#Ayrton live

ISSUE 7 _ APRIL 2015

EZ3kiel's Lux Tour

MagicPanel™, at the heart of Yann Nguema's visuals

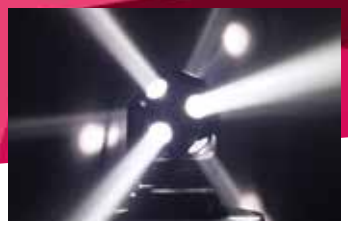
Photo credit: Ra²

ARLETTE GRUSS *30th Anniversary*

FACE *An Evolutionary Perspective*

MAGICBLADE-R *by SoundLightUp*

COSMOPIX-R



COSMOPIX-R CREATIVE SOLUTIONS

An entirely new luminaire based on the concept of the famous double-rotation spheres with PAR36 lamps, dating back to the early '80s. Using the latest technology and a variety of options for controlling the new multi-chip RGBW LED emitters, AYRTON™ has equipped this luminaire with new high-efficiency 94 mm optics and revamped this legendary product design, endowing it with a continuous combination of potential effects.

www.ayrton.eu

AYRTON
Digital Lighting

Editorial

Dear Reader,

As we love to continue surprising our followers with our innovations, you can be sure you will discover exciting new products in these pages - products that we have only just introduced at Prolight+Sound 2015. You will clearly see we do not believe in presenting new products with no additional value or features, but insist on delivering REAL innovation and value to our customers old and new. Our latest products bring you a new LED engine, new optics, new cooling technologies…and, above all, new concepts!

Using two new, very high-power 40W and 60W Osram LED respectively, coupled with new collimation optics, we have pushed the envelope again to offer fresh lighting tools that answer the most demanding requirements of lighting designers.
The introduction of our long-awaited NandoSpot™ LED Spot moving-head is a landmark in the history of Ayrton. This innovative projector allows us to fulfill the needs of our followers who were calling for an Ayrton Spot LED fixture.

And with the return of our DreamPanel™ Series we continue to blur the line between video and lighting. For us innovation is the nature of our business, and for you…?

We hope you will enjoy reading the following pages as much as we enjoyed created our new projectors.

Regards.

Valère Huart.
International Sales Manager.

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Summary





AYRTON LEDS ADD HIGHLIGHTS TO PEPSI SUPER BOWL XLIX

© Rob Carr

The annual excitement of the Pepsi Super Bowl XLIX Halftime Show raged around the University of Phoenix stadium, Arizona on February 1st, broadcast to the world by NBC. International superstar Katy Perry headlined the much-anticipated Halftime Show supported by Lenny Kravitz and Missy Elliott.

Ayrton™ LED fixtures played their part once more in the dynamic lighting design by Bob Barnhart of Full Flood, Inc., with the new, compact MagicRing™R1 and NandoBeam™S6 helping to wow the crowds.

Five-time primary lighting designer for the highly anticipated telecasts, Barnhart delivered a spectacular show, overcoming many of the logistical difficulties of lighting a full-blown, large-scale production in the middle of a football stadium by mounting his lighting equipment on sixteen mobile lighting carts and four band carts.

Twelve MagicRing™R1 beam projection fixtures were incorporated into the band carts and ten NandoBeam™S6 beam/wash fixtures were rigged on a truss directly upstage of the Lenny and Missy stage.

"I used the MagicRings on the band carts to give some energy and movement to the background," says Barnhart, "while the NandoBeams were perfect in providing an additional layer of effects and eye candy."

"I was one of the many that watched the Halftime Show on television and was really pleased to see the MagicRing™R1 and NandoBeam™S6 cut through so well during the show," says Keith Bennett of Morpheus Lights, Ayrton's exclusive US distributor, which provided the fixtures to PRG, the event's lighting contractor.

The Pepsi Super Bowl Halftime Show is the most-watched musical event of the year. More than 115 million viewers in the U.S. watched last season's show when over 200 MagicPanel™602 fixtures flanked Bruno Mars performance at the Met Life Stadium, New Jersey.

AYRTON AT LDI 2014, LAS VEGAS
TECHNICAL INNOVATION FOR WINNERS, NOT GAMBLERS

© Todd Kaplan

Against Las Vegas' glittering backdrop, Ayrton's display of technical innovation on the booth of its exclusive US distributor, Morpheus Lights, shone as brightly at LDI 2014 as in any casino or show on the Strip.

Ayrton™ exhibited a plethora of new products from Ayrton's new Radical™ and NandoBeam™ series, videos of which were already causing excitement on social media. Many of these were presented for the first time to the American market, exciting visitors who were treated to spectacular lighting displays which caught the eye and fired the imagination.

Ayrton's Radical™ Series, consists of WildBeam™R, MagicPanel™R, MagicBlade™R, MagicRing™R9 and IntelliPix™R, with MagicRing™R1 being the latest addition to the Series.

Throughout the exhibition, each Radical™ Series product benefited daily from an individual demonstration involving several units in action. This showed the amazing results achievable with a bank of fixtures and the ingenuity of a lighting designer. "Exceptional programming showed the fun lighting designers have exploring the new design possibilities that Ayrton's innovative products encourage," says Ayrton's international sales manager, Valère Huart-Gyors. "We were extremely happy with the atmosphere surrounding our booth and the excitement the new products generated," he continues. "The lightshows in particular received a lot of compliments from the visitors, attracting new and existing clients who were delighted to discover our latest products and inspired to use our new lighting tools in ways that have not been possible before.

"Ayrton™ is a fast growing player on the US market where we established our place quickly with the aid of our exclusive US distributor, Morpheus Lights, who continue to ensure we are well supported in the US market."

MAGICRING-R9 GOES LARGE ON EMINEM/RIHANNA MONSTER TOUR

© Bruce Rodgers

Lighting designer Dan Boland incorporated 26 of Ayrton's enormous MagicRing™R9 lighting fixtures into his design for Eminem and Rihanna's Monster stadium tour. Last summer's much publicised 6-date US mini tour took in the Rose Bowl, Pasadena, the Met Life Stadium, New Jersey and Comerica Park, Detroit.

With a massive 48-song set list and a technology-heavy set, Monster was rightly dubbed 'small tour, big work'. The artists performed beneath two enormous sloping LED panels flanked by offstage video screens. It was a fitting setting for Ayrton's largest fixture, the MagicRing™R9, twelve of which Boland positioned in a line over each offstage screen.

NEW DISTRIBUTOR IN GERMANY

© Martina Gawenda/EVENT PARTNER

Ayrton™ proudly announces that Visionstage became the new German distributor for its full range of products in January 2015.

Visionstage with its team around CEO Michael Althaus distributes professional stage, studio and show lighting fixtures. Their portfolio is comprised of carefully selected brands and forward-looking technologies – with a focus of both the future of lighting and on the creative user, who needs to make a show happen right now.
Visionstage describes itself as a lean machine: quick, flexible and reliable – with comprehensive technical knowledge and the ability to anticipate potential issues long before they become real problems. And although they are a new player in the market, they have years of collective experience at the highest level of this industry.
Visionstage have two fully equipped showrooms, centrally located in Germany. The flagship showroom is in Frankfurt, the second at the headquarters in Detmold, which is midway between Dortmund and Hanover.

Ayrton™ is delighted to have a new partner who aims to provide best technical solutions, coupled with high value, heads-up service-knowledge.

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AMBERSPHERE SOLUTIONS

Ambersphere Solutions have been appointed the exclusive UK distributor for the Ayrton™ range of LED Luminaires and creative LED imaging solutions. The appointment enables Ambersphere Solutions to extend its unique sales, service, support and training facilities to cover Ayrton™ products in the UK.
Featuring exceptional quality and attention to detail, the Ayrton™ collection of LED lighting solutions offer lighting designers truly creative lighting tools built to withstand the tough demands of touring and installations. The innovative range includes indoor and outdoor fixtures, static and moving yoke fixtures including the signature MagicPanel™ range.
Ambersphere Solutions is the exclusive UK distributor for several leading lighting manufacturers. "Ayrton™ offer a high quality range of modular creative LED products which perfectly complement the existing Ambersphere product range", says Ambersphere Managing Director Glyn O'Donoghue. "I believe our clients will really enjoy getting to know the Ayrton™ product range, it's full of really clever and impressive creative solutions, perfectly suited for the touring, TV and architectural markets."
Ayrton™ Sales Director Valère Huart-Gyors comments, "Our products are designed for creative lighting professionals and Ambersphere are uniquely placed to access these clients in the UK. Ambersphere Solutions offer the quality support and services to complement our products which will be essential as we build our position in the important UK market".

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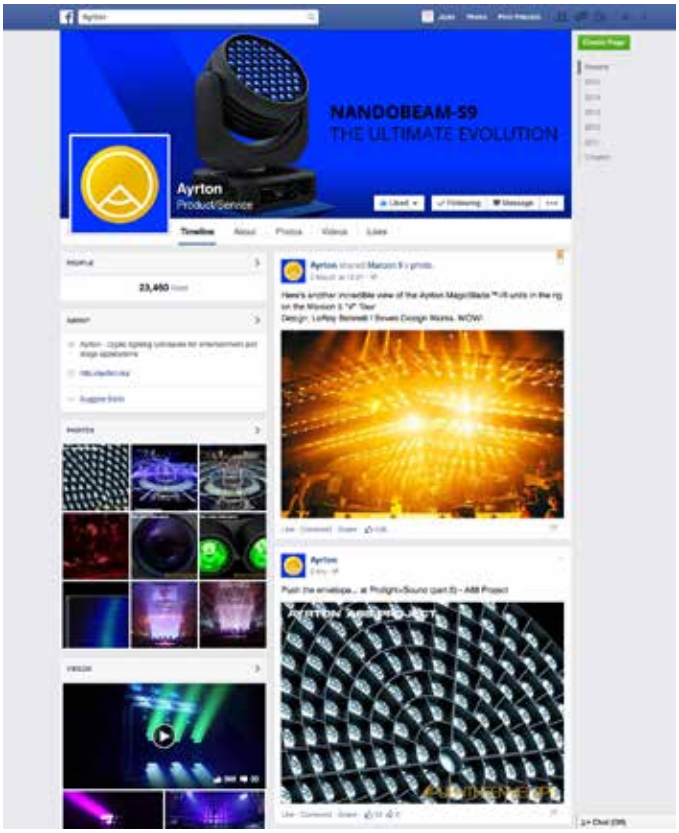
AYRTON *social network*

FACEBOOK



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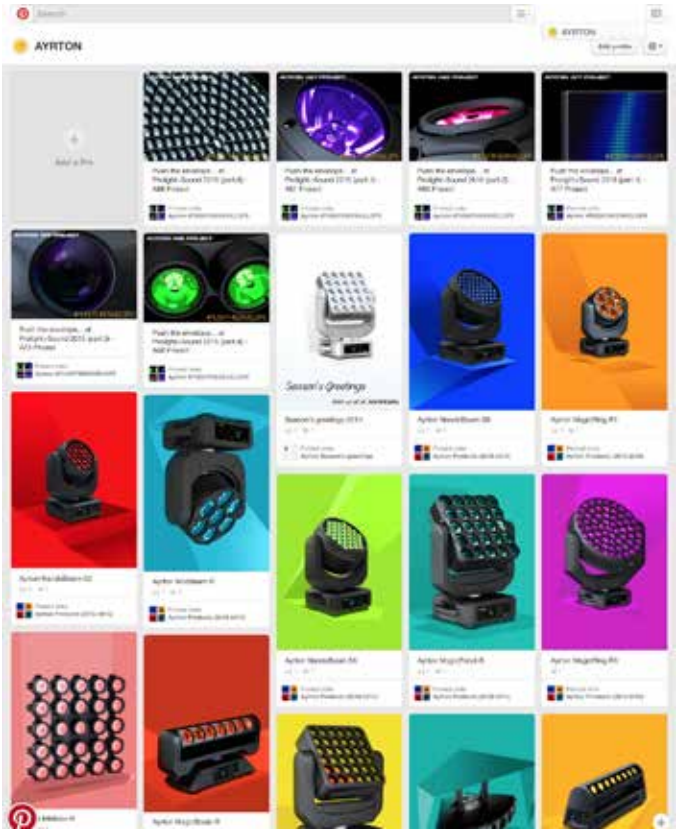

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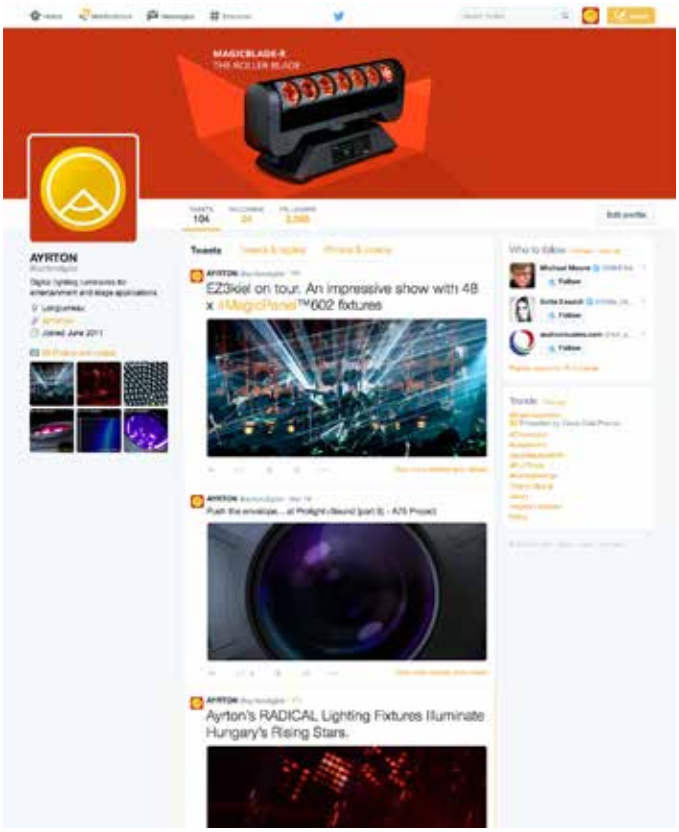
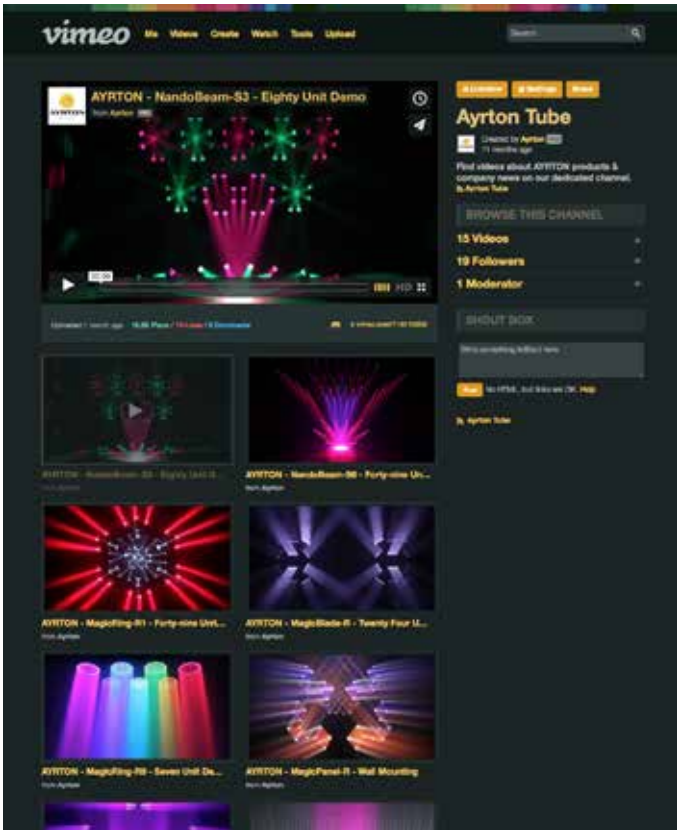


www.twitter.com/ayrtondigital

VIMEO



www.vimeo.com/channels/722996

DREAMPANEL SHIFT

DREAMPANEL SHIFT IMAGING DISPLAYS

The magic blend of two technologies: the continuous pan-tilt rotation of the MAGICPANEL™ and the new control system from the HDMI DREAMPANEL™HD-BOX (patent pending). An innovative 48 circuit rotating connector has been developed to enable the smooth, undisturbed transmission of video signals through pan & tilt rotation.

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PROLIGHT+SOUND 2015

Seven new Ayrton products and a demo light show by Laurent Chapot


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Ayrton will be presenting no fewer than seven new products at Prolight + Sound, all innovations that follow the evolution in LED technology, optics, control and cooling systems. This manufacturer has become a master in the art of combining these different elements to create beams that best suit the applications for its luminaires... and with a rare talent for inventiveness.

At Prolight + Sound, the Ayrton stand has moved from Hall 9 to Hall 11 for a more spacious 150m², dedicating some 90m² to demonstrations, prepared this year by Laurent Chapot, one of France's most respected lighting designers. Laurent will be applying his talent to demonstrating the unique features of the Ayrton product line.

Ayrton, who owes its worldwide success to unique special-effects products like the MagicPanel™ or the MagicBlade™R has added three new spectacular luminaires to the Creative Solution line: The MagicDot™R, CosmoPix™R and VersaPix™RS that use a new oversized 94mm-diameter collimator, which, combined with the latest generation of Osram multichip LED, creates tighter beams with a centre intensity never before seen.

In terms of pure lighting, the French manufacturer is launching the NandoSpot™SC, the first long-awaited LED spot in the line, capable of 20,000 lumens in white, supplementing the NandoBeam wash light launched in 2014.
A new addition to the Automated Luminaire range is the WildSun™K25 a big white, motorised luminaire for lighting stadiums and concert halls, meant to replace Fresnel HMI-4,000W projectors.

Finally, with its typically original touch, Ayrton is incorporating video. The two DreamPanel™Shift and DreamPanel™Twin motorised panels are boosting creative potential thanks to the quality of the video tile used, its versatile effects, and continuous pan and tilt rotation. The DreamPanel™HD-BOX controller has been specially developed for driving the panels in HDMI. This is the new Imaging Display product line.

Yvan Péard, Product Designer at Ayrton, provided us with details on these new tools that will soon be available to help lighting designers create even more spectacular shows.

THE AUTOMATED LUMINAIRE RANGE

NANDOSPOT™SC - 20,000 lumens in white!

The quality of this spot's beam is based on its (white) light emitter, a complete module (incorporating LED and optics). Ayrton has patented this unique module, designed and manufactured by Gaggione, a French company specialised in the development of optics.


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1. *NandoSpot™SC*
2. *WildSun™K25*
3. *MagicDot™R*
4. *VersaPix™RS*
5. *NandoSpot™SC*
6. *WildSun™K25*
7. *MagicDot™R*
8. *VersaPix™RS*

Yvan Péard: "Ayrton has worked closely with Jean-Pierre Lauret (the engineer in charge of optical development at Gaggione) for more than two years to design this light module which provides the fixture with a 20,000-lumen flux and a solid beam that is extremely uniform, i.e., with no hot spots. This beam gives gobos a good sharp edge and is particularly effective for a cone shape. All lenses are high output, with anti-reflective coating: 14 lenses with a 10-50° zoom (5:1 ratio!) and the output lens with a 180mm-diameter, an all-time record for a luminaire of this size."

Combined with the module of white LEDs, which altogether represent a 90mm^2 surface, are a CMY mixing system, a CTO, and a complementary-colour wheel. The effects part consists of two wheels with six rotary glass gobos (preferred by known lighting designers); a continuous dynamic effects wheel, which can be defocused on a large adjustment range; an iris diaphragm; a contour erasure filter for smoothing sharp edges; and a four-facet rotating prism - nothing is lacking. A new heat-pipe cooling system ensures long hours of safe operation.

The WILDSUN™K25: 100,000 lumens in white, a torrent of daylight

With its new LED emitters, WildSun™K25 competes brilliantly with the large Fresnel 4,000W HMI lights typically used for sporting events in stadiums and large arenas.

Yvan Péard: "We followed very precise technical requirements from video directors and operators specialised in television. We had to obtain a very high level of output because these projectors are placed in arches more than 20 meters up, with lighting that is very spread out, almost like daylight... [We needed] a remote control and zoom to make adjustments, and dimming... In short, an Arena that would no longer require any frequent and costly change of bulbs, manual positioning, or remote dimming costing the price of motorised shutters."

The WildSun™K25 meets this specification perfectly with an output of over 100,000 lumens generated by 217 15W (6,000K) white LED chips combined with 217 silicone collimators assembled in a single lens. This luminaire has a 10-50° zoom. Individual control of the rings allows the emission surface to be modulated according to ceiling height. It is fitted with a precise electronic dimmer and a heat pipe-based cooling system that maintains stable output, with a maximum consumption of 2,600W, considerably lower than that of the HMI 4,000W.

THE CREATIVE SOLUTION PRODUCT LINE

The MAGICDOT™R: 180,000 candelas at centre beam

The smallest member of the gang is the toughest. Single light emitter, but what power!

Yvan Péard: We encouraged Osram Opto Semiconductor, with whom we have a very close partnership, to develop a brand-new multichip RGBW with a power range of 60W and an 8mm^2 emissive surface area. We took a current of 16A and combined it with a new 94mm collimator (200g). This required more than two years of development and fine-tuning in collaboration with Gaggione to get the result we wanted: a 4.5° angle and 180,000 candelas of centre beam intensity."

A record breaker! It has a totally round head, continuous pan and tilt rotation, and is lightning fast. Regardless of its position, the head fits within the diameter of the luminaire's cylindrical base. This allows for bold new configurations leaving barely a centimetre of space between two luminaires. Of course, MagicDot™R is an Ayrton patent. The cooling system is also a wonder of technology: a new copper circuit board on the heat pipe along with a one-piece aluminium heat sink using a bath for better thermal conduction. Its weight? 5.3kg!


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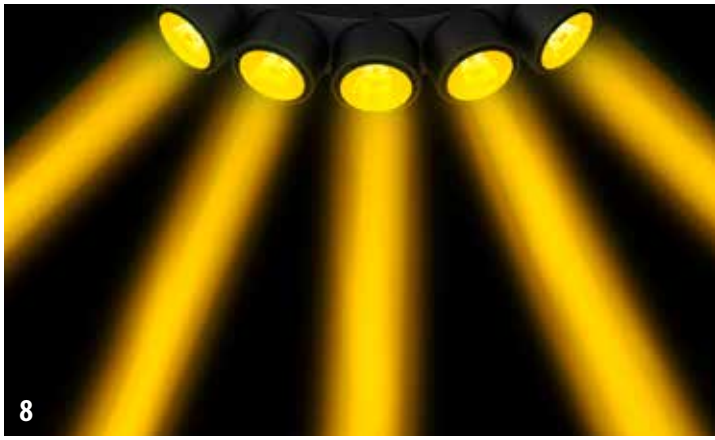
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VERSAPIX™RS, the most mobile of the fixed luminaires

The newly developed 94mm-diameter optics, combined with a 4mm^2 40W RGBW multichip, have given the VersaPix™RS a major boost in its new RS version, called Ultra Radical. It can produce five 3.5° beams (compared with 4.5° for the R range) with a record-breaking centre beam intensity of 200 cd/lm.

Yvan Péard: "The new VersaPix™RS is three times more powerful than the first VersaPix™ we released, and its centre beam intensity is six times greater, so that you can create truly spectacular 3D volumetric effects."


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COSMOPIX™R, 12 light shafts through space

Ayrton has regained the huge success it enjoyed in the '80s, once again with its formidable new 94mm-diameter optics combined with one of Osram's latest creations, a 60W Multichip RGBW LED, which can generate powerful beams of under 5° with a centre beam intensity of 100 cd/lm. This little powerhouse generates 12 light shafts in colour that can be separately controlled in all directions and driven in continuous pan and tilt rotation, creating exhilarating effects never before seen.

Yvan Péard: "The powerful light emitters, arranged in a regular pattern over the entire surface of the CosmoPix™R sphere, required the development of a specific new cooling system for each of the emitters."

The CosmoPix™R has extended series connectivity and can be controlled by DMX-RDM, Art-Net™ or with a wireless DMX-RDM link via a new-generation TiMo module by LumenRadio, an Ayrton partner.

Yvan Péard: "Timo is the smallest receiver in the world, compatible with the latest new technologies. We now integrate it directly onto our motherboards".

THE IMAGING DISPLAY PRODUCT LINE

DREAMPANEL™SHIFT, in classic black

For video applications, OSRAM has recently developed a black diode with a classic black enclosure -- but also with a black reflector! This daring endeavour resulted in a video panel with prodigious contrast and definition. Ayrton has adopted a small format 384 x 384mm version for its infinite rotation moving fixture, and kept the secret.

Yvan Péard: "We've developed an innovative 48-circuit rotating connector to be able to transmit video signals through pan & tilt rotation without any interruption. And we chose a 6mm pitch which seems perfectly suited for show applications. The closest members of the audience are usually sitting at least 10 meters away."

This magnificent ultra-thin luminaire is packed with technology.

Yvan Péard: "Thanks to the new HDMI DreamPanel™HD-Box control system, each DreamPanel™Shift tile receives the entire HDMI 1080P image but displays only its allotted portion of the image."


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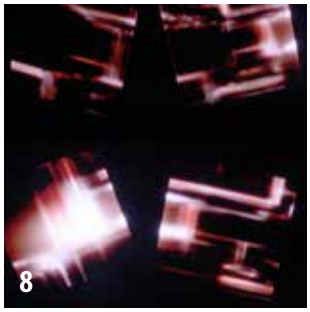
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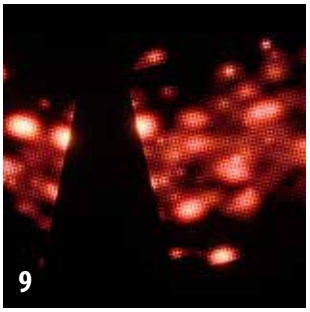
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1. *CosmoPix™R*
2. *DreamPanel™Shift*
3. *DreamPanel™Twin*
4. *DreamPanel™HD-Box*
5, 6, 7. *CosmoPix™R*
8, 9, 10. *DreamPanel™Shift*
11. *DreamPanel™Twin*
12. *DreamPanel™HD-Box*
13. *Ayrton's Brochure Cover*

DREAMPANEL™ TWIN, double-faced: video full HD + volumetric light

Ayrton has anticipated designers' whims by offering another unique luminaire.
With a DreamPanel™Shift on one side and an optimised MagicPanel™ on the other, added to a motorised head in continuous pan and tilt rotation, the DreamPanel™Twin can alternate between light and video. The Shift side (see above) has a 4,096 RGB LEDs on a pitch black background that provides extreme contrast. The other side with the MagicPanel™R has an improved resolution of 64 points (as opposed to 25 points) and nearly the same centre beam intensity, producing even more detailed volumetric mapping effects.


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Yvan Péard: "To get that many pixels on a small surface, we collaborated again with Gaggione and developed a new 45mm collimator capable of projecting a 6° beam with a centre beam intensity of 73 cd/lm."

Another record breaker!

Yvan Péard: The two sides are controlled completely separately-the video side through the entirely new HDMI DreamPanel™HD-Box control system, whilst the MagicPanel™ side used for 3D volumetric effects, along with the pan and tilt movement, is managed by Art-Net or sACN through an Ethernet link.

DREAMPANEL™HD-BOX

To control the DreamPanel™Shift, stand-alone or inside the DreamPanel™Twin, Ayrton has developed the DreamPanel™HD-Box to drive a full HD HDMI universe with maximum simplicity on a matrix video display -- this has never been seen before!

Yvan Péard: "The controller manages the image, the positioning of the panels, and the rotation between the media server layer, which generates the signal, and the display layer. It also resizes and positions the media in real-time in a matrix of video panels regardless of their orientation. It is used with the HDMI DreamPanel™Manager, PC-compatible software that lets you configure a matrix, orient the tiles individually with 1° accuracy and adjust brightness."

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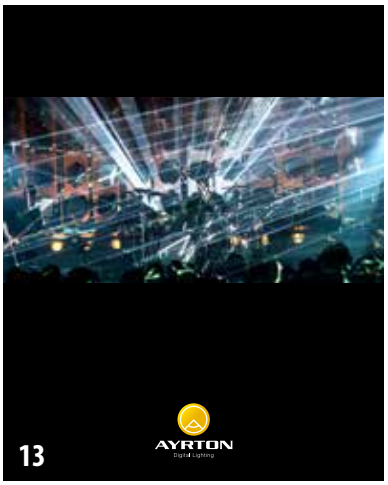
The DreamPanel™HD-Box accepts the signal from any type of media server (HDMI or DVI-D) as input and manages movements using Art-Net. It has four HDMI outputs, two HDMI inputs, two DVI-D inputs, one DMX input to run presets from the lighting console, an RJ45-type connector, and a USB port for software updating.

The catalogue

All these new products have been added to an absolutely stunning 60-page catalogue with splendid, glossy photos of lighting installations, all the technical data, including the specs on the flight cases that are delivered standard with each product.

Ayrton has conveniently provided big charts at the end of the catalogue for comparing all the product specifications.



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LAURENT CHAPOT DESIGNS THE AYRTON BOOTH

Laurent Chapot, a famous French lighting designer, has agreed to apply his know-how at Prolight + Sound to promote products for Ayrton in the company's booth. This is a challenging new experience for him.
We met with him before the show in the Ayrton showroom, as he was programming the gear at his lighting desk. As you will find out, he already has strong opinions about how to use the gear and get the most out of it.

On a 90m^2 stage inside the 150m^2 booth, he has placed the Ayrton name in huge 80-cm-high letters under the new luminaires.

Ayrton Live: Laurent, have you ever applied your talents at a trade show before?
Laurent Chapot: Not really. I did a lot of promotional events at one time but never designed a booth to showcase products. On the other hand, I've always wanted to take part in developing a luminaire. I'll enjoy demoing the new Ayrton products at the trade show where they're going to be announced.

Ayrton Live: What's your method?
Laurent Chapot: I present all the unique features that make a luminaire special and encourage people to want to use it.
It is a very different approach than designing lighting for a show, but no matter what the lighting designer's job is to make people dream.

However, in the first case, you try to go beyond the technical dimension, in this particular case the technology is really essential.
I'm setting up the projectors for creating attractive effects but also to show the particular features of the gear.

Laurent Chapot
Lighting designer

Specialising in lighting, image, stage design and interfaces, Laurent Chapot is also passionate about electronic music.
It is through this music that he got involved in the lighting business in 1981 when he became the light jockey at the Palace.
Pierre Vassiliu later gave him his chance as a stage lighting designer, while maintaining his ties to music when he joined the group Raoul Petite.
At this time, he met Christian Lorenzi and began a long collaboration with Arpège. He has also collaborated with Pascal Striby from the company SPL.
Always staying loyal to his technical roots, through his need for physical contact with the reality of the show, he was able to come up with economically feasible designs.
Laurent forged relationships with artists based on loyalty: 12 years alongside E. Daho, 18 with S. Lama and 8 with Tryo.
In 1994, he partnered with his brother Fabrice and started integrating video into the light shows.
A career path in evolution for a lighting engineer anxious to understand the mechanics of perfect cohesion between light, music, stage and the artist's universe.
Unafraid of «overcoming the technical dimension» for more of the natural element, Lawrence is always available for a show, no matter how large.

Ayrton Live: Which projectors are you including in the gear?
Laurent Chapot: The MagicDot™R, CosmoPix™R, DreamPanel™Shift and DreamPanel™Twin, and also MagicPanel™R, IntelliPix™R, NandoBeam™, MagicRing™. There are around 300 fixtures in all.

When I was first shown the products, I thought about how to arrange them, especially, the MagicDot™R. I thought about making the big MagicRing™R9 with each emitter moving 360° on pan and tilt. Then we'd have a big line of 37 MagicDot™R on 10 linear metres, a light curtain for creating wave effects, "spirographic" beam intersections, and helicoidal rotations, and so forth.

To produce another spectacular group effect, we put 36 on a ring on the ground with the Ayrton logo in the centre. Huge letters that measure 80 centimeters high spelling Ayrton surround the circle.
Nothing very original about these last two effects, but the advantage with the MagicDot™R is that we can really place the fixtures close against each other.

The idea is to create spectacular mass effects from conventional setups, and so it's the uniqueness of the luminaire that makes the difference.

Ayrton Live: In large quantity, maybe, but how about just one?
Laurent Chapot: Yes, absolutely, because it's a very small projector that can fit in anywhere on a small stage, around a drumset, for example, or in a TV studio to fill in the holes. It's more versatile than a PAR and it has a very low profile—it's perfect.

Ayrton Live: What do you think of the Cosmopix™R?
Laurent Chapot: The CosmoPix™R is a projector that needs air because its beams shoot off in all directions. So we spaced them and spread them around in the area and on the ground. This was a well thought-out effect! The LEDs are arranged in an unusual way. Not easy to understand at first glance, but there are enough presets to satisfy the user. You turn it on, you just use it, and it's great. I'll bet that it'll be perfect for big clubs, but I also can see using it at festivals, in TV studios, and at concerts, of course.

Ayrton Live: What about the NandoSpot™SC? How do you feel about starting with white LEDs and working with subtractive colour?
Laurent Chapot: Yes, the colours behave differently, especially when you transition from one to the next. But you get real power with the white. Contrary to what you would think, if you use blue as an additive colour—even though it's a native colour—with a single LED the blue leaves you with only 1/3 or 1/4 of the fixture's power.
Also, I liked the idea that Ayrton submitted a collection of gobos to different designers and used the ones that they liked the most and found the most effective. So I think we're going to have a nice set of gobos.

Ayrton Live: And what about the video/light panels? What effects do you have in mind?
Laurent Chapot: First we have to present the DreamPanel™Shift, a video panel on a moving head with the unique feature of having black LEDs and a black reflector, so there can be no reflection. Looks great and has excellent contrast. Then we have the DreamPanel™Twin, also a continuous rotation fixture, but one side has 64 powerful LEDs and the other side has the video panel.

The idea is to arrange them in a checkerboard of 7 rows by 11 columns, with half the cells using alternating emitters, forming a large screen when all the cells are on the video side.

Ayrton Live: What are the advantages of a video panel mounted on the moving head?
Laurent Chapot: If you get the same effects with these moving LEDs as you would by using a computer to distort an image, there's no point.

Again, you have to create applications that make these products look interesting.

If the DreamPanel™Twin with big LEDs on one side (8x8) is a hit, the video side has an obvious advantage, in any case for MagicPanel™602 and R users.
Less light and more video resolution: the perfect combination.
The two sides alternating in continuous rotation excites the imagination.

The DreamPanel™Shift is much lighter in weight, and is perfect for applications requiring only a single video panel.
You can create large virtual image areas with elements sufficiently spaced regardless of how many there are.
Rotating all these elements will make the image physically come to life.

Images rippling, vanishing, jumping around, and turning in all orientations—a new product with unique effects.
This HD version is the classiest of all LED panels we've had so far."

MAGICDOT-R

MAGICDOT-R CREATIVE SOLUTIONS

A new member of the RADICAL™ product line, MAGICDOT™R is the first professional moving head LED luminaire with a single optical collimator. The new high-efficiency optical system measuring 94 mm in diameter and weighing over 200 grammes required more than two years of development and perfection. The result is an intense beam of less than 5° using a multi-chip RGBW LED with a light-emitting surface of 8 mm^2.

www.ayrton.eu

AYRTON
Digital Lighting

TILT AND AYRTON CELEBRATE A VINTAGE FLASHLIGHT

For the Festival of Lights in Lyon

Does this pocket flashlight look familiar? If you're French maybe you used to keep one in your kitchen drawer or in the glove box of your Deux Chevaux. Or you hung it at the entrance of your wine cellar. Or you've seen theatre ushers use one at the Paris cinema to seat late arrivals. If you're just a Francophile, maybe you saw it in a Truffaut movie. Tilt, creator of urban lighting, has given a new charge to the classic flashlight, this time in giant format powered by the Ayrton™ WildSun™500C luminaire. This LED washlight guides Lyon visitors in living colour along the path to the Place du Maréchal Lyautey. Mixed-generation crowds stopped to admire this massive, very retro object that emitted a variety of bright, beautiful colours.

Excerpts from the article published on the **soundlightup.com** *website*
Text: **Monique Cussigh**
More informations & videos: **www.soundlightup.com**

For the annual Festival of Lights in Lyon, France, the city decided to light up over twenty locations, some with projectors, others with installations. Companies that responded to the call for bids offered their projects with a personal theme.

La Pocket is a new addition to the Tilt luminaire collection with two large-format creations for urban and public park lighting: giant plants and vintage lamps.

Yvan Péard (designer of Ayrton™ luminaires) joined us to meet with François Fouilhé and Claudia Caterin, two managers from Tilt's small staff of eight who make their own luminaires in Eurre, a village near Valence in the department of Drôme, in southern France.

The Pocket, a lamp that shines with public appeal

SLU: The Pocket flashlight is a part of a past that all French share. Is this why you've chosen such a theme?

François Fouilhé (Tilt's Artistic Director): "We love these old flashlights, which represent one of our creations, along with the giant plants. Back in 2009 we came out with a giant architect lamp, and since 2013, we've been wanting to build a big, beautiful flashlight.

This Pocket model goes over well in France. Of course, it is a copy, which we've reproduced aesthetically with attention to detail. And we've animated it. It has a new heart in a vintage body."

SLU: Why did you choose the WildSun™ as a light emitter?

François Fouilhé: "We needed a powerful LED emitter on the same scale as the object that would allow us to animate the light with colour changes, zoom and strobe effects. We discovered the WildSun™500 line in 2013 thanks to Benjamin, our sales rep

at Axente, the French distributor of Ayrton™ products.This projector was exactly what we needed, except that we didn't have the room to integrate the full moving fixture. The WildSun™ head that we use does not exist in their catalogue: Ayrton™ agreed to make us a special version with a fixed head."

SLU: Yvan, do you often make custom products?
Yvan Péard (designer of Ayrton™ luminaires): "At one time we made a lot of them, now it's very rare. In this case, the historical aspect is what interested me. This lamp is something familiar to me, and there was nothing difficult about making one. It was easy to adapt. We provided the WildSun™500C heads within two to three weeks, reusing existing modules. When the WildSun™ came out in 2011, we though about launching a more economical fixed head version for those who didn't need it motorised. We must have made 12 in all before abandoning the project, because leaving out the pan-tilt motor didn't significantly reduce the price of the product… "
François Fouilhé: "Well, now we have eleven of them (laughs)."

For a giant Pocket

SLU: How is it made? With a giant battery, too, and a piece of cardboard inside to improve the contact, they way it used to be, right (laughs)?
François Fouilhé: "No (laughs). The case was designed for hanging the Pocket. You can hang it on a façade, under a tree, etc. So there is an internal armature that keeps it rigid, plus an opening for easy assembly and disassembly. Here, the case is made of steel. It weighs 800 kg."

SLU: 800 kg??
François Fouilhé: "For this kind of public installation outdoors, you have take into account wind resistance, which is not negligible. Given the wind resistance of these oversize units, they have to have sufficient weight so as not to be blown away. Even then, we have a process which comes into play if the wind reaches 100km/h. If the wind were to start blowing at that speed we'd evacuate the public. At 120km/h we'd need more guy wires and add ballast. Beyond that we'd dismantle everything and go home."

SLU: Do you manufacture the luminaires yourself?
François Fouilhé: "Yes, we have a 400m^2 metal workshop, and we manufactured all of these structures. We outsourced our polyester moulds locally, i.e., the entire resin part. There are some good companies in the Drôme area that have mastered this technology. We like to keep things local."

SLU: Do you have any energy constraints here?
François Fouilhé: "Not really, here, the Artist is king, but everyone wants to be conscientious and act responsibly. The operating hours for the Festival of Lights is between 5:30pm and midnight, which is not huge. This is how the city manages energy consumption.
Tilt takes this parameter into account from the outset. The Pocket display, for instance, only consumes 600W. This entire installation is powered on three 16-amp outlets."

SLU: Is there a cue storage memory in each Pocket?
François Fouilhé: "No, they are all wired into the DMX network. A single DMX universe is sufficient for the entire display. We use 14 channels per machine and there are 10 of them. The animation cycle lasts exactly 4 minutes, 50 seconds with two sequences: a slow part with colour change and zoom effect; the other part is fast with zoom and LED crown effects as well. Jean-Baptiste Laude programmed the sequences using Sunlite Suite."

SLU: What do you think of LED light?
François Fouilhé: "It's a great artist's brush, like the other types. I was raised with PARs and halogens. The LED is a new tool that has to be tried out. There need to be visual cues and power cues. The big advantage of LEDs is the energy of the colours and now, with the white chip at 4000º K, it's getting interesting.
The LED is evolving and we are adapting, so that now we take into account the LEDs from the very start. But I'm not quite ready to give up the regular lamps.
There something new about LEDS that we want to add in, and there is much more choice than with regular lamps. And there's a whole range of optics and beam angles that can do all sort of things. But we still love the filament, and we want to hang on to it."

Trees of light

SLU: Do you have a large fleet of fixtures?
François Fouilhé: "Yes, we have a collection of different luminaires, some with bases, large or small. We design projects according to the dimensions of the space to be filled.
When we manufacture a luminaire, its life-cycle is five years, as our stock goes around the world to Singapore, Jerusalem, Moscow, Amsterdam, Emirates, etc.
We also participate in other light festivals because a lot of world capitals have adopted Lyon's concept. These are the best showcases for Tilt."

"And what do you do with the lamps after the Festival of Lights? Are they put up for sale?" François Fouillé and Claudia Caterin have heard this question thousands of times during the exhibit –- proof that they have a hit, and that their products have public appeal. I myself was wondering what colour to choose to illuminate my garden… Orange? Yellow? SLU pink?
These objects are not for sale and after the expo they will be returned to the Tilt fleet of luminaires to be used in other temporary installation projects for garden festivals. They will continue to charm France and other places in the world, far away. ■

Tour Crew

Technical Crew

Artistic direction:
François Fouilhé

Production management:
Claudia Caterin

Manufacturing directors: **Eric Vignal** & **Jean-Baptiste Laude**

Technicians: **Joffrey Pauly, Thomas Couriol, Jean-Christophe Chavanol, Christophe Galand**

1. *On the right, Claudia Caterin (Production Manager) and François Fouilhé (Artistic Director) for Tilt, and on the left, Yvan Péard (Principal Product Designer at Ayrton™).*

2. *We can barely recognise the Ayrton WildSun™500C inside the reflector.*

2. *One luminaire of the collection*

USHER GETS RADICAL

with Ayrton on the UR Experience Tour

© Todd Kaplan

Eric Wade, of FOHShow LLC (www.fohshow.com), is the first US lighting designer to put Ayrton's RADICAL™ new MagicPanel™R out on a major tour – that of American R&B/Hip-Hop artist Usher as he embarks on a fifty-date tour across America and Europe to promote his 8th album, UR.

Wade's rig includes 64 active MagicPanel™R units in the air, plus 25 MagicBlade™R fixtures under a transparent forestage. Both fixtures are members of Ayrton's new RADICAL™ line of LED beam projectors, which was introduced at ProLight + Sound in Frankfurt earlier this year. The common component of the entire RADICAL™ line is an individually-controllable, 15W RGBW multi-chip LED source coupled with a 67mm diameter 4.5° collimator optic. MagicPanel™R puts these emitters into a 5 x 5 matrix, while MagicBlade™R mounts them in a unique, seven-in-a-row, in-line configuration. Both fixtures feature a fast moving yoke with continuous, unlimited rotation on the pan and tilt axes.

This is not the first time Wade has used Ayrton™ lighting products. "I first used Ayrton's MagicPanel™602 on Maroon 5's Overexposed European tour in January 2014. During the three-week run the MagicPanel™602 fixtures were the only ones we had absolutely no problems with. We didn't have to change a single one! I liked them so much I decided to incorporate 64 of the new MagicPanel™R into my design for Usher's international tour."

Wade has made MagicPanel™R the main feature of four automated, diamond-shaped lighting 'pods', custom-made for the tour, each of which carries sixteen MagicPanel™R units. The pods are suspended above the stage and can be raised, lowered and tilted to any angle above the performers to create different shapes and looks throughout the show.

The stage incorporates a number of lifts that are raised and lowered to deliver performers and create scenic elements. The combined movement of lifts and pods with that of the Ayrton™ fixtures above and below stage creates a very dynamic show. "At one point – during a breakdown in OMG – the pods are flown in so low as to wrap around Usher in a shape I created as reminiscent of the 'Beamer' space ship from Falling Skies (the post-apocalyptic sci-fi television series). Usher dances within the 'spaceship' while the MagicPanel™R configuration sprinkles light all around him before all are returned back up to the grid, flattening out as Usher raises his arms to send it away. It makes for a great opening song look!" Cueing of the pods and all automation is handled by assistant lighting designer, Jason Winfree.

The set, designed by the inimitable Baz Halpin and Chris Nyfield, includes an asymmetrical stage with a downstage point offset 6ft from centre. The irregular shape is accentuated by Wade's use of MagicBlade™R fixtures embedded beneath the stage's transparent leading edge. Wade has spaced the fixtures at 4ft intervals and uses them to project up through the clear floor and forward, through the clear front, passing through and over the audience, often synchronising with the hand moves of Usher himself, as if he were controlling the lighting sequences with his dance moves.

"I chose to use MagicBlade™R and MagicPanel™R in maximum channel mode," says Wade. "This meant a lot of programming for my Programmer/Associate Designer, Eric Marchwinski, but also means I can get a lot out of them and a much greater level of control, because the ability to control each and every pixel gives me an unlimited amount of 'looks' to build from."

Wade runs the entire show from a GrandMA2 lighting console. "With Morpheus Lights (Ayrton's exclusive US distributor) helping ACT Lighting create new libraries for the Ayrton™ fixtures, controlling them was a dream," he says. "I used Control Freak Systems and Earlybird Visual to pixel-map all of the MagicPanel™ units which enables us to send video into them as well. Control Freak Systems is the control backbone of my show while Earlybird Visual did all of the MA 3D files for the Ayrton™ products to give us beautiful 3D renderings of the fixtures, along with great pre-programming."

Wade has been very impressed by how dependable and creative the Ayrton™ products have proved. "MagicPanel™R is just as reliable as MagicPanel™602. It is very similar but has sharper beams, and its 5 x 5 matrix means it uses fewer channels. The configuration of emitters gives MagicPanel™R a centre pixel which gives me additional design options – an 'X' has a centre point for example – and I can create different patterns from the ones I can make with MagicPanel™602's 6 x 6 matrix. They really are great fixtures.

"MagicPanel™R is top of my list of favourite fixtures. I didn't get the chance to try out its wireless DMX option on this tour, or to use the WildBeam™R which is another from the Radical™ Series I am keen to try, so now I'm looking forward to putting both into action on a project I have early next year!"

AYRTON MAGIC FOR JASON BULLOCK

on Wiz Khalifa's Under the Influence Tour

© Todd Kaplan

Lighting designer, Jason Bullock of Infinity Point Design, Inc., brought a wealth of new Ayrton™ lighting fixtures to Wiz Khalifa's Under the Influence of Music Tour this year. Under the Influence of Music is an annual event which brings the biggest new names in hip-hop to venues across America.

Bullock was amongst the first to use Ayrton's MagicPanel™602 last year and has returned to it this year incorporating 48 of the units in his design. To these he has added fresh offerings from Ayrton's newly released Radical™ Series, employing 36 unique MagicBlade™R linear fixtures and 12 massive MagicRing™R9 fixtures. Bullock, like Khalifa, is determined to expand the visual presentation of the tours using the latest technology to explore the unique design possibilities that new products present. "After the success of the MagicPanel™602, I met with Ayrton™ in Europe and discussed some logical extensions of the technology they had assembled," says Bullock. "The Radical™ (-R) series has incorporated some of the ideas we discussed so we spent most of our budget on the new MagicBlade™R and MagicRing™R9 units. Luckily Upstaging, Inc, who supplied this tour, already has a large stock of MagicPanel™602 now that everyone wants to use them!"

The MagicPanel™602 units – each a 6×6 matrix of 15W LED RGBW modules fitted with high-output 7° 45mm optics – were rigged on the back wall and side trusses to form the signature feature of Bullock's geometric design.

The MagicRing™R9 fixtures were mounted either side of the stage and used both for illumination and for effects. MagicRing™R9 has sixty-one 4.5° 15W RGBW LED sources arranged on a 60cm diameter face, and can be operated in various modes using from 18 to 256 channels.

Bullock chose the 256 channel mode, although there are multiple macros on offer to control colour, chase etc. "Once you configure it for full resolution mode the channel count starts to add up, so it takes a little extra time to figure out how you're going to use them and assess how to configure your console," he says. "However, with 2 fixtures per universe you start understand the vast number of parameters at your fingertips."

Bullock had another function in mind for the MagicBlade™R – unique fixtures with seven 4.5° 15W RGBW LED emitters arranged in-line and continuous pan and tilt capabilities – mounting eighteen on the rear wall, eight outlining the top ramp and four more set into side trusses. "It's very easy to create asymmetry with the MagicBlade™ units," he noted in an interview with PLSN. "They lend themselves to the weird avant-garde stuff and, because the light is incredibly fast, it can do incredibly cool things like flips and pans and fly-ins with this big flat beam of light."

"Ayrton's whole Radical™ series is forging a new direction," he says. "Early generations of LED moving heads were lacking definition. You could bitmap the face for cool designs but not project the effect in a beam. Ayrton's lights are the perfect combination of a beam projector and effect light, and bright enough to beat out most hard-edged fixtures. The -R series has condensed each pixel down to 4.5 degrees which allow fixtures like the MagicRing™R9 to become, in essence, a large beam projector with the output power of a large format fixture, but at a fraction of the weight and cabling need."

In terms of tour-worthiness, Bullock is full of praise for the Ayrton™ fixtures: "The Ayrton™ kit has been fantastic on the road," he says. "They've been rained on, dropped, plugged in wrongly – and they just keep working! Unless someone has physically broken the body, these lights WORK.

MAGICPANEL™602 CROWNS QUEEN + *Adam Lambert's Worldwide Tour*

© Todd Kaplan

Ayrton™, French manufacturer of original LED lighting solutions, is proud to announce that its MagicPanel™602 LED panel fixtures are touring the world with the 2014/15 Queen + Adam Lambert world tour.

Following this summer's sold out dates across the Far East, Australasia and North America, the champion combination of Queen + Adam Lambert is due to embark on a 26-date (11-country) tour of Europe in early 2015. From the very beginning, lighting designer Rob Sinclair chose to light the show's iconic centrepiece, a giant 'Q', using MagicPanel™602 LED lighting fixtures.
"I have worked with Queen since 2012 and know that Brian May and Roger Taylor have definite ideas, born of long experience, in the production values of their shows," explains Sinclair. "When they requested the reproduction of the iconic 'Q' stage for the tour, I knew we needed a lot of lights to create the huge Queen look."

When it came to lighting the central feature, Sinclair chose 24 of Ayrton's MagicPanel™602 units which he rigged at regular intervals around the curved truss to delineate the shape of the Q: "I needed something small and bright to fit inside the main Q set-piece," he says. "I knew that Upstaging Inc, who supplied the tour (with help from Chameleon in Australia and Neg Earth in Europe) had the MagicPanel™ units and they seemed to fit the bill well. They were bright enough to make an impact and small enough to be built into the set, where they have travelled in situ without problem."

MagicPanel™602 is a 6×6 matrix of 15W RGBW LED emitters, each of which projects a tight, powerful 7.5° beam. Each emitter can be controlled individually or used collectively to produce a coherent 15,000 lumen shaft of light, using only 600W of power. MagicPanel™602 can rotate continuously on both its pan and tilt axis.
Sinclair uses the MagicPanel™ array to highlight the internal structure of the Q-truss and to create midair effects that framed the circular projection screen within. "They are a great backlight coming down onto the stage," he says. The MagicPanel™ units were also used to create chases, shoot beams of light into the audience and accentuate the shape of the truss as it was lowered forward to a horizontal position.
"I didn't need the complexity of the full individual LED control the MagicPanels offer, so chose just to use them in 20-channel mode to keep the channel count to a minimum," he says. "I used some of MagicPanel's built-in effects, but rarely."

Sinclair's programming was significantly simplified by the technical team at Ayrton™ which created bespoke software specifically for the show. "The guys at Ayrton™ wrote us some custom firmware to turn off the corner LED emitters of the square panel," Sinclair says. "This gives an oval beam to mimic the set which works really well coming out of the Q-frame. Without it, it would very much have been a square peg in a round hole!"
This was a 'first' for Ayrton™ which had never created custom code for the MagicPanel™ until this tour, but was encouraged to do so by Keith Bennett of Morpheus Lights, Ayrton's exclusive US distributor, working in conjunction with Upstaging, Inc.

Queen + Adam Lambert's European tour starts in Newcastle, UK in mid-January 2015 before moving to mainland Europe throughout February and returning to the UK to finish at Sheffield Motorpoint Arena on 27 February 2015.

ANDREW CASS
move mountains for The String Cheese Incident

Lighting designer, Andrew Cass chose MagicPanel™602 and MagicBlade™R LED fixtures for his dynamic lighting of The String Cheese Incident which toured the US from late summer 2014 to early 2015.

The String Cheese Incident is a Colorado band with an eclectic style that encompasses elements of bluegrass, rock, electronica, calypso, country, funk, jazz and more. Cass put together a vibrant and colourful lighting design which reflected the variety and dynamism of the band's diverse style. "Colours are my signature - I'm an over-saturated guy! - and the band give me free rein to do what ever I want," says Cass. "The artists like my saturated colour and it is appropriate for their music. There are not many moments during their set when non-saturated colours fit."

To help achieve this level of intensity and variety, Cass turned to the ever-versatile Ayrton™ fixtures with their unique blend of continual movement and broad colour spectrum.

"I have been using MagicPanel™602 since it was released in 2013," says Cass. "The fixtures made a big splash in the EDM scene and I used them at a number of festivals including Electric Zoo where we had over 80 units in the festival rig. For The String Cheese Incident I had 16 MagicPanels rigged on the overhead grid, just behind the band, so I could use them as backlight, eye candy and audience blinders and to create some great aerial effects out there in the smoke. But this tour was my first time using the MagicBlade™R which I chose for its linear alignment and unique motion capabilities."

Cass's motivation for his design was to return to the band's bluegrass origins and create an ingenious rig that was suggestive of mountains. "To do this I wanted a non-circular moving lantern which would enable me to outline the mountain concept with linear moving fixtures." Cass achieved this with 36 MagicBlade™R units evenly spaced on trussing behind the band to outline three triangular mountain peaks.

"So many of the band's songs - for example Spinning Round the Wheel of Life and Sirens - are about continuous motion which I was able to accentuate using the MagicBlade™R and MagicPanel™ continuous pan and tilt features," says Cass. "Ayrton™ is the only manufacturer to have truly succeeded in this unique movement."

Cass also chose the MagicPanel™ and MagicBlade™ fixtures for the individual and isolated quality of each beam of light as projected by each collimator and the high 'pixel' count they afforded him. "I ran my own video content using Art-Net merging through the fixtures to create texture and moving colour so I needed as many pixels as possible with as much individual brightness as possible. MagicPanel™602 gives me a 6 x 6 matrix to work with and the more panels I have, the more pixels I have to play with."

The show was a mixture of rehearsed numbers and improvisation which called on Cass to switch between moments of pre-programmed states and busking. "I tended to use the MagicPanel™ and MagicBlade™ fixtures in the pre-programmed sections because it gave me the luxury of really getting into the intricacies of the fixtures and using the individual pixels to maximum effect. It is worth taking a little while to learn to get the best out of the movement, colour and pixel opportunities, especially when using all 160 channels, because after that you can get such a lot out of them.

"I love the scope the power of these units give you, they are really bright! On this tour we were mainly playing theatres so I could tone them down to 75% or even 50% as needed, but when we play festivals I can push them up to full power and really rock it out. It's also great that they have proved so durable on the road – and we really beat them up! We take them on outdoor festivals and we programme them to move a LOT so they really have to work hard! If they break for anyone, they'd be breaking for me!

"I'm very happy with the MagicPanel™ and the MagicBlade™," concludes Cass. "I am always looking for a light that looks different from the rest of the industry, now I can't wait to try the new NandoBeam™S6 which I've just seen in the online demo. And I'm looking for the right design and application to try out the IntelliPix™ – nothing else does what that thing does!"

NEW YEAR'S EVE
with Fumiya Fujii at Nippon Budokan

The world-famous Nippon Budokan arena in central Tokyo played host to the Fumiya Fujii 30th Best Special Countdown Live on New Year's Eve 2014. The show was the spectacular culmination of a two-year tour by popular Japanese music artist Fumiya Fujii, in celebration of his 'double anniversary' which marked 30 years since the recording of his debut album and his 20th year as a solo artist.

Pivotal to Keisuke Nishi's design for the evening was a bank of 90 IntelliPix™R LED panels supplied by Japanese lighting vendor Heart-S.

Ayrton's Japanese distributor, First Engineering Japan, sold a total of 120 IntelliPix™R panels to their client Heart-S.

IntelliPix™R is a modular beam projection panel of 25 independently controllable 4.5° LED emitters arranged in a 5 x 5 array which project graphics and media far into the air. Panels can be connected together to form a semi-transparent wall, screen or ceiling or be placed under specially designed glass using its dedicated floor installation kit to create an immensely strong projection floor that can wrap a performer in dynamic columns of light. IntelliPix™R is suitable for indoor or outdoor use.

The IntelliPix™R panels were positioned on the stage deck itself, behind the musicians, and angled upward to enable Nishi to show off the full power of IntelliPix™R's projection capacity without pointing directly into the eyes of the audience. Powerful walls of light and spectacular colour shifts were projected upwards to create dramatic aerial beam effects. These contrasted with subtler text and abstract shapes which chased across the surface of the bank of panels, created from IntelliPix™R's individually-controlled pixels which Heart-S mapped using Avolites Media's AI Server. The individual pixels were also used to count down the seconds until New Year 2015.

Heart-S decided that IntelliPix™R was the perfect fixture for this unique range of effects because of its ability to produce intense beams combined with a high degree of versatile control.

First Engineering Japan's Masatoshi Hamada says: "Intellipix™R is very quiet without fan noise so it's also good for theatrical plays or opera (Japanese Kabuki) which require a noise free environment."

IntelliPix™R is suitable for indoor or outdoor use which makes it the perfect tool touring purposes.

RADICAL LIGHTING FIXTURES

Illuminate Hungary's Rising Stars

Ayrton's dynamic MagicPanel™R and MagicBlade™R LED lighting fixtures formed key elements in Light Design Kft's lighting of the interactive singing contest Rising Star Hungary, the Grand Finale of which broke all ratings records in February 2015. The competition took place over three months and was broadcast on television networks across Hungary and the neighbouring countries.

The Ayrton™ fixtures were incorporated into a dazzling set of curved LED walls which displayed video content and abstract imagery throughout the show. Twenty-four MagicPanel™R and twenty-four MagicBlade™R luminaires were rigged between the LED walls where they served as a homogenous surface for video display as well as performing as standard moving head fixtures. Several of the Ayrton™ fixtures' on-board functions were then used to create a wide range of effects in keeping with the mapping and choreography for the music.

MagicPanel™R presents twenty-five individually controllable 15W LED RGBW sources in a 5 x 5 matrix. 67mm collimated optics produce clearly defined, cleanly separated 4.5° beams of light which combine with the RADICAL™ Series' unique feature of continuous double rotation on two axes to created dazzling 3D volumetric effects. MagicBlade™R delivers a totally new, unique design having seven independent RGBW LED sources arranged in-line. Paired with the intensive angle of its 4.5° optics, MagicBlade™R creates light curtains with a genuine overall consistency and, like MagicPanel™R, offers continual double rotation on the PAN/TILT axes.

"We chose the MagicPanel™R and MagicBlade™R units for Rising Star Hungary because we were looking for a way to display video signals on moving head fixtures while still being able to use them as regular robotic lamps," says Tibor Kalla, leading lighting designer at Budapest-based design company, Light Design Kft.

"The license of the show called for pixel mapping technology and a series of moving head lanterns that we could control with our own customised control system. The MagicPanel™R and MagicBlade™R were ideal for this purpose. We were able to pixel map the units and display video information across them too. The video signals which ran through the system onto the LED screens also appeared on the Ayrton™ fixtures with each Ayrton™ LED acting as an individual pixel. The more pixels we had, the better the result!"

The team at Light Design were first introduced to MagicBlade™R and MagicPanel™R online: "We have been looking for a fixture that will serve our needs in the pixel mapping procedure in Hungary for a long time into the future, but which can also be used as a full functional moving head," says Light Design Kft director, Krisztian Karmazsin. "We had seen convincing demo videos from Ayrton™ on the web, and when we saw the fixtures for real at Prolight + Sound in Frankfurt we were convinced that we found what we have been looking for. We had been working on the case for three years before we came to a final solution and are grateful to Valère Huart-Gyors from Ayrton™ who gave us a lot of help to find the best solution for us."

For Rising Star Hungary, the MagicPanel™R and MagicBlade™R fixtures were used in extended mode to provide separate access to every single pixel/LED. "We loved the units for their colour correctness, brightness, the effect possibilities provided by the 5x5 raster, the low power consumption, the easy set-up and so on," continues Kalla.

"Both the MagicPanel™ and the MagicBlade™ are easy to mount, rig and set-up and work perfectly even when mounted in a 90° rotated position. We can use the endless, unlimited pan and tilt movement on both of the axes without experiencing any problem and obtained accurate, precise and very dynamic movements."

Light Design also found the wide range of protocols, which includes Art-Net, DMX-RDM and WDMX, useful, and chose to operate with Art-Net in full mode, controlled by a Road Hog Full Boar, to take advantage of the controllability afforded by the greater number of channels available.

"Rising Star Hungary was the first installation of MagicPanel™R and MagicBlade™R for Light Design, but we have so many new ideas already that our devotion is going to be long lasting for sure!" says Karmazsin. "Our designers have accommodated themselves to the new opportunities these fixtures offer and we are able to develop new dimensions in the studios and in concert environments thanks to their advanced LED technology and outstanding optics. The fixtures have more than fulfilled our expectations."

EZ3KIEL'S LUX TOUR

MagicPanel™, at the heart of Yann Nguema's visuals

The magical movement in the MagicPanel array, created by the positions of the projectors controlled by Yann Nguema, who plays with light as though it were matter.

© Yann Nguema

For almost every one of their 10 albums, the members of the group EZ3kiel have performed concert tours in France. First they used video projectors to add form and image to their atmospheric music, then lasers. Now, for the first time, they've made light an integral part of their performance, using a wall of 48 Ayrton MagicPanel™ luminaires that seem to perfectly satisfy the wild imagination of Yann Nguema, EZ3kiel's bassist and multimedia designer.

Excerpts from the article published on the **soundlightup** *webzine*
Text: **Isabelle Elvira**
Photos: **Monique Cussigh**
More informations & videos:
www.soundlightup.com

Music with no stars but a lot of talent

SLU: Yann, tell us about EZ3kiel, about wanting to create only instrumental music, and especially about always integrating it into a total visual concept.

Yann Nguema: EZ3kiel basically does instrumental music. That's why visuals are important! I usually say we ultimately have no one to light, no leader with a oversized ego to focus on. The lighting covers the whole stage.

SLU: So there's no front lighting?

Yann: Practically never, which has been a major disappointment for photographers. We use projections which keep the light very restrained and localised, and this was especially true before we had the MagicPanels.

SLU: Do you consider yourself a lighting designer?

Yann Nguema: No, not really. I don't do the typical work of a lighting designer. I do visual work. We transform the stage into a visual play using light, which is only one of many tools. I consider myself a multimedia designer. But that varies, whether on-stage or at a happening. Let's say that I do visual creation, somewhere between lighting and video.

SLU: When you were still a musician in the group you managed the visuals. What made you go over to lighting and quit performing on stage?

Yann: Actually, I formed the group 20 years ago. Originally, there were three of us, and I was on stage. On this project, I should have been, too. What I create is interactive, and I control everything

from a computer. I created an instrument using transparent tiles and a video projector, visually, like a virtual wall. But the wall of MagicPanels gave off so much light that I couldn't see my screen on-stage any more! So I decided to start handling the lighting, and that's really what I should be doing!"

Let there be light... with Ez3kiel

SLU: With Ayrton MagicPanels, you're starting to use tools for lighting designers...

Yann: Yes, but I think MagicPanels are not just for the pure lighting designer. Be that as it may, I've always used them in all my projects by adding a customised control interface that I developed on my own.

SLU: How did you find out about them and finally use in your creative work?

Yann: The group's visual creations are constantly evolving. I started with one video projector, then two, then a mix of video projectors and lasers (and this light mix is really pretty and dynamic), and now I'm adding Ayrton™ moving head luminaires. A year ago, a lighting designer told me about the product, and when I saw how it was shaped, with the back completely flat, I immediately thought of gluing a projection surface on the back to make a screen that would turn into a projector, and vice-versa. We experimented around, then called Ayrton™. They told us that we had to leave a little extra space behind the machines for cooling (they're planning on adding a space in the design for the optional mirror, letting air through.). They also told us that if we didn't push them to the maximum—with all the LEDs lit for 10 minutes—there was little risk of overheating. It all worked out, since we soon figured out that it was practically impossible to overuse them. With that much power, once for 20 seconds is okay, but that's it. It's spectacular. We do this three times during a concert at very specific moments to go along with some powerful sound waves, but you can't overdo it.

SLU: So what do you think of this luminaire?

Yann: I was surprised by its shape since I was used to seeing

Yann Nguema multimedia magician

Yann Nguema is an unusual individual, having worked in public relations after studying science and journalism.
Bassist with EZ3kiel since the age of 19, he is one of the three founding members of the biblically-named trio, originally inspired by Samuel L. Jackson's tirade in Tarantino's "Pulp Fiction".
Versatile, eclectic, and passionate about video, he always exercised a visual, and artistic influence on EZ3kiel–however anachronistic, bizarre, and poetic–while developing his own concept of a visual music band.
Four years ago, however, Yann gave up performing to become a visual effects designer.
He dedicated all his time as multimedia designer for their tours, the group's magnificent websites (for which he won an award), and the DVDs for their albums.
This dedicated graphical artist, always eager to experiment, launched his 2013 "Poetical mechanics" exhibit, presenting 12 interactive digital audio-visual installations directly involved with EZ3kiel for the "Naphtaline" album.

1. A monochrome beam of rare intensity, combined with the pixel effects -- this is what today's LEDs are capable of.

2. Le "Magic Screen" developed by Yann Nguema, showing modelling/visualisation of the MagicPanel array on the right along with and all the presets and libraries required for programming and creating an interactive multimedia show.

3. Sometimes the wall of MagicPanel luminaires shuts off, and in the almost total darkness the volumetric laser put us in a dream.

Julien Desbrosses
Lighting Operator

Originally a saxophonist, Julien began his career first as a sound engineer. He quickly became interested in stage lighting and began his training and internship: "I had a boss in Strasbourg named Jacky Fregonese, with a called company Loctambule, who taught me everything," he told us. "I worked with Loctambule a lot and also with Lagoona, who also had a lot of confidence in me. My internship lasted three years, with two years of regular training in the company storage locale, taking automated fixtures apart, then working on different projects for a few companies in Lyon and Paris as a technician, lighting technician, console operator, and followspot technician.
I went on tour as a technician for Manu Chao, and did lighting for Abba Mania, and replaced some people. EZ3kiel is the first real tour where I really fit into the artistic project, and where I want to keep at it and to go much further. I still have a lot of things to get done! For a lighting operator this is heaven."

4. For Yann, almost everything on the stage becomes a projection surface: the back of the MagicPanel covered in white PVC, the musicians and the ground.

5. Each element can show the HD images sent by the Barco R20 video projector.

more bullet-shaped projectors. They're almost low-resolution mini screens and, at the same time, projectors, like a mixture of the two. So it's really interesting for me to get into this level of detail.

SLU: You also have lasers, a video projector, and other projectors like Clay Paky B-EYEs and PARs, and Plano-Convex. Do you enjoy working with all these devices?

Yann: I use the MagicPanels, B-EYEs and lasers all interactively. For instance, for one of the better-known setups of the tour, I have a laser that points into the centre of a ball formed by MagicPanel™ beams and appears to move it around inside the screen.
The ball is created by the MagicPanel™ beams, which I control live with my mouse. (And it's really magic when you think that the laser is what's making the ball move.)
The PARs behind and on the side backlight the MagicPanels, controlled just for movement, and sometimes they stay switched off -- we use them in different ways.
I really like using the projectors as surfaces as well, and I project onto them with a video projector like on the MagicPanels, and you sometimes get the impression that the LED is what's lighting up while it's actually just a projection. I use the same thing on the musicians. It creates a mysterious effect and you wonder where the light is coming from.Then, of course, we use them as a regular light source. In this case, it's "real" lighting, and that's actually not my line.

A two-man team for visuals

SLU: So you collaborate with a "regular" lighting designer?

Yann: Yes I do, from the moment I start the creation. We alternate on every other number, and ultimately, this makes for rather different scenes. I try to produce scenarios that couldn't be done from the GrandMA lighting console. That means everything that's interactive, everything that controls the laser dynamically and interactively with the LEDs, or even everything that can be combined: LED/video projector, LED/laser, LED/back/front, etc. So Julien Desbrosses takes over for the more classic aspect for the overall lighting effect.
In fact, I totally collaborate with Julien, but the MagicPanel™ wall is controlled either by him or me. The rest of the scenes are usually a collaboration done live.
This system was originally thought up by Arnaud Doucet (of FA Musique). He is the one who introduced me to the Ayrton™ luminaires. We developed the project together at the first rehearsal halls. He was part of the adventure and we'd been collaborating with the group for 15 years. Then he decided to call it quits for family and professional reasons. He pulled out of the project and he had done half of the lighting. That was when Julien finally took over. He was supposed to replace him on a few dates. He added a young, hip element, and he had imagination. This brought the project to a higher level.

Computer tools for the magic luminaires

SLU: As a lighting designer, Julien uses the GrandMA console for controlling his scenes, and what tool do you use?

Yann: Like I told you, we both control the MagicPanel™ wall, but obviously only one at a time. When Julien runs it, I reset set the values to zero, and the highest value applies.
Like with every Ez3kiel tour, I've developed specific software to drive the Ayrton™ MagicPanels, the laser and the projectors. Tailor-made! I start with an open source framework that's very image-oriented. It's called Cinder and I use open source libraries from the laser and from Art-Net. The rest is trig and math work to create the scenarios. I run it on my Mac and work with an interface that displays what I send over the video projector and that also shows me a model

wall of LEDs. Then I control the laser by hand with my mouse. I also had to model a small scene in 3D because, when I started creating, I only had one machine. I used it as point of reference, especially for the speed of movement, and I modelled the rest of the gear. I compose with this result, but often, movements seems very simple on the screen, and actually on the "wall", it turns out to be more complicated. Eventually I simplify it so that the visuals are easy to follow.
So I create presets, target effects, and I give myself the freedom to play around with it during the concert, to modulate them or change them. That way I can handle it manually, when it's live.

SLU: Everything is manual. There's no time code?
Yann: Everything is live. Nothing is recorded. We don't improvise because the pieces are all written out.
But we use the laser live. Obviously there are some parts without the laser, where the presets scroll by, and others where I work from movements that have already been programmed but where I can plan with the control parameters, like the speed of the MagicPanels.
The idea behind the target effect was that all the MagicPanels would converge on a single point in space. There is an offset on the pan and tilt that causes them to open and converge on a point that is moves off to the right. And at the same time we superimpose a heart-beat effect to keep the illusion going.

SLU: Therefore, you also used the MagicPanel™ library in your software?
Yann: I only used what interested me. I don't need to control all the 160 channels in extended mode. I use the ones I need because ultimately I created my own macros. With the RGB, white, the dimmer, pan and tilt, I can already do all the scenarios I want.
I don't use the continuous rotation because I always need to know exactly what the pan and tilt are doing. (That's still 144 channels per machine!)

SLU: How long did it take for you to develop your software?
Yann: Here, I've done three or four months of development with the MagicPanels. I think it takes work to master such a powerful tool. Maybe they weren't made for that in the first place, but I think they're really excellent for this kind of effect.

SLU: Do you find yourself limited in terms of pixels? Don't you want more definition?
Yann: No, because we don't have to go all the way. I never tried to create any images with them. It's a matter of taste, for one thing. I don't believe it works. I wouldn't think of using this sort of thing as a screen. To make light, yes, abstract effects, sure, but not to project a recognisable image. Otherwise, I'd have to work on it a lot harder, with three times as many moving heads.

The image in the concept's DNA

SLU: But there are white panels glued behind the MagicPanels to project onto. What material is being used?
Yann: it's ultra-light white PVC. You can cut it with a scissors, and glue it on the back with double adhesive.
Then you project directly onto the back of the MagicPanels. I've set up a screen position for it in my software.

SLU: How do you make this projection effect work on a screen that's not actually a screen?
Yann: The difficulty is that on this surface, which is made up of several elements placed side by side, we have almost as much empty space as filled space. So to work with images that are more precise and complex, I had to simplify things a little and

Tour Crew

Artists

Bass : **Sylvain Joubert**
Drums, Vibraphone : **Stéphane Babiaud**
Guitar, machine : **Johan Guillon**
Lighting, laser, video : **Yann Nguema**

Technical Crew

Tour Manager : **Romuald Wolf**
FOH : **Laurent Signolet «Ptilo»**
Monitors : **Jérémie Adolph «Roukie»**
Lighting Operator : **Julien Desbrosses**
Driver : **Raphaël Kessler**
Manager : **Pierre Pauly**
Contractor : **Lagoona**

Design & scenography:

Arnaud Doucet
Yann Nguema
Assisted by **Gaël Digne (RED System)**

6. The technical road crew with musicians. At the top, from left to right: Raphaël Kessler (driver), Yvan Peard (Ayrton), Jéremy Adolph (FOH), Laurent Signolet (monitors), Sylvain Joubert (bass)
At the bottom : julien Desbrosses (Lighting operator), Romuald Wolf (tour manager), Stéphane Babiaud (drums), Johan Guillon (guitar), Yann Nguema (multimedia designer), Pierre Pauly (manager)

5. Thanks to this virtual array on his computer, Yann can isolate the projectors and work them like pixels, playing on the dark spaces, and then create a 3D effect.

rewrite the scenario. That's why there's also a lot of work on the extra lighting. I come from the video world, and that's why I need to work with a lighting designer.

SLU: Are the images that you project stored on a media server?
Yann: They're on my computer! I'm directly linked to the video projector in HDMI. I put everything on an external PC, and then I just connect a cable.
There's a video signal and the rest is just mapping, which is simulated on the video. I recreate the stage and project onto the little squares behind the MagicPanels. My stage is the MagicPanel™ rectangle that I can see on my screen, and the lasers and video projector are aimed directly at the virtual wall. So when I shoot the laser, I know exactly which MagicPanel™ it's going to hit. Everything is calibrated to create scenarios with a balance of light, laser and projection.
The two lasers, though, are controlled by the ILDA protocol, with two Ether Dream boxes—the only boxes that are practically open source—which allow me to develop my own interface and do some very precise things with my lasers without having to use a major dedicated software packages. A lot of things in these major software packages are useless to me, so that I prefer my application that can do few things but do them with precision.

SLU: Do you control the MagicPanel™ luminaires with Art-Net?
Yann: No we use two nodes to output using DMX. But we're thinking about using them in wireless mode. Because we have 15 DMX universes, it might be practical to use wireless, but we haven't tried it yet. If we had four or five machines we'd do it, but since the whole concert depends on the MagicPanel™ wall, we didn't want to take any risks.
With cables, they work just fine, and we use them a lot.

SLU: No even a slight failure?
Yann: We lost two LEDs on a machine once (laughs). But nobody even noticed!

Conclusion

Like a musician in the band, the array of 48 Ayrton MagicPanel™ luminaires hanging upstage has played its part.
Visible everywhere, even if the lean but effective lighting scenes may not exactly fit Yann Nguema's multimedia concept, the luminaire has satisfied his wild imagination.
With or without the masterfully controlled laser beams, the MagicPanel™ luminaires are transformed at will into powerful projectors or into a projection screen that can display the beautiful images sent from the Barco R20.
Yann is clearly having as much fun with his new lighting toys as with his trusty lasers and video projector. He is generating pure magic, as with the "ball" effect: we don't know whether it's the tiles or the laser that are making it move…or where it came from, or where it's going.
We are happily manipulated by the young designer's visual prestidigitation, which always suits the music. It should be experienced live and "seen" through the visuals that go along with the show.
Combining light with EZ3kiel's concerts is something new, as witnessed by the title of the album recorded live today: Lux.
Lux also relies on three beautiful Clay Paky B-Eye wash lights. Though few in number, they're needed to highlight the musicians and bring them into the visuals.
Though the point, of course, is not to emphasise the musicians per se but to contemplate the lighting, video and music as a whole, they should still not be forgotten.
We admire the work of lighting designer Julien Desbrosses, Yann's associate, who stylishly adds a little classic light to the more conceptual and somewhat abrupt effects in Yann's scenarios.
You can truly appreciate EZ3kiel's universe if you open your eyes and ears wide and see how much the actors, musicians, graphic artists and lighting designers are delighted with the new LED luminaires and Yann's multimedia tools. ■

DREAMPANEL TWIN

DREAMPANEL TWIN IMAGING DISPLAYS

A hybrid luminaire with the MAGICPANEL™ on one side and the DREAMPANEL™SHIFT on the other. Capable of continuous double rotation on the pan and tilt axes, the DREAMPANEL™TWIN can alternate between displaying high-definition video images and 3D volumetric lighting effects. The 6 mm pitch of the video side offers the perfect balance of definition required to display video media on stage, of screen size for enabling full HD, and of overall system brightness.

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AYRTON
Digital Lighting

FOR ITS 30TH ANNIVERSARY
Cirque Arlette Gruss updates its lighting gear

A MagicPanel-R wall is the ideal décor for the parrots, as Arthur Oudin takes full advantage of its power and magnificent palette of colours.

Celebrating its 30th anniversary this year, Cirque Gruss has acquired a large number of new lighting fixtures, a control network, and an innovative electrical system for its lighting crew: Arthur Oudin (lighting designer), Julien Lhomme (technical director), and Alexandre Planche (the newly arrived operator).

Excerpts from the article published on the **soundlightup** *website*
Text: **Isabelle Elvira**
Photos: **Monique Cussigh**
More informations:
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The circus, created 30 years ago by Madame Arlette Gruss, has become a huge enterprise that has distinguished itself as a reference point among European circuses.

Its strength: a family tradition that remains fully loyal to the noble profession, with a modern accent that incorporates technical innovations giving the circus a capital "C".

In terms of light, costumes, music, and now video, Gilbert Gruss (the charismatic son of the founder) has given everything to his performers, technicians and all members of the huge Gruss family (@ 140 people). Bound for Bordeaux, where the circus had a 10-day stand, we met with Arthur Oudin, who has been lighting designer for over a decade for the circus that he grew up with.

The light inside the Big Top

SLU: how is lighting used according to the Gruss philosophy?

Arthur Oudin: "It has always been very important for Gruss. Gilbert is quite excited about luminaires and technical innovations. He fully understands what we're talking about and knows what we need for specific numbers. And the circus is not reluctant to invest in the best possible gear. We have some beautiful gear; we are a circus after all and have a tradition to uphold.

SLU: Exactly what does the circus lighting code require?

Arthur: The main and only rule is delivering a 360° view of the ring. We have to think in terms of a circle from the time we start programming. This year we used cameras on three axes: one at the console, and one on each side to cover the entire ring.

In fact, we really don't have front or side lighting, and that's the problem we're dealing with! It's as if the front lights were used as sidelights and vice-versa. Same for the backlights.

However, there are still contrasts to add, I like, for example, using

CTO [Colour Temperature Orange] to create a tungsten look from one direction and CTB [Colour Temperature Blue] from the other side, for an effect that defines an axis.

SLU: You often bring in the public. How do you handle that?
Arthur: We use Robert Juliat Flo 1800 watt MSR followspots, which work very well and they're perfect for the size of the tent, in combination with the other spots.
Each time we go into the audience, we use two automated fixtures hung from the dome for focusing, and the followspots pick up as soon as they're in position.

Trusses under the dome

SLU: This year you've installed trusses for hanging the projectors. Is this is a real luxury?
Arthur: Matter of fact, we used to hang them directly from the dome. If anything malfunctioned, which happened frequently, we'd have to have a technician climb up and bring the faulty equipment down and then take it back up. It often weighs over 40 kg. Now he can simply lower it using the motorised truss.
We installed the trusses in the tent (where we hung the motors), and it's easier to hoist and more modular.

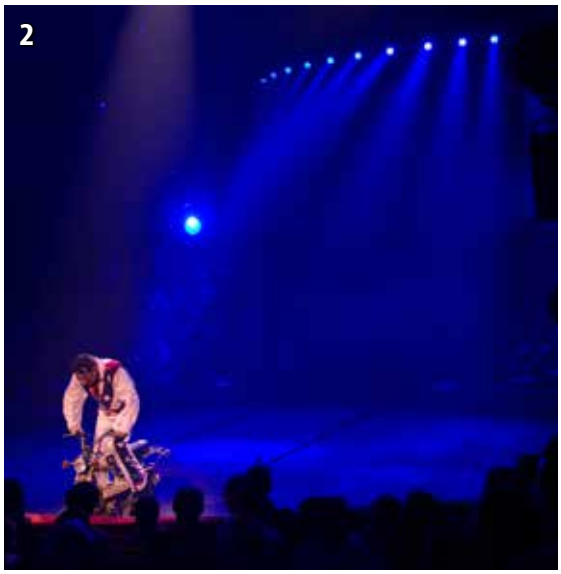
LEDs and beams for backup

And along with all the brand new trusses, we had an arsenal of beautiful projectors to add to Arthur Oudin's and Julien Lhomme's lighting gear, including 24 MagicPanel-R and 14 MagicRing-R1 luminaires.

SLU: What do you think of the new LED fixtures?
Arthur: The MagicPanels are truly magnificent products, and we really glad to have them.
We really needed them, not only because of their fantastic effect but also to fill the empty space under the orchestra. We can use them as background now, instead of having the big black hole!
They are used for the motorbikes of course, but not only. I have fun with them. We've installed mirrors and on the spider-man number, we hit them with the beams. How could I resist?
But I also use the mirror side to give depth to the back of the ring. I really like the fixture. I've only had only one problem – when a screw came loose and shorted out a circuit board.
Dushow is the one who made the mount with the network cabling that works great!
We even use the internal nodes in the MagicPanels to drive an other LED fixture on the rig and it works great!

SLU: How you make use of all the effects of the MagicPanel?
Arthur: "We avoid doing effects for the sake of effects. I like to keep it relatively sober, even if we sometimes add animated effects. We still keep to the theme in the scene. People don't come to the circus to see the lighting—they want a show, of course, but I'm not the star!

1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SLU: Why did you choose the MagicPanel in the R version and not the 602?
Arthur: Mainly for the quality of the beam, its light output, and an even the tighter angle that produces real light shafts.

SLU: Are you considering using even more next year?
Arthur: It is highly possible. It's a super machine, though intensive when it comes to DMX universes (only four fixtures per universe when operated in Extended Mode). They should be delivered with NPUs [MA Lighting Network Processing Units]!

SLU: Which projectors have you replaced with this massive arrival of new fixtures?
Arthur: We have no more Martin MAC 101s (they got soaked). We replaced them with the Ayrton MagicRing-R1s, which are

Arthur Oudin
Lighting Designer

At almost thirty years old, this lighting designer is a child of television.
He had his first audio-visual emotional experiences very early, watching the French Canal + cult show "Nowhere else", where he discovered automatic fixtures and fell in love with lighting.
Arthur became amateur followspot engineer at 12, and ran the console at his first concert in a bar at age 13.
Admittedly, he gets excited about a product, whether recent or old, yet never forgets that the strength of his profession as lighting designer is based on human relations and spontaneous but significant personal encounters.
In addition to working with the Cirque Gruss for 10 years, he has designed lighting for the traditional music sensation Luc Arbogast; shared the console with his friend Olivier Payen on tour with singer Christophe, and most recently at the Olympia for Murray Head. The young designer-operator hates pompous titles and defines himself as "a lighting designer who, after all, handles only the light!"
He created his company Concept-Lights to live out his childhood dream, committing himself to the modest pursuit of a career as an a typical lighting designer for the circus, unusual performers, and quality television.

1. *The lighting team. From left to right, Julien Lhomme, Arthur Oudin and Alex Planche*

2. *The Ayrton MagicRing-R1 lit in monochrome: Arthur love the power and quality of this very small wash/beam moving light.*

Lighting team

Arthur Oudin
lighting designer

Julien Lhomme
Technical Director

Alexander Planche - Operator

Head Electrician
Tomasz Zarzycki

Electricians/followspot engineers - **Mihail Godey, Pawel Wojciechowski, Ivan Kos, Nikolaj Kindy**

really perfect because they're small but very bright, with beautiful colours and continuous pan and tilt rotation.
The circus is the school of hard knocks for the machines, and a super test lab."

Circular power distribution and network

Gilbert's long Christmas list included a brand new electrical system that optimised the new gear. The lighting trusses, network and power distribution—everything is done for the creativity and comfort of the technical team, who have been privileged. As Arthur has confirmed, "We put it all on the list wondering if they would accept it, and they signed off on all of it!"

SLU: So you have a brand-new power distribution system?
Arthur: Yes, we decided to better take advantage of the circular shape of the circus ring and make five racks for each area of the tent with 18 live 3kW outlets. Each rack has an Ethernet-DMX8 node and a Luminex GigaCore12 switch for the ring network to distribute the universes as needed. It is a very convenient and modular system. We no longer pull hundreds of meters of multicable, because it's all done by area".

Almost everything is new in the lighting department… except the designers!

SLU: Do you do the programming alone or with Julien Lhomme?
Arthur: "Julien and I collaborate because we've known each other for a long time. It's the mixture of our creativity that makes the show. When programming, we work out the scenes together. There are occasional conflicts. A lot of work goes into the final creation. Then, when we are pretty well along, Julien runs the cue list we programmed at rehearsal and I correct and polish. It really is a co-production".

Conclusion

After 10 years of collaborating in a show that reinvents itself every season and sharing ideas in design that are equally as fresh, the duo are already thinking about incorporating more video into next year's show. This is a circus that keeps up with the times, as witnessed by the choice and length of the acts (five minutes on average). We were impressed by technical prowess of the people in the shadows who created a magnificent, detailed, colourful and magical spectacle.
Here, the ring of stars was appropriately named, with constellations created from the latest technology in colour LEDs and beams.
The Ayrton MagicPanel moving head luminaires were at their most magical in their "R" version, strategically placed at the back of the ring, under the orchestra. Their fluid movements followed the entrances and exits of the performers (and animals). Arthur uses them both for mapping and as wash lights in pure colours (our favourite).
The innovations incorporated into the rig this season have enriched a collection that is already full of outstanding machines, allowing Arthur and Julien to choose the right projector for a specific lighting need.
And as Arthur Oudin said, even if the public has come to see the performers, you can't help but watch the followspot operator, face-to-face with the high-wire acrobats, tracking their very movements in this magical world.
The role of light in the Cirque Gruss is to reveal prowess and emotion. It is the faithful companion to the performers in this grand spectacle given each day to some 1800 admirers.
And the show has been going strong for 30 years. ■

3. *An array of 24 MagicPanel-R luminaires in the background, under the orchestra, shares the ring with the performers in monochrome red.*

4. *A dazzlingly lit entry for the Gruss horses, the family's essential, perennial companions, accompanied by the new additions to the troupe—the dynamic Ayrton MagicPanel luminaires.*

WILDSUN-K25

WILDSUN-K25 AUTOMATED LUMINAIRES

A new-generation moving head luminaire unequalled on the market. In collaboration with cinematographers and operators specialized in the video production of major sporting events, AYRTON™ dedicated over two years developing and perfecting this marvel of technology, innovation, and light. The WILDSUN™K25 is the only LED luminaire capable of measuring up to the classic Fresnel HMI 4,000 and 6,000 lights in terms of pure output.

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AYRTON
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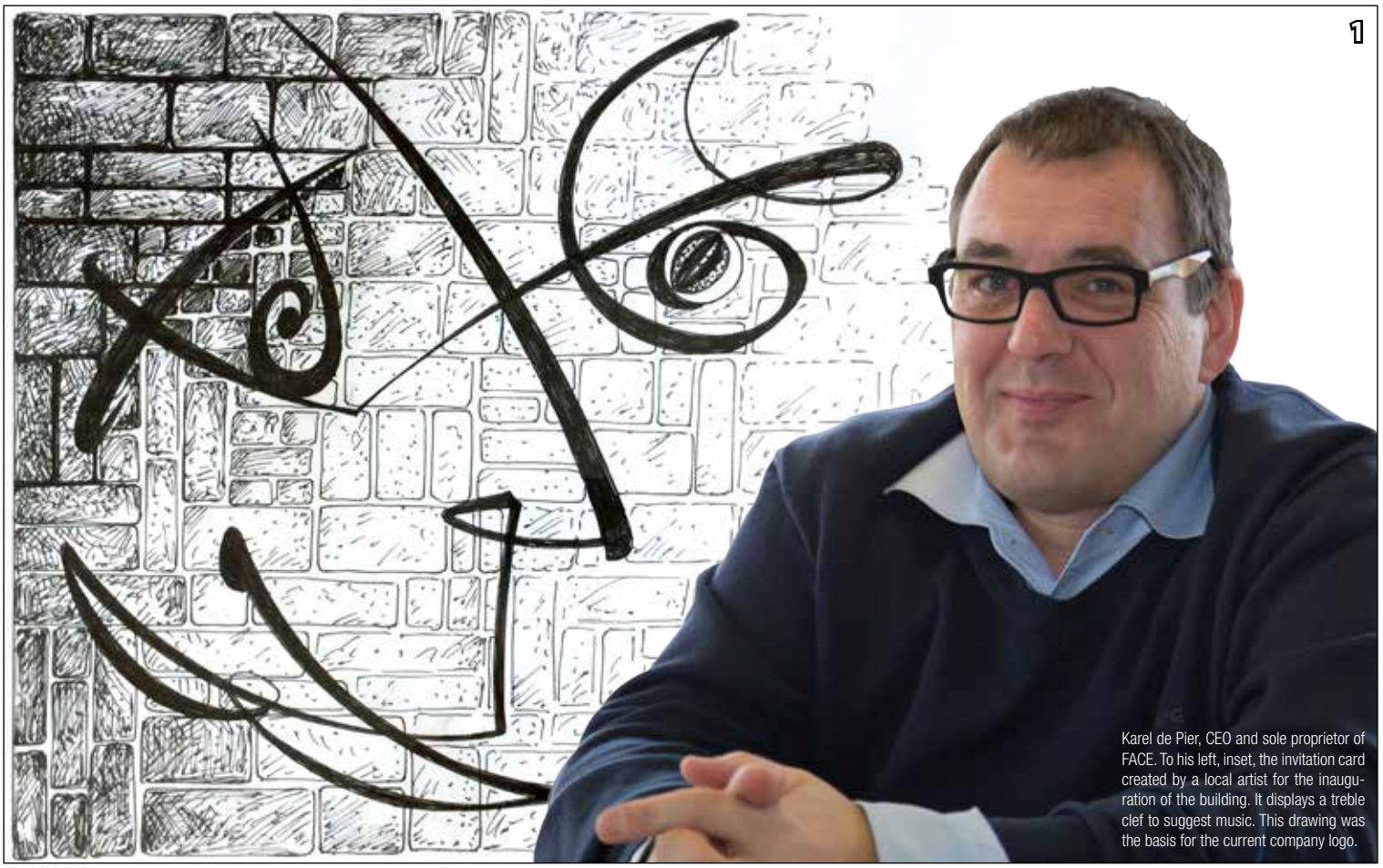
FACE...
An evolutionary perspective



Karel de Pier, CEO and sole proprietor of FACE. To his left, inset, the invitation card created by a local artist for the inauguration of the building. It displays a treble clef to suggest music. This drawing was the basis for the current company logo.

With a solid past and a visionary future, in 2011 Karel de Piere created FACE, a Belgian company dedicated to selling products and services in audiovisual engineering that is ambitiously expanding throughout panEuropean. He has built a dynamic entity combining four business divisions that provide quality solutions in sound, light and video for all types of business customers. From morning to night, FACE's employees not only speak technology and products, but also marketing education, e-commerce, European logistics, and integration projects. This company has enormous human potential. Karel, an inexhaustible font of creative ideas, sets the pace for a highly-motivated staff of 30.

For sound, they represent Martin Audio, Powersoft, Shure, Behringer, Midas, Klark Teknik, and for lighting, ETC, Luminex, MA Lighting, VariLite: FACE has been dealt a winning hand with its pedigree customer base spanning show business, architecture and public relations. Their winning pick in 2012 was Ayrton, which is now sweeping the Benelux countries thanks to FACE's Professional Division.

At the request of Valère Huart-Gyors, Ayrton's Sales Director, Karel de Piere agreed to meet us at FACE headquarters in Boom. He took us on a guided tour of his 6,000m^2 building, explained the company's logistics, and presented the key members of his team.

The company's many faces

FACE was founded in 2011 after the merger of Ampco Belgium and Candela (see profile inset on Karel de Piere). The company concentrates its lighting and video sales on the architectural, entertainment and promotion market with three focuses: direct sales (to service providers, and rental or production companies), project management (integration for architectural projects, theme parks, concert halls), sales to music stores (musical instruments). In addition, they handle logistics for three U.S. manufacturers. The company has 45 suppliers, boasting customers worldwide. FACE needed an effective Enterprise Resource Planning (ERP) system to manage such a large database and its multiple operating units.

The sales unit

Under Karel's leadership, the company's sales unit has four divisions, each headed by a team manager. The Pro Division has a team of eight, managed by Geert Custers. Their mission is to sell direct to service providers and to rental and production companies (e.g., in theatre and television). This includes Benelux companies who buy products as an investment.

The integration division, headed by Steven Kemland, is a five-person team that sell installation projects in, architecture, for theme parks, concert halls and conference centres. They handle a project from A to Z: planning, design, even wiring configuration, installation follow-up and final validation. The Retail division (five employees), under Thomas Huebner, focuses on helping music stores manage orders and deliveries for a range of musical instrument products sold through e-commerce, directly via the web site.

Finally, the European Service Point (ESP) division, managed by Tom Commerman, is a logistics centre, with European customers and three U.S. manufacturers: Midas/Klark Teknik, Primacoustic.

We then found out about the tools the company uses to achieve its objectives, starting with a very functional building that Karel built.

The FACE building: 6,000m²

A versatile individual with eclectic interests, Karel decided to construct the building in 2008 and drew up the blueprints himself. He planned out every minute detail.

Karel de Piere: "I hired a young architect for six months, and we used 3D software to design the building. And I had a lot of fun doing it.

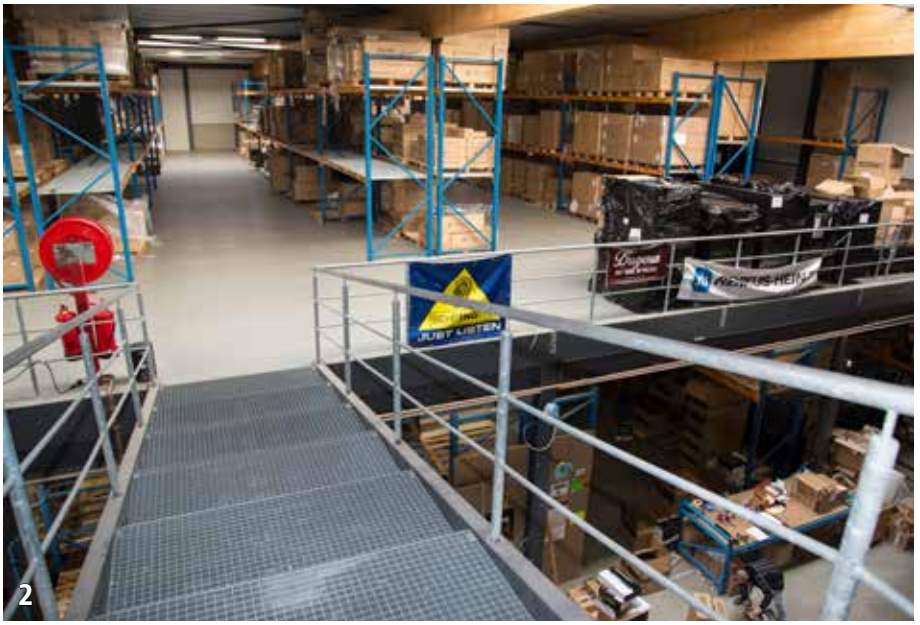
It's a cube (actually a cuboid to be exact) surrounded by an outside patio that everybody can have easy access to. All the offices are located upstairs and on the corner of the building to take advantage of the natural light, with an access door to the patio. From the exterior, this gives the building a soul. From 1800 to 1900, Boom was a brick-manufacturing capital because the region's main source of natural wealth is clay. The Empire State Building in New York was actually built with bricks manufactured here. I love the history of this city, and this is why I built my headquarters here.

The FACE Academy

A 80 m² room has been specifically set aside for training. While FACE offers its customers not only expertise and analysis of market trends, it also offers training on new technologies. This is a rare treat for a distributor, and it's free.

Karel de Piere: "This is a conference and training room with lighting desks and audio mixing consoles for 15 to 20 people. It is also used for meetings when we discuss integration projects with designers and installers.

I designed this in conjunction with our studio. The idea was to have an area for theory on one side and a practical workshop on the other side, separated by glass. This allows the two worlds to communicate.



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We do a lot of educational marketing by organising events around technology. Networks, Digital Audio, System Engineering, Design—these are all seminars on emerging trends. We provide global solutions, and it's really like being at school because in this geographical area, there are no training centres that cover our professions.

For instance, there is a session on AVB [audio video bridging] network technology. Customers learn through practice how to create a network with sound, light, video, sync, and make it work while avoiding the pitfalls. We create the network around a Luminex switch using products from Yamaha, Midas, Avid, MA Lighting, Roland, Panasonic for example."

We've planned a session for the beginning of the year and 80 people have already signed up. A total success! Setting up a second session is urgent because we had to turn away more than 50 people!"

Ayrton Live: What language are these classes are conducted in?

Karel de Piere: "That depends—French, Flemish, sometimes English. We also invite suppliers to use our platform. We put them

1. Karel de Piere
CEO and sole shareholder of FACE
Karel de Piere's story starts in 1992, when he founded Ampco Belgium in an agreement with Eric de Bruyn (head of Ampco Holland) to distribute Martin Audio (it was the time of the F2), TC Electronic and Behringer. This was a major success.
At the same time, Eric de Bruyn expanded his company (in which Karel was a shareholder) to include delivery and manufacturing. Ampco Flashlight Group, uniting 16 companies throughout Benelux and Germany, including Candela, a lighting distribution company founded in 1998 by Karel. In 2007 Eric de Bruyn sold his shares and three years later Karel decided to sell all of his. He negotiated to acquire Ampco Belgium and Candela. In early 2011, he merged the two entities into one company: FACE, Foundation for Audiovisual Commerce & Engineering

The current company logo.

2. *With 45 different suppliers in five countries (including China), warehouse requires a lot of space for storing inventory. FACE has 5,000m² here, not including another building located near the port to receive large volumes.*

3. *The magnificent 220m², 9 meter-high-celling studio. On the left, you can recognize Valère Huart-Gyors, Ayrton's Sales Director. Note the training room, above.*

Yuri Benoît,
Managing Director
Yuri Benoit is Karel de Piere's right-hand man. Having completed a master's degree in economics, he manages the company's logistics, finance and administration departments with a staff of 12.

Geert Custers
Manager, Professional Division
After completing technical studies in cinema, TV and theatre, Geert started in audio. At 22 years he became a freelance sound engineer, spending 10 years on tour all over Central Europe. After dedicating two years as Technical Director of the Théâtre de la Ville in Antwerp he worked as Production Manager for the Flanders Opera. He joined Candela in 2004 and joined the newly created FACE as technical support and sales analyst. Geert has customers in all areas: rental companies, service providers, theatre and television production companies. "And this is good", he says, "Because my experience helps me to help my colleagues".

4. *The 6,000m² building on a plot of 10,000m². The upstairs patio that surrounds the building gives it a high-tech look.*

in contact with the Benelux market. I see this service as one of FACE's added values."

Ayrton Live: **And you have a training staff?**
Karel de Piere: "In terms of organisation, our marketing service sends out invitations and handles registration. And the FACE sales analysts provide the technical cont ent. They are required to actively participate in these seminars whose purpose it to train not only customers but also my staff and myself. Occasionally we invite our suppliers as speakers, but then we also do it ourselves.
We organised one such session on RF [radio frequency] technology and the new legislation on frequencies, which is a subject of concern in Europe. We prepared the content in-house. I didn't want any suppliers who would wind up pushing their own products. You shouldn't mix seminars and training with product presentation and promotion. We communicate very clearly about the kind of events we offer. If we set up a product-line presentation, it's very clear, and people come for that. You shouldn't trap your customers. This is a waste of their time."

Ayrton Live: **And it's free?**
Karel de Piere: "Yes, but we give priority to our customers.
And for the biggest or the most developed companies, say in television, like RTBF, major theatres, or integration companies, we schedule private sessions. I'm talking about our marketing education program, and it's handled in different ways. It's a big investment, I have my own marketing office and the necessary human resources but it easily takes up 20% of our time because we have to prepare and organise everything. This also means having enough human resources to devote 20% of their time to knowledge, but we are in a technical trade and this is a necessity."

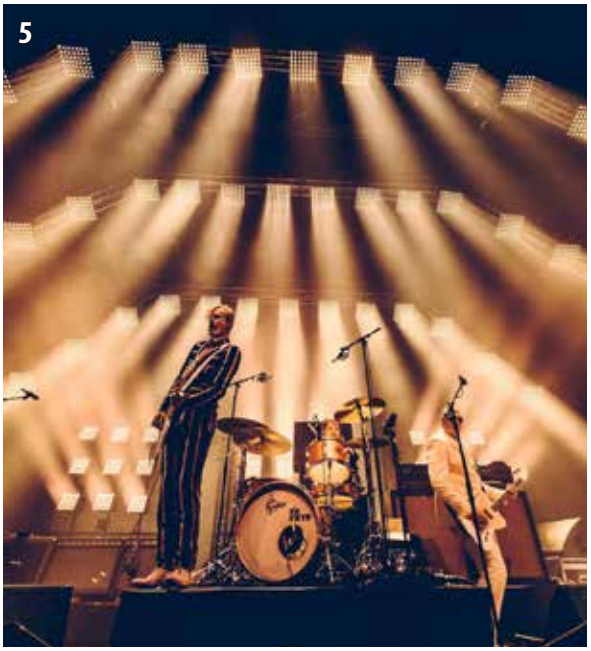
The Studio : 220 m²

The studio is another splendid installation with carefully engineered acoustics using absorbent panels and a superb brick wall that bespeaks history. Here, FACE conducts its own testing.
Karel de Piere: "When I constructed my own building, I wanted a demo room to play with the products and learn how they work. You cannot propose a product if you've never used it, or listened to it, or seen it work. And not only that, it's enjoyable for us. We can test everything here, like, for example, 50 moving head luminaries if we have a big order. It's really multifunctional. It is used internally for demonstrations, and we also hire it out. We use it for training and even for preparing small tours.
We recently had the new sound engineer from the Simple Minds over for two weeks. He's a Belgian. Here, he programmed his digital console using the soundcheck on multitrack."

Customer service

Customer service is handled by five people in charge of troubleshooting products, inspecting shipments before expedition, and preparing orders (some customers want their products in flight cases or with customised wiring).

Ayrton Live: **Which products are tested before shipment?**
Karel de Piere: "It depends on the price and embedded technology: motorised projectors, broadcasting systems, consoles, etc. When a customer comes for equipment, it's usually for using immediately or the next day. We must be sure that it's plug & play because these are major investments.
This one of FACE's services that professionals are used to, and probably one of the reasons why they don't order directly through suppliers."



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The marketing division

The marketing division employs a staff of three whose mission is manage e-commerce for music stores and service providers, handle the e-mailing of sales proposals and invitations to the various seminars, and to create promotional visuals.

Karel de Piere: "We've recently built up our marketing team. I think that given the speed that's required today, the amount of information coming in from all over and that we have to disseminate, it is important to have the internal resources to be reactive. And even if we still rely on outside companies for certain tasks, having our own marketing team has given us the competitive edge these past three years."

Ayrton's success in the Benelux countries

As part of Geert Custers's Professional Division team, Erwin Van der Vieren handles sales relations with Ayrton. He follows the news and latest pricing trends, handles customer service issues, and organises promotional activities.

He was the one who discovered this French brand back in in 2012, when they came up with a new line of luminaire, the WildSun and IceColor and were in search of a distributor involved in the live concert market.

Erwin Van der Vieren: "Ayrton has specialised products with unique features such as continuous pan and tilt rotation and tight beam optics, which puts us ahead of the game when it comes to customer demand. We've sold a large number of MagicPanel luminaires to services providers in Belgium (Art of Confusion, Ampli, VCL Productions, CST Production...) and MA Design (Ampli, Swing...). I've also taken a lot of orders for MagicBlade (Lemon sound & light) and Arcaline2 (PRG/EML, Alpha Company...).TV studios also love the Arcaline2. Ayrton really has a good approach, like increasing the number of lenses and cooling systems to optimise power. The reliability of the products is fantastic and the workmanship exemplary."

Geert Custers: "When we started with Ayrton in 2012, things were complicated and, their product line need a push, but when the MagicPanel arrived, sales took off. Now all our customers know Ayrton, and the company is positioned well because the products have a quality image. There is still a lot of work to be done in Holland where the request for rentals is high. We recently hired Fons de Vreede to develop sales there."

A European vision...

Depending on brand availability, Karel favours proximity to better serve customers in Europe. In 2012 he opened an office in Holland, Rotterdam, and one in Duisburg, Germany. He should be opening other offices located in Europe this year.

Karel de Piere: "I always wanted to make FACE a central European company, i.e., for Belgium and neighbouring countries. It turns out is that for certain products we already have Europe. We are the European partner of three U.S. suppliers.

Ayrton Live: **You don't have the same exclusivity in all countries. If, for example, a German customer wants to order Ayrton from you, what do you do?**

Karel de Piere: "We don't supply to Germany, so I'll tell him to contact the German distributor. I like transparency. Not only that, in 99% of cases, the point is to try to buy cheaper. If I undercut the market price, I undercut my own price.

On a consulting project this is different. We equip theme parks in Germany, and we've also handled projects for one in Paris. When a project comes along and we are approached either by a consultant, a designer, or the end customer on a product that we don't

Fons de Vreede
Lighting Consultant for Holland.
Fons has just joined the Rotterdam office. His mission is to sell the Ayrton and Luminex products in Holland.
His CV lists Flash Light (purchasing manager for 17 years), Disney (Project Manager responsible for show lighting installation for the second amusement park in Paris), High End (European Sales Director) until a takeover by Barco in 2008, Disney, once again (in Germany, he equipped cruise ships).
When he decide to work in Holland for personal reasons, Fons found a job with the FACE sales team, since he knew Karel from Flash Light and they had often talked about working together.

Erwin Van der Vieren,
Sales Consultant and Technical Support for Ayrton
Erwin has an impressive past. He created his own company in 1985, called EVDV Trade, when automatic lighting first came out, and he distributed for Martin. He managed a staff of 20 people. But he succumbed to the economic crisis and in 2011 was forced to shut down his company.
Since 2012, Erwin has been fully committed to FACE, a new adventure that is bringing him invaluable experience.

5. *Belgian band Triggerfinger on stage with MagicPannel ™ fixtures.*

6. *Again, the studio used for demonstrating the Ayrton product line.*

Koen Ceulemans
Sales Analyst, lighting and ETC technical support.
With past experience as a lighting designer, Koens joined FACE in 2011. He is responsible for meeting the lighting needs of theatres, cultural centres and operas in Belgium.

Filip De Clerck
Marketing Division
An expert in electronic music with a degree in computer accounting, Filip has marketing in his blood. His mission is to manage the e-commerce catalogue in connection with the back office. He also promotes company sales by sending out some 50,000 e-mails per year.

Tom Commerman
Back Office and Export Manager
Tom, live sound engineer, left his console 10 years ago for family reasons.
In charge of the back office, the nerve centre of the company, he is the first level contact for suppliers and customers. Tom is also responsible for international sales.

7. *Karel wishes to thank all member of the team that were not mentioned in this article but who have contributed to the success of FACE: Annette, Willy, Sofie, Mich, Stefaan, Gerrit, Timmy, Steven, Glenn, Reinier, Stijn, Raphael, Jeroen, William, Ilse, Tania, Ben, Peter, Thomas, Mario, Peter, Guy.*

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handle, we let the supplier decide how to proceed. We had to say no for some projects so that others could be won with an agreement."

Elegant business

Karel de Piere: "I'm a European, and I think that the borders have been open for a long time, but we have a regional responsibility. Respect and you will be respected.
Especially with lighting we have the same ethic as our suppliers, and that's a choice of partnership. There are values and business standards. The choice of suppliers is important.
We don't do only exclusive or high-end products. This has nothing to do with brand qualification. There are other ways to organise the business and be very efficient but I have my own values and I've been doing things this way for more than 20 years.
Like all companies, we have lived through hard times and good times. We had to evolve, find other sources of profit but I have not changed my philosophy since '92."

Ayrton Live: **What is FACE's turnover?**
Karel de Piere: "€20 million in 2014 and counting on-going contracts, our goal is an impressive upturn by the end of 2016."

Ayrton Live: **In your catalogue, is there a FACE brand of low-cost products made in China?**
Karel de Piere: "No, I made the decision not be manufacturer. I don't want to compete with my partners. When I need a low-cost product, I find a supplier. My goal is only to offer the high end when it comes audio-visual brands."

Operational division

Next to Karel de Pier is Youri Benoît, his right-hand man, who manages FACE's logistics, finance, and administration.
The two men have known each other since the age of 18 years and had the same education. They get along together and both appreciate the importance of good financial and operational management. Yuri has adapted the ERP to the business' needs with the help of Tom Commerman for the back office and Ilse Van Ramdonk for accounting.
Youri Benoît: "The idea was to choose a system that meets our present and future needs."
To manage the equipment inputs and outputs with invoicing, the secure e-commerce with payment by credit card, product management, product spec sheets, and e-mailing, we really need an ERP."
Karel de Piere: "In very aggressive and dynamic market you have to have a tool that handles all the issues: accurate inventory and rate of sales for anticipating orders."

Ayrton Live: **Karel, tell us, in conclusion, how you see the future of FACE?**
Karel de Piere: "My goal is to fully develop the FACE model, to make the company expand in Europe via our four divisions: professional, integration, musical instruments and logistics. I really love our audio-visual market, and the business, marketing and promotional side. It is a really dynamic market, which I enjoy. If you add the evolution of product technology, which is important, you realise that with all that, we're facing a really exciting challenge for years to come." ■

NANDOBEAM-S9

NANDOBEAM-S9 AUTOMATED LUMINAIRES

The latest development and the most powerful fixture in the NANDOBEAM™ product line. Equipped with a new-generation power supply offering over 95% total output efficiency, this power feature enables the highly compact luminaire to use its LED sources continuously at full power without any loss of performance. NANDOBEAM™S9 is equipped with fifty-five high-performance Osram 15 Watt RGBW LED emitters arranged in rings around a central LED.

www.ayrton.eu

AYRTON
Digital Lighting

AUTOMATED IN-LINE LED LUMINAIRE
AYRTON MAGICBLADE-R...
There's magic in the "R"

Once again Ayrton is in the spotlight with a new product presented at Prolight+Sound 2014 and it's already been a big hit. The MagicBlade™R, a moving-head luminaire with seven LED emitters arranged in-line, may look familiar but it has little in common with its older brother, the RollaPix™. This member of the RADICAL product line, has a single row of seven 67-mm diameter 4.5° collimator optics coupled with 15W RGBW Ostar Stage LEDs, famous for producing long-range tight beams.

Text & Photos:
Stéphane Mocret
for Soundlightup

More informations & videos on the webzine
www.soundlightup.com

In addition, based on the solid success of continuous pan-and-tilt rotation achieved with MagicPanel™602, Ayrton decided to add it to this unusual luminaire to enhance creative potential. Yvan Péard, Ayrton's product designer explained that manufacturing was more complicated than expected, because even though the tilt-axis did not require any physical modification, the pan rotation required removing the two attachment points on either side, thereby causing a cantilevered effect. This called for a redesign of the entire base of the fixture by building a chassis that was resistant to any torsion caused by the swinging motion of the head. The electronics were also entirely revised according to the latest developments.

What's inside

MagicBlade™R is equipped with seven 15W RGBW LED emitters and like all products in the "R" line, it is recognisable by the distinctive 67mm diameter collimators that generate extremely tight beams. The heat sink, which takes up most of the back of the head, is made of thin aluminium plates. This cooling system on the moving part of the projector is espe-

cially effective, as we proved in our derating tests. Painted black, it reflects no light and actually improves the aluminium's thermal dissipation, since the paint also serves to protect the aluminium, which would otherwise tend to fade over time. The excellent thermal efficiency of the heat sink eliminates the need for forced ventilation in this part of the fixture.

On the opposite side are the LED emitters. For maximum optical efficiency and a uniform beam, the axis of each collimator must form a precise 90° angle to the support bracket for the LEDs. They all need to be strictly oriented in the same direction. The seven lenses are then held in place at both ends: in the upper part by a precision-manufactured plate, and at the bottom by four pins that are positioned around the LEDs in corresponding slots on the circuit board.

The choice of the LEDs themselves is also particularly important not only for the colorimetric unity of the seven beams but also for grouping MagicBlade™R units in an array. To obtain this level of quality in their products, there is no choice but for Ayrton to specify the most accurate binning available from Osram. The result is perfection. When visiting the Ayrton booth at a trade show, you can clearly see the consistency of color unity between the "R" products.

The tilt drive, with two gears, is found on one side of the yoke. The small gear also acts as the encoder for indexing the head. It is mounted on directly to a three-phase hybrid stepper motor, known for its speed, high torque, smooth movement and precision. The other bigger gear, is attached to the head. Access holes are distributed over the surface of this gear to permit tools to pass through for service. The drive belt is tightened by a roller assembly.

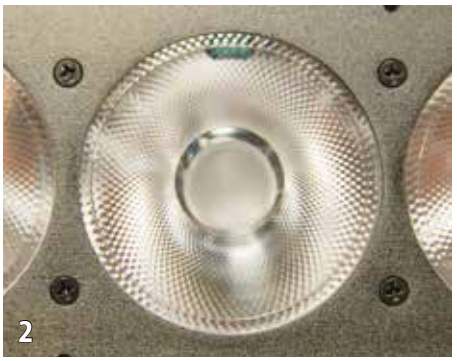
The opposite side of the yoke enables continuous rotation on the pan axis. Here we find a highly reliable slip ring system, which enables the stator, the fixed part, to connect to the rotor, the part that turns. This 11 circuit assembly passes electric power and control data from the yoke into the LED head that rotates powerfully and continuously.

The base enclosure of the fixture must withstand substantial stress created by the movement of the elongated head. It required careful design to deal with potential leverage forces that might prevent the projector from functioning properly.

For easy accessibility, the 200W power supply is mounted on one side of the base enclosure, easily within a service technician's reach. On the other side is the pan axis motor. We found the same system as on the tilt with the small gear with the indexing system and, to permit the fixture to be suspended in any position, a very large and thick gear that drives the yoke.

To conclude the discussion on disassembly, two things attracted my attention. First of all, these are some of the highest quality plastic covers that I have ever reviewed. They are an example of fine workmanship, and the locking pins and thickness of the plastic ensure a seamless assembly.

The second point worth mentioning is that I only needed two tools to take the fixture apart: an Allen wrench and a Phillips screwdriver.



This is certainly a big plus for technicians who will maintain the unit. The same can be said about all the types of screws of varying lengths. Though we completely disassembled the unit, we only came across three kinds of screws! Once again, this is proof of the meticulous work by the Ayrton team at every stage in the design.

External view

While some manufacturers are cutting back drastically on connectors, Ayrton continues to provide its customers with all the options. For controlling the MagicBlade™R, on the rear of the base there are male and female XLR 5-pin connectors for the DMX512 and RDM options, along with two RJ45 EtherCON input/outputs for

1. *The unique aluminium heat sink system cools the head*
2. *67 mm collimators positioned by the precision mounting bracket and the indexing pin visible at the top.*
3. *Pan driven by the three-phase hybrid stepper motor, the encoder and the gear that drives the yoke.*
4. *The tilt drive on one side of the head*
5. *The slip ring assembly that enables permanent rotation*
6. *200 W power supply easily accessible on the side of the base.*
7. *Circuit board for the head with the seven 15W Osram Ostar Stage LEDs and the 28 high-quality drivers.*

8. *The moulded plastic covers*

9. *Ayrton provides a very complete and flexible set of connections.*

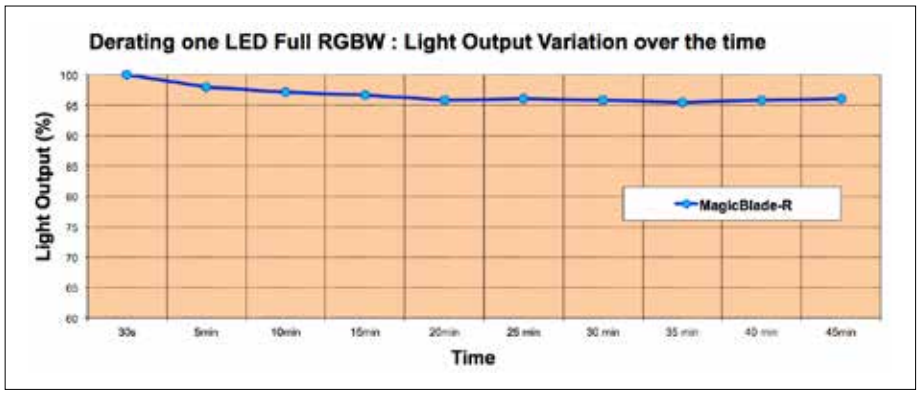
THE PLUSES

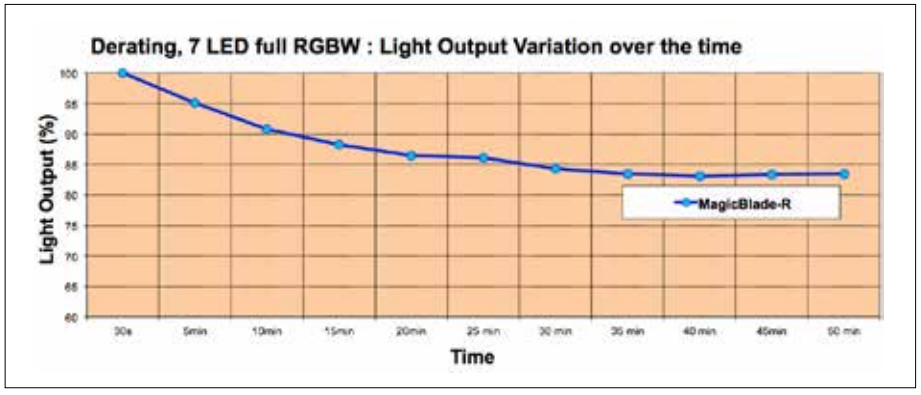
- **The beams**
- **Speed of position change**

THE MINUSES

- **Still looking...**

Art-Net. The luminaire is also equipped with a LumenRadio wireless CRMX RDM receiver. Each fixture can act as a node by mixing different types of inputs and outputs. For instance, to use Art-Net on input, select the DMX universe that controls the luminaire and send it to the other luminaires patched into the same universe through the XLR 5-pin female. The DMX signal





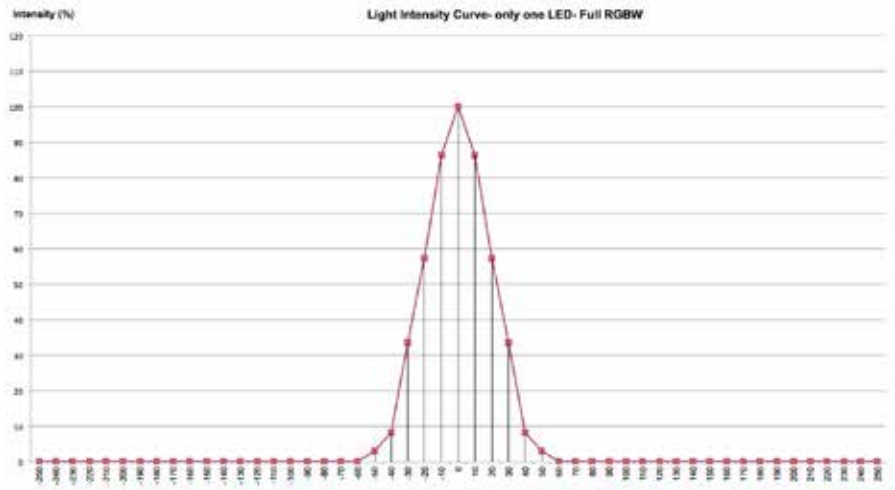
can also be received through the LumenRadio card and sent by the XLR connection. Since the unit's maximum power consumption is 200 Watts, it's possible to power several luminaires on a single circuit. Once again Ayrton has made life easier for technicians by adding a PowerCON TRUE1 mains connector and pass-through output connector.

On the other side of the base is the display and the six touch screen buttons for navigating in the control menus. This is where you control the luminaire and select between one of three DMX modes that require from 18 to 44 channels. The difference between the first two DMX modes is pretty minimal: 2 channels, with the simplest mode not supporting the Pan Fine and Tilt Fine settings. The last mode, which we used for our testing, allowed us to control the four colour parameters, RGBW, and the seven LEDS, independently.

The unit is very quiet. A faint noise can be heard when you use the tilt parameter, but nothing annoying.

We therefore started testing by measuring derating, first on a single LED and then on all the LEDs. In the first case, we observed a derating of less than 5%, which is more than satisfactory. With all the LEDs at full power, we measured a 17% drop in illuminance after their being on at full for 35 minutes. This result is perfectly acceptable for a luminaire that does not have forced ventilation. What's more you have to consider the context in which it will be used. MagicBlade™R is an effects

One RGBW source

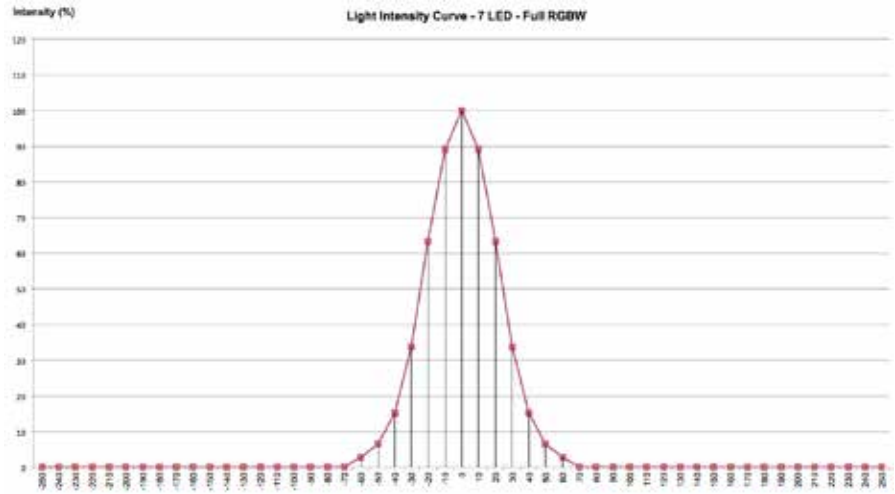


Measurements at I/2 (Light output at the center/2) - 1 LED full RGBW	
Beam diameter	0,22 m
Corresponding angle	5,04°
Light output at the center when switching On	1530 lux
Light output at the center after derating	1460 lux
Flux when switching On	224 lm
Flux after derating	215 lm

Measurements at I/10 (Light output at the center/10)	
Beam diameter	0,39 m
Corresponding angle	8,92°
Light output at the center when switching On	1530 lux
Light output at the center after derating	1460 lux
Flux when switching On	334 lm
Flux after derating	320 lm

The results were good. For a single lit source, we measured 1530 lux at the centre at 5 meters cold and a 334-lumen flux. The single beam was brighter than that of the RollaPix.

Seven RGBW sources



Measurements at I/2 (Light output at the center/2) - 7 LEDs full RGBW	
Beam diameter	0,24 m
Corresponding angle	5,50°
Light output at the center when switching On	7870 lux
Light output at the center after derating	6750 lux
Flux when switching On	1328 lm
Flux after derating	1140 lm

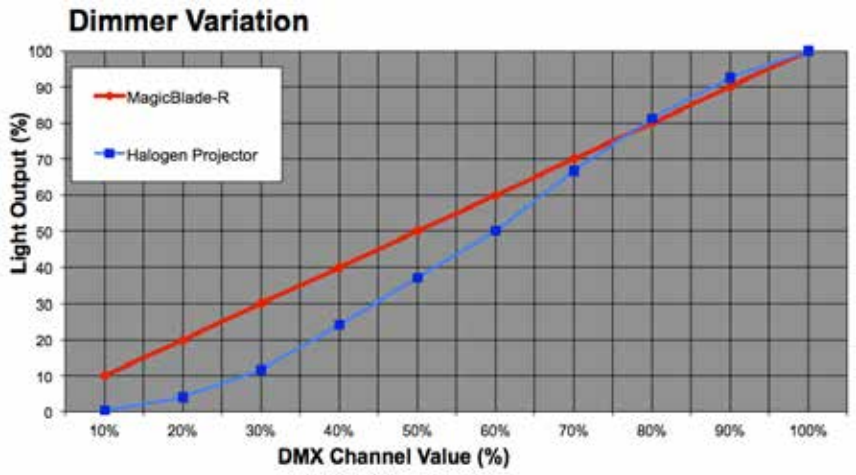
Measurements at I/10 (Light output at the center/10)	
Beam diameter	0,44 m
Corresponding angle	10,06°
Light output at the center when switching On	7870 lux
Light output at the center after derating	6750 lux
Flux when switching On	2180 lm
Flux after derating	1870 lm

After turning on the seven LED sources, we obtained 7870 lux at the centre cold with a 2180-lumen flux.

luminaire that is very unlikely to remain lit in full white or RGBW for a extended period of time. The results were therefore excellent.

Beyond the figures

We found the projected beams of the RADICAL line to be very precise, with the both subtle and dynamic dimmer response. The light is powerful and the narrow beam angle gives it the ability to project a good distance. With good smoke effects and several fixtures in-line, your are able to obtain a nice light curtain effect. The 67mm optics really adds value to this effects luminaire, especially when using different colours in the seven LEDs or with a time delay in the colour transitions. This optical system allows you to shape the light, accenting and animating the effects.
Another magical aspect is the pan setting that expands the range



The dimmer curve, is perfectly straight. Ayrton equips its LEDs with one of the best drivers on the market. Having gained years of experience on this subject, Ayrton really knows what it's doing!

of effects. It can completely change the geometry of a space, offering the advantage of diversifying scenes at the same show or using entirely different effects at other shows. You can even use a single LED to focus on a specific part of the stage or on a musician. Single LED use is also interesting for masking the beam line and using another light source.

But what makes this luminaire—and the rest of the RADICAL line—unique is the continuous rotation on both axes, especially since you can hang it in any it position. This makes it possible to create a new range of simple or combined movements or program effects quickly, which would take time if this function were not present.

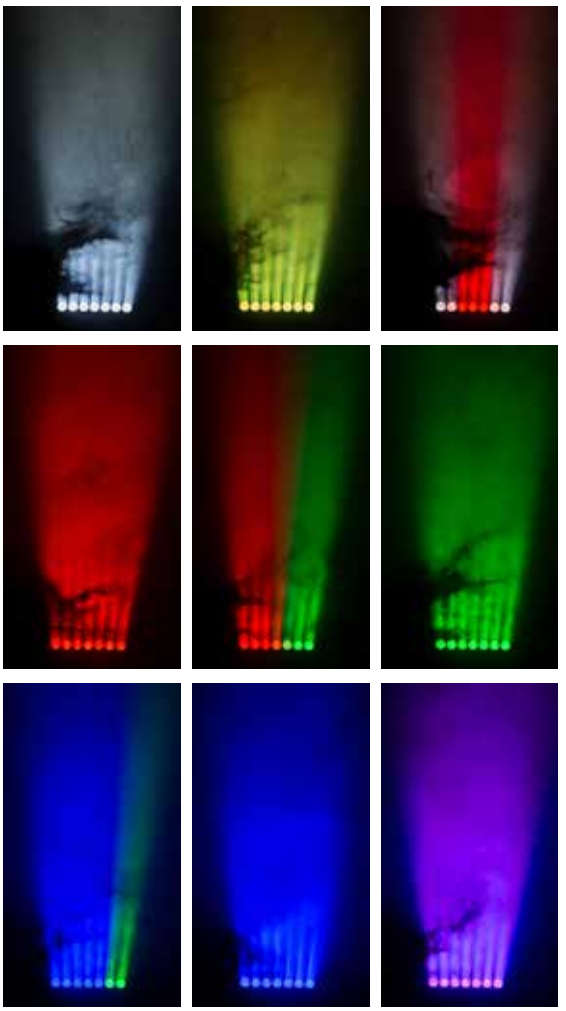
The " Chase Patterns" parameter also allows you to save time with 15 pre-programmed colour chases whose speed and the transition can be controlled through two adjacent channels.

MAGICBLADE-R CHARACTERISTICS	
Dimensions and weight	
Lenght	571 mm
Height	184 mm
Depth	266 mm
Weight	11,2 kg
Mterial	Aluminium - Steel metal - Moulded covers in Selft-extinguishing fire retardant ABS PC
Colour	Black Carbon
Operating manual	Yes
General Characteristics	
Type of projector	LED moving Head RGBW
Voltage and power consumption	110-240 V / 50-60 Hz - 200 W max
Protection class	IP 20
Cooling	Self adjusting variable speed fans in the base - Heatsinks in aluminium in the head
Control	DMX512, RDM, Artnet
nomber of DMX channels and DMX Modes	18/20/44
Lamp type - T° K - life time	7 RGBW 15 W LEDs Ostar Stage OSRAM 50000 Hours
Type of ballast/driver	Electronic
Optical system	High-efficiency 67mm PMMA optics
Motors	2 x Three-phase stepper motors
Software update	Yes
Connectors	XLR 5 points in & out - RJ45 In & Out - powerCON TRUE in & Out
Control panel	LCD display + 6 sensor buttons
Fixing brackets	two Omega 1/4 turn brackets
Fastening point for safety cable	Yes
Pan & Tilt lock	No
Transport handles	Yes
Functions	
Pan et Tit	Continious
Zoom	No
Dimmer / Shutter	Electronic
Colours	RGBW + macros

GENERAL MEASUREMENTS	
Ambiant Noise	32 dB
Machine noice in operation @1m	35 dB
Speed and time	
Rapid movement	
Pan 180°	1,4 s
Tilt 180°	0,92 s
Slow movement	
Fluidity for Pan & Tit	Very Good
Manufacturer	Ayrton - France
Developed in	France
Assembled in	France and China
Warranty period	1 year

COLOURS	RELATIVE %
WHITE RGBW	100 %
RED	0,19%
GREEN	38,8 %
BLUE	4,36 %
ONLY WHITE LED	50 %

A wide gamut of colours can be applied separately on each of the seven LEDs.

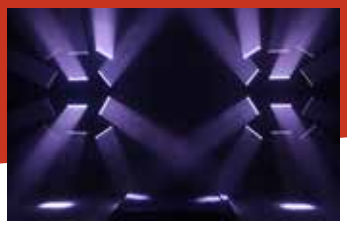


In conclusion

The MagicBlade™R is already a success, as witnessed by the number of orders Ayrton has taken: Dushow & MPM in France, LightDesign in Hungary, Upstaging and VER in the USA, FourLeaf in Japan, Sincopa in Israel.

Admittedly, the French manufacturer has quality on his side. The workmanship of everything designed and manufactured in-house is excellent, and the engineering department has selected only the best outsourced products, such as the LEDs, collimators, drivers or DMX HF board. MagicBlade™R is a perfect product that should thrill many an LD. In fact, it is already being used on stages around the world - by Wiz Khalifa's and Hushser, for instance. Ayrton has amazed us with yet another luminaire and the company is far from running out of ideas. We can expect to find more of them at Prolight+Sound with some new surprises... ■

MAGICBLADE-R



MAGICBLADE-R AUTOMATED LUMINAIRES

A new design that offers continuous double rotation on PAN/TILT axes. Its unique feature is the layout of its seven RGBW LED sources in-line, paired with the highly intensive angle of the optics, which allow the creation of light curtains with genuine overall consistency.
On stage, MAGICBLADE™R's very high centre beam intensity enables excellent visual perception of the beams in an environment saturated with light - vital in the creation of virtual décor.

www.ayrton.eu

AYRTON
Digital Lighting

NANDOSPOT-SC

NANDOSPOT-SC AUTOMATED LUMINAIRES

AYRTON™'s first LED spot luminaire, offering lighting designers unlimited creative possibilities... without any compromise. The luminaire is built around an AYRTON™ LED module that required more than three years of development and fine-tuning. Equipped with monochrome emitters, this module has a new-generation aplanetic lens (patent pending) providing the NANDOSPOT™SC with an excess of 20,000 lumen of power.

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Digital Lighting