working with the new Yamaha console is the Clair Global Cohesion CO12 PA. He notes, “It’s hands-down the best PA I’ve had the opportunity to work with.”

Ease of use is one of the CO12 PA’s best features, Shreiner says: “To make some PAs sound good, you have to really work them with EQ,” he says. “With this one, Phil Kriz puts it up, I check it, and I hardly have to do any EQ to it. It’s so easy to work with, right out of the box. I don’t know what they did inside, but it really makes your life easier at the front of house.”

The PA cabinet count is impressive. There are eight stacks of 12 Cohesion 12s and 12 FF2s for front fills that Kriz, Kevin “Kap” Kapler, Andrea Espinoza, and Brett Rodgers wrangle every day. “The front fills get placed on top of the ground subs,” notes Shreiner. These consist of a CP118 used as a drum sub, nine CP218 subs flown in groups of three, and eight ground subs. Shreiner adds, “We have eight Clair Stack Racks, which is a total of 72 Lab.gruppen amps with 1.44 million watts of power.”

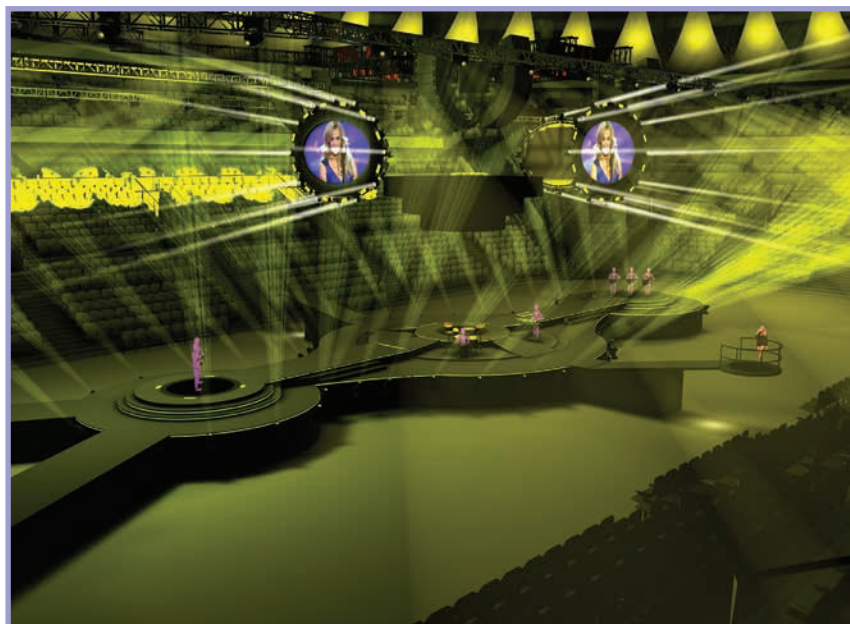
The stage is filled with band members, but there is limited band gear. All five guitarists have nothing on stage, thanks to a rack of ten Fractal Axe-Fx II XL+ preamp/effects processors. “There are no live cabinets—the Fractals are the guitar amp and pedal board, all in one,” Shreiner says. “They’re using Fractals to simulate all their sounds. They sound surprisingly good.”

The microphone package consists of Heil products, specified by Beachley. “We use Heil mics on everything—Carrie uses a Shure UR stick with a Heil RC35 capsule,” explains Shreiner.

The first leg of Carrie Underwood’s *Storyteller Tour* has dates in the US and Canada until the end of this month; the tour then resumes in early September. 🌩



At the beginning of the finale, Underwood is encircled by lasers.



Allen’s render shows an early version of the stage with the IMAG screens.