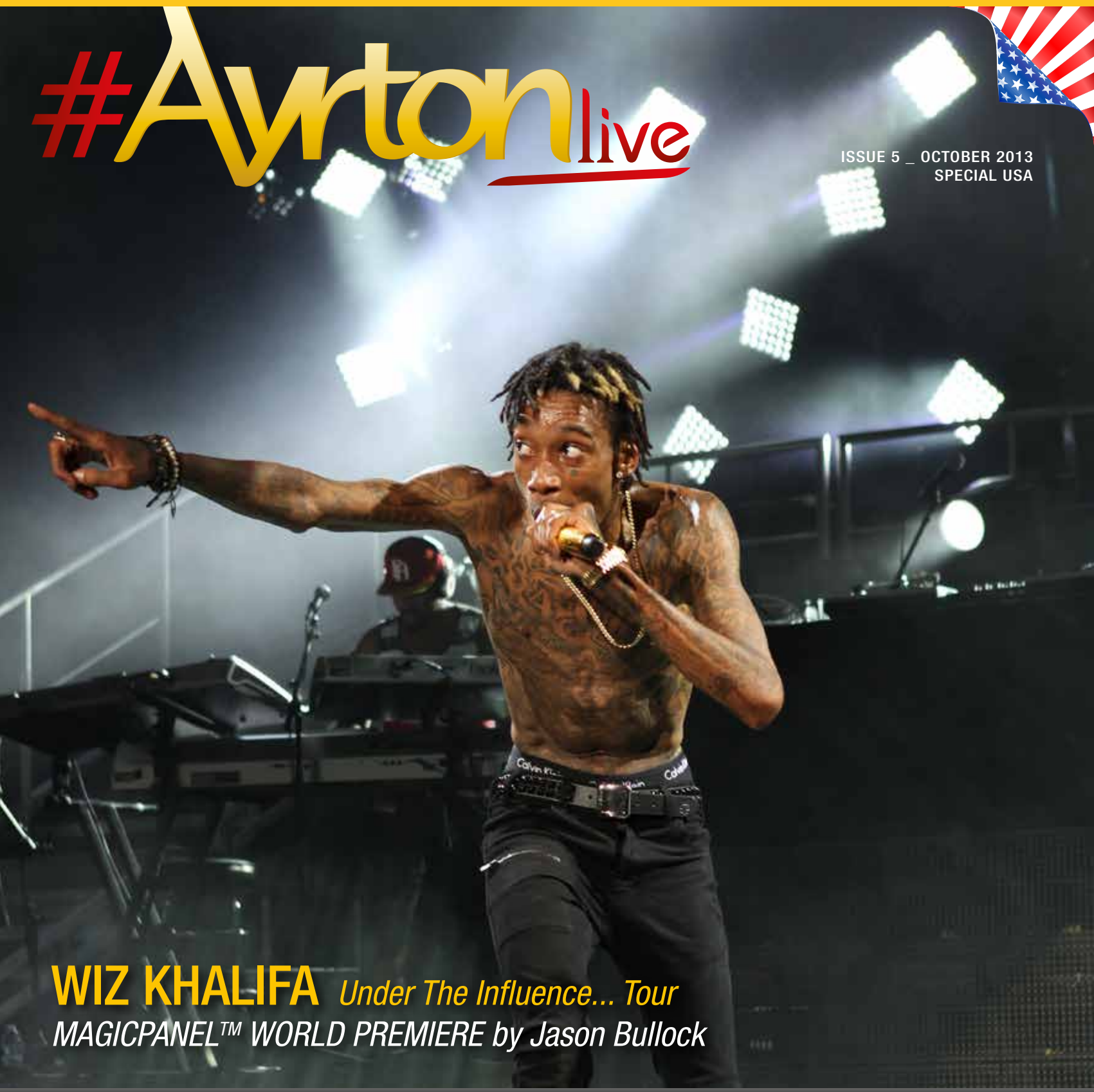
#Ayrton live

ISSUE 5 _ OCTOBER 2013
SPECIAL USA



WIZ KHALIFA *Under The Influence... Tour*

MAGICPANEL™ WORLD PREMIERE by Jason Bullock

ELECTRIC ZOO FESTIVAL *in New York*

MORPHEUS LIGHTS *The pioneer*

MAGICPANEL 602 *by SoundLightUp*

The Magnificent Seven

wildbeam 152

WILDBEAM 152 LED MOVING HEAD LUMINAIRE

WildBeam™152 is an elegantly designed, very fast and compact 150W LED moving head that provides ultra bright, concentrated beams of light.
WildBeam™152 uses 7 RGBW 15W Osram light sources coupled with high-efficiency 65 mm 4,5° collimators. This innovative, advanced optical system allows very concentrated, ultra bright beams to travel far and wide with deep and colorful capacity.

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Editorial

Dear Reader,

Following its commercial introduction last April at the Prolight+Sound 2013 trade show in Frankfurt, the MagicPanel™602 has immediately had huge success in all fields of the entertainment market: touring, television and events.

Thanks to the imagination of talented lighting designers, its innovative concept has offered new visual sensations to thousands of people all over the world.

This is what we are here for.

You will discover more regarding the successful start to MagicPanel™602's career by reading the following pages.

Ayrton never stops conceiving new products and at LDI this year a new eye-catching revolution is coming !

WildBeam™152 and IntelliPix™25 will receive their world première! Both these products use a highly-advanced, French-engineered and manufactured, 65mm optical system. The 4.5° RGBW beam produced by this new optics, coupled with 15W high-power LED, is simply magical.

I hope you will share our pleasure as we launch these new products.

Regards,

Valère Huart.
International Sales Manager.

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Summary





NBC'S SUNDAY NIGHT FOOTBALL KICKS OFF AYRTON MAGICPANEL™602 CAREER IN THE USA


© NBC Sports Group

Lighting Designer, Benoit Richard, can lay claim to the first use of Ayrton's new MagicPanel™602 fixtures in the USA with his lighting for Carrie Underwood as she performed 'Waiting All Day for Sunday Night', the opening theme song for NBC's weekly coverage of NFL Sunday Night Football.

Richard used thirty-six MagicPanel™602 fixtures when the opening sequence for the National Football League's weekly prime time show was filmed. Previous years have seen Pink and Faith Hill sing the opening night theme songs, but this year the torch was passed over to former American Idol winner, Carrie Underwood, who made her debut during the first week of the NFL season on September 8th, 2013.

Richard was determined to create something impressive to mark Underwood's debut. "With a new Artist singing the theme song for this year's 'Sunday Night Football' Season, I envisioned that we needed to showcase a brand new lighting product that had never been shown on TV before," he says. "Keith Bennett from Morpheus Lights had sent me promo videos from the German trade show just a few weeks before I got the job. Talk about good timing! I was very impressed with what I saw and we worked together with Ayrton to make sure our production would be the first in North America to use the MagicPanel units. We pulled it off!"

Underwood's live performance was shot at Raleigh Playa Vista Studios near Los Angeles International Airport at the end of June. Richard worked closely with Director of Photography, Chuck Ozeas, and Production Designer, Evan Rhode, to achieve a 'live performance' look in what was essentially 'an incredible feat of visual effects', according to Richard. All other elements in the video - the Stadium, most of the audience, all the video elements, pyro and lasers – were added in post-production.

Richard used the 36 MagicPanel™ fixtures in four 3 x 3 arrays which he housed in four moving 'pods' to resembled authentic Stadium Sports Lights. "The goal was to have a unique and new look where the viewers would wonder, 'What are those lights behind Carrie?'" says Richard, "and I think we achieved that really well. The tricky part was to make sure that the MagicPanel units would not 'upstage' the Artist because these fixtures have a tremendous output."

With only two days to set up and program the large concert lighting rig, time was a critical factor, but the MagicPanel™ fixtures' programmability proved very valuable. "I decided to set up the fixtures in 'extended mode', which meant using 160 channels per MagicPanel and a total of twelve universes of DMX!" says Richard. "To give me full flexibility I programmed several Group 'matrixes' with the Road Hog Full Boar's Effect Engine and, by using the 'COPY' feature on the console, I was able to create dynamic and fluid looks very quickly.

"My initial reaction to the MagicPanel was simply 'Wow!'. That's all I could say for a while... It's the most exciting product that I have seen in the last 20 years. Is it a moving light? Is it a video screen? It's both! The possibilities are endless and that's what makes this product unique. Our 36 MagicPanel units performed flawlessly during the build and on the shooting day, so it's very solid manufacturing.

"I'm sure a band will be on tour very soon with a back wall or a ceiling full of MagicPanel fixtures. That would be very exciting to design and program!"

Ayrton's MagicPanel™602 units were supplied by Morpheus Lights, Ayrton's exclusive US distributor. "Morpheus did a great job," says Richard. "Mark Fetto provided the equipment for my entire lighting design and he put together a great crew with Jay LeDane at the helm."

AYRTON MAGICPANEL™602 LIGHTS LENNY KRAVITZ AT THE OPENING CEREMONY OF THE 2013 US OPEN TENNIS CHAMPIONSHIPS

Twenty-four Ayrton MagicPanel™602 LED lighting fixtures were used to spectacular effect by lighting designer, Bryan Barancik, at the Opening Ceremony of the 2013 US Open tennis tournament this summer.

The Opening Ceremony, which took place in the 22,500-seat Arthur Ashe Stadium at New York's Flushing Meadows, was lit by Christien Methot. It featured an explosive performance of Are You Gonna Go My Way from Lenny Kravitz who brought in LD Bryan Barancik to design the lighting for his performance.

Barancik chose to relate his design back to the song's iconic music video. The original video, which is still considered outstanding twenty years after it was first released, featured an enormous overhead matrix of light bulbs. Barancik wanted to incorporate a similar aesthetic into the show to tie in with the anniversary of the song. He chose Ayrton MagicPanel™ fixtures as the ideal solution to provide the power and creativity needed to echo this in front of the massive stadium and television audiences, and to punch through the ceremony fixture package of PRG Best Boys, PRG Bad Boys, Martin Atomic Strobes, and Clay Paky Sharpies.

"It was critical to give an animated background behind the band, especially since the wall of the tennis court was only a few feet upstage of the band, and quite unattractive," says Barancik. "We erected six truss towers each with 4 MagicPanel™ units mounted to the downstage edge which comprised the majority of the aesthetic both for camera and the live audience. The rest of the system included PRG Best Boys sited between each tower and on the drum riser, with Atomic Strobes set at the bottom of each tower."

The MagicPanel™ units were then used as powerful and eye-catching feature lighting throughout the set, chasing colours and graphic elements and being used as audience blinders, while making good use of the MagicPanel's continuous rotating pan and tilt capabilities.

Barancik chose the MagicPanel™ fixtures after being shown them earlier this year by Keith Bennett of Morpheus Lights. "I wanted to use them the moment I saw them, and this was the perfect opportunity," says Barancik. "The MagicPanel™ units really were the ideal fixture for the job: the combination of pixel mapping effects, DMX programming, and the fixture's own internal effects gave us an arsenal of options to play with. In the end, we only used a few in the final programming – outstandingly done by Christien's programmer Jason Baeri - to ensure things looked good on screen and live."

Having now used Ayrton MagicPanel™602 fixtures, Barancik has become an avid fan: "They are a wonderful new product. The continuous pan or tilt rotation is a great option for a different look. They held up well to the fast and bumpy load in and load out dictated by the television schedule and worked flawlessly at showtime."

The MagicPanel™602 fixtures were supplied to PRG by Ayrton's exclusive US distributor, Morpheus Lights, for whom Barancik is full of praise. "Keith Bennett and the team at Morpheus are really going out of their way to do a superb job with service and support," he says. "Phone calls and emails were always answered timely, professionally, and helpfully. It's a pleasure working with them."


© Monika Graff

BELGIAN PRODUCTION AND RENTAL COMPANY, ART OF CONFUSION ADDS AYRTON MAGICPANEL™602 BEAM PROJECTORS TO RENTAL STOCK

AND "MAKES MAGIC" AT THE GATHERING PARTY AT DREAMVILLE / TOMORROWLAND, VLAANDEREN MUZIEKLAND AND CAFEÏNA BEACH.

Founded in 1997, Art of Confusion, the Kontich based production and rental company, has an impressive track record, with references ranging from local corporate events to some of the Belgium's largest festivals, such as: I Love Techno and Tomorrowland. Art of Confusion provides professional level lighting, audio, staging equipment and production services.

In July, it was the first company in Europe to take delivery of MagicPanel™602 fixtures. They were put to use as soon as they were delivered! The MagicPanel™ display blew away the Gathering Stage at Dreamville, part of the world-famous Tommorowland EDM festival with the power and versatility of spinning, map-able LED heads.

Art of Confusion was in full charge of this stage, which is located in the giant campground for the festival. The intricately combined beams of MagicPanel™602 dazzled the lucky dancers of Dreamville over the three-day festival.

AoC was also the equipment and service provider for Vlaanderen Muziekland, a TV weekly TV show, where top Belgian bands such as Milk Inc, Natalia, Ozark Henry, etc… competed to win the title of "Radio 2 Summerhit 2013". Broadcast live from coastal town of Westende in front of a live audience, the show reached over half a million viewers every week. MagicPanel™ was selected to put the artists in the spotlight they deserve.

MagicPanel™602 is a modular LED luminaire allowing for a broad range of diverse visual effects.

In addition to being capable of continuous, unlimited rotation on both PAN and TILT axes, MagicPanel™ is able to display media on 36 individually controllable, RGBW emitters via Arkaos Kling-Net protocol, or to be controlled conventionally, via Art-Net or DMX-512 (w/ RDM capability).

MagicPanel™602 also performed at «Cafeïna Beach» in Antwerp. First held in 2006, Cafeïna is a popular party concept, hosting events in various locations around the city. The 2013 edition took place at the beach of Bocadero Waagntie. MagicPanel™ made sure the dance floor and DJ booth were wrapped in a "magic" party aurora.

MYLÈNE FARMER TOUR

WITH AYRTON MAGICPANEL™602 AND WILDSUN™500C

Lighting Designer Dimitri Vassiliu selected the Ayrton MagicPanel™602 and WildSun™500C fixtures to light Myléne Farmer, the most famous French singer today, for her Timeless 2013 concert tour.

Starting in Paris, with 10 consecutive shows at Palais Omnisports de Paris-Bercy, the tour then continued across Europe with performances in France, Belgium, Switzerland, Belarus and Russia.

Total audience was over 450,000 for the 39-show tour.

Dushow Group, headquartered near Paris, was the lighting supplier.

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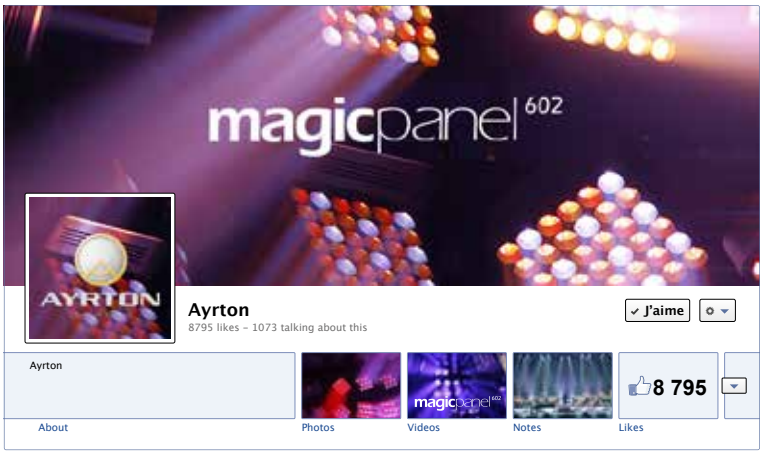

Likes: 8.795 (10/30/2013)

Audience: 57.404 (from 08/29/2013 to 09/04/2013)

Most popular publication: 23.424 (Mylène Farmer "Timeless 2013" @ Paris Bercy)

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ICECOLOR 250 3G LED STATIC LUMINAIRE

ICECOLOR™250 is a compact luminaire offering the possibility of creating an infinite palette of rich pastel or saturated colours. Fitted with an ultramodern fanless and absolutely silent cooling system, it can be integrated into any application without any noise. Respecting the environment thanks to its 85% plus efficiency optics, it is able to produce a lighting flux in excess of 5000 lm for only 200 W of power consumption.

icecolor 250

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AYRTON MAGICPANEL™602 HAS IT NAILED

Leroy Bennett's lighting design for the current Nine Inch Nails Tension 2013 tour utilises the largest installation of Ayrton MagicPanel™602 fixtures to date.

Following a successful summer festival tour promoting their new album Hesitation Marks across the Far East and Europe, the American industrial rock project, Nine Inch Nails, has reconfigured itself and is currently on tour, playing North American arenas in a newly conceived show under a dramatic new lighting / video rig that incorporates 126 Ayrton MagicPanel™602 fixtures.

Legendary rock production/lighting designer Leroy Bennett, whose long line of collaborations includes Prince, Tina Turner, Faith Hill, Paul McCartney, Lady Gaga, Rammstein, Madonna, Beyonce and Bruno Mars, has installed 14 'pods' above the stage on variable speed winches. Each pod contains nine MagicPanel™602 units in a 3 x 3 configuration.

Ayrton MagicPanel™602 is a moving head LED beam projector equipped with thirty-six 15W Osram RGBW emitters in a 6 x 6 array. Each emitter projects a tight, powerful 7.5° beam and can be controlled individually or used collectively to produce a coherent 15,000 lumen shaft of light. Under individual control, the emitters can be pixel mapped or driven by video via Kling-Net. To supplement to the graphic possibilities this control provides, MagicPanel™602 can be continuously rotated on both pan and tilt axes, which adds a dynamic dimensional effect to beams individually projected by mapped emitters. MagicPanel™602 is controllable via DMX-512 (w/ RDM capability) or Art-Net.

The MagicPanel™602 pods formed a major component of the NIN show, as both illuminators and as graphic elements. They are alternatively positioned in near proximity to and directly above the performers, then flown out to define large architectural spaces, then used as audience blinders and ultimately interfaced with the three semi-transparent video curtains. Coordinated video content is then pixel mapped across the collective 4536 emitters of 126 MagicPanel™602 units.

Bennett employs MagicPanel™602 to create many effects throughout the course of the performance: "We tried to push the MagicPanel™602 pods as far as time allowed us but still remain in keeping with the music," he states. "I found the MagicPanel™602 very interesting and diverse which is why I chose to use them, and they have proved to be as bright, versatile and reliable as I had hoped."

The Tension 2013 tour kicked off in late September and the Ayrton MagicPanel™602 has certainly proved itself in terms of performance, design potential and robustness. Bennett states the fixture is 'great on all levels'. "The 360° pan and tilt, brightness, pixel mapping capabilities and durability are all key to the success of these units. You'll be seeing a very large amount being used in the next few months!"

Upstaging, Inc., of Sycamore, Illinois, supplies the Nine Inch Nails touring system. NIN will continue touring in North America until the end of November, then will embark on an Australian/New Zealand leg in March 2014, prior to an anticipated European tour next summer.

LDI SHOW PREVIEW

Ayrton, the innovative French LED luminaire designer and manufacturer, will introduce their latest releases at LDI 2013 - Booth 1227, exhibiting in conjunction with exclusive US distribution partner, Morpheus Lights. LDI is North America's premier entertainment technology trade exhibition, running from November 22 to 24, at the Las Vegas Convention Center.

A dynamic MagicPanel™602 matrix will be presented, along with three new Ayrton products – Intellipix™25 LED Beam Panels, WildBeam™152 Beam Projectors and NandoBeam™602 Wash/Beamlights. John Marovich, Principal Designer for Habitech - Las Vegas, designed the booth and will program the display.

Ayrton's revolutionary MagicPanel™602 had a spectacular launch in both the United States and Europe when it premiered in early summer. Major artists, such as Nine Inch Nails, Kelly Clarkson, Wiz Khalifa, Mylène Farmer and Florida Georgia Line have featured these brilliant, graphic beam projectors on their 2013 tours.

Ayrton is focused on developing fixtures that provide lighting designers with powerful and exciting new tools. Ayrton's goal is to create unique products that expand the possibilities of Light in Action.

Ayrton and Morpheus Lights look forward to meeting you on the show floor, and introducing you to these next-generation entertainment lighting products. LDI 2013 – Booth 1227

INTELLIPIX™25: 5 X 5 LED BEAM PANEL

Ayrton's new IntelliPix™25 is a modular beam projection panel which puts twenty-five independently controllable 4.5º LED emitters into a 5 x 5 array that projects graphics and media far into the air with power never before imagined. Connect multiple panels together in a semi-transparent wall to form a giant screen or, place them under glass to create a projection floor that can wrap a performing artist in dynamic columns of light.

Ayrton has clearly been ahead of the game in development of its beam projection devices, providing new proprietary solutions for focusing LEDs into a tight, collimated beam. Combining revolutionary 67mm optics from Gaggione, with 15W Osram Ostar RGBW LEDs, IntelliPix™25 projects 100 candela per lumen – two and a half times more than a 45mm collimator would.

Intellipix™25 is also a model of industrial design and mechanical engineering pushed to perfection. It assembles securely, with easily interlocking male and female components that align perfectly and mate instantly.

The floor configuration of IntelliPix™25 has 16 support points per square meter to distribute the load of a laminated glass floor effectively and to permit the collimated beams to be projected vertically. IntelliPix™25 is rated IP65 – ready to work rain or shine! Control is via DMX, Art-Net or Kling-Net.

WILDBEAM™152: THE SNAPPY NEW LED BEAM LIGHT

WildBeam™152 is a spectacular new addition to the Ayrton line. By coupling seven 15W Osram Ostar RGBW LEDs with 67mm collimators from Gaggione, Ayrton has created an astonishingly powerful and compact luminaire with a sharp, 5° beam and a clean edge.

The optical output hits a record-breaking 90% efficiency – for a 2,500 lumen light shaft. That's from a fixture that pulls less than 150 watts!

The light engine of WildBeam™ is 7 emitters, which can be individually controlled, to project a multitude of dynamic color effects in space and to animate the beam around a central point, with crisp delineation of the individual component beams remaining perfectly distinct.

Advanced 3-phase stepper motors make WildBeam capable of snappy, dynamic moves – and the great price point means that you'll be able to buy lots of them!

NANDOBEAM™602: THE BIG BROTHER

Ayrton is pleased to announce that the NandoBeam™ family of products is growing. Following the introduction of NandoBeam™302 at ProLight + Sound show in Frankfurt, NandoBeam™602, will have its world premiere at the LDI 2013. The 602 is twice as powerful as its little brother and is equipped with the same lightweight optical system and ultra fast 5:1 zoom.

NandoBeam 602 was designed primarily for use on concert stages and in television production. With quick and dynamic movement, and Ayrton's fabulous saturated color palette, it can emit a powerful 8º column of light or zoom back to provide bright wash coverage at up to 40º.

NandoBeam™602 offers plenty of visual effects, with 37 embedded Osram Ostar RGBW LED emitters, arranged in four "crowns" and independently controlled in semi-ring sections of six emitters. It utilizes a second-generation active heat-pipe cooling system. A Lumen Radio wireless DMX receiver is standard equipment. NandoBeam™602 is controllable via DMX, Art-Net, and Kling-Net.

AYRTON ARCALINE™ AND ICECOLOR™ ILLUMINATE LYON PALAIS DE JUSTICE

One of the most famous monuments of the «old city» of Lyon (Vieux Lyon) in France, the Palais de Justice de Lyon, recently benefited from a new exterior lighting installation which uses an array of LED lighting fixtures from Ayrton to accentuate its architectural magnificence.

Ayrton, French specialists in intelligent LED lighting products for Entertainment and Architectural applications, has provided fixed installations for a number of historic monuments, of which the Palais de Justice is just the latest.

Inaugurated in 1847 and often referred to the 'Palace of the Twenty-Four Columns', the Palais de Justice de Lyon was classified as a Historical Monument in 1996 and is one of the finest neo-classical buildings in France.

To show its spectacular facade to its best advantage, lighting designer Jerome Donna from the Public Lighting Department of the City of Lyon chose a selection of Ayrton Arcaline2 3G 100, Arcaline2™3G 50 and IceColor™250 3G fixtures that will provide the city with a permanent, highly visible landmark for years to come.

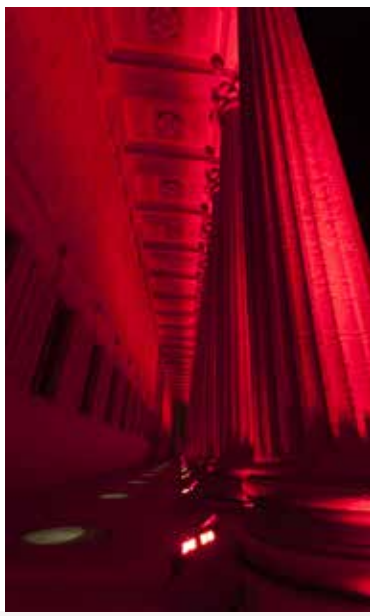
Each of the twenty-four Corinthian columns of the colonnade is front-lit by a single Arcaline2 3G 100 and flanked by two Arcaline2 3G 50 units that provide side lighting. A single IceColor 250 3G is then placed behind each column to wash the facade and delineate foreground and background.

Finally, the details of the upper levels of the portico above are defined using both Arcaline2 3G and IceColor 250 3G that provide smooth, color-constant washes.

In total 140 Arcaline2™3G 50, 24 Arcaline2™3G 100 and 28 IceColor™250 3G fixtures were installed, all of which were controlled by 968 channels of DMX from a Light-CS box from Light Computing Service.

The Courthouse is illuminated by white light throughout the main part of the year but, since all the Ayrton fixtures feature RGBW LEDs, the color of the lighting scheme can be changed when desired. This will be used to full advantage during the world-famous Lyon Festival of Lights, which takes place at the beginning of December. The festival, which has its origins in the Middle Ages, has taken place annually since 1852 and currently attracts around 4 million people to the city.

The Ayrton fixtures were installed by Citeos, specialists in public lighting, heritage enhancement, festive illumination and dynamic urban equipment, and supplied by Ayrton's exclusive French distributor, Axente, under the guidance of Axente's Architectural Lighting Projects team of Jean-Philippe Josserand and Damien Joyeux.



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arcaline²

ARCALINE 2 3G LED STATIC LUMINAIRE

ARCALINE™2 IP65 LED static luminaire is the ultimate linear range evolution of AYRTON creations using 16 RGBW Multi-chip High-Power LEDs as its light-source coupled with 10° x 40° High-Efficiency optical system.
With a stunning smooth and sophisticated profile, the ARCALINE™2 is meant for any kind of steady applications. ARCALINE™2 can be directly powered through its own on-board power supply unit. ARCALINE™2 thus gives an incredible utilisation pliancy in any condition requirements.

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ELECTRIC ZOO FESTIVAL IN NEW YORK

Jonathan Goldstein's original Design includes huge video screens and 80 MagicPanel™ 602

1

The Electric Zoo Festival is, by far, the largest Electronic Dance Music event in New York City, with 190 international artists from the global electronic music scene performing over 3 days (and into the night) on 5 stages for 150,000 enthusiastic attendees. 2013 marks the fifth year for Electric Zoo. With each successive iteration, Production Designer Jonathan Goldstein has pushed the edge of the envelope for technological originality – with more stages and more fabulous visual environments. In 2012 StarLight Visual won an award from the Los Angeles 3D Film Festival for the first live 3D stage design incorporating custom 3D animations, 30,000 pairs of glasses distributed, and live 3D HD cameras.

Text & Photos
Monique Cussigh
from Soundlightup.com

This year's festival also saw the addition of a new Stage, called the "Main Stage East" - which featured over 8,000 square feet of Nocturne 28 mm video screens surrounding a matrix of 80 Ayrton MagicPanel™602 LED beam projectors. Jonathan and his assistant Matt Shimamoto were first introduced to MagicPanel via You Tube videos of the impressive, 25-fixture display at the ProLights & Sound trade show in Frankfurt, Germany (April 2013). They reacted immediately and, in more than tripling that number, assembled the largest MagicPanel installation in the world to date! Magnificent!

We are very proud to see a French manufacture's product succeed in the U.S. to this degree. Ayrton products are distributed in the USA by Morpheus Lights of Las Vegas, Nevada – which has a

long history as a top-level lighting service provider as well as an innovative developer of automated lighting products. For Electric Zoo, Morpheus provided the MagicPanel™ fixtures to Festival lighting contractor PRG, of Secaucus, New Jersey and supported PRG's technology department to insure the installation and operation of the fixture array was flawless.

The Electric Zoo Festival is scheduled each year on the US «Labor Day» Holiday Weekend – which, by tradition, marks the end of the summer season. "E Zoo" is a private event, staged on beautiful public park land (leased from the City of New York) on Randall's Island, in the middle of the East River between the boroughs of Manhattan, Queens and the Bronx.

The Festival starts at 11:00 AM and stops at 11:00 PM, so it is 12 hours straight with no stopping the music. All five stages are playing simultaneously, all day, from the moment the doors open. In just five years, the Electric Zoo Festival has grown from attendance of 15,000 to 150,000 enthusiastic revelers, attracted to the best electro artists and the ability to leapfrog between multiple stages and that combine over-the-top visuals with the driving beat of EDM. Every year seems to leave them wanting more – so the staging, video and lighting production has had to grow with the attendance!

2

3

Jonathan Goldstein – Principal of StarLight Visuals – Creative Director / Production Designer of the Electric Zoo

Jonathan Goldstein has been Creative Director and Production Designer for Electric Zoo since year one, providing Design and Technical Management services through his company StarLight Visual of New York City. His credentials as Lighting Designer run deep - Kanye West, Rihanna, Jay-Z, and Donna Summer. As Production Designer, he has done World Tours with Kid Cudi, Mariah Carey and Alicia Keys. On the last day of rehearsals, in the midst of preparation for the Festival, this highly respected and accomplished American Designer kindly agreed to give me a few minutes for an interview. I am really grateful and impressed.

SLU: What is the origin of this festival?

Jonathan Goldstein: " Electronic Music has transitioned in America over the last five years from an underground movement housed inside gritty clubs in metropolitan cities, to a pop culture phenom happening in every major city. This show is promoted by an independent promoter called "Made Event" who has been working inside the Electronic Music Genre for 25+ years, they get the culture, the crowd, and what people EXPECT to see at their shows. We started Electric Zoo very small with 1 rollout stage and 3 tent stages over 2 days, and we have doubled the festival's size every year. This is the fifth year anniversary."

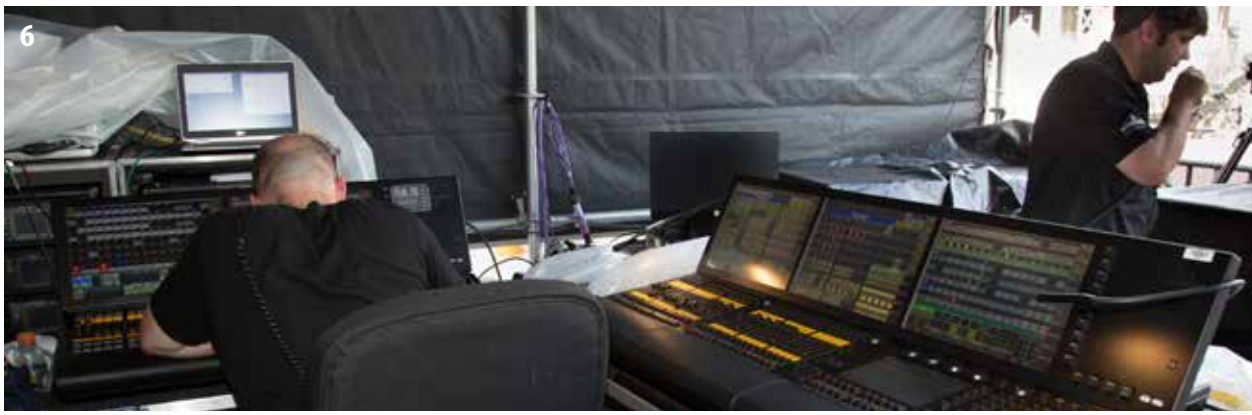
SLU: Is this the biggest festival in New York?

Jonathan Goldstein: "Yes, it is, by far, the biggest festival in New York City and, I'm not certain, but I think it is the biggest on the East Coast. It is in the top five festivals in the US, by size. "The vendors on site are PRG Lighting, PRG Nocturne, Christie Lites, Screen Works... I have to do the calculation, but I believe

1. At the center of the media image, slowly rotating MagicPanel units produced remarkable, dynamic, 3D volumetric animations.

2. The transparency effect of the screen, plus Sharpys, plus wide lateral beams from the MagicPanel array.

3. At night, the atmosphere becomes magical. The media keeps coming and is contrasted by the MagicPanel array at the center. Each pixel generates a very tight and powerful 7.5° beam which is used fabulously to add to the experience.



4. I love this shot! The video image partially occupies the screen , with the structure being revealed by MAC Aura units behind, the MagicPanel beams are in continuous rotation: all at a perfect balance of illumination.

5. The towering array of 80 Ayrton MagicPanel™602 units - ready to take a spin.

6. Brian manages the grandMA2 Full Size console at Main Stage East – with DMX control via NPUs to 64 universes.

7. Posing in front of the Main Stage East with Associate Production Designer Matt Shimamoto (at center) during pre-production, are (from left) Valere Huart-Gyors and Yvan Peard, of Ayrton, and Mark Fetto and Paul Weller, of Morpheus Lights.

8. Two of Jonathan's assistants: On the left, Brian Jenkins, Programmer and Lighting Director for the Main Stage East. On the right, Matt Shimamoto, Associate Production Designer for the Festival.

we have 10 miles (16 kilometers!) of LED product here. We have about 9,000 or 10,000 tiles of LED on site. We have enough generators to power 790 homes."

SLU: Do you increase the lighting / production budget each year?

Jonathan Goldstein: "Yes… We wouldn't be able to be this big if we didn't increase the budget, as well. The production design has increased every year. I come up with ideas every year that everyone loves… and then we have to change those ideas, every year. So I am fighting myself every year to do more edgy innovative designs." No matter how big or small the venue is, we put the same amount of design into it…"

"We were the first ones ever to (present) live 3D visuals here on site for artists. Last year we did this and we won an award for that from the Los Angeles Film Festival, beating Disney out on "Best Live 3D Experience 2012", so it was a big moment for us. We are doing that again this year. We will give out 60,000 pairs of 3D glasses, so that anyone can go and enjoy for free a very different experience in 3D with the real artists live. There are live 3D cameras and everything 100% in 3D. It's really wild to experience especially for this genre of music."

Jonathan breaks the mold of standard EDM design

SLU: When did you begin the design process?

Jonathan Goldstein: "We start production design of this show 8 months prior to the actual show date. It is a very layered process designing 5 stages and 190 artists worth of performances. Each individual stage is given the detail of production design no matter the scale or type of genre that is playing that stage. Each design is completely unique and purposeful. The concept for the Main Stage East was to make lighting an element that was at the


7


8

forefront of the design. Knowing that many artist's productions would give kick back as video and led walls are so overly used in this genre it has become an arms race as to who has the bigger «TV screen» behind them… In this case I took on the challenge of breaking the standard mold of design and sequestered my Design Associate Matthew Shimamoto to find me new lighting elements that could replace the size and scale of a 50' high by 30' wide video wall. In comes the MagicPanel™602."

"We're using it on this [East] stage and so they are something unique to the festival, that are only here on this stage. The central focus of the design on this stage is the MagicPanel. We like using new things and exploring what's new. This gave us an opportunity to bring lighting to the forefront in the design… something that has taken a back seat not only on my designs, but the trend for a lot of people is now "video, video and more video". So, we are just bringing it back to lighting for this specific design and it is working very well. Everyone's very happy with it and it's something unique."

SLU: What do you think of the MagicPanel environment you've created?

Jonathan Goldstein: "I think the fixture is extremely flexible for use, it's amazing because during the daytime it can battle the sun and still be used as a viable design element, the intensity is numbing even during the day being used as «eye candy» into the crowds eyes. At night the fixture intensity had to be reduced so drastically as they were overpowering every other element in the design, but here is where you can really show the impressive beam column, as well as the LED mapping features available to us. We were mapping them through the grandMA2 console as well as using the onboard features of FX…"

"For us we had 80 fixtures and it would have translated into something like 60 universes of DMX over Art-Net, which is a massive amount of data flowing… and at this time the Ethernet connectivity to the light was not functioning properly as per the manufacture, so they suggested we run them via DMX."

SLU: Do you always work with the same team - Matt and Brian?

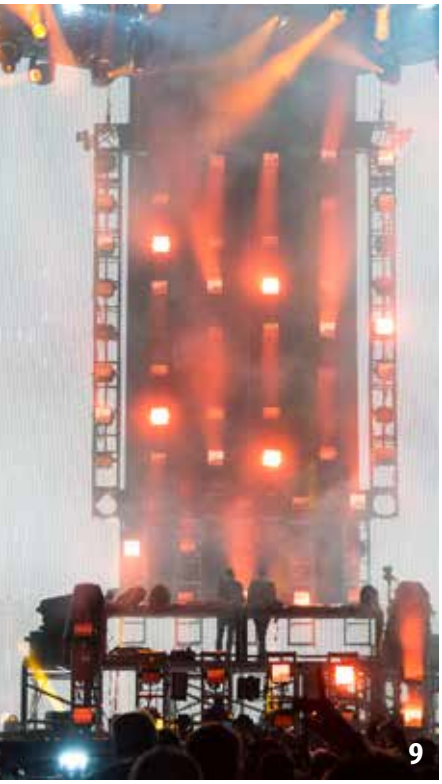
Jonathan Goldstein: "At StarLight Visual, the team is a fluctuating entity, because our guys are so talented you may imagine they are so extremely busy certain times throughout the year. Matt and I have been working together since he was a guest lighting director on a show that SLV designed back in 2011. Matt has some unique skills, he is a very talented programmer and lighting director, but also has production knowledge as well as running his own business, Volt Lites (of Los Angeles, California). This unique skill set is a perfect lineup for being the Associate Lighting Designer on a show like Electric Zoo.

Jonathan Goldstein

of StarLight Visual

StarLight Visual (**www.starlightvisual.com**) is a Production and Visual Design firm based in NYC. It has been the production designer of Electric Zoo since the creation of the show in 2009.
Jonathan started by designing strictly lighting for concert tours and runway fashion including Kanye West, Rihanna, Jay-Z and Donna Summer, Alexander Wang, Calvin Klein, Proenza Schuler and then began to expand the company's scope of work into visual and set design. In 2012 Starlight Visual provided production design for Mariah Carey and, earlier this year, the Alicia Keys World Tour as well as visual designs for Kid Cudi.

SLV Employs a small core of people year round, mainly on the coordination / business side of things. "We prefer to hire the amazing talent we get to work with on a freelance basis" says Jonathan, "This really allows us to tailor who is working on which project which results in a harmony when the production is on the ground touring."



9. No beam can compete with a full power video screen. The matrix at centerstage is enhanced by a solid black background

10. Another amazing mix of media with MagicPanel .

11. LED color saturation is unsurpassed. The MagicPanel breaks all records with its bright, coherent beam.

This happens to be the first chance that I have been able to work with programmer and lighting director Brian Jenkins, I can tell you it wont be the last. Brian had the most compressed programming / directing schedule on the show, as well as it was his first year and first EDM festival, as well as we handed him 80 new fixtures that he had never used and the result was pure success!"

Matt Shimamoto - Associate Production Designer

Jonathan then passes the interview over to his assistant, Matt Shimamoto, an impressively calm 27 years old with enthusiasm and quite a résumé of his own. Unquestionably Jonathan Goldstein knows how to unite a team of talent.

SLU: What is your role in this festival?
Matt Shimamoto: "I work in conjunction with Jonathan to come up with a design with lighting to compliment his beautiful structures and all of his video walls and scenic pieces. We just finished putting this stage together yesterday."

SLU: Is this the first time you've worked with the MagicPanel?
Matt Shimamoto: "Yes this is the first time. We saw this product on You Tube, after the launch at ProLight+Sound and we were in the midst of putting together the design for this festival. We immediately said: "What is that? How do we find it? So we started poking around and found out that it was going to be available in time."
"So far everything has been holding up well. We've been able to figure out how to program this fixture. It's a little bit of a different way of thinking, but we knew it was going to be a little bit of a challenge to get up to speed on how to make it work right, but Brian is an awesome programmer and he has been able to figure it out pretty quickly."

SLU: How are you controlling it?
Matt Shimamoto: "It is controlled currently via hard line DataMax system, just because of the infrastructure that we have here, we had to go that route. The plan originally was to run media through it, but with normal budget constraints we weren't able to make it happen this time. What we were able to do this time was to use bit-mapping through the grandMA2 console."
"We don't have a media server running through it. We have so many guest artists coming through the festival; we are just trying to make it as simple as possible for them to operate. The plan is, if everything goes well, maybe this will return next year and we will get a little more extravagant with how we use it. But with five stages here and everything else, it was hard to dedicate a lot of time to get everything where it could be. We'll get there, but this is a stepping stone to get to the next level."

SLU: Are you driving it in the extended channel mode?
Matt Shimamoto: "We are using it in the 160-channel mode, so we are using every single feature of it. We've got a slew of MA NPUs to drive them… It's pretty impressive. Just running basic effects through it is impressive. Overall the sheer brightness of it is just crazy. Even at 50%, it's projecting all the way out to another tent, to another stage and lighting up a DJ all the way over there.

It's crazy. We've been kind of toning it down a little bit because it's really bright. And the fact that it can rotate like that in 360°, it's really cool."

SLU: Have you been using the grandMA2 for a long time?
Matt Shimamoto: "The consoles are grandMA2 Full Size. We've been using grandMA2 for about two years; we were using MA1s prior to that. But with the scale and size of these festivals and with the technology that they've updated on the consoles, it was a "no-brainer" to make the move to the new version. It's handling it extremely well – that's a lot of processing going out to the rig now. In the current configuration we have hazers and foggers throughout the whole stage and, when we fill it all up, the aerial beam from these MagicPanel units is "super-beamy"… when we use them with just, maybe, two pixels and spin it around. So we get a lot of different looks out of it, which is really impressive, versus having something that is very "washy", because a lot of units out there are in that very "soft" configuration. I like the fact that it has a hard-beam quality to it.
We have two grandMA consoles per stage, one active and one backup. There are five stages total so there are ten throughout the whole site. We have numerous NPUs driving every stage and a grandMA2 in our pre-visualization suite. So we invite some of the designers and directors from the other artists and they come out and program their shows. This way, when they come out on the main stage, they just bring their show-stick, plug it in and they are able to get pretty close. With the number of deejays that are here, they don't have a whole lot of time to dial in their shows, so any time we can give them with the pre-vis suite, we are happy to help."

SLU: Have you had any problems with the MagicPanel?
Matt Shimamoto: "We haven't had any problems with the Panels per se, the only thing I've heard that has been a little touchy was the addressing of the units; on the User Interface there's a little graphic display, and some of them weren't responding. Maybe our people's hands weren't clean enough for them. Other than that, they've been holding up really well… and we've had rain, a lot of humidity, followed by some serious heat on a couple of days. So they've seen a lot of different atmospheric elements over the last few days and they've held up pretty well. We are going to be running them pretty hard for the next three days."

SLU: What other types of fixtures have you chosen ?
Matt Shimamoto: "For moving heads, we have the Vari*Lite 3500 Washes, VL 3000 Spots, a slew of Clay Paky Sharpy, Atomic Strobes with scrollers, there are a ton of MAC 101 behind the LED wall plus some 2-light Moles and more Atomics back there. There is a base of 3500 Washes below the lower panel of video that shoot through."
"There is a nice structure to the video wall, that we kind of treat as a scene piece to break things up from being so electronic and in-your-face; just some nice sexy theatrical light. We try to get as much variation as possible, because it is a very long show. You try not to blow all of your looks right away."

SLU: What is the pitch of the video screens?
Matt Shimamoto: "They are 28 and 18 millimeter pixel pitch walls. They are provided by Nocturne. We have Mbox® media servers driving the video walls."

Conclusion

We were invited back the next night to witness the performances of two DJs on the first night of the festival - Excision and Knife Party. The visuals are GREAT! At the heart of the bustling video screen with hallucinating media in 2D the wall of 80 MagicPanel units is put through it's paces – full beam, strips of light, individual pixels synchronized with unique head movement. The eye is mesmerized by the soaring beams and cannot be detached from the gigantic dynamic matrix. The balance between video and light is right on the mark. The MagicPanel beams break through in a 3D effect that no other projector could match. The sequence of media is perfectly synchronized with the electro rhythm. When the image is dark lights behind the screens reveal the structure and give an industrial look and depth to the scene, accentuated by the beams of Sharpys placed in the foreground. Then of course, the purpose of this gigantic treasure-chest of technology is for the DJ's that appear in silhouette against the bottom of the screen behind their desks, The dynamic visuals reinforce their music in a Herculean way and create a fabulous setting for a dance space! ■

Matt Shimamoto
of Volt Lites

Based in Los Angeles, Matt is a 27 years old designer and programmer. In September, following Electric Zoo, he began programming for Drake's upcoming "Would you Like a Tour?" with Guy Pavelo. He has also worked for the band Phoenix with Tobias Rylander and does "a lot" of Rap shows – including "a couple of years with Lil' Wayne".

AYRTON ACCOMPANIES "M"
on tour from small clubs to large venues

The rock ernergy is palpable in this beautiful light from WildSun™500C and Rollapix™.

French Lighting Designer Dimitri Vassiliu devised a flexible traveling equipment package for the tour of the French singer-songwriter "M" (a/k/a Matthieu Chedid), designed to light up both small clubs and big venues with lots of energy.

On the initial phase of this European club tour, the traveling rig consisted of 8 Ayrton RollaPix™100 automated linear LED fixtures, 4 Svoboda High Intensity Battens mounted on crank-up stands and a console. The distinctive color mixing of the RollaPix units was a nightly constant. The rest of the system was locally supplied, so it varied from venue to venue. Clearly lots of improvisation and adaptation was required.

Additional gear was brought in to supplement the stage picture for M's sold-out, multiple show stand at the Zénith de Paris. The RollaPix count increased to 12 and 15 Ayrton WildSun™500C LED washlights were added, with 9 placed in an arc on the floor, mounted on movable dollies to permit the fixtures to be repositioned during the show. The other 6 were hung at the side for scenic illumination and to play with reflections in mirrors on the set. The Ayrton fixtures were chosen for the superior quality of their RGBW color field and their brightness as a backlight. The Dushow Group, of Roissy en France, supplied the Ayrton LED sources and other equipment for the M tour.

2 lateral PAR 64, 2 amber WildSun™ 500 C, and miror adds depth…

The light and video crew. Top of the picture, from left to right: Jerome Prevost, Celine Royer, Antony Toraldo, Dimitri Vassiliu, Thierry Grand, Jeremy Bargues. Below: Kevin Leroy, Sébastien Amador, William Weber.

icecolor 500

ICECOLOR 500 3G LED STATIC LUMINAIRE

ICECOLOR™500 is a versatile LED projector which can be used indoors or outdoors. Including a built-in Wireless DMX receiver, it has been designed for the most demanding lighting designers and service providers. Monochrome or dual colour cyclorama lighting, Downstage or Upstage lighting, matrix effects, blinding and strobe-light projection in white or colours... the only limitation is your imagination !

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WIZ KHALIFA AT THE ZÉNITH
Under the Influence of MagicPanel™ with Jason Bullock

1

Wiz Khalifa, the young American Hip-Hop phenomenon appeared at the Paris Zenith for a one night only performance to kick-off the European leg of his «Under the Influence of Music» world tour.

Jason Bullock, the tour's Lighting Designer, has done a spectacular job with luminaires that virtually set the Paris stage on fire.

Upstage left and right of the wonderful Wiz, hang beautiful, brand-new Ayrton MagicPanel™ fixtures, Jason's new favorites. It seems as if they were custom made for this Rapper – both doing bump cues as they illuminate the performer and as powerful audience blinders.

Installed in a 4 x 4 matrix, MagicPanel dominates the lighting rig, which is loaded with an impressive number of moving lights – both spots and washes, and proving, once again, that the future belongs to LED technology.

We take you behind-the-scenes of this incredibly effective show.

Text **Isabelle Elvira from soundlightup.com**
Photos **www.soundlightup.com**

We met Jason Bullock and his road crew backstage at the Paris Zenith. Then we had the chance to catch this high-energy concert and bring you some remarkable images of the design: Under the Influence of both Jason Bullock AND Ayrton.

Jason has mostly been a rock & roll designer (working with a variety of musicians from the heavy metal and electro scene). Lighting a genius of American Rap has whetted his appetite for even more. His choice of lighting gear says everything.

Big movers, mostly hung from three high trusses that loom over the stage like fingers. Ground units on the floor upstage include an impressive fixture selection - 24 strobes (SGM X5 LEDs replaced the Martin Atomic 3000s that were used on the US tour), and lots and lots of smoke.

Because the tight stage has to accommodate the rambunctious rapper and all his musicians, set decoration was minimal. The lighting has to do it all... and it did – seemingly effortlessly.

High up, we could see an arsenal of Martin spots and wash lights,

MAC III Profiles and MAC 2000 Wash XBs, plus powerful MAC Vipers installed below.
For alternate effects/beams from the trusses, Martin Washes and Clay Paky Beam (replacing the Vari*Lite VLX units on the European tour) were used for overall beam sweeps and color washes.
Custom "Pods" were built to house the Ayrton MagicPanel™ arrays. Two 4x4 arrays flank the stage and totally dominate the dynamic lighting design.
Jason told us how Ayrton's latest "square creations" inspired his design concepts.

MagicPanel, the master of ceremonies of the lighting rig.

SLU: Jason, you signed on as Production Designer for the Wiz Khalifa 2013 tour - for both the US and European dates. Please tell us how you discovered the MagicPanel™?
Jason Bullock: There was this video of the panels at ProLight & Sound, and one of my friends said, "Dude, these are definitely made for you!"
And, when I saw it, I said: "Have to have them!" This tour was still a couple of months away, because PL&S was early in the year, and we weren't going out till July. So I talked to Chris and I talked to Upstaging, and said: "All right, you guys sort it out. I need 64 of them. I don't care how you get them. I don't care what you do, but will there be enough?" So after a lot of back and forth, they said, "We'll have just enough. Isn't that great?"

SLU: Why are you using only 32 here in Paris?
Jason: Because it was just too expensive to bring all 4 of the "pod" structures over here.

SLU: So, on the European tour will you use just 32 MagicPanels?
Jason: Yes, for all of Europe, because in the UK we're doing a lot of the O2s and small venues (200 seats). Those pods are on wheels. So when you roll them right up on stage, you can move them around with the set-change. And the configuration we have overhead is similar to what the summer tour was, but with whatever different fixtures they have over here in Europe. I'm not really that picky, you know, as long as I could bring some of the MagicPanels. Because it's the first time we've brought anything over. We didn't bring any audio. We didn't bring any sound desks. We just brought the two MagicPanel pods and the back line gear, because it's too expensive to ship it all… but we need to have something. Today, in Paris, I definitely could have used all four pods, but in a lot of these small venues that we're going to do, two will more than blow everything out. When I had the 64 at once during the summer, they'd bury everything else in the lighting system.

SLU: What do you think of overall performance?
Jason: I love them. During the entire summer, we changed only one out, and I think we opened it up and because it had been banged around, and it had a loose connector. They put it back on and we powered it back up and we went "Okay". They are absolutely wonderful. We turned them on this morning, after being on a boat coming across in a sea container. We had put pieces of foam on the front and the back just to stabilize them, rolled them out. We uncovered them, plugged them in and "pzzzt", not a problem at all.

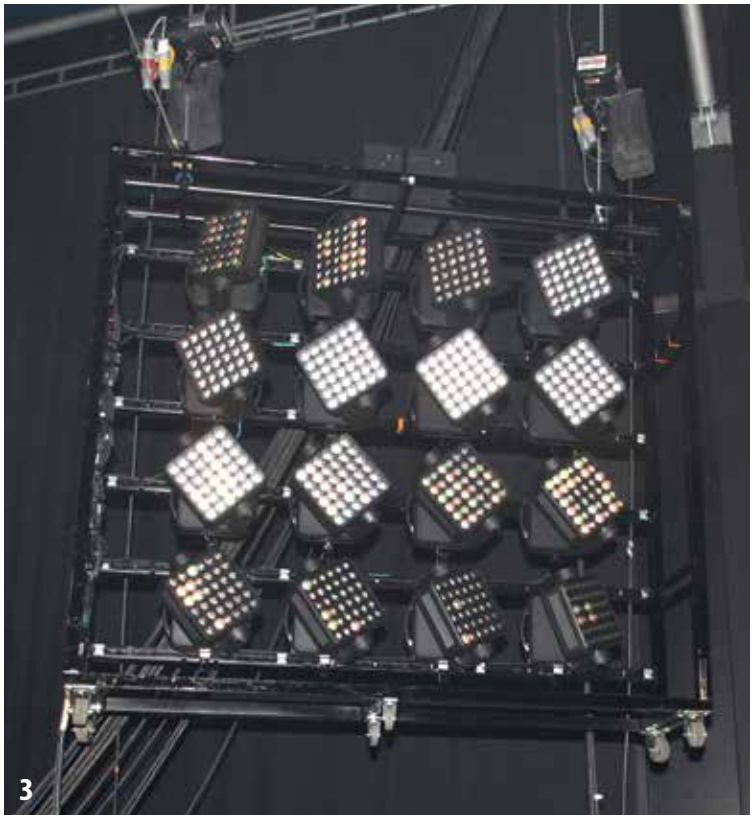
SLU: No problem? Never?
Jason: No.

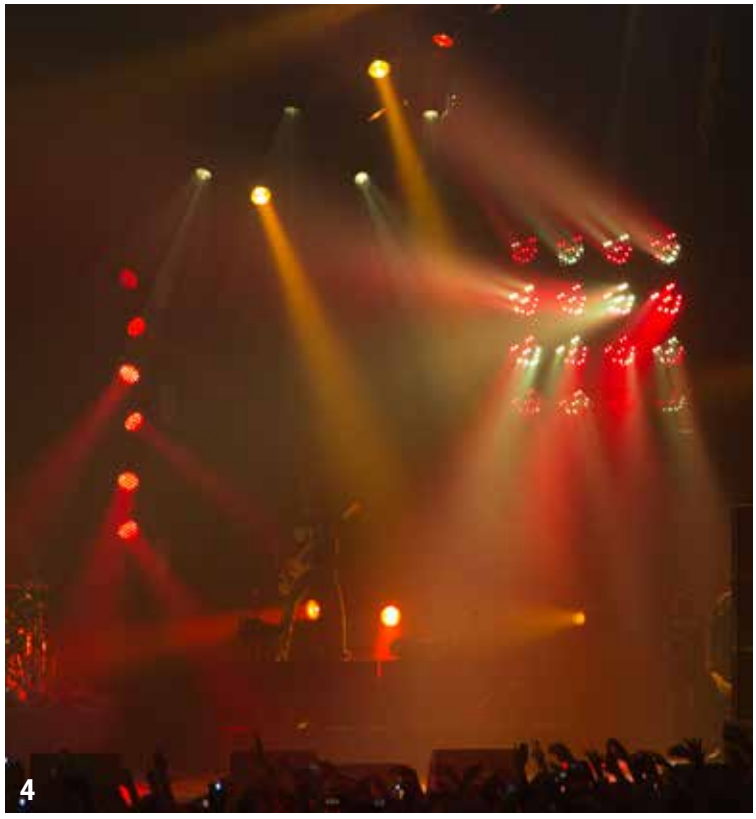
SLU: What do you think of the brightness, enough or maybe even too much?
Jason: Oh yeah… it is bright enough and, no, not too bright at all.
The MagicPanel™ units may literally shine, but they aren't the only fixtures on the stage – they have to fit in with the gear that includes a lot of non-LED lighting products.


2

1. A brilliant red stage picture! Side lighting of the group with MAC 2000 XBs, MagicPanel pods with mapped LED chases moving at slow rotation. Multibeam MAC Vipers providing back lighting describe big circles, while the MAC Auras slowly swing their red beam left and right. The Mac 2000 XBs send red from the trusses.

2. The right side of Jason Bullock's rig in Paris with one totems and one MagicPanel™ pods for back light, one side trusses on the extremes positioned lower than the main finger trusses running upstage / downstage.





3. One of the two 16-MagicPanel™ pods hanging, on the European tour. Note that the aluminum frame is mounted on wheels, ready to roll straight onto the truck.

4. A Smiley emoticon image that Jason was glad to find in the MagicPanel macro library. Having this native image saved him a lot of time in programming the MagicPanel units. The emoticon swings back and forth to the rhythm of the music – amazing!

5 Fabulously unleashing all the luminaires on the public awash in light--I love it!

The pixel wins!

SLU: You've hung a lot of other types of fixtures and sources on the stage. Does the MagicPanel™ LED source (Osram 15W RGBW) fit in with the rest of your rig?

Jason: Compared to anything else out there, it's incredible. I mean, even if you put one MAC III and one MagicPanel side by side, the light output on the MagicPanel is going to beat it. There's a lot more foot-candles coming out of the far end. And that's especially because it stays so narrow. You know, our Sound Engineer, Kevin, used to laugh because he'd be out at the Front of House during the day when I would first turn them on, and then while testing the rig, and I'd just turn them all on, on white. Back then we had the line of four pods, but I did it to him today with just the two—point them out at the audience or straight up in white, at full, and just watch him, and he was like "Whoa, man! Did it to me again!" After that, you'd look down here and can't see the buttons on the console, because you would literally be that blinded. But, the nice thing is, when you put them in effects, you put them in a bitmap, and it breaks them up, and because they're so narrow, it doesn't just kill you all the time. You know, the Showpix and other earlier LED stuff, had no real light output. You had the nice little face but no beam definition. Then, Upstaging came up with their Headlight fixture. It was like, "Alright, that's a good start!" But they're big, they're heavy and, you know, now they're four or five years old. So, I said, "If you're really cool, you'll make an RGB one on a yoke." They tried to do a couple of things. They tried to see if there was a yoke they could fit to hold it. But, no... the thing weighs like... well, too much! So we said, "We'll just scrap that idea for now and we'll get back to it later." And we were going to talk about it again for this summer, but then Ayrton made these... and it was like "Ha! Never Mind!" Somebody's now taken care of this... and it's excellent, absolutely excellent.

Continuous, unlimited Pan and Tilt

SLU: What do you think of the movement, and in particular, the continuous pan/tilt? You are using it on this show?

Jason: They're incredibly accurate as far as maintaining their focus/position in DMX control. One thing I that Ayrton may want to look into is, when you put them in continuous spin mode and then drop them out and back into DMX position control, they can have a bit of a jerk. The only way to get around it is if you made it—just another range setting—so, it just took whatever time was in the cue. You know what I mean?

Other than that, they're great. They're great. To be able to do that continuous spin surprised a lot of people, especially because during the shows there were one or two songs in particular where you'd do the nice, big keel-over like that, and everybody would say, "Did you reset that every time?" "Oh no, they just keep going." "What?" Just keeps going and going and going, and then they can go the other way. People just didn't know what to make of that.

New indeed, but the Lighting Designer still needs the right tools to control these luminaires and make them follow his concepts. And considering that, 160 DMX channels are required to control a single MagicPanel™ in the "extended mode", it is hard to imagine implementing a big system using some 32 units without pixel-mapping.

From effects to mapping

SLU: Are you using the internal effects of MagicPanel?

Jason: Yeah. I found them very handy... I have one or two places where there's a bitmap playing. In the first song, I'm using one of the square chases that's native in the fixture, and I'm running a bitmap underneath. So you see just pieces of the square come out and it works very well as a masking layer. You can run color effects and stuff on it and use that as a blackout filter, and just keep that pattern there. The Smiley faces – that we use for "Young, Wild and Free..." which is all just about drinking and having fun – and... I was going through the macro channels, and I saw the Smiley face was already a macro and said, "Oh, I got just the song for that." And I went right to that song and... I didn't have any cues for that song written – so, I just recorded that in the first cue. Finally, after I worked my way to the end of the set list and I pulled out that first cue and it was just the 64 Smiley faces. I put them all pointing at the audience, turned them on. Whacked me in the face and it was just like, "Oh, yeah... I've been waiting for this!"

Absolutely great, and they simplify a lot of things, because if you had to go through and make those for every fixture, it would take forever: Pixels 1 and 5 and 4 and 9... oohhh... especially, with that many units. At first, because I didn't know all the pre-canned effects were in there, I actually drew the whole thing out on four sheets of graph paper taped together. I drew the entire grid of all the LEDs - 2304 pixels. Then, of course I saw the macros and was like, "Oh, you're kidding me. I don't even need this. It's all right there." And it's nice that you have both static patterns and the moving ones. Gives a really good variety. I think it's wonderful.

ChamSys, the ideal console for MagicPanel™

SLU: Is programming the MagicPanel difficult?

Jason: I will say that it was challenging to get them configured.... I know people using them on MA2s. I'm not an MA2 guy. I used to work with Flying Pig consoles back in the early 90s. I lived in London for quite some time. I like to program my own things, and do my own things. There are a lot of channels here, especially bitmapping out every pixel as a fixture. But the end result is a bitmap engine that's build into the ChamSys. You draw on a grid, you put the fixture in, and it patches it in the internal media server.

SLU: Do you have several layers in the ChamSys?

Jason: Yes, right now I'm running four separate layers of bitmap all done through the desk. You can take a movie and convert it into CMV file format and then upload it into the console. So a lot of those textures...are actually movie files that are colored and are all in the desk. No separate server, no nothing. All built into the console. Plus there's a whole channel for horizontal lines and vertical lines... and you can control the density and the speed and the crossfade. So you can have horizontal lines to start and then you offset them, and then a whole offset breaks and then you can make it thicker or thinner, or change whether it fades or whether it snaps — it's all built into the desk.

SLU: Then, the ChamSys is perfect for this application!

Jason: Yes, Perfect! The nice thing is, because of the way the bitmap in that desk works, I can turn the light to blue, just the fixture itself, and turn the bitmap on, on top of it. So that's why a lot of those multiple layers are just one color in the fixture itself, and then the bitmap is running and doing its own color effects and... I think you can do up to 8 or 10 layers max. I only did four here, because that was all I needed. But it just makes a virtual fixture that does a generic bitmap and you can do up to 20 different grids and layouts all layered in, all through the desk. All those letters and stuff that you saw going on, that's one layer. I put in one letter, sized, moved it. Done! No separate media server... no separate anything!

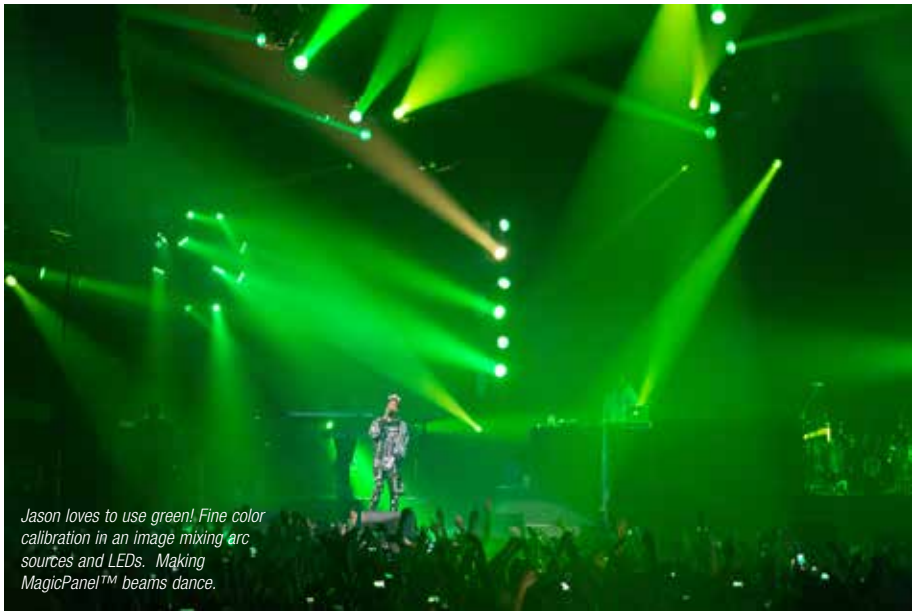
SLU: Are you running data by Ethernet, by Art-Net, or some other protocol?

Jason: What we did in this particular case is, from my console, we run a piece of fiber optic cable to backstage. The fiber goes into a splitter. The splitter resends data over a Cat 5 cable. So, one Cat 5 and one Socapex run to each MagicPanel pod, and then there's a Martin Ether2-8 Art-Net to DMX box sitting on top of each pod. You just plug the Cat 5 into that. Then we did hard 5-pin DMX lines out of that. Very reliable. Never had a problem.

Jason Bullock
Lighting Designer and Principal of Infinity Point Design

He has been successful, thanks to his talent and real passion for his profession and his lights. His preferred console,is a ChamSys MagicQ. He thanks the performers he has served: Korn and Jane's Addiction, where he gained international acclaim among professionals, not to mention fans.

He discovered his passion, working first for Morpheus Lights in California in the early '90s. At the time, that was «the place to be» for any Lighting professional interested in innovative technology. After completing studies in electronics he became a road technician. In 1999 he signed on as LD with the band «311,» and did some 900 shows with them over a 10-year period. He then began programming, working though Upstaging, and started to build a customer base. He soon was working as and LD and then as Designer in his own right for acts like R. Kelly and Gloria Estefan doing both design and programming: He became accustomed to and adept at working with the big lighting rigs which have become today's staple. Two and a half years ago, he created his own company, Infinity Point Design.



Jason loves to use green! Fine color calibration in an image mixing arc sources and LEDs. Making MagicPanel™ beams dance.

Lighting Equipment (Show in Paris)

1 ChamSys MagicQ MQ300
32 MagicPanel™602 Ayrton
10 Mac Viper Profile Martin
24 Mac III Profile Martin
20 Mac 2000 Wash XB Martin
4 Mac 2000 Wash fresnel
15 Alpha Beam 700 Clay Paky
24 strobe X5 LED SGM
4 Lite Mole (2x2)
8 Lite Mole PROCAN
4 Hazer Reel DF50 EFX
4 ZR 33 Martin

Lighting CREW

Lighting Co: **Upstaging**
Video: **Chaos Visual Production (US Tour)**
French contractor (except ChamSys & MagicPanel): **Régie Lumière**
Video: **Chaos Visual Production (US Tour)**
Lighting Designer: **Jason Alexander Bullock (Infinity Point Design)**
Crew Chief: **Mike Ponsiglione**
Lighting Techs: **Blake Elkin, Owen Zoars, Jason «Moockie» Blaylock**
Video director: **Dave Jacobs (Tournée US)**
Video crew: **Sixx Williams, Nelson Funk, Zach White (Tournée US)**
Riggers: **Nick Purciful, Yader Mena**

SLU: Really? No connection or cable problems?
Jason: Just two cables every day! [laughs] You know, for that many lights and that much stuff, people are like, "What do you mean there's only two cables?"

SLU: That's got to be great—because your tour is 20 days, with a show every day.
Jason: Yes, we only have four days off in the next three weeks….

Organizing his control as well time

SLU: It must require a lot of organization.
Jason: Yes it does! I need this stuff to work. I need it to do what it's supposed to do. Fortunately it does that! It also does cloning and morphing, changing from spots to hard edges. It tracks all the cue information… I think we're playing a club in Switzerland, that's literally going to be like 12 wash and 12 hard edge, and I'm going to put those two pods on the floor right beyond the risers and, when they come up, everybody's going to go, "Oh, my God! What just happened?"
The MagicPanel is that remarkable. Everybody I've seen has been putting them into some form of bank or pod…. Once you get your head around programming them… and again, I cue using the bitmap. I know a lot of the guys… other programmers were using media servers, using Mboxes and all that crap that goes with them. I was saying, "Nobody every tries this ChamSys desk – but if you did, you'd find out you don't need all that crap. Just do it straight out of here." But you know how people are about consoles –they know what they know and that's what they want. I use the ChamSys because its easy, it's quick, and because of all the things it can do; because it has all the bitmap; because it has the fixture profiles. We went and edited all of them on board—on the desk. You don't have to do it offline, so as we figured out things, it was like, if I default all the colors to black, when I turn on the bitmap, the bitmap fades in.
When I wrote this show for the first time, I was still in Europe, finishing up with the Korn tour. We did Rock in Rain, Rock The Park, all those big festivals. So, I literally flew from Europe straight to the Upstaging shop in Chicago, walked in at one o'clock in the afternoon, had 48 hours to program before the rig went on the truck, went home for two days, and met the show on our first load-in – because that was how it had to go. I had just two days of rehearsal. Then we started the tour.

SLU: You must be some sort of a magician!
Jason: Love what I do. Love what I do.
This show as designed and run by magician Jason Bullock clearly takes full advantage of his main resources, the MagicPanel™ arrays, which are as fresh and innovative as the artist himself. But really… Does Wiz Khalifa take inspiration from his LD?

Always surprise the artists

SLU: Does Wiz Khalifa have specific requests, requirements for lighting?
Jason: No, actually, because the type of music he's from – the Hip-Hop, R&B area – it's incredibly competitive, and you get people like JZ and Kanje West, and everybody wants the latest and the greatest and the coolest thing! This was the chance we had to get it in the show. We are now at that level. We're getting enough, in the way of a fan base, so let's bring up the level technology. Let's start to match those guys, start to show them something different – and that's MagicPanel™.
When some of their production staff came to the first show, they were like, "Why don't we have those?" Answer, "Cause there is no more. There'll be some soon. But right now…that's all there is." So, Wiz was very excited to be a part of that, and to see new stuff like that. He's one of those guys who'd say, "Man, just make it cool." And when I got done with those first four days of programming, the day before the first show, we sat down, went through every cue in 35 minutes, and he went "I love it. See you later." And I never saw him again. You know, if he gets a crazy idea, he'll come up and say "Oh, Jason, I was thinkin', can you do like a swirly thing that goes flash-flash on the beam?" "I'll do whatever you want man, no problem". But generally, he just wants to be impressed. He wants to see something… something that hasn't been done.

SLU: Do all your artists want to be impressed?
Jason: Yes, yes, yes, they definitely want to be impressed.

Not just a Designer, he's a real lighting guy

SLU: You do a lot to satisfy them.
Jason: I try, but you know, a lot of it is for my own personal satisfaction. You know, over the years I've worked for a lot of

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7. When Wiz Khalifa's repertory tilts toward reggae, Jason switches over to dance lighting using color. The MagicPanel video mapping effects are programmed to the tempo, while spots are programmed faster to animate the stage.

8. Jason Bullock, Wiz Khalifa's Lighting Designer, a virtuoso at the ChamSys console.

9. Jason contrasts the color temperature between cold white and amber. He also plays with break-ups strobes and video mapping from the ChamSys console, which includes an internal media server. Another dynamic sequence!

10. Here, several media server layers integrated into the console are used to drive the versatile MagicPanel LED via a video file. Never a dull moment! of the group with MAC 2000 XBs, MagicPanel pods with mapped LED chases m

people. I programmed for a lot of big Designers. That's what I did for my first 10-12 years. I had my one or two little bands that I would do on my own tours. And then, I got to do Gloria Estefan in four stadiums in South America. Oh great, so there's 20 universes and the old Hog II had two desks wired together just to make it all work, and data systems were hell before you could do Art-Net and that stuff.

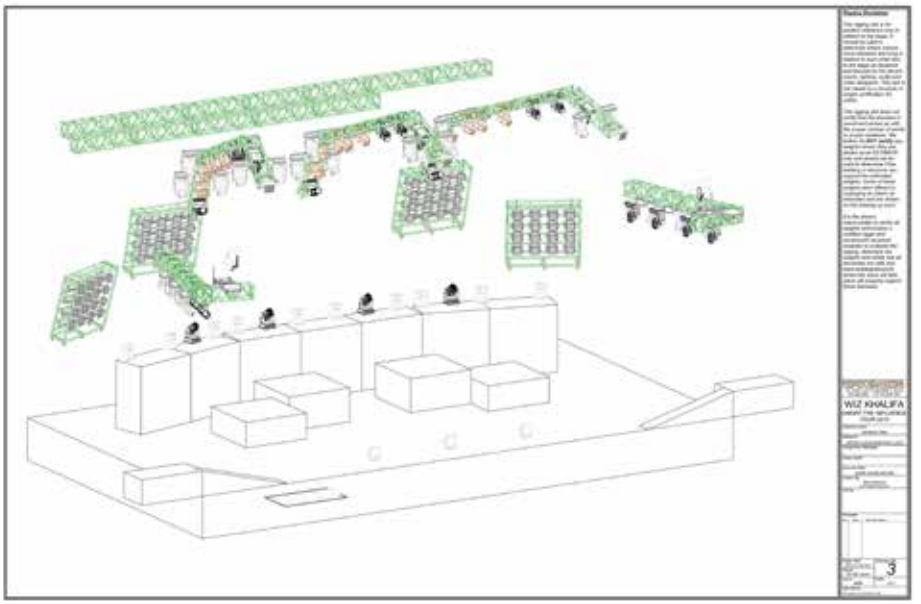
You know, I've seen what can be done, but seen also when people go crazy. Like all right, it's going to be 150 motor points but you're only going to use these lights for two songs. You're like, "Alright, dude, we're talking about a 15-hour load-in to do a two-hour show." People get crazy. I call it getting "click happy." Because you can tell that they were sitting at their computer, and it was like "copy-paste, copy-paste, copy-paste" and… like, "Wait a minute, if you had to draw each of these by hand you would only have six fixtures in there, not 35! Back when everybody had to draw their plots by hand, it was like, "Do I really need this?" You had to do a little stencil, trace, and fill it in… and people thought about it a little more.

I mean, the big system that we started out with this summer, had HUD truss… where all the lights all ride in the truss, and the four MagicPanel pods... That was it! We'd start load-in, we'd come in and mark the floor at 9:30. Lighting system, set, everything would be done by 1:30. When you're doing six shows in a row, you need to have that kind of thing.

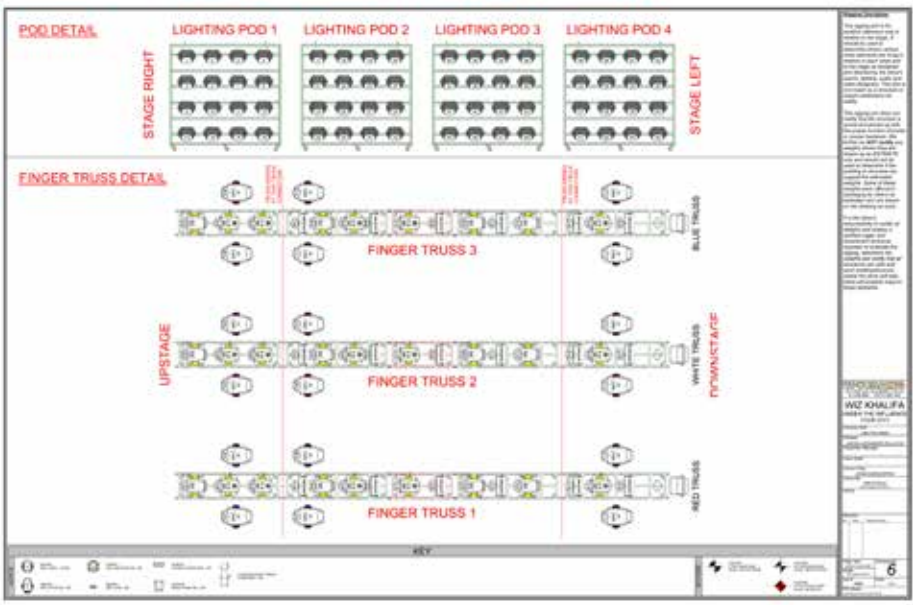
We've all been to shows… where we started 5 o'clock in the morning and now it's 5 at night and we're still trying to make it work. Sorry, I was a tech for too many years. I was the guy dragging the cable. I refuse to do that to my guys. There is no need. You know, if a Designer says "Let's put seven lights over there," you'd like to say, "The Socapex cable only has six circuits... I understand you'd really like seven, and yeah, as a tech, I'll do it because it's your show, but…" As a Designer, I know better. Why? You're really going to do that to your guys? You're really going to make them run an extra cable all the way from the rack just because you think you need one more light there? People don't think about it. You know, a lot of LDs, and especially a lot of the younger LDs, haven't spent time loading in, and haven't spent

time dragging cable around. A lot of programmers who are out there are people who've come out of school, have a good talent for programming but haven't ever had to push a road case into a truck at five in the morning in the pouring rain… not once in their entire life. They come in, wearing nice shoes and nice outfits. They walk in, they walk out. And you like say, "Really, you have no respect for the people who are back there killing themselves to make you happy." One of the guys today lost a strobe light on one of the side trusses right after they trimmed it and he was like, "Man, I'm so sorry. We lost a strobe light." I said, "I have 30 up there. It's not going to be the end of the world if I'm missing the one strobe light from the side." I mean… come on, am I going to make you go up, rappel off the ceiling to change a strobe light? That's absurd, that's just absurd! If we're filming it or something, I might be a little worried, but in this case, no one's going to notice that one strobe light not working! And I just see a greater divide and a bit of a rift between the people who sit out front at the consoles and the people who sit backstage. I think a lot of programmers I'm starting to see coming up in the industry have just gotten this attitude that they're so much better than anyone else, and they can't bother themselves to go grab cable and stuff.

Today, I was out unloading the truck, running feeder across the floor, and the French crew guys from the lighting company were surprised. I was catching their cable while they were standing there and the guy was lowering the cable off the stage, and I said, "Oh, gimme that." And he was like, "No, no, it's okay." And I'm saying, "No it's okay, I'm like standing here. You're dropping the cable. It's no problem, man." My advice to young Designers is to get your hands dirty! Get involved because: a) it gives your guys greater respect for you, and b) if something screws up you know what's up and can just say, "All right, dude, just walk up on stage, unplug that box and plug this back in, it's right over there… and the cable runs down here." Because I ran the damned cable, I know where the stuff goes. I know some programmers who, if you ask them to go and run a data line to a certain spot, couldn't tell you how it was done. I have no respect for that. I tell 'em, "Get your hands dirty. Get involved. Why not?" and they're like, "Well, you know, I'm the programmer. I don't do that" "Stop. You're not a just a programmer. You're a lighting person. Be a lighting person!"



3D rendering of the rig for the US tour



Plot details showing on the three finger trusses and the MagicPanel pods from the US tour.

Conclusion

Here's a Designer who gets his hands dirty, working with his lights on stage, off stage, ready to pull cables; who really knows all his fixtures, especially the new ones, and how to program his console with complete conviction.

He is excited to see what he can make his lights can do, like the Ayrton MagicPanel™ which he uses to maximum advantage. As Production Designer he has to satisfy both his client and himself. On stage, an impassioned Bullock uses the LED matrix to incredible effect, with their futuristic facets –16 of the square face fixtures like so many mirrors, emitting unbelievably powerful light and magnificently rich colors. The looks are often primary colors or monochrome – one of Jason's trademarks – and create heavily saturated images which until recently were unimaginable without LED technology. With each of the 36 emitters controlled independently, our eyes were dazzled by the crazy mapping effects generated and by the massive rock & roll-beam and the astounding use as audience blinders. Jason's light cues, which, at times, outpaced the music's tempo, were almost overloaded with strobes. At times it reminded me more of Heavy Metal than a Rap concert.

But it certainly moved! It was totally alive, brilliant and festive--lighting that made you want to dance and sing, highlighting the talented young Rapper who clearly deserved this outstanding environment!

MORPHEUS LIGHTS
The Automated Lighting Pioneer

Bruce Springsteen a Morpheus long-standing customers. Bruce Springsteen and the E-street Band's show Tour.

© Jo Lopez

Morpheus, one of the two US companies that first made modern automated lighting fixtures practical in the 1980's, has come a long way since it was founded as a conventional rock-n-roll lighting company in San Jose, California. Surrounded by the revolutionary innovations of Silicon Valley's computer industry, the founders of Morpheus developed a proprietory automated lighting system, creating fixtures that had remote-controllable pan, tilt, color and beam characteristics, just at the moment in time that the falling cost of chips and memory made it all economically practical. The rest is history.

Morpheus' R&D advances are legendary. It was the first to develop a CYM color mixing system, the first to create rotating gobos, the first to use dichroics in a CYM system and the first to offer fixtures with continuous rotation. Morpheus' touring systems were the first to be created with specific attention paid to industrial work flow, designed to speed the process of setting gear up and, more importantly, of taking it down quickly and efficiently and of maximizing efficient use of truck space.

Text: Soundlightup.com
Photos: Andrei Mignea

Moving lights revolutionized the rock-n-roll touring business and, for many years, just three companies; Morpheus, Vari*Lite and Light & Sound Design dominated the market. As the world of automated lighting evolved in the 90's the other two companies were sold or merged into other organizations. Morpheus still stands as an independent. It provides premium level production services for touring artists like Bruce Springsteen and the E Street Band, The Backstreet Boys, Ringo Starr and many more. It also continues to manufacture specialty products for the professional lighting market.

In 2011, the company's Managing Partner, Paul Weller, discovered Ayrton's WildSun™500C on its introduction at the Showtech Trade Show in Berlin. He brought it to the attention of Intensity Advisor's Lighting Designer, Jeff Ravitz, who was beginning the process of preparing for Springsteen's "Wrecking Ball" 2012-2013 tour. Ravitz was immediately attracted to the warm white LED that is the core of the WildSun 500C's color system and, after comprehensive testing, specified 65 fixtures for the tour. In 2012 Morpheus became the exclusive US Distributor of Ayrton products and went on to place the unique RollaPix™100 and punchy WildSun™500S fixtures on other high profile projects.

Morpheus' approach to the Ayrton product line is informed by

years of touring experience as a production company and by Morpheus' real understanding of product development and how to deliver effective customer support to the professional lighting community. This year's launch of MagicPanel™602 has certainly benefitted from the partnership of Morpheus, which purchased over 120 of the revolutionary new fixtures for its own rental inventory as well as selling and supporting hundreds more that are out on the road with other top-of-the-line lighting service companies.

Interview with Paul Weller, Managing Partner, and Mark Fetto, Chief Operating Officer of Morpheus Lights

Protected by Patents

SLU: Would you please tell us the story of Morpheus?

Paul Weller: Morpheus Lights was one of the first moving light companies in the world. Originally, there were two in the U.S., Morpheus and Vari*Lite, then later on, the British company, Light & Sound Design joined in and, for a quite a long time, there were just those three – because basic technology was protected by patents. Morpheus was founded in San José, California, in Silicon Valley by three brothers - the Richardsons. They began as just a normal rock-n-roll lighting company, with a bunch of PAR cans and some pipe trees. Then, finding themselves surrounded by the microprocessor technology revolution of the 1980s, which dropped the cost of automated systems to an economically feasible level, they came up with a method for adding motors to lights and controlling them using existing early-generation computer control consoles. Everything was still under analog control back then, so it was primitive compared to modern movers, but it was a breakthrough. After initial success, they kept on inventing new ways to do more and more things and developed a variety of technologies, which they consolidated into an integrated automated lighting system.

They filed for patent protection on their technology, as did Vari*Lite, for the completely separate system that VL had developed independently. The two systems were totally incompatible. Each had its own control protocol and its own lights that could only function with a dedicated control console. Moving lights were provided exclusively on a lease basis, with technicians from each company traveling to the show site to operate and maintain the gear. Those early fixtures needed constant attention – and the road techs of that era had to have a high level of technical capability to keep them functioning. All three moving light companies used the same economic model. If you wanted a moving light, you had to go to one of them. That was it. Needless to say, they did pretty good business back in those days; all three did pretty well.

The companies were somewhat competitive amongst themselves and, as they all reinvested profit back into R&D, the gear became more and more sophisticated. Morpheus was the first to introduce CMY color mixing, with the same gel-based system that is still available in our ColorFader products. Morpheus was the first to put rotating gobos in a fixture, the first to do dichroic CMY color mixing, and the first to introduce continuous unlimited pan rotation – all in the revolutionary PCSpot™.

1. All hands at the Morpheus shop in Las Vegas gather for a group shot.

PanaBeam™ and PanaSpot™ the original Morpheus Lights

Paul Weller: The first generation of Morpheus moving lights were PanaBeam™ and PanaSpot™. PanaSpot™ was distinguished by the use of an HMI source, which offered a stable color temperature that made them camera-friendly for television production. At that time VL used a Marc 350 projector arc source, which was not as stable – it was fine for a rock show, but a potential problem for video cameras. Of course, this was long before IMAG became a must-have and turned every rock show into a TV shoot.

2. Morpheus' PCSpot™ - the revolutionary hard edge fixture, introduced rotating gobos, dichroic color mixing and continuous pan back in 1990.

MP100 and MP 500 Control Years ahead of its time.

Paul Weller: In the late '80s, Morpheus developed a proprietary control protocol along with sophisticated lighting consoles called the MP100 and MP500. These desks had capabilities that really went unmatched until the arrival of the grandMA1. They were miles ahead of the Wholehog and miles ahead of the other consoles available in the world at that time. Of course, none of this was DMX… they ran on a private digital protocol.

Mark Fetto: What Morpheus had, that was really different at the time, was that they provided a complete package: truss and lights incorporated into a unified system, where Vari*Lite and LSD just provided individual moving lights and control. The truss, hoists

3. Morpheus' FaderBeam™ - the first automated washlight with CYM color mixing.

4. The downstage FlipBox™ truss, with Robert Juliat Topaze followspots on top, shown at Bruce Springsteen and the E-street Band's show in Paris - Ready to rock!

and other gear would all have to come in from another company. Morpheus provided a unified package, and their productions would actually use very few traditional lights.

Paul Weller: A modified version of that FlipBox™ truss system is still in use on the Springsteen tour today. What distinguishes FlipBox™ is that, you can pack up to twelve moving lights into 10 feet of truss, then stack the trusses 3 high and pack the stacks 3 across in the truck for travel – so that's 90 feet of truss with up to 108 movers in just 10 feet of truck space. It's very compact and very efficient. When you get to the venue, the trusses downstack and the truss wings swing up from "travel" to "working" position to form a catwalk - so a technician climbing up to the truss can walk inside the truss structure, with the wings acting as a railing. Remember, this was all introduced long before fall-arrest systems became mandatory. Then, finally, the movers all get slid out to the edges of the truss, which lets them move freely during the show.

The new age of competition begins

Paul Weller: By the mid-'90s, the basic US patents that both Vari*Lite and Morpheus had were running out. That created the opportunity for manufacturing companies, primarily High End and Martin, to come into the professional market with moving lights that were affordable and accessible to any lighting company. Prior to this, those two had mostly made simpler fixtures for discos – but in that process they learned how to make fixtures that were very, very reliable, and that changed the nature of automated lighting. Once the patents expired, pretty much anybody could buy a moving light system… and they did. So, the US Market quickly went from just the "big 3" moving light companies to 3,000. Seemed that everyone had movers.

At first, the folks at the big 3 said things like "Well, the Studio Color is not really as good as our lights. It's not as fast. It's not as bright. It can't do this and it can't do that…" While all that all may have been correct, the truth was that the Studio Color could still do a lot – and it was incredibly reliable - and any lighting company could buy it in large numbers. Suddenly, with no need to invest in R&D expense and no need to maintain the level of support staff that the big 3 companies had to, other US lighting companies could compete with moving lights. And they did.

Morpheus metamorphosis

Paul Weller: All this meant that the big 3 had to change. VL started selling fixtures in an attempt to compete with High End. Eventually, it broke itself up into a manufacturing side, which was sold to Genlyte (then ultimately acquired by Philips) and a rental side, which was merged into PRG (which had previously acquired LSD). Morpheus went through reorganization in the mid-'90s. My group purchased the assets of the company in '99, and set about rebuilding the company. It had been sorely neglected and starved for capital. It was still running with the old proprietary systems that didn't talk to anybody else's systems.

We reinvented the company, slimmed it down and have been growing it ever since. Springsteen's reunion tour of 1999-2000 was the first Morpheus touring system to use a DMX console – a Wholehog 2. Prior to that, it had all been completely proprietary. Morpheus had to evolve from a company that said, "Our lights are the best. You should use them", into a company that said "Whatever light you want, wherever you want it." and to combine that approach with Morpheus' core strengths as a touring production company.

SLU: **How do you explain that Vari*Lite grew and succeeded while Morpheus did not.**

Paul Weller: Management. Vari*Lite expanded into Europe during the time their patents were still in place and VL was very well managed. Morpheus was not. Morpheus and Vari*Lite were about the same size in 1990, at the time that VL settled an

important patent infringement case. They originally fought the case but, after many of their best arguments were dismissed by the Patent Office, they quickly settled it and moved on. After that, they were free to concentrate on the lighting business and their sales took off. Morpheus had the exact same patent issue, but it refused to settle and, as a result, the business failed and had to be reorganized.

SLU: Did the company move after the reorganization?

Paul Weller: Yes. We were originally based in Northern California, but we wanted to expand and do work in Las Vegas – because it's an entertainment center. We started with a small operation in Las Vegas in 2001. Mark came onboard to expand the Las Vegas office and our non-touring operations.

SLU: When did Mark arrive?

Paul Weller: December 2005. Mark had previously been with Vari*Lite / VLPS for 16 years as general manager of North American operations. So he came to Morpheus with huge depth of experience and took over our Las Vegas operation. He's made it successful and expanded it. By 2010, we had consolidated all of our operations in Vegas.

Mark Fetto: Our current shop is just to the east of the Airport in Vegas. The building is about 30,000 square feet. We have our executive offices, manufacturing operation, distribution warehouse, as well as our production services and rental shop all under one roof.

Continuous Pan and Tilt PanaBeam™XR2

SLU: When did Morpheus first develop continuous pan and tilt?

Paul Weller: In the early 90's, the PCSpot™ had continuous pan, but not tilt. Morpheus designed and fabricated the slip ring system in-house, using copper brushes running on a circular track. It worked pretty well I guess, but it was not supremely reliable.

We began developing the fixture that became PanaBeam™XR2 in 2000. It is an MSR 1200-watt arc washlight, which features unlimited, continuous pan and tilt capability. The XR2 was designed to be completely reliable and we succeeded in that. In fact it is the most reliable fixture we have in our equipment inventory. That's mostly because, when you use modern slip rings, to enable continuous rotation, a side benefit is that you eliminate the need for wiring harnesses to run up through the yoke. In most moving lights, that harness consists of lots of small conductors that twists back and forth over the service life of the fixture. That ends up being one of most predictable failure points in most fixtures - but that's just not an issue with the XR2.

A slip ring is, essentially, a rotating cylinder that's contacted by stationary brushes, which conduct power and data through the rotating axes without flexing any wires. A slip ring system is used in Ayrton's new MagicPanel™602. There are no moving wires in MagicPanel.

Mark Fetto: All moving lights have probable failure points in them, things like belts and mechanicals. No moving light is ever without maintenance at all, but when you can remove the issue of harnesses twisting, you take away a huge amount of the maintenance headaches. XR2s are just rock-solid.

XR2s were primarily built for Morpheus' own rental inventory, but we sold some to specialty users, like Blue Man Group and PC Lights, Inc., a cutting edge Japanese lighting production company with whom we have a long-standing relationship. Back in the day, PC Lights had a full Morpheus touring rig with the MP100 console and FaderBeam™ and PCSpot™ fixtures. Earlier this year, we helped them buy 60 MagicPanel™602 units.

Paul Weller: XR2 was not intended to be a mass-market fixture that would be sold in boxes. It was designed to demonstrate Morpheus' continuing capability to innovate and deliver high quality goods and services after my group acquired the company. It did that. Indeed, other manufacturers adopted many of the design approaches and construction details introduced in the XR2 in the years following its introduction, which I view to be a compliment to Morpheus' R&D capability.

Morpheus the Manufacturer

SLU: Do you continue to manufacture fixtures?

Paul Weller: Yes, even in a world full of LEDs, our ColorFader™ line has a devoted base clientele, because ColorFader apply the same color mixing system to a wide variety of beam types... so

PanaBeam™XR2, the first continuous pan and tilt moving head, introduced in the 2004.

Paul Weller
Managing Partner
Morpheus Lights

Paul Weller is the Managing Partner of Morpheus Lights. He lives and works in New York City. While studying film production at New York University, he was introduced to rock & roll touring where he worked as an assistant designer, console operator and in road management in the era prior to the development of automated lighting systems.

After completing his studies, he worked in film production in New York, where he established his own firm that provided technical consulting and equipment that interfaced film-based motion picture cameras with video systems - primarily for the television commercial and music video market.

He continued to be involved in live performance technology, designing and building projection systems for the early 1980's reincarnation of the legendary **Joshua Light Show**. He also designed projection control elements and custom projectors for Laurie Anderson's **United States: Parts I-IV** at the Brooklyn Academy of Music.

As the prospect of producing automated lighting fixtures became economically viable, he joined with two partners to found a company that sought to develop that technology. That firm, Variable-Parameter Fixture Development, is now one of the owners of Morpheus Lights.

5. Morpheus' Managing Partner, Paul Weller [Left] and Ayrton's Managing Director and Founder, Yvan Péard, [Right] at the Ayrton stand at ProLight + Sound 2013 in Frankfurt - posed beneath the revolutionary MagicPanel™602 Matrix on Hallucinating Lazareth's vehicles.

you get the same color mix on a Fresnel as on a Leko, and on a wide angle lens as well a narrow spot. ColorFader is hugely reliable. There's a large installed base of them in the world and we keep them serviced - mostly by providing replacement gel strings. Very little mechanical service is necessary - because Morpheus originally designed and built ColorFader for our own use in touring, so they are very, very rugged. They are not designed to fail just after the Warranty expires. They'll continue to work for years and years and not give you any trouble.

Mark Fetto: We've supplied a lot of them to cruise lines.... and we continue to support thousands of ColorFader units that are out there on cruise ships and in installations all over the world. The same diagnostic and service procedures that we have in place to maintain our older subtractive color products, have now been adapted to service Ayrton's LED products. It's a perfect fit.

Paul Weller: What distinguishes Morpheus' manufactured products is that we are, first and foremost, a lighting production company. We understand how to put on a show and we understand deadlines. That is the core of Morpheus. So when we sell products, be they Morpheus or Ayrton, we are ready to supply customer service 24-hours-a-day, 7-day-a-week if need be. If a customer is working on a Saturday night in August, and they have some kind of problem, we can give them immediate attention. We do that for our touring customers – and we do it well. We extend that same level of customer service to the products we sell.

SLU: Are Morpheus products made in the USA?

Paul Weller: You bet. Made in Las Vegas, NV, USA. We try to keep a small quantity of finished product in stock and, of course, more depth in spare parts. Then, we gear up to manufacture batches of product in whatever quantity is required. Given our quality control standard and the relative complexity of the product, it never made sense to try to build them anywhere else.

Touring Production

SLU: Who are the artists that tour with Morpheus?

Paul Weller: We have long-standing customers, such as Bruce Springsteen, who seems to keep coming back to us because of the very high level of service we provide.

Mark Fetto: We maintain that high level of service in order to retain our clients. Springsteen doesn't just give us the business. If the day comes that we don't produce for him, that we don't get it done right, the day that the show just doesn't happen, that could be our last day. We work very hard to insure that doesn't happen.

Paul Weller: Service is really more about the crews we provide than the gear. But, then again, the gear ends up being critical – because we configure it differently than other companies. For the Springsteen tour earlier this year we had two complete sets of trusses ready to go. We sent about half of one set down to Australia in late January, just the curved upstage and mid-stage trusses with the WildSun™500Cs. We picked up straight trusses and the rest of the gear from a great Australian vendor – Chameleon Systems of Sydney. Before that leg was finished, we had already shipped another complete set of trusses to Europe for the summer's tour – with a complete duplicate set of 500Cs. That allowed us to do most of the shipping by ocean freight. Then, certain specialty fixtures in the Springsteen rig, like the big Morpheus BriteBurst™2000 and the Zap L2D2 units had to be air-shipped to Europe because the schedule between the two legs was too tight for ocean freight

SLU: Who are the other artists that you work with?

Mark Fetto: The Backstreet Boys, Slash, Ringo Star, Boston and a number of DJ shows… Electronic Dance Musicians like DJ Nero last summer.

Paul Weller: For years we have also done a flexible system for a television production company that shoots every fall – a mix of figure skating and popular music. It requires a large rig that can light the rink economically and be adapted to create a variety of distinctive looks. We've done similar arena tours with Olympic gymnasts – so it's not just rock-and-roll. We do many, many different kinds of projects.

Mark Fetto: And we're looking forward to putting Ayrton products out with as many of them as we can.

SLU: SLU: How did you discover Ayrton products?

Paul Weller: I saw the WildSun™500C when it was introduced in Europe in 2011 and was very impressed by it – bright, compact and with the warm white chip balanced to emulate tungsten. I then invited Valère Huart-Gyors (International Sales Manager of Ayrton) to come demonstrate it for our technical team in Las Vegas. Only after it passed our technical review did we put together a demonstration for Jeff Ravitz, the lighting designer for Springsteen. We invited Jeff to our shop, where we had assembled a wide selection that included almost all of automated LED wash fixtures on the market. We compared them to each other and the Morpheus

The rolling partner...

rollaPix 100

ROLLAPIX 100 LED LINEAR LUMINAIRE

ROLLAPIX™100 is the first motorised linear LED luminaire fitted with a 4:1 double zoom system (patent pending). The motorisation of the Tilt axis allows the addition of numerous options to this luminaire, such as the creation of partitions, barriers or mobile virtual doors.
The ROLLAPIX™100 is the ideal tool for the creation of virtual lighting decors.

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Light in action

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Mark Fetto
Chief Operating Officer
Morpheus Lights

Mark Fetto, the Chief Operating Officer of Morpheus Lights, is based in Las Vegas, NV, where he has lived for almost 25 years. He began his lighting career in the late 70's, as a touring road technician for Obie's Lighting Productions. After learning to survive on the road as a rock & roll lighting tech, he progressed to become a Lighting Director and, eventually, the Designer for such acts as **Kenny Loggins** and **The Moody Blues**.
In 1985, Mark was introduced to the world of automated lighting when he was hired by an up-and-coming company called Vari*Lite. That launched him on a 16-year career with the company, during which time he made the transition from the design & show side to business operations, eventually becoming the General Manager of North American Operations for VLPS.
Mark was then approached by Rocky Paulson, the legendary founder of Stage Rigging Inc. and became National Sales Manager for that company just as it became part of the Freeman Decorating Company.
He joined Morpheus Lights in 2005 as Chief Operating Officer. Under Mark's supervision, Morpheus then consolidated operations in Las Vegas, where the business has grown substantially. Morpheus became Ayrton's exclusive US Distributor in early 2012.

© Bob Summers
The Classic Rock band BOSTON on tour with WildSun™500C

FaderBeam™, a 1000 watt automated tungsten wash, which had been Jeff's long-term favorite for stage washes.

Mark Fetto: Jeff could have chosen any light he wanted - and he chose WildSun™500C.

Paul Weller: Of course, he was attracted by the 500C's warm white color temperature. What we at Morpheus liked was its "form factor" - the WildSun is compact - very similar in size to FaderBeam. WildSun fits into our FlipBox™ truss perfectly. We can travel 12 WildSun fixtures in the same FlipBox truss as the older legacy fixtures did, as we showed at LDI last year. That's a huge amount of RGBW intensity in a very small package at a great price.

SLU: Was the reason you decided to become an Ayrton distributor because the product is unique?

Paul Weller: I think it was a great decision by Ayrton. Especially if you're trying to introduce products from a company that's previously unknown in the US, it makes a lot of sense to work with an established company that everyone knows and that has demonstrated its stability and capability.

Mark Fetto: The fixtures seem to be very robustly built. The design of the fixtures seems to be a little more forward thinking.

Paul Weller: Morpheus' primary focus has always been on working production – so we're actually a very good distributor to have in the U.S. We can get product shown to professional users very quickly and we already have a high level service / support operation. Many, many companies have tried to break in to the American market with new product without making sure this level of customer service is in place. They just tried to push boxes out the door and figure the rest out later. It doesn't work. If a customer has a warranty issue, he doesn't want to be calling overseas to get parts. You need to have parts here – ready to go and people who are knowledgeable about service issues.

MagicPanel™602 helps establish the Ayrton brand in the US

SLU: As a rental company, does Morpheus only buy products when you have a request for them? Did you invest in Ayrton products even when you didn't have them specified for a show?

Mark Fetto: As a production company, it doesn't do us any good to have really neat products sitting on the shelf. We have to be able to rent them. Having said that, there's certainly a connection in having rental stock to help promote the Ayrton brand and get the name out there. We have Ayrton products here on the shelf ready to rent. Oftentimes we'll get a request for something, like a MAC 301, and we'll move the customer to the WildSun™500C – because we believe that it is really a much better light!

That's why we've bought as many as we have. Once people get their hands on them, they understand the difference and want to use them again. We didn't originally get a lot of specific requests for Ayrton gear, because Ayrton was not a well-known brand in the U.S., MagicPanel has changed that. It's such a unique product and it's really helped us get the Ayrton name out there.

Paul Weller: With the success of MagicPanel, now when we say "Here is the Ayrton WildSun™500C." people no longer respond "Ayrton… who?" They're already saying "Oh… those people who came up with MagicPanel also make some other great fixtures!"

SLU: How many Ayrton fixtures have you sold?

Paul Weller: We sold over 100 WildSun™500S for auto shows

last year and 125+ WildSun™500C units… Earlier this year we put 60 OXO LED FunStrip into an EDM club in Las Vegas. Big seller at this point is MagicPanel – we've taken delivery of about 750 MagicPanel fixtures since June. They have been sold to major touring companies. MagicPanel is unique - it presents a clear alternative that a designer can present to an act or a manager, and ask "Wouldn't you like to see this on your show?" and, fortunately, they've been saying "Yes! I want that."

Mark Fetto: It's sort of like the early days of moving lights, where you'd bring something new to the attention of the designer and the reaction would be "Oh, I gotta' have that!"

Paul Weller: Of course, these days the designer has to want it and the band has to be willing to spend the money for it. We had great success showing designers the video that was up on the SoundLightUP website of the MagicPanel display at ProLight+Sound in Frankfurt. After we sent that out to U.S. designers, the calls started coming in: "Can we have 64 of those for the Wiz Khalifa tour?" "Is there any way we can get just 12 more in time for Kelly Clarkson?" Leroy Bennett has just specified 126 active fixtures on the new Nine Inch Nails tour – which is the largest MagicPanel system so far.

Mark Fetto: Important to note that Nine Inch Nails it is not a tour that Morpheus is directly involved in. We've sold the fixture to another lighting company – Upstaging, which shows it's not only Morpheus that is specifying MagicPanel.

SLU: Have you had specific problems with the WildSun 500C on Springsteen, for instance?

Paul Weller: No, not really. There are always going to be little things with electronic equipment. We had a few issues with some solder connections on one of the WildSun circuit boards. Once we advised Ayrton of it, they changed QC processes and the problem vanished. The quality control on MagicPanel has been impeccable.

Mark Fetto: Of 110 WildSun™500S fixtures we sold last year, I think only five of them needed any kind of service… just tiny issues though… all covered under warranty. Not bad!

SLU: Are you responsible for warranty service in the US?

Paul Weller: Morpheus is the warranty provider for Ayrton products in the US. We keep a stock of spare parts in order to provide U.S. customers with timely warranty service, if it may be required, whether the products were sold directly to a production company or to an end-user, through a dealer.

SLU: Have you had any special requests for Ayrton, proposing ideas for new fixtures?

Paul Weller: I really enjoy discussing ideas with Yvan (Yvan Péard, Managing Partner and Principal Designer of Ayrton products). He seems to be pretty receptive. He's taken them in and comes back with clear responses. Hopefully, we'll see some of them make their way to market in the future. ■


Jimmy Winn, Production Manager


Zeb Cochran, Technical Services Manager


Morpheus purchased over 130 WildSun™500C LED washlights for it's own production inventory...


... And over 120 MagicPanel™602 units.


In 2010 Morpheus expanded into their new Las Vegas facility, which puts executive offices, product manufacturing, repair and warehouse and the touring / show production department all under one roof.


Keith Bennett, Sales Manager

AYRTON MAGICPANEL™ 602 FOR THE STAGE

LED beam projector with volumetric lighting effects and visuals like no other

MagicPanel™602 was a smashing success at the ProLight & Sound 2013 trade show in Frankfurt as evidenced by the impressive number of orders taken: 1,200 sold worldwide since July 1, with over 500 in the US alone. Prominently featured at the Electric Zoo 2013 Festival in New York City, on Wiz Khalifa's Under the Influence of Music world tour and on Nine Inch Nails' Tension 2013 Tour, MagicPanel is also the choice of lighting star Dmitri Vassiliu working in association with Dushow for French pop artist Mylène Farmer. This unique 36-LED matrix is capable of projecting volumes of visuals from its tight and powerful color beams. With continuous pan and tilt movement and unlimited possibilities for dynamic eye-catching effects, MagicPanel™602 will inspire creative lighting designers to explore new visual dimensions.

Text and photos
Stéphane Mocret
for Soundlightup
More informations & videos on the webzine
www.soundlightup.com

Presentation

Ayrton has been developing original and highly innovative LED luminaires since 2001 - exploring new concepts, rather than mimicking existing ones. MagicPanel™602 is mainly intended for special effects, though its beam can have a wider application. As this article will show, Ayrton has gone all out on this new fixture, pulling no punches when it comes to quality in esthetics and engineering, not to mention hardware. The manufacturer has continued to improve the quality of both its mechanical and electronic design to allow for more precise adjustment as well as easier access for maintenance.

The quality workmanship is clearly evident. Even the smallest curve has been thought out to give MagicPanel a uniformity of design. While the squared face might appear cumbersome at first, this wash light's rounded corners soften the whole aspect. MagicPanel™ is a dual-axis automated beam projector, with 36 RGBW 15W Osram LED emitters (6 columns of 6). Depending on the operating mode, the emitters can be controlled as a block unit or individually mapped. A major feature of MagicPanel™ is its continuous pan and tilt movement. Ayrton told us that continuous pan/tilt rotation was the brainchild of Morpheus Lights, the US company that utilized it in 2004, on its PanaBeam™XR2 wash light. Going even further back, Morpheus' PCSpotTM offered continuous rotation (on the pan axis only) in 1990! (Coincidentally, Morpheus is now the exclusive distributor for Ayrton products in the USA.)

This fixture is relatively light weight (@ 19 Kg) and its compact size makes it easy to rig multiple units in close proximity. Controlling multiple MagicPanel fixtures collectively permits previously unimagined effects and images to be created. With individual LED control, Kling-Net protocol compatibility, and multiple inputs, you can quickly pixel-map and flesh out simple visuals.

What's in the box?

Ever since the ProLight & Sound show, I've been dying to break open a box and take a serious look at MagicPanel™. As usual, Ayrton provides a complete package: User Manual, powerCON True1 power cable, 5-pin DMX cable, safety cable, two Omega brackets, and a fitted thermoformed polyfoam insert, that's ready to drop into a roadcase.

The front panel of the fixture base has a full-color display and touch sensitive keypad used to navigate the menus and configure the control settings. To prevent accidentally enabling a function while changing the options, fixture operation is deactivated when the User Interface is accessed and a menu is open. So, you have to exit the menu (or permit it to revert by timing-out) to re-enable console control. Power and control connectors are found on the rear panel of the base. PowerCon TRUE1 connectors provide 110-240 VAC power input with pass-through output to permit power to be distributed to other fixtures. These new connectors from Neutrik are rated for power connection and disconnection under load, which eliminates the need for a ON/OFF switch on the fixture. DMX and RDM connection is via XLR 5-pin male and female connectors. There are also two etherCON connectors for Art-Net and Kling-Net signals. An Art-Net node and Ethernet switch are standard equipment. When MagicPanel™ is connected over Art-Net and the signal can be either re-transmitted by DMX or through the switch by an RJ45 cable. Keep in mind that for smooth and uniform system performance, especially when it comes to video capture, no more than 7 to 10 switches should be linked over the same line from the console - according to Fabrice Gosnet, Product Manager at Luminex. Just above the connectors is a wireless DMX antenna, which permits control via Lumen Radio's wireless DMX protocol. (FYI - The integrated Lumen Radio system was used in shooting the videos for this article.)

For ease of storage and maintenance, there are yoke locks on both the pan and tilt axes.

A look inside

The basic tool kit is very simple -- a screwdriver and two Allen wrenches. A few turns of the screwdriver removes the rear cover, revealing four cooling fans and the power supply. The LEDs are powered in groups of six and you can see Ayrton's neat wiring harnesses. For maintenance - a shot of compressed air does it, and then you replace the cover.

To give MagicPanel™ a thinner profile, Ayrton designed a new extra-flat 1.4" (3.5cm) thick heat sink, which performs double duty as the structural frame of the LED head. It is fabricated of single piece of extruded aluminum and placed in direct contact with the PCB for ideal heat dissipation.

Before removing the front cover of the LED head, you'll want to lock the tilt at 90° (horizontal, facing upwards) to prevent the collimators from falling out. Made in France by Gaggione, the


1


2

3

THE PLUSES

- The light power, The concept
- The Continuous Pan & Tilt
- The ArtNet node
- The Ethernet switch
- The King-Net compatibility
- The Internal effects

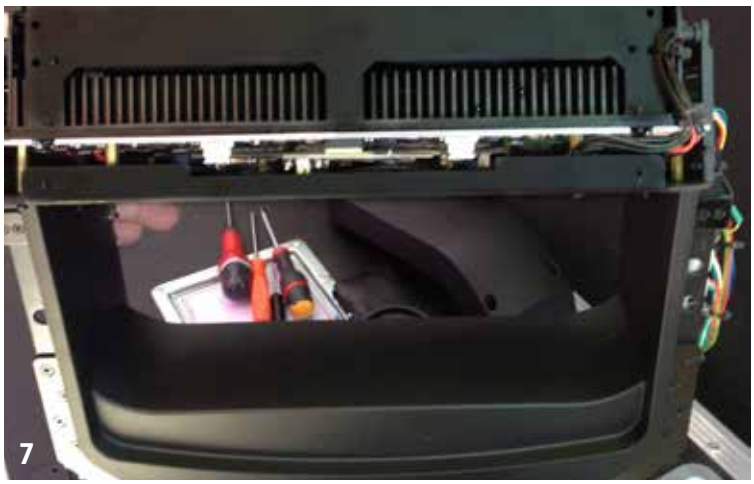
THE MINUSES

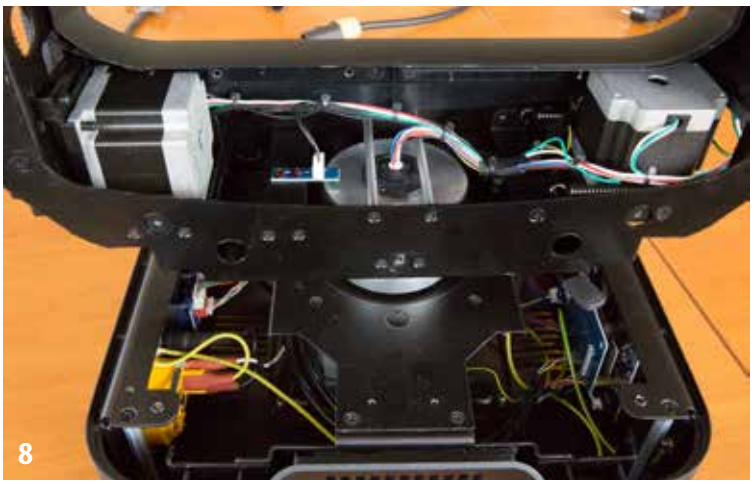
- Only one pan lock position
- No sACN compatibility

1. *MagicPanel™602, plus accessories*

2. *A fitted thermoformed polyfoam road case insert is supplied with each fixture.*

3. *MagicPanel connector panel with Lumen Radio Wireless DMX Antenna*





4. 36 x 7.5° collimators on their support plate

5. Collimators removed - 36 RGBW LEDs on the circuit board under the collimator support plate

6. The four-fan cooling system and LED power supply are located on the rear of the head.

7. Extruded aluminum main-frame / heat sink

8. The two 3-phase (hybrid) stepper motors that drive the pan and tilt are mounted in the cross bar of the yoke. The continuous pan commutator is at the center. Fixture power supply, data management circuits, connectors and User Interface are all in the base of the fixture..

45mm diameter collimators might appear to be similar to those used on RollaPix™100, but these have a tight, fixed, 7.5° beam especially for MagicPanel™. Index pins are provided to align the optical system and center the collimators. This insures that beams are maintained coherently at even level and color.

Four screws retain each yoke arm cover. You'll find the tilt drive in one arm, electronics for the LED head and the continuous tilt commutator in the other.Ayrton has developed an elegant new cover system for the MagicPanel™ yoke, with two identical plastic covers enclosing the cross bar as well as the inside of the yoke arms. This design frees up space and makes components in the lower part of the yoke much more accessible to technicians. The cross bar area houses two, 3-phase (hybrid) stepper motors for pan and tilt as well as the pan commutator.
The base enclosure for MagicPanel™ has been carefully designed and will also be used on future Ayrton fixtures in the same power range.
It houses the fixture's main power supply, the control electronics that respond to the various command protocols and the User Interface.

Time to make Magic!

Time to light up the LEDs. For control on 160 DMX channels, select the "Extended" mode, which lets you manipulate each of the 144 LEDs on separate control channels. Two other modes, "Standard" and "Basic, " use 20 and 18 DMX channels, respectively. While Pixel-mapping is not available in these two modes, a great variety of effects are stored as macros in the fixture's internal memory, and those offer lots of interesting possibilities for animated visuals.

9

10

9. One arm has the tilt drive mechanism and indexing system

10. The opposite arm has LED drive circuitry, protected from heat and head movement and the continuous tilt commutator

There are only a few basic controls – so I'm sure you'll get the feel of the fixture quickly and will find yourself creating cool effects in no time.

A fixture reset takes a bit more than 28 seconds – plenty fast. After the pan and tilt reset, you'll need to wait a few more seconds before DMX control of the fixture is restored. We discovered a slight bug in the fixture we tested: it emitted a small flash of the LEDs when you launched the reset – but Ayrton assures us this will be corrected very soon.

The output is impressive with all four colors at full power. "Watch your eyes!" There are plenty of possibilities for crowd blinding and bump cues.

The dimmer rise time has been designed to be slow for greater precision on the lower end of the curve. This is most apparent when dimming a single LED. This might be a concern to people shooting video, where some attention might want be paid to the evenness of the dimming curve, especially for a long fade. Of course, it should be possible to rework this curve on more sophisticated control consoles. Nevertheless, it would be nice if Ayrton would provide a selectable alternative dimming curve to give the user the choice.

Three-color processing is naturally based on RGB. Simulated CMY control can be used if your console's library system will support it, e.g., for matching corresponding colors on other fixtures more easily. MagicPanel colors are deeply saturated and are as uniform on just a single LED as when the full beam generated by all 36 emitters projects together. Adding the white LED to the color mix allows you to obtain beautiful pastels while maintaining optimum light output.

In addition to providing a uniform beam, the emitters make split-second color transitions – an instant color change capability that also allows for lightning-fast transitions in special effects.

Stéphane Migné
French Lighting Designer

Finally, here are the comments of lighting designer Stéphane Migné, who set up the fabulous display of MagicPanel™ for the Ayrton stand at the ProLight & Sound show in Frankfurt

"What can I tell you? This product is out of this world. It's got a totally lean look, square and completely flat with 36 perfectly aligned LEDs, all mounted in a luminaire that just rotates and rotates continuously in pan and tilt. I love it!

I'm dying to light up the thing!

Ooh, hurts my eyes. Beautiful beam. Sort of tight, powerful wash light with nicely calibrated Ayrton colors.

Very good movement, precise dimmer and strobe. Sure does it for me.

Continuous pan—a rotating emergency light

Continuous tilt—like some kind of incredible combine harvester

Everything fast and flexible, I really like it…

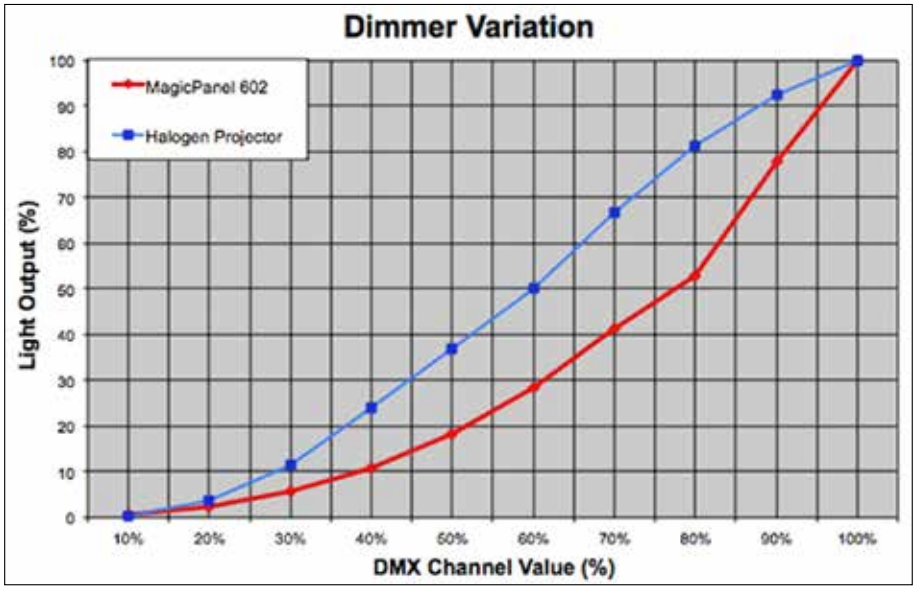
Now let's see what you can do with the 160 DMX channels.

Hey, got to have more universes!

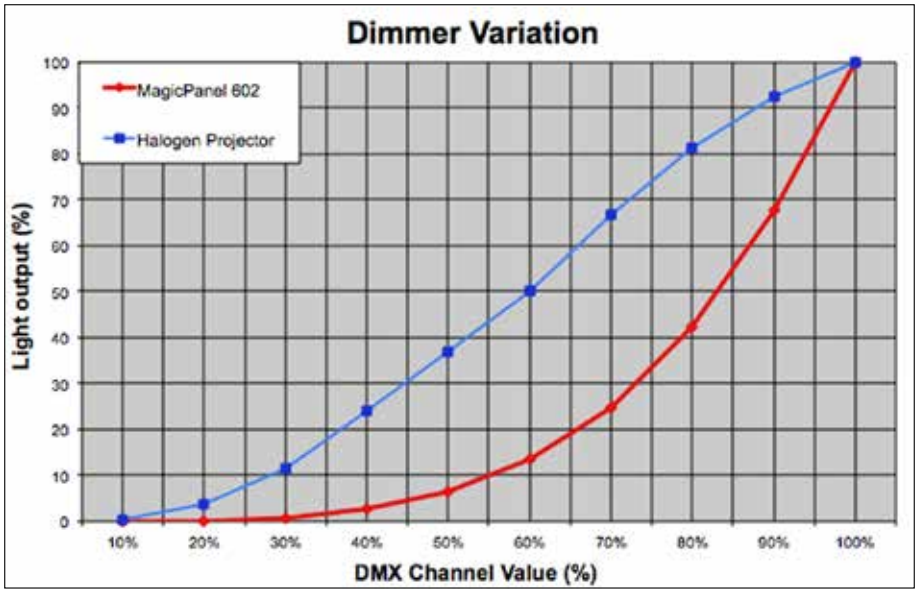
The pixel-mapping is heavy on the overhead but totally effective, and there are lots of preset effects: direction, speed, colors, LED by LED… I spent long hours with Tristan (Editor's note: Tristan Szylobryt was the programmer on the stand) looking, figuring out, creating all sorts of cool animated visuals—no limit.

Then we watched how the thing reacted when we ran it from the media server. Just as good.

Put a few of these babies side by side and you get a great screen with kind of grainy resolution, but it works for me. Powerful and effective. I love it!



RGBW curve: *In certain applications, the dimming curve might want to be reconfigured from the console.*



Only white curve: *When using only a single LED, the dimmer variation curve is even flatter on the low end.*

The 45mm, 7.5° collimator, fabricated in France by Gaggione

You can feel confident programming long fades with beautiful color transitions or quick, dynamic chases.

As you can see in the images and videos, MagicPanel™ 602 is powerful enough to project a well-defined beam with just a small amount of haze in the air. The result is round and fairly uniform at the area being illuminated, so the luminaire can be used effectively in lighting objects on stage as well as creating beam effects.

3-phase stepper motors on pan and tilt allow you optimum control of both speed and position change. Movements are linear (and uniform), with no speed variation and crisp deceleration. The Speed 1 setting allows both rapid and very slow movements via console control. Three other options let you regulate motor speed, which can be useful for limiting swinging motion of trusses and for running very slow, smooth cues. To be clear, MagicPanel™ doesn't beat any speed records, but with 360° pan rotation in 2.24 seconds and 180° tilt in 1 second flat, it is plenty fast enough.

Continuous Pan and Tilt capability is an important feature of MagicPanel™ 602. Pan and tilt rotation have independent control channels that drive the fixture at variable speeds in both directions. These continuous rotation features are simple to program and, when combined with pixel mapping on multiple fixtures, let you create effects never before seen.

For those who have limited DMX channels available and to and simplify programming, Ayrton has integrated a number of resident effects, which are managed by three independent functions: effect selection, power, and speed. This feature allows you to quickly access simple but powerful effects that are stored in the fixture memory. If you have enough DMX channels available, you can create you own effects, using your console's internal pixel mapper. You can also use a media server, the Arkaos Kling-net protocol, or a frame grabber. And, for the best of all worlds, you can combine all these options.

In addition to simple opening and closing, the shutter channel provides a basic strobe function with random and variable pulse effects.

This article would not be complete without a few words on two rather interesting internal functions of MagicPanel™: the Presets and Scenes. These act as a sort of mini showSTORE recorder that stores in the Presets various fixed DMX commands sent by the controller. These commands can then be "played back" using the Scenes function.

This feature may be useful to those who have to use a MagicPanel™602 in a place where no lighting desk is present. You can program a simple pan and tilt position as a reference point, store it as a preset parameter with the dimmer open, and then restore this setting from memory, without a console, via the User Interface on the fixture. Once the fixture has been moved to the new location (without a console), you can call up the preset programming, re-adjust the pan and tilt position manually (again via the User Interface) and run the recorded program with the «new» pan / tilt position set at the modified start point.

What the numbers say

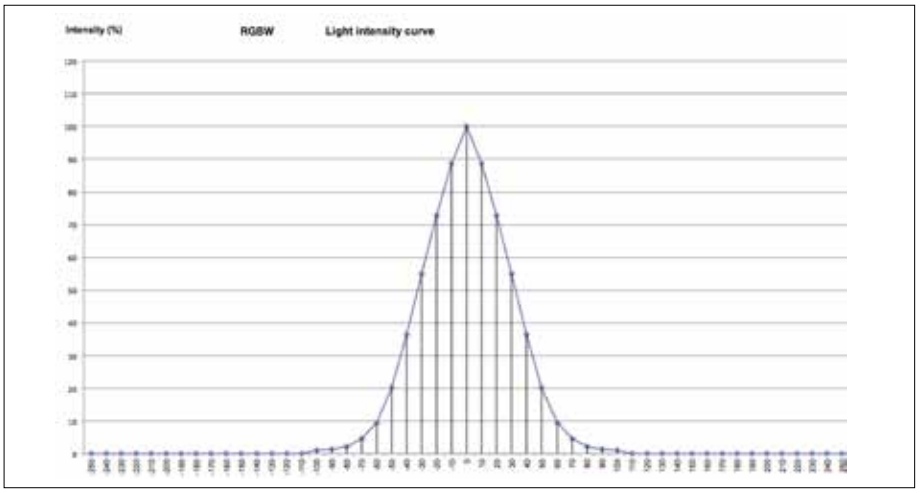
We conducted our measurements in a dark air-conditioned room, projecting onto a white background marked in 10-cm increments along X and Y coordinates.

RGBW photometric measurements

With all four chips of all 36 emitters at full intensity, we obtained a cold test measurement of 20,300 lux—an excellent result. This corresponds to a flux of 10,070 lumens at a 13.7° angle. At that level, MagicPanel™ could easily be added to any lighting

MEASUREMENTS at I/2 (light output at the center/2)	
Beam Diameter	**0,66 m**
Corresponding angle	**7,5°**
Light output at the center when switching on	**20 300 lux**
Light output at the center after derating	**13 835 lux**
Flux when switching On	**5 250 lm**
Flux after derating	**3 980 lm**

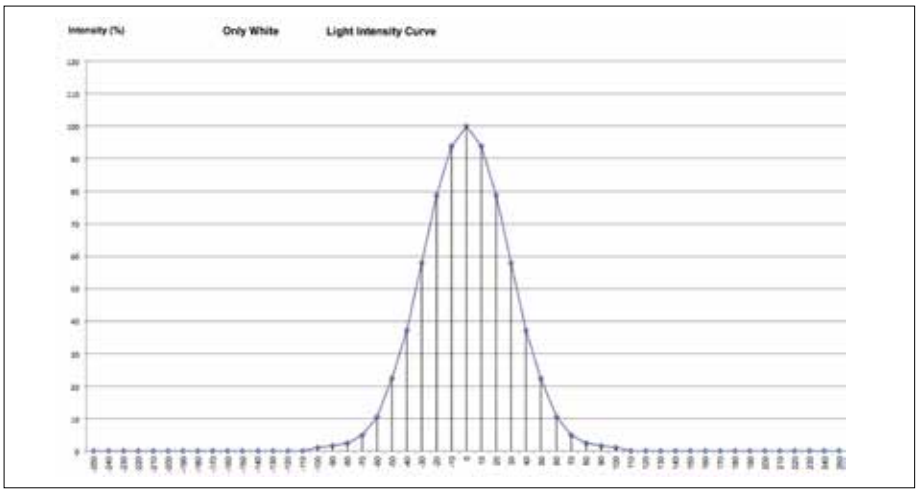
MEASUREMENTS at I/10 (light output at the center/10)	
Beam Diameter	**1,2 m**
Corresponding angle	**13,7 °**
Light output at the center when switching on	**20 300 lux**
Light output at the center after derating	**13 835 lux**
Flux when switching On	**10 070 lm**
Flux after derating	**6 800 lm**



rig used at major concert or festival venues. After continuous operation @ full for one hour (an admittedly preposterous test for this type of fixture), intensity at the center is derated to 13,835 lumens, corresponding to a 6800-lumen flux—still perfectly acceptable.

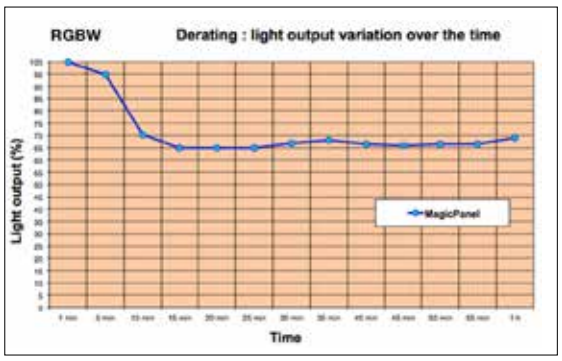
MEASUREMENTS at I/2 (light output at the center/2)	
Beam Diameter	**0,66 m**
Corresponding angle	**7,5°**
Light output at the center when switching on	**10 980 lux**
Light output at the center after derating	**10 920 lux**
Flux when switching On	**3320 lm**
Flux after derating	**3300 lm**

MEASUREMENTS at I/10 (light output at the center/10)	
Beam Diameter	**1,2 m**
Corresponding angle	**13,7 °**
Light output at the center when switching on	**11 020 lux**
Light output at the center after derating	**10 920 lux**
Flux when switching On	**5 790 lm**
Flux after derating	**5760 lm**



White photometric measurements

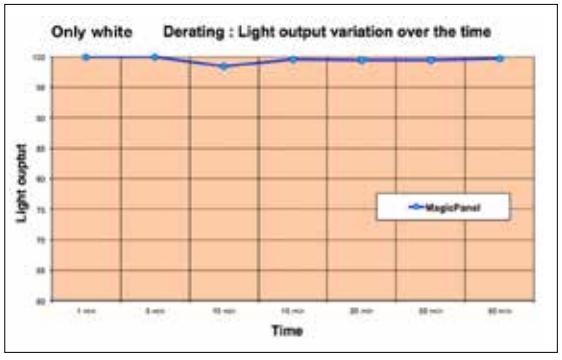
Lighting only the 36 white LED chips at full power, we measured an intensity of 10,900 lux at the center, which corresponds to a flux of 5,760 lumens (both cold and hot). Again these are excellent results for a cool, white light that is powerful, workable, and maintains color temperature stable enough for shooting video.



COLOURS	Relative %
White RGBW	**100 %**
Only White	**54 %**
Green	**41,1 %**
Bleu	**5,2 %**
Red	**17,7 %**

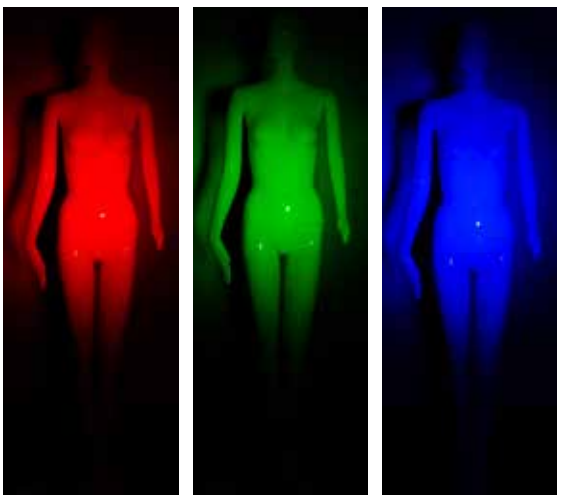
Derating

Again, while it seems absurd to conduct a derating measurement of all the RGBW diodes running at full power on a special-effects luminaire, we ran this test to provide information—in case someone out there might want decide to use MagicPanel at FULL power for an extended duration (and at an unknown, and probably erratic color temperature). As you might expect, MagicPanel™ has less favorable derating than



MAGICPANEL CHARACTERISTICS	
Dimensions and weight	
Lenght	**420 cm**
Height	**545 cm**
Depth	**305 cm**
Weight	**18,9 kg**
General Characteristics	
Type of projector	**Continuous rotation motorised LED Matrix RGBW**
Voltage and power consumption	**110-240 V / 50-60 Hz - 600W max**
Protection class	**IP 20**
Cooling	**Passive, radiator cast aluminium + 4 fans**
Control	**DMX512, RDM, WDMX, Artnet, KlingNet**
nomber of DMX channels and DMX Modes	**18/20/160 canaux DMX - 3 modes**
Lamp type - T° K - life time	**36 Led RGBW Leds 15 W + de 50 000 h**
Type of ballast/driver	**Electronic with active PFC**
Optical system	**36 collimators 45 mm - 7,5° - from Gaggione**
Access to head	**4 screws rear + 5 screws front**
Access to arms	**8 screws**
Software update	**Yes, via RJ45**
Connectors	**2 XLR 5 + 2 Powercon Neutrik True1 + 2 Ethernet**
Control panel	**Colour screen + 5 keys**
Sotware version of the test model	**V 1.1.1**
Fixing brackets	**1/4 de tour**
Fastening point for safety cable	**Yes**
Pan & Tilt lock	**Yes : 1 Pan position & 6 Tilt lock positions**
Transport handles	**Yes**
Supplied Accessories	**PowerCon Power cable, DMX-XLR5 cable, user manual, security cable, Soft thermo-formed shell for use in a travel case, 2 hook bracket**
Functions	
Pan et Tilt	**Continuous rotation**
Zoom	**No**
Dimmer / Shutter	**Electronic**
Colours	**RGBW**
Speed settings	**Yes**

GENERAL MEASUREMENTS	
Ambiant Noise	**34 dB**
Machine noice in operation @1m	**49 dB**
Loudest operating noise @1m	**50 dB**
Speed and time	
Full reset time (OFF/ON)	**28,16 sec**
Rapid movement	
Pan 360°	**2,24 sec**
Tilt 180°	**1 sec**
Slow movement	
Fluidity for Pan & Tilt	**Very Good**
Manufacturer	**Ayrton Light from France**
Developed in	**France**
Assembled in	**France & China**
Warranty period	**1 year**
Use	**Shows, TV, Event**



wash lights such as WildSun™500 or IceColor™ 250, 500 or 1000, which are all equipped with high-performance heat pipe cooling systems that provide excellent thermal stability. With all LEDs at full power, MagicPanel™ light output shows a rapid drop of 35% before leveling off at 30%—proof of efficient regulation of current. This design decision to use the thin extruded aluminum heat sink and four fans in the flat head ensures excellent heat dissipation while keeping the whole assembly lightweight (and therefore fast). Notice the difference in the derating curve for the 36 white chips at full power—a much more realistic scenario.

Conclusion

The Ayrton team did a truly meticulous job, and the result bears witness to the labor invested in developing this luminaire. Designing a square fixture is no mean feat and this is a real accomplishment. The MagicPanel™ design is esthetically pleasing, and Ayrton will be "sharing" certain aspects of the luminaire design with future products. The light quality is excellent. The powerful beam is even and the colors are uniform. Having both a beam and volumetric visuals is magical; and, in addition, MagicPanel™ can also be effectively used as projecting source with a useful field. More than just an effects projector, MagicPanel™ is a complete and finished luminaire.

I would like to thank Impact Evénement for making their showroom available to us; Dmitri Gogos for lending us his MA2 wing; and Dimension Network for supplying the Viper fog machine used in our testing.

The 3D experience...

magicpanel 602

MAGICPANEL 602 360° X&Y 3D MOVING HEAD LUMINAIRE

MagicPanel™602 projects a 7.5° beam in a way that no other fixture can – 36 individually map-able RGBW emitters deliver a massive color blast or an intricate dance of alternating mini-beams that animate and energize the night. Continuous, unlimited pan and tilt rotation add another dimension to unmatched graphical display capabilities. Make magical, brilliant effects, with MagicPanel™!

AYRTON

Light in action

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A visual revolution is coming...

intellipix 25

INTELLIPIX 25 3D LED DISPLAY

With 25 individually map-able high-power RGBW emitters, IntelliPix™25 projects a 4.5° beam in a way that no other fixture can – either a massive color blast or an intricate dance of alternating mini-beams that animate and energize the night. 65 mm high-efficiency collimators add another dimension to unmatched graphical display capabilities. Make magical, brilliant effects, with IntelliPix™25 !

AYRTON
Light in action

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