

Lighting & Sound

\$10.00



America

CELEBRATING 20 YEARS



The Rolling Stones

The Hackney Diamonds Tour

ALSO:

REO Speedwagon in Las Vegas

Sound for Broadway's *Stereophonic*

Gareth Owen on Rock Musicals

Inside Martin Lighting's New Factory

Adamson FletcherMachine

Diamonds are Forever



Copyright Lighting&Sound America
June 2024 complete issue: <https://link.lsamedia.com/jun2024>



There's no stopping The Rolling Stones on the *Hackney Diamonds* Tour

Photos & Text by Steve Jarrings

The Rolling Stones are celebrating over 60 years in the music business. Showing no signs of slowing down, they released new music in 2023 with the release of a new album, *Hackney Diamonds*, to praise from critics and fans alike. To everyone's delight, a new stadium tour was then announced. We got to speak to key members of the creative teams who make a Rolling Stones tour come to fruition.

Patrick Woodroffe, creative director

Woodroffe, who did his first show with The Rolling Stones 42 years ago at the Capitol Theatre in Aberdeen, Scotland, says it has been an extraordinary privilege to grow with them across the various stages of their career: "I hadn't even turned 30 when I did my first tour with them, so they have been a constant presence for over half my life."

In a role that extends beyond creative direction, Woodroffe helps produce ancillary projects the band undertakes between tours—press conferences, documentaries, one-off shows, and album launches. "The *Hackney Diamonds* event in London was a good example of this," he notes. "On this occasion, we worked with Misty Buckley, who designed an elegant, but modern, take on a classic proscenium curtain that fitted well with the beautiful Hackney Empire Theatre. There was no actual performance but, rather, a live broadcast interview with Jimmy Fallon in a setting that was a nice juxtaposition of a contemporary feel in a classic setting."

The Rolling Stones, Woodroffe says, "are, by definition, a contemporary band, far less interested in looking backward than in facing forward. This is reflected in the way they choose to be presented onstage. The team at Stufish [Entertainment Architects] have always understood this, and so the approach that [set designer] Ray Winkler took for the *Hackney Diamonds* Tour was no different. Not only did he give us a design that is a cool piece of modern architecture; he also produced what is, in effect, a virtual stage that allows us to create custom video content that transforms the stage from one number to the next." In the past, Mick Jagger and the late Charlie Watts took the most interest in how the scenery, video, and lighting worked. The others in the band have a view, of course," Woodroffe adds, "but the actual creation is by this smaller

CONCERTS

group. We all miss Charlie's contribution enormously."

Woodroffe, working with long-time associate lighting designer and director Ethan Weber and lighting designer Terry Cook, took on the lion's share of designing the system for the tour. Cook has continued designing for the Stones since becoming a partner at WBD [Woodroffe Bassett Design].

The band typically spends a good month rehearsing in a studio before hitting the road. For this tour, they took over the Henson Soundstage in Hollywood to go over their classic songs, explore unusual numbers from their back catalog, and work out which tracks from the Hackney Diamonds album might play well live before an audience. "Having spent time in Chicago with Terry and Ethan, who

factors had to be fitted into a jigsaw puzzle that eventually produced a seamless choice and order of songs that flowed naturally and built to a climax."

Before arriving in the US, Woodroffe worked with Treatment Studios in London on the video backgrounds for the LED screens and the films commissioned to fit certain songs. "We've worked with Treatment's Sam Pattinson for a number of tours now and there is a recognizable style that has evolved over the years," he says. "A lot of the work is done in-house by artist Noah Campeau and his team, but Sam and his producer for the project, Sam Brickman, will also go out and find a specialist animator to create something unique for a particular number."

Finally, members of the production team met in



The lighting rig includes 135 Elation PROTEUS MAXIMUS units, 36 Ayrton Perseos, 14 Ayrton Dominos, 48 ACME Lighting SUPER DOT-LINES, 57 CHAUVET Professional COLORado PXL Bar 16s, 52 Color Kinetics iV Blast Powercore units, 72 Elation DTW BLINDER 700 IPs, 30 Robe iFORTE LTX units, and 144 custom moles. The Follow-Me system is used. Control is via two MA Lighting grandMA2 full-size consoles.

were creating lighting cues for over 80 numbers," Woodroffe says, "I joined the band for their last week in the studio to hear their choice of songs and to help create the set list for the tour. My only real direction to Terry and Ethan [involved] fixture choices and their arrangement, which had to match the contemporary nature of the stage design. Their interpretation was spot on. I took into account the songs the band wanted to showcase, but it also came from a template that we needed for the visual production to work—how the introductory video morphs into the opening number, for example, how our big production numbers would be spread evenly throughout the show, where Keith's two numbers would lie, and how we came out of them into the third act of the show. All these

Houston for the final week of rehearsals with the band.

"The key to these large productions is the trick of making the audience believe that everything they see, hear, and feel comes directly from the performers on the stage, and then making the whole thing appear seamless as each element plays as part of a whole," Woodroffe says.

Ray Winkler, set designer

The conversations about the set for a new Rolling Stones tour usually begin with a tight group consisting of the band, Woodroffe, and Stufish Entertainment Architects. "At the start," Winkler says, "the conversations are broad and far-reaching, exploring many different concepts; as the ideas evolve into more concrete proposals, the team



"My goal was to ensure that the overall video design stayed true to the band's identity while also incorporating a contemporary look and feel," Campeau says.

expands to include a wider selection of creatives. It is our job to come up with suggestions, so we usually start with a selection of references and mood boards to explore early ideas and see the reaction to these ideas. At the same time, getting the first rough sketches onto paper is important so the ideas don't remain in the abstract and can be discussed with specifics in mind."

Next, discussions expand quickly to involve the technical and logistical team. "This gives us a reality check early on and allows us to benchmark the proposal against known parameters like time and money," Winkler says. "We work closely with a wide team of people essential in developing the concept into a viable proposal. Our relationships with Stageco for the stage structure and [technical design firm] WonderWorks go back many years; we have a comfortable and reliable shorthand to communicate with them on the technical front while maintaining the integrity of the concept. To see this hard work come to fruition, the ideas realized without much compromise, is still, after all these years, a great thrill."

Sam Brickman and Noah Campeau, content creation

London-based Treatment Studio, started more than 20 years ago by Sam Pattinson and Willie Williams, specializes in show design and content creation for live music, theatre, and experiential productions. "Our team created the video content for the entire Stones show," says producer Sam Brickman. "Working closely with Patrick [Woodroffe], we spent six months building the visuals for more than 20 songs."

Brickman says a team of 14 designers was required for the project; their expertise in differing areas of design gave Campeau, Pattinson, Woodroffe, and himself the necessary tools to create almost anything they could think up. "Our

job is about creative and technical problem-solving, so if you want to achieve a unique-looking show, you need to have a great team supporting you."

Treatment Studio worked with various departments during the tour, Brickman adds. "To create something great, you need input from other people. We worked closely with Stufish in the early stages of the project as we had to make sure our content designs complemented the staging created by Ray and his team, and vice versa. We were also in close contact with Nighthawk to ensure the technical aspects of the show and video infrastructure. The tour production team and WBD were integral to our work and time on-site in Houston in particular, where the show came together."

Campeau has worked with Woodroffe for several years, and this is the third Rolling Stones tour he's been involved in as creative director for video content. "Given the band's extensive back catalog, our creative process needs to be broad and flexible from the outset," he says. "As the show takes shape, we can focus on specific songs with a more conceptual approach."

Campeau adds that he enjoys beginning the creative process by exploring the band's rich history and drawing inspiration from the worlds of art and design. "My goal was to ensure that the overall video design stayed true to the band's identity while incorporating a contemporary look and feel. With our talented team of artists, designers, illustrators, and technologists, we are able to create a show that is diverse and visually captivating."

The *Hackney Diamonds* album artwork significantly influenced some of the initial concepts. "We incorporated diamonds as a recurring motif throughout the show. Patrick had the idea to introduce this to the audience as they entered the stadium before exploding the giant diamond facade into beautiful glistening shards to reveal the band



Cook says WBD worked to accommodate its creative partners, who included staging specialists Stageco and TAIT, video gear supplier Nighthawk, and technical design firm WonderWorks.

and start the show. The diamonds served as a touchstone, unifying various aesthetics and providing a consistent visual reference throughout the show. We cultivate a highly collaborative environment where our design team is encouraged to contribute ideas. As we build the visual narrative of the show, concepts evolve throughout the production process, making it a truly collaborative effort between our team, Patrick, and the band.”

Terry Cook, lighting designer

Stufish, Treatment, and WBD have often collaborated, Cook notes. “This shorthand from working with each other allowed for a concept deck to be created first by Stufish where we saw the screen sizes, the stage layout, and, of course, the lighting on the same page. It allowed Patrick to see the big picture for the first time. Next up was Treatment, who inserted static images into the model/deck; at the same time, I was refining the lighting system and making changes to the renders, so Patrick had all the elements correct. This process took a few weeks, but it was at this point we all knew we had something special.”

Cook’s design was formed from a conversation with Woodroffe, who wanted a fresh, modern look, adding that he was limited by trim height, weight, and space due to the video system. “Working with Ray [Winkler] and Jeremy [Lloyd, technical designer], we came up with the up/down trusses interspaced with LED battens, which was a twist

on a previous look of ours. The battens gave us a fresh, strong look. We knew they would allow for moments when we just lit the stage with them.”

Once Cook had the design’s framework, he confirmed fixtures and created the plot, working with John Huddleston and Dan Curley from [lighting vendor] Upstaging Inc. “I wanted a lot of the same lights overhead,” Cook says. “It had to have an evenly spaced uniform look and feel. The workhorse of the rig is the Elation PROTEUS MAXIMUS fixture. This high-powered profile allowed us the punch required to cut through the video screens. We looked at many batten options and eventually settled on the ACME Lighting SUPER DOTLINE. This tilting batten has two strips of high-output LED tape sections that give us a further source of light to play with. Lastly came the followspot. We have done a number of concerts with [the remote-control solution] Follow-Me as the automated spot system so we decided to carry this on, selecting the new Robe iFORTE LTX for the task.”

Cook says the Stones are unique in the number of songs they have recorded; although more than 100 were already in the lighting desk [along with new album selects], “Ethan and I first worked in WYSIWYG, going through about 80,” which represented not the major, must-do hits but songs that might get performed. “The Rolling Stones don’t play the same setlist every night, so we have to be prepared. It’s a joy to be with Ethan in this process, going over each song and cue. We have built quite a friendship

over the last ten years. He is one of the most talented people I have worked with; it's great to have him as an associate on this project. We went to Upstaging, [where] we had ten days with the full rig. It was also the first time I met all the lighting and video crew."

Cook led on fixture choices, knowing what works for the band; he adds that Weber is a great partner in this process. "The lighting positions were limited due to weight and space, so I had to get creative," Cook says. "Each truss had cantilevers on the downstage edge; this allowed for a front key light. Normally, you would float in a truss right downstage but, due to the video header, we wanted a clean look. By doing this, we could cut the truss, rigging, etc., meaning we saved space and weight, which really worked out for us. We had side ladders and floor lights to complete the system."

Cook says WBD worked to accommodate its creative partners, who included staging specialists Stageco and TAIT, video gear supplier Nighthawk, and WonderWorks. "We created custom lighting slots that sat in the space of two video tiles. These pods took several weeks to conceive, and the crew are really happy with how quick it made putting the lighting and screens up and down, with the load-out cut down to three hours. The slot allowed us a discreet position to light the audience with a custom single mole unit; 144 are placed throughout the four slots, allowing Ethan to light the audience at the push of a fader."

Ethan Weber, associate lighting designer, director, and programmer

"Sometime late last fall, I got the call about the band going back out. It's usually kind of a fluid notification," notes Weber. "There will be rumblings that the band is thinking about some shows, then Patrick [Woodroffe] will call to give a general idea of what he thinks the show will be and what part of the year it will be in. Tour dates usually come from [production director, Dale "Opie" Skjerseth] or Lizzie Scace [production coordinator], and then Terry Cook will work out all the pre-production dates with Opie and the lighting vendor and send that to me.

"Patrick is the overall creative director—he'll lay out some guidelines but Terry specs the fixtures. I have the occasional input on fixture types, but Terry's very good at knowing what lamps will work best and working with the vendors to figure out what they have and are willing to buy." He notes there are many holdovers from previous tours—including Ayrton Perseos and Dominos, Elation DTW BLINDER 700 IPs, and Color Kinetics iWBlasts—combined with newer items such as the PROTEUS MAX-IMUS units and Robe iForte LTXs.

Weber guesses the band worked on at least 70 songs in rehearsals. "The current show file has been a work in progress for close to a dozen years. Before this tour, I had

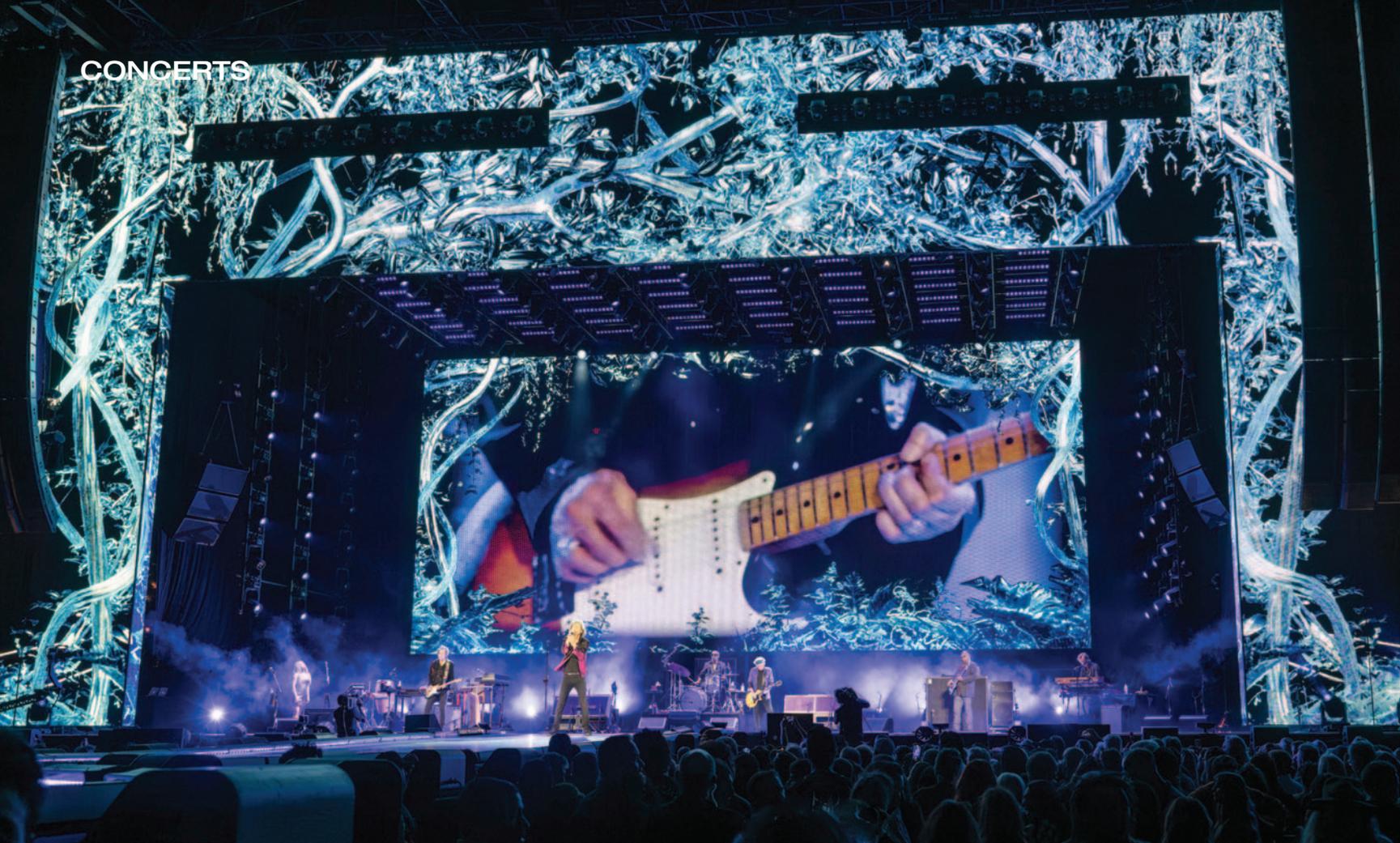
over 80 songs in the board. With the added possibilities from the new album, I now have close to 100. Writing the new songs and cloning/revising the older ones makes for some very long days and nights in pre-production and production rehearsals. As the tour progresses, there are often surprises but the band will usually rehearse them in a few soundchecks before playing live. I'll have time then to build something before the song makes a live appearance.

"The great thing about working with our video director, Roland Greil, is that he's not only a lovely man but also a lighting designer/director. If I'm married to a specific color for a song, Roland will either match it or find a complementary color. Most importantly, we're not at battle during the show. Roland appreciates that lighting is an important element and keeps an eye on his screen intensity."

Weber, who has been lighting the band for 30 years, says he knows the songs and cues so well that most button pushes are automatic. Still, he adds, this is the hardest show he's ever run. "There are so many variables from night to night and a lot of, hopefully, educated guessing. The constant is that the band always puts on an amazing show. Everything else is radically different from when I started. The first tour I did had VL2s, Telescans, and three lighting consoles. It would take hours to cover everything at the end of the night and we would carry double the number of usual spares because fixtures were so unreliable. Now, we run on one console, are surprised when a light doesn't come back after a soft or hard reset, and the only thing we cover at the end of the night is the console and racks. The followspotting is radically different and improved. We've been using Follow-Me for a few years now. Being able to get all the spots up to 50'/60', easily adding extra fixtures onto a band member who needs a few extra footcandles, and not having to put 14 people in harnesses and get them up trusses and towers during a half-hour set change has been a very big step forward. There is always a large number of new people when we start a new tour, but much of the core entourage, production, and fans have been around for many, many years. It's very stressful and yet comfortable at the same time."

Dave Natale, front-of-house engineer

Natale says analog consoles are still the way to go, as he continues to use the Yamaha PM4000 that he has mixed on since the mid-1990s. "Since I started using them, I haven't had any major failures. I have seen too many guys using digital consoles suffer failures they couldn't recover from. If the sound goes out, then everyone goes home." He adds that on certain gigs—TV shows, special events, and festivals—when "forced" to use a digital board, he spent too much time trying to get the sound he wanted. "This is not just limited to one console manufacturer," he clarifies. "I have had the same experience with consoles of all types manufactured by Yamaha, Digidesign [AVID],



Natale says analog consoles are still the way to go, as he continues to use the Yamaha PM4000 that he has mixed on since the mid-1990s. “Since I started using them, I haven’t had any major failures. I have seen too many guys using digital consoles suffer failures they couldn’t recover from. If the sound goes out, then everyone goes home.”

DiGiCo, etc. The fact that all the consoles ‘sound’ very similar to me means to me that a digital platform cannot do what I need it to.”

Generally, Natale uses no effects. “There is, more than likely, ambiance, if not straight-up reverb, present in all the venues we work in; why should I add reverb to the already reverberant environment? I have not used gates on the drums for about 20 years. I know how to place the mics and EQ the drums, so feedback or ringing of the toms is not a problem. I have worked with all of the best drum techs in the business. This means a hell of a lot to your drum sound. It is not only the drummer and the FOH guy who determines the sound. I may put a compressor on a bass DI or lead vocal, but I limit it to those two channels and only if absolutely necessary. If I do use compression, I use a Manley ELOP on the vocal and a dbx 903 or 160XT on the bass DI.”

Natale has used the same Clair system—I-5 and I-5B boxes—designed by Ron Borthwick—with Crown Macro Tech I Series 3500 amps. “Because these cabinets have 18” speakers, I do not need sub lows; I haven’t for at least 25 years. I’ve done a variety of artists with only these speakers—Tina Turner, Mötley Crüe, Fleetwood Mac, The Black Crowes, and, just last summer, Guns N’ Roses—and

it’s worked out great.” He adds that line array PAs are much more forgiving when performers stand in front of them. “I do not EQ anything differently for anyone to perform in front of a line array system, such as when Mick [Jagger] goes down the audience center ramp.” He will EQ everything heavily if he deems it necessary. “If the EQ wasn’t meant to go +/-15dB on any given range or frequency, it wouldn’t. I also learn the band’s material—I mean, learn it very well; when a solo or a cue comes along, I am not afraid to turn that solo or cue up a good inch and a half on the fader, if not more.”

Jo Ravitch, systems engineer, Clair Global

The Rolling Stones have been a Clair Global customer for at least 20 years, and Ravitch has been a systems engineer alongside Natale for approximately a decade. “This i-5/i-5B package has been Dave’s PA of choice ever since they were first developed,” he says. “It’s been identical for almost all of that time. The main hangs are eighteen i5s plus eighteen i5Bs per side and the side hangs are fourteen i5s and fourteen i5Bs per side. Additionally, there are four i5 front fills, two per side. Prior to this tour, all the cabinets were refurbished, and all-new foam grilles were

installed. As per Dave, there are no subs in the system. Ronnie and Keith do not use in-ears; there are one hundred twenty 12AM floor monitors for the wings and the thrust as well as onstage.”

Ravitch notes that Natale likes this PA setup because it is powerful and doesn't need subs. There are one hundred twenty-eight 18" speakers in the main and side systems and there is no shortage of low end. “Each cabinet has four JBL 2" drivers, four JBL 10" drivers, and one 18" driver in each i-5 plus an additional 18" driver in each i5-B. This complement of drivers is twice what the average line array consists of, and, consequently, has an amazing amount of headroom. I've only seen Dave hit the system limiters once or twice.”

On tour, Natale will do his system EQ and line check. After that, Ravitch says, both he and Natale will walk the venue using playback and fine-tune it (and the delays) with radios: “I've gotten away from using the tablet Wi-Fi for tuning, as it always happens that, at some point, the Wi-Fi will drop out, always when you're as far away from the front of house as you can be.” Ravitch monitors the system drive levels and handles front-of-house communications during the show. “Jim Ragus and Nico Regidor will walk the venue and I'll tweak the EQ and drive settings based on their recommendations. My experience with this band has been awesome. It's always a pleasure to work with a band that loves what they do, along with an amazing audio crew!”

Stephen Carter, monitor engineer

Carter mixes on a Midas Heritage 4000 purchased for the Stones on the A Bigger Bang Tour (2005 – 2007). “It has been with them ever since, giving us consistency,” Carter notes. “I am a big believer in [the idea that] if it ain't broke, then don't fix it! Not a lot has changed in the eight years I have been mixing the band—some very small changes to levels, but it's always been smooth sailing. I use a rig designed by Robert Bull [the Stones' previous monitor engineer] in 2013. It's a very straightforward setup: no gates and no compression. I use Rupert Neve Portico 5045s on Mick and Keith's vocals and, for effects, I use Yamaha SPX 990s. For outboard gear, the 5045s give a great advantage for gain before feedback. Again, pretty straightforward, minimal gear as everything has been working great.”

Jagger and Richards are on Shure RF mics with regular SM58 capsules. All wired vocals are Shure SM58s. This has been consistent for many years, Carter says. “Keith and Ronnie [Wood] are not using in-ears and prefer to be old-school, using wedges. Mick uses JH [Audio] Roxanne in-ears, and we have a pretty good mix of others on stage. Darryl [Jones] on bass has Sensaphonics 3D, Chanel [Haynes] on backing vocals is on JH Sheenas, Bernard [Fowler] on backing vocals uses Ultimate Ears, and Matt

THE ROLLING STONES HACKNEY DIAMONDS TOUR '24

Production Crew:

Creative Director: Patrick Woodroffe (WBD)
Set Designer: Ray Winkler (Stufish Entertainment Architects)
Lighting Designer: Terry Cook (WBD)
Associate Lighting Designer, Director, & Programmer: Ethan Weber
Technical Designer: Jeremy Lloyd
Video Director: Mike Duque
Video Screens Director: Roland Greil
Production Director: Dale “Opie” Skjerseth
FOH Audio Engineer: Dave Natale
Audio Systems Engineer: Jo Ravitch
Monitor Engineer: Stephen Carter
Production Companies:
Lighting: Upstaging Inc.
Video: Nighthawk
Content Creation: Treatment Studio (Sam Brickman, Noah Campeau, Sam Pattinson)
Audio: Clair Global
Staging: Stageco and TAIT
Technical Design: WonderWorks

[Clifford] on keyboards, French horn, and backing vocals has JH Roxannes also. We use Wisycom transmitters and combiners for the band.

“It is an absolute honor to mix this band,” he continues. “They are professionals in the truest sense of the word. The entire sound crew is amazing to work with. The production crew has largely stayed together over the years and is the best in the business. The work ethic, attention to detail, and care come from the top and continue throughout. For years, I have had Jonny Brooke, an absolute godsend, taking care of the deck. This year, we have Adan Romero Bauce, the RF coordinator and monitor tech. There's Russ Matterson on Pro Tools, who also mixes in the small rehearsal backstage, and Trystan Forbes, who takes care of all 96 wedges we use. Without them, I would be nothing; it's a pleasure to work with them. I owe everything to Dave Natale and Robert Bull, who taught me everything and have always supported me no matter what. I would not be where I am without the people I have worked alongside over the years.”

The *Hackney Diamonds Tour* continues through July 21, ending its run at the Thunder Ridge Nature Arena in Ridgedale, Missouri. 📶