

#Ayrton *live*

ISSUE 3 _ SEPTEMBER 2012



Jeff Ravitz illuminates
**BRUCE SPRINGSTEEN
& THE E STREET BAND**
with WILDSUN 500

THE VOICE enlightened by Phase 4

AXENTE The French Touch

WILDSUN 500S by SoundLightUp



Photo credit: Jo Lopez

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Illuminate your dreams...



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.



AYRTON

Light in action

Editorial

Dear Readers,

2012 has been a very busy year for Ayrton. Our company provided a significant number of projectors for some major events and tours around the world.

First of all we are proud to have many WildSun 500, operated by our US partner Morpheus Lights, traveling with Bruce Spingsteen and the E-Street band.

Ringo Starr and his 13th All Star band were also lit by Wildsun 500 during their summer US tour. Europe has a large number of events, concerts and TV shows using Ayrton LED fixtures and you will discover some of them by reading the following pages.

Last but not least, our WildSun K series began a brilliant career with a massive order from the entertainment lighting provider NAT, who has invested in 375 WildSun 500 K7.

2013 will probably be as busy as this year with important new releases to come; more information in Las Vegas at the LDI from the 19th to 21st October.

Do not hesitate to contact us for further information.

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MORPHEUS SUPPORTS RINGO STARR AND HIS 13TH ALL STARR BAND WITH AYRTON WILDSUN 500 C

Morpheus Lights was selected as the lighting vendor for legendary musician Ringo Starr on his summer 2012 US tour.

Morpheus is providing personnel and equipment for the project. Veteran lighting designer Jeff Ravitz of Intensity Advisors has in particular chosen Wildsun 500C LED fixtures by Ayrton.

Asked for comment on the performance of the new Ayrton LED fixtures, Ravitz says: «The Wildsun 500C gives the Ringo Starr show a base of strong, intense color. I love the natural warmth of incandescent sources, and that is not lost using the Wildsuns. Also, we can reach far into the blue side of the spectrum as we never could before. Sleek, modern, fast, and capable of interesting effects without exaggerated visual pixilation; they also fade and bump in a way that allows incredibly elegant and crisp cueing. With less weight and power consumption in a compact fixture that mounts comfortably in our truss system, they are a welcome addition to our tour package.»

NEW ADVANCED TECHNOLOGY GOES WILD FOR AYRTON WILDSUN

French entertainment lighting provider, New Advanced Technology (NAT), located 30km east of Paris, has just invested in no less than 375 units of Ayrton WILDSUN 500 K7 moving heads, following several tests and comparisons with other manufacturers' models.

Ayrton's WILDSUN 500 K7 is equipped with thirty-one 6700K multi-chip LEDs and, with its 75% optical efficiency, WILDSUN 500 K7 is the most efficient model on the market.

WILDSUN 500 K7 delivers a massive 20,000 lumen output from a power consumption of only 380W. This amazing power and low consumption, in combination with the full motorisation of the luminaire, make the WILDSUN 500 K7 particularly suitable for exhibitions and car shows.

The WILDSUN 500 K series comprise three moving-heads:

WILDSUN 500 K3 - 3200K white

WILDSUN 500 K7 - 6700K white

WILDSUN 500 KD - variable white from 2700K to 10000K



New Advanced Technology also chose the same moment to invest in 200 Ayrton Arcaline 2 fixtures. The Arcaline 2 is a very powerful 16 x 10W RGBW LED batten. Its IP65 ingress protection level makes it perfectly suitable for both outdoor and indoor use.

MARINELAND IN ANTIBES



Marineland, a beautiful aquatic park situated on the French Riviera, offers an amazing synchronized dance show performed by Orcas. This ballet takes place during the summer season and plays, obviously, during the day but also at night with loads of floodlights, washes and follow spots in order to miss nothing of these friendly stars.

In order to light the entire basin, Lionel Mallet, the show's technical manager selected the Ayrton IceColor 500, amazed by the level of illumination and color quality.

It has only four IceColor 500, uniformly distributed over the roof of the grandstand to cover the entire marine mammal's playing space.

Installation: Fabrice Perez from Lumitech

AYRTON QUALIFIES FOR «THE VOICE» TOUR



After having successfully lit the French version of the TV show «The Voice» with a number of WildSun 500, Ayrton has qualified for «The Voice Tour» all across France.

Indeed several of our VersaPix model, selected by lighting director Alain Longchamp and provided by the Dushow Group, are also being used on the tour. Thanks to their eight 8° individually controllable narrow beams VersaPix produces superb original effects.

SINGING IN THE RAIN



Photo credit: Marco De Angelis

Some of the concerts on the european leg of Bruce Springsteen and the E-Street band «Wrecking Ball» tour took place in the rain, that did not stop The Boss and his musicians heating up the atmosphere.

We can see an example of this in a photo from Florence (Italy), seen above, where the WildSun 500 continue to work perfectly in this humid environment despite their IP20 ingress protection level.

AYRTON MAKES BIG IMPACT AT PROLIGHT+ SOUND

Thanks to our light-show and our favorite company car, our booth was one of the most attractive of the trade show.

Our 2 new exclusive releases, the VERSAPIX and the ROLLAPIX, have had a huge success thanks to their innovative concept and their versatility.

VERSAPIX 100 is a modular LED luminaire allowing the creation of a large variety of visual effects (patent pending). It is made up of 8 independent 15-Watt RGBW modules, fitted with 45-mm optics that allow a very powerful 8° native beam. Each module has its own cooling system based on the use of a radiator equipped with heat transfer fluids with heat-exchange material. When combined with optional optical filters, the beams of the VERSAPIX 100 can transform into horizontal or vertical blades of light.

ROLLAPIX 100 is the first motorised linear LED luminaire fitted with a 4:1 double zoom system (patent pending). This new generation of luminaires was designed for the entertainment industry and its offers all the new features of 4G technology. The distinctive characteristic of the ROLLAPIX 100 is to integrate 8 independent 10-Watt RGBW LEDs teamed with two zoom systems, which can be controlled separately in order to create a multitude of diverse effects.



**LDI 2012:
AYRTON PERFECTLY
MASTERS COLOR**

10 years ago Ayrton was the first manufacturer to create an LED Wash moving-head for the entertainment market.

Innovation still continues today with the first LED Spot moving-head that overcomes the problems of color reproduction thanks to the electronic calibration of the LED and the heat pipe cooling system that made the Wildsun 500 a success.

The issues with LED spotlights are twofold: if the development of a RGBW light box comparable to a single source is essential for the quality of gobo and beam projections then the perfect mastery of the white and colored lights of a set of projectors revealed itself as a challenge that the French manufacturer Ayrton was the first to meet perfectly with Dreamspot 502. It is being presented for the first time in the US at the Ayrton stand in conjunction with Morpheus.

In a world first, Ayrton present the Wildbeam 302, with a powerful 8° ultra tight beam, that it's zoom can drive up to 48°. New to the US you can also discover the the MagicPanel 602 which kicks off a new generation of creative tools that fall into the light and video sectors.



WILDBEAM 302

LED moving-head using 19 RGBW 15 Watt Osram light sources coupled with an ultra fast 8° to 48° zoom.

An innovative and advanced optical system allows ultra bright, very concentrated beams to travel far and wide, with deep and colorful wash capacity.

Concentric circles are individually controllable allowing special effects, an interesting characteristic showing the versatility of this projector.

The WildBeam 302 benefits from a large color screen, an internal battery to run the unit when without access to power distribution and new Neutrik PowerCON True One power connectors.

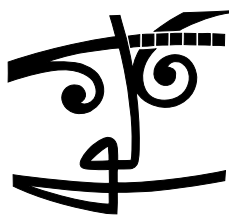
The internal structure is made of steel and aluminum which makes the WildBeam 302 road ready.

An elegant design for a very compact, lightweight, efficient and truly powerful motorized projector.

MAGICPANEL 602

Firstborn in a family based on the use of continuous rotation, MAGICPANEL 602 is a modular LED luminaire allowing for a broad range of diverse visual effects (patent pending). Equipped with continuous double rotation in PAN and TILT mode, it is able to display media on the display side or reflect light on its mirror side. The display is made up of 36 12-Watt LED RGBW modules fitted with high-output 45-mm optics, the unit runs on a sophisticated and particularly quiet cooling system and offers an overall luminous flux in excess of 15.000 lumen for a consumption of 450 Watt. This new luminaire integrates the new 4G AYRTON technology that allows the individual control of each LED source in expanded FULL COLOR mode (RGBW). MAGICPANEL 602 offers the option to display numbers, letters, graphic effects or images, but it is also a fabulous lighting projector which can also be used as a dazzling projector. The MAGICPANEL 602 can be used in groups to create rotating screens on the two axes and produce completely novel effects.

**FACE: EXCLUSIVE DISTRIBUTOR
FOR BELGIUM, THE NETHERLANDS
AND LUXEMBOURG**

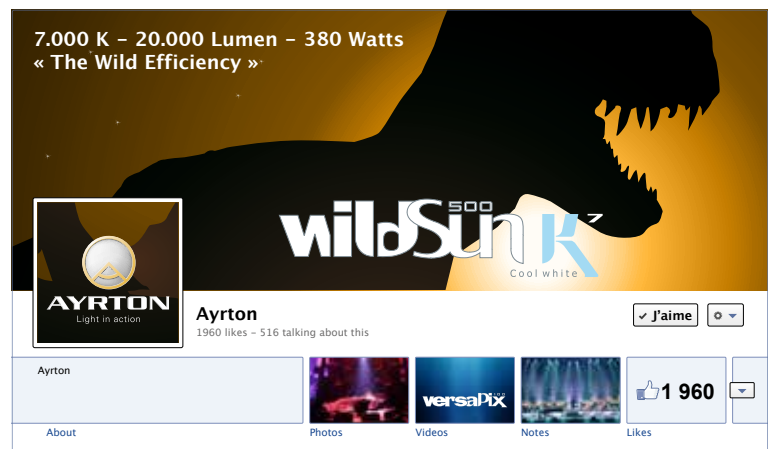


Ayrton, the LED entertainment lighting pioneer, has appointed the leading company Face as exclusive distributor in the Netherlands, Belgium and Luxembourg. Face Belgium, based in Boom near Antwerp, will take care of the clients in Belgium and Luxembourg. Face Netherlands, based in Amsterdam, will cover the Netherlands.

Thanks to its successful range of static and moving head luminaires, Ayrton products has been recently selected for several major concerts, shows and events: Bruce Springsteen Wrecking Ball tour, The Voice, Ringo Starr US summer tour, Julien Clerc european tour and many more....

Ayrton was the first company to introduce a LED moving head on the market in 2002 and still continue to innovates today thanks to its dynamic approach of the entertainment market.

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Likes: 1.960 (09/30/2012)
Audience: 42.033 (from 09/17/2012 to 09/23/2012)
Most popular publication: 8.958 (AyrtonLive 3 Coming soon)

www.facebook.com/pages/ayrton/209728302396312

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Smaller, lighter...
...but even more wild



WILDSUN 200 "S" LED MOVING-HEAD LUMINAIRE

WILDSUN 200 "S" integrates the new 4G AYRTON technology, which allows for the individual control of each LED source. Its boasts a motorised linear zoom from 8° to 32°. Fitted with twelve 15-Watt LED modules it provides an overall luminous flux in excess of 3500 lumen. WILDSUN 200 "S" is the ideal luminaire for your designs, concerts, television sets and any other application in which the power/performance/volume ratio is critical.



AYRTON

Light in action



THE LIGHTING ON THE VOICE

Beams, colours and voices



The set of The Voice satisfying international specifications imposed with a stage, tiers surrounding it and the four chairs for the merciless judges. It is above and on the walls that Frédéric Dorieux expresses himself.

While awaiting season 2 of the first talent show based solely on the candidates' voice, judged blindly by professional judges, we take the opportunity to return to the first edition of this programme, which was a success. Fact is that it involves listening before seeing, but we, the privileged audience, discover performers on the screen before the judges even deign to look back at their notes.

And we can see them clearly, under the amazing lighting implemented by Frédéric Dorieux and the Phase 4 supplier, who remind us that the programme is first and foremost a show, which is watched as much as it is listened to.

Not surprising therefore that a large lighting kit is rigged all around the tiers and the set, showcasing the Clay Paky beams (Alphas with telegenic Sharpys), not to forget Ayrton's new Wildsun LED moving head, mixed with the regulars in Fred's design: Vari*Lite and Studio Color

Text and photos
www.soundlightup.com

575 spots (which have become the signature of the Phase 4 supplier). Enough therefore to be seen for these budding singers, evolving into a nonetheless super codified décor, as it satisfies international specifications that standardise the stage, the tiers and the four judges' chairs.

We met Frédéric Dorieux who recalls the imposed constraints and personalises them, a lighting designer who is nevertheless free to create the lighting he wants for the show, and who joined for a new series in 2013.

Then, we spoke about the great projector kit installed with André Mytnik, manager of Phase 4, lighting supplier for the programme.

SLU: Fred, talk to us about your lighting concept for The Voice. Were you given carte blanche?

Frédéric Dorieux: «In fact they didn't ask me for anything special, but

it has to be said that we have to adapt to a décor that certainly evolves depending on the country but must always integrate the same basics: stage, tiers and judges' chairs.

Similarly, the entire programme is broken down into three key steps: the Blind segment, when the singer performs their song facing the judges, who are turned away, therefore blindly.

The Battles, where the stage turns into a kind of boxing ring and the live Prime segment.»

André Mytnik: «On the selections, i.e., the Blind segment and on the Battles, there were many beams with the VL 3000, VL 2000, VL 1000 and 500 as well as the Clay Paky. The Prime, for its part, made way for the beams with the Alpha Beam Clay Paky in 1500,700 and 300 and the Sharpys that were already present during the Battles. It is also during this step that the Jarag frames were deployed as well as the new Ayrton LED washes. In the end we installed more than 450 projectors, with few traditional ones: 8 follow spots and some 20 profile spots. But there were obviously more of them behind the scenes for all the preparation steps and rehearsals.»

SLU: Why did you choose the Wildsun 500 C? How did you select them?

André Mytnik: «Very quickly, the director of photography Frédéric Dorieux and Jean Philippe Bourdon, our main partners, expressed the desire to have an efficient LED wash projector, with an interesting look. We therefore launched a major testing process in our premises, which lasted one day. The majority of the LED wash moving heads were represented and the Wildsun played its game well with its C version, thanks to highly efficient colour mixing and the total absence of shadows in the projection. The spreading of colour was a great success. We preferred this version, where the beam is not as narrow as the S version, but which, in colour, is highly efficient (thanks to the white at 4000K).

It was a close race with the Robin 600, which was also an excellent machine but where the layout of LED light rings appealed less to us for a TV application due to the black zones present in the colour projection. We needed top colorimetry to be able to align with the Vari*Lite colours on the screen and the Wildsun 500 C took up the challenge, with notably, superb pastels.»

SLU: How many of them do you have in Phase 4?

André Mytnik: Currently we have 60 of them and they come out quite regularly. Frédéric and Jean Philippe are very satisfied with them.»

SLU: And from the supplier's point of view, did you notice problems with these projectors?

André Mytnik: «We had a few problems, mainly electronic, and display and assembly issues with fastenings that became loose. But I have to say that Ayrton was quite reactive and professional for each little mistake by resolving the issues very rapidly.

During the programme, Fred and his teams noticed a software glitch in the colour transition, but that has also been resolved very quickly.»



1. At the back of the set, the 6-mm screens installed by IVS open to allow the candidate to enter and respond to the constellation of Phase 4 projectors.

2. The walls of the set are alternately clad with LED video components, Jarag Chromlech frames and Ayrton Wildsun 500 C LED washes.

3. Of the baton, beams and colours: a winning recipe.



4

4. A scene from the Prime segment during rehearsals with LED and lamp sources (video and Wildsun 500) in perfect harmony.

Lighting team:

Director of photography:
Frédéric Dorieux

GrandMA operator:
Jonas Mytnik

Master electrician:
Thierry Conduto

Automated lighting technician:
Thomas Roussel

Images and media servers:
Olivier Weber
aka « Blondin »

List of lighting equipment PHASE 4 supplier

- 24 VL3000 Vari*Lite
- 66 VL2000 SP Vari*Lite
- 38 VL500 Vari*Lite
- 57 Sharpys Clay Paky
- 25 Alpha Beam 1500 Clay Paky
- 13 Alpha Beam 700 Clay Paky
- 13 Alpha Beam 300 Clay Paky
- 26 Wildsun 500C Ayrton
- 88 Studio Color 575 High End system
- 73 Jarags Chromlech
- 24 ShotLight Clay Paky

SLU: The kit leaves a lot of room to the Clay Paky range, with beams and Sharpys, but also with the rarer (albeit very beautiful) ShotLights. Why did you choose them?

André Mytnik: «It is true that we have many Clay Paky beams in this arrangement, and we are very pleased with them. Of course, the 1500 has minor shutter issues that we are aware of, but overall the range is interesting, just like the Sharpys obviously, which for their part, are highly reliable, in addition to being perfect for TV.

The Shotlights are projectors that I find to be very efficient. With equal lamps, they produce a lot more light when they are open at their widest than the Mac 2000, and in addition, benefit from this shutter option that integrates two independent screens/stroboscopes at the lens output.

What is great is that these strobes in arch form can be controlled independently but can also be synchronised. And what is even better is that all the strobes in a set of Shotlights can be synchronised in order to create a vague effect, for example. Without strobe, this Wash 1500 is efficient and very bright and is sufficient in itself, but with the strobe, it's an interesting solution. For that matter we have no traditional strobes in the kit, the Shotlights do all the work! On the other hand, they use a lot of energy as they have two power supplies: one for the lamp and one for the screens/strobes. Currently we have about 30 of them. They were also used on the Enfoirés tour by Jean Philippe Bourdon.»

SLU: There were lots of screens on the set, did you supervise the images?

André Mytnik: «Yes it's 'Blondin' (Olivier Weber, in charge of image creation at Phase 4) who took care of it. We created all of the show's media in collaboration with production and the artistic director and it was a true challenge with an average of 11 medias per Prime segment.

He controlled them with the help of three Green Hippo Hippotizer V4 media servers (of which one was an emergency one) and controlled them with a GrandMA MALighting console linked in a network to that of the lighting operator in order to be able to truly harmonise video and lighting. »

And it has to be said that this little world had to be harmonised! Between the large Vari*Lite spots that deliver their beams, the armada of Sharpys (57) that balance their batons and the Jarag panels (73) that define the tier walls, in addition to screens everywhere from floor to ceiling (Pixled F30), the sides (F15) at the performers' entrance door, strobes that are also washes and plenty of Studio Colors, the notion of cinematography comes into its own.

Harmonising a set of 450 projectors with video and performers, integrating innovations that are showcased (alternating Jarag and Wildsun 500 is very pleasant on screen and in action), and abiding by a rigid framework imposed by the décor and the show's codes, have been the mission of Frédéric Dorieux and his teams throughout the programme. A successful mission that resulted in beautiful scenes where the pastels of the Wildsun 500 C had no reason to be jealous of the rich colours of the Vari*Lite.

Of course, one can dread the luminous cacophony with the help of beams, but the very structure of the set and its décors has, on the contrary, provided this large kit with a privileged means of expression, with many riggings in the air of course, but highly polished lateral tiered and angled ones. In short, TV lighting that moves and that brings our flat screens to life. Long live Season 2 in order to disobey the rules of the game, by watching before listening!



Discover lighting diagrams on the new website soundlightup.com



The only limit...

...is your imagination !

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versaPix

VERSAPIX 100 LED LINEAR LUMINAIRE

VERSAPIX 100 is a modular LED luminaire allowing the creation of a large variety of visual effects (patent pending). It is made up of 8 independent 15-Watt RGBW modules coupled with 8° optics. The VERSAPIX 100 units can be interchanged to create complex luminaires in the shape of discs, spheres, cylinders, fans or be installed individually in multiple configurations. The only limit for using the VERSAPIX 100 is your imagination.



AYRTON

Light in action

Lighting engineer **Jeff Ravitz** scores a pure Rock'n'Roll moment!

BRUCE SPRINGSTEEN AND THE E STREET BAND AT BERCY:



To our great delight the Wrecking Ball tour hit Paris Bercy for two days, allowing us to (re) discover a true American rock concert, traditional style, with a setup in which the audience surrounds the stage area and the singer for a total communion, which was an obvious pleasure to watch.

But since the sixty-year old rock star never ceases to reinvent himself and above all aims to satisfy his fans, the light show, once again created by Jeff Ravitz and the teams from Morpheus, in turn manufacturer, supplier and provider of technical support for the installation, had quite a few surprises in store for his fans from the get-go as well as for our eyes, which were focused on even the smallest projector rigged in the Paris venue.

For example the lighting design, always true to its warm whites and variations in intensity, innovates this year with the integration of Ayrton and Zap Technology LED moving heads, Clay Paky beams and even fog!

A brilliant production for 2012, which, whilst always focusing on the music and its performers, indulged in a few technological «infringements», whilst preserving its must-haves: colour temperatures at 3200 K, "televisual" shading of the light ambiances, projectors assembled by Morpheus and spotlights galore.

We were therefore filled with wonder to meet the lighting team in situ, from operators to lighting director, not to mention the technicians. And to conclude, the icing on the cake, the American lighting designer Jeff Ravitz, who has earned numerous awards in entertainment and to whom Bruce Springsteen has been loyal for nearly 30 years, spoke to us about his choices that are always in agreement with those of the performer.

TODD AND HIS LIGHTING KIT

By introducing a large number of innovations this year, the large rig gives the wash projectors the priority by entrusting the major task of

the show's ambiances and colours to the Wildsun 500 C, associated with other innovative LED sources such as the L2D2 LED head from Zap Technology, or the Philips bars and converters, which reduce the power consumption of an installation with numerous discharge lamps that use a lot of energy.

SLU: Todd, what is your job here?

Todd Ricci: I am the lighting director and field designer. Each time we need to create a new design for specific songs, I step in. We adapt Jeff Ravitz's concept as the days go by, in accordance with Bruce Springsteen's wishes.

SLU: Can you describe the kit you use in this concert?

Todd: We use a lot of Vari*Lite. But we also have Wildsun 500 C, which is a brand-new product. L2D2, an LED projector on a one-arm yoke by Zap Technology, with an interesting zoom system. It is one of the products that surprised us the most with the Wildsun 500 for what it brought to the show: beautiful blues and truly saturated colours. Then, for spot effects and gobo projection we have the VL 3000, which illuminates the stage and the audience. For gobo effects and the bearings on the main stage, we have the VL2000, which also illuminates the audience, and we have individual positions on the members of the band with the VL2500. The foreground is taken care of by VL1100 halogens with which we are very satisfied. In fact all of the Vari*Lite equipment has worked rather well this year. Under the stage, we have more Sharpys, under the stair riser and in front of the amplifiers, allowing us to achieve various views from different sources in several locations. On this tour, we have replaced the audience blinders with customised Par LED Morpheus, called CP7 using 7 Chauvet COLORado RGB petal-shaped assemblies to illuminate the audience. We have made a lot of major changes for this tour, compared to the three previous ones.

SLU: The presence of LED projectors is important, does this technology appeal to you?

Todd: Yes, we have wide rows of LEDs. We considered everything that technology had to offer for this tour! We have many stage components marked out by LED products such as the ColorBlaze. We also use ColorBursts, just to provide a number of silver effects and lastly, we have the ColorBlasts. You could say that we have quite a few Philips products on the show!

We have also introduced Mac Auras into the kit, just to add visual content that we were unable to achieve with bigger projectors.

TOP-QUALITY NEWCOMERS

With no fewer than 50 yokes, Wildsun 500 C are rigged above the Bercy stage (the kit allows for 20 more in stadiums!). Ayrton washes with efficient colour mix, which is possible thanks to their RGBW multichip and the ideal opening (45° max.), covering more than 95% of the concert's moods.



1

1. At the top of the ladder supporting the Sharpy Clay Paky, the L2D2 from Zap Technology with LEDs and motorised ZOOM on its single arm yoke.

2. Wildsun 500C Ayrton, VL3000 and VL2500 for stage lighting.

3. The PanaBeam XR2, the pan/tilt Morpheus wash with continuo's rotation, equipped with an MSR 1200, CMY, progressive CTO and zoom.



2



3



4

Todd Ricci
Lighting director



Todd Ricci, lighting director. He is the one who follows the tour and who adapts the lighting kit to the venues and Jeff Ravitz's concept to the old titles that the artist chooses to sing.

SLU: Why did you opt for the Wildsun 500 C?

Todd: The particular aim with these Wildsuns was to use their white, which could be a little warmer than that of most LED products, we have therefore defined a white that is more halogen-like. So, among all of the other whites in the show, it is difficult to distinguish the LED source. It is a processed white in order to look warmer, as all our key projectors are 3200K. We love the golds and the colours of the old CMY gels on the Morpheus Color Faders, since they are still the best colour mixing system today, but these have been removed from the kit. Obviously it is impossible to achieve this impression of golden yellow with an LED, which is what represented a major challenge. We managed to come as close as possible with the Wildsuns.

SLU: Did you run into problems with the Wildsuns?

Todd: No, not really. That has just been a matter of practice. We received them, tested them very quickly, loaded them onto the truck and sent them to rehearsals. None of us was really familiar with them. I knew that we did not want to use a lot of parameters and therefore we did not immerse ourselves in the extended DMX mode. We decided that 24 channels would be our basis, which allows for a certain flexibility. In fact, I am very happy with the general appearance of the sources. Everyone was immediately concerned about the LEDs and pixilation. And with the 4 in 1 chip (RGBW behind the same lens), this "pizza" effect is removed. The LEDs also pleasantly illuminate the crowd. Their saturation and colours on the audience are superb. The Wildsuns have really performed well in this show. But there is always this big question with new technologies: how will the projectors operate after a journey in a truck

on the roads in the USA or Europe? They have withstood it rather well. We have not had any mechanical breakdowns...Except for the issue of rain. The rain is our worst enemy when it comes to electronics. Especially where the connectors are concerned, just because of the humidity. It is a constant battle in lighting. But we will be working with a huge "stadium parachute" now in order to avoid these technical issues.

SLU: Is the energy-saving aspect in this type of projector important to you?

Todd: Yes, it was, since I am one of those guys on the tour who is used to going the whole hog! I used all the current in the past, and therefore I know what it means to unwind many cables for many different projectors! Especially when you use traditional ones. We like the fact that these machines are becoming smaller and smaller with the same yield in lumens.

When I plan, I like to have washes that are a little less powerful and I like to use my figures and content that I will integrate into the show without the need for 4 smoke machines and 4 fog machines on stage in order to see the spots. Therefore, I believe that the LEDs allow this to be avoided. Everyone tries to create a brighter wash. The VL3500? They are so powerful that you can't see anything else on stage. To me it's counterproductive! I believe that we have found a great balance for this show with a blend of old school components and innovations. It is one way of balancing it all for Jeff.



4. Total communion between the performer and his audience: a true moment of pure American rock. It is very rare to see so many happy adults going wild.

BETWEEN RADICAL CHANGES AND SURE BETS

And since Todd and Jeff like to combine innovations and safe bets, the «house» projectors run with new sources in a show reproduced on two lighting consoles, which also blend old and new school thanks to a Pathfinder interface allowing an Avolite Diamond II and a GrandMa to be linked, to manage the intensities by using the dimmer (it's Todd's job), and the effects and colours on the automatic console.

SLU: Do you have a lot of encoded memories?

Todd: We have just programmed more materials than necessary today. We like to regularly refresh these basics. During the last tour, we catalogued some 260 different songs that Bruce has performed! Since we have to have a wide array of positions to send whenever he decides: "Hey, I'm gonna sing this song since I haven't done it for 30 years...", whilst this song is obviously not encoded. We have to find the best general approach in order for it to appear to have been custom-made for him.

ABOUT FOLLOW SPOTS AND MEN

With 11 follow spots to ensure the performer's and his band's front and back, we were only mildly surprised to see seats fixed on the galleries/catwalks/trusses, very close to the stage, in the front, but also at the back, the stage surrounded by the audience, just like in an arena,

showcasing Bruce Springsteen in great form, but more importantly visible by all.

SLU: How many follow spots did you plan for?

Todd: We have 11 Robert Juliat follow spots. The Topaze in the foreground and the Manon in the background for short focal lengths. We took the Topaze and replaced the discharge lamp with a 2000-W tungsten lamp. For concerts in stadiums we also have 4 Lancelot rigged on the outer towers.

Ludwig Lepage, from the Robert Juliat sales team explains the adjustment.

Ludwig Lepage (Robert Juliat): The Topazes were transformed into 2000-W halogens (instead of an MSD source), since during the latest tours, Bruce Springsteen and his lighting designer found that his skin was not rendered well with a discharge lamp. Only the wiring inside has changed since the sockets are identical. So, all of the foreground of the concert has been converted into halogen whilst the background is still lit with discharge lamps.

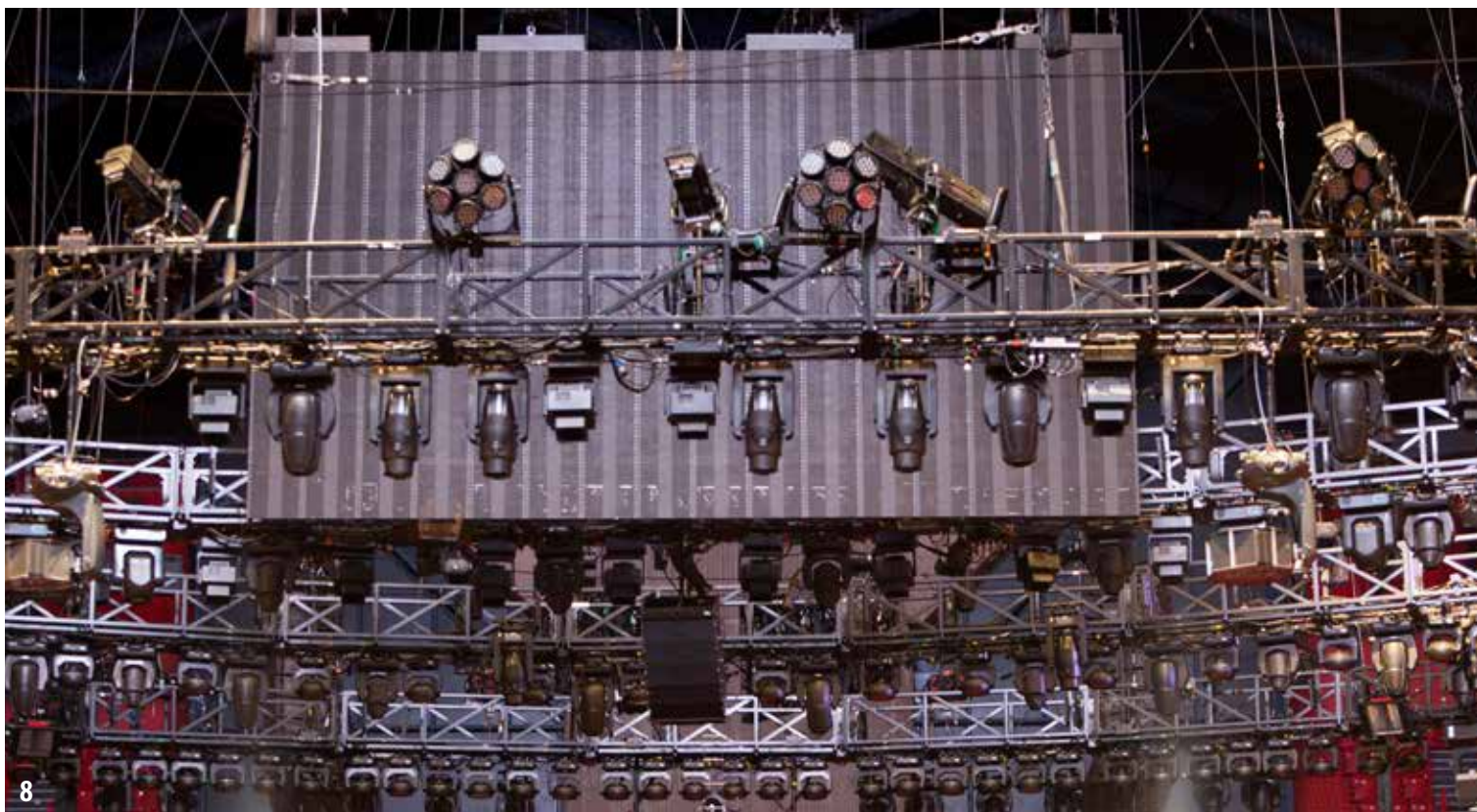
5. Sources can be found everywhere, under, on top of and across the stage: with LEDs for the Philips Color Kinetics, with lamps for the VL 2500 Vari*Lite.

6. A lateral truss with, from left to right, L2D2 from Zap Technology, two Morpheus Fader Beams, a VL 2500 Vari*Lite, under the third FaderBeam two tungsten VL 1100 and a Panabeam XR2.

7. Light control with an Avolites Diamond II or Todd adjusts the projectors' dimmers live, whose colours and movements are programmed in the full size Grand MA and called by John Hoffman.

LIGHT, COLOUR TEMPERATURES AND VIDEO SCREENS

Huge or not, a Bruce Springsteen concert lit by Jeff Ravitz is unique. Very sensitive to the audience and with a constant will to maintain proximity,



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8. The four trusses and their marvellous machines. Notice at the top of the image, the three LED flowers designed by Morpheus with the help of Chauvet Colorado RGB sources. Three of the five foreground Topaze follow spots, the VL1100 and VL3000 can also be seen.

9. Three trusses packed with very nice machines and notably a slew of Wildsun 500C, which are easily recognised even from a distance.

10. Mac Aura Martin, on and under the piano podium. A highly appreciated source at Morpheus for its small size, its feather weight and its output.

or even intimacy with his audience, the Boss first and foremost wants to be seen by all.

That is why his lighting designer attaches a lot of importance to skin tones, shadows and the performer's telegenics, filmed nonstop by a host of cameras that do not lose even an instant of the live performance in order to reproduce it on the giant screens surrounding the stage.

SLU: Working the foreground and the faces seems to be very important to you?

Todd: We have VL 3000 in the air and 2500 that are nonetheless the key to the backdrop for everyone. The foreground plays a lot with theatre angles such as, for example, on the keyboard players. It works well with the camera, with the various shooting angles used during the show to achieve a nice contrast with highly theatrical profile spots. You will notice that when Bruce is filmed, half of his face is in the shade and we reproduce this each time.

Of course, when he runs all over the stage, more light is on him since we want everyone to be able to see him.

SLU: Do you adapt your lighting to the numerous acquisitions and broadcasts during the show?

Todd: Yes, definitely. That has been one of our concerns. It is strange since now, in the age of HD cameras, you also notice more skin hues on everyone. You have to worry about embellishing everything you possibly can, to make sure that you are not creating too much material that would be muddy. We have to keep full colours and pay attention to temperatures. It has become very important to Jeff and he is a master

on the subject. He is a true specialist at this type of thing. He went as far as to put CTO corrector on the colours in order to make sure that the achieved hue was the correct temperature. He is one of those guys who thinks of all these things. It is probably the reason why he doesn't sleep much! These are areas in which he is particularly brilliant. I have learned so much from him and from his job.

Enough to make us eager to speak with the man himself, Jeff Ravitz, lighting designer for the Wrecking Ball tour.

JEFF RAVITZ, A DEVOTED LIGHTING DESIGNER

SLU: Can you tell me your story? how you started in the show lighting desing?

Jeff Ravitz: While I was a student, I worked in summer theatre and was influenced by the great lighting designers I met. Then, shortly after I finished college, I saw a Grateful Dead concert that changed my life. The lighting was «visible», unlike theatre lighting, which, we were taught, should be «invisible». That show was so exciting, beautiful, and expressive, that I dreamed of doing something like that myself. Three weeks later, I answered an advertisement in a local arts newspaper for a position as a lighting designer for a recording group going out on tour. I jumped at the opportunity and got the job. We toured all over, playing clubs and universities, but we also were the opening act for many headline groups, and that experience was invaluable. A few years later, I toured with Kiss as a technician, which furthered my education.



And then, my major break was the chance to design for the rock group, Styx. We created highly theatrical shows and in 1977 they were the biggest American touring band. It was fun and it propelled my career forward.

SLU: What is your idea of light?

Jeff Ravitz: Light is what reveals our world to us, visually. And the way it reflects off an object, whether that is a person or a wall, can strongly affect us. It's all about shape, balance, and three-dimensionality. How something is sculpted out of light can directly affect our mood and psychology. For instance, when light falls on a mountain at sunset, or at mid-day, we have a very different reaction, subconsciously. Our whole world is a painting and it can be flat and dull, or dimensional and rich. As humans, we react to this.

SLU: And for a rock star show?

Jeff Ravitz: A concert--a rock show--depends on lighting to help the audience know what to look at for any given moment. Like a cinematographer helps choose whether a movie audience sees one person or the entire roomful of people, and how they seen them, for a concert we are guiding people through the story of the show, of each song. As lighting designers, we make a statement with color, with angle, with brightness and darkness, and with the use of movement and texture of light. It is our job to highlight the action and to help people that are far from the stage to know what's happening. Lighting also keeps pace with the dynamics of the music, and accents it to help connect the audience with the rhythm, the flow, the feel, and the message. We

take the mood and magnify it. Lighting delivers the music to the eyes of the audience.

SLU: Especially for Bruce Springsteen?

Jeff Ravitz: We all know Bruce Springsteen could put on an exciting show with no lights. But, as I said, we use lighting to help accent the big musical moments, and to visually illustrate the mood of his words and music. Bruce's performance and songs can be very dramatic and are quite conducive to highly theatrical lighting. Bruce is a fan of good film cinematography and photography, and he has instilled the appreciation of those art forms in me. So, it becomes a matter of «revealing» Bruce and the E Street Band members in ways that depict a «point of view», a unique way of presenting them for any particular song that they are playing. We use the psychology of color to make a statement about the emotions and the story line of a song. We use texture and broken-up beams of light. And we use the angle of light very deliberately, sometimes to make the musicians look good, natural and happy, and sometimes to make them look troubled, or angry, and so on. Finally, the music has many expressive accents and rhythms, which we try to play along with.

SLU: Does Bruce Springsteen has specific demands regarding: the lighting of the team of public and of itself?

Jeff Ravitz: Yes, he insists that the band member get a lot of attention and care with lighting. They are part of the overall stage «picture» and even though they sometimes can be more in the background when Bruce is doing something where he needs to be the main focus, they always need to be given the proper lighting treatment.

Bruce loves the audience, and their energy makes him work and play and perform harder for them. And, they become part of the show, also. When they are all singing along with him, they must have good lighting in the appropriate color for the song. The audience reacts to this by being even more responsive, and it goes back and forth between Bruce, the band, and the audience. Of course, sometimes, it's important for them to be in the dark so only Bruce and the band are visible.

Bruce Himself when he is not doing something particularly dramatic, he does like to look good on the screens and to the audience. I work hard to make sure the lighting angles are as flattering as possible, of course, so he does look his best. But, he does not like to look «flat», meaning he likes the lighting to create interesting shadows on his face and body. We also are very careful to make sure he has good light on him from behind so he appears to «pop» out of the background, and not to make him «blend in» to the background.

Bruce loves all colors and he trusts me and my team to choose the best colors for each moment of each song. But, sometimes, he has a very specific idea for the color of a song and we are happy to oblige.

**Jeff Ravitz
Lighting designer**



I've been designing lighting professionally since the early 1970s when I got out of college. I grew up close to New York City and loved Broadway shows. I attended and graduated from Northwestern University, near Chicago. I received a degree in theatre and I would have been happy to do anything in that field. One of my original friends in the business, from my first job, recommended me for the Springsteen job in 1984. I've been with Bruce since the Born In The USA tour, and it's been transformational on so many levels.



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11. The Morpheus technical lighting crew headed by Todd Ricci (right). Valère Huart, in charge of export sales at Ayrton (second from left).

Lighting crew

Lighting designer:
Jeff Ravitz
(Intensity Advisors, LLC)

Lighting director:
Todd Ricci

GrandMA operator:
John Hoffman

Lighting team leader:
Brad Brown

LIGHTING TECHNICIANS

Carl Hughes

Travis Braudaway

Jimmy Varga

Rob Savage

Hadyn Williams (Europe)

Julian Keil (Europe)

SLU: Does Bruce have specific requests regarding lighting equipment especially LED projectors, smoke or haze?

Jeff: Bruce does not have any preferences about lighting equipment or projectors. It is one area he allows me to decide on my own. I do try to show him our newest equipment after it's been added to the lighting system, just to keep him familiar with what I'm doing. And he is very happy to know how much energy we are saving by the use of LEDs. Bruce has long worried about the effects of smoke and haze on his voice and therefore, it has never been approved. However, this year, we researched some hazers that are used on Broadway shows where singers are also quite sensitive to the issue of haze. We tried it in rehearsal, placing the machines far from the stage in order to achieve a very, very slight amount of haze in the air, just to enhance the effects of patterns and light beams in the air. Management is very happy with the results and Bruce has not complained that it has bothered him or his voice.

SLU: What do you think about Ayrton Wildsun, why did you select it?

Jeff: I'm a big fan of the Ayrton Wildsun. I think it's a very good fixture. I have been wanting to explore the use of a high quality LED fixture to replace our automated wash lights, because the new technology offers many advantages. Lower power consumption and less maintenance are important issues, as well as the benefits of additive color mixing and very fast color changes. Our previous wash lights had tungsten lamps. Bruce liked the warm, natural color that they provided. Therefore, I wanted an LED light that would offer a similar foundation of color balance.

“Bruce does not like to look «flat», meaning he likes the lighting to create interesting shadows on his face and body”

Many of the LED fixtures are smaller in size. I wanted a slightly larger LED fixture to add a sense of bigger scale to the overall appearance of the lighting system.

Morpheus Lights helped me to choose a fixture by setting up a very extensive comparison demonstration of all the best LED moving lights. We spent two days metering and comparing color, appearance, speed and smoothness of movement, and brightness levels. The Wildsun's white LEDs are warmer than most of other lights we tested, which means the overall base of mixed colors would also shift a little bit warmer, which I liked. Its other colors are pure and bright, too. And the overall diameter of the LED surface is larger, too, just like I wanted. That means the beam is fatter and the overall light output is brighter. The fade-up and fade-down could be adjusted to be as smooth as an incandescent fixture. The cost of the light was another deciding factor. The Wildsun was affordable, which was important, because we needed a lot of them. Morpheus and I agreed the Wildsun offers great features and attractive value.

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Let the sunshine in...



COLORSUN 200 "S" LED STATIC LUMINAIRE

The ColorSun 200S is a versatile luminaire with innovative technical features with a small footprint. The new generation projector opens up new creative horizons due in part to its 4:1 zoom (8° to 32°) and to the individual control of its 12 LED RGBW modules. Matrix effects, wash lighting, beam effect, etc., the ColorSun 200S provides numerous user options.
ColorSun 200S: the theatre projector of the future available now!



AYRTON

Light in action





12

12. Exceptional depth thanks to a multitude of sources and to Jeff Ravitz's know-how.



13

13. The audience is used as a backdrop for an effect. Different lighting for the band and the Boss, which does not set off the instruments.



14

14. The Wildsuns treat us to wonderful colours. This time, the concept places the band in the background in order to focus on Bruce Springsteen.

SLU: What do you think of the wildsun zoom, its speed, its aperture?

Jeff: The Wildsun pans and tilts are extremely fast. Our movement effects, and the ability to quickly change focus from one location onstage to another are now greatly improved.

The Wildsun zooms to a wide 45 degree flood which covers a lot of territory. And it gives a smooth field of light.

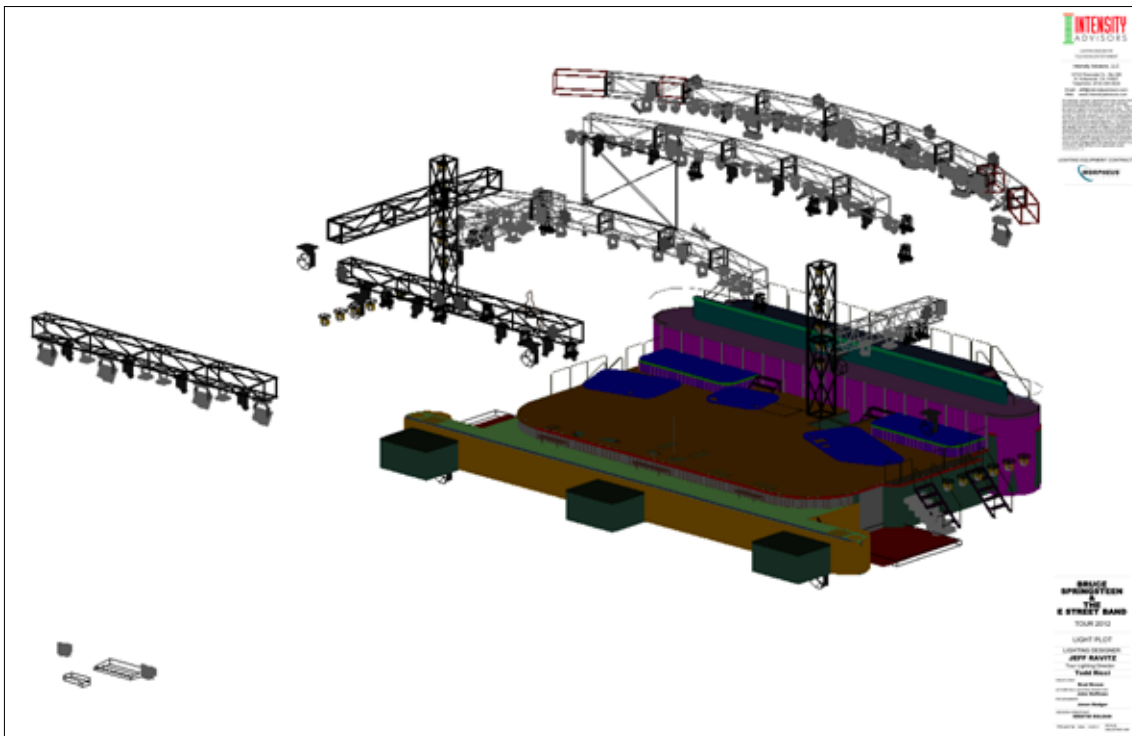
At 11 degrees of spot focus, the light is extremely bright, tight and

results in a very strong beam of light.

During the show, I often change the zoom of the lights, as needed for any particular cue. But I do prefer a medium sized zoom size that works for most cues.

SLU: What is exactly the mission of Wildsun 500?

Jeff: I use the Wildsun 500 as the base layer of color and ambience for the overall onstage lighting. The Wildsuns are used to make a very



strong, full-stage, color statement that I can change quickly as the music or mood changes. It's the soft texture I use in counterpoint to the quality of the sharp, profile fixtures.

SLU: Will you select this Wash on TV sets?

Jeff: I can make use of this light for TV shows. Since our shows are shot in high definition for the screens, I can see that the Wildsuns work well on-camera.

And between the screens, follow spots, other spots, the new LED sources and the old Morpheus moving heads, not to mention the strobes that also made their debut during the 2012 tour, some 350 projectors illuminate the Bercy stage tonight.

And even if sometimes the Sharpy's batons or spot beams are not really recognised due to fog, they are certainly present for the first time near the Boss but still very discreet, this is not the goal pursued by the lighting designer.

Jeff Ravitz in fact designed traditional rock concert lighting, American style, multiplying the scenes with few lights dimmed, favouring a constant mood, highly coloured and nuanced, helped by the superb Wildsun colours, which form an integral part of the show. By truly showing us all of the performers present on stage, thanks to the numerous profile spots and the VL1100 installed in fore- and background, he creates a certain intimacy, enhanced by a very warm ambient colour temperature.

So yes, we are surprised not to find ourselves amid beams galore and radical changes between songs, but we are filled with wonder about the consistency of it all and the integration of new LED sources next to

the traditional Vari*Lite spots and Morpheus projectors we discover. Big L2D2 LED moving heads are spectacular and the whites of the Ayrton moving heads truly add value to a lighting design, which attaches as much importance to the accuracy of the colours as to the variations of white.

We had gone to see a great performance, and we discovered a whole way of working light, of moving the artist and his audience to the heart of the show and to take up a large venue such as Bercy, to our great delight. A truly enjoyable and generous live performance. ■

List of Wrecking Ball tour equipment

AUTOMATIC PROJECTORS

- 24 FaderBeam Morpheus Lights
- 22 PanaBeam XR2+ Morpheus Lights
- 12 BriteBurst 2000E Morpheus Lights
- 52 Wildsun™500C Ayrton
- 28 Sharpy Clay Paky
- 17 MAC Aura Martin
- 21 VL2500 Spot Vari*Lite
- 22 VL3000 Spot Vari*Lite
- 15 VL1100 TSD Vari*Lite
- 1 VL3500 Spot Vari*Lite
- 6 L2D2 Zap Technology
- 6 ColorFader3 Mfader3 Morpheus Lights
- 18 ColorFader3 XLFader3 Morpheus Lights

FOLLOW SPOTS

- 8 Topaze Robert Juliat halogen modified
- 3 Manon RJE Robert Juliat electronic ballast

TRADITIONAL AND LED

- 12 CP7™IP Blinder Morpheus Lights
- 34 ColorBlast Color Kinetics
- 5 ColorBlaze Color Kinetics
- 16 ColorBurst Color Kinetics
- 3 iW Blast Color Kinetics
- 2 COLORado 2 Zoom Tour Chauvet
- 10 SourceFour PAR ETC
- 6 SourceFour 19° ETC
- 1 SourceFour 14° ETC
- 12 Atomic 3000 DMX Martin Professional

CONTROLS

- 1 grandMA MA Lighting
- 1 Diamond II Avolites
- 2 grandMA lite MA Lighting
- 5 grandMA Network Signal Processor MA Lighting
- 1 Pathport Control Distribution System Pathway Connectivity

SMOKE

- 2 Atmosphere hazer MDG

Discover lighting diagrams on the new website soundlightup.com



AXENTE *The French Touch*



The ideal distributor

With 35 brands in a catalogue that combines audio, lighting and structure and a team of 33 people led by Jerome Bréhard, Axente is an intuitive distributor who quickly realised that the future of lighting was in LED and focused on sound values to ensure its success: optimum customer service and loyalty to its suppliers. The brands have in the main been selected from conception in the halls of the international fairs by this team of technology enthusiasts and most have become world leaders in their preferred market: Prolyte, MA Lighting, Robe and Philips Color Kinetics to name but a few. Proof indeed that the Axente team has no shortage of flair. Now it is Ayrton who seems to be throwing their hat into the ring of stage lighting.

200 Arcaline Ayrton has been installed by Laurent Hattinguais from Caméléon (Dushow group) in the Théâtre du Chatelet under the direction of LDs Jean-Luc Choplin and Jacques Ayrault



Let's look at how Axente is structured - a company that has experienced growth since it was formed - by interviewing each of the technical and sales managers to get a more in-depth look at their roles, beginning with the brains of the company, Jérôme Bréhard, Managing Director, whose simplicity is far outmatched by the energy he puts into managing Axente and defining its strategy.

Axente, the story of a close-knit team

Soundlightup: Jérôme, I have a feeling that Axente is the largest French distribution company for lighting. Is this true?

Jérôme Bréhard: I'm not sure, maybe for the professional range. Our turnover for lighting is €15 million and for sound it's €2 million.

SLU: How did you structure the company?

Jérôme Bréhard: We have a common logistics hub for audio and lighting, a single administrative centre and also dedicated sales and technical teams for audio on the one hand and lighting on the other. The after sales service is the same for both.

Alain-René Lantelme heads up the lighting / structure department and Alain Hercman manages the Audio department. Sandrine Brisach handles logistics, which means purchasing and sales.

But Axente is primarily the story of a team effort. We should really talk about the people who built it - mainly Sandrine and Alain-René, who joined me 14 years ago and Thierry in the depot 13 years ago.

Sandrine is in charge of sales administration and is my double, professionally speaking.

I manage strategy and she applies it to everyday life.

Alain Rene oversees the lighting / structure team, in other words six sales reps for France. Alain Hercman manages three sales people on the audio side.

There are five people in the after sales service for both sound and lighting. They, in turn, train our suppliers. The After sales service plays a key role in distribution. In order to be successful in this business, you need a large technical staff.

The heads of products, Guillaume Perrier and Arnaud Pierrel for lighting and Christophe Carles for audio play a pre-sale advisory role and are also involved afterwards in the handling, set-up and monitoring of the products. They give demonstrations, manage the demo equipment and support the sales team for some of the more specialist products. They also get involved in customer open days. They bring the showroom to life and provide training.

I'd like to stress that we do not replace training centres, we actually work in collaboration with them by training their trainers. We only offer training to customers who have purchased a console or a media server.

The sales people have in-depth technical knowledge and are very independent. They are fully equipped and give their own demos.

The sales administration promotes human contact and interaction

SLU: Have you set up a customer account system on the net?

Jérôme Bréhard: Sandrine is in close contact with the sales team and it is her team that takes the orders. Everything starts from here - we have stock worth up to €3 million. We place a lot of importance on human relations. Our customers often need to give us a quick call for a quote or to check on their order. We are in a profession that requires personal contact. I am a big fan of technology and ultra robotics and although I plan to set up a bar code system to improve on the quality of the deliveries, the interface with the customer will always remain human. Yes, customers will soon have a business account and will eventually place their orders via the internet, but it will be an add-on tool for convenience.

LED vs Bulb: which wins today?

SLU: If we talk about trends in lighting and therefore LED products, wash products in particular, what is the proportion of sales of bulb projectors compared to LED projectors?

Jérôme Bréhard: I would say 80% LED to 20% bulb. The scales have tipped. This is a recent development. It all happened a year ago. It was the quality of the products that accelerated the process.



*Adam et Eve, the musicals written by Pascal Obispo, lit by LD Dimitri Vassiliu who selected Ayrton WildSun 500 C wash for coloring the stage. Contractor: Dushow group.
Photo: Renaud Coriouer*

LEDs have been around for years. Axente started dealing with Color Kinetics 13 years ago for example.

The LED revolution started with the ability of LED products to compete with 575 W discharge lamps, the most commonly sold on the market – even on a global scale. The benchmark products are still Studio Color and the Mac 600.

It also happened with the RGBW multi-chip light sources and zooms.

SLU: Was demand spontaneous?

Jérôme Bréhard: Customers do not even question the move as prices are now consistent;



They are at the origin of Axente: Jérôme Bréhard, Managing Director and Sandrine Brisach Head of Sales administration and Logistics.

not equal but good value with respect to the product life.

SLU: What kind of positive and negative feedback are you getting from customers about LED projectors?

Jérôme Bréhard : As for the positive aspects, it's the reliability and consistency of colour for the brands that I distribute (Ayrton, Philips Color Kinetics, Pulsar and Robe). The warmth of colour, particularly for the Ayrton 500C, which seduced its audience with its ability to reproduce the warm hues of the gelatinised halogen.

They also like the performance and lightness of the Robin 600 which has an exceptional efficiency / weight / performance ratio.

As for the negative aspects, they usually say the price and as they are electronic units they can fail over time. When we talk about LEDs, the suppliers that promise 10 years of life in a projector forget that there are power supplies, drivers and components such as capacitors which have a shorter lifetime than the LED. We also used to promise 100,000 hours of life in good faith at the start. We soon had to change our tune and started advising clients not to neglect the upkeep and maintenance. That could be the main disappointment for customers.



Sainte Blandine church in Lyon lit by 24 ModuLed 150 Ayrton installed by the company MK2.

SLU: Yes, even with LEDs it is inevitable to lose one or two given how many of them there are!

Jérôme Bréhard: Indeed, we do have to change the LEDs occasionally. We have bought equipment that allows the circuit to be heated so that they can be taken out cleanly and replaced.

SLU: What is the percentage of returns to the after sales service in Axente for LED projectors?

Jérôme Bréhard: Less than 2% are returned during the first year on all of our brands.

SLU: Let's talk about your LED brands, in fact. What kind of relations

do you keep with your suppliers? Do you get to hear their feedback on orders out in the field?

Jérôme Bréhard: The strength of a great sales team is having a strong presence on the ground in order to gather information on the competition. We are curious and we want to find out as much as we can. There are plenty of people in this profession who have great ideas.

So yes, we have good discussions with the designers. It takes time, and trust is gained with people who respect you from a technical point of view.

With Ayrton, which is a French company, we are very close by which has enabled us to have a high degree of interaction in the set-up on the ground. Speaking the same language is a big advantage for technical questions and software developments.

SLU: Is there competition between the brands that you distribute.

Jérôme Bréhard: No, our brands complement each other. If you think about Robe and Ayrton for example, these are two complementary product lines that meet different needs. Ayrton is the first company in the world to develop a moving head LED and its technical solutions are different to Robe's.

Robe is very well established and develops sales projectors in very large quantities. It takes fewer risks than Ayrton, a manufacturer that deals with more original, higher risk products. It has the courage to manufacture something really different based on a crazy idea from its designer Yvan Peard.

Today we have a complementary, quality range which is comfortable and I have no intention of taking on other brands.

SLU: What has been the development in sales with Ayrton products?

Jérôme Bréhard: With the arrival of the Ice Color and Wildsun, their sales doubled in 2011 compared to 2010. In 2011 we sold more than a hundred Ice Color 500 units, two hundred Ice Color 250 and three hundred Wildsun 500 units in a little over six months, since the products didn't come onto the market until June.

This year we tripled the sales of the entire range of Wildsun500, Ice Color, Versapix and Rollapix, which came onto the market in September. I'd like to thank Christian Lorenzi and Xavier Demay from the Dushow Group who have really placed their belief in Ayrton since last year and actively participated in its development by investing in Rollapix, Versapix and Wildsun before they even existed. Phase 4 and Impact also invested in these products and many installation projects involve Arcaline and Ice Color.



Illumination of the facade of Les Quatre Temps shopping center (Paris La Defense), lighting design by Voyons Voir, performed by VD by using 500 MODULED 150 RGB projectors.

SLU: How do you yourself position Wildsun500 on the global market?

Jérôme Bréhard: These are the wash moving head LEDs with the best consumption / lighting power ratio and therefore the best performance due to the heat pipe cooling system, thanks to the drive and optics quality. This is an original product range and that is what makes Ayrton stand out from the crowd.

Alain-René, the most scientific of the sales managers

Alain-René Lantelme claims responsibility for everything except the box. He knows the lighting products and structure of the catalogue like the back of his hand, with each of their technological features and fields of application. He is the ultimate weapon at the head of his sales team, all chosen for their technical expertise in the field and their market knowledge.

SLU: Alain-René, what is your role in the company?

Alain-René Lantelme: I have a supervisory role. I am responsible for sales in the lighting and structure section, so I manage the sales and I take part in the negotiations with service providers and installers, at their behest.

We have a team of 6 sales people. Jean-François Vivier for the Western region, Benjamin Dechelette for the East, Fabian De Brucker for the South, Yannick Danguy and Vincent Billiard for the Greater Paris area and Jean-Philippe Jossierand, who has a national role dealing with more fixed architectural installations assisted by Damien in the office. We also have three young women in the sales administration team who assist the sales people: Aurélie Foucher, Cindy Gharby and Rosy Pignot, managed by Sandrine Brisach.

The role of the sales manager is to take charge of general policy and make sure that the targets are met. It therefore involves really knowing the market and putting yourself out there to see what's new. There is also a dimension to the job that requires you to develop and maintain relationships with suppliers.

There is a technological aspect as well. You can ask questions to get feedback on the products and pricing in the short and medium term. Axente does not specialise in budget products at all, favouring effective solutions at the right price.

We have high quality products and products with highly competitive prices, but never compromise on quality and service.

SLU: Your slogan, Importer of Solutions - what does that mean exactly?



On the tour Julien Clerc Symphony, the famous French lighting designer Dimitri Vassiliu chose to place RollaPix and WildSun 500 C on stage for their beautiful light and also their silent operation. Contractor: Dushow.



Iway is a formula 1 simulation center in Lyon. Facade highlighted with Arcaline Ayrton. Lighting Designer: Bruno Guillemain. Contractor: Audio Visual Solution.

The Lighthouse of Vernezay illuminated by LED ramps Arcaline Ayrton.

Alain-René Lantelme: We offer a very high service level before, during and after the sale. Our sales people have a strong technical background and are able to give precise answers to customers' questions. All the sales people have a relatively complete kit in their car. We are always prepared to let customers test the equipment, as long as stock is available and we have a large stock of demo equipment: worth hundreds of thousands of Euros in fact! We feel that we definitely have a high level of technical expertise at Axente and our customers seem to think so too. (Laughter)
We don't just sell cardboard, so we spend a lot of time showing and explaining what we sell.

SLU: When a brand enters the fold at Axente, do you take on the whole range or only the part that interests you?

Alain-René Lantelme: When we decide to distribute a brand exclusively here in Axente, we are fully invested and take the entire catalogue.

SLU: Who exactly is responsible for producing the catalogue?

Alain-René Lantelme: It's a joint effort. Every year we share the brands out between us, Jerome Bréhard of course, Sandrine, the product managers, the sales people and myself. There are about a dozen of us who work on it. The prices, for example, are updated and checked by Sandrine and we have two graphic designers who take care of the DTP. It can be downloaded from our website as you know and is available in print over some 500 pages and that's just for lighting and structure.

SLU: Do you also get involved in customer events?

Alain-René Lantelme: Yes, we like to participate in local events, open houses or birthdays. We bring a material and human contribution in this case. On the 25 year-anniversary of Spectaculaire, we provided the material and at their request I gave them a little talk on LED products.

SLU: Do you have a preference for Ayrton because of their proximity?

Alain-René Lantelme: We apply the same treatment and care to all brands. Our basic aim is to offer the best product to the customer. We do demos and the customer is king in all cases.

Fabian, listening to the lighting designers...

Fabian De Brucker is the salesman for the South of France for lighting products and structure. He has a special relationship with the stage lighting designers, based on trust and a shared



passion for beautiful lighting.

SLU: Fabian how do you approach lighting designers?

Fabian De Brucker: They are very fond of new things and especially how they can be used. My role with the designers is to present the prototypes and even to make improvements to any negative points. This requires me to have all the information and prototypes from the manufacturers, which is complicated when you are an importer as the brands often do not inform us about their prototype designs. Two years ago I approached Yvan Péard and therefore Ayrton and we really connected well. As he is a manufacturer, we were able to meet the designers and design products that really meet their needs.

SLU: Do you adopt this approach for all the products in the catalogue?

Fabian De Brucker: In theory yes, but in reality it is not the same for the other brands. I offer the finished products, unlike with Ayrton where I can present the prototypes, and Yvan is very attentive to the feedback. This is not a choice, it is just a fact. But I can understand why a manufacturer does not want to reveal his prototype designs to his customers.

SLU: Are there any products that were changed once the designers had had a look at them?

Fabian De Brucker: I would say so, there are definitely things that have been changed. This is what allows Ayrton to move forward.

SLU: Do you have any spontaneous requests?

Fabian De Brucker: No, it all takes place during the conversations. I listen to their needs. I always try to go to at least one date of their concerts.

Wildsun: The star of the stage and TV scenes

SLU: Which Ayrton products really cry out to the designers?

Fabian De Brucker: It's the Wildsun500 version C that really has what it takes to create beautiful pastels through a 4000K white. Jeff Ravitz, the lighting designer for Bruce Springsteen, Fred Dorieux recently for the show 'The Voice' and Dimitri Vassiliu have all used it partly for this reason. They would obviously like to have a faster zoom, however the quality of the light is exceptional thanks to very precise and oversized French optics.

They also love its flux. The Wildsun 500C gives more light and a very beautiful light at that. This is what they are saying.

SLU: Which products do you find you are competing with?

Fabian De Brucker: We play the role of supplying products that the designers really need. Rollapix are one of a kind, for example.

Obviously with a wash like the Wildsun, we are competing with the established products on the market and a supplier will prioritise their own products. That is understandable.

SLU: With which designers do you have this kind of privileged contact?

Fabian De Brucker: I have a close relationship with Jean-Philippe Bourdon, Laurent Chapot, Alain Longchamp, Fred Peveri, Dimitri Vassiliu and Régis Vigneron.

Dimitri Vassiliu, for example, does the lighting for many artists in France and is very keen to keep abreast of our developments, which is very motivating.

He used a lot of our products in his latest projects such as Adam and Eve, Julien Clerc, etc. And these products were conceived from our discussions, like Rollapix for example, as he wanted a small motorized tilt strip light placed at a low height in front of the stage and to light both the audience and the set alike. Ayrton responded very quickly.

Rollapix was developed in no time at all. We are talking about just a few months for defining the specifications, producing the prototypes and launching a pre-production run. 50 units were made and purchased by Christian Lorenzi and Xavier Demay from the Dushow Group and we made a promise to guarantee their exclusivity for six months.

The Rollapix is now on the market.

SLU: So if I am a designer, do you have any prototype designs to let me in on?

Fabian De Brucker: Ayrton is going to manufacture much lighter and faster devices. But I can't tell you any more, you're not a designer after all! (Laughter)



Royan Cathedral illuminated by the lighting designer Stéphane Viallon with Ayrton IceColor 500. Contractor: Atelier Lumière. Photo Leo Ferras.

Jean-Philippe, at the offices of the consultants and the architectural lighting designers

Jean-Philippe Josserand manages the architectural projects. He advises architects, consultants, lighting designers in the pre-project stage throughout the whole of France.

SLU: Jean-Philippe what is the scope of your work in this area and who are your points of contact?

Jean-Philippe Josserand: The people I meet at the pre-project stage are generally the architects. The more technical guys are the lighting designers and once the projects are under way, the electricians, installers and contractors, where necessary. We have solutions for outdoor lighting for both public and private buildings: a town hall or a shopping centre, for example. Indoors, we can work on a museum project or illuminate the entrance hall of a company headquarters or shops.

We consult on the equipment to use from the design stage, which can then be adapted to achieve the desired result.

We also help the installers as they do not always have the same experience with DMX control, or with networks in large installations and we deliver our products with the first programming. In most cases, Axente takes charge of the programming for the first show.

SLU: How many people are we talking about?

Jean-Philippe Josserand: There are around 20,000 architects in France. Axente is also a partner member of the ACE, the association of lighting designers, with 80 members. They specialise exclusively in the designs they carry out in the architectural field.

We can also estimate a similar number who are not part of the association, or who come from the stage and the world of the performing arts and are occasionally involved in fixed projects. There are many more consulting firms that deal with lighting.

My job is to try to get them to recommend our products in the project dossiers. The installers can propose the equipment they recommend for public contracts. So to be recommended is great, but to go through with the recommendation is even better (laughter).

SLU: What is your approach?

Jean-Philippe Josserand: We are present on shows like Lumiville and I present the latest developments to the lighting designers through the ACE association. They call me when they have a lighting idea and are looking for the right products. I have Pulsar and Philips Color Kinetics complementary products in the catalogue that are 100% suited to fixed installations, as well as Ayrton which is more general.

SLU: What are the leading products in architectural lighting at Ayrton?

Jean-Philippe Josserand: For the new series it's the Arcaline that works in RGB + white. And the range extends right to the entry point with a 50 Arcaline that should arouse the interest of the lighting consultants and the Ice Color 250 which fits very well into a fixed environment.

SLU: What are the best examples of Ayrton products in completed projects?

Jean-Philippe Josserand: There was the Quatre Temps in 2006 where nearly 500 Moduled units were installed to illuminate the front of the shopping centre.

More recently, this summer, we lit the André Blondel barrage at Donzère-Mon-dragon (Client: C.N.R. Lighting design: H.T.E.) with hundreds of RGBW Arcaline striplights and a dozen Ice Color units. This is a monumental barrage on the Rhone and we illuminated the outside of it.

There is also the Titan crane on the Ile de Nantes (Client: Nantes City Council). A classic crane dating back to working port of the city of Nantes. Virginia Voué (lighting designer) chose 150 Moduled RGBs and variable whites, among other projectors for the illumination.

SLU: What do they like about this manufacturer?

Jean-Philippe Josserand: On an architectural front, Ayrton has a very innovative side. It was the first to associate the white with the RGB for example. RGB in a multi-chip is still not commonplace yet and a multi-chip that integrates white is really quite unusual.

SLU: Are there competitors?

Jean-Philippe Josserand: We cannot really talk about competition on a product by product basis. Even though you can find twenty alternatives to each of our products, there is always the illumination level, the quality of the colorimetry, the beam angle control that really make all the difference.



Jérôme Bréhard Managing director

Jerome got his degree in EMC engineering and on returning from England where he had just finished his studies, he took a job in the after sales service department of Robert Juliat, Ile de France, 17 years ago, alongside Jean-Louis Pernette and Christian Rezgui. He maintained Avab organ stops for a year and a half before leaving for Impact Diffusion where, as sales manager, he was put in charge of distributing MA Lighting and Prolyte products. Jerome is brilliant with an insatiable curiosity for technology of all kinds and a big fan of robotics. He built up the distribution department by taking a number of emerging high-tech brands in the fields of LEDs, lighting control and sound. When the company decided to go it alone five years ago under the name of Axente, he was the natural choice for Managing Director.



Alain-René Lantelme Sales director

Alain is a walking encyclopedia. Mother Nature has gifted him with an exceptional memory and a boundless curiosity. He knows everything there is to know about lighting technology, including all the catalogue products and beyond. He started his career at Audiocom and Masterlight and then moved into distribution with HTD before joining Impact diffusion in 1998. He is head of sales in the lighting and structure department and manages the sales and technical teams.



Fabian De Brucker Sales manager for the south and relations manager with stage lighting designers

Fabian began his career at the age of 16 at a local radio station. Indulging his passion for all things technical, he went to work in a Spiral Flash company in Mayenne in '86. He learned everything he knows about sound, lighting and video with Christian. He met with suppliers, including Martin with Jean-Pierre Garnier in 1995, for whom he became the salesman for the South. He worked closely with the big providers and by attending concerts where the products were in use, he was able to meet lighting designers and to gain their confidence. He quickly became the sales manager for the large business accounts for the entire southern region. In 2007, he left Martin to join the Axente adventure in the same role: sales manager for the south and relations manager with the lighting designers.



Jean-Philippe Josserand Head of architectural projects

With 20 years of experience and a member of the ACE, Jean-Philippe is passionate about cultivating his knowledge by following the evolution of the industry in all its guises: legislative, technical and environmental. Before joining Axente in 2005, Jean Philippe worked in the lighting domain both in a technical and architectural capacity, specialising in fibre optics. He first spent eight years in a small company called Tectron, then seven years at Philips. When he arrived at Axente 7 years ago, he adapted naturally to the world of light emitting diodes and he has a particular passion for interior and exterior building lighting.



Guillaume Perrier Product Manager

Guillaume embarked on his career 16 years ago, with a road plan to welcome Tina Turner at the Palais des Sports in Lyon. He was then hired on a few tours, as well as some fixed resident positions. Guillaume has one key advantage - he speaks very good English and acts as an interface that learns the technology quickly. He then started freelancing and continued his career in Switzerland, where he became a technical and artistic lighting technician. He returned to France with a strong background in consoles and media servers. He was hired by companies that outsourced the technical & creative parts to him on sites such as amusement parks. He later moved into fixed installation by creating Boreal Vision with a team that of up to 21 people. In 2006 he joined Axente as product manager.

SLU: Do you feel the appeal of a green approach?

Jean-Philippe Josserand: It was felt enormously with the emergence of LED and some municipalities have been seduced by the very smooth sales pitches on lighting levels, particularly for lamp posts and the life span of LEDs, only to be later disappointed. But this is not our market. It is important not to lose sight of the fact that an LED projector is still electronics with a power supply that is always the weakest link in LED projectors.

SLU: So what is the lifespan of a power supply? Do you have any figures for fixed systems?

Jean-Philippe Josserand: I can't really speak in a systematic way, but what is certain is that it is possible to replace the power supply when it fails in our products. They are not put in the bin, which is not the case for all brands.

Let's take the example of Quatre Temps that we talked about earlier. There were maybe thirty Moduled units that were returned to the after sales service in Axente for restoration, which were then reinserted into the front of the building and spread over a tower.

SLU: What criteria do the designers apply for the selection process?

Jean-Philippe Josserand: The first priority is always the end result and the second is the durability of the equipment in order to keep the Client happy. So designers will choose products that guarantee reliability and maintainability and Ayrton also has a pretty good reputation.

SLU: Have you had any real complaints?

Jean-Philippe Josserand: A slight lack of flexibility for variations on the product range and special products. They would ideally like an Ice Color that is smaller and more compact than the 250, a Color Ice 125, for example, that could light a small column or a window frame that does not require a large projector.

Architecture also requires custom finishes and colours defined by the Ral colour chart.

SLU: Which members of the Axente team do you work with on a daily basis?

Jean-Philippe Josserand: I actually work with the entire team. I work with the product managers to find out about any new developments or for technical clarifications and the sales people as I am in their network. When they are involved in relatively long-term projects, they send me the files. And finally, I also work with the after sales service which is the same for everyone.

Guillaume, Product Manager Hot Line, consulting, demos and training

Guillaume Perrier is the Product Manager for Axente. He is also the official Beta Tester for Grand Ma, Coolux and Arkaos - in other words his opinion is valuable and meaningful in terms of control.

SLU: Guillaume, what role do you play to support the sales team?

Guillaume Perrier: They sometimes have queries that they are trying to answer or they may be attempting to advise customers on matters that stretch their knowledge. They then contact



A part of the Axente's team.

me for the consultancy part. I get involved on site or by telephone.

Technical support can also come in the form of assistance by phone, either because they do not know how to use the equipment or because there is a fault. We are the front line and serve as an ante-room for the after sales service for the diagnosis.

I am also directly involved in consulting for very specific queries on the console, the media server and sometimes the projectors. Customers seek our advice in addition to the technical sales team.

Technical support also means training the customer or rather helping them to get to grips with the product. This is particularly the case for MA consoles and Coolux media servers. It is an important position.

SLU: What kind of relationship do you maintain with the brands?

Guillaume Perrier: We are often approached by brands seeking our advice. I am also an official beta tester on three brands - Ma Lighting, Coolux and Arkaos, which allows me to keep on top of all their projects in the pipeline. And I give them any feedback and any expectation from the customer, including any things that are missing or areas for improvement.

The suppliers often seek the opinion of the end customer and our opinion which is based on experience. They are looking for an idea of what might be on the market for a specific type of product, especially with regard to consoles and media servers. New versions of the software become available every five weeks. We let them know what is badly lacking and what does not work.

SLU: And Ayrton?

Guillaume Perrier: Given the proximity of Ayrton R&D, I get involved at the product prototype stage, giving my opinion on the light and colours, the usage and the functions not to be left out. I also carry out the first tests on the pre-production runs before the demos. I'm kind of the first user of Ayrton products in direct contact with their designer Yvan Peard.

We know that Ayrton could not find a more efficient distributor on the French market. Conversely, with Ayrton, Axente has a range of very original projectors that are reliable, efficient and extremely attractive. When there is passion and technological rigour driving two teams, it is inevitable that they end up going in the same direction, very far and right to the top.

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Now, You Can Play
the City Lights



icecolor
1000

ICECOLOR 1000 3G LED STATIC LUMINAIRE

ICECOLOR 1000 has been designed for large spaces giving its overall flux in excess of 20,000 lm, unequalled on the market. It comes fitted with eight 100 watt RGBW LEDs modules individually controllable. A complete range of filters allows the user to adapt the projector to its environment. With an IP65 ingress protection, it can be used indoor or outdoor and can be controlled remotely through its integrated wireless DMX receiver.



AYRTON

Light in action

WASH LED MOVING HEAD LUMINAIRE

AYRTON «WILDSUN 500S»

There are now three models in the Wildsun 500 moving head wash family of luminaires. The 500C, the first in the range, RGBW with a 11° - 45° zoom and an average white of 4000K has met with true success and has already been adopted in the Dushow and Phase 4 parks, among others, and has also been included in the kit for the Bruce Springsteen tour with Morpheus. There is also the 500S (S for Stage), RGBW, with a tighter 8° to 40° zoom and a cooler white at 6700K to provide extra pep to the beams. It is this model that we have chosen to look at more closely.



Text and photos
www.soundlightup.com

There are also the K, ultra bright, white light, with one (very high power) 3000K warm white diode under each optic for the K3, a single cool white 7000K diode for the K7 and four white chips, two of which at 3000 K and two at 7000 K for the KD, which offers a range of whites.

PRESENTATION

This is quite an impressive device, not necessarily in line with the current trend. There is no miniaturisation here, one senses that the focus was on the effectiveness of the device: a bulky head with a large diameter,

obviously oversized optics and a large and sturdy moving head bracket happily overspilling its base.

Its weight also tells us that we are dealing with one serious piece of equipment: 23 kg. The aluminium and steel plates are omnipresent, the sign of a very robust construction. The plastic covers are particularly well-finished with the curved profile and sleek design that we have become accustomed to with Ayrton.

But the most striking aspect after the first glance is the rounded head, with 31 large crystal eyes in the front and a curious system of black fins hiding behind, through which we can see a tangle of copper and aluminium... We will return to this in more detail later.

As mentioned above, the Wildsun 500S is part of the moving head Wash family. It is actually a special version of the Wildsun 500C, the first in the series. Just like its twin brother, it has a zoom and a colour mixing system for mixing red, green, blue and white, but the Wildsun 500S stands apart for its significantly narrower X5 zoom (8° to 40° according to the manufacturer), and also and especially the choice of a white light source with a 6700K rating, instead of the 4000K of its alter-ego. This version seems to be designed for stage use (hence the «S» for «Stage»): a narrower zoom in effect means an increased range and the cool white is intended to reinforce the impression of brightness of the projector.

The machine has 3 concentric rings of LED light sources plus a central LED. These 4 sets can be controlled independently or in symbiosis, which adds a very interesting «effects» dimension to this projector's capabilities.

It is equipped at source with a nearly universal wireless control system, and the firmware may be updated if necessary through the DMX line, via a dedicated housing.

There are 3 DMX control modes on offer, allowing the user the choice of 17, 24 or 49 DMX channels for a more or less evolved level control. Lastly, what we find on unpacking deserves some attention: a sturdy brown cardboard type sock protects the camera ... And a nice surprise inside, in addition to the variety of accessories such as the pair of «Omega» hooks, a safety sling and user manual in English/French, there is the projector comfortably housed in a black casing moulded perfectly to its shape. The foam protection, which comes as standard, is stamped with the Ayrton logo and is reusable and designed to facilitate the manufacture of flight cases, while providing optimum protection for the machine. A bright idea that will delight providers. (photo 1 & 2)

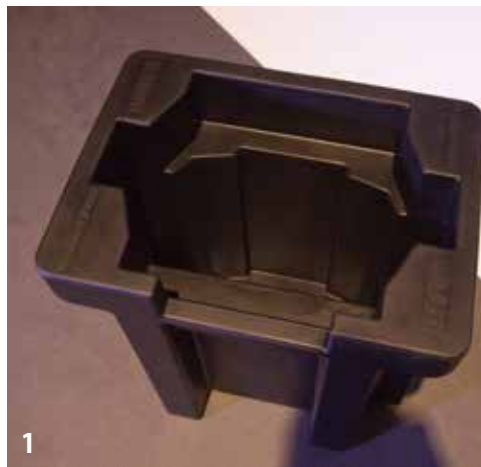
UNDER THE HOOD THE HEAD

This includes the essential functions of the device.

A thick plastic (polycarbonate) glass, housed in a rounded wide black plastic cover protects the full light output. The closed design of this set-up means that the optical system is kept free of dust. 4 screws allow for easy removal of the casing, thereby uncovering the movable plate of the zoom, which houses the 31 LED sources that are visible from the outside of the device. (photo 5)

Three small stepper motors, distributed at 120 degrees, allow the movement when displacing this plate, while 3 sliding guides ensure perfect alignment of the zoom lens with the collimators located underneath, regardless of the position of the plate. Indeed it appears that the zoom lenses fit into the collimators to form one piece when the zoom plate is in the lowered position (narrow zoom). The manufacturer did not skimp on the mechanical solutions used for the adjustments: solid guides are provided with precision ball cages sliding along large diameter calibrated rods, while the motors are «soft» mounted. (photo 3 & 4)

As for the collimators themselves, the primary optics that channel



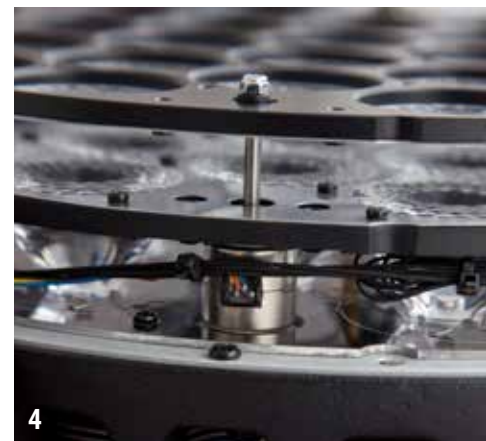
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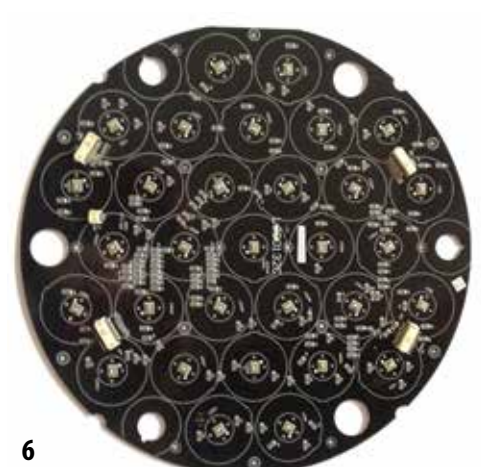
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5



6

1&2. Packaging foam provided directly for a flight case. The machine is delivered in a carton containing this famous damping foam that is specially moulded to the shape of the device.

3. Zoom ball guides. One of 3 precision systems that allow for the guidance of the zoom movement. Distributed over 120 degrees, they ensure the alignment of the zoom lens with the collimators during movement. Clockwork precision!

4. The zoom motors. There are 3 micro stepper motors that ensure the movement of the zoom plate. Their run is reduced.

5. The light output. 4 screws to remove the front cover and the mechanics of the device are revealed: 31 optical systems in 2 parts, with unusual dimensions (45 mm in diameter). The front part is mobile and constitutes the Zoom effect.

6. LED Card. The (MCPCB) board, equipped with 31 Ostar RGBW multi chip LED by Osram.



7



8



9



10



11

7. *The Salad Bowl!*
The cast aluminium frame, which is the backbone of the head of the device: a very attractive piece!

8. *Head fan.*
A single fan cools the heat pipes that are in direct thermal contact with LED sources. It is isolated from the frame by «silent-blocks» to reduce vibration and noise.

9. *The heat pipes.*
In the innards of the rear part of the head, well protected in the finned frame, the famous copper heat transfer pipe cooling system that is joined to thin aluminium strips is cooled by an efficient fan: high-tech... we told you so!

the naturally wide beam of the LED sources are very unusual pieces, consisting of 45-mm-diameter blocks. They are grouped and maintained on a support plate machined from a single piece, which is directly attached to the head's aluminium frame. And finally, when removing the plate and all associated collimators, the 31 Ostar high-power 4-colour LEDs from Osram are revealed, combining red, green, blue and cool white in a single housing. This device totals 124 LED units or «chips». The 31 «multi-chip» LEDs are welded directly onto a single round MCPCB (Metal Core Printed Circuit Board), with an aluminium core (or similar material), in order to allow optimal heat transfer between the LEDs and the cooling system. It is an unavoidable fact, LEDs get hot! Very hot in fact, since in general nearly 75% of the power consumed is transformed into heat. And it is well worth knowing how to dissipate the heat if you want the LEDs to last. (photo 6)

Moving to the other side the head, which is dedicated to the cooling system, it is here that we see the manufacturer's know-how on this point.

The rear frame, one perforated piece with numerous large fins, somewhat resembles a salad bowl. It is made of cast aluminium painted black. (photo 7 & 9)

It provides a protective layer enclosing the actual cooling system, which consists of a stack of thin layers of aluminium in which copper tubes are embedded. This is the heart of the cooling system: radiators known as a «heat pipes» using the principle of heat transfer through pipes and coolant. Three heat pipes of this type form a ring,

each representing a 120° segment of a circle. This system, now standard in certain high-tech products (including the IT world), is still very anecdotal in the field of lighting. It works as follows: a phase-change liquid/gas mix is sealed in hermetic tubes, one end of which in turn is in contact with the heat source to be cooled (in this case the board supporting the LEDs, fixed in turn to a thick aluminium plate forming the base). Under the influence of heat, the mixture contained in the tubes becomes gaseous and therefore «pumps» the calories. It then disperses in the pipes to the other end where the fins are installed, which in turn are ventilated and cooled by the single fan fitted to the device head. This cools the mixture, which becomes partially liquid and returns to the heat source, and so the cycle continues. (photo 8)

This closed-circuit system should not require any special maintenance. The fan used for the heat pipe is mounted on flexible fastenings in order to avoid transmitting its vibrations to the device and to reduce noise.

THE BASE

On one face, the base comprises a connector panel, equipped with classic XLR 3 and 5 DMX IN and OUT connectors, the power switch, fuse holder and a retractable antenna system for the wireless DMX solution installed on the device at source: a very useful little refinement. (photo 11)



12

10. *The power supply.*
The AYRTON moving head luminaire has a dedicated electronic supply, consisting of 2 separate blocks (in the centre of the base).
11. *The connectivity of the device.*
The basics are there: Direct power supply, XLR 3 and 5 pin In and Out DMX connectors on the bases, on/off switch, fuse holder, and the retractable antenna for the wireless DMX system, well protected against impacts in its housing.
12. *The electronics.*
Almost all of the printed circuit boards are housed in the base of the device with easy access. The motherboard, complete with display and buttons, is at the bottom, capped by a green card which is the wireless DMX module. The 4 boards at the top are the drivers for the 4 light-rings containing the LED sources.



13



14

13. *One arm.*
Traditional, the TILT movement is achieved by a toothed belt drive and wheels in a high gear deceiver, controlled by a recessed motor and a printed circuit board for controlling the zoom function.
14. *The other arm.*
This arm houses the PAN and a relatively simple printed circuit board. To be noted that the cables that go to the head cross through a Teflon conduit to avoid any risk of abrasion during repeated rotations.

The front panel on the base is dedicated to the man machine interface. In addition to the colour LCD graphic display that really looks great, albeit a little small (but the device menu is still legible), there are 6 keys for the menu navigation and a dedicated button to start the display when it is running on battery power... As the device has this accessory integrated, the settings can be selected in a hurry on removal from the flight-case. We also notice a tiny hole for the microphone for the audio trigger function for the recorded effects.

The 2 carrying handles on the base have a nice rubber finish and the underside reveals a plate for fixing a pair of Omega clamp rings. This plate can be removed, when, for example, the device is mounted directly on a standard support with 4 screws. The interior contains the motherboard/display, onto which a small green card is grafted: this is the OEM Wireless Solution module. On removing this, we discover 4 «driving» cards used to control the four LED rings independently. Then the electronic power supply is located at the centre, consisting of 2 distinct blocks, housed on both sides of the PAN

NARROW BEAM

	MEASUREMENT ON 2 AXES (at 5 metres) Illumination in lux Hot				Average illumination per light-ring at 5 m (lux)
	Left	Top	Right	Bottom	
Centre	8450				8450
Light-ring 1	8120	7960	8020	8070	8043
Light-ring 2	7100	7050	7100	7260	7128
Light-ring 3	5920	5650	5780	5680	5758
Light-ring 4	4440	4140	4280	4250	4278
Light-ring 5	3100	2910	3050	2940	3000
Light-ring 6	2050	1870	1999	1840	1940
Light-ring 7	1260	1190	1270	1170	1223
Light-ring 8	769	736	807	712	756

Measurements at I/2
Beam diameter: 0.81 m
Corresponding angle: 9.26°

Illumination at the centre when switching on: 9126 lux

Illumination at the centre when hot: 8450 lux

Flux when switching on: 3917 lm

Hot flux: 3627 lm

Measurements at I/10

Beam diameter: 1.56 m

Corresponding angle: 17.68 °

Illumination at the centre when switching on: 9126 lux

Illumination at the centre when hot: 8450 lux

Flux when switching on: 6727 lm

Hot flux: 6229 lm

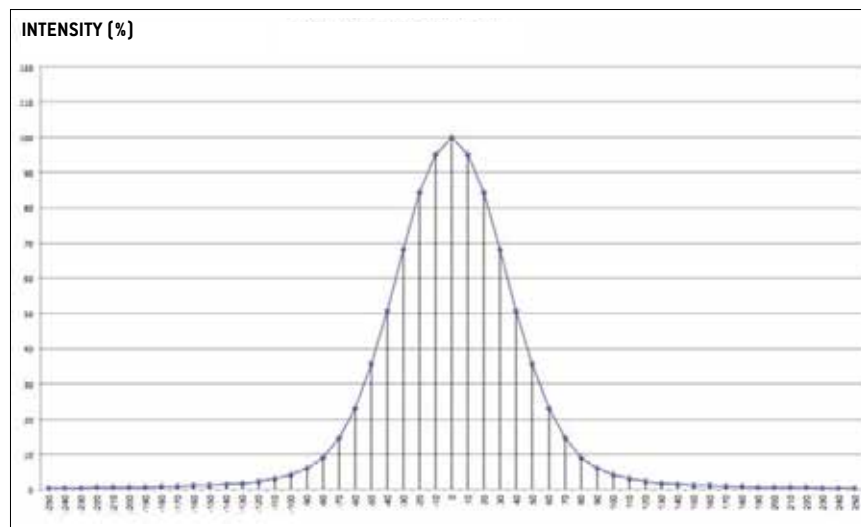


Figure A - Light intensity curve for the narrow beam

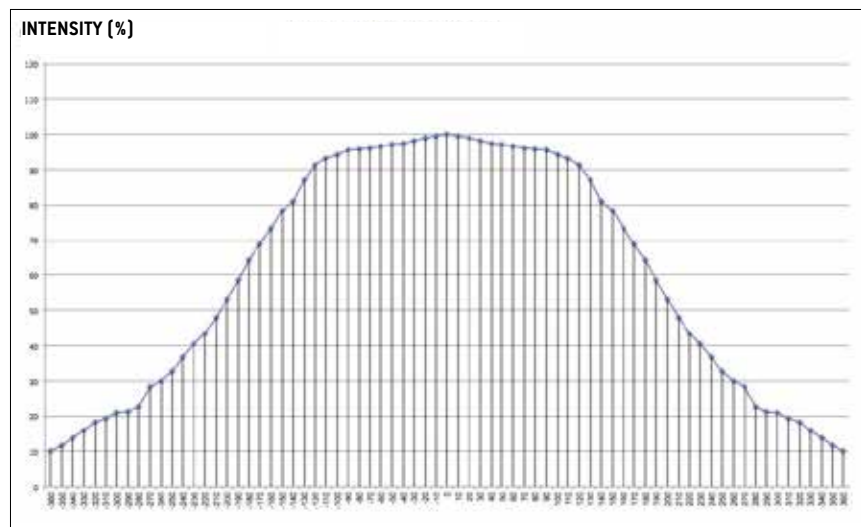


Figure B - Light intensity curve for the wide beam

axis. There is no motor in the base, they are located in the moving head bracket. The two small fans are also «soft» mounted to minimise the transmission of vibrations to the frame. (photo 10 & 12)

THE MOVING HEAD BRACKET

The arms of the moving head bracket are quite imposing, even though the rounded covers soften the overall look. They definitely have a large diameter head to bear.

But the unusual width is also explained by the integration of PAN and TILT stepper motors, one in each arm. And the motors used are visibly oversized. Could this be the harbinger of fast displacement speeds? Testing will tell... The movement is achieved in a conventional manner via a toothed belt and a crown in a high gear deceiver. There is also a motor control board in one arm for the zoom function and the PAN and TILT motor control board is housed in the other. (photo 13 & 14)

TESTS

The tests are performed according to our test protocol: dark, air conditioned room, projection on a white target, increased to a total diameter of 5 metres at a projection distance of 5 metres.

Brightness and uniformity

In narrow zoom mode, the i/2 angle is measured at 9.2°, which is slightly more than the data provided by the manufacturer (8). The beam transmitted is then particularly intense and sharp. (figure A)

In wide zoom mode, the i/2 angle is 44°, which is above the manufacturer's value.

The uniformity of the beam is very good, regardless of the zoom position selected. (figure B)

The brightness of the projector is remarkable given its relatively low power consumption (less than 500 watts). The machine's optical system obviously delivers excellent performance, as a zoom typically has very high flux consumption. The concept of «Green Power» therefore takes on its full meaning.

As with any LED source, the source temperature warms up over time and a decrease in brightness is to be expected (we call this «derating»). The Wildsun 500S, left with all sources burning at 100% capacity stabilised quickly, showing a decrease in brightness of less than 8%, which is a very big plus point: guaranteed brightness stability over time. (figure C)

Colours and mixtures

The projector, fully equipped with LED sources, has a RGB colour mixing additive by default, coupled with a white light source. Compared to an equivalent discharge lamp-type light source with a conventional subtractive CMY, some of the primary or combined colours will be brighter, particularly in the case of Green, Blue, Magenta and Cyan. In

Born to be wild



wildSun

WILDSUN 500 "S" LED MOVING-HEAD LUMINAIRE

Created to meet the entertainment industry's needs, the WILDSUN 500 "S" was designed with a narrow beam minimal angle, as well as deep colours and high centre beam intensity. The choice of colours was made in collaboration with LD and was aimed at achieving saturated hues. The stringent selection criteria for the LEDs used on the WILDSUN 500 "S" also allow for the greater homogeneity of luminaires. It enables the individual control of each light-ring with the option to only use the central LED.



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Light in action

WIDE BEAM

MEASUREMENT ON 1 AXES (5 metres) Hot					Average illumination per light-ring at 5 m (lux)
Centre	Left	Top	Right	Bottom	
Centre	400				400
Light-ring 1	398	398	398	398	398
Light-ring 2	396	396	396	396	396
Light-ring 3	393	393	393	393	393
Light-ring 4	390	390	390	390	390
Light-ring 5	389	389	389	389	389
Light-ring 6	386	386	386	386	386
Light-ring 7	384	384	384	384	384
Light-ring 8	383	383	383	383	383
Light-ring 9	382	382	382	382	382
Light-ring 10	377	377	377	377	377
Light-ring 11	373	373	373	373	373
Light-ring 12	365	365	365	365	365
Light-ring 13	348	348	348	348	348
Light-ring 14	324	324	324	324	324
Light-ring 15	313	313	313	313	313
Light-ring 16	293	293	293	293	293
Light-ring 17	275	275	275	275	275
Light-ring 18	257	257	257	257	257
Light-ring 19	234	234	234	234	234
Light-ring 20	213	213	213	213	213
Light-ring 21	192	192	192	192	192
Light-ring 22	174	174	174	174	174
Light-ring 23	162	162	162	162	162
Light-ring 24	147	147	147	147	147
Light-ring 25	130	130	130	130	130
Light-ring 26	120	120	120	120	120
Light-ring 27	113	113	113	113	113
Light-ring 28	90	90	90	90	90
Light-ring 29	85	85	85	85	85
Light-ring 30	84	84	84	84	84
Light-ring 31	78	78	78	78	78
Light-ring 32	73	73	73	73	73
Light-ring 33	64	64	64	64	64
Light-ring 34	55	55	55	55	55
Light-ring 35	47	47	47	47	47
Light-ring 36	40	40	40	40	40

Measurements at i/2
 Beam diameter: 4.10 m
 Corresponding angle: 44.58°
 Illumination at the centre when switching on: 432 lux
 Illumination at the centre when hot: 400 lux
 Flux when switching on: 4760 lm
 Flux: 4408 lm hot

Measurements at i/10
 Beam diameter: 7.2 m
 Corresponding angle: 71.51°
 Illumination at the centre when switching on: 432 lux
 Illumination at the centre when hot: 400 lux
 Flux when switching on: 7463 lm
 Hot flux: 6911 lm

practice, this notion is true with luminosities measured respectively at 42%, 4.6%, 16% and 47% of the total light emitted by the projector (all RGB + white light sources).

The red is deep (625-632 nm), the green intense (521-527 nm), the blue relatively dark (449-453 nm) but still bright (data collected from the manufacturer, from the OSRAM data sheet). As for the white, it provides the necessary power for many lighting applications by itself. Moreover, the choice of cool white at 6700K as 4th source is unique to the Wildsun 500S. If it favours the impression of light power experienced by the human eye, it can come at the expense of a colour palette that is rich in warm hues and ambers.

The «multi-shadow» adverse effect generated by the beam of a projector equipped with multiple sources is naturally present here, although only slightly.

The quality of the colour mix is very good, the colours are uniform and do not have the tendency to vary on the periphery of the beam. The colour palette that can be obtained is very rich and the addition of white allows for the most subtle of pastel shades.

Effects

The dimmer is progressive (see its response curve). It is very good at low levels, without any visible plateauing effects (it is controlled in 16-bit mode). (figure D)

The «Strobe» function has a maximum throughput of 25 Hz (which is normal given that the function is controlled exclusively by electronics). It has burst flash effects.

Independent control of the LED light-rings (3 concentric rings + the Central LED) expands the scope of application of the device. It is possible to work the two-colour beams for example, or even to use the central LED exclusively to produce the discreet «in view» cushioning. The control channels are dedicated to the animation of these LED light-rings, offering the choice of several light-chasers for which it is possible to adjust the speed and cross-fading. An «effects dimmer» can even mix fixed CMY colours and dynamic effects or the pre-programmed colour «presets».

As the device also has a «virtual» colour wheel, with different temperatures of white colours, plus a handful of specific colours in order to offer bi-colour combinations with only some of the LED light-rings coming into play. That said, on our test model, the white colour temperatures had not yet been calibrated, and pre-recorded colours do not match the references of the Rosco or Lee filters.

A specific DMX channel manages a dynamic variation of colour in cross-fade and the running speed is variable.

Zoom: impressions

Our measurements reveal a zoom range that varies from 9.2° to 44° (angle measured at i/2), which is a good 5 X ratio.

The narrow beam is very intense, well defined with no leakage. The wide angle lights over 70° we keep its value at i/10, the threshold is taken as the «natural» limit of the visual perception of the beam. In this configuration, the intensity curve is a gentle slope with a slight

General specifications	
Length	305 mm (depth of the base)
Width	446 mm (width of the moving head bracket)
Height	544 mm (head at 90° angle)
Weight	22.8 kg (manufacturer data)
Machine type	WASH-type moving head luminaire
Voltage and power consumption	110-240 V/50-60 Hz - 480 W
Weather protection	NO, IP20 protection classification
Cooling system	Forced ventilation
Checks	Via DMX512 - Integrated DMX Wireless System
Number of DMX channels and DMX Modes	17 channels (Basic mode)/24 channels (Standard Mode)/49 channels (Extended Mode)
Lamp Type - T° K - Service Life	31 LED light sources in 4 colours (red, green, blue and white 6700 K) of the OSTAR type by OSRAM
Lamp adjustment	NO
Hot-relighting lamp	Instant control of light sources in all applications
Ballast/Driver type	Electronic
Optics	Primary collimator + mobile lens zoom, in 31 sources
Access to head	Via removable cover, secured with 4 screws
Access to arms	1 cover per arm, 6 screws per cover
Access to the base	1 front panel (4 screws) + 1 rear panel (4 screws) + 2 metal plates (8 screws)
Access to effects	Easy access, the only mechanical effect is the zoom
Number of motors	5 stepper motors
Connections	2 x XLR 5 + 2 x XLR 3
Control panel	Colour graphic LCD display equipment + 7 buttons
Software version of test model	V 1.2
Software updates	YES, via wired DMX connection
Fixing brackets	2 x 1/4 turn omega quick-release removable fasteners
PAN and TILT lock	YES, 2 positions in PAN (180° range) and 7 positions in TILT (45° range)
Transport handle(s)	2 on the base
Attachment point for the safety sling	YES, under the base
FUNCTIONS	
Pan and Tilt	540° PAN - 270° TILT
Zoom	8° to 32° linear zoom
Dimmer/Shutter	YES, 8 or 16 bit electronic dimmer control - strobe up to 25 flashes/sec
Colours	R+G+B+CW four-colour additive and virtual colour wheel
Speed settings	47
2 zoom speeds, 4 Pan/Tilt speeds, 1 DMX channel speed/movement mode	40
GENERAL MEASUREMENTS	
Hottest temperature on the projector	66°C between the fins of the chassis of the head (measured at 21°C ambient temperature)
Ambient noise	33.1 dB
Machine noise in operation @ 1m	36 dB machine in sleep mode (LEDs off) - 39.5 dB with the LEDs lit (ventilation active)
Loudest operating noise @ 1m	41 dB
SPEED & TIME SPECIFICATIONS	
Full reset time (OFF/ON)	42 sec
Lamp reboot time (OFF/ON)	Instant on/off of the LED light sources
RAPID MOVEMENT	
360° Pan	2.3 sec ("Speed 1" mode) to 3.4 sec ("Speed 4" mode)
180° Tilt	1 sec ("Speed 1" mode) to 1.6 sec ("Speed 4" mode)
360° Go/Return Pan	4.2 sec ("Speed 1" mode) to 7.2 sec ("Speed 4" mode)
180° Go/Return Tilt	2.3 sec ("Speed 1" mode) to 3.6 sec ("Speed 4" mode)
SLOW MOVEMENTS	
Fluidity of Pan and Tilt	Very good, 4 out of 5



THE PLUSSES

- A x 5 zoom that is particularly effective (and quick on the final series)
- The effects offered by the LED light-rings and the quality of the colour mix
- The brightness/power consumption ratio



THE MINUSES

- The footprint and weight
- The size of the display (small)



SEE INSTRUCTIONS ON USE DMX CHANNEL ON soundlightup.com

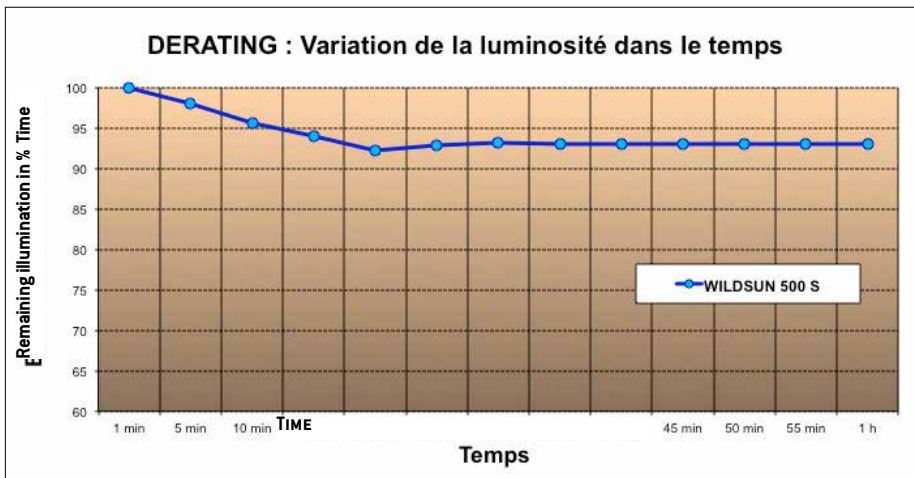


Figure C - Light intensity variation over time

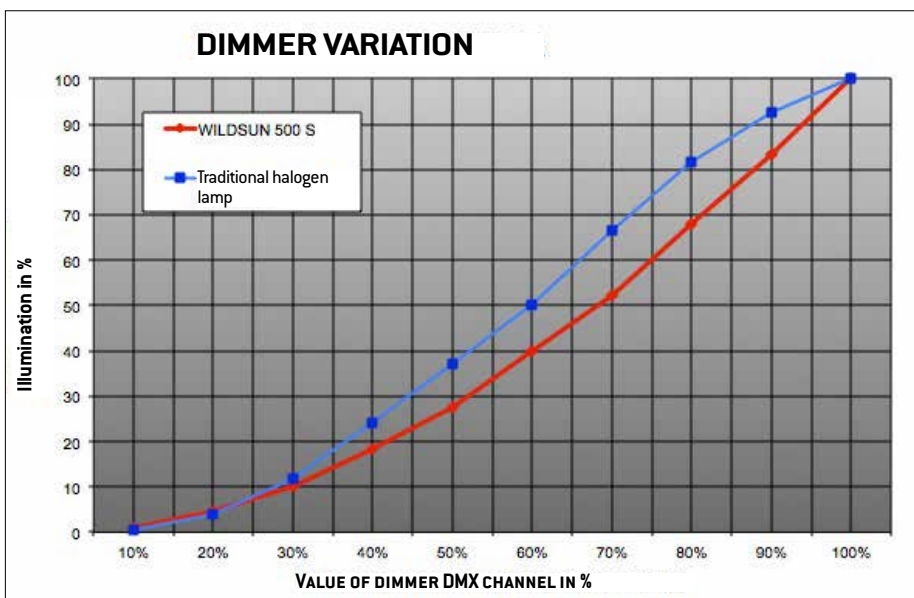


Figure D - Dimmer variation

central plateau. It is therefore easy to coat a large area quite uniformly with colour, even at a short projection distance.

Note that the effects achieved by the separate control of the LED light-rings are especially visually effective in narrow zoom, as in the wide zoom position the light emitted by an LED light-ring tends to «leak» into the optics of the neighbouring light-ring if it is off, which may impair the desired effect if you look at the device front on rather than its projected beam.

As regards the zoom speed, this is adjustable on the device via the menu (but not via the DMX). On the pre-production test sample, the zoom has a best of 2.1 s for its total excursion (as opposed to 3.2 s for its slow speed).

The manufacturer has indicated that it will be the speed zoom of the K7 that will be applied on the final series, which is a total excursion in 0.9 s in rapid mode (and the slow speed at 3.2 s), which should allow for stunning pumping effects.

COLOURS	Illumination (Lux)	Relative [%]
Red only (R)	930	11,01
Green only (G)	3620	42,84
Blue only (B)	390	4,62
Warm White only (WW)	0	0,00
Cold White only (CW)	4730	55,98
Amber only (A)	0	0,00
Yellow (Red + Green) (Y)	4580	54,20
Magenta (Red + Blue) (M)	1410	16,69
Cyan (green + blue) (C)	4040	47,81
R+G+B only	4900	57,99
all LED (R+G+B+W.)	8450	100

Movement and noise:

The Pan and Tilt movements are vivid and sharp; we really like the «generous» choice of motors. The reaction times are almost instant.

The PAN/TILT speed is adjustable on the device via the menu (4 speed). These settings primarily affect the absorbers at the end stop. The go/return speed of the 360° PAN varies from 2.3 s to 3.4 s, while that of the Tilt for a 180° go/return varies from 2.3 s to 3.6 s: very good results.

As regards the slow movements, such as the diagonals, the projector performs decently and the results are good.

As for the noise levels, the device really impressed here: it is particularly silent.

It has several control modes for its fans, but for standard use the «Auto» mode did the job nicely: the maximum threshold during movement, measured at 1 metre, is only 41 dB, which is 33.1 dB ambient. When the device stopped moving, with the LED lights on, the noise dropped to 39.5 dB, finally falling to 36 dB shortly after the LEDs were extinguished (the head fan stops at this point).

Finally, when we press our ear to the device, we can faintly hear the base fans and, as in all the scenarios tested, the head fan is almost inaudible. No annoying audible frequency was noticed.

CONCLUSION

The Wildsun 500 S is an atypical device at first glance that shines by its build quality and its technical nature. Its multiple usage modes associated with the internal effects, make it easily accessible and effective regardless of the conditions of use. Its very specific design and head covered with multiple large eyes provide a real visual signature: it is immediately recognisable on stage. Its effectiveness, both in terms of the zoom and brightness and also the quality of the colour mix, make this device the first choice among Wash LED moving head luminaires in its power range. Welcome to the new sought-after circle of projectors that cannot be ignored! A really nice comeback for AYRTON with these types of projectors.

We will
rock your nights.

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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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Light in action

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The rolling partner...



rollaPix

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