

zactrack control for UAE National Day

Posted on February 22, 2023



A zactrack real-time tracking system was specified and used to control over 400 moving lights for the 51st United Arab Emirates National Day Ceremony which featured creative direction and design by Es Devlin and was produced by People Creative. The show was directed by Francisco Negrin, Gavin Robins & Bryn Walters, with lighting for this stunning and spectacular high-profile production designed by Bruno Poet, with associate designers Max Narula & Johanne Jensen.

A special tunnel shaped auditorium was designed by Es Devlin specially curated for the location at ADNEC in Abu Dhabi. The epic 45-minute show featured a full-scale parade and a stylishly

choreographed cast of over 3000, including 1000 military personnel and 1000 children, which highlighted the history, values, achievements, and future visions of the UAE.

This skilled fusion of colour, movement and drama was broadcast and streamed live on the first day of the 2022 UAE National Day holiday weekend.

Bruno's starting point for the lighting design was the detailed scenic environment and Francisco's carefully storyboarded narrative. Bruno specified a lighting rig that was versatile enough to cover the show dynamics and the impressive 100-metre-long by 20-metre-wide performance area. It featured giant curved portals at both ends with opening / closing doors for entrances / exits. The entire space including the floor was also used as a projection surface!

Ground supported lighting positions surrounded the entire venue, matched to the gentle curves of the outdoor setting, with seating stands either side and a 'ceiling' made up from 14 x 100-metre-long ROE Strip video products attached to catenaries.



Around 3,800 lighting fixtures were patched in total, 436 of which were calibrated and linked to the fully redundant zactrack PRO tracking system chosen by Bruno and Max, with 22 x Anchors (antennas) mapping the designated area and 75 x Tags (trackers).

Lighting being zactracked included powerful Elation Maximus and Robe FORTE luminaires follow-spotting principal artists throughout the show. The FORTEs were run manually by human operators working with the zactrack system which was controlling the intensities and other parameters, unlocking an impressive combination for superlative key lighting.

“We needed a highly accurate and reliable option to really tightly control key lighting, not just to highlight performers but to ensure minimal light spillage onto the projection surfaces, so they had maximum impact,” explained Bruno.

The zactrack system was also utilised to intensity track the location of objects without the lights moving, using a mix of Ayrton and Elation fixtures that captured the numerous parade floats as they passed along the 2km route. This was possible via zactrack’s MSC zoning feature, programmed to automatically trigger the appropriate lights and control the intensities of these fixtures as the floats (or objects) passed by one of 54 zones, which was a clean and streamlined process.

“The system worked brilliantly for this job, and it was extremely quick to set up and finesse,” commented Max.



With the Trackers (tags) so easy to conceal, the video crew from vYv UK additionally asked for assistance with tracking some of the cyclists during rehearsals, allowing their engineers to execute real-time rendering effects during the broadcast. Zactrack signal was sent into the video control system directly via OSC.

Bruno and Max had both used zactrack before on Andrew Lloyd Webber’s acclaimed “Cinderella” production in London’s west end, which ran for a year, with both lighting and sound zactracked via 28 performers throughout the show.

“Cinderella was our first time using the technology, so it was a big test, and everyone was very impressed with the results,” declared Max, with Bruno adding that based on that experience, they

were “fully confident” of integrating it into delivering the bold, dramatic, and slick lightshow needed for UAE National Day.

Bruno also explained how their increased knowledge of zactrack empowered the creation of some very subtle and tasteful yet highly impactful effects like the triggering of fixture intensities, using the lights statically as opposed to following the tags with movement.

For part of the military parade segment, a soldier was tracked so projected grid lines on the show floor would disappear as he approached in perfect harmony with his steps ... keeping the 1000 military behind him in perfect alignment.

The National Day event’s technical integrator was Encore Dubai who sourced and supplied the zactrack system together with all the lighting equipment.

zactrack’s own Alistair Smyth and Paul Roch were also “extremely helpful from the outset,” noted Bruno and Max, in terms of assisting in the zactrack system design to meet all their creative and technical needs and tweaking the system specifically for this show, arguably the largest zactrack system to date.

Says zactrack brand manager Alistair Smyth, “It’s always amazing to see the creativity of Bruce and Max in their inventive designs. Using zactrack with lighting, audio and video simultaneously from one system really illustrates getting the most from zactrack and embracing its many capabilities.”

Lighting was run via four grandMA3s with three grandMA3 lights as backup/tech. The three main ones with their requisite backups ran the show lighting; Jon Barker was programming and tech’ing the zactrack Trackers on one console, while Max looked after the main lighting fixtures on the second, with the third run by Dan Bond programming the vast amounts of LED strip in the venue in conjunction with a d3 server, which also received zactrack data via OSC.

Encore supplied two ‘onstage’ Tracker techs who were trained up on site by Max in the weeks ahead of the event. They laid them all out on the 20 parade floats, checked thoroughly and then assigned them to the relevant performers. The whole process of integrating the Trackers with the cast involved close collaboration with costume designers Jack Galloway & Oxana Rausch and their team who sewed special pouches into the shoulders and other strategic places.

The lighting crew worked onsite for seven weeks ahead of the show.

One of the major challenges was balancing the lighting with the video projections - created by Charli Davies for Luke Halls Studio, which is always a galvanising task, so the more control the lighting team could have over the potential spill factors of light, the better!

The show's audio was designed by Scott Willsallen of Auditoria and the music composed by Mohammed Al Ahmad of Al Watan Studio with choreography by Leigh-Ann Vizer. Stage management was co-ordinated by Orange Jackets' stage manager Sam Hunter working closely with show caller Julia Whittle.



Done+Dusted produced and directed the broadcast elements.

The Organising Committee of the 51 National Day Celebrations was headed by creative executive producer and Rawdha Al Qubasi, artistic director Ayesha Hadhir, and in addition to Encore, other production suppliers and consultants were Wonder Works, Stage One, Cundall Engineering, Al Laith, Creative Technology, Maestra, VK Scenic, Agora and Clair.

The 2022 event was a massive success, great storytelling once again pushing the boundaries of what is possible to achieve and deliver technically and creatively in an ambitious event framework, an entertainment discipline at which the UAE excels.

Photos: © People Creative