



RIHANNA

NO MATTER WHERE RIHANNA PLAYS IN THE WORLD, HER ALL-ENCOMPASSING CARIBBEAN INFUSED URBAN POP TAKES HER FANS - AND THE BOX OFFICE - BY STORM. IN THE FIRST ISSUE OF 2012, TPI AWARD NOMINATED PRODUCTION MANAGER JOE SANCHEZ AND HIS CREW REVEAL HOW THE BIGGEST BEAT-RIDDEN ARENA TOUR THE SINGER HAS EVER TAKEN ON BECAME THE HOTTEST TICKET IN CITIES ACROSS THE GLOBE.

It was a chance meeting with Rihanna's Manager, Jay Brown, in Sydney that would secure Joe Sanchez (Arctic Monkeys, Snow Patrol, Pet Shop Boys), as the star's Production Manager for the most important tour of her career to date, the *Loud* tour. Sanchez was invited to Australia while on holiday in Auckland, New Zealand. One week later, he was in LA heading up the build the tour's mammoth backbone.

"I brought in a lot of new people with me for the tour because the way I look at production, it's very much a collective. I've passed on major world tours before because they've just been looking for a Production Manager with a team already in place, but I've explained that I'm part of a team; they're looking for a different guy. On this tour, there's 11 guys who have been out with me before, I see them as my guys - and as my friends," said Sanchez.

"To become part of my crew, you just have

to prove yourself to me. Coming in to this tour there's definitely people I'll work with again. A good example is Bruce Haynes, the Head Carpenter on this tour; you find the right personalities to work with you and create a professional family." Sanchez described Set Designer, Leroy Bennett, as "one of the coolest people I've worked with in a long time," highlighting the fact that working with people you appreciate on a personal level makes coming to work all the more beneficial.

The Production Manager's own involvement on the tour began in February 2011. He continued: "You have to like the people you're with for this length of time. To do a tour of this size, you'd ideally need six months of pre-production but we had less than three months to do the full design and creative aspects." After three weeks of intense full rehearsals at Sony studios in LA, the tour opened on June 4 in Baltimore. The tour's fluid progress was in part



Opposite: Rihanna's *Loud* tour was one of the biggest shows of 2011, selling out at venues all over the world. Below: The star shot tour T-shirts into the crowd from her giant pink cannon.



down to one of America's most renowned live production moguls. Said Sanchez: "Jamie King, (Britney Spears, Madonna) is the Creative Director. He has a formula that works for so many artists and it means that you can do something quickly because you already have a formula to work with."

Evidentially, the formula does work, taking recording artists to the next level of worldwide live performance. "She's the hottest pop act in the world," said Sanchez. By the time TPI joins the tour in Manchester, UK, the demand for this tour has become very clear. "We've sold 800,000 tickets in Europe alone. The routing of the tour is a bit crazy because they'd put on one night, it'd be sold out instantly and her booking agent had a mad scramble to book shows because it would sell out every time. Tonight, this is her fourth time at the MEN and it's sold out every time to a 17,000 capacity." The Bajan songstress was signed by hip-hop entrepreneur Jay Z and Jay Brown when she was just 17.

Part of the suppliers and rental companies who made the tour possible were carefully chosen. Sanchez concluded: "Eighth Day have been a great support to us, they've really catered for the kind of audio we needed. The video is unusual; we have two video companies. VER supply the equipment and Background Images supply the crew and expertise. They work with VER but also independently of each

other. Roc Nation [home of Jay Z] wanted to push towards it because they had a pre-existing relationship with VER who are huge; they own more video equipment than anyone else in the world."

Although the pyrotechnic specifications were minimal considering the size of the show, the detail in how pyrotechnics and automation would be realised was still vitally important from both the look of the show and from the highest health and safety standards. "Automation is done by Show Rig because they seemed to be the only company who could deliver what we needed at the time. I went to visit their warehouse in Vegas, which was absolutely full of gear, and they were super friendly and accommodating too.

"And pyro needs to be used as part of the show, this isn't 1989! We have more effects than we do pyro; we actually only have two pyro cues in the whole show but Pyrotek showed the enthusiasm for the job. That for me is what it's about, I'm a firm believer in working with companies who really want to do this, otherwise I'll find someone else. You have to want to be here every day, willing to give it your all because it's already tough enough," Sanchez enthused.

"Upstaging and John Huddleston in particular have supported us amazingly this year. So well in fact, that I shipped the entire

US Upstaging rig to Europe after our Barbados show in the summer."

Risk management, document production and analysis of the mechanics and construction of the show were handed over to The Event Safety Shop, a company that has provided a specialist health and safety service to an expanding range of clients since it was formed in 1999.

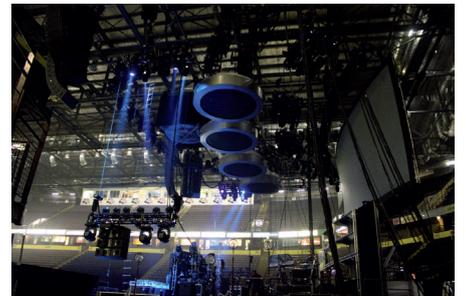
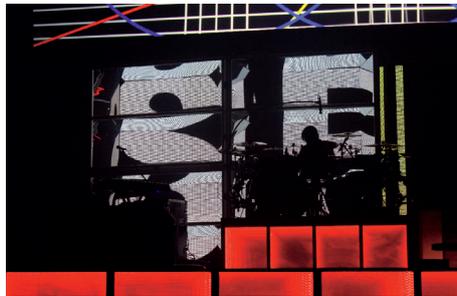
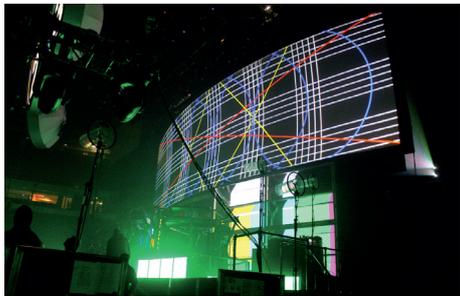
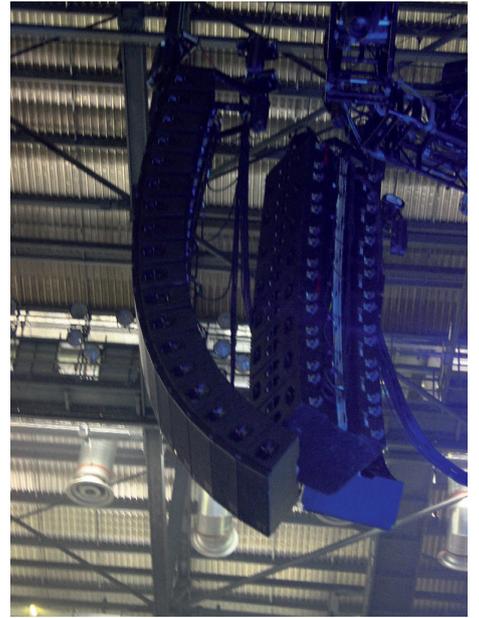
Explained Director Tim Roberts: "We can provide a highly targeted and qualified service. Also, coming from a production background, all our staff understand the mechanics and realities of touring and festivals. We became involved through Joe Sanchez, who we have worked with many times. He has a show - he calls us." Barrier shape, accommodation of the B-stage in some venues and safety of performer ribbon lifts were amongst the safety issues the company needed to address.

Sanchez explained how the TESS caught his attention. "The Event Safety Shop is great at asking what you want to do and then telling you how it's actually achievable. They don't say anything is impossible, but they do find a way to make it all happen safely and that's what you want to hear."

AWESOME AUDIO

Following four years on tour with Sheryl Crow, Sean 'Sully' Sullivan was asked to join the

Below: Pop princess Rihanna beams at her adoring fans at the MEN Arena; Rigging the PA kit specified took the crew two hours; The innovative video display surfaces were a centrepiece of the stage design; Four custom-made pods were moved up and down throughout the show using independent motion control.



Loud tour by Musical Director Kevin Antunes. With the tour nearing its end, Sully has been responsible for both FOH and System Tech duties in Europe, USA, South America, the Bahamas, the UK and Ireland using an Avid Profile, provided by Eighth Day Sound. Sully himself is from a Protools background, and became familiar with the Profile desk as soon as he had the chance. "When the console came out, I started using it immediately and haven't used anything else since," beamed Sully.

Using 90 plug-ins, he continued: "It's basically a Protools rig with a Mac computer. The recording and archiving and backing up means for the DVD shoot at the end of the tour, data is collected and will produce about 75 shows. That feature alone is why I use it, but it's also great for virtual sound-checks, like at festivals when there's just no time in the day.

"The list is endless with this console because it's so powerful. It's almost like Photoshop; you can take a photo and turn it into anything you want to and with this console, you can do that with sound and manipulate it into anything you want it to be. It blows any analogue board out of the water!" said Sully.

"There's no real special effects for audio because it's duplicating what's on the record, with a lot of intricate subtle delays used in a way that mimics the records." Singing live on a seven month run in front of live audiences, Rihanna's vocals have to be as album-accurate

as possible. To achieve her vocal mix, Sully deals with the Sennheiser 2000 E Series, specifically the E965 model alongside a 2000 Series receiver. Rihanna's background singers use Shure transmitters with a Heil RC35 wireless capsule.

Ed Ehrbar has worked as a Monitor Engineer for many years, and prior to his contract with Rihanna, was on the road with Welsh master of croon, Tom Jones, since 1993.

"This is one of the biggest tours of the year and it's been great for me, getting on another level of touring. With Tom Jones, he's big in the UK but we also did a lot of casinos and theatre venues," said Ehrbar. As an Eighth Day Sound employee, Ehrbar used to work with Sully before he went freelance and their pre-existing relationship created an environment where both professionalism and sound management was understood.

The DiGiCo SD7 is his choice. With 512 channels at the 96K application approach and HD racks, running on the Optocore interface, Ehrbar uses some key channels to create Rihanna's sound. "This console is so versatile because it has so many outputs I like, either stereo or mono. I'm using 90 channels and 36 mixes to do the show," he said.

A combination of d&b audiotechnik M2 wedges for low end and Sennheiser G3 IEMs were networked together with the pro wireless GX8 for combiners. "The set has been the

biggest challenge for me, Rihanna likes the big dancey sound, so hiding the side fills out of sight was a challenge, but we've come to a good mix accommodating the look of the show and the guests," Ehrbar explained. The fans lucky enough to have a view from either side of the stage were placed into built-in side pits behind the left and right catwalk areas for both Rihanna to get closer to her audience and her all important dancers and musicians to perform on.

Ehrbar continued, "It's been about nine months now and we've got into the groove. It's smooth but the toughest part has been going into different sized and shaped venues."

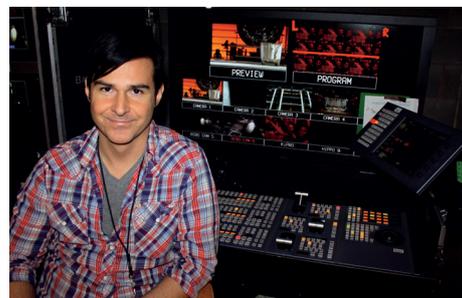
Radio Frequency and Monitor Tech, James Allen, is responsible for the coordination of all frequencies for the wireless mics, belt packs and wireless instruments (bass and guitars).

With a global audience to attend to and a tour plot that could translate as a dot to dot sketch, the tricky task of RF could have proved problematic but Sennheiser's IEM package had the opposite effect.

"There's been no real RF problems, which is actually surprising considering the sheer amount of RF that we have on the road," said Allen. IEMs are all Sennheiser G3 transmitters, set up for international ranges.

On the system tech side of his job, Sully is in a much more unfamiliar position, touring with the d&b J Series PA for the very first time. "I used to work with a Clair Brothers PA on

Below: Bold visual designs packed some punch on the *Loud* tour; Sennheiser's 2000 E Series was the microphone of choice; Production and Lighting Designer Leroy Bennett created unique designs, keeping the colour palette bright and loud, as the tour's title suggests; Video Director Bert Pare.



most other artists like Sheryl Crowe and Justin Timberlake, so the d&b was a new challenge for me," said Sully.

"I started in this business flying the PA and micing stages for crew vendors. I've never just been a sound guy because I feel like I'm responsible for how the show sounds so I can't really hope that system tech will tune a PA the way I would like, therefore I just take that responsibility as being mine."

The J Series is raised by System Engineer James Corbin, but tuned to Sully's exact requirements. Corbin said of the d&b J Series: "It flies fast and it's very user-friendly. No matter where you get it in the world, it's pretty much exactly the same. The amplifiers have to be bought with the system so you're not getting a mis-match of equipment. The PA specified takes two hours to rig and it's very light; you can put a lot up very fast which helps on these big productions."

The main PA was configured with 16 J8's and two J12's at the bottom, side hangs comprised 14 J12's per side with eight J Subs (triple 18 cardioid) between them, pointing off stage at a 45° angle. On the ground there were 12 Q1 front fills and 12 B2 (double 18) subs. There was also a small array of 270 hangs flown in the far back corners which are small hangs of J10's. The system is then zoned out with Dolby Lake Processors for EQing and system level control / delaying zones.

Said Sully: "One of the biggest surprises with

the J Series is that it's a two-way PA. It's got lows, mids and highs but the mids and highs are passive. It's pretty amazing the results you can get. You won't find too many passive systems these days and d&b have got their act together when it comes to this stuff, with the end result probably being a little bit more special than anybody else's; they've made this PA to a level where the kit sounds great without overkill from the amplifiers. The simplicity is what makes this system sound so nice."

Audio gear including backline kit loads into a truck and a half when packaged for the road.

KEEPING THE SHOW IN SYNCH

Rihanna's Theatrical Stage Manager, Jim Webb, is a New Zealand native with a long history in organising live productions. Webb started out with the Pet Shop Boys and has worked with a variety of acts since including the Arctic Monkeys, Peter Gabriel, Sarah Brightman and eventually the biggest popstar on the planet, Rihanna.

Webb often works with Sanchez, the pair maintaining a team effort that keeps the tour running on schedule during day-to-day duties. Webb's job is to run all of the show cues, which affect Rihanna (the Show Caller is Patrick Harbin, working from FOH).

The Sennheiser wireless packs are on a two-way channel, one is left free for Harbin, while the other is available for any interruptions that occur during the live performance, though

technical hitches seldom occur. Webb attended the six weeks of pre-production in LA, learning and teaching the cues to Rihanna.

As the tour is nearing its end, the cues are second nature, but one gig in particular stood out for Webb. "The highlight of *Loud* for me was in Rihanna's home country of Barbados. We just did one show at the Kensington Oval Cricket Ground, but we got to see where she's from and where she comes from as the artist she is," he said.

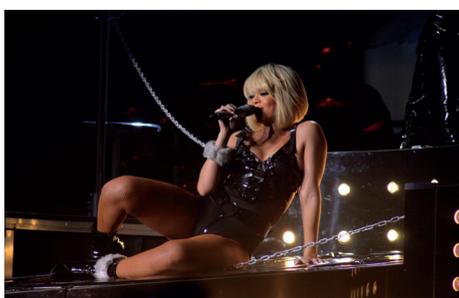
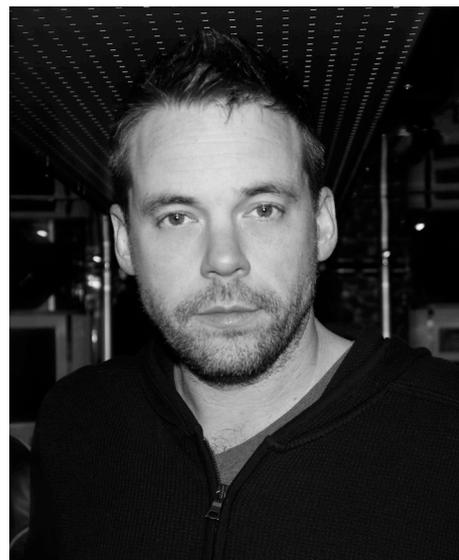
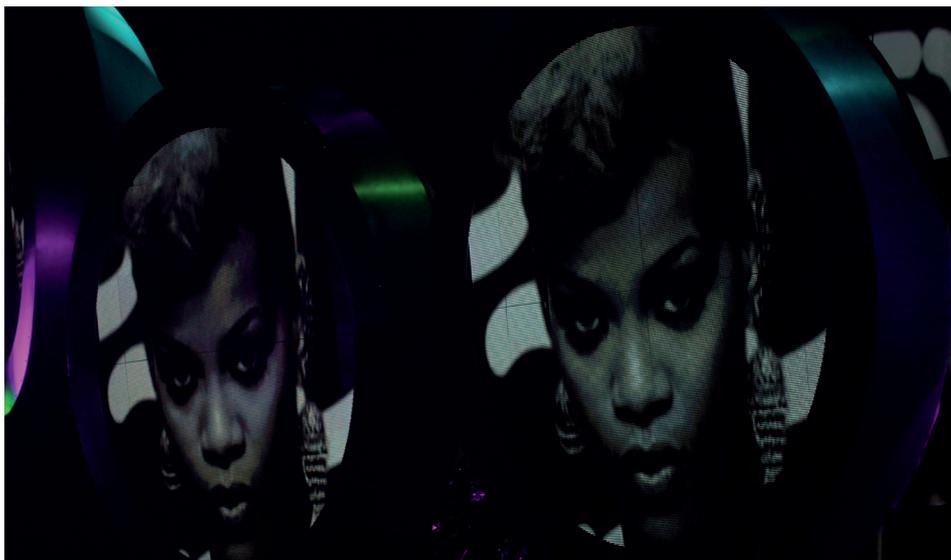
Hidden away under the stage was the playback system, which was at the core of the entire show. Essentially running additional audio tracks and locking the video and lighting elements of the production together was timecode. The set-up was simple, explained Playback Technician Dan Roe.

"We are running MOTU's Digital Performer on two Mac Pros. This was the preferred choice of Music Director Kevin Antunes, who programmed Madonna and Justin Timberlake's shows before setting up the *Loud* tour. We are currently running 20 channels of audio and four channels of timecode," said Roe.

Being heavily locked to timecode meant that the show was rigid in structure, a common feature of many pop shows that include extensive programming of video content and lighting. The first half hour of the show was like one continuous piece of music of which the order could not be changed.

Explained Roe: "Once we hit play, there's

Below: Images of the singer throughout her flourishing career were displayed on the LED half-sphere pods; Production Manager, Joe Sanchez; Rihanna and her entourage of dancers pulled out all the stops, putting on a high impact performance that lived up to the tour's title.



no turning back, songs are generally segwayed together in some shape or form, there's no room for mistakes. Lights, for example, will be done manually and then pick up code half way through the song. There are different situations during the set when video may be live camera shots for the first part of the song until they pick up code and then the content will come in," he added.

The pair of Macs ran simultaneously through a custom Paul Cox switcher so that if one machine fails, the B system automatically kicks in. Said Roe: "Without timecode, nothing else works because this keeps the video and lights in synch with the music. It's tied in because this is the point where everything gets its code from and where it locks to. Technically it is the glue that holds the whole show together."

LIGHTING LOUD

Like each one of the designs he has created, US-based Production and Lighting Designer, Leroy Bennett, strived to make the look of the stage set and lighting on *Loud* as flexible as possible. After breaking into the industry as a Lighting Technician, Bennett's talent soon saw him working on his first production as a Lighting Designer on Prince's 1980 *Dirty Mind* tour.

"After doing a couple of tours, I eventually started designing the stage sets as well. I worked for Prince for 14 years. He got me involved with all his projects including some of the movies - *Purple Rain* being the first. As his popularity grew, so did my career. I have been

lucky to work with many other great artists including Lady Gaga, George Michael and Paul McCartney over the years," said Bennett.

Loud was Bennett's first involvement with Rihanna and having created on-stage magic for an astonishing list of high profile artists, contacting him to work on the R&B sensation's tour was a no-brainer for her management. Pushing boundaries and creating unique designs is what Bennett has become well known for throughout his highflying career and this is something he continued when collaborating with *Loud* Creative Director and Choreographer Jamie King. To fit in with the name of the tour, both Bennett and King knew the colour palette and design had to be bright and loud in every sense.

Lighting and video went hand-in-hand, one of the most prominent features of the stage design being the four custom-made pods that moved up and down during the show using independent motion control. The half-sphere pods, which were fabricated by Upstaging, needed a small, light fixture such as the Martin Professional MAC 101 that could be built into the scenery.

Explained Bennett: "As it was called *Loud*, I worked around the concept of using shapes that loosely resembled speakers. LED was very important in the lighting design too and the newest product we used was the Martin MAC 101. These were in the half-sphere pods, enabling me to place lamps in areas that any other moving light would be too hot, big and

heavy to be positioned, whilst still giving me quite a bit of brightness at the same time."

Each pod face comprised an LED screen and 28 MAC 101 moving head lights, which were mounted behind in four rows. The fixtures were then used to shoot light beams through the screen either independently or in conjunction with the video being displayed on the LED surface.

"There's an awful lot of LED in the show - it's what I would describe as a concealed element of the rig. I have about 1,000 three-channel LED fixtures to deal with at any one time," explained another important member of the lighting team, Lighting Director, Dominic Smith, citing past projects Pet Shop Boys, Il Divo and Bloc Party.

"One of the many clever elements of Roy's design were the infinity boxes, of which there were more than 100. These were found around the outline of the stage and on the band risers. Each one contained four 3-channel RGB LED strips that were mounted around the inside faces of the box. The back was a mirror and the front was clear perspex lined with one-way mirror film on the inside, so that when you look into them you get an infinitely repeating tunnel of LED. The same principle was applied to the giant infinity surfaces on the tops of the satellite stages and the B-Stage, just on a larger scale."

After touring with Production Manager Sanchez on Athlete's shows, Smith was approached to join the *Loud* production unit to operate and programme elements of the lighting. Like Bennett, Smith agreed the concept

Below: One of many highlights from the extravagant show - the popstar singing sitting on a piano that was suspended in mid air; *Loud* was an amalgamation of vibrant colours, faultless vocals and energetic dance routines; Lighting Designer, Dom Smith.



needed to reflect the title of the album and everything should be made brighter to stand out to the fans.

He commented: "Lighting is a very unique thing and pop shows have to be very in your face. They tend to be busier and on a larger scale, which the lighting design reflects. Most of the lighting rig was flown and the majority of songs were cue stacked on Loud, although some included manual playback. We operate 80% of the show directly from timecode so Roy, Lighting Programmer, Jason Baeri, and I put the show together and timecoded most of it."

Tour lighting vendor for all of the mammoth world tour's dates was Upstaging, with Neg Earth providing some support and power distribution in Europe. For such a visually stunning production, Upstaging supplied a long list of kit including 58 Philips Vari-Lite VL3000 Spot luminaires, 24 Coemar Infinity Wash XLs and 24 Martin Atomic 3000 Strobes with Martin Colour Scrollers for the moving lighting rig and nine Elation Platinum Beam 5Rs to be positioned upstage centre.

"The Vari-Lite fixtures have really stood out in their colour mixing, reliability and output. There is also some side lighting for the dancers created by 12 Martin MAC 301 wash fixtures. There are lots of moving set elements and we have a total of 112 MAC 101's hidden in the set pieces and in the giant circles to enhance the 9mm pixel pitch see-through video panels," said Smith.

Controlling such a large number of fixtures

was carried out using MA Lighting's grandMA 1, on which around 70% of the programming was completed before Smith joined the tour. Talking about the console, Smith referred to it as an "established rock-solid workhorse that offers everything needed for such an elaborate production".

VIDEO CENTREPIECES

Lighting and video were united through the four 9ft by 9ft pods, which were made up of a mixture of transparent lightweight WinVision 9mm LED video screens and Martin MAC 101 LED moving heads. Another set of WinVision's screens, known by the crew as the 'book shelves', were incorporated into the set around the central display surface.

The myriad of video elements, which were supplied by VER, were set off with the help of a further curved 20ft by 60ft AV Stumpfl projection screen at the rear of the stage, which was projected onto using six Barco R22 projectors. Content was also displayed on a pair of 13ft by 24ft IMAG screens using another four Barco projectors.

Content was fed to the mixture of display surfaces and eye-catching pods from Green Hippo's Hippotizer V3 media server, controlled through a Vista Spyder processor. "This gave us the flexibility needed to work with the many surfaces. It helped us organise content and display it on a variety of screens - putting IMAG on the screens one minute and then content on the pods the next using cues set up in the

Spyder," said Video Director Bert Pare, who can name Maroon 5, John Mayer and Kiss in the line-up of artists he has worked with.

After spending time in New York as a camera operator for MTV, Pare secured his first gig as a tour cameraman for Backstreet Boys. His career took a new path when Pare directed music videos and worked on webstreaming live concerts for a now defunct online live concert company named DeepRockDrive. He explained: "It really built up my reel and in one year I did almost 70 different acts and styles from indie rock to hip hop. I was then able to go back on the road as a video director and now here I am working on my first tour with Rihanna."

The Spyder performed a vital function; feeding footage from the Sony MVS 6000 switcher that had been filmed using three HD cameras and a pair of robo-cams. Pare picked the switcher because it allowed him to create a range of special effects that are usually produced during post production. "Split screens and motion trails were easy to do on the fly using the console. I wanted to approach it almost like a VJ and the best switcher that featured separate controls just for that was the MVS 6000," said Pare.

Matching the video content hitting the screens with the aesthetic of each song was important. *Disturbia* was just one of the hits on which Pare applied special effects to video footage to enhance the show's visual appeal. "I really wanted the live footage to match the style of the content so it felt more uniform,

Below: Systems Engineer, James Corben; Theatrical Stage Manager, Jim Webb; FOH and Systems Engineer Sean 'Sully' Sullivan; Monitor Engineer, Ed Ehrbar and Radio Frequency and Monitor Tech, James Allen.



opposed to just being TVs on the sides. The effect created for *Disturbia* was almost like digital noise and it's very busy so I use a lot of transitions to break it up. I use a lens distortion to distort round the edges and then when Rihanna reaches out it looks like her hand is super long in the live cut," he explained.

The show was designed in blocks that ranged from the up tempo to the slow ballads - each one requiring a different type of visual content. Veneno, a creative company formed by visionary Producer / Director Dago Gonzalez, produced dynamic content for the concert. "Before the company was able to create the graphics, Jamie King gave Veneno mood boards for each song detailing the kind of design he wanted to allow it to work as an ensemble with the outfits, colours and choreography of the piece," said Pare.

"We ended up having one or two songs with no content so I either created it or produced effects through my switcher for the IMAG feeds. One example is the song *Cheers* in which I create a kaleidoscope effect on shots of the audience cheering that appear to move in and out. The switcher also has a pad that I can hit to produce a negative image on screen."

Camera filters were used to produce extraordinary effects on the big screen too. When Rihanna rode onto the stage on a giant pink tank, a filter was fitted to one of the cameras to create an anamorphic flare - a commonly used effect in war movies. "As well as the special effects, the three types of surfaces are played around with quite a lot by introducing a mix of content and IMAG with effects. We switch it up from song to song and sometimes within the song itself," added Pare.

On a huge production such as *Loud*, a large number of creative individuals were involved in

the pre production stage to make the design concepts into a reality. "Creative Director Jamie King is just one of them and Roy Bennett has been an incredible Show Designer. One of the cool things about *Loud* is the amount of interesting surfaces and that's all down to Roy's design," said Pare.

"When you look at the stage, you can immediately see video is a huge chunk of the set and also a source of light. People will probably walk away from the show and say how crazy the video was. The pods are the stars of the show design and the fact they move around makes them different to the type of surfaces in a lot of other shows."

The original and quirky video screens may have made the design stand out for Pare, but it was Rihanna who helped make his job as Video Director easier. The star had a large amount of input into the look of the show and her incredible appearance made filming the performance simple. Commented Pare: "It can be tricky filming stars, but with her it's easy because she looks amazing all the time. She doesn't even sweat and has flawless skin. I've never been able to get such close-ups of anybody on stage without feeling nervous they might not like it.

"The day after the show, the footage is often re-played in Rihanna's room and we get feedback on what she liked and any changes. Even in rehearsal before she had met me, we had similar ideas on how things should look. When I first heard *Skin* and saw it in rehearsal, I figured out a way to use the the switcher to get black and white and a glowy soft look that is quite abstract. Her Assistant later told me Rihanna was thinking of doing something black and white for the video supporting the song."

Capturing the tour still came with its

challenges due to the great expanse of the stage, which was made up of different platforms. For sections of the show when Rihanna walked to different areas and levels of the set, the robo-cams were invaluable in covering some of the higher shots. According to Pare, the real difficulty was making it look like the video crew were using 12 manned cameras instead of three. However, with the help of the robo-cams and the way in which the footage was cut together, the team was able to make the coverage look fuller.

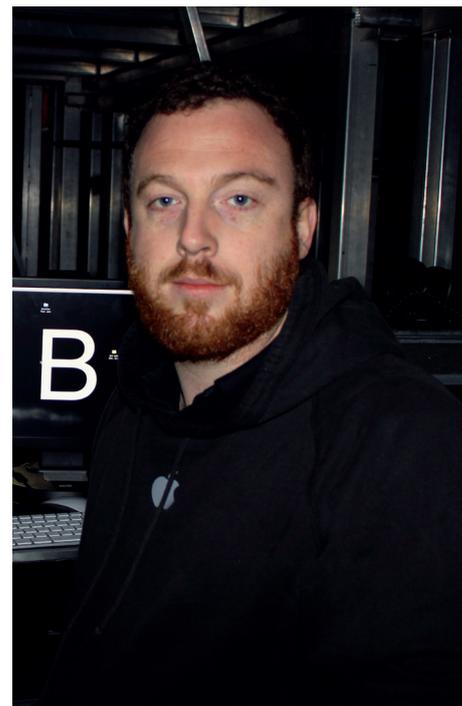
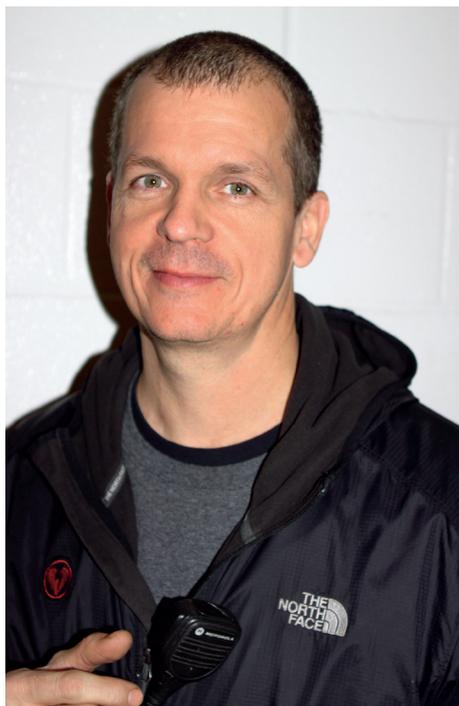
PRACTICALLY AESTHETIC RIGGING

Team Tours' Fritz Breitfelder has been rigging on the road for 18 years, working with Production Manager Joe Sanchez at various points before the current tour. From start to finish, Breitfelder's main daily role as the tour's Lead Rigger takes between three and four hours to get the whole set flown by the crew.

An angled Upstaging video wall drives the whole set forward on a somewhat unique curve, dictating where the rest of the kit could be hung and at what angle the show design would work on practical and aesthetic level. Breitfelder is rigging around 100 points, with a total weight of 38 tonnes, or 76,000lbs. The tour's strange routing means the rigging aspect of *Loud* became easier each time the crew visited a venue for the second (or forth!) time, overcoming any difficulties hanging such a large amount of equipment in various sized arenas.

Yet it's not the indoor parts of the tour, which created concerns for the tour's riggers. Said Breitfelder: "Barbados was not fun from a rigging point of view, it was an outdoor show rigged during hurricane season which left a lot to worry about. It turned out to be a great show that had just proved a real worry because

Below: Head Rigger, Fritz Breitfelder; Pyro Technician, Kenn MacDonald; Playback Technician, Dan Roe.



of the unpredictable winds. There's a little joke for those kind of shows, we develop a case of 'rignanoia!' he laughed.

Luckily the Barbados leg of the tour proved not only another sell out occasion for the star, but also a triumph for the crew as the gig ended without any health and safety issues. Automation for the *Loud* tour came via SGPS's rigging division, Show Rig, (also seen earlier in the year supplying Roger Waters' *The Wall*) and was engineered by Automation Crew Chief Juan Guerra and Automation Programmer Kyle Wolfson.

PYRO PRESENCE

For Kenn MacDonald, working in the touring live production industry became a natural personal progression after being brought up via a family working within music.

Said MacDonald, "Joe Sanchez went through several pyro vendors and chose us." For the last five years, the Pyro Technician has toured the world with the likes of Creed, Shakira, NKOTB and Enrique Iglesias for Pyrotek Special Effects Inc., the only company Sanchez felt fit the bill for the *Loud* tour.

To tastefully incorporate the pyro side of the design into the show, the concepts were created between Jamie King King (Producer), Carla Kama (Designer) and Lorenzo Cornacchia, President of Pyrotek Special Effects Inc. during pre-productions in LA.

Said Cornacchia: "When I met Joe and Carla in LA, it was great because they gave me their ideas and then allowed me to present ideas that would fulfill their needs. I have worked with Jamie King on several productions and understand he needs and wants; that surprising "WOW" factor."

Running all pyro through a system called

Pyro Digital, which has been relied on for some great productions in its history, the controller is wired and fires pyro through modules rather than individual lines. All the CO2 effects are fired via a Jands ESP ii 24/48 lighting console.

During *Raining Men* (a Nicki Minaj duet), Rihanna shoots the cues herself from a cannon, the result being that three lucky fans get an exclusive tour T-shirt to as a souvenir.

PROPS FOR PERFORMERS

Loud called for a number of mechanical and scenic props that Rihanna and her dancers would interact with. "Having worked with Creative Director Jamie King in the past, specialising in building custom props which have to operate safely with performers in mind, ShowFX are the usual go-to company for this type of show," said Founder and President David Mendoza. "Unlike standard scenery pieces, performer's props have to be built as prototypes for rehearsals, then modified and fine-tuned and then built for the road. This is a process we've gone through on every Jamie King show - he loves his mock props!"

When Mendoza first started the business in 1982, it was known as MagiCraft and specialised in designing and building magic props, quickly establishing a clientele which included illusionists David Copperfield and Siegfried and Roy. "As pop artists began adding more spectacle to their productions, MagiCraft was tapped to provide illusions and effects for their concert tours. Michael Jackson, who loved magic, featured a number of illusions by Mendoza in his 1993 *Dangerous Tour*, which led to the business expanding into the manufacturing of sets, staging elements, lifts and props for the touring industry, no longer just building for magicians."

Other musical clients incorporating magic from Mendoza included Justin Timberlake and Britney Spears. As the company expanded its business, the company name was changed to ShowFX in the late '90s to better represent the diversity of its capabilities.

ShowFX provided structural design and fabrication of the *S&M* bed prop in Rihanna's show, which was designed by Leroy Bennett. The Reveal Sphere and Pink Military Gun Set piece were designed by Mendoza working from King's sketches and notes from meetings. The multi-levelled Scaffold Set was also designed and built by ShowFX.

Explained Mendoza: "All the sets and props were designed to be quickly disassembled backstage after their use, and all had to integrate with the show's mobilator, which moved the sets on and off stage. The sets needed to be roadworthy, low-maintenance, quick set up and strike, and effectively packaged to use minimal truck space. The usual challenge of working within a tight timeframe was managed by keeping in close touch with the production personnel during rehearsals and staying on top of the ever changing needs of the director and performers."

RECORD BREAKING ROUTE

It's taken less than six years for 23-year-old Robyn Rihanna Fenty to break record after record, in 2011; her *Loud* tour also had an immense impact on her production crew. Sanchez continued: "Doing 10 shows at the O2 [in London] is a great achievement. She's played more shows at one venue on one tour than any other female artist, so to be her Production Manager, there is a great sense of achievement."

TPI

www.rihannanow.com