



ANOTHER WORLD

Matt Cox of Gravity Rigs has been central to The Chemical Brothers live shows since 1997. As the Playback and Keyboard Technician, he was responsible to ensure the band stayed on track throughout the show. "Everything that happens on stage, from synths to keyboards and drum machines, are all synced," he said, unpicking the layers of faders and wires that made up live rig. "We then have playback world off stage, which then sends out timecode to all the various visual departments, so everything locks into one another."

The difficulty for Cox was that unlike other performers where you would have a three- to four-minute song that would start and stop, "The Chemical Brothers' performance is one continuous mix from start to finish. From the point they press go at the start of the set, everything has to be aligned and in time with one another."

The playback workstation Cox created comprised two major protocols, with Logic running in the background and with Ableton Live used as a live drum machine. "The way they've created the show gives them the flexibility to decide on Tom's live desk whether to mix in or out of a track," stated Cox. "It means it's really quite organic and keeps each show unique."

Throughout the set, Cox ensured both A and B rigs were synced as well as ensuring that all the patch commands were being sent to the relevant keyboards for certain points in the set.

Although the Playback Technician was quick to comment on the build quality of some of the older pieces of the band's set up that were still going strong. "I have to point to our other backline guy, Aaron 'Crippsy' Cripps. He's a qualified electrician as well as backline tech and very handy with a soldering iron if anything goes wrong."

During the conversation, none other than Tom Rowlands dropped into the chat to commend the work of his Playback Technician. "I really don't

know how he does it," commented Rowlands. "Somehow Matt is able to synchronise the internal clocks of every single keyboard and synthesiser on the road – it's remarkable."

GOT TO KEEP ON

For the longest time, The Chemical Brothers have followed a rhythm of two years touring with one year off to write an album. However, with the band's popularity at an all-time high, and if the latest Instagram posts are anything to go by, the *No Geography* tour still has legs – with a selection of dates already confirmed in 2020.

Boasting a crew that's clearly invested in the tour, the entire production seemed to welcome the news of an extended run. As Dennis concluded: "It's a case of getting the family back together and heading out again."

TPI

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THE CHEMICAL BROTHERS

Pushing live touring production to the limit

THE CHEMICAL BROTHERS: NO GEOGRAPHY

Known for their impressive visual offerings, the British electro innovators and their loyal crew are renowned for pushing the boundaries of lighting, video and laser integration further than ever before. TPI's Stew Hume visits the crew at their 2019 finale at London's O2 Arena.







It was certainly a stellar 2019 for Tom Rowlands and Ed Simons. Proving that The Chemical Brothers' decades of influence have never slowed down, with the output of live performances, interest for the group was at an all-time high. From a much-raved-about headline slot on The Other Stage at Glastonbury to an intense arena run, the band's loyal crew continued to elevate the boundaries of live production to new heights. Undoubtedly ready for a Christmas break, the band and crew opted to go all out for their final show of 2019 at London's O2 Arena, stretching their already expansive square footage of LED screens and lighting rig to new limits. In the midst of the busy show prep, TPI checked in with the team to catch up on a busy year of touring.

A long-standing member of The Chemical Brothers touring family, Toby Dennis of I Smashed It Productions has worked with the duo for 14 years, progressing through the ranks as a lighting technician, programmer, rigger, media server tech and finally, technical director. For this album cycle, Dennis added Production Designer and Production Manager to his ever-extending CV.

In the midst of orchestrating the changing set for the London show, TPI stepped back as Dennis and his team figured out a way to introduce additional side screens and a new automated entrance for George and Mildred – the band's iconic giant robots – that flew in from the rig.

Away from the show floor, Dennis expressed his enjoyment at working on the logistics side of the tour. "My wife often calls me Rain Man because I think in 'ones and zeros.'" In Dennis' world, he said, everything has a spreadsheet: "I'm obsessed with organisation." The PM went on to outline the "near-military precision" needed for complicated moves and

coordination of trucks to go to various locations. "For us, particularly in the midst of festival season, it's never a case of putting equipment into a truck and going to the next venue with equipment all going in various directions," he said, relishing the challenge. "I get the best of both worlds with balancing the logistics and the creativity of this show."

Dennis called upon Fly By Nite to provide eight vehicles for the tour with an additional two trucks for the London show. Phoenix Bussing also provided two 16-birth busses, and freighting achieved via Global Motion.

Global Motion's Adam Hatton described the "careful freight handling" required of The Chemical Brothers. He explained: "This production isn't simply about music; it's a very interesting show and we get asked to do some amazing things for them. Their custom robots, for example, are vital to the stage design and are a significant size, requiring careful freight handling," he said.

Hatton, who gets involved early on in the tour's planning stages, has worked with members of this production for more than two decades, and praised their professionalism. "A couple of years ago we had The Chemical Brothers' kit departing Frankfurt and arriving in Hong Kong on a very tight timeframe," he recalled. "So, of course, we were then faced with a typhoon. It was pretty brutal to say the least. If it wasn't for such a well-organised team, it wouldn't have worked.

"Touring high profile acts on promotional schedules can be demanding on everyone and you can't predict everything, but this is a really lovely crew to work with. It's always a pleasure to be a part of the team," he concluded.

Filling out the rest of Dennis' supplier spreadsheet was Skan PA, Lite Alternative, Universal Pixels, ER Productions, and Eat to the Beat.



Playback and Keyboard Technician, Matt Cox of Gravity Rigs; Monitor Engineer, Ian Barton; Production Designer and Manager, Toby Dennis; Show Directors, Marcus Lyall and Adam Smith; Laster Programmer and Operator, Tom Vallis; Lighting Crew Chief, Alex Johnson.

GALVANISE

Any conversation regarding the creative process behind The Chemical Brothers live embodiment would not be complete without Adam Smith and Marcus Lyall. Under the banner of Smith & Lyall, the collective is firmly woven in the fabric of The Chemical Brothers camp, creating much of the aesthetic that has become synonymous with the band's live identity.

"I joined when the band were called The Dust Brothers over 25 years ago," began Smith, who retraced the journey with the band, which started with a simple slide and film projector. Shortly after, Lyall joined the ranks. Initially brought in to create animations for the group's show, the creative force was hereby formed.

Two-and-a-half decades later, Lyall and Smith sat down with TPI in a backstage room aptly labelled 'The Creatives'. "This camp is very different from the usual lighting designer hierarchy," said Smith. "For this show, you can't just think about one department such as the lighting, video or even lasers by themselves. Each department is part of the bigger picture."

Take for example, the song *Go*, which featured animated characters performing a dance routine. Each character held a torch, when pointed, the lighting fixtures behind the LED screen fired through the video surface, acting as the beam. "This required a great deal of planning," explained Lyall. For the song *MAH (Mad as Hell)*, the 'king' character fired lighting beams from his fingers. "We had to consider the hand movements of the character when filming to line up automation plots for the lights and the video."

Having worked with the group for such a long time, both Lyall and Smith commented on the level of freedom that was bestowed on them throughout their time working with the production. "You see this across the

board with their visual elements. They pick people whose work they like, which is why they have such idiosyncratic visual. They get the right people and let them run with an idea."

COME INSIDE

The first thing people often mention when leaving The Chemical Brothers' 2019 shows is the video content. For the latest tour, Universal Pixels provided the touring party with a 19.2m by 10.8m LED screen made up of ROE Visual Vanish 18mm LED panels, which was increased for the London's O2 Arena show with two additional 5.4m by 10.8m side screens. Not forgetting the extra two crew to aid full-time LED Technicians Sam James, James Kerr and Colin Mudd.

"Phil Mercer and the UP team were instrumental in finding the right product for the tour," stated Dennis. "Along with our lighting supplier – Lite Alternative – we did a shootout where we got to compare a selection of products and see how they work alongside various lighting fixtures."

Following the shootout, Dennis said the ROE Visual Vanish 18mm came out on top. "It really is the next level. It's so quick to build, load out and has held up really well during a busy festival season."

UP's Phil Mercer joined the conversation: "In order for Marcus and Adam's content to have the maximum impact, we devised two packages – one for festivals and another for arena shows." Both packages, Mercer explained, featured ROE Visual Vanish 18mm screens, which delivered an unmatched combination of transparency, brightness and pixel pitch. "Smith & Lyall are very particular about picture quality, leading to a specific request for Brompton processing, which always delivers on that front."



Having been involved in The Chemical Brothers' shows for more than 10-years, Mercer has witnessed the evolution of the band's live shows, "I think it's fair to say that, particularly from a visual point, this is the show that everyone is talking about."

On top of the LED solution, Universal Pixels also provided the video elements for the two giant robot mascots, George and Mildred, complete with a custom Barco Olite package.

With the hardware in place, Dennis pointed to the individuals who helped pull many of the visual pieces together. "In the early stages, I began to map out how we were going to integrate all the visual elements. What became clear was that our automation system, the MA Lighting grandMA3 for lighting, and the Catalyst Media server, had to interact." Dennis realised that they were going to need a third-party solution to link each element together. "Essentially we needed an App to keep track of all these elements," explained Dennis, calling upon the expertise of James Cooksey from Basic Monkey. "He has been an integral part of our team on the media server side of things – a great coder and a true genius."

Speaking of his work on the show, Cooksey outlined the mammoth undertaking. "Kinesys has its own protocol while the grandMA3 uses PosiStageNet (PSN), so we had to create an interface to enable each system to communicate effectively."

Cooksey outlined the importance of the Catalyst media servers. "They're ideal for this project due to the nature of non-linear timecode," he explained. "Catalyst also has the ability to trigger lighting outputs and write custom fixtures. For this project, we create a few profiles for the TMB Solaris Flares and the Robe MegaPointes."

Cooksey explained that handling the servers during the set was just one of the jobs that fell under his remit. "It's one of the best things about this camp – you never get bored. During the show, I also helped out with the deployment of the robots and the mirror ball gag. This is definitely not the show where you'll stare at a monitor or flick through Facebook."

UNDER NEON (AND LED) LIGHTS

The other arm of the visual team was 4Eleven – consisting of Thomas Dechandon and Jean 'JC' Aubree. "We began working with Tom on this project but due to his schedule, JC came in to do the majority of the programming at the start of this cycle," stated Dennis. "JC has been a

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fantastic programmer and can translate the syntax from Adam and Marcus in to lighting movement really well." It was a complement shared by the two show designers. "Marcus and I don't really design lights in the conventional way, instead seeing them more as points in an animation," commented Smith. "JC has really embraced this style and run with it."

Once again supplying The Chemical Brothers' lighting needs were Lite Alternative. Leading the charge was Alex Johnson: "I first started with these guys back in 2015," he said. "Their schedule really worked for me as the warehouse manager for Lite Alternative." One of the fixtures of choice were Robe MegaPointes. "They play a massive part in the show," commented the Crew Chief. "It's the advantage of doing these shoot outs – you get an A and B comparison of what is out there."

In total 80 MegaPointes were set out across the stage. "They have been key to the look of this show," stated Johnson. Also providing an added dynamic were eight Martin by Harman MAC Quantum Basics, three MAC Auras, 26 MAC Viper Performances, 12 MAC Viper AirFXs, 10 GLP impression X4 Bars 20s, 24 JDC1s, two Ayrton MagicBlades and 16 Claypaky Sharpys.

One of the big looks created from the show came from what Directors, Smith & Lyall referred to as the wall of strobes. "We have 45 TMB Solaris Flares across nine ladders," he explained. Also being made use of from the TMB catalogue were the Solaris Mozarts, which were placed around the duo's performance space, known collectively by the crew as 'the Hub'.

Out front, the Lite Alternative team provided JC with one of their latest MA Lighting grandMA3s. "We spoke to the guys from 4Eleven and they were both behind the idea of making the switch from the MA2 to the MA3," reflected Johnson. "We have found they have worked really well; this

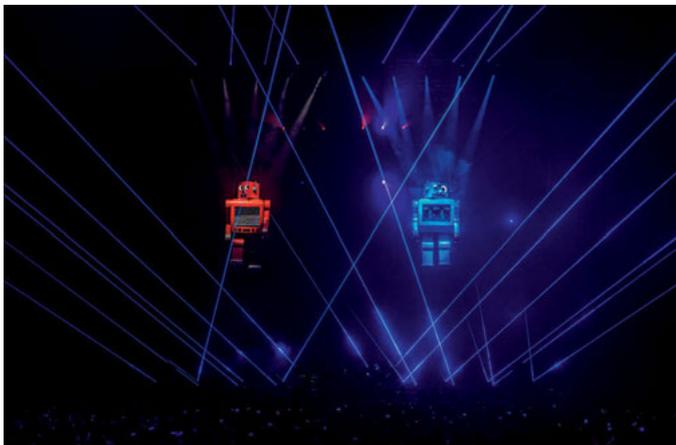
particular desk was also used on Massive Attack's latest tour." To close Johnson described the transition from the extensive festival season to the world of arena touring. "For the festival season, we had four of us on the lighting crew, which included our Kinesys Operator, Mark Goodall."

As soon as the team moved into arenas, he brought in another team to handle the flown rig. "The idea behind this was that we had got into a routine during the festivals of bringing in our touring rig into a set that was already partly provided."

To keep up with this rhythm, Johnson brought in another team of four, so it was "almost like coming into other festival set up." Johnson explained that this crew number was increased to 10 faces for the O2 Arena, London dates. "This might seem like a lot, but some major changes were made for the O2 Arena show that needed to be taken care of. Specifically, the fact that the giant robots would descend from the ceiling rather than our usual process of building them stageside during the show."

One the subject of automation, Lite Alternative provided 22 Liftket 500kg hoists along with a Kinesys K2 control system and a Vector system. The giant robots are a familiar sight to any long-time Chemical Brothers fan, having been part of the duo's video footage for a number of years. During the last tour cycle, production commissioned Spezialz to create the two larger-than-life characters, who have been a mainstay of the band's performance ever since.

"They have become so iconic I don't think we would ever be able to lose them," laughed Dennis, exemplifying how each month they are sent pictures of George and Mildred tattoos on the bodies of dedicated fans. "It's testament to Spezialz build quality that they are still going strong."



IN DUST (AND HAZE) WE TRUST

Adding the final element to the visual cornucopia was the special effects division, consisting of Laser Programmer and Operator, Tom Vallis and Laser Technician, Joey Jackson. Representing ER Productions on the tour, both oversaw a package of 26 Kinekt Lasers, one EX25, an AT-30 and four Beam Bursts.

“I started working on this run in Fly By Nite Rehearsal Studios in April 2018, programming the show,” stated Vallis. After another festival season, he expressed his joy at being in the controllable environment of arenas. “We added eight Kinekt units on the front truss laid out into three rows,” stated Vallis. “The final two are on a Kinesys pod that tracks up and down for one song, which creates a laser look through the LED screen.”

Another automated laser element came in the form of what Vallis referred to as the ‘vortex’. “It’s our own AT-30, which creates a cage around the band and then moves out of the way after its movement.”

The addition of automated elements to his laser rig was very much a trend taking place in other projects with ER Productions. “One of the main

issues we see with most shows is that you’re never able to put fixtures where you would prefer as you’ll be blocking a video screen or a piece of set. It’s one of the reasons why ER has invested so heavily in the Wahlberg Motion Design winch systems.”

For the tour, all automation for the lasers was handled from Vallis’ control station running Pangolin Beyond software. “I’ve scripted everything in Beyond so that if the lifts are not in the correct final position, they will not output anything.”

Vallis concluded by describing how he fit in to the other visual works with the other department. When it came to programming, the Operator stressed the importance of getting the right balance between lighting and lasers, allowing each department their moment to shine. “I have four major laser moments, although there is still video running. The majority of the content is black, thereby not effecting the impact of the lasers.”

Dennis interjected: “Tom has a fantastic eye for laser looks. The entire team from ER are legends,” he continued, recalling first meeting founder Ryan Hagan and Marc Webber at their first warehouse under a railway

arch in Brixton. "All these years later, they are a full-blown international company, holding Guinness World Records. They are true pioneers."

THIS IS NOT A GAME

As you might expect with the electro-pioneers, there were numerous pieces of vintage analogue synths, keyboards and drum machines. Interestingly, this inclination to analogue gear also transcended the wider audio department, with both FOH Engineer, Shan Hira, and Monitor Engineer, Ian Barton, opting for Midas XL4s.

"They go with us everywhere," began Hira. "I still think it's the best sounding desk out there and they really suit how both Ian and I mix." Barton added: "There is a lot of subtlety when it comes to this mix and having all the faders out in front of you means you can make those subtle changes rather than flicking through pages and layers."

What became clear from speaking to the two engineers is that The Chemical Brothers' audio arrangement is far from regular. "From the outside, you might look at the input list, with eight subgroups and a main left and right mix and think, 'how hard could that be,'" began the FOH Engineer. However, Hira explained it was actually quite the intricate design. "I send a post-fade mix from FOH to Ian's desk via a pair of auxes. He can then use this as the basis of his mix and send it back to the band on stage. This means they can hear exactly what is going on at FOH and we are all hearing exactly the same thing. It's just how it has evolved over the years."

Another misnomer that Hira was keen to quash was that the group's live set up was just a replication of their records. "If you go to two Chemical Brothers shows, you will see how drastically different they can be. Tom and Ed are in complete control of the mix. They can hang onto a song for a bit longer if they want or go off on a tangent – it's an ever-changing journey." Hira also pointed to his vast array of outboard gear, which played a vital

part in his workflow. He explained: "I've got a whole host of outboard. I just see it as options to enhance what the boys are doing on stage. There are certain elements that I will bring in at the same point in the set, but other times, when they are jamming, I'll bring in something that I feel works for the moment. That's why a digital workflow would not work for this gig; by the time you find the effect, the moment would be lost."

As has been the case for a number of years, Skan PA supported the group with a d&b audiotechnik system. The main PA comprised 96 KSL8s and 12 KSL12s with 16 J Subs, 15 SL-SUBs and eight V12s. A pair of J8s and J-SUB sidefills per side, eight M2 wedges with two B6s and two V8s, with one V Sub per side.

"Our relationship with Skan began in the early 2000s," stated Hira. "We were set to play Glastonbury and thought it would be a good idea to bring in the company who were supplying our stage for our warm-up shows; we've used them ever since. They have great techs and the gear they supply is immaculate. It has been a pleasure to work with them for the past 15 years."

Moving things to the onstage sound, Barton discussed his workflow to ensure the two producers got a clear audio mix on stage. "First thing to know is that they are not on IEMs, with all sound coming from side fills and onstage monitors," said Barton. "Also, one of them uses ear plugs and the other doesn't, so it can be tricky to get the balance."

Within the duo's performance 'Hub' there were several work stations with a central mixing console surrounded by a selection of keyboards. "There are times when they will move over a selection of keyboards, at which point I use the nearfields closest to them, which I then take out when they move away."

"The mix is really quite dynamic from my end," he continued. "For example, during a quieter moment of the set, I'll actually increase the volume on stage, so they can really hear what they are doing."

Chemical Brothers, Glastonbury
Photo Credit: Alex Nightingale

Samsung Launch

Lehman Trilogy
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