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On the following pages you'll find the full upcoming press release for the **Kan Yama Kan Production**.

The Press Release will tell you most of what you need to know, but we wanted to add some extra notes and images to really highlight why zactrack was chosen and why zactrack was the solution.

This can and should be used as a great case study to highlight how functionally (to solve problems) and creatively (to help the designers vision) the system can be used.

A quick summary –

Kan Yama Kan Production
Riyadh, Saudi Arabia
February 2022

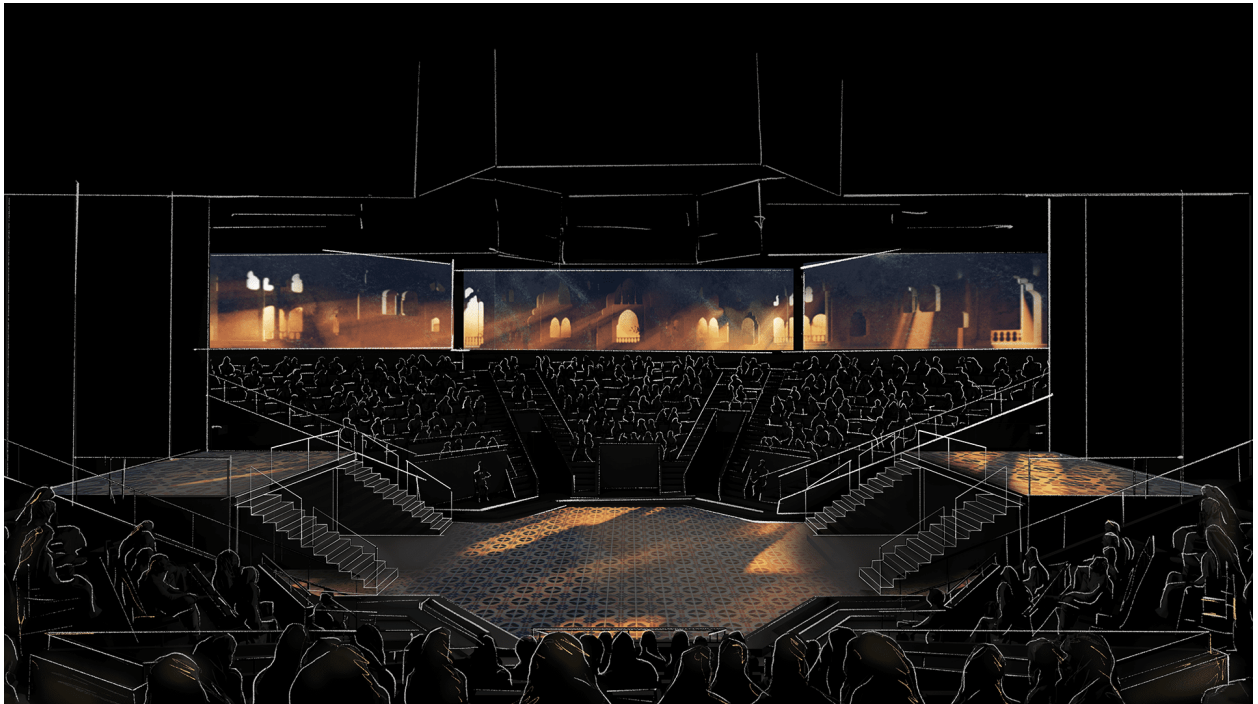
zactrack PRO, 2 servers, 14 Anchors, 27 trackers active in the show – with a full set in reserve.
170+ fixtures used with tracking

Tracking actors, fast moving dancers, flying track aerial performers and even Aladdin's lamp.
Lots of variety in the Z axis with the set structures and for the aerial work.

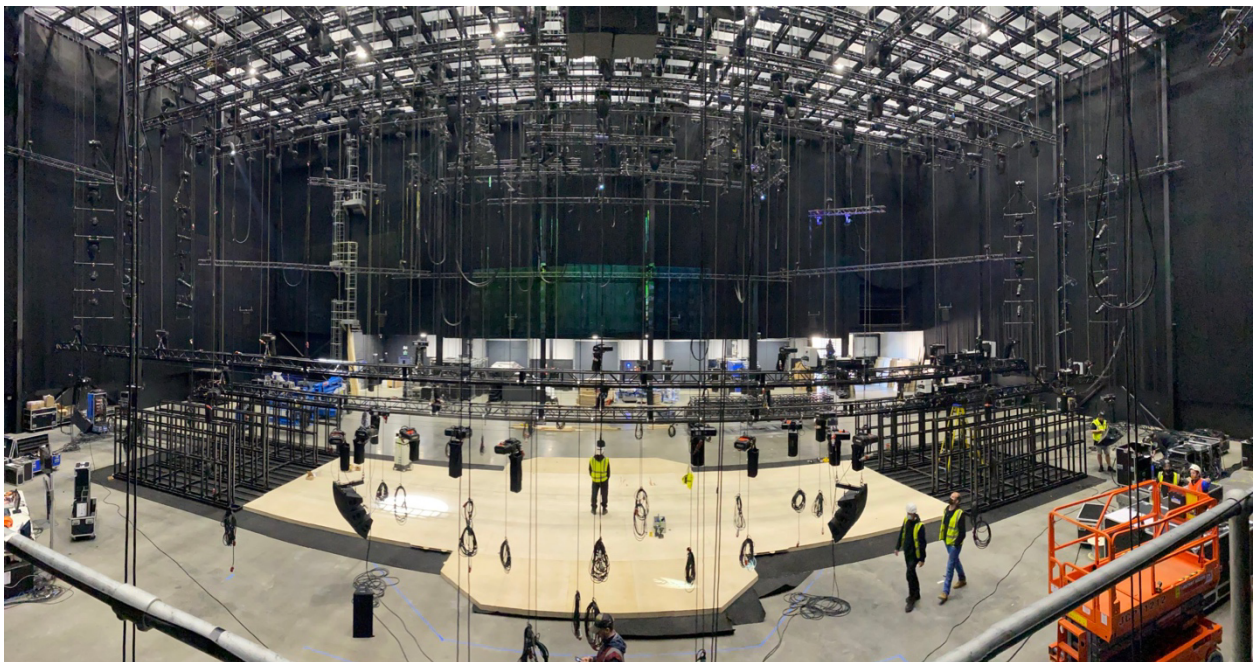
High Energy theatrical show with dance movement and aerial, gauze bleed-throughs, moving set pieces etc, audience on nearly all sides, very wide-traverse layout.

Tracking designed into the show very early on – avoiding washing out projected floors, lighting from up to 3/4 points per performer in a 360 degree perspective.

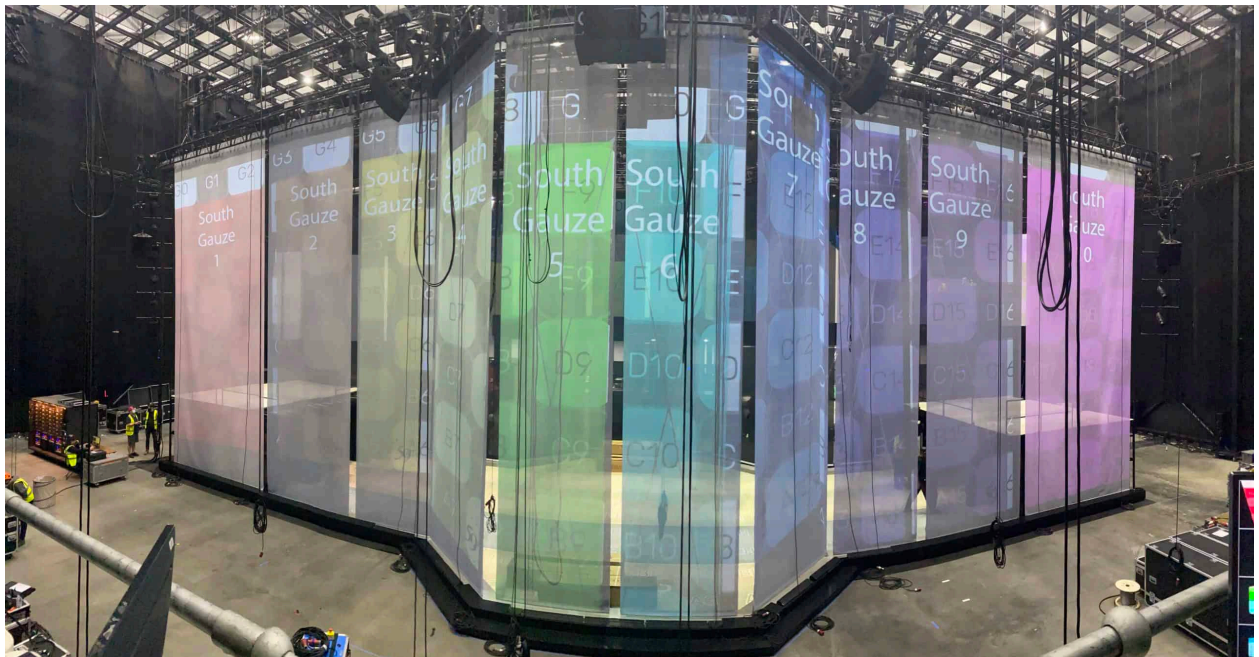
Old school followspots wouldn't have been able to deliver the same looks, cover the same number of performers – plus language barriers with ops from the region etc.



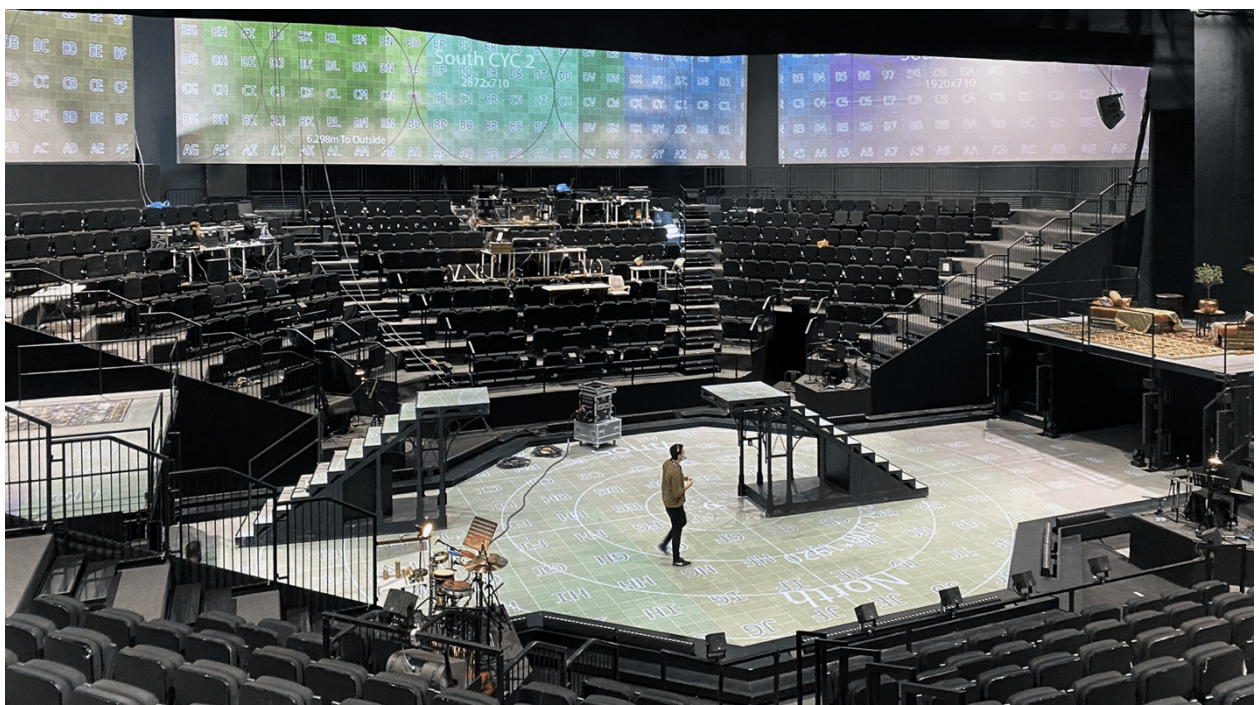
This Build up photo below starts to give you an impression of the size and scale of the production. **170+ fixtures used in tracking, not an issue for zactrack PRO**



One of the obstacles to overcome was the extensive use of gauzes as you can see in the photo below. With zactrack using Ultra Wide Band Radio this problem never became a problem (Back To The Future production in London uses zactrack SMART for a similar reason)



There was a great deal of different levels and heights used on stage, including aerial actors. Meaning a lot of tracking variation in the Z axis. Naturally, as both zactrack products are full 3D following solutions this provided accurate, stable & reliable tracking



Finally, a lot of actors & fast moving actors (swording fighting, aerial performers) with 27 trackers were active in the show (with a full set in reserve). **zactrack's speed presets with prediction mathematics, smoothing and other functionality to fine tune the tracking allowed all actors the Freedom to Move and be tracked to perfection.**



On the next pages, a variety of additional photos & the press release itself.







Press Release -

zactrack Solution for Kan Yama Kan

The global premiere of spectacular theatre and dance show “Kan Yama Kan” was staged in the Global Theatre at Riyadh’s BLVD RUH City entertainment complex, delivered by an award-winning West End and Broadway creative team, with lighting designed by Natasha Chivers, direction and choreography by Will Tuckett and auditorium, set and video design by 59 Productions, who were also technical co-ordinators for producers, Wonderjunkie and Anthology.

With a large cast, a vibrant traverse stage design, fast moving dancers, dynamic scenic items and aerial performers, plus multiple gauzes rolling in and out to enhance projections and other visual effects ... Natasha working with associate LD Andy Purves needed to track up to 15 principal actors, dancers and aerialists all over the performance space using multiple light sources positioned everywhere on the overhead trusses, often simultaneously!

As a solution to this brain teaser, they specified two zactrack PRO servers which were working with 14 anchors and 27 active trackers (with full redundancy) in conjunction with 170 moving light fixtures.

Zactrack uses an innovative (Ultra-Wide-Band) real-time radio tracking technology to make this exacting task smooth and flexible.

Due to the stage layout, the cast had to be lit from all angles – on XY and Z axes – right across the stage and in the two entranceways at each end of the traverse. To do this for the near 360-degree audience to get the best experience, three or four light sources had to be diligently applied, also avoiding washing out any floor areas being used as dynamic projection surfaces, so tracking was designed into the show from inception.

The challenge was then sourcing the right tracking system for this high-profile production.

“We considered several options,” explained Andy. “With the architecture and design of the show, zactrack with its Z vertical axis was the only viable way to achieve the precise results everyone wanted,” he confirmed, and they needed a radio and sensor-based system that would not get confused by the show’s action-packed technicals.

zactrack PRO uses a mathematical prediction model to deal with system and fixture latency and guarantees the flawless pinpoint tracking of actors, athletes, show cars or other fast-moving objects on and above a stage – in this case also flying aerial performers.

Another consideration was how straightforward the system would be to use. “Taking on a large multi-source tracking system is a challenge and a substantial amount of extra technology for a production’s lighting department,” noted Andy, highlighting that additional elements – like the calibration process and programmer’s time during tech rehearsals – must be factored into the equation when evaluating the tracking system options.

The brand new zactrack PRO system used for the show was purchased from zactrack International GmbH by Saudi production partners, SELA. For the one-month production

rehearsal and tech period at LH2 Studios in north-west London, a system was rented from Neg Earth.

Zactrack's UK distributor Ambersphere was also "incredibly helpful" in assisting the project, reveals Andy. They had initially arranged a demonstration so both he and Natasha who are UK based could thoroughly understand how it worked and ensure it would be stable, reliable and the right choice for this scenario.

As part of the process, Ambersphere connected them with others, including people at Neg Earth who had recently been using zactrack products, and hearing these first-hand experiences from industry peers provided "excellent" information and valuable feedback to help them make their final decision.

It included advice on the fixtures that made the best tracking lights, which are ideally compact, lightweight, responsive, and therefore able to move swiftly and seamlessly. "Ambersphere stepped in, hosting several crucial unit trial sessions," says Andy.

During rehearsals, time was also dedicated to discovering the optimal positions for attaching tracker tags to costumes and artists which is also crucial to getting the best performance.

In London, the rehearsal zactrack system was used with Robe LEDBeam 150 moving lights, and in Riyadh these changed to 80 x Claypaky Mini-Bs and 70 x Ayrton Diablos which were rigged across in the roof trusses and supplied by local lighting vendor, SLS.

Performers could be picked up anywhere on the stage and tracked in real-time, ensuring they were always beautifully lit without unwanted light spillage anywhere.

During set up, zactrack's Alignment Algorithm calibrates the lights in 3D space without any pre-knowledge of stage geometry, so at the venue the zactrack PRO "alignment-puck" can be placed on the stage and the software does the rest of the calculations.

The show's zactrack movement commands were integrated into the relevant lighting cues programmed by Marc Polimeni on an ETC EOS Ti console. He worked alongside Natasha as she developed the lighting scenes, looks and overall aesthetic while Andy focussed on the follow spotting detail, and who needed to be picked up by which lights, where and when in the show.

The production's head of lighting was Corey Bennett, and tracker wrangler Charlie Rayner tech'd and dealt with all aspects of the zactrack system including the 27 trackers (with some artists wearing more than one) on a day-to-day basis, in a slightly similar fashion to an audio radio mic tech. He was impressed with the battery life of the trackers as there were some long working days involved.

The time at LH2 enabled the lighting team to finesse the tracking and be prepped and ready for arriving on site in Riyadh and switching to the purchased system. "It was a very collaborative and enjoyable way to work," commented Andy, "using this kit allowed us to achieve results that simply would not have been possible any other way!"

Kan Yama Kan – the vision of producer Zeina Ashour – was a massive success. Blurring the lines between fantasy and real, the epic show re-interpreted some key tales from the 1001

Nights in a unique, fast-paced and energising narrative. The production managers were Gary Beestone and Andy Reader from GBA.

Photos: © Johan Persson

Company profile

zactrack International is the master distributor responsible for worldwide sales and marketing of zactrack Lighting Technologies' professional tracking solutions. zactrack offers innovative automated tracking systems that can track people and moving objects with high accuracy. The technology can be used in theaters and on stages, at events and trade shows, in films and television.

The company has many years of experience and has implemented many high-profile international projects. Service and support are provided through a worldwide distribution network.