



PUY DU FOU



LES EPESSES, FRANCE
EUROPE, MIDDLE EAST & AFRICA

Puy du Fou is a historical theme park based in Les Epresses in the heart of Vendée region of western France and, quite frankly, it is something of a phenomenon, which made for a technical installation that was challenging and intriguing in equal measure.

Best described as a rural theme park minus the rides, Puy du Fou is home to some of the most spectacular, extravagant shows in which thousands of actors and animals recreate historical stories, from Roman gladiators through to King Arthur, all with incredible special effects.

The park itself began in 1978 as an open-air amateur dramatics night, where volunteers re-enacted the local history of the Vendée region. Since then, it has grown at an amazing rate, with shows based on fascinating eras in history - such as *The Vikings*, the medieval-based *The Secret of the Lance* and the awe-inspiring night-time show at the Cinéscénie. Such performances have led to Puy du Fou winning two US 'World's Best Park' awards, while some two million visitors are brought in each year, making it the second most-visited theme park in France after Disneyland Paris.

Now, Puy du Fou has taken things to the next level once again, with its new production - *Le Dernier Panache*, which tells the tale of François Athanase de Charette de la Contrie, who became known as General Charette. Beginning with his studies at the Marine School Guards in Brest, through to his naval battles, how his life was turned upside down with the French Revolution and his final battle for freedom during the Vendée civil war, it's a story that encompasses courage, strength and adventure, based on real-life events.

Le Dernier Panache is the most daring show ever created at Puy



du Fou - and it is only enhanced by the setting. Performed in the custom-built, 360° Theatre of Giants, which utilises advanced motion technology to create a rotating theatre, the 2,400 members of the audience are immersed in the story on a multi-sensory level, slowly rotating to watch the performance on seven different stages.

With such an ambitious production, the technical install proved to be challenging - with audio, lighting, video and special effects all having to be taken into consideration.

The task of providing lighting was down to renowned Lighting Designer, Koert Vermeulen, along with his team at ACT Lighting, with the idea being to use the lighting to help create seamless changes from scene to scene. Koert, who has had a long-standing relationship with Puy du Fou after his work on the award-winning Cinéscénie show, planned to achieve this through careful planning, a deft lighting design and the adroit placement

of fixtures, which were provided by Chauvet.

Koert takes up the story: "Puy du Fou built a new cutting-edge theatre for Le Dernier Panache to create a true immersive experience for the audience. The rotating theatre is a big part of the realism, as it allows scenes to flow one into another as the story unfolds."

Using 120 Ovation E-910FC colour mixing ellipsoidals from Chauvet, Koert and his team had to implement some unorthodox design concepts due to the moving audience seating area.

"All of the fixtures we have 'inside' the proscenium are non-moving heads, while all that are in the audience area are moving heads," said Koert. "This is a little bit different from the usual theatre setup, where you would see more moving heads onstage and fewer in the house.

"However, we did the opposite of this, because I knew I needed absolute flexibility for the houselights to be able to go anywhere, anytime as the seating area

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• **Top**
A naval scene during the show.

• **Left**
Le Dernier Panache actors on one of the rotating theatre's stages.

• **Right**
Part of the impressive set.

moved. We also placed the moving heads so that they are just peeking from the ceiling. This gave us the option of being able to focus them anywhere without obstructing the video projections. Things got tight, but we made it work.” Koert used all 120 of the Ovation E-910FC fixtures within the proscenium for side lighting, cross lighting, top lighting and gobo washing. The RGBA-Lime Ovation LED fixtures are used throughout the production to produce a whole rainbow of colours. “I almost never used a real ‘white’; mostly the Ovation light was coloured,” said Koert. “The colour mixing worked really well. I never had to compromise really on the colours I wanted to use. The Ovation fixture is able to give me the colours I need and the intensity I want. We tested all our options, and the Ovation was the best price-quality ratio by far.” Overall, Koert expressed his delight with the finished project, paying tribute to the team at Puy du Fou, as well as those that worked alongside him on the lighting design. “Given that this is the biggest indoor permanent spectacle and original creation in the history of the ‘Grand Parc’ Puy du Fou, it isn’t surprising that many talented people were involved,” added Koert. “We worked for several months with a team of experts from

58 companies. The artistic direction of Nicolas De Villiers and the challenging vision of Puy du Fou were critical. My Associate Lighting Designer, Luc De Climmer, and Assistant Lighting Designer, Julie Boniche, also played key roles. Just as there were a lot of moving parts coming together with the theatre, so too were there a lot of creative people coming together in the design process. We are proud to be associated with this production.” An aspect of the install that had to work in conjunction with the lighting was the stage backdrops, curtains and drapes, which were provided by ShowTex - another company with 10 years of experience in working alongside the team at Puy du Fou. The specialised technicians at ShowTex were able to meet the precise, structured requirements that came with such an ambitious project, providing a realistic, unique and long-lasting install that brought Le Dernier Panache to life. To highlight the scenery and create an ambience that matched the theme of Le Dernier Panache, masking drapes made of Molton CS were hung in six scenic spaces. However, the main showpiece of the install was the giant panoramic screen, which ShowTex provided using 900sq metres of FP-SuperMat. The bottom of the screen - which is 80-metres



wide and 11-metres tall - is immersed in water and hit by waves during the show, so ShowTex had to ensure that the screen absorbed the waves and stayed tight by using an open tube with curved weight pipes and a stainless steel chain.

Another huge challenge for ShowTex was the life-size palace that appears once the curtain half opens, which required an extraordinary level of precision to achieve the realism. The solution from the ShowTex team was to print it on Galaxy 250 Print, with 3000 sq metres used overall. However, this was not traditional printing, with LaserVoile used as a reinforcement backing fabric to hold the elements of the cutout window. The scenic space had to be used for several scenes in the show, so two printed 200 sq metre backdrops were equipped with a HiSpeed Roll-Up 8000 system, as well as a mechanism at the back for Roman curtain opening, which was all controlled via DMX.

The masking drapes and printed curtains were attached to concentric ShowTrack track, each with a length of 31-metres and coming with a built-in RTD3000 motor for easy, efficient DMX or simple cable control. ShowTex also installed an impressive technical ceiling above four of the stages for hanging draperies, printed curtains, light sources and other elements, while on two stages where the height of decorative elements didn't allow borders, StretchTulle was used to create the illusion of a closed - but flexible - black ceiling. Elsewhere, mobile screens were needed and ShowTex were happy to provide a solution by using 1,700 sq

metres of FiberCloth M0. The material was the least reflective, offering clear projected images and great flexibility. Using seven screens altogether, the FiberCloth M0 moves at a speed of 1.2-metres per second and offers the biggest possible projection surface, while also revealing the different scenes in the show.

Puy du Fou turned to Modulo Pi to provide its video solution, with Cosmo AV providing the images and Christie projectors used, too. The Modulo Kinetic Designer is used for control, with eight Modulo Kinetic Vnode 4K feeding eight Christie 4K Boxer projectors and another Kinetic Vnode for four Christie 2K projectors. With such a original concept, the projections onto the seven screens were made by tracking the screen position based on OSC machinery, with the Modulo Kinetic system projecting both on the top and on the ground to provide truly breath-taking scenery. A sound-transparent projection surface was also required at Puy du Fou to achieve total immersion. New Mesh was provided by ShowTex for a black backdrop and stretched tight, with the sound source for the show mostly installed behind the fabric.

For the sound source, L-Acoustics were on hand to provide a bespoke solution that would grip the audience as they watched Le Dernier Panache performed. Arnaud Delorme, the Applications Engineer at L-Acoustics, who worked on the installation at Puy du Fou, explained how the project came about: "L-Acoustics has been working with Puy du Fou,

providing sound systems for their shows, since 2000. For the Le Dernier Panache, everything started when Nicolas De Villiers and his team had this ambitious idea for a show where the audience tribune would turn 360° from one stage to the other.

"This idea introduced a new challenge for sound design which was: how can you keep a sound element in front of the audience while the tribune is turning. At the same time, Christian Heil was beginning the hard work that would lead to L-ISA many months later." So, what is L-ISA? L-Acoustics has created this multi-channel technical solution to provide a spectacular, ultra-realistic, three-dimensional sound space for performances. L-ISA totally immerses the listener in the sound, making the action intense and authentic. An L-ISA installation includes a Frontal speaker system to amplify the main scene area, with Scene speakers providing an accurate correlation between the sound and the position of the artists and Extension speakers to laterally extend the main scene and broaden the soundscape. There's also the Immersive system, which complements the Frontal system, that is deployed around or above the audience to provide localised sound effects and the creation of an immersive sound experience through L-ISA algorithms. In terms of how this was used at Puy du Fou, Arnaud explained further: "The system has to cover a 2,500 seat tribune, ensuring equal SPL and contour whatever the position of the tribune. Since the maximum distance between the front

• Above
The performers on stage at the Theatre of Giants.



speaker and the back of the audience was only 40-metres, the footprint of each cluster had to be dramatically reduced so it could fit between screens and technical catwalks. This led to a symmetrical disposition of ARCS WiFo system, which ensures maximum SPL and wide coverage but with a tiny footprint. "All the inputs coming from the server are going through a DiGiCo desk equipped with the L-ISA processor to manage the spatialisation of all those sources. Then, the processor feeds all the individual clusters of ARCS WiFo, SB18m, SB28 and 5XTs which means 34 signals all together." "Every 15 degrees, an ARCS WiFo system, composed of two ARCS Focus and one ARCS Wide, is installed behind the top screen and just underneath the

catwalk. Every three clusters of ARCS WiFo, you can find two SB18m, totalling eight SB18 clusters all around," added Arnaud. "In addition to this main system, a line of 13 5XT is used for the very first rows and four SB28 under the tribune helps to give a physical sensation to the low frequencies."

The incredible clarity and immersive experience that the innovative L-ISA system, along with the lighting, backdrops and video content, provides plays an absolutely vital role in the performance of *Le Dernier Panache*, enhancing the deep emotion of the show and gripping the audience throughout. It has to be said that the daring - almost unbelievable - *Le Dernier Panache* is a show that has taken Puy du Fou to the next level in terms of entertainment. ⁴⁷

TECHNICAL INFORMATION

SOUND

1 x L-Acoustics L-ISA processor; 1 x L-Acoustics L-ISA controller; 32 x L-Acoustics WiFoBump bracket; 48 x L-Acoustics ARCS Focus loudspeaker; 24 x L-Acoustics ARCS Wide loudspeaker; 16 x L-Acoustics SB18m subwoofer; 4 x L-Acoustics SB28; 13 x L-Acoustics 5XT loudspeaker; 1 x L-Acoustics LA4X amplified controller; 1 x L-Acoustics LA8 amplified controller; 1 x DiGiCo digital console

LIGHTING, VIDEO & SPECIAL EFFECTS

100 x Chauvet Ovation E-910FC fixture; 1 x Modulo Pi Modulo Kinetic Designer; 9 x Modulo Pi Modulo Kinetic Vnode 4K; 8 x Christie 4K Boxer projector; 4x Christie 2K projector; 900 sq metres of ShowTex FP-SuperMat; 3000 sq metres of ShowTex Galaxy 250 Print; 400sq metres of ShowTex LaserVoile; 1 x ShowTex HiSpeed Roll-Up 8000 system; 2 x ShowTex ShowTrack & RTD 3000; 1700 sq metres of Showtex FiberCloth Mo mobile screens; 600 sq metres of ShowTex New Mesh Print

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