


A Woman of Many Parts

A full-page photograph of Ellie Goulding performing on stage. She is wearing a black long-sleeved top, a black corset-style bodice, and black leather shorts with a wide, metallic-looking belt. She is holding a microphone in her right hand and has her left hand on her hip. She is wearing black boots. The background is a large screen displaying a vibrant, abstract pattern of red, orange, and white bokeh lights. To the left, a clear acrylic drum is visible. The stage floor is dark and reflective.

Ellie Goulding's *Delirium Tour* is designed to showcase the star's many facets

By: Sharon Stancavage

Do we know the real Ellie Goulding? That question became the nexus of the singer's current tour—and album—both titled *Delirium*. "Through the tour creative, we wanted to explore the many facets to Ellie's world," explains show director and co-production designer Dan Shipton, of London-based Black Skull Creative. Goulding is a diverse artist, and her diversity is what drove the production. He adds, "I was inspired by the vast array of musical styles and influences that Ellie has within her life. One single could be a love song and then the next a club anthem—she could be

her and her management, it was clear that they wanted to take the show up a level from what we've done before."

Goulding herself had a hand in the design. "Cate and I had regular time with Ellie to develop ideas and make sure we were heading down the right creative track," Shipton says. "Ellie is a great collaborator and knows exactly what she wants when faced with a decision."

"Working together with Ellie and her musical director, we took the songs she wanted to perform and grouped these into chapters," Carter adds. "Each chapter allowed us to explore a different side of Ellie's personality: light,



The LED in the center receives content via a d3 Technologies media server; it's flanked by two screens fed by two Barco HDXW-20 projectors.

rapping on 'On My Mind' and then rocking out with 'Figure 8.' With all of these many sides to her personality, does anyone really know who she is?"

Working with Shipton on the production design was Cate Carter, of Bryte Design, also located in the UK; Carter is the tour's lighting designer/director. "Historically, Dan had been looking after Ellie's TV appearances and her big special moments, and we've been looking after her live work," she explains. "Right from the initial meeting with

dark, energized, the heartfelt love songs versus big dance anthems. This gave us the structure that became the script which sculpted the show."

Outlining the chapters that make up the show, Shipton says, "We start with Ethereal Ellie, who is dressed in white and represents Ellie in her purest form. She invites us into her world; that quickly introduces us to Energized Ellie, who is more fun and outgoing." From there, the show explores Digital Ellie, who has a club vibe, and then the



Carter's lighting rig in the air is based on triangles, with Ayrton MagicDot-Rs as eye candy.

Heart chapter, which reveals the star's emotional side. "A harder, more rock--star Ellie is seen for the Darkness section before she becomes Light again. Finally, Shipton says, all versions of Ellie intertwine, evolving into the live Ellie holding court on stage. It's as though we are saying that you can't have Ellie without all of these facets to make her complete."

Goulding's tour, which began in Europe, was streamlined for the US. "Due to the variety of US venues that the tour is visiting, it was decided that certain elements wouldn't work," Shipton explains. "Therefore, the two lifts that were used to deliver Ellie to center stage and also to raise her up behind the gold fabric in the opening were cut. We also decided not to tour a B stage and catwalk in the US; those elements were replaced with an 8' thrust." Carter says, "We went for quite an angular look throughout the stage design. The video screens create shards at the back, and up in the roof we have custom mirrored pods that are angular—a little bit like triangular paper airplanes. We took the idea of 'Delirium,' the fragmented fantasy and

reflected that in a broad sense in the stage design."

In addition to the shards, Carter says, "We have a large high-res portrait screen in the middle for both visual content and IMAG, and we're also carrying two portrait IMAG screens as well." Robin Haddow, the tour's video director, notes, "The upstage LED screens are a combination of ROE [Creative Display] 7mm and Basic Tech Co. LTD 11mm LEDs, which form the back wall. We also have two Barco HDXW-20 units, which we use to project on portrait screens on either side of the stage."

In Europe, Goulding carried a custom stage; in America, Carter says, "We're using house decking. We're also carrying a custom staging piece, which is like a triangular raked stage, that we put on top of house decks. Both the rake and the house deck are dressed with Marley." The custom staging piece was fabricated by All Access Staging & Productions, of Torrance, California.

A soft fascia on the set, with a quilted texture "ties in with the borders we're using up in the rig," Carter says. They were supplied by UK-based Presentation Design



The upstage lighting wall is comprised of Martin by Harman MAC Auras and James Thomas Engineering PAR 36 two-lights.

Services. Carter adds, “We brought in Carl Robertshaw to design the big fabric moments.” Shipton notes, “Soft goods are always a great way of dramatically changing a space without taking up a lot of truck space. In the Digital section, we use the fabric flags to close down the space and add a UV look. Then we also use the wings in the song ‘Explosions’ to focus the attention to Ellie center stage.” Also, Carter says, “We have a gold silk reveal at the top of the show. we have the wings and we have drapes midstage. They were supplied by ShowTex in Belgium.”

Video

“We have content from four studios in the show, and a couple of individual pieces from other people that were project-managed by Pablo Beckett at Bryte Design,” explains Carter. The London-based firm Atticus Finch did five songs, while Fabrique Fantastic, located in Geel, Belgium, created content for seven songs. Carter notes, “NorthHouse films in London did all the transition link videos. The intro and the transitions between the chapters,

have video where we filmed Ellie in certain situations and styles.” Shipton adds, “The transition films were really important, as we wanted to create something beautiful in the screens that established the next character and worked perfectly in sync with the music.”

The video content works with the live IMAG. Haddow explains, “I always feel the combination of content and cameras is a very strong look and visually more interesting than having standard IMAG. Content was also created with the design of the LED screens in mind. It has been great to work with content producers that understand this and the end results are truly amazing! We have also exploited Alpha channels within the content which create transparent windows, allowing me to insert live camera pictures into the content.”

Haddow has worked with Goulding since 2013, when he was out with the tour as lighting director. “This is the first tour we have added cameras into the mix and it was a natural progression for me to start directing cameras in addition to looking after the media servers,” he says. “We



For many of his video effects, Haddow uses the plug-in Notch.

have a total of seven cameras: Three are Sony HXC-100s run by my camera operators, two are Bradley Robocams, and the final two are XL Video GNAT minicams, which are locked-off shots. I'm using a [Blackmagic Design] ATEM 2 M/E switcher to cut the cameras. This allows be to cut two completely different feeds which feed into the [d3 Technologies] media server." Phil Mercer, XL Video UK, has project-managed both the European and US legs of the tour, with the US video gear coming out of XL Video's Los Angeles office.

"We have two [d3 Technologies] d3 2x2plus media servers, which operate in main and understudy modes," Haddow explains. "This offers a seamless fully tracking backup system. In the event of the main running into difficulties, the understudy will automatically switch the matrix over from the main outputs to the understudy outputs. While programming, the understudy will also track any changes avoiding the task of manually syncing show files between machines."

This is Haddow's first time on the road with d3 servers, and he couldn't be happier. He explains, "Previous to using the d3, I have been a happy Catalyst user for many years; however, d3 and Catalyst are very different animals! There are still jobs that I can see Catalyst would be the

better option; for this particular tour, d3 was definitely the correct choice."

Moving from Catalyst to the d3 was less complex than one might expect. "Learning it was very intuitive and, retrospectively, it is a lot easier to program than Catalyst," Haddow says. "This tour was the ideal time for me to expand my knowledge of media servers and d3 was the obvious choice for me."

"I love the fact you can program everything on the machine and preview it in 3-D with no external devices such as lighting desks or time code sources required. In practice, I have taken the show file onto my laptop and been able to sit quietly and program, or reprogram, parts of the show."

Using the d3 has several advantages in this situation. "The quality of the SDI input into the system is the best I've ever seen with a very acceptably low level of latency and no frame drop," Haddow says. "D3 is very stable; having now done over 50 Ellie shows without any issues, I feel I can give it the stamp of approval! The support from the team back in London is also first-class."

The plug-in Notch is another reason that Haddow was drawn to the d3. He says, "Notch allows a wide array of live effects to be added to layers within d3. An example of



For the lighting pods, the design team specified a mirrored surface, while the set has a quilted fascia.

Notch's power is it can be used to generate particle emitters, which can follow the flow of the live camera pictures. This produces a very organic and original form of content, which links directly to what is happening on the stage. Another, simpler, use of Notch is to color-grade the camera pictures, allowing really detailed control of the image, offering considerably more control than is usually available within media servers themselves. The fact that Notch works as a plug-in within d3 also helps to reduce latency, which is usually inherent with routing signals through external effect systems."

Unlike many video directors, Haddow is at the front of house with Carter. "Lighting and video should be considered as one thing and being with Cate allows that connection to work to the maximum potential," he says. "It also allows me to keep an eye on the whole video look and make sure everything is visually in-keeping with the lighting and the overall show design. Plus, being stuck backstage would be boring."

Lighting

"I tend to use a combination of fixtures for most of my shows and for this one, Martin [by Harman] MAC Viper Performances allow me to highlight the stage set and

detailing, whilst [Philips] Vari*Lite VL3500 Washes are used to illuminate the dancers and musicians," Carter explains. "Clay Paky Sharpys and Ayrton MagicDot-Rs provide the beam looks and with many of these fixtures positioned high in the rig. This allows me to create some big aerial looks above the stage."

The overhead lighting rig is comprised of four lighting pods; there's also a V-shaped downstage truss and two upstage trusses. Carter notes, "We have a load of Viper Profiles and [Martin] Viper Air FXs. The pods are framed in the Ayrton MagicDots, which is probably one of the biggest eye-candy looks in the show."

There are 62 MagicDot-Rs in total. "On the sides of the mirrored pods," Carter says, "I wanted a very small fixture that would look very neat hanging on the edge and that I could really frame that set piece with—something that I can spread the beams out from and make a real feature. The [MagicDot-Rs] are very fast, they're lightweight, and they're very punchy, so they were definitely the right thing for the job." The pods are also home to Viper Profiles and Viper Air FXs, while the downstage trusses are a combination of VL3500 Wash FXs and Viper Performances. The downstage trusses are lined by linear four-light Molefays and i-Pix BB4 wash lights.



All of the vocal mics are Sennheiser sticks with Beyerdynamic capsules.

Carter says that the massive lighting wall “is full of Martin Auras and [James Thomas Engineering PAR 36] two-lights.” The floor package includes Viper Profiles upstage, VL3500 Wash FX units at stage right and stage left, and Clay Paky Sharpys lining the downstage band riser.

When asked about her workhorses, Carter says, “The Viper Profile and the Sharpy, definitely. As well as the Aura, I use them a lot. Those three give me the majority of the three looks that I use as the basis of my lighting design.”

The lighting is supplied by Upstaging, based in DeKalb, Illinois. “Upstaging has really looked after us,” Carter says. “I regularly work with [Blackburn, UK-based] Lite Alternative for a lot of shows, they are our UK and European lighting supplier. The handover between Lite Alternative and Upstaging has been incredible.”

The show is controlled by MA Lighting grandMA2 console. Carter did the programming with her Bryte Design Studio partner Mike Smith. “For this project, we had quite condensed pre-production time,” she says. “It was great working with Mike; it meant that, we could bounce backwards and forwards in our studio, and then in the

studio of Lite Alternative, before we moved to production rehearsals.”

Carter runs the majority of the show manually. “I occasionally use time code for lighting,” she says. “There are a few points in the show that lend themselves for time code—in those places, I’ve taken time code in and allowed it to trigger certain sequences.”

Color is an important part of the show. Carter remarks, “It’s a very varied color palette; there are a number of songs that have quite a lot of pastel pinks and hot pinks [“Something in the Way You Move” and “Don’t Panic”] and that’s a theme we’ve carried throughout. However, we explore a diverse palette according to the feel and atmosphere of each song.”

Special effects

The production’s smattering of effects is provided by ffp effects Inc., located in Los Angeles. Shipton notes, “There are six C02 jets that are positioned along the front edge of the stage. Ellie wanted to use C02 because it felt exciting and fitted with the vibe of the larger dance tracks.” These are featured in “Outside” and “I Need Your Love.” Confetti,

via four confetti blowers, appears during the finale, “Love Me Like You Do.” “Confetti also felt like a great ending because it was almost as though Ellie’s energy is bursting out into the audience and physically touching them,” he adds.

Sound

A d&b audiotechnik J-Series PA is the sound cabinet of choice for Goulding’s front-of-house audio engineer Joe Harling. “I’ve always been a fan of d&b,” he says. “It seems to give me a little more control over gain-before-feedback than other PAs, and the subs are just amazing. Whilst being a very accurate PA, I think it still has its own ‘sonic identity,’ which I think is pretty important. Its horizontal dispersion is very good; you can walk across the venue floor, from left to right, and not hear any differences. It’s also a very quick and light PA to hang each day.” His main hang is comprised of twenty J8s per side, with eight J-Subs flown behind; the side hangs are twelve J8s and four J12s. Harling adds, “We have a sub array on the floor consisting of eight J-Subs and eight J-Infras, and ten Y10s as front fills.”

The PA is also particularly suited for Goulding’s vocal style. “Ellie is a very quiet singer, so having a fairly narrow dispersion box for the main hangs helps in terms of spill and feedback,” Harling says. “Also, there is a lot of fairly complicated low-end content in the band mix, and I find that a d&b sub array translates this much more evenly than a traditional left/right sub stack.”

Harling also uses d&b’s Array Processing on occasion: “It’s a very clever emerging technology which allows for more even coverage throughout the venue, but in some instances the PA sounds better with it bypassed. We are still trying to work out what factors actually influence this variation.” The system engineering is handled by George Puttock, who uses ArrayCalc and his own proprietary software.

For control, Harling uses a DiGiCo SD5. “I like to think of it as a great ‘hub’ for all the other things I am using,” he says. “It is very clean and accurate, and the routing and layout possibilities are wonderfully flexible. Perhaps it lacks character, so I am drawn to using outboard and plug-ins to give it a bit more ‘vibe,’ but that’s not necessarily a bad thing.”

The SD5 has a plethora of features that make Harling’s job easier: “The way it handles snapshots is excellent, and the ability to have multiple insert points is a life-saver. I lean quite heavily on the matrix section, as it is so flexible. I can also set up different record and press feeds, and even have a bunch of stems ready for festival season broadcast scenarios. All of these things are very important for this gig.”

Outboard gear at the front of house includes Empirical lab EL8 distressors on the kick group, snare 1 group,



A render showing the custom scenic piece on stage, as well as the lighting pods, lighting wall, and video walls.

snare 2 group, and synth bass. Harling explains, “These compressors are a modern classic, and you can hit them pretty hard without it sounding overdone. I tend to use them in 4:1 ratio, with a bit of harmonic distortion engaged. It’s amazing how you can get the snares to sound as loud as if the unit were in bypass, but the room gets so much less excited; it really helps to keep the mix under control.” Working with the distressors are two Kush Audio Clariphonics used on the snare groups and two Tubetech CL1bs, used on the bass guitar group, and lead vocal. “The CL1B is another modern classic, but with a retro feel. I use them in fixed attack and release mode, and they just sound so smooth. Both these sources have further dynamic control being applied to them in Waves, so the compressors are not working super-hard; I’m just doing gentle level control, and imparting tons of character.” A Tubetech SMC2B and Manley Massive Passive are both used as final mastering on the band mix, as well as a TC Electronic 6000, his main for reverbs.

Harling employs many plug-ins for the show. “Probably half of the plug-ins I’m using are about control of certain elements of the mix, and half are about adding character,” he says. “The control elements tend to be plug-ins such as C6, Maxx Volume, or H-EQ. I like to do a fair amount of side-chain compression, such as using the lowest band of a C6 to duck the low end of the bass when the kick drum is played. I also side-chain a Waves gate on the snares from a trigger on the drum, which allows super-accurate control. Maxx Volume is great for controlling very dynamic acoustic guitars, H-EQ is amazing on everything, and C6 is a must on vocals.”



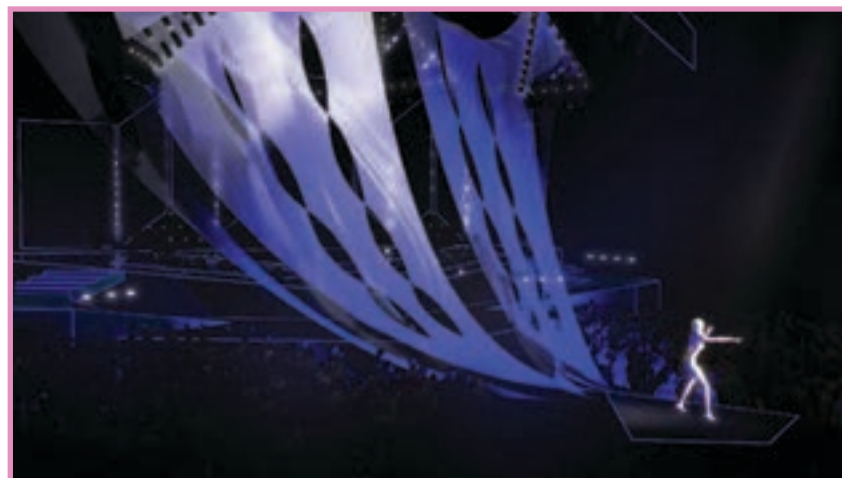
Fabric, created by ShowTex, adds a bit of theatrical flair to the production.

He adds, “The character plug-ins tend to be things like the PuigChild comp/EQ, the CLA 76/La2a, the API EQs, the Waves Non-Linear Summer, and effects such as H-Delay. I am also hosting a few different reverbs and effects in Ableton on a second computer, via a DiGiGrid MGB. These are all either from Valhalla or Soundtoys—they’re two very exciting and affordable plug-in companies.” Harling is running two Waves servers via a Mac Mini.

The audio package is provided by Cleveland-based Eighth Day Sound. “We have a great relationship with them, as they have supplied control packages and crew for us over the last few years,” Harling says. “We also have our main system tech, George Puttock, and main stage tech, Marc Peers, over from the UK, both of whom work for Adlib Audio.”

In terms of mics, Harling uses a Shure Beta91a and Audix D6 on the kick drum; all of the snare mics are Beyerdynamic 201s, which he describes as “my absolute go-to mic. For the tom mics, there are Sennheiser e904s; for the hi-hat and ride, he’s using Shure SM81s. There’s also what Harling terms a ‘trash’ mic: “It’s a Shure green bullet harmonic mic, smashed to death with an API plug-in compressor. Blended in subtly, this helps to add a little character and ‘glue’ to the drum sound,” he explains.

For the guitar mics, there’s a Shure SM7. “It’s a great, flat-sounding mic which deals with the mid-range of guitars very well,” Harling says. The main bass guitar channel, he adds, “is direct from the bassist’s Monique pre-amplifier which is just beautiful.” The vocal mics are all Sennheiser wireless sticks with Beyerdynamic capsules.



A render illustrating the fabric moment shown live above.

The *Delirium Tour* continues in the U.S. until the end of June; it moves to the Pacific Rim in the fall. Shipton concludes, “Bryte Design’s focus on lighting and screen content worked perfectly with Black Skull’s focus on technical producing, directing, and choreographing. Cate and I coming together as co-designers was a great starting point because we were able to totally integrate every element of the production into the design from the word go. Lighting, audience perception of screen content, and all of the creative staging ideas were deeply rooted in the design.”