

#Ayrton live

ISSUE 10 _ OCTOBER 2016



HIGH SCREAM CREATES USHUAIA'S *Wow factor with Ayrton*

BRUCE SPRINGSTEEN *Born to Run*

The **JEWEL** *of Las Vegas*

Twin on Tour with **RADIOHEAD**



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MAGICPANEL-FX CREATIVE SOLUTIONS

MAGICPANEL™FX is an exciting new multi-function, multi-use luminaire. With a revolutionary new optical zoom system that has no visible moving parts, this proprietary system has a 15:1 zoom ratio with a range of 3.5° to 52°. The front face is comprised of a 5 x 5 array of squared lenses which offer exciting new possibilities for creating 2D graphical effects and produces an extremely powerful beam capable of creating extraordinarily new 3D volumetric effects.

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AYRTON
Digital Lighting

Editorial

Dear Reader,

What a pleasure to present to you this 10th issue of our AyrtonLIVE magazine which is again full of great show reports and much more. These are interesting and busy times for Ayrton indeed with more and more shows and events using our original solutions all over the world.

From Eurovision 2016 in Stockholm to JEWEL night-club in Las Vegas, and from Bruce Springsteen & the E-Street band's world tour to Ushuaïa Ibiza Beach Hotel, you will discover plenty of different kinds of application for Ayrton's innovative fixtures.

In this issue you will also find a complete bench test of the AlienPix™RS, the latest new fixture in our world-famous Creative Solutions range.

Creativity is the essence of the company and we will continue to amaze our clients with never-before-seen fixtures. Giving designers the right tools to excite and astound their audiences is our mission and we will continue to work hard on this as Ayrton develops its ranges still further.

Valère Huart.
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AYRTON LAUNCHES NINE NEW PRODUCTS AT PROLIGHT + SOUND 2016

Ayrton presented a number of new products at Prolight + Sound, Frankfurt, exhibiting with its German distributor, Vision Stage, on a 'double-decker' stand where this year's new creations were shown to spectacular effect in a dazzling light show. Designed by Stéphane Migné, the show, featured over 650 fixtures in a 128sqm display, and culminated in a surprise ending which wowed the crowds who came to see the new creations in action. There were plenty of new ideas from these masters of innovation, with no less than nine new products launched.

Yvan Péard, Ayrton's visionary Chief Design and Technology Officer, delivered an array of innovations which have enlarged the scope of several of the Ayrton ranges: the largest

and most efficient optics on the market have been incorporated into the XT range to provide an optimised version designed for large-scale venues; the SX range marks the start of a new series that introduces a zoom capacity to the options available in Ayrton's product line; and the MagicDot™ family has been extended to incorporate fixtures to suit all sizes of venue. Ayrton continued to surprise visitors with more totally new innovations, including the world's first laser-source automated profile, a MagicPanel™ fixture with square optics, and the world's only motorised strobe.



AYRTON WINS LIVE DESIGN™ PRODUCT OF THE YEAR AWARD FOR THE SECOND YEAR IN A ROW WITH MAGICDOT™-R



Ayrton's MagicDot™-R has been awarded the Live Design™ Product of the Year 2016 in the Effects Category at the 9th annual Live Design Awards ceremony that took place in Manhattan on Monday, 13 June. This marks the second year running that Ayrton's product designers were so honoured, having won Product of the Year 2015 for MagicBlade™-R.

A member of Ayrton's Radical product line, the patented MagicDot™-R is the first professional moving head LED luminaire with a single optical collimator. Using a new 60W RGBW multi-chip LED paired with a 94mm high-efficiency collimator, in a unique and distinctive form factor, MagicDot™-R delivers an intense uniform 4.5° beam with a high CRI and a palette of rich saturated and pastel colours.

The judges said MagicDot-R was 'fun and unique' and chose it for a Product of the Year Award because of its power and agility, stating: "The MagicDot-R puts a refreshing effect fixture into the designer's palette. Its lightning fast movement, repeatable positioning, and full 360-degree rotation make this one of the most unique fixtures to have been brought to market in years. It opens the door to many great design ideas."

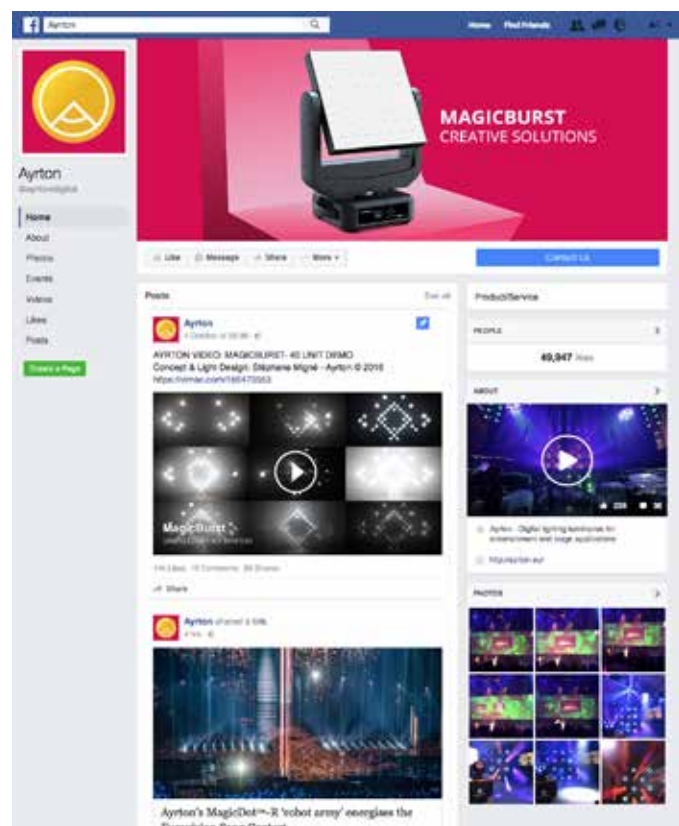
Since its release last year at Prolight + Sound, Frankfurt, MagicDot-R has been put to spectacular use by some of the best lighting designers in the world today, including Cory Fitzgerald, Mike Swinford, LeRoy Bennett, Mark Butts and Dan Hadley, for artists including Bruno Mars, Jason Aldean, The Weeknd, Little Big Town, and of course for the famous 'Grohl Throne' for the Foo Fighters.

« We are delighted to be awarded a Live Design Product of the Year for a second year in a row," says Ayrton's Valère Huart. "I think it is a wonderful acknowledgment of Ayrton's dedication to innovation. Knowing that the jury is composed of experienced designers and programmers, we can be only really proud. Let's continue the story next year!"

Paul Weller and Keith Bennett of Morpheus Lights, Ayrton's exclusive US distributor, accepted the award on behalf of Ayrton.

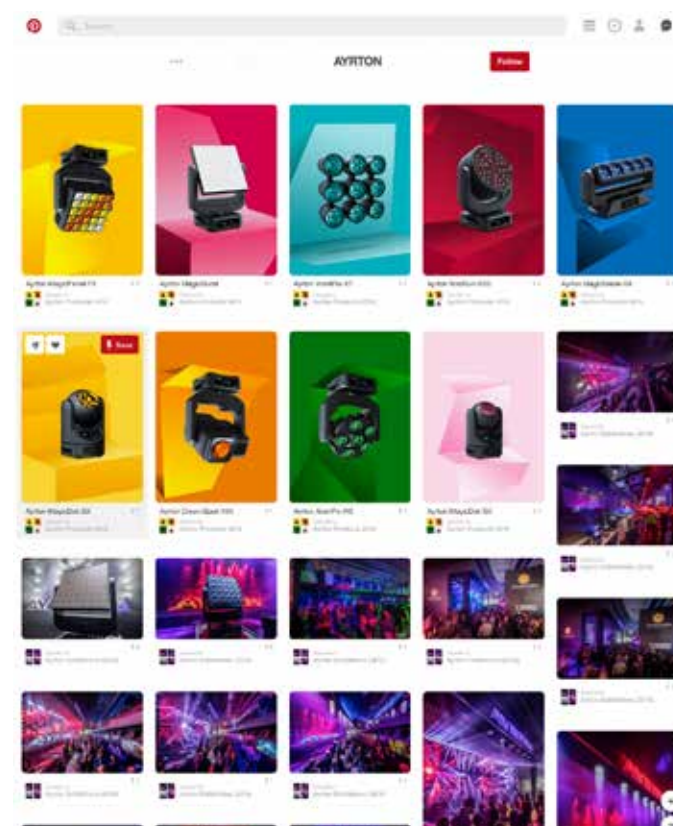


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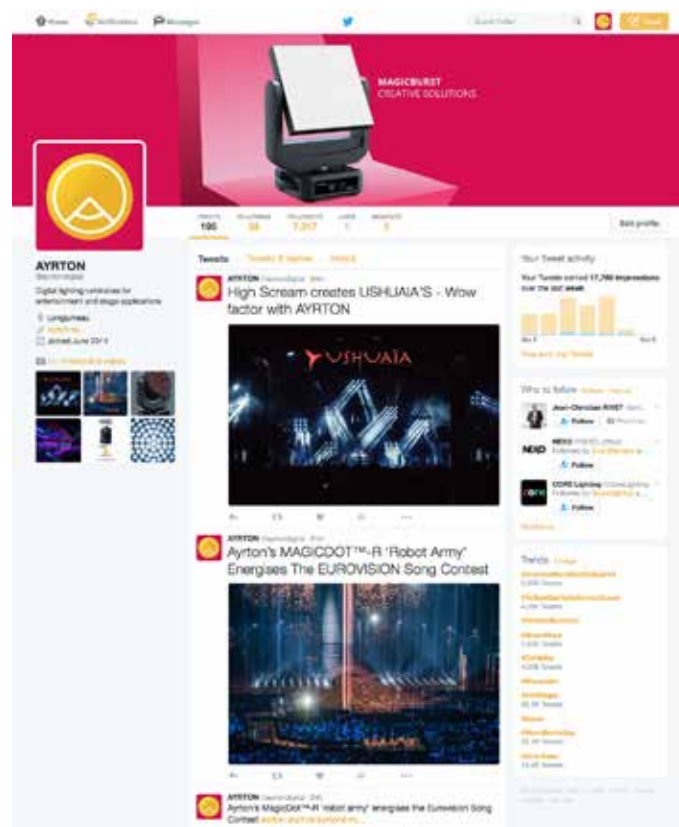
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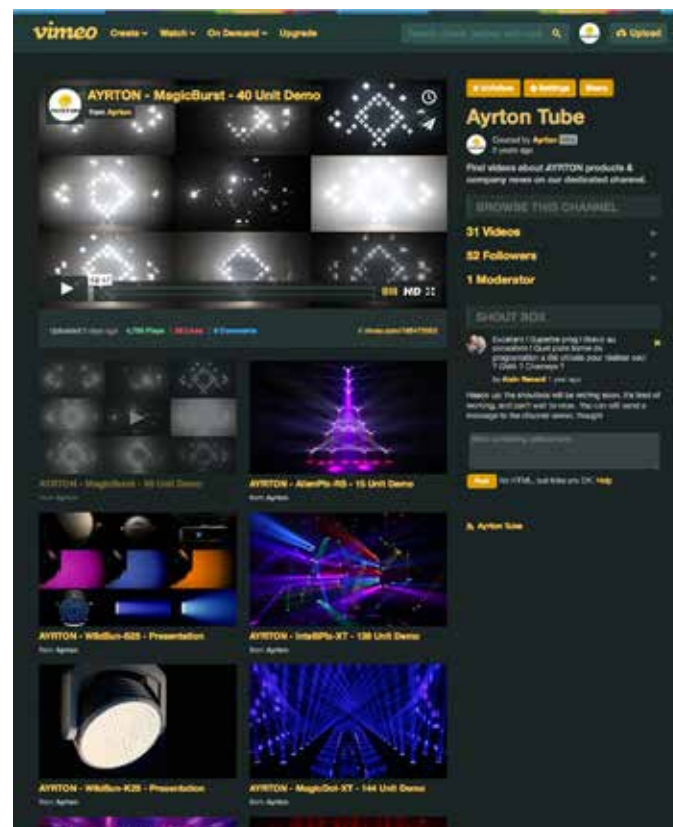
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MAGICDOT-SX



MAGICDOT-SX CREATIVE SOLUTIONS

MAGICDOT™SX is an optically evolved, multipurpose, variant of MAGICDOT™R, with the same form factor, dimensions and features, including ultra-rapid beam movement and continuous, unlimited, rotation on pan and tilt. This new luminaire replaces the 4.5° fixed-focus optics with a revolutionary new 8:1 optical zoom that has a fixed transmitting lens, no visible moving parts and a incredible zoom range of 5° to 40° (patent pending).

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DIMITRI VASSILIU TAKES WILDSUN™ K25 on tour with French band LES INSUS



© Fabien De Brucker

After playing France's small/medium concert venues and festivals, French rock band LES INSUS, made up of former members of Telephone – Jean-Louis Aubert, Louis Bertignac et Richard Kolinka – are now taking their 2016 tour on the arena circuit. Their stage design features ten Ayrton WildSun™K25 LED washlights, the large-scale white-light fixtures that were developed by the French manufacturer for creating a full daylight effect in stadiums and large venues, as an automated alternative to conventional HMI Fresnels.

French lighting designer Dimitri Vassiliu (who often flouts conventional uses of lighting equipment...) had other plans when he decided to use WildSun™K25 fixtures on this tour, which has equipment supplied by entertainment lighting vendor, Dushow.

While it may be really ideal for lighting concert halls, this attractive marvel is being used here to shower the audience in brilliant white light – without blinding it. WildSun-K25 has 217 LED emitters with a 10° to 60° zoom optics, arranged in nine concentric, individually controllable, rings – all mounted on an automated yoke.

Dimitri Vassiliu: Since LES INSUS interact and communicate with the audience a lot during their show, I wanted it to be really well lit – so the performers could see the people. But I didn't want to blind the audience, which would have prevented them from seeing the musicians... so, the K25s were exactly what we needed! What's more, I was getting tired of using Molefays...!

Hanging conventional white-light units on trusses over the audience can be time consuming and inefficient in terms of lamp replacement, fixture weight and the need to focus the fixtures manually. Why would a lighting designer want to deal with this hassle when a moving head solution exists that's lighter, has lower power demand (replacing a 6,000-watt HMI with a 2,750-watt LED unit that has a luminous flux of 100,000 lumens), and is far more versatile (and fully controllable from the lighting desk)?

Dimitri Vassiliu: I like to play around with the nine rings of LED emitters to create certain effects and modulate the output – being careful not to blind anybody but still lighting them well.

The zoom is useful, although, given the confines of the Zenith in Paris, I couldn't quite cover the entire room. It should work better in arenas in the upcoming weeks.

The WildSun™K25 luminaires are deftly used to illuminate an audience eager to see and be seen by its cult band, but they don't actually have the K25s on the stage – since the designer considers that concept a little too "garage".

The near-perfect white of the Ayrton WildSun™K25 (with excellent applications for video), is used splendidly here. This success suggests that we are going to be seeing a lot more of these big LED luminaires on French stages, arenas and stadiums soon.

JOINING UP THE KILLER DOTS



© Erik Kabak

Lighting Designer Steven Douglas is no stranger to the delights of Ayrton fixtures. When he was looking for a new way to showcase The Killers' logo of a 'K', his previous experience of Ayrton MagicDot-R™ proved a fertile ground for firing his imagination. "We've had various incarnations of the logo over the years; I'd always thought it would be cool to build a giant 'K' out of moving lights but I was always put off by the size and weight it would inevitably end up being as well as the space needed between fixtures to allow the head to move."

"When I saw the MagicDot-Rs for the first time it was exciting to think I had found a solution to the problem. Being able to mount the dots closer together because they are so small and do not move outside of the radius of the head itself meant that the concept was now a workable design. I spent a lot of time going back and forth with the guys at Ambersphere Solutions getting them lay out fixtures at different intervals and send me pictures so I could see in real life the gaps I had toyed around with in Vectorworks. As always, they were more than happy to oblige."

Douglas was concerned that, by trying to replicate the band's logo exactly, the dots would be too close together and simply produce a clump of light with little or no definition. Scale was also an important factor; the super-size 'K' needed to be in proportion to the stage and the lighting rig without losing the identity of the original font in the logo.

He continues. "Once we had figured out what we reckoned was the right separation between the units so we had clarity between each dot but retained a clear connection with the logo, I arrived at Ambersphere with biscuits in hand so we could do a proper shoot-out. It was essential that the MagicDots were not going to be too bright when pointing straight out into the audience even though I only use them at full-on and directly into the FoH area twice in the show. One of the great features of the fixtures was being able to spin them right round and point back onto itself and a glowing 'K'; the symbol is fully lit but without any intrusion into the audience space."

Once Ambersphere had answered all Douglas' questions, the supporting framework was constructed by All Access. To complete the look of the piece, Douglas asked for a rail to be built around the edges which are rigged with Ayrton MagicBlade-R fixtures. The whole frame splits into eight sections and the MagicDot units are permanently set into the sections that travel in custom-made set carts. Presently touring in the US where the rental supplier is Christie Lites, Douglas is clearly happy with what a packet of biscuits and a day at Ambersphere Solutions has achieved.

"I've been able to create huge effect from these little beauties," concludes Douglas. "For one song just being able to do a simple pan moment and offset all the fixtures allows for a huge effect to come from something very simple. We will be using the Super 'K' for sometime to come."



AYRTON'S MAGICDOT™ R 'ROBOT ARMY' *energises the Eurovision Song Contest*



The 2016 European Song Contest provided lighting designer, Fredrik Jönsson of Eyebrow Designs, Sweden, the opportunity he'd been waiting for: to specify and deploy Ayrton's MagicDot™-R fixtures. A total of 90 units were used throughout the contest, rigged in a highly unusual fashion in a horizontal grid formation and sunken into the centre of the stage.

"I'd had my eyes on the MagicDot-R for some time," says Jönsson, "and when Eurovision's set designers, who wanted a lot of lights at stage level, asked me about integrating a small aesthetically-appealing moving light into the stage floor, I immediately suggested the MagicDot-R and they loved the look of it. We arrayed them in two 'pools' sunken into the stage and they looked really cool – we called them our 'robot army'! The first draft was for 400 units, but we scaled down to 90 since we needed more floorspace to facilitate the artists..." Jönsson's intention was to provide this year's Eurovision Song Contest with lighting that was reminiscent of the traditional old rock and roll tours, using multiple layers to add dimension and space and give an impression of a much larger stage for the television cameras. "By using the MagicDots in this position, I was able to create another, more 'analogue' layer of visual information in the very LED-heavy environment," says Jönsson. "If one is to use a huge amount of LED surfaces on television, it is important to integrate the lighting into them to achieve proper depth for the cameras which seldom understand the depth of a flat LED wall."

Text: Julie Harper
Photos: © Ralph Larmann 2016

Girts Putelis of lighting suppliers, Litecom, who purchased the Ayrton units through Danish distributor, Atendi A/S, set up the product shootout for Jönsson to make his final choices. "Jönsson liked the MagicDot-R fixtures so much he was determined to keep them in his design, despite changing many other products after the shootout," Putelis stated.

Jönsson cites the MagicDot-R's size and output as the main reason for their being the obvious choice for the Eurovision lighting set. The fixtures had to be bright enough to hold their own amid the LED-heavy set, yet be versatile enough to give Jönsson what he needed in the vast range of musical acts that make up the Contest. From their trenches in the stage, the MagicDot-R fixtures delivered straight lines of powerful, punchy light which Jönsson used to create 'lighting cages' to surround the artists, or 'lighting pools' on the stage shooting visual light beams into the surrounding LED environment.

Jönsson reveals something of the range of effects the units enabled him to create: "In some songs, the MagicDots created nice soft-ish beams of light behind the artist. We also deployed glass bridges over the pools of MagicDots for one song where we used them as a 'light forest' that surrounded the artist and dancer who were on the glass floor above them. The MagicDots were also bitmapped in to the video content that was visible in the LED floor during other songs."

And they proved themselves very hardy on stage too: whilst still in the programming stages, the MagicDot-R army was covered by a portable floor to make a bigger performance area for a large number of dancers performing in one act. "Some of the MagicDots were knocked out of place by the covering panels, but they didn't break," says Jönsson. "We just reset them and they were up and running again. They are very robust in their construction!"

Litecom's Putelis was very impressed by the reliability of the Ayrton fixtures: "The MagicDot-R units behaved perfectly from the moment we received them from the factory, and we encountered no errors or problems throughout the whole six weeks of the Eurovision production and shows. We were very happy with them and confident they can provide our customers with the reliability and performance they expect and need."

Jönsson concludes, "I really like the MagicDots. As I said, I've had a sweet spot for them for some time and took the first opportunity to add them to my designs, and I'm looking forward to trying the new unit with zoom. Ayrton create great fixtures and I really like the new stuff coming out of R&D. I'm looking forward to trying them all as soon as the right projects come along."



SILBERMOND TOURS LIGHT WITH *Ayrton Radical™ fixtures*



German rock band, Silbermond, has embarked on a live tour in support of its recently released, fifth studio album, *Leichtes Gepäck*. Lighting Designer, Stephan Aue, has opted for two dominating lighting products from Ayrton, supplied by VisionStage of Germany, to play alongside them.

Ayrton IntelliPix™-R and Ayrton MagicRing™-R9 create the mainstay effects in the lighting set as the tour takes in major arenas across Germany, Switzerland and Austria, with technical provision from TDA Rental, Bottrop.

Aue took the album name quite literally for the creation of Silbermond's live look and aimed convincingly to travel with 'light luggage'. He explains, "I wanted fixtures that would give me a lot in a small package – and the Ayrton products do just that – it may look light but the effect is, nevertheless, powerful and heavy enough to convince in the big arenas."

The tour kicked off in May with a sold out performance by the band in Hannover, Germany, where the set was revealed. Between stage-to-ceiling videowalls, the Ayrton fixtures formed the beating heart of the 10m x 10m stage set: this included just three of the mighty Ayrton MagicRing™-R9 – for very good reason.

MagicRing-R9 boasts an overall flux of 26,000 lumen and a centre beam intensity of more than 2,730,000 candela. Sixty-one, individually controlled, 15 Watt RGBW LED sources, arranged in four rings with a minimal gap between the optics, provide numerous new graphic options and make it a powerful and extravagant luminaire reserved for extreme and unique use and special effects.

To mirror the iconic look of the music video for the single, *Leichtes Gepäck*, where pendulum lights puncture the atmosphere, Aue looked no further than the MagicRing-R9. "I needed to reassert the dominance of the pendulum light, yet I also wanted it to do more. The MagicRing-R9 is so versatile and so powerful, I needed little else. As a design element, the fixture is more than capable of delivering all I need in terms of the set 'look' – and it illuminates the musicians too."

Providing the lifeblood of the set, however, are four matrixes of Ayrton IntelliPix™-R, each composed of 16 individual units. The Ayrton IntelliPix-R is a semi-transparent modular beam projection panel with a 5 x 5 array of independently controllable 15W Osram LEDs that project volumetric colour graphics and media far into the air.

Positioned independently above the four musicians, the IntelliPix-R matrixes are rigged on motorised hoists, and thus fully repositionable, to provide a host of looks from this most flexible of lighting designs.

From a horizontal ceiling position, the IntelliPix-R matrixes punch out beam 'cages' to surround the musicians; quick change to a vertical or diagonal position at the back of the set and pixel-mapped designs depict a new song. Aue was very impressed with the scope he achieved with the IntelliPix-R, stating, "We were able to reposition the fixtures to constantly create new looks on the stage. We got so much from those matrixes."

He continued, "One particularly successful look was to map the profiles of the musicians onto the matrixes. The units were very simple to pixel map and we created a number of different looks that way. They also became blinders and lighting cages, so we really took a lot away with us in that fixture."

In his final assessment of the Ayrton fixtures, Aue praises the design philosophy behind the brand: "We were able to create incredible effects of huge proportions from a very few tools that were more than capable of competing with the video walls. The versatility and power of the Ayrton fixtures, along with their perfect colour mixing capabilities and accurate control, meant we could devise a wide variety of looks which are as stunning in the large arenas as in the smaller venues on this tour. Consequently, I have been able to make my design supremely transportable without any compromise in substance or quality."

A MAGICAL WEEKEND *with Ayrton*

Working with the Ayrton MagicDot™-R luminaires proved to be a rewarding and pleasurable 'Weekend' experience for Litecom's designer, Mikkel Samuelsen, at the recent Weekend (WKND) Festival.

This uber exciting northern hemisphere event took place in Sweden, Finland and Estonia on the same weekend, at the start of August, with MagicDot™-R debuting at the Swedish Festival in Stockholm, in front of a daily audience of 25,000 people. Topline acts in the line-up included Fatboy Slim, Tiësto, Example and Tigerlily.

Samuelsen was asked to create a design for the main WKND stage and chose Ayrton's MagicDot-R as a major component of the main lighting scheme. Samuelsen based his design around the idea of a series of 'cells' which, in turn, called for a small, but powerful moving light that could operate within the confined space of each cell. Each fixture needed to be small enough to fit within the 'cells' without interfering or blocking the other lighting systems, but at the same time be intensely powerful and manoeuvrable. Only Ayrton MagicDot-R was small and bright enough to fit the bill.

In all, 88 MagicDot-R fixtures were used for this complex design, each of which were fitted and mounted at a 90° angle into the audience-facing grid that flanked the stage, and was built using Litecom's MX1 piping system.

The Ayrton luminaires were supplied by Litecom, Denmark, purchased from Ayrton's exclusive Danish distributor, Atendi A/S. Extra MagicDot-R fixtures were obtained from Motion in Germany, as many of Litecom's MagicDot-R's were, happily, already out on other festival tours.

Litecom's Girts Putelis worked with Samuelsen to produce the full visual solution for the stage, including lighting and LED video walls. He said, "The brief for the EDM stage design included specific instructions for low energy consumption and lightweight fixtures that could be rigged using only single clamps. MagicDot-R's dimensions and LED source fulfilled all these requirements extremely well, with the added bonus of fast continuous pan and tilt.

Although they are not IP-rated for outdoor use, we used our own Litecom-designed rain covers that worked exceptionally well to protect the MagicDot-Rs from the weather, and we are happy to report that the luminaires worked perfectly for the whole two days of the festival and proved very reliable".

About MagicDot™-R

Compact, light and ultra-fast, MagicDot-R is a member of Ayrton's RADICAL™ series. It is the first professional moving head LED with a single optical collimator and multi-chip RGBW LED, resulting in an intense beam of less than 5°.

MagicDot-R's minimal cylindrical design is capable of continuous rotation on the pan and tilt axes, which allows endless groups of luminaires to be rigged in close proximity for stunning effect, yet each of which can be controlled individually. The fixture offers an overall flux of 1,800 lumen and a luminous intensity of 180,000 candela for an overall consumption of only 130 Watt. Weighing just over 200grams it is ideal for the creation of moveable virtual sets and complex light compositions with multiple beams.



ANDI WATSON DEBUTS *DreamPanel™ Twin on tour with Radiohead*

British rock band Radiohead's world tour in support of their latest album, *A Moon Shaped Pool*, has spent the spring and summer taking in the US, Europe, Japan, Canada and South America. It marks the first appearance of Ayrton DreamPanel™-Twin fixtures on tour, and the first occasion for lighting designer Andi Watson to get to know Ayrton lighting products.

I saw Ayrton's DreamPanel-Twin at Prolight+Sound 2015 when it was first released and found it very interesting," says Watson. "I like to work with fixtures that are composed of individual elements and which allow you to dynamically change the beam. I have a lot of experience working with multi-part fixtures and was interested in how I could use DreamPanel-Twin – it seemed to be an interesting solution to my requirement for a light with a proper, distinctive beam shape, that could be modulated and changed.

"The 8 x 8 matrix layout of the LED emitters on the MagicPanel side makes a lot of sense to me in terms of what I like to do with pattern changing and the modulation of the dynamic pattern, and also for pixelmapping. I feel I can convey direction, shape and texture much better with the 8 x 8 layout. Then, on top of that, the high-res video panel on the reverse is a fascinating concept and introduces some interesting options. I really liked the look of the fixture and I knew that an opportunity would arise to use it.

"We traditionally use a lot of video on Radiohead shows so when the tour came up, DreamPanel-Twin seemed like a perfect fit for the ideas I had in my head."

Radiohead are a band who like to push technical boundaries and to try

new things. Watson, who has been Radiohead's lighting designer and creative director since the band's first album in 1993, is a man whose similar mind-set matches them well. Watson views his lighting and stage designs as installations in their own right. He likes to craft and create his lighting designs into layer upon layer of light that create a stand-alone artwork in front of which the band performs.

"I tend not to do tours that just require lighting to be big and bright – that's not what excites me," he explains. "It's more important to me to create a beautiful environment for the band to perform in that is a piece of art as well as a lighting system, stage design or set. I prefer to take a specific approach to my designs, building layer upon layer and adding nuances to give depth and subtlety to the picture."

Because Watson has worked with Radiohead for so long, they know each other extremely well, and what they are trying to achieve. "I'm not given a specific brief as such. But we talk about ideas and influences all the time and the band give me a lot of rope for interpretation and design."

For the *A Moon Shaped Pool* tour, Watson designed a set of multiple layers behind the band based around a series of lightboxes incorporating back projection and mirrors. He added 42 DreamPanel-Twin units, arrayed in seven 6-unit columns and rigged between six 10' high by 6' wide video screens, to complete the backdrop. Six more DreamPanel-Twin fixtures were set, three per side, at stage level to provide horizontal cross-light on the band.

"The tour demanded a lot of compromise as the venues we play are so varied in size, style and architectural character, from London's Roundhouse with its circle of pillars to an amphitheatre in Fourvière, France with Roman

Text: Julie Harper
Photos: © Steve Jennings

columns on the stage, to large arenas like Madison Square Gardens, and festivals of all sizes across North America and Europe. The band wanted the same show and the same design for all of these, so it was quite a challenge to produce a design that could work in anything from the Roundhouse to a large field! I needed something that was extremely adaptable, and had the correct mix of subtlety and power to handle everything from the smallest to the largest venues. DreamPanel-Twin gave me a huge amount to play with."

One of Watson's pet hates is to see the audience looking away from the band to the side of the stage during a performance: "To counter this I designed the visuals to direct the audience's gaze through the band to the screens and up to the heights of the lighting above them. The vertical arrays of DreamPanel-Twins between the screens break up the large areas of video screen and are perfect in presented an engaging, ever-changing series of looks. The juxtaposition between the large and small video surfaces with which you can vary looks, combining and contrasting, allow me to create lots of layering of the video.

"To stop people looking at the screens like 'television' I mix it up a bit and refocus their attention back onto the band. We have up to four layers of live cameras cross-blending between images to give double, or even triple, exposures which result in a lot of textures.

"We chose to maximise the interest factor of the DreamPanel-Twins rather than using the movement as a feature, but we do take advantage of the rotation to mix it up between the video and LED faces. We get a very interesting effect by running video on the DreamPanel side then replicating that with exactly the same thing on the MagicPanel LED side as the fixtures swept around 180°. The change in texture is mesmerising. With the video side we use very slow movement, rotating the fixtures imperceptibly back and forth so you can barely tell they are moving, which gives very subtle changes in perception."

Watson worked with video content designer and long-term collaborator, Pip Rhodes, who created a lot of unique video content specifically for the 8 x 8 face of the MagicPanel side of the DreamPanel-Twin. "We worked out what worked well on the panels and put together some carefully created motion graphics to run on the LED side," says Watson. "This gives us huge amounts of variety and flexibility because the content was custom-designed for the panel layout, and results in some incredibly beautiful lighting. The degree of sophistication you can achieve with these units with careful planning, programming and thought helped us to develop a completely different form of lighting effect."

Watson was also able to take advantage of the different forms of control of the DreamPanel-Twin. "Because you can drive elements of the DreamPanel-Twin from both video and from a lighting desk, you have a lot of flexibility. I often use both sides simultaneously by running video content through the video side, and running chases, effects, or pixel-mapped images at various resolutions on the LED side to illuminate the lighting trusses and the backdrop. We are able to create a very dynamic rear illumination in this way.

"I can also put a glow on the video side and backlight the trusses. For example, for one song I light everything in primary green and I am able to add a tiny UV glow from the rear of the fixtures using the LED side. It is almost indiscernible, but very subtle and effective. Primary green with UV behind is a very beautiful combination! To have that rear light is a very unusual effect — looking at it you can't quite work out where the light is coming from, which is great! It was fun to discover how the units work, what properties they have and how to use them."

The tour lighting was programmed by Watson, assisted by Rob Gawler who also looked after some complex Artnet merging, via multiple Luminex DMX8 units, between the control of the



matrix side from the GrandMA2 full size console and the Catalyst Media Server. The video side of the DreamPanel-Twin units are fed by another Catalyst media server. All ten of the tour media servers are looked after by long-time Radiohead collaborator, Ed Jackson. Lighting for the worldwide tour was supplied by PRG.

"The DreamPanel-Twins are as easy to program as any moving light but the added dimension of the dual-sided option gives you a lot more to play with," concludes Watson. "I think they are a fabulous fixture, I love what they do and look forward to being able to use them a lot more."

Radiohead's A Moon Shaped Pool tour finishes in Austin, Texas on 7th October 2017.



DREAMPANEL-TWIN ADDS SPARKLE to the *JEWEL* of Las Vegas

Hakkasan Group's JEWEL nightclub, which opened in May 2016 at Las Vegas' prestigious Aria Resort & Casino, has provided a major new playground for Ayrton lighting fixtures. Along with Ayrton MagicDot™-R and CosmoPix™-R fixtures, JEWEL is also one of the first installations to use Ayrton's new DreamPanel™-Twin.

Based in one of Las Vegas' newest and most elite hotels, JEWEL is the latest of Hakkasan Group's clubs. Built to replace the existing HAZE nightclub – which, opening in 2009, was in need of bringing into the 21st century – JEWEL has been designed to re-attract guests from among the hotel's elite resident clientele and across Vegas.

The design intent behind JEWEL was to create an environment that gives guests a completely new, eye-opening experience, with visual effects that had never been seen before. Audiotek led the consultant-driven design with lighting and video conceived and specified by Frank Murray and Chris Kmiec, who worked in close collaboration with Hakkasan Group's Video Director, Ed Shaw and Lighting Designer, Andy Taylor. It was installed by local integrators, NTA under the project management of Nevin Edwards.

JEWEL is the third nightclub project for Audiotek with Hakkasan Group, having previously designed the Hakkasan at MGM Grand and OMNIA at Caesar's Palace. Audiotek was determined to create something completely different for JEWEL that would continue to reflect Hakkasan Group's reputation for opulence and quality and meet the high expectations of Aria's top-end clientele.

Audiotek's project manager, Chris Kmiec, takes up the story: "Our aim was to create a venue with enough 'wow' factor to draw guests back, and become known as a spectacle to be seen, as well as a place to be seen in. Every big nightclub now has a flat LED screen behind the DJ...we wanted a departure from this now-standard feature, and were looking to give JEWEL something exciting and original which would make it stand out from the many attractions Vegas offers."

It was while looking for this special ingredient that Kmiec and Murray discovered Ayrton's new DreamPanel™-Twin at Prolight & Sound in Frankfurt in 2015 and realised this dynamic panel was the ideal solution with which to create a truly unique design.

Text: Julie Harper
Photos: © Rukes.com

With a modified MagicPanel™ of 64 LED emitters on one face, and a high resolution DreamPanel™ video screen on the other, DreamPanel-Twin combines video and lighting capabilities into one fixture, with the added capacity of the continuous pan and tilt movement that is a feature of Ayrton fixtures.

This enabled Kmiec and Murray to devise a totally new concept of a kinetic feature wall behind the DJ booth which would be the focal point at the centre of the club's design. Composed of 54 DreamPanel-Twin units in a 9-wide by 6-tall array, the wall could not only act as a surface for video content, but also make use of DreamPanel-Twin's LED matrix side to run effects, act as low resolution video surface and even backlight the DJ – none of which would be possible with a standard video wall. Add to this the ability to alternate between the DreamPanel-Twin's two sides, and with the exciting addition of continuous dynamic movement, and Kmiec and Murray had found the format that would give JEWEL its signature look, in a similar way to the moving chandelier at OMNIA.

Kmiec and his colleagues at Audiotek were familiar with Ayrton and its products, having used Ayrton MagicPanel™-R and MagicBlade™-R lighting fixtures as key components in their design for OMNIA in March 2015.

"From experience, we knew how reliable Ayrton fixtures were, yet how original their design concepts are," says Kmiec, "so although it was a risk to place completely new fixtures at the centre of a project design – we were amongst the first to specify and use DreamPanel-Twin - it was a calculated risk that we believed worth taking! Plus we had the added assurance of Keith Bennett of Morpheus Lights (Ayrton's exclusive US distributor) at our back - we have always enjoyed great support and a great relationship with the company - so we were confident to go ahead."

Custom video content, created specifically for the shape and size of the DreamPanel-Twin wall, and designed to run on both video and LED matrix surfaces, was provided by production company, Ne1co, in conjunction with Hakkasan Group's Video Director, Ed Shaw.

Shaw worked closely with Audiotek lighting designer, Andy Taylor to produce an 8-hour long show that combines lighting and video into one stunning production. "Andy and Ed worked in a uniquely collaborative way, in a situation which is traditionally quite alien to lighting and video designers, because both designers were using the same fixture," says Kmiec. "They were able to take turns to drive the design from either the lighting or the video perspective using a Luminex DMX merge and Ai media server to take control of the lighting or video content as it played out on both sides of the moving fixtures. Avolites also made us some customised control software to move the DreamPanel-Twin in response to the video generated content."



The wall of DreamPanel-Twin fixtures is interspersed with 22 Ayrton MagicDot™-R fixtures which are rigged in two vertical curved arcs around the centre, reminiscent of the iris of an eye and echoing the club's high domed ceiling above. Five more MagicDot-R units flank either side of the DreamPanel-Twin wall. The MagicDot-R fixtures are rigged on custom-made telescopic brackets which bring them flush with the DreamPanel-Twin fixtures to optimise their effect within the set up.

MagicDot™-R uses a 60W RGBW multichip LED with new, high-efficiency 94mm optics and a single optical collimator to deliver an intense 4.5° beam and a palette of rich saturated and pastel colours. It has a totally round head which fits within the diameter of its cylindrical base in all positions and smooth, lighting fast movement in both continuous pan and tilt rotations. "We chose the MagicDot-Rs because of their speed, small size and sharply defined beam," says Kmiec, "and because they produce effects which are superior to any other product".

Sixteen more MagicDot-R units are mounted around the balcony edge to add to the midair effects and work in conjunction with the overhead rig, not the least of which is 6 Ayrton CosmoPix™-R fixtures suspended from the ceiling. CosmoPix-R is based on the concept of the famous PAR36 double-rotation spheres that date back to the early '80s, which Ayrton has revamped using totally new technology. CosmoPix-R uses 12 of Ayrton's 94mm optics



- the same as those used in MagicDot-R - and generates 12 shafts of coloured light that can be separately controlled in all directions and driven in continuous pan and tilt rotation.

JEWEL's CosmoPix-R units are employed as the major feature of the central lighting rig and reaffirm the concept of dynamic movement which has become signature to the Hakkasan brand. The CosmoPix-R are mounted on DMX-controlled Desisti pantographs and dropped in and out of the ceiling above the heads of the crowd to create interest at different levels.

"Dropping the CosmoPix balls down from the centre of the ceiling instead of rigging them in fixed overhead positions or against the wall allows us to make full use of the feature set of the fixtures," explains Kmiec. "They can be viewed from all angles and perform at full 360° in all directions, shedding beams of light above, below and to the side of them. We are able to maximise their spin feature and use multiple lights simultaneously to incredible effect. Then, when they are not in use, we can simple retract them back up into the ceiling so as not to obscure sightlines. The result is a multiplicity of new, exhilarating effects with many different layers to view."

It was these unique qualities of the Ayrton fixtures which caused Audiotek to chose them as JEWEL's feature lighting. "Ayrton designs products that are 'out there', and in this case 'disco', and they give us effects we can't achieve with anything else," says Kmiec. "When Ayrton designs fixtures, no-one says 'stop' to an idea - they just go ahead and make it work."

Audiotek Managing Director, Frank Murray, agrees: "Their products are easy to work with and great tools for the creative designer because they call for careful thought at the design stage. With something as multi-faceted as DreamPanel-Twin and CosmoPix-R, you have to give some thought to what you want to achieve before you program it; yet they can be programmed to be simple for the operator and in-house technicians to use, even after the designers have left the building."

The programming of JEWEL's high-octane show was carried out by Audiotek's Andy Taylor who directed Ayrton's Arnaud Pierrel, - the man responsible for the stunning programming of Ayrton's famous demo videos - and Avolites console officianado, Tim Hornung. The result is an 8-hour show full of content and movement operated by Jorge Tellez, JEWEL's in-house lighting operator.

"We are very happy with the way the Ayrton fixtures turned out," says Kmiec. "By investing in a product newly released by the manufacturer, we have achieved what we set out to do, that is provide the elite customers of Las Vegas with something new and really different - a spectacle to be seen, as well a spectacular club to be seen in. The DreamPanel-Twin and MagicDot-R wall, backed up by the extendable CosmoPix-R fixtures differentiate JEWEL from any other club in town, and it is succeeding in attracting VIP clients to this prestigious venue as a must-see attraction. It has set social media sites alight with Facebook, Twitter and Instagram alive with images and videos of the DreamPanel-Twins in action."

INTELLIPIX-XT



INTELLIPIX-XT CREATIVE SOLUTIONS

INTELLIPIX™XT is a versatile luminaire fitted with nine ultra-powerful, low-etendue, multichip LED emitters, which can be controlled individually and are coupled with AYRTON's new proprietary 126 mm diameter optics.

This configuration pushes the limits with a 2° full beam and a centre-beam luminous intensity of 580 candelas per lumem.

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HIGH SCREAM CREATES USHUAIA'S *Wow factor with Ayrton*

The Ushuaia Ibiza Beach Hotel, which opened in 2011, is a unique concept for the island: a purpose-built hotel and 'dayclub' which has rapidly become the #1 Open Air Club in Ibiza. It is the inspiration of Yann Pissenem who created the Ushuaia brand as a fusion between beach club and luxury hotel, designed as a concept venue for music lovers. The idea has been realised in conjunction with his brother, Romain Pissenem, founder, producer and show director at High Scream, who produces eye-popping shows for Ushuaia that take the DJ out of the nightclub and into full-scale show productions.

Completely rethought and redesigned, Ushuaia is more than a club, having been built as a show venue which attracts party-goers, not only to dance, but also to witness these spectacular shows. Unlike other clubs on the island, Ushuaia opens at 5pm daily throughout the summer and runs until midnight, treating clientele to a spectacular 7-hour show which is as much a visual treat as a musical one, and includes a 2-hour main slot from the best DJs and artists of the underground and EDM worlds.

"Yann realised that clubs on Ibiza only opened at midnight, creating a life-style which cut too heavily into the next day and didn't allow holiday

makers to enjoy all this beautiful island has to offer," explains Romain Pissenem. "He therefore came up with the idea of a club that opened in the daytime, so party-goers could go out earlier in the evening, have a great party, see a massive show, then go to a restaurant at midnight and still be able to get up the next morning to enjoy the beach, the island and its attractions.

"In addition to this, we have seen the EDM scene change a lot over the twenty years that I've been producing shows. Many DJs now spend their time playing festivals and what was their traditional small club environment has now transformed into massive show arenas. Ibiza is well placed in Europe for electronic music, and it makes sense for us to reflect how electronic music is now, and to move it forward.

"With Ushuaia we have a unique venue in which I am able to develop the idea of what I like to call 'Electro-theatre' where we mix a party and electronic music with a proper show. This is what I constantly aim to achieve at Ushuaia, and with electronic music on a bigger scale. We have a 'pit' area and a balcony for the audience, and a layout that is reminiscent of the Italian opera houses of the last century. Party-goers come to see

Text: Julie Harper
Photos: High Scream
© Roberto Castaño

a DJ and to party, for sure, but they also come to see the show. This is something really different in EDM circles and makes Ushuaia unique."

The formula has proved extremely successful with Ushuaia's sixth summer attracting capacity crowds of 8000 people a day over the 120 consecutive nights of the summer season. "That's nearly 1 million people – it's basically become the biggest outdoor festival in the world," says Romain.

Ushuaia is also a hit with the artists. The season's residencies read like a showcase of EDM royalty as David Guetta's Monday slot is followed by Hardwell on Tuesday, Axwell & Ingrosso on Wednesday, Martin Garrix on Friday and Avicii on Sunday. In between, Yann Pissenem has created a new brand, Blue, for Thursday and an underground brand, Ants, for Saturday.

"Ants has been a massive success for Ushuaia," says Romain. "It is totally sold out every Saturday and is the only show we take on tour in its entirety. This year we went to Electric Zoo in New York, had our own stage at Creamfields in Daresbury and are still on tour with it now."

So special is Ushuaia that DJ Avicii chose it as the venue for his last show before retiring this August. "It was very emotional as we have worked with him for the last five years," says Romain.

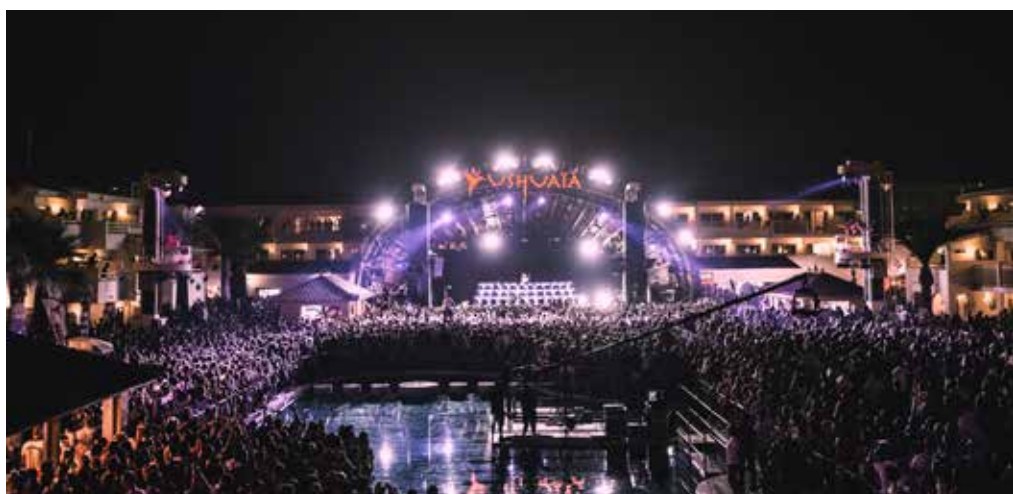
So what is it that gives Ushuaia its international appeal and legendary status?

"Ushuaia is not a standard date on the artists' tour calendars," explains Romain. "Artists tour with their own shows, but when they play Ushuaia, they don't bring their shows with them. Instead, we create a unique 'special edition' show for each artist which is exclusive to Ushuaia. They have a new stage design, new video content, new lighting design – everything is totally new, and we do that for every DJ."

With a background in production and direction of theatre and events in Paris, Romain, aided by his team at High Scream, is responsible for the design and production of every aspect of every show produced at Ushuaia.

"We handle all the production and show direction - from the concept through to the realisation - of all 120 shows," explains Romain. "This includes the stage design, lighting design, video content, costume design, effects and pyrotechnic design, equipment specification and rental, and casting of dancers and acrobats, and employment of technical crew."

"We work all through the winter with the artists and their managers to find something that will fit their, and our, expectation. We have worked with them for many years and know them well. The artist and the music are always the beginning of the process. Their music is my scenario and forms the direction of my design. We also take into account the mood or theme of each act to help set the ambience, so for example





we use the '+x' of Martin Garrix's Multiply party as a recurrent theme, or create something much more 'square' and 'electronic' in style to enhance the aura of Ants."

Incorporated within each show is something Romain calls the 'Wow' effect. "The 'Wow' effect is a signature feature of High Scream's productions and we make sure we have one every day," he says. "For David Guetta's show, BIG, we created a massive tap of running water which floated in mid air over the swimming pool, and added an acrobat, suspended under 500 helium-filled balloons, to perform aerial tricks above it. This kind of thing generates a great response from the audience and becomes a talking point for each show."

The logistics in turning shows around on a daily basis within the confines of a hotel are immense. "When we close at midnight we have 8000 people leaving the venue, with confetti, streamers and pyro residue everywhere. By 6am we have all the entrances outside the club done, all the show decoration ready inside and all technical aspects completed and ready to go. We have to be very quiet so as not to disturb the guests, but we style the fit up as part of the show for the clients. Guests can see the next show taking shape outside of their bedroom window – it's like a backstage private party. It's quite a challenge and keeps us working 24 hours every day.

"It takes around 75 people to run the shows at Ushuaia and I am very lucky to have an amazing technical team. Ideas are only one step in the creation of a show and you have to have the skills to make them real. Our Technical Directors, Bertrand De Saint Pern and Ian Woodall, and

Lighting Designer Sebastian Dupont, are absolutely brilliant, and at High Scream we have all the cool talents who specialise in lighting, video, 3D, etc, as well as clever people who can organise the technical side of transforming from one show to another daily. It takes real teamwork to make all that happen."

Ayrton at Ushuaia

"When I create a show I like to tell a story in design and production, to reinvent the journey and by doing so, create an ambience for the audience. I think Ayrton approaches the design of its products in a similar way, always asking what more they can do with light and expanding the possibilities. This is very valuable for people like me, and I find a lot of ideas come about because of what I discover Ayrton products can do.

"We have used the MagicDot™-XT and DreamPanel™-Twin fixtures a lot this year and I am very excited by the sheer scope of effects you can achieve with them. From the same fixtures you can create such a wide variety of looks, whether it is from the different configurations in which we rig them, or the combination of effects you can get from each unit. With Ayrton, we have been able to create completely different looks for every show.

"For Armin van Buuren, for example, we used a single line of MagicDot-XT fixtures across the top of the DJ booth at stage level to project out above the audience. The following day we changed to a more industrial look for Ants, with MagicDots arrayed in 3 x 3 matrixes within cubic pods flown above the stage. The DreamPanel-Twins rigged on truss columns to flank the dancers during Ushuaia's opening night party were also used



to transform the frontage of Avicii's DJ booth."

Romain had a very specific use in mind for the DreamPanel-Twin on Avicii's show which centred around a curved LED DJ booth faced with 36 DreamPanel-Twin units. "DreamPanel-Twin is an amazing product because you can do so much with it. You can use it as light, use it as video, use it as light and video together, move it continuously 360° in either direction..." he says. "When Avicii played, the whole thing became alive, and to me it was like giving life to a light and to a video screen. When you combine so many fixtures in a curved array with so many possibilities, the effect is amazing. The first time we turned it on, the crowd went crazy. It was like a firework going off. Even I and our lighting operators were stunned! The 'Wow' factor was immense and everyone was amazed by it and sharing photos. I love that!"

But it is not just the power of the 'Wow' that made Ayrton so attractive. Ushuaia's unusual opening hours mean the shows crossover from daylight into night-time. "This is one of the most complicated things because in a normal club you can hide things, but at Ushuaia in broad daylight you cannot hide anything," says Romain. "It's a 360° venue with everything in full view of the audience, so every element of costume or decoration has to be perfect, clean and good to look at."

"But this is also one of the reasons we like to work with Ayrton lights: their appearance as well as their capabilities are very important. Firstly, we need lights that work as illumination, of course, but we can also use them as a type of special effect and a point of interest during daylight hours. The effect of a normal light in daylight cannot be seen and is

not very interesting to look at. But with an Ayrton DreamPanel-Twin or MagicDot-XT, even at six-thirty in the evening, it is interesting to watch the movement of the units themselves, and to build curiosity and anticipation in the crowd. This is great for us because in one light, we have also a piece of decoration and special effect."

Romain employed the MagicDot™-XT in force on Martin Garrix's show by creating a massive rectangular matrix of 100 MagicDot-XT fixtures which surrounded the central cross motif backdrop, and adding 6 DreamPanel-Twin units on each of the four corners.

"When you have that massive matrix of MagicDots and DreamPanel-Twins to work with, you can make it interesting to look at, even if the lights are not turned on," he explains. "It's about managing expectation. We don't turn on everything before the main act comes on stage, but we give little hints beforehand to tantalise, and you can see people wondering how it works and what we are going to do with it. Martin Garrix is one of the few artists to bring his own lighting operator, who works with our design. This is also very interesting as I love to see how a new operator brings fresh eyes to the design you have created and the lights you have chosen, and to see how they will see and use them."

"When Martin comes on as the main act at around 9.30pm, it is dark and then we really go for it, treating the crowd to that 'Wow' factor again. When we turned the matrix on it was insane – again the Ayrton fixtures were a mix between a lightsource, a special effect and decoration. You can't ask anything more from a light – it's doing everything for you!"

Romain Pissenem

Show director



Romain Pissenem is the founder, producer and show director at High Scream, a production company with offices in London, Paris and Ibiza. He has gained a reputation for innovation, creativity and diversity combined with tremendous drive and energy. With a background in producing and directing events and theatre in Paris, he is also responsible for the show direction and production of all shows at Ushuaïa Beach Hotel, and for many others worldwide.

"I opened my first production company in 1996 at the age of eighteen and since then have been producing and directing shows for the last 20 years. My goal was always to produce huge shows with a big 'wow' effect and a lot of light and action.

"I grew up in a small village and, at the age of 12, watched some music video clips that made me so excited with their energy. I started to think about where I could see something with that same energy. From then on I wanted to create that same show-and-music combination on stage, and as a teenager I found the energy of a crowd with a DJ was perfect. I saw that you could use that energy to create massive shows with light and set and effects combined as a proper production. That was the start of what I am doing now and I am extremely happy and grateful to be able to work with people who can help us actuate this kind of product.

"I'm now 38, but I still have exactly the same excitement as when I began. Every time we produce a show and I see it become live on stage, right down to the closing party. I am really happy that I am still passionate about it. The day I wake up and don't enjoy going to Ushuaïa, I suppose I will stop, but I hope that won't be tomorrow! It's a passion and I love it."



"That's what I really love about Ayrton products - their ability to act as a light, but also as an element of decoration and a special effect. At the moment, Ayrton are the only manufacturer whose products allow you to do all that in one."

Romain also says that having so many options could be a dangerous thing! "Ayrton makes me feel like a kid in a sweet shop — I want to use all of them! But I have to be careful not to use everything full-on all the time. The DreamPanel-Twin, for example, is such a good product, it calls on me to make a good design and for us to operate it very well.

"I like to consider my job like a chef: you have to get all the right ingredients and mix them all in the right proportions and combinations — not put too much or mix too many things at the same time. If you don't get the mix right, you don't get the best results. So I have to be really careful not to use everything at the same time. But like a chef, I also have to be careful to find the best ingredients to put in the mix, and I feel that, since working with Ayrton, I have discovered the best ingredients to put in our system. You can do so much, it's like an infinity of possibilities.

So what happens to Ushuaïa at the end of the season — is there some down-time?

Ushuaïa closes at the start of October with a huge last night party to celebrate the end of the season. This year it takes the form of a Rave



Cave with a massive design and a whole week fit up period. "It will be a mix between decoration and technology and, I can guarantee you, I will use everything!"

But the work doesn't stop there. The day after Ushuaïa's closing party, Romain travels to Paris for a completely different project — directing ceremonies on France's opening game for the World Cup selection in front of an 80,000-strong crowd in the stadium and another 6-7 million watching on television.

Then comes a meeting with Ayrton to plan a show in Paris next April which will be co-hosted by High Scream and top French radio station, Fun Radio: "Every year we produce a big show at the 20,000 capacity Accord Hotel Arena," says Romain. "I would like to design this show in 2017 using only Ayrton products. They have so many different, cool products that I want High Scream and Ayrton to collaborate to create a massive design which will 'wow' the biggest venue in Paris."

Two weeks later the team travels to Amsterdam to start working on the first of the Ibiza shows for next year. Meanwhile, Yann Pissenem is taking over Space Ibiza and High Scream will be responsible for all the production and direction of the shows at the newly refurbished club when it opens in 2017. This will double the present output to 240 totally new shows per year. "Soon we will have more shows than days in the year!" says Romain. "No, I don't make life easy for myself. Why would I do that?!"

MAGICDOT-XT



MAGICDOT-XT CREATIVE SOLUTIONS

MAGICDOT™XT is a radical fixture fitted with the AYRTON's new and proprietary 126 mm diameter optic – which distinguishes the "XT" product line. Weighing in at 550 grammes, this new high-efficiency lens is the world's largest collimator! Combined with an ultra-powerful, low-etendue, RGBW multichip LED emitter, MAGICDOT™XT pushes the limits of technology even further with a 2° full beam and centre-beam luminous intensity of 580 candelas per lumen.

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AYRTON
Digital Lighting

THE AVENER

has all the visuals at his fingertips

Using All Access Design's interactive concept



As deep house and electro music producer The Avener pursues his stellar career performing at ADM concert festivals, we thought it would be worthwhile to go back and have a look at his Flash Deep Tour, from late 2015, to focus on the interactive concept developed by All Access Design (AAD). The concept is that the artist can maintain manual control over part of the lighting rig – live and in real time.

the DJ controlled the visual ambiance, acting as a virtual orchestra conductor of the stage design.

To get the desired perspective, Hardellet and All Access Design's engineers integrated LEDs directly in stage components made up of four triangular parts, which were fully mobile.

Any interactive and ultra high-tech design concept should include one of today's most versatile luminaires, Ayrton's DreamPanel™ Twin. In a matrix installation, the hybrid fixtures, moving HD video displays, backed with brilliant LED graphic beam projectors, were combined with other multifunctional fixtures like Ayrton MagicBlade™R.

We sat down with the AAD team members and Alex Hardellet, the atypical young lighting designer who's in charge of this wild project.

SLU: The Flash Deep Tour is a collaboration of four artists. Did you do the lighting for the entire show or just for the star – The Avener?

everaging the latest technology on the market, Alex Hardellet, lighting and video designer for The Avener, applied this interactive concept in his stage design using multiple planes with forced perspective.

Generously mixing tungsten-based fixtures, LED luminaires and video equipment (and even some video game components), he created a rig of connected objects all under a man-machine interface to permit the show to be controlled from the stage. In addition to selecting his music, beats-per-minute, and transitions,

Excerpts from the paper published on the SoundLightUp Webzine

Text: Isabelle Elvira

Photos: All Access Design & Monique Cussigh

More informations & photos:
www.soundlightup.com

Alex Hardellet: "On this tour, AAD only handles The Avenir — even though we proposed an overall killer plan that is used along with some additions for our set. We share the lighting desk with other lighting designers, which is not easy when it comes to timing. With such a huge setup for a one-shot deal, it's hard to set aside the time for rehearsals and sound checks for everybody. So, obviously, we programmed as much as we could ahead of time.—It was really tight!"

SLU: And with all that lighting gear?

Alex Hardellet: "I've seen bigger rigs, but for us, this is a major deal having a rig like this for a DJ in France! It's a really ambitious project, totally involving the equipment supplier (S-Group), the production company (Miala) and All Access Design."

Talk about a vendor being involved! Léon Van Empel and his company S-Group went so far as to buy the new DreamPanel™ Twin fixtures especially for this tour — showing incredible confidence in the designer!

The magnificent Ayrtton hybrids

SLU: Were you able to get the production company to supply the luminaires you wanted?

Alex Hardellet: "Yes, we managed to get the DreamPanel-Twin luminaires and all the LED units, as well as most of the other gear. That's mostly thanks to the equipment supplier who had no qualms about investing in the gear. They have always been very loyal to us when it comes to customized orders and integration."

SLU: Tell me about the Ayrtton DreamPanel and MagicBlade-R luminaires. Were they an obvious choice for you?

Alex Hardellet: "We fell in love — both with Ayrtton products and with Yvan Péard when we saw the video demos — maybe even before that! We just had to include DreamPanel Twin to support the multi-perspective design idea.

We often do front projection planes with a video projector then we add more to create depth. But here I wanted that depth to come from far off, not from the front.

So we installed the VP upstage, behind the DJ cage, between the DreamPanel-Twin units, so that it could project volumetric light together with the DJ/LED matrix plane and the back of the Panel. Our idea was to establish the foreground and background with LEDs in the same perspective — connected through the VP's volumetric light and obtain a mixture of several textures of light."

Uniform, but multiform, gear

SLU: And how are you using Ayrtton MagicBlade-R luminaires in the design?

Alex Hardellet: "It made great sense to use them. We were in a LED universe and I needed a fixture that could produce a lot of light and work in continuous rotation while doing LED-to-LED to extend the pixel-mapping. The MagicBlades are really beautiful



in the installation and they jump right out at you. The rest of the gear follows the same style: rectilinear, conventional and uniform."

SLU: The moving components around the DJ use LEDs...

Alex Hardellet: "They were custom-made for the show and the sides are motorised.

It was quite a challenge trying to make these 150-kg-components move up and down and left to right. The three sections are controlled, and transverse movements were developed by our friends at Moving Load, who made it all possible on a tight deadline and budget. We were the ones who created the vertical movements with winches."

But the little something extra that really made a difference in Miala's bid was the interactive systems and customized products that are a signature of the lighting designer.

Inspired by The Avenir's album cover, Hardellet conceived a creation that is graphic, with multiple planes of perspective, full of

1. Powerful Ayrtton MagicBlade-R luminaires project horizontally. While rich in video, the stage design still shows a sense of restraint and sobriety

2. Alex Hardellet during the show

3. The DJ impeccably presented as a musical variety artist, highlighted by MagicBlade-R units



4

4. A superb display of Hardellet's showmanship, with pixel-mapped LED emitters all following the artist via motion control (four moving triangles and the MagicBlade-R units rotating on truss totems)

square elements but also very mobile and open to the audience and the artist, with the interactivity of the accessories at the disposal of the DJ.

Visually connected and immersive stage design

SLU: How do you combine light and interactivity in your stage design?

Alex Hardellet: "We have a Kinect 2 for XBOX interface that can interpolate body positions and use the internal player like a mask of the person moving in real time – who in this case is The Avener. It's managed by computers that were specially developed for the show.

The idea is to mix the various perspective planes of the lighting design. So, at the beginning of the show the VP shows the DJ in perspective under a halo like some kind of god. As he plays the game and does his show, the Kinect box follows his slightest movements perfectly.

The Kinect interfaces to a computer, which sends a video signal in SDI to a PCI card in the media server. The video output can then be routed either into the VP or into the multiple DreamPanel-Twin array."

SLU: And you just use the Kinect to control the fixtures interactively?

Alex Hardellet: "We also have Leap Motion controllers, which are sensors placed on the fingers – very precise (up to a 10th of a millimetre) – for converting the movements into signals. Then, that signal is assigned to whatever we want... in this case, to the

Ayrton MagicBlade-R fixtures to follow the movements.

In fact, we repurpose all these tools used for controlling a computer without a mouse to enable the artist to act like an orchestra conductor for the automated luminaires.

It's the same idea with the MIO wristbands that we also use for controlling light. They are a little less reliable, because they're newer – but they have enormous potential... able to capture the positions of muscles, and therefore hand gestures in space, like making a circle move, or moving spots and triggering strobes with the simple movement of the hand.

Again, we're converting information using protocols that can be processed by the lighting consoles – especially with the grandMA, which has a 3D "spacializer" to interface the MIO trackers. This can be used to set a position that is then tracked by all the fixtures in the rig.

We really like this plug-and-play feature... total immersion."

SLU: So the DJ has all this equipment on him?

Alex Hardellet: "Yes, he has MIO wristbands on. The Leap Motion sensors are mounted directly on his desk and the Kinect device is behind him. I keep total track of everything from the lighting console, using a monitor that watches the system so that I can intervene in case there's a problem. The whole system runs on about 15 DMX universes, but we also have MA-Net Art-Net, OCS (Open Sound Control) and MIDI."

SLU: Is your desire to constantly develop and deliver concepts for innovative, interactive or connected solutions a response to today's lighting needs in France, or is it just because you enjoy it?



5

Alex Hardellet: "No one ever asked us to develop this sort of concept – so we developed these interactive features, ourselves, just for the fun. I think, however, that even if all this isn't necessarily going to contribute an astonishingly new solution in the race for higher-performance entertainment lighting, we are still meeting a technological challenge... using interactive functions that bring the audience closer to the artist – and that's what people are really looking for.

The real motivator is passion! We are all passionate about light, and when you get excited about something you want to share that feeling."

SLU: Of course, the artist has to play along...

Alex Hardellet: "That's key! This system requires a serious investment on the part of the user.

The Avener was immediately very receptive to the project. We didn't have to convince him... It's so amazing and surreal that something like this exists – it couldn't fail to impress – but then again, remember that interactive technology is not what makes the show. It's just a little something extra we give The Avener and his audience: a cherry on the cake."

Hardellet and his colleagues have a talent for creating technology that neither the artist nor the production staff would have ever dreamt of (or known they had a desire for).

On this one-shot tour with just a few dates, the interactive installation and multiple perspectives were a major success, becoming the hit of festivals that rarely see this sort of light and video gear. The technical professionalism and near-perfect synchronisation – a sine qua non in electronic music – has clearly made the shows a great success.



7

Mandatory sync as a prerequisite for going live

SLU: How urgent was synchronising part of the light playback?

Alex Hardellet: "Honestly, I think that when the rig starts to get big and the production and creative time window is real tight, is when you get the maximum effect. We worked a lot in previzualisation, but to cover the DJ set, you have to know ahead of time what the artist is going to play down to the BPM, and that's tricky..."

SLU: What percentage of the show would that be?

Alex Hardellet: "Three songs... that's it! The rest is live, from my console.

We defined a basic set with the DJ, on which he plays his extra material live. The problem is that Tristan (The Avener) is a real



6

5. As the four moving triangles pull away, Ayrton DreamPanel™ Twin luminaires appear in the air in an exquisite tableau.

6. The Leap Motion controllers

7. Pixel-mapping applied to the video projector, the LED emitters of the DJ cage, and the video display side of the DreamPanel™ Twin array.

TECHNICAL CREWS

Lighting designer & console operator: **Alex Hardellet**

Technical direction:
Charles Édouard Brun

Stage manager:
Samuel Chatain

Lighting & video technicians:
**Gabriel Gatineau
et Romain Villard**

Lighting & rig contractor:
S-Group

Stage movement creator:
Moving Load

Production: **Miala**

Consulting for interactive parts
of the show : **Charles Sadoule**

Ayrton Equipment:

24 MagicBladeTMR Ayrton

36 DreamPanelTMTwin Ayrton



8. The crew from left to right: Leon Van Empel (S-Group), Alex Hardellet (Lighting Designer), Gabriel Gratineau (Video and Pixel Supervisor), Romain Villard (Moving fixture Supervisor), Charles Édouard Brun (Technical Supervisor), Samuel Chatain (Stage Manager), "Captain" (Chief Rigger) and Greg Gouraud (Moving Load - Stage Movement Creator)

9. Under the overhead truss is the Ayrton DreamPanel™Twin array, flanked by the double truss totems.

DJ who prefers to mix his set live. But, even with all our modern technology, there's no way to do synchronisation if his mix is done through USB flash drives and the BPM changes every 10 seconds! So we had to find a compromise, using sync on the intro to his hit song – then again at the closing... to guarantee the highlights of the show work. For the rest, he gave us a big list of songs that he might be playing, which I had to learn and code. He originally gave me about 100 – which we boiled down to about 20."

SLU: But during the show, how do you know which number he's going to do?

Alex Hardellet: "We created a personal control interface so that he can use a touch screen to tell me which song he's going to play and I can lock onto it and prepare the console. And, should he forget to do that (which happens), we also developed a chat interface between his desk and my console – so we can get back on track!"

With this video conference screen Alex – who is also the operator of the show – can chat live with the artist. Great idea! It's the concept of interaction taken to the extreme: between artist and luminaires, audience and artist, and artist and lighting designer.

VLAN, dmx and video

SLU: Was the grandMA2 required to control and program the show?

Alex Hardellet: "Yes, considering the scale of the system, but I'm not really married to any console in particular.

We needed to make sure that the whole system was solid – because we had a total of 120 universes with a lot of NPUs, and network output at 235 MB/sec, which is huge!"

The AAD cooperative has been doing exceptional work, ever since their adventure started four years ago.

By pushing their projects to the limits, these young designers – lighting designers, graphic designers, developers – are once again facing a personal challenge with this concept customized for The Avener. They succeed with total involvement, hard work, and some craziness, blazing new trails in French entertainment lighting with more interactivity and connectivity.

Ayrton luminaires are amazing toys in the hands of Alex Hardellet, both the HD video panels (the front side of the DreamPanel™ Twin) and powerful volumetric light units (MagicPanel-style emitters on the back), proving that light and image can be powerfully reconciled in today's design concepts.

Movement is equally as important as perspective in this stage design concept and, with their unlimited, continuous double rotation the DreamPanel-Twin joins in with the fluid movements of the components inside the DJ's cage. This system was developed by AAD in collaboration with Moving Load (motion control) and S-Group (mechanical engineering and construction), proving that these creative and capable young designers know how to assemble a solid entourage. The end product is a visual experience rich in new technology and ubiquitous light.

Before you know it, movement or body sensors will enable the audience to take part in the stage design itself. Interactivity holds a lot in store for lighting. Can't wait to see what tomorrow brings! ■

DREAMSPOT-18K



DREAMSPOT-18K AUTOMATED LUMINAIRES

AYRTON™ is proud to introduce DREAMSPOT™18K, the very first laser-source multifunctional, multiple-use automated luminaire. Fitted with an OSRAM™ Laser PHASER™ P6000 phosphor conversion module that required three years of development and rigorous testing, DREAMSPOT™18K will offer lighting designers an unlimited range of creative possibilities.

THE RIVER TOUR

Bruce Springsteen and the E Street Band

Back to the Future under the lights of Jeff Ravitz



Bruce Springsteen and the E Street Band returned to Europe's sports stadiums this summer, for a revival tour in celebration of his legendary album *The River*, re-released last year in a special edition with additional tracks, photos and other memorabilia. The Boss performed in a marathon rock & roll homage to the 80s supported by the winning team of Jeff Ravitz and Morpheus Lights.

In a tribute to the vibe of a good old Rock 'n Roll tour, Ravitz used lights and video to help celebrate the glory days with the aid of some futuristic technology: LED fixtures replacing PARcans and full-colour audience blinders, video galore, and remotely controlled followspots that seemed like something straight out of *Star Trek*.

It's back to the future with Jeff Ravitz, a lighting designer who exists to serve the musical artist.

Besides providing Springsteen with a luminous display that matched the energy of his performance (the Boss's concerts have always lasted 3+ hours), Ravitz illuminated him with customized colour temperature (3,700K, no matter what the video engineers say!) and lighting that was theatrical, warm — and with real punch — all thanks to the magnificent luminaires in his rig: Ayrton washes and beams and some futuristic technological marvels.

All this technology made for a great show at Milan's San Siro stadium with a huge stage roof and rig with remote followspots on trusses 10 meters high — but with no visible followspot operators. Three giant LED screens functioned as a single unit with a continuous live HD display of the group, the Boss, and the audience in an remarkably intimate setting — something I'd never seen done as well before in a stadium.

On a sunny Italian day and in a convivial atmosphere, Brad Brown, the tour's Crew Chief and Console Operator, arranged an interview

with Designer Jeff Ravitz of Los Angeles-based design company, Intensity Advisors, LLC, and his Lighting Director, Todd Ricci to discuss this adventure — a mix of past, present, and future - old school, current events, and avant-guard technology.

The River, yesterday and today.

A concert tour based on an album a few decades-old could have been a risky affair, but not for Springsteen, who, instead of simply resurrecting a key moment in his career, found new ideas in sound and light with the help of his lighting designer and some inspiration from the past.

SLU: What is the spirit behind the River Tour and the impact on your new lighting design?

Jeff Ravitz: “The River Tour 2016 is Bruce’s way to return to a period of time and creativity that was life changing for him. In 1980, he was asking important questions and he was finding answers about where his career and life were heading. The River album was an important move forward and once again confirmed him, as his previous albums had done, as a thoughtful philosopher and musician who was continuing an evolving dialogue with members of his generation.

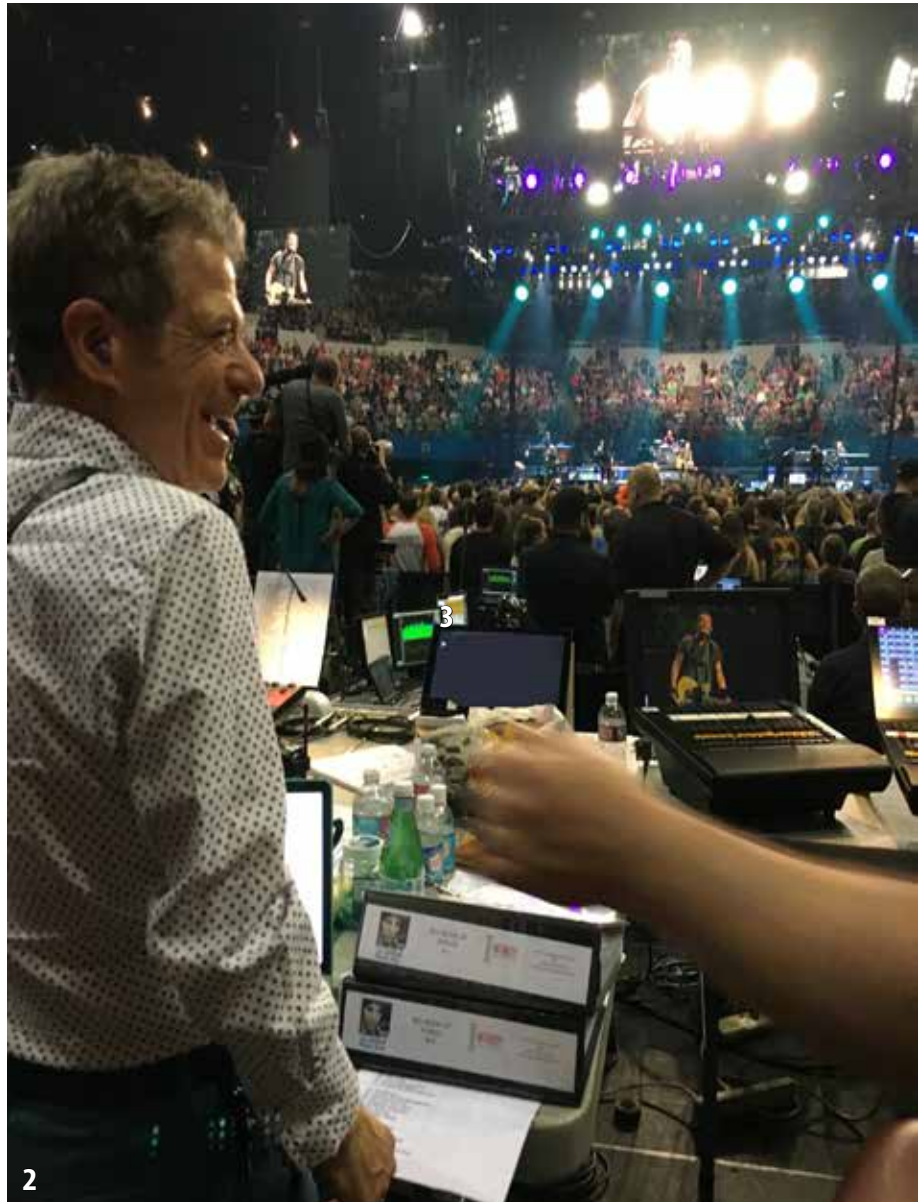
When Tour Manager, George Travis, first called me to discuss the concept of the show, we both knew there needed to be some kind of homage to the vibe and feel of the 1980s, when the album was first released. We did talk about the technology of the Eighties—the design for the original River tour included only PAR64s—and whether or not we should consider using equipment from that era. I felt strongly, however, that we could achieve the essential look of those days with lighting fixtures that would also give us all the benefits of modern technology, with abundant colour choices and the ability to use a variety of focuses. Nevertheless, it stuck in my brain that this show had to come off as “non-technical” looking — at least for the portion of the evening that was devoted to the River album.”

SLU: Are you also in charge of the video design?

Jeff Ravitz: “No, but I have to be aware of it! The video design is inspired by George Travis and created with the video team that includes the owner of Pete’s Big TVs, Peter Daniel, and the tour video director, Chris Hilson. Bruce has input, of course, but we know he is not in favour of using the typical video content that is seen on many tour productions. The majority of the content includes live shots of the audience, I-Mag shots of the band members, and just a few other images.”

SLU: Does Bruce Springsteen like the upstage screen?

Jeff Ravitz: “Yes, I do know that Bruce loves that screen because of the powerful impact it has on the audience to see themselves on that screen in such grand scale. For Bruce and the band, their relationship with the audience is extremely important.”



SLU: Have you had any special requests from him?

Jeff Ravitz: “Yes, I do get specific requests or instructions from Bruce about how he imagines certain cues to be designed. He is very intuitive about what works from a visual point of view. So, he will describe a colour palette that he imagines will work best for a certain song. Sometimes, he has an idea for how a song should begin, from the blackout before the song begins, to the first cue. But, generally, he allows me and my team to design the cues.”

Front lighting as the centrepiece of the show, and at the right temperature!

What the Boss really wants is for the audience to see him, and connect with him and the group. This explains the major importance of front lighting, provided by followspots and a magnificent chorus line of automated fixtures.

1. Jeff Ravitz decided that he would place the Ayrton MagicBlade™ units on the floor upstage and use them only occasionally for a surprise effect. Look how well it works!

2. Jeff Ravitz at one of the LA Shows in March

Jeff Ravitz Lighting Designer



Jeff Ravitz was awarded a Primetime Emmy® for Bruce Springsteen and the E Street Band on HBO, and was previously nominated for Cher Live at the Mirage. He has also received two Los Angeles Emmys® for his designs of LA area programs, four Emmys® from the Pacific Southwest chapter of the Academy, and one from the Michigan chapter, in addition to four Telly Awards for television designs. Well-known as Bruce Springsteen's, Ringo Star's, Styx's lighting designer, Jeff has since forged a reputation for transforming live entertainment performances and arena extravaganzas into exciting, but also broadcast-proper, television shows. Jeff has become one of the busiest TV designers, creating lighting for live televised spectacles, concerts, awards, game and talk shows, comedy specials, fashion, operas, ice show broadcasts, and studio-based TV productions. He is a graduate of Northwestern University's theatre department and is a founding partner of design firm Intensity Advisors, LLC.



SLU: How do you manage the front lighting on Springsteen and on the band?

Jeff Ravitz: "The front lighting, or "key" lights for Bruce and each band member are very carefully planned. The lights for everyone are positioned at just the right angle to reveal them in a way that helps tell the story, create a mood and a feeling of theatricality, and to establish a visual sense of what is most important for the audience to be looking at each moment as the song progresses. Bruce has a high regard for classic film cinematography, and he has instilled that appreciation in me, too. These techniques are used to make the live show look dramatic at times, or just big and fun and rock'n roll at other times, and it must work for the audience in the stadiums as well as for the screens. The colour for every light that falls on a musician's face, as well as its angle and intensity, is very carefully decided."

SLU: Why did you choose different light sources to achieve the colour temperature for the followspots?

Jeff Ravitz: "The various lights that are used as front light for the band members' faces were chosen for their brightness from the distance to the stage, and for their size and other attributes. But, we colour correct each light to be a consistent 3,700 degrees Kelvin. That colour correction is achieved with gel or by colour mixing inside the light."

Lighting the audience

With the artists appearing on stage carefully lit in perfect balance, it was time to light the audience who'd filled the San Siro stadium. This was the task of the custom LED blinders, which Morpheus

Lights built specially for this tour – in a modern, RGB tribute to the traditional nine-light blaster.

SLU: Which lights are reserved for lighting the audience?

Jeff Ravitz: "We have quite a variety of lights to illuminate the audience. As I mentioned, the audience is very much a part of the show. Morpheus Lights, our vendor, has helped create a unique and effective light to help cover the large expanse of audience we have in arenas and stadiums. This fixture is designed to resemble a traditional nine-light audience "blaster" that was used so often in the Eighties. In fact, it's still used today, but with its tungsten colour temperature and high power requirement, it is a disappearing fixture. Instead, we fitted a frame with nine LED PARs. The overall light is larger than a nine-light, which is what I wanted because, in the sizes of venues we play, it's important to be over-scaled to make an impactful visual statement. With nine LED PARs, we have lots of punch and unlimited colours to light the audience. The richness of the colour and the brightness look wonderful, and the appearance of the light fixture, itself, is quite strong."

The beams and wash lights – totally Ayrton

With the addition of WildSun™500C luminaires lighting up the audience, the blinders were not the only source of colour in this vintage, but very futuristic, rig. Other dynamic Ayrton fixtures were up above on the trusses, in the background, and on the Boss's stage floor. NandoBeam™S9 stepped into the position of the PARs, the amazing MagicRing™R9 blasted through the night, and then, two unexpected rows of MagicBlade™R luminaires



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7

appeared — the entire Ayrton LED family was there!

SLU: Why did you choose the NandoBeam-S9 and what do you think about it?

Jeff Ravitz: “The NandoBeam-S9 has several advantages that I love. It has a wide, vivid range of colours. It is very bright. It is economical for power consumption. It moves fast and it has a nice beam quality. It has some great effects built in, although we don’t use all of them for this show. I like the size of the fixture, which is big enough to look powerful on our trusses. And it has a zoom that ranges from very tight to wide. We often use the Nandos in a fairly tight zoom to create the PAR-like beam, which helps us achieve a look that is reminiscent of the ‘80s.”

SLU: Did you compare different brands of washes and beams?

Jeff Ravitz: “I did compare the NandoBeam-S9 to all the major LED wash lights. Most of them were quite good lights, but I kept coming back to the NandoBeam-S9 as a light that could cover all our needs.”

SLU: We saw you are still using the Wildsun-500C, but its white is warmer than with the S9. Do they work well together?

Jeff Ravitz: “I love the Wildsun-500C and its nice, warm white. For this tour, the cooler, crisper S9 was the way I preferred to go for the majority of the system. But I am a fan of mixing colour temperatures. The Wildsun™ is now used mostly as part of our audience lighting, and so the warmer white is an advantage.”

SLU: Is the MagicRing™R9 used as a backlight effect only or also to wash the stage?

Jeff Ravitz: “We use the MagicRing for arrays of strong, thick beams of light. They also work as powerful and over-sized backlights and sidelights on the musicians, and occasionally for special effects using the rings and continuous rotation. It’s a wonderful fixture.”

SLU: Ayrton MagicBlade™R luminaires were used only twice for a very nice backlight effect. Why not more?

Jeff Ravitz: “MagicBlades were added to fill in the darkness upstage, behind the band where there is nothing else to do there. We actually do use them in quite a few songs, but because they are very special lights — so I try not to overuse them. I am very aware that if something is used too frequently, it might not continue to have the impact that I am hoping for. So, I like to “give them a rest” so that when I use them again, they are once again a nice surprise.”

SLU: What do you think of this fixture?

Jeff Ravitz: “I find MagicBlade to be an extremely useful and versatile light. In our show, I try to never use them the same way twice. We have mounted them behind the band on a cross-stage railing in two rows, one above the other. This gives us the opportunity to use them horizontally, vertically, or in a multitude of angles and combinations. And, of course, the way they pan and tilt continuously makes them one of the most fun lighting fixtures in our system.”

MagicBlade fixtures were not the only surprise in this show. The followspots — the key fixtures in Jeff Ravitz’s setup for front-lighting the Boss and the E Street Band — were PRG Bad Boys controlled by the unique GroundControl™ Followspot System

3. Jeff Ravitz wants to pay tribute to the album “The River” and to the 80s, but it’s 2016. PAR cans have been replaced by Ayrton NandoBeam-S9 units, which generate shafts of light that are both tight and incredibly bright — and, above all, colourful!

4. A monochrome scene in green reveals the fine craftsmanship of Jeff Ravitz, who uses frontlight to keep the artists lit at 3,700°K.

5. The Ayrton MagicRing-R9s work in synergy with the NandoBeam-S9 units.

6. A contest for who puts out the most impressive light shaft — and the winner is the Ayrton MagicRing-R9 luminaires hung upstage in front of the screen

7. At the lighting desks — Todd Ricci (Lighting Director) on the left, and Brad Brown (Crew Chief and Console Operator) on the right.

LIGHTING CREWS

Lighting Designer:

Jeff Ravitz

(Intensity Advisors, LLC)

Lighting Director : **Todd Ricci**

Crew Chief - Console Operator:

Brad (Bradley) Brown

Lighting Contractor:

Morpheus Lights

Technical Supervisor:

Tom (Thomas) Marty

Technical Supervisor , Fixture

Technician:

Anthony Cerasuolo

Technical Supervisor, Follow-

spot Technician:

Rainer Matzke, Hadyn Williams,

Adam Beasley

Technical Supervisor, Rack

Technician:

Steven Gertsman

Fixture Technician - Ground-

Control Specialist:

Brandt Gentry

Production manager:

Ron Cameron

Tour Manager: **George Travis**

Tour video director: **Chris Hilson**

The River Tour Ayrton Lighting equipment

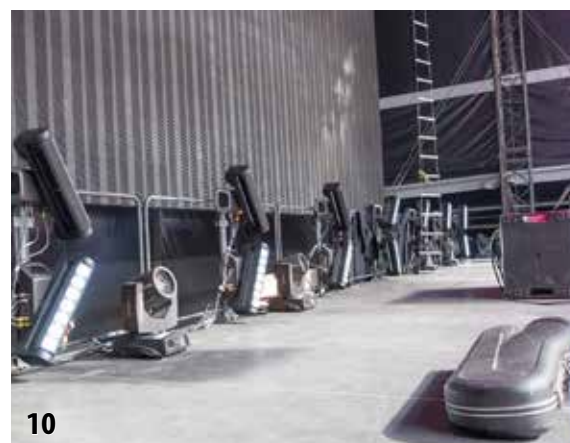
58 NandoBeam S9 Ayrton

12 NandoBeam S6 Ayrton

44 WildSun 500C Ayrton

16 MagicBlade-R Ayrton

20 MagicRing R9 Ayrton



8. Morpheus Lights' crew for The River Tour 2016 Stadium leg. From left to right: Tom Marty, Tony Cerasuolo, Rainer, Hadyn Williams, Adam Beasley, Steven Gertsman, Brandt Gentry, Brad Brown and Todd Ricci.

9. The upstage truss features a stunning row of Ayrton NandoBeam™S9 units. With their tight zoom and bright beam, Jeff Ravitz uses them to emulate PAR 64s for a very 80's-style setup. Suspended just below, are the mighty MagicRing™R9 fixtures.

10. On the railing in front of the upstage screen, the superb Ayrton MagicBlade™R luminaires patiently wait for their moment to make stunning cameo appearances for surprising effect.

— which certainly brought this revival tour into the future. With no more need for live operators to follow the musicians' movements from the trusses above, safety was vastly improved. A real breakthrough!

This remote followspot System have gained Jeff's confidence, so we can anticipate seeing them at other shows and festivals that he's involved with, ranging from Coachella to Lollapalooza. In addition to working with Springsteen, over the past few years Ravitz has designed and collaborated on a variety of productions, such as the annual TED (Technology, Entertainment, Design) conference and tours with Ringo Starr and STYX.

Though the Designer may be quite attached to his Springsteen crew and gear — which is just part of a tour that has 24 trucks and over one hundred total support staff — and his lighting rig of more than 450 fixtures (All for the glory of rock 'n roll!) — he is open to new ideas, and his design concepts are forever evolving, future-oriented.

This is how he came up with the magical chemistry for lighting the Boss — who was intent on bonding with an enthralled audience over four hours — trying to maintain the appearance of low-tech design implementation while using the utmost in

technology. Thus, the 150+ Ayrton luminaires that created effects behind, in front of, and over the stage, imitating PAR cans, or lighting up the audience, whether it was the Wildsun-500C in deep warm white or the MagicRing-R9 with its rich colours and brilliant rings.

The nine-light audience blasters, typical of rock concerts, became Morpheus CP-9s, offering a renaissance of colour.

Then there was the screen, or rather screens (of which there are three), but only the centre screen grabbed our attention.

What an amazing feat to be able to include it in the stage design, bringing us even closer to Springsteen and his band! Missing not a single expression, or finger on a fret, or wild applause, the screen added an element of intimacy, offering an alternative to the cliché of the ever-present video.

The Boss lives and breathes his show for — but especially with — his audience. The screen was just another way of bringing everyone together. It really worked!

Excerpts from the paper published on the Soundlightup Webzine
Text: **Isabelle Elvira** Photos: **Monique Cussigh**
More informations & photos: **www.soundlightup.com**

WILDSUN-S25



WILDSUN-S25 AUTOMATED LUMINAIRES

WILDSUN™S25 is equipped with 217 ultra-powerful RGBW mono-chip LED emitters and this technologically innovative marvel is the most powerful moving-head LED wash fixture on the market today.

With overall light output of 60,000 lumen, it rivals the 2,500 and 4,000 Watt HMI luminaires fitted with colour filters, but with far greater flexibility of use and lower maintenance.

www.ayrton.eu

Special-effects LED luminaire AYRTON'S ALIENPIX™ RS: Destination Earth - Nonstop!



Launched directly from the starship Ayrton, AlienPix™RS has landed on Earth with the determined objective of conquering stages worldwide! With six crisp, tight beams and eight indexable or continuous rotation axes, this new luminaire almost seems like the invention of a comic book author. Developed to create new visual effects, AlienPix™RS offers a wealth of possibilities, and expands the horizons of a lighting designer's imagination.

The journey

When presented as a prototype at the Prolight & Sound 2016, Ayrton's conceptual luminaire called to mind effects not unfamiliar to teenagers in the 1980s. The difference was that, back then, you'd press the "Power" button and the fixture would do what it wanted (whatever it was capable of), whereas this new version from Ayrton is a controllable professional fixture that will fully obey the Programmer's hand and Designer's eye.

This fixture measures 68 cm high and 54 cm wide, and weighs in at only 30 kg. The standard Ayrton base enclosure mounts a wide yoke, which supports the fabulously inventive head – mounting a fixed central emitter and surrounding it with five surrounding emitters, each with continuous rotation on its own axis. The entire head moves on three axes: standard pan and tilt movement plus face rotation around the centre emitter. All rotations can be continuous. Each emitter is a 30-watt Osram OSTAR Stage2 RGBW chip, coupled with a 94 mm collimator. This yields six, powerful 3.5° beams that project long, luminous beams as they sweep across the space of a stage.

On one side of the base, we find the usual control panel and six touch-sensitive keys allowing navigation through the menus and configuration of the various options. On the other, all the necessary connectors. There are two PowerCON TRUE1 connectors for mains power with pass-through, two 5-pin XLR connectors for RDM-compatible DMX input/output and two Ethercon connectors for Art-Net & sACN protocols. In addition, the W-DMX signal antenna (Wireless DMX by CRMX TiMo RDM from LumenRadio) the fuse are accessed on this side.

Check-in before boarding

This was a first-time experience for all of us because Cyril Union, Ayrton's chief software development engineer, had never actually disassembled this new product. So it was a good test to check for ease of maintenance.

The simplest way to disassemble the unit was to start with the yoke, which was relatively straightforward. I was pleased to find that the pan and tilt could be locked down, so that the fixture can be carried safely and easily. First we uncovered the two yoke arms. One side contains the circuit board that controls the yoke's pan and tilt motors. The other houses the tilt-drive belt and two gears along with the indexing system. We discovered something different from previous products: there is a slip ring assembly

(enabling the continuous tilt) on either side. A single slip ring, wouldn't have worked, given the low profile of the yoke.

In removing the covers protecting the lower part of the yoke, we had to remember the Phillips screws on the top of the yoke arms. They ensure a good seal for both the covers, meeting the aesthetic requirements of Yvan Péard, Ayrton's product designer and co-founder. With both covers removed, we discovered a third slip ring assembly, which carries all the data and power. There are also two three-phase hybrid stepper motors that drive the pan and tilt axes with precision. Most of the yoke's components are made of aluminium.

We continued to disassemble the unit at the back of the head. This part serves two purposes. First of all, it holds the mechanics and electronics that allow the head to rotate on its centre axis but also, and equally important, it serves to counterbalance the weight of the emitters and their mounting bracket on the front side of the tilt axis.

To obtain optimal movement both in terms of speed and smoothness, the head has to be balanced – to minimize stress on the motor and the axes.

The rear assembly unit can be opened simply, by removing the two covers. We could see that the frame is made of steel. Much heavier than aluminium, it helps balance the load.

Ayrton has everything organised and neatly tucked away. The motor control card is on the same side of the yoke as the card that handles the two main axes, and the drive is next to the tilt. At the centre we find the slip ring assembly for powering and controlling the six LED emitters.

Opening the front part of the head is more delicate. For seamless assembly, the five triangular covers hiding the frame are neatly fitted together, with one dovetailing into the other. As a result, we had to disassemble all of them. While this design feature is certainly time-consuming when it comes to maintenance, it allows for a wonderfully clean fit when it comes to assembly. Each triangular frame holds a motor, belt and toothed pinion that drives one of the five moving emitters. . . and, of course, there are five additional slip ring assemblies in addition to the three cards controlling the fans. The motor control and LED control card are placed behind the central emitter.

The five rotating LED emitter heads can be opened easily. The covers are designed to allow for excellent air circulation, and the module is minimalist and roomy. It doesn't seem that it could be any simpler. On the back, there is a fan that cools a heat sink in contact with the circuit board, which drives the 30-watt RGBW LED beneath the 94 mm collimator. We found practically the same thing at the centre, but the heat sink is more confined, hence the difference in derating between the central emitter and the peripheral emitters. . . but let's not get ahead of ourselves. . .

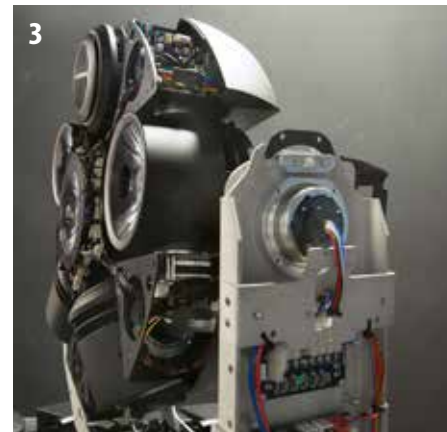
Finally, we uncovered the nerve centre of the fixture – the base. A standard 100-240 V power supply, provides the 450 watts required to make stars shine in the eyes of the audience. The display card controls the touchscreen User Interface. The same



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2



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card works as a motherboard controlling the entire fixture, processing data (e.g., Ethernet, DMX), which requires substantial resources. I/O connector mounts are on the other side.

Dinner before the invasion.

You can't conquer the world on an empty stomach. That's why the AlienPix™RS menu is so complete. You start with the most common functionality, the DMX address. Then you select the control mode, Standard, Basic, Extend or one of the three User Modes. These modes can be customised to create your own DMX maps using the functions available in the other modes. You can adapt the number of channels to your specific needs and according to the space available on the console – a very useful option, which, to my knowledge, is only offered by Ayrton. This, once again, demonstrates how far Ayrton has applied its research and development to make products adaptable to the greatest number of situations. You can also edit the User Mode and Status to define what happens in case the DMX signal is interrupted, or to set up the pan and tilt axes options. The menus also let you select fan speed, power-on for the display, and control protocol (DMX, W-DMX, Art-Net or sACN), and set the default pan position. You can also test and calibrate the luminaire's parameters. Last but not least, you can program fixed lighting scenes using the menu or by capturing DMX values from the controller. You simply store the scenes in one of the programmes and run them

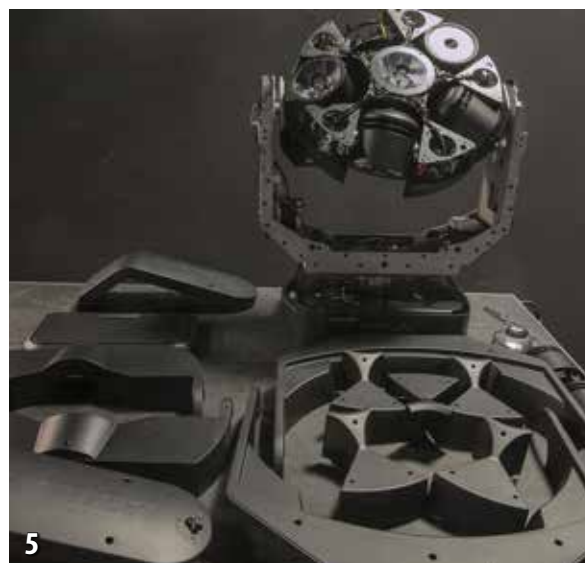
1. With Ayrton, control is a four-course meal.

2. The rear part of the head assembly with its steel frame and the face rotation system.

3. AlienPix™RS is fully loaded!



4



5



6

4. Inside one of the five rotating emitters.

5. With the covers removed, it looks a bit naked.

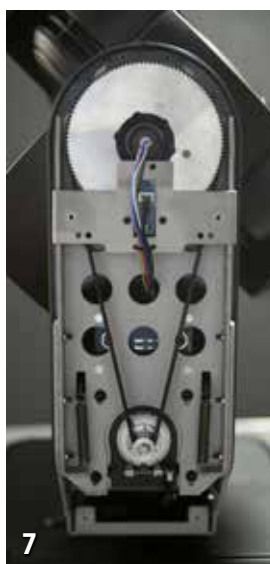
6. Cooling for the LED emitter, simple and effective.

7. The control card for the pan and tilt axes and one of the slip ring assemblies of the tilt axis.

8. The tilt drive and the second slip ring assembly.



6



7

stand-alone. This is another useful function that enables operation without a console.

Landing on Earth.

Time to test the AlienPix™RS performance. We ran the fixture in Extend Mode and the fan on automatic. All measurements were

taken in the Ayrton showroom. I was lucky to have access to the latest Ayrton video for getting started.

As for the beam, no surprises: with the four LED chips on at full output, I obtained six well-defined, crisp, tight and powerful beams. With haze added, I could make out a halo around the light shafts but this didn't affect the visual impact.

Ayrton has always been fantastic in dimming LEDs. I couldn't find any curve option, but it wouldn't have been necessary on this type of unit. If you really feel the need, you can create one on the console. The strobe function was highly effective in regular or random mode. The pulse effects are certainly worth mention. The three primary colours were deep and the white was striking.

Whether instantaneous or continuous, the colour transitions were impeccable. The colour mix, however, is not the strong point of the 94 mm collimator, working in combination with the 4x1 mm2 RGBW chip. The tighter beam angle makes it more difficult to obtain smooth colour mixing. Multiple colours appeared to fall between light amber hues and deep yellows or even certain pastel hues. But AlienPix™RS is mostly an effects luminaire whose main purpose is to produce a powerful beam – so, let's not nit-pick.

It doesn't take long to master the eight rotations and set up the console accordingly. The head rotation might throw you off at first. The combination of pan/tilt movement with the five LED tilts is fairly easy to manage, but adding the rotation of the head is a bit more complicated... but it's really amazing. I prefer simple effects, which I find to be more effective than the complex superimposed movements that are visually harder to follow – so I didn't add too many layers of parameter control.

By keeping it relatively simple, you discover some really interesting and powerful effects. Each axis can be used in indexable or continuous mode, but it's important to focus on what you want instead of just hunting around randomly for effects. Since there are so many possibilities, this can take a bit of time. Another thing to keep in mind is the speed of the different movements. The

MEASUREMENT AT 5 METRES - CENTER LIGHT SOURCE

Beam Diameter at 1/2	0,36 m
Corresponding Angle at 1/2	4,1°
Beam Diameter at 1/10	0,66 m
Corresponding Angle at 1/10	7,5°
Light Output at the Center after Derating	2350 lux
Flux After Derating	400 lm
Light Output at the Center when Switching On	3700 lux
Flux when Switching On	630 lm

MEASUREMENT AT 5 METRES - PERIPHERAL LIGHT SOURCE

Beam Diameter at 1/2	0,36 m
Corresponding Angle at 1/2	4,1°
Beam Diameter at 1/10	0,66 m
Corresponding Angle at 1/10	7,5°
Light Output at the Center after Derating	3720 lux
Flux After Derating	634 lm
Light Output at the Center when Switching On	3760 lux
Flux when Switching On	640 lm

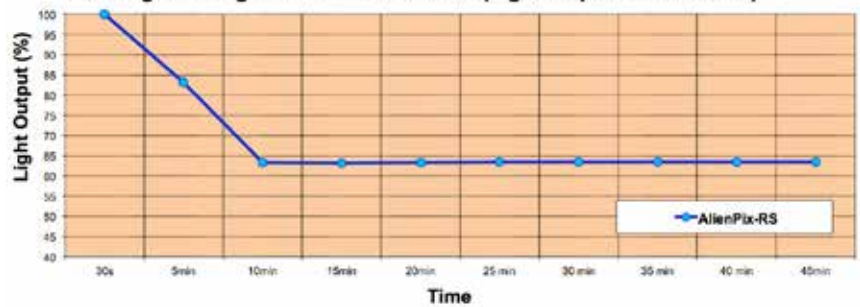
MEASUREMENT AT 5 METRES - ALL SOURCES

Beam Diameter at 1/2	0,36 m
Corresponding Angle at 1/2	4,1°
Beam Diameter at 1/10	0,69 m
Corresponding Angle at 1/10	8°
Light Output at the Center after Derating	21 530 lux
Flux After Derating	3850 lm
Light Output at the Center when Switching On	22 670 lux
Flux when Switching On	4050 lm

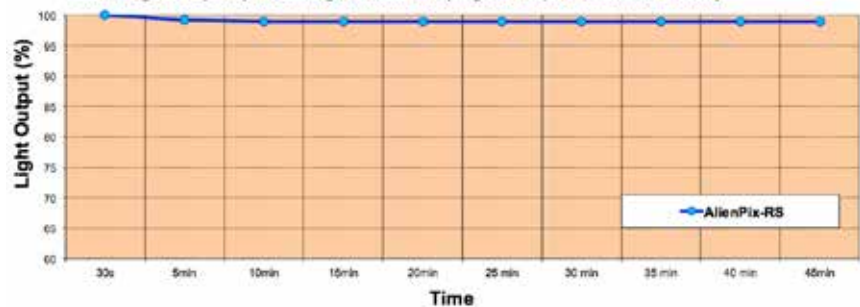
five spinning light emitters on the head are super quick at 0.48 seconds for 180°, but other movements are slower: 1.6 seconds for 180° on the Pan. 1.6 seconds for 180° on the tilt and 1.44 seconds for 180° on the head rotation – all of which seems normal considering the weight and volume being moved. Mixing slower movement on some parameters with “cut”-type cues on others and using dimmer or rapid colours effects, you can obtain superb, effective and really innovative results. This is a real advantage of this fixture. Don't take the easy way out and ignore the fade and delay times – which, combined with the regular movement, can really enhance effects. In addition to all the incredible animation, AlienPix can be used to create wonderful still tableaux. With the six beams, just a few units in combination can generate some magnificent scenes and reveal the volume of a scenic space. The power and concentration of the beams can also add shafts of dense colour to scenes with saturated hues or even lighter pastels. They can also be used to highlight musicians or performers by pointing the central LED emitter at the artist and using it in conjunction with the five other emitters while rotating [or not rotating] the head. The five moving beams can also align on the central beam to focus on an individual, or to sweep the stage.

At the target

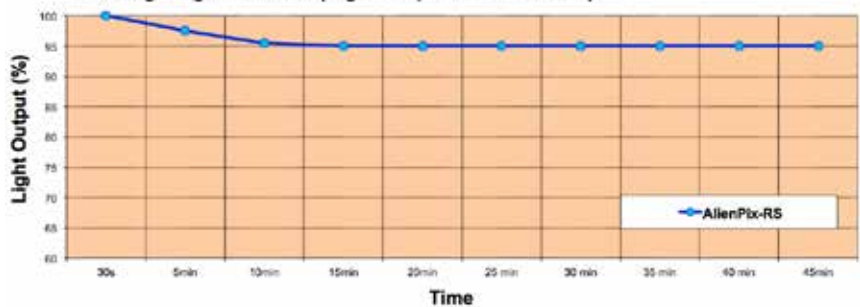
We started off our derating test knowing that AlienPix was not conceived to be used with all emitters running at full power continuously but rather, with individual LEDs being used in colour

Derating of the light source in the center (Light output over the time)


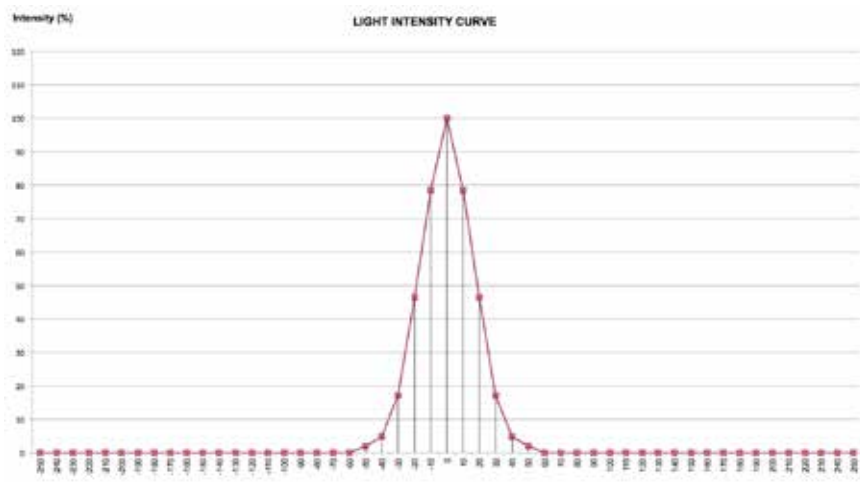
36.5% derating – a fine result for a special-effects luminaire.

Derating of a peripheral light source (Light output over the time)


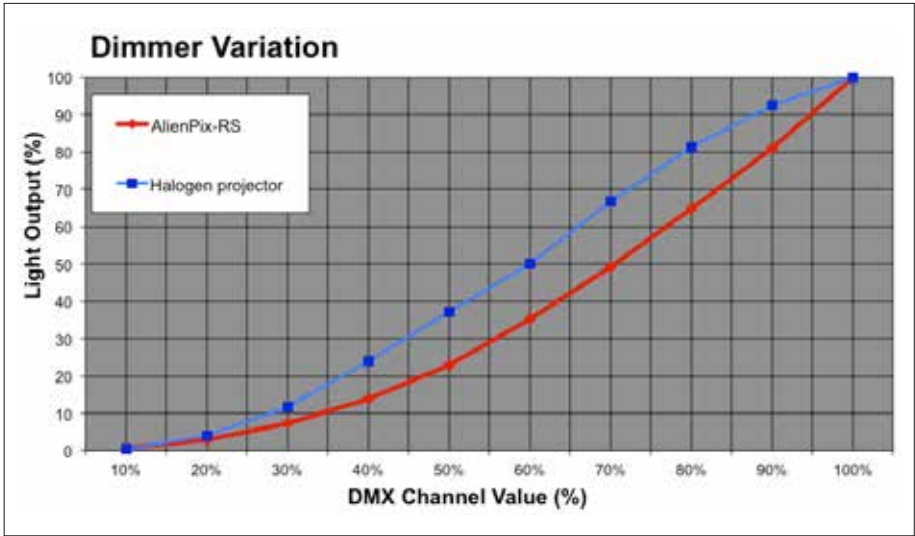
1% derating with the outer LEDs. To ensure optimum cooling, Ayrton doesn't push the voltage beyond Osram's spec.

Derating 6 light sources (Light output over the time)


5% derating for all the LED emitters – excellent performance!



CI-1



The dimmer curve followed the square law.

Slu THE PLUSES

- Greater movement
- Excellent beam intensity and definition
- Full connectivity
- Fine workmanship

Slu THE MINUSES

- Slight halo around the beam
- Lack of uniformity with certain colours

COLORS	RELATIVE PERCENTAGE
WHITE RGBW	100 %
ONLY RED	10,72 %
ONLY GREEN	35,43 %
ONLY BLUE	8,21 %
ONLY WHITE	52,70 %

Relative output percentage by colour.

for a few milliseconds. It's still good to know, however, what a luminaire is capable of. For simplicity's sake, I decided to light the central emitter at full RGBW for the measurements, positioned at 5 meters and to centre it where two axes intersect on a target. Illumination stabilised in 10 minutes with 36.5% attenuation.

With the concept of using the six emitters collectively for backlight (thus satisfying our curiosity), we lit up the five other LEDs at full RGBW and centred them on the one we just measured. Then, we let the fixture cool down and performed a second derating test. At power-on, we measured 23,400 lumens. After 10 minutes, there was little change, showing 21,640 lumens, and 21,530 lumens after 15 minutes. Brightness did not drop! We were really surprised by the 5% attenuation. Would the central LED have a higher derating than the outside emitters?

We took a third set of measurements with just one of the five moving emitters. Attenuation was less than 1%. Derating was basically zero!

Photometric measurements

The central LED emitter

We then performed photometric measurements. Output for the central emitter reached 630 lumens cold and 400 lumens after derating. Remember, this output is not the essential feature of this type of LED emitter, where it's better to think in terms of centre beam intensity for its collimated beam.

Ayrton reports 180 cd/lumen. The luminous intensity curve confirmed good beam definition – with a projection angle of 4.18° at I/2 and 7.55° at I/10.

The outside LED emitter

The output for one of the outside emitters measured at 640 cold and 634 lumens after a 1% derating.

All six LED emitters

We turned all six emitters back on to measure the total maximum output. Flux reached 4,050 lumens cold and 3,800 lumens after derating.

That's an amazing result when compared to the 70% full white in RGBW after derating! Luminous intensity curve and projection angle remained identical.

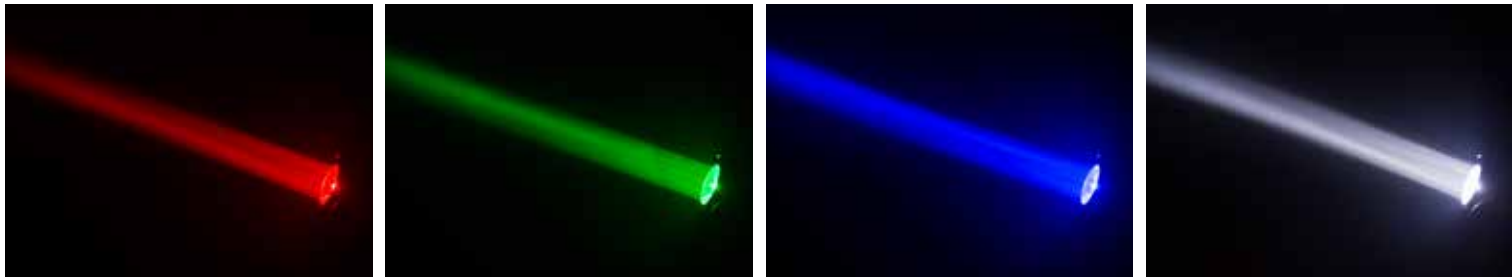
Dimmer and colours

Our last test was the dimmer curve, which is quite similar to that of the MagicDot-R.

Launching the attack!

They're here! AlienPix™RS has landed. Soon you'll be seeing their beams carve out spectacular displays of light. There's no way that this unusual luminaire will leave you feeling indifferent. Even though it's clearly a special-effects fixture, more inventive lighting directors will enjoy it as an homage to the 80s. It requires some hands-on time and practice to become familiar all the features, but once you become a master, it's going to be a hard fixture to do without.

The six beams are really effective, and even with a small number of fixtures, the combination of the eight rotation axes allows you to create virtual architecture, define performance spaces, or even animate the fixture itself – so it'll dance to jingles. As always, Ayrton is on the cutting edge – offering designers an opportunity to push light to the outer limits.



Powerful and deep colour hues.

ALIENPIX-RS



ALIENPIX-RS CREATIVE SOLUTIONS

ALIENPIX™RS is a conceptual multi-rotational luminaire featuring five spot heads on the edge of the central disk that can be controlled individually in continuous, unlimited, rotation. The continuous, unlimited rotation of the main disk, and the pan and tilt movement, are controlled by powerful tri-phase stepper motors that allow fast, accurate and silent positioning. The six ultra-powerful, low-etendue, RGBW multichip LED emitters can be controlled individually.

www.ayrton.eu

MAGICBURST



MAGICBURST CREATIVE SOLUTIONS

MAGICBURST™ is the first high-power graphic LED strobe with continuous, unlimited, rotation on pan and tilt. A 384 x 384 mm squared face supports 3,840 high-output LED grouped into 64 pixels on an 8 x 8 matrix (patent pending). A library of fixed images and pre-programmed dynamic effects are accessible from fixture memory. With a new, state-of-the-art, ultra-compact 1,300 Watt power supply, MAGICBURST™ can deliver peak light output of over 240,000 lumen for several seconds.

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